



Location & GIS:

GoGIS — A Precise Map for Every Asset and Event

GoGIS is the geospatial foundation of the GoATMS platform — a unified Location and GIS service that gives every device, incident, and event an exact place on the road network. Built around a full Linear Referencing System, GoGIS resolves coordinates to routes and reference points and converts them back to map coordinates, so operators can describe locations the way the field does while the system keeps precise geometry underneath.

Every organization manages its road network differently, and GoGIS adapts to each. The service imports authoritative agency GIS data through ESRI connectors, with parsers tuned for state DOTs and regional agencies nationwide. Imports run in steps with resumable progress, loading administrative areas, routes, measures, lane configurations, and landmarks in one pass. Manual edits are flagged so a re-import never overwrites local corrections.

GoGIS uses a flexible overlay model that lets each agency add, override, or hide records on top of a shared GIS dataset without disturbing the source data. When a re-import removes a customized shared record, GoGIS flags the affected override for review. Geocoding, reference-point lookup, and administrative-area resolution run together, returning road, jurisdiction, and reference-point context in one response.

Beyond reference data, GoGIS actively powers operations. It generates scored detour suggestions around incidents on demand, renders the road network as interactive map layers with zoom-aware detail, and connects with other GoATMS modules so they can geocode points, locate devices along a route, and request detours in real time.

Location & GIS Feature Highlights:

- Linear Referencing
- GIS Import
- Detour Routing

LINEAR REFERENCING SYSTEM

LOCATE & CONVERT *Point-to-route snap, measure-to-map*

REFERENCE POINTS *Route + reference point to map location*

GIS DATA IMPORT

AGENCY CONNECTORS *18 ESRI parsers: VDOT, Caltrans, TXDOT +15*

IMPORTED DATA *Areas, routes, measures, lanes, landmarks*

GIS OVERLAYS

AGENCY EDITS *Add, override, or hide on shared GIS data*

ORPHAN DETECTION *Flags overrides when shared data is removed*

GEOCODING, DETOURS & MAPS

POINT GEOCODING *Coordinate to road, jurisdiction, ref point*

DETOUR GENERATION *Scored: fastest, highest-capacity, shortest*

** Agency ESRI connectors and GIS data sources expand as new parsers are added.*

** Detour suggestions are computed from the imported road-network data and reflect the extent of the loaded GIS dataset.*