

CHAPTER 1

INTRODUCTION

In 1994, the Sherman-Denison-Howe Metropolitan Planning Organization (MPO) prepared a 20 year long range Metropolitan Transportation Plan (MTP) for the urbanized area as mandated by the *Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991*. In MTP, the MPO identified bicycle and pedestrian mobility as an important factor in congestion management and air quality management. In 1995, the MPO formed a subcommittee of the Citizens Advisory Committee(CAZ) to formulate recommendations regarding bicycle and pedestrian mobility. CAZ consisted of local motorists, bicyclist, pedestrians and other interested citizens. The catalyst for this Bicycle and Pedestrian mobility plan does not come from the planners' desires to respond to issues of increasing automobile congestion and poor air quality but also from ISTEA to reduce reliance on the single occupant vehicles (SOV). ISTEA states:

It is the policy of the United States to develop a National Intermodal Transportation System that is economically efficient and environmentally sound, provides the foundation for the Nation to compete in the global economy, and will move people and goods in an energy efficient manner.

The National Intermodal Transportation System shall consist of all forms of transportation in a unified, interconnected manner, including the transportation systems of the future, to reduce energy consumption and air pollution while promoting economic development and supporting the Nation's preeminent position in international commerce.

ISTEA shifted the federal, state and local governments approach to transportation from motorized modes to "non-motorized" modes. U.S. Department of Transportation in 1990 issued a national transportation policy entitled *Moving America* stating:

" It is Federal Transportation policy to: promote increase use of bicycling, and encourage planners and engineers to accommodate bicycle and pedestrian needs in designing transportation facilities for urban and suburban areas"

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Recognizing the importance of non-motorized transportation, William Burnett, former Executive Director of Texas Department of Transportation wrote a memorandum dated February 7, 1994 to all district engineers stating:

“Every road, with few exception, is a potential bicycle way. This concept requires full consideration on both new transportation projects, and to retrofit, over time, the backlog of roadways not currently scheduled for improvement”.

CHAPTER 2

Bicycle and Pedestrian Facility Design Concepts

Bicycle and pedestrian facilities can be divided into three classes as Class I, II and III and IV. Figure 2.1 shows the four Classes.

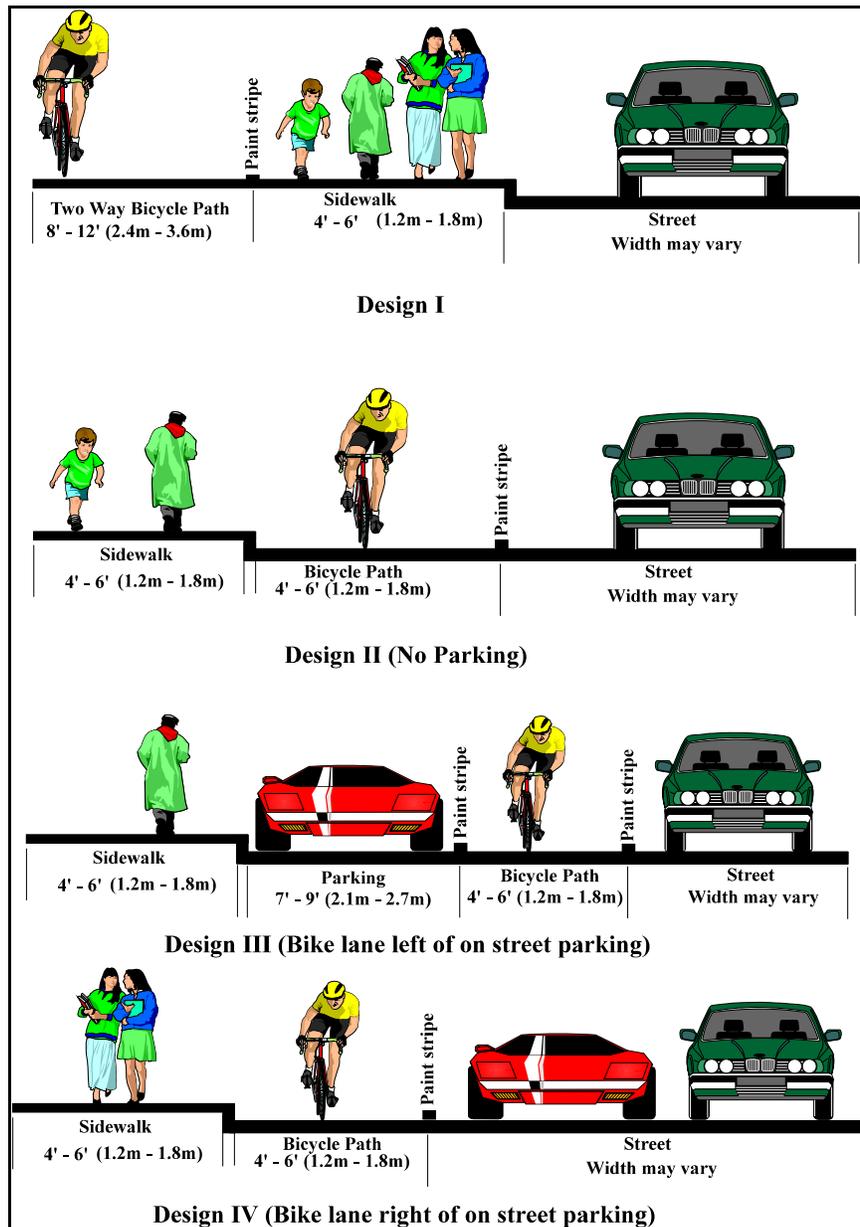


Figure 2.1

Class I facility provides separated right-of-way designated for the use of bicycles. Class I type is mostly found in city parks or parallel with major arterials.

Class II type facility provides exclusive right-of-way for bicycles in the travel lane of automobiles. This type is opted when additional right-of-way is not available. Pedestrian walkways are provided with a curb.

Class III type facility shares roadway right-of-way with signs placed on posts or painted on the pavement. These are found in bigger metropolitan areas.

Following factors were considered in the design:

1. Effective linkage of businesses, schools, churches and residential areas.
2. Maximum separation of bicycles from pedestrians and vehicles.
3. Maximum usage of available streets and right-of-way.
4. Development of loop routes.
5. Avoid intersections of two arterial streets.

A good bicycle and pedestrian path should be clearly marked and should have smooth surface. The path should be sufficiently wide for rider comfort. Figure 2.2 illustrates proposed designs for the bicycle and pedestrian facility.

It must be noted that the safety of any path mainly depends on the user. Intersection are a common problem with bicycle paths with through bicyclist conflicting with right turning vehicles. Even though the Bicycle and Pedestrian path is designed with safety in mind, it is the user who has to practice caution. In a community such as Sherman-Denison-Howe urbanized area motorist are not accustomed to bicyclist and pedestrians. In such a situation, measures to increase awareness of the presence of bicyclist and pedestrians exercising extreme caution.

CHAPTER 3

Bicycle Facility Demands

Texans have depended on their automobiles as the primary mode of transportation. Public transportation, bicycling to work and walking to work are alien terms in many towns. As a result very few towns in Texas have bicycle and pedestrian paths. The following criteria need to be met in order to have an effective bicycle/pedestrian system

- 1) Demand for a bike/pedestrian system.
- 2) Topography should be relatively simple.
- 3) Bicycle/pedestrian facility should be safely separate from moving vehicles.
- 4) Weather conditions should be good throughout the year to have an effective bike/pedestrian system.
- 5) Commuting trip should be relatively small.

In order to find how the Sherman-Denison-Howe urbanized area felt about a Bicycle and Pedestrian path a survey was conducted in late 1995. 1500 surveys were distributed and 669 surveys were received. Surveys were distributed at Austin College, Sherman and Pottsboro high schools and to several residents. Pottsboro was included in the survey because of its rapidly increasing population increasing its chances of inclusion in the urbanized area. Following are the questions asked in the survey.

BICYCLE AND PEDESTRIAN NETWORK SURVEY

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The Metropolitan Transportation Planning Organization is conducting a Bicycle and Pedestrian Study for the Sherman-Denison-Howe urbanized area. Your input will be used to help determine the type and location of pedestrian\bicycle network for the urbanized area. Thank you for your time.

Pedestrian = walking, jogging, skate boarding, roller blading

Check one box per question.

1. Do you think the streets of Sherman-Denison-Howe are safe for bicyclist and pedestrians. Yes No
2. Do you think adding walking/bike path with curb dividers and safety signs would make bicycling & pedestrian traffic safer? Yes No
3. Do you bicycle? to work for recreation/exercise do not bicycle
4. How often might you, your Children or grandchildren use a pedestrian/bike path? Daily Weekly Monthly
5. What places do you think the pedestrian\bicycle path should connect? Check all that apply. Schools Mall Stores Parks
6. Do you think foot\bike traffic will increase, if a pedestrian\bike path is built? Yes No
7. Your age group (Optional) 10-20 21-30 31-40 41-50
 50-65 above 65
8. Would you like to see the Pedestrian\ Bicycle path go through your neighborhood? Yes No

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| 9. Which part of the urban area do you reside? | Street Name City | Closest intersection |
|--|---------------------|----------------------|
|--|---------------------|----------------------|

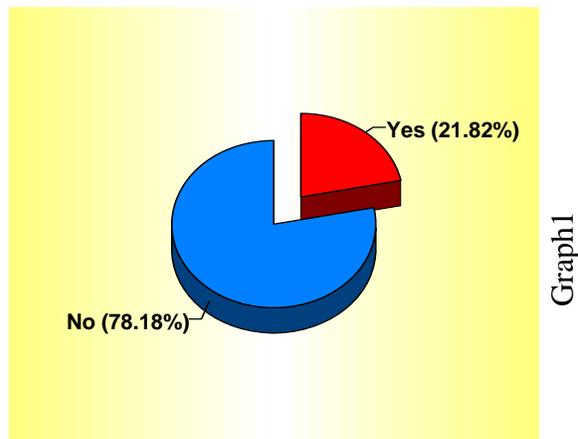
Comments: (Use additional sheets if necessary)

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Following are the results of the survey with comments.

1. Do you think the streets of Sherman-Denison-Howe are safe for bicyclist and pedestrians.

| YES | NO | TOTAL COUNT |
|-----|-----|-------------|
| 146 | 523 | 669 |



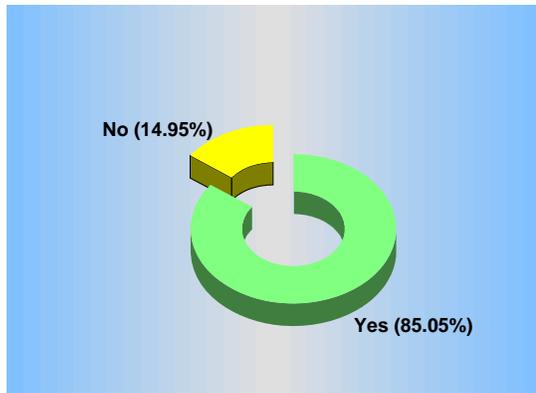
Comments received on question 1

1. Yes for pedestrians but no for bicyclist
2. Not main thoroughfares unless had markings
3. People are not educated how to react to bicyclist.
4. Some no
5. Generally not safe
6. Yes & No
7. Yes with more automobile driver education!
8. Safe on some area
9. It depends on the streets
10. There is not much bicycling through my neighborhood
11. Depends on what street.
12. On residential streets only.

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2. Do you think adding walking/bike path with curb dividers and safety signs would make bicycling & pedestrian traffic safer?

| YES | NO | TOTAL COUNT |
|-----|-----|-------------|
| 569 | 100 | 669 |



Graph 2

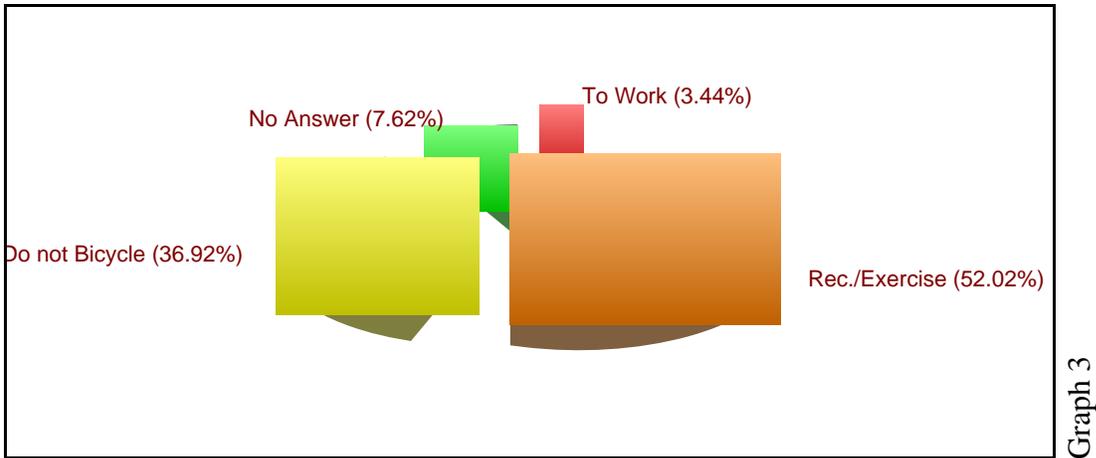
Comments received on question 2

1. No to curb dividers as they are expensive. Put money into bike racks.
2. Maybe
3. Extra lighting
4. If the city of Sherman builds it people will come to exercise on it. Great idea!

3. Do you bicycle?

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| To Work | For Recreation/Exercise | Do not Bicycle | No Answer | Total |
|---------|-------------------------|----------------|-----------|-------|
| 23 | 348 | 247 | 51 | 669 |

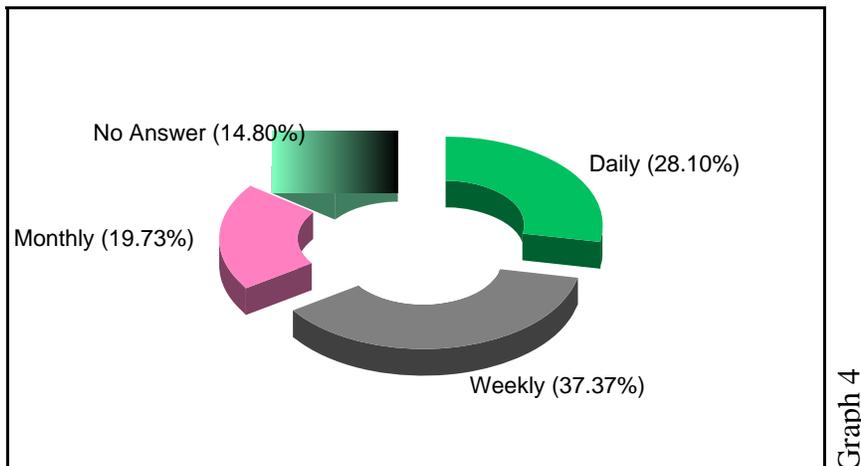


Graph 3

No comments were received for this question.

4. How often might you, your children or grandchildren use a pedestrian\bike path?

| Daily | Weekly | Monthly | No Answer | Total |
|-------|--------|---------|-----------|-------|
| 188 | 250 | 132 | 99 | 669 |



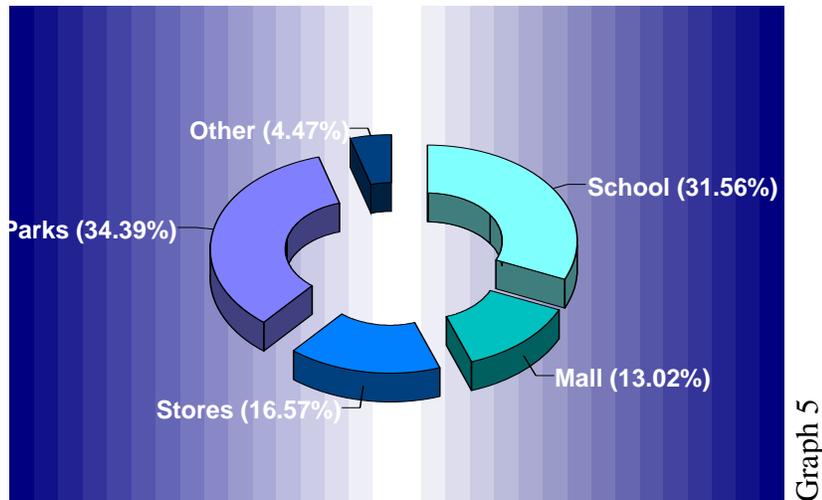
Graph 4

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No comments were received for this question.

5. What places do you think the bicycle/Pedestrian path should connect? Check all that apply.

| Schools | Mall | Stores | Parks | Other | Total |
|---------|------|--------|-------|-------|-------|
| 480 | 198 | 252 | 523 | 68 | 669 |



Places marked under option other are;

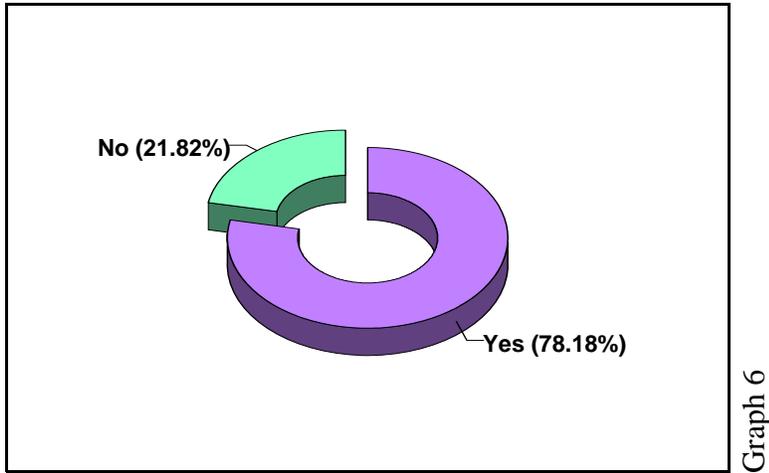
1. Get the Rails-to-Trails path from Denison to Sherman
2. Neighborhood
3. Major industries and grocery stores
4. Sherman/Denison
5. Routes
6. Need to keep the path away from traffic. Follow creek or railroad
7. None
8. Residential areas.
9. Downtown

10. All
11. No need
12. Austin College
13. Non-traffic areas.
14. One or more east/west highway crossings
15. All neighborhoods with sidewalks should be repaired immediately
16. Streets
17. Busy Streets
18. Residential side walks!
19. My house to my Office
20. Sport fields, Bearcat Stadium.
21. Hospital
22. Work places.
23. Nowhere
24. Everywhere
25. Trails
26. Roads and highways
27. Restaurant, lake & Golf
28. Library
29. Convert railways to bike paths
30. Other area cities
31. City centers
32. Crossing Texoma Parkway
33. Churches

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6. Do you think foot\bike traffic will increase, if a pedestrian bike path is built?

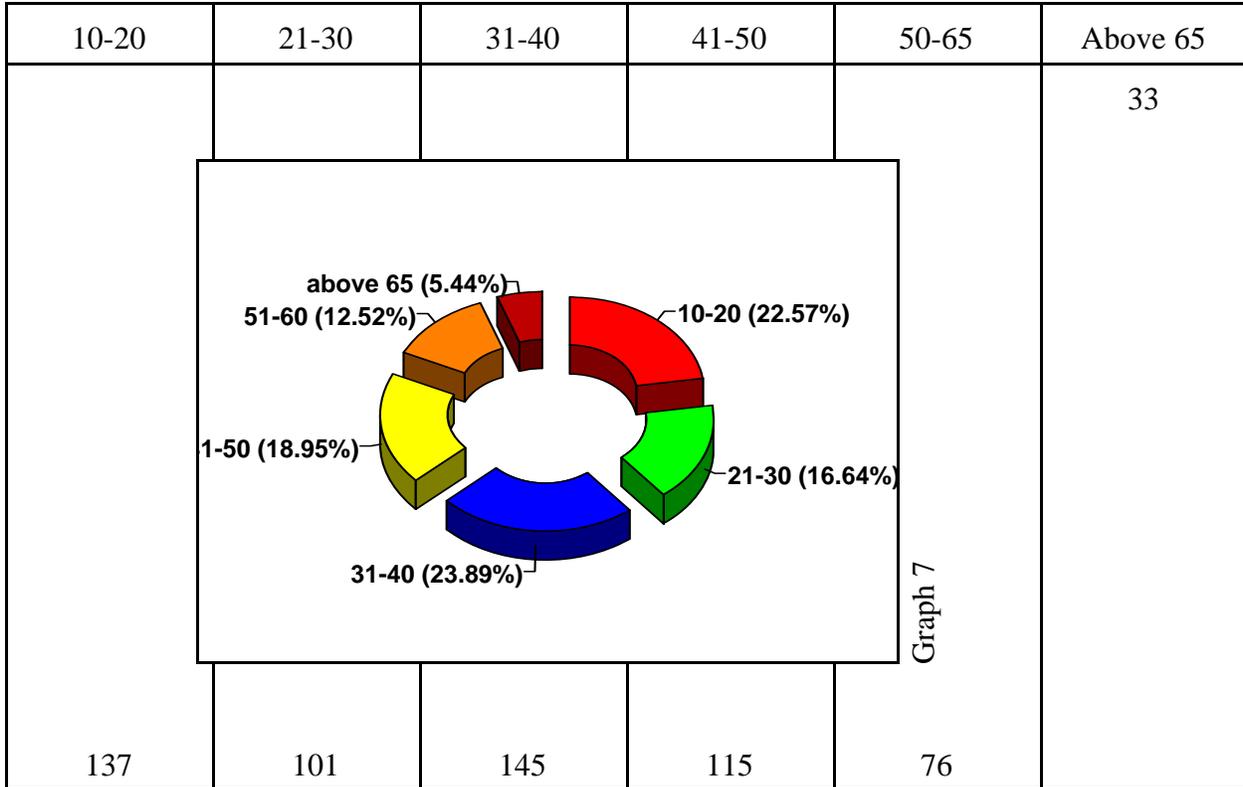
| Yes | No | Total |
|-----|-----|-------|
| 523 | 146 | 669 |



1. A bike path will be used.
2. Will be used for recreation, not business
3. If people feel safe

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7. Your age group (Optional)



8. Would you like to see the Bike/Pedestrian path go through your neighborhood?

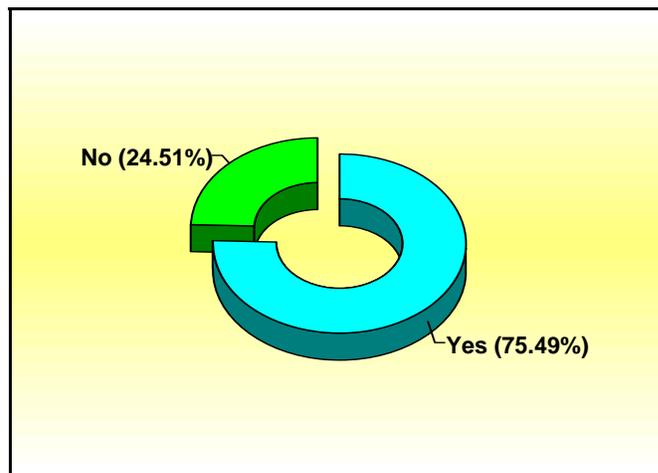
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| Yes | No | Total |
|------------|------------|-------|
| 505(75.5%) | 164(24.5%) | 669 |

Bicycle Survey Comments:

From Sherman:

1. Bicycle racks are lacking all over town and needed at all of the locations listed in Q5.
2. I see problems combining too many kinds of transit on one trail. I sure enjoyed bicycling in Fort Collins, Colorado, Seattle and Washington on vacation-many special bicycling trails.
3. I do not bike on regular basis at present, tho' I own a bike. A trail system away from city streets would probably encourage me to do more riding. Traffic bothers me.
4. Could the city lakes (recreational and water reservoirs) be available for bike & walking paths? Streets are even dangerous for cars. The tax payers have paid dearly for the numerous lakes for water & flood control- let's use the areas to help make healthier citizens- and a unique city!
5. This concept is old and not particularly useful in today's society/community - what people want and need are (places) parks and nature trails - not something else on the streets - If they are going to use the streets for this type of activity - they want the freedom to go where they wish without restrictions or a curbed bike/walk lane. Plus - who is going to maintain such a trail once it is established/built - it wont get any further attention after the initial setup - It's hard enough to



Graph 8

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maintain current streets. Bottom line - we don't need to clutter our streets with these bike lanes - we need park space with this activity. Look at Fairview park - it has a fairly nice walk/jog trail that is used extensively. This is the type of upgrade that should be provided.

6. Repair/improve existing sidewalks would be wonderful!

7. Many curbs do not allow on and off of what few sidewalks we have. There are few right-of-way where TXDOT has shoulders - bicycling is very dangerous in most areas of town. There are no paths between park areas. We need this kind of facility.

8. I would bike to work, if it was safe enough to. It seems a shame to use my car, but I don't feel safe on a bike here.

9. They need more off road paths for mountain bikes.

10. The city spent a bundle doing bike paths in the streets - was a disaster totally.

11. This is really a good idea. AC students would most likely walk or skateboard/roller blade instead of drive. This would be good for the environment as well. Please do.

12. If a sidewalk for this purpose is built, I firmly believe that the final vote should come from the individuals whose property would be directly affected. Other points of consideration (including permission from private land owners) are the following, compensation, alternate route thru' "unwilling" neighborhoods and maintenance of route (will the path/route be lighted in dark areas, potholes etc.)

13. This is a great idea!

14. I would like to see bike paths simply because it would be safer for cyclist.

15. I think that there are some good pedestrian/bike paths should be the first objective.

16. The streets of Sherman are unsafe of bicyclist, pedestrians, skaters and children. There should also be more public transportation.

17. I walk about 5 days a week and would appreciate sidewalks to walk on.

18. It would help for the city to keep some bike "paths" cleaner (Grand Ave. Overpass)

19. We have waited forever to have sidewalks/curb repaired so our children could enjoy them. Our family would walk/ride bikes constantly if we have nice smooth walks! Yes! Hurry!

20. When running I enjoy running on the road-it's a better running surface-the side walks are dangerous and not available in most areas. By dangerous, I mean they are in horrible condition. I'd rather risk being hit by a car. I think the chances of that are far less than breaking my leg or spraining my ankle on the broken sidewalk. Also, I have two children age 1 - - 6. They love to roller blade and bike. This opportunity would be wonderful and safe for them. Hope to see it real soon!!

21. Make bike paths everywhere!

22. Peter Schultz 813 2284 In my experience, this is a cultural problem- too many drivers don't like bikes. Paths probably can't solve it.

23. Utilization of the several abandoned railroad right of way paths would be ideal to cross connect parts of town. Other short paths could then branch off of these major ones. These connect parts of town. Other short paths could then branch off of these major ones. These include the abandoned north south path from Tom Thumb to Hwy 691 or further that would connect Midway Mall & Other shopping areas. Also the east-west path that crosses sunset to FM 1417.

24. Go for it!!

25. Please don't forget about roller bladers!

26. I think a multipurpose trail with a smooth surface for roller blading would be great!. There is no safe place to do this in town!

27. There should be a bike path so kids could use their bikes and exercise freely.

28. This will be great for reduction of pollution.

29. Be nice to have a safe place to encourage exercise.

30. This would be a great idea and I think it would encourage people to get out more.

31. I think the streets are not safe in Denison.

32. Would be great!!!

33. Great for kids.

34. Great idea. Long overdue.

35. Great idea! Glad to hear you're making these plans.

36. I ride my bike approximately 8 miles per day from home to work in downtown Sherman. In

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addition I ride for enjoyment in evenings. Not because I have to, because it is such great pleasure and exercise (we own 4 cars). I survive only because I am careful and not because the streets are really safe for bicycles. The city would really benefit from a good bike path!

37. Wonderful idea!

38. I would prefer to have a trail through abandoned railways instead of an existing roadways.

39. Sherman is in dire need for more traffic signals. It is very dangerous for bicycle riders.

40. Sure hope the old railroad trail - bike path from Sherman to Denison is completed as will be a much safer area to ride. We were in Michigan recently and found several of these bike paths in operation. They sure make riding nice! Randy & Ida Hudgins, 1210 E. Lamar, Sherman.

41. Bike & Pedestrian paths are the responsibility of those who use them.

42. I think this is a great idea! I'm sure myself and other corporate health professionals would be willing to educate community on benefits of biking/walking/roller blading (or correct form). Please consider adding stations signs through out the trails. Ex-station #1 10 lunges each leg: Station #2 25 jumping jacks. This would add very minimal expense and would add great variety to use of the trail. Thanks- Andrea R. Pflughoft J&J 903 868-9018

43. I would allow my children to ride their bicycles to school if there was a bike path. This would develop a good self-esteem, responsibility and better their health. It would also cut down on pollution.

From Denison:

44. A great idea! Would promote our idea as a friendly area for family recreation.

45. A) Country of Denmark, 33% of the workers ride their bike to work. B) Biking beyond just exercise, but a means of travel. Encourage area businesses to survey workers to see if they would put in bike racks or secure bike areas, would workers ride to work? Would this company also need to supply locker areas to store gear/clothes for workers? C) The city of Seattle has extensive bike trails, bike racks on buses for those that live in the suburb to get into the city, and the city has bike racks on every blocks so people can stop, secure, and shop. d) Bikers give humans well needed

exercise and wanes these environmental destroying gas gusslers.

46. As I understand it - there has been more interest in utilizing the old RR bed between Denison & Sherman. Rails-to-Trails work on these kind of projects.

47. A bike path is desperately needed for Morton street in Denison.

48. I have lived in Fort Worth, who has a tremendous bike/walking travel system - 20 + miles. It works very well, beginning at parks and running along the Trinity river. It would make a good study. Parks linked to other cities using old RR right-of-ways would be tremendous.

49. The hike/bike trail etc should not be a priority in transportation planning.

50. This is a wonderful idea! Much needed for this area, which overs little in the way of recreation, particularly Denison. What happened to the idea of using the old railroad tracks (minus the rails) as bike/pedestrian paths?

51. I have three children within walking/riding distance of 2 schools. However, due to traffic I am pensive about allowing them to walk/bike to school, tennis courts, or friends' homes. It would strongly support this program. As a health educator for Grayson Co. Health Dept. We favor anything that will promote wellness & better health. Good luck. Let me know what we can do towards this community development--Carla

CHAPTER 5

Feasibility of Bike/Pedestrian Path

The streets connecting neighborhoods with schools, parks and stores were identified. These streets were analyzed for the feasibility of adding a bike/pedestrian path. The following tables lists these streets.

Sherman Bike/Pedestrian Path

| Name | From | To | Description/Feasibility |
|---------|--------|--------|--|
| FM 1417 | US 75 | FM 691 | FM 1417 has two 12'(3.6m) travel lanes and two 10' (3.0m) shoulders. Due to high traffic volume bike/pedestrian system should be separate from the travel lane and shoulder. Design II should be used in this case. A 4'(1.2m) bike path and 4'(1.2m) shoulder is recommended. |
| FM 131 | FM 691 | 1200 N | This road has two 15'6"(4.7m) lanes. Half of this section is rural and the other urban with curb and gutter. This road is heavily used by Grayson County College students. The Bike/pedestrian system should be separate from the travel lane. Design II should be used in this case. A 4'(1.2m) bike path and 4'(1.2m) shoulder is recommended. |

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|----------|--------|---------|---|
| Travis | 1000 N | FM 1417 | To block 1900 S this street is 42' wide with two lanes. This section has roadside parking on both sides. It also has sidewalks on the west side. To safely operate a bicycle, a 4' bike lane should be added based on design II. Section from 1900 S to FM 1417 is only 30' wide and is not capable of supporting a bike path without widening the existing roadway 4' on each side. The bridge on this roadway also needs to be widened. |
| Lamberth | 2200 W | 700 E | This roadway is not striped and is 37' wide. Though this roadway is frequently traveled it can be restriped to accommodate bike lanes. Signs indicating bike lanes should be placed. This roadway has no sidewalks and a addition of 4' sidewalk is recommended (Design II). |
| Masters | 2600 N | 2500 N | 2600 N block leads to K-mart and is only 22' wide. This section cannot be used for bikes and pedestrians widening and adding (Design II)4' bike lanes and shoulders. 2500 N block leads to the post-office and is 37' wide and does not have striping. This section can be restriped to accommodate the bike path. This section does not have sidewalk. If sidewalks are added a 4' minimum is recommended. |

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| Gallager | 800 E | 1700 E | This section is 42' wide with two 15' lane and one 12' left turn lane. This section can be restriped with two 11' lanes one 11' left turn lane and two 4' bike lanes. This section has no sidewalk. If added a minimum of 4' on each side is recommended. |
| Taylor | 1900 W | 800 E | From block 1900 W to 100 W the road is 31' wide and has parallel parking . This section cannot be used without adding 4' bike lanes. There are no sidewalks except at the Fairview park. The section from 100 E to 800 E is 45' and has four 11' lanes. This section also cannot support a bike lane without widening the existing section. |
| Grand Ave | 1400 N | 100 S | This section is 61' wide with two 11' lanes and two 20' lanes. Part of the 20' lane is used for parallel parking. This section has sidewalks on both sides. Existing section cannot be restriped to accommodate a bicycle lane. 4' bike lane can be added on both sides by widening this road towards the median. |
| Loy Lake | 1700 N | 3200 N | This section is 37' wide with a sidewalk on the east side. It contains two 11' lanes with one 15' left turn lane. This road cannot accommodate a bike path unless widen on the west side. The bridge on Loy Lake over US 82 has sidewalks on either side but not wide enough to accommodate bike lanes. |

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|--------------|--------|-------|--|
| Ricketts | 2900 N | 100 S | This road is 31' wide and has no striping and has low speed traffic(residential). This is ideal for a bike path. This section has no sidewalk and may have to be added. |
| Sunset | 700 N | 100 N | This road is 31' wide has no striping. This will be able to handle a bike path. There is a sidewalk on the west side. |
| Hillcrest Dr | 1400 W | 700 W | This road is 31' foot wide and has no striping. This will be able to accommodate a bike path. There is no sidewalk on this section. A 4' wide sidewalk may be added on each side. |
| Pecan | 1500 E | 200 E | This road is 31' foot wide and has no striping. This will be able to accommodate a bike path. There is no sidewalk on this section. A 4' wide sidewalk may be added on each side. |
| Washington | 1900 W | 100 E | This section is 30' wide and has high traffic volume. This section is not safe for bike lanes without widening the existing section. Sidewalks may be added at the time of widening. |
| Ely | 500 N | 300 N | This section is 25' wide and has no sidewalks. This roadway needs to be widened to accommodate a bike and pedestrian path. |

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|----------|--------|--------|--|
| SH 56 | 2600 W | 1600 W | This section is 44' wide and has two 12' lanes and one 14' left turn lane and two 3' shoulders. Due to high volume and speed, it would be too dangerous to accommodate a bike path without widening the existing section |
| Houston | 1500 W | 1600 E | This section is 44' wide with sidewalks on each side. It has two 12' lanes and one 10' and one 4' shoulder. This section can be restriped to accommodate one bike lane as this section has one way traffic. Adequate signs to warn the motorist of the presence of bicyclist should be provided. |
| Harrison | 100 S | 100 S | This section has 31' wide with a sidewalk on the west side. This section can be restriped to accommodate the bike path. |
| Tolbert | 100 S | 100 S | This section is 38' wide and has two lanes without striping. This section could be striped to accommodate a bicycle path. This section has no sidewalk and a 4' sidewalk may be added |
| Lamar | 1400 W | 1700 E | The section to 1600 E is 31' wide with sidewalk on both sides. It has two 15.5' wide lanes. This section can be restriped to accommodate one bike lane. 1700 E block is 48' wide with sidewalks on both sides. This section has three 15' lanes. This section can also be restriped to accommodate the bike path. Adequate signs to warn the motorist of the presence of bicyclist should be provided. |

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| Rusk | 400 N | 200 S | The section to 300 N is 64' wide with sidewalk and parallel parking on both sides. This section has centerline striped. It can be restriped to accommodate a bike path. The section from 200 N to 100 S is 44' wide without sidewalks. This section can also be restriped to accommodate a bike path. 200 S block is 30' wide and has no sidewalks. This section cannot accommodate a bike path without widening the existing section. |
| Elm | 500 N | 200 S | This section has 27' wide lanes with sidewalk on the east side. Parallel parking on both sides. This section needs to be widened to accommodate a bike path. |
| Crockett | 400 N | 200 S | This section is 43' wide with sidewalk and parallel parking on both sides. This section can be restriped to accommodate a bike path. |
| Walnut | 400 N | 1200 S | To 200 S block the street is 41' wide with sidewalks and parallel parking on both sides. This section needs to be widened to accommodate a bike lane. The section from 300 S from 1200 S is only 30' wide with sidewalks and parallel parking on both sides. This section needs to be widened to accommodate a bike lane. |
| Centennial | 200 E | 200 E | This section is 25' wide with parallel parking on both sides. This section needs to be widened to accommodate a bike path. |

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|------------|--------|--------|--|
| Montgomery | 1300 S | 1400 S | This section is 31' wide with parking on both sides without sidewalks. This section needs to be widened to accommodate a bike path and sidewalk. |
| Montgomery | 600 S | 700 S | This section is 31' wide with parking on both sides with sidewalks. This section needs to be widened to accommodate a bike path. |
| King | 200 E | 200 E | This section is 31' wide with sidewalk and parking on both sides. This section needs to be widened to accommodate a bike path. |
| Willow | 200 S | 1200 S | This section is 31' wide with sidewalk and parking on both sides. This section needs to be widened to accommodate a bike path. |
| Summit | 900 E | 1100 E | This section is 31' wide with parking on both sides. This section needs to be widened to accommodate a bike path and sidewalk. |
| Dewey St | 200 S | 1400 S | This section is 44' wide with sidewalk on the east side. This section needs to be widened to accommodate the bike lanes. |
| Montgomery | 300 N | 200 S | This section is 31' wide with parking on both sides. This section needs to be widened to accommodate a bike path and sidewalk. |
| Baker St | 100 S | 500 S | This section is 37' wide without striping. This can be restriped to accommodate bike paths. This section has no sidewalks and needs to be added. |

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|-------------|--------|----------|--|
| Brockett | 100 E | 1400 E | This section is 37' wide with shoulders and parallel parking on both sides. This section needs to be widened to accommodate bike paths. |
| Hill | 100 E | 100 E | This section is 20' wide with shoulders on the north side. This section needs to be widened to accommodate bike paths. |
| Piner Evans | 100 E | 100 E | This section is 25' wide without shoulders. This section need to be widened to accommodate bike paths and sidewalks.. |
| Walnut | 1000 N | 900 N | This section is 24' wide with sidewalk on the west side and parking on both sides. This section needs to be widened to accommodate a bike path. |
| College | 100 E | 500 E | This section is 31' wide with no sidewalk and parking on the south side. This section needs to be widened to accommodate a bike path and sidewalk |
| Kerr | 100 E | 100 E | This section is 27' wide with no sidewalk and parking on the both sides. This section needs to be widened to accommodate a bike path and sidewalk |
| Music | 1000 N | 900 N | This section is 17' wide and needs to be widened to accommodate a bike path and sidewalk. |
| SH 91 | US 75 | Spur 503 | This section is 68' wide with four 12' lanes and two 10' shoulders. This section cannot be restriped to accommodate bike/pedestrian paths. It should be widened. |

Bicycle & Pedestrian Mobility Plan

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| FM 691 | FM 1417 | SH 91 | The section from FM 1417 to 5200 and from 4700 to sh 91 is 30' wide with two 12' lanes and two 3' shoulders. This needs to be widened to accommodate a bike path. The section from 5300 to 4600 is 44' without shoulders. It has four 12' lanes and needs to be widened to accommodate the bike and pedestrian paths. |
| Frisco | 4300 N | 4600 N | This section is 30' wide with two 12' lanes and two 3' shoulders. This section needs to be widened to accommodate a bike path. |
| Fallon Dr | 2200 E | 2200 E | This section is 44' wide with two 12' lanes and one 14' left turn lane two 3' shoulders. This section can be restriped to accommodate a bike path. |
| US 75 Access | FM 1417 | Ponderosa | This section is 40' wide with two 8' shoulders and has no sidewalks and parking. Due to high traffic volume this section needs to be widened to accommodate the bike path. Bike path provided here should be 8' wide to accommodate two way bike traffic and should be separate from the roadway section. Follow Design I without the sidewalk. This section is 5 miles long and is too long for pedestrians to use it. |

Denison Bicycle/Pedestrian Paths

| Name | From | To | Description/Feasibility |
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| FM 131 | FM 691 | Loy Lake | This section is 25' wide and is not paved. It needs to be paved and widened in order to accommodate a bike path and sidewalk. |
| Loy Lake | 3500 W | 1700 W | From 3500 W to 2700 W the section is 20' wide and requires widening to accommodate a bike path and sidewalk. The section from 1600 W to 1000 W is 33' wide and has parking on both sides. This section also needs to be widened to accommodate a bike path and sidewalk. |
| Bullock | 1600 W | 1000 W | This section is 37' wide with parking on both sides. This section has no sidewalk. It needs to be widened to accommodate a bike path and sidewalk. |
| Scullin | 1900 S | 3200 S | This section is 27' wide with parking on both sides. This section has no sidewalk. It needs to be widened to accommodate a bike path and sidewalk. |
| Florence | 800 W | 800 W | This section is 36' wide and has sidewalk on the north side and parking on the south side. This section can be striped to accommodate a bike path. |
| Park Ave | 1900 S | 1900 S | This section is 22' wide and has parking on both sides. It needs to be widened to accommodate a bike path and sidewalk. |
| Woodlawn | Spur 503 | 2400 S | This section has four 15' lanes with no sidewalks. This section has a high traffic volume and should be widened to accommodate a bike path. |

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| Armstrong | 2200 S | 100 S | The section from 2200 S to 1300 S is 44' wide with four 12' lanes and no sidewalk. This section needs to be widened to accommodate a bike path. The section from 1100 S to 100 S is 34' wide and has sidewalk on both sides and parking on the east side. This section also needs to be widened to accommodate a bike path. |
| Chandler | 1600 S | 1600 S | This section is 32' wide and has no sidewalk or parking. This section can be striped to accommodate a bike path. Sidewalks need to be added. |
| Hanna | 900 W | 900 W | This section is 32' wide with parking on both sides. It needs to be widened to accommodate the bike lanes as well as the sidewalk. |
| Scullin | 1500 S | 900 N | This section is 32' wide with parking on both sides. It needs to be widened to accommodate the bike lanes and sidewalk. |
| Lang | 1400 S | 1000 S | This section is 31' wide and has parking on both sides. This section needs to be widened to accommodate the bike lane and sidewalk. |
| Hull | 1800 W | 1600 W | This section is 36' wide with parking on both sides. It has two 10' lanes and needs to be widened to accommodate bike lanes and sidewalks. |
| French | 800 S | 900 S | This section is 30' wide and has parking on both sides. This section needs to be widened to accommodate the bike lanes and sidewalk. |

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| Fairbank | 900 S | 800 S | This section is 30' wide and has parking on both sides. This section needs to be widened to accommodate the bike lanes and sidewalk. |
| W Day St | 1700 W | 200 E | From 1700 W to 1000 W the section is 36' wide and has no sidewalk or parking. This can accommodate a bike path. The section from 900 W to 600 W has both sidewalk and parking. This section needs to be widened to accommodate bike paths. The section from 500 W to 200 W is 26' wide and has a sidewalk and parking on the sidewalk and needs to be widened. The section from 100 W to 200 E is 31' wide and has parking on both sides. This section also needs to be widened to accommodate the bike path. |
| Crawford Ln | 3200 W | 200 E | From 3200 W to 1700 W the section is 37' wide and has parking on both sides and needs to be widened to accommodate bike paths. The section from 1600 W to 1200 W is 45' wide and has sidewalk on the north side and parking on both sides. This section can be restriped to accommodate the bike path. The section from 900 E to 200 E is 45' wide and has sidewalks and parking on both sides. This section can also be restriped to accommodate the bike path. |
| Owings | 200 E | 200 E | This section is 30' wide and has sidewalks on both side but has no parking. This can be restriped to accommodate the bike lanes |

Bicycle & Pedestrian Mobility Plan

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| Owing | 700 W | 400 W | This section is 37' wide and has sidewalks and parking on both sides. This section has to be widened to accommodate the bike path. |
| Morgan | 1100 W | 200 W | This section is 37' wide and has sidewalks and parking on both sides. This section has to be widened to accommodate the bike path. |
| Chestnut | 700 W | 200 W | From 700 W to 600 the section is 36' wide and has sidewalks and parking on both sides. This section has to be widened to accommodate the bike path. The section from 500 W to 200 W is 55' wide and has sidewalks and parking on both sides. This section can be restriped to accommodate the bike path. |
| Main St | 1000 W | 200 W | The section from 1000 W to 900 W is 52' wide with sidewalks on both sides and parking on the north side. This section has four 11' lanes . Widening of this section is not possible. One 4' bike lane can be accommodate by restriping the existing section. The section from 800 W to 200 W is 66' wide and has sidewalks and parking on both sides. This section also cannot be widened and can be restriped to accommodate one bike lane. |
| Lillis | 500 N | 1600 S | This section is 36' wide and has no sidewalks and has parking on both sides. This section has to be widened to accommodate the bike path and sidewalk. |
| Layne | 1000 N | 800 N | This section is 31' wide and has no sidewalks and parking. This section can be restriped to accommodate the bike path. |

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| Morton | 2700 W | 100 E | The section from 2700 W to 1600 W is 48' wide and has both sidewalk and parking. Due to high volume of traffic this section needs to be widened to accommodate the bike lanes. The section from 1500 W to 100 E is 36' wide and has sidewalk and parking on both sides. This section too has to be widened for bicycle paths. |
| Houston | 400 N | 400 N | The section is 40' wide and has sidewalk and parking on both sides. This section too has to be widened for bicycle paths. |
| Sears | 100 E | 500 E | The section is 36' wide and has sidewalk and parking on both sides. This section too has to be widened for bicycle paths. |
| Sixth | 400 N | 400 N | The section is 40' wide and has sidewalk and parking on both sides. This section too has to be widened for bicycle paths. |
| Washington | 1200 W | 200 E | This section is 37' wide and has no sidewalk and has parking on south side. This section can be restriped to accommodate the bike paths. |
| Vaughn | 12 | 30 | The section is 30' wide and has no sidewalk or parking. This section can be restriped to accommodate the bike paths. |

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| Tone | 900 N | 100 N | The section is 37' wide and has sidewalk on both sides and has no parking . This section can be restriped to accommodate the bike paths. |
| Perry | 300 S | 700 S | This section is 34' wide and has no sidewalk but has parking on both sides. This section also needs to be widened. |
| Tone | 300 S | 700 S | This section is 33' wide and has no sidewalk but has parking on both sides. This section also needs to be widened. |
| Mirrick | 1000 N | 2900 S | This section is 37' wide and has no sidewalk but has parking on both sides. This section also needs to be widened. |
| Barrett | 400 S | 400 N | This section is 33' wide and has sidewalk and parking on both sides. This section also needs to be widened to accommodate a bike path and sidewalk.. |
| Fannin | 100 S | 500 S | This section is 36' wide and has sidewalk on east side and parking on both sides. This section also needs to be widened to accommodate a bike path and sidewalk. |
| Burnett | 100 S | 800 S | From 100 S to 200 S the section is 45' wide sidewalk and parking on both sides. This section can be restriped to accommodate the bike path. The section from 300 S to 800 S is 32' wide and has no sidewalk but has parking on both sides. This section needs to be widened to accommodate the bike path. |

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| Munson | 300 W | 300 W | This section is 36' wide and has sidewalk and parking on both sides. This section needs to be widened to accommodate the bike path. |
| Rusk | 900 S | 1200 S | This section is 30' wide and has sidewalk on east side and parking on both sides. This section needs to be widened to accommodate the bike path. |
| Heron | 200 W | 100 E | This section is 36' wide and has sidewalk and parking on both sides. This section needs to be widened to accommodate the bike path. |
| Lamar | 400 S | 1200 S | This section is 32' wide and has no sidewalk and has parking on both sides. This section needs to be widened to accommodate the bike path. |
| Crockett | 400 S | 900 S | This section is 44' wide and has sidewalk and parking on both sides. This section can be restriped to accommodate the bike path. |
| Hull | 200 E | 400 E | This section is 36' wide and has sidewalk and parking on both sides. This section needs to be widened to accommodate the bike path. |

Howe Bike/Pedestrian Path

| Street | From | To | Description/Feasibility |
|---------------|-------------|-----------|--|
| SH 5 | Ponderosa | 700 S | The section from Ponderosa to Duke St is 40' wide with two 8' shoulders and has no sidewalks and parking. Due to high traffic volume this section needs to be widened to accommodate the bike path. Bike path provided here should be 8' wide to accommodate two way bike traffic and should be separate from the roadway section. Follow Design I with sidewalk. From Duke St to 700 S the section is 43' wide with four 10.5' lanes. The bike path provided here should be 8' wide and follow the Design I as mentioned above. |
| Elm St | 100 W | 200 W | This section is 16' wide and has no sidewalk and has parking on both sides. This section needs to be widened to accommodate the bike path. |
| Mayo St | 400 W | 100 W | From 400 W to 300 W the section is 31' wide and has no sidewalk and has parking on both sides. The section from 200 W to 100 W is 23' wide and has no sidewalk but has parking on both sides. Both sections need to be widened to accommodate the bike lanes and sidewalk. |
| Farmington | 500 S | 800 S | This section is 19' wide and has no sidewalks but has parking on both sides. This section needs to be widened to accommodate the bike path. |

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| Duke St | 300 W | 200 E | This section is 36' wide and has no sidewalk and has parking on both sides. This section needs to be widened to accommodate the bike path. |
| Young St | 200 W | 500 E | This section is 25' wide and has no sidewalk and has parking on both sides. This section needs to be widened to accommodate the bike path. |

Pottsboro Bike/Pedestrian Path

| Street | From | To | Description/Feasibility |
|---------------|-------------|------------|--|
| FM 996 | Hardenburg | Hagerman | This section is 36' wide and has no sidewalk and no parking. It has two 11' lanes and two 7' shoulders. This section needs to be widened to accommodate the bike path. |
| Hardenburg | 100 S | Hagerman | This section is 18' wide and has no sidewalk and no parking. This section needs to be widened to accommodate the bike path. |
| Preston Dr | 200 W | Hardenburg | This section is 16' wide and has no sidewalk and has parking on both sides. This section needs to be widened to accommodate the bike path. |
| Hagerman | Hardenburg | FM 996 | This section is 36' wide and has no sidewalk and no parking. This section needs to be restriped to accommodate the bike path. |
| Franklin St | 200 N | Front St | This section is 32' wide and has no sidewalk and has parking on both sides. This section needs to be widened to accommodate the bike path. |

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| Magnolia St | 100 S | 400 S | This section is 20' wide and has no sidewalk and has parking on both sides. This section needs to be widened to accommodate the bike path. |
| William St | 100 W | 400 E | This section is 19' wide and has no sidewalk and has parking on both sides. This section needs to be widened to accommodate the bike path. |
| Front St | 100 E | 400 E | This section is 20' wide and has no sidewalk and has parking on north side. This section needs to be widened to accommodate the bike path. |

CHAPTER 6

Conclusion

The survey done in the metropolitan area clearly indicated the need for a bike/pedestrian. However, an analysis of the existing roadway system showed that only a few roads could accommodate a bike/pedestrian path without costly widening operations. Any future widening operations should incorporate bicycle lanes and sidewalks to have an effective Bike/Pedestrian system. Operating a bike/pedestrian system under existing conditions will be very difficult.