

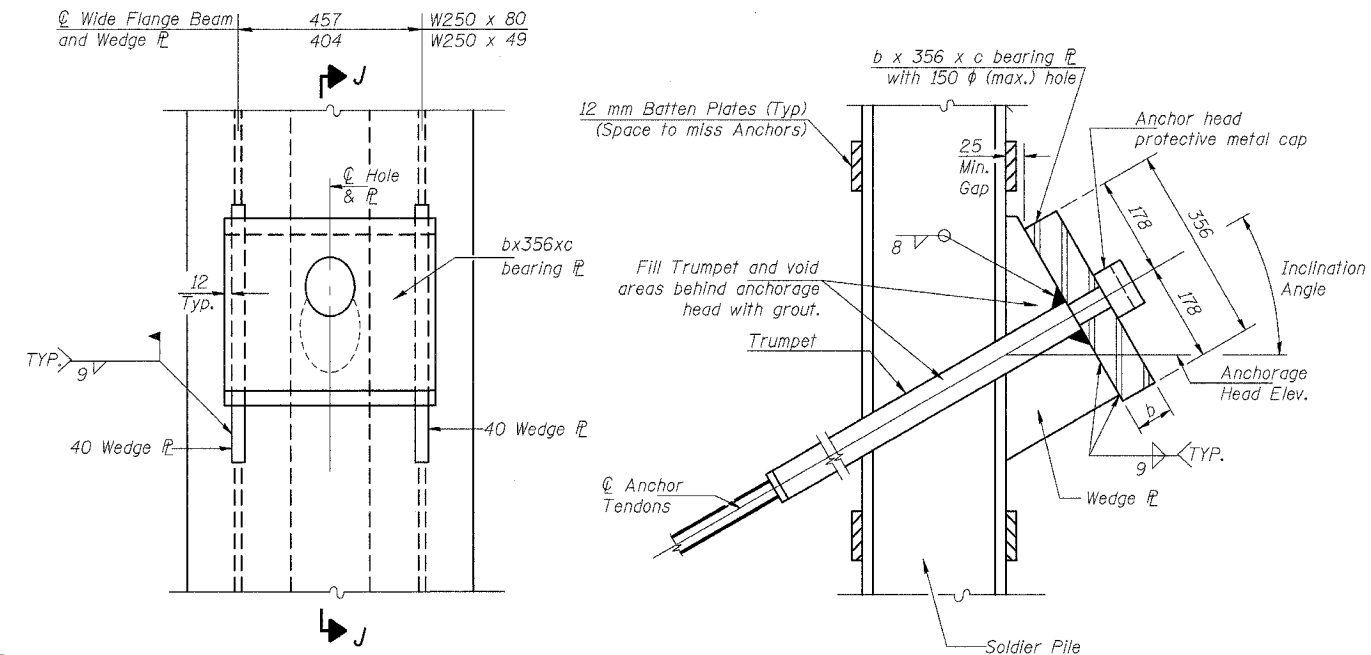
PERMANENT GROUND ANCHOR DATA

Solder Pile Designation	Anchor Number	Anchor Head Elevation	Design Load (kN)	Inclination* Angle	** # of Prestressing Strands	Minimum Anchor Unbonded Length (m)	Estimated Anchor Bond *** Length (m)
B1	B1-1	152.550	296.8	45	3	4.5	5.5
	B1-2	150.450	244.5	45	3	4.5	3.75
B2	B2-1	153.770	432.3	45	3	4.5	5.5
	B2-2	151.100	407.1	45	3	4.5	3.75
B3	B3-1	154.930	577.9	45	4	4.5	5.5
	B3-2	151.720	551.3	45	4	4.5	3.75
C1	C1-1	154.930	577.9	45	4	6.5	4.5
	C1-2	151.720	551.3	45	4	4.0	4.0
C2	C2-1	154.930	446.1	45	3	6.5	4.5
	C2-2	151.780	421.3	45	3	4.0	4.0
C3	C3-1	154.930	441.7	45	3	6.5	4.5
	C3-2	151.810	415.1	45	3	4.0	4.0
C4	C4-1	154.930	466.3	45	3	6.5	4.5
	C4-2	151.860	434.4	45	3	4.0	4.0
D1	D1-1	154.930	466.3	45	3	6.5	4.5
	D1-2	151.860	434.4	45	3	5.0	3.5
D2	D2-1	154.930	543.3	45	4	6.5	4.5
	D2-2	151.910	501.7	45	4	5.0	3.5
D3	D3-1	154.980	529.1	45	4	6.5	4.5
	D3-2	151.980	494.5	45	4	5.0	3.5
D4	D4-1	154.890	447.8	45	3	6.5	4.5
	D4-2	151.990	399.6	45	3	5.0	3.5
E1	E1-1	154.890	447.8	45	3	6.0	4.5
	E1-2	151.990	399.6	45	3	4.0	3.75
E2	E2-1	154.980	511.7	45	4	6.0	4.5
	E2-2	152.080	469.6	45	4	4.0	3.75
E3	E3-1	154.940	511.3	45	4	6.0	4.5
	E3-2	152.090	459.0	45	4	4.0	3.75
E4	E4-1	154.940	424.5	45	3	6.0	4.5
	E4-2	152.140	377.3	45	3	4.0	3.75
F1	F1-1	154.940	424.5	45	3	6.0	5.0
	F1-2	152.140	377.3	45	3	5.0	3.5
F2	F2-1	154.960	493.5	45	4	6.0	5.0
	F2-2	152.190	438.3	45	4	5.0	3.5
F3	F3-1	154.990	484.5	45	4	6.0	5.0
	F3-2	152.240	433.3	45	4	5.0	3.5
F4	F4-1	154.990	403.3	45	3	6.0	5.0
	F4-2	152.280	357.8	45	3	5.0	3.5
G1	G1-1	154.990	403.3	45	3	6.5	5.5
	G1-2	152.280	357.8	45	3	6.0	3.0
G2	G2-1	154.921	466.4	45	3	6.5	5.5
	G2-2	152.281	407.7	45	3	6.0	3.0
G3	G3-1	154.909	459.5	45	3	6.5	5.5
	G3-2	152.299	400.4	45	3	6.0	3.0
G4	G4-1	154.880	381.3	45	3	6.5	5.5
	G4-2	152.320	328.7	45	3	6.0	3.0
H1	H1-1	154.880	279.2	15	3	7.0	6.5
	H1-2	152.320	240.6	15	3	3.0	5.75
H2	H2-1	154.860	323.3	15	3	7.0	6.5
	H2-2	152.340	278.1	15	3	3.0	5.75
H3	H3-1	154.820	320.1	15	3	7.0	6.5
	H3-2	152.340	271.9	15	3	3.0	5.75
H4	H4-1	154.800	264.2	15	3	7.0	6.5
	H4-2	152.360	223.9	15	3	3.0	5.75
I1	I1-1	154.800	264.2	15	3	6.0	6.0
	I1-2	152.360	223.9	15	3	3.0	5.25
I2	I2-1	154.788	303.0	15	3	6.0	6.0
	I2-2	152.378	259.4	15	3	3.0	5.25
I3	I3-1	154.752	298.2	15	3	6.0	6.0
	I3-2	152.372	254.4	15	3	3.0	5.25
I4	I4-1	154.700	246.3	15	3	6.0	6.0
	I4-2	152.370	208.3	15	3	3.0	5.25
J1	J1-1	154.700	246.3	15	3	7.0	6.0
	J1-2	152.370	208.3	15	3	3.0	4.75
J2	J2-1	154.589	287.0	15	3	7.0	6.0
	J2-2	152.329	236.7	15	3	3.0	4.75
J3	J3-1	154.521	282.1	15	3	7.0	6.0
	J3-2	152.311	229.6	15	3	3.0	4.75
J4	J4-1	154.430	298.2	15	3	7.0	6.0
	J4-2	152.280	180.2	15	3	3.0	4.75
K1	K1-1	154.430	298.2	15	3	7.0	3.5
	K1-2	152.280	180.2	15	3	3.0	3.25
K2	K2-1	154.434	261.2	15	3	7.0	3.5
	K2-2	152.294	217.5	15	3	3.0	3.25
K3	K3-1	154.366	256.1	15	3	7.0	3.5
	K3-2	152.266	211.7	15	3	3.0	3.25
K4	K4-1	154.250	211.8	15	3	7.0	3.5
	K4-2	152.220	170.4	15	3	3.0	3.25

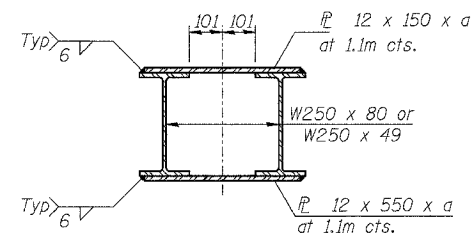
* Measured from horizontal plane.

** The prestressing steel tendon shall consist of the specified number of seven-wire strands (AASHTO M203M Grade 1860 No. 15) An alternate system using an equivalent High Strength Steel bar is allowed.

*** Estimated length only. The contractor shall determine the bonded length necessary to satisfy the test load requirements. The Anchor unbonded length may need to be increased to put the Anchor bonded region in a suitable soil.



ELEVATION
SECTION J - J
ANCHOR HEAD DETAILS



SOLDIER PILE DETAIL
Cut plate in field if it interferes with rock anchor.

Pile Size	a	b	c
W250 x 49	590	80	454
W250 x 80	700	100	507

PERMANENT GROUND ANCHOR DATA

Solder Pile Designation	Anchor Number	Anchor Head Elevation	Design Load (kN)	Inclination* Angle	**# of Prestressing Strands	Minimum Anchor Unbonded Length (m)	Estimated Anchor Bond *** Length (m)
L1	L1-1	154.250	211.8	15	3	7.0	3.5
	L1-2	152.220	170.9	15	3	3.0	3.0
L2	L2-1	154.143	244.1	15	3	7.0	3.5
	L2-2	152.173	194.3	15	3	3.0	3.0
L3	L3-1	154.057	239.8	15	3	7.0	3.5
	L3-2	152.137	187.9	15	3	3.0	3.0
L4	L4-1	153.950	252.2	15	3	7.0	3.5
	L4-2	152.090	146.9	15	3	3.0	3.0
M1	M1-1	153.830	201.3	15	3	6.0	3.0
	M2-1	153.602	239.5	15	3	6.0	3.0
M3	M3-1	153.608	228.1	15	3	6.0	3.0
	M4-1	153.480	188.5	15	3	6.0	3.0
N1	N1-1	153.480	188.5	15	3	3.0	3.0
	N2-1	153.349	227.0	15	3	3.0	3.0
N3	N3-1	153.351	215.3	15	3	3.0	3.0
	N4-1	153.220	178.5	15	3	3.0	3.0
O1	O1-1	153.220	178.5	15	3	3.0	3.0
	O2-1	153.189	200.1	15	3	3.0	3.0
O3	O3-1	153.091	198.0	15	3	3.0	3.0
	O4-1	152.960	166.4	15	3	3.0	3.0

Notes:
Anchorage Head, consisting of 2 wedge plates, and a bearing plate shall be shop fabricated.
Any modifications to the details for the anchor bearing plate and wedge plates required to accommodate the anchor shall be submitted by the Contractor for the Engineer's approval. Cost included with "Permanent Ground Anchors".
Cost of furnishing, fabricating, & attaching all structural steel is included with "Permanent Ground Anchors".
Soldier pile numbering increases from north to south.
Anchor number increases from top to bottom.
Wall reinforcement may be moved to avoid conflict with the anchor head.
Maintain 1" clearance between reinforcement and anchor head.

LIN ENGINEERING, LTD.
20 W. Chestnut
(312) 483-4668
Chicago, Illinois 60629
FAX (312) 483-4706
Designed By: WTN
Checked By: KRP
Drawn By: JMD
Date: 09/02
File: rps0405-50088512.dgn

REVISIONS	NAME

ILLINOIS DEPARTMENT OF TRANSPORTATION
GROUND ANCHOR DETAILS
RETAINING WALL 81
F.A.I. RTE. 74 (I-74)
SECTION 90-11HB-5
TAZEWELL COUNTY
RAMP J-3 STATION 10+037 TO 10+213
STRUCTURE NUMBER 090-8512

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
FAI 74	*	TAZEWELL	1766	606	21 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. ROAD PROJECT	*90-11HB-5		