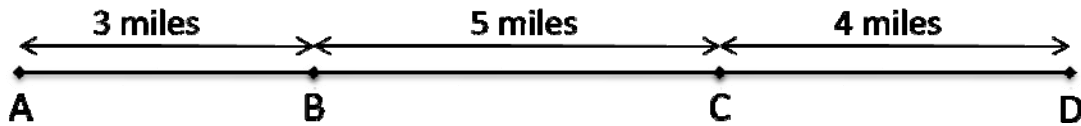


**Corridor Details:**



Corridor AD is a 12-mile highway section in Dallas, Texas. It is an urban freeway with 6 lanes (and space for adding 2 more lanes within the existing right of way).

The ADTs at count locations A, B, C, and D for 2005 are given in the table below:

Location	ADT (2005)
A	80,000
B	100,000
C	100,000
D	120,000

The ADTs are expected to increase by 50% between 2005 and 2025. Conduct an analysis using the SET to evaluate the following conditions:

- Base** year conditions (2005)
- Future 1** - Future year conditions (2025) – “No build” scenario
- Future 2** - Future year conditions (2025) – with 2 lanes added on links BC and CD
- Future 3** - Scenario (c), with the following additions:
  - The added lanes (on links BC and CD) have HOV 2+ restrictions for certain times of day, with a ridership of 12,000 vehicles.
  - Bus Rapid Transit operates on these two links-BC and CD- (150 buses with 50 person occupancy).
  - The HOV lanes and BRT result in a reduction of 15,000 ADT per day on these two links.
  - Alternative funding for these additional lanes contributed 50% to overall capital costs to date.

The following details are provided to aid in your analysis. Make other assumptions if needed.

- Speed limit of 65 mph throughout.
- Current pavement condition rating is 85 (maximum 100); deteriorated condition (score of 70) assumed for no-build scenario; improved score (=90) assumed for other two future scenarios.
- Land use split along corridor for base case: 14% residential, 34% industrial/commercial, rest is institutional, public, or unoccupied. For all future cases, the split is assumed to change to 45% commercial/industrial with residential remaining the same.
- Average automobile occupancy on general purpose lanes is 1.25.
- Currently, there is no transit on corridor.
- Truck percentage – 5% for base year, projected to increase to 8% in the future.
- The Dallas area is in moderate nonattainment for Ozone standards; in attainment for Carbon Monoxide and Particulate Matter.
- Traffic under peak conditions for base = 35%, for future cases =45%.
- TMC Surveillance – none for base case, full coverage for future cases.

### Input Forms

\*Note- Use Urban Area default weights

Link	Description	Length (mi)	Number of Lanes			
			Base	Future 1	Future 2	Future 3
1	AB					
2	BC					
3	CD					
Total	AD					

Road Type (all links, all cases) – Freeway

Proportion of ADT under “Peak” Conditions (all links): Base Case– \_\_\_\_\_  
Future Cases – \_\_\_\_\_

Link	Description	ADT (veh/day)			
		Base	Future 1	Future 2	Future 3*
1	AB				
2	BC				
3	CD				

\*note: reduce for HOV and BRT as described in problem statement

Link	Description	Number of Lanes that can be added in available ROW			
		Base	Future 1	Future 2	Future 3
1	AB				
2	BC				
3	CD				

Truck Percentage (all links) – Base Case - \_\_\_\_\_  
Future Cases - \_\_\_\_\_

Pavement Condition (all links) – Base Case - \_\_\_\_\_  
Future Case 1 - \_\_\_\_\_  
Future Case 2 - \_\_\_\_\_  
Future Case 3 - \_\_\_\_\_

TMC Surveillance (all links) – Base Case - \_\_\_\_\_  
Future Cases - \_\_\_\_\_

Speed Limit (all links, all cases) – 65 mph

### Land Use Split (all links)

Land Use	Base Case	Future Cases
Residential	14%	14%
Industrial/Commercial	34%	45%
Institutional, Public, or Unoccupied		

### Capital Cost Recovery

Link	Description	Proportion of Capital Costs Covered by Alternative Sources			
		Base	Future 1	Future 2	Future 3
1	AB				
2	BC				
3	CD				

O&M Cost Recovery (all cases, all links) = 0

Presence of Rail Service (all links, all cases) - N

General-Purpose Lanes Occupancy (all links, all cases) - \_\_\_\_\_

### HOV, Bus – Basic Information

Link	Description	HOV Lanes (Y/N)				Bus Service (Y/N)			
		Base	Future 1	Future 2	Future 3	Base	Future 1	Future 2	Future 3
1	AB								
2	BC								
3	CD								

### HOV Ridership

Link	Description	Minimum Occupancy Requirement	Ridership (veh/day)			
			Base	Future 1	Future 2	Future 3
1	AB	2				
2	BC	2				
3	CD	2				

### Bus Ridership

Link	Description	Occupancy and Frequency Details*							
		Base		Future 1		Future 2		Future 3	
		Occ.	Freq.	Occ.	Freq.	Occ.	Freq.	Occ.	Freq.
1	AB								
2	BC								
3	CD								

\*occ.- occupancy (persons/bus); freq.-frequency (buses/day)

### Non-Attainment Status (all links, only for base case)

Ozone – Moderate non-attainment

CO and PM – In attainment