

**MEMORANDUM**

**TO:** Mayor and Town Council

**FROM:** W. Calvin Horton, Town Manager

**SUBJECT:** Response from the North Carolina Department of Transportation Regarding Proposed Improvements to Weaver Dairy Road Between N.C. 86 and Erwin Road

**DATE:** June 25, 2001

The following information regards the North Carolina Department of Transportation response to the Council's endorsement of a three-lane improvement project for Weaver Dairy Road between NC-86 and Erwin Road.

The attached Resolution A would affirm the Council's previous request for a three-lane project for Weaver Dairy Road.

The attached Resolution B would accept the State recommended four-lane median divided project for Weaver Dairy Road.

**BACKGROUND**

Improvements to Weaver Dairy Road have ranked high on the Town's list of projects to be included in the State Transportation Improvements Program since the early 1990's.

In April 1999, the Town and the State hosted a Citizens Informational Workshop to present information on proposed Weaver Dairy Road improvements. Four alternatives were presented at the workshop, two with five-lane cross sections and two with four-lane raised median cross sections. Following the workshop presentation, the Council requested that the State also study alternatives involving four-lane and three-lane cross sections without medians.

On November 14, 2000, the Council sponsored a Citizens' Informational Workshop to provide an opportunity for interested citizens to review drawings and information about the proposed improvement alternatives and to discuss this information with Town and State staff.

On November 20, 2000, the Council held a Public Forum to discuss proposed improvement alternatives and to receive citizens' comments about the project.

On January 22, 2001, the Council received a staff report on the proposed Weaver Dairy Road Improvement Project alternatives, which included staff responses to Council and citizen questions and comments expressed at the November 20, 2000 Public Forum. Town and State staff recommended that the Council adopt a resolution endorsing a conceptual design for Weaver

Dairy Road between NC-86 and Erwin Road, to include a four-lane median divided cross section consisting of two travel lanes in each direction, wide outside lanes to accommodate bicycle use, a narrow raised center median with exclusive turn lanes and refuge for pedestrians, curb-and-gutter and sidewalks along both sides of the road, and bus pull-offs as necessary. Please see attachment #2.

At the January 22, 2001 meeting, the Council adopted a resolution endorsing a conceptual design for Weaver Dairy Road to include a three-lane cross section (without a raised center median) consisting of one fourteen foot wide travel lane in each direction, a continuous center turn lane, curb-and-gutter and sidewalks along both sides of the road, and bus pull-offs as necessary.

The three-lane design endorsed by the Council was subsequently evaluated by the Roadway Design Section and Traffic Engineering Unit of the North Carolina Department of Transportation. In February 2001, the Town was notified that the State would not recommend the three-lane design for funding and construction. Please see Attachment #3.

At its March 5, 2001 regular meeting, the Council discussed the State response and agreed that three Council Members, along with the Manager and key Town staff, should meet with State Transportation Secretary and other representatives of the North Carolina Department of Transportation to request that they reconsider the three-lane cross section endorsed by the Council and agree to proceed with that design for the Weaver Dairy Road Improvement Project. A meeting was arranged in Raleigh on April 4, 2001 at which the designated Council Members presented the Town's case to Transportation Secretary Lyndo Tippet, our Transportation Board Member Doug Galyon, and senior NCDOT staff.

The project design was again evaluated by the State, and we were informed in a letter dated May 21, 2001 from Secretary Tippet that the State had determined that it would not be prudent to make the large expenditures required for the three-lane design endorsed by the Council. Mr. Tippet reiterated the NCDOT's position that the four-lane median divided cross section was the section recommended by the State for construction. Attachment #1 is a copy of Mr. Tippet's letter.

## **DISCUSSION**

A detailed comparison of the alternatives considered by the Council and the State is included in Attachment #2.

If the Council wishes to accept the State recommended four-lane median divided project, we believe that the Department of Transportation would schedule a public hearing and would proceed with design and right-of-way acquisitions. Construction could begin in 2005.

We believe that it is likely that the Weaver Dairy Road Improvement Project would be dropped from the State Transportation Improvements Program and the associated funding would be reassigned to other statewide transportation needs, if the Council does not wish to accept the four-lane median divided design.

### MANAGER'S RECOMMENDATION

We originally recommended that the Weaver Dairy Road Improvement Project between NC-86 and Erwin Road include a four-lane median divided cross section consisting of two travel lanes in each direction, wide outside lanes to accommodate bicycle use, a narrowed and raised center median with exclusive turn lanes and refuge for pedestrians, curb-and-gutter and sidewalks along both sides, and bus pull-offs as necessary. We continue to believe that these improvements would be reasonable.

Adoption of Resolution A would affirm the Council's previous request for a three-lane project for Weaver Dairy Road.

Adoption of Resolution B would accept the State recommended four-lane median divided project for Weaver Dairy Road.

### ATTACHMENTS

1. Letter from State Transportation Secretary dated May 21, 2001 (begin new page 1).
2. Agenda Item #8 dated January 22, 2001 (p. 3).
3. Letter from NCDOT/Derrick Weaver dated February 15, 2001 (p. 29).

**RESOLUTION A****A RESOLUTION ENDORSING A CONCEPTUAL DESIGN FOR IMPROVEMENTS TO WEAVER DAIRY ROAD BETWEEN N.C. 86 AND ERWIN ROAD TO INCLUDE A THREE-LANE CROSS SECTION CONSISTING OF ONE FOURTEEN FOOT WIDE TRAVEL LANE IN EACH DIRECTION, A CONTINUOUS TWELVE FOOT WIDE CENTER TURN LANE, AND CURB-AND-GUTTER AND SIDEWALK ALONG BOTH SIDES OF THE ROAD (2001-06-25/R-20a)**

WHEREAS, it is the Town's desire to improve Weaver Dairy Road to the extent that it can safely and effectively accommodate existing and future pedestrian, bicycle, and vehicular traffic; and

WHEREAS, necessary improvements should be designated and constructed so as to minimize disturbance of adjacent properties; and

WHEREAS, representatives of the Town and the State, and interested citizens, have met and discussed the proposed Weaver Dairy Road Improvement Project needs, scope, costs, and impacts; and

WHEREAS, project information and input has been evaluated and considered in conjunction with preliminary studies of several alternative project designs; and

WHEREAS, the Council reaffirms its opinion that a three-lane project best meets the Council's stated objectives for Weaver Dairy Road.

NOW, THEREFORE, BE IT RESOLVED by the Council of the Town of Chapel Hill that the Council endorses a conceptual Weaver Dairy Road Improvement Project between N.C. 86 and Erwin Road to include a three-lane cross-section consisting of a fourteen foot wide travel lane in each direction to accommodate bicycle use, a continuous twelve foot center turn lane, curb-and-gutter and sidewalks along both sides of the road, and right turn lanes and bus pull-offs as necessary.

BE IT FURTHER RESOLVED that the Council requests that the State design incorporate transitions between the new and existing sections in order to preserve all of the existing improvements and that the existing roadway, curb-and-gutter, storm drainage, sidewalks, grass strips, landscaping, and buffer walls adjacent to Chesley and Silver Creek neighborhoods not be disturbed, other than by re-striping of the existing pavement if necessary.

BE IT FURTHER RESOLVED that the Council requests that the State concur with the three-lane project improvements endorsed by the Town and proceed with preparations for a Public Hearing on the proposed Weaver Dairy Road Improvement Project.

BE IT FURTHER RESOLVED that the Council requests the Town be involved to the extent possible in all stages of the project development.

This the 25<sup>th</sup> day of June, 2001.

**RESOLUTION B**

**A RESOLUTION ENDORSING A CONCEPTUAL DESIGN FOR IMPROVEMENTS TO WEAVER DAIRY ROAD BETWEEN N.C. 86 AND ERWIN ROAD TO INCLUDE A FOUR-LANE MEDIAN DIVIDED CROSS-SECTION CONSISTING OF TWO TRAVEL LANES IN EACH DIRECTION, WIDE OUTSIDE LANES TO ACCOMMODATE BICYCLE USE, NARROWED RAISED CENTER MEDIAN WITH EXCLUSIVE TURN LANES AND REFUGE FOR PEDESTRIANS, CURB-AND-GUTTER AND SIDEWALKS ALONG BOTH SIDES OF THE ROAD, AND BUS PULL-OFFS AS NECESSARY (2001-06-25/R-20b)**

WHEREAS, it is the Town's desire to improve Weaver Dairy Road to the extent that it can safely and effectively accommodate existing and future pedestrian, bicycle, and vehicular traffic; and

WHEREAS, necessary improvements should be designated and constructed so as to minimize disturbance of adjacent properties; and

WHEREAS, representatives of the Town and the State, and interested citizens, have met and discussed the proposed Weaver Dairy Road Improvement Project needs, scope, costs, and impacts; and

WHEREAS, project information and input has been evaluated and considered in conjunction with preliminary studies of several alternative project designs; and

WHEREAS, the Council has reconsidered its previous request for a three-lane project design;

NOW, THEREFORE, BE IT RESOLVED by the Council of the Town of Chapel Hill that the Council endorses a conceptual Weaver Dairy Road Improvement Project between N.C. 86 and Erwin Road to include a four-lane median divided cross-section consisting of two travel lanes in each direction, wide outside lanes to accommodate bicycle use, raised center median with exclusive turn lanes and refuge for pedestrians, curb-and-gutter and sidewalks along both sides of the road, and bus pull-offs as necessary.

BE IT FURTHER RESOLVED that the Council requests that the State design incorporate transitions between the new and existing sections in order to preserve all of the existing improvements and that the existing roadway, curb-and-gutter, storm drainage, sidewalks, grass strips, landscaping, and buffer walls adjacent to Chesley and Silver Creek neighborhoods not be disturbed, other than by re-striping of the existing pavement if necessary.

BE IT FURTHER RESOLVED that the Council requests that the State prepare preliminary engineering designs and cost estimates for a retrofitted median, where appropriate, along areas of Weaver Dairy Road where there is already a five-lane cross-section already exists.

BE IT FURTHER RESOLVED that it is the Council's request and understanding based on discussions with the State and statements made by the State project manager to the Council on June 25, 2001, prior to adoption of this resolution, that under no circumstances would driveways

serving the properties that front on Country Road be connected directly to the improved Weaver Dairy Road.

BE IT FURTHER RESOLVED that the Council requests that DOT look into traffic calming and consider traffic calming measures which would be appropriate for this project including rumble strips, textured crosswalks, roundabouts, and/or other measures.

BE IT FURTHER RESOLVED that the Council requests that the State proceed with preparations for a Public Hearing on the proposed four-lane median divided Weaver Dairy Road Improvement Project.

BE IT FURTHER RESOLVED that the Council requests the Town be involved to the extent possible in all stages of the project development.

This the 25<sup>th</sup> day of June, 2001.



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## ATTACHMENT 1

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATIONMICHAEL F. EASLEY  
GOVERNOR

1501 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1501

LYNDO TIPPETT  
SECRETARY

May 21, 2001

Mr. W. Calvin Horton, Manager  
Town of Chapel Hill  
306 North Columbia Street  
Chapel Hill, North Carolina 27516

Dear Mr. Horton:

I enjoyed meeting with you and the Town Council representatives to discuss proposed improvements to Weaver Dairy Road. I appreciate the involvement and commitment the Town of Chapel Hill has made on this project. The information presented on the Comprehensive Plan was very informative and gave a good perspective on Chapel Hill's goals and objectives for its future transportation system.

Since our meeting, I have had further discussions with our staff on the proposed cross section for Weaver Dairy Road. NCDOT has many safety concerns with widening Weaver Dairy Road to a three-lane cross section. We discussed extensively the safety issues of accommodating driver expectation, creating safer pedestrian crossings with refuge areas, separating traffic flow, providing exclusive left turn lanes, providing logical crossovers, as well as, the desires of the Town.

After much deliberation, NCDOT has determined it would not be prudent to make the large expenditure required for the three-lane cross section because it provides only a minimal improvement and compromises safety. Therefore, it is the recommendation of the NCDOT that Weaver Dairy Road be widened to the four-lane divided cross section using Alternative 1A Revised (see Attached Cross Section). I understand from discussions with our Project Development staff, this is the alternative that was recommended to the Town Council at the January 22, 2001, Town Council regular meeting. This recommended cross section maximizes the safety and functional longevity of this project.

The objective of this project is to construct a road that is safe and meets the needs of the community. Therefore, before we can proceed any further, we need the Town's approval of the recommended cross section. Please contact Board of Transportation Member Doug Galyon (336-316-4208) to give the Town's approval for this project.

Sincerely,

A handwritten signature in black ink, appearing to read "Lyndo Tippett".

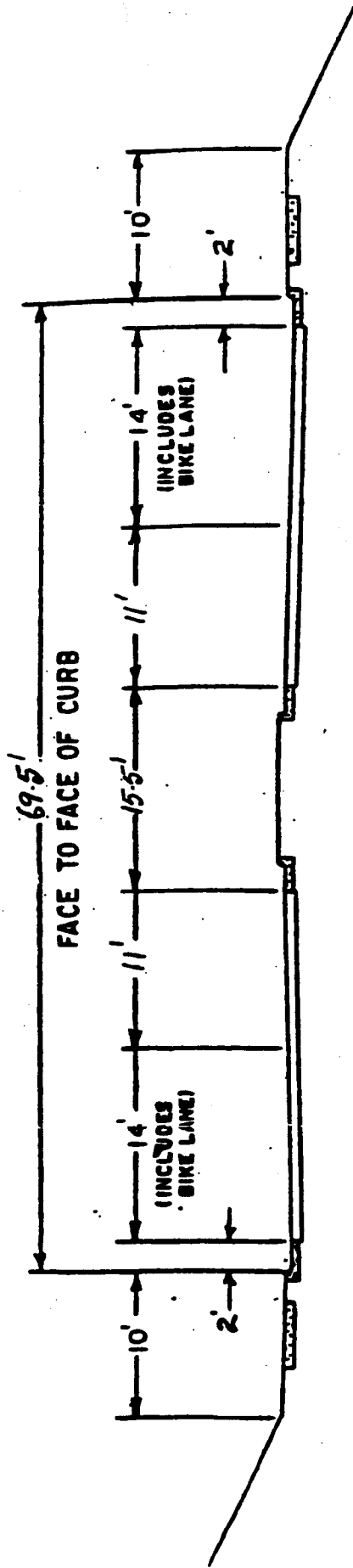
Lyndo Tippett

LT/wdg

Attachment

cc: Doug Galyon, Member, Board of Transportation

MANAGERS' RECOMMENDATION



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ALTERNATIVE 1A REVISED  
FOUR LANE DIVIDED MEDIAN  
WITH CURB AND GUTTER



**MEMORANDUM**

TO: Mayor and Town Council

FROM: W. Calvin Horton, Town Manager

SUBJECT: Proposed Weaver Dairy Road Improvements (NC 86 to Erwin Road)

DATE: January 22, 2001  
REVISED

**INTRODUCTION**

Attached for the Council's consideration are alternative resolutions regarding conceptual designs for the improvement project proposed for Weaver Dairy Road between NC 86 and Erwin Road.

The Manager recommends that the Council adopt the attached Resolution A endorsing the conceptual design for the Weaver Dairy Road Improvement Project between NC 86 and Erwin Road to include a four lane median divided cross section consisting of two travel lanes in each direction, wide outside lanes to accommodate bicycle use, a narrowed raised center median with exclusive turn lanes and refuge for pedestrians, sidewalks along both sides of the road, and bus pull-offs as necessary (Alternative 1A Revised in Table Two).

**BACKGROUND**

In April 1999, the Town and the State hosted a Citizens Informational Workshop to present information on proposed Weaver Dairy Road improvements. Four alternatives were presented at the workshop, two with 5-lane cross-sections and two with 4-lane raised median cross-sections (alternatives 1A, 1B, 2A, and 2B on Table One). Following the workshop presentation, the Council requested that the State study two additional alternatives and the State agreed to study the two 4-lane and two 3-lane cross-sections (alternatives 3A, 3B, 4A, and 4B on Table One). Sketches of the alternative cross sections are attached for reference.

A fifth alternative is the "No Build" scenario, under which the State would not undertake a comprehensive improvement project on Weaver Dairy Road at this time.

On November 14, 2000, the Council sponsored a Citizens' Informational Workshop to provide an opportunity for interested citizens to review drawings and information about the proposed improvement alternatives and to discuss this information with Town and State staff. The workshop was publicized via direct mail and newspaper display ads in the Chapel Hill News, Chapel Hill Herald, and the News and Observer. We also had public service announcements broadcast on radio station WCHL. Approximately 50 people attended the workshop over the three-hour period from 3:30 pm to 6:30 p.m.

On November 20, 2000, the Council held a Public Forum to discuss proposed improvement alternatives and to receive citizens' comments about the project. The forum was announced and advertised concurrently with the workshop, as noted above. Nineteen citizens spoke at the forum. Attachment 1 includes the comments made at the forum and staff responses. A copy of the November 20 memorandum is provided on the attachment 2.

## DISCUSSION

The State performed a preliminary evaluation of nine alternatives, including the no-build scenario. These alternatives are described below, along with advantages and disadvantages of both. All alternatives considered include curb and gutter. All alternatives would need bus pull-offs to accommodate transit service. Travel lanes are 12 feet wide, except where otherwise noted. Table One, prepared by the State, summarizes this discussion and provides cost estimates and information on the impacts on adjoining land and buildings of each alternative. Table One is found on pages 3 and 4.

### Five lane cross-sections: Alternatives 1A and 1B:

These alternatives would include two travel lanes in each direction and a continuous center turn lane. Alternative 1A would have wide (14feet) outside lanes, in order to accommodate bicycles and vehicular traffic together. In Alternative 1B, all travel and turn lanes would be 12 feet, and there would be 5 foot striped bike lanes on each side. Costs for these alternatives are lower than for the 4-lane median divided and higher than for the four lane cross sections.

The primary advantage is the unlimited access to and from all properties. Disadvantages include the lack of pedestrian refuge in the center, limited landscaping opportunities, and the appearance of the wide expanse of asphalt.

### Four lane, median divided cross-sections: Alternatives 2A and 2B:

These alternatives include two travel lanes in each direction and a raised median lined with curb and gutter. The median would be 16 feet wide, except where turn lanes are needed, in which case, the median would shrink to 4 feet to make room for a 12 foot turn lane. Alternative 2A would have wide (14 feet) outside lanes, in order to accommodate bicycles and vehicular traffic together. In Alternative 2B, all travel and turn lanes would be 12 feet, and there would be 5 feet striped bike lanes on each side. The newly improved segment of NC 86 north of Homestead Road is identical to this alternative. Costs for these alternatives are the highest two of the nine alternatives evaluated.

Advantages of these cross sections include the pedestrian refuge throughout the entire length; median landscaping opportunities; and the improved safety of the substantial separation of directional travel lanes.

Disadvantages include limited access to some properties; the greatest impact on adjoining properties; and, the highest costs.

### Four lane undivided cross-sections: Alternatives 3A and 3B:

These alternatives include two travel lanes in each direction. Alternative 3A would have wide (14 feet) outside lanes, in order to accommodate bicycles and vehicular traffic together. In Alternative 3B, all travel and turn lanes would be 12 feet, and there would be 5 feet striped bike

lanes on each side. Costs for these alternatives are lower than those described above, but still above the three lane cross-section.

The primary advantage is the reduced cross-section and the concomitant reduction in impacts to adjoining properties. The disadvantages include the lack of a center turn lane makes the roadway less safe, as cars are forced to either stop or to go around vehicles stopped in the travel lane waiting to turn left. This lack of a turn lane also reduces the traffic carrying capacity. The lack of a median means the lack of a pedestrian refuge.

Three lane cross-sections: Alternatives 4A and 4B:

These alternatives have one travel lane in each direction and a center turn lane. Alternative 4A would have wide (14 feet) travel lanes to accommodate bicycles and vehicular traffic together. This cross-section would be similar to that of Merritt Mill Road. In Alternative 4B, the travel lanes would be 12 feet wide, and there would be 5 feet striped bike lanes on each side. These alternatives have the lowest costs.

The advantages include the least cost and the lowest impacts on adjoining properties. The disadvantage is the significantly limited traffic carrying capacity and requirement for additional lanes to maintain the capacity for coming traffic volumes.

**TABLE ONE**

**U-3306 WEAVER DAIRY ROAD WIDENING**

<b>ALTERNATIVES</b>	<b>1A</b>	<b>1B</b>	<b>2A</b>	<b>2B</b>
Description	Five lane, Curb and Gutter		Four lane, Median Divided	
Bike Accommodation	Wide outside lanes	5' bike lanes	Wide outside lanes	5' bike lanes
Width from face of Curb to face of Curb	68 feet	74 feet	76 feet	82 feet
Construction Cost	\$7,300,000	\$7,850,000	\$8,600,000	\$8,775,000
Right of Way Cost	<u>\$2,655,500</u>	<u>\$2,655,500</u>	<u>\$3,324,500</u>	<u>\$3,324,500</u>
Estimated Project Cost	<u>\$9,955,500</u>	<u>\$10,505,500</u>	<u>\$11,924,500</u>	<u>\$12,099,500</u>
<b>IMPACTS</b>				
Relocations	5 Residences	5 Residences	6 Residences	7 Residences
Close Proximity	3 Residences	11 Residences	9 Residences	10 Residences
Wetland Impacts	None		None	
Stream Impacts	370 feet	390 feet	400 feet	420 feet
Historic Architecture	None		None	
Archeology	None		None	
UST's*	None expected		None expected	
Park Land	Avoided		Avoided	
Country Road	Removes road		Removes road	

<b>ADVANTAGES</b>	→Unlimited access to and from all properties	→Median landscaping opportunities →Substantial separation of directional travel lanes
<b>DISADVANTAGES</b>	→Limited landscaping opportunities →Wide “runway” appearance	→Limited access to some properties →Most impacts/relocations →Most cost

\*Underground Storage Tanks

**TABLE ONE (CONTINUED)**

ALTERNATIVES	3A	3B	4A	4B	5
Description	Four lane, Curb and Gutter		Three lane, Curb and Gutter		No Build
Width from face of Curb to face of Curb	56 feet	62 feet	44 feet	50 feet	26 feet
Bike Accommodation	Wide outside lanes	5' bike lanes	Wide outside lanes	5' bike lanes	None
Construction Cost	\$6,100,000	\$6,900,000	\$5,100,000	\$5,965,000	None
Right of Way Cost	\$2,189,500	\$2,189,500	\$1,704,500	\$1,704,500	None
Estimated Project Cost	\$8,289,500	\$9,089,500	\$6,804,500	\$7,669,500	None
<b>IMPACTS</b>					None
Relocations	3 Residences	3 Residences	3 Residences	3 Residences	None
Close Proximity	3 Residences	5 Residences	2 Residences	2 Residences	None
Wetland Impacts	None		None		None
Stream Impacts	315 feet	335 feet	275 feet	305 feet	None
Historic Architecture	None		None		None
Archeology	None		None		None
UST's*	None expected		None expected		None
Park Land	Avoided		Avoided		None
Country Road	Removes road		May save road/not trees		None
<b>ADVANTAGES</b>	→Reduced cross section		→Least impacts/relocations →Least Cost		
<b>DISADVANTAGES</b>	→No center turn lane →Statistically less safe than other alternatives →Limited traffic capacity →Requires extra turn lanes to maintain capacity		→Limited traffic capacity →Requires additional lanes to maintain capacity		

\*Underground Storage Tanks

### CAPACITY CONSIDERATIONS

Currently, the average daily traffic (ADT) volume on Weaver Dairy Road is between 10,000 and 13,000 vehicles per day. The projected ADT volumes for the year 2025 are between 17,000 and 20,000 vehicles per day.

We have attached information tables which show existing and projected traffic volumes on Weaver Dairy Road, and the traffic contributions we expect from new and existing developments such as VilCom, Timberlyne Shopping Center, Parkside, The Homestead, and the extension of Weaver Dairy Road to Homestead Road.

We think that all of the design alternatives could adequately handle current traffic volumes now. However, we believe that widening for turning lanes at several locations would be necessary in the design of the 4-lane undivided cross-sections (alternatives 3A & 3B) and additional lanes would be necessary in the design of the 3-lane cross-sections (alternatives 4A & 4B) to adequately accommodate projected growth in traffic volumes on Weaver Dairy Road. The 5-lane cross-sections (alternatives 1A & 1B) and the 4-lane median divided cross-sections (alternatives 2A & 2B) could handle expected future traffic volumes as proposed.

### EXISTING IMPROVEMENTS

Several segments of Weaver Dairy Road have been widened to all or part of a 5-lane cross section as a result of Town requirements for adjacent private developments. Also, Weaver Dairy Road is planned to connect to Sage Road, which is an existing 5-lane roadway. The existing 5-lane improvements do not include designated bike lanes or wide outer lanes except across the Silvercreek development frontage.

If it is the Council's desire that Weaver Dairy Road be improved to other than a 5-lane or 4-lane median divided cross section, careful design work would be necessary to create acceptable transitions between the new and existing cross sections in order to preserve as much as possible of the existing improvements.

The extension of Weaver Dairy Road west of NC 86 includes two different cross-sections. The segment associated with the Northwoods development includes a thirteen-foot wide raised center median, two 11-foot wide travel lanes in each direction, and a 5-foot wide sidewalk along one side only. The segment associated with the Parkside and Homestead developments is planned to include a 16-foot wide raised center median, two 12-foot wide travel lanes in each direction, a 4-foot wide striped bike lane in each direction, and a 5-foot wide sidewalk along both sides. The developers will be building half of the ultimate roadway cross-section improvements as part of the Parkside and The Homestead developments.

### **NEXT STEPS**

The State is now awaiting the Council's selection of its desired improvement alternative for Weaver Dairy Road. Once the Council decides on the desired scope of improvements, we would forward the Council's resolution of endorsement to the State for review and approval.

If agreement is reached, the State would begin preliminary design work and environmental impact studies, and would schedule a Public Hearing on the project. Based on the hearing comments and environmental assessment findings, the State would prepare a Municipal Agreement outlining the understandings and responsibilities of the Town and State for mutual agreement to proceed with final design and construction of the project.

## CONCLUSIONS AND RECOMMENDATION

We think that Weaver Dairy Road should be improved to safely and effectively serve pedestrian, bicycle, and vehicular traffic now and in the future. To best accomplish this over the long-term, we believe that improvements would need to include the following:

- Two travel lanes in each direction with exclusive turn lanes to accommodate growing traffic volume
- Bus pulloff areas as necessary
- Bicycle accommodations in both directions
- Pedestrian accommodations in both directions
- Raised center median areas to provide refuge for pedestrians and landscaping opportunities

We believe the key is to balance the needs for traffic carrying capacity and safety with the need to minimize the total cross section. Alternatives 1A and B, and 2A and B are the only ones with the required traffic carrying capacity. Their widths range from 68 feet from face of curb to face of curb, to 82 feet. Alternative 1A, the five-lane cross-section with wide outside lanes has the narrowest width of 68 feet.

We want to come close to this width, but still be able to provide a raised median instead of a continuous center turn lane for increased pedestrian and vehicular safety. In consultation with DOT staff, we have developed a revised cross-section that would add only 18 inches, but would still provide a raised center median and would be acceptable to DOT.

Alternative 1A Revised would include four travel lanes, the outside lanes being 14 feet wide to accommodate bicycles and the inside being 11 feet. (Please see the sketch on page 25.) Instead of a continuous 12 foot wide center turn lane, there would be a median of 11.5 feet (narrower than the 16 foot medians in Alternatives 2A and 2B), plus four feet of curb and gutter. The total width from face of curb to face of curb would total 69.5 feet.

The advantages of this alternative include the pedestrian refuge as well as turn lanes where needed; median landscaping opportunities; improved safety of substantial separation of directional travel lanes; and, limiting the right of way needed and impacts to adjoining properties to those of Alternative 1A. The disadvantages include limited access to some properties, and greater costs than the alternatives with no median

Table Two below compares the Revised Alternate 1A with the original 1A.

(33)

TABLE TWO

## U-3306 WEAVER DAIRY ROAD WIDENING

ALTERNATIVES	REVISED 1A	1A
Description	Four lane, Narrow Median Divided	Five lane, Curb and Gutter
Bike Accommodation	Wide outside lanes	Wide outside lanes
Width from face of Curb to face of Curb	69.5 feet	68 feet
Construction Cost	\$8,250,000	\$7,300,000
Right of Way Cost	<u>\$2,655,500</u>	<u>\$2,655,500</u>
Estimated Project Cost	\$10,905,500	\$9,955,500
<b>IMPACTS</b>		
Relocations	5 Residences	5 Residences
Close Proximity	3 Residences	3 Residences
Wetland Impacts		
Stream Impacts	370 feet	370 feet
Historic Architecture	None	None
Archeology	None	None
UST's*	None expected	None expected
Park Land	Avoided	Avoided
Country Road	Removes Road	Removes Road
<b>ADVANTAGES</b>	<ul style="list-style-type: none"> <li>→Median landscaping opportunities</li> <li>→Substantial separation of directional travel lanes</li> <li>→Same impacts/relocations as 5 Ln.</li> </ul>	→Unlimited access to and from all properties
<b>DISADVANTAGES</b>	→Limited access to some properties	<ul style="list-style-type: none"> <li>→Limited landscaping opportunities</li> <li>→Wide "runaway" appearance</li> </ul>

\*Underground Storage Tanks

This recommended cross-section would readily tie into the existing improved portions of Weaver Dairy Road discussed previously, and would also most closely match the existing segment of Weaver Dairy Road which has been constructed west of NC 86. We believe that the wide outer travel lanes, instead of marked bikeways, would not only be consistent with past recommendations of the Bicycle-Pedestrian Advisory Board, but would also save 6 feet in the final cross-section.

**Manager's Recommendation:** That the Council adopt the attached Resolution "A" endorsing the conceptual design for the Weaver Dairy Road Improvement Project between NC 86 and Erwin Road to include a four lane median divided cross section consisting of two travel lanes in each direction, wide outside lanes to accommodate bicycle use, narrowed raised center median with exclusive turn lanes and refuge for pedestrians, sidewalks along both sides of the road, and bus pull-offs as necessary.

If the Council wishes to choose other options, Resolution B provides a framework which can be completed by the Council to reflect its preferences.

#### **ATTACHMENTS**

1. Comments and Issues Raised during the Public Hearing (p.11).
2. November 20, 2000 Memorandum (p.15).
3. Map (p.20).
4. Sketches of Alternative Cross Sections (p.21).
5. Traffic Data Tables (p.26).



## RESOLUTION A

**A RESOLUTION ENDORSING A CONCEPTUAL DESIGN FOR IMPROVEMENTS TO WEAVER DAIRY ROAD BETWEEN NC 86 AND ERWIN ROAD TO INCLUDE A FOUR LANE MEDIAN DIVIDED CROSS SECTION CONSISTING OF TWO TRAVEL LANES IN EACH DIRECTION, WIDE OUTSIDE LANES TO ACCOMMODATE BICYCLE USE, NARROWED RAISED CENTER MEDIAN WITH EXCLUSIVE TURN LANES AND REFUGE FOR PEDESTRIANS, SIDEWALKS ALONG BOTH SIDES OF THE ROAD, AND BUS PULL-OFFS AS NECESSARY (2001-01-22/R-10a)**

WHEREAS, it is the Town's desire to improve Weaver Dairy Road to the extent that it can safely and effectively accommodate existing and future pedestrian, bicycle, and vehicular traffic; and

WHEREAS, necessary improvements should be designed and constructed so as to minimize disturbance of adjacent properties; and

WHEREAS, representatives of the Town and the State, and interested citizens, have met and discussed the proposed Weaver Dairy Road Improvement Project needs, scope, costs, and impacts; and

WHEREAS, project information and input has been evaluated and considered in conjunction with preliminary studies of several alternative project designs; and

WHEREAS, the Council endorsed-design best meets the project objectives with the least negative impact;

NOW, THEREFORE, BE IT RESOLVED by the Council of the Town of Chapel Hill that the Council endorses a conceptual Weaver Dairy Road Improvement Project between NC 86 and Erwin Road to include a four lane median divided cross section consisting of two travel lanes in each direction, wide outside lanes to accommodate bicycle use, raised center median with exclusive turn lanes and refuge for pedestrians, sidewalks along both sides of the road, and bus pull-offs as necessary.

BE IT FURTHER RESOLVED that the Council requests that the State concur with the project improvements endorsed by the Town and proceed with preparations for a Public Hearing on the proposed Weaver Dairy Road Improvement Project.

BE IT FURTHER RESOLVED that the Council requests the Town be involved to the extent possible in all stages of the project development.

This the 22<sup>nd</sup> day of January, 2001.

310

**A RESOLUTION ENDORSING A CONCEPTUAL DESIGN FOR IMPROVEMENTS TO WEAVER DAIRY ROAD BETWEEN NC 86 AND ERWIN ROAD TO INCLUDE A THREE LANE CROSS SECTION CONSISTING OF ONE FOURTEEN FOOT WIDE TRAVEL LANE IN EACH DIRECTION AND A CONTINUOUS TWELVE FOOT CENTER TURN LANE, WITH CURB-AND-GUTTER AND SIDEWALK ALONG BOTH SIDES OF THE ROAD. (2001-01-22/R-10b)**

WHEREAS, it is the Town's desire to improve Weaver Dairy Road to the extent that it can safely and effectively accommodate existing and future pedestrian, bicycle, and vehicular traffic; and

WHEREAS, necessary improvements should be designed and constructed so as to minimize disturbance of adjacent properties; and

WHEREAS, representatives of the Town and the State, and interested citizens, have met and discussed the proposed Weaver Dairy Road Improvement Project needs, scope, costs, and impacts; and

WHEREAS, project information and input has been evaluated and considered in conjunction with preliminary studies of several alternative project designs; and

WHEREAS, the Council endorsed-design best meets the project objectives with the least negative impact;

NOW, THEREFORE, BE IT RESOLVED by the Council of the Town of Chapel Hill that the Council endorses a conceptual Weaver Dairy Road Improvement Project between NC 86 and Erwin Road to include a three lane cross section consisting of a fourteen foot wide travel lane in each direction to accommodate bicycle use, a continuous twelve foot center turn lane, curb-and-gutter and sidewalk along both sides of the road, and right-turn lanes and bus pull-offs as necessary.

BE IT FURTHER RESOLVED that the Council requests that the State design incorporate transitions between the new and existing sections in order to preserve all of the existing improvements and that the existing roadway, curb & gutter, storm drainage, sidewalks, grass strips, landscaping, and buffer walls adjacent to Chesley and Silver Creek neighborhoods not be disturbed, other than by re-striping of the existing pavement, if necessary.

BE IT FURTHER RESOLVED that the Council requests that the State concur with the project improvements endorsed by the Town and proceed with preparations for a Public Hearing on the proposed Weaver Dairy Road Improvement Project as endorsed herein.

BE IT FURTHER RESOLVED that the Council requests the Town be involved to the extent possible in all stages of the project development.

This the 22<sup>nd</sup> day of January, 2001.

*Revised 1-24-2001.*

## PROPOSED WEAVER DAIRY ROAD WIDENING

Questions/Issues Raised at the November 20, 2000

A variety of comments and questions were brought up at the Public Forum on November 20. A large majority of the citizens who commented on the proposed Weaver Dairy Road improvements live and/or work in the vicinity of the project corridor, and many had similar concerns and questions. The issues discussed at the forum are summarized below, along with our responses. Written correspondence and citizen comment sheets which we received following the project workshop and forum are available for review in the Town Engineering Department.

**1. Several citizens noted that speeding is more of a concern now than traffic congestion, and they expressed concerns that widening the road would exacerbate speeding problems in the future.**

Response: We agree that speeding is an existing problem on Weaver Dairy Road, and it is a focus area for our Police traffic enforcement division. It has generally proven to be true that, after roads are widened, vehicle speeds increase. We think this is a valid concern regarding Weaver Dairy Road if it is widened.

The Town would need to continue to enforce traffic regulations on Weaver Dairy Road, with emphasis on speed limit and school zone enforcement efforts. As the only cross-connector road on the northern side of the Town, much of the Weaver Dairy Road traffic is and will continue to be local in nature, involving repetitive users traveling to and from residences, workplaces, and businesses. We would expect our enforcement efforts to be most effective in educating these local, daily users about the importance we place on compliance with traffic regulations, because this major user group would be affected by such enforcement on a regular basis.

**2. Many citizens expressed concerns about bicycle and pedestrian safety if the road is widened, particularly regarding pedestrians trying to cross the road from one side to the other.**

Response: Pedestrian crossings would be provided at all signalized intersections. Currently, signals are installed at NC 86, and at the entrance to East Chapel Hill High School. As part of the Weaver Dairy Road improvements we would expect additional traffic signals to be installed at the VilCom campus entrance, at Sunrise Road near Cedar Falls Park, at Erwin Road, and at other locations along the project corridor where signals are warranted based on traffic studies which would be completed as part of the project development process. We do not know at this time where or how many additional signals may be warranted.

If the Council approves a project alternative with raised center medians, these areas could function as refuge islands midway across the road, allowing pedestrians to cross only half of the road at a time. We think this is a significant benefit of median-divided roadways.

All of the proposed improvement alternatives would include accommodations for bicyclists. These would include either striped, designated on-street bike lanes in both directions, or wide outside travel lanes for shared use by motorized vehicles and bicycles.

**3. Concerns were expressed that widening Weaver Dairy Road could encourage more traffic to use it than if it were not widened. In conjunction with these comments, some citizens noted that I-40 is nearby and could be used for cross-town trips in lieu of Weaver Dairy Road, thereby mitigating the need to widen it.**

*Response:* While we believe that improved roads may attract additional traffic, we also believe that traffic volumes will increase on Weaver Dairy Road regardless of whether or not it is widened. Traffic volumes on major streets in Chapel Hill have typically increased at a rate of 2-3% per year, independent of additional traffic increases which result from development activity that affects specific corridors such as Weaver Dairy Road.

We believe that the existing two-lane roadway will be unable to accommodate the traffic safely and effectively. Weaver Dairy Road is presently handling 10 – 13,000 vehicle trips per day, with some peak hour congestion. At around 15,000 trips per day, two-lane roadway functions typically exhibit significant deterioration and public safety problems increase.

We are concerned that, unless we begin developing improvement plans now, traffic problems on Weaver Dairy Road will increase and this important connector/collector roadway will eventually be unable to provide safe and effective service to our community.

Interstate 40 is intended to serve regional traffic entering and leaving Chapel Hill, or bypassing the community; it was not built to serve the needs of local traffic. Current traffic congestion on I-40 during the peak hours encourages local traffic to use Weaver Dairy Road. Elderly and inexperienced drivers, many of whom live in Carol Woods or attend East Chapel Hill High School on Weaver Dairy Road, might be uncomfortable using the interstate for routine local travel.

We believe that Weaver Dairy Road should be improved as necessary to provide effective long-term service as the Town's only northern cross-town connector road. We acknowledge that such improvements will make travel easier on Weaver Dairy Road, which could attract more drivers to use it. However, the proposed facility improvements for drivers, bicyclists, and pedestrians would be designed to safely accommodate expected increases in use.

**4. Concerns were expressed about the proximity of proposed roadway-related improvements to existing private property and structures, and inquiries were made about plans for visual/sound buffers and realignment of the road away from existing features such as buildings, ponds, parks, walls, and trees.**

*Response:* There are some locations along the project corridor where the existing roadway is close to private property features and any widening would create conflicts. As was noted by NCDOT staff at the forum, every reasonable effort would be made to adjust the project location within the right-of-way to minimize impacts on adjacent properties and associated features such as natural vegetation/trees, landscaping, ponds, structures, recreational facilities, etc. Examples of this are evident on the NC 86 project where the improvements were shifted away from the

Northwoods neighborhood and adjusted to preserve the large oak trees near the Westminster Drive intersection.

Because of the number of driveways and street intersections penetrating this corridor, installation of sound barriers would be ineffective, and they are not being proposed for this project.

Although clearing of the project right-of-way would be minimized to the extent possible, some natural vegetation and landscaping improvements near the road would need to be removed. Only a small portion of State funded projects are dedicated to revegetation, and this involves primarily stabilization of disturbed areas with groundcover and selective reforestation with pine seedlings. On past projects such as NC 86 and Fordham Boulevard, the Town has arranged for supplemental funding to install beautification and visual buffer landscaping at the edges of the project corridor and in median areas. This could be the case with Weaver Dairy Road as well.

**5. Concerns were expressed associated with preserving reasonable livability and ingress/egress for adjacent properties. The issue of properties fronting on Country Road was highlighted.**

*Response:* As noted previously, it would be the intent of both the Town and State to minimize project related impacts on adjacent properties. In all cases, reasonable ingress to and egress from properties would be maintained or provided.

The most difficult problem we would expect to deal with in this regard involves the houses fronting on Country Road, which closely parallels Weaver Dairy Road for a short distance. All of the proposed improvement alternatives would significantly affect the Country Road frontage, ranging from removal of the visual buffer trees to removal of Country Road itself. Country Road would be one of the primary focus areas during project design, regardless on which alternative the Council selects. Town and State staff would work closely with Country Road residents to achieve the best possible outcome.

Other locations and features we are aware of that would require special design attention due to their proximity to the project corridor include two or three townhouses at Coventry, two ponds adjacent to the project corridor, the Sunrise Road service station fuel tanks, the large oaks at Carol Woods, and the Cedar Falls Park ball fields. The previous tables provide further information on some of the expected impacts of different improvement alternatives.

**6. Concerns about adequate storm water management were expressed, both with and without the proposed road widening project.**

*Response:* We are aware of existing storm water problems at some locations along the proposed project corridor, and we will continue to address those to the extent possible with available resources. Any proposed Weaver Dairy Road improvement project would include a comprehensive hydrologic study to identify existing and potential storm water problem areas and the expected impacts of proposed improvements. The project design would include appropriate measures to mitigate project storm water runoff impacts.

**7. Some citizens questioned the need for any improvements, noting that the road seems to be functioning fine as it is.**

Response: The existing two-lane section of Weaver Dairy Road has limited capacity for accommodating vehicular, bicycle, and pedestrian traffic. We believe that improvements are necessary to adequately serve current and future users of this important community roadway. Please refer to our responses to issues two and three above.

**8. Several citizens requested clarification as to whether or not the existing widened areas of Weaver Dairy Road would be disturbed by proposed improvements. This was of particular concern regarding the existing 5-lane section between the Chesley and Silvercreek neighborhoods.**

Response: It would be the intent of any proposed improvement project to preserve the existing widened sections of Weaver Dairy Road to the extent possible. This would include segments near NC 86, the Timberlyne Shopping Center, the VilCom campus, the high school, and the Chesley/Silvercreek neighborhoods which have been widened to a 5-lane cross section.

Depending on the improvement alternative selected by the Council, design of the necessary transitions to and from the existing widened sections of Weaver Dairy Road may be challenging. We believe the State would leave existing improvements undisturbed and would create transitions with paint striping if necessary. We would not expect to disturb the existing roadway, sidewalks, landscaping, or walls adjacent to Chesley or Silvercreek.

**9. One new issue raised by a Council Member requested consideration of a variation on the proposed three-lane alternative to include a raised center median rather than a continuous center turn lane.**

Response: We discussed this with State staff and they determined that additional study would not be necessary, because this variation would not change the width of the overall cross-section studied for the three lane alternatives with a striped center turn lane.

A raised center median could not be continuous, since openings would be needed to accommodate turning traffic at selected locations and intersections. A median replacing the center turn lane could be only 12 feet wide, which is less than the 16 feet minimum width typically permitted by the State. A 16 feet wide median (20 feet including curb and gutter) would allow a future 12 feet lane and also a refuge island for pedestrians. State staff indicated that they are not interested in a 3-lane section, although the Council could still request this additional study.

(4)

**MEMORANDUM**

**TO:** Mayor and Town Council

**FROM:** W. Calvin Horton, Town Manager

**SUBJECT:** Public Forum on Proposed Weaver Dairy Road Improvement Alternatives (NC 86 to Erwin Road)

**DATE:** November 20, 2000

The purpose of this forum is to receive public comment on roadway improvement alternatives being considered by the Town Council for Weaver Dairy Road between NC 86 and Erwin Road.

**BACKGROUND**

Improvements to Weaver Dairy Road have ranked high on the Town's Transportation Improvements Program since the early 1990's.

In April 1999, the Town and the State hosted a Citizens Informational Workshop to present information on proposed Weaver Dairy Road improvements. Two alternatives were presented at the workshop:

- Alternative 1. Five-lane cross section with curb-and-gutter including a 12-foot center turn lane, four 12-foot travel lanes (two in each direction), two 5-foot bike lanes (one in each direction), and 5-foot sidewalk along both sides of the roadway.
- Alternative 2. Four-lane divided section with curb-and-gutter including a 16-foot raised center median, four 12-foot travel lanes (two in each direction), two 5-foot bike lanes (one in each direction), and 5-foot sidewalk along both sides of the roadway.

Following the workshop presentation, the Council requested that the State study other alternatives for Weaver Dairy Road, in addition to those described above. The State agreed to study the following additional project alternatives:

- Alternative 3. Four-lane cross section with curb-and-gutter including four 12-foot travel lanes (two in each direction), two 5-foot bike lanes (one in each direction), 5-foot sidewalk along both sides of the roadway, and additional widening as needed for turn-lanes at intersections.
- Alternative 4. Three-lane cross section with curb-and-gutter including a 12-foot center turn lane, two 12-foot travel lanes (one in each direction), two 5-foot bike lanes (one in each direction), and 5-foot sidewalk along both sides of the roadway.

Sketches of these alternative cross sections are attached for reference.

On November 14, 2000 the Council sponsored a Citizens' Information Workshop to provide an opportunity for interested citizens to review drawings and information about the proposed improvement alternatives and to discuss this information with Town and State staff. The workshop was publicized via direct mail and newspaper display ads in the Chapel Hill News, Chapel Hill Herald, and the News and Observer. We also had public service announcements on radio station WCHL. Approximately fifty people attended the workshop over the three-hour period from 3:30 pm to 6:30 p.m.

**DISCUSSION**

The State has completed a preliminary evaluation of the alternatives, including differentiation between 5-foot wide striped bike lanes versus wide outer travel lanes (to accommodate bikes) for each alternative. The following Table One, which was prepared by NCDOT staff, summarizes key impacts, costs, advantages and disadvantages of each improvement alternative.

**TABLE ONE**

**U-3306 WEAVER DAIRY ROAD WIDENING**

<b>ALTERNATIVES</b>	<b>1</b>	<b>1A</b>	<b>2</b>	<b>2A</b>
Description	Five lane, Curb and Gutter		Four lane, Median Divided	
Bike Accommodation	Wide outside lanes	5' bike lanes	Wide outside lanes	5' bike lanes
Construction Cost	\$7,300,000	\$7,850,000	\$8,600,000	\$8,775,000
Right of Way Cost	<u>\$2,655,500</u>	<u>\$2,655,500</u>	<u>\$3,324,500</u>	<u>\$3,324,500</u>
Estimated Project Cost	\$9,955,500	\$10,505,500	\$11,924,500	\$12,099,500
<b>IMPACTS</b>				
Relocations	5 Residences	5 Residences	6 Residences	7 Residences
Close Proximity	3 Residences	11 Residences	9 Residences	10 Residences
Wetland Impacts	None		None	
Stream Impacts	370 feet	390 feet	400 feet	420 feet
Historic Architecture	None		None	
Archeology	None		None	
UST's*	None expected		None expected	
Park Land	Avoided		Avoided	
Country Road	Removes road		Removes road	
<b>ADVANTAGES</b>	→Unlimited access to and from all properties		→Median landscaping opportunities →Substantial separation of directional travel lanes	
<b>DISADVANTAGES</b>	→Limited landscaping opportunities →Wide "runway" appearance		→Limited access to some properties →Most impacts/relocations →Most cost	

\*Underground Storage Tanks



TABLE ONE (CONTINUED)

## U-3306 WEAVER DAIRY ROAD WIDENING

ALTERNATIVES	3	3A	4	4A	5
Description	Four lane, Curb and Gutter		Three lane, Curb and Gutter		No Build
Bike Accommodation	Wide outside lanes	5' bike lanes	Wide outside lanes	5' bike lanes	None
Construction Cost	\$6,100,000	\$6,900,000	\$5,100,000	\$5,965,000	None
Right of Way Cost	<u>\$2,189,500</u>	<u>\$2,189,500</u>	<u>\$1,704,500</u>	<u>\$1,704,500</u>	None
Estimated Project Cost	\$8,289,500	\$9,089,500	\$6,804,500	\$7,669,500	None
<b>IMPACTS</b>					None
Relocations	3 Residences	3 Residences	3 Residences	3 Residences	None
Close Proximity	3 Residences	5 Residences	2 Residences	2 Residences	None
Wetland Impacts	None		None		None
Stream Impacts	315 feet	335 feet	275 feet	305 feet	None
Historic Architecture	None		None		None
Archeology	None		None		None
UST's*	None expected		None expected		None
Park Land	Avoided		Avoided		None
Country Road	Removes road		May save road/not trees		None
<b>ADVANTAGES</b>	→Reduced cross section		→Least impacts/relocations →Least Cost		
<b>DISADVANTAGES</b>	→No center turn lane →Statistically less safe than other alternatives →Limited traffic capacity →Requires extra turn lanes to maintain capacity		→Limited traffic capacity →Requires extra turn lanes to maintain capacity		

\*Underground Storage Tanks

The alternative with the highest cost and greatest impact on adjacent properties is the median divided 4-lane cross section with designated bike lanes. The estimated cost is \$12.1 million. This cross section would be identical to the recently completed N.C.86 improvements north of Homestead Road.

Comparatively, the least expensive and disruptive alternative would be the 3-lane cross section with wide outside lanes for bicycles. The estimated cost for this alternative is \$6.8 million. This cross section would be similar to Merritt Mill Road south of Cameron Avenue.

## CAPACITY CONSIDERATIONS

Currently, the average daily traffic (ADT) volume on Weaver Dairy Road is between 10,000 and 13,000 vehicles per day. The projected ADT volumes for the year 2025 are between 17,000 and 20,000 vehicles per day.

We have attached information tables which show existing and projected traffic volumes on Weaver Dairy Road, and the traffic contributions we expect from new and existing developments such as VilCom, Timberlyne Shopping Center, Parkside, The Homestead, and the extension of Weaver Dairy Road to Homestead Road.

We think that all of the design alternatives could adequately handle current traffic volumes. However, we believe that widening for turning lanes at several locations would be necessary in the design of Alternative #3 (4-lane undivided) and Alternative #4 (3-lane) to adequately accommodate projected growth in traffic volumes on Weaver Dairy Road. Alternative #1 (5-lane) and Alternative #2 (4-lane divided) could handle expected future traffic volumes as proposed.

## EXISTING IMPROVEMENTS

Several segments of Weaver Dairy Road have been widened to all or part of a 5-lane cross section as a result of Town requirements for adjacent private developments. Also, Weaver Dairy Road is planned to connect to Sage Road, which is an existing 5-lane roadway. The existing 5-lane improvements do not include designated bike lanes or wide outer lanes except across the Silvercreek development frontage.

If it is the Council's desire to improve Weaver Dairy Road to other than a 5-lane cross section, careful design work would be necessary to create acceptable transitions between the new and existing cross sections in order to preserve as much as possible of the existing improvements.

The extension of Weaver Dairy Road west of NC 86 includes two different cross-sections. The segment associated with the Northwoods development includes a thirteen-foot wide raised center median, two eleven-foot wide travel lanes in each direction, and a five-foot wide sidewalk along one side only. The segment associated with the Parkside and Homestead developments is planned to include a sixteen-foot wide raised center median, two twelve-foot wide travel lanes in each direction, a four-foot wide striped bike lane in each direction, and a five-foot wide sidewalk along both sides. The developers will be building half of the ultimate roadway cross-section improvements as part of the Parkside and Homestead developments.

## NEXT STEPS

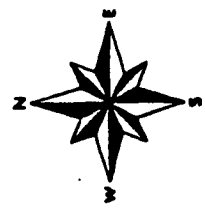
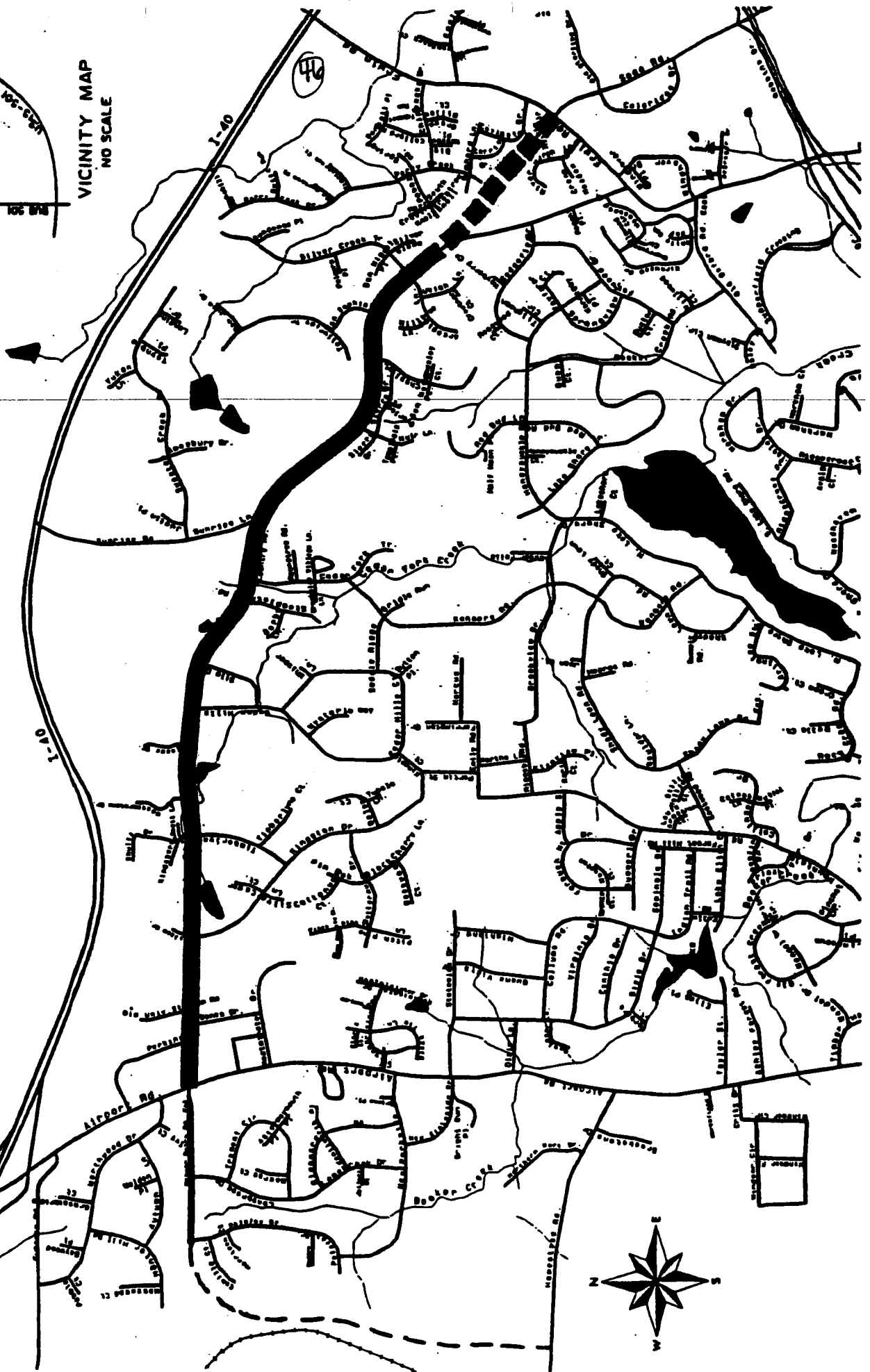
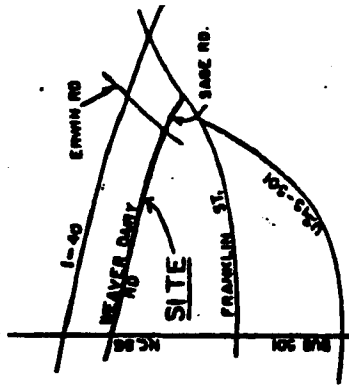
The State is now awaiting the Council's selection of its desired improvement alternative. Following tonight's public forum we will compile the comments received and report back to the Council at its December 11 regular meeting with our evaluation and recommendations regarding the proposed alternatives, for the Council's consideration in selecting a preferred alternative to forward to the State.

If the State concurs with the Town's selected alternative, it would perform an environmental assessment of the proposed project and would hold a public hearing to solicit citizens' comments before preparing final construction plans and specifications.

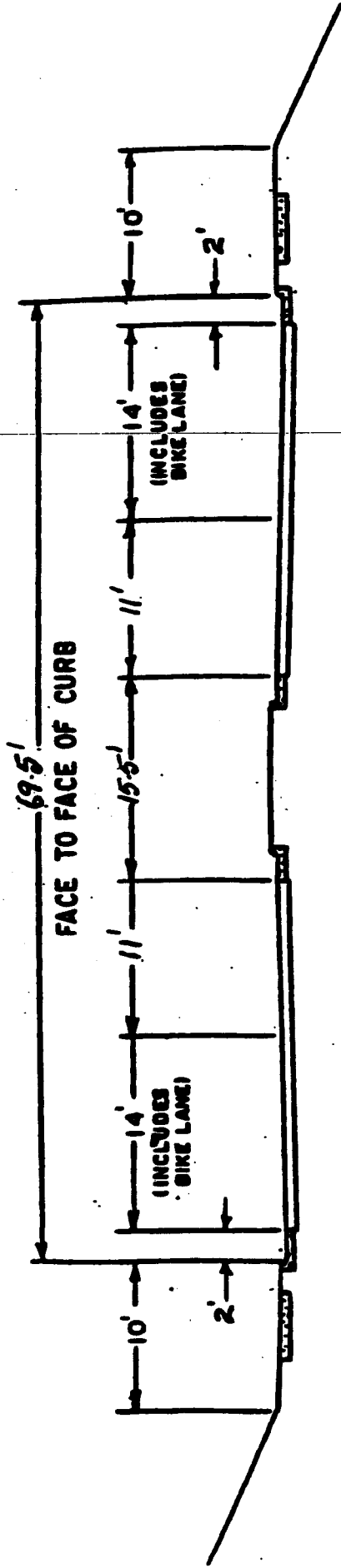
#### **ATTACHMENTS**

1. Map (p. 6).
2. Sketches of Alternative Cross Sections (p. 7).
3. Traffic Data Tables (p. 11).

# Proposed Weaver Dairy Road Project

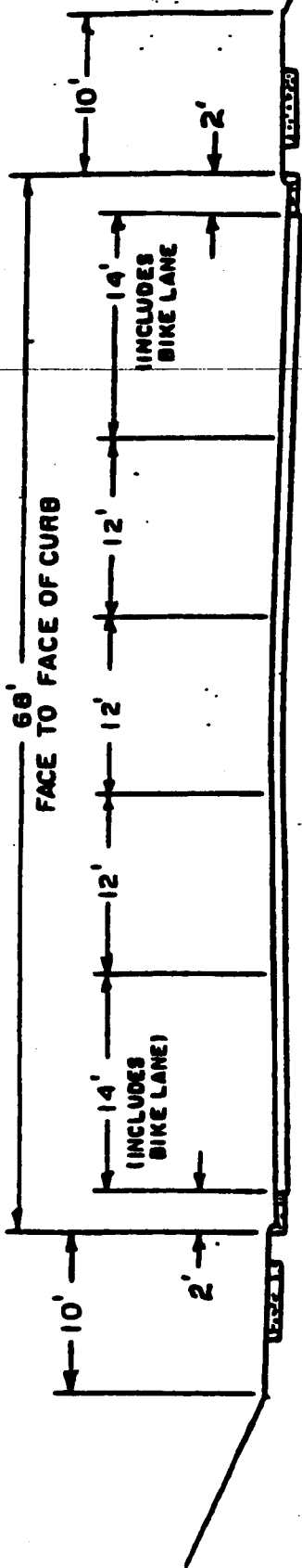


**MANAGERS' RECOMMENDATION**



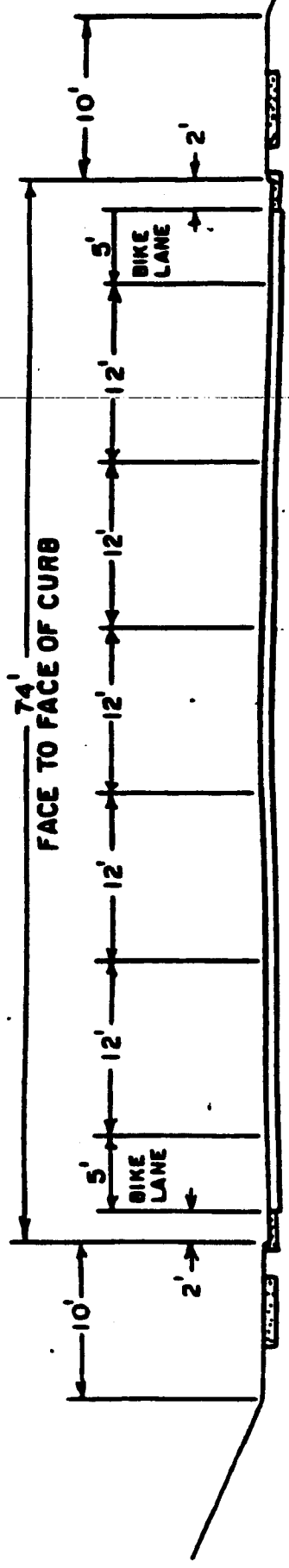
49

**ALTERNATIVE 1A REVISED**  
**FOUR LANE DIVIDED MEDIAN**  
**WITH CURB AND GUTTER**



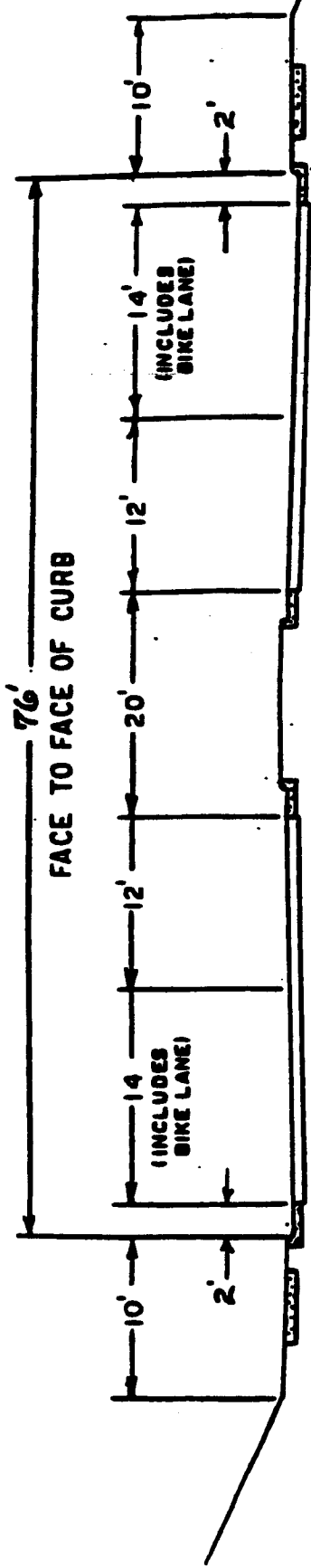
### ALTERNATIVE 1A

FIVE LANES WITH CURB AND GUTTER



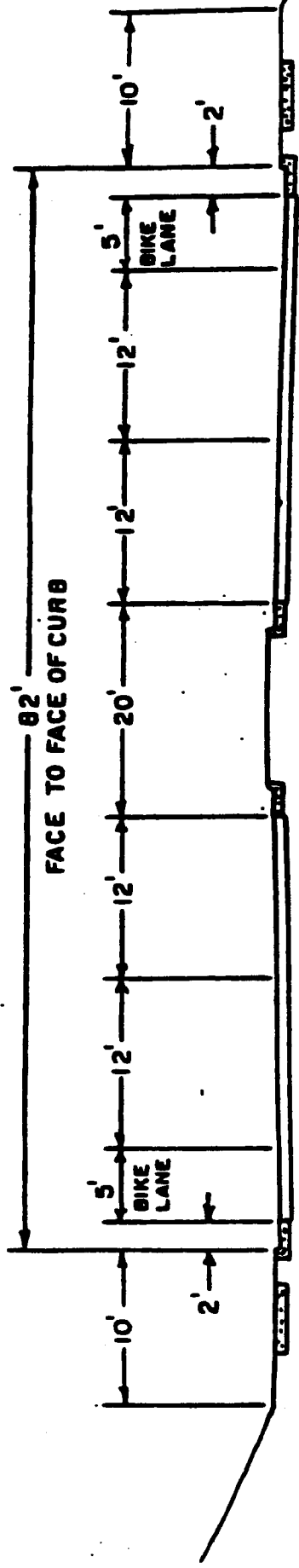
### ALTERNATIVE 1B

FIVE LANES WITH CURB AND GUTTER



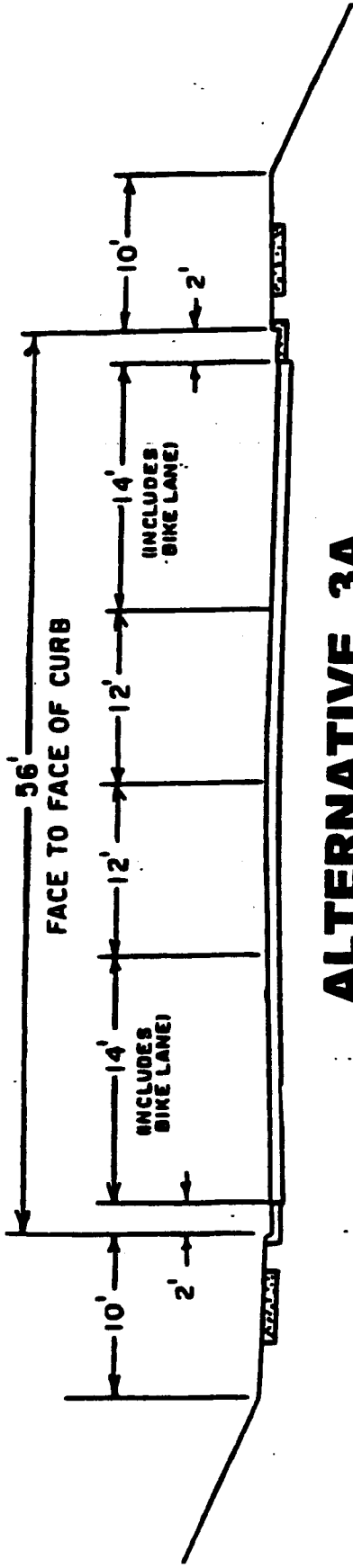
### ALTERNATIVE 2A

FOUR LANE MEDIAN DIVIDED  
WITH CURB AND GUTTER



### ALTERNATIVE 2B

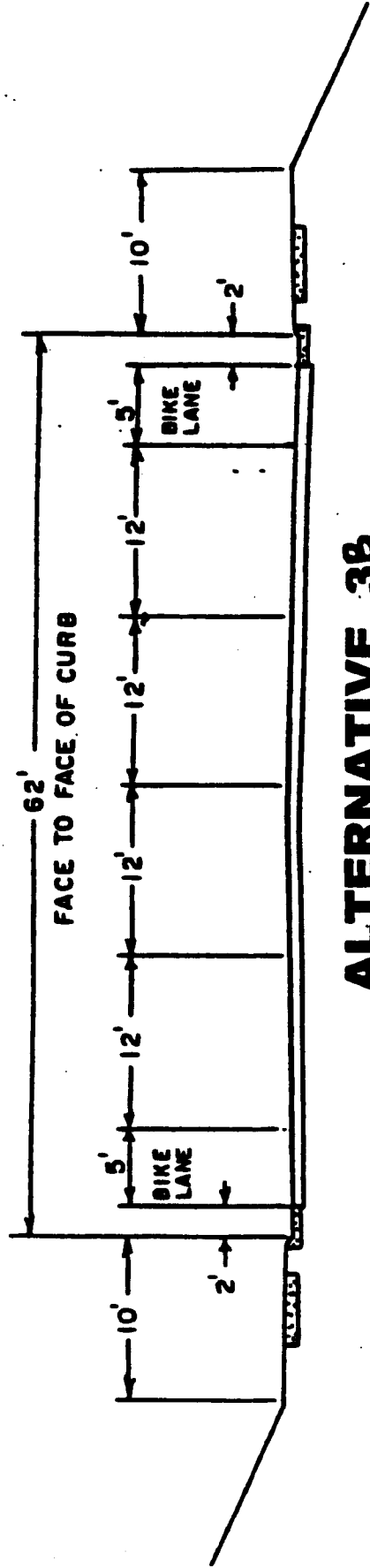
FOUR LANE MEDIAN DIVIDED  
WITH CURB AND GUTTER



**ALTERNATIVE 3A**

**FOUR LANES WITH CURB AND GUTTER**

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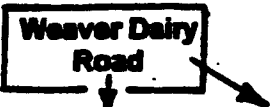


**ALTERNATIVE 3B**

**FOUR LANES WITH CURB AND GUTTER**



**PROJECTED 2004 TRAFFIC VOLUMES ON WEAVER DAIRY ROAD  
WITH PROPOSED DEVELOPMENTS**

	(51)		
<b>Development</b>	<b>Size</b>	<b>Total Traffic</b>	<b>without Site      with Site</b>
1. Park Side II (residential)	72 Units	766	13,400 → 13,700
2. VILCOM (Office Complex)	197,450 sf	2,347	13,700 → 15,200
3. The Homestead (Town homes)	194 Units	1144	15,200 → 16,000

**Notes:**

1. Most of the Timberline Shopping Center is completely built-out and the traffic is taken into consideration in the 2004 "without site"
2. Extension of Weaver Dairy Road will contribute approximately 2,800 vehicles in 2004

**COMPARISON OF TRAFFIC VOLUMES  
ON WEAVER DAIRY ROAD WITH OTHER STREETS**

<b>Street Name</b>	<b>Average Daily Traffic Volume</b>
a) 2025 Year Projected Traffic on Weaver Dairy Road, east of NC 86	20,300
b) Existing Streets with more than 20,000 ADT	
1) Airport Road (NC 86) at Weaver Dairy Rd	21,500
2) Franklin Street, east of Columbia Street	22,500
3) Columbia Street, north of Rosemary Street	21,400
4) NC 54, east of US 15/501	39,800
5) Main Street, east of Railroad in Carrboro	24,200



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FEB 20 2000

STATE OF NORTH CAROLINA ATTACHMENT 3  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

February 15, 2001

Honorable Rosemary I. Waldorf, Mayor  
Town of Chapel Hill  
306 North Columbia Street  
Chapel Hill, NC 27516

**SUBJECT:** Proposed improvements to Weaver Dairy Road (SR 1733), from NC 86 to Erwin Road (SR 1734) in Chapel Hill, Orange County, Federal Aid Project No. MASTP 1733(11), State Project No. 8.2501601, TIP Project No. U-3306

Dear Mayor Waldorf,

Thank you for your input and that of the Town Council during the project development process for the proposed Weaver Dairy Road Improvement Project (TIP Project U-3306) between NC 86 and Erwin Road in Chapel Hill. We also appreciate your efforts to involve and solicit comments from interested citizens regarding this proposed project. All of the discussion and comments have been very helpful in our understanding of the desires and objectives of the Chapel Hill community as related to proposed improvements on Weaver Dairy Road.

At the Local Officials Meeting and Citizens Informational Workshop on April 28, 1999, when the NCDOT agreed to study eight different project design alternatives, I advised you and others present that if either a three-lane or four-lane curb and gutter cross section were chosen it would have to be approved by the appropriate NCDOT officials.

In response to the Town Council's resolution endorsing a three-lane curb and gutter facility (Alternative 4A) for Weaver Dairy Road, I have had discussions with Transportation Board Member Doug Galyon, Division Engineer Mike Mills, Deputy Highway Administrator Len Hill, and members of both the Roadway Design Unit and the Project Development and Environmental Analysis Branch to determine if such a cross-section would be acceptable to the State for improving Weaver Dairy Road.

**MAILING ADDRESS:**  
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS  
1548 MAIL SERVICE CENTER  
RALEIGH NC 27699-1548

**TELEPHONE:** 919-733-3141  
**FAX:** 919-733-9794

**WEBSITE:** WWW.DOH.DOT.STATE.NC.US

**LOCATION:**  
TRANSPORTATION BUILDING  
1 SOUTH WILMINGTON STREET  
RALEIGH, NC

After due consideration from all pertinent perspectives, it was determined that the NCDOT would not recommend construction of a three-lane project as endorsed by the Chapel Hill Town Council. It is the State's opinion that a three-lane project would not adequately meet the projected service and safety needs of this important transportation corridor. The NCDOT recommends construction of a four-lane divided cross section as outlined in Alternative 1A Revised (see Attached Cross Section).

This is the alternative that the Town Manager recommended to the Town Council at the regular meeting on January 22, 2001. This alternative calls for a four-lane median divided cross section consisting of: two travel lanes in each direction with wide outside lanes to accommodate bicycle use, a narrowed raised center median with exclusive turn lanes and refuge areas for pedestrians, sidewalks along both sides of the roadway, and bus pull-offs as necessary.

Alternative 1A Revised, which was developed by the NCDOT in conjunction with Town staff, would best address the concerns of all parties and would meet the long-range transportation plans for the area. We believe that this alternative would be safer than a three-lane cross section because it would best tie together the existing improvements (previously constructed by private developers as required by the Town) and would create continuity between different sections of the project corridor, thereby most reasonably accommodating drivers' expectations. Traffic safety would also be improved by including a center median in the project, which would separate traffic flow, allow for exclusive left turn lanes, and provide crossovers at logical locations.

Pedestrian safety would be enhanced by the refuge area created by installation of a center median, which would allow pedestrians to cross only half of the roadway (two travel lanes, both in the same direction) at a time. Additionally, the center median would provide landscaping opportunities to both beautify the roadway corridor and to eliminate the potential "runway" appearance of a three-lane or five-lane undivided cross section.

This State recommended design alternative would provide a high level of service (traffic capacity) for motorists in the design year (2025) which could not be achieved with a three-lane cross section. Also, a three-lane cross section would require supplementary improvements such as exclusive right turn lanes to maintain even marginal traffic capacity in the design year, and therefore raises serious concerns as to its viability as an acceptable long-range transportation solution for the Weaver Dairy Road corridor.

The preliminary design for the State approved alternative (Alternative 1A Revised) indicates two more impacts to residences than would occur with a three-lane cross section as endorsed by the Town Council. However, we think it is possible that these and other impacts could be avoided by careful and creative engineering during the design phase of the project. The revised four-lane divided cross section proposed by the Town Manager and the State would maximize the function, safety, and aesthetics of the improvements with minimal impacts on the project corridor.

The NCDOT will work closely with the Town staff during the final design phase of the project to determine locations of bus pullouts, median crossovers, and pedestrian crosswalks. Improvements such as new traffic signals and roundabouts will also be considered, to properly manage traffic and to create a safe environment for all Weaver Dairy Road users.

The NCDOT will work with Town staff and residents to maintain reasonable and safe access to the homes located along Country Road off of Cedar Fork Trail. Also, we agree that the existing improvements adjacent to the Chesley and Silver Creek neighborhoods should not be disturbed by the proposed project. If the Town would like this segment of the project to have a raised center median installed in place of the existing center turn lane, we would agree to include such a conversion wherever feasible to do so in the project, provided that the Town agreed to pay for any additional design and construction costs associated with retrofitting the median.

As requested in your letter, the NCDOT is continuing to work on the project Environmental Assessment and design in order to hold a public hearing this summer. If you have any questions or concerns about this recommendation, please contact Doug Galyon at 336-316-4208 or me at 919-733-7844 ext. 215.

Sincerely,

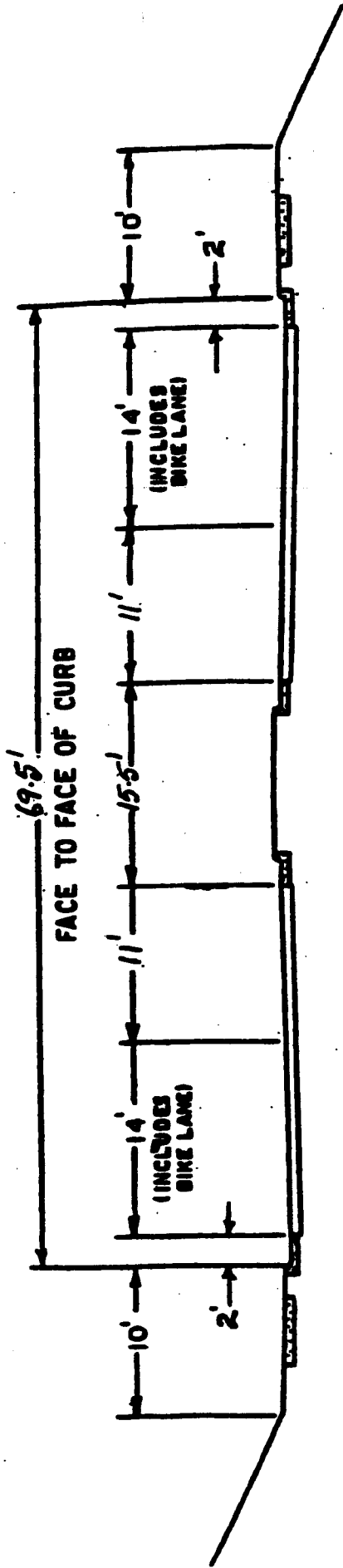


Derrick G. Weaver, PE  
Project Development Engineer

- cc: W.Calvin Horton, Chapel Hill Town Manager
- George Small, P.E., Chapel Hill Director of Engineering
- Doug Galyon, NCDOT Board Member
- Mike Mills, P.E., Division Engineer
- Len Hill, P.E., Deputy Highway Administrator
- Kathy Lassiter, P.E., Roadway Design Engineer
- Linwood Stone, Project Development Unit Head

Attachment: Alternative 1A Revised Cross Section

MANAGERS' RECOMMENDATION



**ALTERNATIVE 1A REVISED**  
**FOUR LANE DIVIDED MEDIAN**  
**WITH CURB AND GUTTER**