Database RoadIt

A brief word about the developed database

The database starts, just like the construction, at a stretch of road to get adjusted (Table RoadSection). RoadSection describes a stretch of road whit an ID.

On a single roadsection, several projects can be carried out. Therefore, RoadSection and Project table have an 1: N relationship. The table includes a projectId and the RoadSectionId.
Each project can have multiple contractors, therefore the Contractor table with the necessary IDs.

Each project has its own schedule with some information.
- Layer Thickness in mm with a maximum of 1 m
- Surface in m² with a maximum of ~ 1000km²
- TonPerDay with a maximum of ~ 10 million metric tons

Each project has its own quality control
- Each attribute is a varchar, and thus refers to an archived pdf. Live data, we can not read yet. We had to postponed because of lack of time.
BatchList contains all the necessary IDs to connect the following tables
- Project as a project has multiple batches
- Silo because a batch can be in multiple silos
- Transportation as a batch is transported through multiple shipments

Silo covers all necessary IDs to connect the following tables together
- Bitumen with timestamp and the necessary temperatures in ° C with minimum -999 ° C up to 999 ° C
- Aggregation works like bitumen
- ListFillerRecup expressed as a percentage INT(3)
- Asphaletmixplant contains only links to PDFs
- Composition contains nine data values from excel, all these were not clear
Furthermore silo contains the following attributes
- Mixing temperatures in ° C with minimum -999 ° C up to 999 ° C
- Silo temperatures in ° C with minimum -999 ° C up to 999 ° C
- Mixing time
- Analysis composition is a link to an Excel

Compactor connects to BatchList
- SpeedofRollerCompactor in m/s with up to 99m/min and -99m/s
- Locationofvibration is link to data file
- Numberofcompactorpassages is link to data file
- Qrcodecompactor link to QR code
- Color code
accompanying excel says this goes too far for the project. We set it to collect the two GPS data

Transport has the following tables
- Actual position with GPS coordinate in varchar
- Actual return positions with GPS coordinate in varchar
- ETA varchar because we are not sure of how the data will look like
- ETAReturn varchar because we are not sure of how the data will look like
- TransportTemp temperatures in ° C with minimum -999 ° C up to 999 ° C
Furthermore, the following attributes
- Truck License Plate is a varchar sake of letters, numbers and "-"
- Departure Time's timestamp
- Real Arrival Time is the timestamp
- Mass truck in kg with up to 99 metric tons
- DeattachementFinnisherTime Timestamp
- DeattachementFinnisherPosition is GPS so varchar
- ArrivalPlant timestarmp
- UnforeseenStop in minutes

Finisher connects to transportation because the finisher ever with multiple loads from a transport works. It has the following tables
- Width in meters
- AphaltTemp with GPS and tempering in accordance with the previously described methods
- AirHuminity in percent so INT (3)
- Temp, according to the known method,
- Speed in m/min
- Wind in km/h
- GPS and LocationandTimeSpan and duration in minutes
- Layer Thickness in mm in left, center and right
- Angle in °
Furthermore, also the following attributes
- Trans Fresh Lope percentage
- Precipitation link to weather report
- AsphaltTempAfter ... link to giga file

Users and their hashed password are stored in the users table. Via a RoleId, they are associated with one of the six operators. When one signs in, a view will be selected on a basis of the RoleId. The view includes which data from which tables the user is allowed to see.