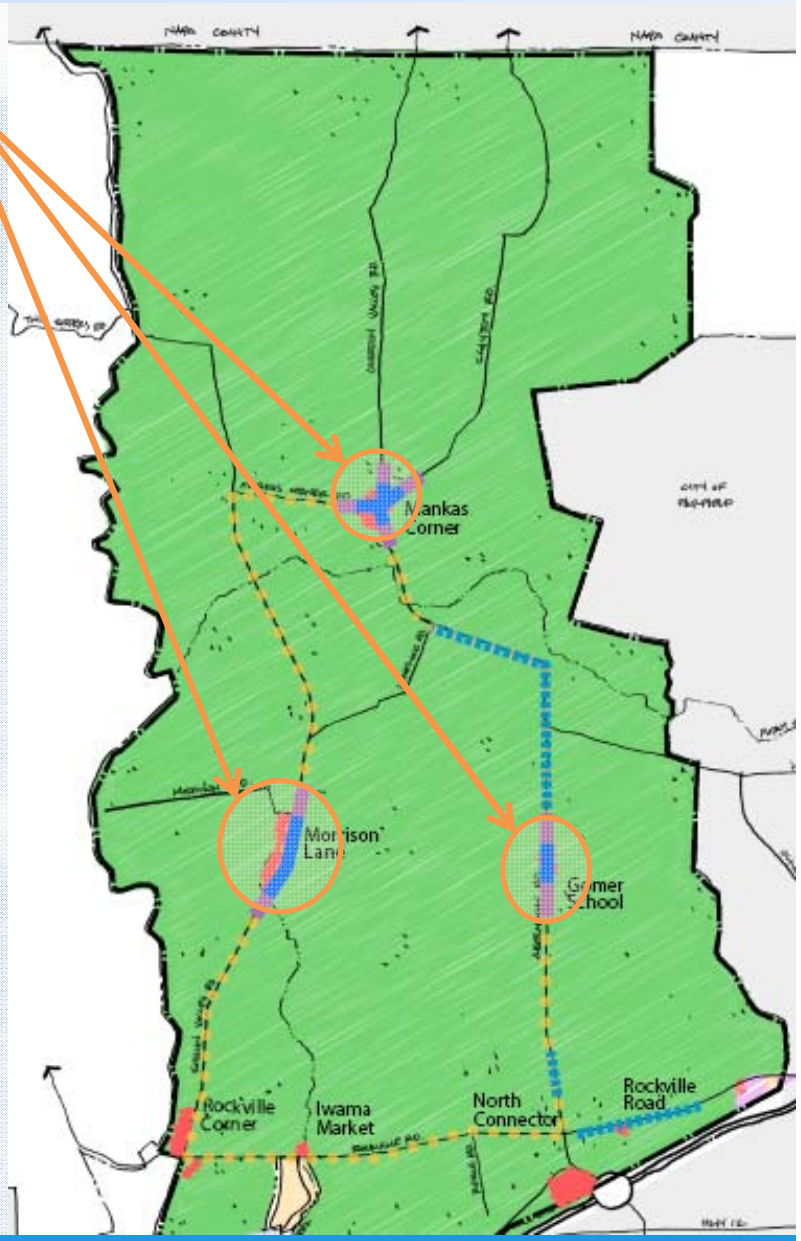
Roadway Prototypes and Cost Estimates

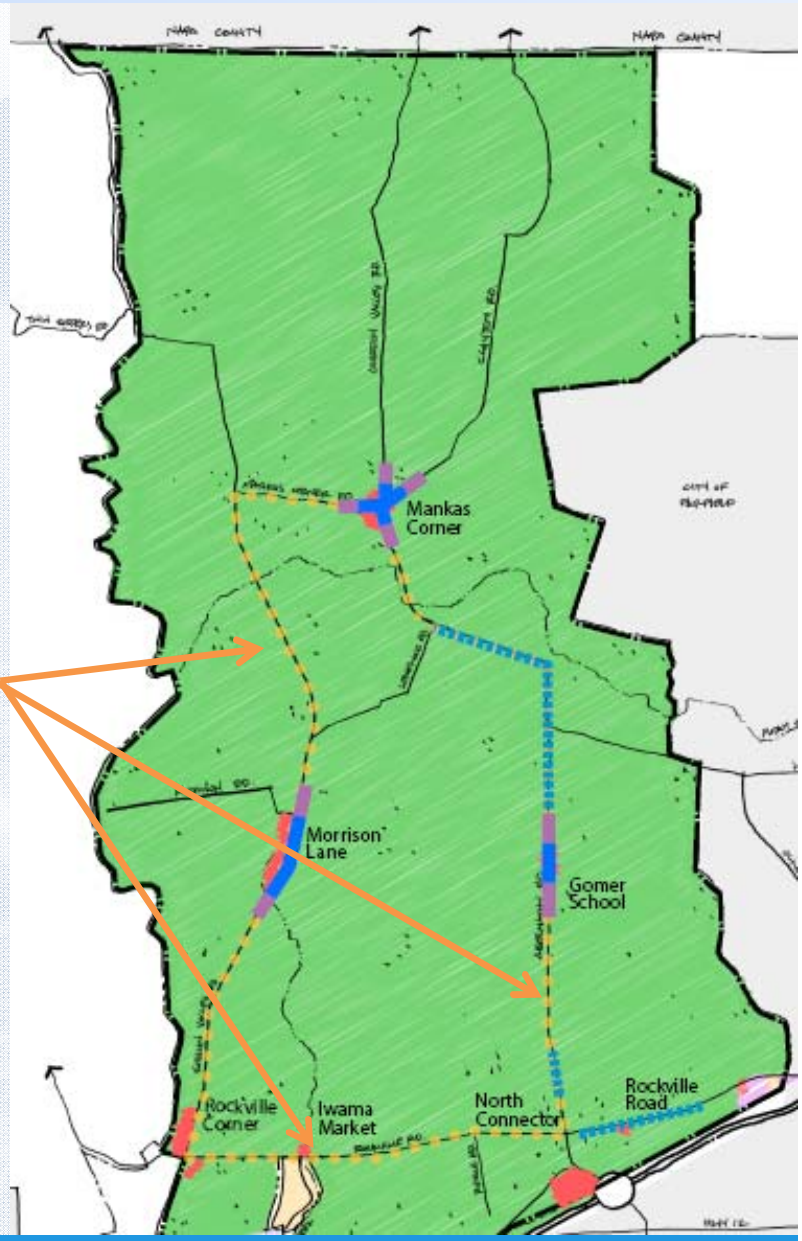
Roadway Improvement Phases

- Phase 1 – Spot improvements at ATCs
- Phase 2 – Improvement to shoulders, utility pole relocation
- Phase 3 – Flooding improvements



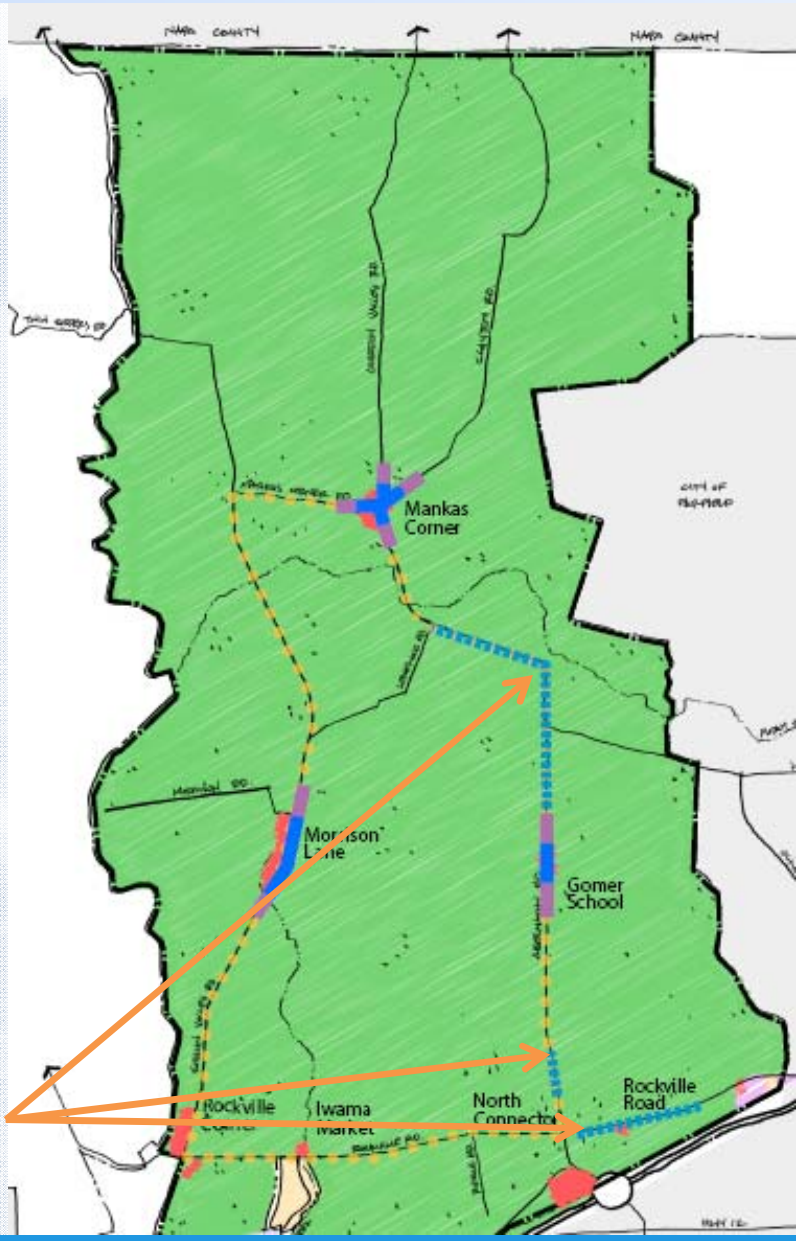
Roadway Improvement Phases

- Phase 1 – Spot improvements at ATCs
- Phase 2 – Improvement to shoulders, utility pole relocation
- Phase 3 – Flooding improvements



Roadway Improvement Phases

- Phase 1 – Spot improvements at ATCs
- Phase 2 – Improvement to shoulders, utility pole relocation
- Phase 3 – Flooding improvements



Phase 1 Improvements

Phase 1

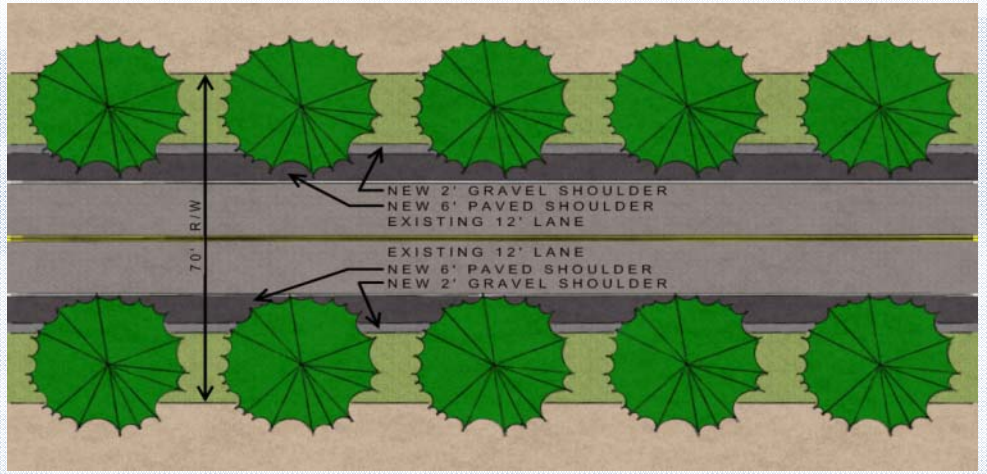
- Considerations:
  - Cost-effective solution to create visitor-friendly environment
  - Reduce speed
  - Improve pedestrian crossings and pathways
  - Increase safety for turning movements
  - Accommodate vehicles entering and exiting ATCs
  - Define setbacks for utility poles

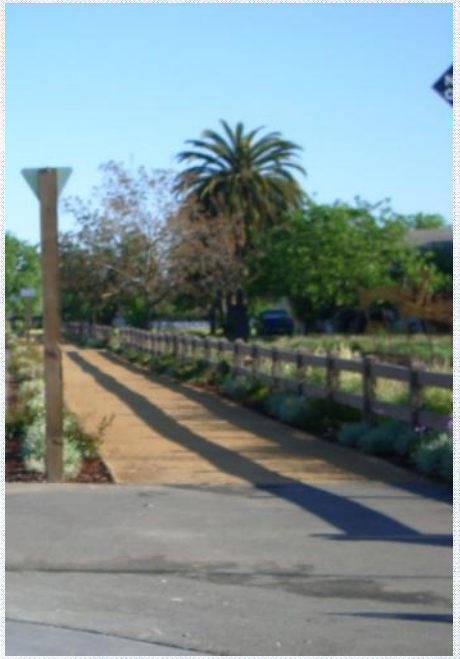
Phase 1

- Placement of street trees
- Widening of shoulders
- Relocation of utility poles
- Placement of two way left turn lanes
- Crosswalks

Phase 1

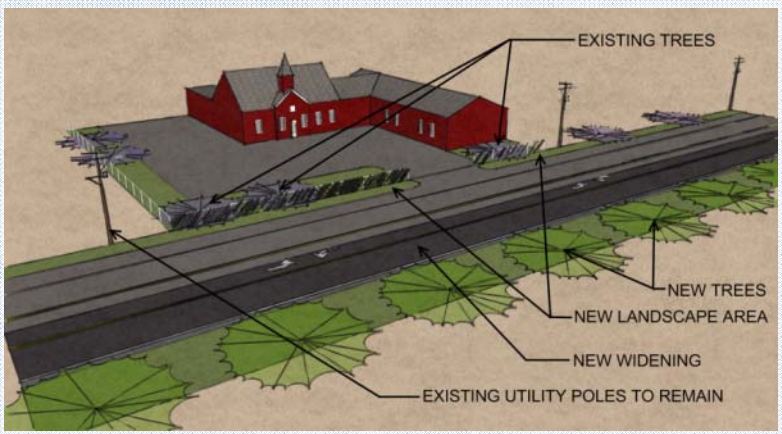
- Signage
- Vehicle actuated speed signs
- Curbs or fencing
- Roadway striping
- Decomposed granite walkways

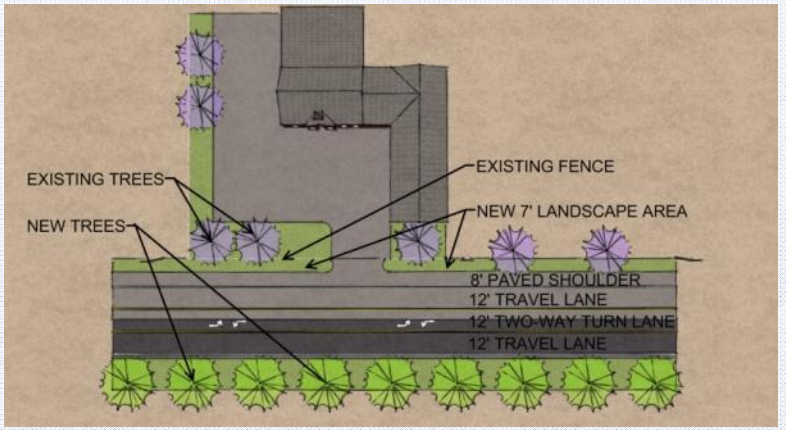


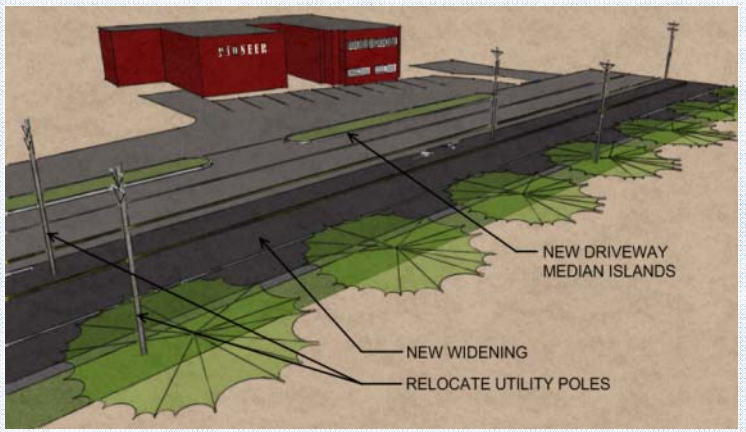


Phase 1

- Typical ATC Prototype
  - Street trees, wider travel lanes, shoulders, signage, curbs or fencing to mark parking entrances/exits, utility pole relocation

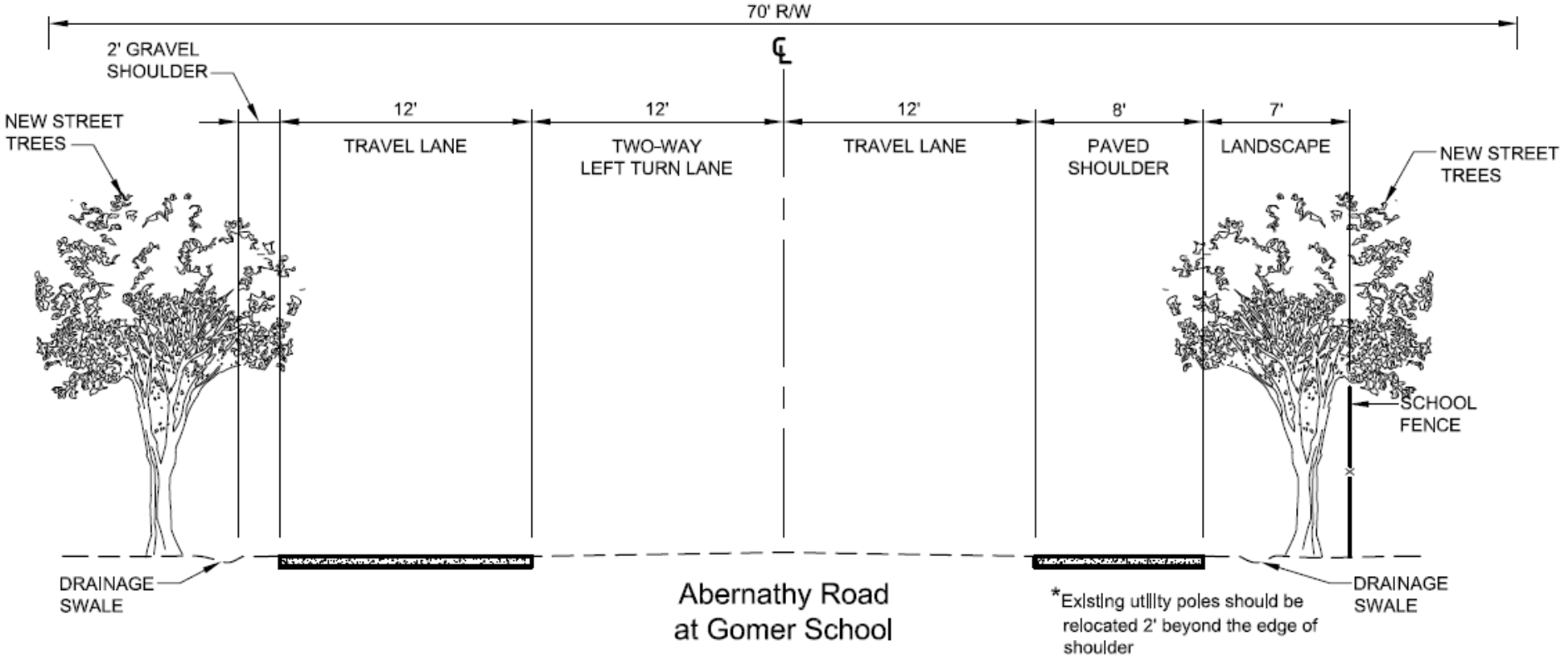






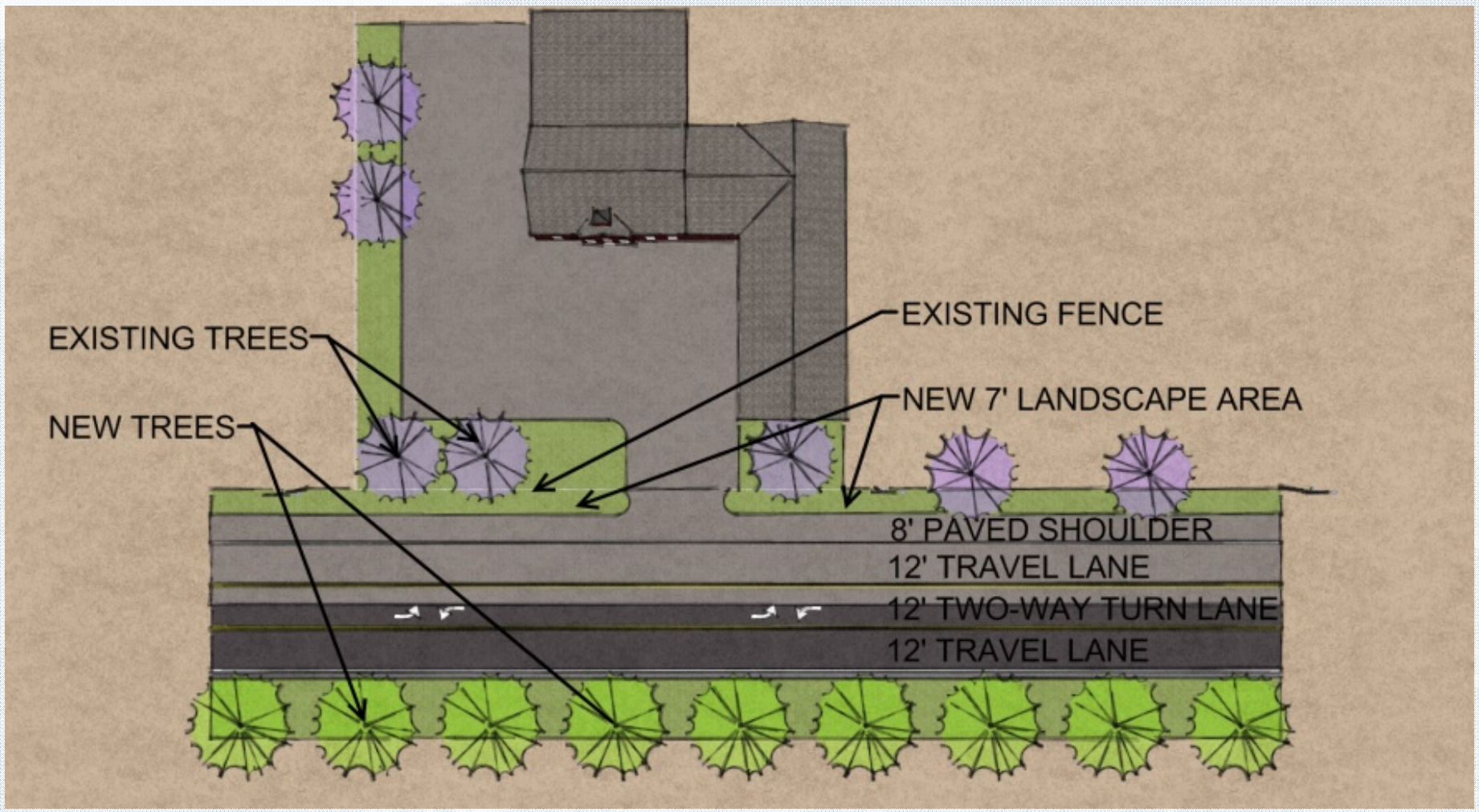
Phase 1

- Gomer School ATC Prototype



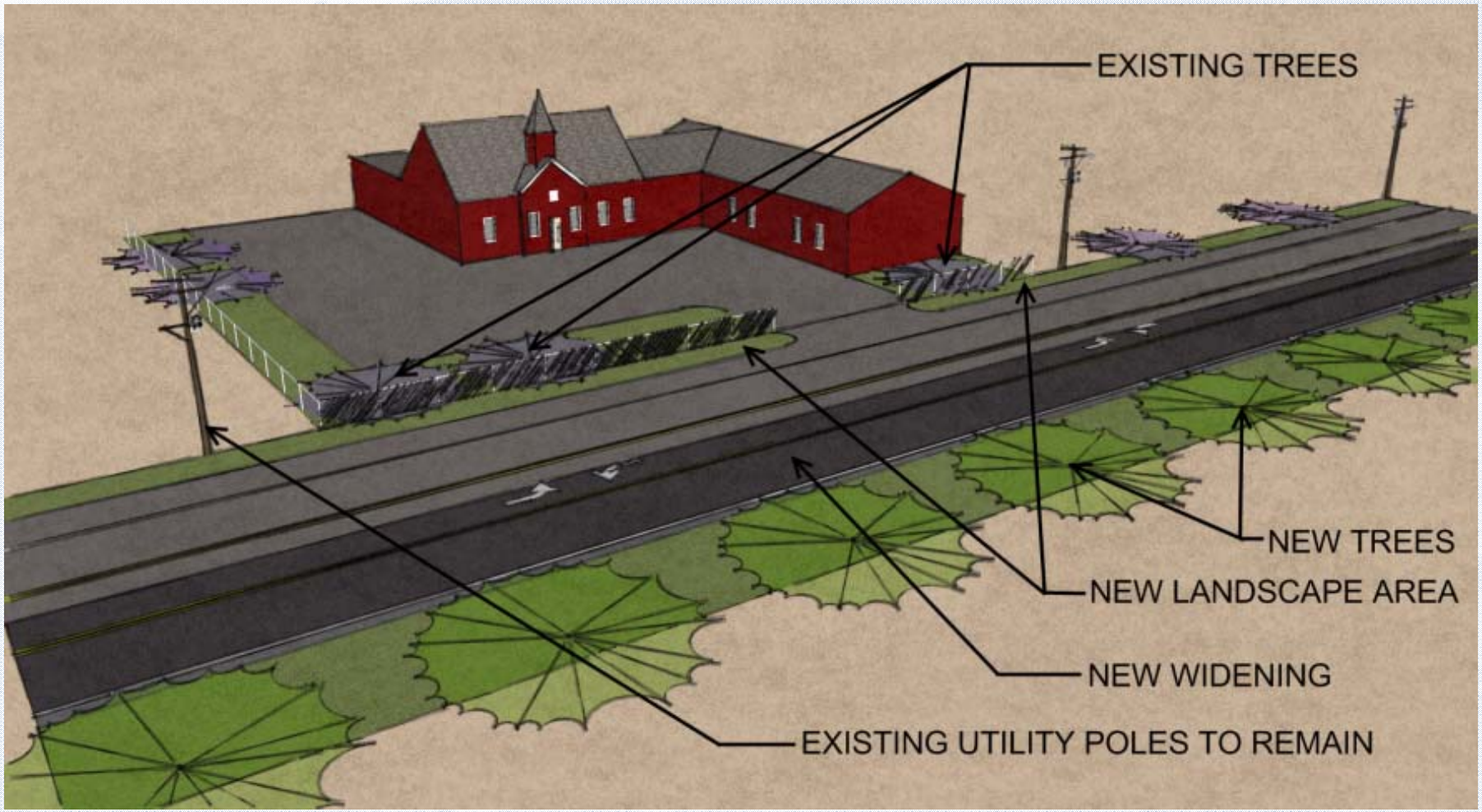
Phase 1

- Gomer School ATC Prototype



Phase 1

- Gomer School ATC Prototype

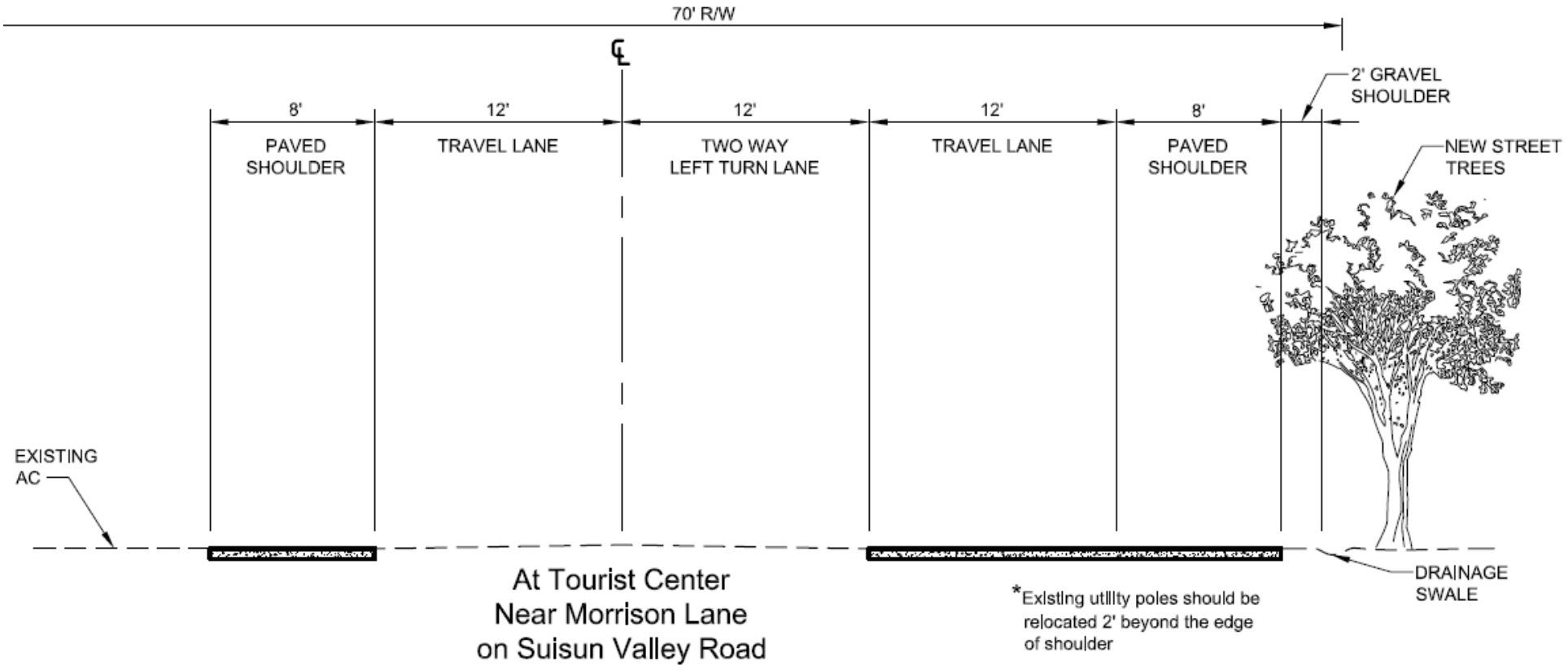


Roadway Prototypes

- Gomer School ATC Prototype

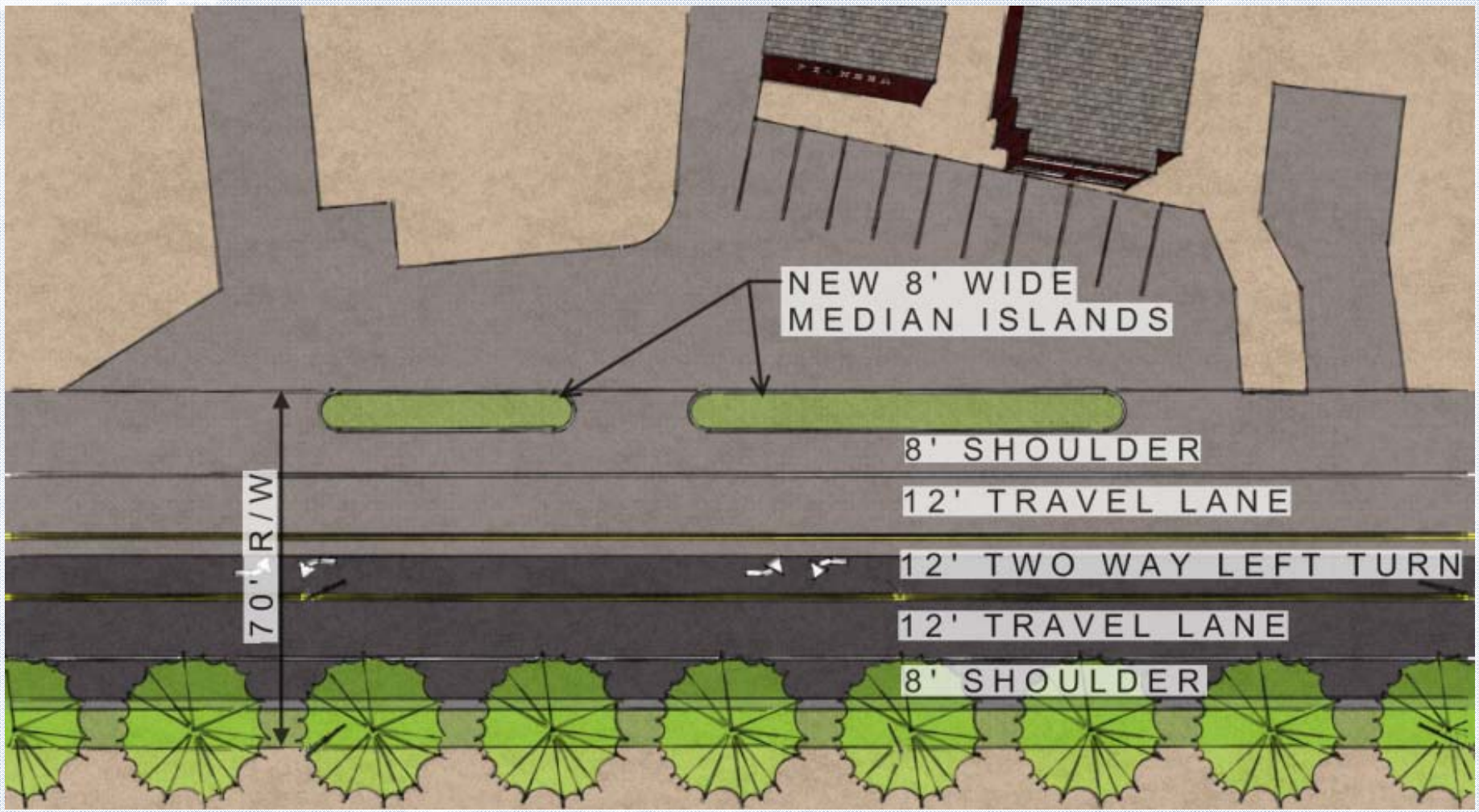
Phase 1

- Morrison Lane ATC Prototype



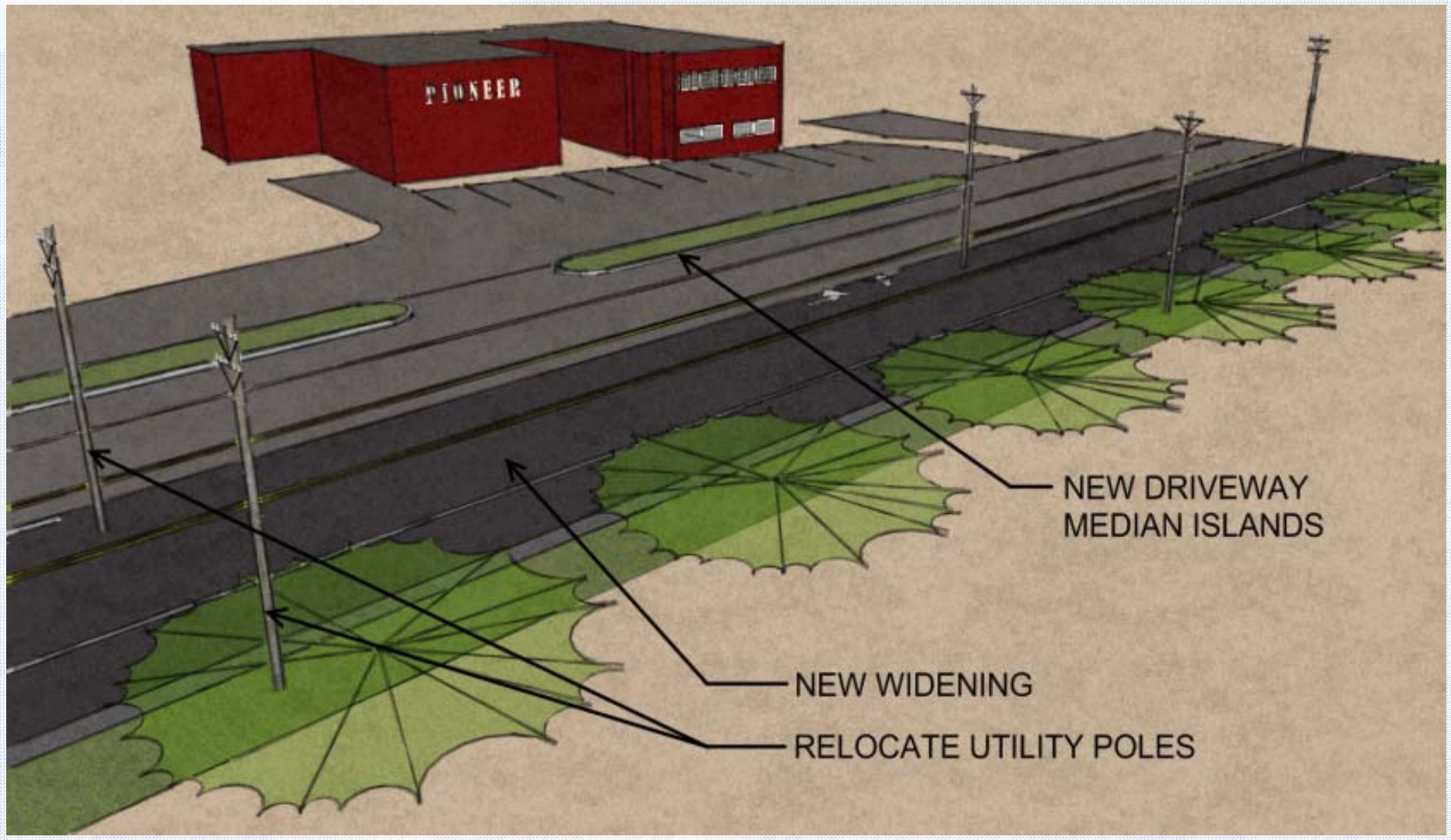
Phase 1

- Morrison Lane ATC Prototype



Phase 1

- Morrison Lane ATC Prototype

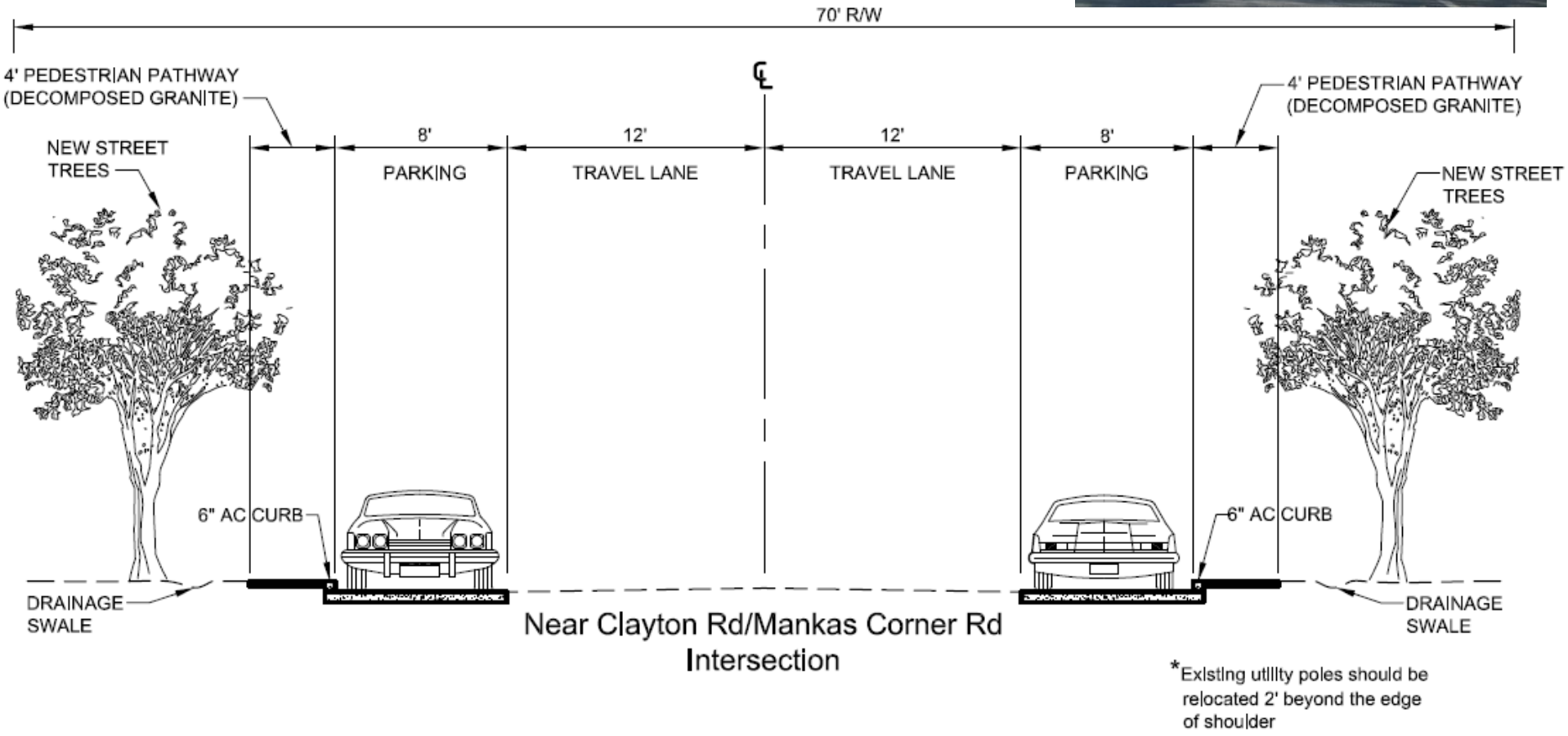


Roadway Prototypes

- Morrison Lane ATC Prototype

Phase 1

- Mankas Corner ATC Prototype

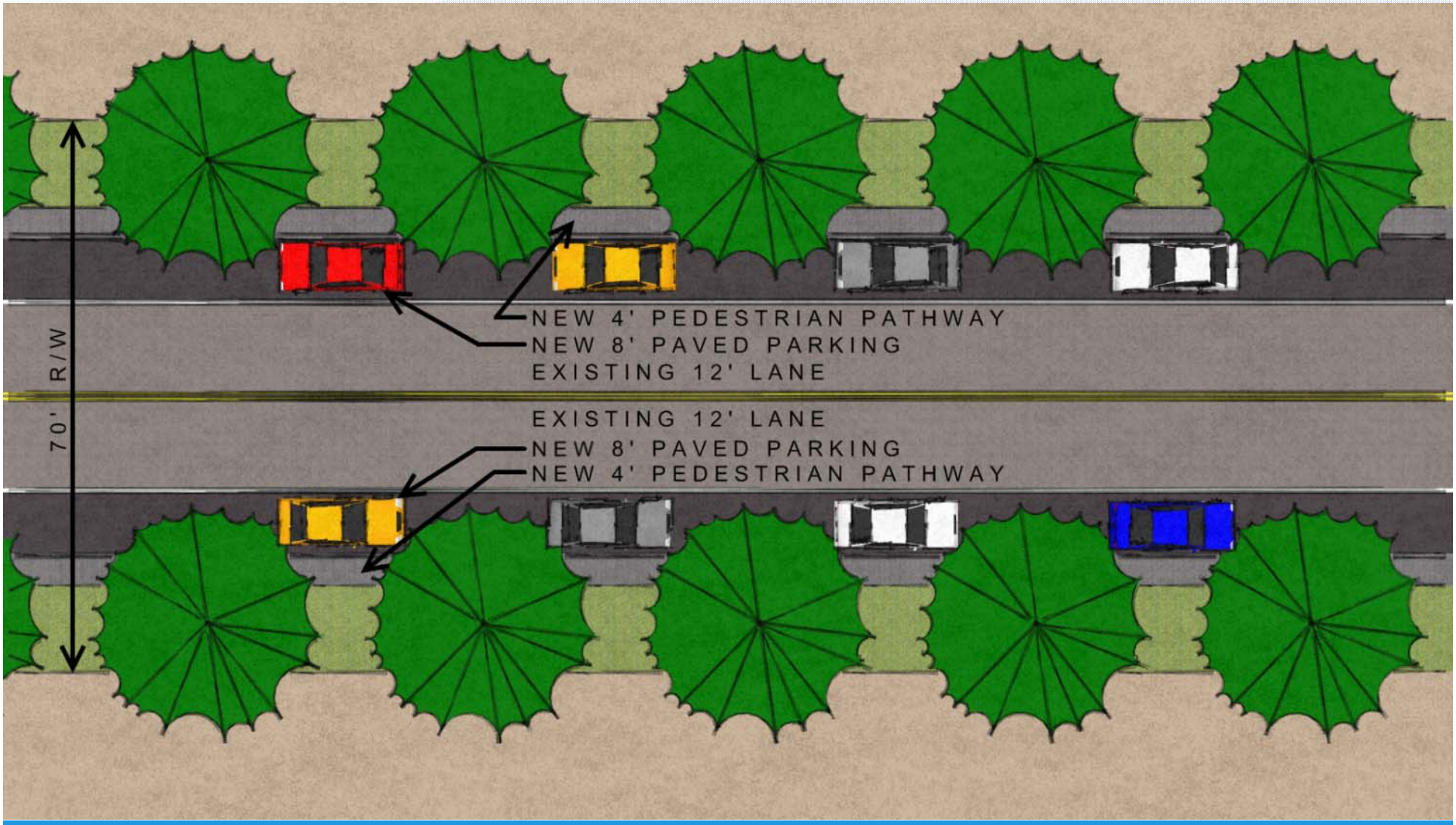


Roadway Prototypes

- Mankas Corner ATC Prototype

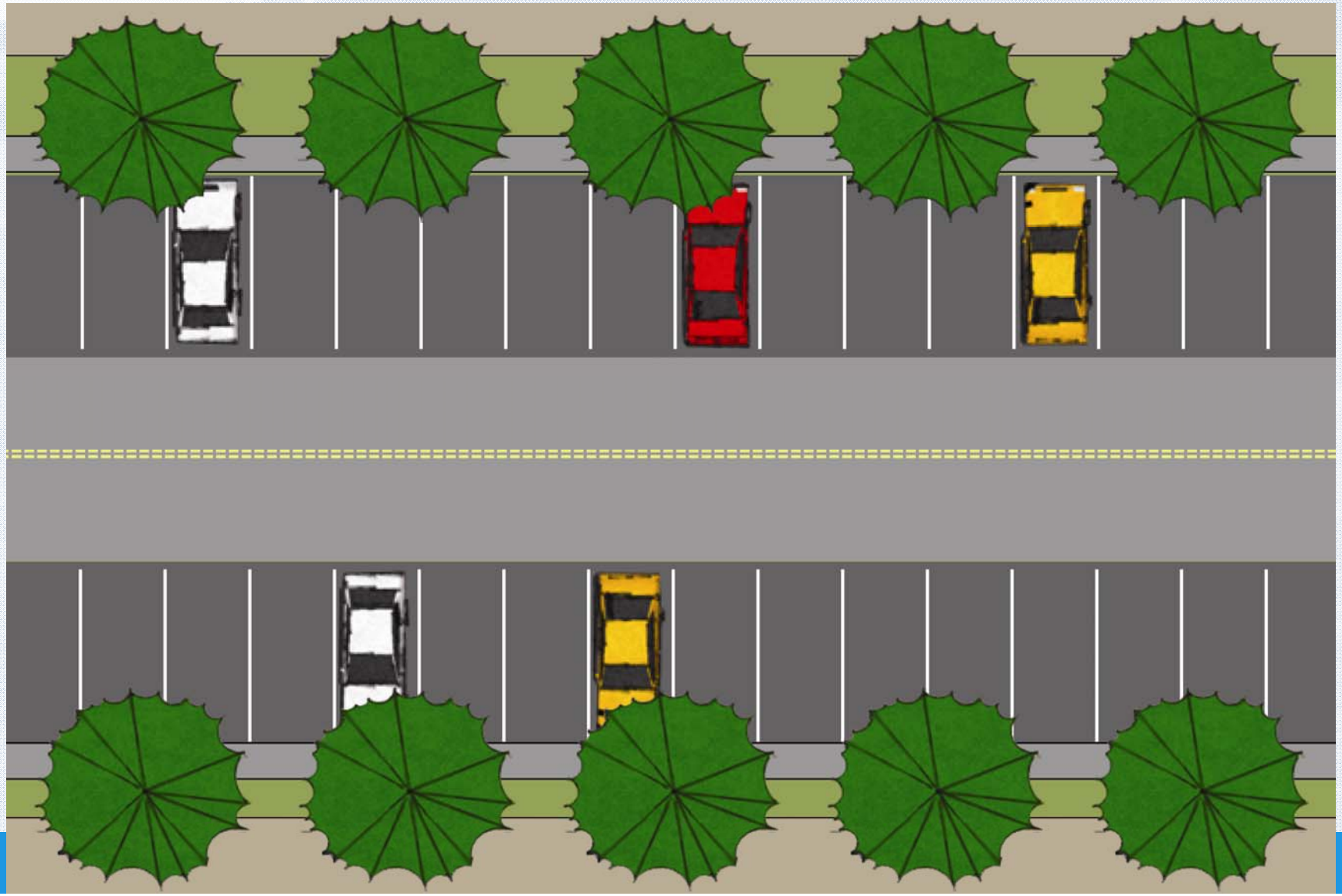
Mankas Corner ATC Prototype

- Parallel Parking



Mankas Corner ATC Prototype

- Perpendicular Parking – Would need further study on size

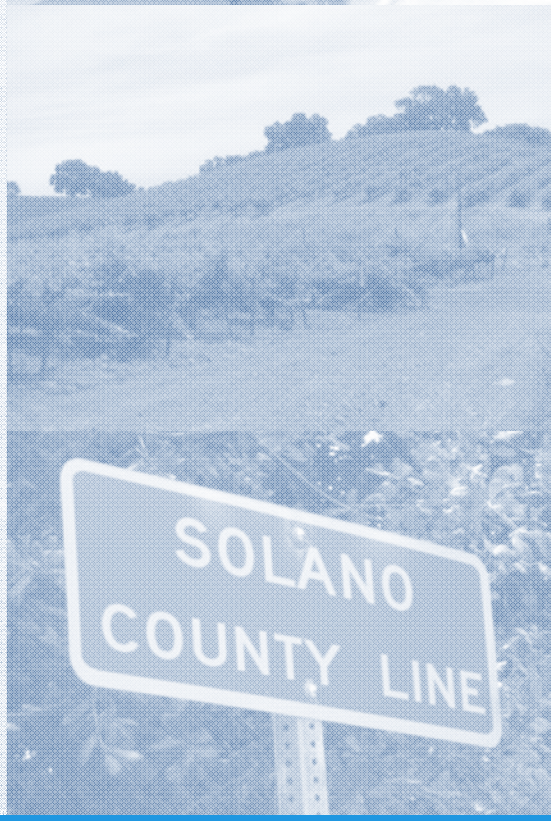


Phase 1

Timeframe: Within 0-10 years

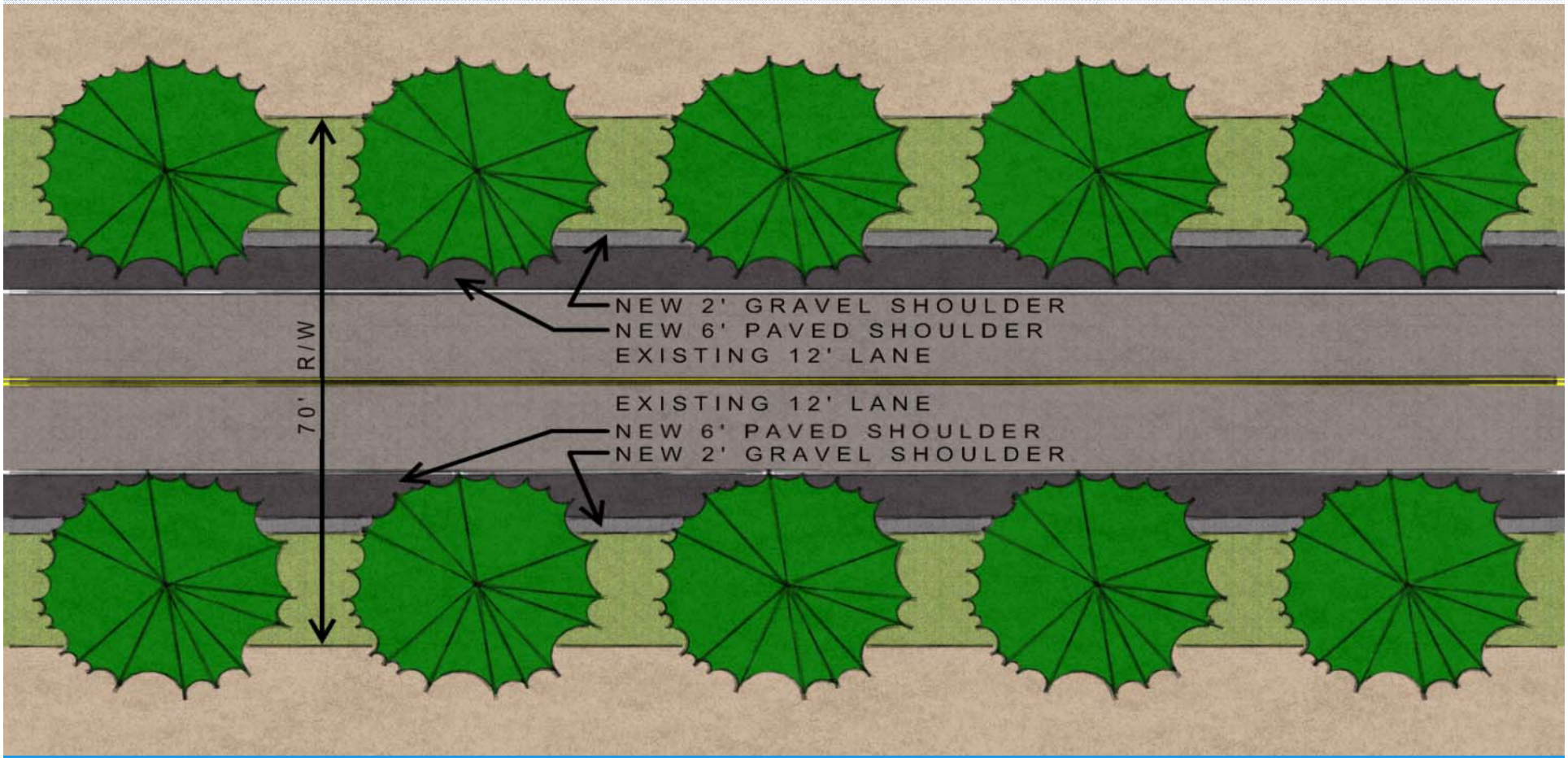
ATC Prototype Costs

- Gomer School
  - $1.5 million per mile, plus $425,000
  - Total: 0.1 mile, **$576,000**
- Morrison Lane
  - $1.8 million per mile, plus $484,000
  - Total: 0.1 mile, **$669,000**
- Mankas Corner
  - $1.1 million per mile, plus $597,000
  - Total: 0.2 mile, **$808,000**



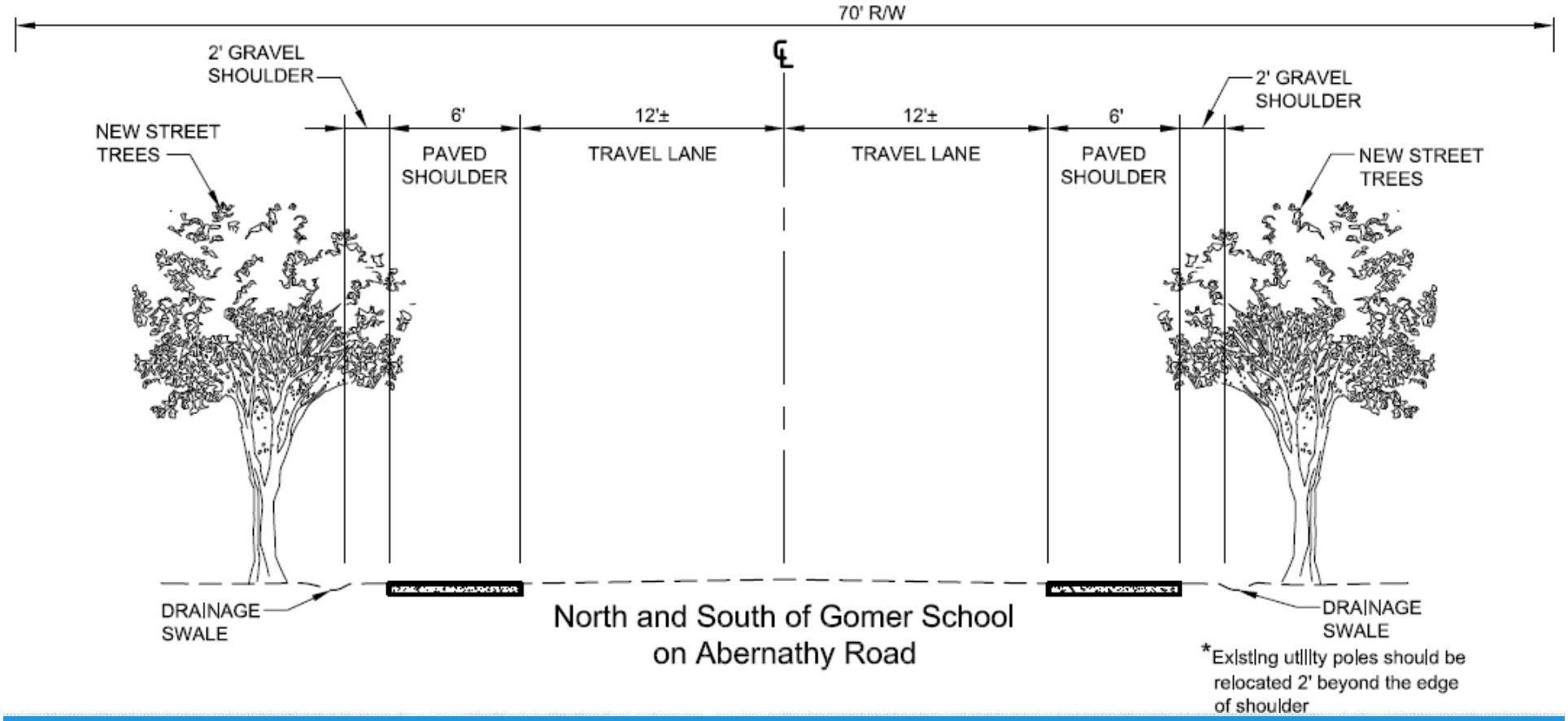
Phase 1

- Typical Approach Prototype
  - Street trees, wider travel lanes, shoulders, pavement markings, signage



Phase 1

- Gomer School Approach Prototype

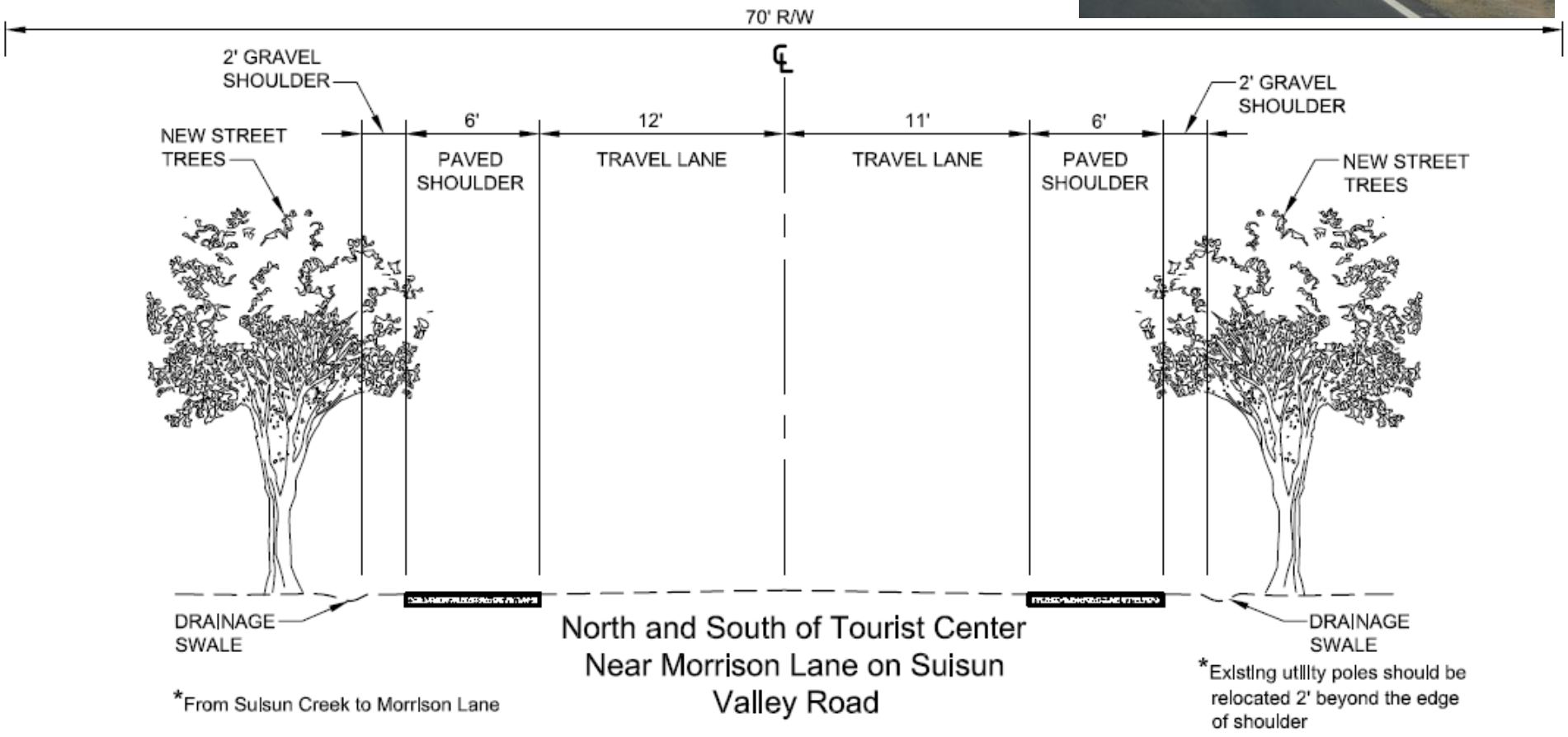


Roadway Prototypes

- Gomer School Approach Prototype

Phase 1

- Morrison Lane Approach Prototype

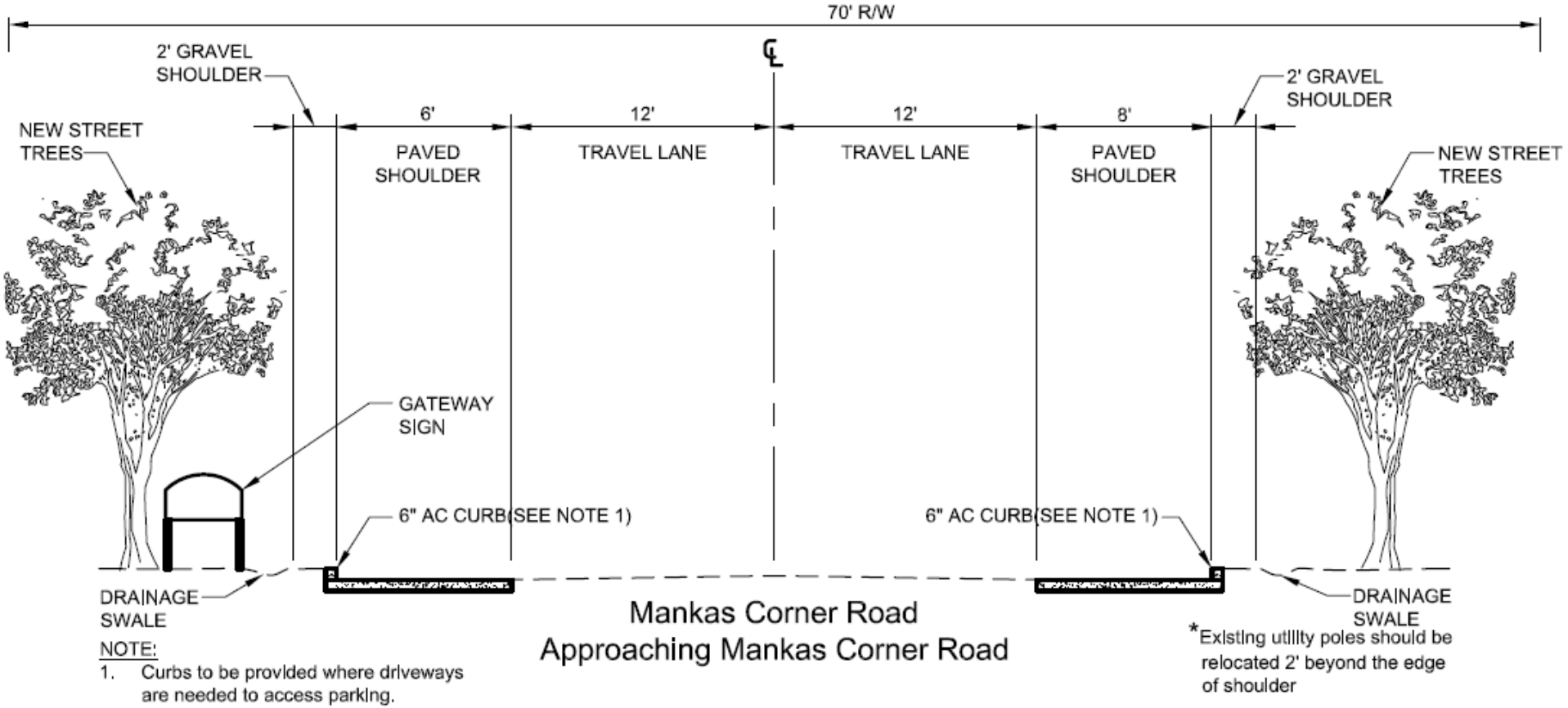


Roadway Prototypes

- Morrison Lane Approach Prototype

Phase 1

- Mankas Corner Approach Prototype



Roadway Prototypes

- Mankas Corner Approach Prototype

Phase 1

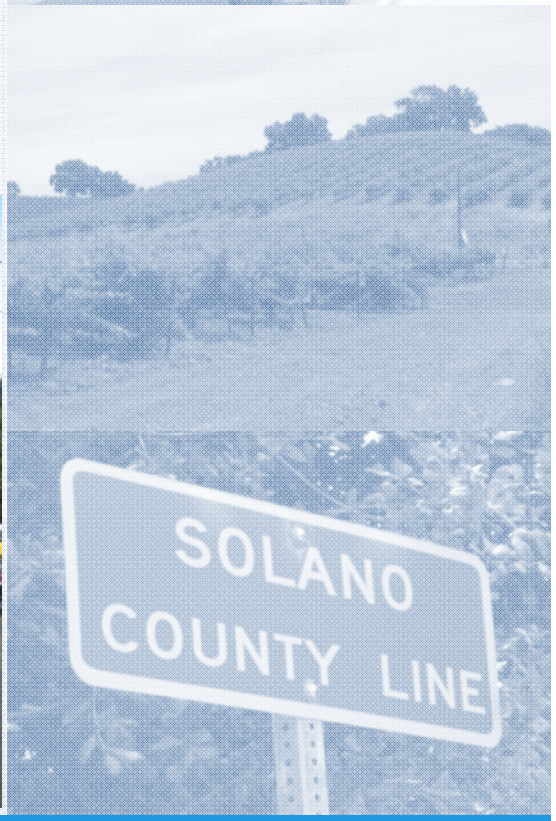
Timeframe: Within 5-10 years

Approach Prototype Costs

- Gomer School
  - $1.2 million per mile, plus $576,000 (earthwork, utilities, landscaping, drainage, contingency, acquisition)
  - Total: 0.4 mile, **$1.4 million**
- Morrison Lane
  - $838,000 per mile, plus $455,000
  - Total: 0.2 mile, **$623,000**
- Mankas Corner
  - $1.1 million per mile, plus $886,000
  - Total: 0.3 mile, **$1.2 million**

Phase 1

- Points to discuss
  - What triggers Phase 1 improvements
  - Priorities for Phase 1 improvements
  - Priorities for on-street parking
  - Methods to indicate entrances/exits



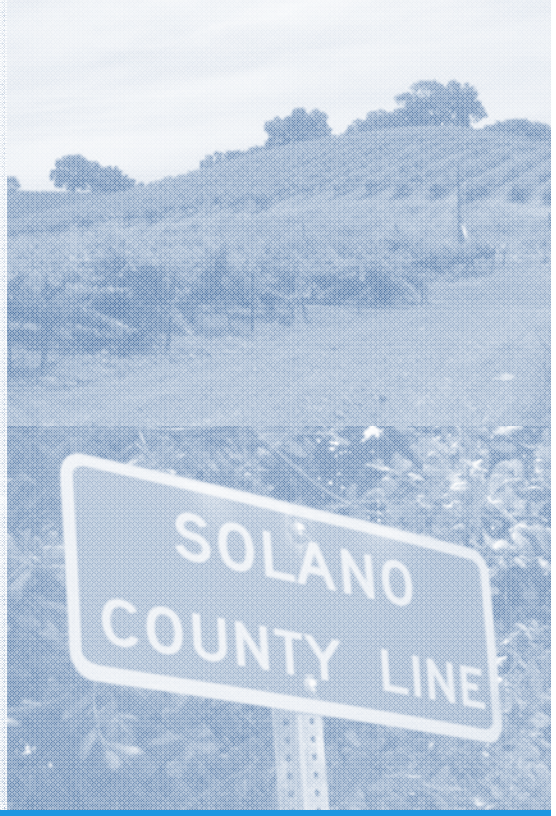
Circulation Plan

Phase 2

Improvements

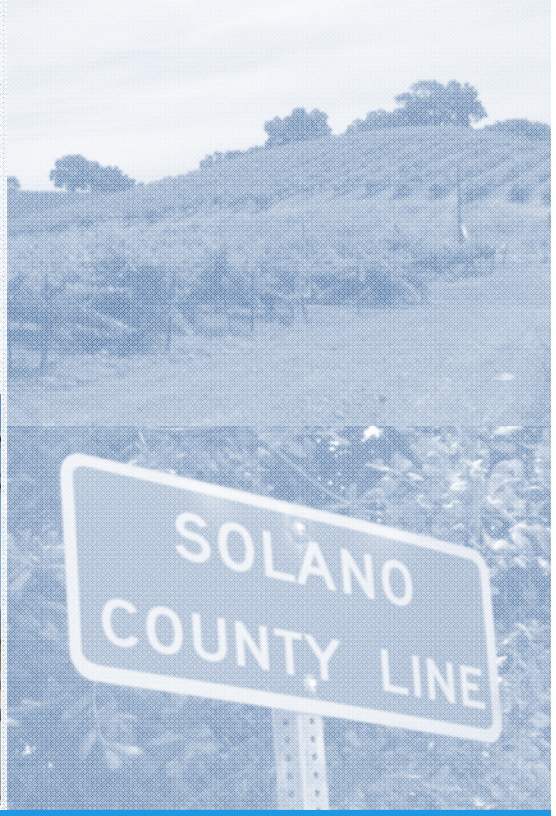
Phase 2

- Considerations:
  - No or minimal shoulders
  - Steep side slopes
  - Narrow travel lanes and bridges
  - Utilities within right-of-way
  - Bicycle safety



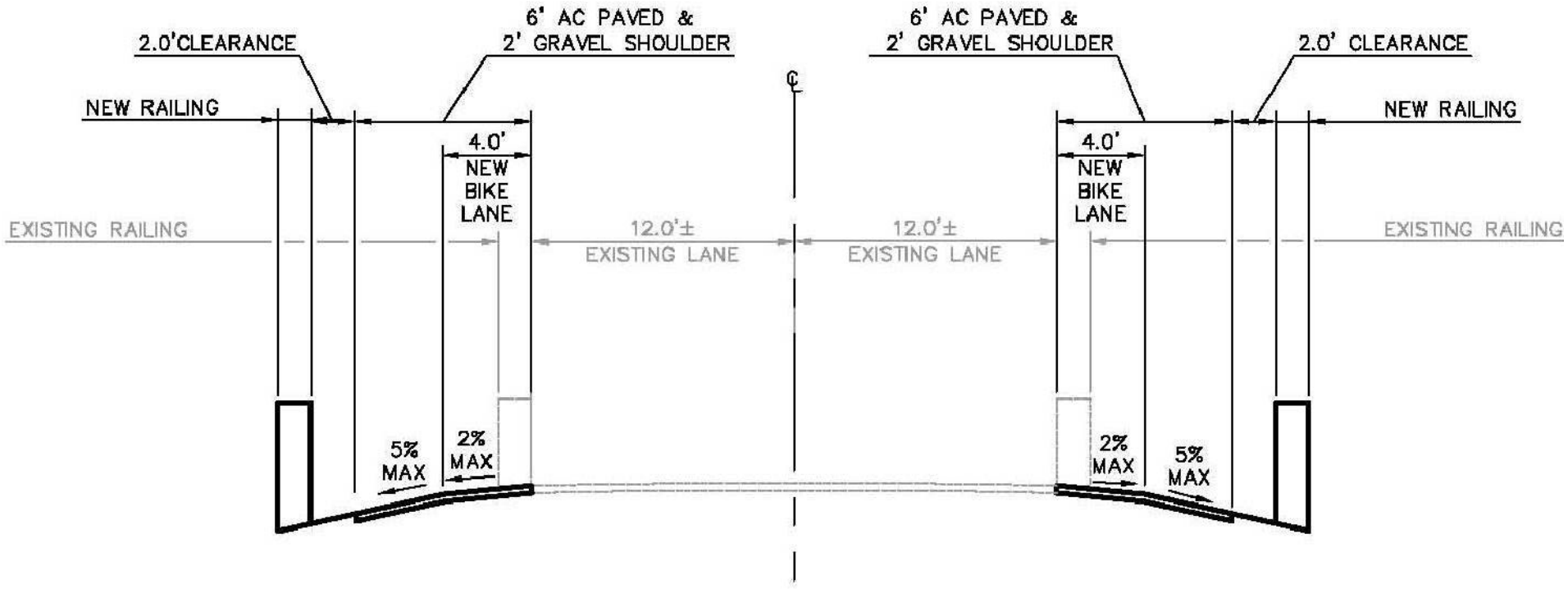
Phase 2

- Design side slopes appropriately
- Add retaining wall with guardrail where steep
- Relocate utility poles
- Widen bridges to accommodate bicyclists and vehicles safely
- Accommodate bicycles and pedestrians on roundabout

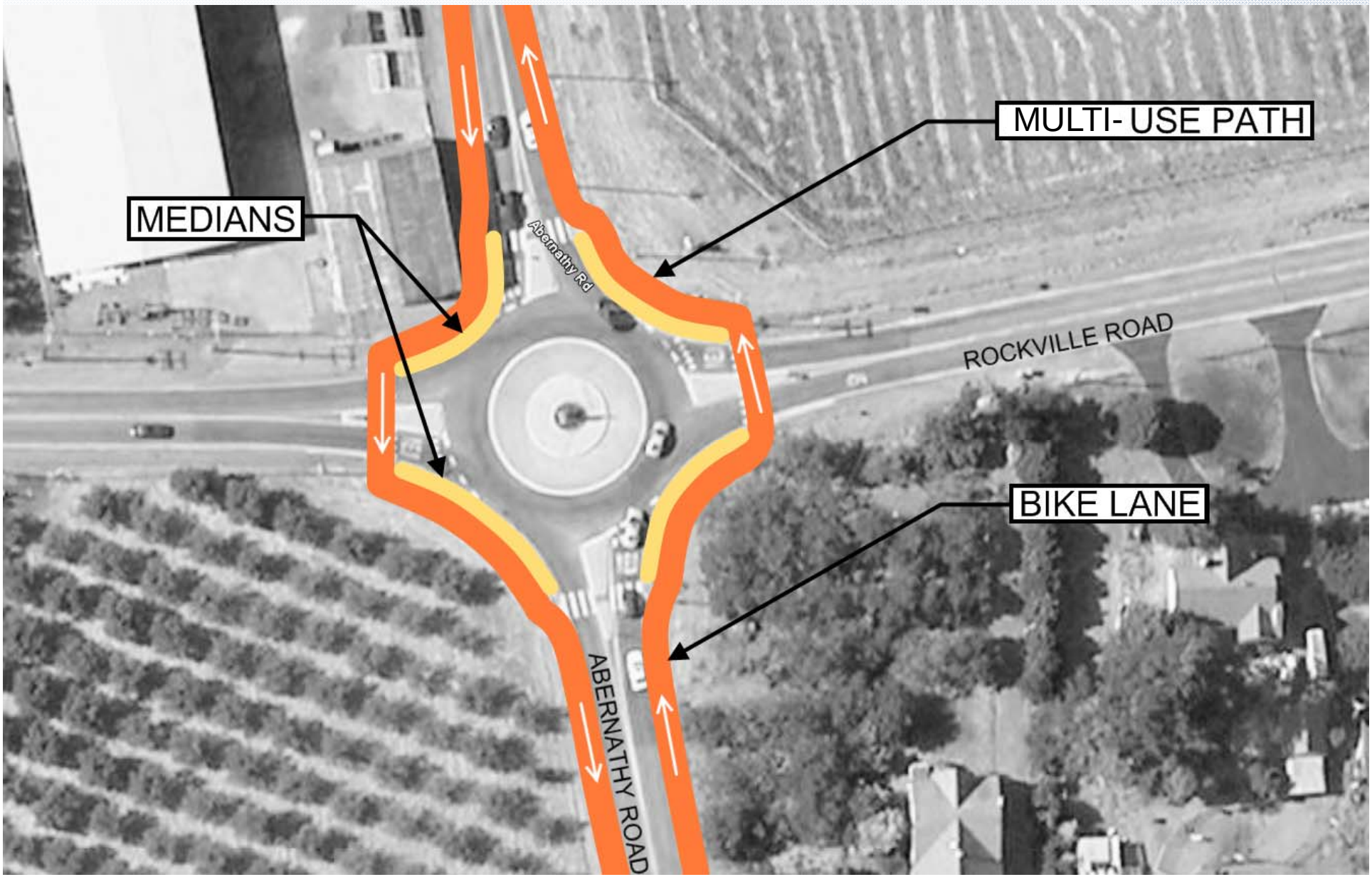


Phase 2

- Typical Section
  - New shoulders, bike lanes, widened lanes, corrected side slopes, railings



Phase 2 – Roundabout Improvements



Phase 2

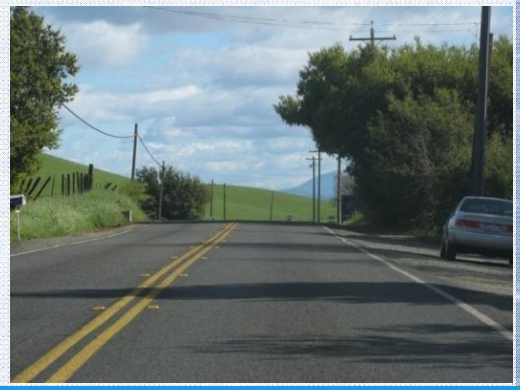
- Abernathy Road
  - 3.5 miles
- Mankas Corner Road
  - 1.9 miles
- Rockville Road
  - 3.1 miles
- Suisun Valley Road
  - 6.5 miles
- Timeframe: 10+ years
- Costs
  - Clearing, materials, retaining wall, signage, striping, bike lane expansion, roundabout modification
  - $4.6 million per mile plus $11 million (earthwork and drainage allowances, contingency, right-of-way acquisition)
  - **Total: $48 million**

Phase 3

Improvements

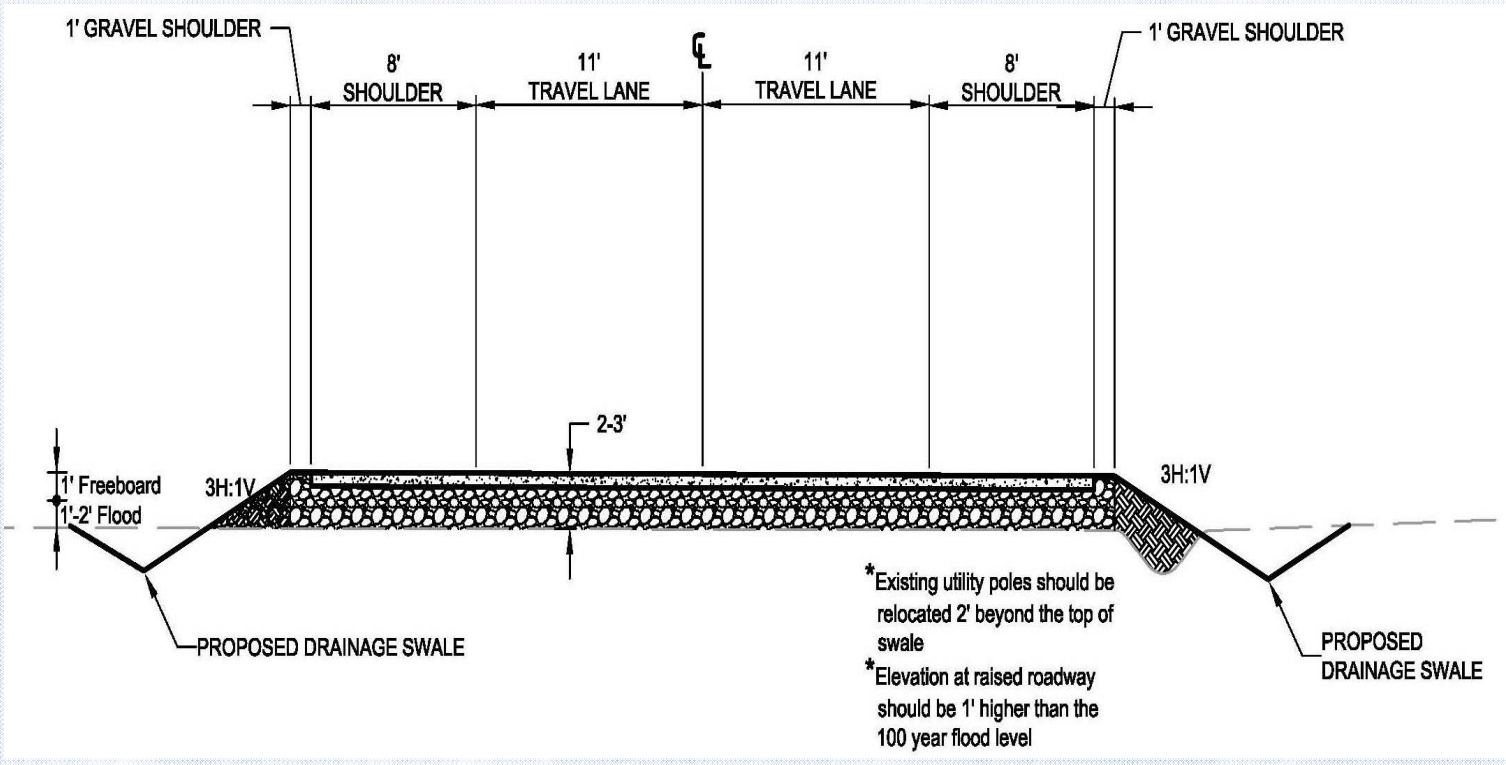
Phase 3

- Considerations:
  - Flooding on Abernathy and Rockville roads
  - Utility pole placement
  - Potentially high cost to prevent occasional flooding and could compound other flooding problems



Phase 3

- Raise road to 1-foot above 100-year flood level
- Modify storm drainage system
  - Culverts to allow conveyance of water from one side of the road to the other and under driveways
  - Add drainage swales along the roadway

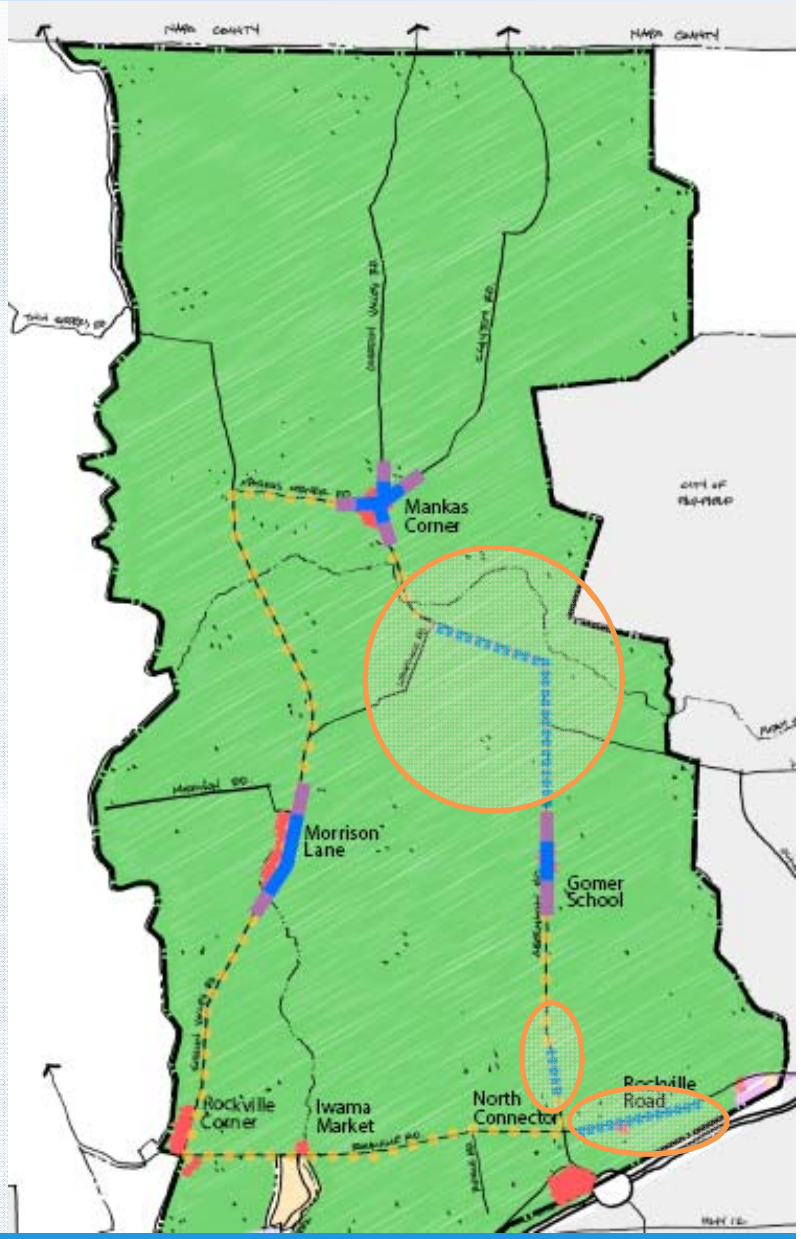


Phase 3

Timeframe: 20+ years/funding

Costs:

- Abernathy Road
  - $1.8 million per mile, plus $11 million (earthwork, utility, landscaping, drainage allowances, and contingency)
  - Total: 2.49 miles, **$15.5 million**
- Rockville Road
  - $2.0 million per mile, plus $3.3 million
  - Total: 0.67 mile, **$4.6 million**



Discussion:

Roadway Improvement Phasing