STATUTE

Attribute	Code Designation	Elements of Crime
Data Type	Varchar(12)	Int**

Relation 1: {Code Designation, Elements of Crime}

Code Designation → Elements of Crime

Defined-By

Attribute	Incident Number	Code Designation
Data Type	Int (incrementing)	Varchar (12)

Relation 2: {Code Designation, Incident Number}

Incident Number → Code Designation

CRIMINAL INCIDENT

Attribute	Incident Number	Time Occurred	Date Occurred	Address
Data Type	Int (incrementing)	Int (4-digit time)****	Date	Varchar(50)

Relation 3: {Incident Number, Time Occurred, Date Occurred, Address}

Incident Number → Time Occurred, Date Occurred, Address

Reported-Through

Attribute	Report Number	Incident Number
Data Type	Int (incrementing)	Int (incrementing)

Relation 4: {Report Number, Incident Number}

Report Number → Incident Number
Incident Number → Report Number

CRIME REPORT

Attribute	Report Number	Date Filed	Description
Data Type	Int (incrementing)	Date	Varchar(200)

Relation 5: {Report Number, Date Filed, Description}

Report Number → Date Filed, Description

Given-A

Attribute	Report Number	Report Number
Data Type	Int (incrementing)	Int (incrementing)

Relation 6: {Report Number}

STATUS UPDATE

Attribute	Report Number	Revision Number	Date Revised	Status
Data Type	Int (incrementing)	Int (incrementing)	Date	Int***

Relation 7: {Report Number, Revision Number, Date Revised, Status}

Report Number, Revision Number → Date Revised, Status
Report Number, Date Revised → Revision Number, Status

Filed-By

Attribute	Date Graduated	Badge Number	Report Number
Data Type	Date	Int	Int (incrementing)

Relation 8: {Date Graduated, Badge Number, Report Number}

Date Graduated, Badge Number → Report Number

POLICE OFFICER

Attribute	Date Graduated	Badge Number	Last Name	First Name
Data Type	Date	Int	Varchar(25)	Varchar(25)

Relation 9: {Date Graduated, Badge Number, Last Name, First Name}

Date Graduated, Badge Number → Last Name, First Name

Member-Of

Attribute	Date Graduated	Badge Number	Precinct Number
Data Type	Date	Int	Int (tiny)

Relation 10: {Date Graduated, Badge Number, Precinct Number}

Date Graduated, Badge Number → Precinct Number

POLICE DEPARTMENT

Attribute	Precinct Number	Jurisdiction
Data Type	Int (tiny)	Varchar(50)

Relation 11: {Precinct Number, Jurisdiction}

Precinct Number → Jurisdiction

Notes:

** Since "Elements of a Crime" is essentially a pooled checklist attribute--that is, it's a series of true/false flags for a pool of common items--it's suggested that it be modeled this way in the data somehow. This way, it will reduce the amount of disk space immensely while simultaneously providing richness of information.

For instance, Aggravated Battery and Murder both contain the crime elements "interpersonal contact" and "injury", but Murder would also contain the "resulting in death" element, whereas Aggravated Battery would not. Similarly, Robbery and Grand Burglary would both contain the crime elements "possession" and "property belonging to another", but whereas Robbery would also contain "interpersonal contact" and "threat of use of force" elements, Burglary would instead contain the "breaking into premises" element.

*** Since this is a multiple choice-style data element, a very small integer or set of booleans should suffice. This can be implemented in an almost identical manner to the above note.

****Since the times are only reported to the minute and not to the second, the TIME data type would not be efficient in our case. Therefore we chose to go with the INT data type as we only need to record time down to the minute in a 24 hour format.