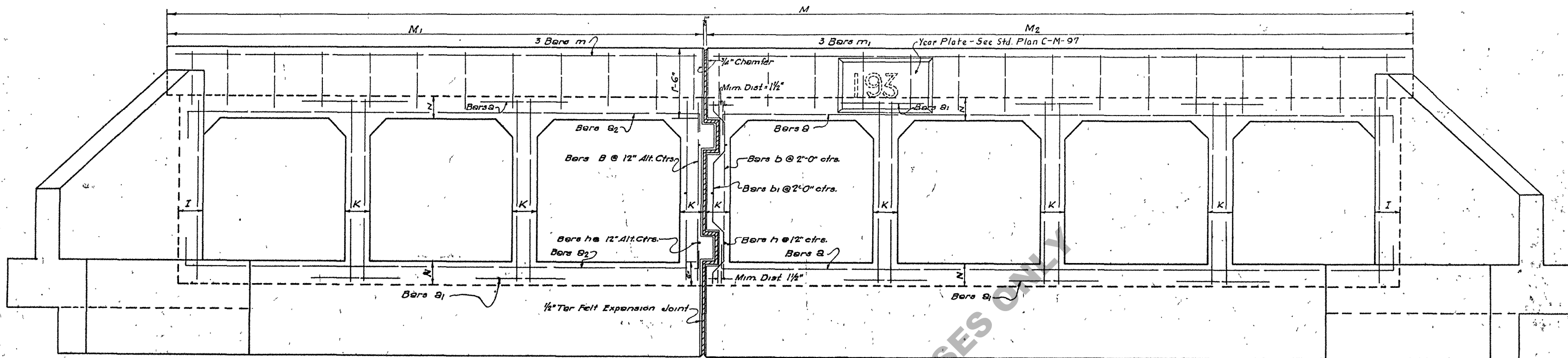
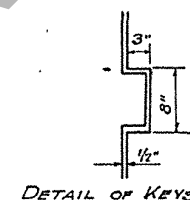




END ELEVATION SHOWING EXPANSION JOINT FOR STANDARD PLAN C-C-13-15  
THIS PLAN TO BE USED WITH C-C-13-15



| OPENINGS | UNIT LENGTHS |
|----------|--------------|
| 3' x 3'  | 0' - 10"     |
| 4' x 4'  | 1' - 10"     |
| 5' x 5'  | 2' - 10"     |
| 6' x 6'  | 3' - 0"      |
| 8' x 8'  | 4' - 0"      |

BARs b1

REINFORCEMENT FOR 24' CULVERT ALL 1/2" BARS FOR SPACING ETC. SEE C-C-13-15

| OPENING |    | BARREL REINFORCEMENT |          |        |          |         |          |        |          |         |          |        |          |           |                 |          |          | WING and CURB REINFORCEMENT |          |        |          |        |          |         |          |          |          |           |                 |          |          |          |          |          |          |
|---------|----|----------------------|----------|--------|----------|---------|----------|--------|----------|---------|----------|--------|----------|-----------|-----------------|----------|----------|-----------------------------|----------|--------|----------|--------|----------|---------|----------|----------|----------|-----------|-----------------|----------|----------|----------|----------|----------|----------|
| SINGLE  | NO | Bars 22              |          | Bars 2 |          | Bars 31 |          | Bars b |          | Bars b1 |          | Bars c |          | Bars d    |                 |          |          | Bars d1                     |          | Bars h |          | Bars m |          | Bars m1 |          | Bars n   |          | Bars e    |                 |          |          | Bars g   |          | Bars k   |          |
|         |    | No.                  | Length   | No.    | Length   | No.     | Length   | No.    | Length   | No.     | Length   | No.    | Length   | Short Bar | Varian-<br>tion | Long Bar | No. Each | No.                         | Length   | No.    | Length   | No.    | Length   | No.     | Length   | No.      | Length   | Short Bar | Varian-<br>tion | Long Bar | No. Each | No.      | Length   | No.      | Length   |
| FEET    |    |                      | ft. ins. |        | ft. ins. |         | ft. ins. |        | ft. ins. |         | ft. ins. |        | ft. ins. | ft. ins.  | ft. ins.        | ft. ins. | ft. ins. |                             | ft. ins. |        | ft. ins. |        | ft. ins. |         | ft. ins. | ft. ins. | ft. ins. | ft. ins.  | ft. ins.        | ft. ins. | ft. ins. | ft. ins. | ft. ins. | ft. ins. | ft. ins. |
| 3x3     | 7  | 70                   | 11-9     | 70     | 15-0     | 350     | 2-0      | 221    | 3-9      | 13      | 4-2      | 42     | 25-9     | 31-3      | 3-6             | 34-9     | 2        | 2                           | 34-10    | 21     | 25-9     | 6      | 11-0     | 6       | 14-6     | 52       | 1-3      | 3-8       | 7               | 6-0      | 4        | 8        | 4-9      | 8        | 6-0      |
|         | 8  | 70                   | 15-3     | 70     | 15-0     | 420     | 2-0      | 247    | 3-9      | 13      | 4-2      | 48     | 25-9     | 31-3      | 3-6             | 34-9     | 2        | 2                           | 34-10    | 24     | 25-9     | 6      | 14-6     | 6       | 14-6     | 60       | 1-3      | 3-8       | 7               | 6-0      | 4        | 8        | 4-9      | 8        | 6-0      |
|         | 9  | 70                   | 15-3     | 70     | 18-6     | 480     | 2-0      | 273    | 3-9      | 13      | 4-2      | 54     | 25-9     | 31-3      | 3-6             | 34-9     | 2        | 2                           | 34-10    | 27     | 25-9     | 6      | 14-6     | 6       | 14-6     | 66       | 1-3      | 3-8       | 7               | 6-0      | 4        | 8        | 4-9      | 8        | 6-0      |
|         | 10 | 70                   | 18-9     | 70     | 18-6     | 540     | 2-0      | 299    | 3-9      | 13      | 4-2      | 60     | 25-9     | 31-3      | 3-6             | 34-9     | 2        | 2                           | 34-10    | 30     | 25-9     | 6      | 18-0     | 6       | 18-0     | 72       | 1-3      | 3-8       | 7               | 6-0      | 4        | 8        | 4-9      | 8        | 6-0      |
|         | 11 | 70                   | 18-9     | 70     | 22-0     | 630     | 2-0      | 325    | 3-9      | 13      | 4-2      | 66     | 25-9     | 31-3      | 3-6             | 34-9     | 2        | 2                           | 34-10    | 33     | 25-9     | 6      | 18-0     | 6       | 21-6     | 80       | 1-3      | 3-8       | 7               | 6-0      | 4        | 8        | 4-9      | 8        | 6-0      |
|         | 12 | 70                   | 22-3     | 70     | 22-0     | 700     | 2-0      | 351    | 3-9      | 13      | 4-2      | 72     | 25-9     | 31-3      | 3-6             | 34-9     | 2        | 2                           | 34-10    | 36     | 25-9     | 6      | 21-6     | 6       | 21-6     | 88       | 1-3      | 3-8       | 7               | 6-0      | 4        | 8        | 4-9      | 8        | 6-0      |
| 4x4     | 7  | 70                   | 15-0     | 70     | 19-4     | 350     | 2-9      | 221    | 4-9      | 13      | 5-2      | 56     | 25-9     | 31-3      | 3-6             | 34-9     | 2        | 2                           | 37-0     | 28     | 25-9     | 6      | 14-5     | 6       | 19-0     | 68       | 1-3      | 4-3       | 7               | 7-2      | 4        | 8        | 5-10     | 8        | 7-5      |
|         | 8  | 70                   | 18-7     | 70     | 19-4     | 420     | 2-9      | 247    | 4-9      | 13      | 5-2      | 64     | 25-9     | 31-3      | 3-6             | 34-9     | 2        | 2                           | 37-0     | 32     | 25-9     | 6      | 19-0     | 6       | 19-0     | 76       | 1-3      | 4-3       | 7               | 7-2      | 4        | 8        | 5-10     | 8        | 7-5      |
|         | 9  | 70                   | 19-7     | 70     | 23-11    | 480     | 2-9      | 273    | 4-9      | 13      | 5-2      | 72     | 25-9     | 31-3      | 3-6             | 34-9     | 2        | 2                           | 37-0     | 36     | 25-9     | 6      | 19-0     | 6       | 23-7     | 86       | 1-3      | 4-3       | 7               | 7-2      | 4        | 8        | 5-10     | 8        | 7-5      |
|         | 10 | 70                   | 24-2     | 70     | 23-11    | 540     | 2-9      | 299    | 4-9      | 13      | 5-2      | 80     | 25-9     | 31-3      | 3-6             | 34-9     | 2        | 2                           | 37-0     | 40     | 25-9     | 6      | 23-7     | 6       | 23-7     | 96       | 1-3      | 4-3       | 7               | 7-2      | 4        | 8        | 5-10     | 8        | 7-5      |
|         | 11 | 70                   | 24-2     | 70     | 28-6     | 630     | 2-9      | 325    | 4-9      | 13      | 5-2      | 88     | 25-9     | 31-3      | 3-6             | 34-9     | 2        | 2                           | 37-0     | 44     | 25-9     | 6      | 23-7     | 6       | 28-2     | 104      | 1-3      | 4-3       | 7               | 7-2      | 4        | 8        | 5-10     | 8        | 7-5      |
|         | 12 | 70                   | 28-9     | 70     | 28-6     | 700     | 2-9      | 351    | 4-9      | 13      | 5-2      | 96     | 25-9     | 31-3      | 3-6             | 34-9     | 2        | 2                           | 37-0     | 48     | 25-9     | 6      | 28-2     | 6       | 28-2     | 112      | 1-3      | 4-3       | 7               | 7-2      | 4        | 8        | 5-10     | 8        | 7-5      |
| 5x5     | 7  | 78                   | 15-4     | 78     | 23-9     | 380     | 3-3      | 221    | 5-9      | 13      | 6-2      | 70     | 25-9     | 31-3      | 3-6             | 38-3     | 2        | 2                           | 39-8     | 35     | 25-9     | 6      | 17-8     | 6       | 23-4     | 84       | 1-3      | 4-9       | 7               | 8-3      | 4        | 8        | 7-0      | 8        | 8-9      |
|         | 8  | 78                   | 24-0     | 78     | 23-9     | 456     | 3-3      | 247    | 5-9      | 13      | 6-2      | 80     | 25-9     | 31-3      | 3-6             | 38-3     | 2        | 2                           | 39-8     | 40     | 25-9     | 6      | 17-8     | 6       | 23-4     | 96       | 1-3      | 4-9       | 7               | 8-3      | 4        | 8        | 7-0      | 8        | 8-9      |
|         | 9  | 78                   | 24-0     | 78     | 29-5     | 532     | 3-3      | 273    | 5-9      | 13      | 6-2      | 90     | 25-9     | 31-3      | 3-6             | 38-3     | 2        | 2                           | 39-8     | 45     | 25-9     | 6      | 23-4     | 6       | 29-0     | 106      | 1-3      | 4-9       | 7               | 8-3      | 4        | 8        | 7-0      | 8        | 8-9      |
|         | 10 | 78                   | 29-8     | 78     | 29-5     | 608     | 3-3      | 299    | 5-9      | 13      | 6-2      | 100    | 25-9     | 31-3      | 3-6             | 38-3     | 2        | 2                           | 39-8     | 50     | 25-9     | 6      | 29-0     | 6       | 29-0     | 116      | 1-3      | 4-9       | 7               | 8-3      | 4        | 8        | 7-0      | 8        | 8-9      |
|         | 11 | 78                   | 29-8     | 78     | 35-1     | 684     | 3-3      | 325    | 5-9      | 13      | 6-2      | 110    | 25-9     | 31-3      | 3-6             | 38-3     | 2        | 2                           | 39-8     | 55     | 25-9     | 6      | 29-0     | 6       | 34-8     | 128      | 1-3      | 4-9       | 7               | 8-3      | 4        | 8        | 7-0      | 8        | 8-9      |
|         | 12 | 78                   | 35-4     | 78     | 35-1     | 760     | 3-3      | 351    | 5-9      | 13      | 6-2      | 120    | 25-9     | 31-3      | 3-6             | 38-3     | 2        | 2                           | 39-8     | 60     | 25-9     | 6      | 34-8     | 6       | 34-8     | 140      | 1-3      | 4-9       | 7               | 8-3      | 4        | 8        | 7-0      | 8        | 8-9      |
| 6x6     | 7  | 88                   | 21-4     | 88     | 27-9     | 430     | 3-9      | 221    | 6-11     | 13      | 7-4      | 84     | 25-9     | 31-6      | 3-6             | 38-6     | 2        | 2                           | 41-6     | 42     | 25-9     | 6      | 20-8     | 6       | 27-4     | 98       | 1-4      | 5-3       | 7               | 9-4      | 4        | 8        | 8-0      | 8        | 10-4     |
|         | 8  | 88                   | 28-0     | 88     | 27-9     | 516     | 3-9      | 247    | 6-11     | 13      | 7-4      | 96     | 25-9     | 31-6      | 3-6             | 38-6     | 2        | 2                           | 41-6     | 48     | 25-9     | 6      | 20-8     | 6       | 27-4     | 112      | 1-4      | 5-3       | 7               | 9-4      | 4        | 8        | 8-0      | 8        | 10-4     |
|         | 9  | 88                   | 28-0     | 88     | 34-5     | 602     | 3-9      | 273    | 6-11     | 13      | 7-4      | 108    | 25-9     | 31-6      | 3-6             | 38-6     | 2        | 2                           | 41-6     | 54     | 25-9     | 6      | 20-8     | 6       | 34-0     | 124      | 1-4      | 5-3       | 7               | 9-4      | 4        | 8        | 8-0      | 8        | 10-4     |
|         | 10 | 88                   | 34-8     | 88     | 34-5     | 688     | 3-9      | 299    | 6-11     | 13      | 7-4      | 120    | 25-9     | 31-6      | 3-6             | 38-6     | 2        | 2                           | 41-6     | 60     | 25-9     | 6      | 34-0     | 6       | 34-0     | 136      | 1-4      | 5-3       | 7               | 9-4      | 4        | 8        | 8-0      | 8        | 10-4     |
|         | 11 | 88                   | 34-8     | 88     | 41-1     | 774     | 3-9      | 325    | 6-11     | 13      | 7-4      | 132    | 25-9     | 31-6      | 3-6             | 38-6     | 2        | 2                           | 41-6     | 66     | 25-9     | 6      | 34-0     | 6       | 40-8     | 150      | 1-4      | 5-3       | 7               | 9-4      | 4        | 8        | 8-0      | 8        | 10-4     |
|         | 12 | 88                   | 41-4     | 88     | 41-1     | 860     | 3-9      | 351    | 6-11     | 13      | 7-4      | 144    | 25-9     | 31-6      | 3-6             | 38-6     | 2        | 2                           | 41-6     | 72     | 25-9     | 6      | 40-8     | 6       | 40-8     | 164      | 1-4      | 5-3       | 7               | 9-4      | 4        | 8        | 8-0      | 8        | 10-4     |
| 8x8     | 7  | 122                  | 27-9     | 122    | 36-3     | 600     | 5-0      | 221    | 9-3      | 13      | 9-8      | 112    | 25-9     | 32-0      | 3-6             | 46-0     | 2        | 2                           | 46-8     | 56     | 25-9     | 6      | 26-11    | 6       | 35-8     | 126      | 1-6      | 6-3       | 7               | 11-6     | 4        | 8        | 10-6     | 8        | 13-0     |
|         | 8  | 122                  | 36-6     | 122    | 36-3     | 720     | 5-0      | 247    | 9-3      | 13      | 9-8      | 128    | 25-9     | 32-0      | 3-6             | 46-0     | 2        | 2                           | 46-8     | 64     | 25-9     | 6      | 26-11    | 6       | 35-8     | 144      | 1-6      | 6-3       | 7               | 11-6     | 4        | 8        | 10-6     | 8        | 13-0     |
|         | 9  | 122                  | 36-6     | 122    | 45-0     | 840     | 5-0      | 273    | 9-3      | 13      | 9-8      | 144    | 25-9     | 32-0      | 3-6             | 46-0     | 2        | 2                           | 46-8     | 72     | 25-9     | 6      | 26-11    | 6       | 35-8     | 162      | 1-6      | 6-3       | 7               | 11-6     | 4        | 8        | 10-6     | 8        | 13-0     |
|         | 10 | 122                  | 45-3     | 122    | 45-0     | 960     | 5-0      | 299    | 9-3      | 13      | 9-8      | 160    | 25-9     | 32-0      | 3-6             | 46-0     | 2        | 2                           | 46-8     | 80     | 25-9     | 6      | 26-11    | 6       | 44-5     | 180      | 1-6      | 6-3       | 7               | 11-6     | 4        | 8        | 10-6     | 8        | 13-0     |
|         | 11 | 122                  | 45-3     | 122    | 53-9     | 1080    | 5-0      | 325    | 9-3      | 13      | 9-8      | 176    | 25-9     | 32-0      | 3-6             | 46-0     | 2        | 2                           | 46-8     | 88     | 25-9     | 6      | 26-11    | 6       | 44-5     | 208      | 1-6      | 6-3       | 7               | 11-6     | 4        | 8        | 10-6     | 8        | 13-0     |
|         | 12 | 122                  | 54-0     | 122    | 53-9     | 1200    | 5-0      | 351    | 9-3      | 13      | 9-8      | 192    | 25-9     | 32-0      | 3-6             | 46-0     | 2        | 2                           | 46-8     | 96     | 25-9     | 6      | 26-11    | 6       | 53-2     | 216      | 1-6      | 6-3       | 7               | 11-6     | 4        | 8        | 10-6     | 8        | 13-0     |