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<b>16. Abstract</b> <p>In Iowa, there are currently no uniform design standards for rural and suburban subdivision development roadways. Without uniform design standards, many counties are unable to provide adequate guidance for public facilities, particularly roadways, to be constructed as part of a rural subdivision development. If a developer is not required to install appropriate public improvements or does not do so properly, significant liability and maintenance expenses can be expected, along with the potential for major project costs to correct the situation. Not having uniform design standards for rural and suburban subdivision development improvements in Iowa creates situations where there is potential for inconsistency and confusion. Differences in the way development standards are applied also create incentives or disincentives for developers to initiate subdivision platting in a particular county.</p> <p>With the wide range of standards or lack of standards for local roads in development areas, it is critical that some level of uniformity is created to address equity in development across jurisdictional lines. The standards must be effective in addressing the problem, but they must not be so excessive as to curtail development activities within a local jurisdiction.</p> <p>In order to address the concerns, cities and counties have to work together to identify where growth is going to be focused. Within that long-term growth area, the roadways should be constructed to urban standards to provide an easier transition to traditional urban facilities as the area is developed. Developments outside of the designated growth area should utilize a rural cross section since it is less likely to have concentrated urban development.</p> <p>The developers should be required to develop roadways that are designed for a minimum life of 40 years, and the county should accept dedication of the roadway and be responsible for its maintenance.</p>					
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## **EXECUTIVE SUMMARY**

### **Introduction**

In Iowa, there are currently no uniform design standards for rural and suburban subdivision development roadways; thus, many counties are unable to provide adequate guidance for public facilities to be constructed as part of a rural subdivision development. It is well-recognized that not having uniform design standards for rural and suburban subdivision development improvements creates situations where there is potential for inconsistency and confusion. Differences in the way development standards are applied also create incentives or disincentives for developers to initiate subdivision platting in a particular county or away from a city.

### **State of the Practice**

The responses from a questionnaire completed by 36 county officials can be summarized by indicating that the “typical” county does require paving of the roads within a subdivision, but does not require paving of the connecting road. Only one county responded that they have established warrants for the paving of the connecting road. For most of the responding counties, the internal subdivision roads are generally privately owned, with homeowners associations responsible for maintenance. The internal subdivision roads are typically built on 66-foot right-of-way easements or outlots. When the local road within the subdivision is paved, it will more than likely be a rural cross section 22 to 24 feet wide with 4-foot rock shoulders and ditches for drainage.

### **Roadway Geometrics**

Roadway geometrics are the parameters that create a well-designed facility, and are established as a function of design speed. The design speed is determined by evaluating the use of the road, the use of the adjacent land, and the expected traffic volume on the road. Once the design speed is established, the roadway vertical and horizontal alignments are set to meet those characteristics necessary to travel safely at that speed. The use of a particular cross-section, either rural or urban, should be decided with consideration of the desires of the developer and the location of the road with respect to the designated growth area of the nearest urban area.

The most important decision to be made as agencies review subdivision development plans is not whether to use a rural or an urban cross-section, but whether to require paving or allow the construction of granular roads. The answer to that question will determine the long-term impact on the generation of fugitive dust and escalating maintenance costs that the homeowners and the agency must deal with. This decision is particularly important when the development is within the designated growth area of a city. Requiring an appropriate level of paving for the expected traffic volume and adjacent land use will initially cost the developer and the homeowners within the subdivision more, but will minimize long-term concerns of both the homeowners and the regulating agency.

## **Recommendations**

It is critical for the county and the adjacent city to cooperate and establish joint development requirements in the designated growth area of the city. The first step in that cooperation process is for the city to look closely at its land use policy plan and evaluate where and to what extent growth over a 20-year period is expected. From that review, a designated growth area should be established. The designated growth area then becomes the most critical area for jointly determining the type of developments that will be allowed and the public improvement regulations that govern the development.

Developments within the designated growth area of a city should use the roadway standards that include an urban cross-section with storm sewers. Using the urban cross-sections within the designated growth area provides for smoother transitions as rural areas are annexed into the adjacent city. Once the roadways within the subdivision are properly constructed to the appropriate local or collector standards, they should be dedicated as public right-of-way, and the county should accept them for maintenance. Although acceptance into the county road system brings increased costs, the properly-constructed road with a design life of at least 40 years will not create unusual problems in the future and will serve the adjacent homeowners. Also, the regulation of speeds and other regulatory elements, such as on-street parking, can be established and enforced if the county has jurisdiction. Enforcement of these regulations is difficult when the right-of-way and road are not dedicated to the county.

An unpaved existing county road connecting a proposed development to a paved road is of particular concern. The connecting road is a part of the county road network, and is likely to become an important street as the area develops and the road is used by more traffic in the designated growth area of a city. Because of that importance and the long life of any pavement, the connecting road should also be paved to an urban cross-section within the designated growth area of a city. It is very likely that this road will need to be widened to multiple lanes as the area grows in the future and is annexed into the nearby city. The urban cross-section will make any expansion of the road reasonably cost-effective, since the existing paving would only need to be widened. Conversely, converting a two-lane rural road to a multi-lane urban facility would involve total removal of the pavement and reconstruction to meet the urban requirements.

For roads within developments outside of the designated growth area of a city, the selection of rural versus urban cross-section is not as critical. The option could be left to the developer to select the type they would like to propose, as long as good regulations are in place for both types. The amount of land required for right-of-way, the characteristics of the land (soils, slope, wooded area, etc.), and the type of drainage facilities to be used are elements to consider in the decision. It is recommended that the rural cross-sections be used as a default and the developers be allowed to propose other cross-sections if they so desire.