



APPENDIX A

Preliminary Design Criteria



## Preliminary Project Design Criteria

**Project Name: Seward Highway Dowling Interchange, Mainline**

<input checked="" type="checkbox"/> New Construction/Reconstruction	<input type="checkbox"/> 3R	<input type="checkbox"/> PM	<input type="checkbox"/>
<b>Project Funding:</b>	National Highway System		
<b>Functional Classification:</b>	Interstate, Urban Principal Arterial Freeway		
<b>Terrain:</b>	Rolling		
<b>Level-of-Service</b>	C" desirable, "D" minimum		
<b>Design Year:</b>	2040		
<b>Present ADT: (Year 2018)</b>	N/A		
<b>Design Year ADT: (Year 2040)</b>	N/A		
<b>DHV (XX%): (Year 2040)</b>	N/A		
<b>Trucks (%):</b>	N/A		
<b>Design Vehicle:</b>	WB-109D		
<b>Design Speed:</b>	70 mph		
<b>Minimum Stopping Sight Distance:</b>	730 Feet		
<b>Minimum Passing Sight Distance:</b>	N/A		
<b>Maximum Allowable Grade:</b>	4%		
<b>Minimum Allowable Grade:</b>	0.5%		
<b>Minimum Allowable Radius:</b>	2050 Feet		
<b>Minimum K-Value for Vertical Curves:</b>	<b>Sag</b>	<b>Crest</b>	
	181	2197 Design, 247 min	
<b>Number of Roadways:</b>	6-lane two-way divided		
<b>Width of Traveled Way:</b>	12 Feet		
<b>Width of Shoulders:</b>	<b>Outside</b>	<b>Inside</b>	
	10 Feet	10 Feet	
<b>Surface Treatment:</b>	<b>T/W:</b>	<b>Shoulders</b>	
	Asphalt Concrete	Asphalt Concrete	
<b>Side Slope Ratios:</b>	<b>Foreslopes:</b>	<b>Backslopes</b>	
	6:1 to 4:1 at hinge point	2:1 max, 3:1 or flatter preferred	
<b>Degree of Access Control:</b>	Full		
<b>Median Treatment:</b>	46 feet min depressed or barrier		
<b>Illumination:</b>	Continuous, low level & high masts		
<b>Curb Usage and Type:</b>	N/A		
<b>Bicycle and Pedestrian Provisions:</b>	Provided on frontage roads and cross streets, including grade separations at cross streets. Prohibited on mainline.		
<b>Vertical Clearance:</b>	17 feet, mainline over		

Proposed By:	Date:
Recommended By:	Date:
Accepted By:	Date:

## Preliminary Project Design Criteria

**Project Name: Seward Highway Dowling Interchange, Diagonal Ramps**

<input checked="" type="checkbox"/> New Construction/Reconstruction	<input type="checkbox"/> 3R	<input type="checkbox"/> PM	<input type="checkbox"/>
<b>Project Funding:</b>	National Highway System		
<b>Functional Classification:</b>	Interstate, Urban Principal Arterial Freeway		
<b>Ramp Type:</b>	Parallel Entrance, Taper Exit		
<b>Terrain:</b>	Rolling		
<b>Level-of-Service</b>	C" desirable, "D" minimum		
<b>Design Year:</b>	2040		
<b>Present ADT: (Year 2018)</b>	N/A		
<b>Design Year ADT: (Year 2040)</b>	N/A		
<b>DHV (XX%): (Year 2040)</b>	N/A		
<b>Trucks (%):</b>	N/A		
<b>Design Vehicle:</b>	WB-67		
<b>Design Speed:</b>	60 mph		
<b>Minimum Stopping Sight Distance:</b>	425 Feet		
<b>Maximum Allowable Grade:</b>	5%		
<b>Minimum Allowable Grade:</b>	0.5% or 0.3% with curb and gutter		
<b>Minimum Allowable Radius:</b>	835 Feet		
<b>Minimum K-Value for Vertical Curves:</b>	<b>Sag</b>	<b>Crest</b>	
	96	84	
<b>Number of Roadways:</b>	1-lane one-way, 2-lane one-way		
<b>Width of Traveled Way:</b>	12 Feet		
<b>Width of Shoulders:</b>	<b>Outside</b>	<b>Inside</b>	
	8 Feet	4 Feet	
<b>Surface Treatment:</b>	<b>T/W:</b>	<b>Shoulders</b>	
	Asphalt Concrete	Asphalt Concrete	
<b>Side Slope Ratios:</b>	<b>Foreslopes:</b>	<b>Backslopes</b>	
	6:1 to 4:1 at hinge point	2:1 max, 3:1 or flatter preferred	
<b>Degree of Access Control:</b>	Full		
<b>Illumination:</b>	Continuous		
<b>Curb Usage and Type:</b>	N/A		
<b>Bicycle and Pedestrian Provisions:</b>	None, provided on frontage roads		

Proposed By:	Date:
Recommended By:	Date:
Accepted By:	Date:

## Preliminary Project Design Criteria

**Project Name: Seward Highway Dowling Interchange, State Owned Frontage Roads**

New Construction/Reconstruction
  3R
  PM

<b>Project Funding:</b>	National Highway System	
<b>Functional Classification:</b>	Urban Arterial	
<b>Terrain:</b>	Rolling	
<b>Level-of-Service</b>	C" desirable, "D" minimum	
<b>Design Year:</b>	2040	
<b>Present ADT: (Year 2018)</b>	N/A	
<b>Design Year ADT: (Year 2040)</b>	N/A	
<b>DHV (XX%): (Year 2040)</b>	N/A	
<b>Trucks (%):</b>	N/A	
<b>Design Vehicle:</b>	WB-67	
<b>Design Speed:</b>	45 mph	
<b>Minimum Stopping Sight Distance:</b>	360 Feet	
<b>Minimum Passing Sight Distance:</b>	N/A	
<b>Maximum Allowable Grade:</b>	7%	
<b>Minimum Allowable Grade:</b>	0.5% or 0.3% with curb and gutter	
<b>Minimum Allowable Radius:</b>	660 Feet	
<b>Minimum K-Value for Vertical Curves:</b>	<b>Sag</b>	<b>Crest</b>
	79	943 design, 61 min
<b>Number of Roadways:</b>	2-lane one-way, 1-lane one-way	
<b>Width of Traveled Way:</b>	12 Feet	
<b>Width of Shoulders/Shy:</b>	2 feet min; 4 feet where provided for bicycles [see bicycle provisions below]	
<b>Surface Treatment:</b>	<b>T/W:</b>	<b>Shoulders</b>
	Asphalt Concrete	Asphalt Concrete
<b>Side Slope Ratios:</b>	<b>Foreslopes:</b>	<b>Backslopes</b>
	4:1, 2:1 behind curb	2:1
<b>Degree of Access Control:</b>	PCM Driveway Manual [no driveways within 100 feet of all gores]	
<b>Median Treatment:</b>	Raised	
<b>Illumination:</b>	Underpass and intersection	
<b>Curb Usage and Type:</b>	Mountable outside, Expressway median	
<b>Bicycle Provisions:</b>	4 foot shoulder or 10 foot pathway	
<b>Pedestrian Provisions:</b>	6 foot sidewalk or 10 foot pathway	
<b>Vertical Clearance:</b>	16.5 feet, cross street under	

Proposed By: \_\_\_\_\_ Date: \_\_\_\_\_

Recommended By: \_\_\_\_\_ Date: \_\_\_\_\_

Accepted By: \_\_\_\_\_ Date: \_\_\_\_\_

## Preliminary Project Design Criteria

**Project Name: Seward Highway Dowling Interchange, State Owned Cross Streets**

<input checked="" type="checkbox"/> New Construction/Reconstruction	<input type="checkbox"/> 3R	<input type="checkbox"/> PM	<input type="checkbox"/>
<b>Project Funding:</b>	National Highway System		
<b>Functional Classification:</b>	Urban Arterial		
<b>Terrain:</b>	Rolling		
<b>Level-of-Service</b>	C" desirable, "D" minimum		
<b>Design Year:</b>	2040		
<b>Present ADT: (Year 2018)</b>	N/A		
<b>Design Year ADT: (Year 2040)</b>	N/A		
<b>DHV (XX%): (Year 2040)</b>	N/A		
<b>Trucks (%):</b>	N/A		
<b>Design Vehicle:</b>	WB-67		
<b>Design Speed:</b>	45 mph		
<b>Minimum Stopping Sight Distance:</b>	360 Feet		
<b>Minimum Passing Sight Distance:</b>	1625 feet		
<b>Maximum Allowable Grade:</b>	7%		
<b>Minimum Allowable Grade:</b>	0.5% or 0.3% with curb and gutter		
<b>Minimum Allowable Radius:</b>	660 Feet		
<b>Minimum K-Value for Vertical Curves:</b>	<b>Sag</b>	<b>Crest</b>	
	79	943 design, 61 min	
<b>Number of Roadways:</b>	2-lane one-way		
<b>Width of Traveled Way:</b>	12 Feet, 11 feet min		
<b>Width of Shoulders/Shy:</b>	2 Feet		
<b>Surface Treatment:</b>	<b>T/W:</b>	<b>Shoulders</b>	
	Asphalt Concrete	Asphalt Concrete	
<b>Side Slope Ratios:</b>	<b>Foreslopes:</b>	<b>Backslopes</b>	
	4:1, 2:1 behind curb	2:1	
<b>Degree of Access Control:</b>	PCM Driveway Manual		
<b>Median Treatment:</b>	Raised		
<b>Illumination:</b>	Underpass and intersection		
<b>Curb Usage and Type:</b>	Mountable outside, Expressway median		
<b>Bicycle Provisions:</b>	4 foot shoulder or 10 foot pathway		
<b>Pedestrian Provisions:</b>	6 foot sidewalk		
<b>Vertical Clearance:</b>	16.5 feet, cross street under		

Proposed By: \_\_\_\_\_ Date: \_\_\_\_\_

Recommended By: \_\_\_\_\_ Date: \_\_\_\_\_

Accepted By: \_\_\_\_\_ Date: \_\_\_\_\_