



ESRI



Run Orders

*Modeling and mapping public safety arrival orders with
ArcGIS Network Analyst 9.3*

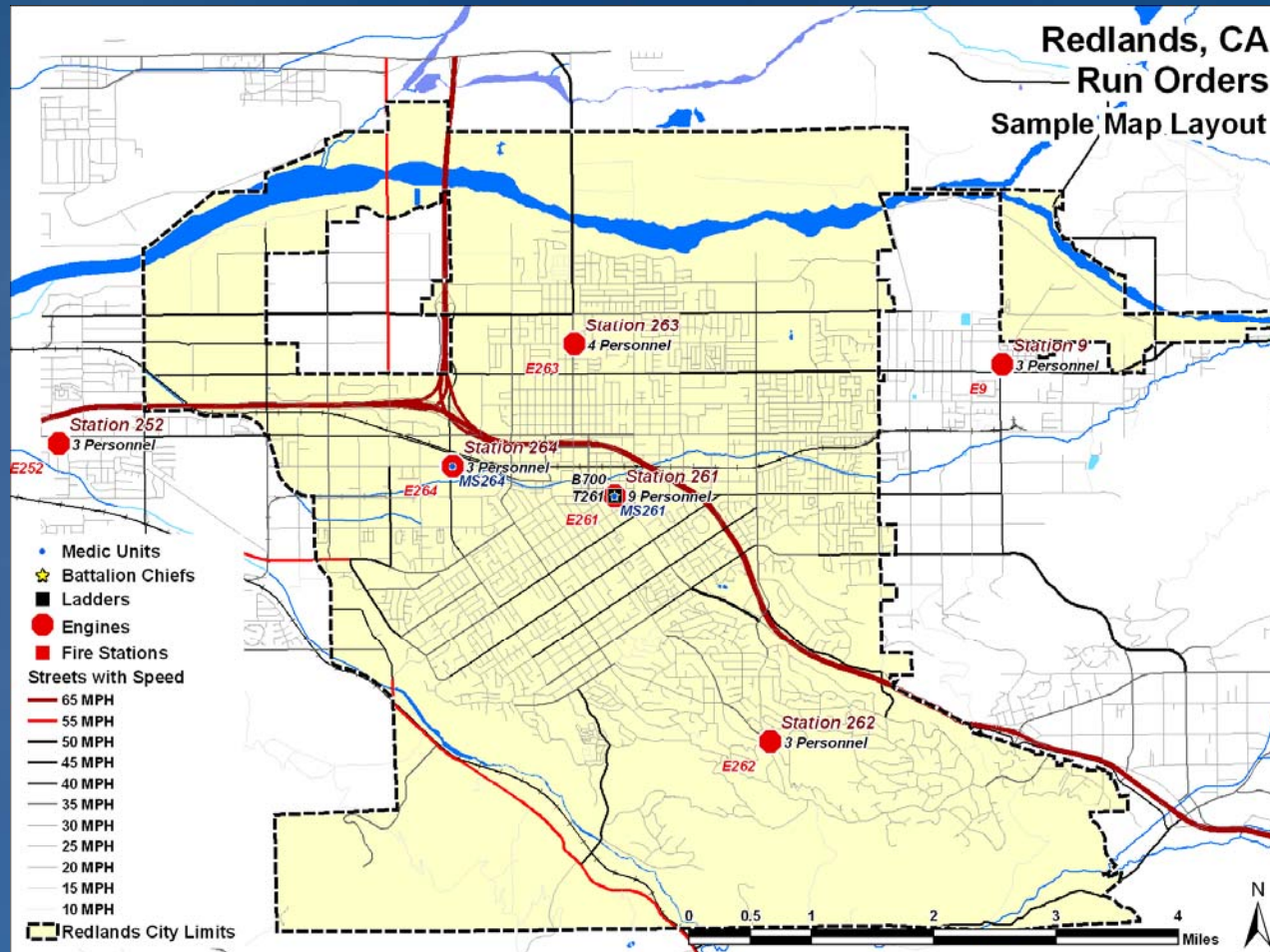
*By Mike Price
Entrada/San Juan, Inc.*

*From the Fall 2009 issue of
ArcUser magazine*

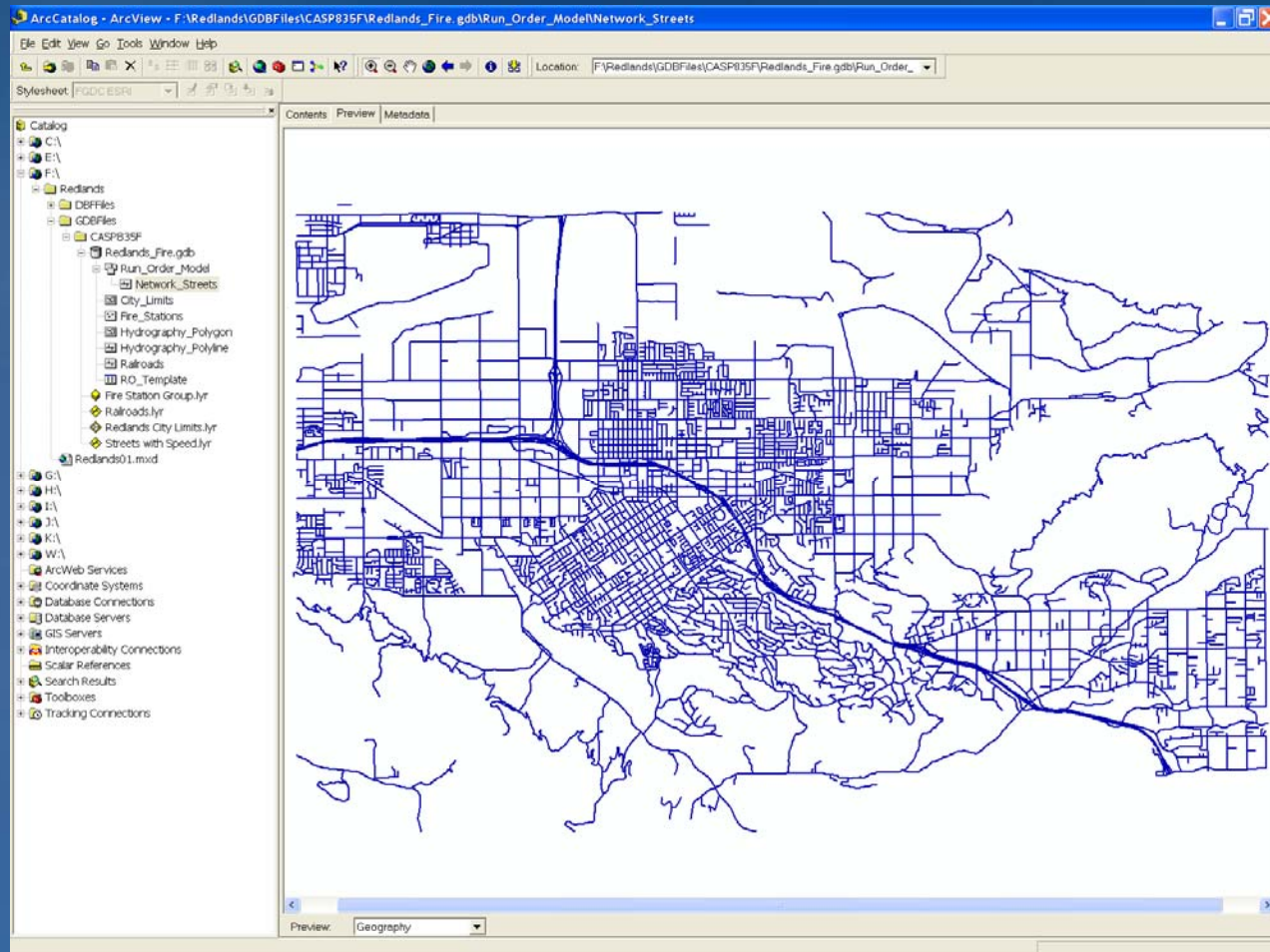
GIS helps responding agencies provide better service

- GIS can make run orders that allow public safety agencies to predict and map the arrival sequence and times for responders traveling to an incident from multiple locations.
- In previous exercises in *ArcUser* used optimized travel areas generated using the ArcGIS Network Analyst extension to identify the station from which the first responders (i.e., First Due) will arrive for a given location. This exercise goes farther by identifying responders Second through Fifth Due.
- A basic understanding of ArcGIS Desktop and the ArcGIS Network Analyst extension is assumed. If needed, review modeling travel networks with ArcGIS Network Analyst and work other exercises in this series by visiting the [Learn How to Model Networks](#) page.

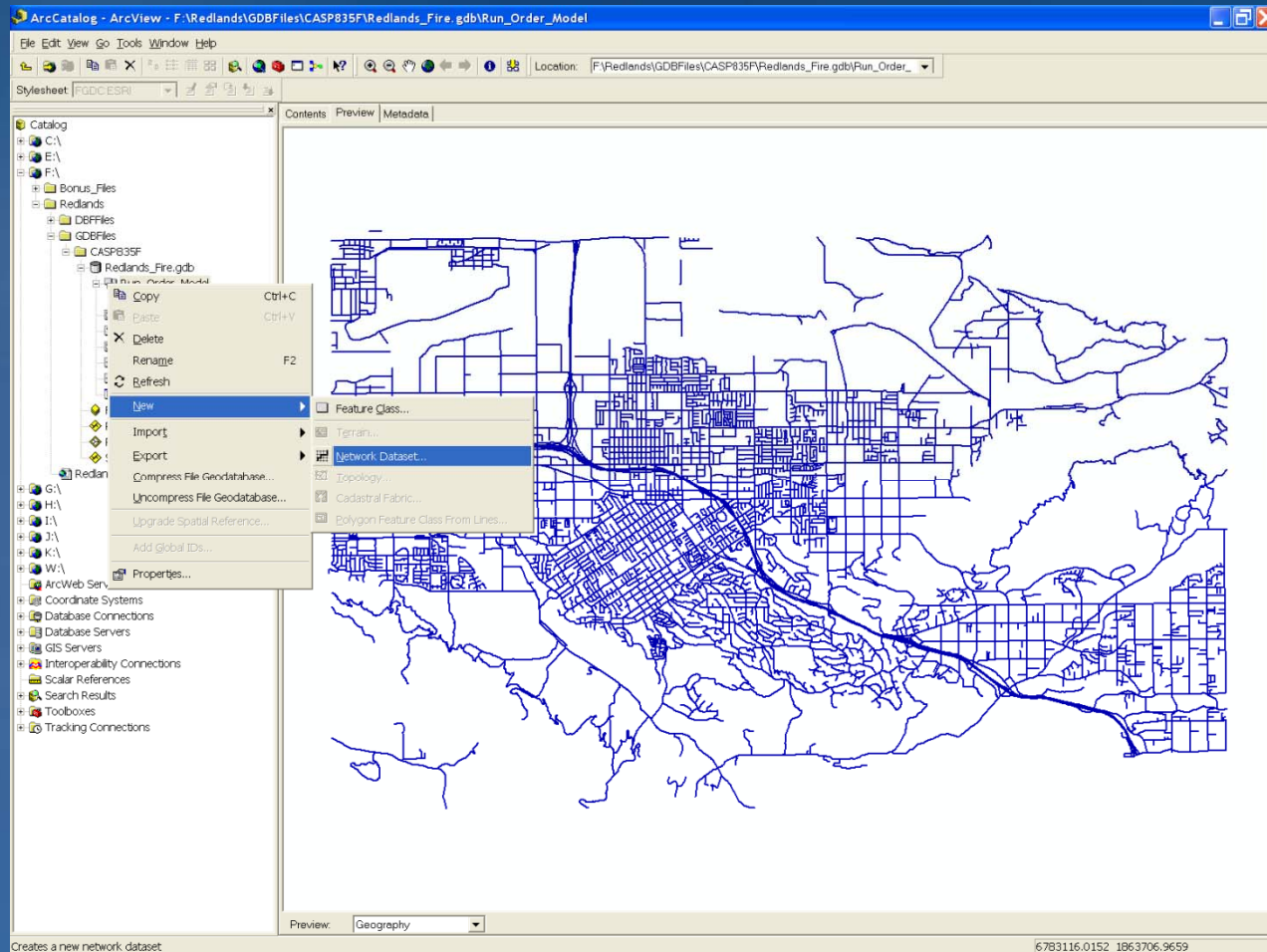
This exercise maps the arrival sequence and times for responders from seven fire stations in and near Redlands, California.



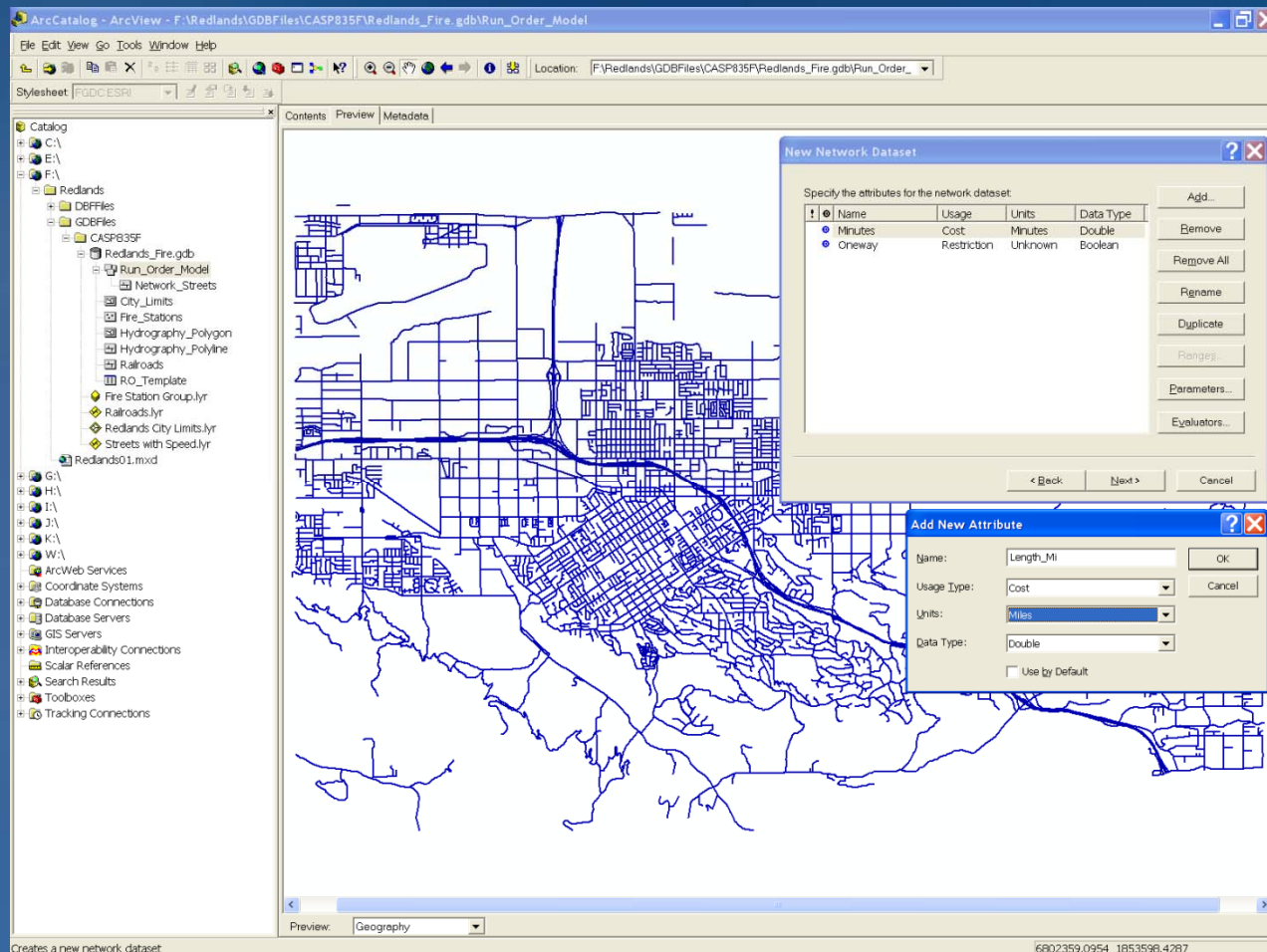
In ArcCatalog, expand the Redlands_Fire geodatabase and inspect the Run_Order_Model feature dataset. Preview the feature class named Network_Streets.



In ArcCatalog, build the Redlands Network Dataset. Right-click on Run_Order_Model and choose New > Network Dataset. Name the feature class Run_Order_Model_ND.



In the Network Dataset wizard, accept defaults until you get to the attribute window. Add a new attribute named **Length_Mi** and set the units to miles.



Reselect Minutes, click the Evaluators button, and select the Default Values tab. Left-click on Turn, select Global Turn Delay, and press F12. In the Global Turn Delay Evaluator type in delay parameters shown.

Global Turn Delay Evaluator

Turn Angles

Direction	Width (degrees)
Straight	60
Reverse	60
Right Turn	120
Left Turn	120

Road Classes

Hierarchy Attribute: <None> (All roads classified as local road class)

☒ Only Show Turn Categories for Local Roads

Direction	Description	Seconds
Straight	From Local To Local Road Across No Roads	0
Straight	From Local To Local Road Across Local Road	1
Reverse	From Local To Local Road	30
Right Turn	From Local To Local Road	2
Left Turn	From Local To Local Road	4

To edit the seconds to traverse a turn category, click a list item in the 'Seconds' column or press F12.

OK Cancel Load From Default Load From File... Save To Default Save To File...

Preview: Geography

Creates a new network dataset

6802359.0954 1853596.4287

Close ArcCatalog, open ArcMap, and open Redlands01.mxd. Use the Field Calculator to populate the INDEX field with values from OBJECT_ID.

The screenshot displays the ArcMap interface with the 'Redlands01.mxd' file open. The 'Attributes of Streets with Speed' table is visible, showing various attributes including LENGTH_MI, MINUTES, INDEX, CENT_X, CENT_Y, STAT_01, TIME_01, STAT_02, TIME_02, STAT_03, TIME_03, STAT_04, TIME_04, STAT_05, TIME_05, TIME_02_01, and Shape_Length. The 'INDEX' column is highlighted in cyan. The 'Field Calculator' dialog box is open, showing the 'INDEX' field being populated with the value of 'OBJECTID_1'.

Attributes of Streets with Speed

LENGTH_MI	MINUTES	INDEX	CENT_X	CENT_Y	STAT_01	TIME_01	STAT_02	TIME_02	STAT_03	TIME_03	STAT_04	TIME_04	STAT_05	TIME_05	TIME_02_01	Shape_Length
0.063256	0.151815	0	0	0	0	0	0	0	0	0	0	0	0	0	0	333.993542
0.193786	0.465095	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1023.188075
0.070125	0.168299	0	0	0	0	0	0	0	0	0	0	0	0	0	0	370.257689
0.105373	0.252895	0	0	0	0	0	0	0	0	0	0	0	0	0	0	556.36935
0.03625	0.087	0	0	0	0	0	0	0	0	0	0	0	0	0	0	191.400173
0.043667	0.1048	0	0	0	0	0	0	0	0	0	0	0	0	0	0	230.561051
0.106033	0.254478	0	0	0	0	0	0	0	0	0	0	0	0	0	0	569.852587
0.062642	0.150341	0	0	0	0	0	0	0	0	0	0	0	0	0	0	330.750091
0.026675	0.06402	0	0	0	0	0	0	0	0	0	0	0	0	0	0	140.843126
0.048108	0.11546	0	0	0	0	0	0	0	0	0	0	0	0	0	0	254.012648
0.130114	0.312273	0	0	0	0	0	0	0	0	0	0	0	0	0	0	687.000266
0.073485	0.176364	0	0	0	0	0	0	0	0	0	0	0	0	0	0	388.000208
0.158523	0.380455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	836.999966
0.071212	0.17091	0	0	0	0	0	0	0	0	0	0	0	0	0	0	376.001234
0.0125	0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	65.999868
0.005874	0.014098	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31.016063
0.037263	0.089432	0	0	0	0	0	0	0	0	0	0	0	0	0	0	196.750263
0.015956	0.038295	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84.249831
0.079924	0.191818	0	0	0	0	0	0	0	0	0	0	0	0	0	0	422.00014
0.072171	0.173211	0	0	0	0	0	0	0	0	0	0	0	0	0	0	381.004104
0.170928	0.410227	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0.016884	0.040521	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0.126726	0.30414	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0.03212	0.077088	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0.181437	0.435448	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0.11118	0.266832	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0.083155	0.199573	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0.162232	0.392845	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Field Calculator

Fields: OBJECTID_1, CLASS, ACCESS, LEFT_FROM, LEFT_TO_AD, RIGHT_FROM, RIGHT_TO_A, PREFIX_DIR, NAME, TYPE, SUFFIX_DIR, LEFT_ZIP

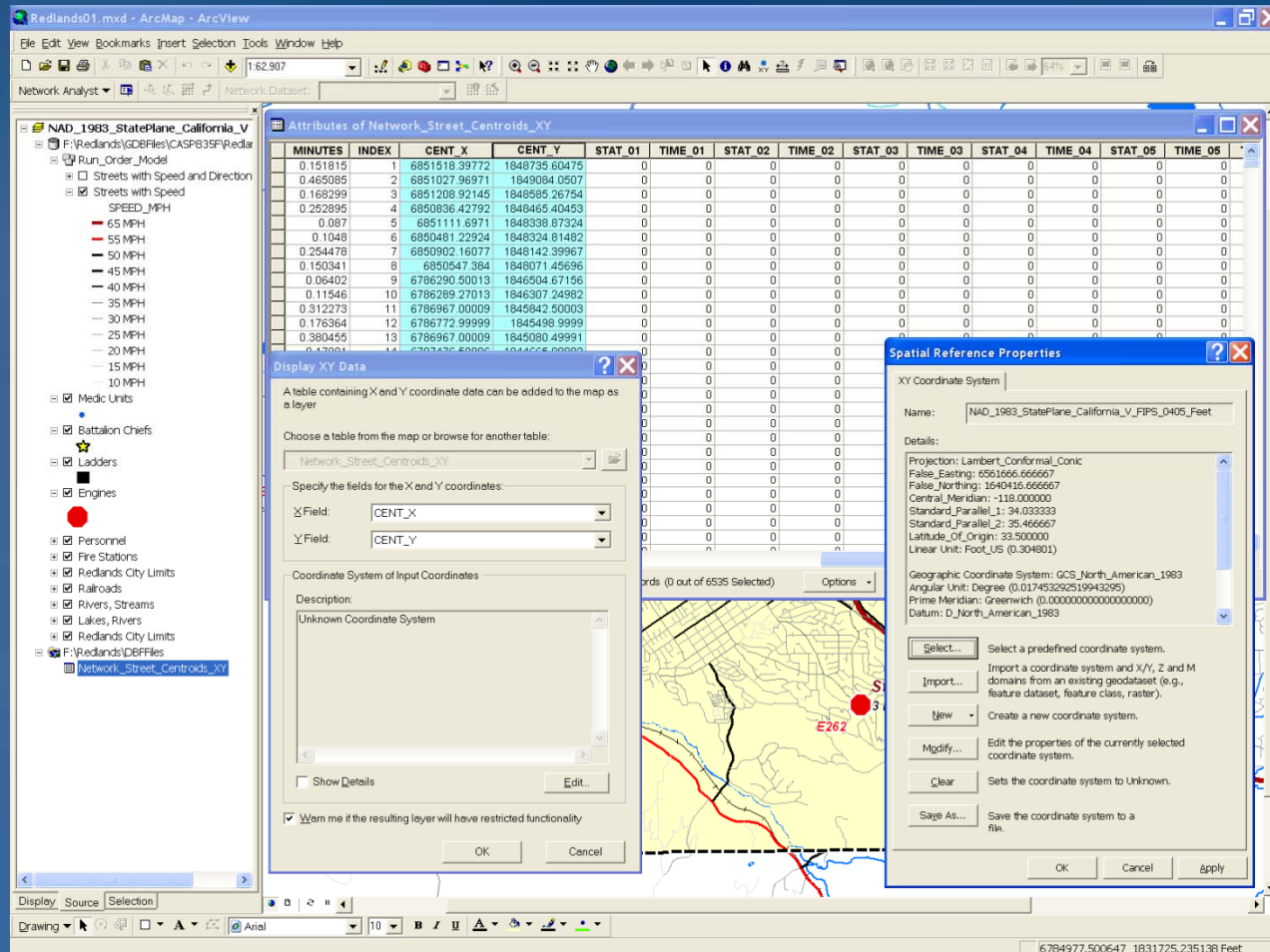
Type: Number (selected), String, Date

Functions: Abs(), Atn(), Cos(), Exp(), Fix(), Int(), Log(), Sin(), Sqr()

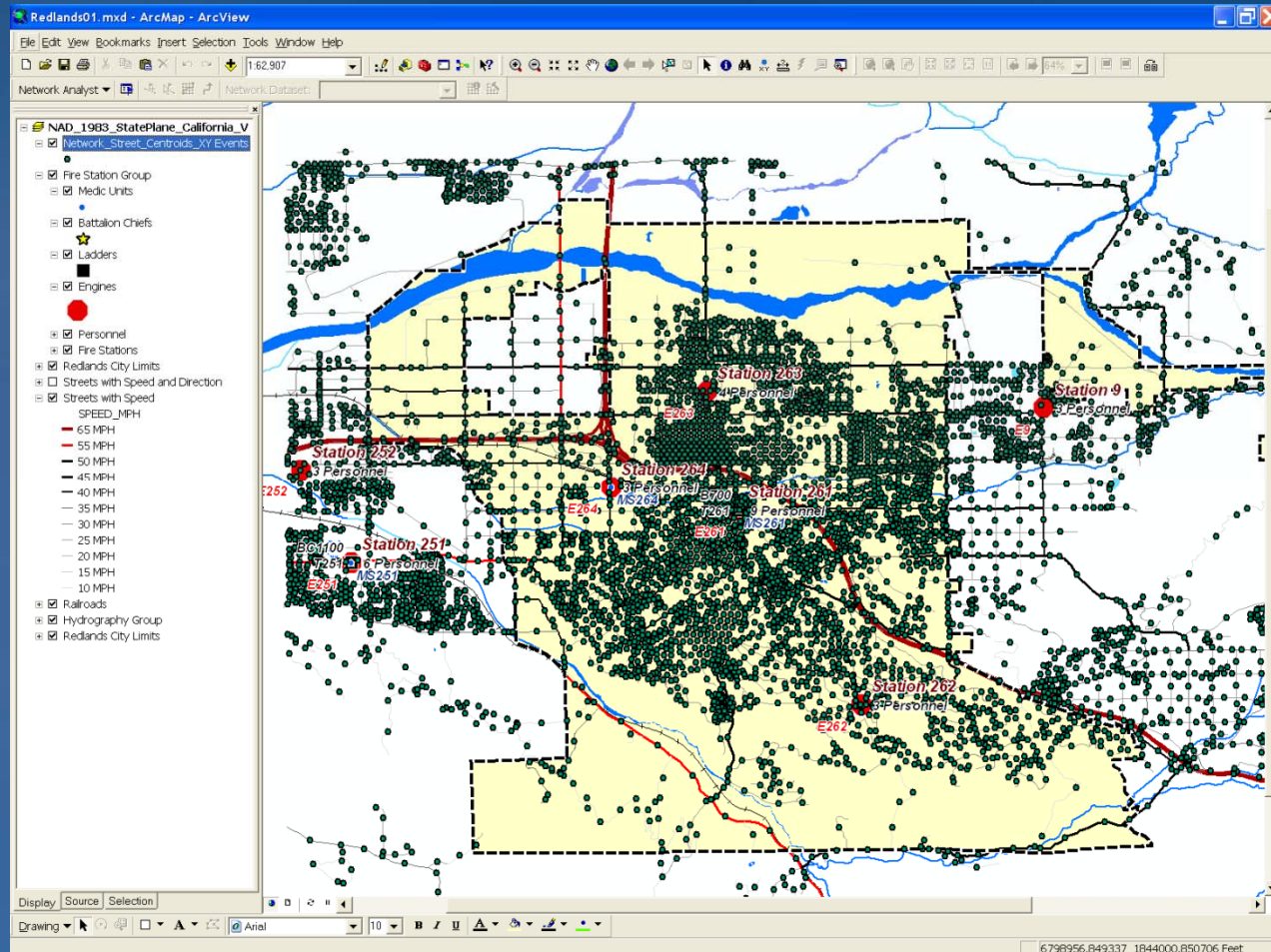
INDEX = [OBJECTID_1]

Calculate selected records only

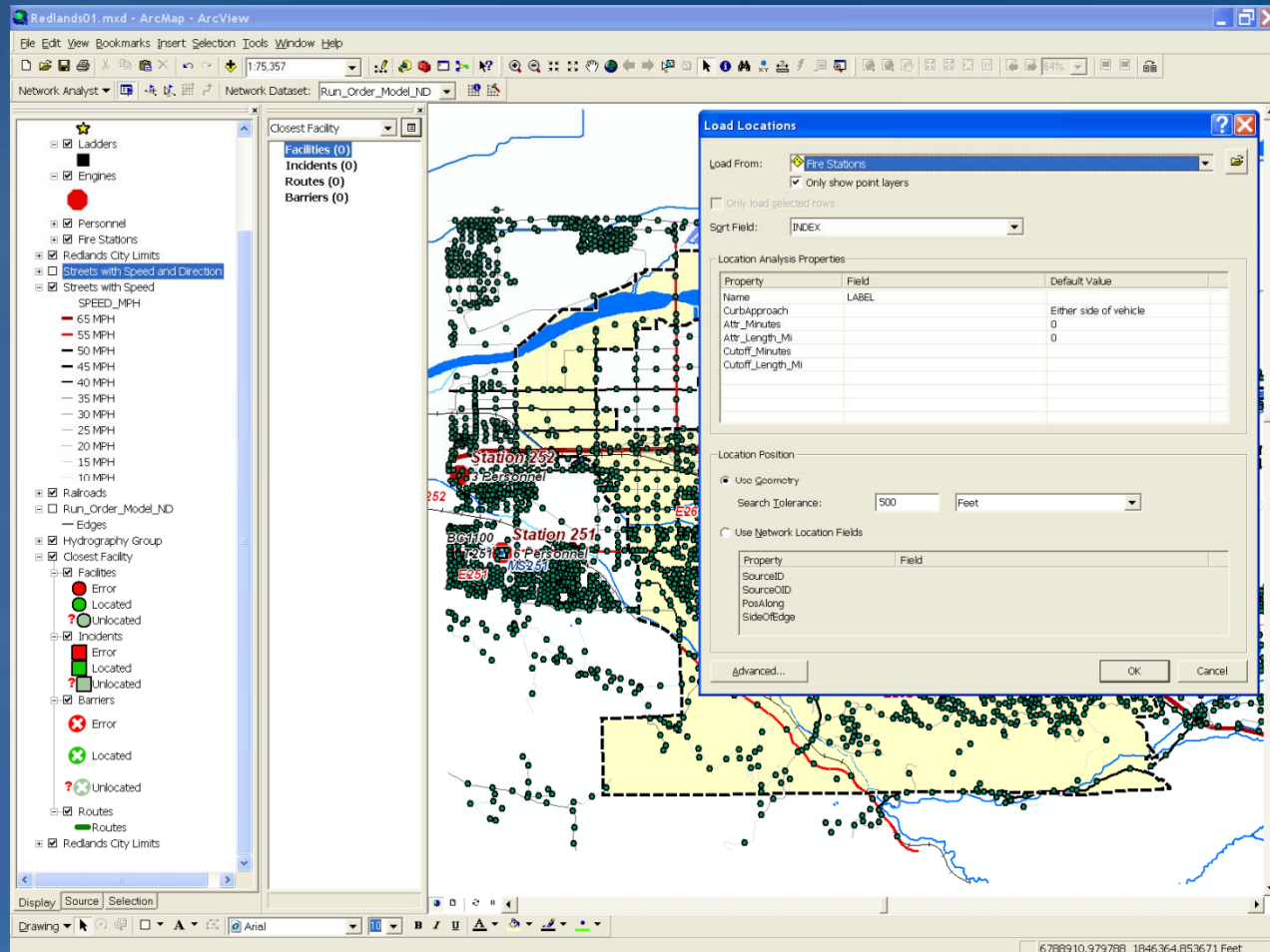
After using Calculate Geometry to calculate centroids for the CENT_X and CENT_Y fields, export these values to a dBASE table.



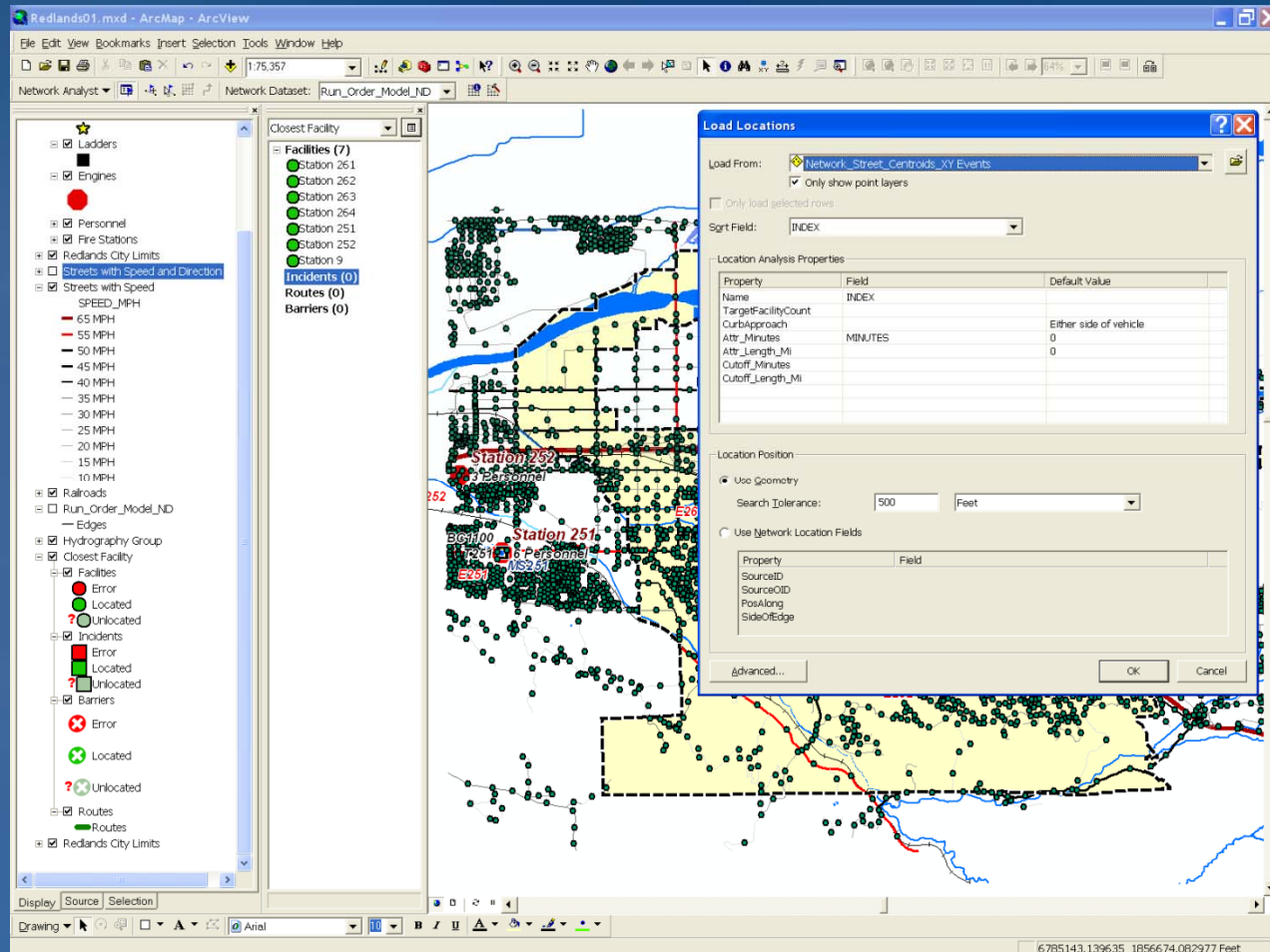
Name the dBASE file Network_Street_Centroids_XY.dbf, save it to the \Redlands\DBFFiles folder, and add it to the map.



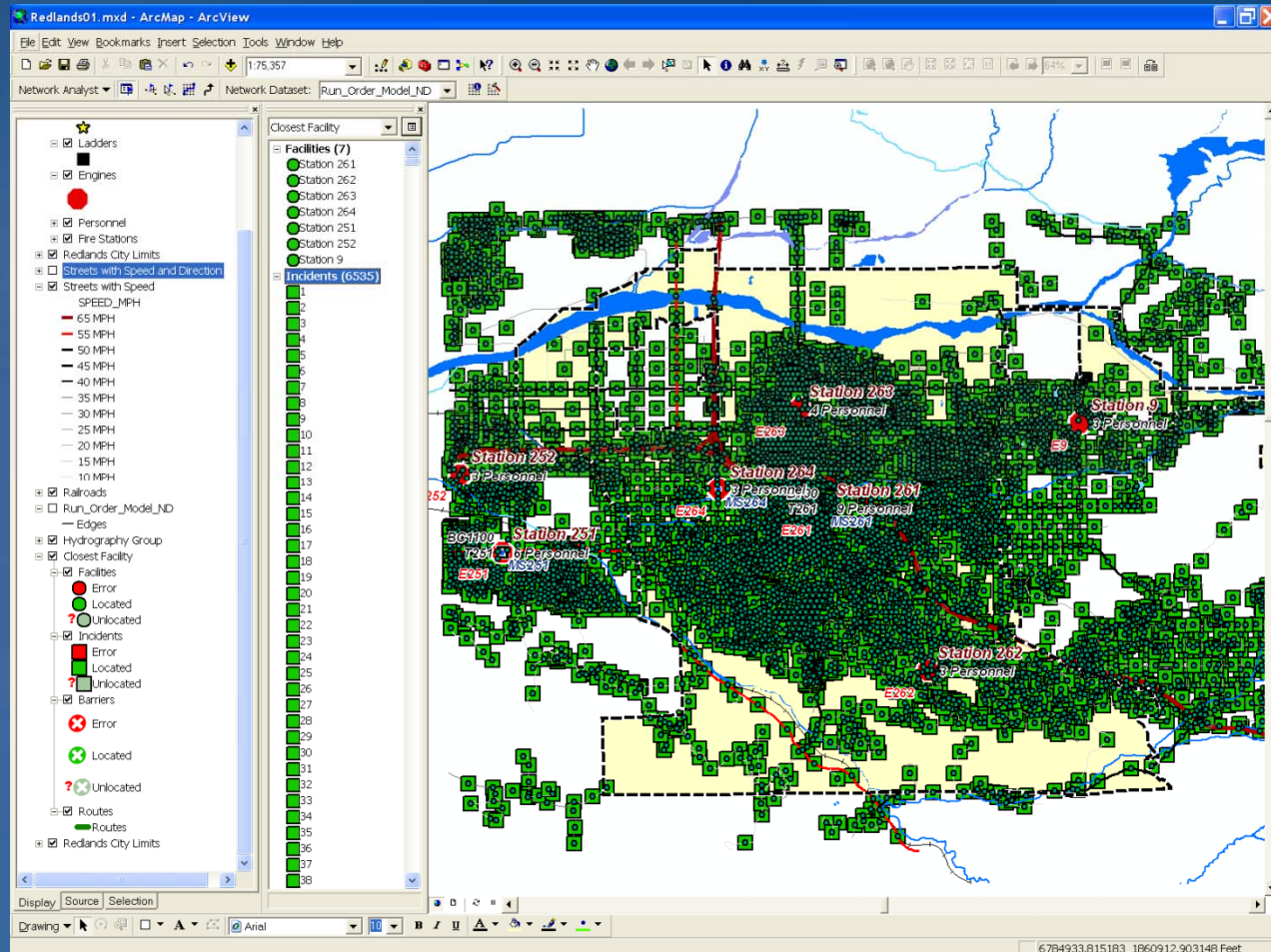
From the Network Analyst drop-down, select New Closest Facility. In the Network Analyst window, right-click on Facilities > Load Locations. Specify Fire Stations > Load From and carefully apply the loading parameters.



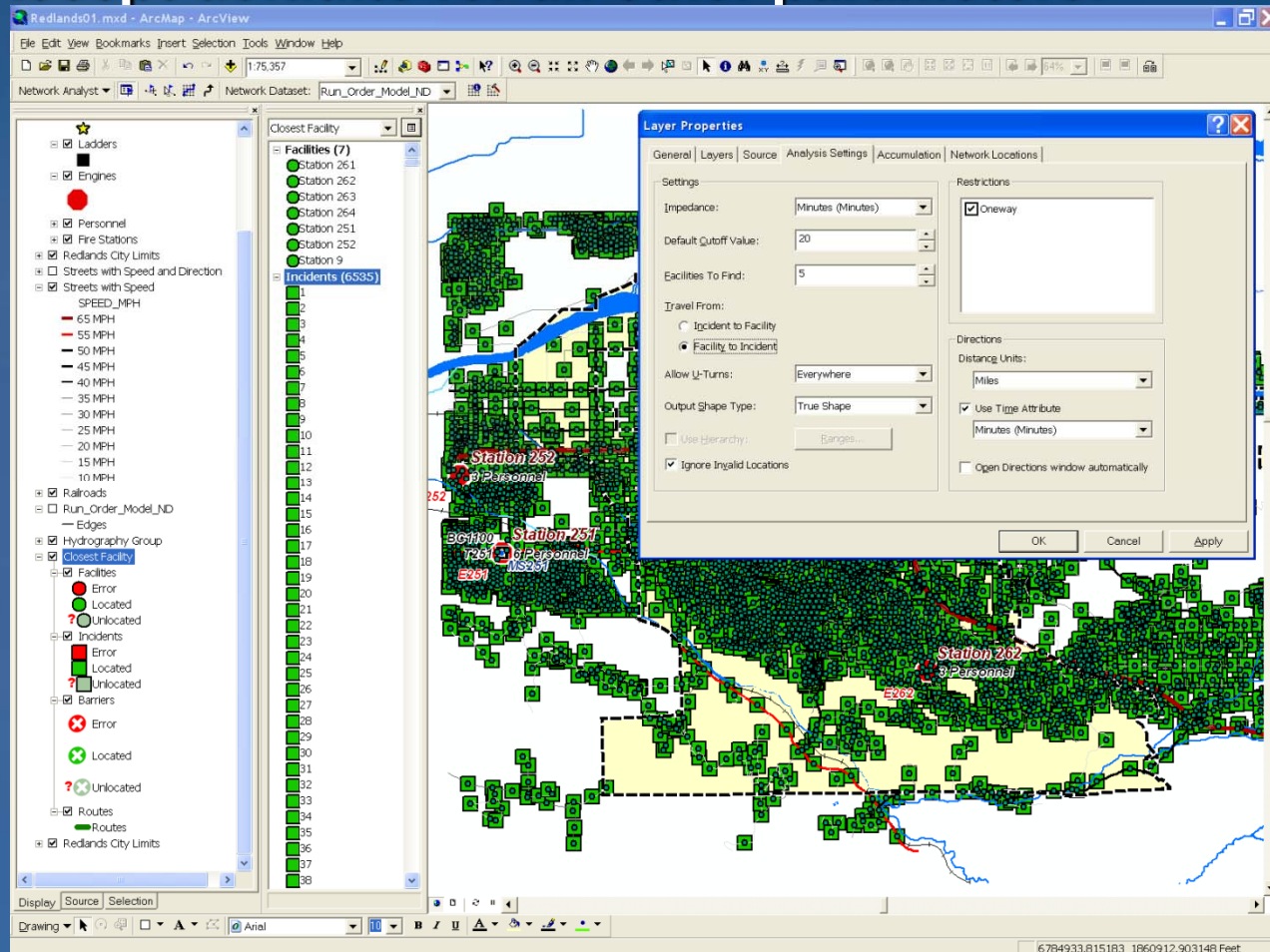
Right-click on Incidents and choose Facilities > Load Locations. Use the parameters shown to load the XY centroid event theme.



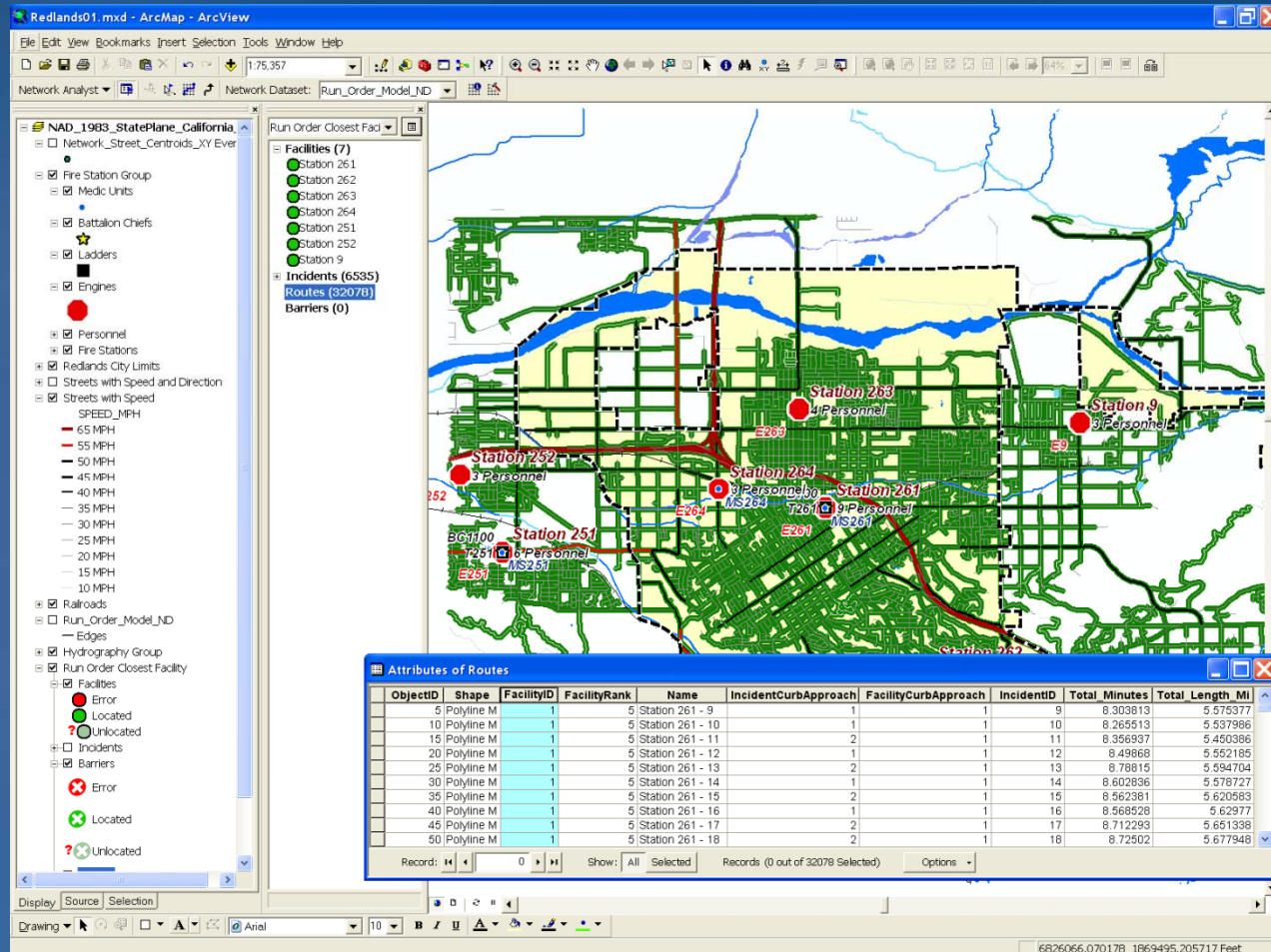
After loading the Incidents, the map should look like this...



In the TOC, right-click on Closest Facility, select Properties. In the Analysis tab, set Impedance to Minutes, Default Cutoff Value to 20, Facilities to Find to 5. Change Travel from to Facility to Incident. Accept defaults for all other parameters.



Right-click on Closest Facility and choose Solve. There are more than 32,000 routes in this solution so this process may take some time.



Join station names, apparatus, and personnel attributes to each route by right-clicking on Routes, choose Join, and specify the parameters shown.

The screenshot shows the ArcMap interface with the 'Join Data' dialog box open. The dialog box is titled 'Join Data' and contains the following information:

- Join lets you append additional data to this layer's attribute table so you can, for example, symbolize the layer's features using this data.
- What do you want to join to this layer?
Join attributes from a table
- 1. Choose the field in this layer that the join will be based on:
FacilityID
- 2. Choose the table to join to this layer, or load the table from:
Fire Stations
☒ Show the attribute tables of layers in this list
- 3. Choose the field in the table to base the join on:
INDEX
- Join Options:
☒ Keep all records
All records in the target table are shown in the resulting table. Unmatched records will contain null values for all fields being appended into the target table from the join table.
☐ Keep only matching records
If a record in the target table doesn't have a match in the join table, that record is removed from the resulting target table.

The background map shows a network of roads and water features. Two specific locations are highlighted: 'Station 263' and 'Station 9'. Below the map, two attribute tables are displayed:

Attributes of Fire Stations

OBJECTID	Shape	STATION N	ADDRESS	LON_DEC	LAT_DEC	E 01	E 02	T 01	T 02	BC01	M 01	INDEX	LABEL	STAFF
1	Point	261	525 E Citrus	-117.1766	34.0555	E261		T261	T261	B700	MS26	1	Station 261	
2	Point	262	1690 Garden St	-117.1547	34.0261	E262						2	Station 262	
3	Point	263	10 W Pennsylvania	-117.1822	34.0736	E263						3	Station 263	
4	Point	264	1270 W Park	-117.1997	34.0591	E264					MS26	4	Station 264	
5	Point	251	11325 Loma Lind	-117.2469	34.0480	E251		T251		BC11	MS25	5	Station 251	
6	Point	252	10520 Ohio St	-117.2559	34.0622	E252						6	Station 252	
7	Point	9	1300 Crafton Ave	-117.1212	34.0707	E9						7	Station 9	

Attributes of Routes

ObjectID	Shape	FacilityID	FacilityRank	Name	IncidentCurbApproach	FacilityCurbApproach	IncidentID	Total_Minutes	Total_Length_Mi
1	Polyline M	6	1	Station 252 - 9	1	1	9	0.682066	0.252996
6	Polyline M	6	1	Station 252 - 10	1	1	10	0.643766	0.215205
11	Polyline M	6	1	Station 252 - 11	2	2	11	0.318296	0.002509
16	Polyline M	6	1	Station 252 - 12	1	2	12	0.460308	0.104309
21	Polyline M	6	1	Station 252 - 13	2	2	13	0.749508	0.146828
26	Polyline M	6	1	Station 252 - 14	1	1	14	1.260633	0.438458
31	Polyline M	6	1	Station 252 - 15	2	1	15	1.220178	0.480314
36	Polyline M	6	1	Station 252 - 16	1	1	16	1.226325	0.489501
41	Polyline M	6	1	Station 252 - 17	2	1	17	1.370091	0.511069
46	Polyline M	6	1	Station 252 - 18	2	1	18	1.382817	0.537679

Right-click on Routes, choose Properties and click on the Definition Query tab. In the formula box, create the expression **CFRoutes.FacilityRank = 1**. This subset represents travel records first on scene stations.

The screenshot shows the ArcMap interface with the following components:

- Query Builder:** A dialog box for building queries. The expression `CFRoutes.FacilityRank = 1` is entered in the text box. The field list on the left includes `CFRoutes.ObjectID`, `CFRoutes.FacilityID`, `CFRoutes.FacilityRank`, `CFRoutes.Name`, `CFRoutes.IncidentCurbApproach`, and `CFRoutes.FacilityCurbApproach`.
- Layer Properties:** A dialog box for the 'Routes' layer. The 'Definition Query' tab is selected, showing the same expression `CFRoutes.FacilityRank = 1`.
- Attributes of Routes:** A table showing the attributes of the selected records. The table has columns: ObjectID, Shape, FacilityID, FacilityRank, Name, IncidentCurbApproach, FacilityCurbApproach, IncidentID, and Total M.

ObjectID	Shape	FacilityID	FacilityRank	Name	IncidentCurbApproach	FacilityCurbApproach	IncidentID	Total M
1	Polyline M	6	1	Station 252 - 9	1	1	9	
6	Polyline M	6	1	Station 252 - 10	1	1	10	
11	Polyline M	6	1	Station 252 - 11	2	2	11	
16	Polyline M	6	1	Station 252 - 12	1	2	12	
21	Polyline M	6	1	Station 252 - 13	2	2	13	
26	Polyline M	6	1	Station 252 - 14	1	1	14	
31	Polyline M	6	1	Station 252 - 15	2	1	15	
36	Polyline M	6	1	Station 252 - 16	1	1	16	
41	Polyline M	6	1	Station 252 - 17	2	1	17	

In the filtered Routes attribute table, choose Options > Export. Save the exported table in Redlands\DBFFiles and name it RO_01.dbf. Don't add this file to the map.

The screenshot shows the ArcMap interface with the 'Export Data' dialog box open. The dialog box has 'Export:' set to 'All records'. Under 'Use the same coordinate system as:', the 'this layer's source data' option is selected. The 'Output table:' field is set to 'F:\Redlands\DBFFiles\RO_01.dbf'. The 'OK' button is highlighted.

The 'Attributes of CFRoutes' table is also visible, showing a list of routes with columns: ObjectID, Shape, FacilityID, FacilityRank, Name, IncidentCurbApproach, FacilityCurbApproach, IncidentID, Total Minutes, and Total Length Mi. The table contains 17 records.

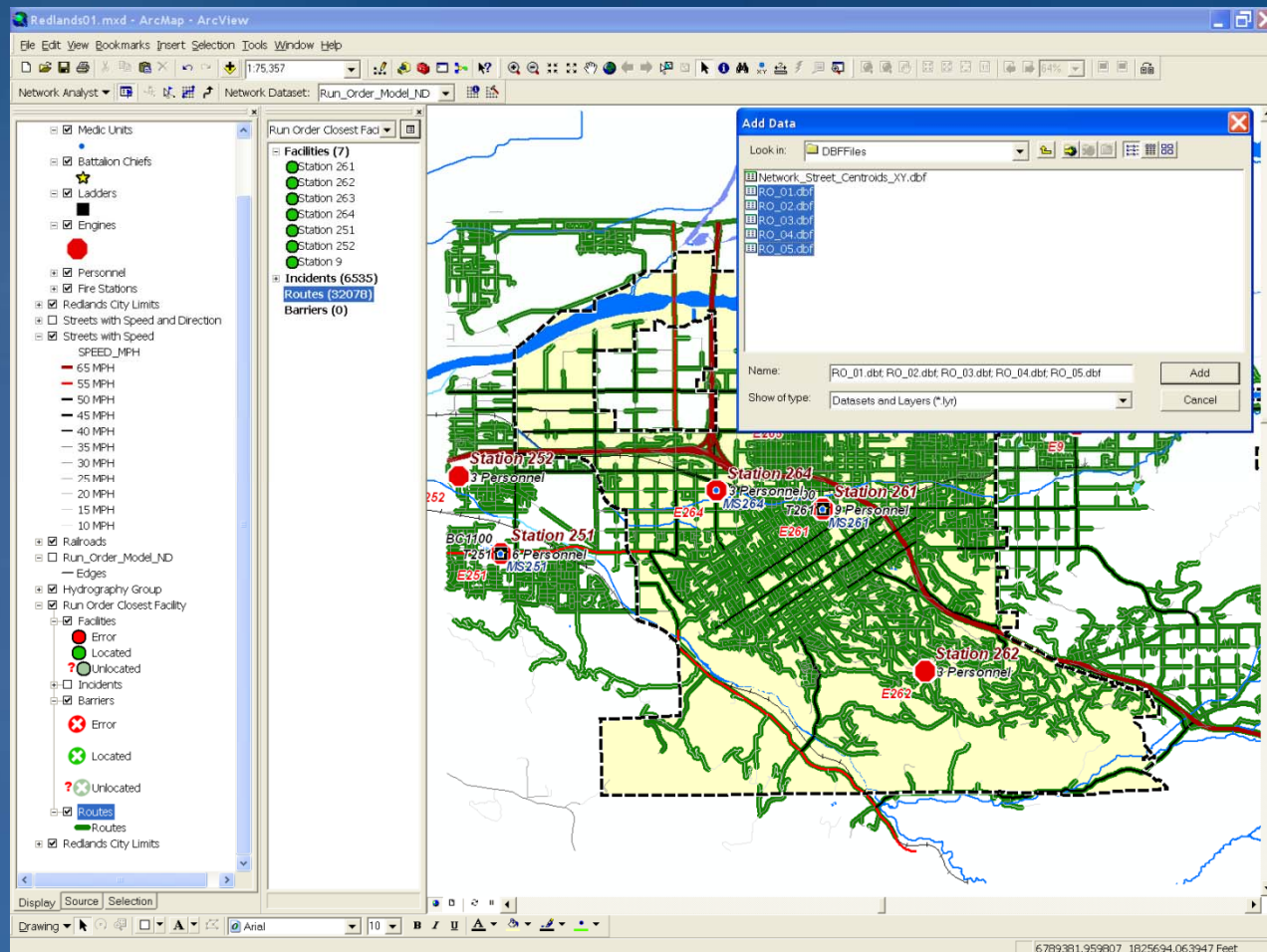
ObjectID	Shape	FacilityID	FacilityRank	Name	IncidentCurbApproach	FacilityCurbApproach	IncidentID	Total Minutes	Total Length Mi
1	Polyline M	6	1	Station 252 - 9	1	1	9	0.682066	0.252596
6	Polyline M	6	1	Station 252 - 10	1	1	10	0.643766	0.215205
11	Polyline M	6	1	Station 252 - 11	2	2	11	0.318296	0.002509
16	Polyline M	6	1	Station 252 - 12	1	2	12	0.460038	0.104309
21	Polyline M	6	1	Station 252 - 13	2	2	13	0.749508	0.146828
26	Polyline M	6	1	Station 252 - 14	1	1	14	1.260633	0.438458
31	Polyline M	6	1	Station 252 - 15	2	1	15	1.220178	0.480314
36	Polyline M	6	1	Station 252 - 16	1	1	16	1.226325	0.489501
41	Polyline M	6	1	Station 252 - 17	2	1	17	1.370091	0.511069

Record: 0 of 17 Selected. Show: All Selected. Records (0 out of 6430 Selected). Options >

Exports the table to a new table

6834910.028313 1834119.373176 Feet

Change the definition query value to 2, then 3, then 4, and then 5, export files, and name them RO_02, RO_03, RO_04, and RO_05. When done, add all five RO files to the map.



Right-click on Streets with Speed, select Joins and Relates, verify there are NO active joins, and create a Join with RO_01, using INDEX as Streets with Speed join field, RO_01 as the table to join, and IncidentID as its join field.

The screenshot shows the ArcMap interface with the 'Join Data' dialog box open. The dialog is configured to join the 'RO_01' table to the 'Streets with Speed' layer. The 'Join Data' dialog has the following settings:

- Join type: Join attributes from a table
- 1. Choose the field in this layer that the join will be based on: INDEX
- 2. Choose the table to join to this layer, or load the table from: RO_01
- 3. Choose the field in the table to base the join on: IncidentID
- Join Options: ☒ Keep all records

The 'Attributes of Streets with Speed' table is displayed with the following columns:

INDEX	CENT_X	CENT_Y	STAT_01	TIME_01	STAT_02	TIME_02	STAT_03	TIME_03	STAT_04	TIME_04	STAT_05	TIME_05	TIME_02_01	Shap
1	6851518	1848735	604	0	0	0	0	0	0	0	0	0	0	0
2	6851027	1849084	050	0	0	0	0	0	0	0	0	0	0	1
3	6851208	1848585	267	0	0	0	0	0	0	0	0	0	0	0
4	6850836	1849465	404	0	0	0	0	0	0	0	0	0	0	0
5	6851111	1848338	873	0	0	0	0	0	0	0	0	0	0	0
6	6850481	1848324	814	0	0	0	0	0	0	0	0	0	0	0
7	6850902	1848142	399	0	0	0	0	0	0	0	0	0	0	0
8	6850547	1848071	456	0	0	0	0	0	0	0	0	0	0	0
9	6786290	1846504	671	0	0	0	0	0	0	0	0	0	0	0

The 'Attributes of RO_01' table is displayed with the following columns:

OID	ObjectID	FacilityID	FacilityRa	Name	IncidentCu	FacilityCu	IncidentID	Total Minu	Total Lei
0	1	6	1	Station 252 - 9	1	1	9	0.682066	0.252
1	6	6	1	Station 252 - 10	1	1	10	0.643766	0.214
2	11	6	1	Station 252 - 11	2	2	11	0.318296	0.002
3	16	6	1	Station 252 - 12	1	2	12	0.460038	0.104
4	21	6	1	Station 252 - 13	2	2	13	0.749508	0.146
5	26	6	1	Station 252 - 14	1	1	14	1.260633	0.438
6	31	6	1	Station 252 - 15	2	1	15	1.220178	0.486
7	36	6	1	Station 252 - 16	1	1	16	1.226325	0.485
8	41	6	1	Station 252 - 17	2	1	17	1.370091	0.511

The map shows a street network with a red dot labeled 'Station 252' and '3 Personnel'.

In the joined table navigate to STAT_01, right-click its header, and select Field Calculation. Use RO_01.STATION_NO to populate the STAT_01 field.

The screenshot shows the ArcMap interface with a map of Redlands, California. The map displays various features including streets, fire stations, and personnel locations. A table titled 'Attributes of Streets with Speed' is open, showing columns for INDEX, CENT_X, CENT_Y, STAT_01, TIME_01, STAT_02, TIME_02, and STAT_03. The STAT_01 column is highlighted in cyan. A 'Field Calculator' dialog box is open, showing the 'Fields' list with 'RO_01.STATION_NO' selected. The 'Type' is set to 'Number'. The 'Functions' list includes 'Abs', 'Atn', 'Cos', 'Exp', 'Fix', 'Int', 'Log', 'Sin', and 'Sqr'. The 'Advanced' checkbox is checked. The 'Network_Street.Stat_01' field is selected, and the expression '[RO_01.STATION_NO]' is entered in the 'Value' field.

INDEX	CENT_X	CENT_Y	STAT_01	TIME_01	STAT_02	TIME_02	STAT_03
1	6851518.397721	1848735.604754	0	0	0	0	0
2	6851027.969711	1849084.050697	0	0	0	0	0
3	6851208.92145	1848585.267537	0	0	0	0	0
4	6850836.42792	1848465.404525	0	0	0	0	0
5	6851111.697101	1848338.873245	0	0	0	0	0
6	6850481.229244	1848324.814815	0	0	0	0	0
7	6850902.160772	1848142.399674	0	0	0	0	0
8	6850547.384001	1848071.456957	0	0	0	0	0
9	6786290.500132	1848504.671556	0	0	0	0	0

Field Calculator

Fields:

- RO_01.Name
- RO_01.IncidentCu
- RO_01.FacilityCu
- RO_01.IncidentID
- RO_01.Total_Minu
- RO_01.Total_Leng
- RO_01.OBJECTID_1
- RO_01.STATION_NO
- RO_01.ADDRESS
- RO_01.LOW_DEC
- RO_01.LAT_DEC
- RO_01.E_01

Type:

- Number
- String
- Date

Functions:

- Abs ()
- Atn ()
- Cos ()
- Exp ()
- Fix ()
- Int ()
- Log ()
- Sin ()
- Sqr ()

Network_Street.Stat_01 = [RO_01.STATION_NO]

Calculate selected records only

OK Cancel

Use the RO_01.Total_Minu to populate the TIME_01 field.

The screenshot displays the ArcMap interface with the 'Redlands01.mxd' project. The 'Network Analyst' toolbar is active, and the 'Run_Order_Model' is loaded. The 'Attributes of Streets with Speed' table is open, showing a list of streets with their attributes. The 'TIME_01' field is highlighted in blue. The 'Field Calculator' dialog is open, showing the 'Fields' list with 'RO_01.Total_Minu' selected. The 'Type' is set to 'Number'. The 'Functions' list is also visible. The map view shows a network of streets with various attributes.

INDEX	CENT_X	CENT_Y	STAT_01	TIME_01	STAT_02	TIME_02	STAT_03
386	6803518.974815	1850193.453339	264	0	0	0	0
1018	6797996.999791	1850206.841501	264	0	0	0	0
1019	6799964.500429	1850222.723349	264	0	0	0	0
1186	6796025.268918	1846028.708105	264	0	0	0	0
2216	6801272.243719	1850886.379918	264	0	0	0	0
2234	6796653.945299	1849551.938877	264	0	0	0	0
2235	6796644.188103	1850872.062031	264	0	0	0	0
2256	6806026.028116	1843521.743106	264	0	0	0	0
2257	6807626.000112	1843913.687613	264	0	0	0	0

Record: 0 | Show: All | Selected | Records (0 out of 6535 Selected) | Options

Field Calculator

Fields:

- RO_01.FacilityRa
- RO_01.Name
- RO_01.IncidentCu
- RO_01.FacilityCu
- RO_01.IncidentID
- RO_01.Total_Minu**
- RO_01.Total_Leng
- RO_01.OBJECTID_1
- RO_01.STATION_NO
- RO_01.ADDRESS
- RO_01.LON_DEC
- RO_01.LAT_DEC

Type:

- ☒ Number
- ☐ String
- ☐ Date

Functions:

- Abs ()
- Atn ()
- Cos ()
- Exp ()
- Fix ()
- Int ()
- Log ()
- Sin ()
- Sqr ()

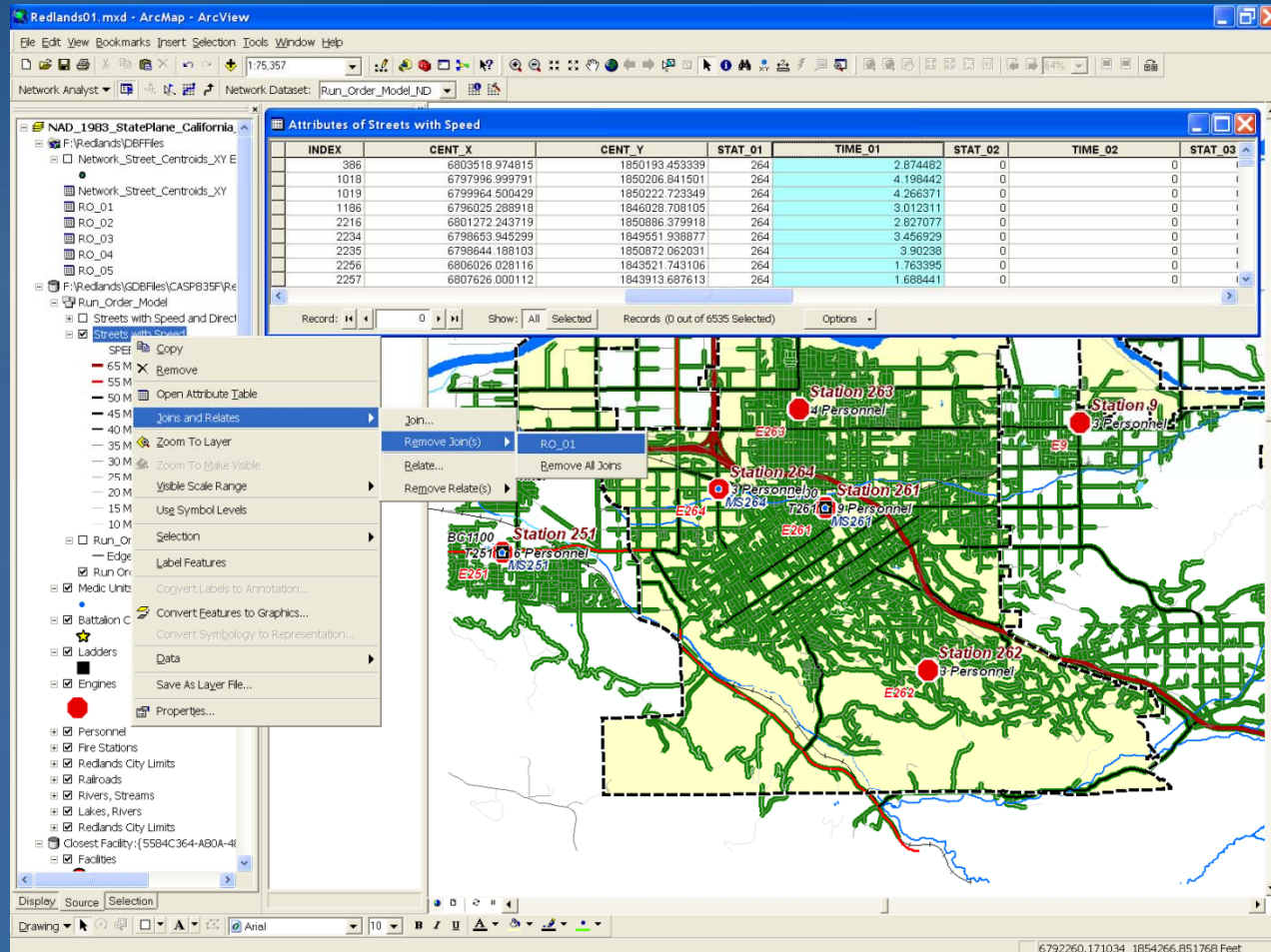
Network_Streets.TIME_01 =

[RO_01.Total_Minu]

Calculate values for this field

6792260.171034 1854266.851768 Feet

In the TOC, right-click Streets with Speed, select Joins and Relates, and remove the RO_01 join. DO NOT skip this step.

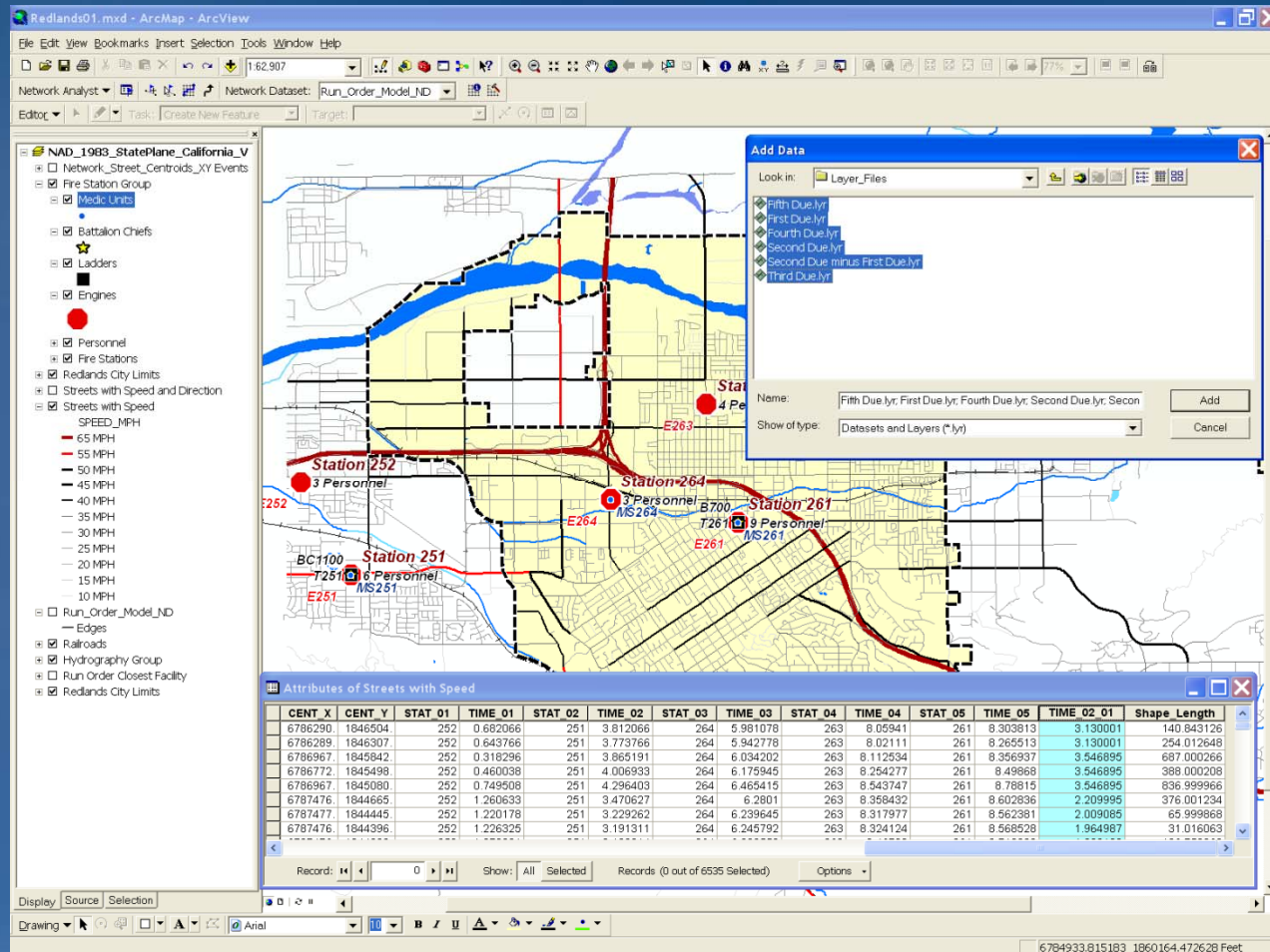


Subtracting the First Due arrival time from the Second Due time models the approximate time interval the first crew will have to wait. Right-click on TIME_02_01, select Field Calculator, enter $[TIME_02] - [TIME_01]$ in the calculation window.

The screenshot shows the ArcMap interface with a map of Redlands, CA. The 'Field Calculator' window is open, showing the calculation $[TIME_02] - [TIME_01]$ for the field 'TIME_02_01'. The 'Calculate selected records only' checkbox is checked. Below the map, a table titled 'Attributes of Streets with Speed' displays the calculated values for 6535 records.

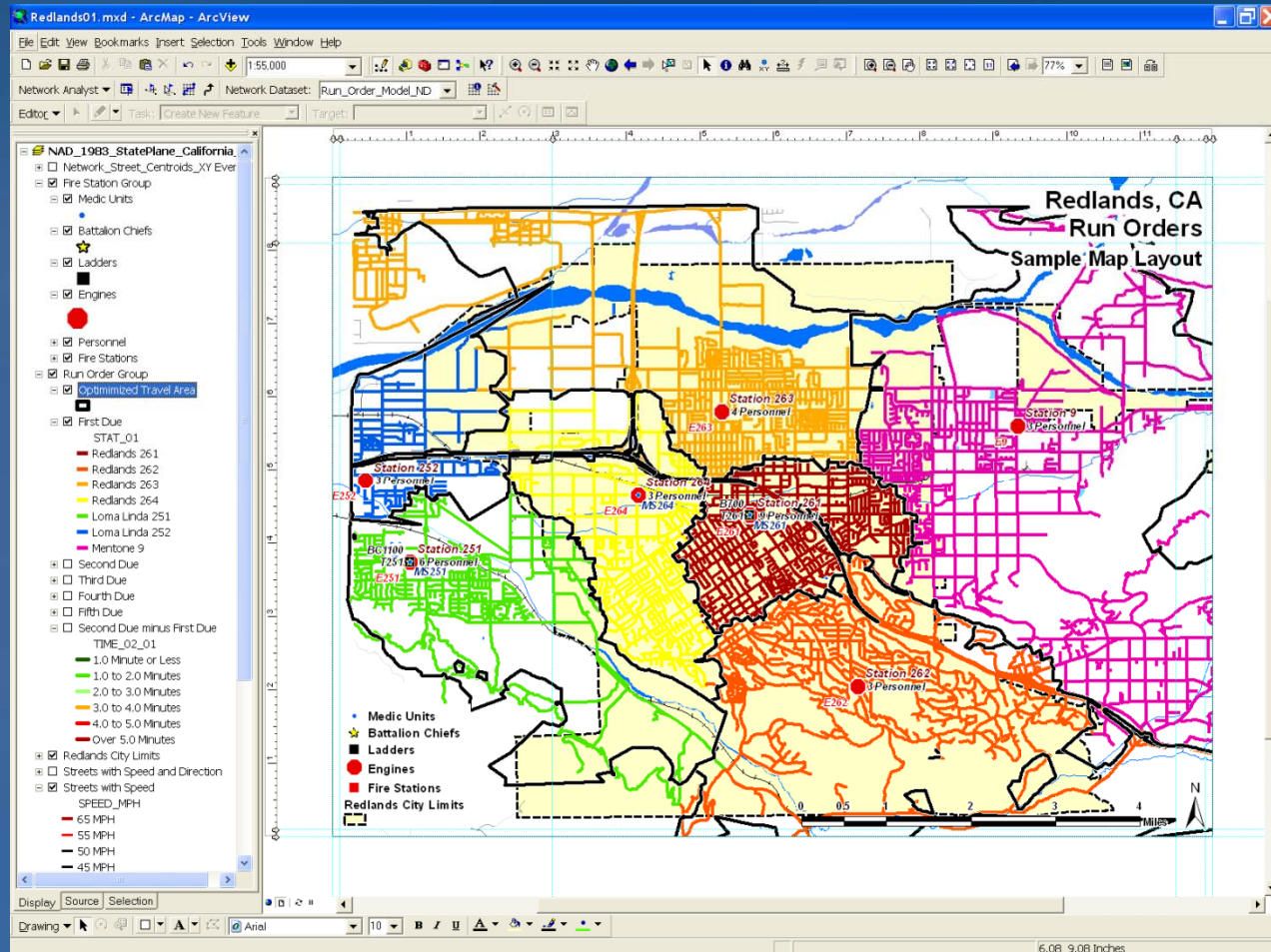
CENT_Y	STAT_01	TIME_01	STAT_02	TIME_02	STAT_03	TIME_03	STAT_04	TIME_04	STAT_05	TIME_05	TIME_02_01	Shape_Length
1848324.814	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	0	
1848142.399	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	0	
1848071.456	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	0	
1846504.671	252	0.682066	251	3.812066	264	5.981078	263	8.059411	261	8.303813	0	
1846307.249	252	0.643766	251	3.773766	264	5.942778	263	8.021111	261	8.265513	0	
1845842.500	252	0.318296	251	3.865191	264	6.034202	263	8.112534	261	8.356937	0	
1845498.999	252	0.460038	251	4.006933	264	6.175945	263	8.254277	261	8.49868	0	
1845080.499	252	0.749508	251	4.296403	264	6.465415	263	8.543747	261	8.78815	0	
1844665.999	252	1.260633	251	3.470627	264	6.2801	263	8.358432	261	8.602836	0	
1844445.000	252	1.220178	251	3.229262	264	6.239645	263	8.317977	261	8.562381	0	
1844396.500	252	1.226325	251	3.191311	264	6.245792	263	8.324124	261	8.568528	0	

In the Bonus_Files folder, there layer files and a shapefile showing optimized station area boundaries. Load all files in the map and group them in a new Layer Group named them Run Order Group. Place the group just below Fire Stations in the TOC.

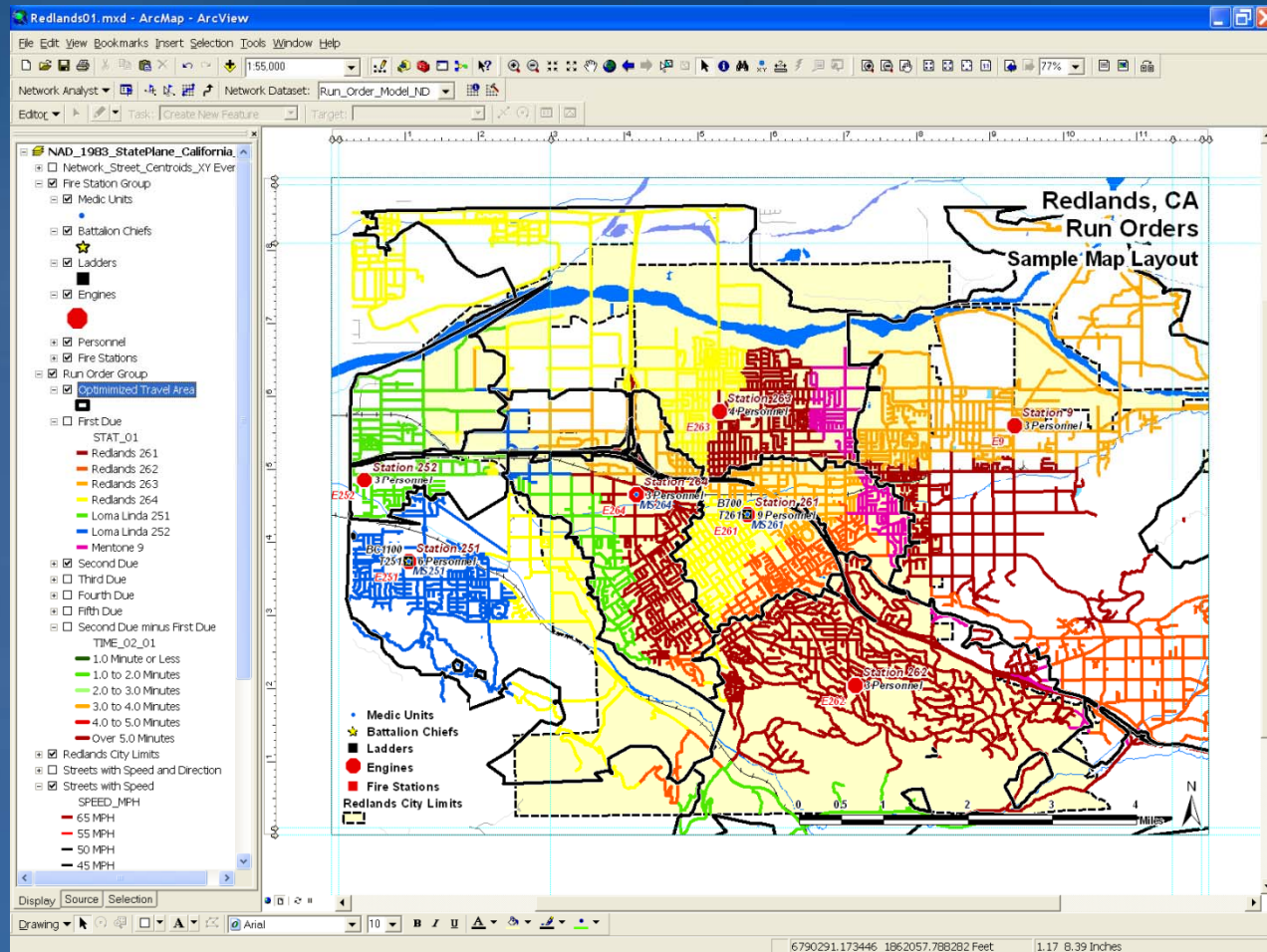


First Due Order

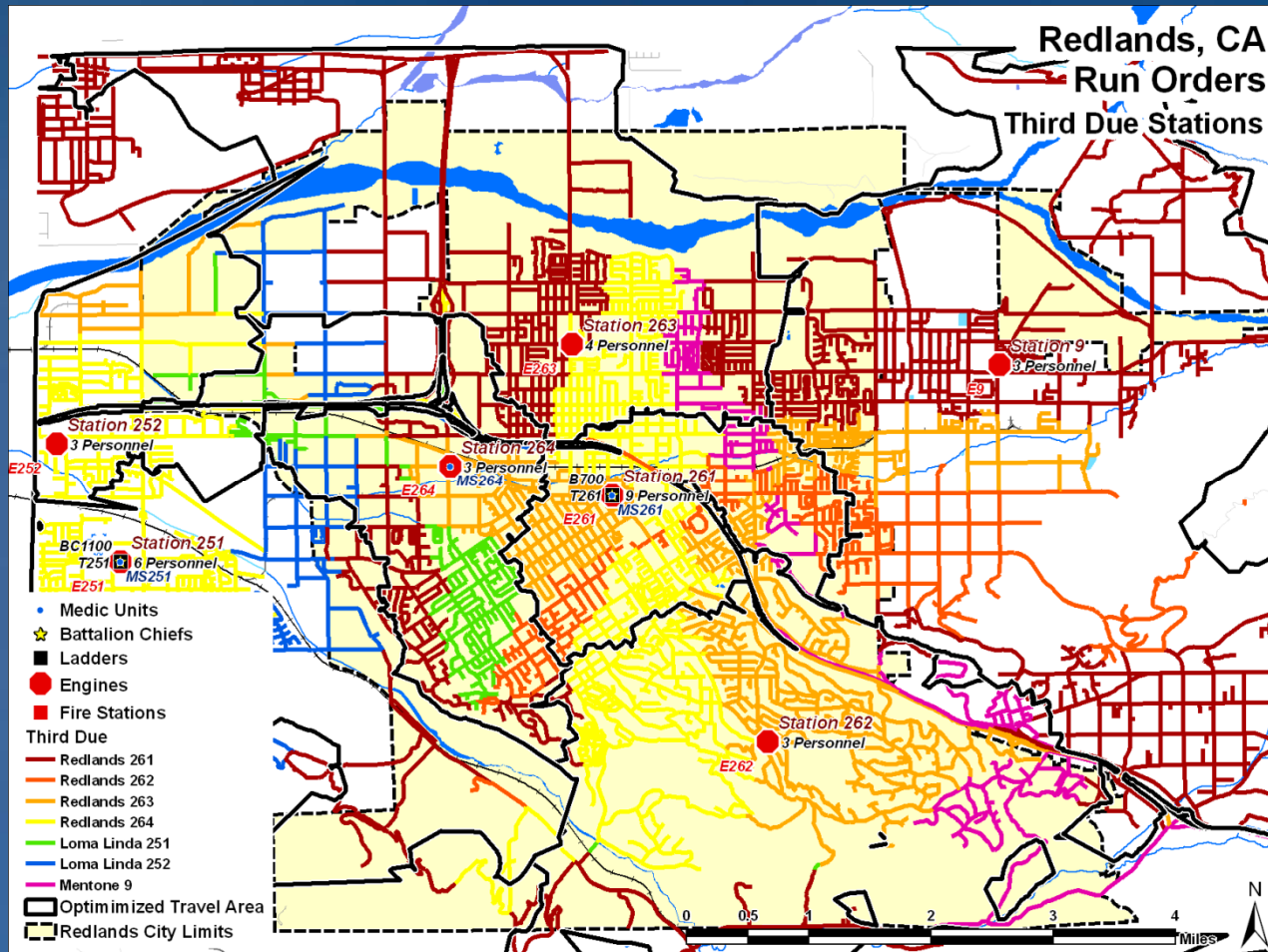
Turn layers for Due Groups and create maps for each group.



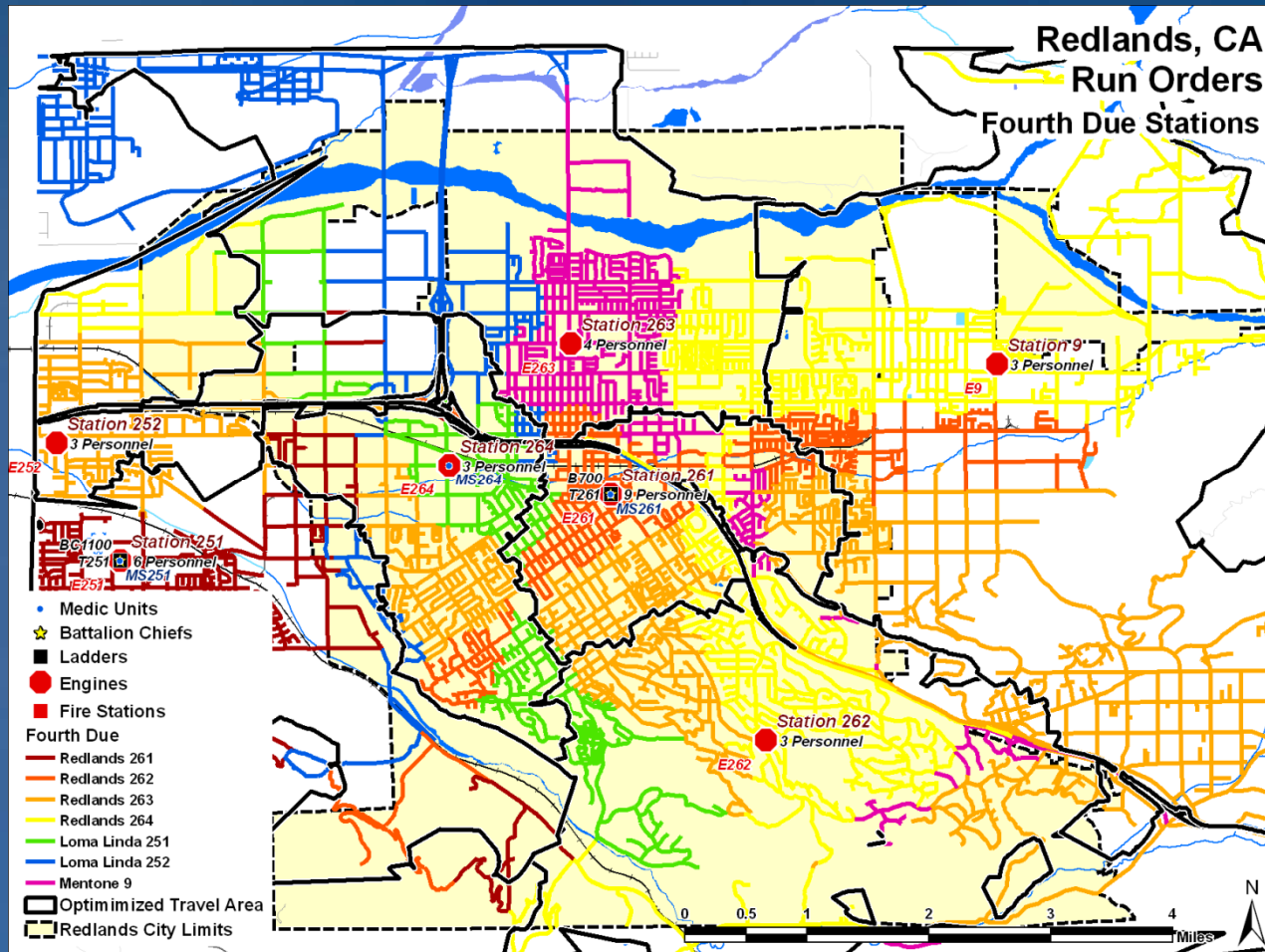
Second Due Order



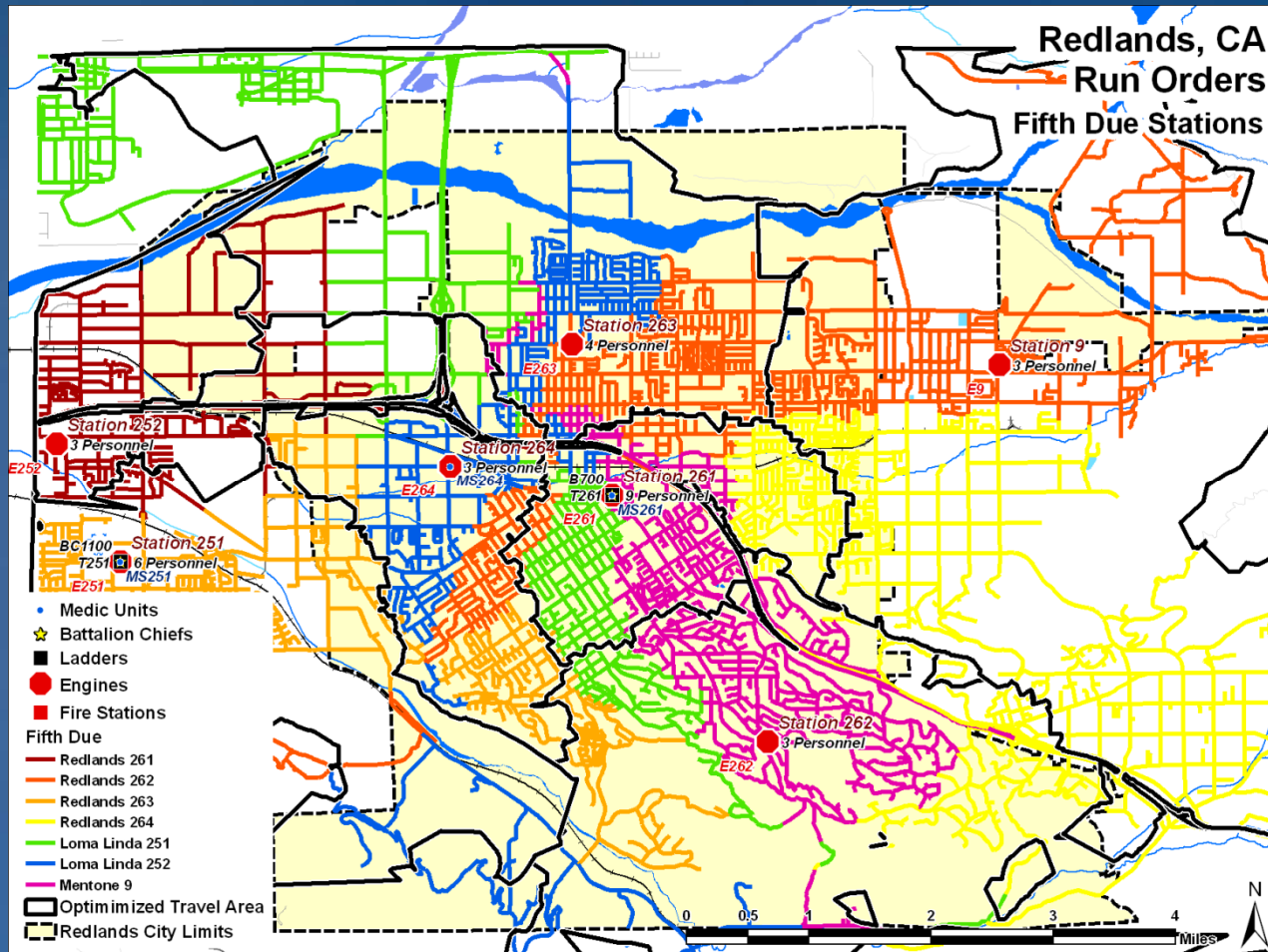
Third Due Order



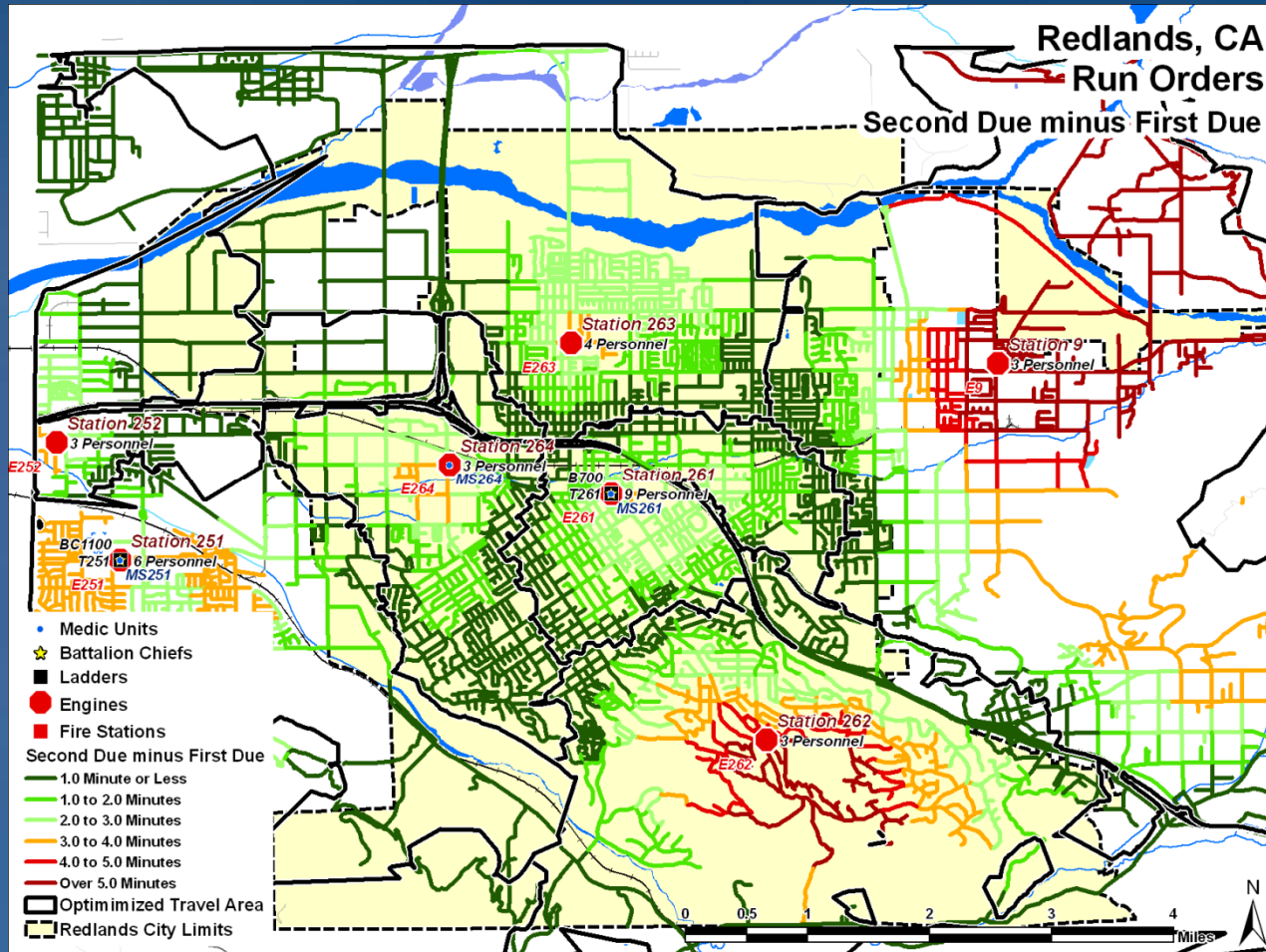
Fourth Due Order



Fifth Due Order



Second Due minus First Due = Wait Time



Run Order Benefits and Limitations

- Run orders provide emergency responders with an accurate, reliable way to model complex responses with travel from multiple locations. This workflow counts on response from fixed facilities with all responders who are dispatched simultaneously.
- This method works well for a static, districtwide model that includes automatic and mutual aid. As mobile dispatching and automated vehicle locators (AVL) become widely deployed, this workflow will need to be simplified to speed up individual event dispatching. Remember your target audience