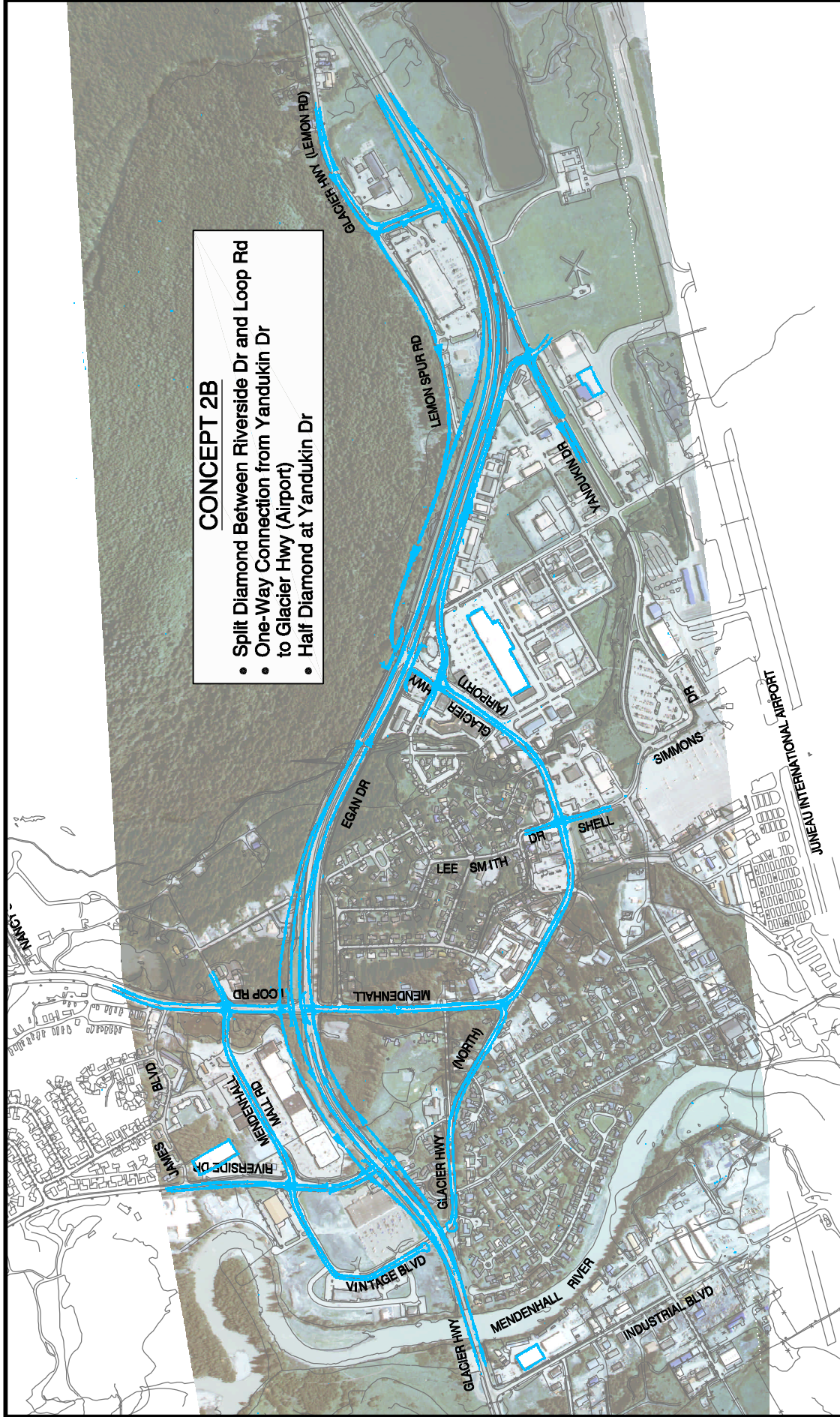




- Public transit routes and emergency access routes need to change. However, these local grade-separated connections provide alternative routes, and Egan Drive can be avoided.
- Grade separated connections establish safe crossings for pedestrians and bicycles and should pull local traffic off Egan Drive. However, single-point interchanges limit opportunities for pedestrians to cross the arterial street (Mendenhall Loop Road).
- Environmental and Planning
  - Environmental impacts include potential wetland impacts at Riverside Drive, and Lemon Spur Road extensions, and at realigned Yandukin Drive. This concept is compatible with AWTP, and Second Channel Crossing planning efforts except at Riverside Drive, which could introduce more traffic and may change long term planning assumptions.
  - Closing off access to Vintage Boulevard from Egan Drive leaves only one access point to Vintage Park businesses. This is an area slated for future business development and is one of the few areas in the Borough available for new developments. Reducing access to Vintage Boulevard will be a barrier to new business development.
- Practical Considerations
  - Concept 2A is one of the more expensive systems at \$56 million (construction costs only). This concept requires right-of-way on the east end for the Lemon Spur Road extension and the Yandukin diamond interchange. This system will result in a large increase in maintenance due to more lane miles, more guardrail areas, illumination systems, and several new structures to maintain. There would be moderate to major traffic impacts during construction.
- Conclusion
  - In summary, Concept 2A satisfies the Purpose and Need Statement of the project but performs poor relatively to other concepts.

### *Concept 2B*

This concept, shown in Figure 5-8, also provides access at two locations along Egan Drive, i.e. access at Yandukin Drive is limited to a half diamond towards downtown Juneau, and a split diamond interchange between Riverside Drive and Mendenhall Loop Road provides access to the study area similar to today. However, access is prohibited at the Vintage Boulevard/Glacier Highway (North) intersection, changing the side streets into cul-de-sacs (as in Concept 2A). The one-way connection from Yandukin Drive to Glacier Highway (Airport) and a half-diamond at Yandukin Drive provides connections between the Nugget Mall area and the Fred Meyer area as well as access to Egan Drive but not access to westbound Egan Drive. The one-way circulation between Glacier Highway (Airport) and Fred Meyer (except for the Old Dairy Road section) reduces the impact at the Fred Meyer parking lot.



**CONCEPT 2B**

- Split Diamond Between Riverside Dr and Loop Rd
- One-Way Connection from Yandukin Dr to Glacier Hwy (Airport)
- Half Diamond at Yandukin Dr

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CONCEPT 2B**

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FIGURE  
5-8

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- Traffic Considerations
  - The split diamond interchange between Riverside Drive and Mendenhall Loop Road provides for efficient traffic operations at these two study intersections. This scenario does include free right-turn lanes at both the north and south ramp terminal intersections from Egan Drive to Mendenhall Loop Road, which, as with all previous concepts, does not address the weaving section between the intersection of Mendenhall Loop Road/Egan Drive and Mendenhall Loop Road/Mall Road. It is also likely that dual left-turn lanes will be required at the ramp terminal intersections. The length traveled along Egan Drive crossing Mendenhall Loop Road would be extensive. The ramp terminal intersections at Mendenhall Loop Road would operate acceptable with the lane configuration discussed.
  - The McNugget Mall (Glacier Highway (Airport)) area loses its direct connection with Egan Drive.
  - Grade separations and interchanges will reduce conflicts and improve safety along the corridor.
- Non-Motorized Users and Public Transit
  - Grade-separated connections establish safe crossings for pedestrians and bicycles and should pull local traffic off Egan Drive.
  - Public transit routes and emergency access routes need to change and are worse than Concept 2A because of partial one-way couplet.
- Environmental and Planning
  - As stated for Concept 2A, closing off access to Vintage Boulevard from Egan Drive limits access to existing Vintage Park businesses, and will be a barrier to new business development.
  - It is consistent with AWTP, and Second Channel Crossing planning efforts.
- Practical Considerations
  - Concept 2B is less expensive (\$40 million) than Concept 2A, but is similar in most other areas. The diamond interchange shown in the sketch has a better overall footprint than all of the other concepts in System #2 series, with less right-of-way take and wetland, habitat impact. Like Concept 2A, this system yields a large maintenance increase and moderate/major traffic impacts during construction.
- Conclusion
  - In summary, Concept 2B satisfies the Purpose and Need Statement of the project but performs poor relatively to other concepts.

### *Concept 2C*

The unique feature of this concept, shown in Figure 5-9, is the connection between James Boulevard and Lemon Spur Road. Local access is further improved by extending Riverside

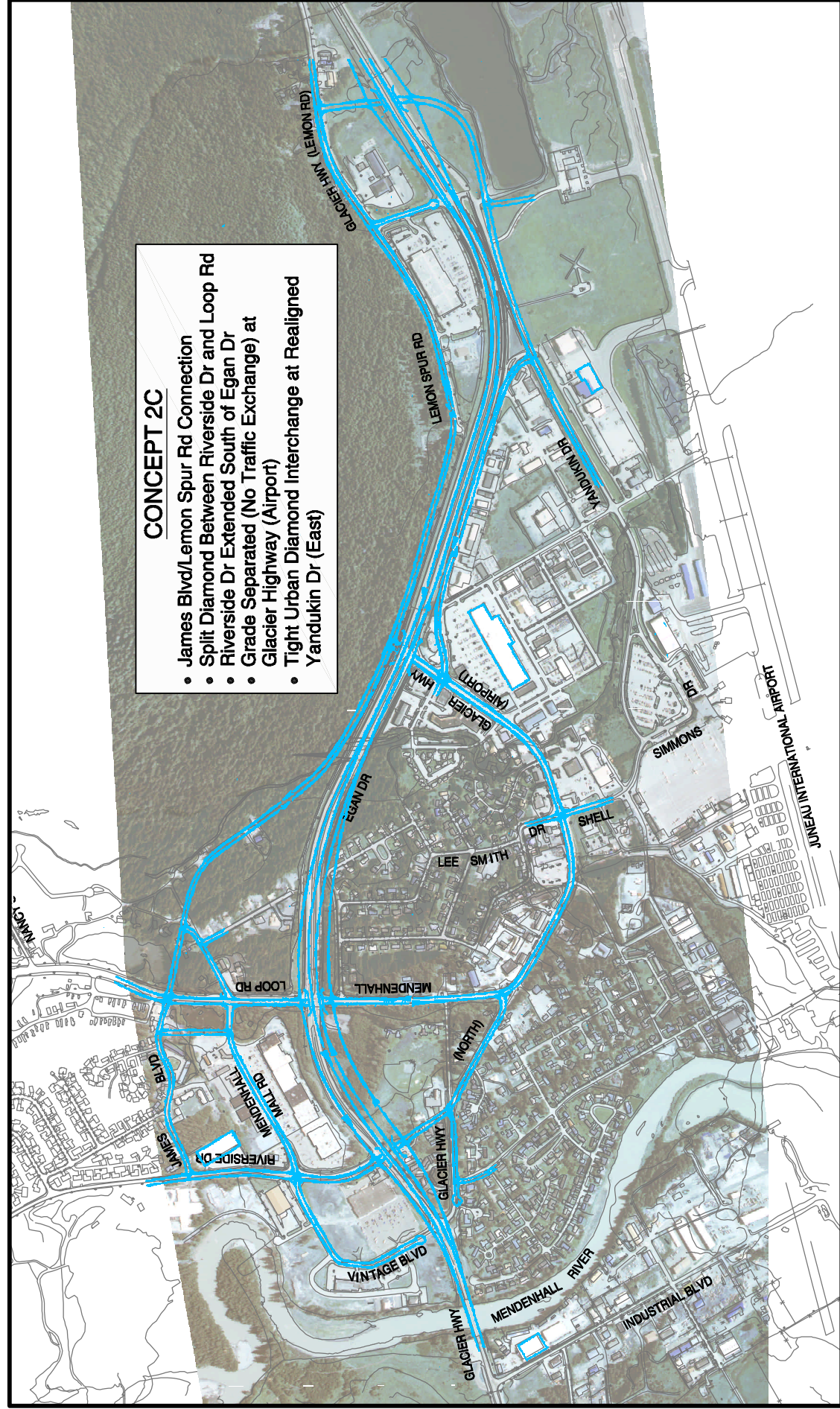


Drive south following Sunset Drive to align with Glacier Highway (North), and to connect Glacier Highway (Airport) with the James Boulevard/Lemon Spur Road connection. The Mendenhall Loop Road/James Boulevard intersection will be signalized. These connections help separate the local traffic from Mendenhall Valley to Fred Meyer and provides an alternative route to access downtown via old Glacier Highway. The split diamond between Loop Road and Riverside Drive is provided, which includes the Riverside Drive south extension, improving

access and circulation in this area. As previously stated, the realignment of Yandukin Drive to the east of the Juneau Christian Center minimizes the impact on airport property. Access is prohibited at the Vintage Boulevard/Glacier Highway (North) intersection, and Glacier Highway (Airport) will be separated from Egan Drive. The road network in the vicinity of Mendenhall Mall is altered to improve operations along Mendenhall Loop Road. These modifications include changing the existing signalized intersection at Mendenhall Mall Road/Atlin Drive to right-in/right-out and providing a new north-south link between James Boulevard and Mendenhall Mall Road.

- Traffic Considerations
  - Concept 2C introduces the James Boulevard/Glacier Highway (Airport)/Lemon Spur Road connection providing off Egan Drive local connections. This system also includes adding a fourth leg to Riverside Drive, thus providing additional local access to Glacier Highway from the western portion of the Mendenhall Valley. The additional local connections will decrease the number of trips traveling through the intersection of Mendenhall Loop Road/Egan Drive, which will require fewer lanes at this intersection. The road network in the vicinity of Mendenhall Mall is also altered to improve operations along Mendenhall Loop Road.
  - The McNugget Mall (Glacier Highway (Airport)) area loses its direct connection with Egan Drive.
  - Grade separations and interchanges will reduce conflicts and improve safety along the corridor.
- Non-Motorized Users and Public Transit
  - The James Boulevard/Glacier Highway (Airport)/Lemon Spur Road link completes multiple local connections. These grade separations and new connections establish safe crossings for pedestrians and bicycles and should pull more local traffic off Egan Drive (the most of all the concepts). This concept will also likely result in a more appropriate distribution of local (within the Valley), and non-local (to and from places outside of the Valley) trips to the transportation system.
  - This concept provides the best network to accommodate and improve public transit routes and emergency access routes within the study area.





- CONCEPT 2C**
- James Blvd/Lemon Spur Rd Connection
  - Split Diamond Between Riverside Dr and Loop Rd
  - Riverside Dr Extended South of Egan Dr
  - Grade Separated (No Traffic Exchange) at Glacier Highway (Airport)
  - Tight Urban Diamond Interchange at Realigned Yandukin Dr (East)



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**AREA #1: CONCEPTS FOR EAST OF MENDENHALL RIVER  
 CONCEPT 2C**

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FIGURE  
 5-9



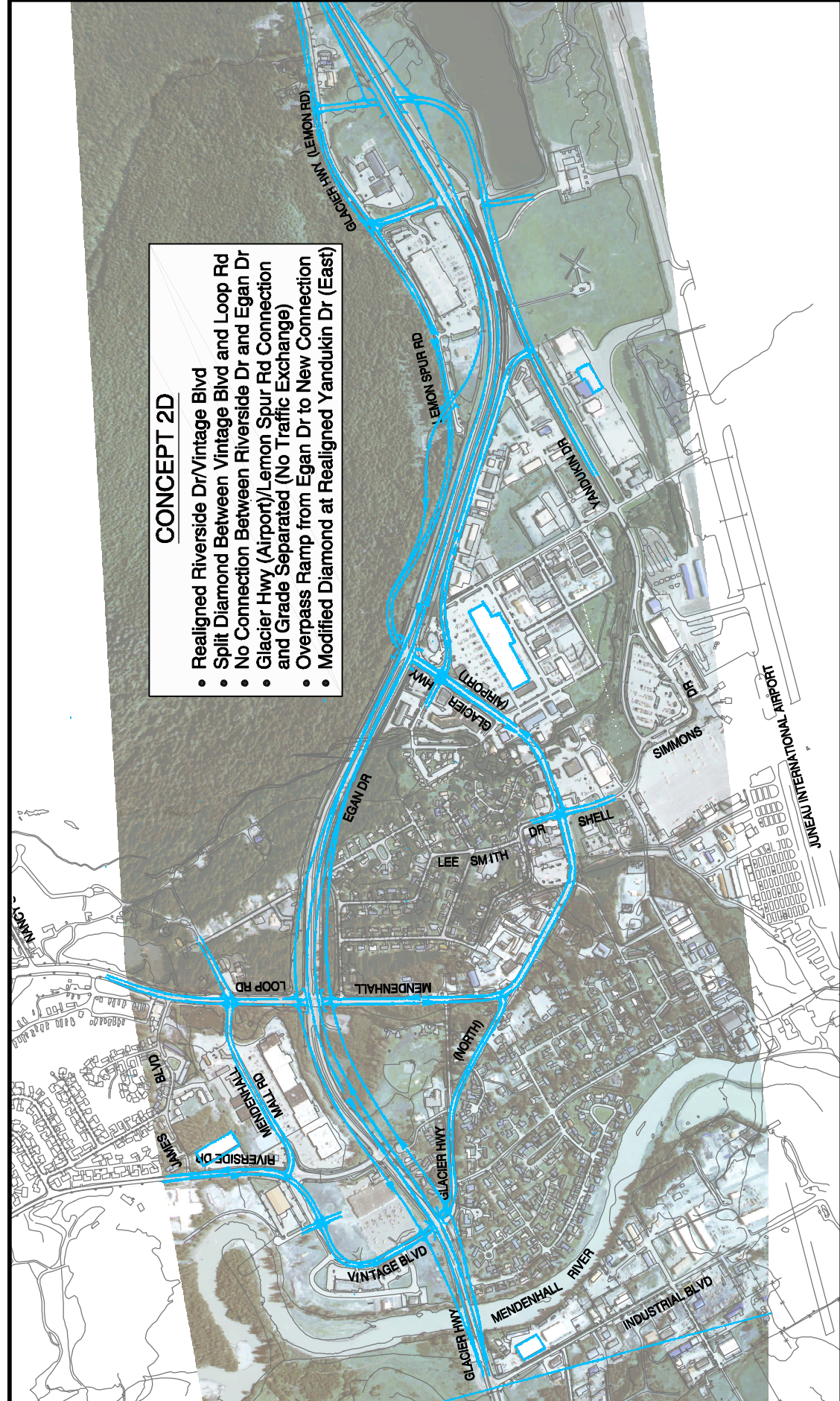
- Environmental and Planning
  - As stated for Concept 2A, closing access to Vintage Boulevard from Egan Drive reduces access to existing Vintage Park businesses, and will be a barrier to new business development.
  - Concept 2C would impact sensitive habitat areas, including Jordan Creek and possible wetlands. Constructing the connector road would not impact traffic, and the connector road may be available as a detour during other construction. This concept is compatible with other planning efforts except at Riverside Drive, which introduces more traffic and may change long term planning assumptions.
- Practical Considerations
  - Concept 2C is similar in cost (at \$40 million) to Concept 2B. The overall effect of this system is similar to Concept 2B along Egan Drive, except that the Tight Urban Diamond interchange at Yandukin Drive is similar to Concept 2A. The James Boulevard/Lemon Spur Road connection will require fairly substantial right-of-way take and an increase in maintenance.
- Conclusion
  - In summary, Concept 2C satisfies the Purpose and Need Statement of the project.

#### *Concept 2D*

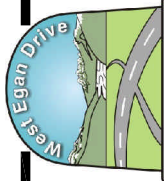
This concept, shown in Figure 5-10, proposes to change the road network north of Egan Drive by realigning Riverside Drive to Vintage Boulevard and eliminating Riverside Drive south of Mendenhall Mall Road. However, full access is provided at Vintage Boulevard/Glacier Highway (North). The proposed split diamond interchange between Vintage Boulevard and Mendenhall Loop Road requires the extension of the ramps to/from the west across the Mendenhall River. The Glacier Highway (Airport) to Lemon Spur Road connection and the accompanying connection from Egan Drive improves local circulation between the Fred Meyer and Glacier Highway (Airport) areas. Access at Yandukin Drive is limited (westbound on-ramp not provided) to eliminate the unacceptable weaving section between on- and off-ramps along Egan Drive.

- Traffic Considerations
  - The split diamond concept provides adequate traffic operations at Vintage Boulevard and Mendenhall Loop Road. Depending on the route choices made by travelers, this concept could create a bottleneck from a potentially heavy right-turn from eastbound Mendenhall Mall Road to southbound Mendenhall Loop Road.
  - As mentioned under Concept 2A, the Glacier Highway (Airport)/Lemon Spur Road link completes another local connection. The proposed westbound overpass ramp provides a more direct connection from Egan to the commercial areas along Glacier Highway (Airport).
  - The Glacier Highway (Airport) area loses its direct connection with Egan Drive.





- CONCEPT 2D**
- Realigned Riverside Dr/Vintage Blvd
  - Split Diamond Between Vintage Blvd and Loop Rd
  - No Connection Between Riverside Dr and Egan Dr
  - Glacier Hwy (Airport)/Lemon Spur Rd Connection and Grade Separated (No Traffic Exchange)
  - Overpass Ramp from Egan Dr to New Connection
  - Modified Diamond at Realigned Yandukin Dr (East)



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 CONCEPT 2D**

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FIGURE  
 5-10



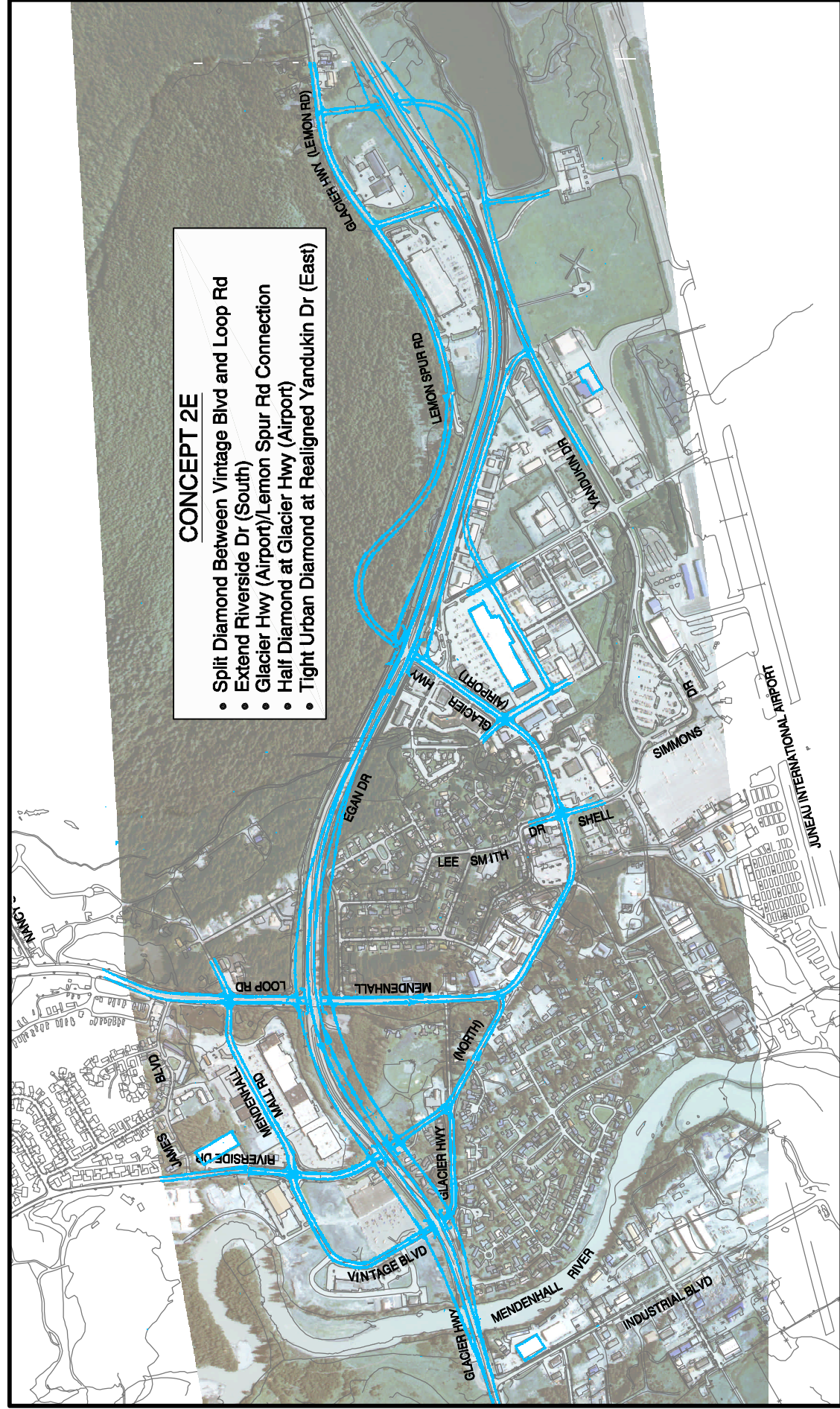


- Grade separations and interchanges will reduce conflicts and improve safety along the corridor.
- Non-Motorized Users and Public Transit
  - As stated before, grade-separated connections establish safe crossings for pedestrians and bicycles.
  - This concept accommodates public transit routes and emergency access routes with some minor changes within the study area.
- Environmental and Planning
  - The ramp off Egan Drive with its fly-over and connection to the Lemon Spur connection will cause impacts in sensitive areas. The elimination of Riverside Drive connection was not considered in previous planning efforts (Riverside Drive Corridor Study).
- Practical Considerations
  - Concept 2D is a moderately high cost system at \$44 million. It is similar in most regards to Concepts 2A and 2B.
  - The concept requires a wider structure across the Mendenhall River (Brotherhood Bridge) to accommodate the ramps between Industrial Boulevard and Vintage Boulevard.
- Conclusion
  - In summary, Concept 2D performs fairly under the evaluation criteria related to the Purpose and Need Statement.

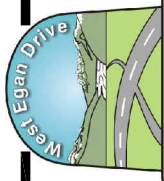
### *Concept 2E*

Figure 5-11 shows the conceptual split diamond interchange (frontage roads) between Vintage Boulevard, Riverside Drive and Mendenhall Loop Road. Riverside Drive extends south of Egan Drive to provide better local access. The Glacier Highway (Airport) to Lemon Spur Road connection improves local circulation, and a half diamond interchange is provided at Glacier Highway (Airport) to facilitate traffic to/from downtown. The realignment of Yandukin Drive to the east of the Juneau Christian Center will minimize the impact on airport property.

- Traffic Considerations
  - Comparable to Concept 2C, this concept allows local vehicle trips within the Mendenhall Valley to use streets other than Egan Drive. The split diamond concept will yield adequate traffic operations at Mendenhall Loop Road/Egan Drive intersection.
  - The Riverside Drive extension and the Vintage Boulevard–Glacier Highway (North) link provide additional north-south connections and should relieve traffic congestion at the Egan Drive/Mendenhall Loop Road intersection.



- CONCEPT 2E**
- Split Diamond Between Vintage Blvd and Loop Rd
  - Extend Riverside Dr (South)
  - Glacier Hwy (Airport)/Lemon Spur Rd Connection
  - Half Diamond at Glacier Hwy (Airport)
  - Tight Urban Diamond at Realigned Yandukin Dr (East)



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FIGURE  
 5-11



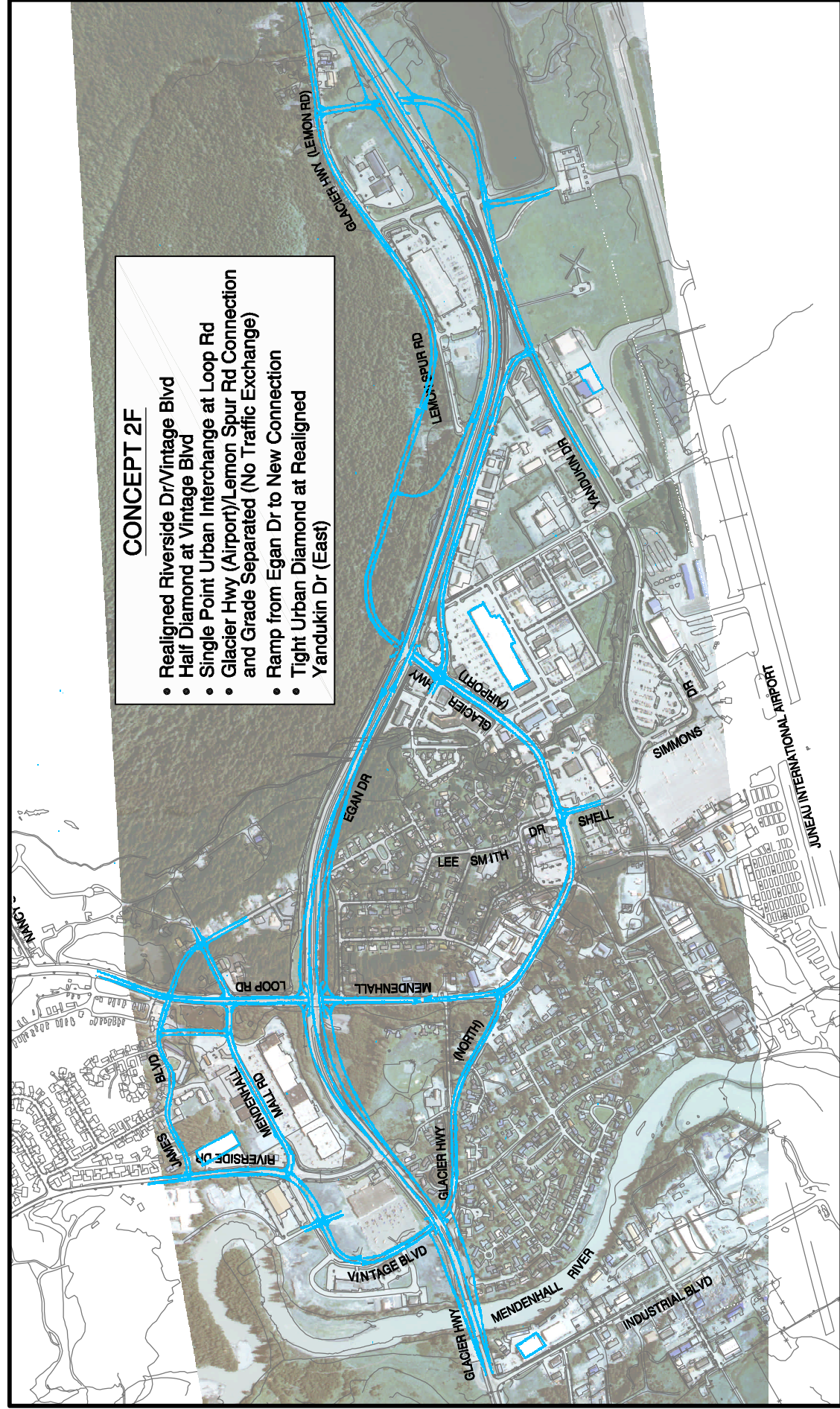


- As mentioned under Concept 2A, the Glacier Highway (Airport)–Lemon Spur Road link completes another local connection. The proposed ramps to and from the east provide direct access from Egan Drive to the commercial areas along Glacier Highway (Airport).
- Grade separations and interchanges will reduce conflicts and improve safety along the corridor.
- Non-Motorized Users and Public Transit
  - As stated before, grade-separated connections establish safe crossings for pedestrians and bicycles.
  - This concept accommodates public transit routes and emergency access routes with some minor changes within the study area.
- Environmental and Planning
  - This concept is compatible with other planning efforts (AWTP) except at Riverside Drive, which introduces more traffic and may change long term planning assumptions.
- Practical Considerations
  - Concept 2E is a higher cost system at \$53 million. The impacts of Concept 2E are somewhat higher than Concept 2D because of the provision of the half diamond interchange at Glacier Highway (Airport) and the alignment of the new Glacier Highway (Airport)/Lemon Spur Road link.
  - The concept requires a wider structure across the Mendenhall River (Brotherhood Bridge) to accommodate the ramps serving Vintage Boulevard.
- Conclusion
  - In summary, Concept 2E satisfies the Purpose and Need Statement of the project.

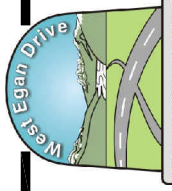
### *Concept 2F*

As shown on Figure 5-12, this concept aligns Riverside Drive with Vintage Boulevard and eliminates Riverside Drive south of Mendenhall Mall Road. Partial access is provided at Vintage Boulevard/Glacier Highway (North) for traffic to and from “out the road”. Full access at Mendenhall Loop Road is provided by a single-point urban interchange. This concept also proposes removing the traffic signal at the Mendenhall Loop Road/Mendenhall Mall Road/Atlin Drive intersection and replacing it with a right-in/right-out intersection and a new north-south link between James Boulevard and Mendenhall Mall Road. The Glacier Highway (Airport)–Lemon Spur Road connection provides local connectivity, and a westbound off-ramp from Egan Drive will improve access to the commercial areas along Glacier Highway (Airport). The realignment of Yandukin Drive to the east of the Juneau Christian Center will minimize the impact on airport property.





- CONCEPT 2F**
- Realigned Riverside Dr/Vintage Blvd
  - Half Diamond at Vintage Blvd
  - Single Point Urban Interchange at Loop Rd
  - Glacier Hwy (Airport)/Lemmon Spur Rd Connection and Grade Separated (No Traffic Exchange)
  - Ramp from Egan Dr to New Connection
  - Tight Urban Diamond at Realigned Yandukin Dr (East)



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 CONCEPT 2F**

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FIGURE  
 5-12



- Traffic Considerations
  - The single-point urban interchange at Egan Drive/Mendenhall Loop Road in this concept is complemented with a half diamond interchange at Vintage Boulevard to provide access to the Mendenhall Valley. Motorists traveling southbound on Riverside Drive with a destination east of the study area will be able to gain access to eastbound Egan Drive via Mendenhall Loop Road. This will likely create queuing and weaving on southbound Mendenhall Loop Road between Mendenhall Mall Road and Egan Drive. Eliminating Riverside Drive will also increase the right turn from westbound Egan Drive to northbound Mendenhall Loop Road. The removal of the signalized intersection at Mendenhall Loop Road/Mendenhall Mall Road/Atlin Drive should improve traffic operations along Mendenhall Loop Road north of Egan Drive.
  - The Glacier Highway (Airport)/Lemon Spur Road link completes another local connection. The proposed westbound ramp provides an indirect connection from Egan to the commercial areas along Glacier Highway (Airport).
  - The access arrangement of this concept does not serve the predominant movements to/from downtown as well as other concepts.
  - The Glacier Highway (Airport) area loses its direct connection with Egan Drive.
  - Grade separations and interchanges will reduce conflicts and improve safety along the corridor.
- Non-Motorized Users and Public Transit
  - Grade-separated connections establish safe crossings for pedestrians and bicycles. However, single-point interchanges limit opportunities for pedestrians to cross the arterial street (Mendenhall Loop Road).
  - This concept accommodates public transit routes and emergency access routes with some minor changes within the study area.
- Environmental and Planning
  - This concept has relatively large environmental impacts. The elimination of Riverside Drive connection was not considered in previous planning efforts (Riverside Drive Corridor Study).
- Practical Considerations
  - Concept 2F is the second most expensive system at \$62 million. The single-point interchange at Mendenhall Loop Road will require large structures to accommodate traffic lanes, pathways, and Duck Creek. This concept has high maintenance increase, a large impact on traffic during construction, and a fair amount of right-of-way take.
  - The concept requires a wider structure across the Mendenhall River (Brotherhood Bridge) to accommodate the ramps serving Vintage Boulevard.
- Conclusion