

| EAST GUTTER LINE ALIGNMENT CONTROL POINT COORDINATES | | |
|--|----------|-----------|
| POINT/STATION | NORTHING | EASTING |
| PC 0+094.604 | 8932.580 | 10587.323 |
| PCC 0+122.089 | 8920.078 | 10608.295 |
| PT 0+144.899 | 8897.402 | 10610.257 |
| PI 0+174.123 | 8868.189 | 10609.445 |
| PC 0+209.799 | 8832.667 | 10607.662 |
| PT 0+219.996 | 8822.377 | 10607.984 |
| PC 0+222.890 | 8819.501 | 10608.311 |
| PCC 0+328.752 | 8768.726 | 10685.920 |
| PCC 0+376.662 | 8788.356 | 10729.519 |

| WEST GUTTER LINE ALIGNMENT CONTROL POINT COORDINATES | | |
|--|----------|-----------|
| POINT/STATION | NORTHING | EASTING |
| PC 0+082.642 | 8950.405 | 10647.490 |
| PCC 0+089.218 | 8947.195 | 10641.811 |
| PCC 0+107.138 | 8933.090 | 10630.913 |
| PT 0+152.228 | 8889.807 | 10619.712 |
| PC 0+198.909 | 8843.144 | 10618.416 |
| PCC 0+319.763 | 8786.587 | 10702.621 |
| PCC 0+343.724 | 8797.674 | 10723.843 |

| CIRCULAR CURVE DATA | | | | |
|---------------------|---------|---------|------------|---------|
| CURVE | RADIUS | LENGTH | DELTA | TANGENT |
| C23 | 6.000 | 3.943 | 37°39'25" | 2.046 |
| C24 | 6.000 | 3.943 | 37°39'25" | 2.046 |
| C25 | 60.000 | 120.854 | 115°24'24" | 94.923 |
| C26 | 182.228 | 23.961 | 7°32'02" | 11.998 |

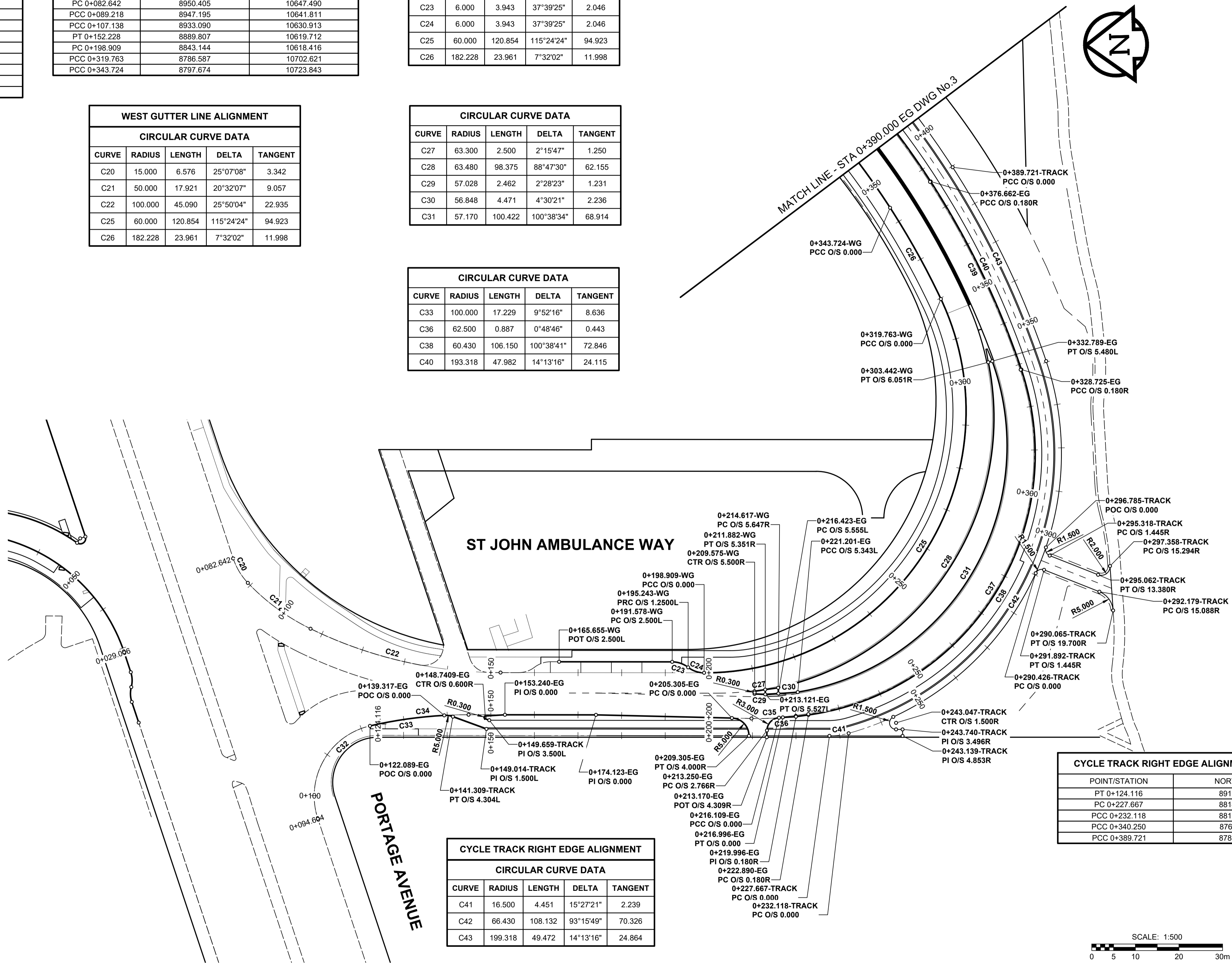
| EAST GUTTER LINE ALIGNMENT | | | | |
|----------------------------|---------|---------|------------|---------|
| CIRCULAR CURVE DATA | | | | |
| CURVE | RADIUS | LENGTH | DELTA | TANGENT |
| C32 | 16.500 | 27.485 | 95°26'31" | 18.147 |
| C34 | 99.993 | 22.808 | 13°04'09" | 11.454 |
| C35 | 62.500 | 10.197 | 9°20'52" | 5.110 |
| C37 | 60.250 | 105.834 | 100°38'41" | 72.629 |
| C39 | 193.138 | 47.938 | 14°13'16" | 24.093 |

| WEST GUTTER LINE ALIGNMENT | | | | |
|----------------------------|---------|---------|------------|---------|
| CIRCULAR CURVE DATA | | | | |
| CURVE | RADIUS | LENGTH | DELTA | TANGENT |
| C20 | 15.000 | 6.576 | 25°07'08" | 3.342 |
| C21 | 50.000 | 17.921 | 20°32'07" | 9.057 |
| C22 | 100.000 | 45.090 | 25°50'04" | 22.935 |
| C25 | 60.000 | 120.854 | 115°24'24" | 94.923 |
| C26 | 182.228 | 23.961 | 7°32'02" | 11.998 |

| CIRCULAR CURVE DATA | | | | |
|---------------------|--------|---------|------------|---------|
| CURVE | RADIUS | LENGTH | DELTA | TANGENT |
| C27 | 63.300 | 2.500 | 2°15'47" | 1.250 |
| C28 | 63.480 | 98.375 | 88°47'30" | 62.155 |
| C29 | 57.028 | 2.462 | 2°28'23" | 1.231 |
| C30 | 56.848 | 4.471 | 4°30'21" | 2.236 |
| C31 | 57.170 | 100.422 | 100°38'34" | 68.914 |

| CIRCULAR CURVE DATA | | | | |
|---------------------|---------|---------|------------|---------|
| CURVE | RADIUS | LENGTH | DELTA | TANGENT |
| C33 | 100.000 | 17.229 | 9°52'16" | 8.636 |
| C36 | 62.500 | 0.887 | 0°48'46" | 0.443 |
| C38 | 60.430 | 106.150 | 100°38'41" | 72.846 |
| C40 | 193.318 | 47.982 | 14°13'16" | 24.115 |

| CIRCULAR CURVE DATA | | | | |
|---------------------|---------|---------|------------|---------|
| CURVE | RADIUS | LENGTH | DELTA | TANGENT |
| C33 | 100.000 | 17.229 | 9°52'16" | 8.636 |
| C36 | 62.500 | 0.887 | 0°48'46" | 0.443 |
| C38 | 60.430 | 106.150 | 100°38'41" | 72.846 |
| C40 | 193.318 | 47.982 | 14°13'16" | 24.115 |



| CYCLE TRACK RIGHT EDGE ALIGNMENT CONTROL POINT COORDINATES | | |
|--|----------|-----------|
| POINT/STATION | NORTHING | EASTING |
| PT 0+124.116 | 8918.309 | 10603.207 |
| PC 0+227.667 | 8814.797 | 10608.295 |
| PCC 0+232.118 | 8810.385 | 10603.681 |
| PCC 0+340.250 | 8762.821 | 10687.740 |
| PCC 0+389.721 | 8783.079 | 10607.662 |

| CYCLE TRACK RIGHT EDGE ALIGNMENT | | | | |
|----------------------------------|---------|---------|-----------|---------|
| CIRCULAR CURVE DATA | | | | |
| CURVE | RADIUS | LENGTH | DELTA | TANGENT |
| C41 | 16.500 | 4.451 | 15°27'21" | 2.239 |
| C42 | 66.430 | 108.132 | 93°15'49" | 70.326 |
| C43 | 199.318 | 49.472 | 14°13'16" | 24.864 |

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

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 Last Saved: 8/16/2018 9:12 AM by DDaszpod
 Plotted: 8/23/2018 2:45 PM by Daniel Daszpod

| EXISTING | LEGEND - PLAN | NEW | EXISTING | LEGEND - PLAN | NEW | EXISTING | LEGEND - PLAN | NEW | |
|----------|---------------------------|-----|-------------------------|---------------|------------------------|----------|------------------------|-----|------|
| | GAS | | MANHOLE | | CONCRETE PAVEMENT | | LOCATION APPROVED | | BM |
| | MTS / PEDESTAL | | CATCH BASIN / CATCH PIT | | CONC SIDEWALK / MEDIAN | | UNDERGROUND STRUCTURES | | ELEV |
| | HYDRO / CABINET | | CURB INLET WITH BOX | | ASPHALT PAVEMENT | | SUPR. UG STRUCTURES | | |
| | CATV / FIBRE OPTIC | | TREE | | PAVING STONE | | COMMITTEE | | |
| | TRAFFIC SIGNALS / PIT | | TEST HOLE | | GRAVEL | | NOTE | | |
| | LAND DRAINAGE SEWER | | PROPERTY LINE | | RAMP CURB | | LOCATION APPROVED | | |
| | SANITARY / COMBINED SEWER | | SURVEY BAR | | PLANING / REMOVAL | | NOTE | | |
| | CB LEAD / SSP / DCP | | FENCE | | | | NOTE | | |
| | WATER MAIN | | BOC / EDGE OF PAVEMENT | | | | NOTE | | |
| | SUBDRAIN | | ELEVATION | | | | NOTE | | |
| | DITCH | | TRAFFIC SIGN | | | | NOTE | | |

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPR. UG STRUCTURES COMMITTEE DATE

NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

| NO. | REVISIONS | DATE | BY |
|-----|--------------------------|----------|-----|
| B | ISSUED FOR TENDER | 18/09/04 | RPB |
| A | ISSUED FOR CLIENT REVIEW | 18/06/27 | RPB |

| | |
|---------------------------|----------------------------|
| | MORRISON HERSHFIELD |
| DESIGNED BY | WRJ |
| CHECKED BY | RPB |
| DRAWN BY | DID |
| APPROVED BY | BWB |
| RELEASED FOR CONSTRUCTION | N/A |
| HOR SCALE | 1:500 |
| VERT SCALE | N/A |
| DATE | 18/09/04 |

PROFESSIONAL'S SEAL

PROVINCE OF MANITOBA

R.P. BRUCE

REGISTERED PROFESSIONAL ENGINEER

CONSULTANT FILE NAME

160034-2-Empr-Recon-HG-2.dwg

THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

EMPR STREET PROJECT
PAVEMENT RECONSTRUCTION
HORIZONTAL GEOMETRY
EMPR STREET EAST
PORTAGE AVE. TO STA 0+390.000 EG

CITY DRAWING NUMBER: P-3494-2
SHEET 2 OF 168
DRAWING NO. REV 2 B

SCALE: 1:500

BID OPPORTUNITY No. 602-2018