**GENERAL NOTES**

Grating details shown are intended for use with particular sizes of precast reinforced concrete flared end sections as shown on IDOT standards 542301 and 542306.

- Approximately quantity of steel shown includes total quantity of grating, bolts, nuts, washers and steel pipe.
- Holes in the precast concrete flared end sections shall be cored to the diameters noted. If cone-out on the other end of the hole occurs, the hole shall be filled with grout to correct the diameter of the hole.
- Flange with flat washer and hex nut
- Plate shall conform to surface shape of concrete flared end section.

**SECTION A-A**

**FLARED END SECTIONS**

Grating For Concrete

<table>
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<td>LAKE COUNTY STANDARDS &amp; DETAILS</td>
<td>U:\Design\Nauman\Lake\Standard Details\LC5403 Grating for Conc Flared End Section 24-54 in pipe.dgn</td>
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**REVISIONS / REMARKS**

- IDOT standards 542301 and 542306.
**PLAN**

Quantity of steel = 425 lbs.

- 7'-6" Concrete dimension
- 8'-9" Length of 1" x 4" strong pipe (galvanized)
- 7'-0" Length of PL 4"x4"
- 9 spaces at 9" = 6'-9"
- Pipe cap (typ.)
- Galvanized 1"
- 8'-2" Length of 1" x 4" strong pipe (galvanized)
- 7'-0" Concrete dimension
- 6'-6" Length of PL 4"x4"
- 8 spaces at 9" = 6'-0"
- = 24"
- 8 sp. @ 3"
- 3"x3"x...
- 25" Length of 48" I.D. pipe
- 6" 42 I.D. pipe
- 42 I.D. pipe thru concrete
- Provide 2" dia. hole thru concrete
- Plate washer L 4"x4"x'
- and hex nut
- Plate shall conform to surface shape of core, flared end section.
- Plate washer L 3"x3"x'
- 1/2" Bearing plated (typ.)
- Plate
- 15"
- 15"
- 15"
- 15"
- 8" Dia. hole thru concrete
- Plate washer L 3"x3"x'
- 1/2" Bearing plated (typ.)
- Plate
- 15"
- 15"
- 15"
- 15"
- 8" Dia. hole thru plate
- Flared end section.
- Surface shape of conc. 3"x... " Bearing
- 15 "
- 1" Bolt with L 3"x3"x'
- plates (typ.)
- 14 "x... " Bars
- 13 "
- 13 "
- 13 "
- 13 "
- 7  spaces @ 3"
- Pipe cap (typ.)
- Galvanized 1"
- 6'-0" Length of PL 4"x4"
- 7  spaces at 9"
- = 5'-3"
- 6 '-6" Concrete dimension
- 7 '-6" Length of 1" x 4" strong pipe (galvanized)
- 6" 42 I.D. pipe
- 42 I.D. pipe thru concrete
- Provide 2" dia. hole thru concrete
- Plate washer L 4"x4"x'
- and hex nut
- Plate shall conform to surface shape of core, flared end section.
- Plate washer L 3"x3"x'
- 1/2" Bearing plated (typ.)
- Plate
- 15"
- 15"
- 15"
- 15"
- 8" Dia. hole thru concrete
- Plate washer L 3"x3"x'
- 1/2" Bearing plated (typ.)
- Plate
- 15"
- 15"
- 15"
- 15"
- 8" Dia. hole thru plate
- Flared end section.
- Surface shape of conc. 3"x... " Bearing
- 15 "
- 1" Bolt with L 3"x3"x'
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- 13 "
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