Appendix E: Special Corridor Concepts

Special Corridors

In Chapter 3, the concepts of Complete Streets and Context Sensitive Solutions are presented as essential elements of roadway corridor planning and design.

Complete Streets

The focus of a complete streets initiative is to consider all modes during the planning, design, construction, operation and maintenance of the city's street network. Effective complete streets policies help communities routinely create safe and inviting road networks for everyone, including bicyclists, drivers, transit operators and users, and pedestrians of all ages and abilities. For the Complete Streets policy to be effective, a program of supporting policies and procedures need to be put in place in all City departments, including a program of land use planning guidelines, a series of project development checklists, established responsibilities for addressing modal issues, and design and operating standards for implementation and maintenance.

Context Sensitive Solutions

Though a roadway corridor on the Thoroughfare Plan may be of a particular classification designation - principal arterial, minor arterial or collector - its typical section may transition along its corridor depending upon the traffic volumes and relation to the adjacent land uses. In many cases, an arterial roadway may pass through rural into urban and sequentially commercial into residential settings and back again within a segment of the corridor. The typical sections to be considered for these roadways should be sufficiently adaptable to the context of its current surroundings and potential development. Similarly, the development of land adjacent to arterial roadways should be sensitive to the mobility function of the corridor. Thus, for each of the roadway classifications in the Thoroughfare Plan, multiple typical sections are proposed for potential application to the corridor context, with innumerable permutations possible.

Special Context Sensitive Corridors

Every corridor should be designed with complete streets principles and context sensitive solutions in mind. Certain corridors, in particular, are identified for heightened attention to such special considerations. These corridors are special because of the significance of their immediate surroundings and are in need of greater attention to detail to mitigate the potential impacts of traffic on the corridor's sense of place, livability and economic vitality. Four corridors in particular are included as special corridors that are particularly sensitive to the existing and potential impacts of traffic operations:

- Lindsey Street, between Berry Road and Classen Boulevard
- Porter Avenue, between Robinson Street and Alameda Street
- James Garner Avenue, between Flood Avenue/Robinson Street and Boyd Street
- Flood Avenue, between Robinson Street and Main Street
- Berry Road, between Robinson Street and Imhoff Road

During the working meetings with the CVC modal Subcommittees, concepts for some of these context sensitive solutions were prepared and discussed amongst a mixed grouping of the modal Subcommittee members. The following project descriptions and illustrative diagrams were developed for discussion purposes only, and do not represent actual design concepts by the City of Norman nor do they represent any concurrence by any group within the city regarding the elements of the concepts. The corridors will require further study and collaboration with stakeholders to identify all relevant issues.

Lindsey Street

Lindsey Street, between Berry Road and Jenkins Avenue
(Implementation Action S3a)

Lindsey Street, between Jenkins Avenue and Classen Boulevard
(Implementation Action S5a)

Purpose: Relieve congestion along Lindsey Street west of OU and create a Complete Street to provide walking and bicycling connections from OU to nearby commercial/retail destinations

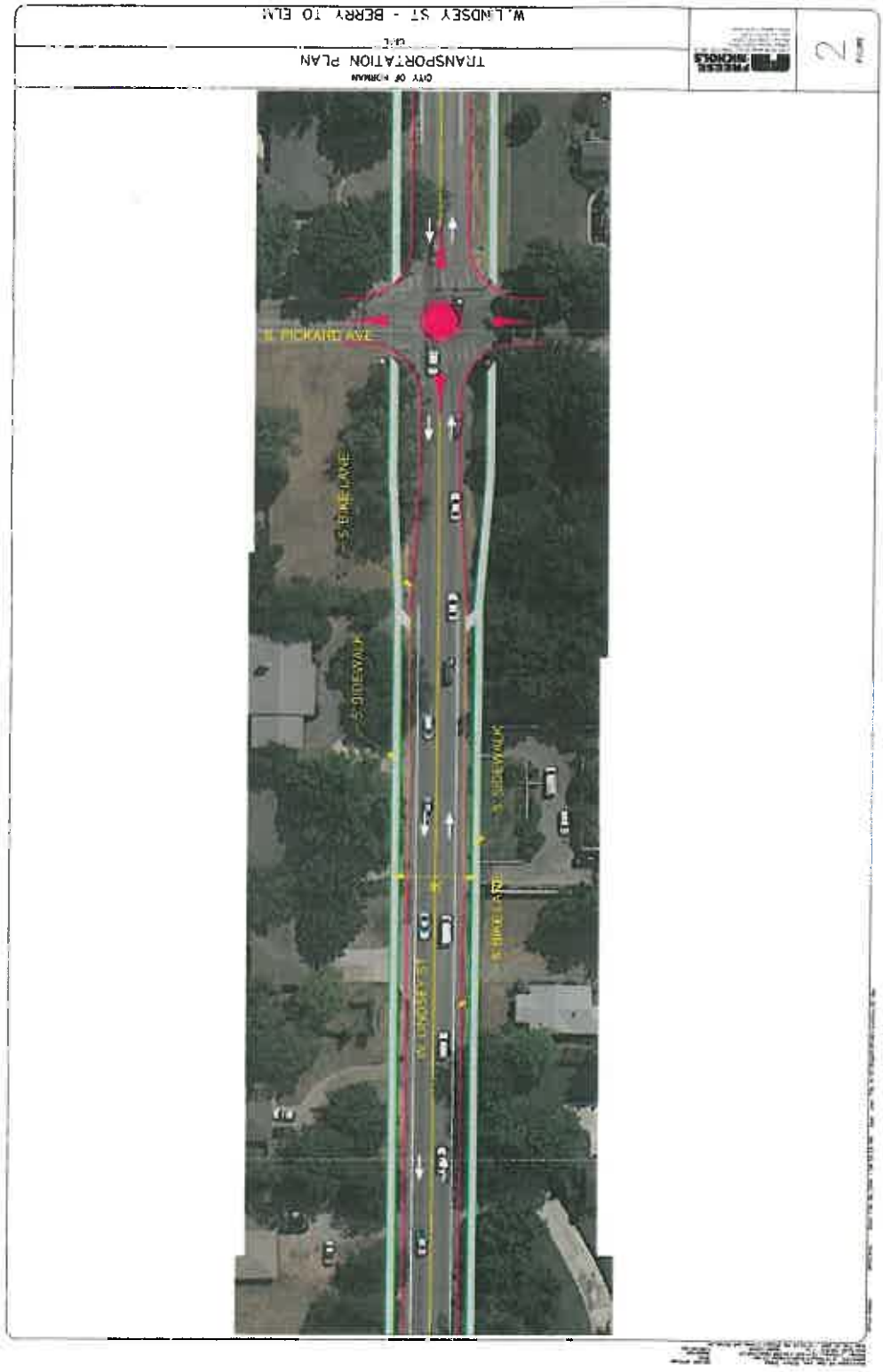
Significant dialogue and conceptual concepts have been exchanged between City staff and representatives of the University of Oklahoma (OU) regarding the desired characteristics of Lindsey Street as it approaches and passes through the university campus. Lindsey Street from Classen Boulevard to Jenkins Avenue has been constructed as a 4-lane roadway with sidepaths to accommodate multimodal access to campus from the east, as well as access and circulation during sporting events. Between Jenkins Avenue and Elm Avenue, Lindsey Street is a 3-lane roadway with adjacent sidepaths to accommodate multimodal cross circulation through the campus. West of Berry Road, the City will be improving Lindsey Street to a 4-lane divided cross section with landscaped median, bike lanes, and wide sidewalks for a consistent section approaching I-35.

Between Elm Avenue and Berry Road, Lindsey Street is a two lane open drainage tree-lined roadway with some sidewalks that generally dissipate west of Lahoma Avenue. This section of roadway is proposed to have sidewalks and bike lanes connecting the OU Campus pedestrian and bicycling network to the commercial development west of Berry Road. A context sensitive roadway typical section would be to retain one travel lane plus bike lanes in each direction, with intersection treatments, such as roundabouts, to facilitate cross street access. This typical section would be refined to fit the context of the adjacent land uses, including minimizing pavement width, considerations for driveways, and preservation of significant trees where feasible.

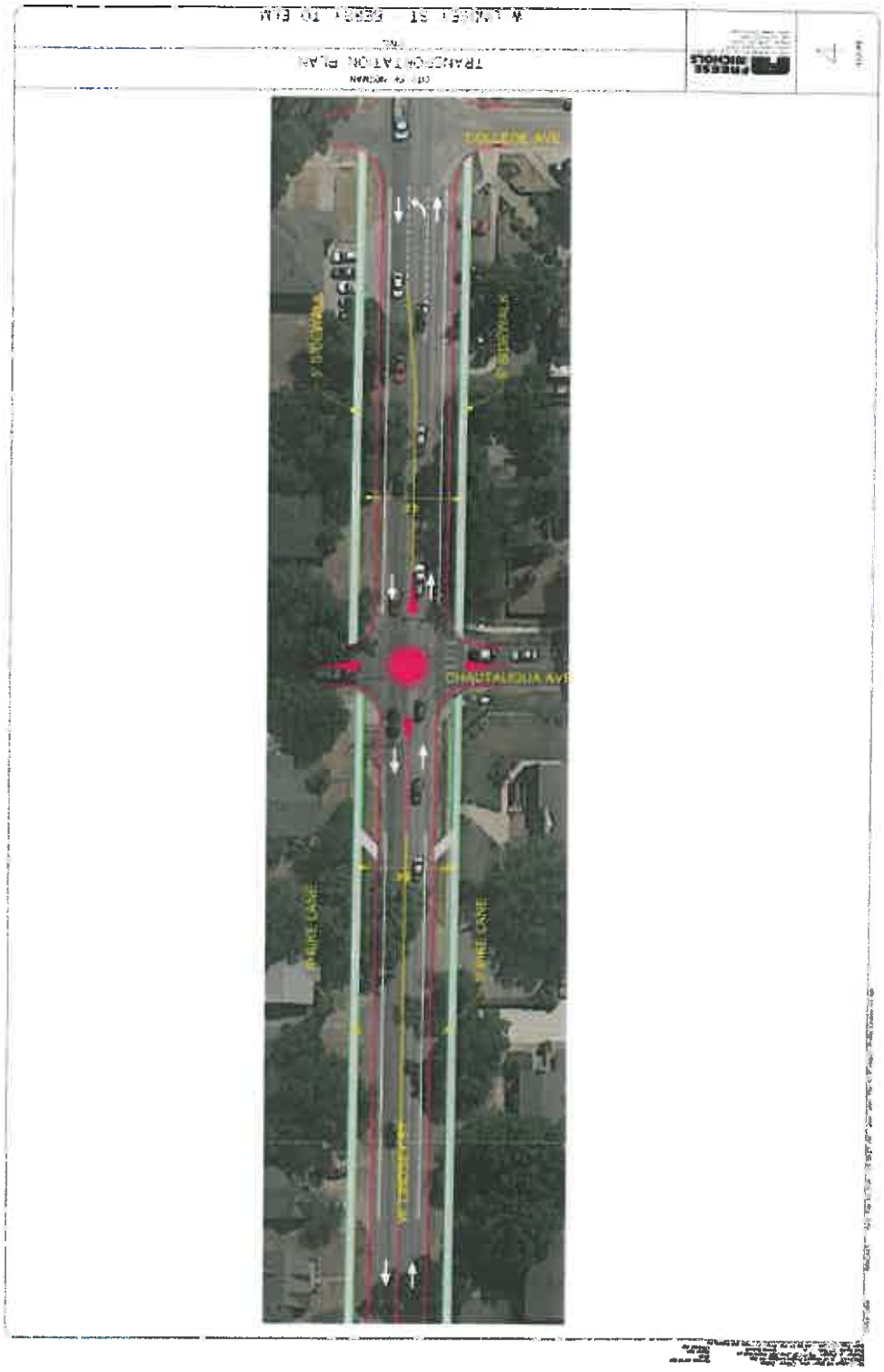
The existing roadway segment between Elm Avenue and Jenkins Avenue would be evaluated for enhancements that may better serve OU local traffic while serving the minor arterial roadway function of Lindsey Street. Note that a concept is note presented herein.

East of Jenkins Avenue, the sidepaths would be extended full width to Classen Boulevard. Potentially, a grade separation of Lindsey Street at the existing railroad tracks would be created, carrying the travel lanes and side paths under the railroad.

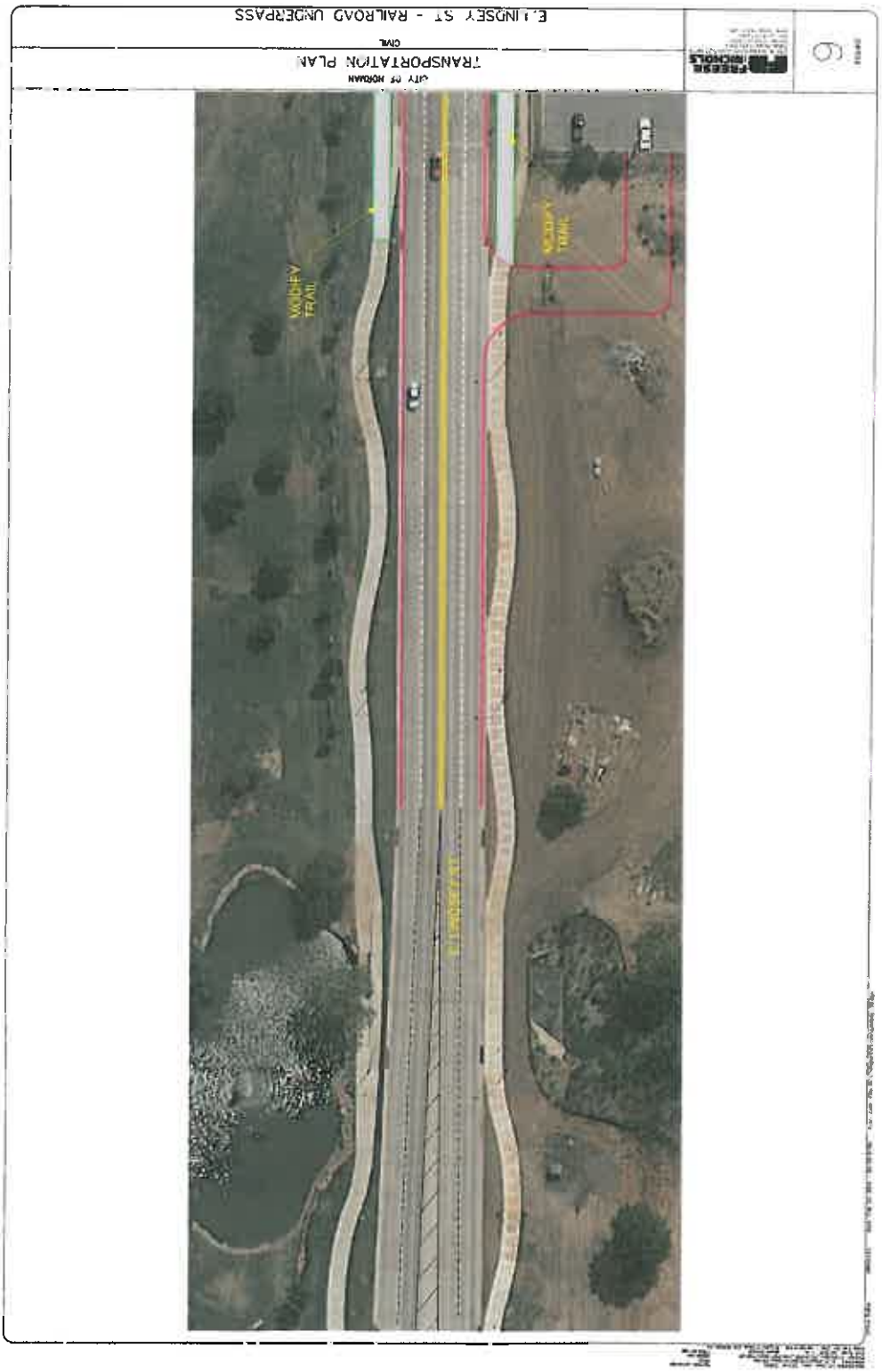
W. LINDSEY ST
SIDEWALK
CITY OF NORMAN
TRANSPORTATION PLAN
W. LINDSEY ST - BERRY TO ELM
FIGURE
1


W. LINDSEY ST - BERRY TO ELM
TRANSPORTATION PLAN
CITY OF NORMAN
2
W. RICHARD AVE
S. ELM LANE
S. SIDEWALK
S. ELM ROAD

Appendix E: Special Corridor Concepts
Norman Comprehensive Transportation Plan


COLLEGE AVE
CHAUTAUQUA AVE

TRANSPORTATION PLAN
W. LINDSEY ST


E. LINDSEY ST. - RAILROAD UNDERPASS
CIVIL
TRANSPORTATION PLAN
CITY OF NORMAN
FREESE NICHOLS
WORLEY TRAIL
WORLEY TRAIL

PROPOSED RAILROAD BRIDGE
MODIFY TRAIL
E. LINDSEY ST
MODIFY TRAIL
CITY OF NORMAN
TRANSPORTATION PLAN
CIVIL
E. LINDSEY ST. - RAILROAD UNDERPASS
10
FIGURE

Porter Avenue

Porter Avenue, between Robinson Street and Alameda Street
(Implementation Action S3b)

Purpose: Facilitate the planned enhancements to the Porter Avenue corridor near Downtown

A Porter Avenue Corridor Study was conducted in 2009 to assess the potential enhancement of the Porter Avenue corridor, from Robinson Street to Alameda Street. The Porter Avenue Corridor Plan presents a concept for a revitalized retail corridor to expand upon the successful retail development along Main Street just west of Porter Avenue.

One recommendation of the study suggested that Porter Avenue could be reduced to a three lane typical section so that sidewalks could be enhanced to facilitate the redevelopment of adjacent properties. As part of this CTP preparation effort, the consultant worked with city staff to prepare Synchro modeling of an enhanced three-lane section. Various iterations were prepared and found that, with four lanes between Main and Gray, the three-lane section would operate about as well as a four lane section with existing levels of traffic. Conditions with a growth of 25% and 50% were examined and still found that both the modified three-lane and the existing four-lane section would operate well with up to a 50% growth. Beyond 50% growth, both scenarios experienced significant congestion predominantly due to the crossing traffic at Main and Gray Streets.

However, there is also a desire by the CART system planners, and echoed by members of the CVC Transit Subcommittee, to introduce transit service into the Porter Avenue corridor. For the introduction of bus operations into Porter Avenue, a four-lane section would have the flexibility to allow transit stops in the rightmost lane, with cars allowed to pass in the adjacent lane. If a three-lane section were implemented, the transit stops would need to be pull-overs protruding into the widen sidewalk areas, in order to keep buses from blocking the flow of the one lane of traffic.

The Porter Avenue Corridor Plan draft report, containing the proposed corridor enhancements and transportation recommendations, can be found on the city's website, under the Planning and Development tab.

E. DAVIS ST
N. PORTER AVE
CITY OF NORMAN
TRANSPORTATION PLAN
ONE
N. PORTER AVE
E. ALAMEDA ST - E. ALAMEDA ST
11
FIGURE


E. ACRES ST - E. ALAMEDA ST
N. PORTER AVE
CIVIL
TRANSPORTATION PLAN
CITY OF NORMAN
12
FIGURE
N PORTER AVE
E ACRES ST

CITY OF NORMAN
TRANSPORTATION PLAN

ON:
N. PORTER AVE
E. ACRES ST - E. ALAMEDA ST

13

E. COMANCHE ST
N. PORTER AVE
E. ALAMEDA ST
CITY OF NORMAN
TRANSPORTATION PLAN
N. PORTER AVE
E. ACRES ST - E. ALAMEDA ST
FREESE NICHOLS
14

E COMANCHE ST
S PORTER AVE
E SYMMES ST
E SYMMES ST
CITY OF NORMAN
TRANSPORTATION PLAN
N. PORTER AVE
E. ACRES ST - E. ALAMEDA ST
15
FIGURE


CITY OF NORMAN
TRANSPORTATION PLAN
N. PORTER AVE
E. ACRES ST - E. ALAMEDA ST
16
PORTER AVE
ALAMEDA ST

James Garner

James Garner extension, between Robinson Street and Acres Street
(Implementation Action M3a)

Bridge the Legacy Trail Over Robinson Street
(Implementation Action M6b)

James Garner/Jenkins Avenue, between Acres Street to Boyd Street
(Implementation Action S3c)

Purpose: Create a more direct access way between Downtown Norman and I-35/US 77 to the north.

Extend the existing James Garner Avenue as a two-lane roadway from Acres Street northward to a crossing over the depressed Robinson Street, using the already provided abutments created for the Robinson Street underpass of the Railroad. Create a connection to Flood Avenue north of Robinson Street. Truncate the local streets north of Acres Street to not intersect with James Garner Avenue extension.

In conjunction with, and due to, the extension of James Garner Avenue north of Acres Street, realign the existing legacy trail north of Acres Street. Consider whether to cul-de-sac the side streets to not connect to the James Garner extension to enhance the safety of the Legacy Trail. Extend the Legacy Trail over the grade separated Robinson Street to eliminate the potential safety hazards of the existing at-grade trail crossing of Robinson Street. Develop design plans for the trail in conjunction with a potential bridge over Robinson Street for the James Garner Avenue extension. Consider the costs and potential safety and utility benefits of including a grade-separated crossing of the Legacy Trail over Flood Avenue just north of Robinson to eliminate the need for the majority of trial users to cross through the busy intersection of Robinson Street at Flood Avenue.

The proposed extension of James Garner Avenue northward to tie directly to Flood Avenue will bring a component of through traffic to the segment of James Garner Avenue south of Acres Street. This section of James Garner Avenue is currently a meandering two lane roadway with on-street parking to Boyd Street. A concept is proposed for modifications to the roadway to:

- add pockets of left turn lanes to facilitate traffic movement while retaining essentially a two-lane roadway through downtown
- remove various areas of curbside parking and create pockets of off-street parking in the public right-of-way
- enhance the intersections of James Garner at Acres, Gray and Main Street to facilitate north south movement along James Garner while blending its movements into the fabric of the Downtown Streets

Potential densification of development along James Garner/Jenkins Avenue, between Main Street and Boyd Street, will increase the significance of the need for good access and circulation, off-street parking, and increased accommodations for bicycle and pedestrian mobility. Design the travel lanes, bike lanes, bus accommodations, sidewalks and corridor parking provisions will need to support higher density development and transit oriented development.


JAMES GARNER AVE EXTENSION
ROBINSON TO ACRES
TRANSPORTATION PLAN
CITY OF NORMAN
FIGURE 1
REALIGNED
JAMES GARNER AVE

REALIGNED LEGACY TRAIL
W ACRES ST
N JAMES AVE
CITY OF NORMAN
TRANSPORTATION PLAN
JAMES GARNER AVE EXTENSION
ROBINSON TO ACRES
FIGURE

E ACRES ST
N JAMES AVE
JAMES GARNER AVE
CITY OF NORMAN
TRANSPORTATION PLAN
CIVIL
JAMES GARNER AVE EXTENSION
ACRES TO EUFAULA
3


CITY OF NORMAN
TRANSPORTATION PLAN
JAMES GARNER AVE EXTENSION
ACRES TO EUFALIA
4
FIGURE
JAMES GARNER AVE
N. JONES AVE
W. GRAY ST


5
FUTURE
TRANSPORTATION PLAN
CITY OF NORMAN
JAMES GARNER AVE EXTENSION
ACRES TO EUFALIA
E. JONES AVE
JAMES GARNER AVE
N. MAIN ST

Flood Avenue

Flood Avenue, between Robinson Street and Main Street
(Implementation Action S3d)

Purpose: Relieve existing and future congestion along Flood Avenue south of Robinson Street

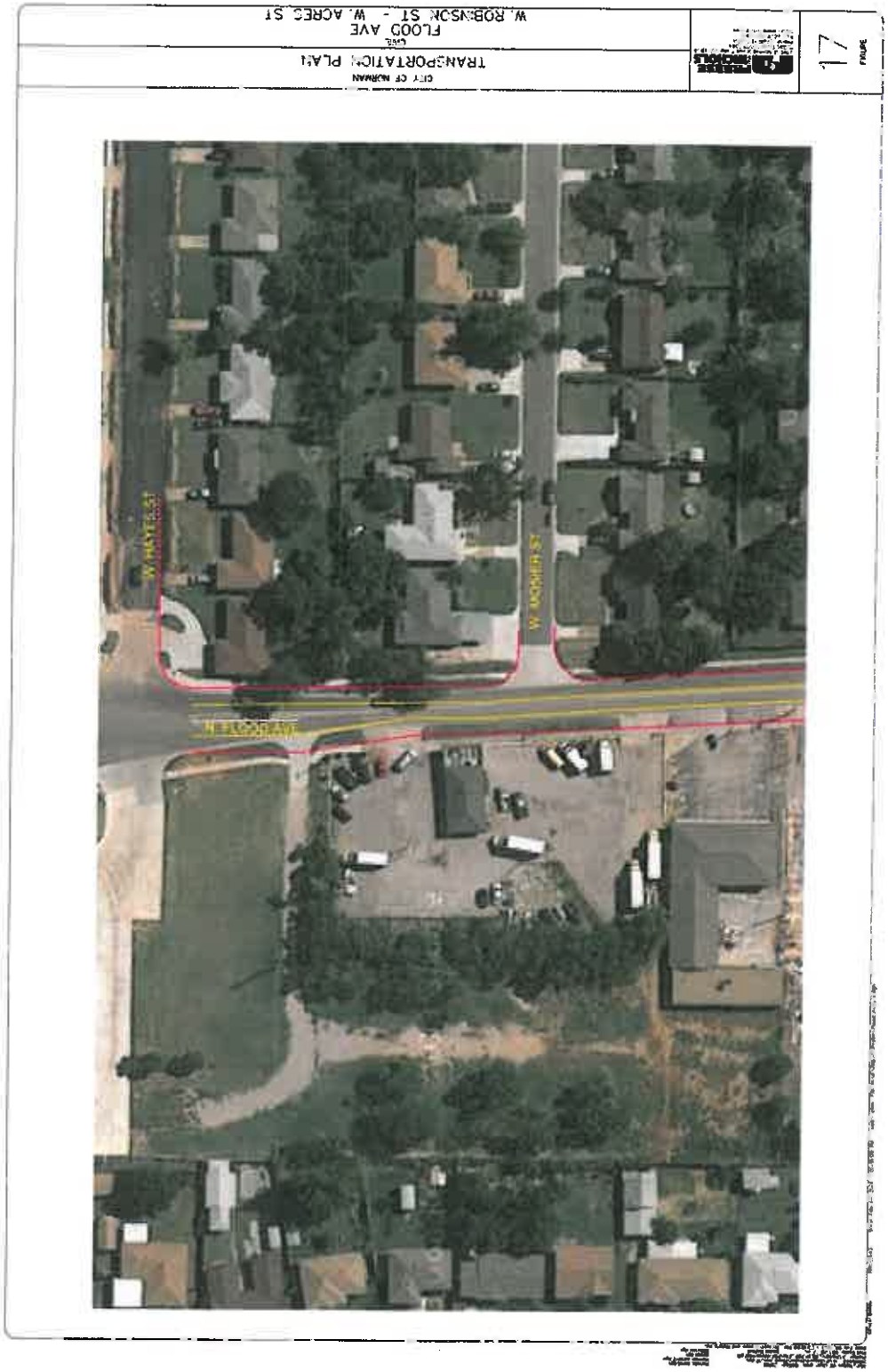
US 77/Flood Avenue forms a direct conduit from the core of Norman to and from I-35 to the north. Traffic on Flood Avenue south of Robinson Street currently experiences moderate congestion during the AM and PM peak hours due to the capacity constraints of the two lane section just north of Acres Street, exacerbated by the driveway activity in and out of adjacent development.

Simulation of the 2035 travel demand and roadway network with the proposed James Garner Extension in place from Acres Street to Flood Avenue north of Robinson Street indicates that the extension will relieve some of the traffic demand from Flood Avenue south of Robinson Street, reducing future congestion on Flood Avenue to a less severe condition.

To alleviate the remaining congestion on Flood Avenue, once the James Garner Extension is in place, operational improvements could be assessed that would be supportive of the adjacent land uses. Such improvements could possibly consist of:

- Widening to a three-lane section north of Acres Street would improve throughput on Flood Avenue by allowing left turns a place to get out of the flow of traffic.
- Alternatively, a four-lane section could be assessed, allowing off-peak parking along the street curb, while greatly increasing the throughput capacity during peak hours.
- Access management of driveways along the roadway by the provision of cross access among adjacent parking lots that would allow consolidation of driveways, increasing net available off-street parking and further improving the throughput capacity of the roadway.
- Provision of sidewalks continuously along both sides of Flood Avenue to facilitate walking between neighborhoods and retail

The segment between Robinson and Acres Streets would receive one treatment concept, while the segment between Acres and Main Streets would receive another more residential set of treatments.


W. ROBINSON ST. - W. ACRES ST
FLOOD AVE
TRANSPORTATION PLAN
CITY OF NORMAN
17
FIGURE
W HAYES ST
W MOSIER ST
W ROOSEVELT

W. JOHNSON ST
FLOOD AVE
W. JOHNSON ST
CITY OF NORMAN
TRANSPORTATION PLAN
CIVIL
FLOOD AVE
W. ROBINSON ST - W. ACRES ST
10
FIGURE

CITY OF NORMAN
TRANSPORTATION PLAN
FLOOD AVE
W. ROBINSON ST. - W. ACRES ST.
19

CITY OF NORMAN
TRANSPORTATION PLAN
CIVIL
FLOOD AVE
W. ROBINSON ST - W. ACRES ST
20

CITY OF NORMAN
TRANSPORTATION PLAN
FLOOD AVE
W. ROBINSON ST - W. ACRES ST
21

Berry Road

Berry Road, between Robinson Street and Imhoff Road
(Implementation Action M3f)

Purpose: Create a Multimodal Corridor

Berry Road is predominantly a two-lane roadway, with auxiliary lanes provided at major intersections. The development along Berry Road can be characterized as predominantly residential, with commercial development at the major intersections of Robinson Street, Main Street and Lindsey. Norman High School lies at the northeast corner of Berry Road at Main Street. South of Lindsey Street, adjacent development is single family homes. Some parallel parking provisions have been installed, with financial participation by adjacent residents, along Berry Road between Dakota and Dorchester Streets. Travel demand modeling for 2035 estimates that Berry Road will operate at acceptable levels of service as a two-lane roadway with auxiliary lanes at major intersections. As such it would make a good bicycling corridor given a few more feet of width. The Pavement Condition Index along the majority of Berry Road is below acceptable standards. Future reconstruction of Berry Road will allow the opportunity to provide a two-lane corridor with bike lanes along its length from Robinson Street to Imhoff Road. Roundabouts may be considered for intersection traffic control treatments in lieu of traffic signals at all except Robinson, Main and Lindsey Streets to affect corridor traffic calming. Other considerations for this roadway may include constructing a three-lane roadway with bike lanes between Robinson Street and Lindsey Street that could be re-striped to a four-lane roadway if needed in the future to serve as a north-south circulator roadway to provide an alternative to 24th Avenue W. and Flood Avenue as traffic volumes increase over time. Also, CART has identified Berry Road as a corridor of interest for a future bus route, which may indicate the need for providing bus pullover bays at the bus stops, which may be combined with the space allocated for bike lanes as needed to conserve right-of-way.