



PROJECT REFERENCE NO.	SHEET NO.
P-5705A	2B-3
RW SHEET NO.	
RAILROAD DESIGN ENGINEER	

DATE: NOVEMBER 4, 2022

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROPOSED -R1_PR- TRACK ALIGNMENT

Curve 201 Ea = 1.0", V = 50 mph (Passenger), 50 mph (Freight)

Curve CUR_R1_PR-201

Chord Definition

P.I. Station	24+27.78	N	541,145.6501	E	1,431,444.9779
Delta =	0° 47' 45.33" (LT)				
Degree =	1° 30' 00.00"				
Tangent =	26.5320				
Length =	53.0617				
Radius =	3,819.8277				
External =	0.0921				
Long Chord =	53.0627				
Mid. Ord. =	0.0921				
P.C. Station	24+01.25	N	541,152.3500	E	1,431,470.6500
P.T. Station	24+54.31	N	541,138.5942	E	1,431,419.4013
C.C.		N	537,456.3187	E	1,432,435.2414
Back	S 75° 22' 23.46" W				
Ahead	S 74° 34' 38.13" W				
Chord Bear	S 74° 58' 30.80" W				

Spiral CUR_R1_PR-201A

Chord Definition

Angle	0° 27' 53.95" (LT)	P	0.0419
LS	62.0000	K	30.9999
R	3,819.8277	LT	41.3335
YS	0.1677	ST	20.6668
XS	61.9996	LC	61.9998
BK	S 74° 34' 38.13" W		
AH	S 74° 06' 44.18" W		
CB	S 74° 16' 02.17" W		
Defl	0° 09' 17.98"		
Deg	1° 30' 00.00"		

Spiral Coordinates

Point	North	East	Station
CS	541,138.5942	1,431,419.4013	24+54.31
PI	541,133.0981	1,431,399.4787	24+74.98
ST	541,121.7829	1,431,359.7242	25+16.31
CC	537,456.3187	1,432,435.2414	

Course from ST CUR_R1_PR-201A to TS CUR_R1_PR-202B
S 74° 06' 44.18" W Dist 267.8350

Curve 202 Ea = 2.5", V = 50 mph (Passenger), 50 mph (Freight)

PISCS CUR_R1_PR-202 N 540,872.0734 E 1,430,482.3988 STA 34+28.48

Total Tangent =	644.3352
Total Length =	1,266.0971
Total Delta =	27° 46' 37.63" (LT)
Back Tangent =	S 74° 06' 44.18" W
Ahead Tangent =	S 46° 20' 06.55" W

Spiral CUR_R1_PR-202B

Chord Definition

Angle	1° 56' 14.45" (LT)	P	0.4367
LS	155.0000	K	77.4970
R	2,292.0130	LT	103.3395
YS	1.7469	ST	51.6723
XS	154.9823	LC	154.9921
BK	S 74° 06' 44.18" W		
AH	S 72° 10' 29.74" W		
CB	S 73° 27' 59.39" W		
Defl	0° 38' 44.79"		
Deg	2° 30' 00.00"		

Spiral Coordinates

Point	North	East	Station
TS	541,048.4622	1,431,102.1204	27+84.14
PI	541,020.1727	1,431,002.7285	28+87.48
SC	541,004.3552	1,430,953.5367	29+39.14
CC	538,822.3691	1,431,655.1492	

Curve CUR_R1_PR-202

Chord Definition

P.I. Station	34+24.29	N	540,855.8471	E	1,430,491.6828
Delta =	23° 54' 08.74" (LT)				
Degree =	2° 30' 00.00"				
Tangent =	485.1430				
Length =	956.0971				
Radius =	2,292.0130				
External =	50.7818				
Long Chord =	949.2543				
Mid. Ord. =	49.6810				
P.C. Station	29+39.14	N	541,004.3552	E	1,430,953.5367
P.T. Station	38+95.24	N	540,532.9415	E	1,430,129.6114
C.C.		N	538,822.3691	E	1,431,655.1492
Back	S 72° 10' 29.74" W				
Ahead	S 48° 16' 21.00" W				
Chord Bear	S 60° 13' 25.37" W				

Spiral CUR_R1_PR-202A

Chord Definition

Angle	1° 56' 14.45" (LT)	P	0.4367
LS	155.0000	K	77.4970
R	2,292.0130	LT	103.3395
YS	1.7469	ST	51.6723
XS	154.9823	LC	154.9921
BK	S 48° 16' 21.00" W		
AH	S 46° 20' 06.55" W		
CB	S 46° 58' 51.35" W		
Defl	0° 38' 44.79"		
Deg	2° 30' 00.00"		

Spiral Coordinates

Point	North	East	Station
CS	540,532.9415	1,430,129.6114	38+95.24
PI	540,498.5490	1,430,091.0474	39+46.91
ST	540,427.1994	1,430,016.2926	40+50.24
CC	538,822.3691	1,431,655.1492	

Course from ST CUR_R1_PR-202A to 99906
S 46° 20' 06.55" W Dist 131.0200

Point 99906 (PI # 15 LHOT)
N 540,336.7381 E 1,429,921.5139 Sta 41+81.26

Course from 99906 to 99907
S 46° 20' 06.55" W Dist 39.9800

Point 99907 (PS # 15 LHOT)
N 540,309.1344 E 1,429,892.5927 Sta 42+21.24

Course from 99907 to TS CUR_R1_PR-203B
S 46° 20' 06.55" W Dist 100.0000

Curve 203 Ea = 1.0", V = 50 mph (Passenger), 50 mph (Freight)

Spiral CUR_R1_PR-203B

Chord Definition

Angle	0° 27' 53.95" (LT)	P	0.0419
LS	62.0000	K	30.9999
R	3,819.8277	LT	41.3335
YS	0.1677	ST	20.6668
XS	61.9996	LC	61.9998
BK	S 46° 20' 06.55" W		
AH	S 45° 52' 12.60" W		
CB	S 46° 10' 48.57" W		
Defl	0° 09' 17.98"		
Deg	1° 30' 00.00"		

Spiral Coordinates

Point	North	East	Station
TS	540,240.0905	1,429,820.2536	43+21.24
PI	540,211.5523	1,429,790.3534	43+62.57
SC	540,197.1623	1,429,775.5195	43+83.24
CC	537,455.4280	1,432,435.2144	

Curve CUR_R1_PR-203

Chord Definition

P.I. Station	45+34.31	N	540,091.9742	E	1,429,667.0869
Delta =	4° 31' 46.60" (LT)				
Degree =	1° 30' 00.00"				
Tangent =	151.0700				
Length =	301.9740				
Radius =	3,819.8277				
External =	2.9862				
Long Chord =	301.9040				
Mid. Ord. =	2.9838				
P.C. Station	43+83.24	N	540,197.1623	E	1,429,775.5195
P.T. Station	46+85.22	N	539,978.5514	E	1,429,567.3001
C.C.		N	537,455.4280	E	1,432,435.2144
Back	S 45° 52' 12.60" W				
Ahead	S 41° 20' 26.01" W				
Chord Bear	S 43° 36' 19.30" W				

PROPOSED -Y4- ACCESS DRIVE ALIGNMENT

Point 98401
N 541,086.8545 E 1,430,238.1859 Sta 10+22.00

Course from 98401 to PC Y4-1
N 76° 06' 30.99" E Dist 28.0000

Curve Y4-1

Curve CUR_Y4-1

P.I. Station	10+71.41	N	541,098.7162	E	1,430,286.1479
Delta =	46° 21' 19.76" (LT)				
Degree =	114° 35' 29.61"				
Tangent =	21.4070				
Length =	40.4528				
Radius =	50.0000				
External =	4.3899				
Long Chord =	39.3585				
Mid. Ord. =	4.0356				
P.C. Station	10+50.00	N	541,093.5768	E	1,430,265.3669
P.T. Station	10+90.45	N	541,117.3012	E	1,430,296.7714
C.C.		N	541,142.1144	E	1,430,253.3628
Back	N 76° 06' 30.99" E				
Ahead	N 29° 45' 11.22" E				
Chord Bear	N 52° 55' 51.10" E				

Course from PT Y4-1 to PC Y4-2
N 29° 45' 11.22" E Dist 30.0000

Curve Y4-2

Curve CUR_Y4-2

P.I. Station	11+67.89	N	541,184.5268	E	1,430,335.1988
Delta =	86° 58' 55.71" (RT)				
Degree =	114° 35' 29.61"				
Tangent =	47.4334				
Length =	75.9062				
Radius =	50.0000				
External =	18.9197				
Long Chord =	68.8242				
Mid. Ord. =	13.7259				
P.C. Station	11+20.45	N	541,143.3464	E	1,430,311.6593
P.T. Station	11+96.36	N	541,163.1879	E	1,430,377.5613
C.C.		N	541,118.5332	E	1,430,355.0679
Back	N 29° 45' 11.22" E				
Ahead	S 63° 15' 53.07" E				
Chord Bear	N 73° 14' 39.07" E				

Course from PT Y4-2 to 98402
S 63° 15' 53.07" E Dist 11.1358

Point 98402
N 541,158.1783 E 1,430,387.5067 Sta 12+07.49