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|------------|----------------|-----------|----------------------|-----------------|------------|
| Bridge No. | 2017-2318-16.0 | Road Name | Meadowbank to Amaruq | Inspection Date | 2017-07-15 |
|------------|----------------|-----------|----------------------|-----------------|------------|



Figure 10: Sw ballast wall



Figure 12: Typical bearing front (SE exterior)



Figure 9: Railing installation (NE)



Figure 11: Typical bearing front (NW exterior)

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Figure 14: Typical bracing (looking NW)



Figure 16: Typical deck edge and railing (SW)



Figure 13: Typical bearing guide plate in slot (SW)



Figure 15: Typical cast-in-place deck joint (SE)

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Figure 18: Bridge deck (looking north)



Figure 20: Creek (looking SE)



Figure 17: Base of ballast wall - evazote gaps observed (NE)



Figure 19: Bridge deck (looking south)

Bridge Inspection Report Agnico Eagle

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|--|---|-------------------|---|---------------------|---|--------------|------------|-----------------|-------------|--|-------------------------|--|---|
| Bridge No. | 2017-2318-20.0 | Road Name | Meadowbank to Amaruq | | | | | Inspection Date | 2017-07-13 | | | | |
| STA. | Forest District | | | | | Access Notes | | | | | | | |
| 20.0 km | | | | | | | | | | | | | |
| Bridge Length | Stream Crossing | | | | | Inspected By | | | | | | | |
| 14.7 o/o m | | | | | | R. Smertina | | | | | | | |
| UTM Zone | Easting | | | | | Northing | | | | | | | |
| | | | | | | | | | | | | | |
| No. Spans | | Installation Date | | Current Load Rating | | | Deck Width | | Project No. | | Anticipated Replacement | | |
| 1 | | 2017 | | | | | 7900 mm | | | | | | |
| Span / Length (m) | 1 | 13.88 | 2 | | 3 | | 4 | | 5 | | 6 | | 7 |
| Comments | single span. steel girders with precast concrete deck, integral abutments | | | | | | | | | | | | |
| <p>Excellent: New or almost new condition and properly installed Good: Structurally sound, in good repair and have minimal wear Fair: Structurally sound, but show moderate wear or preliminary indications of rot or corrosion Poor: Structurally unsound, major items in need of repair or replacement, or bridge load rating should be reduced</p> <p>Abutment, spans, piers numbered from left bank, facing downstream / girders numbered from upstream to downstream.</p> | | | | | | | | | | | | | |
| Approaches | | | | | | | | | | | | | |
| Approach Road | Good | | Ensure road embankment is graded full width of the bridge deck | | | | | | | | | | |
| Alignment | Good | | Straight | | | | | | | | | | |
| Visibility | Good | | Weather dependent | | | | | | | | | | |
| Signage | N/A | | Temporary signage installed currently | | | | | | | | | | |
| Delineators | N/A | | None | | | | | | | | | | |
| Overall | Good | | | | | | | | | | | | |
| Deck - Span 1 | | | | | | | | | | | | | |
| Running Surface | Good | | Lifting lug pockets exposed to gravel and traffic impact | | | | | | | | | | |
| Grout Pockets | Good | | Drip grooves at CIP deck joints not installed (maintenance consideration) | | | | | | | | | | |
| Curb Rails and Risers | Fair | | Only 2 of 3 anchor bolts currently installed at each connection - fit-up problems during construction at some locations | | | | | | | | | | |
| Hardware | Good | | | | | | | | | | | | |
| Overall | Good | | | | | | | | | | | | |
| Superstructure - Span 1 | | | | | | | | | | | | | |
| Girders | Excellent | | | | | | | | | | | | |
| Bracing | Good | | | | | | | | | | | | |
| Diaphragms | Good | | | | | | | | | | | | |
| Hardware | Excellent | | | | | | | | | | | | |
| Overall | Good | | | | | | | | | | | | |

Bridge Inspection Report Agnico Eagle

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|--------------------------------------|----------------|---|----------------------|-----------------|------------|
| Bridge No. | 2017-2318-20.0 | Road Name | Meadowbank to Amaruq | Inspection Date | 2017-07-13 |
| Abutment - North | | | | | |
| Bearings | Fair | Guide plates are nearing the limit of allowed movement on the day of inspection | | | |
| Bracing | Good | | | | |
| Ballast Wall | Good | Some loose evazote under ballast wall and at joint with the deck. Some minor spalling evident at welded embedded plate locations. | | | |
| Corrosion Protection | N/A | weathering steel | | | |
| Caps or Sills | Good | footings appear level. evidence of footing movement (particularly at NW corner) - either fill has moved forward towards the creek or footing has moved backwards to ballast wall. | | | |
| Fill | Poor | approach grading has some gaps near the ends of the deck | | | |
| Hardware | Excellent | weathering steel | | | |
| Riprap | Excellent | | | | |
| Wingwall | Good | | | | |
| Overall | Good | | | | |
| Abutment - South | | | | | |
| Bearings | Fair | Guide plates are nearing the limit of allowed movement on the day of inspection | | | |
| Bracing | Good | | | | |
| Ballast Wall | Good | Some loose evazote under ballast wall and at joint with the deck | | | |
| Corrosion Protection | N/A | weathering steel | | | |
| Caps or Sills | Good | footings appear level | | | |
| Fill | Poor | approach grading has some gaps near the ends of the deck | | | |
| Hardware | Excellent | weathering steel | | | |
| Riprap | Excellent | | | | |
| Wingwall | Good | | | | |
| Overall | Good | | | | |
| Hazards | | | | | |
| High Water | | | | | |
| Scour | | | | | |
| Ice | | | | | |
| Debris | | | | | |
| Aggradation | | | | | |
| Channel | | | | | |
| Estimated Present Water Level Depth | | | | | |
| Estimated Present Water Level Width | | | | | |
| Estimated High Water Level Clearance | | | | | |

Bridge Inspection Report Agnico Eagle

| Bridge No. | 2017-2318-20.0 | Road Name | Meadowbank to Amaruq | Inspection Date | 2017-07-13 |
|---|--|-----------|----------------------|-----------------|------------|
| Repair Description and Cost Estimate | | | | | |
| No. | Description | Priority | Cost Estimate | | |
| 1 | Cut bearing slots for guide plates to allow further movement - see report for recommended amount | Medium | \$0.00 | | |
| 2 | Grade road embankments to match bridge deck width or provide delineation at gap locations | Low | \$0.00 | | |
| 3 | Install permanent signage at bridge approaches | Low | \$0.00 | | |
| 4 | Grout lifting lug pockets in deck to prevent damage from gravel and traffic | Low | \$0.00 | | |
| 5 | Install railings meeting facility requirements - ensure all anchor bolts are installed | Low | \$0.00 | | |
| 6 | Confirm that all bracing and bolted connections are tightened according to project specifications | Low | \$0.00 | | |
| <p>High: Immediate, non-recurring repair to assure public safety Medium: Ongoing, regular maintenance items to protect capital investment Low: Minor maintenance items or improvements to extend service life</p> <p>The cost estimate for individual maintenance items reflects the cost of materials and labour for completing a task; it does not include any costs associated with mobilization, demobilization, delivery of materials, engineering or contract administration.</p> | | | | | |
| Monitoring Items | | | | | |
| No. | Description | | | | |
| 1 | Monitor footings and bin walls for any future movement | | | | |
| 2 | Monitor leakage due to lack of drip grooves at cast-in-place concrete deck soffit | | | | |
| 3 | Monitor approach grading regularly to avoid traffic damaging the precast deck panel edges | | | | |
| 4 | Monitor for loose or missing evazote at underside of ballast wall or joints and replace/repair as required | | | | |
| Comments | | | | Seal | |
| Partial Inspection 3:30 pm 25 degrees C - ambient/ground temperature 12.7 degrees skin temperature - inside face of south girder 12.4 degrees skin temperature - outside east face Load test conducted on July 15th - minor noise observed | | | | | |

| | | | | | |
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| Bridge No. | 2017-2318-20.0 | Road Name | Meadowbank to Amaruq | Inspection Date | 2017-07-13 |
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Figure 2: Bridge railing connection into deck (SW)



Figure 4: Evazote under south centre girder and ballast wall



Figure 1: Bearing guide plate nearing end of slot (SW outside of bearing)



Figure 3: Creek (looking west)

| | | | | | |
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Figure 6: Large weld at ballast wall connection (SW girder, inside face)



Figure 8: North abutment



Figure 5: Front of south centre bearing (west side)



Figure 7: Minor spall at soffit of deck to ballast wall connection (SW)

| | | | | | |
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| Bridge No. | 2017-2318-20.0 | Road Name | Meadowbank to Amaruq | Inspection Date | 2017-07-13 |
|------------|----------------|-----------|----------------------|-----------------|------------|



Figure 10: NW footing movement



Figure 12: Soffit of bridge and creek (looking NW)



Figure 9: North centre bearing (front)



Figure 11: SE bearing front outside face

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| Bridge No. | 2017-2318-20.0 | Road Name | Meadowbank to Amaruq | Inspection Date | 2017-07-13 |
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Figure 14: Top of deck (looking south)



Figure 16: West bracing bay (looking north)



Figure 13: SW bridge exterior



Figure 15: Typical front of bearing (SW)

Bridge Inspection Report Agnico Eagle

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|--|--|-------------------|--|---------------------|---|--------------|------------|-----------------|-------------|--|-------------------------|---|
| Bridge No. | 2017-2318-23.9 | Road Name | Meadowbank to Amaruq | | | | | Inspection Date | 2017-07-13 | | | |
| STA. | Forest District | | | | | Access Notes | | | | | | |
| 23.9 km | | | | | | | | | | | | |
| Bridge Length | Stream Crossing | | | | | Inspected By | | | | | | |
| 67.056 o/o m | | | | | | R. Smertina | | | | | | |
| UTM Zone | Easting | | | | | Northing | | | | | | |
| | | | | | | | | | | | | |
| No. Spans | | Installation Date | | Current Load Rating | | | Deck Width | | Project No. | | Anticipated Replacement | |
| 1 | | 2017 | | | | | 7900 mm | | | | | |
| Span / Length (m) | 1 | 66.0 | 2 | | 3 | | 4 | | 5 | | 6 | 7 |
| Comments | single span. steel girders (5 pieces, spliced) with precast concrete deck and integral abutments | | | | | | | | | | | |
| <p>Excellent: New or almost new condition and properly installed Good: Structurally sound, in good repair and have minimal wear Fair: Structurally sound, but show moderate wear or preliminary indications of rot or corrosion Poor: Structurally unsound, major items in need of repair or replacement, or bridge load rating should be reduced</p> <p>Abutment, spans, piers numbered from left bank, facing downstream / girders numbered from upstream to downstream.</p> | | | | | | | | | | | | |
| Approaches | | | | | | | | | | | | |
| Approach Road | Good | | Some gaps in road embankment approaching deck edge | | | | | | | | | |
| Alignment | Good | | straight | | | | | | | | | |
| Visibility | Good | | weather dependent | | | | | | | | | |
| Signage | N/A | | temporary signage installed currently | | | | | | | | | |
| Delineators | N/A | | none | | | | | | | | | |
| Overall | Good | | | | | | | | | | | |
| Deck - Span 1 | | | | | | | | | | | | |
| Running Surface | Excellent | | | | | | | | | | | |
| Grout Pockets | Excellent | | | | | | | | | | | |
| Curb Rails and Risers | Excellent | | | | | | | | | | | |
| Hardware | Excellent | | | | | | | | | | | |
| Overall | Excellent | | | | | | | | | | | |
| Superstructure - Span 1 | | | | | | | | | | | | |
| Girders | Good | | Minor bowing observed in girder webs, particularly at splice points. | | | | | | | | | |
| Bracing | Good | | | | | | | | | | | |
| Diaphragms | Excellent | | | | | | | | | | | |
| Hardware | Excellent | | | | | | | | | | | |
| Overall | Good | | | | | | | | | | | |

Bridge Inspection Report Agnico Eagle

| Bridge No. | 2017-2318-23.9 | Road Name | Meadowbank to Amaruq | Inspection Date | 2017-07-13 |
|--------------------------------------|----------------|---|----------------------|-----------------|------------|
| Abutment - North | | | | | |
| Bearings | Fair | Some slot length (amount varies) remaining for guide plate movement. No top keepers were installed during bearing installation. | | | |
| Bracing | Good | | | | |
| Ballast Wall | Good | Some loose evazote under ballast wall and at joint with deck. Some minor spalling evident at welded embedded plate locations. | | | |
| Corrosion Protection | N/A | weathering steel | | | |
| Caps or Sills | Good | footings appear level. minimal settlement. | | | |
| Fill | Poor | approach grading has some gaps near the ends of the deck. | | | |
| Hardware | Excellent | | | | |
| Riprap | Excellent | | | | |
| Wingwall | Good | | | | |
| Overall | Good | | | | |
| Abutment - South | | | | | |
| Bearings | Fair | Some slot length (amount varies) remaining for guide plate movement. No top keepers were installed during bearing installation. | | | |
| Bracing | Good | | | | |
| Ballast Wall | Good | Some loose evazote under ballast wall and at joint with deck. Some minor spalling evident at welded embedded plate locations. Significant ballast wall and bin wall alignment offset. | | | |
| Corrosion Protection | N/A | weathering steel | | | |
| Caps or Sills | Excellent | footings appear level. minimal settlement. | | | |
| Fill | Good | approach grading has some gaps near the ends of the deck. | | | |
| Hardware | Excellent | | | | |
| Riprap | Excellent | | | | |
| Wingwall | Good | | | | |
| Overall | Good | | | | |
| Hazards | | | | | |
| High Water | | | | | |
| Scour | | | | | |
| Ice | | | | | |
| Debris | | | | | |
| Aggradation | | | | | |
| Channel | | | | | |
| Estimated Present Water Level Depth | | | | | |
| Estimated Present Water Level Width | | | | | |
| Estimated High Water Level Clearance | | | | | |

Bridge Inspection Report Agnico Eagle

| Bridge No. | 2017-2318-23.9 | Road Name | Meadowbank to Amaruq | Inspection Date | 2017-07-13 |
|---|--|-----------|----------------------|-----------------|------------|
| Repair Description and Cost Estimate | | | | | |
| No. | Description | Priority | Cost Estimate | | |
| 1 | Confirm that all bracing and bolted connections are tightened according to project specifications | Low | \$0.00 | | |
| 2 | Widen road embankments to match bridge deck width or provide delineation at gap locations | Low | \$0.00 | | |
| 3 | May cut bearing slots for guide plates to allow further movement (optional) | Low | \$0.00 | | |
| 4 | Grout lifting lug pockets in deck to prevent damage from gravel and traffic | Low | \$0.00 | | |
| 5 | Install railings meeting facility requirements - ensure all anchor bolts are installed | Low | \$0.00 | | |
| 6 | Install permanent signage at bridge approaches | Low | \$0.00 | | |
| <p>High: Immediate, non-recurring repair to assure public safety Medium: Ongoing, regular maintenance items to protect capital investment Low: Minor maintenance items or improvements to extend service life</p> <p>The cost estimate for individual maintenance items reflects the cost of materials and labour for completing a task; it does not include any costs associated with mobilization, demobilization, delivery of materials, engineering or contract administration.</p> | | | | | |
| Monitoring Items | | | | | |
| No. | Description | | | | |
| 1 | Monitor bin walls and ballast walls for movement | | | | |
| 2 | Monitor approach grading regularly to avoid traffic damaging the precast deck panel edges | | | | |
| 3 | Monitor for loose or missing evazote at underside of ballast wall or joints and replace/repair as required | | | | |
| Comments | Seal | | | | |
| Partial Inspection 2:00 pm Sunny 27.6 degrees Celsius - outside skin temperature of NW girder skin temperature varies to 7.6 degrees C at outside face, NE girder Ambient temperature ~ 13 degrees C Load test conducted on July 15th - minor noise and vibration observed | | | | | |

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|------------|----------------|-----------|----------------------|-----------------|------------|
| Bridge No. | 2017-2318-23.9 | Road Name | Meadowbank to Amaruq | Inspection Date | 2017-07-13 |
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Figure 2: NW outside girder connection to ballast wall



Figure 4: Remaining slot length (SE bearing outside)



Figure 1: NW bearing - front face



Figure 3: Railing connection and deck soffit (SE corner)