#### **OKANOGAN COUNTY COMMISSIONERS**

#### **RESOLUTION 95 2020**

WHEREAS, pursuant to RCW 36.81.121, the Legislative Authority of each County, with the advice and assistance of the County Road Engineer, and pursuant to one or more public hearings thereon, shall prepare and adopt a comprehensive program including proposed road, bridge, path and trail construction projects, and any other specified capital outlays for the following six-year period, and;

WHEREAS, the current Priority Programming Array and Bridge Inspection Report have been provided along with the proposed Six-Year Transportation Improvement Program to aid in its evaluation, and;

**WHEREAS,** the proposed program is based on a realistic assessment of available funding for the program period, and;

WHEREAS, the proposed program is consistent with the goals and objectives of the Transportation Element of the Okanogan County Comprehensive Plan and the Transportation Element is hereby updated to reflect this current adopted Six Year Transportation Improvement Program, and;

WHEREAS, a public hearing has been held to provide input to the proposed program;

**NOW, THEREFORE BE IT RESOLVED**, that the attached Six-Year Transportation Improvement Program for the years 2021 to 2026 is hereby adopted by Okanogan County as required by R.C.W. 36.81.121.

DATED at Okanogan, Washington this 4th day of August, 2020.

BOARD OF COUNTY COMMISSIONERS OKANOGAN, WASHINGTON

Jim DeTro, Chairman

alena Johns, Clerk of the Board

ATTEST

Chris Branch, Vice Chairman

Andy Hover, Member



Agency: Okanogan Co.
County: Okanogan

MPO/RTPO: OCOG RTPO N Inside Y Outside

Functional Class	y Nur	A. PIN/Project No. C. Project Title D. Road Name or Number E. Begin & End Termini F. Project Description	B. STIP ID G. Structure ID	Heari	Adopted	Amendment	Resolution No.	Improvement Type	Utility Codes	Total Length	Environmental Type	RW Required
07	1		3683-02					11	PTW	0.170	CE	No
		North Star Park City Bridge B-4										
		4.88 to 5.05										
		Replace failing bridge structure with a new structure, roadway profile modification to meet hydrologic and structural standards, and shoulder widening to meet current roadway standards for the portion of roadway impacted by the structure replacement. Clearing, grubbing, and revegetation will be included as necessary.										

Funding	unding												
Status	Phase	Phase Start Year (YYYY)	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total Funds					
S	CN	2021	BR	1,110,000		0	0	1,110,000					
	-		Totals	1,110,000		0	0	1,110,000					

Expenditure Schedule	Expenditure Schedule										
Phase	1st	2nd	3rd	4th	5th & 6th						
CN	1,110,000	0	0	0	0						
Totals	1,110,000	0	0	0	0						



Agency: Okanogan Co.
County: Okanogan

MPO/RTPO: OCOG RTPO N Inside Y Outside

Functional Class	y Numk	A. PIN/Project No.  C. Project Title  D. Road Name or Number  E. Begin & End Termini  F. Project Description  B. STIP ID  B. STIP ID  C. STIP ID  B. STIP ID  C. STIP ID  C. STIP ID  B. STIP ID  C. S	Heari	Adopted	Amendment	Resolution No.	Improvement Type	Utility Codes	Total Length	Environmental Type	RW Required
08	2	9221-04					06		0.150	CE	No
		Salmon Creek Road Drainage									
		9221									
		2.950 to 3.10									
		Replace existing culvert.									

Funding	unding												
Status	Phase	Phase Start Year (YYYY)	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total Funds					
S	PE	2021		0	CRAB	54,000	6,000	60,000					
S	CN	2023		0	CRAB	695,700	77,300	773,000					
			Totals	0		749,700	83,300	833,000					

Expenditure Schedule	Expenditure Schedule										
Phase	1st	2nd	3rd 4th		5th & 6th						
PE	60,000	0	0	0	0						
CN	0	0	773,000	0	0						
Totals	60,000	0	773,000	0	0						



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County: Okanogan

MPO/RTPO: OCOG RTPO N Inside Y Outside

Functional Class	y Numb	A. PIN/Project No. C. Project Title D. Road Name or Number E. Begin & End Termini F. Project Description	B. STIP ID G. Structure ID	Heari	Adopted	Amendment	Resolution No.	Improvement Type	Utility Codes	Total Length	Environmental Type	RW Required
05	3	/ E241(011)	9155(1)					06	PTW	2.250	CE	Yes
		Old 97 (Driskel Rd to Verestar Rd)										ı l
		9155										1
		MP 1.91 to MP 4.16										
		Minor realignment, widening, grading, drainage, ballast, top course and HMA or BST. Guardrail may be necessary on short grade section.										

Funding	unding												
Status	Phase	Phase Start Year (YYYY)	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total Funds					
S	CN	2021	STP(R)	978,000	CRAB	1,350,000	0	2,328,000					
			Totals	978,000		1,350,000	0	2,328,000					

Expenditure Schedule	Expenditure Schedule										
Phase	1st	2nd	3rd	4th	5th & 6th						
CN	2,328,000	0	0	0	0						
Totals	2,328,000	0	0	0	0						



Agency: Okanogan Co.
County: Okanogan

MPO/RTPO: OCOG RTPO N Inside Y Outside

Functional Class	y Numb	A. PIN/Project No.  C. Project Title  D. Road Name or Number  E. Begin & End Termini  F. Project Description  B. STIP ID  B. STIP ID  C. STIP ID  B. STIP ID  C. S	Hearii	Adopted	Amendment	Resolution No.	Improvement Type	Utility Codes	Total Length	Environmental Type	RW Required
07	4	STP - P2					05			CE	No
		Okanogan County Wide Pavement Preservation									ı
											ı
		varies to varies									i I
		Crack Seal as needed, Pre-Level as needed, Chip Seal.									

Funding	unding											
Status	Phase	Phase Start Year (YYYY)	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total Funds				
Р	PE	2022	STP(R)	25,000		0	3,902	28,902				
Р	CN	2023	STP(R)	500,000		0	78,035	578,035				
			Totals	525,000		0	81,937	606,937				

Expenditure Schedule	Expenditure Schedule									
Phase	1st	2nd	3rd	4th	5th & 6th					
PE	0	28,902	0	0	0					
CN	0	0	578,035	0	0					
Totals	0	28,902	578,035	0	0					



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Functional Class	y Numb	A. PIN/Project No. C. Project Title D. Road Name or Number E. Begin & End Termini F. Project Description	B. STIP ID G. Structure ID	Heari	Adopted	Amendment	Resolution No.	Improvement Type	Utility Codes	Total Length	Environmental Type	RW Required
05	5		9155-20					04	PTW	1.200	CE	No
		Old 97 (Verestar to Plata Road)										
		9155										
		4.15 to 5.35										
		Minor Alignment Changes, rebuild, resurface to all weather road and install guardrail.										

Funding	unding												
Status	Phase	Phase Start Year (YYYY)	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total Funds					
S	PE	2021		0	CRAB	126,000	14,000	140,000					
S	CN	2024		0	CRAB	1,674,000	186,000	1,860,000					
			Totals	0		1,800,000	200,000	2,000,000					

Expenditure Schedule	Expenditure Schedule										
Phase	1st	2nd	3rd	4th	5th & 6th						
PE	140,000	0	0	0	0						
CN	0	0	0	1,860,000	0						
Totals	140,000	0	0	1,860,000	0						



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MPO/RTPO: OCOG RTPO N Inside Y Outside

Functional Class	y Numb	A. PIN/Project No. C. Project Title D. Road Name or Number E. Begin & End Termini F. Project Description	B. STIP ID G. Structure ID	Heari	Adopted	Amendment	Resolution No.	Improvement Type	Utility Codes	Total Length	Environmental Type	RW Required
07	6	/ 9437(001)	9437(1)					06	PTW	1.290	CE	Yes
		Highway 7 (Grillo Section)										1
		9437										1
		MP 13.40 to MP 14.69										
		Minor realignment, widening, grading, drainage, ballast, top course and BST. Guardrail installed where warranted.										

Funding	·unding											
Status	Phase	Phase Start Year (YYYY)	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total Funds				
Р	PE	2023		0	CRAB	231,750	25,750	257,500				
Р	RW	2024		0	CRAB	154,125	17,125	171,250				
Р	CN	2025		0	CRAB	1,117,125	124,125	1,241,250				
			Totals	0		1,503,000	167,000	1,670,000				

Expenditure Schedule											
Phase	1st	2nd	3rd	4th	5th & 6th						
PE	0	0	257,500	0	0						
RW	0	0	0	171,250	0						
CN	0	0	0	0	1,241,250						
Totals	0	0	257,500	171,250	1,241,250						



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Functional Class	y Numk	A. PIN/Project No. C. Project Title D. Road Name or Number E. Begin & End Termini F. Project Description	B. STIP ID G. Structure ID	Heari	Adopted	Amendment	Resolution No.	Improvement Type	Utility Codes	Total Length	Environmental Type	RW Required
07	7		2781					06	CPTW	1.490	CE	Yes
		Robinson Canyon (Nichols Rd to Omak Airport)										
		2781										
		MP 1.60 to MP 3.09										
		Minor Realignment, widening, grading, drainage, ballast, top course and BST or HMA.										

Funding	<sup>2</sup> unding												
Status	Phase	Phase Start Year (YYYY)	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total Funds					
Р	PE	2021		0	CRAB	180,000	20,000	200,000					
Р	RW	2022		0	CRAB	108,000	12,000	120,000					
Р	CN	2023		0	CRAB	1,350,000	150,000	1,500,000					
			Totals	0		1,638,000	182,000	1,820,000					

Expenditure Schedule											
Phase	1st	2nd	3rd	4th	5th & 6th						
PE	200,000	0	0	0	0						
RW	0	120,000	0	0	0						
CN	0	0	1,500,000	0	0						
Totals	200,000	120,000	1,500,000	0	0						



Agency: Okanogan Co.
County: Okanogan

MPO/RTPO: OCOG RTPO N Inside Y Outside

Functional Class	y Numb	C. Project Title D. Road Name or Number E. Begin & End Termini	3. STIP ID	Hearing	Adopted	Amendment	Resolution No.	Improvement Type	Utility Codes	Total Length	Environmental Type	RW Required
07	8		2867					06	CPTW	2.270	CE	Yes
		Old Riverside Hwy (Omak City Limits to Airport Rd)										.
		2867										.
		MP 0.23 to MP 2.50										1
		Minor realignment, widening, grading, drainage, ballast, top course and BST.										1

Funding	unding											
Status	Phase	Phase Start Year (YYYY)	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total Funds				
Р	PE	2022		0	CRAB	324,000	51,000	375,000				
Р	RW	2022		0	CRAB	216,000	34,000	250,000				
Р	CN	2023		0	CRAB	1,622,000	253,000	1,875,000				
			Totals	0		2,162,000	338,000	2,500,000				

Expenditure Schedule											
Phase	1st	2nd	3rd	4th	5th & 6th						
PE	0	375,000	0	0	0						
RW	0	250,000	0	0	0						
CN	0	0	1,875,000	0	0						
Totals	0	625,000	1,875,000	0	0						



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Functional Class	y Numb	A. PIN/Project No. C. Project Title D. Road Name or Number E. Begin & End Termini F. Project Description	B. STIP ID G. Structure ID	Heari	Adopted	Amendment	Resolution No.	Improvement Type	Utility Codes	Total Length	Environmental Type	RW Requ
07	9	/ 2856(000)	2856					06	PTW	1.010	CE	Yes
		Omak Airport Rd (Airport to Old Riverside Hwy)										1 1
		2856										1 1
		MP 0.00 to MP 1.01										1 1
		Minor realignment, widening, grading, drainage, ballast, top course and BST. May need guardrail on short grade section.										

Funding	inding											
Status	Phase	Phase Start Year (YYYY)	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total Funds				
Р	PE	2021		0	CRAB	135,000	15,000	150,000				
Р	RW	2022		0	CRAB	90,000	10,000	100,000				
Р	CN	2024		0	CRAB	990,000	110,000	1,100,000				
	7		Totals	0		1,215,000	135,000	1,350,000				

Expenditure Schedule										
Phase	1st	2nd	3rd	4th	5th & 6th					
PE	135,000	0	0	0	0					
RW	0	90,000	0	0	0					
CN	0	0	0	1,100,000	0					
Totals	135,000	90,000	0	1,100,000	0					



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07	10	/ STPR(000)	9437(2)					06	PTW	1.700	CE	Yes
		Highway 7 (SR 97 to MP 2.15)										
		9437										
		MP 0.00 to MP 1.70										
		Minor realignment, widening, gradeing, drainage, ballast, top course and BST.										

Funding	unding											
Status	Phase	Phase Start Year (YYYY)	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total Funds				
Р	PE	2021		0	CRAB	225,000	25,000	250,000				
Р	RW	2022		0	CRAB	118,800	13,200	132,000				
Р	CN	2023		0	CRAB	2,070,000	230,000	2,300,000				
			Totals	0		2,413,800	268,200	2,682,000				

Expenditure Schedule											
Phase	1st	2nd	3rd	4th	5th & 6th						
PE	250,000	0	0	0	0						
RW	0	132,000	0	0	0						
CN	0	0	2,300,000	0	0						
Totals	250,000	132,000	2,300,000	0	0						



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Functional Class	y Numb	A. PIN/Project No. C. Project Title D. Road Name or Number E. Begin & End Termini F. Project Description	B. STIP ID	Heari	Adopted	Amendment	Resolution No.	Improvement Type	Utility Codes	Total Length	Environmental Type	RW Required
07	11		9309-13					04	PT	1.200	CE	Yes
		Cameron Lake Road 3R										
		9309										
		3.30 to 4.50										
		Realigned and widen road with HMA or BST, drainage and safety improvements.										

Funding								
Status	Phase	Phase Start Year (YYYY)	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total Funds
S	RW	2021		0	CRAB	55,800	6,200	62,000
S	CN	2022		0	CRAB	1,269,200	141,022	1,410,222
			Totals	0		1,325,000	147,222	1,472,222

Expenditure Schedule	Expenditure Schedule										
Phase	1st	2nd	3rd	4th	5th & 6th						
RW	62,000	0	0	0	0						
CN	0	0	1,410,222	0	0						
Totals	62,000	0	1,410,222	0	0						



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08	12		WA-11443					04	OPT	1.340	CE	Yes
		Rodeo Trail (Fairgrounds Section)										
		3175										
		0.960 to 2.30										
		Reconstruct surface lanes and shoulder widths to limit seasonal weight restrictions.										

Funding	nding											
Status	Phase	Phase Start Year (YYYY)	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total Funds				
Р	PE	2021	STP(R)	142,725		0	22,275	165,000				
Р	RW	2022	STP(R)	86,500		0	13,500	100,000				
Р	CN	2023	STP(R)	1,427,250		0	222,750	1,650,000				
			Totals	1,656,475		0	258,525	1,915,000				

Expenditure Schedule											
Phase	1st	2nd	3rd	4th	5th & 6th						
PE	165,000	0	0	0	0						
RW	0	100,000	0	0	0						
CN	0	0	1,650,000	0	0						
Totals	165,000	100,000	1,650,000	0	0						



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00	13		GDRAIL B					21	PT		CE	No
		County Wide Guardrail Safety Project B										ı l
		varies										ı l
		varies to varies										ı l
		County wide safety project for guardrail installation at key locations to protect over embankment hazard. Work will include shoulder stabilization and guardrail installation.										

Funding	unding												
Status	Phase	Phase Start Year (YYYY)	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total Funds					
S	CN	2021	HSIP	408,000		0	0	408,000					
			Totals	408,000	_	0	0	408,000					

Expenditure Schedule	Expenditure Schedule										
Phase	1st	2nd	3rd	4th	5th & 6th						
CN	408,000	0	0	0	0						
Totals	408,000	0	0	0	0						



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Functional Class	y Numk	A. PIN/Project No.  C. Project Title  D. Road Name or Number  E. Begin & End Termini  F. Project Description  B. STIP ID  G. S	Hearii	Adopted	Amendment	Resolution No.	Improvement Type	Utility Codes	Total Length	Environmental Type	RW Requir
00	14	BGRAIL FIT					21	PT		CE	No
		Bridge Rail Retrofit									ı
		Varies									ı
		Varies to Varies									ı
		Retrofit Bridge Rail Varies									

Funding	unding												
Status	Phase	Phase Start Year (YYYY)	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total Funds					
Р	PE	2021	HSIP	51,900		0	8,100	60,000					
Р	CN	2022	HSIP	651,146		0	0	651,146					
			Totals	703,046		0	8,100	711,146					

Expenditure Schedule					
Phase	1st	2nd	3rd	4th	5th & 6th
PE	519,000	0	0	0	0
CN	0	550,978	0	0	0
Totals	519,000	550,978	0	0	0



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08	15		9140-07					03	PT	0.150	CE	Yes
		Mazama Intersection										
		Lost River Rd										
		0.35 to 0.50										
		Alignment, Base Course, Top Course, HMA or BST Asphalt, Stripe and Sign.										

Funding	ınding											
Status	Phase	Phase Start Year (YYYY)	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total Funds				
Р	PE	2021	STP(R)	47,575		0	7,425	55,000				
Р	RW	2022	STP(R)	12,975		0	2,025	15,000				
Р	CN	2023	STP(R)	173,000		0	27,000	200,000				
			Totals	233,550		0	36,450	270,000				

Expenditure Schedule											
Phase	1st	2nd	3rd	4th	5th & 6th						
PE	55,000	0	0	0	0						
RW	0	15,000	0	0	0						
CN	0	0	200,000	0	0						
Totals	55,000	15,000	200,000	0	0						



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07	16		9437-07					06	PTW	1.280	CE	No
		Highway 7 (Early Sunrise Section)										
		9437										
		2.15 to 3.43										
		Minor widening, prelevel, chipseal and some safety improvements.										

Funding	unding												
Status	Phase	Phase Start Year (YYYY)	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total Funds					
Р	PE	2021		0	CRAB	30,000	3,000	33,000					
Р	CN	2023		0	CRAB	510,000	51,000	561,000					
			Totals	0		540,000	54,000	594,000					

Expenditure Schedule											
Phase	4th	5th & 6th									
PE	33,000	0	0	0	0						
CN	0	0	753,000	0	0						
Totals	33,000	0	753,000	0	0						



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07	17		9425-26					04	PTW	1.250	CE	Yes
		Loomis Oroville Road										
		9425										
		6.00 to 7.25										
		Minor realignment, widening, grading, ballast, top course, and HMA or BST.										

Funding	funding											
Status	Phase	Phase Start Year (YYYY)	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total Funds				
Р	PE	2021		0	CRAB	126,000	14,000	140,000				
Р	RW	2022		0	CRAB	22,500	2,500	25,000				
Р	CN	2024		0	CRAB	1,651,500	183,500	1,835,000				
			Totals	0		1,800,000	200,000	2,000,000				

Expenditure Schedule											
Phase	1st	2nd	3rd	4th	5th & 6th						
PE	140,000	0	0	0	0						
RW	0	25,000	0	0	0						
CN	0	0	0	1,835,000	0						
Totals	140,000	25,000	0	1,835,000	0						



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Functional Class	y Numb	A. PIN/Project No. C. Project Title D. Road Name or Number E. Begin & End Termini F. Project Description	B. STIP ID G. Structure ID	Heari	Adopted	Amendment	Resolution No.	Improvement Type	Utility Codes	Total Length	Environmental Type	RW Required
00	18		WA-12029					21	PTW		CE	No
		Countywide Speed Limit and Striping Study										1 1
		various										1 1
		various to various										1 1
		Evaluate and update posted speed limits. Evaluate and update pavement marking policy and install additional pavement markings.										

Funding								
Status	Phase	Phase Start Year (YYYY)	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total Funds
S	CN	2021	HSIP	57,000		0	0	57,000
			Totals	57,000		0	0	57,000

Expenditure Schedule											
Phase	1st	2nd	3rd	4th	5th & 6th						
CN	0	57,000	0	0	0						
Totals	0	57,000	0	0	0						



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County: Okanogan

MPO/RTPO: OCOG RTPO N Inside Y Outside

Functional Class	N N	A. PIN/Project No. C. Project Title D. Road Name or Number E. Begin & End Termini F. Project Description	B. STIP ID G. Structure ID	Heari	Adopted	Amendment	Resolution No.	Improvement Type	Utility Codes	Total Length	Environmental Type	RW Required
05	19		WA-12937					04	PTW	0.380	CE	No
		Loomis Oroville Road Drainage										
		94250										
		0.280 to 0.660										.
		Replace 3 Old deteriorated culverts with approximate 10' span culverts. Guardrail modifications maybe required to accommodate the culverts.										

Funding	Funding												
Status	Phase	Phase Start Year (YYYY)	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total Funds					
Р	PE	2021		0	CRAB	45,000	5,000	50,000					
Р	CN	2024		0	CRAB	315,000	35,000	350,000					
			Totals	0		360,000	40,000	400,000					

Expenditure Schedule											
Phase	1st	2nd	3rd	4th	5th & 6th						
PE	500,000	0	0	0	0						
CN	0	0	0	350,000	0						
Totals	500,000	0	0	350,000	0						



Agency: Okanogan Co.
County: Okanogan

MPO/RTPO: OCOG RTPO N Inside Y Outside

Functional Class	y Numb	A. PIN/Project No. C. Project Title D. Road Name or Number E. Begin & End Termini F. Project Description	B. STIP ID G. Structure ID	Heari	Adopted	Amendment	Resolution No.	Improvement Type	Utility Codes	Total Length	Environmental Type	RW Required
07	20		WA-12938					05	PTW	1.500	CE	No
		Old 97 - 2R 5.35 - 6.85										.
		9155										.
		5.35 to 6.85										1
		Minor realignment, widening, gradeing, drainage, ballast, top course and BST.										1

Funding	Funding												
Status	Phase	Phase Start Year (YYYY)	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total Funds					
Р	PE	2021		0	CRAB	118,800	13,200	132,000					
Р	CN	2024		0	CRAB	1,107,900	123,100	1,231,000					
			Totals	0		1,226,700	136,300	1,363,000					

Expenditure Schedule											
Phase	1st	2nd	3rd	4th	5th & 6th						
PE	132,000	0	0	0	0						
CN	0	0	0	1,231,000	0						
Totals	132,000	0	0	1,231,000	0						



Agency: Okanogan Co.
County: Okanogan

MPO/RTPO: OCOG RTPO N Inside Y Outside

Functional Class	y Numb	A. PIN/Project No. C. Project Title D. Road Name or Number E. Begin & End Termini F. Project Description	B. STIP ID G. Structure ID	Heari	Adopted	Amendment	Resolution No.	Improvement Type	Utility Codes	Total Length	Environmental Type	RW Required
07	21		WA-12940					04	PTW	1.420	CE	No
		Old 97 3R 6.85 - 8.27										
		9155										
		6.85 to 8.27										
		Minor realignment within existing right of way, widening, grading, drainage, ballast, top course and HMA or BST. Guardrail may be necessary on short grade section.										

Funding	unding											
Status	Phase	Phase Start Year (YYYY)	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total Funds				
Р	PE	2022		0	CRAB	168,300	18,700	187,000				
Р	CN	2024		0	CRAB	2,345,400	261,000	2,606,400				
			Totals	0		2,513,700	279,700	2,793,400				

Expenditure Schedule											
Phase	1st	2nd	3rd	4th	5th & 6th						
PE	0	187,000	0	0	0						
CN	0	0	0	2,345,400	0						
Totals	0	187,000	0	2,345,400	0						



Agency: Okanogan Co.
County: Okanogan

MPO/RTPO: OCOG RTPO N Inside Y Outside

Functional Class	y Numb	A. PIN/Project No. C. Project Title D. Road Name or Number E. Begin & End Termini F. Project Description	B. STIP ID G. Structure ID	Heari	Adopted	Amendment	Resolution No.	Improvement Type	Utility Codes	Total Length	Environmental Type	RW Required
07	22		WA-12942					04	PTW	1.200	CE	No
		Twisp River Road 2.82 - 4.02										
		9114										
		2.82 to 4.02										1
		Minor realignment within existing right of way, widening, grading, drainage, ballast, top course and HMA or BST.										

Funding	unding												
Status	Phase	Phase Start Year (YYYY)	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total Funds					
Р	PE	2023		0	CRAB	125,100	13,900	139,000					
Р	CN	2025		0	CRAB	1,741,500	193,500	1,935,000					
			Totals	0		1,866,600	207,400	2,074,000					

Expenditure Schedule											
Phase	1st	2nd	3rd	4th	5th & 6th						
PE	0	0	125,100	0	0						
CN	0	0	0	0	1,935,000						
Totals	0	0	125,100	0	1,935,000						

	Federal Funds	State Funds	Local Funds	Total Funds
Grand Totals for Okanogan Co.	5,671,071	22,463,500	2,823,134	30,957,705



## **MEMORANDUM**

Date: July 30, 2020

To: Board of Okanogan County Commissioners

From: Josh Thomson P.E., Director/County Engineer

Subject: 2021-2026 Revenue and Expenditure Analysis

The attached Revenue and Expenditure Analysis is a required component of the 6-year Transportation Improvement Program, and is a good tool to assess trends and options for capital expenditures.

Revenues assume no levy shift and a 1.5% road levy increase per year. Motor Vehicle Fuel Tax and County Arterial Preservation Program funds (derived from MVFT) are estimated at 15% decrease in 2021 and 10% decrease in 2022, and returning to pre-COVID levels by 2023. Federal Forest Yield is optimistically projected to continue at a flat rate.

Revenues and expenditures for large construction projects include all of the funded projects in the TIP. This leaves both the revenues and expenditures for engineering low in 2022 and zero in 2023-2026, but I anticipate more projects will be funded in the next two years to bring them more in line with the 2021 figures. Project engineering revenues are typically 88% of the expenditures, so this will have little impact on the projected fund balance.

Expenditures for normal maintenance and administration activities assume a 3% annual escalation to account for labor and benefit increases, construction materials and equipment inflation, and fuel price increases. 3% may be a bit low to account for all of these factors. Chip seal costs are assumed to increase 7% per year because they are more heavily influenced by construction cost inflation, which outpaces the CPI-based inflation rate. Chip seal is estimate at 65 miles per year, which yields a 10-year average rotation on our paved roads.

Construction of new shops at Winthrop and Tonasket are budgeted in 2022 and 2023 for analysis purposes, assuming half of the investment comes from another source such as the capital improvement fund. The proposed pit purchase in 2023 will likely only be possible if the Methow property is sold first.

## **Revenue and Expenditure Analysis**

## OKANOGAN County SIX-YEAR TRANSPORTATION IMPROVEMENT PROGRAM **REVENUE AND EXPENDITURE ANALYSIS**

Co Rd/Co Rd Construction:	2021	2022	2023	2024 - 2026
REVENUES:				
BEGINNING FUND BALANCE	4,000,000	3,662,330	2,931,957	2,490,279
REAL & PERSONAL PROPERTY TAX	, ,		, , , , , , , , , , , , , , , , , , , ,	, , , , ,
LESS CO ROAD DIVERSION	4,907,930	4,981,549	5,056,272	15,623,880
LEVY SHIFT (enter as negative)				
MOTOR VEHICLE FUEL TAX	3,400,000	3,600,000	4,000,000	12,000,000
CO ARTERIAL PRES PROGRAM	531,250	593,750	625,000	1,875,000
RURAL ARTERIAL PROGRAM	1,666,800	1,332,200	731,700	1,674,000
UATA				
IAC-SALMON RECOVERY FUND				
FEDERAL - HSIP	492,000	0	0	0
FEDERAL - BRIDGE REPLACEMENT	1,185,000			
FEDERAL - STP REGIONAL	978,000	0	0	0
FEDERAL - FOREST YIELD	705,000	705,000	705,000	2,115,000
FEDERAL - OTHER				
WSDOT PARTICIPATION				
BRIDGE REPLACEMENT PROGRAM				
HAZARD ELIMINATION PROGRAM				
OTHER INTERGOVERNMENT & STATE SHARED	36,000	36,000	36,000	108,000
CHARGES FOR SERVICES	22,000	24,000	25,000	75,000
LICENSES & PERMITS	18,000	18,000	18,000	54,000
OTHER MISCELLANEOUS REVENUES	34,000	34,000	34,000	102,000
GENERAL OBLIGATION BOND PROCEEDS				
PROCEEDS FROM SALE OF FIXED ASSETS			700,000	
SPECIAL PURPOSE PATH				
PUBLIC WORKS TRUST FUND				
CRIDS				
SEPA				
OPERATING TRANSFER	16,000	16,000	16,000	48,000
IMPACT FEES				
TOTAL REVENUES & FUND BALANCES:	\$17,991,980	\$15,002,829	\$14,878,929	\$36,165,159

Print Date: 7/29/2020 Page 1 of 2

## **Revenue and Expenditure Analysis**

## OKANOGAN County SIX-YEAR TRANSPORTATION IMPROVEMENT PROGRAM **REVENUE AND EXPENDITURE ANALYSIS**

Co Rd/Co Rd Construction:	2021	2022	2023	2024 - 2026		
EXPENDITURES:						
CONSTRUCTION PROJECT ENGINEERING	457,000	70,000	0	0		
ROAD SURFACES MAINTENANCE	2,200,000	2,266,000	2,334,000	7,422,000		
ROAD PREVENTATIVE MAINTENANCE (CHIP SEAL)	1,750,000	1,873,000	2,004,000	6,854,000		
STORM DRAINAGE	325,000	335,000	345,000	1,097,000		
STRUCTURES	50,000	52,000	54,000	172,000		
TRAFFIC SAFETY DEVICES	450,000	464,000	478,000	1,520,000		
STREET CLEANING	100,000	103,000	106,000	337,000		
SNOW & ICE CONTROL	1,580,000	1,627,000	1,676,000	5,330,000		
ROADSIDE	440,000	453,000	467,000	1,485,000		
PITS & QUARRIES	205,000	211,000	217,000	690,000		
PIT PURCHASES			600,000			
MAINTENANCE ADMINISTRATION	785,000	809,000	833,000	2,649,000		
FACILITIES	180,000	185,000	191,000	607,000		
FACILITIES CONSTRUCTION		250,000	250,000			
SUPPORT SERVICES	850,000	876,000	902,000	2,868,000		
GENERAL SERVICES (331)	1,050,000	1,082,000	1,114,000	3,543,000		
LONG TERM DEBT	4,650	4,650	4,650	13,950		
SUBTOTAL OPERATIONS:	\$10,426,650	\$10,660,650	\$11,575,650	\$34,587,950		
CONSTRUCTION:						
ROADWAY SAFETY	465,000	0	0	0		
ROADWAY IMPROVEMENT (CONSTRUCTION)	3,438,000	1,410,222	813,000	1,860,000		
SUBTOTAL CONSTRUCTION:	\$3,903,000	\$1,410,222	\$813,000	\$1,860,000		
TOTAL EXPENDITURES	\$14,329,650	\$12,070,872	\$12,388,650	\$36,447,950		
FUND BALANCE:	\$3,662,330	\$2,931,957	\$2,490,279	-\$282,791		
NET FOR YEAR	(\$337,670)	(\$730,373)	(\$441,678)	(\$2,773,070)		

Print Date: 7/29/2020 Page 2 of 2



# OKANOGAN COUNTY DEPARTMENT OF PUBLIC WORKS

## 2019 BRIDGE CONDITION INSPECTION REPORT



Josh Thomson, P.E.

**County Engineer** 

Bridge Inspection Team Leader, G1614

July 7, 2020

Date

### **Table of Contents**

- I. Introduction
- **II.** Bridge Inspections
- **III.** Inspection Findings
- IV. Scour Evaluations
- V. Bridge Restrictions
- VI. Emergency Repairs
- VII. Maintenance Activities
- **VIII. Completed Projects**
- IX. Current Projects
- X. Recommended Projects

**Appendix A - Okanogan County NBIS Bridge Listing** 

**Appendix B - Load Rating Summary Sheets** 

#### I. INTRODUCTION

The 2019 Bridge Condition Inspection Report summarizes the status of bridges owned, operated and maintained by Okanogan County, and is prepared under the direction of the County Engineer in accordance with WAC 136-20-060. This Report is for your use during preparation of the Six Year Transportation Improvement Program. This report is based upon the most current data available in our bridge files.

Contained within this report are descriptions of the ongoing bridge inspection efforts and current findings, bridge load restrictions and emergency repairs undertaken through December 31, 2019. Any maintenance accomplished and recommended replacement or rehabilitation projects will be described within.

#### II. BRIDGE INSPECTIONS

Federal Highway Administration (FHWA) requirements mandate that public agencies inspect and report on all bridges (vehicle carrying structures with a span length of greater than twenty feet) at least once every twenty-four months. The purpose of routine inspections is to evaluate and record the current condition of the bridge, determine the degree of wear and deterioration, and recommend repairs or needed services. The inspections are also to ensure and maintain public safety and confidence and to protect the traveling public's investments.

The County Engineer is a licensed Civil Professional Engineer and became certified as a bridge inspector/team leader in 2016.

#### 1. Routine Bridge Inspections

Okanogan County has a total of 50 bridges subject to the National Bridge Inspection Standards (NBIS), not counting the Statler Bridge on Salmon Creek that is under construction and not yet open. Okanogan County also performs NBIS inspections on 8 small structure with spans less than 20 feet, and the Similkameen Trail bridge, which is not subject to NBIS inspection standards because it is a non-highway structure. Of those 59 county-owned bridges, inspections were performed on 29 bridges including one small structure and the Similkameen Trail bridge during the 2019 inspection season. Inspections are also performed on nine city bridges for the towns of Okanogan, Tonasket and Conconully when scheduled; four were inspected for the City of Okanogan in 2019. Riverside's two bridges are inspected by WSDOT. Federal regulations require that NBIS bridges receive a routine safety inspection once every 24 months. Some of Okanogan County's bridges are inspected every 12 months due to deficiencies or damage that justify more frequent inspection.

#### 2. Special Inspections

Special inspections are usually performed by WSDOT personnel under a reimbursable agreement with the WSDOT Bridge Preservation Office.

**UBIT Inspection:** An Under Bridge Inspection Truck (UBIT) is needed to perform inspections if the underside of the bridge is inaccessible. The UBIT inspection is required every 72 months or sooner if conditions dictate more frequent scheduling. Okanogan County has 2 bridges that require a UBIT inspection.

**Underwater Inspection:** Inspection of the underwater elements of a bridge is required by the NBIS at least once every 60 months or sooner if conditions dictate. Okanogan County has 3 bridges that are due for underwear inspections in 2020, which will be performed by WSDOT personnel.

**Fracture Critical Inspections:** Okanogan County does not have any fracture critical bridges.

#### III. INSPECTION FINDINGS

When new damage or conditions are found during inspections that warrant repairs, maintenance is scheduled to be performed by county personnel or specialty contractors.

The Sufficiency Rating (SR) of each bridge is an indication of the overall health of the structure. The SR is a score calculated for each bridge based on the condition of the various elements of each bridge. It is a numeric value that ranges from 0 to 100 and is generated in the bridge management software. The value is a summation of four calculated values: Structural Adequacy and Safety, Serviceability and Functional Obsolescence, Essentiality for Public Use, and Special Reductions. The lower the SR is, the higher the priority for rehabilitation or replacement. To qualify for replacement funding, a bridge must have a sufficiency rating of less than 50. The SR for each bridge is included in Appendix A.

#### IV. SCOUR EVALUATIONS

A scour evaluation is required for all bridges over water. The purpose of a scour evaluation is to determine susceptibility of the bridge's foundation to the erosive actions of flowing water removing material from the bridge's foundation. A bridge is considered scour critical if its foundation is determined to be unstable for observed or calculated scour conditions.

When a bridge inspector identifies an actual or potential problem, the bridge must be further evaluated to determine whether or not it should be considered scour critical.

All of Okanogan County's bridges have been evaluated and none of them are scour critical at this time.

#### V. BRIDGE RESTRICTIONS

A load rating is performed for each bridge in the NBIS inventory by a professional structural engineer in accordance with federal and state regulations. A bridge load rating is the measure of the bridge's load carrying capacity. There are two capacity levels that bracket this ability, the Inventory Rating and the Operating Rating. The Inventory Rating is the load that a bridge can carry for an indefinite number of load cycles without detriment to the bridge. The Operating Rating is the maximum load that can be carried on an infrequent basis without detriment to the bridge.

The NBIS requires the posting of load limits or restrictions on a bridge when the load rating factor for the legal load is less than 1. Load ratings have historically been calculated using six standard truck configurations to check the capacity levels. Three of the truck configurations represent common legal loads, the forth is a national standard truck and the fifth and sixth represent overload vehicles.

Recently the Federal Highway Administration has added truck configurations that must be calculated for bridge load ratings. "Group 1" bridges were required to be load rated for Special Hauling Vehicles (SHVs) by the end of 2017, and "Group 2" bridges must be load rated by the end of 2022. Okanogan County has 14 group 1 bridges that were load rated in 2017, Okanogan has 3, and Tonasket has one. Conconully has three group 1 bridges that were load rated in 2019. SHVs are closely spaced multi-axle single unit trucks introduced by the trucking industry in the last decade, and are designated as SU4, SU5, SU6, and SU7 corresponding to the number of axles on the truck. Examples include dump trucks, construction vehicles, solid waste trucks and other hauling trucks with more than two drive axles and/or multiple drop axles not represented in the original six configurations.

Six bridges in Okanogan County and two in the City of Okanogan were posted with load restrictions in 2017 due to the load ratings required by FHWA. You will note in Appendix A that the Keystone bridge has a sufficiency rating of 58.75, Gate Creek is at 70.47 and the rest are 75 or higher. The reduced load ratings are not necessarily an indication of poor condition, but of loads imposed that the structures were not designed for. The load rating cover sheets for bridges requiring load restrictions are included as Appendix B for reference.

Bridge No.	Bridge Name	Status	Legal Load Restricted for:
B-14	Keystone	Posted	Type 3, 3-S2, SU4-SU7
C-6	Gold Creek Lower	Posted	SU4-SU7
C-11	Balky Hill	Posted	SU5-SU7
C-18	Gate Creek	Posted	SU5-SU7
E-5	Sinlahekin Cr	Posted	SU4-SU7
F-8	Nine Mile Cr	Posted	SU5-SU7
Okanogan2	Salmon Cr – 1 <sup>st</sup> Ave	Posted	SU4-SU7
Okanogan3	Salmon Cr – 5 <sup>th</sup> Ave	Posted	SU4-SU7

The ASSHTO Type 3 truck is a standard 3-axle single unit truck, a type 3-S2 is a standard 3-axle tractor with a 2-axle semi-trailer, and a type 3-3 is a 3-axle truck with a 3-axle trailer.

Legal loads are as follows:

Configuration	Tonnage					
AASHTO Type 3	25 Tons					
AASHTO Type 3-S2	36 Tons					
AASHTO Type 3-3	40 Tons					
SU4	27 Tons					
SU5	31 Tons					
SU6	34.7 Tons					
SU7	38.7 Tons					

#### VI. EMERGENCY REPAIRS

No emergency repairs beyond ordinary maintenance were required on NBIS reportable structures in 2019.

### VII. MAINTENANCE ACTIVITIES

Proper maintenance and repairs are necessary to prevent further deterioration of structures, to extend their useful life, and to prevent or reduce major repair costs in the future. During inspections, maintenance needs are documented. Repairs are scheduled for completion by county crews or contract. Typical annual maintenance includes guardrail repairs, deck and drain cleaning, signing and brush cutting.

This year county personnel installed rip rap under the Toats Coulee Bernard (E-7) structure based on inspection findings.

Future maintenance will be more of the same as above and deck preservation products are currently being studied for cost and performance.

#### VIII. COMPLETED PROJECTS

No bridge construction projects were completed in 2019.

#### IX. CURRENT PROJECTS

Construction of a 68' span structure on Salmon Creek Rd at milepost 2.24 over Salmon Creek began in September 2019, and was not completed by year's end.

RAP funding was secured in 2019 to replace an undersized box culvert on Salmon Creek Rd at milepost 3.05. Design work began in last 2019, and construction will likely occur in 4-5 years. The current structure is a concrete box culvert with approximate 11' span and 6' height.

#### X. RECOMMENDED PROJECTS

Deck surface preservation and expansion joint repair are the focus of the county's bridge preservation efforts based on field observations. Deck sealing products are being studied for cost and performance. Two bridges are in line for the initial trials. Bridge C-5, Buttermilk Creek Lower, and bridge C-8, Twisp River, are both in need of deck surface sealing.

Three temporary culverts were placed under Hosheit Rd in 2017 to reopen the road after Tunk Creek washed out the previous culvert. This temporary situation needs to be remedied with a larger structure which will likely exceed 20' span. This project is likely to cost \$600,000 to \$800,000 based on current WDFW requirements, though there is a possibility a structure costing half that could be permitted.

# **Appendix A**

Okanogan County NBIS Bridge Listing

#### Appendix A 2019 Bridge Condition Report

Bridge Number	Bridge Name	Status	NBI Reportable	Sufficiency Rating	Deficiency Status	Year Built	Year Rebuilt	Structure Length	Traffic ADT	Last Inspection Date	Inspection Freq. (Mo)	Notes
A-2	SALMON CR. STATLER	CLOSED	Yes			2020		68	497		24	Under Construction
A-3	SALMON CR. RANDO MANOR	open	Yes	70.06		1949	1976	23	497	03-Oct-19	12	
A-4	SALMON CREEK HAPPY HILL	open	Yes	90.93		1969		22	41	01-Oct-18	24	
A-5	SALMON CREEK RUBY-LOWER	open	Yes	91.07		1969		26	18	01-Oct-18	24	
A-6	SALMON CREEK RUBY-UPPER	open	Yes	92.34		1969		24	23	01-Oct-18	24	
A-7	CONCONULLY SOUTHEND	open	Yes	77.9		1949		60	639	01-Oct-18	24	
A-8	SALMON CREEK WEST FORK	open	Yes	85.24		1949	1979	70	53	01-Oct-18	24	
A-9	MAIN ST CONCONULLY	open	Yes	67.75		1976		38	123	10-Oct-18	24	Conconully
A-10	LAKE ST CONCONULLY	open	Yes	68.79		1973		24	251	10-Oct-18	24	Conconully
A-11	BROADWAY ST CONCONULLY	open	Yes	87.92		1982		26	22	01-Oct-18	24	Conconully
A-12	SILVER ST CONCONULLY	open	Yes	91.77		1997		28	15	10-Oct-18	24	Conconully
B-1	LITTLE NESPELEM RIVER	open	Yes	94.32		2014		63	134	14-Oct-19	24	
B-3	NO.STAR PARK CITY LOWER	open	Yes	99.97		2017		70	24	04-Oct-18	24	
B-4	NO.STAR PARK CITY UPPER	open	Yes	39.69	SD	1958		51	24	14-Oct-19	12	Serious Deficiencies
B-5	PARK CITY MILL CREEK	open	Yes	80.68		1958		26	72	14-Oct-19	24	
B-6	PARK CITY SMITH CREEK	open	Yes	82.09		1958		26	72	14-Oct-19	12	
B-8	HADEN ANDERSON	open	No	44.06	FO	1961		53	38	20-Oct-14	12	CCT, not inspected by County
B-10	OMAK-RIVERSIDE EAST SIDE	open	Yes	81.99	FO	1968		50	2176	10-Oct-19	24	
B-11	BROOKS TRACT	open	Yes	84.45		1973		50	473	10-Oct-19	24	
B-12	OMAK CREEK	open	Yes	99.75		2006		31	290	09-Oct-19	24	
B-13	RIVERSIDE	open	Yes	79.32		1969		330	650	08-Oct-19	24	Riverside, inspected by WSDOT
B-14	KEYSTONE	POSTED	Yes	58.75	FO	1973		32	82	10-Oct-19	24	
B-15	MOSES ROAD	open	Yes	99.94		2017		68	33	04-Oct-18	24	
B-17	FIGLENSKI	open	Yes	99		1976		25	15	10-Oct-19	24	
B-18	MORGAN	open	Yes	89.14		1976		30	45	10-Oct-19	24	
B-20	JOHNSON CREEK RIVERSIDE	open	Yes	72.63		1976		26	521	07-Oct-19	24	Riverside, inspected by WSDOT
C-2	LITTLE BRIDGE CREEK	open	Yes	99.6		2008		41	237	23-Oct-19	24	
C-4	BUTTERMILK CREEK	open	Yes	84.98		1960	2007	66	17	03-Oct-18	24	
C-5	TWISP RIVER AT BUTTERMILK CR RD	open	Yes	70.92		1959		102	53	03-Oct-18	24	
C-6	GOLD CREEK-LOWER	POSTED	Yes	80.75		1972		30	111	15-Oct-19	24	
C-8	TWISP RIVER WEST	open	Yes	84.53		1949		108	585	23-Oct-19	24	
C-9	POORMAN CREEK	open	Yes	80.01		1974		78	31	23-Oct-19	24	
C-10	COAL BANKS-TWISP RIVER	open	Yes	76.09		1960		120	80	23-Oct-19	24	

Appendix A 2019 Bridge Condition Report

Bridge Number	Bridge Name	Status	NBI Reportable	Sufficiency Rating	Deficiency Status	Year Built	Year Rebuilt	Structure Length	Traffic ADT	Last Inspection Date	Inspection Freq. (Mo)	Notes
C-11	BALKY HILL	POSTED	Yes	88.2		1972		30	122	23-Oct-19	24	
C-12	BEAVER CREEK-SOUTH	open	Yes	70.91		1957		24	54	23-Oct-19	24	
C-13	BEAVER CREEK-MIDDLE	open	Yes	81.89		1962		72	57	23-Oct-19	24	
C-14	WOLF CREEK	open	Yes	71.37	FO	1963		30	476	10-Oct-18	24	
C-15	CHEWUCH	open	Yes	95.9		1953		120	93	10-Oct-18	24	
C-16	GOAT CREEK	open	Yes	82.37		1971		30	195	10-Oct-18	24	
C-18	GATE CREEK	POSTED	Yes	70.47		1971		32	225	15-Oct-19	12	
C-19	LOST RIVER U.S.F.S.	open	Yes	91.63		1950		93	40	10-Oct-18	24	
C-20	MAZAMA	open	Yes	92.3		1972		214	534	10-Oct-18	24	
D-2	EFFIE BR.	open	Yes	99.98		1990		212	27	03-Oct-18	24	
D-3	MONSE	open	Yes	91.25		1967		560	376	03-Oct-18	24	
D-4	LOUP LOUP CREEK	open	Yes	99.6		2014		52	35	03-Oct-18	24	
D-5	CHILIWIST CREEK	open	Yes	97.12		1944		22	1566	03-Oct-18	24	
D-6	MALOTT OLD 97	open	No	93.84		2011		22	1566	03-Oct-18	24	Small structure (under 20')
D-7	BURDETT STREET	open	No	99		2012		22	20	03-Oct-18	24	Small structure (under 20')
E-1	TONASKET	open	Yes	97.43		1999		316	3042	29-Oct-18	24	
E-2	BONAPARTE CREEK-TONASKET	open	Yes	82.23		1972		24	84	29-Oct-18	24	Tonasket
E-4	BLUE LAKE CULVERT	open	Yes	99.46		2018		21	36	08-Mar-19	24	
E-5	SINLAHEKIN CREEK	POSTED	Yes	89.1		1973		30	36	29-Oct-18	24	
E-7	TOATS COULEE BERNARD	open	Yes	79.84	FO	1966		62	101	29-Oct-18	24	
E-8	СНОРАКА	open	Yes	91.66		1980		79	26	29-Oct-18	24	
E-11	ELLISFORDE	open	Yes	84.59		1961		339	921	29-Oct-18	24	
E-14	LOST CREEK	open	Yes	80.79		1958		42	52	31-Oct-18	24	
F-2	SIMILKAMEEN AT OROVILLE	open	Yes	75.19		1950		366	1282	28-Oct-19	24	
F-3	OROVILLE, EASTSIDE	open	Yes	92.75		1971		180	2420	28-Oct-19	24	
F-4	SIMILKAMEEN TRAIL	open	No			1952	2009	366	2			Non-highway structure
F-7	NIGHTHAWK	open	Yes	96.24		1973		306	121	28-Oct-19	24	
F-8	NINE MILE CREEK	POSTED	Yes	85.03		1980		28	504	28-Oct-19	24	
F-9	THORNDIKE LOOP	open	Yes	96		1980		24	21	28-Oct-19	24	
OKANOGAN1	OKANOGAN RIVER-OAK ST	open	Yes	98.42		2003		340	4100	03-Oct-19	24	City of Okanogan
OKANOGAN2	SALMON CR-FIRST AVE	POSTED	Yes	83.77		1970		38	260	03-Oct-19		City of Okanogan
OKANOGAN3	SALMON CR-FIFTH AVE.	POSTED	Yes	75.44		1970		38	260	03-Oct-19		City of Okanogan
OKANOGAN4	SALMON CR-MILL STREET	open	Yes	89.45		2006		50	450	03-Oct-19		City of Okanogan

# **Appendix B**

**Load Rating Summary Sheets** 

**Bridge Name:** 

**Keystone** 

**Bridge Number:** 

B-14

Agency:

**Okanogan County** 

Structure ID:

08018700

**Bridge Type:** 

Prestressed Concrete Rib Deck Girders

Length: Skew: 32'-0" Long Bridge 0 Degree Skew

No. Spans:

(1) 31'-6"

Designed By:

Central Pre-Mix Prestress Co., 1973

**Design Load:** 

HS-20-44

Ref. Inspection: Rating Date: 10/05/2015 08/29/2017

**Rating Method:** 

LRFR

Rated By:

Susan M. Kovich, WA License 39869 NICHOLLS KOVICH ENGINEERING, PLLC



#### RESULTS OF RATING

NBI RATING	Rating Factor	γL	Controlling Point
HL-93 Inventory	0.50	0.80	Service III -Moment
HL-93 Operating	1.09	1.35	Strength I -Moment

LEGAL LOADS	Rating Factor	γL	Allowable Load	<b>Controlling Point</b>
TYPE 3	0.80	1.00	20 Tons	Service III -Moment
TYPE 3-S2	0.83	1.00	30 Tons	Service III -Moment
TYPE 3-3	1.00	1.00	40 Tons	Service III -Moment
Notional Rating Load (NRL)	0.53	1.00	21 Tons	Service III -Moment
Single Unit SHV (SU4)	0.67	1.00	18 Tons	Service III -Moment
Single Unit SHV (SU5)	0.63	1.00	20 Tons	Service III -Moment
Single Unit SHV (SU6)	0.57	1.00	20 Tons	Service III -Moment
Single Unit SHV (SU7)	0.55	1.00	21 Tons	Service III -Moment

PERMIT LOADS								
WSDOT Overload 1	0.55	1.00	26 Tons	Service III -Moment				
WSDOT Overload 2	0.47	1.00	49 Tons	Service III -Moment				

REMARKS: BRIDGE SHOULD BE POSTED FOR TYPE 3, 3-S2, SU4, SU5, SU6 & SU7

RESTRICT BRIDGE FOR OL1 & OL2 DUE TO POSTING

Rating based on 10% impact and 0.6" of BST overlay.

	NBI CODING			CURRENT REFERENCE				
[70]	Operating Level	(1660)	0	[29]	Avg. Daily Traffic	(1445)	82	
[63]	Oper. Rating Method	(1551)	8	[109]	Truck Percent	(1451)	13	
[64]	Oper. Rating Tons	(1552)		[58]	Deck Overall	(1663)	7	
[64]	Oper. Rating Factor	(1553)	1.09	[59]	Superstructure	(1671)	8	
[65]	Inv. Rating Method	(1554)	8	[60]	Substructure	(1676)	7	
[66]	Inv. Rating Tons	(1555)			Approach Roadway	(7681)	8	
[66]	Inv. Rating Factor	(1556)	0.50			17 - 17		

**Bridge Name:** 

**Gold Creek-Lower** 

**Bridge Number:** 

C-6

Agency:

**Okanogan County** 

Structure ID:

08201800

**Bridge Type:** 

Prestressed Concrete Rib Deck Girders

Length:

30'-0" Long Bridge

Skew:

0° Skew

No. Spans:

(1) 29-5" Span

**Designed By:** 

Central Pre-Mix Prestress Co., 1972

**Design Load:** 

HS-20-44

**Ref. Inspection: Rating Date:** 

10/07/2015 10/30/2017

**Rating Method:** 

LRFR

Rated By:

Susan M. Kovich, WA License 39869 NICHOLLS KOVICH ENGINEERING, PLLC



#### RESULTS OF RATING

NBI RATING	Rating Factor	γL	<b>Controlling Point</b>
HL-93 Inventory	0.73	0.80	Service III - Moment
HL-93 Operating	0.97	1.35	Strength I - Moment

LEGAL LOADS	<b>Rating Factor</b>	γL	Allowable Load	<b>Controlling Point</b>
TYPE 3	1.20	1.00	30 Tons	Service III - Moment
TYPE 3-S2	1.21	1.00	44 Tons	Service III - Moment
TYPE 3-3	1.46	1.00	59 Tons	Service III - Moment
Notional Rating Load (NRL)	0.78	1.00	31 Tons	Service III - Moment
Single Unit SHV (SU4)	0.99	1.00	27 Tons	Service III - Moment
Single Unit SHV (SU5)	0.92	1.00	28 Tons	Service III - Moment
Single Unit SHV (SU6)	0.84	1.00	29 Tons	Service III - Moment
Single Unit SHV (SU7)	0.80	1.00	31 Tons	Service III - Moment

PERMIT LOADS								
WSDOT Overload 1	0.83	1.00	40 Tons	Service I – Moment				
WSDOT Overload 2	0.70	1.00	72 Tons	Service I – Moment				

REMARKS: BRIDGE SHOULD BE POSTED FOR SU4, SU5, SU6 & SU7 RESTRICT BRIDGE FOR OVERLOAD 1 & OVERLOAD 2

Rating based on 10% impact and 1/2" asphalt overlay.

	NBI CODING				CURRENT REFERENCE	3	
[70]	Operating Level	(1660)	3	[29]	Avg. Daily Traffic	(1445)	111
[63]	Oper. Rating Method	(1551)	8	[109]	Truck Percent	(1451)	14
[64]	Oper. Rating Tons	(1552)		[58]	Deck Overall	(1663)	8
[64]	Oper. Rating Factor	(1553)	0.97	[59]	Superstructure	(1671)	8
[65]	Inv. Rating Method	(1554)	8	[60]	Substructure	(1676)	8
[66]	Inv. Rating Tons	(1555)		2. 3	Approach Roadway	(7681)	8
[66]	Inv. Rating Factor	(1556)	0.73		nest@offneroestesseers - selferenbeter 2000ffn		

**Bridge Name:** 

**Balky Hill** 

**Bridge Number:** 

C-11

Agency:

**Okanogan County** 

Structure ID:

08023500

**Bridge Type:** 

Prestressed Concrete Rib Deck Girders

Length:

30'-0" Long Bridge

Skew:

0° Skew

No. Spans:

(1) 29'-5" Span

**Designed By:** 

Central Pre-Mix Prestress Co., 1972

**Design Load:** 

HS-20-44

**Ref. Inspection: Rating Date:** 

10/26/2015 10/30/2017

**Rating Method:** 

LRFR

Rated By:

Susan M. Kovich, WA License 39869 NICHOLLS KOVICH ENGINEERING, PLLC

#### RESULTS OF RATING

NBI RATING	Rating Factor	γL	<b>Controlling Point</b>
HL-93 Inventory	0.74	0.80	Service III - Moment
HL-93 Operating	0.97	1.35	Strength I - Moment

LEGAL LOADS	<b>Rating Factor</b>	γL	Allowable Load	<b>Controlling Point</b>
TYPE 3	1.21	1.00	30 Tons	Service III - Moment
TYPE 3-S2	1.23	1.00	44 Tons	Service III - Moment
TYPE 3-3	1.48	1.00	59 Tons	Service III - Moment
Notional Rating Load (NRL)	0.79	1.00	32 Tons	Service III - Moment
Single Unit SHV (SU4)	1.00	1.00	27 Tons	Service III - Moment
Single Unit SHV (SU5)	0.93	1.00	29 Tons	Service III - Moment
Single Unit SHV (SU6)	0.85	1.00	29 Tons	Service III - Moment
Single Unit SHV (SU7)	0.81	1.00	32 Tons	Service III - Moment

PERMIT LOADS									
WSDOT Overload 1	0.84	1.00	40 Tons	Service I - Moment					
WSDOT Overload 2	0.71	1.00	73 Tons	Service I - Moment					

REMARKS: BRIDGE SHOULD BE POSTED FOR SU5, SU6 & SU7 RESTRICT BRIDGE FOR OVERLOAD 1 & OVERLOAD 2

Rating based on 10% impact and no asphalt overlay.

NBI CODING			CURRENT REFERENCE				
[70]	Operating Level	(1660)	3	[29]	Avg. Daily Traffic	(1445)	115
[63]	Oper. Rating Method	(1551)	8	[109]	Truck Percent	(1451)	5
[64]	Oper. Rating Tons	(1552)		[58]	Deck Overall	(1663)	8
[64]	Oper. Rating Factor	(1553)	0.97	[59]	Superstructure	(1671)	8
[65]	Inv. Rating Method	(1554)	8	[60]	Substructure	(1676)	8
[66]	Inv. Rating Tons	(1555)			Approach Roadway	(7681)	8
[66]	Inv. Rating Factor	(1556)	0.74		200.		

**Bridge Name:** 

**Gate Creek** 

**Bridge Number:** 

C-18

Agency:

**Okanogan County** 

**Structure ID:** 

08115000

**Bridge Type:** 

Prestressed Concrete Rib Deck Girders

Length:

32'-0" Long Bridge

Skew:

0 Degree Skew

No. Spans:

(1) 31'-2"

**Designed By:** 

Central Pre-Mix Concrete Co. Prestress Div., 1971

**Design Load:** 

**Ref. Inspection: Rating Date:** 

10/05/2016 08/29/2017

**Rating Method:** 

LRFR

Rated By:

Susan M. Kovich, WA License 39869

NICHOLLS KOVICH ENGINEERING, PLLC

#### RESULTS OF RATING

NBI RATING	Rating Factor	γL	<b>Controlling Point</b>
HL-93 Inventory	0.76	0.80	Service III -Moment
HL-93 Operating	1.32	1.35	Strength I -Moment

LEGAL LOADS	<b>Rating Factor</b>	γL	Allowable Load	<b>Controlling Point</b>
TYPE 3	1.22	1.00	31 Tons	Service III -Moment
TYPE 3-S2	1.26	1.00	45 Tons	Service III -Moment
TYPE 3-3	1.52	1.00	61 Tons	Service III -Moment
Notional Rating Load (NRL)	0.80	1.00	32 Tons	Service III -Moment
Single Unit SHV (SU4)	1.02	1.00	27 Tons	Service III -Moment
Single Unit SHV (SU5)	0.96	1.00	30 Tons	Service III -Moment
Single Unit SHV (SU6)	0.87	1.00	30 Tons	Service III -Moment
Single Unit SHV (SU7)	0.83	1.00	32 Tons	Service III -Moment

PERMIT LOADS						
WSDOT Overload 1	0.84	1.00	40 Tons	Service III -Moment		
WSDOT Overload 2	0.72	1.00	75 Tons	Service III -Moment		

REMARKS: BRIDGE SHOULD BE POSTED FOR SU5, SU6 & SU7

RESTRICT OL1 & OL2 DUE TO POSTING

Rating based on 10% impact and 0.60" BST overlay.

NBI CODING			CURRENT REFERENCE				
[70]	Operating Level	(1660)	3	[29]	Avg. Daily Traffic	(1445)	200
[63]	Oper. Rating Method	(1551)	8	[109]	Truck Percent	(1451)	3
[64]	Oper. Rating Tons	(1552)		[58]	Deck Overall	(1663)	8
[64]	Oper. Rating Factor	(1553)	1.32	[59]	Superstructure	(1671)	6
[65]	Inv. Rating Method	(1554)	8	[60]	Substructure	(1676)	8
[66]	Inv. Rating Tons	(1555)			Approach Roadway	(7681)	8
[66]	Inv. Rating Factor	(1556)	0.76				

**Bridge Name:** Sinlahekin Creek

**Bridge Number:** 

E-5

Agency:

**Okanogan County** 

Structure ID:

08180900

**Bridge Type:** 

Prestressed Concrete Rib Deck Girders

Length:

30'-0" Long Bridge

Skew:

0° Skew

No. Spans:

(1) 29-5" Span

**Designed By:** 

Central Pre-Mix Prestress Co., 1972

**Design Load:** 

HS-20-44

**Ref. Inspection: Rating Date:** 

10/25/2016 10/30/2017

**Rating Method:** 

LRFR

Rated By:

Susan M. Kovich, WA License 39869 NICHOLLS KOVICH ENGINEERING, PLLC

#### RESULTS OF RATING

NBI RATING	Rating Factor	γL	<b>Controlling Point</b>
HL-93 Inventory	0.74	0.80	Service III - Moment
HL-93 Operating	0.97	1.35	Strength I - Moment

LEGAL LOADS	Rating Factor	γL	Allowable Load	<b>Controlling Point</b>
TYPE 3	1.21	1.00	30 Tons	Service III - Moment
TYPE 3-S2	1.22	1.00	44 Tons	Service III - Moment
TYPE 3-3	1.48	1.00	59 Tons	Service III - Moment
Notional Rating Load (NRL)	0.79	1.00	32 Tons	Service III - Moment
Single Unit SHV (SU4)	0.99	1.00	27 Tons	Service III - Moment
Single Unit SHV (SU5)	0.93	1.00	29 Tons	Service III - Moment
Single Unit SHV (SU6)	0.85	1.00	29 Tons	Service III - Moment
Single Unit SHV (SU7)	0.81	1.00	31 Tons	Service III - Moment

PERMIT LOADS							
WSDOT Overload 1	0.84	1.00	40 Tons	Service I – Moment			
WSDOT Overload 2	0.71	1.00	73 Tons	Service I - Moment			

REMARKS: BRIDGE SHOULD BE POSTED FOR SU4, SU5, SU6 & SU7

RESTRICT BRIDGE FOR OVERLOAD 1 & OVERLOAD 2

Rating based on 10% impact and no asphalt overlay.

	NBI CODING			CURRENT REFERENCE				
[70]	Operating Level	( <u>1660</u> )	3	[29]	Avg. Daily Traffic	(1445)	36	
[63]	Oper. Rating Method	(1551)	8	[109]	Truck Percent	(1451)	8	
[64]	Oper. Rating Tons	(1552)		[58]	Deck Overall	(1663)	7	
[64]	Oper. Rating Factor	(1553)	0.97	[59]	Superstructure	(1671)	8	
[65]	Inv. Rating Method	(1554)	8	[60]	Substructure	(1676)	8	
[66]	Inv. Rating Tons	(1555)			Approach Roadway	(7681)	8	
[66]	Inv. Rating Factor	(1556)	0.74			17.70 - Carlotta 17.		



**Bridge Name: Nine Mile Creek** 

**Bridge Number:** 

F-8

Agency: **Okanogan County** 

Structure ID:

08188400

**Bridge Type:** 

Reinforced Concrete Rib Deck Girders

Length: Skew:

28'-0" Long Bridge 0 Degree Skew

No. Spans:

(1) 27'-4"

Designed By:

Central Pre-Mix Prestress Co., 1979

**Design Load:** 

HS20-44 + 25 psf Future Asphalt

**Ref. Inspection: Rating Date:** 

10/06/2015 10/30/2017

**Rating Method:** 

LRFR

Rated By:

Susan M. Kovich, WA License 39869 NICHOLLS KOVICH ENGINEERING, PLLC



#### RESULTS OF RATING

NBI RATING	Rating Factor	γL	<b>Controlling Point</b>
HL-93 Inventory	0.77	0.80	Service III Moment
HL-93 Operating	1.44	1.35	Strength I Shear

LEGAL LOADS	<b>Rating Factor</b>	γL	Allowable Load	Controlling Point
TYPE 3	1.26	1.00	32 Tons	Service III Moment
TYPE 3-S2	1.30	1.00	47 Tons	Service III Moment
<b>TYPE 3-3</b>	1.54	1.00	61 Tons	Service III Moment
Notional Rating Load (NRL)	0.85	1.00	34 Tons	Service III Moment
Single Unit SHV (SU4)	1.06	1.00	29 Tons	Service III Moment
Single Unit SHV (SU5)	0.97	1.00	30 Tons	Service III Moment
Single Unit SHV (SU6)	0.89	1.00	31 Tons	Service III Moment
Single Unit SHV (SU7)	0.87	1.00	34 Tons	Service III Moment

PERMIT LOADS							
WSDOT Overload 1	0.92	1.00	44 Tons	Service III Moment			
WSDOT Overload 2	0.75	1.00	78 Tons	Service III Moment			

REMARKS: BRIDGE SHOULD BE POSTED FOR SU5, SU6 & SU7

**RESTRICT BRIDGE FOR OVERLOAD 1 & OVERLOAD 2** 

Rating based on 10% impact and no asphalt overlay.

NBI CODING				CURRENT REFERENCE				
[70]	Operating Level	(1660)	3	[29]	Avg. Daily Traffic	(1445)	504	
[63]	Oper. Rating Method	(1551)	8	[109]	Truck Percent	(1451)	2	
[64]	Oper. Rating Tons	(1552)		[58]	Deck Overall	(1663)	8	
[64]	Oper. Rating Factor	(1553)	1.44	[59]	Superstructure	(1671)	8	
[65]	Inv. Rating Method	(1554)	8	[60]	Substructure	(1676)	8	
[66]	Inv. Rating Tons	(1555)			Approach Roadway	(7681)	8	
[66]	Inv. Rating Factor	(1556)	0.77			1176.00		

Bridge Name: Salmon Cr-First Ave

Bridge Number: Okanogan2

Agency: City of Okanogan

**Structure ID:** 08526000

Bridge Type: Prestressed Concrete Rib Deck Girders

**Length:** 38'-0" Long Bridge

Skew: 0° Skew

No. Spans: (1) 37'-4" Span

**Designed By:** Central Pre-Mix Prestress Co., 1973

Design Load: HS-20-44

 Ref. Inspection:
 10/15/2015

 Rating Date:
 10/30/2017

Rating Method: LRFR

Rated By: Susan M. Kovich, WA License 39869

NICHOLLS KOVICH ENGINEERING, PLLC



#### RESULTS OF RATING

NBI RATING	Rating Factor	γL	<b>Controlling Point</b>		
HL-93 Inventory	0.73	0.80	Service III - Moment		
HL-93 Operating	1.23	1.35	Strength I - Moment		

LEGAL LOADS	<b>Rating Factor</b>	γL	Allowable Load	<b>Controlling Point</b>
TYPE 3	1.02	1.00	26 Tons	Service III - Moment
TYPE 3-S2	1.09	1.00	39 Tons	Service III - Moment
TYPE 3-3	1.24	1.00	50 Tons	Service III - Moment
Notional Rating Load (NRL)	0.67	1.00	27 Tons	Service III - Moment
Single Unit SHV (SU4)	0.87	1.00	23 Tons	Service III - Moment
Single Unit SHV (SU5)	0.82	1.00	25 Tons	Service III - Moment
Single Unit SHV (SU6)	0.75	1.00	26 Tons	Service III - Moment
Single Unit SHV (SU7)	0.71	1.00	27 Tons	Service III - Moment

PERMIT LOADS							
WSDOT Overload 1	0.66	1.00	32 Tons	Service I – Moment			
WSDOT Overload 2	0.61	1.00	64 Tons	Service I – Moment			

REMARKS: BRIDGE SHOULD BE POSTED FOR SU4, SU5, SU6 & SU7

RESTRICT BRIDGE FOR OVERLOAD 1 & OVERLOAD 2

Rating based on 20% impact and 2" asphalt overlay.

	NBI CODING			CURRENT REFERENCE				
[70]	Operating Level	(1660)	2	[29]	Avg. Daily Traffic	(1445)	260	
[63]	Oper. Rating Method	(1551)	8	[109]	Truck Percent	(1451)	5	
[64]	Oper. Rating Tons	(1552)		[58]	Deck Overall	(1663)	7	
[64]	Oper. Rating Factor	(1553)	1.23	[59]	Superstructure	(1671)	7	
[65]	Inv. Rating Method	(1554)	8	[60]	Substructure	(1676)	7	
[66]	Inv. Rating Tons	(1555)		5 5	Approach Roadway	(7681)	6	
[66]	Inv. Rating Factor	(1556)	0.73		Down word with the second monopolitics of the property of Delegan Aller and the second			

Bridge Name: Salmon Cr-Fifth Ave

Bridge Number: Okanogan3

Agency: City of Okanogan

**Structure ID:** 08526500

Bridge Type: Prestressed Concrete Rib Deck Girders

**Length:** 38'-0" Long Bridge

Skew: 0° Skew

No. Spans: (1) 37'-0" Span Designed By: Unknown, 1971

Design Load: HS-20

**Ref. Inspection:** 10/15/2015 **Rating Date:** 10/30/2017

Rating Method: LRFR

Rated By: Susan M. Kovich, WA License 39869

NICHOLLS KOVICH ENGINEERING, PLLC



#### RESULTS OF RATING

NBI RATING	Rating Factor	γL	Controlling Point	
HL-93 Inventory	0.79	0.80	Service III - Moment	
HL-93 Operating	1.30	1.35	Strength I - Moment	

LEGAL LOADS	Rating Factor	γL	Allowable Load	Controlling Point
TYPE 3	1.11	1.00	28 Tons	Service III - Moment
TYPE 3-S2	1.18	1.00	42 Tons	Service III - Moment
TYPE 3-3	1.35	1.00	54 Tons	Service III - Moment
Notional Rating Load (NRL)	0.72	1.00	29 Tons	Service III - Moment
Single Unit SHV (SU4)	0.94	1.00	25 Tons	Service III - Moment
Single Unit SHV (SU5)	0.89	1.00	28 Tons	Service III - Moment
Single Unit SHV (SU6)	0.81	1.00	28 Tons	Service III - Moment
Single Unit SHV (SU7)	0.77	1.00	30 Tons	Service III - Moment

PERMIT LOADS								
WSDOT Overload 1	0.71	1.00	34 Tons	Service I - Moment				
WSDOT Overload 2	0.66	1.00	69 Tons	Service I - Moment				

REMARKS: BRIDGE SHOULD BE POSTED FOR SU4, SU5, SU6 & SU7

RESTRICT BRIDGE FOR OVERLOAD 1 & OVERLOAD 2

Rating based on 20% impact and no asphalt overlay.

	NBI CODING			CURRENT REFERENCE				
[70]	Operating Level	(1660)	2	[29]	Avg. Daily Traffic	(1445)	260	
[63]	Oper. Rating Method	(1551)	8	[109]	Truck Percent	(1451)	5	
[64]	Oper. Rating Tons	(1552)		[58]	Deck Overall	(1663)	7	
[64]	Oper. Rating Factor	(1553)	1.30	[59]	Superstructure	(1671)	7	
[65]	Inv. Rating Method	(1554)	8	[60]	Substructure	(1676)	5	
[66]	Inv. Rating Tons	(1555)			Approach Roadway	(7681)	6	
[66]	Inv. Rating Factor	(1556)	0.79			Table Land of the second of		