Mineral Avenue Corridor Assessment

ITE 2017 Western District Annual Meeting
San Diego, CA June 21st
Biography - Aaron Heumann, PE, PTOE

• Currently City of Littleton Transportation Engineering Manager
• 24 Years Combined Experience on the Public & Private Sides
• CO/WY Section Past President
• 2018 Joint Western District & Texas District Meeting Co-Chair
Presentation Outline

- Project Background
- Assessment Methodology
- Study Process
- Implementation Strategy
- Results
Background

- Mineral Avenue
- Study Area
- Neighborhoods
Study Area

Neighborhoods:
- Meadowbrook
- Polo Reserve-Polo Ridge Farms
- Polo Reserve-The Sanctuary
- Overlook at Platte Valley
- Pinnacle at Mountain Gate
- The Overlook Plateau
- Outlook (The Meadows at Platte Valley)
- Corridor Study Limits
- Mineral Ave Regional Trail
- City Limits
Methodology

- City Pilot Project
- Resident Engagement
- Community Meetings
- Cooperative/Iterative Process
Process

- Community Involvement
- Information Gathering
- Issues Assessment
- Preliminary Solutions
- Implementation Strategy
- Recommendations to City Council
- Implementation
Community Involvement

- Project Webpage on City Website
- Neighborhood Meetings
- Development of Mission, Goals & Users
- Identification of Issues & Concerns
- Feedback on Data, Assessment, Solutions & Implementation Strategy
Info & Data

- Past Studies
- Physical Environment & Surrounding Land Uses
- Vehicular Volumes
- Pedestrian/Bicycle Activity
- Vehicle Speeds
- Vehicle Intersection Delays
- Corridor Accident History
- Police Enforcement History
- Transit & School Buses
Assessment

Key Resident Perceived Issues Identified:

• Traffic Growth for Commuting & Commercial Land Use
• Increased Number & Severity of Accidents
• Speed Traffic Creating Unsafe Conditions
• Delay Accessing Adjacent Neighborhoods

➢ Review with residents to verify issues being addressed
Preliminary Solutions

- Roadway Changes
- Intersection Modifications
- Side Street Improvements
- Access Revisions
- Traffic Control Considerations

➢ Review with residents to identify solutions to move forward with
Implementation Strategy

- Concept Design
- Phasing Plan
- Cost Estimates

➢ Review with residents to develop an agreed upon strategy
Designs

• Mineral Avenue Modifications
• Platte Canyon Road Movements
• Side Street Improvements
Mineral Avenue Modifications

- **Recommended**
  - Right Turn Acceleration/Deceleration Lane
  - Lane Width Narrowing
  - Center Median Widening
  - Speed Limit Change
  - Specific U-turn Locations
  - Deter Vehicle Queues from Blocking Intersections

- **Not Recommended**
  - Median Nose Reduction
  - Constructability Issues
  - Cost Prohibitive
Platte Canyon Road Movements

• Recommended
  • Mineral Avenue Intersection
    • Dual NB & SB Left Turn Lanes
    • Traffic Signal Modifications
    • Channelized NB Right Turn Lane
  • Mineral Drive Intersection
    • Full Movement Access

• Not Recommended
  • Meadowbrook Access to Platte Canyon Road
  • Not Supported by Residents
  • Cost Prohibitive
Mineral Ave
Dual Left Turn Lanes
Mineral Ave
Dual Left Turn Lanes
Signal Modifications

Platte Canyon Rd

Channelization Island

Channelization Islands

Mineral Dr

Full Movement
Side Street Improvements

• Provisional Revisions
  – Crosswalk Striping
  – Trail Signage
  – Addition of Blank Out Signs on Polo Ridge Drive Pedestrian Signal

• Ultimate Alterations
  – Curb Extensions
  – Raised Crosswalk
  – Additional Landscaping
Phasing Plan

• Phase 1
  • Side Street Provisional Improvements – Crosswalks, Trail Signage & Blank Out Signs
  • Mineral Avenue Lane Reassignments

• Phase 2
  • Platte Canyon Road/Mineral Avenue Intersection

• Phase 3
  • Platte Canyon Road/Mineral Drive Intersection
  • Side Street Ultimate Improvements – Raised Crosswalks, Curb Extensions & Landscaping
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**Cost Estimating**
## Cost Estimating

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• Trail Signage  
• Blank Out Signs on Polo Ridge Drive Pedestrian Signal | $11,000 |
| 1B    | Mineral Avenue Lane Reassignment            | • Right Turn Acceleration/Deceleration Lane  
• Lane Width Narrowing  
• Center Median Widening  
• Speed Limit Change  
• Specific U-turn Locations  
• Deter Vehicle Queues from Blocking Intersections | $35,000 |
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| 3A    | Platte Canyon Road/Mineral Drive Intersection | • Full Movement Access | $107,000 |
| 3B    | Side Street Ultimate Improvements | • Curb Extensions  
• Raised Crosswalk  
• Additional Landscaping | $246,000 |
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|       |                                              | **Total** | **$491,000** |
Funding

- Public Works Operating Budget
- Open Space Funds
- Capital Improvement Project Program
- State & Federal Grant Programs
Project Status To Date

- Community Engaged & Pleased with Process
- City Council Approved
- Phase 1 Implementation Complete
- After Data Collected
- Phase 2 & 3 Still to Come
Resident Perceptions

• Improved Operations Due to U-turn Relocation
• Reduced Speeds Due to Lane Narrowing, RT Accel/Decel & Lower Speed Limit
• Decrease Delays Due to Two-stage Left Turn Option
• Corridor Less Intimidating to Access
After Data Indications

- Volume Increase by <5%
- Slight Growth in Traffic at Intersections
- Decrease in Corridor Traffic Speeds by ~5 mph
- Comparable Delays
- Fewer Reported Accidents & Lower Incident of Injury Accidents
Project Takeaways

• Corridor Functioning Safer for Bicyclists & Peds
• Corridor More Accessible for Side Streets
• Minimal Impact to Vehicle Operations

➢ Demonstrated Benefits of Resident Involvement & Good Communication
➢ Safety Improvements with Minimal Impacts to Operations & Congestion
➢ City Applying Process to Other Projects
Comments or Questions