

## Transportation Committee

Meeting date: June 24, 2019

For the Metropolitan Council meeting of July 10, 2019

**Subject:** Scott County Functional Classification Principal Arterial Change Requests

**District(s), Member(s):** District 4, Deb Barber

**Policy/Legal Reference:** The Metropolitan Council is designated by the state to maintain the Metropolitan Highway System (i.e., Principal Arterial System); 2040 Transportation Policy Plan, Chapter 5 and Appendix D.

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**Division/Department:** Metropolitan Transportation Services (MTS)

### Proposed Action

That the Metropolitan Council approve the following functional classification changes and administratively modify the 2040 Transportation Policy Plan (TPP) to reflect the following:

1. Changes to the system:
  - a. Upgrade Scott County State Aid Highway (CSAH) 42 from an A-Minor Expander to a Principal Arterial from CSAH 17 to CSAH 21.
  - b. Upgrade CSAH 17 from an A-Minor Expander to a Principal Arterial from CSAH 42 to Trunk Highway (TH) 169.
  - c. Downgrade CSAH 21 from a Principal Arterial to an A-Minor Expander from CSAH 42 to TH 169.
2. Continue evaluating CSAH 78 from TH 169 to CSAH 17 as a future Principal Arterial, but do not change the current functional classification of the roadway at this time.

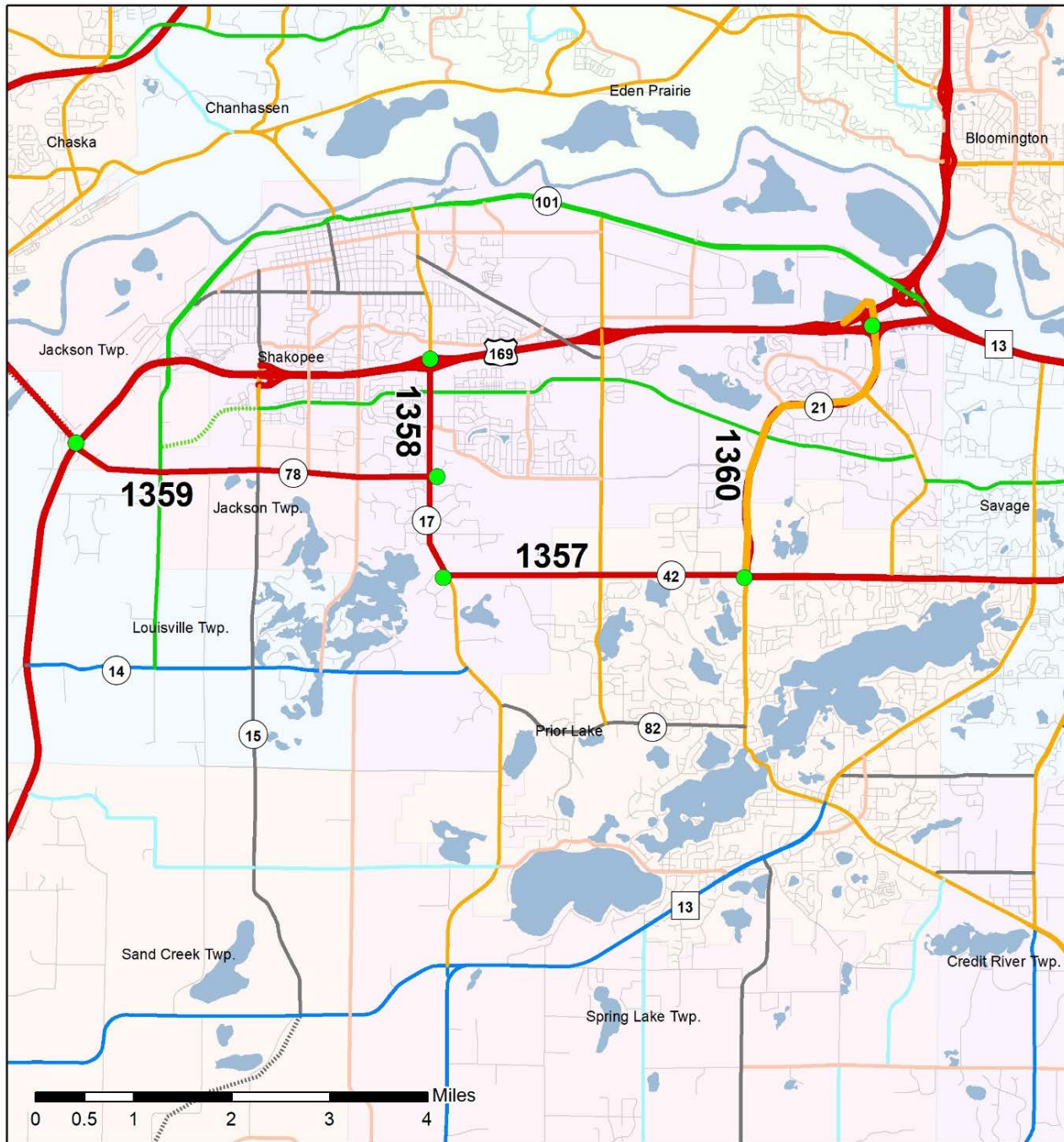
### Background

Roadway functional classification identifies what function roadways perform as part of the transportation system from serving a local purpose (e.g., streets within a subdivision with direct access to homes) to serving a regional or statewide mobility purpose (e.g., interstate highways like I-35). The functional classification system categorizes roads into four primary types: Principal Arterials (PAs), Minor Arterials, Collectors, and Local streets. This region has further divided the Minor Arterials into A-Minor Arterials and Other Arterials. Changes to the Minor Arterial and Collector system are approved by the Technical Advisory Committee (TAC). Changes to the Principal Arterial system require approval of the Metropolitan Council and must be reflected in the 2040 TPP.

Scott County is requesting the following changes to the functional classification system:

1. Upgrade CSAH 42 from an A-Minor Expander to a Principal Arterial (see segment 1357 on Figure 1 where green dots denote segment termini).
2. Upgrade CSAH 17 from an A-Minor Expander to a Principal Arterial (see segment 1358 on Figure 1).
3. Upgrade CSAH 78 from an A-Minor Expander to a Principal Arterial (see segment 1359 on Figure 1).
4. Downgrade CSAH 21 from a Principal Arterial to an A-Minor Expander (see segment 1360 on Figure 1).

Figure 1: Requested New Functional Classifications (Segments 1357-1360)



**Existing Regional Functional Class Roads**

- Principal Arterial
- Other Arterial
- Major Collector
- Minor Collector
- A Minor Augmentor
- A Minor Reliever
- A Minor Expander
- A Minor Connector

**Planned Regional Functional Class Roads**

- Principal Arterial
- Other Arterial
- Major Collector
- Minor Collector
- A Minor Augmentor
- A Minor Reliever
- A Minor Expander
- A Minor Connector

City / Township Boundaries

Street Centerlines

County Boundaries



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The upgrading of an existing roadway to a PA is a rare occurrence. Additions to the PA network require a rigorous review that must ultimately be approved by the full Metropolitan Council. Any approved changes will be administratively modified into the region's 2040 Transportation Policy Plan as part of this action. Functional classification change requests involving PAs must also include local resolutions of support from all impacted jurisdictions (in this case, all impacted jurisdictions have provided letters of support; they are the City of Prior Lake, City of Shakopee, Shakopee Mdewakanton Sioux Community, Jackson Township, and Louisville Township) to ensure that local jurisdictions are aware of any potential Principal Arterial designation impacts (e.g., limited direct access to the roadway from private and public streets).

The three proposed Principal Arterial segments include the following:

CSAH 42 (segment 1357): The eastern half of this segment is a four-lane divided roadway (see Figure 2) and the western half will be expanded to a four-lane divided roadway in 2020. CSAH 42 intersects with CSAH 17 with a grade separation (see Figure 3).

**Figure 2: CSAH 42 at McKenna Rd**



Source: Google Street View

**Figure 3: CSAH 42 and CSAH 17 Grade Separation**



Source: Google Street View



CSAH 17 (segment 1358): This north-south segment is a four-lane divided roadway (see Figures 4 and 5) with access controls. At the north end, the corridor is highly developed with St. Francis Regional Medical Center, commercial/retail, Marschall Road Transit Station, and an interchange with TH 169.

**Figure 4: CSAH 17 and CSAH 78 Intersection**



Source: Google Street View

**Figure 5: CSAH 17**



Source: Google Street View

CSAH 78 (segment 1359): This east-west segment is a rural, two-lane roadway (see Figures 6-8) with several private accesses throughout the corridor. At the western edge, CSAH 78 will intersect with a new interchange at TH 169 and TH 41 (planned for completion in 2020). This connection with TH 41 facilitates trips to Carver County via a Minnesota River crossing.

**Figure 6: CSAH 78 east of CR 79**



Source: Google Street View

**Figure 7: CSAH 78 at Marystown Rd**



*Source: Google Street View*

**Figure 8: CSAH 78 at CR 73**



*Source: Google Street View*

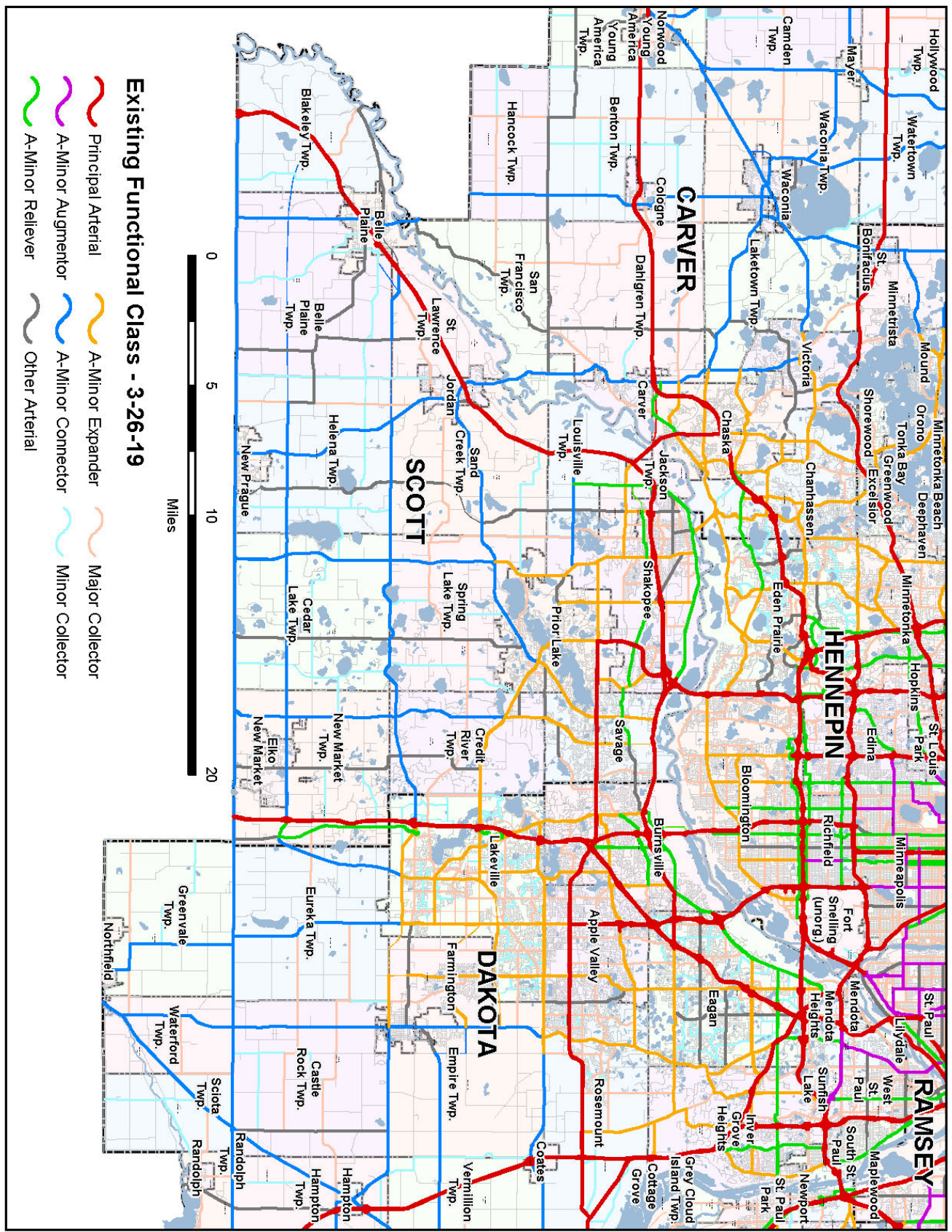
The proposed Principal Arterials along CSAHs 42 and 17 would help create a single Principal Arterial connection across the southern Metropolitan Area that has been described in the 2030 and 2040 Scott County Comprehensive Plans (see Figure 9). CSAH 78 was added as a future PA to the draft 2040 Scott County Comprehensive Plan. Scott County is proactively planning for future PAs as their access spacing guidelines are based off the future functional class map.

CSAH 17 connects to TH 169 and is part of a planned future north-south PA. This provides a better north-south route than extending the current north-south PA, CSAH 21 (proposed to be downgraded to an A-Minor Expander).

The County is requesting the Principal Arterial designation to ensure future development adjacent to the corridor occurs consistent with Principal Arterial access management guidelines. Matching the appropriate functional class for the roadway will better align federal pavement and congestion performance measures with the priorities of Scott County.



Figure 9 – Existing Functional Class Scott County and Surrounding Area



## Rationale

During the development of the 2040 Transportation Policy Plan, Scott County discussed its intention to request three of the four functional classification change requests that are part of this action item. As such, the approved 2040 TPP Update (October 2018) has a Principal Arterial system map that shows the three changes as pending approval after official application was made by Scott County. Council staff was in agreement with the three changes. However, the CSAH 78 upgrade from an A-Minor Expander to a Principal Arterial was not part of the initial discussions and is not shown on the TPP map.

Staff is recommending approval of these same three changes as shown in the TPP; however, staff is not recommending a change to the current functional classification to CSAH 78. This route is a viable, future Principal Arterial and planning should continue for it to one day be a Principal Arterial. However, it is currently not functioning like a Principal Arterial due to the numerous private driveways and field access points, close spacing to TH 169 (only one mile), low traffic volumes (6,100), and current role of serving mostly local traffic.

Additional reasoning is provided in Table 1, which compares Appendix D of the 2040 TPP (i.e., Criteria for Other Principal Arterials in the Rural Area) to CSAH 78.

Met Council staff discussed the four requested changes with MnDOT Central Office and Metro District staff. The addition of new PA mileage will also start the process to add the mileage to the National Highway System (NHS). Roadways on the NHS must be analyzed and reported on for federally required performance measures. If approved as requested, the change would add nine miles of PA, while removing 3.5 miles of PA on CSAH 21, for a net addition of 5.5 miles to the Principal Arterial system. If only approving the staff recommendation of CSAH 42, 17, and 21, there would be a net addition of two miles to the PA system. MnDOT was not concerned about the addition of these miles (in either case described above) to the NHS given their small scale compared to the rest of the system.

MnDOT expressed concern about the distinction between the current versus future functional classification of the roadway and wants to make sure that the requested changes reflect how the roadway is currently functioning, not how it may function in the future. It is MnDOT's stance that CSAH 78's current function is not that of a Principal Arterial, but that it should continue to be evaluated moving forward.

MnDOT also consulted directly with the Shakopee Mdewakanton Sioux Community, which was supportive of Scott County's request.

**Table 1: TPP Criteria for Principal Arterials**

TPP Criteria	Rural PA Guidelines	CSAH 78
Place Connection	Connect the urban service area with major cities in MN and other states	✓ (meets guidelines)
Spacing	2-6 miles (suburban) 6-12 miles (rural)	✗ (does not meet guidelines) Only 1 mile spacing
Operations	45 mph+ design speed	✓
System Connections and Access Spacing	To other PAs or A-Minors. Access spacing 1-2 miles.	✗ Access spacing is too close
Trip Making Services	Trips greater than 8 miles with at least 5 miles on the PA	✗ 63% of trips less than 8 miles*
Mobility vs. Land Access	Little or no direct land access	✗ Too much direct land access to residences and farm fields
Intersections	High-capacity controlled at-grade intersections	✗ Larger intersections at either end, but not at intersections within the 3-mile segment
Parking	None	✓
Large Trucks	No restrictions	✓
Management Tools	Access controls, intersection spacing	✗ Neither up to PA guidelines
Typical Avg. Daily Traffic Volumes	2,500-25,000+	✓ Meets guidelines, but rather low volume road at 6,100 to add as a new PA
Posted Speed Limit	Legal limit	✓
Right-of-Way	100-300 feet	✓ Meets guidelines, but right-of-way only around 100 feet
Transit	None	✓
Bike and Pedestrian	On facilities that cross or are parallel to the PA	✓

\*2018 travel data from Streetlight Insights

✓ = meets guidelines

✗ = does not meet guidelines



## Thrive Lens Analysis

Proper functional classification alignment most directly impacts Prosperity. Further, a well-defined Principal Arterial system helps maintain mobility in the region allowing people to get to employment, medical appointments, recreational activities, and other destinations.

## Funding

No impacts to the Council; however, Principal Arterial roadways are added to the National Highway System and become eligible for additional funding such as the National Highway Performance Program (NHPP) funds.

## Known Support / Opposition

Scott County provided local resolutions of support from all impacted jurisdictions. In addition, the following discussion occurred at TAC Planning, TAC, and Transportation Advisory Board (TAB) meetings.

TAC Planning (5/9/19): The discussion centered on the fact that functional class is supposed to represent the current function of the roadway, not the future function of the roadway. However, Scott County noted that is difficult to enforce access controls to a higher standard than the current functional class. Scott County is expecting development to occur, especially around the TH 169/TH 41/CSAH 78 interchange area.

Much of the discussion focused on CSAH 78, which the recommended motion does not support changing. Staff maintains this area is not functioning currently as a PA, but a new interchange at TH 169/TH 41/CSAH 78 might change traffic flows in the future.

The recommended motion says “continue evaluating” CSAH 78. As part of the TPP administrative amendment related to this action item, CSAH 78 will now be listed as a future Principal Arterial in the “Additional Highway Needs beyond the Increased Revenue Scenario” section of Chapter 5: Highway Investment Direction and Plan. This change to the region’s long-range plan should help Scott County in managing access requests.

MnDOT staff reminded the committee of MnDOT’s Metro functional class review that will be happening this year as requested by FHWA. After county and municipal comprehensive plans are completed (most of them will be submitted to the Council by July 1, 2019), MnDOT will review all functional class roads for alignment with guidelines. Staff noted that a one to two-year time frame to reevaluate this road was reasonable (after the completion of the MnDOT functional classification review and the TH 169 interchange construction). Also, staff recommend that TAC Planning have a continuing generalized discussion about functional class guidelines, process, and impact, especially of the planned PA system.

Several county representatives spoke of the recent changes in PA planning from MnDOT to the county level. Scott County has been viewing CSAH 78 as a planned PA since the 1990s as part of a wider east/west corridor. Carver County staff spoke in support of the requested motion (including CSAH 78), highlighting that CSAH 78 carries east/west traffic on longer trips, that both Carver and Scott Counties believe it is functioning as a PA.

TAC (6/5/19): TAC approved the TAC Planning recommendations. However, they split the recommendation into two parts: the approval of three of the changes and then the continued evaluation of one change (CSAH 78) as the change request was not recommended for approval.

The committee discussed that that functional classification changes are technical in nature and that CSAH 78 does not currently function as a Principal Arterial. Staff from other counties noted that they have identified future Principal Arterials, but they will not change the current status until they exhibit the status of a PA.

Some members expressed the difficulty in establishing access control for a future PA when development occurs. It is easier to limit access to a roadway if the current functional classification is a Principal Arterial. If access control is not obtained at this early stage, it is difficult and expensive to get it later.