



## OGDEN VALLEY PLANNING COMMISSION

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### AMENDED WORK SESSION AGENDA

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November 26, 2019

5:00 p.m.

- *Pledge of Allegiance*
- *Roll Call:*

WS1: DISCUSSION: Review and discussion regarding street connectivity policy.

WS 2: DISCUSSION: Final review of proposed amendments to the subdivision ordinance.

*The regular meeting will be held in the Weber County Commission Chambers, in the Weber Center, 1<sup>st</sup> Floor,  
2380 Washington Blvd., Ogden, Utah.*

*Please enter the building through the front door on Washington Blvd. if arriving to the meeting after 5:00 p.m.*

**NO PRE-MEETING IS SCHEDULED FOR THIS MEETING**

***In compliance with the Americans with Disabilities Act, persons needing auxiliary services for these meetings should call the Weber County Planning Commission at 801-399-8791***

## Weber County Street Connectivity Standards

### Overview

Street connectivity standards require that the streets in new developments have a minimum level of connectivity. This connectivity has several aspects, including how well the streets are connected at intersections; how dense the network is; how well the community can access specific key destinations; and ensuring that the network is connected for all users.

Good street connectivity provides a range of benefits, including:

**Regional and community mobility:** Good street connectivity redistributes traffic among different routes in a network, providing more options and better accessibility for local traffic. This in turn frees some of the capacity on the adjacent arterial roads, which are mostly used by the non-local traffic.

**Transportation choice:** Higher street connectivity provides travelers with greater choice of travel modes. In a well-connected network, distances are shorter, barriers lessen, and active transportation modes and transit become more viable choices. This means that these types of networks are less automobile dependent.

**Safety:** In recent years, many studies have focused on how built environment factors (such as street connectivity and community) affect physical activity and health.

**Infrastructure and growth management:** Higher street connectivity improves the investment in municipal infrastructure, such as utilities, and services such as fire and ambulance.

**Health:** Street connectivity has been shown to offer indirect benefits related to health, largely stemming from the health effects of increased physical activity.

**Economic vitality:** Increasing street connectivity has been found to have an impact on a community's economic vitality. Many of the benefits are measurable in the economy or in the fiscal well-being of households and governments.

**Environment:** Street connectivity has major impacts on the environment. Shifts towards transit and active transportation modes in a connected network reduce VMTs, delays, and usage of automobiles which reduces air pollution, noise, and energy consumption.

Community access: At a regional or community-wide scale, connectivity improvements can reduce bottlenecks and reduce distances that residents need to travel to jobs. At a neighborhood scale, connectivity improvements can bring a school, park, or shopping area within walking or bicycling distance to more people.

A few simple requirements can help ensure that unincorporated Weber County communities achieve these benefits. Retrofitting street connections is extremely difficult, so high-quality street connectivity is more likely to occur through new development. With Western Weber County and Ogden Valley planning areas experiencing and projected to experience ongoing high growth, robust street connectivity standards can create a sustainable community frame for decades to come.

The standards are divided into three types:

Internal connections ensure that the streets within a development are connected to one another.

External connections ensure that a development is connected to surrounding street networks, both those that are pre-existing and those that will be built in the future.

The major street network is the network of streets oriented to countywide and regional travelers, such as collector and arterial streets.

These street connectivity standards are calibrated to the specific types of neighborhoods, districts, and communities envisioned for the Western Weber and Ogden Valley planning areas. These standards account for the different land use intensities directed by the General Plans and allowed by the zoning.

Note that key terms are defined in the Definitions section.

**Commented [TS1]:** Will italicize any term that is defined in the Definitions section.

Applicability

These standards apply to both public streets and private streets.

Internal connections

Minimum connectivity index

Overview

The connectivity index measures the basic level of connection of the streets in a development area. The connectivity index is the ratio of the street segments in the

development area to the intersections in the same area. The connectivity index is the number of “links,” or street segments, divided by the number of “nodes,” which include both intersections and dead ends, within the development area.

Calculate the connectivity index by:

- Counting the number of links in the subdivision area – the discrete street segments between nodes
- Counting the number of nodes – the combined intersections and dead ends in the area (excluding the ends of street stubs intended for future connection)
- Dividing the number of links by the number of nodes

The example connectivity plan in Figure X includes identification of links and nodes and connectivity index calculations.

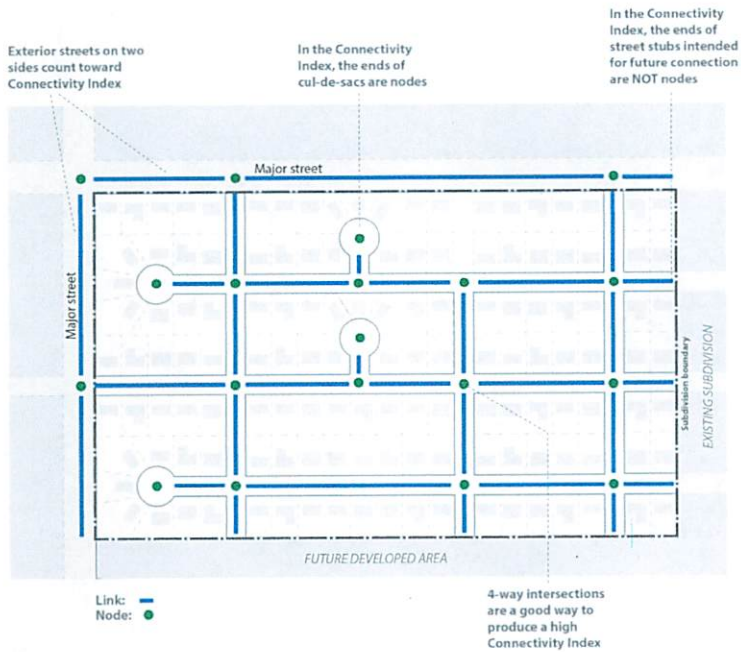
#### *Standard*

The minimum connectivity index required for all subdivisions is 1.6.

#### Notes

- Count approximately half of the links and nodes located on the perimeter of the subdivision toward the index - typically, this consists of two sides of the subdivision. See Figure 1.

Figure 1 – Connectivity Index



## Maximum block length

### Overview

Maximum block lengths are limits on the spacing of parallel streets. Maximum block lengths ensure that street networks have a minimum level of intersection density, and that the street network remains at a manageable human scale.

Calculate the maximum block length by measuring the length of each block in the subdivision, from the edge of one street right-of-way to the next street right-of-way, demonstrating that none exceeds the maximum established in the Standard section below.

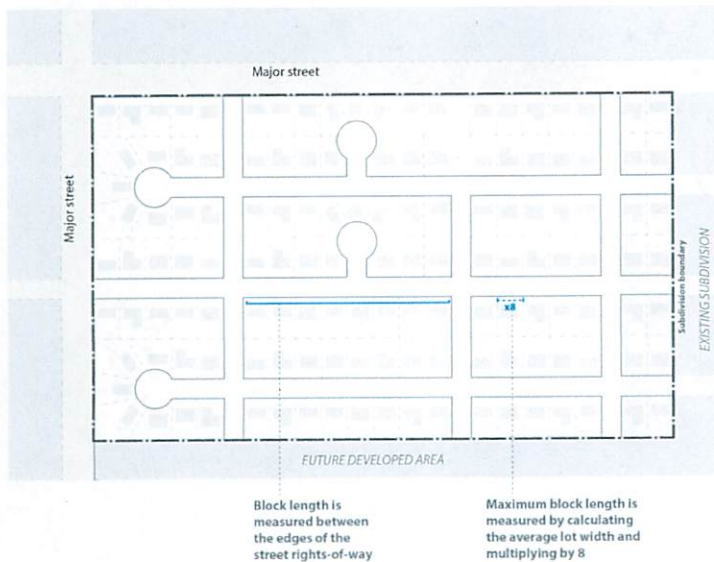
The example connectivity plan in Figure X includes identification of maximum block lengths.

### Standard

The maximum block length is 8 times the average lot width (measured at the street) of the subdivision. However, at no time shall a block length exceed 1320 feet, nor shall a block length maximum of less than 400 feet be imposed.

For example, if your average lot width is 80 feet, then your maximum block length is 640 feet; if your average lot width is 100 feet, your maximum block length is 800 feet. However, if your average lot width is 200 feet, your maximum block length would not be 1,600 feet – it would be 1,320 feet, because that is the highest block length maximum possible.

Figure 2 – Block Length



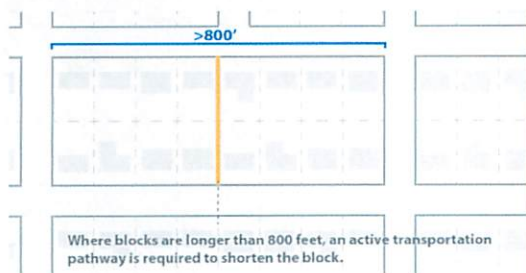
Notes:

- If the subdivision is comprised of individually separate and distinct areas with very different lot dimensions, the average lot width of each area may be used to calculate the maximum block length of that specific areas.
- Blocks over 800 feet in length shall be provided with a mid-block active transportation pathway through the block entering at approximately the center of

the block. The pathway shall have a minimum asphalt or concrete width of 10 feet with one-foot soft shoulders on both sides. It shall connect through the block to the approximate center of another block using the shortest route reasonably possible when circumnavigating proposed lot boundaries and other barriers not reasonably mitigatable. If adjacent undeveloped or underdeveloped land causes no other block to which the pathway can connect, the pathway shall be stubbed to the subdivision boundary in a location that will reasonably enable future pathway development on the adjacent land to connect to the stub. The planning director may waive this mid-block pathway requirement if environmental constraints exist that render the connection unreasonable and unnecessary; or if agricultural open space that is, or would otherwise be, permanently preserved as provided elsewhere in the Land Use Code would be interrupted by the pathway in a manner that creates a hardship for crop production. In allowing the waiver, the planning director may require the pathway be placed in another location to offer optimal compensation for the lack of a connection. The land that the pathway occupies may either be dedicated by the subdivision plat to the county, or be conveyed to the county by the subdivision plat as a perpetual easement.

- Access management requirements for UDOT-managed streets may allow block lengths along these streets to be longer. In this case, active transportation pathways may be substituted for streets to meet the block length requirement, with a maximum 800 feet between pathway connections, and meeting the standards in previous paragraph.
- Streets must be public to count toward the street spacing that creates the block length maximums.

Figure 3 – Blocks over 800 feet



Commented [CE32]: TK - Second image that does not have parallel roads to help conceptualize a none-grid network.

## Maximum cul-de-sac length

### *Overview*

Maximum cul-de-sac lengths are limits to the lengths of cul-de-sacs and other dead-end streets included in a subdivision. These limits balance the desire for a cul-de-sac lifestyle with mitigation of the negative effects of long dead-end streets on a connected street network.

Calculate the maximum cul-de-sac length by measuring each cul-de-sac and other dead-end street and demonstrating that none exceeds the maximum established in the Standard section below.

### *Standard*

The maximum cul-de-sac length is three times the average lot width (measured at the street) of the subdivision. The highest a maximum cul-de-sac length can be is 400 feet. The lowest a cul-de-sac length can be is 150 feet.

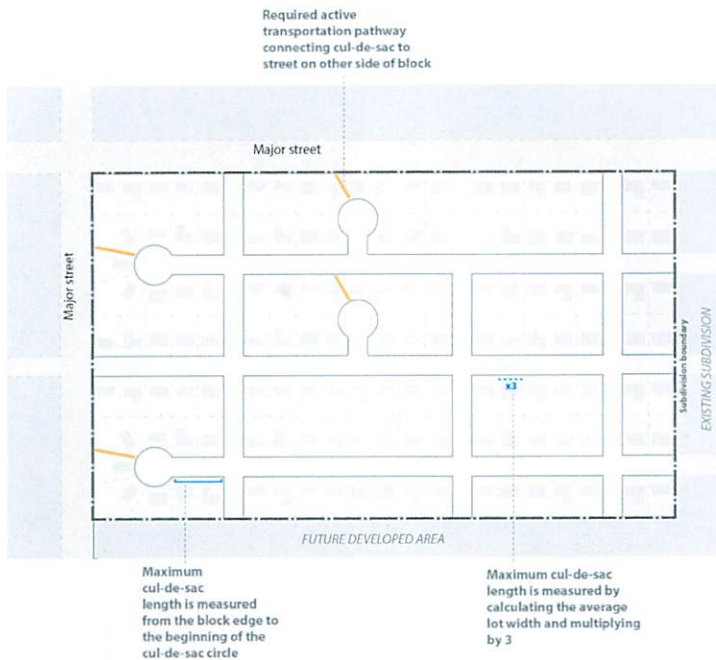
For example, if your average lot width is 80 feet, then your maximum cul-de-sac length is 240 feet; if your average lot width is 100 feet, your maximum cul-de-sac length is 300 feet. However, if your average lot width is 200 feet, your maximum cul-de-sac length would not be 600 feet – it would be 400 feet, because that is the highest cul-de-sac length maximum possible.

### *Notes*

- If the subdivision is comprised of individually separate and distinct areas with very different lot dimensions, the average lot width of each area may be used to calculate the maximum cul-de-sac length.
- Stub streets intended for future connections are not subject to this maximum cul-de-sac length requirement.

Figure 4 – Cul-de-sac management





Active

## transportation connection for each cul-de-sac

### Overview

Active transportation connections for cul-de-sacs requires that a pathway for walking, bicycling and other active transportation modes be placed between the end of the cul-de-sac and the street or trail on the other side of the block, if there is one. This requirement helps to mitigate the negative effects of dead-end streets on connected street networks.

Calculate adherence to this requirement by ensuring that there is an active transportation pathway at the end of each dead-end street.

### Standard

At each cul-de-sac or other dead-end street, an active transportation pathway must be built between the end of the cul-de-sac and the street or trail on the other side of the block.

### Notes

- If there is no street built yet on the other side of the cul-de-sac, build the pathway as a stub to the subdivision boundaries to connect to future streets.

#### External connections

#### Maximum stub street spacing

##### *Overview*

Stub streets are streets that dead end against vacant or undeveloped land with the intention of connecting to development on that land in the future. Requiring stub streets and establishment of maximum stub street spacing help to maintain a consistent and connected street network that ties together different subdivisions.

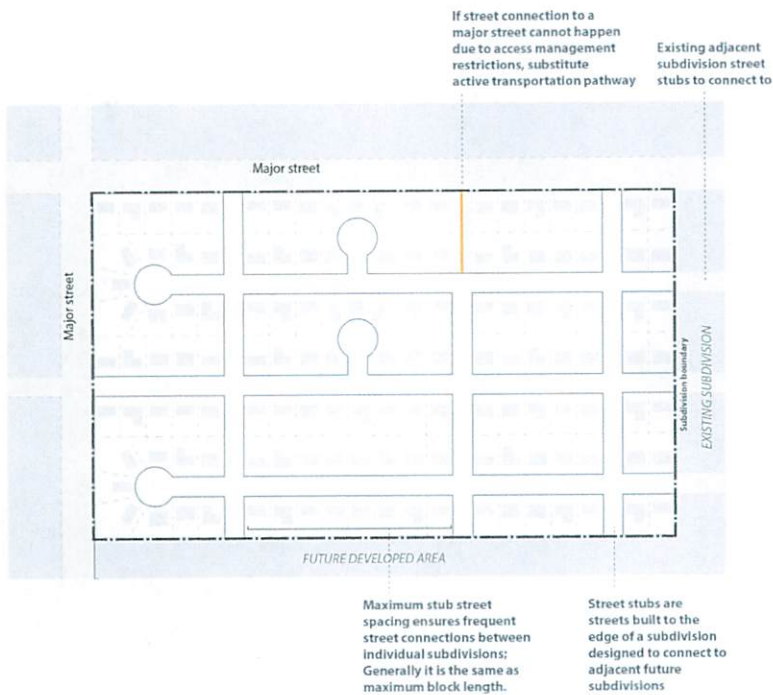
Calculate the maximum stub street spacing by measuring the spacing between all stub streets in the subdivision, from the edge of one street right-of-way to the next street right-of-way, and demonstrating that none exceeds the maximum established in the Standard section below.

##### *Standard*

The maximum stub street spacing is the same as the maximum block length requirement in Section X.

However, this requirement must be balanced with building stub streets in a way that extends the general network established in the development and connects to the networks already established by existing subdivisions.

Figure 5 – External connections



**Commented [CE33]:** When I build the ordinance I will likely follow the same format for example figures we have in other sections; which is to place the graphic in its own section at the end of the chapter, and reference the section containing the graphic within the statute.

## Trail connections

Active transportation connections in the subdivision shall connect the subdivision to, or if adjacent land is undeveloped or underdeveloped, provide a stub in the direction of, any existing or planned trails, where applicable.

## Major Street Network

### Overview

For most community-wide and regional trips, major streets are the only streets used – this major street network needs to be connected in itself. Considerations for the major street network include:

- Traffic dispersal
- Transit accessibility

- Bicycle routes – should be comfortable yet direct
- Commercial district accessibility
- Cost to build
- Barriers to active transportation

### *Standards*

Major streets shall be built at a maximum one-half mile spacing.

The network of major streets shall have a connectivity index of 1.8. For information on calculating the connectivity index, see Section X.

### Private streets

Private streets do not count toward the spacing that creates the block length maximums. Private streets can be built between the maximum spacing of public streets. However, if private streets are to be built, the block length maximum may be increased by 25 percent.

### Connectivity Plan

Achievement of connectivity standards must be demonstrated on a Connectivity Plan to be submitted with each development application. The Connectivity Plan shall demonstrate the following information:

#### Basic network information

- Area of the development
- Links
- Intersections
- Dead ends, including cul-de-sacs
- Street stubs
- Trails

Adherence to the following requirements:

- Minimum connectivity index requirement
- Maximum block length requirement

- Maximum cul-de-sac length requirement
- Maximum stub streets spacing requirement
- Requirement for active transportation pathways connecting cul-de-sacs
- Maximum major streets spacing requirement
- Connection to any applicable existing or planned trails

For an example of a Connectivity Plan, see Figure X.

#### **Multi-property connectivity planning**

In some situations in Weber County, the small size of properties, separate ownership, the interconnected nature of these properties, and the phasing of development over time combine to challenge the achievement of a connected street network.

In these cases, it may be beneficial to develop a Small Area Connectivity Plan to understand how connections among the properties will be made in the long term. Small Area Connectivity Plans may be made through a collaboration among property owners and Weber County staff. Either property owner(s)/developer(s) may initiate this planning process, which is facilitated by Weber County Planning staff, by submitting a complete application to the Planning Division. Upon receipt of an application, Weber County Planning Staff shall mail notices of the plan creation to immediately adjoining property owners. If mutually agreeable by all owners and the Planning Director, the property of adjoining owners may be included in the plan if all properties can be connected within the boundaries of the Small Area Connectivity Plan by the public street network. If adjoining property is included, a new notice of the plan creation shall be sent to the owner of property adjoining the included property, if that owner was not included in the original notice. Other owners or members of the public not interested in including their property in the plan may offer factual information regarding barriers and constraints that will help the owners and planning staff determine the best configuration of streets and pathways within the Small Area Connectivity Plan. Other non-factual information received from parties who do not own property within the plan area shall not be considered in the creation of the plan.

As an incentive for land owners to collaborate on a Small Area Connectivity Plan, if two or more landowners join efforts to create and get approval from the County for a Small Area Connectivity Plan, each property is entitled to a 10 percent increase in lot density for the

area within the Small Area Connectivity Plan, with an additional one percent density increase per each additional acre over ten acres, with a maximum density increase of 50 percent. The landowners involved may determine by mutual agreement how to divvy the density allowance between properties. Dividing land prior to creation of a Small Area Connectivity Plan in anticipation of the density increase is prohibited and such lands shall not be eligible for the plan and may be subject to code enforcement procedures as provided in the Land Use Code.

The results of the small area connectivity plan shall be submitted by planning staff for review by the planning commission. The planning commission shall forward a recommendation regarding the plan to the County Commission. If the plan complies with these street connectivity standards, the planning commission shall recommend approval of the plan.

The plan shall be memorialized in a written and graphic development agreement to be mutually drafted and executed by each affected property owner and the County. The County Commission shall approve the development agreement if it can find that the plan complies with these street connectivity standards and if there is reasonable public interest in approving the plan. Otherwise, the County Commission may reject the development agreement. An approved development agreement shall be executed by voluntary consent of all affected landowners, and recorded to each affected parcel upon final signature of the County Commission.

A Small Area Connectivity Plan, as approved by the County, shall substitute the relevant connectivity standards when it comes time for the property owner to apply for a development, unless its development agreement has expired.

#### Exceptions

The connectivity requirements may be reduced by the planning director if the applicant provides clear and convincing evidence that it is impossible or impracticable to achieve due to the following limitations:

- Topography: Natural features including lakes, rivers, designated wetlands;
- Existing adjacent development: It is important that a new subdivision connect to an adjacent pre-existing development; this connection should be balanced with the external connectivity requirements. For example, if the pre-existing development

has stub streets, they should be incorporated into the new subdivision in a way that best adheres to the connectivity requirements.

- Rail corridors; or
- Limited access roadways.

Reductions in the required connectivity index will be reviewed on a case-by-case basis and must require recommendations from each reviewing department.

#### Definitions

“Active transportation pathway” – A pathway intended for use by non-motorized transportation modes such as walking and bicycling.

“Block length” – Length of street between two intersecting streets; does not include any portion of intersecting street right-of-way.

“Connectivity index” – Number of links per node within the development area; Include links and nodes on approximately half the perimeter of the development area.

“Cul-de-sac” – A specific treatment of a dead end characterized by a circle of pavement to facilitate turning around and property frontage.

“Dead end” – Point at which a street terminates without meeting another street.

“Development area” – The area of the subdivision being proposed in the application.

“Intersection” – Point at which two or more streets meet.

“Link” – Street segment between two nodes (or adjacent to one node in the case of a stub street).

“Major street network” – Framework of streets intended for citywide and/or regional travel. In functional classification system, include the Collector and Arterial designations.

“Node” – A point in the street network that is either an intersection or a dead-end.

“Street” – public or private way intended for use by vehicular and non-vehicular transportation modes.

“Private street” – A street closed to the general public.

“Street network” – Framework of streets.