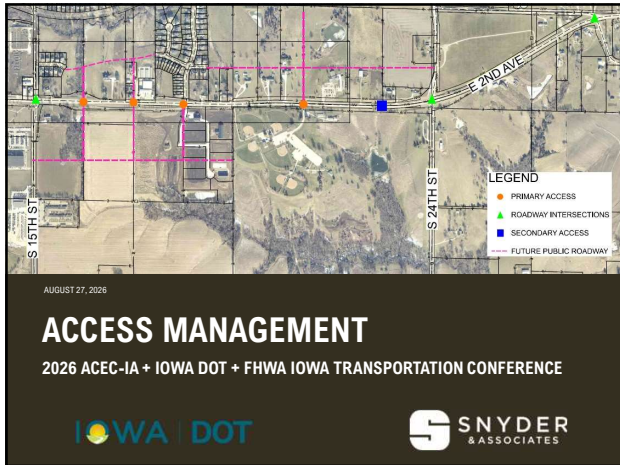




---

---

---

---

---

---

---

---

## PRESENTERS



**ANDY SWISHER, PE, PTOE**  
Traffic Operations Engineer  
Iowa DOT District 1



**TONY BOES, PE, PTOE**  
Principal Traffic Engineer  
Snyder & Associates, Inc.

2

---

---

---

---

---

---

---

---

## AGENDA

- 1 Iowa Code & Iowa DOT Access Management Manual
- 2 Example Project: IA 415 & NW 44<sup>th</sup> St Concept Study
- 3 Key Takeaways



3

---

---

---

---

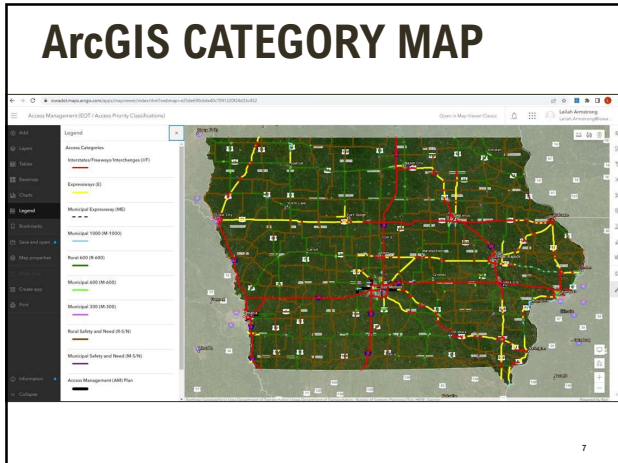
---

---

---

---

6



---

---

---

---

---

---

---

---

# ACCESS MANAGEMENT

Iowa Code and DOT Access Management Manual

**Access Management Manual**

- Supports Iowa Code
- The “How to Manual”

8

---

---

---

---

---

---

---

---

# KEY ITEMS/PARAMETERS

9

---

---

---

---

---

---

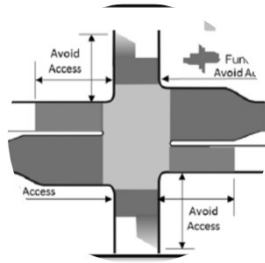
---

---

# ACCESS MANAGEMENT

## Functional Area

- "Includes any area upstream or downstream of an intersection where intersection operation and conflicts significantly influence driver behavior and vehicle operations. The functional area of an intersection is a calculated value based on the intersection's geometrics, posted speed limit, traffic volume, type of traffic control used, and perception-reaction-time values determined by the American Association of State Highway and Transportation Officials."



- Used for determining the first access point from newly constructed intersections, interchanges, and free-flowing movements

10

---

---

---

---

---

---

---

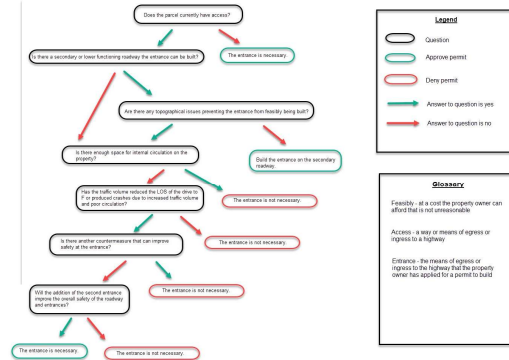
---

---

---

# ACCESS MANAGEMENT

## Proof of Necessity Flowchart



11

---

---

---

---

---

---

---

---

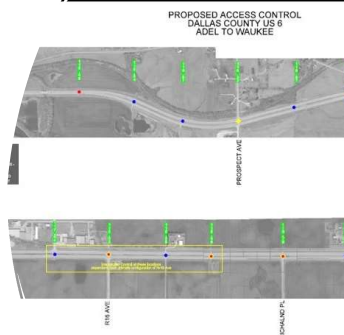
---

---

# ACCESS MANAGEMENT

## Access Management Plans

- Acknowledges the need to handle access jointly with local agencies
- Allows for flexibility on highway segments that do not fit any categories
- Addresses more complex and existing conditions in urban and growing areas
- Guidance provided in the Access Management Manual



12

---

---

---

---

---

---

---

---

---

---

# IMPLEMENTATION

EXAMPLE PROJECT:  
IA 415 & NW 44<sup>TH</sup> STREET CONCEPT STUDY

13

---

---

---

---

---

---

---

---

## ACCESS MANAGEMENT

Example Project – IA 415 & NW 44<sup>th</sup> St Concept Study

### Project background

- Study area
- 2-lane rural cross-section, 55 mph speed limit
- Commuter corridor and access to recreation areas
- 13,500 AADT existing, 25,700 AADT 2050 forecast
- Planned area development
- Planned NW 18<sup>th</sup> Street Extension



14

---

---

---

---

---

---

---

---

## ACCESS MANAGEMENT

Example Project – IA 415 & NW 44<sup>th</sup> St Concept Study

### Alternatives Analysis

- **Traffic signals at major intersections**
  - Safety concerns
  - Intersections on curves – superelevation, highway realignment
  - Higher delays than roundabouts
- **Roundabouts at major intersections**
  - Improved safety
  - Lower delays than traffic signals



15

---

---

---

---

---

---

---

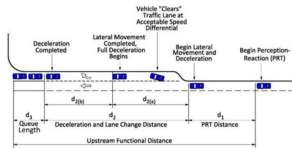
---

# ACCESS MANAGEMENT

Example Project – IA 415 & NW 44<sup>th</sup> St Concept Study

## Access Spacing Criteria (55 mph rural)

- Upstream functional distance (excluding queue) = 655 ft
- Downstream functional distance (preferred) = 865 ft
- Total minimum spacing = 1,520 ft
- Access Category M-600, R-600
  - Minimum spacing is more than double Access Category implied spacing.



16

---

---

---

---

---

---

---

---

# ACCESS MANAGEMENT

Example Project – IA 415 & NW 44<sup>th</sup> St Concept Study

## Access Alternatives

- Alternative 1 – based on side road priority level
- Alternative 2 – based on maximizing access locations within spacing criteria
- Alternative 3 – low speed (35 mph)

17

---

---

---

---

---

---

---

---

# ACCESS MANAGEMENT

Alternative 1: IA 415 & NW 44<sup>th</sup> St Concept Study




---

---

---

---

---

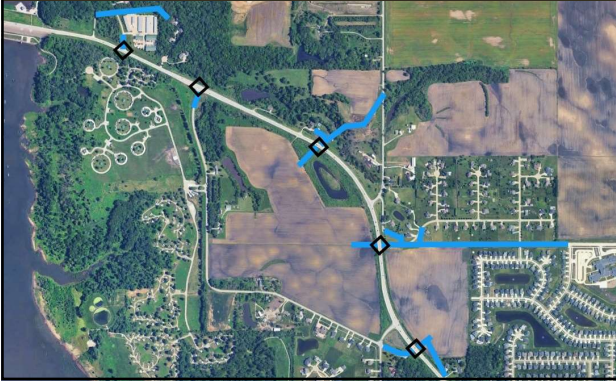
---

---

---

## ACCESS MANAGEMENT

Alternative 2: IA 415 & NW 44<sup>th</sup> St Concept Study



---

---

---

---

---

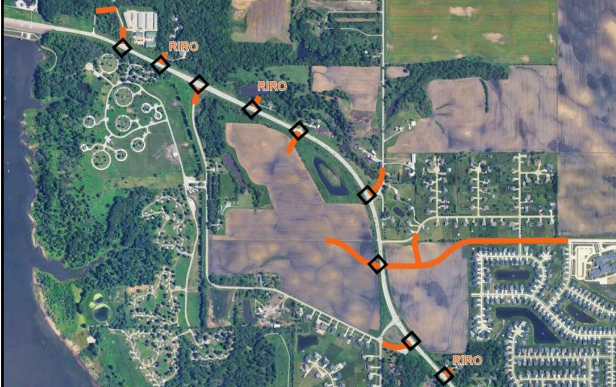
---

---

---

## ACCESS MANAGEMENT

Alternative 3: IA 415 & NW 44<sup>th</sup> St Concept Study



---

---

---

---

---

---

---

---

## KEY TAKEAWAYS

21

---

---

---

---

---

---

---

---

# ACCESS MANAGEMENT

## Key Takeaways

- Know the Code
- Access Management Manual
- Coordination with Iowa DOT and local agencies
- Understand the value of access management
  - Improved safety and mobility

22

---

---

---

---

---

---

---

## QUESTIONS?



IOWA DOT

SNYDER  
ASSOCIATES

23

---

---

---

---

---

---

---