



SECTION 11: TRANSPORTATION RECOMMENDATIONS

The Thoroughfare Plan

Importance of Thoroughfare Planning

The Thoroughfare Plan is frequently considered one of the two most critical components of a Comprehensive Plan. While the Future Land Use Plan is enforced through the Zoning Ordinance, the Thoroughfare Plan is enforced primarily through the platting requirements of the Subdivision Regulations or by budgeted capital improvements. The Plan not only identifies the general location and type of future thoroughfares, but also provides one of the critical funding mechanisms for road construction.

State statute permits cities with adopted Thoroughfare Plans to require right-of-way dedication as a contingency of plat approval when land development takes place within planned thoroughfare corridors. In addition, cities are allowed to require private sector participation in the construction of such thoroughfares to the traffic capacity required for the proposed project. Many cities throughout the State utilize this public/private development approach for the construction of most roadways not built with State or County funds.

While the City may or may not choose to exercise the right to require private sector participation in road construction, it is critical for the implementation of this Plan that the City requires the dedication of right-of-way to the full extent proposed in this document.

***"I'm of the opinion that we're paying now for what we didn't do before."
- David Sage***

Subdivision Regulations also apply to land within the ETJ allowing the City to impact the local and major roads it will have to inherit once annexation occurs. Therefore, Whitehouse should treat transportation development within the ETJ with the same level of care as is practiced within the City Limits.

Transportation Plan Vision

***"We have to make it understood that if you don't control your land use, then you have more traffic problems."
- Mark Sweeney***

***"[With land use] we have to balance that [growth with] our traffic problem."
- Russell Rischard***

Many citizens who spoke during the public involvement program were initially drawn to the project based on concerns regarding transportation congestion within the community. Through the involvement process, many participants gained an increased level of awareness regarding the relationship between land use and

transportation, allowing for an informed discussion of the more comprehensive solutions.

Many businesses and residences within Whitehouse were historically built with driveway designs which had little regard for access management techniques, a situation not uncommon for small communities throughout

***"Implementing design specifications that limit the amount of access points to a roadway is critical. Part of our traffic problem both here and in Tyler is the fact that property owners are allowed to put a driveway every 20 feet... some of the easiest ways to improve your traffic flow are to install raised medians, limit the number of driveways, and require mutual access easements... those are simple things to improve the traffic flow that we are all looking for without needing to expand every roadway."
- Mark Sweeney***

the State. Citizens expressed frustration regarding the number and quality of driveways from an aesthetic and safety standpoint, but began the process with little understanding as to the impact that uncontrolled turning maneuvers can have on road capacity. Once these management techniques and statistics were introduced, most participants supported the notion of access management. Support was particularly strong for management of thoroughfares which lack sufficient right-of-way for expansion.

Citizens also recognized the direct relationship between the schools and many of the observed traffic problems. The school system was viewed as an irreplaceable



community asset and held as one of the City's strongest recruitment tools for future citizens. Speakers also understood the economic and employment value the School District brings to the community. However, most participants expressed concern that a lack of cooperation between the City government and School District was hampering efficient traffic flow options. School campus location was also mentioned as a contributing factor to morning and afternoon congestion.

***"We're [WISD] the largest employer in the City. We cause more congestion than anyone and will continue to do so [because the City and District continue to grow]. When we're in session we nearly double the population of the City."
- Dennis Miller***

***"For future schools [we need to] get some of the traffic away from the intersection [of 110 and 346 and] not build any new schools on the east side."
- Kimberly Rischard***

***"We have talked about that [extension of Hagan to the west] for a good five years. People are always going back and saying 'we hear talk...' well, sometimes it takes a while to get our talk to action. [Our traffic problems are] not going to get better, they are going to get worse. We owe it to the people to say "We've got [a Plan] to do something to alleviate these problems."
- Danny Hogden***

By and large the strongest mandate delivered by participants was for the City to take action on a Plan. Most speakers expressed frustration that many of the transportation recommendations put forth by the 1995 Comprehensive Plan were not implemented. Many of the solutions proposed in both this document and the original Plan could make a significant impact on existing traffic problems. Even small successes should be pursued in order to build momentum for larger projects. Construction intended to make small connections between existing roads would constitute this type of small success and allow more citizen confidence in the Plan.

***"Just by connecting [some of] these short streets, you'd be surprised [how much that would help], just a few short connections in this town right now would ease congestion."
- Darrell Crymes***



Plan Flexibility and Phasing

It should be understood that the Thoroughfare Plan identifies transportation corridors rather than specific road alignments. It is not uncommon during the platting process for the final alignment of thoroughfares to be changed slightly to account for a variety of factors. During the public involvement and data analysis phase of the planning process only general data is available. As a result, specific engineering constraints and unanticipated compromises may lead to minor changes and adjustments.

***"Arterials would actually be a four-lane road... the fact that it might not be a four-lane road for the first 10 to 12 years of its life doesn't make any difference... you simply want to reserve the right-of-way... [then] you're prepared."
- Danny Hogden***

Phasing of thoroughfare capacity is also a critical concept for thoroughfare planning. For example, the Plan may call for the establishment of a major arterial with a planned pavement width of 70 feet and 100 feet of right-of-way through a certain piece of property. At the time of platting, the Subdivision Regulations may require the dedication of this right-of-way to the City as a requirement of plat approval. While the eventual pavement width calls for a four-lane highway, the City and/or developer may elect to only construct a road capable of handling the short-term traffic generation of the development project. The key is that sufficient right-of-way is dedicated in order to permit the eventual construction of the planned major arterial without the need to acquire additional right-of-way or relocate structures.

Thoroughfare Types

Three types of thoroughfares are included in this Thoroughfare Plan. The Functional Street Classification System is utilized to classify thoroughfares based on design capacity versus levels of access. The Plan also includes off-street trails intended for use by pedestrians and cyclists.



Major Arterials

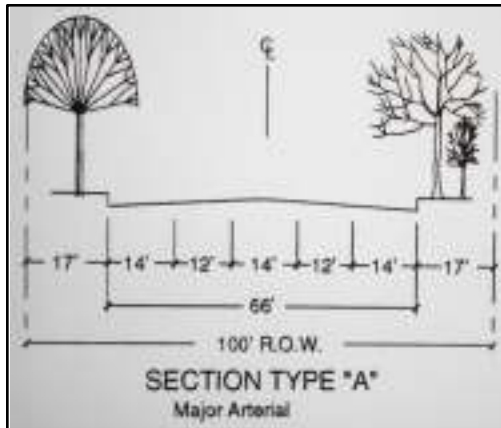


Figure 11.1: Typical major arterial as recommended in the 1995 Thoroughfare Plan

Major arterials are frequently defined as thoroughfares which move vehicles through an entire community and provide connections to other communities. These facilities have a high level of mobility and capacity, but are designed to permit a reduced level of accessibility to adjacent land uses. As defined in the 1995 Thoroughfare Plan, a typical major arterial would have an overall

right-of-way of 100 feet. Though configurations may vary, most major arterials are designed with at least 70 feet of pavement width with two drive lanes in either direction and a center median/turn lane. Figure 11.1 is an illustration published in the 1995 Comprehensive Plan depicting a typical cross-section of this classification. Though not shown, sidewalks are also frequently included as a design component of major arterials.

Another design alternative would include raised medians with decorative street trees and bushes. Some designs go so far as to include trails in the median such as in Bellaire, Texas (Image 11.1).



Image 11.1: A walking trail and linear park system in the wide median of Bellaire Boulevard in Bellaire, Texas

Access management can have significant impacts on the carrying capacity of a roadway. Major arterials function best under these conditions. Access management techniques may include the use of solid center medians with turn



bays, regulated curb cut/separation distances for adjacent properties, and shared access easements allowing neighboring commercial sites developed at different times to share common driveways. As is discussed in the Tyler Area MPO Plan, properly executed access management can result in a 50% increase in capacity when applied to a typical four-lane arterial. This functional increase is the same as would be achieved by adding another lane to the roadway in both directions.

"I'd like to see [the development regulations] begin to look at [how to] keep everybody's driveway from emptying out onto major roads."

- Debbie Shafer

The efficiency of major arterials is also dependent on the placement and spacing of other arterials and collectors. Traffic signal separation distances should also be maintained. Under the Functional Classification System signalized intersections should be separated by a minimum of one half mile. Direct access to major arterials by residential driveways or numerous individual commercial facilities should be discouraged unless the thoroughfare is designed to accommodate a pedestrian mixed-use design. This access accommodation may be the case in the City's "Town Center."

Minor Arterials

Minor arterials serve many of the same functions as major arterials; however, their design capacity and appropriateness for commercial use may be reduced. As with major arterials, a minor arterial may sometimes provide a driver with a continuous corridor crossing the entire community.

Minor arterials, which generally allow for more direct access by collectors and local streets, can be utilized to funnel traffic on to major arterials. The design of these facilities is intended to allow for more access with lower overall capacity and speed. A typical cross-section is illustrated in Figure 11.2 taken from the 1995 Comprehensive Plan. In this example, the right-of-way measures

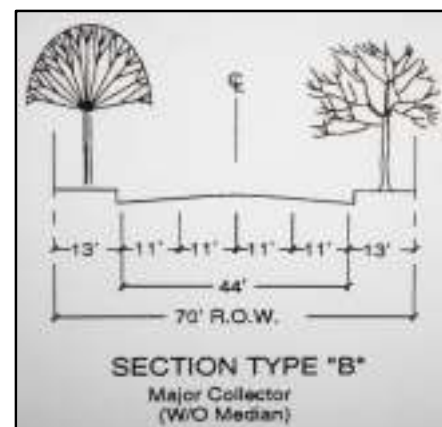


Figure 11.2: Typical minor arterial as recommended in the 1995 Thoroughfare Plan



70 feet across with a 44 foot wide pavement width. In this example, two drive isles are provided in either direction with no provision for a left turn lane or shoulders. Alternate designs might include a center turn lane, one drive lane in both directions, and narrow shoulders. The inclusion of sidewalks is also appealing as minor arterials frequently connect residential neighborhoods with shopping or school campuses.

Access management is still important for minor arterials; however, their nature necessitates a higher level of access to the roadway from adjacent uses. Solid center medians limiting left hand turning motion may not be feasible; however, the regulation of curb cuts with minimum separation distances and shared access easements can preserve and improve traffic capacity on these facilities.

Collectors

Collectors are the least intensive of the three thoroughfare types. A collector will rarely bisect an entire community, but rather deliver collected traffic from neighborhoods and local streets to major or minor arterials. Collectors allow a high level of access by adjacent driveways and property. Therefore, collectors cannot permit the same level of traffic speed or capacity as minor arterials even given a similar pavement width.

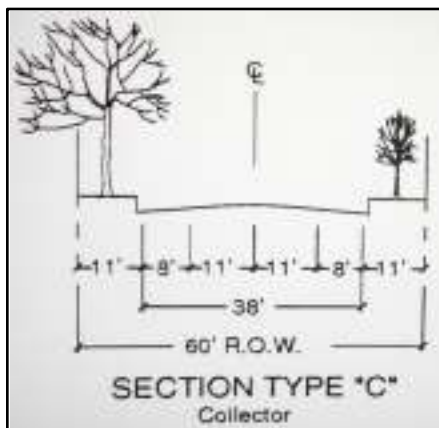


Figure 11.3: Typical collector as recommended in the 1995 Thoroughfare Plan

In fact, the right-of-way requirement recommended by the 1995 Thoroughfare Plan and throughout planning literature for the two road types is frequently only slightly different. Figure 11.3 illustrates the thoroughfare cross-section as shown in the 1995 Plan. In this example, the right-of-way width is 60 feet with a pavement width of 38 feet. Two drive lanes and narrow shoulders are provided with no center turn lane.

As with other illustrations, sidewalks and or bike lanes are not shown but should be considered in the design standards for Whitehouse.



Although not desirable, direct access to collectors from residential driveways and individual retail/office sites is not a significant threat to roadway capacity. Still, for safety and livability concerns, it is desirable to practice neighborhood design which orients residential lots to local streets which in turn access collectors.

Trails

Trails are not a typical component of thoroughfare planning. However, in order to raise awareness of the connectivity component of the Parks portion of this document the Thoroughfare Plan will include off-street hike and bike trails.

Other Street Types

Local street design varies dramatically from neighborhood to neighborhood. For example, street width is a topic inspiring a great deal of debate between design professionals and neighborhood residents. Slow driving speeds are generally associated with the perception of safety on local streets. The single largest contributor to average driving speed is lane width. This factor is even more influential than posted speed limits. While a common complaint about residential streets is that they are too narrow, constructing residential streets at extremely wide sizes inevitably results in higher traffic speeds and lower pedestrian safety.

Another common complaint about residential streets is the presence of parked cars. While on-street parking may present an eyesore and frustrate neighborhood drivers, these cars contribute significantly to lower driving speeds. As a result, on-street parking can drastically increase pedestrian safety.

Street layout is also frequently discussed in neighborhood design debates. While cul-de-sacs and curvilinear designs are effective at reducing the infiltration of traffic through a residential subdivision, these designs can have negative impacts on other aspects of the neighborhood. For example, a traditional neighborhood grid pattern permits easier pedestrian movement and increases visibility within the neighborhood. The result can potentially reduce crime and permit more neighborhood play among children. Curvilinear design and cul-de-sacs also force



more traffic on to certain roads within the neighborhood. Lots located near the end of a cul-de-sac have fewer vehicles driving past them. However, homes located on the neighborhood's main streets and near the entrance suffer from drastically increased traffic levels. In contrast, a design using a grid network can evenly distribute cars throughout the neighborhood rather than focusing traffic to only one or two access streets. While there are certainly advantages to contemporary cul-de-sac designs many neo-traditional subdivision designers are returning to the grid pattern and narrow streets allowing for on-street parking. No single solution will be ideal to all situations within Whitehouse. For this reason, updates to the Subdivision Regulations should look to allow these alternate designs when the situation permits it.

Major Thoroughfare Planning Needs

During public involvement, several critical issues were repeatedly discussed by citizen participants. Most of these issues relate back to the intersection of Main Street (FM 346) and State Highway 110. On weekday mornings school traffic merges with commuters to create significant congestion problems. Two critical shortcomings were examined which combine to exacerbate this problematic situation. The first is a lack of adequate north/south bypass flow allowing commuters to avoid traveling through the Town Center. The second issue discussed frequently was the deficiency in east/west flow within the City.

"There's not a road that anybody can take that gets around the schools... you're going to go through school traffic no matter how you look at it."
- David Sage

Because this congestion results from a combination of intercity and regional travel, a solution requires that both circumferential (bypass) and radial traffic patterns be addressed. The layout of Whitehouse can be symbolized as a tilted plus sign. Most drivers originating in or passing through the City while commuting to work travel north to Tyler on State Highway 110. Residents of Whitehouse are joined in this commute by workers living in Troup and various



unincorporated areas of southern Smith County. While several "back roads" exist for this purpose, most travelers still utilize State Highway 110.

North/South Bypass Flow

To address this bypass transportation need two general traffic patterns were identified through public involvement. Pattern 1 (Figure 11.4) bypasses the City to the east giving commuters the option of traveling north on Bascom Road (FM 848) or State

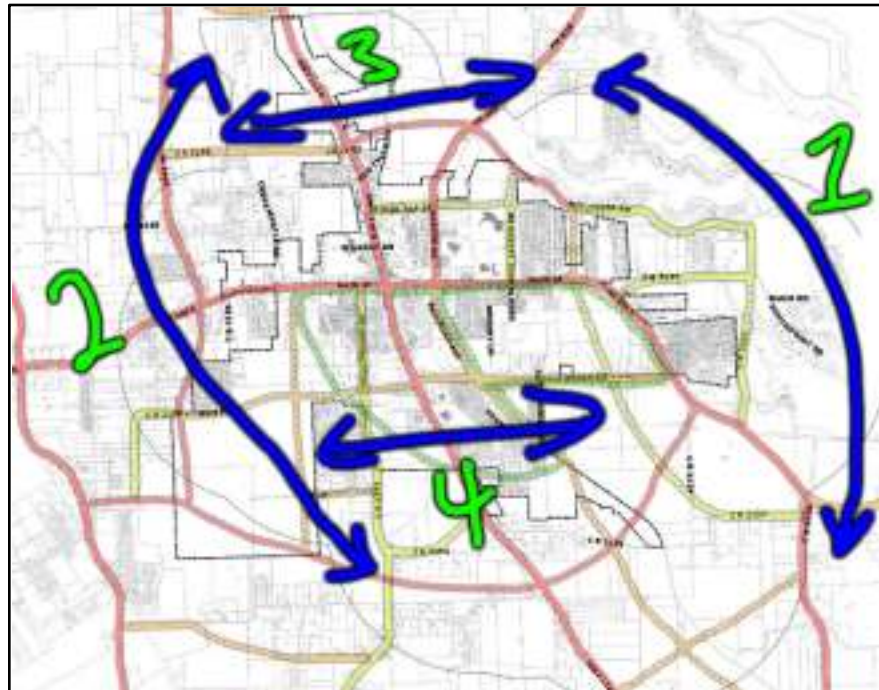


Figure 11.4: The digital "butcher paper sketch" shown above was drawn collaboratively during the transportation public workshop and identifies both major needs (blue arrows and green numbers) and possible solutions (red, orange, yellow, and green lines).

Highway 110. Because the figurative plus sign tilts slightly to the west, Pattern 1 would be perceived as a shorter distance by travelers originating south of the City. The major drawback of this alternative is that the combination of Lake Tyler and existing residential neighborhoods limit alignment possibilities. Natural barriers also exist in the form of low elevation potentially requiring higher construction costs.

Pattern 2 bypasses the City's center on the west side presenting commuters with the option of traveling north on Paluxy Drive (FM 756), Rhones Quarter Road (FM 2964), or State Highway 110. Unlike Pattern 1, this alternative presents fewer natural barriers; however, other problems persist. Many of the most appealing alternatives require portions of the road to be built outside of the City's ETJ.



Land west of Whitehouse not within the City's jurisdiction falls within the City of Tyler's ETJ.

East/West Internal Flow

Because most of the major employment centers are located to the north of the City in Tyler, east/west movement is generally limited to intercity travel by citizens shopping or driving to and from schools. Despite the impending construction on Main Street (FM 346), many participants felt that alternatives were needed for both internal use and as a means to connect the City to planned north/south bypass corridors.

In general, two alternatives were identified to address this east/west movement. Pattern 3 would be north of Main Street and connect to the two planned bypass corridors (Figure 11.4). Existing development and natural features are both significant impediments to several possible alignments for this corridor. Pattern 4 would lie south of Main Street and also allow for connectivity with both eastern and western bypass corridors.

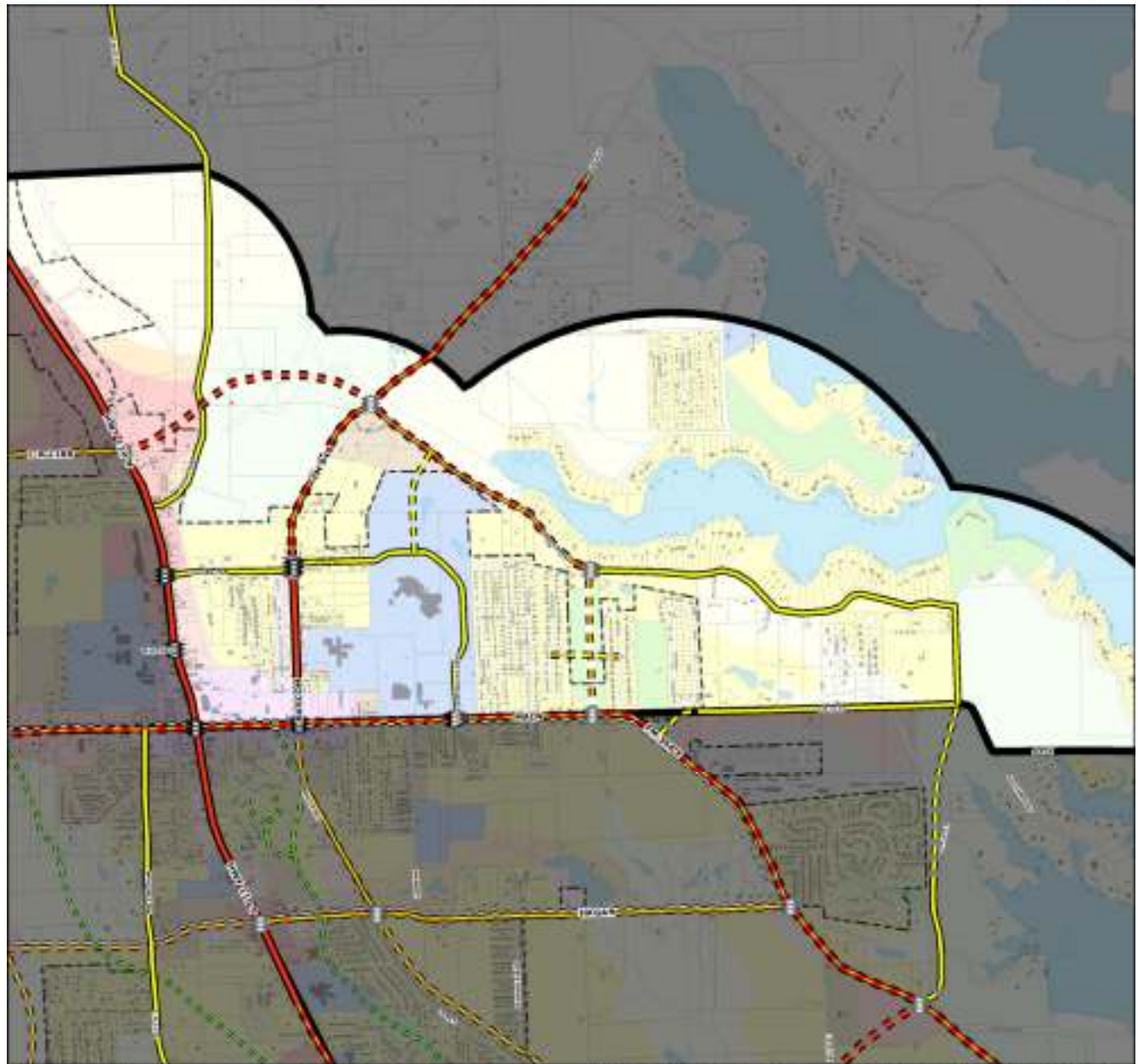
The Thoroughfare Plan

The complete Thoroughfare Plan Map can be found on page 214 (Map 11.1). As with the Land Use Section, the Thoroughfare Plan will be presented by Planning Area to allow for specific discussion of each quadrant of the City.

Planning Area 1


Location and Existing Conditions

As with land use, transportation needs in Planning Area 1 are severely limited by both existing land use conditions and natural features (Map 11.2). The Hillcreek drainage basin into Lake Tyler bisects the area in the north, while residential and School District development has consumed most of the vacant land in the southern portion of the quadrant.

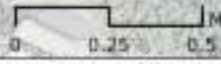


Map 11.2: Thoroughfare Plan for Planning Area 1

- | | |
|--|--------------------------------|
| Planned Major Arterial/Existing Collector | Estate Density Residential |
| Existing Major Arterial | Low Density Residential |
| Planned Major Arterial/Existing Minor Arterial | Medium Density Residential |
| Planned Major Arterial | High Density Residential |
| Existing Minor Arterial | Low Intensity Office/Retail |
| Planned Minor Arterial/Existing Collector | Medium Intensity Office/Retail |
| Planned Minor Arterial | High Intensity Office/Retail |
| Existing Collector | Light Industrial/Business Park |
| Planned Collector | Public/Semi-Public |
| Planned Enhanced Sidewalk | Master Planned Development |
| Planned Hike/Bike Trail | Town Center |
| Existing Traffic Signal | Parkland |
| Planned Traffic Signal | Whitehouse City/ETJ Limits |
| | Built Structures |



City of Whitehouse
Geographic Information Systems



0 0.25 0.5 MI

Comprehensive Planning and this Future Land Use Map do not represent zoning. About the Image: The image is an artistic rendering of typical single-family residential homes in Whitehouse. Also pictured is a commercial rose farm located behind the homes.



North/South Bypass Flow Solutions

In order for an eastern bypass option to be viable, its proper alignment within this Planning Area is critical. FM 346 in the southeastern quadrant is planned for major upgrades which will solve part of the north/south bypass goal. However, in order to align with this highway the corresponding thoroughfare in Planning Area 1 must intersect to the east of Main Street's southerly curve.

Because of existing residential development, only one alignment alternative remains viable. This alignment would be placed on unimproved land between the residential streets of Gatewood Drive and Karla Drive, connecting Main Street (FM 346) and an upgraded Hillcreek Road. Modifications to this portion of Hillcreek Road would be necessary in order to handle increased traffic. Care must also be taken to mitigate the impacts on existing lake homes located along this road. Once Hillcreek Road is upgraded, travelers from southern Whitehouse and unincorporated southeastern Smith County would have a route to connect to Bascom Road (FM 848) for travel north into Tyler.

East/West Internal Flow Solutions

In order to complete this bypass for connectivity with State Highway 110, some east/west flow must also be addressed. An eastern extension of Hillcreek Road to intersect with State Highway 110 at approximately Lilly Road (CR 2188) would provide both alternate east/west flow and complete the eastern bypass within this quadrant. Various alignment options would be available. However, existing commercial development on State Highway 110 and drainage problems will be constraining factors in determining the final alignment.

Other Important Connections

School drop off and pick up from both private vehicles and school buses is a constant source of traffic congestion within the City. Despite this congestion, the School District has done an effective job of planning for internal flow of buses when multiple campuses are built concurrently.

The primary example of interschool traffic flow is the Higgins, Holloway, and High School campuses' internal connections which allow buses to avoid public streets (Image 11.2). However, some complaints have been raised by neighboring homeowners because two internal School District roads connect to public streets through existing



Image 11.2: A bus loop internally connects the Higgins Intermediate, Whitehouse High School, and Holloway Middle School campuses; however, parents and student drivers must still use external roads to move between campuses. Schools are shaded in blue, homes are shaded in yellow.

residential neighborhoods. Acker Tap is one example of neighborhood infiltration by school related traffic. Several opportunities exist for the connection of the upgraded Hillcreek Road to FM 346 through the High School campus area. If new campuses are built on property surrounding the High School site, alternative access to Hillcreek Road will become even more attractive. At present all school sites within the District have been designed to take access from State Highway 110, Main Street (FM 346), or Bascom Road (FM 848). A school built north of the High School accessing Hillcreek Road would alter this pattern and possibly result in a reduction of school traffic on existing thoroughfares.

Another minor, yet important component of the Plan would be the completion of Frances Drive between Gatewood Drive and Karla Drive. This extension would allow residents within the subdivisions to access the planned eastern bypass without using Main Street (FM 346). Providing for fewer turning movements on the City's major arterials will contribute significantly to access management goals and increase the effective capacity of such arterials without the need to add lanes. A connection such as this is unlikely to increase internal traffic within the two neighborhoods.



Overall Needs

Table 11.1 illustrates the mileage of proposed road construction, as well as the number of new signalized intersections which may be needed. The mileage estimates combine new construction with work to upgrade existing roads. For estimates within all Planning Areas, construction funded as a part of the Main Street (FM 346) widening project will be excluded. Proposed traffic signals are located on the border of two Planning Areas will be counted partially in the estimates for both quadrants.

In general, proposed road construction within Planning Area

Planning Area	Major Arterial	Minor Arterial	Collector	Traffic Signals
Planning Area 1	2.6 miles	0.45 miles	0.54 miles	3.0

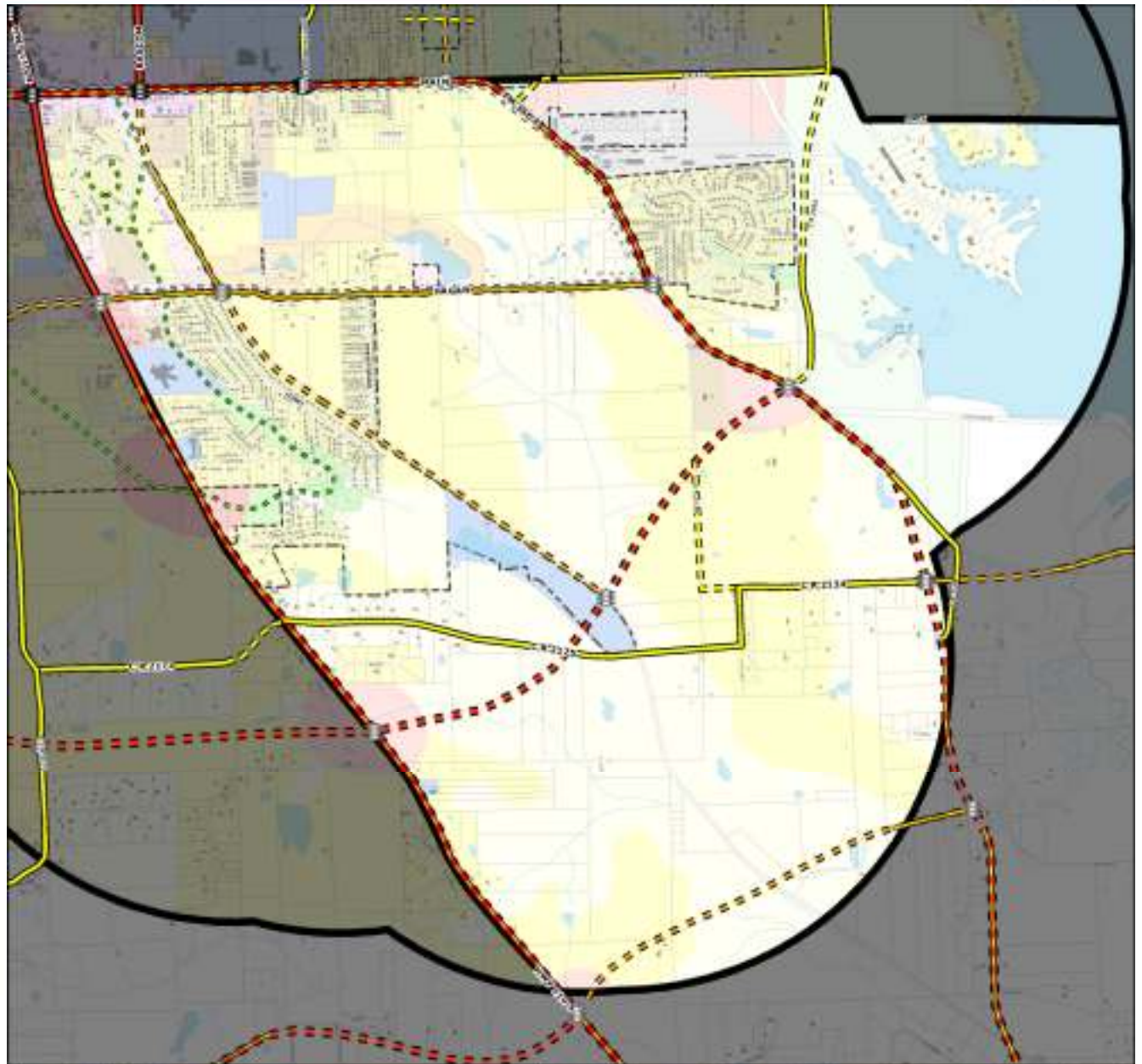
Table 11.1: Thoroughfare Plan construction estimates for Planning Area 1 in terms of mileage and number of new traffic signals (new road construction is combined with upgrades to existing thoroughfares)

1 would involve both new and upgraded thoroughfares. The primary need is for major arterial mileage completing the northeast loop and would involve both upgrades to Hillcreek Road and new construction between Bascom Road and State Highway 110. Two traffic signals are needed within the quadrant as well as two bordering on other Planning Areas.

Planning Area 2

Location and Existing Conditions

Because so much of the land within Planning Area 2 remains unimproved, coordination between planned land use and planned thoroughfares will be critical (Map 11.3). Adjustments to either component of the Comprehensive Plan must be reflected in changes to the other. Natural conditions such as flood prone areas will also have significant impacts on the cost and ease of implementing this portion of the Thoroughfare Plan.



Map 11.3: Thoroughfare Plan for Planning Area 2

- | | |
|---|--------------------------------|
| Planned Classification/Existing Classification | Estate Density Residential |
| Existing Major Arterial | Low Density Residential |
| Planned Major Arterial/Existing Collector | Medium Density Residential |
| Planned Major Arterial/Existing Minor Arterial | High Density Residential |
| Planned Major Arterial | Low Intensity Office/Retail |
| Existing Minor Arterial | Medium Intensity Office/Retail |
| Planned Minor Arterial/Existing Collector | High Intensity Office/Retail |
| Planned Minor Arterial | Light Industrial/Business Park |
| Existing Collector | Public/Semi-Public |
| Planned Collector | Master Planned Development |
| Planned Enhanced Sidewalk | Town Center |
| Planned Hike/Bike Trail | Parkland |
| Existing Traffic Signal | Whitehouse City/ETJ Limits |
| Planned Traffic Signal | Built Structures |



Comprehensive Planning and this Future Land Use Map do not represent zoning. About the Image: The image is an artistic rendering of Wildcat Stadium located on the Whitehouse Junior High School Campus. Also pictured are several other WISD athletic facilities including the softball field and tennis courts.



North/South Bypass Flow Solutions

After turning to the south, the upgraded Main Street (FM 346) can be utilized to achieve a portion of the goal of bypassing traffic to the east of the City's core. Unfortunately, connecting this thoroughfare with traffic traveling north on State Highway 110 does not present as much of a straightforward solution. The 1995 Thoroughfare Plan called for Fowler Road (CR 2175) to be widened and realigned with CR 2134. Together these thoroughfares would intersect with FM 346 just outside the southeastern City Limits. This alternative has the advantage of utilizing existing roads; however, it does present several problems.

This alignment is not ideal for achieving the stated goal of providing an eastern bypass option for travelers heading north or south on State Highway 110. Fowler Road's intersection with State Highway 110 is just south of a major residential neighborhood and travels through another established neighborhood. The planned thoroughfare's angle is also of concern, with the eastern intersection of State Highway 110 lying north of its planned western intersection with FM 346. This alignment will have a less appealing draw to travelers seeking a bypass around the City's central area.

As an alternative it is proposed that these roads remain unchanged and a new alignment be selected. The proposed route would intersect with State Highway 110 approximately one half mile south of Fowler Road (CR 2175). The alignment would curve gradually to the north and intersect FM 346 at the current termination of Dickson Road (CR 2332). In addition to providing for improved bypass traffic flow this alignment would allow for the establishment of two retail/office nodes and utilize some land already owned by the City. The proposed centerline configuration is intended to mitigate impacts to existing development while locating the thoroughfare on relatively flat terrain. Final alignment decisions should not be made until a thorough engineering survey can be conducted to identify potential problems with low elevation and drainage conditions.



Development of an even more southerly bypass may be needed in a very long-term timeframe. While the specifics of this alignment are beyond the scope of the current planning project, this Thoroughfare Plan does identify Blackjack Road (CR 2138) as a future major arterial. In the 10 to 30 year time period, development around Lake Columbia and growth of the City of Troup may necessitate this enhancement.

East/West Internal Flow Solutions

Hagan Road has served as the principal southerly alternative to Main Street (FM 346) on the eastern side of the City. In order to accommodate planned development on the City's western side, the existing Hagan Road may require capacity increases. This Plan calls for the thoroughfare to be upgraded to minor arterial capacity. Because of right-of-way limitations, expansion of this thoroughfare may be difficult and costly. However, east/west traffic levels will eventually necessitate this project even with the widening of Main Street (FM 346). Access management limiting direct access to the thoroughfare by new individual residential lots is encouraged in order to maximize the existing narrow right-of-way. Even though much of the property fronting on the thoroughfare's southern frontage lies outside the City Limits, the Subdivision Regulations should be applied in order to enforce this access management technique for new development and to acquire right-of-way for a future widening project.

Other Important Connections

***"Both the intersection of State Highway 110 and 346, as well as Bascom Road and 346 can become signature intersections after Railroad Avenue is aligned with Bascom Road, to the north."
- Mark Sweeney***

Although internal north/south traffic flow was not identified as a high priority Plan objective through public involvement, the development of corridors providing for this movement will enhance the usability of State Highway 110. One such alternate route exists within Planning Area 2. At present Railroad Avenue connects Main Street with Hagan Road providing a possible alternative for commuters traveling north to Tyler. Unfortunately, the existing alignment does not provide an appealing alternative



for motorists wishing to avoid morning congestion at the intersection of State Highway 110 and Main Street. The 1995 Plan called for a realignment of the northern terminus of Railroad Avenue to intersect with the signalized intersection of Bascom Road and Main Street. This realignment has become increasingly appealing given the planned linkage between Bascom Road and State Highway 110 as well as Bascom Road's eventual connection with Loop 49. This realignment can also play an important role in the redevelopment goals for the City's Town Center.

In order to take full advantage of this realignment, a southerly extension of Railroad Avenue to the proposed southeastern loop is also recommended. If the existing railroad right-of-way is vacated the City should aggressively pursue construction of this thoroughfare. The existing homes near Lee Drive and Christopher Drive may require relocation unless construction on the railroad right-of-way becomes possible. Alignment south of the subdivisions could either follow the existing railroad right-of-way or take advantage of City-owned property to the northwest of the wastewater treatment plant facility. Once completed, the combination of Railroad Avenue and Bascom Road would provide a very appealing alternative to State Highway 110 for some commuters.

Some awkward alignments currently exist on the City's east side involving the intersection of FM 346 with several roads including Dickson Road (CR 2332), Concession Road, Blackjack Road (CR 2138), and CR 2134. The Thoroughfare Plan attempts to address these intersections with some slight re-alignments and new construction. If Blackjack Road (CR 2138) is ultimately developed to major arterial status its intersection with both CR 2134 and FM 346 must be addressed.

The ideal alignment of northern Dickson Road (CR 2332) will also depend greatly on unpredictable development outcomes. A realignment of Dickson Road to intersect with CR 2133 would be desirable if the inland marina/canal subdivision project discussed in the Land Use and Civic Image portions of this document becomes a reality. If this land remains unimproved or is developed for exclusively residential use the cost of this realignment would not be justified.



Overall Needs

Planning Area	Major Arterial	Minor Arterial	Collector	Traffic Signals
Planning Area 2	2.1 miles	4.96 miles	1.08 miles	6.5

Table 11.2: Thoroughfare Plan construction estimates for Planning Area 2 in terms of mileage and number of new traffic signals (new road construction is combined with upgrades to existing thoroughfares)

Needed street construction within Planning Area 2 will

focus more on minor arterials with an estimated five miles of new or upgraded roads proposed. Despite the relatively limited mileage, the proposed major arterial connections are a critical component of the overall bypass option (Table 11.2). Proposed upgrades to State Highway 110 South are excluded from the estimates. Several miles of trail are also proposed along the Whitehouse Creek.

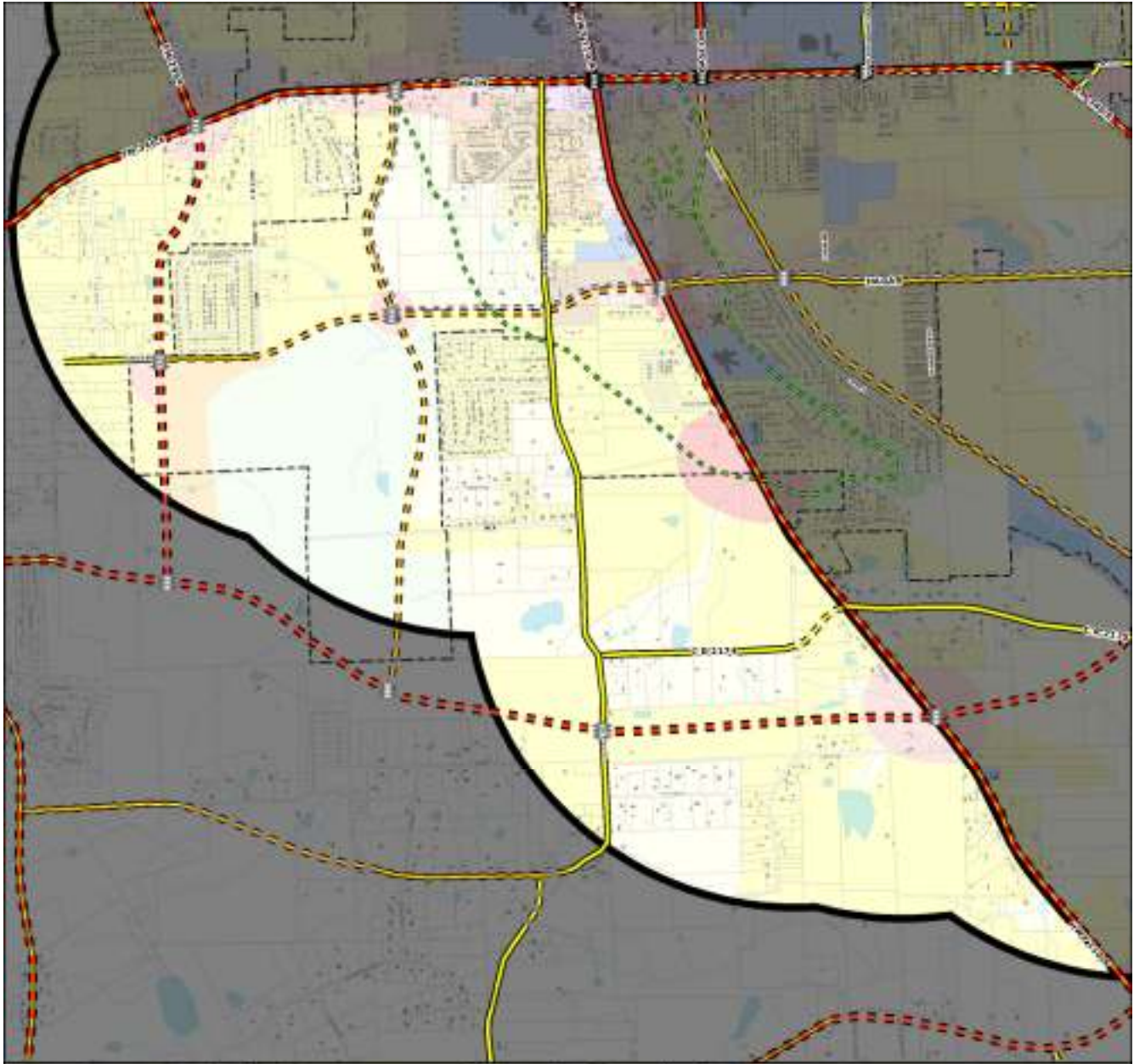
Planning Area 3

Location and Existing Conditions

Large portions of unimproved land can be found within Planning Area 3 (Map 11.4). Implementation of the Future Land Use Plan will have a pronounced impact on transportation needs here, just as in Planning Area 2. Terrain conditions will also play a role in the location and cost of proposed thoroughfares. As a trade-off, flooding concerns within land under the jurisdiction of the City are not as severe as those faced on the City's eastern side. However, questions over jurisdiction may come into play for development of these thoroughfares.

North/South Bypass Flow Solutions

In order to address the need for a western bypass, several alignments were considered and discussed during public involvement. Planned construction on Paluxy Drive north of FM 346 will bring this thoroughfare to an increased level of capacity and connectivity with Loop 49. However, this thoroughfare lies well beyond the ETJ of Whitehouse and within the jurisdiction of Tyler. Rhones Quarter Road terminates at FM 346, but will ultimately connect to Loop 49 in the north and provides for several eastern connections to State Highway 110 in the northern portion of the City. For this reason, an extension of Rhones Quarter Road may provide for the most effective western bypass option.

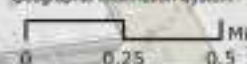


Map 11.4: Thoroughfare Plan for Planning Area 3

Planned Classification/Existing Classification

- Existing Major Arterial
- Planned Major Arterial/Existing Collector
- Planned Major Arterial/Existing Minor Arterial
- Planned Major Arterial
- Existing Minor Arterial
- Planned Minor Arterial/Existing Collector
- Planned Minor Arterial
- Existing Collector
- Planned Collector
- Planned Enhanced Sidewalk
- Planned Hike/Bike Trail
- Existing Traffic Signal
- Planned Traffic Signal

- Estate Density Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Low Intensity Office/Retail
- Medium Intensity Office/Retail
- High Intensity Office/Retail
- Light Industrial/Business Park
- Public/Semi-Public
- Master Planned Development
- Town Center
- Parkland
- Whitehouse City/ETJ Limits
- Built Structures



Comprehensive Planning and this Future Land Use Map do not represent zoning. About the Image: The image is an artistic rendering of Whitehouse High School. The first students to graduate from the facility were the Class of 2001.



The most critical design component will be within the Quail Run area since the extended thoroughfare must traverse existing residential development. South of this neighborhood little existing development will present alignment problems and only engineering challenges should remain.

Providing for a southern connection between Rhones Quarter Road and State Highway 110 will require the construction of several miles of new thoroughfares. The 1995 Plan called for a realignment of Wildwood Drive (CR 2174) and Nix Lane for this purpose. However,

"I lived in [north] Dallas from 1985 to 2000 and drove those streets [every day]... in '85 it looked like Whitehouse... they were putting in the [streets and highways that are there now], and people at the time were saying 'Why in the world are these roads coming out here? It's farmland.' Today it would have been horrendous if they hadn't [built roads the way they did back then]."
- David Sage

given existing conditions and many of the same concerns expressed about utilizing Fowler Road in Planning Area 2, this Thoroughfare Plan does not recommend this alignment. Although the proposed configuration would require new construction and right-of-way acquisition, it does minimize the need for



Image 11.3: Topography will play a major role in the final alignment of proposed thoroughfares. In this exaggerated elevation rendering (exaggerated by a factor of seven) the topographical concerns faced in southern Whitehouse are shown as they relate to the proposed southern arterial. Unfortunately the proposed route may be the only viable option for this connection that does not require the use of eminent domain to acquire right-of-way through land with pre-existing development.

relocation of existing structures and follows the least hilly path given the existing terrain problems. Compliance with the Thoroughfare Plan through enforcement of the City's Subdivision Regulations within the ETJ will be critical in order to



preserve this thoroughfare for eventual development; as is awareness of engineering problems arising from topography (Image 11.3). As in Planning Area 2, future development may necessitate a more southerly bypass route. FM 344 may represent one alternative for such a thoroughfare. However, rapid expansion of Tyler's planning jurisdiction may place most of the land on Whitehouse's southwest side not currently in the ETJ out of the City's control. Annexation policies for both Cities within the next few years will dictate which municipality will hold the authority to plan this area. Regardless of the final ETJ alignments, a joint project with the City of Tyler for thoroughfare planning of this area will benefit both communities.

East/West Internal Flow Solutions

While capacity upgrades to Main Street (FM 346) and the southwestern bypass will both provide for east/west movement, the need for internal flow of this type remains. The 1995 Plan proposed the extension of Hagan Road to the west. This recommendation remains valid under existing conditions, and given the likelihood of increased development on the City's west side, such an extension should be considered in the short-term. The Plan recommends this thoroughfare be constructed as a minor arterial and tie in with the planned southerly extension of Rhones Quarter Road (FM 2964).

Other Important Connections

Other than State Highway 110, the only north/south corridor currently existing in Planning Area 3 is Willingham Road. Traffic generated by adjacent neighborhoods and residents of unincorporated southern Whitehouse places a significant burden on this relatively narrow thoroughfare. Development of land which is currently unimproved or occupied by extremely low density residential homes will add increasing pressure on the thoroughfare. Because the road is located so close to State Highway 110, the cost of widening this road may not justify the benefits. For that reason, the Plan recommends the construction of a new north/south minor arterial to run roughly parallel to Willingham approximately one half of a mile to the west of the existing thoroughfare. As



with other new construction, the planned alignment has been designed to minimize hilly topography and existing land use conflicts. Further engineering analysis will be necessary to finalize the most efficient alignment.

Overall Needs

Needed road construction within Planning Area 3 is evenly distributed between major arterials and minor arterials with just under four miles of new or upgraded roads proposed for each. Construction estimates include some portions of the western bypass which lie outside of the City's ETJ (Table 11.3). Some of these construction costs may fall to other entities if the ETJ cannot be extended. As with Planning Area 2, proposed upgrades to State Highway 110 South are excluded from the estimates as this construction is already identified as a long-term project through TxDOT funding. Several miles of hike and bike trails are also proposed within

the Planning Area along Blackhawk Creek.

Planning Area	Major Arterial	Minor Arterial	Collector	Traffic Signals
Planning Area 3	3.8 miles	3.42 miles	0.23 miles	7.0

Table 11.3: Thoroughfare Plan construction estimates for Planning Area 3 in terms of mileage and number of new traffic signals (new road construction is combined with upgrades to existing thoroughfares)

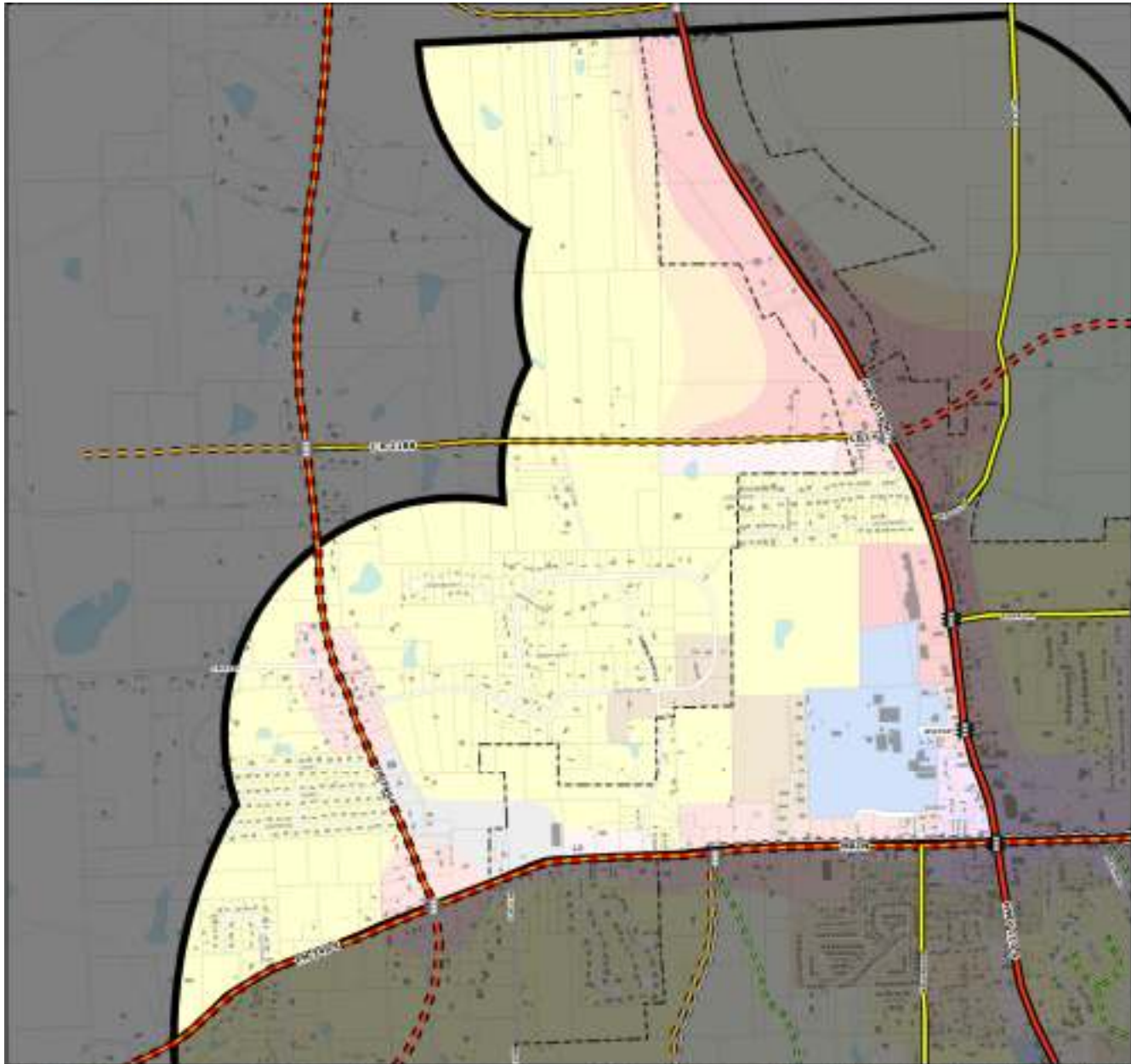
Planning Area 4

Location and Existing Conditions

Planning Area 4 is one of the most developed quadrants within the City. As a result, thoroughfare planning within the area is dramatically effected by existing land use conditions. No new thoroughfares are planned as a part of this study because existing conditions would require eminent domain or drastic upgrades to already busy residential roads.

North/South Bypass Flow Solutions

The existing alignment of Rhones Quarter Road (FM 2964) provides the best location for continuing the western bypass proposed in Planning Area 3. The existing thoroughfare will require improvements if significant traffic volume is added.

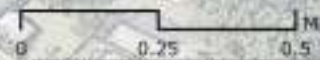


Map 11.5: Thoroughfare Plan for Planning Area 4

- | | | |
|--|---------------|--------------------------------|
| Planned Classification/Existing Classification | Yellow | Estate Density Residential |
| Existing Major Arterial | Light Yellow | Low Density Residential |
| Planned Major Arterial/Existing Collector | Orange | Medium Density Residential |
| Planned Major Arterial/Existing Minor Arterial | Dark Orange | High Density Residential |
| Planned Major Arterial | Light Pink | Low Intensity Office/Retail |
| Existing Minor Arterial | Dark Pink | Medium Intensity Office/Retail |
| Planned Minor Arterial/Existing Collector | Red | High Intensity Office/Retail |
| Planned Minor Arterial | Grey | Light Industrial/Business Park |
| Existing Collector | Blue | Public/Semi-Public |
| Planned Collector | Light Green | Master Planned Development |
| Planned Enhanced Sidewalk | Purple | Town Center |
| Planned Bike/Bike Trail | Light Green | Parkland |
| Existing Traffic Signal | Black outline | Whitehouse City/ETJ Limits |
| Planned Traffic Signal | Grey square | Built Structures |



City of Whitehouse
Geographic Information System



Comprehensive Planning and this Future Land Use Map do not represent zoning. About the Image: The image is an artistic rendering of typical single-family residential homes in Whitehouse. Also pictured is a commercial rose farm located behind the homes.

East/West Internal Flow Solutions

Unlike Planning Area 1, bypass traffic heading north on the western bypass may not seek to reconnect with State Highway 110 in all cases. One reason for this will be the construction of Loop 49's intersection with Rhones Quarter Road (FM 2964), which will likely be completed prior to the construction of the other components of the western bypass. Regardless, it is recommended that the City explore the possibility of upgrading Lilly Road (CR 2188) in order to provide higher capacity access to State Highway 110. This upgrade will also increase the viability of northern circumferential flow around the City.

Other Important Connections

The 1995 Thoroughfare Plan called for a north/south collector running through land which will soon be developed as a part of the Shahan Ranch project. While this collector is no longer an option, the City may wish to explore alternative alignments for a north/south collector. Crape Myrtle Road could potentially be connected to Lilly Road (CR 2188) for this purpose. However, this connection would place an increased level of traffic within the existing neighborhood and require right-of-way acquisition from land currently in use for residential purposes. Additionally, most of this land lies outside the current City Limits. It is recommended that the City address this possibility through a small area plan if annexation of the neighborhood becomes a reality.

Overall Needs

Needed construction within Planning Area 4 consists exclusively of upgrades to existing thoroughfares. Cooperation and coordination with State and County road maintenance agencies will greatly impact the cost of these upgrades to the City of Whitehouse. Whitehouse also needs to consider the impact of transportation planning by the City of Tyler. Both Rhones Quarter Road (FM 2964) and Lilly Road (CR 2188) extend beyond the City's planning jurisdiction into Tyler's ETJ. Coordination of thoroughfare planning between the two municipalities may be most critical within this Planning Area.



Thoroughfare Plan Implementation

Previous Implementation

The most limiting factor in the success or failure of the 1995 Thoroughfare Plan rested in the lack of implementation steps followed by the City of Whitehouse. In many cases City officials and the public understood the problems with congestion at the time; however, a variety of circumstances made implementation difficult or impossible under existing conditions.

"[Regarding implementation failures] it probably wasn't because people didn't recognize the need, but somewhere along the way there was either not enough emphasis placed [on road improvements and construction], or someone said 'we can't afford it, forget it.'"

- Danny Hogden

"[With our last Plan] I think we knew the issues, but where we failed is in our implementation... now we have the evidence to show that this is what we need to do... we've got to get these things implemented because if we don't get our transportation issues solved [we will have even worse issues later]."

- Jake Jacobson

The success of this Thoroughfare Plan will also be determined by the actions City officials take in order to implement its recommendations. The most critical step to put the Plan into place involves codifying the

Thoroughfare Plan as a part of the Subdivision Regulations. This will allow Whitehouse to acquire needed right-of-way for future road construction and improvements to existing thoroughfares. The Thoroughfare Plan should be enforced both within the City Limits and ETJ. Cases where development occurs on land identified for major thoroughfares cannot be allowed to take place again. Failures of implementation of this Plan may permanently preclude long-term transportation success, requiring the use of eminent domain to correct past

"What I would like to [point out is that] there were never any [transportation upgrades constructed after the 1995 Plan] and that's going to have to be bought out and done in the next four or five years or we might as well shut Whitehouse down as far as getting through it."

- Mike Adams



problems which will worsen with time.

Transportation Five-Year Action Agenda

As with the action agenda for Land Use and Annexation, the following list should be considered flexible and open to change given unforeseen conditions and events. If some of the recommended actions can be accomplished in a more rapid manner than proposed here, Whitehouse should pursue that option.

Because many of the recommendations within the Transportation Section constitute major capital improvements, this action agenda may require additional time or a significant increase in transportation budgets in order to accomplish the action items within five years. If the City's budget cannot accommodate this ambitious schedule, two priority items should still be accomplished.

***"There are a lot of things on the Thoroughfare Plan that are not attainable even maybe within the next 10 years, but there are some primary linkages that would automatically and overnight change our traffic problem... [two] of which are the Bascom Road/Railroad Avenue realignment and the extension of Hagan Road to the west."
- Mark Sweeney***

The first priority should be the accomplishment of a few small, yet achievable transportation projects. This will allow citizens and public officials to build upon the momentum created by these successes before undertaking larger projects.

The second critical priority should be conducting engineering analysis on the planned thoroughfare corridors. By establishing the ultimate alignment as soon as possible, the City can begin phased acquisition of right-of-way in association with private sector development through the platting process.

Whitehouse may also wish to construct some recommended projects below the final capacity while still acquiring sufficient right-of-way to eventually upgrade the thoroughfare to the recommended classification. The extension of Hillcreek Road between Bascom Road (FM 848) and State Highway 110 is one example



where establishing such a starting point may be more important than achieving the final goal within a single construction project.

Year 1:

1. Adopt the Thoroughfare Plan as a component of the Subdivision Regulations and begin acquiring right-of-way through the platting process.
2. Amend the Subdivision Regulations to comply with the TxDOT Access Management Manual for design and access standards for all arterials and collectors.
3. Amend the Subdivision Regulations to require the inclusion of mutual access easements with all new commercial development.
4. Allocate consultant budget or City staff time for engineering analysis of all Thoroughfare Plan recommendations.
5. Pursue grants through TxDOT and other agencies to retrofit existing thoroughfares with sidewalks, curbs, and gutters.
6. Conduct engineering analysis on the feasibility and costs associated with constructing a minor arterial between Hillcreek Road and Main Street (FM 346) as recommended by this Thoroughfare Plan.
7. Conduct an engineering analysis on the feasibility and costs associated with the western extension of Hillcreek Road to intersect with State Highway 110 as a major arterial and upgrade of the existing thoroughfare to major arterial status as recommended by this Thoroughfare Plan.
8. Budget for and negotiate the purchase of right-of-way needed to construct a minor arterial between Hillcreek Road and Main Street (FM 346) and Frances Drive as a collector connecting Karla Drive and Gatewood Drive.
9. Familiarize surrounding municipalities, utility districts, and higher government agencies with the adopted Thoroughfare Plan.
10. Work with the Metropolitan Planning Organization (MPO) and TxDOT to amend their regional Plans to account for the City's new Thoroughfare Plan.
11. Conduct a public involvement program to identify residential streets whose retrofitting with sidewalks would further the overall pedestrian access and safety goals of this Plan.
12. Implement Capital Improvements Programming (CIP) as a mechanism to coordinate the timing and financing of capital projects between various City Departments which would otherwise involve duplicated efforts.



Year 2:

1. Begin construction of a minor arterial between Hillcreek Road and Main Street (FM 346) and the extension of Frances Drive as budgeted during the previous year.
2. Conduct an engineering analysis on the feasibility of extending Hagan Road as a minor arterial to the east to intersect with Willingham Road as recommended by this Thoroughfare Plan.
3. Conduct an engineering analysis on the feasibility and cost to reroute the northern termination of Railroad Avenue to intersect with Bascom Road.
4. Begin an ongoing dialogue with the railroad line owner regarding the ultimate disposition of this right-of-way.
5. Work with TxDOT to study the feasibility of, and establish a preferred alignment for, the proposed southern loop and Rhones Quarter Road southern extension.

Year 3:

1. Negotiate and plan with WISD regarding future school development on the High School campus site and public use of the High School Access Road as well as a connection between it and Hillcreek Road to the north.
2. Budget for the cost of upgrading Hillcreek Road to major arterial status between the new north/south minor arterial and Bascom Road (FM 848) as designed in the engineering analysis conducted during the previous year.
3. Budget for the right-of-way acquisition and construction costs associated with the westward extension of Hagan Road as a minor arterial to intersect with Willingham Road, as designed in the engineering analysis conducted during the previous year.

Year 4:

1. Budget for and negotiate the purchase of right-of-way needed to reroute Railroad Avenue to intersect with Bascom Road (FM 848) if such right-of-way has not already been dedicated through platting.
2. Budget for and negotiate the purchase of right-of-way needed to extend Hillcreek Road to intersect with State Highway 110 as designed in the engineering analysis conducted in Year 1 if such right-of-way has not already been dedicated through platting.



3. Begin construction to upgrade Hillcreek Road as a major arterial as budgeted during the previous year.
4. Begin construction on the westward extension of Hagan Road as budgeted during the previous year.
5. Update City GIS data sets necessary for Comprehensive Plan evaluation such as the Existing Streets Condition Survey.

Year 5:

1. Begin construction to reroute Railroad Avenue as budgeted during the previous year.
2. Begin construction to extend Hillcreek Road as budgeted during the previous year.
3. Undertake a minor update of this Comprehensive Plan including Thoroughfare Planning to account for changing conditions and assessments of implementation successes or failures.
4. Prioritize additional construction and upgrade projects through public involvement as a component of the Comprehensive Plan update.

Ongoing Implementation

Platting of Land within Identified Thoroughfare Corridors

Whitehouse should adopt amendments to its Subdivision Regulations which require private sector developers to dedicate right-of-way for planned thoroughfares as a required component of the platting process. Many cities go farther and require private sector construction of thoroughfares to a capacity which is equivalent to the needs of the new development. These municipalities occasionally participate with the developer in order to construct the thoroughfare at the desired capacity standards as shown on the Plan.

Whether or not Whitehouse chooses to require private sector construction of planned thoroughfares, the City must begin enforcing the Thoroughfare Plan through all applicable ordinances. Implementation failures following the 1995 Comprehensive Plan have created difficult and less efficient alignments for planned components of the current Thoroughfare Plan. Failure to implement this



Plan will result in permanent traffic problems or the need to implement eminent domain as traffic problems continue to deteriorate.

**"A Streetscaping Plan would drastically change the image of our City... it would make all the difference in the world."
- Debbie Shafer**

Each plat submitted within the City Limits or ETJ should be evaluated to determine Thoroughfare Plan dedication needs. Plats should also be reviewed as they relate to access management or the planned sidewalk system. Plats proposed on existing thoroughfares such as State Highway 110 or Hagan Road should also be evaluated under these criteria in order to gradually retrofit existing shortcomings through consistent application of a streetscaping and access management policy.

Termination of Active Railroad Use

One weakness of this Thoroughfare Plan is a lack of clarity regarding the future status of the railroad. Both the Transportation and Parks Sections of this Plan propose future uses for the railroad right-of-way if it becomes available. The City should initiate and maintain contact with the railroad owners in regards to the disposition of the right-of-way. The ultimate alignment for Bascom Road/Railroad Avenue to become a secondary north/south arterial is dependent on the eventual conversion of this right-of-way for vehicular use.

Tyler ETJ North and West of Whitehouse

Within the life of this planning document, it is conceivable that Tyler and Whitehouse may extend their incorporated boundaries and eventually share a common City Limits border. Regardless of the timeframe for this eventuality, the two Cities should work to coordinate long-term transportation plans where ETJ boundaries currently meet.

Unincorporated land to the north, west, and southwest of Whitehouse contain both existing and planned thoroughfares which will cross jurisdictional boundaries. Once each City has completed its comprehensive planning projects,



it would be advisable to amend each Thoroughfare Plan to better address regional traffic flow.

Plan Reevaluation and Updates

While this Plan is intended to cover development within Whitehouse through 2020, the transportation action agenda is limited to five years. This limitation in scope is intended to allow for subsequent minor Plan updates to set new priorities given changing conditions and implementation within the first five years. As with the Land Use Section, it is recommended that the City conduct minor updates to this Plan at five-year intervals. Major updates may or may not be required prior to 2020 if this Plan is fully implemented. However, failure to implement the recommendations of this Plan or drastically changing conditions may necessitate a major update prior to 2020.

Major Regional Transportation Projects

The planning and construction of Loop 49 could produce a paradigm shift for land use and transportation throughout the greater Tyler area. Other regional transportation projects, such as the East Texas Hourglass Conceptual Corridor, remain in the early design and conception stages. If these major transportation projects drastically alter the transportation needs of Whitehouse, this Plan may require more immediate amendments. Development around Lake Columbia is another potentially significant project which may trigger the need for updates or modifications to this Plan.

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Section 11:
Transportation Recommendations

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