AVERAGE TRIP LENGTH ANALYSIS

MTMUG, July 21, 2021

Question: Which bridges are most critical to the movement of freight?
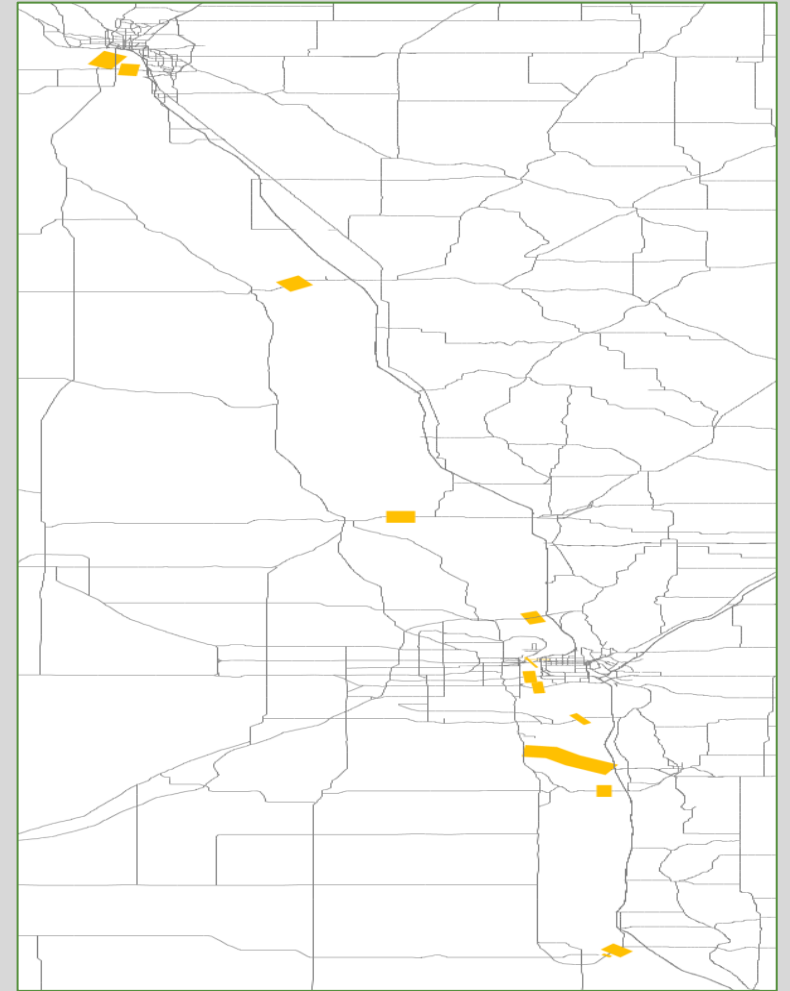
WHICH HAS THE GREATEST DRAW?

WHICH SHOULD GET PRIORITY TREATMENT IN MAINTENANCE?

WHICH TO INCLUDE ON THE MULTIMODE FREIGHT NETWORK?

Analysis: What is the average trip length via iTRAM?

◦ Analysis Steps

1. Create a list of candidate locations [Primary and Interstate] along the Missouri river

2. Mark each of the locations in the Select Link tool

Analysis: What is the average trip length via iTRAM?

◦ Analysis Steps

3. Summarize the total trips on each selection link as identified by matrix core from "TempAuto.mtx" and "TempTruck.mtx"

Analysis: What is the average trip length via iTRAM?

◦ Analysis Steps

4. Open the "TimeSkim.mtx" from the Step 2 folder and select the "length" matrix core.

5. Use TransCAD to manually add in intrazonal trip times with the normal default parameters

Analysis: What is the average trip length via iTRAM?

○ Analysis Steps

6. Create a new matrix for the summation of the matrix math, multiply the trips from step 3 with the length from step 4 to get VMT

7. Compute the matrix statistics and take the VMT for the selected bridge and divide by the select link trips

    - This will need to be done for each select link
    - This will need to be done for each truck and auto matrix

Analysis: What is the average trip length via iTRAM?

◦ Analysis Results

Number	Route	County	Matrix Sum	VMT	Trip Length
1	I-80	Pottawattamie	35,867	6,393,135	178.2
2	IA 2	Fremont	2,677	328,634	122.8
3	I-680	Pottawattamie	26,268	2,633,935	100.3
4	US 30	Harrison	3,959	347,157	87.7
5	IA 175	Monona	1,171	78,317	66.9
6	US 34 New	Mills	8,801	569,112	64.7
7	US 75	Woodbury	13,440	805,902	60.0
8	IA 370	Mills	2,893	161,776	55.9
9	I-480	Pottawattamie	48,284	1,291,010	26.7
10	US 77	Woodbury	22,112	546,741	24.7
11	US 34 Old	Mills	305	6,449	21.2
12	IA 92	Pottawattamie	13,142	264,789	20.1

Analysis: What is the average trip length via iTRAM?

Thoughts or Questions?