TGSLTW1014

COMPUTED BY: BJH DATE: 09-09-24

CHECKED BY: REL DATE: 09-09-24

| PROJECT NO. | SHEET NO. |
|---|---|
| B-5833 | 3D-1 |

# NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
# DIVISION OF HIGHWAYS

**Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.**
**See "Standard Specifications For Roads and Structures, Section 300-5".**

## *LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)*

| LINE & STATION / SIZE / THICKNESS OR GAUGE | OFFSET | STRUCTURE NUMBER FROM | STRUCTURE NUMBER TO | TOP ELEVATION FT. | INVERT ELEVATION FT. | INVERT ELEVATION FT. | MINIMUM REQUIRED SLOPE % | Side Drain Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | | DO NOT USE RCP | DO NOT USE CSP | DO NOT USE CAAP | DO NOT USE HDPE | DO NOT USE PVC | R. C. PIPE CLASS III 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L 13+75 | 32 LT | 0408 | | 1068.6 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0408 | 0407 | | 1065.4 | 1065.0 | 0.6 | | | | | | | | | | | | | | | | | | | | | | |
| L 14+47 | 36 LT | 0409 | | 1069.3 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0409 | 0410 | | 1066.5 | 1066.3 | | | | | | | | | | | | | | | | | | | | | | | |
| L 14+47 | 18 LT | 0410 | | 1071.5 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0410 | 0408 | | 1066.1 | 1065.4 | 0.5 | | | | | | | | | | | | | | | | | | | | | | |
| L 15+93 | 36 LT | 0411 | | 1072.1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0411 | 0412 | | 1069.3 | 1069.1 | | | | | | | | | | | | | | | | | | | | | | | |
| L 15+93 | 18 LT | 0412 | | 1074.6 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0412 | 0410 | | 1068.9 | 1066.1 | 0.3 | | | | | | | | | | | | | | | | | | | | | | |
| L 16+50 | 39 LT | 0413 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0413 | 0412 | | 1073.1 | 1068.9 | | | | | | | | | | | | | | | | | | | | | | | |
| L 17+11 | 35 LT | 0414 | | | | | | | | 36 | | | | | | | | | | | | | | | | | | | |
| Y1 11+71 | 25 LT | 0416 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0416 | 0415 | | 1084.9 | 1082.5 | | | | | | | | | | | | | | | | | | | | | | | |
| L 20+78 | 43 LT | 0418 | | 1098.0 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0418 | 0417 | | 1093.2 | 1091.7 | | | | | | | | | | | | | | | | | | | | | | | |
| L 11+11 | 23 RT | 0419 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0419 | 0420 | | 1065.6 | 1065.0 | | | | | | | | | | | | | | | | | | | | | | | |
| L 20+00 | 39 RT | 0422 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0422 | 0423 | | 1090.0 | 1089.6 | | | | | | | | | | | | | | | | | | | | | | | |
| L 24+17 | 0 CL | 0504 | | 1116.8 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0504 | 0508 | | 1113.6 | 1113.1 | | | | | | | | | | | | | | | | | | | | | | | |
| L 25+79 | 20 RT | 0505 | | 1120.4 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0505 | 0507 | | 1117.2 | 1115.8 | | | | | | | | | | | | | | | | | | | | | | | |
| L 26+53 | 20 RT | 0506 | | 1121.2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0506 | 0505 | | 1118.0 | 1117.2 | | | | | | | | | | | | | | | | | | | | | | | |
| L 25+06 | 22 RT | 0507 | | 1119.0 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0507 | 0508 | | 1115.8 | 1113.1 | | | | | | | | | | | | | | | | | | | | | | | |
| L 24+17 | 23 RT | 0508 | | 1116.3 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0508 | 0510 | | 1113.1 | 1110.5 | | | | | | | | | | | | | | | | | | | | | | | |
| LOOPD 10+71 | 14 RT | 0509 | | 1114.2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0509 | 0510 | | 1111.0 | 1110.5 | | | | | | | | | | | | | | | | | | | | | | | |
| LOOPD 10+71 | 12 LT | 0510 | | 1114.6 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0510 | 0535 | | 1110.5 | 1106.4 | | | | | | | | | | | | | | | | | | | | | | | |
| LOOPD 12+75 | 10 LT | 0511 | | 1110.0 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0511 | 0513 | | 1105.2 | 1104.3 | 0.3 | | | | | | | | | | | | | | | | | | | | | | |
| RAMPD 14+01 | 12 LT | 0512 | | 1109.9 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0512 | 0513 | | 1106.7 | 1105.7 | | | | | | | | | | | | | | | | | | | | | | | |
| LOOPD 13+75 | 10 LT | 0513 | | 1108.6 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0513 | 0514 | | 1104.3 | 1103.4 | 0.5 | | | | | | | | | | | | | | | | | | | | | | |
| LOOPD 14+75 | 10 LT | 0514 | | 1107.6 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0514 | 0517 | | 1103.4 | 1100.0 | 0.5 | | | | | | | | | | | | | | | | | | | | | | |
| RAMPD 17+19 | 37 RT | 0515 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0515 | 0516 | | 1101.3 | 1100.3 | | | | | | | | | | | | | | | | | | | | | | | |
| RAMPD 16+37 | 12 LT | 0516 | | 1107.7 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0516 | 0517 | | 1100.3 | 1099.8 | | | | | | | | | | | | | | | | | | | | | | | |
| LOOPD 15+77 | 10 LT | 0517 | | 1106.6 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0517 | 0518 | | 1099.8 | 1095.3 | 0.5 | | | | | | | | | | | | | | | | | | | | | | |
| LOOPD 16+97 | 10 LT | 0518 | | 1105.3 | | | | | | | | | | | | | | | | | | | | | | | | | |
| SHEET TOTALS | | | | | | | | | | 36 | | | | | | | | | | | | | | | | | | | |

| LINE & STATION | FROM | TO | R. C. PIPE CLASS IV 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | R. C. PIPE CLASS V 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY | QUANTITIES FOR DRAINAGE STRUCTURES A 0' THRU 5' EACH | B 5' THRU 10' LIN. FT. | 10' AND ABOVE LIN. FT. | C.B. STD. 840.01 OR STD. 840.02 | FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E | F | G | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L 13+75 | 0408 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| | 0408 | 0407 | | | 44 | | | | | | | | | | | | | | | | | | | | | | |
| L 14+47 | 0409 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| | 0409 | 0410 | | 16 | | | | | | | | | | | | | | | | | | | | | | | |
| L 14+47 | 0410 | | | | | | | | | | | | | | | | | | | 1 | 0.4 | | | | | | |
| | 0410 | 0408 | | | 72 | | | | | | | | | | | | | | | | | | | | | | |
| L 15+93 | 0411 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| | 0411 | 0412 | | 16 | | | | | | | | | | | | | | | | | | | | | | | |
| L 15+93 | 0412 | | | | | | | | | | | | | | | | | | | 1 | 0.7 | | | | | | |
| | 0412 | 0410 | | | 144 | | | | | | | | | | | | | | | | | | | | | | |
| L 16+50 | 0413 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0413 | 0412 | | | 60 | | | | | | | | | | | | | | | | | | | | | | |
| L 17+11 | 0414 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Y1 11+71 | 0416 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0416 | 0415 | | | 48 | | | | | | | | | | | | | | | | | | | | | | |
| L 20+78 | 0418 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| | 0418 | 0417 | | 28 | | | | | | | | | | | | | | | | | | | | | | | |
| L 11+11 | 0419 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0419 | 0420 | | | | | | | | | | 56 | | | | | | | | | | | | | | | |
| L 20+00 | 0422 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0422 | 0423 | | | 80 | | | | | | | | | | | | | | | | | | | | | | |
| L 24+17 | 0504 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| | 0504 | 0508 | | 24 | | | | | | | | | | | | | | | | | | | | | | | |
| L 25+79 | 0505 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| | 0505 | 0507 | | 72 | | | | | | | | | | | | | | | | | | | | | | | |
| L 26+53 | 0506 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| | 0506 | 0505 | | 72 | | | | | | | | | | | | | | | | | | | | | | | |
| L 25+06 | 0507 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| | 0507 | 0508 | | 88 | | | | | | | | | | | | | | | | | | | | | | | |
| L 24+17 | 0508 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| | 0508 | 0510 | | 44 | | | | | | | | | | | | | | | | | | | | | | | |
| LOOPD 10+71 | 0509 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| | 0509 | 0510 | | 28 | | | | | | | | | | | | | | | | | | | | | | | |
| LOOPD 10+71 | 0510 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| | 0510 | 0535 | | 76 | | | | | | | | | | | | | | | | | | | | | | | |
| LOOPD 12+75 | 0511 | | | | | | | | | | | | | | | | | | | 1 | | | 1 | | | 1 | |
| | 0511 | 0513 | | 96 | | | | | | | | | | | | | | | | | | | | | | | |
| RAMPD 14+01 | 0512 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| | 0512 | 0513 | | 36 | | | | | | | | | | | | | | | | | | | | | | | |
| LOOPD 13+75 | 0513 | | | | | | | | | | | | | | | | | | | 1 | | | 1 | | | 1 | |
| | 0513 | 0514 | | 96 | | | | | | | | | | | | | | | | | | | | | | | |
| LOOPD 14+75 | 0514 | | | | | | | | | | | | | | | | | | | 1 | | | 1 | | | 1 | |
| | 0514 | 0517 | | 96 | | | | | | | | | | | | | | | | | | | | | | | |
| RAMPD 17+19 | 0515 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0515 | 0516 | | | 96 | | | | | | | | | | | | | | | | | | | | | | |
| RAMPD 16+37 | 0516 | | | | | | | | | | | | | | | | | | | 1 | 2.4 | | | | | | |
| | 0516 | 0517 | | | 44 | | | | | | | | | | | | | | | | | | | | | | |
| LOOPD 15+77 | 0517 | | | | | | | | | | | | | | | | | | | 1 | 1.8 | | 1 | | | 1 | |
| | 0517 | 0518 | | | 116 | | | | | | | | | | | | | | | | | | | | | | |
| LOOPD 16+97 | 0518 | | | | | | | | | | | | | | | | | | | 1 | 5.0 | | 1 | | | 1 | |
| SHEET TOTALS | | | | 788 | 704 | | | | | | | 56 | | | | | | | | 20 | 10.3 | | 5 | | | 5 | |

NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)

| LINE & STATION | FROM | TO | CONCRETE TRANSITIONAL SECTION T.B.D.I. STD. 852.06 | C.B. STD. 852.05 | OPEN THROAT C.B. STD. 840.04 OR STD. 840.05 | D.I. STD. 840.14 OR STD. 840.15 | D.I. FRAME AND GRATES STD. 840.16 | G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26 | G.D.I. TYPE "B" STD. 840.18, 840.27, OR 840.45 | G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28 | G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20 | G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20 | G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22 | G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22 | G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24 | G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24 | G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29 | G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29 | J.B. STD. 840.31, 840.32, OR 840.45 | T.B.J.B. STD. 840.34 OR 840.46 | T.B.D.I. STD. 840.35 OR 840.46 | M.H. STD. 840.51, STD. 840.52, OR STD. 840.53 | M.H. FRAME AND COVER STD. 840.54 | 4-SIDED OPEN THROAT C.B. SEE DETAIL 2D-2 | CONVERT EXISTING C.B. TO J.B. | CONVERT EXISTING C.B. TO D.I. | CONVERT EXISTING D.I. TO J.B. | CONVERT EXISTING J.B. TO D.I. | ADJUST C.B. | ADJUST D.I. | | | FLOWABLE FILL CY | CONCRETE COLLARS CL. "B" STD. 840.72 CY | CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY | PIPE REMOVAL LIN. FT. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L 13+75 | 0408 | | | | | | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | |
| | 0408 | 0407 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L 14+47 | 0409 | | | | | | | | 1 | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| | 0409 | 0410 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L 14+47 | 0410 | | | | | | | | | | | | | | | | | 1 | | | 1 | | | | | | | | | | | | | | | | TRAFFIC BEARING 2GI |
| | 0410 | 0408 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L 15+93 | 0411 | | | | | | | | 1 | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| | 0411 | 0412 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L 15+93 | 0412 | | | | | | | | | | | | | | | | | 1 | | | 1 | | | | | | | | | | | | | | | | TRAFFIC BEARING 2GI |
| | 0412 | 0410 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L 16+50 | 0413 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0413 | 0412 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L 17+11 | 0414 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Y1 11+71 | 0416 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0416 | 0415 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L 20+78 | 0418 | | | | | | | | 1 | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| | 0418 | 0417 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L 11+11 | 0419 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0419 | 0420 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L 20+00 | 0422 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0422 | 0423 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L 24+17 | 0504 | | 1 | | | | | | | | | | | | | | | 1 | | | 1 | | | | | | | | | | | | | | | | TRAFFIC BEARING 2GI |
| | 0504 | 0508 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L 25+79 | 0505 | | | | | | | | | | | | | | | | | 1 | | | 1 | | | | | | | | | | | | | | | | TRAFFIC BEARING 2GI |
| | 0505 | 0507 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L 26+53 | 0506 | | | | | | | | | | | | | | | | | 1 | | | 1 | | | | | | | | | | | | | | | | TRAFFIC BEARING 2GI |
| | 0506 | 0505 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L 25+06 | 0507 | | | | | | | | | | | | | | | | | 1 | | | 1 | | | | | | | | | | | | | | | | TRAFFIC BEARING 2GI |
| | 0507 | 0508 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L 24+17 | 0508 | | 1 | | | | | | | | | | | | | | | 1 | | | 1 | | | | | | | | | | | | | | | | TRAFFIC BEARING 2GI |
| | 0508 | 0510 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOOPD 10+71 | 0509 | | 1 | | | | | | | | | | | | | | | 1 | | | 1 | | | | | | | | | | | | | | | | TRAFFIC BEARING 2GI |
| | 0509 | 0510 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOOPD 10+71 | 0510 | | 1 | | | | | | | | | | | | | | | 1 | | | 1 | | | | | | | | | | | | | | | | TRAFFIC BEARING 2GI |
| | 0510 | 0535 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOOPD 12+75 | 0511 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0511 | 0513 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RAMPD 14+01 | 0512 | | 1 | | | | | | | | | | | | | | | 1 | | | 1 | | | | | | | | | | | | | | | | TRAFFIC BEARING 2GI |
| | 0512 | 0513 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOOPD 13+75 | 0513 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0513 | 0514 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOOPD 14+75 | 0514 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0514 | 0517 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RAMPD 17+19 | 0515 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0515 | 0516 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RAMPD 16+37 | 0516 | | 1 | | | | | | | | | | | | | | | 1 | | | 1 | | | | | | | | | | | | | | | | TRAFFIC BEARING 2GI |
| | 0516 | 0517 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOOPD 15+77 | 0517 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0517 | 0518 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOOPD 16+97 | 0518 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SHEET TOTALS | | | 6 | | | | | | 4 | | | | | | | 1 | | 14 | | | 11 | | | | | | | | | | | | | | | | |

**ABBREVIATIONS**

| | |
|---|---|
| C.A.A. | CORRUGATED ALUMINIUM ALLOY |
| C.B. | CATCH BASIN |
| C.S. | CORRUGATED STEEL |
| D.I. | DROP INLET |
| G.D.I. | GRATED DROP INLET |
| H.D.P.E. | HIGH DENSITY POLYETHYLENE |
| J.B. | JUNCTION BOX |
| M.H. | MANHOLE |
| N.S. | NARROW SLOT |
| P.V.C. | POLYVINYL CHLORIDE |
| R.C. | REINFORCED CONCRETE |
| T.B.D.I. | TRAFFIC BEARING DROP INLET |
| T.B.J.B. | TRAFFIC BEARING JUNCTION BOX |
| W.S. | WIDE SLOT |