

**STERLING HIGHWAY, MP 45-60**

G South Alternative  
COST ESTIMATE

<b>Length</b>	BOP	EOP	Length (ft)	Length (mi)
	1224+00.00	1976+17.00	75217.00	14.2
<b>Length New Highway (from intersection to intersection of the old Hwy)</b>	Int with Old Hwy	Int with Old Hwy	Length (ft)	Length (mi)
	1610+25.00	1866+25.00	25600.00	4.8

**TYPICAL SECTION**

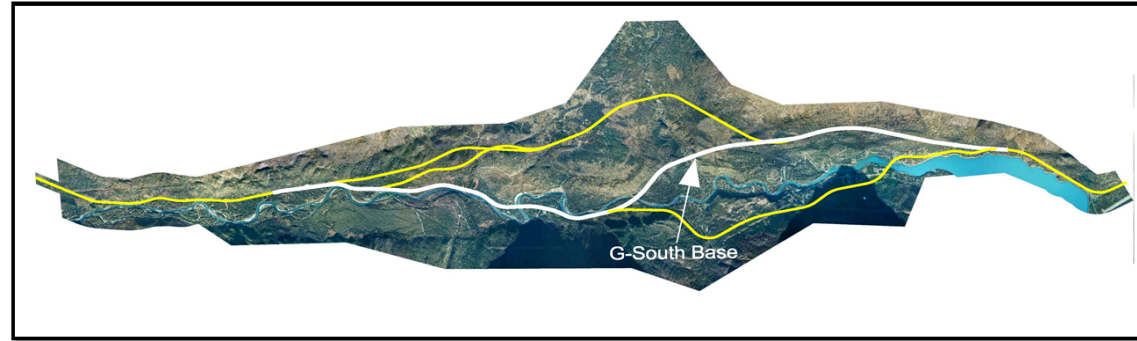
Proposed 2-Lane Sterling Highway: 8' - 12' - 12' - 8' = 40-feet  
 Proposed 2-Lane Sterling Highway W/ Lt Turn Lane: 8' - 12' - 16' - 12' - 8' = 56-feet  
 Proposed 2-Lane Sterling Highway W/ Rt Turn Lane: 8' - 12' - 12' - 12' - 8' = 52-feet  
 Proposed 2-Lane Sterling Highway W Passing Lane: 8' - 12' - 12' - 12' - 8' = 52-feet

**STRUCTURAL SECTION (inches)**

ACP Type II =	2"	
Binder =	3"	
ABC =	4"	
Borrow "A" =	20"	Combined and listed as "Borrow "A" for Cost Estimating Purposes
Borrow "B" =	20"	
Borrow "C" =	varies	

**STRUCTURES (feet)**

Crossing	Beg Sta	End Sta	Width
Schooner Bend Bridge	1531+00	1534+25	40
Kenai River Crossing	1616+40	1621+26	52
Juneau Creek Crossing	1656+80	1670+00	52



**ASSUMPTIONS:**

Clear Zone: 30-feet  
Slopes: 6:1 (22'); 2:1

DESCRIPTION	ITEM No	Pay Unit	Unit Price	Quantity	Amount
CLEARING AND GRUBBING	201 (3A)	ACRE	\$5,977.97	200	\$1,195,594.15
REMOVAL OF STRUCTURES AND OBSTRUCTIONS	202 (1)	LUMP SUM	\$437,086.27	1	\$437,086.27
REMOVAL OF PAVEMENT	202 (2)	SQUARE YARD	\$5.32	150,000	\$798,507.44
REMOVAL AND DISPOSAL OF CULVERT PIPE	202 (4A)	LUMP SUM	\$43,708.63	1	\$43,708.63
COMMON EXCAVATION	203 (1)	CUBIC YARD	\$7.28	2,445,700	\$17,816,364.66
ROCK EXCAVATION	203 (2)	CUBIC YARD	\$17.48	980,000	\$17,133,781.61
BORROW, TYPE A	203 (6A)	TON	\$12.67	591,100	\$7,486,856.58
BORROW, TYPE B	203 (6B)	TON	\$7.28	245,000	\$1,784,768.32
BORROW, TYPE C	203 (6C)	TON	\$5.63	403,824	\$2,353,410.33
OBLITERATION OF ROADWAY	203 (9)	SQUARE YARD	\$2.19	30,000	\$65,562.94
CRUSHED AGGREGATE BASE COURSE	301 (1)	TON	\$37.56	145,939	\$5,481,704.23
ASPHALT TREATED BASE COURSE	306 (1)	TON	\$55.36	74,000	\$4,096,956.26
ASPHALT CONCRETE PAVEMENT, TYPE II, CLASS A	401 (1)	TON	\$78.43	54,909	\$4,306,289.50
ASPHALT CEMENT, GRADE AC-5	401 (4)	TON	\$863.59	2,900	\$2,504,408.28
CLASS A CONCRETE	501 (1)	LUMP SUM	\$72,847.71	1	\$72,847.71
MECHANICALLY STABILIZED EMBANKMENT RETAINING WALL	511 (1)	SQUARE FOOT	\$65.56	62,250	\$4,081,293.01
FIN DRAIN	603 (7-150)	LINEAR FOOT	\$58.28	14,000	\$815,894.36
24 INCH PIPE	603 (17-24)	LINEAR FOOT	\$127.10	3,600	\$457,562.25
36 INCH PIPE	603 (17-36)	LINEAR FOOT	\$186.23	1,600	\$297,968.38
48 INCH PIPE	603 (17-48)	LINEAR FOOT	\$248.71	5,200	\$1,293,310.98
144 INCH PIPE	603 (17-144)	LINEAR FOOT	\$746.14	1,200	\$895,369.14
END SECTION FOR 24 INCH PIPE	603 (20-24)	EACH	\$840.82	90	\$75,674.03
END SECTION FOR 36 INCH PIPE	603 (20-36)	EACH	\$1,007.40	60	\$60,444.10
END SECTION FOR 48 INCH PIPE	603 (20-48)	EACH	\$1,266.60	40	\$50,664.89
W-BEAM GUARDRAIL	606 (1)	LINEAR FOOT	\$30.17	30,000	\$904,975.10
REMOVAL AND DISPOSING OF GUARDRAIL	606 (6)	LINEAR FOOT	\$9.46	11,000	\$104,066.73
PARALLEL GUARDRAIL TERMINAL	606 (13)	EACH	\$4,370.86	34	\$148,609.33
TRANSITION RAIL	606 (16)	EACH	\$2,913.91	12	\$34,966.90
DITCH LINING	610 (3/7)	SQUARE YARD	\$29.14	23,000	\$670,198.94
RIPRAP, CLASS II	611 (1B)	CUBIC YARD	\$118.31	14,000	\$1,656,284.47
STANDARD SIGN	615 (1)	SQUARE FOOT	\$101.99	1,800	\$183,576.23
DOUBLE THAW PIPE	616 (5)	LINEAR FOOT	\$36.42	6,400	\$233,112.67
SEEDING	618 (2)	POUND	\$49.54	8,000	\$396,291.55
WATER FOR SEEDING	618 (3)	M GAL	\$13.11	8,000	\$104,900.70
TOPSOIL	620 (1)	SQUARE YARD	\$6.50	880,000	\$5,721,794.77
SLOPE REINFORCEMENT	637 (1)	LUMP SUM	\$1,400,917.52	1	\$1,400,917.52
MOBILIZATION AND DEMOBILIZATION	640 (1)	LUMP SUM	\$2,913,908.44	1	\$2,913,908.44
EROSION AND POLLUTION CONTROL ADMINISTRATION	641 (1)	LUMP SUM	\$43,708.63	1	\$43,708.63
EROSION AND POLLUTION CONTROL	641 (3)	LUMP SUM	\$218,543.13	1	\$218,543.13
SILT FENCE	641 (4)	LINEAR FOOT	\$5.83	45,000	\$262,251.76
CONSTRUCTION SURVEYING	642 (1)	LUMP SUM	\$728,477.11	1	\$728,477.11
THREE PERSON SURVEY PARTY	642 (3)	HOURLY	\$355.32	300	\$106,596.89
TRAFFIC MAINTENANCE	643 (2)	LUMP SUM	\$291,390.84	1	\$291,390.84
PERMANENT CONSTRUCTION SIGNS	643 (3)	LUMP SUM	\$17,483.45	1	\$17,483.45
FLAGGING	643 (15)	LUMP SUM	\$728,477.11	1	\$728,477.11
TRAFFIC CONTROL DEVICES	643 (25)	CONTINGENT SUM	\$1,456,954.22	1	\$1,456,954.22
ENGINEERING TRANSPORTATION	644 (8)	EACH	\$36,423.86	14	\$509,933.98
WIDE PAD DOZER 48 KW MINIMUM	646 (1)	HOURLY	\$174.83	1,000	\$174,834.51
METHYL METHACRYLATE PAVEMENT MARKINGS	670 (10)	LUMP SUM	\$874,172.53	1	\$874,172.53
<b>ROADWAY SUBTOTAL</b>					<b>\$93,492,389</b>
<b>BRIDGE SUBTOTAL</b>					<b>\$88,297,404</b>
<b>CONTIGENCY (20%)</b>					<b>\$36,357,959</b>
<b>CONSTRUCTION ENGINEERING (15%)</b>					<b>\$32,722,163</b>
<b>CONSTRUCTION COSTS SUBTOTAL</b>					<b>\$250,869,914</b>
<b>WILDLIFE IMPACT MITIGATION</b>					<b>\$6,945,000</b>
<b>WETLAND IMPACT MITIGATION</b>					<b>\$1,500,000</b>
<b>SECTION 106</b>					<b>\$4,000,000</b>
<b>DESIGN ENGINEERING (12%)</b>					<b>\$30,104,390</b>
<b>UTILITIES</b>					<b>\$800,000</b>
<b>ROW</b>					<b>\$2,896,601</b>
<b>SUBTOTAL</b>					<b>\$297,115,905</b>
<b>ICAP (5%)</b>					<b>\$14,855,795</b>
<b>GRAND TOTAL</b>					<b>\$312,000,000</b>

TABLE of ESTIMATING FACTORS		
ITEM	FACTOR	QUANTITY
Select Material Type C (tons)	140 lb/ft <sup>3</sup>	403,824
Select Material Type B (tons)	140 lb/ft <sup>3</sup>	245,000
Select Material Type A (tons)	145 lb/ft <sup>3</sup>	591,100
Crushed Aggregate Base Course (tons)	145 lb/ft <sup>3</sup>	30,000
Asphalt Treated Aggregate Base Course (tons)	148 lb/ft <sup>3</sup>	145,939
ACP (tons)	152 lb/ft <sup>3</sup>	74,000
ATB AC Oil (tons)	5.5 % of ATB	8,027

SUMMARY	
Borrow Type C (CY--ft <sup>3</sup> )	213,663 5,788,909
Borrow Type B (CY--ft <sup>3</sup> )	129,630 3,500,000
Borrow Type A (CY--ft <sup>3</sup> )	301,967 8,153,103
Aggregate Base Course (CY--ft <sup>3</sup> )	15,326 413,793
ATB (CY--ft <sup>3</sup> )	73,043 1,972,150
ACP (CY--ft <sup>3</sup> )	36,062 973,684

GUARDRAIL (LF)	
Segment:	Length
1255+00 RT TO 1268+00 RT	1,300
1268+00 RT TO 1275+50 RT	750
1275+50 RT TO 1281+50 RT	600
1281+50 RT TO 1285+50 RT	400
1285+50 RT TO 1291+00 RT	550
1307+50 RT TO 1313+00 RT	550
1366+00 RT TO 1383+50 RT	1,750
1383+50 RT TO 1387+00 RT	350
1387+00 RT TO 1391+50 RT	450
1400+00 RT TO 1405+50 RT	550
1405+50 RT TO 1409+50 RT	450
1409+50 RT TO 1415+00 RT	550
1438+50 RT TO 1452+00 RT	1,350
1568+00 LT TO 1571+50 LT	350
1720+00 LT TO 1730+00 LT	1,000
1819+00 RT TO 1834+00 RT	1,500
1854+25 RT TO 1898+25 RT	4,400
1910+00 RT TO 1916+50 RT	650
1937+00 RT TO 1942+00 RT	500
OFF-MAINLINE	12,000
<b>TOTAL:</b>	<b>30,000</b>

MSE RETAINING WALLS (SF)			
Location	Length	Height	Face
1258+00 LT TO 1259+25 LT	125	22	2,125
1261+50 LT TO 1262+50 LT	100	19	1,850
1265+00 LT TO 1272+50 LT	1,250	16	12,100
1288+50 LT TO 1289+00 LT	50	5	225
1313+50 LT TO 1315+50 LT	200	3	625
1348+50 LT TO 1350+00 LT	150	4	550
1370+00 LT TO 1377+50 LT	750	8	6,000
1399+25 LT TO 1399+75 LT	50	5	125
1404+50 LT TO 1408+00 LT	350	11	4,275
1405+50 RT TO 1409+00 RT	350	8	2,925
1410+00 LT TO 1410+75 LT	75	26	1,275
1414+50 LT TO 1415+50 LT	100	16	1,575
1820+00 RT TO 1820+50 RT	50	3	125
1824+50 RT TO 1826+00 RT	150	18	2,750
1829+50 RT TO 1833+50 RT	400	12	4,600
1872+50 RT TO 1876+50 RT	400	25	10,150
1886+00 LT TO 1888+50 LT	250	8	1,975
1910+50 LT TO 1911+00 LT	50	5	250
1939+00 RT TO 1940+50 RT	150	12	1,825
OFF-MAINLINE			6,925
<b>TOTAL:</b>			<b>62,250</b>

Bridge Rail Connections	
Structures:	3
x4	12
<b>TOTAL:</b>	<b>12</b>

Guardrail End Sections	
Rail Runs	19
X1 (Opposing Traffic)	19
Clear Zone Need	15
<b>TOTAL:</b>	<b>34</b>

Bridge Structure Costs				
Crossing	SF	Cost (\$/SF)	Revised Cost (\$/SF)	Bridge Cost
Forest Service Crossing	8448		\$267.73	\$2,261,801.34
Kenai River	37908	\$625.00	\$539.78	\$20,462,078.58
Juneau Creek	82212	\$800.00	\$690.92	\$56,802,056.50
Kenai River at Schooners	16250	\$625.00	\$539.78	\$8,771,467.16
<b>Totals</b>				<b>\$88,297,403.58</b>

Bridge Structure Cost Revision Assumptions: From the Bridge Report the most expensive bridge option was used to provide a conservative estimate, the cost per sq ft from the bridge report was adjusted to construction only costs by dividing by 1.55 (55% increase over basic furnishing and installation costs) and then including 10% for detours and 15% for mobilization. This number was then brought to 2014 Dollars via AK CPI inflation averages between 2011 and 2014.