SECTION 7: EXISTING TRANSPORTATION

Transportation is one of the primary factors impacting quality-of-life within the City of Whitehouse. During every phase of public involvement, rush-hour traffic congestion and regional traffic flow were among the first topics participants discussed.

Transportation Context

The principal thoroughfares within the City are State Highway 110 and Main Street (FM 346). State Highway 110 runs north/south through the center of Whitehouse connecting the City of Tyler to the City of Troup while Main Street (FM 346) runs east/west.

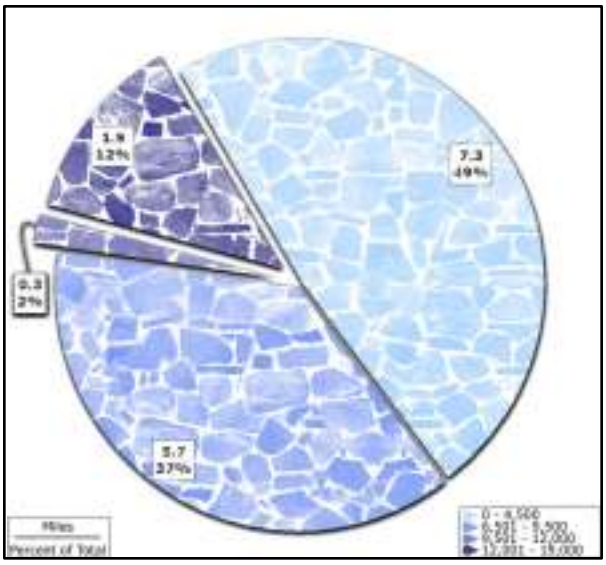
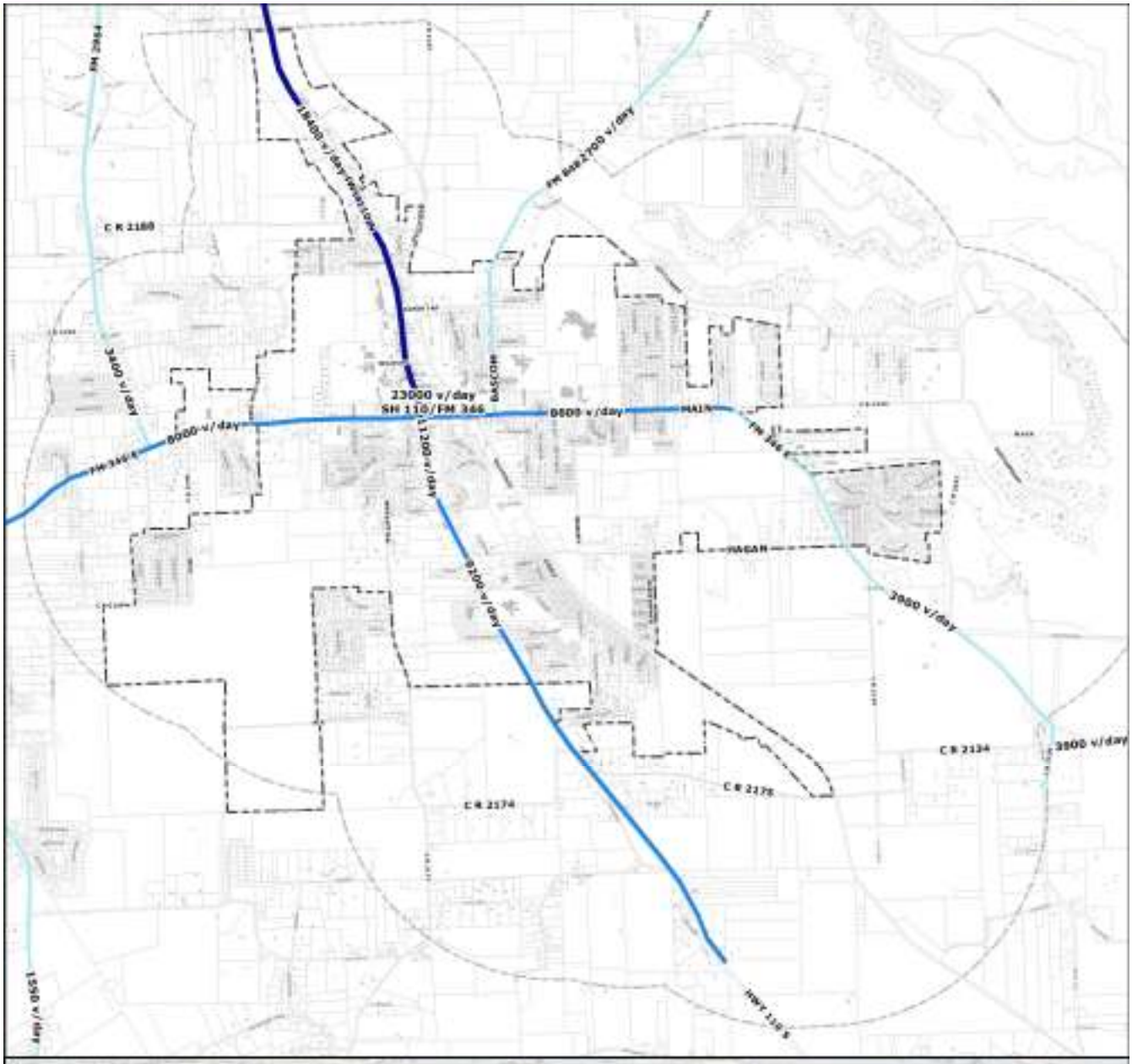


Chart 7.1: Traffic Count ranges for TxDOT maintained roads within the City Limits and ETJ reveal that over 14% of the system averages over 10,000 trips per day.

State Highway 110 receives the highest traffic volumes of the two thoroughfares (Map 7.1). As of 2004, the northern segment of this highway averaged 18,400 daily vehicle trips while the southern portions averaged just over 10,000 vehicles per day. Segments of FM 346 within the City Limits regularly receive over 8,000 vehicles per day. The intersection of State Highway 110 and FM 346 is the most heavily trafficked road segment within the study area, averaging nearly 23,000 vehicles per day. These vehicle averages (ADT) represent traffic counts in 2004 as measured by the Texas Department of Transportation (TxDOT). Over 50% of the TxDOT maintained road segments within the study area accommodate over 6,000 vehicle trips per day (Chart 7.1). Preliminary counts avilible to the Police Department indicate that 2005 levels have increased dramatically. Compared to other cities in the region, the City of

"Ten years ago you could count the cars that came from Troup on one hand... [now we have thousands]."
- Danny Hogden



Map 7.1: 2004 TxDOT Traffic Counts

Average Daily Trips (ADT)

- 1,550 - 4,400
- 4,401 - 6,500
- 6,501 - 9,500
- 9,501 - 12,000
- 12,001 - 19,000
- Whitehouse City/ETJ Limits
- built structures

City of Whitehouse Geographic Information System

0 0.5 1 Mi

Traffic count data provided courtesy of the Texas Department of Transportation Tyler District. About the Image: The image is an artistic rendering of homes located on Lake Tyler's waterfront within Whitehouse's ETJ. Whitehouse High School is also visible on the far horizon.

Whitehouse must accommodate these traffic levels at a significantly higher ratio of average vehicle trips to population size. The principal commercial thoroughfares within the City of Tyler, Loop 323 and US 69 (Broadway Avenue), peek at 43,000 and 45,000 vehicles per day respectively according to the Metropolitan Planning Organization's (MPO) figures. These figures represent traffic on the busiest thoroughfares within the region's principal economic and commercial center, a City of more than 90,000 people visited daily by residents from numerous suburbs. Traffic levels observed in Whitehouse are all the more staggering within this context.

"I think it's interesting that 110 carries a third of the traffic that's on the loop [Loop 323 in Tyler]. It's staggering for our little town to have a street that carries that much traffic."
- Mike Peterson

We [WISD] are a traffic maker... we take mamas to kids... only half of our children ride the bus."
- Dennis Miller

Most participants seemed particularly concerned with early morning and late afternoon congestion. These problem periods result from the convergence of school and commuter traffic. School bus traffic also reduces the efficiency of many roads and intersections during these periods.

The community has access to commercial air travel with flights departing out of Tyler Pounds Regional Airport. The airport has several Fixed Base Operators (FBO), including American Airlines and Continental Airlines. The Tyler Transit public transportation system also serves Whitehouse on an on-demand basis; however, regular service is not provided. The City is bisected by one railroad line. Passenger rail service is not provided and only limited freight traffic was observed at the time of this study. Though the right-of-way extends to the City of Troup, the ultimate disposition of the railroad remains in question.

"[I know the guy] who used to drive the train [from Tyler] down to Troup everyday and back. The track got so bad that they lowered the speed limit to 10 miles an hour. When he retired no one could make the trip in one day... they were having to pay overtime."
- Stephen Cotton

The 1995 Thoroughfare Plan

The 1995 Comprehensive Plan included a Thoroughfare Plan for land within the City Limits and ETJ. Then as now, significant congestion was occurring along State Highway 110 with particularly apparent problems at its intersection with FM 346. This congestion resulted from both internal and external traffic generators.

The 1995 Plan called for an extension of several existing thoroughfares handling east and west bound traffic, such as Lilly Road and Hagan Road. Upgrades to existing north/south thoroughfares such as Memory Lane and Railroad Avenue were also proposed. These measures were intended to ease internal traffic flow such as morning and afternoon school travel.

The Plan also attempted to address residents' needs for access into Tyler. Traffic flow was also addressed for drivers who originated in the south and southeastern portions of Smith County and traveled to schools in Whitehouse or on to Tyler.

The Plan called for Wildwood Drive and Fowler Road to be upgraded, realigned, and extended to span the entire southerly width of the community's ETJ. Rhones Quarter Road, currently only servicing the northwestern quadrant of the City, was also planned for extension to the south to meet this new thoroughfare. An extension of Lilly Road, which would connect State Highway 110 and FM 346, was also planned for the northeastern quadrant of the City.

These efforts were intended to provide for both internal flow and timely traffic bypass for travelers not bound for destinations within Whitehouse. Map 7.2 displays a modified version of the 1995 Thoroughfare Plan. Thoroughfares have been reclassified into major arterials, minor arterials, and collectors. Some thoroughfares have also been adjusted to account for subsequent land development that did not accommodate planned thoroughfare alignments.

Map 7.2: 1995 Thoroughfare Plan

Planned Class/Existing Class

- 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 Hike/Bike Trail
- Whitehouse City Limits
- Whitehouse Extraterritorial Jurisdiction
- 1996 Built Structures

1995 Existing Land Use

- Single-Family Residential
- Duplex Residential
- Multi-Family Residential
- Group Quarters
- Mobile/Manufactured/RV
- Rural Residential (>= 5 acres)
- Commercial Retail
- Commercial Office
- Commercial Other
- Commercial-Industrial
- Industrial
- Public Facilities
- Semi-Public (religious, hospitals)
- Transportation
- Railroad
- Utilities
- Park
- Ball Parks
- RV Park/Water Recreation
- Agricultural
- Unimproved
- Lake/Water

City of Whitehouse Geographic Information System

0 0.5 1 Mi

Existing Land Use information for this map represents a combination of data sources including: the 1995 land use survey, 1995 aerial photography, and city staff. The 1995 survey has been corrected and some land use categories have been reassigned to correspond with the 2005 existing land use survey. This information is intended for use in comprehensive planning, and does not represent classifications utilized by taxing agencies. About the Image: The image is an artistic rendering of typical lakefront development within Whitehouse's ETJ. Most of the waterfront property on Lake Tyler and Lake Tyler East is developed for residential or parkland purposes.

Analysis and Implementation of the 1995 Thoroughfare Plan

Analysis of the 1995 Thoroughfare Plan

While many road segments shown on the Plan already existed in 1995, most were not constructed at planned standards or capacities. Map 7.2 indicates both planned capacity and existing capacity for all thoroughfares included on the 1995 Plan.

The majority of State Highway 110 is currently designed as planned, as is part of Bascom Road (FM 848). Main Street (FM 346) is currently designed as a two-lane highway, lacking access management throughout most portions of the corridor. While in its current configuration it could only be classified as a minor arterial or collector, the previously mentioned TxDOT expansion project will improve this facility to standards meeting or exceeding those proposed in the 1995 Thoroughfare Plan throughout 63% of this corridor.

State Highway 110, south of Cain Elementary and near the southerly City Limits, is also currently built below the planned standards. This portion of the thoroughfare currently functions as a minor arterial.

Lilly Road and Hagan Road are also critical components to the 1995 Plan which are currently constructed below their planned capacity. Both facilities currently consist of only two narrow drive lanes, and lack shoulders and access management. Both roads also face significant limiting factors impairing their ultimate development. Upgrades to Hagan Road will be hampered by limited existing right-of-way and Lilly Road is built over and around several small hills.

Implementation of the 1995 Plan

While land development within the City has progressed at a moderate to high level, little or no progress has been made toward implementation of the Thoroughfare Plan.

"The Thoroughfare Plan that was adopted in 1995... [none of it got implemented... that's got to be] something that's more important to us this time." - Danny Hogden

In several cases large residential and nonresidential development projects have been platted on land planned to accommodate significant thoroughfares. Brittain Court for example, is a gated residential neighborhood which was developed north of Main Street (FM 346) on land where the "northeast loop" was shown connecting to Main Street (FM 346) as it veers to the south. This portion of the planned road was not built, nor was any land set aside for the future development of this thoroughfare.

Also within this quadrant, Whitehouse ISD has completed the initial phase of what could become a multi-school complex including the high school. The 1995 Thoroughfare Plan called for a collector linking the northeast loop with FM 346 near this location. The School District constructed a portion of this collector at very high design standards; however, the thoroughfare is used exclusively for campus access and is gated before, during, and after school hours.

"For people on the East Lake [Lake Tyler East]... if they are going to Tyler, they're coming through here. So the first project I view that the City has to do is [construct the northeast loop between FM 346 and SH 110]." - David Sage

In order to route traffic around the eastern core of the City, the northeast loop is a necessity. Unfortunately, these construction projects were located on two of only three possible corridors this bypass could use to tie into Main Street (FM 346). The combination of both projects has significantly increased traffic volumes along Main Street (FM 346) and due to their inconsistencies with the Thoroughfare Plan have done nothing to implement the recommended solution.

A large residential and commercial project called Shahan Ranch is currently underway in the northwestern quadrant of the City. This development will also fail to implement the recommendations of the 1995 Thoroughfare Plan. Spanning much of the vacant land between Main Street (FM 346) in the south and Lilly Road in the north, the project was platted without accommodation for

the planned collector running north and south between these two existing thoroughfares. Development of this land eliminates any possibilities of a north/south alternative to State Highway 110 on the western side of the City. The Shahan Ranch project will link Lilly Road and Main Street (FM 346) with high-quality residential streets; however, the planned design will actively discourage through traffic. Expansion of Rhones Quarter Road (FM 2964) will help alleviate some movement in these directions; however, this thoroughfare will ultimately produce its own commercial traffic generators.

Overall, no significant progress toward 1995 Thoroughfare Plan implementation beyond TxDOT's expansion of Main Street (FM 346) has been achieved since initial adoption. Several key impediments to such implementation exacerbated the situation.

"We've gotta find a way to prove to the citizens [of Whitehouse] that we do know how to build a road... because right now I believe they think we've forgotten how."
– Danny Hogden

"To some extent it seems like the transportation component from the last time [the 1995 Plan] was more or less just drawings... it doesn't seem like there was a lot of effort to say [that the developers] must adhere to this."
- Mark Sweeney

The original Plan failed to account for many natural features and existing land use conditions which made some thoroughfares difficult or cost prohibitive to complete. Political concerns originating from both the City Council and citizens have also impacted the location and funding for some thoroughfares. Additionally, the 1995 Plan was quickly viewed as out of date and possibly ineffective given existing and changing local conditions. This perceived weakness led to only sporadic adherence and an increasing level of unawareness about several fundamental Plan components. Finally, few of the recommended implementation tools were adopted into the Zoning Ordinance and Subdivision Regulations, leaving development compliance with the Thoroughfare Plan impossible to enforce by City staff or the Planning and Zoning Commission.

The most significant failure to implement the Thoroughfare Plan occurred in the northeastern quadrant of the City. The southern segment of the planned northeastern loop was not located within the City Limits at the time the Brittain Court residential development was proposed (Image 7.1). At that time the City did not exercise the authority to review plats within the ETJ as permitted under State statute. As a result, the best alignment alternative for this vital thoroughfare was lost. In addition to the lost alignment possibility, the City also missed an opportunity to combine the intersection construction which will be required for this connection with the State-funded FM 346 widening project. This type of cost sharing between complementary but unrelated projects is the essence of Capital Improvements Programming (CIP). To date, CIP has not been utilized in accordance with an adopted Thoroughfare Plan on needed capital projects.

Image 7.1: The Brittain Court subdivision was built on land identified for a vital eastern bypass corridor on the 1995 Thoroughfare Plan.

The WISD High School Complex was built on a less significant but important connection between this planned eastern bypass and FM 346. The School District has historically been the principal economic driver for the community, and even participated as a funding partner for the 1995 Comprehensive Plan. The School District is currently limiting access to this collector despite this cooperation in funding of and familiarity with the 1995 Thoroughfare Plan.

The desire to limit access to its student body and campus is a valid concern. However, if the northeastern loop is completed, the existing north/south collector will be a critical component of the overall traffic pattern within both the City and

Image 7.2: The High School Access Road was shown on the 1995 Thoroughfare Plan; however, public use of this road is not permitted during school hours.

Whitehouse High School complex. Cooperation between the School District and the City in thoroughfare planning and access through this corridor will have a significant impact on transportation efficiency for both entities (Image 7.2).

Topography and drainage concerns made portions of the north/south collector running through the Shahan Ranch project impractical. The southern portion of this collector, mislabeled as a public street on the 1995 Thoroughfare Plan, ran through an existing multi-family housing development and utilized traffic calming speed bumps. An existing single-family neighborhood adjacent to Lilly Road could have also brought political opposition to this type of high volume facility.

Ongoing Implementation Possibilities of the 1995 Plan

"In 1995 a lot of folks sat down and said there's a need for more north/south and east/west corridors. True in 1995, true in 2000, probably true in 2010… from that 1995 map, were any [of the planned] roads added? I don't believe we've made any [improvements to the road network] for the last 10 years."
- Danny Hogden

The two principal goals of the 1995 Plan regarding transportation were to provide for both intercity travel and effective bypass options for both north/south and east/west commuters. Despite the fact that no progress has been made, traffic bypass around the City's core remains a viable option if proper ongoing planning is undertaken and effective implementation tools are adopted before further development makes bypass impossible.

The frequently discussed northeastern loop, already significantly impaired by natural features and pre-existing development, has been further crippled by recent land use changes. While alternatives still remain for this connection, their effectiveness will be reduced due to these constraints. Bypass options for the remaining three quadrants in the City remain viable, and possibly more attractive, given the Loop 49 project planned just north of the City. Development has not impacted some portions of the land planned for these corridors. However, natural features and unregulated development within the ETJ may quickly narrow the City's options for these vital connections as well.

"The roads are going to be there eventually, they really are, 20 or 30 years down the road it's going to happen, they'll just have to take out more homes in the future because we can't just [keep expanding 110 and] 346 to six lanes in each direction [to solve our traffic problems]."
- David Sage

In terms of intercity traffic flow, most potential for improvement exists within the portions of the City south of Main Street (FM 346). The westerly extension of Hagan Road and lingering questions about the all but abandoned railroad right-of-way will be critical issues impacting these ongoing transportation improvement options.

Transportation Network Existing Conditions Survey

A discussion and analysis of the existing road conditions would be beneficial prior to evaluating the City's options for modifying the 1995 Thoroughfare Plan. Geographic Information System (GIS) data and maps showing the street network within this study are based upon centerline data distributed by the Smith County Appraisal District and other County agencies. Street characteristics discussed within the section were derived by Butler Planning Services utilizing a combination of methods. Consultant staff conducted windshield surveys and contracted for low level aerial photography flights in late 2005. County-wide high level aerial photography acquired in 2003 was also utilized when conditions

remained unchanged. Some data such as traffic counts were provided by the Smith County TxDOT office.

Surface Type

The street network is predominantly constructed using asphalt paving techniques. Approximately 98% (40 miles) have been constructed in this pavement type while just one tenth of a mile (less than 1%) have been built utilizing concrete pavement (Chart 7.2, Map 7.3). The majority of roads within the City are paved in an impervious and permanent manner utilizing concrete or asphalt. About 2% (one mile) of the street network is constructed of dirt or gravel. Most of these roads are located within active development sites or on land recently annexed into the City.

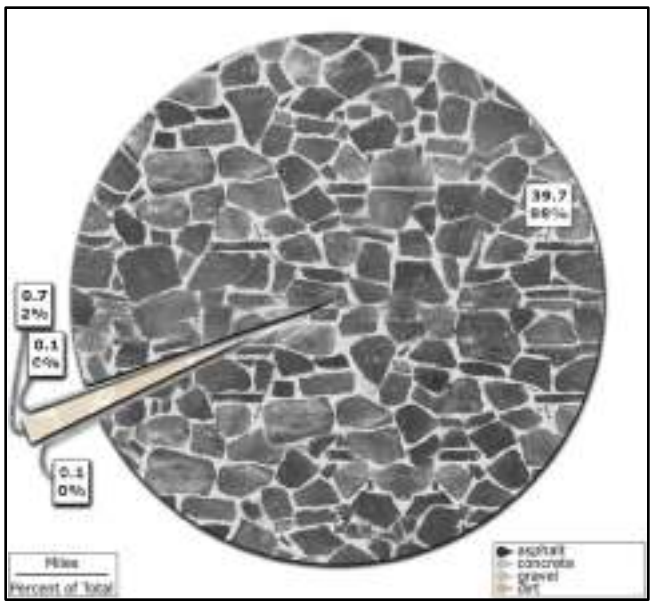
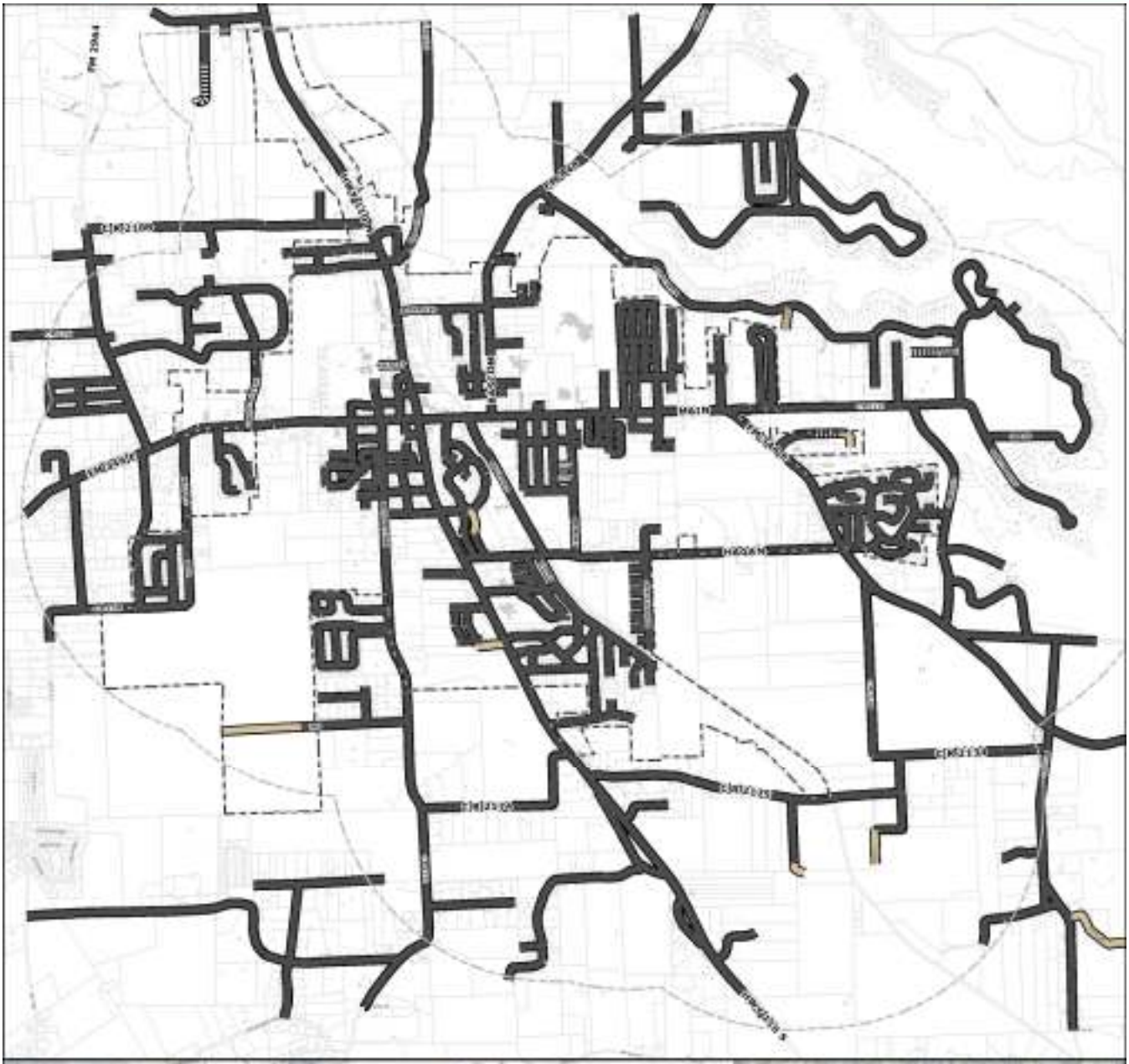


Chart 7.2: Street surface type within the City Limits

"[I would like to see an ordinance that requires] all new subdivision streets to be concrete instead of asphalt because it increases their lifespan... look at the streets over in [our new subdivisions], right now half of them [already need repair] because they just don't last as long as concrete... even down Hagan Road where it was re-topped... within six months [it already needed repair]." - David Williams

Within the ETJ a similar percentage of pervious paving techniques can be found. Several County Roads are paved in asphalt near major highways, but switch to a gravel/dirt mix near homes. Overall, 2% (1.2 miles) of roads within the ETJ are paved with dirt or gravel. The issue of asphalt versus concrete paving type was discussed during citizen involvement. A unified preference was not expressed; however, proponents of concrete were outspoken in support of this pavement type over asphalt.



Map 7.3: Surface Type

- concrete
- asphalt
- gravel
- dirt
- Whitehouse City/ETJ Limits
- built structures

City of Whitehouse Geographic Information System

0 0.5 1 Mi

Surface type data collected through field work conducted by Butler Planning Services. About the Image: The image is an artistic rendering of the shopping center anchored by Brookshire's Grocery Store. Other lessees in the center include McDonald's, Subway, Movie Gallery, Dollar General, and several popular local restaurants.

Sidewalks

The vast majority of roads within the study area lack sidewalks. Within the City only 4% (1.5 miles) of roads have sidewalks on both sides of the street (Chart 7.3, Map 7.4). An additional 2% (0.8 miles) of roads have been built with sidewalks on one side of the street. No sidewalks were observed on road segments within the ETJ.

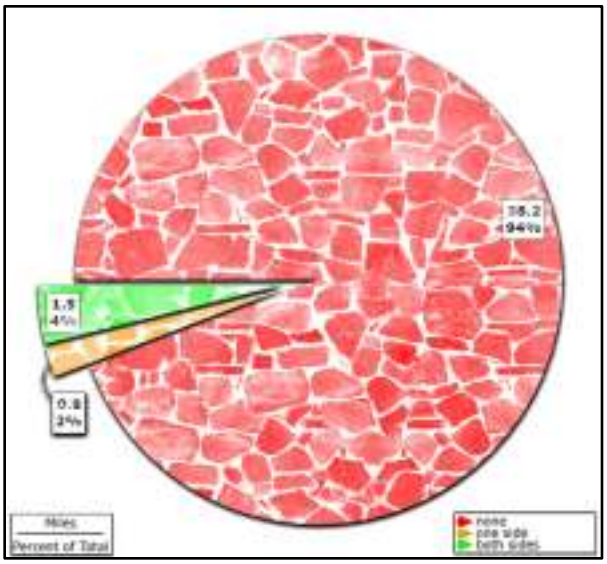


Chart 7.3: Sidewalk provision within the City Limits

Provisions for the inclusion of sidewalks and other streetscaping improvements acquired through the platting process have now been included in the City's Subdivision Regulations. However, to date only one subdivision (The Willows) has been built including this amenity. Sidewalks are also provided along some portions of northern State Highway 110 and Bascom Road (FM 848). Streetscaping design for the upgraded Main Street (FM 346) corridor will include sidewalks on both sides of the street (Figure 7.1).

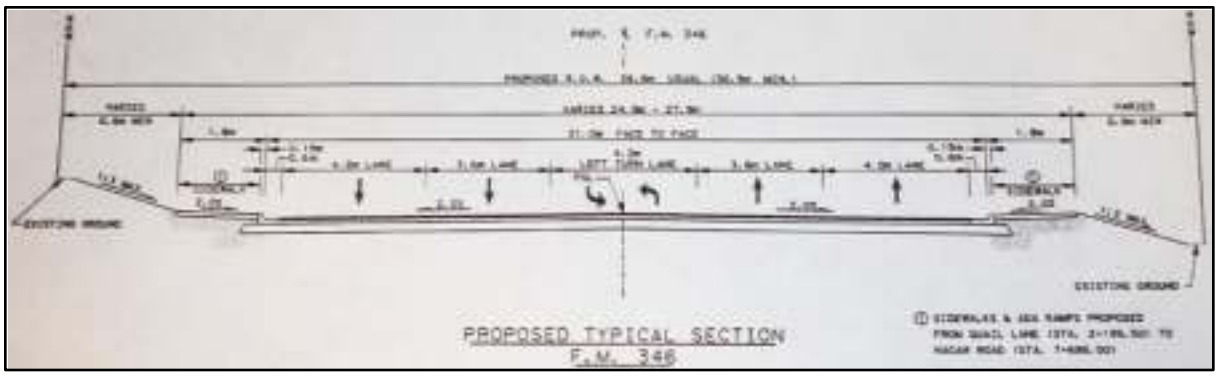
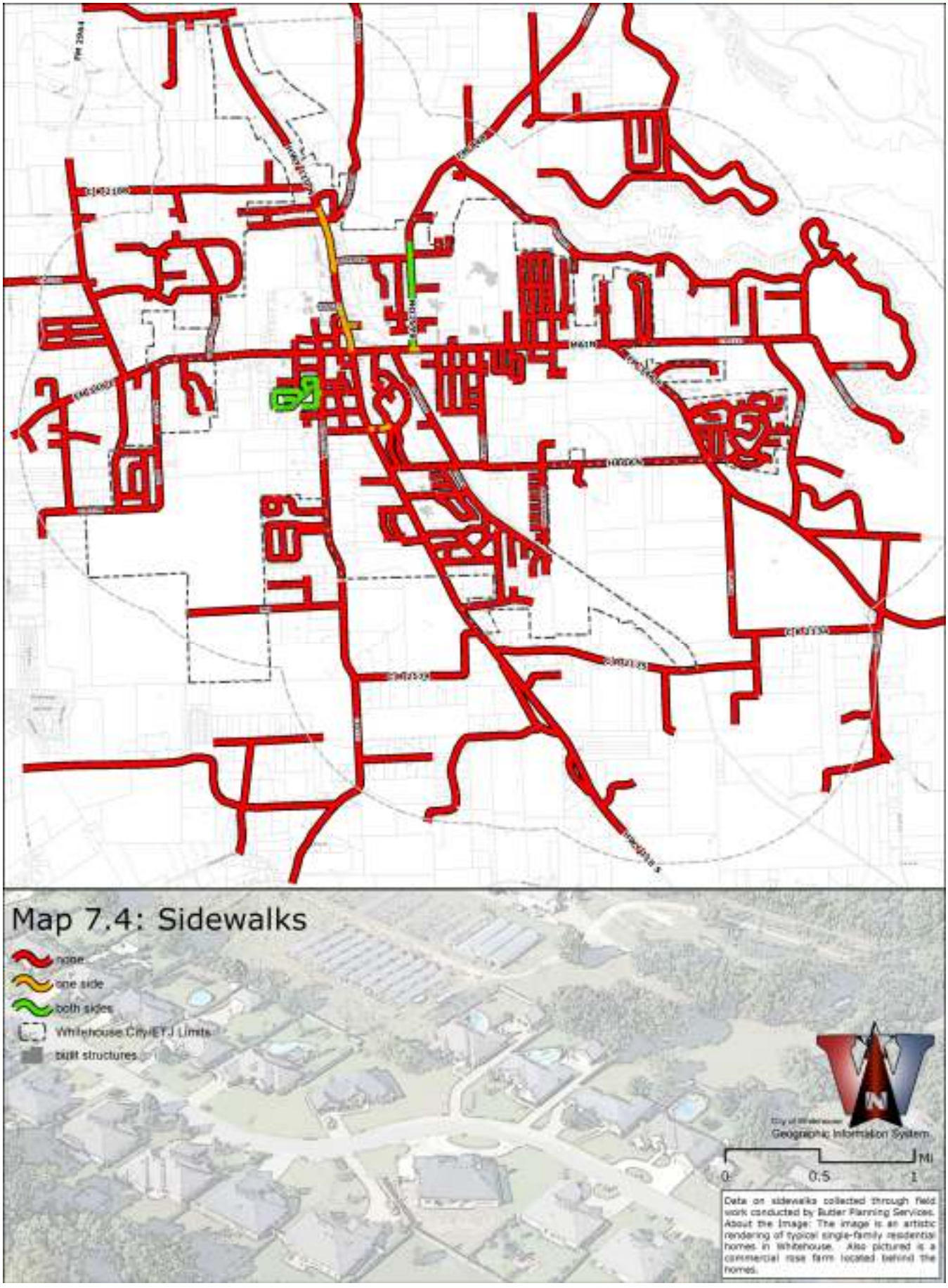


Figure 7.1: After construction, Main Street (FM 346) will indude six foot wide sidewalks on both sides of the thoroughfare.

Several citizens discussed the lack of sidewalks during public participation. These participants expressed a desire for sidewalks to be utilized for both recreation and as an alternative transportation option.


Map 7.4: Sidewalks
none
one side
both sides
Whitehouse City/ETJ Limits
built structures
Geographic Information System
Mi
0
0.5
1
Data on sidewalks collected through field work conducted by Butler Planning Services. 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.

Curb and Gutter

Curb and gutter facilities are provided on just under half of the road segments within the City Limits with 42% (17.2 miles) of roads having been constructed with full curb and gutter. Just over half of the miles of roads, 56% (22.5 miles), were not built with curb and gutter (Chart 7.4, Map 7.5). The remaining 2% (0.9 miles) have curb and gutter facilities on one side of the road only. Several older neighborhoods within the City lack curb and gutter, but do benefit from grass ditches which provide some drainage control (Image 7.3).

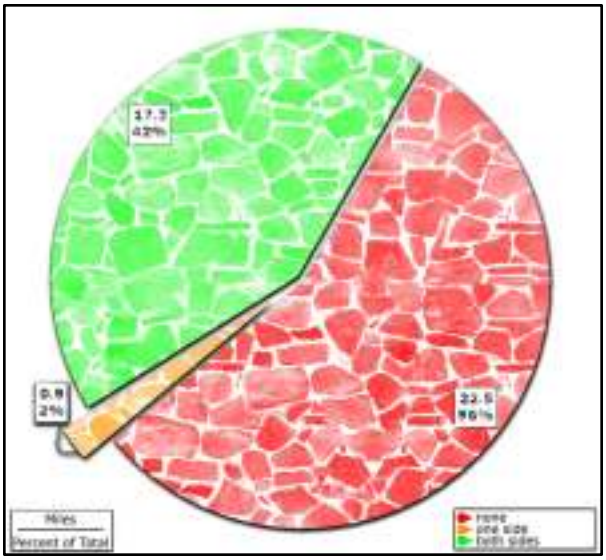
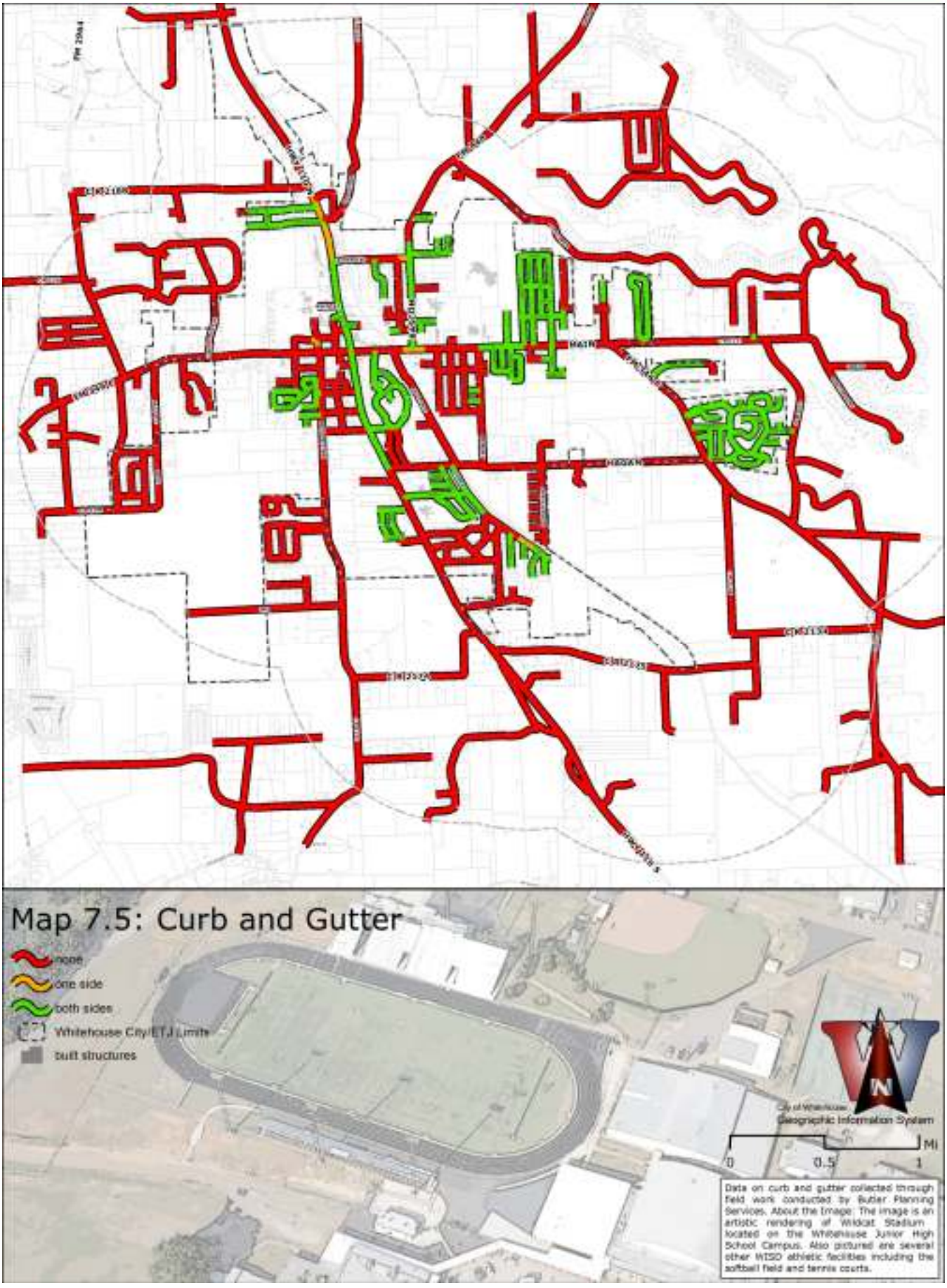


Chart 7.4: Curb and gutter provision within the City Limits

Image 7.3: Open ditches such as these found on State Highway 110 South provide drainage control throughout most parts of the ETJ.

Despite the fact that several subdivisions have been established within the ETJ at relatively high residential densities, nearly 100% (54.7 miles) of roads are built without curb and gutter. Only two tenths of a mile, at the entrance to one subdivision, has been constructed with curb and gutter. In most cases, only grass ditches are provided for runoff control and drainage purposes.


Map 7.5: Curb and Gutter
none
one side
both sides
Whitehouse City/ETJ Limits
built structures
Geographic Information System
0
0.5
1
Mi
Data on curb and gutter collected through field work conducted by Butler Planning Services. 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.

Access Management

The majority of roads within the Whitehouse study area lack access management provisions such as turn lanes, center medians, or regulated curb cuts. Management of curb cuts has recently been implemented in some cases. However, 91% (36.5 miles) of roads within the City Limits do not utilize turn lanes or center medians (Chart 7.5, Map 7.6). Only 8% (3.3 miles) of roads are designed with a center turn lane, and approximately 1% (0.8 miles) have a solid median or median with turn bays. Thoroughfares such as Hagan Road and portions of Main Street (FM 346) have many instances of individual single-family driveways taking direct access to the road.

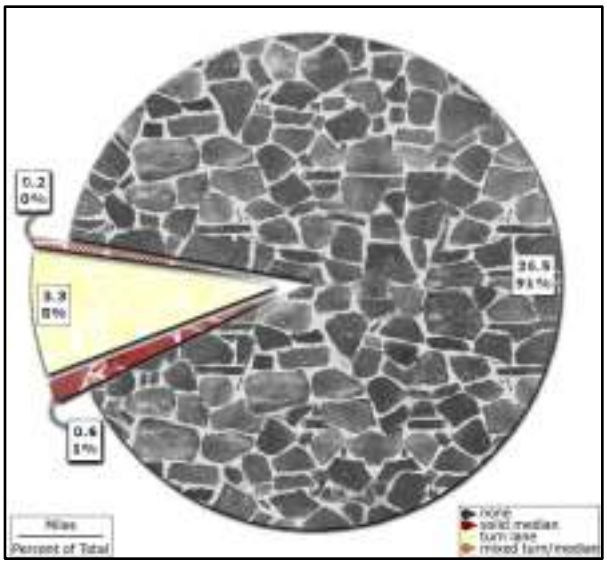
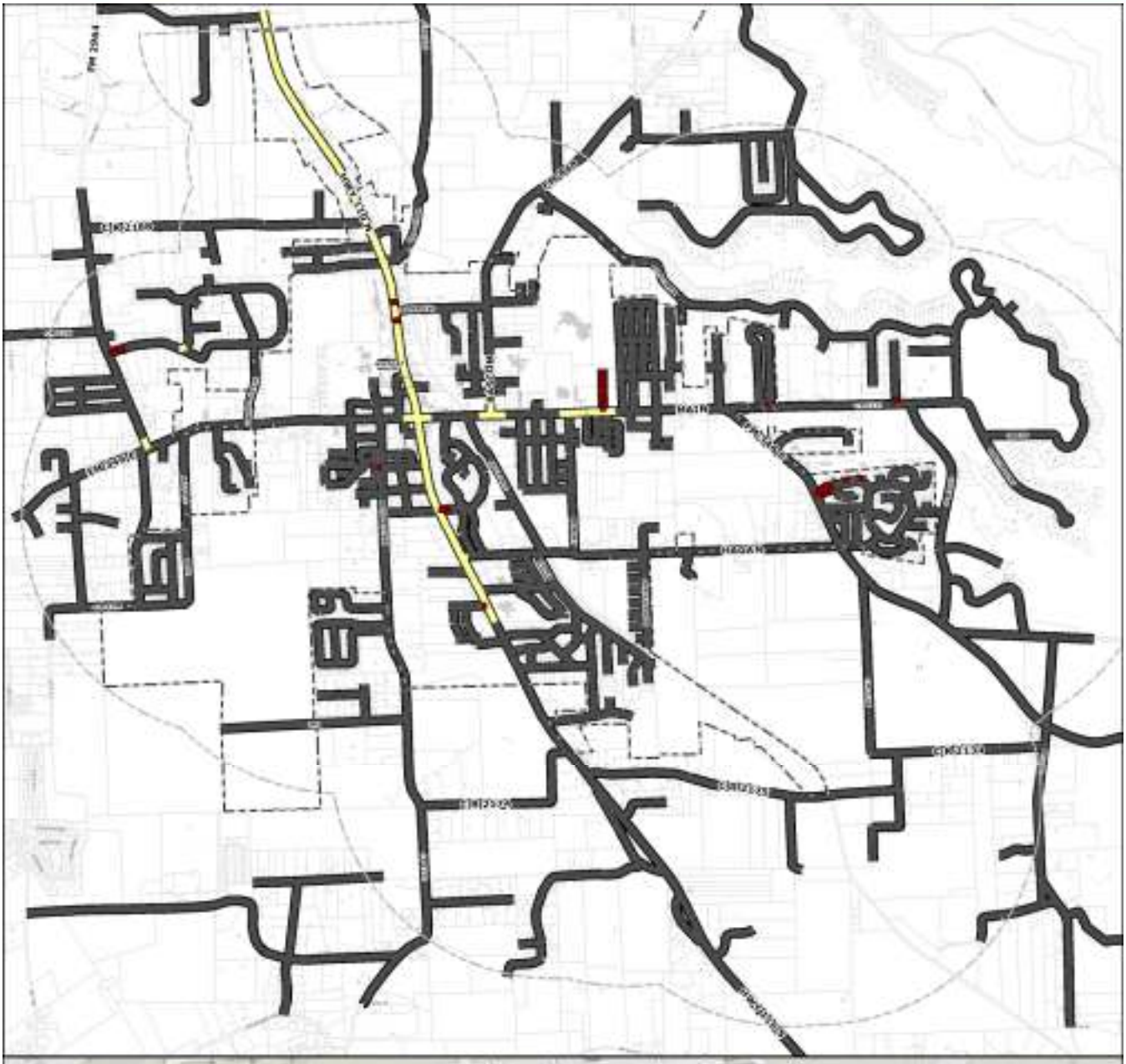


Chart 7.5: Access Management provision within the City Limits

For the most part, within the ETJ Appropriate access management is not practiced; however, some TxDOT intersections have been designed with turn lanes. In fact, with the exception of some subdivision entrances, access management is practiced exclusively on TxDOT maintained highways. Raw statistics of access management implementation will always appear low given the relatively high representation of older residential subdivisions within the City. Upon completion, access management will be included in the streetscapeing design of the upgraded Main Street (FM 346).

Several notable thoroughfares lacking complete access management include Bascom Road (FM 848) and Rhones Quarter Road (FM 2964); both thoroughfares are designated as major arterials on the 1995 Thoroughfare Plan. Other heavily utilized roads lacking access management include Willingham Road (CR 2171) and Hagan Road. Mutual access easements for commercial development are not required at this time.



Map 7.6: Access Management

- none
- solid median
- turn lane
- mixed turn/med
- Whitehouse City/ETJ Limits
- built structures

Geographic Information System

0 0.5 1 Mi

Data on access management was collected through field work conducted by Butler Planning Services. 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.

Control Devices

Traffic Signals

Traffic flow within the City is managed by a variety of control devices, a distinct change from the "one stoplight town" of its recent past. Traffic signals have been installed on three of the major highways. Three signals have been installed on State Highway 110 at approximately quarter-mile spacing. The intersection of Bascom Road (FM 848) and Main Street (FM 346) and the intersection of the High School Access Road and Main Street (FM 346) have also been signalized. School traffic has necessitated the installation of several traffic signals either at the campus entrance or at public roads near secondary campus access points.

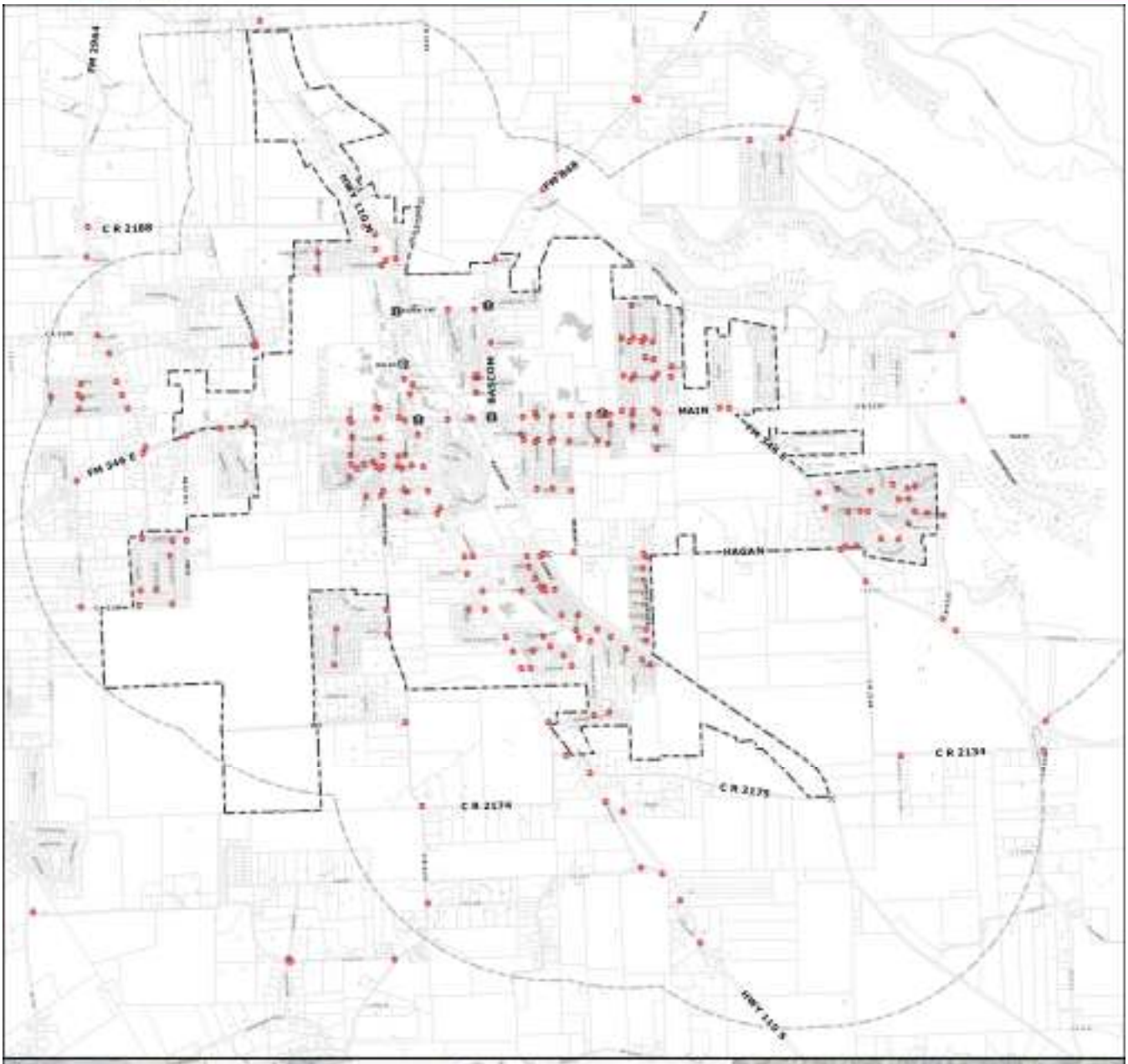
Image 7.4: The City's first traffic signal was installed in 1981 at the intersection of State Highway 110 and Main Street (FM 346). In the April issue of "Homefolks," a short-lived periodical by Shirley Smith, the topics of crosswalk safety and parent drop-off were discussed. Both issues remain concerns at the time of this writing due to School District growth and increasing traffic crossing through the intersection.

Railroad Crossings

Five major intersections of public streets and the railroad are located within the City. Due to declining rail traffic these intersections are not gated or grade separated. Most major intersections such as the one located on Main Street (FM 346) are equipped with warning lights.

Stop/Yield Signs

Within residential portions of the City, stop signs are utilized at street intersections for traffic control. Yield signs are infrequently used even in low traffic situations.



Map 7.7: Control Devices

- stop sign
- traffic light
- rail road crossing
- Whitehouse City/ETJ Limits
- built structures

City of Whitehouse
Geographic Information System

0 0.5 1 Mi

Data on control devices collected through field work conducted by Butler Planning Services. About the Image: The image is an artistic rendering of the shopping center anchored by Brookshire's Grocery Store. Other lessees in the center include McDonald's, Subway, Movie Gallery, Dollar General, and several popular local restaurants.

Street Lighting

An analysis of street lighting must begin with a warning of subjectivity within the presented data. This data set was derived through fieldwork using a purely empirical rating system. Factors such as fixture brightness, lighting standard frequency, and tree cover were considered. Road segments were rated on a "percentage lit" scale. Sophisticated light meters were not utilized for this study. While consistency may be assumed within the study area, comparisons should not be made between these data and those presented in other planning documents.

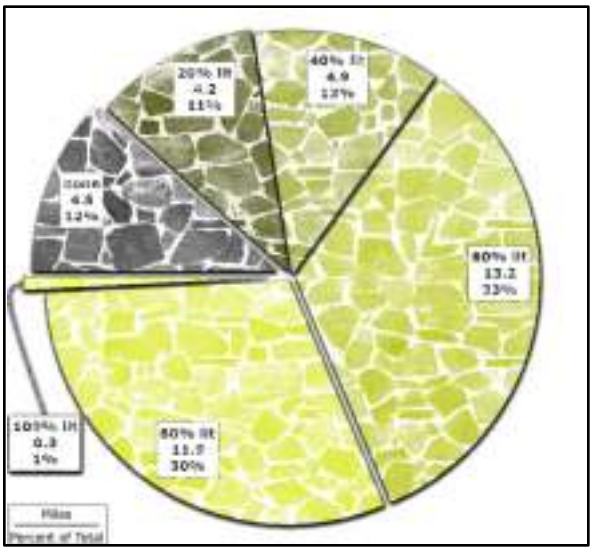
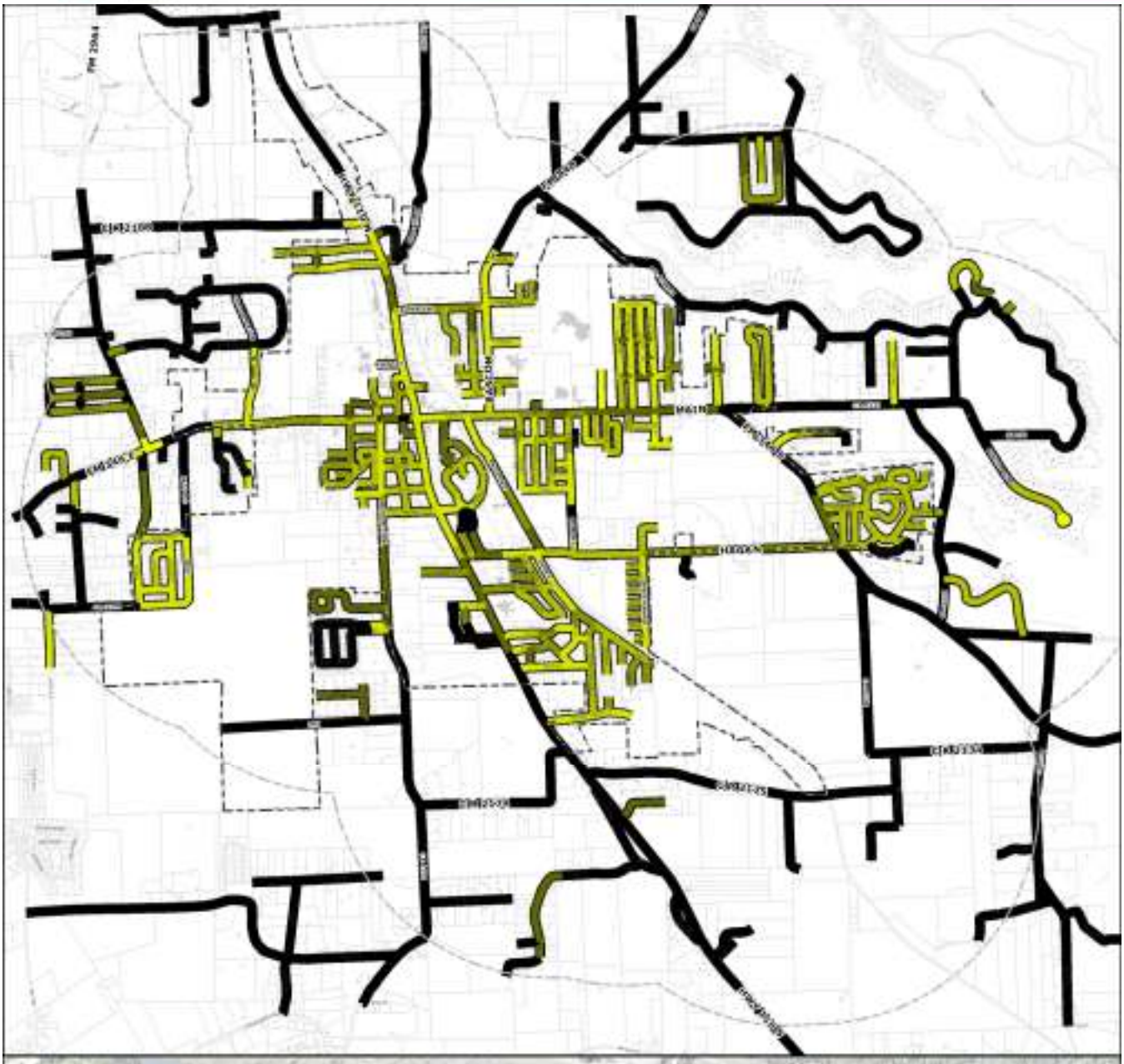


Chart 7.6: Street lighting provision within the City Limits

Image 7.5: The majority of roads within the City Limits have been built with street lighting of one type or another. Many street segments labeled as lacking lighting will eventually receive it through planned construction including roads which are a part of residential housing developments such as Waterton (left) and Nottingham Forest (above).

Street lighting in one form or another is provided throughout most portions of the street network within the City Limits. Of all road segments, 64% (25.4 miles) were rated at greater than 60% lit (Chart 7.6). Only 12% (4.5 miles) of roads were observed completely lacking street lighting. Of these roads, several were located within developing subdivisions and will receive street lighting at levels comparable to completed phases (Image 7.5).



Map 7.8: Street Lighting

100% lit
80% lit
60% lit
40% lit
20% lit
none
Whitehouse City/ETJ Limits
built structures

Geographic Information System

Mi
0 0.5 1

Data on street lighting was collected through field work conducted by Butler Planning Services. 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.

Street lighting was not found at these levels within the ETJ where nearly 87% (48.8 miles) of roads lack any provision for lighting (Chart 7.7, Map 7.8). Only 6% (3.3 miles) have been lit at greater than 60% levels. Unlike rural highways, approximately half of the residential neighborhoods within the ETJ have been designed with one form of lighting or another. These neighborhoods account for almost all road segments in the ETJ with lighting. While some rural subdivisions have lighting similar to that found within the City, a few residents speaking at public workshops from these subdivisions indicated that such rural "guard lighting" was not up to the desired level of service. Commercial and recreation areas near Lake Tyler as well as some highway intersections also have lighting.

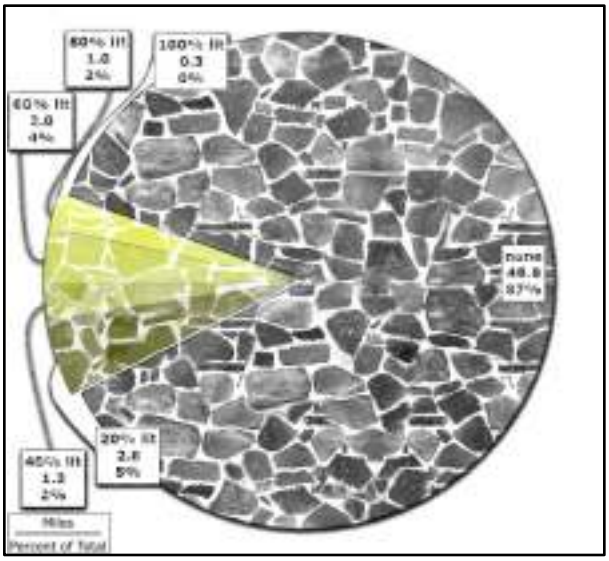


Chart 7.7: Street lighting provision within the ETJ


Image 7.6: A wide variety of street lighting styles is found both within the City Limits and ETJ.

Some problem areas exist within the City including residential developments not on individually platted parcels, such as those found at the intersection of Hagan Road and Memory Lane. Other portions of the City have been built with very effective and appropriately styled street lighting (Image 7.6).

Surface Condition

Analysis of surface condition is inherently subjective due to the method of data collection. Consultant staff assigned a condition rating to each road segment in the street network during fieldwork. These assignments were made from a purely empirical standpoint. Conditions considered include surface cracks, potholes, smoothness, etc. Perspective and oblique aerial photography were also analyzed and considered when assigning the overall surface condition rating. As a result, the following discussion and analysis should be viewed from a relative rather than an absolute standpoint. Road segment condition ratings will be consistent throughout the study area, but should not be compared to condition analysis in other documents.

Surface condition is rated on a scale from one to five, with the value of one representing roads in the best condition. Within the City Limits, 82% (32.9 miles) of the road surface is rated with the best or second best condition (Chart 7.8). 13% (5.4 miles) fall into the average category with the remaining 5% (2.1 miles) rated at below average or poor. Taking into account that less than 2% of the street network within the City Limits is constructed of dirt or gravel, 3% of the City's asphalt roads remain in poor condition. Some roads such as Dews Drive were not dedicated to the City, and therefore do not receive public maintenance. If more than one home takes access from these roads they are included in the analysis despite their private status.

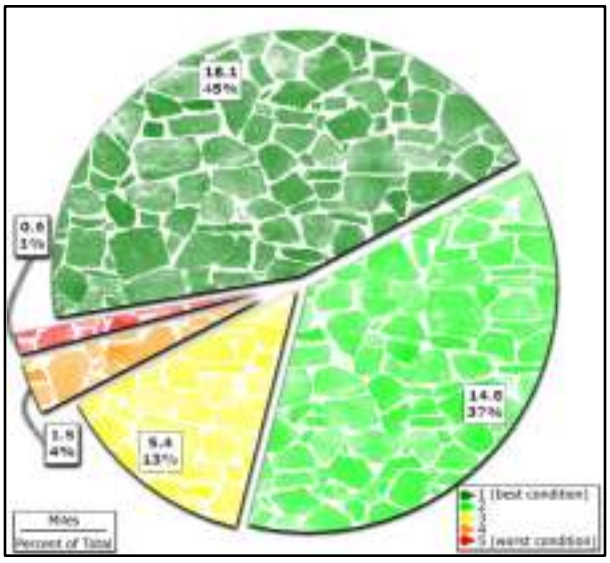


Chart 7.8: Surface condition of roads within the City Limits

Major infrastructure improvement projects by TxDOT are also impacting surface condition. Right-of-way acquisition is complete for the project to upgrade Main Street (FM 346). The construction timetable calls for road work to be complete

in approximately three years. Currently, surface conditions on the existing road are below the standards observed on other TxDOT maintained highways. However, conditions on this thoroughfare will drastically improve once construction is complete, which will positively impact the overall condition rating for roads within the City Limits.

Surface condition within the ETJ received an overall lower rating as compared to roads within the City Limits (Chart 7.9, Map 7.9). Only 35.1 miles (65% as compared to 82% in the City) were rated in the top two categories. Average to poorly rated road segments in the ETJ also tended to score below average or poor at a higher percentage than within the City. Despite this, County and City maintenance techniques and levels are relatively uniform on major roads.

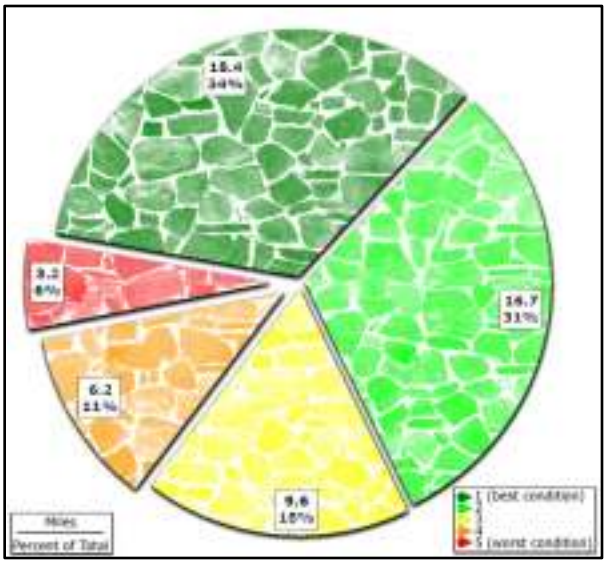
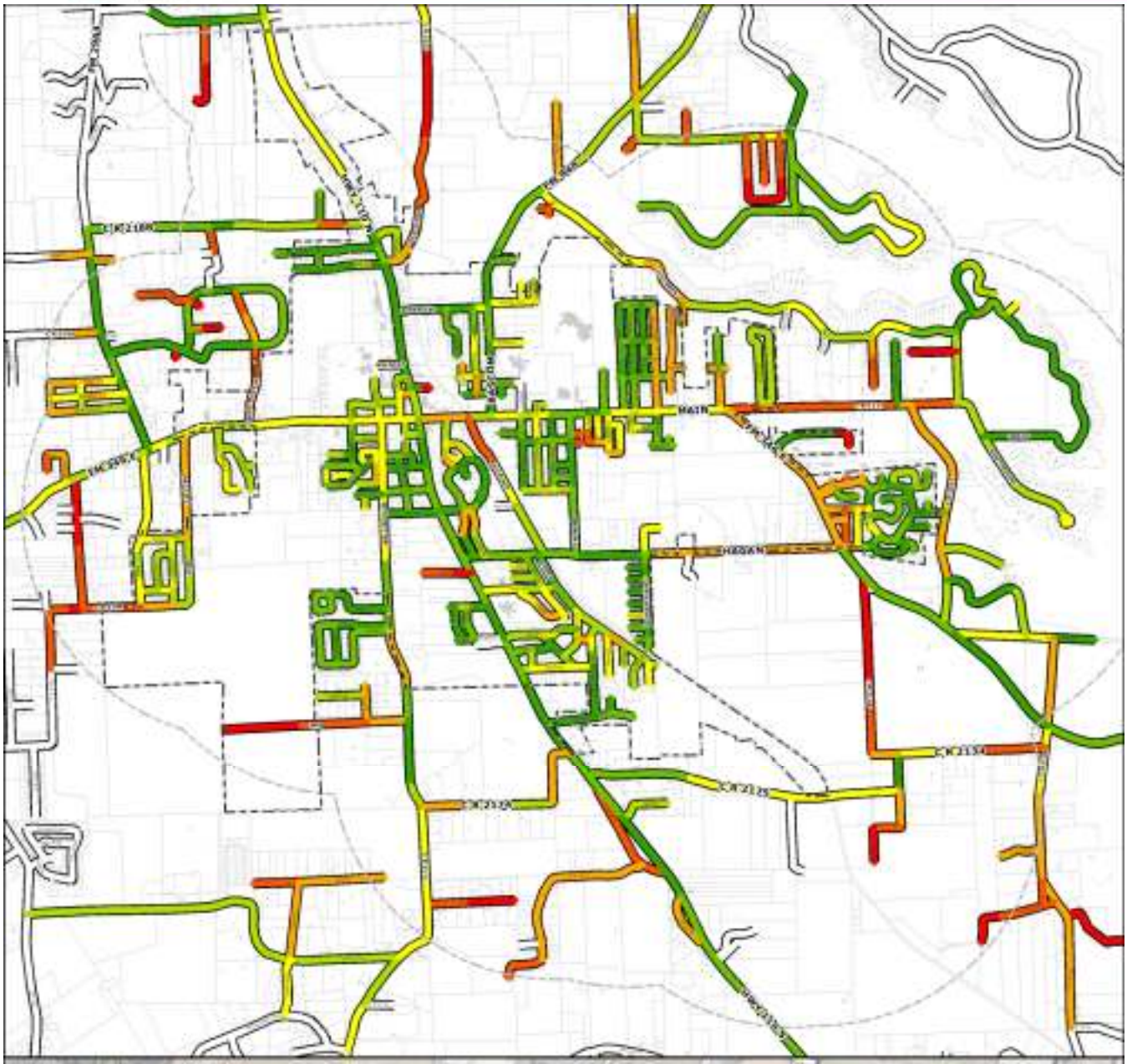


Chart 7.9: Surface condition of roads within the ETJ

Image 7.7: Highways within the ETJ which are maintained by TxDOT or the County are frequently kept in excellent condition; however, some problems were observed on shoulders which are not curbed.

In some cases, Willingham Road (CR 2171) for example, surface conditions in the ETJ were superior to those within the City Limits. As a result, during fieldwork some portions of this highway maintained by the County received higher surface condition ratings than portions maintained by the City. By contrast some minor County Roads and "local rural" streets appear to have lower ratings than equivalent City streets.



Map 7.9: Surface Condition

- 0.75 - 1.00 (best condition)
- 1.01 - 1.25
- 1.26 - 1.99
- 2.00 - 2.25
- 2.26 - 3.25
- 3.26 - 4.25
- 4.26 - 5.50 (worst condition)
- Whitehouse City/ETJ Limits
- built structures

City of Whitehouse Geographic Information System

0 0.5 1 Mi

Data on surface condition were collected through field work conducted by Butler Planning Services. 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.

Regional Transportation Projects Impacting Whitehouse

Main Street (FM 346) Widening

Several major construction projects will have significant impacts on transportation within Whitehouse and its ETJ. The first is the previously introduced widening of Main Street (FM 346) from Rhones Quarter Road (FM 2964) in the east to Hagan Road in the west. This project will upgrade the existing thoroughfare to a minimum of two drive lanes in either direction. Major intersections will be improved adding dedicated right turn lanes and in some cases, dual left turn lanes (Figure 7.2). Construction will also improve portions of State Highway 110 at its intersection with Main Street (FM 346).

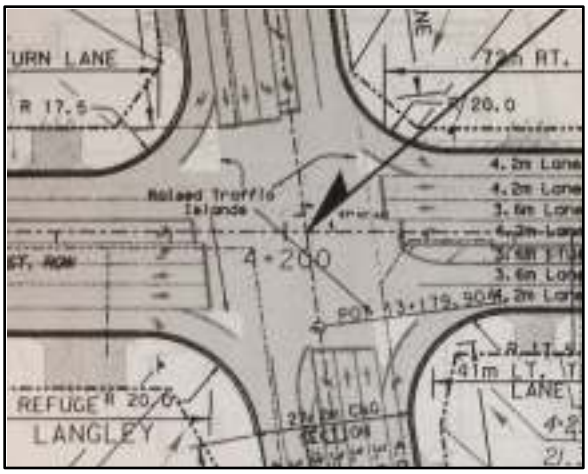


Figure 7.2: The intersection of State Highway 110 and Main Street (FM 346) will be constructed with right-turn-only lanes, and dual left-turn lanes in two directions with the capacity to add second left-turn lanes as needed for western and southern traffic increases.

The project will also include the addition of six foot-wide sidewalks and Americans with Disabilities Act (ADA) compliant access ramps from Quail Lane to Hagan Road. These upgrades will be installed on both the northern and southern sides of the thoroughfare. Access management will be employed in the form of regulated curb cuts, center left turn lanes, and raised center medians with turn bays where appropriate.

Construction is scheduled to begin in mid-2006 and be completed by late 2008. New right-of-way acquisition is presently nearing completion and will shift the centerline of the facility to the south, causing only minor land use changes to property on the northern side of the road. TxDOT is funding the project.

Loop 49 Construction

Another significant project underway is the construction of a new limited access freeway which will loop around the City of Tyler. As currently conceived, this project would be designed as a toll way with TxTag automated tolling systems to generate construction and maintenance funds (Image 7.8). Many cities including Whitehouse have also contributed funds to the project.

Image 7.8: Proposed on-ramp design for Loop 49 using TxTag automated toll gates (Image Source: Loop 49 Project Website)

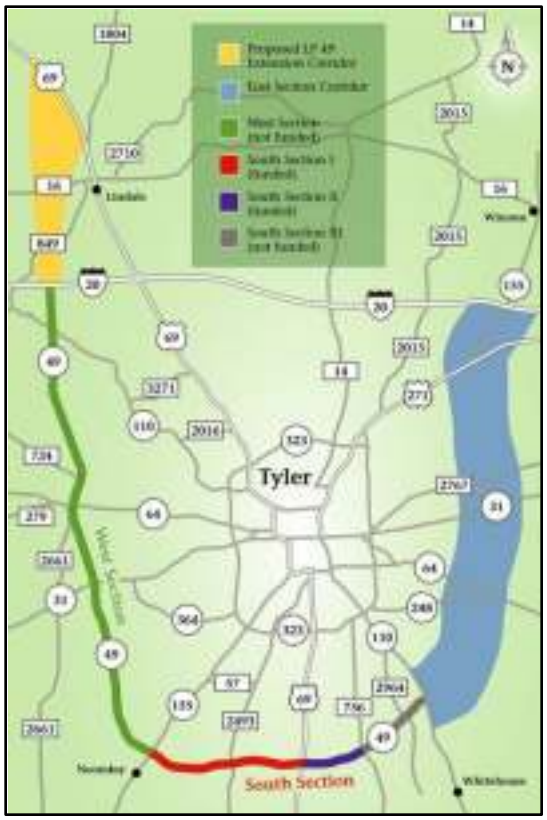


Image 7.9: Proposed corridors for Loop 49 sections (Image Source: Loop 49 Project Website)

Ultimately the loop is planned to connect US 69 north of Lindale, cross Interstate 20, bypass the City of Noonday and the City of Whitehouse to the north of both communities, then terminate again on Interstate 20 approximately at the intersection of State Highway 155 (Image 7.9). The State Highway 155 South (at Noonday) to Paluxy (FM 756) segment has been fully funded and is under construction. Completion of this segment is scheduled for mid-2007. Construction on the segment most relevant to Whitehouse, from Paluxy Drive (FM 756) to State Highway 110, could possibly begin as early as 2007, with a project completion in mid-2009. Final alignment, design, and funding sources are not yet been finalized for portions of the loop extending to the east from State Highway 110.

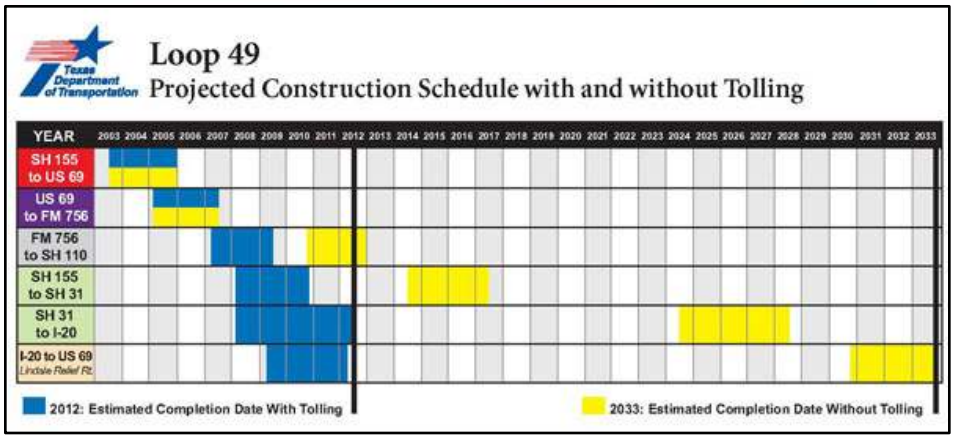


Image 7.10: Project time-line for phase one completion with and without tolling used for project funding (Image Source: Loop 49 Project Website)

The initial phase of the project will cover construction of each loop section as a two lane freeway with grade separated access at major intersections. Subsequent phases will provide for the construction of a secondary road bed adding a second lane for traffic flow in each direction without significantly impacting traffic flow on the original two lanes. Later phases will also add more complete access roads and access ramps for additional intersections.

Paluxy Drive (FM 756) Widening

Paluxy Drive (FM 756) is scheduled to be widened to a four-lane major arterial from Jeff Davis Drive in Tyler to its intersection with FM 346 just west of Whitehouse. An official construction timeline has not yet been finalized. However, the project has been classified as "short-term" in the Tyler Area Metropolitan Transportation Plan, with a possible completion range through 2014.

Project Impacts on Whitehouse

These projects will have a significant and permanent impact on transportation within the City of Whitehouse notably improving future traffic flow. However, it is crucial to consider that as the region rapidly grows in population and reduces in net density, these significant improvements to transportation infrastructure may or may not result in less congestion than is currently observed within Whitehouse.

While this may seem paradoxical, it is important to understand that the Loop 49 project is likely to cause a dramatic shift in the land use and transportation

pattern within the entire East Texas region. While the City of Tyler is one of the chief proponents of the project, the most drastic impact of the loop will likely be on residents of outlying communities such as Whitehouse. If constructed as designed, the loop will provide for the only high-speed freeway travel within the region, allowing for dramatic increases in circumferential (circular) movement around the periphery of Tyler. However, the loop will not provide for any improvement in radial movement from the suburban areas around the loop into the City's concentrated employment, cultural, health, and governmental districts.

As a result, one byproduct of the loop project may be the formation of leapfrog urban development or "edge cities." If TxDOT focuses on improving peripheral traffic flow at the expense of radial movement from the suburbs to the central core, the result could be noticeably higher levels of congestion for the already established urban portions of Tyler.

"Whitehouse's traffic problems are in many ways the same way as the City of Tyler's. It is so bad because we don't have a freeway or by-pass system to get through or around the City." - Mark Sweeney

While many important and high impact improvement projects are slated for established arterials within the City of Tyler, at present no plans have been made for radial freeways. Subsequently, corridors such as Broadway (US 69), State Highway 110, and Loop 323 are projected to suffer reductions in present-day levels of service, despite several impending improvement projects.

As a result, motorists living in the suburbs and just inside Loop 49 may find it easier to travel around the City than through it. The natural tendency of urban development will be to move to areas which promote high traffic counts but benefit from high transportation and infrastructure levels of service.

Classic examples of this development pattern can be observed in several other Texas cities. The Uptown/Galleria District in Houston for example is built at densities similar to those found within Downtown. With the exception of commercial activity along major freeways, much of the land between Downtown

and the 610 Loop was slow to develop. Furthermore, much of this land was built at densities equivalent to land found in suburban cities.

This scenario is not presented in order to imply that Tyler will develop new commercial cores as intense as those found within Downtown Tyler. However, if infrastructure availability is provided in a timely manner, many of the high-level services currently found in or around Tyler's Downtown/Medical District may decentralize gradually over time or be duplicated elsewhere. These services will likely locate in areas of highest mobility. New service and commercial nodes are most likely to be found along the new loop at intersections of major arterials such as US 69, State Highway 155, or State Highway 110.

Whitehouse, Noonday, New Chapel Hill, and Lindale are all communities which may see such high intensity urban development near their planning jurisdictions. While the ETJ of the City of Tyler encompasses much of the land surrounding the loop corridor, many suburbs will see an increased level of accessibility to and from Tyler's economy.

Further fueling the possibility of a dramatic land use shift are the "East Texas Hourglass Conceptual Corridor" and Interstate 69 study corridor. The hourglass concept is intended to extend a freeway transportation corridor from southern Tyler to northern Longview and on to a potential connection with other major north/south corridors.

While this project is conceptual at best, the current design shows this freeway corridor beginning at the intersection of State Highway 110 and Loop 49, just north of Whitehouse. If this project is constructed as currently conceptualized, the likelihood that high level services and commercial activities will locate within several miles of Whitehouse is increased all the more if other infrastructure services are provided.

The widening of Main Street (FM 346) will also bring both long and short term impacts to the City of Whitehouse. Improving a two-lane road to an access

managed four-lane facility drastically improves the overall traffic capacity of an arterial. Planned improvements to the intersection of Main Street and State Highway 110 will also have a noticeable impact on traffic flow on both thoroughfares. The installation of dedicated right turn lanes and dual left turn lanes will permit more vehicles to traverse the intersection simultaneously, therefore reducing the bottleneck effect this intersection has on traffic traveling north or south on State Highway 110.

"My brother-in-law comes up from Troup every day and he dreads Whitehouse... he may sit through [the intersection of 346 and 110] three or four times before he gets through." - David Sage

The road work throughout the center of town will bring a higher level of confusion to the current traffic problems. However, construction should not noticeably reduce the flow of traffic during morning and afternoon rush hours given the thoroughfare's already limited capacity.

While the benefits produced by the widening project are noteworthy, an inescapable fact is that adding lanes to existing thoroughfares quickly results in diminishing returns beyond four lanes of main traffic due to turning and lane change maneuvers. For this reason, citizens and decision-makers should not limit their focus solely to the expansion of existing thoroughfares within the City as an answer to escalating traffic problems in the future.

"[The misconception that you can alleviate congestion by continuing to add on lanes] is like saying you can add closets to your house so that you'll always have one empty." - Danny Hogden

Even with the widening project to upgrade Main Street (FM 346) from two lanes to four, and possible improvements to State Highway 110, parallel alternatives to the two principal thoroughfares will become increasingly critical as these upgraded thoroughfares once again reach saturation levels. Diminishing returns are quickly experienced when adding lanes to thoroughfares already designed with two or more drive lanes in either direction.