14" OCTAGONAL PILES

Low prestress level

- 5 strands - $f_{pc} = 817$
- $f_c = 6$ ksi
  - 143 ton axial load
- $f_c = 7$ ksi
  - 170 ton axial load
- $f_c = 8$ ksi
  - 196 ton axial load

High prestress level

- 8 strands - $f_{pc} = 1254$
- $f_c = 6$ ksi
  - 133 ton axial load
- $f_c = 7$ ksi
  - 160 ton axial load
- $f_c = 8$ ksi
  - 187 ton axial load
14" OCTAGONAL PILE
5 strands, $f_c = 6$ ksi

SECTION PROPERTIES

$I = 2103 \text{ in}^4$
$r = 3.6 \text{ in}$
$A = 162 \text{ in}^2$
$w = 178 \text{ plf}$
Perimeter = 46 in

$I/r =$ effective unsupported length of the pile / radius of gyration

AXIAL LOAD \( \phi Pn \) (kips) vs. BENDING MOMENT \( \phi Mn \) (ft.k.)
14" OCTAGONAL PILE
5 strands, $f'_c = 7$ ksi

SECTION PROPERTIES
- $I = 2103 \text{ in}^4$
- $r = 3.6 \text{ in}$
- $A = 162 \text{ in}^2$
- $w = 178 \text{ plf}$
- Perimeter = 46 in

$\frac{I}{r}$ = effective unsupported length of the pile / radius of gyration

Graph showing load vs. bending moment for a 14" Oct Pile with 5 strands and $f'_c = 7$ ksi.
14" OCTAGONAL PILE
5 strands, $f_c' = 8$ ksi

SECTION PROPERTIES
\[ I = 2103 \text{ in}^4 \]
\[ r = 3.6 \text{ in} \]
\[ A = 162 \text{ in}^2 \]
\[ w = 178 \text{ plf} \]
Perimeter = 46 in

\[ \frac{1}{r} = \text{effective unsupported length of the pile / radius of gyration} \]

14" Oct Pile
5 strands
$fc' = 8$ ksi
14" OCTAGONAL PILE
8 strands, $f'_c = 6$ ksi

SECTION PROPERTIES
- $I = 2103$ in\(^4\)
- $r = 3.6$ in
- $A = 162$ in\(^2\)
- $w = 178$ plf
- Perimeter = 46 in

$1/r$ = effective unsupported length of the pile / radius of gyration

AXIAL LOAD $\phi P_n$ (kips)

BENDING MOMENT $\phi M_n$ (ft.k.)

14" Oct Pile
8 strands
$f_c = 6$ ksi
14" OCTAGONAL PILE
8 strands, $f_c = 7$ ksi

SECTION PROPERTIES

$I = 2103 \text{ in}^4$
$r = 3.6 \text{ in}$
$A = 162 \text{ in}^2$
$w = 178 \text{ plf}$
Perimeter = 46 in

$I/r = \text{effective unsupported length of the pile} / \text{radius of gyration}$

Graph of axial load $\phi P_n$ (kips) vs. bending moment $\phi M_n$ (ft.k.) for 14" Oct Pile with 8 strands and $f_c = 7$ ksi.
14" OCTAGONAL PILE
8 strands, f'_c = 8 ksi

SECTION PROPERTIES

\( I = 2103 \text{ in}^4 \)
\( r = 3.6 \text{ in} \)
\( A = 162 \text{ in}^2 \)
\( w = 178 \text{ plf} \)
Perimeter = 46 in

\( l/r = \text{effective unsupported length of the pile} / \text{radius of gyration} \)

![Graph showing axial load vs. bending moment for 14" Oct Pile with 8 strands, f'_c = 8 ksi.](image-url)