County Road 98 Motor Vehicle and Bicycle Safety Project – *Phase 2*

Public Meeting #3

September 5, 2018;

6:00 PM to 7:30 PM

County Road 98

Functional Classification:

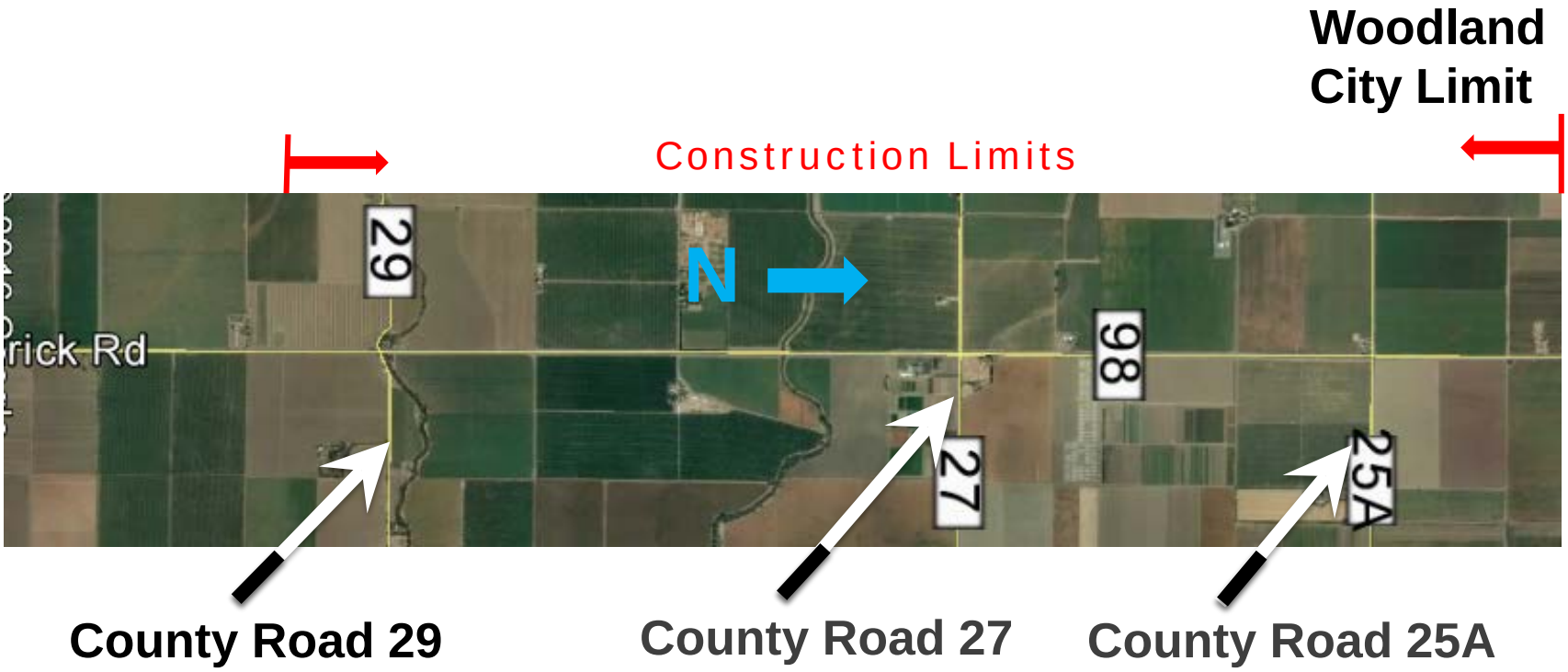
- Federal Aid Clasification
  - Minor Rural Arterial
- Yolo County General Plan and Master Plan Designations
  - Major Two-Lane County Road
- Yolo County Bikeway Master Plan
  - Class 2 Bike Lane

County Road 98
Motor Vehicle and Bicycle Safety Project – *Phase 1*
(Completed January 2014)

1. **Widen roadway/improve shoulders to provide:**
    - Safer access for wide and slow farm vehicles
    - Improved visibility for vehicles entering County Road 98
    - Provide vehicle clear recovery zones
    - Areas for safer bicycle travel

2. **Modify intersections to improve operations**

Phase 1 Project Corridor
Construction Limits



Phase 1 Project Results

Three years "prior" to the Phase 1 project, there were 17 non-intersection accidents along the corridor.

Three years "after" the Phase 1 project, the non-intersection accidents dropped to 5 - a 70% reduction.

Non-intersection **injuries** dropped from 16 to 1 - a 94% reduction.

Intersection accidents continued to increase, which is why the Phase 2 project has special emphasis on intersection improvements.

County Road 98

Motor Vehicle and Bicycle Safety Project

Phase 2 Project:

- The overall project continues the phase 1 improvements
- Our current focus is on identifying and developing Intersection Improvements at these Major Corridor Intersections:

County Road 98

Motor Vehicle and Bicycle Safety Project

This portion of the ***Phase 2 Project*** **effort** centers on the **intersections and coordinating intersection improvements** with existing and planned corridor bicycle and pedestrian improvements.

The Main Objective of the our effort, as a part of this of the Phase 2 project, is to **identify** and **develop** intersection **"safety" and "capacity" Improvements**.

County Road 98

Motor Vehicle and Bicycle Safety Project

The **Alternatives** we are considering for each intersection include:

1. Traffic Signalization
2. Roundabouts

Improvement Options

Traffic Signals

Pros:

- May improve vehicular safety
- Enhances pedestrian and bicycle safety
- Minimizes construction traffic control

Cons:

- Can cause excessive delay
- May increase accident frequency
- Can cause traffic route diversion

Improvement Options

Roundabouts

Pros:

- Improve intersection vehicular safety
- Enhance pedestrian and bicycle safety
- Can/will reduce operating speeds
- Minimizes traffic delays
- Environmentally friendly (GHG emissions)

Cons:

- Complex design process
- Complex construction and traffic handling
- May require more right of way

Geometric Considerations

The following design elements are being considered:

- Capacity and Operations
- Bikes and Pedestrian Facilities
- Way Finding
- Fast Paths Analysis
- Large Truck and Farm Equipment Needs
- Right of Way Requirements

Bicycle Accommodation

Objectives:

- **Minimize exposure** to conflicts
- **Reduce speeds** at conflict points
- **Communicate** presence of cyclists and routing

Minimize Exposure to Conflicts

Bicycle Design Objectives:

- Minimize transition and mixing zones
- Simplify turning movements
- Continuity in routing of various experience levels
- Conform to existing with provisions for future planned facilities

Continuity in Bicycle Routing

- Acknowledgement of **various cyclist skill levels.**
- **Connection to existing** pedestrian and bike facilities
- Provisions for **connection to planned** facilities

Communicate Presence of Cyclists Using Signing and Striping

- Use of **sharrows** where bikes will occupy the lane

- Use **guide and regulatory signing** to strengthen vehicle lane discipline

Accommodate Large Vehicles

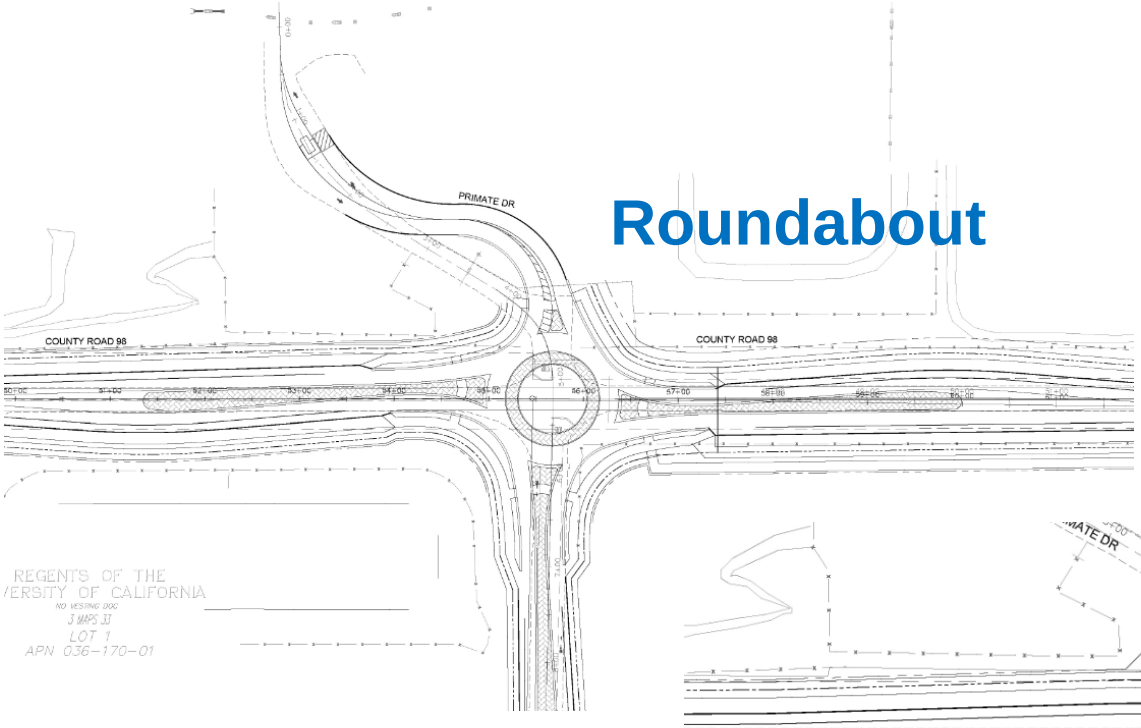
- Accommodate all **Legal** Vehicles.
- Accommodate **Farm Equipment**

Accommodate Large Farm Equipment

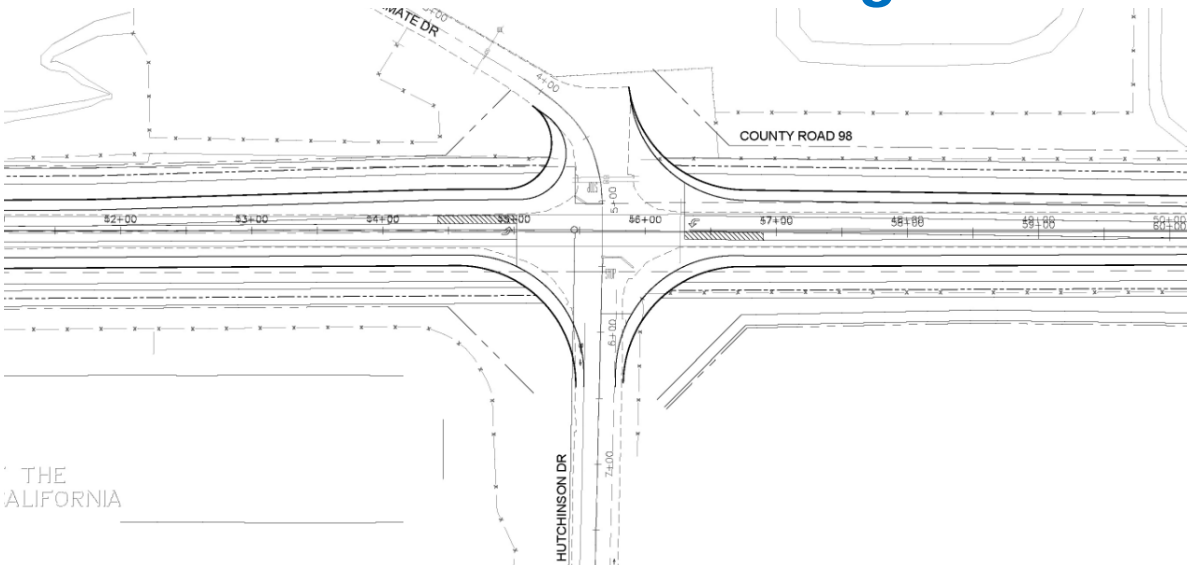
Accommodate All Legal Vehicles

Improvement Concepts – CR 98 and Hutchinson

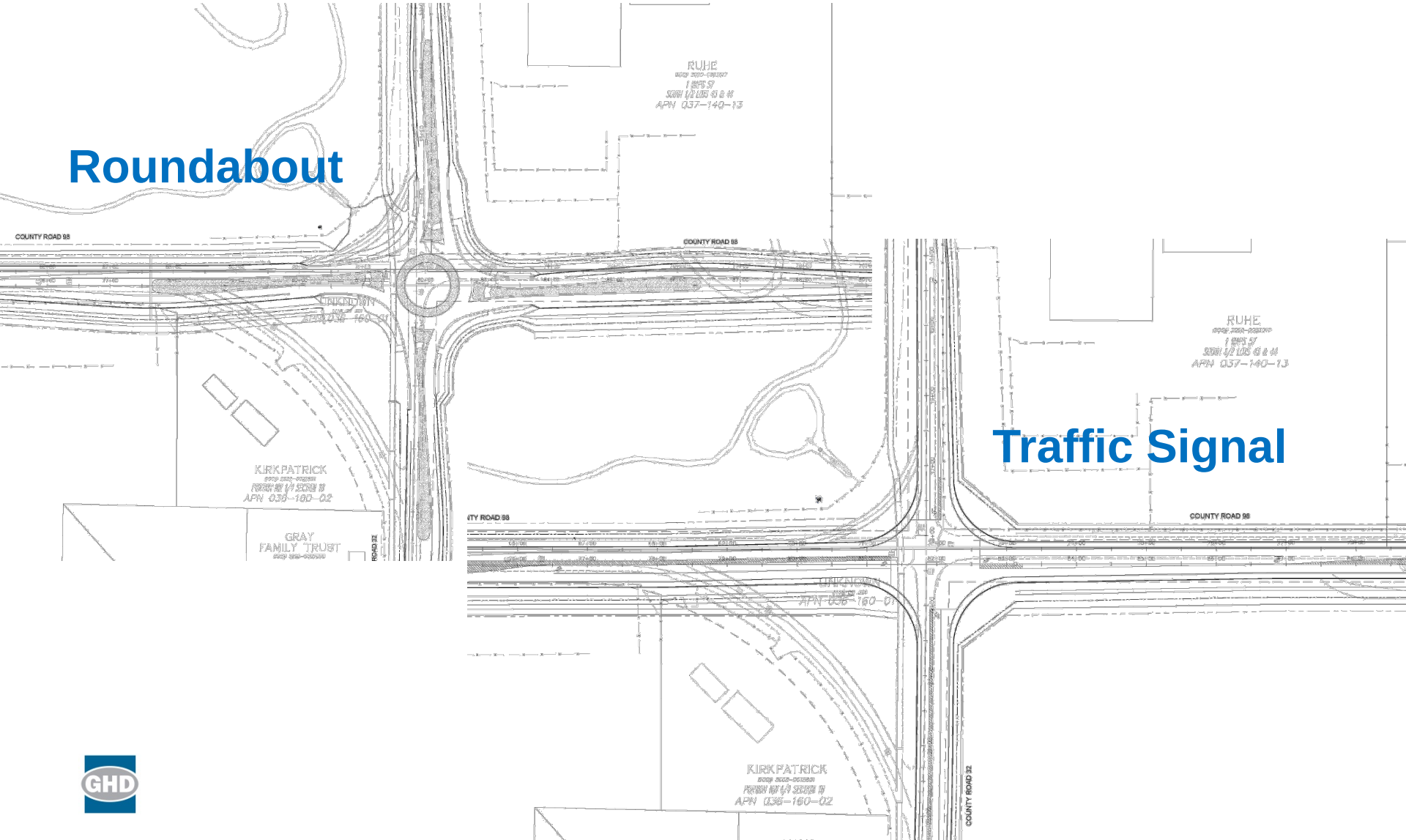
Roundabout



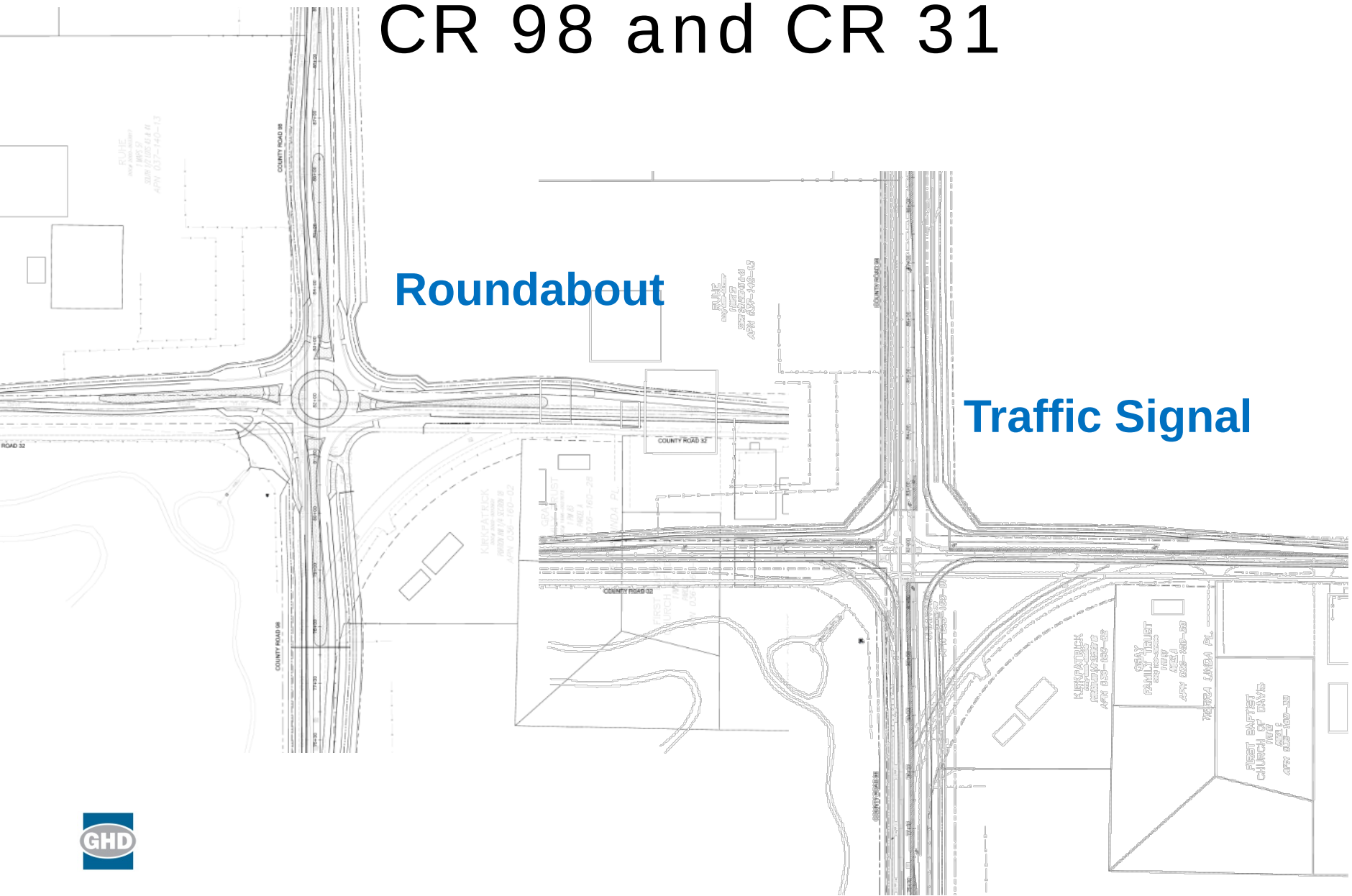
Traffic Signal



Improvement Concepts – CR 98 and CR 32



Improvement Concepts – CR 98 and CR 31



Traffic Signals v. Roundabouts Evaluation Process

Intersection Control Evaluation (ICE)

Sample ICE Metrics

- Operations
- Safety
- Neighborhood Impacts
- Phased Approach
- Environmental Impacts
- Water Quality Benefits
- Benefit/Cost
- Others

Lifecycle Benefit/Cost Analysis

Example Analysis

Life Cycle Costs (Interim design)	Roundabouts	Signals
Benefits - due to reduced Collision and Mobility Costs (Roundabout VS Signals)		
Collision Costs of predicted crashes		
Delay Costs		
Fuel and GHG Costs		
Total Benefit (due to reduced costs)		
Project Costs including design, construction and maintenance (Roundabouts VS Signal)		
Operations and Maintenance Costs		
Project Costs (including soft costs)		
Total Costs		
Total Life Cycle Costs (Opening Year $) - Net Present Value		
Life Cycle Benefit/Cost Ratio		
Benefit (Total Benefit Signal - Roundabout)		
Costs (Total Costs Roundabout - Signal)		
B/C Ratio (Roundabout to Signal)		

Open House

Please Proceed to the Individual Intersection Exhibit Stations:

1. Please note on the Exhibits, or on the Comment Cards any specific issues you would like this project to address.

2. We will be available to discuss any issues you wish to have addressed.

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