

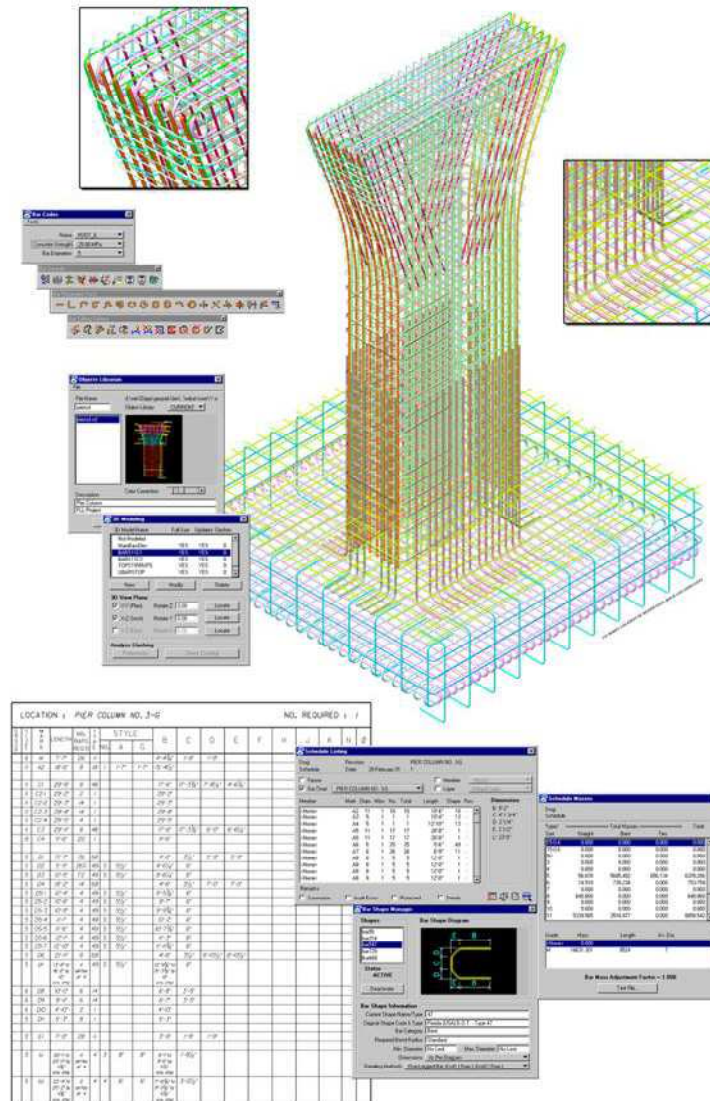
Bentley Rebar

Common Office Issues

- Dealing with tight lead times
- Working with different Design Codes
- Reworking or adjusting details
- Constant re-engineering
- Scheduling and quantities
- 3D modeling of reinforcement

Interactive Product

- Rebar is a fully interactive software for reinforced concrete detailing.
- Rebar eliminates manual labor intensive problems.

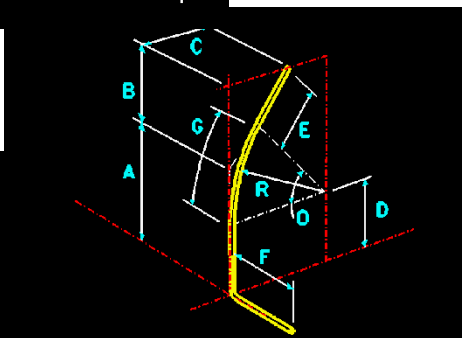
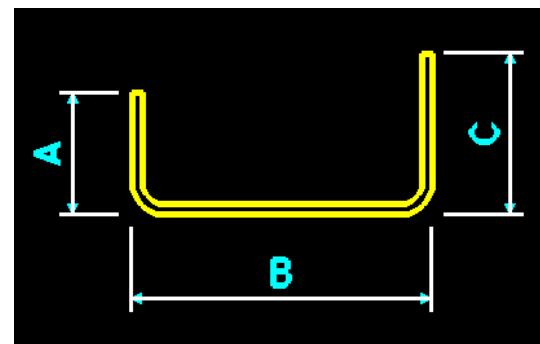
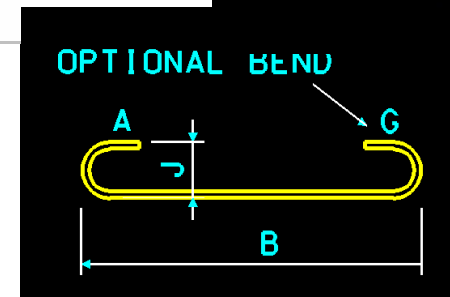
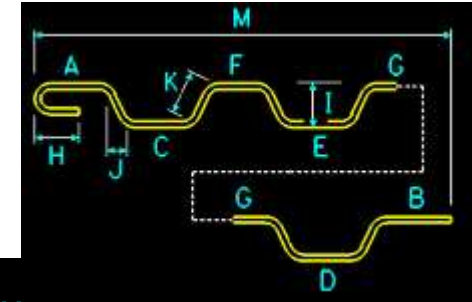
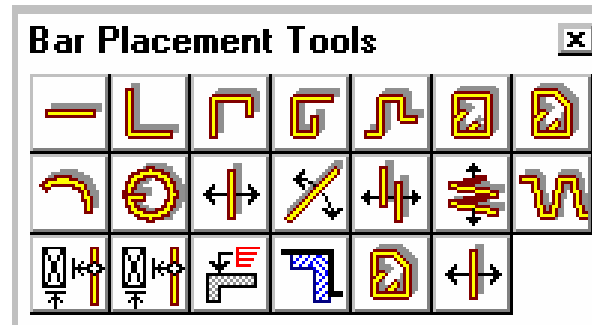


BENTLEY Rebar Features

- Universal concrete detailing
- Custom concrete details
- Automatic scheduling and bar lists
- Automatic update of reinforcement
- International design codes
- English/metric units conversion
- Intelligent bar editing
- Dynamic dimensions
- Automatic full size and rescaling
- 3D modeling

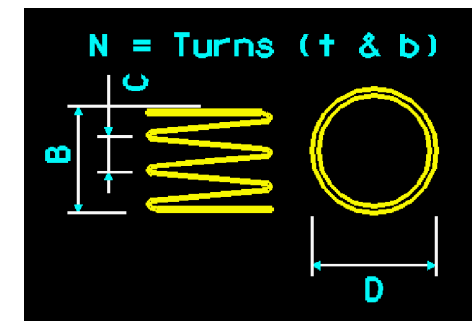
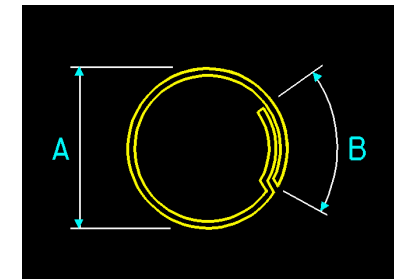
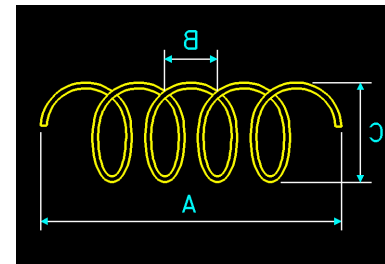
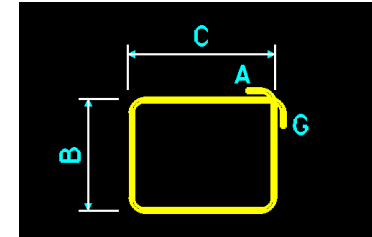
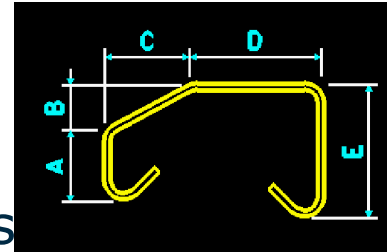
Universal Concrete Detailing

- Rebar greatly improves the accuracy of concrete detailing.
- Powerful routines enable placement of reinforcement to any concrete structure.



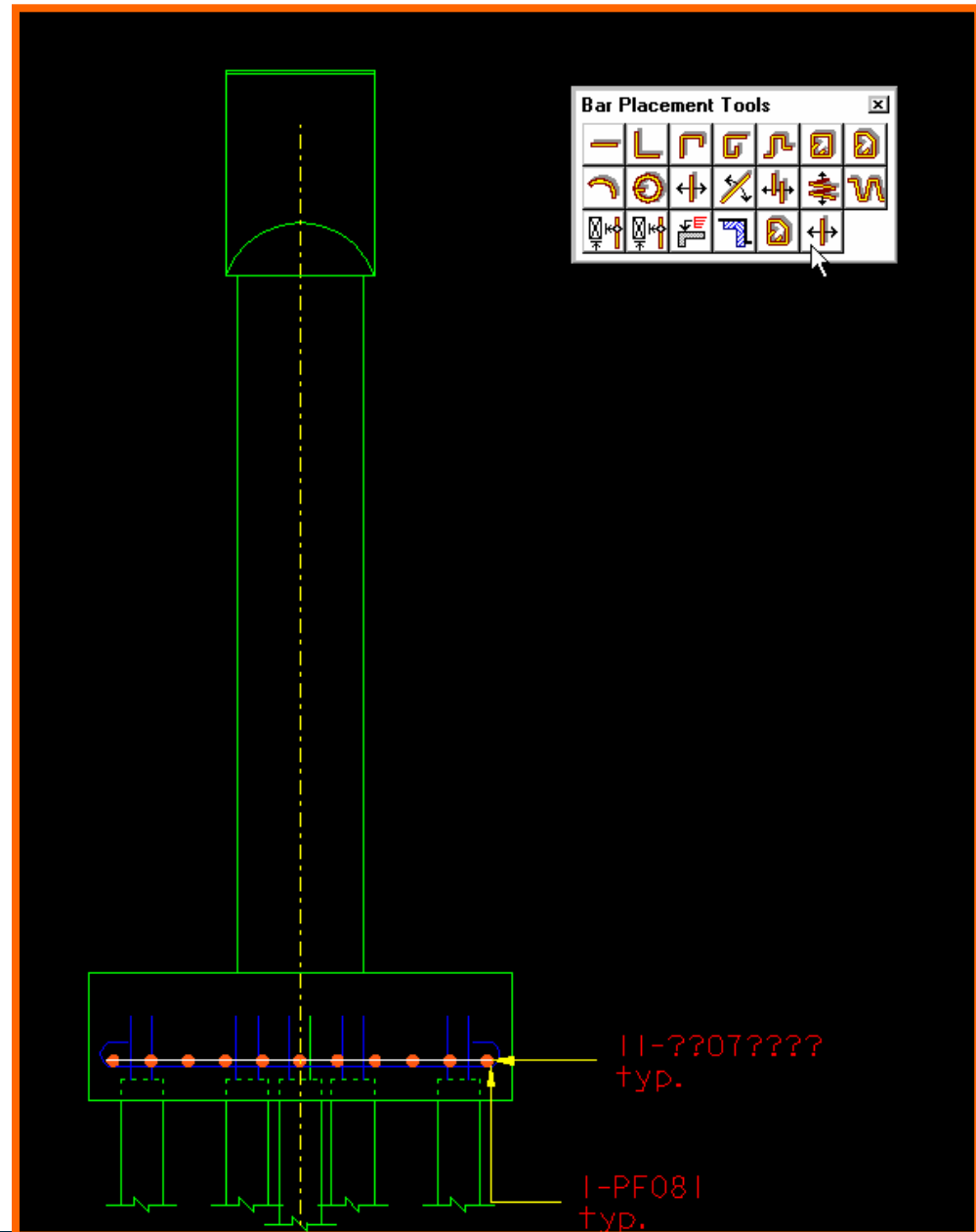
Bar Detailing Features...

- Multi-legged reinforcement
- Parallel & Radial bar ranges
- Staggered & Alternate bar ranges
- Four and Five Sided Stirrups
- Circular Stirrups
- Circular and Radial bars
- Spiral reinforcement
- Truss Bar Reinforcement
- To virtually any concrete arrangement



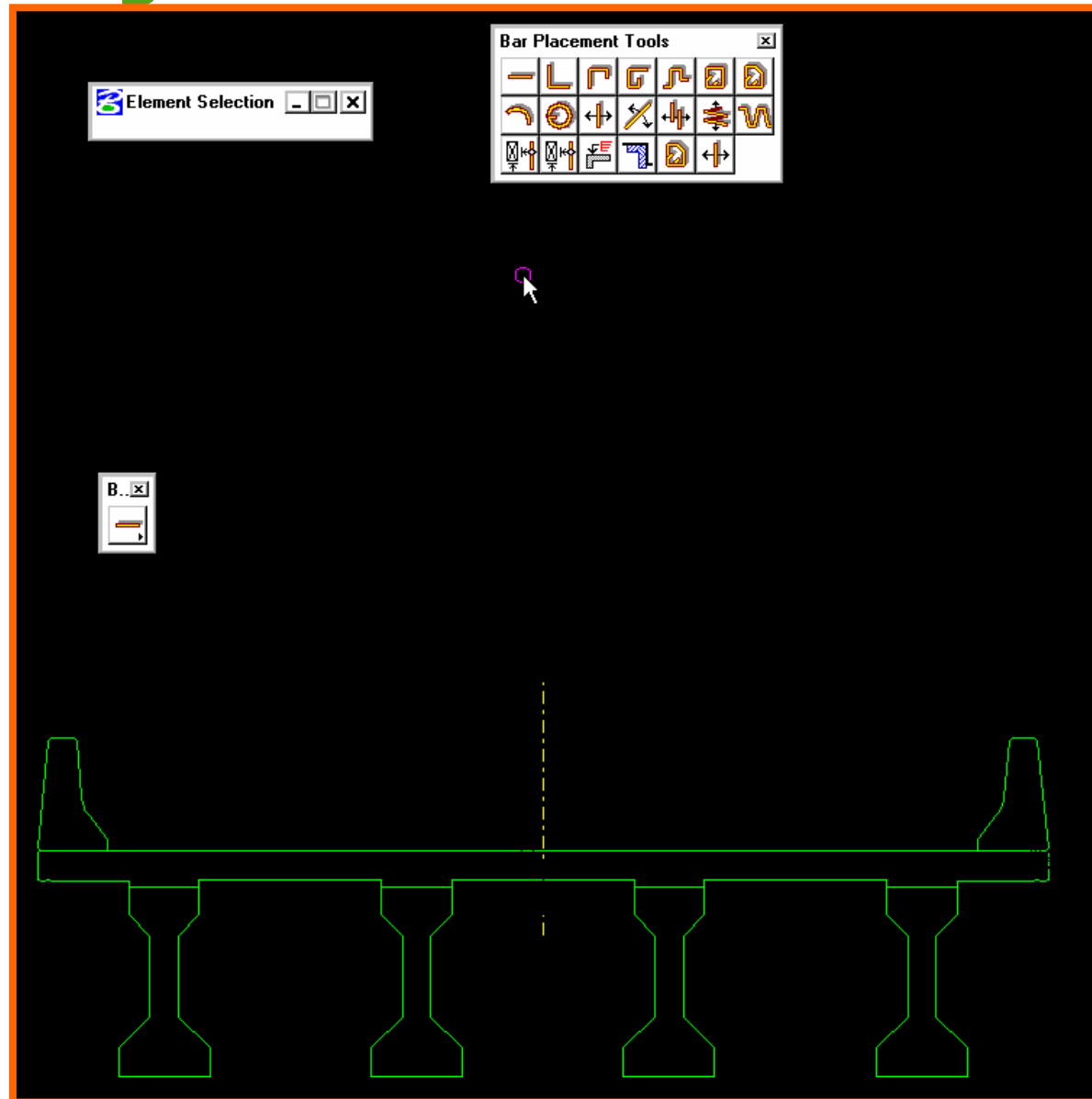
Concrete Detailing

- Spiral Bar Placement
- Powerful tools for modifications.
- Relocation and Cloning available.
- Automatic Schedule calculations.



Concrete Detailing

- Truss Bar Placement and Automatic Bar Dimension Calculations.

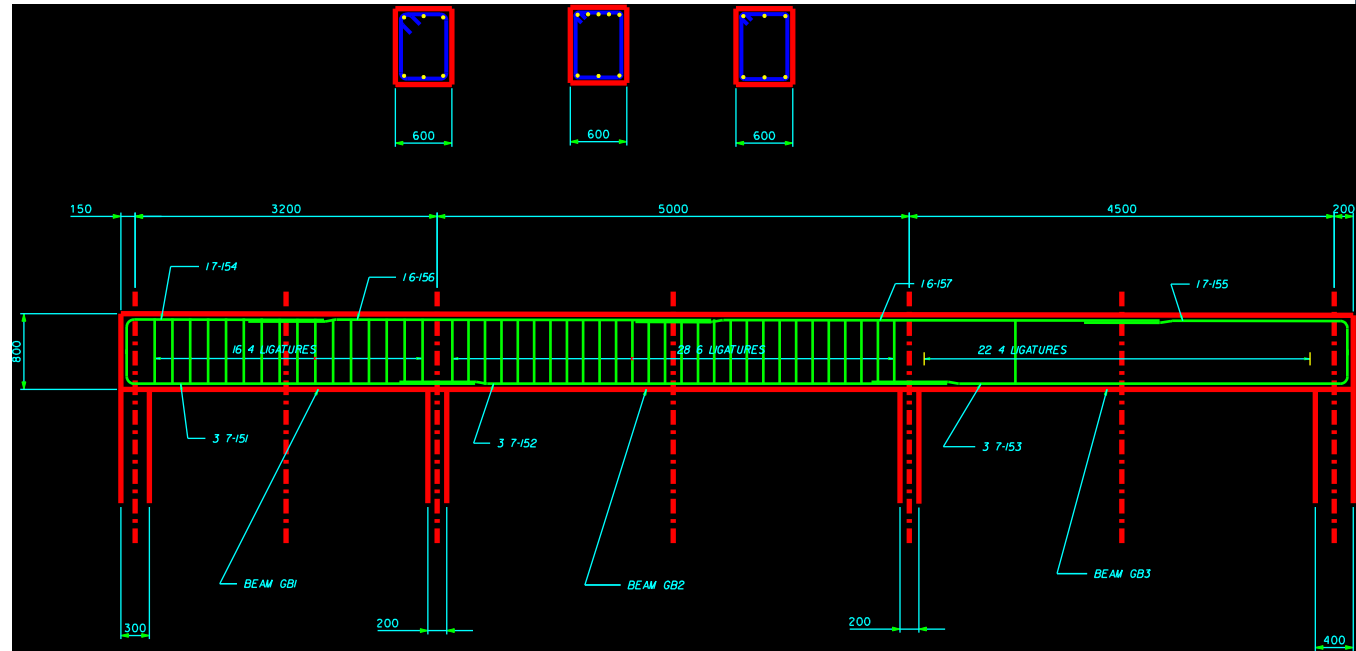


Bridge Detailing ... Universal Concrete Detailing

- Originally designed for bridge detailing, where details are often 'non-standard' and normally very complex.
- Rebar suited to other A/E/C disciplines.
 - Commercial buildings.
 - Heavy industrial structures.
 - Marine Structures.
 - And more..
- 3D modeling as well as 2D detailing.

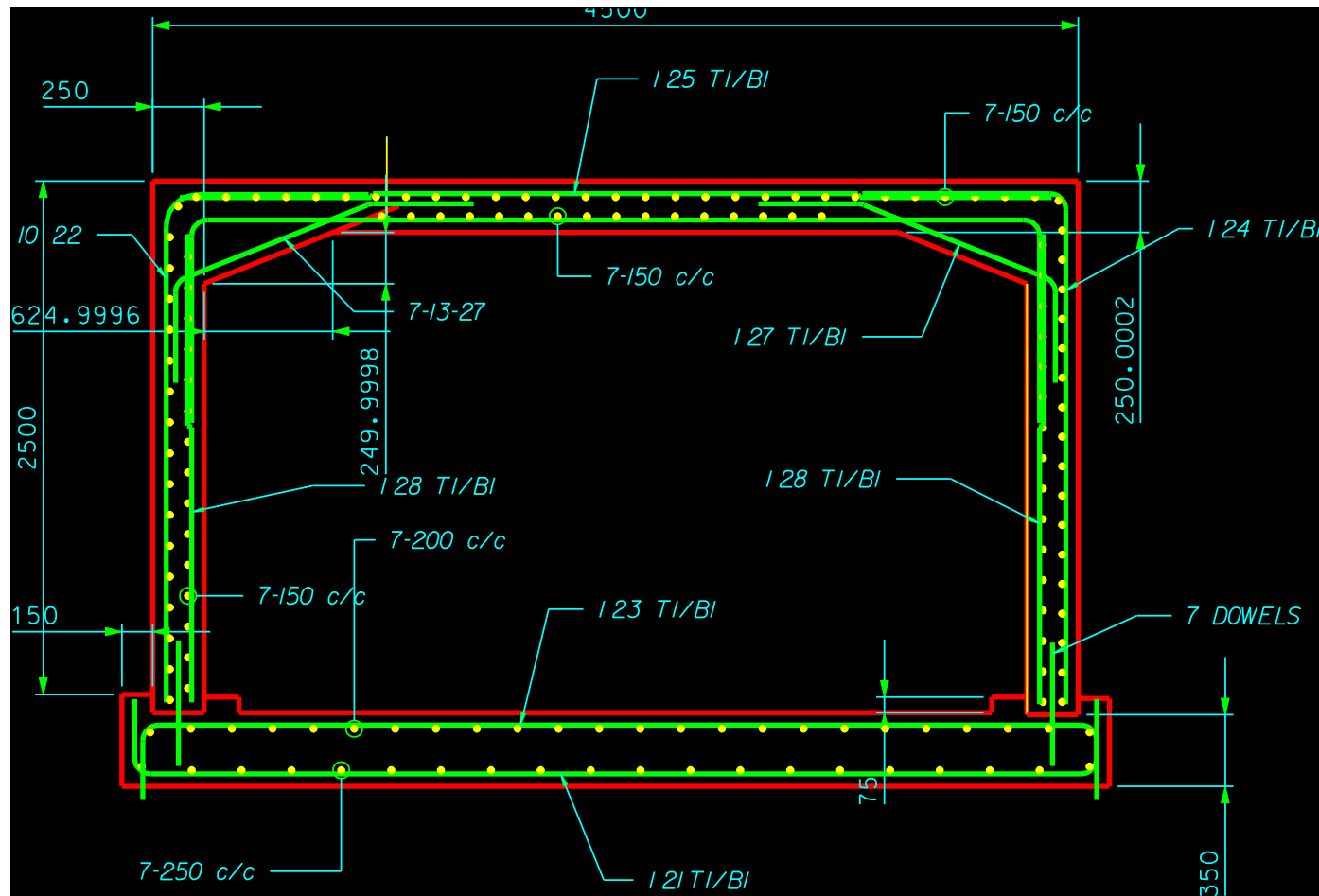
Beam Framing

- Multiple Span tie beam framing.
- Make changes to an interior span length and adjacent spans will automatically move.



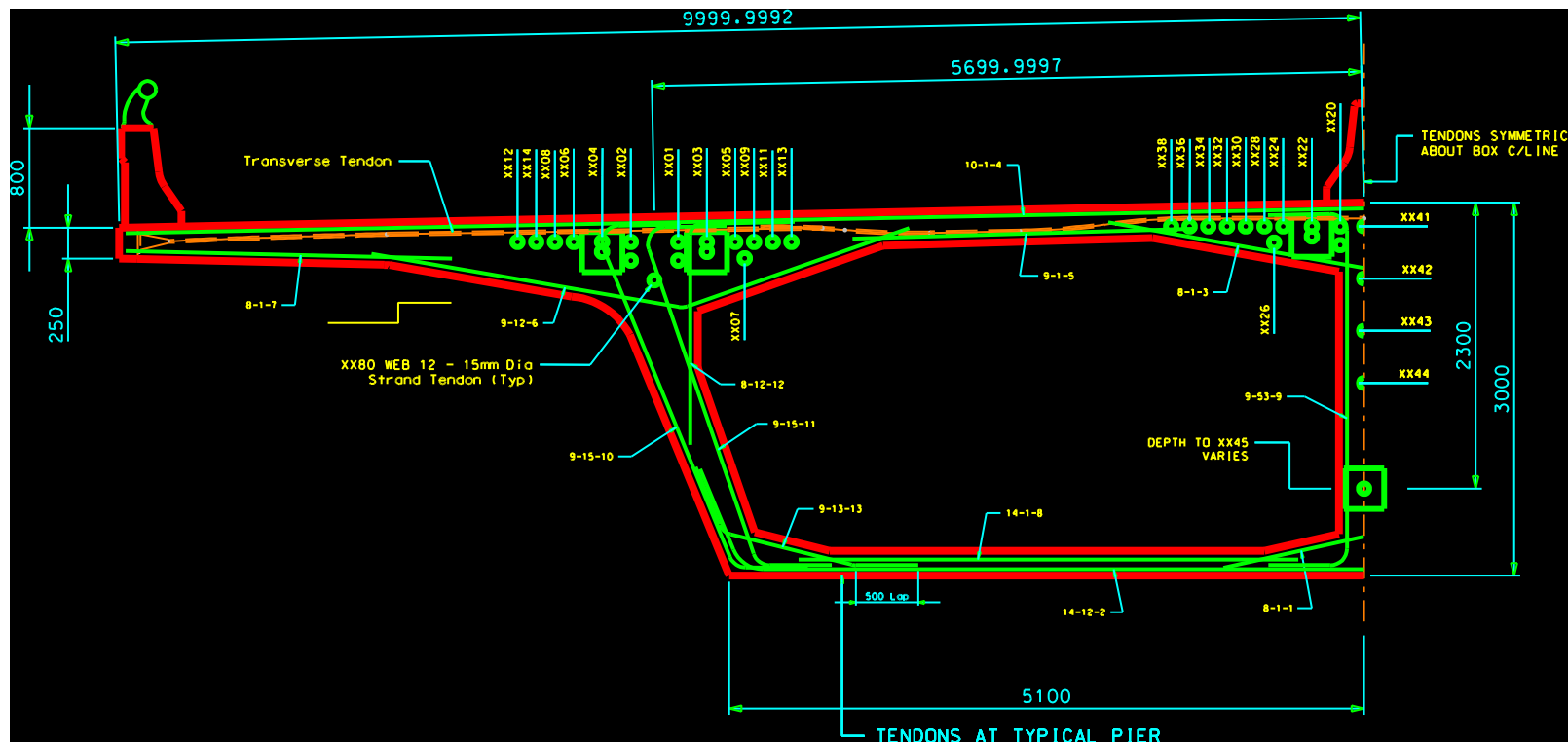
Box Culvert

Concrete Boxes
Precast or
Cast in-
place.



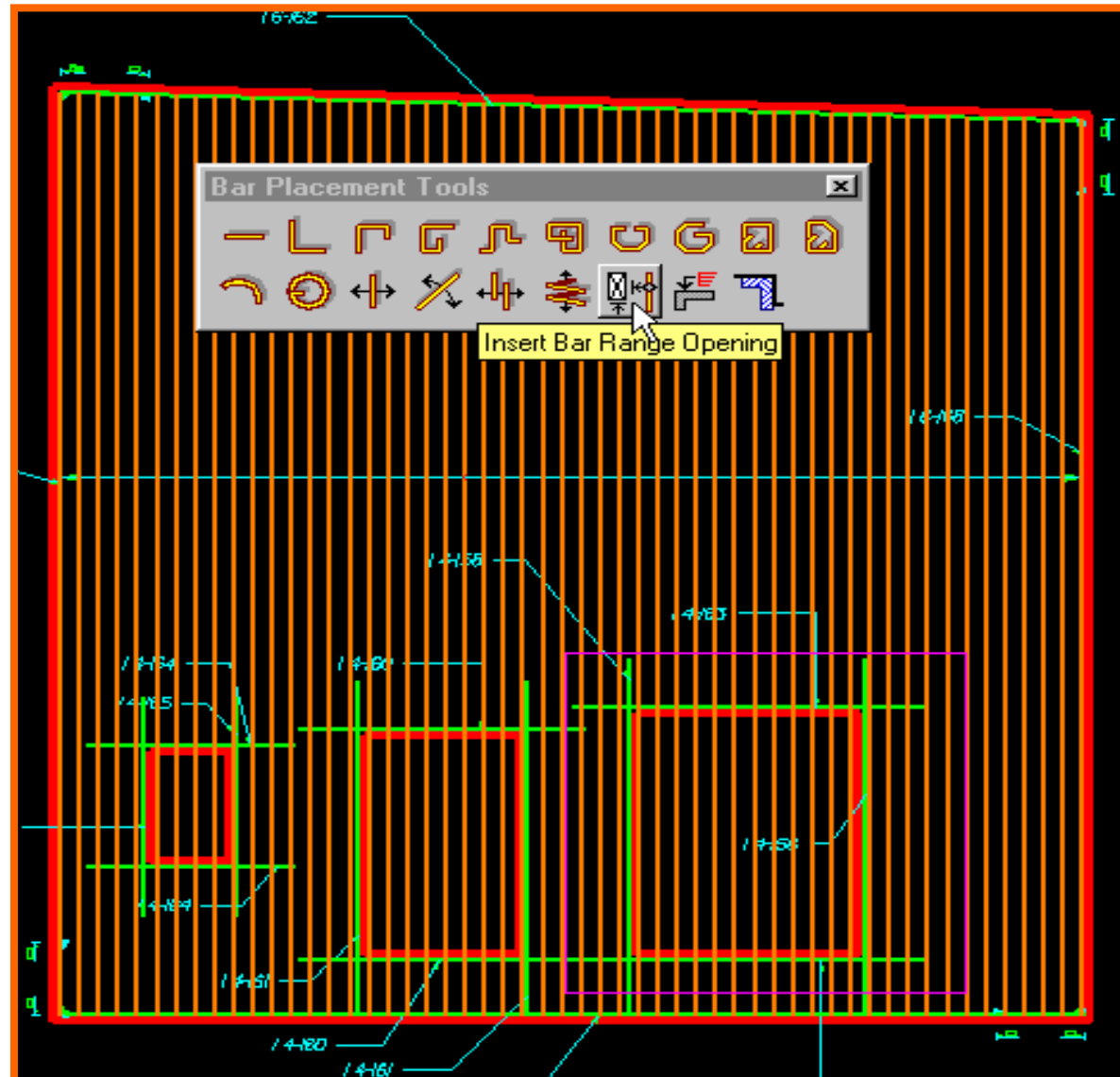
Precast Box

- Precast Segmental or Cast in-place Bridges.



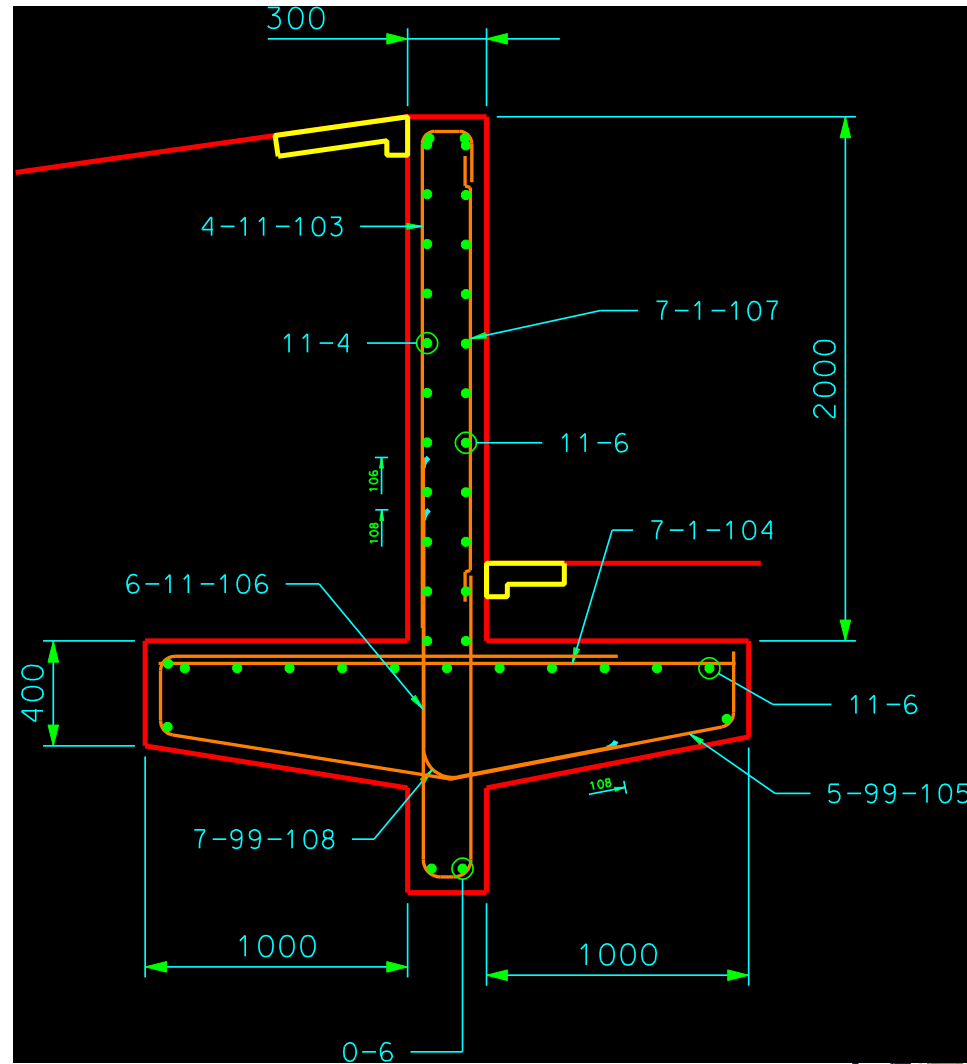
Building Floors

- Multistory floor slabs.



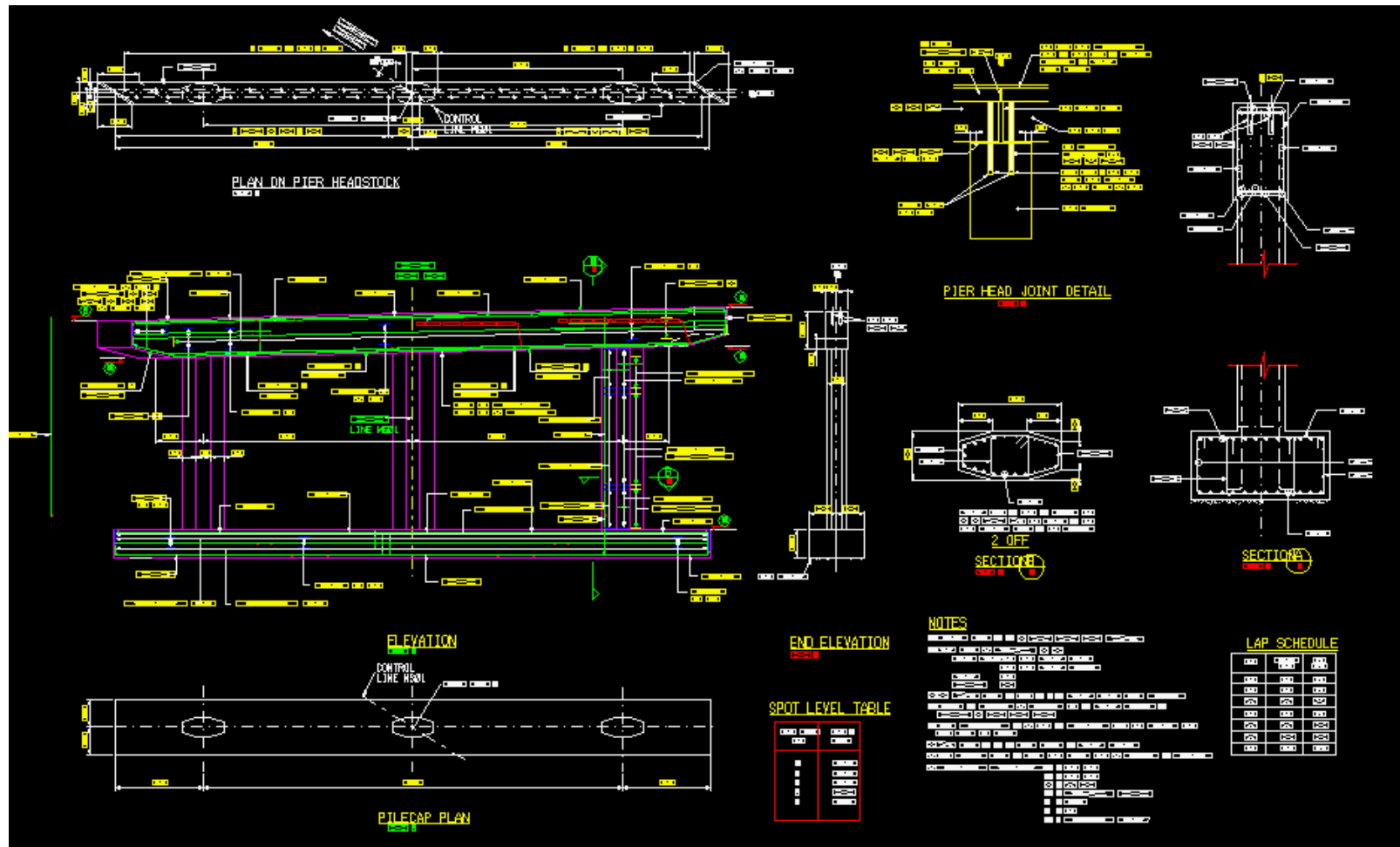
Foundations

- Retaining walls.



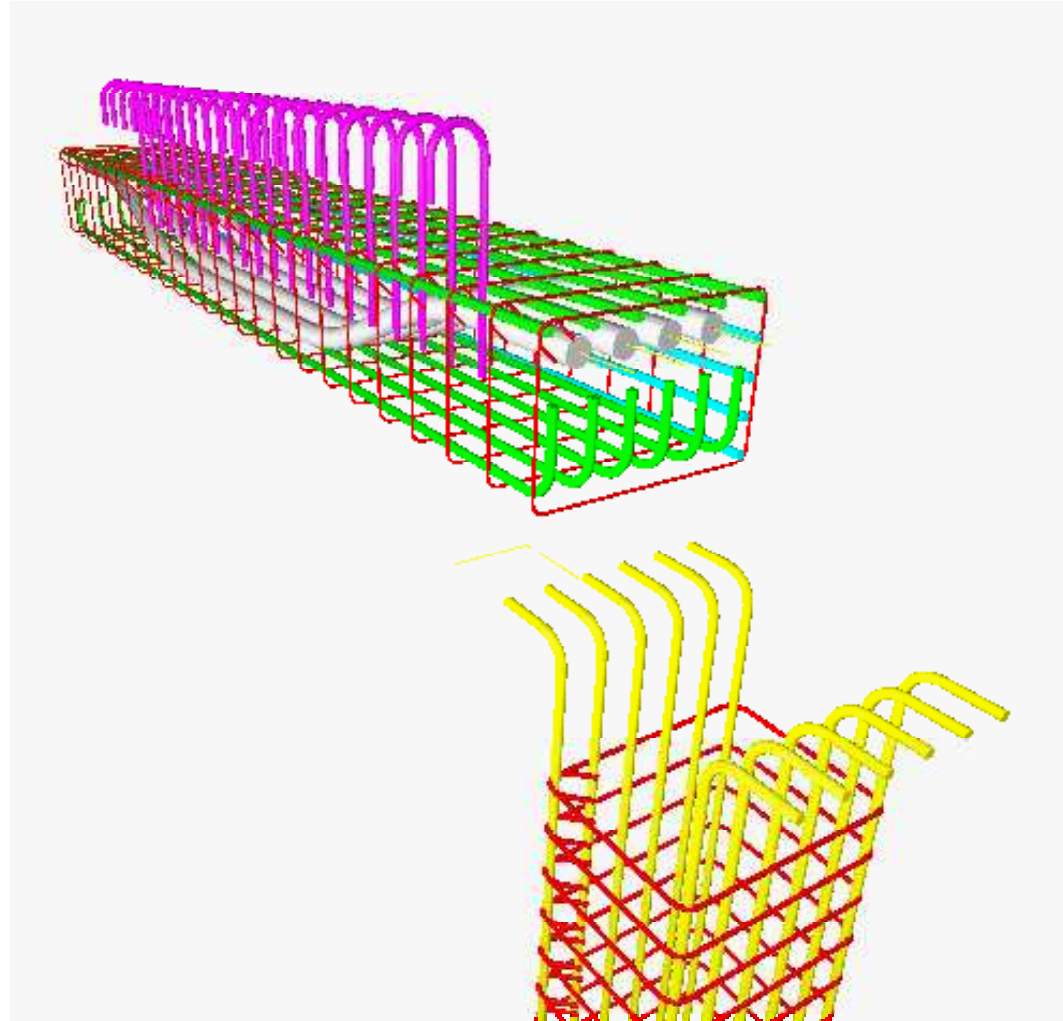
Bridge Piers

- Multiple Framed Column Bents.



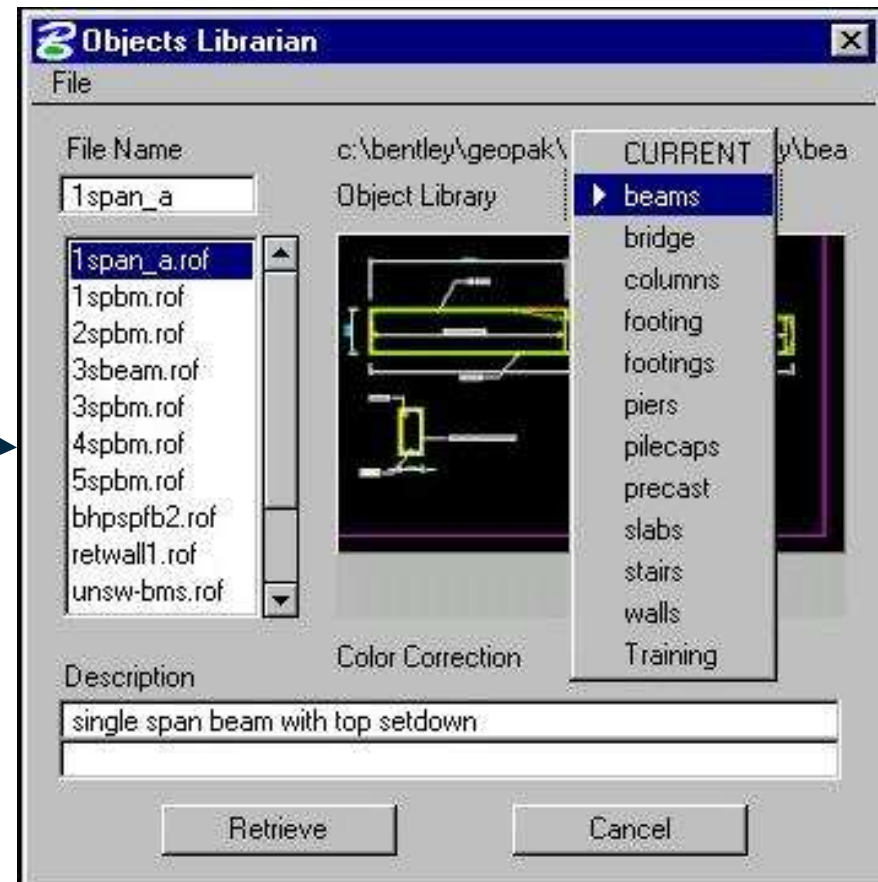
3D Modeling

- Create 3D Models.
- Assemble Integrated Drawings.



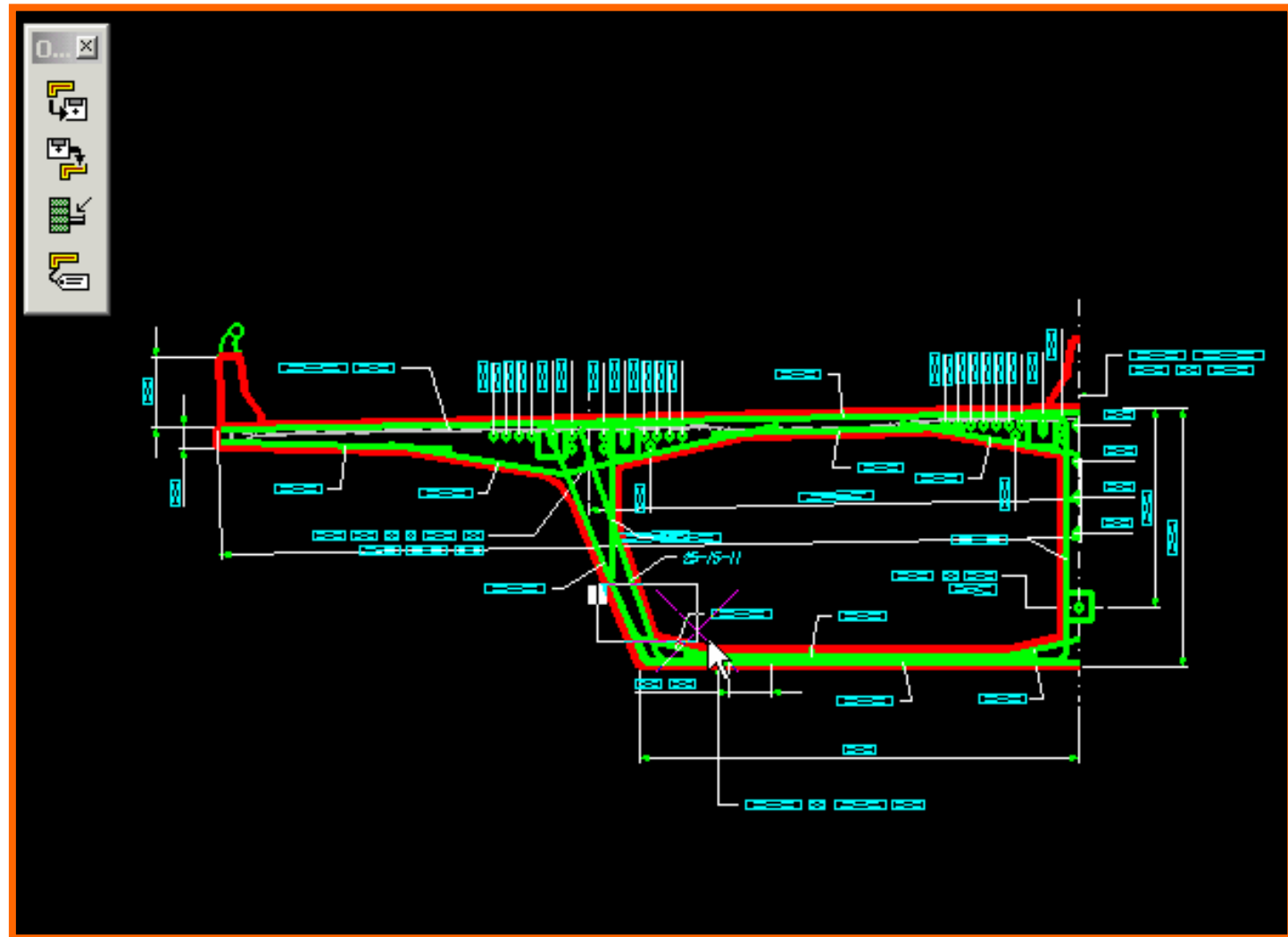
Custom Concrete Details

- Reinforcement detailing is automated by selecting predefined concrete details from Rebar's Object library.



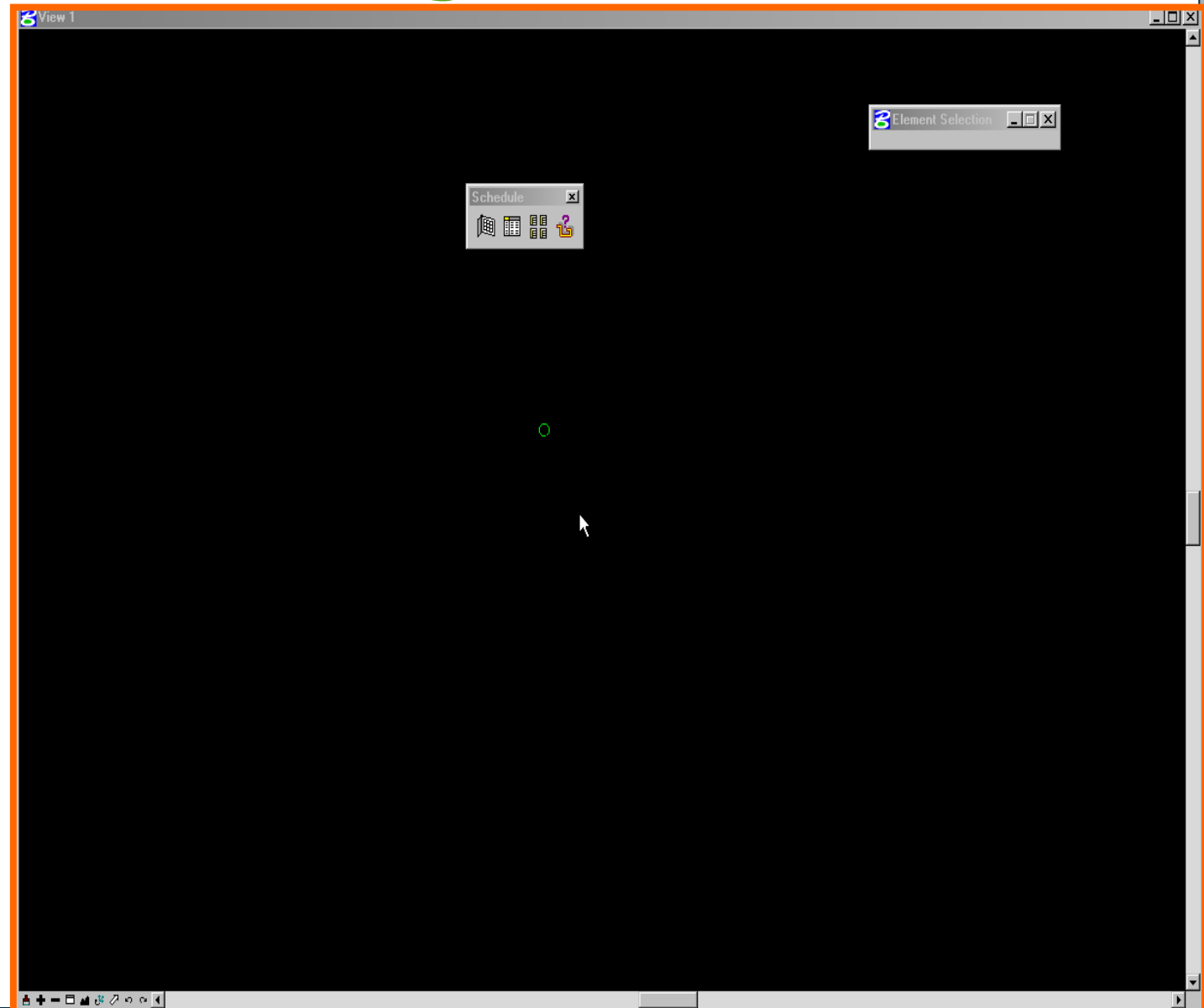
Custom Concrete Details

- Retrieve a detail.
- Modify as required.



Automatic Scheduling

- Automatics Bar Lists containing Bar size, schedule dimensions, quantities, shape types, shape diagrams etc.
- Bar list formats are user definable.



Automatic Scheduling

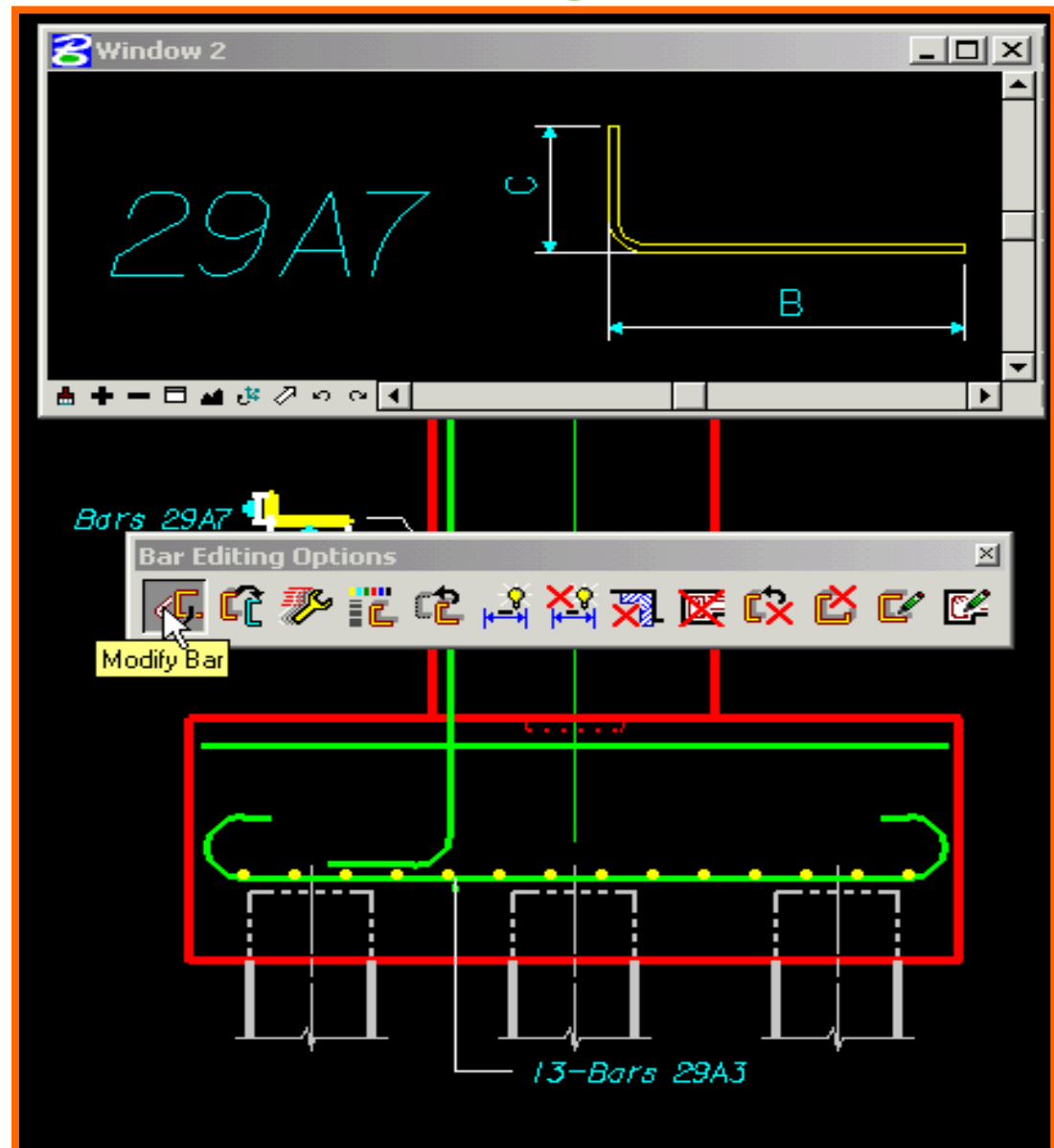
- Accurately records bar marks, bar shapes, and bar lengths as you detail.
- Automatic updates of reinforcement if changes are made to the size and shape of the concrete detail.

The screenshot displays the Bentley software interface for reinforcement scheduling. It features two main views: 'View 1' showing a reinforcement detail and 'View 2' showing a schedule table. The schedule table is titled 'LOCATION : NO. R' and contains the following data:

NO.	SIZE	MARK	LENGTH	NO. BARS REQ'D	TYPE	STYLE									
						NO.	A	G	B	C	D	E	F	H	
4	A1		11'-5"	2	23				3'-8"	1'-3/4"	3'-8"				
8	A2		14'-5"	5	1				14'-5"						
6	A3		14'-11"	1	23				5'-5/4"	1'-3"	5'-5/4"				
3A4-1			6'-2"	1	1				6'-2"						
3A4-2			6'-0"	1	1				6'-0"						
3A4-3			5'-10"	1	1				5'-10"						
3A4-4			5'-8"	1	1				5'-8"						
3A4-5			5'-6"	1	1				5'-6"						
3A4-6			5'-4"	1	1				5'-4"						
3A4-7			5'-2"	1	1				5'-2"						
3A4-8			5'-0"	1	1				5'-0"						
3A4-9			4'-10"	1	1				4'-10"						

Dynamic Reinforcement Changes

- Place bar marks and Diagrams in labels.
- Make changes to the rebar and the label and diagrams automatically update.



Multiple Design Codes

- Rebar makes it easy to draw reinforcing to code.
- Lap lengths, bar diameters, steel designations, standard bend sizes, and the bar shape library are all preset to your specified detailing standard.
- Bar shapes includes an extensive library of shapes.
- Details created under a Code, can be re-drawn to another Code:
 - Bar diameters, bend radii, hook lengths and stock lengths are converted automatically.
 - All bar shapes applicable to the current design code are recalculated for the current project.

Multiple Design Codes

Bar Codes

Tools

Name

Concrete Strength

Bar Diameters

- AS3600
- SKBI.89
- ACI318
- NZS3101
- FDOT_M92B
- CRSI_METRIC
- CRSIODOT_M
- FDOT_M
- FDOT_E
- Certy_mm
- BAEL
- BS8110
- SUCDI
- BS8110

Bar Diameter Data

Diameter: 11.8000 Grade: Y Bar Designation: Y12

General Data

Bend Radii/Lengths

Adjustments

Effective Area: 113.097336

Mass Per Unit Length: 0.000000

Stock Length: 12000.0000

Cranked Bar Slope (1 in ?): 6.0000

Default Lap Length: 480.0000

Maximum Radius for Bending: 5000.0000

OK Cancel

Bar Diameter Data

Diameter: 11.8000 Grade: Y Bar Designation: Y12

General Data

Bend Radii/Lengths

Adjustments

Name: Standard

R: 36.0000

L1: 70.0000

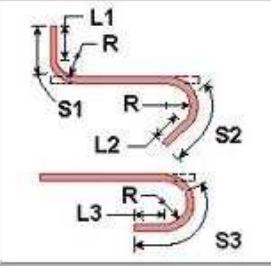
L2: 70.0000

L3: 70.0000

S1: 200.0000

S2: 200.0000

S3: 200.0000



Standard

Alternate

Modify

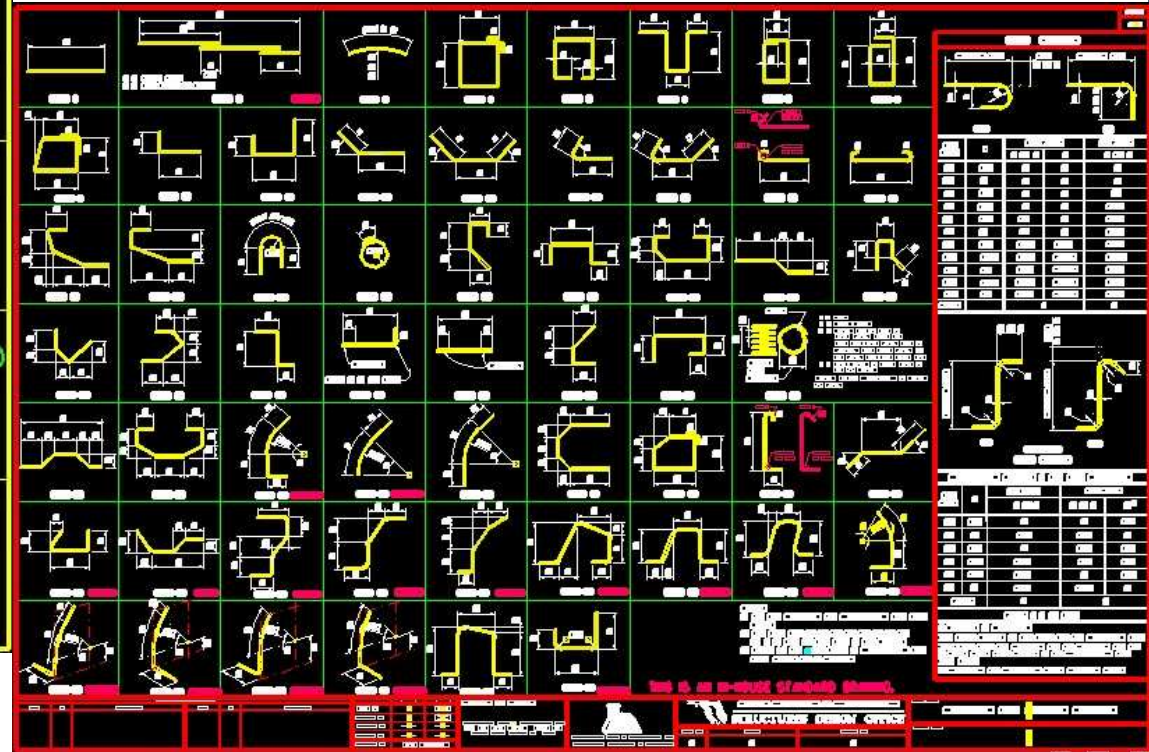
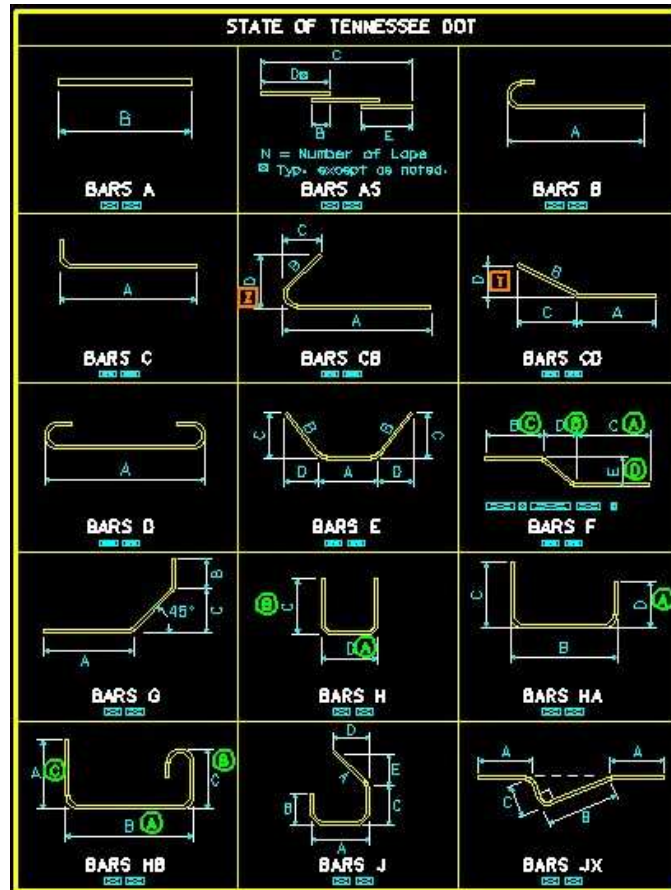
Delete

Add

OK Cancel

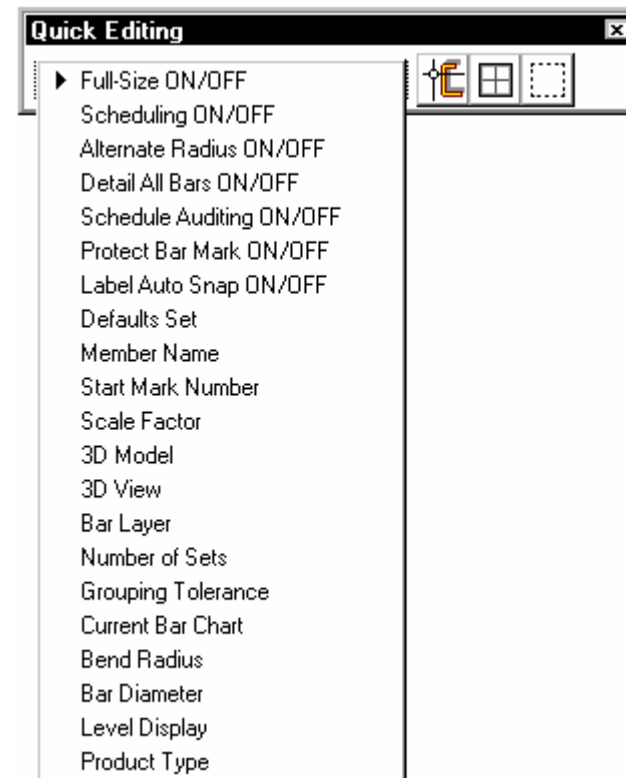
Design Code Shapes

Hundreds of Shapes Available.
Just Draw and let Rebar do the
Detection...or just define your own.



Intelligent Bar Editing

- Rebar eliminates redrafting time as powerful editing functions are available.

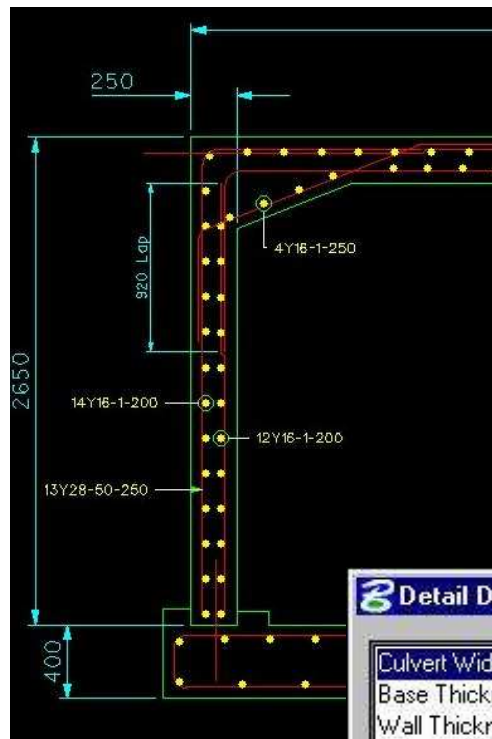


Dynamic Dimensions

- Rebar's dynamic dimension capability intelligently resizes concrete arrangements.
- Dynamic dimensions can be stored and retrieved with components in the object library.

Dynamic Dimensions

- Manipulate a concrete arrangement in seconds.
- A single Rebar Dimension can re-size any number of details across the design file.



Dynamic Dimensions

Value: 2650.0000 Update

Code: Show All

Dimension Type

Angle: 0.00

Hidden Element

Modify

Related Points

Mode: Normal

New Delete Select

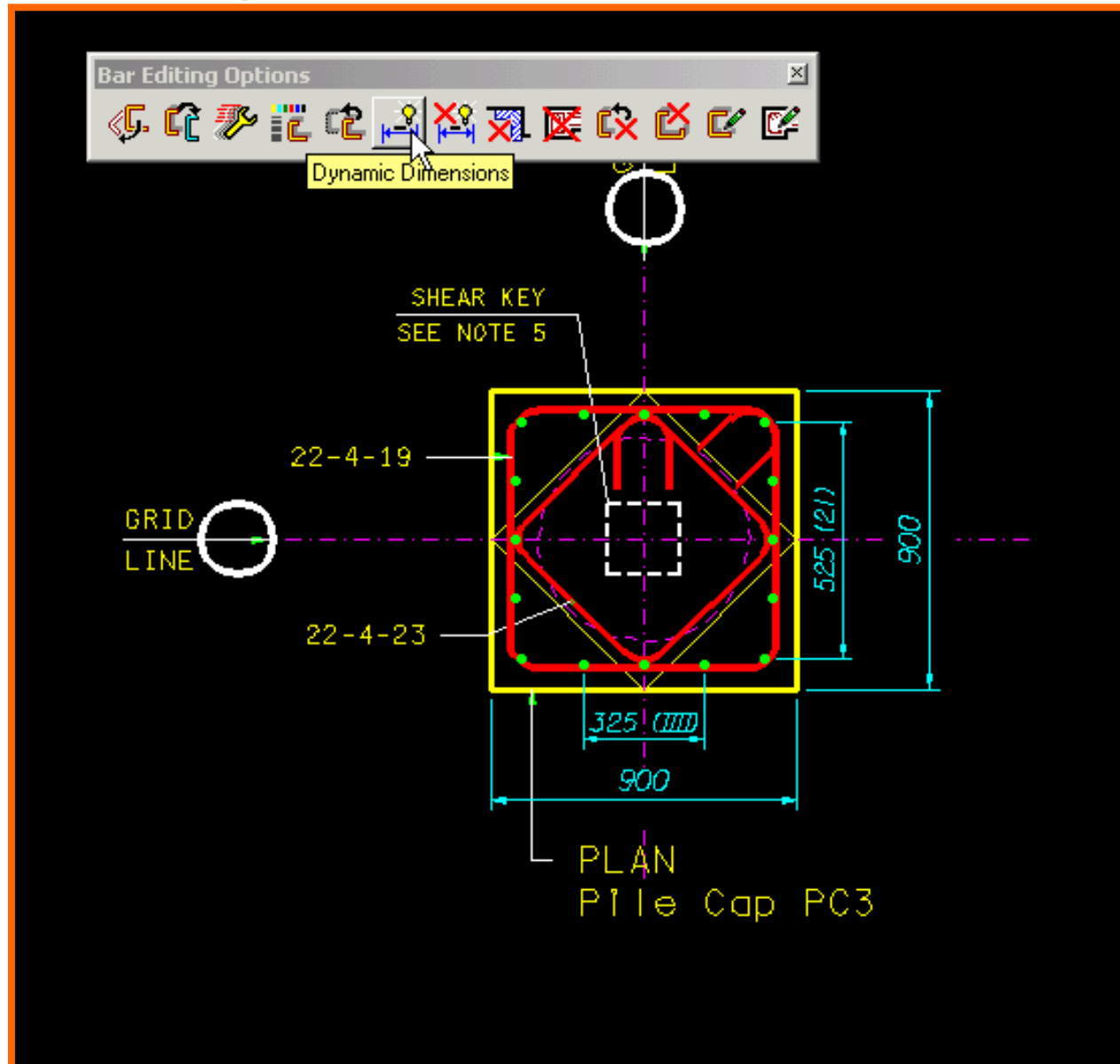
Detail Dimensions

Culvert Width	3000
Base Thickness	400
Wall Thickness	250
Culvert Width	5000
Culvert Height	2650

Current Dimension Value: 3000.0000

Dynamic Dimensioning

- Interactive Dynamic Dimensioning.
- Automatic changes to details forces reinforcing updates.
- Include related Points to a dimension for Automatic updates.

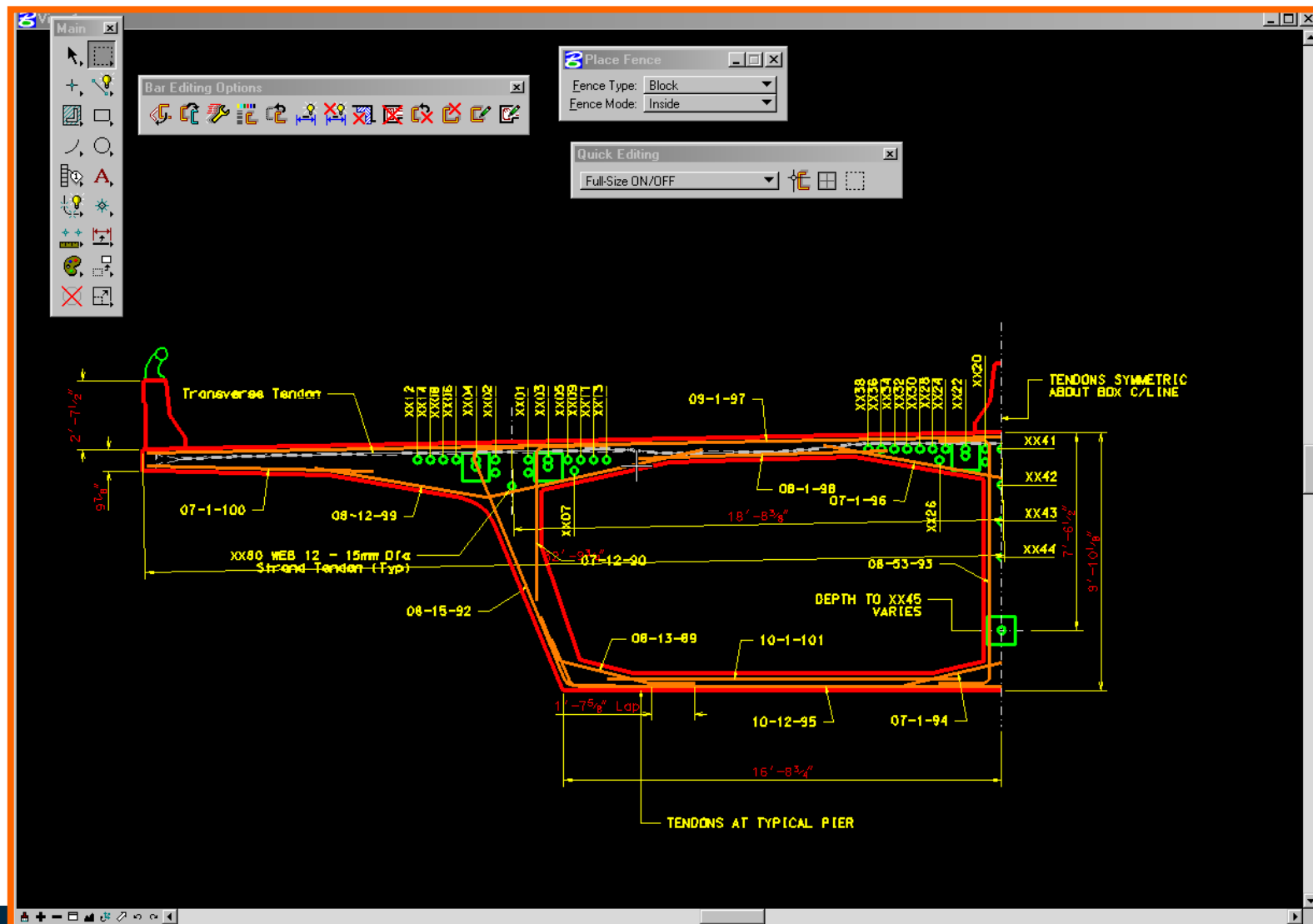


Automatic Full Size and Rescaling

- Full-size details are required to check for bar interferences.
- Simply place a fence around the detail, and rebar redraws main and longitudinal bars to exact size and location within the concrete detail.

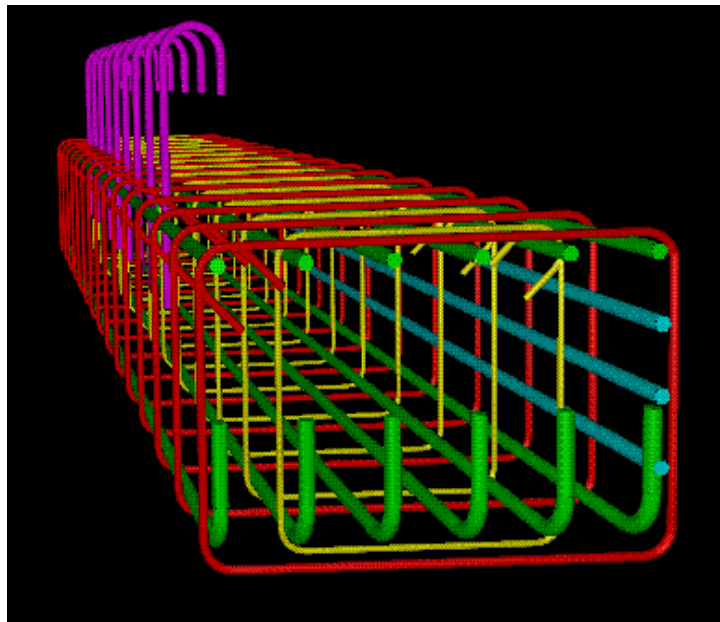
Automatic Full Size and Rescaling

Fence a detail and toggle ON or OFF to view Full-size details.



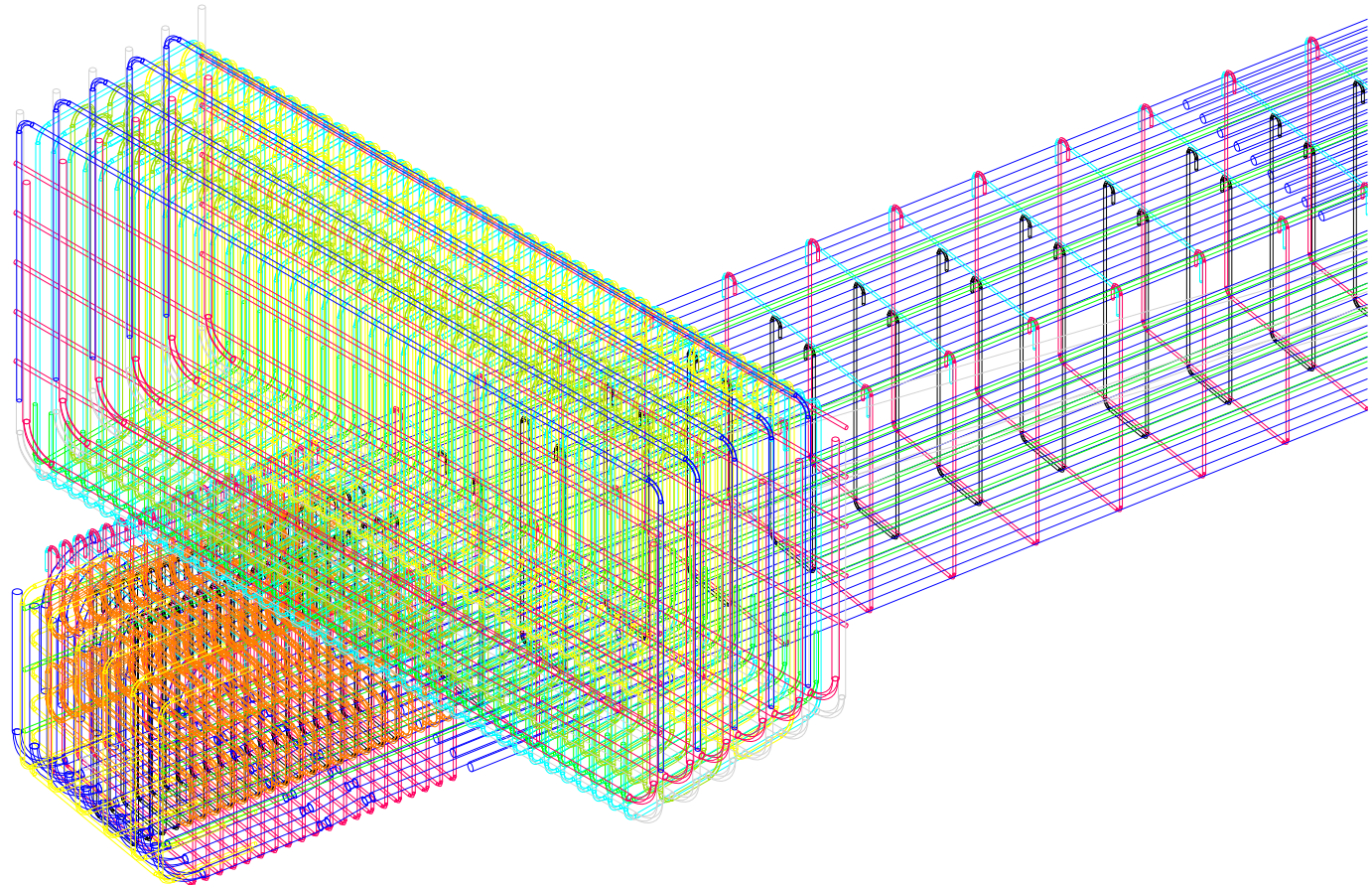
3D Models

- Three-dimensional modeling of reinforcing bars has, until now, been extremely time-consuming.
- GEOPAK rebar overcomes these problems by producing 3D models automatically from the details contained in your normal 2D section, elevation, and plan views.



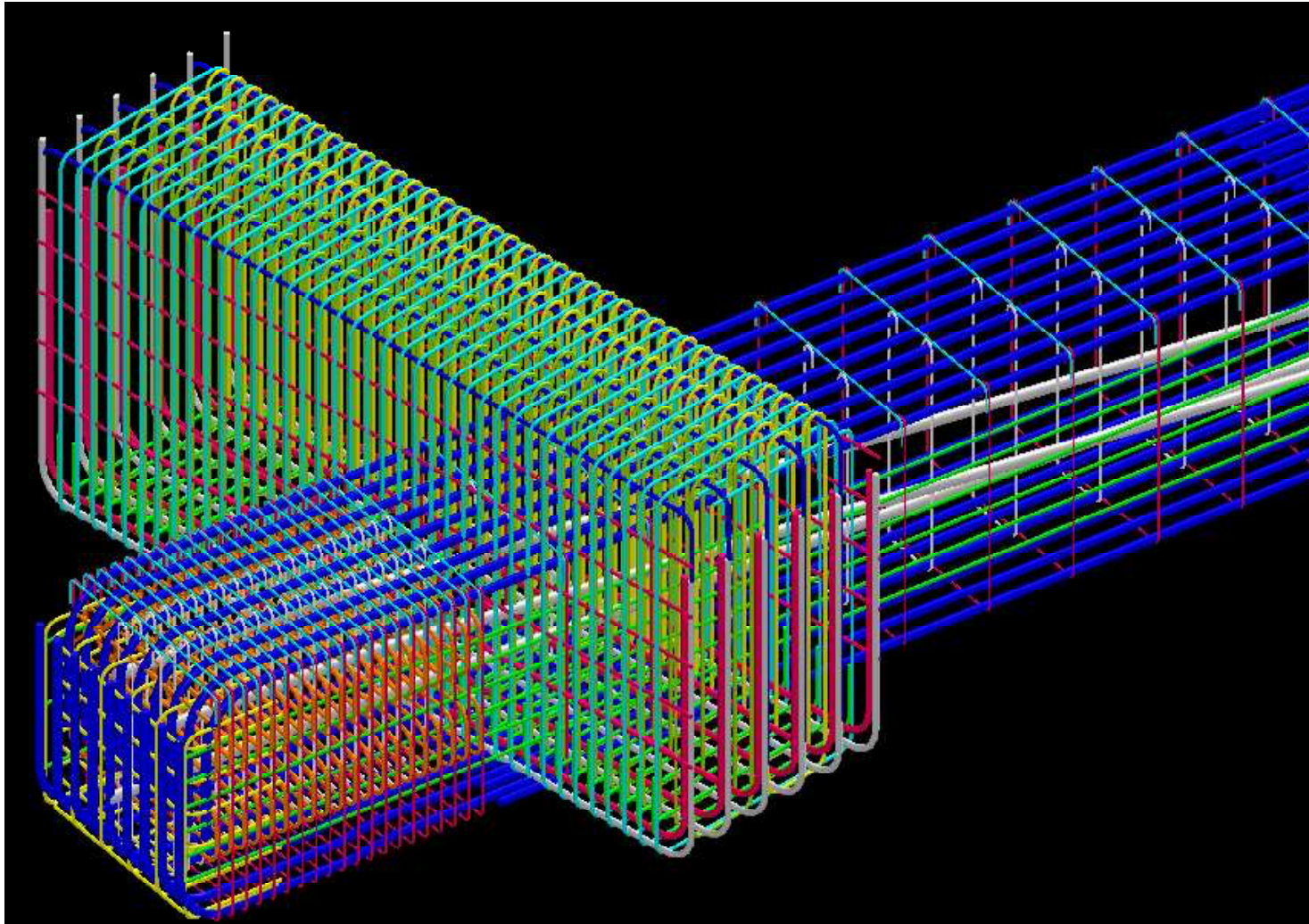
3D Models

- Wiremesh model created automatically by Rebar.



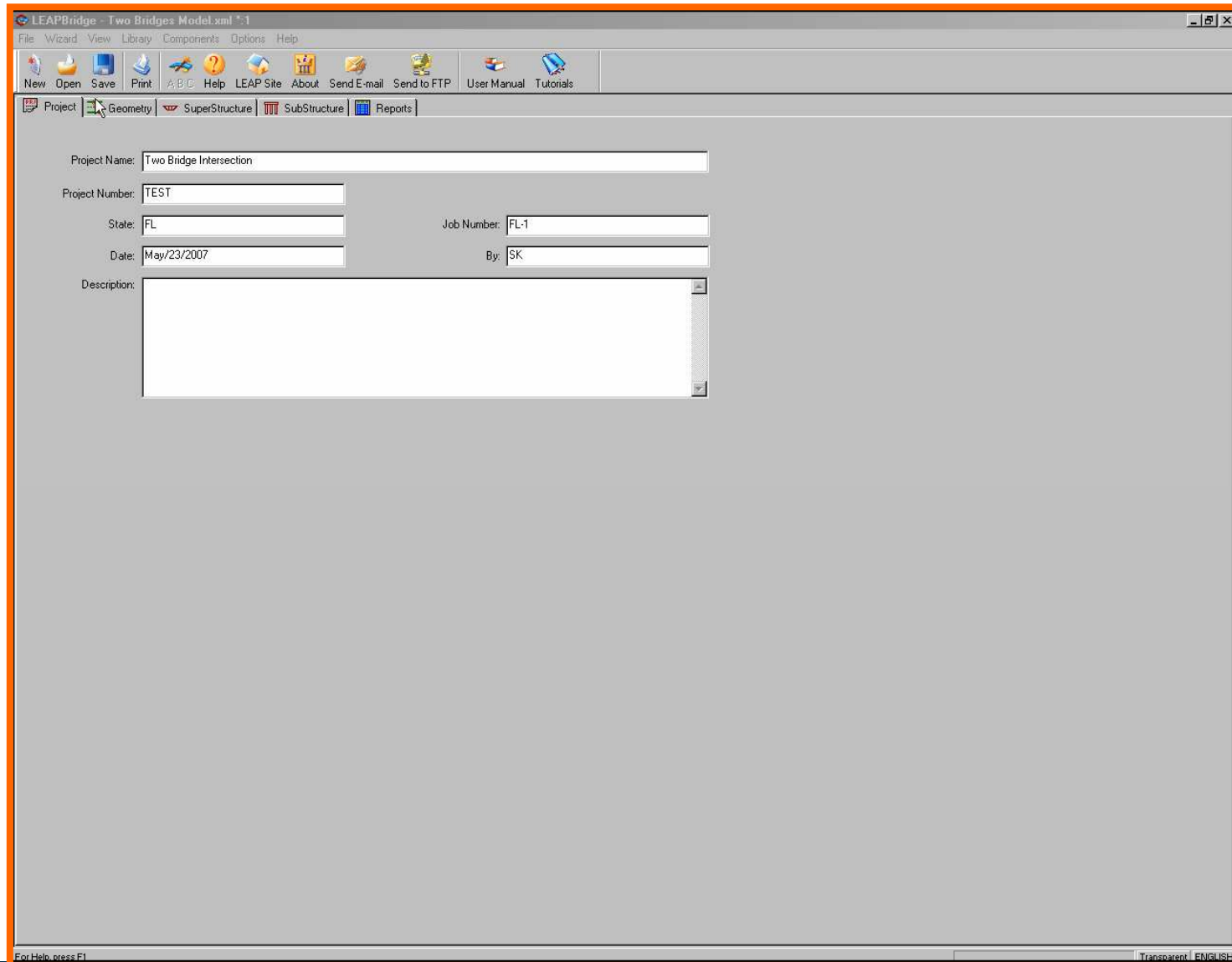
3D Models

- Rendered Beam connection showing post-tensioning tendons.



Interaction with Leap Bridge

- Detail with Rebar...



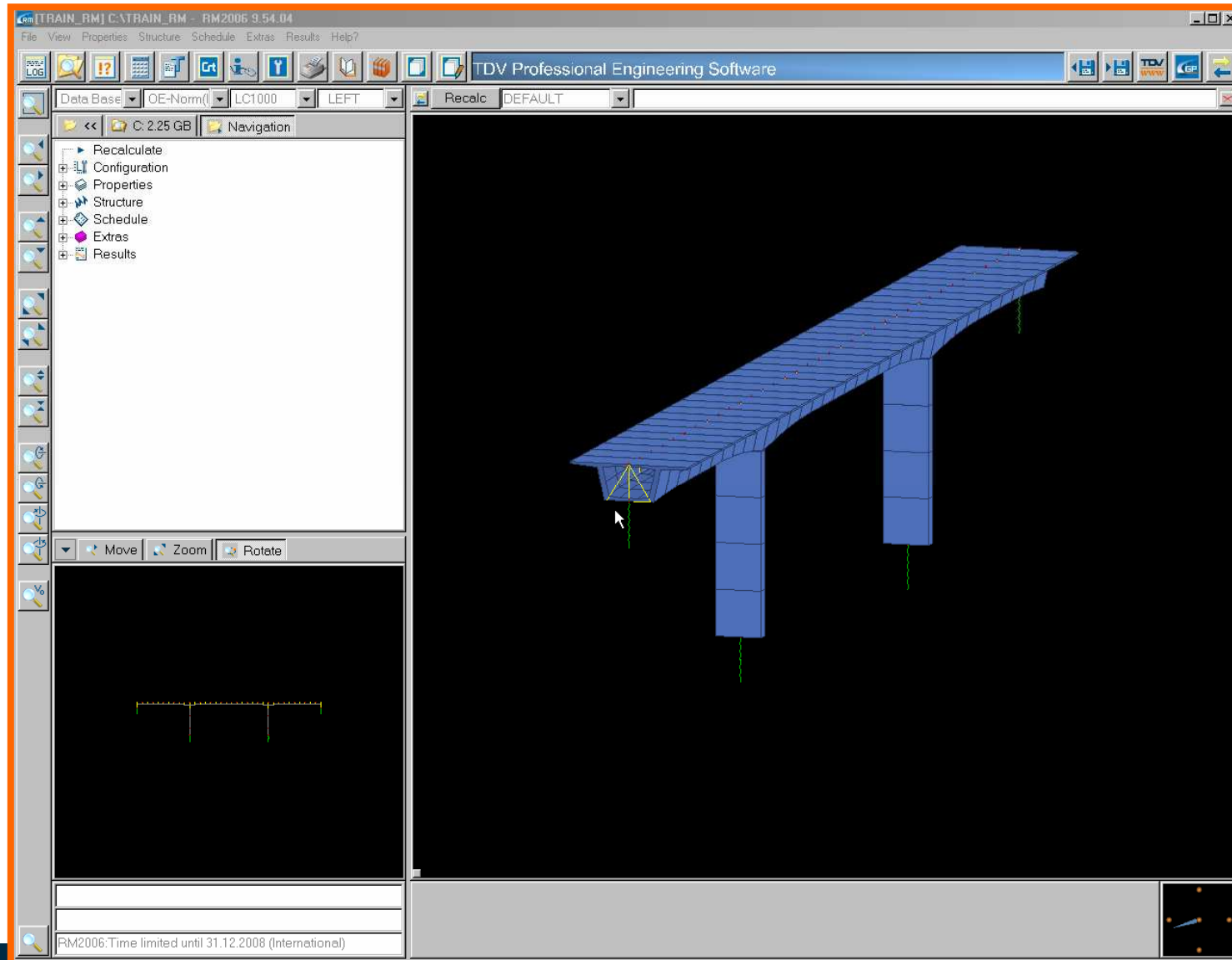
The screenshot displays the LEAPBridge software interface. The title bar reads "LEAPBridge - Two Bridges Model.xml *1". The menu bar includes "File", "Wizard", "View", "Library", "Components", "Options", and "Help". The toolbar contains icons for "New", "Open", "Save", "Print", "A/B/C", "Help", "LEAP Site", "About", "Send E-mail", "Send to FTP", "User Manual", and "Tutorials". The main menu bar shows "Project", "Geometry", "SuperStructure", "SubStructure", and "Reports". The "Project" menu is active, showing a form with the following fields:

Project Name:	Two Bridge Intersection		
Project Number:	TEST		
State:	FL	Job Number:	FL-1
Date:	May/23/2007	By:	SK
Description:	<input type="text"/>		

At the bottom left, it says "For Help, press F1". At the bottom right, it says "Transparent ENGLISH".

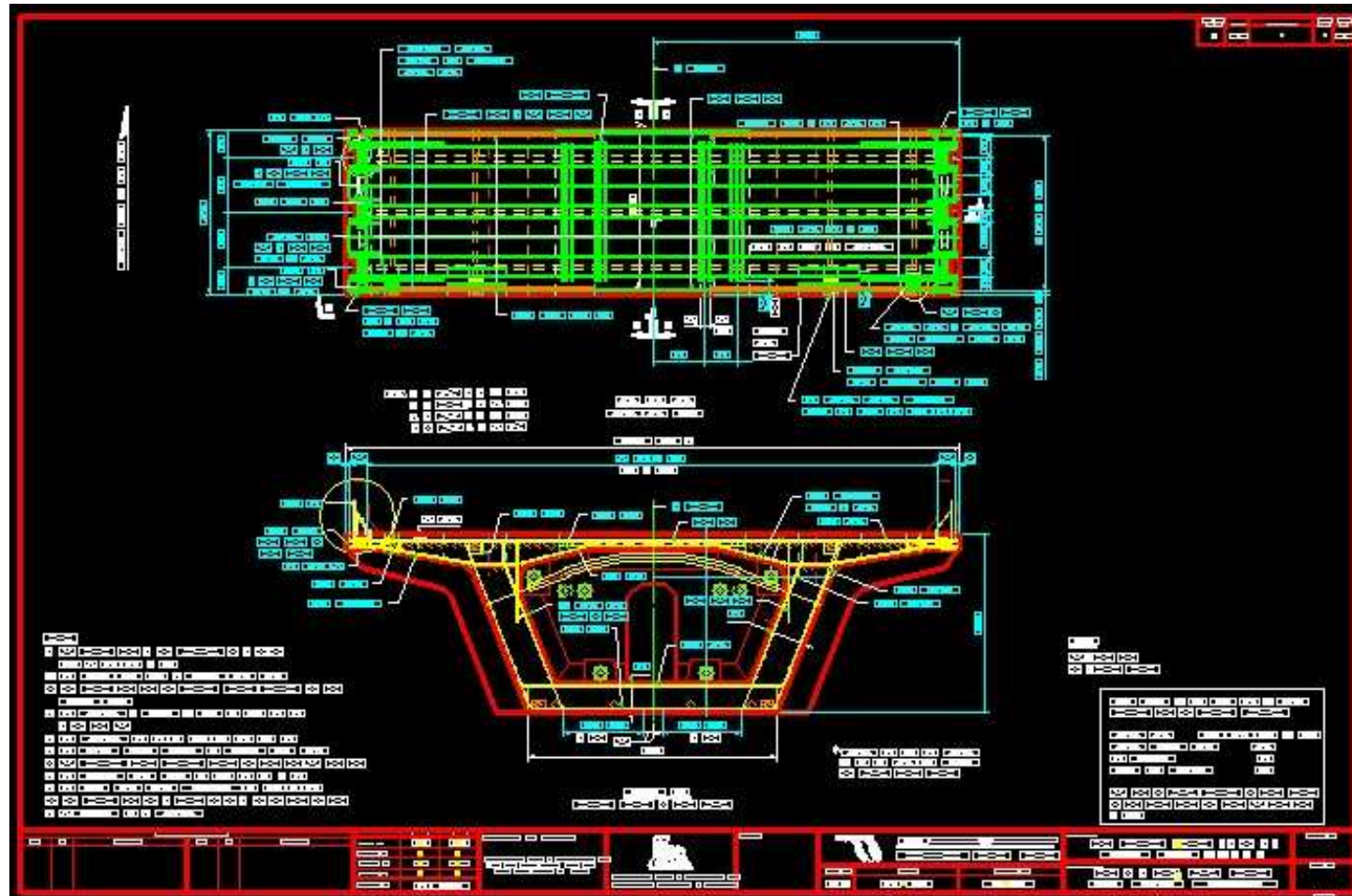
Interaction with RM Bridge

- Detail with Rebar...



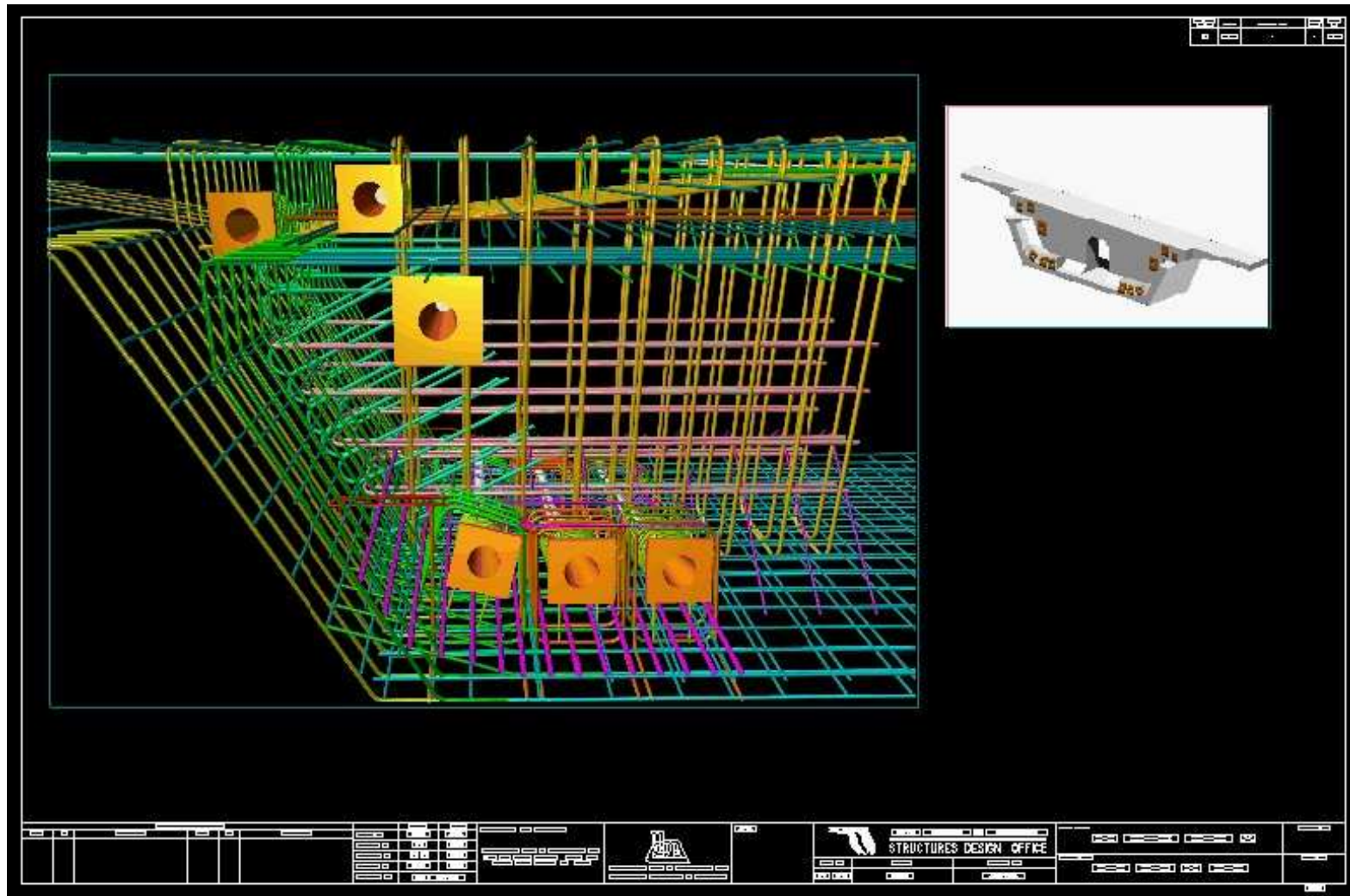
Turn This Into..

Contract Drawings.



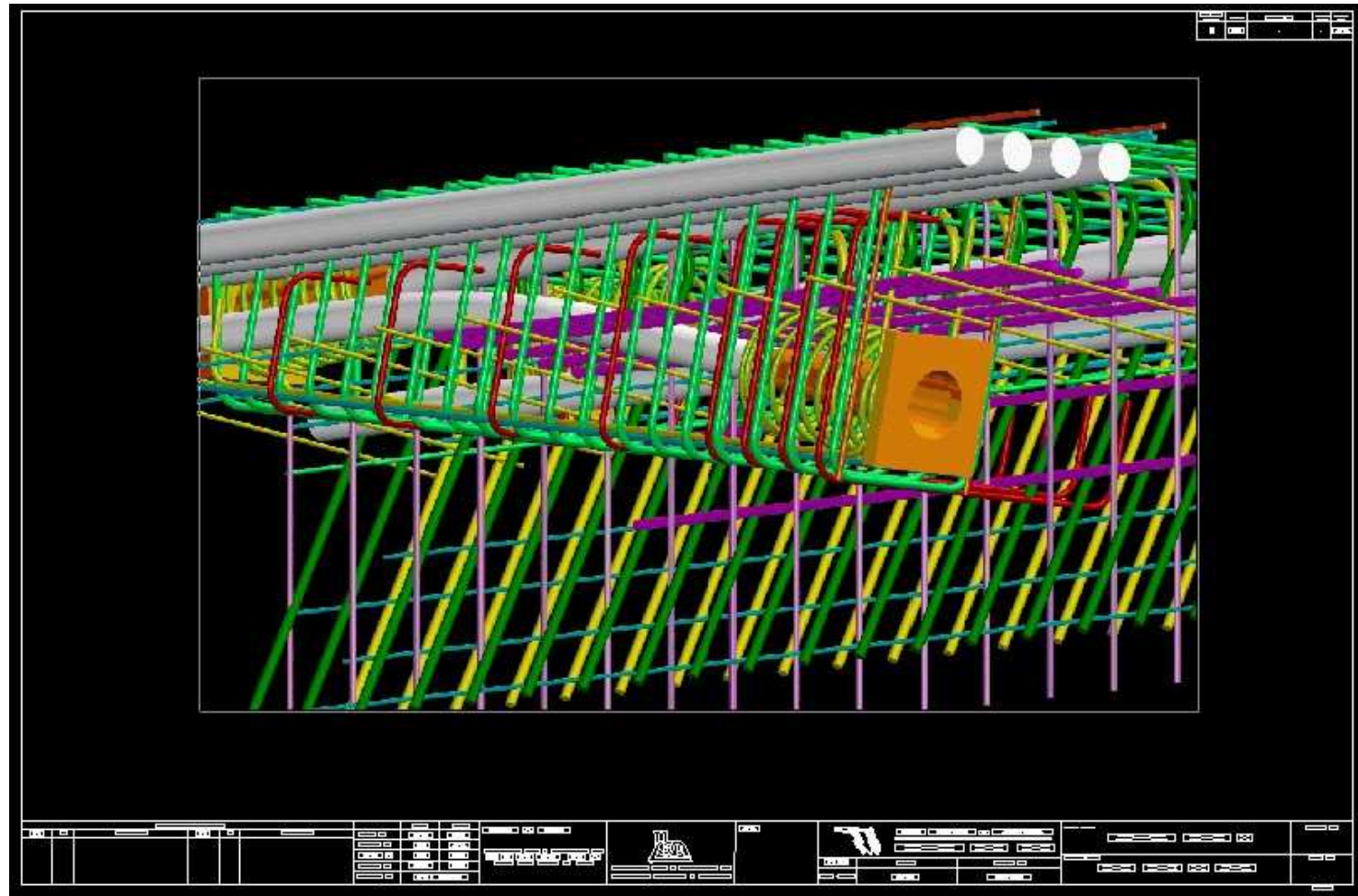
3D Modeling

Integrated Drawings.

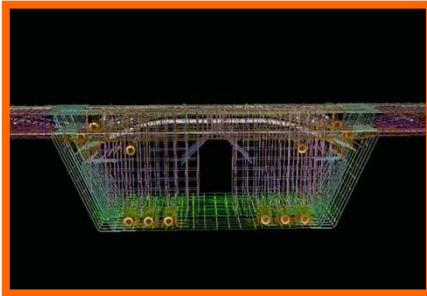


3D Modeling

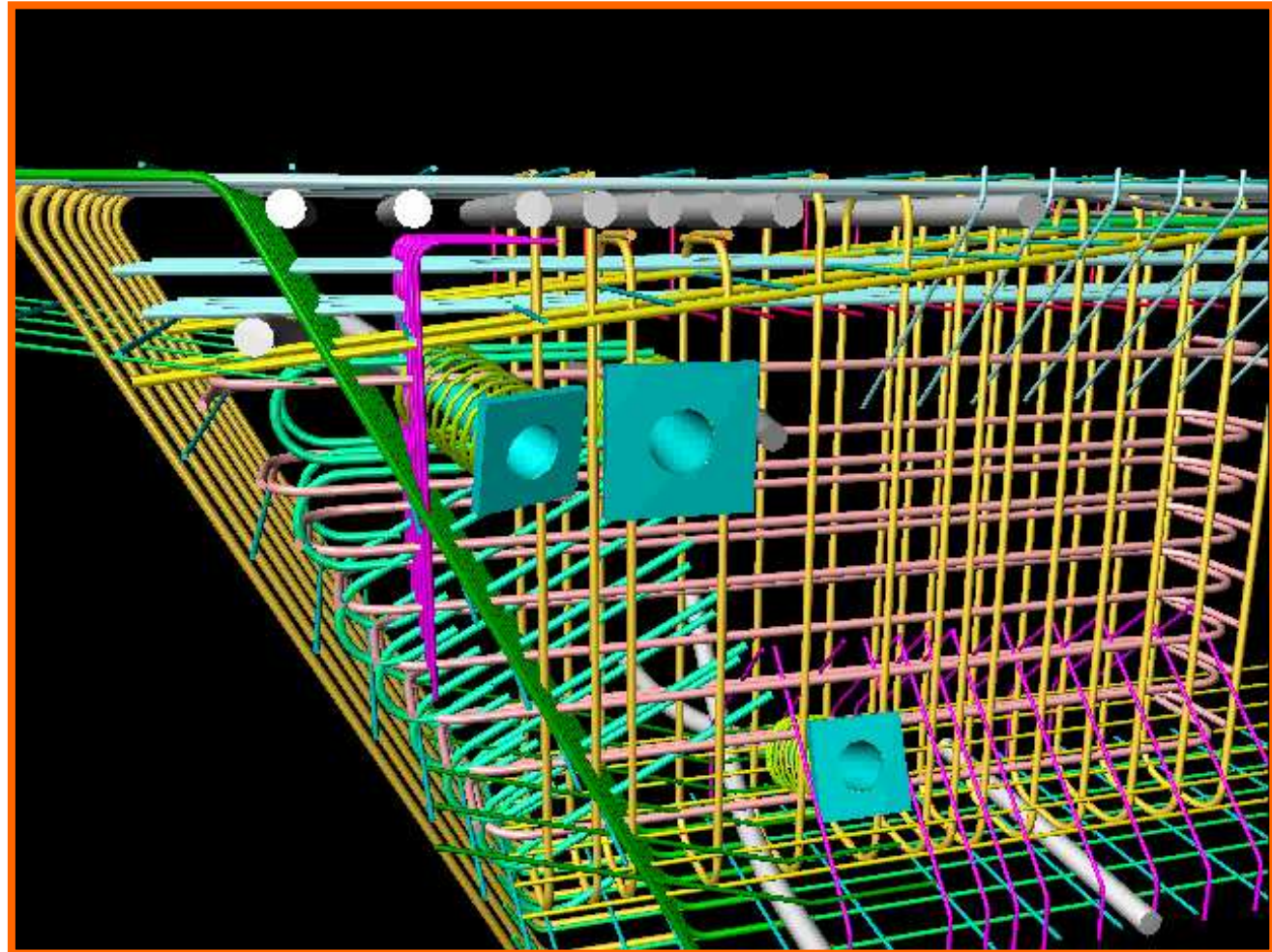
Integrated Drawings.



3D Model Checking



Check
Interferences





Thank you for your attention!