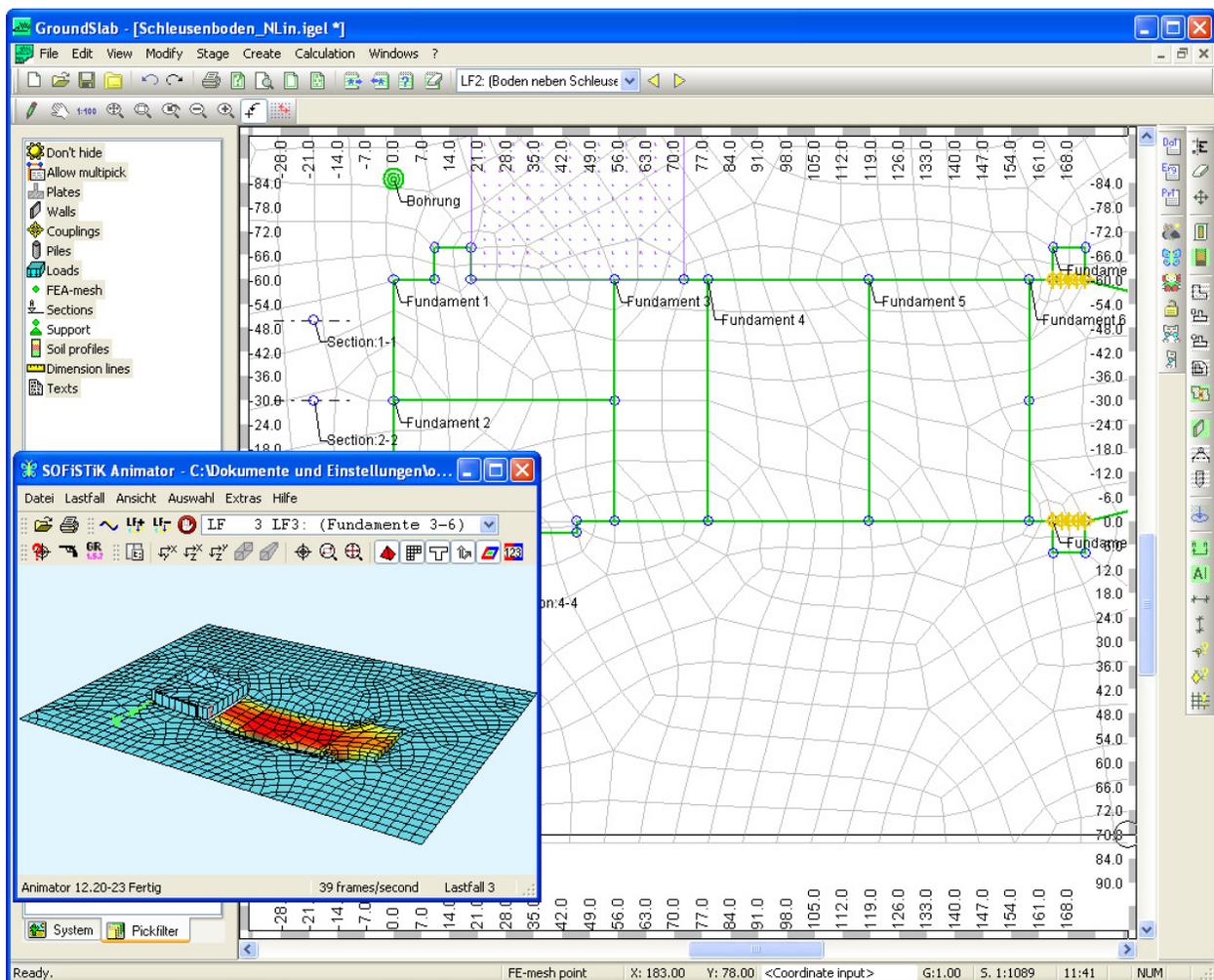


FIDES-GroundSlab

Interactive Generation and Calculation of Elastic Semi Infinite Space Models

Elastic bedded foundation plates are often calculated in traditional manor taking into account of the bedding constant. In this way, the engineer disregards important effects of the interaction between structure and soil. FIDES-GroundSlab in contrast, includes the stiffness of the soil under the foundation plate by using the elastic semi infinite space modell into the calculation. This soil-structure interdependency results as a rule to the formation of a settlement downfold. If coexisting foundations are calculated, then the mutual interdependency of adjacent buildings will be automatically considered.



Performance characteristics

User interface

- CAD-like input functionality
- Extensive import possibilities like e.g. DXF, XML,
- Input of the properties of the layered semi infinite space models per drilling profiles in combination with the soil layer database used by all FIDES series of geotechnics programs in common.
- Automatic Finite Element mesh generation
- Intelligent input helps e.g. at polygon intersections, multiple object selection, ...
- Windows standard like e.g. undo and redo for all actions, copy & paste, contextmenu, system-explorer, ...

Calculation

- Integrated calculation kernel SEPP and HASE-2D respectively ASE and HASE-3D* from SOFiSTiK
- Linear and non linear* calculation
- One or more soil plates (FE-Systems) on semi infinite space models (stiffness modulus method)
- Upcoming walls for stiffening effects of plates*
- Piles for strengthening of the soil semi space*
- Input of pointloads, free line- and area loads plus self weight
- Concise generation of building stages and superposition of loadcases
- Nonlinearities*: plastification of soil at the plate edge and at the pilefoot, contrasting plate corners
- Automatic dimensioning of plates, Punch through design of the plates
- Design with all current established norms (EC, DIN, BS, ACI, ASSHTO uvm.)
- Fully compatible to the SOFiSTiK Finie Element Program System

Results

- Settlements and stresses at any depth in the soil (free definable 3D-intersections)
- Internal plate forces and dimensioning/reinforcement results

- Envelopes for extremal values
- Output: mixed text and graphic
- All SOFiSTiK post processing capabilities available (Animator, Ursula, DBView, WinGRAF, ...)
- Various exporting possibilities e.g. DXF, RTF, MSWord, ...

Application range

- Flat foundations
- Calculation of settlements at any depth
- Determination of mutual interactions of settlements
- Minimisation of settlements

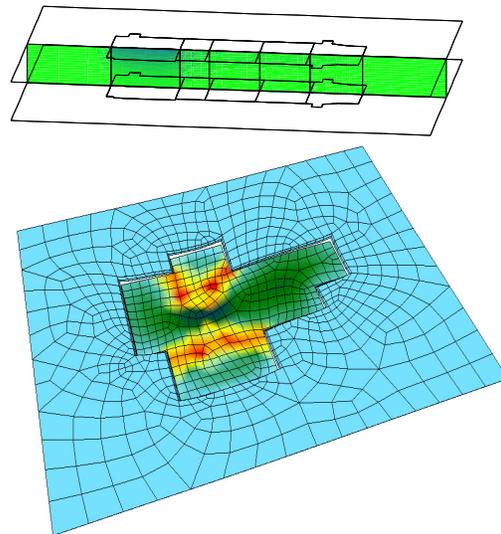
Extension moduls

FIDES-GroundSlab-2D

- Basic version for linear calculations

FIDES-GroundSlab-2,5D

- Includes non linearities, strengthening walls, strengthening piles



* Extension modul FIDES-GroundSlab-2,5D is required