

I:\ProjectData\MRG-60-12.89\Design\Roadway\Sheets\07245\_GN001.dgn SHEET 2 2/11/2021 8:26:47 AM jwiseman

**COORDINATES FOR KING PILE SHAFTS**

SHAFT NO.	STATION	NORTHING	EASTING
1	1680+04.67	605100.94	2147296.12
2	1680+10.67	605106.52	2147293.91
3	1680+16.67	605112.10	2147291.70
4	1680+22.67	605117.68	2147289.50
5	1680+28.67	605123.26	2147287.29
6	1680+34.67	605128.84	2147285.09
7	1680+40.67	605134.42	2147282.90
8	1680+46.67	605140.01	2147280.70
9	1680+52.67	605145.59	2147278.51
10	1680+58.67	605151.18	2147276.32
11	1680+64.67	605156.77	2147274.13
12	1680+70.67	605162.35	2147271.95
13	1680+76.67	605167.94	2147269.76
14	1680+82.67	605173.53	2147267.58
15	1680+88.67	605179.12	2147265.41
16	1680+94.67	605184.72	2147263.23
17	1681+00.67	605190.31	2147261.06
18	1681+06.67	605195.90	2147258.89
19	1681+12.67	605201.50	2147256.72
20	1681+18.67	605207.09	2147254.55
21	1681+24.67	605212.69	2147252.39
22	1681+30.67	605218.29	2147250.23
23	1681+36.67	605223.88	2147248.07
24	1681+42.67	605229.48	2147245.91
25	1681+48.67	605235.08	2147243.76
26	1681+54.67	605240.68	2147241.61
27	1681+60.67	605246.29	2147239.46
28	1681+66.67	605251.89	2147237.31
29	1681+72.67	605257.49	2147235.17
30	1681+78.67	605263.10	2147233.03
31	1681+84.67	605268.70	2147230.89
32	1681+90.67	605274.31	2147228.75
33	1681+96.67	605279.92	2147226.61
34	1682+02.67	605285.53	2147224.48
35	1682+08.67	605291.14	2147222.35
36	1682+14.67	605296.75	2147220.23
37	1682+20.67	605302.36	2147218.10
38	1682+26.67	605307.97	2147215.98
39	1682+32.67	605313.58	2147213.86
40	1682+38.67	605319.20	2147211.74
41	1682+44.67	605324.81	2147209.63
42	1682+50.67	605330.43	2147207.51
43	1682+56.67	605336.04	2147205.40
44	1682+62.67	605341.66	2147203.30
45	1682+68.67	605347.28	2147201.19
46	1682+74.67	605352.90	2147199.09
47	1682+80.67	605358.52	2147196.99
48	1682+86.67	605364.14	2147194.89
49	1682+92.67	605369.76	2147192.79
50	1682+98.67	605375.39	2147190.70
51	1683+04.67	605381.01	2147188.61
52	1683+10.67	605386.63	2147186.52
53	1683+16.67	605392.26	2147184.44
54	1683+22.67	605397.89	2147182.35
55	1683+28.67	605403.51	2147180.27
56	1683+34.67	605409.14	2147178.19
57	1683+40.67	605414.77	2147176.12

**STAKEOUT COORDINATES FOR @ WALL**

	STATION	NORTHING	EASTING
PC	1679+00.00	605003.78	2147335.05
PT	1684+81.80	605547.44	2147127.99

**ITEM 524 - DRILLED SHAFTS, 36" DIAMETER, ABOVE BEDROCK, AS PER PLAN**

**ITEM 524 - DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK, AS PER PLAN**

**ITEM 524 - DRILLED SHAFTS, 42" DIAMETER, INTO BEDROCK, AS PER PLAN**

THIS WORK CONSISTS OF FURNISHING AND INSTALLING DRILLED SHAFTS FOR SOLDIER PILE AND LAGGING WALLS. THE DRILLED SHAFTS ARE REINFORCED WITH SOLDIER PILES INSTEAD OF REINFORCING STEEL CAGES. THE SOLDIER PILES EXTEND ABOVE THE TOP OF THE DRILLED SHAFT. FURNISH AND INSTALL DRILLED SHAFTS IN ACCORDANCE WITH CMS 524 EXCEPT AS MODIFIED AND SUPPLEMENTED BELOW.

EXCAVATE THE HOLE FOR THE DRILLED SHAFTS WITHIN 3 INCHES OF THE PLAN LOCATION IN THE HORIZONTAL PLANE. IF FIELD CONDITIONS INDICATE GREATER DEPTHS, NOTIFY THE ENGINEER FOR FURTHER EVALUATION.

PLACE THE SOLDIER PILE VERTICALLY WITHIN THE HOLE SO IT IS NOT INCLINED MORE THAN 1" BETWEEN THE TOP AND BOTTOM. PLACE THE SOLDIER PILE SO THAT THE FLANGES ARE PARALLEL TO THE CENTERLINE OF CONSTRUCTION. DO NOT ALLOW THE ORIENTATION OF THE FLANGES TO VARY BY MORE THAN 10 DEGREES. SUPPORT THE SOLDIER PILE SO THAT IT DOES NOT MOVE DURING CONCRETE PLACEMENT.

USE CLASS OCI CONCRETE ACCORDING TO CMS 511. PLACE CONCRETE TO THE ELEVATION FOR THE BOTTOM OF THE PRECAST LAGGING. THE CONTRACTOR MAY PLACE CONCRETE USING THE FREE FALL METHOD PROVIDED THE DEPTH OF WATER IS LESS THAN 6 INCHES AND THE CONCRETE FALLS WITHOUT STRIKING THE SIDES OF THE HOLE. POURING CONCRETE ALONG THE WEB OF THE SOLDIER PILE IS ACCEPTABLE.

CHECK THE POSITION, THE VERTICAL ALIGNMENT AND ORIENTATION OF THE SOLDIER PILE IMMEDIATELY AFTER CONCRETE PLACEMENT. MAKE CORRECTIONS AS NECESSARY TO MEET THE ABOVE TOLERANCES.

SEQUENCE OF INSTALLATION  
THE INSTALLATION SEQUENCE SHALL BE SUCH THAT NO DRILLED SHAFT IS INSTALLED ADJACENT TO EITHER AN OPEN DRILLED SHAFT EXCAVATION OR A DRILLED SHAFT IN WHICH THE CONCRETE HAS LESS THAN A 48 HOUR CURE. INSTALLING THE SHAFTS IN AN ALTERNATING SEQUENCE OR ANY OTHER SEQUENCE THAT MEETS THIS CRITERIA IS PERMISSIBLE.

PROTECTION OF UNATTENDED OPEN SHAFTS  
CARE SHALL BE EXERCISED AS TO COVER UNATTENDED OPEN SHAFTS. TEMPORARY COVERS SHALL BE OF ADEQUATE STRENGTH TO PREVENT A PERSON OR ANIMAL FROM FALLING IN. NO DRILLED SHAFT EXCAVATION SHALL BE LEFT UN-POURED OVERNIGHT

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS USED TO CONSTRUCT THE DRILLED SHAFTS. ANY TEMPORARY GRADING, EXCAVATION, EMBANKMENT, AGGREGATE, DRAINAGE, SHEETING, ETC. NEEDED TO COMPLETE THE WORK SHALL BE INCLUDED IN THE BID PRICE FOR THE DRILLED SHAFTS. THE COST OF ANY EXCAVATION AND SUBSEQUENT REPLACEMENT OF EMBANKMENT (PER ITEM 203 EMBANKMENT) SHALL BE INCLUDED IN THE VARIOUS BID ITEMS FOR THE DRILLED SHAFTS. NO SEPARATE PAYMENT WILL BE MADE.

PAYMENT IS FULL COMPENSATION FOR CONSTRUCTING THE DRILLED SHAFTS, INCLUDING FURNISHING AND PLACING CONCRETE. PAYMENT FOR SOIL OVERBURDEN DRILLING, WHICH IS GROUND LEVEL TO THE TOP OF THE SHAFT, SHALL BE INCLUSIVE OF ITEM 524 - DRILLED SHAFTS, 36" AND/OR 42" DIAMETER, ABOVE BEDROCK

MEASUREMENT FOR PAYMENT FOR DRILLED SHAFTS ABOVE BEDROCK, AS PER PLAN, WILL BE MEASURED ALONG THE AXIS OF THE DRILLED SHAFT FROM THE TOP OF THE SHAFT TO THE TOP OF BEDROCK, AS DETERMINED BY THE ENGINEER. MEASUREMENT FOR PAYMENT FOR DRILLED SHAFTS INTO BEDROCK, AS PER PLAN, WILL BE LIMITED TO THE DISTANCE BETWEEN THE TOP OF BEDROCK AND THE BOTTOM OF THE DRILLED SHAFT, AS DETERMINED BY THE ENGINEER.

**ITEM 524 - DRILLED SHAFTS, MISC.: PERMANENT CASING**

PERMANENT CASING, PER CMS 524.06, SHALL BE USED FOR THE INSTALLATION OF DRILLED SHAFTS. PERMANENT CASING CONSTRUCTION SHALL BE PER CMS 524.04D. THE PERMANENT CASING SHALL BE EXTENDED TO THE TOP OF BEDROCK.

PAYMENT IS FULL COMPENSATION FOR FURNISHING AND PLACING THE PERMANENT CASING.

**ITEM 507 - STEEL PILES, MISC.: SOLDIER PILES W24X117**

THIS WORK CONSISTS OF FURNISHING AND PLACING STEEL SOLDIER PILES INTO DRILLED HOLES. FURNISH SOLDIER PILES CONSISTING OF STRUCTURAL STEEL MEMBERS THAT MEET THE PLAN REQUIREMENTS AND CONFORM TO ASTM A572, GRADE 50. DO

NOT FIELD WELD OR SPLICE STEEL SOLDIER PILES; WITH PANEL SEATS BEING THE EXCEPTION.

MEASUREMENT FOR PAYMENT WILL BE LIMITED TO THE DISTANCE BETWEEN THE TOP OF WALL ELEVATION AND THE BOTTOM OF THE DRILLED SHAFT, AS DETERMINED BY THE ENGINEER. THE DEPARTMENT WILL PAY FOR SOLDIER PILES AT THE CONTRACT UNIT PRICE PER FOOT OF ITEM 507 - STEEL PILES, MISC.: SOLDIER PILES - W24X117

**SURVEYING POSITIONAL PARAMETERS**

USE THE FOLLOWING VERTICAL AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88 (2011)  
GEOID: GEOID12A

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83 (CORS96)  
ELLIPSOID: GRS80  
MAP PROJECTION: LAMBERT CONFORMAL CONIC  
COORDINATE SYSTEM: OHIO STATE PLANE, SOUTH ZONE  
COMBINED SCALE FACTOR: N/A

UNITS:  
FURNISH UNITS IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

**STAKEOUT COORDINATES FOR @ CONSTRUCTION & S.R. 60**

	STATION	NORTHING	EASTING
POT	667+18.81	603916.51	2147797.05
PC	678+82.35	604994.37	2147358.83
PT	684+81.02	605553.66	2147145.41
PC	691+91.69	606222.95	2146906.45

**CONTROL POINTS**

STATION	OFFSET	NORTHING	EASTING	ELEVATION	FEATURE
678+96.14	34.04' RT	605019.9360	2147385.1940	663.579	3/4" IRON PIN SET W/CAP
680+69.70	35.11' RT	605181.1810	2147322.1520	665.551	3/4" IRON PIN SET W/CAP
682+69.29	39.33' RT	605368.5980	2147254.9630	670.250	3/4" IRON PIN SET W/CAP
684+44.43	38.69' RT	605532.3190	2147194.1630	669.296	3/4" IRON PIN SET W/CAP

CALCULATED  
JDW  
CHECKED  
ARM

GENERAL NOTES

MRG-60-12.89