

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM - 6

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|------------------|------------|--------|------------------------------|--|
| BK. W. ABUT | 3462+71.70 | 14.33 | 676.87 | 676.87 |
| Q BRG. W. ABUT | 3462+72.95 | 14.33 | 676.87 | 676.87 |
| A | 3462+82.95 | 14.33 | 676.84 | 676.85 |
| B | 3462+92.95 | 14.33 | 676.81 | 676.83 |
| C | 3463+02.95 | 14.33 | 676.78 | 676.80 |
| D | 3463+12.95 | 14.33 | 676.75 | 676.76 |
| Q W. BRG. PIER 1 | 3463+24.45 | 14.33 | 676.71 | 676.71 |
| PIER 1 | 3463+25.62 | 14.33 | 676.71 | 676.71 |
| Q E. BRG. PIER 1 | 3463+26.79 | 14.33 | 676.70 | 676.70 |
| E | 3463+36.79 | 14.33 | 676.67 | 676.73 |
| F | 3463+46.79 | 14.33 | 676.64 | 676.73 |
| G | 3463+56.79 | 14.33 | 676.61 | 676.72 |
| H | 3463+66.79 | 14.33 | 676.58 | 676.70 |
| I | 3463+76.79 | 14.33 | 676.55 | 676.66 |
| J | 3463+86.79 | 14.33 | 676.52 | 676.60 |
| K | 3463+96.79 | 14.33 | 676.49 | 676.53 |
| Q W. BRG. PIER 2 | 3464+03.45 | 14.33 | 676.47 | 676.47 |
| PIER 2 | 3464+04.62 | 14.33 | 676.47 | 676.47 |
| Q E. BRG. PIER 2 | 3464+05.79 | 14.33 | 676.47 | 676.47 |
| L | 3464+15.79 | 14.33 | 676.44 | 676.45 |
| M | 3464+25.79 | 14.33 | 676.41 | 676.42 |
| N | 3464+35.79 | 14.33 | 676.38 | 676.39 |
| O | 3464+45.79 | 14.33 | 676.35 | 676.36 |
| Q W. BRG. PIER 3 | 3464+53.83 | 14.33 | 676.32 | 676.32 |
| PIER 3 | 3464+54.83 | 14.33 | 676.32 | 676.32 |
| Q E. BRG. PIER 3 | 3464+55.83 | 14.33 | 676.32 | 676.32 |
| P | 3464+65.83 | 14.33 | 676.29 | 676.33 |
| Q | 3464+75.83 | 14.33 | 676.26 | 676.33 |
| R | 3464+85.83 | 14.33 | 676.23 | 676.31 |
| S | 3464+95.83 | 14.33 | 676.20 | 676.28 |
| T | 3465+05.83 | 14.33 | 676.17 | 676.23 |
| U | 3465+15.83 | 14.33 | 676.14 | 676.17 |
| Q W. BRG. PIER 4 | 3465+23.65 | 14.33 | 676.11 | 676.11 |
| PIER 4 | 3465+24.82 | 14.33 | 676.11 | 676.11 |
| Q E. BRG. PIER 4 | 3465+25.99 | 14.33 | 676.11 | 676.11 |
| V | 3465+35.99 | 14.33 | 676.08 | 676.09 |
| W | 3465+45.99 | 14.33 | 676.05 | 676.07 |
| X | 3465+55.99 | 14.33 | 676.02 | 676.04 |
| Y | 3465+65.99 | 14.33 | 675.99 | 676.01 |
| Q BRG. E. ABUT | 3465+80.58 | 14.33 | 675.94 | 675.94 |
| BK. E. ABUT | 3465+81.83 | 14.33 | 675.94 | 675.94 |

BEAM - 7

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|------------------|------------|--------|------------------------------|--|
| BK. W. ABUT | 3462+71.70 | 20.50 | 676.74 | 676.74 |
| Q BRG. W. ABUT | 3462+72.95 | 20.50 | 676.74 | 676.74 |
| A | 3462+82.95 | 20.50 | 676.71 | 676.72 |
| B | 3462+92.95 | 20.50 | 676.68 | 676.70 |
| C | 3463+02.95 | 20.50 | 676.65 | 676.67 |
| D | 3463+12.95 | 20.50 | 676.62 | 676.63 |
| Q W. BRG. PIER 1 | 3463+24.45 | 20.50 | 676.58 | 676.58 |
| PIER 1 | 3463+25.62 | 20.50 | 676.58 | 676.58 |
| Q E. BRG. PIER 1 | 3463+26.79 | 20.50 | 676.58 | 676.58 |
| E | 3463+36.79 | 20.50 | 676.55 | 676.60 |
| F | 3463+46.79 | 20.50 | 676.52 | 676.60 |
| G | 3463+56.79 | 20.50 | 676.49 | 676.59 |
| H | 3463+66.79 | 20.50 | 676.46 | 676.57 |
| I | 3463+76.79 | 20.50 | 676.43 | 676.53 |
| J | 3463+86.79 | 20.50 | 676.40 | 676.47 |
| K | 3463+96.79 | 20.50 | 676.37 | 676.40 |
| Q W. BRG. PIER 2 | 3464+03.45 | 20.50 | 676.35 | 676.35 |
| PIER 2 | 3464+04.62 | 20.50 | 676.34 | 676.34 |
| Q E. BRG. PIER 2 | 3464+05.79 | 20.50 | 676.34 | 676.34 |
| L | 3464+15.79 | 20.50 | 676.31 | 676.32 |
| M | 3464+25.79 | 20.50 | 676.28 | 676.30 |
| N | 3464+35.79 | 20.50 | 676.25 | 676.27 |
| O | 3464+45.79 | 20.50 | 676.22 | 676.23 |
| Q W. BRG. PIER 3 | 3464+53.83 | 20.50 | 676.19 | 676.19 |
| PIER 3 | 3464+54.83 | 20.50 | 676.19 | 676.19 |
| Q E. BRG. PIER 3 | 3464+55.83 | 20.50 | 676.19 | 676.19 |
| P | 3464+65.83 | 20.50 | 676.16 | 676.20 |
| Q | 3464+75.83 | 20.50 | 676.13 | 676.20 |
| R | 3464+85.83 | 20.50 | 676.10 | 676.18 |
| S | 3464+95.83 | 20.50 | 676.07 | 676.15 |
| T | 3465+05.83 | 20.50 | 676.04 | 676.10 |
| U | 3465+15.83 | 20.50 | 676.01 | 676.04 |
| Q W. BRG. PIER 4 | 3465+23.65 | 20.50 | 675.98 | 675.98 |
| PIER 4 | 3465+24.82 | 20.50 | 675.98 | 675.98 |
| Q E. BRG. PIER 4 | 3465+25.99 | 20.50 | 675.98 | 675.98 |
| V | 3465+35.99 | 20.50 | 675.95 | 675.96 |
| W | 3465+45.99 | 20.50 | 675.92 | 675.94 |
| X | 3465+55.99 | 20.50 | 675.89 | 675.92 |
| Y | 3465+65.99 | 20.50 | 675.86 | 675.88 |
| Q BRG. E. ABUT | 3465+80.58 | 20.50 | 675.81 | 675.81 |
| BK. E. ABUT | 3465+81.83 | 20.50 | 675.81 | 675.81 |

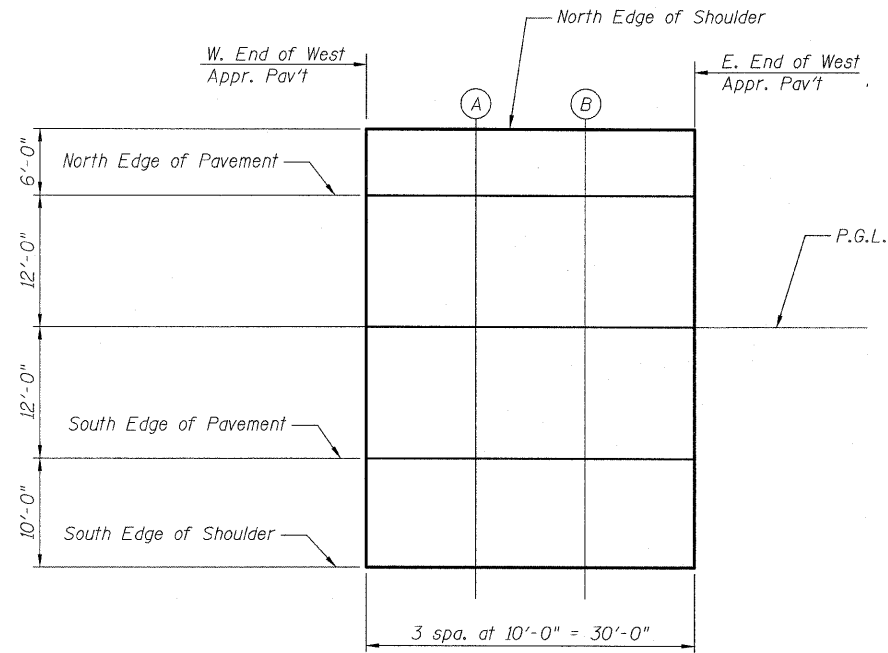
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| DESIGNED - SP |
| CHECKED - PDF |
| DRAWN - SP |
| CHECKED - PDF |

TOP OF SLAB ELEVATIONS - 4
STRUCTURE NO. 006-0170 EB

| | | | | | |
|---------------------|--------------------|---------------------------|--------|--------------|-----------|
| SHEET NO. 7 | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 344 | 161 |
| 59 SHEETS | CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN
West Approach

NORTH EDGE OF SHOULDER

| Location | Station | Offset | Theoretical Grade Elevations |
|-------------------------|------------|---------|------------------------------|
| W. End West Appr. Pav't | 3462+41.70 | -18.00' | 676.87 |
| A | 3462+51.70 | -18.00' | 676.85 |
| B | 3462+61.70 | -18.00' | 676.82 |
| E. End West Appr. Pav't | 3462+71.70 | -18.00' | 676.79 |

NORTH EDGE OF PAVEMENT

| Location | Station | Offset | Theoretical Grade Elevations |
|-------------------------|------------|---------|------------------------------|
| W. End West Appr. Pav't | 3462+41.70 | -12.00' | 677.00 |
| A | 3462+51.70 | -12.00' | 676.97 |
| B | 3462+61.70 | -12.00' | 676.95 |
| E. End West Appr. Pav't | 3462+71.70 | -12.00' | 676.92 |

P.G.L.

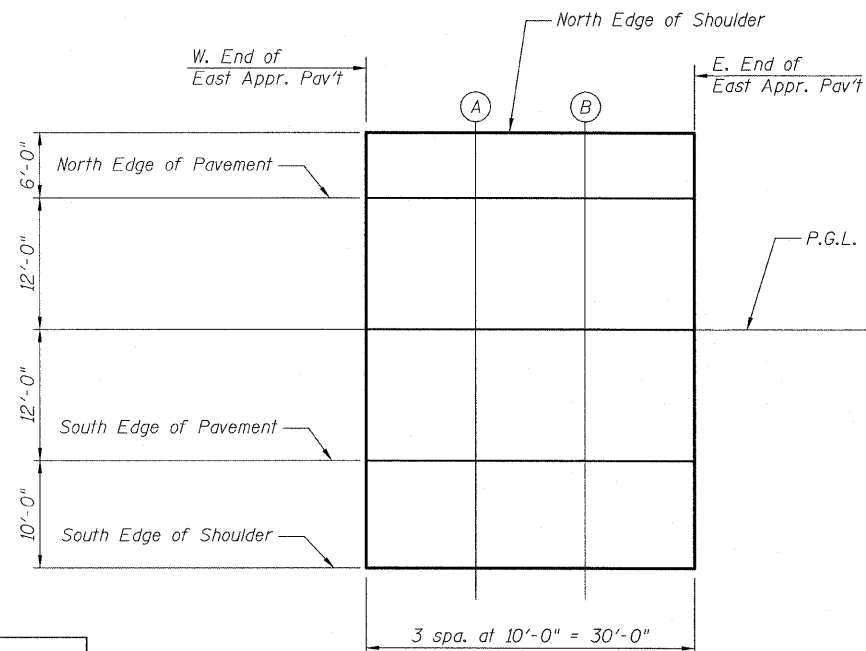
| Location | Station | Offset | Theoretical Grade Elevations |
|-------------------------|------------|--------|------------------------------|
| W. End West Appr. Pav't | 3462+41.70 | 0.00' | 677.19 |
| A | 3462+51.70 | 0.00' | 677.16 |
| B | 3462+61.70 | 0.00' | 677.13 |
| E. End West Appr. Pav't | 3462+71.70 | 0.00' | 677.10 |

SOUTH EDGE OF PAVEMENT

| Location | Station | Offset | Theoretical Grade Elevations |
|-------------------------|------------|--------|------------------------------|
| W. End West Appr. Pav't | 3462+41.70 | 12.00' | 677.00 |
| A | 3462+51.70 | 12.00' | 676.97 |
| B | 3462+61.70 | 12.00' | 676.95 |
| E. End West Appr. Pav't | 3462+71.70 | 12.00' | 676.92 |

SOUTH EDGE OF SHOULDER

| Location | Station | Offset | Theoretical Grade Elevations |
|-------------------------|------------|--------|------------------------------|
| W. End West Appr. Pav't | 3462+41.70 | 22.00' | 676.79 |
| A | 3462+51.70 | 22.00' | 676.76 |
| B | 3462+61.70 | 22.00' | 676.74 |
| E. End West Appr. Pav't | 3462+71.70 | 22.00' | 676.71 |



PLAN
East Approach

NORTH EDGE OF SHOULDER

| Location | Station | Offset | Theoretical Grade Elevations |
|-------------------------|------------|---------|------------------------------|
| W. End East Appr. Pav't | 3465+81.83 | -18.00' | 675.86 |
| A | 3465+91.83 | -18.00' | 675.83 |
| B | 3466+01.83 | -18.00' | 675.80 |
| E. End East Appr. Pav't | 3466+11.83 | -18.00' | 675.77 |

NORTH EDGE OF PAVEMENT

| Location | Station | Offset | Theoretical Grade Elevations |
|-------------------------|------------|---------|------------------------------|
| W. End East Appr. Pav't | 3465+81.83 | -12.00' | 675.99 |
| A | 3465+91.83 | -12.00' | 675.96 |
| B | 3466+01.83 | -12.00' | 675.93 |
| E. End East Appr. Pav't | 3466+11.83 | -12.00' | 675.90 |

P.G.L.

| Location | Station | Offset | Theoretical Grade Elevations |
|-------------------------|------------|--------|------------------------------|
| W. End East Appr. Pav't | 3465+81.83 | 0.00' | 676.17 |
| A | 3465+91.83 | 0.00' | 676.14 |
| B | 3466+01.83 | 0.00' | 676.11 |
| E. End East Appr. Pav't | 3466+11.83 | 0.00' | 676.08 |

SOUTH EDGE OF PAVEMENT

| Location | Station | Offset | Theoretical Grade Elevations |
|-------------------------|------------|--------|------------------------------|
| W. End East Appr. Pav't | 3465+81.83 | 12.00' | 675.99 |
| A | 3465+91.83 | 12.00' | 675.96 |
| B | 3466+01.83 | 12.00' | 675.93 |
| E. End East Appr. Pav't | 3466+11.83 | 12.00' | 675.90 |

SOUTH EDGE OF SHOULDER

| Location | Station | Offset | Theoretical Grade Elevations |
|-------------------------|------------|--------|------------------------------|
| W. End East Appr. Pav't | 3465+81.83 | 22.00' | 675.78 |
| A | 3465+91.83 | 22.00' | 675.75 |
| B | 3466+01.83 | 22.00' | 675.72 |
| E. End East Appr. Pav't | 3466+11.83 | 22.00' | 675.69 |

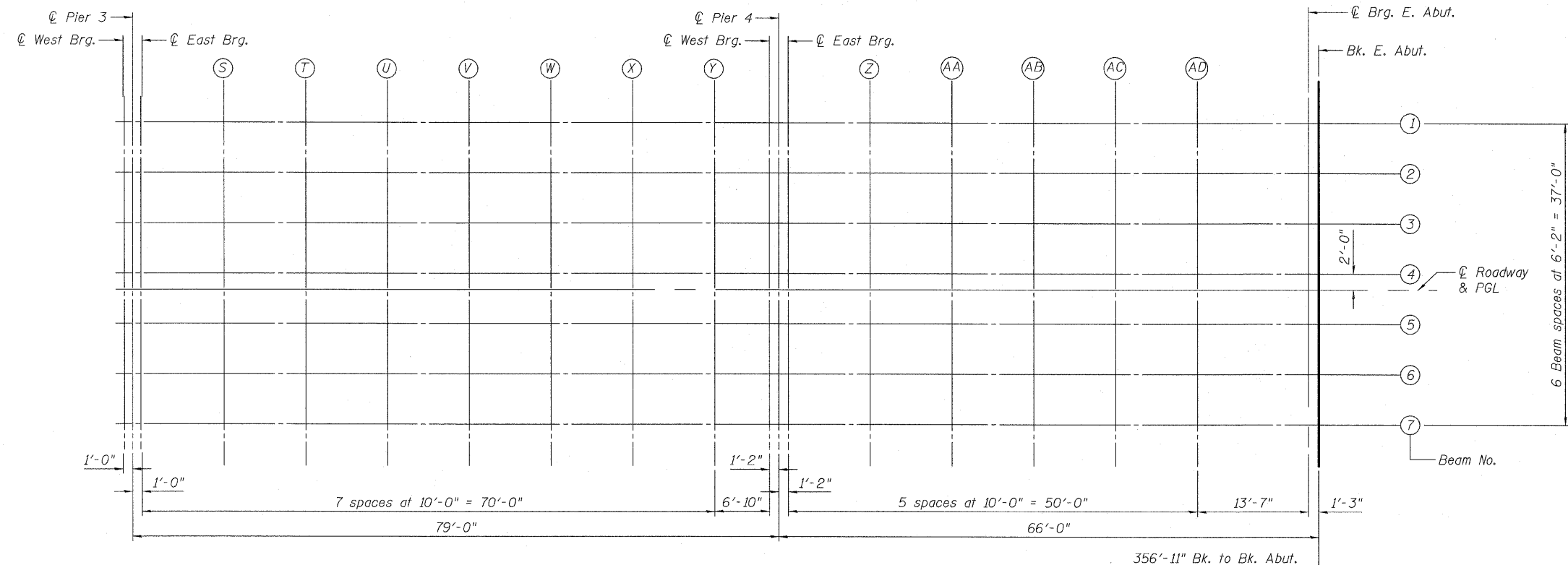
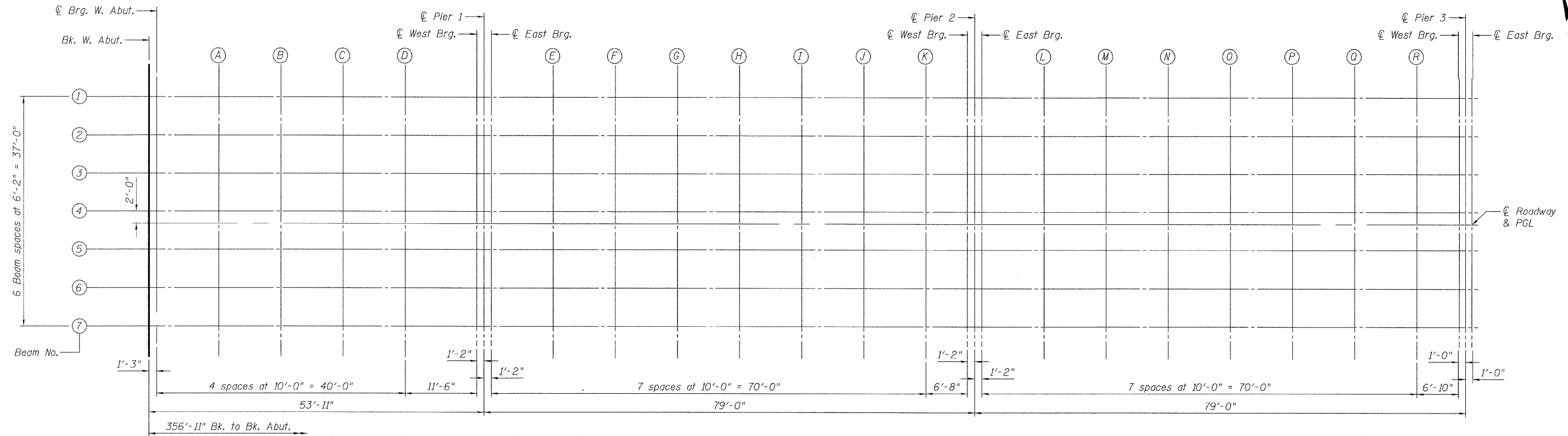
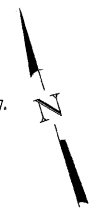
**TOP OF APPROACH SLAB ELEVATIONS
STRUCTURE NO. 006-0170 EB**

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| DESIGNED - IM |
| CHECKED - PDF |
| DRAWN - IM |
| CHECKED - PDF |

| SHEET NO. | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|------------------------------|-----------|---------|------------------|--------------|-----------|
| 59 SHEETS | 80 | * | BUREAU | 344 | 102 |
| FED. ROAD DIST. NO. ILLINOIS | | | FED. AID PROJECT | | |
| CONTRACT NO. 66908 | | | | | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN

| | |
|----------|-------|
| DESIGNED | - SP |
| CHECKED | - PDF |
| DRAWN | - PK |
| CHECKED | - PDF |

TOP OF SLAB ELEVATIONS - 1
STRUCTURE NO. 006-0171 WB

| | | | | | |
|--------------------------|-----------|---------------------------|--------------------|--------------|-----------|
| SHEET NO. 9 59 SHEETS | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 344 | 103 |
| | | | CONTRACT NO. 66908 | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | | |

TYLIN INTERNATIONAL

* 06-17BR & BR-1,7VB-M, 6BR & 6, 7 RS-1 & II

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM - 1

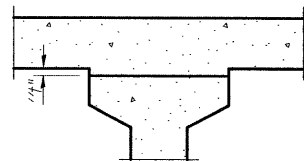
| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|------------------|------------|--------|------------------------------|--|
| BK. W. ABUT | 3462+24.91 | -20.50 | 674.95 | 674.95 |
| Q BRG. W. ABUT | 3462+26.16 | -20.50 | 674.95 | 674.95 |
| A | 3462+36.16 | -20.50 | 674.97 | 674.99 |
| B | 3462+46.16 | -20.50 | 675.00 | 675.02 |
| C | 3462+56.16 | -20.50 | 675.02 | 675.04 |
| D | 3462+66.16 | -20.50 | 675.03 | 675.05 |
| Q W. BRG. PIER 1 | 3462+77.66 | -20.50 | 675.05 | 675.05 |
| PIER 1 | 3462+78.83 | -20.50 | 675.05 | 675.05 |
| Q E. BRG. PIER 1 | 3462+80.00 | -20.50 | 675.05 | 675.05 |
| E | 3462+90.00 | -20.50 | 675.07 | 675.12 |
| F | 3463+00.00 | -20.50 | 675.08 | 675.16 |
| G | 3463+10.00 | -20.50 | 675.08 | 675.19 |
| H | 3463+20.00 | -20.50 | 675.09 | 675.20 |
| I | 3463+30.00 | -20.50 | 675.09 | 675.20 |
| J | 3463+40.00 | -20.50 | 675.09 | 675.17 |
| K | 3463+50.00 | -20.50 | 675.09 | 675.13 |
| Q W. BRG. PIER 2 | 3463+56.66 | -20.50 | 675.09 | 675.09 |
| PIER 2 | 3463+57.83 | -20.50 | 675.09 | 675.09 |
| Q E. BRG. PIER 2 | 3463+59.00 | -20.50 | 675.09 | 675.09 |
| L | 3463+69.00 | -20.50 | 675.09 | 675.14 |
| M | 3463+79.00 | -20.50 | 675.08 | 675.17 |
| N | 3463+89.00 | -20.50 | 675.07 | 675.18 |
| O | 3463+99.00 | -20.50 | 675.06 | 675.17 |
| P | 3464+09.00 | -20.50 | 675.05 | 675.15 |
| Q | 3464+19.00 | -20.50 | 675.03 | 675.11 |
| R | 3464+29.00 | -20.50 | 675.01 | 675.05 |
| Q W. BRG. PIER 3 | 3464+35.83 | -20.50 | 675.00 | 675.00 |
| PIER 3 | 3464+36.83 | -20.50 | 675.00 | 675.00 |
| Q E. BRG. PIER 3 | 3464+37.83 | -20.50 | 674.99 | 674.99 |
| S | 3464+47.83 | -20.50 | 674.97 | 675.02 |
| T | 3464+57.83 | -20.50 | 674.95 | 675.04 |
| U | 3464+67.83 | -20.50 | 674.92 | 675.03 |
| V | 3464+77.83 | -20.50 | 674.90 | 675.01 |
| W | 3464+87.83 | -20.50 | 674.86 | 674.97 |
| X | 3464+97.83 | -20.50 | 674.83 | 674.91 |
| Y | 3465+07.83 | -20.50 | 674.80 | 674.83 |
| Q W. BRG. PIER 4 | 3465+14.66 | -20.50 | 674.77 | 674.77 |
| PIER 4 | 3465+15.83 | -20.50 | 674.77 | 674.77 |
| Q E. BRG. PIER 4 | 3465+17.00 | -20.50 | 674.76 | 674.76 |
| Z | 3465+27.00 | -20.50 | 674.73 | 674.75 |
| AA | 3465+37.00 | -20.50 | 674.68 | 674.73 |
| AB | 3465+47.00 | -20.50 | 674.64 | 674.69 |
| AC | 3465+57.00 | -20.50 | 674.60 | 674.65 |
| AD | 3465+67.00 | -20.50 | 674.55 | 674.58 |
| Q BRG. E. ABUT | 3465+80.58 | -20.50 | 674.48 | 674.48 |
| BK. E. ABUT | 3465+81.83 | -20.50 | 674.48 | 674.48 |

BEAM - 2

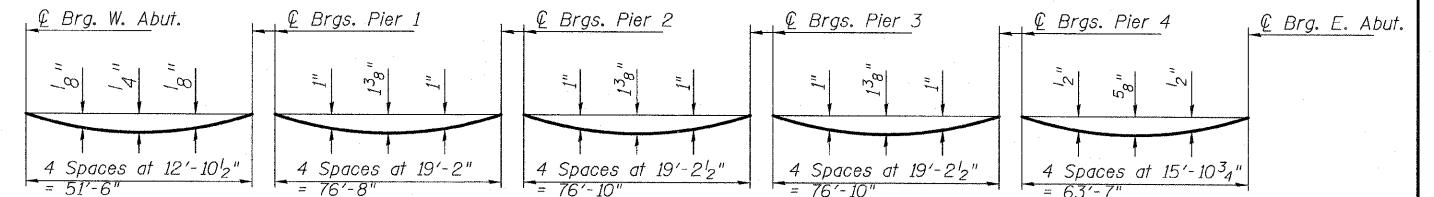
| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|------------------|------------|--------|------------------------------|--|
| BK. W. ABUT | 3462+24.91 | -14.33 | 675.08 | 675.08 |
| Q BRG. W. ABUT | 3462+26.16 | -14.33 | 675.08 | 675.08 |
| A | 3462+36.16 | -14.33 | 675.10 | 675.12 |
| B | 3462+46.16 | -14.33 | 675.12 | 675.15 |
| C | 3462+56.16 | -14.33 | 675.14 | 675.17 |
| D | 3462+66.16 | -14.33 | 675.16 | 675.18 |
| Q W. BRG. PIER 1 | 3462+77.66 | -14.33 | 675.18 | 675.18 |
| PIER 1 | 3462+78.83 | -14.33 | 675.18 | 675.18 |
| Q E. BRG. PIER 1 | 3462+80.00 | -14.33 | 675.18 | 675.18 |
| E | 3462+90.00 | -14.33 | 675.19 | 675.25 |
| F | 3463+00.00 | -14.33 | 675.20 | 675.29 |
| G | 3463+10.00 | -14.33 | 675.21 | 675.32 |
| H | 3463+20.00 | -14.33 | 675.22 | 675.33 |
| I | 3463+30.00 | -14.33 | 675.22 | 675.32 |
| J | 3463+40.00 | -14.33 | 675.22 | 675.30 |
| K | 3463+50.00 | -14.33 | 675.22 | 675.26 |
| Q W. BRG. PIER 2 | 3463+56.66 | -14.33 | 675.22 | 675.22 |
| PIER 2 | 3463+57.83 | -14.33 | 675.22 | 675.22 |
| Q E. BRG. PIER 2 | 3463+59.00 | -14.33 | 675.22 | 675.22 |
| L | 3463+69.00 | -14.33 | 675.21 | 675.27 |
| M | 3463+79.00 | -14.33 | 675.21 | 675.30 |
| N | 3463+89.00 | -14.33 | 675.20 | 675.31 |
| O | 3463+99.00 | -14.33 | 675.19 | 675.30 |
| P | 3464+09.00 | -14.33 | 675.17 | 675.28 |
| Q | 3464+19.00 | -14.33 | 675.16 | 675.24 |
| R | 3464+29.00 | -14.33 | 675.14 | 675.18 |
| Q W. BRG. PIER 3 | 3464+35.83 | -14.33 | 675.13 | 675.13 |
| PIER 3 | 3464+36.83 | -14.33 | 675.13 | 675.13 |
| Q E. BRG. PIER 3 | 3464+37.83 | -14.33 | 675.12 | 675.12 |
| S | 3464+47.83 | -14.33 | 675.10 | 675.15 |
| T | 3464+57.83 | -14.33 | 675.08 | 675.17 |
| U | 3464+67.83 | -14.33 | 675.05 | 675.16 |
| V | 3464+77.83 | -14.33 | 675.02 | 675.14 |
| W | 3464+87.83 | -14.33 | 674.99 | 675.10 |
| X | 3464+97.83 | -14.33 | 674.96 | 675.04 |
| Y | 3465+07.83 | -14.33 | 674.93 | 674.96 |
| Q W. BRG. PIER 4 | 3465+14.66 | -14.33 | 674.90 | 674.90 |
| PIER 4 | 3465+15.83 | -14.33 | 674.90 | 674.90 |
| Q E. BRG. PIER 4 | 3465+17.00 | -14.33 | 674.89 | 674.89 |
| Z | 3465+27.00 | -14.33 | 674.85 | 674.88 |
| AA | 3465+37.00 | -14.33 | 674.81 | 674.86 |
| AB | 3465+47.00 | -14.33 | 674.77 | 674.82 |
| AC | 3465+57.00 | -14.33 | 674.73 | 674.77 |
| AD | 3465+67.00 | -14.33 | 674.68 | 674.71 |
| Q BRG. E. ABUT | 3465+80.58 | -14.33 | 674.61 | 674.61 |
| BK. E. ABUT | 3465+81.83 | -14.33 | 674.60 | 674.60 |

BEAM - 3

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|------------------|------------|--------|------------------------------|--|
| BK. W. ABUT | 3462+24.91 | -8.17 | 675.18 | 675.18 |
| Q BRG. W. ABUT | 3462+26.16 | -8.17 | 675.19 | 675.19 |
| A | 3462+36.16 | -8.17 | 675.21 | 675.23 |
| B | 3462+46.16 | -8.17 | 675.23 | 675.26 |
| C | 3462+56.16 | -8.17 | 675.25 | 675.28 |
| D | 3462+66.16 | -8.17 | 675.27 | 675.29 |
| Q W. BRG. PIER 1 | 3462+77.66 | -8.17 | 675.29 | 675.29 |
| PIER 1 | 3462+78.83 | -8.17 | 675.29 | 675.29 |
| Q E. BRG. PIER 1 | 3462+80.00 | -8.17 | 675.29 | 675.29 |
| E | 3462+90.00 | -8.17 | 675.30 | 675.35 |
| F | 3463+00.00 | -8.17 | 675.31 | 675.40 |
| G | 3463+10.00 | -8.17 | 675.32 | 675.43 |
| H | 3463+20.00 | -8.17 | 675.33 | 675.44 |
| I | 3463+30.00 | -8.17 | 675.33 | 675.43 |
| J | 3463+40.00 | -8.17 | 675.33 | 675.41 |
| K | 3463+50.00 | -8.17 | 675.33 | 675.37 |
| Q W. BRG. PIER 2 | 3463+56.66 | -8.17 | 675.33 | 675.33 |
| PIER 2 | 3463+57.83 | -8.17 | 675.33 | 675.33 |
| Q E. BRG. PIER 2 | 3463+59.00 | -8.17 | 675.33 | 675.33 |
| L | 3463+69.00 | -8.17 | 675.32 | 675.37 |
| M | 3463+79.00 | -8.17 | 675.32 | 675.40 |
| N | 3463+89.00 | -8.17 | 675.31 | 675.42 |
| O | 3463+99.00 | -8.17 | 675.30 | 675.41 |
| P | 3464+09.00 | -8.17 | 675.28 | 675.39 |
| Q | 3464+19.00 | -8.17 | 675.27 | 675.34 |
| R | 3464+29.00 | -8.17 | 675.25 | 675.29 |
| Q W. BRG. PIER 3 | 3464+35.83 | -8.17 | 675.24 | 675.24 |
| PIER 3 | 3464+36.83 | -8.17 | 675.23 | 675.23 |
| Q E. BRG. PIER 3 | 3464+37.83 | -8.17 | 675.23 | 675.23 |
| S | 3464+47.83 | -8.17 | 675.21 | 675.26 |
| T | 3464+57.83 | -8.17 | 675.19 | 675.27 |
| U | 3464+67.83 | -8.17 | 675.16 | 675.27 |
| V | 3464+77.83 | -8.17 | 675.13 | 675.25 |
| W | 3464+87.83 | -8.17 | 675.10 | 675.21 |
| X | 3464+97.83 | -8.17 | 675.07 | 675.15 |
| Y | 3465+07.83 | -8.17 | 675.03 | 675.07 |
| Q W. BRG. PIER 4 | 3465+14.66 | -8.17 | 675.01 | 675.01 |
| PIER 4 | 3465+15.83 | -8.17 | 675.01 | 675.01 |
| Q E. BRG. PIER 4 | 3465+17.00 | -8.17 | 675.00 | 675.00 |
| Z | 3465+27.00 | -8.17 | 674.96 | 674.99 |
| AA | 3465+37.00 | -8.17 | 674.92 | 674.97 |
| AB | 3465+47.00 | -8.17 | 674.88 | 674.93 |
| AC | 3465+57.00 | -8.17 | 674.83 | 674.88 |
| AD | 3465+67.00 | -8.17 | 674.79 | 674.82 |
| Q BRG. E. ABUT | 3465+80.58 | -8.17 | 674.72 | 674.72 |
| BK. E. ABUT | 3465+81.83 | -8.17 | 674.71 | 674.71 |



FILLET HEIGHTS



DEAD LOAD DEFLECTION DIAGRAM

Note: (Includes weight of concrete, excluding beams).
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.

TOP OF SLAB ELEVATIONS - 2
STRUCTURE NO. 006-0171 WB

| |
|---------------|
| DESIGNED - SP |
| CHECKED - PDF |
| DRAWN - SP |
| CHECKED - PDF |

To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown below, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

| | | | | | |
|--------------|---------------------|---------|--------------------|------------------|-----------|
| SHEET NO. 10 | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 344 | 104 |
| 59 SHEETS | FED. ROAD DIST. NO. | | ILLINOIS | FED. AID PROJECT | |
| | | | CONTRACT NO. 66908 | | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM - 4

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|------------------|------------|--------|------------------------------|--|
| BK. W. ABUT | 3462+24.91 | -2.00 | 675.28 | 675.28 |
| Q BRG. W. ABUT | 3462+26.16 | -2.00 | 675.28 | 675.28 |
| A | 3462+36.16 | -2.00 | 675.31 | 675.32 |
| B | 3462+46.16 | -2.00 | 675.33 | 675.35 |
| C | 3462+56.16 | -2.00 | 675.35 | 675.37 |
| D | 3462+66.16 | -2.00 | 675.37 | 675.38 |
| Q W. BRG. PIER 1 | 3462+77.66 | -2.00 | 675.38 | 675.38 |
| PIER 1 | 3462+78.83 | -2.00 | 675.38 | 675.38 |
| Q E. BRG. PIER 1 | 3462+80.00 | -2.00 | 675.39 | 675.39 |
| E | 3462+90.00 | -2.00 | 675.40 | 675.45 |
| F | 3463+00.00 | -2.00 | 675.41 | 675.50 |
| G | 3463+10.00 | -2.00 | 675.42 | 675.53 |
| H | 3463+20.00 | -2.00 | 675.42 | 675.54 |
| I | 3463+30.00 | -2.00 | 675.43 | 675.53 |
| J | 3463+40.00 | -2.00 | 675.43 | 675.50 |
| K | 3463+50.00 | -2.00 | 675.43 | 675.46 |
| Q W. BRG. PIER 2 | 3463+56.66 | -2.00 | 675.42 | 675.42 |
| PIER 2 | 3463+57.83 | -2.00 | 675.42 | 675.42 |
| Q E. BRG. PIER 2 | 3463+59.00 | -2.00 | 675.42 | 675.42 |
| L | 3463+69.00 | -2.00 | 675.42 | 675.47 |
| M | 3463+79.00 | -2.00 | 675.41 | 675.50 |
| N | 3463+89.00 | -2.00 | 675.40 | 675.51 |
| O | 3463+99.00 | -2.00 | 675.39 | 675.51 |
| P | 3464+09.00 | -2.00 | 675.38 | 675.48 |
| Q | 3464+19.00 | -2.00 | 675.36 | 675.44 |
| R | 3464+29.00 | -2.00 | 675.35 | 675.38 |
| Q W. BRG. PIER 3 | 3464+35.83 | -2.00 | 675.33 | 675.33 |
| PIER 3 | 3464+36.83 | -2.00 | 675.33 | 675.33 |
| Q E. BRG. PIER 3 | 3464+37.83 | -2.00 | 675.33 | 675.33 |
| S | 3464+47.83 | -2.00 | 675.31 | 675.36 |
| T | 3464+57.83 | -2.00 | 675.28 | 675.37 |
| U | 3464+67.83 | -2.00 | 675.26 | 675.37 |
| V | 3464+77.83 | -2.00 | 675.23 | 675.34 |
| W | 3464+87.83 | -2.00 | 675.20 | 675.30 |
| X | 3464+97.83 | -2.00 | 675.17 | 675.24 |
| Y | 3465+07.83 | -2.00 | 675.13 | 675.17 |
| Q W. BRG. PIER 4 | 3465+14.66 | -2.00 | 675.11 | 675.11 |
| PIER 4 | 3465+15.83 | -2.00 | 675.10 | 675.10 |
| Q E. BRG. PIER 4 | 3465+17.00 | -2.00 | 675.10 | 675.10 |
| Z | 3465+27.00 | -2.00 | 675.06 | 675.09 |
| AA | 3465+37.00 | -2.00 | 675.02 | 675.06 |
| AB | 3465+47.00 | -2.00 | 674.98 | 675.03 |
| AC | 3465+57.00 | -2.00 | 674.93 | 674.98 |
| AD | 3465+67.00 | -2.00 | 674.88 | 674.92 |
| Q BRG. E. ABUT | 3465+80.58 | -2.00 | 674.82 | 674.82 |
| BK. E. ABUT | 3465+81.83 | -2.00 | 674.81 | 674.81 |

PGL

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|------------------|------------|--------|------------------------------|--|
| BK. W. ABUT | 3462+24.91 | 0 | 675.31 | 675.31 |
| Q BRG. W. ABUT | 3462+26.16 | 0 | 675.32 | 675.32 |
| A | 3462+36.16 | 0 | 675.34 | 675.35 |
| B | 3462+46.16 | 0 | 675.36 | 675.38 |
| C | 3462+56.16 | 0 | 675.38 | 675.40 |
| D | 3462+66.16 | 0 | 675.40 | 675.41 |
| Q W. BRG. PIER 1 | 3462+77.66 | 0 | 675.41 | 675.41 |
| PIER 1 | 3462+78.83 | 0 | 675.42 | 675.42 |
| Q E. BRG. PIER 1 | 3462+80.00 | 0 | 675.42 | 675.42 |
| E | 3462+90.00 | 0 | 675.43 | 675.48 |
| F | 3463+00.00 | 0 | 675.44 | 675.53 |
| G | 3463+10.00 | 0 | 675.45 | 675.56 |
| H | 3463+20.00 | 0 | 675.45 | 675.57 |
| I | 3463+30.00 | 0 | 675.46 | 675.56 |
| J | 3463+40.00 | 0 | 675.46 | 675.54 |
| K | 3463+50.00 | 0 | 675.46 | 675.49 |
| Q W. BRG. PIER 2 | 3463+56.66 | 0 | 675.46 | 675.46 |
| PIER 2 | 3463+57.83 | 0 | 675.46 | 675.46 |
| Q E. BRG. PIER 2 | 3463+59.00 | 0 | 675.46 | 675.46 |
| L | 3463+69.00 | 0 | 675.45 | 675.50 |
| M | 3463+79.00 | 0 | 675.44 | 675.53 |
| N | 3463+89.00 | 0 | 675.43 | 675.54 |
| O | 3463+99.00 | 0 | 675.42 | 675.54 |
| P | 3464+09.00 | 0 | 675.41 | 675.51 |
| Q | 3464+19.00 | 0 | 675.39 | 675.47 |
| R | 3464+29.00 | 0 | 675.38 | 675.41 |
| Q W. BRG. PIER 3 | 3464+35.83 | 0 | 675.36 | 675.36 |
| PIER 3 | 3464+36.83 | 0 | 675.36 | 675.36 |
| Q E. BRG. PIER 3 | 3464+37.83 | 0 | 675.36 | 675.36 |
| S | 3464+47.83 | 0 | 675.34 | 675.39 |
| T | 3464+57.83 | 0 | 675.31 | 675.40 |
| U | 3464+67.83 | 0 | 675.29 | 675.40 |
| V | 3464+77.83 | 0 | 675.26 | 675.37 |
| W | 3464+87.83 | 0 | 675.23 | 675.33 |
| X | 3464+97.83 | 0 | 675.20 | 675.28 |
| Y | 3465+07.83 | 0 | 675.16 | 675.20 |
| Q W. BRG. PIER 4 | 3465+14.66 | 0 | 675.14 | 675.14 |
| PIER 4 | 3465+15.83 | 0 | 675.13 | 675.13 |
| Q E. BRG. PIER 4 | 3465+17.00 | 0 | 675.13 | 675.13 |
| Z | 3465+27.00 | 0 | 675.09 | 675.12 |
| AA | 3465+37.00 | 0 | 675.05 | 675.09 |
| AB | 3465+47.00 | 0 | 675.01 | 675.06 |
| AC | 3465+57.00 | 0 | 674.96 | 675.01 |
| AD | 3465+67.00 | 0 | 674.91 | 674.95 |
| Q BRG. E. ABUT | 3465+80.58 | 0 | 674.85 | 674.85 |
| BK. E. ABUT | 3465+81.83 | 0 | 674.84 | 674.84 |

BEAM - 5

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|------------------|------------|--------|------------------------------|--|
| BK. W. ABUT | 3462+24.91 | 4.17 | 675.25 | 675.25 |
| Q BRG. W. ABUT | 3462+26.16 | 4.17 | 675.25 | 675.25 |
| A | 3462+36.16 | 4.17 | 675.27 | 675.29 |
| B | 3462+46.16 | 4.17 | 675.30 | 675.32 |
| C | 3462+56.16 | 4.17 | 675.31 | 675.34 |
| D | 3462+66.16 | 4.17 | 675.33 | 675.35 |
| Q W. BRG. PIER 1 | 3462+77.66 | 4.17 | 675.35 | 675.35 |
| PIER 1 | 3462+78.83 | 4.17 | 675.35 | 675.35 |
| Q E. BRG. PIER 1 | 3462+80.00 | 4.17 | 675.35 | 675.35 |
| E | 3462+90.00 | 4.17 | 675.36 | 675.42 |
| F | 3463+00.00 | 4.17 | 675.37 | 675.46 |
| G | 3463+10.00 | 4.17 | 675.38 | 675.49 |
| H | 3463+20.00 | 4.17 | 675.39 | 675.50 |
| I | 3463+30.00 | 4.17 | 675.39 | 675.50 |
| J | 3463+40.00 | 4.17 | 675.39 | 675.47 |
| K | 3463+50.00 | 4.17 | 675.39 | 675.43 |
| Q W. BRG. PIER 2 | 3463+56.66 | 4.17 | 675.39 | 675.39 |
| PIER 2 | 3463+57.83 | 4.17 | 675.39 | 675.39 |
| Q E. BRG. PIER 2 | 3463+59.00 | 4.17 | 675.39 | 675.39 |
| L | 3463+69.00 | 4.17 | 675.39 | 675.44 |
| M | 3463+79.00 | 4.17 | 675.38 | 675.47 |
| N | 3463+89.00 | 4.17 | 675.37 | 675.48 |
| O | 3463+99.00 | 4.17 | 675.36 | 675.47 |
| P | 3464+09.00 | 4.17 | 675.34 | 675.45 |
| Q | 3464+19.00 | 4.17 | 675.33 | 675.41 |
| R | 3464+29.00 | 4.17 | 675.31 | 675.35 |
| Q W. BRG. PIER 3 | 3464+35.83 | 4.17 | 675.30 | 675.30 |
| PIER 3 | 3464+36.83 | 4.17 | 675.30 | 675.30 |
| Q E. BRG. PIER 3 | 3464+37.83 | 4.17 | 675.29 | 675.29 |
| S | 3464+47.83 | 4.17 | 675.27 | 675.32 |
| T | 3464+57.83 | 4.17 | 675.25 | 675.34 |
| U | 3464+67.83 | 4.17 | 675.22 | 675.33 |
| V | 3464+77.83 | 4.17 | 675.19 | 675.31 |
| W | 3464+87.83 | 4.17 | 675.16 | 675.27 |
| X | 3464+97.83 | 4.17 | 675.13 | 675.21 |
| Y | 3465+07.83 | 4.17 | 675.10 | 675.13 |
| Q W. BRG. PIER 4 | 3465+14.66 | 4.17 | 675.07 | 675.07 |
| PIER 4 | 3465+15.83 | 4.17 | 675.07 | 675.07 |
| Q E. BRG. PIER 4 | 3465+17.00 | 4.17 | 675.06 | 675.06 |
| Z | 3465+27.00 | 4.17 | 675.03 | 675.05 |
| AA | 3465+37.00 | 4.17 | 674.98 | 675.03 |
| AB | 3465+47.00 | 4.17 | 674.94 | 674.99 |
| AC | 3465+57.00 | 4.17 | 674.90 | 674.95 |
| AD | 3465+67.00 | 4.17 | 674.85 | 674.88 |
| Q BRG. E. ABUT | 3465+80.58 | 4.17 | 674.78 | 674.78 |
| BK. E. ABUT | 3465+81.83 | 4.17 | 674.78 | 674.78 |

| |
|---------------|
| DESIGNED - SP |
| CHECKED - PDF |
| DRAWN - SP |
| CHECKED - PDF |

TOP OF SLAB ELEVATIONS - 3
STRUCTURE NO. 006-0171 WB

| | | | | | |
|---------------------|--------------------|----------|------------------|--------------|-----------|
| SHEET NO. 11 | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 344 | 165 |
| 59 SHEETS | CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. | | ILLINOIS | FED. AID PROJECT | | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM - 6

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|------------------|------------|--------|------------------------------|--|
| BK. W. ABUT | 3462+24.91 | 10.33 | 675.15 | 675.15 |
| Q BRG. W. ABUT | 3462+26.16 | 10.33 | 675.15 | 675.15 |
| A | 3462+36.16 | 10.33 | 675.18 | 675.19 |
| B | 3462+46.16 | 10.33 | 675.20 | 675.22 |
| C | 3462+56.16 | 10.33 | 675.22 | 675.24 |
| D | 3462+66.16 | 10.33 | 675.24 | 675.25 |
| Q W. BRG. PIER 1 | 3462+77.66 | 10.33 | 675.25 | 675.25 |
| PIER 1 | 3462+78.83 | 10.33 | 675.25 | 675.25 |
| Q E. BRG. PIER 1 | 3462+80.00 | 10.33 | 675.26 | 675.26 |
| E | 3462+90.00 | 10.33 | 675.27 | 675.32 |
| F | 3463+00.00 | 10.33 | 675.28 | 675.37 |
| G | 3463+10.00 | 10.33 | 675.29 | 675.40 |
| H | 3463+20.00 | 10.33 | 675.29 | 675.41 |
| I | 3463+30.00 | 10.33 | 675.30 | 675.40 |
| J | 3463+40.00 | 10.33 | 675.30 | 675.37 |
| K | 3463+50.00 | 10.33 | 675.30 | 675.33 |
| Q W. BRG. PIER 2 | 3463+56.66 | 10.33 | 675.29 | 675.29 |
| PIER 2 | 3463+57.83 | 10.33 | 675.29 | 675.29 |
| Q E. BRG. PIER 2 | 3463+59.00 | 10.33 | 675.29 | 675.29 |
| L | 3463+69.00 | 10.33 | 675.29 | 675.34 |
| M | 3463+79.00 | 10.33 | 675.28 | 675.37 |
| N | 3463+89.00 | 10.33 | 675.27 | 675.38 |
| O | 3463+99.00 | 10.33 | 675.26 | 675.38 |
| P | 3464+09.00 | 10.33 | 675.25 | 675.35 |
| Q | 3464+19.00 | 10.33 | 675.23 | 675.31 |
| R | 3464+29.00 | 10.33 | 675.22 | 675.25 |
| Q W. BRG. PIER 3 | 3464+35.83 | 10.33 | 675.20 | 675.20 |
| PIER 3 | 3464+36.83 | 10.33 | 675.20 | 675.20 |
| Q E. BRG. PIER 3 | 3464+37.83 | 10.33 | 675.20 | 675.20 |
| S | 3464+47.83 | 10.33 | 675.18 | 675.23 |
| T | 3464+57.83 | 10.33 | 675.15 | 675.24 |
| U | 3464+67.83 | 10.33 | 675.13 | 675.24 |
| V | 3464+77.83 | 10.33 | 675.10 | 675.21 |
| W | 3464+87.83 | 10.33 | 675.07 | 675.17 |
| X | 3464+97.83 | 10.33 | 675.04 | 675.11 |
| Y | 3465+07.83 | 10.33 | 675.00 | 675.04 |
| Q W. BRG. PIER 4 | 3465+14.66 | 10.33 | 674.98 | 674.98 |
| PIER 4 | 3465+15.83 | 10.33 | 674.97 | 674.97 |
| Q E. BRG. PIER 4 | 3465+17.00 | 10.33 | 674.97 | 674.97 |
| Z | 3465+27.00 | 10.33 | 674.93 | 674.96 |
| AA | 3465+37.00 | 10.33 | 674.89 | 674.93 |
| AB | 3465+47.00 | 10.33 | 674.85 | 674.90 |
| AC | 3465+57.00 | 10.33 | 674.80 | 674.85 |
| AD | 3465+67.00 | 10.33 | 674.75 | 674.79 |
| Q BRG. E. ABUT | 3465+80.58 | 10.33 | 674.69 | 674.69 |
| BK. E. ABUT | 3465+81.83 | 10.33 | 674.68 | 674.68 |

BEAM - 7

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|------------------|------------|--------|------------------------------|--|
| BK. W. ABUT | 3462+24.91 | 16.50 | 675.03 | 675.03 |
| Q BRG. W. ABUT | 3462+26.16 | 16.50 | 675.03 | 675.03 |
| A | 3462+36.16 | 16.50 | 675.06 | 675.07 |
| B | 3462+46.16 | 16.50 | 675.08 | 675.10 |
| C | 3462+56.16 | 16.50 | 675.10 | 675.12 |
| D | 3462+66.16 | 16.50 | 675.12 | 675.13 |
| Q W. BRG. PIER 1 | 3462+77.66 | 16.50 | 675.13 | 675.13 |
| PIER 1 | 3462+78.83 | 16.50 | 675.13 | 675.13 |
| Q E. BRG. PIER 1 | 3462+80.00 | 16.50 | 675.14 | 675.14 |
| E | 3462+90.00 | 16.50 | 675.15 | 675.20 |
| F | 3463+00.00 | 16.50 | 675.16 | 675.25 |
| G | 3463+10.00 | 16.50 | 675.17 | 675.28 |
| H | 3463+20.00 | 16.50 | 675.17 | 675.29 |
| I | 3463+30.00 | 16.50 | 675.18 | 675.28 |
| J | 3463+40.00 | 16.50 | 675.18 | 675.25 |
| K | 3463+50.00 | 16.50 | 675.18 | 675.21 |
| Q W. BRG. PIER 2 | 3463+56.66 | 16.50 | 675.17 | 675.17 |
| PIER 2 | 3463+57.83 | 16.50 | 675.17 | 675.17 |
| Q E. BRG. PIER 2 | 3463+59.00 | 16.50 | 675.17 | 675.17 |
| L | 3463+69.00 | 16.50 | 675.17 | 675.22 |
| M | 3463+79.00 | 16.50 | 675.16 | 675.25 |
| N | 3463+89.00 | 16.50 | 675.15 | 675.26 |
| O | 3463+99.00 | 16.50 | 675.14 | 675.26 |
| P | 3464+09.00 | 16.50 | 675.13 | 675.23 |
| Q | 3464+19.00 | 16.50 | 675.11 | 675.19 |
| R | 3464+29.00 | 16.50 | 675.10 | 675.13 |
| Q W. BRG. PIER 3 | 3464+35.83 | 16.50 | 675.08 | 675.08 |
| PIER 3 | 3464+36.83 | 16.50 | 675.08 | 675.08 |
| Q E. BRG. PIER 3 | 3464+37.83 | 16.50 | 675.08 | 675.08 |
| S | 3464+47.83 | 16.50 | 675.06 | 675.11 |
| T | 3464+57.83 | 16.50 | 675.03 | 675.12 |
| U | 3464+67.83 | 16.50 | 675.01 | 675.12 |
| V | 3464+77.83 | 16.50 | 674.98 | 675.09 |
| W | 3464+87.83 | 16.50 | 674.95 | 675.05 |
| X | 3464+97.83 | 16.50 | 674.92 | 674.99 |
| Y | 3465+07.83 | 16.50 | 674.88 | 674.92 |
| Q W. BRG. PIER 4 | 3465+14.66 | 16.50 | 674.86 | 674.86 |
| PIER 4 | 3465+15.83 | 16.50 | 674.85 | 674.85 |
| Q E. BRG. PIER 4 | 3465+17.00 | 16.50 | 674.85 | 674.85 |
| Z | 3465+27.00 | 16.50 | 674.81 | 674.84 |
| AA | 3465+37.00 | 16.50 | 674.77 | 674.81 |
| AB | 3465+47.00 | 16.50 | 674.73 | 674.78 |
| AC | 3465+57.00 | 16.50 | 674.68 | 674.73 |
| AD | 3465+67.00 | 16.50 | 674.63 | 674.67 |
| Q BRG. E. ABUT | 3465+80.58 | 16.50 | 674.57 | 674.57 |
| BK. E. ABUT | 3465+81.83 | 16.50 | 674.56 | 674.56 |

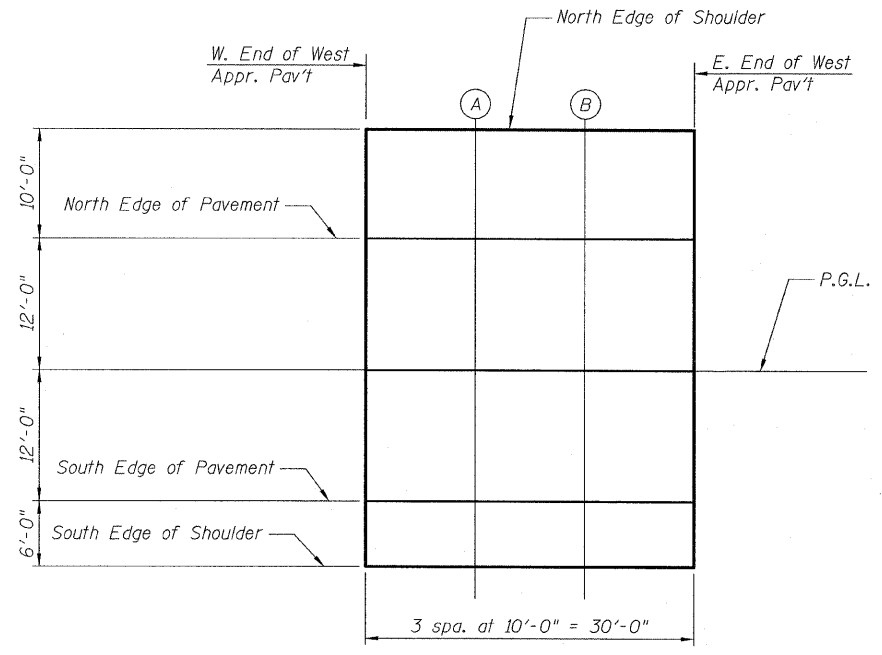
| |
|---------------|
| DESIGNED - SP |
| CHECKED - PDF |
| DRAWN - SP |
| CHECKED - PDF |

TOP OF SLAB ELEVATIONS - 4
STRUCTURE NO. 006-0171 WB

| | | | | | |
|--------------------|---------------------|---------|---------------------------|--------------|-----------|
| SHEET NO. 12 | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 344 | 106 |
| 59 SHEETS | FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |
| CONTRACT NO. 66908 | | | | | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN
West Approach

NORTH EDGE OF SHOULDER

| Location | Station | Offset | Theoretical Grade Elevations |
|-------------------------|------------|---------|------------------------------|
| W. End West Appr. Pav't | 3461+94.91 | -22.00' | 674.85 |
| A | 3462+04.91 | -22.00' | 674.87 |
| B | 3462+14.91 | -22.00' | 674.89 |
| E. End West Appr. Pav't | 3462+24.91 | -22.00' | 674.91 |

NORTH EDGE OF PAVEMENT

| Location | Station | Offset | Theoretical Grade Elevations |
|-------------------------|------------|---------|------------------------------|
| W. End West Appr. Pav't | 3461+94.91 | -12.00' | 675.05 |
| A | 3462+04.91 | -12.00' | 675.07 |
| B | 3462+14.91 | -12.00' | 675.10 |
| E. End West Appr. Pav't | 3462+24.91 | -12.00' | 675.12 |

P.G.L.

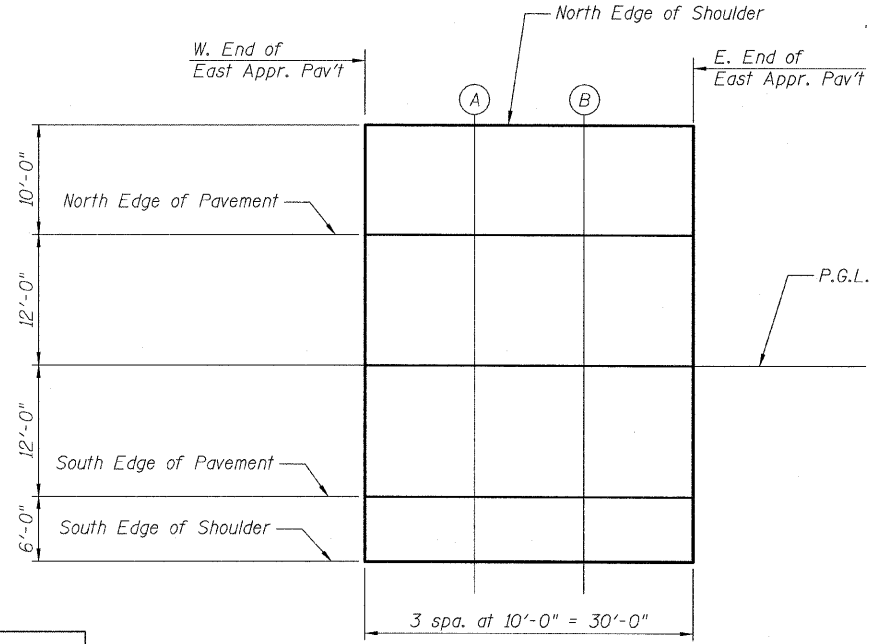
| Location | Station | Offset | Theoretical Grade Elevations |
|-------------------------|------------|--------|------------------------------|
| W. End West Appr. Pav't | 3461+94.91 | 0.00' | 675.24 |
| A | 3462+04.91 | 0.00' | 675.26 |
| B | 3462+14.91 | 0.00' | 675.28 |
| E. End West Appr. Pav't | 3462+24.91 | 0.00' | 675.31 |

SOUTH EDGE OF PAVEMENT

| Location | Station | Offset | Theoretical Grade Elevations |
|-------------------------|------------|--------|------------------------------|
| W. End West Appr. Pav't | 3461+94.91 | 12.00' | 675.05 |
| A | 3462+04.91 | 12.00' | 675.07 |
| B | 3462+14.91 | 12.00' | 675.10 |
| E. End West Appr. Pav't | 3462+24.91 | 12.00' | 675.12 |

SOUTH EDGE OF SHOULDER

| Location | Station | Offset | Theoretical Grade Elevations |
|-------------------------|------------|--------|------------------------------|
| W. End West Appr. Pav't | 3461+94.91 | 18.00' | 674.93 |
| A | 3462+04.91 | 18.00' | 674.95 |
| B | 3462+14.91 | 18.00' | 674.97 |
| E. End West Appr. Pav't | 3462+24.91 | 18.00' | 674.99 |



PLAN
East Approach

NORTH EDGE OF SHOULDER

| Location | Station | Offset | Theoretical Grade Elevations |
|-------------------------|------------|---------|------------------------------|
| W. End East Appr. Pav't | 3465+81.83 | -22.00' | 674.45 |
| A | 3465+91.83 | -22.00' | 674.40 |
| B | 3466+01.83 | -22.00' | 674.36 |
| E. End East Appr. Pav't | 3466+11.83 | -22.00' | 674.32 |

NORTH EDGE OF PAVEMENT

| Location | Station | Offset | Theoretical Grade Elevations |
|-------------------------|------------|---------|------------------------------|
| W. End East Appr. Pav't | 3465+81.83 | -12.00' | 674.65 |
| A | 3465+91.83 | -12.00' | 674.61 |
| B | 3466+01.83 | -12.00' | 674.57 |
| E. End East Appr. Pav't | 3466+11.83 | -12.00' | 674.53 |

P.G.L.

| Location | Station | Offset | Theoretical Grade Elevations |
|-------------------------|------------|--------|------------------------------|
| W. End East Appr. Pav't | 3465+81.83 | 0.00' | 674.84 |
| A | 3465+91.83 | 0.00' | 674.80 |
| B | 3466+01.83 | 0.00' | 674.76 |
| E. End East Appr. Pav't | 3466+11.83 | 0.00' | 674.72 |

SOUTH EDGE OF PAVEMENT

| Location | Station | Offset | Theoretical Grade Elevations |
|-------------------------|------------|--------|------------------------------|
| W. End East Appr. Pav't | 3465+81.83 | 12.00' | 674.65 |
| A | 3465+91.83 | 12.00' | 674.61 |
| B | 3466+01.83 | 12.00' | 674.57 |
| E. End East Appr. Pav't | 3466+11.83 | 12.00' | 674.53 |

SOUTH EDGE OF SHOULDER

| Location | Station | Offset | Theoretical Grade Elevations |
|-------------------------|------------|--------|------------------------------|
| W. End East Appr. Pav't | 3465+81.83 | 18.00' | 674.53 |
| A | 3465+91.83 | 18.00' | 674.48 |
| B | 3466+01.83 | 18.00' | 674.44 |
| E. End East Appr. Pav't | 3466+11.83 | 18.00' | 674.41 |

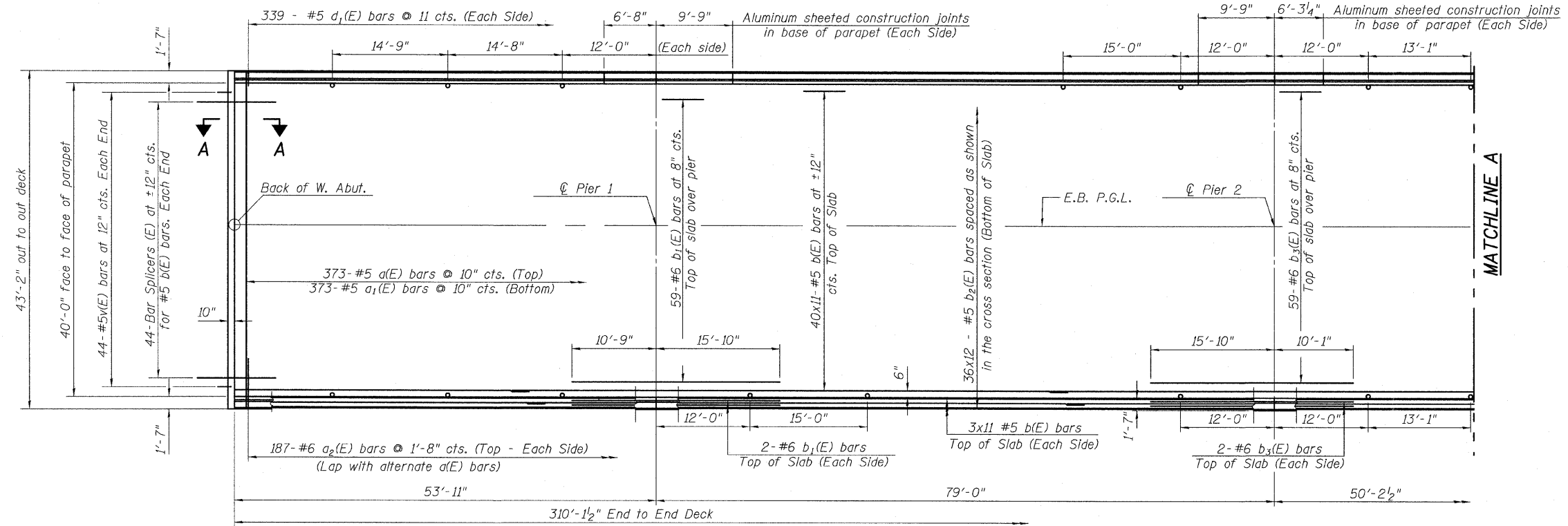
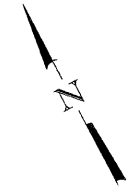
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| DESIGNED - IM |
| CHECKED - PDF |
| DRAWN - IM |
| CHECKED - PDF |

**TOP OF APPROACH SLAB ELEVATIONS
STRUCTURE NO. 006-0171 WB**

| | | | | | |
|--------------------|---------------------|---------|---------------------------|--------------|-----------|
| SHEET NO. 13 | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 344 | 107 |
| 59 SHEETS | FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |
| CONTRACT NO. 66908 | | | | | |

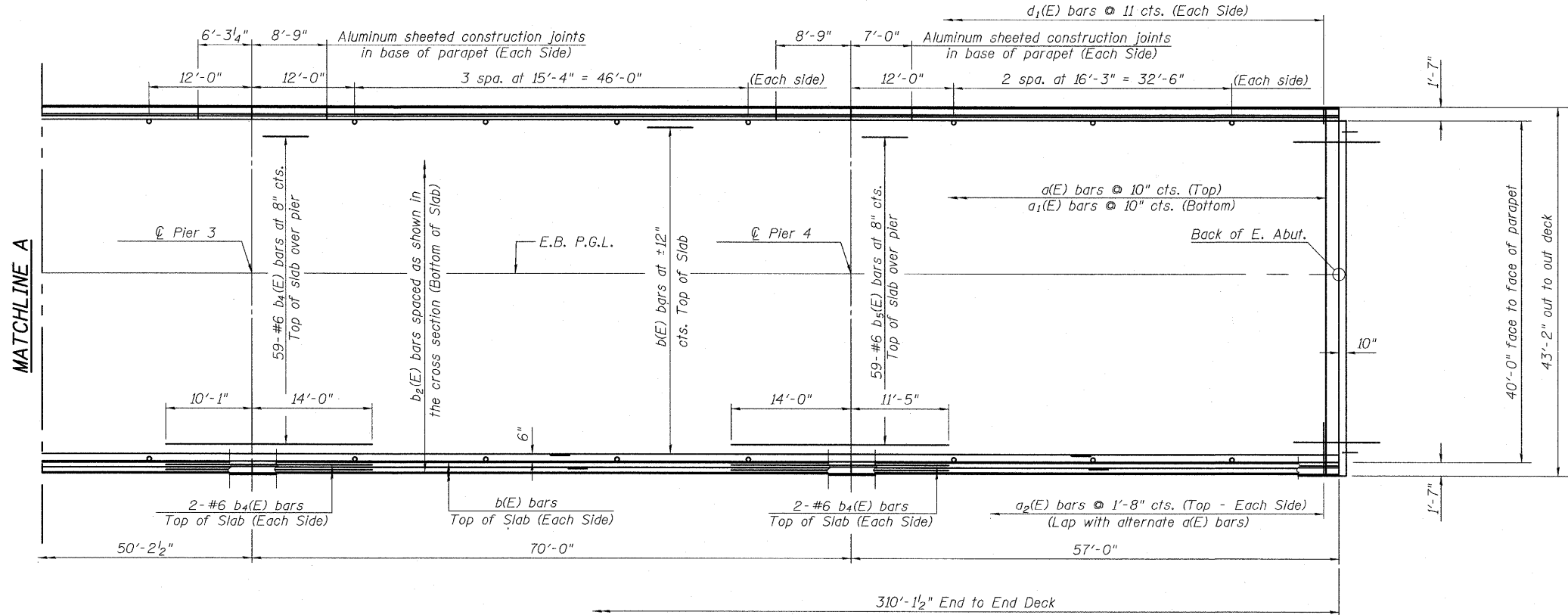
TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



NOTES

1. For Additional Superstructure Details, see Sheets 15 to 16.
2. For Bill of Material, see Sheet 15.
3. For Section A-A see Sheet 21.
4. Bars indicated thus: 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
5. For Bar Splicer Details, see Sheet 52.
6. For Parapet Reinforcement, see Sheet 16.



| | |
|------------|------|
| DESIGNED - | I.M. |
| CHECKED - | PDF |
| DRAWN - | I.M. |
| CHECKED - | PDF |

MINIMUM BAR LAPS
#5 bar = 2'-2"
#6 bar = 2'-7"

PLAN - EASTBOUND BRIDGE

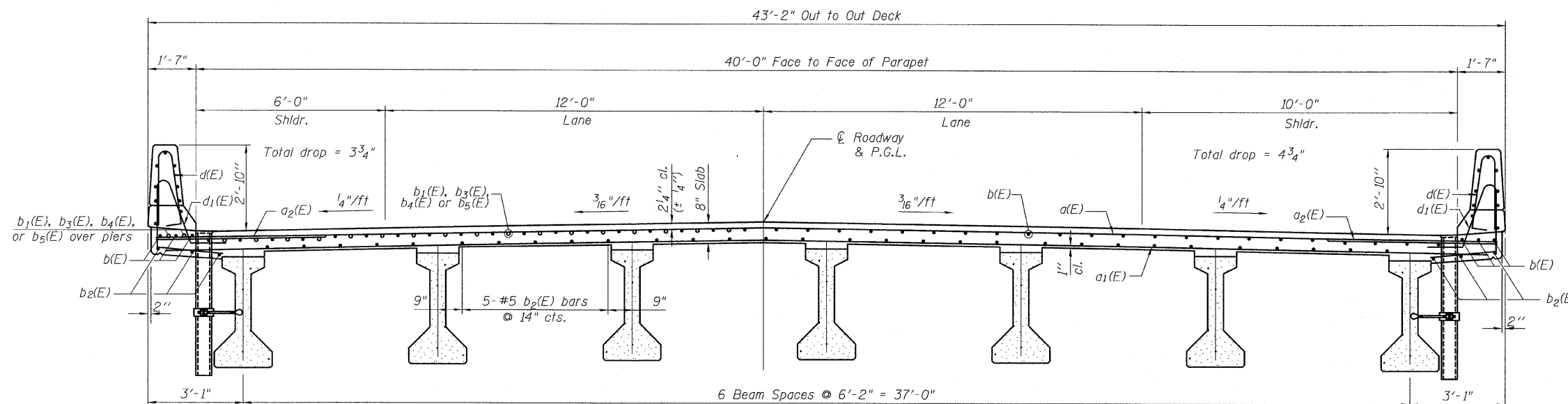
**SUPERSTRUCTURE
STRUCTURE NO. 006-0170 EB**

| | | | | | |
|---------------------|--------------------|---------------------------|--------|--------------|-----------|
| SHEET NO. 14 | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 244 | 108 |
| 59 SHEETS | CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | | |

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**SUPERSTRUCTURE
BILL OF MATERIAL**

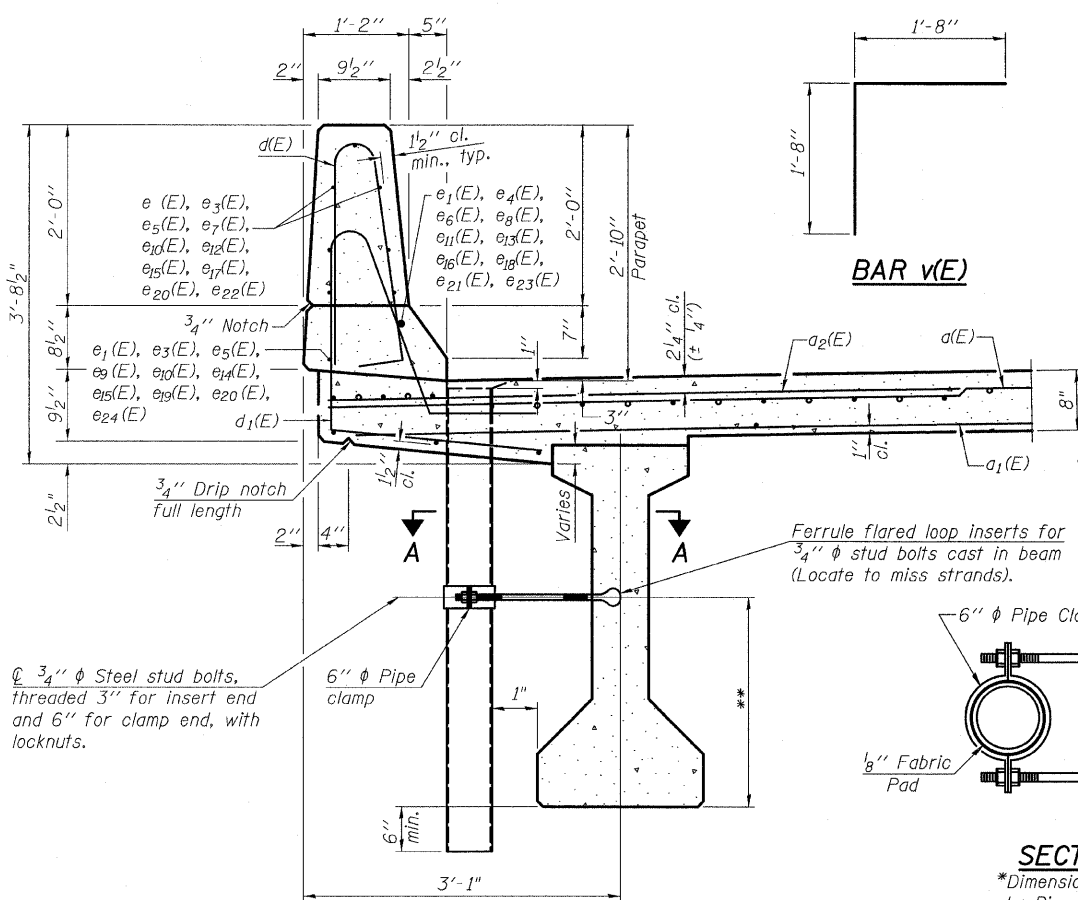


| Bar | No. | Size | Length | Shape |
|----------------------------------|-----|----------|---------|--------|
| a(E) | 373 | #5 | 42'-5" | — |
| a1(E) | 373 | #5 | 41'-10" | — |
| a2(E) | 374 | #6 | 6'-0" | — |
| b(E) | 506 | #5 | 30'-2" | — |
| b1(E) | 63 | #6 | 26'-7" | — |
| b2(E) | 432 | #5 | 27'-10" | — |
| b3(E) | 63 | #6 | 25'-11" | — |
| b4(E) | 63 | #6 | 24'-1" | — |
| b5(E) | 63 | #6 | 25'-5" | — |
| d(E) | 678 | #5 | 5'-7" | ┌ |
| d1(E) | 678 | #5 | 7'-6" | ┌ |
| e(E) | 42 | #4 | 15'-6" | — |
| e1(E) | 4 | #8 | 25'-3" | — |
| e2(E) | 4 | #4 | 24'-2" | — |
| e3(E) | 16 | #4 | 6'-5" | — |
| e4(E) | 2 | #8 | 6'-5" | — |
| e5(E) | 32 | #4 | 9'-6" | — |
| e6(E) | 4 | #8 | 9'-6" | — |
| e7(E) | 42 | #4 | 19'-7" | — |
| e8(E) | 4 | #8 | 31'-4" | — |
| e9(E) | 4 | #4 | 30'-4" | — |
| e10(E) | 32 | #4 | 6'-0" | — |
| e11(E) | 4 | #8 | 6'-0" | — |
| e12(E) | 28 | #4 | 18'-7" | — |
| e13(E) | 4 | #8 | 20'-5" | — |
| e14(E) | 4 | #4 | 19'-5" | — |
| e15(E) | 32 | #4 | 8'-6" | — |
| e16(E) | 4 | #8 | 8'-6" | — |
| e17(E) | 42 | #4 | 17'-3" | — |
| e18(E) | 4 | #8 | 27'-10" | — |
| e19(E) | 4 | #4 | 26'-10" | — |
| e20(E) | 16 | #4 | 6'-9" | — |
| e21(E) | 2 | #8 | 6'-9" | — |
| e22(E) | 42 | #4 | 16'-5" | — |
| e23(E) | 4 | #8 | 26'-7" | — |
| e24(E) | 4 | #4 | 25'-7" | — |
| m(E) | 96 | #4 | 5'-4" | — |
| m1(E) | 60 | #6 | 4'-0" | — |
| m2(E) | 28 | #8 | 5'-10" | — |
| m3(E) | 4 | #6 | 2'-0" | — |
| m4(E) | 28 | #6 | 8'-11" | — |
| m5(E) | 10 | #6 | 42'-10" | — |
| s(E) | 90 | #4 | 10'-10" | ┌ |
| s1(E) | 30 | #4 | 11'-2" | ┌ |
| s2(E) | 72 | #4 | 10'-11" | ┌ |
| s3(E) | 84 | #5 | 6'-9" | ┌ |
| v(E) | 88 | #5 | 3'-4" | ┌ |
| Reinforcement Bars, Epoxy Coated | | Lbs. | | 92,980 |
| Concrete Superstructure | | Cu. Yds. | | 486.0 |

NEAR PIER

CROSS SECTION
(Looking East)

NEAR MIDSPAN



BAR v(E)

BAR d(E)

BAR d1(E)

BAR s1(E)

BAR s3(E)

BAR s(E)

BAR s2(E)

SECTION A-A

*Dimension as required by Pipe Clamp

FIBERGLASS PIPE

ALUMINUM TUBE

TOP PLAN

(Showing Aluminum Tube)

TOP PLAN

| |
|-----------------|
| DESIGNED - I.M. |
| CHECKED - PDF |
| DRAWN - I.M. |
| CHECKED - PDF |

SECTION THRU PARAPET

**For insert locations See PPC I-beam sheets.

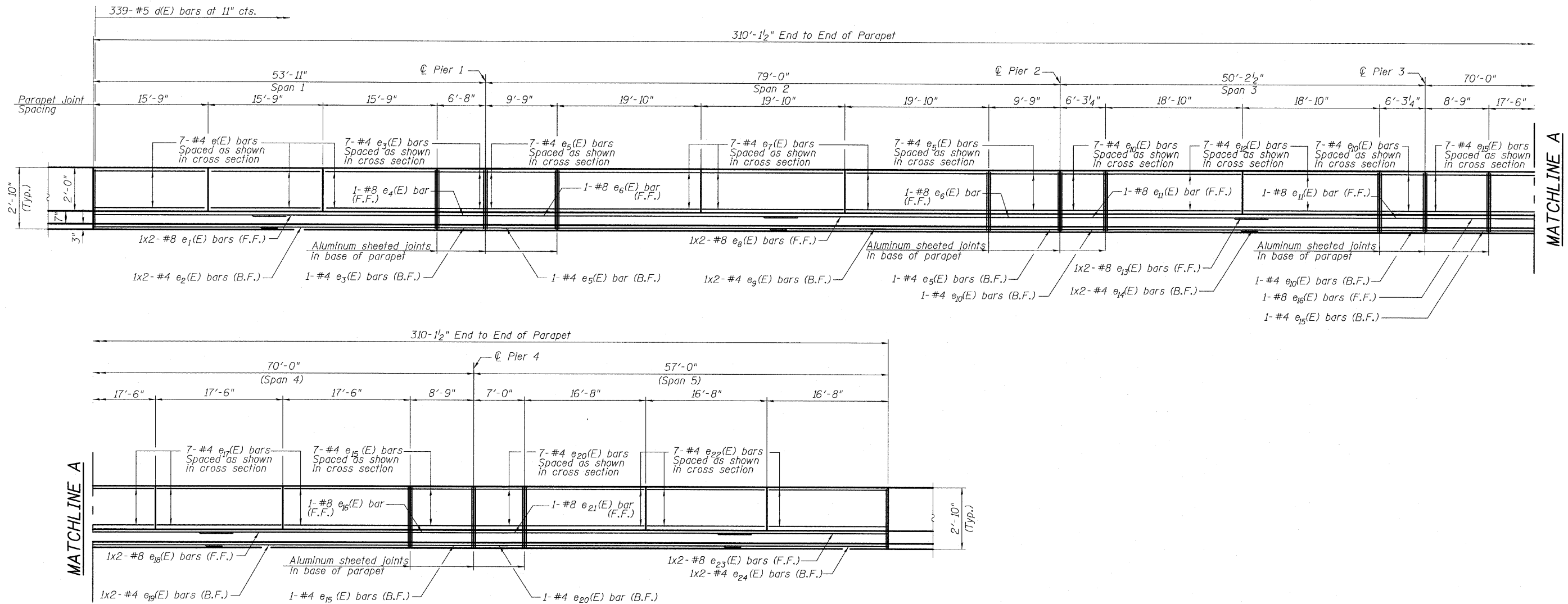
Notes:
Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
The exterior surfaces of the floor drains shall be coated or pigmented by the manufacturer with a color that matches the concrete.
The clamping device and inserts shall be galvanized according to AASHTO M 232.

**SUPERSTRUCTURE DETAILS - I
STRUCTURE NO. 006-0170 EB**

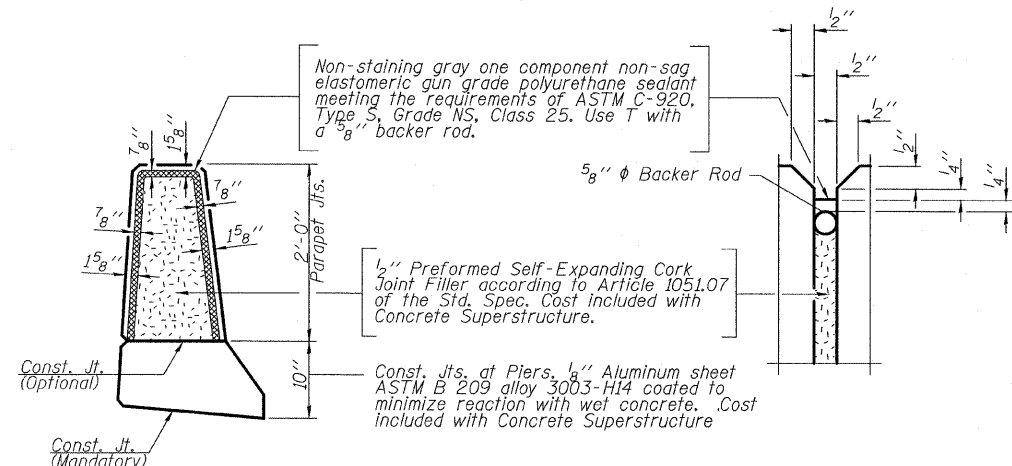
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|---------------------------|---------------------|--------------|------------------|---------------------|------------------|
| SHEET NO. 15 59 SHEETS | F.A. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 109 |
| | CONTRACT NO. 66908 | | | | |
| | FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



INSIDE ELEVATION OF NORTH PARAPET
(South Parapet opposite hand)



PARAPET JOINT DETAILS

MINIMUM BAR LAPS
#4 bar = 1'-4"
#8 bar = 3'-5"

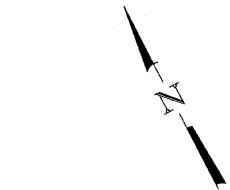
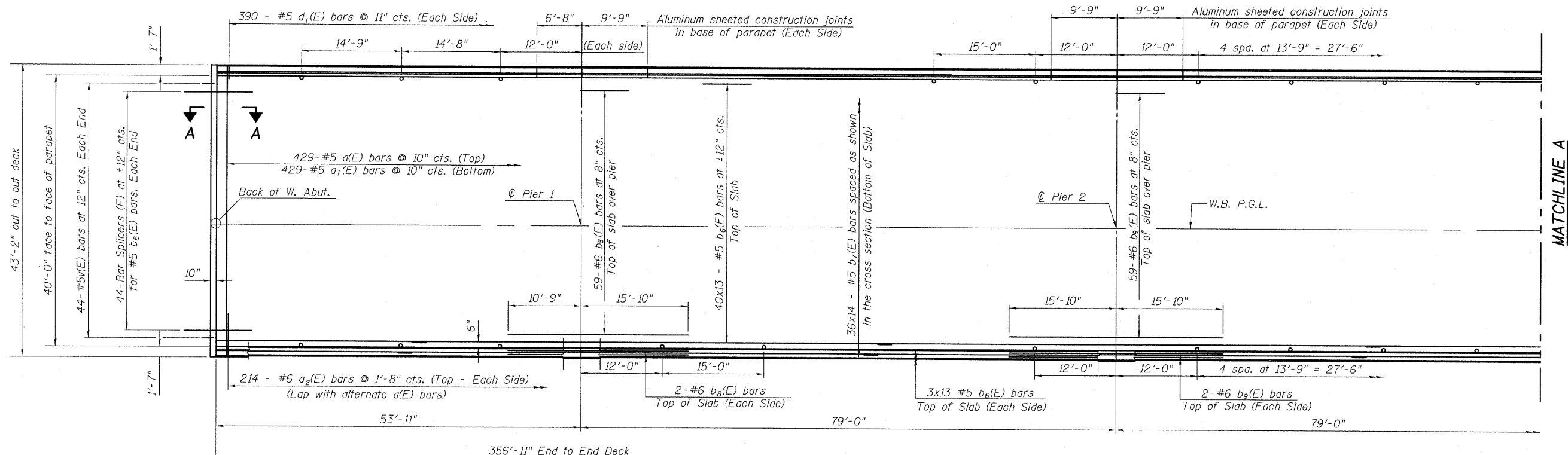
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| DESIGNED - I.M. |
| CHECKED - PDF |
| DRAWN - I.M. |
| CHECKED - PDF |

SUPERSTRUCTURE DETAILS - II
STRUCTURE NO. 006-0170 EB

| | | | | | |
|---------------------|--------------------|---------------------------|--------|--------------|-----------|
| SHEET NO. 16 | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 344 | 110 |
| 59 SHEETS | CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | | |

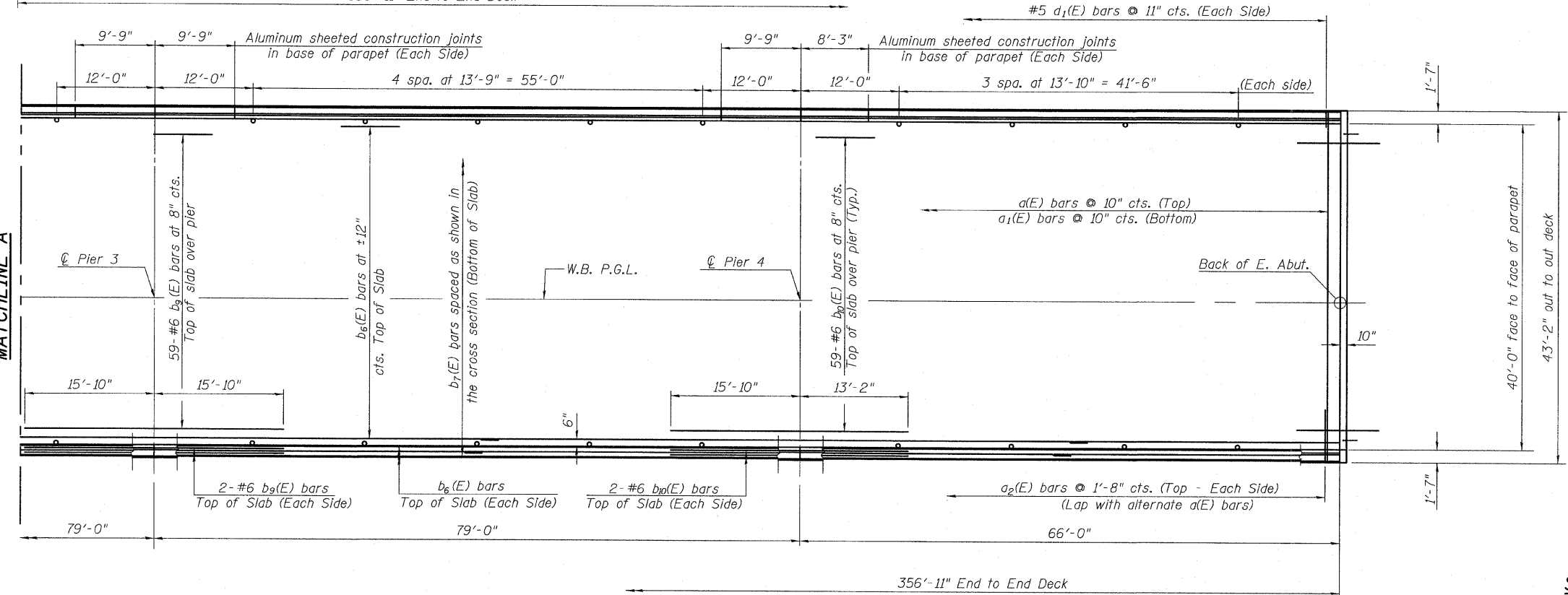
TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



NOTES

1. For Additional Superstructure Details, see Sheets 18 to 19.
2. For Bill of Material, see Sheet 18.
3. For Section A-A see Sheet 21.
4. Bars indicated thus: 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
5. For Bar Splicer Details, see Sheet 52.
6. For Parapet Reinforcement, see Sheet 19.



| | |
|------------|------|
| DESIGNED - | I.M. |
| CHECKED - | PDF |
| DRAWN - | I.M. |
| CHECKED - | PDF |

MINIMUM BAR LAPS
#5 bar = 2'-2"
#6 bar = 2'-7"

PLAN - WESTBOUND BRIDGE

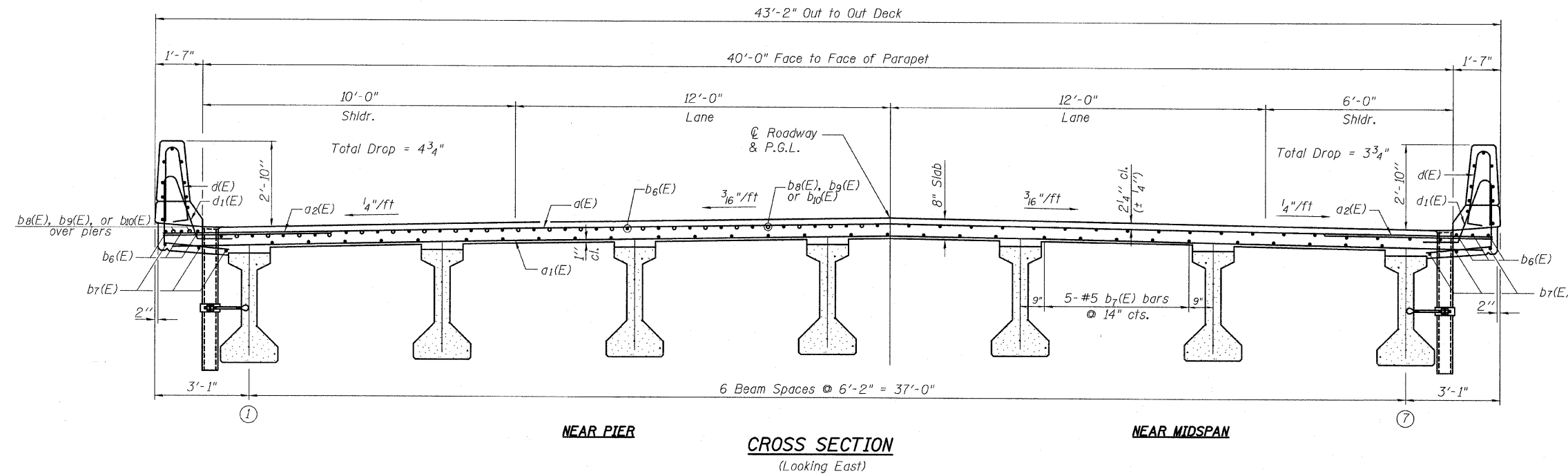
**SUPERSTRUCTURE
STRUCTURE NO. 006-0171 WB**

| | | | | | |
|---------------------------|-----------|---------|---------------------------|--------------|-----------|
| SHEET NO. 17 59 SHEETS | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 344 | 111 |
| FED. ROAD DIST. NO. | | | ILLINOIS FED. AID PROJECT | | |
| CONTRACT NO. 66908 | | | | | |

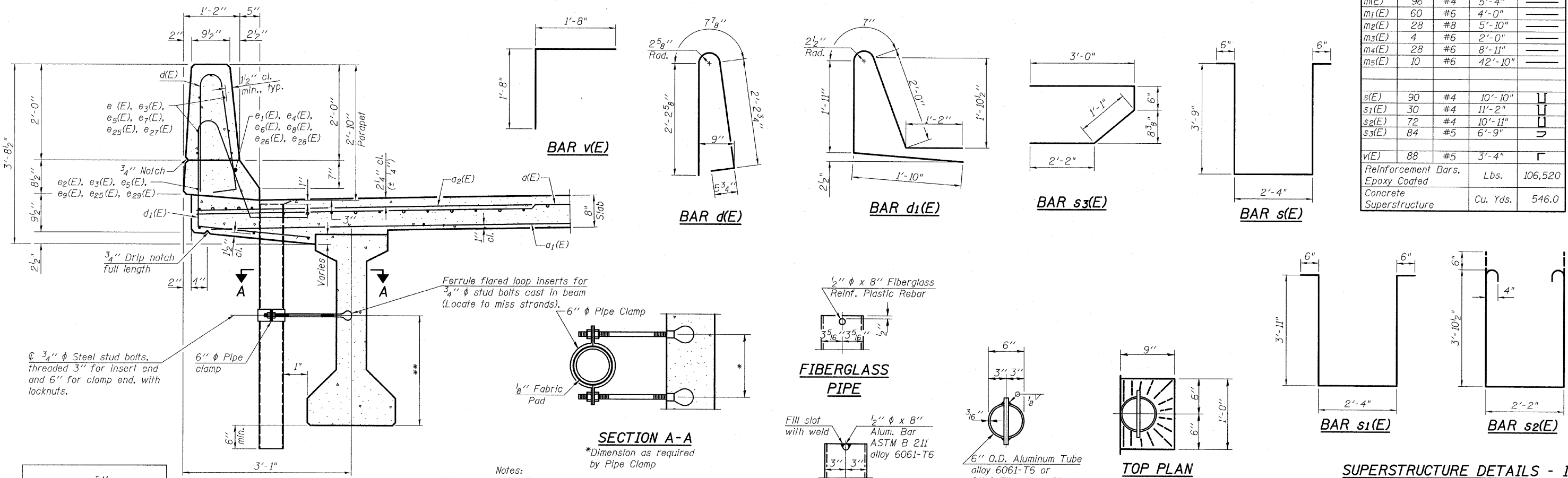
TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
BILL OF MATERIAL



| Bar | No. | Size | Length | Shape |
|----------------------------------|-----|----------|---------|-------|
| a(E) | 429 | #5 | 42'-5" | — |
| a1(E) | 429 | #5 | 41'-10" | — |
| a2(E) | 428 | #6 | 6'-0" | — |
| b6(E) | 598 | #5 | 29'-6" | — |
| b7(E) | 504 | #5 | 27'-6" | — |
| b8(E) | 63 | #6 | 26'-7" | — |
| b9(E) | 126 | #6 | 31'-8" | — |
| b10(E) | 63 | #6 | 29'-0" | — |
| d(E) | 780 | #5 | 5'-7" | ⌒ |
| d1(E) | 780 | #5 | 7'-6" | ⌒ |
| e(E) | 42 | #4 | 15'-6" | — |
| e1(E) | 4 | #8 | 25'-3" | — |
| e2(E) | 4 | #4 | 24'-2" | — |
| e3(E) | 16 | #4 | 6'-5" | — |
| e4(E) | 2 | #8 | 6'-5" | — |
| e5(E) | 96 | #4 | 9'-6" | — |
| e6(E) | 12 | #8 | 9'-6" | — |
| e7(E) | 126 | #4 | 19'-7" | — |
| e8(E) | 12 | #8 | 31'-4" | — |
| e9(E) | 12 | #4 | 30'-4" | — |
| e25(E) | 16 | #4 | 8'-0" | — |
| e26(E) | 2 | #8 | 8'-0" | — |
| e27(E) | 42 | #4 | 19'-0" | — |
| e28(E) | 4 | #8 | 30'-6" | — |
| e29(E) | 4 | #4 | 29'-5" | — |
| m(E) | 96 | #4 | 5'-4" | — |
| m1(E) | 60 | #6 | 4'-0" | — |
| m2(E) | 28 | #8 | 5'-10" | — |
| m3(E) | 4 | #6 | 2'-0" | — |
| m4(E) | 28 | #6 | 8'-11" | — |
| m5(E) | 10 | #6 | 42'-10" | — |
| s(E) | 90 | #4 | 10'-10" | ⌒ |
| s1(E) | 30 | #4 | 11'-2" | — |
| s2(E) | 72 | #4 | 10'-11" | — |
| s3(E) | 84 | #5 | 6'-9" | — |
| v(E) | 88 | #5 | 3'-4" | ⌒ |
| Reinforcement Bars, Epoxy Coated | | Lbs. | 106,520 | |
| Concrete Superstructure | | Cu. Yds. | 546.0 | |



| |
|-----------------|
| DESIGNED - I.M. |
| CHECKED - PDF |
| DRAWN - I.M. |
| CHECKED - PDF |

SECTION THRU PARAPET
**For insert locations See PPC I-beam detail sheets.

Notes:
Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
The exterior surfaces of the floor drains shall be coated or pigmented by the manufacturer with a color that matches the concrete.
The clamping device and inserts shall be galvanized according to AASHTO M 232.

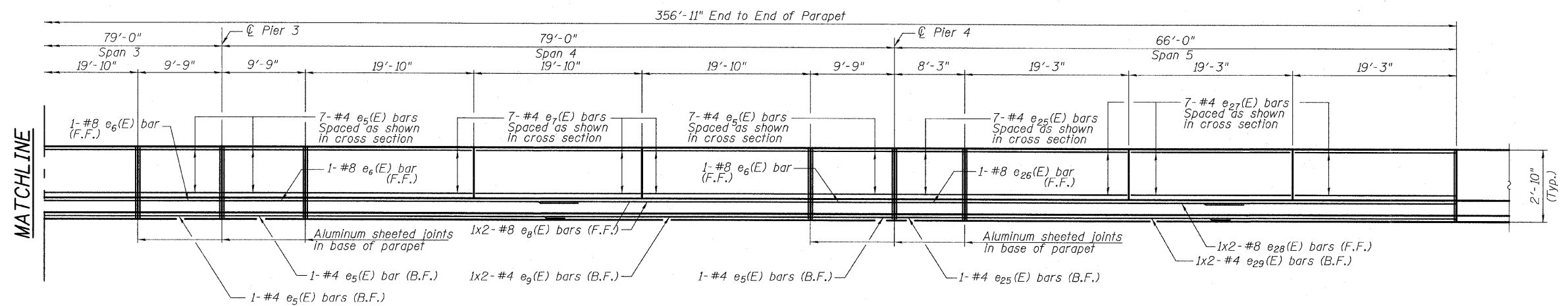
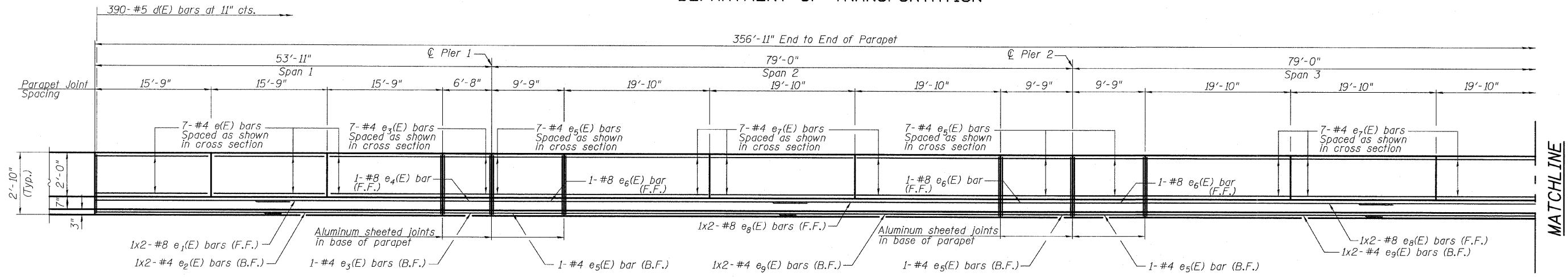
FIBERGLASS PIPE
1/2" φ x 8" Fiberglass Reinf. Plastic Rebar
3/16" x 3/16" x 1/2"
3/16" x 3/16" x 1/2"
1/2" φ x 8" Alum. Bar ASTM B 211 alloy 6061-T6
Fill slot with weld
3/16" x 3/16" x 1/2"
ALUMINUM TUBE
6" O.D. Aluminum Tube alloy 6061-T6 or 6" φ Fiberglass Pipe

TOP PLAN
(Showing Aluminum Tube)
SUPERSTRUCTURE DETAILS - I
STRUCTURE NO. 006-0171 WB

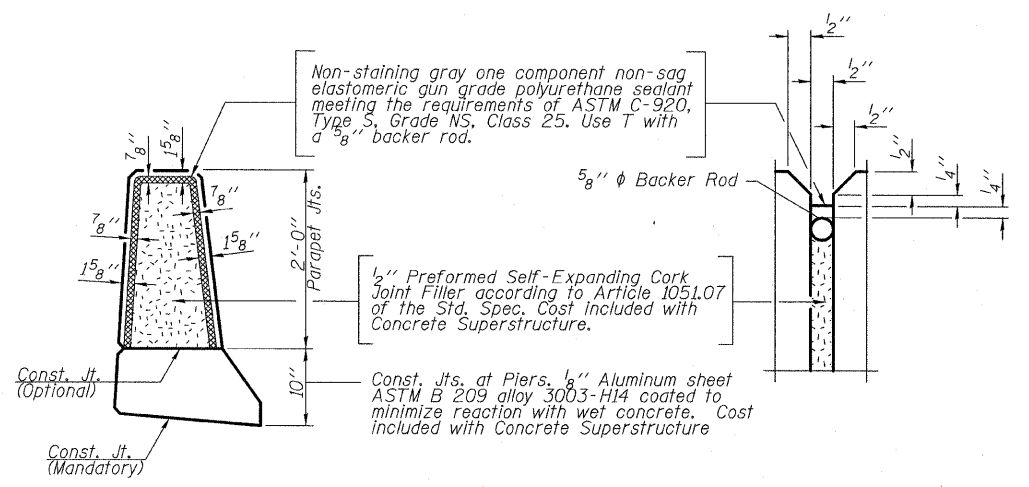
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|---------------------------|-----------|---------|---------------------------|--------------|-----------|
| SHEET NO. 18 59 SHEETS | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 344 | 112 |
| FED. ROAD DIST. NO. | | | ILLINOIS FED. AID PROJECT | | |
| CONTRACT NO. 66908 | | | | | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



INSIDE ELEVATION OF THE NORTH PARAPET
(South Parapet opposite hand)



PARAPET JOINT DETAILS

MINIMUM BAR LAPS
#4 bar = 1'-4"
#8 bar = 3'-5"

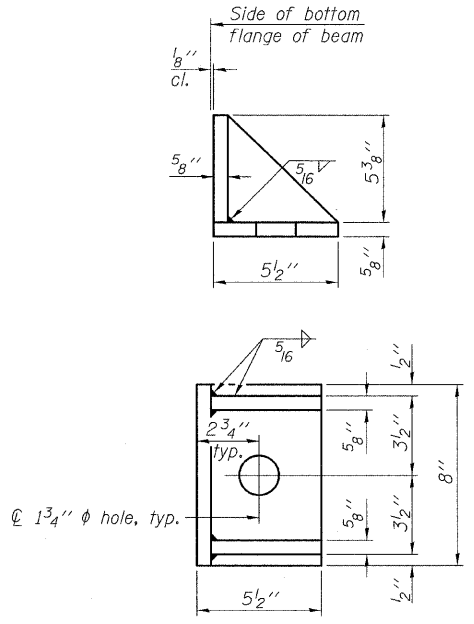
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| DESIGNED - I.M. |
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| DRAWN - I.M. |
| CHECKED - PDF |

SUPERSTRUCTURE DETAILS - II
STRUCTURE NO. 006-0171 WB

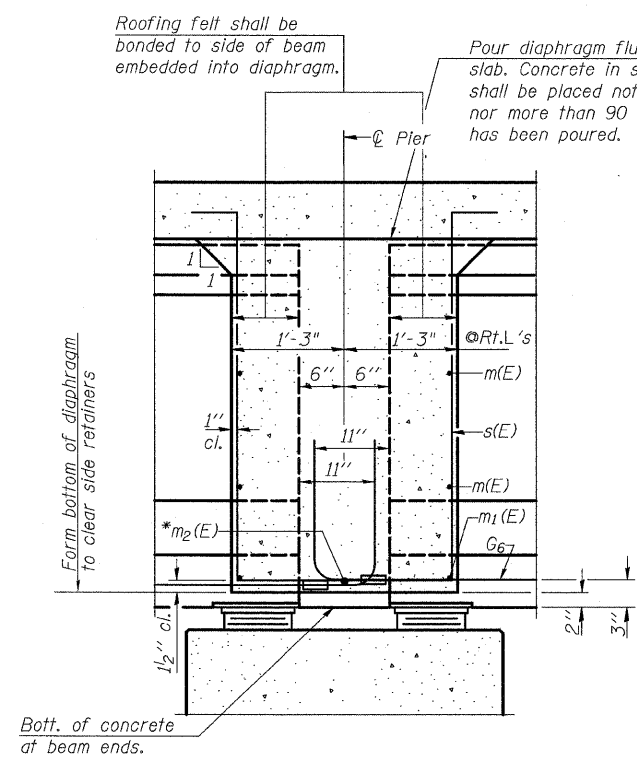
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| SHEET NO. 19 | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 344 | 113 |
| 59 SHEETS | CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | | |

TYLIN INTERNATIONAL

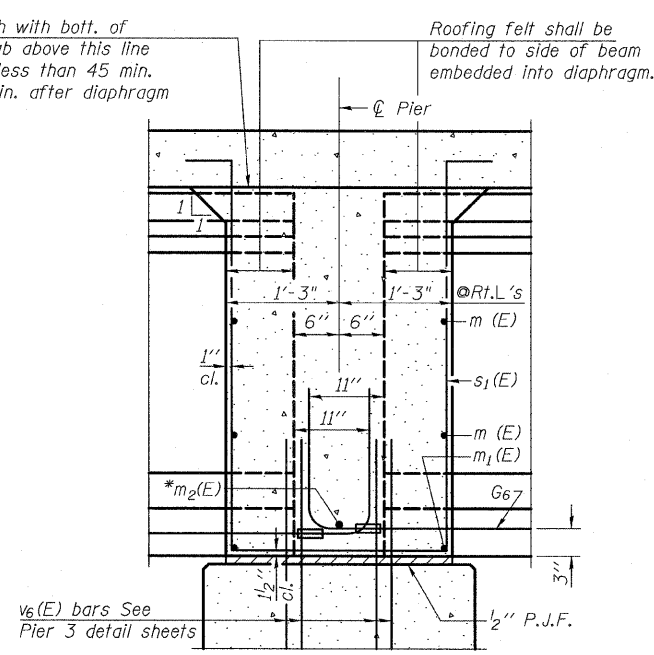
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SIDE RETAINER AT PIER 3
(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.

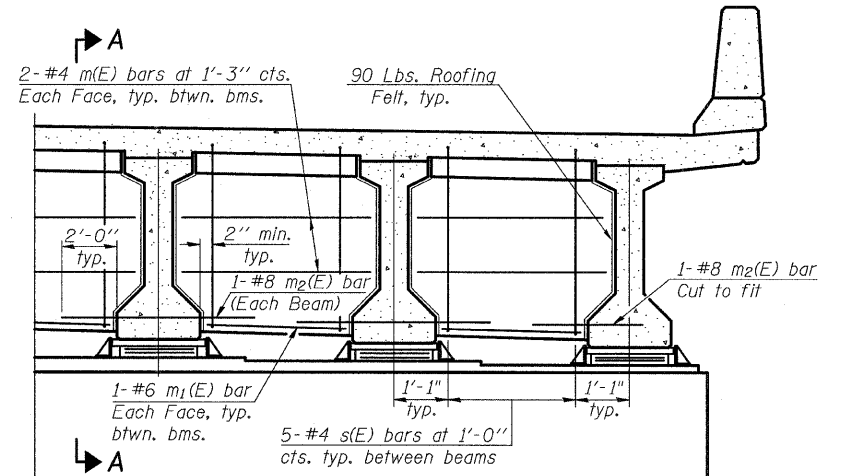


SECTION A-A

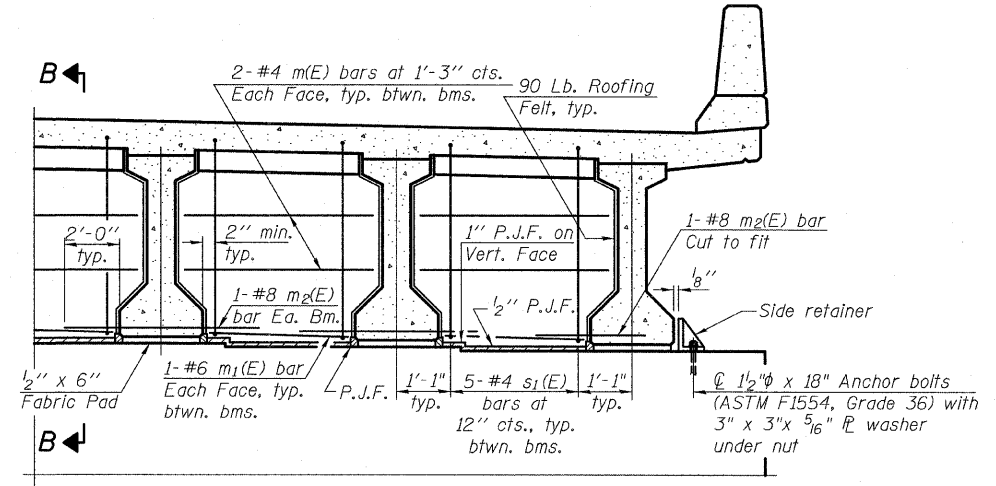


SECTION B-B
Dimensions along ϕ of beam, except as shown.

* Tightly fasten the #8 bars together
with No. 9 wire ties.

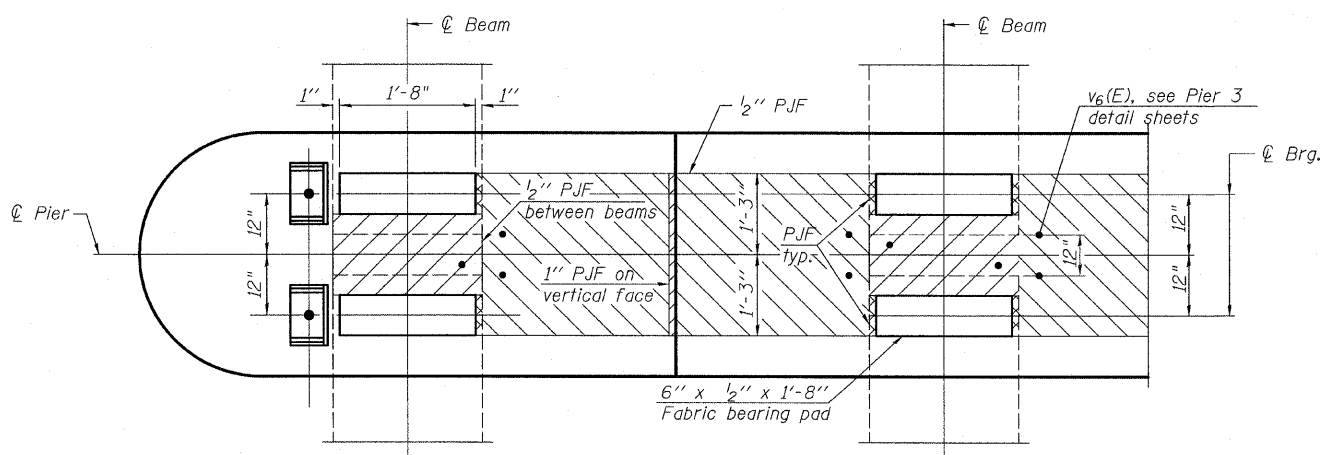


DIAPHRAGM AT PIERS 1, 2, 4



DIAPHRAGM AT PIER 3

Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheets 15 and 18 of 59.
Concrete in diaphragm is included with Concrete Superstructure on sheets 15 and 18 of 59.
For details of bars s(E) and s1(E) see sheets 15 and 18 of 59.
The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
Cost of 90 Lb. roofing felt is included with Concrete Superstructure.
The side retainer shall be galvanized after shop fabrication according to AASHTO M 111.
Anchor bolt assemblies shall be galvanized according to Article 1006.09 of the Standard Specifications.
Anchor bolts at Pier 3 shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts for side retainers may be either cast in place or installed in holes drilled after the supporting member is in place and prior to pouring the deck.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Cost of side retainer and anchor bolts at Pier 3 shall be included with Concrete Structures.



PLAN AT PIER 3
(Showing bearing pad and P.J.F. details)

MIN. BAR LAP
(Diaphragms)
#6 bar = 2'-9"

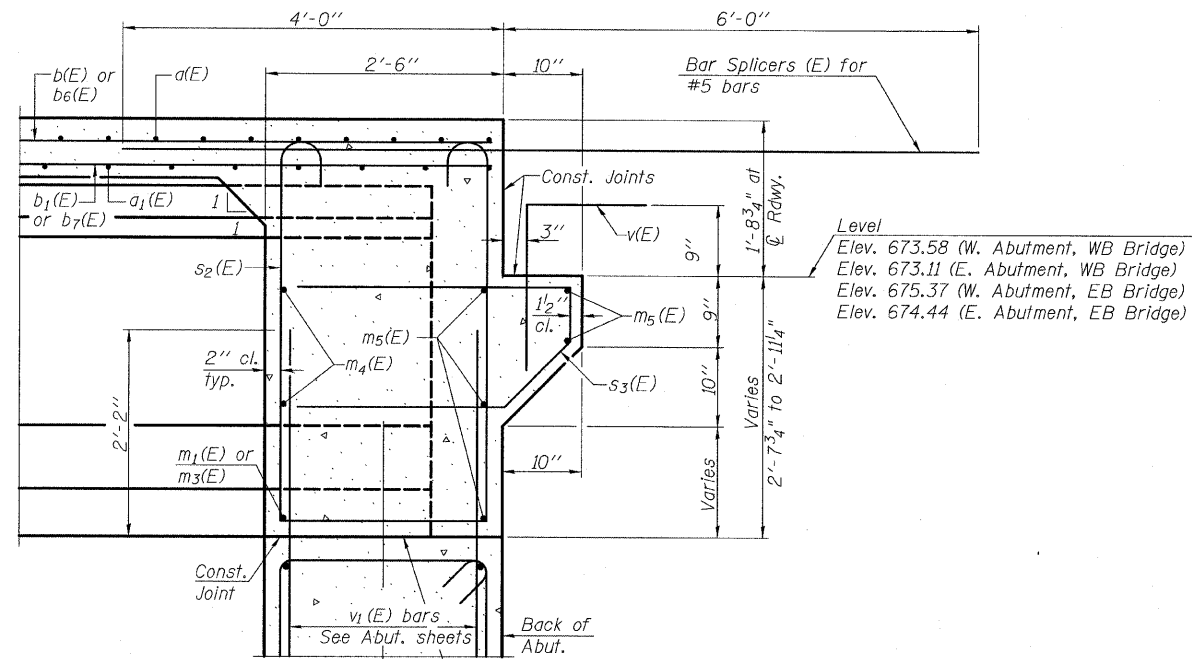
PIER DIAPHRAGM DETAILS
STRUCTURE NO. 006-0170 EB
STRUCTURE NO. 006-0171 WB

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| DESIGNED - | I.M. |
| CHECKED - | PDF |
| DRAWN - | I.M. |
| CHECKED - | PDF |

| | | | | | |
|--------------|---------------------|---------|---------------------------|--------------|-----------|
| SHEET NO. 20 | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 344 | 114 |
| 59 SHEETS | FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |
| | | | CONTRACT NO. 66908 | | |

TYLIN INTERNATIONAL

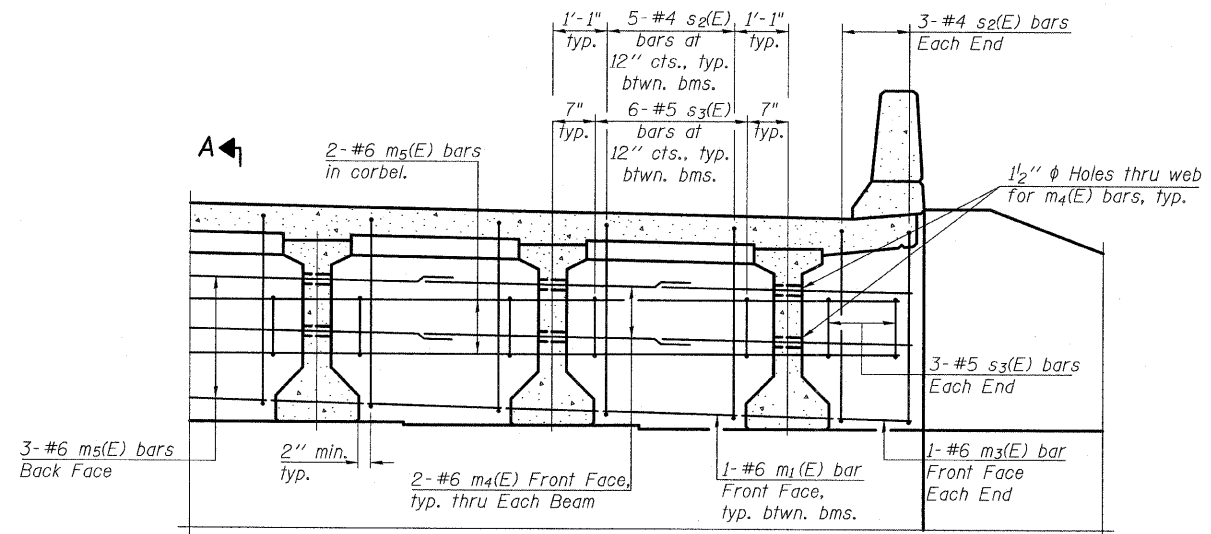
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Level
Elev. 673.58 (W. Abutment, WB Bridge)
Elev. 673.11 (E. Abutment, WB Bridge)
Elev. 675.37 (W. Abutment, EB Bridge)
Elev. 674.44 (E. Abutment, EB Bridge)

Beam ends shall be set on an initial 1/2" min. grout (2:1 sand and portland cement, very dry mix) to provide full bearing. Any excess grout squeezed out from under the beam shall be removed. Cost included with Concrete Structures.

SECTION A-A



DIAPHRAGM ELEVATION AT ABUTMENT

Notes:

- Reinforcement bars in diaphragm are billed with superstructure on sheet 15 and 18 of 59.
- Concrete in diaphragm is included with Concrete Superstructure on sheet 15 and 18 of 59.
- For details of bars s(E), s1(E) and s2(E) see sheet 15 and 18 of 59.
- The s2(E) and s3(E) bars shall be placed parallel to the beams.
- Spacing for these bars shall be at right angles to the beams.

| | |
|----------|--------|
| DESIGNED | - I.M. |
| CHECKED | - PDF |
| DRAWN | - I.M. |
| CHECKED | - PDF |

MIN. BAR LAP

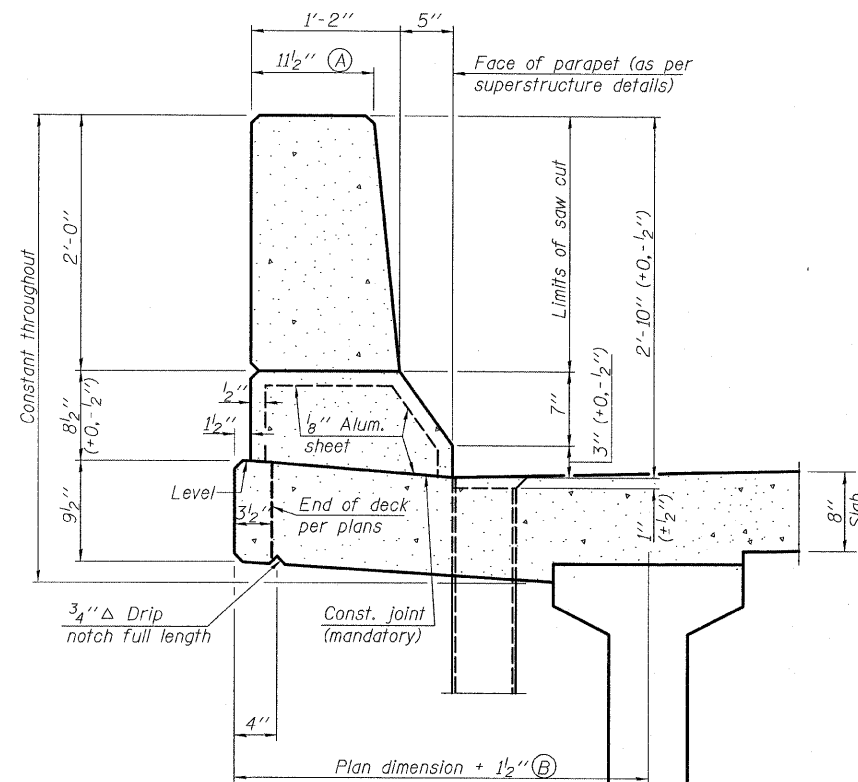
(Diaphragms)
#6 bar = 2'-9"

ABUTMENT DIAPHRAGM DETAILS
STRUCTURE NO. 006-0170 EB
STRUCTURE NO. 006-0171 WB

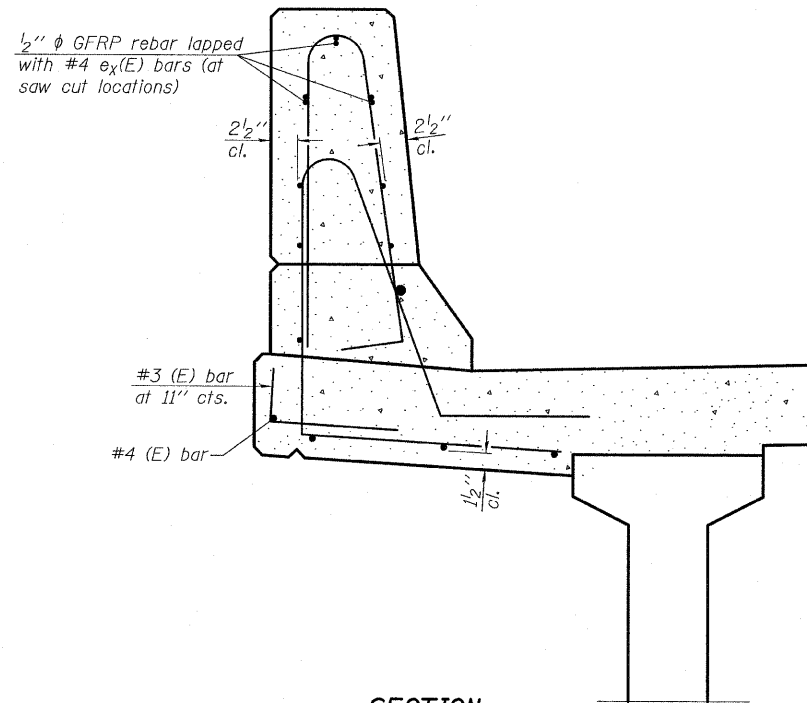
| | | | | | |
|---------------------------|--------------------|---------------------------|------------------|---------------------|------------------|
| SHEET NO. 21 59 SHEETS | F.A. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 115 |
| | CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



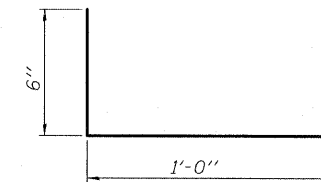
SECTION
(Showing dimensions)



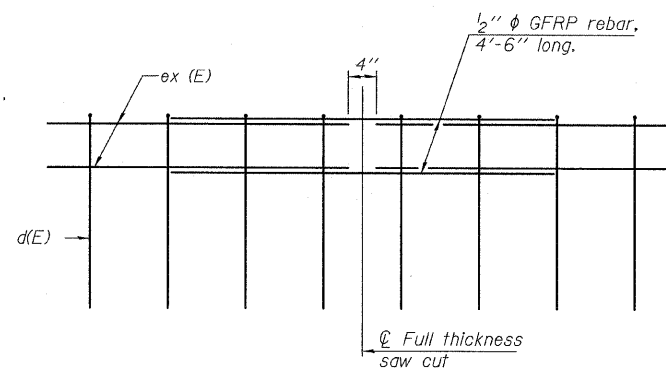
SECTION
(Showing reinforcement clearances for slip forming and additional reinforcement bars)

GENERAL NOTES

All dimensions shall remain the same as shown on contract plans, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0165 cu. yds./ft. of parapet.
Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all joint locations in lieu of cork joint filler.



#3 (E) BAR



GFRP REBAR STIFFENING DETAIL
(Place as shown in parapet section at each parapet joint location.)

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| DESIGNED - SP |
| CHECKED - PDF |
| DRAWN - SP |
| CHECKED - PDF |

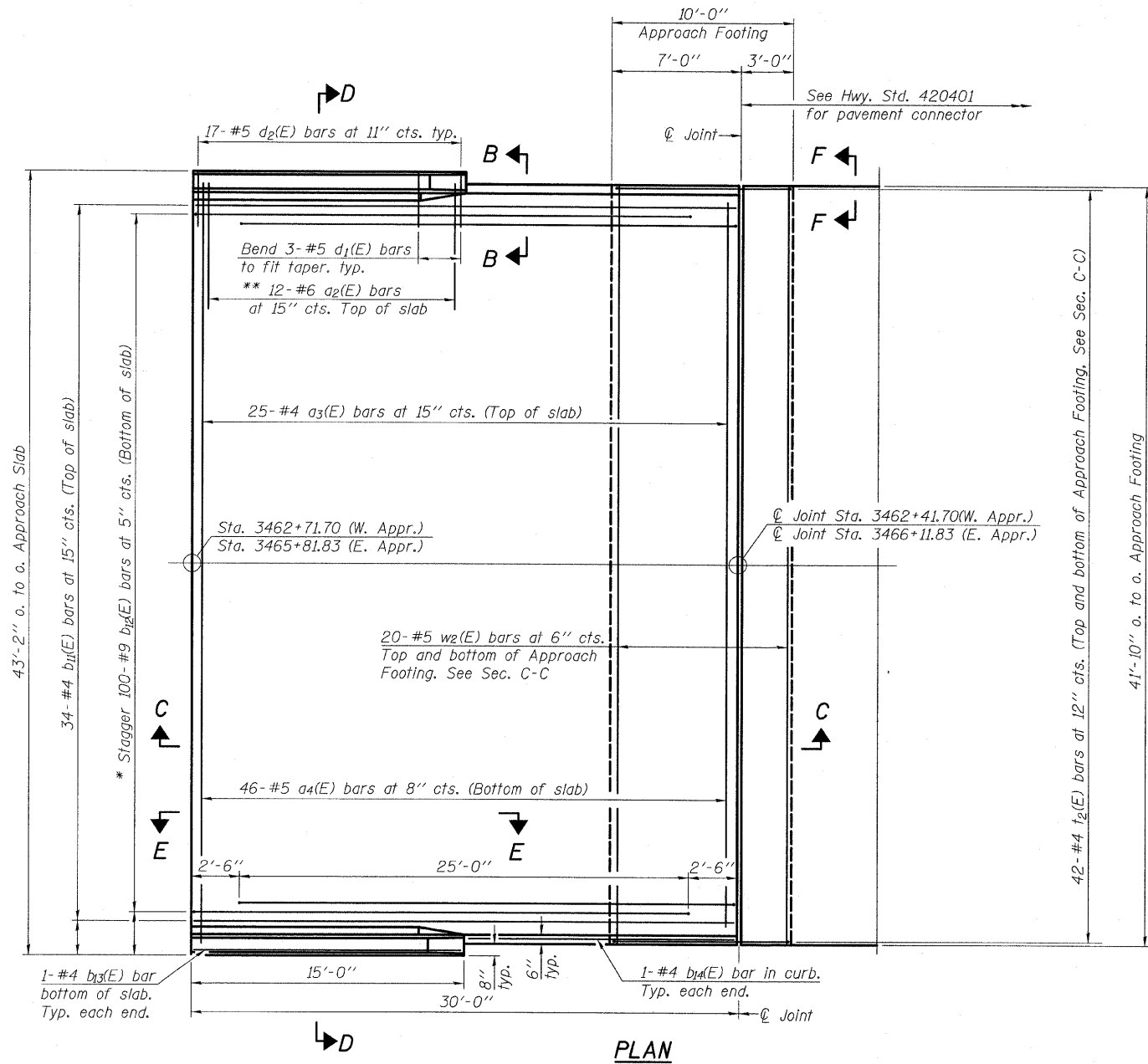
**CONCRETE PARAPET
SLIPFORMING OPTION
STRUCTURE NO. 006-0170 EB
STRUCTURE NO. 006-0171 WB**

| | | | | | |
|---------------------------|------------------------------|--------------|------------------|---------------------|------------------|
| SHEET NO. 22 59 SHEETS | F.A. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 114 |
| | FED. ROAD DIST. NO. ILLINOIS | | | FED. AID PROJECT | |
| CONTRACT NO. 66908 | | | | | |

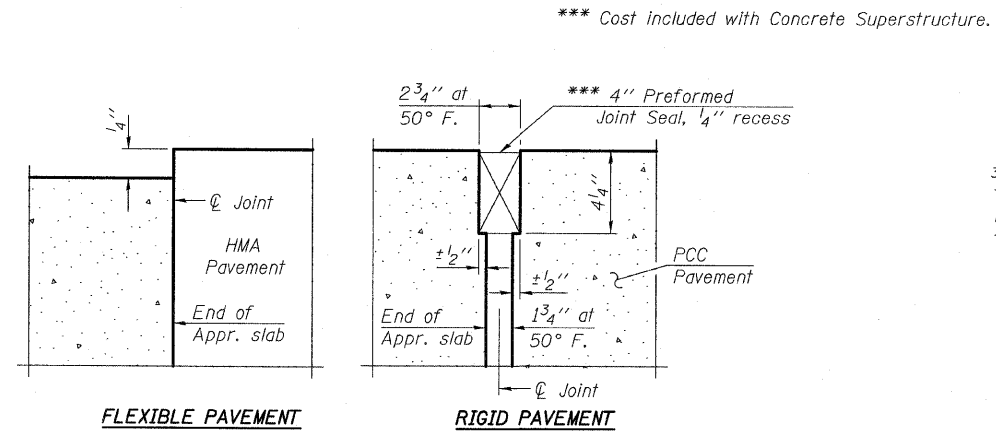
TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

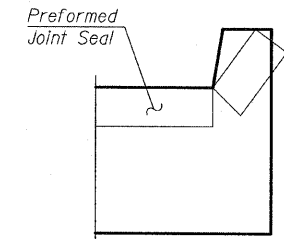
Notes:
See sheet 24 of 59 for Sections C-C & D-D and View E-E.
 $a_3(E)$, $a_4(E)$, and $w_2(E)$ bar spacings measured perpendicular to \varnothing Rdwy.



* Tilt #9 $b_{1/2}(E)$ bars as required to maintain clearance.
** Alternate with $a(E)$ bars, typ. ea. parapet.

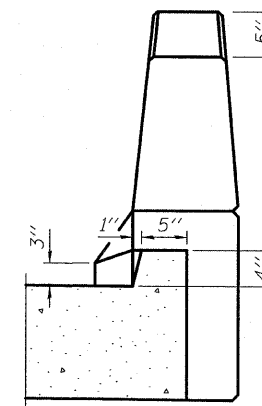


DETAIL A



VIEW F-F

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.



VIEW B-B

| | |
|----------|-------|
| DESIGNED | - SP |
| CHECKED | - PDF |
| DRAWN | - SP |
| CHECKED | - PDF |

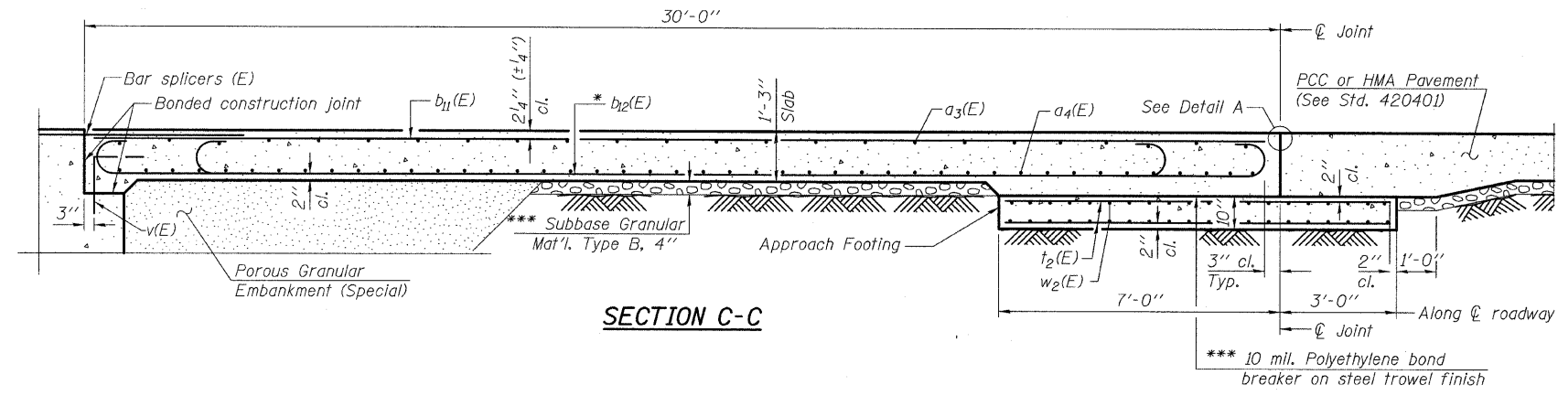
APPROACH SLAB DETAILS - I
STRUCTURE NO. 006-0170 EB

| | | | | | |
|--------------|---------------------|---------|---------------------------|--------------|-----------|
| SHEET NO. 23 | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 344 | 117 |
| 59 SHEETS | FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |
| | | | CONTRACT NO. 66908 | | |

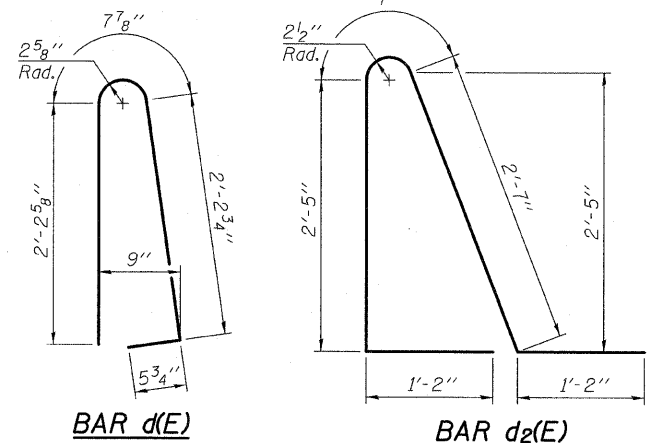
TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
See sheet 23 of 59 for Detail A and View B-B.
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v(E) bar details, see sheet 21 of 59.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 52 of 59.
Cost of excavation for approach footing included with Concrete Structures.
For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 59.



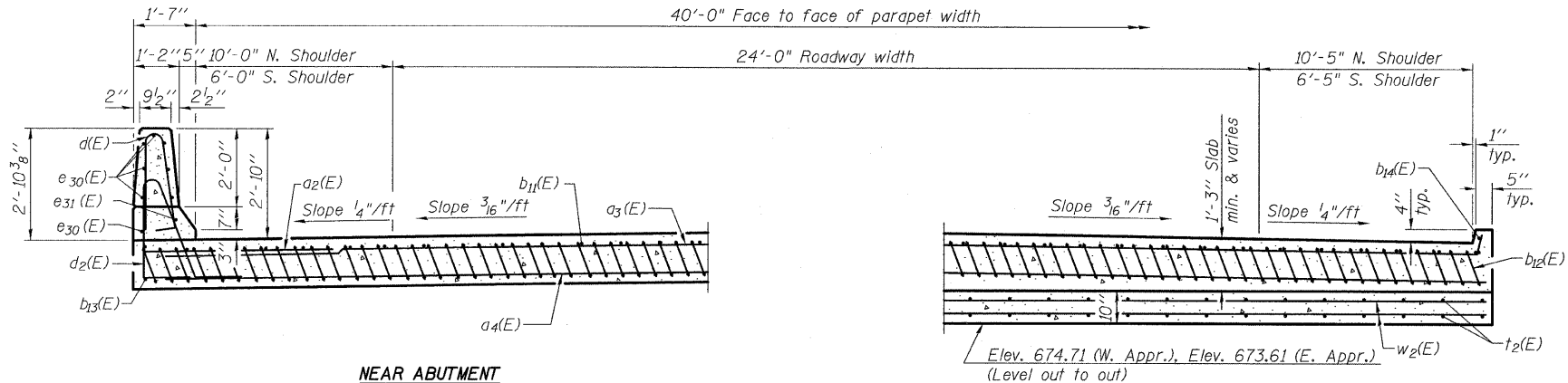
SECTION C-C



BAR d(E)

BAR d2(E)

* Tilt #9 b12(E) bars as required to maintain clearance.
*** Cost included with Concrete Superstructure.

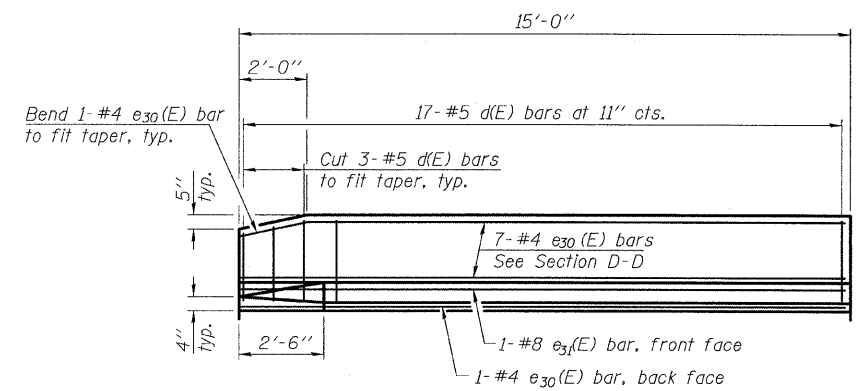


NEAR ABUTMENT

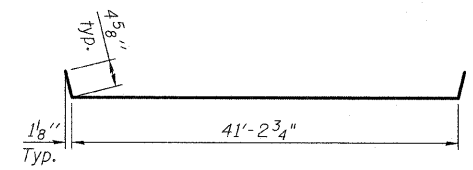
SECTION D-D

(See Plan for dimensions not shown)

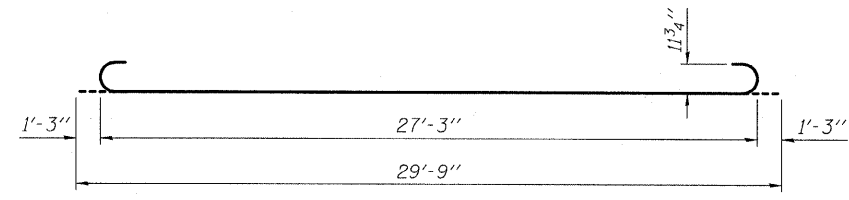
AT APPROACH FOOTING



VIEW E-E



BAR a3(E)



BAR b12(E)

TWO APPROACHES
BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|----------------------------------|-----|------|---------|--------|
| a2(E) | 48 | #6 | 6'-0" | — |
| a3(E) | 50 | #4 | 42'-0" | — |
| a4(E) | 92 | #5 | 41'-6" | — |
| b11(E) | 68 | #4 | 29'-8" | — |
| b12(E) | 200 | #9 | 29'-9" | U |
| b13(E) | 4 | #4 | 14'-8" | — |
| b14(E) | 4 | #4 | 14'-8" | — |
| d(E) | 68 | #5 | 5'-7" | U |
| d2(E) | 68 | #5 | 7'-11" | U |
| e30(E) | 32 | #4 | 14'-8" | — |
| e31(E) | 4 | #8 | 14'-8" | — |
| t2(E) | 168 | #4 | 9'-8" | — |
| w2(E) | 80 | #5 | 41'-6" | — |
| Concrete Superstructure | | | Cu. Yd. | 126.5 |
| Concrete Structures | | | Cu. Yd. | 25.8 |
| Reinforcement Bars, Epoxy Coated | | | Pound | 33,450 |

(1) 4,540 pounds of total weight is considered Reinforcement Bars, Epoxy Coated for the Substructure

APPROACH SLAB DETAILS - II
STRUCTURE NO. 006-0170 EB

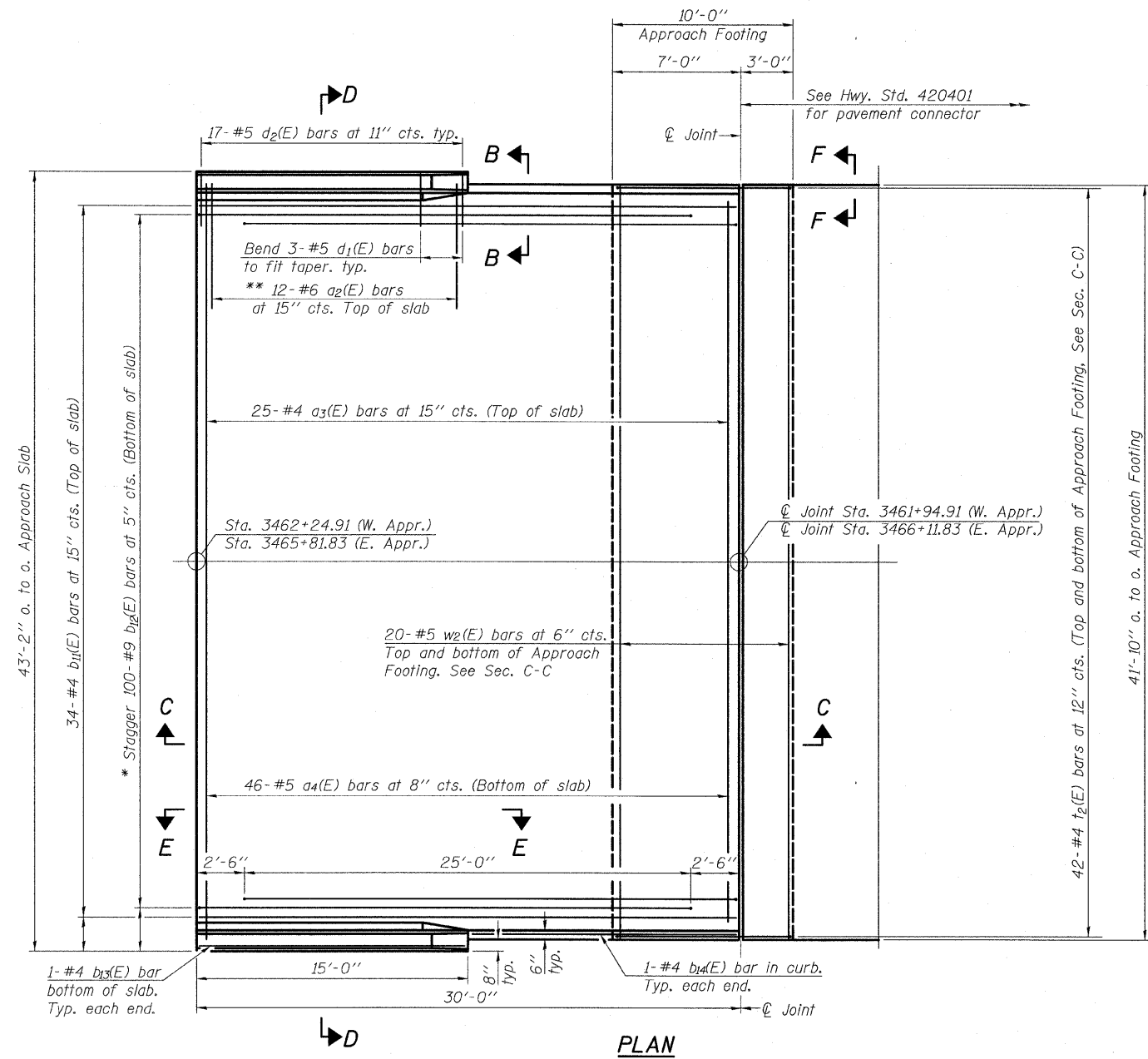
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| DESIGNED - IM |
| CHECKED - PDF |
| DRAWN - IM |
| CHECKED - PDF |

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|--------------------|------------------------------|-----------|------------------|------------------|---------------|
| SHEET NO. 24 | F.A. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 118 |
| 59 SHEETS | FED. ROAD DIST. NO. ILLINOIS | | FED. AID PROJECT | | |
| CONTRACT NO. 66908 | | | | | |

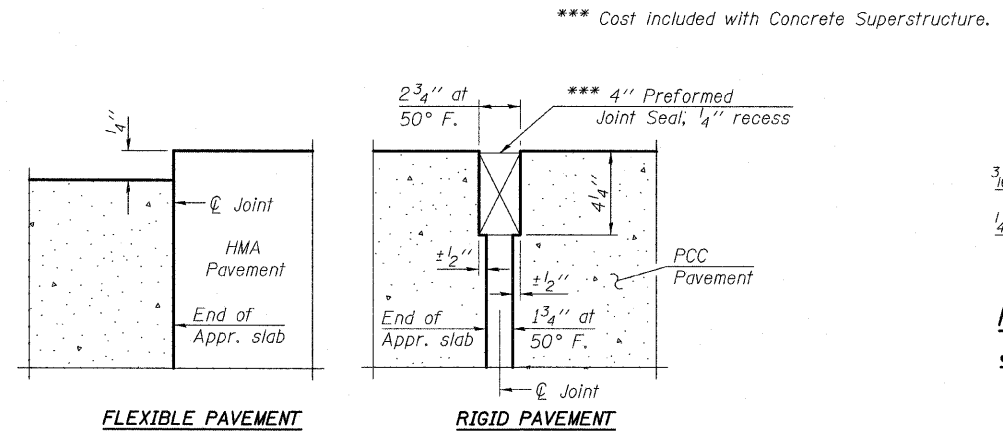
TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

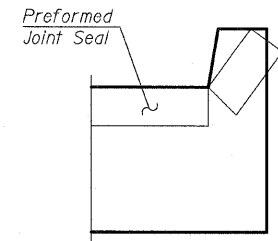
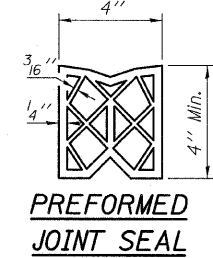
Notes:
See sheet 26 of 59 for Sections C-C & D-D and View E-E.
a(E), a₁(E), and w(E) bar spacings measured perpendicular to \varnothing Rdwy.



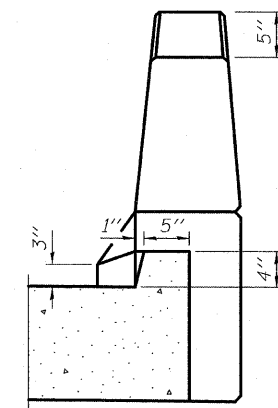
* Tilt #9 b₁₂(E) bars as required to maintain clearance.
** Alternate with a₃(E) bars, typ. ea. parapet.



DETAIL A



Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.



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| DESIGNED - IM |
| CHECKED - PDF |
| DRAWN - IM |
| CHECKED - PDF |

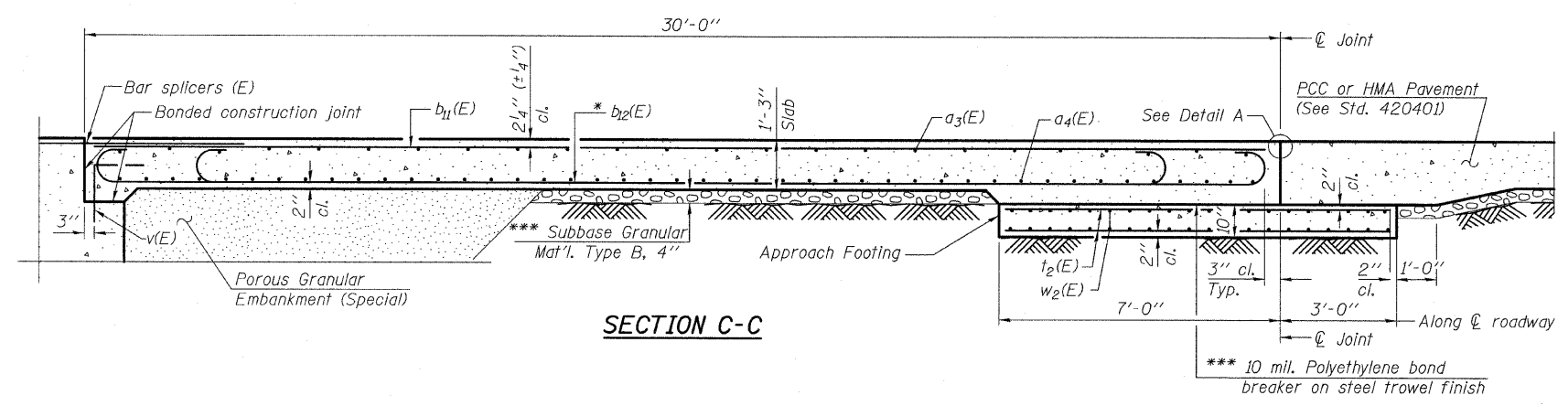
APPROACH SLAB DETAILS - I
STRUCTURE NO. 006-0171 WB

| | | | | | |
|---------------------|--------------------|----------|------------------|--------------|-----------|
| SHEET NO. 25 | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 344 | 119 |
| 59 SHEETS | CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. | | ILLINOIS | FED. AID PROJECT | | |

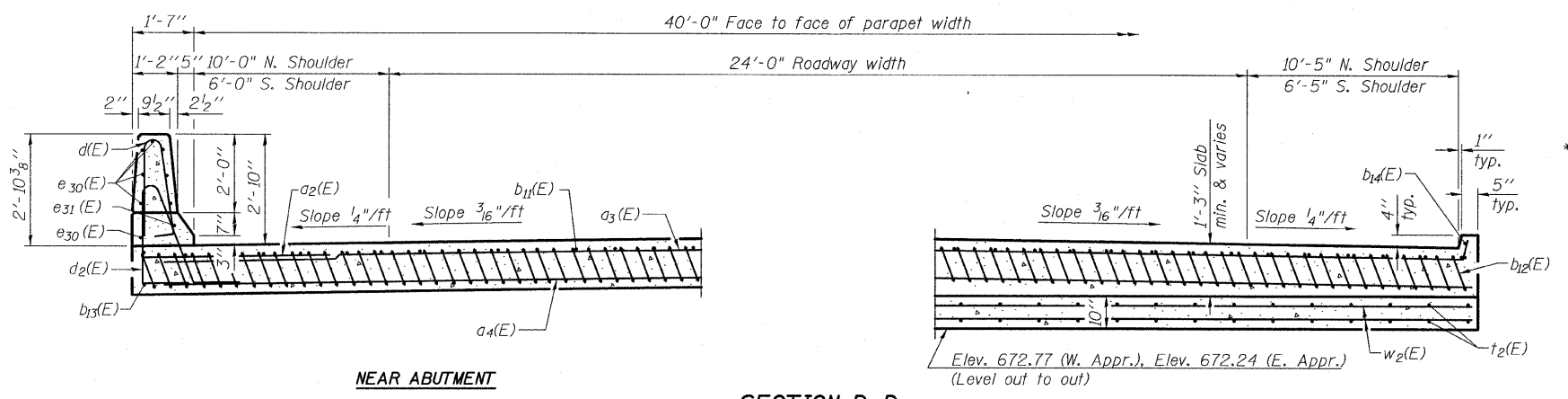
TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
See sheet 25 of 59 for Detail A and View B-B.
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v(E) bar details, see sheet 21 of 59.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 52 of 59.
Cost of excavation for approach footing included with Concrete Structures.
For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 59.



SECTION C-C



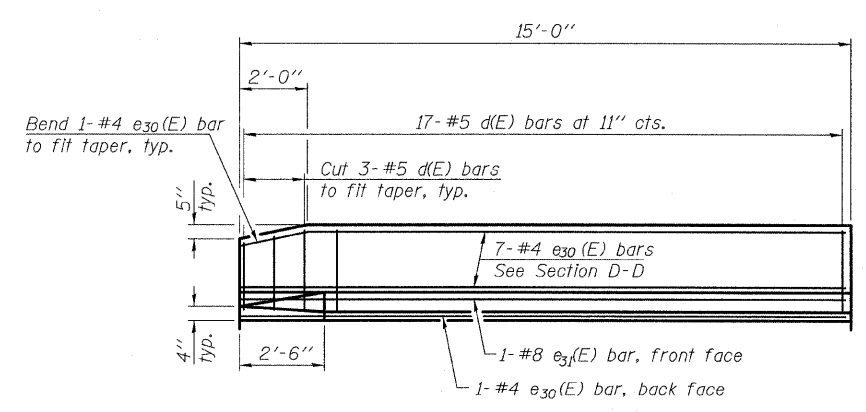
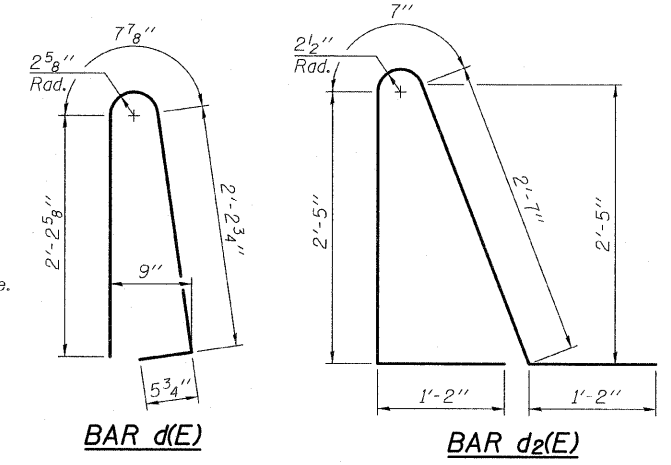
NEAR ABUTMENT

SECTION D-D

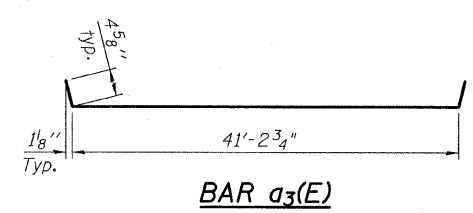
(See Plan for dimensions not shown)

AT APPROACH FOOTING

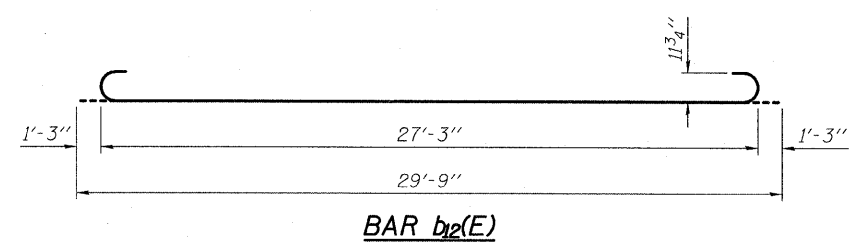
* Tilt #9 b12(E) bars as required to maintain clearance.
*** Cost included with Concrete Superstructure.



VIEW E-E



BAR a3(E)



BAR b2(E)

TWO APPROACHES
BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|----------------------------------|-----|------|---------|--------|
| a2(E) | 48 | #6 | 6'-0" | — |
| a3(E) | 50 | #4 | 42'-0" | — |
| a4(E) | 92 | #5 | 41'-6" | — |
| b11(E) | 68 | #4 | 29'-8" | — |
| b12(E) | 200 | #9 | 29'-9" | — |
| b13(E) | 4 | #4 | 14'-8" | — |
| b14(E) | 4 | #4 | 14'-8" | — |
| d(E) | 68 | #5 | 5'-7" | U |
| d2(E) | 68 | #5 | 7'-11" | U |
| e30(E) | 32 | #4 | 14'-8" | — |
| e31(E) | 4 | #8 | 14'-8" | — |
| t2(E) | 168 | #4 | 9'-8" | — |
| w2(E) | 80 | #5 | 41'-6" | — |
| Concrete Superstructure | | | Cu. Yd. | 126.5 |
| Concrete Structures | | | Cu. Yd. | 25.8 |
| Reinforcement Bars, Epoxy Coated | | | Pound | 33,450 |

(1) 4,540 pounds of total weight is considered Reinforcement Bars, Epoxy Coated for the Substructure

APPROACH SLAB DETAILS - II
STRUCTURE NO. 006-0171 WB

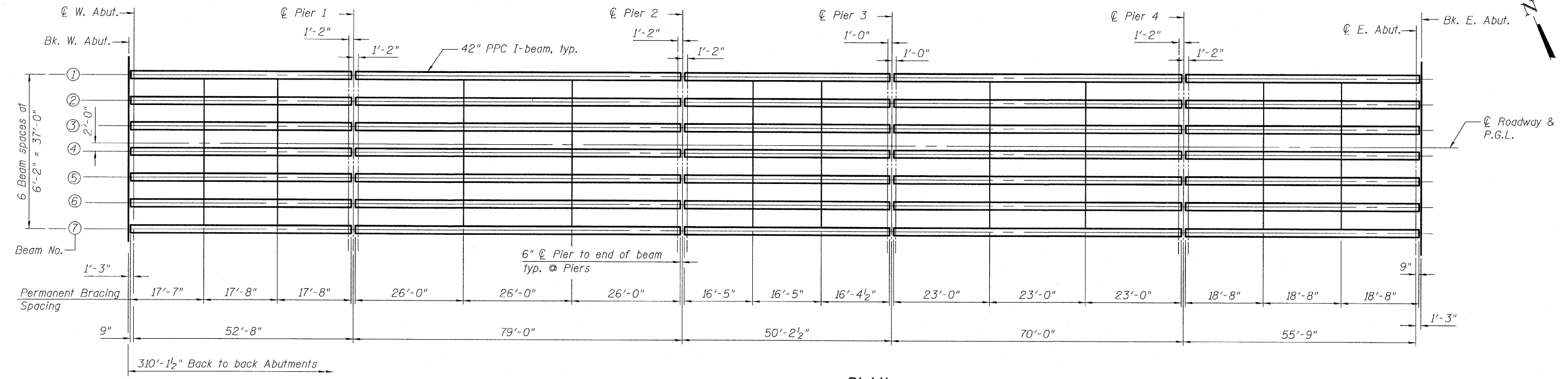
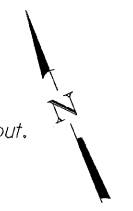
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| DESIGNED - IM |
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| DRAWN - IM |
| CHECKED - PDF |

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|---------------------------|--------------------|--------------|------------------|---------------------|------------------|
| SHEET NO. 26 59 SHEETS | F.A. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 120 |
| | CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. | | ILLINOIS | FED. AID PROJECT | | |

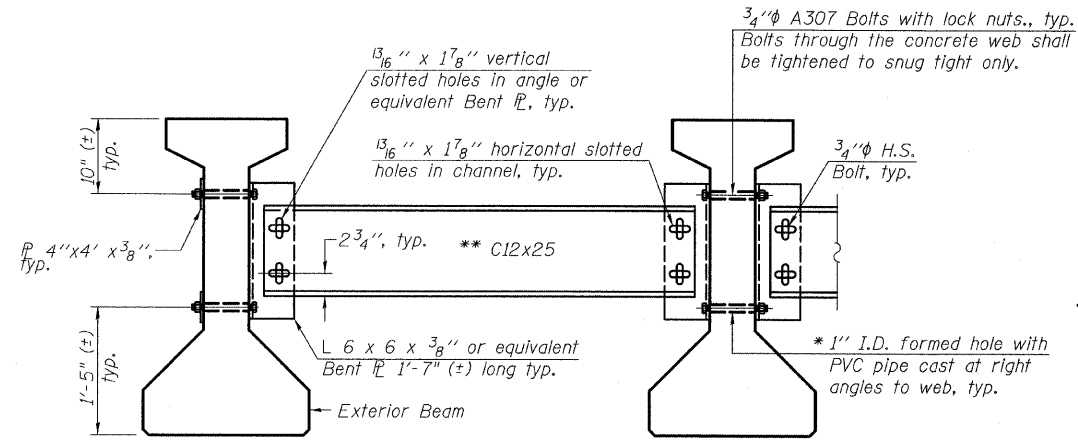
TYLIN INTERNATIONAL

* 06-17BR & BR-1,7VB-M, 6BR & 6, 7 RS-1 & IJ

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN



Notes:
All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.
Two hardened washers are required for each set of oversized holes.
All holes shall be 15/16" unless otherwise noted.
5/16" x 3" x 3" plate washers are required over all slotted holes.
All bolts shall be galvanized according to AASHTO M232.
Bracing shall be installed as beams are erected and tightened as soon as possible during erection.

* Fabricator shall locate to miss strands within permissible tolerances.
** Alternate C12x30 channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on lighter section. The alternate, if utilized, shall be provided at no extra cost to the Department.

PERMANENT BRACING DETAILS

| | |
|------------|-----|
| DESIGNED - | SP |
| CHECKED - | PDF |
| DRAWN - | SP |
| CHECKED - | PDF |

| | 0.4 Sp. 1 | Pier 1 | 0.5 Sp. 2 | Pier 2 | 0.5 Sp. 3 | Pier 3 | 0.5 Sp. 4 | Pier 4 | 0.6 Sp. 5 |
|---------|--------------------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|
| I | (in ⁴) | 90,956 | | 90,956 | | 90,956 | | 90,956 | 90,956 |
| I' | (in ⁴) | 277,493 | | 277,493 | | 277,493 | | 277,493 | 277,493 |
| S_b | (in ³) | 5,153 | | 5,153 | | 5,153 | | 5,153 | 5,153 |
| S_b' | (in ³) | 8,772 | | 8,772 | | 8,772 | | 8,772 | 8,772 |
| S_t | (in ³) | 3,736 | | 3,736 | | 3,736 | | 3,736 | 3,736 |
| S_t' | (in ³) | 26,772 | | 26,772 | | 26,772 | | 26,772 | 26,772 |
| Q | (k/') | 1.12 | | 1.12 | | 1.12 | | 1.12 | 1.12 |
| M_P | (k') | 371 | | 823 | | 323 | | 644 | 417 |
| s_P | (k/') | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 |
| $M_s P$ | (k) | 62 | 213 | 151 | 173 | -8 | 121 | 114 | 88 |
| M_L | (k) | 287 | 284 | 353 | 272 | 216 | 238 | 309 | 259 |
| M_I | (k) | 111 | 100 | 118 | 101 | 88 | 88 | 108 | 96 |

I : Non-composite moment of inertia of beam section (in.⁴).
 I' : Composite moment of inertia of beam section (in.⁴).
 S_b : Non-composite section modulus for the bottom fiber of the prestressed beam (in.³).
 S_b' : Composite section modulus for the bottom fiber of the prestressed beam (in.³).
 S_t : Non-composite section modulus for the top fiber of the prestressed beam (in.³).
 S_t' : Composite section modulus for the top fiber of the prestressed beam (in.³).
 Q : Un-factored non-composite dead load (kips/ft.).
 M_P : Un-factored moment due to non-composite dead load conservatively taken at 0.5 of the span (kip-ft.).
 s_P : Un-factored long-term composite (superimposed) dead load (kips/ft.).
 $M_s P$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
 M_L : Un-factored live load moment on the composite section (kip-ft.).
 M_I : Un-factored moment due to impact on the composite section (kip-ft.).

| | W. Abut. | Pier 1 | Pier 1 | Pier 2 | Pier 2 | Pier 3 | Pier 3 | Pier 4 | Pier 4 | E. Abut. |
|-------------|----------|--------|--------|--------|--------|--------|--------|--------|--------|----------|
| | | Span 1 | Span 2 | Span 2 | Span 3 | Span 3 | Span 4 | Span 4 | Span 5 | |
| R_Q | (k) | 30.2 | 44.2 | 44.2 | 28.1 | 28.1 | 39.2 | 39.2 | 31.9 | 31.9 |
| $R_s P$ | (k) | 7.6 | 16.7 | 16.7 | 14.4 | 14.4 | 12.2 | 12.2 | 16.0 | 8.9 |
| R_L | (k) | 31.8 | 21.4 | 21.4 | 21.2 | 21.2 | 20.0 | 20.0 | 20.8 | 32.1 |
| R_I | (k) | 8.9 | 5.5 | 5.5 | 5.7 | 5.7 | 5.4 | 5.4 | 5.6 | 9.0 |
| R_{Total} | (k) | 78.5 | 73.8 | 87.8 | 85.5 | 69.4 | 65.7 | 76.8 | 81.6 | 81.9 |

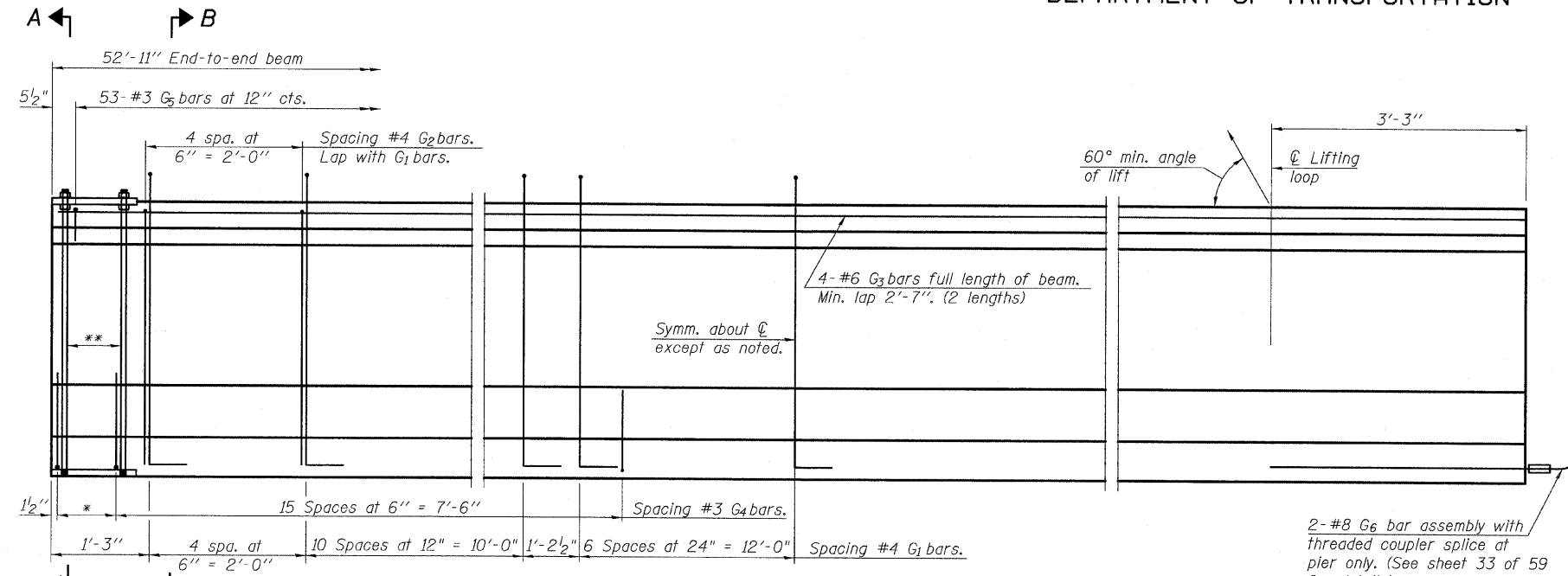
* The total $R_s P$, R_L , and impact reactions are assumed to be distributed evenly to each bearing line at a pier regardless of the span ratios. The bearing design at a pier is based on the maximum reactions of either span.

FRAMING PLAN
STRUCTURE NO. 006-0170 EB

| | | | | | |
|--------------|---------------------|---------|---------------------------|--------------|--------------------|
| SHEET NO. 27 | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 344 | 121 |
| 59 SHEETS | FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | CONTRACT NO. 66908 |

TYLIN INTERNATIONAL

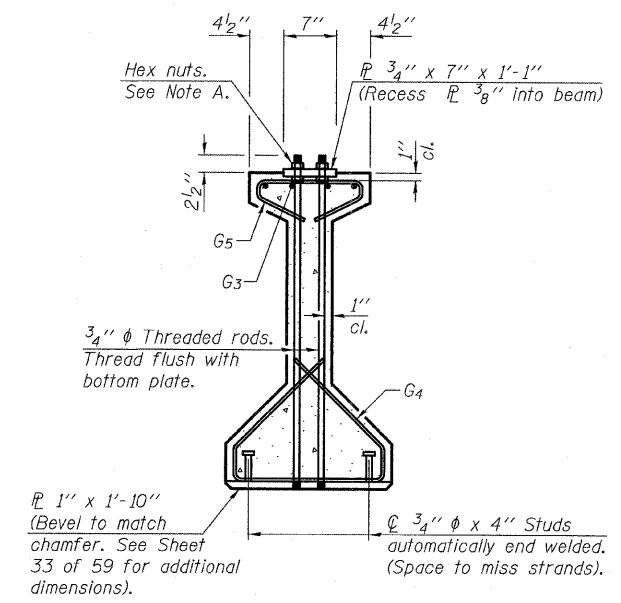
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



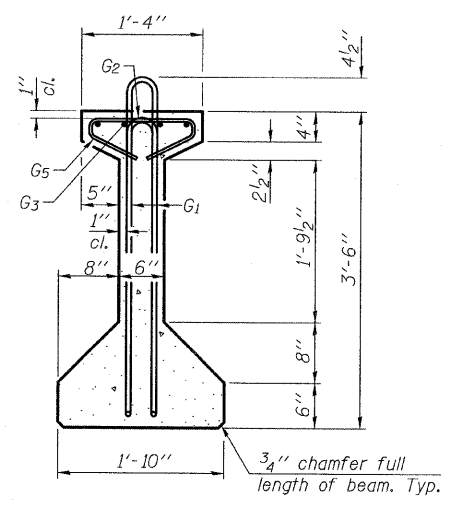
ELEVATION OF BEAM
(Showing reinforcement & dimensions)

*3 spaces at 3" = 9".
**4-3/4" φ threaded dowel rods at 3" cts., Each Face.

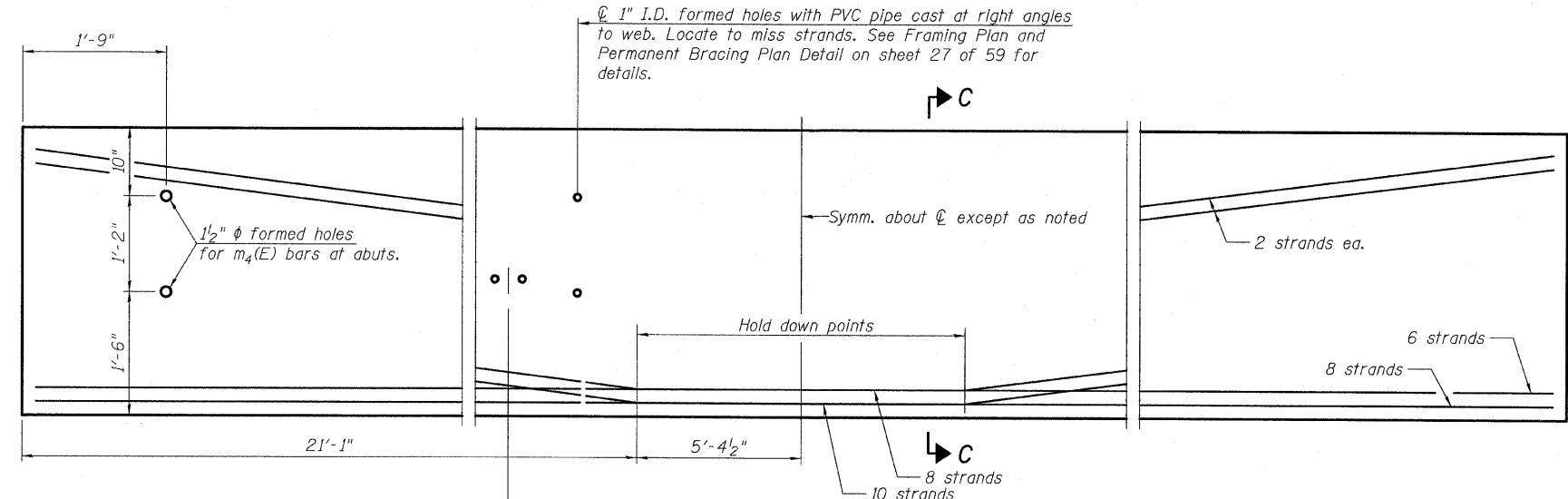
2-#8 G6 bar assembly with threaded coupler splice at pier only. (See sheet 33 of 59 for details).
Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



SECTION A-A

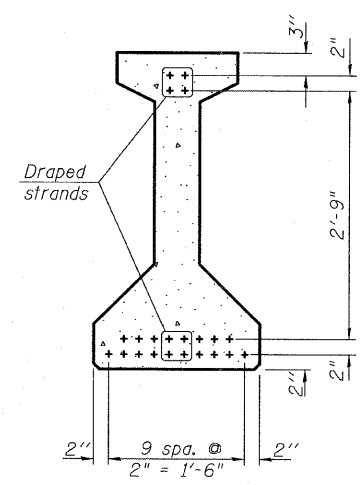


SECTION B-B



ELEVATION OF BEAM
(Showing prestressing steel)

Inserts for floor drain pipe clamps. Beams 1 & 7 only, locate to miss strands. See sheet 14 of 59 for drain locations.



SECTION C-C

*****BAR LIST
ONE BEAM ONLY**

| Bar | No. | Size | Length | Shape |
|-----|-----|------|--------|-------|
| G1 | 43 | #4 | 8'-5" | ∩L |
| G2 | 10 | #4 | 6'-8" | ∩ |
| G3 | 8 | #6 | 27'-8" | — |
| G4 | 38 | #3 | 4'-11" | ∩ |
| G5 | 53 | #3 | 2'-6" | ∩ |
| G6 | 2 | #8 | 6'-6" | U |

***For information only

Notes:
See sheet 33 of 59 for additional details and Bill of Material.
Required release strength, f'ci, shall be 5,000 psi.

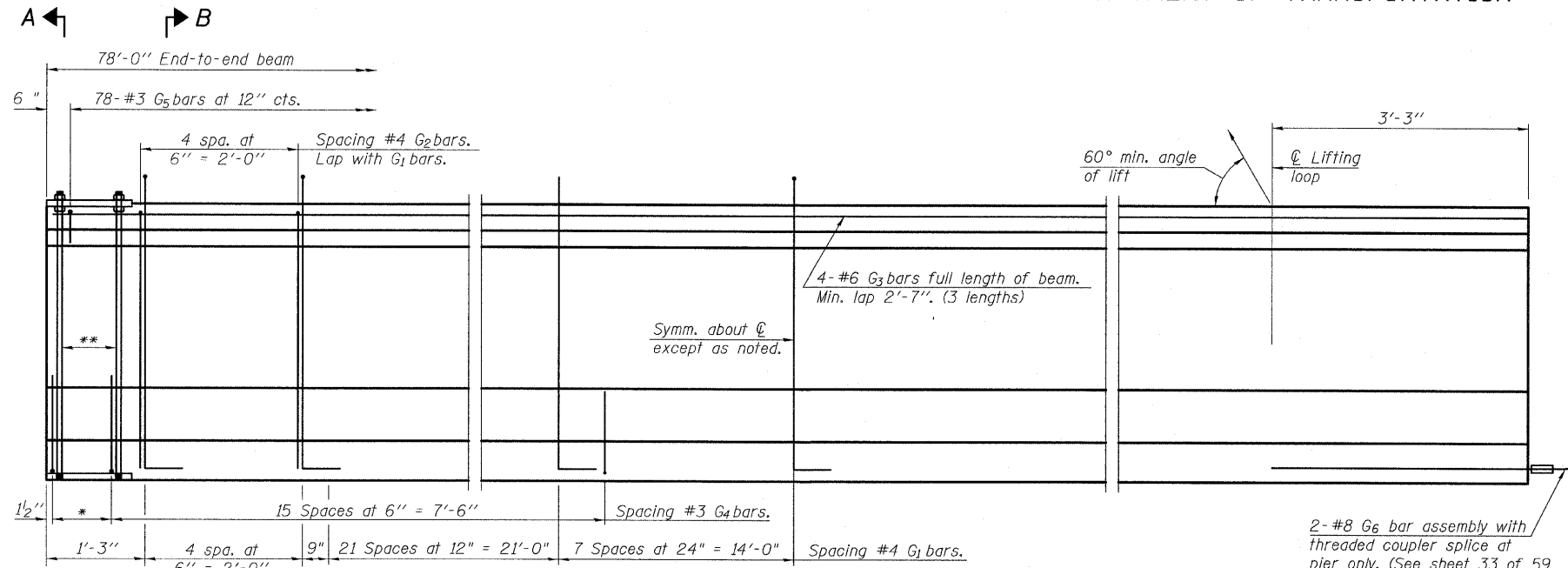
| | |
|----------|----------|
| DESIGNED | - PK |
| CHECKED | - PDF SP |
| DRAWN | - PK |
| CHECKED | - PDF |

**42" PPC I-BEAM (SPAN 1)
STRUCTURE NO. 006-0170 EB**

| | | | | | |
|---------------------------|-----------|---------|---------------------------|--------------------|-----------|
| SHEET NO. 28 59 SHEETS | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 344 | 122 |
| FED. ROAD DIST. NO. | | | ILLINOIS FED. AID PROJECT | CONTRACT NO. 66908 | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

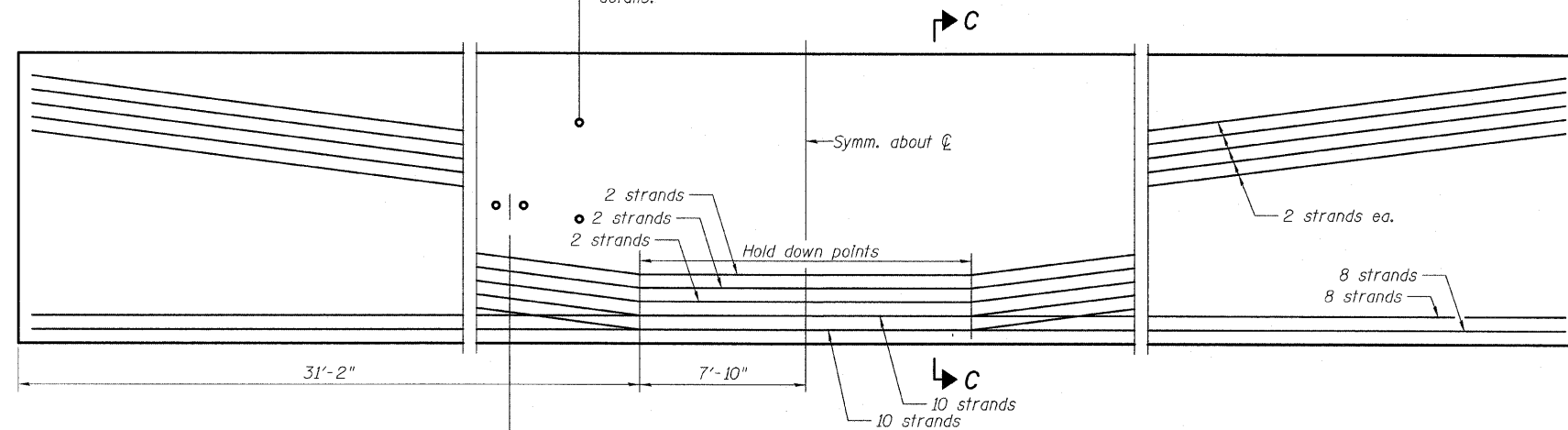


ELEVATION OF BEAM
(Showing reinforcement & dimensions)

2-#8 G₆ bar assembly with threaded coupler splice at pier only. (See sheet 33 of 59 for details).

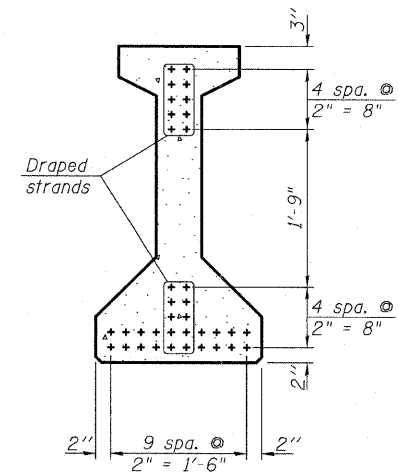
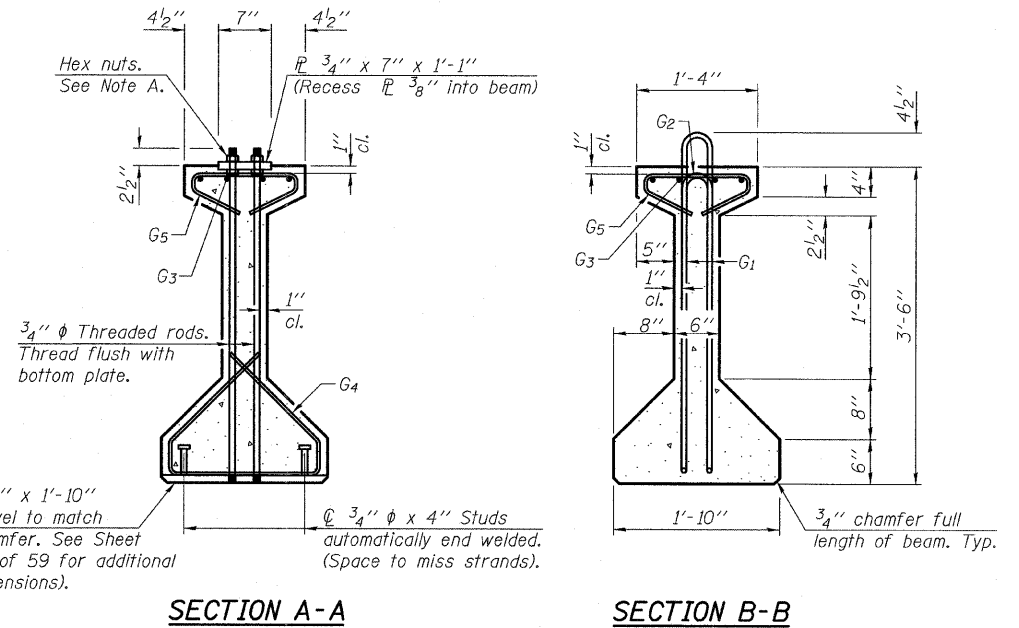
Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.

1" I.D. formed holes with PVC pipe cast at right angles to web. Locate to miss strands. See Framing Plan and Permanent Bracing Plan Detail on sheet 27 of 59 for details.



ELEVATION OF BEAM
(Showing prestressing steel)

Inserts for floor drain pipe clamps. Beams 1 & 7 only, locate to miss strands. See sheet 14 of 59 for drain locations.



*****BAR LIST**
ONE BEAM ONLY

| Bar | No. | Size | Length | Shape |
|----------------|-----|------|--------|-------|
| G ₁ | 67 | #4 | 8'-5" | ∩L |
| G ₂ | 10 | #4 | 6'-8" | ∩ |
| G ₃ | 12 | #6 | 27'-9" | — |
| G ₄ | 38 | #3 | 4'-11" | ∩ |
| G ₅ | 78 | #3 | 2'-6" | ∩ |
| G ₆ | 4 | #8 | 6'-6" | ∩ |

***For information only

Notes:
See sheet 33 of 59 for additional details and Bill of Material.
Required release strength, f'ci, shall be 5,000 psi.

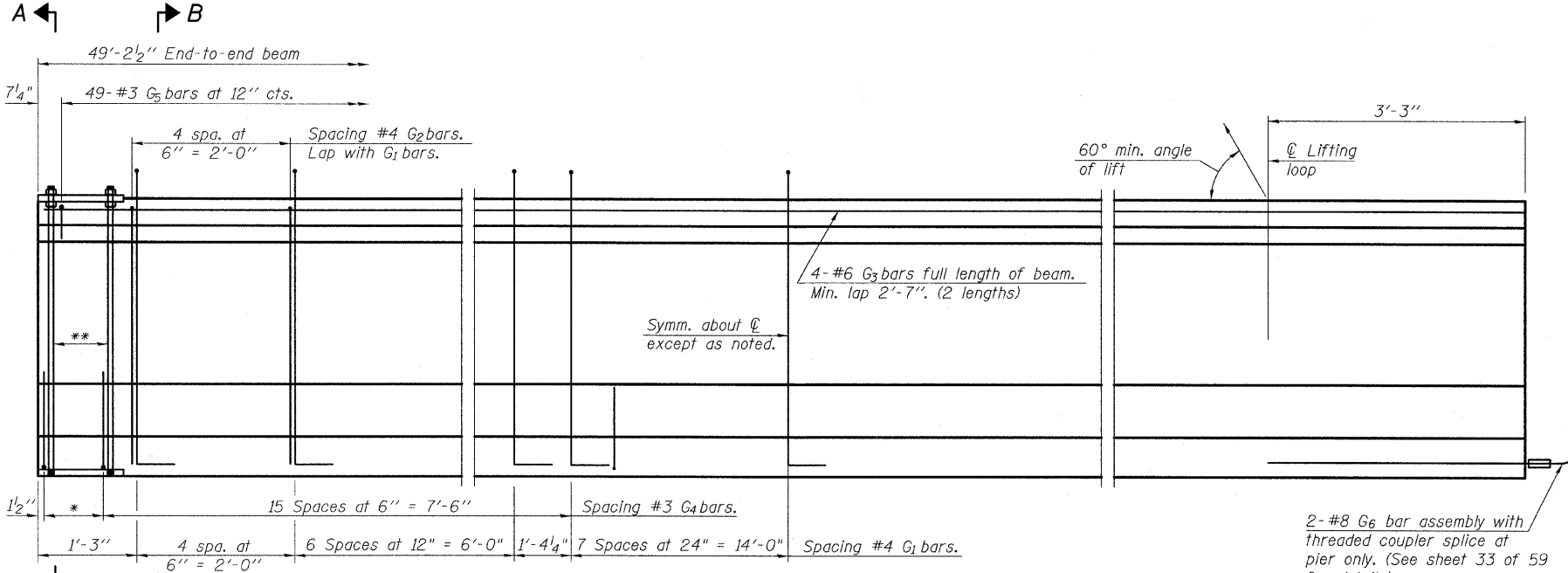
42" PPC I-BEAM (SPAN 2)
STRUCTURE NO. 006-0170 EB

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|------------------|
| DESIGNED - PK |
| CHECKED - PDF SP |
| DRAWN - PK |
| CHECKED - PDF |

| | | | | | |
|--------------|---|-----------|--------------------|------------------|---------------|
| SHEET NO. 29 | F.A. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 123 |
| 59 SHEETS | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | CONTRACT NO. 66908 | | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



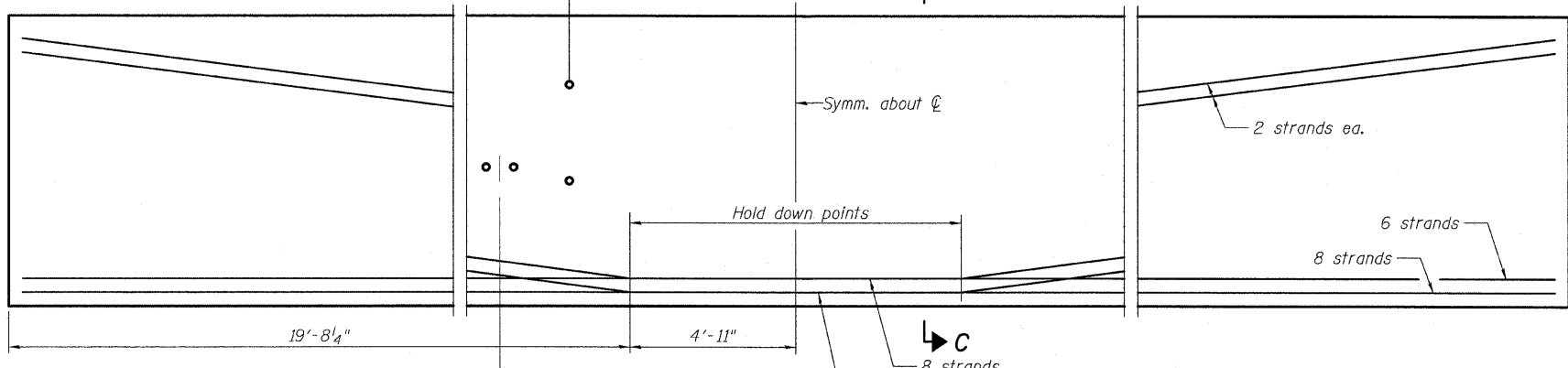
ELEVATION OF BEAM
(Showing reinforcement & dimensions)

*3 spaces at 3" = 9".
**4-3/4" φ threaded dowel rods at 3" cts., Each Face.

2-#8 G6 bar assembly with threaded coupler splice at pier only. (See sheet 33 of 59 for details).

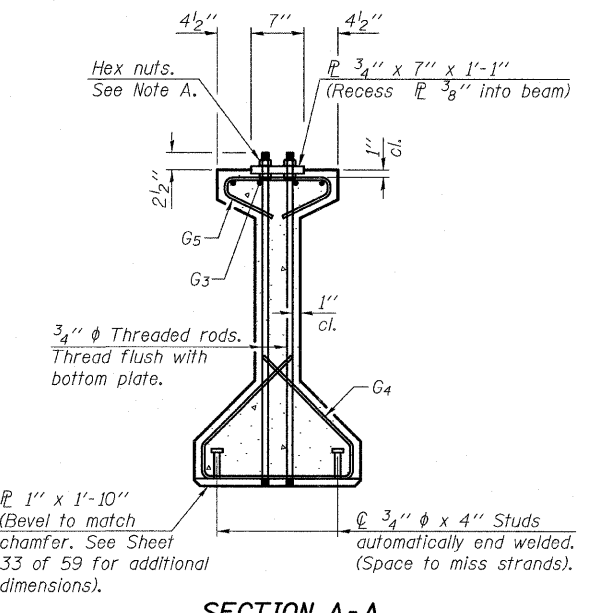
Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.

1" I.D. formed holes with PVC pipe cast at right angles to web. Locate to miss strands. See Framing Plan and Permanent Bracing Plan Detail on sheet 27 of 59 for details.

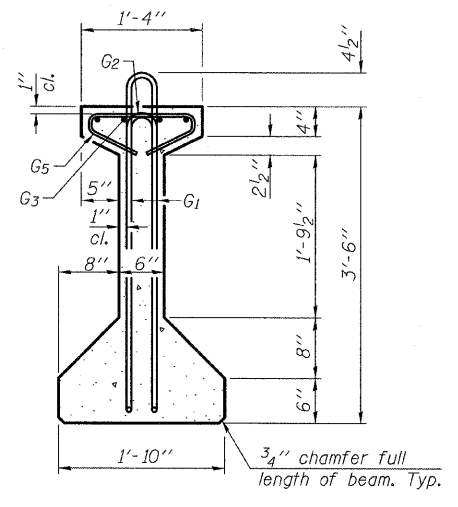


ELEVATION OF BEAM
(Showing prestressing steel)

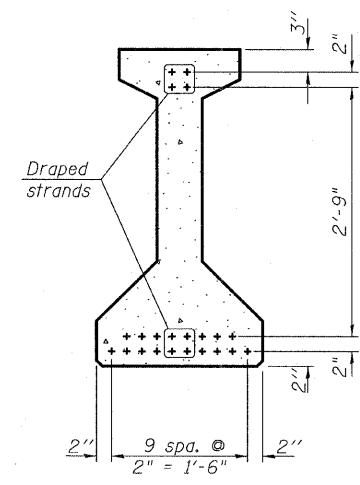
Inserts for floor drain pipe clamps. Beams 1 & 7 only, locate to miss strands. See sheet 14 of 59 for drain locations.



SECTION A-A



SECTION B-B



SECTION C-C

*****BAR LIST
ONE BEAM ONLY**

| Bar | No. | Size | Length | Shape |
|-----|-----|------|---------|-------|
| G1 | 37 | #4 | 8'-5" | ∩L |
| G2 | 10 | #4 | 6'-8" | ∩ |
| G3 | 8 | #6 | 25'-10" | — |
| G4 | 38 | #3 | 4'-11" | ∩ |
| G5 | 49 | #3 | 2'-6" | ∩ |
| G6 | 4 | #8 | 6'-6" | U |

***For information only

Notes:
See sheet 33 of 59 for additional details and Bill of Material.
Required release strength, f'ci, shall be 5,000 psi.

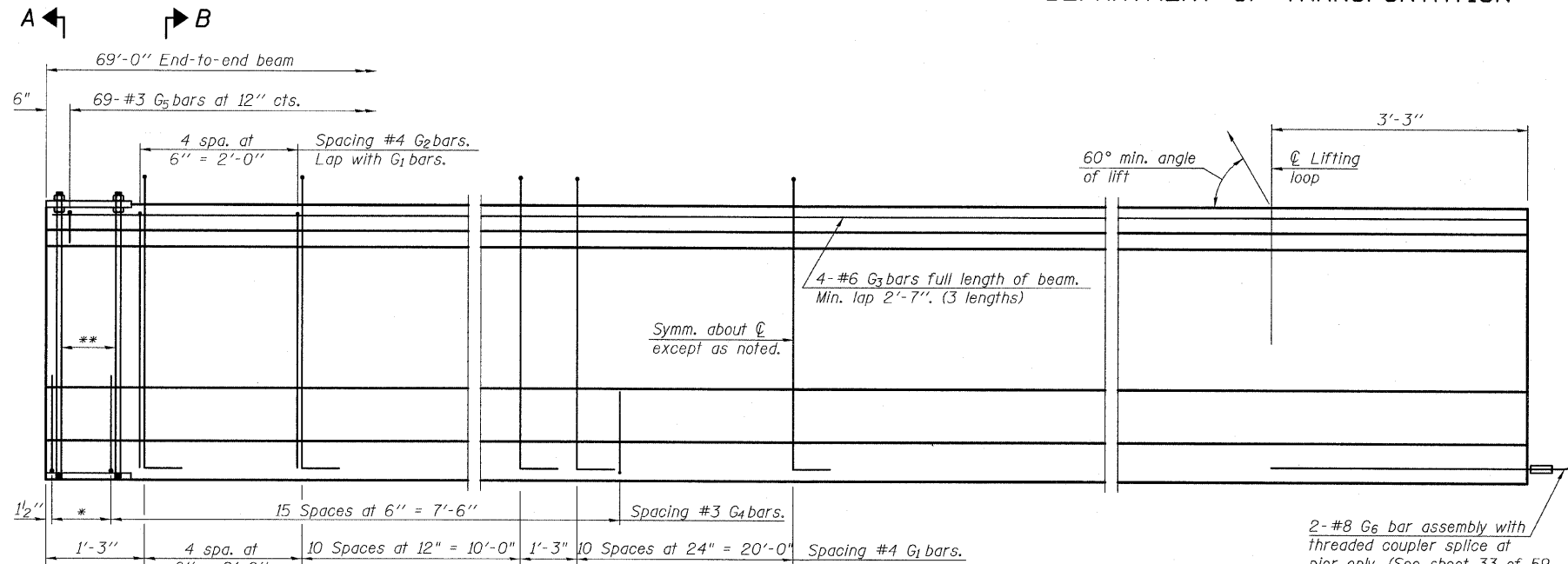
| | |
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| DESIGNED | - PK |
| CHECKED | - PDF SP |
| DRAWN | - PK |
| CHECKED | - PDF |

**42" PPC I-BEAM (SPAN 3)
STRUCTURE NO. 006-0170 EB**

| | | | | | |
|---------------------------|--------------------|---------------------------|------------------|---------------------|------------------|
| SHEET NO. 30 59 SHEETS | F.A. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 124 |
| | CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | | |

TYLIN INTERNATIONAL

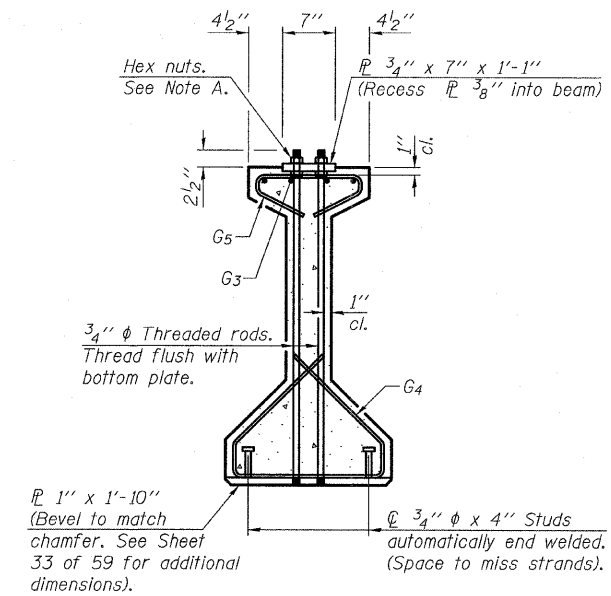
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



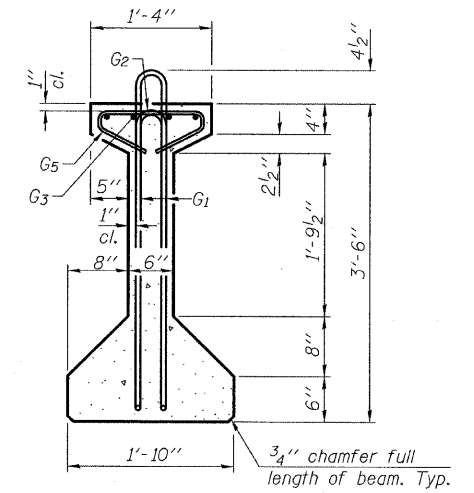
ELEVATION OF BEAM
(Showing reinforcement & dimensions)

2-#8 G6 bar assembly with threaded coupler splice at pier only. (See sheet 33 of 59 for details).

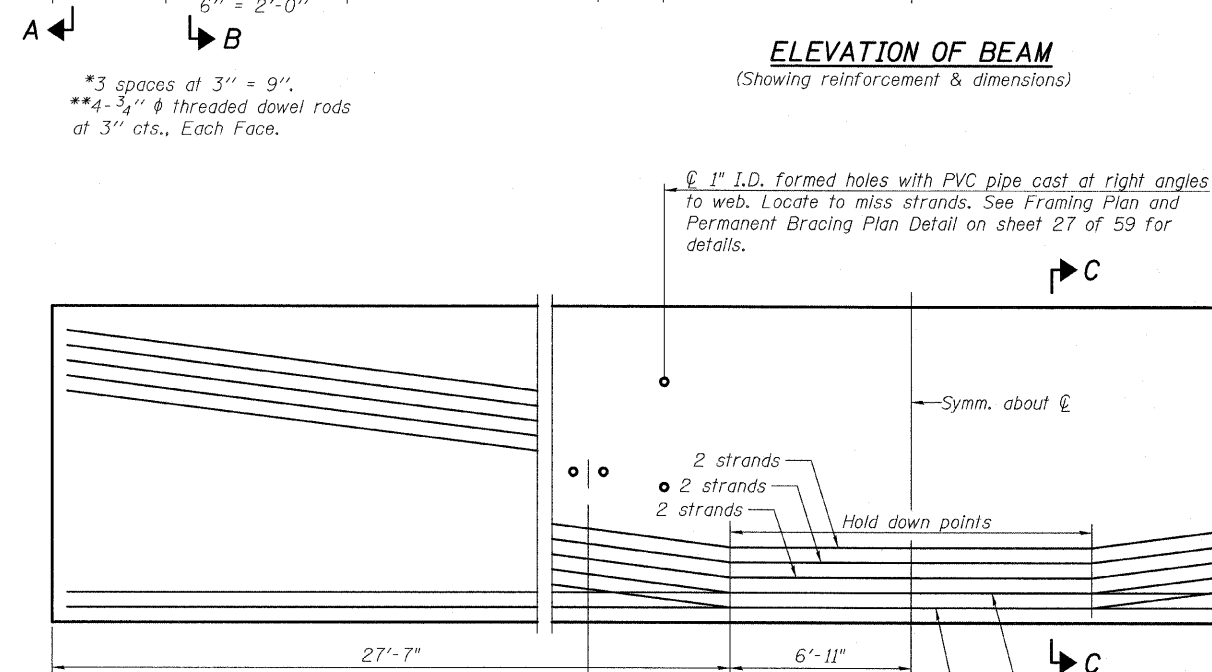
Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



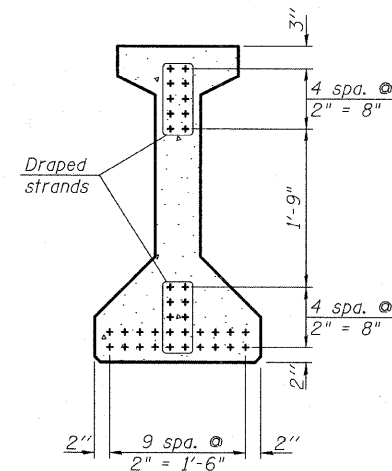
SECTION A-A



SECTION B-B



ELEVATION OF BEAM
(Showing prestressing steel)



SECTION C-C

*****BAR LIST
ONE BEAM ONLY**

| Bar | No. | Size | Length | Shape |
|-----|-----|------|--------|-------|
| G1 | 51 | #4 | 8'-5" | NL |
| G2 | 10 | #4 | 6'-8" | N |
| G3 | 12 | #6 | 24'-8" | |
| G4 | 38 | #3 | 4'-11" | ∩ |
| G5 | 69 | #3 | 2'-6" | U |
| G6 | 4 | #8 | 6'-6" | J |

***For information only

Notes:
See sheet 33 of 59 for additional details and Bill of Material.
Required release strength, f'ci, shall be 5,000 psi.

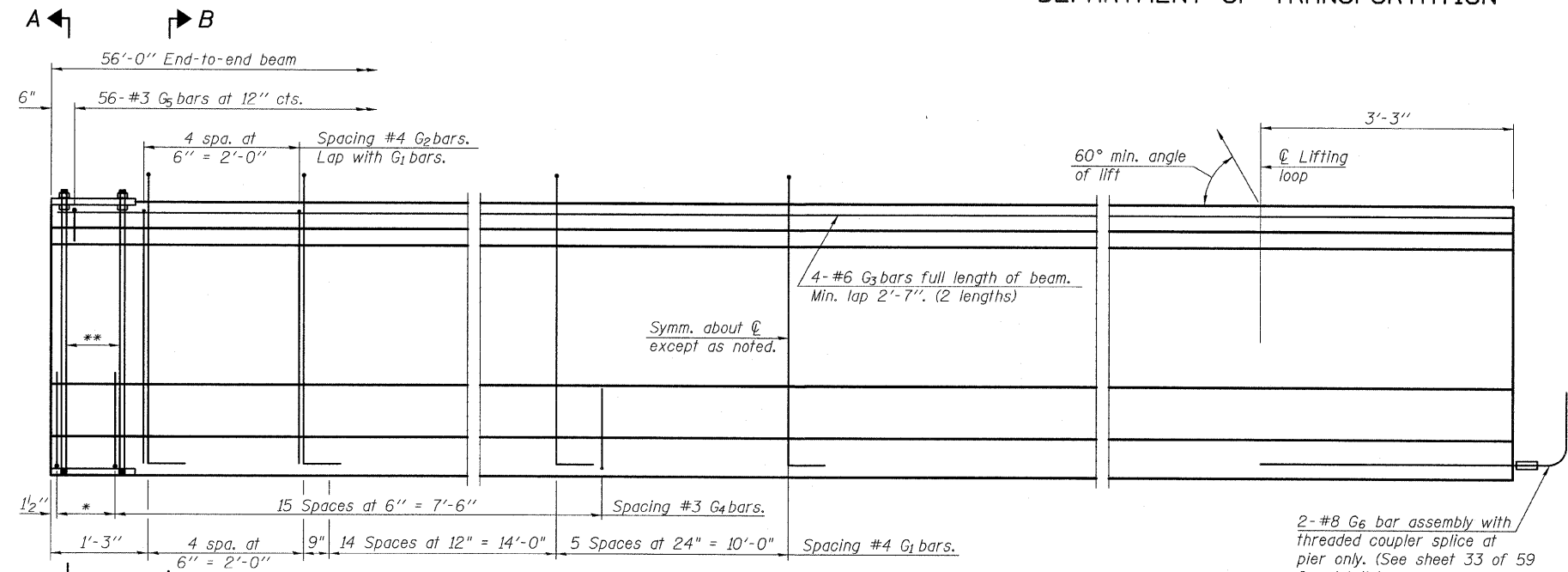
| |
|-------------------|
| DESIGNED - PK |
| CHECKED - PDF, SP |
| DRAWN - PK |
| CHECKED - PDF |

| | | | | | |
|---------------------------|---|--------------|------------------|---------------------|------------------|
| SHEET NO. 31 59 SHEETS | F.A. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 125 |
| | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | CONTRACT NO. 66908 | |

TYLIN INTERNATIONAL

**42" PPC I-BEAM (SPAN 4)
STRUCTURE NO. 006-0170 EB**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

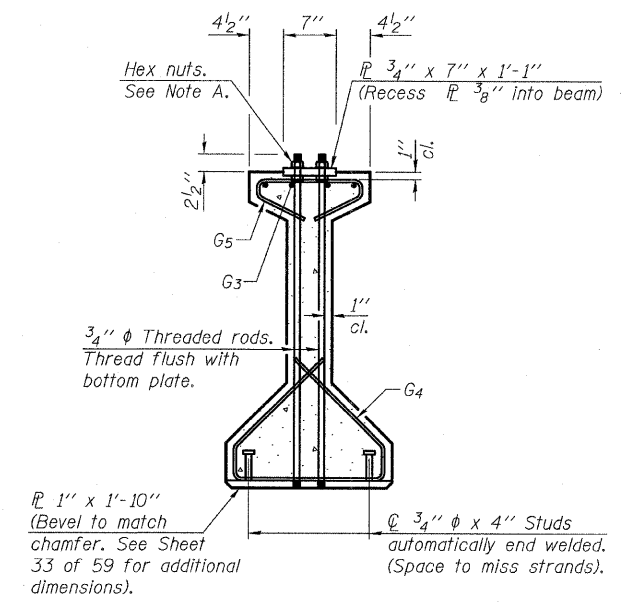


ELEVATION OF BEAM
(Showing reinforcement & dimensions)

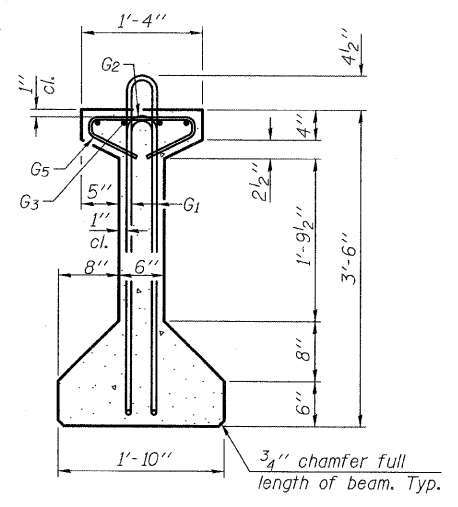
*3 spaces at 3" = 9".
**4-3/4" φ threaded dowel rods at 3" cts., Each Face.

2-#8 G6 bar assembly with threaded coupler splice at pier only. (See sheet 33 of 59 for details).

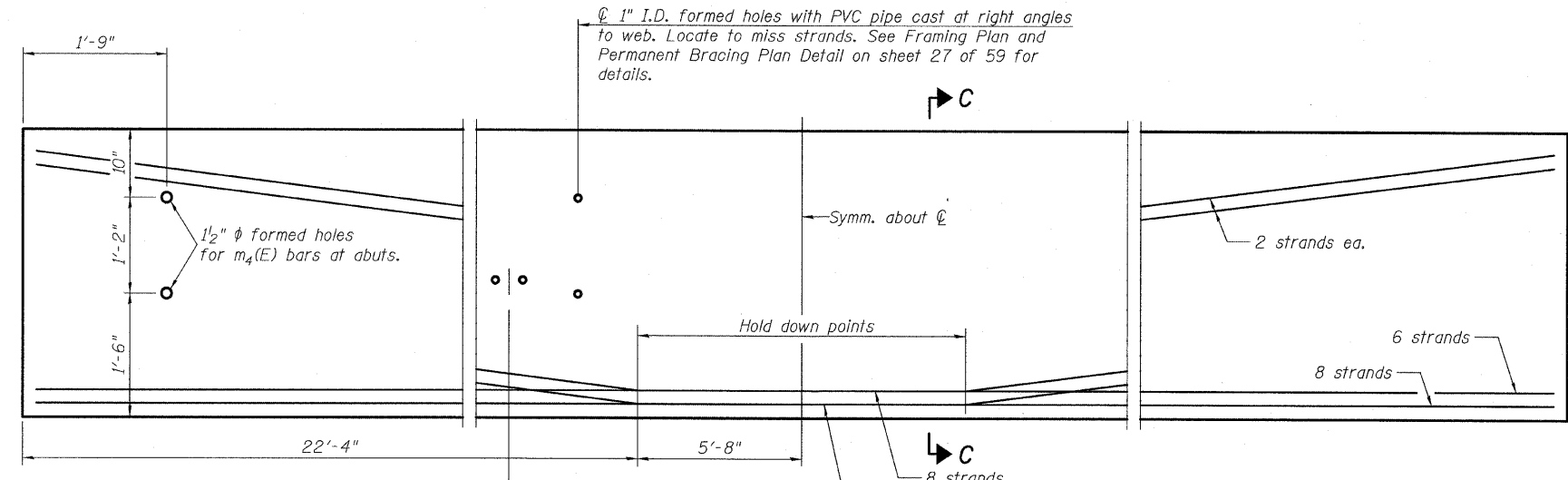
Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



SECTION A-A

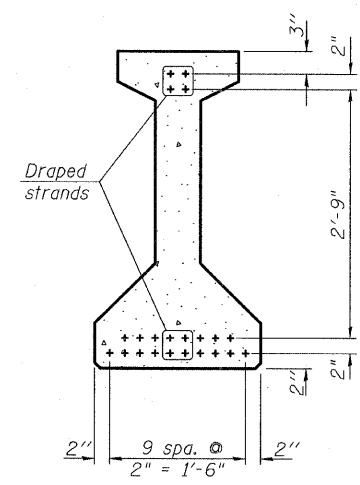


SECTION B-B



ELEVATION OF BEAM
(Showing prestressing steel)

Inserts for floor drain pipe clamps. Beams 1 & 7 only, locate to miss strands. See sheet 14 of 59 for drain locations.



SECTION C-C

*****BAR LIST
ONE BEAM ONLY**

| Bar | No. | Size | Length | Shape |
|-----|-----|------|--------|-------|
| G1 | 49 | #4 | 8'-5" | NL |
| G2 | 10 | #4 | 6'-8" | N |
| G3 | 8 | #6 | 29'-3" | — |
| G4 | 38 | #3 | 4'-11" | S |
| G5 | 56 | #3 | 2'-6" | S |
| G6 | 2 | #8 | 6'-6" | J |

***For information only

Notes:
See sheet 33 of 59 for additional details and Bill of Material.
Required release strength, f'ci, shall be 5,000 psi.

| |
|------------------|
| DESIGNED - PK |
| CHECKED - PDF SP |
| DRAWN - PK |
| CHECKED - PDF |

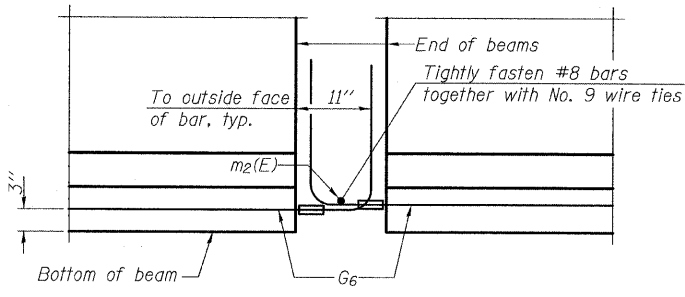
**42" PPC I-BEAM (SPAN 5)
STRUCTURE NO. 006-0170 EB**

| | | | | | |
|---------------------------|-----------|---------|---------------------------|--------------|-----------|
| SHEET NO. 32 59 SHEETS | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 344 | 126 |
| FED. ROAD DIST. NO. | | | ILLINOIS FED. AID PROJECT | | |
| CONTRACT NO. 66908 | | | | | |

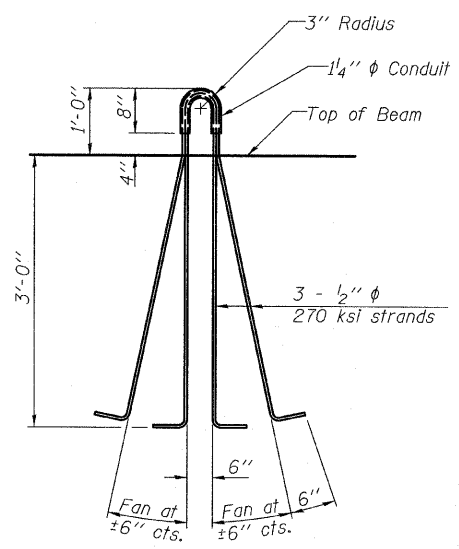
TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

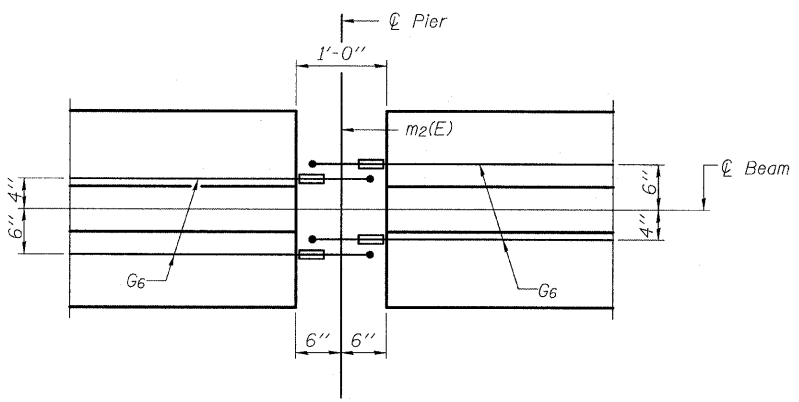
NOTES
 Inserts for 3/4" φ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.
 Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
 Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions). A minimum 2 1/2" φ lifting pin shall be used to engage the lifting loops during handling. Tilt G6 bars when necessary to maintain 1/2" clearance.
 The top and bottom plates shall be AASHTO M270 Grade 50.
 The bottom plates and studs shall be galvanized according to AASHTO M111.
 Threaded rods shall be ASTM F 1554 Grade 55.
 The G6 bar assembly shall have the threaded ends oversized to ensure no reduction in cross sectional area after threading. The coupler splice shall be capable of developing 125 percent of the yield strength of the reinforcement bar.



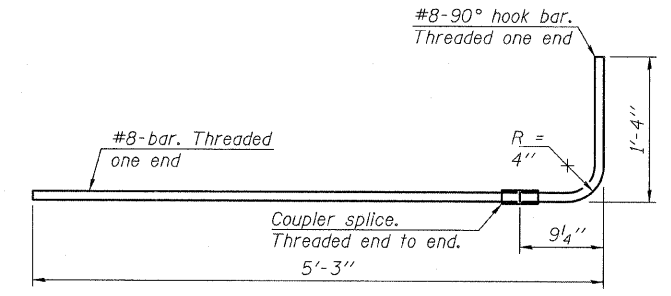
ELEVATION OF BEAM AT PIER



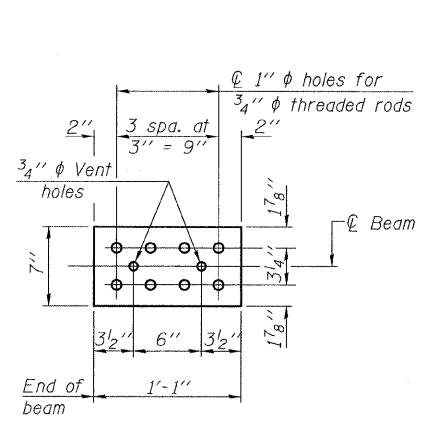
LIFTING LOOP DETAIL



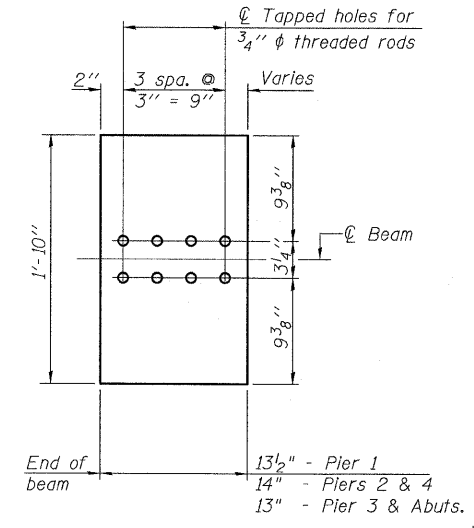
PLAN OF BEAM AT PIER



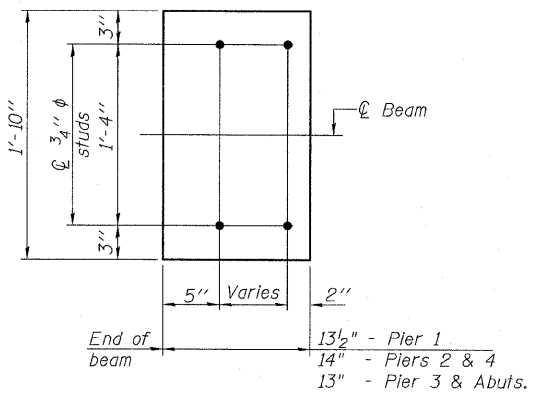
G6 BAR ASSEMBLY



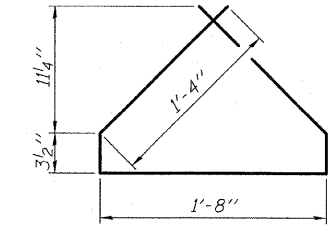
TOP PLATE



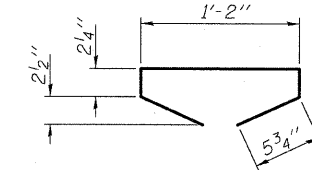
BOTTOM PLATE
(Showing threaded rods)



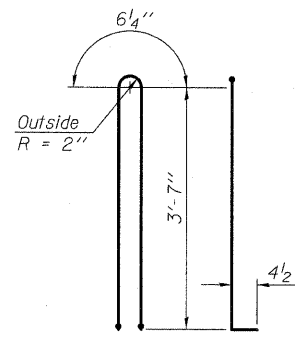
BOTTOM PLATE
(Showing studs)



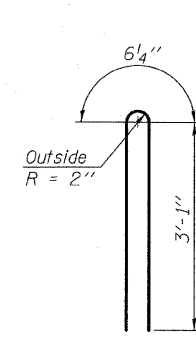
BAR G4



BAR G5



BAR G1



BAR G2

BILL OF MATERIAL

| Item | Unit | Total |
|---|------|---------|
| Furnishing and Erecting Precast Prestressed Concrete I-Beams, 42" | Ft. | 2,135.9 |

**42" PPC I-BEAM DETAILS
STRUCTURE NO. 006-0170 EB**

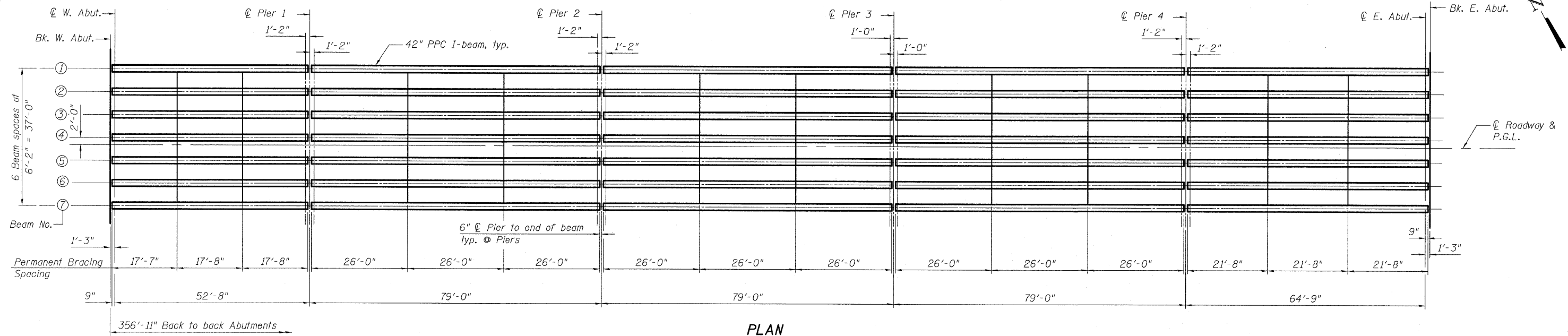
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| DESIGNED - PK |
| CHECKED - PDF SP |
| DRAWN - PK |
| CHECKED - PDF |

See bearing details for pintle hole locations when required.

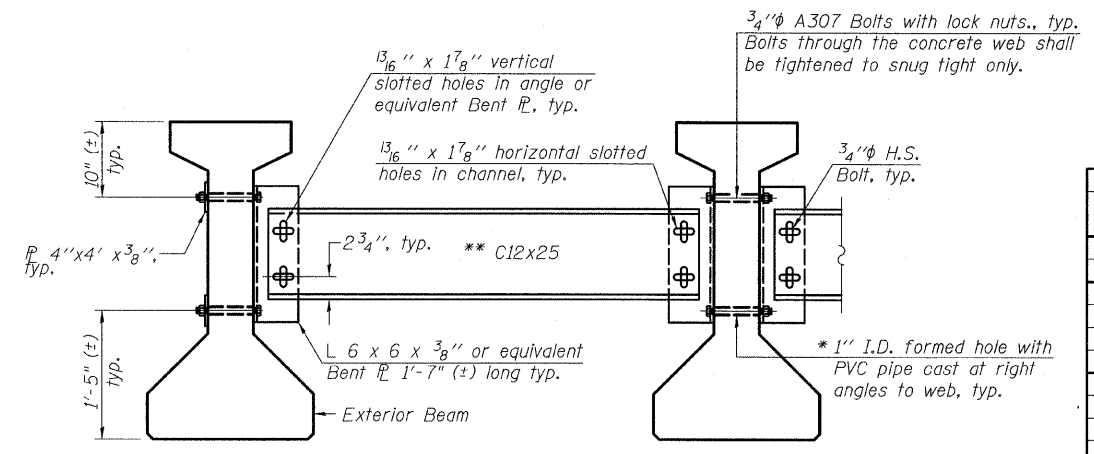
| | | | | | |
|--------------|---|-----------|--------------------|------------------|---------------|
| SHEET NO. 33 | F.A. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 127 |
| 59 SHEETS | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | CONTRACT NO. 66908 | | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN



Notes:
All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.
Two hardened washers are required for each set of oversized holes.
All holes shall be 1 5/16" ϕ unless otherwise noted.
5/16" x 3" x 3" plate washers are required over all slotted holes.
All bolts shall be galvanized according to AASHTO M232.
Bracing shall be installed as beams are erected and tightened as soon as possible during erection.

* Fabricator shall locate to miss strands within permissible tolerances.
** Alternate C12x30 channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on lighter section. The alternate, if utilized, shall be provided at no extra cost to the Department.

PERMANENT BRACING DETAILS

Cost of permanent bracing included with Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36"

| | |
|------------|-----|
| DESIGNED - | SP |
| CHECKED - | PDF |
| DRAWN - | SP |
| CHECKED - | PDF |

| | 0.4 Sp. 1 | Pier 1 | 0.5 Sp. 2 | Pier 2 | 0.5 Sp. 3 | Pier 3 | 0.5 Sp. 4 | Pier 4 | 0.6 Sp. 5 |
|----------------------------|--------------------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|
| I | (in ⁴) | 90,956 | | 90,956 | | 90,956 | | 90,956 | |
| I' | (in ⁴) | 277,493 | | 277,493 | | 277,493 | | 277,493 | |
| S _b | (in ³) | 5,153 | | 5,153 | | 5,153 | | 5,153 | |
| S _b ' | (in ³) | 8,772 | | 8,772 | | 8,772 | | 8,772 | |
| S _t | (in ³) | 3,736 | | 3,736 | | 3,736 | | 3,736 | |
| S _t ' | (in ³) | 26,772 | | 26,772 | | 26,772 | | 26,772 | |
| Q | (k/') | 1.12 | | 1.12 | | 1.12 | | 1.12 | |
| M _Q | (k) | 371 | | 823 | | 826 | | 826 | |
| s _Q | (k/') | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 |
| M _{s_Q} | (k) | 69 | 194 | 129 | 235 | 114 | 224 | 117 | 228 |
| M _L | (k) | 287 | 295 | 369 | 347 | 378 | 347 | 376 | 328 |
| M _I | (k) | 112 | 104 | 123 | 115 | 126 | 116 | 126 | 110 |

I: Non-composite moment of inertia of beam section (in.⁴).
I': Composite moment of inertia of beam section (in.⁴).
S_b: Non-composite section modulus for the bottom fiber of the prestressed beam (in.³).
S_b': Composite section modulus for the bottom fiber of the prestressed beam (in.³).
S_t: Non-composite section modulus for the top fiber of the prestressed beam (in.³).
S_t': Composite section modulus for the top fiber of the prestressed beam (in.³).
Q: Un-factored non-composite dead load (kips/ft.).
M_Q: Un-factored moment due to non-composite dead load conservatively taken at 0.5 of the span (kip-ft.).
s_Q: Un-factored long-term composite (superimposed) dead load (kips/ft.).
M_{s_Q}: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
M_L: Un-factored live load moment on the composite section (kip-ft.).
M_I: Un-factored moment due to impact on the composite section (kip-ft.).

| | W. Abut. | Pier 1 Span 1 | Pier 1 Span 2 | Pier 2 Span 2 | Pier 2 Span 3 | Pier 3 Span 3 | Pier 3 Span 4 | Pier 4 Span 4 | Pier 4 Span 5 | E. Abut. |
|------------------------------|----------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------|
| R _Q | (k) | 30.2 | 30.2 | 44.2 | 44.2 | 44.2 | 44.2 | 44.2 | 37.0 | 37.0 |
| * R _{s_Q} | (k) | 7.9 | 16.0 | 16.0 | 17.7 | 17.7 | 17.3 | 17.3 | 17.6 | 10.7 |
| * R _L | (k) | 31.9 | 21.8 | 21.8 | 23.4 | 23.4 | 23.4 | 22.8 | 22.8 | 33.2 |
| * R _I | (k) | 8.9 | 5.7 | 5.7 | 5.8 | 5.8 | 5.8 | 5.9 | 5.9 | 8.6 |
| R _{Total} | (k) | 78.9 | 73.7 | 87.7 | 91.1 | 91.1 | 90.7 | 90.7 | 90.5 | 89.5 |

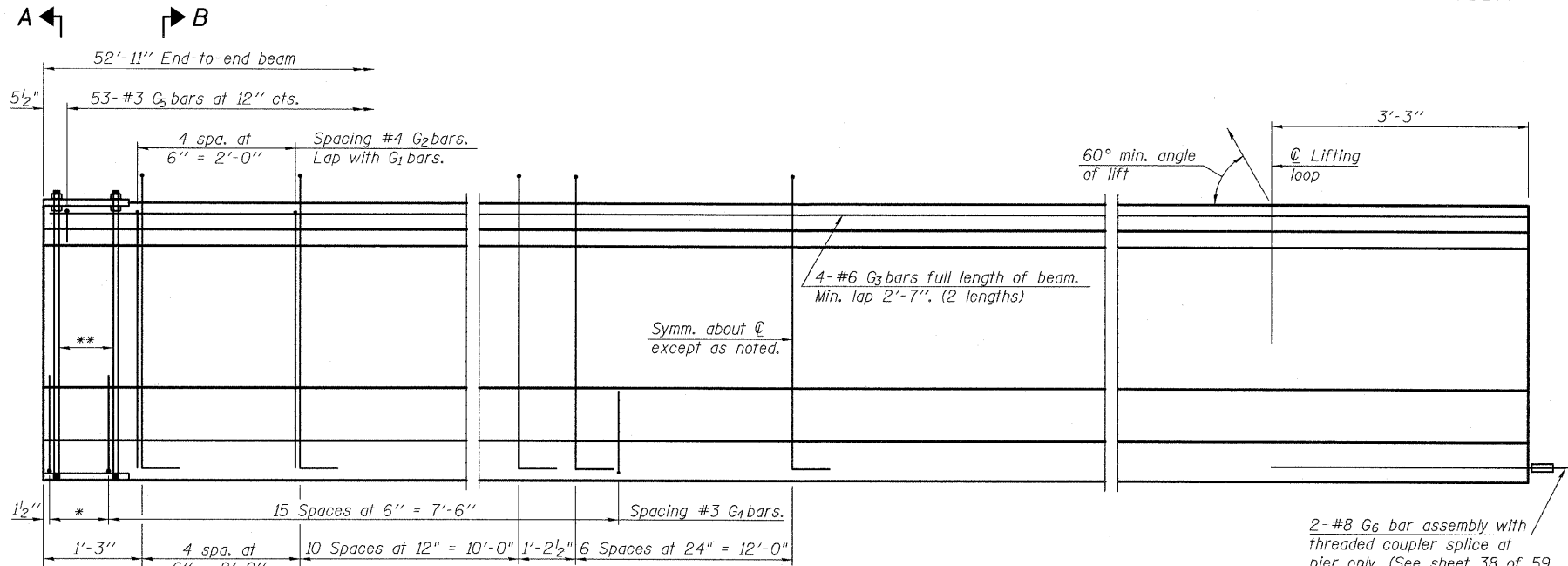
* The total R_{s_Q}, R_L, and impact reactions are assumed to be distributed evenly to each bearing line at a pier regardless of the span ratios. The bearing design at a pier is based on the maximum reactions of either span.

FRAMING PLAN
STRUCTURE NO. 006-0171 WB

| | | | | | |
|--------------|---------------------|---------|---------------------------|--------------|-----------|
| SHEET NO. 34 | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 344 | 128 |
| 59 SHEETS | FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |
| | | | CONTRACT NO. 66908 | | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

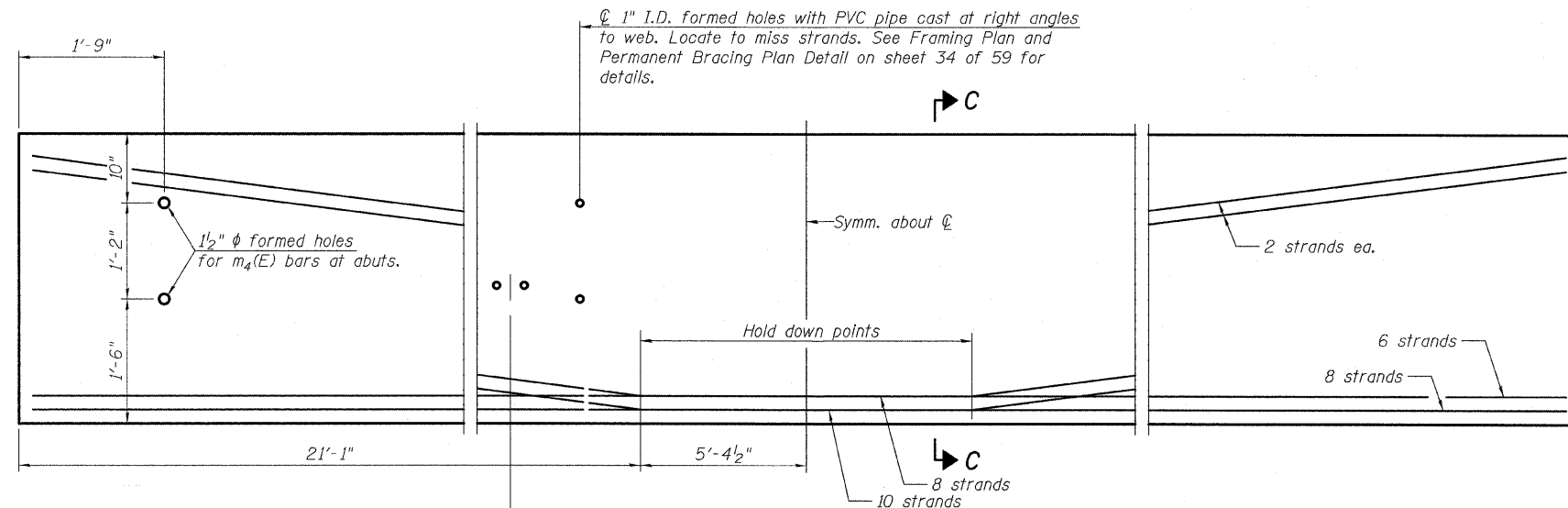


ELEVATION OF BEAM
(Showing reinforcement & dimensions)

*3 spaces at 3" = 9".
**4-3/4" φ threaded dowel rods at 3" cts., Each Face.

2-#8 G₆ bar assembly with threaded coupler splice at pier only. (See sheet 38 of 59 for details).

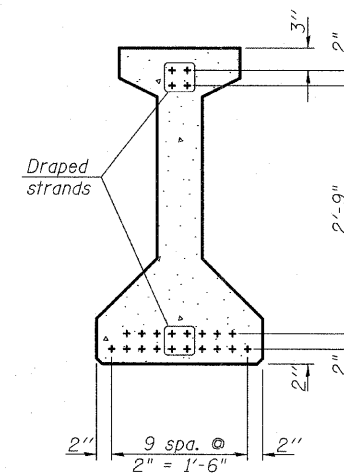
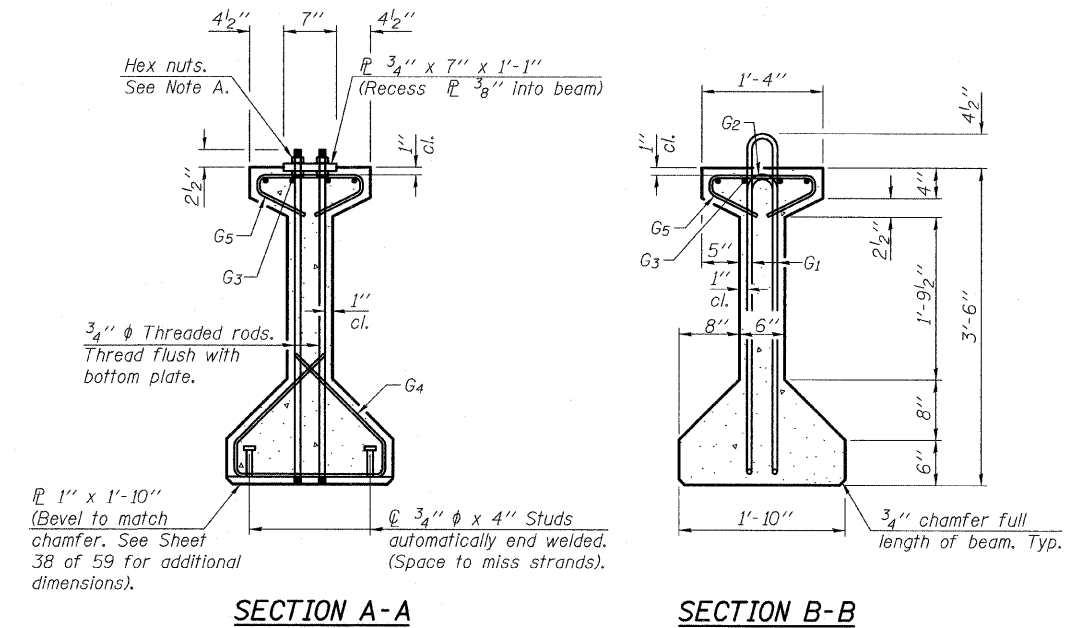
Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



ELEVATION OF BEAM
(Showing prestressing steel)

Inserts for floor drain pipe clamps. Beams 1 & 7 only. locate to miss strands. See sheet 17 of 59 for drain locations.

| | | |
|----------|---|--------|
| DESIGNED | - | PK |
| CHECKED | - | PDF SP |
| DRAWN | - | PK |
| CHECKED | - | PDF |



*****BAR LIST**
ONE BEAM ONLY

| Bar | No. | Size | Length | Shape |
|----------------|-----|------|--------|-------|
| G ₁ | 43 | #4 | 8'-5" | ⊏ |
| G ₂ | 10 | #4 | 6'-8" | ⊏ |
| G ₃ | 8 | #6 | 27'-8" | — |
| G ₄ | 38 | #3 | 4'-11" | ⊏ |
| G ₅ | 53 | #3 | 2'-6" | ⊏ |
| G ₆ | 2 | #8 | 6'-6" | ⊏ |

***For information only

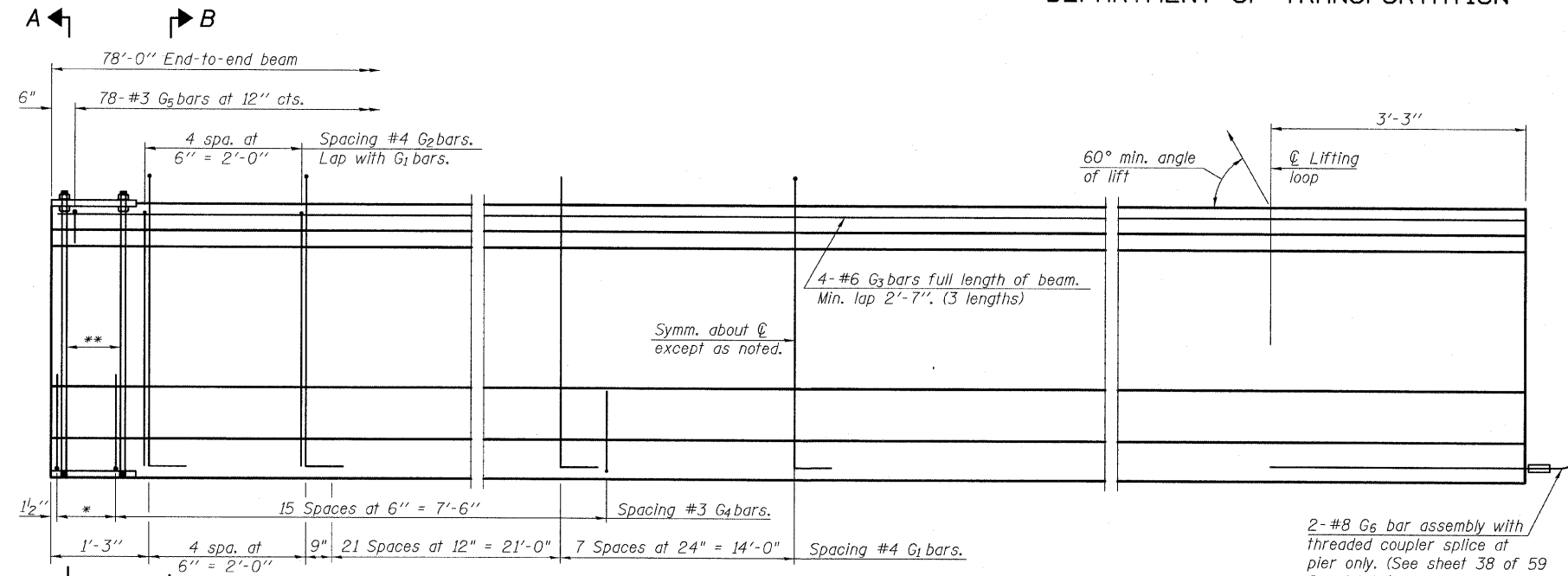
Notes:
See sheet 38 of 59 for additional details and Bill of Material.
Required release strength, f'ci, shall be 5,000 psi.

42" PPC I-BEAM (SPAN 1)
STRUCTURE NO. 006-0171 WB

| | | | | | |
|---------------------|--------------------|---------------------------|---------------|------------------|---------------|
| SHEET NO. 35 | F.A. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 129 |
| 59 SHEETS | CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



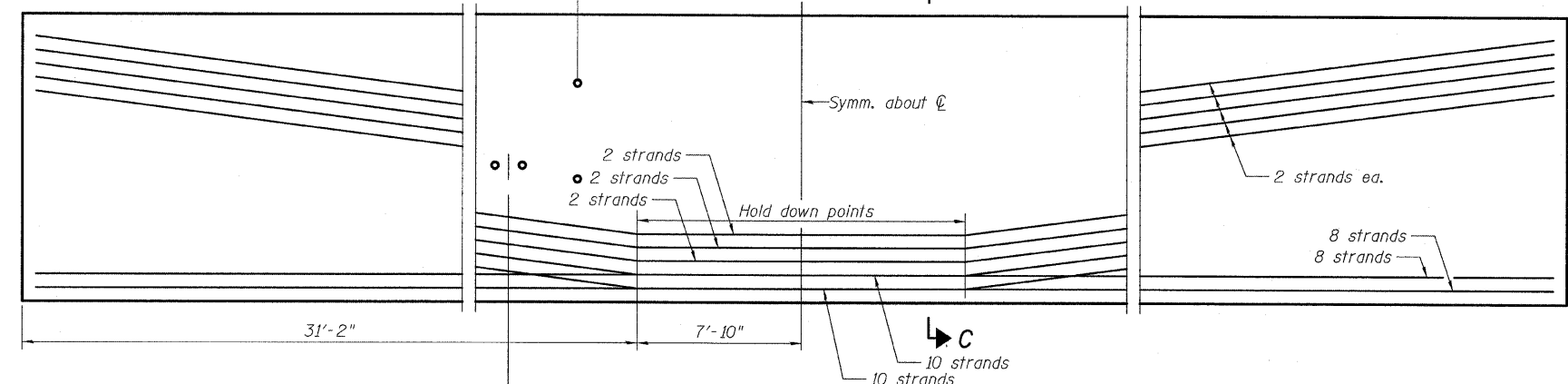
ELEVATION OF BEAM
(Showing reinforcement & dimensions)

*3 spaces at 3" = 9".
**4-3/4" φ threaded dowel rods at 3" cts., Each Face.

2-#8 G6 bar assembly with threaded coupler splice at pier only. (See sheet 38 of 59 for details).

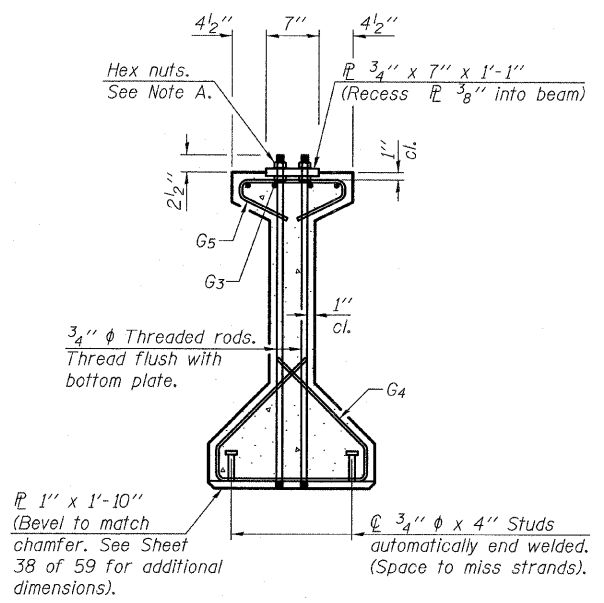
Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.

1" I.D. formed holes with PVC pipe cast at right angles to web. Locate to miss strands. See Framing Plan and Permanent Bracing Plan Detail on sheet 34 of 59 for details.

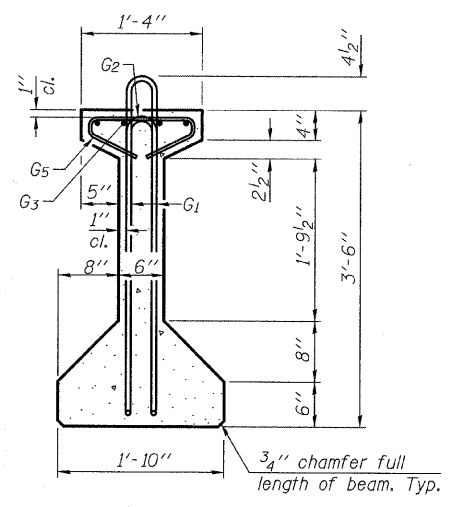


ELEVATION OF BEAM
(Showing prestressing steel)

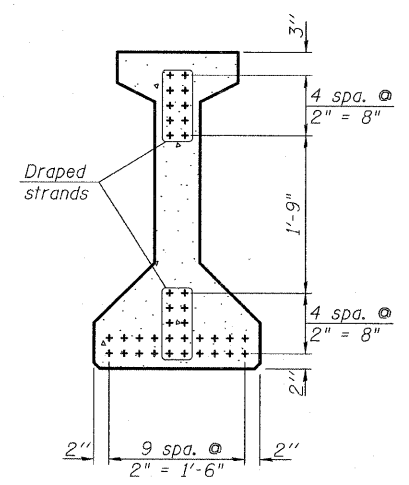
Inserts for floor drain pipe clamps. Beams 1 & 7 only, locate to miss strands. See sheet 17 of 59 for drain locations.



SECTION A-A



SECTION B-B



SECTION C-C

*****BAR LIST
ONE BEAM ONLY**

| Bar | No. | Size | Length | Shape |
|-----|-----|------|--------|-------|
| G1 | 67 | #4 | 8'-5" | NL |
| G2 | 10 | #4 | 6'-8" | n |
| G3 | 12 | #6 | 27'-9" | — |
| G4 | 38 | #3 | 4'-11" | S |
| G5 | 78 | #3 | 2'-6" | S |
| G6 | 4 | #8 | 6'-6" | J |

***For information only

Notes:
See sheet 38 of 59 for additional details and Bill of Material.
Required release strength, f'ci, shall be 5,000 psi.

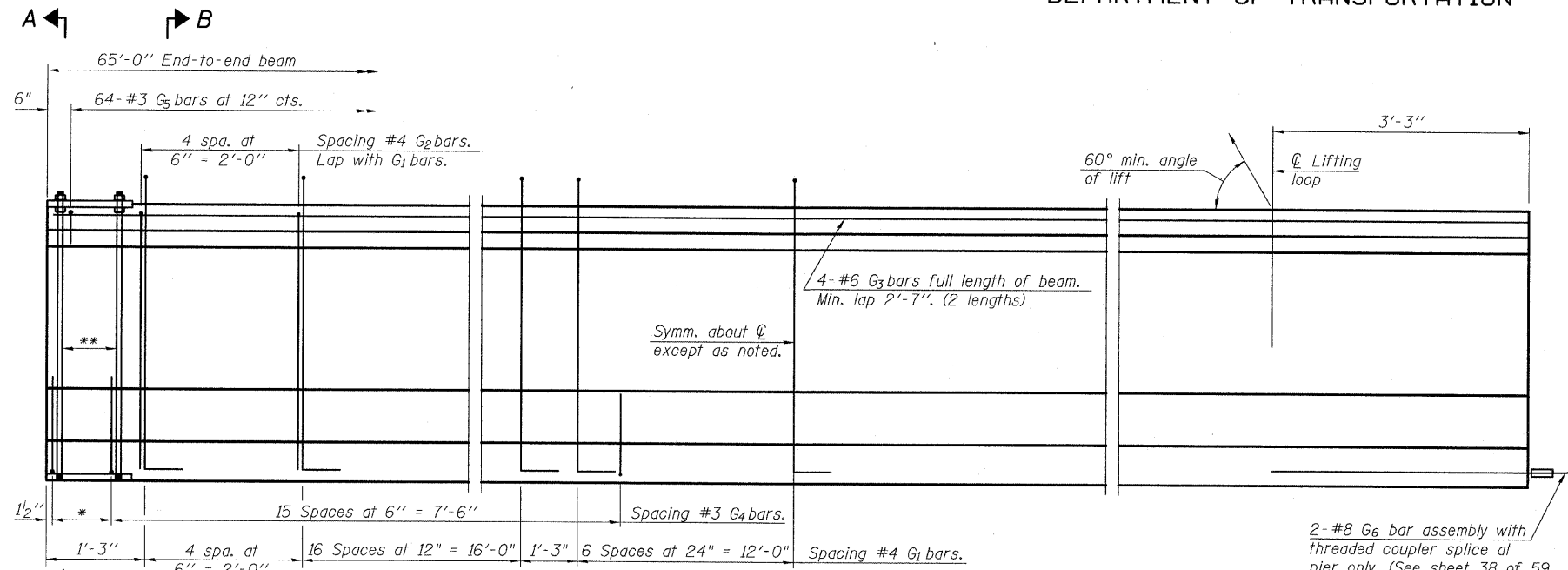
| | | |
|----------|---|--------|
| DESIGNED | - | PK |
| CHECKED | - | PDF SP |
| DRAWN | - | PK |
| CHECKED | - | PDF |

**42" PPC I-BEAM (SPANS 2 TO 4)
STRUCTURE NO. 006-0171 WB**

| | | | | | |
|---------------------------|--------------------|---------------------------|------------------|---------------------|------------------|
| SHEET NO. 36 59 SHEETS | F.A. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 130 |
| | CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | | |

TYLIN INTERNATIONAL

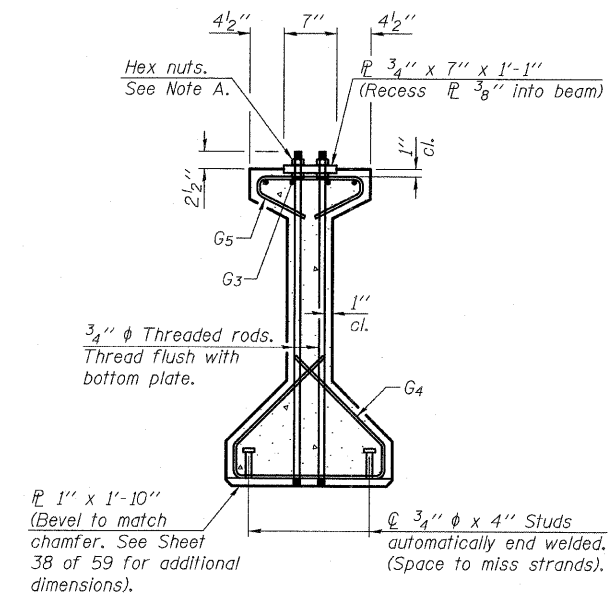
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



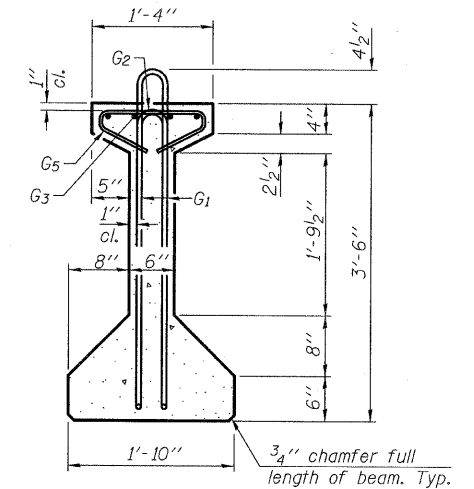
ELEVATION OF BEAM
(Showing reinforcement & dimensions)

2-#8 G₆ bar assembly with threaded coupler splice at pier only. (See sheet 38 of 59 for details).

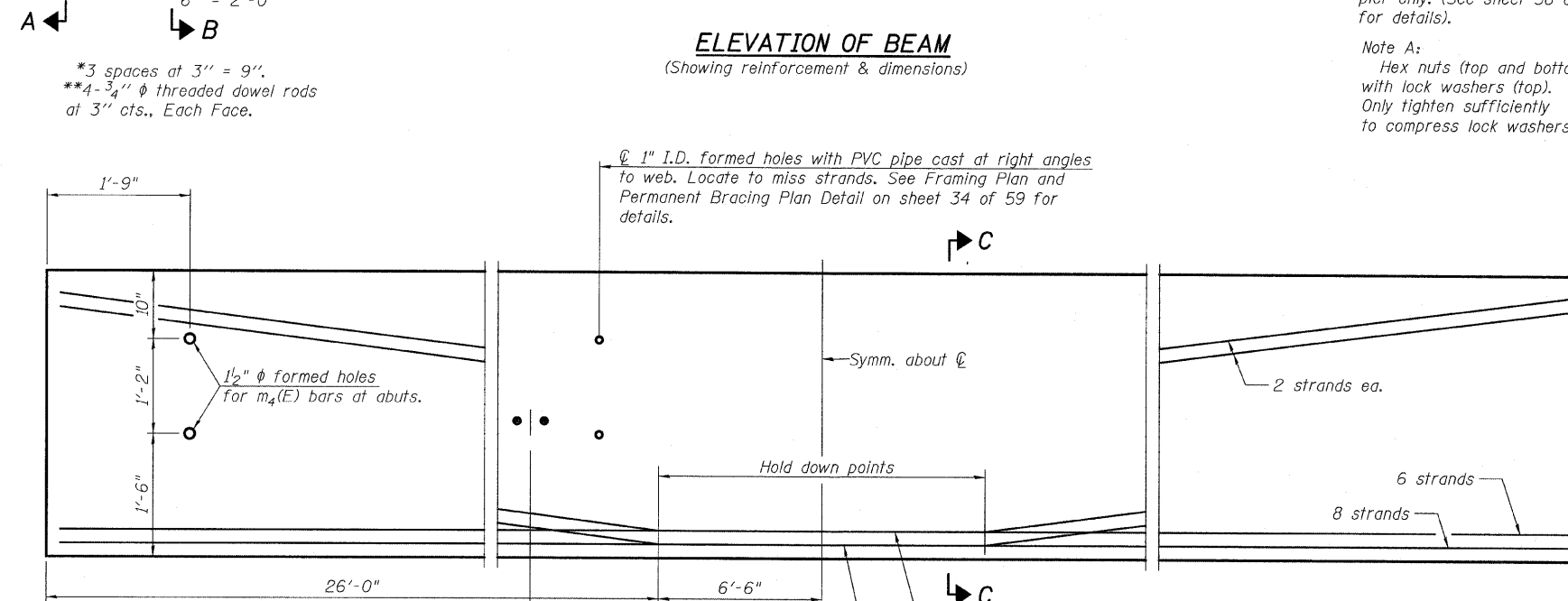
Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



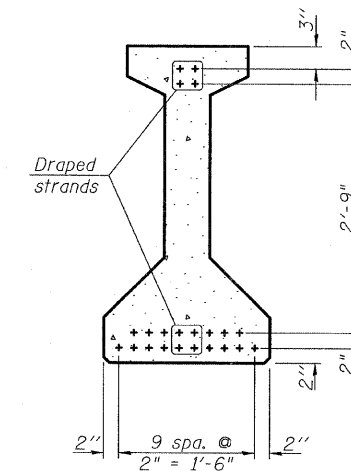
SECTION A-A



SECTION B-B



ELEVATION OF BEAM
(Showing prestressing steel)



SECTION C-C

*****BAR LIST
ONE BEAM ONLY**

| Bar | No. | Size | Length | Shape |
|----------------|-----|------|--------|-------|
| G ₁ | 55 | #4 | 8'-5" | NL |
| G ₂ | 10 | #4 | 6'-8" | N |
| G ₃ | 8 | #6 | 33'-9" | |
| G ₄ | 38 | #3 | 4'-11" | U |
| G ₅ | 64 | #3 | 2'-6" | U |
| G ₆ | 2 | #8 | 6'-6" | U |

***For information only

Notes:
See sheet 38 of 59 for additional details and Bill of Material.
Required release strength, f'_{ci}, shall be 5,000 psi.

| | |
|----------|----------|
| DESIGNED | - PK |
| CHECKED | - PDF SP |
| DRAWN | - PK |
| CHECKED | - PDF |

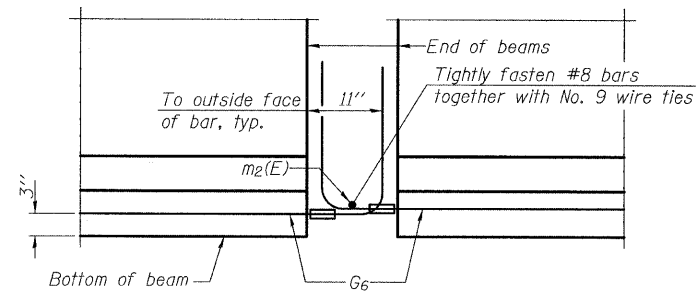
**42" PPC I-BEAM (SPAN 5)
STRUCTURE NO. 006-0171 WB**

| | | | | | |
|---------------------------|--------------------|---------------------------|------------------|---------------------|------------------|
| SHEET NO. 37 59 SHEETS | F.A. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 131 |
| | CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | | |

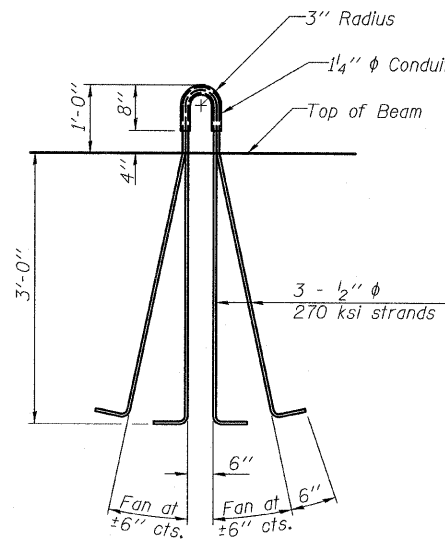
TYLIN INTERNATIONAL

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DEPARTMENT OF TRANSPORTATION

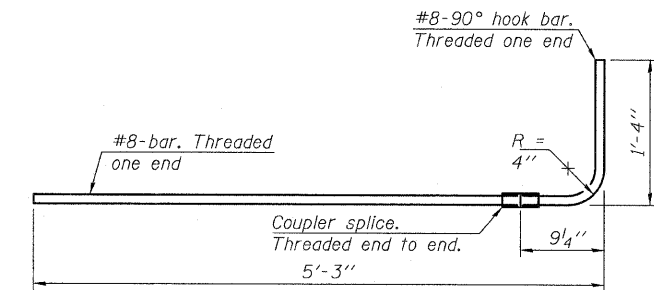
NOTES
 Inserts for $\frac{3}{4}$ " ϕ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.
 Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be $\frac{1}{2}$ " and the nominal cross-sectional area shall be 0.153 sq. in.
 Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
 A minimum $2\frac{1}{2}$ " ϕ lifting pin shall be used to engage the lifting loops during handling.
 Tilt G₆ bars when necessary to maintain $1\frac{1}{2}$ " clearance.
 The top and bottom plates shall be AASHTO M270 Grade 50.
 The bottom plates and studs shall be galvanized according to AASHTO M111.
 Threaded rods shall be ASTM F 1554 Grade 55.
 The G₆ bar assembly shall have the threaded ends oversized to ensure no reduction in cross sectional area after threading. The coupler splice shall be capable of developing 125 percent of the yield strength of the reinforcement bar.



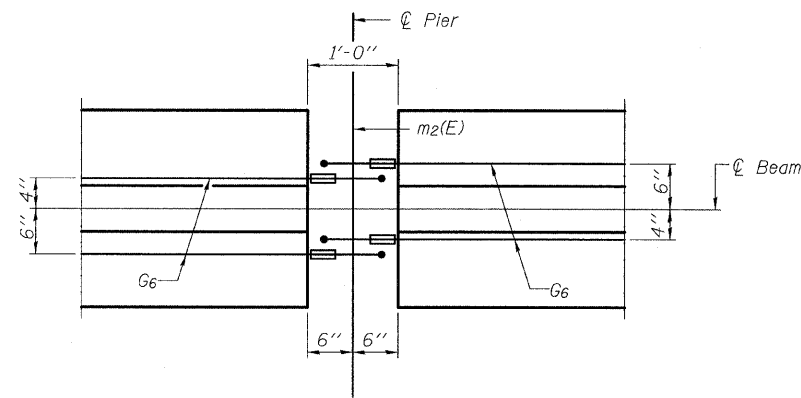
ELEVATION OF BEAM AT PIER



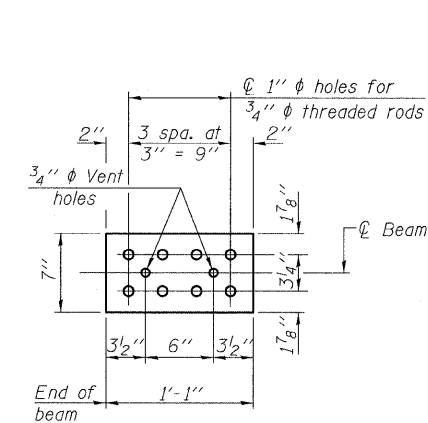
LIFTING LOOP DETAIL



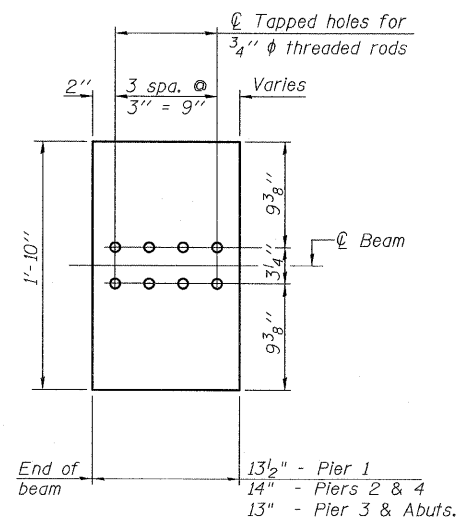
G₆ BAR ASSEMBLY



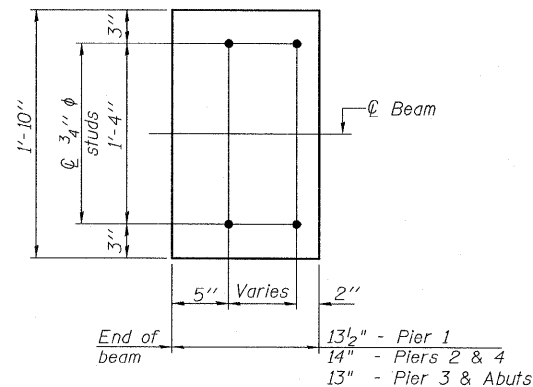
PLAN OF BEAM AT PIER



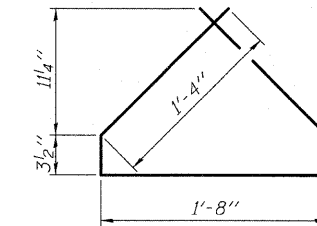
TOP PLATE



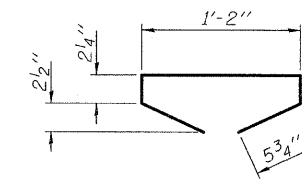
BOTTOM PLATE
(Showing threaded rods)



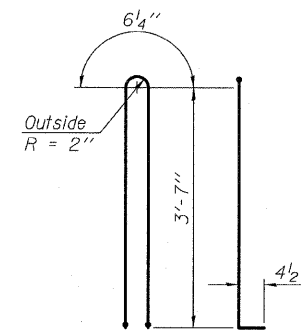
BOTTOM PLATE
(Showing studs)



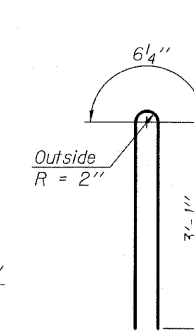
BAR G₄



BAR G₅



BAR G₁



BAR G₂

BILL OF MATERIAL

| Item | Unit | Total |
|---|------|---------|
| Furnishing and Erecting Precast Prestressed Concrete I-Beams, 42" | Ft. | 2,463.4 |

**42" PPC I-BEAM DETAILS
STRUCTURE NO. 006-0171 WB**

| |
|------------------|
| DESIGNED - PK |
| CHECKED - PDF SP |
| DRAWN - PK |
| CHECKED - PDF |

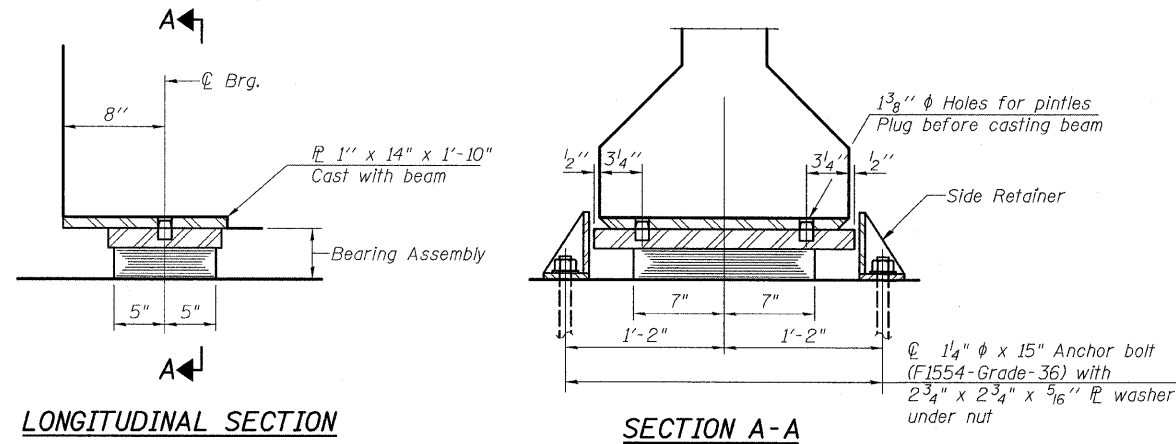
See bearing details for pintle hole locations when required.

| | | | | | |
|--------------|---|-----------|--------------------|------------------|---------------|
| SHEET NO. 38 | F.A. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 132 |
| 59 SHEETS | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | CONTRACT NO. 66908 | | |

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* 06-L7BR & BR-1,7VB-M, 6BR & 6, 7 RS-1 & IJ

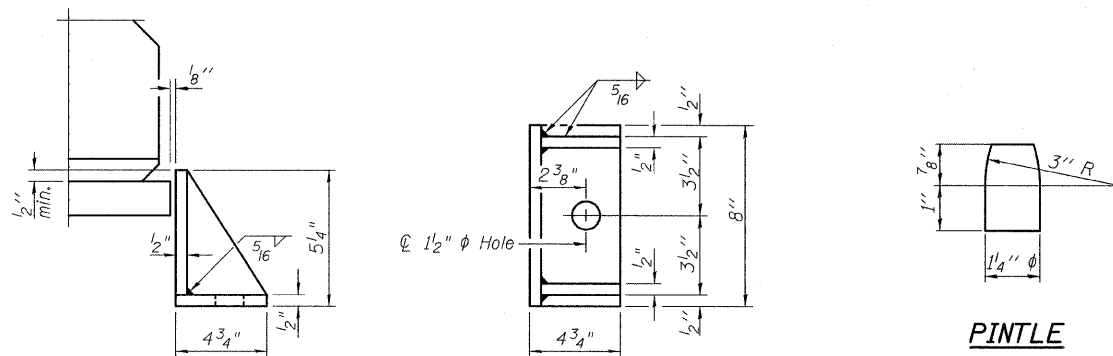
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



LONGITUDINAL SECTION

SECTION A-A

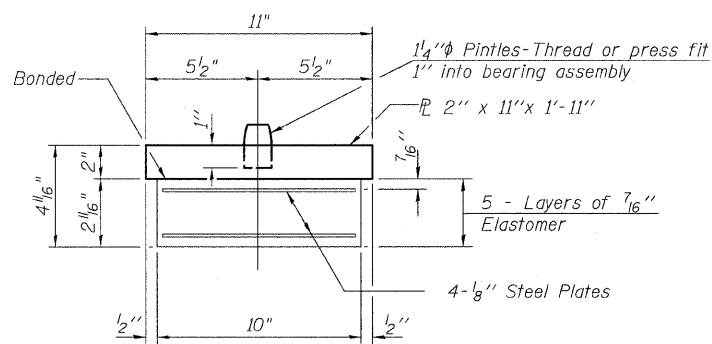
TYPE I ELASTOMERIC EXP. BRG. - PIERS 2 & 4



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

PINTLE



BEARING ASSEMBLY

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for side retainers may be cast in place or installed in holes drilled after members are in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

See sheet 33 and 38 of 59 for additional details of plate cast with beam.

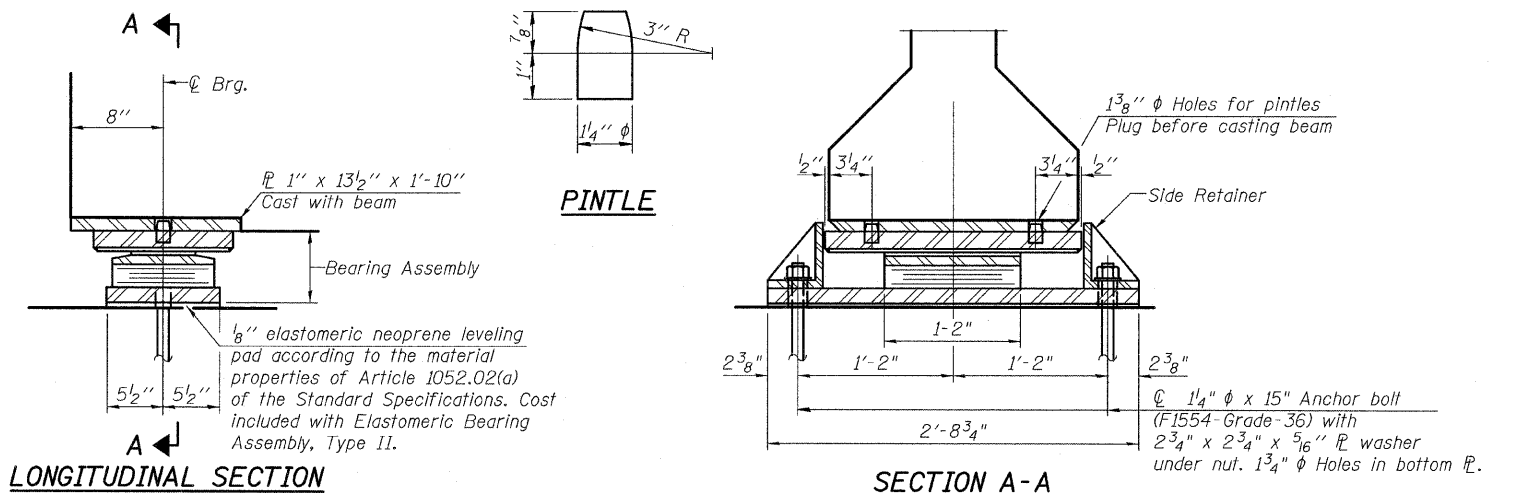
All embedded and separate bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 (as applicable).

BILL OF MATERIAL

(Total for 2 bridges)

| Item | Unit | Total |
|--------------------------------------|------|-------|
| Elastomeric Bearing Assembly, Type I | Each | 56 |
| Anchor Bolts, 1 1/4" φ | Each | 112 |

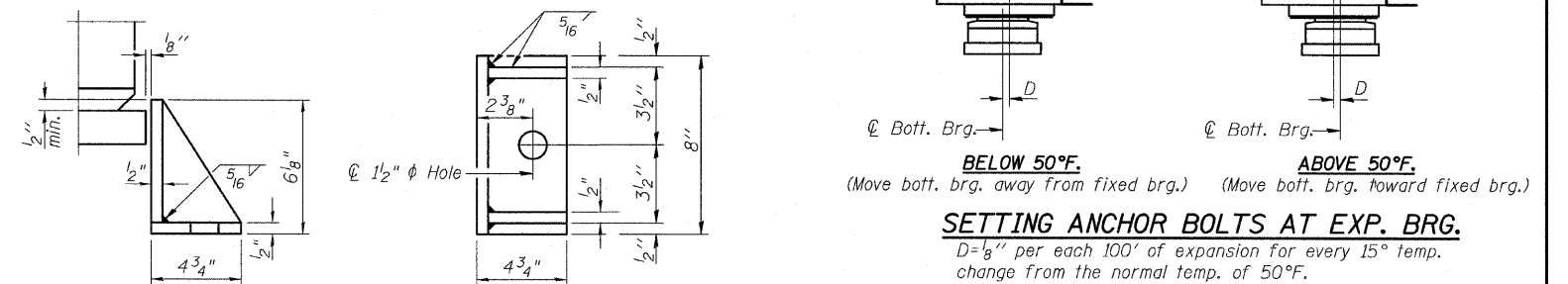
| |
|------------------|
| DESIGNED - PK |
| CHECKED - PDF SP |
| DRAWN - PK |
| CHECKED - PDF |



LONGITUDINAL SECTION

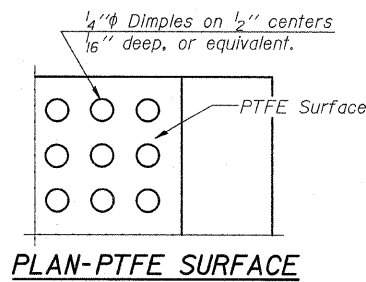
SECTION A-A

TYPE II ELASTOMERIC EXP. BRG. - PIER 1

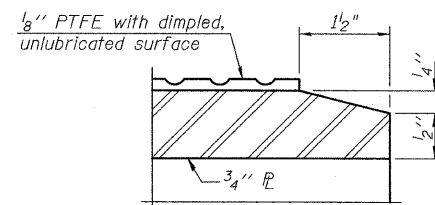


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



PLAN-PTFE SURFACE

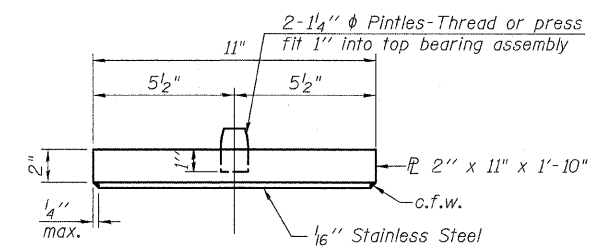


SECTION THRU PTFE

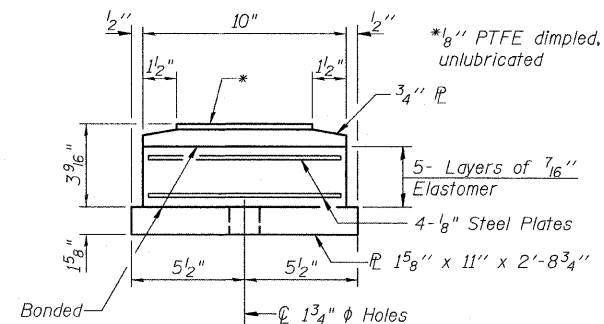
BILL OF MATERIAL

(Total for 2 bridges)

| Item | Unit | Total |
|---------------------------------------|------|-------|
| Elastomeric Bearing Assembly, Type II | Each | 28 |
| Anchor Bolts, 1 1/4" φ | Each | 56 |



TOP BEARING ASSEMBLY



BOTTOM BEARING ASSEMBLY

BELOW 50°F.

(Move bott. brg. away from fixed brg.)

ABOVE 50°F.

(Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for Type II bearings shall be placed in holes in the concrete drilled through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.

The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

See sheet 33 & 38 of 59 for additional details of plate cast with beam.

All embedded and separate bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 (as applicable).

BEARINGS

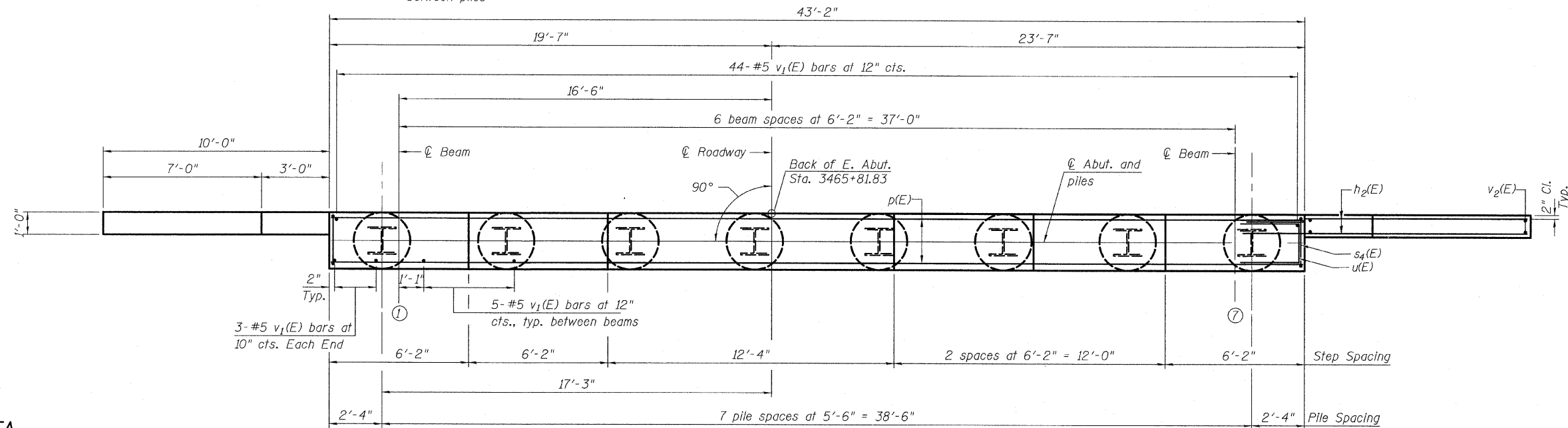
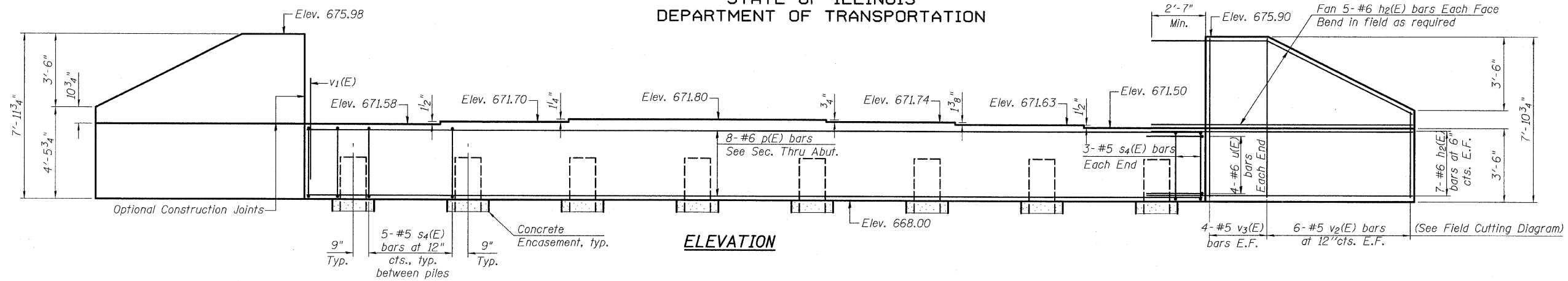
STRUCTURE NO. 006-0170 EB

STRUCTURE NO. 006-0171 WB

| SHEET NO. | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|-----------|---------|---------------------------|--------------|-----------|
| 59 SHEETS | 80 | * | BUREAU | 344 | 133 |
| FED. ROAD DIST. NO. | | | ILLINOIS FED. AID PROJECT | | |
| CONTRACT NO. 66908 | | | | | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



LAP SPLICES

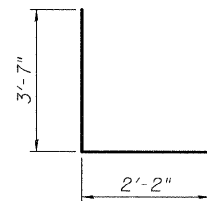
| Bar | Lap |
|-----|-------|
| #4 | 1'-8" |
| #5 | 2'-2" |
| #6 | 2'-7" |
| #7 | 3'-5" |
| #8 | 4'-6" |

PILE DATA

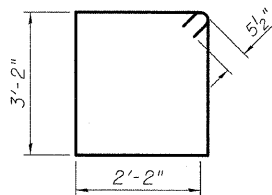
Type: Steel HP14x73
Nominal Required Bearing: 300 kips
Factored Resistance Available: 150 kips
Est. Length: 30 ft.
No. Production Piles: 7 Piles
No. Test Piles: 1 Pile

NOTES:

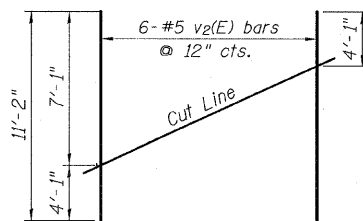
1. Pour steps monolithically with cap.
2. For details of piles and Concrete Encasement, see sheet 53 of 59.



BAR u(E)



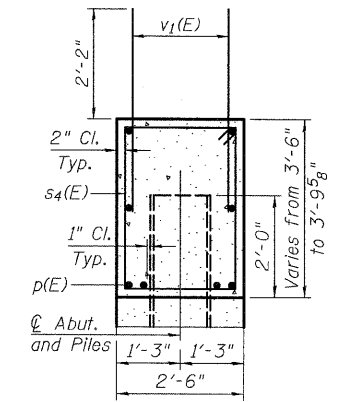
BAR s₄(E)



FIELD CUTTING DIAGRAM

BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|----------------------------------|---------|------|---------|-------|
| h ₂ (E) | 48 | #6 | 13'-3" | — |
| p(E) | 8 | #6 | 42'-10" | — |
| s ₄ (E) | 41 | #5 | 11'-7" | □ |
| u(E) | 8 | #6 | 9'-4" | — |
| v ₁ (E) | 80 | #5 | 4'-4" | — |
| v ₂ (E) | 12 | #5 | 11'-2" | — |
| v ₃ (E) | 16 | #5 | 7'-7" | — |
| Structure Excavation | Cu. Yd. | 51.8 | | |
| Concrete Structures | Cu. Yd. | 19.7 | | |
| Reinforcement Bars, Epoxy Coated | Pound | 2710 | | |
| Furnishing Steel Piles, HP 14x73 | Foot | 210 | | |
| Driving Piles | Foot | 210 | | |
| Test Pile, HP 14x73 | Each | 1 | | |
| Concrete Encasement | Cu. Yd. | 4.4 | | |



SEC. THRU ABUT.

**EAST ABUTMENT
STRUCTURE NO. 006-0170 EB**

LEGEND

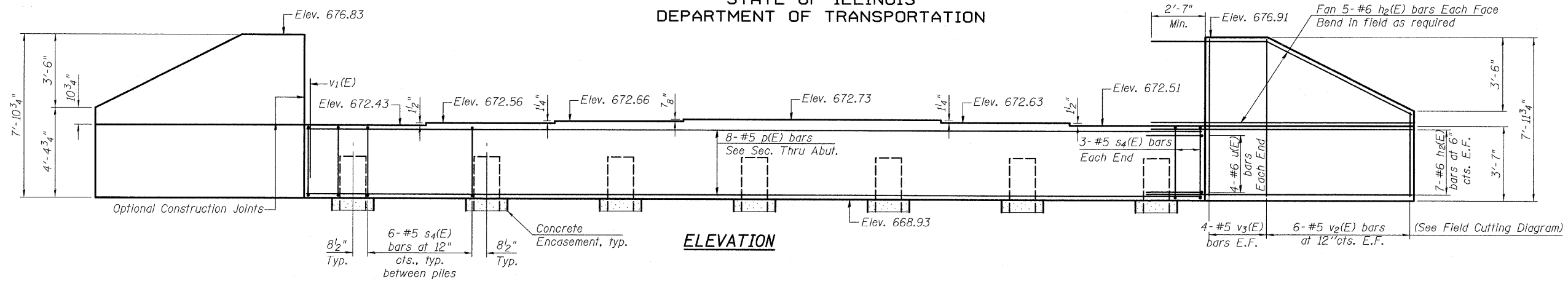
E.F. - Denotes Each Face.

| | |
|------------|-----|
| DESIGNED - | PK |
| CHECKED - | PDF |
| DRAWN - | PK |
| CHECKED - | PDF |

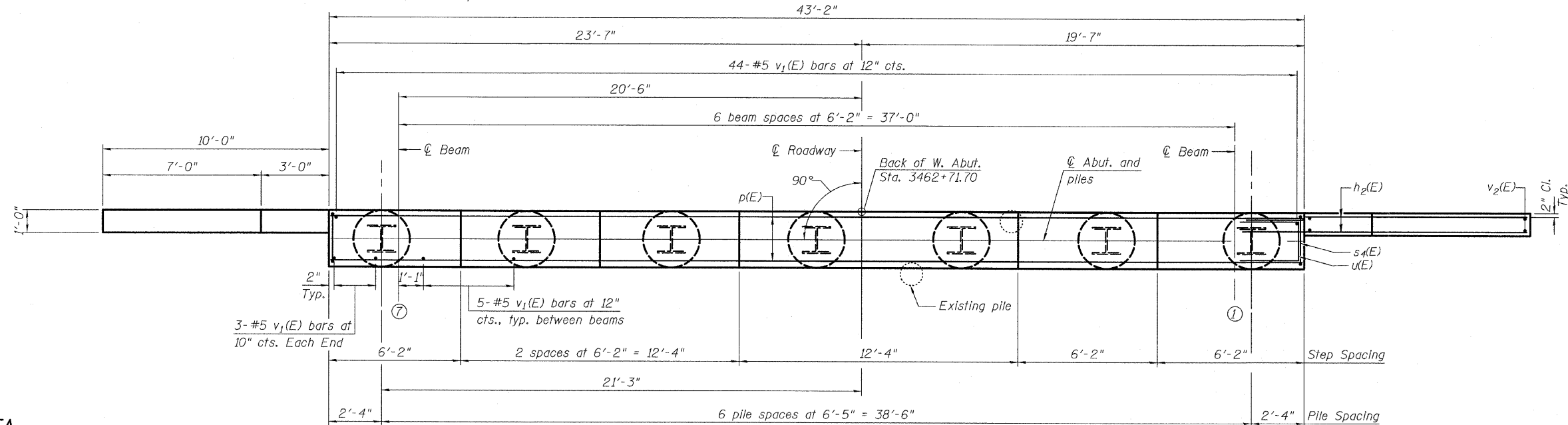
| | | | | | |
|--------------|---------------------|------------------|--------------------|--------------|-------|
| SHEET NO. 40 | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET |
| | 80 | * | BUREAU | 344 | 174 |
| 59 SHEETS | FED. ROAD DIST. NO. | | CONTRACT NO. 66908 | | |
| ILLINOIS | | FED. AID PROJECT | | | |

TYLIN INTERNATIONAL

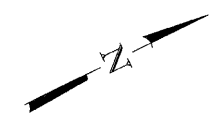
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION



PLAN



LAP SPLICES

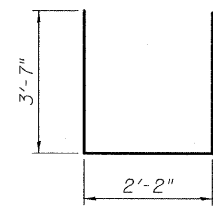
| Bar | Lap |
|-----|-------|
| #4 | 1'-8" |
| #5 | 2'-2" |
| #6 | 2'-7" |
| #7 | 3'-5" |
| #8 | 4'-6" |

PILE DATA

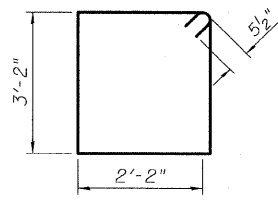
Type: Steel HP14x73
 Nominal Required Bearing: 300 kips
 Factored Resistance Available: 150 kips
 Est. Length: 63 ft.
 No. Production Piles: 6 Piles
 No. Test Piles: 1 Pile

NOTES:

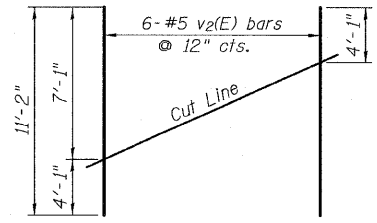
1. Pour steps monolithically with cap.
2. Contractor may adjust pile spacing to miss existing piles.
3. For details of piles and Concrete Encasement, see sheet 53 of 59.



BAR u(E)



BAR s4(E)

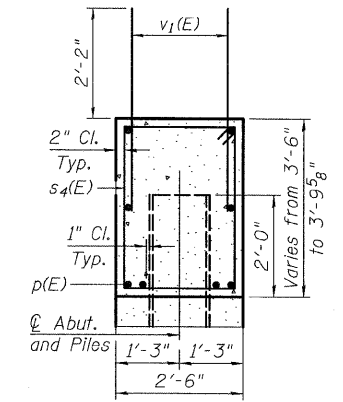


FIELD CUTTING DIAGRAM

Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.

BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|----------------------------------|---------|------|---------|-------|
| h ₂ (E) | 48 | #6 | 13'-3" | — |
| p(E) | 8 | #6 | 42'-10" | — |
| s ₄ (E) | 42 | #5 | 11'-7" | □ |
| u(E) | 8 | #6 | 9'-4" | U |
| v ₁ (E) | 80 | #5 | 4'-4" | — |
| v ₂ (E) | 12 | #5 | 11'-2" | — |
| v ₃ (E) | 16 | #5 | 7'-7" | — |
| Structure Excavation | Cu. Yd. | | 92.4 | |
| Concrete Structures | Cu. Yd. | | 19.7 | |
| Reinforcement Bars, Epoxy Coated | Pound | | 2720 | |
| Furnishing Steel Piles, HP 14x73 | Foot | | 378 | |
| Driving Piles | Foot | | 378 | |
| Test Pile, HP14x73 | Each | | 1 | |
| Concrete Encasement | Cu. Yd. | | 3.8 | |



SEC. THRU ABUT.

**WEST ABUTMENT
STRUCTURE NO. 006-0170 EB**

LEGEND

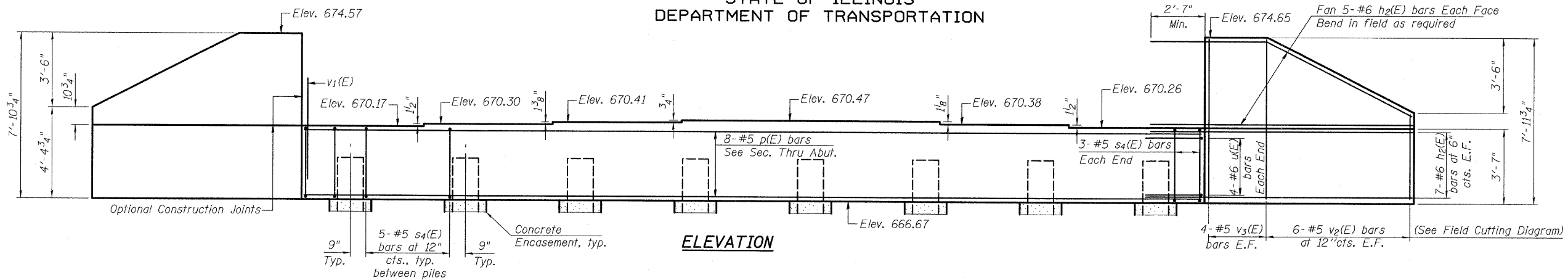
E.F. - Denotes Each Face.

| | |
|----------|-------|
| DESIGNED | - PK |
| CHECKED | - PDF |
| DRAWN | - PK |
| CHECKED | - PDF |

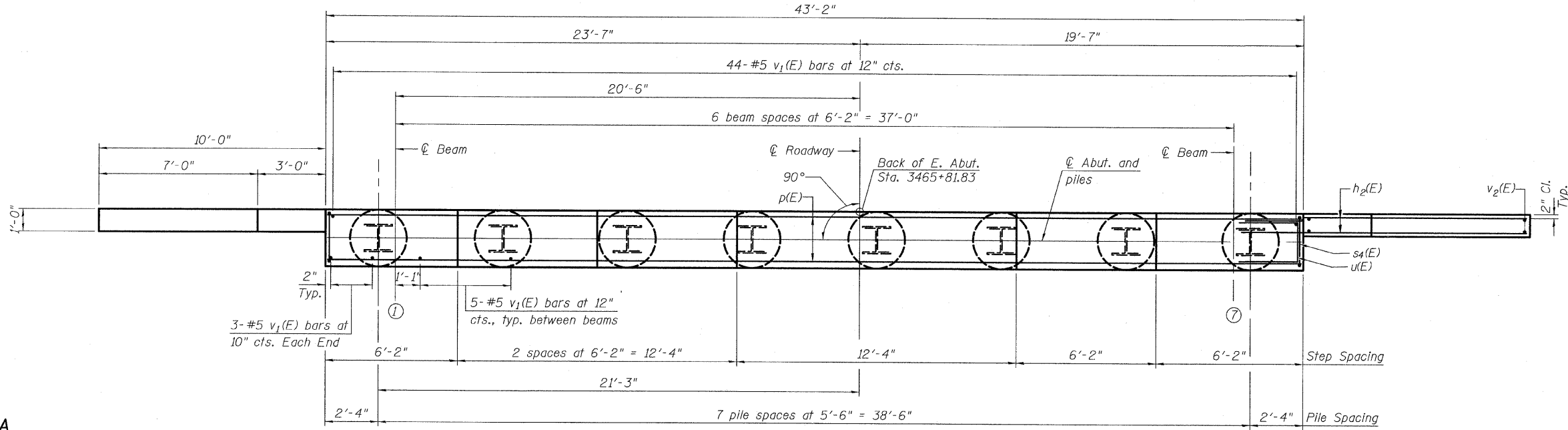
| SHEET NO. | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|-----------|---------------------------|--------------------|--------------|-----------|
| 59 SHEETS | 80 | * | BUREAU | 344 | 135 |
| | | | CONTRACT NO. 66908 | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION



PLAN



LAP SPLICES

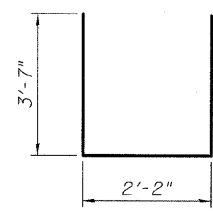
| Bar | Lap |
|-----|-------|
| #4 | 1'-8" |
| #5 | 2'-2" |
| #6 | 2'-7" |
| #7 | 3'-5" |
| #8 | 4'-6" |

PILE DATA

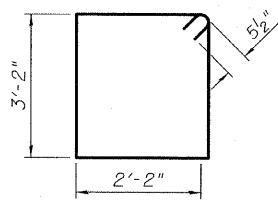
Type: Steel HP14x73
 Nominal Required Bearing: 300 kips
 Factored Resistance Available: 150 kips
 Est. Length: 48 ft.
 No. Production Piles: 7 Piles
 No. Test Piles: 1 Pile

NOTES:

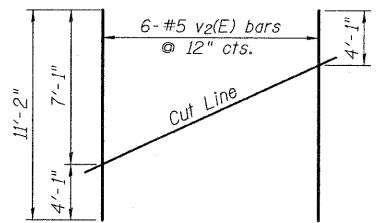
1. Pour steps monolithically with cap.
2. For details of piles and Concrete Encasement, see sheet 53 of 59.



BAR u(E)



BAR s4(E)

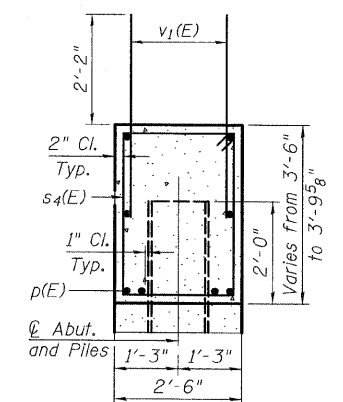


FIELD CUTTING DIAGRAM

Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.

BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|----------------------------------|---------|------|---------|-------|
| h2(E) | 48 | #6 | 13'-3" | — |
| p(E) | 8 | #6 | 42'-10" | — |
| s4(E) | 41 | #5 | 11'-7" | □ |
| u(E) | 8 | #6 | 9'-4" | U |
| v1(E) | 80 | #5 | 4'-4" | — |
| v2(E) | 12 | #5 | 11'-2" | — |
| v3(E) | 16 | #5 | 7'-7" | — |
| Structure Excavation | Cu. Yd. | 66.9 | | |
| Concrete Structures | Cu. Yd. | 19.7 | | |
| Reinforcement Bars, Epoxy Coated | Pound | 2710 | | |
| Furnishing Steel Piles, HP 14x73 | Foot | 336 | | |
| Driving Piles | Foot | 336 | | |
| Test Pile, HP14x73 | Each | 1 | | |
| Concrete Encasement | Cu. Yd. | 4.4 | | |



SEC. THRU ABUT.

**EAST ABUTMENT
STRUCTURE NO. 006-0171 WB**

LEGEND

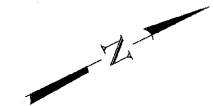
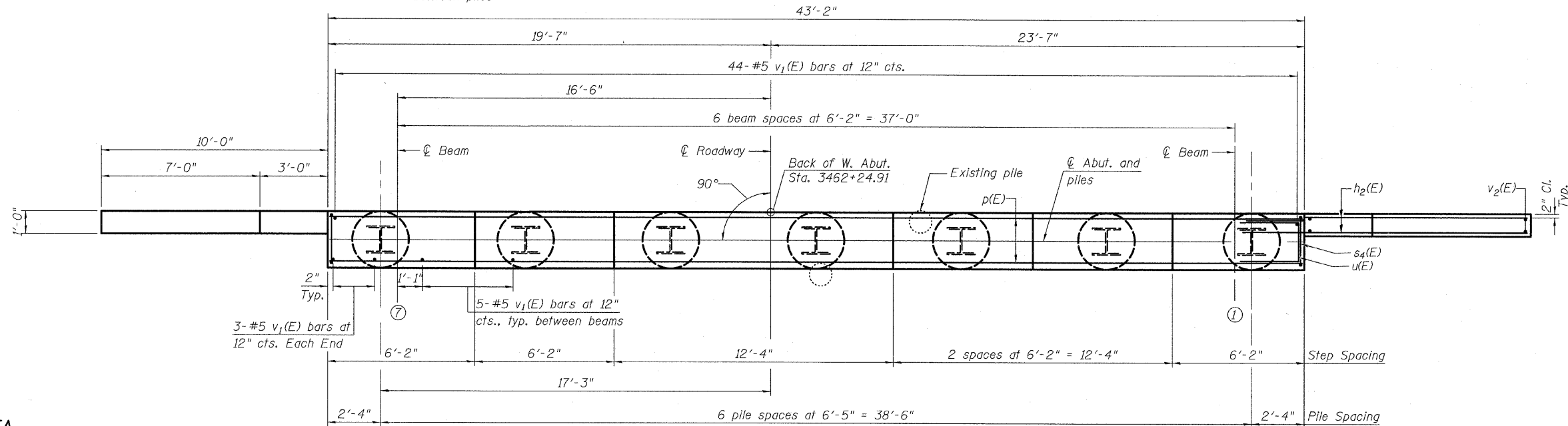
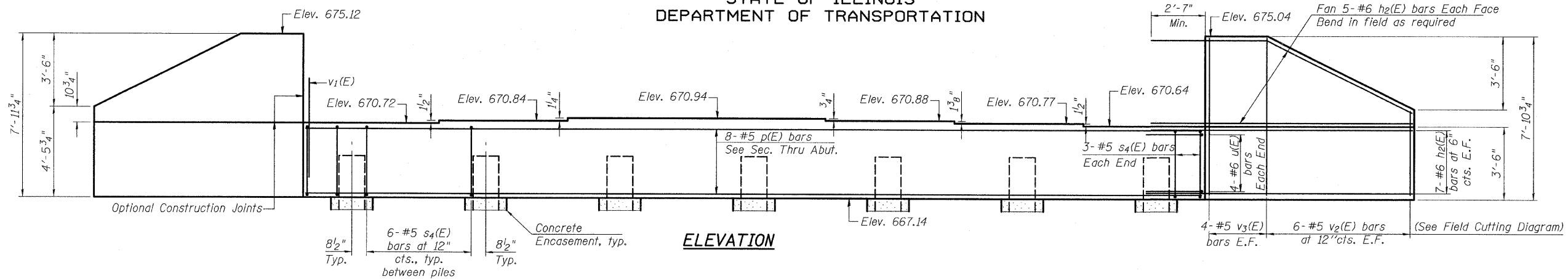
E.F. - Denotes Each Face.

| | |
|----------|-------|
| DESIGNED | - PK |
| CHECKED | - PDF |
| DRAWN | - PK |
| CHECKED | - PDF |

| | | | | | |
|---------------------------|-----------|---------|---------------------------|--------------|-----------|
| SHEET NO. 42 59 SHEETS | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 344 | 131 |
| FED. ROAD DIST. NO. | | | ILLINOIS FED. AID PROJECT | | |
| CONTRACT NO. 66908 | | | | | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



LAP SPLICES

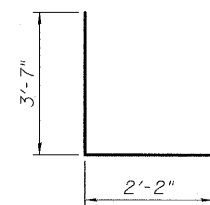
| Bar | Lap |
|-----|-------|
| #4 | 1'-8" |
| #5 | 2'-2" |
| #6 | 2'-7" |
| #7 | 3'-5" |
| #8 | 4'-6" |

PILE DATA

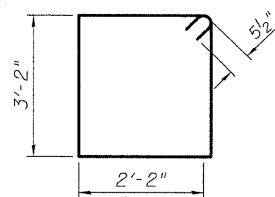
Type: Steel HP14x73
 Nominal Required Bearing: 300 klps
 Factored Resistance Available: 150 klps
 Est. Length: 64 ft.
 No. Production Piles: 6 Piles
 No. Test Piles: 1 Pile

NOTES:

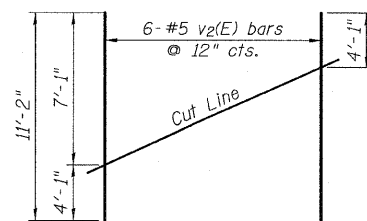
1. Pour steps monolithically with cap.
2. Contractor may adjust pile spacing to miss existing piles.
3. For details of piles and Concrete Encasement, see sheet 53 of 59.



BAR u(E)



BAR s₄(E)

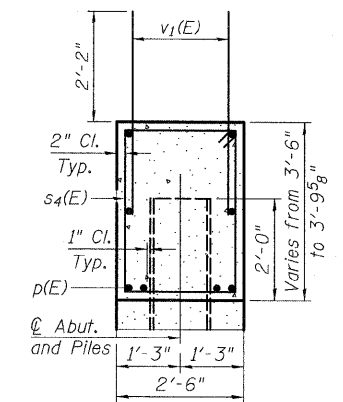


FIELD CUTTING DIAGRAM

Order v₂(E) full length. Cut as shown and use remainder of bars in opposite face.

BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|----------------------------------|---------|------|---------|-------|
| h ₂ (E) | 48 | #6 | 13'-3" | — |
| p(E) | 8 | #6 | 42'-10" | — |
| s ₄ (E) | 42 | #5 | 11'-7" | □ |
| u(E) | 8 | #6 | 9'-4" | U |
| v ₁ (E) | 80 | #5 | 4'-4" | — |
| v ₂ (E) | 12 | #5 | 11'-2" | — |
| v ₃ (E) | 16 | #5 | 7'-7" | — |
| Structure Excavation | Cu. Yd. | | 113.5 | |
| Concrete Structures | Cu. Yd. | | 19.7 | |
| Reinforcement Bars, Epoxy Coated | Pound | | 2720 | |
| Furnishing Steel Piles, HP 14x73 | Foot | | 384 | |
| Driving Piles | Foot | | 384 | |
| Test Pile, HP14x73 | Each | | 1 | |
| Concrete Encasement | Cu. Yd. | | 3.8 | |



SEC. THRU ABUT.

**WEST ABUTMENT
STRUCTURE NO. 006-0171 WB**

LEGEND

E.F. - Denotes Each Face.

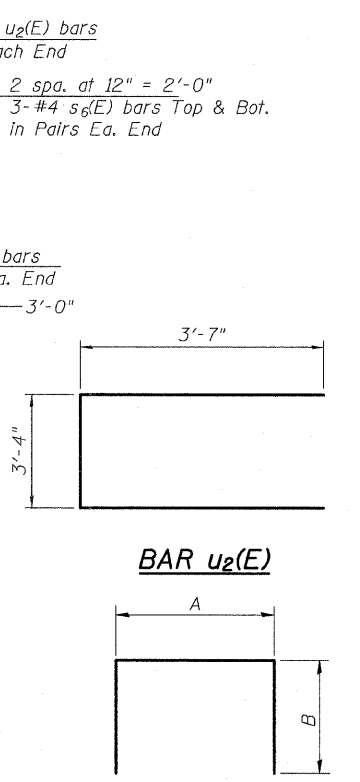
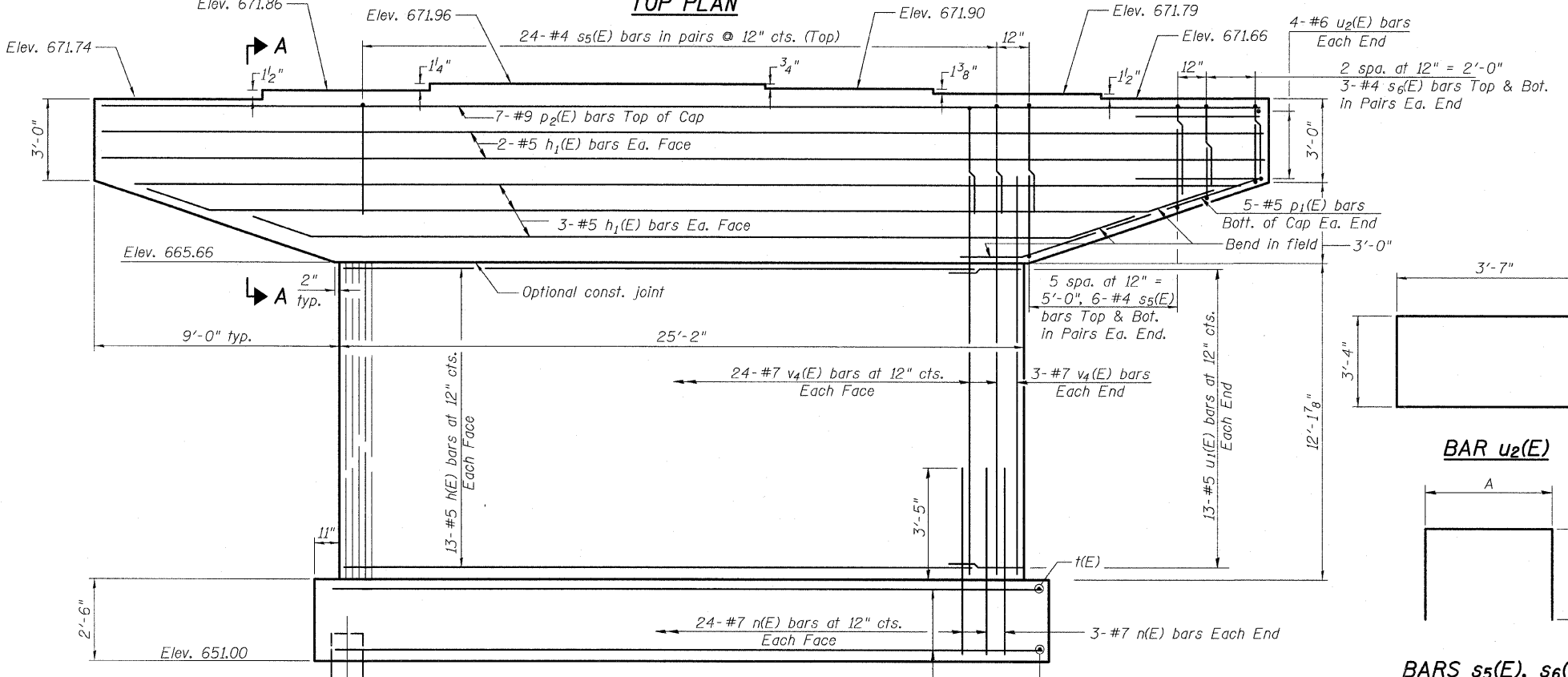
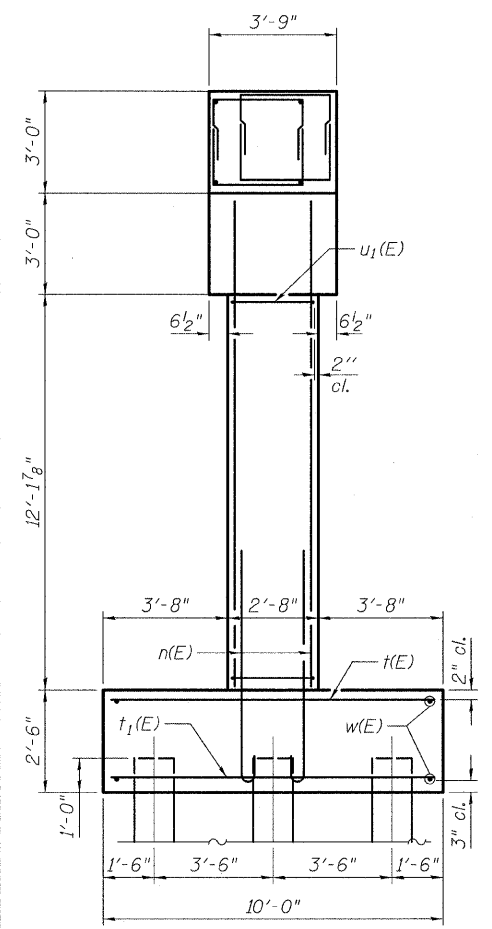
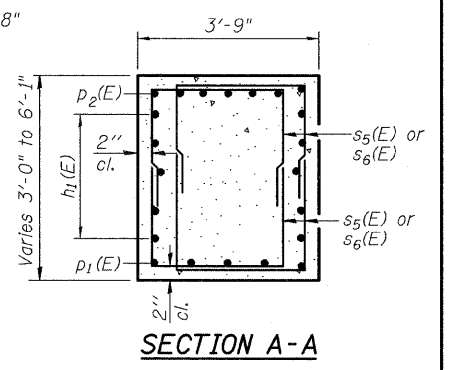
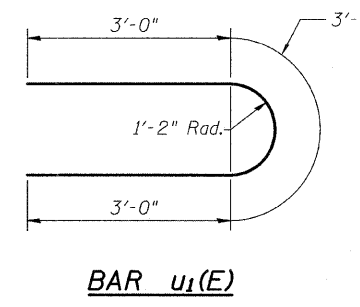
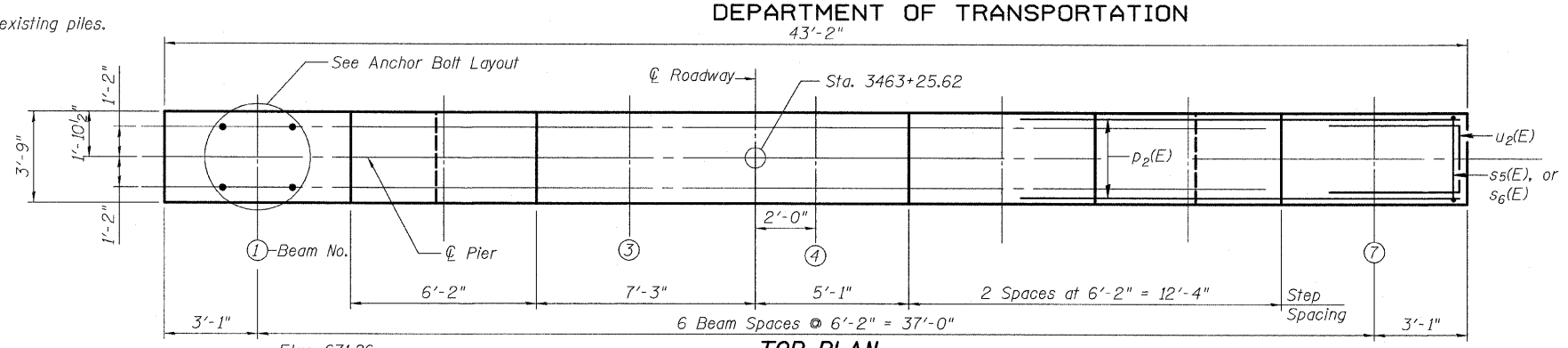
| | |
|------------|-----|
| DESIGNED - | PK |
| CHECKED - | PDF |
| DRAWN - | PK |
| CHECKED - | PDF |

| | | | | | |
|---------------------------|-----------|---------|--------------------|------------------|-----------|
| SHEET NO. 43 59 SHEETS | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 344 | 177 |
| FED. ROAD DIST. NO. | | | ILLINOIS | FED. AID PROJECT | |
| | | | CONTRACT NO. 66908 | | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Contractor may adjust pile spacing to miss existing piles.
For details of piles, see sheet 53 of 59.



**BARS s5(E), s6(E)
A & B DIMENSIONS**

| Bar | A | B |
|-------|-------|-------|
| s5(E) | 2'-8" | 3'-8" |
| s6(E) | 2'-8" | 2'-7" |

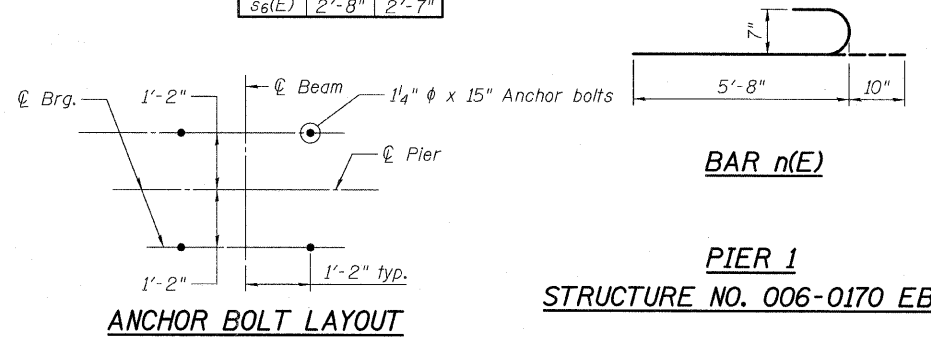
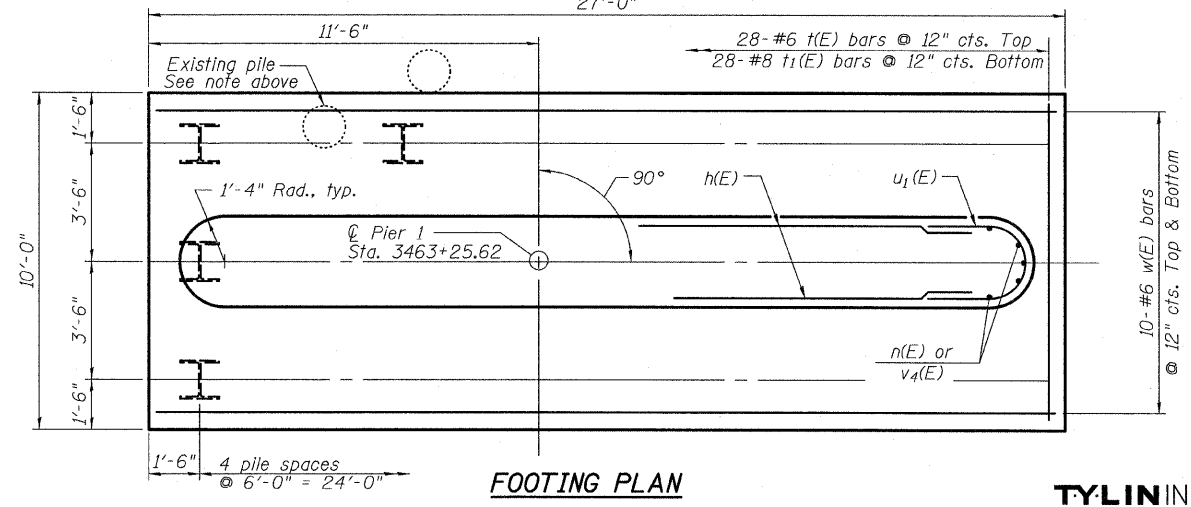
**PIER
BILL OF MATERIAL**

| Bar | No. | Size | Length | Shape |
|-------|-----|------|---------|-------|
| h(E) | 26 | #5 | 22'-6" | — |
| h1(E) | 10 | #5 | 42'-10" | — |
| n(E) | 54 | #7 | 6'-6" | U |
| p1(E) | 10 | #5 | 11'-0" | — |
| p2(E) | 7 | #9 | 42'-10" | — |
| s5(E) | 98 | #4 | 10'-0" | □ |
| s6(E) | 24 | #4 | 7'-10" | □ |
| t(E) | 28 | #6 | 9'-8" | — |
| t1(E) | 28 | #8 | 9'-8" | — |
| u1(E) | 26 | #5 | 9'-8" | U |
| u2(E) | 8 | #6 | 10'-6" | U |
| v4(E) | 54 | #7 | 16'-0" | — |
| w(E) | 20 | #6 | 26'-8" | — |

| | | |
|-------------------------------------|---------|-------|
| Structure Excavation | Cu. Yd. | 136.6 |
| Concrete Structures | Cu. Yd. | 87.5 |
| Reinforcement Bars, Epoxy Coated | Pound | 7,780 |
| Furnishing Steel Piles, HP14x73 | Foot | 868 |
| Driving Piles | Foot | 868 |
| Test Pile, HP14x73 | Each | 1 |

PILE DATA
Type: HP 14x73
Nominal Required Bearing: 400 kips
Factored Resistance Available: 200 kips
Est. Length: 62'
No. Production Piles: 14
No. Test Piles: 1

| | |
|----------|---------|
| DESIGNED | - SP |
| CHECKED | - PDF |
| DRAWN | - IM,PK |
| CHECKED | - PDF |



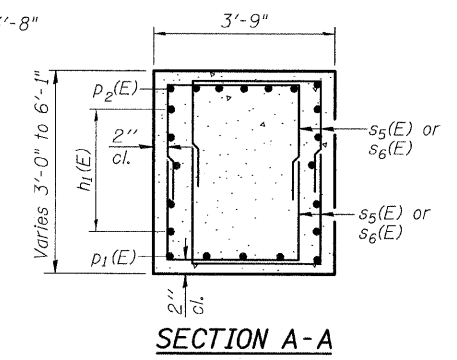
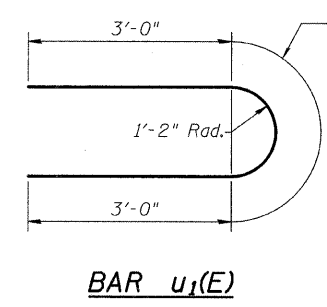
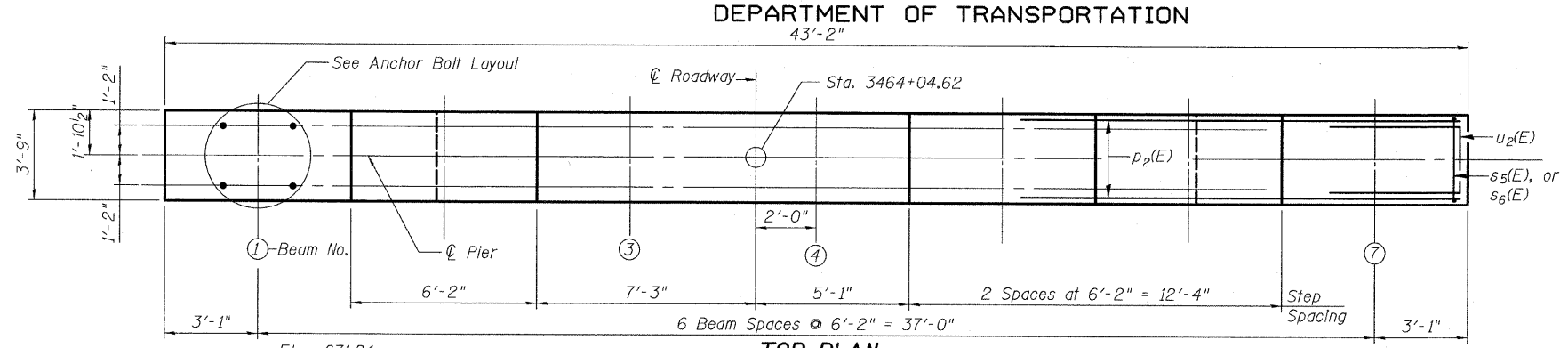
**PIER 1
STRUCTURE NO. 006-0170 EB**

| SHEET NO. | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|-----------|---------------------------|--------------------|--------------|-----------|
| 59 SHEETS | 80 | * | BUREAU | 344 | 138 |
| | | | CONTRACT NO. 66908 | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

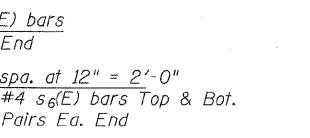
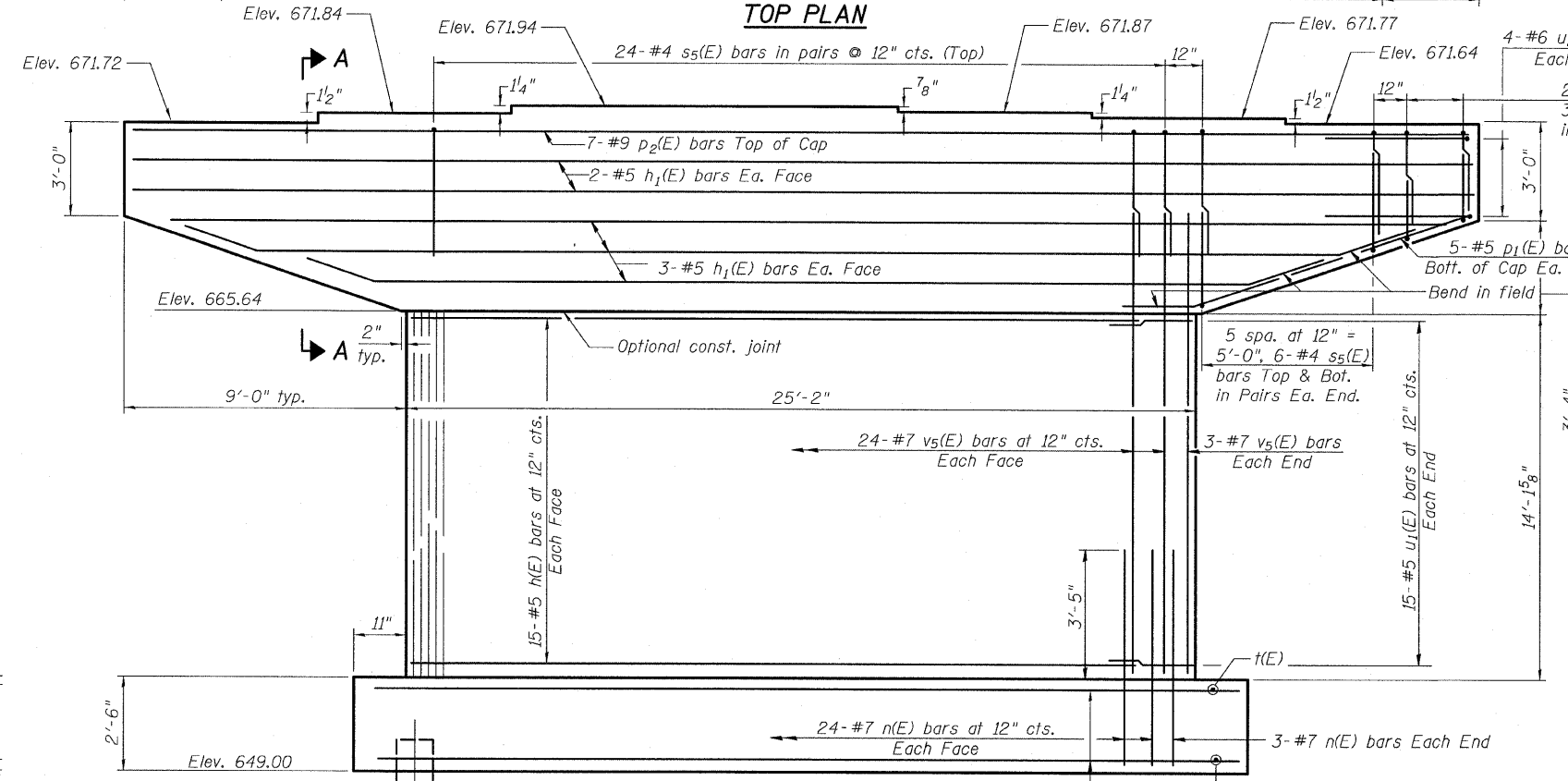
Notes:
Space reinforcement in cap to miss anchor bolts.
Four steps monolithically with cap.
For details of piles, see sheet 53 of 59.



MINIMUM BAR LAP
#4 bar = 1'-8"

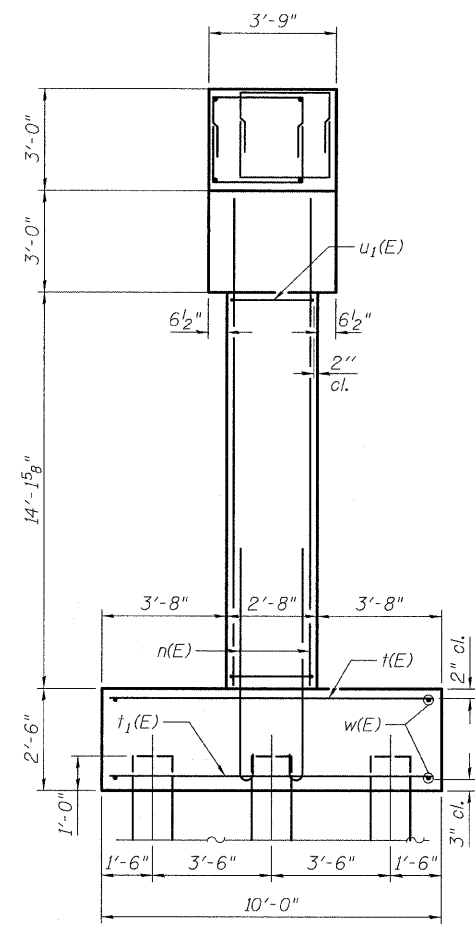
**PIER
BILL OF MATERIAL**

| Bar | No. | Size | Length | Shape |
|----------------------------------|-----|---------|---------|-------|
| h(E) | 30 | #5 | 22'-6" | — |
| h1(E) | 10 | #5 | 42'-10" | — |
| n(E) | 54 | #7 | 6'-6" | ⌋ |
| p1(E) | 10 | #5 | 11'-0" | — |
| p2(E) | 7 | #9 | 42'-10" | — |
| s5(E) | 98 | #4 | 10'-0" | ⌋ |
| s6(E) | 24 | #4 | 7'-10" | ⌋ |
| t(E) | 28 | #6 | 9'-8" | — |
| t1(E) | 28 | #8 | 9'-8" | — |
| u1(E) | 30 | #5 | 9'-8" | ⌋ |
| u2(E) | 8 | #6 | 10'-6" | ⌋ |
| v5(E) | 54 | #7 | 18'-2" | — |
| w(E) | 20 | #6 | 26'-8" | — |
| Structure Excavation | | Cu. Yd. | 64.3 | |
| Concrete Structures | | Cu. Yd. | 92.4 | |
| Reinforcement Bars, Epoxy Coated | | Pound | 8,150 | |
| Furnishing Steel Piles, HP14x73 | | Foot | 588 | |
| Driving Piles | | Foot | 588 | |
| Test Pile, HP14x73 | | Each | 1 | |



**BAR s5(E), s6(E)
A & B DIMENSIONS**

| Bar | A | B |
|-------|-------|-------|
| s5(E) | 2'-8" | 3'-8" |
| s6(E) | 2'-8" | 2'-7" |

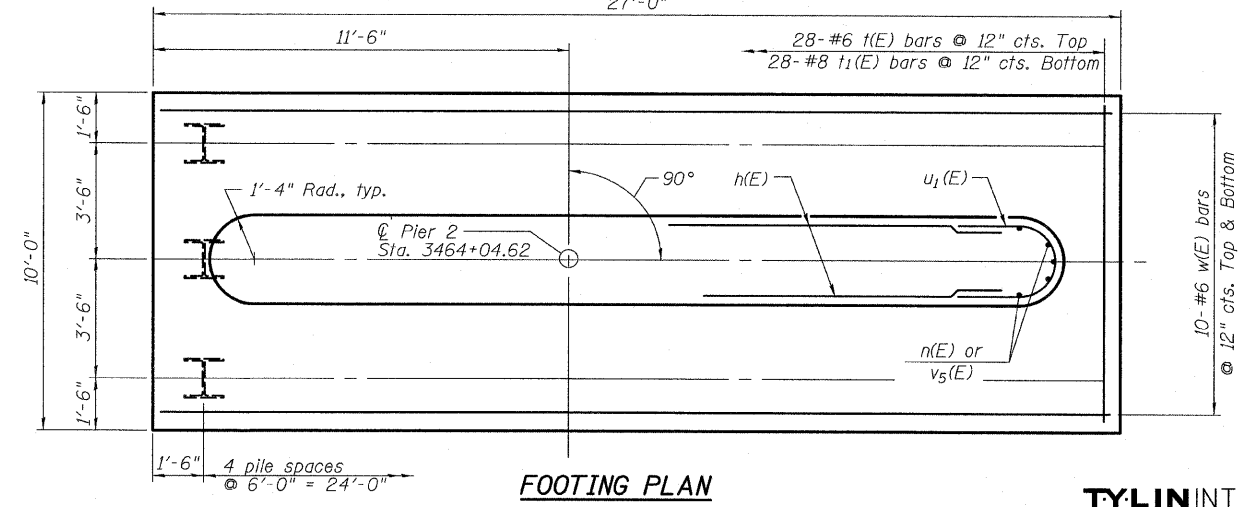


END VIEW

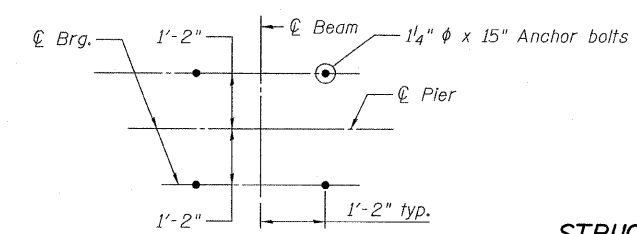
PILE DATA

Type: HP 14x73
Nominal Required Bearing: 400 kips
Factored Resistance Available: 200 kips
Est. Length: 42'
No. Production Piles: 14
No. Test Piles: 1

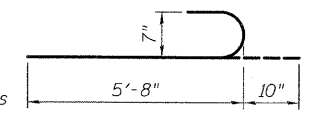
| | |
|----------|---------|
| DESIGNED | - SP |
| CHECKED | - PDF |
| DRAWN | - PF,IM |
| CHECKED | - PDF |



FOOTING PLAN



ANCHOR BOLT LAYOUT



BAR n(E)

**PIER 2
STRUCTURE NO. 006-0170 EB**

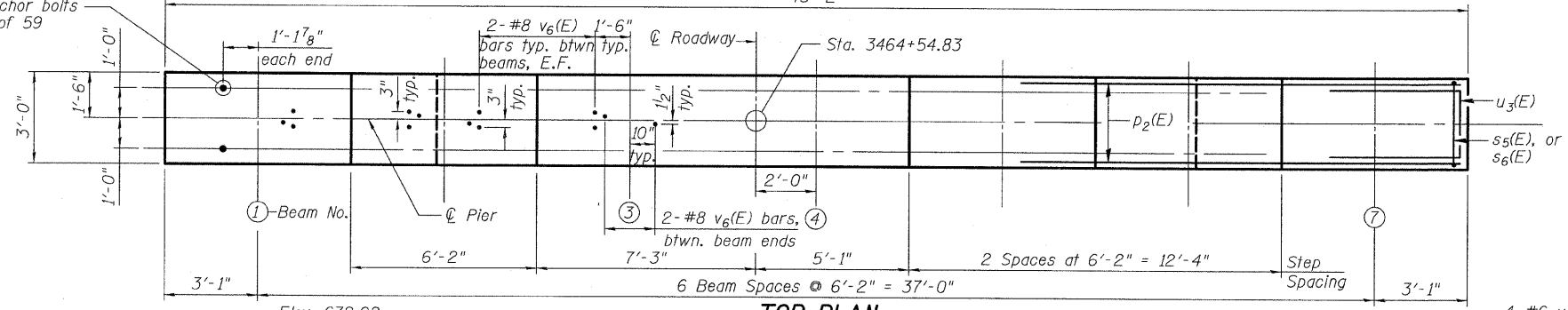
| SHEET NO. | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|-----------|---------|---------------------------|--------------|-----------|
| 45 | 80 | * | BUREAU | 344 | 139 |
| 59 SHEETS | | | | | |
| FED. ROAD DIST. NO. | | | ILLINOIS FED. AID PROJECT | | |
| CONTRACT NO. 66908 | | | | | |

TYLIN INTERNATIONAL

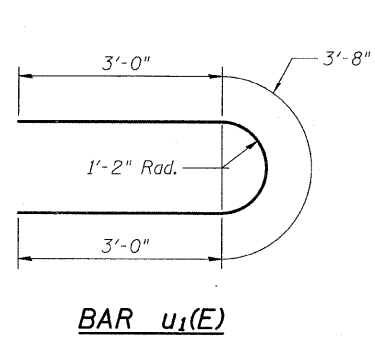
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 53 of 59.

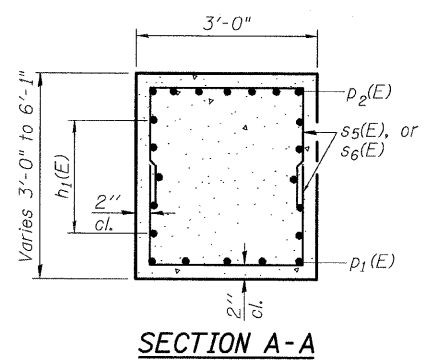
1/2" φ x 18" Anchor bolts
See Sheet 20 of 59



TOP PLAN



BAR u1(E)

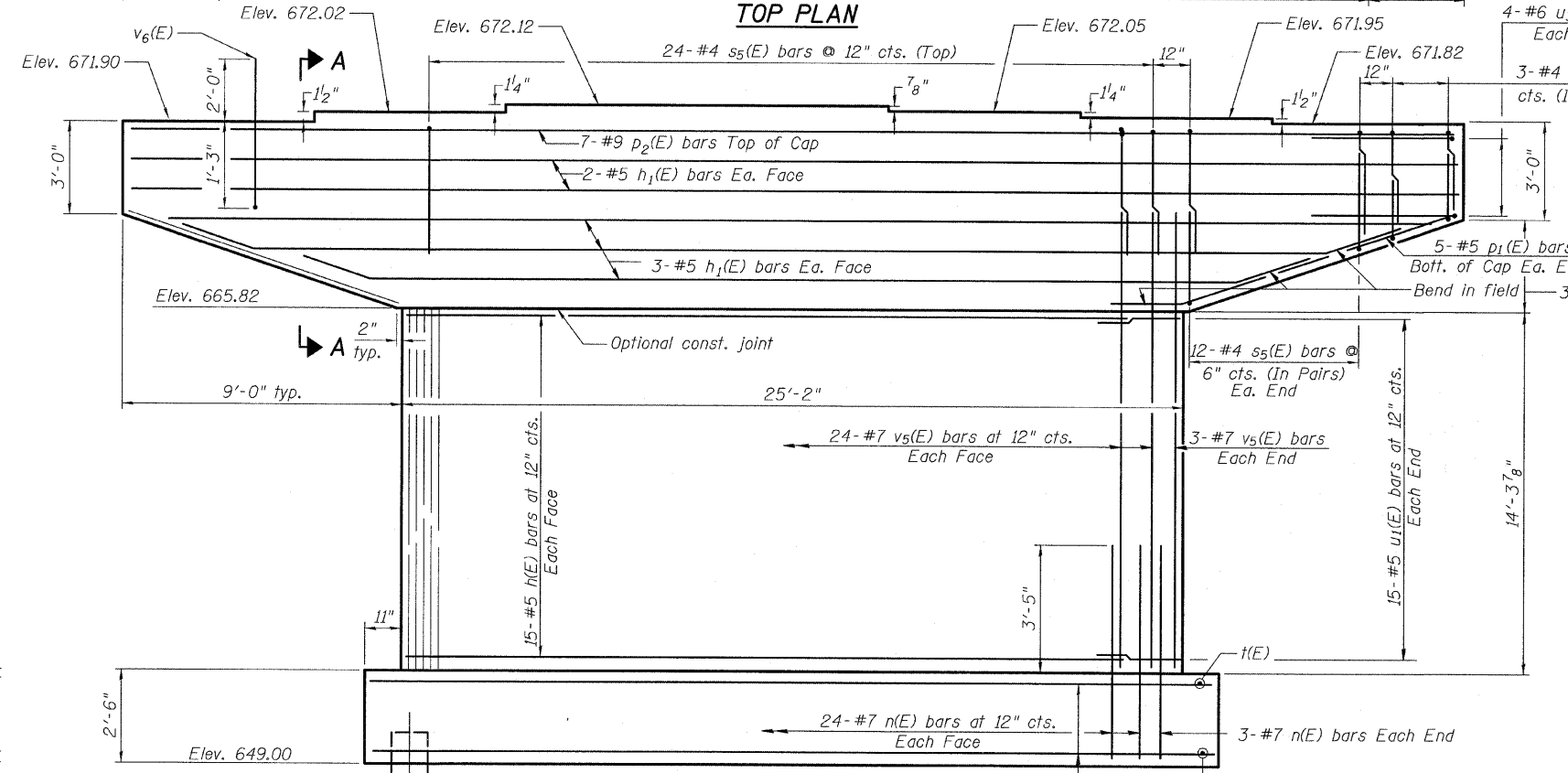


SECTION A-A

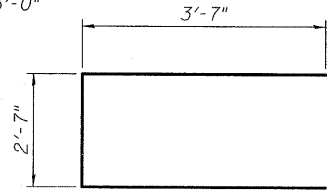
MINIMUM BAR LAP
#4 bar = 1'-8"

PIER
BILL OF MATERIAL

| Bar No. | Size | Length | Shape |
|----------------------------------|---------|--------|---------|
| n(E) | 30 | #5 | 22'-6" |
| h1(E) | 10 | #5 | 42'-10" |
| n(E) | 54 | #7 | 6'-6" |
| p1(E) | 10 | #5 | 11'-0" |
| p2(E) | 7 | #9 | 42'-10" |
| s5(E) | 72 | #4 | 10'-0" |
| s6(E) | 12 | #4 | 7'-10" |
| t(E) | 28 | #6 | 9'-8" |
| t1(E) | 28 | #8 | 9'-8" |
| u1(E) | 30 | #5 | 9'-8" |
| u3(E) | 8 | #6 | 9'-9" |
| v5(E) | 54 | #7 | 18'-2" |
| v6(E) | 36 | #8 | 4'-2" |
| w(E) | 20 | #6 | 26'-8" |
| Structure Excavation | Cu. Yd. | 64.3 | |
| Concrete Structures | Cu. Yd. | 86.4 | |
| Reinforcement Bars, Epoxy Coated | Pound | 8,310 | |
| Furnishing Steel Piles, HP14x73 | Foot | 574 | |
| Driving Piles | Foot | 574 | |
| Test Pile, HP14x73 | Each | 1 | |



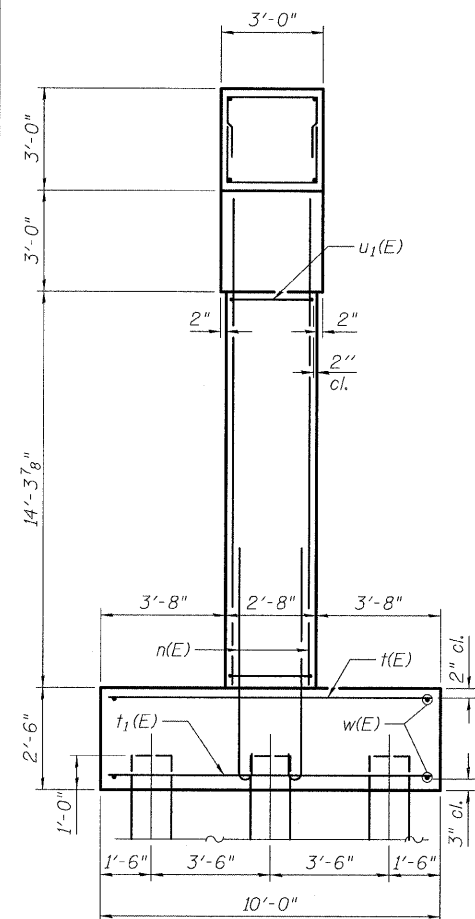
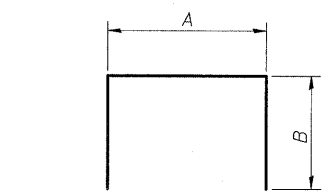
ELEVATION
(Looking East)



BAR u3(E)

BARS s5(E), s6(E)
A & B DIMENSIONS

| Bar | A | B |
|-------|-------|-------|
| s5(E) | 2'-8" | 3'-8" |
| s6(E) | 2'-8" | 2'-7" |

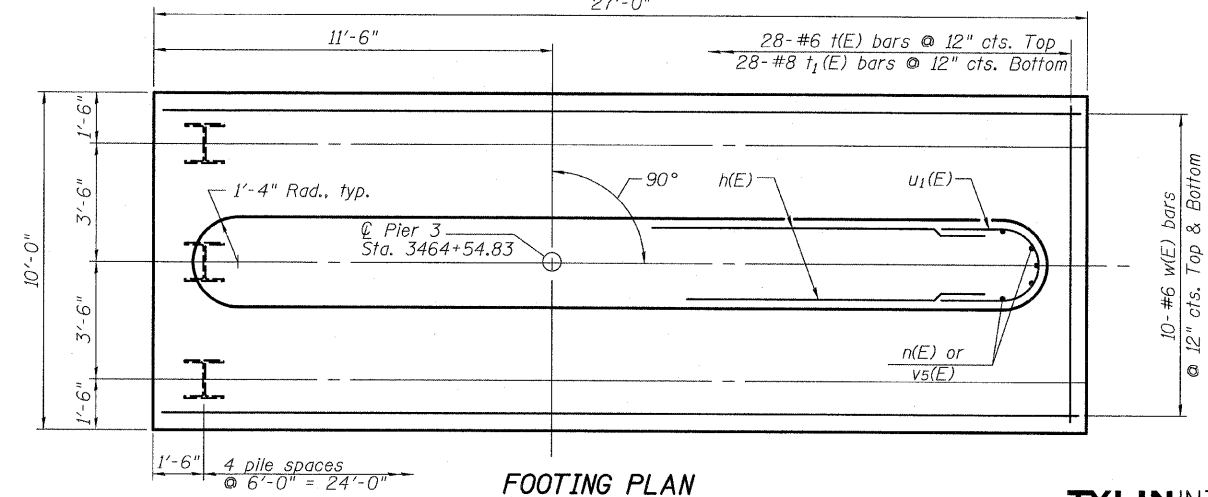


END VIEW

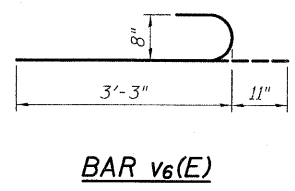
PILE DATA

Type: HP 14x73
Nominal Required Bearing: 400 kips
Factored Resistance Available: 200 kips
Est. Length: 41'
No. Production Piles: 14
No. Test Piles: 1

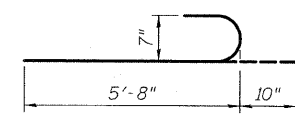
| |
|----------------|
| DESIGNED - SP |
| CHECKED - PDF |
| DRAWN - IM, PK |
| CHECKED - PDF |



FOOTING PLAN



BAR v6(E)



BAR n(E)

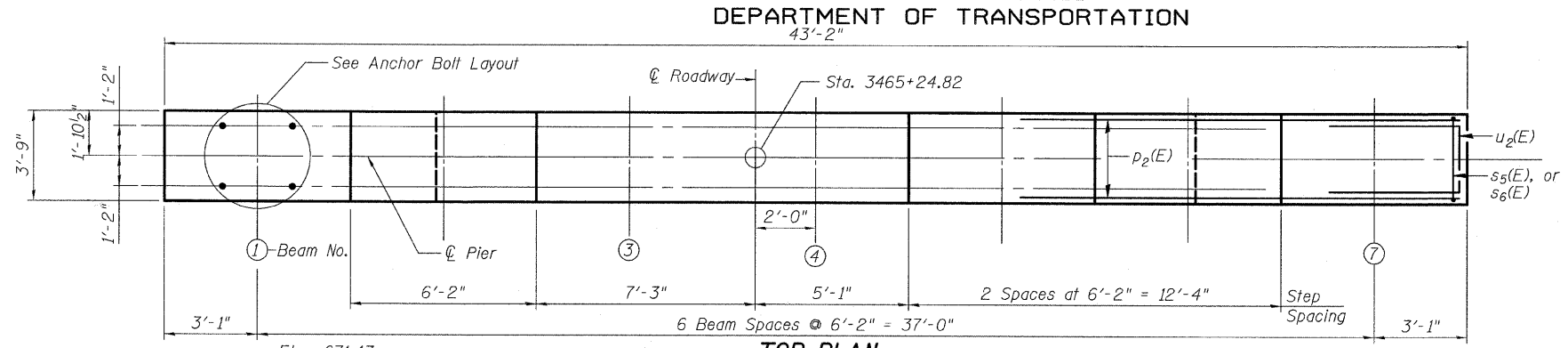
PIER 3
STRUCTURE NO. 006-0170 EB

| SHEET NO. | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|-----------|---------|---------------------------|--------------|-----------|
| 46 | 80 | * | BUREAU | 344 | 140 |
| 59 SHEETS | | | | | |
| FED. ROAD DIST. NO. | | | ILLINOIS FED. AID PROJECT | | |
| CONTRACT NO. 66908 | | | | | |

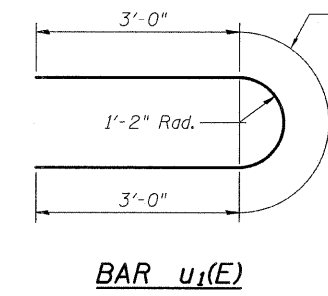
TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

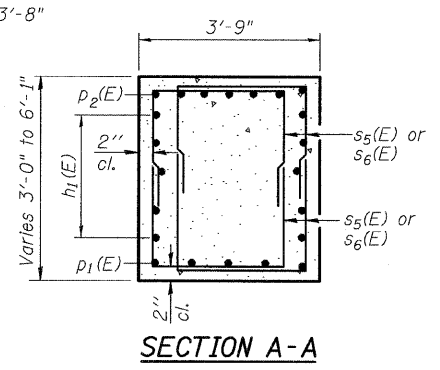
Notes:
Space reinforcement in cap to miss anchor bolts.
Four steps monolithically with cap.
For details of piles, see sheet 53 of 59.



TOP PLAN



BAR u₁(E)

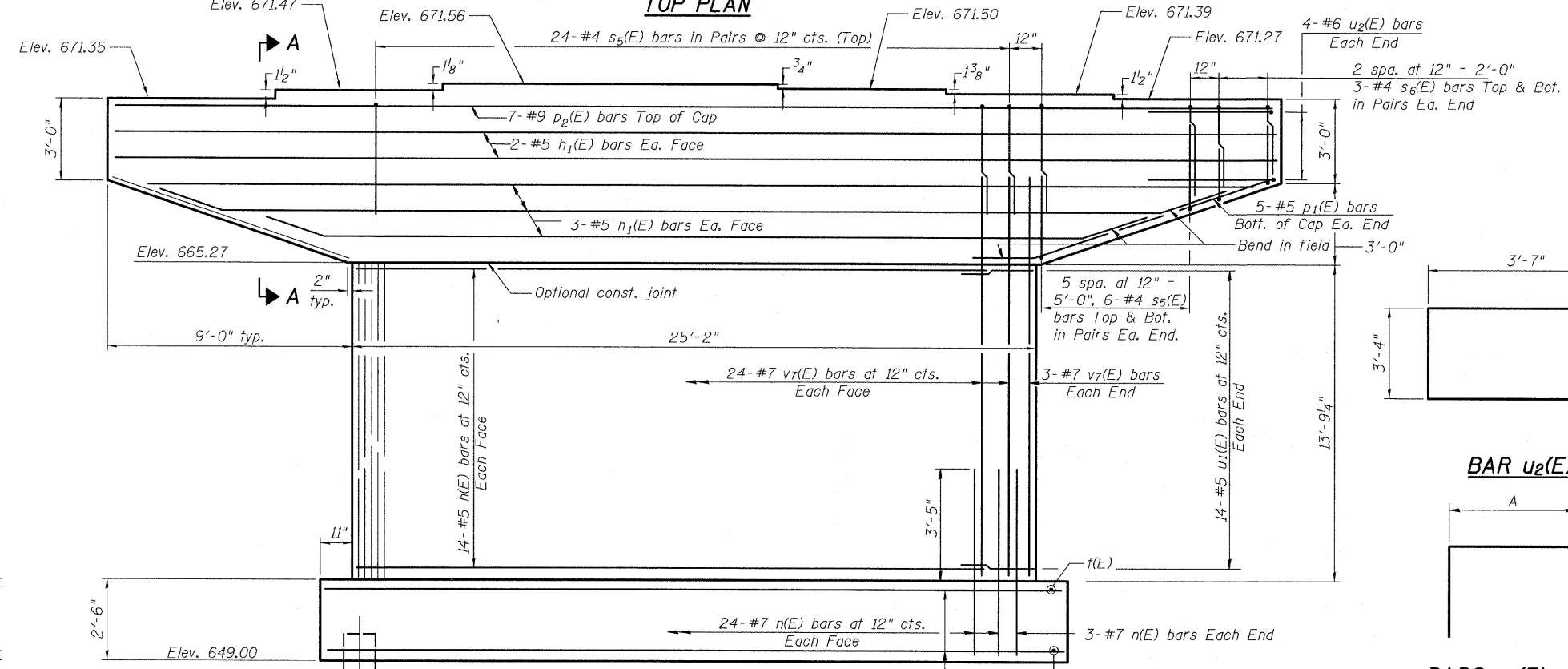


SECTION A-A

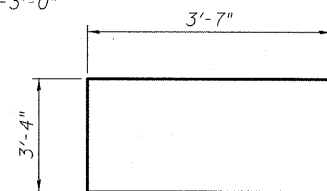
MINIMUM BAR LAP
#4 bar = 1'-8"

PIER
BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|----------------------------------|-----|---------|---------|-------|
| h(E) | 28 | #5 | 22'-6" | — |
| h ₁ (E) | 10 | #5 | 42'-10" | — |
| n(E) | 54 | #7 | 6'-6" | ⌋ |
| p ₁ (E) | 10 | #5 | 11'-0" | — |
| p ₂ (E) | 7 | #9 | 42'-10" | — |
| s ₅ (E) | 98 | #4 | 10'-0" | ⌊ |
| s ₆ (E) | 24 | #4 | 7'-10" | ⌊ |
| t(E) | 28 | #6 | 9'-8" | — |
| t ₁ (E) | 28 | #8 | 9'-8" | — |
| u ₁ (E) | 28 | #5 | 9'-8" | ⌋ |
| u ₂ (E) | 8 | #6 | 10'-6" | ⌋ |
| v ₇ (E) | 54 | #7 | 17'-7" | — |
| w(E) | 20 | #6 | 26'-8" | — |
| Structure Excavation | | Cu. Yd. | 64.3 | |
| Concrete Structures | | Cu. Yd. | 91.5 | |
| Reinforcement Bars, Epoxy Coated | | Pound | 8,020 | |
| Furnishing Steel Piles, HP14x73 | | Foot | 588 | |
| Driving Piles | | Foot | 588 | |
| Test Pile, HP14x73 | | Each | 1 | |



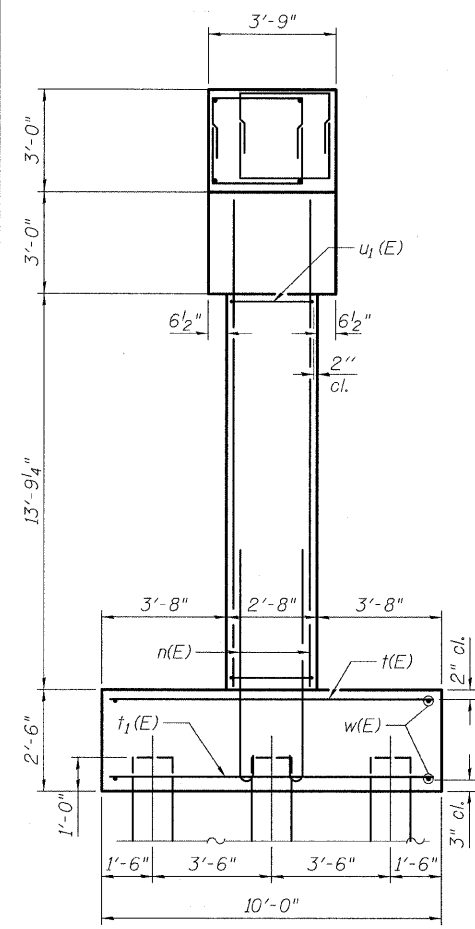
ELEVATION
(Looking East)



BAR u₂(E)

BARS s₅(E), s₆(E)
A & B DIMENSIONS

| Bar | A | B |
|--------------------|-------|-------|
| s ₅ (E) | 2'-8" | 3'-8" |
| s ₆ (E) | 2'-8" | 2'-7" |

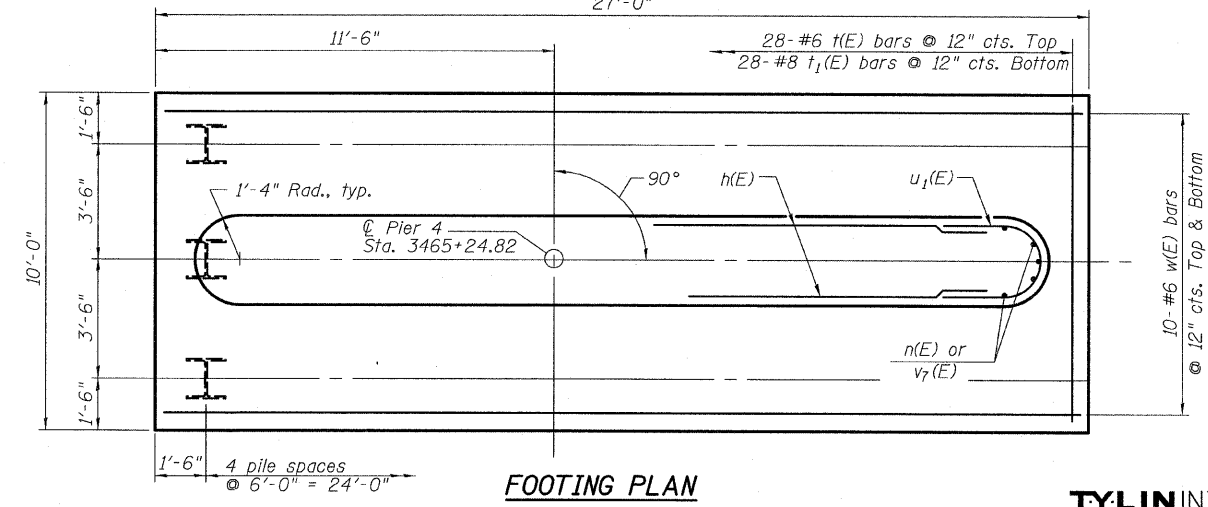


END VIEW

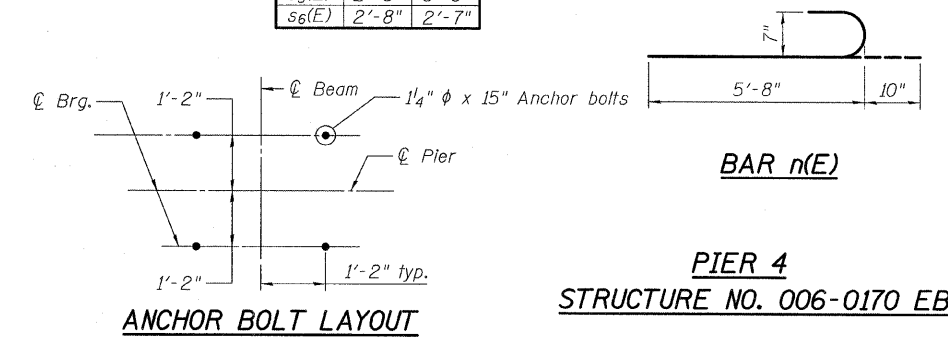
PILE DATA

Type: HP 14x73
Nominal Required Bearing: 400 kips
Factored Resistance Available: 200 kips
Est. Length: 42'
No. Production Piles: 14
No. Test Piles: 1

| | |
|----------|---------|
| DESIGNED | - SP |
| CHECKED | - PDF |
| DRAWN | - IM,PK |
| CHECKED | - PDF |



FOOTING PLAN



ANCHOR BOLT LAYOUT

BAR n(E)

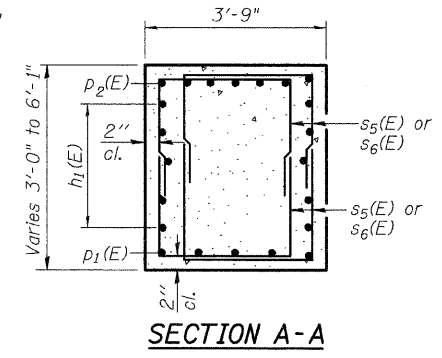
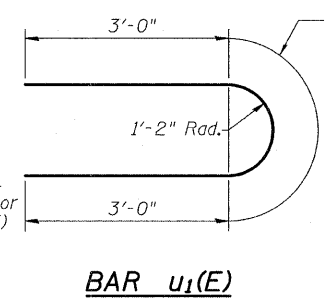
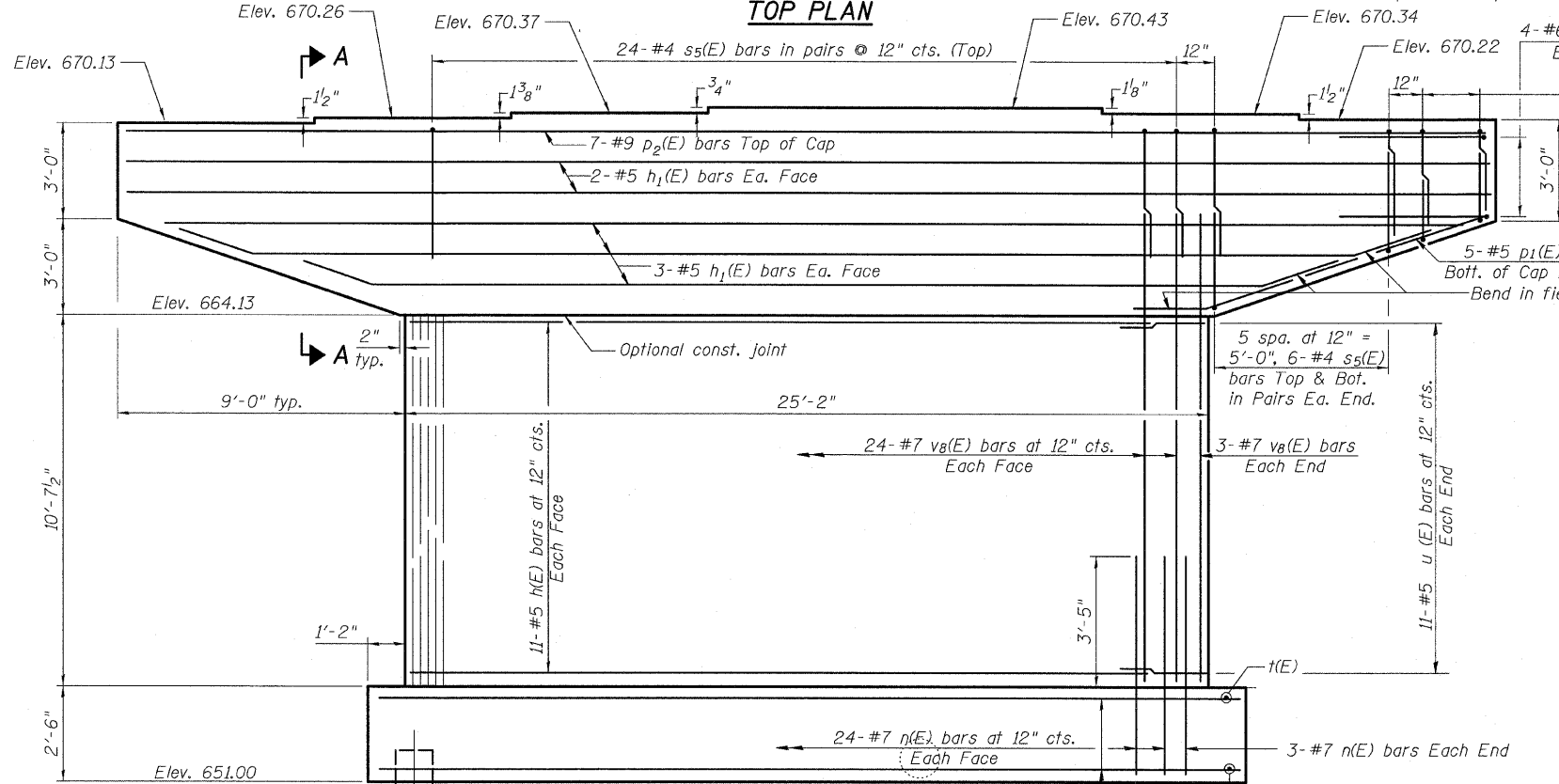
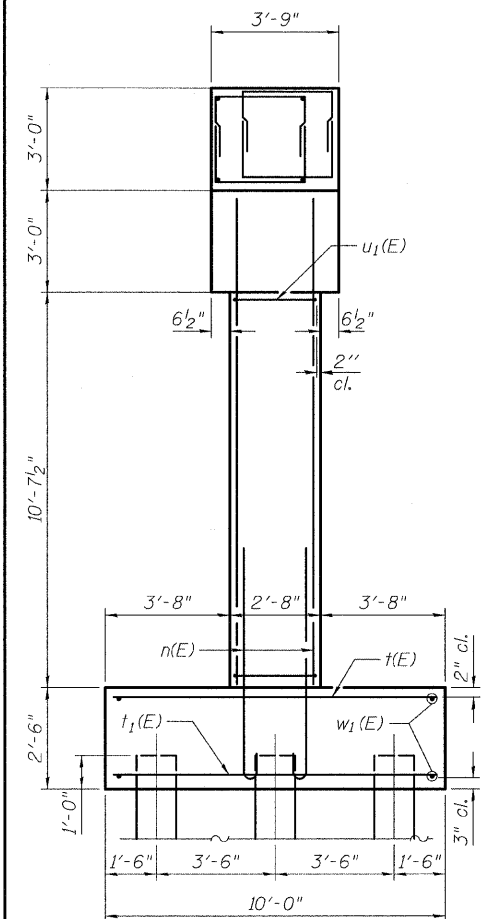
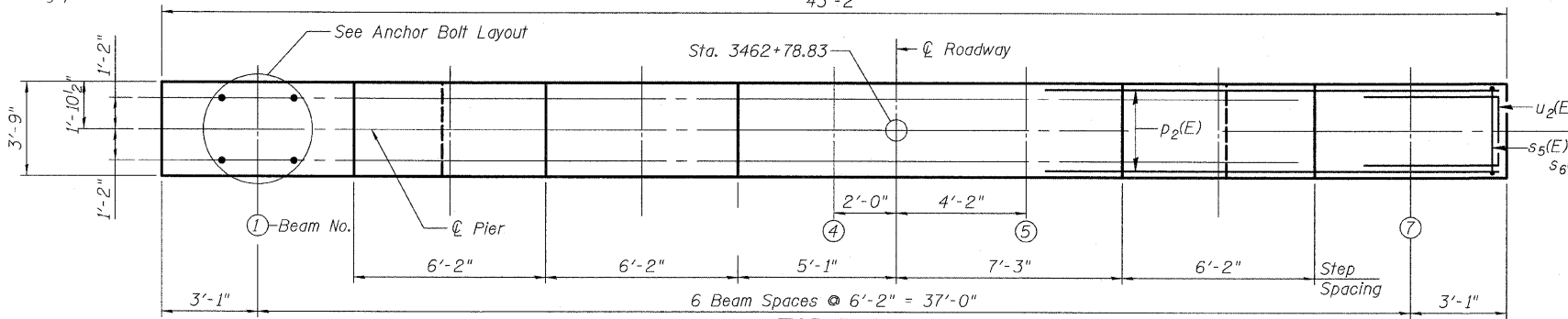
PIER 4
STRUCTURE NO. 006-0170 EB

| | | | | | |
|--------------------|------------------------------|-----------|------------------|------------------|---------------|
| SHEET NO. 47 | F.A. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 141 |
| 59 SHEETS | FED. ROAD DIST. NO. ILLINOIS | | FED. AID PROJECT | | |
| CONTRACT NO. 66908 | | | | | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

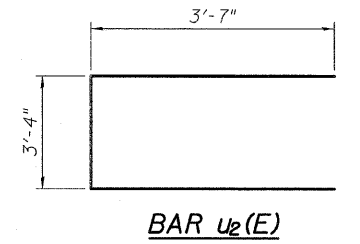
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Contractor may adjust pile spacing to miss existing piles.
For details of piles, see sheet 53 of 59.



MINIMUM BAR LAP
#4 bar = 1'-8"

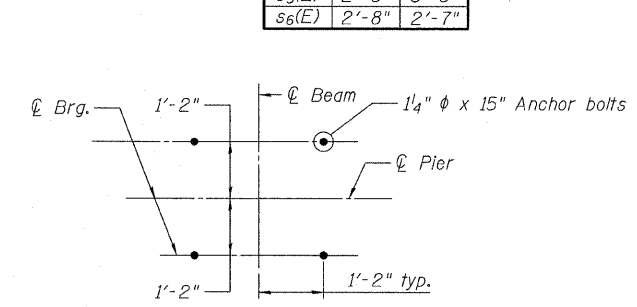
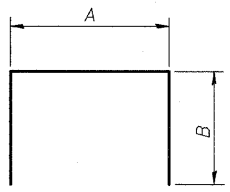
PIER
BILL OF MATERIAL

| Bar No. | Size | Length | Shape |
|----------------------------------|------|---------|---------|
| h(E) | 22 | #5 | 22'-6" |
| h1(E) | 10 | #5 | 42'-10" |
| n(E) | 54 | #7 | 6'-6" |
| p1(E) | 10 | #5 | 11'-0" |
| p2(E) | 7 | #9 | 42'-10" |
| ss(E) | 98 | #4 | 10'-0" |
| s6(E) | 24 | #4 | 7'-10" |
| t(E) | 28 | #6 | 9'-8" |
| t1(E) | 28 | #8 | 9'-8" |
| u1(E) | 22 | #5 | 9'-8" |
| u2(E) | 8 | #6 | 10'-6" |
| v8(E) | 54 | #7 | 14'-6" |
| w1(E) | 20 | #6 | 27'-2" |
| Structure Excavation | | Cu. Yd. | 127.4 |
| Concrete Structures | | Cu. Yd. | 84.1 |
| Reinforcement Bars, Epoxy Coated | | Pound | 7,490 |
| Furnishing Steel Piles, HP14x73 | | Foot | 851 |
| Driving Piles | | Foot | 851 |
| Test Pile, HP14x73 | | Each | 1 |



BARS s5(E), s6(E)
A & B DIMENSIONS

| Bar | A | B |
|-------|-------|-------|
| s5(E) | 2'-8" | 3'-8" |
| s6(E) | 2'-8" | 2'-7" |

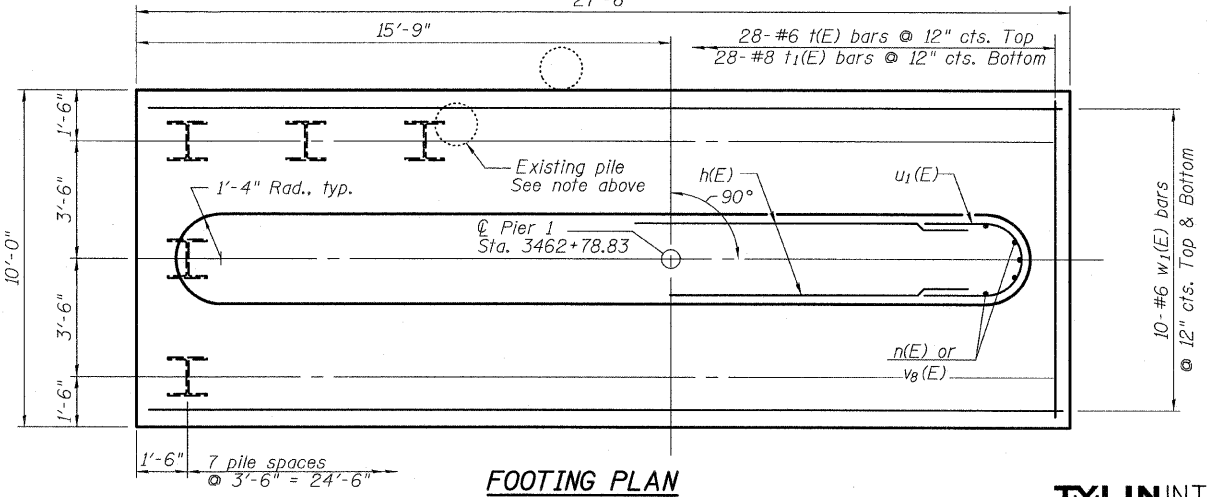


BAR n(E)

PIER 1
STRUCTURE NO. 006-0171 WB

PILE DATA
Type: HP 14x73
Nominal Required Bearing: 260.8 kips
Factored Resistance Available: 130.4 kips
Est. Length: 37'
No. Production Piles: 23
No. Test Piles: 1

| | |
|----------|---------|
| DESIGNED | - SP |
| CHECKED | - PDF |
| DRAWN | - IM,PK |
| CHECKED | - PDF |

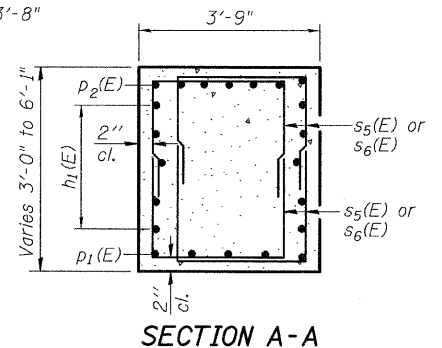
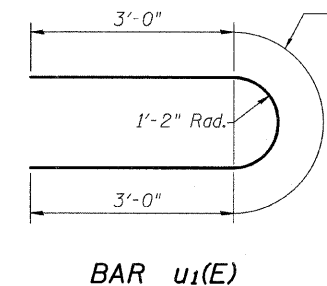
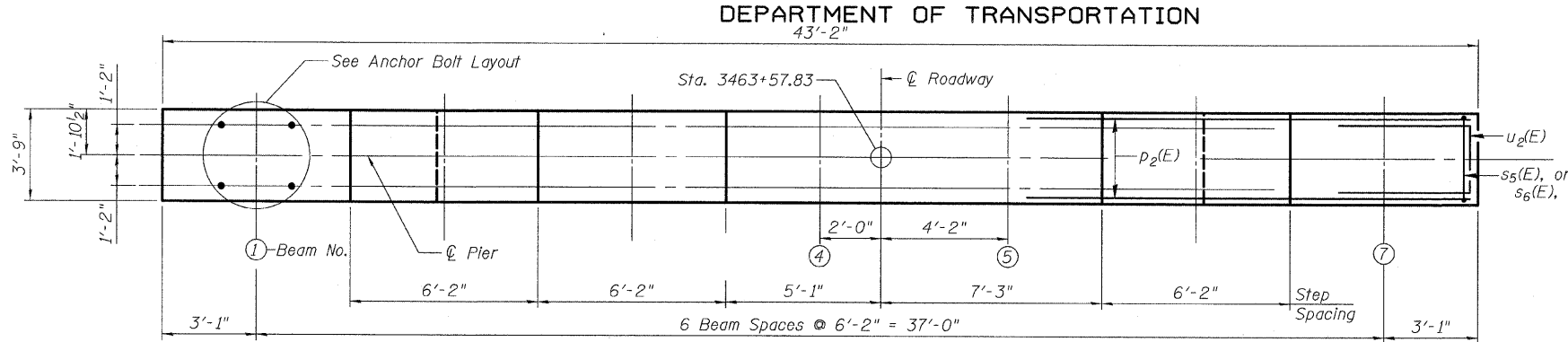


| SHEET NO. | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|-----------|---------|---------------------------|--------------|-----------|
| 59 SHEETS | 80 | * | BUREAU | 344 | 142 |
| FED. ROAD DIST. NO. | | | ILLINOIS FED. AID PROJECT | | |
| CONTRACT NO. 66908 | | | | | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

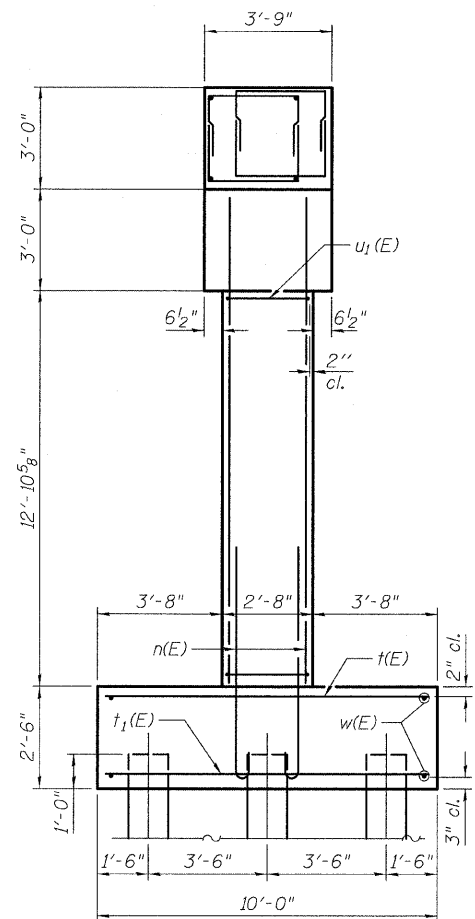
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 53 of 59.



MINIMUM BAR LAP
#4 bar = 1'-8"

PIER
BILL OF MATERIAL

| Bar No. | Size | Length | Shape |
|----------------------------------|------|---------|--------------|
| h(E) | #5 | 22'-6" | — |
| h1(E) | #5 | 42'-10" | — |
| n(E) | #7 | 6'-6" | — |
| p1(E) | #5 | 11'-0" | — |
| p2(E) | #9 | 42'-10" | — |
| s5(E) | #4 | 10'-0" | — |
| s6(E) | #4 | 7'-10" | — |
| t(E) | #6 | 9'-8" | — |
| t1(E) | #8 | 9'-8" | — |
| u1(E) | #5 | 9'-8" | — |
| u2(E) | #6 | 10'-6" | — |
| v9(E) | #7 | 16'-9" | — |
| w(E) | #6 | 26'-8" | — |
| Structure Excavation | | | Cu. Yd. 64.3 |
| Concrete Structures | | | Cu. Yd. 89.3 |
| Reinforcement Bars, Epoxy Coated | | | Pound 7,860 |
| Furnishing Steel Piles, HP14x73 | | | Foot 728 |
| Driving Piles | | | Foot 728 |
| Test Pile, HP14x73 | | | Each 1 |

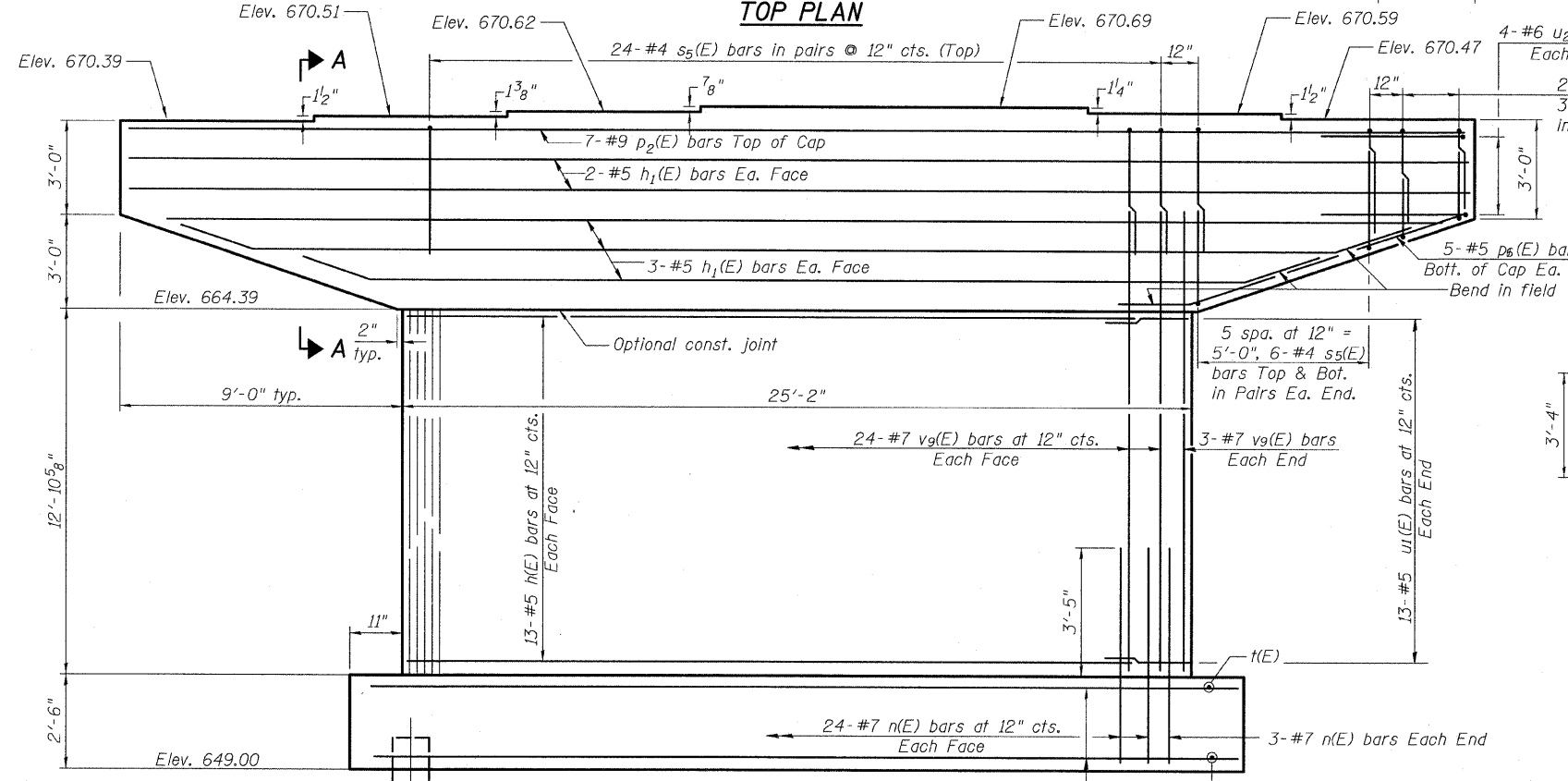


END VIEW

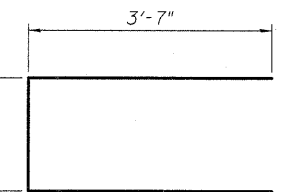
PILE DATA

Type: HP 14x73
Nominal Required Bearing: 400 kips
Factored Resistance Available: 200 kips
Est. Length: 52'
No. Production Piles: 14
No. Test Piles: 1

| |
|---------------|
| DESIGNED - SP |
| CHECKED - PDF |
| DRAWN - IM,FK |
| CHECKED - PDF |



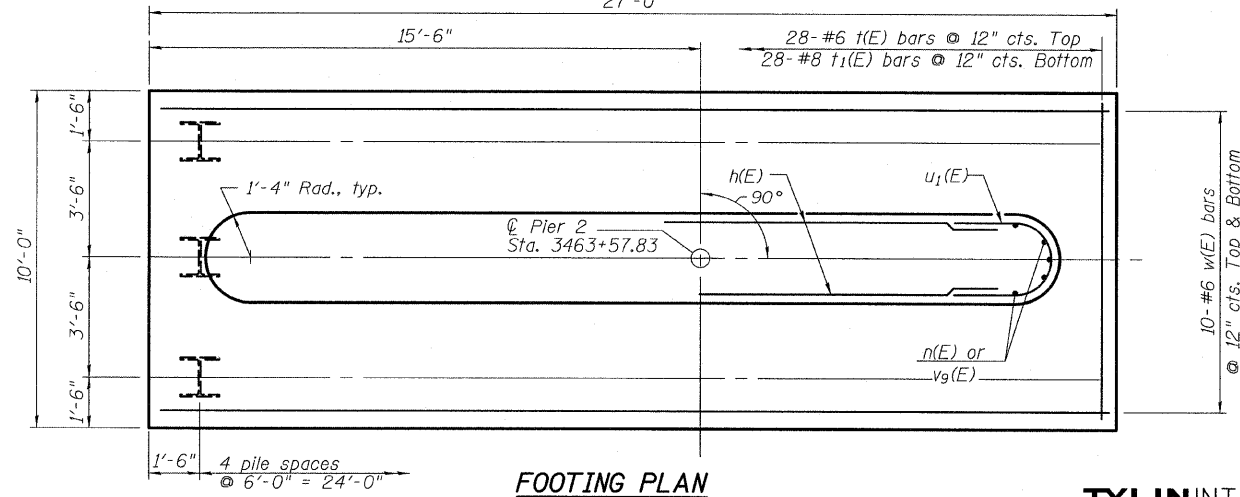
ELEVATION
(Looking East)



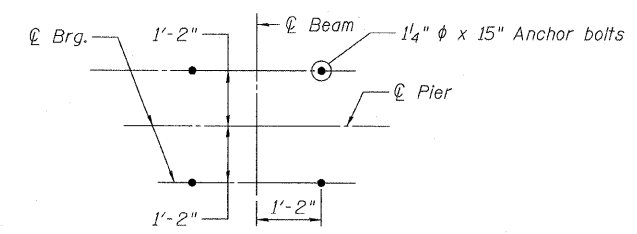
BAR u2(E)

BARS
A & B DIMENSIONS

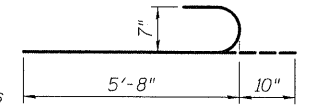
| Bar | A | B |
|-------|-------|-------|
| s5(E) | 2'-8" | 3'-8" |
| s6(E) | 2'-8" | 2'-7" |



FOOTING PLAN



ANCHOR BOLT LAYOUT



BAR n(E)

PIER 2
STRUCTURE NO. 006-0171 WB

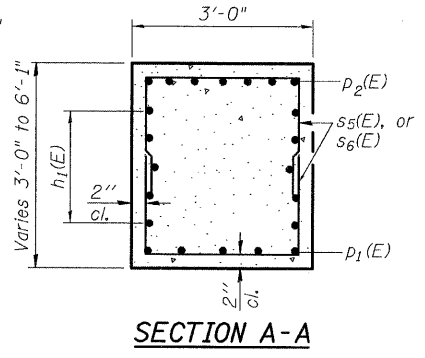
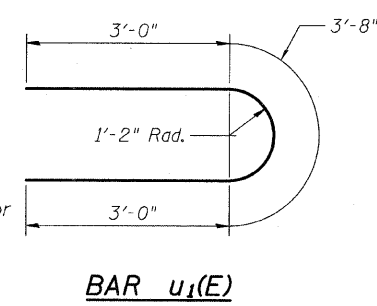
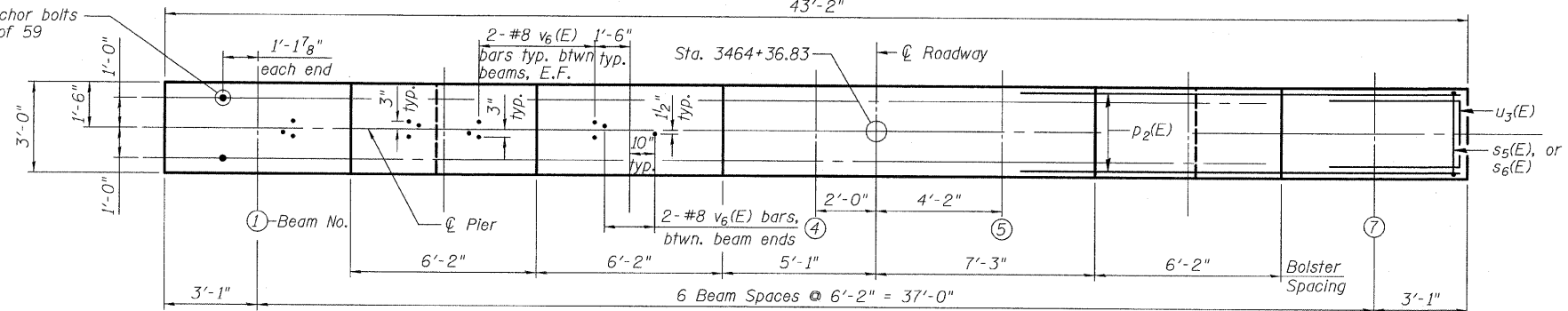
| | | | | | |
|---------------------|--------------|---------------------------|--------------------|------------------|---------------|
| SHEET NO. 49 | F.A. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 143 |
| 59 SHEETS | | | CONTRACT NO. 66908 | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 53 of 59.

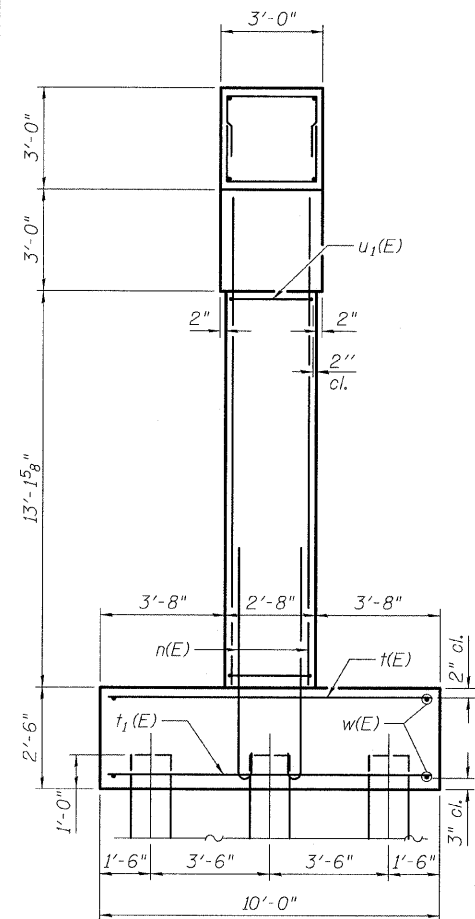
1/2" φ x 18" Anchor bolts
See Sheet 20 of 59



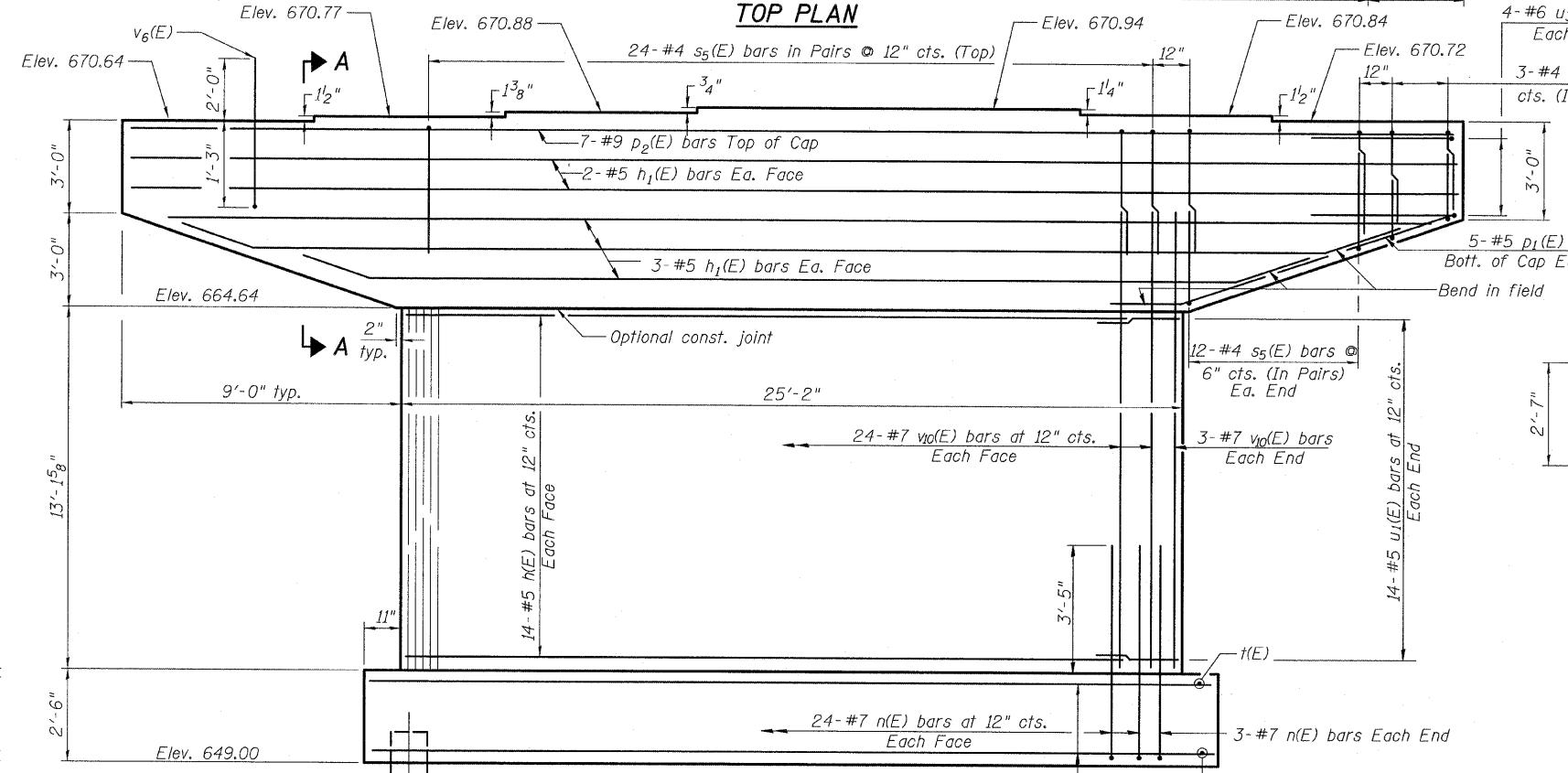
MINIMUM BAR LAP
#4 bar = 1'-8"

PIER
BILL OF MATERIAL

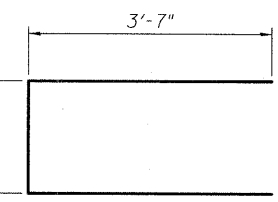
| Bar | No. | Size | Length | Shape |
|----------------------------------|-----|---------|---------|-------|
| n(E) | 28 | #5 | 22'-6" | — |
| h1(E) | 10 | #5 | 42'-10" | — |
| n(E) | 54 | #7 | 6'-6" | U |
| p1(E) | 10 | #5 | 11'-0" | — |
| p2(E) | 7 | #9 | 42'-10" | — |
| s5(E) | 72 | #4 | 10'-0" | □ |
| s6(E) | 12 | #4 | 7'-10" | □ |
| t(E) | 28 | #6 | 9'-8" | — |
| t1(E) | 28 | #8 | 9'-8" | — |
| u1(E) | 28 | #5 | 9'-8" | U |
| u3(E) | 8 | #6 | 9'-9" | — |
| v6(E) | 54 | #7 | 17'-0" | — |
| v6(E) | 36 | #8 | 4'-2" | U |
| w(E) | 20 | #6 | 26'-8" | — |
| Structure Excavation | | Cu. Yd. | 64.3 | |
| Concrete Structures | | Cu. Yd. | 83.5 | |
| Reinforcement Bars, Epoxy Coated | | Pound | 8,110 | |
| Furnishing Steel Piles, HP14x73 | | Foot | 728 | |
| Driving Piles | | Foot | 728 | |
| Test Pile, HP14x73 | | Each | 1 | |



END VIEW



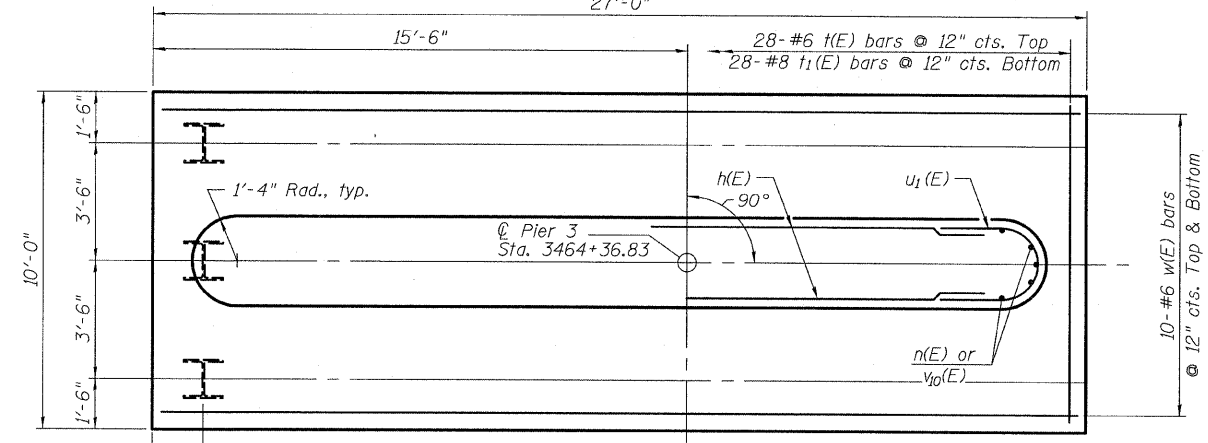
ELEVATION
(Looking East)



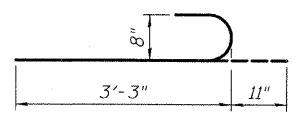
BAR u3(E)

BARS s5(E), s6(E)
A & B DIMENSIONS

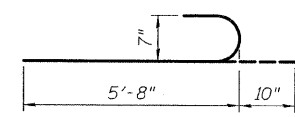
| Bar | A | B |
|-------|-------|-------|
| s5(E) | 2'-8" | 3'-8" |
| s6(E) | 2'-8" | 2'-7" |



FOOTING PLAN



BAR v6(E)



BAR n(E)

PIER 3
STRUCTURE NO. 006-0171 WB

PILE DATA
Type: HP 14x73
Nominal Required Bearing: 400 kips
Factored Resistance Available: 200 kips
Est. Length: 52'
No. Production Piles: 14
No. Test Piles: 1

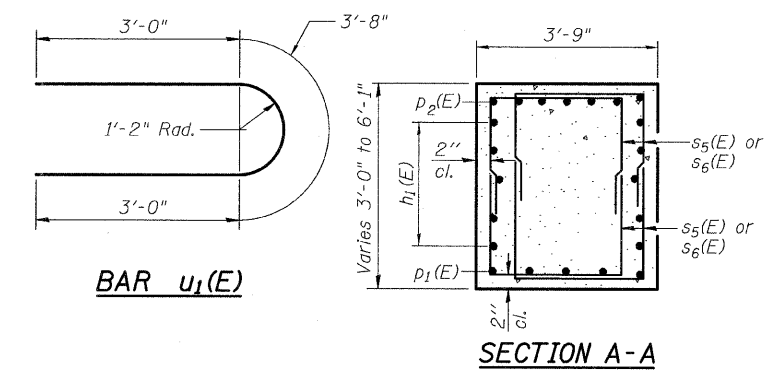
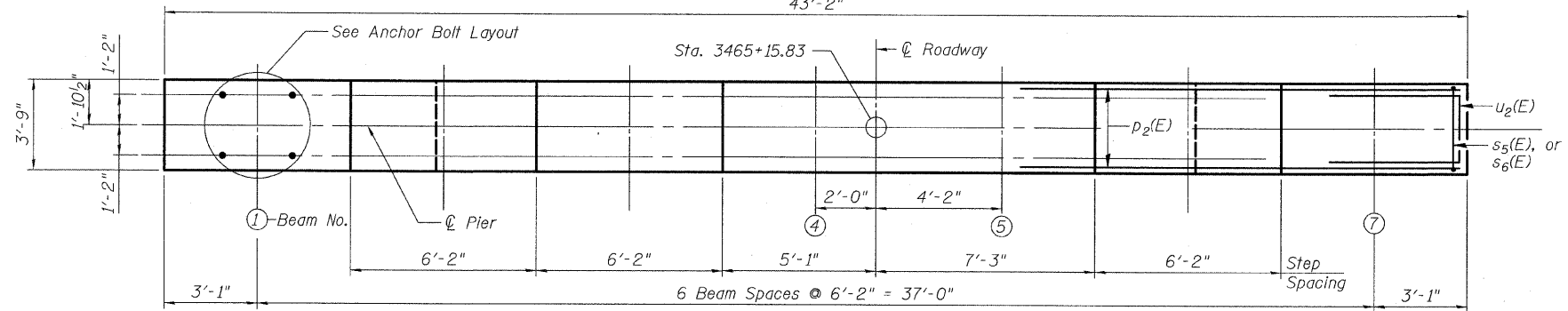
| | |
|----------|---------|
| DESIGNED | - SP |
| CHECKED | - PDF |
| DRAWN | - IM,PK |
| CHECKED | - PDF |

| SHEET NO. | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------|---------------------|---------|--------------------|------------------|-----------|
| 50 | 80 | * | BUREAU | 344 | 144 |
| 59 SHEETS | FED. ROAD DIST. NO. | | ILLINOIS | FED. AID PROJECT | |
| | | | CONTRACT NO. 66908 | | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

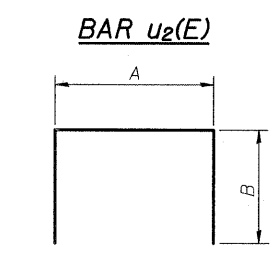
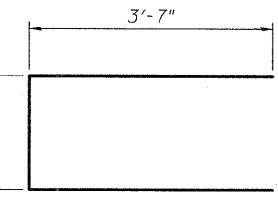
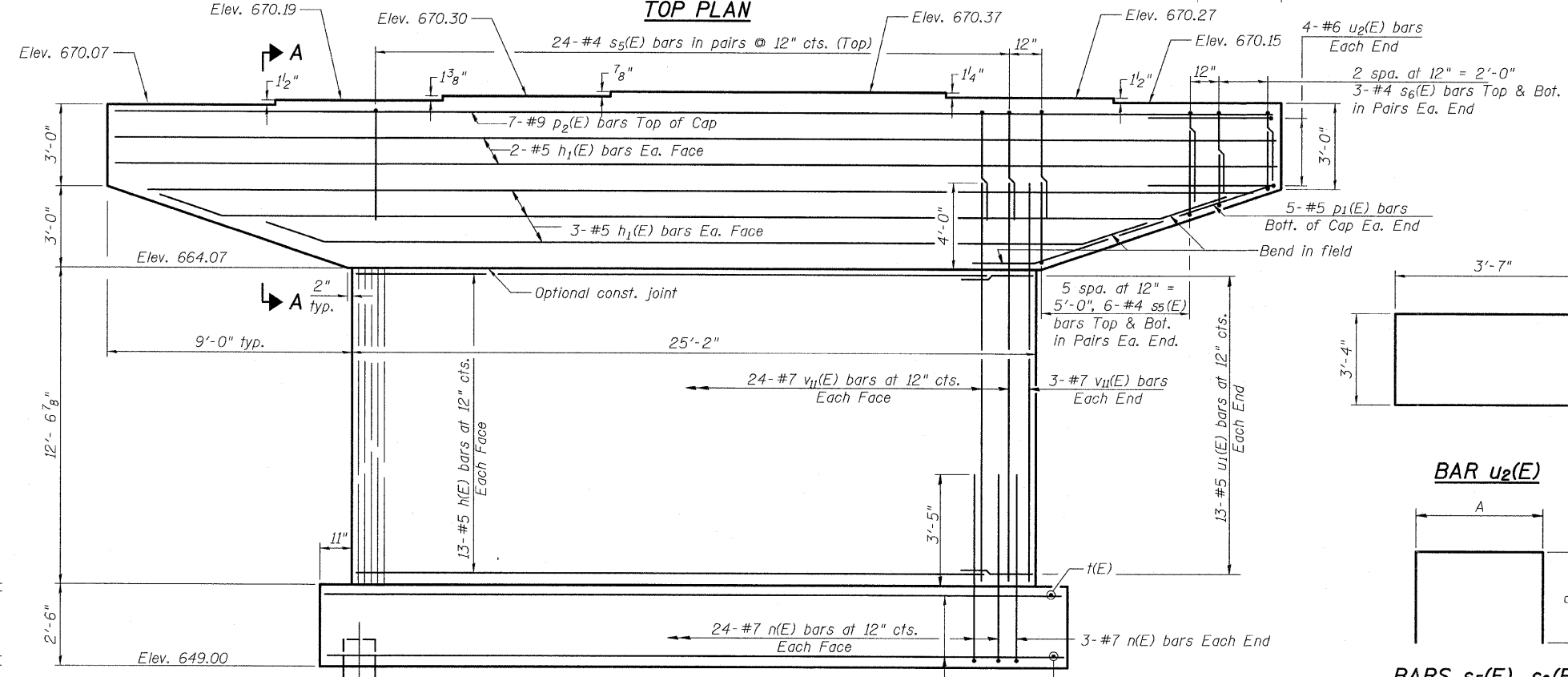
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 53 of 59.



MINIMUM BAR LAP
#4 bar = 1'-8"

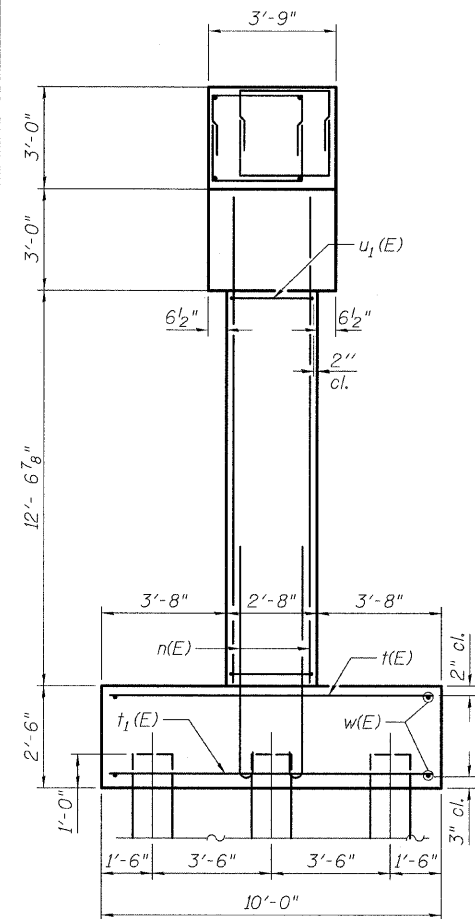
**PIER
BILL OF MATERIAL**

| Bar | No. | Size | Length | Shape |
|----------------------------------|-----|------|---------|-------|
| h(E) | 26 | #5 | 22'-6" | — |
| h1(E) | 10 | #5 | 42'-10" | — |
| n(E) | 54 | #7 | 6'-6" | ⌋ |
| p1(E) | 10 | #5 | 11'-0" | — |
| p2(E) | 7 | #9 | 42'-10" | — |
| s5(E) | 98 | #4 | 10'-0" | ⌋ |
| s6(E) | 24 | #4 | 7'-10" | ⌋ |
| t(E) | 28 | #6 | 9'-8" | — |
| t1(E) | 28 | #8 | 9'-8" | — |
| u1(E) | 26 | #5 | 9'-8" | ⌋ |
| u2(E) | 8 | #6 | 10'-6" | ⌋ |
| v1(E) | 54 | #7 | 16'-5" | — |
| w(E) | 20 | #6 | 26'-8" | — |
| Structure Excavation | | | Cu. Yd. | 64.3 |
| Concrete Structures | | | Cu. Yd. | 88.5 |
| Reinforcement Bars, Epoxy Coated | | | Pound | 7,820 |
| Furnishing Steel Piles, HP14x73 | | | Foot | 574 |
| Driving Piles | | | Foot | 574 |
| Test Pile, HP14x73 | | | Each | 1 |



A & B DIMENSIONS

| Bar | A | B |
|-------|-------|-------|
| s5(E) | 2'-8" | 3'-8" |
| s6(E) | 2'-8" | 2'-7" |

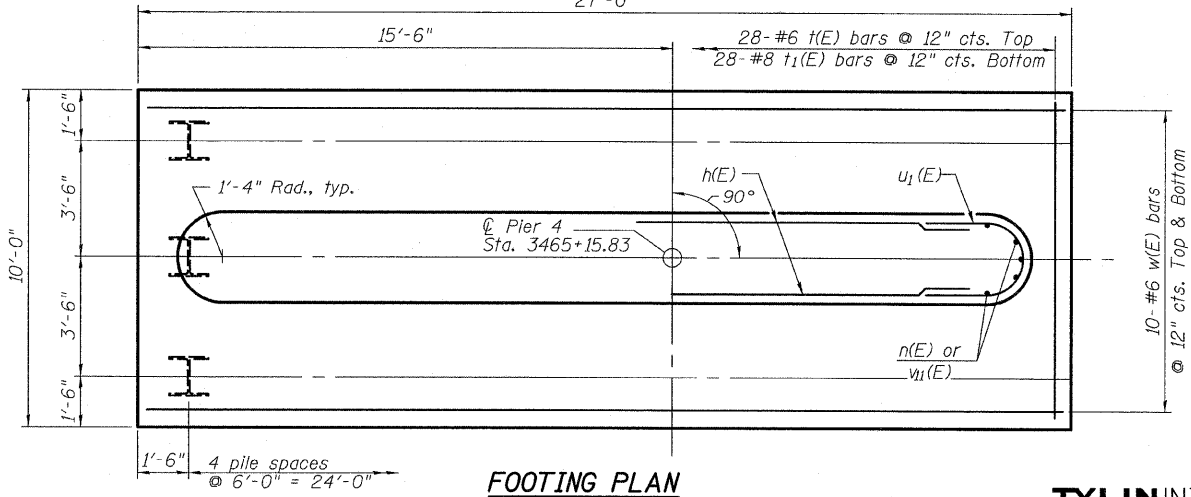


END VIEW

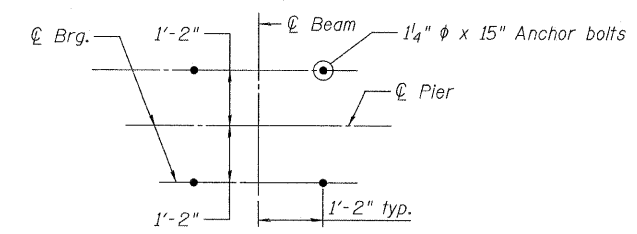
PILE DATA

Type: HP 14x73
Nominal Required Bearing: 400 kips
Factored Resistance Available: 200 kips
Est. Length: 41'
No. Production Piles: 14
No. Test Piles: 1

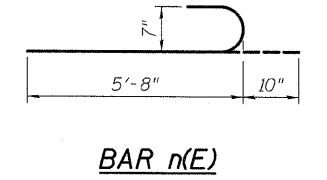
| | |
|----------|---------|
| DESIGNED | - SP |
| CHECKED | - PDF |
| DRAWN | - IM,PK |
| CHECKED | - PDF |



FOOTING PLAN



ANCHOR BOLT LAYOUT



BAR n(E)

**PIER 4
STRUCTURE NO. 006-0171 WB**

| | | | | | |
|---------------------|--------------|---------------------------|--------------------|------------------|---------------|
| SHEET NO. 51 | F.A. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 145 |
| 59 SHEETS | | | CONTRACT NO. 66908 | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | | |

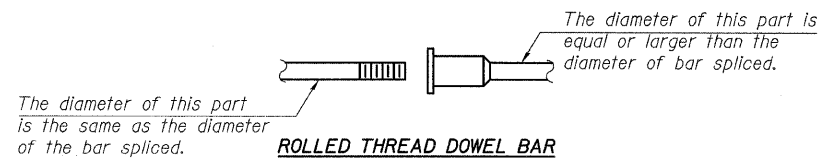
TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

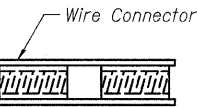
- ① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$
 - ② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_t$
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete



ROLLED THREAD DOWEL BAR



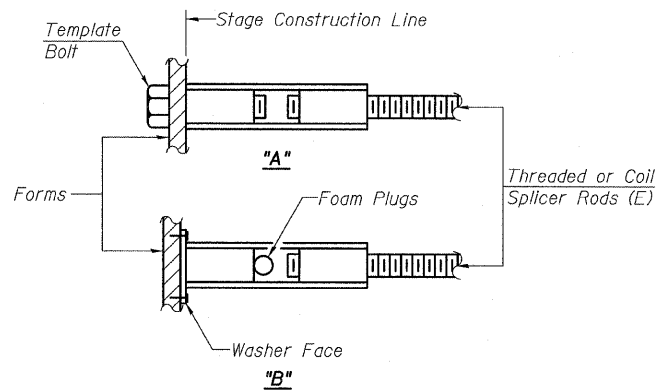
**** ONE PIECE**



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

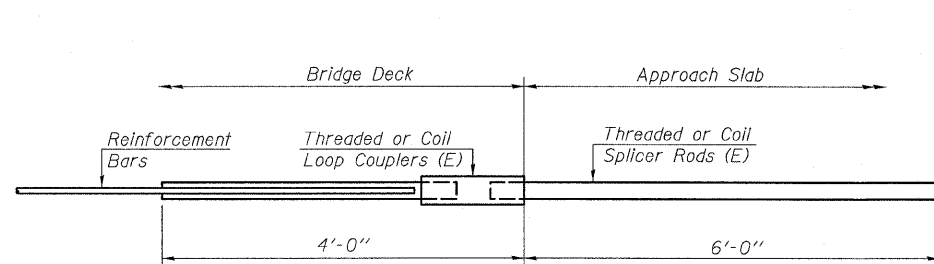
**Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



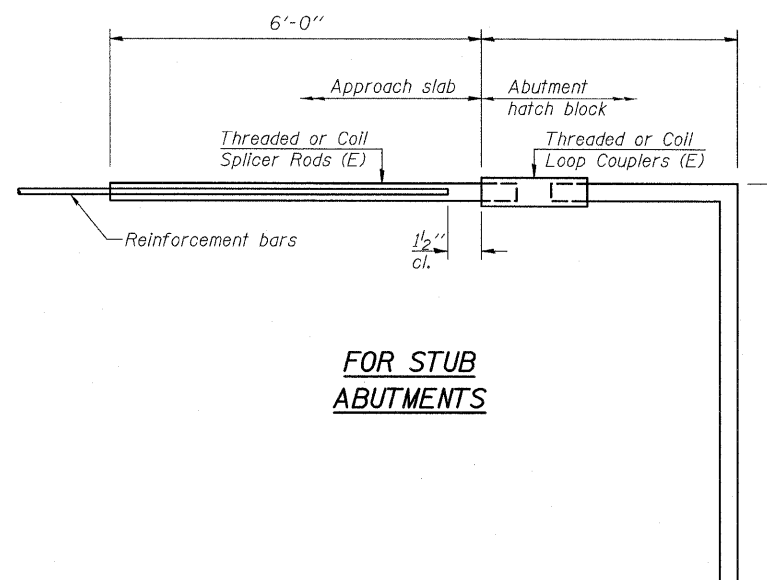
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

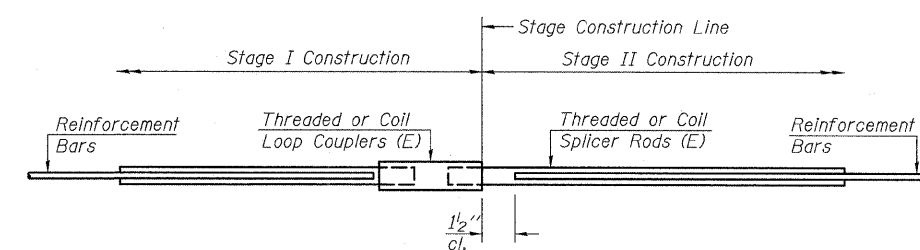
| BAR SPLICER ASSEMBLIES | | | |
|------------------------|---------------------------------|------------------------------|---------------------------------------|
| Bar Size to be Spliced | Splicer Rod or Dowel Bar Length | Strength Requirements | |
| | | Min. Capacity kips - tension | Min. Pull-Out Strength kips - tension |
| #4 | 1'-8" | 14.7 | 7.9 |
| #5 | 2'-2" | 23.0 | 12.3 |
| #6 | 2'-7" | 33.1 | 17.4 |
| #7 | 3'-5" | 45.1 | 23.8 |
| #8 | 4'-6" | 58.9 | 31.3 |
| #9 | 5'-9" | 75.0 | 39.6 |
| #10 | 7'-3" | 95.0 | 50.3 |
| #11 | 9'-0" | 117.4 | 61.8 |



FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS



FOR STUB ABUTMENTS



STANDARD

| Bar Size | No. Assemblies Required | Location |
|----------|-------------------------|----------|
| | | |
| | | |
| | | |
| | | |

| Bar Splicer for #5 bar | |
|--------------------------|----------------------------|
| Min. Capacity = | 23.0 kips - tension |
| Min. Pull-out Strength = | 12.3 kips - tension |
| No. Required = | 88 WB Bridge, 88 EB Bridge |

| Bar Splicer for #5 bar | |
|--------------------------|---------------------|
| Min. Capacity = | 23.0 kips - tension |
| Min. Pull-out Strength = | 12.3 kips - tension |
| No. Required = | |

| | |
|------------|-----|
| DESIGNED - | SP |
| CHECKED - | PDF |
| DRAWN - | SP |
| CHECKED - | PDF |

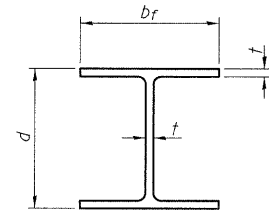
BAR SPLICER ASSEMBLY DETAILS

STRUCTURE NO. 006-0170 EB
STRUCTURE NO. 006-0171 WB

| SHEET NO. 52 | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|-----------|---------|---------------------------|--------------|-----------|
| 59 SHEETS | 80 | * | BUREAU | 344 | 146 |
| FED. ROAD DIST. NO. | | | ILLINOIS FED. AID PROJECT | | |
| CONTRACT NO. 66908 | | | | | |

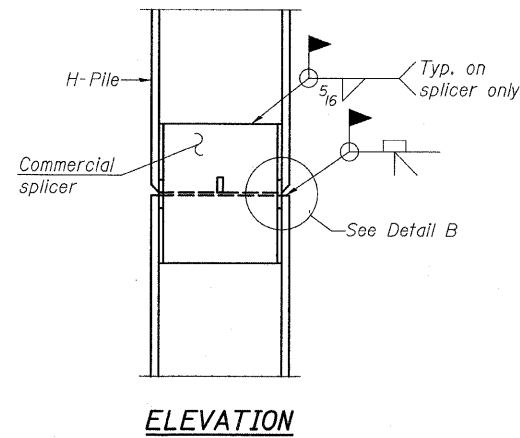
TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

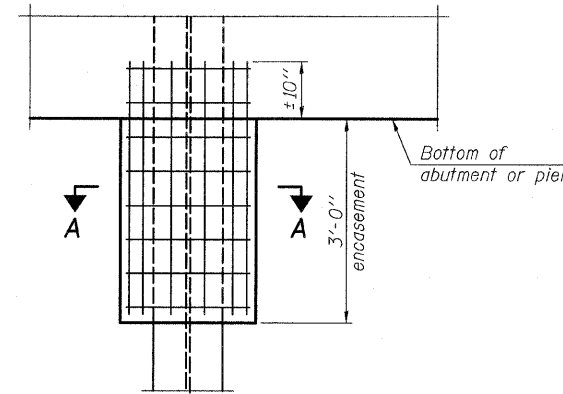


STEEL PILE TABLE

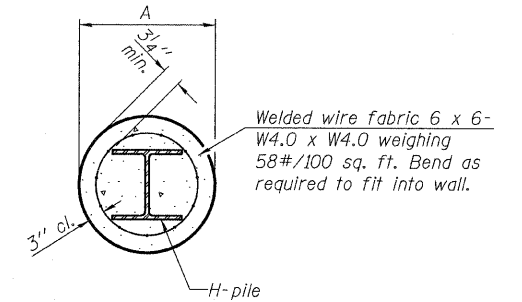
| Designation | Depth d | Flange width br | Web and Flange thickness t | Encasement diameter A |
|-------------|---------|-----------------|----------------------------|-----------------------|
| HP 14x117 | 14 1/4" | 14 7/8" | 13/16" | 30" |
| x102 | 14" | 14 3/4" | 11/16" | 30" |
| x89 | 13 7/8" | 14 3/4" | 5/8" | 30" |
| x73 | 13 5/8" | 14 5/8" | 1/2" | 30" |
| HP 12x84 | 12 1/4" | 12 1/4" | 11/16" | 24" |
| x74 | 12 1/8" | 12 1/4" | 5/8" | 24" |
| x63 | 12" | 12 3/8" | 1/2" | 24" |
| x53 | 11 3/4" | 12" | 7/16" | 24" |
| HP 10x57 | 10" | 10 1/4" | 9/16" | 24" |
| x42 | 9 3/4" | 10 1/8" | 7/16" | 24" |
| HP 8x36 | 8" | 8 1/8" | 7/16" | 18" |



ELEVATION



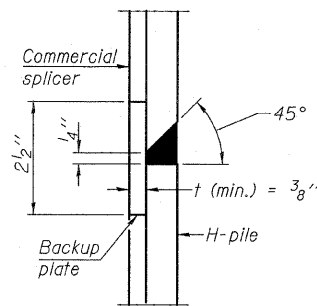
ELEVATION



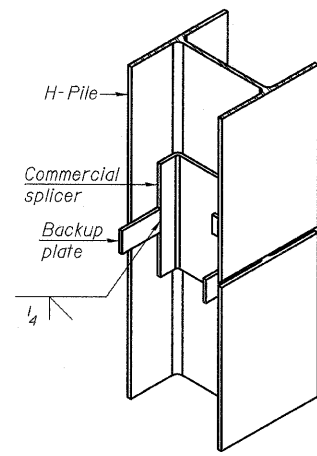
SECTION A-A

Note:
Forms for encasement may be omitted when soil conditions permit.

PILE ENCASEMENT

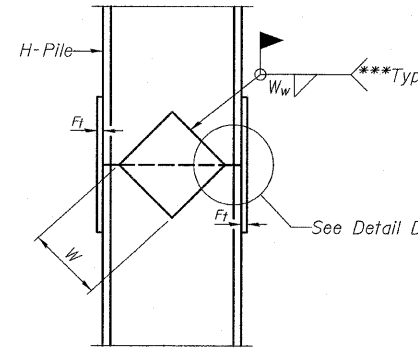


DETAIL "B"

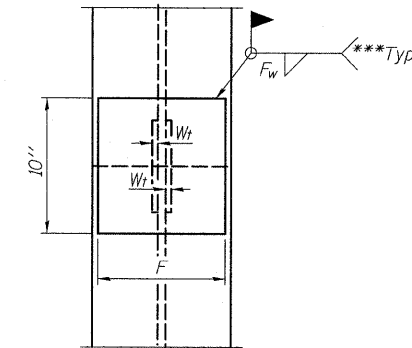


ISOMETRIC VIEW

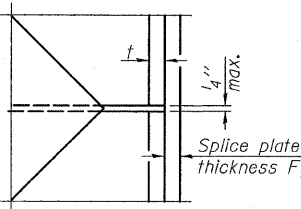
WELDED COMMERCIAL SPLICE



ELEVATION



END VIEW



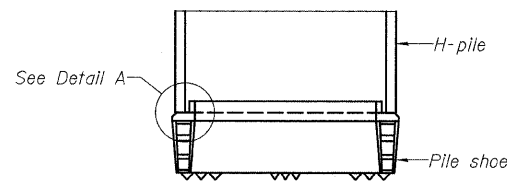
DETAIL D

| Designation | F | Ft | Fw | W | Wt | Ww |
|-------------|---------|------|--------|--------|--------|------|
| HP 14x117 | 12 1/2" | 1" | 7/8" | 7 3/4" | 5 3/8" | 1/2" |
| x102 | 12 1/2" | 7/8" | 3/4" | 7 3/4" | 5 3/8" | 1/2" |
| x89 | 12 1/2" | 3/4" | 11/16" | 7 3/4" | 5 3/8" | 1/2" |
| x73 | 12 1/2" | 5/8" | 9/16" | 7 3/4" | 5 3/8" | 1/2" |
| HP 12x84 | 10" | 7/8" | 11/16" | 6 1/2" | 5 3/8" | 1/2" |
| x74 | 10" | 7/8" | 11/16" | 6 1/2" | 5 3/8" | 1/2" |
| x63 | 10" | 5/8" | 1/2" | 6 1/2" | 1/2" | 3/8" |
| x53 | 10" | 5/8" | 1/2" | 6 1/2" | 1/2" | 3/8" |
| HP 10x57 | 8" | 3/4" | 9/16" | 5 1/4" | 1/2" | 3/8" |
| x42 | 8" | 5/8" | 9/16" | 5 1/4" | 1/2" | 3/8" |
| HP 8x36 | 7" | 5/8" | 7/16" | 4 1/4" | 1/2" | 3/8" |

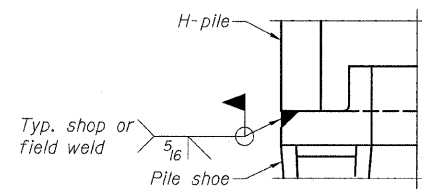
WELDED PLATE FIELD SPLICE

HP PILE DETAILS

STRUCTURE NO. 006-0170 EB
STRUCTURE NO. 006-0171 WB

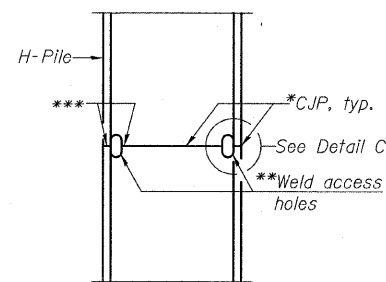


ELEVATION

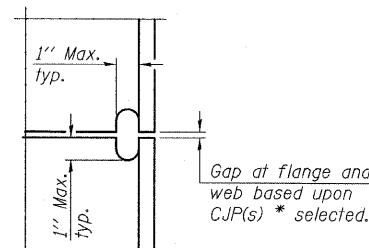


DETAIL A

H-PILE SHOE ATTACHMENT



ELEVATION



DETAIL C

COMPLETE PENETRATION WELD SPLICE

* Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.

** Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.

*** Interrupt welds 1/4" from end of each pile.

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

TYLIN INTERNATIONAL

| |
|---------------|
| DESIGNED - SP |
| CHECKED - PDF |
| DRAWN - SP |
| CHECKED - PDF |

| | | | | | |
|--------------|---------------------|---------|---------------------------|--------------|--------------------|
| SHEET NO. 53 | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 344 | 147 |
| 59 SHEETS | FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | CONTRACT NO. 66908 |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Two Materials
Selby Twp. - SW 1/4 Sec 1 - T16N, R10E
Sh. 1 of 2

Units English
Bridge Foundation
Boring Log

PROJECT BRIDGE I-80 Westbound over Date 04/03/95
ROUTE FAI 80 Brush Creek Bored By B. Montgomery
SEC. 06-07B & 06-07F STA. 1612 + 97.40 Checked By T. Bratt

| D E P T H | N | Qu t/sf | W % | Surf Wat El. Grndwater El. at Compl Wash | D E P T H | N | Qu t/sf | W % | Ground Surface 198.0 | |
|-----------------------|---|------------|--------|--|-----------------------|---|------------|--------|---|-----------------|
| | | | | | | | | | At | Hrs |
| | | | | | | | | | | 0 |
| | | | | | | | | | VERY STIFF black SILT 14% organics | 4 3.5 40 7 B |
| | | | | | | | | | MEDIUM black SILT 9% organics | 1 1.0 43 2 B |
| | | | | | | | | | VERY LOOSE gray SAND & GRAVEL | 3 3 |
| | | | | | | | | | VERY LOOSE gray SAND w/wood fragments (negative friction) | 2 |
| | | | | | | | | | First Encounter V MEDIUM gray SAND | 3 9 12 |
| | | | | | | | | | MEDIUM gray SAND | 5 9 10 |
| | | | | | | | | | DENSE gray SAND (very fine) | 11 15 16 |
| | | | | | | | | | MEDIUM gray SAND | 8 10 11 |
| | | | | | | | | | MEDIUM gray SAND | 10 8 9 |
| | | | | | | | | | END OF BORING | -70 |

Units English
Project
Route FAI 80
Sec. 06-07B & 06-07F
County Bureau
Sh. 2 of 2

Boring No. B-1
Sta 1611+80 WB
O/S 10' Lt

| D E P T H | N | Qu t/sf | W % | Surf Wat El. Grndwater El. at Compl Wash | D E P T H | N | Qu t/sf | W % | Ground Surface 175.2 | |
|-----------------------|---|------------|--------|--|-----------------------|---|------------|--------|------------------------------------|------------------------|
| | | | | | | | | | At | Hrs |
| | | | | | | | | | | 0 |
| | | | | | | | | | MEDIUM gray SAND & GRAVEL | 13 12 9 |
| | | | | | | | | | MEDIUM gray SAND & GRAVEL | 8 6 10 |
| | | | | | | | | | Same as above | 8 10 10 |
| | | | | | | | | | MEDIUM gray SAND & GRAVEL | 9 12 13 |
| | | | | | | | | | Same as above | 9 12 15 |
| | | | | | | | | | HARD brown SILTY CLAY TILL | 8 4.7 11 12 B 14 |
| | | | | | | | | | VERY STIFF brown CLAY LOAM TILL | 7 2.9 11 9 B 7 |
| | | | | | | | | | Same as above | 8 3.9 11 11 B 13 |
| | | | | | | | | | Same as above | 5 2.5 12 8 B 13 |
| | | | | | | | | | Same as above | 5 2.1 10 8 B 11 |
| | | | | | | | | | END OF BORING | -70 |

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Two Materials
Selby Twp. - SW 1/4 Sec 1 - T16N, R10E
Sh. 1 of 2

Units English
Bridge Foundation
Boring Log

PROJECT BRIDGE I-80 Westbound over Date 01/03/95
ROUTE FAI 80 Brush Creek Bored By B. Montgomery
SEC. 06-07B & 06-07F STA. 1612 + 97.40 Checked By T. Bratt

| D E P T H | N | Qu t/sf | W % | Surf Wat El. Grndwater El. at Compl Wash | D E P T H | N | Qu t/sf | W % | Ground Surface 175.2 | |
|-----------------------|---|------------|--------|--|-----------------------|---|------------|--------|---|-------------------------|
| | | | | | | | | | At | Hrs |
| | | | | | | | | | | 0 |
| | | | | | | | | | MEDIUM black SILTY LOAM friable | 0.5 24 E |
| | | | | | | | | | HARD Same as above w/SAND lenses | 7 5.7 12 11 B 13 |
| | | | | | | | | | Same as above | 5 1.2 22 5 B 5 |
| | | | | | | | | | HARD Same as above | 8 4.5 15 13 B 17 |
| | | | | | | | | | MEDIUM black SILT w/SAND lenses | 3 0.5 33 5 B 8 |
| | | | | | | | | | VERY LOOSE SAND & GRAVEL unconsolidated | 0 1 1 |
| | | | | | | | | | Same as above | 16 17 22 |
| | | | | | | | | | First Encounter V gray SAND contains GRAVEL | 3 3 10 |
| | | | | | | | | | gray SAND contains GRAVEL | 9 10 10 |
| | | | | | | | | | MEDIUM gray SAND & GRAVEL | 12 11 17 |
| | | | | | | | | | Same as above | 10 10 12 |
| | | | | | | | | | Same as above | 6 10 12 |
| | | | | | | | | | DENSE gray SAND & GRAVEL | 10 22 13 |
| | | | | | | | | | Same as above | 10 10 10 |
| | | | | | | | | | HARD gray SILTY CLAY TILL | 16 7.8 10 27 B 35 |
| | | | | | | | | | Same as above | 14 4.9 11 26 B 26 |
| | | | | | | | | | HARD gray SILTY CLAY LOAM TILL | 7 5.0 13 11 B 17 |
| | | | | | | | | | Same as above | 14 26 26 |
| | | | | | | | | | END OF BORING | -70 |

Units English
Project
Route FAI 80
Sec. 06-07B & 06-07F
County Bureau
Sh. 2 of 2

Boring No. B-2
Sta 1612 + 52 WB
O/S 14' Rt

| D E P T H | N | Qu t/sf | W % | Surf Wat El. Grndwater El. at Compl Wash | D E P T H | N | Qu t/sf | W % | Ground Surface 175.2 | |
|-----------------------|---|------------|--------|--|-----------------------|---|------------|--------|--|-------------------------|
| | | | | | | | | | At | Hrs |
| | | | | | | | | | | 0 |
| | | | | | | | | | Same as above | 15 4.7 11 20 B 30 |
| | | | | | | | | | VERY STIFF gray SILTY CLAY TILL | 12 3.3 12 18 B 31 |
| | | | | | | | | | STIFF gray SILTY CLAY TILL | 10 2.1 14 18 B 20 |
| | | | | | | | | | SOFT gray SILT | 6 0.4 26 12 B 15 |
| | | | | | | | | | MEDIUM gray SILTY TILL | 6 0.8 23 8 B 10 |
| | | | | | | | | | STIFF gray SILTY TILL | 6 1.7 18 7 B 13 |
| | | | | | | | | | VERY STIFF gray/tan SILTY TILL w/LIMESTONE fragments | 3.5 20 B |
| | | | | | | | | | Same as above | 11 2.9 16 21 B 23 |
| | | | | | | | | | END OF BORING | -65 |

N-Std Penetr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

N-Std Penetr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

| |
|---------------|
| DESIGNED - MF |
| CHECKED - PDF |
| DRAWN - MF |
| CHECKED - PDF |

BORING LOGS - 1

STRUCTURE NO. 006-0170 EB
STRUCTURE NO. 006-0171 WB

| | | | | | |
|--------------|------------------------------|-----------|-------------------------------------|------------------|---------------|
| SHEET NO. 54 | F.A. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 148 |
| 59 SHEETS | FED. ROAD DIST. NO. ILLINOIS | | FED. AID PROJECT CONTRACT NO. 66908 | | |

TYLIN INTERNATIONAL

*06-17BR & BR-1,7VB-M, 6BR & 6, 7 RS-1 & 11

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Two Materials
Selby Twp. - SW 1/4 Sec 1 - T16N, R10E

PROJECT BRIDGE I-80 Westbound over
ROUTE PAI 80 Brush Creek
SEC. 06-07B & 06-07F STA. 1612 + 97.40

Units English
Bridge Foundation
Boring Log
Sh. 1 of 2
Date 07/22/96
Bored By C. Jenkins
Checked By T. Bratt

| COUNTY Bureau | | D E P | | S u r f W a t E l. | | G r o u n d w a t e r E l. | | D E P | | S u r f W a t E l. | | G r o u n d w a t e r E l. | | D E P | | S u r f W a t E l. | | G r o u n d w a t e r E l. | | | | | | | |
|--|----|-------------|------|--|-------|--|---|-------------|----|--|---|--|---|-------------|-----|--|---|--|---|---|------|---|----|-----|---|
| Qu | W | N | t/sf | % | At | Hrs | H | N | Qu | W | N | t/sf | % | At | Hrs | H | N | Qu | W | N | t/sf | % | At | Hrs | H |
| 0.3 | 30 | | | | 174.4 | | | | | | | | | | | | | | | | | | | | |
| Ground Surface 178.2 0 SOFT brown SILTY LOAM VERY STIFF gray SILTY CLAY TILL 3 2.3 14 4 B | | | | | | | | | | | | | | | | | | | | | | | | | |
| SOFT brown SILTY CLAY with SAND on bottom of sampler 2 0.4 28 2 P 3 Same as above -25 2 2.1 15 5 B 7 | | | | | | | | | | | | | | | | | | | | | | | | | |
| First Encounter V LOOSE tan dirty SAND & GRAVEL 1 2 2 HARD brown SILTY LOAM TILL 9 6.8 10 10 S 14 | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOOSE dirty gray SAND & GRAVEL 1 3 5 Same as above -30 4 4.3 11 6 S 10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Same as above 2 4 5 Same as above 9 4.3 12 11 B 16 | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEDIUM dirty gray SAND & GRAVEL 6 9 9 Same as above -35 8 4.3 11 10 B 13 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Begin Wash LOOSE dirty gray SAND & GRAVEL 2 4 5 Same as above 8 4.1 11 12 S 14 | | | | | | | | | | | | | | | | | | | | | | | | | |
| STIFF gray SILTY CLAY TILL 4 1.9 16 5 S 7 STIFF brown SILTY LOAM TILL 3 1.6 11 6 B 9 | | | | | | | | | | | | | | | | | | | | | | | | | |
| VERY STIFF gray SILTY CLAY TILL 4 2.1 17 6 S 8 VERY STIFF brown SILTY LOAM TILL 4 2.3 11 7 B 10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| next column -45 | | | | | | | | | | | | | | | | | | | | | | | | | |
| N-Std Pentr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fall. B-Bulge S-Shear E-Estimated P-Penetrometer) | | | | | | | | | | | | | | | | | | | | | | | | | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Two Materials
Selby Twp. - SW 1/4 Sec 1 - T16N, R10E

PROJECT BRIDGE I-80 Westbound over
ROUTE PAI 80 Brush Creek
SEC. 06-07B & 06-07F STA. 1612 + 97.40

Units English
Bridge Foundation
Boring Log
Sh. 2 of 2
Date 07/22/96
Bored By C. Jenkins
Checked By T. Bratt

| COUNTY Bureau | | D E P | | S u r f W a t E l. | | G r o u n d w a t e r E l. | | D E P | | S u r f W a t E l. | | G r o u n d w a t e r E l. | | D E P | | S u r f W a t E l. | | G r o u n d w a t e r E l. | | | | | | | |
|--|---|-------------|------|--|-------|--|---|-------------|----|--|---|--|---|-------------|-----|--|---|--|---|---|------|---|----|-----|---|
| Qu | W | N | t/sf | % | At | Hrs | H | N | Qu | W | N | t/sf | % | At | Hrs | H | N | Qu | W | N | t/sf | % | At | Hrs | H |
| | | | | | 174.4 | | | | | | | | | | | | | | | | | | | | |
| VERY STIFF brown SILTY LOAM TILL 7 2.1 12 8 B 13 | | | | | | | | | | | | | | | | | | | | | | | | | |
| VERY STIFF gray SILTY LOAM TILL 3 2.7 14 5 B 8 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Same as above -50 8 2.5 14 10 S 12 | | | | | | | | | | | | | | | | | | | | | | | | | |
| STIFF brown SILT 1 1.7 24 3 B 7 | | | | | | | | | | | | | | | | | | | | | | | | | |
| STIFF dark gray SILT -55 5 1.5 23 4 B 7 | | | | | | | | | | | | | | | | | | | | | | | | | |
| VERY STIFF gray/green SILTY CLAY 3 2.3 21 4 P 8 | | | | | | | | | | | | | | | | | | | | | | | | | |
| VERY STIFF green with orange mottling SILTY CLAY TILL 3 2.1 26 6 B 7 | | | | | | | | | | | | | | | | | | | | | | | | | |
| VERY STIFF tan SILTY CLAY TILL 6 3.5 21 7 B 11 | | | | | | | | | | | | | | | | | | | | | | | | | |
| HARD tan SILTY CLAY TILL -65 5 6.8 16 11 B 15 | | | | | | | | | | | | | | | | | | | | | | | | | |
| HARD tan SILTY CLAY TILL 8 6.5 17 13 B 15 | | | | | | | | | | | | | | | | | | | | | | | | | |
| END OF BORING -70 | | | | | | | | | | | | | | | | | | | | | | | | | |
| N-Std Pentr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fall. B-Bulge S-Shear E-Estimated P-Penetrometer) | | | | | | | | | | | | | | | | | | | | | | | | | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Two Materials
Selby Twp. - SW 1/4 Sec 1 - T16N, R10E

PROJECT BRIDGE I-80 Westbound over
ROUTE PAI 80 Brush Creek
SEC. 06-07B & 06-07F STA. 1612 + 97.40

Units English
Bridge Foundation
Boring Log
Sh. 1 of 2
Date 07/11/96
Bored By C. Jenkins
Checked By T. Bratt

| COUNTY Bureau | | D E P | | S u r f W a t E l. | | G r o u n d w a t e r E l. | | D E P | | S u r f W a t E l. | | G r o u n d w a t e r E l. | | D E P | | S u r f W a t E l. | | G r o u n d w a t e r E l. | | | | | | | |
|--|---|-------------|------|--|-------|--|---|-------------|----|--|---|--|---|-------------|-----|--|---|--|---|---|------|---|----|-----|---|
| Qu | W | N | t/sf | % | At | Hrs | H | N | Qu | W | N | t/sf | % | At | Hrs | H | N | Qu | W | N | t/sf | % | At | Hrs | H |
| | | | | | 172.4 | | | | | | | | | | | | | | | | | | | | |
| Ground Surface 178.1 0 VERY SOFT black SILTY CLAY 0.0 34 P STIFF gray TILL 10 1.5 16 14 P 14 | | | | | | | | | | | | | | | | | | | | | | | | | |
| VERY SOFT Same as above 0 0.2 46 1 B 1 HARD brown SILTY CLAY TILL -25 7 4.1 11 8 S 12 | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEDIUM gray CLAY TILL -5 0 1.0 20 1 P 4 VERY STIFF Same as above 27 3.7 12 19 B 12 | | | | | | | | | | | | | | | | | | | | | | | | | |
| VERY STIFF Same as above 3 2.3 22 4 B 6 VERY STIFF brown SILTY CLAY -30 4 3.3 12 7 B 11 | | | | | | | | | | | | | | | | | | | | | | | | | |
| STIFF Same as above -10 1 1.7 18 2 B 5 Same as above 7 3.5 12 9 B 13 | | | | | | | | | | | | | | | | | | | | | | | | | |
| First Encounter V MEDIUM Same as above with SAND lens 1 0.6 19 3 B 3 Same as above -35 13 2.7 12 6 S 6 | | | | | | | | | | | | | | | | | | | | | | | | | |
| VERY STIFF gray TILL with SAND & GRAVEL lens -15 5 4.0 15 6 P 7 Same as above 14 3.1 12 13 S 15 | | | | | | | | | | | | | | | | | | | | | | | | | |
| HARD gray TILL 13 6.0 10 15 S 28 Same as above -40 6 3.1 12 5 B 9 | | | | | | | | | | | | | | | | | | | | | | | | | |
| HARD Same as above -20 11 10.5 9 16 S 11 VERY STIFF brown SILTY CLAY TILL 8 3.5 13 10 B 11 | | | | | | | | | | | | | | | | | | | | | | | | | |
| next column -45 | | | | | | | | | | | | | | | | | | | | | | | | | |
| N-Std Pentr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fall. B-Bulge S-Shear E-Estimated P-Penetrometer) | | | | | | | | | | | | | | | | | | | | | | | | | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Two Materials
Selby Twp. - SW 1/4 Sec 1 - T16N, R10E

PROJECT BRIDGE I-80 Westbound over
ROUTE PAI 80 Brush Creek
SEC. 06-07B & 06-07F STA. 1612 + 97.40

Units English
Bridge Foundation
Boring Log
Sh. 2 of 2
Date 07/11/96
Bored By C. Jenkins
Checked By T. Bratt

| COUNTY Bureau | | D E P | | S u r f W a t E l. | | G r o u n d w a t e r E l. | | D E P | | S u r f W a t E l. | | G r o u n d w a t e r E l. | | D E P | | S u r f W a t E l. | | G r o u n d w a t e r E l. | | | | | | | |
|--|---|-------------|------|--|-------|--|---|-------------|----|--|---|--|---|-------------|-----|--|---|--|---|---|------|---|----|-----|---|
| Qu | W | N | t/sf | % | At | Hrs | H | N | Qu | W | N | t/sf | % | At | Hrs | H | N | Qu | W | N | t/sf | % | At | Hrs | H |
| | | | | | 172.4 | | | | | | | | | | | | | | | | | | | | |
| HARD gray SILTY CLAY TILL -45 10 4.2 13 12 S 15 | | | | | | | | | | | | | | | | | | | | | | | | | |
| VERY STIFF gray SILTY CLAY TILL 4 3.9 13 7 B 10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Same as above -50 7 3.1 13 12 B 12 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Same as above 2 3.0 12 11 B 7 | | | | | | | | | | | | | | | | | | | | | | | | | |
| STIFF gray SILTY CLAY -55 5 1.5 20 7 B 8 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Same as above 4 1.7 20 8 S | | | | | | | | | | | | | | | | | | | | | | | | | |
| HARD tan/brown SILTY CLAY TILL -60 4 4.1 24 7 B 11 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Same as above 6 4.2 24 8 B 13 | | | | | | | | | | | | | | | | | | | | | | | | | |
| HARD tan SILTY CLAY TILL -65 7 5.0 17 11 B 14 | | | | | | | | | | | | | | | | | | | | | | | | | |
| END OF BORING -70 | | | | | | | | | | | | | | | | | | | | | | | | | |
| N-Std Pentr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fall. B-Bulge S-Shear E-Estimated P-Penetrometer) | | | | | | | | | | | | | | | | | | | | | | | | | |

DESIGNED - MF
CHECKED - PDF
DRAWN - MF
CHECKED - PDF

BORING LOGS - 2
STRUCTURE NO. 006-0170 EB
STRUCTURE NO. 006-0171 WB

| | | | | | |
|---------------------------|---|--------------|------------------|---------------------|------------------|
| SHEET NO. 55 59 SHEETS | F.A. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 147 |
| | CONTRACT NO. 66908 | | | | |
| | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Two Materials
Selby Twp. - SW 1/4 Sec 1 - T16N, R10E
PROJECT BRIDGE I-80 Westbound over Date 04/10/95
Units English
Bridge Foundation
Boring Log
Sh. 1 of 2

ROUTE FAI 80 Brush Creek Bored By J. Robertson
SEC. 06-07B & 06-07F STA. 1612 + 97.40 Checked By T. Bratt

| County Bureau | D | E | P | T | H | N | Qu | W | Surf Wat El. | D | E | P | T | H | N | Qu | W |
|--|---|---|---|---|---|---|------|---|--------------|---|---|---|---|---|---|------|---|
| | | | | | | | t/sf | % | at Compl | | | | | | | t/sf | % |
| Ground Surface 173.4 | | | | | | | | | 167.4 | | | | | | | | |
| VERY SOFT black SILTY CLAY LOAM | | | | | | | | | 165.8 | | | | | | | | |
| MEDIUM black SILTY CLAY with SAND lens | | | | | | | | | | | | | | | | | |
| VERY LOOSE gray SAND & GRAVEL | | | | | | | | | | | | | | | | | |
| MEDIUM Same as above | | | | | | | | | | | | | | | | | |
| First Encounter V VERY STIFF gray CLAY TILL | | | | | | | | | | | | | | | | | |
| HARD Same as above | | | | | | | | | | | | | | | | | |
| MEDIUM Same as above | | | | | | | | | | | | | | | | | |
| Begin Wash MEDIUM gray medium coarse SAND & GRAVEL | | | | | | | | | | | | | | | | | |
| HARD gray CLAY TILL | | | | | | | | | | | | | | | | | |

N-Std Penetr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fall, B-Bulge S-Shear E-Estimated P-Penetrometer)

Units English
Project
Route FAI 80
Sec. 06-07B & 06-07F
County Bureau
Sh. 2 of 2

Boring No. B-7
Sta 1614 + 22
O/S 4' Lt

| El. | N | Qu | W |
|-----|----|------|----|
| | | t/sf | % |
| -45 | 3 | 3.1 | 11 |
| | 7 | B | |
| | 10 | | |
| | 6 | 3.5 | 13 |
| | 7 | B | |
| | 10 | | |
| -50 | 4 | 2.9 | 13 |
| | 8 | B | |
| | 11 | | |
| | 4 | 3.7 | 13 |
| | 7 | B | |
| | 9 | | |
| -55 | 5 | 4.3 | 13 |
| | 6 | B | |
| | 6 | | |
| | 5 | 3.9 | 27 |
| | 5 | B | |
| | 7 | | |
| -50 | | | |
| -85 | | | |
| -90 | | | |
| -95 | | | |
| -70 | | | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Two Materials
Selby Twp. - SW 1/4 Sec 1 - T16N, R10E
PROJECT BRIDGE I-80 Westbound over Date 03/13/96
Units English
Bridge Foundation
Boring Log
Sh. 1 of 2

ROUTE FAI 80 Brush Creek Bored By B. Montgomery
SEC. 06-07B & 06-07F STA. 1612 + 97.40 Checked By T. Bratt

| County Bureau | D | E | P | T | H | N | Qu | W | Surf Wat El. | D | E | P | T | H | N | Qu | W |
|--|---|---|---|---|---|---|------|---|--------------|---|---|---|---|---|---|------|---|
| | | | | | | | t/sf | % | at Compl | | | | | | | t/sf | % |
| Ground Surface 199.7 | | | | | | | | | 167.4 | | | | | | | | |
| Broken Concrete | | | | | | | | | | | | | | | | | |
| MEDIUM gray CLAY LOAM | | | | | | | | | | | | | | | | | |
| VERY STIFF gray CLAY LOAM, very dense | | | | | | | | | | | | | | | | | |
| MEDIUM gray SILT very plastic | | | | | | | | | | | | | | | | | |
| MEDIUM gray SILTY LOAM | | | | | | | | | | | | | | | | | |
| MEDIUM gray/tan SILT mottled & plastic | | | | | | | | | | | | | | | | | |
| VERY STIFF gray SILT | | | | | | | | | | | | | | | | | |
| VERY STIFF gray SILT | | | | | | | | | | | | | | | | | |
| MEDIUM black SILT | | | | | | | | | | | | | | | | | |
| 8.3% Organics | | | | | | | | | | | | | | | | | |

N-Std Penetr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fall, B-Bulge S-Shear E-Estimated P-Penetrometer)

Units English
Project
Route FAI 80
Sec. 06-07B & 06-07F
County Bureau
Sh. 2 of 2

Boring No. B-8
Sta 1615 + 72
O/S 12' Rt

| El. | N | Qu | W |
|-----|----|------|----|
| | | t/sf | % |
| -45 | 13 | 7.0 | 12 |
| | 15 | S | |
| | 19 | | |
| | 11 | 7.0 | 11 |
| | 13 | B | |
| | 18 | | |
| -50 | 10 | 3.7 | 13 |
| | 10 | B | |
| | 15 | | |
| | 11 | 4.7 | 12 |
| | 12 | B | |
| | 16 | | |
| -55 | 11 | 5.7 | 12 |
| | 12 | B | |
| | 14 | | |
| | 7 | 3.5 | 12 |
| | 11 | S | |
| | 10 | | |
| -60 | | | |
| -85 | | | |
| -90 | | | |
| -70 | | | |

| |
|---------------|
| DESIGNED - SP |
| CHECKED - PDF |
| DRAWN - SP |
| CHECKED - PDF |

BORING LOGS - 3
STRUCTURE NO. 006-0170 EB
STRUCTURE NO. 006-0171 WB

| | | | | | |
|---|--------------------|---------|--------|--------------|-----------|
| SHEET NO. 56 | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 344 | 150 |
| 59 SHEETS | CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | | |

TYLIN INTERNATIONAL

*06-L7BR & BR-1,7VB-M, 6BR & 6, 7 RS-1 & I1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Two Materials
Selby Twp. - SW 1/4 Sec 1 - T16N, R10E

Units English
Bridge Foundation
Boring Log

PROJECT BRIDGE I-80 Eastbound over Date 03/29/96 Sh. 1 of 2

ROUTE FAI 80 Brush Creek Bored By B. Montgomery

SEC. 06-07B & 06-07F STA. 1612 + 97.40 Checked By T. Bratt

| D E P T H | N | Qu t/sf | W % | Surf Wat El. 167.4 Grndwater El. at Compl. Mash At 24 Hrs 168.2 | D E P T H | N | Qu t/sf | W % |
|--|---|------------|--------|--|-----------------------|---|------------|--------|
| COUNTY Bureau | | | | | | | | |
| Ground Surface 200.2 0 | | | | | | | | |
| Broken Concrete & Bituminous | | | | | | | | |
| VERY STIFF gray CLAY LOAM 4 3.7 18 | | | | | | | | |
| VERY STIFF gray CLAY TILL 4 4.5 14 | | | | | | | | |
| STIFF gray CLAY TILL with SILT lenses 4 1.2 16 | | | | | | | | |
| HARD tan SILTY CLAY LOAM TILL 7 5.7 14 | | | | | | | | |
| STIFF tan/gray SILTY LOAM, oxidized & mottled 4 1.5 20 | | | | | | | | |
| STIFF tan SILT 4 1.7 22 | | | | | | | | |
| STIFF tan SILT 5 1.7 21 | | | | | | | | |
| STIFF tan/gray SILTY CLAY, mottled 4 1.7 23 | | | | | | | | |
| next column | | | | | | | | |
| N-Std Pentr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer) | | | | | | | | |

Units English
Project
Route FAI 80
Sec. 06-07B & 06-07F
County Bureau

Sh. 2 of 2

| Boring No. B-9 Sta 1612 + 50 O/S 8' Lt | El. | N | Qu t/sf | W % | El. | N | Qu t/sf | W % |
|--|--------|--------|------------|--------|-----|---|------------|--------|
| HARD gray CLAY TILL | -45 | 8 | 5.2 | 14 | -70 | | | |
| MEDIUM gray SAND | 4/2/96 | 4 | 6 | 10 | -50 | | | |
| MEDIUM gray SAND | -50 | 12 | 12 | 15 | -75 | | | |
| VERY DENSE gray SAND | -55 | 8 | 12 | 15 | -80 | | | |
| hard drilling | | 100/2" | PEN | | -85 | | | |
| VERY DENSE gray SAND | -55 | 21 | 26 | 27 | -90 | | | |
| HARD gray CLAY TILL | -60 | 12 | 10.3 | 10 | -95 | | | |
| END OF BORING | -60 | 12 | 10.3 | 10 | -95 | | | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Two Materials
Selby Twp. - SW 1/4 Sec 1 - T16N, R10E

Units English
Bridge Foundation
Boring Log

PROJECT BRIDGE I-80 Eastbound over Date 01/02/95 Sh. 1 of 2

ROUTE FAI 80 Brush Creek Bored By B. Montgomery

SEC. 06-07B & 06-07F STA. 1612 + 97.40 Checked By T. Bratt

| D E P T H | N | Qu t/sf | W % | Surf Wat El. 169.0 Grndwater El. at Compl. | D E P T H | N | Qu t/sf | W % |
|--|---|------------|--------|--|-----------------------|---|------------|--------|
| COUNTY Bureau | | | | | | | | |
| Ground Surface 178.6 0 | | | | | | | | |
| SOFT black SILTY LOAM dry & crumbly | | | | | | | | |
| SOFT Same as above | | | | | | | | |
| SOFT black SILTY LOAM contains shells very plastic 10.3% Organics | | | | | | | | |
| gray SAND & GRAVEL w/some large GRAVEL pieces | | | | | | | | |
| First Encounter V -10 | | | | | | | | |
| gray fluid SAND, very uniform & fine | | | | | | | | |
| gray fine SAND & GRAVEL at base | | | | | | | | |
| Same as above | | | | | | | | |
| Same as above | | | | | | | | |
| HARD gray SILTY CLAY TILL | | | | | | | | |
| next column | | | | | | | | |
| N-Std Pentr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer) | | | | | | | | |

Units English
Project
Route FAI 80
Sec. 06-07B & 06-07F
County Bureau

Sh. 2 of 2

| Boring No. B-10 Sta 1613 + 50 O/S 20' Lt EB CL | El. | N | Qu t/sf | W % | El. | N | Qu t/sf | W % |
|--|-----|----|------------|--------|-----|---|------------|--------|
| HARD gray CLAY TILL w/large pabbles | -45 | 7 | 4.5 | 11 | -70 | | | |
| Same as above | | 10 | 3.0 | 12 | -75 | | | |
| VERY STIFF Same as above | -50 | 5 | 2.8 | 13 | -80 | | | |
| VERY STIFF Same as above | | 5 | 2.8 | 13 | -85 | | | |
| VERY STIFF Same as above | -55 | 12 | 3.2 | 14 | -90 | | | |
| VERY SOFT gray SILT very moist & plastic | -60 | 1 | 0.2 | 26 | -95 | | | |
| MEDIUM gray SILTY CLAY TILL | | 1 | 3.2 | 23 | | | | |
| MEDIUM gray SILTY CLAY TILL | | 2 | 3.2 | 21 | | | | |
| tan SILTY CLAY TILL weathered LIMESTONE fragments | -65 | 3 | 1.8 | 22 | -95 | | | |
| END OF BORING | -65 | 3 | 1.8 | 22 | -95 | | | |

| |
|---------------|
| DESIGNED - SP |
| CHECKED - PDF |
| DRAWN - SP |
| CHECKED - PDF |

BORING LOGS -4
STRUCTURE NO. 006-0170 EB
STRUCTURE NO. 006-0171 WB

| | | | | | |
|---|--------------------|---------|--------|--------------|-----------|
| SHEET NO. 57 | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 344 | 151 |
| 59 SHEETS | CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | | |

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Two Materials
Selby Twp. - SW 1/4 Sec 1 - T16N, R10E
PROJECT BRIDGE I-80 Eastbound over Date Sh. 1 of 2
03/18/96

Units English
Project
Bridge Foundation
Boring Log

ROUTE FAI 80 Brush Creek Bored By K. Pax
SEC. 06-07B & 06-07F STA. 1612 + 97.40 Checked By T. Bratt

| DEPT | Qu | W | Surf Wat El. | Grndwater El. | At 72 Hrs | H | N | Qu | W |
|---|----|-----|--------------|---------------|-----------|---|---|----|---|
| Ground Surface 199.8 | | | 171.2 | 174.8 | | | | | |
| Concrete Approach Pavement | | | | | | | | | |
| STIFF olive green, brown gray, black CLAY LOAM | 3 | 1.7 | 29 | | | | | | |
| STIFF Same as above | 4 | 1.5 | 27 | | | | | | |
| STIFF Same as above | 4 | 2.0 | 23 | | | | | | |
| STIFF olive green, black SILTY CLAY LOAM | 5 | 2.0 | 21 | | | | | | |
| STIFF olive green, brown SILTY CLAY LOAM | 4 | 1.8 | 24 | | | | | | |
| MEDIUM olive green, black SILTY CLAY LOAM | 4 | 0.8 | 27 | | | | | | |
| STIFF olive green, brown, black SILTY CLAY LOAM | 3 | 1.6 | 25 | | | | | | |
| VERY STIFF black SILT | 5 | 3.9 | 20 | | | | | | |

N-Std Pentr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Two Materials
Selby Twp. - SW 1/4 Sec 1 - T16N, R10E
PROJECT BRIDGE I-80 Eastbound over Date Sh. 2 of 2
03/18/96

ROUTE FAI 80 Brush Creek Bored By K. Pax
SEC. 06-07B & 06-07F STA. 1612 + 97.40 Checked By T. Bratt

| DEPT | Qu | W | Surf Wat El. | Grndwater El. | At 72 Hrs | H | N | Qu | W |
|--|----|-----|--------------|---------------|-----------|---|---|----|---|
| HARD pink, light brown SILTY LOAM TILL | 12 | 5.2 | 11 | | | | | | |
| HARD Same as above | 21 | 5.7 | 10 | | | | | | |
| HARD Same as above | 15 | 6.1 | 11 | | | | | | |
| HARD Same as above | 15 | 4.0 | 12 | | | | | | |
| STIFF Same as above | 16 | 1.7 | 12 | | | | | | |
| MEDIUM Same as above w/SAND lenses | 15 | 0.7 | 15 | | | | | | |
| VERY STIFF Same as above | 10 | 3.5 | 13 | | | | | | |
| VERY STIFF Same as above | 9 | 2.7 | 11 | | | | | | |
| HARD Same as above | 7 | 5.0 | 11 | | | | | | |
| VERY STIFF Same as above | 8 | 3.5 | 11 | | | | | | |

N-Std Pentr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Two Materials
Selby Twp. - SW 1/4 Sec 1 - T16N, R10E
PROJECT BRIDGE I-80 Eastbound over Date Sh. 1 of 2
01/22/96

Units English
Project
Bridge Foundation
Boring Log

ROUTE FAI 80 Brush Creek Bored By R. Montgomery
SEC. 06-07B & 06-07F STA. 1612 + 97.40 Checked By T. Bratt

| DEPT | Qu | W | Surf Wat El. | Grndwater El. | At 14day Hrs | H | N | Qu | W |
|--|-----|-----|--------------|---------------|--------------|---|---|----|---|
| Ground Surface 178.8 | | | 167.4 | | | | | | |
| MEDIUM tan SILTY LOAM Road Gravel & Asphalt | 0.5 | 10 | | | | | | | |
| MEDIUM black SILTY LOAM | 6 | 1.0 | 26 | | | | | | |
| SOFT black SILTY LOAM w/SAND lenses | 3 | 0.2 | 25 | | | | | | |
| SOFT black SILTY LOAM w/ SAND 9.5% Organics | 2 | 0.3 | 48 | | | | | | |
| MEDIUM gray Sand & GRAVEL | 6 | | | | | | | | |
| MEDIUM gray SAND & GRAVEL with medium rounded GRAVEL | 8 | | | | | | | | |
| MEDIUM Same as above | 10 | | | | | | | | |
| MEDIUM Same as above | 12 | | | | | | | | |
| MEDIUM gray SILT contains SAND lenses | 12 | 0.5 | 15 | | | | | | |

N-Std Pentr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Two Materials
Selby Twp. - SW 1/4 Sec 1 - T16N, R10E
PROJECT BRIDGE I-80 Eastbound over Date Sh. 2 of 2
01/22/96

ROUTE FAI 80 Brush Creek Bored By R. Montgomery
SEC. 06-07B & 06-07F STA. 1612 + 97.40 Checked By T. Bratt

| DEPT | Qu | W | Surf Wat El. | Grndwater El. | At 14day Hrs | H | N | Qu | W |
|---|----|-----|--------------|---------------|--------------|---|---|----|---|
| MEDIUM Same as above | 10 | 1.0 | 15 | | | | | | |
| MEDIUM Same as above very wet & plastic | 12 | 1.0 | 14 | | | | | | |
| VERY STIFF Same as above | 12 | 3.0 | 12 | | | | | | |
| VERY STIFF Same as above (very dry) | 4 | 3.0 | 11 | | | | | | |
| STIFF Same as above | 6 | 1.5 | 14 | | | | | | |
| STIFF gray SILTY CLAY TILL | 12 | 1.7 | 15 | | | | | | |
| STIFF Same as above | 22 | 1.7 | 27 | | | | | | |
| STIFF Same as above | 22 | 1.7 | 26 | | | | | | |
| MEDIUM gray SILT | 5 | 0.5 | 27 | | | | | | |

N-Std Pentr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

| |
|---------------|
| DESIGNED - SP |
| CHECKED - PDF |
| DRAWN - SP |
| CHECKED - PDF |

BORING LOGS - 5
STRUCTURE NO. 006-0170 EB
STRUCTURE NO. 006-0171 WB

| | | | | | |
|--------------|------------------------------|-----------|-------------------------------------|------------------|---------------|
| SHEET NO. 58 | F.A. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 744 | SHEET NO. 152 |
| 59 SHEETS | FED. ROAD DIST. NO. ILLINOIS | | FED. AID PROJECT CONTRACT NO. 66908 | | |

TYLIN INTERNATIONAL

Benchmark: Chiseled "□" on the west end of the southwest parapet of the structure carrying WB I-80 over East Bureau Creek (SN 006-0025); Elev. 663.02

Existing Structures: The existing structures, SN 006-0024 & 0025, were built in 1963 as FAI Route 80 Station 1434+82. The existing 3-span wide flange superstructures are supported by pile bent abutments and hammerhead piers on footings. The existing structures lengths are 185'-10" back to back of abutments and the overall width of each structure 35'-8". The existing structures will be removed entirely and replaced with dual 3-span PPC I-beam superstructures supported by integral abutments and pile bent piers. One lane of traffic in each direction will be maintained at all times using crossovers.

No Salvage.

DESIGN SCOUR ELEVATION TABLE

| | | | | |
|-----------------------------|-------------|-----------|-----------|-------------|
| Design Scour Elevation (ft) | W. Abut. WB | Pier 1 WB | Pier 2 WB | E. Abut. WB |
| | 654.71 | 628.3 | 627.8 | 654.70 |
| Design Scour Elevation (ft) | W. Abut. EB | Pier 1 EB | Pier 2 EB | E. Abut. EB |
| | 654.53 | 627.0 | 629.8 | 654.88 |

STATION 3285+21.33
BUILT 20__ BY
STATE OF ILLINOIS
F.A.I. RT. 80 SEC. 06-6BR
LOADING HS20
SN 006-0172 (EB)

STATION 3285+21.33
BUILT 20__ BY
STATE OF ILLINOIS
F.A.I. RT. 80 SEC. 06-6BR
LOADING HS20
SN 006-0173 (WB)

NAME PLATES
See Std. 515001

LOADING HS20-44 & ALT.

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specification for Highway Bridges

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)

PRECAST UNITS

$f'_c = 6,000$ psi
 $f_{ai} = 5,000$ psi
 $f'_s = 270,000$ psi (1/2" ϕ Low Relaxation Strands)
 $f_{si} = 201,960$ psi (1/2" ϕ Low Relaxation Strands)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.036 g
Site Coefficient (S) = 1

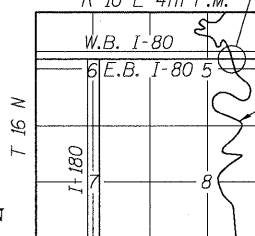
CURVE DATA

(ϕ Survey FAI Route 80)
PI Sta. = 3302+13.75
 $\Delta = 7^{\circ}09'06''$ (Lt)
 $D = 0^{\circ}10'03''$
 $R = 34,212.07'$
 $L = 4270.33'$
 $T = 2,137.94'$
 $E = 66.74'$
PC Sta. 3280+75.81
PT Sta. 3323+46.14
Normal Crown

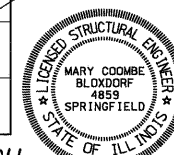
APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

Proposed Structure Replacement
R 10 E 4th P.M.



LOCATION SKETCH



WATERWAY INFORMATION

Drainage Area = 26.4 Sq. Mi. Low Grade Elev. 662.16 @ Sta. 3285+10 EB

| Flood | Freq. Yr. | Q C.F.S. | Opening Exist. Prop. | Sq. Ft. Nat. H.W.E. | Head - Ft. Exist. Prop. | Headwater El. Exist. Prop. |
|-------------|-----------|----------|----------------------|---------------------|-------------------------|----------------------------|
| Design | 50 | 3943 | 594 836 | 643.9 | 0.9 0.4 | 644.8 644.3 |
| Base | 100 | 4611 | 627 877 | 644.3 | 1.1 0.6 | 645.4 644.8 |
| Overtopping | — | — | — | — | — | — |
| Max. Calc. | 500 | 6243 | 694 963 | 645.1 | 1.7 1.0 | 646.9 646.1 |

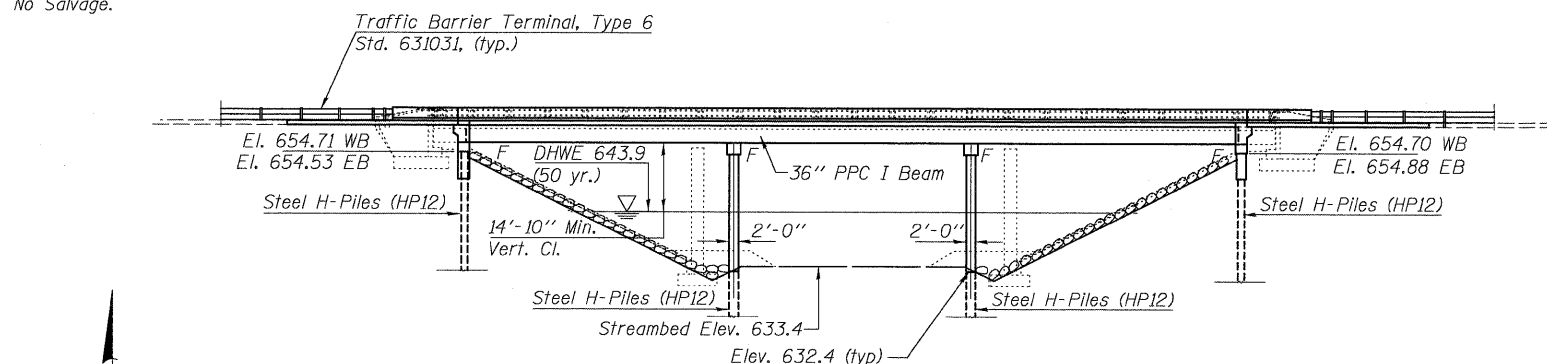
10 yr. vel. thru exist. Str. = 4.85 ft/sec 10 yr. vel. thru Prop. Str. = 3.37 ft/sec

I-80 OVER E. BUREAU CREEK
FAI ROUTE 80 SECTION 06-6BR

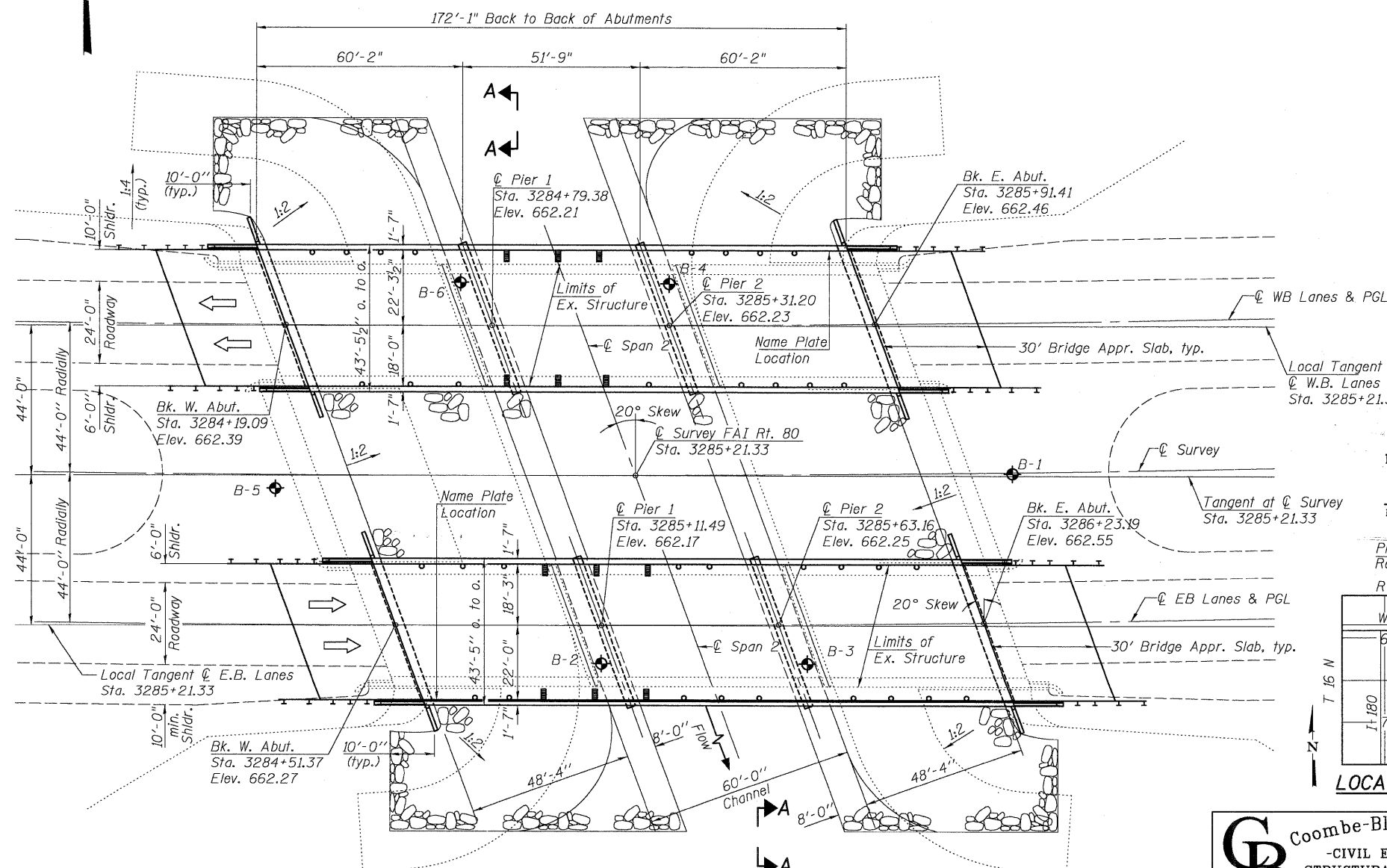
BUREAU COUNTY

STATION 3285+21.33

SN 006-0172 (EB) & SN 006-0173 (WB)



ELEVATION



PLAN

CB Coombe-Bloxdorf P.C.
- CIVIL ENGINEERS -
- STRUCTURAL ENGINEERS -
- LAND SURVEYORS -
Design Firm License No. 184-002703

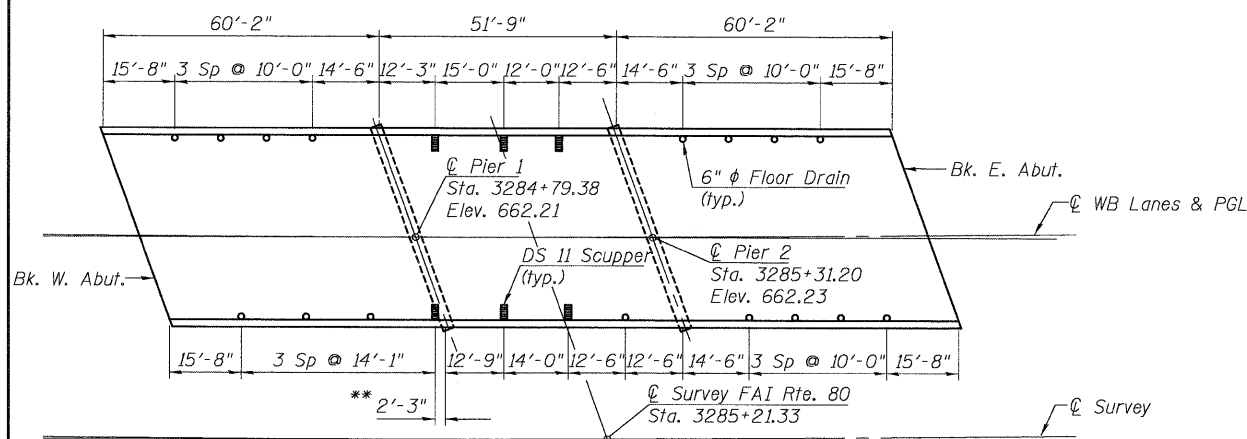
PROJECT NO. 05061
SCALE
DATE 6/25/09
DESIGN BY RM/MCB
DRAWN BY TFG
CHECKED BY MCB

SHEET NO. 1
45 SHEETS

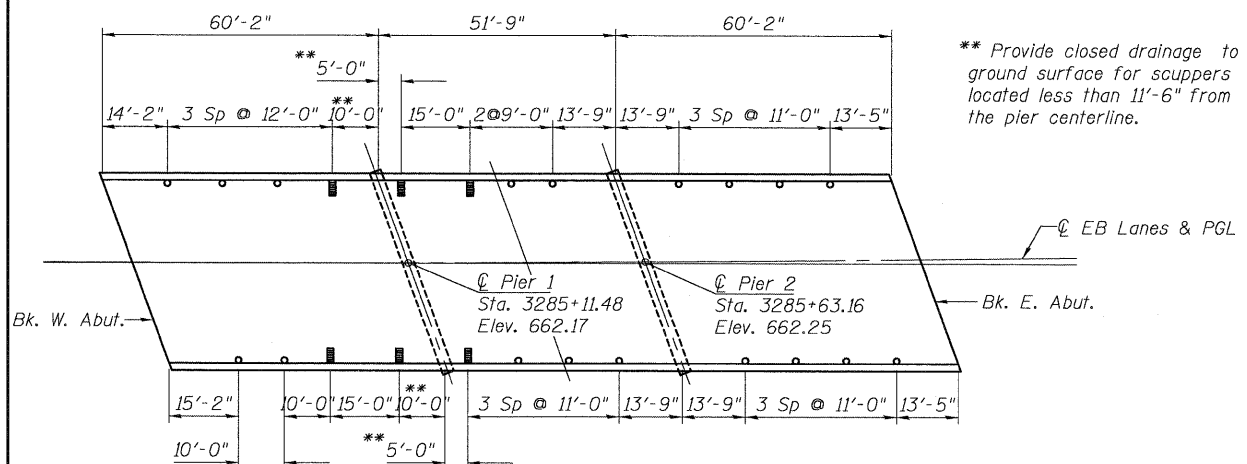
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|---|-----------|---------------|------------------|---------------|
| F.A.I. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 154 |
| CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | |

*06-I7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & IJ

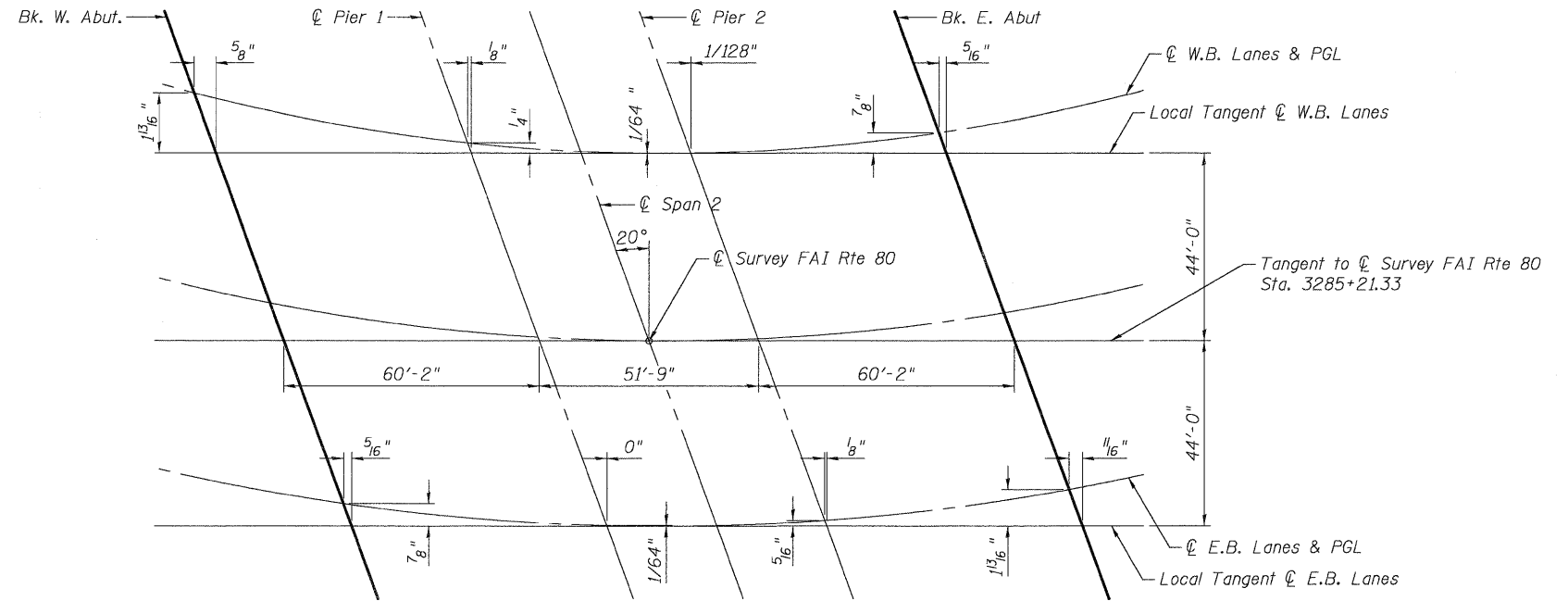
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FILE NAME = \\0060172\0173\66908-001-ops.dgn
PLOTTER = HP DesignJet 5000 Series
USER NAME = EFC



WB SCUPPER & DRAIN SPACING



EB SCUPPER & DRAIN SPACING



OFFSET SKETCH
(Not to Scale)

GENERAL NOTES

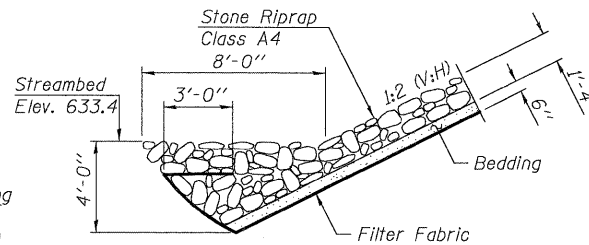
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
 Reinforcement bars designated (E) shall be epoxy coated.
 Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
 The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.
 The existing structural steel coating contains lead. The contractor shall take appropriate precautions to deal with the presence of lead on this project.

TOTAL BILL OF MATERIAL-TWO STRUCTURES

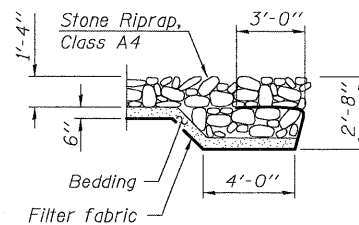
| ITEM | UNIT | SUPER | SUB | TOTAL |
|---|---------|--------|-------|--------|
| Removal of Existing Structures | Each | | | 2 |
| Structure Excavation | Cu. Yd. | | 500 | 500 |
| Porous Granular Embankment Special | Cu. Yd. | | 292 | 292 |
| Concrete Structures | Cu. Yd. | | 513.0 | 513.0 |
| Concrete Superstructure | Cu. Yd. | 846.0 | | 846.0 |
| Protective Coat | Sq. Yd. | 1829 | | 1829 |
| Bridge Deck Grooving | Sq. Yd. | 1463 | | 1463 |
| Reinforcement Bars, Epoxy Coated | Pound | 173030 | 42920 | 215950 |
| Bar Splicers | Each | 160 | | 160 |
| Furnishing Steel Piles HP 12x53 | Foot | | 4486 | 4486 |
| Driving Piles | Foot | | 4486 | 4486 |
| Test Pile Steel, HP 12x53 | Each | | 8 | 8 |
| Concrete Encasement | Cu. Yd. | | 24.8 | 24.8 |
| Name Plates | Each | 2 | | 2 |
| Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36" | Foot | 2358 | | 2358 |
| Pipe Underdrains For Structures 4" | Foot | | | 333 |
| Geocomposite Wall Drain | Sq. Yd. | | | 189 |
| Drainage Scuppers, DS-11 | Each | 12 | | 12 |
| Floor Drains | Each | 34 | | 34 |
| Stone Riprap, Class A4 | Sq. Yd. | | | 3222 |
| Filter Fabric | Sq. Yd. | | | 3222 |
| Underwater Structure Excavation Protection-Location 1 | Each | | 1 | 1 |
| Underwater Structure Excavation Protection-Location 2 | Each | | 1 | 1 |
| Underwater Structure Excavation Protection-Location 3 | Each | | 1 | 1 |
| Underwater Structure Excavation Protection-Location 4 | Each | | 1 | 1 |
| Drainage System | L. Sum | 1 | | 1 |
| Hot-Mix Asphalt Surface Removal (Asbestos) | Sq. Yd. | 1238 | | 1238 |

INDEX OF SHEETS

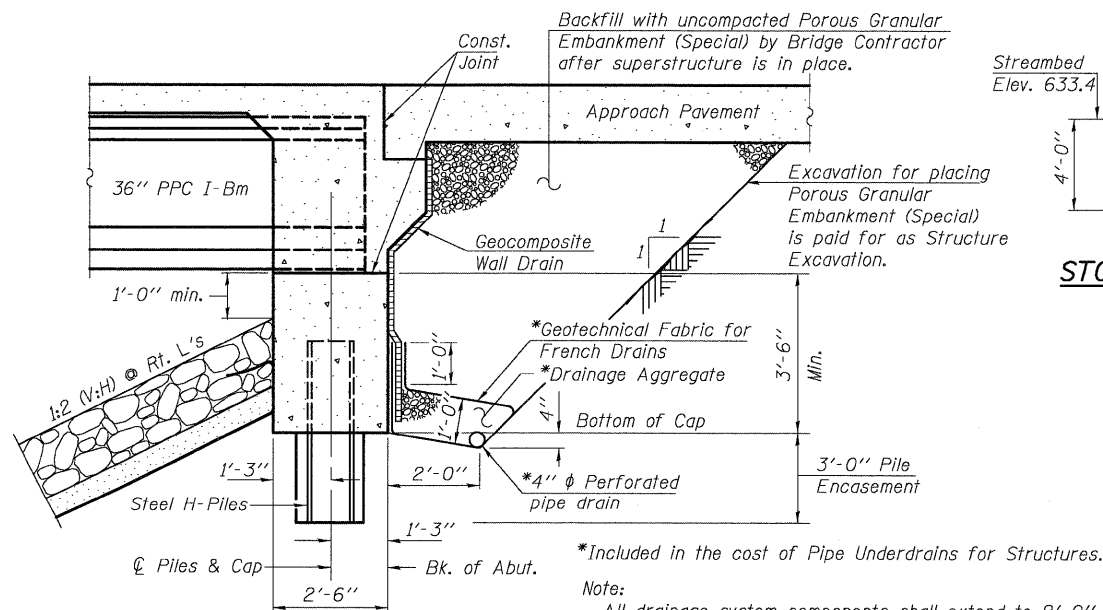
- 1 General Plan and Elevation
- 2 General Notes and Total Bill of Material
- 3 Footing Layout
- 4-7 Top of Slab Elevations WB Structure
- 8-9 Top of Slab Elevations WB Approach Pavement
- 10-13 Top of Slab Elevations EB Structure
- 14-15 Top of Slab Elevations EB Approach Pavement
- 16 Superstructure WB
- 17 Superstructure EB
- 18 Superstructure Details
- 19-20 Diaphragm Details
- 21 Concrete Parapet Slipforming Option
- 22-23 Bridge Approach Slab Details
- 24 Drainage Scuppers, DS-11
- 25 Drainage System
- 26 Framing Plan
- 27-29 PPC Beam Details
- 30 West Abutment WB
- 31 East Abutment WB
- 32 West Abutment EB
- 33 East Abutment EB
- 34 Pier 1 WB
- 35 Pier 2 WB
- 36 Pier 1 EB
- 37 Pier 2 EB
- 38 Steel Pile Details
- 39 Bar Splicer (Coupler) Details
- 40-45 Boring Logs



STONE RIPRAP ANCHOR DETAIL



SECTION A-A



SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rf. L's)

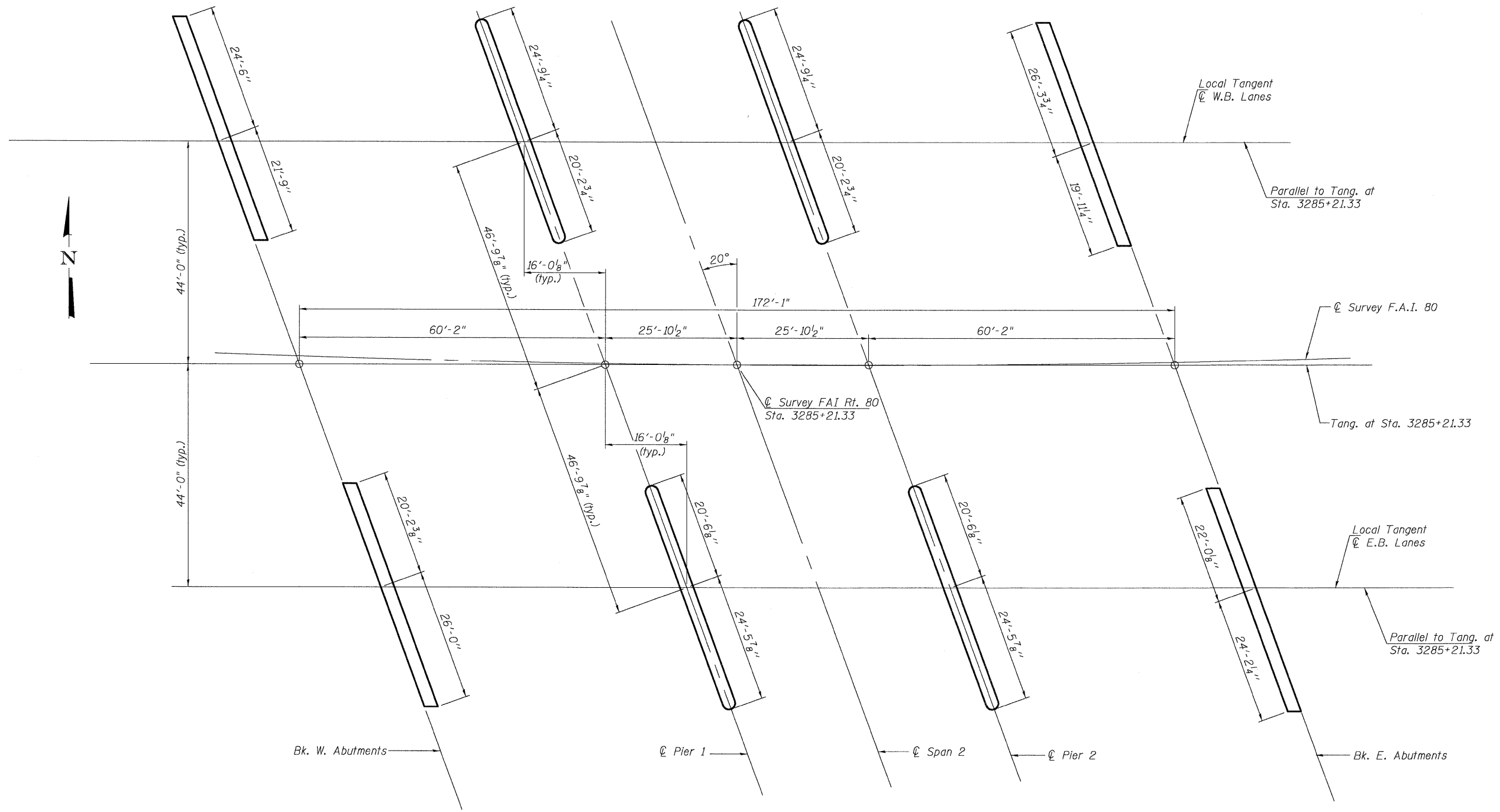
Note:
 All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

GENERAL NOTES & TOTAL BILL OF MATERIAL
SN 006-0172 (EB) & SN 006-0173 (WB)

| | | | | |
|--|--|--------------------------|---|---|
| Coombe-Bloxdorf P.C. - CIVIL ENGINEERS - - STRUCTURAL ENGINEERS - - LAND SURVEYORS - Design Firm License No. 184-002703 | PROJECT NO. 05061 SCALE DATE 6/25/09 DESIGN BY RM/MCB DRAWN BY TFG CHECKED BY MCB | SHEET NO. 2 45 SHEETS | F.A.I. RTE. 80 SECTION * COUNTY BUREAU TOTAL SHEETS 344 SHEET NO. 155 CONTRACT NO. 66908 | FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT *06-L7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & J1 |
|--|--|--------------------------|---|---|

PLOT DATE = 09/08/2009
 FILE NAME = \\0600172.0173-66908-002-gm-notes.dgn
 USER NAME = GFC

PLOT DATE = 09/08/2009
 FILE NAME = \\060172.0175-66908-003-Footing-Layout.dgn
 USER NAME = BCL



FOOTING LAYOUT

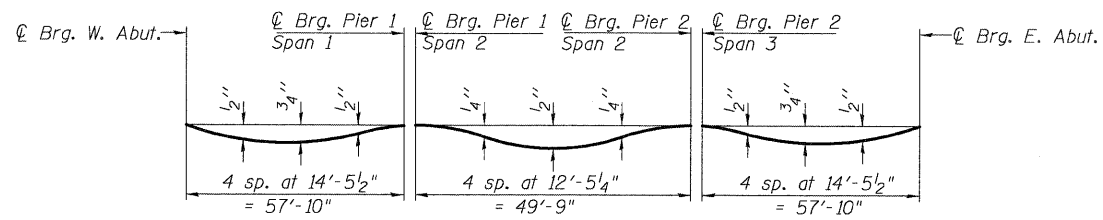
**FOOTING LAYOUT
 SN 006-0172 (EB) & SN 006-0173 (WB)**

CB Coombe-Bloxdorf P.C.
 - CIVIL ENGINEERS -
 - STRUCTURAL ENGINEERS -
 - LAND SURVEYORS -
 Design Firm License No. 184-002703

| | |
|-------------|---------|
| PROJECT NO. | 05061 |
| SCALE | |
| DATE | 6/25/09 |
| DESIGN BY | RM/MCB |
| DRAWN BY | TFG |
| CHECKED BY | MCB |

| | | | | | |
|---|-------------|---------|--------|--------------|-----------|
| SHEET NO. 03 45 SHEETS | F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 344 | 156 |
| CONTRACT NO. 66908 | | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | | |

*06-L7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & IJ

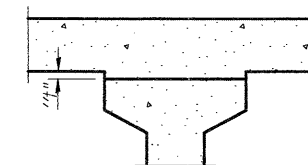


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

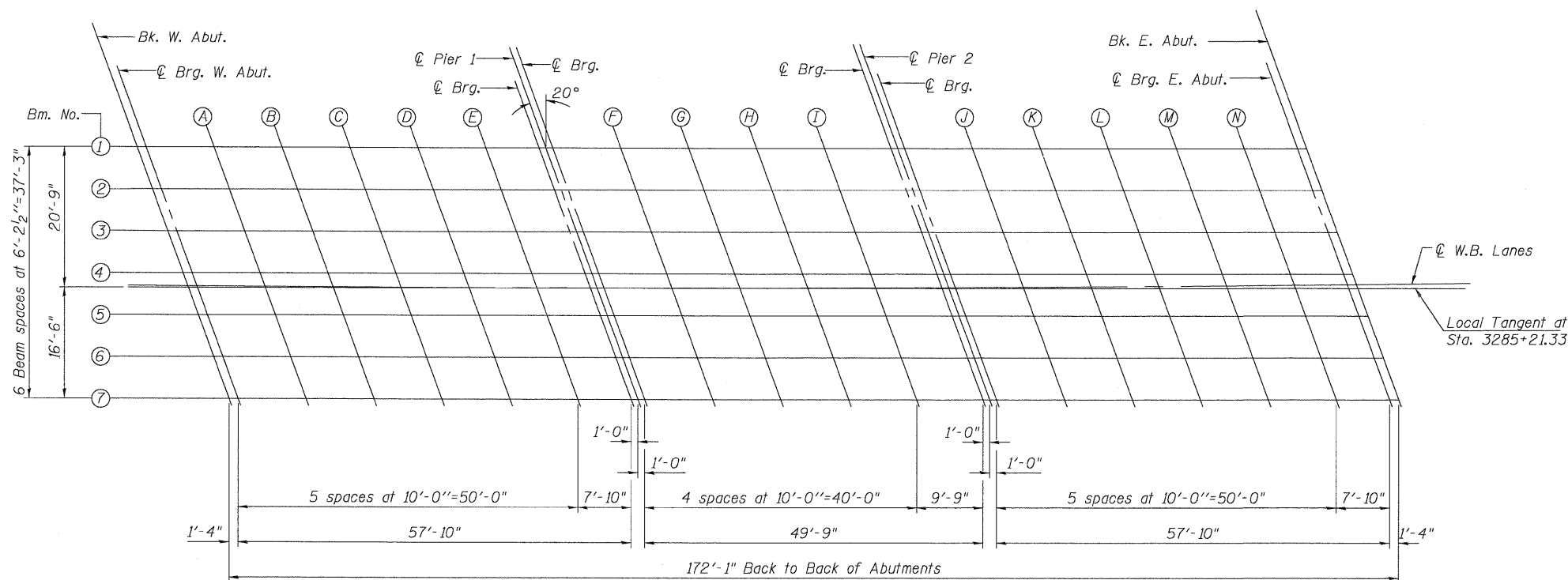
Note:

The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on following sheets.



To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown on Sheets 5 thru 7 of 45, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

FILLET HEIGHTS



PLAN

**TOP OF SLAB ELEVATIONS
WB STRUCTURE
SN 006-0173 (WB)**

PLOT DATE = 09/06/2009
FILE NAME = ..\060173\0173-66908-004-top-std-wb.dgn
USER NAME = DFC

CB Coombe-Bloxdorf P.C.
- CIVIL ENGINEERS -
- STRUCTURAL ENGINEERS -
- LAND SURVEYORS -
Design Firm License No. 184-002703

| | |
|-------------|---------|
| PROJECT NO. | 05061 |
| SCALE | |
| DATE | 6/25/09 |
| DESIGN BY | RM/MCB |
| DRAWN BY | TFG |
| CHECKED BY | MCB |

| |
|-------------|
| SHEET NO. 4 |
| 45 SHEETS |

| | | | | |
|---|---------|--------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 80 | * | BUREAU | 344 | 157 |
| CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | |

*06-17BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & 11

BEAM 1

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------------|------------|--------|------------------------------|--|
| Bk. W. Abut. | 3284+11.52 | -20.57 | 662.06 | 662.06 |
| CL Brg. W. Abut. | 3284+12.84 | -20.58 | 662.05 | 662.05 |
| A | 3284+22.87 | -20.61 | 662.00 | 662.03 |
| B | 3284+32.89 | -20.64 | 661.96 | 662.01 |
| C | 3284+42.90 | -20.66 | 661.92 | 661.98 |
| D | 3284+52.92 | -20.68 | 661.89 | 661.94 |
| E | 3284+62.94 | -20.70 | 661.86 | 661.89 |
| CL Brg. Pier 1 Span 1 | 3284+70.78 | -20.71 | 661.85 | 661.85 |
| CL Pier 1 | 3284+71.80 | -20.71 | 661.85 | 661.85 |
| CL Brg. Pier 1 Span 2 | 3284+72.79 | -20.71 | 661.84 | 661.84 |
| F | 3284+82.81 | -20.73 | 661.83 | 661.85 |
| G | 3284+92.84 | -20.74 | 661.82 | 661.86 |
| H | 3285+02.94 | -20.75 | 661.82 | 661.86 |
| I | 3285+12.96 | -20.75 | 661.83 | 661.85 |
| CL Brg. Pier 2 Span 2 | 3285+22.64 | -20.75 | 661.84 | 661.84 |
| CL Pier 2 | 3285+23.65 | -20.75 | 661.84 | 661.84 |
| CL Brg. Pier 2 Span 3 | 3285+24.64 | -20.75 | 661.84 | 661.84 |
| J | 3285+34.66 | -20.75 | 661.86 | 661.90 |
| K | 3285+44.67 | -20.75 | 661.89 | 661.94 |
| L | 3285+54.71 | -20.74 | 661.92 | 661.98 |
| M | 3285+64.72 | -20.73 | 661.96 | 662.01 |
| N | 3285+74.74 | -20.71 | 662.00 | 662.03 |
| CL Brg. E. Abut. | 3285+82.59 | -20.70 | 662.04 | 662.04 |
| Bk. E. Abut. | 3285+83.93 | -20.70 | 662.04 | 662.04 |

BEAM 2

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------------|------------|--------|------------------------------|--|
| Bk. W. Abut. | 3284+13.80 | -14.37 | 662.17 | 662.17 |
| CL Brg. W. Abut. | 3284+15.12 | -14.38 | 662.17 | 662.17 |
| A | 3284+25.14 | -14.40 | 662.12 | 662.15 |
| B | 3284+35.17 | -14.43 | 662.08 | 662.13 |
| C | 3284+45.19 | -14.45 | 662.04 | 662.10 |
| D | 3284+55.20 | -14.48 | 662.01 | 662.06 |
| E | 3284+65.22 | -14.49 | 661.99 | 662.01 |
| CL Brg. Pier 1 Span 1 | 3284+73.07 | -14.50 | 661.97 | 661.97 |
| CL Pier 1 | 3284+74.06 | -14.51 | 661.97 | 661.97 |
| CL Brg. Pier 1 Span 2 | 3284+75.07 | -14.51 | 661.97 | 661.97 |
| F | 3284+85.09 | -14.52 | 661.96 | 661.98 |
| G | 3284+95.11 | -14.53 | 661.95 | 661.99 |
| H | 3285+05.21 | -14.54 | 661.95 | 661.99 |
| I | 3285+15.23 | -14.54 | 661.96 | 661.98 |
| CL Brg. Pier 2 Span 2 | 3285+24.90 | -14.54 | 661.97 | 661.97 |
| CL Pier 2 | 3285+25.91 | -14.54 | 661.97 | 661.97 |
| CL Brg. Pier 2 Span 3 | 3285+26.91 | -14.54 | 661.98 | 661.98 |
| J | 3285+36.93 | -14.54 | 662.00 | 662.03 |
| K | 3285+46.94 | -14.54 | 662.02 | 662.08 |
| L | 3285+56.96 | -14.52 | 662.06 | 662.12 |
| M | 3285+66.98 | -14.51 | 662.09 | 662.15 |
| N | 3285+76.99 | -14.50 | 662.14 | 662.16 |
| CL Brg. E. Abut. | 3285+84.84 | -14.48 | 662.18 | 662.18 |
| Bk. E. Abut. | 3285+86.18 | -14.48 | 662.18 | 662.18 |

BEAM 3

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------------|------------|--------|------------------------------|--|
| Bk. W. Abut. | 3284+16.08 | -8.17 | 662.27 | 662.27 |
| CL Brg. W. Abut. | 3284+17.41 | -8.18 | 662.26 | 662.26 |
| A | 3284+27.42 | -8.20 | 662.22 | 662.25 |
| B | 3284+37.44 | -8.23 | 662.18 | 662.23 |
| C | 3284+47.46 | -8.25 | 662.14 | 662.21 |
| D | 3284+57.47 | -8.27 | 662.11 | 662.17 |
| E | 3284+67.49 | -8.29 | 662.09 | 662.12 |
| CL Brg. Pier 1 Span 1 | 3284+75.34 | -8.30 | 662.08 | 662.08 |
| CL Pier 1 | 3284+76.33 | -8.30 | 662.08 | 662.08 |
| CL Brg. Pier 1 Span 2 | 3284+77.34 | -8.30 | 662.08 | 662.08 |
| F | 3284+87.36 | -8.32 | 662.07 | 662.09 |
| G | 3284+97.38 | -8.32 | 662.06 | 662.10 |
| H | 3285+07.48 | -8.33 | 662.06 | 662.10 |
| I | 3285+17.50 | -8.34 | 662.07 | 662.09 |
| CL Brg. Pier 2 Span 2 | 3285+27.17 | -8.34 | 662.09 | 662.09 |
| CL Pier 2 | 3285+28.17 | -8.34 | 662.09 | 662.09 |
| CL Brg. Pier 2 Span 3 | 3285+29.18 | -8.34 | 662.09 | 662.09 |
| J | 3285+39.18 | -8.33 | 662.11 | 662.15 |
| K | 3285+49.19 | -8.32 | 662.14 | 662.20 |
| L | 3285+59.21 | -8.32 | 662.17 | 662.24 |
| M | 3285+69.23 | -8.30 | 662.21 | 662.27 |
| N | 3285+79.24 | -8.29 | 662.26 | 662.29 |
| CL Brg. E. Abut. | 3285+87.09 | -8.27 | 662.30 | 662.30 |
| Bk. E. Abut. | 3285+88.43 | -8.27 | 662.31 | 662.31 |

**TOP OF SLAB ELEVATIONS
WB STRUCTURE
SN 006-0173 (WB)**

PLOT DATE = 09/08/2009
FILE NAME = J:\060173\0173-66908-005-top-slab-elev-wb.dgn
USER NAME = CTC

CB Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

PROJECT NO. 05061
SCALE
DATE 6/25/09
DESIGN BY RM/MCB
DRAWN BY TFG
CHECKED BY MCB

SHEET NO. 5
45 SHEETS

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---------|--------|--------------|-----------|
| 80 | * | BUREAU | 344 | 158 |
| CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | |

*06-I7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & IJ

BEAM 4

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------------|------------|--------|------------------------------|--|
| Bk. W. Abut. | 3284+18.37 | -1.97 | 662.36 | 662.36 |
| CL Brg. W. Abut. | 3284+19.69 | -1.97 | 662.35 | 662.35 |
| A | 3284+29.71 | -2.00 | 662.31 | 662.34 |
| B | 3284+39.72 | -2.03 | 662.27 | 662.32 |
| C | 3284+49.74 | -2.05 | 662.23 | 662.30 |
| D | 3284+59.74 | -2.07 | 662.21 | 662.26 |
| E | 3284+69.76 | -2.09 | 662.19 | 662.21 |
| CL Brg. Pier 1 Span 1 | 3284+77.60 | -2.10 | 662.17 | 662.17 |
| CL Pier 1 | 3284+78.61 | -2.10 | 662.17 | 662.17 |
| CL Brg. Pier 1 Span 2 | 3284+79.61 | -2.10 | 662.17 | 662.17 |
| F | 3284+89.63 | -2.11 | 662.16 | 662.18 |
| G | 3284+99.64 | -2.12 | 662.16 | 662.20 |
| H | 3285+09.73 | -2.13 | 662.16 | 662.20 |
| I | 3285+19.75 | -2.13 | 662.17 | 662.19 |
| CL Brg. Pier 2 Span 2 | 3285+29.42 | -2.13 | 662.19 | 662.19 |
| CL Pier 2 | 3285+30.43 | -2.13 | 662.19 | 662.19 |
| CL Brg. Pier 2 Span 3 | 3285+31.43 | -2.13 | 662.19 | 662.19 |
| J | 3285+41.44 | -2.12 | 662.21 | 662.25 |
| K | 3285+51.46 | -2.12 | 662.24 | 662.30 |
| L | 3285+61.48 | -2.11 | 662.28 | 662.34 |
| M | 3285+71.48 | -2.09 | 662.32 | 662.37 |
| N | 3285+81.49 | -2.07 | 662.37 | 662.39 |
| CL Brg. E. Abut. | 3285+89.34 | -2.06 | 662.41 | 662.41 |
| Bk. E. Abut. | 3285+90.68 | -2.06 | 662.42 | 662.42 |

W.B. LANES & P.G.L.

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------------|------------|--------|------------------------------|--|
| Bk. W. Abut. | 3284+19.09 | 0.00 | 662.38 | 662.38 |
| CL Brg. W. Abut. | 3284+20.42 | 0.00 | 662.38 | 662.38 |
| A | 3284+30.34 | 0.00 | 662.33 | 662.37 |
| B | 3284+40.28 | 0.00 | 662.30 | 662.35 |
| C | 3284+50.21 | 0.00 | 662.26 | 662.33 |
| D | 3284+60.15 | 0.00 | 662.24 | 662.29 |
| E | 3284+70.08 | 0.00 | 662.22 | 662.24 |
| CL Brg. Pier 1 Span 1 | 3284+78.37 | 0.00 | 662.21 | 662.21 |
| CL Pier 1 | 3284+79.38 | 0.00 | 662.20 | 662.20 |
| CL Brg. Pier 1 Span 2 | 3284+80.38 | 0.00 | 662.20 | 662.20 |
| F | 3284+90.30 | 0.00 | 662.19 | 662.22 |
| G | 3285+00.23 | 0.00 | 662.19 | 662.23 |
| H | 3285+10.25 | 0.00 | 662.20 | 662.23 |
| I | 3285+20.19 | 0.00 | 662.21 | 662.23 |
| CL Brg. Pier 2 Span 2 | 3285+30.20 | 0.00 | 662.22 | 662.22 |
| CL Pier 2 | 3285+31.20 | 0.00 | 662.22 | 662.22 |
| CL Brg. Pier 2 Span 3 | 3285+32.21 | -0.01 | 662.23 | 662.23 |
| J | 3285+42.05 | 0.00 | 662.25 | 662.28 |
| K | 3285+51.89 | 0.00 | 662.28 | 662.33 |
| L | 3285+61.72 | 0.00 | 662.31 | 662.38 |
| M | 3285+71.56 | 0.00 | 662.35 | 662.41 |
| N | 3285+81.40 | 0.00 | 662.40 | 662.43 |
| CL Brg. E. Abut. | 3285+90.09 | 0.00 | 662.45 | 662.45 |
| Bk. E. Abut. | 3285+91.41 | 0.00 | 662.45 | 662.45 |

LOCAL TANGENT

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------------|------------|--------|------------------------------|--|
| Bk. W. Abut. | 3284+19.14 | 0.15 | 662.38 | 662.38 |
| CL Brg. W. Abut. | 3284+20.47 | 0.15 | 662.38 | 662.38 |
| A | 3284+30.49 | 0.12 | 662.33 | 662.36 |
| B | 3284+40.51 | 0.09 | 662.29 | 662.35 |
| C | 3284+50.51 | 0.08 | 662.26 | 662.32 |
| D | 3284+60.52 | 0.05 | 662.24 | 662.29 |
| E | 3284+70.54 | 0.04 | 662.22 | 662.24 |
| CL Brg. Pier 1 Span 1 | 3284+78.39 | 0.03 | 662.20 | 662.20 |
| CL Pier 1 | 3284+79.38 | 0.03 | 662.20 | 662.20 |
| CL Brg. Pier 1 Span 2 | 3284+80.39 | 0.02 | 662.20 | 662.20 |
| F | 3284+90.39 | 0.02 | 662.19 | 662.22 |
| G | 3285+00.41 | 0.01 | 662.19 | 662.23 |
| H | 3285+10.51 | 0.00 | 662.20 | 662.23 |
| I | 3285+20.53 | 0.00 | 662.21 | 662.23 |
| CL Brg. Pier 2 Span 2 | 3285+30.20 | 0.00 | 662.22 | 662.22 |
| CL Pier 2 | 3285+31.20 | 0.00 | 662.22 | 662.22 |
| CL Brg. Pier 2 Span 3 | 3285+32.21 | 0.00 | 662.23 | 662.23 |
| J | 3285+42.21 | 0.00 | 662.25 | 662.28 |
| K | 3285+52.23 | 0.01 | 662.28 | 662.34 |
| L | 3285+62.24 | 0.02 | 662.31 | 662.38 |
| M | 3285+72.26 | 0.04 | 662.36 | 662.41 |
| N | 3285+82.26 | 0.05 | 662.40 | 662.43 |
| CL Brg. E. Abut. | 3285+90.11 | 0.07 | 662.44 | 662.44 |
| Bk. E. Abut. | 3285+91.45 | 0.07 | 662.45 | 662.45 |

**TOP OF SLAB ELEVATIONS
WB STRUCTURE
SN 006-0173 (WB)**

PLOT DATE = 09/08/2009
FILE NAME = \\06060173-0173-66908-006-top-slab-elev-wb.dgn
USER = MCB
USER NAME = MCB

CB Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

| | |
|-------------------|-------------|
| PROJECT NO. 05061 | SHEET NO. 6 |
| SCALE | 45 SHEETS |
| DATE 6/25/09 | |
| DESIGN BY RM/MCB | |
| DRAWN BY TFG | |
| CHECKED BY MCB | |

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------------|---------|----------|--------------|------------------|
| 80 | * | BUREAU | 344 | 159 |
| CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 | | ILLINOIS | | FED. AID PROJECT |

*06-[7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & IJ

BEAM 5

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------------|------------|--------|------------------------------|--|
| Bk. W. Abut. | 3284+20.64 | 4.23 | 662.31 | 662.31 |
| CL Brg. W. Abut. | 3284+21.97 | 4.23 | 662.30 | 662.30 |
| A | 3284+31.99 | 4.20 | 662.26 | 662.29 |
| B | 3284+41.99 | 4.18 | 662.22 | 662.28 |
| C | 3284+52.01 | 4.15 | 662.19 | 662.26 |
| D | 3284+62.02 | 4.13 | 662.17 | 662.22 |
| E | 3284+72.02 | 4.12 | 662.15 | 662.18 |
| CL Brg. Pier 1 Span 1 | 3284+79.87 | 4.11 | 662.14 | 662.14 |
| CL Pier 1 | 3284+80.88 | 4.11 | 662.14 | 662.14 |
| CL Brg. Pier 1 Span 2 | 3284+81.88 | 4.11 | 662.14 | 662.14 |
| F | 3284+91.89 | 4.09 | 662.13 | 662.15 |
| G | 3285+01.91 | 4.09 | 662.13 | 662.16 |
| H | 3285+12.00 | 4.08 | 662.13 | 662.17 |
| I | 3285+21.92 | 4.08 | 662.15 | 662.17 |
| CL Brg. Pier 2 Span 2 | 3285+31.69 | 4.08 | 662.16 | 662.16 |
| CL Pier 2 | 3285+32.68 | 4.08 | 662.16 | 662.16 |
| CL Brg. Pier 2 Span 3 | 3285+33.70 | 4.08 | 662.17 | 662.17 |
| J | 3285+43.70 | 4.09 | 662.19 | 662.22 |
| K | 3285+53.71 | 4.09 | 662.22 | 662.28 |
| L | 3285+63.73 | 4.11 | 662.26 | 662.32 |
| M | 3285+73.75 | 4.12 | 662.30 | 662.35 |
| N | 3285+83.75 | 4.14 | 662.35 | 662.37 |
| CL Brg. E. Abut. | 3285+91.59 | 4.15 | 662.39 | 662.39 |
| Bk. E. Abut. | 3285+92.91 | 4.15 | 662.40 | 662.40 |

BEAM 6

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------------|------------|--------|------------------------------|--|
| Bk. W. Abut. | 3284+22.92 | 10.43 | 662.20 | 662.20 |
| CL Brg. W. Abut. | 3284+24.26 | 10.43 | 662.20 | 662.20 |
| A | 3284+34.26 | 10.40 | 662.16 | 662.19 |
| B | 3284+44.27 | 10.38 | 662.12 | 662.18 |
| C | 3284+54.27 | 10.36 | 662.09 | 662.15 |
| D | 3284+64.29 | 10.34 | 662.07 | 662.12 |
| E | 3284+74.31 | 10.33 | 662.05 | 662.08 |
| CL Brg. Pier 1 Span 1 | 3284+82.15 | 10.32 | 662.04 | 662.04 |
| CL Pier 1 | 3284+83.15 | 10.31 | 662.04 | 662.04 |
| CL Brg. Pier 1 Span 2 | 3284+84.15 | 10.31 | 662.04 | 662.04 |
| F | 3284+94.16 | 10.31 | 662.03 | 662.05 |
| G | 3285+04.16 | 10.30 | 662.03 | 662.07 |
| H | 3285+14.27 | 10.29 | 662.04 | 662.07 |
| I | 3285+24.18 | 10.29 | 662.05 | 662.07 |
| CL Brg. Pier 2 Span 2 | 3285+33.96 | 10.30 | 662.07 | 662.07 |
| CL Pier 2 | 3285+34.95 | 10.30 | 662.07 | 662.07 |
| CL Brg. Pier 2 Span 3 | 3285+35.95 | 10.30 | 662.07 | 662.07 |
| J | 3285+45.96 | 10.30 | 662.10 | 662.13 |
| K | 3285+55.96 | 10.31 | 662.13 | 662.19 |
| L | 3285+65.98 | 10.32 | 662.17 | 662.23 |
| M | 3285+76.00 | 10.33 | 662.21 | 662.26 |
| N | 3285+86.00 | 10.35 | 662.26 | 662.29 |
| CL Brg. E. Abut. | 3285+93.84 | 10.37 | 662.30 | 662.30 |
| Bk. E. Abut. | 3285+95.17 | 10.37 | 662.31 | 662.31 |

BEAM 7

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------------|------------|--------|------------------------------|--|
| Bk. W. Abut. | 3284+25.20 | 16.64 | 662.07 | 662.07 |
| CL Brg. W. Abut. | 3284+26.53 | 16.63 | 662.07 | 662.07 |
| A | 3284+36.54 | 16.61 | 662.03 | 662.06 |
| B | 3284+46.54 | 16.58 | 661.99 | 662.05 |
| C | 3284+56.56 | 16.56 | 661.96 | 662.03 |
| D | 3284+66.56 | 16.54 | 661.94 | 661.99 |
| E | 3284+76.58 | 16.53 | 661.93 | 661.95 |
| CL Brg. Pier 1 Span 1 | 3284+84.42 | 16.52 | 661.92 | 661.92 |
| CL Pier 1 | 3284+85.42 | 16.52 | 661.92 | 661.92 |
| CL Brg. Pier 1 Span 2 | 3284+86.41 | 16.52 | 661.92 | 661.92 |
| F | 3284+96.43 | 16.51 | 661.91 | 661.93 |
| G | 3285+06.43 | 16.50 | 661.91 | 661.95 |
| H | 3285+16.53 | 16.50 | 661.92 | 661.96 |
| I | 3285+26.45 | 16.50 | 661.93 | 661.96 |
| CL Brg. Pier 2 Span 2 | 3285+36.21 | 16.50 | 661.95 | 661.95 |
| CL Pier 2 | 3285+37.20 | 16.50 | 661.96 | 661.96 |
| CL Brg. Pier 2 Span 3 | 3285+38.21 | 16.50 | 661.96 | 661.96 |
| J | 3285+48.21 | 16.51 | 661.99 | 662.02 |
| K | 3285+58.23 | 16.52 | 662.02 | 662.07 |
| L | 3285+68.23 | 16.53 | 662.06 | 662.12 |
| M | 3285+78.25 | 16.54 | 662.10 | 662.15 |
| N | 3285+88.25 | 16.56 | 662.15 | 662.18 |
| CL Brg. E. Abut. | 3285+96.10 | 16.58 | 662.20 | 662.20 |
| Bk. E. Abut. | 3285+97.42 | 16.58 | 662.20 | 662.20 |

**TOP OF SLAB ELEVATIONS
WB STRUCTURE
SN 006-0173 (WB)**

PLOT DATE = 09/06/2009
FILE NAME = ...0060173_0173_66908-007-top-slab-elev-wb.dgn
USER NAME = CFC

CB Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

PROJECT NO. 05061
SCALE
DATE 6/25/09
DESIGN BY RM/MCB
DRAWN BY TFG
CHECKED BY MCB

SHEET NO. 7
45 SHEETS

| | | | | |
|-----------------------|---------|--------|---------------------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 80 | * | BUREAU | 344 | 160 |
| FED. ROAD DIST. NO. 7 | | | ILLINOIS FED. AID PROJECT | |
| | | | CONTRACT NO. 66908 | |

*06-[7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & I]

NORTH EDGE OF SHOULDER

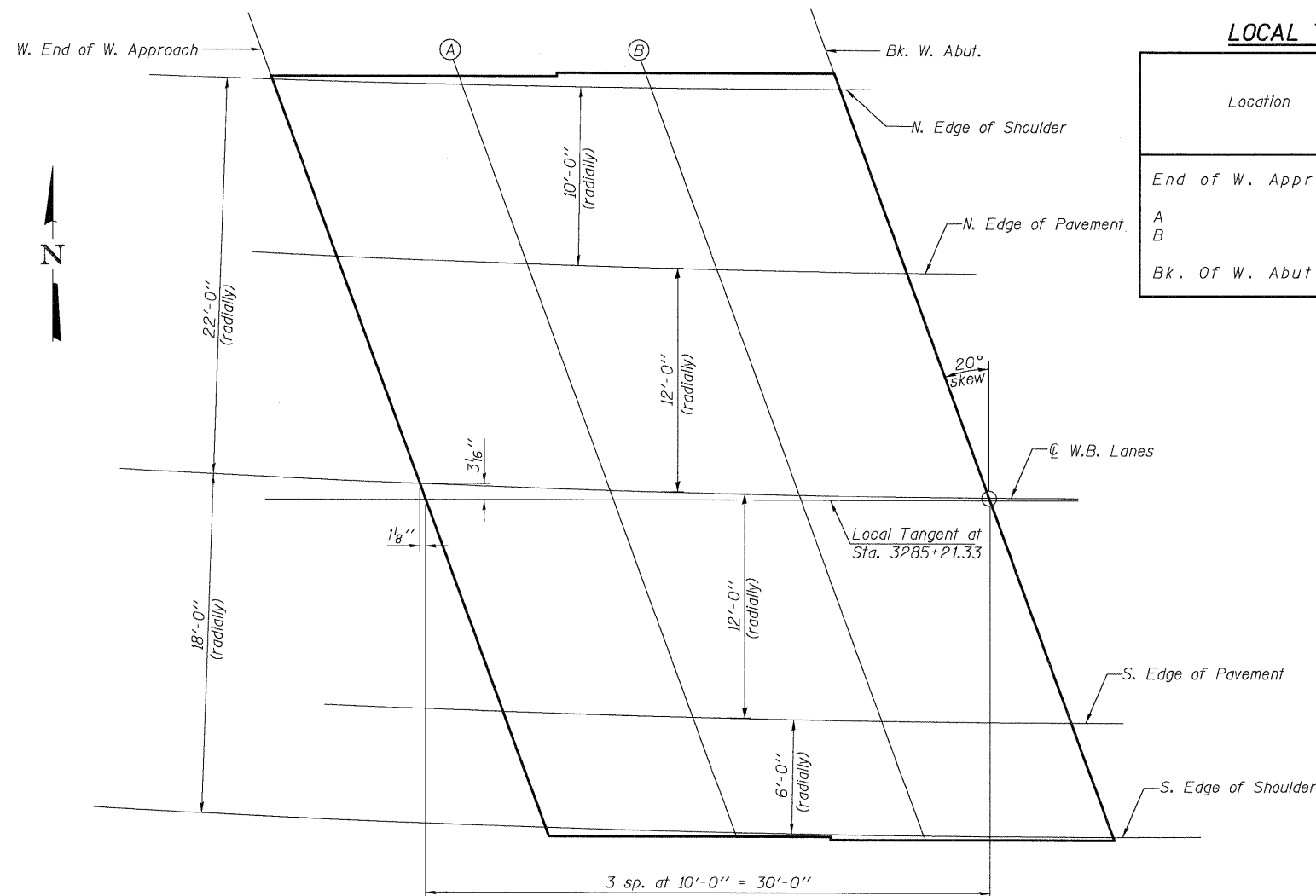
| Location | Station | Offset | Theoretical Grade Elevations |
|--------------------|------------|--------|------------------------------|
| End of W. Approach | 3283+80.88 | -22 | 662.22 |
| A | 3283+90.82 | -22 | 662.15 |
| B | 3284+00.75 | -22 | 662.09 |
| Bk. Of W. Abut. | 3284+10.98 | -22 | 662.03 |

NORTH EDGE OF PAVEMENT

| Location | Station | Offset | Theoretical Grade Elevations |
|--------------------|------------|--------|------------------------------|
| End of W. Approach | 3283+84.57 | -12.00 | 662.40 |
| A | 3283+94.51 | -12.00 | 662.33 |
| B | 3284+04.44 | -12.00 | 662.27 |
| Bk. Of W. Abut. | 3284+14.65 | -12.00 | 662.22 |

CL WB LANES

| Location | Station | Offset | Theoretical Grade Elevations |
|--------------------|------------|--------|------------------------------|
| End of W. Approach | 3283+89.02 | 0.00 | 662.56 |
| A | 3283+98.94 | 0.00 | 662.49 |
| B | 3284+08.88 | 0.00 | 662.44 |
| Bk. Of W. Abut. | 3284+19.09 | 0.00 | 662.38 |



PLAN

LOCAL TANGENT AT STA. 3285+21.33

| Location | Station | Offset | Theoretical Grade Elevations |
|--------------------|------------|--------|------------------------------|
| End of W. Approach | 3283+89.12 | 0.25 | 662.56 |
| A | 3283+99.12 | 0.22 | 662.49 |
| B | 3284+09.14 | 0.18 | 662.44 |
| Bk. Of W. Abut. | 3284+19.14 | 0.15 | 662.38 |

SOUTH EDGE OF PAVEMENT

| Location | Station | Offset | Theoretical Grade Elevations |
|--------------------|------------|--------|------------------------------|
| End of W. Approach | 3283+93.43 | 12.00 | 662.34 |
| A | 3284+03.36 | 12.00 | 662.28 |
| B | 3284+13.30 | 12.00 | 662.23 |
| Bk. Of W. Abut. | 3284+23.49 | 12.00 | 662.18 |

SOUTH EDGE OF SHOULDER

| Location | Station | Offset | Theoretical Grade Elevations |
|--------------------|------------|--------|------------------------------|
| End of W. Approach | 3283+95.65 | 18.00 | 662.20 |
| A | 3284+05.55 | 18.00 | 662.14 |
| B | 3284+15.47 | 18.00 | 662.09 |
| Bk. Of W. Abut. | 3284+25.70 | 18.00 | 662.04 |

**TOP OF SLAB ELEVATIONS
WB WEST APPROACH PAVEMENT
SN 006-0173 (WB)**

| | | | | |
|--|--|--------------------------|--|-----------------------------------|
| Coombe-Bloxdorf P.C. - CIVIL ENGINEERS - - STRUCTURAL ENGINEERS - - LAND SURVEYORS - Design Firm License No. 184-002703 | PROJECT NO. 05061 SCALE DATE 6/25/09 DESIGN BY RM/MCB DRAWN BY TFG CHECKED BY MCB | SHEET NO. 8 45 SHEETS | F.A.I. RTE. 80 SECTION * COUNTY BUREAU CONTRACT NO. 66908 | TOTAL SHEETS 344 SHEET NO. 161 |
| | FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | |

*06-I7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & IJ

PLOT DATE = 09/08/2009
 FILE NAME = ...060173_0173-66908-008-108e-wb-w-approach.dgn
 USER NAME = CFC

E-AS 10-1-08

NORTH EDGE OF SHOULDER

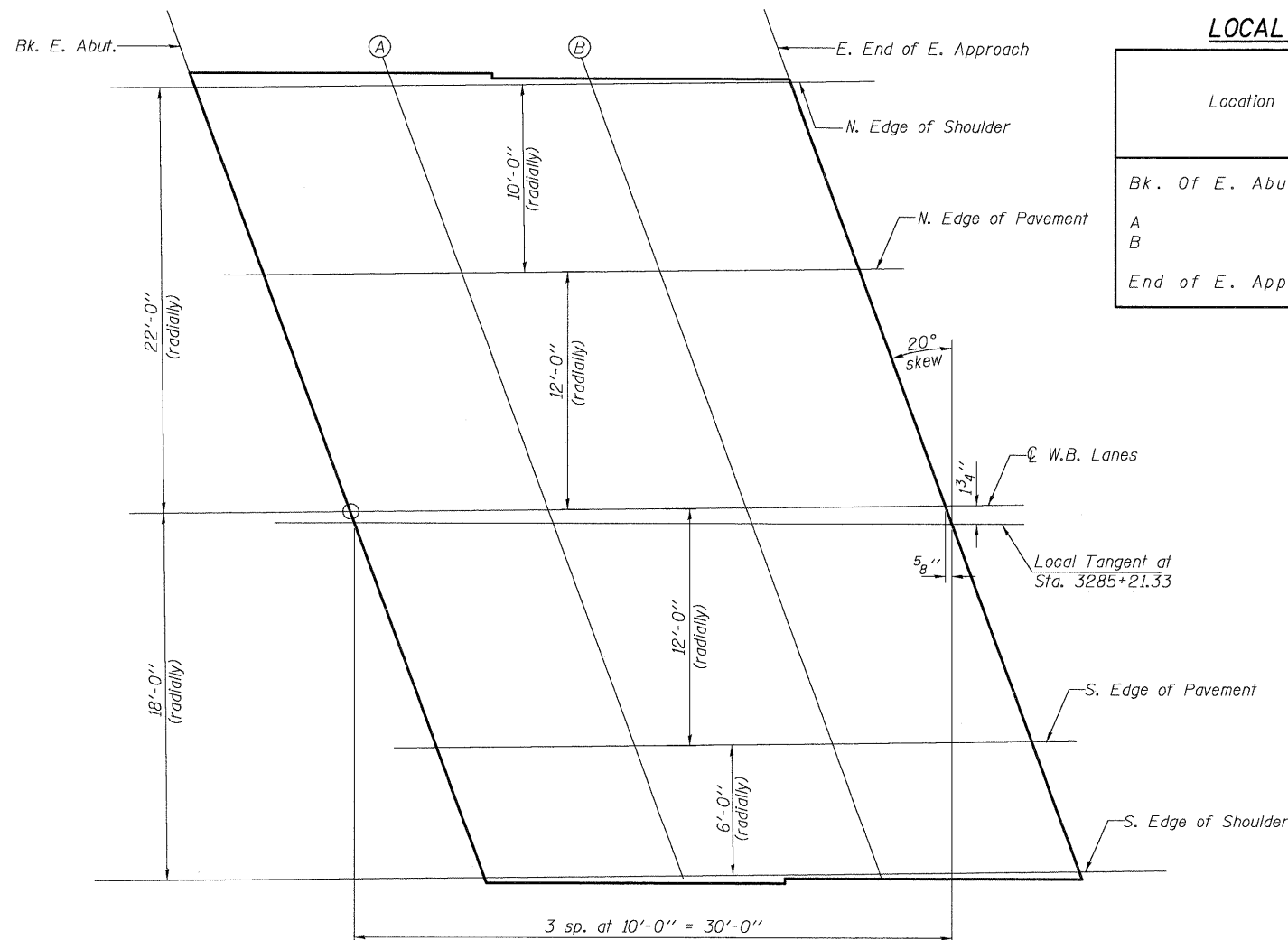
| Location | Station | Offset | Theoretical Grade Elevations |
|-----------------|------------|--------|------------------------------|
| Bk. Of E. Abut. | 3285+83.45 | -22.00 | 662.01 |
| A | 3285+93.27 | -22.00 | 662.07 |
| B | 3286+03.11 | -22.00 | 662.13 |
| End of E. Appr. | 3286+13.49 | -22.00 | 662.20 |

NORTH EDGE OF PAVEMENT

| Location | Station | Offset | Theoretical Grade Elevations |
|-----------------|------------|--------|------------------------------|
| Bk. Of E. Abut. | 3285+87.07 | -12.00 | 662.24 |
| A | 3285+96.91 | -12.00 | 662.30 |
| B | 3286+06.75 | -12.00 | 662.36 |
| End of E. Appr. | 3286+17.09 | -12.00 | 662.43 |

℄ W.B. LANES

| Location | Station | Offset | Theoretical Grade Elevations |
|-----------------|------------|--------|------------------------------|
| Bk. Of E. Abut. | 3285+91.41 | 0.00 | 662.45 |
| A | 3286+01.25 | 0.00 | 662.51 |
| B | 3286+11.09 | 0.00 | 662.58 |
| End of E. Appr. | 3286+21.43 | 0.00 | 662.65 |



LOCAL TANGENT AT STA. 3285+21.33

| Location | Station | Offset | Theoretical Grade Elevations |
|-----------------|------------|--------|------------------------------|
| Bk. Of E. Abut. | 3285+91.45 | 0.07 | 662.45 |
| A | 3286+01.46 | 0.09 | 662.51 |
| B | 3286+11.48 | 0.12 | 662.58 |
| End of E. Appr. | 3286+21.48 | 0.15 | 662.65 |

SOUTH EDGE OF PAVEMENT

| Location | Station | Offset | Theoretical Grade Elevations |
|-----------------|------------|--------|------------------------------|
| Bk. Of E. Abut. | 3285+95.77 | 12.00 | 662.29 |
| A | 3286+05.61 | 12.00 | 662.35 |
| B | 3286+15.44 | 12.00 | 662.42 |
| End of E. Appr. | 3286+25.77 | 12.00 | 662.49 |

SOUTH EDGE OF SHOULDER

| Location | Station | Offset | Theoretical Grade Elevations |
|-----------------|------------|--------|------------------------------|
| Bk. Of E. Abut. | 328597.938 | 18 | 662.18 |
| A | 328607.759 | 18 | 662.24 |
| B | 328617.58 | 18 | 662.31 |
| End of E. Appr. | 328627.922 | 18 | 662.39 |

PLAN

**TOP OF SLAB ELEVATIONS
WB EAST APPROACH PAVEMENT
SN 006-0173 (WB)**

CB Coombe-Bloxdorf P.C.
 - CIVIL ENGINEERS -
 - STRUCTURAL ENGINEERS -
 - LAND SURVEYORS -
 Design Firm License No. 184-002703

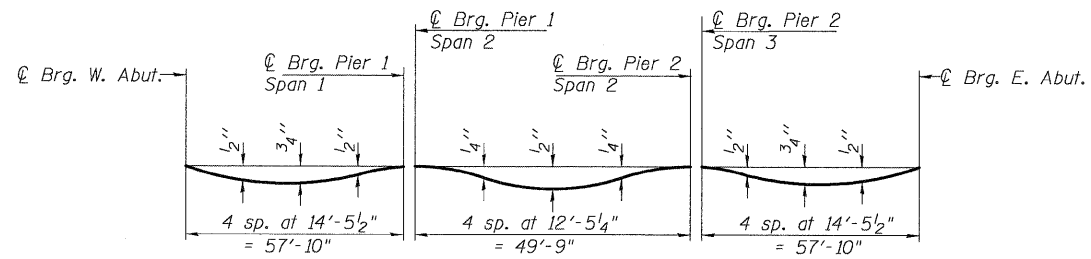
PROJECT NO. 05061
 SCALE
 DATE 6/25/09
 DESIGN BY RM/MCB
 DRAWN BY TFG
 CHECKED BY MCB

SHEET NO. 9
 45 SHEETS

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---------|--------|--------------|-----------|
| 80 | * | BUREAU | 344 | 162 |
| CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | |

*06-L7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & IJ

PLOT DATE = 09/08/2009
 FILE NAME = ..\30060173-0173-66908-009-106e-wb-e-approach.dgn
 USER NAME = CFC

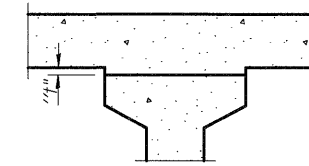


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

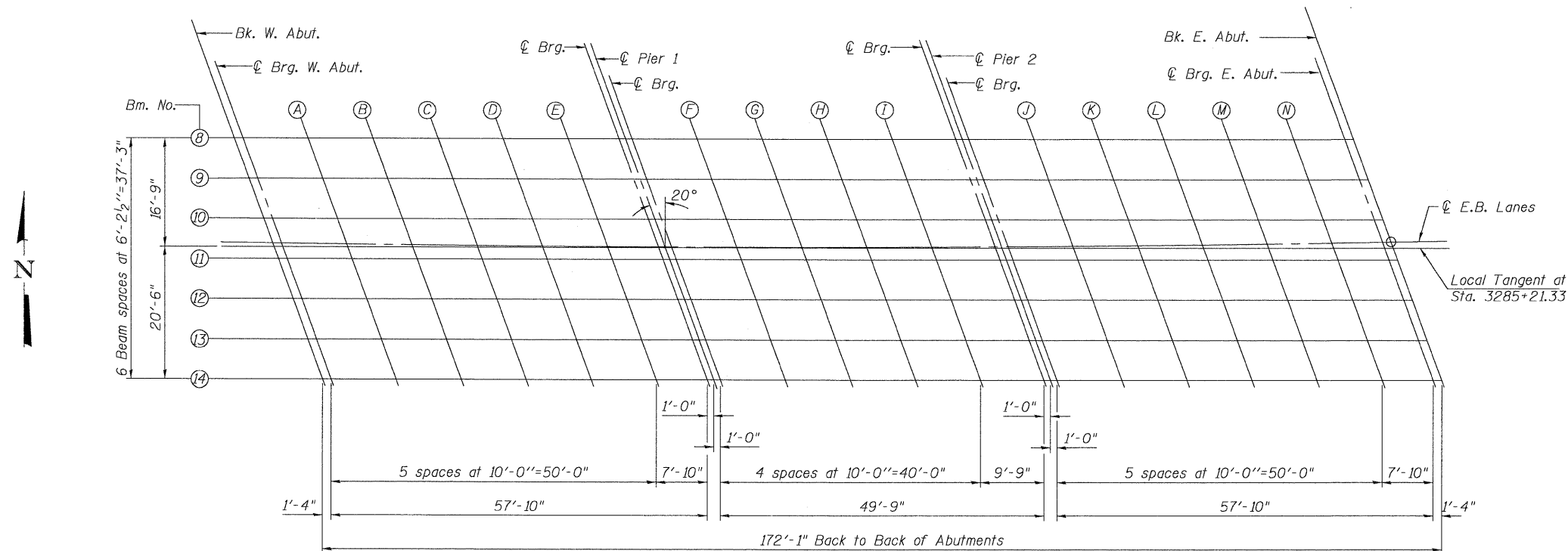
Note:

The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on following sheets.



To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown on Sheets 11 thru 13 of 45, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

FILLET HEIGHTS



PLAN

**TOP OF SLAB ELEVATIONS
EB STRUCTURE
SN 006-0172 (EB)**

PLOT DATE = 09/08/2009
FILE NAME = ...0060172.0173-66908-010-top-slab-elev-eb.dgn
USER NAME = DFC

CB Coombe-Bloxdorf P.C.
- CIVIL ENGINEERS -
- STRUCTURAL ENGINEERS -
- LAND SURVEYORS -
Design Firm License No. 184-002703

| | |
|-------------|---------|
| PROJECT NO. | 05061 |
| SCALE | |
| DATE | 6/25/09 |
| DESIGN BY | RM/MCB |
| DRAWN BY | TFG |
| CHECKED BY | MCB |

| |
|--------------|
| SHEET NO. 10 |
| 45 SHEETS |

| | | | | |
|---|---------|--------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 80 | * | BUREAU | 344 | 163 |
| CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | |

*06-[7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & 1]

BEAM 8

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------------|------------|--------|------------------------------|--|
| Bk. Of W. Abut. | 3284+45.27 | -16.67 | 662.01 | 662.01 |
| CL Brg. W. Abut | 3284+46.59 | -16.67 | 662.00 | 662.00 |
| A | 3284+56.59 | -16.69 | 661.97 | 662.00 |
| B | 3284+66.58 | -16.71 | 661.94 | 661.99 |
| C | 3284+76.58 | -16.72 | 661.91 | 661.98 |
| D | 3284+86.56 | -16.73 | 661.90 | 661.95 |
| E | 3284+96.56 | -16.74 | 661.88 | 661.91 |
| CL Brg. Pier 1 Span 1 | 3285+04.39 | -16.75 | 661.88 | 661.88 |
| CL Pier 1 | 3285+05.39 | -16.75 | 661.88 | 661.88 |
| CL Brg. Pier 1 Span2 | 3285+06.38 | -16.75 | 661.88 | 661.88 |
| F | 3285+16.38 | -16.75 | 661.88 | 661.91 |
| G | 3285+26.28 | -16.75 | 661.89 | 661.93 |
| H | 3285+36.35 | -16.75 | 661.90 | 661.94 |
| I | 3285+46.36 | -16.74 | 661.92 | 661.94 |
| CL Brg. Pier 2 Span 2 | 3285+56.09 | -16.74 | 661.94 | 661.94 |
| CL Pier 2 | 3285+57.09 | -16.74 | 661.95 | 661.95 |
| CL Brg. Pier 2 Span3 | 3285+58.08 | -16.74 | 661.95 | 661.95 |
| J | 3285+68.08 | -16.72 | 661.98 | 662.01 |
| K | 3285+78.07 | -16.71 | 662.02 | 662.07 |
| L | 3285+88.07 | -16.69 | 662.06 | 662.13 |
| M | 3285+98.07 | -16.67 | 662.11 | 662.16 |
| N | 3286+08.05 | -16.65 | 662.17 | 662.20 |
| CL Brg. E. Abut. | 3286+15.88 | -16.62 | 662.22 | 662.22 |
| Bk. Of E. Abut. | 3286+17.20 | -16.62 | 662.23 | 662.23 |

BEAM 9

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------------|------------|--------|------------------------------|--|
| Bk. Of W. Abut. | 3284+47.54 | 10.46 | 662.12 | 662.12 |
| CL Brg. W. Abut | 3284+48.88 | 10.46 | 662.11 | 662.11 |
| A | 3284+58.86 | 10.48 | 662.08 | 662.11 |
| B | 3284+68.84 | 10.50 | 662.05 | 662.11 |
| C | 3284+78.84 | 10.52 | 662.03 | 662.09 |
| D | 3284+88.83 | 10.53 | 662.01 | 662.07 |
| E | 3284+98.81 | 10.54 | 662.00 | 662.03 |
| CL Brg. Pier 1 Span 1 | 3285+06.64 | 10.54 | 662.00 | 662.00 |
| CL Pier 1 | 3285+07.65 | 10.54 | 662.00 | 662.00 |
| CL Brg. Pier 1 Span2 | 3285+08.65 | 10.54 | 662.00 | 662.00 |
| F | 3285+18.63 | 10.54 | 662.00 | 662.03 |
| G | 3285+28.53 | 10.54 | 662.01 | 662.05 |
| H | 3285+38.61 | 10.54 | 662.02 | 662.06 |
| I | 3285+48.61 | 10.54 | 662.04 | 662.07 |
| CL Brg. Pier 2 Span 2 | 3285+58.35 | 10.53 | 662.07 | 662.07 |
| CL Pier 2 | 3285+59.34 | 10.53 | 662.07 | 662.07 |
| CL Brg. Pier 2 Span3 | 3285+60.34 | 10.52 | 662.08 | 662.08 |
| J | 3285+70.34 | 10.51 | 662.11 | 662.14 |
| K | 3285+80.32 | 10.50 | 662.15 | 662.21 |
| L | 3285+90.30 | 10.48 | 662.19 | 662.26 |
| M | 3286+00.30 | 10.46 | 662.25 | 662.30 |
| N | 3286+10.29 | 10.43 | 662.30 | 662.33 |
| CL Brg. E. Abut. | 3286+18.12 | 10.41 | 662.35 | 662.35 |
| Bk. Of E. Abut. | 3286+19.46 | 10.41 | 662.36 | 662.36 |

BEAM 10

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------------|------------|--------|------------------------------|--|
| Bk. Of W. Abut. | 3284+49.81 | -4.26 | 662.21 | 662.21 |
| CL Brg. W. Abut | 3284+51.14 | -4.26 | 662.20 | 662.20 |
| A | 3284+61.13 | -4.28 | 662.17 | 662.20 |
| B | 3284+71.11 | -4.30 | 662.14 | 662.20 |
| C | 3284+81.09 | -4.31 | 662.12 | 662.19 |
| D | 3284+91.09 | -4.32 | 662.11 | 662.16 |
| E | 3285+01.08 | -4.33 | 662.10 | 662.13 |
| CL Brg. Pier 1 Span 1 | 3285+08.91 | -4.33 | 662.10 | 662.10 |
| CL Pier 1 | 3285+09.90 | -4.33 | 662.10 | 662.10 |
| CL Brg. Pier 1 Span2 | 3285+10.90 | -4.33 | 662.10 | 662.10 |
| F | 3285+20.90 | -4.33 | 662.10 | 662.13 |
| G | 3285+30.79 | -4.33 | 662.11 | 662.15 |
| H | 3285+40.87 | -4.33 | 662.13 | 662.16 |
| I | 3285+50.86 | -4.33 | 662.15 | 662.17 |
| CL Brg. Pier 2 Span 2 | 3285+60.60 | -4.31 | 662.17 | 662.17 |
| CL Pier 2 | 3285+61.59 | -4.31 | 662.18 | 662.18 |
| CL Brg. Pier 2 Span3 | 3285+62.59 | -4.31 | 662.18 | 662.18 |
| J | 3285+72.59 | -4.30 | 662.22 | 662.25 |
| K | 3285+82.57 | -4.28 | 662.26 | 662.31 |
| L | 3285+92.56 | -4.26 | 662.30 | 662.37 |
| M | 3286+02.54 | -4.24 | 662.36 | 662.41 |
| N | 3286+12.54 | -4.22 | 662.41 | 662.44 |
| CL Brg. E. Abut. | 3286+20.35 | -4.19 | 662.46 | 662.46 |
| Bk. Of E. Abut. | 3286+21.69 | -4.19 | 662.47 | 662.47 |

**TOP OF SLAB ELEVATIONS
EB STRUCTURE
SN 006-0172 (EB)**

PLOT DATE = 09/06/2009
FILE NAME = ..\06060172-0173-66908-011-top-slab-elev-eb.dgn
USER NAME = CFC

CB Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

| | |
|-------------|---------|
| PROJECT NO. | 05061 |
| SCALE | |
| DATE | 6/25/09 |
| DESIGN BY | RM/MCB |
| DRAWN BY | TFG |
| CHECKED BY | MCB |

| | | | | | |
|---|-------------|---------|--------|--------------|-----------|
| SHEET NO. 11 | F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 45 SHEETS | 80 | * | BUREAU | 344 | 164 |
| CONTRACT NO. 66908 | | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | | |

*06-[7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & 1]

☉ E.B. LANES & P.G.L.

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------------|------------|--------|------------------------------|--|
| Bk. Of W. Abut. | 3284+51.37 | 0.00 | 662.27 | 662.27 |
| CL Brg. W. Abut | 3284+52.69 | 0.00 | 662.26 | 662.26 |
| A | 3284+62.58 | 0.00 | 662.23 | 662.27 |
| B | 3284+72.48 | 0.00 | 662.21 | 662.26 |
| C | 3284+82.38 | 0.00 | 662.19 | 662.25 |
| D | 3284+92.29 | 0.00 | 662.17 | 662.23 |
| E | 3285+02.19 | 0.00 | 662.17 | 662.19 |
| CL Brg. Pier 1 Span 1 | 3285+10.48 | 0.00 | 662.16 | 662.16 |
| CL Pier 1 | 3285+11.49 | 0.00 | 662.17 | 662.17 |
| CL Brg. Pier 1 Span2 | 3285+12.48 | 0.00 | 662.17 | 662.17 |
| F | 3285+22.29 | 0.00 | 662.17 | 662.20 |
| G | 3285+32.09 | 0.00 | 662.18 | 662.22 |
| H | 3285+41.98 | 0.00 | 662.20 | 662.23 |
| I | 3285+51.79 | 0.00 | 662.22 | 662.24 |
| CL Brg. Pier 2 Span 2 | 3285+62.16 | 0.00 | 662.25 | 662.25 |
| CL Pier 2 | 3285+63.16 | 0.00 | 662.25 | 662.25 |
| CL Brg. Pier 2 Span3 | 3285+64.15 | 0.00 | 662.25 | 662.25 |
| J | 3285+73.96 | 0.00 | 662.29 | 662.32 |
| K | 3285+83.76 | 0.00 | 662.33 | 662.38 |
| L | 3285+93.57 | 0.00 | 662.37 | 662.44 |
| M | 3286+03.37 | 0.00 | 662.43 | 662.48 |
| N | 3286+13.18 | 0.00 | 662.48 | 662.51 |
| CL Brg. E. Abut. | 3286+21.87 | 0.00 | 662.54 | 662.54 |
| Bk. Of E. Abut. | 3286+23.19 | 0.00 | 662.55 | 662.55 |

LOCAL TANGENT AT STA. 3285+21.33

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------------|------------|--------|------------------------------|--|
| Bk. Of W. Abut. | 3284+51.39 | 0.07 | 662.27 | 662.27 |
| CL Brg. W. Abut | 3284+52.73 | 0.07 | 662.26 | 662.26 |
| A | 3284+62.71 | 0.05 | 662.23 | 662.26 |
| B | 3284+72.69 | 0.03 | 662.21 | 662.26 |
| C | 3284+82.68 | 0.02 | 662.19 | 662.25 |
| D | 3284+92.68 | 0.01 | 662.17 | 662.23 |
| E | 3285+02.66 | 0.00 | 662.17 | 662.19 |
| CL Brg. Pier 1 Span 1 | 3285+10.49 | 0.00 | 662.17 | 662.17 |
| CL Pier 1 | 3285+11.49 | 0.00 | 662.17 | 662.17 |
| CL Brg. Pier 1 Span2 | 3285+12.48 | 0.00 | 662.17 | 662.17 |
| F | 3285+22.38 | 0.00 | 662.17 | 662.20 |
| G | 3285+32.37 | 0.00 | 662.18 | 662.22 |
| H | 3285+42.44 | 0.00 | 662.20 | 662.23 |
| I | 3285+52.42 | 0.01 | 662.22 | 662.24 |
| CL Brg. Pier 2 Span 2 | 3285+62.16 | 0.02 | 662.25 | 662.25 |
| CL Pier 2 | 3285+63.16 | 0.02 | 662.25 | 662.25 |
| CL Brg. Pier 2 Span3 | 3285+64.15 | 0.02 | 662.25 | 662.25 |
| J | 3285+74.15 | 0.03 | 662.29 | 662.32 |
| K | 3285+84.14 | 0.05 | 662.33 | 662.38 |
| L | 3285+94.12 | 0.07 | 662.38 | 662.44 |
| M | 3286+04.11 | 0.10 | 662.43 | 662.48 |
| N | 3286+14.09 | 0.12 | 662.49 | 662.51 |
| CL Brg. E. Abut. | 3286+21.92 | 0.14 | 662.54 | 662.54 |
| Bk. Of E. Abut. | 3286+23.26 | 0.15 | 662.55 | 662.55 |

BEAM 11

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------------|------------|--------|------------------------------|--|
| Bk. Of W. Abut. | 3284+52.07 | 1.95 | 662.24 | 662.24 |
| CL Brg. W. Abut | 3284+53.41 | 1.94 | 662.23 | 662.23 |
| A | 3284+63.39 | 1.93 | 662.20 | 662.23 |
| B | 3284+73.38 | 1.91 | 662.18 | 662.23 |
| C | 3284+83.36 | 1.89 | 662.16 | 662.22 |
| D | 3284+93.35 | 1.89 | 662.14 | 662.20 |
| E | 3285+03.35 | 1.88 | 662.14 | 662.16 |
| CL Brg. Pier 1 Span 1 | 3285+11.16 | 1.88 | 662.14 | 662.14 |
| CL Pier 1 | 3285+12.17 | 1.88 | 662.14 | 662.14 |
| CL Brg. Pier 1 Span2 | 3285+13.17 | 1.88 | 662.14 | 662.14 |
| F | 3285+23.05 | 1.88 | 662.14 | 662.17 |
| G | 3285+33.05 | 1.88 | 662.15 | 662.19 |
| H | 3285+43.12 | 1.88 | 662.17 | 662.21 |
| I | 3285+53.11 | 1.89 | 662.19 | 662.22 |
| CL Brg. Pier 2 Span 2 | 3285+62.85 | 1.90 | 662.22 | 662.22 |
| CL Pier 2 | 3285+63.84 | 1.90 | 662.22 | 662.22 |
| CL Brg. Pier 2 Span3 | 3285+64.84 | 1.90 | 662.23 | 662.23 |
| J | 3285+74.82 | 1.91 | 662.26 | 662.29 |
| K | 3285+84.81 | 1.93 | 662.30 | 662.36 |
| L | 3285+94.81 | 1.95 | 662.35 | 662.41 |
| M | 3286+04.79 | 1.97 | 662.40 | 662.46 |
| N | 3286+14.77 | 2.00 | 662.46 | 662.49 |
| CL Brg. E. Abut. | 3286+22.60 | 2.02 | 662.51 | 662.51 |
| Bk. Of E. Abut. | 3286+23.93 | 2.02 | 662.52 | 662.52 |

**TOP OF SLAB ELEVATIONS
EB STRUCTURE
SN 006-0172 (EB)**

PLOT DATE = 09/08/2009
FILE NAME = \\0660172.0175-56508-012-top-slab-elev-ab.dgn
DATE = 06/25/09
USER NAME = BCL

CB Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

| | |
|-------------|---------|
| PROJECT NO. | 05061 |
| SCALE | |
| DATE | 6/25/09 |
| DESIGN BY | RM/MCB |
| DRAWN BY | TFG |
| CHECKED BY | MCB |

| |
|--------------|
| SHEET NO. 12 |
| 45 SHEETS |

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---------|--------|--------------|-----------|
| 80 | * | BUREAU | 344 | 165 |
| CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | |

*06-L7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & IJ

BEAM 12

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------------|------------|--------|------------------------------|--|
| Bk. Of W. Abut. | 3284+54.34 | 8.15 | 662.13 | 662.13 |
| CL Brg. W. Abut | 3284+55.68 | 8.14 | 662.13 | 662.13 |
| A | 3284+65.66 | 8.13 | 662.10 | 662.13 |
| B | 3284+75.65 | 8.11 | 662.07 | 662.13 |
| C | 3284+85.63 | 8.10 | 662.06 | 662.12 |
| D | 3284+95.61 | 8.09 | 662.04 | 662.10 |
| E | 3285+05.60 | 8.09 | 662.04 | 662.07 |
| CL Brg. Pier 1 Span 1 | 3285+13.43 | 8.08 | 662.04 | 662.04 |
| CL Pier 1 | 3285+14.42 | 8.08 | 662.04 | 662.04 |
| CL Brg. Pier 1 Span2 | 3285+15.42 | 8.08 | 662.04 | 662.04 |
| F | 3285+25.32 | 8.08 | 662.05 | 662.07 |
| G | 3285+35.30 | 8.09 | 662.06 | 662.10 |
| H | 3285+45.38 | 8.09 | 662.08 | 662.11 |
| I | 3285+55.36 | 8.09 | 662.10 | 662.13 |
| CL Brg. Pier 2 Span 2 | 3285+65.10 | 8.11 | 662.13 | 662.13 |
| CL Pier 2 | 3285+66.09 | 8.11 | 662.13 | 662.13 |
| CL Brg. Pier 2 Span3 | 3285+67.09 | 8.11 | 662.14 | 662.14 |
| J | 3285+77.07 | 8.13 | 662.17 | 662.21 |
| K | 3285+87.06 | 8.14 | 662.22 | 662.27 |
| L | 3285+97.04 | 8.16 | 662.26 | 662.33 |
| M | 3286+07.03 | 8.19 | 662.32 | 662.37 |
| N | 3286+17.01 | 8.21 | 662.38 | 662.41 |
| CL Brg. E. Abut. | 3286+24.84 | 8.23 | 662.43 | 662.43 |
| Bk. Of E. Abut. | 3286+26.16 | 8.24 | 662.44 | 662.44 |


BEAM 13

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------------|------------|--------|------------------------------|--|
| Bk. Of W. Abut. | 3284+56.61 | 14.36 | 662.01 | 662.01 |
| CL Brg. W. Abut | 3284+57.95 | 14.35 | 662.01 | 662.01 |
| A | 3284+67.93 | 14.34 | 661.98 | 662.02 |
| B | 3284+77.91 | 14.32 | 661.96 | 662.02 |
| C | 3284+87.90 | 14.31 | 661.94 | 662.01 |
| D | 3284+97.88 | 14.30 | 661.93 | 661.99 |
| E | 3285+07.87 | 14.30 | 661.93 | 661.96 |
| CL Brg. Pier 1 Span 1 | 3285+15.68 | 14.29 | 661.93 | 661.93 |
| CL Pier 1 | 3285+16.67 | 14.29 | 661.93 | 661.93 |
| CL Brg. Pier 1 Span2 | 3285+17.69 | 14.29 | 661.93 | 661.93 |
| F | 3285+27.57 | 14.29 | 661.94 | 661.97 |
| G | 3285+37.56 | 14.30 | 661.95 | 661.99 |
| H | 3285+47.63 | 14.30 | 661.97 | 662.01 |
| I | 3285+57.61 | 14.31 | 662.00 | 662.02 |
| CL Brg. Pier 2 Span 2 | 3285+67.33 | 14.32 | 662.03 | 662.03 |
| CL Pier 2 | 3285+68.35 | 14.32 | 662.03 | 662.03 |
| CL Brg. Pier 2 Span3 | 3285+69.34 | 14.32 | 662.03 | 662.03 |
| J | 3285+79.32 | 14.34 | 662.07 | 662.11 |
| K | 3285+89.31 | 14.36 | 662.12 | 662.17 |
| L | 3285+99.29 | 14.38 | 662.17 | 662.23 |
| M | 3286+09.26 | 14.40 | 662.22 | 662.27 |
| N | 3286+19.24 | 14.43 | 662.29 | 662.31 |
| CL Brg. E. Abut. | 3286+27.07 | 14.46 | 662.34 | 662.34 |
| Bk. Of E. Abut. | 3286+28.40 | 14.46 | 662.35 | 662.35 |

BEAM 14

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------------|------------|--------|------------------------------|--|
| Bk. Of W. Abut. | 3284+58.88 | 20.56 | 661.88 | 661.88 |
| CL Brg. W. Abut | 3284+60.21 | 20.55 | 661.87 | 661.87 |
| A | 3284+70.20 | 20.54 | 661.85 | 661.88 |
| B | 3284+80.16 | 20.52 | 661.83 | 661.88 |
| C | 3284+90.15 | 20.52 | 661.81 | 661.88 |
| D | 3285+00.13 | 20.51 | 661.80 | 661.86 |
| E | 3285+10.12 | 20.50 | 661.80 | 661.83 |
| CL Brg. Pier 1 Span 1 | 3285+17.93 | 20.50 | 661.80 | 661.80 |
| CL Pier 1 | 3285+18.94 | 20.50 | 661.80 | 661.80 |
| CL Brg. Pier 1 Span2 | 3285+19.94 | 20.50 | 661.80 | 661.80 |
| F | 3285+29.82 | 20.50 | 661.81 | 661.84 |
| G | 3285+39.81 | 20.50 | 661.83 | 661.87 |
| H | 3285+49.88 | 20.51 | 661.85 | 661.89 |
| I | 3285+59.86 | 20.52 | 661.87 | 661.90 |
| CL Brg. Pier 2 Span 2 | 3285+69.59 | 20.53 | 661.91 | 661.91 |
| CL Pier 2 | 3285+70.58 | 20.53 | 661.91 | 661.91 |
| CL Brg. Pier 2 Span3 | 3285+71.58 | 20.53 | 661.91 | 661.91 |
| J | 3285+81.56 | 20.55 | 661.95 | 661.99 |
| K | 3285+91.54 | 20.57 | 662.00 | 662.05 |
| L | 3286+01.53 | 20.59 | 662.05 | 662.11 |
| M | 3286+11.51 | 20.61 | 662.11 | 662.16 |
| N | 3286+21.50 | 20.64 | 662.17 | 662.20 |
| CL Brg. E. Abut. | 3286+29.31 | 20.67 | 662.22 | 662.22 |
| Bk. Of E. Abut. | 3286+30.63 | 20.67 | 662.23 | 662.23 |

**TOP OF SLAB ELEVATIONS
EB STRUCTURE
SN 006-0172 (EB)**

| | | | | |
|--|--|---------------------------|--|-----------------------------------|
|  Coombe-Bloxdorf P.C. -CIVIL ENGINEERS- -STRUCTURAL ENGINEERS- -LAND SURVEYORS- Design Firm License No. 184-002703 | PROJECT NO. 05061 SCALE DATE 6/25/09 DESIGN BY RM/MCB DRAWN BY TFG CHECKED BY MCB | SHEET NO. 13 45 SHEETS | F.A.I. RTE. 80 SECTION * COUNTY BUREAU CONTRACT NO. 66908 | TOTAL SHEETS 344 SHEET NO. 166 |
| | FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | |
| | *06-17BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & 11 | | | |

PLOT DATE = 09/08/2009
 FILE NAME = ...0060172.0173-66908-013-top-slab-elev-eb.dgn
 USER NAME = CFC

NORTH EDGE OF SHOULDER

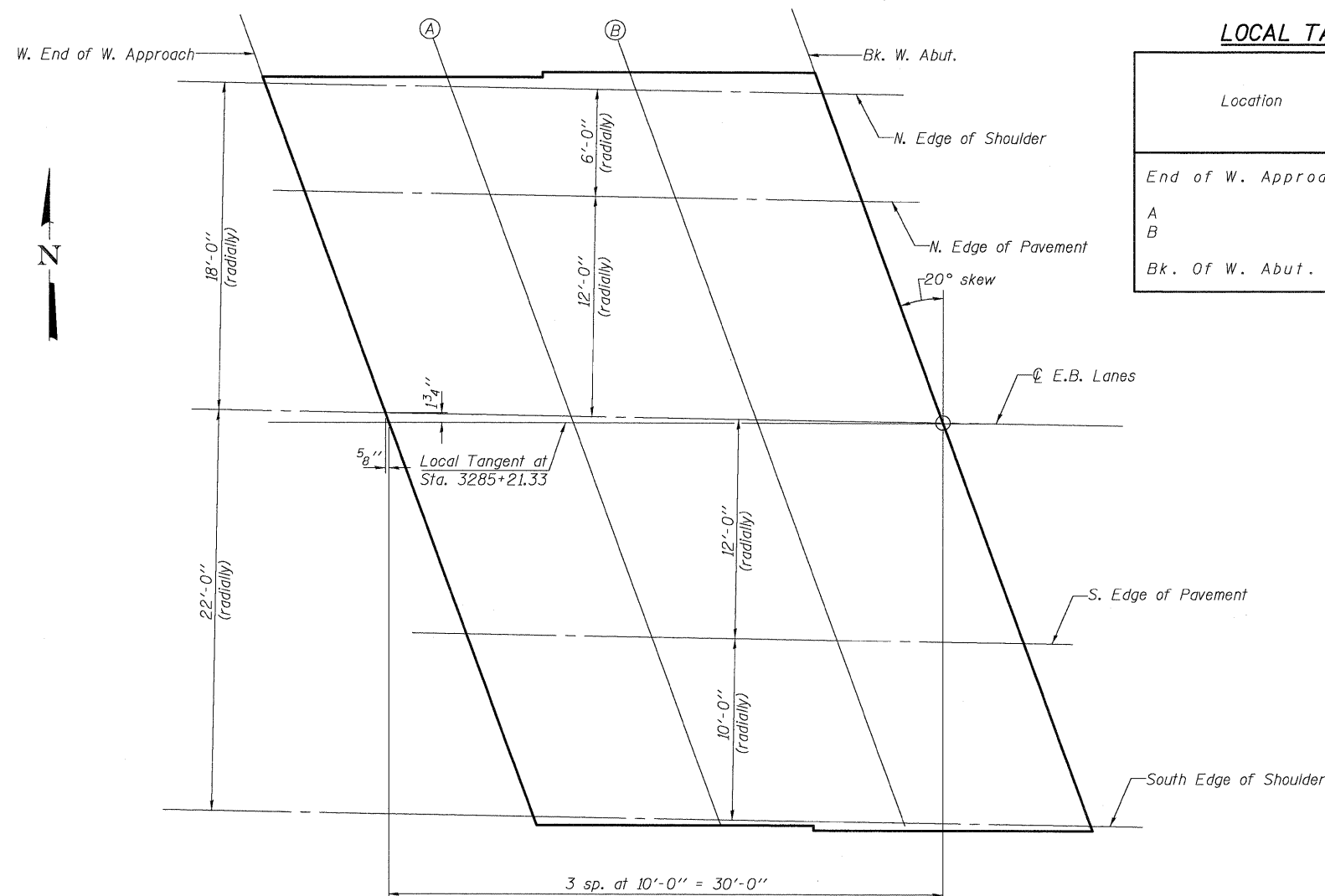
| Location | Station | Offset | Theoretical Grade Elevations |
|--------------------|------------|--------|------------------------------|
| End of W. Approach | 3284+14.83 | -18.00 | 662.12 |
| A | 3284+24.73 | -18.00 | 662.07 |
| B | 3284+34.65 | -18.00 | 662.02 |
| Bk. Of W. Abut. | 3284+44.78 | -18.00 | 661.98 |

NORTH EDGE OF PAVEMENT

| Location | Station | Offset | Theoretical Grade Elevations |
|--------------------|------------|--------|------------------------------|
| End of W. Approach | 3284+17.06 | -12.00 | 662.24 |
| A | 3284+26.95 | -12.00 | 662.18 |
| B | 3284+36.85 | -12.00 | 662.14 |
| Bk. Of W. Abut. | 3284+46.98 | -12.00 | 662.10 |

☉ EB LANES

| Location | Station | Offset | Theoretical Grade Elevations |
|--------------------|------------|--------|------------------------------|
| End of W. Approach | 3284+21.52 | 0.00 | 662.40 |
| A | 3284+31.42 | 0.00 | 662.35 |
| B | 3284+41.32 | 0.00 | 662.31 |
| Bk. Of W. Abut. | 3284+51.37 | 0.00 | 662.27 |



LOCAL TANGENT AT STA. 3285+21.33

| Location | Station | Offset | Theoretical Grade Elevations |
|--------------------|------------|--------|------------------------------|
| End of W. Approach | 3284+21.58 | 0.14 | 662.40 |
| A | 3284+31.57 | 0.12 | 662.35 |
| B | 3284+41.55 | 0.09 | 662.30 |
| Bk. Of W. Abut. | 3284+51.39 | 0.07 | 662.27 |

SOUTH EDGE OF PAVEMENT

| Location | Station | Offset | Theoretical Grade Elevations |
|--------------------|------------|--------|------------------------------|
| End of W. Approach | 3284+25.99 | 12.00 | 662.19 |
| A | 3284+35.87 | 12.00 | 662.14 |
| B | 3284+45.78 | 12.00 | 662.10 |
| Bk. Of W. Abut. | 3284+55.76 | 12.00 | 662.07 |

SOUTH EDGE OF SHOULDER

| Location | Station | Offset | Theoretical Grade Elevations |
|--------------------|------------|--------|------------------------------|
| End of W. Approach | 3284+29.71 | 22 | 661.96 |
| A | 3284+39.59 | 22 | 661.92 |
| B | 3284+49.50 | 22 | 661.88 |
| Bk. Of W. Abut. | 3284+59.41 | 22 | 661.85 |

PLAN

**TOP OF SLAB ELEVATIONS
EB WEST APPROACH PAVEMENT
SN 006-0172 (EB)**

PLOT DATE = 09/08/2009
FILE NAME = s:\060172\0173\66908-014-1-case-eb-w-approach.dgn
PLOT SCALE = 1/8" = 1'-0"
USER NAME = BCL

E-AS 10-1-08

CB Coombe-Bloxdorf P.C.
- CIVIL ENGINEERS -
- STRUCTURAL ENGINEERS -
- LAND SURVEYORS -
Design Firm License No. 184-002703

PROJECT NO. 05061
SCALE
DATE 6/25/09
DESIGN BY RM/MCB
DRAWN BY TFG
CHECKED BY MCB

SHEET NO. 14
45 SHEETS

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---------|--------|--------------|-----------|
| 80 | * | BUREAU | 344 | 167 |
| CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | |

*06-L7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & IJ

NORTH EDGE OF SHOULDER

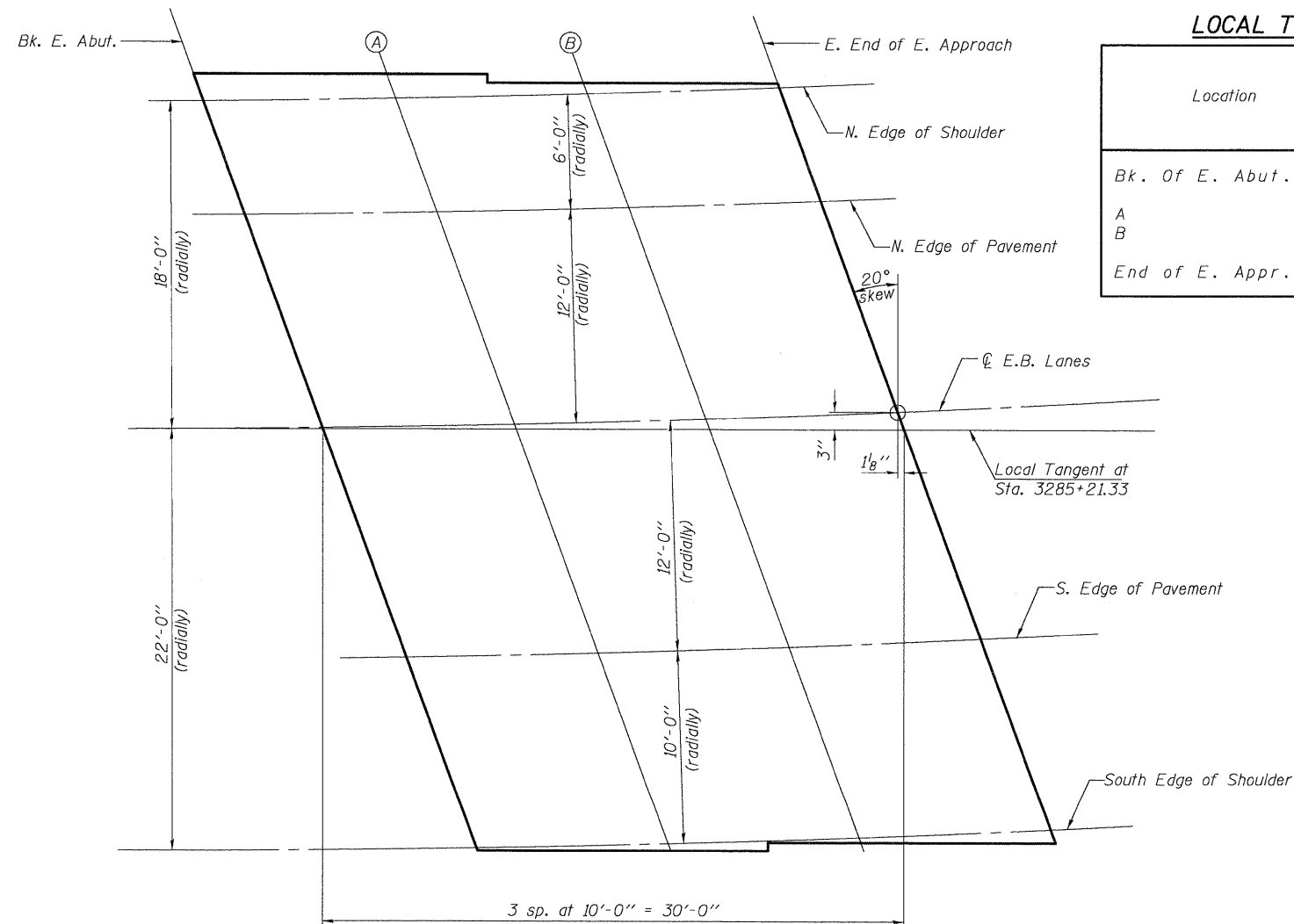
| Location | Station | Offset | Theoretical Grade Elevations |
|------------------|------------|--------|------------------------------|
| Bk. Of E. Abut. | 3286+16.72 | -18.00 | 662.19 |
| A | 3286+26.54 | -18.00 | 662.26 |
| B | 3286+36.36 | -18.00 | 662.33 |
| End of E. Aprpr. | 3286+46.65 | -18.00 | 662.41 |

NORTH EDGE OF PAVEMENT

| Location | Station | Offset | Theoretical Grade Elevations |
|------------------|------------|--------|------------------------------|
| Bk. Of E. Abut. | 3286+18.87 | -12.00 | 662.33 |
| A | 3286+28.67 | -12.00 | 662.40 |
| B | 3286+38.48 | -12.00 | 662.47 |
| End of E. Aprpr. | 3286+48.82 | -12.00 | 662.56 |

CL EB LANES

| Location | Station | Offset | Theoretical Grade Elevations |
|------------------|------------|--------|------------------------------|
| Bk. Of E. Abut. | 3286+23.19 | 0.00 | 662.55 |
| A | 3286+33.00 | 0.00 | 662.62 |
| B | 3286+42.80 | 0.00 | 662.69 |
| End of E. Aprpr. | 3286+53.13 | 0.00 | 662.78 |



LOCAL TANGENT AT STA. 3285+21.33

| Location | Station | Offset | Theoretical Grade Elevations |
|------------------|------------|--------|------------------------------|
| Bk. Of E. Abut. | 3286+23.26 | 0.15 | 662.55 |
| A | 3286+33.24 | 0.18 | 662.62 |
| B | 3286+43.23 | 0.22 | 662.69 |
| End of E. Aprpr. | 3286+53.21 | 0.25 | 662.78 |

SOUTH EDGE OF PAVEMENT

| Location | Station | Offset | Theoretical Grade Elevations |
|------------------|------------|--------|------------------------------|
| Bk. Of E. Abut. | 3286+27.52 | 12.00 | 662.39 |
| A | 3286+37.32 | 12.00 | 662.46 |
| B | 3286+47.12 | 12.00 | 662.54 |
| End of E. Aprpr. | 3286+57.43 | 12.00 | 662.63 |

SOUTH EDGE OF SHOULDER

| Location | Station | Offset | Theoretical Grade Elevations |
|------------------|------------|--------|------------------------------|
| Bk. Of E. Abut. | 3286+31.12 | 22.00 | 662.21 |
| A | 3286+40.92 | 22.00 | 662.28 |
| B | 3286+50.73 | 22.00 | 662.36 |
| End of E. Aprpr. | 3286+61.02 | 22.00 | 662.45 |

PLAN

**TOP OF SLAB ELEVATIONS
EB EAST APPROACH PAVEMENT
SN 006-0172 (EB)**

PLOT DATE = 09/06/2009
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 USER NAME = CFC

E-AS 10-1-08

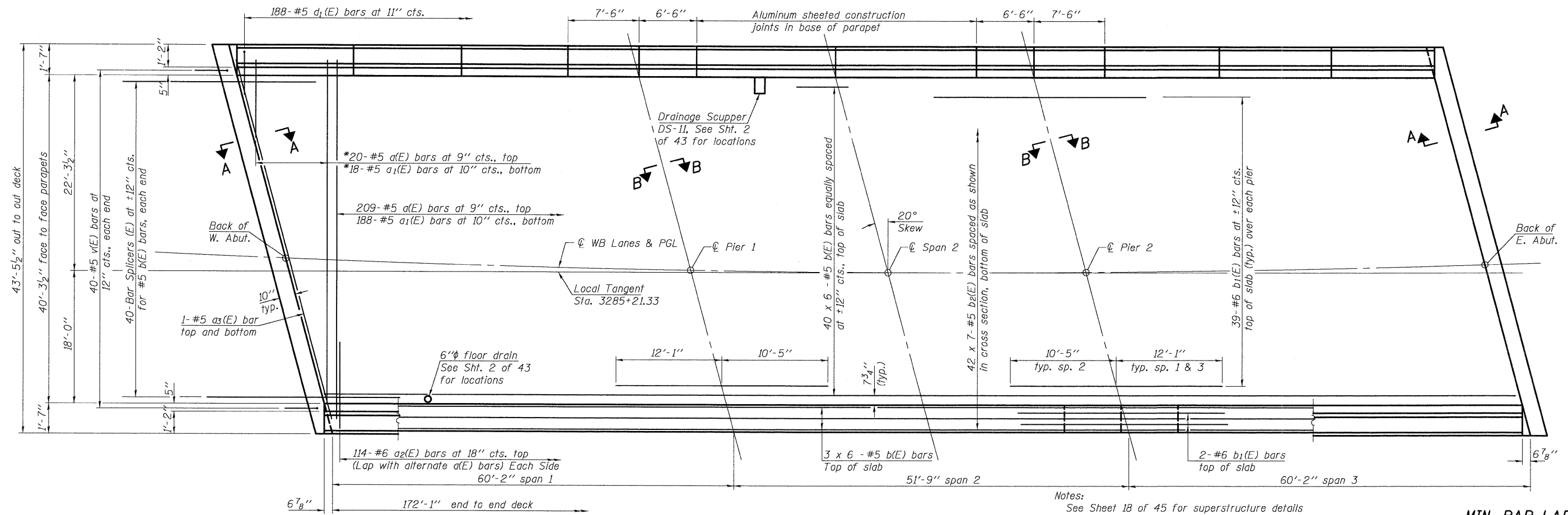
CB Coombe-Bloxdorf P.C.
 - CIVIL ENGINEERS -
 - STRUCTURAL ENGINEERS -
 - LAND SURVEYORS -
 Design Firm License No. 184-002703

| | |
|-------------|---------|
| PROJECT NO. | 05061 |
| SCALE | |
| DATE | 6/25/09 |
| DESIGN BY | RM/MCB |
| DRAWN BY | TFG |
| CHECKED BY | MCB |

| | | | | | |
|---|----------------|-----------|--------------------|--------------|-----------|
| SHEET NO. 15 | F.A.I. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS | SHEET NO. |
| | | | | 344 | 168 |
| 45 SHEETS | | | CONTRACT NO. 66908 | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | | |

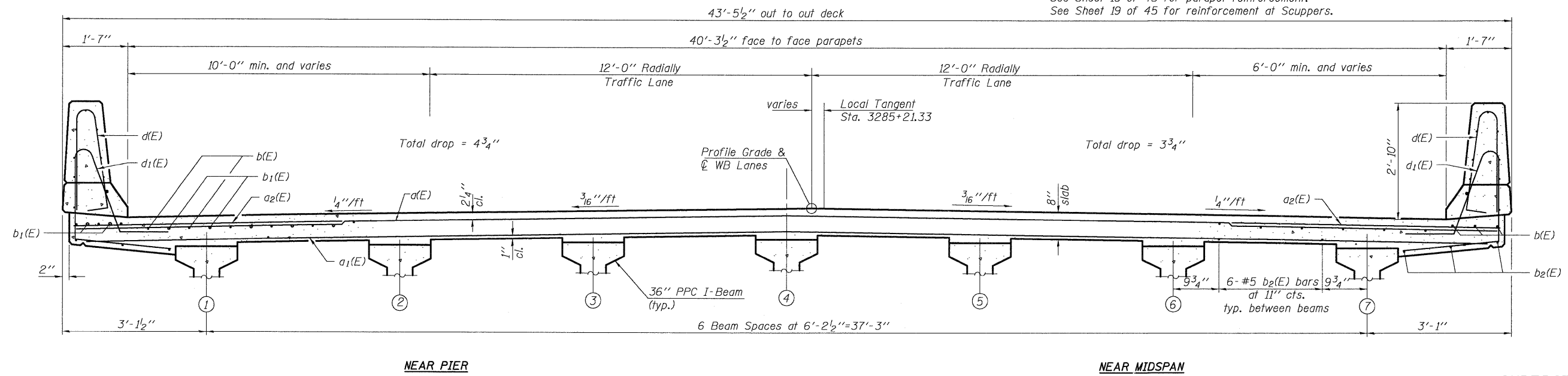
*06-[7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & I]

* Order a(E) and a₁(E) bars full length.
Cut to fit skew and use remainder of
bars in opposite end.



Notes:
See Sheet 18 of 45 for superstructure details and Bill of Material.
Bars indicated thus 40 x 6-#5 etc. indicates 40 lines of bars with 6 lengths per line.
See Sheet 18 of 45 for parapet reinforcement.
See Sheet 19 of 45 for reinforcement at Scuppers.

MIN. BAR LAP
#5 bars = 1'-8"



SUPERSTRUCTURE WB
SN 006-0173 (WB)

PLOT DATE = 09/08/2009
FILE NAME = J:\060173\0173-66908-016-super-wb.dgn
USER NAME = J:\060173\0173-66908-016-super-wb.dgn
USER NAME = J:\060173\0173-66908-016-super-wb.dgn

PII-2-R 10-1-08

CB Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

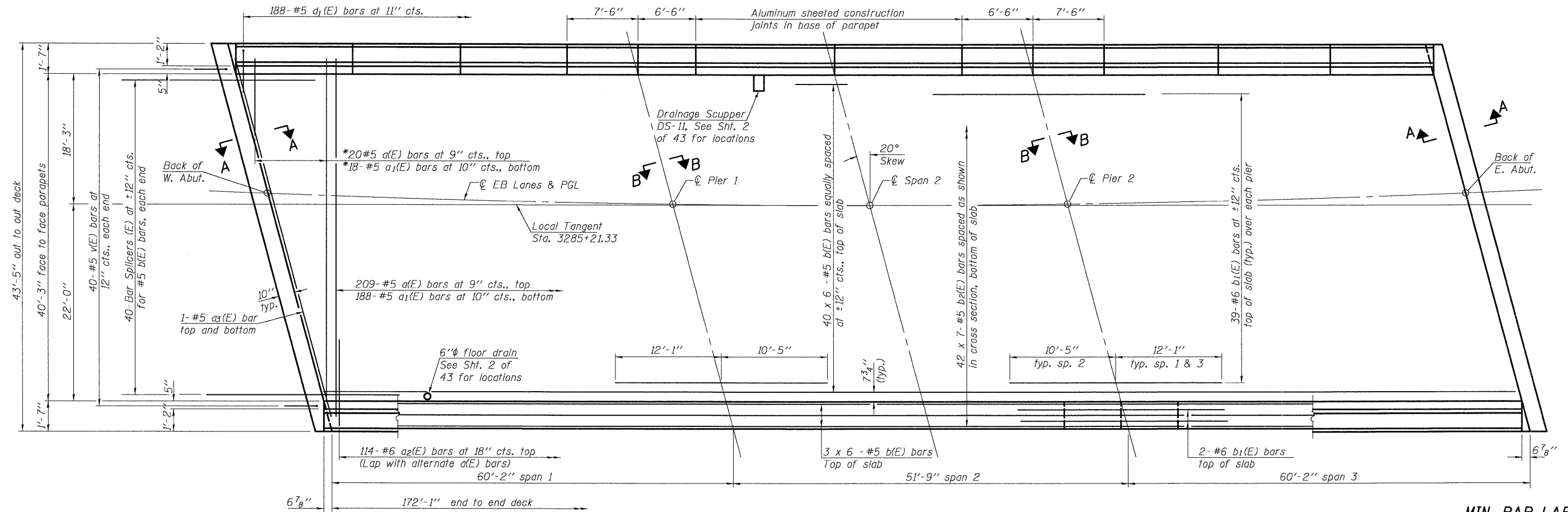
| | |
|-------------|---------|
| PROJECT NO. | 05061 |
| SCALE | |
| DATE | 6/25/09 |
| DESIGN BY | RM/MCB |
| DRAWN BY | TFG |
| CHECKED BY | MCB |

SHEET NO. 16
45 SHEETS

| | | | | |
|---|---------|--------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 80 | * | BUREAU | 344 | 169 |
| CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | |

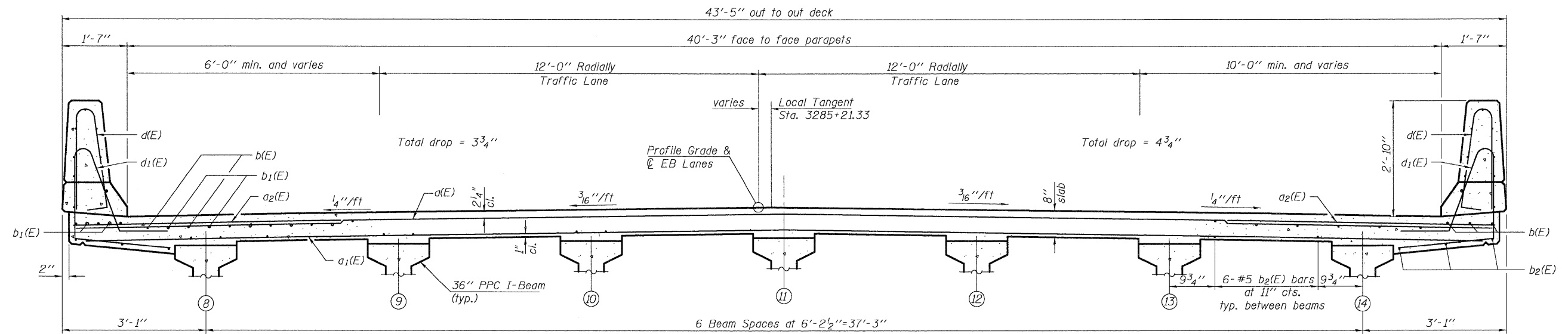
*06-C7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & IJ

* Order a(E) and a₁(E) bars full length.
Cut to fit skew and use remainder of
bars in opposite end.



PLAN

MIN. BAR LAP
#5 bars = 1'-8"



NEAR PIER

CROSS SECTION
(Looking East)

NEAR MIDSPAN

SUPERSTRUCTURE EB
SN 006-0172 (EB)

Notes:
See Sheet 18 of 45 for superstructure details and Bill of Material.
Bars indicated thus 40 x 6-#5 etc. indicates 40 lines of bars with 6 lengths per line.
See Sheet 18 of 45 for parapet reinforcement.
See Sheet 19 of 45 for reinforcement at Scuppers.

CB Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

PROJECT NO. 05061
SCALE
DATE 6/25/09
DESIGN BY RM/MCB
DRAWN BY TFG
CHECKED BY MCB

SHEET NO. 17
45 SHEETS

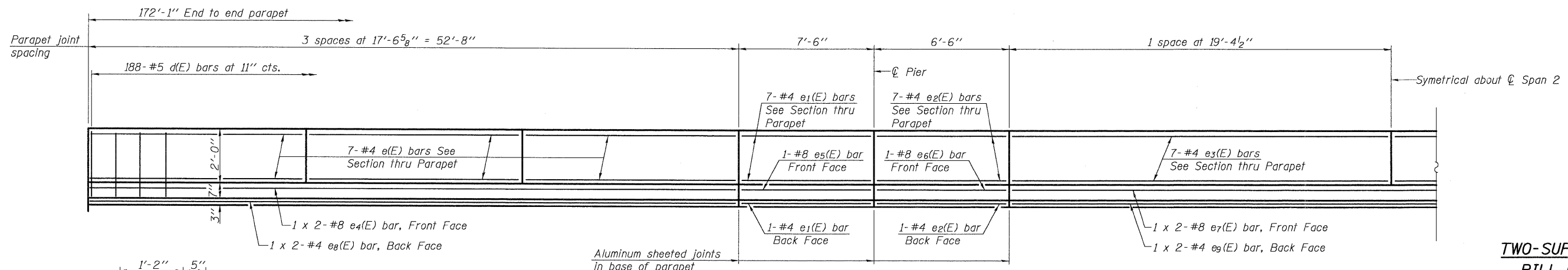
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---------|--------|--------------|-----------|
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| CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | |

*06-17BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & 1J

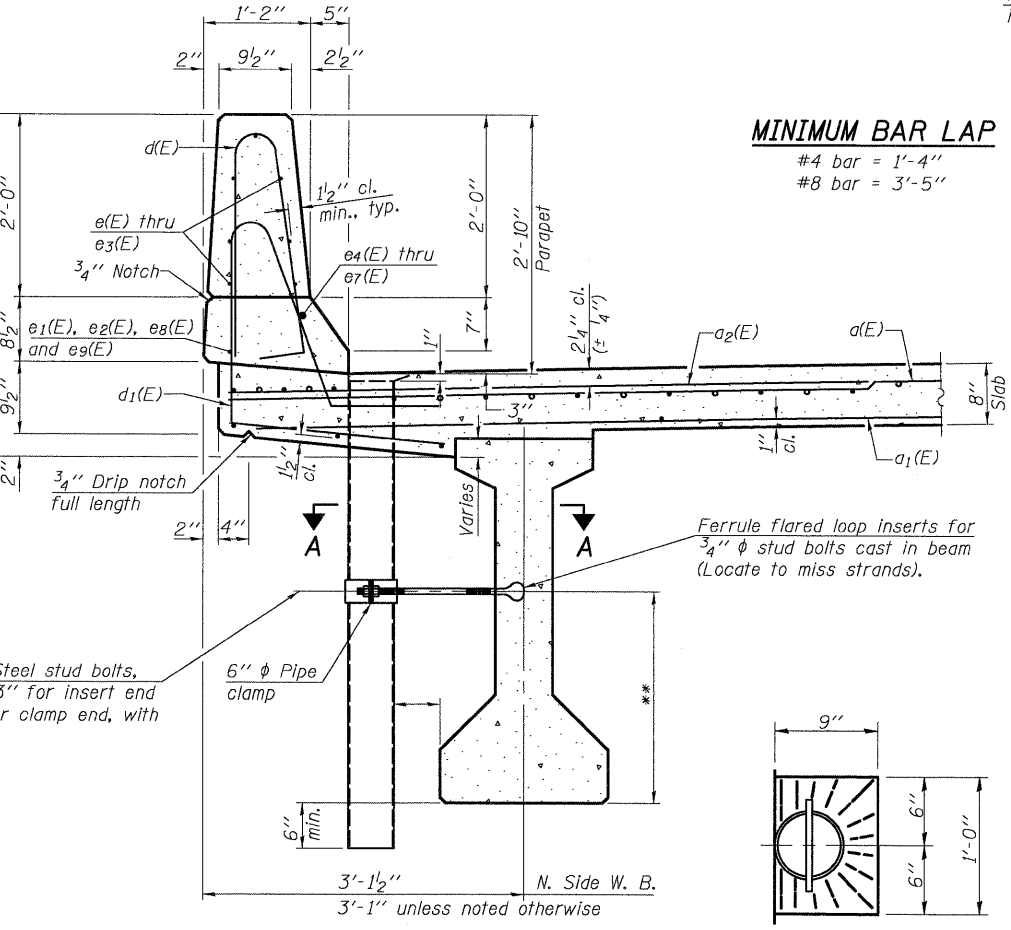
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USER NAME = CFC

PII-2-R

10-1-08



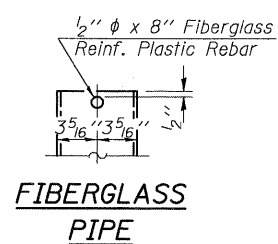
INSIDE ELEVATION OF PARAPET



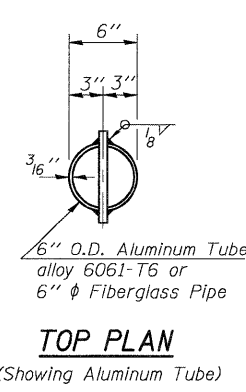
MINIMUM BAR LAP

PARAPET JOINT DETAILS

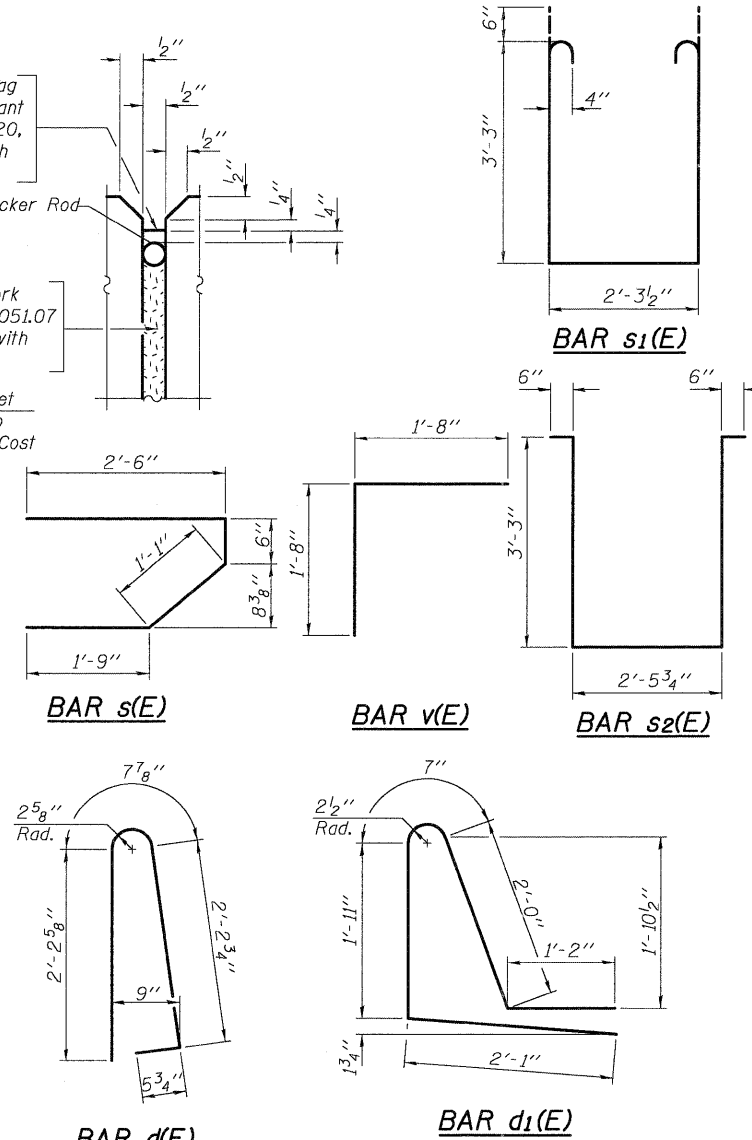
Notes:
 Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
 The exterior surfaces of the floor drains shall be coated or pigmented by the manufacturer with a color that matches the concrete.
 The clamping device and inserts shall be galvanized according to AASHTO M 232.



FIBERGLASS PIPE



ALUMINUM TUBE



TWO-SUPERSTRUCTURES BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|----------------------------------|-----|----------|---------|-------|
| a(E) | 458 | #5 | 42'-9" | — |
| a1(E) | 412 | #5 | 42'-1" | — |
| a2(E) | 456 | #6 | 6'-6" | — |
| a3(E) | 8 | #5 | 45'-10" | — |
| a4(E) | 96 | #5 | 1'-6" | — |
| b(E) | 552 | #5 | 30'-1" | — |
| b1(E) | 172 | #6 | 22'-6" | — |
| b2(E) | 588 | #5 | 26'-0" | — |
| d(E) | 752 | #5 | 5'-7" | — |
| d1(E) | 752 | #5 | 7'-9" | — |
| e(E) | 168 | #4 | 17'-2" | — |
| e1(E) | 64 | #4 | 7'-2" | — |
| e2(E) | 64 | #4 | 6'-2" | — |
| e3(E) | 56 | #4 | 19'-0" | — |
| e4(E) | 16 | #8 | 27'-11" | — |
| e5(E) | 8 | #8 | 7'-2" | — |
| e6(E) | 8 | #8 | 6'-2" | — |
| e7(E) | 8 | #8 | 21'-0" | — |
| e8(E) | 16 | #4 | 26'-10" | — |
| e9(E) | 8 | #4 | 19'-11" | — |
| m(E) | 20 | #6 | 45'-10" | — |
| m1(E) | 8 | #6 | 2'-1" | — |
| m2(E) | 56 | #6 | 9'-4" | — |
| m3(E) | 72 | #6 | 4'-7" | — |
| m4(E) | 96 | #4 | 5'-7" | — |
| m5(E) | 28 | #8 | 5'-8" | — |
| s(E) | 168 | #5 | 5'-10" | — |
| s1(E) | 144 | #4 | 9'-10" | — |
| s2(E) | 120 | #4 | 10'-0" | — |
| v(E) | 160 | #5 | 3'-4" | — |
| Reinforcement Bars, Epoxy Coated | | Lbs. | 105340 | |
| Concrete Superstructure | | Cu. Yds. | 563.8 | |
| Bar Splicers | | Each | 160 | |

Bars indicated thus 1 x 2-#5 etc. indicates 1 line of bars with 2 lengths per line.

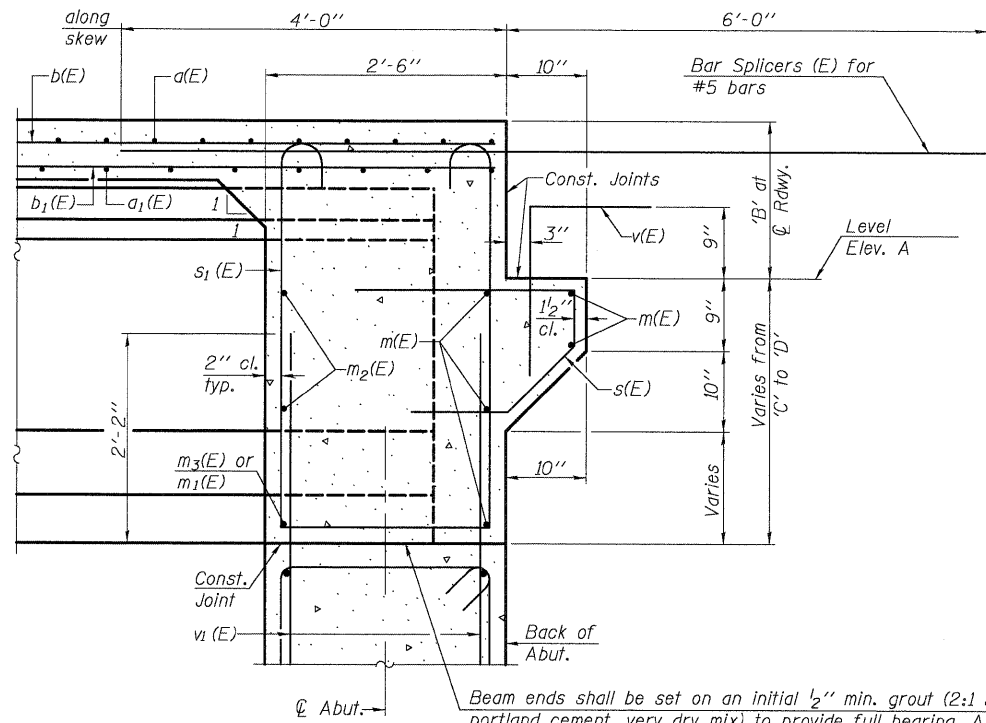
SUPERSTRUCTURE DETAILS
 SN 006-0172 (EB) & SN 006-0173 (WB)

Coombe-Bloxdorf P.C.
 - CIVIL ENGINEERS -
 - STRUCTURAL ENGINEERS -
 - LAND SURVEYORS -
 Design Firm License No. 184-002703

| | | | | | |
|-------------------|----------------|---|--------------------|------------------|---------------|
| PROJECT NO. 05061 | F.A.I. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 171 |
| SCALE | DATE 6/25/09 | DESIGN BY RM/MCB | CONTRACT NO. 66908 | | |
| DRAWN BY TFG | CHECKED BY MCB | FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | |

*06-I7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & IJ

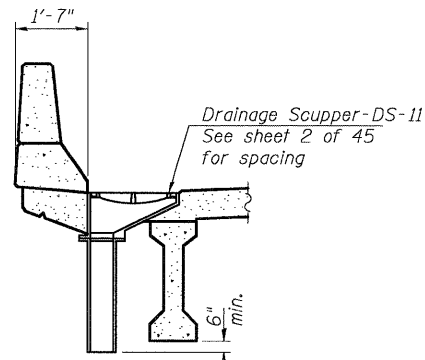
PLOT DATE = 09/06/2009
 FILE NAME = ..\060172-0173-66908-018-super-detail.dgn
 USER NAME = CFC



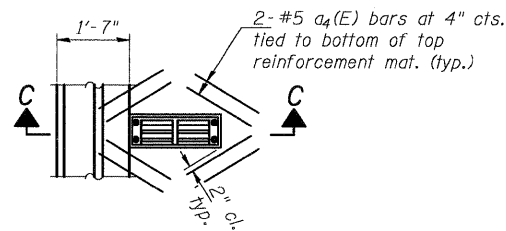
Beam ends shall be set on an initial 1/2" min. grout (2:1 sand and portland cement, very dry mix) to provide full bearing. Any excess grout squeezed out from under the beam shall be removed. Cost included with Concrete Structures.

SECTION A-A

Dimensions at right angles to abutment, except as shown.



SECTION C-C

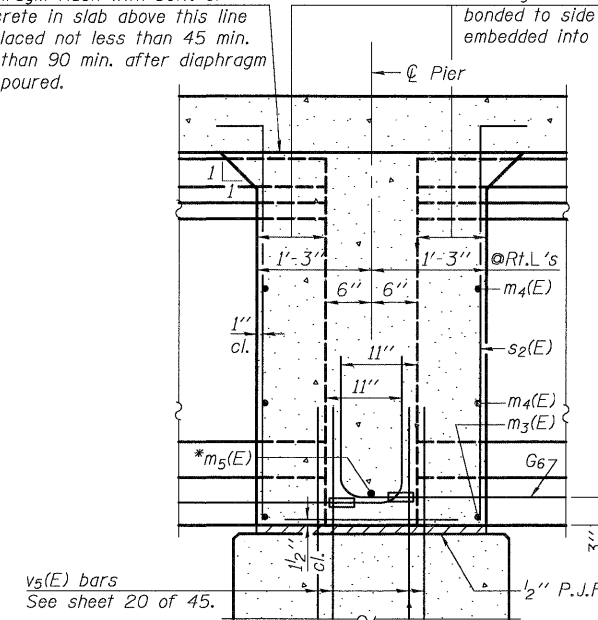


PLAN AT SCUPPER

| Location | A | B | C | D |
|-------------|--------|-----------|-----------|-----------|
| W. Abut. WB | 660.66 | 1'-8 3/4" | 2'-5 1/2" | 2'-1 7/8" |
| E. Abut. WB | 660.64 | 1'-9 7/8" | 2'-5 1/4" | 2'-1 3/8" |
| W. Abut. EB | 660.47 | 1'-9 5/8" | 2'-5 1/4" | 2'-1 3/8" |
| E. Abut. EB | 660.82 | 1'-8 3/4" | 2'-5 1/4" | 2'-2 3/4" |

Pour diaphragm flush with bott. of slab. Concrete in slab above this line shall be placed not less than 45 min. nor more than 90 min. after diaphragm has been poured.

Roofing felt shall be bonded to side of beam embedded into diaphragm.



SECTION B-B

Dimensions along centerline of beam, except as shown.

* Tightly fasten the #8 bars together with No. 9 wire ties.

Note: See sheet 16 & 17 of 45 for location of Sections A-A and B-B.

DIAPHRAGM DETAILS
SN 006-0172 (EB) & SN 006-0173 (WB)

| | | | | |
|---|--|---------------------------|--|-----------------------------------|
| - CIVIL ENGINEERS - - STRUCTURAL ENGINEERS - - LAND SURVEYORS - Design Firm License No. 184-002703 | PROJECT NO. 05061 SCALE DATE 6/25/09 DESIGN BY RM/MCB DRAWN BY TFG CHECKED BY MCB | SHEET NO. 19 45 SHEETS | F.A.I. RTE. 80 SECTION * COUNTY BUREAU CONTRACT NO. 66908 | TOTAL SHEETS 344 SHEET NO. 172 |
| | FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | |

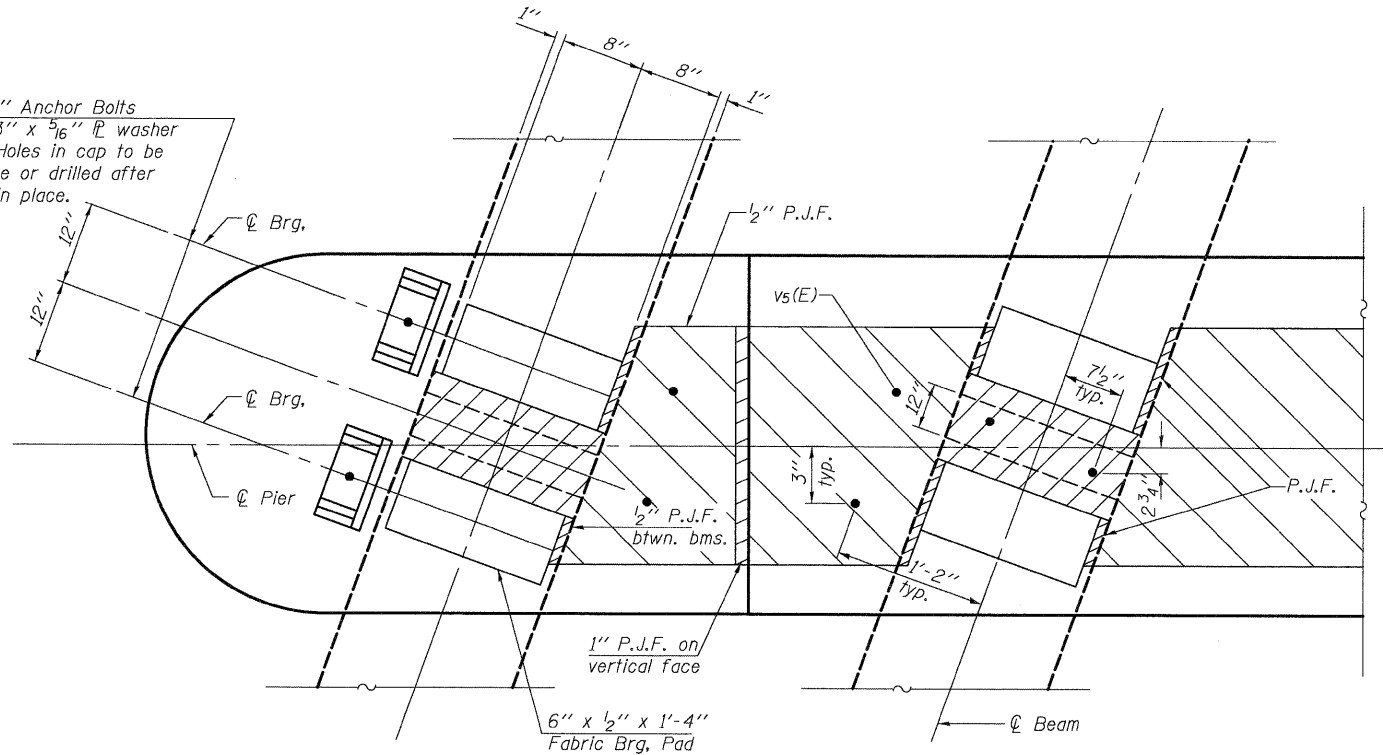
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PLOT DATE = 09/06/2009
 FILE NAME = ..\0060172-0173-66908-019-diafrgm-detaills.dgn
 USER NAME = CFC

PI-2DDI

10-1-08

1/2" X 18" Anchor Bolts with 3" x 3" x 5/16" PL washer under nut. Holes in cap to be cast in place or drilled after beams are in place.



PLAN AT PIER
(Showing bearing pad and PJF details)

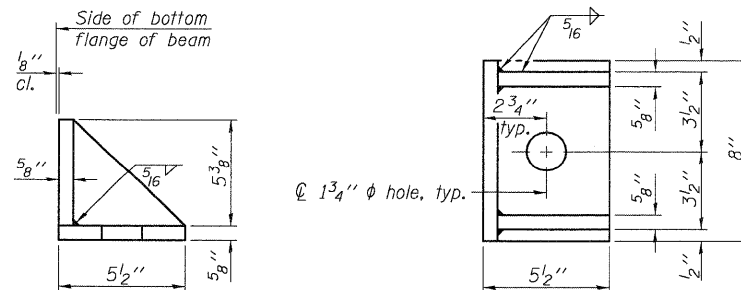
Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 18 of 45.
Concrete in diaphragm is included with Concrete Superstructure on sheet 18 of 45.
For details of bars s(E), s₁(E) and s₂(E) see sheet 18 of 45.
The s(E), s₁(E) and s₂(E) bars shall be placed parallel to the beams.
Spacing for these bars shall be at right angles to the beams.
See sheet 19 of 45 for Sections A-A and B-B.
Cost of 90 Lb. roofing felt is included with Concrete Superstructure.
The side retainer shall be galvanized after shop fabrication according to AASHTO M 111.
Anchor bolt assemblies shall be galvanized according to Article 1006.09 of the Standard Specifications.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F_y=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

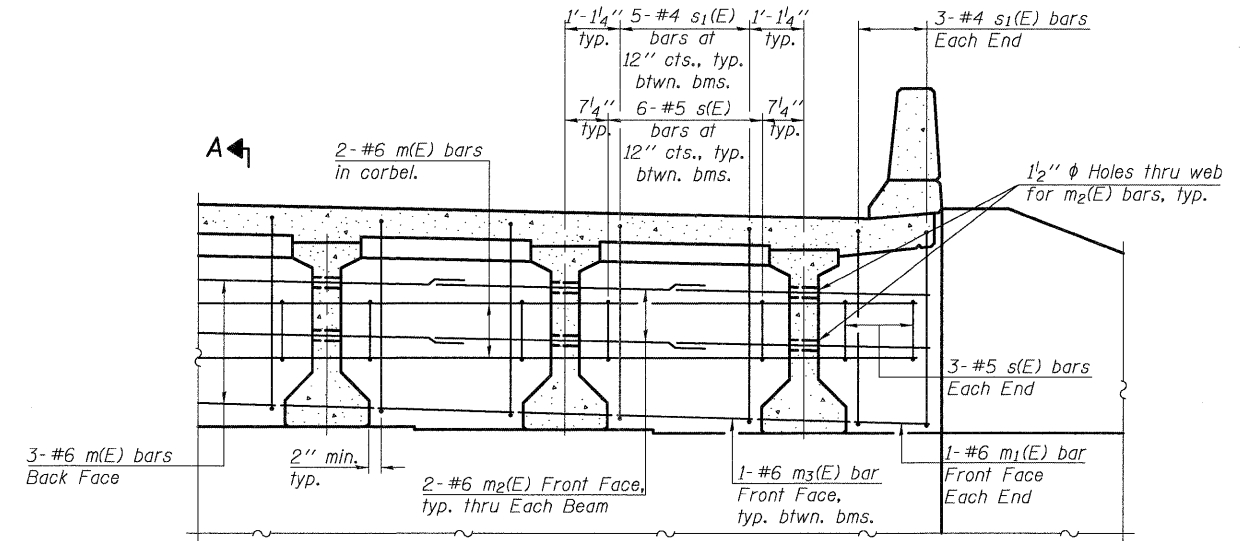
Anchor bolts for side retainers may be either cast in place or installed in holes drilled after the supporting member is in place and prior to pouring the deck.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

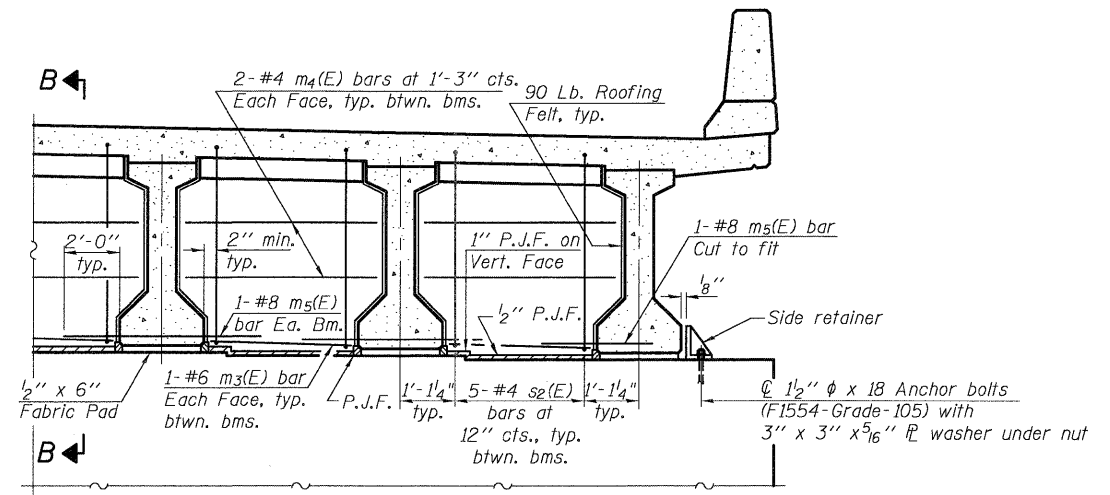
Cost of side retainer and anchor bolts shall be included with Concrete Structures.



SIDE RETAINER
(2 required each side of pier).
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



DIAPHRAGM ELEVATION AT ABUTMENT



DIAPHRAGM AT PIER

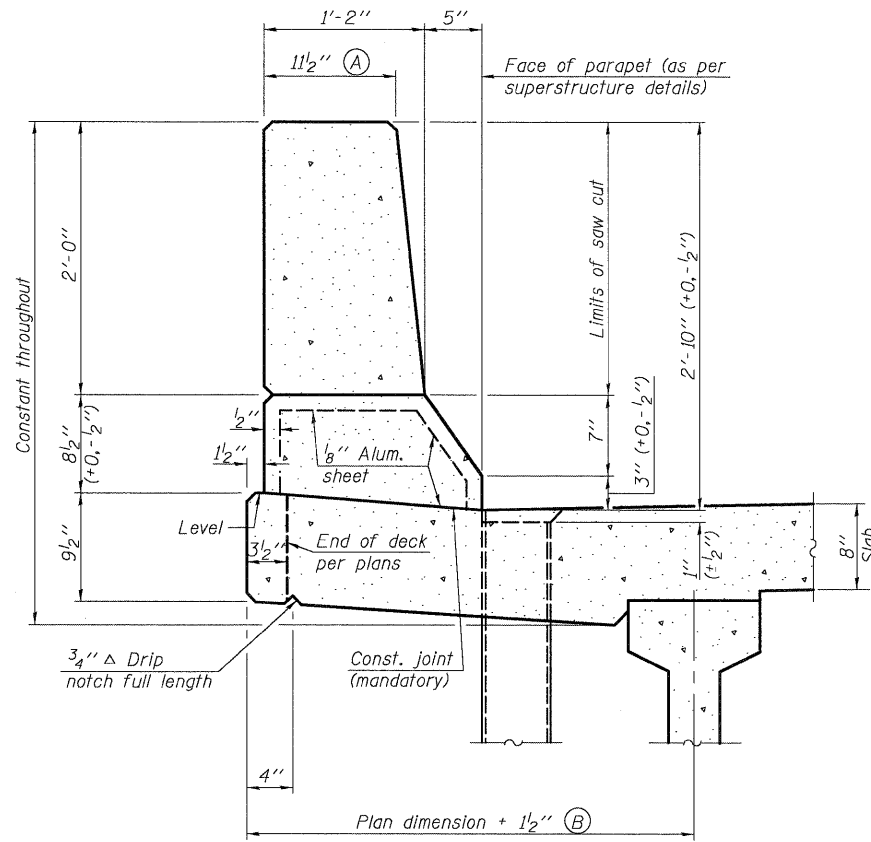
MIN. BAR LAP
#6 bar = 2'-9"

DIAPHRAGM DETAILS
SN 006-0172 (EB) & SN 006-0173 (WB)

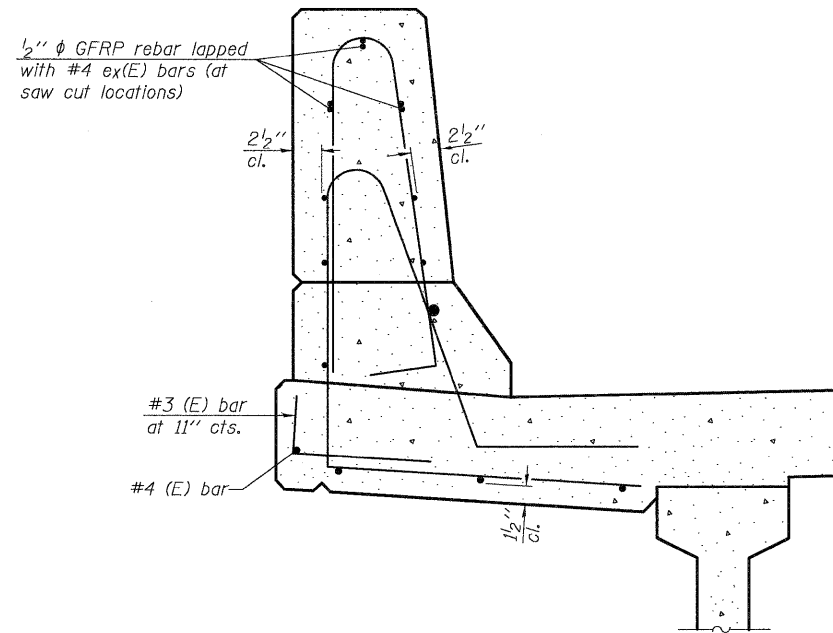
| | | | | | | | |
|--|--------------|--|--------------------|-----------|---------------|------------------|---------------|
| PROJECT NO. 05061 SCALE DATE 8/05/09 DESIGN BY RM/MCB DRAWN BY TFG CHECKED BY MCR | SHEET NO. 20 | | F.A.I. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 173 |
| | 45 SHEETS | | CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | | | | |

*06-17BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & 1J

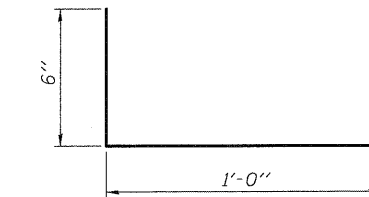
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USER NAME = CFC



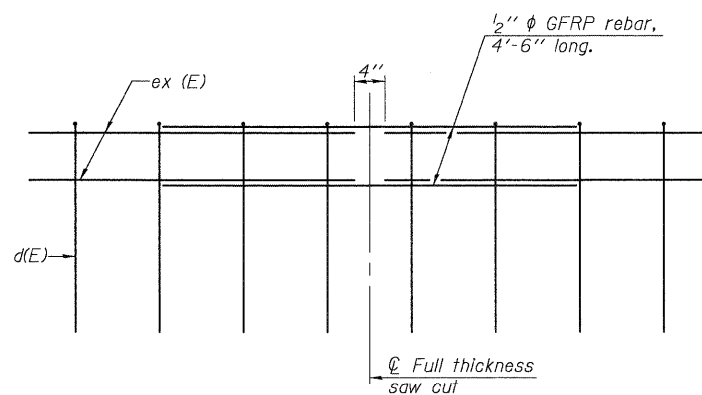
SECTION
(Showing dimensions)



SECTION
(Showing reinforcement clearances for slip forming and additional reinforcement bars)



#3 (E) BAR



GFRP REBAR STIFFENING DETAIL
(Place as shown in parapet section at each parapet joint location.)

**CONCRETE PARAPET
SLIPFORMING OPTION**
SN 006-0172 (EB) & SN 006-0173 (WB)

PLOT DATE = 09/09/2009
FILE NAME = \\0608072.0173-66908-02-sfp-34.dgn
USER NAME = CFC

SFP-34

10-1-08

CB Coombe-Bloxdorf P.C.
- CIVIL ENGINEERS-
- STRUCTURAL ENGINEERS-
- LAND SURVEYORS-
Design Firm License No. 184-002703

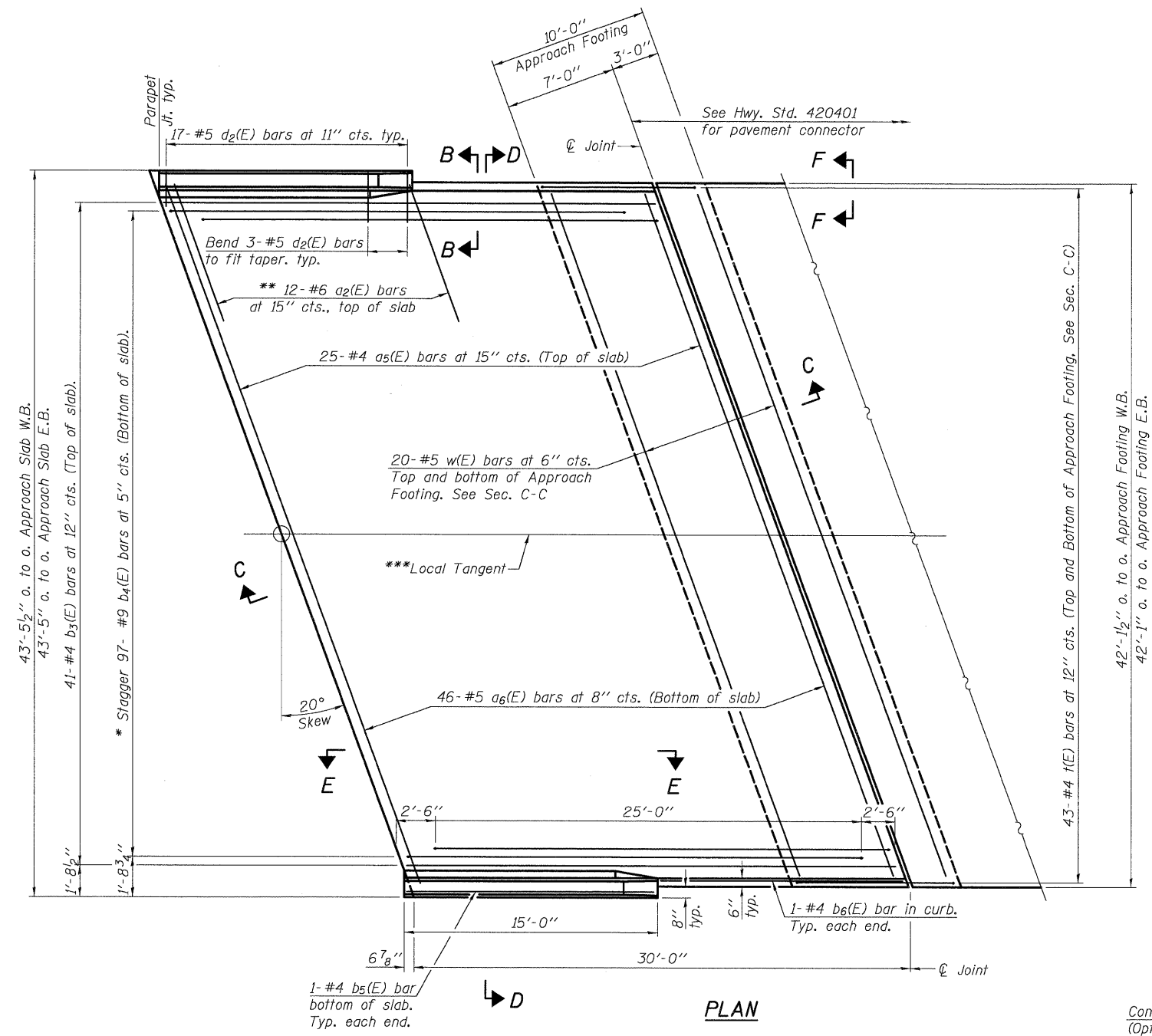
PROJECT NO. 05061
SCALE
DATE 6/25/09
DESIGN BY RM/MCB
DRAWN BY TFG
CHECKED BY MCB

SHEET NO. 21
45 SHEETS

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---------|--------|--------------|-----------|
| 80 | * | BUREAU | 344 | 174 |
| CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | |

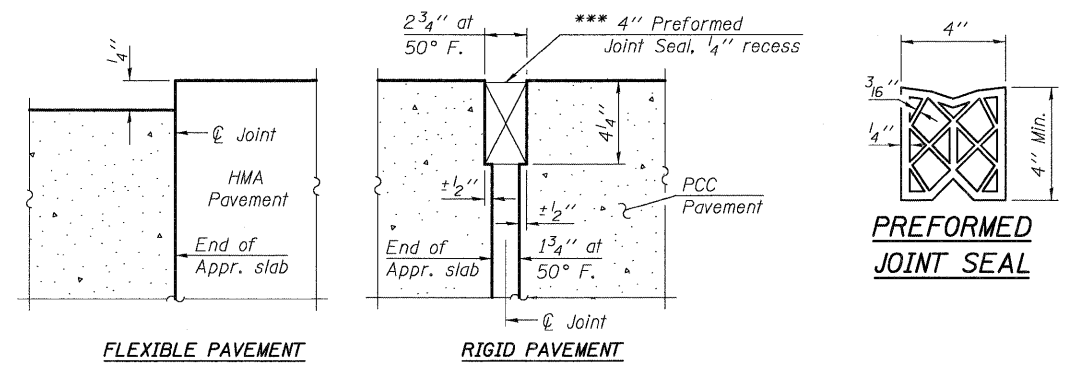
*06-17BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & 1J

Notes:
See sheet 23 of 43 for Sections C-C & D-D and View E-E.
a(E), a₁(E), and w(E) bar spacings measured perpendicular to ϕ Rdwy.

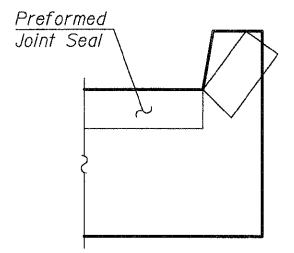


* Tilt #9 b₄(E) bars as required to maintain clearance.
** Alternate with a₅(E) bars, typ. each parapet.
*** See Sheets 8, 9, 14 & 15 of 45 for stations along Local Tangent.

*** Cost included with Concrete Superstructure.

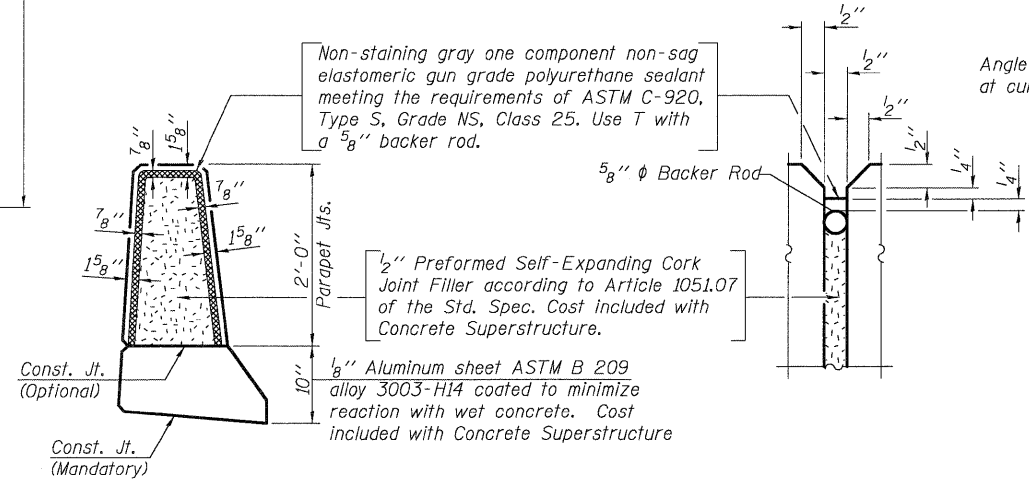


DETAIL A



VIEW F-F

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.



PARAPET JOINT DETAILS

(Sheet 1 of 2)

BRIDGE APPROACH SLAB DETAILS
SN 006-0172 (EB) & SN 006-0173 (WB)

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FILE NAME = ..\0060172-0173-66908-022-barr.dgn
USER NAME = CFC

BA-R 10-31-08

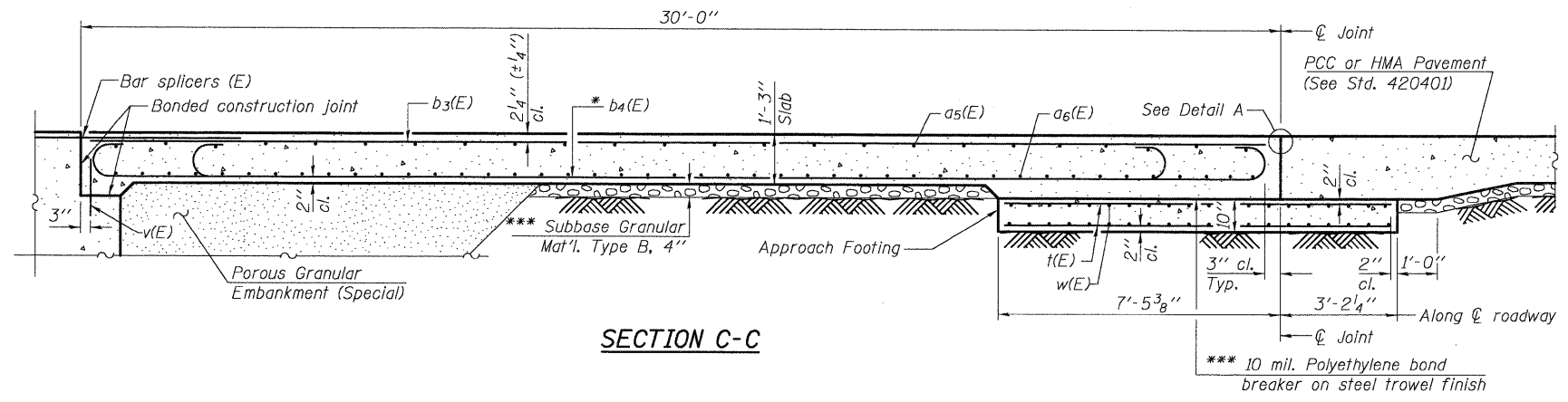
CB Coombe-Bloxdorf P.C.
- CIVIL ENGINEERS -
- STRUCTURAL ENGINEERS -
- LAND SURVEYORS -
Design Firm License No. 184-002703

| | |
|-------------|---------|
| PROJECT NO. | 05061 |
| SCALE | |
| DATE | 6/25/09 |
| DESIGN BY | RM/MCB |
| DRAWN BY | TFG |
| CHECKED BY | MCR |

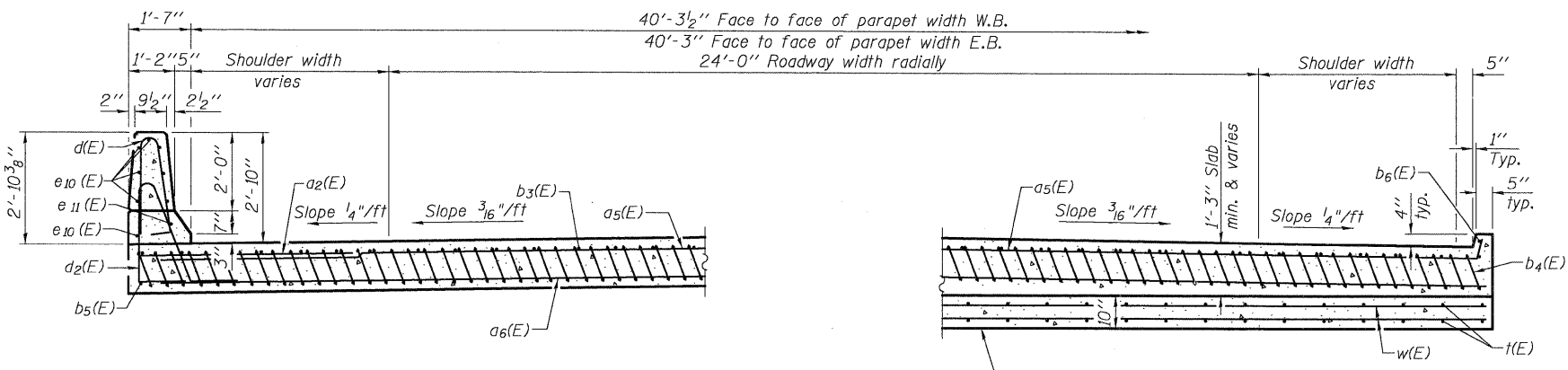
| | | | | |
|---|---------|--------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | | | 80 | * |
| CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | |

*06-[7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & I]

Notes:
 See sheet 22 of 45 for Detail A and View B-B.
 Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
 Approach footing concrete shall be paid for as Concrete Structures.
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
 For v(E) bar details, see sheet 18 & 19 of 45.
 The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
 For bar splicer details, see sheet 39 of 45.
 Cost of excavation for approach footing included with Concrete Structures.
 For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 45.



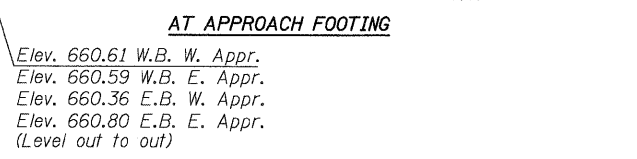
SECTION C-C



NEAR ABUTMENT

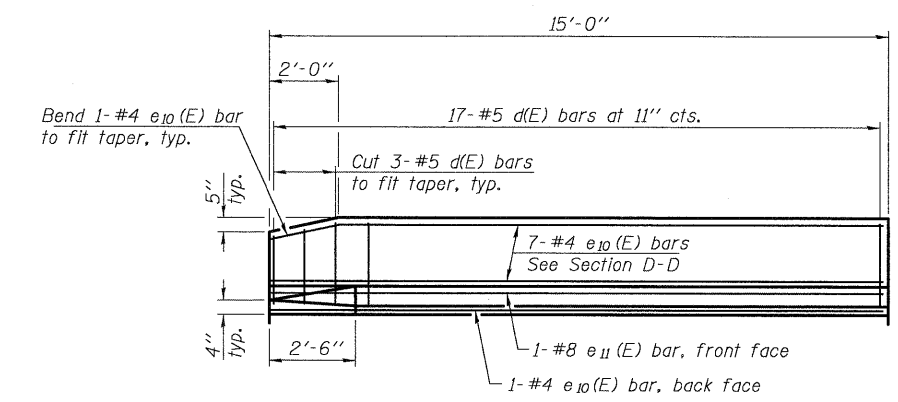
SECTION D-D

(See Plan for dimensions not shown)

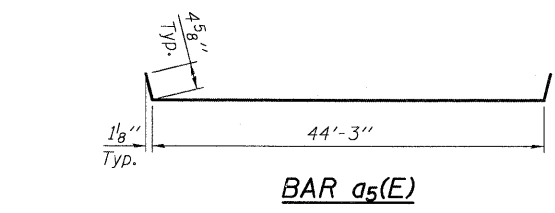


AT APPROACH FOOTING

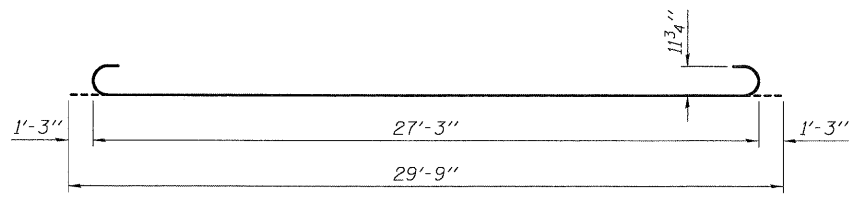
Elev. 660.61 W.B. W. Appr.
 Elev. 660.59 W.B. E. Appr.
 Elev. 660.36 E.B. W. Appr.
 Elev. 660.80 E.B. E. Appr.
 (Level out to out)



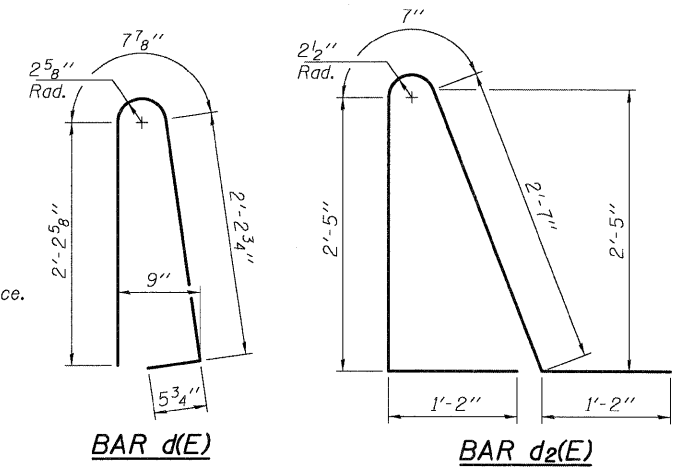
VIEW E-E



BAR a5(E)



BAR b4(E)



BAR d(E)

BAR d2(E)

* Tilt #9 b4(E) bars as required to maintain clearance.
 *** Cost Included with Concrete Superstructure.

FOUR APPROACHES
 BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|----------------------------------|-----|---------|--------|-------|
| a2(E) | 96 | #6 | 6'-6" | — |
| a5(E) | 100 | #4 | 45'-1" | — |
| a6(E) | 184 | #5 | 44'-3" | — |
| b3(E) | 164 | #4 | 29'-8" | — |
| b4(E) | 388 | #9 | 29'-9" | — |
| b5(E) | 8 | #4 | 14'-8" | — |
| b6(E) | 8 | #4 | 14'-8" | — |
| d(E) | 136 | #5 | 5'-7" | — |
| d2(E) | 136 | #5 | 7'-11" | — |
| e10(E) | 64 | #4 | 14'-8" | — |
| e11(E) | 8 | #8 | 14'-8" | — |
| t(E) | 344 | #4 | 10'-3" | — |
| w(E) | 160 | #5 | 44'-3" | — |
| Concrete Superstructure | | Cu. Yd. | 282.2 | |
| Concrete Structures | | Cu. Yd. | 55.1 | |
| Reinforcement Bars, Epoxy Coated | | Pound | 67,690 | |

(Sheet 2 of 2)

BRIDGE APPROACH SLAB DETAILS
 SN 006-0172 (EB) & SN 006-0173 (WB)

PLOT DATE = 09/08/2009
 FILE NAME = \\0060172.0173-66908-023-bar-eh12.dgn
 USER NAME = CFC

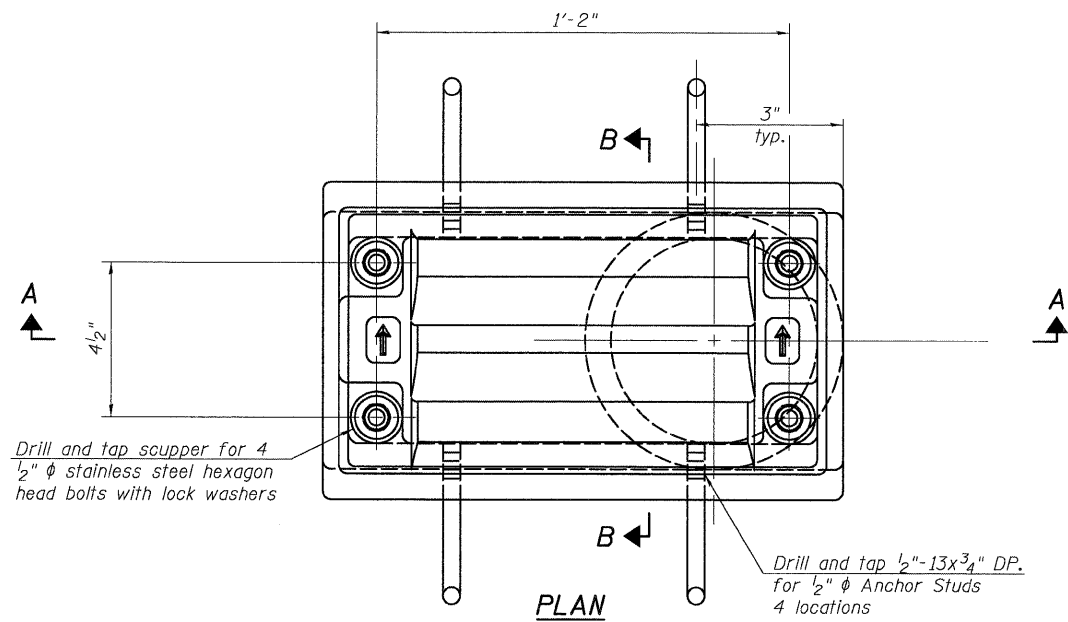
BA-R 10-31-08

CB Coombe-Bloxdorf P.C.
 -CIVIL ENGINEERS-
 -STRUCTURAL ENGINEERS-
 -LAND SURVEYORS-
 Design Firm License No. 184-002703

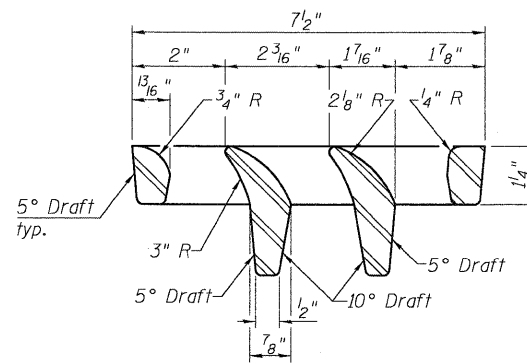
| | |
|-------------|---------|
| PROJECT NO. | 05061 |
| SCALE | |
| DATE | 6/25/09 |
| DESIGN BY | RM/MCB |
| DRAWN BY | TFG |
| CHECKED BY | MCB |

| | | | | | |
|---|--------------------|-----------|---------------|------------------|---------------|
| SHEET NO. 23 | F.A.I. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 176 |
| 45 SHEETS | CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | | |

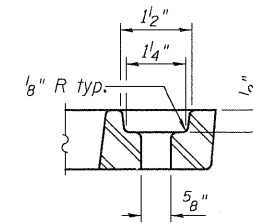
*06-L7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & IJ



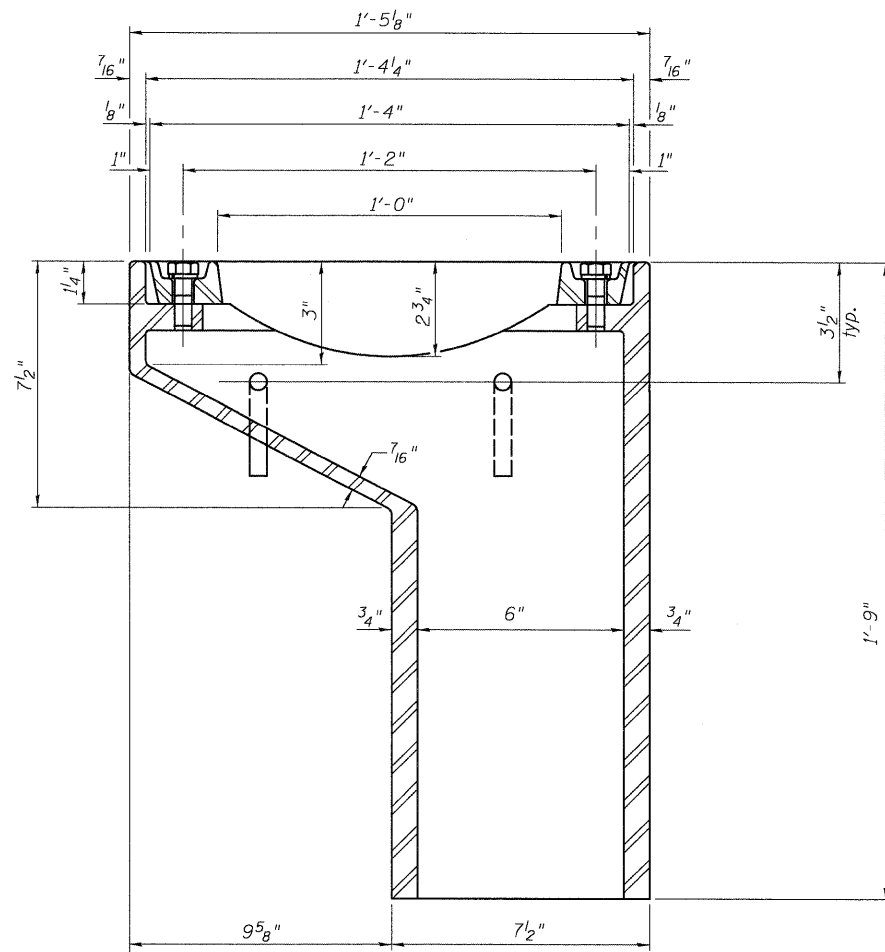
PLAN



VANE GRATE DETAIL

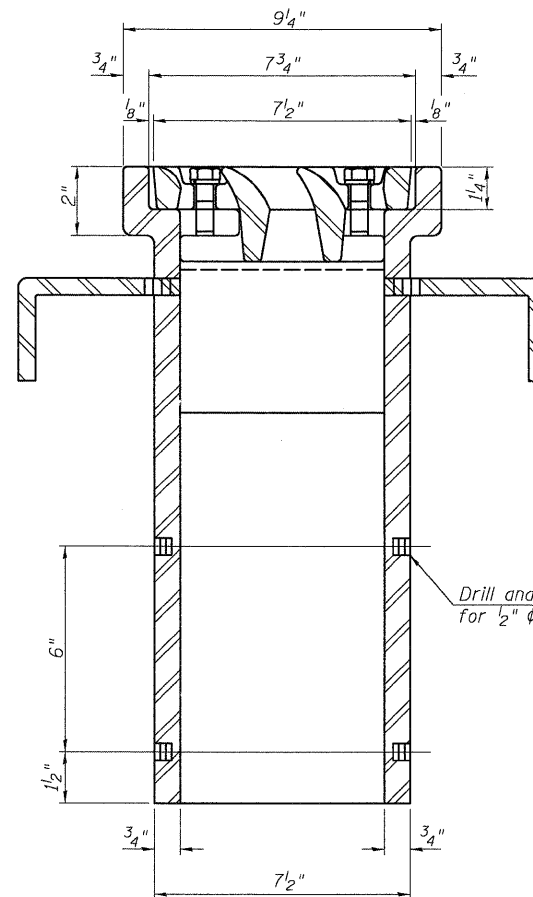


BOLT HOLE DETAIL



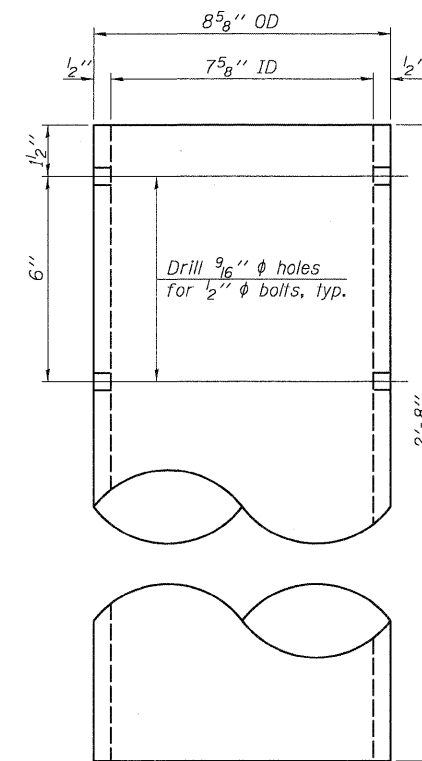
SECTION A-A

See sheet 18 of 45 for scupper location relative to parapet.

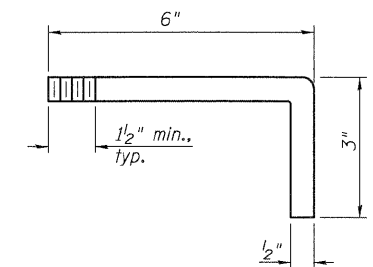


SECTION B-B

Drill and tap 1/2"-13x1/2" DP. for 1/2" φ bolts. (4 locations)



DOWNSPOUT



ANCHOR STUD DETAIL

BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|-------------------------|------|----------|
| Drainage Scupper, DS-11 | Each | 12 |

DRAINAGE SCUPPER, DS-11
SN 006-0172 (EB) & SN 006-0173 (WB)

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---------|--------|--------------|-----------|
| 80 | * | BUREAU | 344 | 177 |
| CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | |

CB Coombe-Bloxdorf P.C.
- CIVIL ENGINEERS -
- STRUCTURAL ENGINEERS -
- LAND SURVEYORS -
Design Firm License No. 184-002703

PROJECT NO. 05061
SCALE
DATE 6/25/09
DESIGN BY RM/MCH
DRAWN BY TFG
CHECKED BY MCB

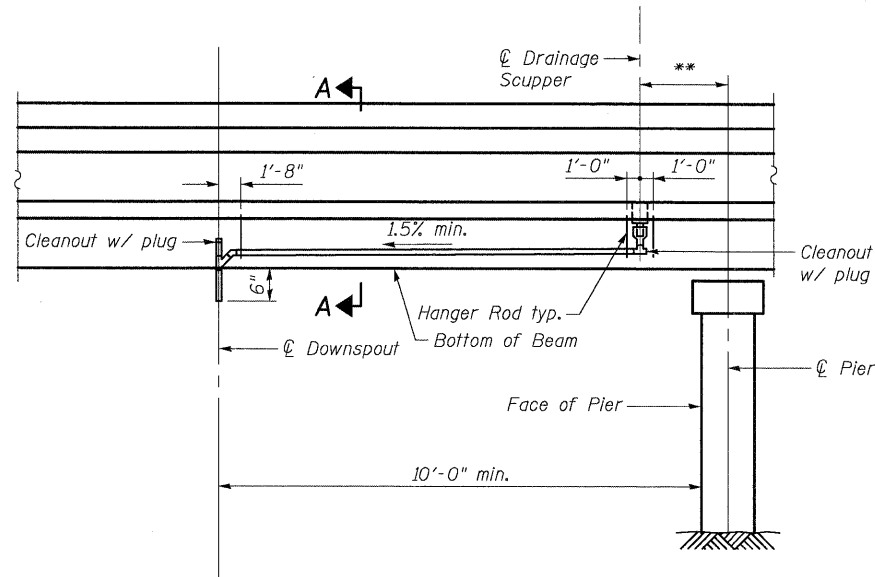
SHEET NO. 24
45 SHEETS

*06-L7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & 1J

PLOT DATE = 09/08/2009
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DS-11

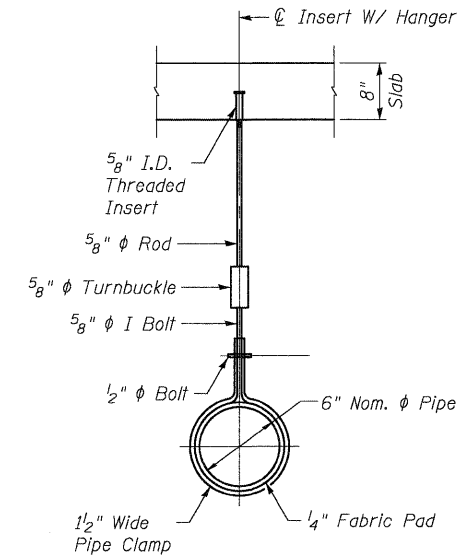
10-1-08



*Max. Hanger Spacing = 10'-6" or as recommended by Pipe Manufacturer.

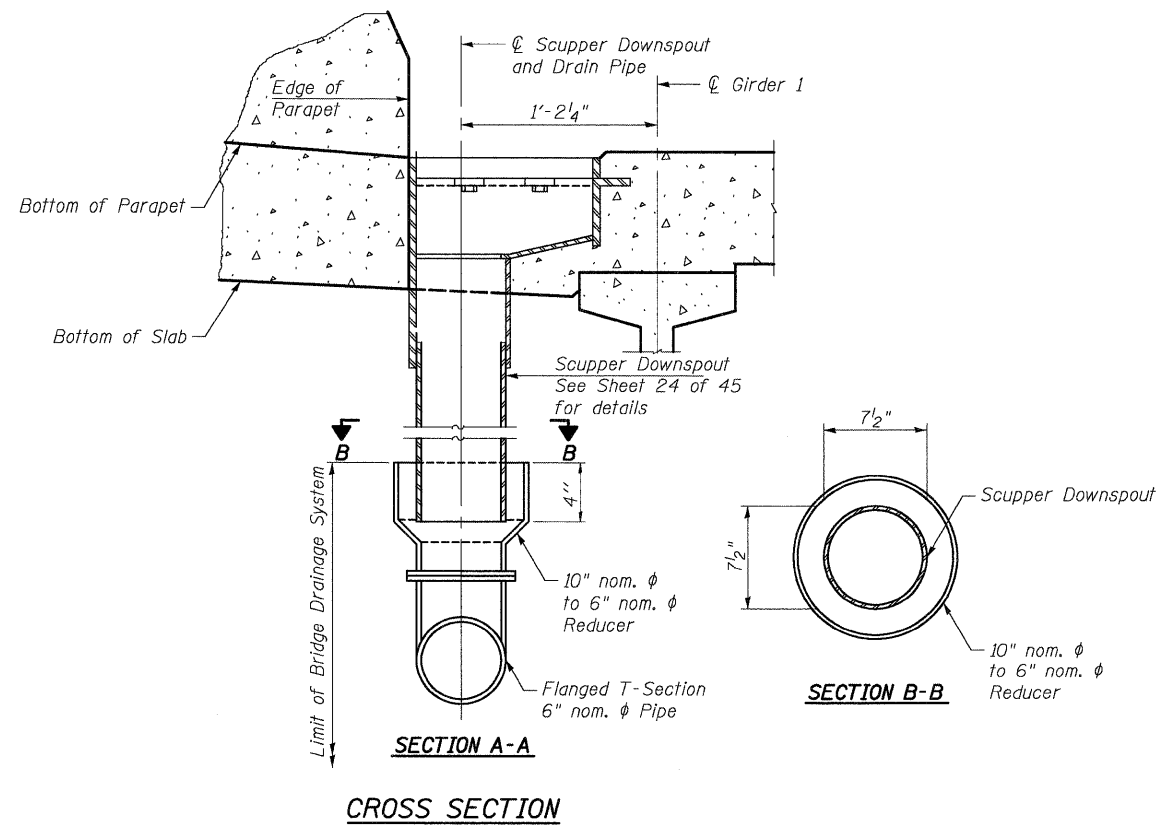
**Scupper with dimension from pier designated with a double asterisk on sheet 2 of 45 require the Drainage System as shown.

ELEVATION VIEW



HANGER DETAIL

Note: Bottom of pipe clamp shall not extend below bottom of beam.



CROSS SECTION

DRAINAGE SYSTEM
SN 006-0172 (EB) & SN 006-0173 (WB)

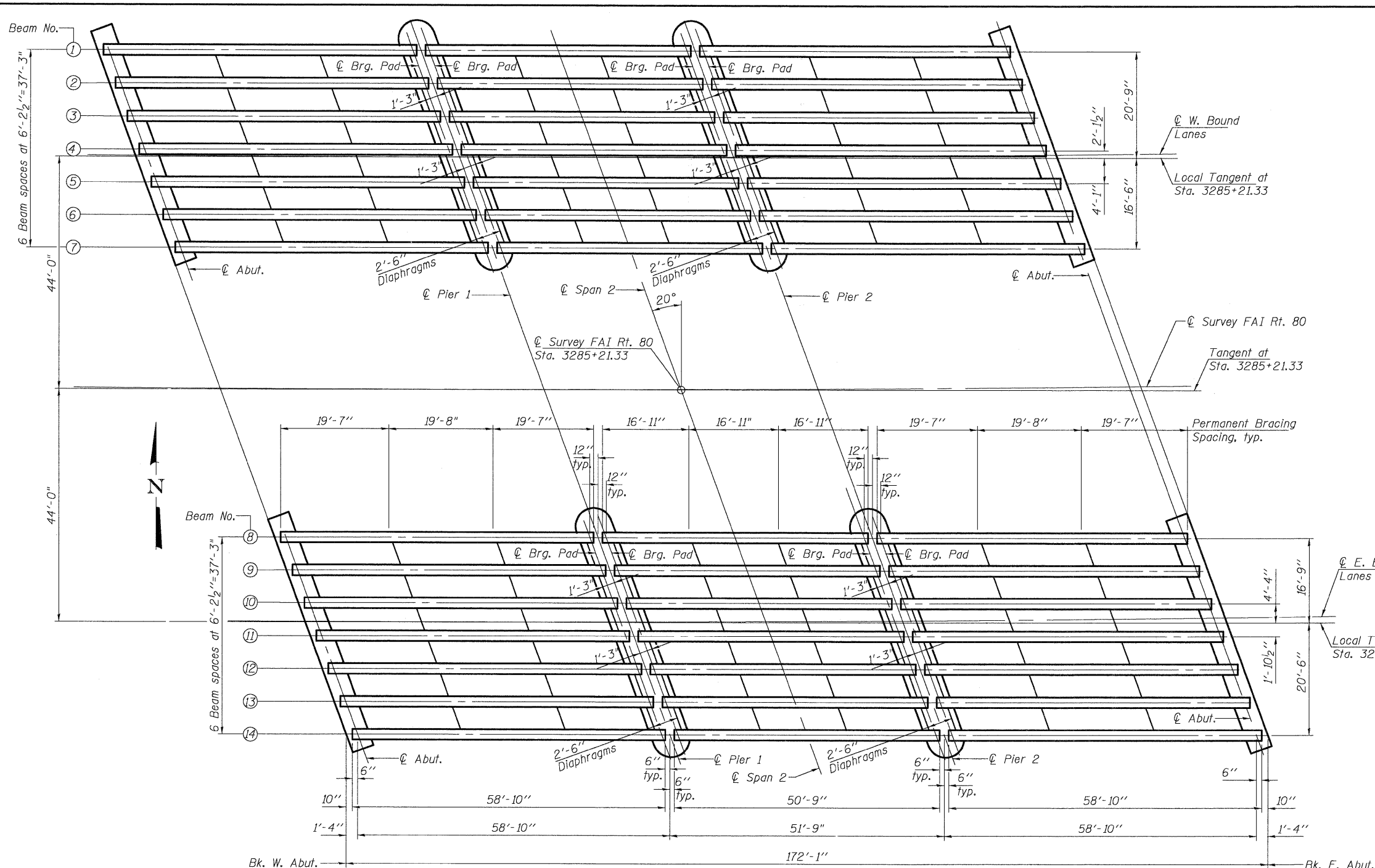
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 USER NAME = EFC

CB Coombe-Bloxdorf P.C.
 - CIVIL ENGINEERS -
 - STRUCTURAL ENGINEERS -
 - LAND SURVEYORS -
 Design Firm License No. 184-002703

| | |
|-------------|---------|
| PROJECT NO. | 05061 |
| SCALE | |
| DATE | 8/11/09 |
| DESIGN BY | RM/MCB |
| DRAWN BY | TFG |
| CHECKED BY | MCB |

| | | | | | | |
|---|-----------|-------------|---------|--------|--------------|-----------|
| SHEET NO. 25 | 45 SHEETS | F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | | 80 | * | BUREAU | 344 | 178 |
| CONTRACT NO. 66908 | | | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | | | |

*06-17BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & 1J



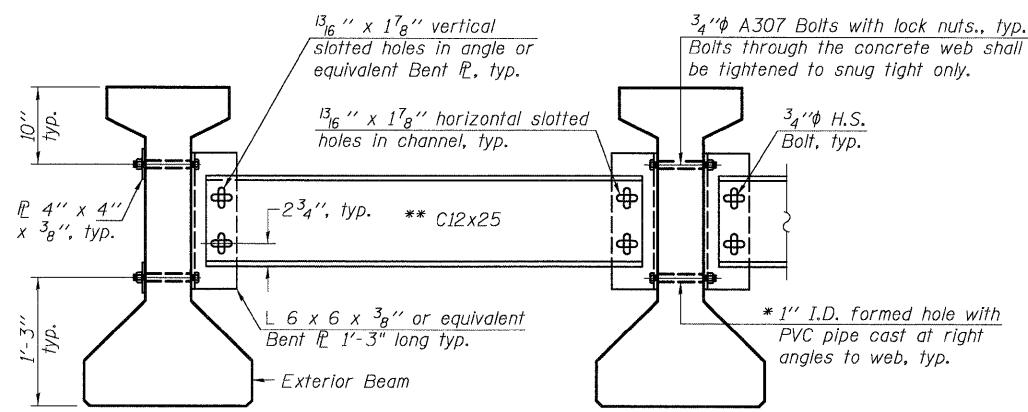
| INTERIOR BEAM MOMENT TABLE | | | | |
|----------------------------|--------------------|------------------------|-------------|-----------|
| | | 0.4 Sp. 1 0.6 Sp. 3 | Pier 1 or 2 | 0.5 Sp. 2 |
| I | (in ⁴) | 48648 | --- | 48648 |
| I' | (in ⁴) | 172192 | --- | 172192 |
| S _b | (in ³) | 3165 | --- | 3165 |
| S _b ' | (in ³) | 5916 | --- | 5916 |
| S _t | (in ³) | 2358 | --- | 2358 |
| S _t ' | (in ³) | 25514 | --- | 25514 |
| Q | (k/') | 1.02 | --- | 1.02 |
| M _Q | (k) | 440 | --- | 340 |
| s _Q | (k/') | 0.42 | 0.42 | 0.42 |
| M _s | (k) | 121 | 129 | 10 |
| M _t | (k) | 350 | 240 | 246 |
| M _i | (k) | 95 | 67 | 70 |

| INTERIOR BEAM REACTION TABLE | | | | |
|------------------------------|-----|-------|--------------------------------|--------------------------------|
| | | Abut. | Pier 1 Span 1 Pier 2 Span 3 | Pier 1 Span 2 Pier 2 Span 2 |
| R _Q | (k) | 29.9 | 29.9 | 26.3 |
| R _s | (k) | 10.0 | 12.6 | 12.6 |
| R _t | (k) | 32.6 | 20.0 | 20.0 |
| R _i | (k) | 8.9 | 5.5 | 5.7 |
| R _{Total} | (k) | 81.4 | 68.0 | 64.6 |

*The total R_sQ, R_t, and impact reactions are assumed to be distributed evenly to each bearing line at a pier regardless of the span ratios. The bearing design at a pier is based on the maximum reactions of either span.

- I: Non-composite moment of inertia of beam section (in.⁴).
- I': Composite moment of inertia of beam section (in.⁴).
- S_b: Non-composite section modulus for the bottom fiber of the prestressed beam (in.³).
- S_b': Composite section modulus for the bottom fiber of the prestressed beam (in.³).
- S_t: Non-composite section modulus for the top fiber of the prestressed beam (in.³).
- S_t': Composite section modulus for the top fiber of the prestressed beam (in.³).
- Q: Un-factored non-composite dead load (kips/ft.).
- M_Q: Un-factored moment due to non-composite dead load conservatively taken at 0.5 of the span (kip-ft.).
- s_Q: Un-factored long-term composite (superimposed) dead load (kips/ft.).
- M_s: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
- M_t: Un-factored live load moment on the composite section (kip-ft.).
- M_i: Un-factored moment due to impact on the composite section (kip-ft.).

FRAMING PLAN



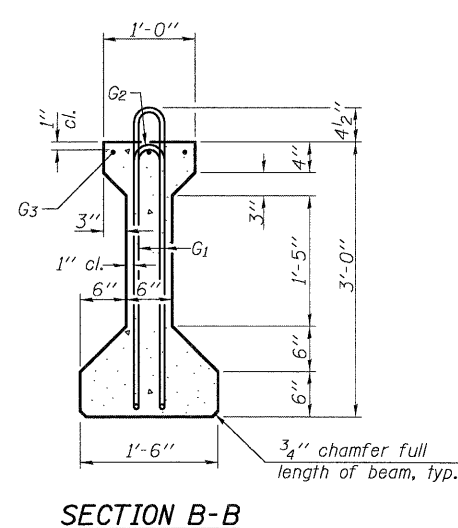
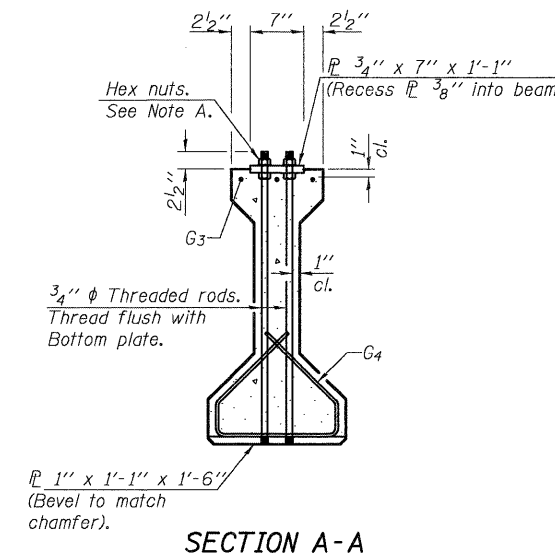
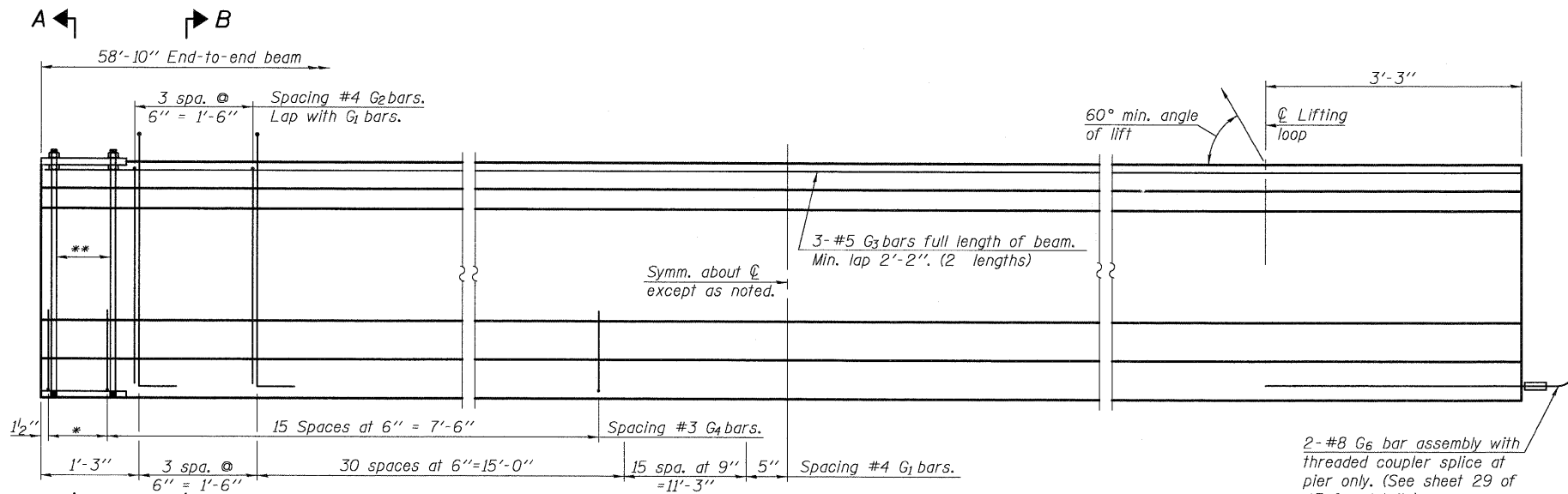
PERMANENT BRACING DETAILS

Notes:
 All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted. Two hardened washers are required for each set of oversized holes.
 All holes shall be 15/16" φ unless otherwise noted. 5/16" x 3" x 3" plate washers are required over all slotted holes.
 All bolts shall be galvanized according to AASHTO M232. Bracing shall be installed as beams are erected and tightened as soon as possible during erection.
 *Fabricator shall locate to miss strands within permissible tolerances.
 **Alternate C12x30 channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on lighter section. The alternate, if utilized, shall be provided at no extra cost to the Department.
 The cost of the permanent bracing as shown is included in the cost of Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36". Estimated weight of Structural Steel for one permanent brace = 196 pounds.

FRAMING PLAN
 SN 006-0172 (EB) & SN 006-0173 (WB)

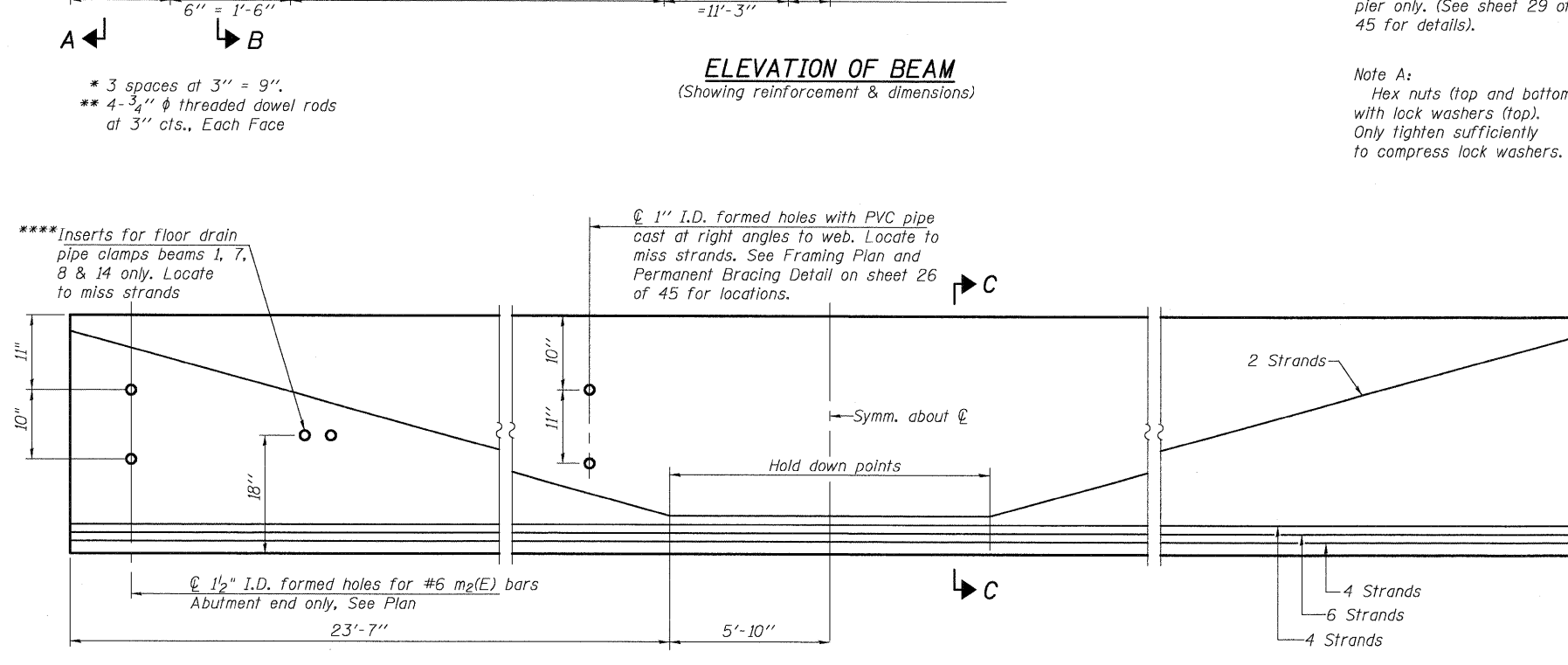
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|--|--|---------------------------|--|-----------------------------------|
| Coombe-Bloxdorf P.C. -CIVIL ENGINEERS- -STRUCTURAL ENGINEERS- -LAND SURVEYORS- Design Firm License No. 184-002703 | PROJECT NO. 05061 SCALE: 1/8" = 1'-0" DATE: 6/25/09 DESIGN BY: RM/MCB DRAWN BY: TFG CHECKED BY: MCB | SHEET NO. 26 45 SHEETS | F.A.I. RTE. 80 SECTION * COUNTY BUREAU CONTRACT NO. 66908 | TOTAL SHEETS 344 SHEET NO. 179 |
| | FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT *06-[7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & I] | | | |

PLOT DATE = 09/08/2009
 FILE NAME = ...060172_0173_66908-026-framing-plan.dgn
 USER NAME = EFC



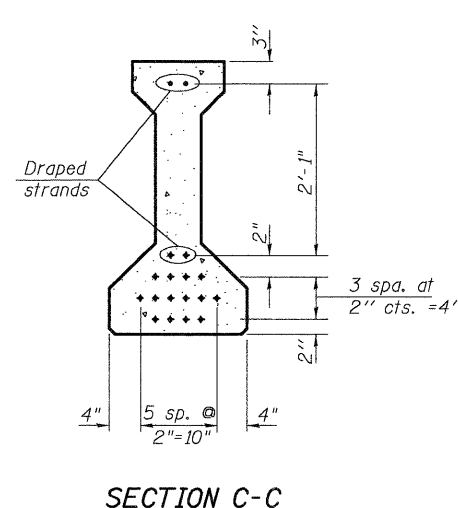
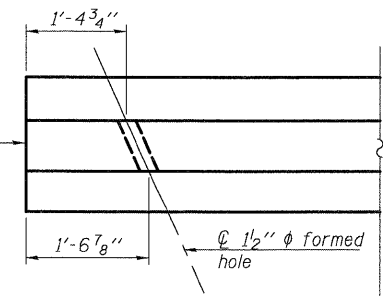
ELEVATION OF BEAM
(Showing reinforcement & dimensions)

Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



ELEVATION OF BEAM
(Showing prestressing steel)

****See Sheet 2 of 45 for floor drain locations.



*****BAR LIST ONE BEAM ONLY**

| Bar | No. | Size | Length | Shape |
|----------------|-----|------|--------|-------|
| G ₁ | 98 | #4 | 7'-5" | ∩L |
| G ₂ | 8 | #4 | 5'-8" | ∩ |
| G ₃ | 6 | #5 | 30'-6" | — |
| G ₄ | 38 | #3 | 4'-1" | ∩ |
| G ₅ | 2 | #8 | 6'-6" | U |

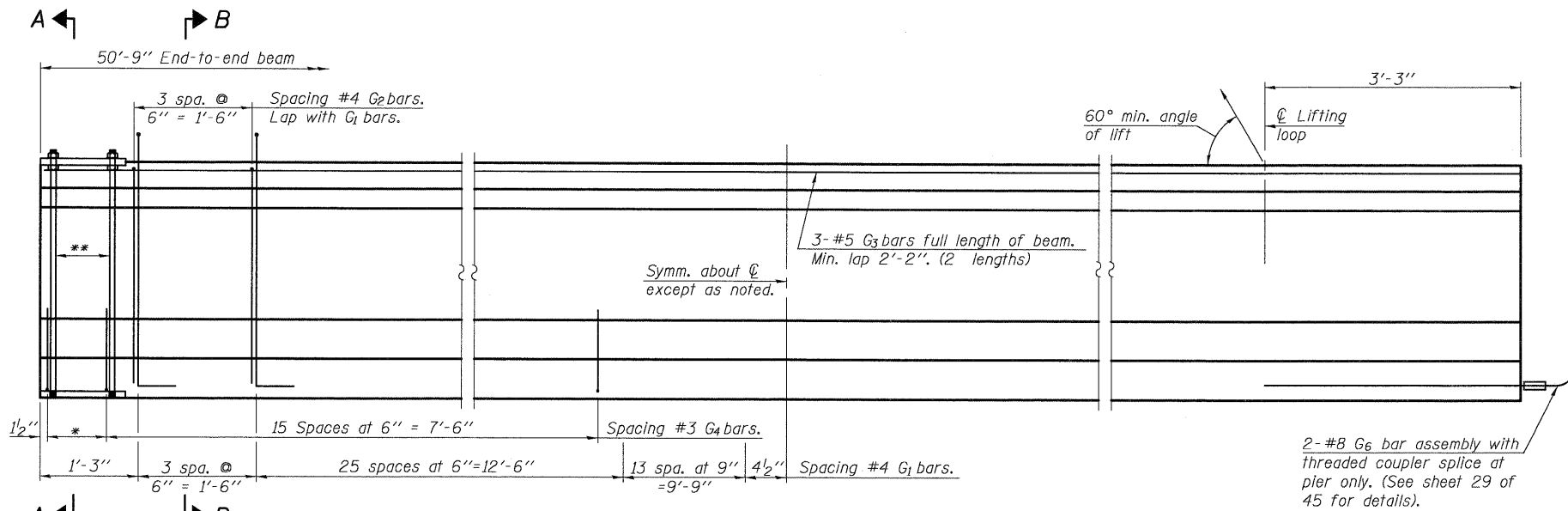
***For information only

Notes:
See sheet 29 of 45 for additional details and Bill of Material.
Required release strength, f'_{ci}, shall be 5000 psi.

**36" PPC I-BEAM SPANS 1 & 3
SN 006-0172 (EB) & SN 006-0173 (WB)**

| | | | | |
|---|--|---------------------------|--|-----------------------------------|
| <p>Coombe-Bloxdorf P.C. - CIVIL ENGINEERS - - STRUCTURAL ENGINEERS - - LAND SURVEYORS - Design Firm License No. 184-002703</p> | PROJECT NO. 05061 SCALE DATE 8/31/09 DESIGN BY RM/MCB DRAWN BY TFG CHECKED BY MCB | SHEET NO. 27 45 SHEETS | F.A.I. RTE. 80 SECTION * COUNTY BUREAU CONTRACT NO. 66908 | TOTAL SHEETS 344 SHEET NO. 180 |
| | FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT *06-I7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & IJ | | | |

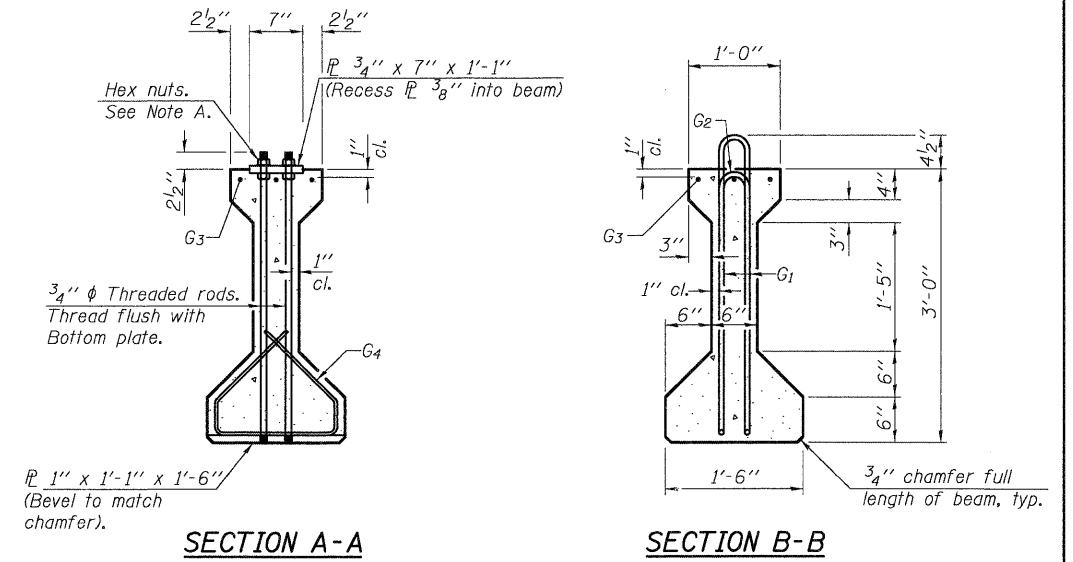
PLOT DATE = 09/08/2009
 FILE NAME = ..\0060172-0173-66908-027-ppc-beams-1-3.dgn
 USER NAME = CFC



ELEVATION OF BEAM
(Showing reinforcement & dimensions)

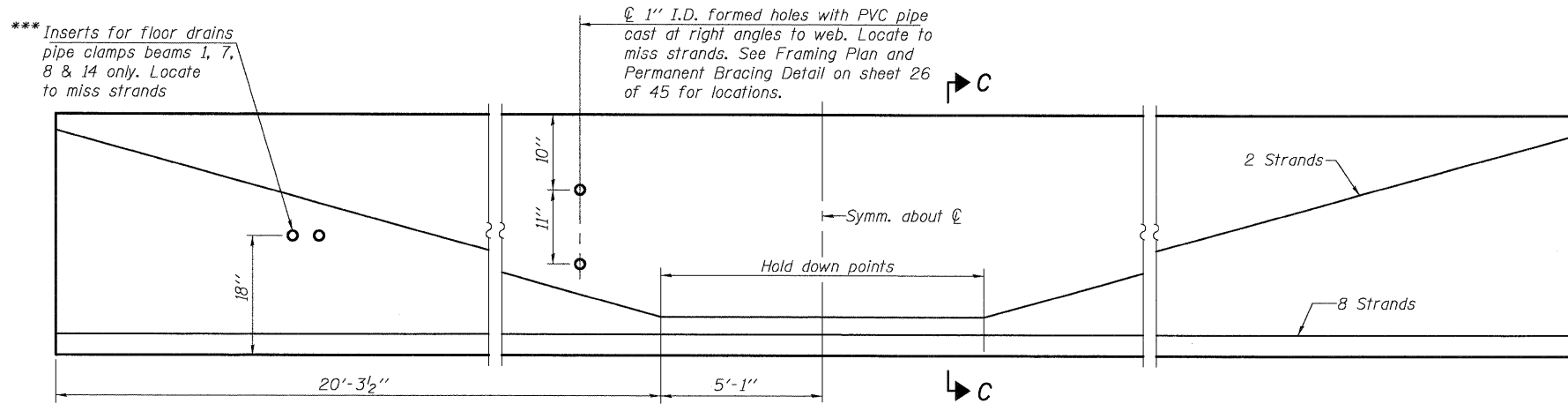
* 3 spaces at 3" = 9"
** 4-3/4" ϕ threaded dowel rods at 3" cts., Each Face

Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



SECTION A-A

SECTION B-B



ELEVATION OF BEAM
(Showing prestressing steel)

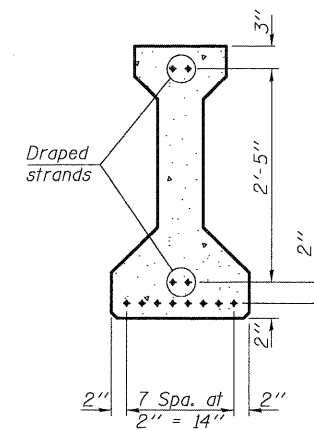
***See Sheet 1 of 45 for floor drain locations.

*****BAR LIST**
ONE BEAM ONLY

| Bar | No. | Size | Length | Shape |
|----------------|-----|------|--------|-------|
| G ₁ | 84 | #4 | 7'-5" | ∩L |
| G ₂ | 8 | #4 | 5'-8" | ∩ |
| G ₃ | 6 | #5 | 26'-6" | — |
| G ₄ | 38 | #3 | 4'-1" | ∩ |
| G ₆ | 4 | #8 | 6'-6" | ∩ |

***For information only

Notes:
See sheet 29 of 45 for additional details and Bill of Material.
Required release strength, f'ci, shall be 5000 psi.



SECTION C-C

PLOT DATE = 09/06/2009
FILE NAME = \0060172-0173-66908-028-ppc-beam-2.dgn
USER NAME = TFG

PI-4-36 10-1-08

CB Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

| | |
|-------------|---------|
| PROJECT NO. | 05061 |
| SCALE | |
| DATE | 6/25/09 |
| DESIGN BY | RM/MCB |
| DRAWN BY | TFG |
| CHECKED BY | MCB |

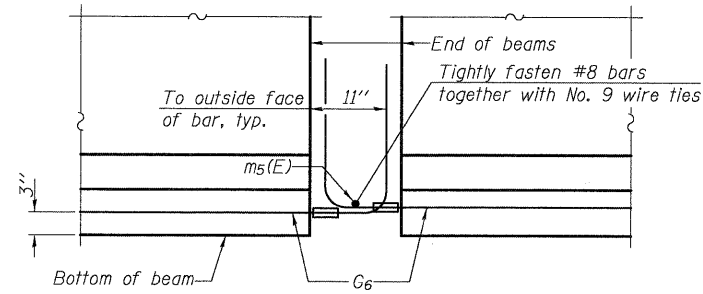
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|---|---------|--------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 80 | * | BUREAU | 344 | 181 |
| CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | |

*06-L7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & 1J

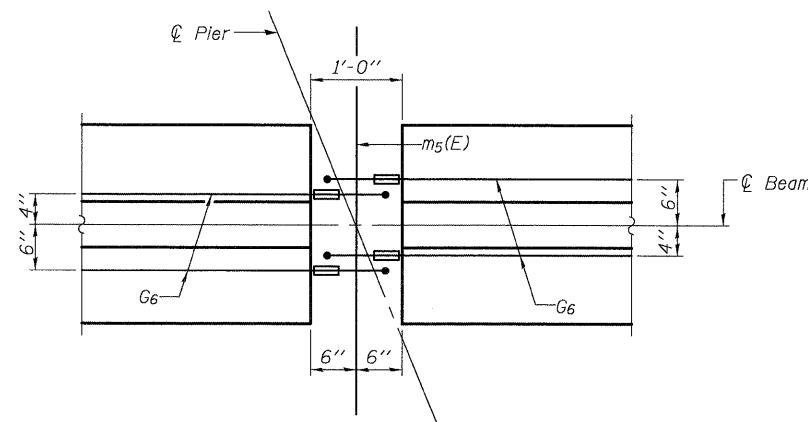
36" PPC I-BEAM SPAN 2
SN 006-0172 (EB) & SN 006-0173 (WB)

NOTES

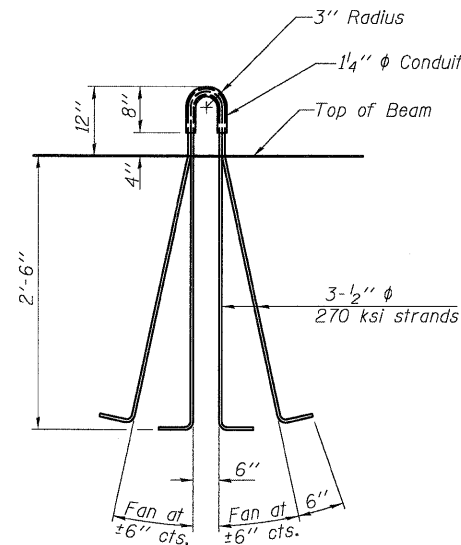
Inserts for $\frac{3}{4}$ " ϕ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be $\frac{1}{2}$ " and the nominal cross-sectional area shall be 0.153 sq. in. Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions). A minimum $2\frac{1}{2}$ " ϕ lifting pin shall be used to engage the lifting loops during handling. Tilt G_6 bars when necessary to maintain $1\frac{1}{2}$ " clearance. The top and bottom plates shall be AASHTO M270 Grade 50. The bottom plates and studs shall be galvanized according to AASHTO M111. Threaded rods shall be ASTM F 1554 Grade 55. The G_6 bar assembly shall have the threaded ends oversized to ensure no reduction in cross sectional area after threading. The coupler splice shall be capable of developing 125 percent of the yield strength of the reinforcement bar.



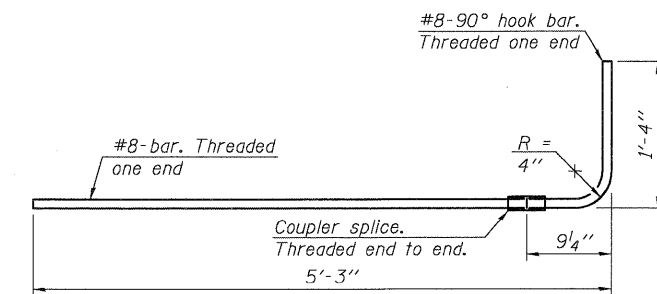
ELEVATION OF BEAM AT PIER



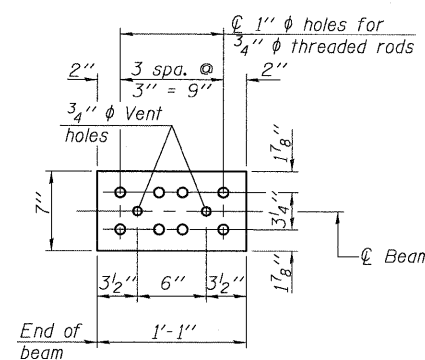
PLAN OF BEAM AT PIER



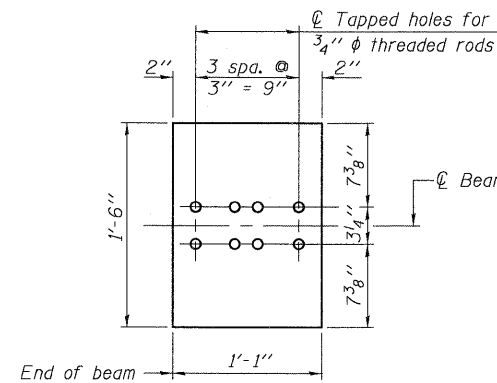
LIFTING LOOP DETAIL



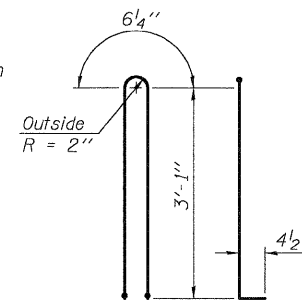
G6 BAR ASSEMBLY



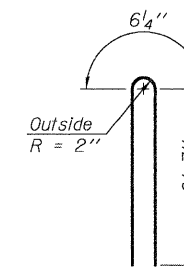
TOP PLATE



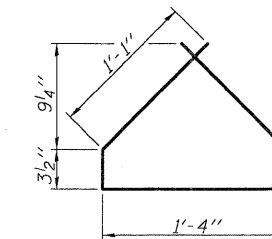
BOTTOM PLATE



BAR G1



BAR G2



BAR G4

BILL OF MATERIAL

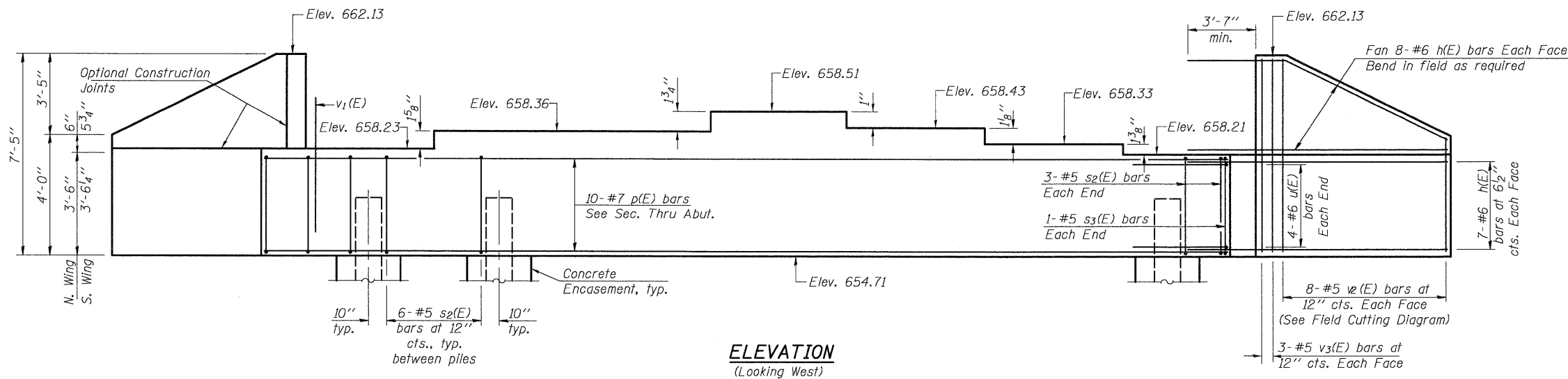
| Item | Unit | Total |
|---|------|-------|
| Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36" | Ft. | 2358 |

**36" PPC I-BEAM DETAILS
SN 006-0172 (EB) & SN 006-0173 (WB)**

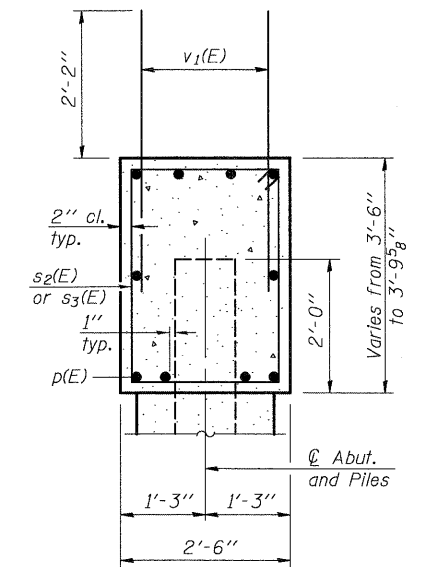
| | | | | | | | |
|---|--------------------------------|---|--------------------|---------|--------|--------------|-----------|
| <p>Coombe-Bloxdorf P.C. - CIVIL ENGINEERS - - STRUCTURAL ENGINEERS - - LAND SURVEYORS - Design Firm License No. 184-002703</p> | PROJECT NO. 05061 | SHEET NO. 29 | F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | DATE 8/05/09 | | 80 | * | BUREAU | 344 | 182 |
| | DESIGN BY RM/MCB | 45 SHEETS | CONTRACT NO. 66908 | | | | |
| | DRAWN BY TFG CHECKED BY MCB | FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | | |

*06-L7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & 11

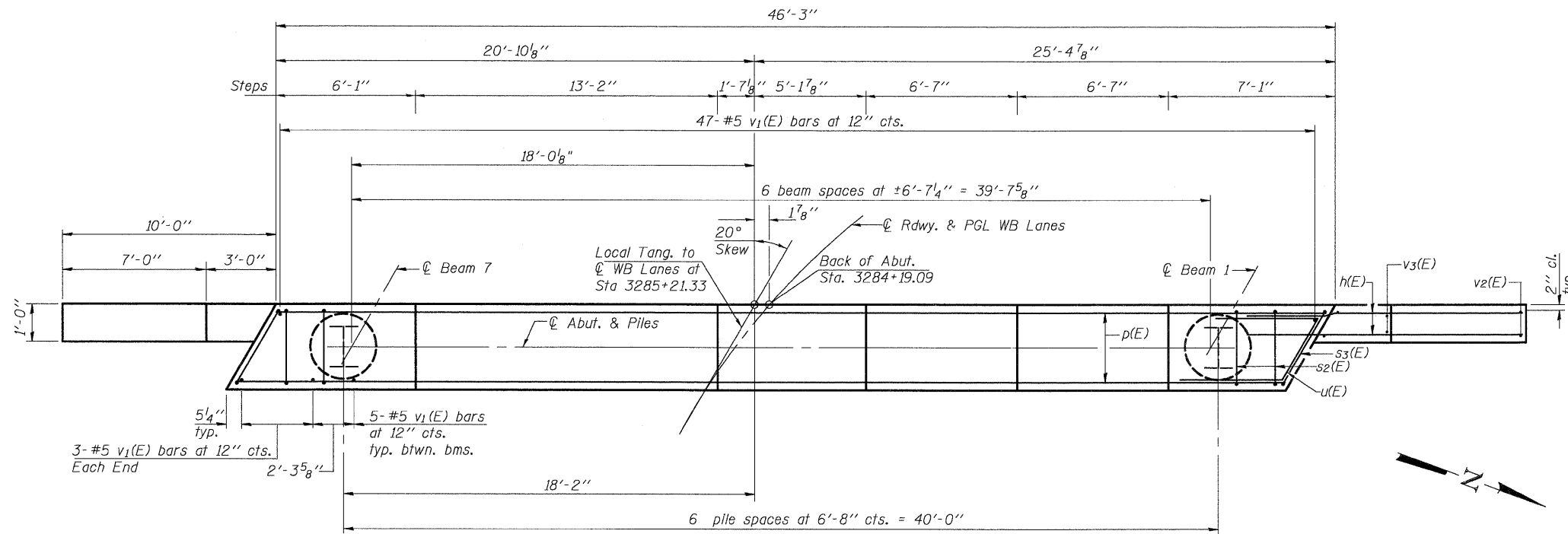
Notes:
Four steps monolithically with cap.



ELEVATION
(Looking West)



SEC. THRU ABUT.
(dim. at right L's)



PLAN

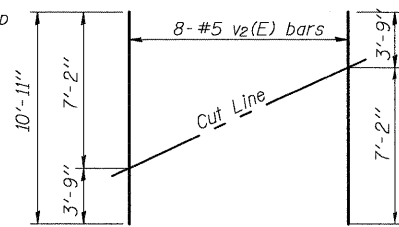
BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|----------------------------------|-----|---------|---------|-------|
| h(E) | 60 | #6 | 13'-7" | — |
| p(E) | 10 | #7 | 45'-11" | — |
| s2(E) | 42 | #5 | 11'-7" | □ |
| s3(E) | 2 | #5 | 11'-11" | □ |
| u(E) | 8 | #6 | 9'-4" | ┌ |
| v1(E) | 83 | #5 | 4'-4" | — |
| v2(E) | 16 | #5 | 10'-11" | — |
| v3(E) | 12 | #5 | 7'-2" | — |
| Structure Excavation | | Cu. Yd. | 125 | |
| Concrete Structures | | Cu. Yd. | 20.4 | |
| Reinforcement Bars, Epoxy Coated | | Pound | 3450 | |
| Furnishing Steel Piles, HP12x53 | | Foot | 354 | |
| Driving Piles | | Foot | 354 | |
| Test Pile, Steel HP12x53 | | Each | 1 | |
| Concrete Encasement | | Cu. Yd. | 2.4 | |

For details of piles and Concrete Encasement, see sheet 38 of 45.

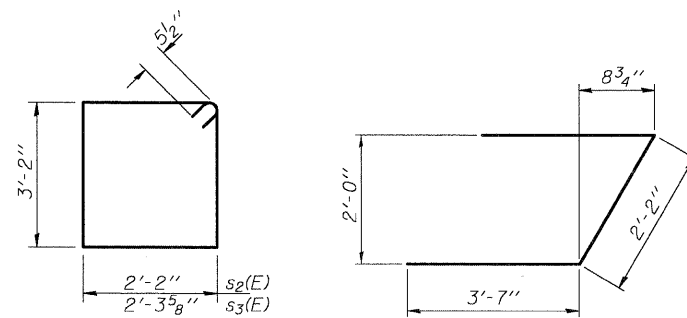
PILE DATA

Type: Steel HP12 x 53
Nominal Required Bearing: 360 kip
Allowable Resistance Available: 120 kip
Est. Length: 59 ft
No. Production Piles: 6
No. Test Piles: 1



FIELD CUTTING DIAGRAM

Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s2(E) & s3(E)

BAR u(E)

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

| | |
|-------------|---------|
| PROJECT NO. | 05061 |
| SCALE | |
| DATE | 8/05/09 |
| DESIGN BY | RM/MCB |
| DRAWN BY | TFG |
| CHECKED BY | MCR |

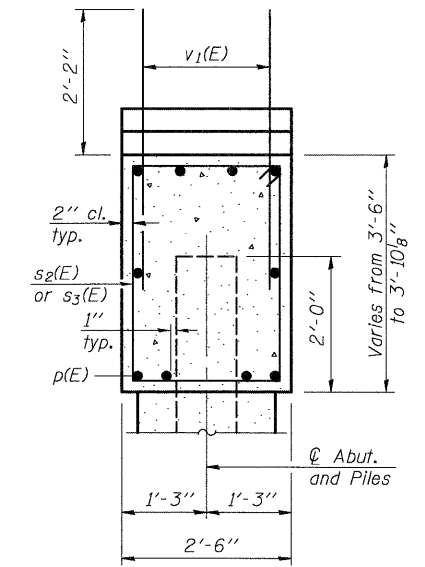
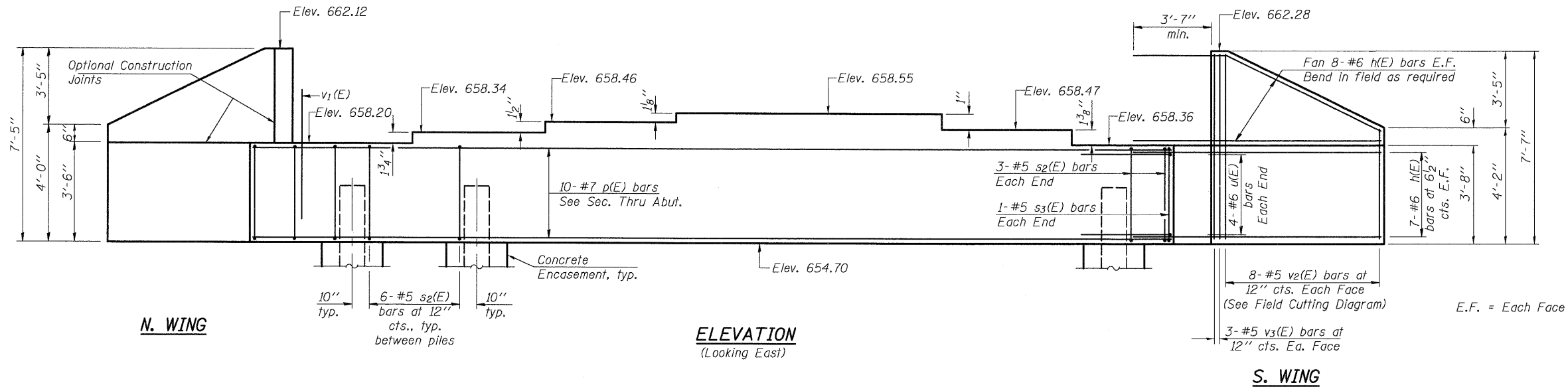
| | |
|--------------|-----------|
| SHEET NO. 30 | 45 SHEETS |
|--------------|-----------|

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---------|--------|--------------|-----------|
| 80 | * | BUREAU | 344 | 183 |
| CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | |

*06-L7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & IJ

PLOT DATE = 09/08/2009
 FILE NAME = J:\0606172_0173-66908-030-w-abut-wb.dgn
 USER = JMC
 PLOTTER = HP DesignJet 2450

Notes:
Pour steps monolithically with cap.



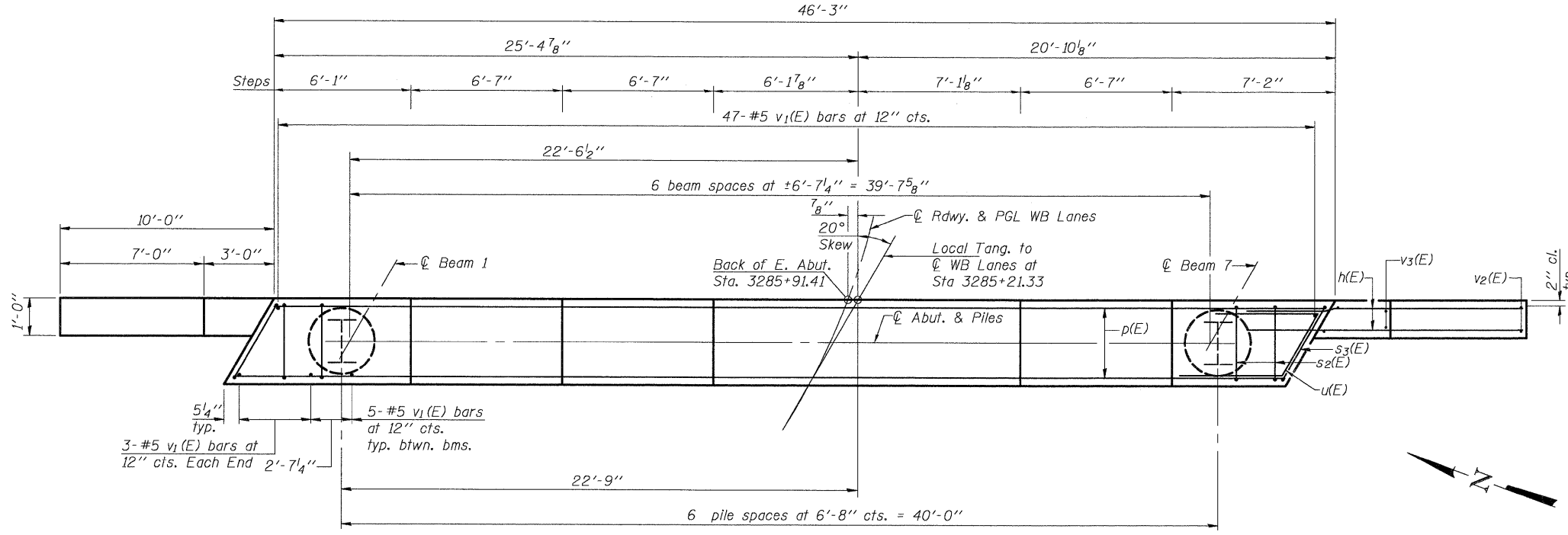
SEC. THRU ABUT.
(dim. at right L's)

BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|----------------------------------|-----|---------|---------|-------|
| h(E) | 60 | #6 | 13'-7" | — |
| p(E) | 10 | #7 | 45'-11" | — |
| s2(E) | 42 | #5 | 11'-7" | □ |
| s3(E) | 2 | #5 | 11'-11" | □ |
| u(E) | 8 | #6 | 9'-4" | ┘ |
| v1(E) | 83 | #5 | 4'-4" | — |
| v2(E) | 16 | #5 | 10'-11" | — |
| v3(E) | 12 | #5 | 7'-2" | — |
| Structure Excavation | | Cu. Yd. | 125 | |
| Concrete Structures | | Cu. Yd. | 20.4 | |
| Reinforcement Bars, Epoxy Coated | | Pound | 3450 | |
| Furnishing Steel Piles, HP12x53 | | Foot | 384 | |
| Driving Piles | | Foot | 384 | |
| Test Pile, Steel HP12x53 | | Each | 1 | |
| Concrete Encasement | | Cu. Yd. | 2.4 | |

For details of piles and Concrete Encasement, see sheet 38 of 45.

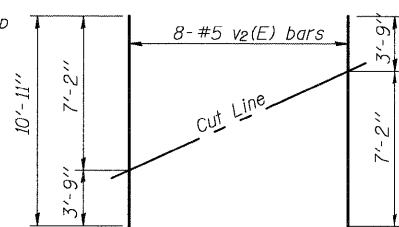
**EAST ABUTMENT WB
SN 006-0173 (WB)**



PLAN

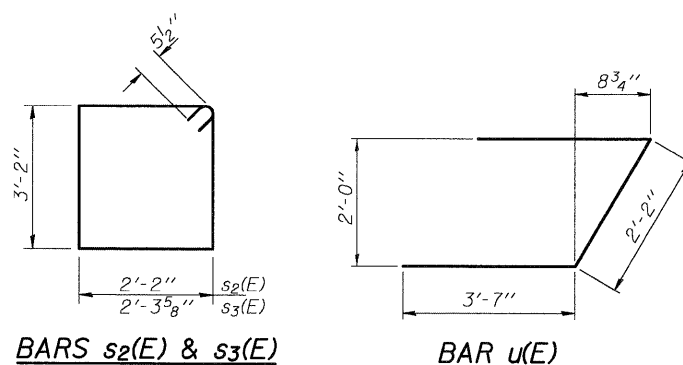
PILE DATA

Type: Steel HP12 x 53
Nominal Required Bearing: 360 kip
Allowable Resistance Available: 120 kip
Est. Length: 64 ft.
No. Production Piles: 6
No. Test Piles: 1



FIELD CUTTING DIAGRAM

Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s2(E) & s3(E)

BAR u(E)

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

| | |
|-------------|---------|
| PROJECT NO. | 05061 |
| SCALE | |
| DATE | 8/05/09 |
| DESIGN BY | RM/MCB |
| DRAWN BY | TFG |
| CHECKED BY | MCB |

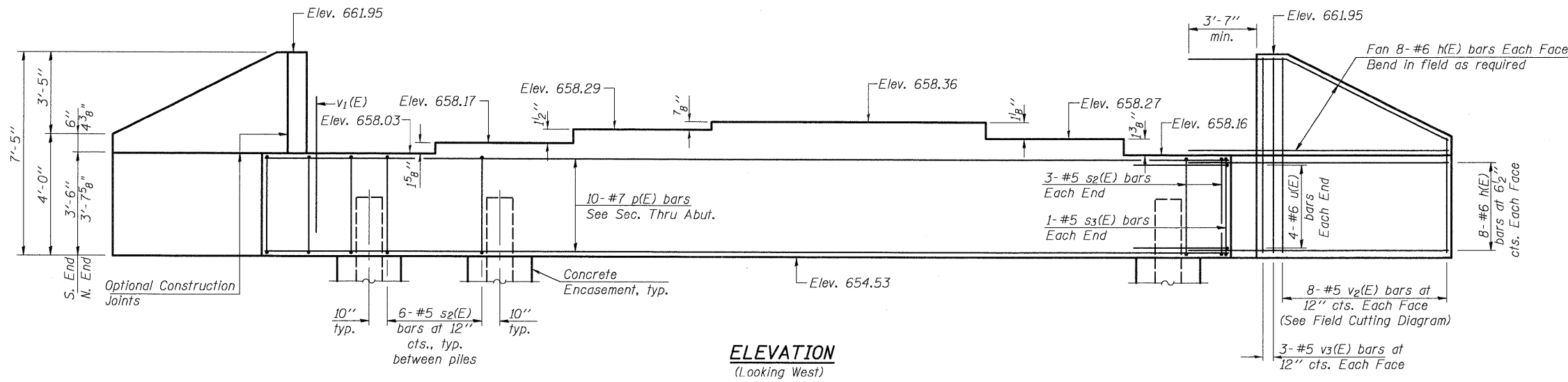
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|---|--------------------|-----------|---------------|------------------|---------------|
| SHEET NO. 31 | F.A.I. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 184 |
| 45 SHEETS | CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | | |

*06-L7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & 1J

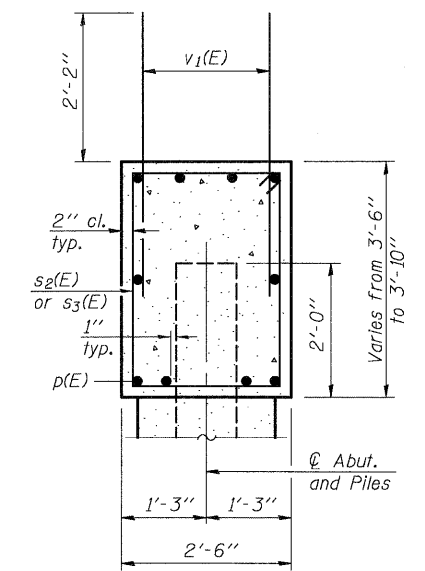
PLOT DATE = 09/08/2009
 FILE NAME = ...06060172.0173-66908-031-e-abut-wb.dgn
 PLOT SCALE = 1/8" = 1'-0"
 USER NAME = GFC

AI-R 10-1-08

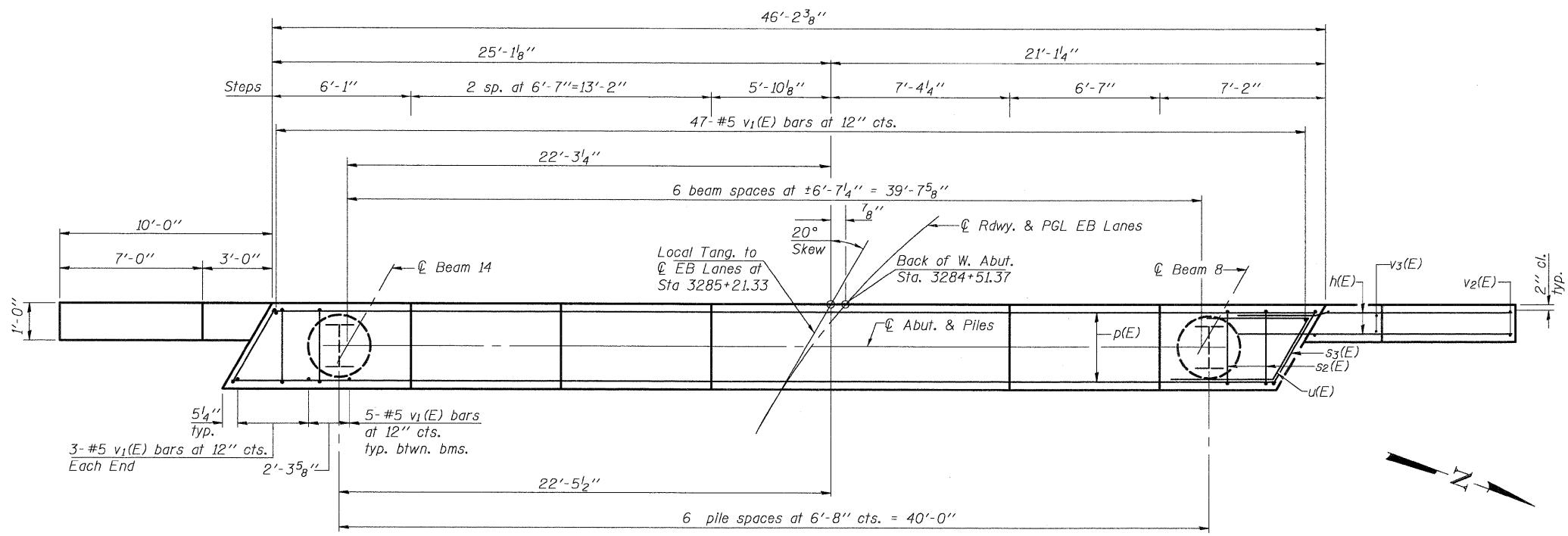
Notes:
Four steps monolithically with cap.



ELEVATION
(Looking West)



SEC. THRU ABUT.
(dim. at right L's)



PLAN

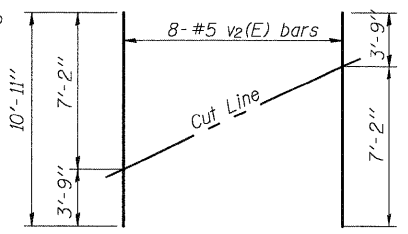
BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|----------------------------------|-----|---------|---------|-------|
| h(E) | 60 | #6 | 13'-7" | — |
| p(E) | 10 | #7 | 45'-11" | — |
| s2(E) | 42 | #5 | 11'-7" | □ |
| s3(E) | 2 | #5 | 11'-11" | □ |
| u(E) | 8 | #6 | 9'-4" | ┌ |
| v1(E) | 83 | #5 | 4'-4" | — |
| v2(E) | 16 | #5 | 10'-11" | — |
| v3(E) | 12 | #5 | 7'-2" | — |
| Structure Excavation | | Cu. Yd. | 125 | |
| Concrete Structures | | Cu. Yd. | 20.4 | |
| Reinforcement Bars, Epoxy Coated | | Pound | 3450 | |
| Furnishing Steel Piles, HP12x53 | | Foot | 354 | |
| Driving Piles | | Foot | 354 | |
| Test Pile, Steel HP12x53 | | Each | 1 | |
| Concrete Encasement | | Cu. Yd. | 2.4 | |

For details of piles and Concrete Encasement, see sheet 38 of 45.

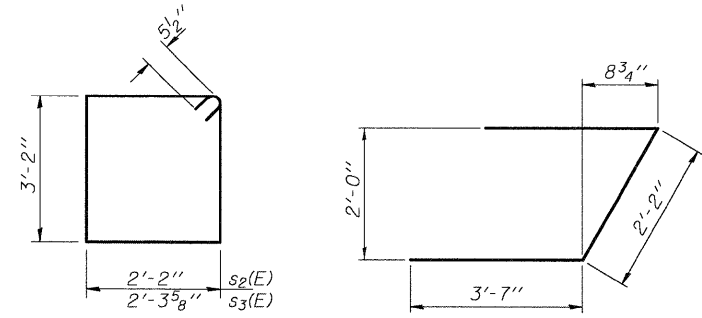
PILE DATA

Type: Steel HP12 x 53
Nominal Required Bearing: 360 kip
Allowable Resistance Available: 120 kip
Est. Length: 59 ft
No. Production Piles: 6
No. Test Piles: 1



FIELD CUTTING DIAGRAM

Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s2(E) & s3(E)

BAR u(E)

CB Coombe-Bloxdorf P.C.
- CIVIL ENGINEERS -
- STRUCTURAL ENGINEERS -
- LAND SURVEYORS -
Design Firm License No. 184-002703

| | |
|-------------|---------|
| PROJECT NO. | 05061 |
| SCALE | |
| DATE | 8/05/09 |
| DESIGN BY | RM/MCB |
| DRAWN BY | TFG |
| CHECKED BY | MGB |

| | |
|--------------|-----------|
| SHEET NO. 32 | 45 SHEETS |
|--------------|-----------|

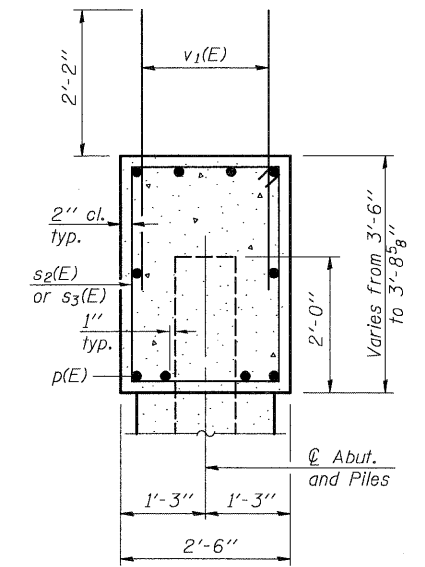
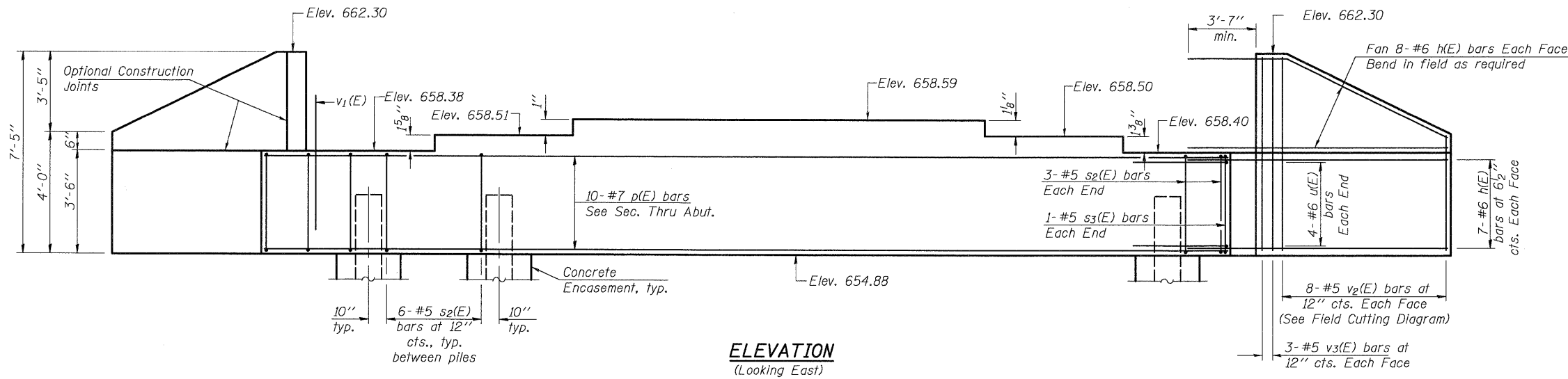
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---------|--------|--------------|-----------|
| 80 | * | BUREAU | 344 | 185 |
| CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | |

*06-L7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & IJ

PLOT DATE = 09/08/2009
 FILE NAME = \\0603172.0173-66908-032-w-abut-eb.dgn
 USER NAME = GCL

AI-R 10-1-08

Notes:
 Pour steps monolithically with cap.

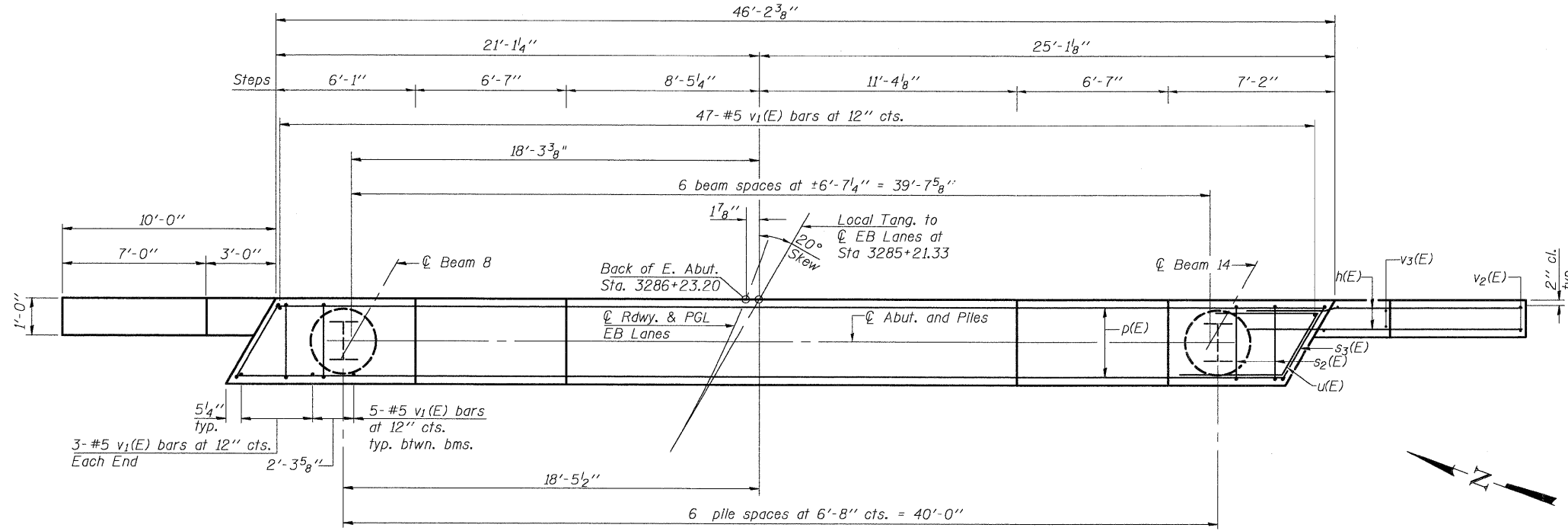


SEC. THRU ABUT.
 (dim. at right L's)

BILL OF MATERIAL

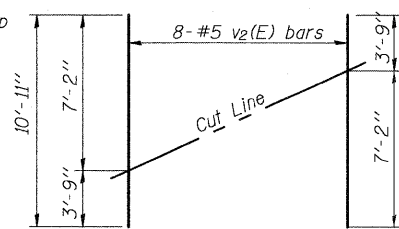
| Bar | No. | Size | Length | Shape |
|----------------------------------|-----|---------|---------|-------|
| h(E) | 60 | #6 | 13'-7" | — |
| p(E) | 10 | #7 | 45'-11" | — |
| s ₂ (E) | 42 | #5 | 11'-7" | □ |
| s ₃ (E) | 2 | #5 | 11'-11" | □ |
| u(E) | 8 | #6 | 9'-4" | ┘ |
| v ₁ (E) | 83 | #5 | 4'-4" | — |
| v ₂ (E) | 16 | #5 | 10'-11" | — |
| v ₃ (E) | 12 | #5 | 7'-2" | — |
| Structure Excavation | | Cu. Yd. | 125 | |
| Concrete Structures | | Cu. Yd. | 20.4 | |
| Reinforcement Bars, Epoxy Coated | | Pound | 3450 | |
| Furnishing Steel Piles, HP12x53 | | Foot | 384 | |
| Driving Piles | | Foot | 384 | |
| Test Pile, Steel HP12x53 | | Each | 1 | |
| Concrete Encasement | | Cu. Yd. | 2.4 | |

For details of piles and Concrete Encasement, see sheet 38 of 45.



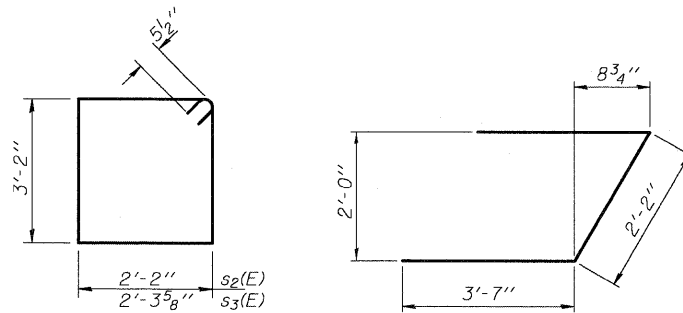
PILE DATA

Type: Steel HP12 x 53
 Nominal Required Bearing: 360 kip
 Allowable Resistance Available: 120 kip
 Est. Length: 64 ft.
 No. Production Piles: 6
 No. Test Piles: 1



FIELD CUTTING DIAGRAM

Order v₂(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s₂(E) & s₃(E)

BAR u(E)

Coombe-Bloxdorf P.C.
 - CIVIL ENGINEERS-
 - STRUCTURAL ENGINEERS-
 - LAND SURVEYORS-
 Design Firm License No. 184-002703

PROJECT NO. 05061
 SCALE
 DATE 6/25/09
 DESIGN BY RM/MCB
 DRAWN BY TFG
 CHECKED BY MCB

SHEET NO. 33
 45 SHEETS

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---------|--------|--------------|-----------|
| 80 | * | BUREAU | 344 | 186 |
| CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | |

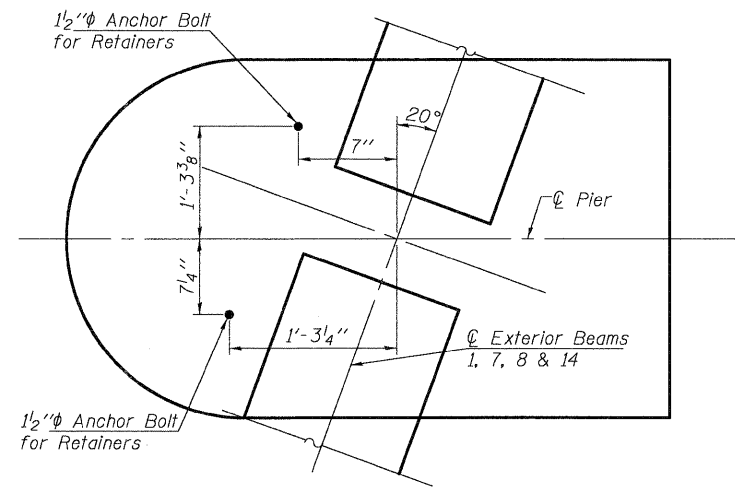
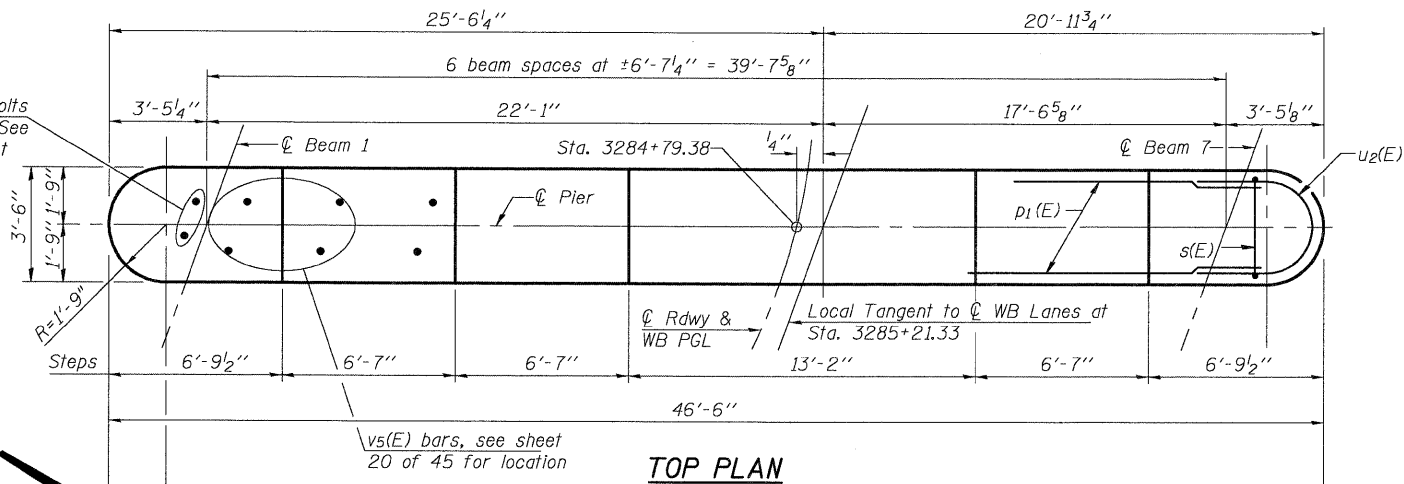
*06-[7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & 1]

PLOT DATE = 09/08/2009
 FILE NAME = s:\060172\0175-66908-033-e-abut-eb.dgn
 USER NAME = BFC

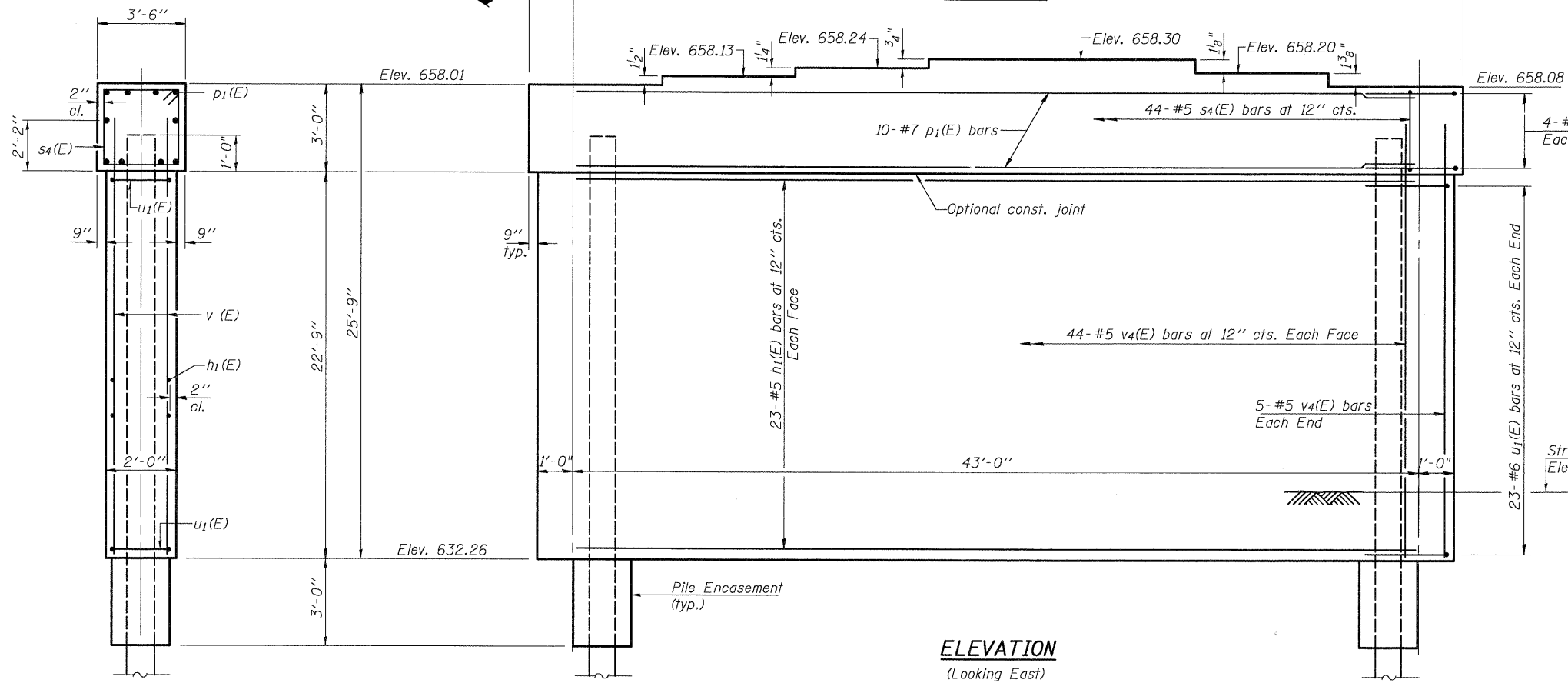
AI-R 10-1-08

Notes:
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 For details of piles, see sheet 38 of 45.

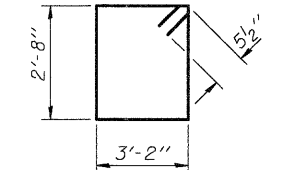
1/2"φ Anchor Bolts
 for Retainers, See
 Detail this sheet
 for location



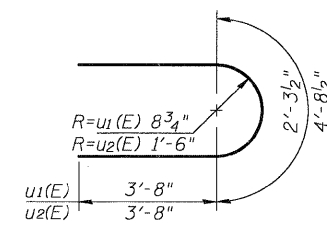
ANCHOR BOLT LOCATION DETAIL



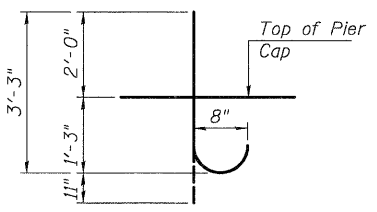
ELEVATION
 (Looking East)



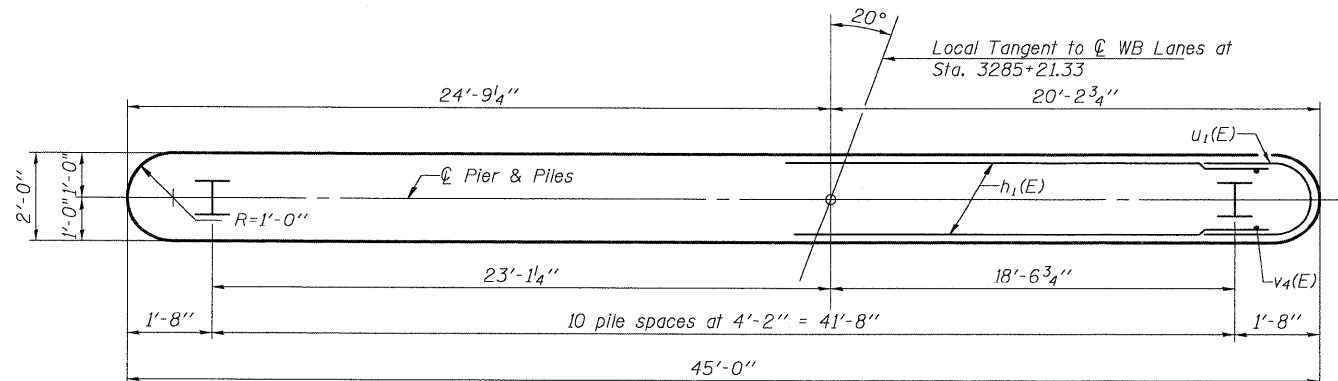
BAR s4(E)



BARS u1(E) & u2(E)



BAR v5(E)



PLAN

BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|--|-----|------|---------|-------|
| h1(E) | 46 | #5 | 43'-0" | — |
| p1(E) | 10 | #7 | 43'-0" | — |
| s4(E) | 44 | #5 | 12'-7" | □ |
| u1(E) | 46 | #6 | 9'-8" | U |
| u2(E) | 8 | #6 | 12'-1" | U |
| v4(E) | 98 | #5 | 24'-11" | — |
| v5(E) | 36 | #8 | 4'-2" | U |
| Concrete Structures | | | Cu. Yd. | 94.1 |
| Reinforcement Bars, Epoxy Coated | | | Pound | 7280 |
| Furnishing Steel Piles, HP12x53 | | | Foot | 760 |
| Driving Piles | | | Foot | 760 |
| Test Pile, Steel HP12x53 | | | Each | 1 |
| Underwater Structure Excavation | | | Each | 1 |
| Protection-Location 1 Concrete Encasement | | | Cu. Yd. | 3.8 |

**PIER 1 WB
 SN 006-0173 (WB)**

PILE DATA

Type: Steel HP12 x 53
 Nominal Required Bearing: 315 kip
 Allowable Resistance Available: 105 kip
 Est. Length: 76 ft.
 No. Production Piles: 10
 No. Test Piles: 1

NOTE

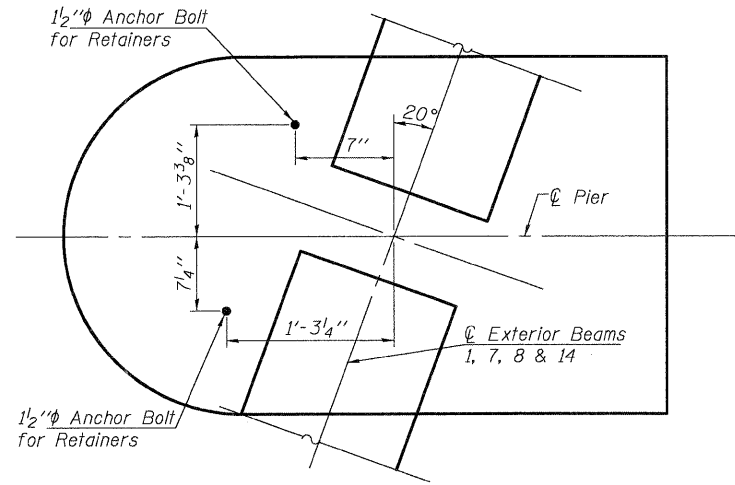
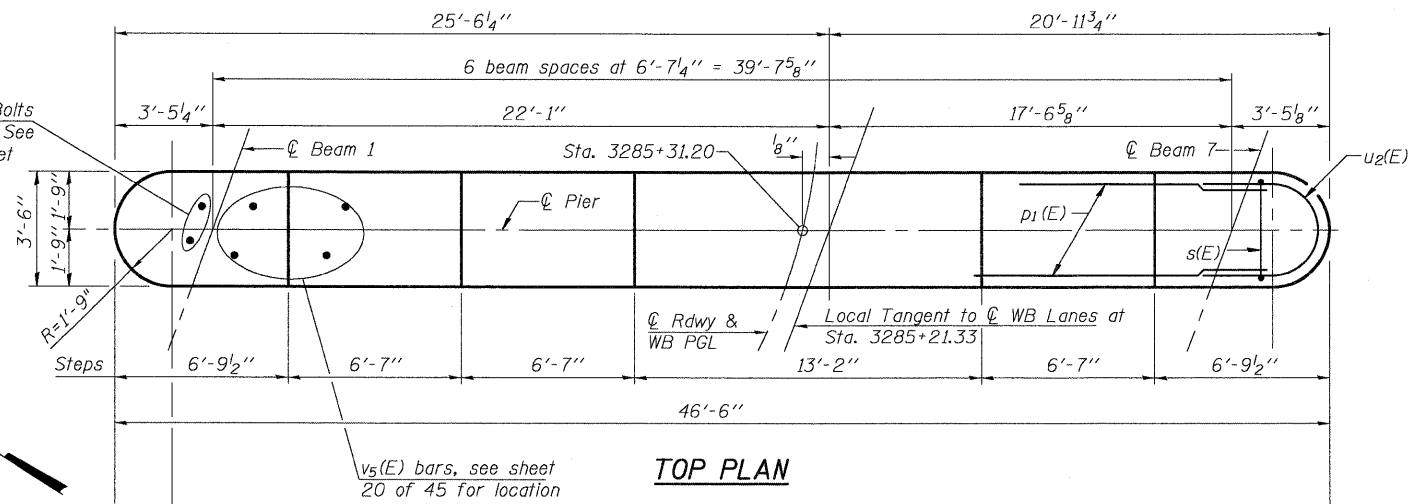
If a portion of the pier wall or concrete encasement is under water, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.

PLOT DATE = 09/08/2009
 FILE NAME = \\06080172.0173-66908-034-pc-1-pier-1-wb.dgn
 USER NAME = TFG

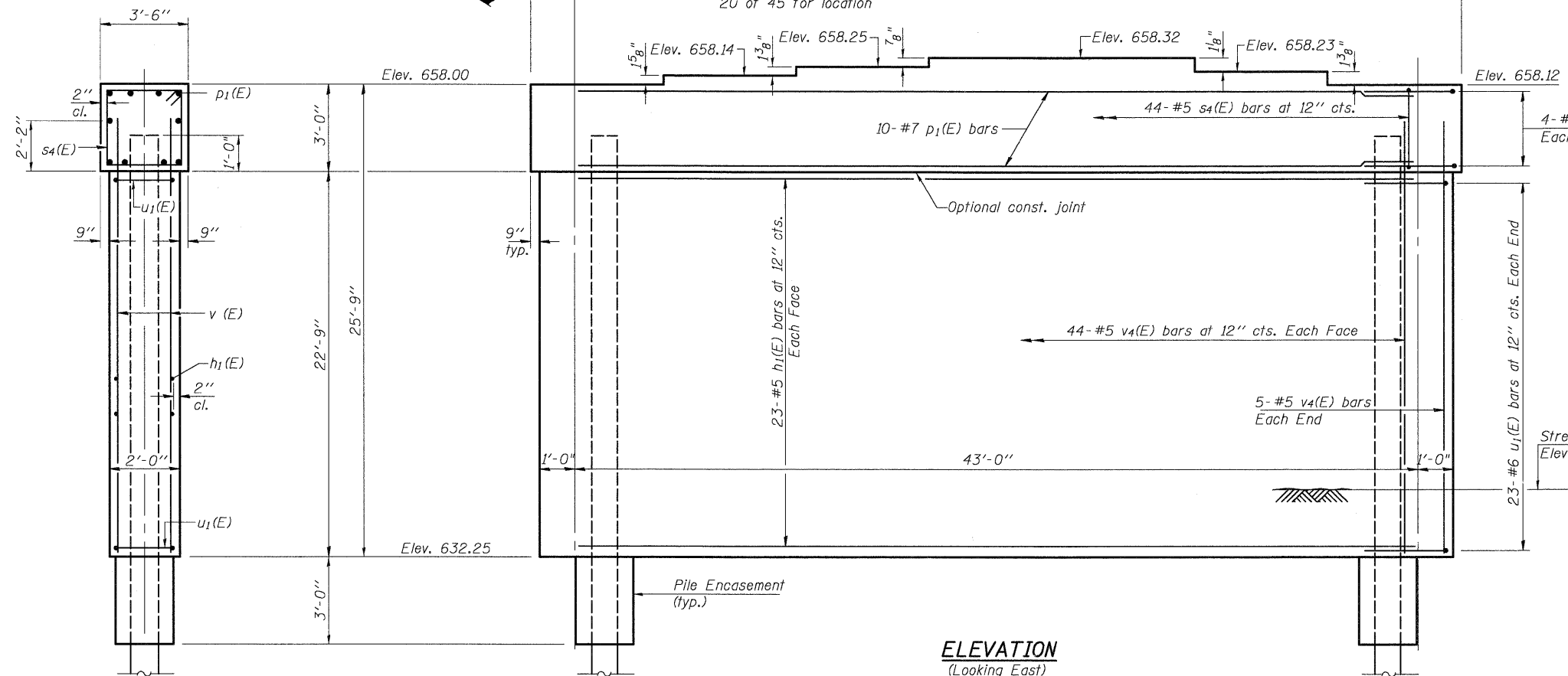
| | | | | |
|--|--|---------------------------|--|-----------------------------------|
| Coombe-Bloxdorf P.C. - CIVIL ENGINEERS - - STRUCTURAL ENGINEERS - - LAND SURVEYORS - Design Firm License No. 184-002703 | PROJECT NO. 05061 SCALE DATE 8/05/09 DESIGN BY RM/MCB DRAWN BY TFG CHECKED BY MCB | SHEET NO. 34 45 SHEETS | F.A.I. RTE. 80 SECTION * COUNTY BUREAU CONTRACT NO. 66908 | TOTAL SHEETS 344 SHEET NO. 187 |
| | FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | |
| | *06-L7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & 11 | | | |

Notes:
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 For details of piles, see sheet 38 of 45.

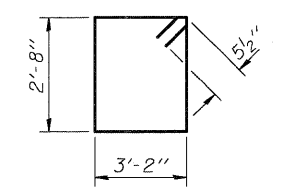
1/2" φ Anchor Bolts
 for Retainers, See
 Detail this sheet
 for location



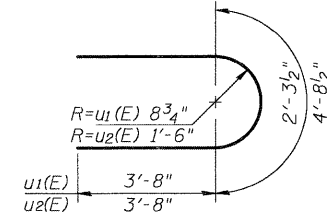
ANCHOR BOLT LOCATION DETAIL



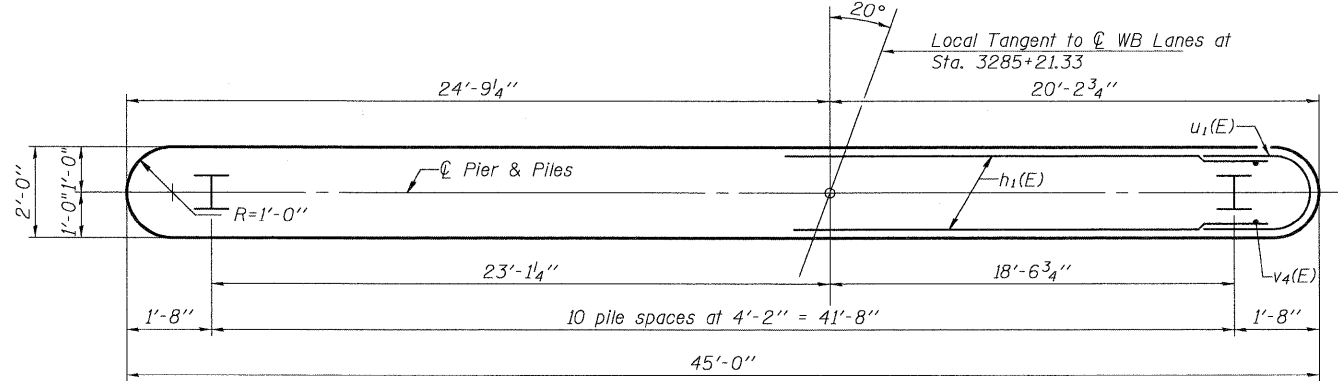
ELEVATION
 (Looking East)



BAR s4(E)



BARS u1(E) & u2(E)



PLAN

END VIEW

PILE DATA

Type: Steel HP12 x 53
 Nominal Required Bearing: 315 kip
 Allowable Resistance Available: 105 kip
 Est. Length: 74 ft.
 No. Production Piles: 10
 No. Test Piles: 1

NOTE

If a portion of the pier wall or concrete encasement is under water, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.

BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|---|-----|------|---------|-------|
| h1(E) | 46 | #5 | 43'-0" | — |
| p1(E) | 10 | #7 | 43'-0" | — |
| s4(E) | 44 | #5 | 12'-7" | □ |
| u1(E) | 46 | #6 | 9'-8" | U |
| u2(E) | 8 | #6 | 12'-1" | U |
| v4(E) | 98 | #5 | 24'-11" | — |
| v5(E) | 36 | #8 | 4'-2" | U |
| Concrete Structures | | | Cu. Yd. | 94.1 |
| Reinforcement Bars, Epoxy Coated | | | Pound | 7280 |
| Furnishing Steel Piles, HP12x53 | | | Foot | 740 |
| Driving Piles | | | Foot | 740 |
| Test Pile, Steel HP12x53 | | | Each | 1 |
| Underwater Structure Excavation Protection-Location 2 | | | Each | 1 |
| Concrete Encasement | | | Cu. Yd. | 3.8 |

**PIER 2 WB
 SN 006-0173 (WB)**

PLOT DATE = 09/06/2009
 PLOT SCALE = 1/8"=1'-0"
 USER NAME = CFC

Coombe-Bloxdorf P.C.
 - CIVIL ENGINEERS -
 - STRUCTURAL ENGINEERS -
 - LAND SURVEYORS -
 Design Firm License No. 184-002703

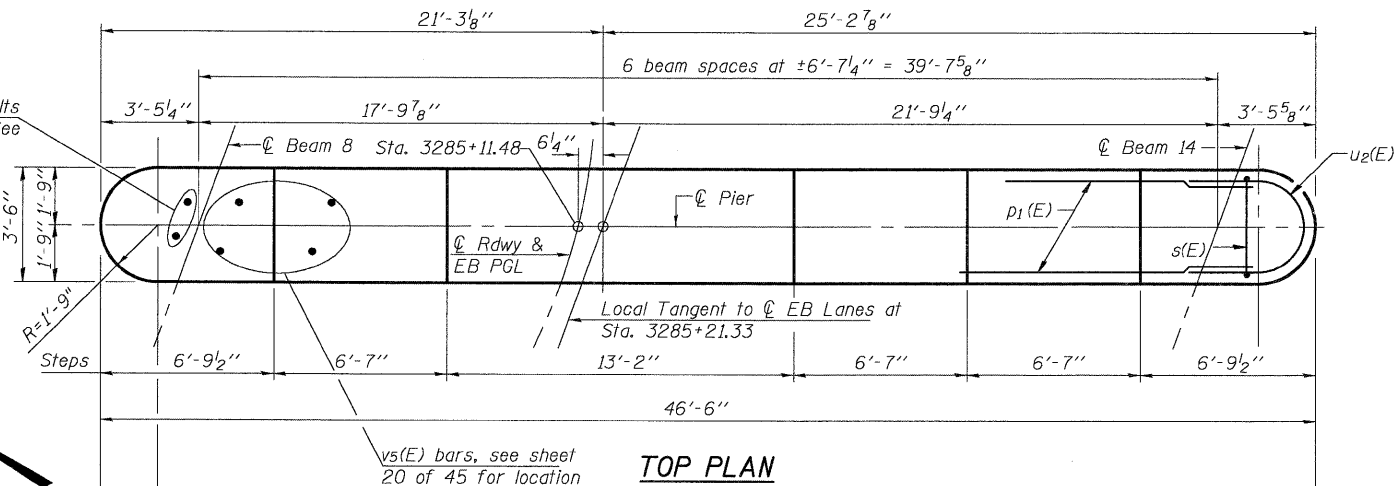
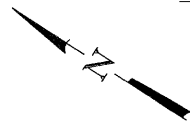
| | |
|-------------------|--------------|
| PROJECT NO. 05061 | SHEET NO. 35 |
| DATE 8/05/09 | 45 SHEETS |
| DESIGN BY RM/MCB | |
| DRAWN BY TFG | |
| CHECKED BY MCB | |

| | | | | |
|---|-----------|---------------|------------------|---------------|
| F.A.I. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 188 |
| CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | |

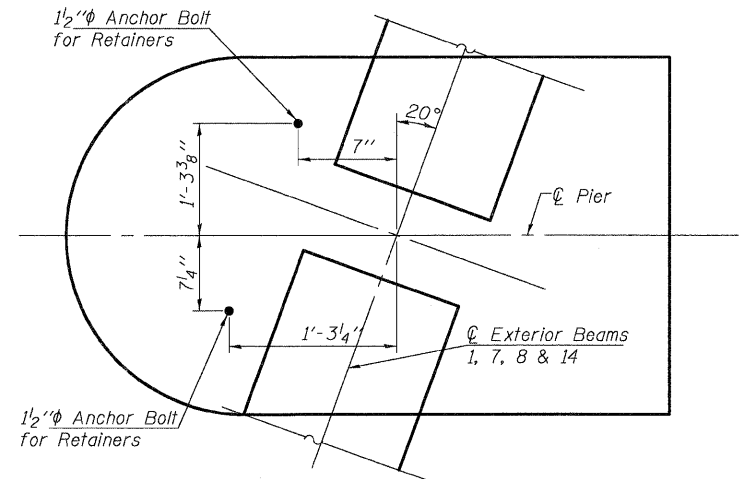
*06-I7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & J1

Notes:
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 For details of piles, see sheet 38 of 45.

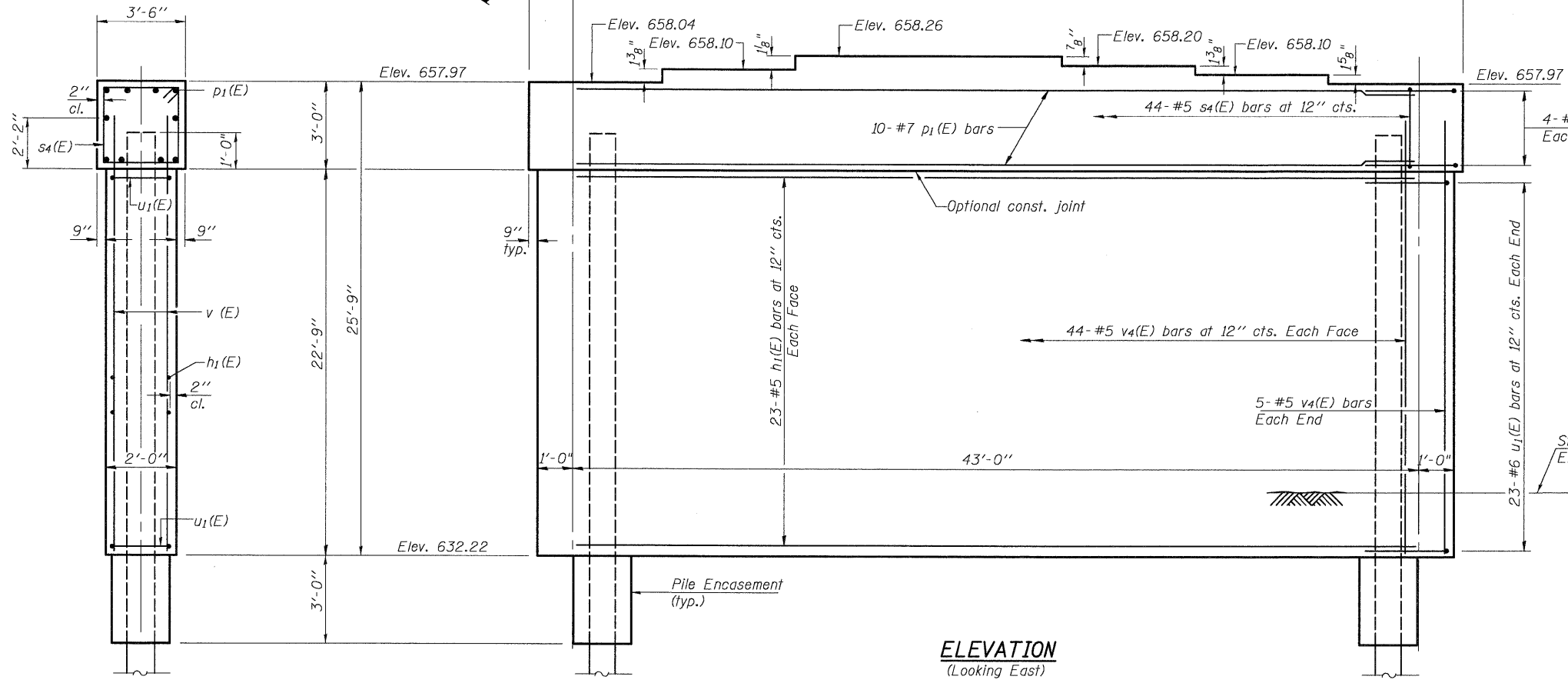
1/2"φ Anchor Bolts
 for Retainers. See
 Detail this sheet
 for location



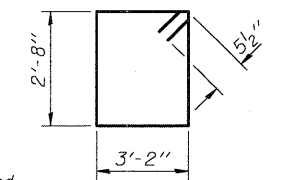
TOP PLAN



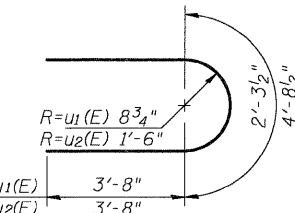
ANCHOR BOLT LOCATION DETAIL



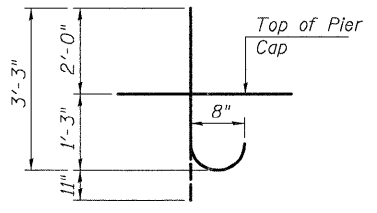
ELEVATION
 (Looking East)



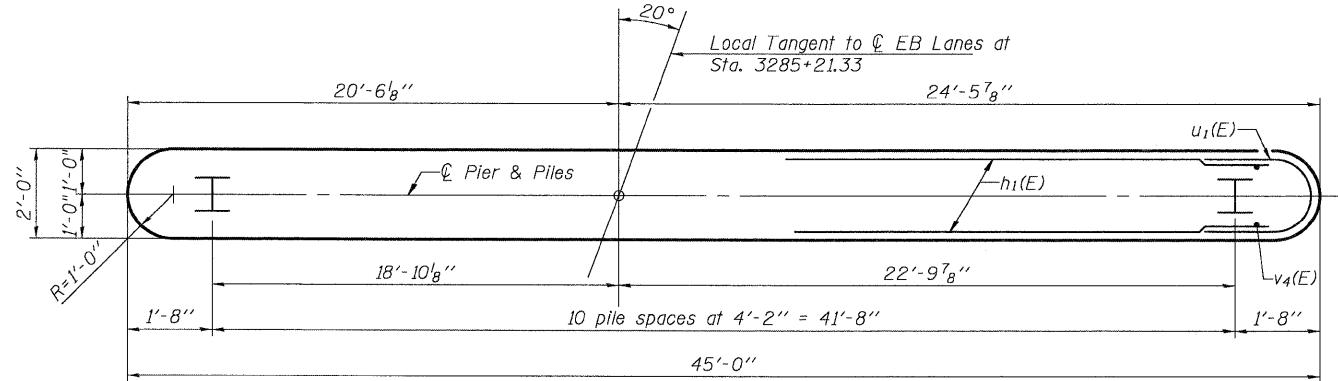
BAR s4(E)



BARS u1(E) & u2(E)



BAR v5(E)



PLAN

PILE DATA

Type: Steel HP12 x 53
 Nominal Required Bearing: 315 kip
 Allowable Resistance Available: 105 kip
 Est. Length: 76 ft.
 No. Production Piles: 10
 No. Test Piles: 1

NOTE

If a portion of the pier wall or concrete encasement is under water, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.

BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|----------------------------------|-----|------|---------|-------|
| h1(E) | 46 | #5 | 43'-0" | — |
| p1(E) | 10 | #7 | 43'-0" | — |
| s4(E) | 44 | #5 | 12'-7" | □ |
| u1(E) | 46 | #6 | 9'-8" | U |
| u2(E) | 8 | #6 | 12'-1" | U |
| v4(E) | 98 | #5 | 24'-11" | — |
| v5(E) | 36 | #8 | 4'-2" | U |
| Concrete Structures | | | Cu. Yd. | 94.0 |
| Reinforcement Bars, Epoxy Coated | | | Pound | 7280 |
| Furnishing Steel Piles, HP12x53 | | | Foot | 760 |
| Driving Piles | | | Foot | 760 |
| Test Pile, Steel HP12x53 | | | Each | 1 |
| Underwater Structure Excavation | | | Each | 1 |
| Protection-Location 3 | | | | |
| Concrete Encasement | | | Cu. Yd. | 3.8 |

PIER 1 EB
SN 006-0172 (EB)

PLOT DATE = 09/06/2009
 FILE NAME = \\0606172-0172-66908-036-pier-1-eb.dgn
 USER NAME = CFC
 USER NAME = CFC

CB Coombe-Bloxdorf P.C.
 - CIVIL ENGINEERS -
 - STRUCTURAL ENGINEERS -
 - LAND SURVEYORS -
 Design Firm License No. 184-002703

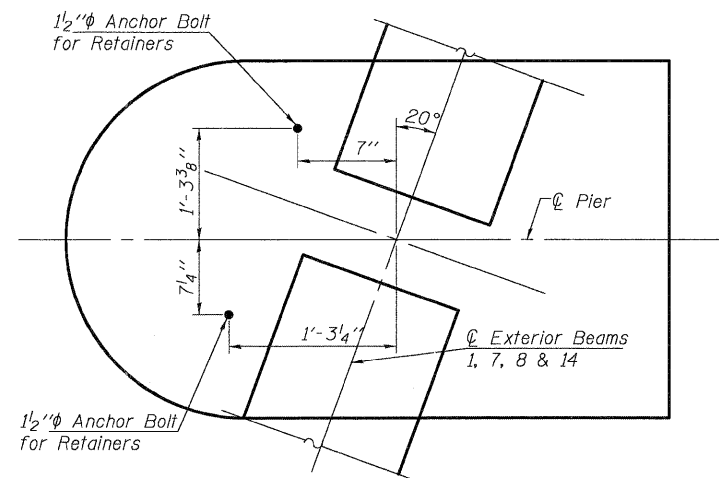
| | |
|-------------|---------|
| PROJECT NO. | 05061 |
| SCALE | |
| DATE | 8/05/09 |
| DESIGN BY | RM/MCB |
| DRAWN BY | TFG |
| CHECKED BY | MCB |

| | | | | |
|---|---------|--------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 80 | * | BUREAU | 344 | 189 |
| CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | |

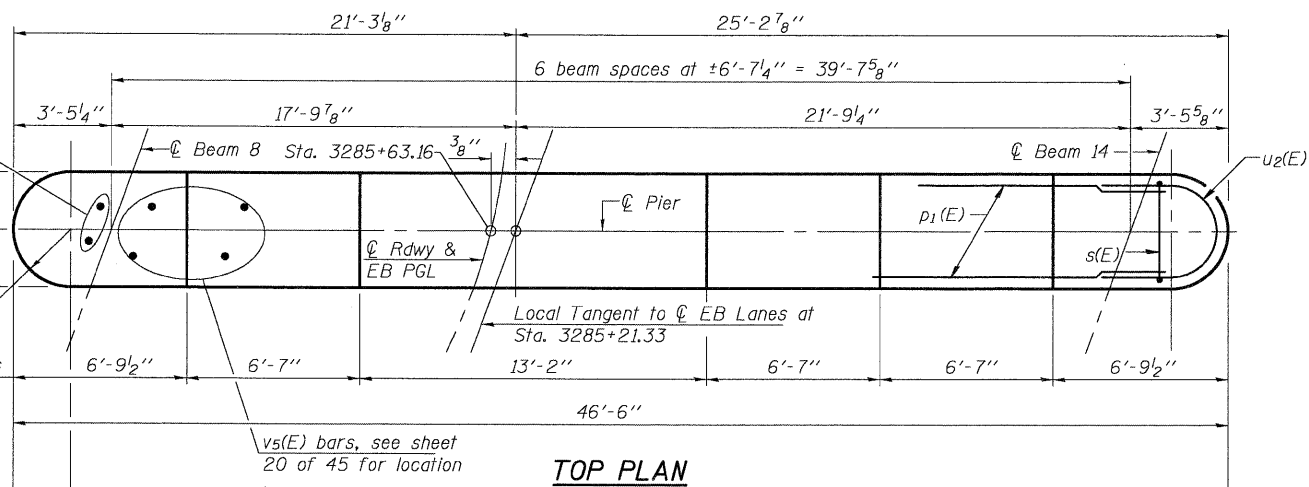
*06-[7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & I]

Notes:
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 For details of piles, see sheet 38 of 45.

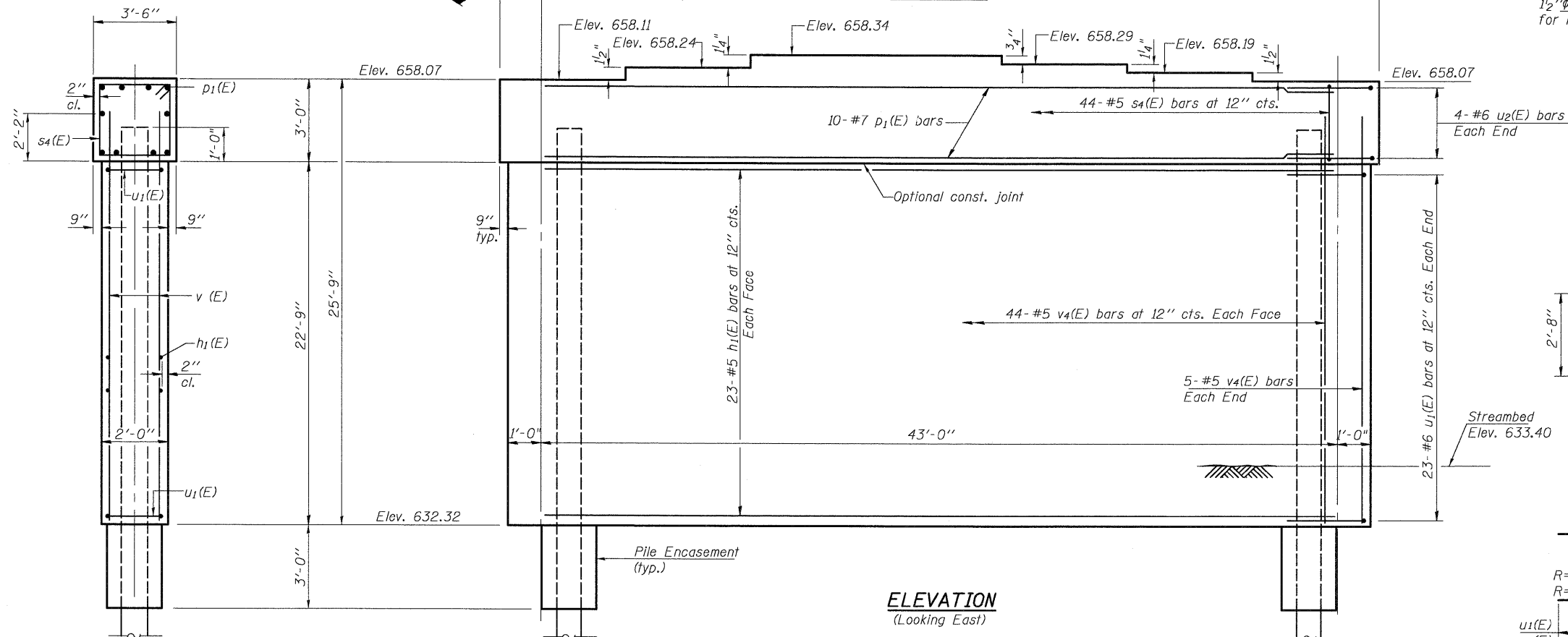
1/2" φ Anchor Bolts
 for Retainers, See
 Detail this sheet
 for location



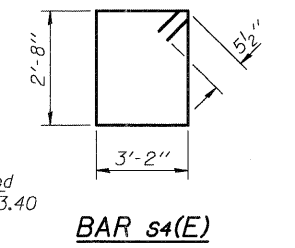
ANCHOR BOLT LOCATION DETAIL



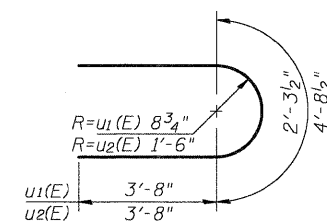
TOP PLAN



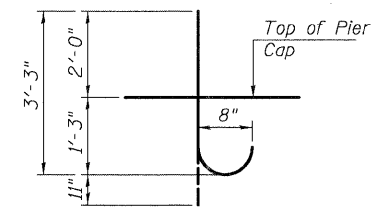
ELEVATION
 (Looking East)



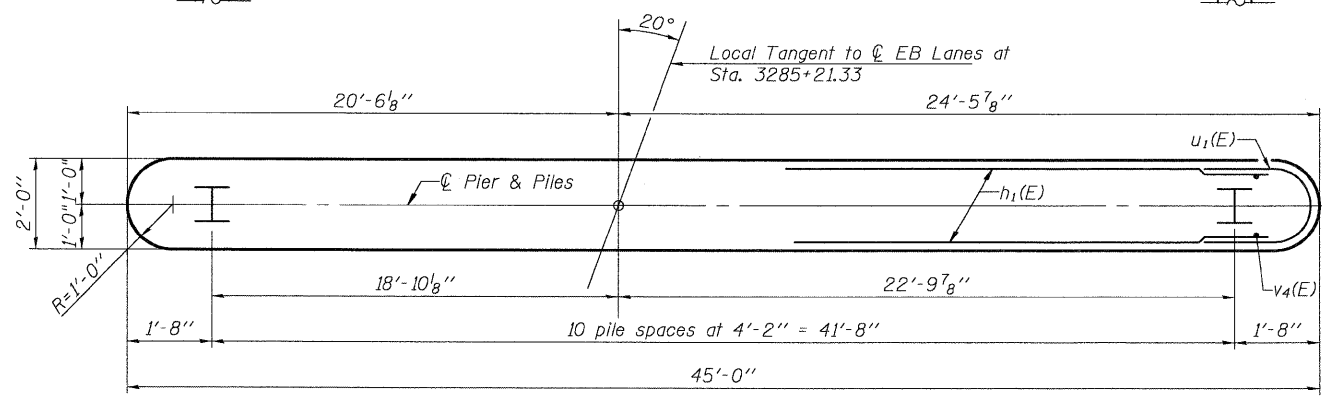
BAR s4(E)



BARS u1(E) & u2(E)



BAR v5(E)



PLAN

END VIEW

PILE DATA

Type: Steel HP12 x 53
 Nominal Required Bearing: 315 kip
 Allowable Resistance Available: 105 kip
 Est. Length: 75 ft.
 No. Production Piles: 10
 No. Test Piles: 1

NOTE

If a portion of the pier wall or concrete encasement is under water, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.

BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|---|-----|---------|---------|-------|
| h1(E) | 46 | #5 | 43'-0" | — |
| p1(E) | 10 | #7 | 43'-0" | — |
| s4(E) | 44 | #5 | 12'-7" | □ |
| u1(E) | 46 | #6 | 9'-8" | U |
| u2(E) | 8 | #6 | 12'-1" | U |
| v4(E) | 98 | #5 | 24'-11" | — |
| v5(E) | 36 | #8 | 4'-2" | U |
| Concrete Structures | | Cu. Yd. | 94.1 | |
| Reinforcement Bars, Epoxy Coated | | Pound | 7280 | |
| Furnishing Steel Piles, HP12x53 | | Foot | 750 | |
| Driving Piles | | Foot | 750 | |
| Test Pile, Steel HP12x53 | | Each | 1 | |
| Underwater Structure Excavation Protection-Location 4 | | Each | 1 | |
| Concrete Encasement | | Cu. Yd. | 3.8 | |

**PIER 2 EB
 SN 006-0172 (EB)**

PLOT DATE = 09/08/2009
 FILE NAME = J:\060172_0172-66908-037-pier-2-ab.dgn
 PLOT SCALE = 1/8" = 1'-0"
 USER NAME = CFC

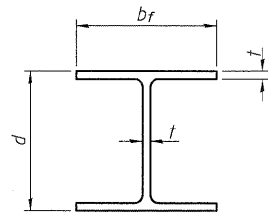
CB Coombe-Bloxdorf P.C.
 - CIVIL ENGINEERS -
 - STRUCTURAL ENGINEERS -
 - LAND SURVEYORS -
 Design Firm License No. 184-002703

PROJECT NO. 05061
 SCALE
 DATE 8/05/09
 DESIGN BY RM/MCB
 DRAWN BY TFG
 CHECKED BY MCB

SHEET NO. 37
 45 SHEETS

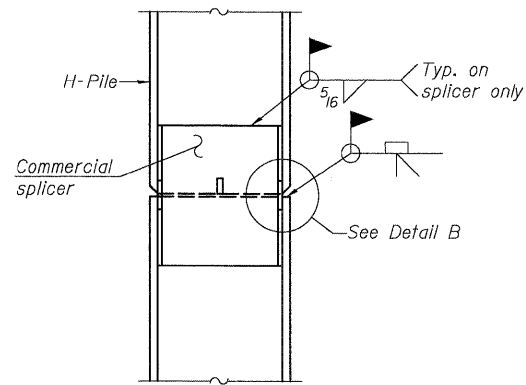
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---------|--------|--------------|-----------|
| 80 | * | BUREAU | 344 | 190 |
| CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | |

*06-L7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & 11

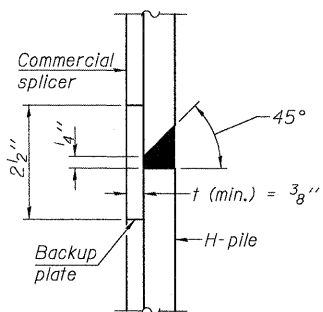


STEEL PILE TABLE

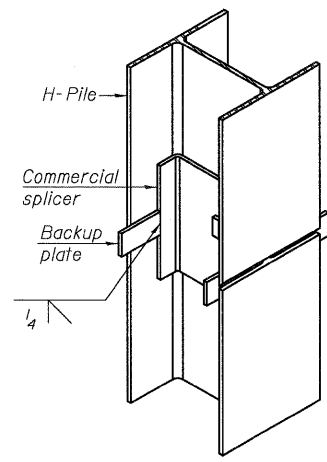
| Designation | Depth d | Flange width b _f | Web and Flange thickness t | Encasement diameter A |
|-------------|---------|-----------------------------|----------------------------|-----------------------|
| HP 14x117 | 14 1/4" | 14 7/8" | 1 3/8" | 30" |
| x102 | 14" | 14 3/4" | 1 1/8" | 30" |
| x89 | 13 7/8" | 14 3/4" | 5/8" | 30" |
| x73 | 13 5/8" | 14 5/8" | 1/2" | 30" |
| HP 12x84 | 12 1/4" | 12 1/4" | 1 1/8" | 24" |
| x74 | 12 1/8" | 12 1/4" | 5/8" | 24" |
| x63 | 12" | 12 1/8" | 1/2" | 24" |
| x53 | 11 3/4" | 12" | 7/16" | 24" |
| HP 10x57 | 10" | 10 1/4" | 9/16" | 24" |
| x42 | 9 3/4" | 10 1/8" | 7/16" | 24" |
| HP 8x36 | 8" | 8 1/8" | 7/16" | 18" |



ELEVATION

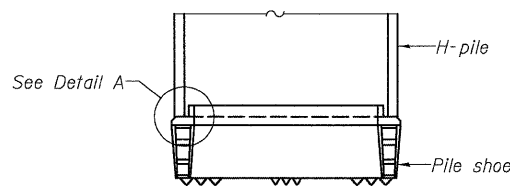


DETAIL "B"

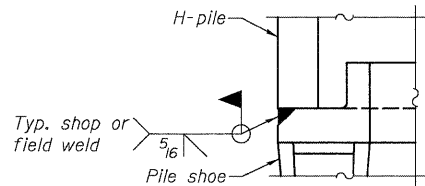


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE

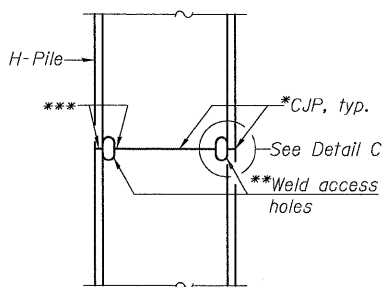


ELEVATION



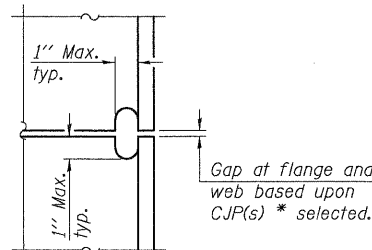
DETAIL A

H-PILE SHOE ATTACHMENT



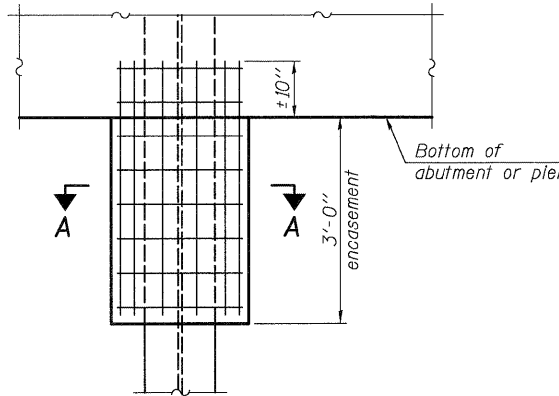
ELEVATION

COMPLETE PENETRATION WELD SPLICE



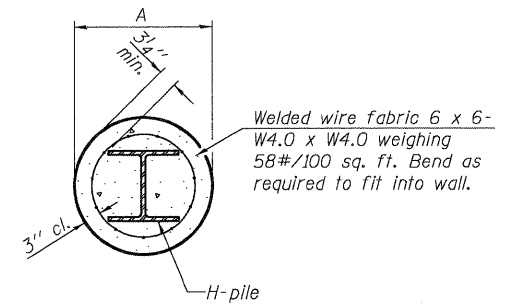
DETAIL C

COMPLETE PENETRATION WELD SPLICE



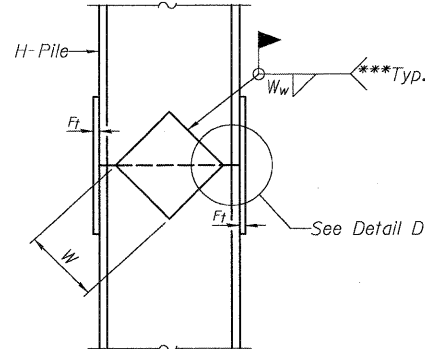
ELEVATION

PILE ENCASEMENT

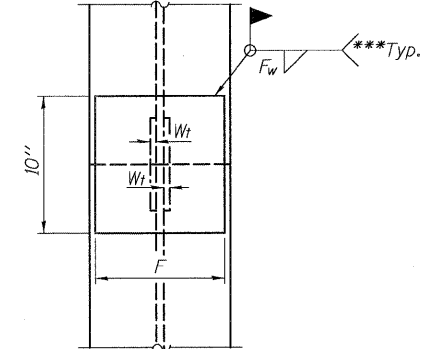


SECTION A-A

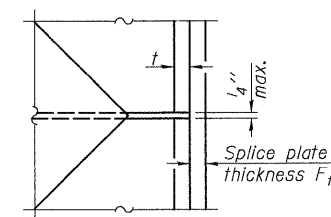
Note: Forms for encasement may be omitted when soil conditions permit.



ELEVATION



END VIEW



DETAIL D

WELDED PLATE FIELD SPLICE

| Designation | F | F _t | F _w | W | W _t | W _w |
|-------------|---------|----------------|----------------|--------|----------------|----------------|
| HP 14x117 | 12 1/2" | 1" | 7/8" | 7 3/4" | 5/8" | 1/2" |
| x102 | 12 1/2" | 7/8" | 3/4" | 7 3/4" | 5/8" | 1/2" |
| x89 | 12 1/2" | 3/4" | 1/2" | 7 3/4" | 5/8" | 1/2" |
| x73 | 12 1/2" | 5/8" | 9/16" | 7 3/4" | 5/8" | 1/2" |
| HP 12x84 | 10" | 7/8" | 1/2" | 6 1/2" | 5/8" | 1/2" |
| x74 | 10" | 7/8" | 1/2" | 6 1/2" | 5/8" | 1/2" |
| x63 | 10" | 5/8" | 1/2" | 6 1/2" | 1/2" | 3/8" |
| x53 | 10" | 5/8" | 1/2" | 6 1/2" | 1/2" | 3/8" |
| HP 10x57 | 8" | 3/4" | 9/16" | 5 1/4" | 1/2" | 3/8" |
| x42 | 8" | 5/8" | 9/16" | 5 1/4" | 1/2" | 3/8" |
| HP 8x36 | 7" | 5/8" | 7/16" | 4 1/4" | 1/2" | 3/8" |

Note: The steel H-piles shall be according to AASHTO M270 Grade 50.

- * Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.
- ** Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.
- *** Interrupt welds 1/4" from end of each pile.

CB Coombe-Bloxdorf P.C.
 - CIVIL ENGINEERS -
 - STRUCTURAL ENGINEERS -
 - LAND SURVEYORS -
 Design Firm License No. 184-002703

| | |
|-------------|---------|
| PROJECT NO. | 05061 |
| SCALE | |
| DATE | 6/25/09 |
| DESIGN BY | RM/MCB |
| DRAWN BY | TFG |
| CHECKED BY | MCB |

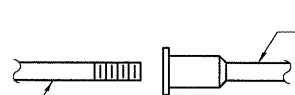
| |
|--------------|
| SHEET NO. 38 |
| 45 SHEETS |

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---------|--------|--------------|-----------|
| 80 | * | BUREAU | 344 | 191 |
| CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | |

*06-L7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & 11

The diameter of this part is equal or larger than the diameter of bar spliced.

The diameter of this part is the same as the diameter of the bar spliced.



ROLLED THREAD DOWEL BAR



**** ONE PIECE**

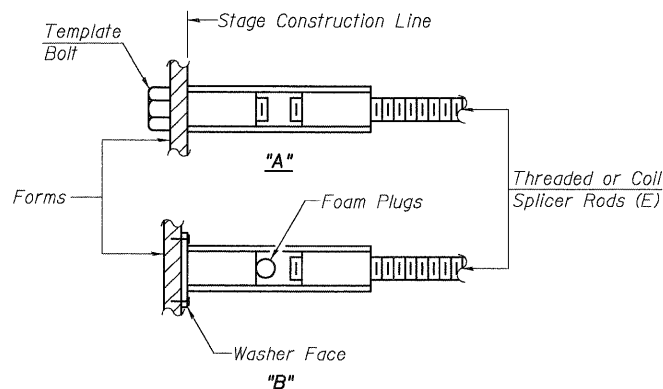
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

**Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



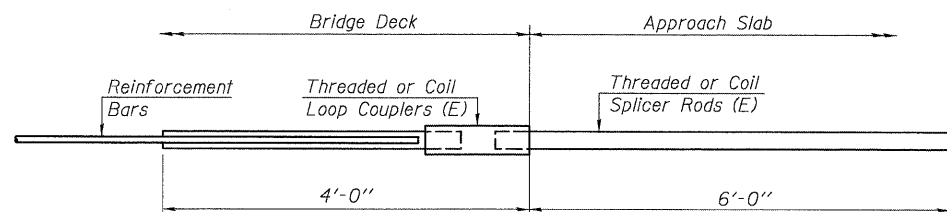
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.

NOTES
 Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
 All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
 Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

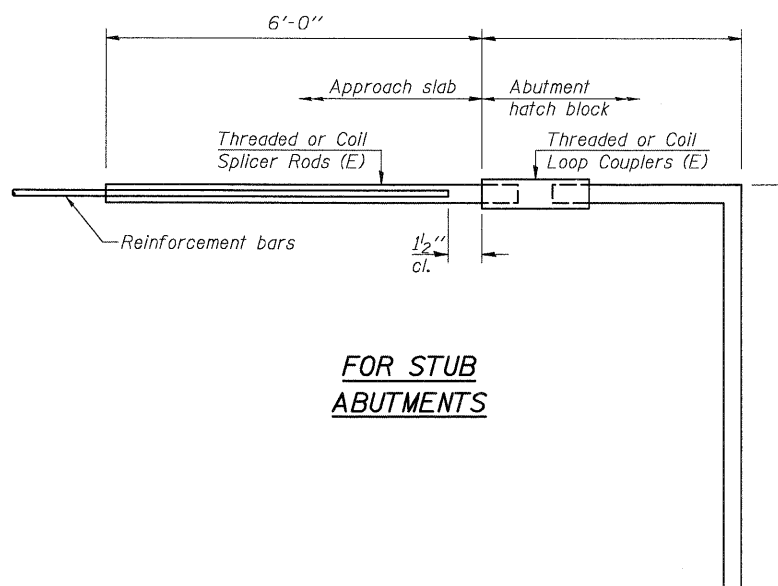
- ① Minimum Capacity = $1.25 \times f_y \times A_t$
 (Tension in kips)
 - ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_t$
 (Tension in kips)
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_t = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

| BAR SPLICER ASSEMBLIES | | | |
|------------------------|---------------------------------|------------------------------|---------------------------------------|
| Bar Size to be Spliced | Splicer Rod or Dowel Bar Length | Strength Requirements | |
| | | Min. Capacity kips - tension | Min. Pull-Out Strength kips - tension |
| #4 | 1'-8" | 14.7 | 7.9 |
| #5 | 2'-2" | 23.0 | 12.3 |
| #6 | 2'-7" | 33.1 | 17.4 |
| #7 | 3'-5" | 45.1 | 23.8 |
| #8 | 4'-6" | 58.9 | 31.3 |
| #9 | 5'-9" | 75.0 | 39.6 |
| #10 | 7'-3" | 95.0 | 50.3 |
| #11 | 9'-0" | 117.4 | 61.8 |



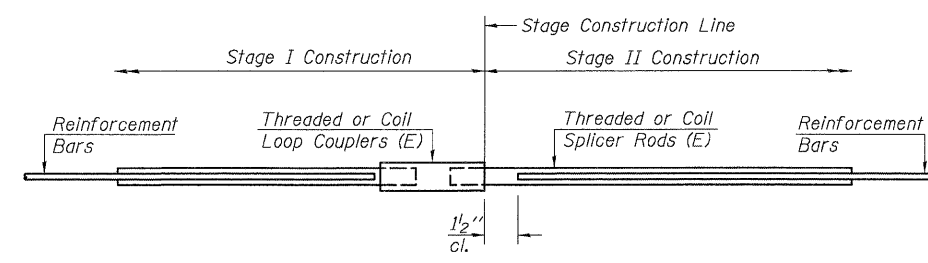
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

| |
|--|
| Bar Splicer for #5 bar |
| Min. Capacity = 23.0 kips - tension |
| Min. Pull-out Strength = 12.3 kips - tension |
| No. Required = 160 |



FOR STUB ABUTMENTS

| |
|--|
| Bar Splicer for #5 bar |
| Min. Capacity = 23.0 kips - tension |
| Min. Pull-out Strength = 12.3 kips - tension |
| No. Required = |



STANDARD

| Bar Size | No. Assemblies Required | Location |
|----------|-------------------------|----------|
| | | |
| | | |
| | | |
| | | |

**BAR SPLICER (COUPLER) DETAILS
 SN 006-0172 (EB) & SN 006-0173 (WB)**

PLOT DATE = 09/08/2009
 FILE NAME = 06080372_0173-66908-039-bar-splcbar.dgn
 PLOT SCALE = 1/8" = 1'-0"
 USER NAME = CFC

BSD-1 10-1-08

CB Coombe-Bloxdorf P.C.
 - CIVIL ENGINEERS -
 - STRUCTURAL ENGINEERS -
 - LAND SURVEYORS -
 Design Firm License No. 184-002703

| |
|-------------------|
| PROJECT NO. 05061 |
| SCALE |
| DATE 6/25/09 |
| DESIGN BY RM/MCB |
| DRAWN BY TFG |
| CHECKED BY MCB |

| | | | | | |
|---|--------------------|-----------|---------------|------------------|---------------|
| SHEET NO. 39 | F.A.I. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 192 |
| 45 SHEETS | CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | | |

*06-17BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & 1J



SOIL BORING LOG

ROUTE FAI 80 DESCRIPTION P92-037-03 I-80 over East Bureau Creek, 1.2 m. E. of I-180

Date 8/1/04

SECTION 06-6B, 6F LOCATION Selby Twp. - 5 SE. SEC. TWP. 16N, RNG. 10E

COUNTY Bureau DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

| STRUCT. NO. | Station | DEPTH (ft) | BLOWS (/6") | UCS (tsf) | MOIST (%) | DESCRIPTION | DEPTH (ft) | BLOWS (/6") | UCS (tsf) | MOIST (%) |
|----------------------------------|-------------------------------|------------|-------------|-----------|-----------|---|------------|-------------|-----------|-----------|
| BORING NO. B-3 | Station 1435+30 | | | | | Surface Water Elev. 634.8 ft | | | | |
| | Offset 10.00R Lt CL | | | | | Stream Bed Elev. 632.3 ft | | | | |
| | Ground Surface Elev. 662.0 ft | | | | | Groundwater Elev.: | | | | |
| | | | | | | First Encounter 634.5 ft | | | | |
| | | | | | | Upon Completion Wash ft | | | | |
| | | | | | | After Hrs. | | | | |
| VERY STIFF brown SILTY LOAM | | 5 | | | | STIFF tan SILTY LOAM TILL | | | | |
| | | 8 | 3.3 | | 13 | | | | | |
| | | 10 | B | | | | | | | |
| STIFF brown SILTY LOAM TILL | | 4 | | | 12 | STIFF gray/green SILTY LOAM TILL | | | | |
| | | 6 | 1.9 | | | | | | | |
| | | 9 | B | | | | | | | |
| VERY STIFF brown SILTY LOAM TILL | | 6 | | | 12 | VERY STIFF gray/green SANDY LOAM TILL | | | | |
| | | 10 | 2.5 | | | | | | | |
| | | 10 | S | | | | | | | |
| Same as above | | 4 | | | 11 | DENSE tan SAND with some GRAVEL | | | | |
| | | 8 | 2.5 | | | | | | | |
| | | 10 | B | | | | | | | |
| STIFF brown SILTY LOAM TILL | | 4 | | | 12 | MEDIUM tan SANDY GRAVEL | | | | |
| | | 6 | 1.7 | | | | | | | |
| | | 8 | B | | | | | | | |
| Same as above | | 1 | | | 12 | Begin Wash | | | | |
| | | 4 | 1.8 | | | Same as above | | | | |
| | | 6 | B | | | | | | | |
| SOFT gray SILT | | 2 | | | 20 | Wash | | | | |
| | | 3 | 0.4 | | | VERY DENSE tan/gray dirty SANDY GRAVEL | | | | |
| | | 5 | B | | | | | | | |
| HARD brown/tan SILTY LOAM TILL | | 4 | | | 23 | VERY DENSE gray well-cemented coarse SAND | | | | |
| | | 8 | 5.1 | | | | | | | |
| | | 13 | S | | | End of Boring | | | | |

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE FAI 80 DESCRIPTION P92-037-03 I-80 over East Bureau Creek, 1.2 m. E. of I-180

Date 8/5/04

SECTION 06-6B, 6F LOCATION Selby Twp. - 5 SE. SEC. TWP. 16N, RNG. 10E

COUNTY Bureau DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

| STRUCT. NO. | Station | DEPTH (ft) | BLOWS (/6") | UCS (tsf) | MOIST (%) | DESCRIPTION | DEPTH (ft) | BLOWS (/6") | UCS (tsf) | MOIST (%) |
|----------------|-------------------------------|------------|-------------|-----------|-----------|---------------------------------|------------|-------------|-----------|-----------|
| BORING NO. B-4 | Station 1434+90 | | | | | Surface Water Elev. 634.8 ft | | | | |
| | Offset 10.00R Lt WB CL | | | | | Stream Bed Elev. 632.3 ft | | | | |
| | Ground Surface Elev. 661.7 ft | | | | | Groundwater Elev.: | | | | |
| | | | | | | First Encounter 634.2 ft | | | | |
| | | | | | | Upon Completion Wash ft | | | | |
| | | | | | | After Hrs. | | | | |
| Air | | | | | | Air (continued) | | | | |
| | | | | | | Water | | | | |
| | | | | | | VERY SOFT gray/black SANDY LOAM | | | | |
| | | | | | | | | | | |
| | | | | | | MEDIUM gray SAND & GRAVEL | | | | |
| | | | | | | | | | | |
| | | | | | | HARD brown SILTY CLAY TILL | | | | |
| | | | | | | | | | | |
| | | | | | | Same as above | | | | |
| | | | | | | HARD brown SILTY LOAM TILL | | | | |

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE FAI 80 DESCRIPTION P92-037-03 I-80 over East Bureau Creek, 1.2 m. E. of I-180

Date 8/5/04

SECTION 06-6B, 6F LOCATION Selby Twp. - 5 SE. SEC. TWP. 16N, RNG. 10E

COUNTY Bureau DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

| STRUCT. NO. | Station | DEPTH (ft) | BLOWS (/6") | UCS (tsf) | MOIST (%) | DESCRIPTION | DEPTH (ft) | BLOWS (/6") | UCS (tsf) | MOIST (%) |
|----------------------------------|-------------------------------|------------|-------------|-----------|-----------|--|------------|-------------|-----------|-----------|
| BORING NO. B-4 | Station 1434+90 | | | | | Surface Water Elev. 634.8 ft | | | | |
| | Offset 10.00R Lt WB CL | | | | | Stream Bed Elev. 632.3 ft | | | | |
| | Ground Surface Elev. 661.7 ft | | | | | Groundwater Elev.: | | | | |
| | | | | | | First Encounter 634.2 ft | | | | |
| | | | | | | Upon Completion Wash ft | | | | |
| | | | | | | After Hrs. | | | | |
| HARD brown SILTY LOAM TILL | | 9 | | | 12 | MEDIUM tan SILTY CLAY | | | | |
| | | 10 | 4.5 | | | | | | | |
| | | 12 | B | | | | | | | |
| VERY STIFF brown SILTY LOAM TILL | | 5 | | | 12 | VERY STIFF tan SILTY CLAY TILL | | | | |
| | | 7 | 2.7 | | | | | | | |
| | | 9 | B | | | | | | | |
| Same as above | | 5 | | | 12 | HARD tan SILTY LOAM TILL | | | | |
| | | 7 | 2.1 | | | | | | | |
| | | 8 | S | | | | | | | |
| STIFF brown SILTY LOAM TILL | | 3 | | | 12 | VERY STIFF green SANDY LOAM TILL | | | | |
| | | 6 | 1.5 | | | | | | | |
| | | 8 | B | | | | | | | |
| Same as above | | 3 | | | 12 | VERY STIFF gray/green SHALEY CLAY | | | | |
| | | 5 | 2.0 | | | | | | | |
| | | 7 | B | | | | | | | |
| Same as above | | 0 | | | 14 | Same as above | | | | |
| | | 1 | 1.1 | | | | | | | |
| | | 4 | B | | | | | | | |
| Same as above | | 2 | | | 13 | DENSE tan SAND & GRAVEL under green/blue SHALEY CLAY | | | | |
| | | 5 | 1.1 | | | | | | | |
| | | 8 | B | | | | | | | |
| Same as above | | 1 | | | 13 | DENSE tan/gray dirty well-cemented SAND & GRAVEL | | | | |
| | | 3 | 1.2 | | | | | | | |
| | | 6 | P | | | | | | | |

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

PLOT DATE = 09/08/2009
PLOT SCALE = 1" = 20'
USER NAME = CFC

BORING LOGS SN 006-0172 (EB) & SN 006-0173 (WB)

CB Coombe-Bloxdorf P.C.
- CIVIL ENGINEERS -
- STRUCTURAL ENGINEERS -
- LAND SURVEYORS -
Design Firm License No. 184-002703

| | |
|-------------|---------|
| PROJECT NO. | 05061 |
| SCALE | |
| DATE | 6/25/09 |
| DESIGN BY | RM/MCB |
| DRAWN BY | TFG |
| CHECKED BY | MCB |

| | | | | | |
|---|--------------------|-----------|---------------|------------------|---------------|
| SHEET NO. 42 | F.A.I. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 195 |
| 45 SHEETS | CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | | |

*06-[7BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & J]



SOIL BORING LOG

ROUTE FAI 80 DESCRIPTION P92-037-03 I-80 over East Bureau Creek, 1.2 m. E. of I-180 LOGGED BY C. Jenkins
SECTION 06-6B, 6F LOCATION Selby Twp. - 5 SE. SEC. TWP. 16N. RNG. 10E
COUNTY Bureau DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

Table with columns: DEPTH (ft), BLOW (ft/6"), UCS (tsf), M-O-I-S-T, and soil descriptions. Includes groundwater elevations and SPT values.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE FAI 80 DESCRIPTION P92-037-03 I-80 over East Bureau Creek, 1.2 m. E. of I-180 LOGGED BY W. Garza
SECTION 06-6B, 6F LOCATION Selby Twp. - 5 SE. SEC. TWP. 16N. RNG. 10E
COUNTY Bureau DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

Table with columns: DEPTH (ft), BLOW (ft/6"), UCS (tsf), M-O-I-S-T, and soil descriptions. Includes groundwater elevations and SPT values.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE FAI 80 DESCRIPTION P92-037-03 I-80 over East Bureau Creek, 1.2 m. E. of I-180 LOGGED BY W. Garza
SECTION 06-6B, 6F LOCATION Selby Twp. - 5 SE. SEC. TWP. 16N. RNG. 10E
COUNTY Bureau DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

Table with columns: DEPTH (ft), BLOW (ft/6"), UCS (tsf), M-O-I-S-T, and soil descriptions. Includes groundwater elevations and SPT values.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

PLOT DATE = 09/09/2009 PLOT SCALE = 1"=40' PLOT USER = CFC

BORING LOGS SN 006-0172 (EB) & SN 006-0173 (WB)

Project information block including Coombe-Bloxdorf P.C. logo, project number (05061), scale, date (6/25/09), sheet number (43 of 45), and contract number (66908).



Illinois Department
of Transportation
Division of Highways
DOT

SOIL BORING LOG

Page 3 of 3

Date 3/30/05

ROUTE FAI 80 DESCRIPTION P92-037-03 I-80 over East Bureau Creek, 1.2 m. E. of I-180 LOGGED BY J. Straling

SECTION 06-6B, 6F LOCATION Selby Twp. - 5 SE, SEC. , TWP. 16N, RNG. 10E

COUNTY Bureau DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

| STRUCT. NO. | DEPTH | DESCRIPTION | UNCONSOLIDATED | MOISTURE | Surface Water Elev. | Stream Bed Elev. |
|-----------------------------|--------|---------------------|----------------|----------|---------------------|------------------|
| Station | ft | (ft) (6") (tsf) (%) | Qu | T | ft | ft |
| | 17 | | | | 634.8 | 632.3 |
| | 21 | | | | | |
| | 30 | | | | | |
| Ground Surface Elev. | 662.0 | | | | | |
| Groundwater Elev.: | | | | | | |
| First Encounter | | | | | 632.0 | ft ▼ |
| Upon Completion | | | | | | ft |
| After | | | | | | Hrs. ft |
| Wash | 17 | | | | | |
| VERY DENSE gray medium SAND | 21 | | | | | |
| | 30 | | | | | |
| End of Boring | 580.50 | | | | | |
| | -85 | | | | | |
| | -90 | | | | | |
| | -95 | | | | | |
| | -100 | | | | | |

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

PLOT DATE = 05/08/2009
FILE NAME = \\0606172.0173-66908-040-045-bor-log.dgn
USER NAME = CFC

BORING LOGS
SN 006-0172 (EB) & SN 006-0173 (WB)

| | | | | | | |
|--|-------------------|--|---|---------------|------------------|---------------|
| Coombe-Bloxdorf P.C. -CIVIL ENGINEERS- -STRUCTURAL ENGINEERS- -LAND SURVEYORS- Design Firm License No. 184-002703 | PROJECT NO. 05061 | F.A.I. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 198 |
| | SCALE | SHEET NO. 45 | CONTRACT NO. 66908 | | | |
| DATE 6/25/09 | DESIGN BY RM/MCB | 45 SHEETS | FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | |
| DRAWN BY TFG | CHECKED BY MCB | *06-17BR & BR-1, TVB-M, 6BR & 6, 7 RS-1 & 1J | | | | |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Benchmark: BM #438 ROW Marker. Sta. 3573+21.49 Offset 134.57 Rt., El. 641.41

Existing Structure: S.N. 006-0028 EB and 006-0029 WB. Built as F.A. Rt. 80 Section 06-7B-1, in 1963. The superstructure consists of a 237'-0" (back to back of abutments) by 36'-7 1/2" wide reinforced concrete deck on three span continuous wide flange steel beams supported by pile bent spill thru abutments and hammerhead piers. Existing structures to be removed and replaced using crossovers.

Salvage: None.

Traffic Barrier Terminal Type 6
Std. 631031 (Typ. at Ea. Ends)
See Roadway Plans

DESIGN SPECIFICATION

AASHTO 2002 Standard Specifications
for Highway Bridges

LOADING HS20-44 & ALT. MILITARY

Allow 50 #/sq. ft. for
Future Wearing Surface.

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient = 0.036g
Site Coefficient = 1.0

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi
f'ci = 5,000 psi
f's = 270,000 psi (1/2" ϕ low lax. strands)
fsi = 201,960 psi (1/2" ϕ low lax. strands)

CURVE DATA

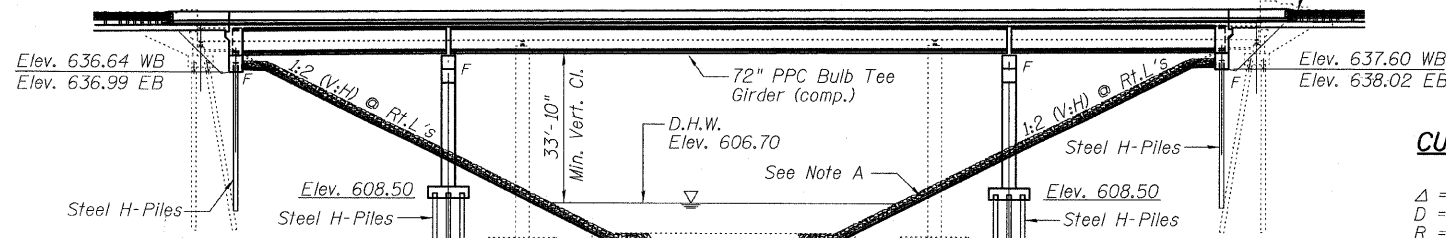
$\Delta = 22^\circ 37' 08"$ (LT)
D = 0' 29' 52"
R = 11,511.14'
T = 2,302.14'
L = 4,544.32'
E = 227.95'
e = 1.5%
P.C. STA. = 3590+84.54
P.I. STA. = 3613+86.67
P.T. STA. = 3636+28.85

Note A:
Stone Riprap - use Class A5 from
Streambed to Elev. 610.0 and Class A4
from Elev. 610.0 to the Abutment. (Typ.)

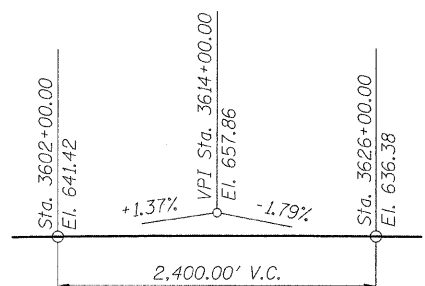
WATERWAY INFORMATION

| Flood | Freq. Yr. | Q C.F.S. | Opening Sq. Ft. | | Nat. H.W.E. | Head - Ft. | | Headwater El. | |
|-------------|-----------|----------|-----------------|-------|-------------|------------|-------|---------------|-------|
| | | | Exist. | Prop. | | Exist. | Prop. | Exist. | Prop. |
| Design | 10 | 1265 | 172 | 172 | 605.8 | 0.9 | 0.9 | 606.7 | 606.7 |
| Base | 50 | 2033 | 232 | 232 | 606.7 | 1.6 | 1.6 | 608.3 | 608.3 |
| Overtopping | 100 | 2374 | 253 | 253 | 607.0 | 2.0 | 2.0 | 609.0 | 609.0 |
| Max. Calc. | 500 | 3205 | 289 | 289 | 607.5 | 2.7 | 2.7 | 610.2 | 610.2 |

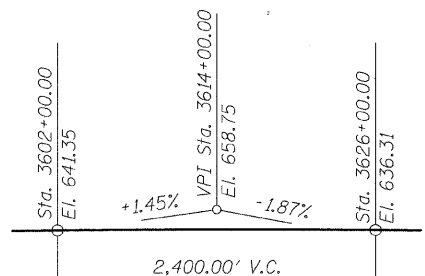
Existing Low Grade Elev. 646.9 @ Sta. 3607+87
Proposed Low Grade Elev. 647.2 @ Sta. 3607+60
10 Year Velocity through Existing Bridge = 7.4 fps
10 Year Velocity through Proposed Bridge = 7.4 fps



ELEVATION



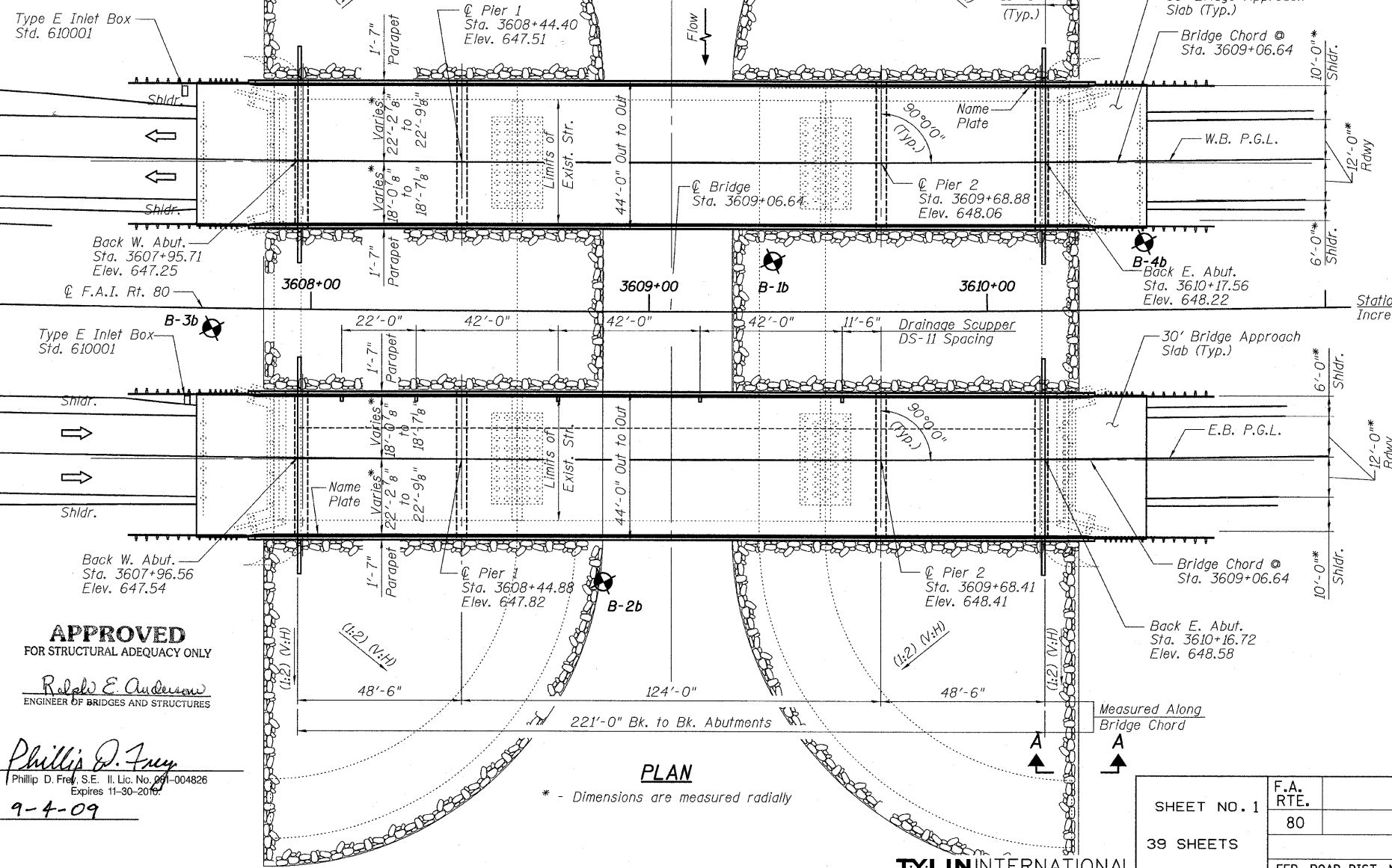
PROFILE GRADE
I-80 Westbound



PROFILE GRADE
I-80 Eastbound

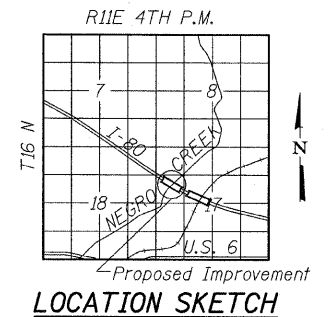
DESIGN SCOUR ELEVATION TABLE

| Design Scour Elevation (ft.) | W. Abut. | Piers 1&2 | E. Abut. |
|------------------------------|----------|-----------|----------|
| WB | 636.71 | 602.50 | 637.68 |
| EB | 637.00 | 602.50 | 638.04 |



PLAN

* - Dimensions are measured radially



LOCATION SKETCH

GENERAL PLAN
I-80 OVER NEGRO CREEK
F.A.I. RTE. 80
SEC. 06-7BR-1 & 06-7VB-M
BUREAU COUNTY
STA. 3609+06.64
STRUCTURE NO. 006-0174 (EB)
STRUCTURE NO. 006-0175 (WB)

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Robert E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

Signed *Phillip D. Frey*
Phillip D. Frey, S.E. II Lic. No. 004826
Expires 11-30-2016
Date 9-4-09

| | |
|----------|--------|
| DESIGNED | SP, AD |
| CHECKED | PDF |
| DRAWN | SP, IM |
| CHECKED | PDF |



| | | | | | |
|---------------------|--------------|---------------------------|--------------------|------------------|---------------|
| SHEET NO. 1 | F.A. RTE. 80 | SECTION * | COUNTY BUREAU | TOTAL SHEETS 344 | SHEET NO. 199 |
| 39 SHEETS | | | CONTRACT NO. 66908 | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | | |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

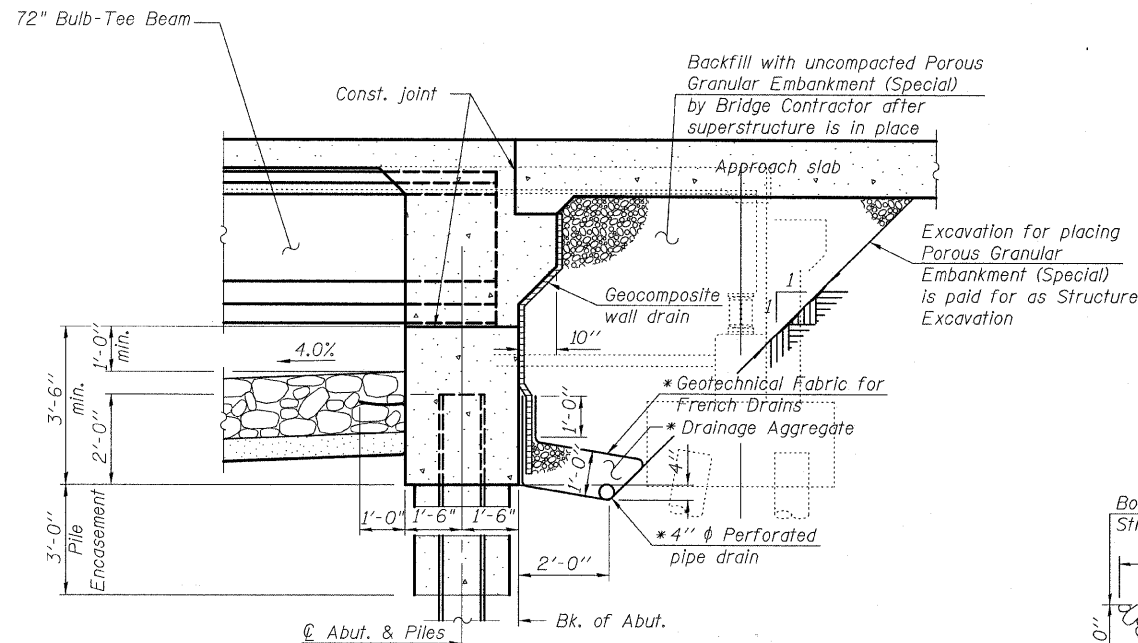
1. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
4. Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
5. The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.

INDEX OF SHEETS

- 1 General Plan
- 2 General Notes, Index of Sheets & Bill of Material
- 3 Offset Sketch and Footing Layout
- 4 Top of Slab Elevations Layout
- 5-6 Top of Slab Elevations - Eastbound
- 7-8 Top of Slab Elevations - Westbound
- 9 Top of Approach Slab Elevations (Eastbound)
- 10 Top of Approach Slab Elevations (Westbound)
- 11 Superstructure
- 12 Superstructure Details I
- 13 Superstructure Details II
- 14 Superstructure Details III
- 15 Concrete Parapet Slipforming Option
- 16-17 Bridge Approach Slab Details
- 18 Drainage Scupper, DS-II
- 19 Framing Plan
- 20 72" PPC Bulb-T Beam-Permanent Bracing & Moment Tables
- 21 72" PPC Bulb-T Beam - Spans 1 & 3
- 22 72" PPC Bulb-T Beam - Span 2
- 23 72" PPC Bulb-T Beam - Details
- 24 East Abutment - Eastbound
- 25 West Abutment - Eastbound
- 26 East Abutment - Westbound
- 27 West Abutment - Westbound
- 28 Pier 1 - Eastbound
- 29 Pier 2 - Eastbound
- 30 Pier 1 - Westbound
- 31 Pier 2 - Westbound
- 32 Bar Splicer (Coupler) Details
- 33 Steel H Pile Details
- 34-39 Boring Logs

TOTAL BILL OF MATERIAL

| ITEM | UNIT | SN 006-0174 (EB) | | SN 006-0175 (WB) | | TOTAL |
|---|-------|------------------|--------|------------------|--------|---------|
| | | SUPER | SUB | SUPER | SUB | |
| Porous Granular Embankment (Special) | CU YD | | 295 | | 295 | 590 |
| Stone Riprap, Class A4 | SQ YD | | 1945 | | 1945 | 3,890 |
| Stone Riprap, Class A5 | SQ YD | | 1264 | | 1264 | 2,528 |
| Filter Fabric | SQ YD | | 3342 | | 3342 | 6,684 |
| Removal of Existing Structures | EACH | | | | | 2 |
| Structure Excavation | CU YD | | 511 | | 511 | 1,022 |
| Concrete Structures | CU YD | | 311.9 | | 310.2 | 622.1 |
| Concrete Superstructure | CU YD | 539.2 | | 539.2 | | 1,078.4 |
| Bridge Deck Grooving | SQ YD | 954 | | 954 | | 1,908 |
| Concrete Encasement | CU YD | | 10 | | 10 | 20 |
| Protective Coat | SQ YD | 1,188 | | 1,188 | | 2,376 |
| Furnishing and Erecting Precast Prestressed Concrete Bulb-T Beams 72" | FOOT | 1,304 | | 1,304 | | 2,608 |
| Reinforcement Bars, Epoxy Coated | POUND | 103,480 | 50,120 | 103,480 | 49,950 | 307,030 |
| Bar Splicers | EACH | 84 | | 84 | | 168 |
| Furnishing Steel Pile, HP14x73 | FOOT | | 3,325 | | 3,261 | 6,586 |
| Driving Piles | FOOT | | 3,325 | | 3,261 | 6,586 |
| Test Pile Steel HP14x73 | EACH | | 4 | | 4 | 8 |
| Name Plates | EACH | 1 | | 1 | | 2 |
| Anchor Bolts, 1 1/2" | EACH | | 8 | | 8 | 16 |
| Geocomposite Wall Drain | SQ YD | | 92 | | 92 | 184 |
| Pipe Underdrain for Structures 4" | FOOT | | 128 | | 128 | 256 |
| Drainage Scuppers, DSII | EACH | 5 | | | | 5 |
| Hot-Mix Asphalt Surface Removal (Asbestos) | SQ YD | 783 | | 783 | | 1,566 |

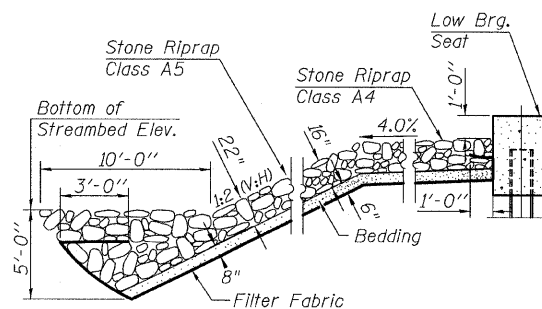


SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)

* Included in the cost of Pipe Underdrains for Structures

All drainage system components shall extend 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101)

| | |
|----------|-----|
| DESIGNED | IM |
| CHECKED | PDF |
| DRAWN | IM |
| CHECKED | PDF |



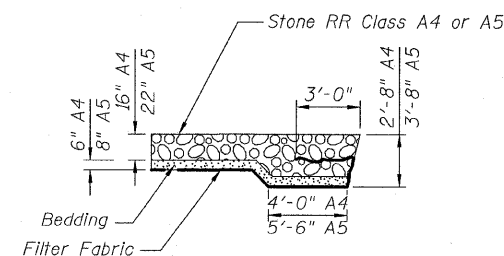
STONE RIPRAP ANCHOR DETAIL

STATION 3609+06.64
BUILT 201 BY
STATE OF ILLINOIS
F.A.I. RT. 80 SEC. 06-7BR-1
LOADING HS20 & ALT.
STR. NO. 006-0175

NAME PLATE WESTBOUND
See Std. 515001

STATION 3609+06.64
BUILT 201 BY
STATE OF ILLINOIS
F.A.I. RT. 80 SEC. 06-7BR-1
LOADING HS20 & ALT.
STR. NO. 006-0174

NAME PLATE EASTBOUND
See Std. 515001



SECTION A-A

**GENERAL NOTES, INDEX OF SHEETS
& BILL OF MATERIAL**
STRUCTURE NO. 006-0174 (EB)
STRUCTURE NO. 006-0175 (WB)

| | | | | | |
|---------------------|--------------------|----------|------------------|--------------|-----------|
| SHEET NO. 2 | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 80 | * | BUREAU | 394 | 200 |
| 39 SHEETS | CONTRACT NO. 66908 | | | | |
| FED. ROAD DIST. NO. | | ILLINOIS | FED. AID PROJECT | | |

TYLIN INTERNATIONAL

* 06-T7BR & BR-1,7VB-M, 6BR & 6, 7 RS-1 & II