## **RetainPro 10 Features**

RetainPro 10 is an exceptional full featured program offering analysis & design for all types of earth retaining structures with an incredible array of capabilities:

- Quickly and easily designs or analyzes nearly any retaining wall, concrete or masonry, or combination of both, cantilevered or restrained. Gravity walls, segmental walls (SRWs) with or without geogrids (MSE)
- Loading conditions include axial, surcharges, adjacent footings, impact, wind, seismic (due to earth pressure and/or self-weight)
- Stem can be divided and stepped for up to five changes in thickness, material, and reinforcing.
- Immediate downloading after ordering or upgrading

• Conforms to applicable provisions of IBC 2009, ACI 318-05, MSJC '08 ASCE 7-05, NEHRP 2000, CBC '07, and AASHTO LRFD 2007.17th Edition

- Soldier pile shoring
- · Gabion gravity walls and multi-wythe large-block walls
- Design Status bar for overstress warnings.
- Updated to code changes in IBC '09 and NCMA (SRWs).
- Design per AASHTO LRFD.
- Updated 210-page User's Manual and more design examples.
- Faster QuickHelp (F1) button for assistance on any screen.
- Automatic maintenance updates keeps you always current
- Allows water table condition, including footing buoyancy
- For Windows XP / Vista / 7

• Select building code and Retain Pro automatically inserts proper load factors, all of which are editable or set as defaults.

- Split-screen graphics for simultaneously viewing your input, results, and construction drawing.
- Wall-Wizard for quick-start design input.
- Design for wind on projecting portion of stem, and/or wind on a weightless fence on top of the wall.

• Create an AutoCAD DXF file for most wall types, importing a fully dimensioned drawing into your CAD program (AutoCAD, AutoCAD LT, QuickCAD, and most others), requiring only minor further editing

• Input active/passive pressures using Equivalent Fluid Pressure method, or enter angle of internal friction, select either Rankine or Coulomb method, and Retain Pro automatically calculates active and passive pressures

- Option for single-row drilled pier foundations.
- Does \walls with tapered concrete stems
- Easy-to-use project file management system.

• Customize your printout title block - even add your logo

• View construction drawing on split-screen as you make changes. Optionally print the construction drawing (but it is only editable if exported to CAD via Retain Pro's DXF utility)

• Using your assigned Product Activation Code (PAC) system you can download the full program and activate immediately after ordering, and install on multiple computers subject to your license agreement

• Many designer-decision options, such as use of vertical component of active pressure for overturning or sliding or soil pressure reduction, presence of slab at base to resist sliding, use of cohesion instead of friction to resist sliding, and others

• Computes rebar development lengths above and below each stem section, including required dowel embedment into footing

- · Automatic sizing of footings with no restriction on offsets either side
- Detailed, concise, calculation printout, with graphics
- Graphics displays construction drawing of your design and loading diagram to check your input/output
- Easy utility for designing multiple walls with minor changes (such as changes in wall height)
- Calculates wall deflection (tilt) for cantilever walls
- Change between US or SI units (most program modules)
- All allowable stress values changeable, or made defaults
- Add a shear key anywhere under footing and Retain Pro designs the reinforcing
- Free quick-response technical support from licensed structural engineers.