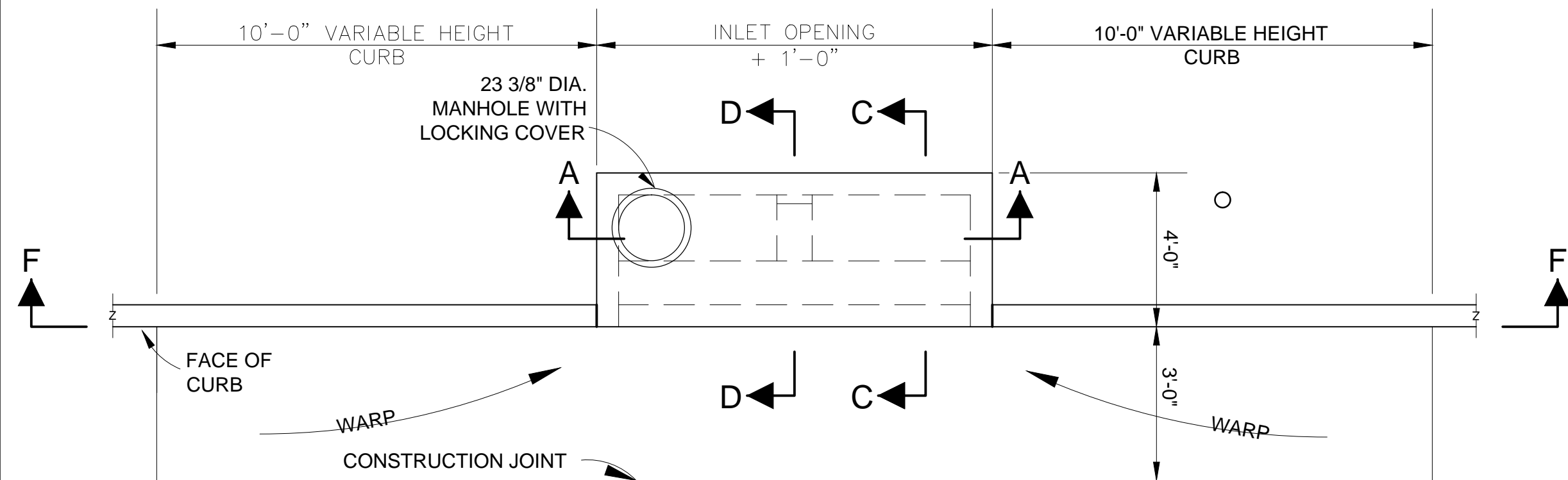
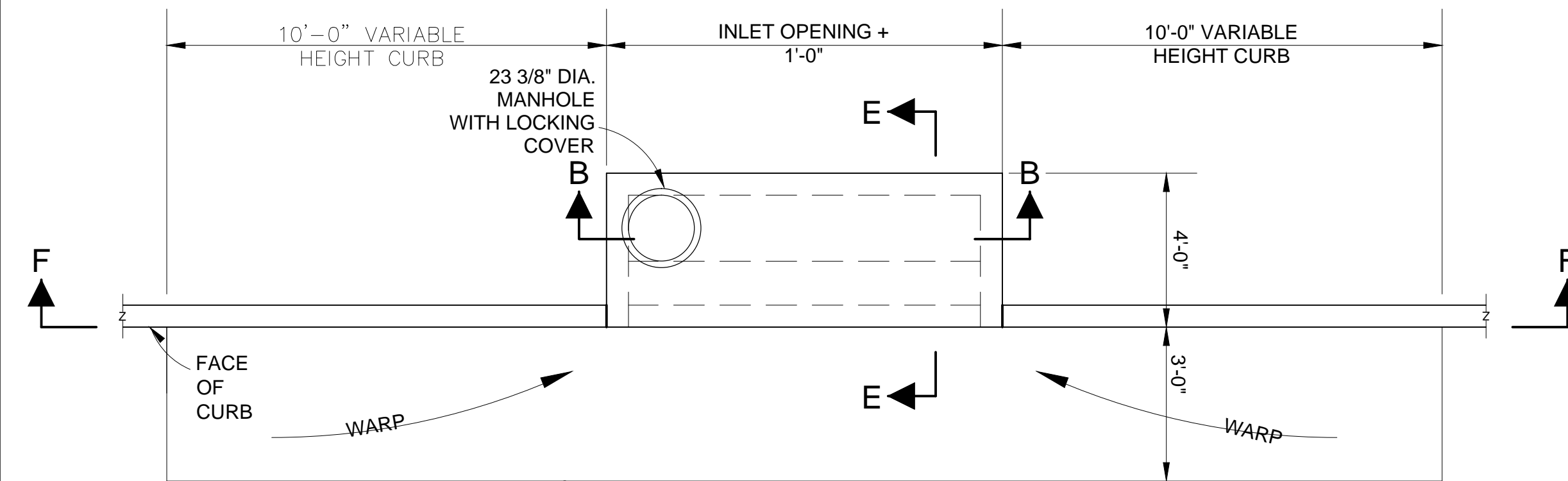


GENERAL NOTES:

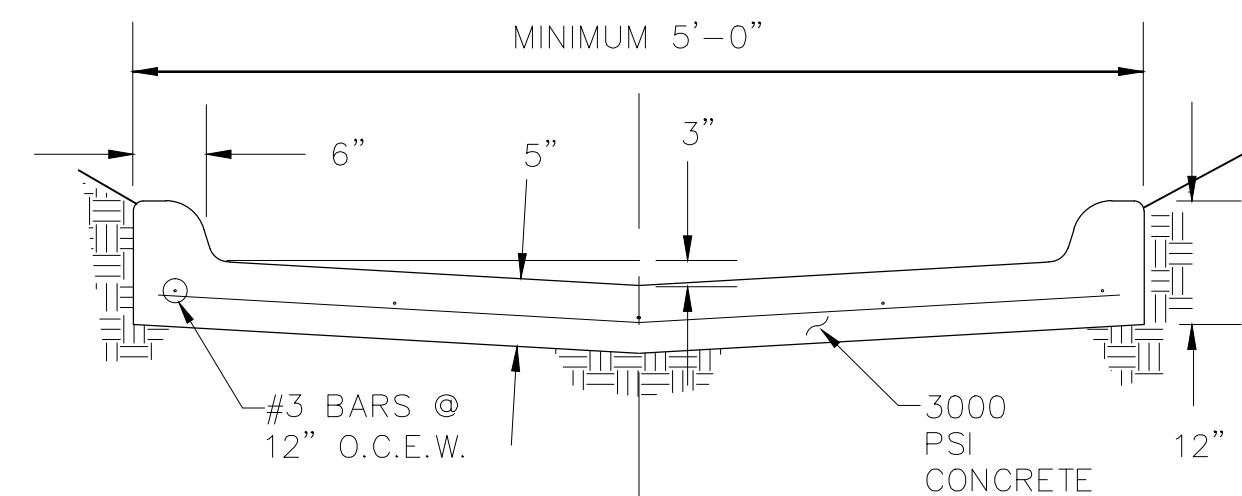
1. OUTLET PIPE MAY BE LOCATED IN ANY WALL BUT SHALL NOT BE LOCATED AT ANY CORNER OR PILASTER.
2. MANHOLE RING WITH LOCKING COVER SHALL BE PLACED OVER THE OUTLET PIPE, REINFORCING BARS ARE TO BE ADJUSTED ACCORDINGLY. RING & COVER SHALL BE BASS & HAYS INLET #224L OR EQUAL.
3. INLETS 4' TO 5' DEEP SHALL CONTAIN ONE STEP SPACED 3'6" FROM THE TOP OF THE INLET. STEPS SHALL BE OF THE POURED IN PLACE AND ARE TO BE RUBBER OR PLASTIC COATED (NEENAH R-1981-1 OR EQUAL).
4. INLETS 5' AND DEEPER SHALL CONTAIN ONE STEP SPACED 3'6" FROM THE TOP OF INLET AND ADDITIONAL STEPS EVERY 12" O.C. BELOW TO 1'6" FROM BOTTOM.
5. ALL INLETS SHALL BE 4000 P.S.I. CONCRETE.



12 AND 14 FOOT CURB LINE INLET



8 AND 10 FOOT CURB LINE INLET  
CURB LINE INLET PLAN VIEW  
N.T.S

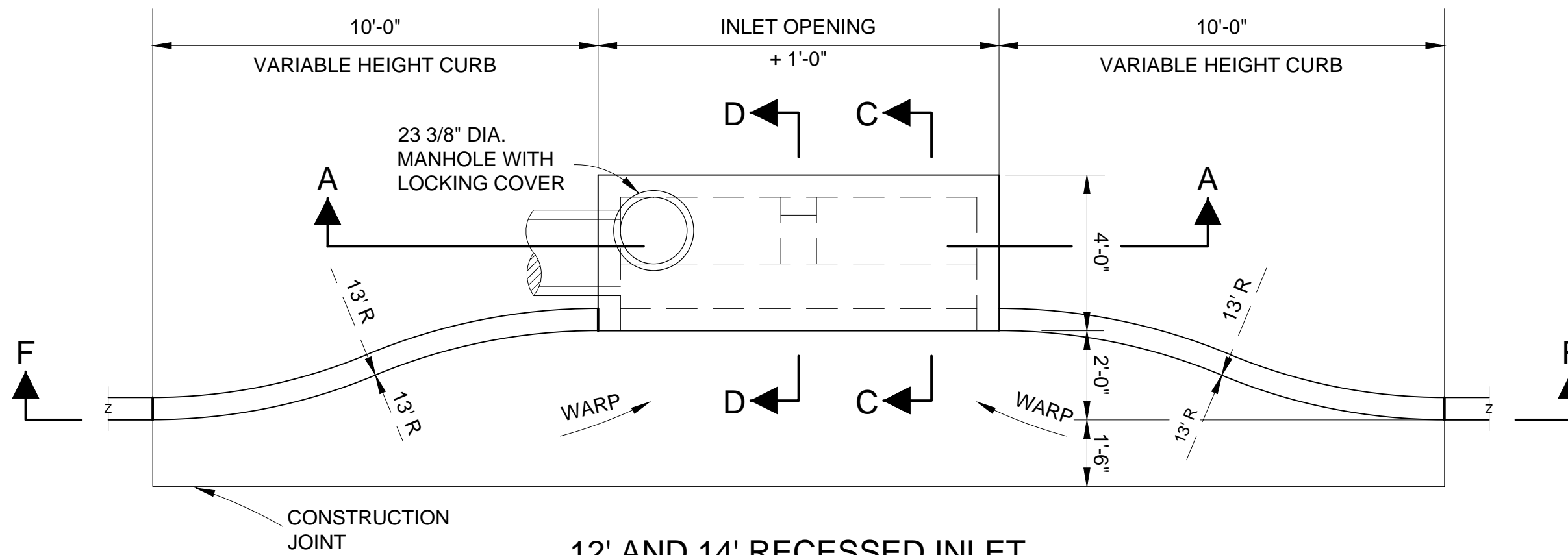


CURB FLUME DETAIL  
N.T.S

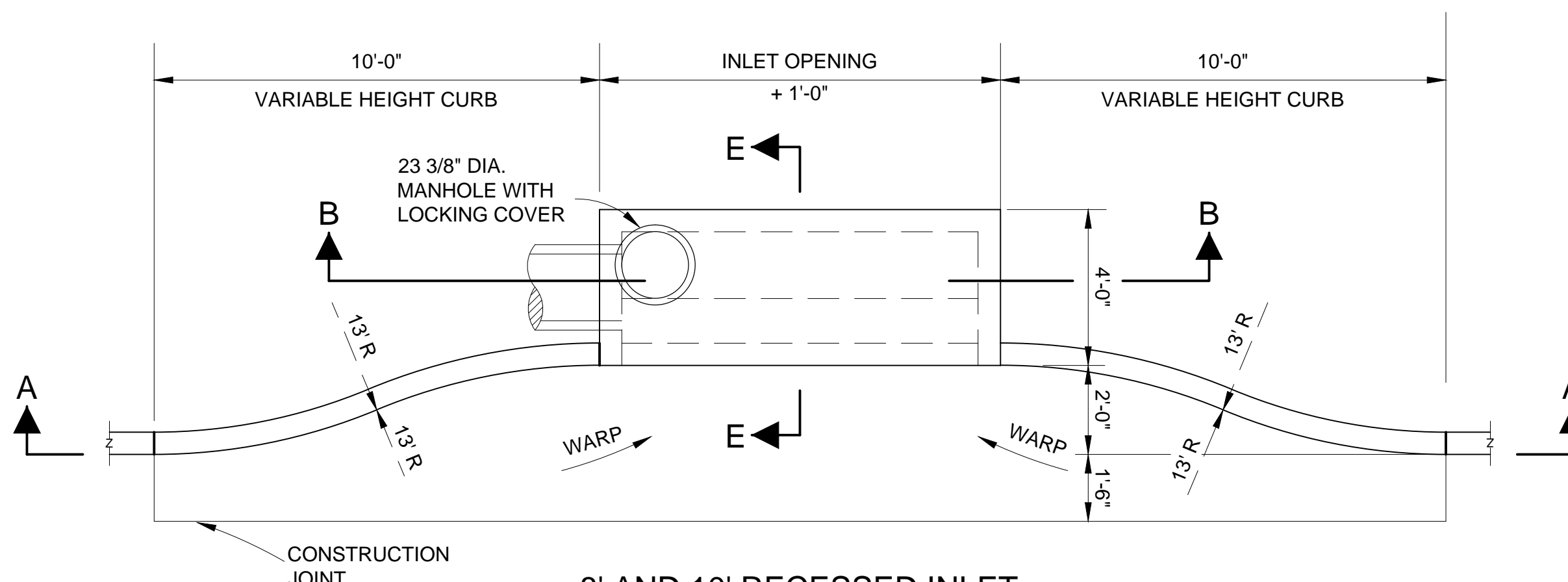
NOTE:  
IF FLUME IS 7' OR WIDER, PLACE PIPE BOLLARDS 7' X 6" DIA., FILLED WITH CONCRETE (4' BURY DEPTH) @ 3' O.C. AT BOTH ENDS OF FLUME

GENERAL NOTES:

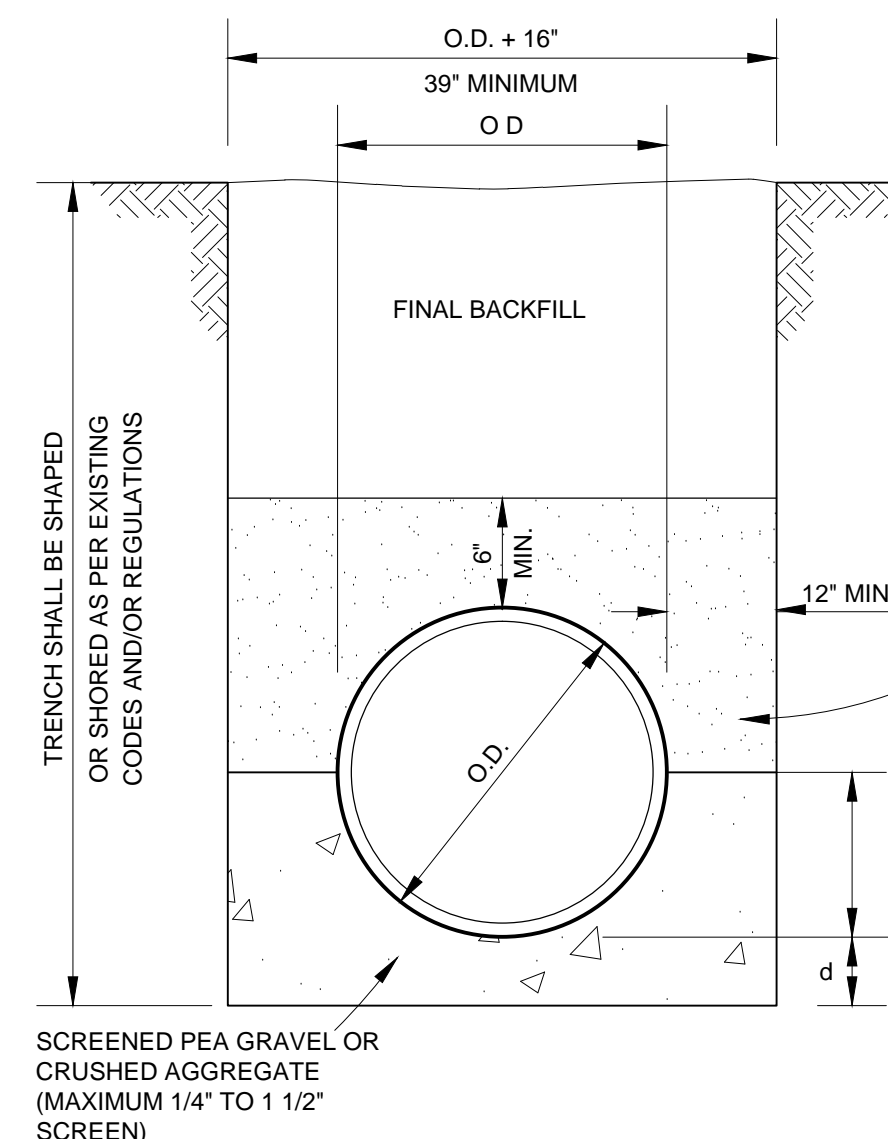
1. OUTLET PIPE MAY BE LOCATED IN ANY WALL BUT SHALL NOT BE LOCATED AT ANY CORNER AT THE PILASTER.
2. MANHOLE RING WITH LOCKING COVER SHALL BE PLACED OVER THE OUTLET PIPE, REINFORCING BARS ARE TO BE ADJUSTED ACCORDINGLY.
3. INLETS 4' TO 5' DEEP SHALL CONTAIN ONE STEP SPACED 3'6" FROM THE TOP OF THE INLET. STEPS SHALL BE OF THE POURED IN PLACE AND ARE TO BE RUBBER OR PLASTIC COATED (NEENAH R-1981-1 OR EQUAL).
4. INLETS 5' AND DEEPER SHALL CONTAIN ONE STEP SPACED 3'6" FROM THE TOP OF INLET AND ADDITIONAL STEPS EVERY 12" O.C. BELOW TO 1'6" FROM BOTTOM.



12' AND 14' RECESSED INLET



8' AND 10' RECESSED INLET  
CURB LINE INLET PLAN VIEW  
N.T.S



STORM DRAIN R.C.P. PIPE ENBEDMENT

GENERAL NOTES:

1. FOR THE DEFINITION OF THE BACKFILL MATERIAL TERMS SEE N.C.T.C.O.G. SPECIFICATIONS ITEM 2.1.8.
2. FINAL BACKFILL SHALL CONSIST OF AND BE PLACED IN ACCORDANCE WITH N.C.T.C.O.G. SPECIFICATIONS ITEM 6.2.9.

SELECT, GRANULAR OR NATIVE MATERIAL COMPACTED TO 95%.

1/2 O.D.

PIPE SIZE  $d$   
 $\le 27' 3''$   
 30'-60' 4'  
 $> 66' 6''$



Public Works  
Department  
Venus, Texas

Storm Sewer Standard Details

SHEET 1 OF 3

| DRAWN BY     | DATE     | SCALE        | RVSD |
|--------------|----------|--------------|------|
| J. DAUGHERTY | MAY 2018 | NOT TO SCALE |      |

| REINFORCING BAR SCHEDULE |                 |                  |          |                 |                        |       |    |
|--------------------------|-----------------|------------------|----------|-----------------|------------------------|-------|----|
| INLET LENGTH             | BAR MARK NUMBER | BAR DIAGRAM TYPE | BAR SIZE | NUMBER REQUIRED | BAR BENDING DIMENSIONS |       |    |
|                          |                 |                  |          |                 | A                      | B     | C  |
| 8                        | A               | I                | #3       | 9               | 3'-2"                  | 6"    | -  |
|                          | B               | I                | #3       | 2               | 6'-8"                  | 6"    | -  |
|                          | C               | II               | #4       | VARIES          | 8'-8"                  | 6"    | -  |
|                          | D               | II               | #4       | 12              | 8'-8"                  | 6"    | -  |
|                          | E               | IV               | #3       | 7               | *                      | *     | -  |
|                          | F               | III              | #3       | 2               | 4'-0"                  | -     | -  |
|                          | G               | V                | #4       | 10              | **                     | 3'-2" | ** |
|                          | H               | III              | #4       | VARIES          | 3'-2"                  | -     | -  |
|                          | I               | III              | #4       | 4               | **                     | -     | -  |
|                          | N               | III              | #4       | 2               | 1'-6"                  | -     | -  |
| 10                       | A               | I                | #3       | 14              | 3'-2"                  | 6"    | -  |
|                          | B               | I                | #3       | 2               | 8'-8"                  | 6"    | -  |
|                          | C               | II               | #4       | VARIES          | 10'-8"                 | 6"    | -  |
|                          | D               | II               | #4       | 12              | 10'-8"                 | 6"    | -  |
|                          | E               | IV               | #3       | 8               | *                      | *     | -  |
|                          | F               | III              | #3       | 2               | 4'-0"                  | -     | -  |
|                          | G               | V                | #4       | 12              | **                     | 3'-2" | ** |
|                          | H               | III              | #4       | VARIES          | 3'-2"                  | -     | -  |
|                          | I               | III              | #4       | 4               | **                     | -     | -  |
|                          | N               | III              | #4       | 2               | 1'-6"                  | -     | -  |
| 12                       | A               | I                | #3       | 10              | 3'-2"                  | 6"    | -  |
|                          | B               | I                | #3       | 2               | 10'-8"                 | 6"    | -  |
|                          | C               | II               | #4       | VARIES          | 12'-8"                 | 6"    | -  |
|                          | D               | II               | #5       | 6               | 12'-8"                 | -     | -  |
|                          | E               | IV               | #3       | 12              | **                     | *     | *  |
|                          | F               | III              | #3       | 2               | 4'-0"                  | -     | -  |
|                          | G               | V                | #4       | 10              | **                     | 3'-2" | ** |
|                          | H               | III              | #4       | VARIES          | 3'-2"                  | -     | -  |
|                          | I               | III              | #4       | 4               | **                     | -     | -  |
|                          | L               | III              | #4       | 5               | **                     | -     | -  |
|                          | M               | III              | #4       | 5               | 2'-8"                  | 6"    | -  |
|                          | N               | III              | #4       | 2               | 1'-6"                  | -     | -  |
|                          | P               | I                | #5       | 9               | 3'-2"                  | 6"    | -  |
|                          | R               | V                | #5       | 9               | **                     | 3'-2" | ** |
| 14                       | A               | I                | #3       | 14              | 3'-2"                  | 6"    | -  |
|                          | B               | I                | #3       | 2               | 12'-8"                 | 6"    | -  |
|                          | C               | II               | #4       | VARIES          | 14'-8"                 | 6"    | -  |
|                          | D               | II               | #5       | 6               | 14'-8"                 | -     | -  |
|                          | E               | IV               | #3       | 16              | *                      | *     | -  |
|                          | F               | III              | #3       | 2               | 4'-0"                  | -     | -  |
|                          | G               | V                | #4       | 14              | **                     | 3'-2" | ** |
|                          | H               | III              | #4       | VARIES          | 3'-2"                  | -     | -  |
|                          | I               | III              | #4       | 4               | **                     | -     | -  |
|                          | L               | III              | #4       | 5               | **                     | -     | -  |
|                          | M               | III              | #4       | 5               | 2'-8"                  | 6"    | -  |
|                          | N               | III              | #4       | 2               | 1'-6"                  | -     | -  |
|                          | P               | I                | #5       | 9               | 3'-2"                  | 6"    | -  |
|                          | R               | V                | #5       | 9               | **                     | 3'-2" | ** |

\* SEE BAR DIAGRAM FOR DIMENSIONS.  
\*\* LENGTH VARIES DUE TO DEPTH OF INLET.

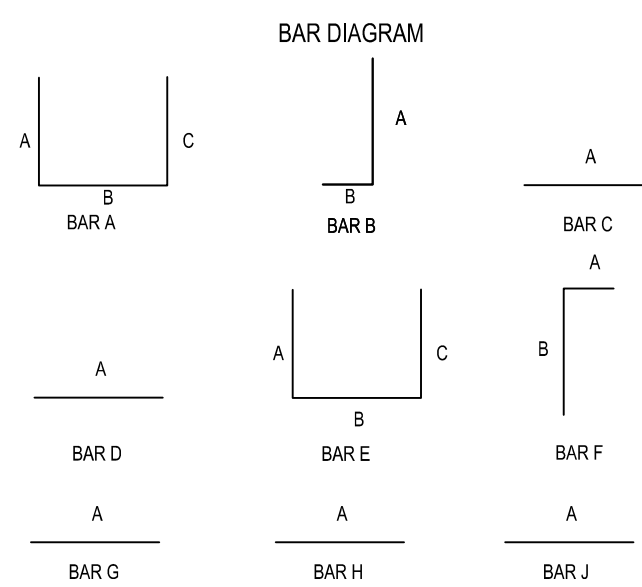
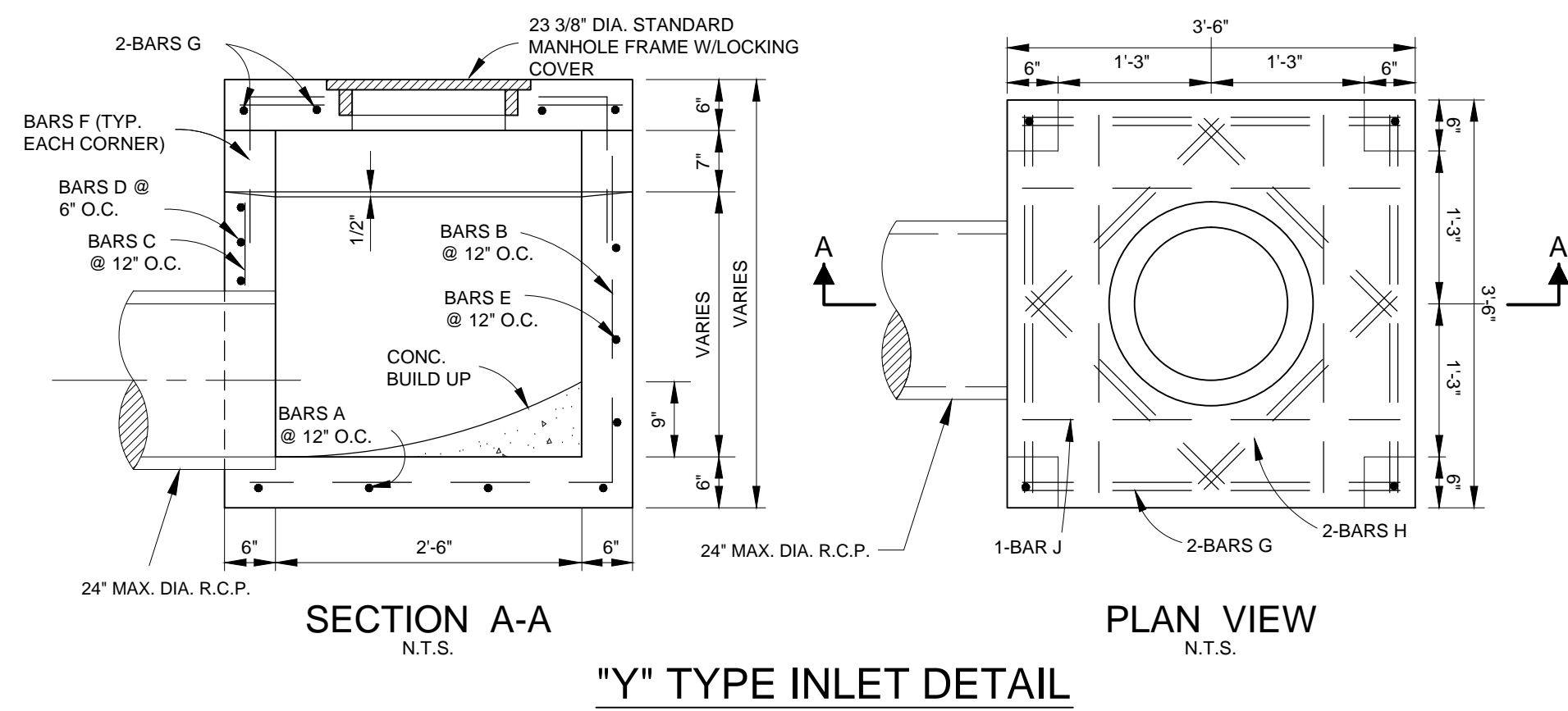
### CURB INLET REINFORCING BAR SCHEDULE

| REINFORCING BAR SCHEDULE |          |          |                        |        |        |
|--------------------------|----------|----------|------------------------|--------|--------|
| BAR                      | NO. REQD | BAR SIZE | BAR BENDING DIMENSIONS |        |        |
|                          |          |          | A                      | B      | C      |
| A                        | 4        | #4       | VARIES                 | 3'-0"  | VARIES |
| B                        | 4        | #4       | VARIES                 | VARIES | -      |
| C                        | 2        | #4       | VARIES                 | -      | -      |
| D                        | VARIES   | #4       | 3'-0"                  | -      | -      |
| E                        | VARIES   | #4       | 3'-0"                  | 3'-0"  | 3'-0"  |
| F                        | 4        | #4       | 1'-0"                  | 2'-0"  | -      |
| G                        | 8        | #4       | 3'-2"                  | -      | -      |
| H                        | 8        | #4       | 2'-1"                  | -      | -      |
| J                        | 4        | #4       | 3'-2"                  | -      | -      |

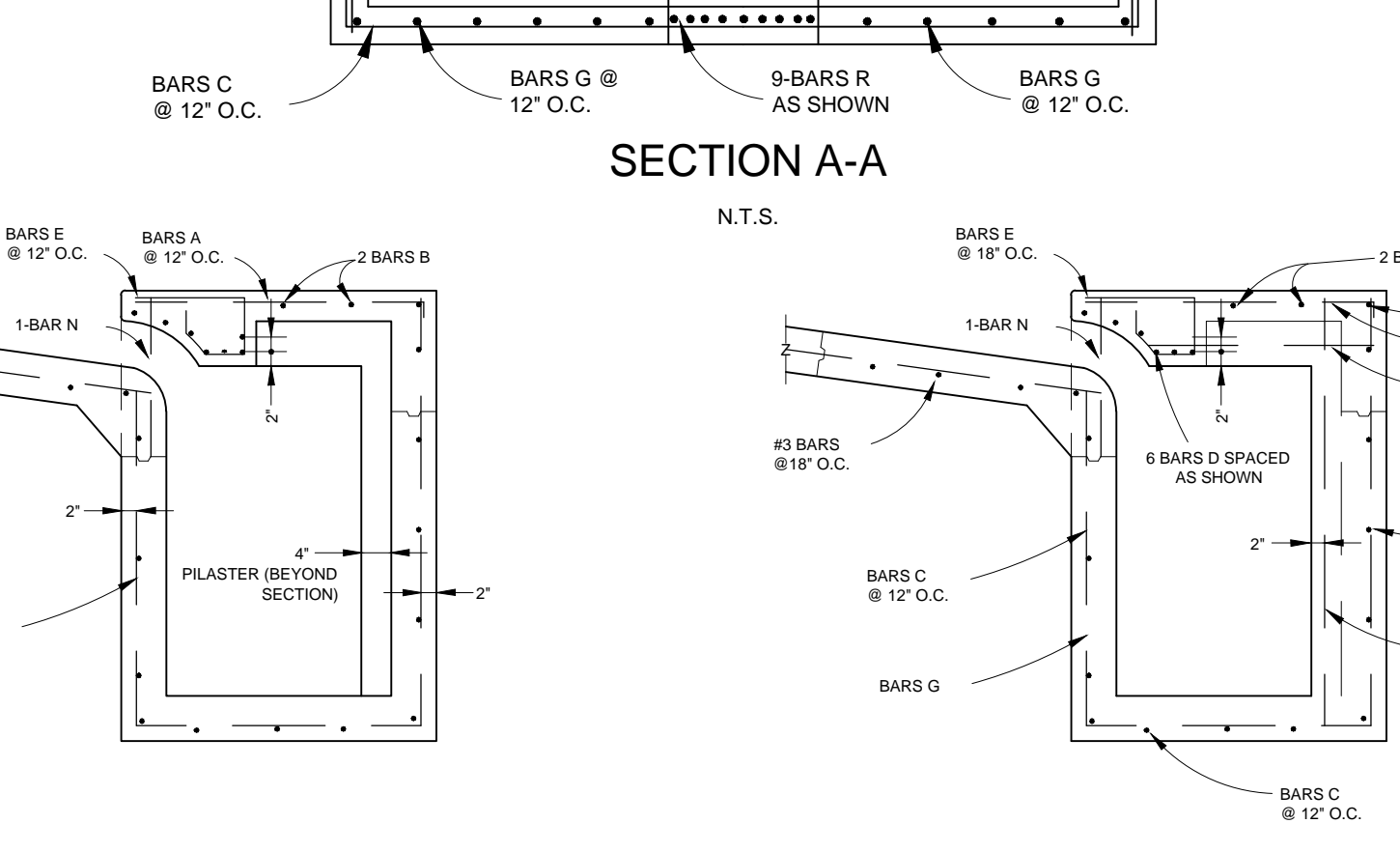
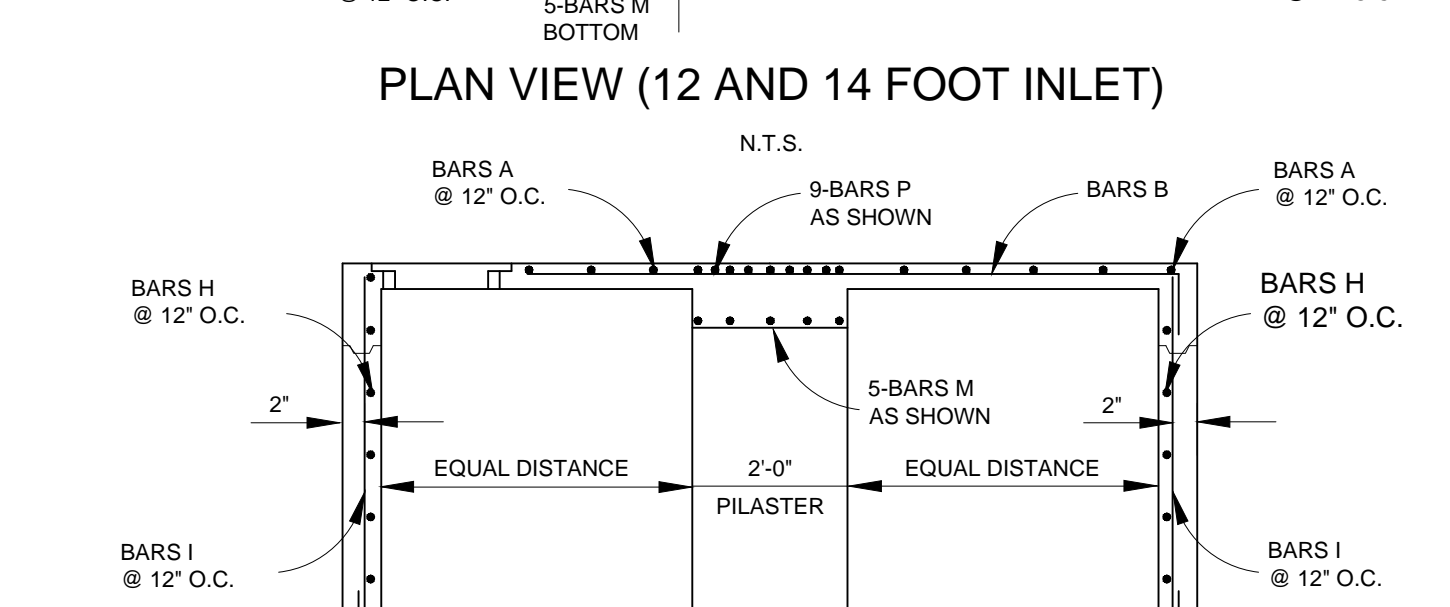
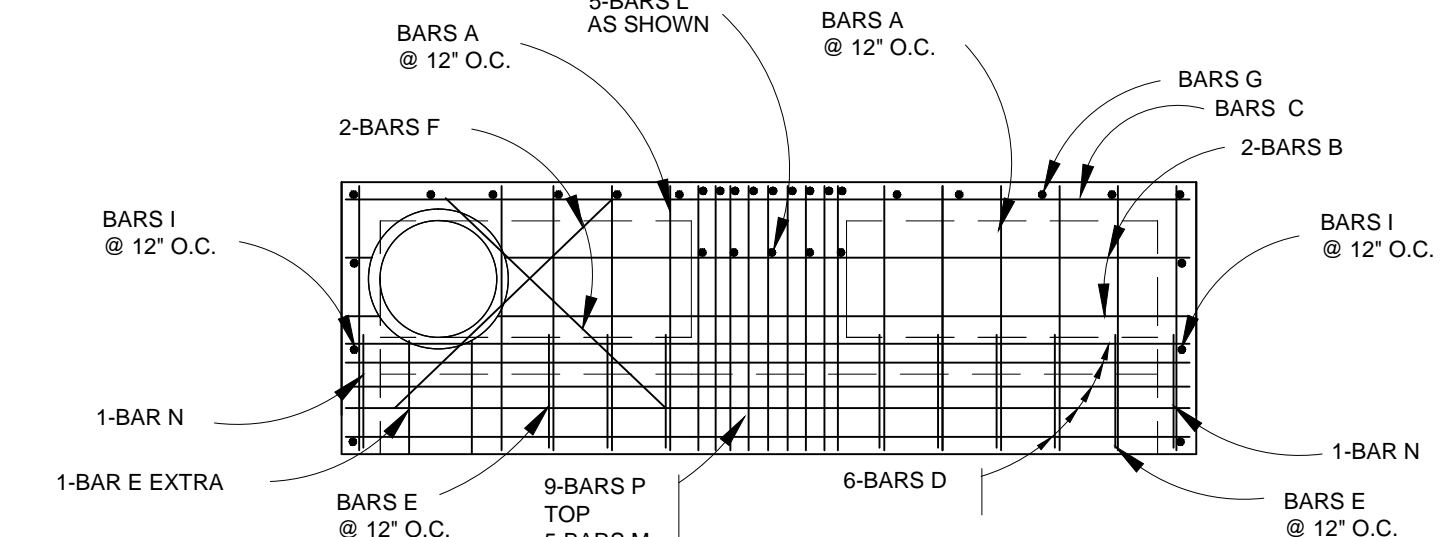
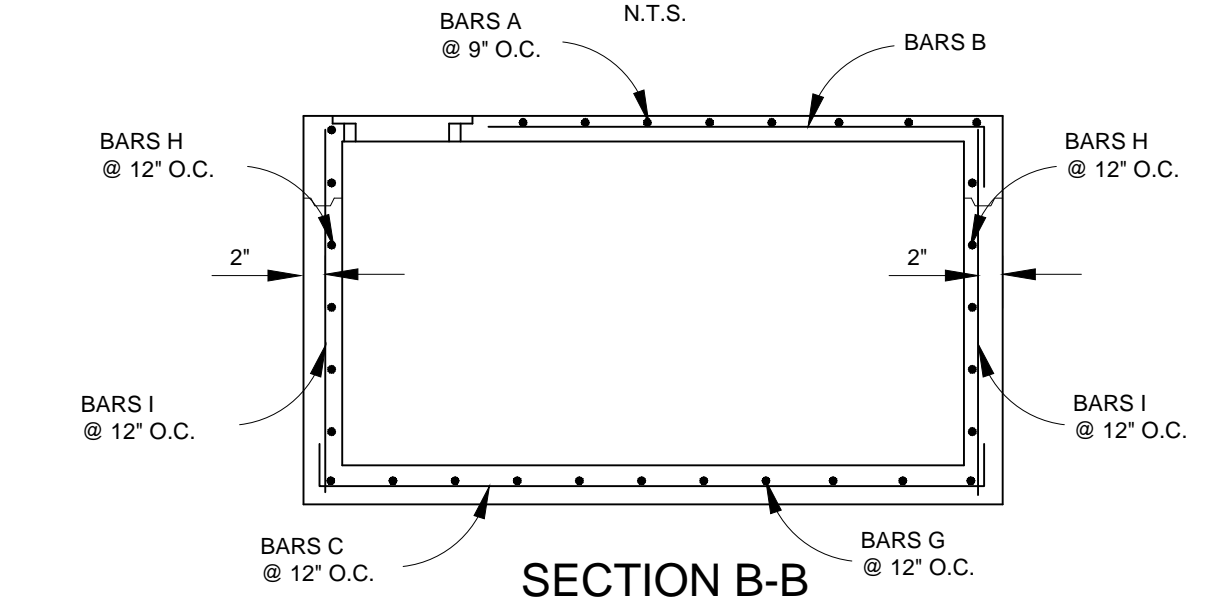
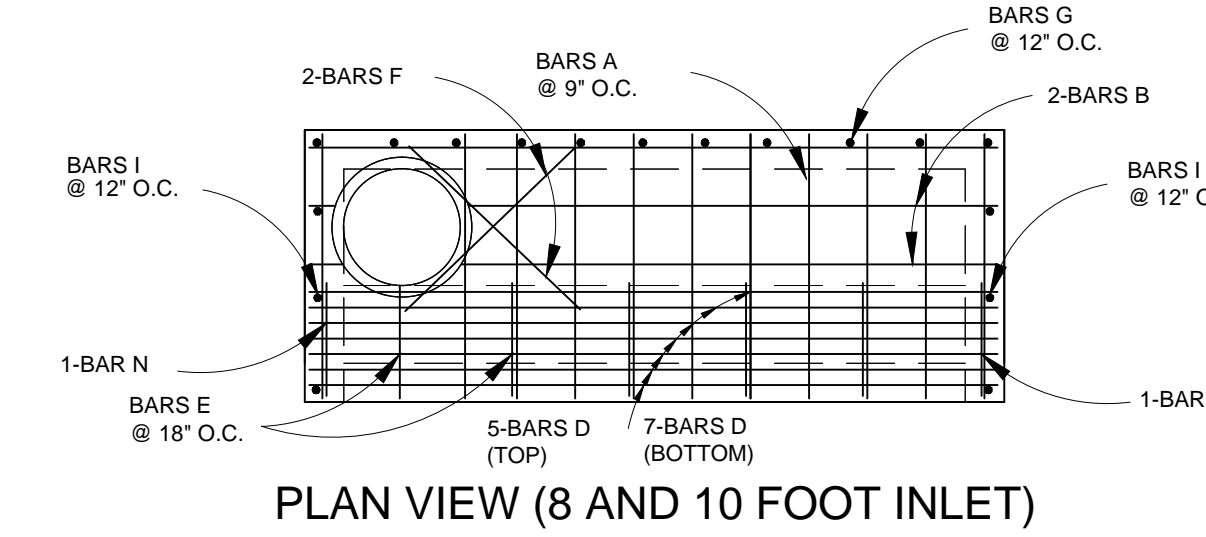
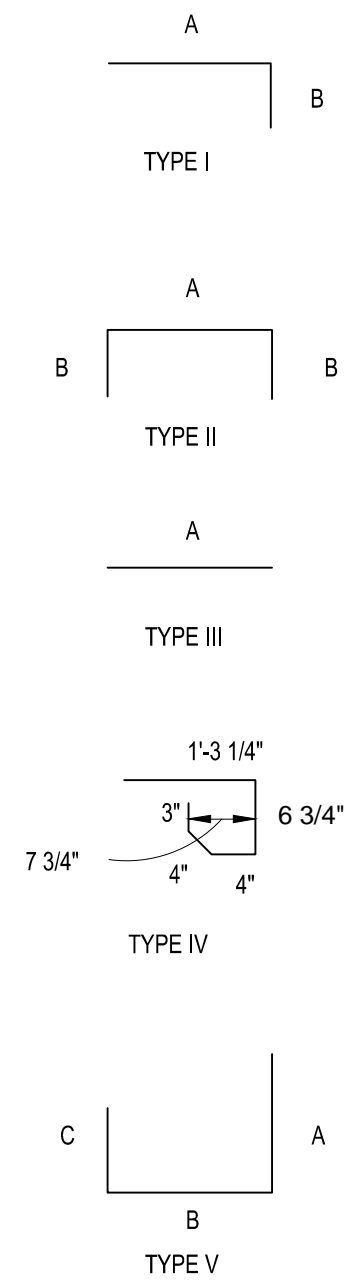
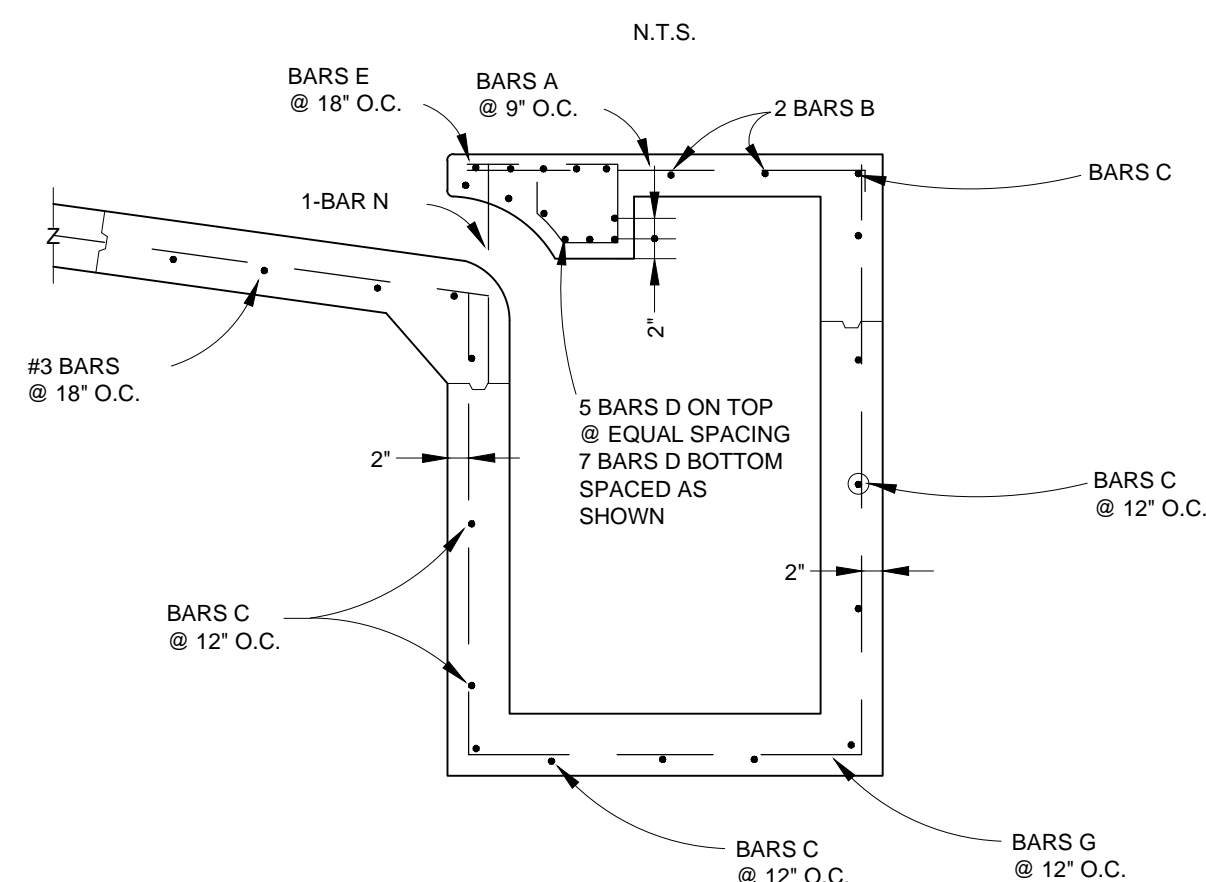
NOTE:  
BARS "A" & "E" ARE USED IN THE WALLS PARALLEL TO THE R.C.P., BARS "B" ARE IN THE WALL OPPOSITE THE R.C.P..

#### GENERAL NOTES:

- OUTLET PIPE MAY BE LOCATED IN ANY WALL BUT SHALL NOT BE LOCATED AT ANY CORNER OR PILASTER.
- MANHOLE RING WITH LOCKING COVER SHALL BE PLACED OVER THE OUTLET PIPE. REINFORCING BARS ARE TO BE ADJUSTED ACCORDINGLY. RING & COVER SHALL BE BASS & HAYS INLET #224L OR EQUAL.
- INLETS 4 TO 5' DEEP SHALL CONTAIN ONE STEP SPACED 36" FROM THE TOP OF THE INLET. STEPS SHALL BE OF THE POURED IN PLACE AND ARE TO BE RUBBER OR PLASTIC COATED (NEENAH R-1981-1 OR EQUAL).
- INLETS 5' AND DEEPER SHALL CONTAIN ONE STEP SPACED 36" FROM THE TOP OF INLET AND ADDITIONAL STEPS EVERY 12" O.C. BELOW TO 16" FROM BOTTOM.
- ALL INLETS SHALL BE 4000 P.S.I. CONCRETE.
- WHEN STEPS ARE REQUIRED, MANHOLE RING AND LID SHALL BE PLACED OVER STEPS AND NOT IN THE CENTER.

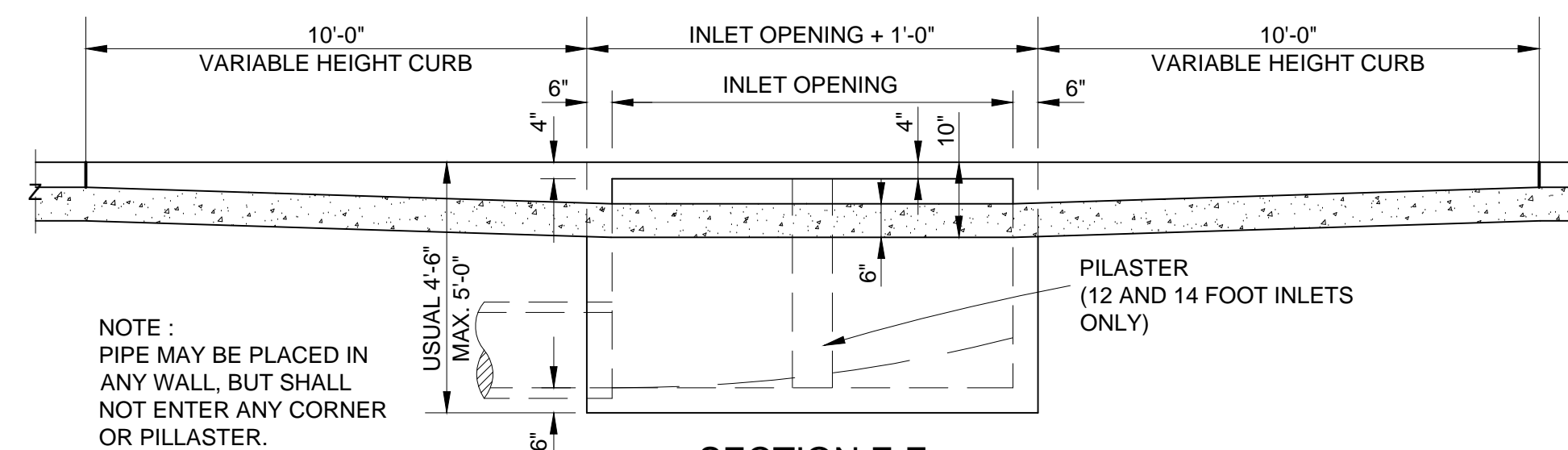


### SECTION E-E CURB INLET REINFORCEMENT

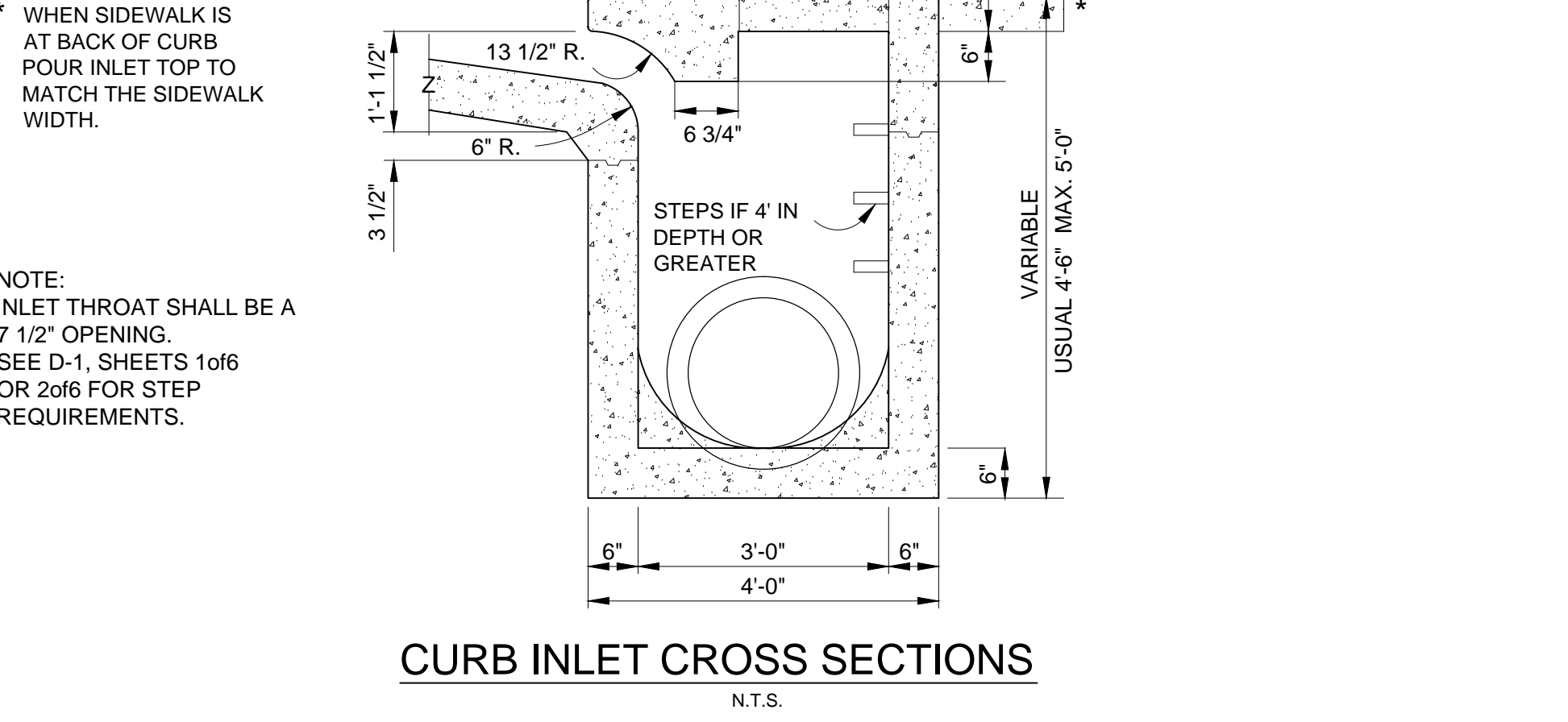


### SECTION C-C CURB INLET REINFORCEMENT

### SECTION D-D CURB INLET REINFORCEMENT




### SECTION F-F CURB INLET CROSS SECTIONS



NOTE:  
INLET THROAT SHALL BE A 7 1/2" OPENING. SEE D-1, SHEETS 10f6 OR 20f6 FOR STEP REQUIREMENTS.

\* WHEN SIDEWALK IS AT BACK OF CURB POUR INLET TOP TO MATCH THE SIDEWALK WIDTH.

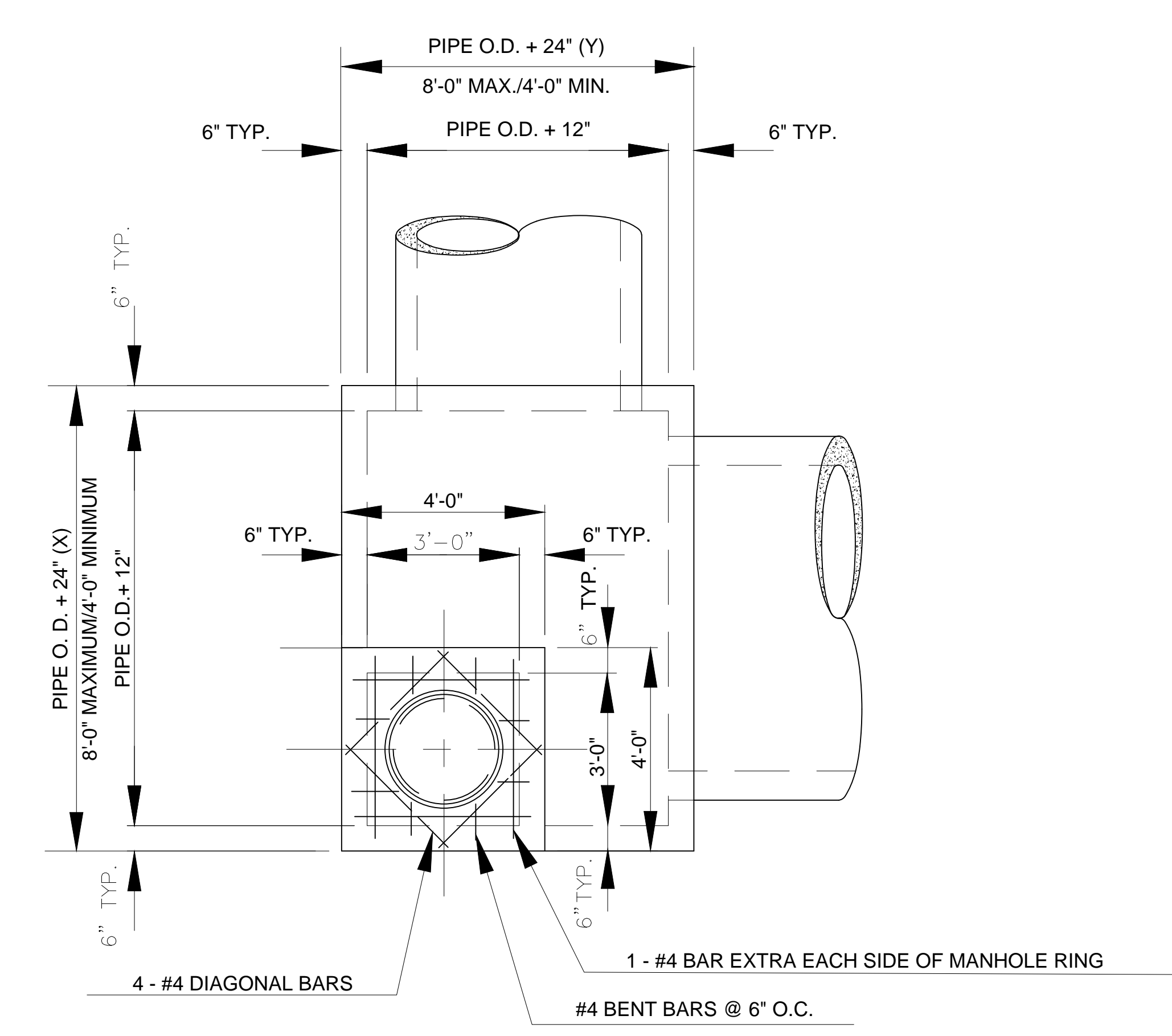
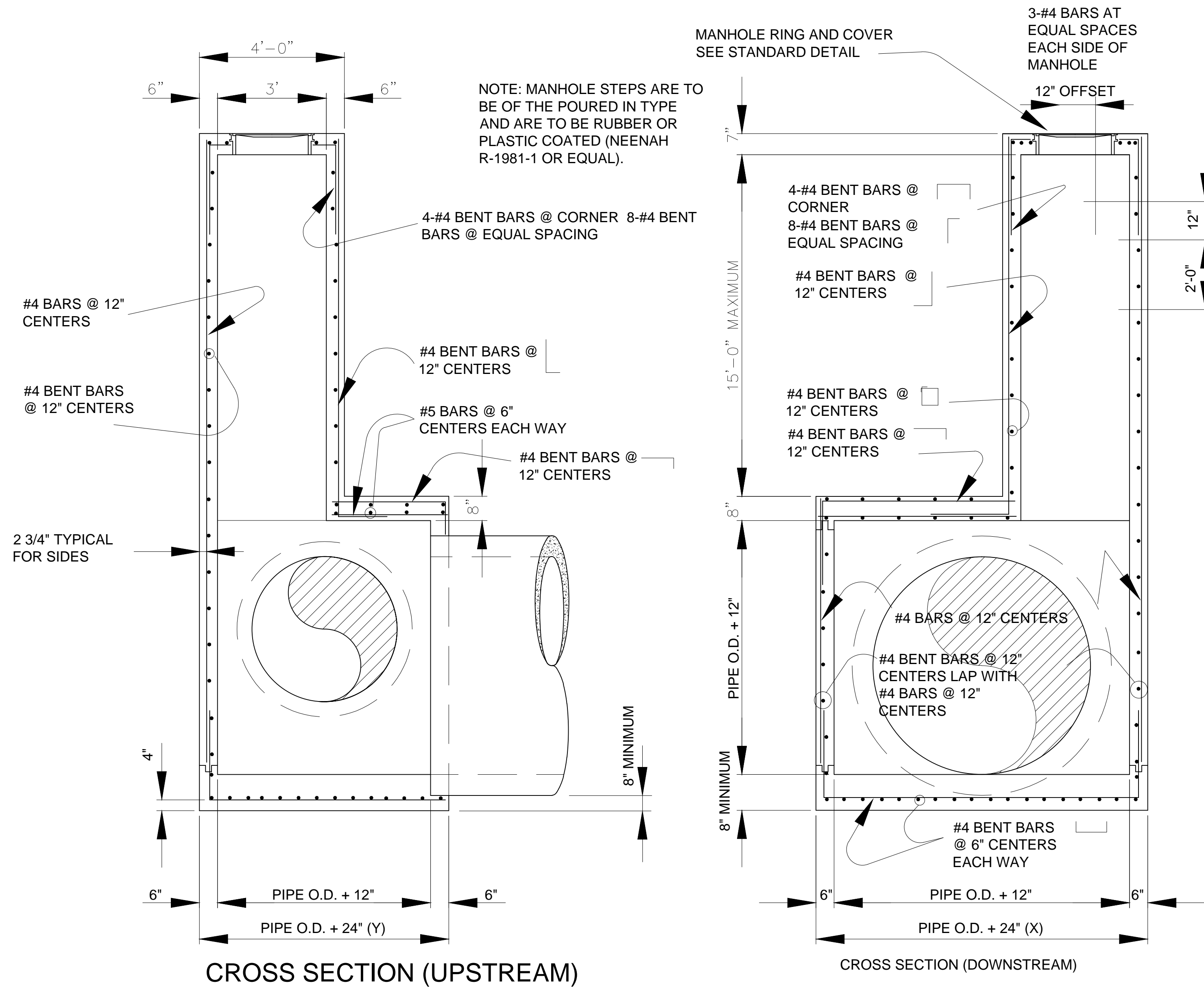


**Public Works  
Department  
Venus, Texas**

**Storm Sewer Standard Details**

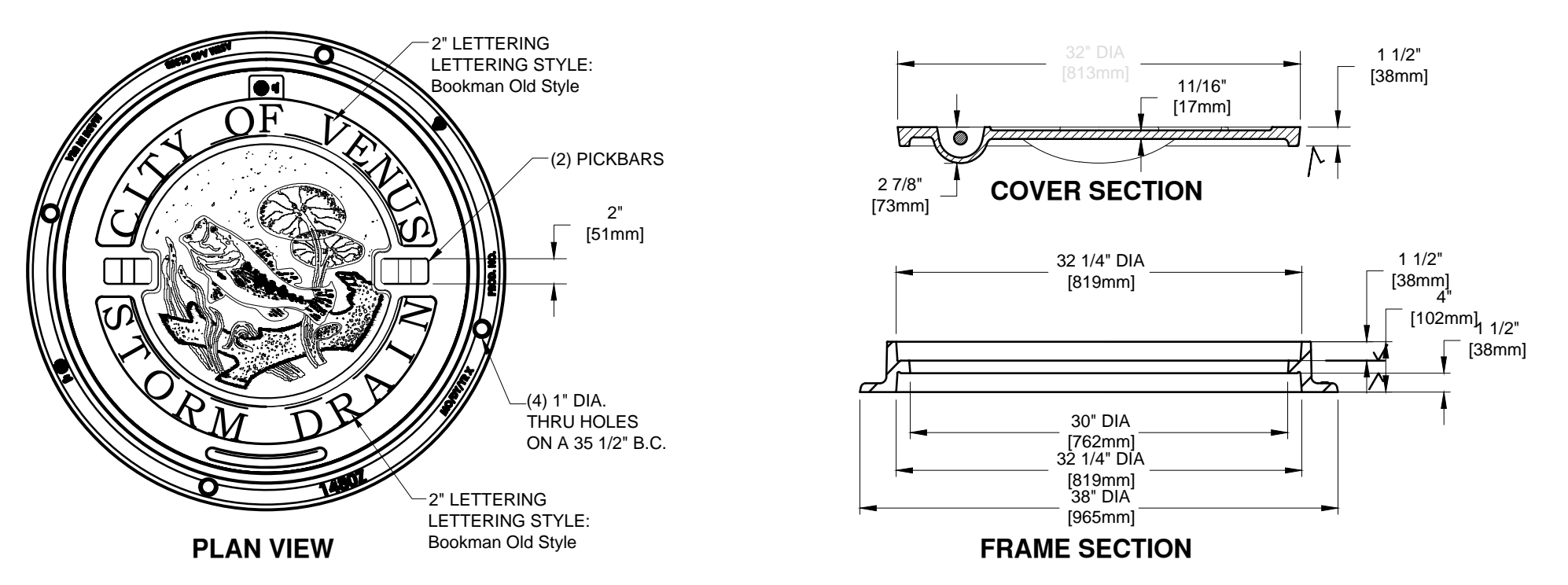
**SHEET 2 OF 3**

| DRAWN BY     | DATE     | SCALE        | RVSD |
|--------------|----------|--------------|------|
| J. DAUGHERTY | MAY 2018 | NOT TO SCALE |      |



- GENERAL NOTES:
1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 P.S.I. ALL EXPOSED EDGES SHALL HAVE A 3/4" CHAMFER. AN ALTERNATE DESIGN (BEARING THE SEAL OF A REGISTERED PROFESSIONAL ENGINEER) WILL BE ACCEPTABLE FOR PRECAST CONSTRUCTION OF MANHOLES AND/OR EQUIVALENT STRUCTURAL DESIGN WITH THE APPROVAL OF THE DIRECTOR OF ENGINEERING.
  2. IN AREAS OF CONFLICT BETWEEN REINFORCING STEEL, BLOCKOUTS, PIPES, ANCHOR BOLTS OR OTHER REINFORCING STEEL, THE REINFORCEMENT SHALL BE BENT OR ADJUSTED TO CLEAR AS DIRECTED BY THE DESIGNING ENGINEER.
  3. CONNECTING PIPES SHOULD ENTER WITHIN TEN (10) DEGREES OF NORMAL TO THE INLET WALL. IF NECESSARY, PIPE ELBOWS OR CURVED APPROACH ALIGNMENT SHOULD BE USED TO STAY WITHIN THIS LIMIT. PIPES MAY ENTER ANY OR ALL WALLS, EXCEPT AT CORNERS. THE MAXIMUM SIZE OF PIPE THAT CAN BE ACCOMODATED IS 60 INCHES IN DIAMETER, MORE THAN ONE PIPE MAY ENTER A SIDE, SUBJECT TO THE MAXIMUM BOX DIMENSIONS SHOWN. THE CLEAR DISTANCE BETWEEN ADJACENT PIPES SHOULD BE A MINIMUM OF 9 INCHES.
  4. MINIMUM REBAR LAP IS TO BE THIRTY (30) BAR DIAMETERS (MINIMUM LENGTH OF 18 INCHES). ALL CONCRETE SHALL BE 4000 P.S.I.
  5. MANHOLE LID SHALL BE 30" DIAMETER AND SHALL SAY "STORM SEWER" ON IT.

STORM SEWER MANHOLE CROSS SECTION



STORM SEWER MANHOLE RIND AND LID DETAIL  
NOT TO SCALE

NOTE:  
ALL STORM STRUCTURES WITH ACCESS POINTS SHALL HAVE MATCHING LIDS

STORM SEWER MANHOLE PLAN VIEW

|                              |                  |   |      |
|------------------------------|------------------|---|------|
|                              |                  | Public Works Department<br>Venus, Texas |      |
| Storm Sewer Standard Details |                  |   |      |
| SHEET 3 OF 3                 |                  |   |      |
| DRAWN BY<br>J. DAUGHERTY     | DATE<br>MAY 2018 | SCALE<br>NOT TO SCALE                   | RVSD |