	Traffic Volumes	Loyal of Camilas (a.m. martis line	Traffic Performance			Design Criteria (e.g. schematic, scaled single line, de		All and Man		rine Navigation				Natural and Cultural/Historic Resources		Status (a.g. drass
Concept Description	Year Assignment Process (e.g. hand model, none, growth factor?)	intersections?)	Travel Time	Mode of Travel	Vehicle Miles of Travel	Cross-Section	Horizontal	Profile	Air Navigation	Marine Navigation	Structures	Cost Estimating	Fish Habitat	Wetlands and Parks	Cultural/Historic Resources	Status (e.g. dropp evaluation
Five Northbound Lanes on Existing Bridge;	2020 Metro's EMME/2 travel demand model - Output	VISSIM Model - Input	Average Speed	Improve freight within BIA		New structures will be built to curre standards	nt Providing for weaving and merging means adding lanes in some locations	High-level, fixed span bridges	Bridges in the vicinity of Pearson Air Park	I-5 bridges across major shipping channel (Columbia River)	Further study needed to determine whether new bridge should be a replacement or supplemental	\$1,200 million (2002)	Limited screening focusing on fish	, , , , , , , , , , , , , , , , , , , ,	No detailed analysis was undertake	en Promising
5 southbound lanes on new double-deck bridge;	Regional travel patterns	Freeway operations	Reduce congestion and delay	Assume HOV lanes - further analysis needed in EIS			- SR 500 to 4th Plain	Low-level movable span bridges	No impact to restricted air space		further investigation needed	,	Actual impacts to natural resources need to be determined in an EIS	•	Actual impacts to cultural and histor resources need to be determined in an EIS	
LRT on lower deck; west of existing bridges		Vehicle Hours of Delay					- 4th Plain to Mill Plain					Displacements: 8 residential & 16 non-residential	Number of river crossing will significantly influence the impact	Delta Park green space	Ft. Vancouver Historical Site	
		Safety - reduces merging and weaving Concept #1 and #4 same model,					Mill Plain to SR 14In the vicinity of Hayden Island				Tunnels	Encroachments: 21 residential & 32 non-residential Need additional survey, engineering		Radio tower wetlands	Historic I-5 Columbia River Bridge	
		because both in Category #1					- SR 500 to 4th Plan - SR 500 to 4th Plan				Supplemental bridge Existing structures do not meet	and design work in EIS Based on major construction items				
							- SR 500 to 4th Plan Reduce number of exits and entrances Alignment east/west of existing bridges Several interchange improvements				seismic standards					
							Several interchange improvements									
Five northbound lanes on new bridge east of existing b 5 southbound lanes on existing bridges, New LRT bridge west of existing bridges	ridges,															
New 5 lane double deck bridge, northbound upper dec lower deck, LRT on existing west bridge	k, southbound															
New five lane double-deck bridge; northbound upper d		VISSIM Model - Input	Average Speed	Improve freight within BIA			nt Providing for weaving and merging	High-level, fixed span bridges	Bridges in the vicinity of Pearson Air			\$1,175 million (2002)	No detailed analysis was undertaken	No detailed analysis was undertaker	No detailed analysis was undertake	en Promising
southbound lower deck,	model - Output					standards	means adding lanes in some locations		Park	channel (Columbia River)			Limited screening focusing on fish habitat and wetlands	Limited screening focusing on fish habitat and wetlands		
LRT on new bridge west of existing bridges;		Freeway operations	Reduce congestion and delay	Assume HOV lanes - further analysis needed in EIS			- SR 500 to 4th Plain	Low-level movable span bridges	No impact to restricted air space			the existing bridges and seismic	Actual impacts to natural resources need to be determined in an EIS		Actual impacts to cultural and histor resources need to be determined in an EIS	•
Only option to shift navigational channel		Vehicle Hours of Delay					- 4th Plain to Mill Plain				Light rail on existing bridge would require retrofitting and the associated costs could easily exceed a new bridge	·	n-Number of river crossing will significantly influence the impact	Delta Park green space	Ft. Vancouver Historical Site	
		Safety - reduces merging and weaving					- Mill Plain to SR 14				Tunnels	Encroachments: 9 residential & 35 non-residential		Radio tower wetlands	Historic I-5 Columbia River Bridge	
		Concept #1 and #4 same model, because both in Category #1					 In the vicinity of Hayden Island SR 500 to 4th Plan SR 500 to 4th Plan 					Need additional survey, engineering and design work in EIS Based on major construction items		Full impact to Columbia River		
							- SR 500 to 4th Plan Reduce number of exits and				seismic standards					
							entrances Alignment east/west of existing									

New structures will be built to current Providing for weaving and merging High-level, fixed span bridges

means adding lanes in some

- SR 500 to 4th Plain

- 4th Plain to Mill Plain

- Mill Plain to SR 14

- SR 500 to 4th Plan

- SR 500 to 4th Plan

- SR 500 to 4th Plan Reduce number of exits and

entrances

locations

- In the vicinity of Hayden Island

Alignment east/west of existing

New structures will be built to current Providing for weaving and merging High-level, fixed span bridges

means adding lanes in some

- SR 500 to 4th Plain

- 4th Plain to Mill Plain

- In the vicinity of Hayden Island

Alignment east/west of existing

Several interchange improvements

- Mill Plain to SR 14

- SR 500 to 4th Plan

- SR 500 to 4th Plan - SR 500 to 4th Plan Reduce number of exits and

entrances

Several interchange improvements

locations

Status (e.g. dropped, why? Or further

evaluation why?)

Ft. Vancouver Historical Site

Ft. Vancouver Historical Site

Historic I-5 Columbia River Bridge

Historic I-5 Columbia River Bridge

No detailed analysis was undertaken No detailed analysis was undertaken No detailed analysis was undertaken Promising

need to be determined in an EIS need to be determined in an EIS resources need to be determined in

Delta Park green space

Radio tower wetlands

Delta Park green space

Radio tower wetlands

Bridges in the vicinity of Pearson Air I-5 bridges across major shipping Further study needed to determine No cost estimate was developed for No detailed analysis was undertaken No detailed analysis was underta

Displacements: 20 residential & 23 Number of river crossing will

Displacements: 6 residential & 17 Number of river crossing will

significantly influence the impact

significantly influence the impact

Limited screening focusing on fish habitat and wetlands

Part of EIS, need life cycle costs of Actual impacts to natural resources Actual impacts to natural resources Actual impacts to cultural and historic

the existing bridges and seismic need to be determined in an EIS need to be determined in an EIS resources need to be determined in

whether new bridge should be a Concept #6

non-residential

non-residential

non-residential

non-residential

and design work in EIS

Encroachments: 16 residential & 43

Need additional survey, engineering

Based on major construction items

Encroachments: 13 residential & 29

Need additional survey, engineering

Based on major construction items

and design work in EIS

replacement or supplemental

further investigation needed

Existing structures do not meet

whether new bridge should be a

Existing structures do not meet

replacement or supplemental

Replacement bridge

Supplemental bridge

seismic standards

Replacement bridge

Supplemental bridge

seismic standards

Bridges in the vicinity of Pearson Air I-5 bridges across major shipping Further study needed to determine \$1,161 million (2002)

Joint use (highway/light rail) bridge

channel (Columbia River)

channel (Columbia River)

Low-level movable span bridges No impact to restricted air space

Low-level movable span bridges No impact to restricted air space

Local Arterials on existing northbound ridge LRT on southbound Bridge

*modeled in detail in BIA Study

Summary of Bridge Influence Area (BIA) Concepts

8-5 New 6 lane bridge east of existing bridges;

lower deck

LRT on new bridge west of existing bridges

8-6* 3 lanes northbound/southbound on existing bridges;

8-7* 3 southbound lanes on existing west bridge;

8-8 New 8-lane Bridge east of existing bridges

2 lanes northbound/southbound collector-distributor on existing

New 4-lane collector-distributor double deck bridge with LRT on

HOV only, southbound and northbound on existing east bridge;

2 arterial lanes and LRT on new bridge west of existing bridges

3 northbound lanes on new bridge east of existing bridges;

2020 Metro's EMME/2 travel demand VISSIM Model - Input

2020 Metro's EMME/2 travel demand VISSIM Model - Input

Freeway operations

Vehicle Hours of Delay

Freeway operations

Vehicle Hours of Delay

Safety - reduces merging and

weaving
Need additional engineering to
resolve mergingat SR 14

Safety - reduces merging and

model - Output

model - Output

Average Speed

Average Speed

Reduce congestion and delay

Reduce congestion and delay

Improve freight within BIA

Improve freight within BIA

needed in EIS

Assume HOV lanes - further analysis

needed in EIS

Assume HOV lanes - further analysis