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MEMORANDUM

TO: Howey-in-the-Hills Planning Board
CC: J. Brock, Town Clerk
FROM: Thomas Harowski, AICP, Planning Consultant
SUBJECT: Comprehensive Plan Policy
Requiring Extension of Grid Street Pattern
DATE: April 25, 2022

The Town's comprehensive plan includes a policy requiring the use of grid street patterns when appropriate. This policy has been called into question recently with the consideration of a development proposal of about 88 acres on the south side of SR 19 between the bridge and the CR 28 intersection. The comprehensive plan policy would require the extension of the existing grid system from "Old Howey" northward through the proposed development. Residents living in the area south of the proposed project have expressed concerns about the grid connections, and the Town Council has asked the Planning Board to review the policy and consider if the policy should be amended or removed from the comprehensive plan. This report is offered to provide information to the Planning Board for its consideration.

The Current Policy and Rationale

The policy in question, Policy 1.11.6, is presented in the Future Land Use Element in support of Objective 1.11 encouraging innovative land development applications. The language of the objective and policy are provided below.

OBJECTIVE 1.11: *Innovative Land Development Applications.* Future growth and development shall be managed through the preparation, adoption, implementation, and enforcement of innovative land development regulations.

POLICY 1.11.6: *New Development Following the Town's Existing Street Grid Pattern.* The Town shall require all new subdivisions, residential and commercial developments, approved after the adoption of this *Comprehensive Plan*, to follow the Town's existing street grid pattern when appropriate.

This policy was included in the comprehensive plan in 2010 when the plan was undergoing one of the routine reviews required by state statute. The policy was intended to support a development pattern that results in new developments reflecting the structure of “old Howey” as these developments are brought forward for consideration. The more recent projects approved by the Town including Venezia/Talichet, The Reserve and Lake Hills have been based on plans that were approved by the Town prior to the addition of Policy 1.11.6 to the comprehensive plan.

The most obvious location for the application of Policy 1.11.6 is for the 88-acre tract which has become known as the Thompson Grove property. This property is adjacent to a well-developed grid street pattern and has limited impacts from severe terrain or extensive wetlands that might negate the use of a grid street pattern. This property has been in agricultural use, but it is in an area that suggests other uses will become more appropriate over time.

The Land Use Plan and Proposed Project

The comprehensive plan future land use map designates the subject property as low density residential and the land development code has applied Single Family Residential (SFR) zoning to the parcel. The comprehensive plan designation limits the maximum project density to two units per acre; and zoning requires a minimum half-acre lot with lot dimensions of 100 feet by 150 feet. The existing neighborhood to the south is zoned MDR-1 which requires a minimum 15,000 square foot lot with the comprehensive plan allowing a maximum development density of four units per acre.

The comprehensive plan clearly anticipated development when and if it proceeded northward from the existing neighborhoods to be done in a manner consistent with existing development. In September 2021, the Town reviewed a pre-application for development of the Thompson Grove parcel that proposed about 250 units on lots measuring 5,500 and 6,600 square feet along with a 10-acre commercial area. The concept plan showed two connections to the existing grid network to the south and one connection to SR 19. The applicant was advised that the proposed project could not be undertaken without an amendment to the future land use map and rezoning of the parcel. While a developer might propose a more intensive level of development than currently allowed, the Town is under no obligation to modify either its land use plan or its zoning to allow a more intensive project. A developer has no development expectations that those set by the current plan and current zoning. NO FURTHER ACTION HAS OCCURRED REGRADING THE PARCEL AS NO FORMAL APPLICATION HAS BEEN RECEIVED.

Based on the comprehensive plan policies the maximum number of units that may be permitted on the subject property is 163 units. This calculation is based on the net area of the site of 81.5 acres times two units per acre. The 6.53 acres of conservation area identified on the concept plan was excluded from the calculation. The actual number of units that may be development on the site could be less than the maximum allowed by zoning as the shape of the property may make it difficult to get the maximum number of units at the lot sizes required by the zoning.

The Grid Street System

A grid street pattern is typical of older communities and older neighborhoods as is the case with Old Howey. Grid street patterns have been touted in recent years by New Urban theorists because of the advantages they offer in their ability to support walkable neighborhoods, allow for land use flexibility, create a specific street character and because of their ability to absorb and disperse larger volumes of traffic because of the multiplicity of route options. Joe Minicozzi of Urban 3 has done an extensive amount of research that demonstrates a grid system also yields the highest value per acre. Traffic speeds in grid system tend to be lower due to the frequency of intersections.

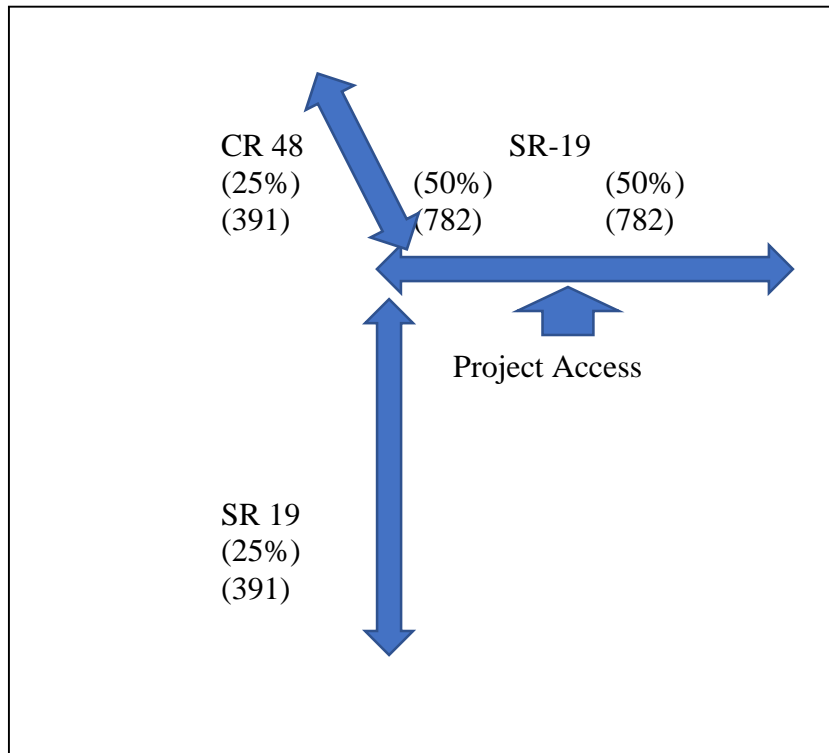
Dendritic street systems force traffic onto arterial and collector networks that provide relatively few alternatives with these routes generating higher average traffic volumes and they tend to generate congestion when accidents or other conditions occur. These systems tend to be higher speed on the collector and arterial network which shortens trip times when congestion is not present. Grid systems tend to impose themselves on the existing topography while the dendritic systems can more easily conform the topography and other site limiting conditions. These types of road networks have become what people living in a suburban setting have come to experience as the norm.

Traffic Estimates

While the grid street system and the dendritic design have advantages and disadvantages, the key issue behind the current examination is anticipated traffic impacts. This section is going to examine those issues. Traffic generation in a residential neighborhood is a function of the number of units that are developed. Traffic studies conducted over many years for a large number of single-family developments have settled on a trip generation of 9.6 trips per single family home. (These are really trip ends with each trip having a beginning and end point.) Trips include not only residents of the homes, but every other trip in the area including the mail delivery, trash collection, the pizza delivery driver and Amazon.

In this analysis the traffic distribution done for the Lake Hills project was used to allocate trips to the road network. Since Lake Hills is directly opposite the Thompson Grove parcel the traffic distribution is likely to be similar in character. If a formal application is ever received for the property, a traffic study specifically for the parcel needs to be done, but this analysis should be sufficient to understand how trips affecting Old Howey if connected by a grid system would be allocated. Traffic allocation is typically shown by a distribution tree. When a new development is proposed, nearby residents commonly anticipate major traffic impacts with associated negative outcomes. The following information estimates and allocates trips from a proposed development of the Thompson Grove parcel based on the maximum unit total allowed by the current land use designation.

The diagram below shows the distribution of trips based on the model cited above showing the percentage of trips and the estimated number of trips by direction. Note the following:



- Total trips are based on 9.6 trips per dwelling unit times the maximum site yield of 163 trips. ($163 \times 9.6 = 1564$)
- One half of the trips (782) generated are expected to go east towards Tavares.
- Approximately 25% of total trips (391) are expected to use CR 48 towards Leesburg
- Approximately 25% of total trips (391) are expected to go south along the SR 19 corridor

The question becomes how many of the southbound trips are likely to use local roads as opposed to using SR 19 which is likely to be the faster route. For trips to more remote locations like the Florida Turnpike, US 27 and the communities south of Howey, SR 19 is likely to be the preferred route. For destinations such as Griffin Park and perhaps some of the local businesses in the Central Avenue area, the local road network might be chosen.

To give some structure to the discussion regarding southbound traffic, the following table has been developed showing the trips assigned to the local road network at various levels of assignment and how these trips might be distributed over time based on the number of connections to the existing grid network.

Southbound Trip Assignment Scenarios					
Percent	100	50	30	20	10
Total Trips	391	195	117	78	39
Trips/Hour	22	11	6	4	2
Trips/Street 5 connections	4	2	1	1	0.5
Trips/Street 2 connections	11	6	3	2	1

1. Trips per hour are based on 18 hours assuming no trips between midnight and 6:00 AM
2. Trips per street per hour for five connections is the maximum number of linkages
3. Trips per street for two connections is based on the concept plan linkages.

The table shows that even if half the southbound trips generated by a development along the south side of SR 19 use the local street network, the grid system can distribute the trips so that impacts at any one time are minimal. The more connections that are available, the less is the impact on any one linkage. There are techniques that can be used to discourage southbound trips such as the placement of stop signs to interrupt flow in one direction.

This analysis also does not consider the potential for residents in the hrothern portion of Old Howey using trips through a new subdivision if access to SR 19 for eastbound trips toward Taveres is more convenient.

Questions and Discussion Issues

Given the background and information provided above, a primary question for discussion is:

Is the adopted policy for extension of the development pattern of grid street design from Old Howey to new, adjacent development still reflective of the basic community design that the Town desires?

If the answer to this question is yes, then the Town Council needs to implement the policy as new projects are brought forward. The analysis indicates that traffic impacts to existing neighborhoods, at least as evidenced by the Thompson Grove parcel, are minor. If the answer is no, then the Town Council should consider eliminating the policy.

The policy already has wording that allows variation on a case-by-case basis as a result of the “as appropriate” language. If the desire is to maintain the policy and consider individual cases, then the Town should consider adding some criteria to the policy that provide examples of when a grid pattern is inappropriate. For example, property which has wetlands located so that it would frequently interrupt a grid pattern extension, a dendritic street design might be more appropriate. There may be other reasons such as difficult terrain that may suggest a grid street pattern is a less effective design. Except for extraordinary circumstances, issues like traffic resulting from street extensions should not be a cause for abandoning the grid street policy. These are factors that might best be served by repealing the policy in favor a design that promotes isolated and disconnected neighborhoods.

We are in a situation where the Board has ample time to consider the alternatives as there is no current project proposal that would require short-term application of the policy under discussion. If the Board has additional questions or desires additional information, staff can attempt to provide that input for the decision-making process.