

CSE112-Project Provided Data

Geographic Data

Neighborhoods and Districts (ID, Name, Population, Type, X-coordinate, Y-coordinate)

- 1, Maadi, 250000, Residential, 31.25, 29.96
- 2, Nasr City, 500000, Mixed, 31.34, 30.06
- 3, Downtown Cairo, 100000, Business, 31.24, 30.04
- 4, New Cairo, 300000, Residential, 31.47, 30.03
- 5, Heliopolis, 200000, Mixed, 31.32, 30.09
- 6, Zamalek, 50000, Residential, 31.22, 30.06
- 7, 6th October City, 400000, Mixed, 30.98, 29.93
- 8, Giza, 550000, Mixed, 31.21, 29.99
- 9, Mohandessin, 180000, Business, 31.20, 30.05
- 10, Dokki, 220000, Mixed, 31.21, 30.03
- 11, Shubra, 450000, Residential, 31.24, 30.11
- 12, Helwan, 350000, Industrial, 31.33, 29.85
- 13, New Administrative Capital, 50000, Government, 31.80, 30.02
- 14, Al Rehab, 120000, Residential, 31.49, 30.06
- 15, Sheikh Zayed, 150000, Residential, 30.94, 30.01

Important Facilities (ID, Name, Type, X-coordinate, Y-coordinate)

- F1, Cairo International Airport, Airport, 31.41, 30.11
- F2, Ramses Railway Station, Transit Hub, 31.25, 30.06
- F3, Cairo University, Education, 31.21, 30.03
- F4, Al-Azhar University, Education, 31.26, 30.05
- F5, Egyptian Museum, Tourism, 31.23, 30.05
- F6, Cairo International Stadium, Sports, 31.30, 30.07
- F7, Smart Village, Business, 30.97, 30.07
- F8, Cairo Festival City, Commercial, 31.40, 30.03

F9, Qasr El Aini Hospital, Medical, 31.23, 30.03
F10, Maadi Military Hospital, Medical, 31.25, 29.95

Road Network Data

Existing Roads (FromID, ToID, Distance(km), Current Capacity(vehicles/hour), Condition(1-10))

1, 3, 8.5, 3000, 7
1, 8, 6.2, 2500, 6
2, 3, 5.9, 2800, 8
2, 5, 4.0, 3200, 9
3, 5, 6.1, 3500, 7
3, 6, 3.2, 2000, 8
3, 9, 4.5, 2600, 6
3, 10, 3.8, 2400, 7
4, 2, 15.2, 3800, 9
4, 14, 5.3, 3000, 10
5, 11, 7.9, 3100, 7
6, 9, 2.2, 1800, 8
7, 8, 24.5, 3500, 8
7, 15, 9.8, 3000, 9
8, 10, 3.3, 2200, 7
8, 12, 14.8, 2600, 5
9, 10, 2.1, 1900, 7
10, 11, 8.7, 2400, 6
11, F2, 3.6, 2200, 7
12, 1, 12.7, 2800, 6
13, 4, 45.0, 4000, 10
14, 13, 35.5, 3800, 9
15, 7, 9.8, 3000, 9
F1, 5, 7.5, 3500, 9
F1, 2, 9.2, 3200, 8
F2, 3, 2.5, 2000, 7
F7, 15, 8.3, 2800, 8
F8, 4, 6.1, 3000, 9

Potential New Roads (FromID, ToID, Distance(km), Estimated Capacity(vehicles/hour), Construction Cost(Million EGP))

1, 4, 22.8, 4000, 450
1, 14, 25.3, 3800, 500
2, 13, 48.2, 4500, 950
3, 13, 56.7, 4500, 1100
5, 4, 16.8, 3500, 320
6, 8, 7.5, 2500, 150
7, 13, 82.3, 4000, 1600
9, 11, 6.9, 2800, 140
10, F7, 27.4, 3200, 550
11, 13, 62.1, 4200, 1250
12, 14, 30.5, 3600, 610
14, 5, 18.2, 3300, 360
15, 9, 22.7, 3000, 450
F1, 13, 40.2, 4000, 800
F7, 9, 26.8, 3200, 540

Traffic Flow Data

Traffic Flow Patterns (RoadID, Morning Peak(veh/h), Afternoon(veh/h), Evening Peak(veh/h), Night(veh/h))

1-3, 2800, 1500, 2600, 800
1-8, 2200, 1200, 2100, 600
2-3, 2700, 1400, 2500, 700
2-5, 3000, 1600, 2800, 650
3-5, 3200, 1700, 3100, 800
3-6, 1800, 1400, 1900, 500
3-9, 2400, 1300, 2200, 550
3-10, 2300, 1200, 2100, 500
4-2, 3600, 1800, 3300, 750
4-14, 2800, 1600, 2600, 600
5-11, 2900, 1500, 2700, 650
6-9, 1700, 1300, 1800, 450

7-8, 3200, 1700, 3000, 700
7-15, 2800, 1500, 2600, 600
8-10, 2000, 1100, 1900, 450
8-12, 2400, 1300, 2200, 500
9-10, 1800, 1200, 1700, 400
10-11, 2200, 1300, 2100, 500
11-F2, 2100, 1200, 2000, 450
12-1, 2600, 1400, 2400, 550
13-4, 3800, 2000, 3500, 800
14-13, 3600, 1900, 3300, 750
15-7, 2800, 1500, 2600, 600
F1-5, 3300, 2200, 3100, 1200
F1-2, 3000, 2000, 2800, 1100
F2-3, 1900, 1600, 1800, 900
F7-15, 2600, 1500, 2400, 550
F8-4, 2800, 1600, 2600, 600

Public Transportation Data

Current Metro Lines (LineID, Name, Stations(comma-separated IDs), Daily Passengers)

M1, Line 1 (Helwan-New Marg), "12,1,3,F2,11", 1500000

M2, Line 2 (Shubra-Giza), "11,F2,3,10,8", 1200000

M3, Line 3 (Airport-Imbaba), "F1,5,2,3,9", 800000

Current Bus Routes (RouteID, Stops(comma-separated IDs), Buses Assigned, Daily Passengers)

B1, "1,3,6,9", 25, 35000

B2, "7,15,8,10,3", 30, 42000

B3, "2,5,F1", 20, 28000

B4, "4,14,2,3", 22, 31000

B5, "8,12,1", 18, 25000

B6, "11,5,2", 24, 33000

B7, "13,4,14", 15, 21000

B8, "F7,15,7", 12, 17000

B9, "1,8,10,9,6", 28, 39000

B10, "F8,4,2,5", 20, 28000

Public Transportation Demand (FromID, ToID, Daily Passengers)

3, 5, 15000

1, 3, 12000

2, 3, 18000

F2, 11, 25000

F1, 3, 20000

7, 3, 14000

4, 3, 16000

8, 3, 22000

3, 9, 13000

5, 2, 17000

11, 3, 24000

12, 3, 11000

1, 8, 9000

7, F7, 18000

4, F8, 12000

13, 3, 8000

14, 4, 7000