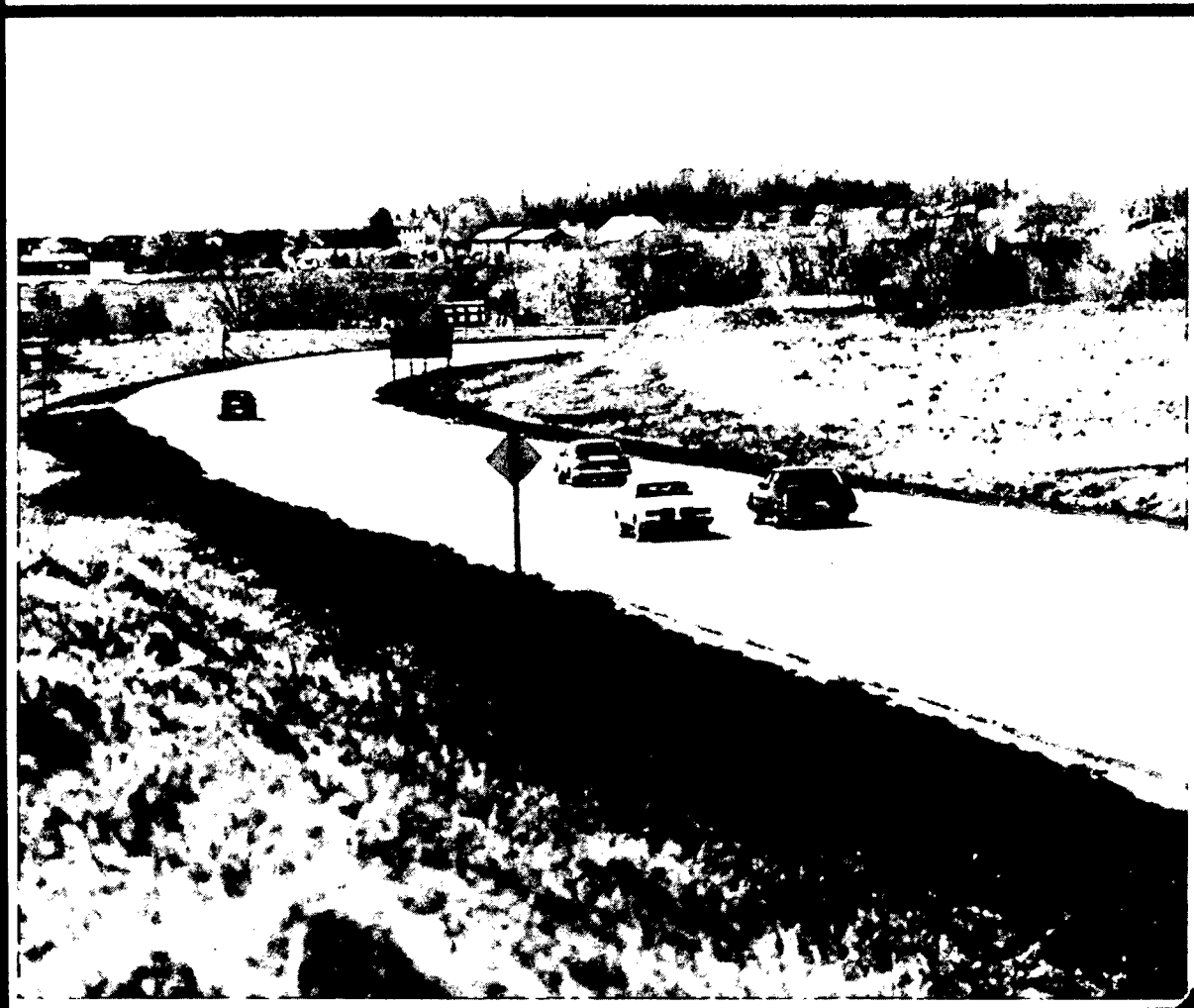
Environmental Assessment

for

CONTRACT NO. HO 581-101-771
MARYLAND ROUTE 175
(LITTLE PATUXENT PARKWAY)
FROM SNOWDEN RIVER PARKWAY
TO U.S. ROUTE 29 HOWARD COUNTY



prepared by
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

and
MARYLAND DEPARTMENT OF TRANSPORTAT
STATE HIGHWAY ADMINISTRATION

REPORT NUMBER: FHWA-MD-EA-81-01-D

FEDERAL HIGHWAY ADMINISTRATION

REGION III

MARYLAND ROUTE 175
FROM SNOWDEN RIVER PARKWAY
TO U.S. ROUTE 29
HOWARD COUNTY, MARYLAND

ADMINISTRATIVE ACTION

ENVIRONMENTAL ASSESSMENT

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
AND
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

SUBMITTED PURSUANT TO 42 U.S.C. 4332(2)(C) and U.S.C. 128(a)
CEQ REGULATIONS (40 CFR 1500 et seg)

M. S. Caltrider
State Highway Administrator

4/24/81
DATE

by: _____
Hal Kassoff, Director,
Office of Planning and
Preliminary Engineering

4/30 81
DATE

by: _____
Federal Highway Administration
Division Federal Highway
Administration

SUMMARY

1. Administrative Action

( ) Environmental Impact Statement

(X) Environmental Assessment

( ) Finding of No Significant Impact

2. Individuals who can be contacted for additional information concerning the proposed project and this document.

Mr. Edward Terry, Jr.
District Engineer
FHWA
The Rotunda - Suite 220
711 West 40th Street
Baltimore, Md. 21211
Phone:(301) 962-3088
Hours:7:45a.m. to 4:15p.m.

Mr. Wm. F. Schneider, Jr.
Chief, Bureau of Project Planning
State Highway Administration
707 North Calvert Street
Baltimore, Md. 21202
Phone:(301) 659-1130
Hours:8:15a.m. to 4:15p.m.

3. Description of Action

The proposed project would provide for the construction of an additional two (2) lane roadway by adding a parallel roadway within the existing right of way (See Figure 1 & 2). The parallel roadway would be located on the north side of the existing roadway from Snowden River Parkway to 1500' west of Dobbin Road and from this point to U.S. Route 29 on the south side. Land use in the proposed project area is primarily residential with some industrial and commercial development. This action proposes to improve safety and operating characteristics, alleviate present congestion, and to accommodate forecasted traffic growth. (See Figure 1).

4. Summary of Impacts

The upgrading of Maryland Route 175 from U.S. Route 29 to Snowden River Parkway would have no significant impact on the quality of the human or natural environments. The

proposed action would be within the existing right of way. No businesses or residences would be displaced, and no historic or archeological sites would be impacted. No violations of the State or Federal National Ambient Air Quality Standards (S/NAAQS) are predicted to occur for any of the proposed alternates. Design noise levels would not be exceeded for any of the alternates. Five (5) streams would be crossed by the proposed action, but no significant impact on the floodplain of the streams would occur. There would be no wetlands impacts and no threatened or endangered species will be affected by the proposed action.

Construction permits, if necessary, will be obtained from the Maryland Department of Natural Resources.

5. Alternates Description

The major alternates being considered consists of the No-Build and two build alternates. Both build alternates propose the addition of a parallel roadway to compliment the existing two lane roadway. The parallel roadway is proposed to be located on the north side of the existing roadway from Snowden River Parkway to 1500' west of Dobbin Road and from this point to U.S. Route 29 on the south side.

The improvement alternates generally differ only in respect to the width of the proposed median. For both build alternates, existing intersections would be reconstructed to accommodate the proposed roadway with no additional intersections proposed. Dual left turning lanes are being proposed for both build alternates at the Tamar Drive intersection with single left turn lanes being maintained at

Thunder Hill Road, Dobbin Road, and Snowden River Parkway. The possible extension of the two existing underpasses at Thunder Hill and Tamar Drive is currently being coordinated with the Columbia Park and Recreation Association, Inc., (See Sec. IV, Page 60). A pedestrian overpass located at Tamar Drive and Maryland Route 175 is also being considered in addition to the possible extension of the existing underpasses.

Alternate 1

This alternate proposes construction of a 24 foot roadway parallel to the existing roadway and separated by a 54 foot open median. Alternate 1 includes the construction of a retaining wall to avoid slope damage to an existing earth berm at Sohap Lane.

Alternate 2

Alternate 2 proposes the construction of a 24 foot roadway separated by a 24 foot curbed median. Alternate 2 could be accomplished without the need for retaining walls to avoid effects to existing earth berms.

No-Build Alternate

The No-Build Alternate continues Maryland Route 175 as a two lane roadway. There would be no major improvements to the existing roadway or intersections. Any improvement would be limited to normal maintenance and spot safety improvements.

6. Project Consistency with National Urban Policy

A. Urban Impacts

The implementation of the proposed improvement to

Maryland Route 175 (Little Patuxent Parkway) will have positive local impacts in that the need for additional capacity along this corridor will be satisfied. Planned development of east Columbia will place severe demands on the existing two lane roadway. The capability of this roadway to handle planned and expected traffic volume increases is a vital element of effective growth management in the area.

Alternates under consideration for this project will not remotely impact the social or economic viability of either the Washington or the Baltimore CBD (Central Business District), nor will costs be incurred by either of those central cities for the construction, operation, or maintenance of the roadway.

The implementation of this project has been actively pursued by State and local agencies and officials. The project is consistent with State Highway Administration plans as well as local land use and transportation plans including the Regional Planning Council's 1979-1981 Transportation Improvement Program and the General Development Plan, the General Plan for Howard County, the Columbia Preliminary Development Plan and the 1979-1998 Highway Needs Study.

Benefits accruing to the area by virtue of the implementation of this project include the increased accessibility it will provide existing and proposed local development as well as the relief it will provide to a

roadway characterized by congestion and operational problems. The separated roadways now under consideration for this project would also contribute to a lessening in the number and severity of traffic accidents now being experienced along this route.

B. Energy Conservation

With the steady growth the area has exhibited over recent years and land use projections showing even further increases in the future, traffic demands on the existing roadway can only be expected to increase over current levels. As the existing roadway drops to lower levels of service characterized by low speeds, stop and start conditions, lack of manueverability and poor access, it can only be expected that inefficient fuel use and unsafe conditions will result. The proposed parallel roadway will alleviate these conditions.

Since the design year traffic forecasts for this project area are independent of either of the "Build" alternates under consideration, energy consumption will depend, to a great deal, on available capacity. The additional lanes will effect improved flow conditions and decreased travel time which will result in a decrease in energy consumption.

C. TSM (Transportation Systems Management)

While such strategies as commuter parking lots, bikepaths, increased bus service, and traffic engineering projects continue to be investigated, their overall effect toward increasing the capacity requirements of existing Maryland Route 175 would be minimal. All alternatives to

the widening of the existing roadway to four lanes fail to facilitate traffic flow in a cost-effective manner.

As part of a TSM strategy, bikelanes would not significantly increase capacity nor would they address safety and operational problems associated with Maryland Route 175. The relatively long distance from the Columbia area to employment centers, make walking and bicycling impractical for the purposes of the majority of the study area's commuters. Since the majority of Columbia commuters are oriented to Washington and Baltimore, Maryland Route 175 has and will continue to provide arterial access to principal corridor routes such as U.S. Route 29 and I-95. Ridesharing, while fuel efficient and cost efficient, will not effect a large enough reduction in traffic on this segment of highway to overcome the need for additional lanes.

Other than capacity related problems, additional issues compounding the inadequacy of Maryland Route 175 are operational and safety problems which TSM strategies will not redress.

D. Minority and Neighborhood Effects

Due to the previous acquisition of adequate right of way expressly for a future dualization of Maryland Route 175 there will be no relocations required as a result of the implementation of this project.

A benefit accuring to all users, including minorities and low income individuals, resulting from the implementa-

tion of a "Build" alternate, is the increase in safety and efficiency of the roadway. There is no disruption to neighborhood integrity anticipated as a result of the selection of a Build alternate.

E. Improvements to Existing Systems

Proposed improvements to Maryland Route 175 give full consideration to use of existing facilities including the no-build option as well as an alternate composed of appropriate TSM strategies. This practice is in conformance with Maryland Department of Transportation policy which states that, where practical, transportation needs should be met by improving existing facilities rather than constructing new ones.

Determination of the need to dualize this facility was based on analyses of present and future traffic volumes, land use, the population served, and the existing structural and operational deficiencies of the highway.

COST EFFECTIVE ANALYSIS OF ALTERNATES

IMPACT CATEGORY	ALTERNATE 1	ALTERNATE 2	NO-BUILD
Houses displaced	0	0	0
Estimated number of persons affected	0	0	0
Businesses displaced	0	0	0
Unimproved property affected	0	0	0
Historical sites affected	0	0	0
Noise level impact (sites exceeding standards)	0	0	0
Air Quality impact (Sites exceeding standards)	0	0	0
Wetland areas affected	0	0	0
Floodplain areas crossed	5	5	5
Threatened or endangered species affected	0	0	0
Stream Crossings	5	5	5
Pedestrian Underpass Crossings	2	2	2
Consistent with Land Use Plans	Yes	Yes	No
Class II Bikelane	Removed	Removed	Remains
Estimated Costs ($1,000)			
Estimated Right of Way and Relocation	0	0	0
Estimated Construction* Cost	$4,835,761	$4,622,020	0
Preliminary Engineering	$ 211,089	$ 201,755	
Total*	$5,046,950	$4,823,775	0

*NOTE: Construction costs for the extension of the pedestrian underpass are not included in above cost estimates. The costs are as follows: Alternate 1 - $ 338,000; Alternate 2 - $ 225,000.

The following Environmental Assessment Form is a requirement of the Maryland Environmental Policy Act and Maryland Department of Transportation Order 11.01.06.02. It's use is in keeping with the provisions of 1500.4 (k) and 1506.2 and .6 of the Council of Environmental Quality Regulations, effective July 31, 1979, which recommend that duplication of Federal, State, and Local procedures be integrated into a single process.

The checklist identifies specific areas of the natural and social-economic environment which have been considered while preparing this environmental assessment. The reviewer can refer to the appropriate sections of the document, as indicated in the "Comment" column of the form, for a description of specific characteristics of the natural or social-economic environment within the proposed project area. It will also highlight any potential impacts, beneficial or adverse, that the action may incur. The "No" column indicates that during the scoping and early coordination processes, that specific area of the environment was not identified to be within the project area or would not be impacted by the proposed action.

ASSESSMENT OF SIGNIFICANT ENVIRONMENTAL EFFECTS

The following questions should be answered by placing a check in the appropriate column(s). If desirable, the "comments attached" column can be checked by itself or in combination with an answer of "yes" or "no" to provide additional information or to overcome an affirmative presumption.

In answering the questions, the significant beneficial and adverse, short and long term effects of the proposed action, on-site and off-site during construction and operation should be considered.

All questions should be answered as if the agency is subject to the same requirements as a private person requesting a license or permit from the State or Federal Government.

	Yes	No	Comments Attached
A. Land Use Considerations			
1. Will the action be within the 100 year flood plain?	X		Pg.27
2. Will the action require a permit for construction or alteration within the 50 year flood plain?	X		
3. Will the action require a permit for dredging, filling, draining or alteration of a wetland?		x	
4. Will the action require a permit for the construction or operation of facilities for solid waste disposal including dredge and excavation spoil?		x	
5. Will the action occur on slopes exceeding 15%?		X	
6. Will the action require a grading plan or a sediment control permit?	X		Pg. 84
7. Will the action require a mining permit for deep or surface mining?		X	
8. Will the action require a permit for drilling a gas or oil well?		X	
9. Will the action require a permit for airport construction?		X	
10. Will the action require a permit for the crossing of the Potomac River by conduits, cables or other like devices?		X	

	Yes	No	Comments Attached
11. Will the action affect the use of a public recreation area, park, forest, wildlife management area, scenic river or wildland?	___	X	Pg. 26
12. Will the action affect the use of any natural or man-made features that are unique to the county, state or nation?	___	X	___
13. Will the action affect the use of an archaeological or historical site or structure?	___	X	Pg. 28&62
B. Water Use Considerations			
14. Will the action require a permit for the change of the course, current, or cross-section of a stream or other body of water?	X	___	Pg. 27&84
15. Will the action require the construction, alteration or removal of a dam, reservoir or waterway obstruction?	___	X	___
16. Will the action change the overland flow of storm water or reduce the absorption capacity of the ground?	X	___	Pg. 84
17. Will the action require a permit for the drilling of a water well?	___	X	___
18. Will the action require a permit for water appropriation?	___	X	___
19. Will the action require a permit for the construction and operation of facilities for treatment or distribution of water?	___	X	___
20. Will the project require a permit for the construction and operation of facilities for sewage treatment and/or land disposal of liquid waste derivatives?	___	X	___
21. Will the action result in any discharge into surface or subsurface water?	X	___	Pg. 84

	Yes	No	Comments Attached
22. If so, will the discharge affect ambient water quality parameters and/or require a discharge permit?	___	X	___
C. Air Use Considerations			
23. Will the action result in any discharge into the air?	X	___	Pg. 74
24. If so, will the discharge affect ambient air quality parameters or produce a disagreeable odor?	X	___	Pg. 78
25. Will the action generate additional noise which differs in character or level from present conditions?	X	___	Pg. 63
26. Will the action preclude future use of related air space?	___	X	___
27. Will the action generate any radiological, electrical, magnetic, or light influences?	___	X	___
D. Plants and Animals			
28. Will the action cause the disturbance, reduction or loss of any rare, unique or valuable plant or animal?	___	X	___
29. Will the action result in the significant reduction or loss of any fish or wildlife habitats?	___	X	___
30. Will the action require a permit for the use of pesticides, herbicides or other biological, chemical or radiological control agents?	___	X	___
E. Socio-Economic			
31. Will the action result in a preemption or division of properties or impair their economic use?	___	X	Pg. 59

	Yes	No	Comments Attached
32. Will the action cause relocation of activities, structures or result in a change in the population density or distribution?	___	X	Pg. 59
33. Will the action alter land values?	___	X	___
34. Will the action affect traffic flow and volume?	X	___	Pg.32-42
35. Will the action affect the production, extraction, harvest or potential use of a scarce or economically important resource?	___	X	___
36. Will the action require a license to construct a sawmill or other plant for the manufacture of forest products?	___	X	___
37. Is the action in accord with federal, state, regional and local comprehensive or functional plans--including zoning?	X	___	Pg. 5
38. Will the action affect the employment opportunities for persons in the area?	___	X	___
39. Will the action affect the ability of the area to attract new sources of tax revenue?	___	X	___
40. Will the action discourage present sources of tax revenue from remaining in the area, or affirmatively encourage them to relocate elsewhere?	___	X	___
41. Will the action affect the ability of the area to attract tourism?	___	X	___
F. Other Considerations			
42. Could the action endanger the public health, safety or welfare?	___	X	___
43. Could the action be eliminated without deleterious effects to the public health, safety, welfare or the natural environment?	___	X	___

	Yes	No	Comments Attached
44. Will the action be of statewide significance?	___	X	___
45. Are there any other plans or actions (federal, state, county or private) that, in conjunction with the subject action could result in a cumulative or synergistic impact on the public health, safety, welfare or environment?	___	X	Pg. 2
46. Will the action require additional power generation or transmission capacity?	___	X	___

G. Conclusion

47. This agency will develop a complete environmental effects report on the proposed action.	___	X	Pg. 10

TABLE OF CONTENTS

I. DESCRIPTION OF PROPOSED ACTION

A. Project Location

The project is located east of the new town of Columbia in eastern Howard County, Maryland. The project limits extend from 0.7 miles west of Interstate 95, at Snowden River Parkway, to U.S. Route 29 for a length of approximately 4.1 miles (See Figure 1 & 2).

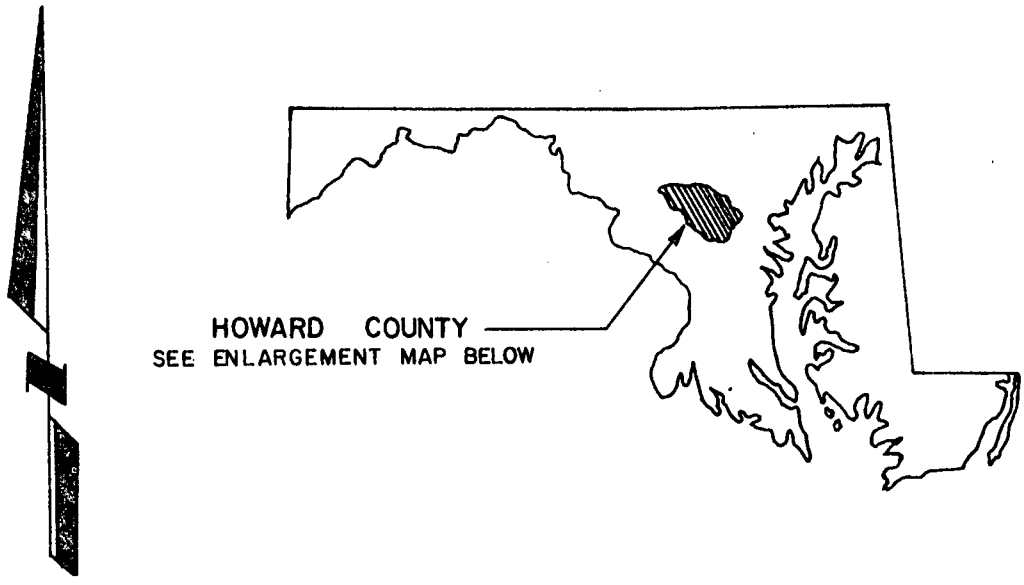
The terrain in the area primarily consists of gently rolling hills corresponding with the existing roadway. The project area is primarily residential with open space existing throughout the corridor. The residential areas are located between Tamar Drive and Thunder Hill Road and consist of the Villages of Oakland Mills and Villages of Long Reach. Each village contains single and multi-residential complexes and supporting facilities, such as shopping centers, a firehouse, schools, pools, and other recreational areas.

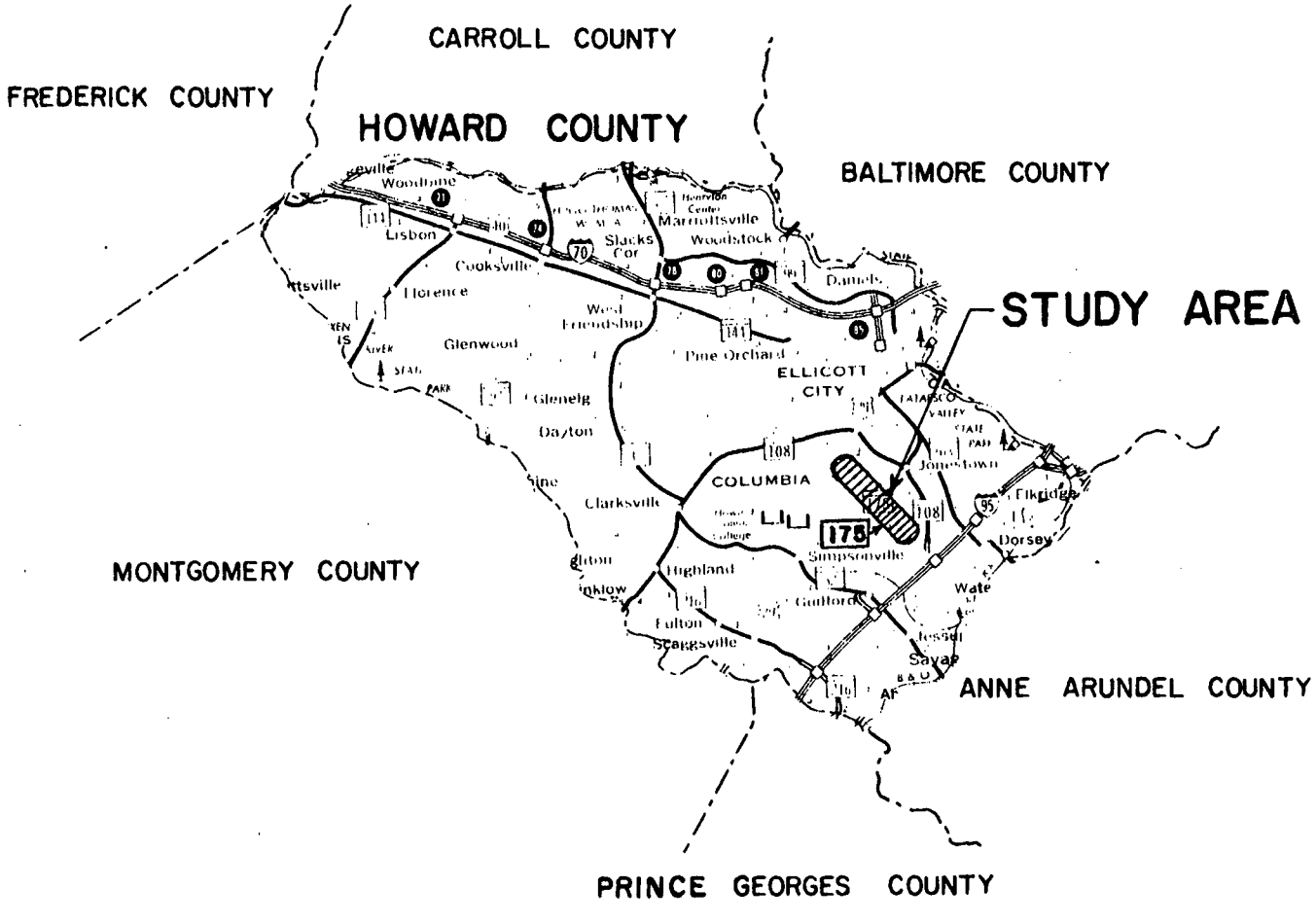
At the eastern terminus of the project is an industrial area which includes the General Electric Appliance Park. The western terminus of the project is adjacent to the town of Columbia, which includes the Columbia Mall, (a regional shopping center) and several office comlexes and restaurants.

B. Project Description

The proposed improvements to Maryland Route 175 consist of upgrading the existing roadway from a two lane, to a multi-lane divided highway by adding a parallel roadway within the existing right of way. The new parallel road-

MARYLAND

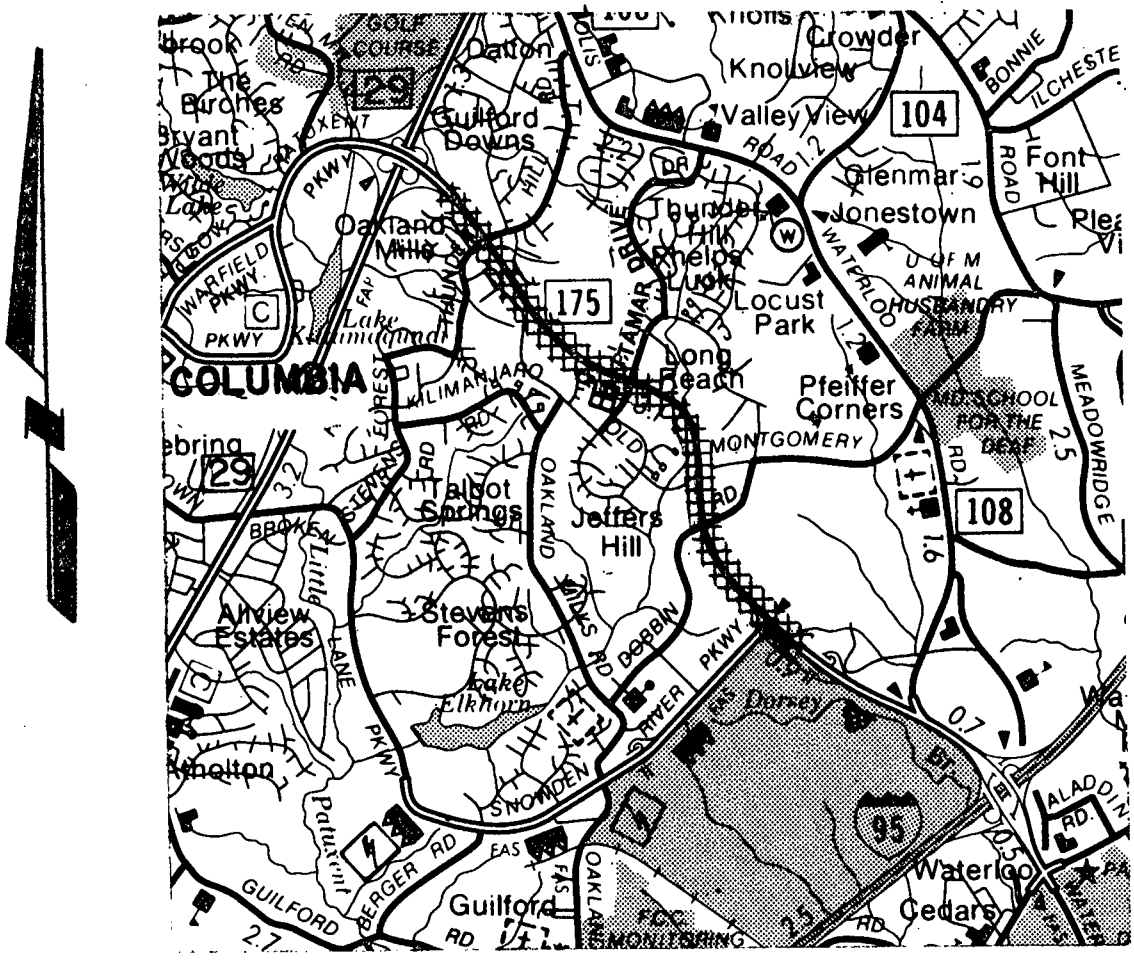




LOCATION MAP

FIGURE # 1

HOWARD COUNTY



STUDY AREA

SCALE 1" = 1 MILE

STUDY AREA MAP

FIGURE 2

way is proposed to be located on the south side of the existing roadway from U.S. Route 29 to 1500' west of Dobbin Road and from this point to Snowden River Parkway on the north side.

The improvement alternates differ in respect to the width of the proposed median. For both build alternates, existing intersections would be expanded to accommodate the proposed roadway with no new intersections proposed. The existing condition at the Maryland Route 175 and Thunder Hill Road would be alleviated by the proposed build alternates due to the additional through lanes being provided on Maryland Route 175. The additional lanes would allow through vehicles to clear the intersection in less time thereby providing more time for left turn movements off of Maryland Route 175 to Thunder Hill Road. As an interim improvement, the reconstruction of the Maryland Route 175 and Thunder Hill Road intersection is being undertaken jointly by the State Highway Administration and Howard County. The improvement will add an additional lane both eastbound and westbound and existing islands will be removed. Dual left turning lanes are proposed for both alternates at the Tamar Drive intersection with single left turn lanes being maintained at Thunder Hill Road, Dobbin Road, and Snowden River Parkway. The No-Build Alternate, Alternate 1 (54' median), and Alternate 2 (24' median) are described in detail in Section 3 on page 43 of this document. The possible extension of the two existing underpasses at Thunder Hill Road and Tamar Drive is currently being

coordinated with the Columbia Park and Recreation, Association, Inc. (See Section IV. Page 60). An overpass at Tamar Drive is being studied.

C. Description of Existing Environment

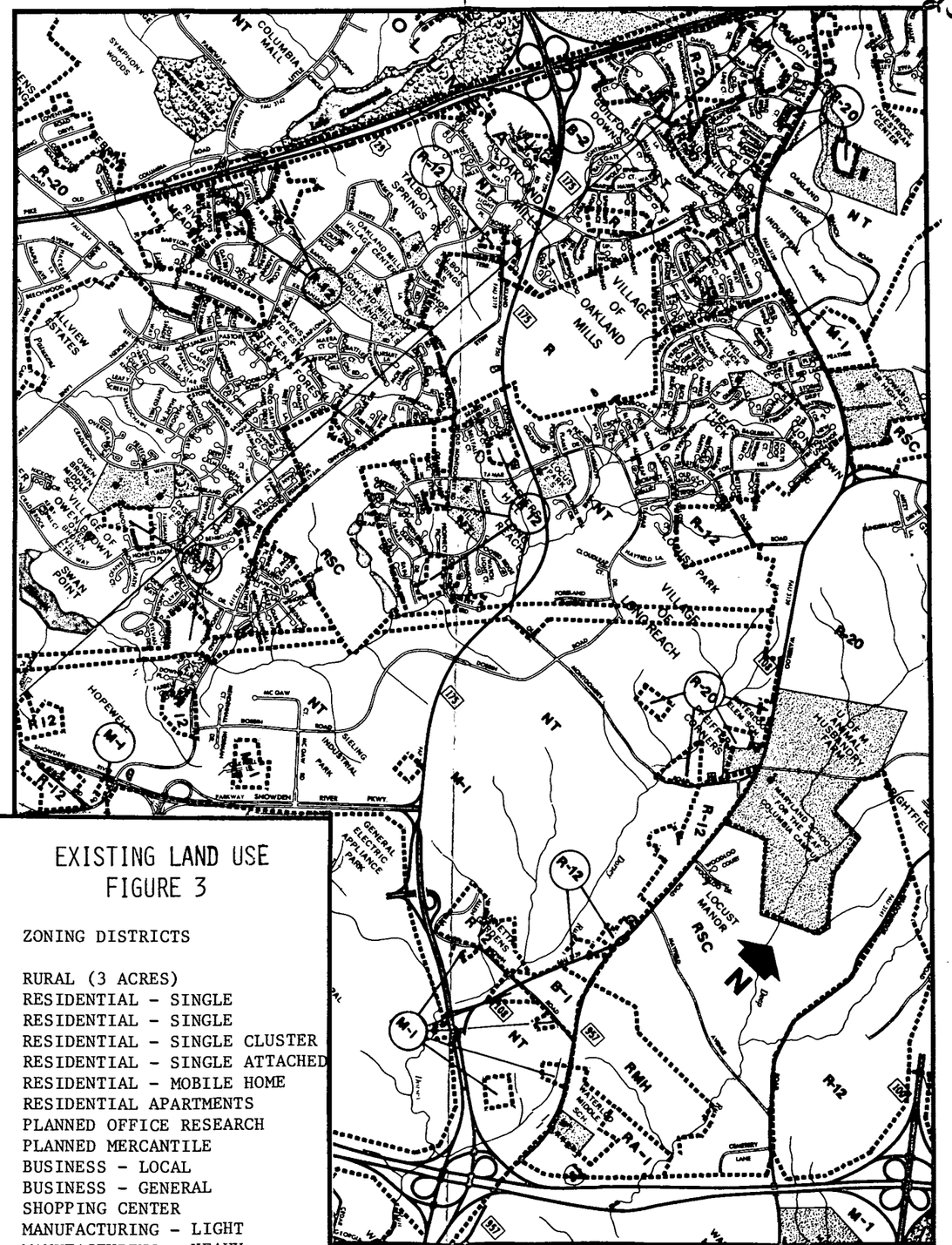
1. Socio-Economic

The population in Howard County has been forecasted by the Regional Planning Council in conjunction with Howard County officials to increase from 90,900 in 1975 to about 199,800 in 1995. In March, 1980, the Howard County population was 124,863 as estimated by the Howard County Department of Planning and Zoning. During the 1975-1995 period, population within the new town of Columbia will grow 144% and total employment will increase by 136%. For the same period, population and total employment in the vicinity of Maryland Route 175 will approximately triple (See Table 1). In 1995, population in the vicinity of Maryland Route 175 is projected at 28,593.

TABLE 1

	POPULATION	TOTAL EMPLOYMENT
HOWARD COUNTY		
1970	53,753	26,332
1975	90,000	38,635
1970-1975 Growth	67%	47%
1995	199,800	84,700
1975-1995 Growth	120%	119%
COLUMBIA		
1970	13,460	7,580
1975	43,900	16,755
1970-1975 Growth	226%	121%
1995	107,300	39,600
1975-1995 Growth	144%	136%
MD. 175 VICINITY		
1970	2,466	1,793
1975	10,065	5,695
1970-1975 Growth	308%	218%
1995	28,593	13,251
1975-1995 Growth	184%	133%

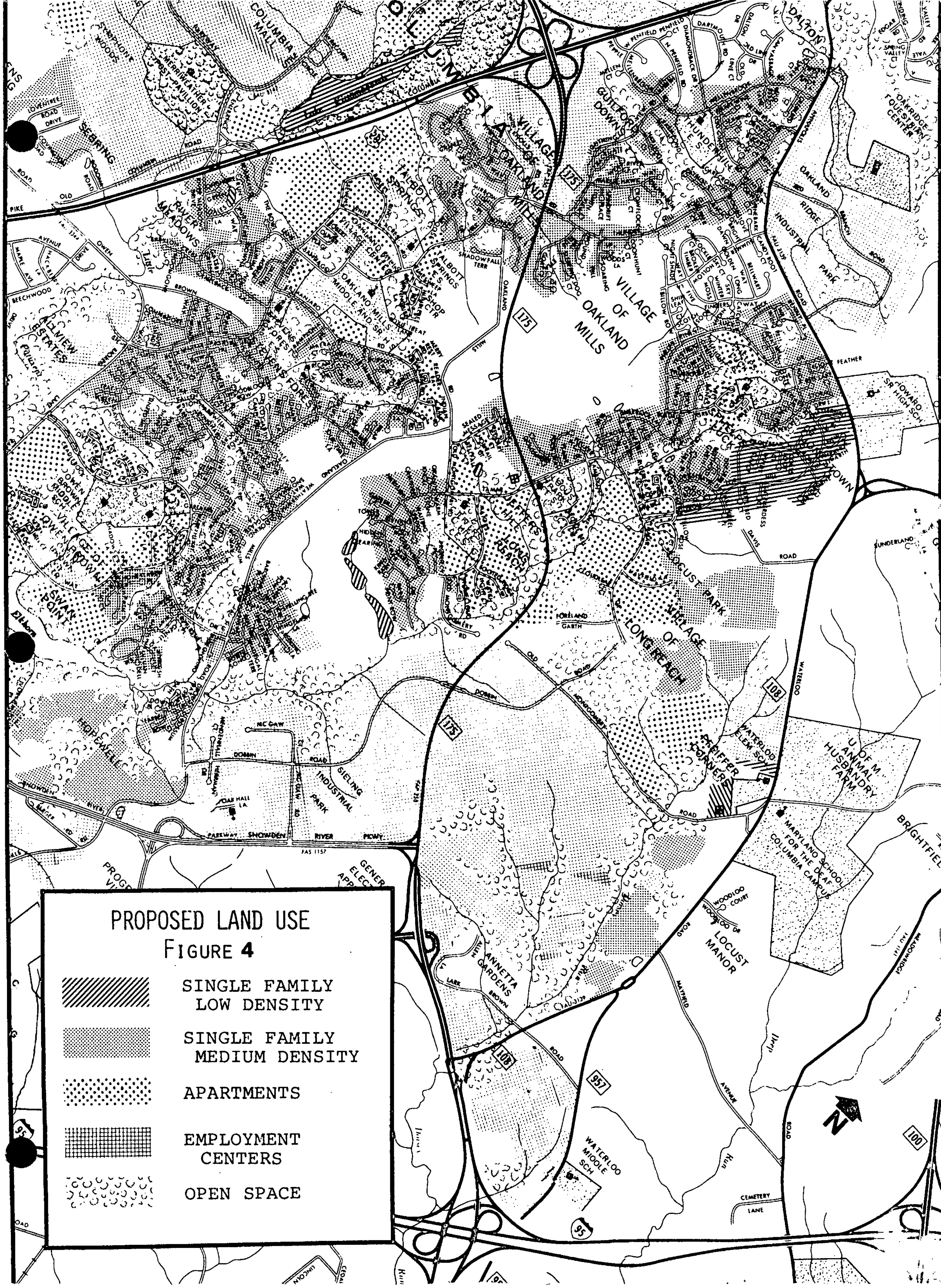
SOURCE: Regional Planning Council, 1978
1980 Census Figures still under preparation.



EXISTING LAND USE
FIGURE 3

ZONING DISTRICTS

R	RURAL (3 ACRES)
R-20	RESIDENTIAL - SINGLE
R-12	RESIDENTIAL - SINGLE
RSC	RESIDENTIAL - SINGLE CLUSTER
RSA	RESIDENTIAL - SINGLE ATTACHED
RMH	RESIDENTIAL - MOBILE HOME
RA-1	RESIDENTIAL APARTMENTS
POR	PLANNED OFFICE RESEARCH
PM	PLANNED MERCANTILE
B-1	BUSINESS - LOCAL
B-2	BUSINESS - GENERAL
SC	SHOPPING CENTER
M-1	MANUFACTURING - LIGHT
M-2	MANUFACTURING - HEAVY
I-D	INDUSTRIAL DEVELOPMENT
NT	NEW TOWN



PROPOSED LAND USE

FIGURE 4

Howard County's 1975 tax rate is $2.49/$100 assessed value with a median income of $17,734 compared to $14,384 for the State. The July, 1980 unemployment rate for Howard County is 3.5% compared to a State unemployment rate of 6.9%.

The only known minority community in the study area is the Shalom Square Elderly Housing located north of Maryland Route 175 on Foreland Garth consisting of a high rise apartment unit and modular units (See Figure 12, Site 17).

It is estimated that minorities constitute 17.2% of the population in Howard County (Source: Howard County Comprehensive Planning and Zoning).

The proposed action is consistent with local land use, zoning, and transportation plans including the Regional Planning Councils 1979-1981 Transporation Improvement Program and the General Development Plan, the General Plan for Howard County, the Columbia Preliminary Development Plan and the 1980 Highway Needs Inventory. The pattern of existing land usage is shown on Figure 3. Proposed land use is shown on Figure 4.

The project corridor east of U.S. Route 29 contains a mixture of land uses. These include agricultural, business, light manufacturing, and industrial, with low and medium density residential the predominant existing and planned land use. (See Figure 3). At each end of the study area, the corridor contains commercial uses with light manufacturing and industrial development at the eastern project limits. There are three existing major industrial parks and

one proposed industrial park within the study area. The existing industrial parks include the Sieling Industrial Park with 737 employees and planned expansion, Guilford Industrial Park with 2001 employees, and the General Electric Appliance Park with 2100 employees. The proposed industrial park Twin Knolls is located near the U.S. Route 29/Maryland Route 175 interchange and is only in the early stages of construction. Currently, a funeral parlor has been constructed with future plans including a motel, bank, restaurant, and an office complex. At the intersection of Maryland Route 175 and Dobbins Road, light manufacturing and office uses are proposed on the south and north sides respectively. Planned commercial uses consisting of a strip commercial center, home improvement center, and a restaurant are proposed for the southeast and southwest quadrants of Maryland Route 175 and Dobbin Road.

Residential development within the study area consists of single family structures and apartment complexes fronting on arterial streets off of Maryland Route 175. The residential units east of U.S. 29 are a part of Columbia and the neighborhoods are designated as Guilford Downs, Thunder Hill Road, Locust Park, and Jeffers Hill within the Village of Oakland Mills and the Village of Long Reach (See Figure 3). Each village contains supporting facilities such as shopping centers, a firehouse, schools, pools, and other recreational areas.

Recreational facilities outside the right of way within the study area consist of a ballfield located on the north

side of Maryland Route 175 at the intersection of Tamar Drive. Columbia Association (CA) designated open space with recreational facilities consisting of a playground, a community pathway system, and a pedestrian underpass are located along Maryland Route 175 between Tamar Drive and Dobbin Road. An underpass is also located east of Thunder Hill Road. No parkland exists within the study area. Currently, a Class II (shared roadway) bikelane system exists along Maryland Route 175.

Community facilities within the study area consist of the Long Reach Village Center located north of Maryland Route 175 on Cloudleep Court which includes a retail center, professional offices, a visual arts center, and the Long Reach Community Center. The Kinder-Care Learning Center is located north of Maryland Route 175 at the intersection of Tamar Drive and Lambskin Lane. The Jeffers Hill Neighborhood Center which serves as a day care center and community center is located south of Maryland Route 175 on Tamar Drive. The Jeffers Hill Elementary School is situated next to the community center on Tamar Drive. The Long Reach Fire Station #9 fronts on Tamar Drive south of Maryland Route 175.

2. Natural Environment

The original natural environment of the study area has been almost completely changed by urban development. Most of the area has been developed for residential and industrial use, therefore, there is very little remaining upland wildlife habitat. There are no threatened or endangered

species within the project area. See the letter in the Correspondence Section from the U.S. Fish and Wildlife Service received 10/21/80 and the letter from the Maryland Department of Natural Resources dated April 11, 1980.

Existing Maryland Route 175 crosses five small streams which are tributaries to the Little Patuxent River. The Little Patuxent was designated a Scenic River in 1972 by the Maryland General Assembly. The existing and proposed stream crossings of Maryland Route 175 do not directly cross the main branch of the Little Patuxent River. Each of the small stream crossings has an associated 100 year floodplain. A conceptual hydrologic investigation using Federal Insurance Administration maps, was conducted and it was determined the stream floodplains would not be significantly impacted by the proposed action. No tidal wetlands exist in the study area. The study area is outside the Coastal Zone Management area of primary focus.

A biological survey of the Little Patuxent River was conducted in 1968 by the Federal Water Pollution Control Agency Mid Atlantic Region. The study surveyed the community of benthic organisms as an indicator of the biological condition of the stream. The streams involved in the project were not surveyed, probably due to the small size and proximity to development. The nearest sample station on the Little Patuxent was at the U.S. Route 1 bridge downstream by Savage (See Figure 1 - Location Map). Based on the study, good water quality conditions existed, with clear water, numerous minnous and darters and good

populations of mayflies and caddisflies.

There is no prime or unique farmland within the study area. A literature and field review revealed there are no unique natural settings within the study area as well as no sole source acquifers identified by the Environmental Protection Agency.

3. Historical/Archeological

Two historic sites of Maryland Historical Trust inventory quality and two probably eligible for the National Register are located outside the right of way in the Maryland Route 175 study area and are indicated on Figure 11. These properties are:

-Blandair, north of Maryland Route 175 between Thunder Hill Road and Tamar Drive. Probable National Register Eligible, (identified as Site #2).

-Linden Grove, 5970 Tamar Drive. Probable National Register eligible (Site #3).

-Maquire Farm, S. E. quadrant of U.S. Route 29/Maryland Route 175 - Acquired by Twin Knolls Business Park, State Inventory (Site #1).

-Frame House, 8810 Old Montgomery Road, State Inventory, (Site #4).

An archeological reconnaissance completed by the Maryland Geological Survey revealed no evidence of aboriginal archeological resources. An historic cemetery, Dorsey Cemetery (Site #5), located outside the right of way, represents the only historic archeological resource encountered. See the letter in the Correspondence Section

from the Maryland Historical Trust dated September 13, 1979.

4. Existing Roadway System

Maryland Route 175 is classified as an urban intermediate arterial highway system. The existing roadway consists of one standard twelve foot lane in each direction with 10 foot paved shoulders. No parking is permitted along this section of Maryland Route 175.

The existing right of way along Maryland Route 175 varies in width from 250 feet to 300 feet. Although only two lanes were initially constructed, there was sufficient right of way purchased for an ultimate four lane divided facility.

Twelve foot right and left hand turning lanes exist at the four signalized intersections of Snowden River Parkway, Dobbin Road, Tamar Drive, and Thunder Hill Road. The existing intersections at Thunder Hill Road, Tamar Drive, and Dobbin Road are presently experiencing unstable operating conditions with reduced operating speeds along mainline Maryland Route 175 during peak traffic hours. Local bus service is provided along Maryland Route 175 in the Thunder Hill area utilizing portions of Maryland Route 175. A private intercity bus service provides commuter service to and from Baltimore and Washington during peak periods.

Currently, a Class II bikelane exists along Maryland Route 175 but is proposed to be eliminated in conformance with the Columbia Preliminary Development Plan for bikeways.

There are also two existing pedestrian underpasses and they are located approximately 1800 feet east of Tamar Drive and 500 feet east of Thunder Hill Road.

II. NEED FOR THE PROJECT

A. Purpose

The purpose of the Maryland Route 175 project is to ensure that sufficient roadway capacity exists to adequately provide for the existing and projected traffic growth that is anticipated in the eastern portion of Howard County. With the projected increases in population, employment, and traffic, the existing roadway and particularly the intersections would experience increased congestion. Existing intersections at Thunder Hill Road, Tamar Drive, and Dobbin Road are already experiencing unstable operating conditions during peak hour traffic periods. Operating speeds along the mainline currently average 15 mph during peak hour with the existing and proposed speed posted at 45 mph. The proposed action is necessary to improve safety and operating characteristics, alleviate present congestion, and to accommodate forecasted traffic growth on Maryland Route 175.

Maryland Route 175 serves as one of the major east-west routes within the Columbia area. In general, Maryland Route 175 in conjunction with the other major east-west routes, serves the traffic entering and leaving the communities of Columbia and Ellicott City. The east-west routes serve as feeder roads for the longer distance trips using U.S. Route 29, I-95, and U.S. Route 1.

B. Accident Statistics

Maryland Route 175 accident statistics are based on a two year period from 1977 through 1978. The study section

of Maryland Route 175 experienced a total of 69 accidents during this two year period. The following table of accident experience (listed by severity) indicates the number of persons killed or injured and property damage accidents for the two year period.

Severity	1977	1978	Total
Fatal Accidents	2	1	3
Persons Killed	3	2	5
Injury Accidents	8	12	20
Persons Injured	15	26	41
Property Damage Accidents	20	26	46
TOTAL ACCIDENTS	30	39	69

These accidents resulted in a rate of 220 accidents per 100 million vehicle miles of travel (Accident/100MVM) which is presently lower than the statewide average rate of 305 accidents/100MVM for similar design state maintained highways. The accidents at this specific location of Maryland Route 175 have generated a cost to the motoring and general public of aproximately $1.8million/100MVM.

Despite the low overall accident rate, three fatal accidents, resulting in five deaths, occurred on Maryland Route 175 during the two year study period. These accidents provide a fatal accident rate of 9.6 accidents/100MVM, which exceeds the statewide average of 3.1 fatal accidents/100MVM. In addition, a triple fatality accident occurred in 1976 on Maryland Route 175 at Dobbin Road. Two of the three fatal accidents in 1977 and 1978 were due to opposite direction collisions.

Two locations within the study area meet the State Highway Administration's criteria as High Accident Inter-

sections (HAI). These locations are listed below, including the year and number of accidents.

Location	Year (No. of Accidents)
Md. 175 at Thunder Hill Road	1977 (14), 1978 (15)
Md. 175 at Tamar Drive	1978 (17)

The study area of Maryland Route 175 has also experienced a higher than normal incidence of left turn and opposite direction accidents.

The proposed four lane divided highway with partial control of access should significantly reduce both the high fatality rate as well as the number of opposite direction collisions that are now occurring on the subject roadway. It is estimated that implementation of this proposed project would result in an accident savings of approximately $693,000/100MVM.

C. Capacity Analysis and Traffic Projections

Listed below is the average daily traffic for the years 1979, 1986 and 2006 for the "No-Build" alternate and for the "Build" Alternates with and without Snowden River Parkway Extended.

AVERAGE DAILY TRAFFIC

NO-BUILD

1979	1986	2006
24,150	25,150	28,625

BUILD WITHOUT SNOWDEN RIVER PARKWAY EXTENDED

1979	1986	2006
24,150	28,300	46,225

BUILD WITH SNOWDEN RIVER PARKWAY EXTENDED

1979	1986	2006
24,150	29,200	46,225

An intersection at Snowden River Parkway and Maryland Route 175 will not be included as an element of this Project Planning Study. Without the extension of Snowden River Parkway beyond Route 175, an at-grade intersection will accommodate projected traffic. There are no plans to extend Snowden River Parkway beyond its existing terminus at Route 175, at least until 1985. At that time, the Howard County planning staff, within whose jurisdiction Snowden River Parkway lies, would re-evaluate the economics of extending Snowden River Parkway. In the event an interchange at Route 175 were to be considered as an element of the future extension of Snowden River Parkway, the analysis and construction of the interchange would be the County's responsibility. The existing at-grade partial intersection at Snowden River Parkway was designed to accommodate reconstruction to a grade separated interchange when such reconstruction is warranted. Furthermore, a highway segment connecting Snowden River Parkway with Maryland Route 372 in Baltimore County, as shown in the 1975 Baltmore County Comprehensive Plan is no longer proposed for Baltmore County's highway network within the next 20 years.

The No-Build and Build Alternates (with and without Snowden River Parkway Extended) traffic projections are shown on Figures 5, 6, and 7, respectively.

Currently, the traffic on Maryland Route 175 from U.S. Route 29 to Tamar Drive is operating at a level of service (LOS) "E", which means conjested and unstable flow with periodic stoppages. The remaining section from Tamar Drive

to Snowden River Parkway is operating at a LOS "D", which is restricted in speed maneuverability and approaching congested and unstable flow. Alternates 1 and 2 are proposed to widen Maryland Route 175 to a multi-lane divided highway with turning lanes at signalized intersections. This improvement is anticipated to add sufficient capacity such that Maryland Route 175 will operate at favorable levels of service to design year 2006.

Intersection analysis shows that three of the four existing Maryland Route 175 intersections are currently operating at LOS "F" during peak hours, which means forced flow conditions low speeds, and stoppages that may occur for short or long periods of time (See Figure 8). Only Snowden River Parkway is operating at LOS "A", which indicated free flow conditions. However, by the design year 2006, Snowden River Parkway will be operating at LOS "F" under the No-Build Alterante.

In 2006, under the No-Build alternate, the Tamar Drive, Thunder Hill Road, and Dobbin Road intersection will operate at LOS "F". In 2006, under both Build Alternates, the Thunder Hill Road and Dobbin Road intersections will operate at LOS "B" with and without Snowden River Parkway extended. The Tamar Drive intersection will operate at LOS "D" in 2006 with or without Snowden River Parkway extended. The Snowden River Parkway intersection will operate at LOS "B" without the extension in 2006, and at LOS "D" with the extension of Snowden River Parkway.

TRAFFIC VOLUMES

AVERAGE VOLUMES

NO-BUILD

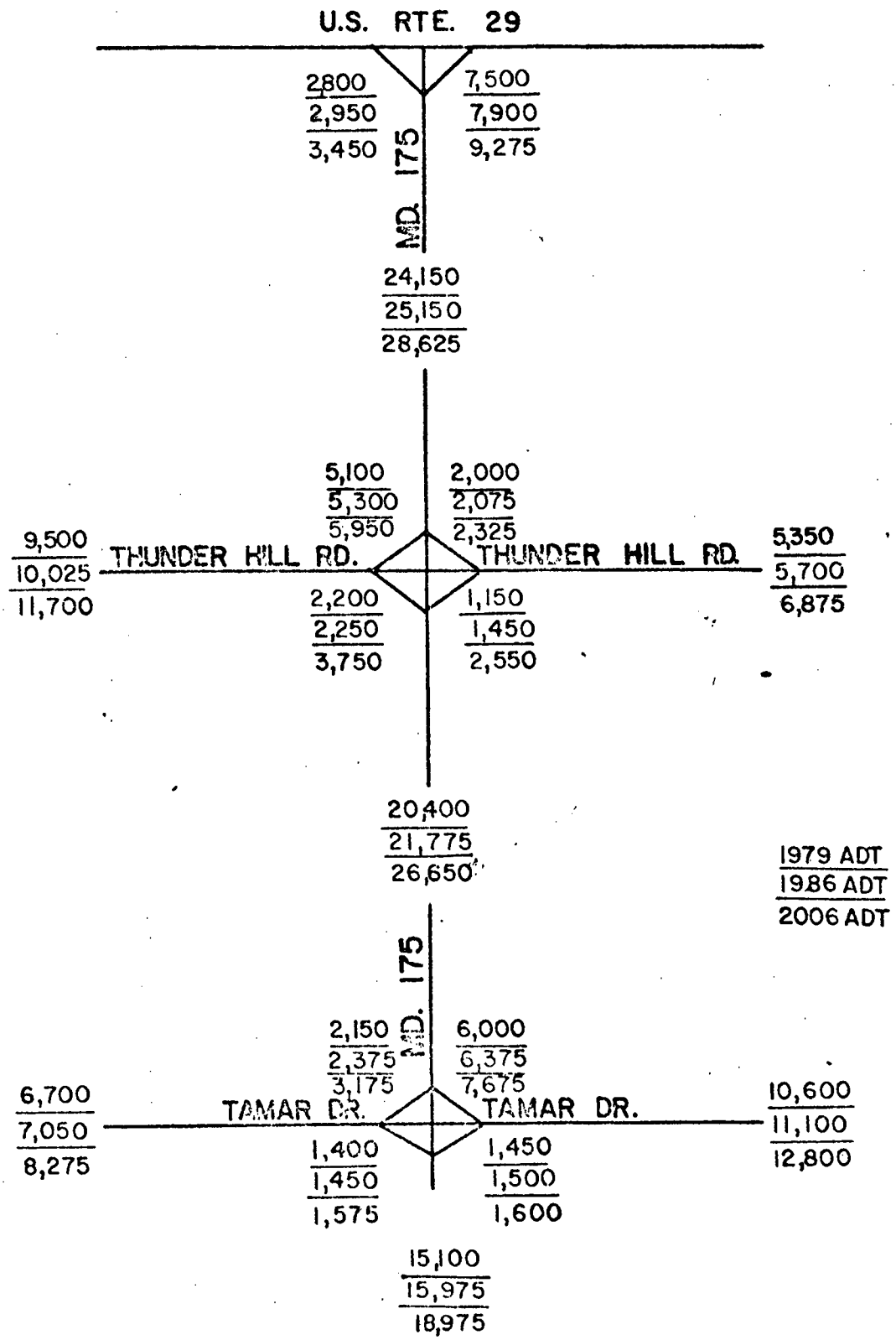


FIGURE # 5A

TRAFFIC VOLUMES

AVERAGE VOLUMES

NO-BUILD

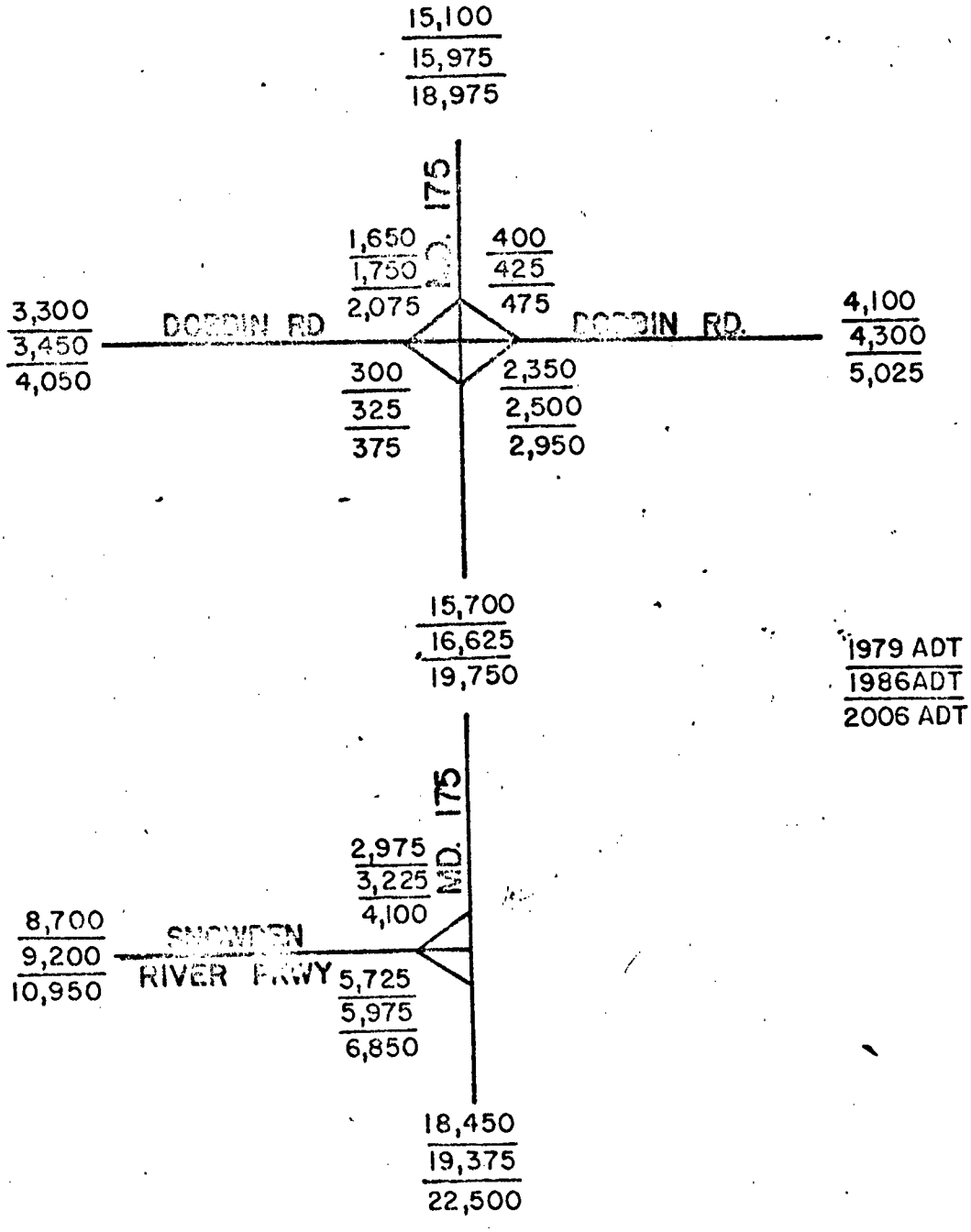


FIGURE # 5B

TRAFFIC VOLUMES

AVERAGE VOLUMES

BUILD WITH SNOWDEN RIVER PARKWAY

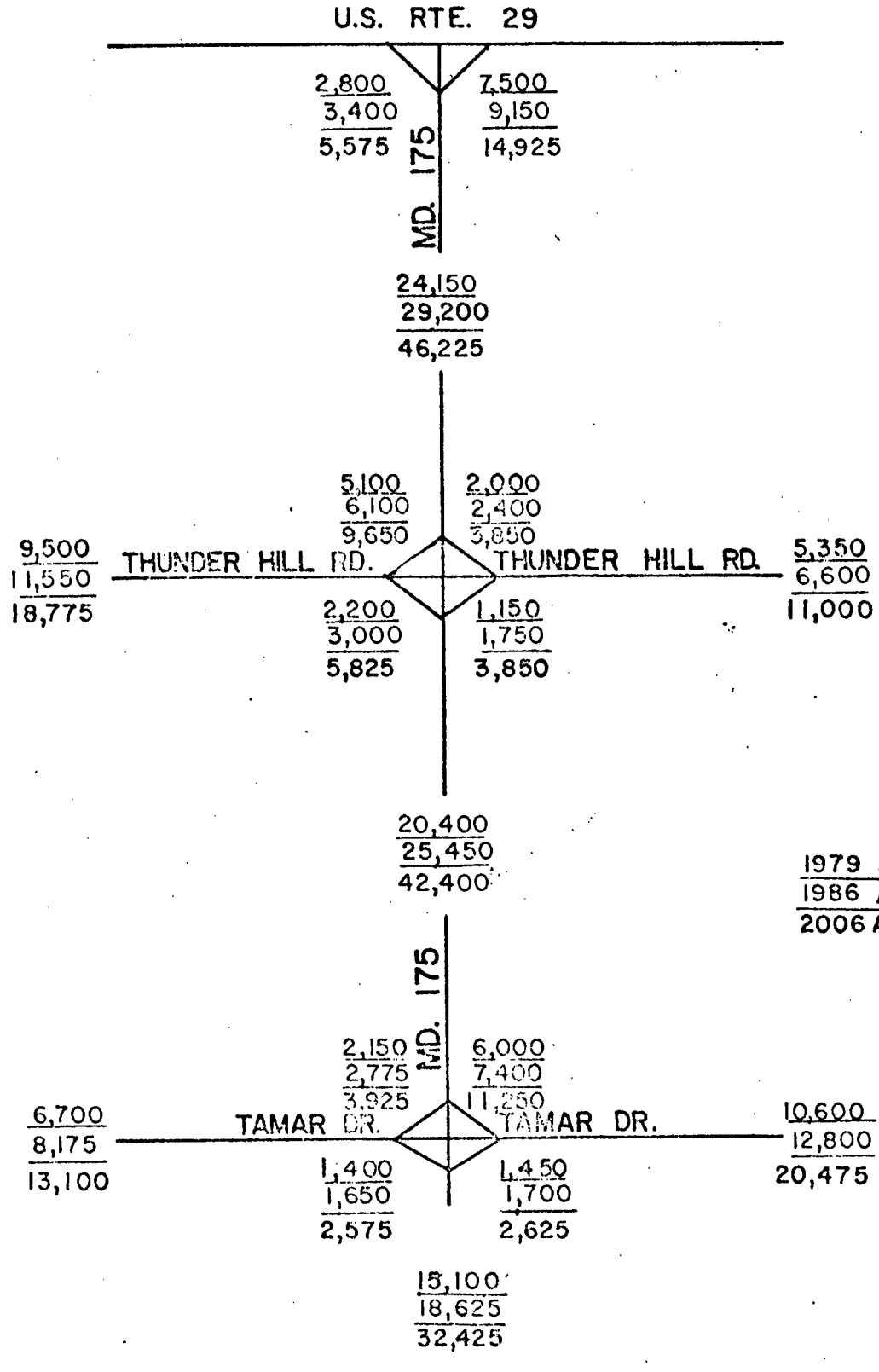


FIGURE # 6A

TRAFFIC VOLUMES

AVERAGE VOLUMES

BUILD WITH SNOWDEN RIVER PARKWAY

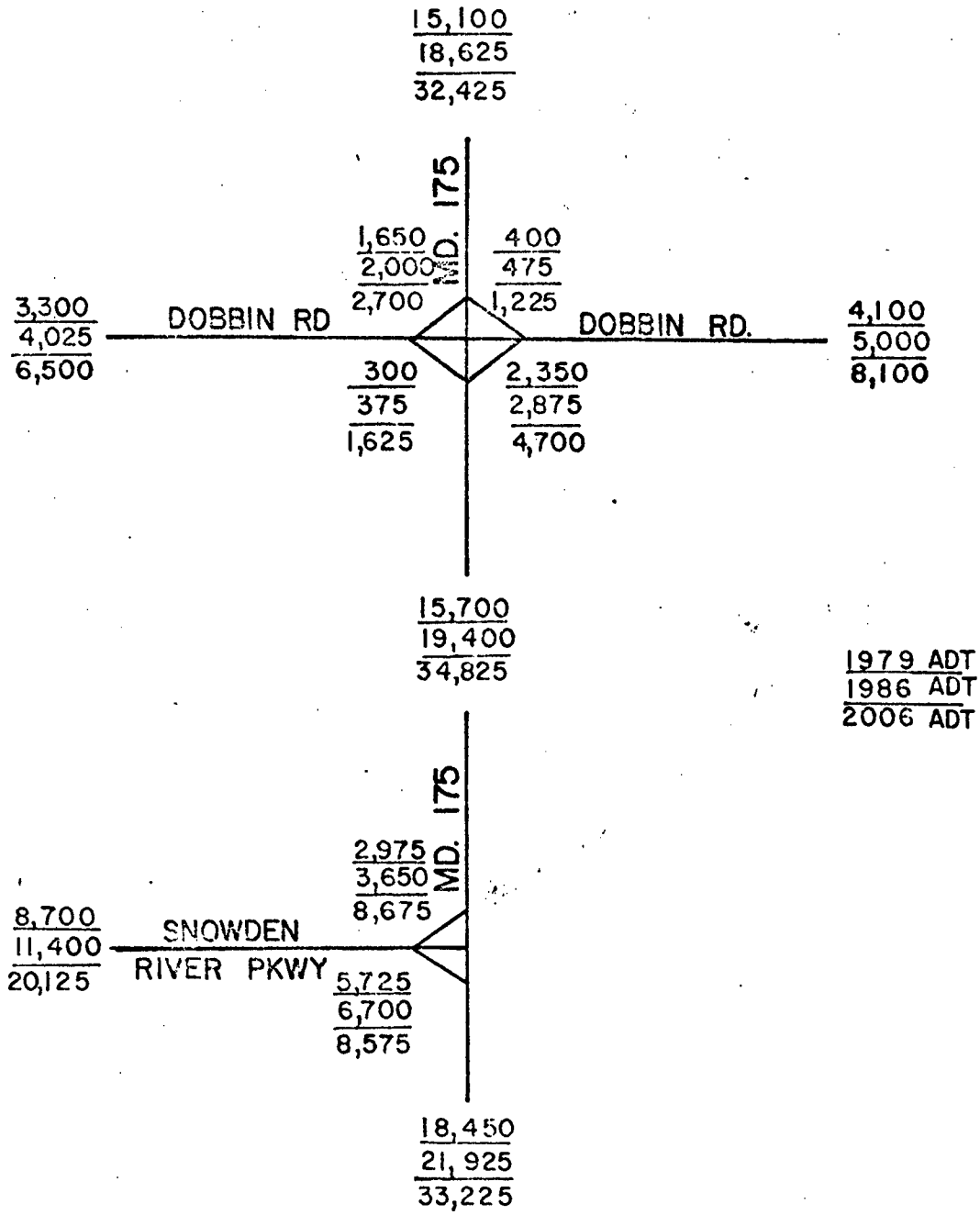


FIGURE # 6B

TRAFFIC VOLUMES

AVERAGE VOLUMES

BUILD WITHOUT SNOWDEN RIVER PARKWAY

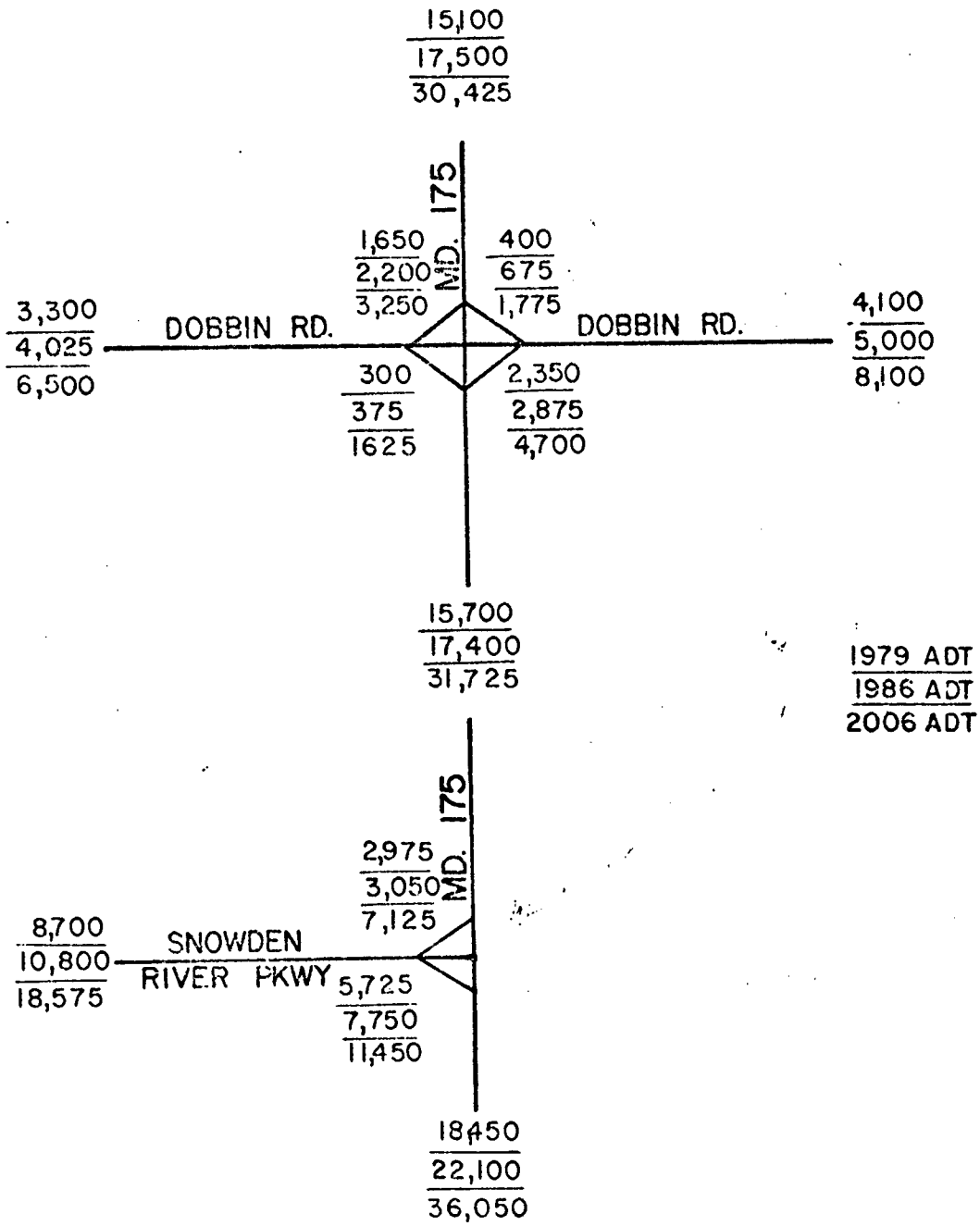


FIGURE # 7A

TRAFFIC VOLUMES
AVERAGE VOLUMES
BUILD WITHOUT SNOWDEN RIVER PARKWAY

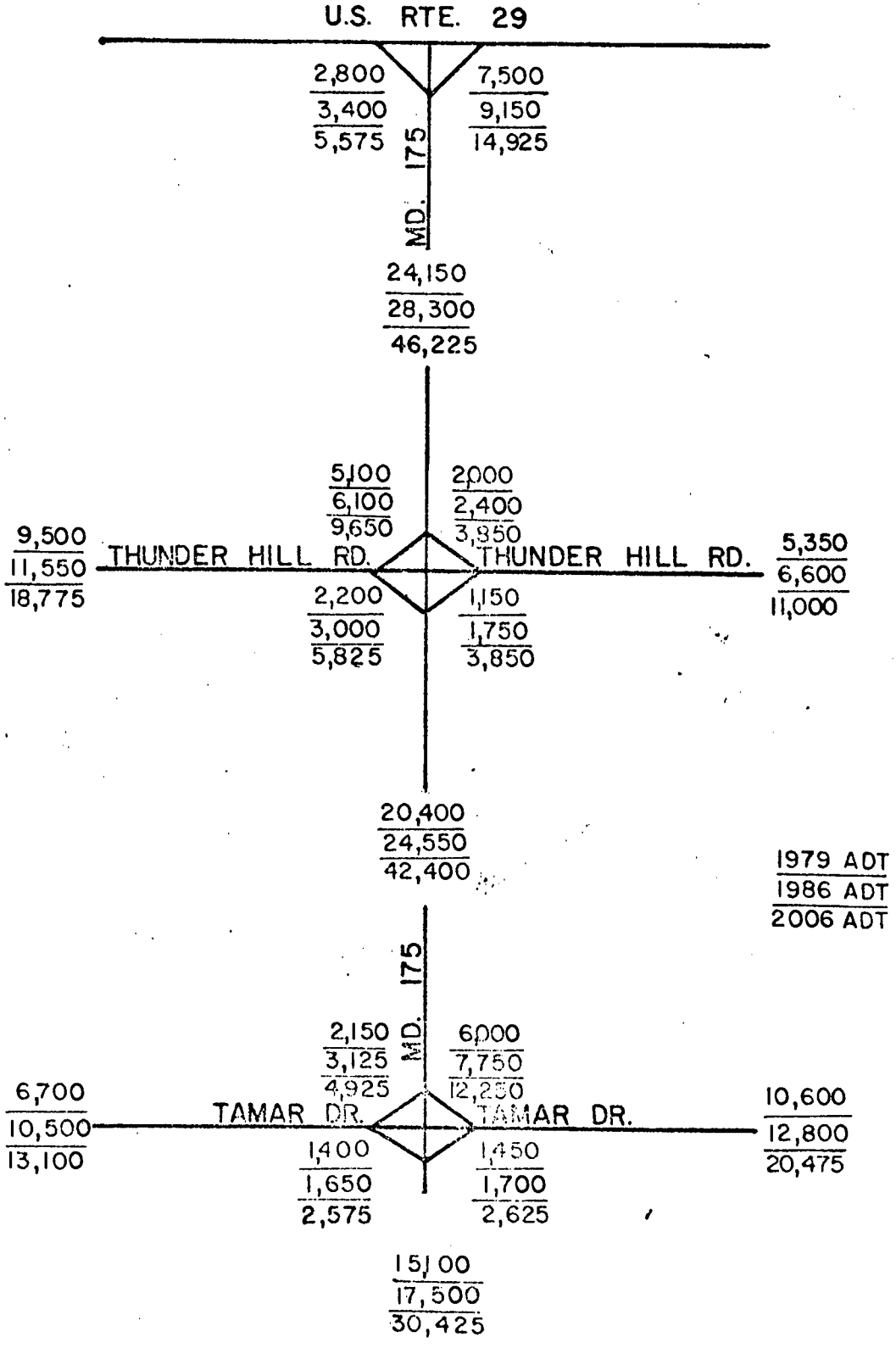


FIGURE # 7

INTERSECTION ANALYSIS

SERVICE VOLUME FOR LOS 'C'

SVc No build = 1000 (Two-way)
SVc Build = 1900 (One-way)
SVe Build = 3800 (One-way)

OPERATING SPEED	PEAK	OFF-PEAK
1. 1979	15	45
2. 2006 No-Build	10	45
3. Build without Snowden River Parkway	25	45
4. Build with Snowden River Parkway	25	45

CONDITIONS

1. Existing
2. No-Build
3. Build without Snowden River Parkway
4. Build with Snowden River Parkway

Single Left Turn
THUNDER HILL ROAD

Year	Conditions	L.O.S.
1979	1	F
2006	2	F
2006	3	B
2006	4	B

Double Left Turn
TAMAR DRIVE

Year	Conditions	L.O.S.
1979	1	F
2006	2	F
2006	3	D
2006	4	D

Single Left Turn
DOBBIN ROAD

Year	Conditions	L.O.S.
1979	1	F
2006	2	F
2006	3	B
2006	4	B

Single Left Turn
SNOWDEN RIVER PARKWAY

Year	Conditions	L.O.S.
1979	1	A
2006	2	F
2006	3	B
2006	4	D

FIGURE

Both Alternates 1 and 2 propose to widen Maryland Route 175 from a two lane roadway to a multi-lane divided facility, with single or double left turning lanes provided at signalized intersections. The existing condition at Maryland Route 175 and Thunder Hill Road would be alleviated by the proposed build alternates due to the additional through lanes being provided at Maryland Route 175. The additional lanes would allow through vehicles to clear the intersection in less time thereby providing more time for left turn movements off of Maryland Route 175 to Thunder Hill Road.

As an interim improvement, the reconstruction of Thunder Hill Road and Maryland Route 175 is being undertaken jointly by the State Highway Administration and Howard County. The improvement will add an additional lane both eastbound and westbound and the existing islands will be removed. The project is in the design phase with proposed construction in the Fall of 1982.

A double left turning lane is proposed at Tamar Drive to accommodate projected traffic needs and result in an adequate level of service. With the build alternates, opposing traffic will be separated by a minimum 24 foot median and turning lanes would be provided which will greatly aid in reducing rear-end, left turn, and opposite direction accidents. The Maryland Route 175 improvement is anticipated to accommodate increased capacities to the existing facility and will improve the flow of traffic within the Columbia Area.

III. ALTERNATES CONSIDERED

Alternate 1

Geometric Design Criteria for the proposed construction is in compliance with the American Association of State Highway and Transportation Officials (AASHTO) Publication "A Policy on Design of Urban Highways and Arterial Streets, 1973".

Alternate 1 proposes a 54 foot open median to separate the existing 24 foot roadway from the proposed 24 foot parallel roadway. (See Figure 9 and Typical Section page 44).

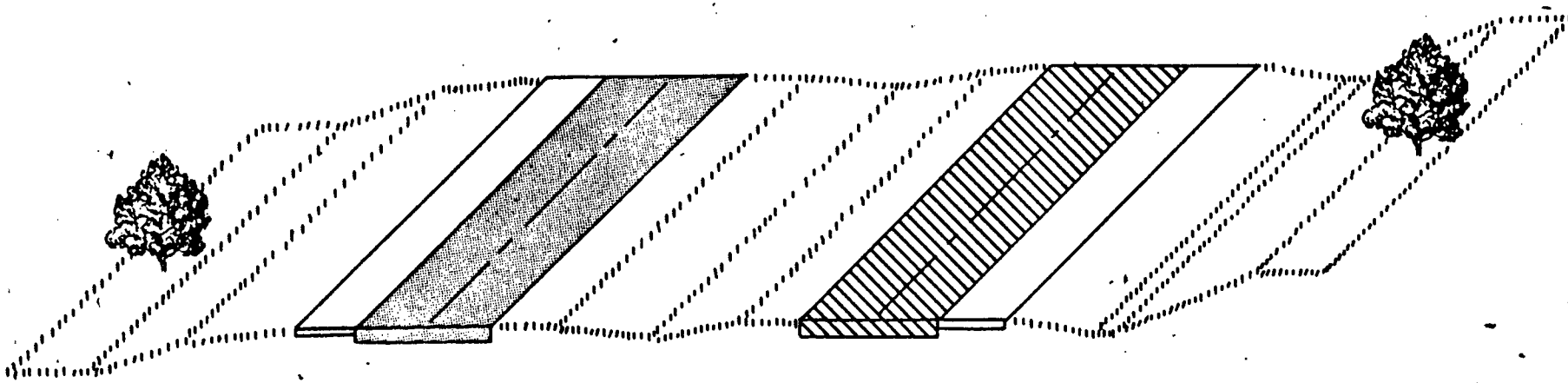
Alternate 1 begins approximately 1130 feet east of Snowden River Parkway on the north side of the existing roadway.

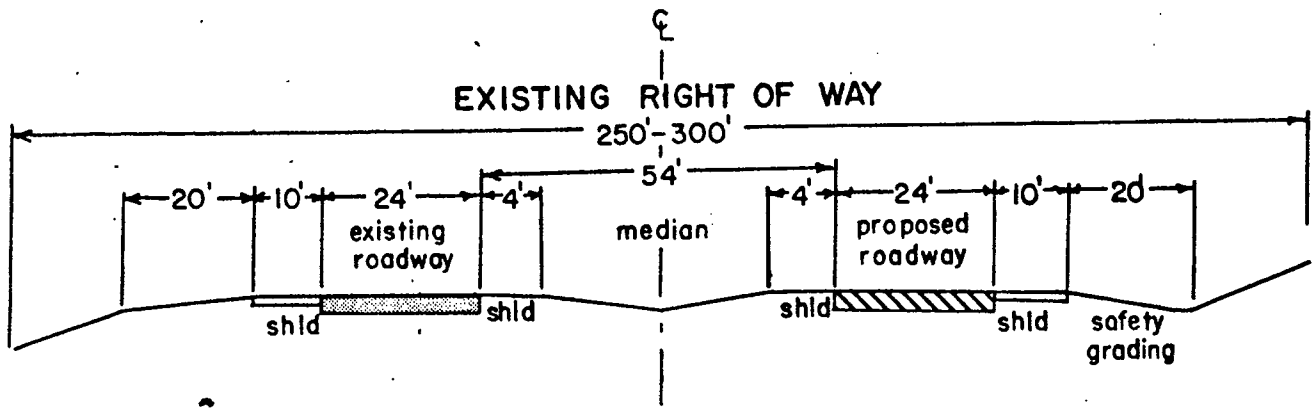
The existing 64 foot median, which extends from the I-95 Interchange to about 600 feet west of the entrance to the General Electric Applicance Park, will transition into the proposed 54 foot median 1500 feet west of Dobbin Road.

Approximately 770 feet east of the U.S. Route 29 Interchange, the proposed 54 foot median would transition into the existing 64 foot median.

The Snowden River Parkway and Dobbin Road Intersections will be expanded to acommodate the new roadway. Both intersections would remain signalized. The Snowden River Parkway Intersection, will provide a single left turning lane to accommodate the projected turning movements from Maryland Route 175.

MARYLAND ROUTE 175
PROPOSED TYPICAL SECTIONS

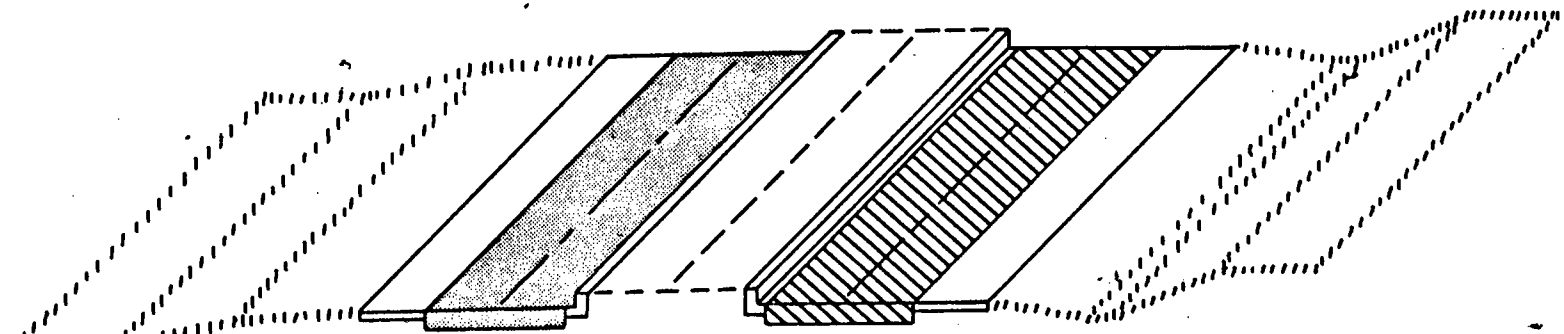


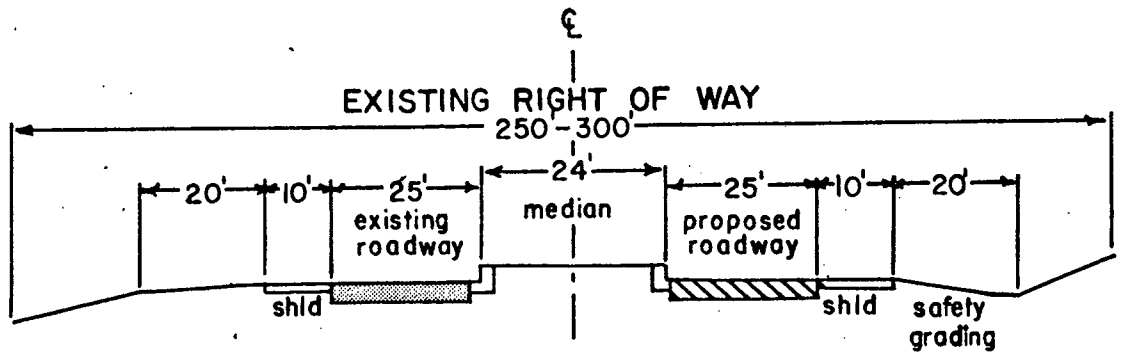


ALTERNATE 'I'

NOTE:
The dimensions shown are for the purpose of determining cost estimates and environmental impacts, and are subject to change during the final design phase.

MARYLAND ROUTE 175
PROPOSED TYPICAL SECTIONS





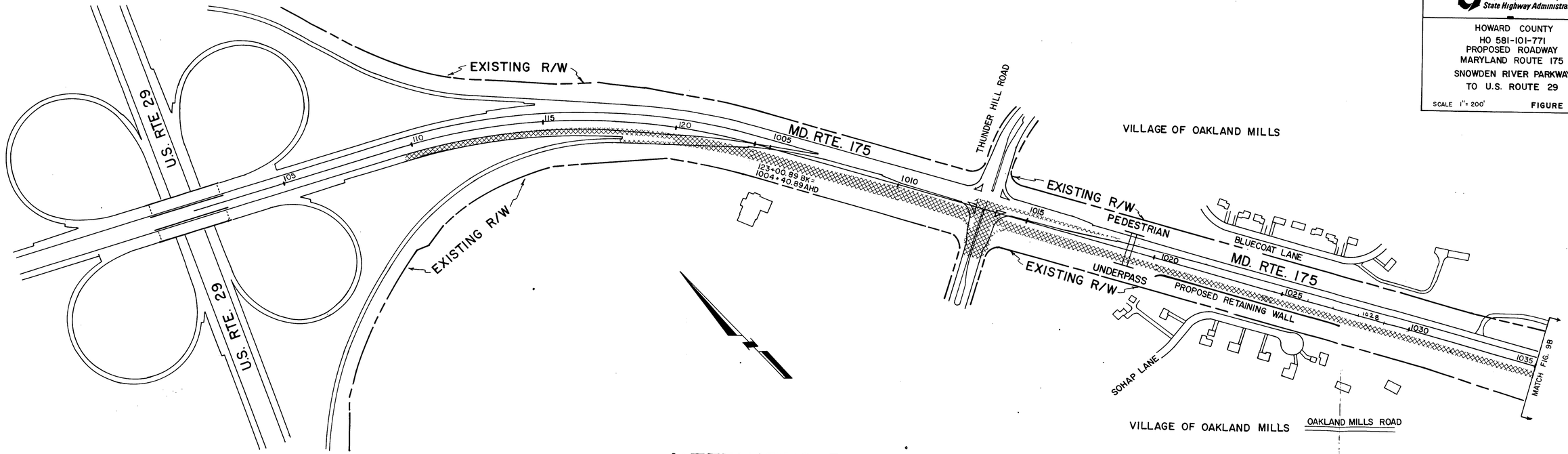
ALTERNATE '2'

NOTE:
The dimensions shown are for the purpose of determining cost estimates and environmental impacts, and are subject to change during the final design phase.

Maryland Department of Transportation
State Highway Administration

HOWARD COUNTY
HO 581-101-771
PROPOSED ROADWAY
MARYLAND ROUTE 175
SNOWDEN RIVER PARKWAY
TO U.S. ROUTE 29

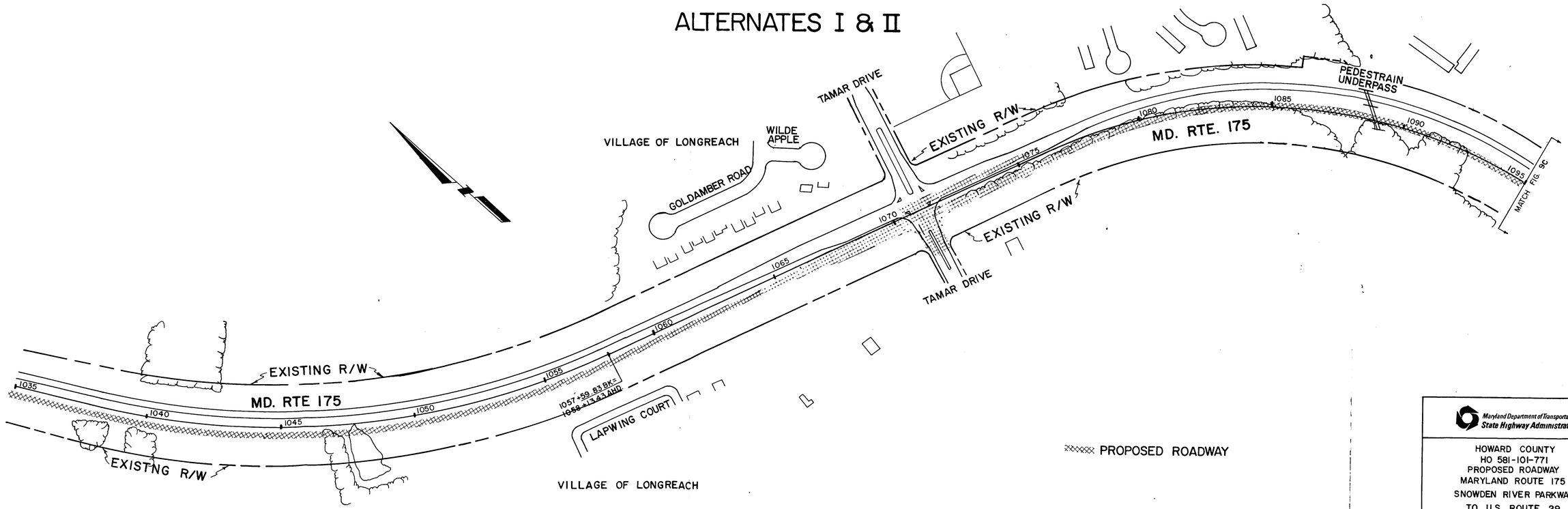
SCALE 1"= 200' FIGURE # 9A



ALTERNATES I & II

PROPOSED ROADWAY

ALTERNATES I & II



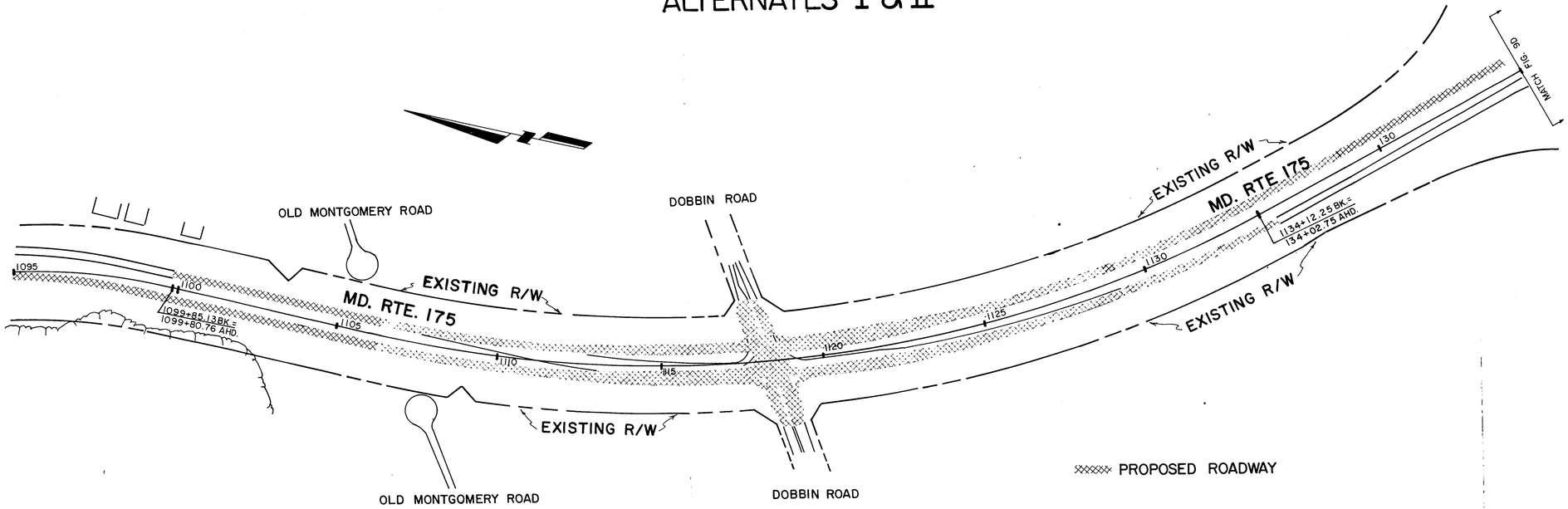
Maryland Department of Transportation
State Highway Administration

HOWARD COUNTY
HO 581-101-771
PROPOSED ROADWAY
MARYLAND ROUTE 175
SNOWDEN RIVER PARKWAY
TO U.S. ROUTE 29

SCALE 1"= 200'

FIGURE # 9B

ALTERNATES I & II



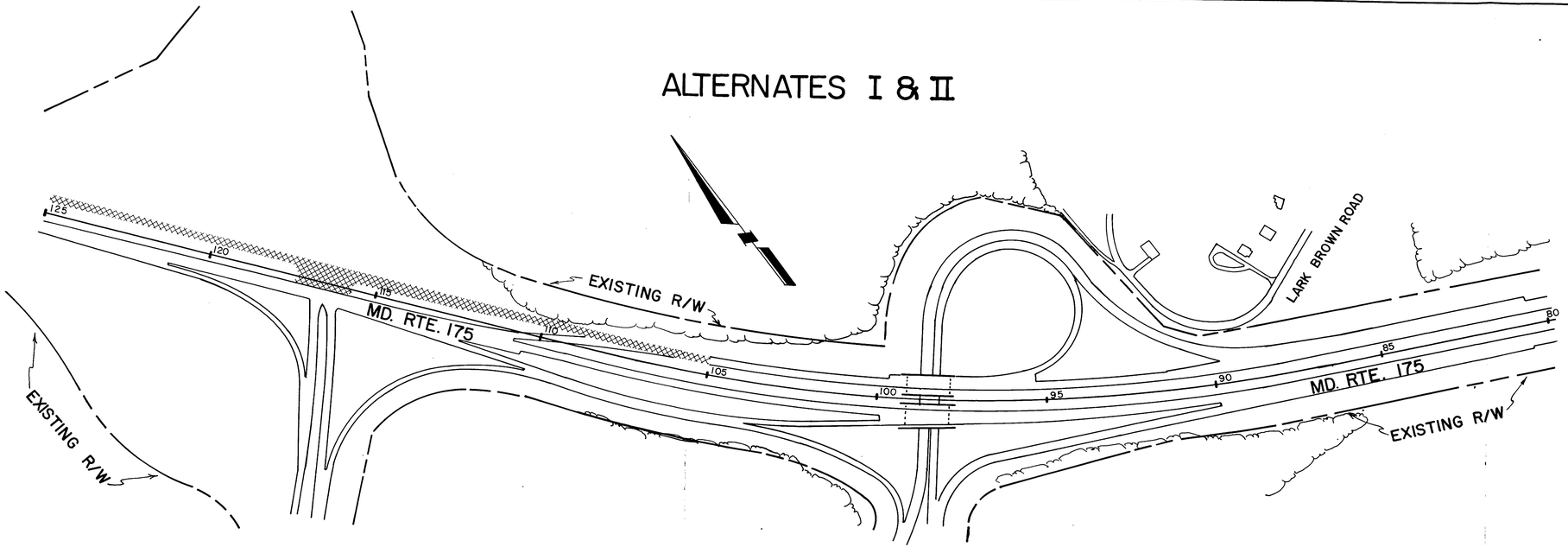
Maryland Department of Transportation
State Highway Administration

HOWARD COUNTY
HO 581-101-771
PROPOSED ROADWAY
MARYLAND ROUTE 175
SNOWDEN RIVER PARKWAY
TO U.S. ROUTE 29

SCALE 1" = 200'

FIGURE # 9C

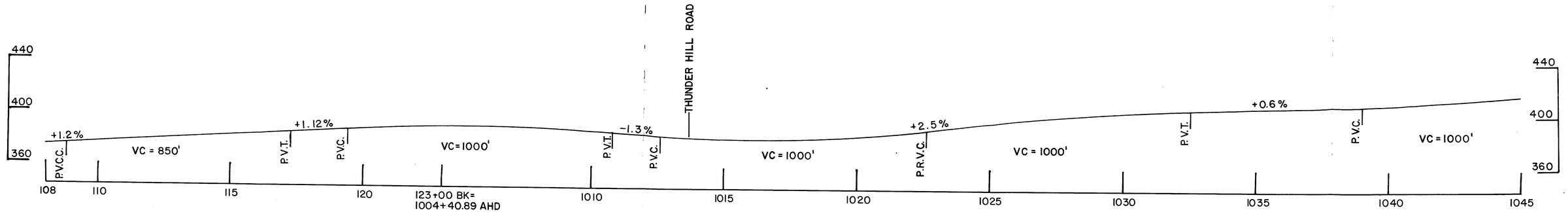
ALTERNATES I & II

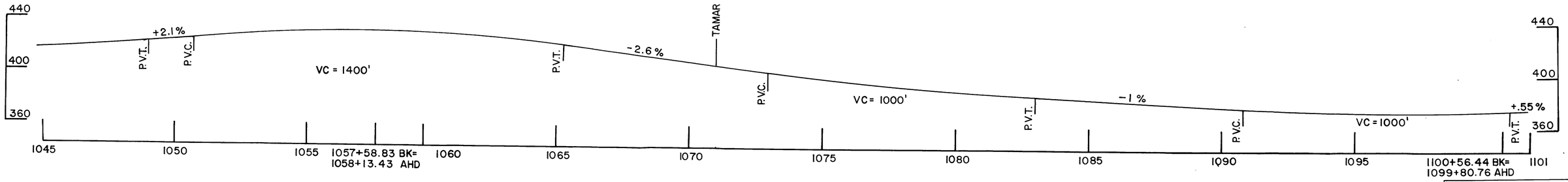


Maryland Department of Transportation
State Highway Administration

HOWARD COUNTY
HO 581-101-771
PROPOSED ROADWAY
MARYLAND ROUTE 175
SNOWDEN RIVER PARKWAY
TO U.S. ROUTE 29

SCALE 1"= 200' FIGURE # 9D



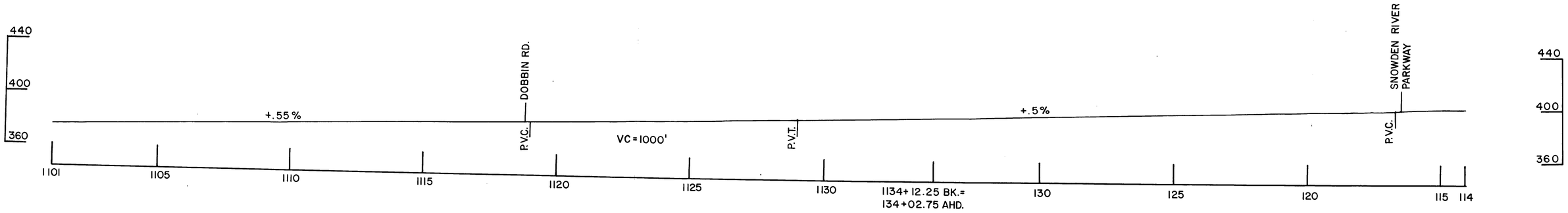


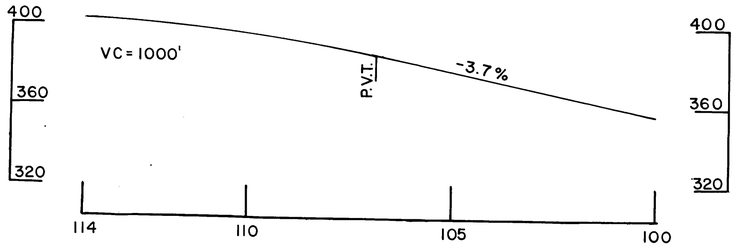
ALTERNATES I & II

HORIZ. 1"= 200'
VERT. 1"= 40'

HOWARD COUNTY
HO 581-101-771
EXISTING & PROPOSED GRADE
MARYLAND ROUTE 175
SNOWDEN RIVER PARKWAY
TO U.S. ROUTE 29

FIGURE # 10A





ALTERNATES I & II

HORIZ. 1"= 200'
VERT. 1"= 40'

HOWARD COUNTY
EXISTING & PROPOSED GRADE

MARYLAND ROUTE 175
SNOWDEN RIVER PARKWAY
TO U.S. ROUTE 29

FIGURE # 10B

From approximately 1500 feet west of Dobbin Road to U.S. Route 29 the proposed roadway is located to the south and parallel the existing road.

Traffic studies indicate that because of the continuous growth in the Tamar Drive area, a double left turn movement is needed to handle both present and future traffic demands.

As an interim improvement to the Thunder Hill Road and Maryland Route 175 intersection, the reconstructin of the existing intersection is being undertaken jointly by the State Highway Administration and Howard County. The improvement will add an additional lane in both eastbound and westbound and the existing islands will be removed. The project is in the design phase with proposed construction in the Fall of 1982.

Approximately 650 feet east of Thunder Hill Road and south of existing Maryland Route 175, a retaining wall is proposed in the vicinity of Sohap Lane. This retaining wall is proposed to retain the existing berm that is situated between existing Maryland Route 175 and Sohap Lane.

The two existing pedestrian underpasses are located approximately 1800 feet east of Tamar Drive and 500 feet east of Thunderhill Road.

A pedestrian overpass is being investigated at present as to need.

It is anticipated that no properties will be affected by the proposed improvement, since all new construction is expected to be contained within the existing right of way of 250 feet to 300 feet.

COST OF PROPOSED ALTERNATE 1

Construction	$4,835,761
Right of Way	0
Preliminary Engineering	211,089
Total	$5,046,950

Alternate 2

Alternate 2 proposes a 24 foot curbed raised median to separate the existing roadway from the proposed parallel roadway (See Figure 9). Alternate 2 has the same horizontal and vertical characteristics as Alternate 1. The only difference between the two alternates is the median width (See Typical Section, page 45).

The Alternate 2 proposal would have a minimal effect on the existing earth berms and also reduce the amount of slope grading, thereby allowing a portion of the unused right of way to remain intact. Slope grading could be accomplished without the use of retaining walls in the Sohap Lane area.

All intersections would be at grade and would have the same basic characteristics as described in Alternate 1, with a narrower 24 foot raised median width.

As an interim improvement to the Thunder Hill Road and Maryland Route 175 intersection, the reconstruction of the existing intersection is being undertaken jointly by the State Highway Administration and Howard County. The improvement will add an additional lane both eastbound and westbound and the existing islands will be removed. The project is in the design phase with proposed construction in the Fall of 1982.

The two existing pedestrian underpasses are located approximately 1800 feet east of Tamar Drive and 5009 feet east of Thunderhill Road. A pedestrian overpass is being investigated at present as to need.

Alternate 2 has no anticipated effects on any properties and all new construction is expected to be contained within existing 250 feet to 300 feet right of way.

COST OF ALTERNATE 2

Construction	$4,622,020
Right of Way	0
Preliminary Engineering	201,755
Total	$4,823,775

NOTE: Costs for constructing an extension of the existing pedestrian underpasses are included as a separate element of this study. The Columbia Association originally financed the construction of the existing underpasses and currently maintains them in accordance with an agreement executed on August 28, 1973 by the Columbia Park and Recrea-

tion Association, Inc., and the State Highway Administration. The Columbia Association has the option of constructing and maintaining an extension of the pedestrian underpasses or having the State backfill and seal the existing underpasses. The costs for the extension of the existing underpasses for each alternate are as follows:

Alternate 1 - $338,000

Alternate 2 - $225,000

For furter details, see Appendix B on page 103.

No-Build

With the No-Build Alternate, Maryland Route 175 would continue as a two lane roadway. There would be no major improvements to the existing roadway or intersections. Any improvement would be limited to normal maintenance and spot safety improvements. As an interim improvement to the Thudner Hill Road and Maryland Route 175 intersection, the reconstruction of the existing intersection is being undertaken jointly by the State Highway Administration and Howard County. The improvement will add an additional lane in both eastbound and westbound and the existing islands will be removed. The project is in the design phase with proposed construction in the Fall of 1982. With the projected increases in population, employment and traffic volumes, the existing roadway will experience increased congestion, safety and capacity problems.

Advantages and Disadvantages

Alternate 1

Advantages:

1) Wider median will improve safety.
2) A wider median will improve operational freedom and also provide adequate recovery area for out-of-control vehicles as compared to Alternate 2 or the No-Build.
3) Will improve overall capacity and projected traffic needs.
4) The proposed four lane divided highway, with partial control of access should significantly reduce both the high fatality rate as well as the number of opposite direction collisions that are occurring of the existing roadway.
5) Alternate 1 is safer than Alternate 2.

Disadvantages:

1) Has some slope damage to the existing earth berms and requires a retaining wall for the Sohap Lane berm.

Alternate 2

Advantages:

1) Presence of median would improve safety.
2) Minimal effect to the existing earth berms.
3) Least costly build alternate.

Alternate 2

Advantages (Cont'd.)

4) The proposed four lane divided highway with partial control of access should significantly reduce both the high fatality rate as well as the higher than normal opposite direction collisions that are occuring on the existing roadway.

Disadvantages:

1) Curbed median will eliminate the recovery area and also have a tendency to misdirect errant vehicles.

2) The curbed median would reduce traffic capacity slightly.

3) Provides no refuge in the median area for vehicle emergency stops.

4) Raised median more difficult to maintain.

No-Build

Advantages:

1) No effect to berms

2) No cost involved.

Disadvantages:

1) Existing congestion of the roadway and intersections will continue to deteriorate.

2) Will remain an unsafe facility, with no separation of opposing traffic.

3) The potential for fatal accidents will not be reduced.

IV. ENVIRONMENTAL IMPACTS

A. Socio-Economic Impacts

The proposed action will not have adverse effects on either the social or economic atmosphere of the community in the study area. The no-build Alternate, Alternate 1, and Alternate 2 would not require the displacement or acquisition of any structures. The proposed action is within the existing right of way. There would be no effect on taxable land. The proposed action would provide better access for emergency vehicles. No community or recreational facilities would be affected and no families displaced. The only known minority community, Shalom Square Elderly Housing, would not be effected by the proposed action.

TITLE VI STATEMENT

It is the policy of the Maryland State Highway Administration to insure compliance with the provisions of Title VI of the Civil Rights Act of 1964 and related civil rights laws and regulations which prohibit discrimination on the grounds of race, sex, color, age, religion, national origin, physical or mental handicap in all State Highway program projects funded in whole or in part by the Federal Highway Administration. The State Highway Administration will not discriminate in highway planning, highway design, highway construction the acquisition of right of way or the provision of relocation advisory assistance. This policy has been incorporated into all levels of the highway planning process in order that proper consideration be given to the social, economic, and environmental effects of all highway projects.

Alleged discrimination actions should be addressed to the State Highway Administration for investigation.

A summary of the relocation assistance program of the Maryland State Highway Administration is found in Appendix A.

The extension of the two existing pedestrian underpasses located approximately 1800 feet east of Tamar Drive and 500 feet east of Thunder Hill Road are currently being investigated. An agreement was executed on August 28, 1973 between the Columbia Park and Recreation Association, Inc. (CA) and the State Highway Administration (SHA). (See Appendix B). The agreement states that when the State Highway Administration constructs the eastbound roadway of Maryland Route 175, the CA shall have the option of constructing and maintaining the required extension of the existing underpasses. An overpass located at Tamar Drive is also being considered. A pedestrian study was conducted for the Tamar Drive intersection and is available for inspection at 707 North Calvert Street, Baltimore, Maryland. A pedestrian overpass is being investigated at present as to need. If the CA does not extend the underpasses, cross-walks would be provided with appropriate signalization at the intersections of Thunder Hill Road and Tamar Drive with Maryland Route 175. If the underpasses are extended, and an opening is provided for natural lighting, artificial lighting would still be required.

The existing Class II bikelane (shared roadway) along

Maryland Route 175 is proposed to be eliminated in conformance with the Columbia Preliminary Development Plan forbikeways and is consistent with the Howard County Master Plan. Howard County proposes replacement of the existing Class II bikelane with the existing Class I (off roadway) pedestrian/bikeway system that serves the communities north and south of Maryland Route 175.

The existing Class II bikelane consists of a striped shoulder from Tamar Drive to Thunder Hill Road and serves no additional purpose over the existing Class I pedestrian/ bikeway system. Utilization of the Class I pedestrian/ bikeway system is more efficient in terms of access to residences and community facilities. Also, bikeways which are not physically separated from the roadway used by motor vehciles are inconsistent with safety design criteria recommended for controlled access highways. Bikelanes are prohibited on controlled access highways under Maryland law and American Association of State Highway and Transportation Officials (AASHTO) design standards.

If the pedestrian underpasses east of Thunder Hill Road and Tamar Drive are not extended, pedestrian/bicycle movement utilizing the Class I system across Maryland Route 175 would be interrupted. It is the CA's responsibility by agreement to decide whether to extend the existing underpasses across Maryland Route 175, they have tentatively agreed to do so. (See Appendix B and letter in Correspondence Section from Columbia Association dated January 5, 1981).

B. Historical/Cultural Impacts

Two historic sites of inventory quality and two of probable National Register eligibility are located outside the right of way. The historic sites locations are shown on Figure 11. The letter from the Maryland Historical Trust dated August 6, 1979 indicates no effect.

A historic cemetery for the Dorsey Family (Site # 5), which is located outside of the right of way south of Maryland Route 175, will not experience impacts because construction will occur on the north side of the existing road only. Nonetheless, as a precaution, the site will be designated as sensitive and avoided so that its immediate environs will not be used for the storage of construction equipment, borrow pits, or the like. No additional archeological work was recommended.

C. Noise Impacts

A detailed noise analysis has been completed for the proposed action. The Technical Noise Report (dated October 1980) summarized below is available for review at the Maryland Department of Transportation, State Highway Administration, 707 North Calvert Street, Baltimore, Maryland 21202.

A description of the Noise Sensitive Area (NSA) follows with their location indicated on Figure 12. A field measurement program to establish ambient noise levels was conducted utilizing the latest methods for environmental noise analysis during non-peak hour (7 a.m. - 4 p.m.) and peak hour (4-6 p.m.) traffic periods. As shown on Table 2

the predicted noise levels for the No-Build and build alternates would not exceed design criteria.

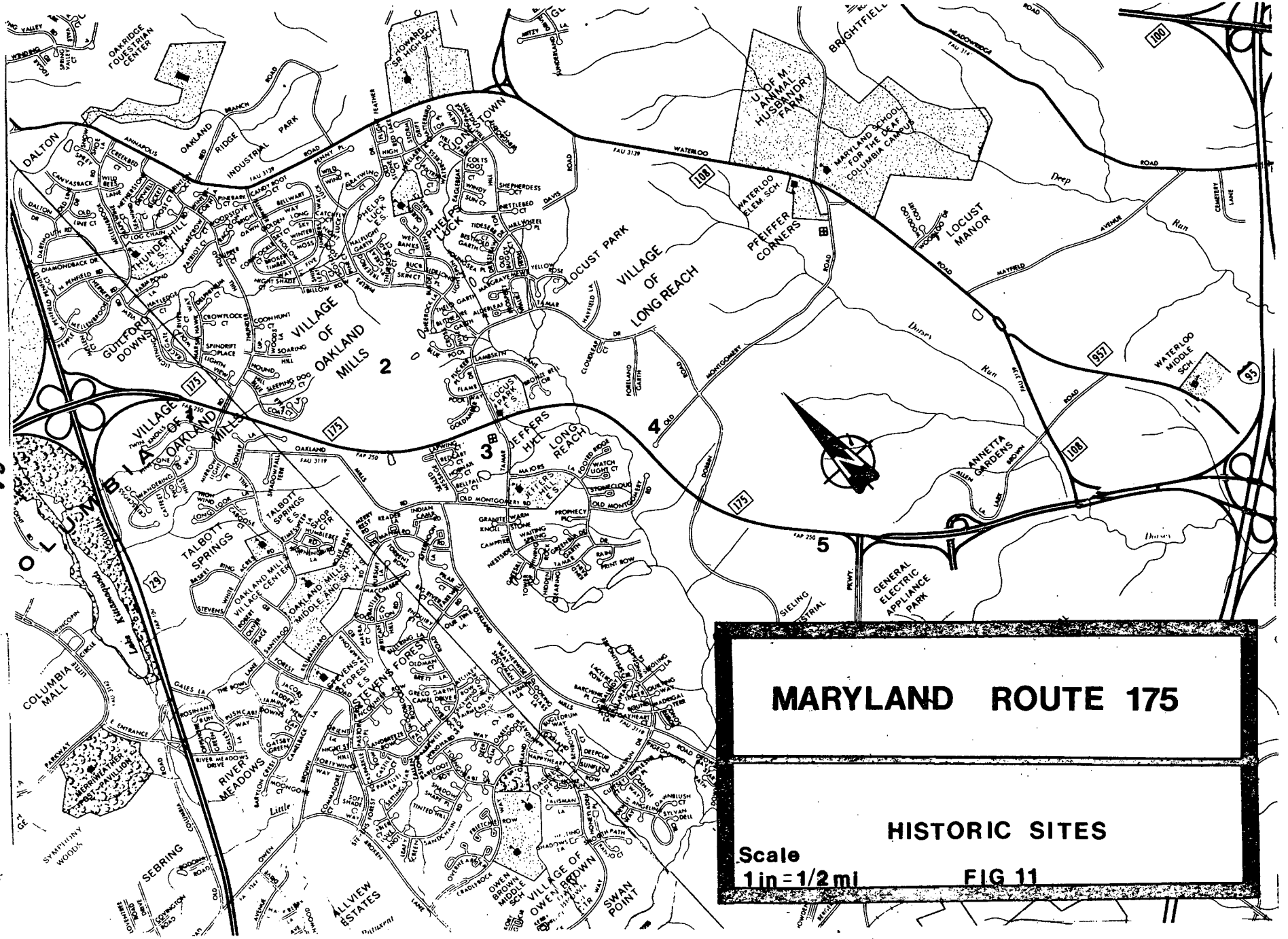
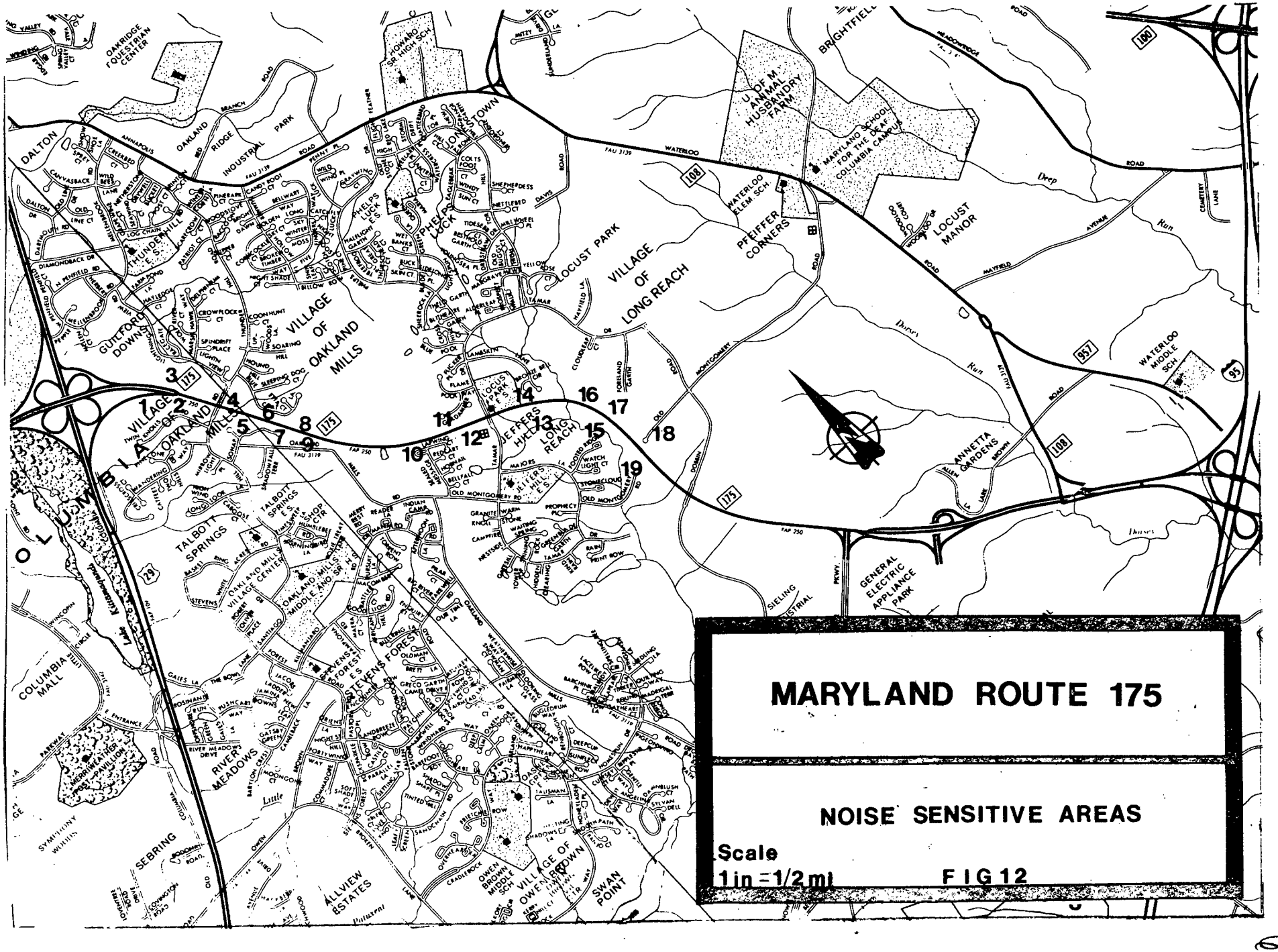

MARYLAND ROUTE 175
HISTORIC SITES
Scale
1 in = 1/2 mi
FIG 11

TABLE 2

PROJECT NOISE LEVELS

66

MARYLAND ROUTE 175, I-95 TO U.S. ROUTE 29				
			DESIGN YEAR (2006) L_{10}	
NSA	DESCRIPTION	AMBIENT L_{10}	NO-BUILD	BUILD ALTS.
1	Residential	59dBA	63dBA	66dBA
2	Commercial	59dBA	67dBA	70dBA
3	Residential	53dBA	58dBA	61dBA
4	Residential	57dBA	61dBA	63dBA
5	Residential	59dBA	67dBA	69dBA
6	Residential	60dBA	63dBA	65dBA
7	Residential	55dBA	64dBA	66dBA
8	Residential	62dBA	64dBA	66dBA
9	Residential	62dBA	67dBA	69dBA
10	Residential	55dBA	56dBA	59dBA
11	Residential	56dBA	57dBA	60dBA
12	Residential	57dBA	58dBA	60dBA
13	Residential	55dBA	56dBA	59dBA
14	Residential	65dBA	65dBA	65dBA
15	Residential	56dBA	56dBA	59dBA
16	Residential	63dBA	63dBA	66dBA
17	Residential	64dBA	64dBA	67dBA
18	Residential	54dBA	57dBA	59dBA
19	Residential	54dBA	57dBA	61dBA


MARYLAND ROUTE 175
NOISE SENSITIVE AREAS
Scale
1 in = 1/2 mi
FIG 12
COLUMBIA
VILLAGE OF OAKLAND MILLS
VILLAGE OF LONG REACH
VILLAGE OF OWEN BROWN
OAKLAND MILLS HIGH SCH
OAKLAND MILLS MIDDLE SCH
OWEN BROWN MIDDLE SCH
HOWARD SR. HIGH SCH
WATERLOO MIDDLE SCH
WATERLOO ELEM. SCH.
PHELPS LUCK ELEM. SCH.
THUNDERHILL ELEM. SCH.
TALBOTT SPRINGS ELEM. SCH.
STEVENS FOREST ELEM. SCH.
JEFFERS HILL ELEM. SCH.
LOCUST PARK ELEM. SCH.
U. OF M. ANIMAL HUSBANDRY FARM
MARYLAND SCHOOL FOR THE DEAF COLUMBIA CAMPUS
PFEIFFER CORNERS
LOCUST MANOR
ANNETTA GARDENS
GENERAL ELECTRIC APPLIANCE PARK
OAKRIDGE EQUESTRIAN CENTER
COLUMBIA MALL
RIVER MEADOWS
ALLVIEW ESTATES
SEBRING
SWAN POINT
GUILFORD DOWNS
DALTON
OAKLAND MILLS ROAD
INDUSTRIAL PARK ROAD
WATERLOO ROAD
MAYFIELD AVENUE
MONTGOMERY ROAD
OLD MONTGOMERY RD
LOCUST PARK
Deep Run
Little Patuxent
175
108
190
957
95
29

NOISE SENSITIVE AREAS

MARYLAND ROUTE 175

Noise Sensitive Area	Activity Category	Description
1	B	One (1) two story, single family, farmhouse with out-buildings located on south side of Maryland Route 175 east of U.S. Route 29 with access drive to Thunder Hill Road.
2	C	One(1) single-story brick funeral home located on south side of Maryland Route 175 east of U.S. Route 29 with access drive to Thunder Hill Road.
3	B	Nine(9) single family, two story brick residences located along the north side of Maryland Route 175, east of U.S. Route 29 with access to Lightning View and Thunder Hill Roads.
4	B	Four (4) two story, single family frame residences located north of Maryland Route 175, east of U.S. Route 29 with access to Blue Coat Lane and Thunder Hill Road.
5	B	Three (3) single story, single family frame residences located south of Maryland Route 175 east of U.S. Route 29 with access to Sohap Lane and Thunder Hill Road.
6	B	Eight (8) two story, single family frame residences located north of Maryland Route 175 east of U.S. Route 29 with access to Blue Coat Lane and Thunder Hill Road.
7	B	Five (5) single story, single family brick residences located south of Maryland Route 175 east of U.S. Route 29 with access to Sohap Lane and Thunder Hill Road.

Noise Sensitive Area	Activity Category	Description
8	B	One (1) single story, single family brick residence located north of Maryland Route 175 east of U.S. Route 29 with access to Blue Coat Lane and Thunder Hill Road.
9	B	One(1) single story, single family brick residence with outbuildings located south of Maryland Route 175 east of U.S. 29 with access to Oakland Mills Road, Sohap Lane, and Thunder Hill Road.
10	B	Ten (10) two-story single family frame residences located south of Maryland Route 175 east of U.S. Route 29 with access to Lapwing Court, Oakland Mills Road and Tamar Drive.
11	B	Seventeen (17) two-story single family frame residences located north of Maryland Route 175, east of U.S. Route 29 with access to Goldamber Garth and Tamar Drive.
12	B	One(1) two-story single family frame farmhouse with out-buildings located south of Maryland Route 175 east of U.S. Route 29 with access to Tamar Drive.
13	B	Jeffers Hill Apartments. Three-story brick garden apartments located south of Maryland Route 175 east of U.S. Route 29 and Tamar Drive with access to Tamar Drive.
14	B	Three (3) two-story brick townhouse units located north of Maryland Route 175, east of U.S. Route 29 and Tamar Drive with access to Lambskin Lane and Tamar Drive.

Noise Sensitive Area	Activity Category	Description
15	B	Approximately six (6) two-story brick townhouse units located south of Maryland Route 175 east of Tamar Drive with access to Majors Lane and Tamar Drive.
16	B	Lazy Hollow apartments. Three-story brick garden apartments located north of Maryland Route 175, east of Tamar Drive with access to Dobbin Road and Tamar Drive. Also, a multi-story brick apartment complex located just southeast of above site.
17	B	Shalom Square. Approximately twelve single-story single family frame apartments located north of Maryland Route 175, east of Tamar Drive with access to Dobbin Road and Tamar Drive.
18	B	One (1) two-story, single family frame farmhouse with outbuildings located north of Maryland Route 175 east of Tamar Drive with access to Montgomery and Dobbin Road.
19	B	One (1) single story, single family brick residence located south of Maryland Route 175 east of Tamar Drive with access to Montgomery Road, Majors Lane, and Tamar Drive.

No-Build Alternate

A total of nineteen (19) noise sensitive areas are associated with this alternate. L_{10} noise levels would increase 1-9dBA over present levels. Design noise levels would not be exceeded. The degree or amount of the change is assessed according to the following criteria:

L_{10} Change over Ambient	Degree of Impact
Decrease in Ambient	Positive
0-5 dBA Increase	Negligible
6-10dBA Increase	Minor
11-15dBA Increase	Significant
Over 15dBA Increase	Severe

The number of areas experiencing the varied degrees of impact are as follows:

Number of Noise Sensitive Areas	NSA Number(s)	Degree Of Impact
16	1,3,4,6,8,9,10,11,12 13,14,15,16,17,18,19	Negligible
3	2,5,7,	Minor

Alternates 1 and 2

A total of nineteen (19) noise sensitive areas were studied for potential noise impacts. The basic difference between Alternates 1 and 2 is the proposed median width. Alternate 1 would have a 54 foot median versus a 24 foot medain with Alternate 2. This thirty foot change would not significantly vary the L_{10} noise level effects from either alternate. The L_{10} noise levels for the build condition are those which would result if Altenate 1 were constructed. They represent a "worst cast" impact. Increases in noise levels would range from 1-11dBA with two areas showing increases of more than 10dBA over ambient levels. Design noise levels would not be exceeded with either "Build" alternate. The following relates the number of areas experiencing the various degrees of impact.

Number of Noise Sensitive Areas	NSA Number(s)	Degree of impact
11	6,8,10,11,12,13,14 15,16,17,18	Negligible
6	1,3,4,5,9,19	Minor
2	2,7	Significant

Noise sensitive areas 2 and 7 would experience significant increases in ambient levels by the design year 2006. Area 2 is a funeral home with no exterior use adjacent to the highway. The L_{10} design noise criteria of 75dBA for a commercial use area will not be exceeded. No adverse impact is anticipated.

Area 7 presently receives some protection from an earth berm constructed with Maryland Route 175. An investigation into increasing the height of this barrier by ten feet was made. The results of increasing the height yeilded an additional noise attenuation of 1dBA, a negligible benefit. Increasing the berm length by 500' to the east was also studied with no additional attenuation attainable. The Administration proposes to provide additional vegetative screening in this area as a partial mitigation measure.

The L_{10} levels indicated in Table 2 represent the maximum-noise levels that are anticipated in the design year 2006. It is expected that these levels will occur from 7 - 9 a.m. and 4 - 6 p.m.

B. Construction Impacts

As with any major construction projects, areas around the construction site are likely to experience varied

periods and degrees of noise impact. This type of project would probably employ the following pieces of equipment which would likely be sources of construction noise:

Bulldozers and Earth Movers

Graders

Front End Loaders

Dump and Other Diesel Trucks

Compressors

It is probable that construction activity should not occur on evenings or weekends. Therefore, critical time periods during which sleep or outdoor recreation would occur would not be subject to noise intrusion from construction activities.

Maintenance of construction equipment will be regular and thorough to minimize noise emissions because of inefficiently tuned engines, poorly lubricated moving parts, poor or ineffective muffling systems, etc.

C. Impacts on Undeveloped Land

There are a few areas of undeveloped land within the study area. The following relates the L_{10} noise levels likely to occur at given distances from the roadway edge:

	L_{10}(dBA)*	
Distance from Roadway	No-Build	Build
50'	72-74	75-81
300'	62-63	64-66
800'	55-56	56-59

*The range of values shown reflect changes in traffic volume and speed over the length of the alternate.

D. Coordination with Local Officials

Comments received at the Alternates Public Workshop held April 28, 1980 regarding noise impacts centered on the area along Sohap Lane and the development of Shalom Square. It was stated by State Highway Administration personnel that preliminary noise level projections indicated the design noise level of 70dBA would be exceeded at Shalom Square. Concern was also expressed that several earth berms be retained if a build alternate were selected. These berms in the vicinity of Sohap Lane and west of Tamar Drive on the south side of Maryland Route 175 were constructed when the original two lane highway was built. The berms developed as a result of coordination with community groups and were intended to provide some relief from highway noise impacts. In addition, a landscaping contract was completed to provide some visual screening. The State Highway Administration has incorporated measures into the two build alternates to retain these berms.

A meeting was held subsequent to the Alternates Public Workshop at the request of the Village Board of Oakland Mills on May 20, 1980 to discuss the proposed improvements to Maryland Route 175. One of the topics of concern was noise impact. At the time of the meeting, preliminary results indicated that one residential area would experience design noise levels exceeding design criteria. This was area 17, Shalom Square, a housing development for retired citizens. Since the meeting, refinement of the analysis showed that design noise levels would not be exceeded as

initially indicated. A negligible increase in ambient levels is anticipated to result if a build alternate is selected and constructed.

Several comments were made at the meeting which indicated a desire for noise abatement measures regardless of whether Federal design criteria were exceeded. As previously stated in this report, the most practical approach to minimizing this increase would be the establishment of a vegetative screen through this area. The comments received from the Oakland Mills Village Board reflect this approach.

Effective and compatible land use planning and development should consider potential adverse impacts from highway generated noise to aid in this process. A copy of the technical noise report and the American Association of State Highway and Transportation Officials (AASHTO) Policy on Land Use have been sent to the following agencies:

Office of Planning and Zoning, Howard County
3450 Court House Drive
Ellicott City, Maryland 21043

Community Development Commission of Howard County
Court House
Ellicott City, Maryland 21043

In addition, a copy of "The Audible Landscape: A Manual for Highway Noise and Land Use" has previously been sent to the aforementioned agencies.

D. Air Quality Impacts

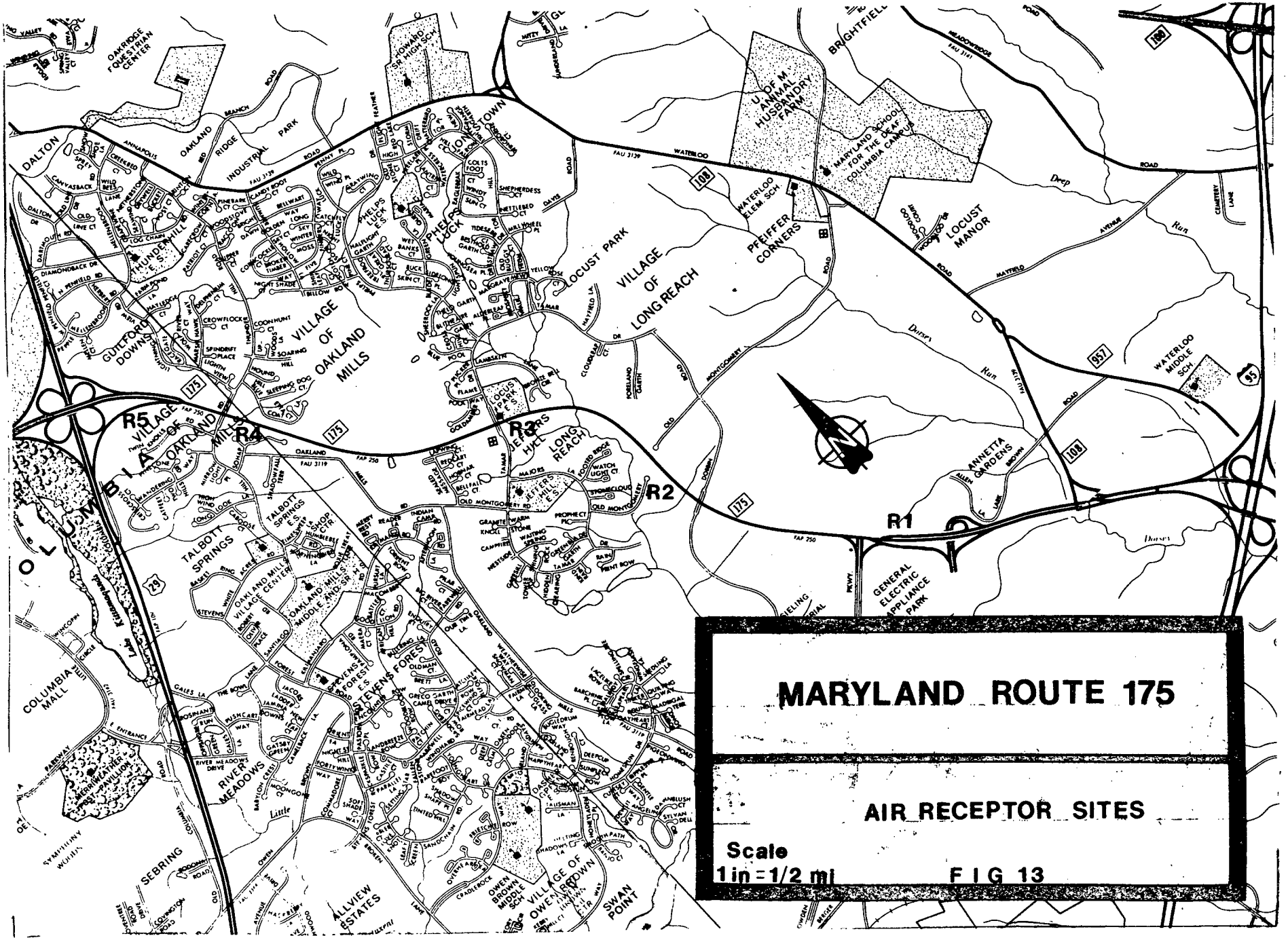
An air quality analysis has been completed for the proposed action. The Technical Air Quality Report (dated April, 1980) summarized below, is available for review at

the Maryland Department of Transportation, State Highway Administration, 707 North Calvert Street, Baltimore, Maryland 21202.

1. Microscale Analysis

The objective of this report is to compare the carbon monoxide (CO) concentrations estimated to result from the traffic configurations and volumes of each alternative with the State and National Ambient Air Quality Standards (S/NAAQS). The NAAQS and SAAQS are identical for CO: 40 mg/m^3 for the maximum one hour period, and 10 mg/m^3 for the maximum consectutive eight hour average.

A microscale CO pollutant diffusion simulation analysis, based on free-flow traffic conditions, was conducted. This analysis consisted of calculating one and eight hour CO concentrations resulting from automobile emissions at various receptor sites. All calculations were performed for 1986 (year of completion) and 2006 (year of design). The emission factors were obtained from the EPA program MOBILE 1, which is based on the latest version of supplement 5 of the EPA document Compilation of Air Pollutant Emission Factors (AP-42). Line source CO dispersion estimates were calculated using the EPA program HIWAY (a Gaussian dispersion-statistics model). CO emissions generated by vehicles idling at intersection traffic signals were also factored into results where required. The appropriate traffic data was utilized and a 20 percent stringency level and mechanic training were also assumed under the conditions of I/M (Inspection/ Maintenance of emission controls)


R1
R2
R3
R4
R5
MARYLAND ROUTE 175
AIR RECEPTOR SITES
Scale
1 in = 1/2 mi
FIG 13

program in effect during both years of analysis. The stringency parameter reflects how rigorously the inspection program is carried out (a higher stringency factor means lower emissions).

The LDV-engine operating modes were all assumed to be FTP (Federal Test Procedure) except for cases where a high percentage of fully-warmed-up engines was expected.

The meteorology assumed in each simulation was derived in part from historical measurements for the area and in part from worst-case guidelines.

Temperatures used for the simulation consisted of 20°F for all peak-hour modeling runs, and 35°F for all eight hour modeling runs. Wind directions were rotated to maximize receptor concentrations of CO.

Five receptor sites were chosen for this analysis and are described below. Figure 3 shows the location of the sites. Three of the receptors are actual dwellings, and two are Edge of Right of Way (EROW) receptors. All receptors are at-grade relative to existing roadway unless otherwise noted. The receptor site locations were verified during study area visits by the analysis team.

Site 1 is an EROW receptor located on the north side of Maryland Route 175 and east of the proposed Snowden River Parkway extension. This receptor is technically located outside the study area, but was used in order to provide a "worst-case" situation. Receptors 1a, 1b, and 1c were located 8, 16, and 24 meters respectively from the EROW.

Site 2 is a two-story brick townhouse at Lambskin Lane. It is approximately 510 feet south and 20 feet above the road grade of Maryland Route 175.

Site 3 is a three-story apartment building at Tamar Drive (in the Timber Neck Apartment Complex). It is approximately 280 feet south and the second floor apartment is at grade with Maryland Route 175.

Site 4 is a two-story modular frame house at Sohap Lane. It is 220 feet south of Maryland Route 175.

Site 5 is an EROW receptor located 1300 feet east of Route 29 (Columbia Pike). Receptors 5a, 5b, and 5c were located 8, 16, and 24 meters respectively from the EROW, which is 210 feet south of Maryland Route 175.

Background CO levels were projected based upon historical monitoring conducted at the Clifton T. Perkins Hospital, located approximately seven miles southeast of the project area, from December 1974 through March 1975.

The following projected background CO levels were calculated using the rollback procedure as adapted to this area:

	CO, mg/m^3	
	one-hour	eight-hour
1986	2.0	1.6
2006	1.6	1.3

The total predicted CO concentration (including background) are listed in Table 3 and 4. Examination of these tables reveals that no violations of either the maximum one hour (40 mg/m^3) or eight hour (10 mg/m^3)

TABLE 3

ONE-HOUR CO CONCENTRATIONS* AT EACH RECEPTOR SITE, mg/m^3

1986

RECEPTORS	NO-BUILD	Alt. 1 (w/o pkwy)	Alt. 2 (w/o pkwy)	Alt. 1 (w/pkwy)	Alt. 2 (w/pkwy)
R1a	6.8	5.0	4.8	4.9	4.8
1b	6.4	4.4	4.5	4.6	4.5
1c	5.9	3.8	4.3	4.4	4.3
R2	4.3	2.9	2.9	3.0	3.0
R3	6.0	3.5	3.6	3.7	3.7
R4	9.8	4.6	4.7	3.7	4.8
R5a	5.9	4.7	4.9	4.7	4.7
5b	5.7	3.9	3.3	4.4	4.6
5c	5.2	3.1	3.5	3.8	4.2

2006

RECEPTORS	NO-BUILD	Alt. 1 (w/o pkwy)	Alt. 2 (w/o pkwy)	Alt. 1 (w/pkwy)	Alt. 2 (w/pkwy)
R1a	5.2	5.0	4.9	4.7	4.6
1b	4.9	4.7	4.6	4.5	4.4
1c	4.5	4.5	4.4	4.3	4.2
R2	3.4	2.7	2.7	2.8	2.8
R3	7.1	5.9	5.9	10.1	10.1
R4	17.5	4.8	5.0	4.8	5.0
R5a	4.5	3.9	4.5	3.9	4.5
5b	3.7	3.0	3.2	3.0	3.2
5c	2.7	2.6	2.4	2.6	2.4

*Including background levels

The S/NAAQS for CO are: one-hour maximum = 40 mg/m^3
eight-hour maximum = 10 mg/m^3

w/o pkwy = Alternate without Snowden River Parkway Extended
w/pkwy = Alternate with Snowden River Parkway Extended

TABLE 4

EIGHT-HOUR CO CONCENTRATIONS* AT EACH RECEPTOR SITE, mg/m^3

1986

RECEPTORS	NO-BUILD	Alt. 1 (w/o pkwy)	Alt. 2 (w/o pkwy)	Alt. 1 (w/pkwy)	Alt. 2 (w/pkwy)
R1a	2.6	2.5	2.5	2.5	2.5
1b	2.5	2.4	2.4	2.4	2.4
1c	2.4	2.4	2.3	2.4	2.3
R2	2.1	1.9	2.2	2.0	2.3
R3	2.3	2.1	2.1	2.2	2.2
R4	3.0	2.5	2.5	2.6	2.6
R5a	2.4	2.5	2.6	2.6	2.6
5b	2.2	2.4	2.4	2.4	2.4
5c	1.9	2.2	2.2	2.2	2.2

2006

RECEPTOR	NO-BUILD	Alt. 1 (w/o pkwy)	Alt. 2 (w/o pkwy)	Alt. 1 (w/pkwy)	Alt. 2 (w/pkwy)
R1a	2.0	2.3	2.2	2.2	2.2
1b	1.9	2.2	2.2	2.1	2.1
1c	1.9	2.1	2.1	2.0	2.0
R2	1.7	1.6	1.7	1.7	1.7
R3	2.2	2.1	2.1	2.7	2.7
R4	3.6	2.3	2.3	2.3	2.3
R5a	1.9	2.2	2.3	2.2	2.3
5b	1.7	1.9	1.9	1.9	1.9
5c	1.5	1.8	1.7	1.8	1.7

*Including background levels

The S/NAAQS for CO are: One-hour maximum = 40 mg/m^3
Eight-hour maximum = 10 mg/m^3

standard are predicted for 1986 or 2006 for the No-Build and Build Alternates.

Copies of the draft air quality analysis were forwarded to the U.S. EPA and Maryland Department of Health and Mental Hygiene for review and comment. See the letters dated May 9, 1980 and May 7, 1980 in the Correspondence Section.

2. Consistency with the State Implementation Plan

The subject project is located within the Metropolitan Baltimore Intrastate Air Quality Control Region. Consistency with the State Implementation Plan has been evaluated considering 1) relationship to regional air quality goals, 2) microscale carbon monoxide levels, and 3) construction impacts.

1. Relationship to Regional Air Quality Goals

The air quality consistency of this project on a regional level is assured in the following ways. First, a National Memorandum of Understanding between U.S. DOT and EPA dated June 14, 1978 formally integrates the transportation and air quality planning processes for transportation projects receiving Federal aid highway funds. This agreement recognizes that the "reduction of air pollution is an important national goal and must be among the highest priorities of the transportation planning process in areas not meeting primary Air Quality Standards". It also provides for extensive input from local and state transportation and air quality agencies and the public. In addition, it calls for the joint adminsitration of the air quality aspects of the ubran transportation planning process between U.S. DOT

and EPA. This includes the joint review of the following documents and activities to ensure that air quality considerations are adequately addressed: 1) the Transportation Plan for the urbanized area, 2) the Transportation Improvement Program which identifies projects for implementation, 3) the State Implementation Plan/Transportation Control Plan for addressing attainment with Air Quality Standards, and 4) the review process which "certifies" that adequate transportation and air quality planning is being conducted in these urbanized areas.

Secondly, through the urban transportation planning requirements of Title 23, United States Code, Section 134, as implemented by the Regional Planning Council (or TPB/COG) forum, the same state and local agencies that are urbanized areas are also responsible - from a transportation control plan perspective - for assuring attainment of Air Quality Standards.

Thirdly, this project is included in the regional transportation plan and Transportation Improvement Program for the urbanized area and is programmed for Federal-aid highway funding. Thus, it is included in this Federal review and project development process. Therefore, the regional consistency of this project is addressed prior to undertaking the final project planning studies present in this environmental document.

Since regional pollutants such as hydrocarbons and oxides of nitrogen, precursors of photochemical oxidants (Smog), are addressed through this regional planning process

only carbon monoxide emissions, a more localized pollutant are being quantatively analyzed in this analysis.

Construction Impacts

The construction phase of the proposed project has the potential of impacting the ambient air quality through such means as fugitive dust from grading operations, materials handling, and through the possible burning of land clearing debris. The State Highway Administration has addressed this possibility by establishing Specifications for Materials, Highways, Bridges, and Incidental Structures which specifies procedures to be followed by contractors involved in State work.

The Maryland Bureau of Air Quality Control was consulted to determine the adequacy of the Specifications in terms of satisfying the requirements of the Regulations Governing the Control of Air Pollution in the State of Maryland. The Maryland Bureau of Air Quality Control found that the specifications are consistent with the requirements of these regulations. Therefore, during the construction period, all appropriate measures will be taken to minimize the impact on the air quality of the area.

Therefore, the action described is consistent with the SIP for Clean Air.

F. Natural Environmental Impacts

As discussed in Sectin I-C-2, the original natural environment has been almost completely changed by urban development. There are no known unique, rare, threatened, or endangered plant or animal species in the study area.

See the letter from DNR and U.S. FWS in Comments and Coordination Section.

The proposed stream crossings which serve as tributaries to the Little Patuxent River have an associated 100 year floodplain. The proposed alternates would have no significant impact on the base floodplains. The existing culvert structures will be extended. No wetlands exist in the study area. The study area is outside the Coastal Zone Management area of primary focus. As stated before, no sole source acquifers are located in the area.

None of the proposed alternates will have a significant encroachment on the floodplain resulting in any risks or impacts to the beneficial floodplain values or provide direct or indirect support to further development within the floodplain.

Sedimentation and erosional processes would be at work during construction. During construction, standard erosion and sedimentation control technology will be practiced. There will be a minor decrease in water quality during construction, however, it will not affect aquatic life.

G. Construction Impacts

If either of the "Build Alternates" are selected, the immediate project area would experience temporary inconveniences due to construction activities. These inconveniences would result from slowing of traffic through construction zones and the noise, dirt, and visual impacts

of construction activities in relatively close proximity to adjacent improved properties.

Care would be taken during construction to prevent significant siltation or other blockage of local drainage ditches, pipes, culverts, etc. Sedimentation traps would be utilized to trap sediment-ladened water before it leaves the construction site.

As with all major construction projects, areas around the construction site are likely to experience varied periods and degrees of impact from noise. This type of project will probably employ the following pieces of equipment which will likely be sources of construction noise:

Bulldozers and Earthmovers.

Graders

Frontend Loaders

Dump and other heavy trucks

Compressors

Construction activity should not occur on evenings or weekends. Religious events or evening outdoor residential activities would not experience adverse impacts because construction will not be ongoing at that time. School activities would not be disrupted.

Maintenance of construction equipment will be regular and thorough to minimize noise emissions caused by ineffeciently tuned engines, poorly lubricated moving parts, poor or ineffective muffling systems, etc.

A grading and sediment control plan will be prepared to

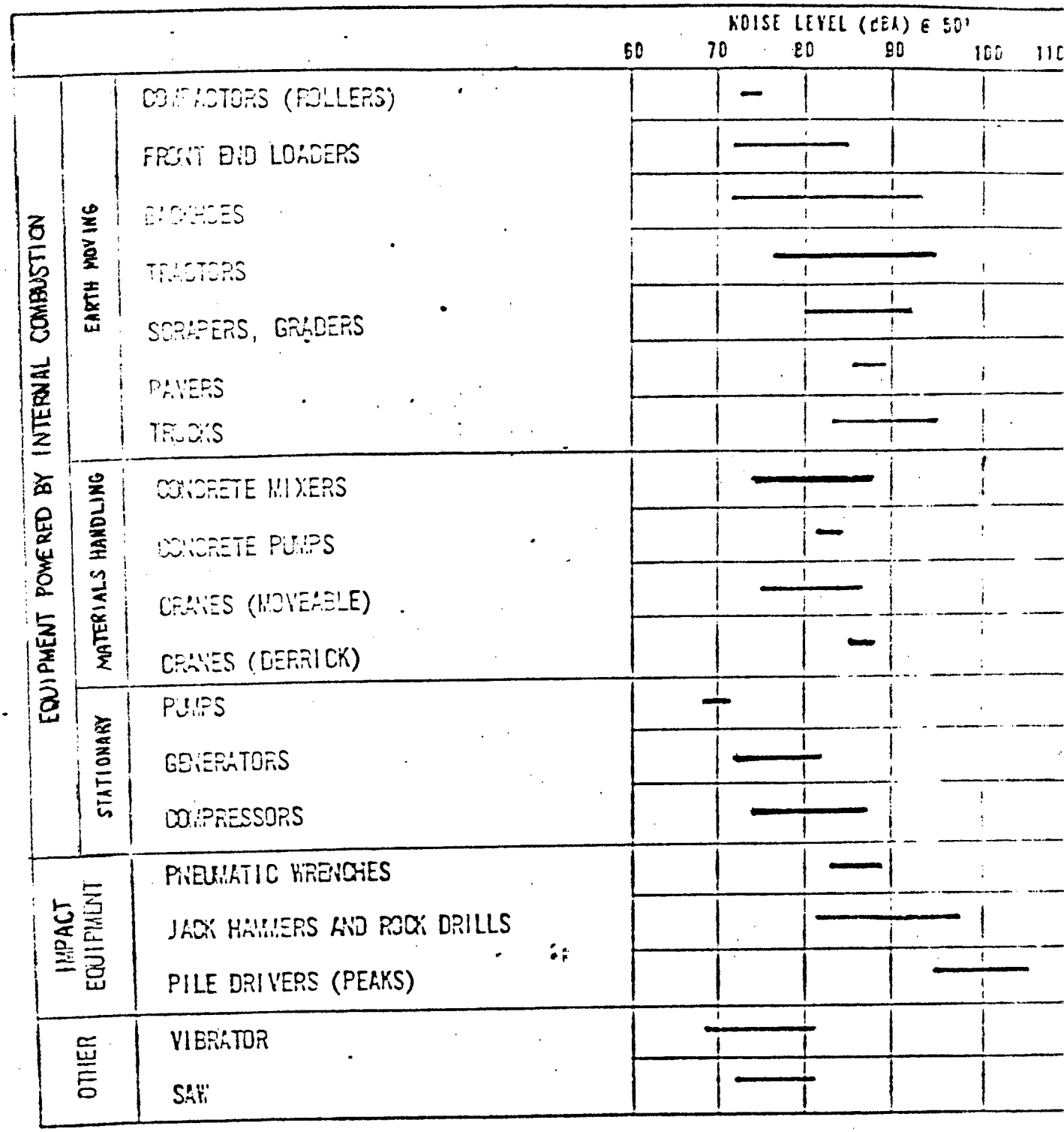
alleviate any erosion problems and will be filed with the Water Resources Administration of the Department of Natural Resources. Sedimentation and erosional processes would be at work during construction.

47

The construction phase of the proposed project has the potential of impacting the ambient air quality through such means as fugitive dust from grading operatins, materials handling, and through the possible burning of land clearing debris. The State Highway Administration has addressed this possibility by establishing Specifications for Materials, Highways, Bridges, and Incidental Structures which specifies procedures to be followed by contractors involved in State work.

CONSTRUCTION EQUIPMENT NOISE RANGES

48



Note: Based on Limited Available Data.

Reference: Highway Noise Report for U.S. Department of Transportation, Federal Highway Administration and Maryland Department of Transportation, State Highway Administration, ~~for Prospect Expressway, MD. Rte. 200 to MD. Rte. 100 and Alternate Connections to Md. Rte. 2, Ingemar Associates, Inc. 1975~~

V. COMMENTS AND COORDINATION

Comments received from all sources have been thoroughly reviewed and assessed. Recommendations by various commenting entities have been incorporated into the body of the Environmental Assessment.

The first public notification of Project Planning activities was published August 30, 1978. The public notice appeared in the Howard County Time on August 30, 1978 and September 13, 1978, the Howard County News on August 31 and September 14, 1978, the Baltimore Morning Sun on September 15, 1978 and the Wasington Star News on September 7, 1978. An Alternates Public Meeting was conducted in the cafeteria of Jeffers Hill Elementary School, Tamar Drive, 7:30 p.m., April 29, 1980.

Correspondence resulting from coordination efforts by the State Highway Administration with Federal, State, and Local agencies are reproduced in this section. All remaining letters and memoranda of the Alternates Public Meeting are available for inspection at the State Highway Administration, Bureau of Project Planning, 707 North Calvert Street, Baltimore, Maryland 21202.

COLUMBIA ASSOCIATION

5829 BANNEKER ROAD
COLUMBIA, MARYLAND 21044

90

RECEIVED

JAN 7 1981

HIGHWAY DISTRICT ENGINEER

January 5, 1981

Mr. C. E. Raith, Highway
District Engineer
Maryland Department of Transportation
Office of District Engineer
P.O. Box 308
Frederick, Maryland 21701

Dear Mr. Raith:

In response to your letter of December 15, The Columbia Park and Recreation Association, Inc. will in all likelihood want to extend the two existing predestrian underpasses under the proposed Eastbound Roadway of Route 175 in a manner similar to that described in the agreement executed on August 28, 1973.

As you know, however, Section 6 of the current agreement provides that the corporation may exercise its option to construct said facilities within 90 days of official notice by the State Highway Administration that in fact the Eastbound Roadway is to be constructed. I would hope that staff opinion will suffice for your purposes until the Corporation is given the opportunity to officially exercise its option as described in Section 6 of the Agreement.

In the interim, it would be very useful if the State could provide the Corporation with current cost estimates of the two proposed underpasses proposed for construction under the Eastbound Roadway as well as the State's best estimate of the year in which construction may be expected to be performed in the areas in which the two pedestrian underpasses are to be located.

This information is vital to the Corporation's economic model and financial planning and would be essential at the time the Corporation would officially exercise its option concerning the proposed underpasses.

Therefore, although your letter of December 15 is not the 90 day letter required in the August 28, 1973 agreement, we do want to express our interest in the project and our current intent to exercise the option at the appropriate time. If your letter were the 90 day letter, then we would, at this time, exercise our option, reserving our rights to abandon or discontinue the project or its use.

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We look forward to hearing from the Department of Transportation at your earliest convenience and I can assure you that as soon as we have the information requested this matter will receive our prompt attention.

Very sincerely yours,

Frederick M. Pryor

Frederick M. Pryor
Vice-President

FMP:kp

E.T. Campbell 92

State of Maryland

ENVIRONMENTAL HEALTH ADMINISTRATION
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
201 WEST PRESTON STREET • BALTIMORE, MARYLAND 21201 • Area Code 301 • 383- 3245

Harry Hughes, Governor

Charles R. Buck, Jr., Sc.D. Secretary

May 7, 1980

Mr. Charles E. Anderson, Chief
Bureau of Landscape Architecture
Joppa & Falls Roads
Brooklandville, Maryland 21022

Dear Mr. Anderson:

RE: Contract No. HO 581-101-771
Maryland Route 175 -- Snowden
River Parkway to U.S. Route 29

We have reviewed the Air Quality Analysis for the above subject project and have found that it is not inconsistent with the Programs' plans and objectives.

Thank you for the opportunity to review this analysis.

Sincerely yours,

William K. Bonta, Chief
Division of Program Planning & Analysis
Air Quality Programs

WKB:bab

MAY 8 1980

Gray 93

MARYLAND DEPARTMENT OF NATURAL RESOURCES
WILDLIFE ADMINISTRATION

BERNARD F. HALLA
DIRECTOR
EARL H. HODIL
DEPUTY DIRECTOR

TAWES STATE OFFICE BUILDING
ANNAPOLIS, MARYLAND 21401
(301) 269-3195

April 11, 1980

Mr. William L. Branch
State Highway Administration
Bureau of Landscape Architecture
Joppa and Falls Roads
Brooklandville, Maryland 21022

Dear Bill:

There are no known populations of threatened or endangered species within the area of project influence for the proposed widening of Route 175 from approximately Route 29 to Route 95 in Howard County, as discribed in your letter of April 3, 1980.

Sincerely,

Gary J. Taylor
Nongame & Endangered
Species Program Manager

GJT:bw
cc: Carlo Brunori

APR

C. F. ANDERSON

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
DELMARVA AREA OFFICE
1825 VIRGINIA STREET
ANNAPOLIS, MD 21401

94

Mr. Richard S. Krolak, Chief
Environmental Management
Bureau of Project Planning (Room 404)
State Highway Administration
300 West Preston Street
Baltimore, MD 21201

Re: Contract No. HO 581-101-771
Maryland Route 175 - From
U.S. Route 29 to Interstate
Route 95 in Howard County

Dear Mr. Krolak:

This responds to your October 6, 1980, request for information on the presence of Federally listed or proposed endangered or threatened species within the impact area of the referenced project in Howard County, Maryland.

Except for occasional transient individuals, no Federally listed or proposed species under our jurisdiction are known to exist in the project impact area. Therefore, no Biological Assessment or further Section 7 Consultation is required with the Fish and Wildlife Service (FWS). Should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered.

This response relates only to endangered species under our jurisdiction. It does not address other FWS concerns under the Fish and Wildlife Coordination Act or other legislation.

Please contact Andy Moser (301-269-6324), our Endangered Species Specialist, if you need further assistance.

Sincerely yours,

George A. Moser

for John D. Green
Area Manager

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
6TH AND WALNUT STREETS
PHILADELPHIA, PENNSYLVANIA 19106

95

MAY 9 1980

Mr. Charles R. Anderson
Maryland State Highway Administration
2323 W. Joppa Road
Brooklandville, MD 21022

Re: Maryland Route 173 - Stoney Creek to Tick Neck Rd., Anne Arundel, MD
Maryland Route 175 - Snowden River Parkway to U.S. Rte 29, Howard Co., MD

Dear Mr. Anderson:

We have reviewed the Draft Air Quality Analyses for the above referenced projects. Based upon this review, we have no objections to either project from an air quality standpoint. If you have any questions, or if we can be of further assistance, feel free to contact us.

Sincerely yours,

John R. Pomponio
Chief
EIS & Wetlands Review Section

Walsh 96
Turner

Maryland Historical Trust

August 6, 1979

RE: Maryland Route 175
From Snowden River Parkway
To U.S. Route 29
Contract No. HO 581-101-771

Mr. Eugene T. Camponeschi, Chief
Bureau of Project Planning
State Highway Administration
300 West Preston Street
Baltimore, Maryland 21201

Dear Mr. Camponeschi:

A preliminary reconnaissance has identified the following historic sites in the vicinity of the subject project:

HO-33	Blandair	probable National Register eligible
HO-84	Linden Grove 5970 Tamar Drive	probable National Register eligible
A	Maguire Farm Twin Knolls Business Park	local historic significance
B	Frame House 8810 Old Montgomery Road	local historic significance -

These sites are indicated on the attached map.

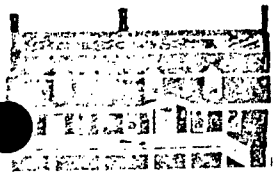
We will be happy to provide further information at your request.

Sincerely,

Peter E. Kurtze

Historic Sites Surveyors

PK:PW:mcr



September 13, 1979

Maryland Historical Trust

Mr. Eugene T. Camponeschi, Chief
Bureau of Project Planning
Maryland State Highway Administration
P.O. Box 717
300 West Preston Street
Baltimore, Maryland 21203

Re: Maryland Route 175, Snowden River Parkway to U.S. Route 29
Howard County

Dear Mr. Camponeschi:

I have reviewed the above referenced contract with Wayne Clark and concur with the report findings of no affect for prehistoric sites. The disturbed nature of the project area resulting from site preparation associated with previous construction has resulted in alteration of the terrain. As surface examinations and shovel test pitting of the remaining areas failed to reveal archeological remains, I conclude the proposed project will not directly affect historic archeological resources.

However, Dennis Curry states that the close proximity of the Dorsey cemetery to the construction limits may result in the indirect disturbance of this feature. I concur that this indirect affect should be avoided by implementing measures to prevent damage. Please let me know if your data supports this assessment of potential indirect impact. If so, then proper measures to avoid the cemetery will need to be developed.

If you have any questions, please contact Wayne Clark.

Sincerely,

J. Rodney Little
State Historic
Preservation Officer

JRL/WEC/jv

cc: Rita Suffness
Dick Krolak
Dennis Curry
Amy Schlagel

Shaw House 21 State Circle, Annapolis, Maryland 21401 (301)269-2212, 269-2438

REGIONAL PLANNING COUNCIL
701 St. Paul Street
Baltimore, Maryland 21202

R & R File No., 79-187
B & P Committee June 8, 1979

REVIEW AND REFERRAL MEMORANDUM

PROJECT IDENTIFICATION

Jurisdiction: Howard County

Project Name: Project Planning Prospectus for Maryland Route 175 from Snowden River Parkway to U. S. Route 29

Applicant: State Highway Administration, Maryland Department of Transportation

Cost: $_____total, $_____federal, $_____state, $_____local

Grant Program:

COMMENTS

This project has been reviewed and found to be not inconsistent with local and metropolitan plans, policies and programs. No intergovernmental issues have been raised.

June 22, 1979
Date

WALTER J. KOWALCZYK, JR.
Walter Kowalczyk, Acting Director

APPENDIX A

"SUMMARY OF THE RELOCATION ASSISTANCE PROGRAM OF THE STATE HIGHWAY ADMINISTRATION OF MARYLAND"

"SUMMARY OF THE RELOCATION ASSISTANCE PROGRAM OF THE STATE HIGHWAY ADMINISTRATION OF MARYLAND"

All State Highway Administration projects must comply with the provisions of the "Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970" (Public Law 91-646) and/or the Annotated Code of Maryland, Article 21, Sections 12-201 thru 12-209. The Maryland Department of Transportation, State Highway Administration, Bureau of Relocation Assistance, administers the Relocation Assistance Program in the State of Maryland.

The provisions of the Federal and State Law require the State Highway Administration to provide payments and services to persons displaced by a public project. The payments that are provided include replacement housing payments and/or moving costs. The maximum limits of the replacement housing payments are $15,000 for owner-occupants and $4,000 for tenant-occupants. In addition, but within the above limits, certain payments may be made for increased mortgage interest costs and/or incidental expenses. In order to receive these payments, the displaced person must occupy decent, safe and sanitary replacement housing. In addition to the replacement housing payments described above, there are also moving cost payments to persons, businesses, farms and non-profit organizations. Actual moving costs for residences include actual moving costs up to 50 miles or a schedule moving cost payment, including a dislocation allowance, up to $500.

The moving cost payments to businesses are broken down into several categories, which include actual moving expenses and payments "in lieu of" actual moving expenses. The owner of a displaced business is entitled to receive a payment for actual reasonable moving and related expenses in moving his business, or personal property; actual direct losses of tangible personal property; and actual reasonable expenses for searching for a replacement site.

The actual reasonable moving expenses may be paid for a move by a commercial mover or for a self-move. Generally, payments for the actual reasonable moving expenses are limited

to a 50 mile radius. In both cases, the expenses must be supported by receipted bills. An inventory of the items to be moved must be prepared, and estimates of the cost may be obtained. The owner may be paid an amount equal to the low bid or estimate. In some circumstances, the State may negotiate an amount not to exceed the lower of the two bids. The allowable expenses of a self-move may include amounts paid for equipment hired, the cost of using the business's vehicles or equipment, wages paid to persons who physically participate in the move, and the cost of the actual supervision of the move.

When personal property of a displaced business is of low value and high bulk, and the estimated cost of moving would be disproportionate in relation to the value, the State may negotiate for an amount not to exceed the difference between the cost of replacement and the amount that could be realized from the sale of the personal property.

In addition to the actual moving expenses mentioned above, the displaced business is entitled to receive a payment for the actual direct losses of tangible personal property that the business is entitled to relocate but elects not to move. These payments may only be made after an effort by the owner to sell the personal property involved. The costs of the sale are also reimbursable moving expenses. If the business is to be reestablished, and personal property is not moved but is replaced at the new location, the payment would be the lesser of the replacement costs minus the net proceeds of the sale or the estimated cost of moving the item. If the business is being discontinued or the item is not to be replaced in the reestablished business, the payment will be the lesser of the difference between the value of the item for continued use in place and the net proceeds of the sale or the estimated cost of moving the item.

If no offer is received for the personal property and the property is abandoned, the owner is entitled to receive the lesser of the value for continued use of the item in place or the estimated cost of moving the item and the reasonable expenses of the sale. When personal property is abandoned without an effort by the owner to dispose of the property by sale, the owner will not be entitled to moving expenses, or losses for the item involved.

The owner of a displaced business may be reimbursed for the actual reasonable expenses in searching for a replacement business up to $500. All expenses must be supported by receipted bills. Time spent in the actual search may be reimbursed on an hourly basis, but such rate may not exceed $10 per hour.

In lieu of the payments described above, the State may determine that the owner of a displaced business is eligible to receive a payment equal to the average annual net earnings of the business. Such payment shall not be less than $2,500 nor more than $10,000. In order to be entitled to this payment, the State must determine that the business cannot be relocated without a substantial loss of its existing patronage, the business is not part of a commercial enterprise having at least one other establishment in the same or similar business that is not being acquired, and the business contributes materially to the income of a displaced owner.

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Considerations in the State's determination of loss of existing patronage are the type of business conducted by the displaced business and the nature of the clientele. The relative importance of the present and proposed locations to the displaced business, and the availability of suitable replacement sites are also factors.

In order to determine the amount of the "in lieu of" moving expenses payment, the average annual net earning of the business is considered to be one-half of the net earnings before taxes, during the two taxable years immediately preceding the taxable year in which the business is relocated. If the two taxable years are not representative, the State, with approval of the Federal Highway Administration, may use another two-year period that would be more representative. Average annual net earnings include any compensation paid by the business to the owner, his spouse, or his dependents during the period. Should a business be in operation less than two years, but for twelve consecutive months during the two taxable years prior to the taxable year in which it is required to relocate, the owner of the business is eligible to receive the "in lieu of" payment. In all cases, the owner of the business must provide information to support its net earings, such as income tax returns, for the tax years in question.

The relocation assistance officer located in each district office maintains a listing of local, State, and Federal programs which may benefit displaced businesses.

For displaced farms and non-profit organizations, actual reasonable moving costs generally up to 50 miles, actual direct losses of tangible personal property, and searching costs are paid. The "in lieu of" actual moving cost payments provide that the State may determine that a displaced farm may be paid a minimum of $2,500 to a maximum of $10,000 based upon the net income of the farm, provided that the farm has been discounted or relocated. In some cases, payments "in lieu of" actual moving costs may be made to farm operations that are affected by a partial acquisition. A non-profit organization is eligible to receive "in lieu of" actual moving cost payments, in the amount of $2,500.

A more detailed explanation of the benefits and payments available to displaced persons, businesses, farms, and non-profit organizations is available in Relocation Brochures that will be distributed at the public hearings for this project and will also be given to displaced persons individually in the future.

In the event comparable replacement housing is not available to rehouse persons displaced by public projects or that available replacement housing is beyond their financial means, replacement "housing as a last resort" will be utilized to accomplish the rehousing. Detailed studies will be completed by the State Highway Administration and approved by the Federal Highway Administration before "housing as a last resort" could be utilized. "Housing as a last resort" could be provided to displaced persons in several different ways although not limited to the following:

1. An improved property can be purchased or leased.

2. Dwelling units can be rehabilitated and purchased or leased.

3. New dwelling units can be constructed.

4. State acquired dwellings can be relocated, rehabilitated, and purchased or leased.

Any of these methods could be utilized by the State Highway Administration and such housing would be made available to displaced persons. In addition to the above procedure, individual replacement housing payments can be increased beyond the statutory limits in order to allow a displaced person to purchase or rent a dwelling unit that is within his financial means.

The "Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970" requires that the State Highway Administration shall not proceed with any phase of any project which will cause the relocation of any person, or proceed with any construction project until it has furnished satisfactory assurances that the above payments will be provided and that all displaced persons will be satisfactorily relocated to comparable decent, safe and sanitary housing within their financial means or that such housing is in place and has been made available to the displaced person.

APPENDIX B

"MARYALND STATE HIGHWAY ADMINISTRATION
BOARD OF PUBLIC WORKS OF MARYLAND AND
COLUMBIA PARK AND RECREATION ASSOCIATION
INC. AGREEMENT"

105

THIS AGREEMENT, executed in triplicate, made and entered into this 28th day of August, 1973 by and among THE COLUMBIA PARK AND RECREATION ASSOCIATION, INC., a Maryland non-profit corporation, hereinafter sometimes called "Corporation," party of the first part, THE STATE HIGHWAY ADMINISTRATION of the Department of Transportation of the State of Maryland, hereinafter sometimes called "State," party of the second part, and the BOARD OF PUBLIC WORKS OF MARYLAND, hereinafter sometimes called "Board," party of the third part, both the Board and State, acting for the State of Maryland, witnesseth:

WHEREAS, THE State is relocating and improving Maryland Route 175 between U. S. Route 29 and Lark Brown Road in Howard County, Maryland, which will be designed as a dual highway, the Westbound Roadway to be constructed at this time, and the Eastbound Roadway to be constructed at a future date, and

WHEREAS, Relocated Maryland Route 175, as planned will bisect the Columbia Villages of Oakland Mills and Long Reach, and in order to facilitate the flow of pedestrian traffic to and from the areas of these villages, the Corporation desires to provide for the construction of two (2) Pedestrian Underpass Structures under the new highway at approximate Highway Stations 1019 and 1087, the aforesaid work being sometimes referred to as the "Project," and

WHEREAS, the State is agreeable to changing its Roadway plans of the new highway to accommodate the two (2) Pedestrian Underpasses desired by the Corporation and to include these structures in its roadway contract under the terms and conditions hereinafter set forth; and

WHEREAS, the Board is joined with the State as a party to this instrument under the provisions of Section 15 of Article 78A of the Annotated Code of Maryland, as amended, which requires the joinder of the Board to a conveyance of land or any interest therein made by the State.

NOW, THEREFORE, this agreement witnesseth, that for and in consideration of the premises and the sum of One Dollar ($1.00) paid by each of the parties hereto to each of the other parties hereto, receipt whereof is hereby acknowledged, and of the covenants and agreements herein contained, the parties do hereby agree as follows:

1. The State and the Board to the extent of their authority in the premises do hereby grant unto the Corporation, without monetary consideration, the right, liberty and privilege of constructing, establishing, maintaining and renewing, at its sole cost and expense, two (2) pedestrian underpass structures at approximate Highway Stations 1019 and 1087, as well as the pedestrian walkways under the dual highway and across the right-of-way of relocated Maryland Route 175. If the underpass structures and pedestrian walkways should be abandoned or discontinued to be used by the Corporation, the right, liberty and privilege herein granted shall cease and terminate thirty (30) days after

receipt of written notice from the State to the Corporation of such termination. In such event, the State will backfill and seal the said pedestrian underpass structures in a manner elected by the State, and the Corporation hereby agrees to reimburse the State for all costs and expenses actually incurred by State in performance of such work within thirty (30) days of the date of invoice.

2. The Corporation will furnish to the State detailed plans and specifications covering the proposed pedestrian underpass structures to provide for pedestrian walkways under the highway and across the right-of-way of relocated Maryland Route 175, which shall be prepared in accordance with design requirements of the State and American Association of State Highway Officials' standards. Said plans and specifications and any subsequent changes therein shall be subject to the approval (in writing) of all parties to this agreement, to the extent that their respective interests are affected thereby.

3. The State will incorporate the approved detailed plans and specifications of said pedestrain underpass structures, as furnished by the Corporation, in its contract drawings and arrange to carry out all work required in conjunction with the construction of relocated Maryland Route 175 under State's Contract No. HO-400-4-778, with the understanding that the Corporation will reimburse the State for the entire cost involved in the construction of said pedestrian underpass structures in accordance with provisions of Sections 4 and 5 hereof.

4. The estimated cost of the two (2) pedestrian underpass structures is detailed as follows:

PEDESTRIAN UNDERPASS STRUCTURE AT STATION 1019+
(WESTBOUND ROADWAY)

Item No.	Description	Quantity	Unit Price	Amount
	Engineer's Office #3		$ 150	$ 150
	Construction Stake-out	LS	1,500	1,500
	Mobilization	LS	2,000	2,000
	Std. Metal End Section for 30" BCCMP	2 ea.	150	300
	Std. Metal End Section for50" x 31" CMP	2 ea.	250	500
	30" BCCMP Type 'C', 14 gauge	32 LF	18	576
	Arch Pipe 50" x 31" BCCM Pipe Arch, Type A, 12 gauge	32 LF	34	1,088
	Class 3 Excavation for Structures	242 CY	6	1,452
	Class C Concrete Sub-foundations	10 CY	40	400
	Reinforced Concrete Pedestrian	LS		39,685
	Contingent Concrete for Pedestrian Structure	10 CY	75	750
	Metal Railing for Reinforced Concrete Pedestrian Structure	LS		1,020
	Epoxy Protective Coating for Parapets on Pedestrian Passage Structure	LS		396
	Guard Rail WF Beam Anchorage at structure	4 ea.	150	600
	Guard Rail W/Beam	200 LF	5	1,000
	Solid Sodding	41 SY	1.25	61.25
	Total Estimated Construction Cost			$ 51,478.25
	Construction Engineering 8%			4,118.26
	Administrative and Overhead Expense	14%		7,206.95
	Total Estimated Cost of Pedestrian Underpass at Station 1019+			$ 62,803.46

PEDESTRIAN UNDERPASS STRUCTURE AT STATION 1089+
(WESTBOUND ROADWAY)

Item No.	Description	Quantity	Unit Price	Amount
	Engineer's Office #3	LS	$	$ 150
	Construction Stake-out	LS		1,500
	Mobilization	LS		2,200
	Class 3 Excavation for Structure	278 CY	6	1,668
	Class C Concrete Sub-foundations	10 CY	40	400
	Reinforced Concrete Pedestrian Structure	LS		48,190
	Contingent Concrete for Pedestrian Structure	10 CY	75	750
	Metal Railing for Reinforced Pedestrain Structure	LS		1,190
	Epoxy Protective Coating for Parapets on Pedestrian Structure	LS		450
	Guard Rail WF Beam Anchorage at Structure	4 ea.	150	600
	Guard Rail W/Beam	200 LF	5	1,000
	Solid Sodding	43 SY	1.25	63.75
	Total Estimated Construction Cost			$58,161.75
	Construction Engineering 8%			$ 4,652.94
	Administrative and Overhead Expense 14%			8,142.64
	Total Estimated Cost of Pedestrian Underpass at Station 1089+			$70,957.33
	Total Estimated Cost of Both Pedestrian Underpass Structures is			$133,760.00

It is understood and agreed that the total estimated cost of the Pedestrian Underpass Structures, based upon bid prices plus 22% to cover State's construction, engineering and overhead costs, will be paid by the Corporation to the State as follows: Upon the award of the contract -- 10%; on the first day of each month during the period of construction -- an amount reasonably estimated by the

State to be the estimated cost to be incurred for the Pedestrian Underpass Structures during the month for which the payment is requested. The Corporation will furnish a bond from a reputable bonding company, which bond shall obligate the bonding company to pay for all costs incurred by the State for the Pedestrian Underpass Structures to the extent that the Corporation shall fail to pay such costs.

5. Subsequent to final payment to the Contractor, State will render an accounting of the total cost of the Project to the Corporation and payment by either party as may be required by the accounting, and as verified by the Corporation, will be made in full within thirty (30) days of the date of Invoice.

6. It is understood and agreed between the parties hereto that the terms and conditions of this agreement cover only the presently proposed Pedestrian Underpass Structures under the Westbound Roadway. At such time as the State determines is appropriate for the construction of the Easbound Roadway, the Corporation shall have the option of constructing, establishing, maintaining and renewing, at its sole cost and expense, the future extension of the Pedestrian Underpass Structures under said Eastbound Roadway. This option shall be exercised by the Corporation within ninety (90) days following notice to it by the State of the State's intent to commence construction (not less than ninety (90) days later) of the Eastbound Roadway. Failure on the part of the Corporation to respond to the State within said ninety (90) days following notice shall be deemed to be conclusive evidence of the Corporation's election not to exercise the option to construct, establish, maintain and renew the

future extension of the Pedestrian Underpass Structures under the Eastbound Roadway.

In the event the Corporation does not elect to exercise its option as herein provided, the State will backfill and seal the then existing Pedestrian Underpass Structures under the Westbound Roadway in a manner elected by the State, and the Corporation hereby agrees to reimburse the State for all costs and expenses actually incurred by the State in performance of such work within thirty (30) days of the date of invoice.

In the event the Corporation elects to exercise its option to construct, establish, maintain and renew the future extension of the Pedestrian Underpass Structures under the Eastbound Roadway, then it is agreed that the Corporation will bear all costs attributable to such future extension of the Pedestrian Underpass Structures and, subsequent to the State's decision to proceed with the construction of the Eastbound Roadway, the Corporation agrees to pay to the State the estimated cost attributable to the said extension of the Pedestrian Underpass Structures in a manner substantially similar to that provided hereinabove for payment of the estimated cost of the Pedestrian Underpass Structures under the Westbound Roadway.

7. (a) The Corporation, at its sole cost and expense, will construct, maintain, repair and renew the Pedestrian walkways through the underpass structures and across the right of way of relocated Maryland Route 175, including any lighting, warning

signs or other devices that may be required to safeguard Pedestrian traffic.

(b) Upon completion of the pedestrian underpasses and prior to the pedestrian walkways through same being placed in service by the Corporation, the Corporation shall procure a Protective Public Liability Insurance policy(s) in an insurance company authorized to do business in the State of Maryland to protect the "Board of Public Works of Maryland" and the "Maryland State Highway Administration" both acting for and on behalf of the State of Maryland from damages resulting from the construction of said underpasses and appurtenant structures. Such insurance shall provide for limits of not less than $100,000.00 for all damages arising out of death of or injury to any one person and $300,000.00 for death of or injury to two or more persons in any one occurrence, and $100,000.00 for property damage in any one occurrence with an aggregate property damage coverage of $300,000.00 for two or more occurrences. Such insurance shall be kept in full force and effect for as long as said underpasses remain in use under the highway, including the proposed future extensions thereof under the Eastbound Roadway, if and when constructed. All costs of providing said insurance shall be borne 100% by the Corporation. The original policy(s) and any renewals thereof must be furnished to and approved by the State.

Corporation further covenants and agrees to indemnify, protect and save harmless the Board and State from any and all loss, cost, damage and expense, and claims and demands therefore, whether

by reason of injury to or destruction of the property of the Corporation, or property of the Board and/or State, or property in their or either of their possession, control, or custody, or injury to or death of or injury to other persons, or injury to or destruction of property of other persons or corporations, who may seek to hold the Board and/or State or their employees liable therefor, insofar as the construction, use and maintenance of aforesaid underpasses are concerned.

8. (a) Upon completion of the Project, the Corporation shall, at its sole cost and expense, maintain, or cause to be maintained, the said Pedestrian Underpass Structures in their entirety. It is hereby agreed that the State shall not be responsible for any costs or expenses incurred in the maintenance of the Pedestrian Underpass Structures and that the maintenance standards of the Corporation shall conform to those of the State for the maintenance of said Structures.

(b) The State shall, at its sole cost and expense, repair, renew and maintain the relocated Maryland Route 175 roadway and all other highway facilities pertinent thereto which are owned by it.

(c) The Corporation shall, at its sole cost and expense, repair, renew and maintain the Pedestrian walkways and all other facilities pertinent thereto.

9. This Agreement shall inure to and be binding upon the parties hereto, their successors and assigns.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed, in triplicate, by their officers thereunto duly authorized, the day and year first above written.

ATTEST:

THE COLUMBIA PARK AND RECREATION ASSOCIATION, INC.

By _____

WITNESS:

THE STATE HIGHWAY ADMINISTRATION

By _____
Walter E. Woodford, Jr.
Deputy State Highway Administrator

WITNESS:

BOARD OF PUBLIC WORKS OF MARYLAND

By _____
Governor

By _____
Comptroller

By _____
Treasurer

APPROVED

_____
Chief Engineer
State Highway
Administration

Approved as to Form and legal Sufficiency:

This 22nd day of August, 1973.

_____
Administrative Special Attorney
State Highway Administration

115

STATE OF MARYLAND)
Al. Baltimore) SS:
~~COUNTY OF~~)

I HEREBY CERTIFY that on this 21st day of August, 1973, before me, the subscriber, a Notary Public of the State of Maryland, in and for the County aforesaid, personally appeared Patricia M. Kennedy of THE COLUMBIA PARK AND RECREATION ASSOCIATION, INC., and acknowledged the aforesaid agreement to be the act and deed of THE COLUMBIA PARK AND RECREATION ASSOCIATION, INC.

AS WITNESS my hand and Notarial Seal.

Joanne N. Bynes
Notary Public

My Commission Expires: 7/1/74

STATE OF MARYLAND)
) SS:
COUNTY OF)

I HEREBY CERTIFY that on this 28th day of August, 1973, before me, the subscriber, a Notary Public of the State of Maryland, in and for the County aforesaid, personally appeared Walter E. Woodford, Jr., Deputy State Highway Administrator for THE STATE HIGHWAY ADMINISTRATION, and acknowledged the foregoing agreement to be the act and deed of The State Highway Administration of the Department of Transportation, acting for and on behalf of the State of Maryland.

AS WITNESS my hand and Notarial Seal.

Frank J Paskewski
Notary Public

My Commission Expires: July 1, 1974

STATE OF MARYLAND)
) SS:
COUNTY OF Baltimore)

I HEREBY CERTIFY that on this 13th day of June, 1974, before me, the subscriber, a Notary Public of the State of Maryland, in and for the County aforesaid, personally appeared Marvin Mandel, Governor, Louis L. Goldstein, Comptroller, and J. Millard Tawes, Treasurer, constituting the BOARD OF PUBLIC WORKS OF MARYLAND, and each severally acknowledged the foregoing agreement to be the act and deed of the BOARD OF PUBLIC WORKS OF MARYLAND, acting for the State of Maryland.

AS WITNESS my hand and Notarial Seal.

Notary Public

My Commission Expires: July 1, 1974