

# TRANSPORTATION PROJECT REPORT

## DRAFT DESIGN REPORT / DRAFT ENVIRONMENTAL IMPACT STATEMENT / DRAFT 4(f) EVALUATION

### APPENDIX E Structures Information

November 2016

PIN 5470.22  
NYS Route 198 (Scajaquada Expressway Corridor)  
Grant Street Interchange to Parkside Avenue Intersection  
City of Buffalo  
Erie County



ANDREW M. CUOMO  
Governor

Department of  
Transportation

MATTHEW J. DRISCOLL  
Commissioner



U.S. Department of Transportation  
Federal Highway Administration

**Exhibit 2.3.3.6 (1) - NYS Route 198 Structures Summary**

BIN	1039910	1039930	1039940	1039959	1039969	1039970	1039989	1039990	2260460	1047259
<b>Feature Carried</b>	Grant St.	Grant St. Ramp GF	Grant St. Ramp GE	Elmwood Ave. Ramp EC	Elmwood Ave.	Elmwood Ave. Ramp EK	NY Route 198	Pedestrian	Lincoln Parkway Ramp LJ	NY Route 198
Functional Classification	Urban Minor Arterial	Urban Principal Arterial Expressway	Urban Principal Arterial Expressway	Urban Principal Arterial Expressway	Urban Principal Arterial	Urban Principal Arterial Expressway	Urban Principal Arterial	Not Applicable	Urban Collector	Urban Principal Arterial Expressway
<b>Feature Crossed</b>	NY Route 198 & Scajaquada Creek	Scajaquada Creek	Scajaquada Creek	Scajaquada Creek	NY Route 198 & Scajaquada Creek	Scajaquada Creek	Scajaquada Creek	NY Route 198	Scajaquada Creek	Delaware Ave.
Functional Classification	Urban Principal Arterial Expressway	Not Applicable	Not Applicable	Not Applicable	Urban Principal Arterial Expressway	Not Applicable	Not Applicable	Urban Principal Arterial Expressway	Not Applicable	Urban Principal Arterial
<b>General Information</b>										
Year Built	1960	1960	1960	1960	Under Construction	1960	1960	1962	1900	1936
Year of Last Major Rehabilitation	2003	None	None	None	-	None	None	None	1964	2010
Owner	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	City of Buffalo	NYSDOT
Maintenance Responsibility	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	City of Buffalo	NYSDOT
<b>Structure Characteristics</b>										
Structure Type	Steel Multi-Girder	Reinf. Concrete Culvert	Reinf. Concrete Culvert	Steel Multi-Girder	Steel Multi-Girder	Steel Multi-Girder	Steel Multi-Girder	Steel Girder - Main Span Reinf. Concrete -Ramps	Steel Multi-Girder	Concrete Deck Arch - Filled Spandrel
Number of Spans (span length - ft (m))	2 spans @ 146.0 (44.501) 111.0 (33.833)	2 spans @ 24.24 (7.388) 24.24 (7.388)	2 spans @ 35.59 (11.456) 35.59 (11.456)	1 span @ 139.0 (42.367)	2 spans @ 140 (42.672) 140 (42.672)	2 spans @ 93.0 (28.346) 75.0 (22.860)	1 span @ 90.0 (27.432)	22 approach spans 1 main span @ 78.0 (23.774)	3 spans @ 35.0 (10.6) 35.0 (10.6) 35.0 (10.6)	2 spans @ 57.0 (17.374)
Deck	CIP Concrete / Epoxy Rebar	Not Applicable	Not Applicable	CIP Concrete / Uncoated Rebar	CIP Concrete / Epoxy Rebar	CIP Concrete / Uncoated Rebar	CIP Concrete / Uncoated Rebar	CIP Concrete / Uncoated Rebar	CIP Concrete / Uncoated Rebar	Not Applicable
Wearing Surface	Concrete	Asphalt	Asphalt	Microsilica Overlay	Concrete	Asphalt	Asphalt	Concrete	Asphalt Block	Asphalt
Raised Median on Bridge	No	No	No	Yes	No	No	Yes	No	No	Yes
Railing / Concrete Barrier	Concrete	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Concrete	Concrete
Utilities	Water Line, Electric, Fire Alarm Conduit	Electric	Electric	Electric	Waterline, Electric, Telephone	Electric	Electric	Electric	None	Electric
Lighting	Yes	None	None	Yes	Yes	Yes	Yes	Yes	None	Yes
<b>Structure Geometrics</b>										
Out-to-Out Width (ft (m))	70.58 (21.512)	58.0 (17.678)	80.5 (24.54)	42.33 (12.903)	73.17 (22.302)	25.33 (7.722)	87.33 (26.619)	11.67 (3.557)	80.08 (24.409)	73.33 (22.352)
Curb-to-Curb Width (ft (m))	52.00 (15.85)	39.0 (11.89)	32.0 (9.754)	33.0 (10.058)	52 (15.85)	20.0 (6.096)	78.00 (23.774)	9.67 (2.947)	53.0 (16.154)	56.0 (17.069)
NB / WB Lanes on Bridge	2	1	1	1	2	1	3	Not Applicable	0	2
SB / EB Lanes on Bridge	2	0	0	1	2	0	2	Not Applicable	2	2
Lane Width (ft (m))	2 @ 12.0 (3.66) 2 @ 10.0 (3.05)	1 @ 16.0 (4.877)	1 @ 15.0 (4.572)	2 @ 14.5 (4.42)	4 @ 13.0 (3.962)	1 @ 14.0 (4.267)	4 @ 13.0 (3.96) 1 @ 12.0 (3.66)	Not Applicable	2 @ 13.5 (4.11)	4 @ 13.0 (3.962)
Shoulder Width (ft (m))	2 @ 1.0 (0.3)	2 @ 11.5 (3.505)	2 @ 11.5 (3.505)	4 @ 1.0 (0.30)	None	2 @ 3.0 (0.914)	2 @ 7.0 (2.134)	Not Applicable	2 @ 13.0 (3.96)	None - Concrete Barrier
Sidewalk Width (ft (m))	2 @ 9.28 (2.83)	None	None	None	12.63 (3.850) @ West Fascia 9.00 (2.746) @ East Fascia	None	None	Not Applicable	2 @ 13.54 (4.128)	2 @ 5.50 (1.676)
Median Width (ft (m))	6.0 (1.83)	None	None	3.0 (0.914)	None	None	4.0 (1.219)	Not Applicable	None	4.0 (1.219)
Bridge Length (ft (m))	261.7 (79.8)	48.5 (14.8)	75.2 (22.9)	144.0 (43.9)	282.0 (85.9)	177.0 (53.9)	94.5 (28.8)	612.0 (186.5)	108.0 (32.9)	229.0 (69.8)
Bridge Skew (deg.)	17.76	20.18	52.75	34	33.57	55	6.3	0	0	0
Area of Bridge Deck (ft <sup>2</sup> (m <sup>2</sup> ))	18480 (1717)	1807 (168)	3700 (344)	5942 (552)	20621 (1916)	4478 (416)	8200 (762)	8500 (790)	8700 (808)	16946 (1574.3)
Min. Vertical Clearance Under (ft (m))	14.44 (4.40) 9.67 (2.95) @ Bike path	Not Applicable	Not Applicable	Not Applicable	14.82 (4.52) 10.07 (3.07) @ Bike path	7.58 (2.31) @ Bike path	Not Applicable	14.21 (4.33)	Not Applicable	13.25 (4.04)
Geometrics that do not meet Current Standards <sup>1</sup>	Lane Width < 11' (3.3 m) min.	None	None	None	None	Bike Path Vertical Clearance < 8.0' (2.5 m) min.		Vertical Clearance < 15.0' (4.6 m) min.	None	Vertical Clearance < 14.0' (4.27 m) min.
<b>Structural Condition</b>										
Restrictions	None	None	None	None	None	None	None	Not Applicable	None	None
Scour Issues	None	None	None	None	None	None	None	Not Applicable	None	Not Applicable
NYSDOT Conditional Rating (Year) <sup>2</sup>	6.500 (2015)	5.233 (2014)	5.186 (2014)	4.839 (2014)	-	5.031 (2014)	5.075 (2014)	5.082 (2014)	5.280 (2014)	5.622 (2014)
NYSDOT General Recommendation (Year) <sup>3</sup>	7 (2015)	5 (2014)	5 (2014)	5 (2014)	-	5 (2014)	5 (2014)	5 (2014)	5 (2014)	6 (2014)
Elements Rated 3 and Below <sup>4</sup>	Scuppers, Lighting, Curbs, and Sign Structures	Lighting	Lighting	Lighting	-	Bearings, Pedestals, and Scuppers	Lighting	None	None	Median
FHWA Sufficiency Rating (Year) <sup>5</sup>	74.1 (2015)	96.7 (2015)	86.0 (2015)	82.7 (2015)	-	92.8 (2015)	98.2 (2015)	Not Applicable	98.8 (2015)	52.1 (2015)
<b>Maintenance History</b>	Superstructure, Pier 2 Replaced Abutments Rehab. 2003	Safety Improvements 1974	Safety Improvements 1974 & 1978	Abut. Repairs, New Median Barrier and Guide Railing, Armored Joint, Micro-silica Overlay 1995	-	New Wearing Surface, New Joints and Bearing Rehab. 1988	New Wearing Surface, Joints 1995	Safety Improvements 1974 Bridge Painting 1975	New Superstructure 1964 New Wearing Surface, Joints, Curb and Steel Painting 2014	Extend Arch, New Sidewalks, New Concrete Barrier, Reset Stone Masonry and Stairway Repairs 1984 Reset Stone Masonry, New Sidewalks and Drainage 2010
<b>Load Rating</b>										
Inventory Rating	HS 44	HS 36	HS 36	HS 60	HS 34	HS 38	HS 29	Not Applicable	HS 53	HS 51
Operating Rating	HS 74	HS 85	HS 88	HS 101	HS 57	HS 63	HS 63	Not Applicable	HS 89	HS 83
<b>Substructure</b>										
Abutment Type	Stub Cantilever	Not Applicable	Not Applicable	Stub Cantilever	Integral	Stub Cantilever	Solid Cantilever	Not Applicable	Concrete Gravity	Concrete - Arch
Pier Type	Concrete, Rigid Frame	Not Applicable	Not Applicable	Not Applicable	Solid Concrete	Solid Concrete	Not Applicable	Concrete - Rigid Frame & Solid	Solid Stone	Concrete - Arch
Foundation	Steel Pile	Steel Pile	Steel Pile	Steel Pile	Steel Pile	Steel Pile	Steel Pile	Concrete CIP	Timber Pile	Timber Pile
<b>Structural Details</b>										
Fracture Critical Span	No	No	No	No	No	No	No	Yes - Main Span	No	No
Fatigue Resistance	C Details	Not Applicable	Not Applicable	C Details	C Details	D, E and E' Details	D, E and E' Details	D, E and E' Details	D, E and E' Details	Not Applicable
Bearings	Elastomeric	Not Applicable	Not Applicable	Steel Rockers	Elastomeric	Steel Rockers	Steel Rockers	Steel Slider - Main Span	Steel Rocker	None
<b>Other</b>										
Historically Significant	No	No	No	No	No	No	No	No	Yes	Yes

**Notes:**  
 1. NY Route 198 and associated ramps are assumed to be a "Urban Arterial" per NYSDOT Highway Design Manual when evaluating geometric standards.  
 2. The NYSDOT Condition Rating is a weighted average of selected bridge element ratings. The ratings reflect the bridge's ability to function structurally, rated on a scale of 1 through 7. Structures rated less than 5 are defined as deficient and are eligible for replacement.  
 3. The NYSDOT General Recommendation is an assessment of the bridge's overall condition, rated on a scale of 1 through 7.  
 4. Elements rated 3 are seriously deteriorated or not functioning as originally designed.  
 5. The FHWA Sufficiency Rating is an average of the following factors: structural adequacy, safety, serviceability, functional obsolescence and essentiality to the public.  
 A Sufficiency Rating of 80 or less qualifies for rehabilitation and 50 or less qualifies for replacement as long as the structure has not had federally funded work performed within the last 10 years.

**PIN 5470.22**

NYS Route 198 (Scajaquada Expressway Corridor)

Bridge Summary

October 2016

**Exhibit 3.3.3.6 - NYS Route 198 Proposed Structures Summary**

	BIN	DESCRIPTION	BRIDGE OPTIONS	COST	ISSUES / COMMENTS
Stage 1 (Delaware Ave to Parkside Ave Section)	1047259	NYS Route 198 over Delaware Avenue (NYS Route 384)	Existing bridge to remain. New highway roadway over bridge with removal of existing median barrier. New concrete barrier at curb line.	\$800,000	New concrete roadway slab, railings and sidewalks.
	1039959	Elmwood Ave Ramp EC Connector over Scajaquada Creek	Replace bridge with 167 ft (51 m) single span steel girder bridge founded on steel bearing piles.	\$5,100,000	Assume integral abutments located behind existing abutment, approximate 180' span. Requires long retaining wall in NW quadrant.
Stage 2 (Elmwood Ave Section)	1039969	Elmwood Avenue over NYS Route 198 & Scajaquada Creek	Bridge to be replaced under a separate NYSDOT contract (PIN 5470.30).	\$0	
	1039970	Elmwood Ave Ramp EK over Scajaquada Creek	Remove existing bridge.	\$250,000	
	1039989	NYS Route 198 over Scajaquada Creek	Existing girders to remain. Replace concrete deck, new bearings, repair substructure concrete and paint bridge.	\$1,950,000	Per 2014 Inspection Report - Bearings, Pedestals & Seats rated 4, Structural Deck rated 5, Curbs, Sidewalks & Railing rated 5, Primary Members rated 6, Paint rated 4.
	1039990	Pedestrian Bridge over NYS Route 198	Paint existing steel section over Route 198.	\$140,000	Structurally adequate, 2014 inspection report general recommendation rates the bridge 5 (out of 7). Approach spans require isolated and minor structural concrete repairs. Recommend painting the steel section of the bridge spanning Route 198.
	2260460	Lincoln Parkway Ramp LJ over Scajaquada Creek	Existing bridge to remain and restriped to accommodate additional parking. Rehabilitate existing concrete substructures. Existing concrete arch fascia and ornamental railing to remain.	\$1,060,000	
	PROPOSED	Pedestrian Bridge over Scajaquada Creek	Construct 100 ft (30 m) single span pedestrian bridge founded on piles.	\$570,000	Carries 10' clear shared use path.
	1039910	Grant Street over NYS Route 198 & Scajaquada Creek	No bridge modifications are anticipated.	\$0	Based on 2015 inspection report, bridge general recommendation is 7 (out of a possible 7). Last major rehab in completed in 2003.
Stage 3 (Grant Street Section)	PROPOSED	Grant Street Connector to Westbound NYS Route 198 over Scajaquada Creek	Construct 104 ft (32 m) single span steel flared girder crossing Scajaquada Creek with a shared use path underpass.	\$2,800,000	Steel girder spacing to vary to provide for varying out-to-out deck width.
	1039930	Grant Street Ramp GF over Scajaquada Creek	Remove existing bridge.	\$200,000	Cost is for the removal of existing concrete structure top slab and walls. Assume bottom slab to remain in place.
	1039940	Grant Street Ramp GE over Scajaquada Creek	Remove existing bridge.	\$230,000	Cost is for the removal of existing concrete structure top slab and walls. Assume bottom slab to remain in place.
	PROPOSED	Pedestrian Bridge over Scajaquada Creek	Construct 100 ft (30 m) single span pedestrian bridge founded on piles.	\$580,000	Carries 10' clear shared use path.

<b>Bridge Cost Summary</b>	<b>Round To:</b>
Stage 1=	\$800,000
Stage 2=	\$9,100,000
Stage 3=	\$3,900,000
TOTAL	\$13,800,000