

# SECTION 3 - PRIMARY CORRIDOR TRANSPORTATION IMPROVEMENT OPTIONS

## INITIAL SCREENING PROCESS

With the great number of potential improvement options and enhancements identified for the Argonne Road Corridor (see Section 2), it was necessary to utilize an initial sieving (screening) process to pare the initial ideas down to a manageable number of feasible options for further study. The Study Process included an initial screening process for this purpose, as described herein.

### Evaluation Criteria

A meaningful set of criteria were required to utilize as a basis for comparison of all of the improvement options and enhancements. The consultant team developed evaluation criteria directly from the initial project Goals and Objectives (as identified in Section 1). The evaluation criteria are described as follows:

- **Manage Traffic** – Due to the ever-increasing demand, the Argonne corridor must be able to efficiently manage vehicular traffic. The following traffic subsets are of interest.
  - North/South Traffic
  - East/West Traffic
  - Trucks & Emergency Vehicles
- **Safety** – Safety considerations are paramount for drivers, pedestrians, and bicyclists utilizing Argonne Road.
- **Accessibility** – Argonne improvements must consider access to local businesses and homes, for multiple modes of transportation.
  - Business Access
  - Residential Access
  - Non-Motorized Access (Bicycles & Pedestrians)
- **Environmental Quality** – The environmental context of Argonne Road should be enhanced and not compromised.
- **Placemaking** – Millwood's presence as a thriving community along Argonne Road should be emphasized.
- **Constructability/Implementation** – Options must be physically constructible, as well as politically feasible.
- **Cost** – Cost for implementing the options must be considered in the evaluation.

### Evaluation

A matrix consisting of all of the identified improvement options and enhancements, as well as the established criteria was developed for use in the evaluation process. The Stakeholder Advisory Committee was tasked with paring down the large number of options into a

manageable number of primary corridor improvement options during the second SAC meeting, held on September 11, 2007. Due to anticipated time limitations for the meeting, the consultant team prepared an initial draft evaluation, and forwarded the completed matrix to the SAC for review prior to the meeting. During the SAC meeting, the SAC reviewed and commented on the criteria and the various rankings as provided by the consultant team. **Figure 3-1** presents the revised initial screening matrix.

The SAC was directed to focus their attention on the Traffic Operations/Management options as these were the primary and operationally unique options with which the applicable enhancements from the remaining option ideas could be included.

## Results

The SAC weeded out a number of Traffic Operations/Management Options, and settled on four primary corridor transportation options that included:

- **Option 1:** Optimize the Existing 4-Lane Road
- **Option 2:** Widen the 4-Lane Road for Left-Hand Turn Pockets at Signalized Intersections
- **Option 3:** 4 to 3 Lane Conversion (Road Diet)
- **Option 4:** Widen Argonne to 5-Lanes

While some of these options were controversial to various SAC members, the committee as a whole recognized that these options encompass the feasible range of Traffic Operations/Management options for the Town to investigate within their jurisdiction. Harold White (WSDOT, Eastern Region) pointed out to the group that when the Town moves to seek funding for any of these options, it is important to be able to justify to the funding agent that the Town's process for selection of the preferred option was robust and considered a range of feasible options.

The consultant team then developed packages for each identified primary transportation improvement option that included applicable enhancements from the other categories of options. Arterial traffic calming measures, as well as enhancements for non-motorized travel, transit, business access, truck and emergency vehicle access, and placemaking enhancements were included with each package to comprise four unique DRAFT Primary Corridor Transportation Improvement Options, which would be further analyzed as the next part of the Study Process.

The DRAFT Primary Corridor Transportation Improvement Options were then distributed via electronic mail to the SAC for review and comment. The revised Primary Corridor Transportation Improvement Options are presented herein.



TOWN OF MILLWOOD

**ARGONNE ROAD CORRIDOR STUDY**  
**Figure 3-1: Initial Screening Summary**

**LEGEND:**

Positively Affects: +      Easy: E      Less Expensive: \$  
 Neutral: N      Moderate: M      Moderately Expensive: \$\$  
 Negatively Affects: -      Difficult: D      Expensive: \$\$\$

NORTH/SOUTH THRU TRAFFIC

EAST/WEST TRAFFIC

TRUCKS & EMERGENCY VEHICLES

SAFETY

BUSINESS ACCESS

RESIDENTIAL ACCESS

NON-MOTORIZED ACCESS

TRANSIT ACCESS

ENVIRONMENTAL QUALITY

PLACEMAKING

CONSTRUCTABILITY & IMPLEMENTATION

COST

**NOTES**

**TRAFFIC OPERATIONS/MANAGEMENT**

IMPROVEMENT OPTION DESCRIPTION	NORTH/SOUTH THRU TRAFFIC	EAST/WEST TRAFFIC	TRUCKS & EMERGENCY VEHICLES	SAFETY	BUSINESS ACCESS	RESIDENTIAL ACCESS	NON-MOTORIZED ACCESS	TRANSIT ACCESS	ENVIRONMENTAL QUALITY	PLACEMAKING	CONSTRUCTABILITY & IMPLEMENTATION	COST	NOTES
1 Maximize traffic operations with existing 4 lane roadway	+	+	+	+	N	N	N	+	N	N	E	\$	Make the best use of existing four lane roadway, using signal timing and phasing in corridor.
1a Coordinate signals with new controller equipment and interconnect system	+	+	+	+	N	N	N	+	N	N	E	\$	Establish various signal timing plans for corridor, install detection on Argonne Road
1b Install left turn arrows at ex signals	+	+	+	+	+	+	N	+	N	N	E	\$	Install detection for long delays to trigger left turn phasing
1c Implement split phasing on side streets	-	+	+	+	+	+	+	+	N	N	E	\$	Consider split phasing for side streets where offset or geometrics are a challenge
1d Recovery after RR pre-emption	+	+	+	+	N	+	N	+	N	N	E	\$	Ensure coordinated signals during recovery after railroad pre-emption, to ensure safe access and community mobility
1e Connect to Regional Traffic Management Center	+	N	+	+	N	N	N	+	N	N	M	\$	Coordinate with State and Spokane Valley signals
2 Widen for left turn pockets at Grace, Euclid, Liberty	+	+	+	+	+	+	N	+	N	+	M	\$\$	Consider what type of left-turn phasing would be needed, with left turn pockets.
3 4 to 3 lane conversion with bikes & peds, medians or driveway access (to 5/6 lanes at Trent)	-	+	-	+	+	+	+	-	N	+	M	\$	Evaluate if single lane in each direction can handle traffic demand.
4 Widen Argonne Road for 5-lane alternative	+	+	+	-	-	+	+	+	-	-	D	\$\$\$	Widen by one lane, provide for two-way left-turn lane between intersections
5 Prohibit left turns from Argonne Road. Provide for right turns to side streets and all movements from side streets at signals.	+	-	N	+	-	-	+	N	N	-	E	\$	Revise circulation (thru/across corridor) (without widening) (emphasis at Grace, Euclid/Empire)
6 Make Euclid through-way to Vista instead of Liberty	N	+	N	+	+	+	N	N	N	N	E	\$	Change traffic control at Vista and Euclid to all-way stop.
7 Discourage cut-through at Fowler to Trent (train race via Empire)	N	+	N	N	N	+	+	N	N	+	E	\$	
8 Realignment of Frederick intersection	N	N	+	N	-	+	+	N	-	N	M	\$\$	Provide a single intersection for east and west approach - combine with fire signal and/or pedestrian signal
9 Update traffic signs in corridor	N	N	N	+	N	+	N	N	N	+	E	\$	Ensure reflective signs, make sure all signs are visible and convey the messages necessary. Install larger street name signs (with Millwood logo for identity)
10 Off-peak parking on street, perhaps in one direction	N	N	N	N	+	+	N	+	N	+	E	\$	Keep 4 lane roadway, designate parking by time of day
11 Reversible lanes (3-lane section)	N	N	N	-	+	+	+	N	N	-	M	\$\$	Establish three-lane roadway with two-way left-turn lane that becomes a reversible lane to serve peak demand. Left turns would be prohibited during the peak periods.
12 Toll bridge at Spokane River	-	N	-	N	-	-	N	N	-	-	D	\$\$	
13 Construct new arterial over Spokane River	+	+	+	+	N	+	N	N	-	+	D	\$\$\$	University Avenue alignment has been considered.
14 Remove traffic light at Liberty	+	-	N	-	-	-	-	-	N	N	M	\$	Provide for better service with signal at Euclid/Empire
15 Discourage Albertsons traffic to Argonne	+	N	N	+	-	N	+	N	N	N	E	\$	This is already planned with Town agreement for Walgreens project at Trent and Argonne. Construction will prohibit east/west through or left turn movements.
16 Add signal at Buckeye, subservient to Trent	-	+	-	+	+	+	+	N	N	-	M	\$\$	Desirable for improved pedestrian crossing at Buckeye. However, it's contrary to planned changes with Walgreens.
17 Eliminate east lane (right lane going north) between Trent and Buckeye	-	N	-	+	N	+	N	N	N	-	M	\$	Consider modifications to better define lane use. Work with Spokane Valley on intersection configuration at Trent.

**ARTERIAL TRAFFIC CALMING**

1 Curb bulb-outs to protect parking, peds													
2 Historic district - Euclid to Liberty	N	+	N	+	+	+	+	+	N	+	E	\$	Can fit within current roadway width, also enhance sidestreet sight distance.
3 Argonne Road corridor, from Buckeye to Liberty	-	+	-	+	+	+	+	+	N	+	M	\$	If roadway re-defined as three lanes, could identify parking along one side with curb extensions.
4 Patterned/pigmented concrete at crosswalks, intersections	N	N	N	+	+	+	+	N	N	+	E	\$	Crosswalks, raised intersection can contribute to traffic calming.
5 Gateway feature	N	N	N	N	+	+	N	N	N	+	E	\$	Flags, hanging baskets, Millwood logo on street name signs, sculpture or gateway arch
6 Landscaping, medians	-	N	-	N	+	N	+	+	+	+	M	\$\$	Landscaping could be at curb bulbs, within landscape strip adjacent to sidewalk, in median. Consider street trees for seasonal color, shade, buffer from traffic.



TOWN OF MILLWOOD

**ARGONNE ROAD CORRIDOR STUDY**  
**Figure 3-1: Initial Screening Summary**

**LEGEND:**

Positively Affects: +      Easy: E      Less Expensive: \$  
 Neutral: N                  Moderate: M      Moderately Expensive: \$\$  
 Negatively Affects: -      Difficult: D      Expensive: \$\$\$

IMPROVEMENT OPTION DESCRIPTION	NORTH/SOUTH THRU TRAFFIC	EAST/WEST TRAFFIC	TRUCKS & EMERGENCY VEHICLES	SAFETY	BUSINESS ACCESS	RESIDENTIAL ACCESS	NON-MOTORIZED ACCESS	TRANSIT ACCESS	ENVIRONMENTAL QUALITY	PLACEMAKING	CONSTRUCTABILITY & IMPLEMENTATION	COST	NOTES
7 Reduction of speed limit, coordination with signals (25 mph)	N	N	N	N	N	+	N	N	+	+	E	\$	This may be accomplished without changing speed limit, but posting the coordinated travel time

**NON-MOTORIZED**

<b>Pedestrian</b>													
1 Complete sidewalks throughout corridor	N	N	N	+	+	+	+	+	+	+	M	\$\$	
2 Obtain easements for consistent sidewalks	N	N	N	N	+	+	+	N	N	+	M	\$	Provide min. 5' unobstructed width sidewalks.
3 Cobblestone crosswalks, other crosswalk treatments	N	N	N	+	N	+	+	+	N	+	E	\$	Define the crosswalks for good visibility and mobility.
4 Move sidewalk east of existing retaining wall at Dalton - meander?	N	N	N	N	N	+	+	N	N	+	M	\$\$	Consider with expansion or modifications on IEP site
5 Clean up behind McVay building, create path to City park	N	N	N	+	+	+	+	+	+	+	M	\$	Coordinate with County along sewer right of way.
6a Skybridge across Argonne at Euclid/Empire, utilize County sewer easement, connect to Centennial Trail	+	+	+	+	+	+	+	N	N	N	D	\$\$	Coordinate with railroad and County along sewer right of way. Construction of structure may not be possible. Must meet ADA standards - with ramps
6b Skybridge at Grace	+	+	+	+	+	+	+	N	N	N	D	\$\$	Must meet ADA standards with ramps - require right of way
6c Skybridge at Buckeye	+	+	+	+	+	+	+	N	N	N	D	\$\$	Must meet ADA standards with ramps - require right of way
7 Create unobstructed sidewalks at RR crossing	N	N	N	+	+	+	+	+	N	+	M	\$	
8 Relocate/remove power poles in sidewalk between Buckeye and Grace, and from Grace to Spokane River	N	N	N	+	N	+	+	N	+	+	M	\$\$	Provide ADA minimum, expand where possible. See if poles are required or if underground or other route is possible.
9 Limit pedestrian crossings to Euclid and Grace only	N	+	+	-	-	-	-		N	N	E	\$	
10 Consider removing sidewalks along IEP, use width for other purposes	N	N	N	-	-	-	-		+	N	E	\$	
11 Raised intersection, including crosswalks at signals	-	N	-	+	+	+	+	+	N	+	E	\$	Drainage must be considered in design
12 Connect sidewalks into neighborhoods - east and west	N	+	N	+	+	+	+	+	+	+	M	\$\$	
13 Connect schools and parks, sports fields	N	N	N	+	+	+	+	+	+	+	M	\$\$	
14 Modify signal timing for longer side-street crossing at Grace	-	+	+	+	+	+	+	+	N	+	E	\$	
15 Pedestrian flags at uncontrolled crosswalks	N	N	N	+	N	+	+	+	N	N	E	\$	
16 Update and/or provide ADA Standard Curb Ramps	N	N	N	+	+	+	+	N	N	+	E	\$	Required with roadway/sidewalk improvements projects.

<b>Bicycle</b>													
1 Pedestrian/bike trail under north side of bridge for safe connection to Centennial Trail	N	N	N	+	N	+	+	+	N	+	M	\$\$	
2 Establish north-south bike route east of Argonne Road, maybe Marguerite	+	+	+	+	+	+	+	N	N	+	E	\$	Consider Marguerite as possible alternate bike route
3 Establish north-south bike route west of Argonne Road	+	+	+	+	+	+	+	N	N	+	E	\$	Sign route, mark pavement with Sharrows

<b>TRANSIT FACILITIES</b>													
1 Provide for two-way bus service on Argonne Road	N	N	N	+	+	+	+	+	N	+	M	\$\$	Must provide for safe turn movements for buses
2 Benches along sidewalks, at bus stops	N	N	N	N	+	+	+	+	+	+	E	\$	Consider shelters at key stops
3 Formalize bus stop pads	N	N	N	N	+	+	+	+	+	+	E	\$	
4 Bus Shelters	N	N	N	N	+	+	+	+	N	+	M	\$	



TOWN OF MILLWOOD

**ARGONNE ROAD CORRIDOR STUDY**  
**Figure 3-1: Initial Screening Summary**

**LEGEND:**

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 Neutral: N                  Moderate: M      Moderately Expensive: \$\$  
 Negatively Affects: -      Difficult: D      Expensive: \$\$\$

IMPROVEMENT OPTION DESCRIPTION

NORTH/SOUTH THRU TRAFFIC

EAST/WEST TRAFFIC

TRUCKS & EMERGENCY VEHICLES

SAFETY

BUSINESS ACCESS

RESIDENTIAL ACCESS

NON-MOTORIZED ACCESS

TRANSIT ACCESS

ENVIRONMENTAL QUALITY

PLACEMAKING

CONSTRUCTABILITY & IMPLEMENTATION

COST

NOTES

**PLACEMAKING/ROADSIDE AMENITIES**

1	Flower Baskets, Planters	N	N	N	N	+	+	+	N	+	+	E	\$	
2	More Trees/Vegetation	N	N	N	N	+	+	+	N	+	+	M	\$	
3	Eliminate Billboards	N	N	N	N	+	N	N	N	+	+	M	\$	Define the crosswalks for good visibility and mobility.
4	Uniform Architectural Lighting	N	N	N	+	+	+	+	+	+	+	E	\$\$	
5	Street Furniture	N	N	N	N	+	+	+	+	+	+	E	\$	
6	Signage for Historic District	N	N	N	+	+	+	+	N	+	+	E	\$	

**EMERGENCY VEHICLE ACCESS**

1	Improve geometry @ Stout/Grace for Fire Truck Turns	N	+	+	+	N	+	N	N	+	+	M	\$\$	
2	Emergency Signal @ Fredrick	N	+	+	+	N	+	+	N	N	N	E	\$	

**BUSINESS ACCESS**

1	Improved Access to Argonne for IEP	+	+	+	+	+	+	+	+	N	N	M	\$\$	Accommodate truck turning paths, reduce delays
2	Formalize Existing Parking Areas, Protect On-Street Parking w/ Bulb-Outs	+	+	N	+	+	+	+	+	N	+	E	\$	Include Euclid and side streets

## OPERATIONAL SUMMARY OF PRIMARY CORRIDOR TRANSPORTATION IMPROVEMENT OPTIONS

The four identified Primary Corridor Transportation Improvement Option packages for Argonne Road are presented in Detail in **Figures 3-2 to 3-5**. Key components of each of these packages is summarized and described below.

### Option 1: Optimize Existing 4-Lane Roadway

This option focuses on optimizing the performance of the existing 4-lane roadway by coordination of traffic signals along the corridor, and with the Regional Traffic Management Center. This option considers installing left turn arrows at existing signals (Grace, Euclid/Empire and Liberty), implementing split-phasing for side-street traffic, and providing prolonged north-south recovery after railroad pre-emption.

### Option 2: Widen for Turn Pockets at Signalized Intersections

This option builds on Option 1 signal optimization by also widening at the existing signalized intersections to provide improved left-turns on Argonne. Left-hand turn pockets would be provided at the intersections with Grace, Euclid/Empire, and Liberty.

### Option 3: 4 to 3 Lane Conversion (Road Diet)

This option would re-stripe the existing roadway to 3-lanes. One travel lane would be provided in each direction, plus the addition of a continuous two-way left-turn lane throughout the project limits.

Successful implementation of a “Road Diet” has been shown to greatly improve safety at the intersections by providing left improved left-turns, and limiting the number of lanes a vehicle must turn across during left-hand turns.

### Option 4: Widen to 5-Lanes

This option provides for two travel lanes in each direction, plus the addition of a continuous two-way left-turn lane throughout the project limits.

## TRAFFIC CALMING ELEMENTS

Although the function of principal arterials such as Argonne is primarily to efficiently and safely move large volumes of traffic, studies have shown that traffic calming elements may be introduced to safely manage the traffic, providing a better balance with business and residential accessibility, bicycle and pedestrian mobility, and general livability. The following traffic calming elements have been identified for consideration in each of the aforementioned Options (**refer to Figures 3-2 to 3-5**).

- **Curb/Sidewalk Bulb-Outs:** Bulb-outs are extensions of the curb and sidewalk out towards the traveled lane in areas with on-street parking. The concept is to bring the curb closer to the edge of traveled lane, which causes drivers to feel somewhat restricted and drive at slower speeds. The application for Argonne would be to provide bulb-outs at the corners in the Historic District that would serve to protect the existing parallel parking and provide shorter crossing distances for pedestrians crossing Argonne.
- **Special Crosswalk Treatments:** Special crosswalk treatments generally serve to make the crosswalk more visible to drivers, thereby creating awareness of the crossings such

that drivers modify their behavior accordingly. Possible applications for Argonne Road include pigmented and/or patterned concrete crosswalks, and/or crosswalks with in-pavement lighting for added visibility.

- **Gateway Feature:** Driver behavior may be modified with the inclusion of a gateway feature at either end of Argonne at the Town limits to accentuate the place – the Town of Millwood. Gateway features may vary from a small sign on a post to a large structure that spans the entire width of the roadway. The key is for drivers to recognize that they are entering a community, such that their expectations and behavior adjust accordingly.
- **Landscaping/Medians:** Intermittent medians and landscaping are an effective traffic calming measures. Driver behavior is influenced by visually pleasing landscaped roadside, and by the relative closeness of the curbed median island to the traveled lane.
- **Reduction of Speed Limit:** Due to the location of the Town of Millwood along the Argonne Road corridor, between a largely rural area to the north, and Interstate 90 to the south, the Town encompasses a reduced speed area along the corridor. A speed reduction zone, from 35 mph to 30 mph, is at the bridge over the Spokane River. Adjustment of the speed limit and/or managing the effective speed through the corridor via coordinated signal timing may serve to reduce excessive speeding. Radar-controlled speed limit signs are another effective way of increasing driver awareness of travel speed.

## ENHANCEMENT OPTIONS

A number of enhancements to the four Primary Options have been identified by the stakeholders, public and consultant team. These enhancements fall under the following categories and are considered for each Primary Option (**refer to Figures 3-2 to 3-5**):

- Pedestrian Facilities
- Bicycle Facilities
- Transit Facilities
- Placemaking/Roadside Amenities
- Emergency Vehicle Access Facilities
- Business Access Facilities

These enhancements are largely self-explanatory and are further developed in Section 4.



**ARGONNE ROAD CORRIDOR STUDY**

**FIGURE 3-2: Corridor Improvement Option 1 [Optimize Existing 4-Lane Roadway]**

**TRAFFIC OPERATIONS/MANAGEMENT**

<b>1</b>	<b>Maximize traffic operations with existing 4 lane roadway</b>
1a	Coordinate signals with new controller equipment and interconnect system
1b	Install left turn arrows at ex signals
1c	Implement split phasing on side streets
1d	Recovery after RR pre-emption
1e	Connect to Regional Traffic Management Center
1f	ITS treatments - railroad blocking warnings, VMS, radar speed signs
5	Prohibit left turns from Argonne Road. Provide for right turns to side streets and all movements from side streets at signals.
6	Make Euclid through-way to Vista instead of Liberty
7	Discourage cut-through at Fowler to Trent (train race via Empire)
9	Update traffic signs in corridor
10	Off-peak parking on street, perhaps in one direction
14	Remove traffic light at Liberty
17	Eliminate east lane (right lane going north) between Trent and Buckeye

**ARTERIAL TRAFFIC CALMING**

1	Curb bulb-outs to protect parking, peds
1a	Historic district - Euclid to Liberty
2	Patterned/pigmented concrete at crosswalks, intersections
3	Gateway feature
4	Landscaping, medians
5	Reduction of speed limit, coordination with signals (25 mph)

**NON-MOTORIZED**

**Pedestrian**

1	Complete sidewalks throughout corridor
2	Obtain easements for consistent sidewalks
3	Cobblestone crosswalks, other crosswalk treatments
4	Move sidewalk east of existing retaining wall at Dalton - meander?
5	Clean up behind McVay building, create path to City park
7	Create unobstructed sidewalks at RR crossing
8	Relocate/remove power poles in sidewalk between Buckeye and Grace, and from Grace to Spokane River
9	Limit pedestrian crossings to Euclid and Grace only
11	Raised intersection, including crosswalks at signals
12	Connect sidewalks into neighborhoods - east and west
13	Connect schools and parks, sports fields
14	Modify signal timing for longer side-street crossing at Grace
16	Update and/or provide ADA Standard Curb Ramps
17	Consider a multi-use path along IEP from Empire to the Bridge

**Bicycle**

2	Establish north-south bike route west of Argonne Road, maybe Marguerite
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**Transit Facilities**

1	Provide for two-way bus service on Argonne Road
2	Benches along sidewalks, at bus stops
3	Formalize bus stop pads
4	Bus Shelters

**PLACEMAKING/ROADSIDE AMENITIES**

1	Flower Baskets, Planters
2	More Trees/Vegetation
4	Uniform Architectural Lighting
5	Street Furniture
6	Signage for Historic District

**EMERGENCY VEHICLE ACCESS**

2	Emergency Signal @ Fredrick
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**BUSINESS ACCESS**

1	Improved Access to Argonne for IEP
2	Formalize Existing Parking Areas, Protect On-Street Parking w/ Bulb-Outs



**ARGONNE ROAD CORRIDOR STUDY**

**FIGURE 3-3: Corridor Improvement Option 2 [4-Lane with Turn Pockets]**

**TRAFFIC OPERATIONS/MANAGEMENT**

1a	Coordinate signals with new controller equipment and interconnect system
1b	Install left turn arrows at ex signals
1c	Implement split phasing on side streets
1d	Recovery after RR pre-emption
1e	Connect to Regional Traffic Management Center
1f	ITS treatments: railroad blockage warning, VMS, radar speed signs
<b>2</b>	<b>4-Lane with widening for left turn pockets at Grace, Euclid, Liberty</b>
6	Make Euclid through-way to Vista instead of Liberty
7	Discourage cut-through at Fowler to Trent (train race via Empire)
9	Update traffic signs in corridor
14	Remove traffic light at Liberty
17	Eliminate east lane (right lane going north) between Trent and Buckeye

**ARTERIAL TRAFFIC CALMING**

1	Curb bulb-outs to protect parking, peds
1a	Historic district - Euclid to Liberty
2	Patterned/pigmented concrete at crosswalks, intersections
3	Gateway feature
4	Landscaping, medians
5	Reduction of speed limit, coordination with signals (25 mph)

**NON-MOTORIZED**

**Pedestrian**

1	Complete sidewalks throughout corridor
2	Obtain easements for consistent sidewalks
3	Cobblestone crosswalks, other crosswalk treatments
4	Move sidewalk east of existing retaining wall at Dalton - meander?
5	Clean up behind McVay building, create path to City park
7	Create unobstructed sidewalks at RR crossing
8	Relocate/remove power poles in sidewalk between Buckeye and Grace, and from Grace to Spokane River
9	Limit pedestrian crossings to Euclid and Grace only
10	Consider removing sidewalks along IEP, use width for other purposes
11	Raised intersection, including crosswalks at signals
12	Connect sidewalks into neighborhoods - east and west
13	Connect schools and parks, sports fields
14	Modify signal timing for longer side-street crossing at Grace
15	Pedestrian flags at uncontrolled crosswalks
16	Update and/or provide ADA Standard Curb Ramps
17	Consider a multi-use path along IEP from Empire to the Bridge

**Bicycle**

2	Establish north-south bike route west of Argonne Road, maybe Marguerite
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**Transit Facilities**

1	Provide for two-way bus service on Argonne Road
2	Benches along sidewalks, at bus stops
3	Formalize bus stop pads
4	Bus Shelters

**PLACEMAKING/ROADSIDE AMENITIES**

1	Flower Baskets, Planters
2	More Trees/Vegetation
4	Uniform Architectural Lighting
5	Street Furniture
6	Signage for Historic District

**EMERGENCY VEHICLE ACCESS**

2	Emergency Signal @ Fredrick
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**BUSINESS ACCESS**

1	Improved Access to Argonne for IEP
2	Formalize Existing Parking Areas, Protect On-Street Parking w/ Bulb-Outs



## ARGONNE ROAD CORRIDOR STUDY

FIGURE 3-4: Corridor Improvement Option 3 [3-Lane Conversion]

### TRAFFIC OPERATIONS/MANAGEMENT

1a	Coordinate signals with new controller equipment and interconnect system
1b	Install left turn arrows at ex signals
1c	Implement split phasing on side streets
1d	Recovery after RR pre-emption
1e	Connect to Regional Traffic Management Center
1f	ITS treatments: railroad blockage warning, VMS, radar speed signs
3	<b>4 to 3 lane conversion with bikes &amp; peds, medians or driveway access (to 5/6 lanes at Trent)</b>
6	Make Euclid through-way to Vista instead of Liberty
7	Discourage cut-through at Fowler to Trent (train race via Empire)
9	Update traffic signs in corridor
14	Remove traffic light at Liberty
17	Eliminate east lane (right lane going north) between Trent and Buckeye

### ARTERIAL TRAFFIC CALMING

1	Curb bulb-outs to protect parking, peds
1a	Historic district - Euclid to Liberty
1b	Argonne Road corridor, from Buckeye to Liberty
2	Patterned/pigmented concrete at crosswalks, intersections
3	Gateway feature
4	Landscaping, medians
5	Reduction of speed limit, coordination with signals (25 mph)

### NON-MOTORIZED

#### Pedestrian

1	Complete sidewalks throughout corridor
2	Obtain easements for consistent sidewalks
3	Cobblestone crosswalks, other crosswalk treatments
5	Clean up behind McVay building, create path to City park
7	Create unobstructed sidewalks at RR crossing
8	Relocate/remove power poles in sidewalk between Buckeye and Grace, and from Grace to Spokane River
11	Raised intersection, including crosswalks at signals
12	Connect sidewalks into neighborhoods - east and west
13	Connect schools and parks, sports fields
14	Modify signal timing for longer side-street crossing at Grace
16	Update and/or provide ADA Standard Curb Ramps
17	Consider a multi-use path along IEP from Empire to the Bridge

#### Bicycle

2	Establish north-south bike route west of Argonne Road, maybe Marguerite
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#### Transit Facilities

1	Provide for two-way bus service on Argonne Road
2	Benches along sidewalks, at bus stops
3	Formalize bus stop pads
4	Bus Shelters

### PLACEMAKING/ROADSIDE AMENITIES

1	Flower Baskets, Planters
2	More Trees/Vegetation
4	Uniform Architectural Lighting
5	Street Furniture
6	Signage for Historic District

### EMERGENCY VEHICLE ACCESS

2	Emergency Signal @ Fredrick
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### BUSINESS ACCESS

1	Improved Access to Argonne for IEP
2	Formalize Existing Parking Areas, Protect On-Street Parking w/ Bulb-Outs



**ARGONNE ROAD CORRIDOR STUDY**  
**FIGURE 3-5: Corridor Improvement Option 4 [5-Lanes]**

**TRAFFIC OPERATIONS/MANAGEMENT**

1a	Coordinate signals with new controller equipment and interconnect system
1b	Install left turn arrows at ex signals
1c	Implement split phasing on side streets
1d	Recovery after RR pre-emption
1e	Connect to Regional Traffic Management Center
1f	ITS Treatments: railroad blockage warning, VMS, radar speed signs
<b>4</b>	<b>Widen Argonne Road for 5-lane alternative</b>
6	Make Euclid through-way to Vista instead of Liberty
7	Discourage cut-through at Fowler to Trent (train race via Empire)
9	Update traffic signs in corridor
10	Off-peak parking on street, perhaps in one direction
14	Remove traffic light at Liberty
17	Eliminate east lane (right lane going north) between Trent and Buckeye

**ARTERIAL TRAFFIC CALMING**

1	Curb bulb-outs to protect parking, peds
1a	Historic district - Euclid to Liberty
2	Patterned/pigmented concrete at crosswalks, intersections
3	Gateway feature
4	Landscaping, medians
5	Reduction of speed limit, coordination with signals (25 mph)

**NON-MOTORIZED**

**Pedestrian**

1	Complete sidewalks throughout corridor
2	Obtain easements for consistent sidewalks
3	Cobblestone crosswalks, other crosswalk treatments
4	Move sidewalk east of existing retaining wall at Dalton - meander?
5	Clean up behind McVay building, create path to City park
7	Create unobstructed sidewalks at RR crossing
8	Relocate/remove power poles in sidewalk between Buckeye and Grace, and from Grace to Spokane River
9	Limit pedestrian crossings to Euclid and Grace only
10	Consider removing sidewalks along IEP, use width for other purposes
11	Raised intersection, including crosswalks at signals
12	Connect sidewalks into neighborhoods - east and west
13	Connect schools and parks, sports fields
14	Modify signal timing for longer side-street crossing at Grace
15	Pedestrian flags at uncontrolled crosswalks
16	Update and/or provide ADA Standard Curb Ramps
17	Consider a multi-use path along IEP from Empire to the Bridge

**Bicycle**

2	Establish north-south bike route west of Argonne Road, maybe Marguerite
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**Transit Facilities**

1	Provide for two-way bus service on Argonne Road
2	Benches along sidewalks, at bus stops
3	Formalize bus stop pads
4	Bus Shelters

**PLACEMAKING/ROADSIDE AMENITIES**

1	Flower Baskets, Planters
2	More Trees/Vegetation
4	Uniform Architectural Lighting
5	Street Furniture
6	Signage for Historic District

**EMERGENCY VEHICLE ACCESS**

2	Emergency Signal @ Fredrick
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**BUSINESS ACCESS**

1	Improved Access to Argonne for IEP
2	Formalize Existing Parking Areas, Protect On-Street Parking w/ Bulb-Outs