

I:\ProjectData\MUS_93006\400-Engineering\Roadway\Sheets\93006_GG003.dgn Sheet 3/22/2021 10:04:2 AM hgilberl

| SHEET NUM. | | | | | | PART. | | | | | ITEM | ITEM EXT | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. | CALCULATED XXX | CHECKED XXX | XXX | |
|------------|--------|-------|-----|-------|--|-----------|---------------|---------------|---------------|---------------|------|----------|-------------|------|---|---------------|-------------------|----------------|-----|-----|
| 61 | 893 | 895 | 896 | 1243 | | 01/IMS/PV | 02/IMS/B R | 03/IMS/C V | 04/S<2/O T | 05/SAF/O T | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | 7 | 0.6 | | | | 5.2 | 2.4 | | | 602 | 20000 | 7.6 | CY | CONCRETE MASONRY | | | | | |
| | 64,083 | | | | | | 64,083 | | | | 605 | 11100 | 64,083 | FT | 6" SHALLOW PIPE UNDERDRAINS | | | | | |
| | 863 | | | | | | 863 | | | | 605 | 13300 | 863 | FT | 6" UNCLASSIFIED PIPE UNDERDRAINS | | | | | |
| | 28,947 | | | | | | 28,947 | | | | 605 | 14000 | 28,947 | FT | 6" BASE PIPE UNDERDRAINS | | | | | |
| | | | | 1,500 | | | 1,500 | | | | 611 | 00400 | 1,500 | FT | 4" CONDUIT, TYPE E | | | | | |
| | 1,092 | | | | | | 1,092 | | | | 611 | 00900 | 1,092 | FT | 6" CONDUIT, TYPE B | | | | | |
| | 2,099 | | | | | | 2,099 | | | | 611 | 01500 | 2,099 | FT | 6" CONDUIT, TYPE F | | | | | |
| 100 | | 1,517 | | | | | 1,495 | 122 | | | 611 | 04400 | 1,617 | FT | 12" CONDUIT, TYPE B | | | | | |
| | | 243 | | | | | 188 | 55 | | | 611 | 04600 | 243 | FT | 12" CONDUIT, TYPE C | | | | | |
| | | 34 | | | | | | 34 | | | 611 | 05200 | 34 | FT | 12" CONDUIT, TYPE F, 707.05 TYPE C OR 707.21 | | | | | |
| | | 1,273 | | | | | 1,273 | | | | 611 | 05900 | 1,273 | FT | 15" CONDUIT, TYPE B | | | | | |
| | | 674 | | | | | 634 | 40 | | | 611 | 06100 | 674 | FT | 15" CONDUIT, TYPE C | | | | | |
| | | 520 | 111 | | | | 325 | 306 | | | 611 | 06700 | 631 | FT | 15" CONDUIT, TYPE F, 707.05 TYPE C OR 707.21 | | | | | |
| | | | 16 | | | | 16 | | | | 611 | 13400 | 16 | FT | 30" CONDUIT, TYPE B | | | | | |
| | | | 16 | | | | 16 | | | | 611 | 21100 | 16 | FT | 48" CONDUIT, TYPE C | | | | | |
| | | 30 | | | | | 30 | | | | 611 | 52300 | 30 | FT | 19" X 30" CONDUIT, TYPE A, 706.04 | | | | | |
| | | 160 | | | | | 78 | 82 | | | 611 | 96600 | 160 | FT | CONDUIT, BORED OR JACKED, TYPE B, 12" | | | | | |
| | | 1,182 | | | | | 744 | 438 | | | 611 | 96600 | 1,182 | FT | CONDUIT, BORED OR JACKED, TYPE B, 15" | | | | | |
| 200 | | | | | | | 200 | | | | 611 | 97000 | 200 | FT | SLOTTED DRAIN, TYPE 1, 12" | | | | | |
| | | 6 | 2 | | | | 8 | | | | 611 | 98150 | 8 | EACH | CATCH BASIN, NO. 3 | | | | | |
| | | 2 | | | | | 2 | | | | 611 | 98180 | 2 | EACH | CATCH BASIN, NO. 3A | | | | | |
| | | | 1 | | | | 1 | | | | 611 | 98300 | 1 | EACH | CATCH BASIN, NO. 5 | | | | | |
| | | 3 | | | | | 3 | | | | 611 | 98410 | 3 | EACH | CATCH BASIN, NO. 8 | | | | | |
| | | 5 | | | | | 3 | 2 | | | 611 | 98450 | 5 | EACH | CATCH BASIN, NO. 2-2A | | | | | |
| | | | 1 | | | | 1 | | | | 611 | 98470 | 1 | EACH | CATCH BASIN, NO. 2-2B | | | | | |
| | | 1 | | | | | | 1 | | | 611 | 98570 | 1 | EACH | CATCH BASIN, NO. 2-5 | | | | | |
| | | 5 | | | | | 3 | 2 | | | 611 | 98840 | 5 | EACH | INLET, NO. 2-A-6 | | | | | |
| | | 3 | | | | | 2 | 1 | | | 611 | 98850 | 3 | EACH | INLET, NO. 2-A-8 | | | | | |
| | | 5 | | | | | 4 | 1 | | | 611 | 98860 | 5 | EACH | INLET, NO. 2-A-10 | | | | | |
| | | | 35 | | | | 35 | | | | 611 | 99101 | 35 | EACH | INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN | | | | | 47 |
| | | | 4 | | | | 4 | | | | 611 | 99114 | 4 | EACH | INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, WITH BLOCK OUT | | | | | |
| | | | 4 | | | | 4 | | | | 611 | 99115 | 4 | EACH | INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN , WITH BLOCK OUT | | | | | 885 |
| | | | 5 | | | | 4 | 1 | | | 611 | 99574 | 5 | EACH | MANHOLE, NO. 3 | | | | | |
| | | | 5 | | | | 5 | | | | 611 | 99654 | 5 | EACH | MANHOLE ADJUSTED TO GRADE | | | | | |
| | 37 | | | | | | 37 | | | | 611 | 99710 | 37 | EACH | PRECAST REINFORCED CONCRETE OUTLET | | | | | |

GENERAL SUMMARY

MUS-70-10.49

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| REF NO. | STATION TO STATION | | | | 601 | | | 605 | 605 | 605 | 611 | 611 | 611 | | | | | | | | | | | |
|------------------------------------|--------------------|---------------|--|--|--|--|-------|---------------------------------|---------------------------------|------------------------------|--------------------|--------------------|------------------------------------|--|--|---------------------------|---------------------------|-----------------------------|----------------------------------|----------------------------------|---------------------------|----|---|--|
| | | TO | | | TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT | | | 6" SHALLOW PIPE UNDERDRAIN, 30" | 6" UNCLASSIFIED PIPE UNDERDRAIN | 6" BASE PIPE UNDERDRAIN, 18" | 6" CONDUIT, TYPE B | 6" CONDUIT, TYPE F | PRECAST REINFORCED CONCRETE OUTLET | | | 6" TEE (INFORMATION ONLY) | 6" WYE (INFORMATION ONLY) | 6" CROSS (INFORMATION ONLY) | 6" X 90° BEND (INFORMATION ONLY) | 6" X 45° BEND (INFORMATION ONLY) | 6" CAP (INFORMATION ONLY) | | | |
| | | | | | SY | | FT | FY | FY | FY | FY | FY | EACH | | | EACH | EACH | EACH | EACH | EAC | EACH | | | |
| 51-UD | 566+97 | 569+60 | | | | | 264 | | | | | 4 | | | | | | | | | 1 | 1 | | |
| 52-UD | 569+72 | 573+38 | | | 0.2 | | | | 415 | | | 17 | 1 | | | 1 | | | | 1 | 1 | | | |
| 53-UD | 569+68 | 576+99 | | | | | 731 | | | | | 15 | | | | 1 | | | | 1 | 1 | | | |
| 54-UD | 569+72 | 577+43 | | | | | 771 | | | | | 9 | | | | | | | | | 1 | 1 | | |
| 55-UD | 569+69 | 577+46 | | | | | 777 | | | | | 8 | | | | | | | | | 1 | 1 | | |
| 56-UD | 569+69 | 576+00 | | | | | 631 | | | | | 14 | | | | | | | | 1 | 1 | | | |
| 57-UD | 569+69 | 576+99 | | | | | 730 | | | | | 11 | | | | 1 | | | | | 1 | 1 | | |
| 58-UD | 569+69 | 577+03 | | | 0.2 | | | | 731 | | | 17 | 1 | | | | 1 | | | | 1 | 1 | | |
| 187-UD | 573+57 | 577+03 | | | | | | | 347 | | | 8 | | | | | | | | 1 | 1 | | | |
| 188-UD | 573+57 | 577+00 | | | | | 345 | | | | 37 | | | | | | | 1 | | | 1 | 1 | | |
| 59-UD | 577+04 | 581+99 | | | 0.2 | | | | 495 | | | 16 | 1 | | | | 1 | | | | 1 | 1 | | |
| 60-UD | 577+00 | 582+75 | | | | | 575 | | | | 24 | | | | | | | | | 1 | 1 | | | |
| 61-UD | 577+44 | 580+43 | | | | | 299 | | | | 24 | | | | | | | | | | 1 | 1 | | |
| 62-UD | 577+47 | 580+46 | | | | | 299 | | | | | 8 | | | | | | | | | 1 | 1 | | |
| 63-UD | 577+00 | 581+99 | | | | | 499 | | | | | 15 | | | | | | | | 1 | 1 | | | |
| 64-UD | 577+04 | 582+03 | | | 0.2 | | | | 500 | | | 13 | 1 | | | | 1 | | | | 1 | 1 | | |
| 65-UD | 580+44 | 582+44 | | | | | 200 | | | | | 4 | | | | | | | | | 1 | 1 | | |
| 66-UD | 580+47 | 582+47 | | | | | 200 | | | | | 8 | | | | | | | | | 1 | 1 | | |
| 67-UD | 593+40 | 587+35 | | | 0.2 | | | | 539 | | | 9 | 1 | | | | | | | 1 | 1 | | | |
| 68-UD | 582+00 | 587+31 | | | | | 522 | | | | | 15 | | | | | | | | | 1 | 1 | | |
| 69-UD | 582+04 | 587+31 | | | 0.2 | | 526 | | | | | 27 | 1 | | | | 1 | | | | 1 | 1 | | |
| 70-UD | 582+46 | 584+94 | | | | | 248 | | | | | 4 | | | | | | | | | 1 | 1 | | |
| 71-UD | 582+48 | 584+97 | | | | | 249 | | | | | 9 | | | | | | | | | 1 | 1 | | |
| 72-UD | 584+95 | 587+33 | | | | | 238 | | | | | 4 | | | | | | | | | 1 | 1 | | |
| 73-UD | 584+98 | 587+32 | | | | | 234 | | | | | 9 | | | | | | | | | 1 | 1 | | |
| 74-UD | 597+33 | 601+10 RAMP K | | | 0.2 | | 376 | 10 | | | | 18 | 1 | | | | | | 1 | | | 2 | | |
| 75-UD | 597+24 | 601+35 | | | | | 412 | | | | | 13 | | | | | | | | | | 1 | | |
| 76-UD | 597+12 | 599+14 | | | | | 202 | | | | | 7 | | | | | | | | | | 1 | | |
| 77-UD | 597+07 | 599+16 | | | | | 209 | | | | | 3 | | | | | | | | | | 1 | | |
| 78-UD | 597+01 | 601+47 | | | | | 399 | 48 | | | 12 | | | | | 1 | | | | | | 1 | 2 | |
| 79-UD | 596+80 | 598+00 | | | | | 116 | | | | | | | | | | | | | | | 1 | | |
| 80-UD | 598+35 | 601+26 | | | | | 276 | 13 | | | 17 | | | | | | | | | 1 | | | 2 | |
| 81-UD | 597+72 | 601+56 | | | 0.2 | | | | 386 | | | 8 | 1 | | | | | | | | 1 | 1 | | |
| 82-UD | 599+14 | 600+94 | | | | | 176 | | | | | 7 | | | | | | | | | | 1 | 1 | |
| 83-UD | 599+18 | 601+44 | | | | | 182 | 45 | | | | 3 | | | | | | | 1 | | | 2 | | |
| 84-UD | 600+43 | 601+32 | | | | | | 90 | | | | 24 | | | | | | | | | | 2 | 1 | |
| 85-UD | 601+07 | 601+41 | | | | | | 36 | | | | 7 | | | | | | | | | | 1 | | |
| 86-UD | 603+09 | 604+94 | | | 0.2 | | | | 183 | | | 13 | | | | | 1 | | | | | 1 | 1 | |
| 87-UD | 603+07 | 604+95 | | | | | 187 | | | | 15 | | | | | | | | | | 1 | 1 | | |
| 88-UD | 603+12 | 604+98 | | | | | 132 | 55 | | | | 5 | | | | 1 | | | | | | 2 | | |
| 89-UD | 603+14 | 604+98 | | | | | 134 | 53 | | | | 2 | | | | 1 | | | | | | 2 | | |
| 90-UD | 603+18 | 605+02 | | | | | 187 | | | | 23 | | | | | | | | | | 1 | 1 | | |
| 91-UD | 603+47 | 605+04 | | | | | 160 | | | | | | | | | | 1 | | | | | | 1 | |
| 92-UD | 603+22 | 605+06 | | | | | 191 | | | | 22 | | | | | 1 | | | | | | | 1 | |
| 93-UD | 603+29 | 605+07 | | | 0.2 | | 186 | | | | | 18 | 1 | | | | 1 | | | | | 1 | 1 | |
| 94-UD | 607+04 | 608+58 | | | 0.2 | | | | 153 | | | 15 | 1 | | | | 1 | | | | | 1 | 1 | |
| 95-UD | 607+00 | 608+58 | | | | | 157 | | | | | 15 | | | | | | | | | 1 | 1 | | |
| 96-UD | 607+01 | 607+19 | | | | | | 18 | | | | 7 | | | | | | | | | | 1 | 1 | |
| 97-UD | 607+01 | 608+58 | | | | | 133 | 24 | | | | 2 | | | | 1 | | | | | | 2 | | |
| 98-UD | 607+02 | 608+58 | | | | | 157 | | | | | 15 | | | | | | | | | 1 | 1 | | |
| 99-UD | 607+06 | 608+58 | | | 0.2 | | | | 154 | | | 16 | 1 | | | | | | | | | 1 | 1 | |
| 100-UD | 607+32 | 608+58 | | | | | 127 | | | | | 7 | | | | | 1 | | | | | 1 | 1 | |
| TOTALS CARRIED TO SHEET 893 | | | | | 2.4 | | 12437 | 392 | 3903 | | 174 | 449 | 11 | | | 8 | 9 | 4 | 13 | 28 | | 57 | | |

| | |
|---|---------|
| CALCULATED | RJG |
| | CHECKED |
| HAG | |
| UNDERDRAIN SUB-SUMMARY 51-UD TO 100-UD | |
| MUS-70-10.49 | |
| 889 2231 | |

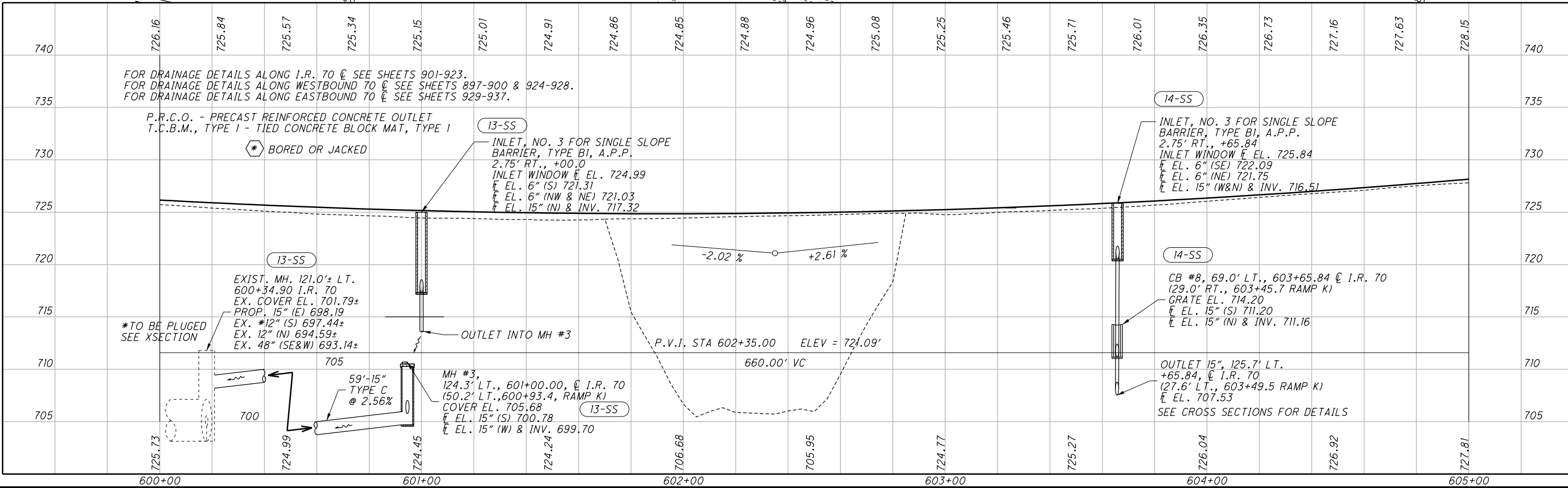
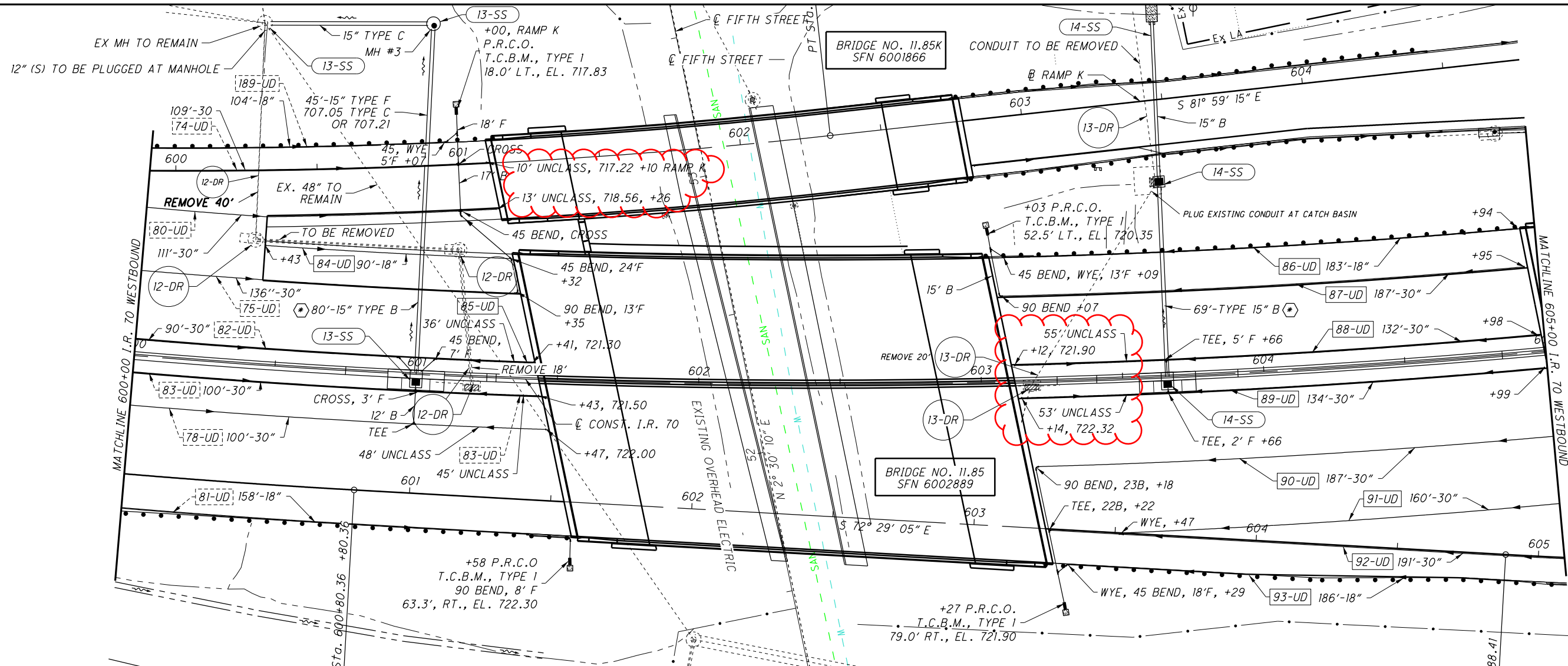
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| REF NO. | STATION TO STATION | | | 601 | 605 | 605 | 605 | 605 | 611 | 611 | 611 | | | | | | | | | | |
|--|--------------------|--------------|------------|--|---------------------------------|---------------------------------|------------------------------|---------------------------------|--------------------|--------------------|------------------------------------|-----|--|------|---------------------------|---------------------------|-----------------------------|----------------------------------|----------------------------------|---------------------------|---|
| | | | | TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT | 6" SHALLOW PIPE UNDERDRAIN, 30" | 6" UNCLASSIFIED PIPE UNDERDRAIN | 6" BASE PIPE UNDERDRAIN, 18" | 6" SHALLOW PIPE UNDERDRAIN, 24" | 6" CONDUIT, TYPE B | 6" CONDUIT, TYPE F | PRECAST REINFORCED CONCRETE OUTLET | | | | 6" TEE (INFORMATION ONLY) | 6" WYE (INFORMATION ONLY) | 6" CROSS (INFORMATION ONLY) | 6" X 90° BEND (INFORMATION ONLY) | 6" X 45° BEND (INFORMATION ONLY) | 6" CAP (INFORMATION ONLY) | |
| | | | | SY | FT | FT | FT | FT | FT | FT | EACH | | | EACH | EACH | EACH | EACH | EACH | EACH | EACH | |
| | RAMP J | | | | | | | | | | | | | | | | | | | | |
| 226-UD | 598+00 | 602+23 | | | 411 | | | | | 10 | | | | | | | | | | | |
| 227-UD | 597+76 | 602+86.5 | | | 512 | | | | | 11 | | | | | | | | 1 | | 1 | |
| | RAMP K | | | | | | | | | | | | | | | | | | | | |
| 228-UD | 602+80 | 604+96 | | | 213 | | | | | 22 | | | | | | | | | | 1 | 1 |
| 229-UD | 602+81 | 604+65 | | | 170 | | | | | 10 | | | | | | | | | | | 1 |
| 230-UD | 604+67 | 605+12 | | | | | | | | 10 | | 32 | | | | | | | | | 1 |
| 231-UD | NOT USED | | | | | | | | | | | | | | | | | | | | |
| 232-UD | 605+14 | 605+46 | | | | | | | | 10 | | | | | | | | | | | 1 |
| | RAMP L | | | | | | | | | | | | | | | | | | | | |
| 233-UD | 607+17 | 609+17 | | | 70 | | 128 | | | 27 | | | | 1 | | | | 1 | | | 1 |
| 234-UD | 607+18 | 608+48 | | | 128 | | | | | 9 | | | | | | | | 1 | | | 1 |
| 218-UD | 584+50 | 586+00 | | | | | | | | | | | | | | | | | | | |
| | RAMP N | | | | | | | | | | | | | | | | | | | | |
| 236-UD | 618+26 | 622+13 | | | 372 | | | | | 10 | | | | | | | | | | | 1 |
| 237-UD | 616+75 | 622+12 | | | | | | | | 10 | | 524 | | | | | | | | | 1 |
| 238-UD | 622+14 | 623+14 | | | 87 | | | | | 10 | | | | | | | | | | | 1 |
| 239-UD | 623+15 | 625+35 | | | 206 | | | | | 10 | | | | | | | | | | | 1 |
| | RAMP O | | | | | | | | | | | | | | | | | | | | |
| 240-UD | 617+08 | 618+75 | | | | | 165 | | | 10 | | | | | | | | | | | 1 |
| 241-UD | 618+90 | 621+38 | | | 235 | | | | | 10 | | | | | | | | | | | 1 |
| TOTALS | THIS | SHEET | | | 2404 | | 324 | 556 | | 169 | | | | 1 | 0 | 0 | 3 | 1 | | 13 | |
| TOTALS | FROM | SHEET | 888 | 2 | 12083 | 53 | 6856 | | 350 | 305 | 10 | | | 14 | 11 | 0 | 19 | 17 | | 50 | |
| TOTALS | FROM | SHEET | 889 | 2.4 | 12437 | 392 | 3903 | | 174 | 449 | 11 | | | 8 | 9 | 4 | 13 | 28 | | 57 | |
| TOTALS | FROM | SHEET | 890 | 0.6 | 13831 | 75 | 8414 | | 276 | 394 | 2 | | | 13 | 6 | 1 | 12 | 28 | | 55 | |
| TOTALS | FROM | SHEET | 891 | 1.2 | 12961 | 0 | 8717 | | 97 | 444 | 5 | | | 10 | 11 | 0 | 11 | 29 | | 41 | |
| TOTALS | FROM | SHEET | 892 | 1.8 | 9811 | 343 | 733 | | 195 | 338 | 9 | | | 9 | 2 | 4 | 11 | 7 | | 43 | |
| TOTALS CARRIED TO GENERAL SUMMARY | | | | 8.0 | 63527.0 | 863.0 | 28947.0 | 556 | 1092 | 2099 | 37 | | | 54.0 | 39.0 | 9.0 | 69.0 | 110.0 | | 259.0 | |

| | | |
|---------------------|------------|-----|
| MUS-70-10.49 | CALCULATED | RUG |
| | CHECKED | HAG |

893
2231

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HORIZONTAL SCALE IN FEET

CALCULATED: R/JG
CHECKED: HAG

DRAINAGE PLAN & PROFILE CENTERLINE I.R. 70

STA. 600+00 TO STA. 605+00

MUS-70-10.49

911
2231

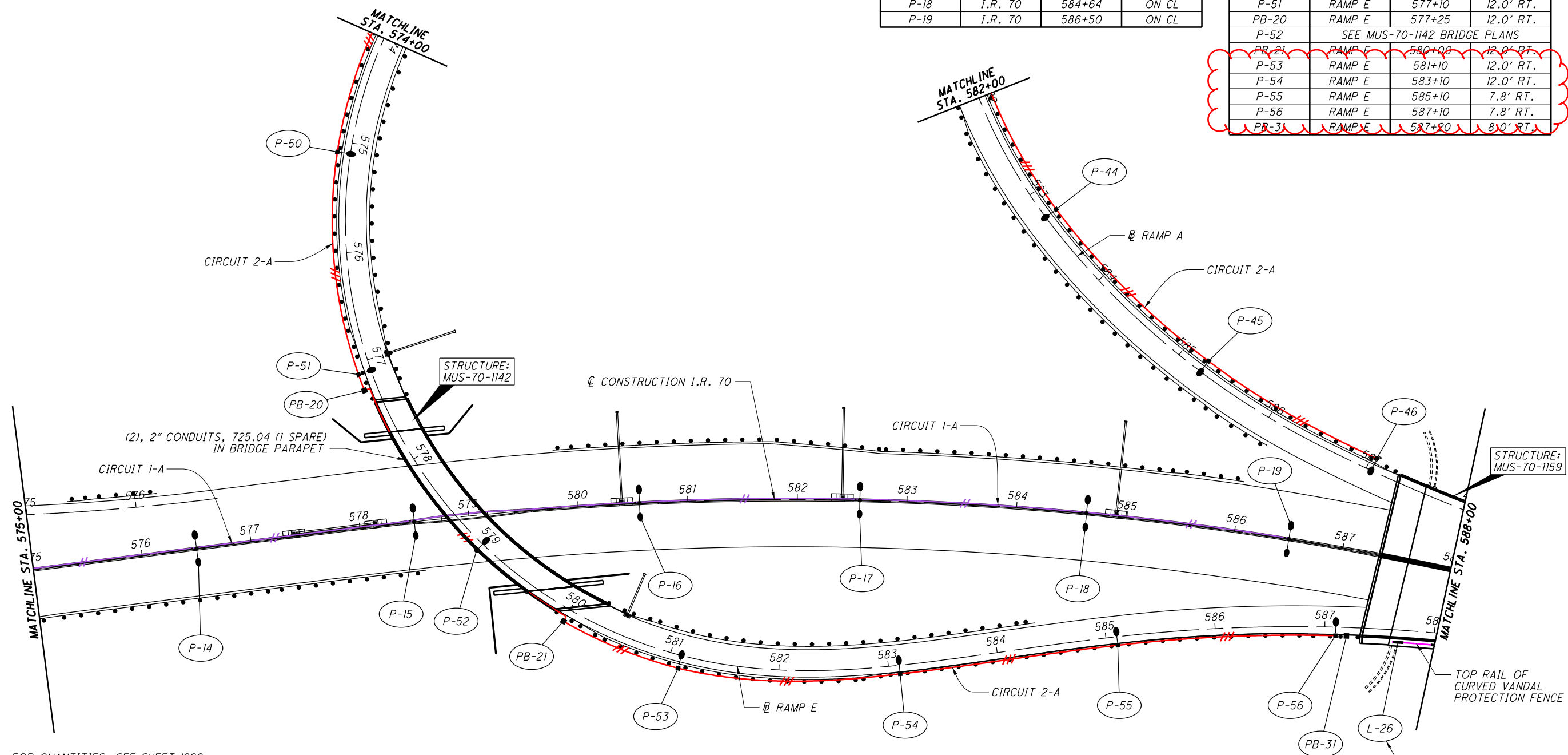
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| CIRCUIT 1-A | | | |
|-------------|-----------|---------|--------|
| REFERENCE | ALIGNMENT | STATION | OFFSET |
| P-14 | I.R. 70 | 576+50 | ON CL |
| P-15 | I.R. 70 | 578+50 | ON CL |
| P-16 | I.R. 70 | 580+56 | ON CL |
| P-17 | I.R. 70 | 582+57 | ON CL |
| P-18 | I.R. 70 | 584+64 | ON CL |
| P-19 | I.R. 70 | 586+50 | ON CL |

| CIRCUIT 2-A | | | |
|-------------|------------------------------|---------|-----------|
| REFERENCE | ALIGNMENT | STATION | OFFSET |
| P-44 | RAMP A | 583+25 | 12.0' LT. |
| P-45 | RAMP A | 585+25 | 12.0' LT. |
| P-46 | RAMP A | 587+05 | 12.0' LT. |
| P-50 | RAMP E | 575+10 | 12.0' RT. |
| P-51 | RAMP E | 577+10 | 12.0' RT. |
| PB-20 | RAMP E | 577+25 | 12.0' RT. |
| P-52 | SEE MUS-70-1142 BRIDGE PLANS | | |
| PB-21 | RAMP E | 580+00 | 12.0' RT. |
| P-53 | RAMP E | 581+10 | 12.0' RT. |
| P-54 | RAMP E | 583+10 | 12.0' RT. |
| P-55 | RAMP E | 585+10 | 7.8' RT. |
| P-56 | RAMP E | 587+10 | 7.8' RT. |
| PB-31 | RAMP E | 587+20 | 8.0' RT. |

CALCULATED
BRH
CHECKED
JSL

HORIZONTAL SCALE IN FEET



FOR QUANTITIES, SEE SHEET 1262

| LEGEND | |
|--------|---------------------------------------|
| | CIRCUIT 1-A |
| | CIRCUIT 2-A |
| | PROPOSED PULL BOX |
| | DUAL ARM LIGHT POLE, MEDIAN MOUNTED |
| | SINGLE ARM LIGHT POLE, GROUND MOUNTED |
| | SINGLE ARM LIGHT POLE, BRIDGE MOUNTED |
| | MUSKINGUM RIVER BRIDGE WALK LUMINAIRE |

LIGHTING PLAN
STA. 575+00 TO STA. 588+00

MUS-70-10.49

1273
2231

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| ABUT. | PIERS | SUPER. | GENERAL | PART. | | | | | ITEM | ITEM EXT | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. |
|--------|-------|---------|---------|-----------|-----------|-----------|-----------|-----------|------|----------|-------------|--|---|---------------|
| | | | | 01/IMS/PV | 02/IMS/BR | 03/IMS/CV | 04/S<2/OT | 05/SAE/OT | | | | | | |
| | | | LS | | LS | | | | 202 | 11203 | LS | STRUCTURE OVER 20 FOOT SPAN (MUS-70-1089) | | |
| | | | 506 | | 506 | | | | 202 | 22900 | 506 | SY | PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN | 3 |
| | | | LS | | LS | | | | 503 | 11100 | LS | COFFERDAMS AND EXCAVATION BRACING | | |
| | | | LS | | LS | | | | 503 | 21301 | LS | UNCLASSIFIED EXCAVATION, AS PER PLAN | | 3 |
| 15,211 | 6,979 | 340,129 | | | 362,317 | | | | 509 | 10000 | 362,317 | LB | EPOXY COATED REINFORCING STEEL | |
| | 978 | | | | 1,730 | | | | 510 | 10000 | 1,730 | EACH | DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT | |
| | | 1,071 | | | 1,071 | | | | 511 | 21522 | 1,071 | CY | CLASS OC2 CONCRETE WITH QC/OA, SUPERSTRUCTURE | |
| | | 336 | | | 336 | | | | 511 | 34450 | 336 | CY | CLASS OC2 CONCRETE WITH QC/OA, BRIDGE DECK (PARAPET) | |
| | | 49 | | | 49 | | | | 511 | 43212 | 49 | CY | CLASS OC1 CONCRETE WITH QC/OA, PIER | |
| 104 | | | | | 104 | | | | 511 | 45712 | 104 | CY | CLASS OC1 CONCRETE WITH QC/OA, ABUTMENT | |
| 30 | | 1,663 | | | 1,693 | | | | 512 | 10050 | 1,693 | SY | SEALING OF CONCRETE SURFACES (NON-EPOXY) | |
| | 76 | | | | 76 | | | | 512 | 33000 | 76 | SY | TYPE 2 WATERPROOFING | |
| | | | | | LS | | | | 513 | 10060 | LS | STRUCTURAL STEEL MEMBERS, LEVEL 3 | | |
| | | 18,984 | | | 18,984 | | | | 513 | 20000 | 18,984 | EACH | WELDED STUD SHEAR CONNECTORS | |
| | | | LUMP | | LS | | | | 513 | 95020 | LS | STRUCTURAL STEEL, MISC.:EXTERNAL POST TENSIONING | | 3 |
| | | 3,674 | | | 3,674 | | | | 514 | 00060 | 3,674 | SF | FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT | |
| | | 3,674 | | | 3,674 | | | | 514 | 00066 | 3,674 | SF | FIELD PAINTING STRUCTURAL STEEL, FINISH COAT | |
| | | 2 | | | 2 | | | | 514 | 10000 | 2 | EACH | FINAL INSPECTION REPAIR | |
| | | 186 | | | 186 | | | | 516 | 11210 | 186 | FT | STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL | |
| | | | 6 | | 6 | | | | 516 | 13600 | 6 | SF | 1" PREFORMED EXPANSION JOINT FILLER | |
| | | | 95 | | 95 | | | | 516 | 14600 | 95 | FT | STRUCTURAL JOINT OR JOINT SEALER, MISC.: HOT APPLIED JOINT SEALER WITH SLEEPER SLAB | 52 |
| | | | 190 | | 190 | | | | 516 | 31011 | 190 | FT | 2" DEEP JOINT SEALER, AS PER PLAN | 3 |
| | | 28 | | | 28 | | | | 516 | 44200 | 28 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (10"x12"x3.0473") | |
| | | 42 | | | 42 | | | | 516 | 44200 | 42 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (15"x16"x3.6967") | |
| | | 14 | | | 14 | | | | 516 | 44200 | 14 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (15"x16"x3.6967") | |
| | | | LS | | LS | | | | 516 | 47001 | LS | JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN | | 3 |
| | | 12 | | | 12 | | | | 518 | 12201 | 12 | EACH | SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN | 44 |
| 52 | | | | | 52 | | | | 518 | 21200 | 52 | CY | POROUS BACKFILL WITH GEOTEXTILE FABRIC | |
| 198 | | | | | 198 | | | | 518 | 40000 | 198 | FT | 6" PERFORATED CORRUGATED PLASTIC PIPE | |
| 120 | | | | | 120 | | | | 518 | 40010 | 120 | FT | 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS | |
| | | | 530 | | 530 | | | | 526 | 25010 | 530 | SY | REINFORCED CONCRETE APPROACH SLABS WITH QC/OA (T=15") | |

ALL QUANTITIES SHOWN BELOW HAVE BEEN CARRIED TO SHEET 1908.

| ABUT. | PIERS | SUPER. | GENERAL | ITEM | ITEM EXT | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. |
|-------|-------|--------|---------|------|----------|-------------|------|--|---------------|
| | | | 530 | 204 | 10000 | 530 | SY | ROADWAY SUBGRADE COMPACTION | |
| | | | 2 | 601 | 20010 | 2 | CY | EROSION CONTROL CRUSHED AGGREGATE SLOPE PROTECTION | |
| | | | 52 | 601 | 21001 | 52 | SY | CONCRETE SLOPE PROTECTION, AS PER PLAN | 3 |
| | | | 89 | 304 | 20000 | 89 | CY | PAVEMENT AGGREGATE BASE | |

| |
|--|
| DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5 |
| REVIEWED DATE JPH 12/2/2020 STRUCTURE FILE NUMBER 6002706 |
| DRAWN JPH REVISED |
| DESIGNED MJB CHECKED TAG |
| BRIDGE SUMMARY BRIDGE NO. MUS-70-1089 OVER LICKING RIVER & NEWARK RD. |
| MUS-70-10.49 PID No. 93006 |
| 4 / 52 |
| 1398 2231 |

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS

| | |
|----------|--------------------------|
| AS-1-15 | DATED/REVISED: 7/17/2015 |
| AS-2-15 | DATED/REVISED: 1/18/2019 |
| CPA-1-08 | DATED/REVISED: 7/18/2008 |
| CPP-1-08 | DATED/REVISED: 7/21/2017 |
| CS-1-08 | DATED/REVISED: 1/19/2018 |
| GSD-1-19 | DATED/REVISED: 1/18/2019 |
| PCB-91 | DATED/REVISED: 1/18/2013 |
| SBR-1-13 | DATED/REVISED: 7/20/2018 |
| SBR-2-13 | DATED/REVISED: 7/20/2018 |

DESIGN SPECIFICATIONS

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE 8TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2017, AND THE ODOT BRIDGE DESIGN MANUAL, 2019.

DESIGN DATA

- ITEM 511 CLASS OC1 CONCRETE, SUBSTRUCTURE (ABUTMENT AND FOOTING) COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)
- ITEM 511 CLASS OC2 CONCRETE, SUPERSTRUCTURE (DECK) COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)
- REINFORCING STEEL - ASTM A615 OR A996, GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI

DESIGN LOADING

DESIGN LOADING: HL-93.
FUTURE WEARING SURFACE (FWS) OF 60 POUNDS PER SQUARE FOOT.

REFERENCE

EXISTING BRIDGE PLANS MAY BE INSPECTED AND ARE PROVIDED WITH THIS PROJECT'S BIDDING DOCUMENTS.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02, AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL
2 1/2" CONCRETE COVER

MONOLITHIC WEARING SURFACE

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

POROUS BACKFILL WITH GEOTEXTILE FABRIC

POROUS BACKFILL WITH GEOTEXTILE FABRIC, THE THICKNESS AS DETAILED IN THIS PLAN SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND Laterally TO THE ENDS OF THE WINGWALLS.

CONSTRUCTION SEQUENCE

SEE GENERAL NOTES FOR MAINTENANCE OF TRAFFIC NOTES AND MAINTENANCE OF TRAFFIC DETAIL SHEETS TO PLAN SEQUENCE OF OPERATIONS.

SURFACE SMOOTHNESS FOR BRIDGES AND APPROACHES

AT THE COMPLETION OF WORK FOR ALL PHASES OF CONSTRUCTION THE CONTRACTOR SHALL CONTACT THE DISTRICT 5 SMOOTHNESS CORDINATOR.

PERFORM THE FOLLOWING AS PER PROPOSAL NOTE 555:

- CLEAN, SWEEP, AND PREPARE THE FINAL DECK AND FINAL ROADWAY SURFACE.
- MEASURE, GRIND, AND RE-MEASURE THE BRIDGE AND/OR ROADWAY AS NECESSARY.
- PERFORM GROOVING OF THE BRIDGE DECK.

INSPECTION FOR BATS

PRIOR TO THE START OF DEMOLITION ACTIVITIES THE CONTRACTOR SHALL INSPECT THE UNDERSIDE OF THE BRIDGE FOR THE PRESENCE OF BATS OR NESTING BIRDS. IF ANY BATS OR BIRD NESTS ARE OBSERVED THE CONTRACTOR SHALL NOTIFY NICOLE HAFER-LIPSTREU IN THE DISTRICT 5 PLANNING DEPARTMENT @ (740) 323-5103 (NICOLE.HAFERLIPSTREU@DOT.OHIO.GOV), OR, BRIAN TATMAN @ (740) 323-5191 (BRIAN.TATMAN@DOT.OHIO.GOV) PRIOR TO STARTING ANY DEMOLITION WORK.

ELASTOMERIC BEARING PADS

THE ELASTOMERIC BEARING PAD SHALL BE PLACED AT THE REAR AND FORWARD ABUMENTS AS DETAILED IN THE PLAN. THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARING WAS DESIGNED IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE LONGTERM COMPRESSION PROOF LOAD TEST (AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED. THE DIMENSION PROVIDED FOR THE ELASTOMERIC BEARING PAD MAY NOT REQUIRE THE CONTRACTOR TO TRIM THE ENDS OF THE BEARING PAD TO PROPERLY FIT THE SKEWED ANGLES OF THE DIAPHRAGM. HOWEVER, IF TRIMMING IS REQUIRED, THE CONTRACTOR SHALL TRIM EACH ITEM 516 ELASTOMERIC BEARING PAD, MISC., BY MECHANICAL MEANS AS APPROVED BY THE ENGINEER. MITER CUT THE ENDS SO THAT THE BEARING PADS FIT FLUSH BETWEEN ADJOINING PHASES/VERTICAL WINGWALL SURFACES. OTHERWISE, PROVIDE SHORTER BEARING PADS AND PLACE A PROPER AMOUNT OF P.E.J.F. BETWEEN ADJOINING PHASES. ALL ASSOCIATED TIME LABOR AND MATERIALS TO PERFORM THIS FIELD WORK WILL BE INCIDENTAL TO ITEM 516 ELASTOMERIC BEARING PAD, MISC.

CUT LINE CONSTRUCTION JOINT PREPARATION

THE INTENT OF THIS PLAN IS TO ALLOW THE CONTRACTOR TO PERFORM FULL DEPTH SAW CUTS AT THE REMOVAL LINES FOLLOWED BY 1/4" SCARIFICATION TO THE REMAINING CUT LINE SURFACES. HOWEVER, AT THE CONTRACTOR'S OPTION FOR THE SUBSTRUCTURE REMOVALS, SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT, ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE. RE-STEEL NOT TO BE INCORPORATED IN THE PROPOSED CONCRETE SHALL BE MECHANICALLY CUT AT THE REMOVAL LINE.

ITEM 202 - PORTION OF STRUCTURE REMOVED, AS PER PLAN, (SUPERSTRUCTURE)

THIS WORK CONSISTS OF THE REMOVAL OF THE ENTIRE EXISTING SUPERSTRUCTURE AS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, INCLUDING THE REMOVAL OF ALL EXISTING CONCRETE DECK, PARAPETS, MEDIANS, BRIDGE RAILINGS, SCUPPERS WITH ATTACHMENTS, EXPANSION JOINTS, STEEL BULB ANGLE GUTTERS, AND ALL OTHER INDIVIDUAL COMPONENTS OF THE ENTIRE EXISTING SUPERSTRUCTURE.

THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES AND AS SHOWN IN THIS PLAN. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED, I.E. THE EXISTING PIERS. THE USE OF EXPLOSIVES, HEADACHE BALLS, HOE RAM TYPE EQUIPMENT, AND TRACK HOE PULVERIZER/SHEAR/MULTI-PROCESSOR ATTACHMENTS IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

PROTECTION OF TRAFFIC: THE CONTRACTOR SHALL SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, BOAT, ETC.) AS PER CMS 2019 501.05.B.2.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF MATERIALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, (SUPERSTRUCTURE).

ITEM 202 - PORTION OF STRUCTURE REMOVED, AS PER PLAN, (SUBSTRUCTURE)

THIS WORK CONSISTS OF THE REMOVAL OF THE EXISTING SUBSTRUCTURE AS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

THE METHOD OF REMOVAL AND THE WEIGHT OF THE HAMMER FOR ABUTMENT REMOVAL SHALL BE APPROVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS, AND/OR HOE-RAMS WILL NOT BE PERMITTED FOR ABUTMENT REMOVAL. RETAIN EXISTING PILES AT ABUTMENTS TO ELEVATIONS AS INDICATED IN PLANS.

THE METHOD OF REMOVAL AND THE WEIGHT OF THE HAMMER FOR PIER REMOVAL SHALL BE APPROVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS, AND/OR HOE-RAMS WILL NOT BE PERMITTED FOR PIER REMOVAL. RETAIN EXISTING REINFORCING STEEL AT PIERS SUFFICIENT TO PROVIDE PROPER LAPPING WITH PROPOSED REINFORCEMENT.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUBSTRUCTURE.

ITEM 202 - APPROACH SLAB REMOVED, AS PER PLAN

DESCRIPTION: THIS WORK SHALL INCLUDE THE REMOVAL OF ALL EXISTING APPROACH SLABS, ADJACENT CONCRETE CURB, AND CONCRETE MEDIAN BARRIER.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A SQ. YD. BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, APPROACH SLAB REMOVED, AS PER PLAN.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN

THE TEMPORARY SHEET PILING USED FOR PHASE CONSTRUCTION SHALL HAVE A MINIMUM SECTION MODULOUS OF 27 IN³ /FT OF WALL.

PAYMENT TO PERFORM THE TEMPORARY SHEET PILING SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK UNLESS SEPARATELY ITEMIZED IN THE PLANS.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN

THIS ITEM SHALL CONSIST OF REMOVING MATERIALS FROM BEHIND THE EXISTING BACKWALL IN ORDER TO PERFORM ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN. LIMITS OF THIS EXCAVATION SHALL BE LIMITED BETWEEN THE PROPOSED WINGWALLS AND EXTEND TO THE END OF THE PROPOSED APPROACH SLABS AS DETAILED. EXCAVATION AROUND PIER COLUMNS SHALL BE TO THE DEPTH OF THE TOP OF PIER FOOTINGS AND PROVIDE ADEQUATE AREA TO PERFORM THE WORK SHOWN IN THESE PLANS.

THE BACKFILL MATERIAL FOR ALL EXCAVATION BEHIND THE ABUTMENTS AND UNDER THE APPROACH SLABS SHALL BE LOW STRENGTH MORTAR BACKFILL (LSM). LSM, TYPE 1 SHALL CONFORM TO CMS SECTION 613 AND BE PLACED WITHIN THE LIMITS OF THE APPROACH SLABS AND IT MAY ALSO BE USED TO CONSTRUCT THE SLOPES IN THIS SAME AREA AS LONG AS IT IS COVERED WITH ONE FOOT OF SOIL TO MATCH EXISTING GRADE. THE AREA FOR THE POROUS BACKFILL WITH GEOTEXTILE FABRIC SHALL BE FORMED PRIOR TO THE PLACEMENT OF THE LSM, TYPE 1 BACKFILL AND PLACEMENT OF THE GEOTEXTILE FABRIC SHALL BE PLACED AFTER THE LSM HAS CURED AND THE FORMS HAVE BEEN REMOVED.

PAYMENT TO PERFORM ALL THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK UNLESS SEPARATELY ITEMIZED IN THE PLANS.

ITEM 507 - 12" CAST-IN-PLACE REINFORCED CONCRETE PILES FURNISHED, AS PER PLAN

THE MINIMUM STEEL PILE WALL THICKNESS FOR THE ABUTMENT AND PIER PILES SHALL BE 0.344 INCH.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE):

THE ULTIMATE BEARING VALUE IS 60 KIPS/PILE FOR THE REAR AND FORWARD ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 100 KIPS/PILE FOR PIER 1 AND PIER 2 PILES.

ABUTMENT PILES: 4 - 12" CAST-IN-PLACE PILES 49 FEET LONG, ORDER LENGTH 54 FEET
PIER PILES: 5 - 12" CAST-IN-PLACE PILES 55 FEET LONG, ORDER LENGTH 60 FEET

2 - DYNAMIC LOAD TESTING ITEMS

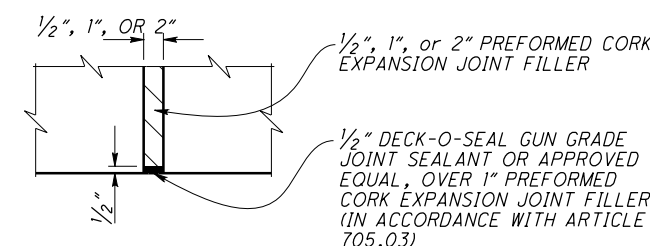
ITEM 509 - REINFORCING STEEL, MISC.: GALVANIZED

ALL REINFORCING STEEL SHALL BE GALVANIZED STEEL CONFORMING TO ASTM A767, CLASS 1. THE GALVANIZED COATED REINFORCING STEEL WILL MEET ALL OTHER REQUIREMENTS OF 509. THE GALVANIZED COATING WILL BE APPLIED AFTER REINFORCING HAS BEEN FABRICATED. IF THE GALVANIZED SURFACE BECOMES DAMAGED DURING HANDLING IN THE FIELD, REPAIRS WILL CONFORM TO ASTM A780. USE BAR SUPPORTS AND TIE WIRES WHICH ARE PLASTIC COATED OR EPOXY COATED. ONLY SUPPLIERS CERTIFIED UNDER S1068 MAY PROVIDE THIS REINFORCING.

ITEM 516 - 1/2", 1", OR 2" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN

ALL 1/2" P.E.J.F., 1" P.E.J.F., AND 2" P.E.J.F. CALLED FOR IN THE PLANS SHALL BE PREFORMED CORK JOINT FILLER (IN ACCORDANCE WITH ARTICLE 705.03). RECESS JOINT FILLER 1/2" FOR ALL JOINTS (SEE DETAIL). SEAL ALL JOINTS WITH DECK-O-SEAL GUN GRADE-JOINT SEALANT OR AN APPROVED EQUAL. THE COLOR SHALL BE STONE GRAY. APPROVED MANUFACTURER'S APPLICATION METHODS SHALL BE FOLLOWED DURING SURFACE PREPARATION AND APPLICATION FOR MAXIMUM EFFECTIVENESS.

DECK-O-SEAL
P.O. BOX 397
HAMPSHIRE, IL 60140
PHONE: 800-542-7665



PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 516 - 1/2" PEJF, A.P.P., SQ. FT. AND 1" PEJF, A.P.P., SQ. FT., AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND INCIDENTALS REQUIRED TO COMPLETE THE WORK DESCRIBED.

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| | |
|---------------|---|
| DESIGN AGENCY | OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 |
| REVIEWED TAG | DATE 11/23/2020 |
| DESIGNED TDF | CHECKED CPS |
| DRAWN TDF | REVISED |
| BRIDGE NOTES | BRIDGE NO. MUS-70-11.86 OVER N. 5TH STREET |
| MUS-70-10.49 | PID No. 93006 |
| 3/81 | 1609 2231 |

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| SHEET NUM. | | | | | | | | | | | | | PART. | ITEM | ITEM | GRAND | UNIT | DESCRIPTION | SEE SHEET NO. | | | |
|------------|--|--|--|--|--|--|--|--|--|--|--|--|---------------|---------|---------|---------|---------|-------------|---------------|------|---|-------|
| | | | | | | | | | | | | | 02/IMS/B R | EXT | TOTAL | | | | | | | |
| | | | | | | | | | | | | | PHASE 1 | PHASE 2 | PHASE 3 | | | | | | | |
| | | | | | | | | | | | | | 0.34 LS | 0.33 LS | 0.33 LS | LS | 202 | 11201 | LS | | PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SUPERSTRUCTURE) | 3 |
| | | | | | | | | | | | | | 0.34 LS | 0.33 LS | 0.33 LS | LS | 202 | 11201 | LS | | PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SUBSTRUCTURE) | 3 |
| | | | | | | | | | | | | | 144 | 203 | 150 | 497 | 202 | 22901 | 497 | SY | APPROACH SLAB REMOVED, AS PER PLAN | 3 |
| | | | | | | | | | | | | | LS | | | LS | 503 | 11101 | LS | | COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN | 3 |
| | | | | | | | | | | | | | 0.34 LS | 0.33 LS | 0.33 LS | LS | 503 | 21301 | LS | | UNCLASSIFIED EXCAVATION, AS PER PLAN | 3 |
| | | | | | | | | | | | | | | 0.5 LS | 0.5 LS | LS | 505 | 11100 | LS | | PILE DRIVING EQUIPMENT MOBILIZATION | |
| | | | | | | | | | | | | | | 422 | 49 | 471 | 507 | 00500 | 471 | FT | 12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN | 3 |
| | | | | | | | | | | | | | | 462 | 54 | 516 | 507 | 00550 | 516 | FT | 12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED | 3 |
| | | | | | | | | | | | | | 65,743 | 90,316 | 59,044 | 215,103 | 509 | 10000 | 215,103 | LB | EPOXY COATED REINFORCING STEEL | |
| | | | | | | | | | | | | | | 9,985 | | 9,985 | 509 | 40000 | 9,985 | LB | REINFORCING STEEL, MISC.: GALVANIZED | 3 |
| | | | | | | | | | | | | | 89 | 42 | 58 | 189 | 510 | 10000 | 189 | EACH | DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT | |
| | | | | | | | | | | | | | 268 | 345 | 228 | 841 | 511 | 32212 | 841 | CY | CLASS OC2 CONCRETE WITH OC/OA, SUPERSTRUCTURE | |
| | | | | | | | | | | | | | | 26 | 26 | 52 | 511 | 31401 | 52 | CY | CLASS OC2 SCC CONCRETE, BRIDGE DECK PARAPET, AS PER PLAN | 64-66 |
| | | | | | | | | | | | | | | 26 | | 26 | 511 | 41012 | 26 | CY | CLASS OC1 CONCRETE WITH OC/OA, PIER ABOVE FOOTINGS | |
| | | | | | | | | | | | | | 72 | 134 | 69 | 275 | 511 | 43512 | 275 | CY | CLASS OC1 CONCRETE WITH OC/OA, ABUTMENT INCLUDING FOOTING | |
| | | | | | | | | | | | | | | 13 | | 13 | 511 | 46512 | 13 | CY | CLASS OC1 CONCRETE WITH OC/OA, FOOTING | |
| | | | | | | | | | | | | | 55 | | | 55 | 511 | 53012 | 55 | CY | CLASS OC2 CONCRETE, MISC.: MEDIAN BARRIER | 62 |
| | | | | | | | | | | | | | 322 | 360 | 273 | 955 | 512 | 10050 | 955 | SY | SEALING OF CONCRETE SURFACES (NON-EPOXY) | |
| | | | | | | | | | | | | | 61 | 62 | 61 | 184 | 512 | 10100 | 184 | SY | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) | |
| | | | | | | | | | | | | | 116 | 149 | 98 | 363 | 516 | 13201 | 363 | SF | 1/2" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN | 3 |
| | | | | | | | | | | | | | 169 | 183 | 140 | 492 | 516 | 13601 | 492 | SF | 1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN | 3 |
| | | | | | | | | | | | | | | 18 | 17 | 35 | 516 | 13901 | 35 | SF | 2" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN | 3 |
| | | | | | | | | | | | | | 69 | 94 | 63 | 226 | 516 | 14020 | 226 | FT | SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL | |
| | | | | | | | | | | | | | 69 | 89 | 57 | 215 | 516 | 14600 | 215 | FT | STRUCTURAL JOINT OR JOINT SEALER, MISC.: EMSEAL WITH SLEEPER SLAB | 81 |
| | | | | | | | | | | | | | 69 | 89 | 57 | 215 | 516 | 31011 | 215 | FT | 2" DEEP JOINT SEALER, AS PER PLAN | 4 |
| | | | | | | | | | | | | | 1 | | | 1 | 516 | 42000 | 1 | EACH | ELASTOMERIC BEARING PAD, MISC.: (34'-9" x 8" x 1-1/2") | 3 |
| | | | | | | | | | | | | | 1 | | | 1 | 516 | 42000 | 1 | EACH | ELASTOMERIC BEARING PAD, MISC.: (34'-6" x 8" x 1-1/2") | 3 |
| | | | | | | | | | | | | | | 1 | | 1 | 516 | 42000 | 1 | EACH | ELASTOMERIC BEARING PAD, MISC.: (47'-10" x 8" x 1-1/2") | 3 |
| | | | | | | | | | | | | | | 1 | | 1 | 516 | 42000 | 1 | EACH | ELASTOMERIC BEARING PAD, MISC.: (41'-9" x 8" x 1-1/2") | 3 |
| | | | | | | | | | | | | | | | 1 | 1 | 516 | 42000 | 1 | EACH | ELASTOMERIC BEARING PAD, MISC.: (29'-6" x 8" x 1-1/2") | 3 |
| | | | | | | | | | | | | | | | 1 | 1 | 516 | 42000 | 1 | EACH | ELASTOMERIC BEARING PAD, MISC.: (29'-4" x 8" x 1-1/2") | 3 |
| | | | | | | | | | | | | | 5 | 4 | 5 | 14 | 518 | 12000 | 14 | EACH | SCUPPERS, INCLUDING SUPPORTS | |
| | | | | | | | | | | | | | 23 | 38 | 15 | 76 | 518 | 21200 | 76 | CY | POROUS BACKFILL WITH GEOTEXTILE FABRIC | |
| | | | | | | | | | | | | | 69 | 89 | 63 | 221 | 518 | 40000 | 221 | FT | 6" PERFORATED CORRUGATED PLASTIC PIPE | |
| | | | | | | | | | | | | | 29 | 43 | 31 | 103 | 518 | 40010 | 103 | FT | 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS | |
| | | | | | | | | | | | | | 553 | 562 | 548 | 1,663 | SPECIAL | 51900100 | 1,663 | SF | COMPOSITE FIBER WRAP SYSTEM | 4 |
| | | | | | | | | | | | | | | 1 | 1 | 2 | 523 | 20000 | 2 | EACH | DYNAMIC LOAD TESTING | 3 |
| | | | | | | | | | | | | | 188 | 245 | 160 | 593 | 526 | 25001 | 593 | SY | REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN | 4 |
| | | | | | | | | | | | | | | LS | | LS | SPECIAL | 53000200 | LS | | STRUCTURES (PRECONSTRUCTION CONDITION SURVEY) | 4 |
| | | | | | | | | | | | | | | 0.9 LS | 0.1 LS | LS | SPECIAL | 53000200 | LS | | STRUCTURES (VIBRATION MONITORING) | 4 |
| | | | | | | | | | | | | | | 464 | 460 | 924 | SPECIAL | 53000600 | 924 | SF | STRUCTURES (AESTHETIC TREATMENT CONCRETE FORMLINER/STAIN) | 4 |

| | | | | | | | | |
|-------------------------|----------------|-----------------|----------------|----------|------------|-----------------------|------------|----------------------------|
| DESIGNED TDF | CHECKED CPS | DESIGNED TDF | CHECKED CPS | DESIGNED | DATE | REVIEWED | DATE | DESIGN AGENCY |
| | | | | TDF | 11/23/2020 | TAG | 11/23/2020 | OHIO DEPARTMENT OF |
| | | | | TDF | 6002889 | STRUCTURE FILE NUMBER | 6002889 | TRANSPORTATION, DISTRICT 5 |
| | | | | TDF | | REVISOR | | |
| BRIDGE SUMMARY | | | | | | | | |
| BRIDGE NO. MUS-70-11.86 | | | | | | | | |
| OVER N. 5TH STREET | | | | | | | | |
| MUS-70-10.49 | | | | | | | | |
| PID No. 93006 | | | | | | | | |
| 5 / 81 | | | | | | | | |
| 1611 2231 | | | | | | | | |

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS

Table with 2 columns: Drawing ID and Date/Revision. Includes AS-1-15, AS-2-15, CPA-1-08, CPP-1-08, CS-1-08, GSD-1-19, PCB-91, SBR-1-13, SBR-2-13.

DESIGN SPECIFICATIONS

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE 8TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2017, AND THE ODOT BRIDGE DESIGN MANUAL, 2019.

DESIGN DATA

- ITEM 511 CLASS OC1 CONCRETE, SUBSTRUCTURE (ABUTMENT AND FOOTING) COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)
ITEM 511 CLASS OC2 CONCRETE, SUPERSTRUCTURE (DECK) COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)
REINFORCING STEEL - ASTM A615 OR A996, GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI

DESIGN LOADING

DESIGN LOADING: HL-93. FUTURE WEARING SURFACE (FWS) OF 60 POUNDS PER SQUARE FOOT.

REFERENCE

EXISTING BRIDGE PLANS MAY BE INSPECTED AND ARE PROVIDED WITH THIS PROJECT'S BIDDING DOCUMENTS.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02, AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL
2 1/2" CONCRETE COVER

MONOLITHIC WEARING SURFACE

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

POROUS BACKFILL WITH GEOTEXTILE FABRIC

POROUS BACKFILL WITH GEOTEXTILE FABRIC, THE THICKNESS AS DETAILED IN THIS PLAN SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND Laterally TO THE ENDS OF THE WINWALLS.

CONSTRUCTION SEQUENCE

SEE GENERAL NOTES FOR MAINTENANCE OF TRAFFIC NOTES AND MAINTENANCE OF TRAFFIC DETAIL SHEETS TO PLAN SEQUENCE OF OPERATIONS.

SURFACE SMOOTHNESS FOR BRIDGES AND APPROACHES

AT THE COMPLETION OF WORK FOR ALL PHASES OF CONSTRUCTION THE CONTRACTOR SHALL CONTACT THE DISTRICT 5 SMOOTHNESS CORDINATOR.

PERFORM THE FOLLOWING AS PER PROPOSAL NOTE 555:

- 1. CLEAN, SWEEP, AND PREPARE THE FINAL DECK AND FINAL ROADWAY SURFACE.
2. MEASURE, GRIND, AND RE-MEASURE THE BRIDGE AND/OR ROADWAY AS NECESSARY.
3. PERFORM GROOVING OF THE BRIDGE DECK.

INSPECTION FOR BATS

PRIOR TO THE START OF DEMOLITION ACTIVITIES THE CONTRACTOR SHALL INSPECT THE UNDERSIDE OF THE BRIDGE FOR THE PRESENCE OF BATS OR NESTING BIRDS. IF ANY BATS OR BIRD NESTS ARE OBSERVED THE CONTRACTOR SHALL NOTIFY NICOLE HAFER-LIPSTREU IN THE DISTRICT 5 PLANNING DEPARTMENT @ (740) 323-5103 (NICOLE.HAFERLIPSTREU@DOT.OHIO.GOV), OR, BRIAN TATMAN @ (740) 323-5191 (BRIAN.TATMAN@DOT.OHIO.GOV) PRIOR TO STARTING ANY DEMOLITION WORK.

ELASTOMERIC BEARING PADS

THE ELASTOMERIC BEARING PAD SHALL BE PLACED AT THE REAR AND FORWARD ABUMENTS AS DETAILED IN THE PLAN. THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARING WAS DESIGNED IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE LONGTERM COMPRESSION PROOF LOAD TEST (AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED. THE DIMENSION PROVIDED FOR THE ELASTOMERIC BEARING PAD MAY NOT REQUIRE THE CONTRACTOR TO TRIM THE ENDS OF THE BEARING PAD TO PROPERLY FIT THE SKEWED ANGLES OF THE DIAPHRAGM. HOWEVER, IF TRIMMING IS REQUIRED, THE CONTRACTOR SHALL TRIM EACH ITEM 516 ELASTOMERIC BEARING PAD, MISC., BY MECHANICAL MEANS AS APPROVED BY THE ENGINEER. MITER CUT THE ENDS SO THAT THE BEARING PADS FIT FLUSH BETWEEN ADJOINING PHASES/VERTICAL WINGWALL SURFACES. OTHERWISE, PROVIDE SHORTER BEARING PADS AND PLACE A PROPER AMOUNT OF P.E.J.F. BETWEEN ADJOINING PHASES. ALL ASSOCIATED TIME LABOR AND MATERIALS TO PERFORM THIS FIELD WORK WILL BE INCIDENTAL TO ITEM 516 ELASTOMERIC BEARING PAD, MISC.

CUT LINE CONSTRUCTION JOINT PREPARATION

THE INTENT OF THIS PLAN IS TO ALLOW THE CONTRACTOR TO PERFORM FULL DEPTH SAW CUTS AT THE REMOVAL LINES FOLLOWED BY 1/4" SCARIFICATION TO THE REMAINING CUT LINE SURFACES. HOWEVER, AT THE CONTRACTOR'S OPTION FOR THE SUBSTRUCTURE REMOVALS, SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT, ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE. RE-STEEL NOT TO BE INCORPORATED IN THE PROPOSED CONCRETE SHALL BE MECHANICALLY CUT AT THE REMOVAL LINE.

ITEM 202 - PORTION OF STRUCTURE REMOVED, AS PER PLAN, (SUPERSTRUCTURE)

THIS WORK CONSISTS OF THE REMOVAL OF THE ENTIRE EXISTING SUPERSTRUCTURE AS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, INCLUDING THE REMOVAL OF ALL EXISTING CONCRETE DECK, PARAPETS, MEDIANS, BRIDGE RAILINGS, SCUPPERS WITH ATTACHMENTS, EXPANSION JOINTS, STEEL BULB ANGLE GUTTERS, AND ALL OTHER INDIVIDUAL COMPONENTS OF THE ENTIRE EXISTING SUPERSTRUCTURE.

THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES AND AS SHOWN IN THIS PLAN. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED, I.E. THE EXISTING PIERS. THE USE OF EXPLOSIVES, HEADACHE BALLS, HOE RAM TYPE EQUIPMENT, AND TRACK HOE PULVERIZER/SHEAR/MULTI-PROCESSOR ATTACHMENTS IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

PROTECTION OF TRAFFIC: THE CONTRACTOR SHALL SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, BOAT, ETC.) AS PER CMS 2019 501.05.B.2.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF MATERIALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, (SUPERSTRUCTURE).

ITEM 202 - PORTION OF STRUCTURE REMOVED, AS PER PLAN, (SUBSTRUCTURE)

THIS WORK CONSISTS OF THE REMOVAL OF THE EXISTING SUBSTRUCTURE AS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

THE METHOD OF REMOVAL AND THE WEIGHT OF THE HAMMER FOR ABUTMENT REMOVAL SHALL BE APPROVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS, AND/OR HOE-RAMS WILL NOT BE PERMITTED FOR ABUTMENT REMOVAL. RETAIN EXISTING PILES AT ABUTMENTS TO ELEVATIONS AS INDICATED IN PLANS.

EXISTING PIERS SHALL REMAIN IN PLACE AND UNDAMAGED DURING ADJACENT STRUCTURE REMOVALS.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUBSTRUCTURE.

ITEM 202 - APPROACH SLAB REMOVED, AS PER PLAN

DESCRIPTION: THIS WORK SHALL INCLUDE THE REMOVAL OF ALL EXISTING APPROACH SLABS, ADJACENT CONCRETE CURB, AND CONCRETE MEDIAN BARRIER.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A SQ. YD. BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, APPROACH SLAB REMOVED, AS PER PLAN.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN

THE TEMPORARY SHEET PILING USED FOR PHASE CONSTRUCTION SHALL HAVE A MINIMUM SECTION MODULOUS OF 27 IN^3 /FT OF WALL.

PAYMENT TO PERFORM THE TEMPORARY SHEET PILING SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK UNLESS SEPARATELY ITEMIZED IN THE PLANS.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN

THIS ITEM SHALL CONSIST OF REMOVING MATERIALS FROM BEHIND THE EXISTING BACKWALL IN ORDER TO PERFORM ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN. LIMITS OF THIS EXCAVATION SHALL BE LIMITED BETWEEN THE PROPOSED WINGWALLS AND EXTEND TO THE END OF THE PROPOSED APPROACH SLABS AS DETAILED. EXCAVATION AROUND PIER COLUMNS SHALL BE TO THE DEPTH OF THE TOP OF PIER FOOTINGS AND PROVIDE ADEQUATE AREA TO PERFORM THE WORK SHOWN IN THESE PLANS.

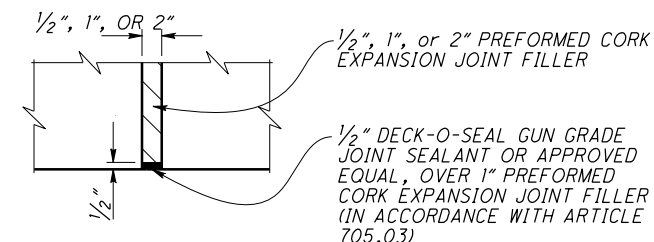
THE BACKFILL MATERIAL FOR ALL EXCAVATION BEHIND THE ABUTMENTS AND UNDER THE APPROACH SLABS SHALL BE LOW STRENGTH MORTAR BACKFILL (LSM). LSM, TYPE 1 SHALL CONFORM TO CMS SECTION 613 AND BE PLACED WITHIN THE LIMITS OF THE APPROACH SLABS AND IT MAY ALSO BE USED TO CONSTRUCT THE SLOPES IN THIS SAME AREA AS LONG AS IT IS COVERED WITH ONE FOOT OF SOIL TO MATCH EXISTING GRADE. THE AREA FOR THE POROUS BACKFILL WITH GEOTEXTILE FABRIC SHALL BE FORMED PRIOR TO THE PLACEMENT OF THE LSM, TYPE 1 BACKFILL AND PLACEMENT OF THE GEOTEXTILE FABRIC SHALL BE PLACED AFTER THE LSM HAS CURED AND THE FORMS HAVE BEEN REMOVED.

PAYMENT TO PERFORM ALL THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK UNLESS SEPARATELY ITEMIZED IN THE PLANS.

ITEM 516 - 1/2", 1", OR 2" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN

ALL 1/2" P.E.J.F., 1" P.E.J.F, AND 2" P.E.J.F. CALLED FOR IN THE PLANS SHALL BE PREFORMED CORK JOINT FILLER (IN ACCORDANCE WITH ARTICLE 705.03). RECESS JOINT FILLER 1/2" FOR ALL JOINTS (SEE DETAIL). SEAL ALL JOINTS WITH DECK-O-SEAL GUN GRADE-JOINT SEALANT OR AN APPROVED EQUAL. THE COLOR SHALL BE STONE GRAY. APPROVED MANUFACTURER'S APPLICATION METHODS SHALL BE FOLLOWED DURING SURFACE PREPARATION AND APPLICATION FOR MAXIMUM EFFECTIVENESS.

DECK-O-SEAL
P.O. BOX 397
HAMPSHIRE, IL 60140
PHONE: 800-542-7665



PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 516 - 1/2" PEJF, A.P.P., SQ. FT. AND 1" PEJF, A.P.P., SQ. FT., AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND INCIDENTALS REQUIRED TO COMPLETE THE WORK DESCRIBED.

ITEM 519 - COMPOSITE FIBER WRAP SYSTEM

REFER TO PROPOSAL NOTE 519 FOR ITEM SPECIFICATIONS NOT GIVEN HEREIN. THE REQUIRED CONFINING STRESS DUE TO FRP JACKET (F) WILL BE 0.150 FOR THE HEIGHT SHOWN ON SHEET 29/72 THRU 35/72. THE FINAL URETHANE (OR SYSTEM SPECIFIED) COATING SYSTEM APPLICATION COLOR SHALL BE FEDERAL COLOR FS-595C-16440: LIGHT GULL GRAY.

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN

FURNISH APPROACH SLABS CONFORMING TO CMS 526. THE ACCEPTED QUANTITIES SHALL INCLUDE: CONCRETE, REINFORCING STEEL, JOINT FILLERS, JOINT SEALERS, JOINT SEALS, P-E.J.F., A.P.P., WATERPROOFING, AND ANY OTHER INCIDENTALS SHOWN ON THE APPROACH SLAB DETAIL SHEETS UNLESS OTHERWISE NOTED IN THE PLAN. THE DEPARTMENT WILL MEASURE APPROACH SLABS BY THE NUMBER OF SQUARE YARDS.

FILL UNDER APPROACH SLABS

ITEM 304, AGGREGATE BASE SHALL BE USED TO BRING THE SUBBASE TO GRADE FOR THE PROPOSED APPROACH SLABS AS DETAILED ON THE APPROACH SLAB DETAILS SHEETS AND SHALL EXTEND 1'-6" ON BOTH SIDES OF EACH APPROACH SLAB.

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BRIDGE NOTES
MUS-70-10.49
PID No. 93006
3/72
1690
2231
DESIGN AGENCY: OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5
DATE: 11/24/2020
TAG: 6002919
REVIEWED:
DRAWN:
CHECKED:
DESIGNED:
STRUCTURE FILE NUMBER:
CPS

I:\ProjectData\MUS_93006\400-Engineering\Structures\SFN_600299\Sheets\070_299C_S000.dgn Bridge Quantities 3/23/2021 3:54:59 PM tgreenwa

| SHEET NUM. | | | | | | | | | | PART. | ITEM | ITEM | GRAND | UNIT | DESCRIPTION | SEE SHEET NO. | | | |
|------------|--|--|--|--|--|--|--|--|--|--|---------|---------|---------|---------|-------------|---------------|---|---|-------|
| | | | | | | | | | | 02/IMS/B R | EXT | TOTAL | | | | | | | |
| | | | | | | | | | | PHASE 1 | PHASE 2 | PHASE 3 | | | | | | | |
| | | | | | | | | | | STRUCTURE OVER 20 FOOT SPAN (MUS-70-1192) | | | | | | | | | |
| | | | | | | | | | | 0.34 LS | 0.33 LS | 0.33 LS | LS | 202 | 11201 | LS | PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SUPERSTRUCTURE) | 3 | |
| | | | | | | | | | | 0.34 LS | 0.33 LS | 0.33 LS | LS | 202 | 11201 | LS | PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SUBSTRUCTURE) | 3 | |
| | | | | | | | | | | 144 | 146 | 147 | 437 | 202 | 22901 | 437 | SY | APPROACH SLAB REMOVED, AS PER PLAN | 3 |
| | | | | | | | | | | LS | | | LS | 503 | 11101 | LS | COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN | 3 | |
| | | | | | | | | | | 0.34 LS | 0.33 LS | 0.33 LS | LS | 503 | 21301 | LS | UNCLASSIFIED EXCAVATION, AS PER PLAN | 3 | |
| | | | | | | | | | | 96,464 | 87,089 | 87,162 | 270,715 | 509 | 10000 | 270,715 | LB | EPOXY COATED REINFORCING STEEL | |
| | | | | | | | | | | 107 | 56 | 58 | 221 | 510 | 10000 | 221 | EACH | DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT | |
| | | | | | | | | | | 418 | 354 | 356 | 1,128 | 511 | 32212 | 1,128 | CY | CLASS OC2 CONCRETE WITH OC/OA, SUPERSTRUCTURE | |
| | | | | | | | | | | 29 | 31 | 60 | 60 | 511 | 34401 | 60 | CY | CLASS OC SCC CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN | 58-60 |
| | | | | | | | | | | 57 | 74 | 59 | 190 | 511 | 43512 | 190 | CY | CLASS OC1 CONCRETE WITH OC/OA, ABUTMENT INCLUDING FOOTING | |
| | | | | | | | | | | 66 | | | 66 | 511 | 53012 | 66 | CY | CLASS OC2 CONCRETE, MISC.: MEDIAN BARRIER | 56 |
| | | | | | | | | | | 361 | 334 | 322 | 1,017 | 512 | 10050 | 1,017 | SY | SEALING OF CONCRETE SURFACES (NON-EPOXY) | |
| | | | | | | | | | | 56 | 62 | 50 | 168 | 512 | 10100 | 168 | SY | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) | |
| | | | | | | | | | | 113 | 96 | 96 | 305 | 516 | 13201 | 305 | SF | 1/2" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN | 3 |
| | | | | | | | | | | 162 | 117 | 118 | 397 | 516 | 13601 | 397 | SF | 1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN | 3 |
| | | | | | | | | | | | 46 | 19 | 65 | 516 | 13901 | 65 | SF | 2" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN | 3 |
| | | | | | | | | | | 68 | 61 | 61 | 190 | 516 | 14020 | 190 | FT | SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL | |
| | | | | | | | | | | 68 | 55 | 55 | 178 | 516 | 14600 | 178 | FT | STRUCTURAL JOINT OR JOINT SEALER, MISC.: EMSEAL WITH SLEEPER SLAB | 72 |
| | | | | | | | | | | 68 | 55 | 55 | 178 | 516 | 31011 | 178 | FT | 2" DEEP JOINT SEALER, AS PER PLAN | 4 |
| | | | | | | | | | | 2 | | | 2 | 516 | 42000 | 2 | EACH | ELASTOMERIC BEARING PAD, MISC.: (34'-0" x 8" x 1-1/2") | 3 |
| | | | | | | | | | | | 2 | 2 | 4 | 516 | 42000 | 4 | EACH | ELASTOMERIC BEARING PAD, MISC.: (28'-11" x 8" x 1-1/2") | 3 |
| | | | | | | | | | | 7 | | 7 | 14 | 518 | 12000 | 14 | EACH | SCUPPERS, INCLUDING SUPPORTS | |
| | | | | | | | | | | 23 | 25 | 14 | 62 | 518 | 21200 | 62 | CY | POROUS BACKFILL WITH GEOTEXTILE FABRIC | |
| | | | | | | | | | | 68 | 58 | 58 | 184 | 518 | 40000 | 184 | FT | 6" PERFORATED CORRUGATED PLASTIC PIPE | |
| | | | | | | | | | | 29 | 31 | 34 | 94 | 518 | 40010 | 94 | FT | 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS | |
| | | | | | | | | | | 504 | 561 | 447 | 1,512 | SPECIAL | 51900100 | 1,512 | SF | COMPOSITE FIBER WRAP SYSTEM | 3 |
| | | | | | | | | | | 188 | 156 | 160 | 504 | 526 | 25001 | 504 | SY | REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN | 3 |
| | | | | | | | | | | | 512 | 557 | 1,069 | SPECIAL | 53000600 | 1,069 | SF | STRUCTURES (AESTHETIC TREATMENT CONCRETE FORMLINER/STAIN) | 4 |

| | |
|----------------|--|
| DESIGN AGENCY | OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5 |
| DATE | 11/24/2020 |
| REVISION TAG | 58-60 |
| DRAWN TDF | |
| CHECKED CPS | |
| BRIDGE SUMMARY | BRIDGE NO. MUS-70-11.92 OVER N. 6TH STREET |
| MUS-70-10.49 | PID No. 93006 |
| 5 / 72 | 1692 2231 |

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS

| | |
|----------|--------------------------|
| AS-1-15 | DATED/REVISED: 7/17/2015 |
| AS-2-15 | DATED/REVISED: 1/18/2019 |
| CPA-1-08 | DATED/REVISED: 7/18/2008 |
| CPP-1-08 | DATED/REVISED: 7/21/2017 |
| CS-1-08 | DATED/REVISED: 1/19/2018 |
| GSD-1-19 | DATED/REVISED: 1/18/2019 |
| PCB-91 | DATED/REVISED: 1/18/2013 |
| SBR-1-13 | DATED/REVISED: 7/20/2018 |
| SBR-2-13 | DATED/REVISED: 7/20/2018 |

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FUTURE WEARING SURFACE (FWS) OF 60 POUNDS PER SQUARE FOOT.

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2 1/2" CONCRETE COVER

MONOLITHIC WEARING SURFACE

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

POROUS BACKFILL WITH GEOTEXTILE FABRIC

POROUS BACKFILL WITH GEOTEXTILE FABRIC, THE THICKNESS AS DETAILED IN THIS PLAN SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND Laterally TO THE ENDS OF THE WINGWALLS.

FILL UNDER APPROACH SLABS

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SURFACE SMOOTHNESS FOR BRIDGES AND APPROACHES

AT THE COMPLETION OF WORK FOR ALL PHASES OF CONSTRUCTION THE CONTRACTOR SHALL CONTACT THE DISTRICT 5 SMOOTHNESS COORDINATOR.

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- MEASURE, GRIND, AND RE-MEASURE THE BRIDGE AND/OR ROADWAY AS NECESSARY.
- PERFORM GROOVING OF THE BRIDGE DECK.

INSPECTION FOR BATS

PRIOR TO THE START OF DEMOLITION ACTIVITIES THE CONTRACTOR SHALL INSPECT THE UNDERSIDE OF THE BRIDGE FOR THE PRESENCE OF BATS OR NESTING BIRDS. IF ANY BATS OR BIRD NESTS ARE OBSERVED THE CONTRACTOR SHALL NOTIFY NICOLE HAFER-LIPSTREU IN THE DISTRICT 5 PLANNING DEPARTMENT @ (740) 323-5103 (NICOLE.HAFERLIPSTREU@DOT.OHIO.GOV), OR, BRIAN TATMAN @ (740) 323-5191 (BRIAN.TATMAN@DOT.OHIO.GOV) PRIOR TO STARTING ANY DEMOLITION WORK.

ELASTOMERIC BEARING PADS

ELASTOMERIC BEARING PAD: THE ELASTOMERIC BEARING PAD SHALL BE PLACED AT THE REAR AND FORWARD ABUMENTS AS DETAILED IN THE PLAN. THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARING WAS DESIGNED IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE LONGTERM COMPRESSION PROOF LOAD TEST (AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED. THE DIMENSION PROVIDED FOR THE ELASTOMERIC BEARING PAD WILL ALLOW THE CONTRACTOR TO TRIM THE ENDS OF THE BEARING PAD TO PROPERLY FIT THE SKEWED ANGLES OF THE DIAPHRAGM. THE CONTRACTOR SHALL TRIM EACH ITEM 516 ELASTOMERIC BEARING PAD, MISC., BY MECHANICAL MEANS AS APPROVED BY THE ENGINEER. MITER CUT THE ENDS SO THAT THE BEARING PADS FIT FLUSH BETWEEN ADJOINING PHASES/VERTICAL WINGWALL SURFACES. ALL ASSOCIATED TIME LABOR AND MATERIALS TO PERFORM THIS FIELD WORK WILL BE INCIDENTAL TO ITEM 516 ELASTOMERIC BEARING PAD, MISC.

CUT LINE CONSTRUCTION JOINT PREPARATION

THE INTENT OF THIS PLAN IS TO ALLOW THE CONTRACTOR TO PERFORM FULL DEPTH SAW CUTS AT THE REMOVAL LINES FOLLOWED BY 1/4" SCARIFICATION TO THE REMAINING CUT LINE SURFACES. HOWEVER, AT THE CONTRACTOR'S OPTION FOR THE SUBSTRUCTURE REMOVALS, SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT, ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE. RE-STEEL NOT TO BE INCORPORATED IN THE PROPOSED CONCRETE SHALL BE MECHANICALLY CUT AT THE REMOVAL LINE.

ITEM 202 - PORTION OF STRUCTURE REMOVED, AS PER PLAN, (SUPERSTRUCTURE)

THIS WORK CONSISTS OF THE REMOVAL OF THE ENTIRE EXISTING SUPERSTRUCTURE AS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, INCLUDING THE REMOVAL OF ALL EXISTING CONCRETE DECK, PARAPETS, MEDIANS, BRIDGE RAILINGS, SCUPPERS WITH ATTACHMENTS, EXPANSION JOINTS, STEEL BULB ANGLE GUTTERS, AND ALL OTHER INDIVIDUAL COMPONENTS OF THE ENTIRE EXISTING SUPERSTRUCTURE.

THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES AND AS SHOWN IN THIS PLAN. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED, I.E. THE EXISTING PIERS. THE USE OF EXPLOSIVES, HEADACHE BALLS, HOE RAM TYPE EQUIPMENT, AND TRACK HOE PULVERIZER/SHEAR/MULTI-PROCESSOR ATTACHMENTS IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

REMOVAL OF THE EXISTING CONCRETE PIER SHEAR KEY SHALL BE PERFORMED BY GRINDING AND SHALL BE INCLUDED IN FOR PAYMENT UNDER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, (SUPERSTRUCTURE).

PROTECTION OF TRAFFIC: THE CONTRACTOR SHALL SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, BOAT, ETC.) AS PER CMS 2019 501.05.B.2.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF MATERIALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, (SUPERSTRUCTURE).

ITEM 202 - PORTION OF STRUCTURE REMOVED, AS PER PLAN, (SUBSTRUCTURE)

THIS WORK CONSISTS OF THE REMOVAL OF THE EXISTING SUBSTRUCTURE AS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

THE METHOD OF REMOVAL AND THE WEIGHT OF THE HAMMER FOR ABUTMENT REMOVAL SHALL BE APPROVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS, AND/OR HOE-RAMS WILL NOT BE PERMITTED FOR ABUTMENT REMOVAL. RETAIN EXISTING PILES AT ABUTMENTS TO ELEVATIONS AS INDICATED IN PLANS.

EXISTING PIERS SHALL REMAIN IN PLACE AND UNDAMAGED DURING ADJACENT STRUCTURE REMOVALS.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUBSTRUCTURE.

ITEM 202 - APPROACH SLAB REMOVED, AS PER PLAN

THIS WORK CONSISTS OF THE REMOVAL OF ALL EXISTING APPROACH SLABS AND CONCRETE MEDIAN BARRIER.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A SQ. YD. BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, APPROACH SLABS REMOVED, AS PER PLAN.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN

THIS ITEM SHALL CONSIST OF REMOVING MATERIALS FROM BEHIND THE EXISTING BACKWALL IN ORDER TO PERFORM ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN. LIMITS OF THIS EXCAVATION SHALL BE LIMITED BETWEEN THE PROPOSED WINGWALLS AND EXTEND TO THE END OF THE PROPOSED APPROACH SLABS AS DETAILED. EXCAVATION AROUND PIER COLUMNS SHALL BE TO THE DEPTH OF THE TOP PIER FOOTING AND PROVIDE ADEQUATE AREA TO PERFORM THE WORK SHOWN IN THESE PLANS.

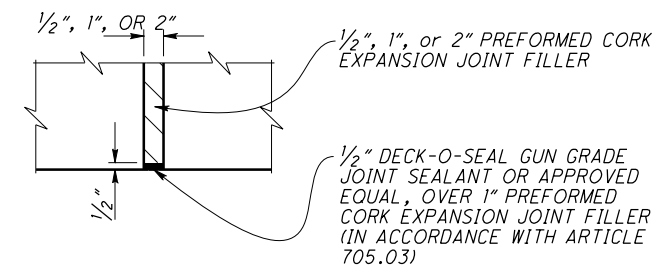
THE BACKFILL MATERIAL FOR ALL EXCAVATION BEHIND THE ABUTMENTS AND UNDER THE APPROACH SLABS SHALL BE LOW STRENGTH MORTAR BACKFILL (LSM). LSM, TYPE I SHALL CONFORM TO CMS SECTION 613 AND BE PLACED WITHIN THE LIMITS OF THE APPROACH SLABS AND IT MAY ALSO BE USED ALSO BE ABLE TO CONSTRUCT THE SLOPES IN THIS SAME AREA AS LONG AS IT IS COVERED WITH ONE FOOT OF SOIL TO MATCH EXISTING GRADE. THE AREA FOR THE POROUS BACKFILL WITH GEOTEXTILE FABRIC SHALL BE FORMED PRIOR TO THE PLACEMENT OF THE LSM, TYPE I BACKFILL AND PLACEMENT OF THE GEOTEXTILE FABRIC SHALL BE PLACED AFTER THE LSM HAS CURED AND THE FORMS HAVE BEEN REMOVED.

PAYMENT TO PERFORM ALL THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK UNLESS SEPARATELY ITEMIZED IN THE PLANS.

ITEM 516 - 1/2" OR 1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN

ALL 1/2" P.E.J.F., 1" P.E.J.F., AND 2" P.E.J.F. CALLED FOR IN THE PLANS SHALL BE PREFORMED CORK JOINT FILLER (IN ACCORDANCE WITH ARTICLE 705.03). RECESS JOINT FILLER 1/2" FOR ALL JOINTS (SEE DETAIL). SEAL ALL JOINTS WITH DECK-O-SEAL GUN GRADE-JOINT SEALANT OR AN APPROVED EQUAL. THE COLOR SHALL BE STONE GRAY. APPROVED MANUFACTURER'S APPLICATION METHODS SHALL BE FOLLOWED DURING SURFACE PREPARATION AND APPLICATION FOR MAXIMUM EFFECTIVENESS.

DECK-O-SEAL
P.O. BOX 397
HAMPSHIRE, IL 60140
PHONE: 800-542-7665



PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 516 - 1/2" PEJF, A.P.P., SO. FT. AND 1" PEJF, A.P.P., SO. FT., AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND INCIDENTALS REQUIRED TO COMPLETE THE WORK DESCRIBED.

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN

FURNISH APPROACH SLABS CONFORMING TO CMS 526. THE ACCEPTED QUANTITIES SHALL INCLUDE: CONCRETE, REINFORCING STEEL, JOINT FILLERS, JOINT SEALERS, JOINT SEALS, WATERPROOFING, AND ANY OTHER INCIDENTALS SHOWN ON THE APPROACH SLAB DETAIL SHEETS UNLESS OTHERWISE NOTED IN THE PLAN. THE DEPARTMENT WILL MEASURE APPROACH SLABS BY THE NUMBER OF SQUARE YARDS.

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OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

BRIDGE NOTES 1
BRIDGE NO.: MUS-70-1199
OVER 7TH STREET

| | | | |
|----------|-----|---------|-------------|
| DESIGNED | YEL | CHECKED | CPS |
| DRAWN | YEL | REVISED | . |
| REVIEWED | TAG | DATE | FILE NUMBER |
| | | | 6002943 |

MUS-70-10.49
PID No. 93006

3 / 73

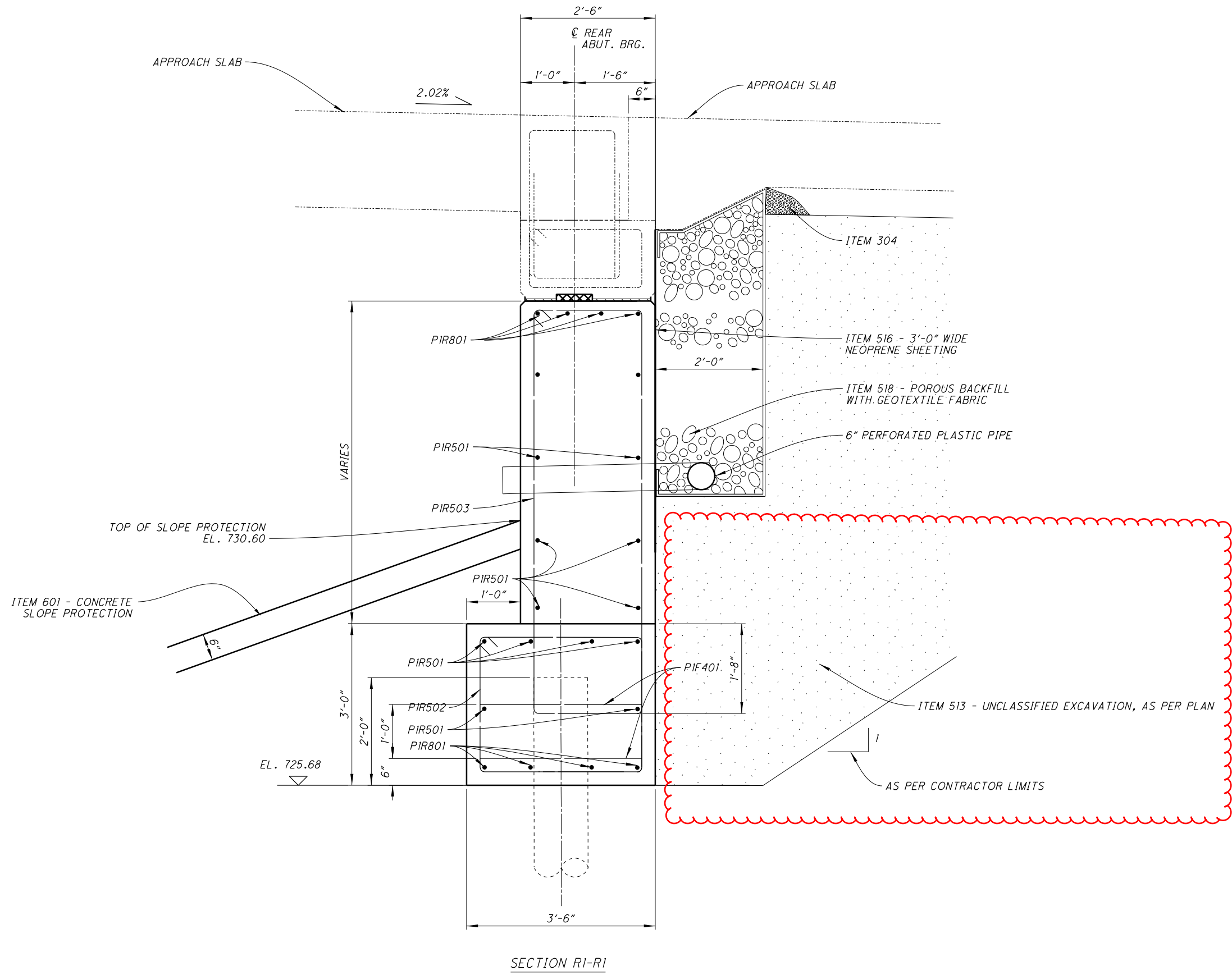
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| SHEET NUM. | | | | | | | | | | PART. | ITEM | ITEM | GRAND | UNIT | DESCRIPTION | SEE SHEET NO. | |
|--|---------|---------|--|--|--|--|--|--|--|---------------|---------|----------|---------|------|---|---|---|
| | | | | | | | | | | 02/IMS/B R | EXT | TOTAL | | | | | |
| PHASE 1 | PHASE 2 | PHASE 3 | | | | | | | | | | | | | | | |
| STRUCTURE OVER 20 FOOT SPAN (MUS-70-1199) | | | | | | | | | | | | | | | | | |
| 0.34 LS | 0.33 LS | 0.33 LS | | | | | | | | LS | 202 | 11201 | LS | | | PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SUPERSTRUCTURE) | 3 |
| 0.34 LS | 0.33 LS | 0.33 LS | | | | | | | | LS | 202 | 11201 | LS | | | PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SUBSTRUCTURE) | 3 |
| 188 | 147 | 199 | | | | | | | | 534 | 202 | 22900 | 534 | SY | APPROACH SLAB REMOVED | | |
| LS | | | | | | | | | | LS | 503 | 11101 | LS | | | COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN | 4 |
| 0.34 LS | 0.33 LS | 0.33 LS | | | | | | | | LS | 503 | 21301 | LS | | | UNCLASSIFIED EXCAVATION, AS PER PLAN | 3 |
| 62,675 | 57,831 | 74,097 | | | | | | | | 194,603 | 509 | 10000 | 194,603 | LB | EPOXY COATED REINFORCING STEEL | | |
| 44 | 36 | 48 | | | | | | | | 128 | 510 | 10000 | 128 | EACH | DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT | | |
| 275 | 233 | 305 | | | | | | | | 813 | 511 | 32212 | 813 | CY | CLASS QC2 CONCRETE WITH QC/OA, SUPERSTRUCTURE | | |
| 55 | | | | | | | | | | 55 | 511 | 34450 | 55 | CY | CLASS QC2 CONCRETE WITH QC/OA, BRIDGE DECK (PARAPET) (MEDIAN BARRIER) | | |
| | 24 | 24 | | | | | | | | 48 | 511 | 34461 | 48 | CY | CLASS QC SCC CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN | 57-59 | |
| 64 | 76 | 86 | | | | | | | | 226 | 511 | 43512 | 226 | CY | CLASS QC1 CONCRETE WITH QC/OA, ABUTMENT INCLUDING FOOTING | | |
| 328 | 273 | 299 | | | | | | | | 900 | 512 | 10050 | 900 | SY | SEALING OF CONCRETE SURFACES (NON-EPOXY) | | |
| 57 | 57 | 85 | | | | | | | | 199 | 512 | 10100 | 199 | SY | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) | | |
| 23 | 22 | 20 | | | | | | | | 65 | 512 | 33000 | 65 | SY | TYPE 2 WATERPROOFING | | |
| 13 | 96 | 126 | | | | | | | | 335 | 516 | 13201 | 335 | SF | 1/2" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN | 3 | |
| 154 | 119 | 155 | | | | | | | | 428 | 516 | 13601 | 428 | SF | 1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN | 3 | |
| | 41 | 36 | | | | | | | | 79 | 516 | 13901 | 79 | SF | 2" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN | 3 | |
| 68 | 67 | 77 | | | | | | | | 212 | 516 | 14020 | 212 | FT | SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL | | |
| 68 | 58 | 76 | | | | | | | | 202 | 516 | 14600 | 202 | FT | STRUCTURAL JOINT OR JOINT SEALER, MISC.: EMSEAL WITH SLEEPER SLAB | 73 | |
| 68 | 58 | 76 | | | | | | | | 202 | 516 | 31011 | 202 | FT | 2" DEEP JOINT SEALER, AS PER PLAN | 4 | |
| 2 | | | | | | | | | | 2 | 516 | 42000 | 2 | EACH | ELASTOMERIC BEARING PAD, MISC.: (33'-10" x 8" x 1-1/2") | 3 | |
| | 2 | | | | | | | | | 2 | 516 | 42000 | 2 | EACH | ELASTOMERIC BEARING PAD, MISC.: (28'-9" x 8" x 1 1/2") | 3 | |
| | | 1 | | | | | | | | 1 | 516 | 42000 | 1 | EACH | ELASTOMERIC BEARING PAD, MISC.: (34'-2" x 8" x 1 1/2") | 3 | |
| | | 1 | | | | | | | | 1 | 516 | 42000 | 1 | EACH | ELASTOMERIC BEARING PAD, MISC.: (42'-7" x 8" x 1 1/2") | 3 | |
| 6 | 2 | 11 | | | | | | | | 19 | 518 | 12000 | 19 | EACH | SCUPPERS, INCLUDING SUPPORTS | | |
| 28 | 34 | 41 | | | | | | | | 103 | 518 | 21200 | 103 | CY | POROUS BACKFILL WITH GEOTEXTILE FABRIC | | |
| 68 | 58 | 76 | | | | | | | | 202 | 518 | 40000 | 202 | FT | 6" PERFORATED CORRUGATED PLASTIC PIPE | | |
| 29 | 41 | 49 | | | | | | | | 119 | 518 | 40010 | 119 | FT | 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS | | |
| 507 | 507 | 761 | | | | | | | | 1,775 | SPECIAL | 51900100 | 1,775 | SF | COMPOSITE FIBER WRAP SYSTEM | 4 | |
| 188 | 160 | 211 | | | | | | | | 559 | 526 | 25001 | 559 | SY | REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN | 3 | |
| | 461 | 460 | | | | | | | | 921 | SPECIAL | 53000600 | 921 | SF | STRUCTURES AESTHETIC TREATMENT (CONCRETE FORMLINER/STAIN) | 4 | |

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| DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 |
| REVIEWED DATE TAG 11/20/2020 STRUCTURE FILE NUMBER 6002743 |
| DRAWN YEL REVISED . |
| DESIGNED YEL CHECKED CPS |
| BRIDGE SUMMARY BRIDGE NO.: MUS-70-1199 OVER 7TH STREET |
| MUS-70-10.49 PID No. 93006 |
| 6 / 69 |
| 1764 2231 |

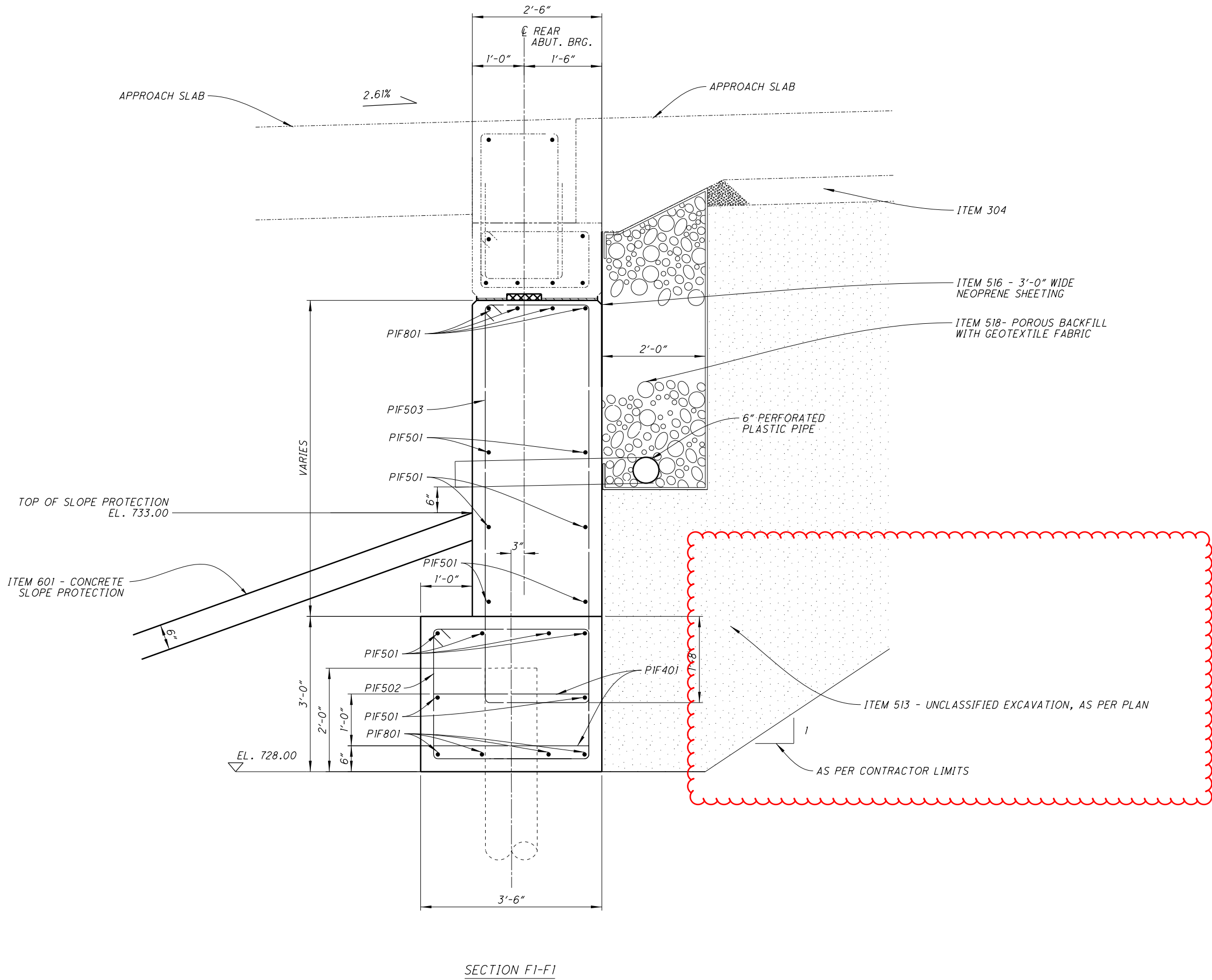
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SECTION R1-R1

| | | | | | | | | | | | |
|---|--|----------------|--|--------------|--|---|--|--------------------|--|---|--|
| DESIGNED YEL | | CHECKED CPS | | DRAWN YEL | | REVIEWED TAG | | DATE 11/24/2020 | | DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 | |
| | | | | | | STRUCTURE FILE NUMBER 6002943 | | | | | |
| PROPOSED REAR ABUTMENT DETAILS (PHASE 1 BACKWALL) | | | | | | BRIDGE NO. MUS-70-1199 OVER 7TH STREET | | | | | |
| MUS-70-10.49 | | | | | | PID No. 93006 | | | | | |
| 16 / 73 | | | | | | 1775 2231 | | | | | |

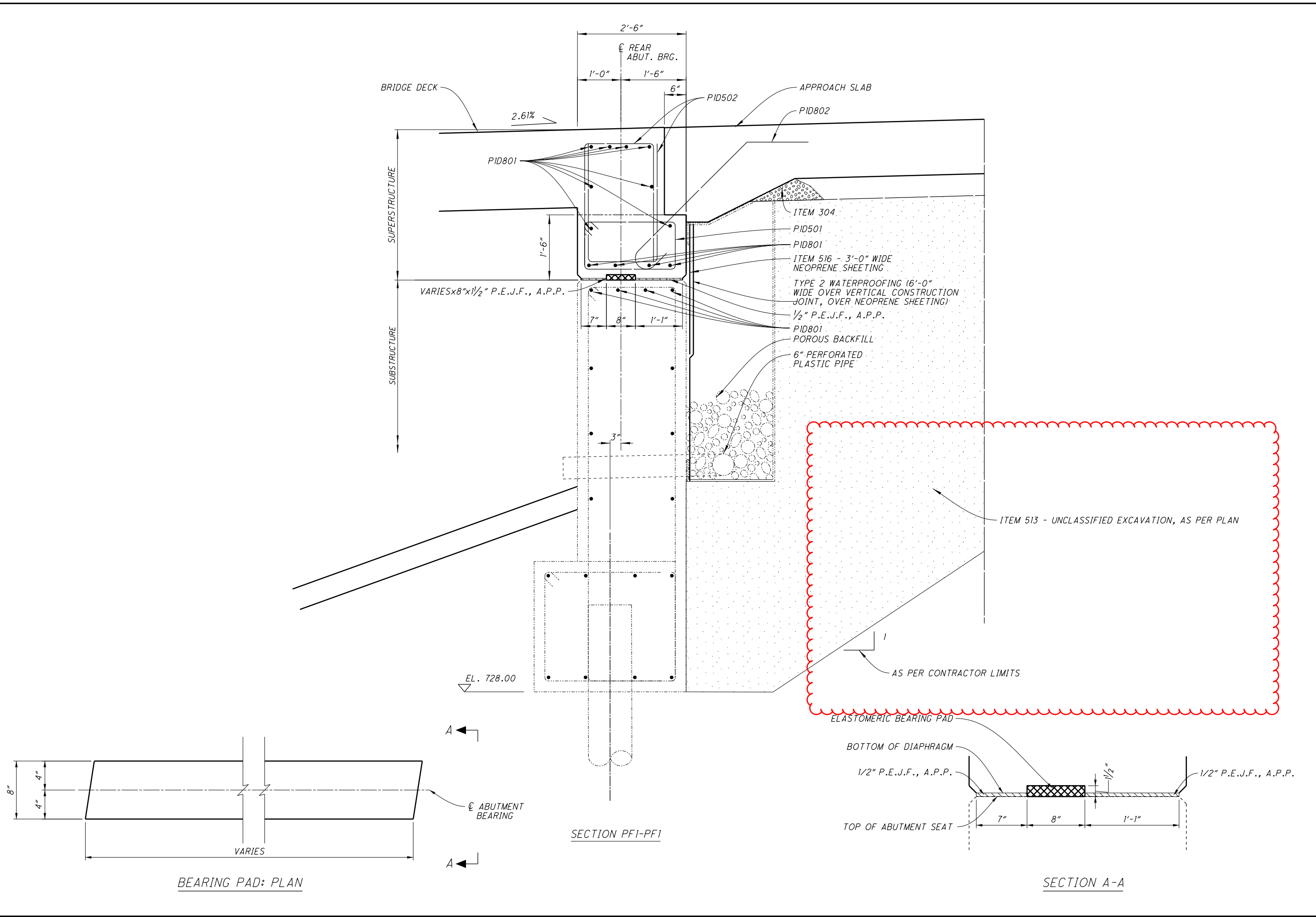
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SECTION F1-F1

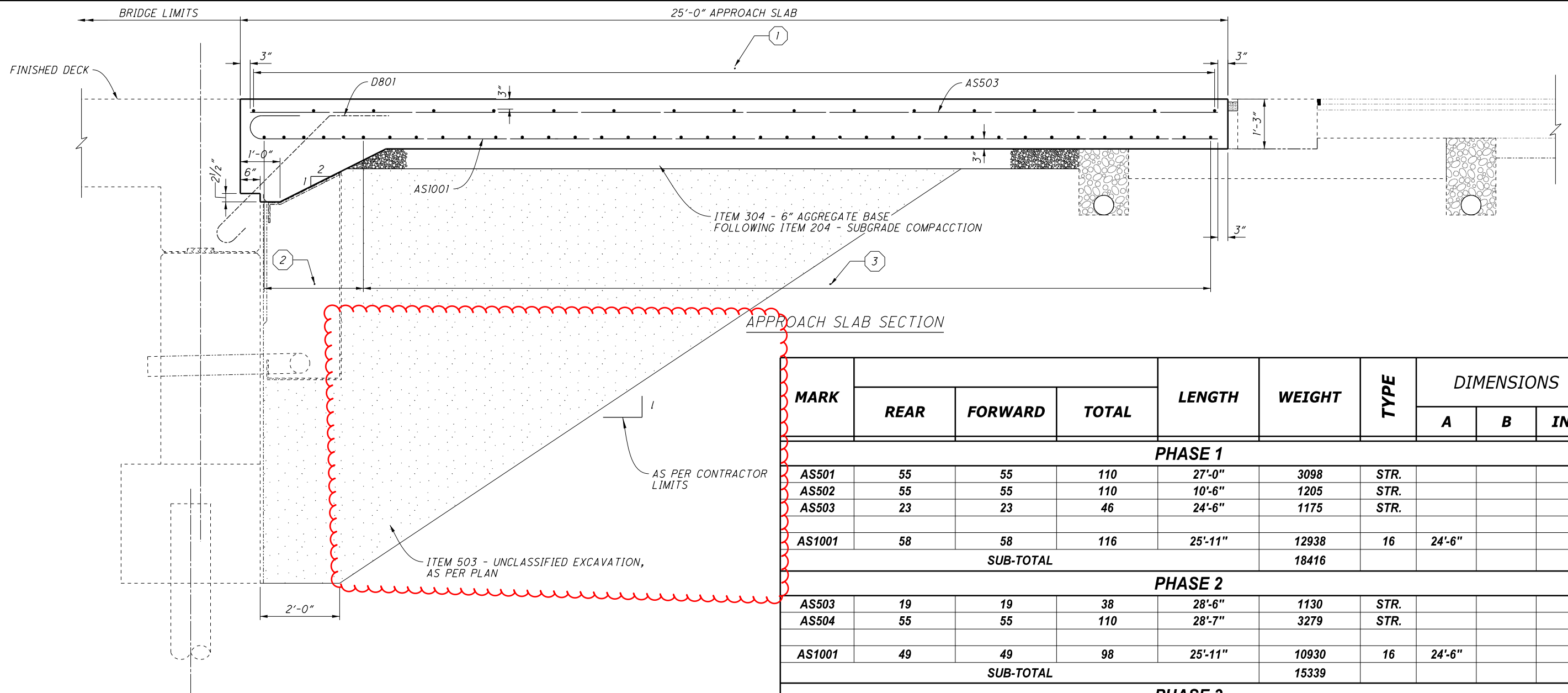
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|---|--|--------------|--|----------------------------------|--|--------------------|--|---|--|
| DESIGNED YEL | | DRAWN YEL | | REVIEWED TAG | | DATE 11/24/2020 | | DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 | |
| CHECKED CPS | | REVISED . | | STRUCTURE FILE NUMBER 6002943 | | | | | |
| PROPOSED FORWARD ABUTMENT DETAILS (PHASE 1 SECTION) | | | | | | | | | |
| BRIDGE NO.: MUS-70-1199 OVER 7TH STREET | | | | | | | | | |
| MUS-70-10.49 | | | | | | | | | |
| PID No. 93006 | | | | | | | | | |
| 23/73 | | | | | | | | | |
| 1782 2231 | | | | | | | | | |

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| DESIGN AGENCY | | OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 | |
| REVIEWED | DATE | TAG | STRUCTURE FILE NUMBER |
| YEL | 11/24/2020 | | 6002943 |
| DRAWN | YEL | CHECKED | REVISED |
| YEL | | CPS | |
| PROPOSED FORWARD END DIAPHRAGM DETAILS | | | |
| BRIDGE NO. MUS-70-1199 OVER 7TH STREET | | | |
| MUS-70-10.49 | | PID No. 93006 | |
| 46 / 73 | | 1805 2231 | |

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NOTES:

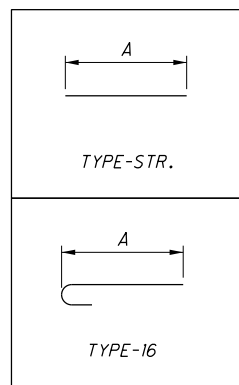
1. ALL LONGITUDINAL CONSTRUCTION JOINTS SHALL BE SEALED 2'-0" IN WIDTH WITH HMM RESIN. APPROACH SLAB SEALING TO BE INCLUDING FOR PAYMENT OF ITEM 526 - REINFORCED CONCRETE APPROACH SLAB (T=15"), AS PER PLAN.

2. FOR ADDITIONAL DETAILS SEE STANDARD DRAWING AS-1-15.

- ① PHASE 1: REAR-AS501 & AS502 SPA. @ 1'-6", FWD-AS501 & AS502 SPA. @ 1'-6"
- ① PHASE 2: REAR-AS504 SPA. @ 1'-6", FWD-AS504 SPA. @ 1'-6"
- ① PHASE 3: REAR-AS505 SERIES SPA. @ 1'-6", FWD-AS508 SERIES SPA. @ 1'-6"

- ② PHASE 1: REAR-AS501 & AS502 SPA. @ 6", FWD-AS501 & AS502 SPA. @ 6"
- ② PHASE 2: REAR-AS504 SPA. @ 6", FWD - AS504 SPA. @ 6"
- ② PHASE 3: REAR-AS506 SPA. @ 6", FWD - AS509 SPA. @ 6"

- ③ PHASE 1: REAR- AS501 @ AS502 SPA. @ 8", FWD- AS501 & AS502 SPA. @ 8"
- ③ PHASE 2: REAR- AS504 SPA. @ 8", FWD- AS504 SPA. @ 8"
- ③ PHASE 3: REAR- AS507 SERIES SPA. @ 8", FWD- AS510 SERIES SPA. @ 8"



BENDING DIAGRAMS

| MARK | | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | |
|------------------|-----------|---------|-------|----------|--------------|------|------------|---|---------|
| | REAR | FORWARD | TOTAL | | | | A | B | INC |
| PHASE 1 | | | | | | | | | |
| AS501 | 55 | 55 | 110 | 27'-0" | 3098 | STR. | | | |
| AS502 | 55 | 55 | 110 | 10'-6" | 1205 | STR. | | | |
| AS503 | 23 | 23 | 46 | 24'-6" | 1175 | STR. | | | |
| AS1001 | 58 | 58 | 116 | 25'-11" | 12938 | 16 | 24'-6" | | |
| SUB-TOTAL | | | | | 18416 | | | | |
| PHASE 2 | | | | | | | | | |
| AS503 | 19 | 19 | 38 | 28'-6" | 1130 | STR. | | | |
| AS504 | 55 | 55 | 110 | 28'-7" | 3279 | STR. | | | |
| AS1001 | 49 | 49 | 98 | 25'-11" | 10930 | 16 | 24'-6" | | |
| SUB-TOTAL | | | | | 15339 | | | | |
| PHASE 3 | | | | | | | | | |
| AS505 | 1 | | | 565'-0" | 589 | STR. | 32'-8" | | 0'-0.8" |
| | SERIES OF | | | | | | TO | | |
| | | 17 | | | | | 33'-9" | | |
| AS506 | 6 | | 6 | 33'-9" | 211 | STR. | 33'-9" | | |
| AS507 | 1 | | | 1063'-0" | 1109 | STR. | 32'-8" | | 0'-0.4" |
| | SERIES OF | | | | | | TO | | |
| | | 32 | | | | | 33'-9" | | |
| AS508 | | 1 | | 698'-0" | 728 | STR. | 41'-1" | | 0'-1.6" |
| | SERIES OF | | | | | | TO | | |
| | | 17 | | | | | 40'-11.4" | | |
| AS509 | | 6 | 6 | 43'-3" | 271 | STR. | 43'-3" | | |
| AS510 | | 1 | | 1314'-0" | 1371 | STR. | 41'-1" | | 0'-0.8" |
| | SERIES OF | | | | | | TO | | |
| | | 32 | | | | | 41'-0.2" | | |
| AS511 | | 1 | 1 | 10'-6" | 11 | STR. | 10'-6" | | |
| AS512 | | 1 | 1 | 23'-9" | 25 | STR. | 23'-9" | | |
| AS1001 | 58 | 69 | 127 | 25'-11" | 14165 | 16 | 24'-6" | | |
| AS1002 | | 1 | 1 | 23'-9" | 102 | 16 | 23'-9" | | |
| AS1003 | | 1 | 1 | 20'-9" | 89 | 16 | 20'-9" | | |
| AS1004 | | 1 | 1 | 14'-0" | 60 | 16 | 14'-0" | | |
| AS1005 | | 1 | 1 | 8'-0" | 34 | 16 | 8'-0" | | |
| AS1006 | | 1 | 1 | 1'-9" | 8 | 16 | 1'-9" | | |
| SUB-TOTAL | | | | | 18773 | | | | |

DESIGN AGENCY: OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5
 REVIEWED DATE: 11/24/2020
 TAG: 6002943
 STRUCTURE FILE NUMBER: 6002943
 DRAWN BY: YEL
 CHECKED BY: CPS
 DESIGNED BY: YEL
 REVISIONS: .

APPROACH SLAB DETAILS
 BRIDGE NO.: MUS-70-1199
 OVER 7TH STREET

MUS-70-10.49
 PID No. 93006

72 / 73
 1831
 2231

CALCULATIONS

ITEM 202 - CONCRETE SLOPE PROTECTION REMOVED

REAR ABUTMENT SLOPE ON BRIDGE NO. MUS-70-1212:
 - STA 615+70.45 TO STA 616+10.33
 QUANTITY = $(39.88' \times 97.34' \times \text{SLOPE } 1.08) / 9 = 465.8 \text{ S.Y.}$
 - STA 615+14.33 TO STA 616+18.53
 QUANTITY = $(3.81' \times 97.34') / 9 = 41.2 \text{ S.Y.}$

FORWARD ABUTMENT SLOPE ON BRIDGE NO. MUS-70-1212:
 - STA 616+78.06 TO STA 616+82.83
 QUANTITY = $(4.23' \times 97.34') / 9 = 45.7 \text{ S.Y.}$
 - STA 616+82.83 TO STA 617+26.70
 QUANTITY = $(43.87' \times 97.34' \times \text{SLOPE } 1.08) / 9 = 512.4 \text{ S.Y.}$

GRAND TOTAL
 465.8 S.Y. + 41.2 S.Y. + 45.7 + 512.4 = 1,065 S.Y.

ITEM 601 - CONCRETE SLOPE PROTECTION

REAR ABUTMENT SLOPE ON BRIDGE NO. MUS-70-1212:
 - STA 615+70.45 TO STA 616+10.33
 QUANTITY = $(39.88' \times 97.34' \times \text{SLOPE } 1.08) / 9 = 465.8 \text{ S.Y.}$
 - STA 615+14.33 TO STA 616+18.53
 QUANTITY = $(3.81' \times 97.34') / 9 = 41.2 \text{ S.Y.}$

FORWARD ABUTMENT SLOPE ON BRIDGE NO. MUS-70-1212:
 - STA 616+78.06 TO STA 616+82.83
 QUANTITY = $(4.23' \times 97.34') / 9 = 45.7 \text{ S.Y.}$
 - STA 616+82.83 TO STA 617+26.70
 QUANTITY = $(43.87' \times 97.34' \times \text{SLOPE } 1.08) / 9 = 512.4 \text{ S.Y.}$

GRAND TOTAL
 465.8 S.Y. + 41.2 S.Y. + 45.7 + 512.4 = 1,065 S.Y.

ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION

REAR ABUTMENT DRAINS BRIDGE NO. MUS-70-1212:
 - SOUTH DRAIN
 QUANTITY = $(4.0' \times 3.14 \times 1.0') / 27 = 0.47 \text{ C.Y.}$
 - NORTH DRAIN
 QUANTITY = $(4.0' \times 3.14 \times 1.0') / 27 = 0.47 \text{ C.Y.}$

FORWARD ABUTMENT DRAINS BRIDGE NO. MUS-70-1212:
 - SOUTH DRAIN
 QUANTITY = $(4.0' \times 3.14 \times 1.0') / 27 = 0.47 \text{ C.Y.}$
 - NORTH DRAIN
 QUANTITY = $(4.0' \times 3.14 \times 1.0') / 27 = 0.47 \text{ C.Y.}$

GRAND TOTAL
 0.47 C.Y. + 0.47 C.Y. + 0.47 C.Y. + 0.47 C.Y. = 1.88 C.Y.

ALL QUANTITIES SHOWN BELOW CARRIED TO SHEET 1908.

| APPROACH | BRIDGE | ITEM | ITEM EXTENSION | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET |
|------------------------|--------|------|----------------|-------------|--------|------------------------------------|-----------|
| ROADWAY | | | | | | | |
| | 1,065 | 202 | 32800 | 1,065 | SO.YD. | CONCRETE SLOPE PROTECTION REMOVED | 1 |
| 367 | | 204 | 10000 | 367 | SO.YD. | SUBGRADE COMPACTION | 70-73 |
| EROSION CONTROL | | | | | | | |
| | 2 | 601 | 20010 | 2 | CU.YD. | CRUSHED AGGREGATE SLOPE PROTECTION | 14-15 |
| | 1,065 | 601 | 21000 | 1,065 | SO.YD. | CONCRETE SLOPE PROTECTION | 1 |
| PAVEMENT | | | | | | | |
| 82 | | 304 | 20000 | 82 | CU.YD. | AGGREGATE BASE | 70-73 |

ITEM 204 - SUBGRADE COMPACTION

REAR APPROACH SLAB ON BRIDGE NO. MUS-70-1212:
 - STA 615+47.70 TO STA 615+55.83
 QUANTITY = $(8.13' \times 94.34') / 9 = 85.2 \text{ S.Y.}$
 - STA 615+55.83 TO STA. 615+65.45
 QUANTITY = $(9.63' \times 91.67') / 9 = 98.1 \text{ S.Y.}$

FORWARD APPROACH SLAB ON BRIDGE NO. MUS-70-1212:
 - STA 617+31.70 TO STA 617+41.33
 QUANTITY = $(9.63' \times 91.67') / 9 = 98.1 \text{ S.Y.}$
 - STA 617+41.33 TO STA 617+49.45
 QUANTITY = $(8.13' \times 94.34') / 9 = 85.2 \text{ S.Y.}$

GRAND TOTAL
 85.2 S.Y. + 98.1 S.Y. + 98.1 S.Y. + 85.2 S.Y. = 367 S.Y.

ITEM 304 - AGGREGATE BASE

REAR APPROACH SLAB ON BRIDGE NO. MUS-70-1212:
 - STA 615+47.70 TO STA 615+55.83
 QUANTITY = $((8.13' \times 94.34') \times (8''/12')) / 27 = 18.9 \text{ C.Y.}$
 - STA 615+55.83 TO STA. 615+65.45
 QUANTITY = $((9.63' \times 91.67') \times (8''/12')) / 27 = 21.8 \text{ C.Y.}$

FORWARD APPROACH SLAB ON BRIDGE NO. MUS-70-1212:
 - STA 617+31.70 TO STA 617+41.33
 QUANTITY = $((9.63' \times 91.67') \times (8''/12')) / 27 = 21.8 \text{ C.Y.}$
 - STA 617+41.33 TO STA 617+49.45
 QUANTITY = $((8.13' \times 94.34') \times (8''/12')) / 27 = 18.9 \text{ C.Y.}$

GRAND TOTAL
 18.9 C.Y. + 21.8 C.Y. + 21.8 C.Y. + 18.9 C.Y. = 82 C.Y.

ITEM 613 - LOW STRENGTH MORTAR BACKFILL, AS PER PLAN

LOW STRENGTH MORTAR (LSM) USED AS BACKFILL BEHIND SEMI-INTEGRAL ABUTMENT DIAPHRAGMS SHALL HAVE A LONG TERM COMPRESSIVE STRENGTH BETWEEN 150 AND 200 PSI. THE TOP ELEVATION SHALL BE AT LEAST 6" BELOW THE PROPOSED BOTTOM OF APPROACH SLAB AND ANY FORMWORK BETWEEN THE LSM BACKFILL AND SEMI-INTEGRAL DIAPHRAGM SHALL BE COMPLETELY REMOVED.

THE QUANTITY IN THE PLANS ASSUMES A 1.5:1 SLOPE OF BOTTOM OF LSM ELEVATION UP TO 2' BELOW THE PROPOSED TOP OF LSM ELEVATION (WHERE A VERTICAL END OF THE ITEM 613 IS ASSUMED). ADDITIONAL LSM BEYOND THESE LIMITS IS INCLUDED WITH ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN.

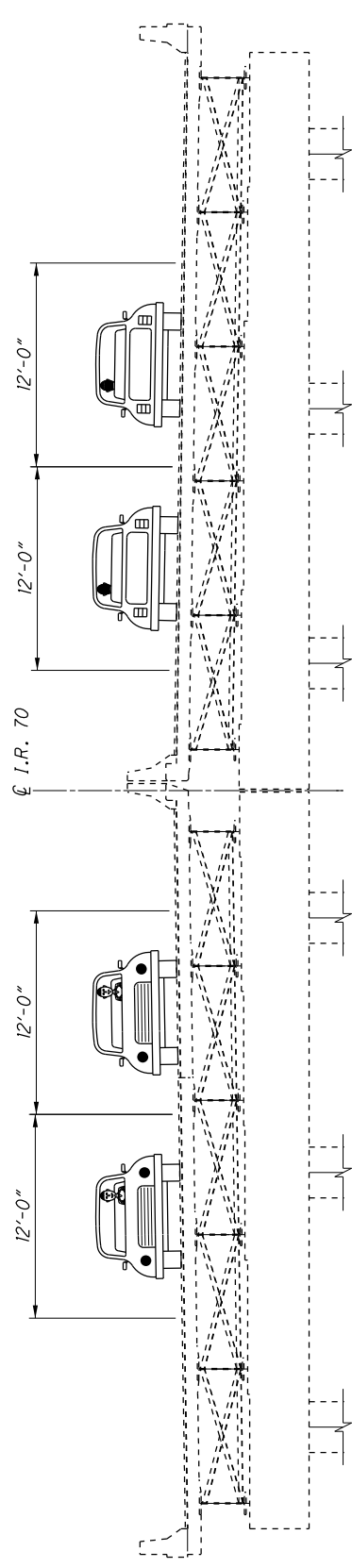
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| | | | | | |
|---|-----------------------------------|-------------------------|--|-------------------|---|
| BRIDGE NOTES BRIDGE NO. MUS-70-1212 OVER UNDERWOOD ST. | DESIGNED CPS CHECKED TAG | DRAIN CPS REVISED | REVIEWED CPS STRUCTURE FILE NUMBER | DATE 12/4/2020 | DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 |
| MUS-70-10.49 PID No. 93006 | | | | | 6002978 |
| 5 / 74 | | | | | 1837 2231 |

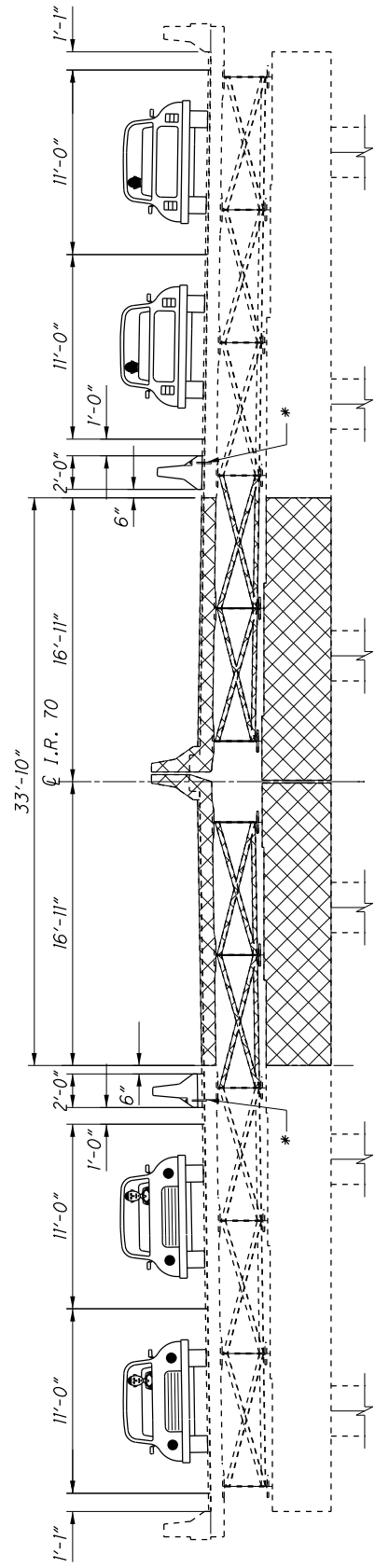
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| PHASE 1 | PHASE 2 | PHASE 3 | PART. 02/IMS/B R | ITEM | ITEM EXT | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. |
|---------------------------------------|---------|---------|------------------------|---------|-------------|----------------|------|---|---------------------|
| STRUCTURE REPAIR (MUS-70-1212) | | | | | | | | | |
| LS | LS | LS | LS | 202 | 11203 | LS | | PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN (SUPERSTRUCTURE) | 3 |
| 127 | 120 | 120 | 367 | 202 | 11301 | 367 | CY | PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SUBSTRUCTURE) | 3 |
| 188 | 148 | 148 | 484 | 202 | 22901 | 484 | SY | APPROACH SLAB REMOVED, AS PER PLAN | 3 |
| LS | LS | LS | LS | 503 | 11101 | LS | | COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN | 4 |
| LS | LS | LS | LS | 503 | 21301 | LS | | UNCLASSIFIED EXCAVATION, AS PER PLAN | 4 |
| 50,139 | 52,085 | 52,085 | 154,309 | 509 | 10000 | 154,309 | LB | EPOXY COATED REINFORCING STEEL | |
| 5,843 | 4,263 | 4,263 | 14,369 | 509 | 40000 | 14,369 | LB | REINFORCING STEEL, MISC.: GALVANIZED | 4 |
| | 36 | | 36 | 510 | 10000 | 36 | EACH | DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT | |
| 166 | 153 | 153 | 472 | 511 | 21523 | 472 | CY | CLASS OC2 CONCRETE WITH OC/OA, SUPERSTRUCTURE, AS PER PLAN | 3 |
| 4 | | | 4 | 511 | 33500 | 4 | EACH | SEMI-INTEGRAL DIAPHRAGM GUIDE | |
| 72 | | | 72 | 511 | 34450 | 72 | CY | CLASS OC2 CONCRETE WITH OC/OA, BRIDGE DECK (PARAPET) (MEDIAN BARRIER) | |
| | 35 | 35 | 70 | 511 | 34461 | 70 | CY | CLASS OC SCC CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN | 64-65 |
| 35 | 27 | 27 | 89 | 511 | 41012 | 89 | CY | CLASS OC1 CONCRETE WITH OC/OA, PIER ABOVE FOOTINGS | |
| 74 | 85 | 85 | 244 | 511 | 43512 | 244 | CY | CLASS OC1 CONCRETE WITH OC/OA, ABUTMENT INCLUDING FOOTING | |
| 389 | 337 | 337 | 1,063 | 512 | 10050 | 1,063 | SY | SEALING OF CONCRETE SURFACES (NON-EPOXY) | |
| 57 | 57 | 57 | 171 | 512 | 10100 | 171 | SY | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) | |
| 44 | 41 | 41 | 126 | 512 | 33000 | 126 | SY | TYPE 2 WATERPROOFING | |
| LS | LS | LS | LS | 513 | 10040 | LS | | STRUCTURAL STEEL MEMBERS, LEVEL 2 | |
| 3,030 | 2,424 | 2,424 | 7,878 | 513 | 20000 | 7,878 | EACH | WELDED STUD SHEAR CONNECTORS | |
| 7,147 | 5,893 | 5,893 | 18,933 | 514 | 00060 | 18,933 | SF | FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT | |
| 7,147 | 5,893 | 5,893 | 18,933 | 514 | 00066 | 18,933 | SF | FIELD PAINTING STRUCTURAL STEEL, FINISH COAT | 3 |
| 8 | 7 | 7 | 22 | 514 | 10000 | 22 | EACH | FINAL INSPECTION REPAIR | |
| 18 | 9 | 9 | 36 | 516 | 13601 | 36 | SF | 1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN | 4 |
| | 27 | 27 | 54 | 516 | 13901 | 54 | SF | 2" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN | 4 |
| 66 | 65 | 65 | 196 | 516 | 14020 | 196 | FT | SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL | |
| 66 | 59 | 59 | 184 | 516 | 14600 | 184 | FT | STRUCTURAL JOINT OR JOINT SEALER, MISC.: EMSEAL WITH SLEEPER SLAB | 73 |
| 66 | 59 | 59 | 184 | 516 | 31011 | 184 | FT | 2" DEEP JOINT SEALER, AS PER PLAN | 4 |
| 10 | 8 | 8 | 26 | 516 | 44300 | 26 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-3" x 1'-1" x 4.1479") | 3 |
| 10 | 8 | 8 | 26 | 516 | 44300 | 26 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-6" x 1'-2" x 4.1479") | 3 |
| 18 | 17 | 17 | 52 | 518 | 21200 | 52 | CY | POROUS BACKFILL WITH GEOTEXTILE FABRIC | |
| 66 | 68 | 68 | 202 | 518 | 40000 | 202 | FT | 6" PERFORATED CORRUGATED PLASTIC PIPE | |
| | 24 | 28 | 52 | 518 | 40010 | 52 | FT | 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS | |
| 1,271 | 1,017 | 1,017 | 3,305 | SPECIAL | 51900100 | 3,305 | SF | COMPOSITE FIBER WRAP SYSTEM | 4 |
| 182 | 163 | 163 | 508 | 526 | 25011 | 508 | SY | REINFORCED CONCRETE APPROACH SLABS WITH OC/OA (T=15"), AS PER PLAN | 4 |
| | 605 | 605 | 1,210 | SPECIAL | 53000600 | 1,210 | SF | STRUCTURES (AESTHETIC TREATMENT CONCRETE FORMLINER/STAIN) | 4 |
| 78 | 70 | 70 | 218 | 613 | 41201 | 218 | CY | LOW STRENGTH MORTAR BACKFILL, AS PER PLAN | 5 |

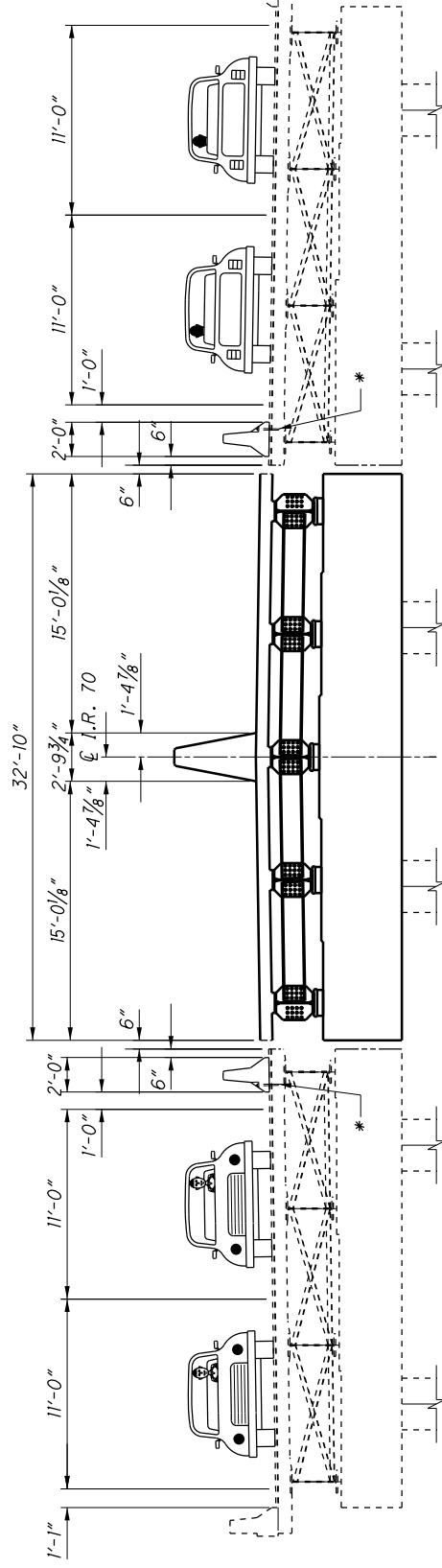
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| REVIEWED DATE CPS 12/4/2020 STRUCTURE FILE NUMBER 6002978 |
| DRAIN CPS CPS REVISED |
| DESIGNED CPS CPS CHECKED TAG |
| BRIDGE SUMMARY BRIDGE NO. MUS-70-1212 OVER UNDERWOOD ST. |
| MUS-70-10.49 PID No. 93006 |
| 6 / 74 |
| 1838 2231 |



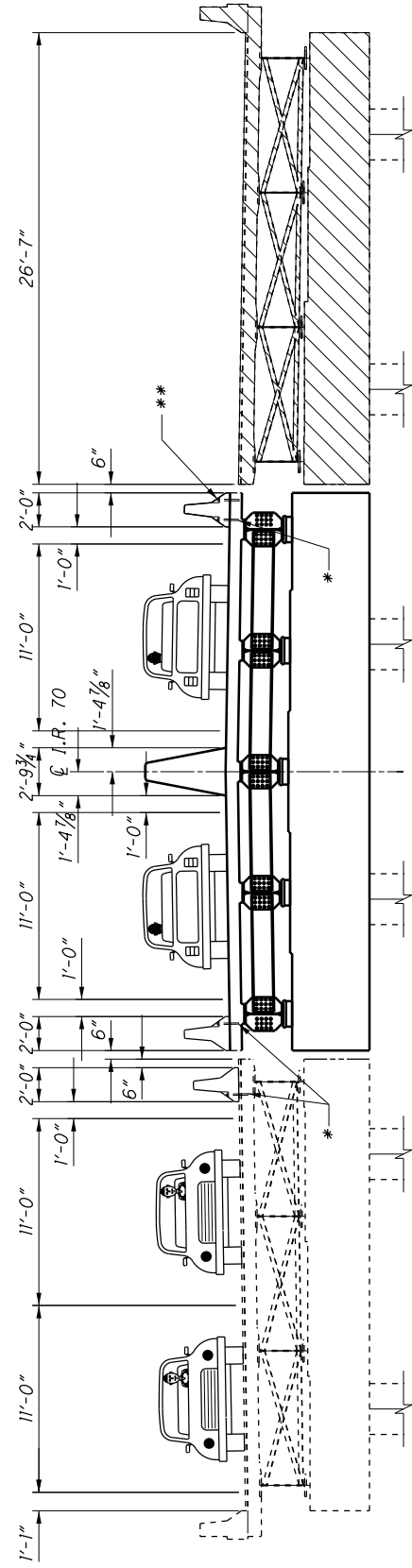
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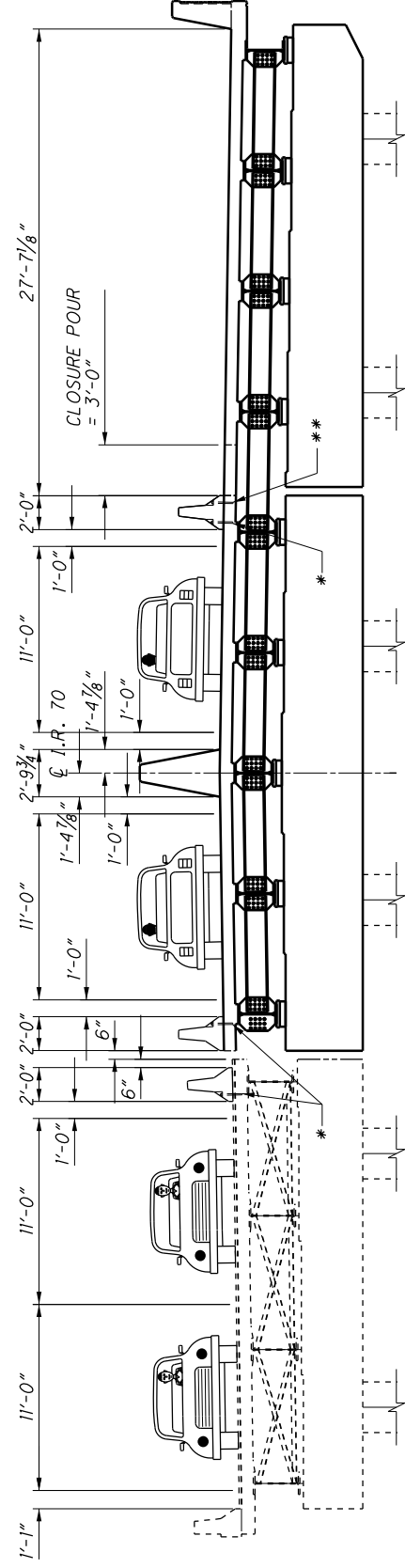
PHASE 1 REMOVAL



PHASE 1 REPLACEMENT



PHASE 2 REMOVAL

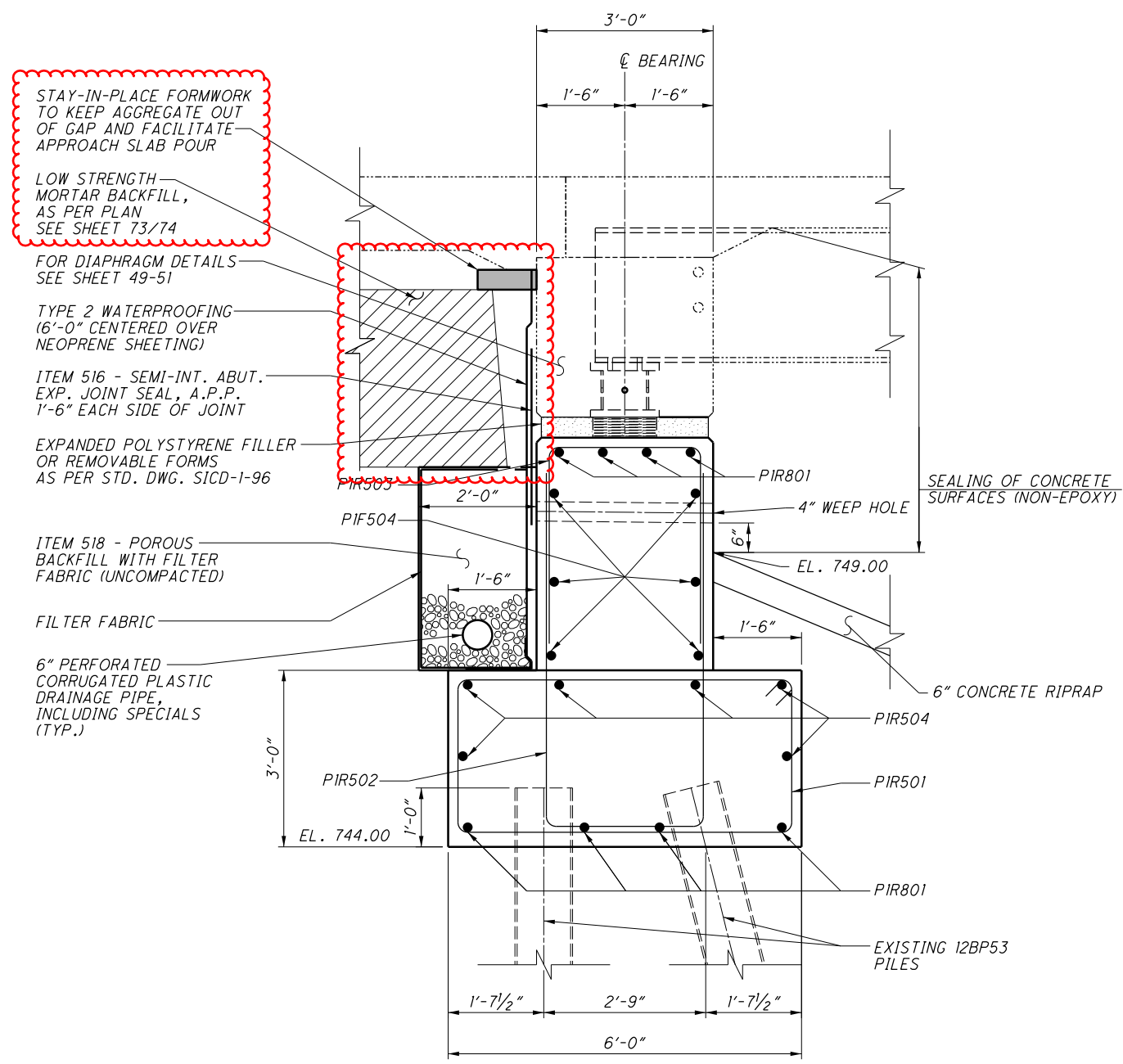


PHASE 2 REPLACEMENT

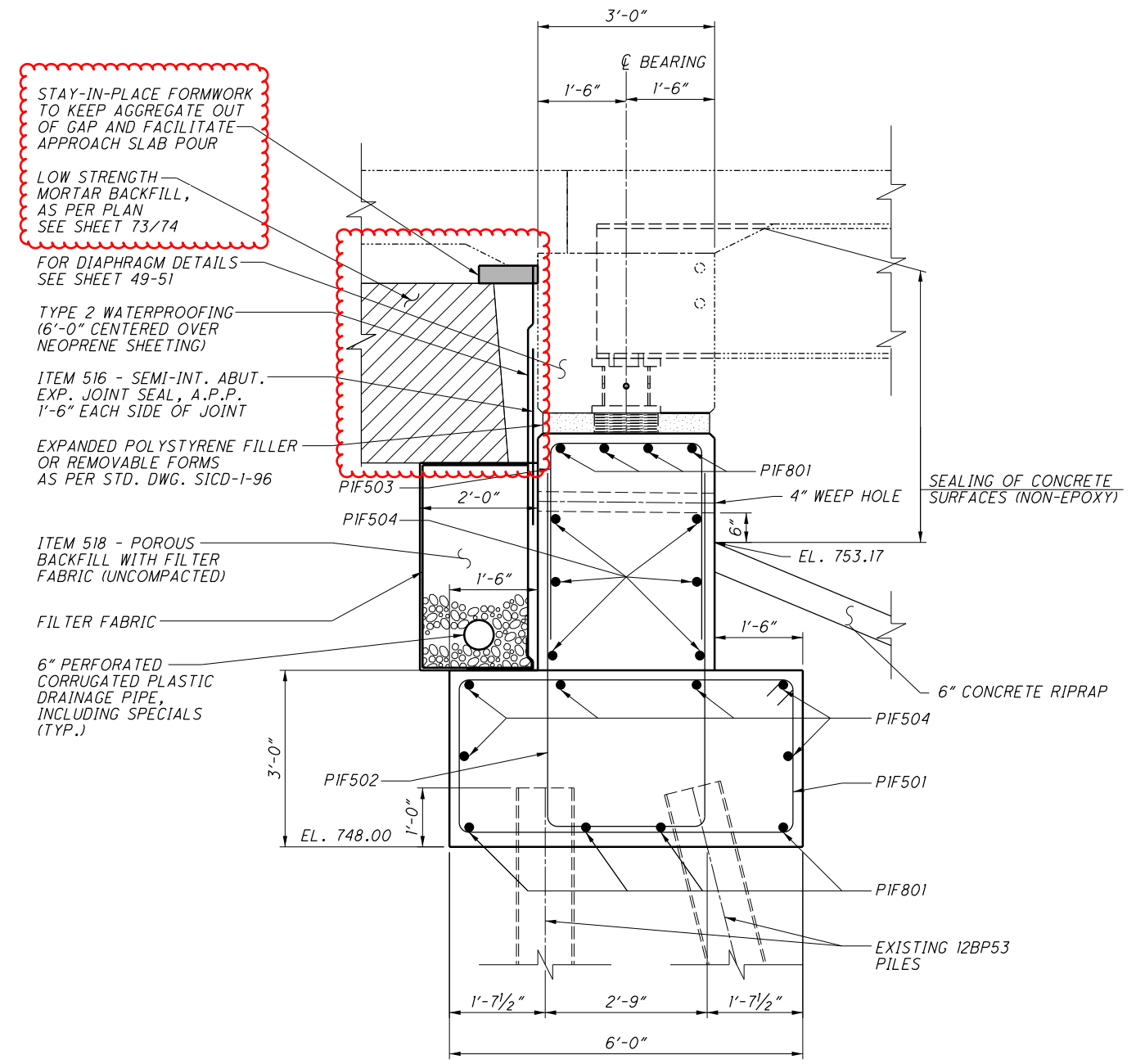
* - A MINIMUM OF 4 ANCHORS SHALL BE PROVIDED ON THE TRAFFIC SIDE OF EACH BARRIER SEGMENT WITH THE ANCHOR PATTERN SYMMETRICAL ABOUT THE CENTER OF EACH SEGMENT. WHEN NO LONGER NEEDED, REMOVE ANCHORS AS DIRECTED BY THE ENGINEER AND FILL HOLES WITH GROUT PER CMS 705.20 IF DECK IS TO REMAIN IN NEXT PHASE. PB IS INCLUDED AND PAID FOR WITH ROADWAY MOT QUANTITIES

* - A MINIMUM OF 2 ANCHORS SHALL BE PROVIDED ON THE TRAFFIC SIDE OF EACH BARRIER SEGMENT WITH THE ANCHOR PATTERN SYMMETRICAL ABOUT THE CENTER OF EACH SEGMENT. WHEN NO LONGER NEEDED, REMOVE ANCHORS AS DIRECTED BY THE ENGINEER AND FILL HOLES WITH GROUT PER CMS 705.20 IF DECK IS TO REMAIN IN NEXT PHASE. PB IS INCLUDED AND PAID FOR WITH ROADWAY MOT QUANTITIES

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SECTION R-1
16
(REAR ABUTMENT BREASTWALL DETAIL)



SECTION F-1
17
(FORWARD ABUTMENT BREASTWALL DETAIL)

STAY-IN-PLACE FORMWORK TO KEEP AGGREGATE OUT OF GAP AND FACILITATE APPROACH SLAB POUR

LOW STRENGTH MORTAR BACKFILL, AS PER PLAN SEE SHEET 73/74

STAY-IN-PLACE FORMWORK TO KEEP AGGREGATE OUT OF GAP AND FACILITATE APPROACH SLAB POUR

LOW STRENGTH MORTAR BACKFILL, AS PER PLAN SEE SHEET 73/74

FOR DIAPHRAGM DETAILS SEE SHEET 49-51

TYPE 2 WATERPROOFING (6'-0" CENTERED OVER NEOPRENE SHEETING)

ITEM 516 - SEMI-INT. ABUT. EXP. JOINT SEAL, A.P.P. 1'-6" EACH SIDE OF JOINT

EXPANDED POLYSTYRENE FILLER OR REMOVABLE FORMS AS PER STD. DWG. SICD-1-96

ITEM 518 - POROUS BACKFILL WITH FILTER FABRIC (UNCOMPACTED)

FILTER FABRIC

6" PERFORATED CORRUGATED PLASTIC DRAINAGE PIPE, INCLUDING SPECIALS (TYP.)

FOR DIAPHRAGM DETAILS SEE SHEET 49-51

TYPE 2 WATERPROOFING (6'-0" CENTERED OVER NEOPRENE SHEETING)

ITEM 516 - SEMI-INT. ABUT. EXP. JOINT SEAL, A.P.P. 1'-6" EACH SIDE OF JOINT

EXPANDED POLYSTYRENE FILLER OR REMOVABLE FORMS AS PER STD. DWG. SICD-1-96

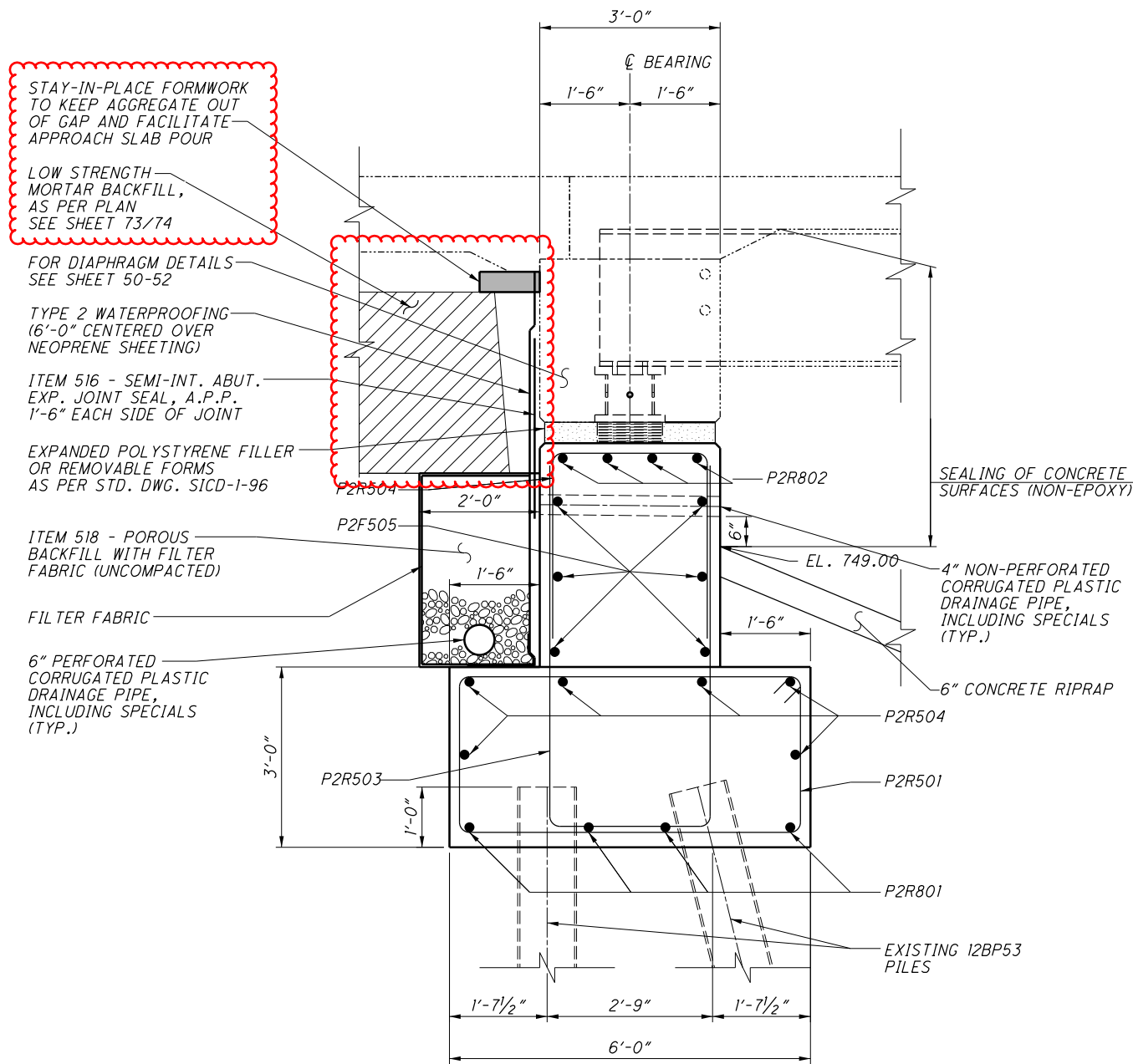
ITEM 518 - POROUS BACKFILL WITH FILTER FABRIC (UNCOMPACTED)

FILTER FABRIC

6" PERFORATED CORRUGATED PLASTIC DRAINAGE PIPE, INCLUDING SPECIALS (TYP.)

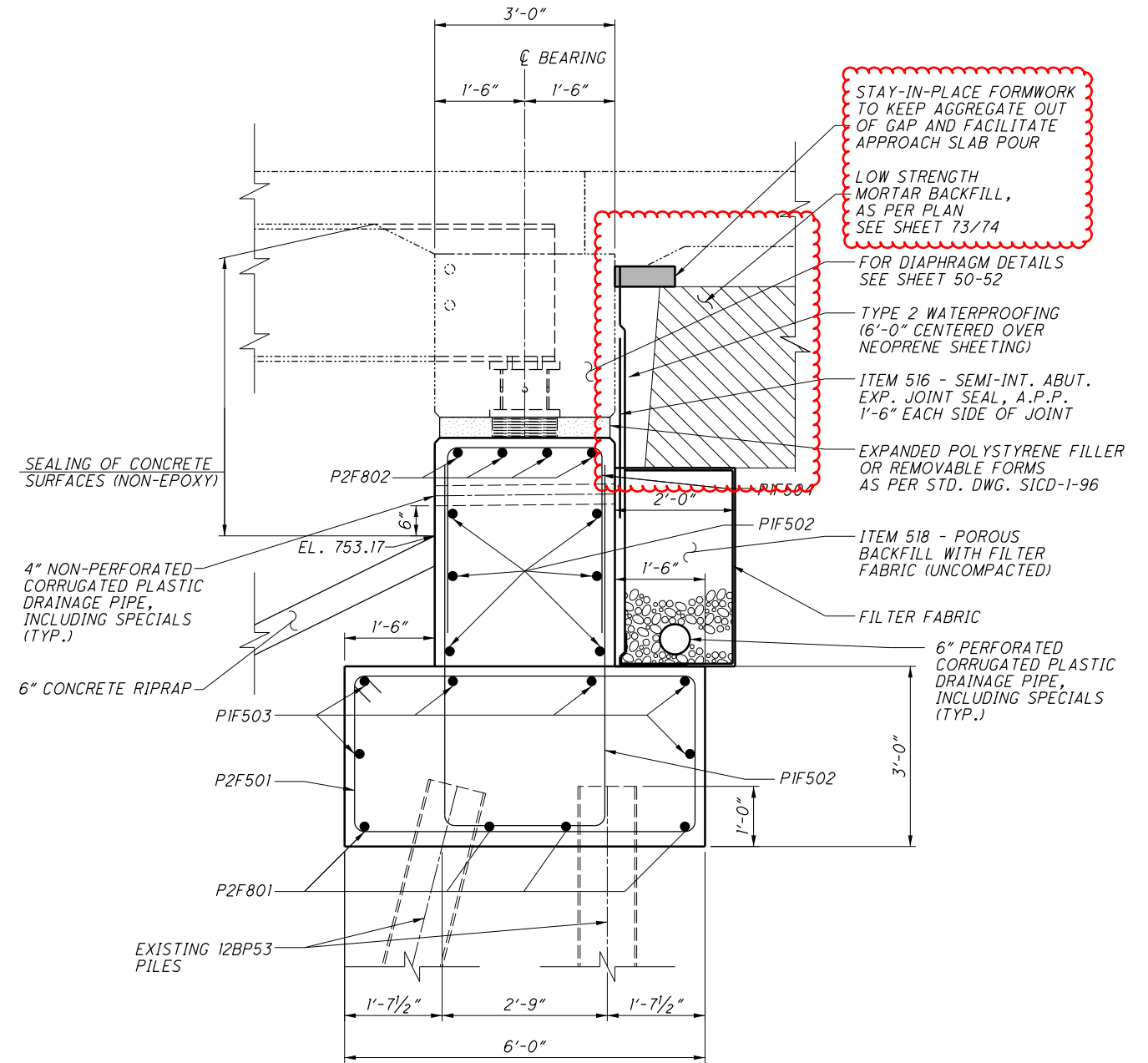
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| DRAWN | | CPS | REVISED | |
| REVIEWED | DATE | STRUCTURE FILE NUMBER | | |
| CPS | 12/4/2020 | 6002978 | | |
| DESIGN AGENCY | | | | |
| OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 | | | | |
| PROPOSED REAR AND FORWARD ABUTMENT DETAILS (PHASE I) | | | | |
| BRIDGE NO. MUS-70-1212 OVER UNDERWOOD ST. | | | | |
| MUS-70-10.49 | | PID No. 93006 | | |
| 18 / 74 | | 1850 / 2231 | | |

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SECTION R-2
19

(REAR ABUTMENT BREASTWALL DETAIL)



SECTION F-2
20

(FORWARD ABUTMENT BREASTWALL DETAIL)

STAY-IN-PLACE FORMWORK TO KEEP AGGREGATE OUT OF GAP AND FACILITATE APPROACH SLAB POUR

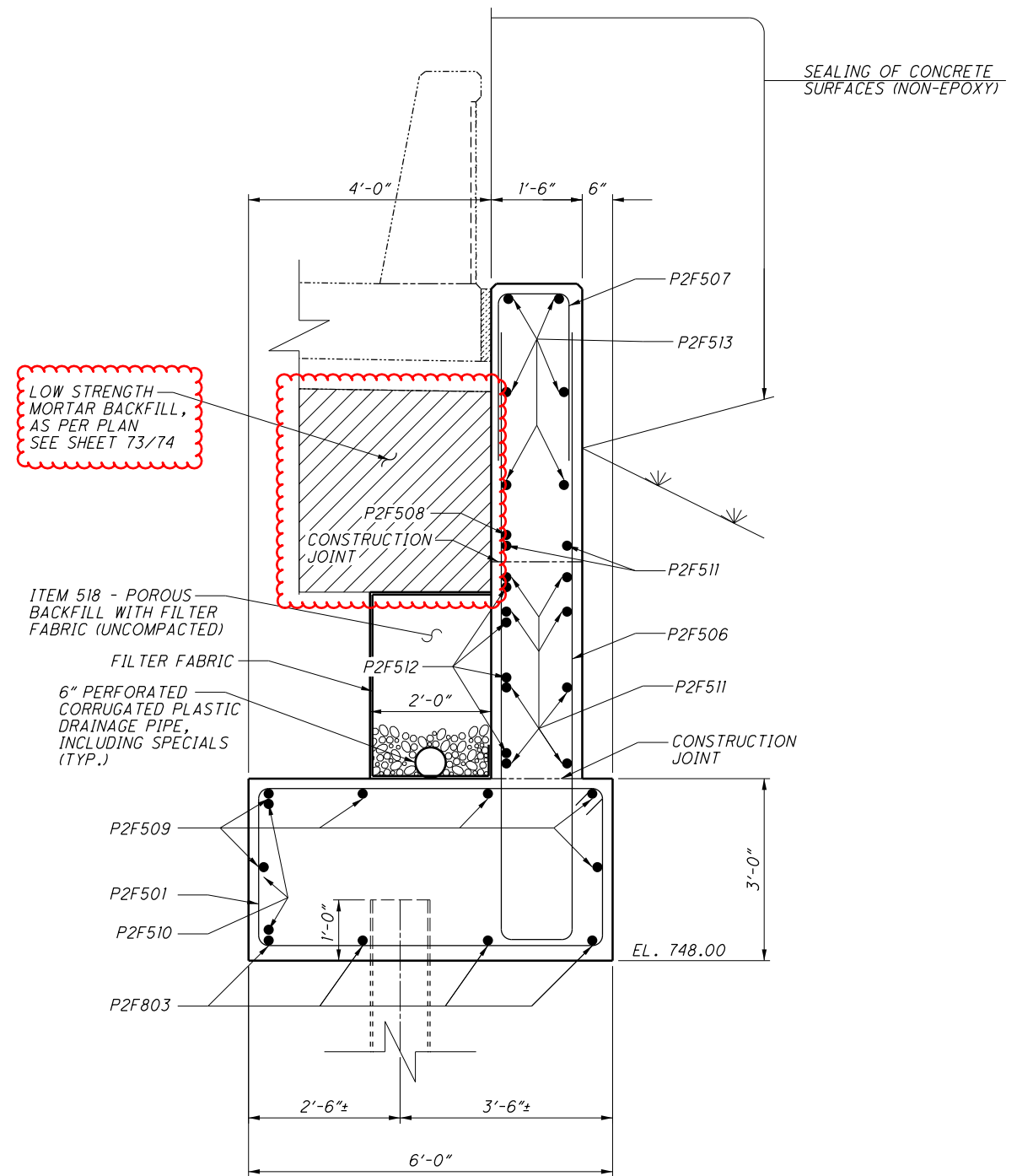
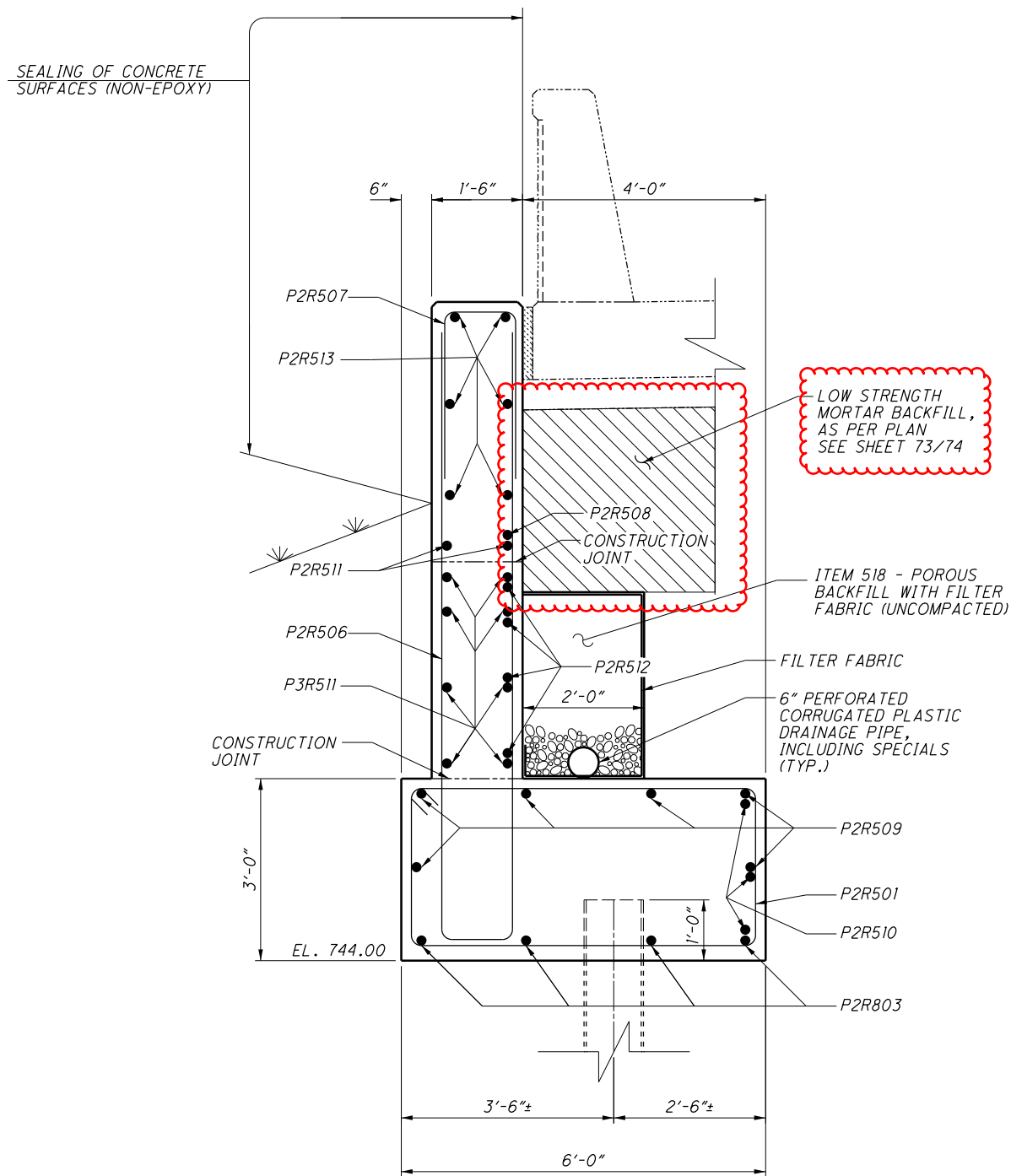
LOW STRENGTH MORTAR BACKFILL, AS PER PLAN SEE SHEET 73/74

STAY-IN-PLACE FORMWORK TO KEEP AGGREGATE OUT OF GAP AND FACILITATE APPROACH SLAB POUR

LOW STRENGTH MORTAR BACKFILL, AS PER PLAN SEE SHEET 73/74

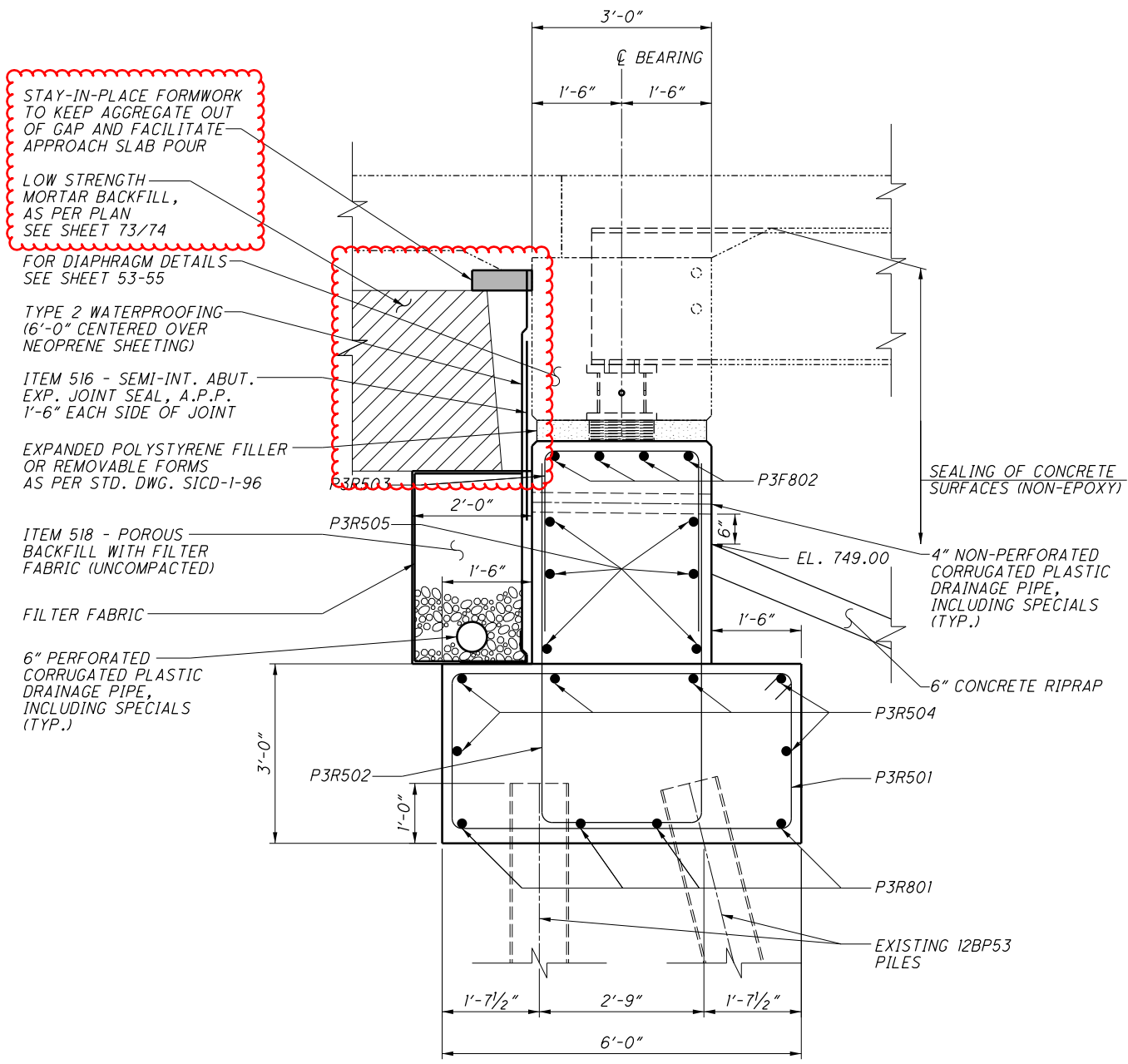
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| DESIGNED | | CPS | CHECKED | TAG |
| DRAIN | | CPS | REVISED | |
| REVIEWED | DATE | STRUCTURE FILE NUMBER | | |
| CPS | 12/4/2020 | 6002978 | | |
| DESIGN AGENCY | | | | |
| OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 | | | | |
| PROPOSED REAR AND FORWARD ABUTMENT DETAILS (PHASE 2) | | | | |
| BRIDGE NO. MUS-70-1212 OVER UNDERWOOD ST. | | | | |
| MUS-70-10.49 PID No. 93006 | | | | |
| 21 / 74 | | | | |
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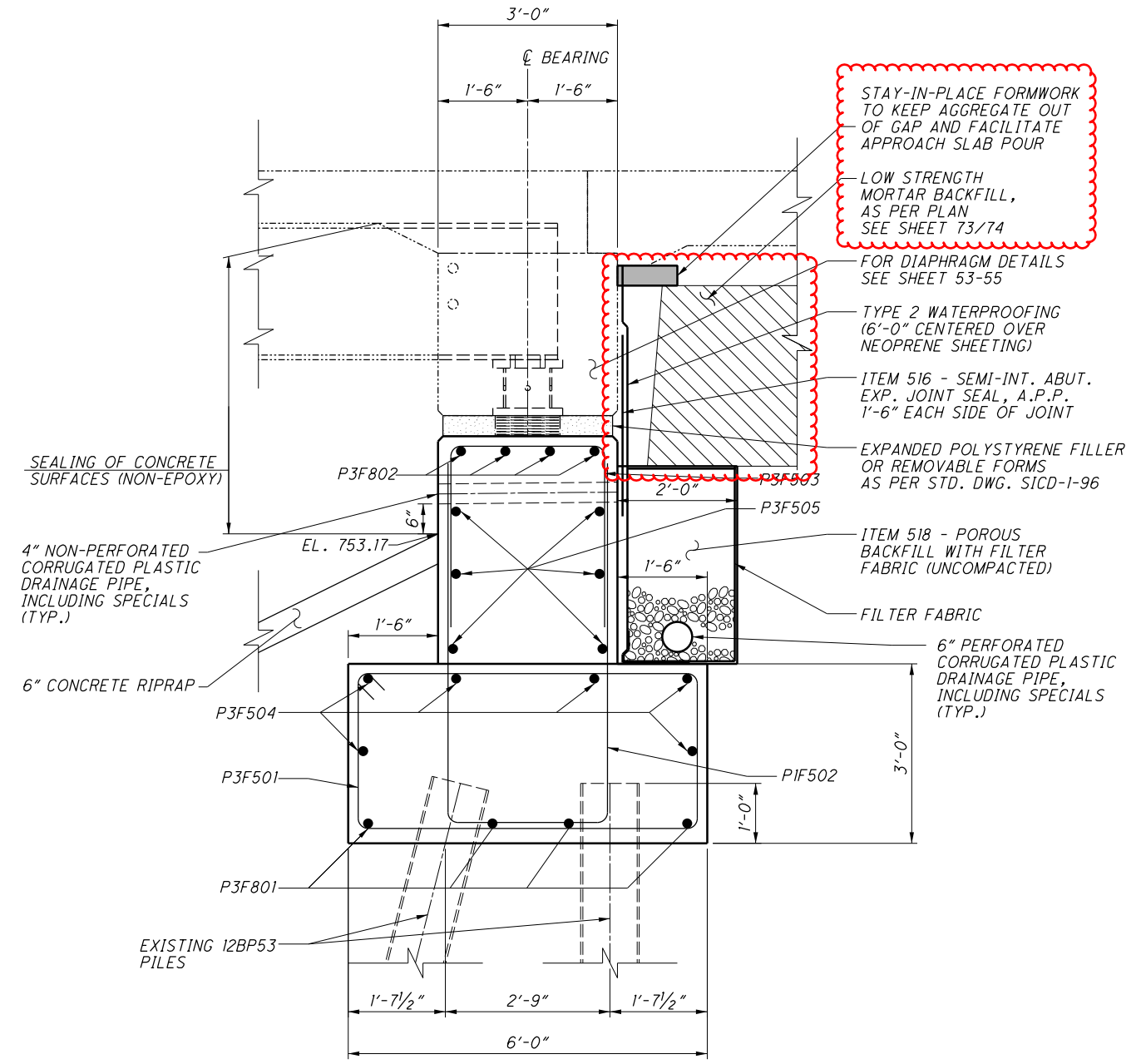
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| DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 | |
| REVIEWED CPS | DATE 12/4/2020 |
| DRAIN CPS | STRUCTURE FILE NUMBER 6002978 |
| DESIGNED CPS | CHECKED TAG |
| PROPOSED REAR AND FORWARD ABUTMENT DETAILS (PHASE 2) | |
| BRIDGE NO. MUS-70-1212 OVER UNDERWOOD ST. | |
| MUS-70-10.49 | PID No. 93006 |
| 23 / 74 | |
| 1855 2231 | |

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SECTION **R-3**
24

(REAR ABUTMENT BREASTWALL DETAIL)



SECTION **F-3**
25

(FORWARD ABUTMENT BREASTWALL DETAIL)

STAY-IN-PLACE FORMWORK TO KEEP AGGREGATE OUT OF GAP AND FACILITATE APPROACH SLAB POUR

LOW STRENGTH MORTAR BACKFILL, AS PER PLAN SEE SHEET 73/74

STAY-IN-PLACE FORMWORK TO KEEP AGGREGATE OUT OF GAP AND FACILITATE APPROACH SLAB POUR

LOW STRENGTH MORTAR BACKFILL, AS PER PLAN SEE SHEET 73/74

FOR DIAPHRAGM DETAILS SEE SHEET 53-55

TYPE 2 WATERPROOFING (6'-0" CENTERED OVER NEOPRENE SHEETING)

ITEM 516 - SEMI-INT. ABUT. EXP. JOINT SEAL, A.P.P. 1'-6" EACH SIDE OF JOINT

EXPANDED POLYSTYRENE FILLER OR REMOVABLE FORMS AS PER STD. DWG. SICD-1-96

ITEM 518 - POROUS BACKFILL WITH FILTER FABRIC (UNCOMPACTED)

FILTER FABRIC

6" PERFORATED CORRUGATED PLASTIC DRAINAGE PIPE, INCLUDING SPECIALS (TYP.)

FOR DIAPHRAGM DETAILS SEE SHEET 53-55

TYPE 2 WATERPROOFING (6'-0" CENTERED OVER NEOPRENE SHEETING)

ITEM 516 - SEMI-INT. ABUT. EXP. JOINT SEAL, A.P.P. 1'-6" EACH SIDE OF JOINT

EXPANDED POLYSTYRENE FILLER OR REMOVABLE FORMS AS PER STD. DWG. SICD-1-96

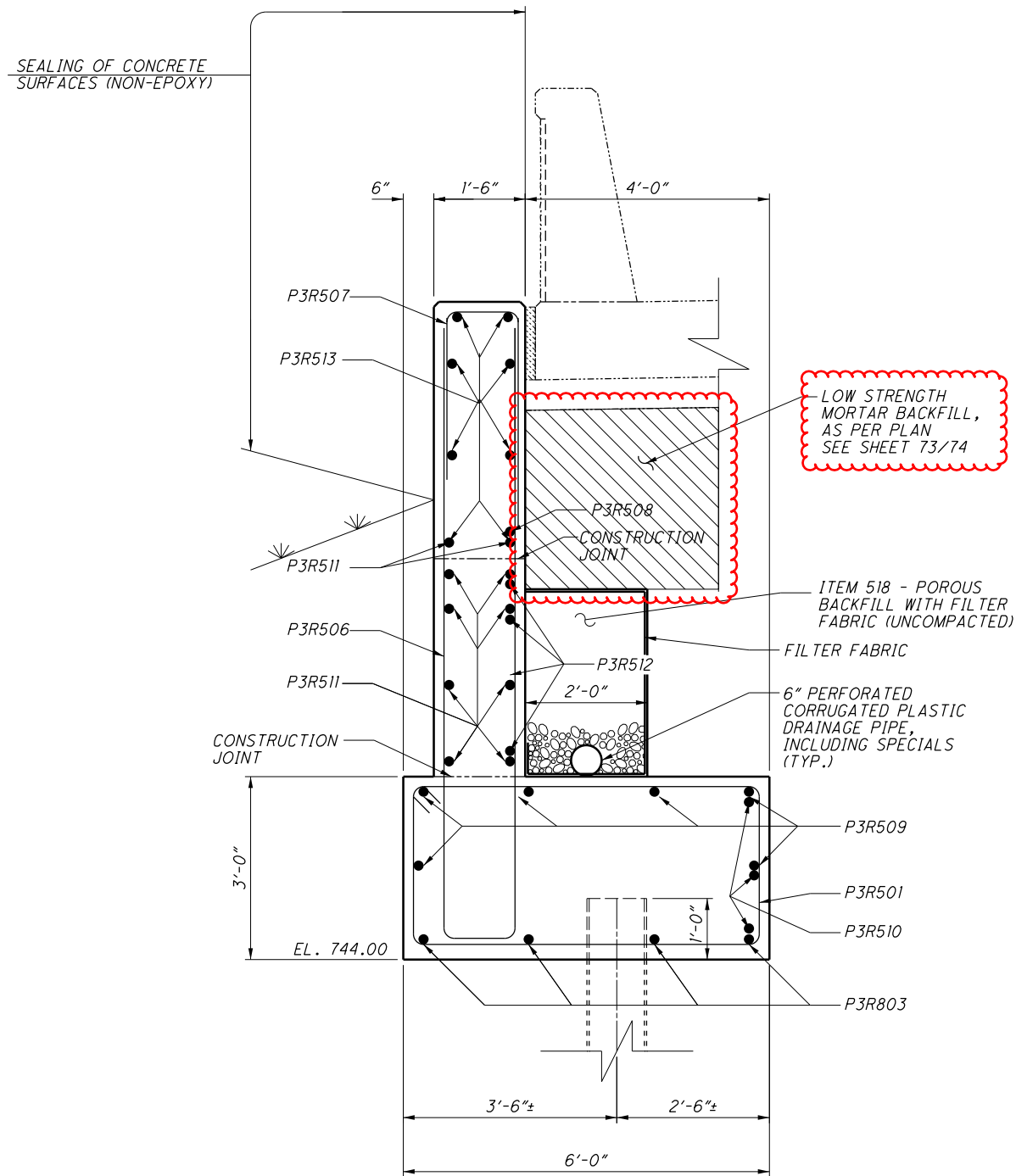
ITEM 518 - POROUS BACKFILL WITH FILTER FABRIC (UNCOMPACTED)

FILTER FABRIC

6" PERFORATED CORRUGATED PLASTIC DRAINAGE PIPE, INCLUDING SPECIALS (TYP.)

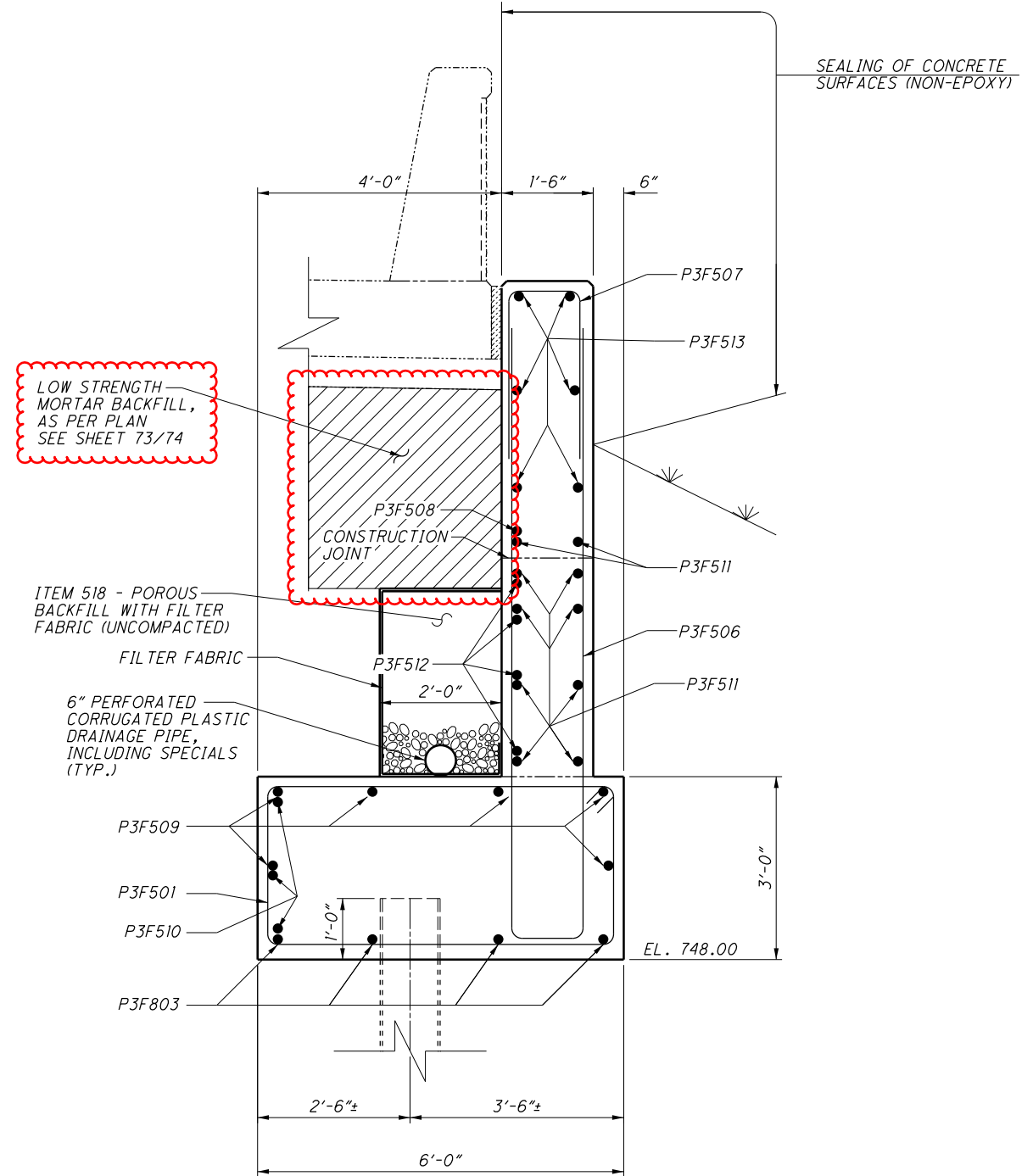
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| DESIGNED | CPS | CHECKED | TAG | REVIEWED | CPS | DATE | 12/4/2020 | DESIGN AGENCY | OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 |
| DRAWN | CPS | REVISED | | | | STRUCTURE FILE NUMBER | 6002978 | | |
| PROPOSED REAR AND FORWARD ABUTMENT DETAILS (PHASE 3) | | | | | | | | | |
| BRIDGE NO. MUS-70-1212 OVER UNDERWOOD ST. | | | | | | | | | |
| MUS-70-10.49 PID No. 93006 | | | | | | | | | |
| 26 / 74 | | | | | | | | | |
| 1858 2231 | | | | | | | | | |

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SECTION R-5
27

(REAR ABUTMENT SOUTH TURNBACK WALL DETAIL)

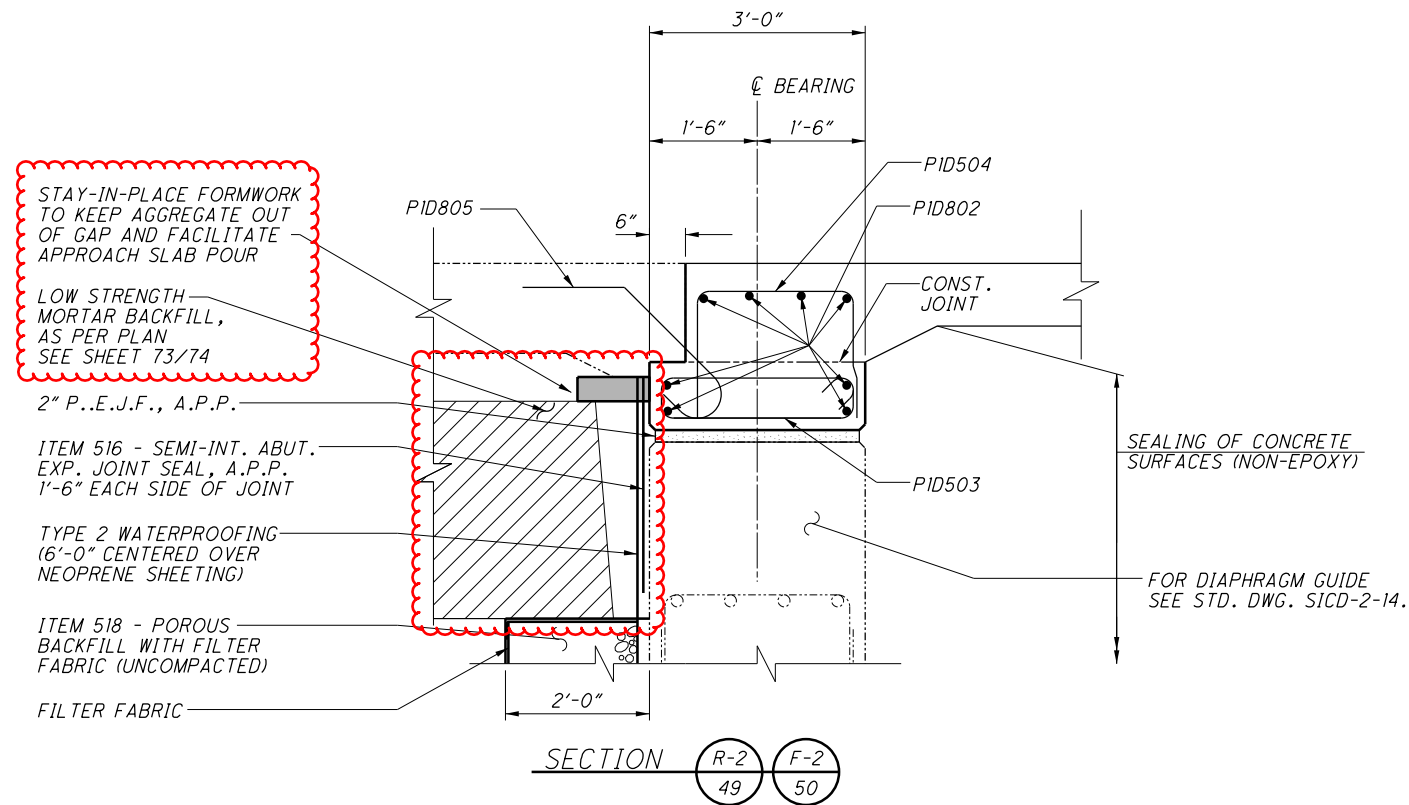


SECTION F-5
27

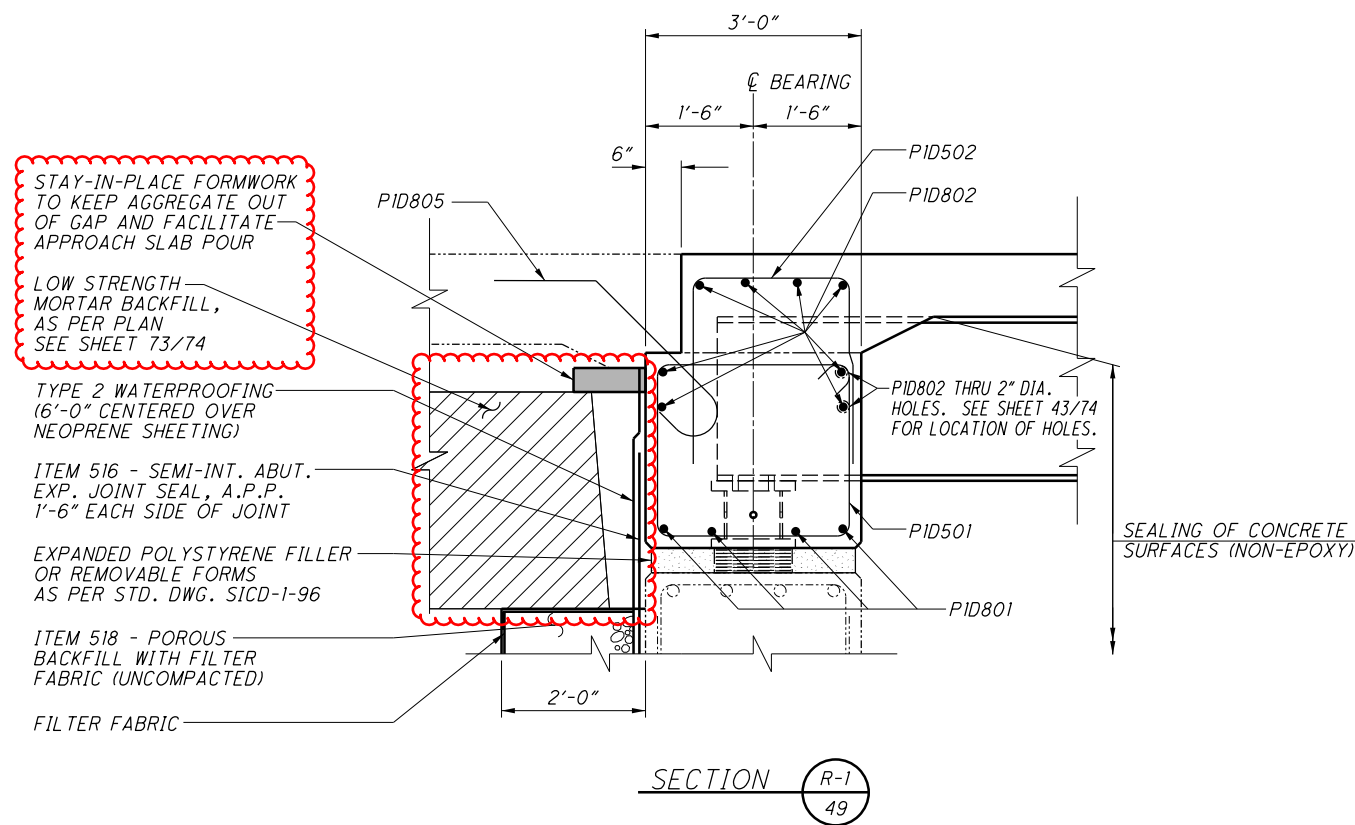
(FORWARD ABUTMENT SOUTH TURNBACK WALL DETAIL)

| | | | | |
|---|----------------|--------------|-----------------|-------------------|
| DESIGNED CPS | CHECKED TAG | DRAWN CPS | REVIEWED CPS | DATE 12/4/2020 |
| STRUCTURE FILE NUMBER 6002978 | | | | |
| DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 | | | | |
| BRIDGE NO. MUS-70-1212 OVER UNDERWOOD ST. | | | | |
| PROPOSED REAR AND FORWARD ABUTMENT DETAILS (PHASE 3) | | | | |
| MUS-70-10.49 PID No. 93006 | | | | |
| 28 / 74 | | | | |
| 1860 2231 | | | | |

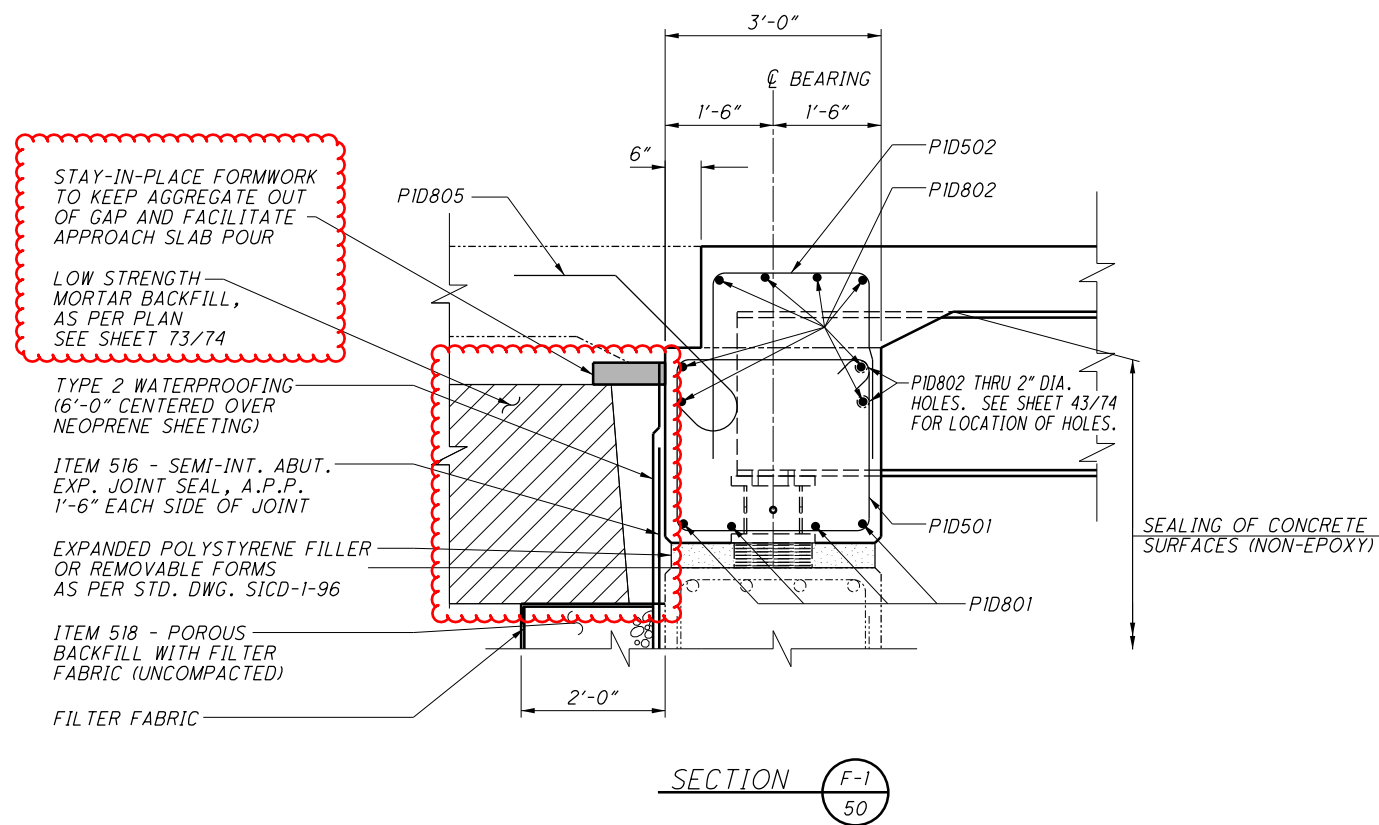
I:\ProjectData\MUS\93006\400-Engineering\Structures\070_1212_SS005.dgn Phase I Rear and Fwd. Abut. Section Details 3/24/2021 3:15:42 PM cshonk



SECTION R-2 F-2
49 50
 (REAR & FWD. ABUTMENT DIAPHRAGM DETAIL)



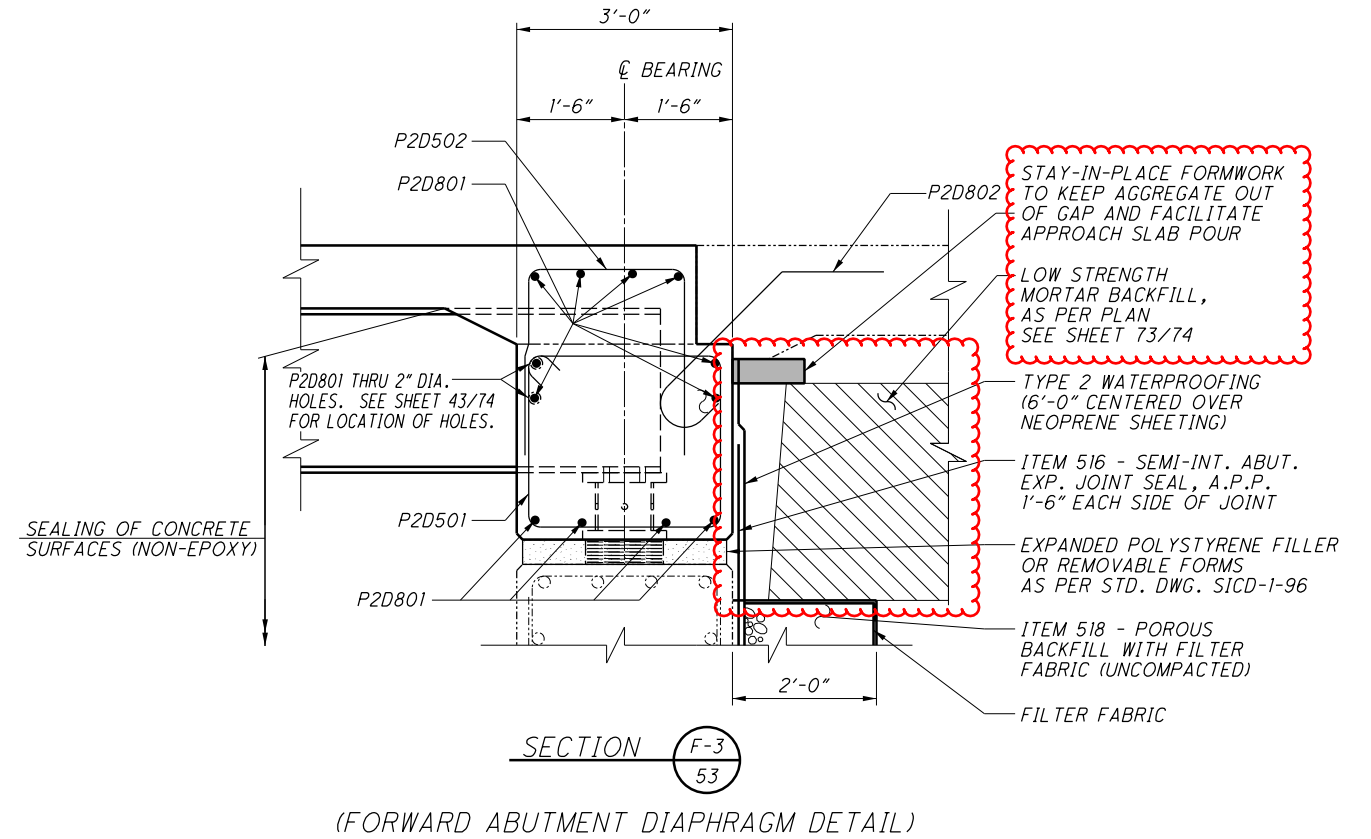
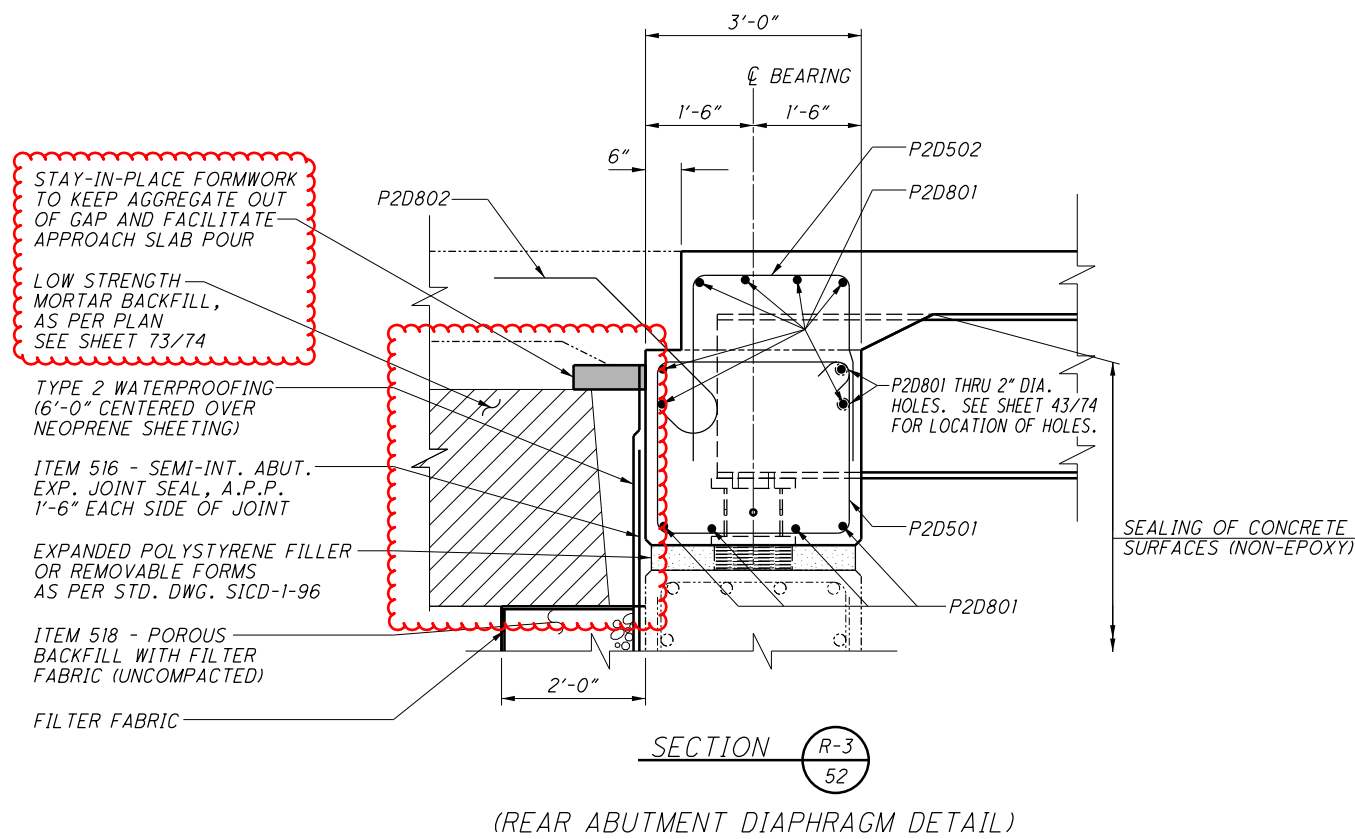
SECTION R-1
49
 (REAR ABUTMENT DIAPHRAGM DETAIL)



SECTION F-1
50
 (FORWARD ABUTMENT DIAPHRAGM DETAIL)

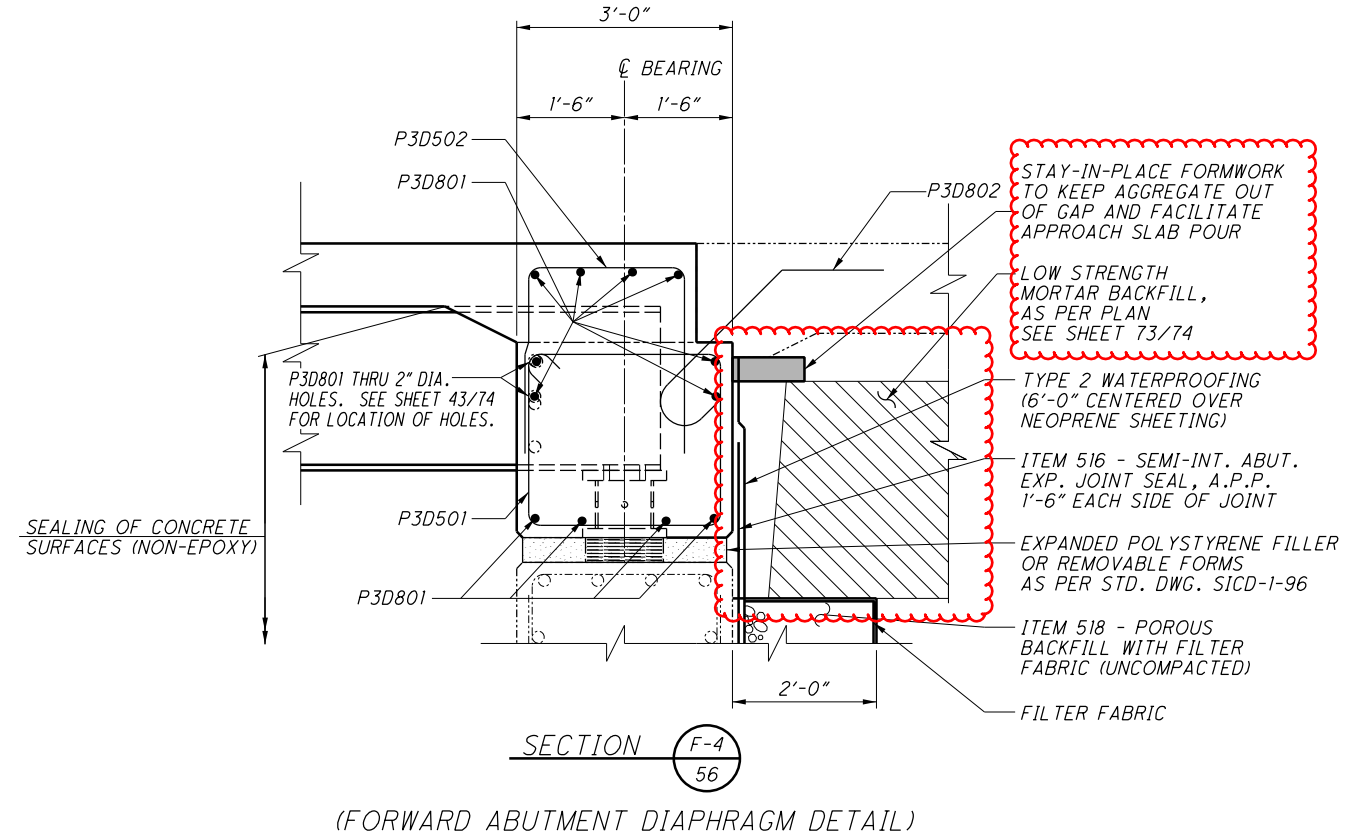
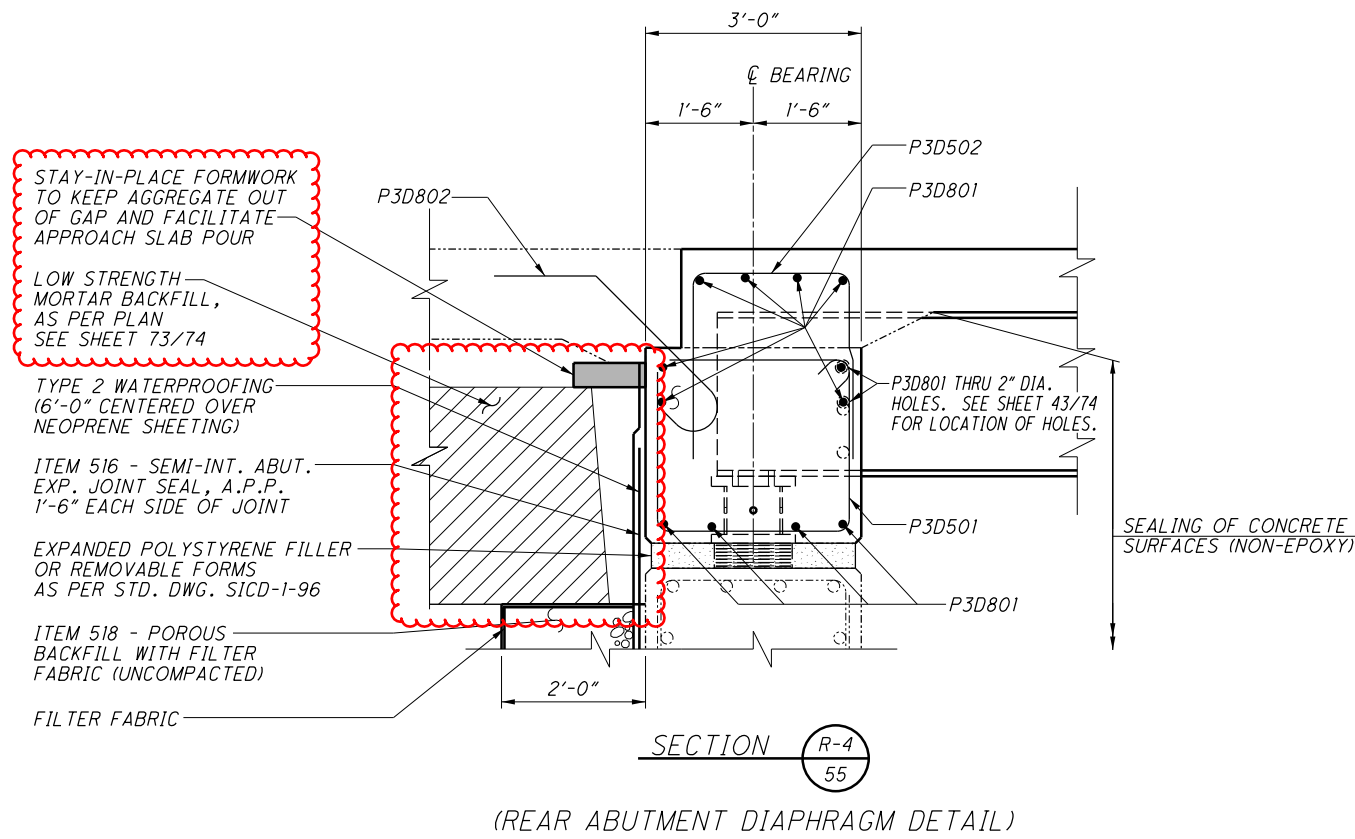
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|--|-------------------|-----------------|----------------------------------|
| DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 | DATE 12/4/2020 | REVIEWED CPS | STRUCTURE FILE NUMBER 6002978 |
| DESIGNED CPS | CHECKED TAG | DRAWN CPS | REVISED |
| PROPOSED REAR AND FWD. ABUTMENT DIAPHRAGM DETAILS (PHASE I) BRIDGE NO. MUS-70-1212 OVER UNDERWOOD ST. | | | |
| MUS-70-10-49 | PID No. 93006 | | |
| 51 / 74 | | | |
| 1883 2231 | | | |

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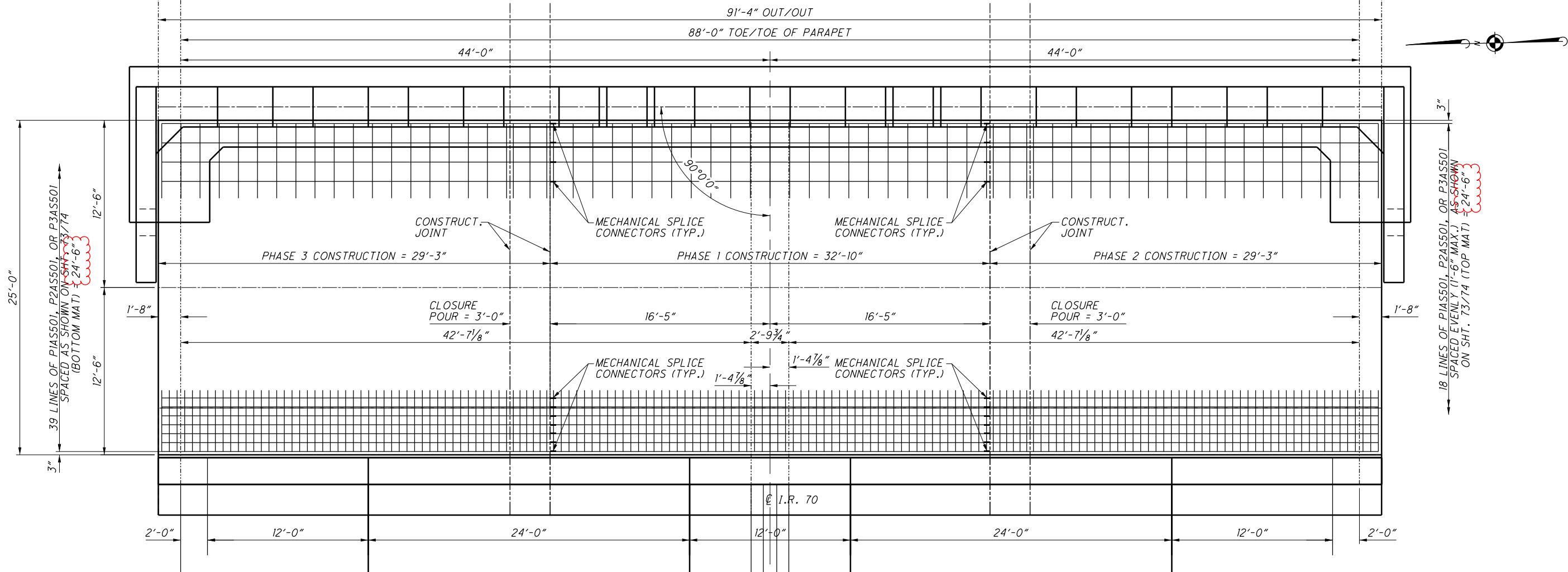
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|---|-----------------|---|--|
| DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 | REVIEWED CPS | DATE 12/4/2020 | STRUCTURE FILE NUMBER 6002978 |
| | DRAWN CPS | REVISOR | |
| DESIGNED CPS | CHECKED TAG | PROPOSED REAR AND FWD. ABUTMENT DIAPHRAGM DETAILS (PHASE 2) | |
| | | | BRIDGE NO. MUS-70-1212 OVER UNDERWOOD ST. |
| MUS-70-10.49 | PID No. 93006 | | |
| 54/74 | | | |
| 1886 2231 | | | |

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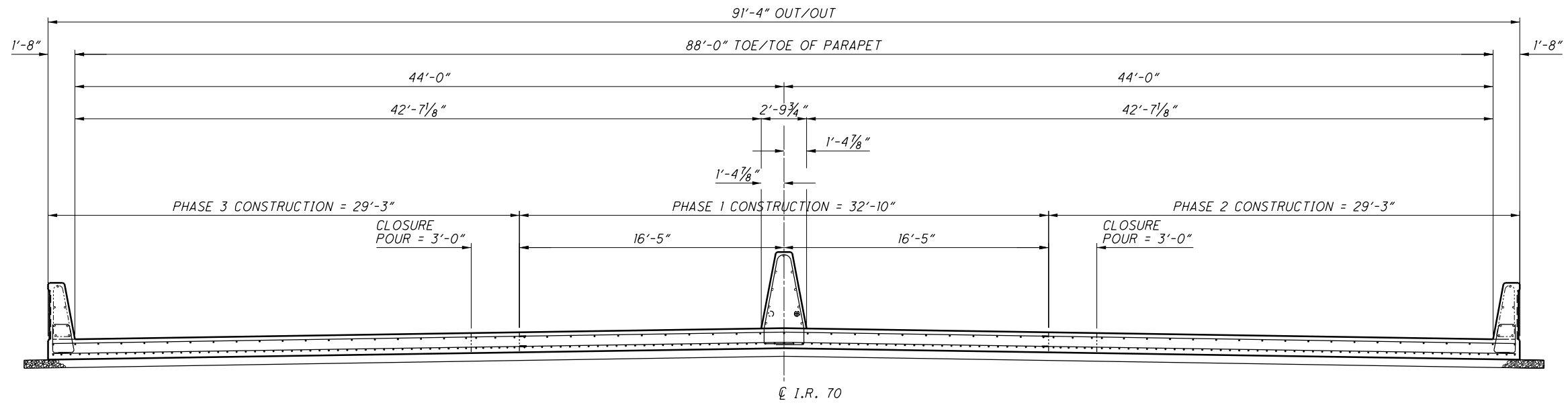


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|---|----------------|--------------|---------|----------------------------------|----------------------------|-------------------------------------|
| DESIGNED CPS | CHECKED TAG | DRAWN CPS | REVISED | REVIEWED CPS | DATE 12/4/2020 | DESIGN AGENCY OHIO DEPARTMENT OF |
| | | | | STRUCTURE FILE NUMBER 6002978 | TRANSPORTATION, DISTRICT 5 | |
| PROPOSED REAR AND FWD. ABUTMENT DIAPHRAGM DETAILS (PHASE 3) | | | | | | |
| BRIDGE NO. MUS-70-1212 OVER UNDERWOOD ST. | | | | | | |
| MUS-70-10.49 PID No. 93006 | | | | | | |
| 57/74 | | | | | | |
| 1889 2231 | | | | | | |

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PROPOSED APPROACH SLABS (PLAN VIEW)

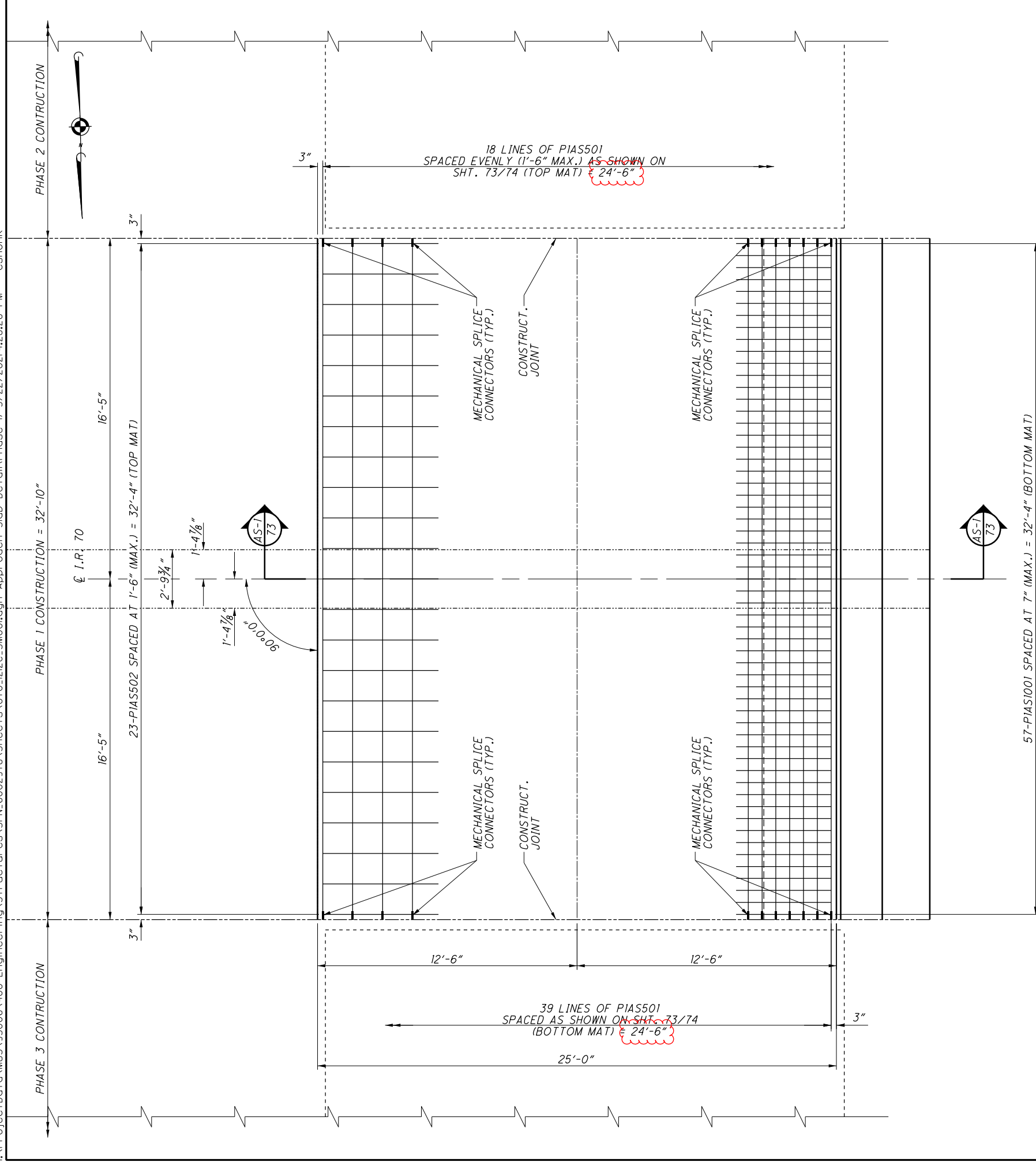


PROPOSED APPROACH SLABS (TYPICAL)

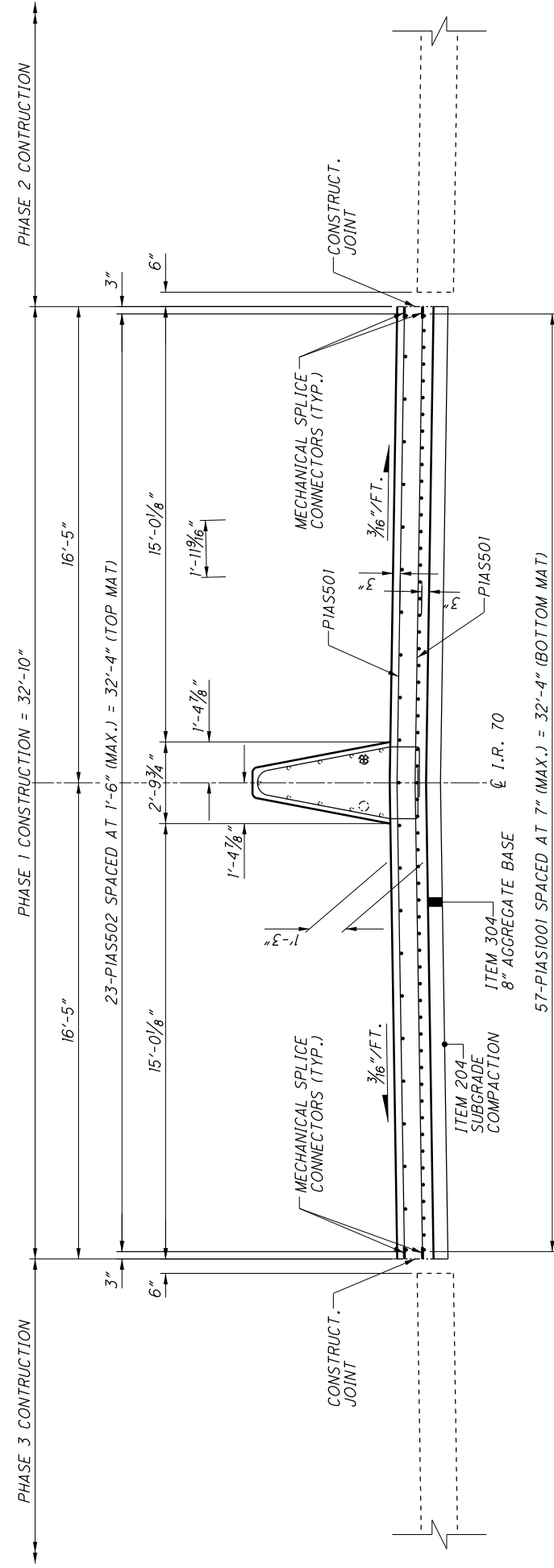
REAR APPROACH SLAB: STA. 615+42.95 TO STA. 615+67.95 = 25.00'
 FORWARD APPROACH SLAB: STA. 617+29.20 TO STA. 617+54.20 = 25.00'
 50.00'

| | |
|---|----------------------------------|
| DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 | |
| REVIEWED CPS | DATE 12/4/2020 |
| DRAWN CPS | STRUCTURE FILE NUMBER 6002978 |
| DESIGNED CPS | CHECKED TAG |
| PROPOSED APPROACH SLAB DETAILS BRIDGE NO. MUS-70-1212 OVER UNDERWOOD ST. | |
| MUS-70-10.49 PID No. 93006 | |
| 69 / 74 | |
| 1901 2231 | |

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PROPOSED APPROACH SLABS (PLAN VIEW) (PHASE I)
REAR APPROACH SLAB SHOWN, FORWARD MIRRORED



PROPOSED APPROACH SLABS (TYPICAL) (PHASE I)
REAR APPROACH SLAB SHOWN, FORWARD MIRRORED

REAR APPROACH SLAB: STA. 615+42.95 TO STA. 615+67.95 = 25.00'
 FORWARD APPROACH SLAB: STA. 617+29.20 TO STA. 617+54.20 = 25.00'
 50.00'

MUS-70-10.49
 PID No. 93006

70/74

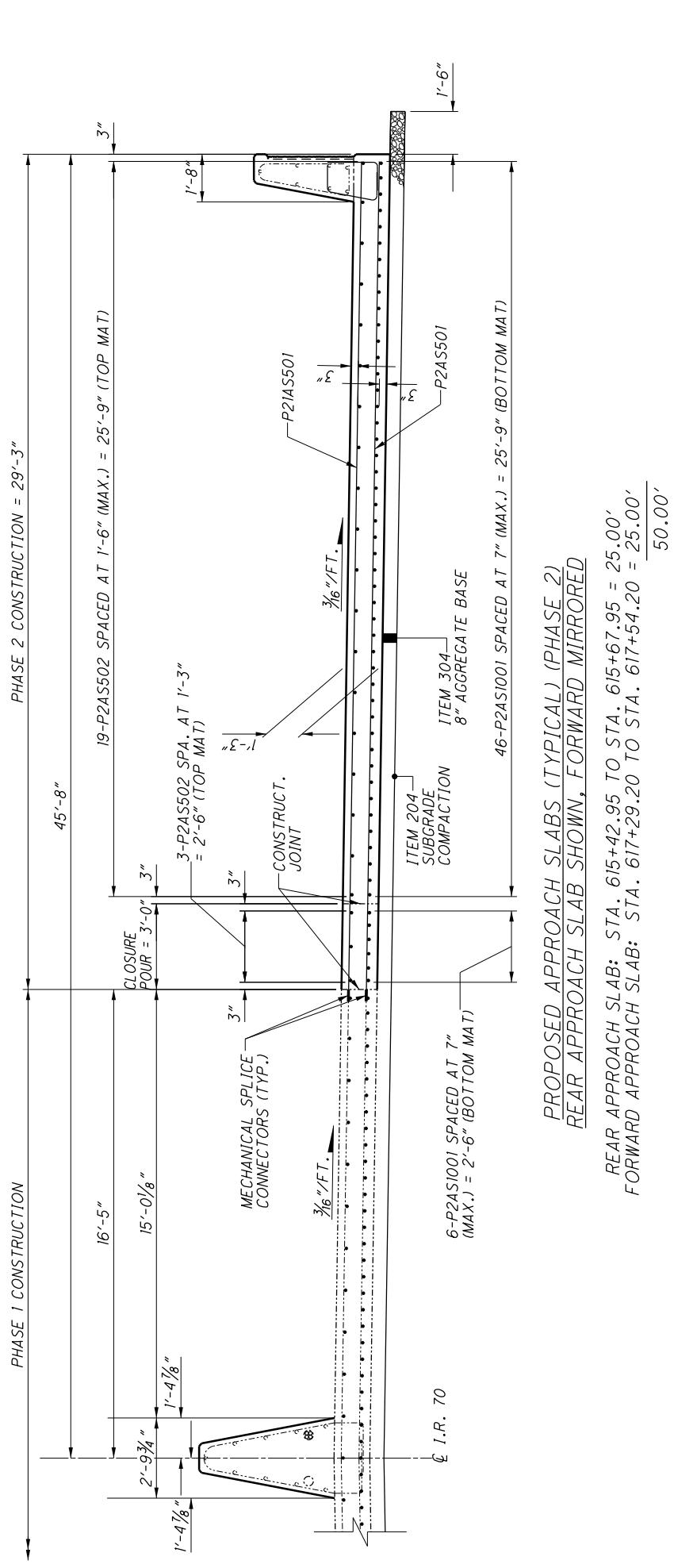
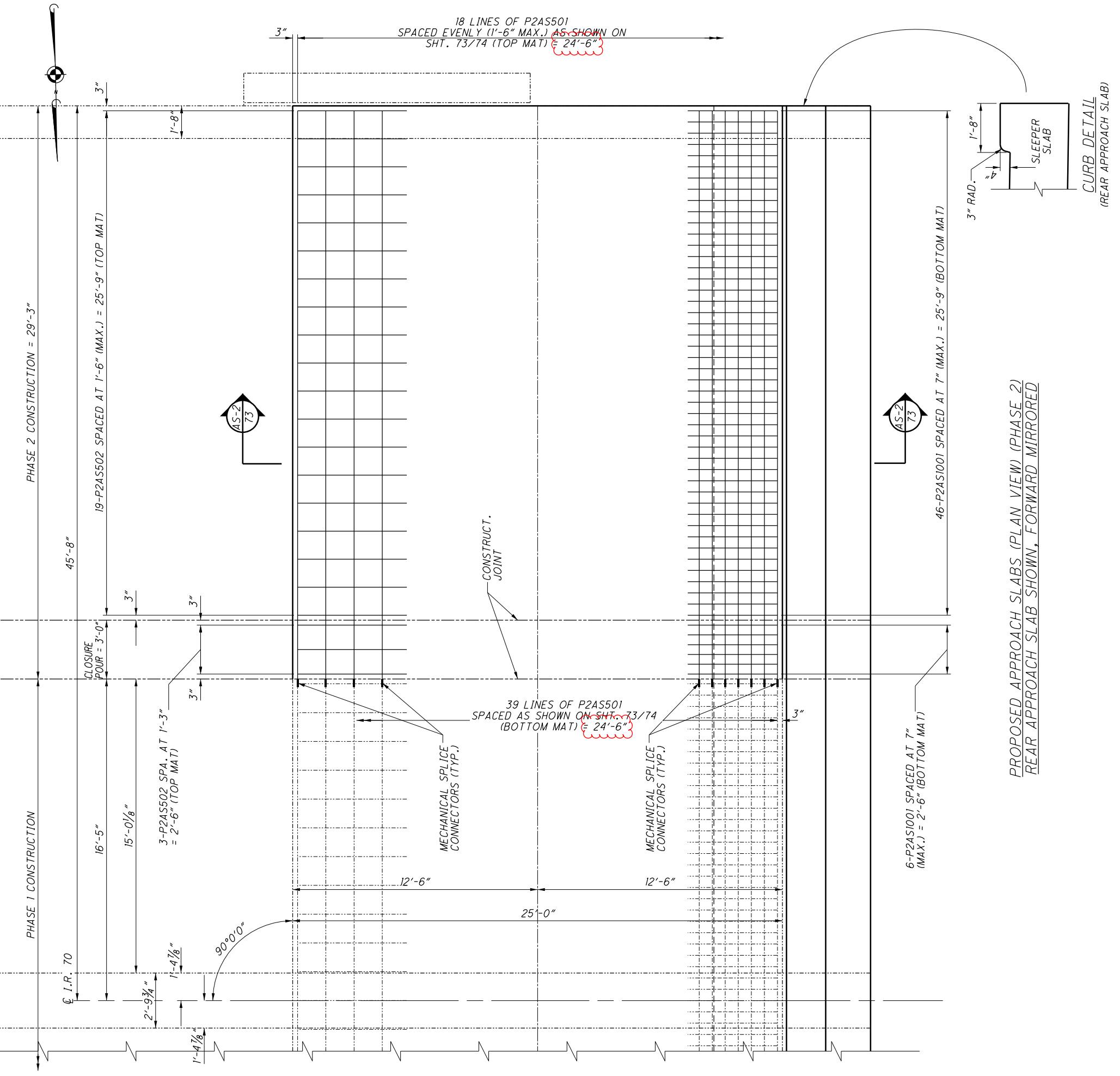
1902
 2231

PROPOSED APPROACH SLAB DETAILS (PHASE I)

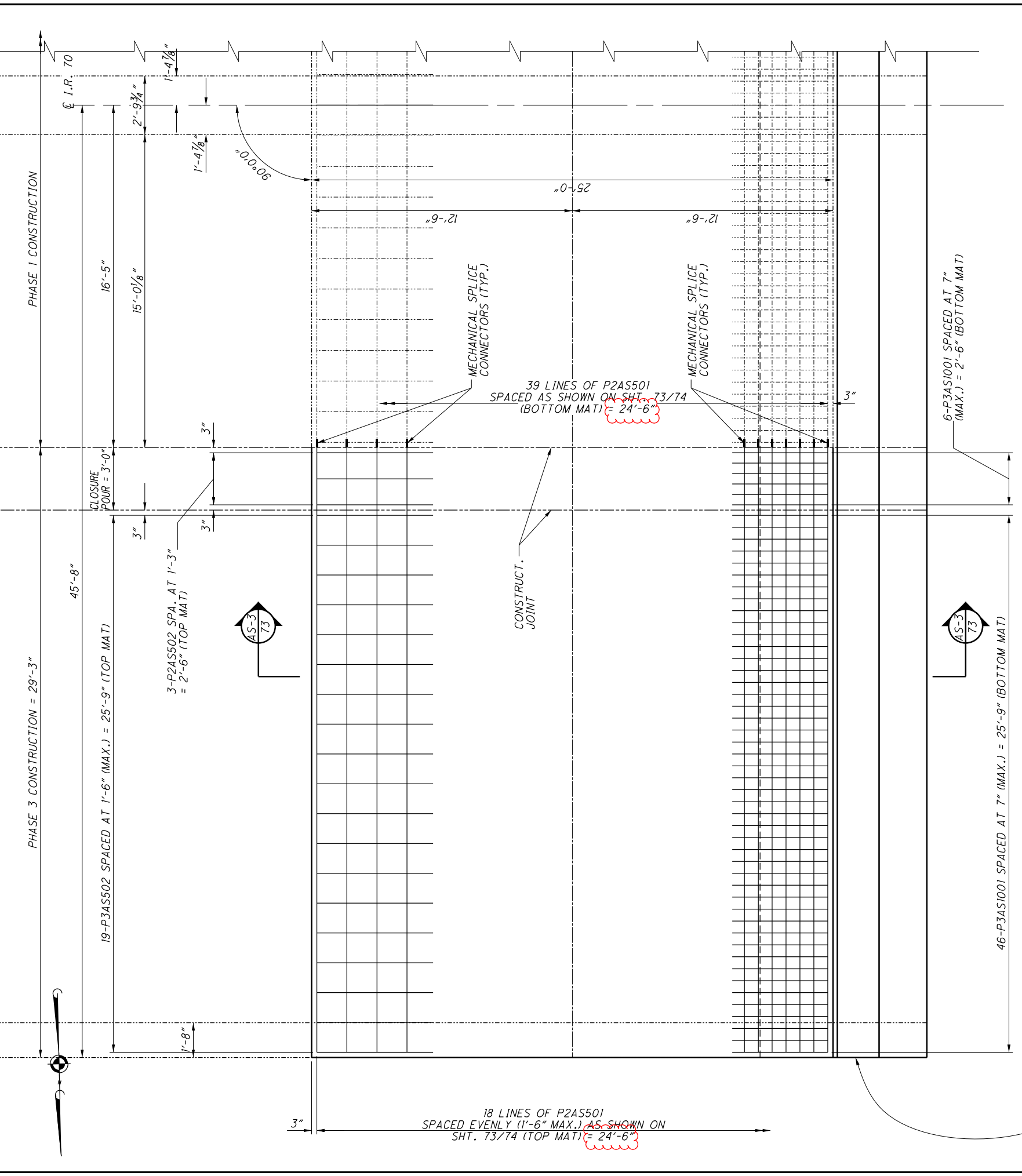
BRIDGE NO. MUS-70-1212
 OVER UNDERWOOD ST.

| | | | | | |
|----------|---------|---------|-----------------------|-----------|---|
| DESIGNED | DRAIN | CHECKED | REVIEWED | DATE | DESIGN AGENCY |
| CPS | CPS | TAG | CPS | 12/4/2020 | OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 |
| | REVISED | | STRUCTURE FILE NUMBER | | |
| | | | 6002978 | | |

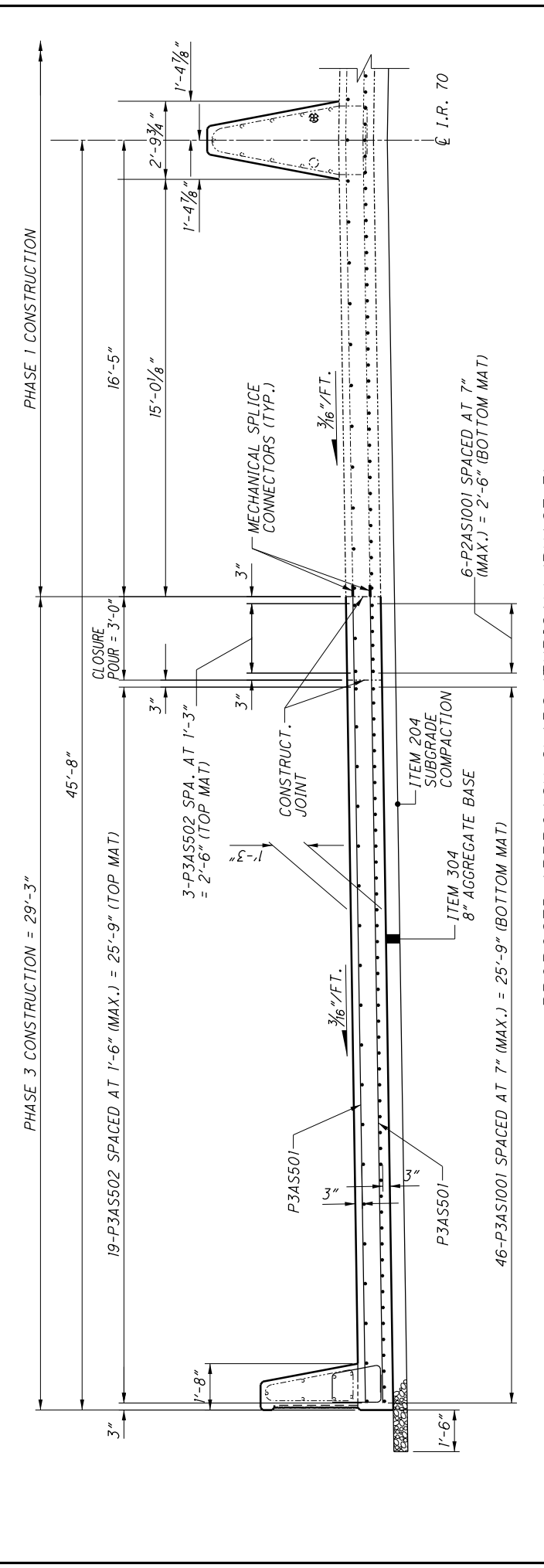
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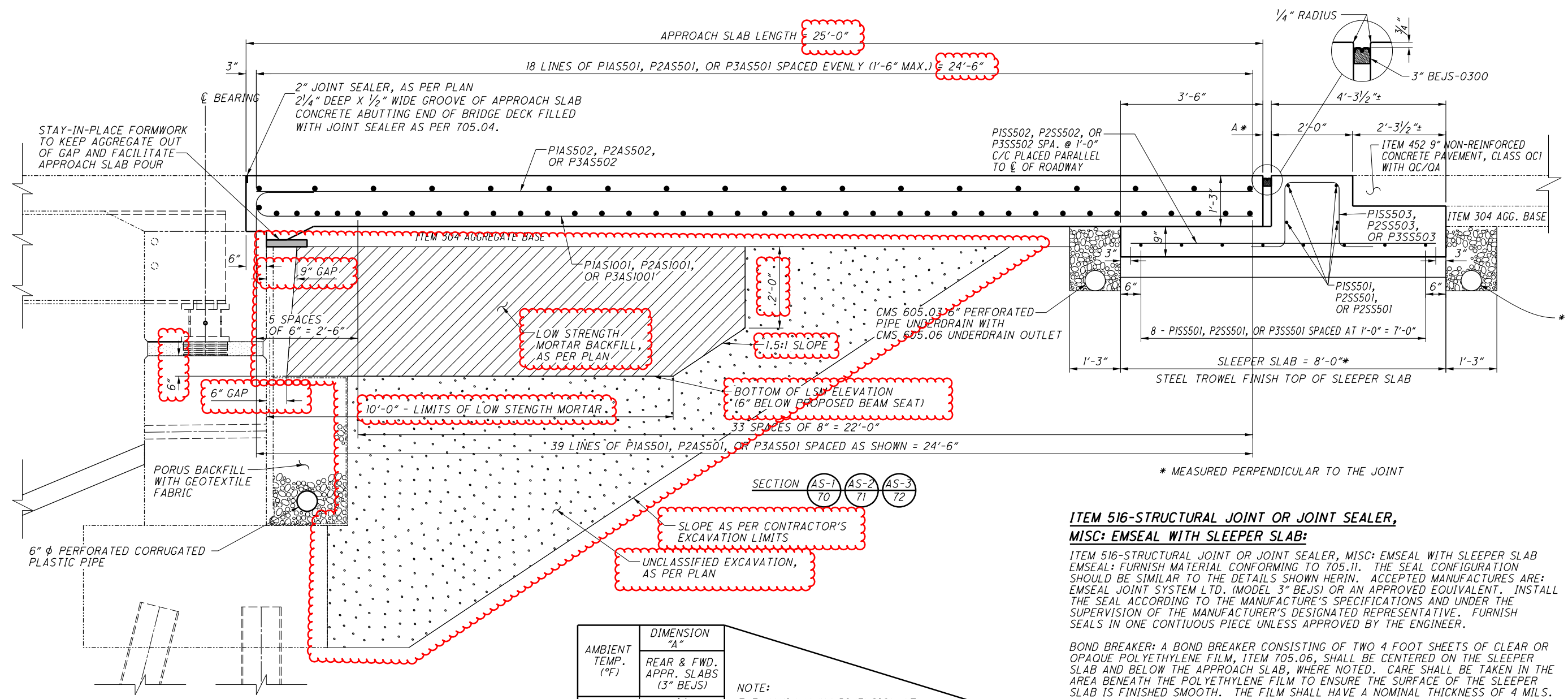
CURB DETAIL
 (REAR APPROACH SLAB)



REAR APPROACH SLAB: STA. 615+42.95 TO STA. 615+67.95 = 25.00'
 FORWARD APPROACH SLAB: STA. 617+29.20 TO STA. 617+54.20 = 25.00'
 50.00'

| | | | | | | | |
|--------------------------------------|---|--|--|------------------------|-------------------------|--|---|
| MUS-70-10.49 PID No. 93006 | PROPOSED APPROACH SLAB DETAILS (PHASE 3) BRIDGE NO. MUS-70-1212 OVER UNDERWOOD ST. | | | DESIGNED CPS TAG | DRAIN CPS REVISED | REVIEWED CPS 12/4/2020 STRUCTURE FILE NUMBER 6002978 | DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 |
| | 72 / 74 1904 2231 | | | | | | |

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NOTE:
TYPE "A" WATERPROOFING SHALL NOT EXTEND ABOVE THE BOTTOM OF THE CUT GROOVE IN WHICH THE HOT APPLIED JOINT SEALER IS TO BE PLACED. IT SHALL BE APPLIED TO THE ENTIRE AREA OF THE ABUTMENT OR SUPERSTRUCTURE WHICH COMES INTO CONTACT WITH THE APPROACH SLAB.

NOTE:
FOR ADDITIONAL DETAILS SEE STANDARD DRAWING AS-1-15 & AS-2-15.

NOTE:
FOR APPROACH SLAB FINISH ELEVATIONS, SEE SHEET 61/74.

| ITEM | DESCRIPTION | QUANT'Y | UNIT |
|------|--|---------|---------|
| 204 | ** SUBGRADE COMPACTION | 367 | SQ. YD. |
| 304 | ** AGGREGATE BASE | 82 | CU. YD. |
| 516 | * STRUCTURAL JOINT OR JOINT SEALER, MISC: EMSEAL WITH SLEEPER SLAB | 184 | FT. |
| 526 | * REINFORCED CONCRETE APPROACH SLABS WITH OC/OA (T=15"), AS PER PLAN | 509 | SQ. YD. |

CARRIED TO (*) BRIDGE SUMMARY or (**) SHEET 5/74

NOTE: ALL QUANTITIES SHOWN ARE FOR REAR AND FORWARD APPROACH SLABS.

| AMBIENT TEMP. (°F) | DIMENSION "A" |
|--------------------|-----------------------------------|
| | REAR & FWD. APPR. SLABS (3" BEJS) |
| 90° | 2 1/16" |
| 80° | 2 1/8" |
| 70° | 2 1/4" |
| 60° | 2 3/8" |
| 50° | 2 1/2" |
| 40° | 2 9/16" |

NOTE:
THE MAXIMUM "A" DIMENSION AT TIME OF INSTALLATION IS 2.5"

SECTION AS-1 AS-2 AS-3
70 71 72

SLOPE AS PER CONTRACTOR'S EXCAVATION LIMITS

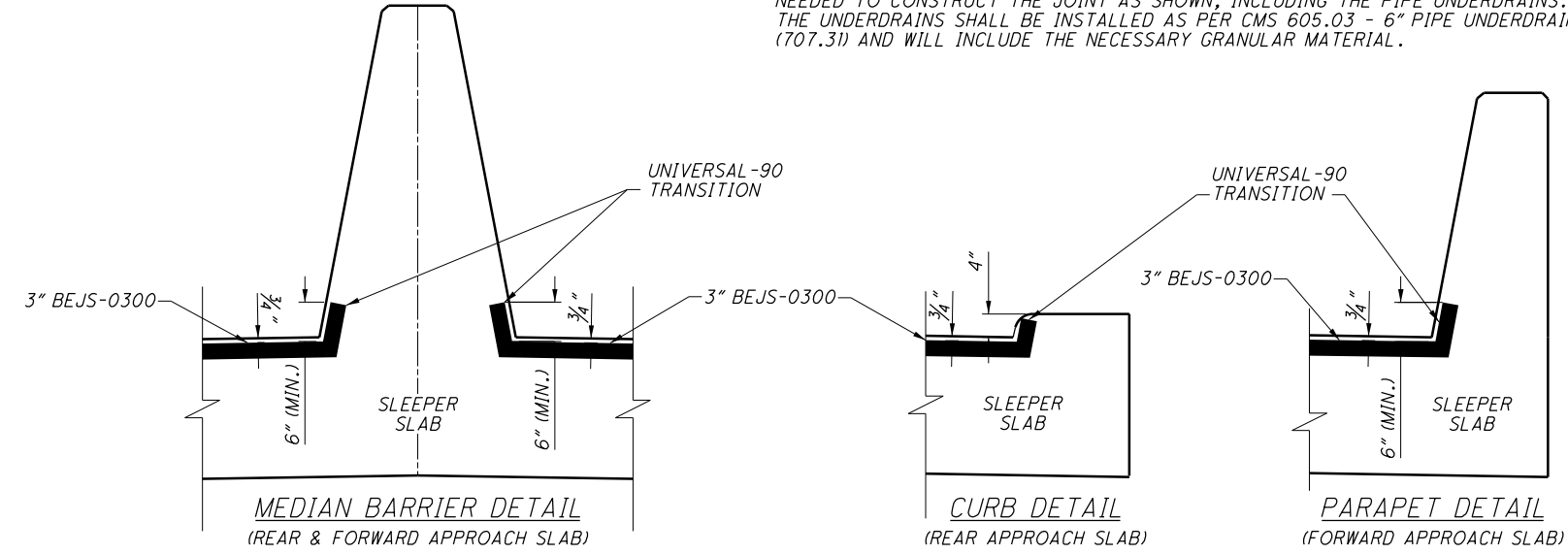
UNCLASSIFIED EXCAVATION, AS PER PLAN

ITEM 516-STRUCTURAL JOINT OR JOINT SEALER, MISC: EMSEAL WITH SLEEPER SLAB:

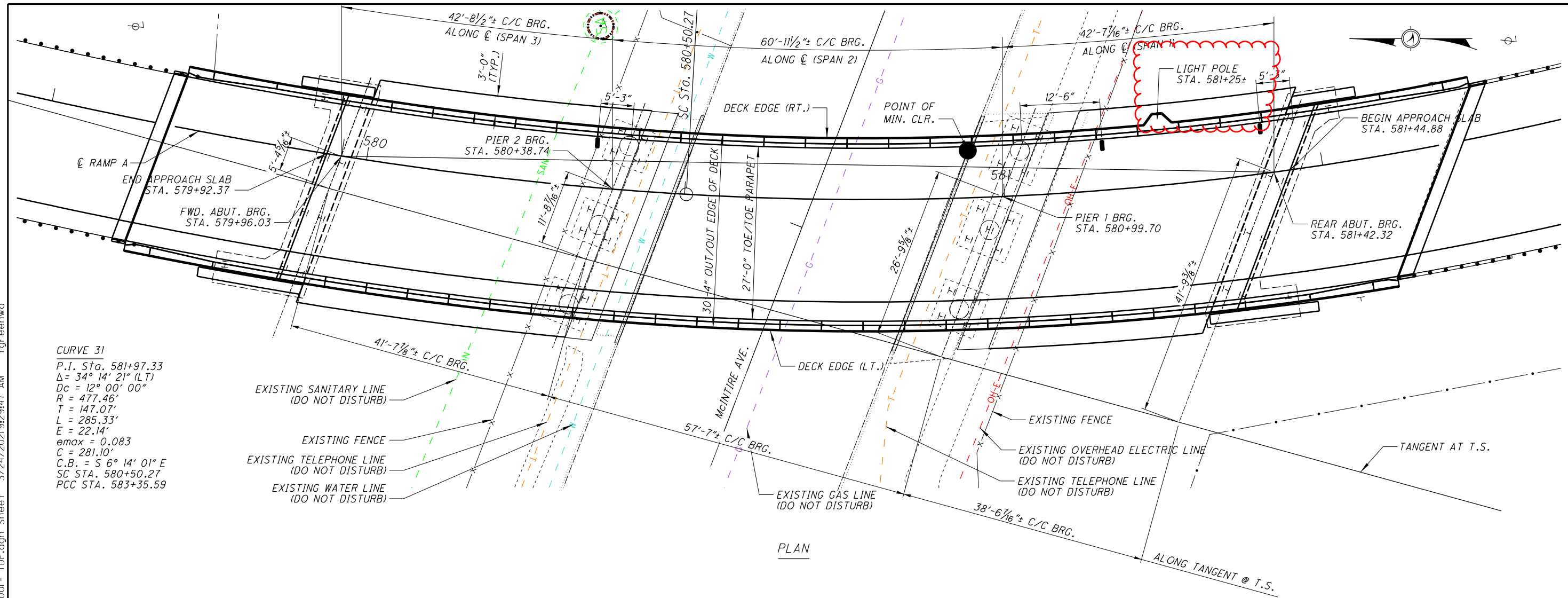
ITEM 516-STRUCTURAL JOINT OR JOINT SEALER, MISC: EMSEAL WITH SLEEPER SLAB EMSEAL: FURNISH MATERIAL CONFORMING TO 705.11. THE SEAL CONFIGURATION SHOULD BE SIMILAR TO THE DETAILS SHOWN HERIN. ACCEPTED MANUFACTURES ARE: EMSEAL JOINT SYSTEM LTD. (MODEL 3" BEJS) OR AN APPROVED EQUIVALENT. INSTALL THE SEAL ACCORDING TO THE MANUFACTURE'S SPECIFICATIONS AND UNDER THE SUPERVISION OF THE MANUFACTURER'S DESIGNATED REPRESENTATIVE. FURNISH SEALS IN ONE CONTINUOUS PIECE UNLESS APPROVED BY THE ENGINEER.

BOND BREAKER: A BOND BREAKER CONSISTING OF TWO 4 FOOT SHEETS OF CLEAR OR OPAQUE POLYETHYLENE FILM, ITEM 705.06, SHALL BE CENTERED ON THE SLEEPER SLAB AND BELOW THE APPROACH SLAB, WHERE NOTED. CARE SHALL BE TAKEN IN THE AREA BENEATH THE POLYETHYLENE FILM TO ENSURE THE SURFACE OF THE SLEEPER SLAB IS FINISHED SMOOTH. THE FILM SHALL HAVE A NOMINAL THICKNESS OF 4 MILS.

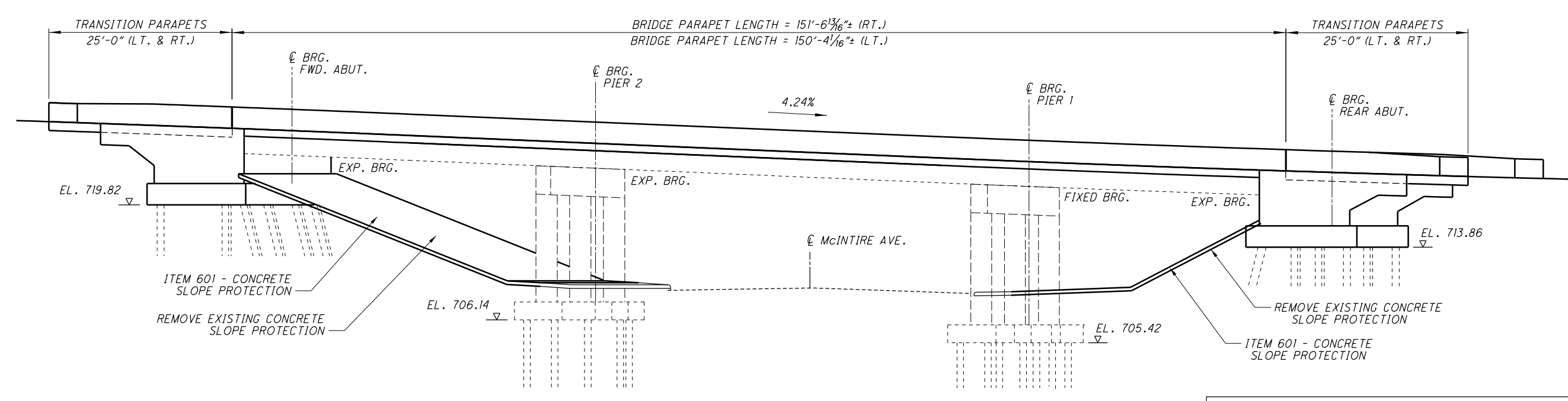
PAYMENT: MEASUREMENT OF THE EXPANSION JOINT FOR PAYMENT PURPOSES SHALL BE ALONG THE CENTERLINE OF THE SLEEPER SLAB AND BETWEEN THE BACKS OF CURB. PAYMENT SHALL BE PER FOOT OF ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC: EMSEAL WITH SLEEPER SLAB AND SHALL INCLUDE 3" BEJS SEAL AS PROVIDED BY EMSEAL JOINT SYSTEM LTD. AT 25 BRIDLE LANE, WESTBOROUGH, MA 01581 (800) 526-8365 OR AN APPROVED EQUAL, CONCRETE SLEEPER SLAB, RESTEEL, PIPE UNDERDRAINS AND OUTLETS AND ALL LABOR, MATERIALS AND INCIDENTALS NEEDED TO CONSTRUCT THE JOINT AS SHOWN, INCLUDING THE PIPE UNDERDRAINS. THE UNDERDRAINS SHALL BE INSTALLED AS PER CMS 605.03 - 6" PIPE UNDERDRAIN (707.31) AND WILL INCLUDE THE NECESSARY GRANULAR MATERIAL.



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PLAN

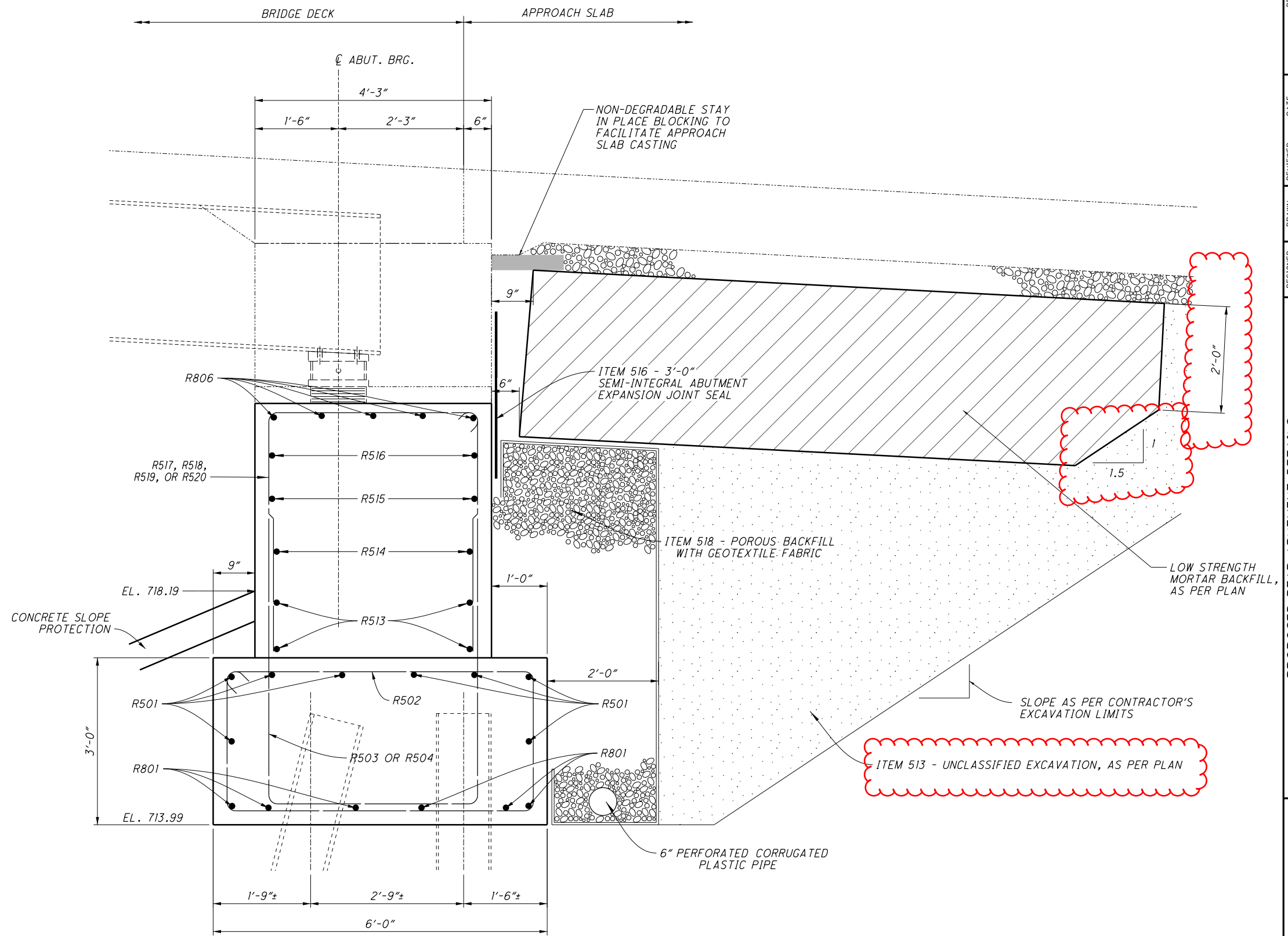


ELEVATION

NOTE THAT THE PROPOSED ROADWAY CENTERLINE STATIONING IS REVERSE FROM THAT OF THE EXISTING. AS A RESULT, THE NOMENCLATURE OF THE SUBSTRUCTURE UNITS IS OPPOSITE THAN THAT WHICH IS CONVENTIONALLY APPLIED. I.E. THE REAR ABUTMENT IS UPSTATION AND THE FORWARD ABUTMENT IS DOWNSTATION.

| | | | | | |
|----------------------------|-------|-------------------------|-----------------------|--|--|
| DESIGNED | | DATE | | DESIGN AGENCY | |
| YEL | YEL | MM/DD/YY | MM/DD/YY | OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5 | |
| CHECKED | REVIS | TAG | STRUCTURE FILE NUMBER | 6001920 | |
| TAG | | | | MUS-70-10.49 | |
| GENERAL PLAN AND ELEVATION | | BRIDGE NO. MUS-70-1144A | | PID No. 93006 | |
| RAMP 'A' OVER MCINTIRE AVE | | | | 2 / 45 | |
| | | | | 1920 2231 | |

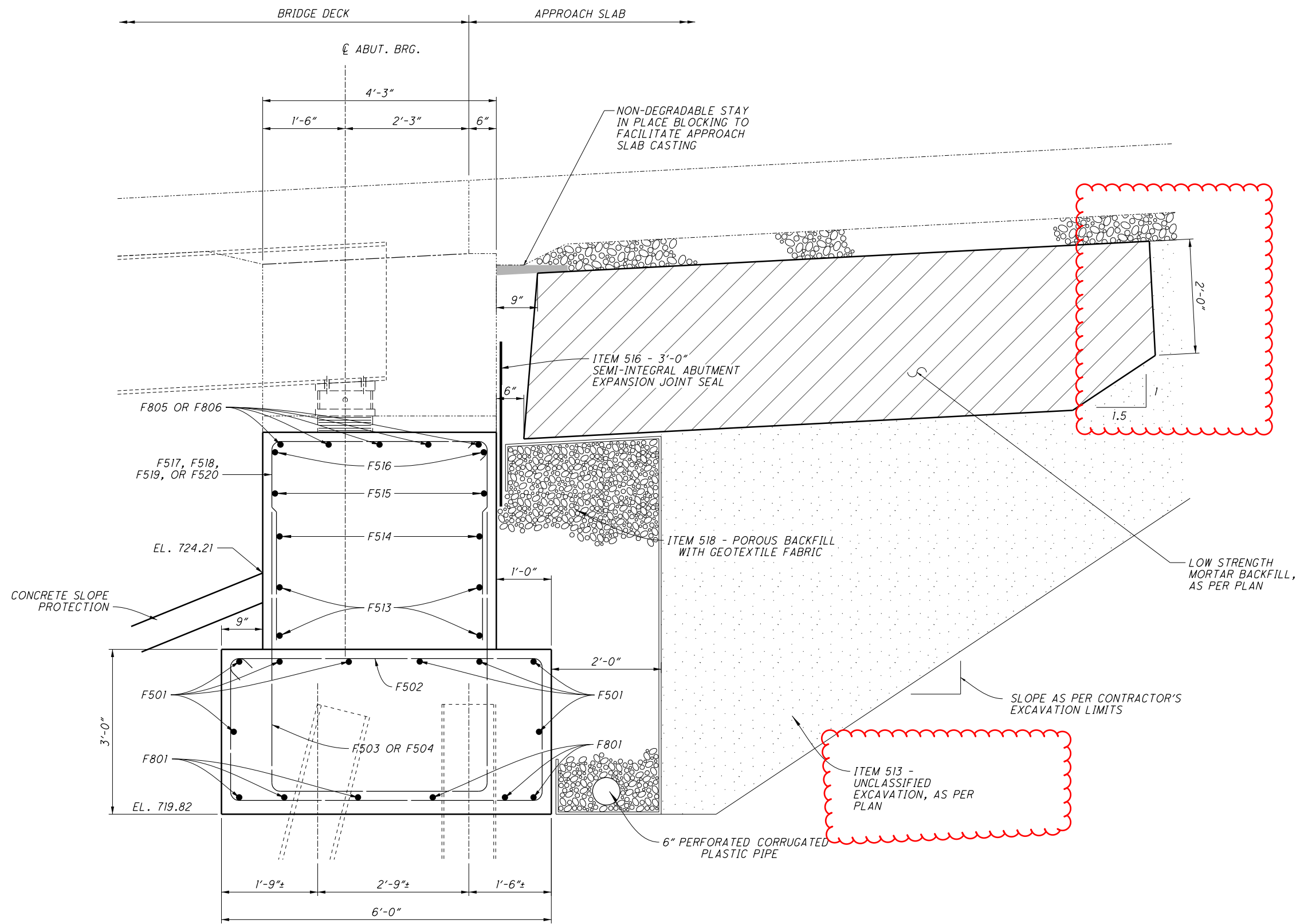
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SECTIONS R1 & R2
10,11

| | | | | | |
|--------------|--|-----------------------|---------|--|---|
| DESIGNED | | YEL | CPS | DESIGN AGENCY | OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 |
| DRAWN | | YEL | REVIS | REVIEWED | DATE |
| TAG | | STRUCTURE FILE NUMBER | 6001920 | TAG | 12/01/20 |
| MUS-70-10.49 | | PID No. 93006 | | BRIDGE NO. MUS-70-1144A RAMP 'A' OVER MCINTIRE AVE. | |
| 12/45 | | 1930 2231 | | PROPOSED REAR ABUTMENT DETAILS | |

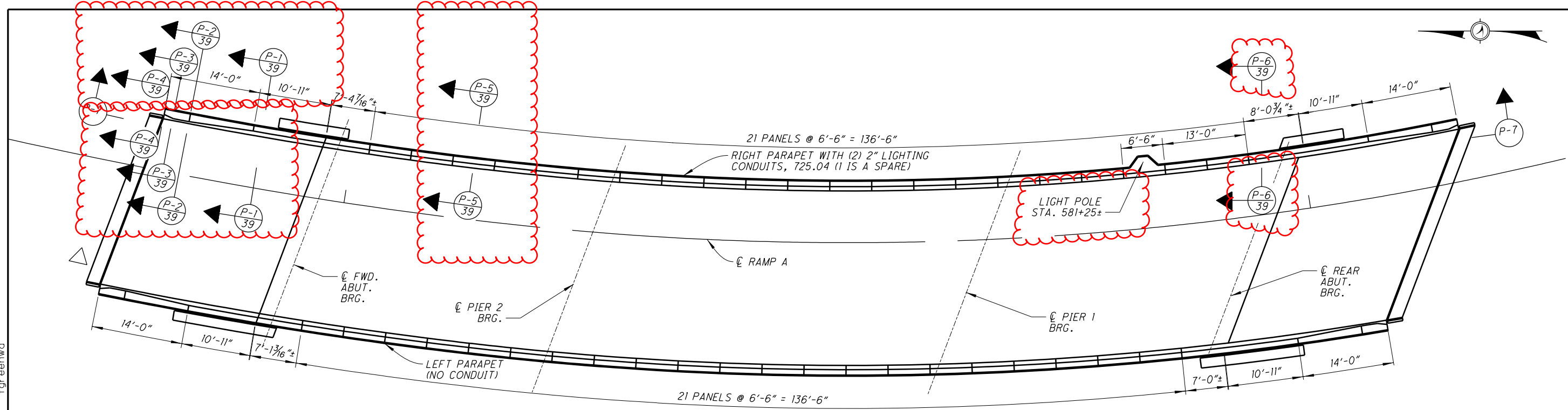
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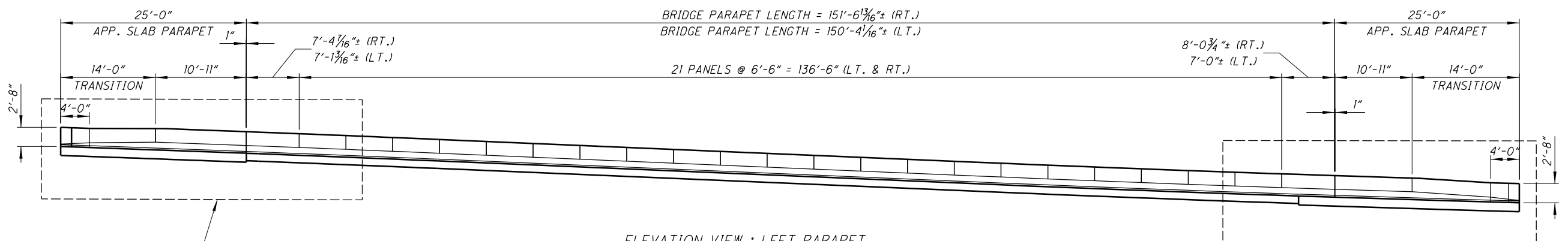
SECTIONS $\frac{F1 \& F2}{15,16}$

| | | | | | | | | | |
|-----------------------------------|--|------------------|--|----------------------------------|--|-------------------|--|--|--|
| DESIGNED YEL | | DRAWN YEL/TDF | | REVIEWED TAG | | DATE 12/1/2020 | | DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 | |
| CHECKED CPS | | REVISED | | STRUCTURE FILE NUMBER 6001920 | | | | | |
| PROPOSED FORWARD ABUTMENT DETAILS | | | | | BRIDGE NO. MUS-70-1144A RAMP 'A' OVER MCINTIRE AVE. | | | | |
| MUS-70-10.49 | | | | | PID No. 93006 | | | | |
| 17 / 45 | | | | | 1935 2231 | | | | |

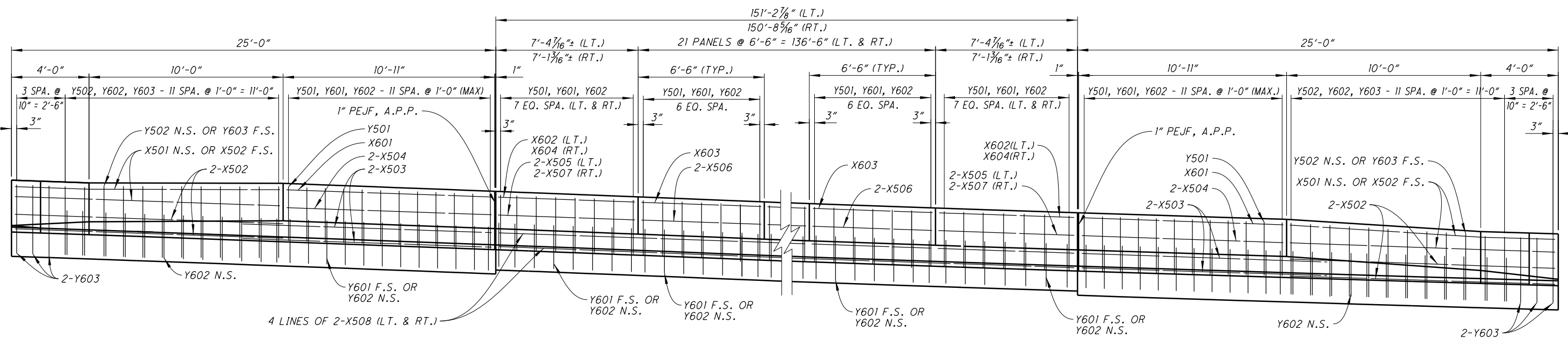
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PLAN VIEW



ELEVATION VIEW : LEFT PARAPET
RIGHT PARAPET SIMILAR

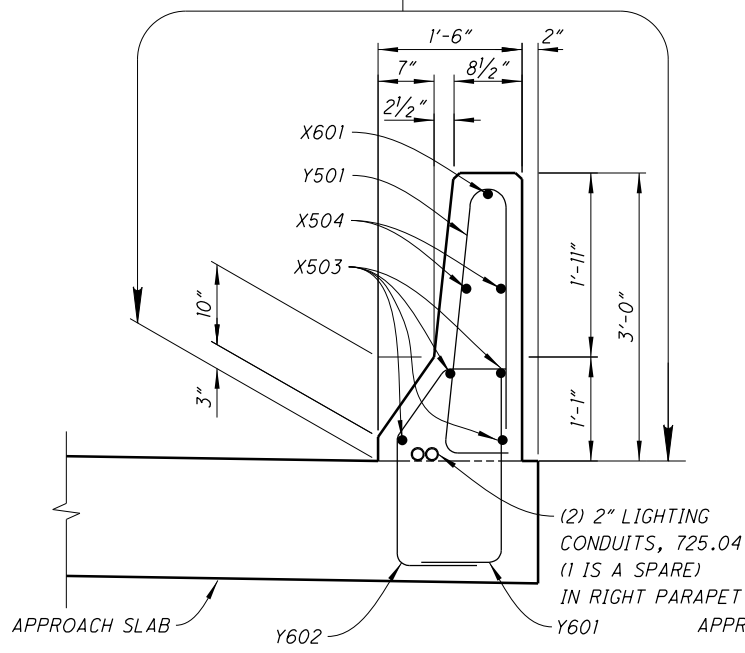


SECTION P-7

| | | | |
|-----------------------------|---|-----------------------|---------|
| DESIGNED | YEL | CHECKED | CPS |
| DRAWN | YEL/TDF | REVIS | . |
| REVIEWED | TAG | STRUCTURE FILE NUMBER | 6001920 |
| DATE | 12/1/2020 | | |
| DESIGN AGENCY | OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 | | |
| PARAPET DETAILS | | | |
| BRIDGE NO. MUS-70-1144A | | | |
| RAMP 'A' OVER MCINTIRE AVE. | | | |
| MUS-70-10.49 | | | |
| PID No. 93006 | | | |
| 38 / 45 | | | |
| 1956 | | | |
| 2231 | | | |

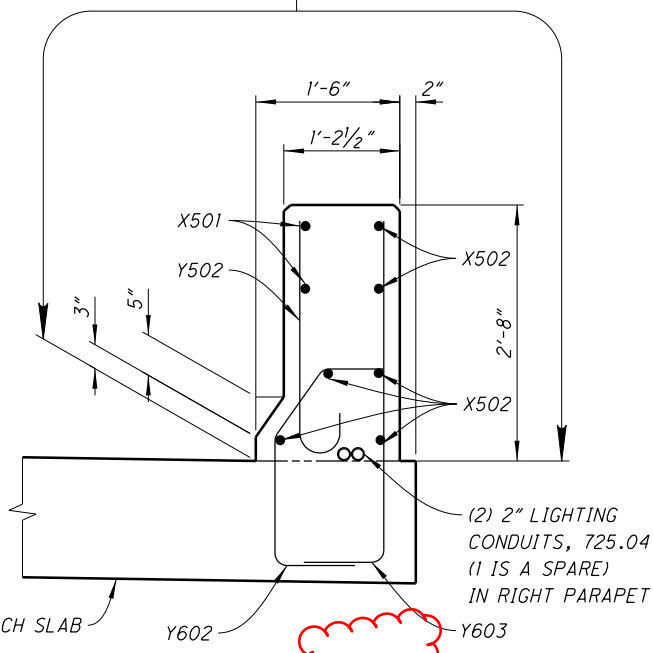
I:\ProjectData\MUS\93006\400-Engineering\Structures\070_1144P_SA002.dgn Sheet 3/24/2021 10:56:33 AM tgreenwa

ITEM 512 SEALING OF CONCRETE SURFACES (NON-EPOXY) LIMITS



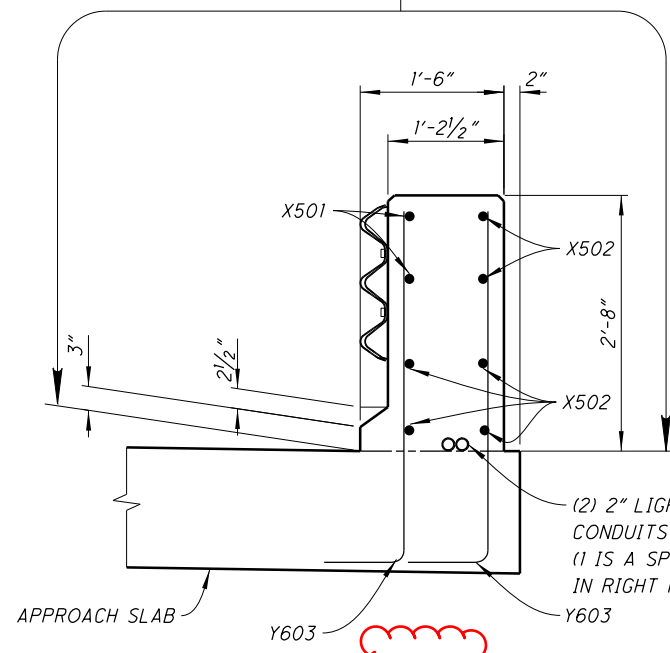
SECTION P-1
38

ITEM 512 SEALING OF CONCRETE SURFACES (NON-EPOXY) LIMITS



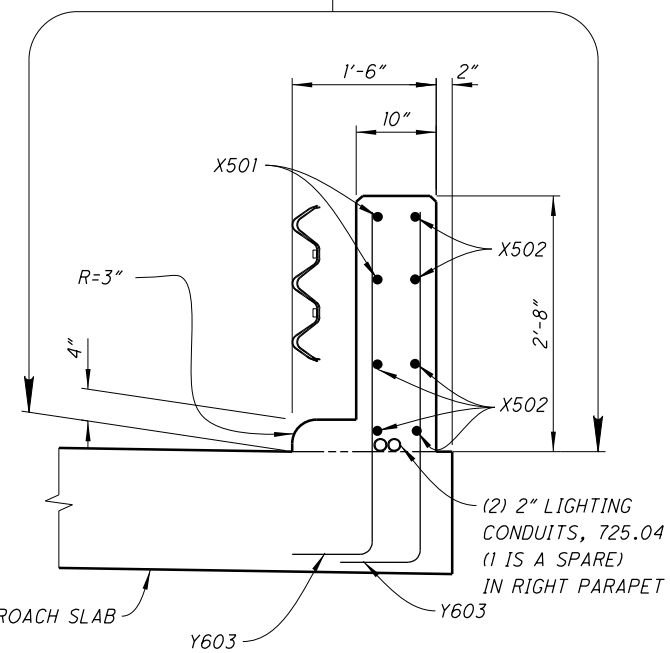
SECTION P-2
38

ITEM 512 SEALING OF CONCRETE SURFACES (NON-EPOXY) LIMITS



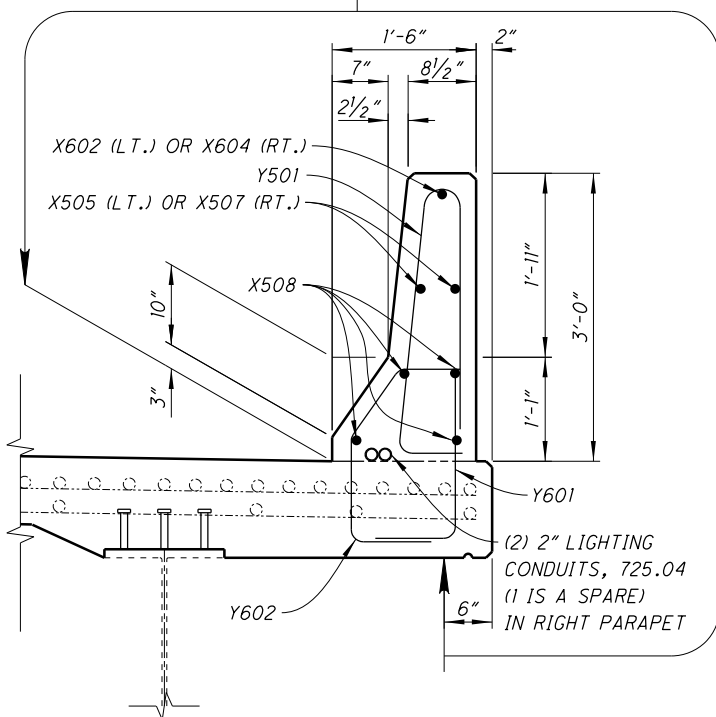
SECTION P-3
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ITEM 512 SEALING OF CONCRETE SURFACES (NON-EPOXY) LIMITS



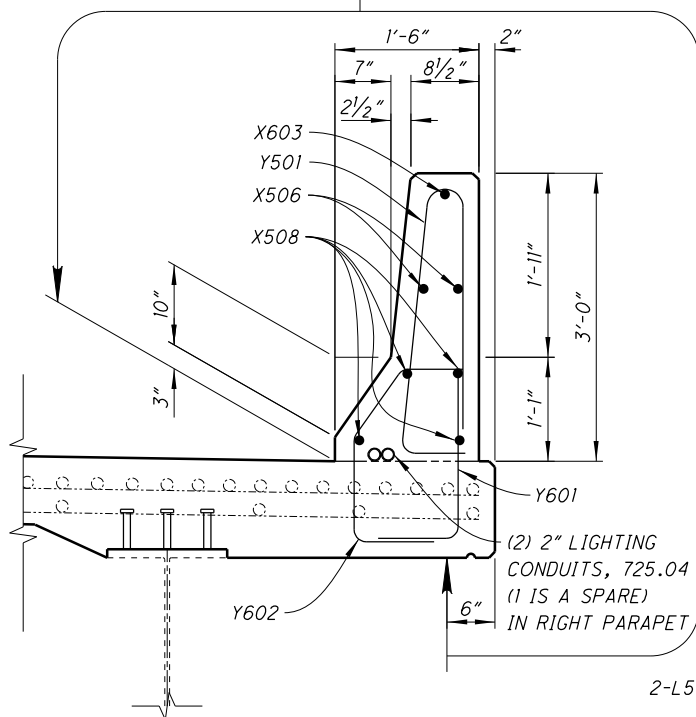
SECTION P-4
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ITEM 512 SEALING OF CONCRETE SURFACES (NON-EPOXY) LIMITS

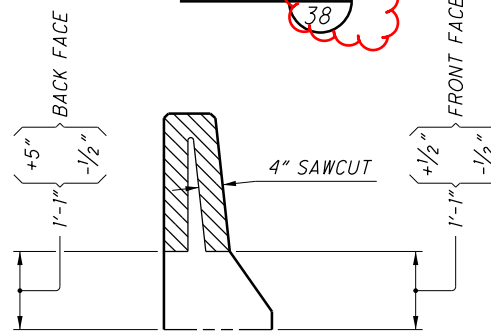


SECTION P-5
38

ITEM 512 SEALING OF CONCRETE SURFACES (NON-EPOXY) LIMITS



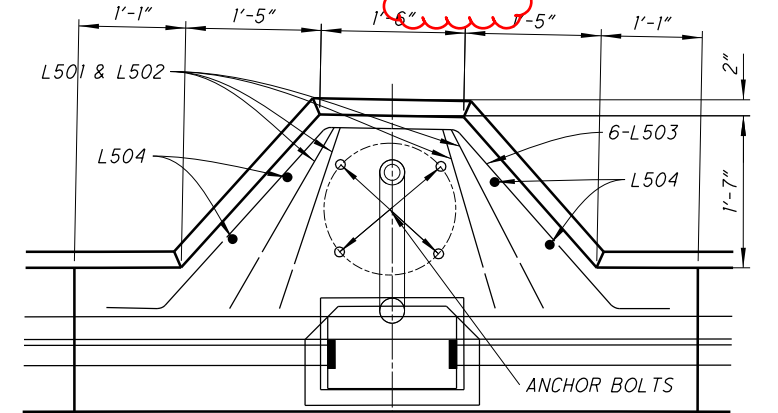
SECTION P-6
38



DETAIL A

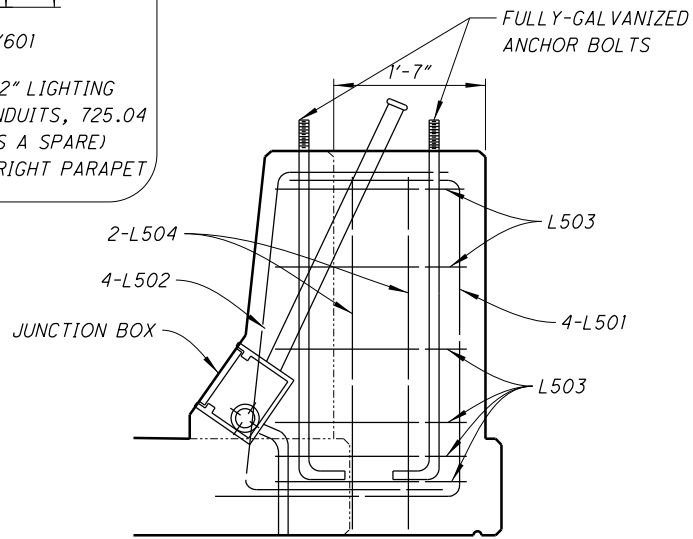
SECTION THROUGH SAWCUT
SAWCUT PERIMETER = 4'-7"

- NOTE:
- 1-ALL REINFORCING STEEL TO BE EPOXY COATED.
 - 2-FIELD BEND BARS WHERE NECESSARY
 - 3-FOR ADDITIONAL DETAILS SEE STD. DWG. BR-1-13

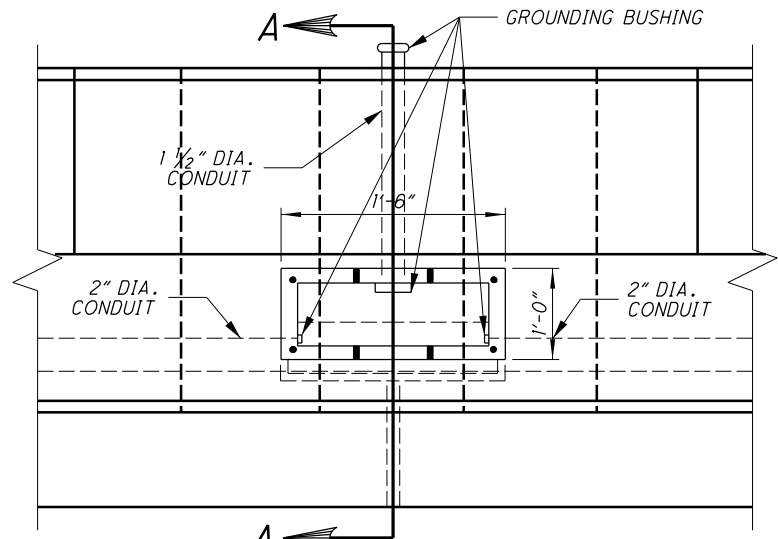


PILASTER JOINT PLAN PILASTER JOINT

PLAN



SECTION A-A

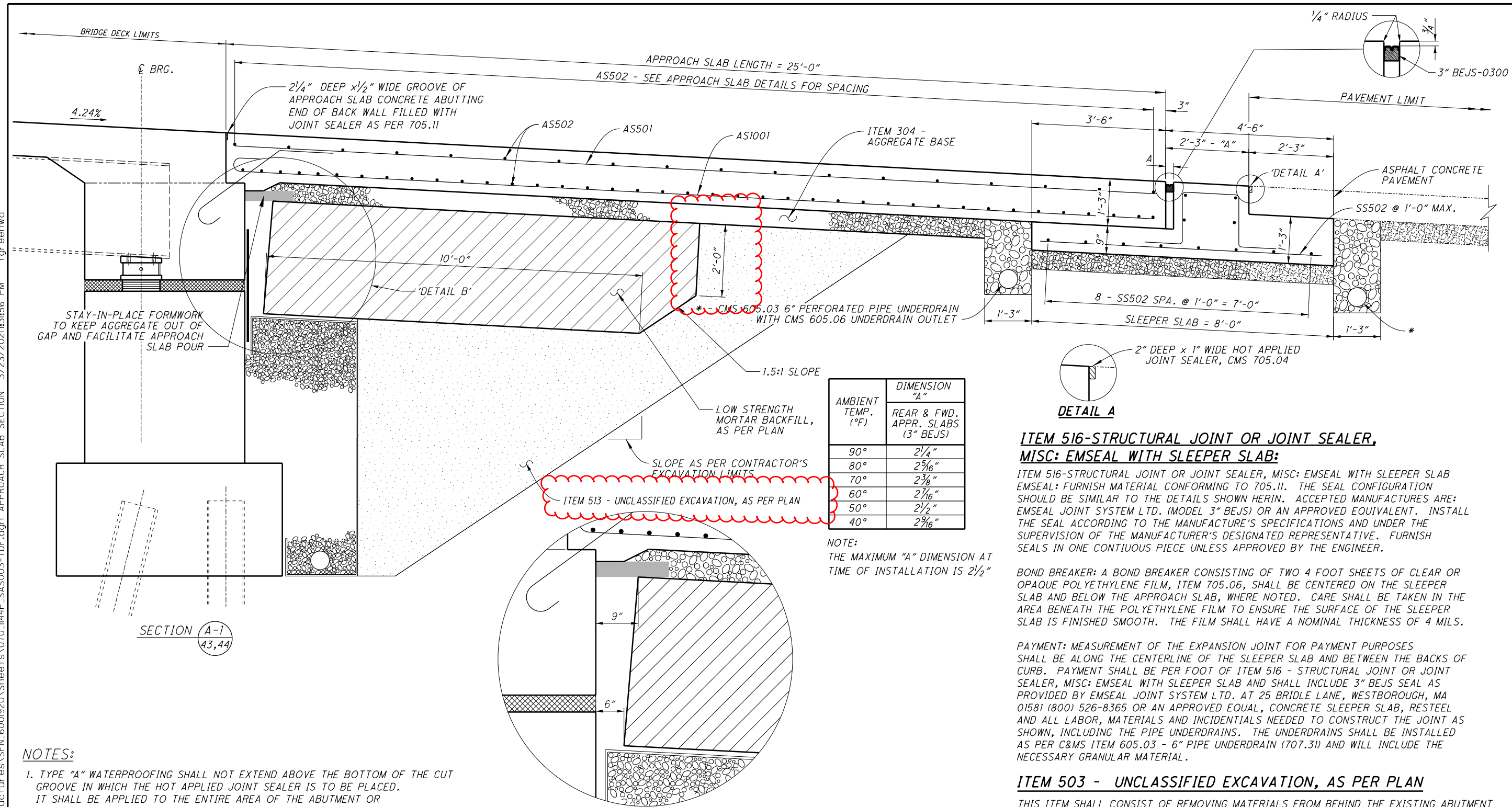


ELEVATION

LEGEND
* ITEM 512 - SEALING OF CONCRETE SURFACES (NON-EPOXY) = CLEAR COATING.

| PARAPET LAP LENGTH | |
|--------------------|----------|
| No. 5 | = 2'-5" |
| No. 6 | = 2'-11" |

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NOTES:

- TYPE "A" WATERPROOFING SHALL NOT EXTEND ABOVE THE BOTTOM OF THE CUT GROOVE IN WHICH THE HOT APPLIED JOINT SEALER IS TO BE PLACED. IT SHALL BE APPLIED TO THE ENTIRE AREA OF THE ABUTMENT OR SUPERSTRUCTURE WHICH COMES INTO CONTACT WITH THE APPROACH SLAB.
- FOR ADDITIONAL DETAILS SEE STANDARD DRAWING AS-I-15

DETAIL B

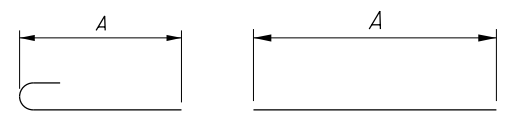
NOTES

- ONCE CONSTRUCTED, ANY FORMWORK OR SOIL MUST BE REMOVED FROM THE 6" GAP BETWEEN THE DIAPHRAGM AND LOW STRENGTH MORTAR MASS.

| MARK | REAR | FORWARD | TOTAL | LENGTH | WEIGHT | TYPE | DIMENSIONS | | |
|-----------|------|---------|-------|--------|--------|------|------------|---|-----|
| | | | | | | | A | B | INC |
| AS501 | 21 | 21 | 42 | 24'-6" | 1073 | STR. | 24'-6" | | |
| AS502 | 57 | 57 | 114 | 33'-9" | 4013 | STR. | 33'-9" | | |
| AS1001 | 52 | 52 | 104 | 26'-1" | 11673 | 16 | 24'-6" | | |
| SUB-TOTAL | | | | | 16759 | | | | |

RE-STEEL TO BE INCLUDED FOR PAYMENT IN ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN

BENDING DIAGRAMS



TYPE-16

TYPE-STR

ITEM 516-STRUCTURAL JOINT OR JOINT SEALER, MISC: EMSEAL WITH SLEEPER SLAB:

ITEM 516-STRUCTURAL JOINT OR JOINT SEALER, MISC: EMSEAL WITH SLEEPER SLAB EMSEAL: FURNISH MATERIAL CONFORMING TO 705.11. THE SEAL CONFIGURATION SHOULD BE SIMILAR TO THE DETAILS SHOWN HERIN. ACCEPTED MANUFACTURES ARE: EMSEAL JOINT SYSTEM LTD. (MODEL 3" BEJS) OR AN APPROVED EQUIVALENT. INSTALL THE SEAL ACCORDING TO THE MANUFACTURE'S SPECIFICATIONS AND UNDER THE SUPERVISION OF THE MANUFACTURER'S DESIGNATED REPRESENTATIVE. FURNISH SEALS IN ONE CONTINUOUS PIECE UNLESS APPROVED BY THE ENGINEER.

BOND BREAKER: A BOND BREAKER CONSISTING OF TWO 4 FOOT SHEETS OF CLEAR OR OPAQUE POLYETHYLENE FILM, ITEM 705.06, SHALL BE CENTERED ON THE SLEEPER SLAB AND BELOW THE APPROACH SLAB, WHERE NOTED. CARE SHALL BE TAKEN IN THE AREA BENEATH THE POLYETHYLENE FILM TO ENSURE THE SURFACE OF THE SLEEPER SLAB IS FINISHED SMOOTH. THE FILM SHALL HAVE A NOMINAL THICKNESS OF 4 MILS.

PAYMENT: MEASUREMENT OF THE EXPANSION JOINT FOR PAYMENT PURPOSES SHALL BE ALONG THE CENTERLINE OF THE SLEEPER SLAB AND BETWEEN THE BACKS OF CURB. PAYMENT SHALL BE PER FOOT OF ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC: EMSEAL WITH SLEEPER SLAB AND SHALL INCLUDE 3" BEJS SEAL AS PROVIDED BY EMSEAL JOINT SYSTEM LTD. AT 25 BRIDLE LANE, WESTBOROUGH, MA 01581 (800) 526-8365 OR AN APPROVED EQUAL, CONCRETE SLEEPER SLAB, RESTEEL AND ALL LABOR, MATERIALS AND INCIDENTALS NEEDED TO CONSTRUCT THE JOINT AS SHOWN, INCLUDING THE PIPE UNDERDRAINS. THE UNDERDRAINS SHALL BE INSTALLED AS PER C&MS ITEM 605.03 - 6" PIPE UNDERDRAIN (707.31) AND WILL INCLUDE THE NECESSARY GRANULAR MATERIAL.

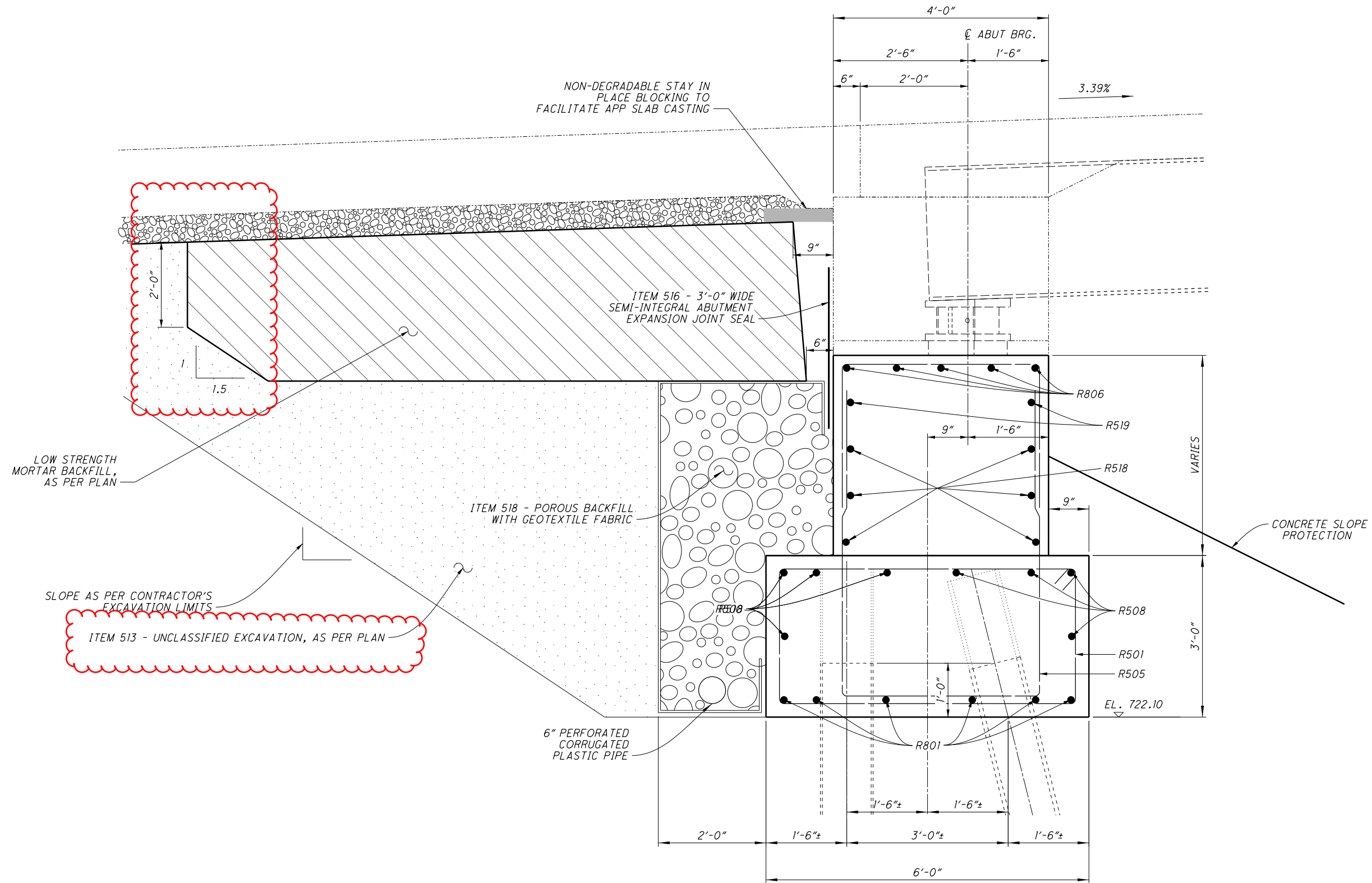
ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN

THIS ITEM SHALL CONSIST OF REMOVING MATERIALS FROM BEHIND THE EXISTING ABUTMENT IN ORDER TO PERFORM ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN AND ADDITIONAL WORK PROPOSED HEREIN. LIMITS OF THIS EXCAVATION SHALL BE LIMITED BETWEEN THE EXISTING WINGWALLS AND EXTEND TO THE END OF THE PROPOSED APPROACH SLABS AS DETAILED. EXCAVATION AROUND PIER COLUMNS SHALL BE TO THE DEPTH OF THE TOP PIER FOOTING AND PROVIDE ADEQUATE AREA TO PERFORM THE WORK SHOWN IN THESE PLANS.

THE BACKFILL MATERIAL FOR ALL EXCAVATION BEHIND THE ABUTMENTS AND UNDER THE APPROACH SLABS SHALL BE LOW STRENGTH MORTAR BACKFILL (LSM). LSM, TYPE 1 SHALL CONFORM TO CMS SECTION 613 AND BE PLACED WITHIN THE LIMITS OF THE APPROACH SLABS AND IT MAY ALSO BE USED TO CONSTRUCT THE SLOPES IN THIS SAME AREA AS LONG AS IT IS COVERED WITH ONE FOOT OF SOIL TO MATCH EXISTING GRADE. THE AREA FOR THE POROUS BACKFILL WITH GEOTEXTILE FABRIC SHALL BE FORMED PRIOR TO THE PLACEMENT OF THE LSM, TYPE 1 BACKFILL AND PLACEMENT OF THE GEOTEXTILE FABRIC SHALL BE PLACED AFTER THE LSM HAS CURED AND THE FORMS HAVE BEEN REMOVED.

PAYMENT TO PREFORM ALL THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK UNLESS SEPERATELY ITEMIZED IN THE PLANS.

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SECTION (R-1)
10,11

DESIGN AGENCY
OHIO DEPARTMENT OF
TRANSPORTATION, DISTRICT 5

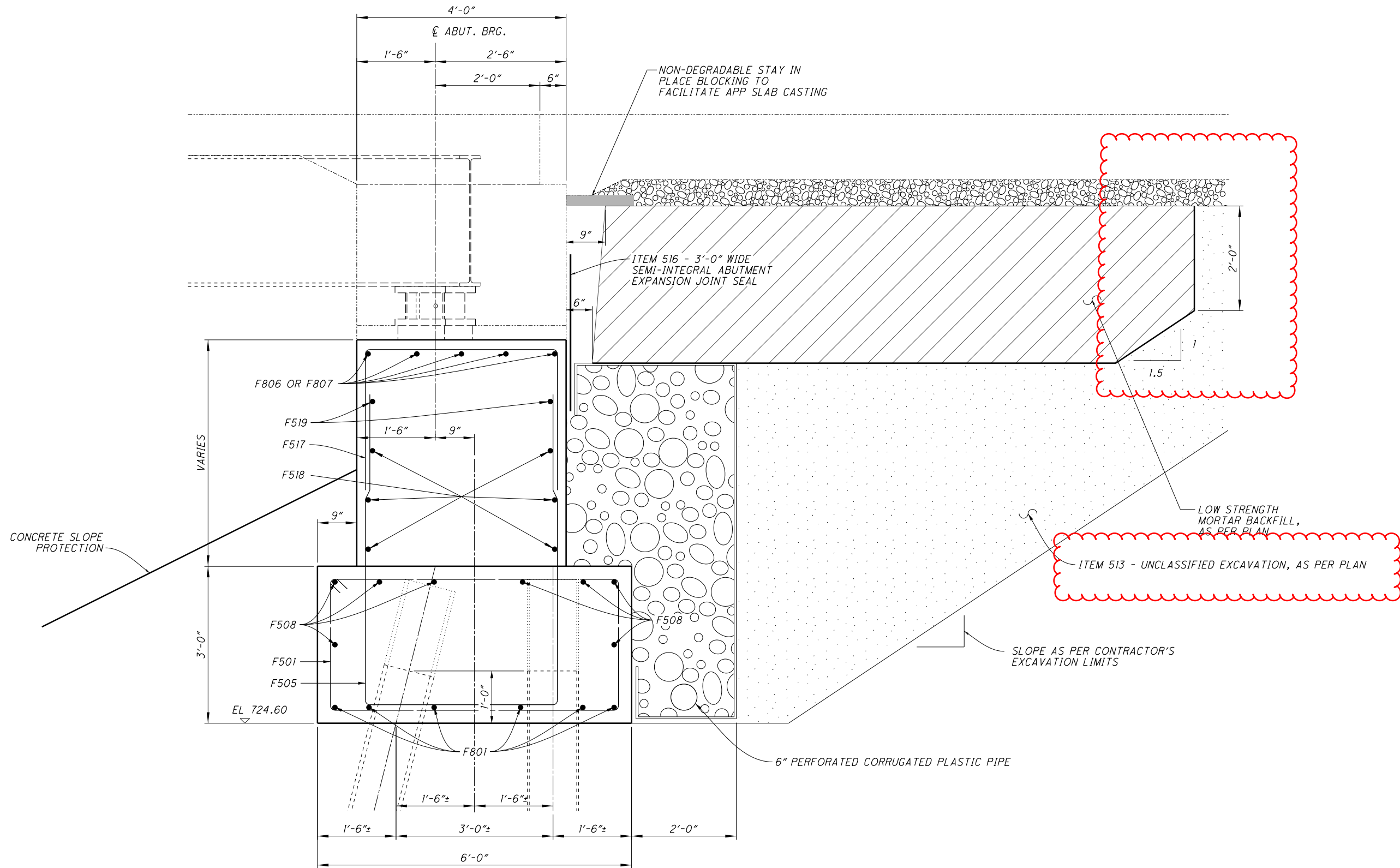
REVIEWED DATE
TAG 11/27/2020
STRUCTURE FILE NUMBER
6001890

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REVIS
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PROPOSED REAR ABUTMENT DETAILS
BRIDGE NO.: MUS-70-1142E
RAMP 'E' OVER MCINTIRE AVE.

MUS-70-10.49
PID No. 93006

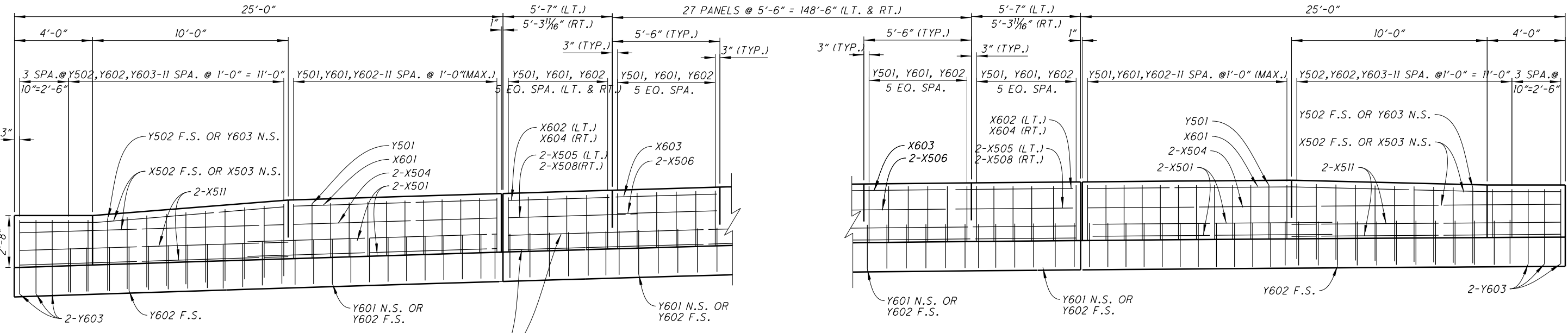
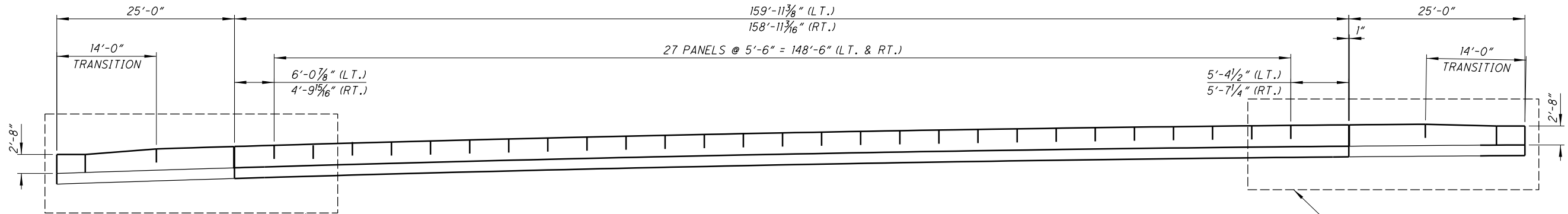
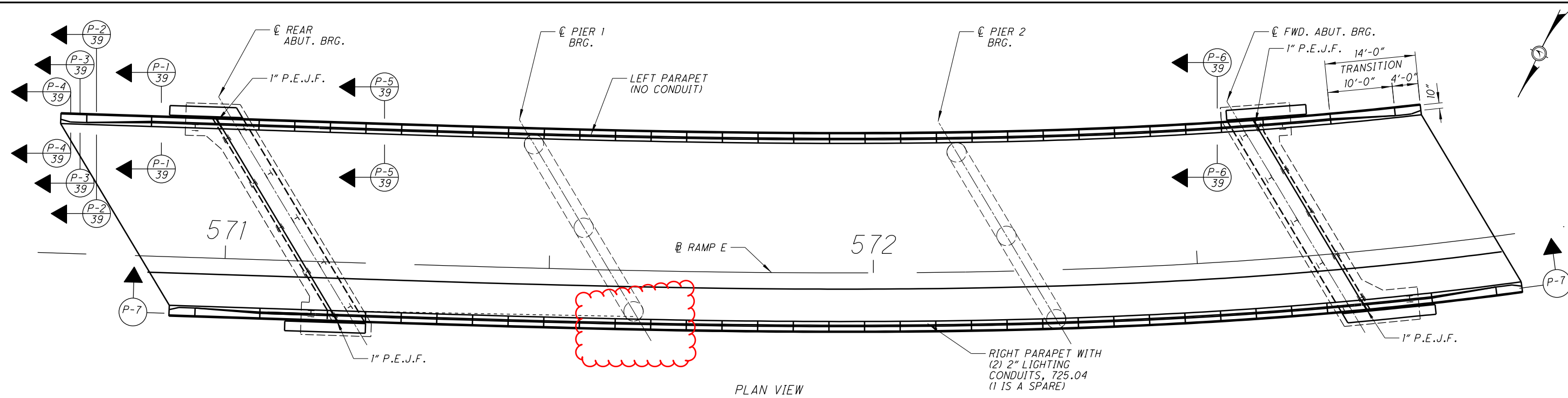
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SECTION (F-1)
15,16

| | | | | | | | | | |
|--|--|---------|--|-----------------------|---------------|------------|--|----------------------------|--|
| DESIGNED | | DRAWN | | REVIEWED | | DATE | | DESIGN AGENCY | |
| YEL | | YEL | | TAG | | 11/27/2020 | | OHIO DEPARTMENT OF | |
| TAG | | REVISED | | STRUCTURE FILE NUMBER | | 600890 | | TRANSPORTATION, DISTRICT 5 | |
| <p>PROPOSED FORWARD ABUTMENT DETAILS BRIDGE NO.: MUS-70-1142E RAMP 'E' OVER MCINTIRE AVE.</p> | | | | | | | | | |
| MUS-70-10.49 | | | | | PID No. 93006 | | | | |
| 17 / 44 | | | | | 1980 2231 | | | | |

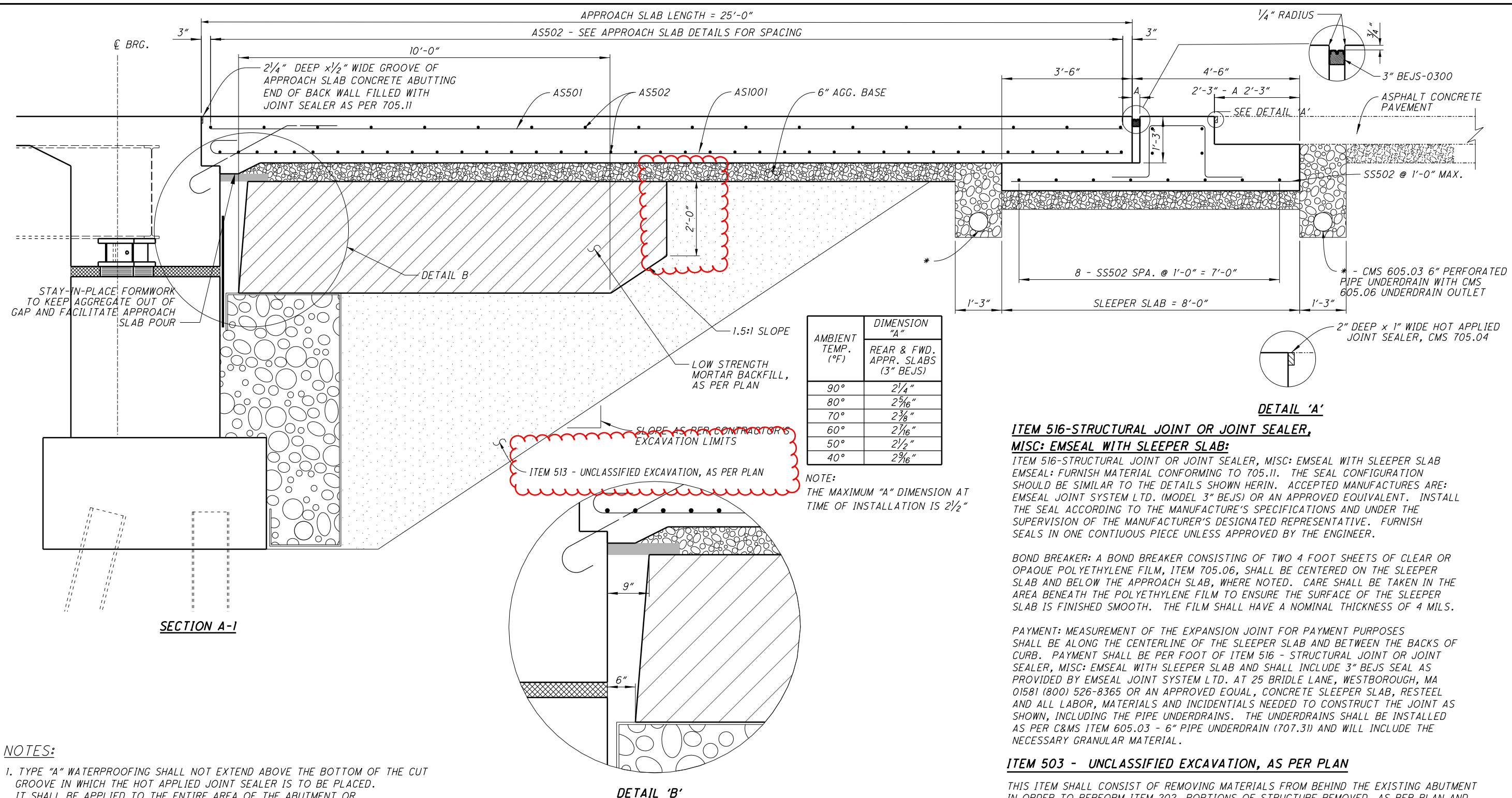
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4 LINES OF 2-X507 & 1 LINE OF 2-X509 (LT.)
4 LINES OF 2-X507 & 1 LINE OF 2-X510 (RT.)

| | | | |
|-----------------------------|---------|---------------|---|
| DESIGNED | YEL | CHECKED | TAG |
| DRAWN | YEL | REVISED | |
| REVIEWED | TAG | DATE | 11/27/2020 |
| STRUCTURE FILE NUMBER | 6001890 | DESIGN AGENCY | OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 |
| PARAPET DETAILS | | | |
| BRIDGE NO.: MUS-70-1142E | | | |
| RAMP 'E' OVER MCINTIRE AVE. | | | |
| MUS-70-10.49 | | | |
| PID No. 93006 | | | |
| 38 / 44 | | | |
| 2001 | | | |
| 2231 | | | |

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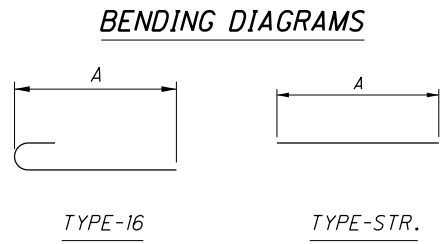


- NOTES:**
- TYPE "A" WATERPROOFING SHALL NOT EXTEND ABOVE THE BOTTOM OF THE CUT GROOVE IN WHICH THE HOT APPLIED JOINT SEALER IS TO BE PLACED. IT SHALL BE APPLIED TO THE ENTIRE AREA OF THE ABUTMENT OR SUPERSTRUCTURE WHICH COMES INTO CONTACT WITH THE APPROACH SLAB.
 - FOR ADDITIONAL DETAILS SEE STANDARD DRAWING AS-1-15

| MARK | | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | |
|------------------|------|---------|-------|--------|--------|------|------------|---|-----|
| | REAR | FORWARD | TOTAL | | | | A | B | INC |
| AS501 | 22 | 22 | 44 | 24'-6" | 1124 | STR. | 24'-6" | | |
| AS502 | 52 | 56 | 118 | 33'-9" | 4154 | STR. | 33'-9" | | |
| ASI001 | 53 | 53 | 106 | 26'-1" | 11897 | 16 | 24'-6" | | |
| SUB-TOTAL | | | | | 17175 | | | | |

RE-STEEL TO BE INCLUDED FOR PAYMENT IN ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN

- NOTES**
- ONCE CONSTRUCTED, ANY FORMWORK OR SOIL MUST BE REMOVED FROM THE 6" GAP BETWEEN THE DIAPHRAGM AND LOW STRENGTH MORTAR MASS.



ITEM 516-STRUCTURAL JOINT OR JOINT SEALER, MISC: EMSEAL WITH SLEEPER SLAB:
ITEM 516-STRUCTURAL JOINT OR JOINT SEALER, MISC: EMSEAL WITH SLEEPER SLAB EMSEAL: FURNISH MATERIAL CONFORMING TO 705.11. THE SEAL CONFIGURATION SHOULD BE SIMILAR TO THE DETAILS SHOWN HERIN. ACCEPTED MANUFACTURERS ARE: EMSEAL JOINT SYSTEM LTD. (MODEL 3" BEJS) OR AN APPROVED EQUIVALENT. INSTALL THE SEAL ACCORDING TO THE MANUFACTURE'S SPECIFICATIONS AND UNDER THE SUPERVISION OF THE MANUFACTURE'S DESIGNATED REPRESENTATIVE. FURNISH SEALS IN ONE CONTIUOUS PIECE UNLESS APPROVED BY THE ENGINEER.

BOND BREAKER: A BOND BREAKER CONSISTING OF TWO 4 FOOT SHEETS OF CLEAR OR OPAQUE POLYETHYLENE FILM, ITEM 705.06, SHALL BE CENTERED ON THE SLEEPER SLAB AND BELOW THE APPROACH SLAB, WHERE NOTED. CARE SHALL BE TAKEN IN THE AREA BENEATH THE POLYETHYLENE FILM TO ENSURE THE SURFACE OF THE SLEEPER SLAB IS FINISHED SMOOTH. THE FILM SHALL HAVE A NOMINAL THICKNESS OF 4 MILS.

PAYMENT: MEASUREMENT OF THE EXPANSION JOINT FOR PAYMENT PURPOSES SHALL BE ALONG THE CENTERLINE OF THE SLEEPER SLAB AND BETWEEN THE BACKS OF CURB. PAYMENT SHALL BE PER FOOT OF ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC: EMSEAL WITH SLEEPER SLAB AND SHALL INCLUDE 3" BEJS SEAL AS PROVIDED BY EMSEAL JOINT SYSTEM LTD. AT 25 BRIDLE LANE, WESTBOROUGH, MA 01581 (800) 526-8365 OR AN APPROVED EQUAL, CONCRETE SLEEPER SLAB, RESTEEL AND ALL LABOR, MATERIALS AND INCIDENTALS NEEDED TO CONSTRUCT THE JOINT AS SHOWN, INCLUDING THE PIPE UNDERDRAINS. THE UNDERDRAINS SHALL BE INSTALLED AS PER C&MS ITEM 605.03 - 6" PIPE UNDERDRAIN (707.31) AND WILL INCLUDE THE NECESSARY GRANULAR MATERIAL.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN
THIS ITEM SHALL CONSIST OF REMOVING MATERIALS FROM BEHIND THE EXISTING ABUTMENT IN ORDER TO PERFORM ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN AND ADDITIONAL WORK PROPOSED HEREIN. LIMITS OF THIS EXCAVATION SHALL BE LIMITED BETWEEN THE EXISTING WINGWALLS AND EXTEND TO THE END OF THE PROPOSED APPROACH SLABS AS DETAILED. EXCAVATION AROUND PIER COLUMNS SHALL BE TO THE DEPTH OF THE TOP PIER FOOTING AND PROVIDE ADEQUATE AREA TO PERFORM THE WORK SHOWN IN THESE PLANS.

THE BACKFILL MATERIAL FOR ALL EXCAVATION BEHIND THE ABUTMENTS AND UNDER THE APPROACH SLABS SHALL BE LOW STRENGTH MORTAR BACKFILL (LSM). LSM, TYPE I SHALL CONFROM TO CMS SECTION 613 AND BE PLACED WITHIN THE LIMITS OF THE APPROACH SLABS AND IT MAY ALSO BE USED TO CONSTRUCT THE SLOPES IN THIS SAME AREA AS LONG AS IT IS COVERED WITH ONE FOOT OF SOIL TO MATCH EXISTING GRADE. THE AREA FOR THE POROUS BACKFILL WITH GEOTEXTILE FABRIC SHALL BE FORMED PRIOR TO THE PLACEMENT OF THE LSM, TYPE I BACKFILL AND PLACEMENT OF THE GEOTEXTILE FABRIC SHALL BE PLACED AFTER THE LSM HAS CURED AND THE FORMS HAVE BEEN REMOVED.

PAYMENT TO PREFORM ALL THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK UNLESS SEPERATELY ITEMIZED IN THE PLANS.

**ITEM SPECIAL - 530 - STRUCTURE: AESTHETIC TREATMENT
(CONCRETE FORMLINER/STAIN)**

THE SURFACE FINISH SHALL BE ONE OF THE PATTERNS DESCRIBED BELOW IN THE ARCHITECTURAL SURFACE ELEVATION AND TABLE FROM AN APPROVED COMPANY MEETING THE DETAILS SHOWN ON THIS PAGE.

THE STAINING OF THE PATTERNED CONCRETE SURFACES SHALL BE DONE PRIOR TO APPLICATION OF ITEM 512 - SEALING OF CONCRETE SURFACES (NON-EPOXY). THE STAIN COLORED CONCRETE, USING LITHOCHROME TINTURA STAIN, SHALL BE LAYERED TO ACHIEVE A VARIEGATED AFFECT USING COLORS AS PROVIDED BY L.M. SCOFIELD COMPANY, DOUGLASVILLE, GEORGIA (800) 800-9900 OR APPROVED EQUAL. A VARYING COMBINATION OF COLORS SHALL BE UTILIZED IN ORDER TO BEST DUPLICATE THE APPEARANCE OF INDIGENOUS SANDSTONE. THE STAIN SHALL BE APPLIED BY AN AIR APPLIED, EVEN AND CONTROLLED, METHOD AS RECOMMENDED BY THE MANUFACTURER AND APPROVED BY THE ENGINEER. THE CONTRACTOR WILL NOT ALLOW OVERSPRAY OR RUNS TO RUIN THE APPEARANCE OF THE ADJACENT CONCRETE, WHICH SHALL REMAIN UNSTAINED. SEE AESTHETIC DETAIL SHEETS FOR THE LOCATION OF THE SURFACES TO BE STAINED.

THE CONTRACTOR OR AN APPROVED SUB-CONTRACTOR MUST SUPPLY DOCUMENTATION STATING THAT THEY HAVE AT LEAST 5 YEARS EXPERIENCE IN CONCRETE STAINING WITH PAST WORK REFERENCES CITED.

GENERAL PARAMETERS OF THE PATTERNED SURFACE TEXTURE AND COLOR ARE GIVEN HEREIN; HOWEVER, FINAL BASIS FOR APPROVAL WILL BE PROVIDED BY A EXISTING BRIDGE EXAMPLE. THE PHYSICAL LOCATION OF THIS EXAMPLE IS:

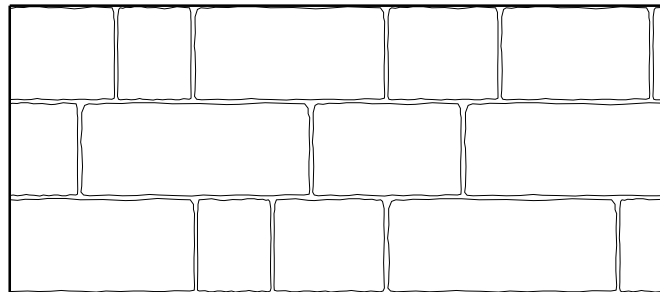
BRIDGE NO. COS-541-19.18
SFN: 1602404
COSHOCKTON, OH 43812
COORDINATES = 40.2751760, -81.8763820

ALL CONCRETE WORK MUST BE COMPLETED AND CURED FOR A MINIMUM OF 28 DAYS BEFORE THE STAIN IS APPLIED. SURFACE PREPARATION SHALL BE AS PER CMS 512.03 F

TWO FULL SCALE, DIFFERENTLY PATTERNED, STAINED AND SEALED, PRECONSTRUCTION TEST PANELS SHALL BE PROVIDED FOR APPROVAL BY THE DIRECTOR. IF THE TEST PANELS DO NOT MEET THE APPROVAL OF THE DIRECTOR, THE RESULTS MAY BE GROUNDS TO REJECT THE PROPOSED PANEL SURFACE CHOSEN. THE TEST PANELS WILL BE PROVIDED REPEATEDLY, AS NECESSARY, UNTIL APPROVAL IS GRANTED. FIVE FEET BY FIVE FEET TEST PANELS SHALL BE PROVIDED. THE MOCK-UPS SHALL HAVE THE SAME ARCHITECTURAL RELIEF, THICKNESS, PATTERN, AND COLOR/SEALANT INTENDED TO BE USED ON THE PROJECT. THE PANELS SHALL BE OF THE SAME CEMENT, AGGREGATE SOURCE, AND CONCRETE SEALANT THAT WILL BE USED TO CONSTRUCT THE PROJECT. AFTER APPROVAL THE CONCRETE TEST PANELS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.

MEASUREMENT: ITEM SPECIAL 530 STRUCTURES (AESTHETIC TREATMENT CONCRETE FORMLINER/STAIN) SHALL BE MEASURED IN SQ. FT. AND SHALL BE DEFINED BY THE AREAS THAT ARE DETAILED FOR THE APPROVED PATTERNED AREA.

ALL WORK INCLUDING SURFACE PREPARATION, STAINING AND OTHER MATERIALS REQUIRED TO COMPLETE THIS WORK SHALL BE INCLUDED WITH THE ITEMIZED PAYMENT FOR ITEM SPECIAL 530 STRUCTURES (AESTHETIC TREATMENT CONCRETE FORMLINER/STAIN).



ARCHITECTURAL SURFACE - ELEVATION

THE FOLLOWING SHALL BE USED:
THE PATTERN AND TEXTURE SHALL DUPLICATE THE APPEARANCE OF RECTANGULAR CUT AND HAND HEWN SANDSTONE THAT IS DRY LAID (WITH NO MORTAR JOINTS). THE BRIDGE RAILING SHALL HAVE 3 COURSES WITH A TOTAL HEIGHT EQUALING 3 FT. TYPICAL STONE/COURSING HEIGHTS AT THE ABUTMENTS SHALL VARY (SEE PLAN DETAILS PERTAINING TO THESE). THE PATTERN SHALL BE RANDOMIZED WITHIN THE WORK AREA.

**ITEM SPECIAL - 530 - STRUCTURE: AESTHETIC TREATMENT
(CONCRETE FORMLINER/STAIN) (CONTINUED)**

THE FOLLOWING FORMLINER SHALL BE USED:

| COMPANY NAME: | PANEL SURFACE TREATMENT: | SPECIFICATIONS: |
|---------------------------|---|--|
| SPEC FORMLINERS, INC. | RECTANGULAR CUT, HAND HEWN, & DRY LAID SANDSTONE (CUSTOM) | MAX RELIEF 1/2" AVERAGE RELIEF 1" STONE LENGTHS 1' TO 3' |
| CUSTOM ROCK INTERNATIONAL | RECTANGULAR CUT, HAND HEWN, & DRY LAID SANDSTONE (CUSTOM) | MAX RELIEF 1/2" AVERAGE RELIEF 1" STONE LENGTHS 1' TO 3' |
| APPROVED EQUAL | APPROVED EQUAL | APPROVED EQUAL |

AESTHETIC WORK ON BR. NO. MUS-60G-0033 AND ALL OTHER BRIDGES WITH AESTHETIC RAILING AS DETAILED IN THESE PLANS SHALL MATCH IDENTICALLY.

ITEM 519 - COMPOSITE FIBER WRAP SYSTEM

REFER TO PROPOSAL NOTE 519 FOR ITEM SPECIFICATIONS NOT GIVEN HEREIN. THE REQUIRED CONFINING STRESS DUE TO FRP JACKET (F) WILL BE 0.150 FOR THE HEIGHT SHOWN ON SHEET 22/69 THRU 27/69. THE FINAL URETHANE (OR SYSTEM SPECIFIED) COATING SYSTEM APPLICATION COLOR SHALL BE FEDERAL COLOR FS-595C-16440: LIGHT GULL GRAY.

ITEM 613 - LOW STRENGTH MORTAR BACKFILL, AS PER PLAN

LOW STRENGTH MORTAR (LSM) USED AS BACKFILL BEHIND SEMI-INTEGRAL DIAPHRAGMS SHALL HAVE LONG TERM COMPRESSIVE STRENGTH BETWEEN 150 AND 200 PSI. THE TOP ELEVATION SHALL BE AT LEAST 6" BELOW THE PROPOSED BOTTOM OF APPROACH SLAB AND ANY FORMWORK BETWEEN THE LSM BACKFILL AND SEMI-INTEGRAL DIAPHRAGM SHALL BE COMPLETELY REMOVED.

THE QUANTITY IN THE PLANS ASSUMES A 1.5:1 SLOPE OF BOTTOM OF THE LSM EXTENDING UP TO 2' BELOW THE PROPOSED TOP OF LSM ELEVATION (WHERE A VERTICAL END OF THE ITEM 613 IS ASSUMED). ADDITIONAL LSM BEYOND THESE LIMITS IS INCLUDED WITH ITEM 503 UNCLASSIFIED EXCAVATION, AS PER PLAN.

PERFORMING THE LIMITS REQUIRED FOR BACKFILL BEHIND THE SEMI-INTEGRAL DIAPHRAGMS SHALL BE INCLUDED FOR PAYMENT WITH THIS ITEM. PAYMENT FOR ITEM 613 LOW STRENGTH MORTAR BACKFILL, AS PER PLAN SHALL BE CONSIDERED FULL PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS REQUIRED TO PERFORM THE WORK.

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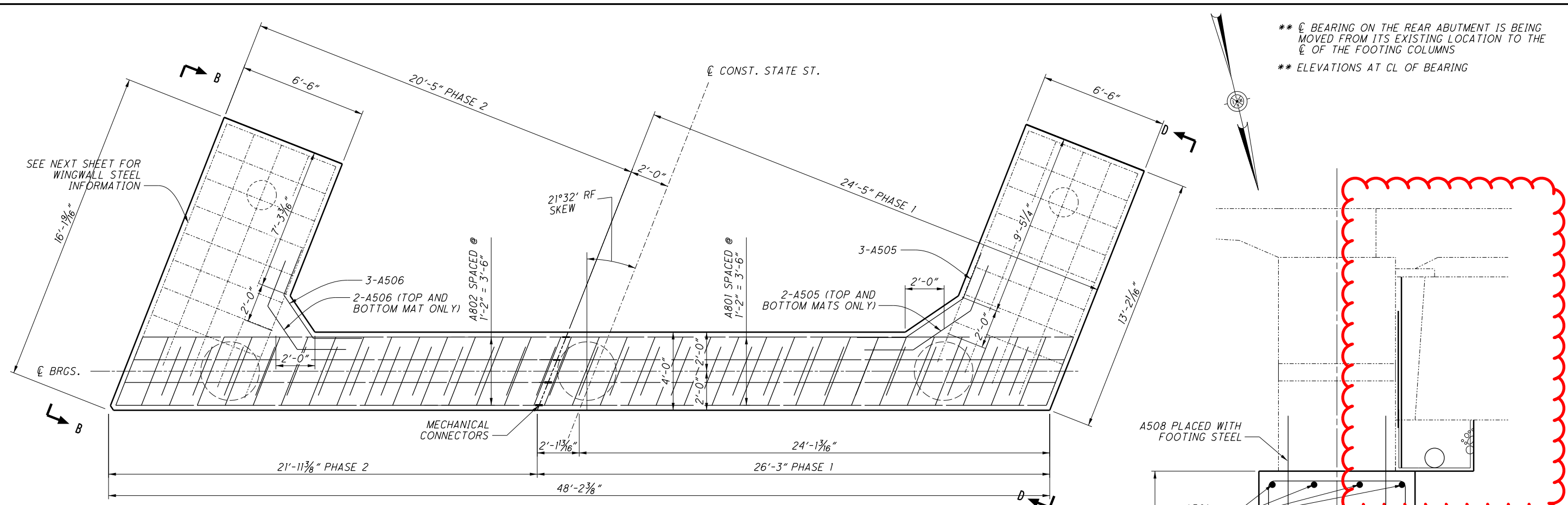
| | |
|---------------------|---|
| BRIDGE NOTES | BRIDGE NO.: MUS-60G-0033 STATE STREET OVER I.R. 70 |
| MUS-70-10-49 | PID No. 93006 |
| 4 / 69 | <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> 2131 2231 </div> |
| DESIGNED JKS | DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 |
| CHECKED CPS | REVIEWED TAG 11/20/2020 STRUCTURE FILE NUMBER 6002730 |
| DRAIN JKS | DATE 11/20/2020 |
| REVISOR JKS | REVISION 6002730 |

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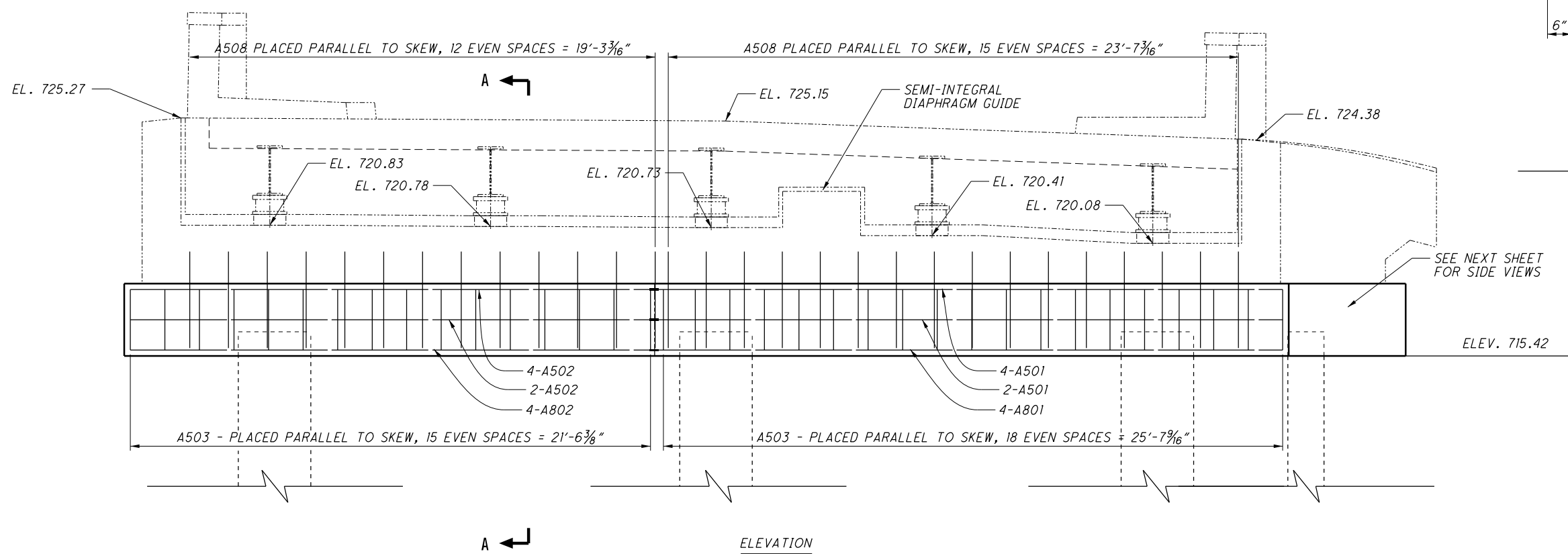
| SHEET NUM. | | | | PART. | ALT | ITEM | ITEM | GRAND | UNIT | DESCRIPTION | SEE |
|---|-------|------|------|---------------|-----|---------|----------|---------|------|---|--------------|
| SUPER. | ABUT. | PIER | GEN. | 02/IMS/B R | (X) | EXT | TOTAL | | | | SHEET NO. |
| STRUCTURE OVER 20 FOOT SPAN (SFN6002730) | | | | | | | | | | | |
| LS | | | | LS | | 202 | 11201 | LS | | PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUPERSTRUCTURE | 3 |
| | 138 | | | 138 | | 202 | 11301 | 138 | CY | PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUBSTRUCTURE | 3 |
| | | | 156 | 156 | | 202 | 22900 | 156 | SY | APPROACH SLAB REMOVED | |
| 516 | | | | 516 | | 202 | 75260 | 516 | FT | VANDAL PROTECTION FENCE REMOVED | |
| | | | LS | LS | | 503 | 11101 | LS | | COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN | 3 |
| | | | LS | LS | | 503 | 21301 | LS | | UNCLASSIFIED EXCAVATION, AS PER PLAN | 3 |
| 106570 | 9287 | | | 115857 | | 509 | 10000 | 115,857 | LB | EPOXY COATED REINFORCING STEEL | |
| | | 7336 | | 7336 | | 509 | 40000 | 7,336 | LB | REINFORCING STEEL, MISC.: GALVANIZED | 3 |
| | | 162 | | 162 | | 510 | 10000 | 162 | EACH | DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT | |
| | 2 | | | 2 | | 511 | 33500 | 2 | EACH | SEMI-INTEGRAL DIAPHRAGM GUIDE | |
| 346 | | | | 346 | | 511 | 34447 | 346 | CY | CLASS OC2 CONCRETE WITH OC/OA, BRIDGE DECK, AS PER PLAN | 5 |
| 78 | | | | 78 | | 511 | 34463 | 78 | CY | CLASS OC SCC CONCRETE WITH OC/OA, BRIDGE DECK (PARAPET), AS PER PLAN | 47-52 |
| | | 28 | | 28 | | 511 | 43210 | 28 | CY | CLASS OC1 CONCRETE, PIER | |
| | 58 | | | 58 | | 511 | 45722 | 58 | CY | CLASS OC SCC CONCRETE WITH OC/OA, ABUTMENT | |
| | 85 | | | 85 | | 511 | 46512 | 85 | CY | CLASS OC1 CONCRETE WITH OC/OA, FOOTING | |
| 990 | 112 | | | 1102 | | 512 | 10050 | 1,102 | SY | SEALING OF CONCRETE SURFACES (NON-EPOXY) | |
| | | 171 | | 171 | | 512 | 10100 | 171 | SY | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) | |
| | 72 | | | 72 | | 512 | 33000 | 72 | SY | TYPE 2 WATERPROOFING | |
| LS | | | | LS | | 513 | 10040 | LS | | STRUCTURAL STEEL MEMBERS, LEVEL 2 | |
| 4725 | | | | 4725 | | 513 | 20000 | 4,725 | EACH | WELDED STUD SHEAR CONNECTORS | |
| 11289 | | | | 11289 | | 514 | 00060 | 11,289 | SF | FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT | |
| 11289 | | | | 11289 | | 514 | 00066 | 11,289 | SF | FIELD PAINTING STRUCTURAL STEEL, FINISH COAT | 3 |
| 11 | | | | 11 | | 514 | 10000 | 11 | EACH | FINAL INSPECTION REPAIR | |
| 36 | | | | 36 | | 516 | 13601 | 36 | SF | 1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN | 3 |
| | 128 | | | 128 | | 516 | 13901 | 128 | SF | 2" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN | 3 |
| | 104 | | | 104 | | 516 | 14020 | 104 | FT | SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL | |
| | | | 91 | 91 | | 516 | 14600 | 91 | FT | STRUCTURAL JOINT OR JOINT SEALER, MISC.: EMSEAL WITH SLEEPER SLAB | 67-69 |
| | | | 87 | 87 | | 516 | 31011 | 87 | FT | 2" DEEP JOINT SEALER, AS PER PLAN | 3 |
| | | 15 | | 15 | | 516 | 44300 | 15 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) 1'-2"x1'-8"x4.1479" | 33-36 |
| | 10 | | | 10 | | 516 | 44400 | 10 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) 1'-4"x1'-4"x5.2973" | 33-36 |
| 6 | | | | 6 | | 518 | 12200 | 6 | EACH | SCUPPERS, INCLUDING SUPPORTS | |
| | 21 | | | 21 | | 518 | 21200 | 21 | CY | POROUS BACKFILL WITH GEOTEXTILE FABRIC | |
| | 116 | | | 116 | | 518 | 40000 | 116 | FT | 6" PERFORATED CORRUGATED PLASTIC PIPE | |
| | 48 | | | 48 | | 518 | 40010 | 48 | FT | 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS | |
| | | | 1538 | 1538 | | SPECIAL | 51900100 | 1,538 | SF | COMPOSITE FIBER WRAP SYSTEM | 4, 25-27 |
| | | | 50 | 50 | | 519 | 11100 | 50 | SF | PATCHING CONCRETE STRUCTURE | 4, 25-27 |
| | | | 223 | 223 | | 526 | 25011 | 223 | SY | REINFORCED CONCRETE APPROACH SLABS WITH OC/OA (T=15"), AS PER PLAN | 5, 67-69 |
| 3048 | 789 | | 120 | 3957 | | SPECIAL | 53000600 | 3,957 | SF | STRUCTURES: AESTHETIC TREATMENT (CONCRETE FORMLINER/STAIN) | 4 |
| | | | 524 | 524 | | 607 | 39992 | 524 | FT | TEMPORARY VANDAL FENCE, TYPE A | 3 |
| 459 | | | 459 | 459 | | SPECIAL | 60740000 | 459 | FT | VANDAL PROTECTION FENCE (DECORATIVE) | 56-64 |
| | 122 | | | 122 | | 613 | 41201 | 122 | CY | LOW STRENGTH MORTAR BACKFILL, AS PER PLAN | 4 |

| | |
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| BRIDGE SUMMARY BRIDGE NO.: MUS-60G-0033 STATE STREET OVER I.R. 70 | DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 |
| DESIGNED JKS CHECKED CPS | REVIEWED TAG STRUCTURE FILE NUMBER 6002730 |
| DRAIN JKS REVISED | DATE 11/20/2020 |
| MUS-70-10.49 PID No. 93006 | |
| 6 / 69 | |
| 2133 2231 | |

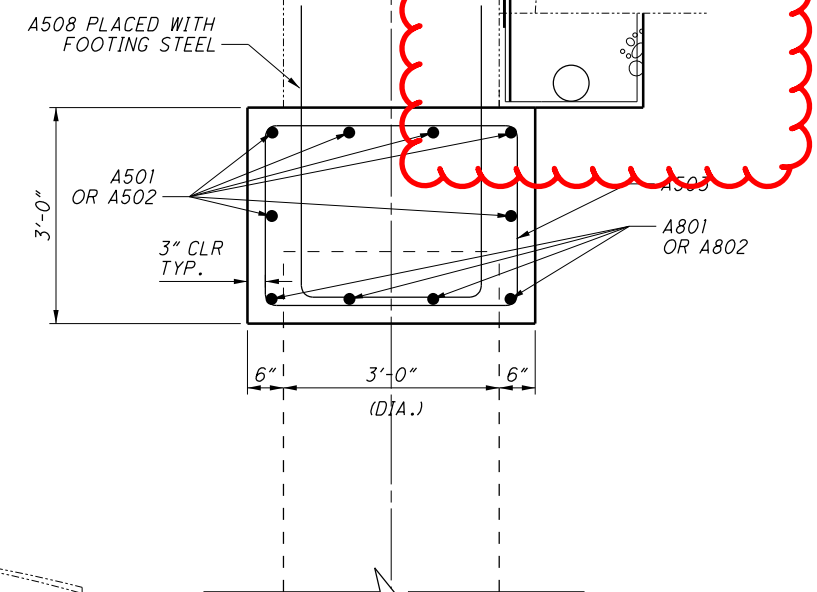
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PLAN
ONLY FOOTING SHOWN FOR CLARITY



ELEVATION



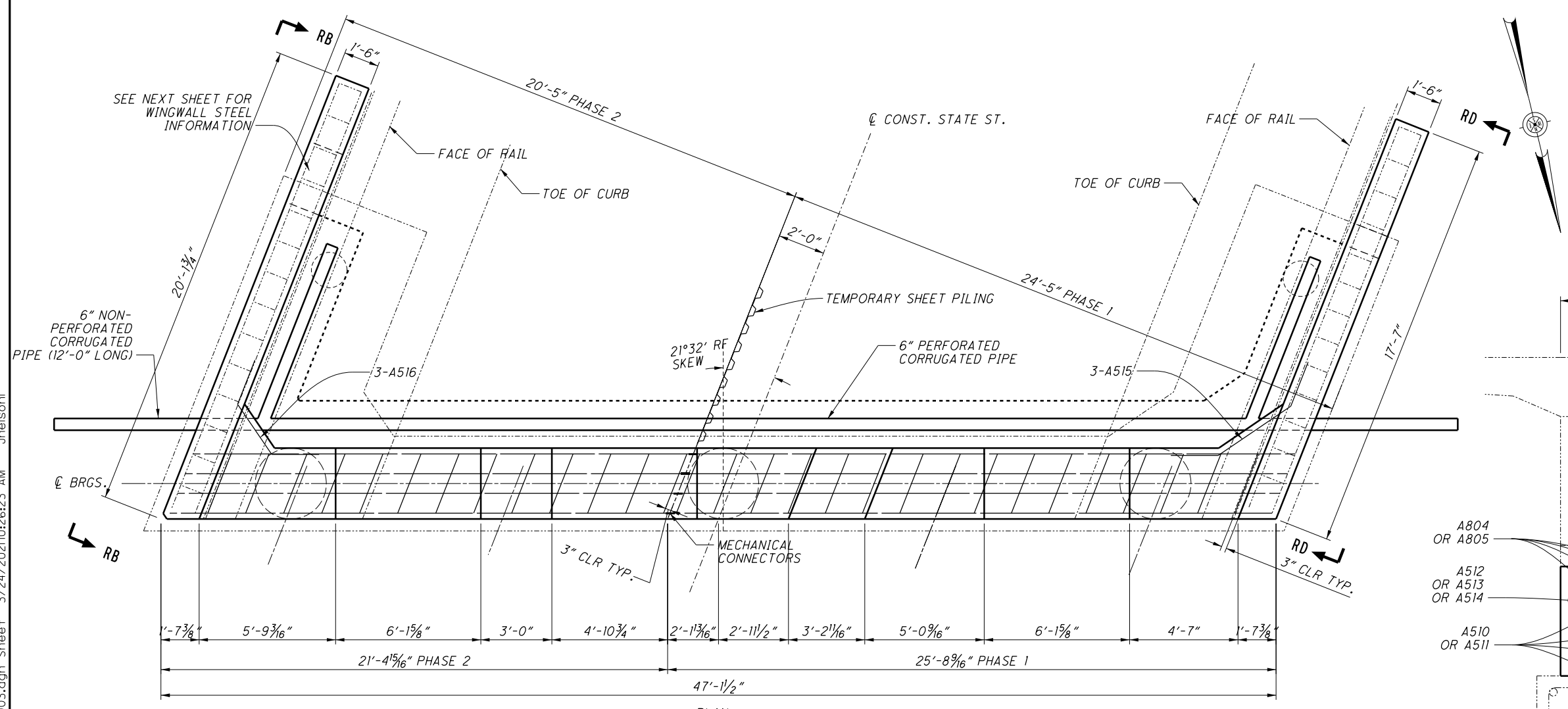
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** ELEVATIONS AT CL OF BEARING

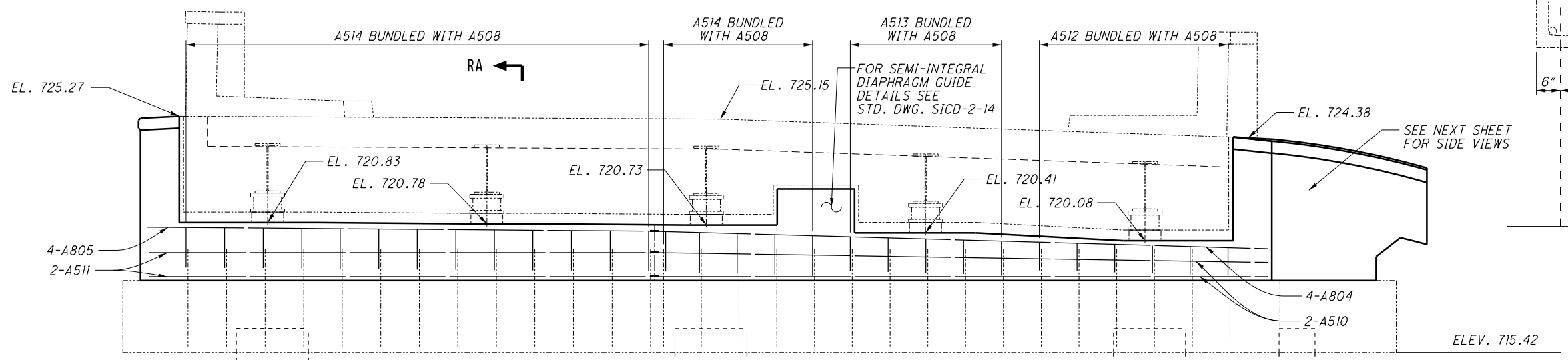
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| CHECKED | JKS | FILE | STRUCTURE FILE NUMBER | 6002730 |
| REVIEWED | JKS | REVISED | TAG | 11/20/2020 |
| PROJECT NO.: | | MUS-70-10.49 | | |
| BRIDGE NO.: | | MUS-606-0033 | | |
| STATE STREET OVER I.R. 70 | | PID No. | | |
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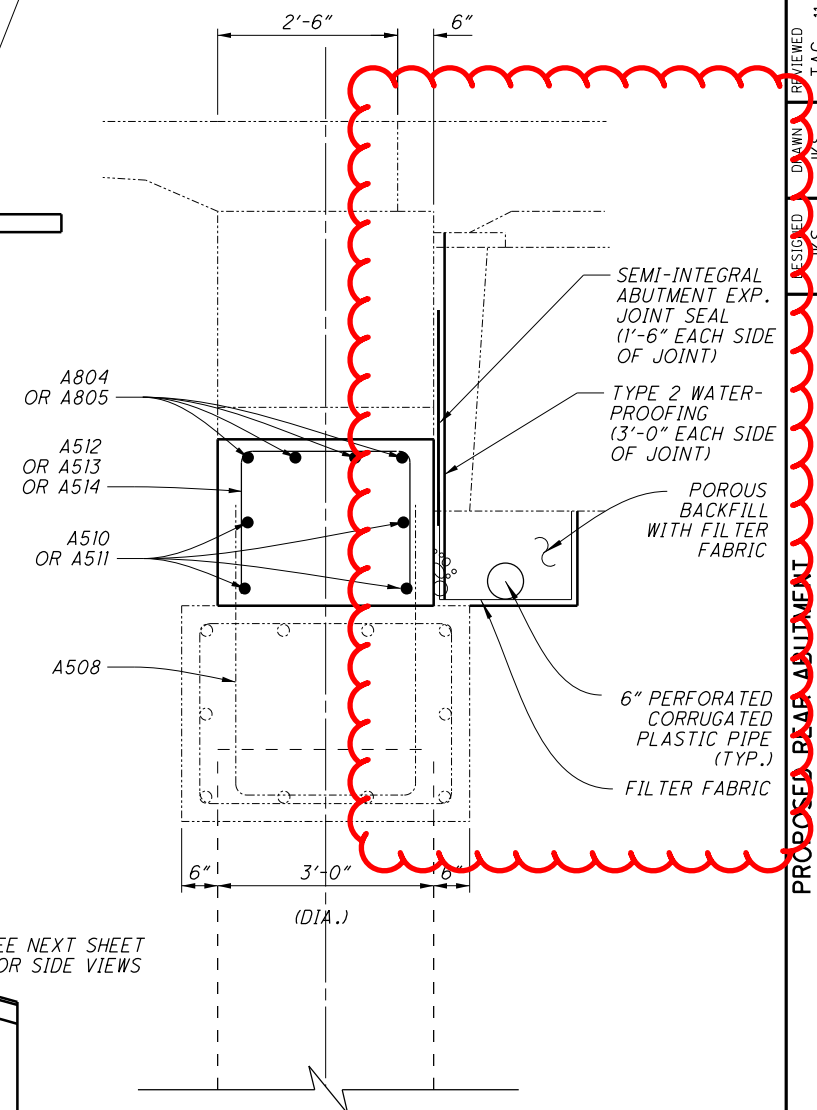
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PLAN
 FOOTING STEEL NOT SHOWN



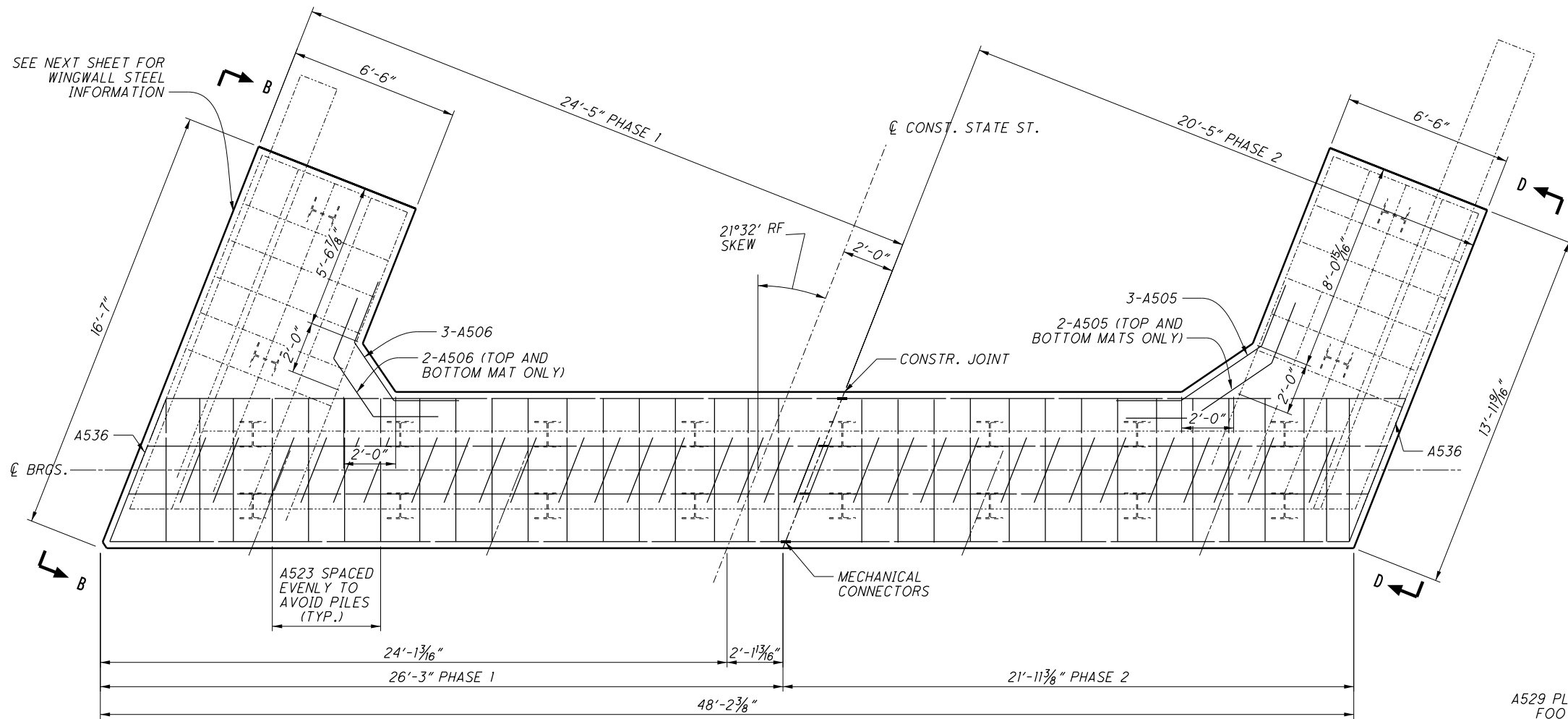
ELEVATION



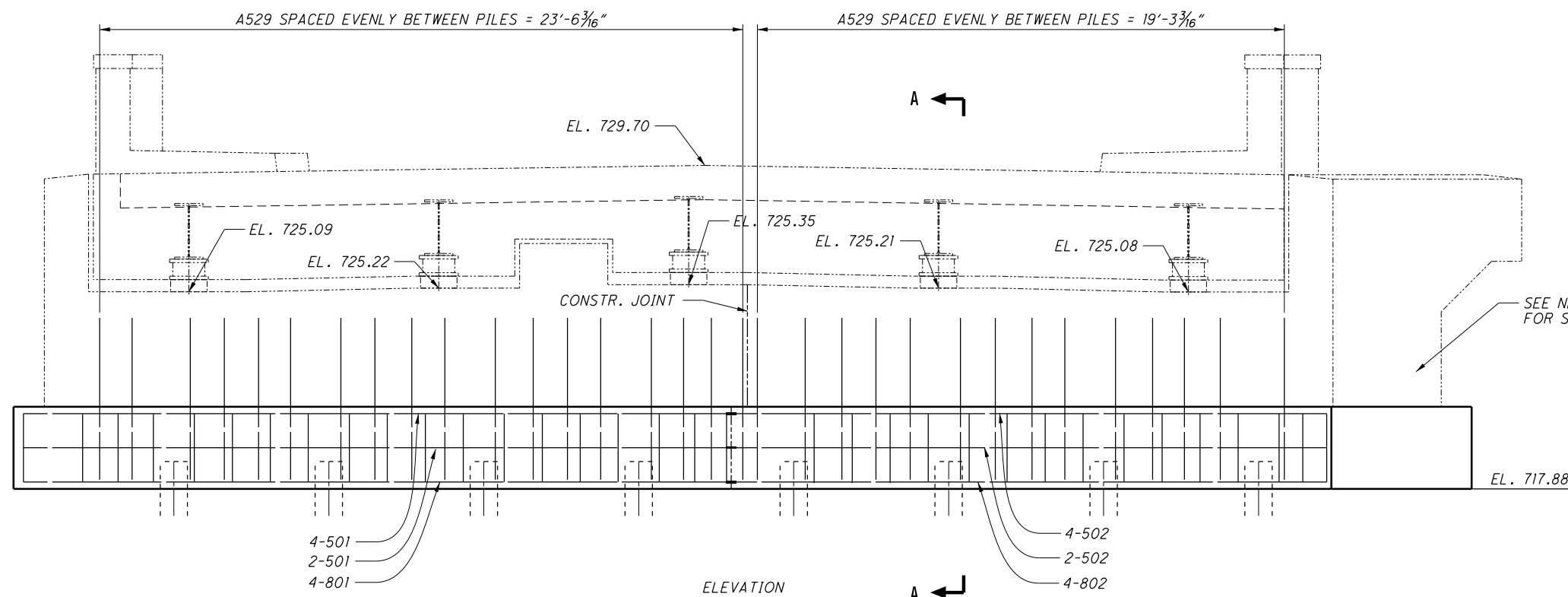
SECTION RA-RA
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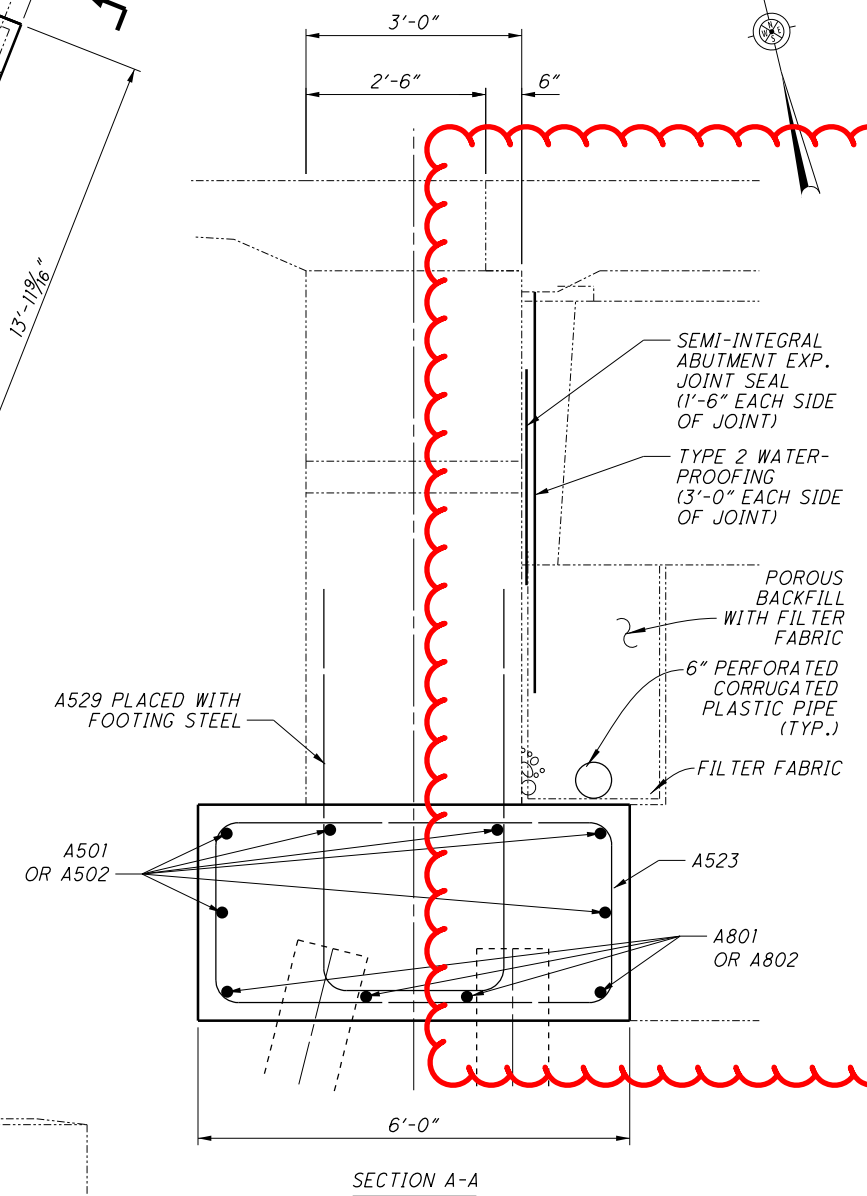


PLAN
ONLY FOOTING STEEL SHOWN FOR CLARITY



ELEVATION

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** ELEVATIONS AT CL OF BEARING

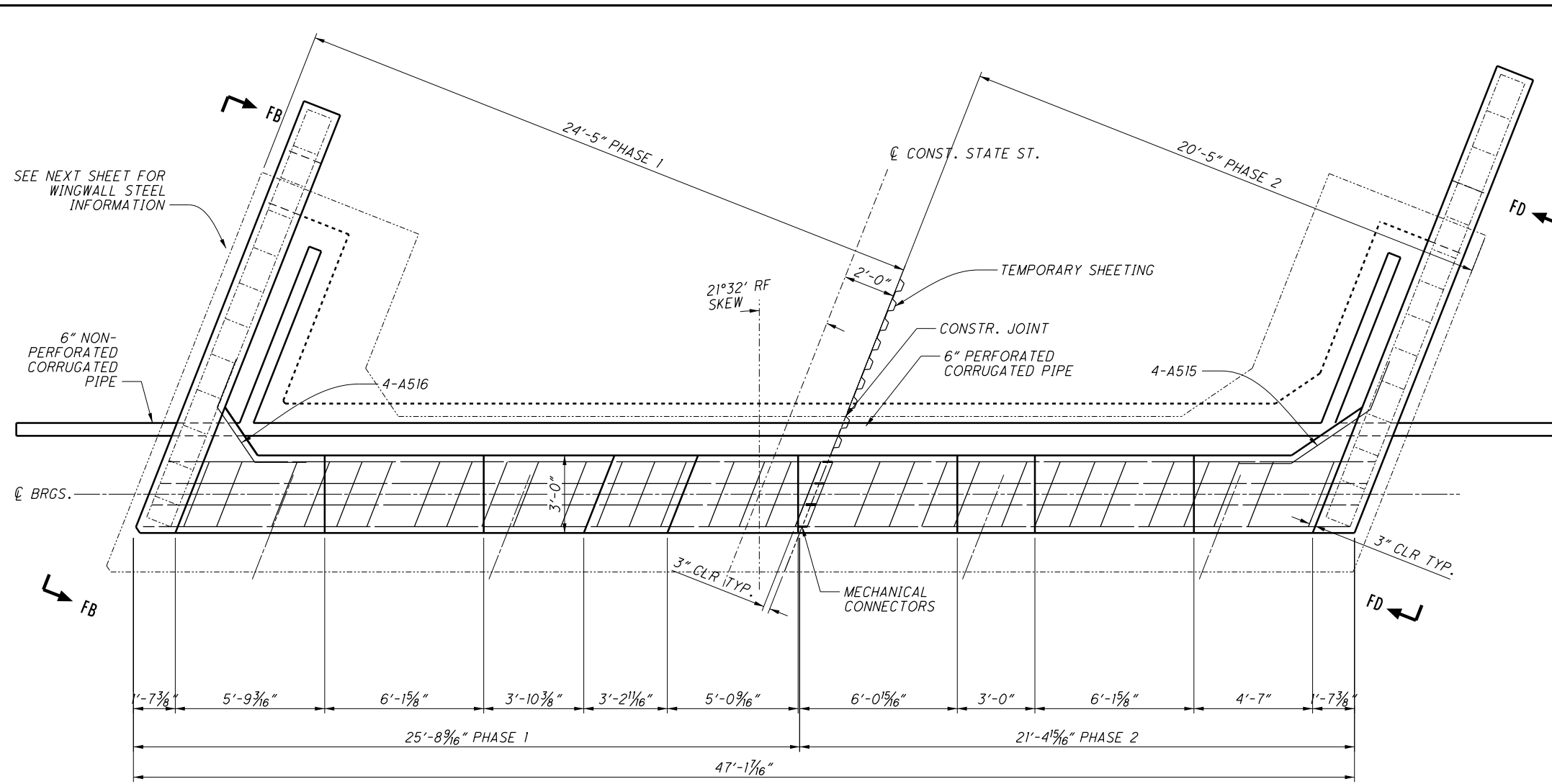


SECTION A-A

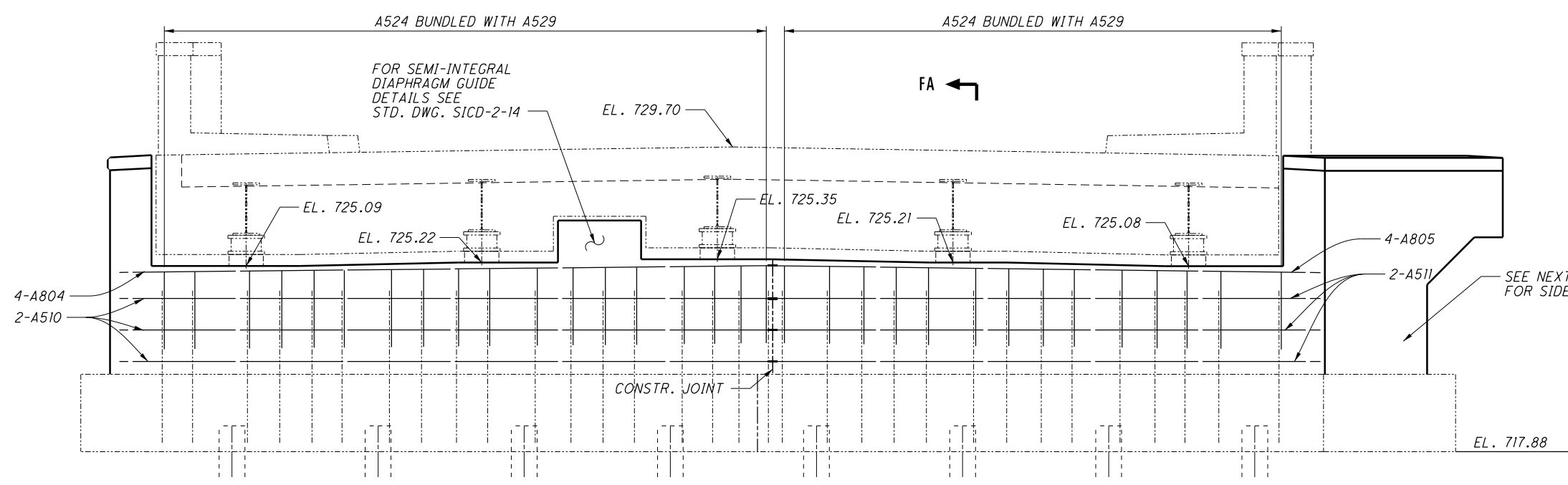
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| DATE | 11/20/2020 |
| TAG | 6002730 |
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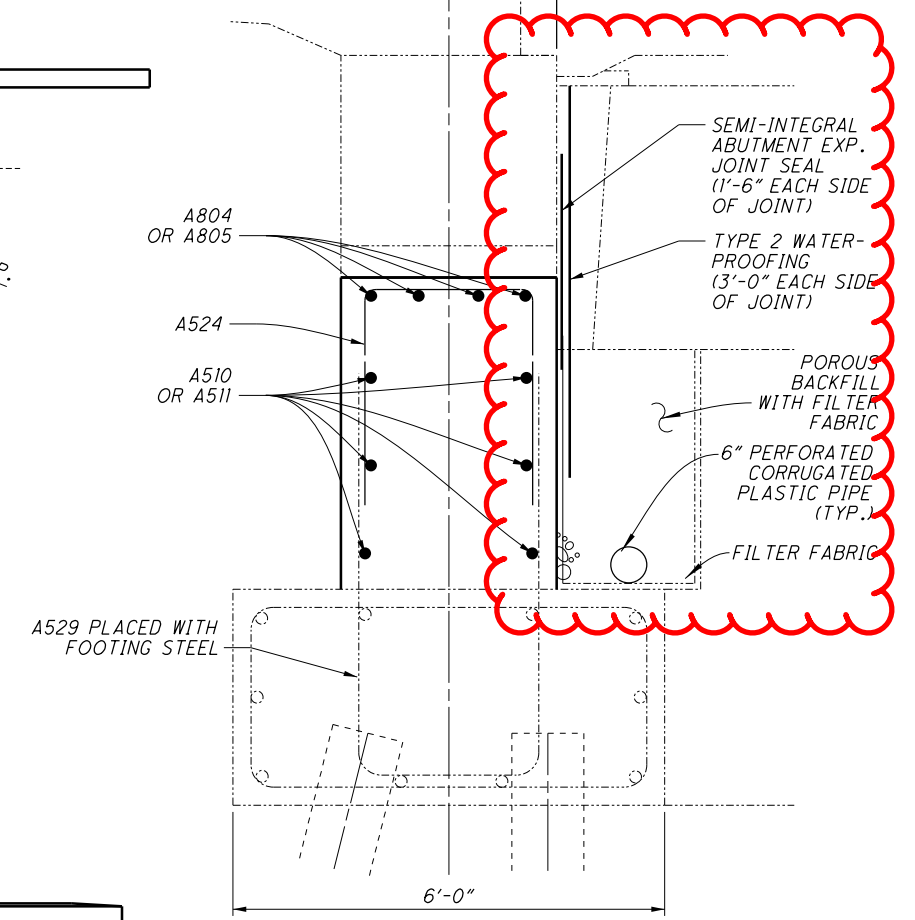
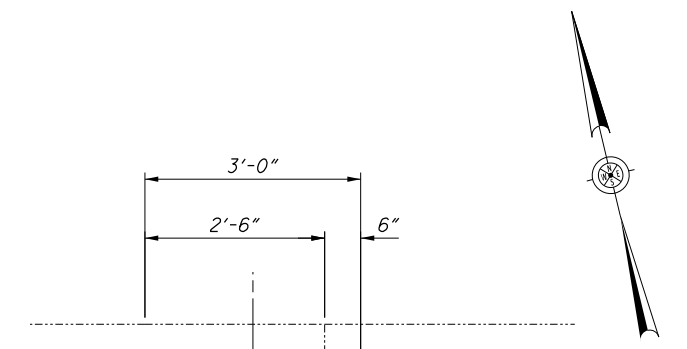


PLAN
FOOTING STEEL NOT SHOWN



ELEVATION
FA ←

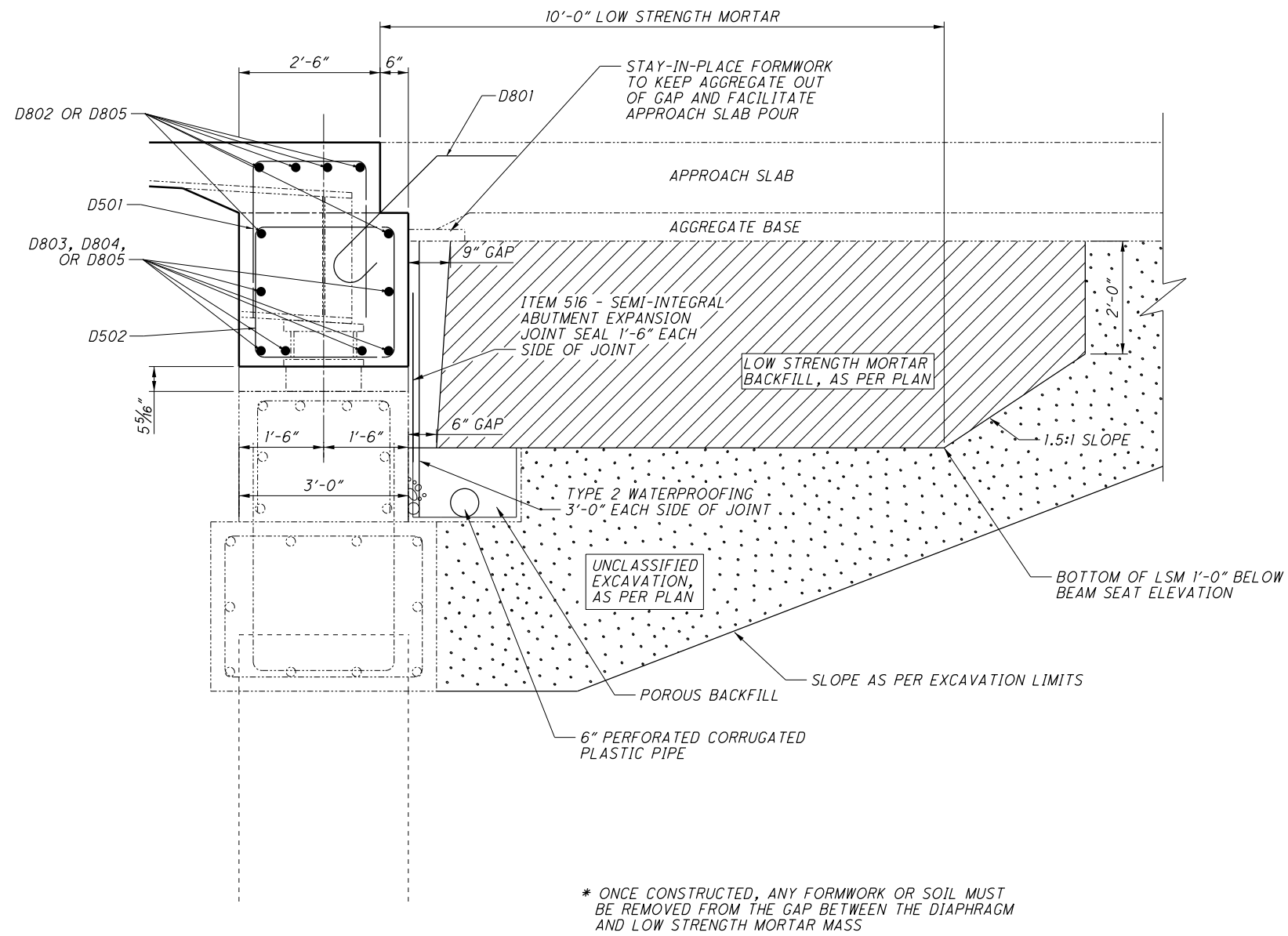
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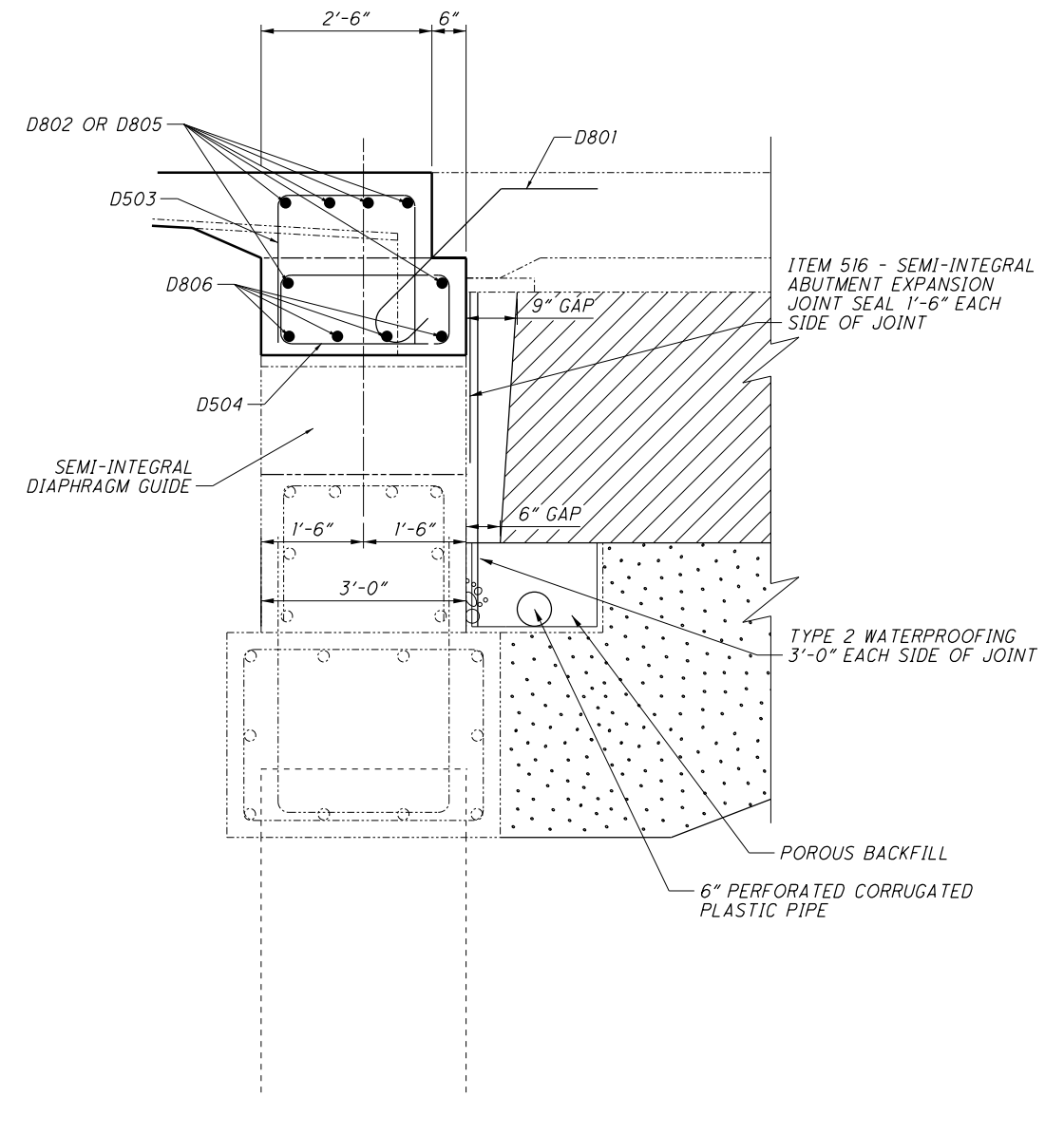
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| STATE STREET OVER I.R. | 70 | | | |
| PROPOSED FORWARD ABUTMENT | | | | |
| MUS-70-10.49 | | | | |
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SECTION A-A



SECTION B-B

DESIGN AGENCY
OHIO DEPARTMENT OF
TRANSPORTATION, DISTRICT 5

REVIEWED DATE
TAG 11/20/2020
STRUCTURE FILE NUMBER
6002730

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CHECKED CPS

DESIGNED JKS
REVIS

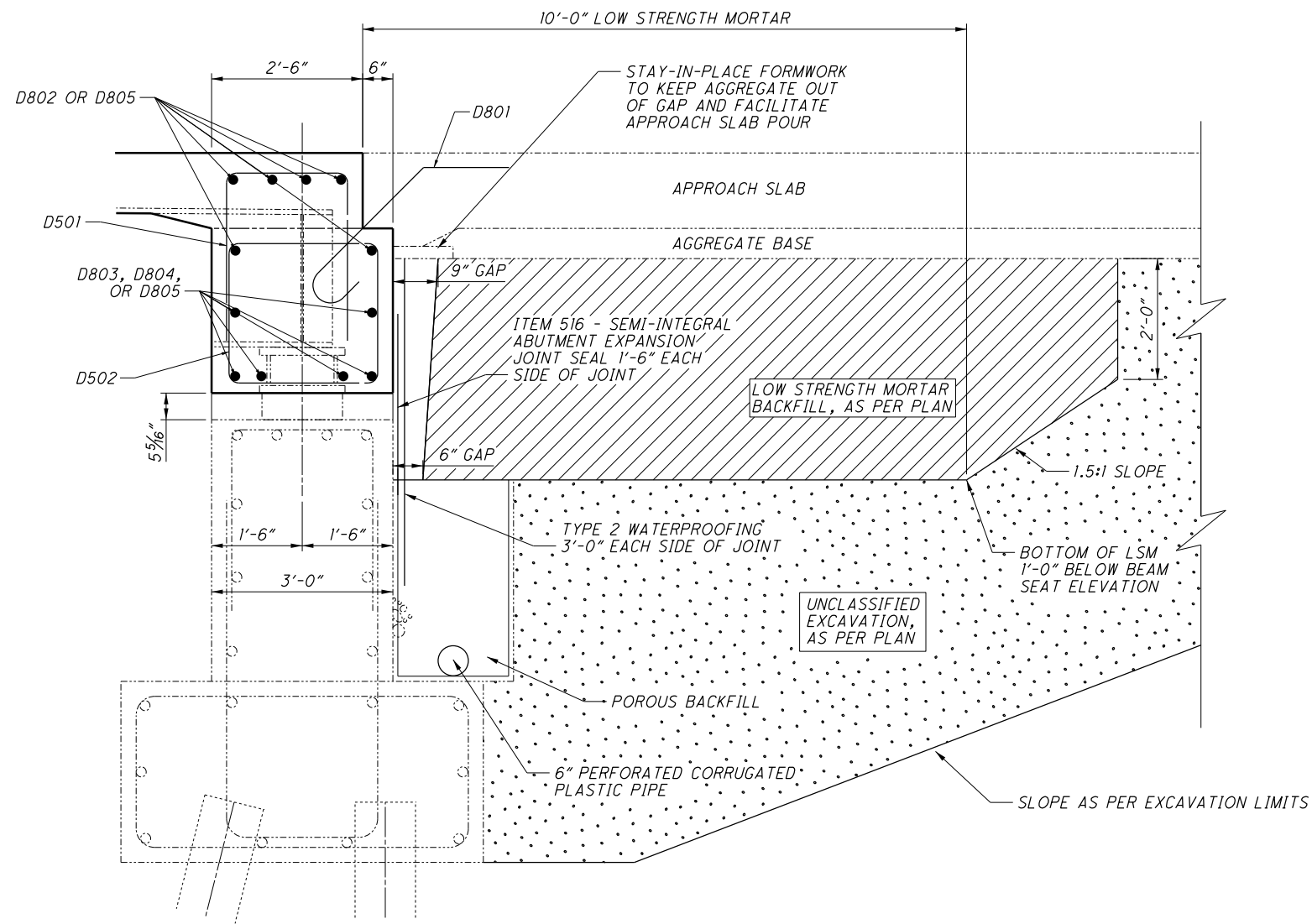
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BRIDGE NO.: MUS-606-0033
STATE STREET OVER I.R. 70

MUS-70-10.49
PID No. 93006

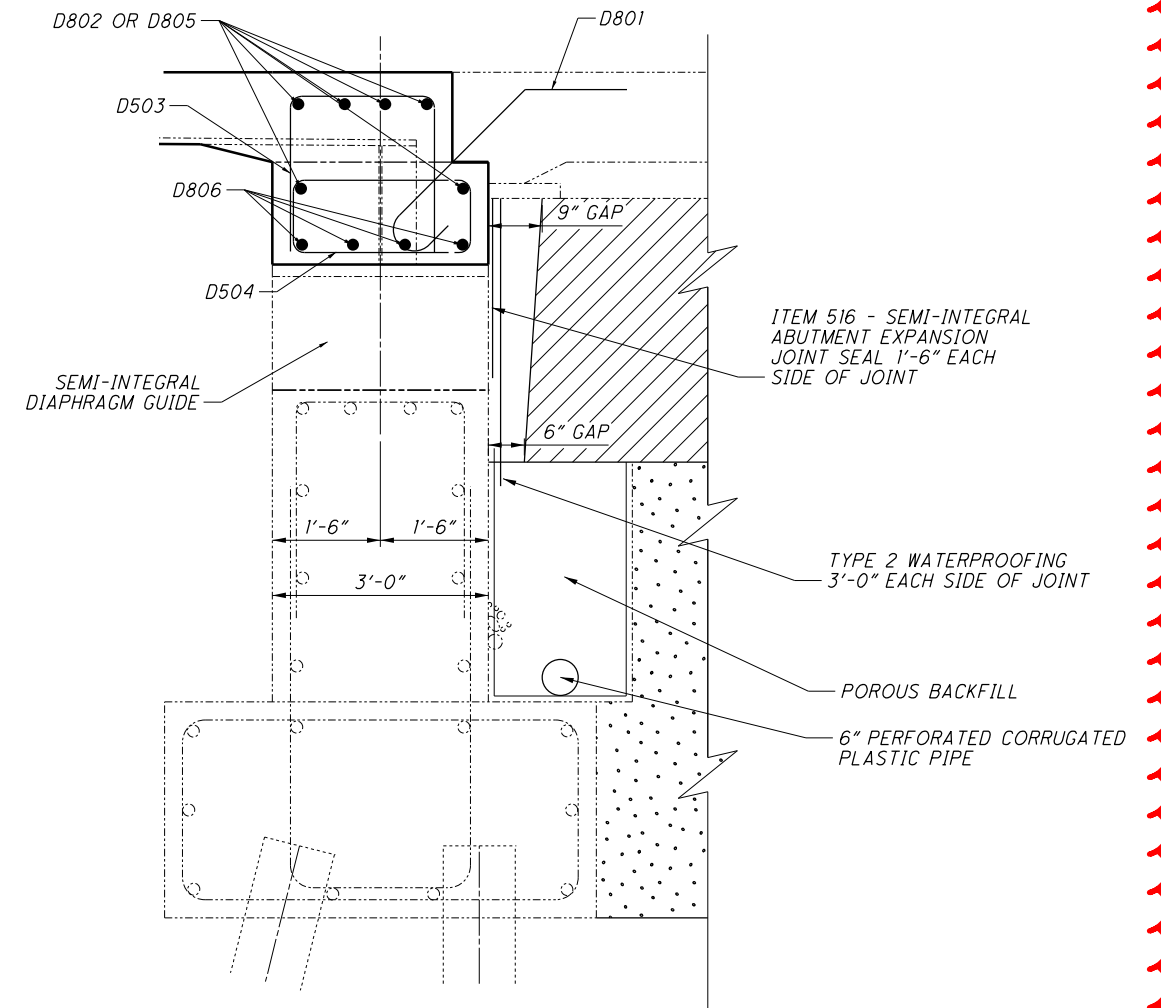
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SECTION A-A



SECTION B-B