

APPENDIX A

PROJECT DESIGN CRITERIA

Project Design Criteria

Project Trunk Road Extension Project Number 07-016

New Construction / Reconstruction Rehabilitation Other _____

Design Functional Classification Rural Minor Collector (AASHTO)*

Design Year (Usually 5-year increment at least 20 years after construction) 2027

Present ADT (& year) Fairview Loop > 4500 (ATR 2005) Trunk Road > 2700 (ATR 2005)

Design Year ADT (& year) >3000 (2027) (ITE pg 263)

Mid Design Period ADT (& year) > 3000 (2017) (ITE pg 263)

Pavement Design Year (Construction Year + n*) 2027

Design Vehicle S-Bus 40 (possible elementary school)

Design Speed 45 mph (AASHTO pg 424)

Stopping Sight Distance 360 feet (AASHTO pg 426)

Passing Sight Distance 1625 feet (AASHTO pg 427)

Maximum allowable Grade 10% (AASHTO pg 425)

Minimum Allowable Grade 0.5% Ditch Slope (AASHTO pg 425)

Minimum K-value for Vertical Curves: Sag 79 (AASHTO pg 426) Crest 61 (AASHTO pg 426)

Number of Lanes Two

Minimum Width of Traveled Way 18 ft min., 24 recommended (AASHTO pg 315)

Minimum Width of Shoulders: 2ft (AASHTO pg 316)

Surface Treatment: T/W paved Shoulders paved

Side Slope Ratios: Foreslopes 3:1 max Backslopes 2:1 max

Minimum Allowable Horizontal Curve 660 feet (AASHTO pg 159)

Cross Slope 1.5% min (AASHTO pg 425)


Clear Zone 10 feet (AASHTO pg 323)

Maximum Superelevation 6% (AASHTO pg 157)

Minimum Tangent Lengths 44 feet (AASHTO pg 174)

Proposed by Todd Carsten Project Engineer Date 5/10/07

Recommended by Tom Adams Project Manager Date 5/10/07

Accepted by  Client Date 5-20-07

ATR Alaska Department of Transportation Traffic Volume Report, 2005
 MSB Matanuska-Susitna Borough Subdivision Construction Manual, 1991
 AASHTO Geometric Design of Highways and Streets, 2001
 ITE Institute of Transportation Engineers Trip Generation 6th Edition
 * See MSB pg 9 (over 3000 ADT)