

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	87 N-0612-01	2015	36	84

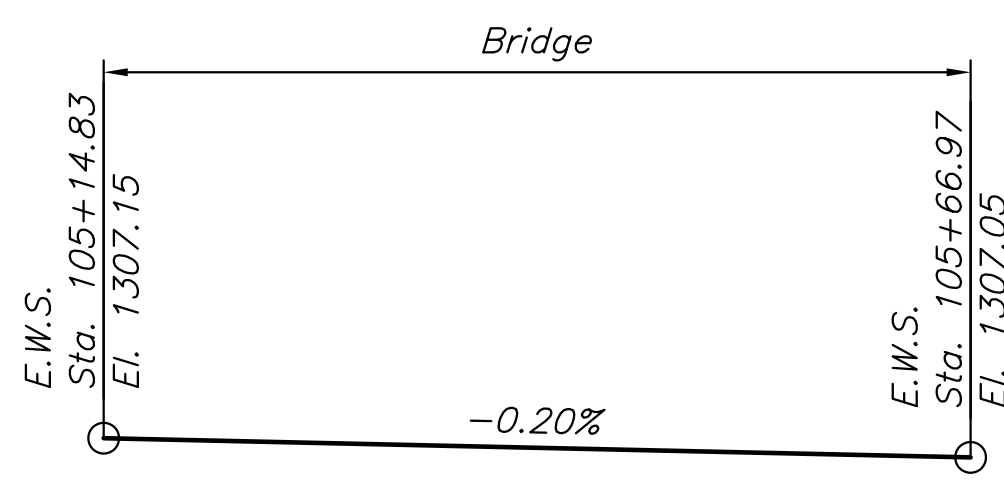


CONSTRUCTION PLANS FOR  
**21ST STREET BRIDGE AT DERBY REFINERY**  
 WICHITA, KANSAS

©2013  
 MKEC Engineering  
 All Rights Reserved  
 www.mkec.com  
 These drawings and their contents, including, but not limited to, all concepts, designs, & ideas are the exclusive property of MKEC Engineering (MKEC), and may not be used or reproduced in any way without the express consent of MKEC.

**CONSTRUCTION LAYOUT**

PROJECT NO.	87 N-0612-01	
DATE	JULY 2015	
SCALE	1" = 10'	
DESIGNED	DRAWN	CHECKED
KJS	DMU	KJS
NO.	REVISION	DATE
SHEET NO.		

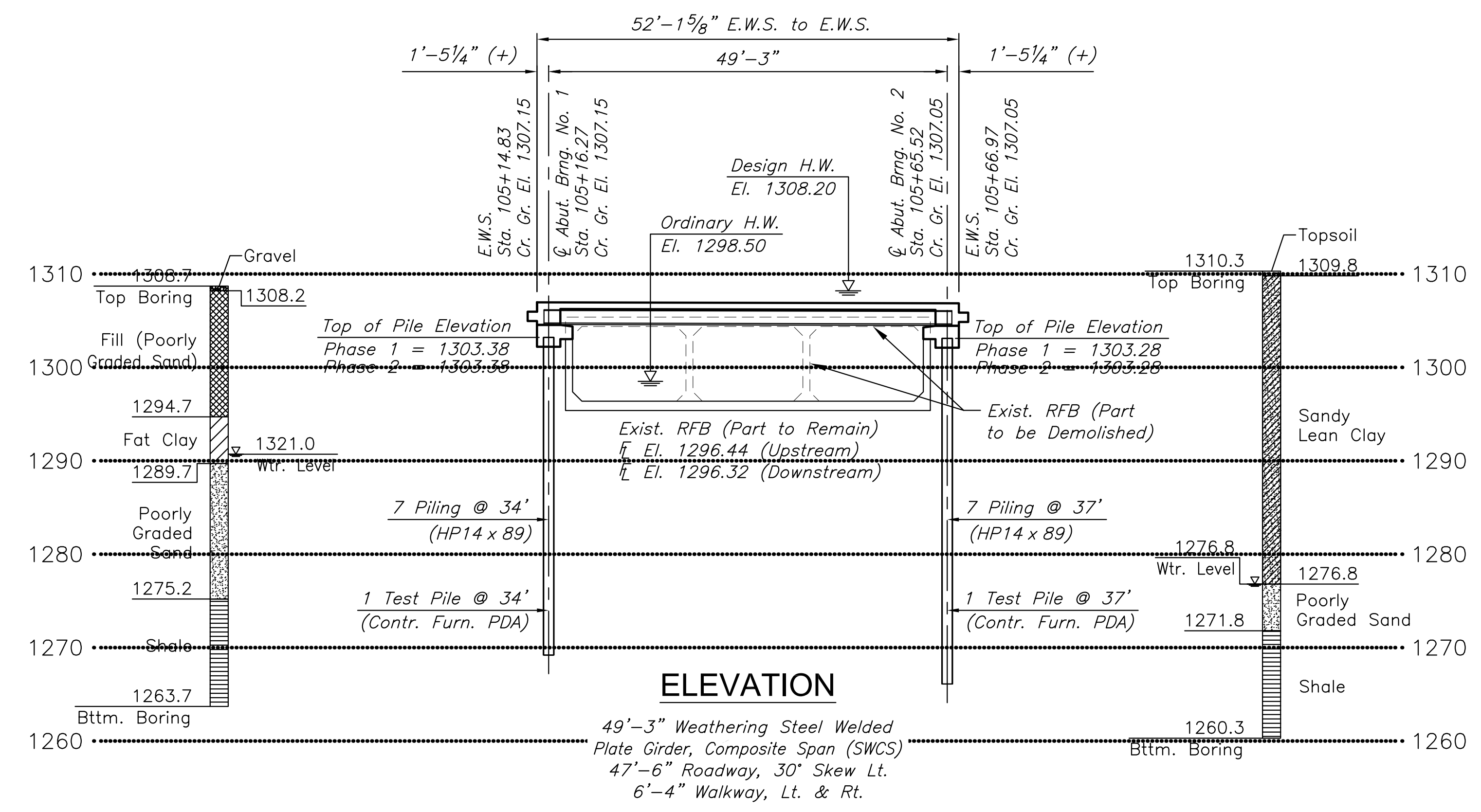


**CROWN GRADE PROFILE**

**BORING LEGEND**

- Gravel frac
- Topsoil
- Fill
- Sandy Lean Clay
- Poorly Graded Sand
- Shale

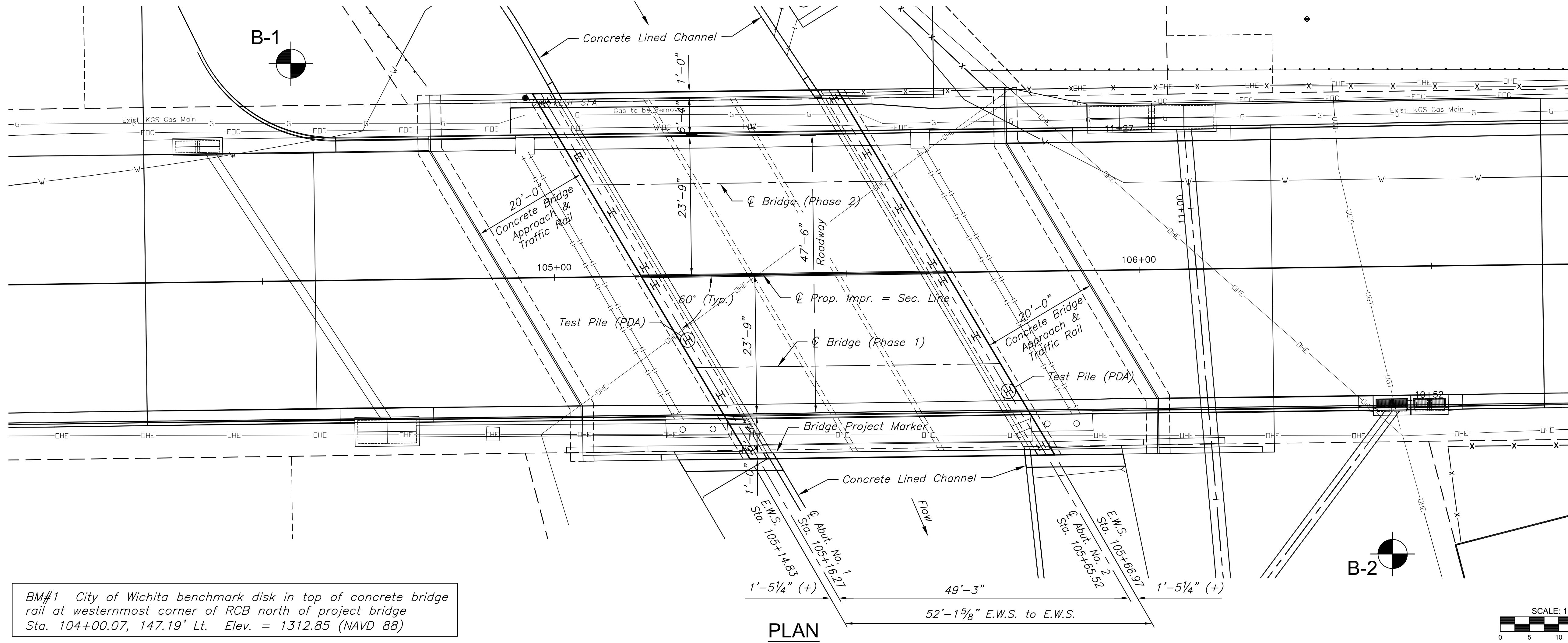
NOTE:  
 Elevation is shown perpendicular to skew. Dimensions are measured along  $\phi$  Prop. Impr.



**ELEVATION**

**DRAINAGE DATA**

Drainage Area	-----	1.7 Sq. Mi.
Design Frequency	-----	100 Years
Design Discharge ( $Q_{100}$ )	-----	2180 cfs
Design Highwater Elevation	-----	1308.20 Ft.
Design Backwater	-----	1308.20 Ft.
Design Backwater Elevation	-----	1308.20 Ft.
Overtopping Elevation	-----	N/A
Overtopping Frequency	-----	>100 Years
Discharge at $Q_{10}$	-----	885 cfs
Backwater at $Q_{10}$	-----	1301.30 Ft.
Backwater Elevation at $Q_{10}$	-----	1301.30 Ft.
Historic High Water Elevation	-----	Unknown
Ordinary High Water Elevation	-----	1298.50 Ft.
Total Waterway Provided	-----	306 Sq. Ft.
Design Waterway Provided	-----	306 Sq. Ft.



**PLAN**

BM#1 City of Wichita benchmark disk in top of concrete bridge rail at westernmost corner of RCB north of project bridge  
 Sta. 104+00.07, 147.19' Lt. Elev. = 1312.85 (NAVD 88)

PLOTTER: Tuesday, July 21, 2015 @ 10:10AM