In this data engineering project, the steps followed adhered to an ETL (Extract, Transform, Load) process. Let's break down these steps to understand how I transformed raw data into a meaningful analytics table.

* **Modeling the Logical Design**: The first step involved conceptualizing the logical design of the data model. This phase was crucial in determining how different aspects of the crime, housing, and climate data would relate to each other. Decisions about what data to include and how to structure it were made with the project's objectives in mind.
* **SQL Design**: The next step was designing the SQL schema. This involved identifying the primary and foreign keys for each dataset, ensuring that relationships between different data types were logically and efficiently structured. This step is fundamental for maintaining data integrity and facilitating complex queries.
* **Data Collection**: For the data collection, I turned to reliable sources such as data.world, data.gov, and other data-rich websites. These platforms provided me with up-to-date and comprehensive datasets required for my analysis.
* **Focus on Specific City Parts**: I narrowed my focus to specific city areas for crime and property data. This helped in maintaining a manageable scope and ensuring data relevance.
* **Property Crime Categories**: I categorized property crime into various types like larceny-theft, robbery, and motorcycle theft, among others. This categorization allowed for more nuanced analysis and insights.
* **Data Cleaning**: The next crucial step was cleaning the data for both property and crime datasets. This involved removing inconsistencies, handling missing values, and standardizing formats to ensure data quality.
* **Data Merging**: After cleaning, the data from different sources were merged based on city information. This step was pivotal in combining the datasets into a unified structure for analysis.
* **Database Creation with SQLAlchemy**: The final step was the creation of a database using SQLAlchemy. This ORM (Object-Relational Mapping) library facilitated the ETL process, allowing for efficient extraction of files, transformation, and loading of data into our database.