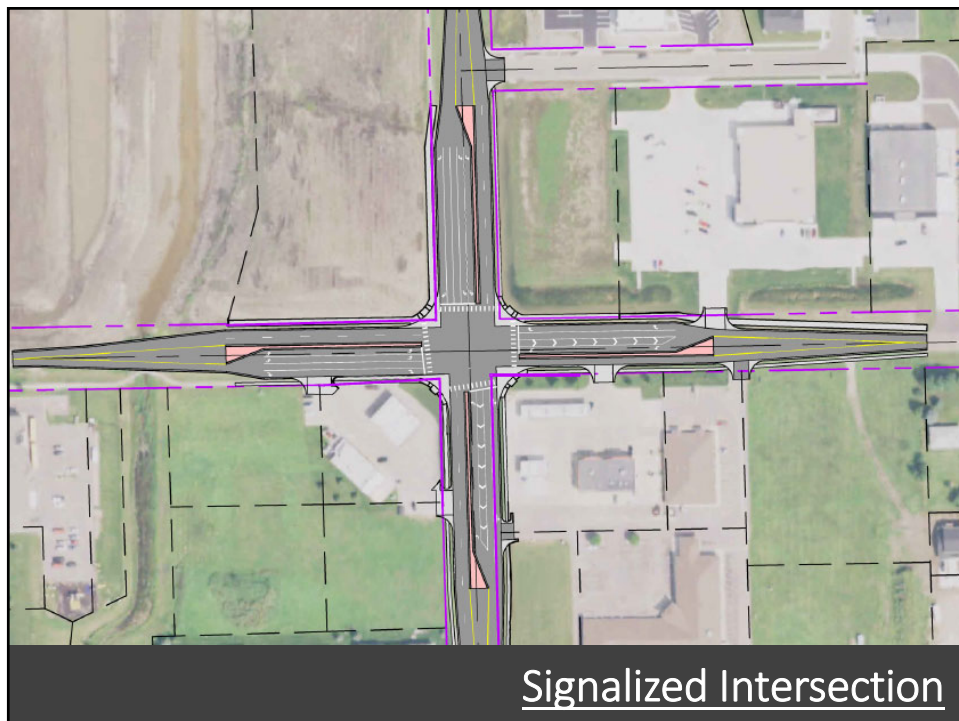
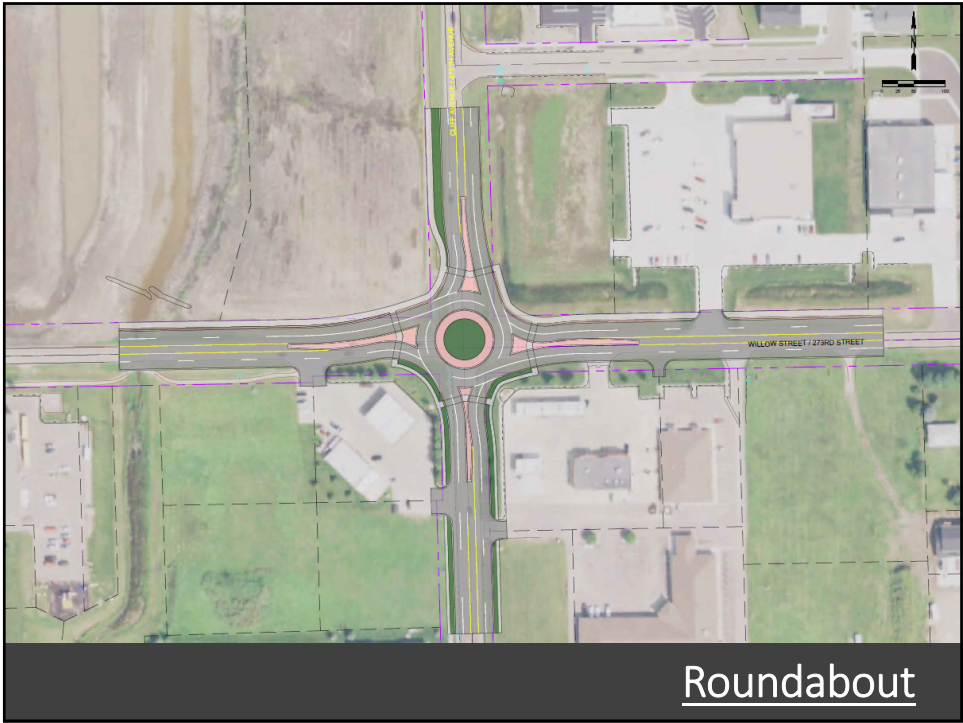




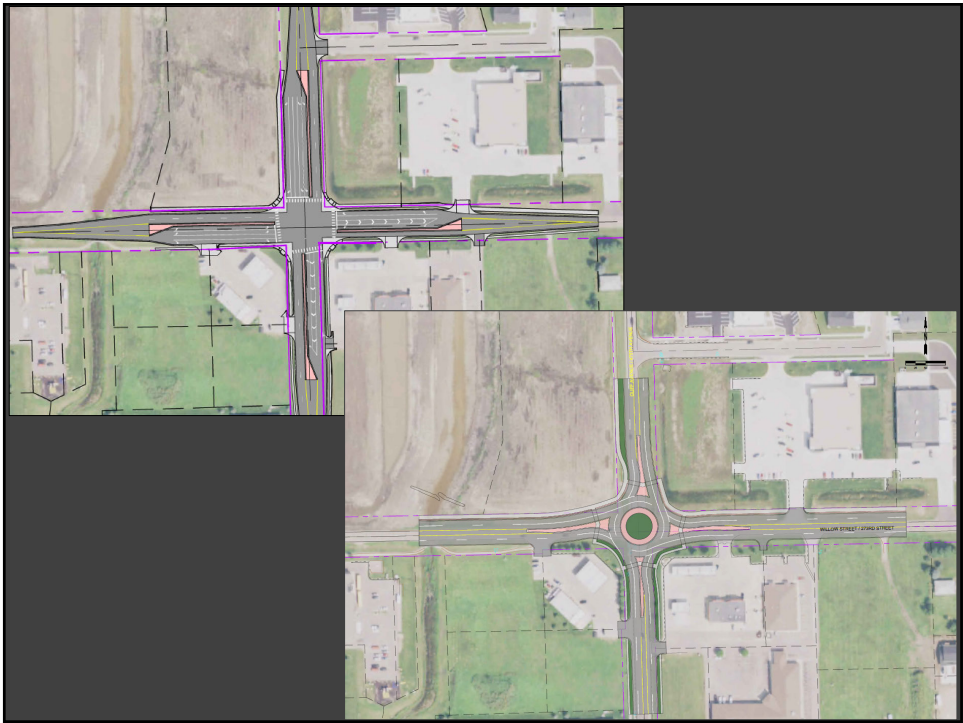
1



2



3

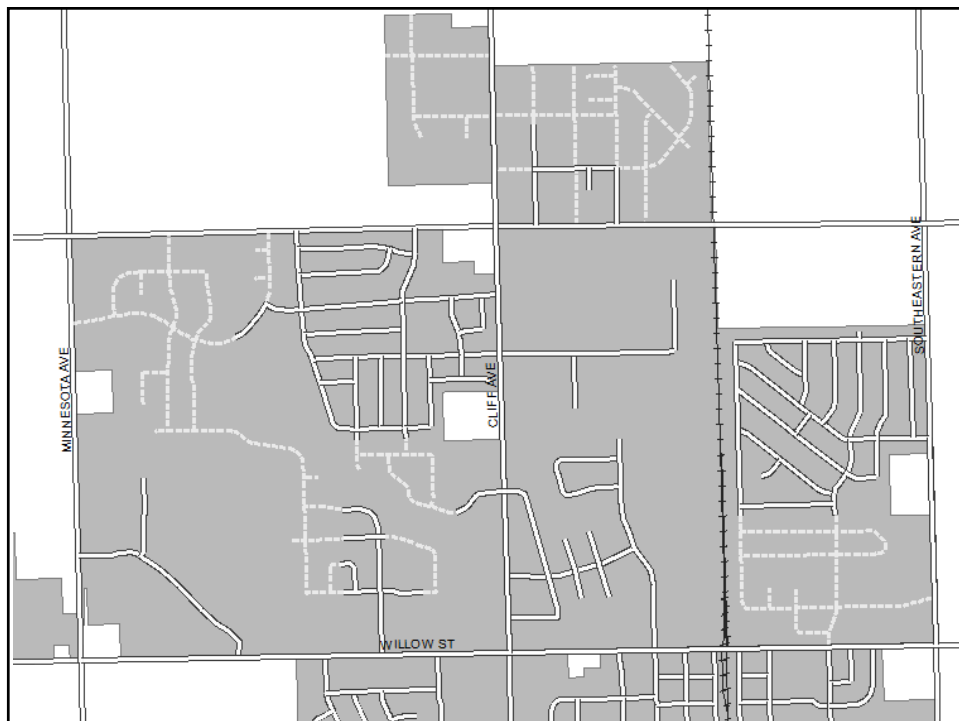


4

Alternatives Analysis

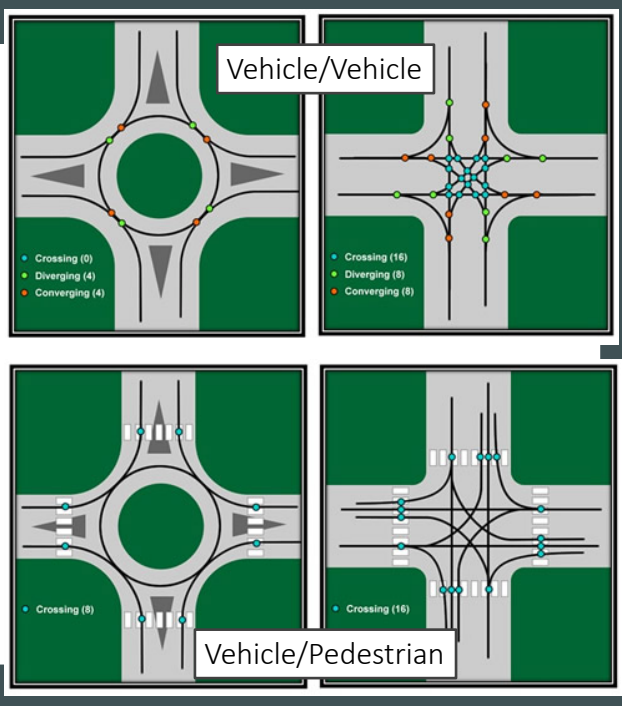
- Traffic Analysis
- ☐ Landowner Impacts
- ☐ Pedestrian Safety
- ☐ Constructability
- ☐ Cost Analysis

5



6

Conflict Points Comparison



7

Alternatives Analysis

| Traffic Analysis | Signalized Intersection | Roundabout |
|---|-------------------------|----------------------|
| Intersection Type Applicable to Location | Yes | Yes |
| Traffic Pattern Applicable | Yes | Yes |
| Impacts to Adjacent Intersections | Minimal | Minimal |
| Integrates with Surrounding Future Traffic Improvements | Yes | Yes |
| Traffic Capacity | 15,000 Veh/day | 15,000 Veh/day |
| Traffic Capacity Life Span | 20 to 25 Years | 20 to 25 Years |
| Traffic Conflict Points | More than 150 | 16 |
| Angle Crash Points | More than 100 | 0 |
| School Proximity Applicable | Yes | Yes |
| Truck Navigable | Yes | Yes |
| U-Turn Available for Vehicles | Some | Yes |
| Average Delays in Peak Times (Opening Day) | 10 Seconds | 10 Seconds |
| Average Delays in Peak Times (2040) | 35 Seconds | 25 Seconds |
| Delays in Off Peak Times (2040) | Up to 35 Seconds | Less than 10 Seconds |
| Landscaping/Aesthetic Opportunities | No | Yes |
| Inline with Harrisburg's 'Low Impact' Goals | No | Yes |

* Data is based on 30% design and is subject to adjustment in the design process.

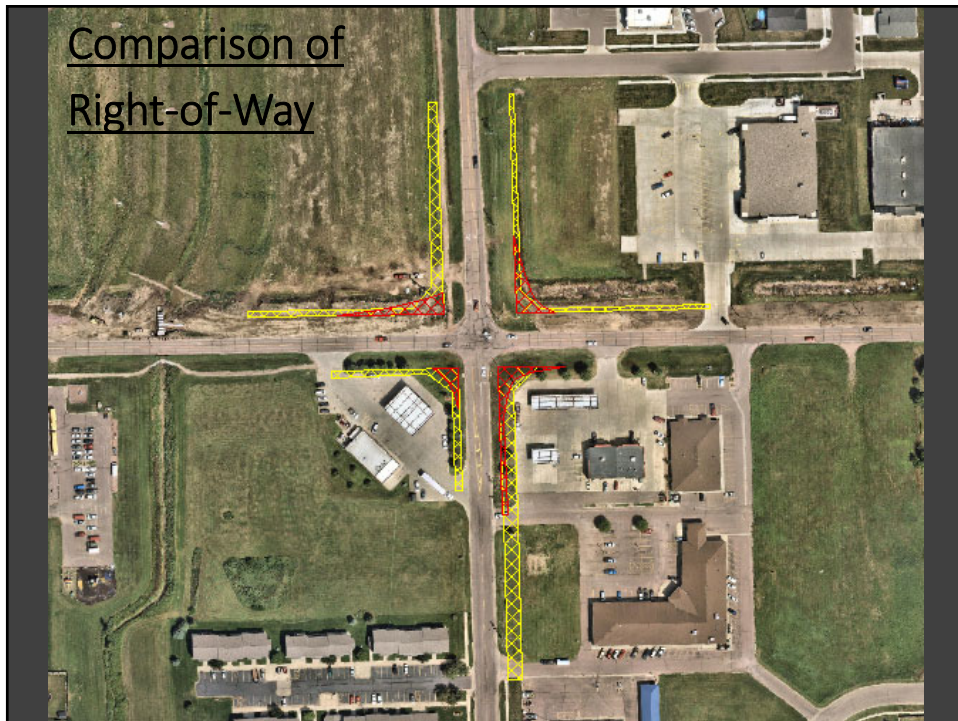
8

Alternatives Analysis

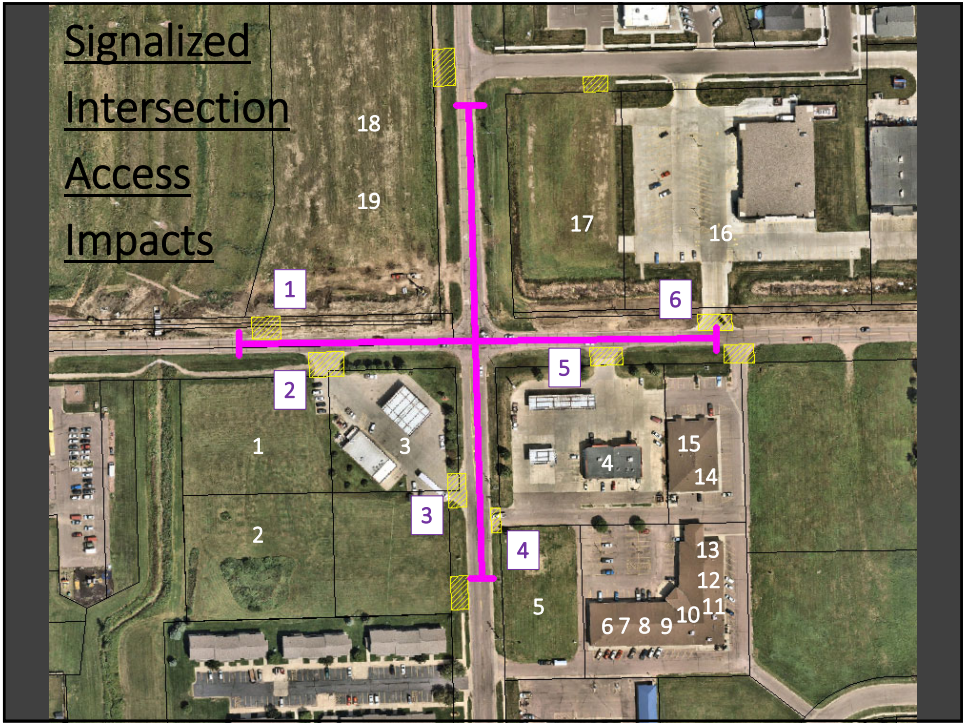
- ☐ Traffic Analysis
- Landowner Impacts
- ☐ Pedestrian Safety
- ☐ Constructability
- ☐ Cost Analysis

9

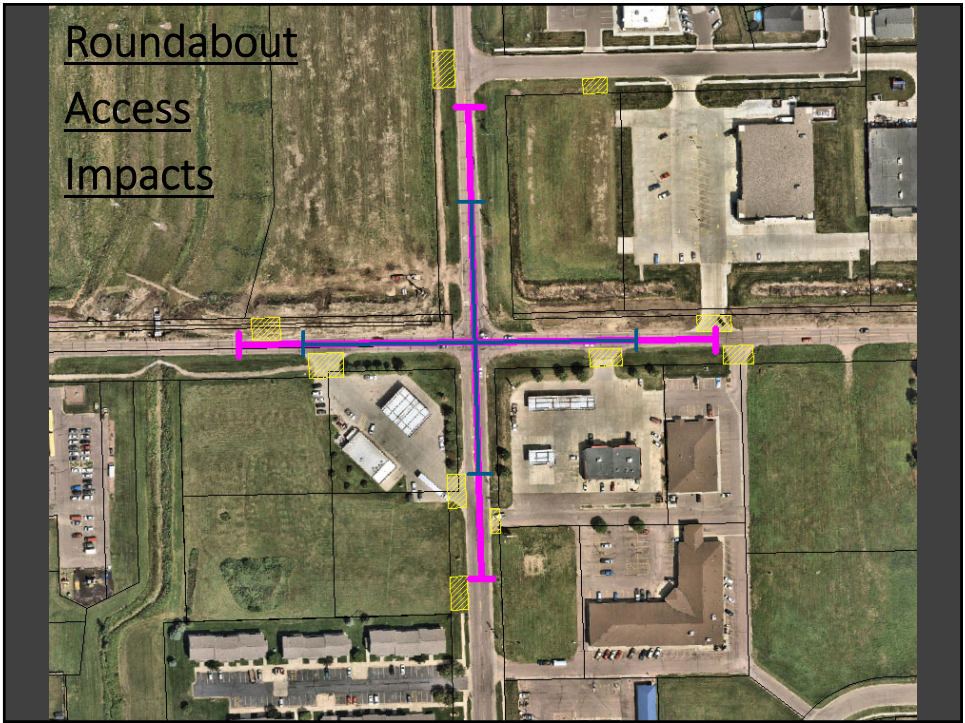
Comparison of Right-of-Way



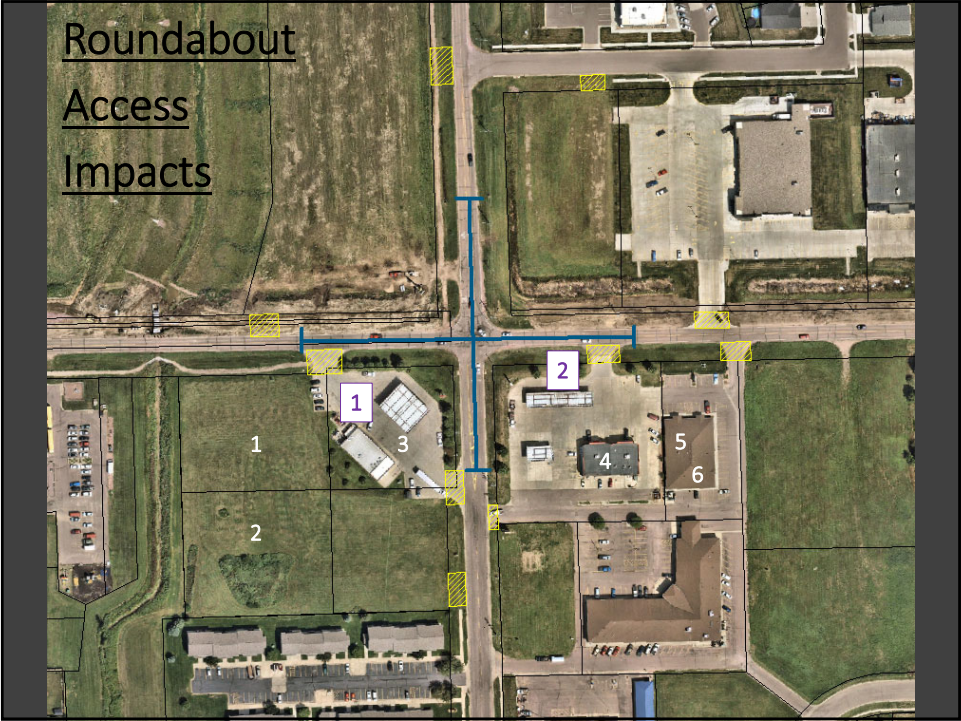
10



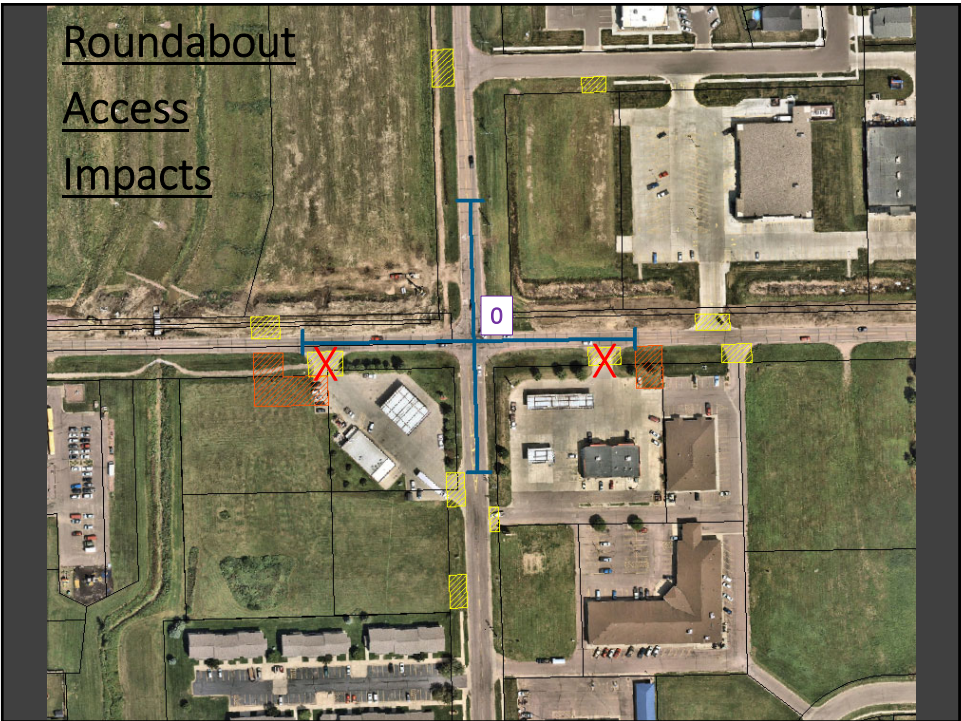
11



12



13



14

Alternatives Analysis

| Landowner Impacts | Signalized Intersection | Roundabout |
|---|-------------------------|-------------|
| Average Median Lengths Required | 400 Ft | 160 Ft |
| Accesses Limited to Right In/Right Out | 6 | 2/0 |
| Number of Businesses Adversely Impacted by Access | 19 | 3/0 |
| Right of Way Needs | 30,200 Sq Ft | 6,800 Sq Ft |

* Data is based on 30% design and is subject to adjustment in the design process.

15

Alternatives Analysis

- ☐ Traffic Analysis
- ☐ Landowner Impacts
- Pedestrian Safety
- ☐ Constructability
- ☐ Cost Analysis

16

Alternatives Analysis

| Pedestrian & Bicycle Safety | Signalized Intersection | Roundabout |
|--|-------------------------|------------------|
| Average Crossing Total Leg Length | 97 Ft | 44 Ft |
| Lanes per Crossing | 6 | 4 |
| Refuge Island Provided | No | Yes |
| Total Pedestrian/Vehicle Conflict Points | 36 | 16 |
| Vehicle Speed in Intersection | 25 mph (or more) | Less than 20 mph |
| Bicycle Navigable | Yes | Yes |
| Disabled Pedestrian Navigable | Yes | Yes |

* Data is based on 30% design and is subject to adjustment in the design process.

17

Alternatives Analysis

- ☐ Traffic Analysis
- ☐ Landowner Impacts
- ☐ Pedestrian Safety
- Constructability
- ☐ Cost Analysis

18

Alternatives Analysis

| Constructability | Signalized Intersection | Roundabout |
|---|-------------------------|---------------|
| Construction Timeframe | 3 to 6 months | 2 to 3 months |
| Construction Requires Full Intersection Shut Down | No | No |
| Avoid Construction During School Year | No | Potentially |
| Potential Construction Year | 2021 to 2023 | 2021 |

* Data is based on 30% design and is subject to adjustment in the design process.

19

Alternatives Analysis

- ☐ Traffic Analysis
- ☐ Landowner Impacts
- ☐ Pedestrian Safety
- ☐ Constructability
- Cost Analysis

20

Alternatives Analysis

| Cost Analysis | Signalized Intersection | Roundabout |
|--|-------------------------|---------------|
| Construction Cost (2021 dollars) | \$3.5 Million | \$2.0 Million |
| Sufficient Funding Secured | Partly | Yes |
| Funding Impacts on Other Corridor Improvements | Yes | No |
| Pavement Amounts | 40,500 Sq Yds | 20,600 Sq Yds |
| Drainage Impacts | 4,400 Sq Ft | 2,400 Sq Ft |
| Right of Way Needs | Est. \$100,000 | Est. \$20,000 |
| Average Annual Maintenance Costs | \$5,800 | \$2,900 |
| Equivalent Life Cycle Cost | \$88,000 | \$49,900 |

* Data is based on 30% design and is subject to adjustment in the design process.

21

Community & Stakeholder Input

- City Planning & Zoning Commission
- City Disability Awareness Board
- Harrisburg Chamber of Commerce/HEDC Board
- Harrisburg School District
- Recent developers near the intersection
- Adjacent landowners requiring ROW

22