KABATA Reponses to House Transportation Committee Information Requests made by Representative Feige

- **Please Provide the Wilbur Smith Traffic and Toll Revenue Study(s).**
  - There are many elements and sub-studies that go into developing an "investment grade" traffic and toll revenue study. The information requested is available on the Knik Arm Bridge website at these links and they collectively build up to the present traffic and toll revenue projections and risk analysis. They are provided in chronological/hierarchical order from most recent to oldest. We also provide the HDR traffic study that was prepared as part of developing the environmental impact statement for a view independent of CDM Smith.

    - August 2012 update letter - http://www.knikarmbridge.com/documents/MemoforAugust2012TandRforecastupdated8.23.2012.pdf
    - October 2011 Benefit-Cost Analysis - http://www.knikarmbridge.com/2011TIGER/T&RStudy.pdf
    - October 2011 Travel, Fuel Use, and Carbon Dioxide (CO2) Emission Impacts - http://www.knikarmbridge.com/2011TIGER/Emissions.pdf
    - August 2011 Traffic and Toll Revenue Study Update – http://www.knikarmbridge.com/2011TIGER/T&RStudy.pdf
    - 2007 Final Draft Traffic and Toll Revenue Study - http://www.knikarmbridge.com/documents/10082007ProposedKnikArmBridgeFinalTrafficandTollRevenueForecastDRAFT.pdf
    - 2007 Independent Socio-Economic Overview - http://www.knikarmbridge.com/documents/IndependentEconomicOverviewandDevelopmentForecast07022007.pdf
    - 2007 Stated preference travel survey - http://www.knikarmbridge.com/documents/KnikArmStatedPreferenceTrafficSurveyReport.pdf
    - 2007 Origin and Destination Study - http://www.knikarmbridge.com/documents/OriginandDestinationStudy091207.pdf
    - Land Use and Transportation Forecasting Technical report HDR 2006 – http://www.knikarmbridge.com/Tech_Reports/Boiler%20QC/Land%20Use%20and%20Transportation%20Forecast/Appendix%20I/Appendix%20I%20Trans%20Planning%20Model%20Tech%20Report%2012-2005.pdf

Q. How do the various population forecasts compare? Where is the population growth settling?

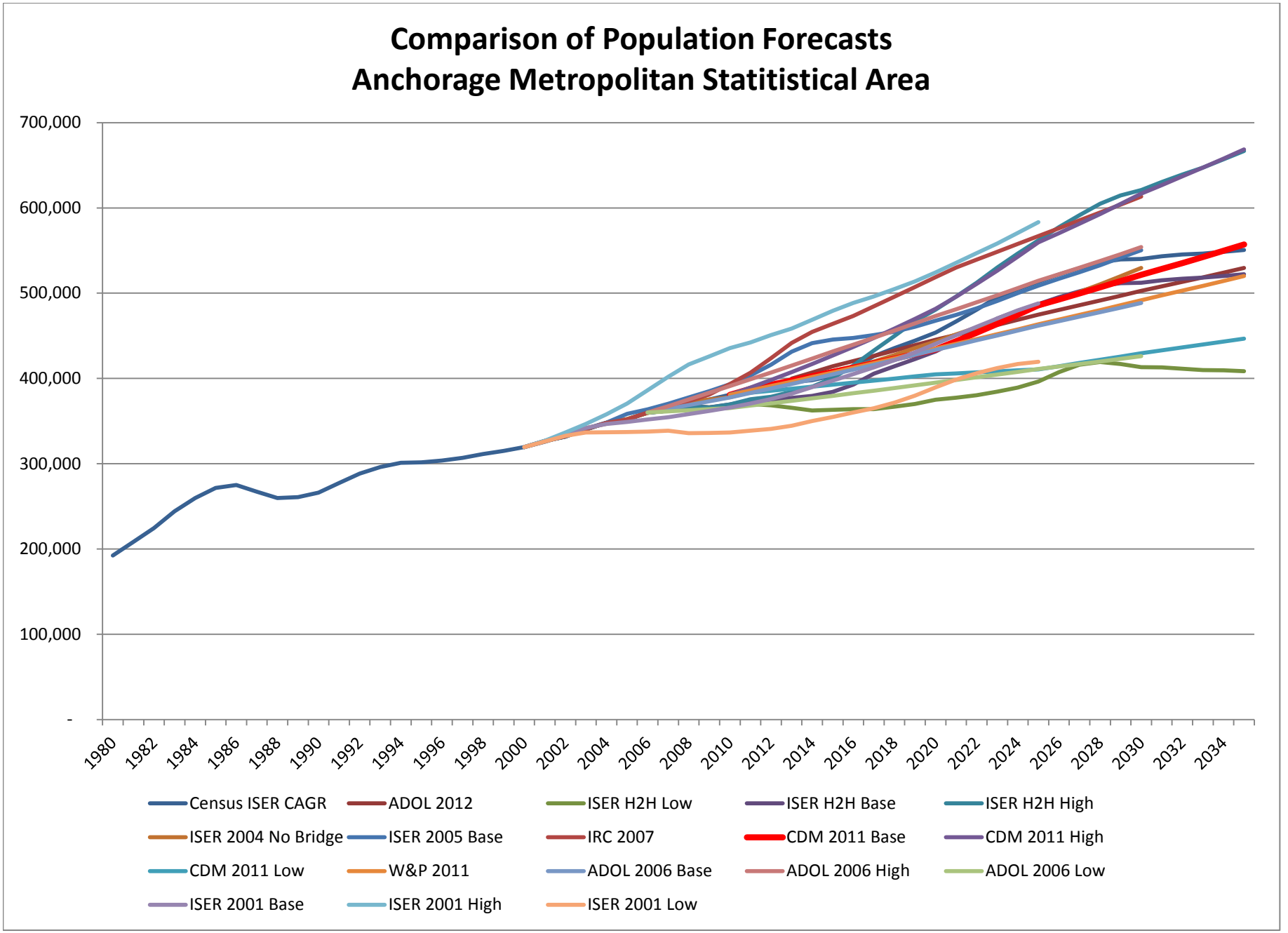
a. The attached charts provide graphical images of the historical population and a range of population forecasts for the Anchorage Metropolitan Statistical Area, the Municipality

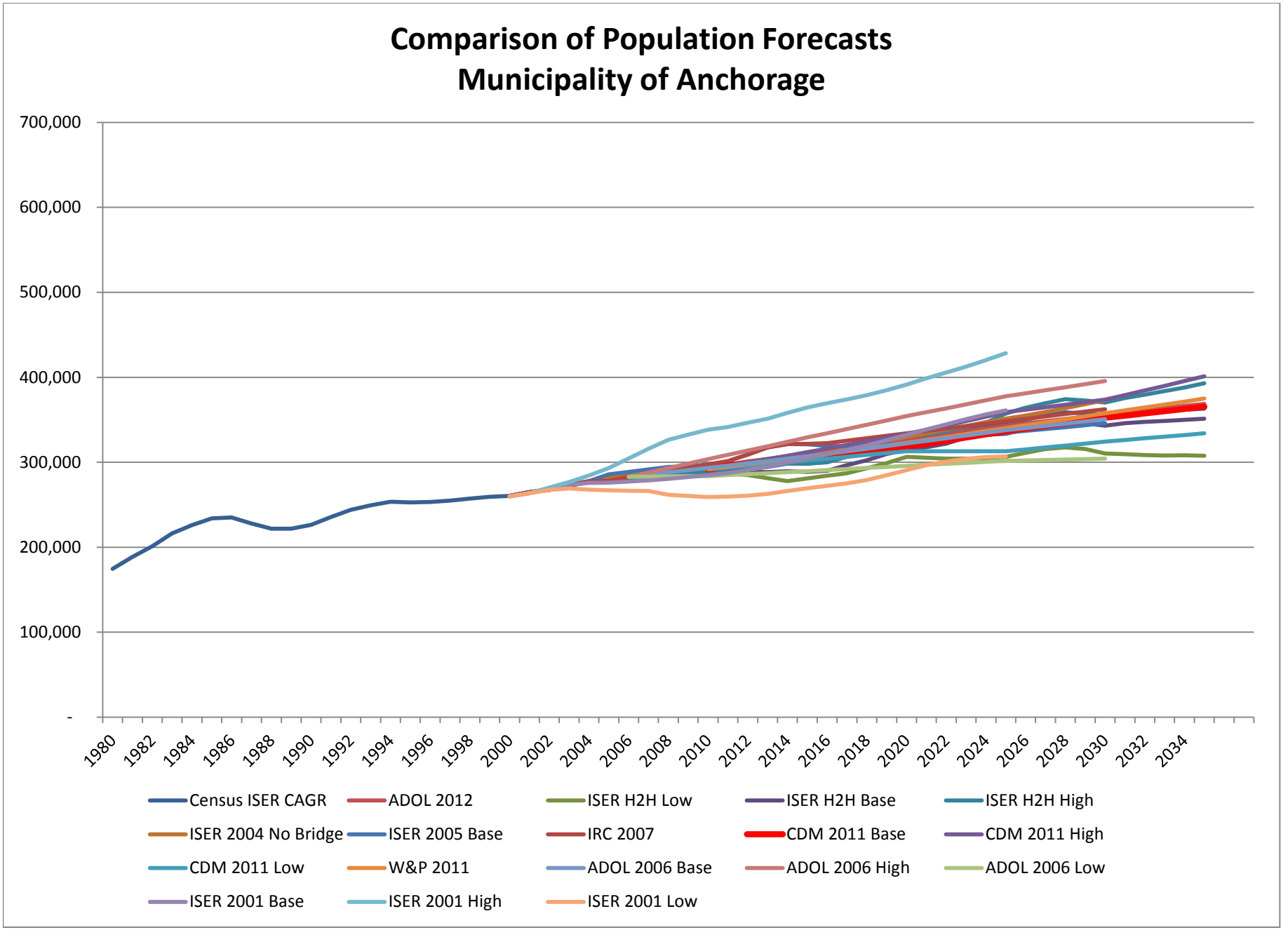
of Anchorage, and the Matanuska-Susitna Borough. The bright red line depicts CDM Smith's base case population forecast in each of the charts.

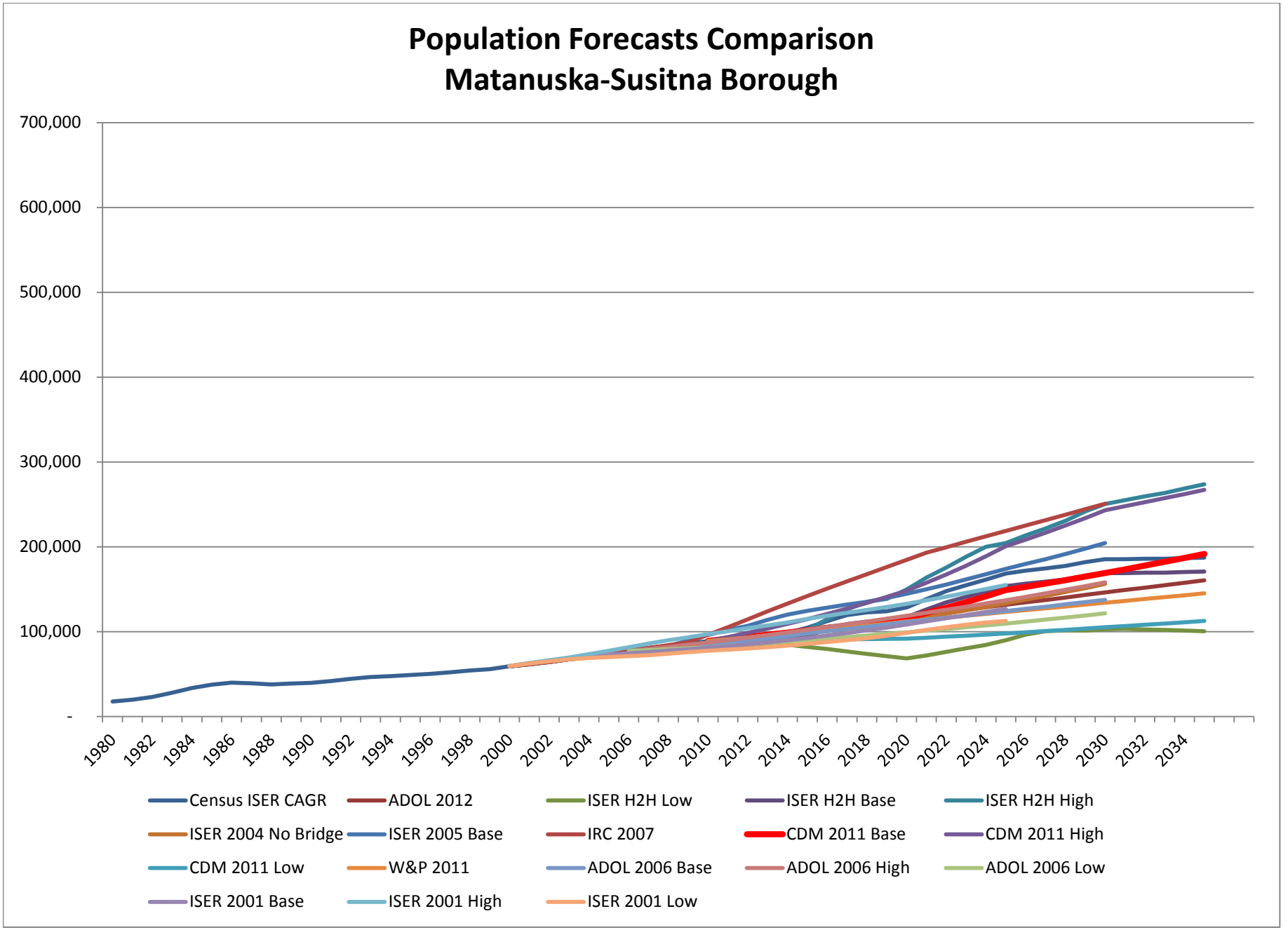
- To understand where future population growth is expected to settle with the construction of the bridge we have attached maps of the region showing population and households for 2020, 2025, 2030 and 2035 prepared by CDM Smith. The maps reflect the expected greenfield effect of the new transportation corridor opening up land closer to Anchorage. These maps did not consider the two new town sites that the Mat-Su Borough has surveyed just north of the Port MacKenzie District.

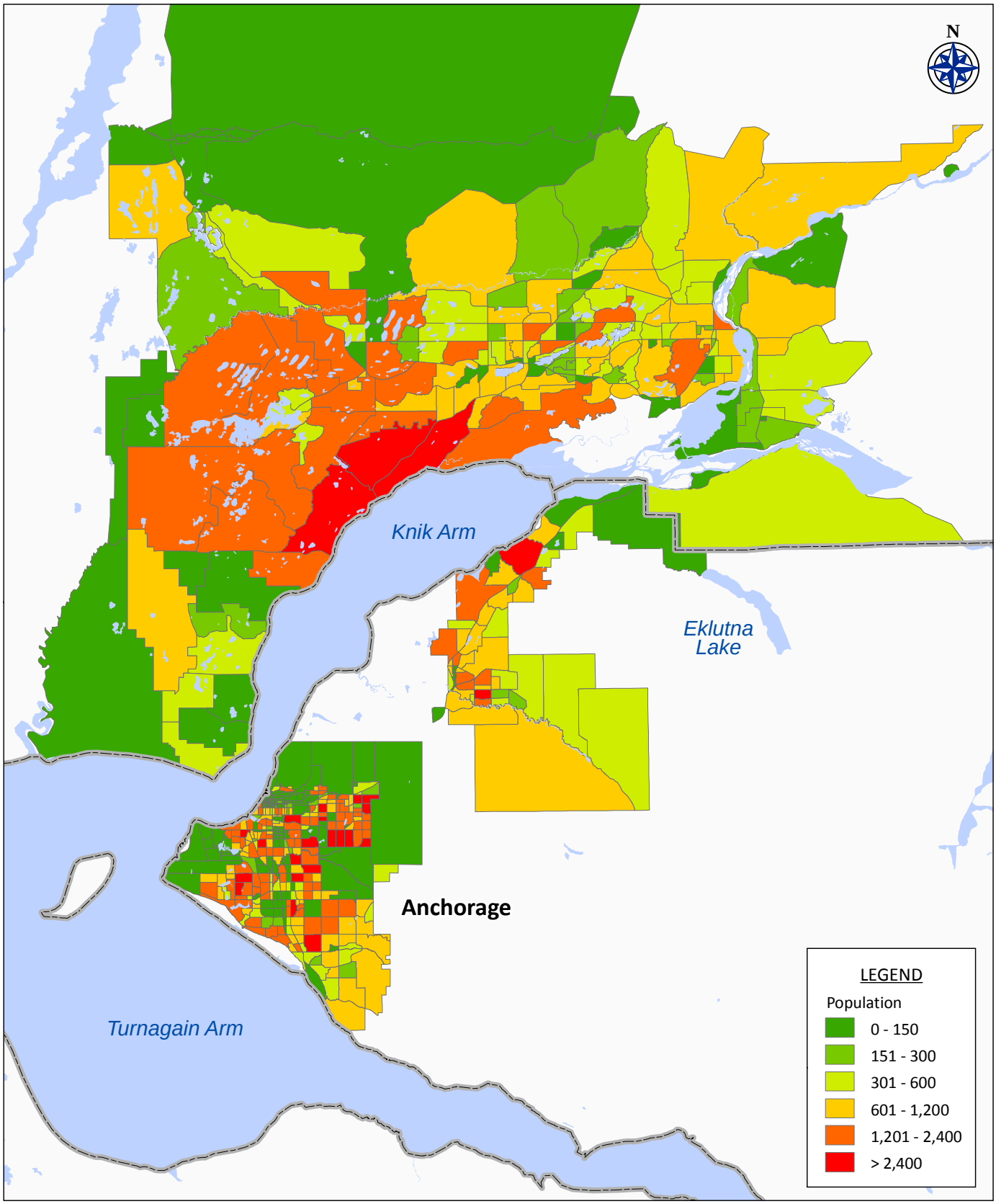
Q. What DOT roads would be needed beyond the crossing and what category of roads does that spending get?

a. Please see Commissioner Luiken's response to Senator Joe Thomas' request for information made during the 1nd session of the 27th legislature, attached. Any updates would have to be provided by ADOT&PF.


Comparison of Population Forecasts
Anchorage Metropolitan Statitistical Area
700,000
600,000
500,000
400,000
300,000
200,000
100,000
-
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020
2022
2024
2026
2028
2030
2032
2034
Census ISER CAGR
ADOL 2012
ISER H2H Low
ISER H2H Base
ISER H2H High
ISER 2004 No Bridge
ISER 2005 Base
IRC 2007
CDM 2011 Base
CDM 2011 High
CDM 2011 Low
W&P 2011
ADOL 2006 Base
ADOL 2006 High
ADOL 2006 Low
ISER 2001 Base
ISER 2001 High
ISER 2001 Low

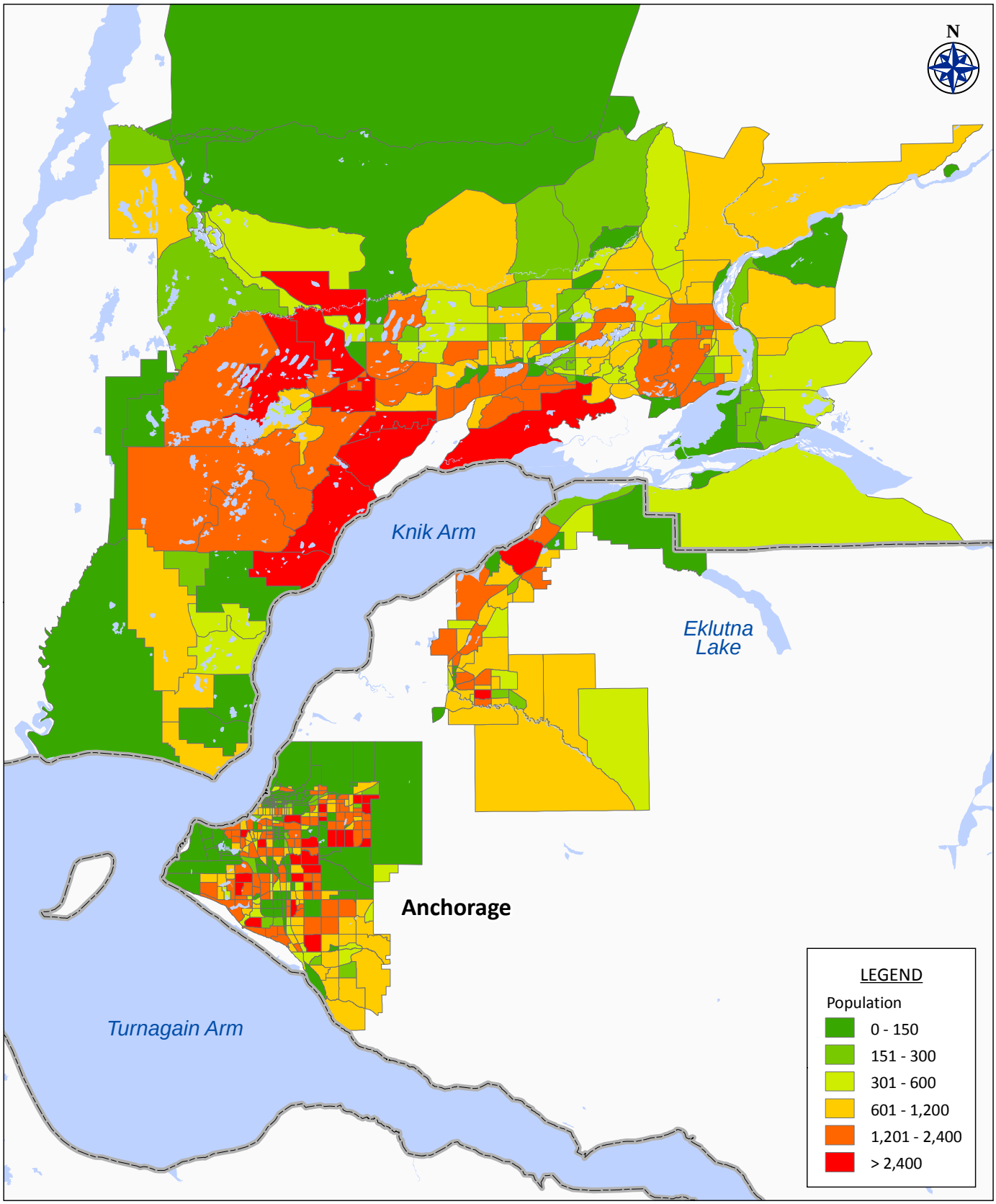

Comparison of Population Forecasts
Municipality of Anchorage
700,000
600,000
500,000
400,000
300,000
200,000
100,000
-
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020
2022
2024
2026
2028
2030
2032
2034
Census ISER CAGR
ADOL 2012
ISER H2H Low
ISER H2H Base
ISER H2H High
ISER 2004 No Bridge
ISER 2005 Base
IRC 2007
CDM 2011 Base
CDM 2011 High
CDM 2011 Low
W&P 2011
ADOL 2006 Base
ADOL 2006 High
ADOL 2006 Low
ISER 2001 Base
ISER 2001 High
ISER 2001 Low


Population Forecasts Comparison
Matanuska-Susitna Borough
700,000
600,000
500,000
400,000
300,000
200,000
100,000
-
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020
2022
2024
2026
2028
2030
2032
2034
Census ISER CAGR
ADOL 2012
ISER H2H Low
ISER H2H Base
ISER H2H High
ISER 2004 No Bridge
ISER 2005 Base
IRC 2007
CDM 2011 Base
CDM 2011 High
CDM 2011 Low
W&P 2011
ADOL 2006 Base
ADOL 2006 High
ADOL 2006 Low
ISER 2001 Base
ISER 2001 High
ISER 2001 Low



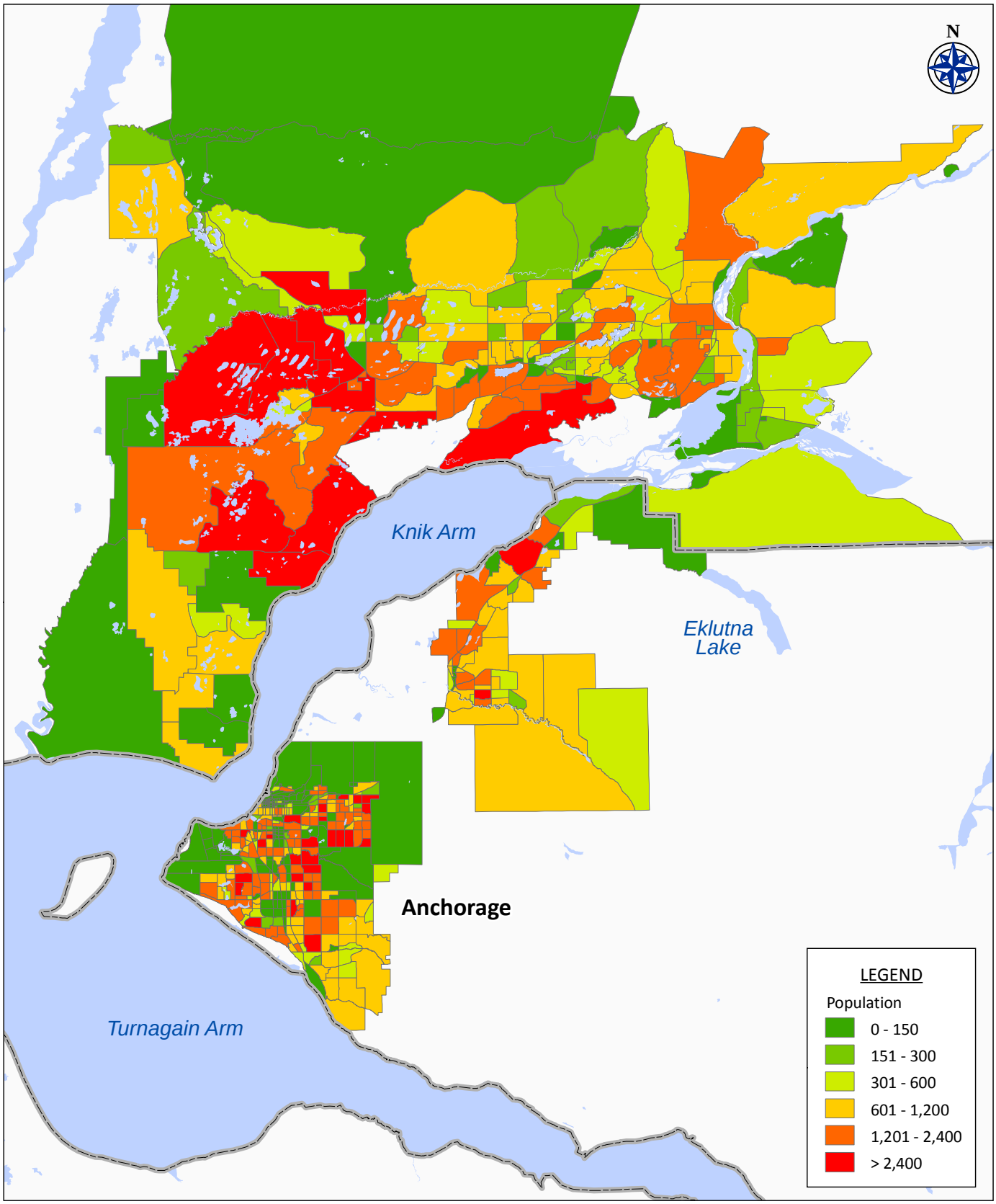
POPULATION BY TRAFFIC ANALYSIS ZONES WITH BRIDGE - 2020

FIGURE 1



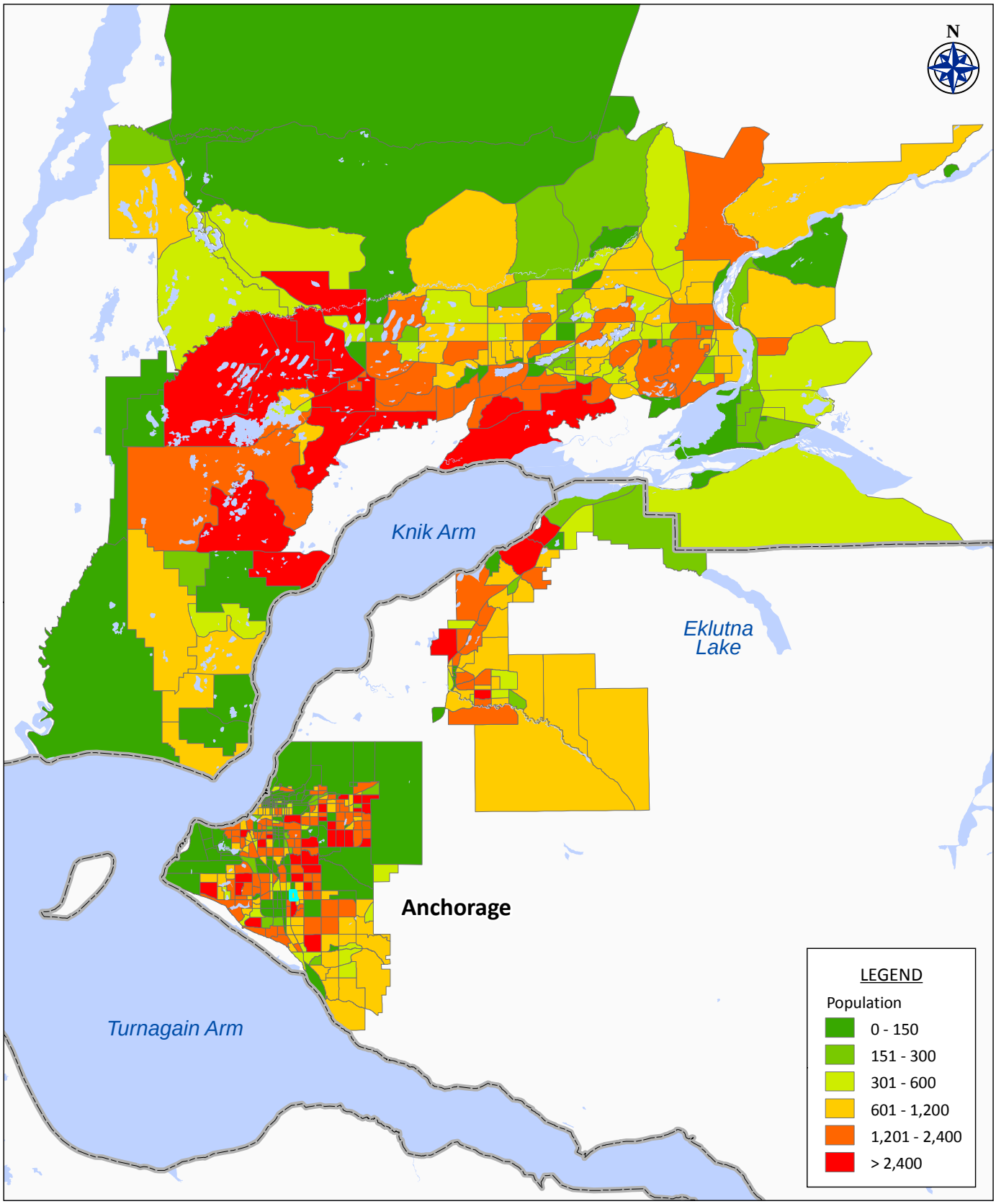
POPULATION BY TRAFFIC ANALYSIS ZONES WITH BRIDGE - 2025

FIGURE 2



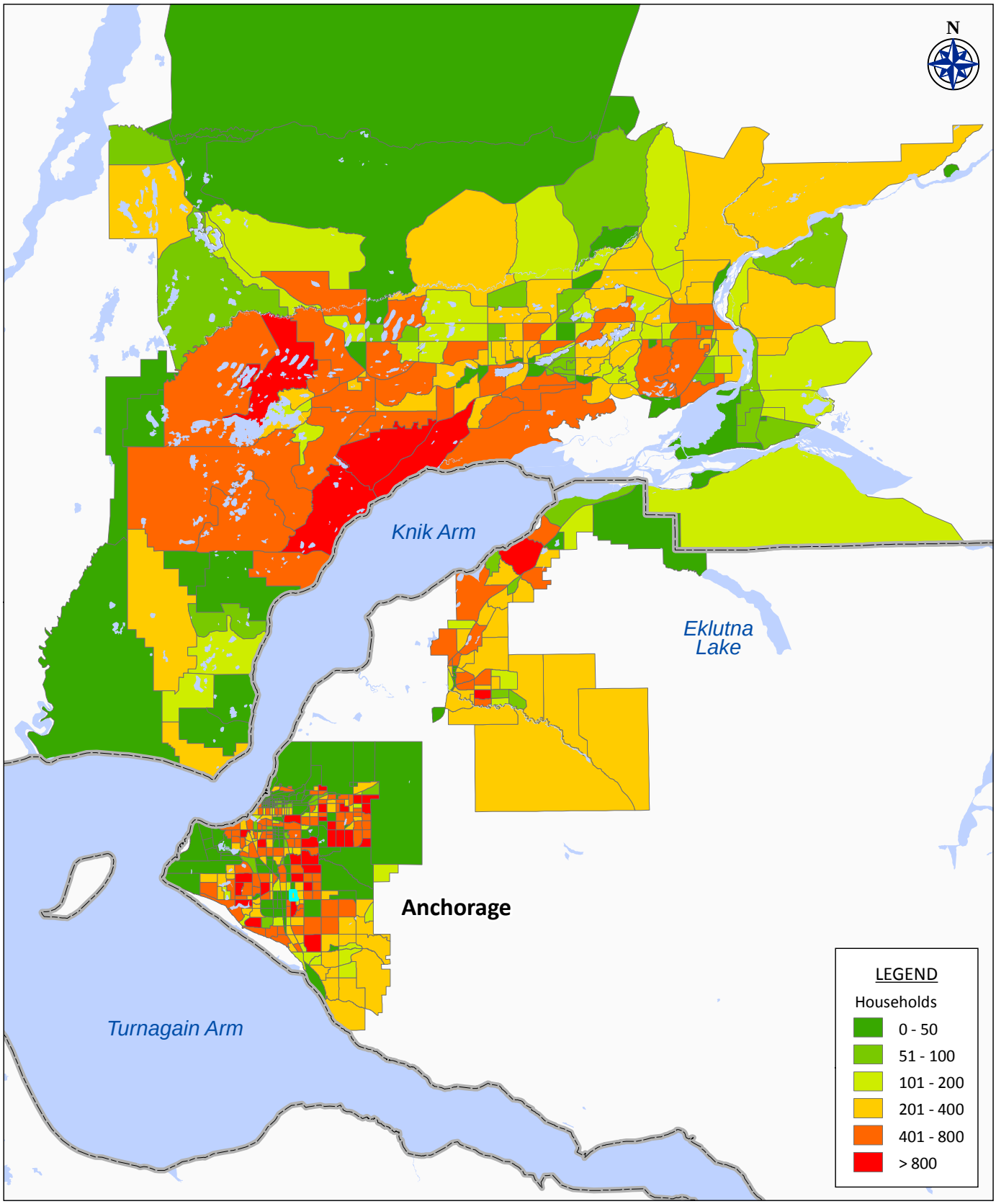
POPULATION BY TRAFFIC ANALYSIS ZONES WITH BRIDGE - 2030

FIGURE 3



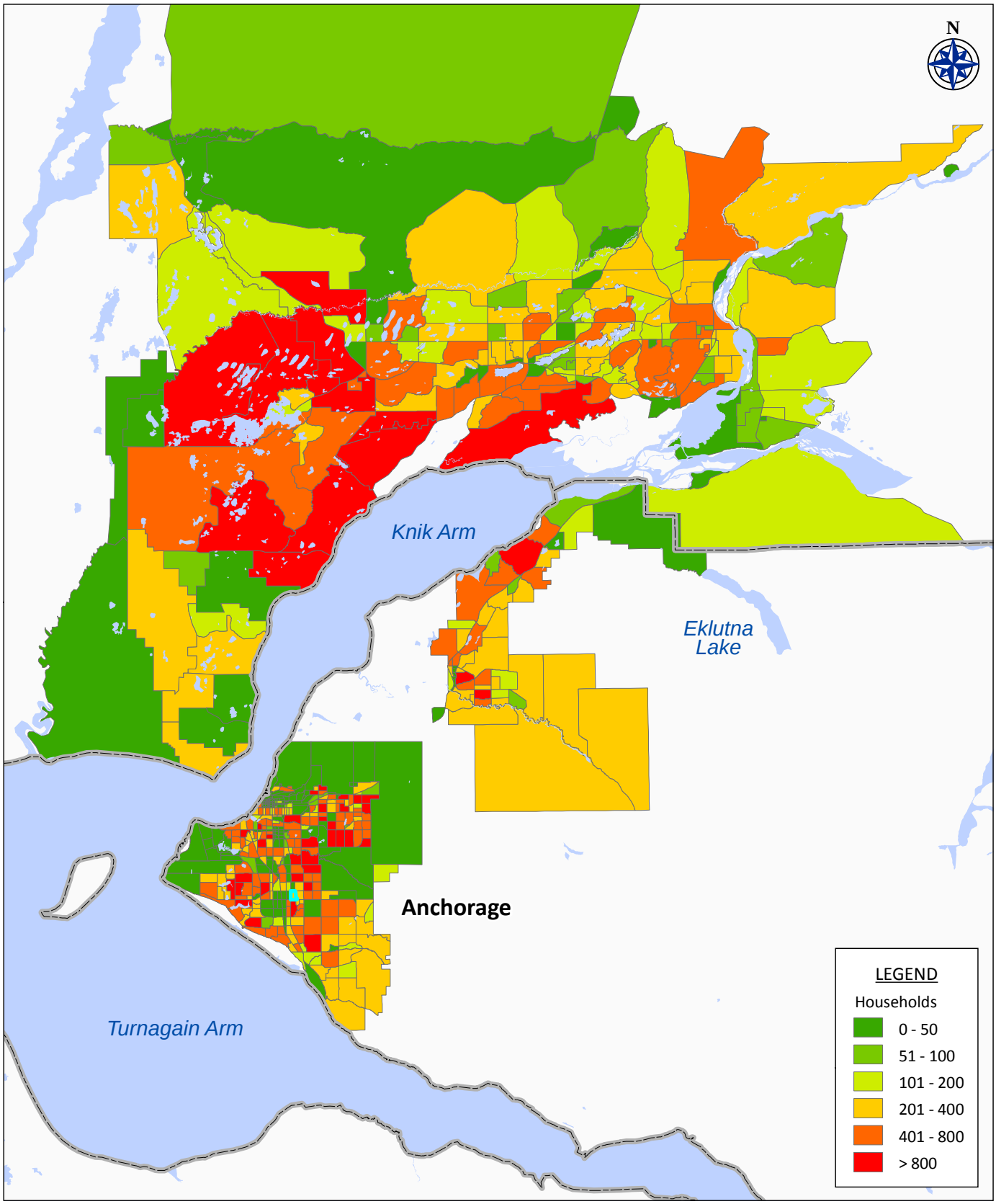
POPULATION BY TRAFFIC ANALYSIS ZONES WITH BRIDGE - 2035

FIGURE 4



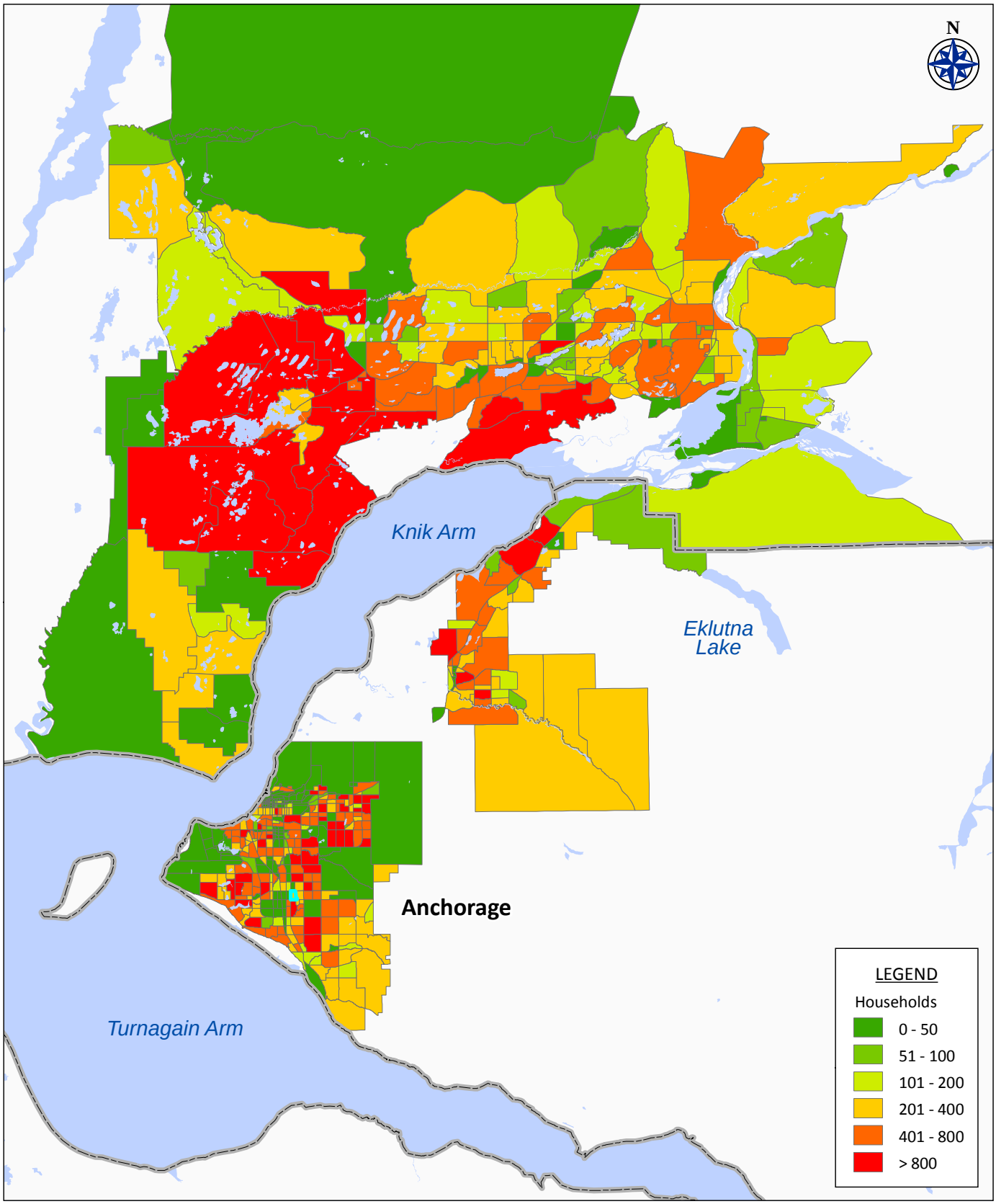
NUMBER OF HOUSEHOLDS BY TRAFFIC ANALYSIS ZONES - WITH BRIDGE - 2020

FIGURE 5



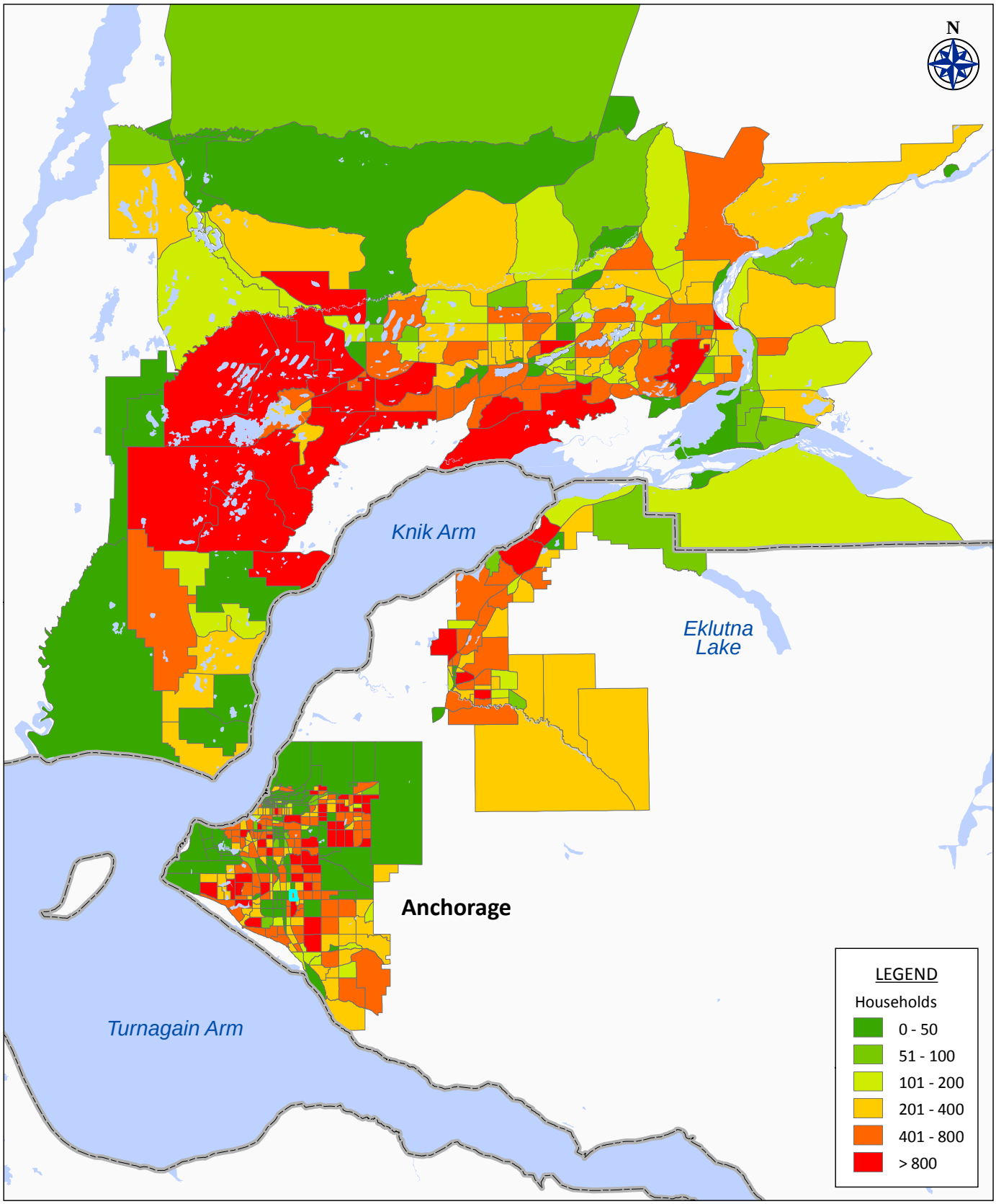
NUMBER OF HOUSEHOLDS BY TRAFFIC ANALYSIS ZONES - WITH BRIDGE - 2025

FIGURE 6



NUMBER OF HOUSEHOLDS BY TRAFFIC ANALYSIS ZONES - WITH BRIDGE - 2030

FIGURE 7



NUMBER OF HOUSEHOLDS BY TRAFFIC ANALYSIS ZONES - WITH BRIDGE - 2035

FIGURE 8

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
OFFICE OF THE COMMISSIONER

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April 7, 2011

The Honorable Joe Thomas
Alaska State Legislature
State Capitol, Room 514
Juneau, AK 99801-1182

Dear Senator Thomas:

In response to your letter dated March 8th, I appreciate the opportunity to provide you with information regarding the Department of Transportation and Public Facilities (DOT&PF) activities, both current and planned, for the Anchorage and Mat-Su Borough areas of the State. As you have noted in your letter, some of these projects have been included in the traffic analysis relative to the Knik Arm Crossing project. Your interest in how this project impacts the State's transportation infrastructure is evident in the thoroughness of your questions.

In response to a statement made in committee by Jeff Ottesen, you have asked which specific projects on the Glenn Highway the State could avoid (or delay) building if the Knik Arm Bridge was constructed. With the bridge predicted to carry 36,000 or more vehicles per day in 2035, at minimum the widening of the Glenn and Parks Highway by at least two lanes could be avoided. This is roughly estimated to cost $300 to $400 million.

You have also asked for vehicle traffic count numbers. The most recent (2009) annual average daily traffic (AADT) figures compiled by the department show 28,495 vehicles on the Glenn Highway at the Eklutna Flats location (prior to the intersection of the Glenn Highway with the Old Glenn Highway). At the bridge carrying the Glenn Highway over the Knik River, the 2009 AADT was 26,220 vehicles. Traffic projections for the Eklutna Flats location on the Glenn Highway have been done using the Highway to Highway traffic model (H2H). For the year 2035, the model predicts an AADT of 54,000 vehicles at the Eklutna location with 37,000 vehicles using the proposed Knik Arm Crossing. The modeling completed by Wilbur Smith Associates for KABATA predicts a 2035 AADT of 48,700 vehicles for the Eklutna Flats location with 36,000 vehicles using the Knik Arm Crossing.

You also ask for project information and cost estimates for the projects DOT&PF believes will be necessary to accommodate projected traffic flow for the Knik Arm Bridge. This information is set out below:

- Burma Road 2-Lanes $49 million
- South Big Lake Road 4-Lanes $45 million
- Pt. MacKenzie Road (6 mile section) $18 million
- Knik-Goose Bay MP 8 to MP 17 $27 million

Other projects in the area, specifically upgrading Vine Road, the Parks Highway widening to Big Lake, and Knik-Goose Bay widening between Parks Highway and Vine Road are not included as they are needed urgently due to traffic volumes and population growth regardless of the bridge decision.

Maintenance costs are estimated at $7,500 per lane mile annually. Depending on the final design of these improvements, it is estimated that approximately 100 lane miles could be added to the transportation network in this area. This would require approximately $750,000 of additional annual maintenance expenditures.

You have asked how much it would cost the state in general funds and / or federal highway funds to pay for the construction of the projects necessary to support the estimated bridge traffic flow. The overall cost of these projects is $139 million. It would be up to the state Legislature to decide whether to appropriate state general funds or federal funds for the projects and on what timetable.

Phase 2 of the Knik Arm Crossing project involves the bridge/viaduct connection with Ingra-Gambell. This is expected to be needed in 2025 at the earliest depending on traffic volumes. The cost estimate prepared by KABATA for this effort is currently $248 million (in 2008 dollars). This work is part of the KABATA project commitments and it is expected to be funded from the toll receipts collected on the bridge. A toll agreement is currently being finalized between the department, KABATA and the Federal Highway Administration (FHWA). Since the Knik Arm Crossing project has been federalized (funded with Federal-aid funds through FHWA) surplus revenue generated by tolls must be used on Federal-aid eligible projects.

Some of the projects identified by Wilbur Smith as part of the planned regional network that may influence the estimated bridge traffic flow and their costs are:

- International Airport Road Extension $34.9 Million
- Abbott Loop Extension $37.5 Million
- Dowling Road Extension $115.0 Million

The full list of almost 40 projects can be found at: www.knikarmbridge.com/TIFIA.html#traffic

KABATA's Traffic and Toll Revenue Update Study prepared by Wilbur Smith Associates included many projects from the AMATS Transportation Improvement Plan and Long Range Transportation Plan. These selected projects were segregated based on expected timeframe for delivery. There were 12 projects listed in the study with 2012 date. All of those projects are complete except for two projects that are still active and under development. There were 18 projects that were included with a date of 2015. Cost estimates developed by AMATS for these 18 projects totaled $486.5 million with $419.8 of that identified as likely to be funded through their Federal Transportation Improvement Program, $46.7 million from bonds and $20 million from State general Funds. Finally, there were 13 projects listed with a date of 2030. Ten of these projects were from the AMATS LRTP with an estimated cost of $749 million. One of those projects, the Glenn Highway Seward Highway Connection project was estimated at $581 million. Three of the projects listed in the Wilbur Smith Associates study for 2030 were from the Mat-Su LRTP and did not include estimated costs.

It is difficult (and potentially inaccurate) to make a statement regarding how much funding will be needed each year from the Legislature since these projects listed in the AMATS LRTP do not carry a schedule nor is the cost estimate provided compiled at a precise enough detail. The information contained in the LRTP is designed to be a best estimate of priorities in the future and demonstrate a level of fiscal constraint based on a system-level estimate of costs and revenue sources that are reasonably expected to be available. The LRTP is intended to be strictly a planning document and not an accounting document. Nor did Wilbur Smith do any modeling that confirms whether each of these network improvements facilitate bridge traffic, have no effect, or in fact reduce bridge traffic. Such modeling is a significant undertaking, and was not part of their scope of work. Wilbur Smith Associates simply assumed that most of the planned network in the AMATS and Mat-Su long range transportation plans consistent with the network ADOT&PF used for the H2H traffic model.

In state fiscal year 2009 the department spent in excess of $108 million dollars (Federal and State funds) in the Anchorage area on transportation improvements. In state fiscal year 2010 the expenditures exceeded $127 million for the Anchorage area. The projects prioritized by the AMATS LRTP in 2007 that Wilbur Smith Associates identified as influencing the viability of the Knik Arm Crossing project total about $1.4 billion through 2030. That equates to approximately $69 million a year. It must be recognized that some of those projects will be funded and delivered by the Municipality as historically they have been proactive in identifying local funding. The projects discussed for the Mat-Su Borough total approximately $330-390 million over 20 years which comes to $16.5-19.5 million a year. Neither of those figures seems unreasonable or disproportionate considering the population growth, current congestion and safety issues or historic appropriations levels. Currently the Federal-aid funds received by the State exceed $400 million annually.

Your final question is how much and what percentage of federal funding it would take to pay for the projects needed to support the bridge traffic flow. The total cost of the projects not covered by toll revenue that influence bridge and general network traffic flow is $1,800 million ($1,400 million in Anchorage and $400 million in Mat-Su) to be constructed over a period of 20 years. Regular federal highway aid funding requires a 10% state match. This leaves $1,620 million that could be funded from regular highway aid dollars. Dividing $1,620 over a period of 20 years results in a hypothetical annual federal highway funding need for these projects of $81 million per year. The State currently receives $400 million in regular federal highway aid funding per year. Allocating $81 million per year for the regional network projects would amount to 20.25% a year of the overall amount.

The Knik Arm Crossing project and the transportation infrastructure improvements currently being considered by the department are not only about passenger vehicles traveling between Anchorage and the Mat-Su Borough. Multi-modal services for the Port of Anchorage and Port MacKenzie are also important links in this equation. Improved connectivity between these two ports and the interior regions of the State will reduce freight movement times and potentially drive increased economic development and job creation. The Knik Arm Crossing project is unique in the sense that it has the potential to generate a large enough revenue stream to pay its own way. No other public transportation system has that expectation yet the Knik Arm Crossing project will possibly exceed that expectation and generate additional revenue that could be used to fund other unrelated transportation projects.

In conclusion, the department feels that the current slate of potential projects for the region holds merit regardless of the disposition of the Knik Arm Crossing. They address identified needs in an environment of continued growth and do not appear to represent an unreasonable or disproportionate cost to the State. I trust that this provides satisfactory answers to your questions and I would be happy to discuss further if you desire.

Sincerely,

Marc Luiken
Commissioner

cc: Andrew Niemiec, Executive Director, Knik Arm Bridge and Toll Authority
Pat Kemp, Deputy Commissioner for Highways and Public Facilities, DOT&PF
Rob Campbell, Regional Director, Central Region, DOT&PF
Brenda Hewitt, Legislative Liaison, DOT&PF