

Goshen Road Improvement Project – Typical Section

The planning phase (Facility Planning Phase 1) investigated various alternatives for this project, varying from no improvement (No Build Option), to widening to four lanes with the potential to widen in the future to six lanes (Alternative 6) within a 120-foot R.O.W. See Figure 1 below for Planning Phase alternatives. Please note that the right-of-way (R.O.W.) width noted for any alternate is the MINIMUM.

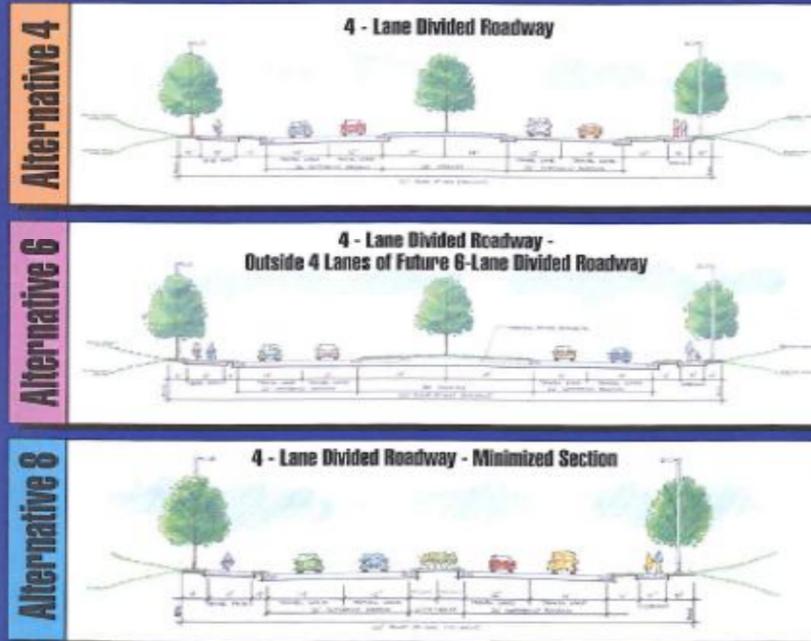


Goshen Road South

Odendhal Avenue to Warfield Road

Comparison of Alternative Typical Sections

Typical Section Alternatives



Goshen Road Alternative Typical Section	Traffic Congestion	Noise Impacts (> 67dBA)	Wetlands & Waters of the U.S. Impacts	Forest Impacts	Historic Properties*	Right-of-Way Impacts	Right-of-Way Width	Landscaped Median	Landscaped Roadside	Street Lighting	Bike Path (8' Width)	Sidewalk (5' Width)	Closed Section (Curbed) Roadway	Potential for Future 6-Lane Section (within Min. R/W)
No-Build Existing Typical Section	18 Intersections with an unacceptable LOS	9 Residences	0 Wetlands 0 Waters	0 Acres	0 Impacts	0 Acres 0 Properties 0 Relocations	Varies - Approx. 60' to 130'	No	Existing Vegetation	Typically only at Intersections	No	Spot locations	No - Typically Open Roadway Section	-
Alternative 4 4-Lane Divided Roadway	2 Intersections with an unacceptable LOS	69 Residences	1.5 Acres of Wetlands 0.2 Acres of Waters	4.8 Acres	0 Impacts	13.5 Acres 105 Properties 0 Relocations	120' Minimum	Yes - with Street Trees	Yes	Yes	Yes - Offset 7' from Face of Curb	Yes - Offset 10' from Face of Curb	Yes - along Median and Outside	Yes - with median and Outside Widening
Alternative 6 4-Lane Divided Roadway - Outside 4 Lanes of Future 6-Lane Divided Roadway	2 Intersections with an unacceptable LOS	74 Residences	1.5 Acres of Wetlands 0.2 Acres of Waters	4.8 Acres	0 Impacts	13.5 Acres 105 Properties 0 Relocations	120' Minimum	Yes - with Street Trees	Yes	Yes	Yes - Offset 4' from Face of Curb	Yes - Offset 6' from Face of Curb	Yes - along Median and Outside	Yes - with Median Widening
Alternative 8 4-Lane Divided Roadway (Minimized 4-Lane Section)	2 Intersections with an unacceptable LOS	68 Residences	1.1 Acres of Wetlands 0.1 Acres of Waters	3.9 Acres	0 Impacts	10.7 Acres 88 Properties 0 Relocations	100' Minimum	Yes - with Low Plantings	Yes	Yes	Yes - Offset 4' from Face of Curb	Yes - Offset 6' from Face of Curb	Yes - along Median and Outside	No

* One candidate historic property was under review when this Prospectus was published; the final decision will be reflected in Phase 2.

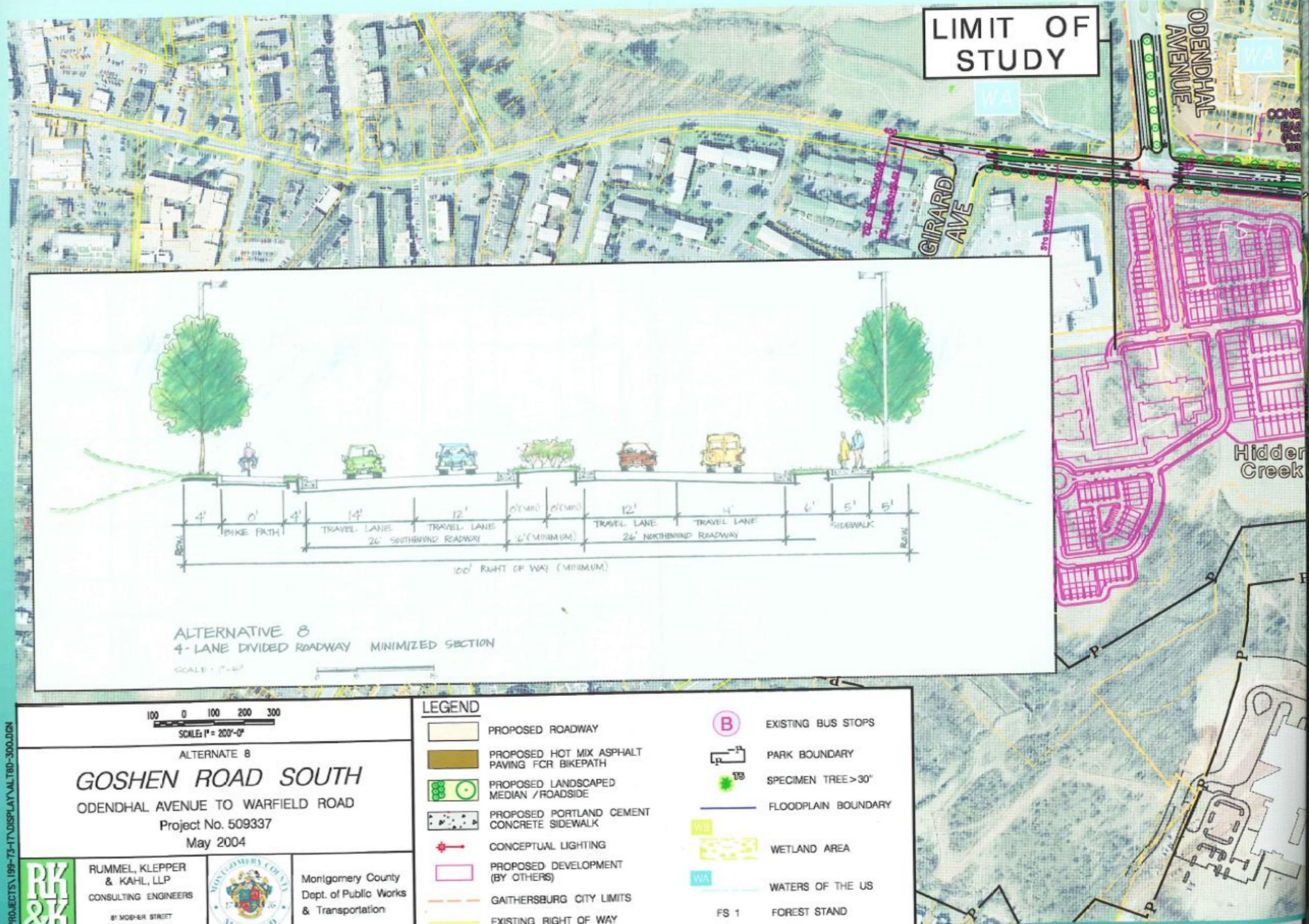
Common Build Alternative Features

- Dedicated Left Turn Lanes Improve Safety, Operations and Capacity
- Pedestrian and Bicycle Facilities Improve Safety and Access to Neighborhoods, Commercial Centers and Transit Facilities
- Roadway Lighting Improves Safety for Vehicular, Bicycle and Pedestrian Traffic
- Appropriate Roadside Grading for Design Speed and Roadway Classification Improves Roadside Safety with Proper Obstacle Setback
- Medians Improve Safety with Physical Separation between Opposing Traffic
- Roadway Landscaping adds Aesthetic Enhancements



Figure 1. Planning Phase I alternatives

The chosen alternative, Alternative 8, proposed a four-lane improvement within a minimum R.O.W. of 100 feet. This alternative was approved by the County Council in 2004. The Typical Section illustration for Alternative 8 with a description from the Project Prospectus is shown in Figure 2 and Figure 3 below. Figure 4 shows a copy of the Council Approval Letter of Alternative 8. The width of the median was proposed to be a minimum of 16 feet with a width of 24 feet at un-signalized intersections.



ALTERNATE 8
GOSHEN ROAD SOUTH
 ODENDHAL AVENUE TO WARFIELD ROAD
 Project No. 509337
 May 2004



RUMMEL, KLEPPER & KAHL, LLP
 CONSULTING ENGINEERS
 81 WOODRIDGE STREET



Montgomery County
 Dept. of Public Works & Transportation

LEGEND

- PROPOSED ROADWAY
- PROPOSED HOT MIX ASPHALT PAVING FOR BIKEPATH
- PROPOSED LANDSCAPED MEDIAN / ROADSIDE
- PROPOSED PORTLAND CEMENT CONCRETE SIDEWALK
- CONCEPTUAL LIGHTING
- PROPOSED DEVELOPMENT (BY OTHERS)
- GAITHERSBURG CITY LIMITS
- EXISTING RIGHT OF WAY
- EXISTING BUS STOPS
- PARK BOUNDARY
- SPECIMEN TREE >30'
- FLOODPLAIN BOUNDARY
- WETLAND AREA
- WATERS OF THE US
- FS 1 FOREST STAND

Figure 2. Typical Section of Alternative 8



Alternative 8

Alternative 8 is based on Montgomery County DPWT Standard No. (MC-217.01) and includes a 6-foot grass panel between the curb face and sidewalk and a 4-foot grass panel between the curb face and bike path. Alternative 8 includes a 16-foot typical median with low shrubby plantings. The median width increases to 18 feet at signalized intersections to accommodate a 12-foot left-turn lane and a 6-foot median. The median width is increased to 24 feet at unsignalized intersections to provide adequate storage width that will accommodate a two-staged vehicular crossing. The minimum right-of-way width for Alternative 8 is 100 feet. Ten (10) retaining walls are included to reduce or avoid extensive grading impacts to adjacent properties. See *Appendix A* for more information on the proposed retaining walls for Alternative 8.

Alternative 8 has approximately 1.1 acres of wetland impacts and 0.1 acres of Waters of the United States impacts. Right-of-way impacts for Alternative 8 include approximately 10.7 acres of fee and construction easement area.

A comparison chart for Alternatives 4,6 and 8 is included in *Appendix A*.

Recommended Alternative

Alternative 8 has been selected as the recommended alternative for improvements along Goshen Road. Alternative 8 achieves the purpose and need of the project, while presenting the least impact on adjacent properties and natural resources when compared to the other build alternatives. Alternative 8 also received strong support from the local residents and homeowners associations.

The design for Alternative 8 should continue to be reviewed and refined during Phase II Facility Planning as more detailed mapping and engineering is developed. The typical section and grading limits may be expanded where existing right-of-way is adequate or may be reduced in areas where right-of-way is limited and impacts are substantial. Additional right-of-way may be required to accommodate drainage, stormwater management and final permitting requirements. However, every effort should be made to strategically locate facilities in areas that require the least amount of disturbance to residential, institutional and park property, as well as cultural and environmental resources.



MEMORANDUM

July 15, 2004

TO: Michael Hoyt, Acting Director
Department of Public Works and Transportation

FROM: Nancy Floreen, Chair
Transportation and Environment Committee

SUBJECT: Goshen Road South project

On July 15, 2004 the T&E Committee reviewed the results of Phase I facility planning for the Goshen Road South project, and we unanimously recommend that you proceed to study Alternative 8 during Phase II of facility planning. We concur with all of the Planning Board's comments (attached), except that any decision about the type of landscaping in the medians or the landscape panels should be deferred until after the Council's review of the Road Construction Code during the upcoming year.

The Committee appreciates the work the Department of Public Works and Transportation has completed to date, and we look forward to the completion of Phase II facility planning for the Goshen Road South project in 2006 so that we can consider the project for funding as part of the FY 2007-2012 Capital Improvements Program, or as a later amendment to that CIP.

cc: Councilmembers
Derick Berlage, Chair, Montgomery County Planning Board

After the completion of Facility Planning Phase I and subsequent approval of the recommended alternative by the County Council, the County's Road Code was revised (named Context Sensitive Standards). Therefore, the geometric design for this and other projects must now comply with a new set of road design standards. The Preliminary Design for this project proposed a typical section within a typical R.O.W. width of 107 feet. The design calls for a uniform 18-foot wide median (even at un-signalized intersections). This narrower median reduces impacts to properties yet still meets some very essential design requirements, namely: the turn lanes are carved out of the median and are 12-feet wide, leaving a 6-foot wide median as a refuge for pedestrians and cyclists crossing the road. Also, the 18-foot wide median provides just enough space for a vehicle making a left turn out of a side road to complete the turn movement in two stages, if necessary (by waiting in the "median" area).

Based on the concerns of some citizens who attended the Preliminary Design Public Information Meeting for this project, the width of the typical section has been further narrowed to 103 feet by reducing the width of the back panels from five feet to three feet. See Figure 5 below for a copy of the typical section that will be used in Final Design phase (if and when funding is received to proceed to Final Design). This proposed design is consistent with the Planning Phase-recommended typical section as well as the new Road Code standards. This design is necessary and appropriate to meet the geometric, safety, landscaping and other design objectives of this project, with minimized impacts to adjacent properties. Please note that while the R.O.W. will be wider at intersections (to provide the necessary turn lanes), at certain locations, the R.O.W. will be narrower than 100 feet so as to avoid impact to environmentally sensitive features, such as the Goshen Elm tree.

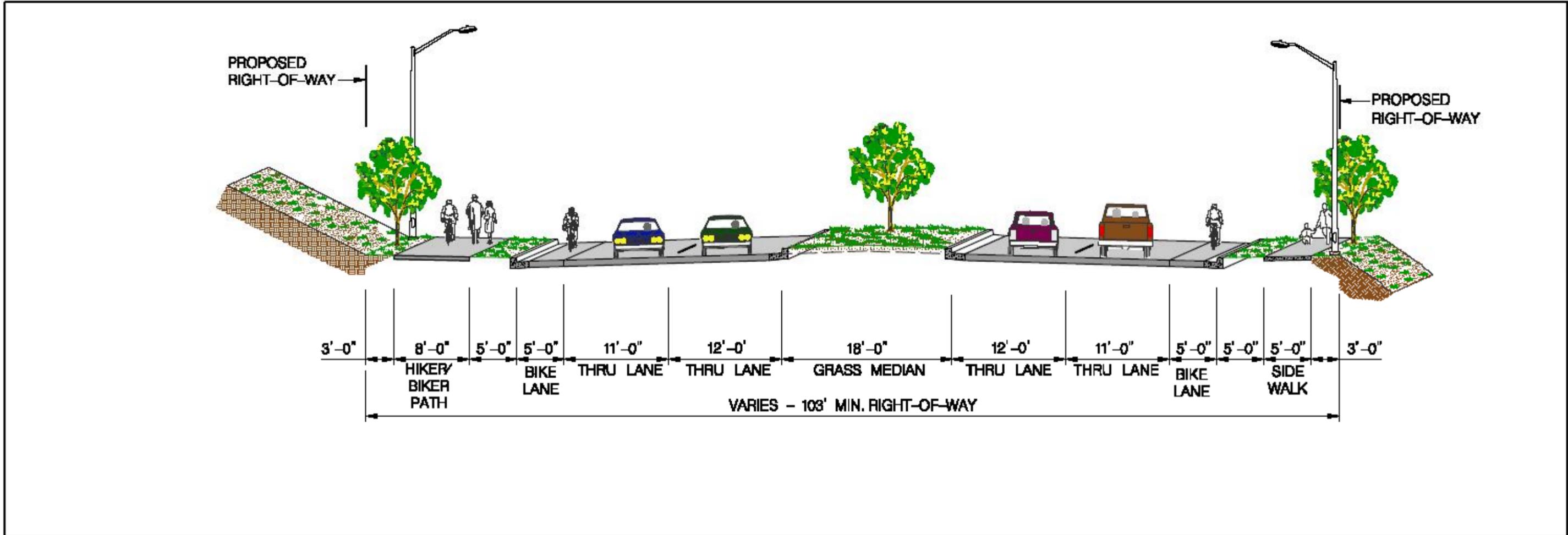


Figure 5. Proposed Typical Section For Final Design