

Photograph D-1: View from West Bank Looking Eastward Approximate Location of Proposed Ramp C5 Bridge

Photograph D-2: On East Bank at Approximate Location of Photographs D-3 and D-4

Photograph D-3: On East Bank Flap Gate on Storm Outlet Approximate Location of Proposed Ramp C5 Bridge



Photograph D-4: On East Bank View Looking Downstream Approximate Location of Proposed Ramp C5 Bridge

Note: All photographs are available on the CD-ROM / DVD for closer viewing.

FRA-70/71 over Scioto River General – Existing Bridge

I-70 / I-71 WEST INTERCHANGE BRIDGE REPLACEMENTS over THE SCIOTO RIVER OWNER: ODOT DISTRICT 6 BRIDGE WATERWAY HYDRAULIC and SCOUR ANALYSIS REPORT PROJECT 4A – STAGE 1 and PROJECT 6A – TS&L CLIENT: GPD GROUP PID NO. 77372: FRA-70-1321R & 1321A PID NO. 89464: FRA-70-1322C & 1323L & FRA-71-1503L APPENDIX D Page 1 of 20



Photograph D-5: View from West Bank Looking Eastward Approximate Location of Proposed Ramp C5 Bridge

Photograph D-6: On East Bank at Approximate Location of Photographs D-3 and D-4

Photograph D-7: On East Bank View Looking Downstream Approximate Location of Proposed Ramp C5 Bridge

FRA-70/71 over Scioto River General Ordinary High Water

I-70 / I-71 WEST INTERCHANGE BRIDGE REPLACEMENTS over THE SCIOTO RIVER OWNER: ODOT DISTRICT 6 BRIDGE WATERWAY HYDRAULIC and SCOUR ANALYSIS REPORT PROJECT 4A – STAGE 1 and PROJECT 6A – TS&L CLIENT: GPD GROUP PID NO. 77372: FRA-70-1321R & 1321A PID NO. 89464: FRA-70-1322C & 1323L & FRA-71-1503L APPENDIX D Page 2 of 20



Photograph D-8: View from West Bank Looking Eastward Approximate Location of Proposed Ramp C5 Bridge

Photograph D-9: On East Bank at Approximate Location of Photographs D-3 and D-4

Photograph D-10: On East Bank View Looking Downstream Approximate Location of Proposed Ramp C5 Bridge

FRA-70/71 over Scioto River General – Railroad Bridge

I-70 / I-71 WEST INTERCHANGE BRIDGE REPLACEMENTS over THE SCIOTO RIVER OWNER: ODOT DISTRICT 6 BRIDGE WATERWAY HYDRAULIC and SCOUR ANALYSIS REPORT PROJECT 4A – STAGE 1 and PROJECT 6A – TS&L CLIENT: GPD GROUP PID NO. 77372: FRA-70-1321R & 1321A PID NO. 89464: FRA-70-1322C & 1323L & FRA-71-1503L APPENDIX D Page 3 of 20



Photograph D-11: View from West Bank Looking Eastward Approximate Location of Proposed Ramp C5 Bridge



Photograph D-12: On East Bank at Approximate Location of Photographs D-3 and D-4



Photograph D-13: On East Bank View Looking Downstream Approximate Location of Proposed Ramp C5 Bridge





Photograph D-44: On East Bank View Looking Upstream Approximate Location of Proposed Ramp C5 Bridge

Photograph D-15: On East Bank Flap Gate on Storm Outlet Approximate Location of Proposed Ramp C5 Bridge

FRA-70/71 over Scioto River East Bank Under Bridges

I-70 / I-71 WEST INTERCHANGE BRIDGE REPLACEMENTS over THE SCIOTO RIVER OWNER: ODOT DISTRICT 6 BRIDGE WATERWAY HYDRAULIC and SCOUR ANALYSIS REPORT PROJECT 4A – STAGE 1 and PROJECT 6A – TS&L CLIENT: GPD GROUP PID NO. 77372: FRA-70-1321R & 1321A PID NO. 89464: FRA-70-1322C & 1323L & FRA-71-1503L APPENDIX D Page 4 of 20



Photograph D-16: View from West Bank Looking Eastward Approximate Location of Proposed Ramp C5 Bridge

Photograph D-17: On East Bank at Approximate Location of Photographs D-3 and D-4

Photograph D-18: On East Bank View Looking Downstream Approximate Location of Proposed Ramp C5



Photograph D-19: On East Bank View Looking Downstream Approximate Location of Proposed Ramp C5 Bridge



Photograph D-20: On East Bank View Looking Upstream Approximate Location of Proposed Ramp C5 Bridge

FRA-70/71 over Scioto River East Bank Under Bridges Erosion at Piers

I-70 / I-71 WEST INTERCHANGE BRIDGE REPLACEMENTS OVER THE SCIOTO RIVER OWNER: ODOT DISTRICT 6 BRIDGE WATERWAY HYDRAULIC and SCOUR ANALYSIS REPORT PROJECT 4A – STAGE 1 and PROJECT 6A – TS&L CLIENT: GPD GROUP PID NO. 77372: FRA-70-1321R & 1321A PID NO. 89464: FRA-70-1322C & 1323L & FRA-71-1503L APPENDIX D Page 5 of 20



Photograph D-21: View from West Bank Looking Eastward Approximate Location of Proposed Ramp C5 Bridge

Photograph D-22: On East Bank at Approximate Location of Photographs D-3 and D-4

Photograph D-23: On East Bank Flap Gate on Storm Outlet Approximate Location of Proposed Ramp C5 Bridge



Photograph D-24: On East Bank View Looking Downstream Approximate Location of Proposed Ramp C5 Bridge



Photograph D-25: On East Bank View Looking Upstream Approximate Location of Proposed Ramp C5 Bridge

FRA-70/71 over Scioto River East Bank Under Bridges Erosion at Piers

I-70 / I-71 WEST INTERCHANGE BRIDGE REPLACEMENTS OVER THE SCIOTO RIVER OWNER: ODOT DISTRICT 6 BRIDGE WATERWAY HYDRAULIC and SCOUR ANALYSIS REPORT PROJECT 4A – STAGE 1 and PROJECT 6A – TS&L CLIENT: GPD GROUP PID NO. 77372: FRA-70-1321R & 1321A PID NO. 89464: FRA-70-1322C & 1323L & FRA-71-1503L APPENDIX D Page 6 of 20



Photograph D-26: View from West Bank Looking Eastward Approximate Location of Proposed Ramp C5 Bridge

Photograph D-27: On East Bank at Approximate Location of Photographs D-3 and D-4

Photograph D-28: On East Bank View Looking Downstream Approximate Location of Proposed Ramp C5 Bridge





Photograph D-29: On East Bank View Looking Downstream Approximate Location of Proposed Ramp C5 Bridge

Photograph D-30: On East Bank View Looking Upstream Approximate Location of Proposed Ramp C5 Bridge

FRA-70/71 over Scioto River East Bank Upstream

I-70 / I-71 WEST INTERCHANGE BRIDGE REPLACEMENTS over THE SCIOTO RIVER OWNER: ODOT DISTRICT 6 BRIDGE WATERWAY HYDRAULIC and SCOUR ANALYSIS REPORT PROJECT 4A – STAGE 1 and PROJECT 6A – TS&L CLIENT: GPD GROUP PID NO. 77372: FRA-70-1321R & 1321A PID NO. 89464: FRA-70-1322C & 1323L & FRA-71-1503L APPENDIX D Page 7 of 20

Photograph D-31: eam On East Bank Flap Gate on Storm Outlet O C5 Bridge Approximate Location of Proposed Ramp C5 Bridge







Photograph D-32: View from West Bank Looking Eastward Approximate Location of Proposed Ramp C5 Bridge

Photograph D-33: On East Bank at Approximate Location of Photographs D-3 and D-4

Photograph D-34: On East Bank View Looking Downstream Approximate Location of Proposed Ramp C5 Bridge





Photograph D-35: On East Bank View Looking Downstream Approximate Location of Proposed Ramp C5 Bridge

Photograph D-36: On East Bank View Looking Upstream Approximate Location of Proposed Ramp C5 Bridge

FRA-70/71 over Scioto River East Bank Upstream

I-70 / I-71 WEST INTERCHANGE BRIDGE REPLACEMENTS over THE SCIOTO RIVER OWNER: ODOT DISTRICT 6 BRIDGE WATERWAY HYDRAULIC and SCOUR ANALYSIS REPORT PROJECT 4A – STAGE 1 and PROJECT 6A – TS&L CLIENT: GPD GROUP PID NO. 77372: FRA-70-1321R & 1321A PID NO. 89464: FRA-70-1322C & 1323L & FRA-71-1503L APPENDIX D Page 8 of 20



Photograph D-37: View from West Bank Looking Eastward Approximate Location of Proposed Ramp C5 Bridge

Photograph D-38: On East Bank at Approximate Location of Photographs D-3 and D-4

Photograph D-39: On East Bank at Approximate Location of Photographs D-3 and D-4



Photograph D-40: On East Bank View Looking Downstream Approximate Location of Proposed Ramp C5 Bridge





Photograph D-41: On East Bank View Looking Upstream Approximate Location of Proposed Ramp C5 Bridge

Photograph D-42: On East Bank Flap Gate on Storm Outlet Approximate Location of Proposed Ramp C5 Bridge

FRA-70/71 over Scioto River East Bank Upstream – Bike Path – River Contraction

I-70 / I-71 WEST INTERCHANGE BRIDGE REPLACEMENTS over THE SCIOTO RIVER OWNER: ODOT DISTRICT 6 BRIDGE WATERWAY HYDRAULIC and SCOUR ANALYSIS REPORT PROJECT 4A – STAGE 1 and PROJECT 6A – TS&L CLIENT: GPD GROUP PID NO. 77372: FRA-70-1321R & 1321A PID NO. 89464: FRA-70-1322C & 1323L & FRA-71-1503L APPENDIX D Page 9 of 20



Photograph D-43: View from West Bank Looking Eastward Approximate Location of Proposed Ramp C5 Bridge

Photograph D-44: On East Bank at Approximate Location of Photographs D-3 and D-4

Photograph D-45: On East Bank at Approximate Location of Photographs D-3 and D-4

FRA-70/71 over Scioto River East Bank Upstream – Bike Path – River Contraction

I-70 / I-71 WEST INTERCHANGE BRIDGE REPLACEMENTS over THE SCIOTO RIVER OWNER: ODOT DISTRICT 6 BRIDGE WATERWAY HYDRAULIC and SCOUR ANALYSIS REPORT PROJECT 4A – STAGE 1 and PROJECT 6A – TS&L CLIENT: GPD GROUP PID NO. 77372: FRA-70-1321R & 1321A PID NO. 89464: FRA-70-1322C & 1323L & FRA-71-1503L APPENDIX D Page 10 of 20



Photograph D-46: On East Bank View Looking Downstream Approximate Location of Proposed Ramp C5 Bridge

Photograph D-47: On East Bank View Looking Upstream Approximate Location of Proposed Ramp C5 Bridge

Photograph D-48: On East Bank Flap Gate on Storm Outlet Approximate Location of Proposed Ramp C5 Bridge



Photograph D-49: View from West Bank Looking Eastward Approximate Location of Proposed Ramp C5 Bridge



Photograph D-50: On East Bank at Approximate Location of Photographs D-3 and D-4



Photograph D-51: On East Bank Flap Gate on Storm Outlet Approximate Location of Proposed Ramp C5

FRA-70/71 over Scioto River East Bank Upstream – Bike Path – River Contraction

I-70 / I-71 WEST INTERCHANGE BRIDGE REPLACEMENTS over THE SCIOTO RIVER OWNER: ODOT DISTRICT 6 BRIDGE WATERWAY HYDRAULIC and SCOUR ANALYSIS REPORT PROJECT 4A – STAGE 1 and PROJECT 6A – TS&L CLIENT: GPD GROUP PID NO. 77372: FRA-70-1321R & 1321A PID NO. 89464: FRA-70-1322C & 1323L & FRA-71-1503L APPENDIX D Page 11 of 20



Photograph D-52: View from West Bank Looking Eastward Approximate Location of Proposed Ramp C5 Bridge

Photograph D-53: On East Bank at Approximate Location of Photographs D-3 and D-4

Photograph D-54: On East Bank Flap Gate on Storm Outlet Approximate Location of Proposed Ramp C5 Bridge

FRA-70/71 over Scioto River East Bank Upstream – Overbank Wall Overflow

I-70 / I-71 WEST INTERCHANGE BRIDGE REPLACEMENTS over THE SCIOTO RIVER OWNER: ODOT DISTRICT 6 BRIDGE WATERWAY HYDRAULIC and SCOUR ANALYSIS REPORT PROJECT 4A – STAGE 1 and PROJECT 6A – TS&L CLIENT: GPD GROUP PID NO. 77372: FRA-70-1321R & 1321A PID NO. 89464: FRA-70-1322C & 1323L & FRA-71-1503L APPENDIX D Page 12 of 20



Photograph D-55: View from West Bank Looking Eastward Approximate Location of Proposed Ramp C5 Bridge

Photograph D-56: On East Bank at Approximate Location of Photographs D-3 and D-4

Photograph D-57: On East Bank Flap Gate on Storm Outlet Approximate Location of Proposed Ramp C5 Bridge



Photograph D-58: On East Bank View Looking Downstream Approximate Location of Proposed Ramp C5 Bridge

FRA-70/71 over Scioto River East Bank Upwnstream – Overbank – Overflow Path

I-70 / I-71 WEST INTERCHANGE BRIDGE REPLACEMENTS over THE SCIOTO RIVER OWNER: ODOT DISTRICT 6 BRIDGE WATERWAY HYDRAULIC and SCOUR ANALYSIS REPORT PROJECT 4A – STAGE 1 and PROJECT 6A – TS&L CLIENT: GPD GROUP PID NO. 77372: FRA-70-1321R & 1321A PID NO. 89464: FRA-70-1322C & 1323L & FRA-71-1503L APPENDIX D Page 13 of 20





Photograph D-59: View from West Bank Looking Eastward Approximate Location of Proposed Ramp C5 Bridge

Photograph D-60: On East Bank at Approximate Location of Photographs D-3 and D-4

FRA-70/71 over Scioto River West Bank Downstream

I-70 / I-71 WEST INTERCHANGE BRIDGE REPLACEMENTS over THE SCIOTO RIVER OWNER: ODOT DISTRICT 6 BRIDGE WATERWAY HYDRAULIC and SCOUR ANALYSIS REPORT PROJECT 4A – STAGE 1 and PROJECT 6A – TS&L CLIENT: GPD GROUP PID NO. 77372: FRA-70-1321R & 1321A PID NO. 89464: FRA-70-1322C & 1323L & FRA-71-1503L APPENDIX D Page 14 of 20





Photograph D-61: View from West Bank Looking Eastward Approximate Location of Proposed Ramp C5 Bridge

Photograph D-62: On East Bank at Approximate Location of Photographs D-3 and D-4



Photograph D-63: On East Bank Flap Gate on Storm Outlet Approximate Location of Proposed Ramp C5 Bridge



Photograph D-64: On East Bank View Looking Downstream Approximate Location of Proposed Ramp C5 Bridge



Photograph D-65: On East Bank View Looking Upstream Approximate Location of Proposed Ramp C5 Bridge

FRA-70/71 over Scioto River West Bank Under Bridges

I-70 / I-71 WEST INTERCHANGE BRIDGE REPLACEMENTS OVER THE SCIOTO RIVER OWNER: ODOT DISTRICT 6 BRIDGE WATERWAY HYDRAULIC and SCOUR ANALYSIS REPORT PROJECT 4A – STAGE 1 and PROJECT 6A – TS&L CLIENT: GPD GROUP PID NO. 77372: FRA-70-1321R & 1321A PID NO. 89464: FRA-70-1322C & 1323L & FRA-71-1503L APPENDIX D Page 15 of 20



Photograph D-66: On East Bank Flap Gate on Storm Outlet Approximate Location of Proposed Ramp C5 Bridge







Photograph D-67: View from West Bank Looking Eastward Approximate Location of Proposed Ramp C5 Bridge

Photograph D-68: On East Bank at Approximate Location of Photographs D-3 and D-4

On East Bank Flap Gate on Storm Outlet Approximate Location of Proposed Ramp C5 Bridge



Photograph D-70: **On East Bank View Looking Downstream** Approximate Location of Proposed Ramp C5 Bridge



Photograph D-71: **On East Bank View Looking Upstream** Approximate Location of Proposed Ramp C5 Bridge

FRA-70/71 over Scioto River West Bank Under Bridges

I-70 / I-71 WEST INTERCHANGE BRIDGE REPLACEMENTS over THE SCIOTO RIVER **OWNER: ODOT DISTRICT 6**

BRIDGE WATERWAY HYDRAULIC and SCOUR ANALYSIS REPORT PROJECT 4A - STAGE 1 and PROJECT 6A - TS&L CLIENT: GPD GROUP

PID NO. 77372: FRA-70-1321R & 1321A PID NO. 89464: FRA-70-1322C & 1323L & FRA-71-1503L APPENDIX D Page 16 of 20

Photograph D-69:



On East Bank Flap Gate on Storm Outlet Approximate Location of Proposed Ramp C5 Bridge



Photograph D-73: View from West Bank Looking Eastward Approximate Location of Proposed Ramp C5 Bridge



Photograph D-74: On East Bank at Approximate Location of Photographs D-3 and D-4

FRA-70/71 over Scioto River West Bank Under Bridges

I-70 / I-71 WEST INTERCHANGE BRIDGE REPLACEMENTS over THE SCIOTO RIVER OWNER: ODOT DISTRICT 6 BRIDGE WATERWAY HYDRAULIC and SCOUR ANALYSIS REPORT PROJECT 4A – STAGE 1 and PROJECT 6A – TS&L CLIENT: GPD GROUP PID NO. 77372: FRA-70-1321R & 1321A PID NO. 89464: FRA-70-1322C & 1323L & FRA-71-1503L APPENDIX D Page 17 of 20



Photograph D-75: View from West Bank Looking Eastward Approximate Location of Proposed Ramp C5 Bridge

Photograph D-76: On East Bank at Approximate Location of Photographs D-3 and D-4



Photograph D-77: On East Bank at Approximate Location of Photographs D-3 and D-4



Photograph D-78: On East Bank View Looking Downstream Approximate Location of Proposed Ramp C5 Bridge





Photograph D-79: On East Bank View Looking Upstream Approximate Location of Proposed Ramp C5 Bridge

FRA-70/71 over Scioto River West Bank Upstream

I-70 / I-71 WEST INTERCHANGE BRIDGE REPLACEMENTS over THE SCIOTO RIVER OWNER: ODOT DISTRICT 6 BRIDGE WATERWAY HYDRAULIC and SCOUR ANALYSIS REPORT PROJECT 4A – STAGE 1 and PROJECT 6A – TS&L CLIENT: GPD GROUP PID NO. 77372: FRA-70-1321R & 1321A PID NO. 89464: FRA-70-1322C & 1323L & FRA-71-1503L APPENDIX D Page 18 of 20

Photograph D-80:

On East Bank Flap Gate on Storm Outlet

Approximate Location of Proposed Ramp C5 Bridge



Photograph D-81: View from West Bank Looking Eastward Approximate Location of Proposed Ramp C5 Bridge

Photograph D-82: On East Bank at Approximate Location of Photographs D-3 and D-4

Photograph D-83: On East Bank at Approximate Location of Photographs D-3 and D-4



Photograph D-84: On East Bank View Looking Downstream Approximate Location of Proposed Ramp C5 Bridge

Photograph D-85: On East Bank View Looking Upstream Approximate Location of Proposed Ramp C5 Bridge

Photograph D-86: On East Bank Flap Gate on Storm Outlet Approximate Location of Proposed Ramp C5 Bridge

FRA-70/71 over Scioto River West Bank Upstream

I-70 / I-71 WEST INTERCHANGE BRIDGE REPLACEMENTS over THE SCIOTO RIVER OWNER: ODOT DISTRICT 6 BRIDGE WATERWAY HYDRAULIC and SCOUR ANALYSIS REPORT PROJECT 4A – STAGE 1 and PROJECT 6A – TS&L CLIENT: GPD GROUP PID NO. 77372: FRA-70-1321R & 1321A PID NO. 89464: FRA-70-1322C & 1323L & FRA-71-1503L APPENDIX D Page 19 of 20



Photograph D-87: View from West Bank Looking Eastward Approximate Location of Proposed Ramp C5 Bridge

Photograph D-88: On East Bank at Approximate Location of Photographs D-3 and D-4

Photograph D-89: On East Bank at Approximate Location of Photographs D-3 and D-4



Photograph D-90: On East Bank View Looking Downstream Approximate Location of Proposed Ramp C5 Bridge



Photograph D-91: On East Bank View Looking Upstream Approximate Location of Proposed Ramp C5 Bridge

FRA-70/71 over Scioto River West Bank Upstream

I-70 / I-71 WEST INTERCHANGE BRIDGE REPLACEMENTS over THE SCIOTO RIVER OWNER: ODOT DISTRICT 6 BRIDGE WATERWAY HYDRAULIC and SCOUR ANALYSIS REPORT PROJECT 4A – STAGE 1 and PROJECT 6A – TS&L CLIENT: GPD GROUP PID NO. 77372: FRA-70-1321R & 1321A PID NO. 89464: FRA-70-1322C & 1323L & FRA-71-1503L APPENDIX D Page 20 of 20