Acknowledgements

Lead Project Contributors

The following agencies and individuals were the primary contributors to the Mill Valley to Corte Madera Corridor Study. Numerous other individuals contributed through their participation.

Project Sponsor

*Marin County Department of Public Works*

Carey Lando  
*Senior Transportation Planner*

Technical Advisory Committee

Jill Barnes  
*Senior Engineer, City of Mill Valley*

Dan Dawson  
*Principal Transportation Planner, Marin County Department of Public Works*

Ed Hulme  
*Superintendent, Marin County Parks and Open Space Department*

Dan Ring  
*Public Works Director, Town Of Corte Madera*

Bill Whitney  
*Associate Project Delivery Manager, Transportation Authority of Marin*

Caltrans District 4

Lead Consultant

*Alta Planning + Design*

Bicycle and Pedestrian Facility Planning and Design  
Randy Anderson, Project Manager  
Matt Lasky, Planner  
Brian Burchfield, Assistant Planner  
Roy Harju, GIS Analyst

Subconsultants

Jacobs Associates, Tunnel Engineering  
LSA Associates, Environmental Analysis  
Nolte Associates, Civil Engineering  
Parisi Associates, Traffic Engineering
This page intentionally left blank.
Table of Contents

1 Introduction ................................................................................ 1-1
   Study Team ................................................................................. 1-1
   Study Process ............................................................................. 1-3
   Executive Summary ...................................................................... 1-3
   Improvement Concepts .................................................................. 1-4
   Organization of the Report .......................................................... 1-8
   Types of Bicycle and Pedestrian Facilities ...................................... 1-8
   Technical Studies Summary ......................................................... 1-11
   Other Background Information .................................................... 1-15

2 Improvement Concepts ................................................................ 2-1
   Summary .................................................................................... 2-1
   Study Objectives and Issues ......................................................... 2-1
   Signage Concepts ......................................................................... 2-2
   Route Alternative A – Horse Hill Route ......................................... 2-4
   Route Alternative B – Alto Tunnel Route ........................................ 2-47
   Route Alternative C – Camino Alto/Corte Madera Avenue Route ...... 2-71

3 Alternatives Evaluation ............................................................... 3-1
   Profiles ...................................................................................... 3-1
   Evaluation Criteria ........................................................................ 3-3
   Input Regarding Criteria ............................................................. 3-4
   Evaluation Matrix ......................................................................... 3-6

4 Cost Estimates ............................................................................ 4-11
   Construction Costs ....................................................................... 4-11
   Operation and Maintenance Costs ............................................... 4-17

5 Implementation .......................................................................... 5-1
   Project Implementation Steps ....................................................... 5-1
   Potential Project Phasing ............................................................. 5-1
   Sample Implementation Timelines ............................................... 5-2
   Funding Sources ........................................................................... 5-5
List of Figures and Tables

Figure 1-1: Regional Routes Context........................................................................................................ 1-2
Figure 1-2: Study Area Routes and Segments........................................................................................... 1-7
Figure 1-3: Caltrans Bikeway Classifications........................................................................................... 1-10
Table 1-2: Project Area Estimated Annual Users, Average Daily Traffic (ADT) and Benefits......1-15
Figure 2-1: Trail Mileage Marker per Manual of Uniform Traffic Control Devices..............................2-2
Figure 2-2: Horse Hill Route Overview .................................................................................................... 2-3
Figure 2-3: E. Blithedale Improvement Concept......................................................................................... 2-9
Figure 2-4: Ashford access improvements between MV-Sausalito Path and Lomita/Ashford intersection................................................................................................................................. 2-12
Figure 2-5: Cross-section through existing MV-Sausalito bike path with new pedestrian path......2-13
Figure 2-6: Maguire School Bypass Path Concept...................................................................................... 2-16
Figure 2-7: Alternative bike route concept................................................................................................. 2-17
Figure 2-8: Plan view of Lomita/Shell intersection area............................................................................ 2-20
Figure 2-9: Section through Lomita Drive at open space frontage.............................................................. 2-21
Figure 2-10: Section through Lomita Drive at residential frontage............................................................. 2-21
Figure 2-11: Plan of modified Horse Hill multi-use path ........................................................................ 2-25
Figure 2-12: Cross-section through modified Horse Hill multi-use path................................................ 2-25
Figure 2-13: Conceptual plan of new path connection to Meadowsweet.................................................2-26
Figure 2-14: Segment 3 Alternative: Horse Hill Path with trench............................................................... 2-27
Figure 2-15: Profile of Horse Hill Path........................................................................................................ 2-28
Figure 2-16 Highway 101 on-ramp intersection improvements................................................................. 2-36
Figure 2-17: Existing condition - section through southern portion of Casa Buena...............................2-37
Figure 2-18: Proposed condition - section through southern portion of Casa Buena...............................2-37
Figure 2-19: Existing condition - Section through northern portion of Casa Buena...............................2-38
Figure 2-20: Proposed condition - section through northern portion of Casa Buena ........................................... 2-38
Figure 2-21: Greenbrae/Twin Cities Corridor Improvements Study ................................................................. 2-43
Figure 2-22: Alto Tunnel Route Overview ........................................................................................................ 2-46
Figure 2-23: Section through Multi-Use Path ..................................................................................................... 2-52
Figure 2-24: South Portal Emergency Vehicle Turnaround Plan ..................................................................... 2-54
Figure 2-25: South Portal Emergency Vehicle Turnaround Section ............................................................... 2-54
Figure 2-26: Cross-Section through Tunnel ...................................................................................................... 2-58
Figure 2-27: Section through Multi-Use Path .................................................................................................... 2-62
Figure 2-28: North Portal Emergency Vehicle Turnaround Plan ................................................................... 2-63
Figure 2-29: North Portal Emergency Vehicle Turnaround Section .............................................................. 2-63
Figure 2-30: Plan View of Improvements near Redwood/Montecito Intersection ........................................ 2-69
Figure 2-31: Section through Re-Constructed Planter and New Path .............................................................. 2-70
Figure 2-32: Section Through Existing Sandra Marker Path with New Pedestrian Path ............................. 2-70
Figure 2-33: Camino Alto/Corte Madera Avenue Route Overview ................................................................. 2-72
Figure 2-34: Section at Southern Portion Camino Alto ..................................................................................... 2-78
Figure 2-35: Camino Alto Improvements Between Azalea Drive and Kite Hill Lane ..................................... 2-79
Figure 2-36: Camino Alto Improvements between Kite Hill Lane and Overhill Road ................................... 2-80
Figure 2-37: Section near Top of Camino Alto ................................................................................................. 2-83
Figure 2-38: Camino Alto Improvements between Overhill Road and City Limits ....................................... 2-84
Figure 2-39: Southern Portion of Corte Madera Avenue Improvements ......................................................... 2-88
Figure 2-40 Section through Corte Madera Avenue ....................................................................................... 2-92
Figure 2-41: Northern Portion of Corte Madera Avenue Improvements ....................................................... 2-93
Figure 3-1: Profiles of Study Routes ............................................................................................................... 3-2
Figure 3-2: Profiles of Other Marin County Routes ......................................................................................... 3-2
Table 3-1: Route Alternatives Evaluation Matrix

Table 4-1: Route Improvements Planning-Level Estimates

Table 4-2: Segment Improvements Planning-Level Estimates

Table 4-3: Maintenance Costs Estimates for the Three Project Alternatives

Figure 5-1: Horse Hill Route Implementation Timeline Example

Figure 5-2: Alto Tunnel Route Project Timeline Example

Figure 5-3: Camino Alto/Corte Madera Avenue Route Project Timeline Example

**List of Appendices - Technical Studies**

- Geotechnical Study (Appendix A)
- Tunnel Feasibility Study (Appendix B)
- Drainage Analysis (Appendix C)
- Multi-Modal Traffic Analysis (Appendix D)
- Emergency Response Analysis (Appendix E)
- Environmental Considerations Study (Appendix F)
- Right-of-Way Conditions Analysis (Appendix G)
- Route Use Counts and Projections (Appendix H)

**Appendices - Background Information**

- Inventory and Description of Routes (Appendix I)
- Public and Agency Comments and Response Summary (Appendix J)
- Background Documents (Appendix K)
- Detailed Cost Estimates (Appendix L)