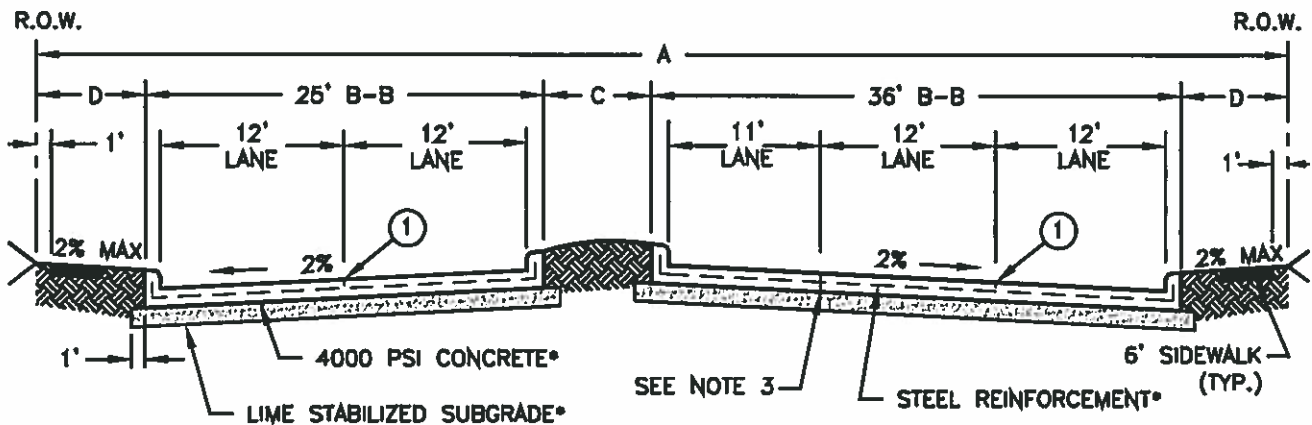


STANDARD SECTION (P4D-M4D)
N.T.S.



LEFT TURN LANE SECTION

MID-BLOCK
N.T.S.

- ① SAWED LONGITUDINAL CONTRACTION JOINT OR CONSTRUCTION JOINT

ROAD TYPE	R.O.W. @ MID-BLOCK (A)	MEDIAN WIDTH (B)	MEDIAN WIDTH (C)	PARKWAY WIDTH (D)
P4D	100'	19'	8'	15.5'
M4D	100'	19'	8'	15.5'

REFERENCE STREET DESIGN MANUAL FOR INTERSECTION LAYOUT INFORMATION

NOTES:

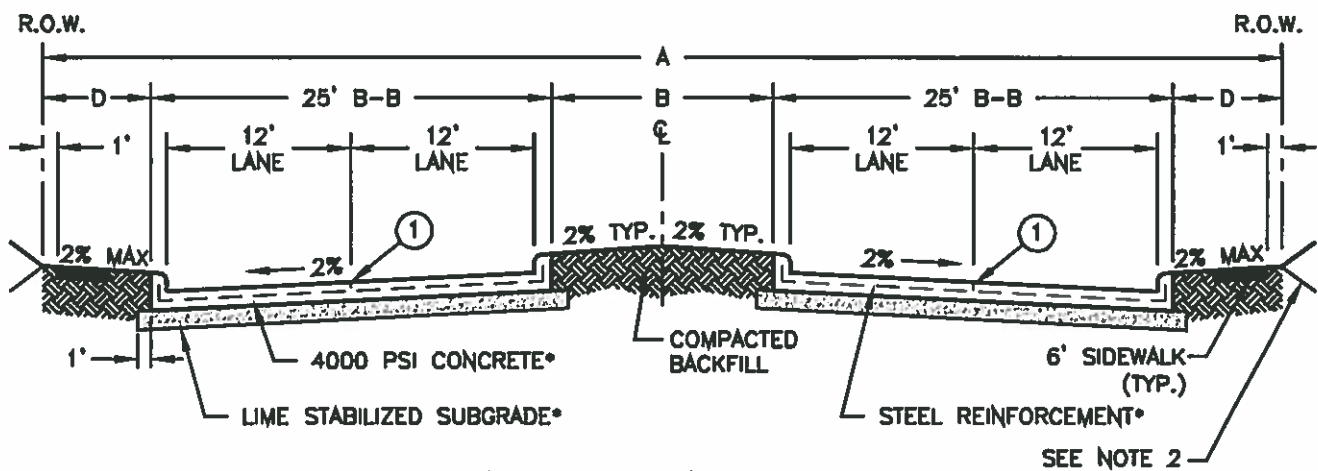
1. REINFORCED CURB HEIGHT AND WIDTH SHALL BE 6".
2. SLOPES ADJACENT TO THE R.O.W. SHALL BE NO STEEPER THAN 4:1.
3. KEYWAY JOINT REQ'D FOR NEW ROADWAY CONSTRUCTION, LONGITUDINAL BUTT JOINT REQ'D ON EXISTING SECTION.
4. TOP 4" OF MEDIAN AND PARKWAY BACKFILL SHALL BE TOPSOIL MATERIAL.

* A GEOTECHNICAL EVALUATION AND DESIGN SHALL BE CONDUCTED TO DETERMINE AN ADEQUATE PAVEMENT SECTION BASED ON A MINIMUM 20 YEAR DESIGN LIFE FOR ALL PAVING PROJECTS. THE MINIMUM ALLOWABLE PAVEMENT DESIGN SHALL BE NO LESS THAN 8"-4000 PSI CONCRETE WITH #4 BARS AT 24" CENTERS ON A 8" LIME STABILIZED SUBGRADE COMPACTED TO 98% STANDARD PROCTOR DENSITY. THE PLASTICITY INDEX SHALL NOT EXCEED 12.

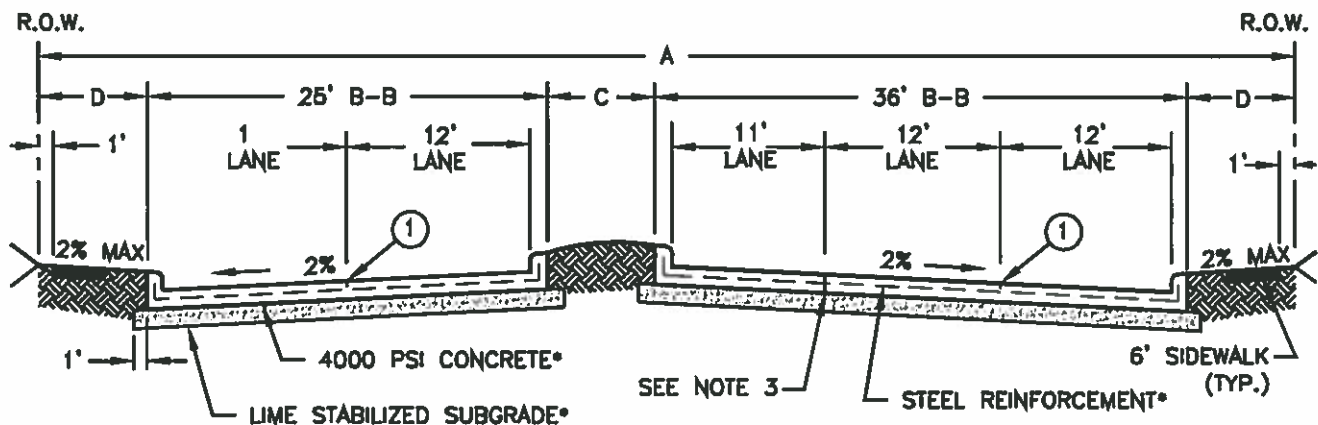
STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



Farmersville



STANDARD SECTION (R4D-R2D)
N.T.S.



LEFT TURN LANE SECTION
MID-BLOCK
N.T.S.

1 SAWED LONGITUDINAL CONTRACTION JOINT OR CONSTRUCTION JOINT

ROAD TYPE	R.O.W. @ MID-BLOCK (A)	MEDIAN WIDTH (B)	MEDIAN WIDTH (C)	PARKWAY WIDTH (D)
R4D	110'	20'	9'	20'
R2D	40'	20'	9'	10'

REFERENCE STREET DESIGN MANUAL FOR INTERSECTION LAYOUT INFORMATION

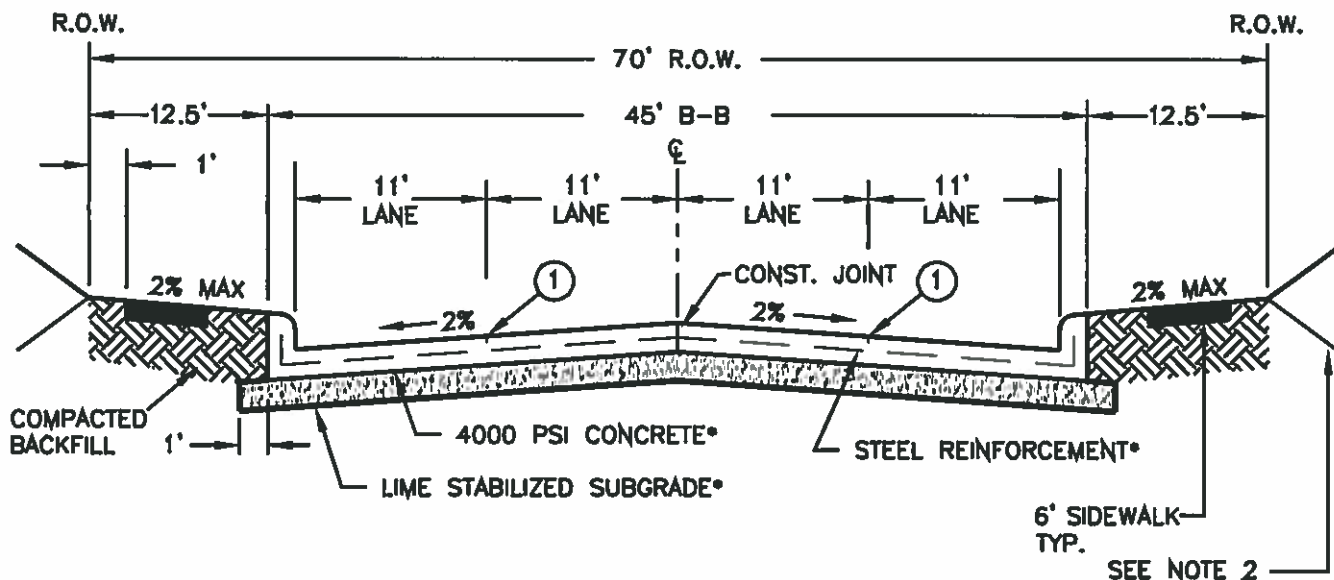
NOTES:

1. REINFORCED CURB HEIGHT & WIDTH SHALL BE 6".
2. SLOPES ADJACENT TO THE R.O.W. SHALL BE NO STEEPER THAN 4:1.
3. KEYWAY JOINT REQ'D FOR NEW ROADWAY CONSTRUCTION, LONGITUDINAL BUTT JOINT REQ'D ON EXISTING SECTION.
4. TOP 4" OF MEDIAN & PARKWAY BACKFILL SHALL BE TOPSOIL MATERIAL.
5. A GEOTECHNICAL EVALUATION & DESIGN SHALL BE CONDUCTED TO DETERMINE AN ADEQUATE PAVEMENT SECTION BASED ON A MINIMUM 20 YEAR DESIGN LIFE FOR ALL PAVING PROJECTS.
6. THE MINIMUM ALLOWABLE PAVEMENT DESIGN SHALL BE NO LESS THAN 8" - 4000 PSI CONCRETE WITH #4 BARS AT 24" CENTERS ON A 8" LIME STABILIZED SUBGRADE COMPACTED TO 95% STANDARD PROCTOR DENSITY. THE PLASTICITY INDEX SHALL NOT EXCEED 12.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



Farmersville



STANDARD SECTION (P4U-M4U)
N.T.S.

- ① SAWED LONGITUDINAL CONTRACTION JOINT OR CONSTRUCTION JOINT

• A GEOTECHNICAL EVALUATION AND DESIGN SHALL BE CONDUCTED TO DETERMINE AN ADEQUATE PAYMENT SECTION BASED ON A MINIMUM 20 YEAR DESIGN LIFE FOR ALL PAVING PROJECTS. THE MINIMUM ALLOWABLE PAYMENT DESIGN SHALL BE NO LESS THAN 8"-4000 PSI CONCRETE WITH #4 BARS AT 24" CENTERS ON A 8" LIME STABILIZED SUBGRADE COMPACTED TO 95% STANDARD PROCTOR DENSITY. THE PLASTICITY INDEX SHALL NOT EXCEED 12.

NOTES:

1. REINFORCED CURB HEIGHT AND WIDTH SHALL BE 6".
2. SLOPES ADJACENT TO THE R.O.W. SHALL BE NO STEEPER THAN 4:1.
3. TOP 4" OF PARKWAY BACKFILL SHALL BE TOPSOIL MATERIAL.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



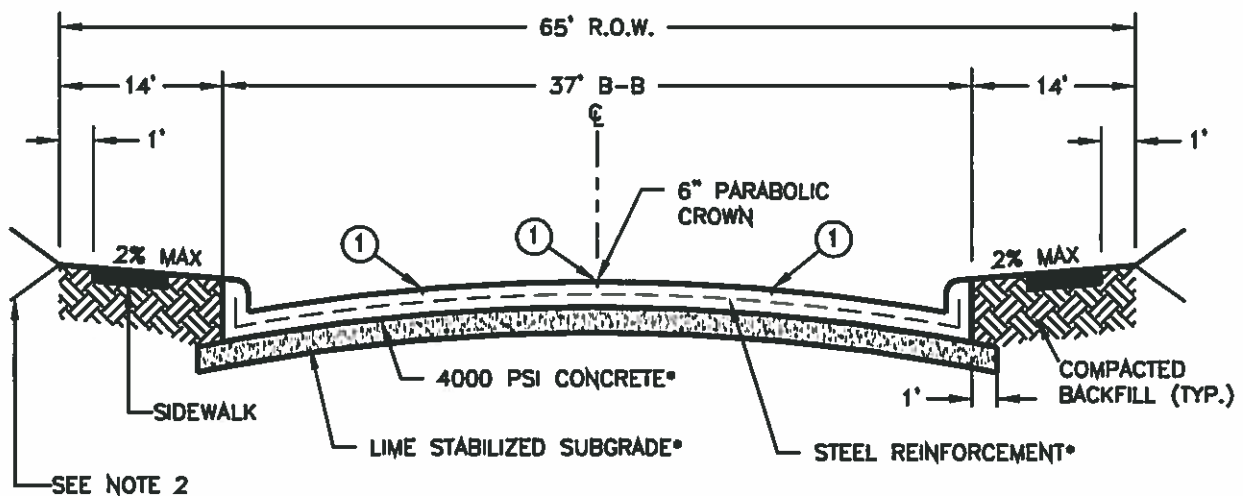
Farmersville

P4U - M4U UNDIVIDED THOROUGHFARE

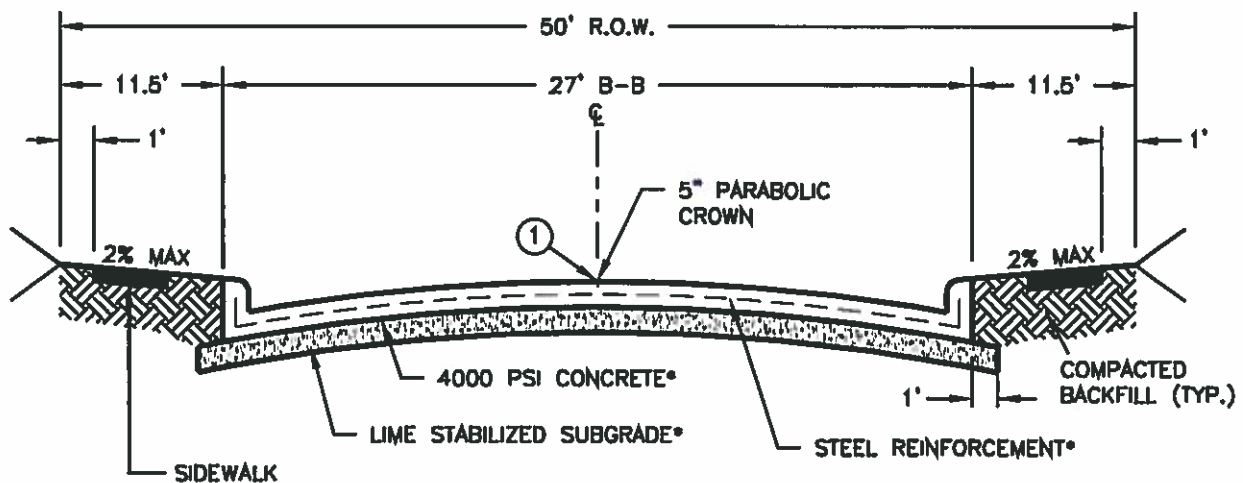
DESIGNED: E.W.D.
DRAWN: M.K.W. / DB

DATE: 10-27-16
REVISION: N/C

104



COLLECTOR STREET N.T.S.



LOCAL STREET N.T.S.

- ① SAWED LONGITUDINAL CONTRACTION JOINT OR CONSTRUCTION JOINT

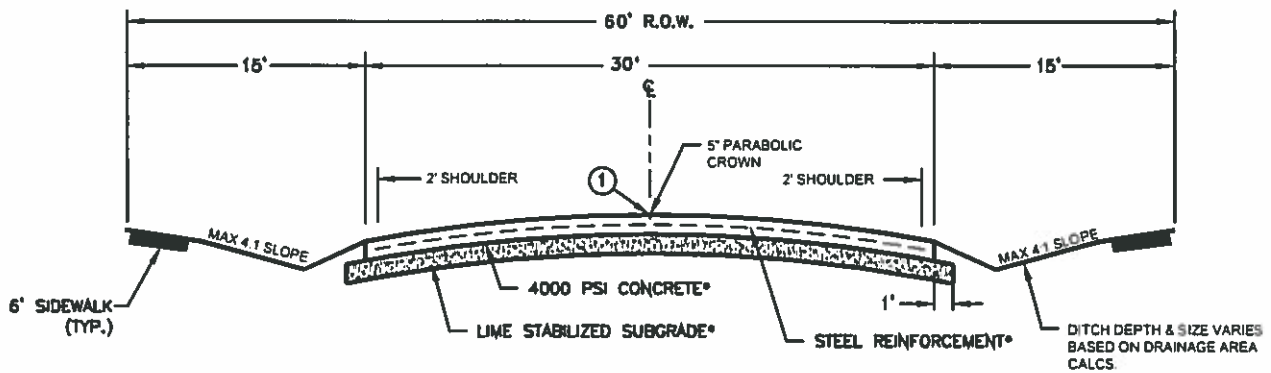
* A GEOTECHNICAL EVALUATION AND DESIGN SHALL BE CONDUCTED TO DETERMINE AN ADEQUATE PAVEMENT SECTION BASED ON A MINIMUM 20 YEAR DESIGN LIFE FOR ALL PAVING PROJECTS. THE MINIMUM ALLOWABLE PAVEMENT DESIGN SHALL BE NO LESS THAN 6"-4000 PSI CONCRETE WITH #4 BARS AT 24" CENTERS ON A 6" LIME STABILIZED SUBGRADE COMPACTED TO 95% STANDARD PROCTOR DENSITY. THE PLASTICITY INDEX SHALL NOT EXCEED 12.

NOTES:

1. REINFORCED CURB HEIGHT AND WIDTH SHALL BE 6".
2. SLOPES ADJACENT TO THE R.O.W. SHALL BE NO STEEPER THAN 4:1.
3. TOP 4" OF PARKWAY BACKFILL SHALL BE TOPSOIL MATERIAL.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS





ESTATE RESIDENTIAL STREET

- ① SAWED LONGITUDINAL CONTRACTION JOINT OR CONSTRUCTION JOINT

* A GEOTECHNICAL EVALUATION AND DESIGN SHALL BE CONDUCTED TO DETERMINE AN ADEQUATE PAVEMENT SECTION BASED ON A MINIMUM 20 YEAR DESIGN LIFE FOR ALL PAVING PROJECTS. THE MINIMUM ALLOWABLE PAVEMENT DESIGN SHALL BE NO LESS THAN 6"-4000 PSI CONCRETE WITH #4 BARS AT 24" CENTERS ON A 6" LIME STABILIZED SUBGRADE COMPACTED TO 98% STANDARD PROCTOR DENSITY. THE PLASTICITY INDEX SHALL NOT EXCEED 12.

NOTES:

1. SLOPES ADJACENT TO THE R.O.W. SHALL BE NO STEEPER THAN 4:1
2. TOP 4" OF MEDIAN & PARKWAY BACKFILL SHALL BE TOPSOIL MATERIAL

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



Farmersville

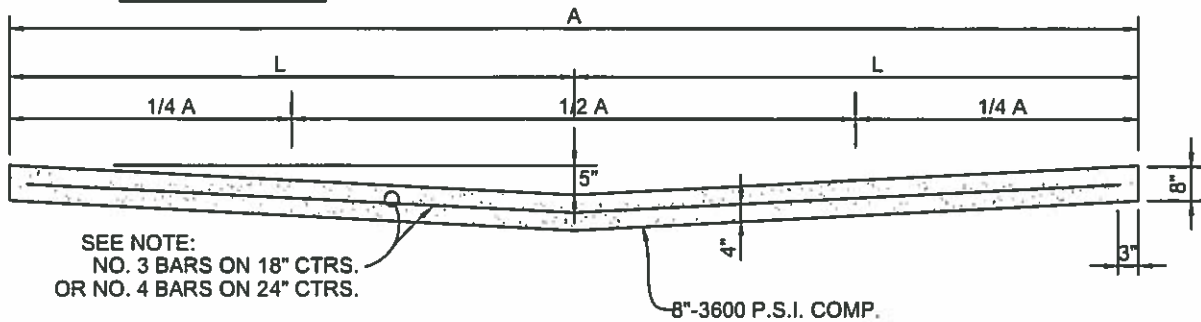
ESTATE RESIDENTIAL STREET

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

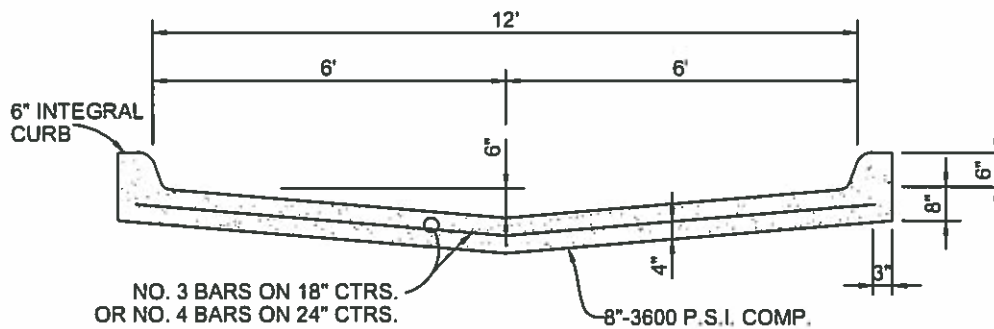
DATE: 10-27-16
REVISION: N/C

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ALLEY WIDTH (A)	HALF WIDTH (L)
12'	6'
16'	8'
20'	10'



STANDARD 12, 16' & 20' ALLEY SECTION



STANDARD ALLEY SECTION WITH CURBS

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS

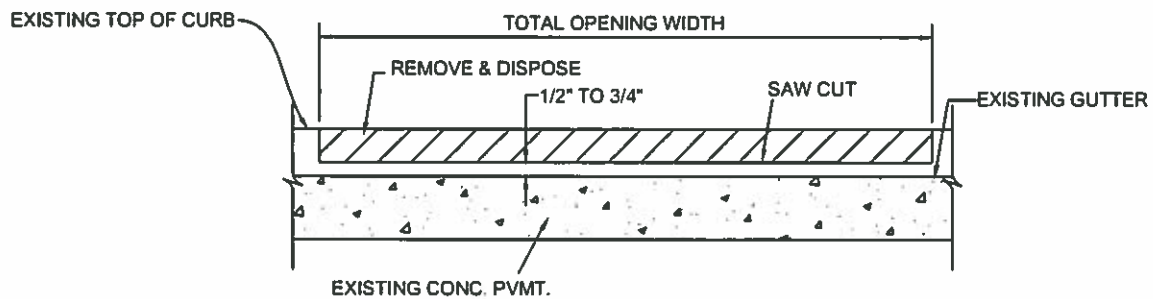


ALLEY PAVING

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-18
REVISION: N/C

107



DRIVEWAY OR ALLEY CURB CUT

NOTE:

1. CONTRACTOR SHALL PROVIDE No. 3 BARS ON 12" CENTERS OR No. 4 BARS ON 18" CENTERS FOR OUTSIDE 1/4 ALLEY WIDTH AND PROVIDE No. 3 BARS ON 18" CENTERS OR No. 4 BARS ON 24" CENTERS FOR MIDDLE 1/2 ALLEY WIDTH.
2. CONTRACTOR MAY AT HIS OPTION USE No. 3 BARS ON 12" CENTERS OR No. 4 BARS ON 18" CENTERS FOR ENTIRE ALLEY WIDTH AT NO ADDITIONAL COST TO THE CITY.
3. ALL ACCESSIBLE ROUTES SHALL MEET ADA & TAS REQUIREMENTS.
4. SIDEWALK THICKNESS ACROSS ANY ALLEY SHALL BE 6" MIN.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



Farmersville

DRIVEWAY OR ALLEY CURB CUT

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

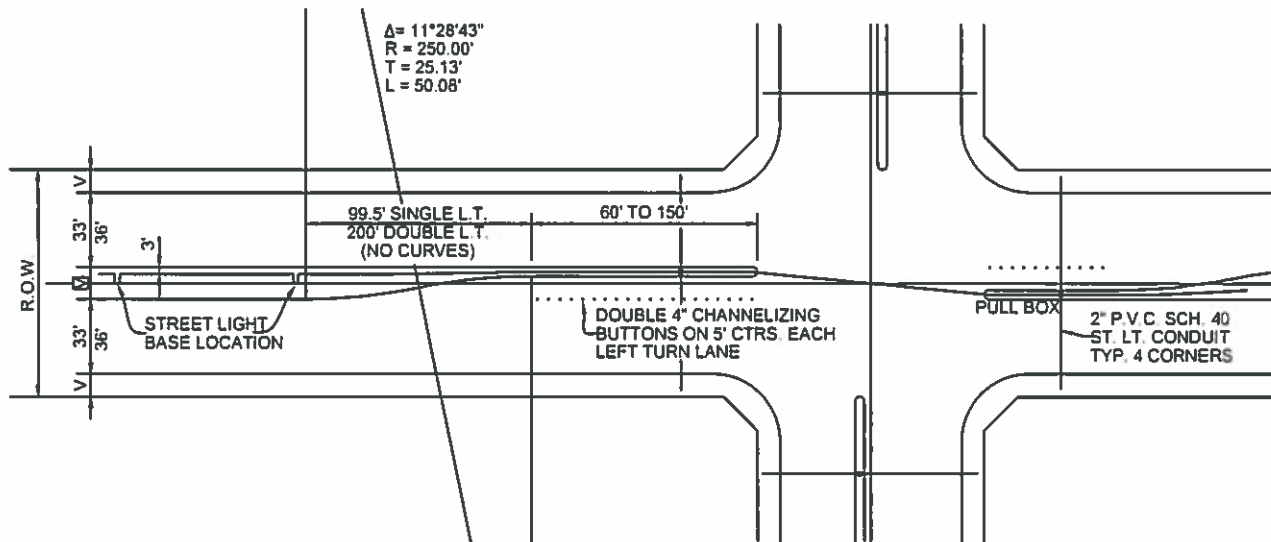
DATE: 10-27-18
REVISION: N/C

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LEGEND

1. SAWED LONGITUDINAL -DUMMY JOINT
2. CONSTRUCTION JOINT (FULL WIDTH A. P.V.M.T. IS ALLOWED WHERE APPROVED BY CITY).

NOTE:
SIDEWALKS SHALL BE INCLUDED IN ALL STREET RIGHT-OF-WAYS. LOCATION AS DETERMINED BY THE CITY.



LEFT TURN PLAN

SECTIONS SHALL HAVE MINIMUM PAVEMENT THICKNESS OF 8 INCHES.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



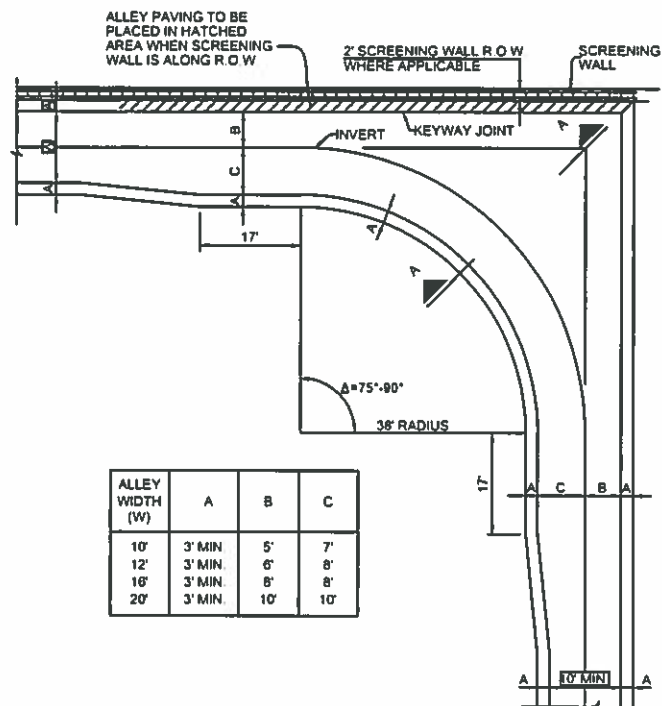
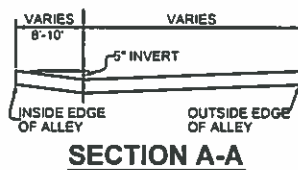
Farmersville

LEFT TURN LANE

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

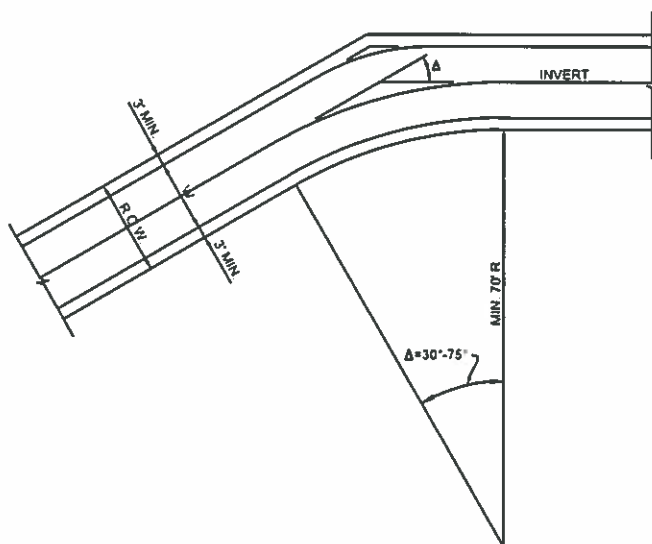
DATE: 10-27-18
REVISION: N/C

109



ALLEY WIDTH (W)	A	B	C
10'	3' MIN	5'	7'
12'	3' MIN	6'	8'
16'	3' MIN	8'	8'
20'	3' MIN	10'	10'

ALLEY TURN FOR Δ = 75°-90°

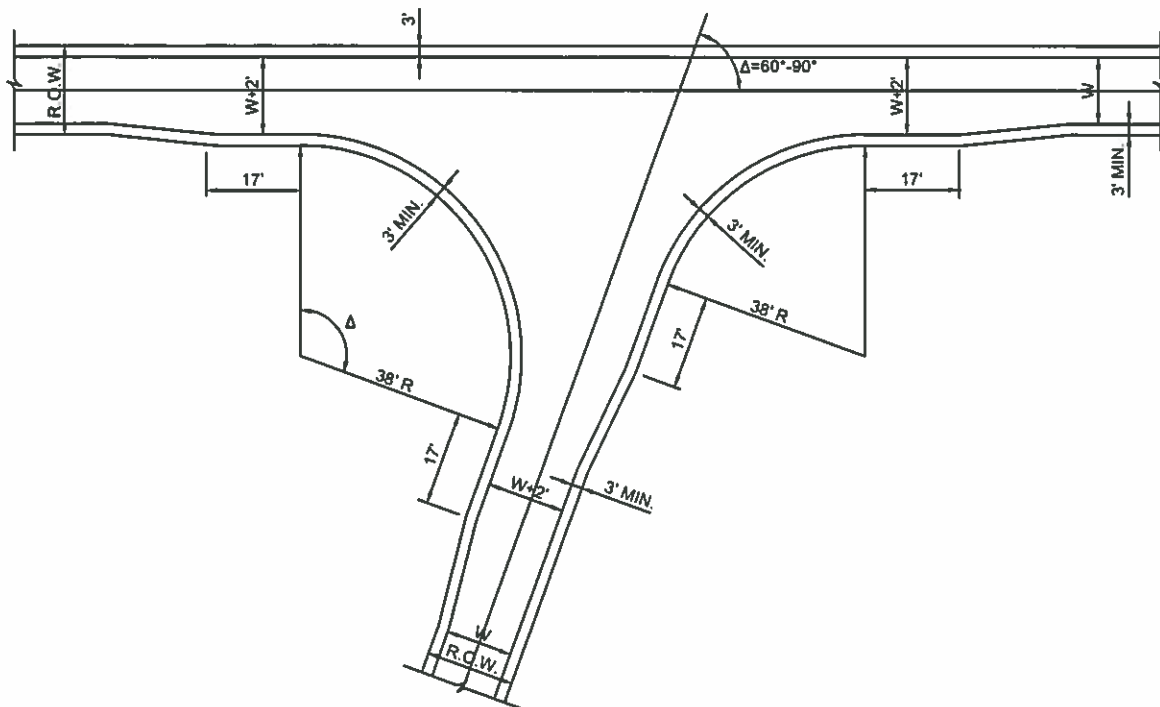


ALLEY TURN FOR Δ = 30°-75°

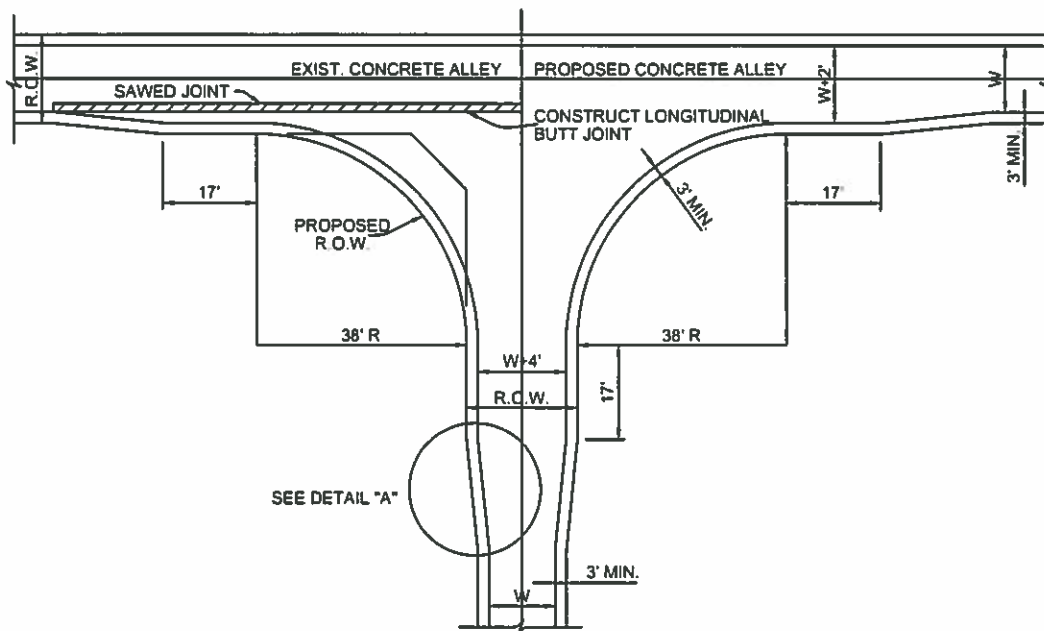
STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



Farmersville



ALLEY TURN FOR $\Delta > 90^\circ$



ALLEY INTERSECTING ALLEY

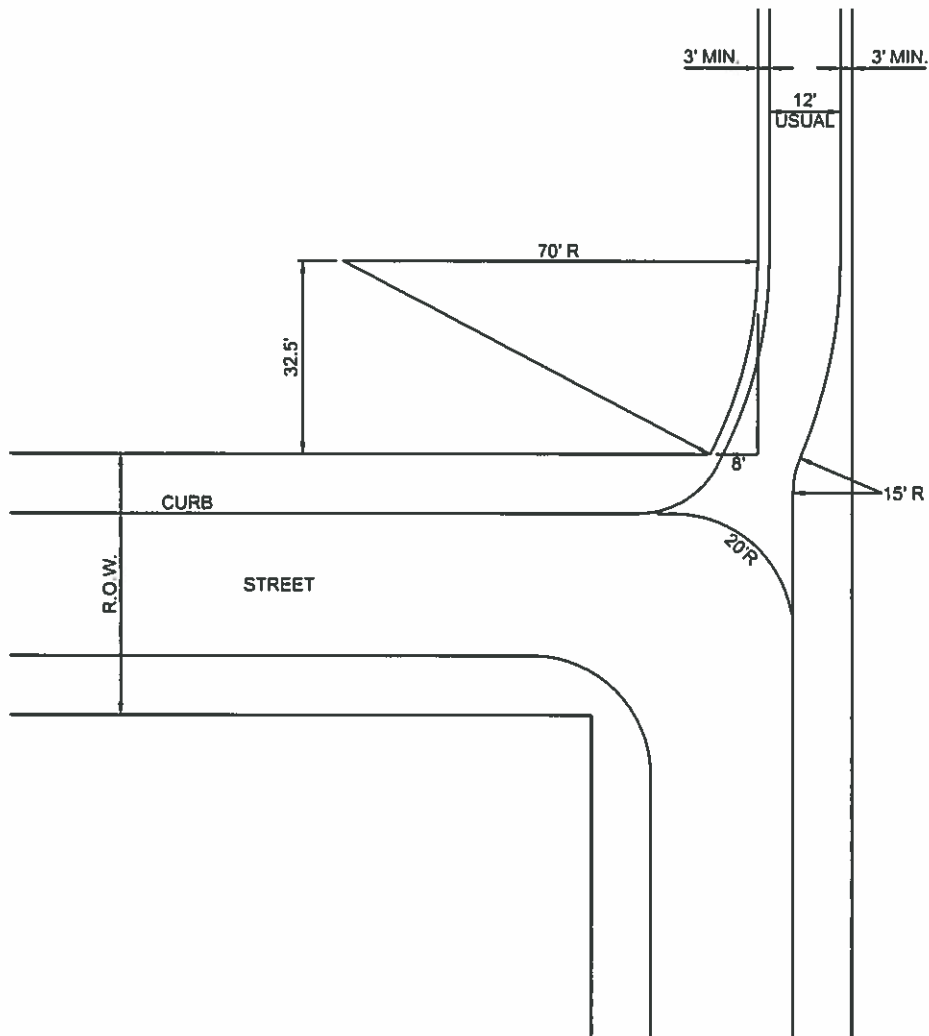


DETAIL "A"

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



Farmersville



ALLEY / STREET INTERSECTION

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



Farmersville

ALLEY / STREET INTERSECTION

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

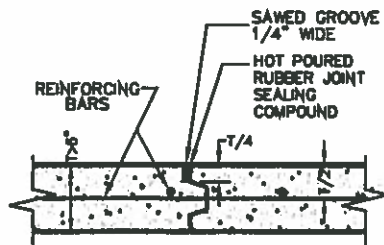
DATE: 10-27-16
REVISION: N/C

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ST-12



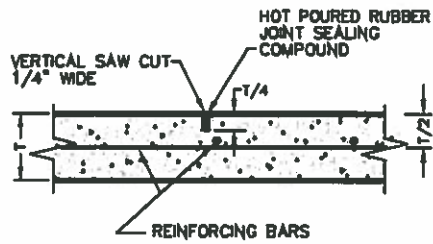
STREET HEADER



KEYWAY JOINT

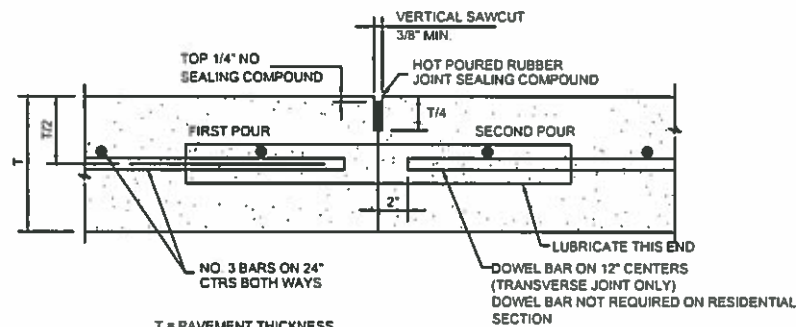
FOR PAVEMENT THICKNESS > 6"

NOTE: STEEL REINFORCEMENT SHALL BE AS SPECIFIED IN THE SITE SPECIFIC PAVEMENT DESIGN FOR THE GIVEN ROADWAY.



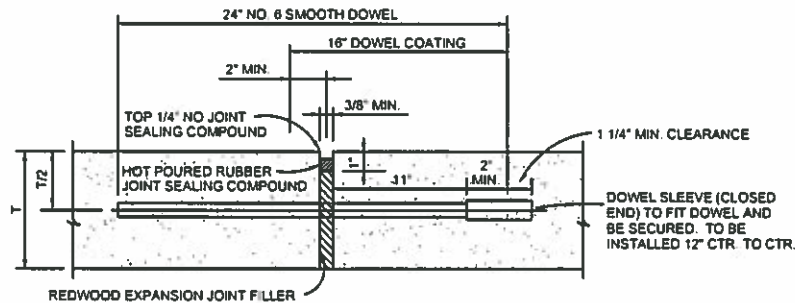
SAWED CONTRACTION JOINT

NOTE: SAWED JOINTS SHALL BE EVERY 15' FOR ALL THICKNESS OF CONCRETE AND SHALL BE CONSTRUCTED WITHIN THE FIRST 12 HOURS OF CONCRETE PLACEMENT.



NOTE:
1 DOWELS AND REINFORCING BARS SHALL BE SUPPORTED BY AN APPROVED DEVICE

TRANSVERSE AND LONGITUDINAL CONSTRUCTION JOINT



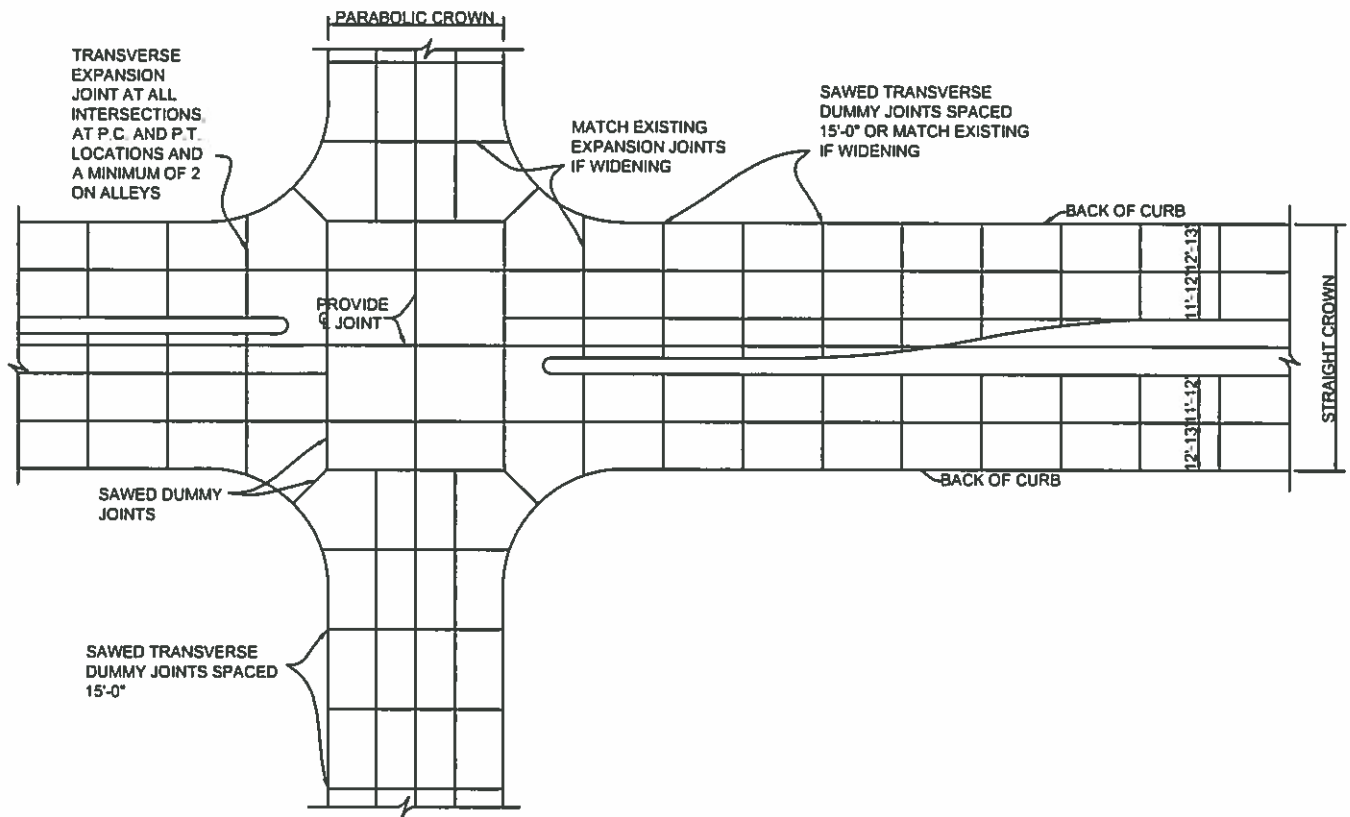
TRANSVERSE EXPANSION JOINT NOTES
1 DOWELS AND REINFORCING BARS SHALL BE SUPPORTED BY AN APPROVED DEVICE
2 TRANSVERSE EXPANSION JOINTS SHALL BE LOCATED AT ALL INTERSECTIONS

TRANSVERSE EXPANSION JOINT

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



Farmersville



SPACING DIAGRAM FOR TRANSVERSE JOINTS
(ROADWAYS AND ALLEYS)

ST-15

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



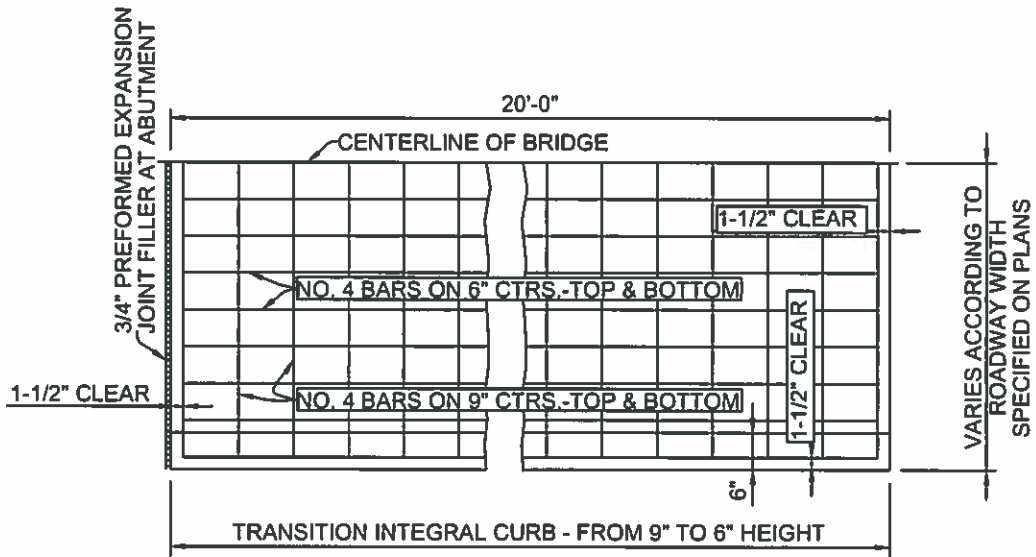
Farmersville

PAVING JOINTS

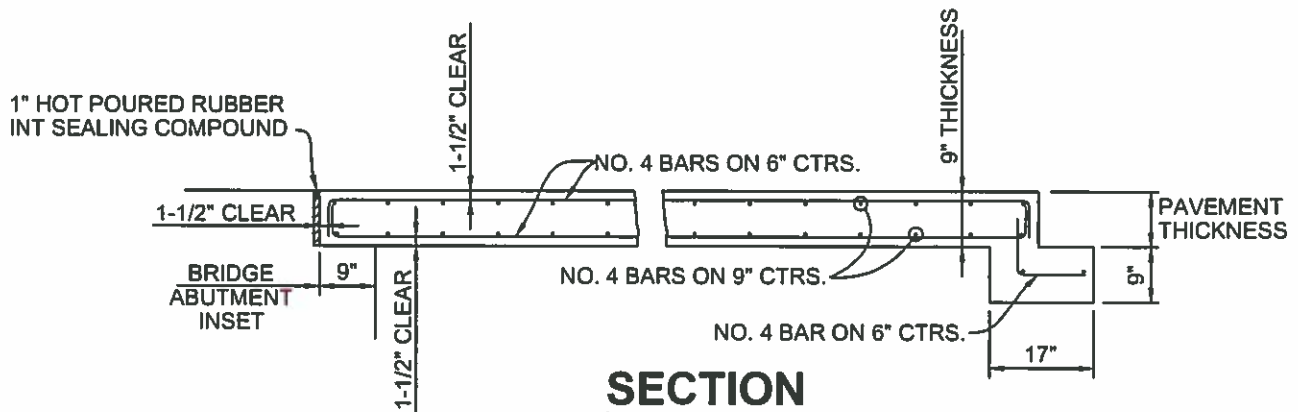
DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-16
REVISION: N/C

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PLAN



SECTION

BRIDGE APPROACH SLAB

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



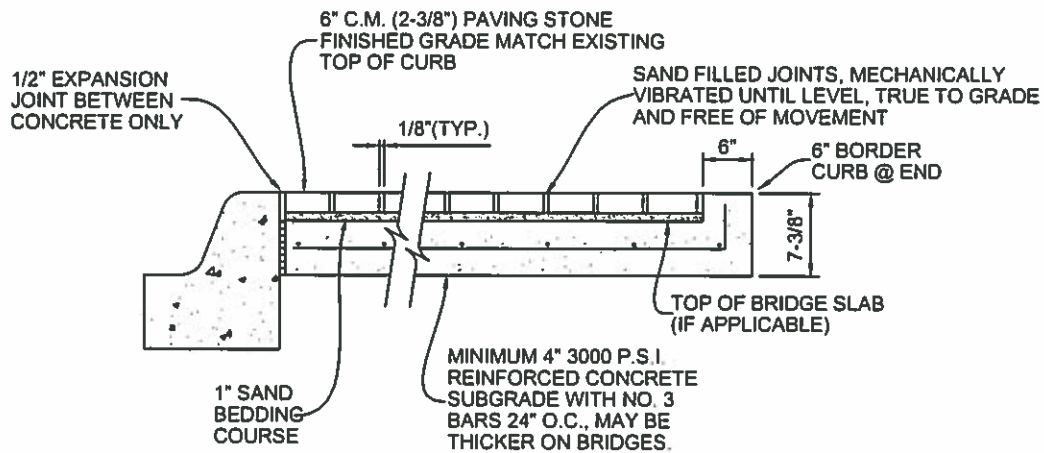
Farmersville

BRIDGE APPROACH SLAB

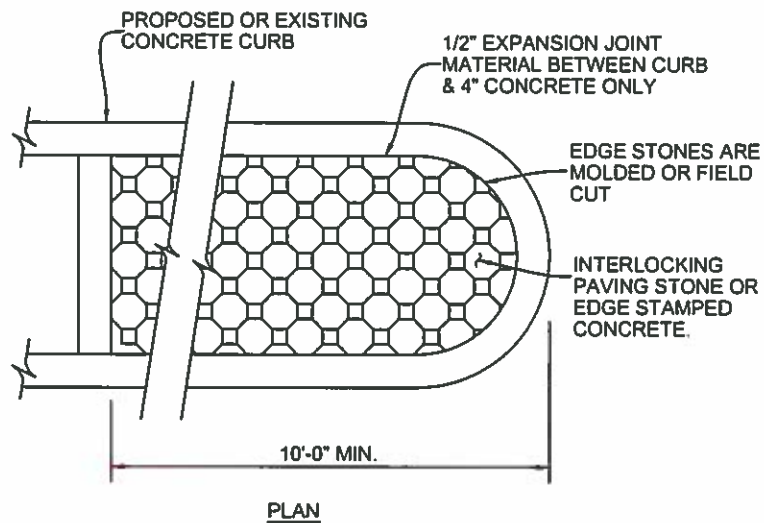
DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-16
REVISION: N/C

116



TYPICAL CROSS SECTION



MEDIAN PAVING SHALL EXTEND TO A POINT WHERE MEDIAN IS 6' WIDE. IF MEDIAN IS 6' WIDE, SHALL EXTEND 15' FROM NOSE. FOR MEDIANS WIDER THAN 6', PAVING SHALL EXTEND 10' FROM NOSE. ALL DISTANCES ARE MINIMUM.

MEDIAN PAVING STAMPED CONCRETE OR INTERLOCKING PAVING STONE

COLOR AND STYLE TO BE SELECTED BY CITY

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



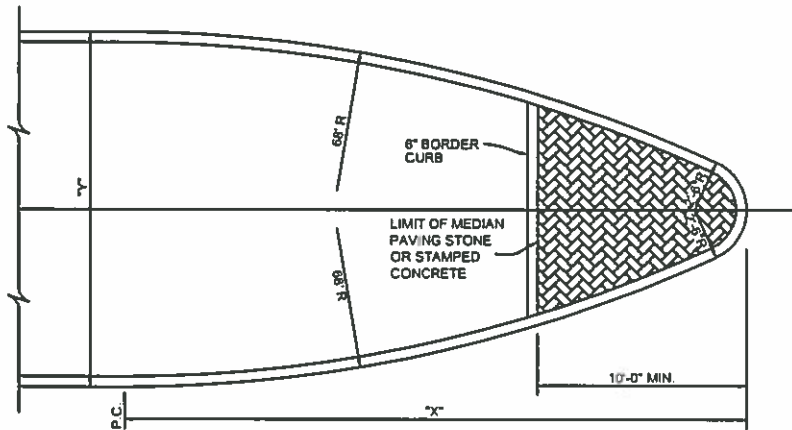
Farmersville

MEDIAN PAVING

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

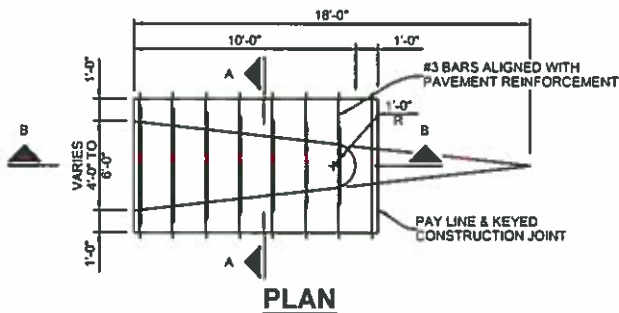
DATE: 10-27-16
REVISION: N/C

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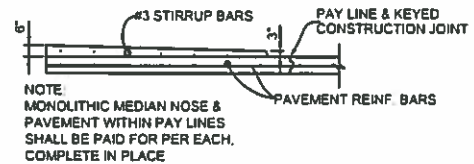


DETAIL OF NOSE FOR MEDIAN ISLAND

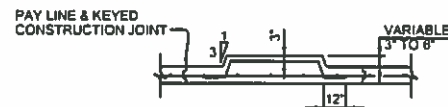
DIMENSIONS OF MEDIAN NOSE			
X = 13.90'	Y = 7.0'	X = 26.36'	Y = 14.0'
X = 16.44'	Y = 8.0'	X = 29.89'	Y = 17.0'
X = 18.06'	Y = 9.0'	X = 32.93'	Y = 20.0'
X = 20.42'	Y = 10.0'	X = 36.47'	Y = 24.0'



PLAN



SECTION B-B



SECTION A-A

MONOLITHIC MEDIAN NOSE

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS

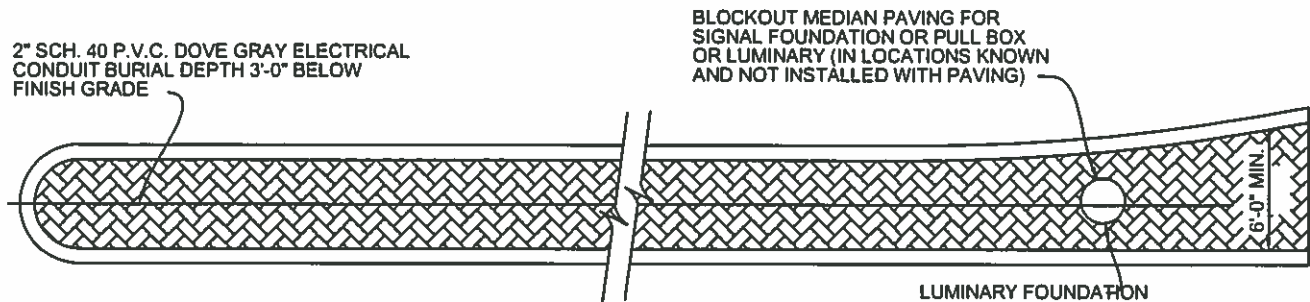


MEDIAN ISLAND PAVING

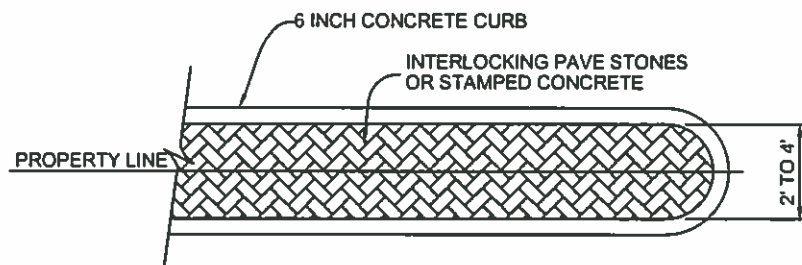
DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-18
REVISION: N/C

118



DETAIL OF MEDIAN PAVEMENT



MEDIAN AT DRIVEWAYS SPLIT BY PROPERTY LINE

NOTE:

1. CONTRACTOR SHALL PROVIDE No. 3 BARS ON 12" CTRS OR No. 4 BARS ON 18" CENTERS FOR OUTSIDE 1/4 ALLEY WIDTH AND PROVIDE No. 3 BARS ON 18" CTRS OR No. 4 BARS ON 24" CENTERS FOR MIDDLE 1/2 ALLEY WIDTH.
2. CONTRACTOR MAY AT HIS OPTION USE No. 3 BARS ON 12" CTRS OR No. 4 BARS ON 18" CTRS FOR ENTIRE ALLEY WIDTH AT NO ADDITIONAL COST TO THE CITY.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



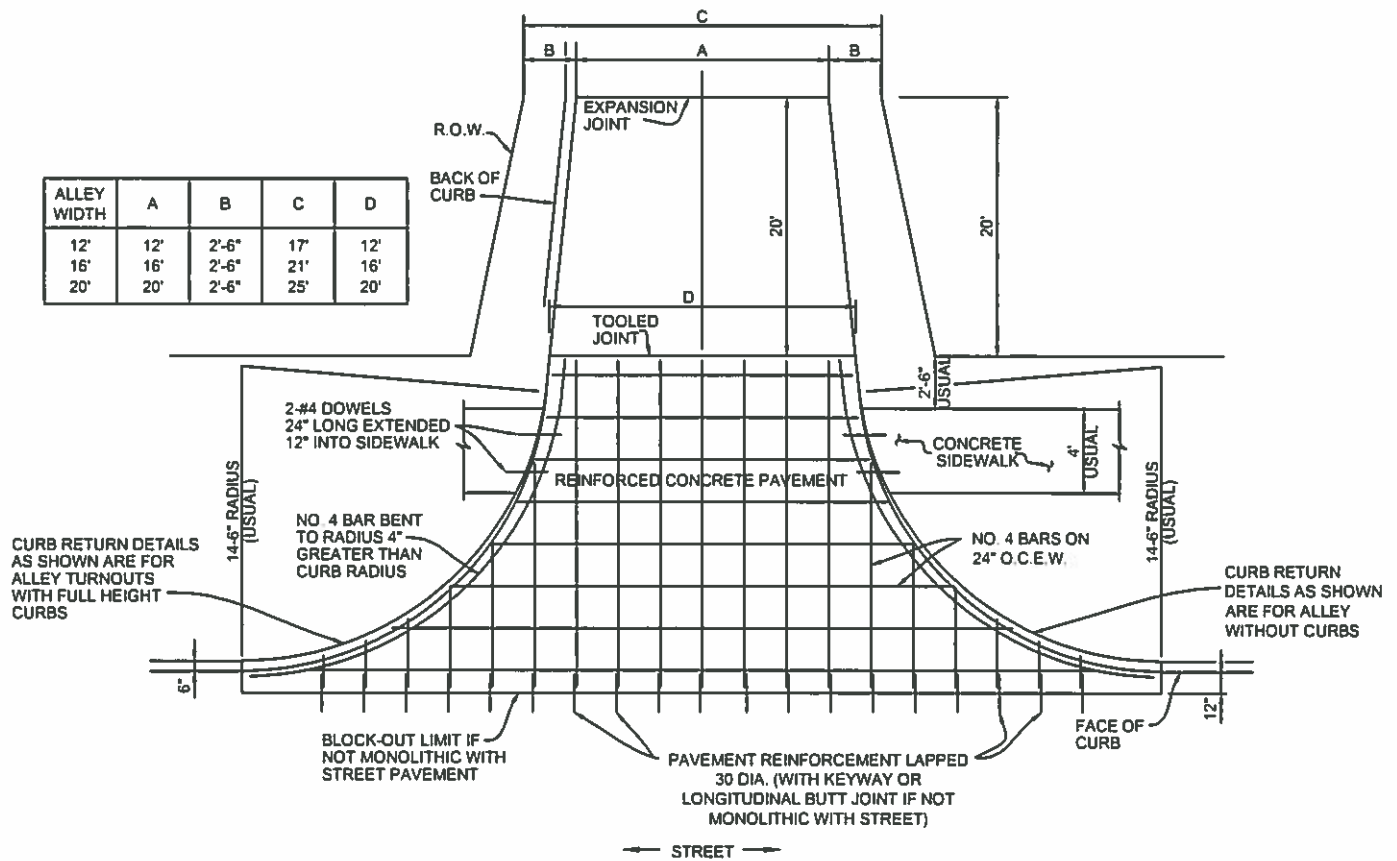
MEDIAN PAVEMENT

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-18
REVISION: N/C

119

ALLEY WIDTH	A	B	C	D
12'	12'	2'-6"	17'	12'
16'	16'	2'-6"	21'	16'
20'	20'	2'-6"	25'	20'



ALLEY RETURN DETAILS

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



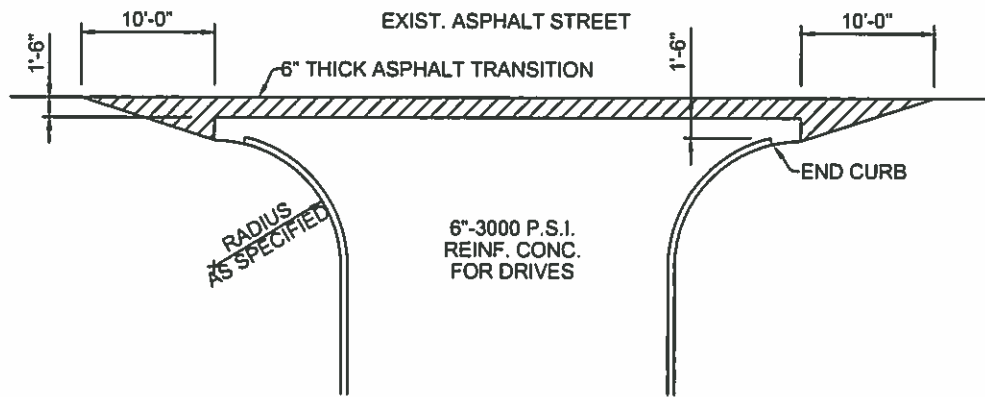
Farmersville

ALLEY PAVING

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

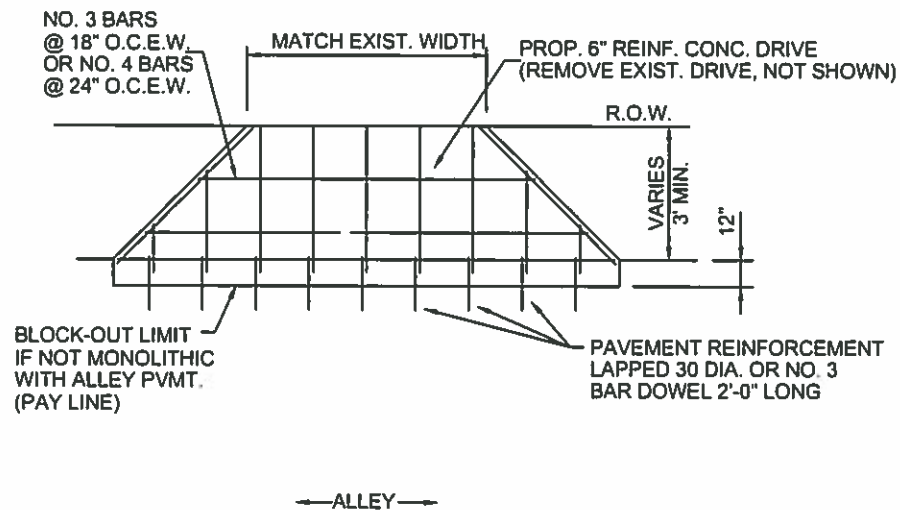
DATE: 10-27-16
REVISION: N/C

120



TYPICAL DRIVE OR STREET CONNECTION

DRIVEWAY RETURN TO EXISTING ASPHALT STREET W/O CURB & GUTTER



DRIVEWAY RETURN TO ALLEY

NOTE:

1. CONTRACTOR SHALL PROVIDE No. 3 BARS ON 12" CTRS OR No. 4 BARS ON 18" CENTERS FOR OUTSIDE 1/4 ALLEY WIDTH AND PROVIDE No. 3 BARS ON 18" CTRS OR No. 4 BARS ON 24" CENTERS FOR MIDDLE 1/2 ALLEY WIDTH.
2. CONTRACTOR MAY AT HIS OPTION USE No. 3 BARS ON 12" CTRS OR No. 4 BARS ON 18" CTRS FOR ENTIRE ALLEY WIDTH AT NO ADDITIONAL COST TO THE CITY.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



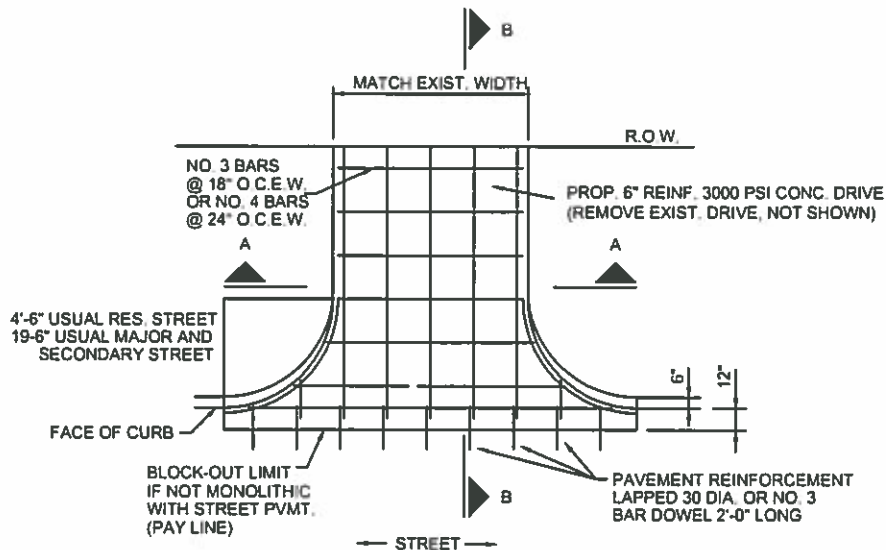
Farmersville

DRIVEWAY RETURN

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

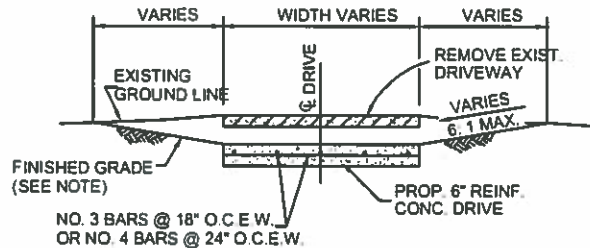
DATE: 10-27-16
REVISION: N/C

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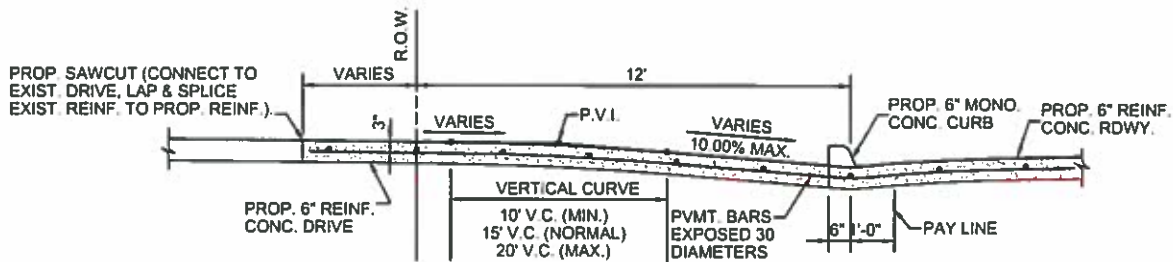


DRIVEWAY RETURN TO STREET

NOTES:
FINISHED GRADING WITHIN THE R.O.W. SHALL BE BROADCAST SEEDDED. WHERE PROPOSED DRIVEWAY CONSTRUCTION GOES BEYOND THE R.O.W. AND INTO PRIVATE PROPERTY, THE FINISHED GRADING SHALL BE BLOCK SODDED TO RESTORE THE LANDSCAPING TO ITS PRE-CONSTRUCTION APPEARANCE.



SECTION A-A



SECTION B-B

DRIVEWAY RETURN SECTIONS

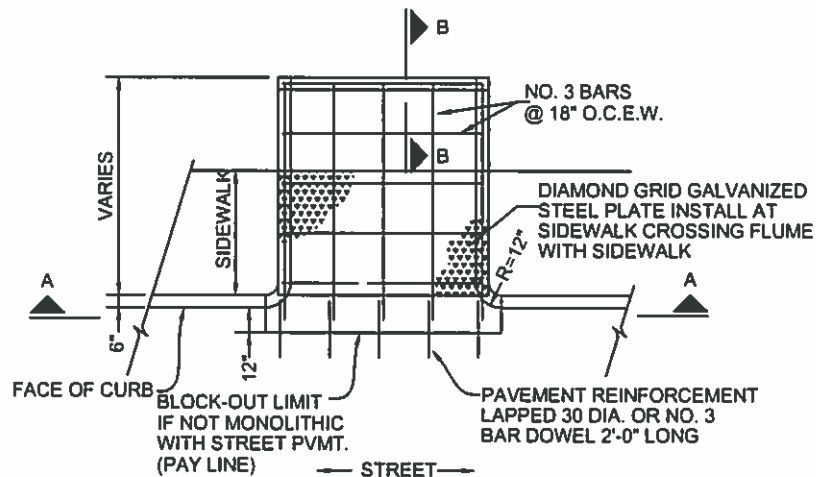
NOTE

1. CONTRACTOR SHALL PROVIDE No. 3 BARS ON 12" CTRS OR No. 4 BARS ON 18" CENTERS FOR OUTSIDE 1/4 ALLEY WIDTH AND PROVIDE No. 3 BARS ON 18" CTRS OR No. 4 BARS ON 24" CENTERS FOR MIDDLE 1/2 ALLEY WIDTH.
2. CONTRACTOR MAY AT HIS OPTION USE No. 3 BARS ON 12" CTRS OR No. 4 BARS ON 18" CTRS FOR ENTIRE ALLEY WIDTH AT NO ADDITIONAL COST TO THE CITY.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS

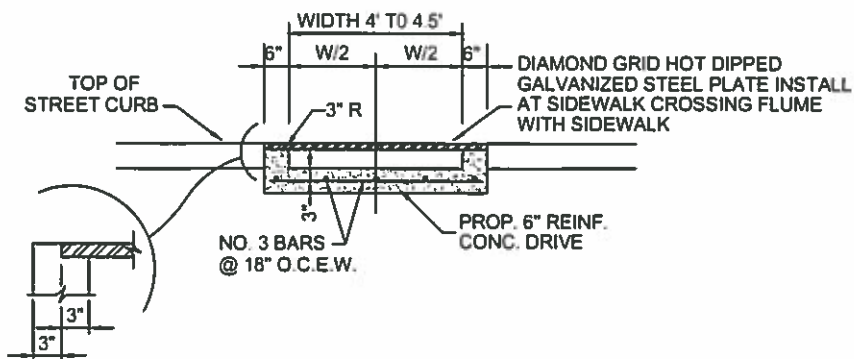


STEEL PLATE FLUME COVER
 PLATE THICKNESS SHALL BE 5/8 INCHES
 BASE ON 100 P.S.I. LIVE LOAD AND MAX.
 DEAD & LIVE LOAD DEFLECTION OF L/240.
 BOLT PLATE DOWN WITH BRASS BOLTS.
 BOLTS SHALL BE 1/2" DIA. RECESSED TO
 FLUSH WITH TOP OF PLATE AND SPACED A
 MAXIMUM OF 12" ON CENTERS. 1/2" DIA.
 SELF-DRILLING ANCHORS SHALL BE USED
 AND SPACED THE SAME. SURFACE OF
 PLATE SHALL BE A NON-SKID MATERIAL.

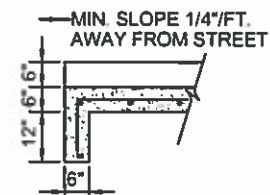


PLAN

REINFORCED CONCRETE FLUME WITH CURBS



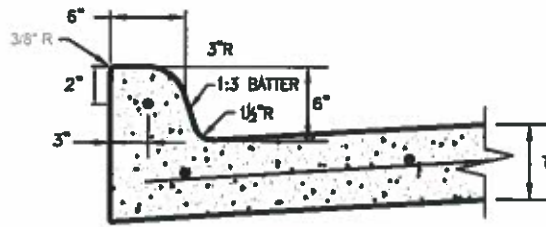
SECTION A-A



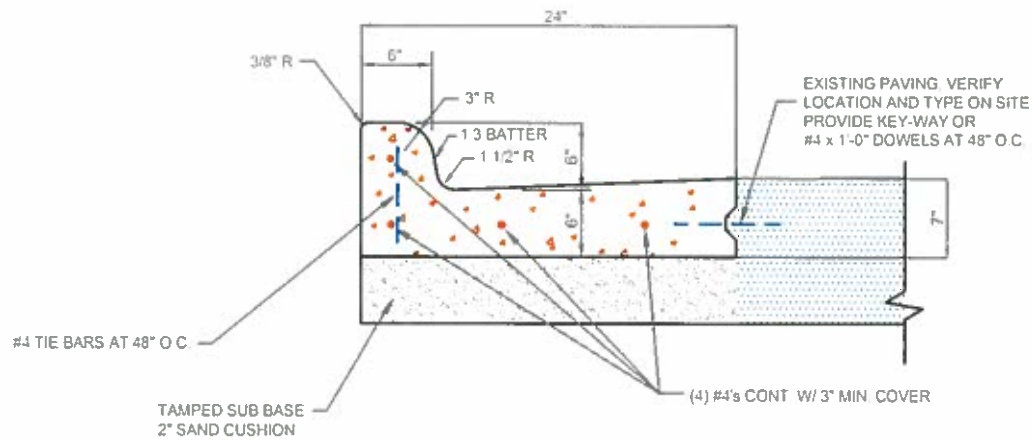
SECTION B-B

STANDARD CONSTRUCTION DETAILS
 FOR
 CITY OF FARMERSVILLE
 COLLIN COUNTY, TEXAS





INTEGRAL CURB & GUTTER



SEPARATE CURB & GUTTER

NOTES

- 1 INTEGRAL CURB & GUTTER SHALL BE USED ON ALL NEW STREETS.
- 2 FOR INTEGRAL CURB & GUTTER, REINFORCEMENT SHALL MATCH STREET PAVING REINFORCING. FOR SEPARATE CURB & GUTTER, #4 BARS SHALL BE USED.
- 3 ALL SEPARATE CURBS SHALL BE CONSTRUCTED OF 3600 PSI PORTLAND CEMENT CONCRETE UNLESS OTHERWISE SPECIFIED. INTEGRAL CURB & GUTTER SHALL MATCH STREET PAVING.
- 4 GRADE SHALL BE MEASURED AT BACK OF CURB.
- 5 NO VERTICAL DOWELED CURBS SHALL BE ALLOWED.
- 6 #4 REBAR SHALL BE USED.

ST-24

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



Farmersville

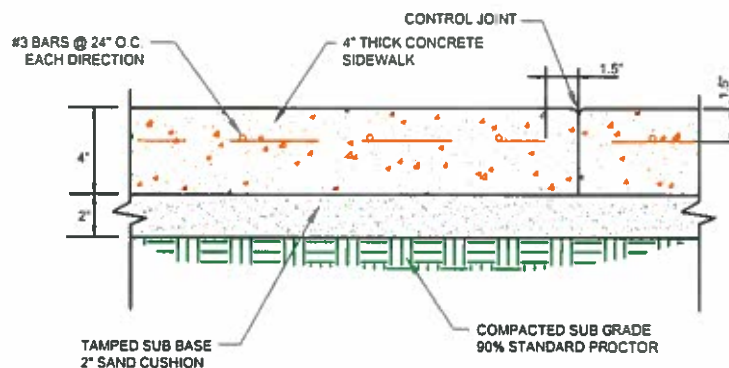
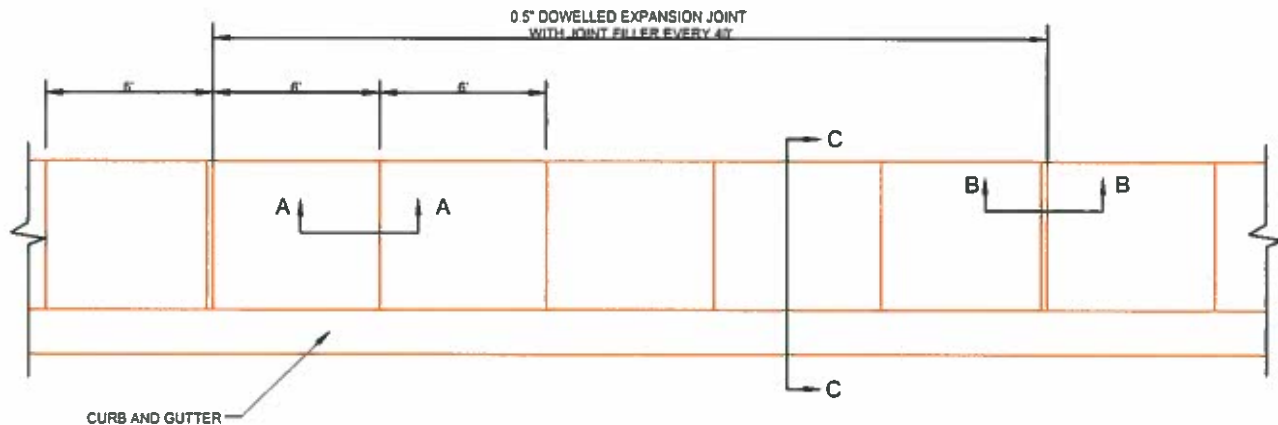
CURB & GUTTER

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-18
REVISION: N/C

124





SECTION A-A
NOT TO SCALE

CONCRETE SIDEWALK/CURB & GUTTER PLAN

NOT TO SCALE

NOTES:

1. PROVIDE TOOLED CONTROL JOINTS AT 6' O.C. (25% SLAB THICKNESS) AND ISOLATION JOINTS AT 24' O.C. UNLESS OTHERWISE NOTED.
2. CROSS SLOPE OF SIDEWALK SHALL BE NO GREATER THAN 2%.
3. SIDEWALK CONCRETE WITHIN CITY R.O.W. SHALL BE MINIMUM 3,000 PSI.
4. PAVED SIDEWALKS SHALL BE PROVIDED ALONG BOTH SIDES OF ALL THOROUGHFARES AND COLLECTORS, AND ALONG ALL RESIDENTIAL OR LOCAL STREETS WHICH ARE LOCATED IMMEDIATELY ADJACENT TO A SCHOOL SITE AND FOR A DISTANCE OF ONE BLOCK ALONG SUCH STREETS LEADING DIRECTLY TO A SCHOOL SITE.
5. MINIMUM WIDTH OF 6' IF SIDEWALK ADJACENT TO CURB.
6. STEEL WIRE MESH IS NOT ACCEPTABLE.
7. NO BELOW GRADE STAKES IN EXPANSION JOINTS.
8. NO DOWELS AT LEAD WALKS AND CORNERS INTO CITY CURB.
9. ALL REINFORCING STEEL SHALL BE SUPPORTED BY AN APPROVED DEVICE.
10. 48" IS MINIMUM WIDTH TO MEET FEDERAL ACCESSIBILITY GUIDELINES.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



SIDEWALK, CURB & GUTTER

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-16
REVISION: N/C

127



ST-28

A

Detectable Warning Devices (DWD) shall be pre-manufactured cast-in-place plates from the City of Farmersville approved vendor list installed to the manufacturer's specifications, and shall meet all ADA requirements. Brick Pavers allowed. Color to be Brick Red or similar. DWD shall be 24 inches in length for the full width of the street connection starting at the back of curb. A maximum 2-inch border shall be allowed on the sides of the DWD for proper installation.

B

Also known as "Clear Space" per ADA PROWAG, the City requires a minimum landing space of 4-foot by 4-foot at the bottom of every ramp. This landing space shall have a cross slope in both directions that does not exceed 2.0% and shall be wholly outside the parallel vehicular travel path.

C

The ramp component of the directional curb ramp shall have a continuous longitudinal slope more than 5% and less than 8.3%. The ramp shall also have a cross slope of no more than 2.0%. Length of ramp can vary, but shall not exceed 15 feet to achieve desired elevation change.

D

Also known as "Turning Space" per ADA PROWAG, a minimum landing space of 4-foot by 4-foot shall be at the top of every ramp. This landing (turning) space shall have a cross slope in both directions that does not exceed 2.0%. Landing must match width of sidewalk and length shall be the same distance ("Squared" Landing).

E

All curb ramps shall have grade breaks at the top and bottom that are perpendicular to the direction of the ramp run. Where the ends of the bottom grade break are less than or equal to 5 feet, the DWD shall be placed within the ramp at the bottom grade break. Where either end of the bottom grade break is greater than 5 feet, the DWD shall be placed behind the back of the curb.

F

Paving contractor shall leave block out with a keyway joint installed, minimum of 18 inches measured from back of curb. Block out shall be poured monolithically with Curb Ramp. Concrete shall tie to street paving with a keyway joint. No curb shall be constructed where a DWD is provided. The curb on either side shall have a typical 5 foot taper to transition from the standard 6-inch curb height to be flush with ramp.

G

All work associated with accessible routes shall be installed flush with all features to minimize vertical surface discontinuities. Each segment along accessible route shall be flush with no more (zero tolerance) than a $\frac{1}{4}$ -inch grade separation (elevation difference), or $\frac{1}{2}$ -inch grade separation if beveled (bevel slope shall not be steeper than 50%).

H

NOT USED

I

Street crossings shall adhere to same guidelines as other accessible routes within public right-of-way, and shall be for the full width of the in-line accessible route. Cross slope shall not exceed 2%. New street construction shall incorporate all ADA design requirements. It shall be the responsibility of the Design Professional and Contractor to ensure all street crossings meet the requirements of PROWAG. Street alterations on existing streets to bring to compliance shall be at the City Engineer's discretion.

J

All curbs constructed as part of an ADA Ramp shall match City curb standards.

* See PROWAG special design considerations when street crossing has no stop or yield condition.

ST-30

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS

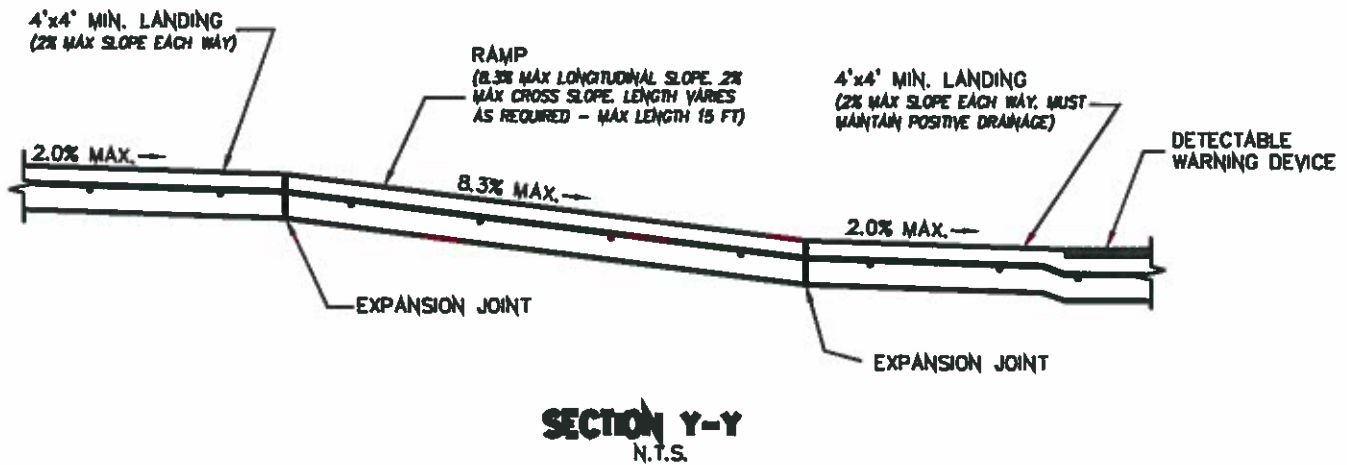
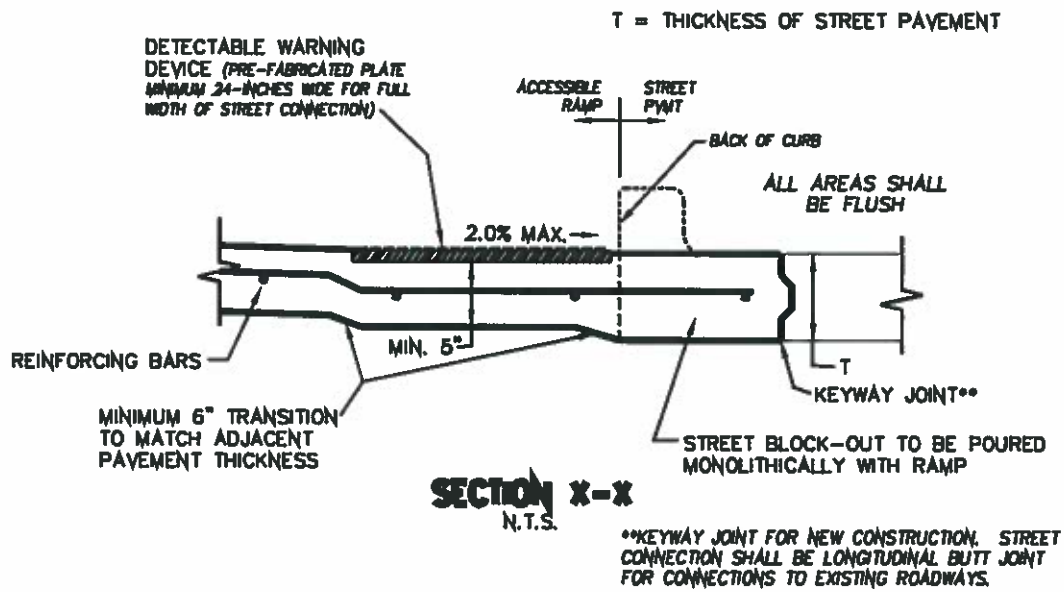


DIRECTIONAL CURB RAMP NOTES

DESIGNED: EWD
DRAWN: MKW / DBI

DATE: 10-27-16
REVISION: N/C

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NOTE: ALL SIDEWALK CURB RAMPS WILL BE 3600 PSI CONCRETE.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



Farmersville

DIRECTIONAL CURB RAMP

DESIGNED E.W.D.
DRAWN M.K.W. / D.B.

DATE 10-27-16
REVISION N/C

131

PEDESTRIAN ACCESSIBILITY (WITHIN PUBLIC R.O.W.)

All newly constructed sidewalks, curb ramps and crosswalks installed within City of Farmersville public rights-of-way shall be considered a pedestrian access route and shall conform to the most current Guidelines for Public Rights-of-Way created by the United States Access Board.

CURB RAMPS

1. All slopes shown are MAXIMUM ALLOWABLE. Lesser slopes that will still drain properly should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
2. Landings shall be 4' x 4' minimum with a maximum 2% slope in the transverse and longitudinal directions.
3. Clear space at the bottom of curb ramps shall be a minimum of 4' x 4' wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.
4. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.
5. Additional information on curb ramp location, design, light reflective value and texture may be found in the most current edition of the Texas Accessibility Standards (TAS) and 16 TAC 68.102. Federal guidelines shall supersede any conflicts.
6. Crosswalk dimensions, crosswalk markings and stop bar locations shall be as shown elsewhere in the plans. At intersections where crosswalk markings are not required, curb ramps and accessible routes shall align with theoretical crosswalks unless otherwise directed.
7. Handrails are not required on curb ramps.
8. Provide a flush transition where the curb ramps connect to the street.
9. Accessible routes are considered "ramps" when longitudinal slopes are between 5% and 8.3% (maximum allowable). Sidewalks under 5% longitudinal slope are deemed accessible routes and must follow all applicable guidelines.

DETECTABLE WARNING DEVICE

10. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with Section 705 of the TAS. The surface must contrast visually with adjoining surfaces. Furnish and install an approved cast-in-place dark red detectable warning surface material adjacent to uncolored concrete, unless specified elsewhere in the plans.
11. Detectable Warning Materials must meet City of Farmersville Material Specification (Refer to TxDOT Approved Vendor List) and be listed on the Material Producer List. Install products in accordance with manufacturer's specifications.
12. Detectable warning surfaces must be slip resistant and not allow water to accumulate.
13. Detectable warning surfaces shall be a minimum of 24" in depth in the direction of pedestrian travel, and extend the full width of the curb ramp or landing where the pedestrian access route enters the street.
14. Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb. When placed on the ramp, align the rows of domes to be perpendicular to the grade break between the ramp run and the street. Where detectable warning surfaces are provided on a surface with a slope that is less than 5 percent, dome orientation is less critical. Detectable warning surfaces may be curved along the corner radius.

SIDEWALKS

15. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within one or more reach ranges specified in TAS 308.
16. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items so as not to obstruct the pedestrian access route or clear ground space.
17. Street grades and cross slopes shall be as shown elsewhere in the plans.
18. Changes in level greater than 1/4 inch are not permitted (1/2 inch with bevel).
19. Where a 4' sidewalk is provided, a 5' x 5' passing areas are required at intervals not to exceed 200'.
20. The least possible grade should be used to maximize accessibility. The running slope of sidewalks and crosswalks within the public right of way may follow the grade of the parallel roadway. Where a continuous grade greater than 5% must be provided, handrails may be desirable to improve accessibility. Handrails may also be needed to protect pedestrians from potentially hazardous conditions. If provided, handrails shall comply with TAS 505.
21. Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS

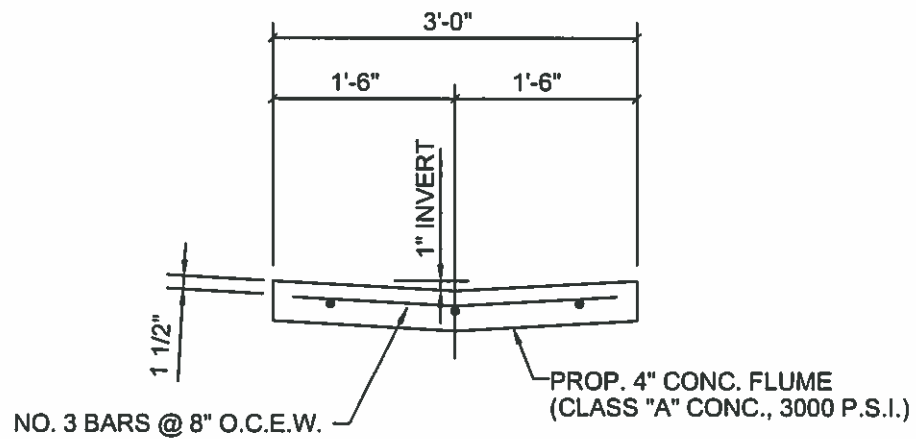


DIRECTIONAL CURB RAMP NOTES

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-16
REVISION: NC

132



VALLEY GUTTER

NOTES:

1. ALL VISIBLE SURFACES SHALL BE A TROWEL FINISH.
2. 3/4" CHAMFER REQUIRED ON ALL CORNERS.

ST-33

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS

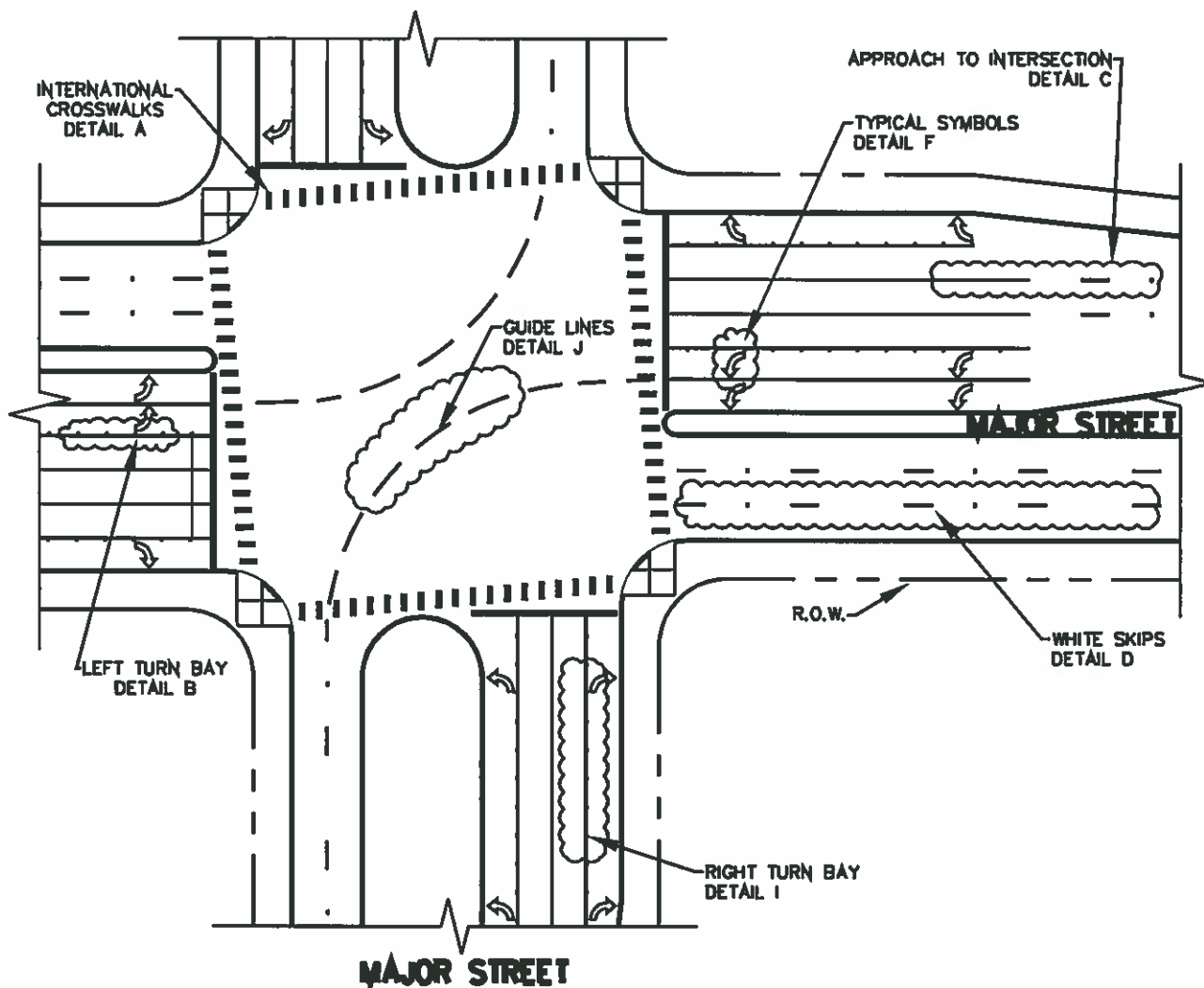


VALLEY GUTTER

DESIGNED E.W.D.
DRAWN M.K.W. / DBI

DATE 10-27-16
REVISION N/C

133

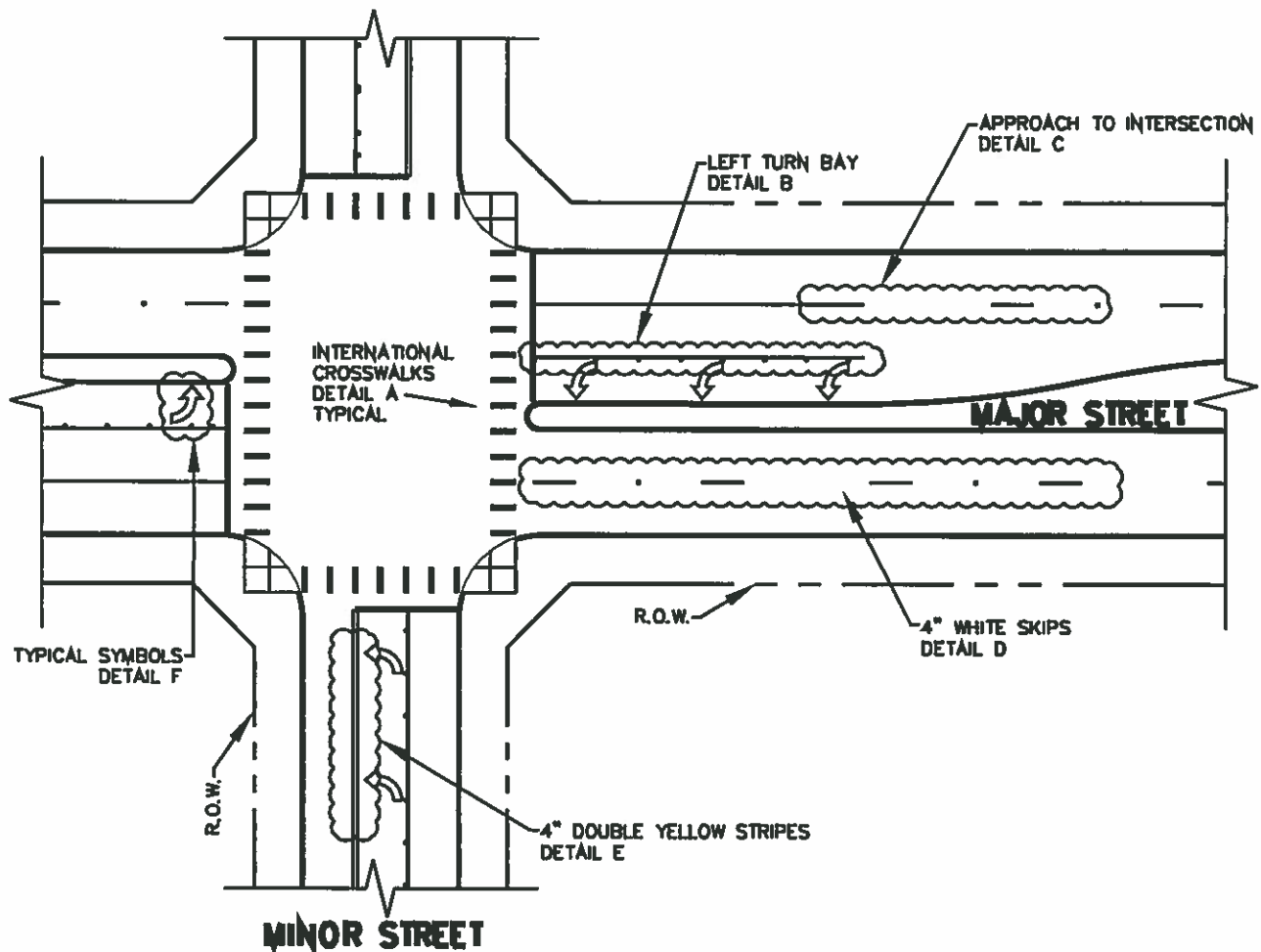


NOTE:

1. ALL NEW STRIPING SHALL BE METHYL METHACRYLATE UNLESS OTHERWISE APPROVED BY THE CITY OF FARMERSVILLE.
2. STOP BARS SHALL BE 24" WIDE & EXTEND 12" FROM NEAREST FACE OF CURB OR EDGE OF PAVEMENT ACROSS ALL APPROACH LANES.
3. INSTALL ALL PAVEMENT MARKINGS ACCORDING TO TXDOT STANDARD SPECIFICATION ITEMS 666, 668, 677 & 678.
4. DIMENSIONS OF SYMBOLS ARE TYPICAL. DIMENSIONS MAY BE MODIFIED IF SHOWN ON PLANS.
5. FOR ITEMS NOT SHOWN ON THESE SHEETS REFER TO TXDOT STANDARD SHEETS PM(1)-12, PM(2)-12 & PM(3)-12 (OR LATEST TXDOT REVISION).
6. REMOVE EXISTING STRIPING PRIOR TO INSTALLATION OF NEW STRIPING. REMOVE EXISTING RAISE PAVEMENT MARKINGS (RPMS) THAT DO NOT FOLLOW THE PLAN SET.
7. THESE DETAILS ARE FOR DESCRIPTION ONLY; NOT ALL INTERSECTIONS WILL HAVE ALL FEATURES.
8. INSTALL ARROWS STRIPING AS DIRECTED BY THE CITY ENGINEER.
9. USE TYPE II-C-R RPMS ALONG LEFT TURN BAY STRIPES IN AREAS WITH DIVIDED HIGHWAYS OR RAISED MEDIANS. USE TYPE I-C WITH UNDIVIDED HIGHWAYS, FLUSH MEDIANS & TWO-WAY LEFT TURN LANES.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS





NOTE:

1. ALL NEW STRIPING SHALL BE METHYL METHACRYLATE UNLESS OTHERWISE APPROVED BY THE CITY OF FARMERSVILLE.
2. STOP BARS SHALL BE 24" WIDE & EXTEND 12" FROM NEAREST FACE OF CURB OR EDGE OF PAVEMENT ACROSS ALL APPROACH LANES.
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8. INSTALL ARROWS STRIPING AS DIRECTED BY THE CITY ENGINEER.
9. USE TYPE II-C-R RPMS ALONG LEFT TURN BAY STRIPES IN AREAS WITH DIVIDED HIGHWAYS OR RAISED MEDIANS. USE TYPE I-C WITH UNDIVIDED HIGHWAYS, FLUSH MEDIANS & TWO-WAY LEFT TURN LANES.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



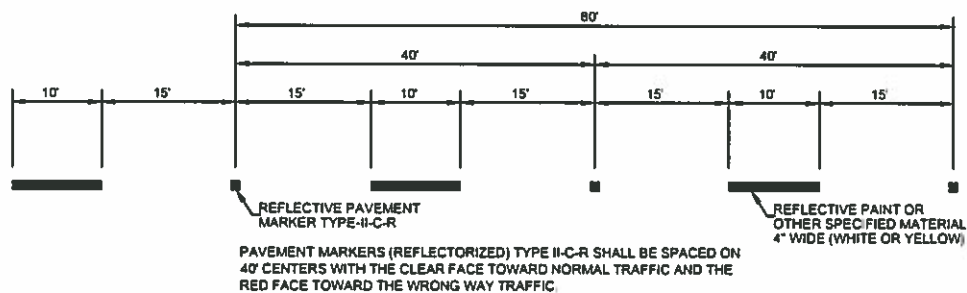
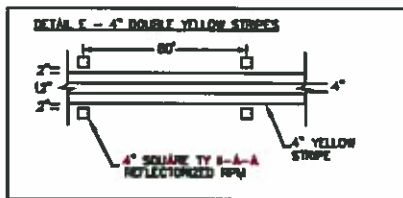
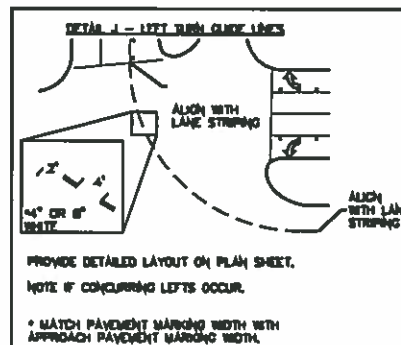
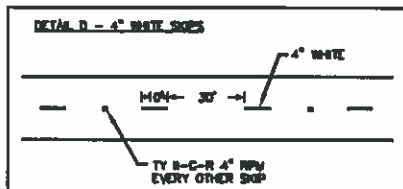
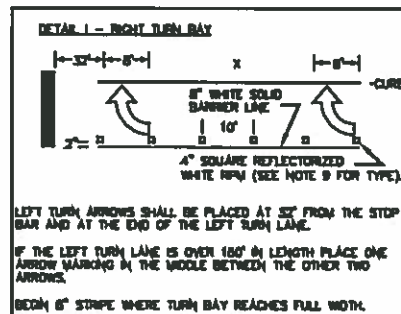
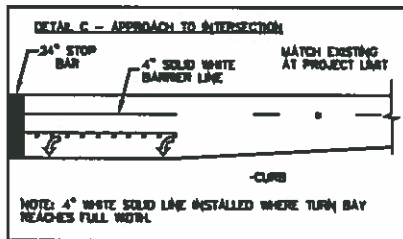
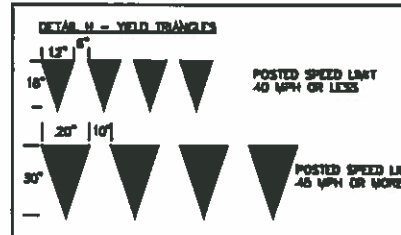
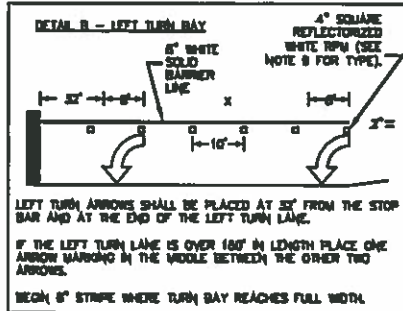
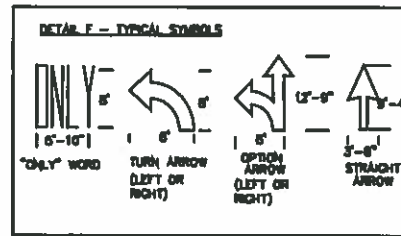
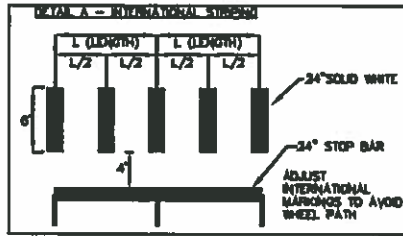
Farmersville

MAJOR - MINOR INTERSECTION PAVEMENT MARKINGS

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-16
REVISION: N/C

135



LANE LINE PAVEMENT MARKING

ST-36

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



LANE LINE PAVEMENT MARKING

DESIGNED: E.W.D.
DRAWN: M.K.W./DBI

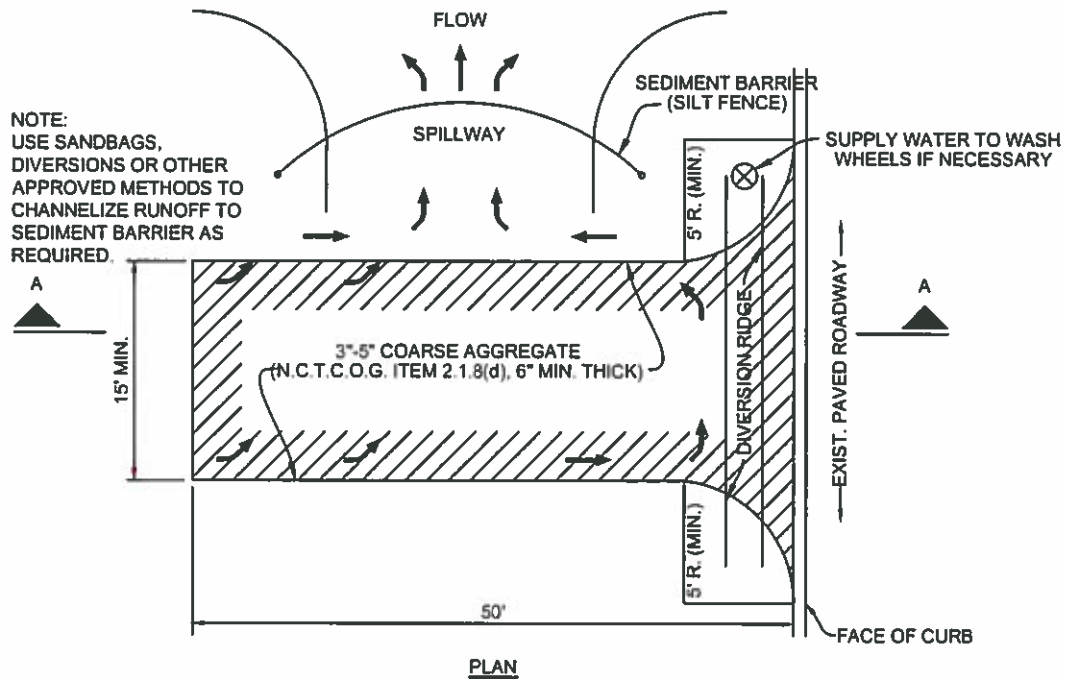
DATE: 10-27-16
REVISION: N/C

136



SECTION A-A

NOTE:
DIVERSION RIDGE REQUIRED
WHERE GRADE EXCEEDS 2.00%



TEMPORARY CONSTRUCTION ENTRANCE

ST-37

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS

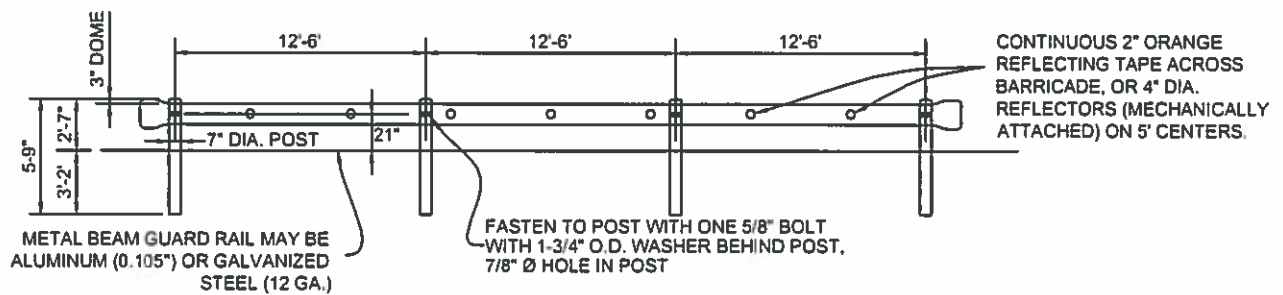


TEMPORARY CONSTRUCTION ENTRANCE

DESIGNED E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-18
REVISION: N/C

137



NON CONSTRUCTION BARRICADES (PERMANENT BARRICADES) SHALL CONSIST OF TxDOT GF(TD)-87 METAL BEAM GUARD FENCE WITH TERMINAL CONNECTOR SECTIONS AT EACH END. PERMANENT BARRICADES SHALL BE MANUFACTURED AND CONSTRUCTED IN ACCORDANCE WITH TxDOT DETAILS. BARRICADE SHALL EXTEND FROM OUTSIDE CURB TO OUTSIDE CURB.

PERMANENT BARRICADE

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS

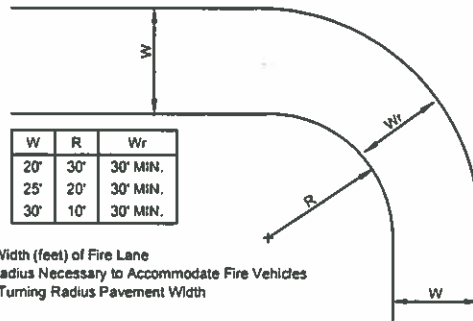


PERMANENT BARRICADE

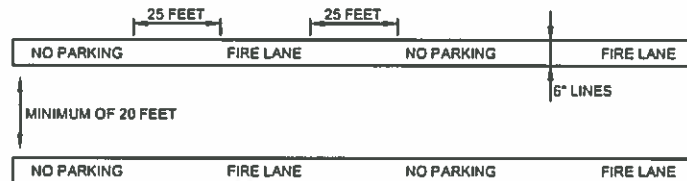
DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-16
REVISION: N/C

138



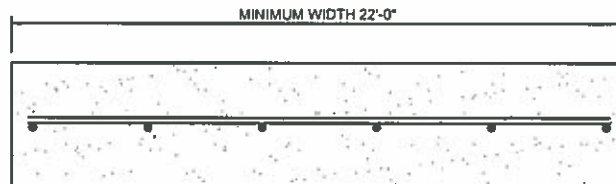
FIRE LANE DESIGN



NOTE:

1. THE FIRE CHIEF IS AUTHORIZED TO DESIGNATE FIRE LANES.
2. FIRE LANES SHALL BE MARKED BY SIX INCH (6") WIDE LINES USING RED TRAFFIC PAINT, WITH THE WORDING "NO PARKING" AND "FIRE LANE" PAINTED ON THE LINES AT INTERVALS OF TWENTY-FIVE (25'). THE LETTERING WILL BE FOUR INCHES (4") HIGH WITH A ONE INCH (1") WIDE STROKE PAINTED WITH WHITE TRAFFIC PAINT.
3. FIRE LANES SHALL BE A MINIMUM OF TWENTY-FEET (20') IN WIDTH.
4. ANY DEAD-END FIRE LANE MORE THAN ONE HUNDRED FIFTY-FEET (150') LONG SHALL PROVIDE A TURN AROUND OF ONE HUNDRED FEET (100') IN DIAMETER AT THE CLOSED END.

FIRE LANE MARKING



1. ALL FIRE LANES SHALL BE PAVED WITH A MINIMUM OF 8 INCHES OF 3000 P.S.I. CONCRETE REINFORCED WITH #3 REBAR PLACED ON 18 INCH CENTERS EACH WAY ON A 6 INCH LIME STABILIZED SUBGRADE. THE SUBGRADE SHALL BE STABILIZED WITH HYDRATED LIME IN SUFFICIENT AMOUNT TO REDUCE THE PLASTICITY INDEX BELOW FIFTEEN (15). IF NO LABORATORY CONTROL IS USED, THE AMOUNT OF LIME SHALL BE EQUAL TO SEVEN AND ONE HALF (7-1/2) PERCENT BY UNIT DRY WEIGHT OF SOIL ESTIMATED AT 75 POUNDS PER CUBIC FEET OF 32 POUNDS OF LIME PER SQUARE YARD OF SURFACE AREA TREATED TO A 6 INCH THICKNESS.
2. ALL FIRE LANES MAY BE PAVED WITH 6 INCHES OF 3000 P.S.I. CONCRETE (28 DAYS COMPRESSIVE STRENGTH) REINFORCED WITH #3 REBAR PLACED ON 18 INCH CENTERS EACH WAY ON A SUBGRADE SCARIFIED AND COMPACTED TO AT LEAST 95% STANDARD PROCTOR DENSITY. CONTRACTION JOINTS SHALL BE SPACED AT A MAXIMUM OF 15.5 FEET ON CENTERS EACH WAY. CONTRACTION JOINTS MAY BE DUMMY OR SAWED JOINTS TO A DEPTH OF AT LEAST ONE (1) INCH DEEP. TO INSURE PROPER RUNOFF IN ORDER TO PREVENT PONDING, THE PAVEMENT SURFACE SHOULD HAVE A MINIMUM SLOPE OF 1% (12" PER 100 FEET).
3. ALTERNATE PAVING DESIGN:
IN LIEU OF ITEMS LISTED ABOVE, THE DEVELOPER MAY SUBMIT AN ENGINEERED DESIGN THAT WILL BE EQUIVALENT IN PERFORMANCE OF THE SPECIFICATIONS ABOVE. THE EQUIVALENT DESIGN MUST TAKE INTO ACCOUNT THE SOIL CONDITIONS OF THE SITE TO BE DEVELOPED. SUCH DESIGN SHALL REQUIRE APPROVAL BY PUBLIC WORKS DIRECTOR.

FIRE LANE PAVING & JOINT DETAIL

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS

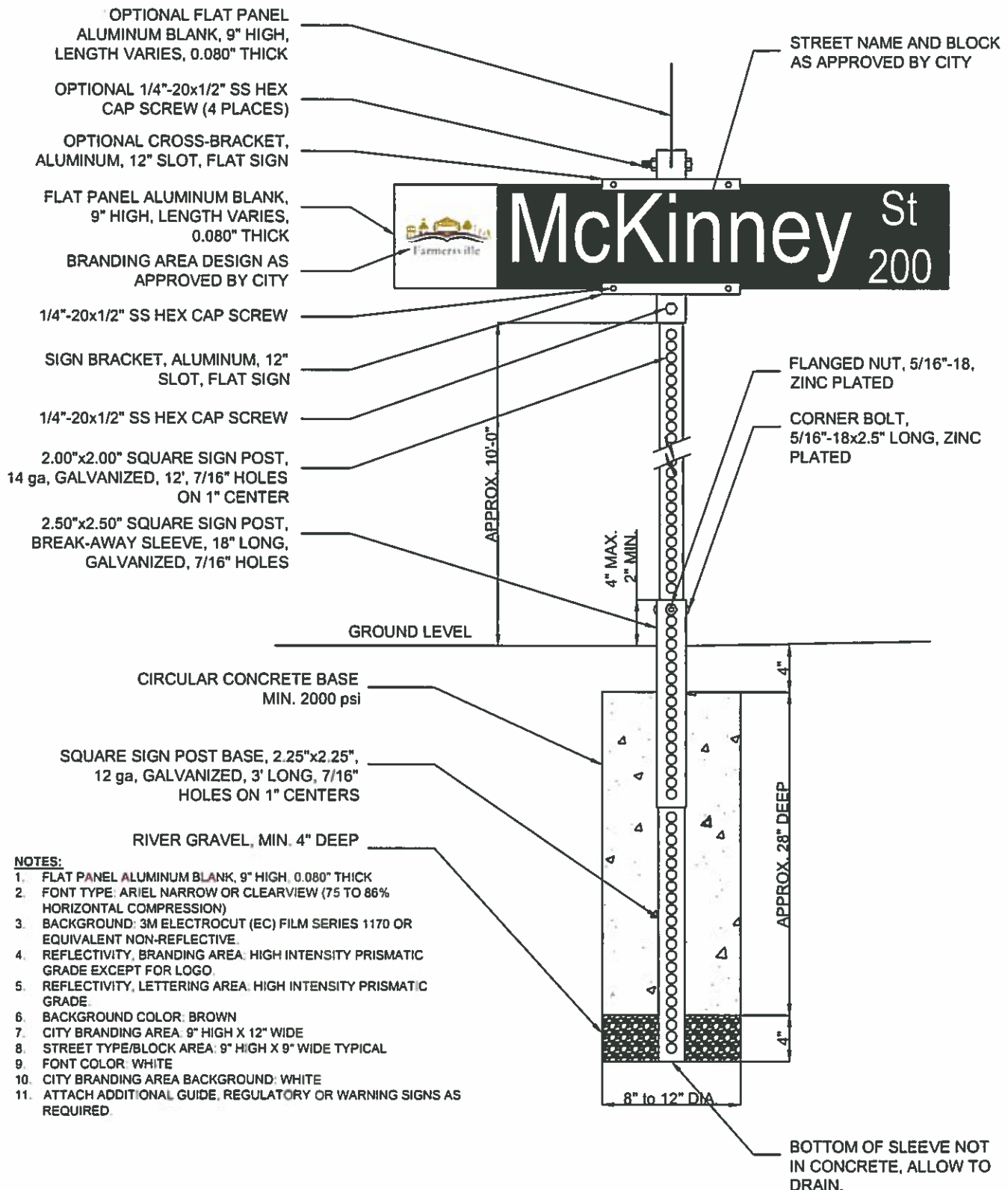


FIRE LANE MARKING, PAVING & JOINT

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-16
REVISION: N/C

139



STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



STANDARD STREET SIGN

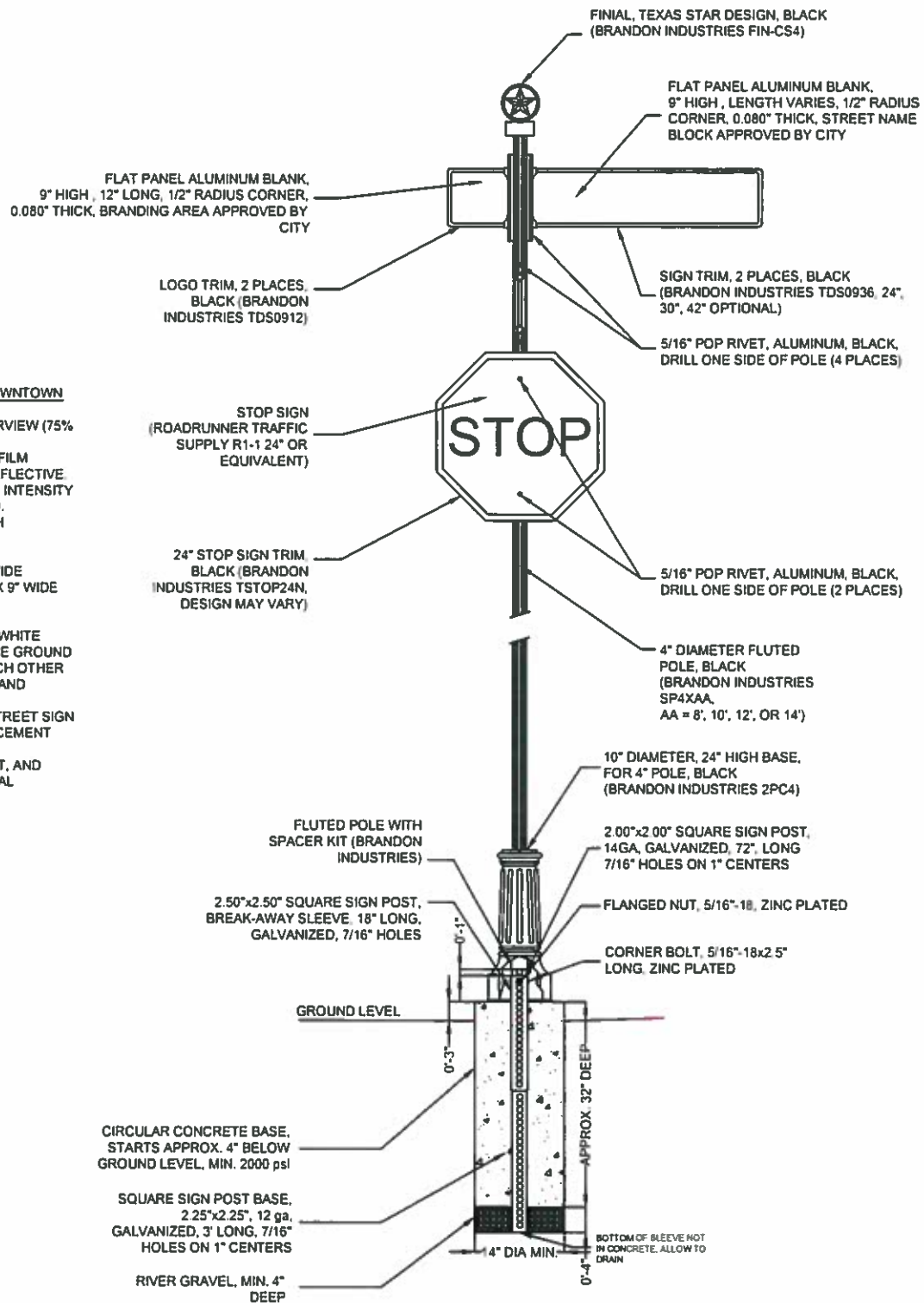
DESIGNED E.W.D.
DRAWN M.K.W./D.B.I.

DATE: 10-27-16
REVISION: N/C

140

NOTES:

1. SIGN DESIGN SHALL BE USED FOR DOWNTOWN BUSINESS DISTRICT.
2. FONT TYPE: ARIAL NARROW OR CLEARVIEW (75% TO 86% HORIZONTAL COMPRESSION).
3. BACKGROUND: 3M ELECTRO CUT (EC) FILM SERIES 1170 OR EQUIVALENT, NON-REFLECTIVE.
4. REFLECTIVITY, BRANDING AREA: HIGH INTENSITY PRISMATIC GRADE EXCEPT FOR LOGO.
5. REFLECTIVITY, LETTERING AREA: HIGH INTENSITY PRISMATIC GRADE.
6. BACKGROUND COLOR: BROWN.
7. CITY BRANDING AREA: 9" HIGH X 12" WIDE
8. STREET TYPE / BLOCK AREA: 9" HIGH X 9" WIDE (TYP)
9. FONT COLOR: WHITE
10. CITY BRANDING AREA BACKGROUND: WHITE
11. SIGN VERTICAL DIMENSIONS FROM THE GROUND AND SIGN DISTANCE RELATIVE TO EACH OTHER FOR SIGNS SHALL MEET CITY, STATE, AND FEDERAL REQUIREMENTS.
12. CITY SHALL PROVIDE APPROVE ALL STREET SIGN DESIGNS, COLOR, MARKING, AND PLACEMENT PRIOR TO INSTALLATION.
13. HEIGHT OF POLE, STREET SIGN COUNT, AND INFORMATIONAL SIGN COUNT OPTIONAL DEPENDANT UPON APPLICATION.



STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS

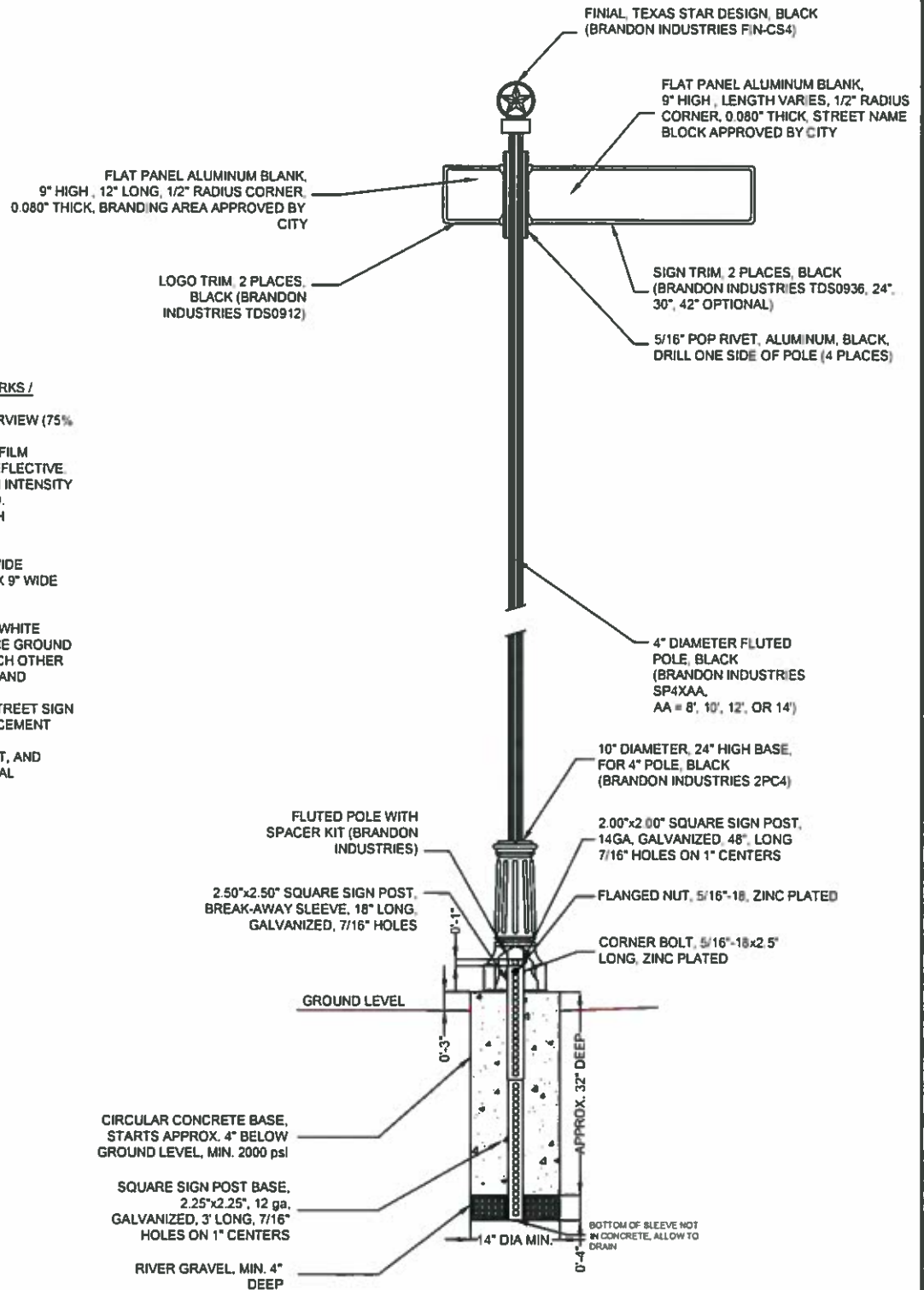


DECORATIVE STREET SIGN

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-16
REVISION: N/C

141



NOTES:

1. SIGN DESIGN SHALL BE USED FOR PARKS / STREETS.
2. FONT TYPE: ARIAL NARROW OR CLEARVIEW (75% TO 86% HORIZONTAL COMPRESSION).
3. BACKGROUND: 3M ELECTRO CUT (EC) FILM SERIES 1170 OR EQUIVALENT, NON-REFLECTIVE.
4. REFLECTIVITY, BRANDING AREA: HIGH INTENSITY PRISMATIC GRADE EXCEPT FOR LOGO.
5. REFLECTIVITY, LETTERING AREA: HIGH INTENSITY PRISMATIC GRADE.
6. BACKGROUND COLOR: BROWN.
7. CITY BRANDING AREA: 9" HIGH X 12" WIDE
8. STREET TYPE / BLOCK AREA: 9" HIGH X 9" WIDE (TYP)
9. FONT COLOR: WHITE
10. CITY BRANDING AREA BACKGROUND: WHITE
11. SIGN VERTICAL DIMENSIONS FROM THE GROUND AND SIGN DISTANCE RELATIVE TO EACH OTHER FOR SIGNS SHALL MEET CITY, STATE, AND FEDERAL REQUIREMENTS.
12. CITY SHALL PROVIDE APPROVE ALL STREET SIGN DESIGNS, COLOR, MARKING, AND PLACEMENT PRIOR TO INSTALLATION.
13. HEIGHT OF POLE, STREET SIGN COUNT, AND INFORMATIONAL SIGN COUNT OPTIONAL DEPENDANT UPON APPLICATION.

STANDARD CONSTRUCTION DETAILS FOR CITY OF FARMERSVILLE COLLIN COUNTY, TEXAS



PARKS DECORATIVE STREET SIGN

DESIGNED E.W.D.
DRAWN M.K.W. / DBI

DATE 10-27-16
REVISION N/C

142

FLAT PANEL ALUMINUM BLANK,
1/2" RADIUS CORNER, 0.080" THICK,
SIZE AND DESIGN AS REQUIRED BY CITY

TRIM, BLACK, SIZE AS REQUIRED BY CITY
(BRANDON INDUSTRIES TSXXXXN)

FINIAL, TEXAS STAR DESIGN, BLACK
(BRANDON INDUSTRIES FIN-CS4)

5/16" POP RIVET, ALUMINUM, BLACK,
DRILL ONE SIDE OF POLE (2 PLACES)

4" DIAMETER FLUTED
POLE, BLACK
(BRANDON INDUSTRIES
SP4XAA,
AA = 8', 10', 12', OR 14')

10" DIAMETER, 24" HIGH BASE,
FOR 4" POLE, BLACK
(BRANDON INDUSTRIES 2PC4)

FLUTED POLE WITH
SPACER KIT (BRANDON
INDUSTRIES)

2.50"x2.50" SQUARE SIGN POST,
BREAK-AWAY SLEEVE, 18" LONG
GALVANIZED, 7/16" HOLES

2.00"x2.00" SQUARE SIGN POST,
14GA, GALVANIZED, 48" LONG
7/16" HOLES ON 1" CENTERS

FLANGED NUT, 5/16"-18, ZINC PLATED

CORNER BOLT, 5/16"-18x2 5"
LONG, ZINC PLATED

GROUND LEVEL

CIRCULAR CONCRETE BASE,
STARTS APPROX. 4" BELOW
GROUND LEVEL, MIN. 2000 psi

SQUARE SIGN POST BASE,
2.25"x2.25", 12 ga,
GALVANIZED, 3" LONG, 7/16"
HOLES ON 1" CENTERS

RIVER GRAVEL, MIN. 4"
DEEP

14" DIA MIN.
BOTTOM OF SLEEVE NOT
IN CONCRETE, ALLOW TO
DRAIN

NOTES:

1. SIGN DESIGN SHALL BE USED FOR SMALL
FORMAT SIGNS.
2. FONT TYPE: ARIAL NARROW OR CLEARVIEW (75%
TO 86% HORIZONTAL COMPRESSION).
3. BACKGROUND: 3M ELECTRO CUT (EC) FILM
SERIES 1170 OR EQUIVALENT, NON-REFLECTIVE.
4. REFLECTIVITY, BRANDING AREA: HIGH INTENSITY
PRISMATIC GRADE EXCEPT FOR LOGO.
5. REFLECTIVITY, LETTERING AREA: HIGH
INTENSITY PRISMATIC GRADE.
6. BACKGROUND COLOR: BROWN.
7. FONT COLOR: WHITE.
8. SIGN VERTICAL DIMENSIONS FROM THE GROUND
AND SIGN DISTANCE RELATIVE TO EACH OTHER
FOR SIGNS SHALL MEET CITY, STATE, AND
FEDERAL REQUIREMENTS.
9. CITY SHALL PROVIDE APPROVE ALL STREET SIGN
DESIGNS, COLOR, MARKING, AND PLACEMENT
PRIOR TO INSTALLATION.
10. HEIGHT OF POLE, STREET SIGN COUNT, AND
INFORMATIONAL SIGN COUNT OPTIONAL
DEPENDANT UPON APPLICATION.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS

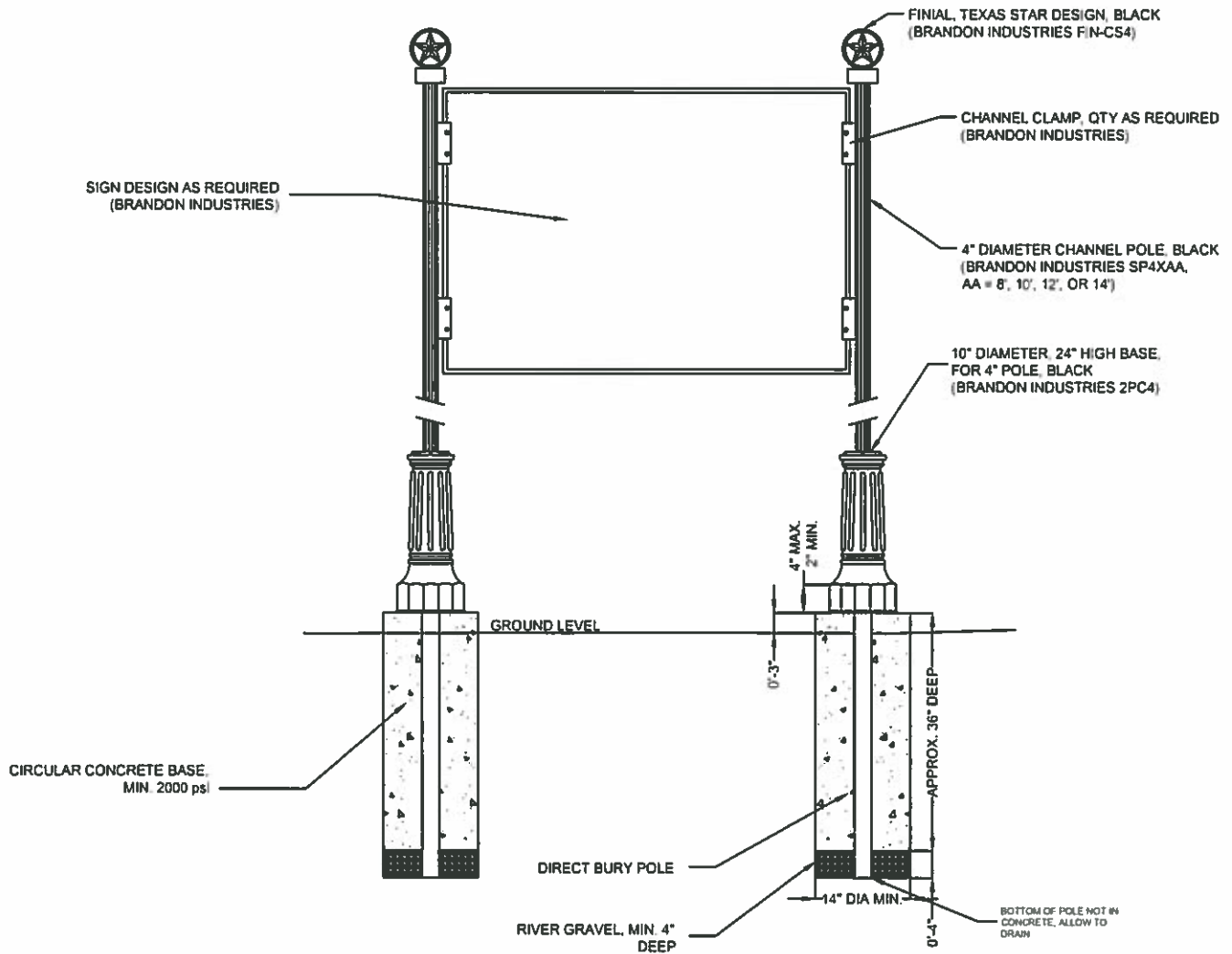


PARKS DECORATIVE SMALL FORMAT SIGN

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-16
REVISION: N/C

143



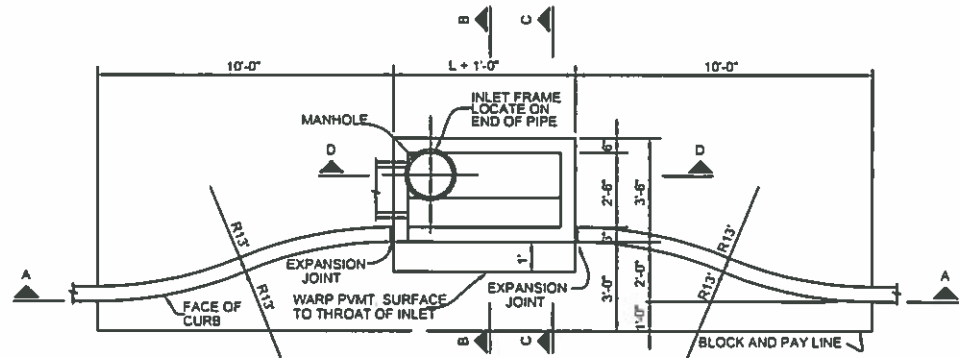
STANDARD CONSTRUCTION DETAILS
 FOR
 CITY OF FARMERSVILLE
 COLLIN COUNTY, TEXAS



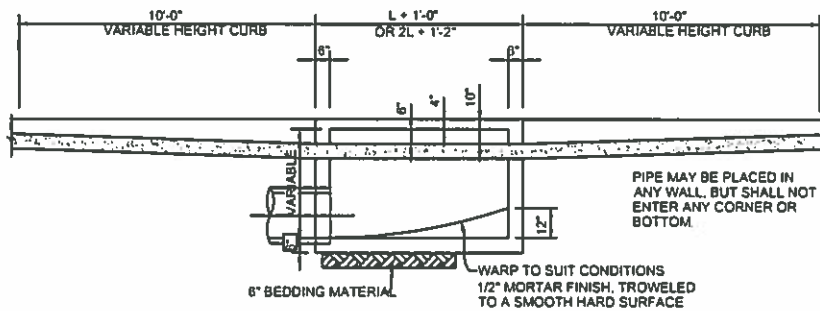
Farmersville

NOTES:

1. THE FLOOR OF THE EXCAVATION FOR INLET BOX MUST PROVIDE A FIRM, LEVEL BED FOR THE BASE SECTION TO REST UPON.
2. A MINIMUM OF 6 INCHES OF 1" DIAMETER (MAXIMUM) ROCK OR GRAVEL SHALL BE USED TO PREPARE THE BEDDING TO FINAL GRADE OR LIEU OF THIS, AT LEAST 6 INCHES OF 2-SACK CEMENT STABILIZED SAND SHALL BE USED TO PREPARE THE BEDDING TO GRADE. CEMENT STABILIZED-SAND SHALL BE ALLOWED TO SET BY KEEPING HOLE PUMPED DRY.
3. AFTER CASING HAS BEEN INSTALLED ON THE PROPER BEDDING, THE BACKFILL MATERIAL, WHICH IS FREE FLOWING AND CLEAR OF ROCKS, IN EXCESS OF 4" DIAMETER AND OTHER LUMPS WHICH WOULD PROHIBIT PROPER COMPACTION, SHALL BE COMMENCED IN LIFTS OF NO MORE THAN 18". THE MATERIAL USED FOR BACKFILL SHOULD BE A TYPE SUITABLE TO OBTAIN THE DENSITY REQUIREMENTS FOR THE SPECIFIC JOB.

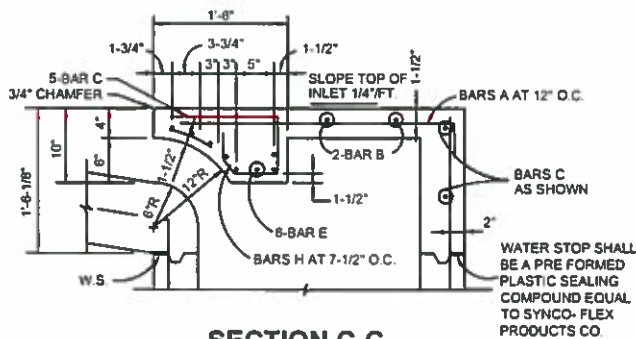


PLAN - RECESSED INLET

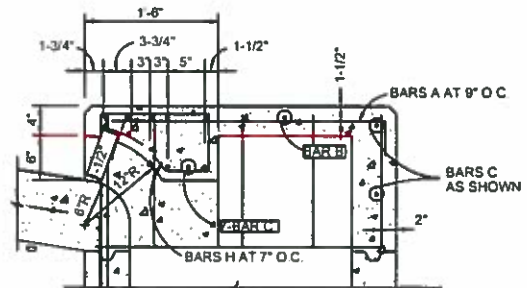


SECTION A-A-RECESSED AND STANDARD INLETS

4, 6, 8, AND 10 FOOT INLETS



SECTION C-C



SECTION E-E

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



STORM WATER RECESSED INLET

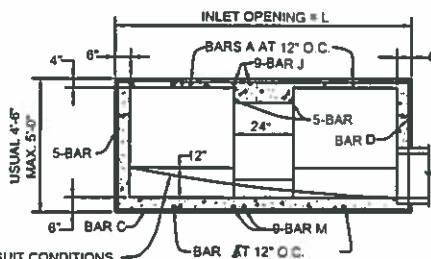
DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-16
REVISION: N/C

201

SW-01

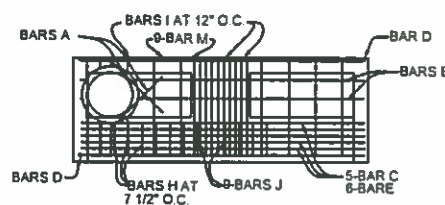
1. THE FLOOR OF THE EXCAVATION FOR INLET BOX MUST PROVIDE A FIRM, LEVEL BED FOR THE BASE SECTION TO REST UPON
2. A MINIMUM OF 6 INCHES OF 1" DIAMETER (MAXIMUM) ROCK OR GRAVEL SHALL BE USED TO PREPARE THE BEDDING TO FINAL GRADE OR LIEU OF THIS, AT LEAST 6 INCHES OF 2-SACK CEMENT STABILIZED SAND SHALL BE USED TO PREPARE THE BEDDING TO GRADE. CEMENT STABILIZED-SAND SHALL BE ALLOWED TO SET BY KEEPING HOLE PUMPED DRY
3. AFTER CASING HAS BEEN INSTALLED ON THE PROPER BEDDING, THE BACKFILL MATERIAL, WHICH IS FREE FLOWING AND CLEAR OF ROCKS, IN EXCESS OF 4" DIAMETER AND OTHER LUMPS WHICH WOULD PROHIBIT PROPER COMPACTION, SHALL BE COMMENCED IN LIFTS OF NO MORE THAN 18" THE MATERIAL USED FOR BACKFILL SHOULD BE A TYPE SUITABLE TO OBTAIN THE DENSITY REQUIREMENTS FOR THE SPECIFIC JOB



WARP TO SUIT CONDITIONS
1/2" MORTAR FINISH,
TROWELED TO A SMOOTH
FINISH

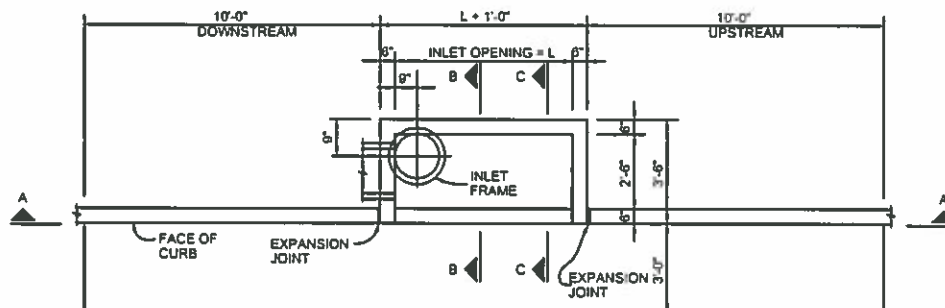
Diagram illustrating a square manhole with a 12-inch diameter pipe. The diagram shows the pipe offset to the right and up. Dimensions include: 1'-6" for the top offset, 2'-6" for the bottom offset, 3'-6" for the total width, and 4'-0" for the total height. Labels include: SLOPE TOP OF INLET 1/4" FT., BAR G, 2-BAR K, BAR J, PIPE, BAR I AT 12" O.C., VARIABLE, USUAL 4'-6", and MAX. 5'-0".

SECTION B-B



PLAN - STANDARD INLET

NOTE:
PIPES SHALL CONNECT TO
THE ENDS OR SIDES OF
INLETS CONNECTION SHALL
NOT BE MADE AT CORNER
OR BOTTOM.



PLAN - STANDARD INLET

4. 6. 8 AND 10 FOOT INLETS

STANDARD CONSTRUCTION DETAILS FOR CITY OF FARMERSVILLE COLLIN COUNTY, TEXAS



STORM WATER STANDARD INLET

DESIGNED: E.W.D.
DRAWN: M K W. / DBI

DATE: 10-27-18
REVISION: N/C

202

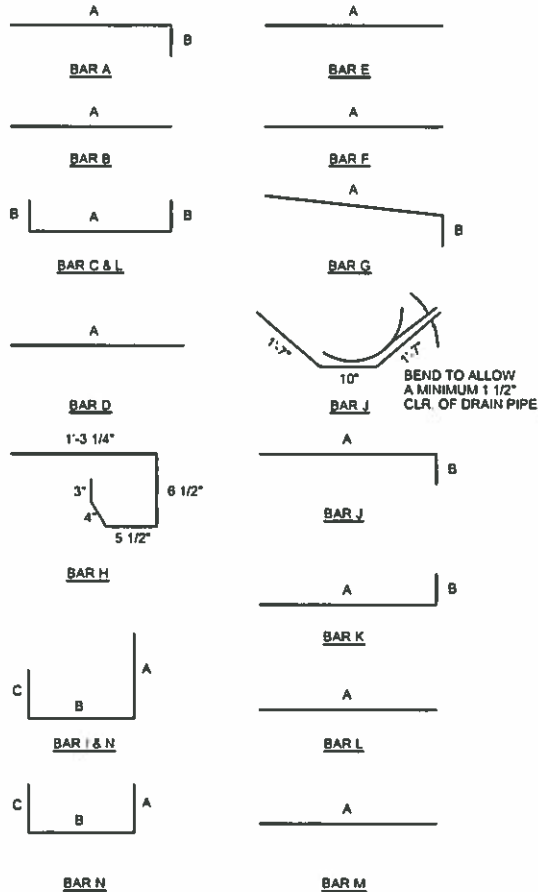
20-MS

RECESSED AND STANDARD INLETS REINFORCING STEEL SCHEDULE

DIMENSIONS SHOWN ARE FOR MAXIMUM SIZE INLETS

INLET LENGTH	BAR TYPE	BAR DIA. (1/8 IN)	NO REQ'D	BAR DIMENSIONS		
				A	B	C
4	A	3	6	3'-2"	0'-3"	-
	B	3	1	2'-10"	-	-
	C	4	15	4'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	6	-	-	-
	N	3	3	3'-2"	3'-2"	3'-2"
6	A	3	9	3'-2"	0'-3"	-
	B	3	1	4'-10"	-	-
	C	4	15	6'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	9	-	-	-
	N	3	3	3'-2"	3'-2"	3'-2"
8	A	3	12	3'-2"	0'-3"	-
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	12	-	-	-
	N	3	3	3'-2"	3'-2"	3'-2"
10	A	3	13	3'-2"	0'-3"	-
	B	3	2	6'-10"	-	-
	C	4	18	10'-8"	0'-6"	-
	D	4	4	4'-8"	-	-
	E	5	6	10'-8"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	14	-	-	-
	I	4	8	4'-8"	3'-2"	3'-2"
	L	4	5	4'-3"	-	-

* SEE DIAGRAM FOR DIMENSIONS.
4', 6' & 10' INLETS



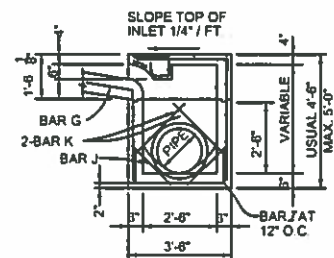
BAR DIAGRAMS

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



[illegible]

20 FOOT INLETS



12, 14, 16 AND 20 FOOT INLETS

SECTION D-D

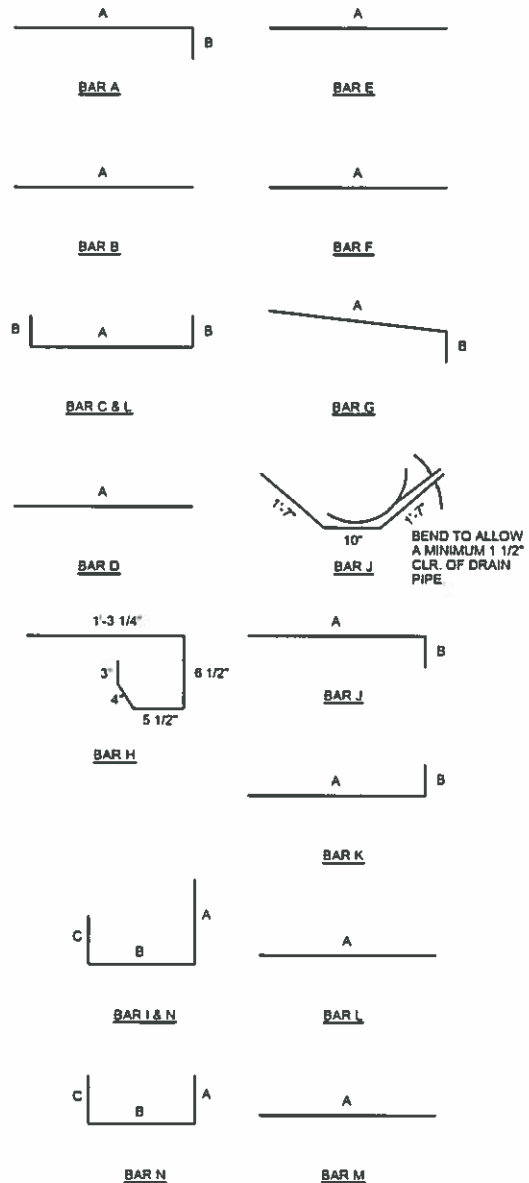
204

DOUBLE INLETS

DIMENSIONS SHOWN ARE FOR MAXIMUM SIZE INLETS

INLET LENGTH	BAR TYPE	BAR DIA. (1/8 IN.)	NO. REQ'D	BAR DIMENSIONS		
				A	B	C
6 FT.	A	3	15	3'-2"	0'-6"	-
	B	3	2	11'-6"	-	-
	C	4	18	13'-4"	0'-6"	-
	D	4	9	4'-8"	-	-
	E	5	8	13'-4"	-	-
	F	4	5	1'-2"	-	-
	G	3	12	2'-0"	1'-3"	-
	H	3	28	-	-	-
	I	4	12	4'-8"	3'-2"	3'-2"
	J	5	1	-	-	-
	K	5	8	3'-2"	0'-6"	-
	L	4	11	3'-2"	0'-6"	-
	M	4	2	3'-0"	-	-
	N	4	2	4'-8"	3'-2"	4'-8"
7 FT.	A	3	17	3'-2"	0'-6"	-
	B	3	2	13'-6"	-	-
	C	4	18	15'-4"	0'-3"	-
	D	4	9	4'-8"	-	-
	E	5	8	15'-4"	-	-
	F	4	5	1'-2"	-	-
	G	3	15	2'-0"	1'-3"	-
	H	3	32	-	-	-
	I	4	14	4'-8"	3'-2"	3'-2"
	J	5	1	-	-	-
	K	5	8	3'-2"	0'-6"	-
	L	4	11	3'-2"	0'-6"	-
	M	4	2	3'-0"	-	-
	N	4	2	4'-8"	3'-2"	4'-8"
8 FT.	A	3	19	3'-2"	0'-6"	-
	B	3	2	15'-6"	-	-
	C	4	18	17'-4"	0'-6"	-
	D	4	9	4'-8"	-	-
	E	5	8	17'-4"	-	-
	F	4	5	1'-2"	-	-
	G	3	12	2'-0"	1'-3"	-
	H	3	28	-	-	-
	I	4	18	4'-8"	3'-2"	3'-2"
	J	5	1	-	-	-
	K	5	8	3'-2"	0'-6"	-
	L	4	11	3'-2"	0'-6"	-
	M	4	2	3'-0"	-	-
	N	4	2	4'-8"	3'-2"	4'-8"
10 FT.	A	3	23	3'-2"	0'-6"	-
	B	3	2	19'-6"	-	-
	C	4	18	21'-4"	0'-6"	-
	D	4	9	4'-8"	-	-
	E	5	8	21'-4"	-	-
	F	4	5	1'-2"	-	-
	G	3	15	2'-0"	1'-3"	-
	H	3	32	-	-	-
	I	4	20	4'-8"	3'-2"	3'-2"
	J	5	1	-	-	-
	K	5	8	3'-2"	0'-6"	-
	L	4	11	3'-2"	0'-6"	-
	M	4	2	3'-0"	-	-
	N	4	2	4'-8"	3'-2"	4'-8"

* SEE DIAGRAM FOR DIMENSIONS
 ** FIELD CUT AS REQUIRED TO ACCOMMODATE DRAIN PIPE
 16" AND 20" INLETS



△ BEND TO ALLOW A MINIMUM 1 1/2" CLR. OF DRAIN PIPE
 * SEE DIAGRAMS FOR DIMENSIONS
 ** FIELD CUT AS REQUIRED TO ACCOMMODATE DRAIN PIPE

BAR BENDING DIAGRAMS

REINFORCING STEEL SCHEDULE

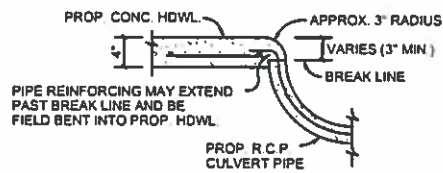
STANDARD CONSTRUCTION DETAILS
 FOR
 CITY OF FARMERSVILLE
 COLLIN COUNTY, TEXAS



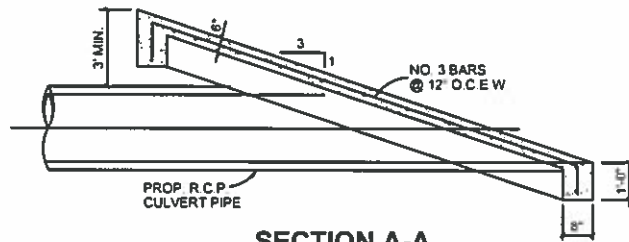
STORM WATER DOUBLE INLET

DESIGNED: E.W.D. DATE: 10-27-18
 DRAWN: M.K.W. / DBI REVISION: N/C

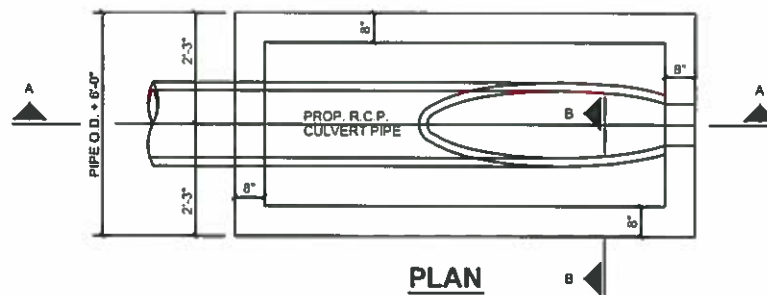
205



SECTION B-B



SECTION A-A



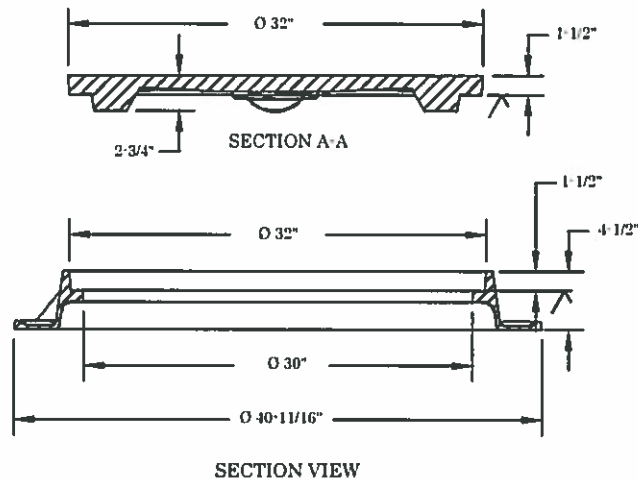
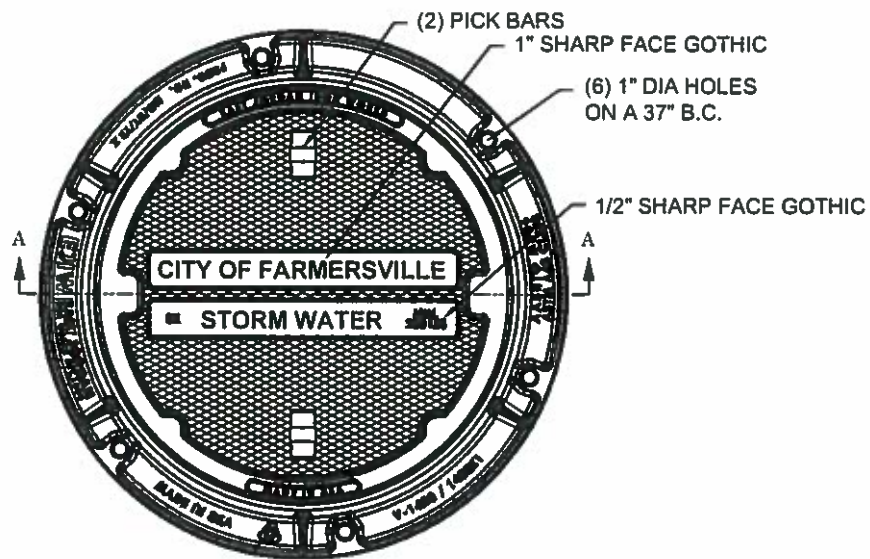
PLAN

SLOPED CONCRETE HEADWALL

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



Farmersville



STANDARD MANHOLE RING AND COVER

WITH PICK SLOTS

BASS AND HAYS FOUNDRY, INC.
MANHOLE: V-14200-1480

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



Farmersville

STORM WATER MANHOLE RING & COVER

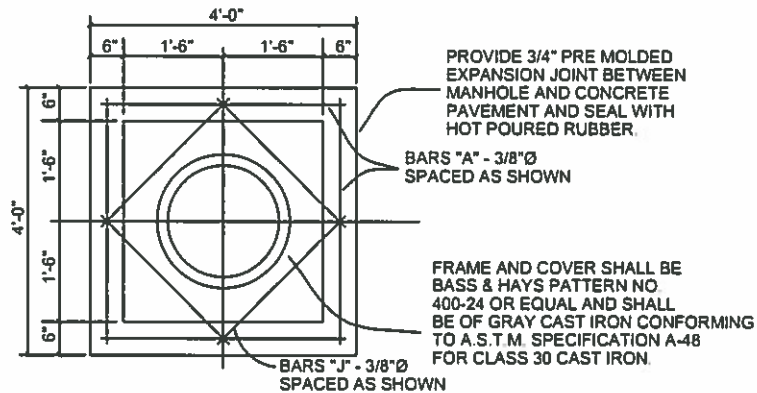
DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-16
REVISION: N/C

207

STORM WATER MANHOLE NOTES:

1. PRECAST MANHOLE RISERS SHALL BE USED UNLESS SPECIAL PERMISSION IS GRANTED BY THE CITY FOR CAST-IN-PLACE RISERS.
2. PRECAST MANHOLE RISERS SHALL BE CLASS III R.C.P. FOR ALL MANHOLES UNDER 25 FT. DEEP AND CLASS IV R.C.P. FOR MANHOLES OVER 25 FT. DEEP.
3. MANHOLE BASE MAY BE PRECAST FOR PIPES LESS THAN 30" AND MAY BE PRECAST FOR PIPES 30" AND LARGER WITH PERMISSION GRANTED BY THE CITY.



TOP PLAN
TYPE A & TYPE B
STORM WATER MANHOLE

STANDARD CONSTRUCTION DETAILS
 FOR
 CITY OF FARMERSVILLE
 COLLIN COUNTY, TEXAS



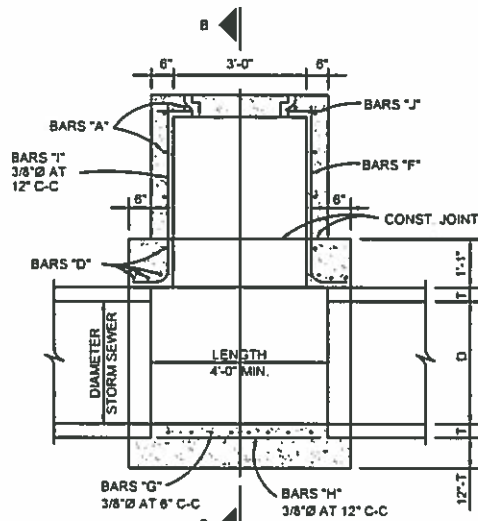
Farmersville

STORM WATER MANHOLE

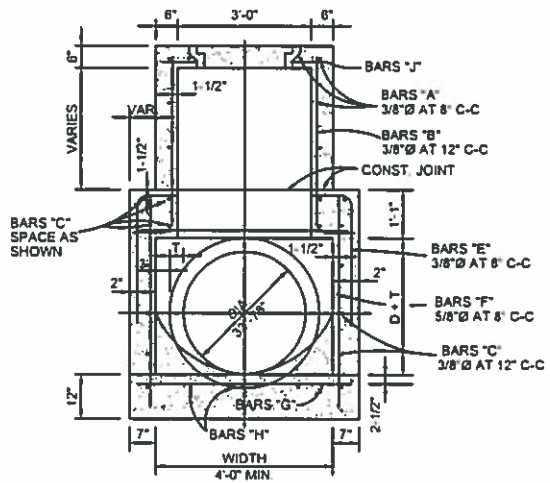
DESIGNED: E.W.D.
 DRAWN: M.K.W. / DBI

DATE: 10-27-16
 REVISION: N/C

208



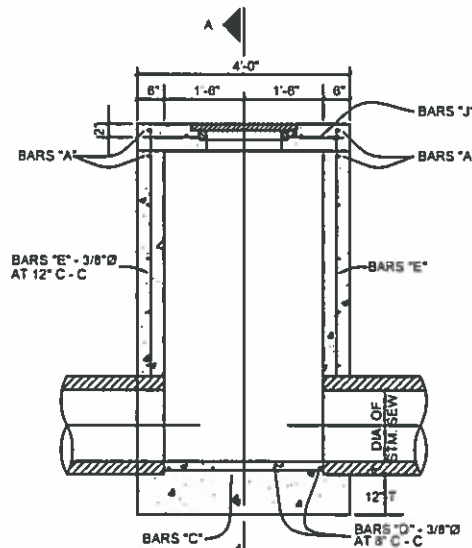
ELEVATION



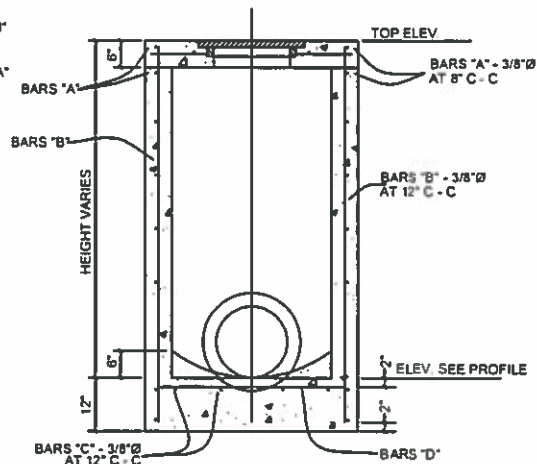
SECTION B-B

TYPE B STORM WATER MANHOLE

MAX. PIPE SIZE 78"



ELEVATION



SECTION A-A

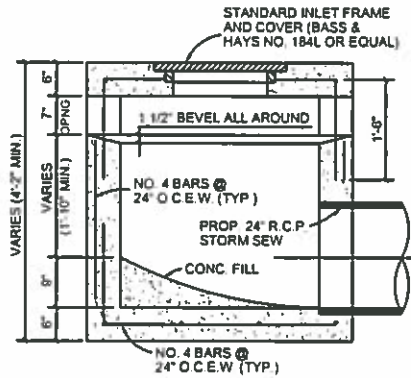
STORM WATER TYPE A MANHOLE

MAX. PIPE SIZE 30"

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS

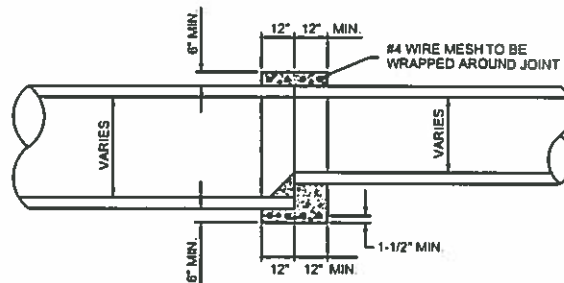


Farmersville



SECTION A-A

STANDARD DROP INLET

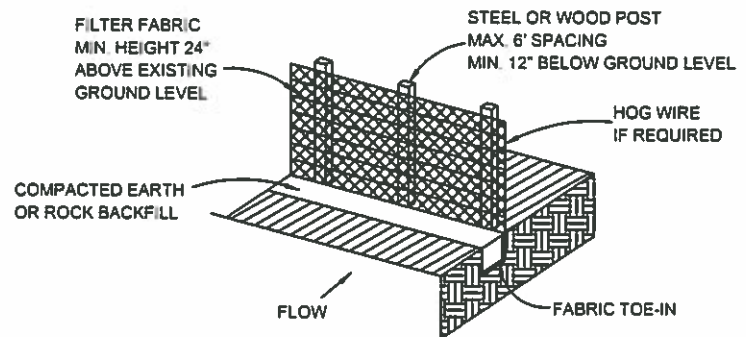


**DETAIL OF CONCRETE COLLAR
FOR R.C.P. OR R.C.A.P. CONNECTIONS**

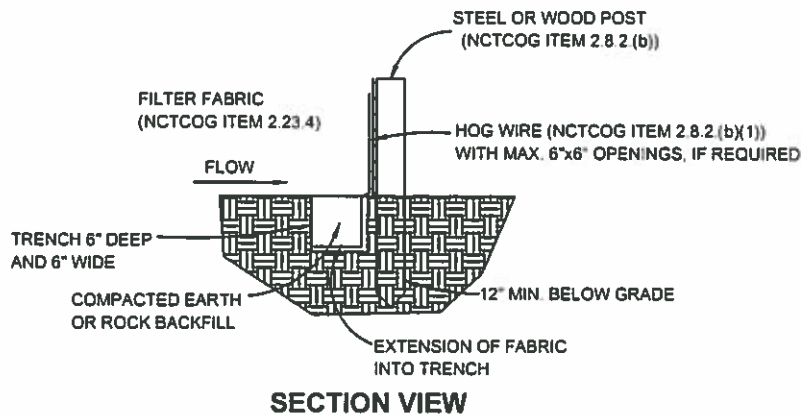
INSIDE JOINT SHALL BE CONCRETE MORTAR

NOTES:

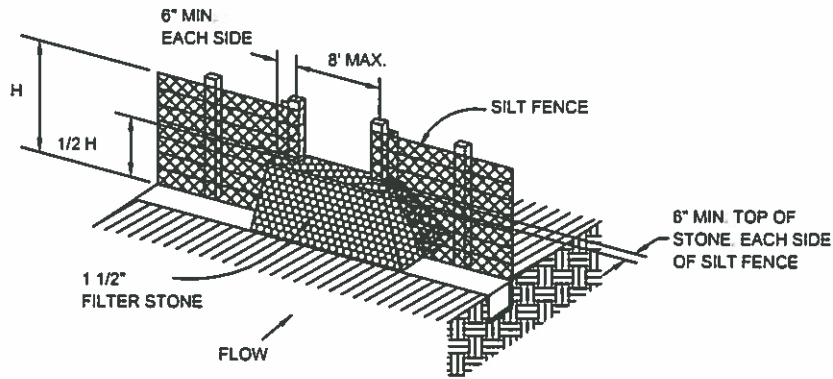
- 1) THE CONTRACTOR SHALL INSPECT SILT FENCE WEEKLY AND AFTER MAJOR RAIN EVENTS TO ENSURE THAT THE DEVICE IS FUNCTIONING PROPERLY AND MAINTAIN IN ACCORDANCE WITH NCTCOG ITEM 3.12
- 2) THE CONTRACTOR SHALL REMOVE SEDIMENT FROM BEHIND FENCE WHEN THE DEPTH OF SEDIMENT HAS BUILT UP TO ONE-THIRD THE HEIGHT OF THE FENCE ABOVE GRADE.
- 3) THE CONTRACTOR SHALL INSPECT THE BASE OF THE FENCE TO ENSURE THAT NO GAPS HAVE DEVELOPED AND RE-TRENCH AS NECESSARY.
- 4) THE CONTRACTOR SHALL INSPECT FENCE POSTS TO ENSURE THAT THEY ARE PROPERLY SUPPORTING THE FENCE. IF NECESSARY, THE CONTRACTOR SHALL RESET AND ADD POSTS
- 5) IF FILTER FABRIC IS RIPPED, DAMAGED OR DETERIORATED, THE CONTRACTOR SHALL REPLACE IT IN ACCORDANCE WITH THE ORIGINAL SPECIFICATIONS AND DETAILS. (MAINTENANCE OF THE SILT FENCE SHALL BE AT THE CONTRACTORS OWN EXPENSE)



ISOMETRIC VIEW



SECTION VIEW



STONE OVERFLOW STRUCTURE

LOCATION AS CALLED FOR IN PLANS

EROSION CONTROL

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



Farmersville

STORM WATER EROSION CONTROL

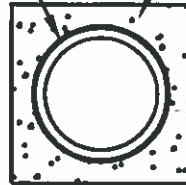
DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-16
REVISION: N/C

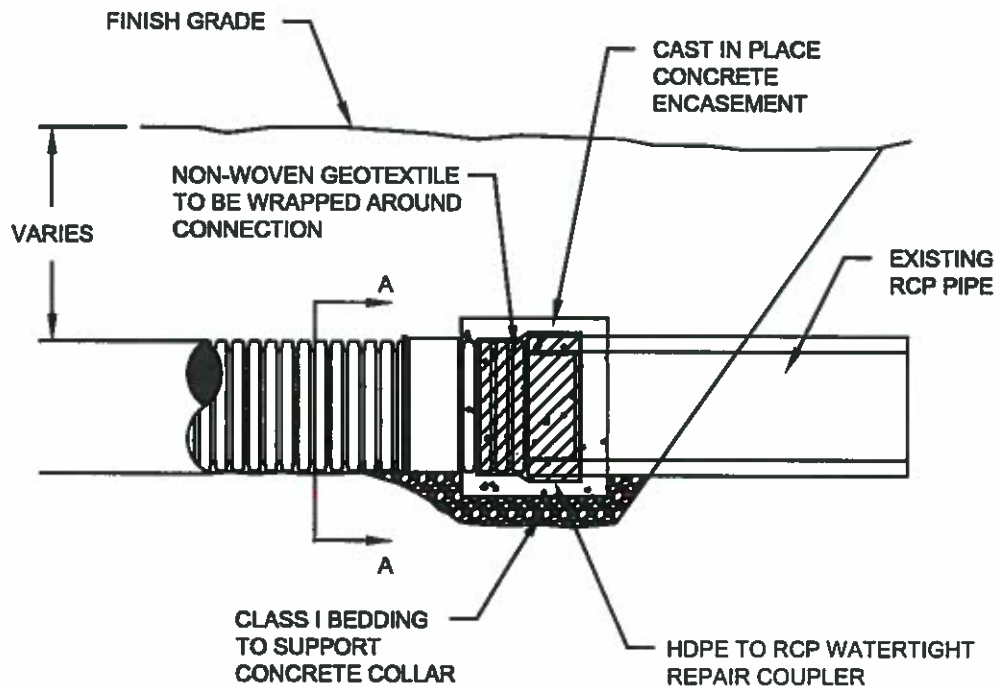
211

NON-WOVEN GEOTEXTILE TO
BE WRAPPED AROUND
CONNECTION

CAST IN PLACE
CONCRETE
ENCASEMENT



SECTION "A-A"



HDPE TO RCP CONNECTION

NOTE:

1. CONNECTION & PIPE TO BE BACKFILLED PER
ASTM D2321.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



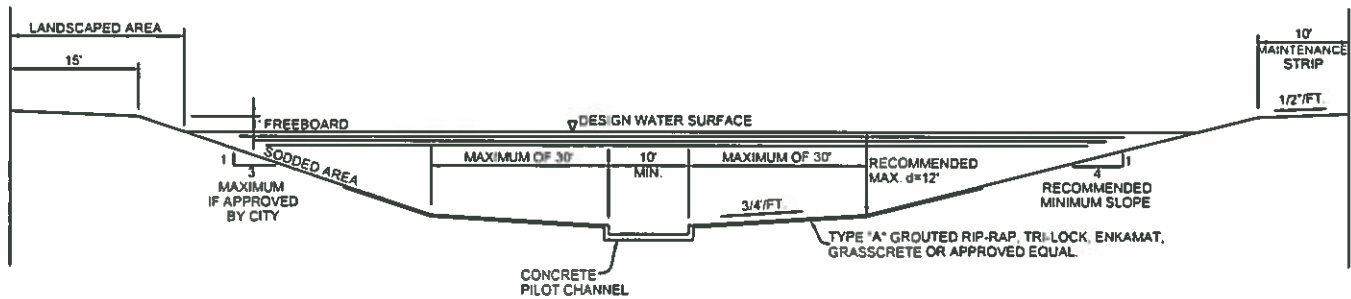
Farmersville

HDPE TO RCP CONNECTION

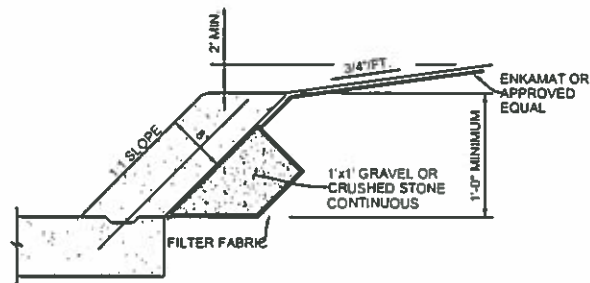
DESIGNED E.W.D.
DRAWN M.K.W. / DBI

DATE 10-27-18
REVISION NC

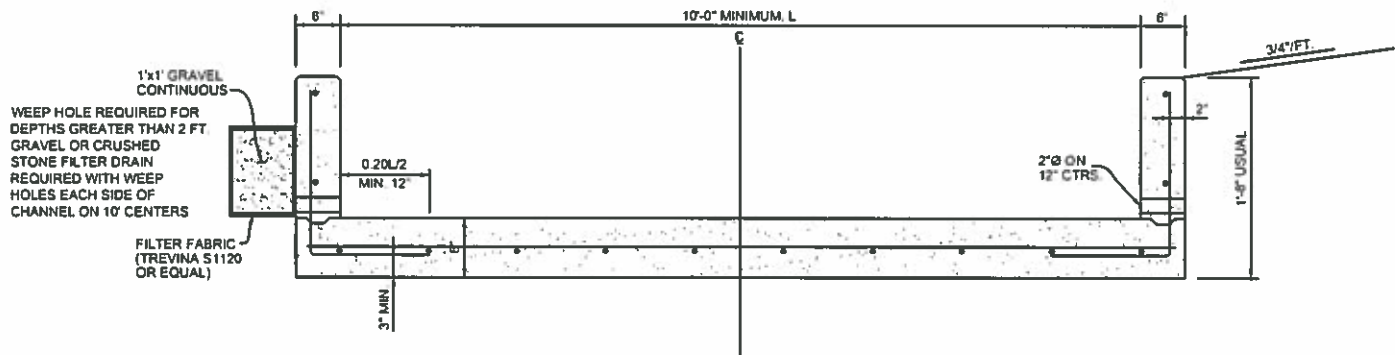
212



TYPICAL CHANNEL WITH REINFORCED CONCRETE LINED PILOT CHANNEL



OPTIONAL (SLOPED WALL)



REINFORCED CONCRETE PILOT CHANNEL (VERTICAL WALL)

GENERAL NOTES FOR LINED CHANNELS

1. CONSTRUCTION JOINT SHOWN FOR CONVENIENCE ONLY. MONOLITHIC CONSTRUCTION MAY BE USED.
2. ALL VISIBLE SURFACES SHALL BE A TROWEL FINISH.
3. ALL REINFORCING STEEL SHALL BE 3/8" DIA. AND SPACED 12" CENTER TO CENTER BOTH WAYS UNLESS OTHERWISE SPECIFIED.
4. IF WOOD FORMS ARE USED WITH CONSTRUCTION JOINT, THEY SHALL BE TWO, 2"x4" AND SHALL NOT BE REMOVED UNTIL CONCRETE ON SLOPES IS READY TO BE PLACED.
5. ALL CONCRETE IN LINED CHANNEL SHALL BE NCTCOG CLASS "A" (MIN. 3000 P.S.I.) CONCRETE.
6. LAT BOTTOM TO BE CONSTRUCTED WHEN CHANNEL WIDTH IS LESS THAN 12 FOOT.
7. 3/4" CHAMFER ON ALL CONCRETE CORNERS.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



Farmersville

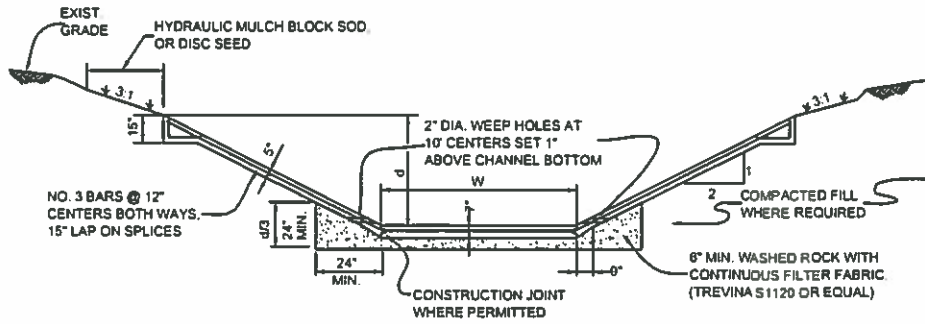
CHANNELS / CONCRETE

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

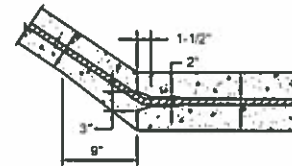
DATE: 10-27-16
REVISION: N/C

301

CH-01

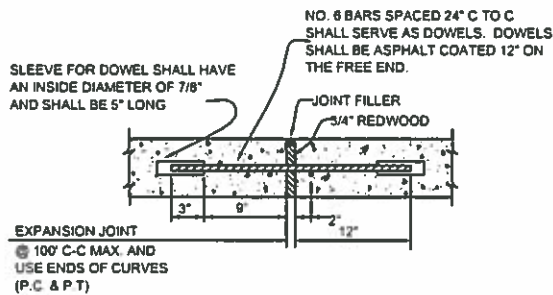


TYPICAL REINFORCED CONCRETE CHANNEL

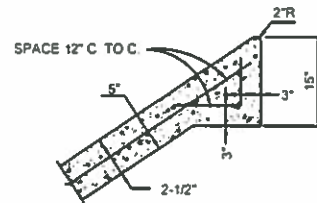


CONSTRUCTION JOINT
OPTIONAL

CONCRETE CHANNEL



TRANSVERSE EXPANSION JOINT



SLAB EDGE - DETAIL "A"

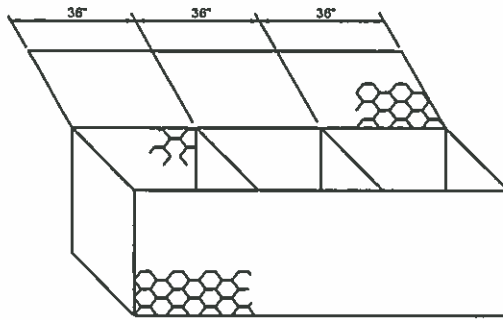
GENERAL NOTES FOR LINED CHANNELS

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STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



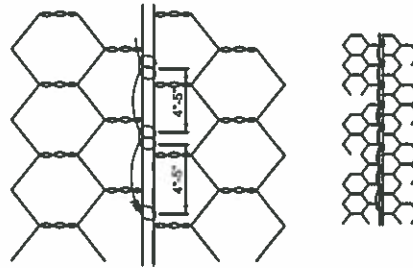
Farmersville



GABION CONTAINER

N.T.S.

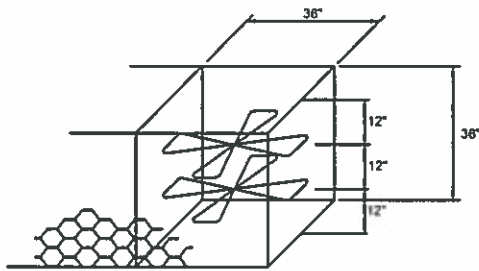
NOTE
GABION MAY BE CUT BUT SHALL BE RETIED
IN A MANNER TO PRODUCE A CLOSED CELL
AND ALL TIES SHALL BE IN CONFORMANCE
WITH DETAILS



GABION TIE

N.T.S.

NOTE
ALL TYING OF GABIONS SHALL BE AS SHOWN

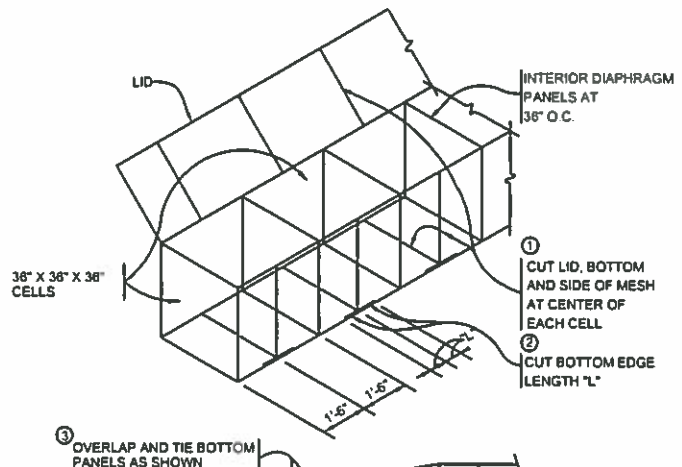


INNER TIE WIRE

N.T.S.

TOPSOIL PLACEMENT PROCEDURE

1. PRIOR TO CLOSING BASKET, PLACE A LAYER OF 3/4" GRAVEL ON TOP OF THE GABION WALL AND THE HORIZONTAL STEPS FILLING THE VOIDS BETWEEN THE GABION ROCKS. SWEEP EXCESSIVE GRAVEL OFF THE GABIONS WITH A BROOM UNTIL FLUSH WITH OR BELOW THE TOP OF THE GABION.
2. PLACE A LAYER OF SOIL ON TOP OF THE GABION WALL AND STEPS.
3. OF THE GABION WALL AND STEPS.
4. WASH OR "JET" THE SOIL INTO THE GABIONS. PLACE FINAL LAYER OF TOPSOIL.
5. ON THE GABIONS TO A DEPTH OF SIX INCHES.



NOTE-ALL RETYING
OF THE CUT
GABION SHALL
BE BY TYING WITH
A DOUBLE LOOP.
MADE AT THE SAME
POINT AT A 4 INCH
SPACING

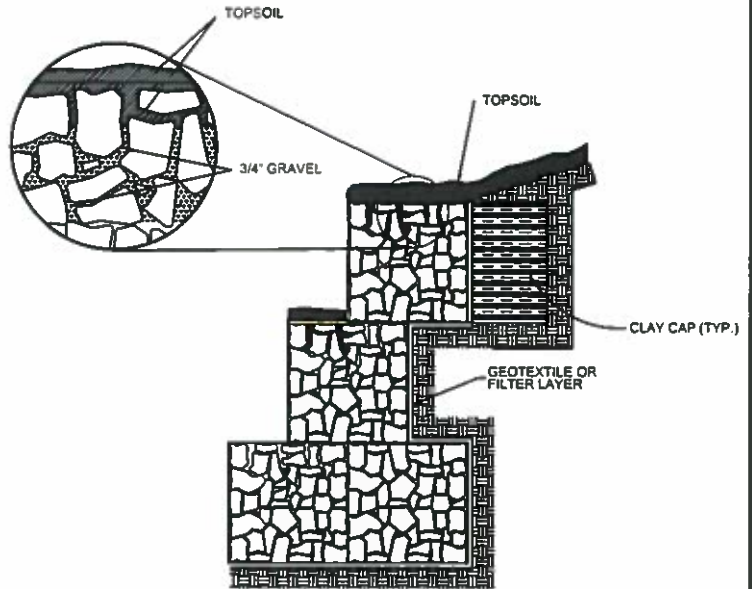
GABION RADIUS PROCEDURE

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



Farmersville

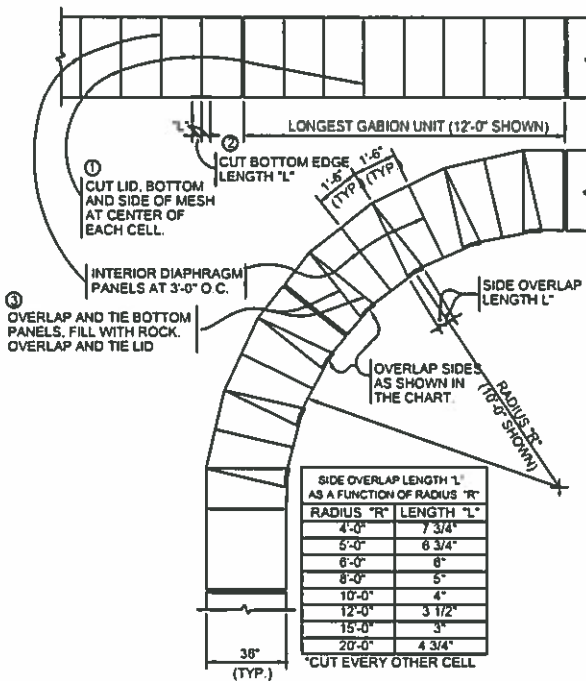
- 1 TOPSOIL PLACEMENT
PROCEDURE PRIOR TO CLOSING
BASKET PLACE A LAYER OF 3/4"
GRAVEL ON TOP OF THE GABION
WALL AND THE HORIZONTAL STEPS
FILLING THE VOIDS BETWEEN THE
GABION ROCKS. SWEEP EXCESSIVE
GRAVEL OFF THE
- 2 GABIONS WITH A BROOM UNTIL
FLUSH WITH OR BELOW THE TOP
OF THE GABION. PLACE A LAYER OF
SOIL ON TOP
- 3 OF THE GABION WALL AND STEPS.
- 4 WASH OR "JET" THE SOIL INTO THE
GABIONS. PLACE FINAL LAYER OF
TOPSOIL
- 5 ON THE GABIONS TO A DEPTH OF SIX
INCHES



SECTION

NOTE:
DO NOT USE SHARP TOOLS WHEN SPREADING TOPSOIL ON GABIONS

VEGETATED GABION WALL TOPSOIL PLACEMENT

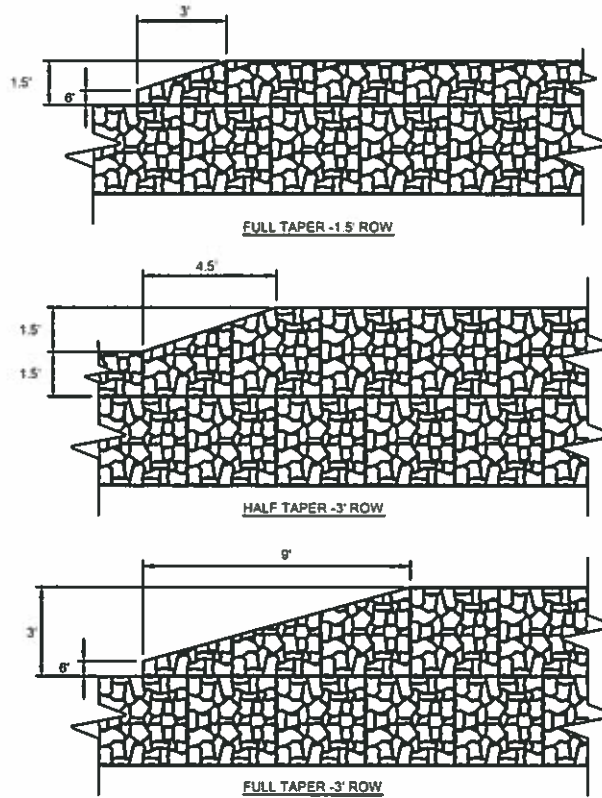


GABION RADIUS PROCEDURE

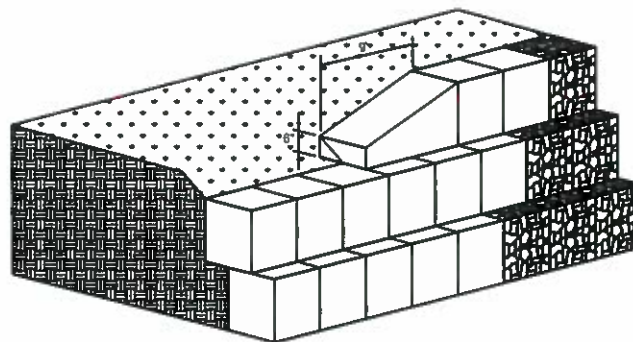
STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



Farmersville



TAPERED WALL HEIGHT TRANSITION



**STANDARD TAPER
FOR WALL HEIGHTS TRANSITIONS**

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



FIRE HYDRANT NOTES:

1. ALL FIRE HYDRANTS SHALL CONFORM TO AWWA STANDARDS SPECIFICATIONS FOR FIRE HYDRANTS FOR ORDINARY WATER WORKS SERVICE.

FIRE HYDRANTS SHALL HAVE A 5-1/4" MINIMUM VALVE OPENING AND A BARREL APPROXIMATELY 7" INSIDE DIAMETER.

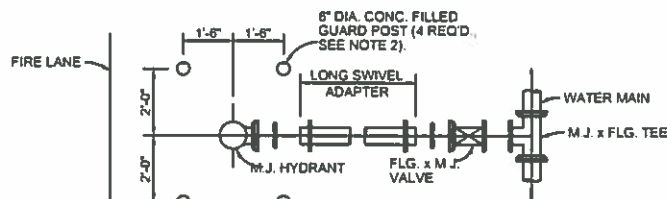
ALL HYDRANTS SHALL BE EQUIPPED WITH A BREAKAWAY FLANGE, NOZZLE SECTION, UPPER AND LOWER STAND PIPES AND HYDRANT BASE SHALL BE DUCTILE IRON. THE UPPER BARREL ABOVE GROUND SHALL BE IN TWO SECTIONS TO ALLOW FOR EASY DISASSEMBLY. ALL HYDRANTS SHALL BE APPROVED BY THE CITY.

2. GUARD POSTS MAY BE REQUIRED AS DETERMINED BY THE CITY OF FARMERSVILLE FIRE DEPARTMENT. GUARD POSTS SHALL BE 6 L.F. OF 6" DIA. STEEL PIPE (3' ABOVE & BELOW GROUND LEVEL). POST SHALL BE ENCASED IN 18" DIA. CONC. PIER TO A DEPTH OF 12" BELOW POST BOTTOM. REINF. CONC. PIER WITH 2 NO. 8 BARS (12" LONG) THRU POST INTO PIER. POST ABOVE GROUND LEVEL SHALL BE PAINTED ALUMINUM WITH 2-2 INCH BANDS OF RED AND WHITE REFLECTIVE TAPE.

3. FIRE HYDRANTS SHALL BE CLASSIFIED IN ACCORDANCE WITH THE TABLE BELOW. FIRE HYDRANT BARRELS SHALL BE PAINTED SILVER. FIRE HYDRANT BONNETS AND CAPS SHALL BE PAINTED AND COLOR CODED IN ACCORDANCE WITH THE TABLE BELOW. PAINT TYPE AND MANUFACTURER SHALL BE APPROVED BY CITY BEFORE INSTALLATION.

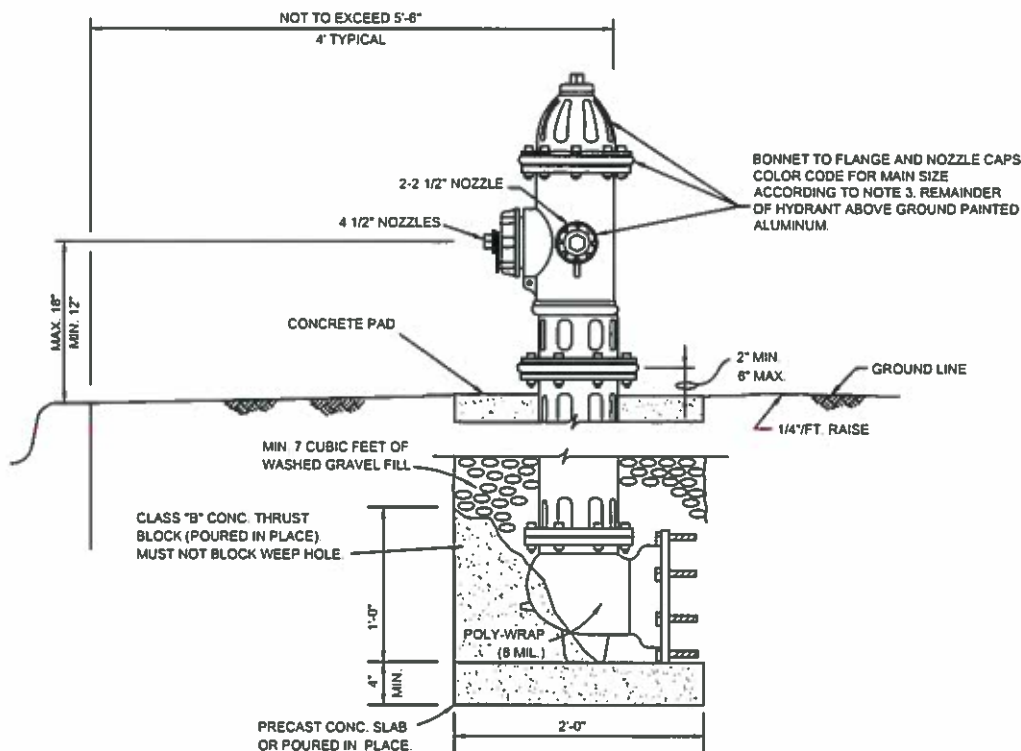
Fire Hydrant Class & Color Scheme		
Class	Flow at 20 PSIG	Color of Bonnet & Caps
AA	FLOW > = 1,500 gpm	BLUE
A	1,000 gpm < = FLOW < 1,500 gpm	GREEN
B	500 gpm < = FLOW < 1,000 gpm	ORANGE
C	250 gpm < = FLOW < 500 gpm	RED
NOP	FLOW < 250 gpm (non-operational)	BLACK

4. ALL HYDRANTS SHALL BE INSTALLED WITH A 24" X 24" SQUARE REINFORCED CONCRETE PAD.
5. IF A TEMPORARY CONDITION EXISTS FOR 30 DAYS OR LESS, WHERE A FIRE HYDRANT CANNOT DELIVER AT LEAST 250 gpm AT 20 psig, THEN A BLACK BAG MAY BE PLACED OVER THE FIRE HYDRANT TO IDENTIFY IT AS NON-OPERATIONAL IN LIEU OF PAINTING.
6. INDIVIDUAL FIRE HYDRANT CAPABILITIES MAY BE DETERMINED BY ENGINEERING HYDRAULIC ANALYSIS OR TESTS.
7. FIRE HYDRANTS SHALL BE MUELLER.
8. SPECIFIC FIRE HYDRANT PLACEMENT SHALL BE APPROVED BY THE CITY.
9. PAINT SHALL BE ALUMINUM TNEPEC OMNITHANE SERIES 530, SAFETY RED 06SF, TNEPEC HI-BUILD GLOSS SERIES, SAFETY BLUE 11SF, SAFETY GREEN 09SF, SAFETY ORANGE 04SF, BLACK 356R.
10. STREET REFLECTOR SHALL BE INCLUDED FOR ALL FIRE HYDRANT INSTALLATIONS. COLOR SHALL BE REFLECTIVE BLUE.
11. REFLECTOR SHALL BE INSTALLED WITH BUTYL PAD, TWO PART EPOXY INSTALLATION OR BITUMINOUS ADHESIVE. MANUFACTURER SHALL BE APPROVED BY CITY OF FARMERSVILLE BEFORE INSTALLATION.



STANDARD FIRE HYDRANT ASSEMBLY INSTALLATION

NOTE: APPROVAL REQUIRED FOR ALTERNATE INSTALLATIONS



STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



FIRE HYDRANT

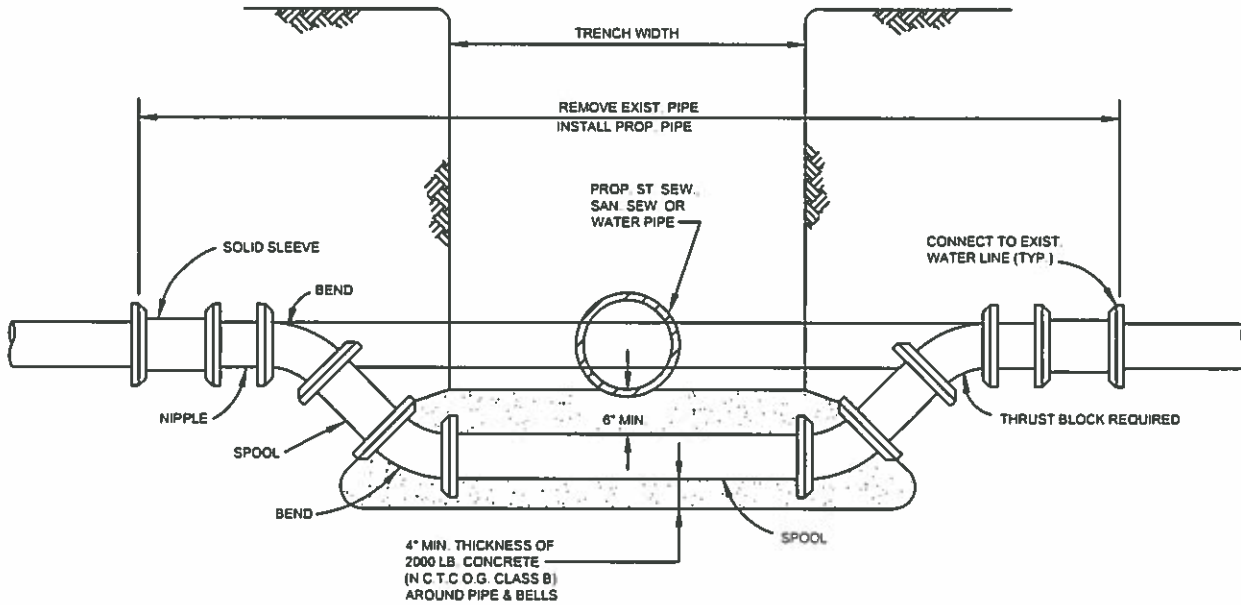
DESIGNED: E.W.D.
DRAWN: M.K.W / DBI

DATE: 10-27-18
REVISION: NC

401

NOTES:

1. PROPOSED WATER PIPE SHALL BE DUCTILE IRON UNLESS OTHERWISE SPECIFIED IN PLANS. ALL FITTINGS SHALL BE DUCTILE IRON (M.J.P.E.) MEGALUG.
2. PROPOSED PIPING & FITTINGS ARE SYMMETRIC ABOUT CENTER OF PROP. SAN. SEW. OR ST. SEW. PIPE AND SHALL RETAIN TEST PRESSURES.
3. ALL THRUST BLOCKING SHALL BE SUBSIDIARY TO UNIT PRICE.
4. CROSSING OF SANITARY SEWER SHALL BE IN ACCORDANCE WITH T.N.R.C.C. REQUIREMENTS.



WATER MAIN LOWERING

TRENCH WIDTH

NOTE:
 W=MINIMUM 16" GREATER THAN PIPE O.D.
 MAXIMUM 36" GREATER THAN PIPE O.C.

STANDARD CONSTRUCTION DETAILS
 FOR
 CITY OF FARMERSVILLE
 COLLIN COUNTY, TEXAS



Farmersville

WATER MAIN LOWERING

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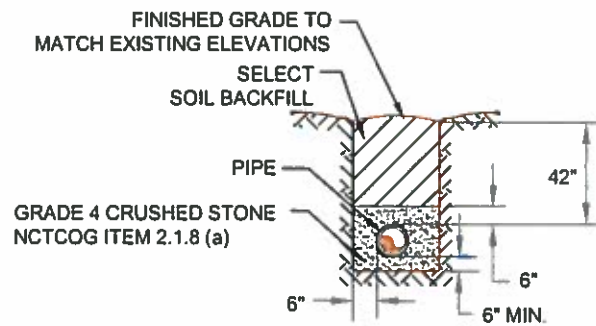
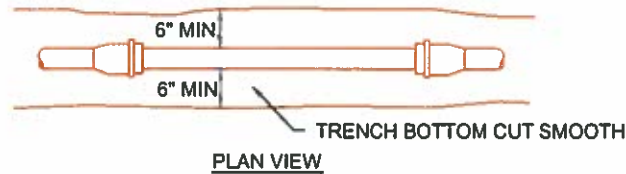
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 REVISION: N/C

402

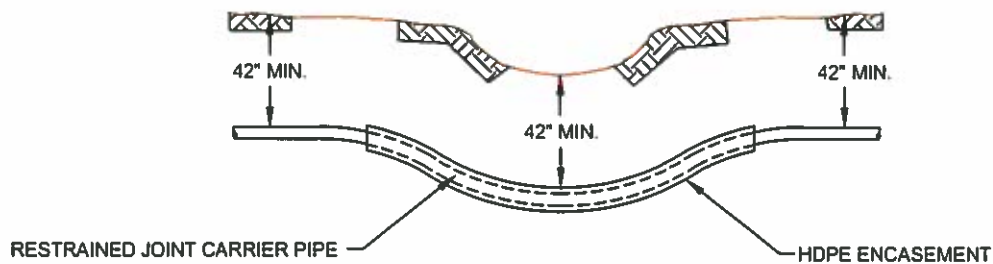
W-02

NOTES:

1. SELECT BACKFILL SHALL BE SOIL MATERIAL.
ROCK IN SELECT BACKFILL SHALL BE LIMITED TO
2" MAX. DIMENSION.
2. BELOW DETAILS SHALL APPLY TO ALL PVC WATER
PIPE 12" IN DIAMETER AND SMALLER.



LAYING DETAILS FOR PVC WATER PIPE

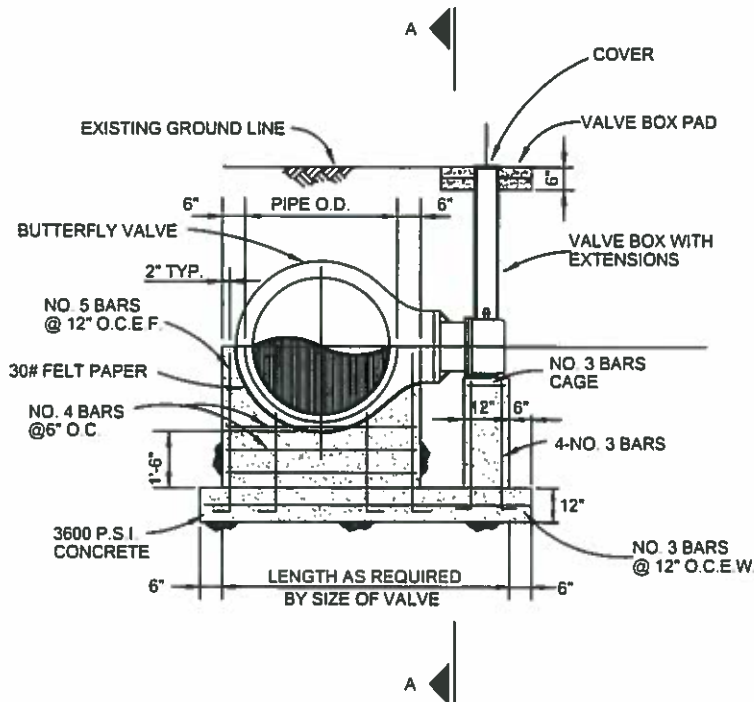


WATERLINE CREEK CROSSING

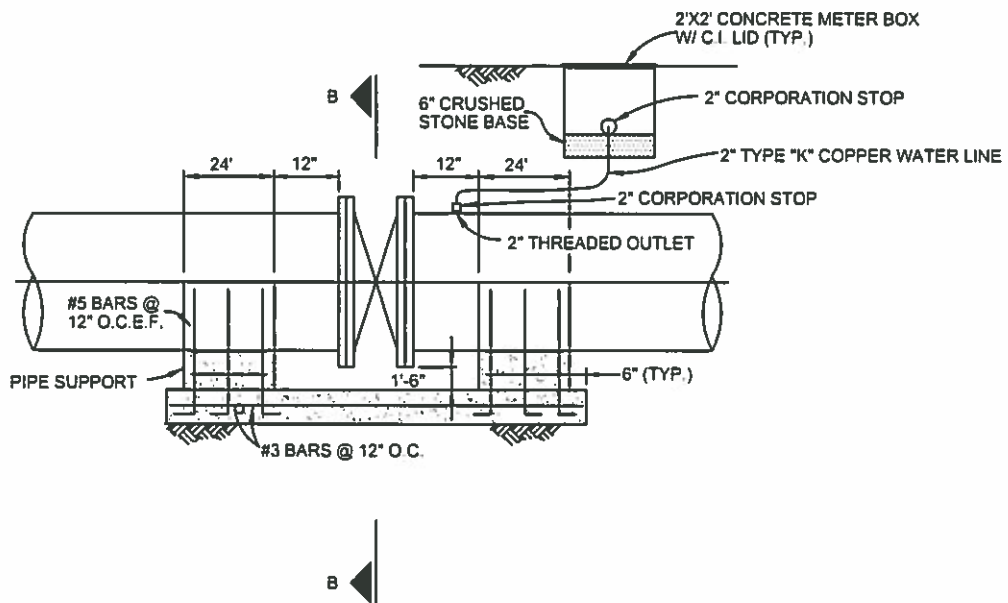
NOTE: MANUFACTURERS MINIMUM PIPE DEFLECTION
DISTANCE RECOMMENDATIONS SHALL BE FOLLOWED.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS





SECTION B-B



SECTION A-A

BUTTERFLY VALVE INSTALLATION

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS

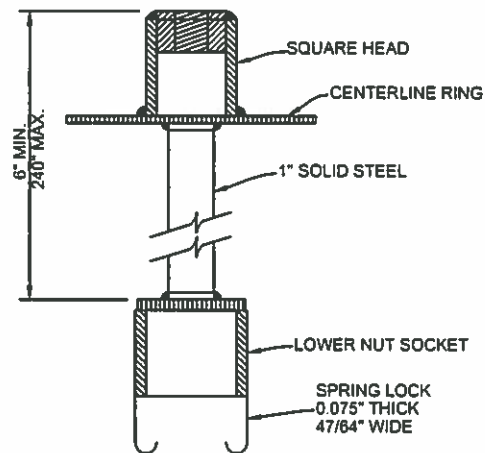


BUTTERFLY VALVE INSTALLATION

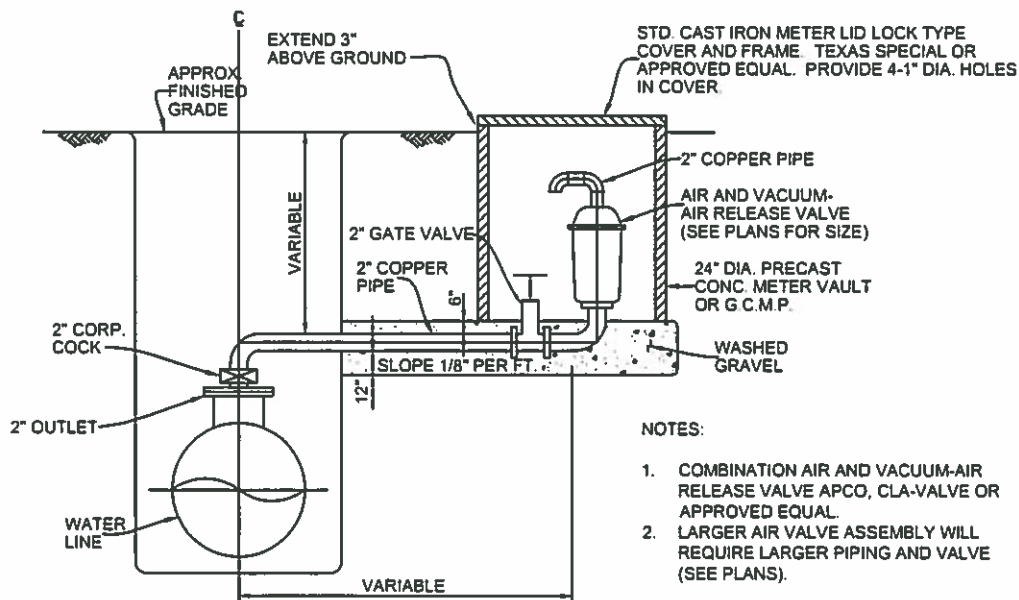
DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-16
REVISION: N/C

404



SPRING LOCK VALVE EXTENSION



AIR AND VACUUM - AIR RELEASE VALVE INSTALLATION

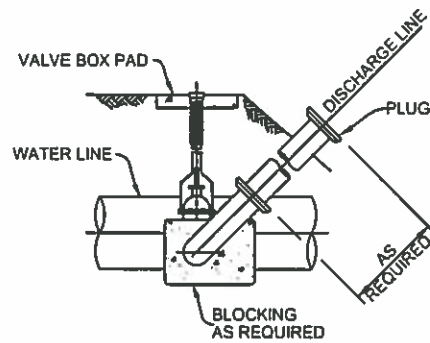
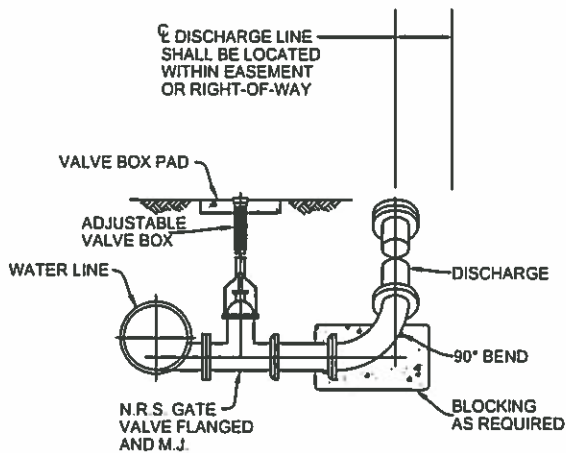
STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



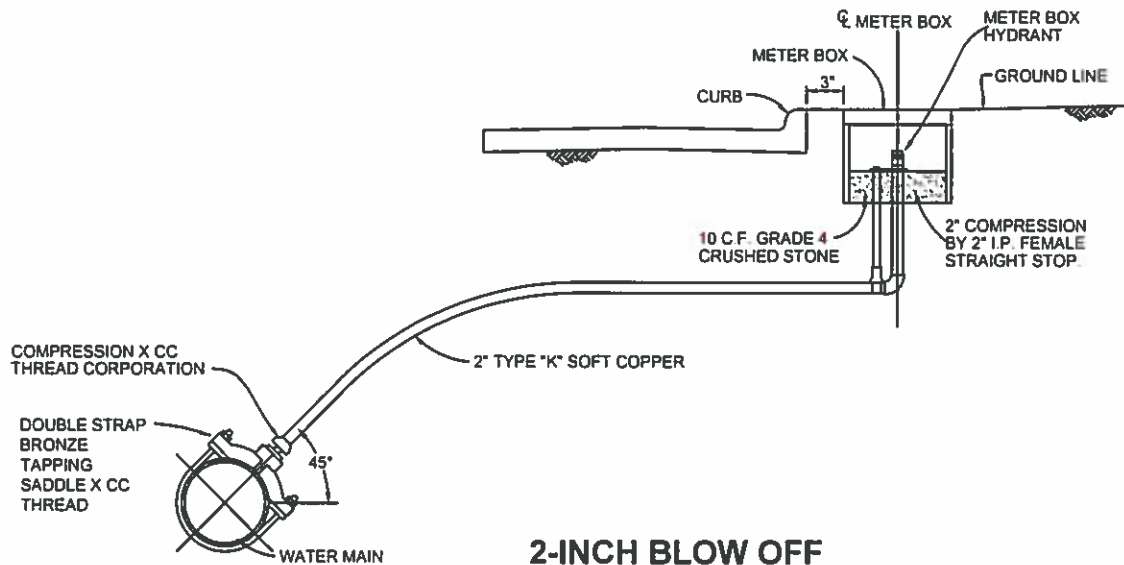
AIR RELEASE VALVE

DESIGNED: E.W.D. DATE: 10-27-18
DRAWN: M.K.W. / DBI REVISION: N/C

405



BLOW OFF VALVE



2-INCH BLOW OFF

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



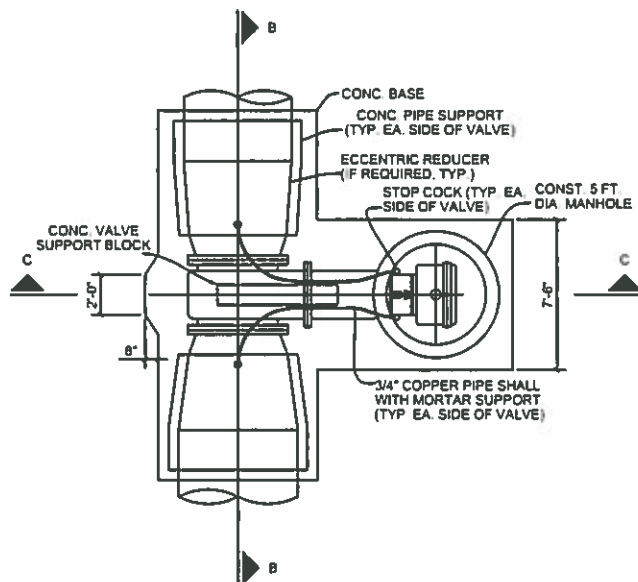
Farmersville

BLOW OFF VALVE

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

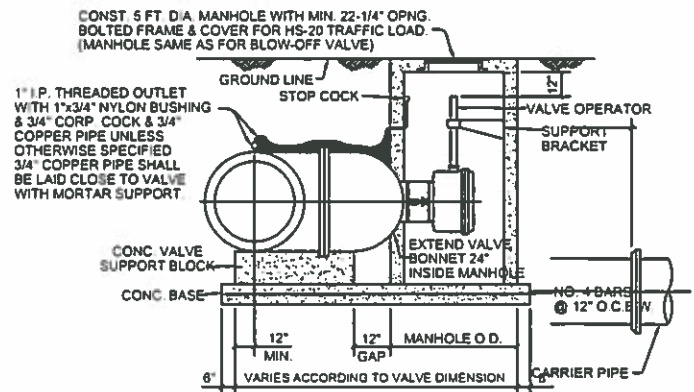
DATE: 10-27-18
REVISION: N/C

406



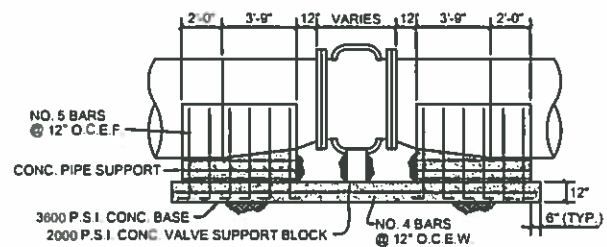
HORIZONTAL VALVE PLAN

NO SCALE



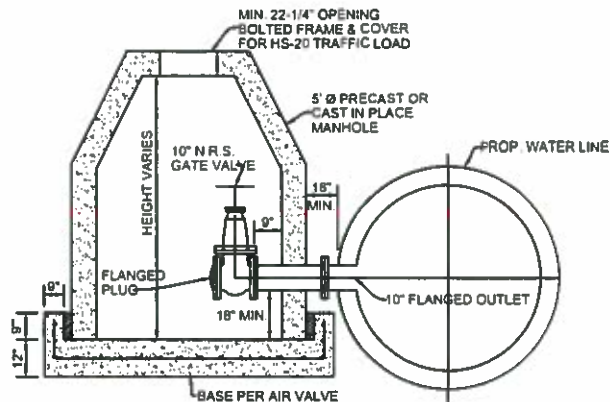
HORIZONTAL VALVE SECTION C-C

NO SCALE



HORIZONTAL VALVE SECTION B-B

NO SCALE



BLOW OFF VALVE W/ MANHOLE

NO SCALE

GENERAL NOTES FOR BORING, JACKING OR TUNNELING

1. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY LOCATING ALL EXISTING UTILITIES PRIOR TO BEGINNING ANY INSTALLATION ACTIVITIES
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH REPAIR OR REPLACEMENT OF ANY PAVEMENT AND UNDERGROUND UTILITIES DAMAGED AS A RESULT OF CONSTRUCTION OPERATIONS
3. DRY BORE SHALL BE UTILIZED UNLESS OTHER METHODS SPECIFICALLY ARE APPROVED IN WRITING BY THE CITY.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



Farmersville

BLOW OFF VALVE WITH MANHOLE

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

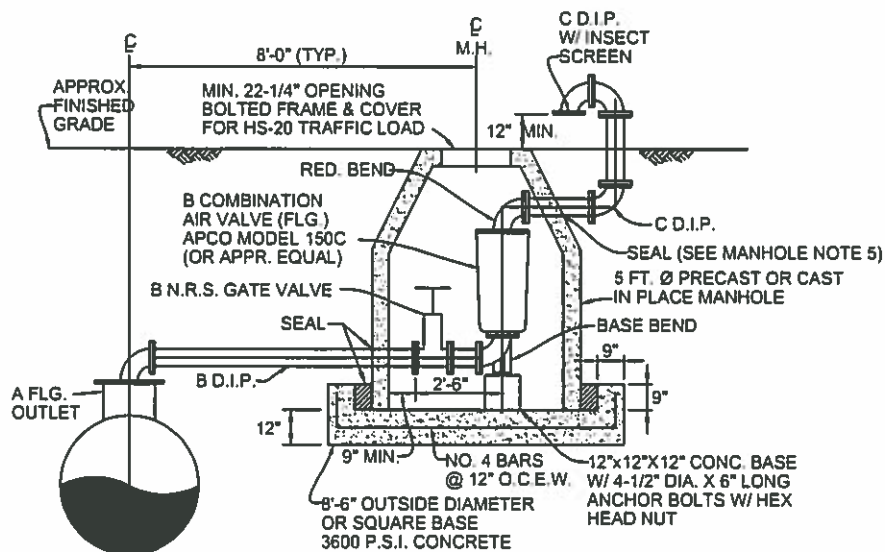
DATE: 10-27-18
REVISION: N/C

407

W-07

NOTE: FOR DIMENSIONS A, B & C SEE TABLE BELOW

MAIN DIA.	A	B	C
24	9	4	4
30	12	4	4
36	12	6	4
42	15	6	6
48	18	6	6
54	18	8	6



AIR RELEASE VALVE W/MANHOLE

NO SCALE

GENERAL NOTES FOR BORING, JACKING OR TUNNELING

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STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



Farmersville

AIR RELEASE VALVE W/ MANHOLE

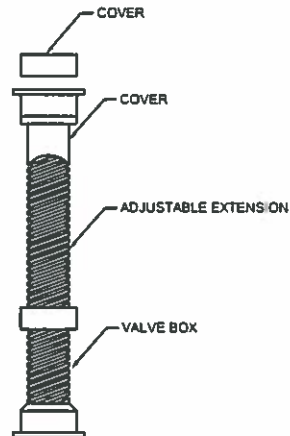
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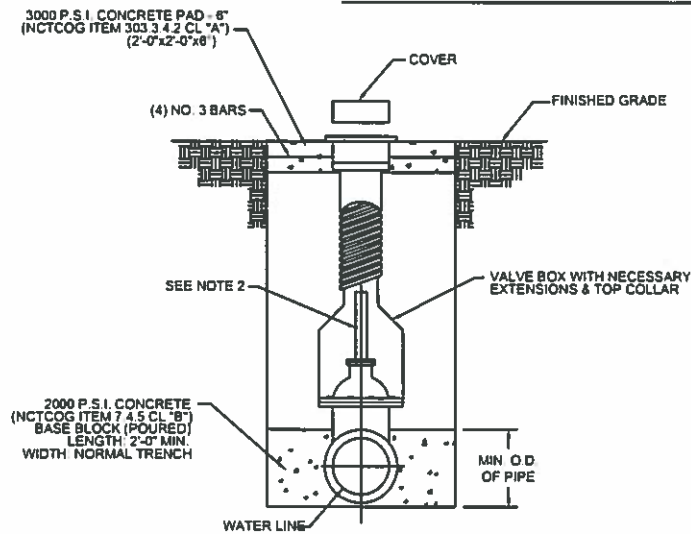
408

NOTES:

1. 4" TO 12" GATE VALVE SHALL BE RESILIENT SEATED WEDGE IN ACCORDANCE WITH AWWA STANDARD C-509.
2. A PERMANENTLY ATTACHED VALVE EXTENSION STEM SHALL BE REQUIRED FOR ANY VALVE WHOSE OPERATING NUT IS LOCATED IN EXCESS OF 4 FT BELOW THE TOP OF VALVE BOX. THIS EXTENSION SHALL BE OF SUFFICIENT LENGTH TO INSURE THAT ITS TOP IS WITHIN 4" OF THE VALVE BOX COVER.
3. PAINT VALVE STACK COVERS IN ACCORDANCE WITH THE FOLLOWING:
STANDARD WATERLINE - BLUE
FIRE HYDRANT - RED
FLUSH VALVE - BLACK
DEAD END - WHITE



VALVE BOX W/ EXTENSION



GATE VALVE INSTALLATION

NOT TO SCALE

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS

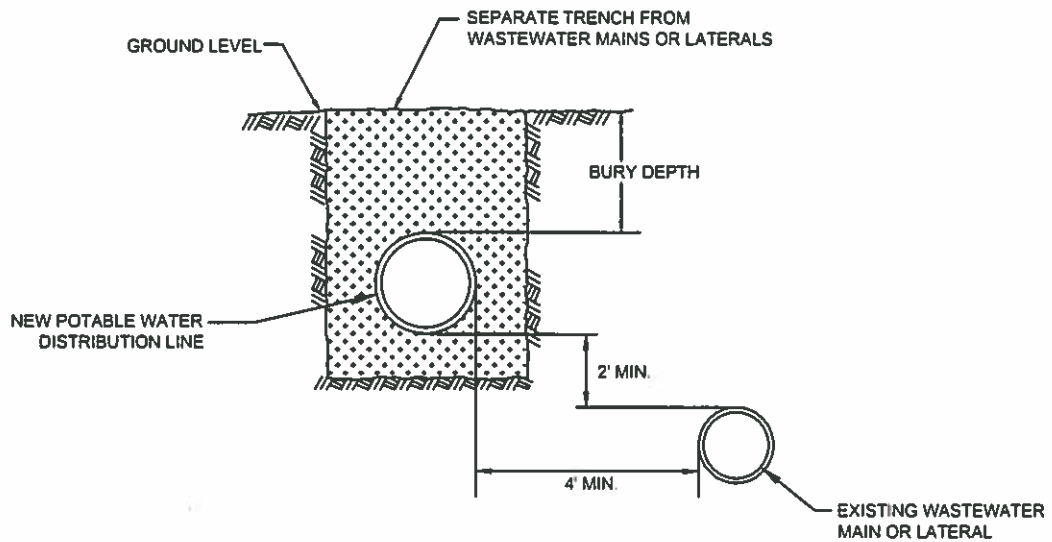


GATE VALVE INSTALLATION

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-16
REVISION: N/C

409



WATER LINE INSTALLATION - PARALLEL LINES

9' SEPARATION DISTANCE CANNOT BE ACHIEVED.
EXISTING LEAKING/NON-LEAKING WASTEWATER MAIN OR LATERAL

NOTES:

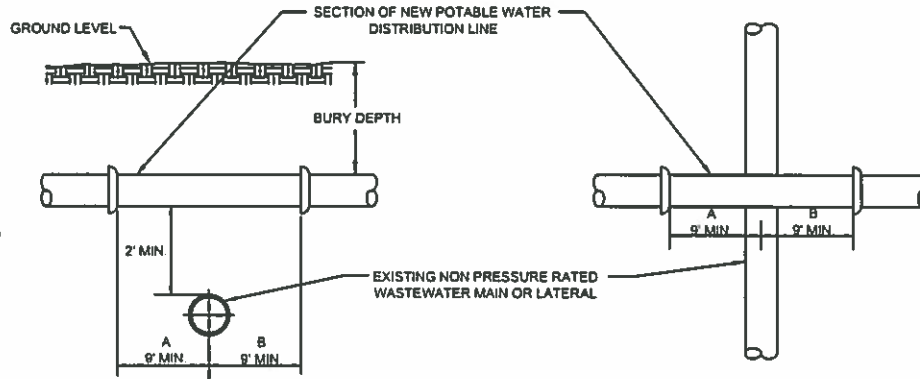
1. ENGINEER TO DETERMINE IF EXISTING WASTEWATER MAIN OR LATERAL IS LEAKING.
2. EXISTING LEAKING WASTEWATER MAIN OR LATERAL SHALL BE REPLACED WITH 150 psi PRESSURE RATED PIPE, FOR AT LEAST 9' IN BOTH DIRECTIONS.
3. MAKE EVERY EFFORT NOT TO DISTURB THE BEDDING AND BACKFILL OF THE EXISTING WASTEWATER MAIN OR LATERAL.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



NOTES:

1. A AND B ARE EQUIDISTANT
2. IF EXISTING WASTEWATER MAIN OR LATERAL SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED AT LEAST 9' IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150psi PRESSURE RATED PIPE.

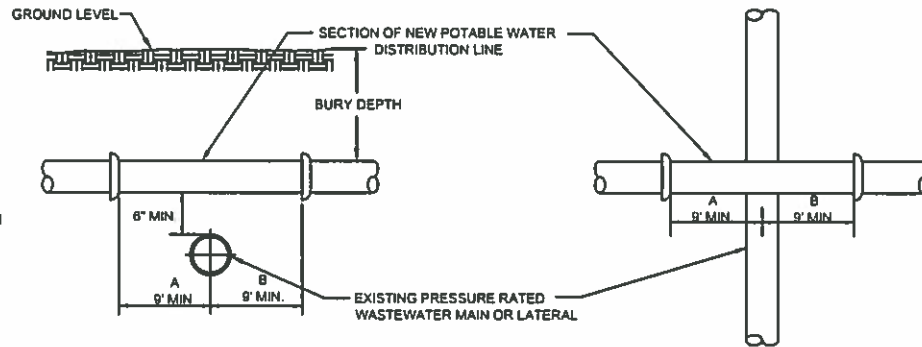


WATER LINE INSTALLATION - CROSSING LINES

9' SEPARATION DISTANCE CANNOT BE ACHIEVED.
EXISTING NON-PRESSURE RATED MAIN OR LATERAL.

NOTES:

1. A AND B ARE EQUIDISTANT
2. IF EXISTING WASTEWATER MAIN OR LATERAL SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED AT LEAST 9' IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150psi PRESSURE RATED PIPE.



SIDE VIEW

TOP VIEW

WATER LINE INSTALLATION - CROSSING LINES

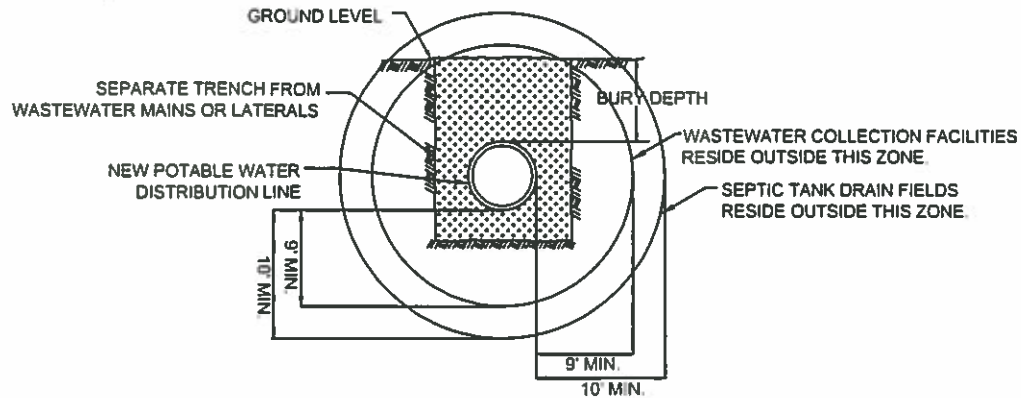
9' SEPARATION DISTANCE CANNOT BE ACHIEVED.
EXISTING PRESSURE RATED MAIN OR LATERAL.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



NOTES:

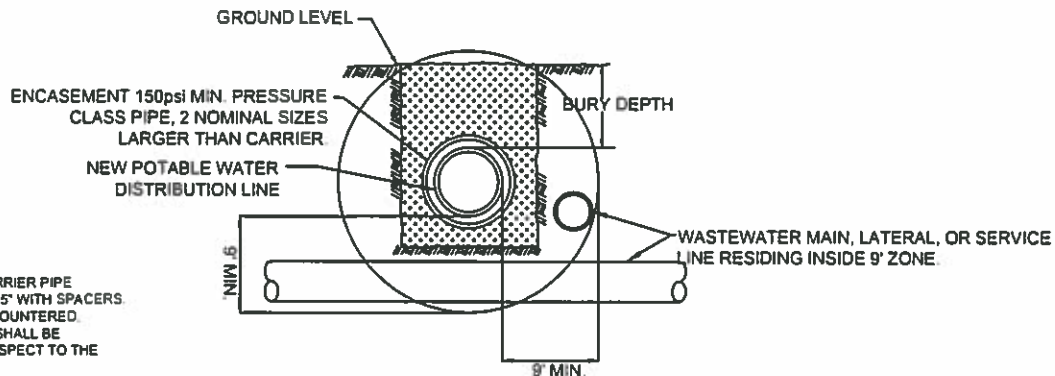
1. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN 9' VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER MAIN, LATERAL, OR SERVICE LINE.
2. SUCTION MAINS SHALL NOT CROSS WASTEWATER MAINS, LATERALS, OR SERVICE LINES.
3. RAW WATER SUPPLY LINES SHALL NOT BE INSTALLED WITHIN 5' OF ANY TILE OR CONCRETE WASTEWATER MAINS, LATERALS, OR SERVICE LINES.



END VIEW
NOT TO SCALE

TYPICAL WATER LINE INSTALLATION

9' SEPARATION DISTANCE CAN BE ACHIEVED



END VIEW
NOT TO SCALE

TYPICAL WATER LINE INSTALLATION PARALLEL OR CROSSING

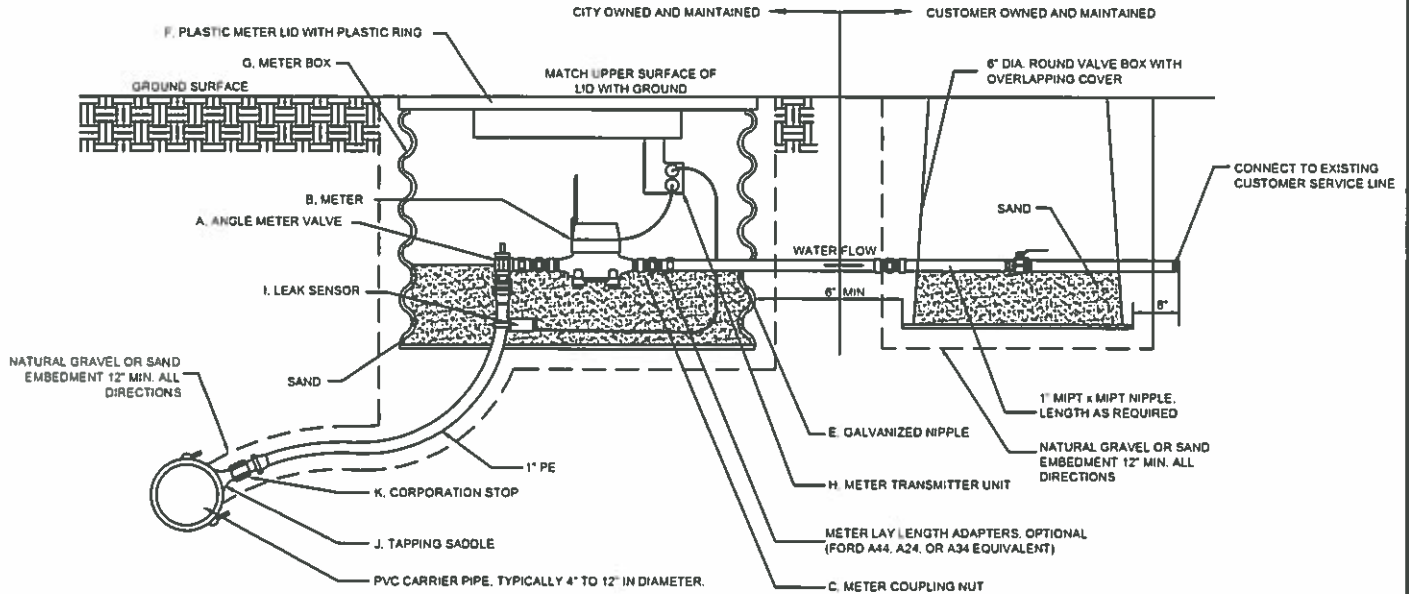
ALTERNATE INSTALLATION
9' SEPARATION DISTANCE CAN BE ACHIEVED

NOTES:

1. SPACE AROUND CARRIER PIPE SUPPORTED EVERY 5' WITH SPACERS IF CROSSING IS ENCOUNTERED.
2. ENCASEMENT PIPE SHALL BE CENTERED WITH RESPECT TO THE CROSSING.
3. ENCASEMENT EXTENDS FOR 9' MINIMUM BEYOND THE POINTS WHERE THE 9' KEEP-OUT ZONE IS ENCOUNTERED.
4. ENCASEMENT SHALL BE SEALED AT THE ENDS WITH CEMENT GROUT OR MANUFACTURED SEALANT.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS





Item	Description	Water Line Size/Meter Size/Part Manufacturer/Part Number			
		Inlet 1" PE Meter 5/8" X 3/4" Outlet 1" PE	Inlet 1" PE Meter 1" Outlet 1" PE	Inlet 1.5" PE Meter 1.5" Outlet 1.5" PE	Inlet 2" PE Meter 2" Outlet 2" PE
A	Angle Meter Valve	Ford, BA43-342W-G, Pack Joint X Meter Swivel Nut, Padlock Wings, Grip Joint	Ford, BA43-444W-G, Pack Joint X Meter Swivel Nut, Padlock Wings, Grip Joint	Ford, FV43-666W-G, Pack Joint X Meter Swivel Nut, Padlock Wings, Grip Joint	Ford, FV43-777W-G, Pack Joint X Meter Swivel Nut, Padlock Wings, Grip Joint
B	Meter	Badger, E-Series Ultrasonic 316SS, 5/8" X 3/4", 1 Gallon Resolution, 7.5" Lay Length, UM1-0007-6873	Badger, E-Series Ultrasonic 316SS, 1", 1 Gallon Resolution, 10.75" Lay Length, UM1-0007-8421	E-Series Ultrasonic 316SS, 1.5", 1 Gallon Resolution, UM1-0007-9007	E-Series Ultrasonic 316SS, 2", 1 Gallon Resolution, UM1-0007-7974
C	Meter Coupling Nut	Ford, 5/8" X 3/4" Meter X 1" FIPT, C31-24	Ford, 1" Meter X 1" FIPT, C31-44		
D	Meter Flange			Ford, 1.5" Meter Flange X 1.5" FIPT, CF31-66	Ford, 2" Meter Flange X 2" FIPT, CF31-77
E	Galvanized Nipple	1" MIPT X 1" MIPT, 18" Long	1" MIPT X 1" MIPT, 18" Long	1.5" MIPT X 1.5" MIPT, 18" Long	2" MIPT X 2" MIPT, 18" Long
F	Plastic Meter Lid with Plastic Ring	Nicor, 12.5SLFARI Type C Lid and 17.75X12.75Ring	Nicor, 12.5SLFARI Type C Lid and 17.75X12.75Ring	Field Determined as Approved by City	Field Determined as Approved by City
G	Meter Box	Contech, A-2000 Drainage Pipe, PVC, 18" Diameter, 18" Long or Field Adjusted to Length	Contech, A-2000 Drainage Pipe, PVC, 18" Diameter, 18" Long or Field Adjusted to Length	Field Determined as Approved by City	Field Determined as Approved by City
H	Meter Transmitter Unit	Itron, With Leak Sensor Capability, ERW-1300-203	Itron, With Leak Sensor Capability, ERW-1300-203	Itron, With Leak Sensor Capability, ERW-1300-203	Itron, With Leak Sensor Capability, ERW-1300-203
I	Leak Sensor	Optional by City Direction, Itron, LDS-0001-001	Optional by City Direction, Itron, LDS-0001-002	Optional by City Direction, Itron, LDS-0001-003	Optional by City Direction, Itron, LDS-0001-004
J	Tapping Saddle	Ford, Hinged Design, Style SXX, AWWA Threads	Ford, Hinged Design, Style SXX, AWWA Threads	Ford, Hinged Design, Style SXX, AWWA Threads	Ford, Hinged Design, Style SXX, AWWA Threads
K	Corporation Stop	Ford, AWWA/CC Taper Thread X Pack Joint, Grip Joint	Ford, AWWA/CC Taper Thread X Pack Joint, Grip Joint	Ford, AWWA/CC Taper Thread X Pack Joint, Grip Joint	Ford, AWWA/CC Taper Thread X Pack Joint, Grip Joint

SERVICE CONNECTION

ALL METERS WITH VAULTS LARGER THAN 2" DIA. SHALL BE APPROVED BY THE CITY OF FARMERSVILLE.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



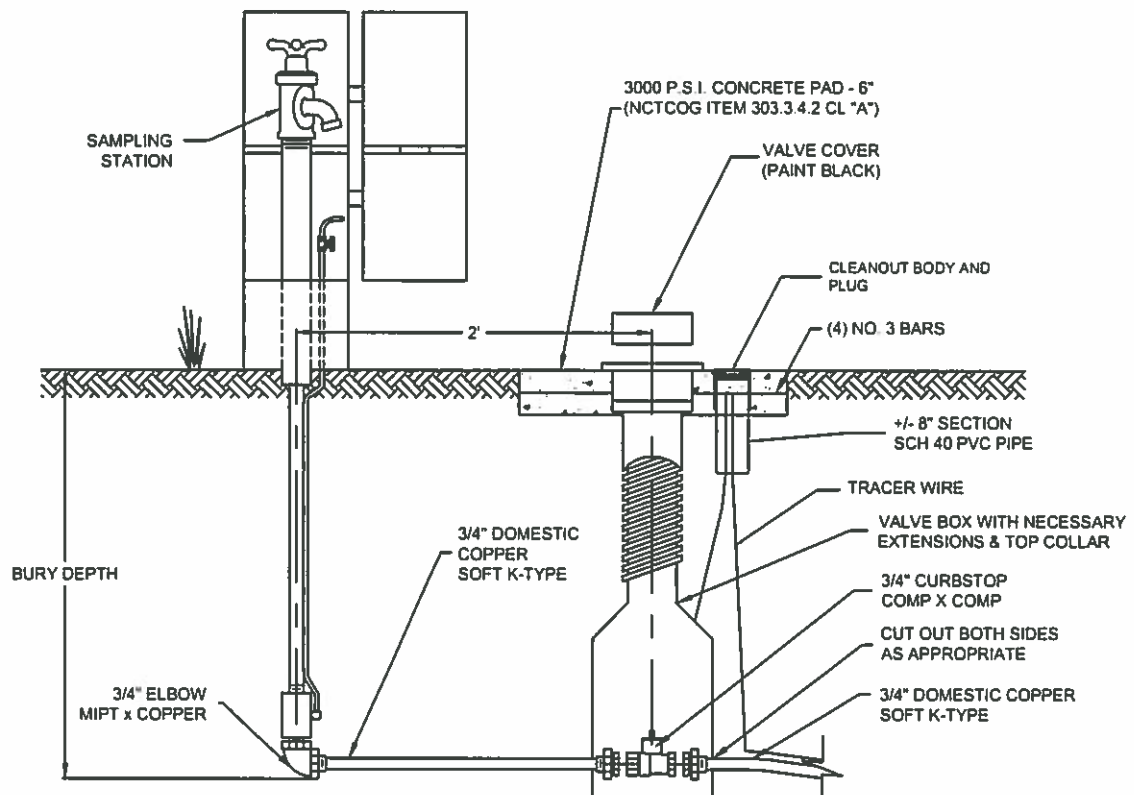
Farmersville

SERVICE CONNECTION

DESIGNED: E.W.D.
DRAWN: M.K.W./DBI

DATE: 10-27-16
REVISION: N/C

413



GENERAL NOTES:

1. SAMPLING STATIONS SHALL BE 3'-0" BURY, WITH A 3/4" FIP INLET, AND A (3/4" HOSE OR UNTHREADED) NOZZLE
2. ALL STATIONS SHALL BE ENCLOSED IN A LOCKABLE, NONREMOVABLE, ALUMINUM-CAST HOUSING
3. WHEN OPENED, THE STATION SHALL REQUIRE NO KEY FOR OPERATION, AND THE WATER WILL FLOW IN AN ALL BRASS WATERWAY.
4. ALL WORKING PARTS WILL ALSO BE OF BRASS AND BE REMOVABLE FROM ABOVE GROUND WITH NO DIGGING. EXTERIOR PIPING SHALL BE GALVANIZED STEEL (BRASS PIPE ALSO AVAILABLE).
5. A COPPER VENT TUBE WILL ENABLE EACH STATION TO BE PUMPED FREE OF STANDING WATER TO PREVENT FREEZING AND TO MINIMIZE BACTERIA GROWTH
6. ECLIPSE NO. 88-SS SAMPLING STATION SHALL BE MANUFACTURED BY KUPFERLE FOUNDRY, ST. LOUIS, MO 63102.

SAMPLING STATION

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS

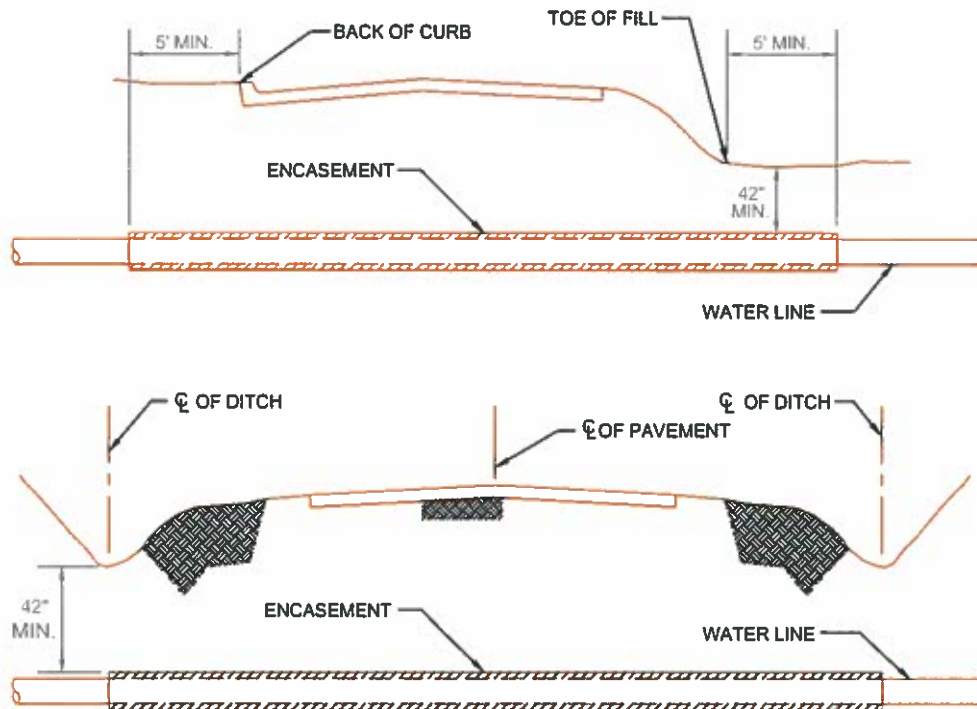


SAMPLING STATION

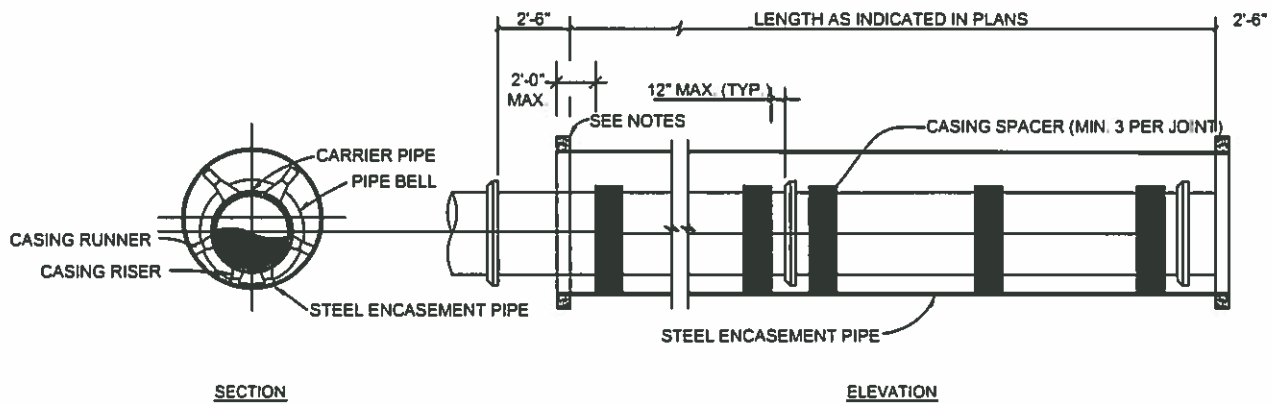
DESIGNED E.W.D.
DRAWN M.K.W / DBI

DATE: 10-27-16
REVISION: N/C

414



ROAD BORE & ENCASEMENT



WATERLINE ENCASEMENT

NOTES:

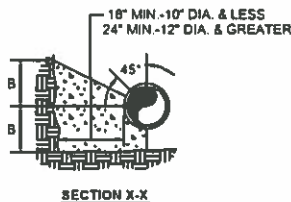
1. 3 MORTAR BANDS MAY BE USED IN LIEU OF CASING SPACERS FOR R.C.C.P.
2. CONTRACTOR SHALL PROVIDE SUPPORT UNDER CARRIER PIPE TO HAVE MIN. 1.5" CLEARANCE BETWEEN PIPE BELL AND ENCASEMENT PIPE.
3. ENDS OF ENCASEMENT PIPE SHALL BE PLUGGED WITH BRICK AND MORTAR FOR ROADWAY CROSSINGS AND CLAY FOR ROADWAY CROSSINGS.
4. CONTRACTOR SHALL FURNISH & INSTALL A MINIMUM OF 3 CASING SPACERS PER JOINT OF PIPE. CASING SPACERS SHALL BE INSTALLED ACCORDING TO MANUFACTURERS' RECOMMENDATIONS. CASING SPACERS SHALL BE AS MANUFACTURED BY P.S.I. OR APPROVED EQUAL.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS

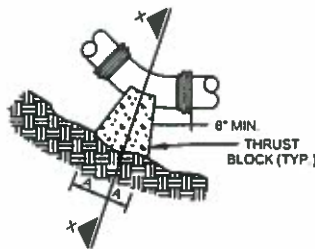
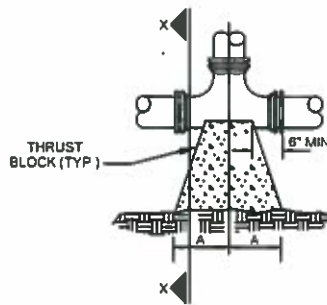


NOTES:

1. FOR VERT. BEND DOWN IN EXCESS OF 11 1/4" BEND, ANCHORAGE SHALL BE DESIGNED BY ENGINEER.
2. FOR VERT. BEND UPWARD, BLOCKING TO BE SIMILAR TO THAT FOR HORIZ. BEND.
3. GLANDS & BOLTS SHALL BE PROTECTED FROM CONC. BY PLASTIC SHEETING WHEN POURING THRUST BLOCKS.
4. ALL THRUST BLOCK & SUPPORT CONC. SHALL BE 3000 PSI READY MIX CONC.
5. THRUST BLOCKS WITH "B" DIMENSION GREATER THAN 30" SHALL HAVE THE RESTRAINED PIPE INSTALLED WITH A MINIMUM OF 4' OF COVER.
6. IF UNDER 100 PSI WORKING PRESSURE, RESTRAINT JOINTS MUST BE USED. IF EQUAL OR GREATER THAN 100 PSI WORKING PRESSURE, BOTH BLOCK AND RESTRAINT JOINTS ARE REQUIRED.

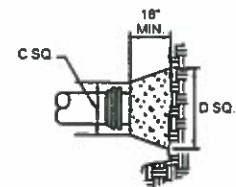


BENDS AND TEES

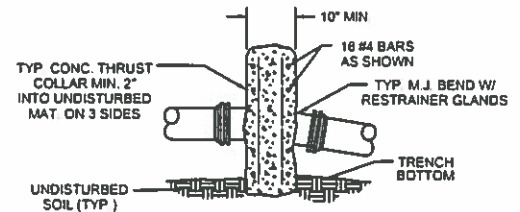


PLAN BENDS

THRUST BLOCK



PLAN AND ELEVATION PLUGS



SECTION OF VERTICAL BEND

PIPE SIZE	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND		TEE		PLUG	
	A	B	A	B	A	B	A	B	A	B	C	D
4"	8"	12"	8"	8"	6"	6"	6"	6"	11"	9"	10"	6"
6"	18"	12"	8"	10"	8"	8"	8"	8"	11"	10"	12"	18"
8"	18"	13"	10"	10"	8"	8"	8"	8"	11"	12"	12"	24"
10"	20"	16"	12"	14"	8"	12"	8"	12"	14"	16"	16"	30"
12"	20"	16"	12"	14"	8"	12"	8"	12"	14"	16"	16"	30"
16"	26"	20"	16"	18"	11"	13"	11"	13"	18"	20"	20"	36"
24"	82"	42"	62"	30"	44"	22"	22"	16"	82"	42"	82"	42"
30"	185"	42"	100"	42"	52"	42"	40"	30"	185"	42"	185"	42"

PRESSURE = 200 psi
BEARING = 2000 psi
FACTOR OF SAFETY = 1.5

FACTOR OF SAFETY = 1.5

PIPE SIZE	PIPE MAT'L	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	VALVE /PLUG	TEE BRANCH	RED. (NOTE 2)	VERT. 45°	VERT. 22 1/2°	VERT. 11 1/4°
6"	D.I.	28'	12'	6'	3'	38'	34'	20'	23'	11'	5'
8"	D.I.	37'	15'	7'	4'	51'	47'	21'	30'	15'	7'
10"	D.I.	45'	19'	9'	4'	61'	57'	20'	37'	18'	9'
12"	D.I.	53'	22'	11'	5'	73'	69'	38'	43'	21'	10'
6"	PVC	30'	12'	6'	3'	56'	38'	29'	35'	17'	8'
8"	PVC	40'	16'	8'	4'	74'	56'	31'	46'	22'	11'
10"	PVC	47'	20'	9'	5'	89'	82'	30'	56'	27'	13'
12"	PVC	56'	23'	11'	6'	106'	88'	56'	66'	32'	16'

NOTES

1. ALL JOINTS SHALL BE RESTRAINED ON BOTH SIDES OF THE FITTING FOR THE LENGTH SHOWN UNLESS OTHERWISE INDICATED.
2. REDUCER IS ONE SIZE SMALLER THAN PIPE LISTED. RESTRAINED LENGTH IS UPSTREAM ON THE LARGE SIDE OF THE REDUCER.
3. IF UNDER 100 PSI WORKING PRESSURE, RESTRAINT JOINT(S) ARE TO BE USED. IF EQUAL TO OR OVER 100 PSI WORKING PRESSURE, BOTH THRUST BLOCK AND RESTRAINT JOINTS SHALL BE USED.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS

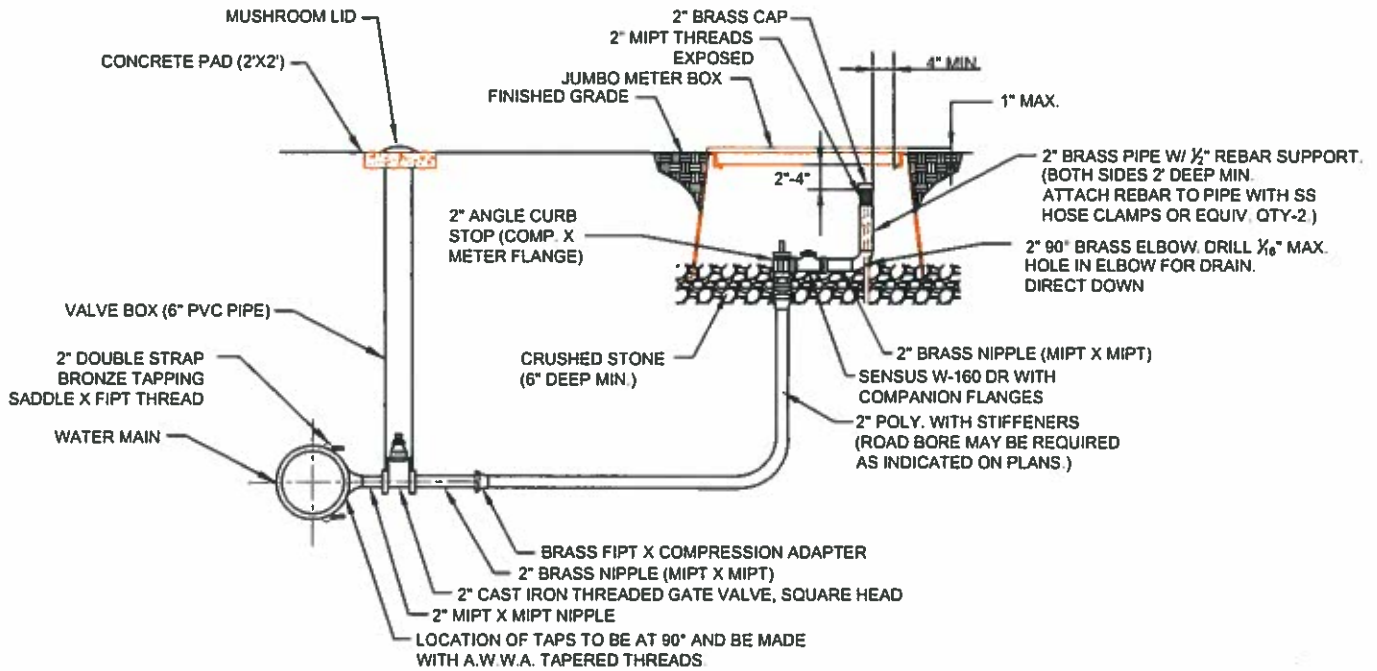


THRUST BLOCK

DESIGNED: E.W.D. DATE: 10-27-16
DRAWN: M.K.W. / D.B.I. REVISION: N/C

NOTES:

1. PAINT VALVE STACK COVERS IN ACCORDANCE WITH THE FOLLOWING:
STANDARD WATERLINE - BLUE
FIRE HYDRANT - SILVER
FLUSH VALVE - BLACK
DEAD END - WHITE
2. METER BOX HOLES MAY NEED TO BE ENLARGED TO ACCOMMODATE PIPE.



2" BURIED FLUSH VALVE ASSEMBLY

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS

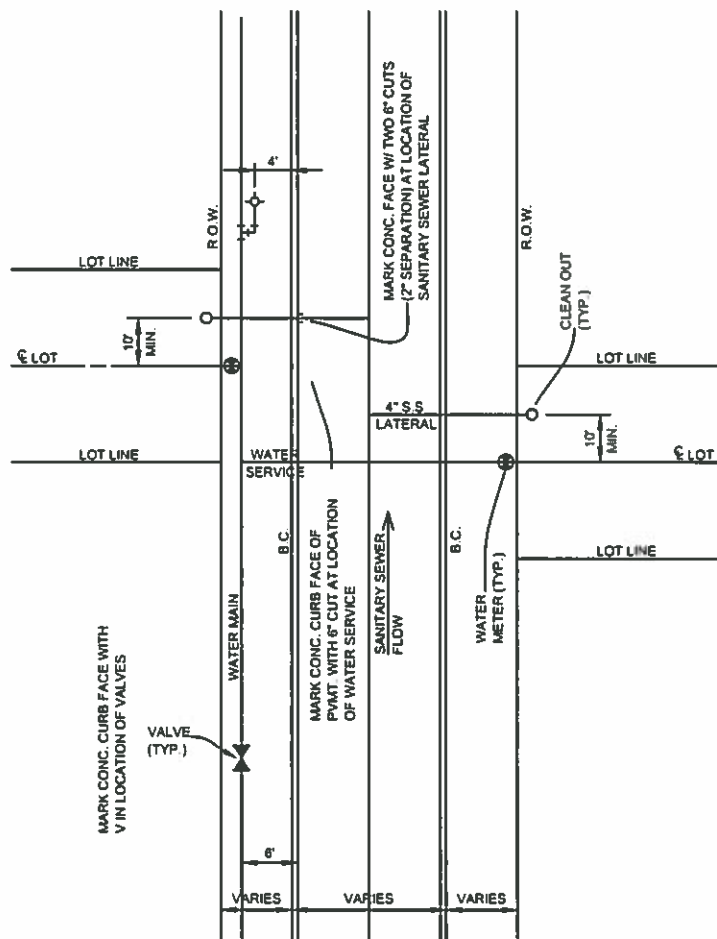


2" BURIED FLUSH VALVE ASSEMBLY

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-16
REVISION: N/C

417



TYPICAL WATER/SANITARY SEWER
SERVICE LOCATION

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



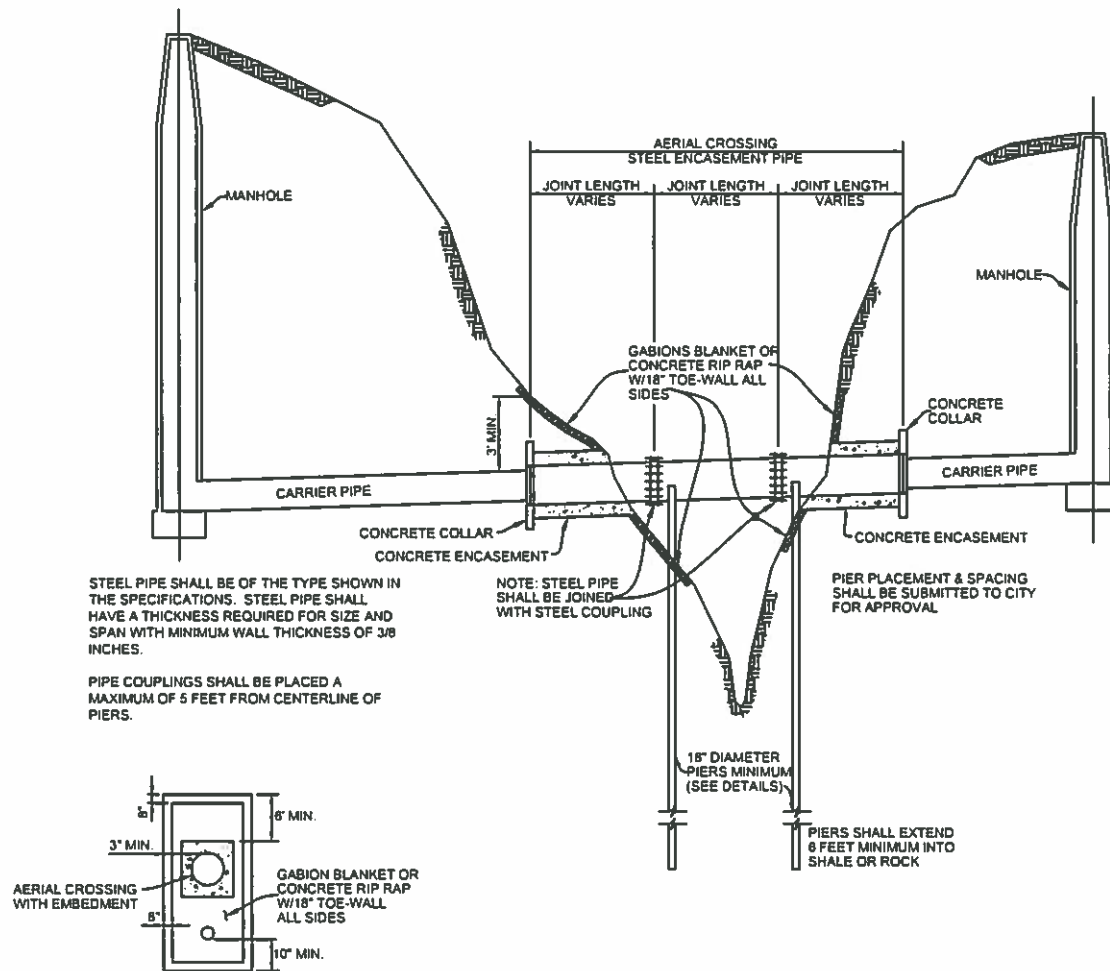
SERVICE LOCATIONS

DESIGNED E.W.D.
DRAWN M.K.W. / DBI

DATE 10-27-18
REVISION N/C

501

10-WW-01



BANK PROTECTION (TYP.)

AERIAL CROSSING

NOTE:
ENGINEERING DESIGN SHALL BE SUBMITTED TO CITY FOR APPROVAL
FOR USE FOR EACH CROSSING. PIERS SHALL BE PLACED AT MAXIMUM
SPAN DISTANCE AS DICTATED BY ENGINEER'S DESIGN.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS

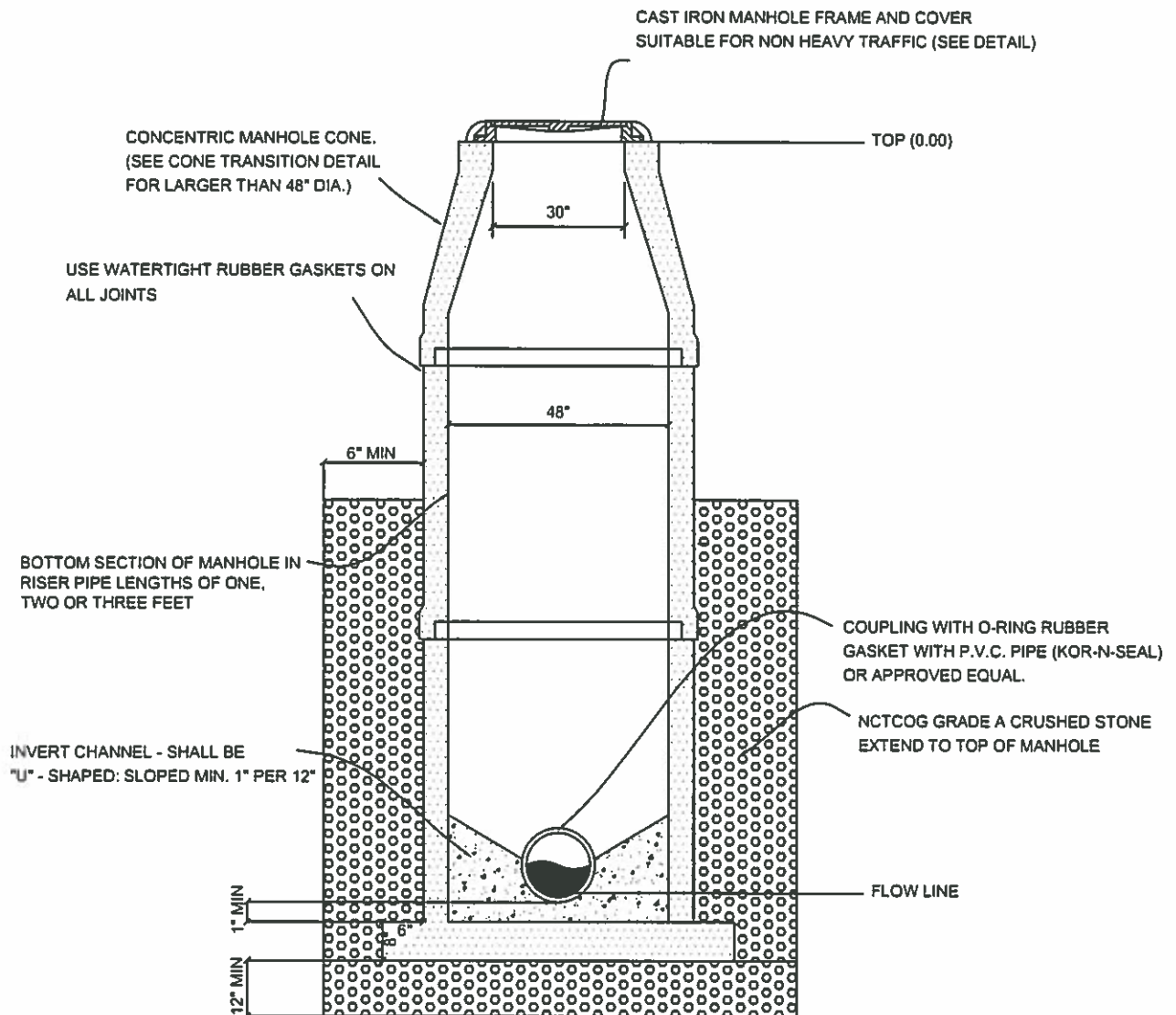


WASTEWATER AERIAL CROSSING

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-18
REVISION: N/C

502



PRECAST CONCRETE MANHOLE

NOTES:

1. FOR WETLAND, FLOODPLAIN, BELOW WATER TABLE, AND HIGH WATER APPLICATIONS, ALL JOINTS ON OUTSIDE OF MANHOLE SHALL BE SEALED WITH AQUAGUARD SHRINK SEAL.
2. ALL JOINTS SHALL MEET ASTM C443.
3. ALL PRECAST COMPONENTS SHALL MEET ASTM C478.
4. LIFTING INSERTS SHALL BE PROVIDED.
5. PRECAST COMPONENTS SHALL BE FORTERRA BUILDING PRODUCTS OR APPROVED EQUAL.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



PRECAST CONCRETE MANHOLE

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-16
REVISION: N/C

504

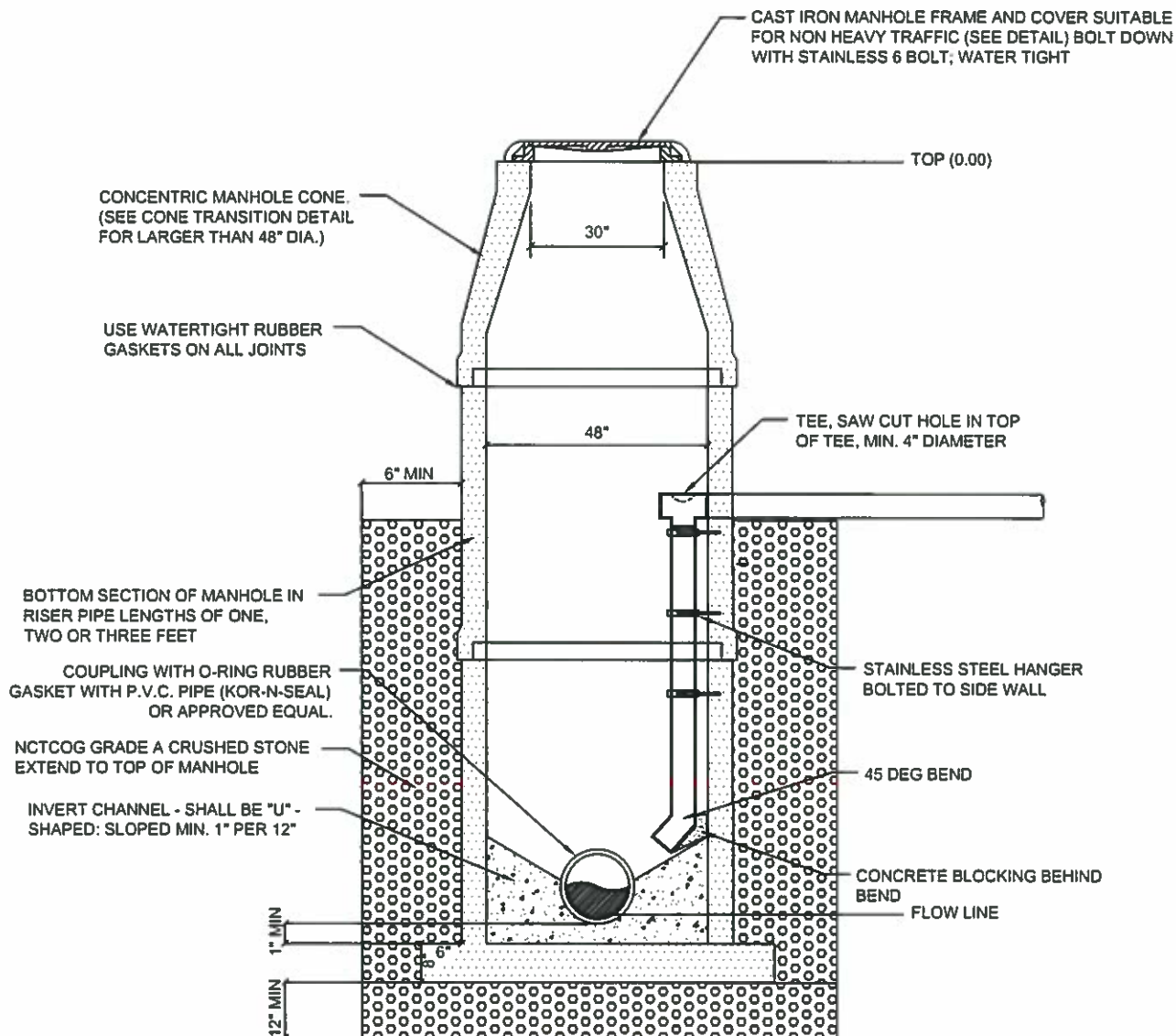
NOTES:

1. FOR WETLAND, FLOODPLAIN, BELOW WATER TABLE, AND HIGH WATER APPLICATIONS, ALL JOINTS ON OUTSIDE OF MANHOLE SHALL BE SEALED WITH AQUAGUARD SHRINK SEAL.
2. ALL JOINTS SHALL MEET ASTM C443.
3. ALL PRECAST COMPONENTS SHALL MEET ASTM C478.
4. LIFTING INSERTS SHALL BE PROVIDED.
5. PRECAST COMPONENTS SHALL BE FORTERRA BUILDING PRODUCTS OR APPROVED EQUAL.
6. PIPE DIAMETER TO BE THE SAME AS LINE CONSTRUCTION.
7. APPROVED PREFABRICATED RUNNER GASKET OR O-RING SHALL BE USED AT ALL JOINTS.
8. FOR MANHOLES IN PAVEMENT, A 6"x6" MIN. SIZE BLOCKOUT IS REQUIRED.
9. PIPE TO MANHOLE CONNECTORS SHALL BE KOR-N-SEAL OR APPROVED EQUAL.



NOTES:

1. BOLT SIZE: 3/8" DIA. LENGTH NOT TO EXCEED 1" PAST ANCHOR WHEN INSTALLED.
2. TYPE: 304 OR 316 STAINLESS.
3. BOLT ANCHOR DEPTH: 2" MIN. EPOXY SEALER NOT TO PROTRUDE THROUGH MANHOLE WALL.
4. ANCHOR SPACING: 4' MAX. (MIN. NUMBER OF ANCHORS - 2 PER DROP 1' - 6" BELOW TEE, 1' - 6" ABOVE 45 DEG BEND AT TOP OF M.H.)
5. DROP PIPE TYPE: SDR-35 (BELL & SPIGOT).
6. BOTTOM BEND NOT TO BE GREATER THAN 45 DEG. BEND NOT TO BE MORE THAN 4" FROM BENCH OF MANHOLE.



INTERNAL DROP MANHOLE

NO SCALE

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



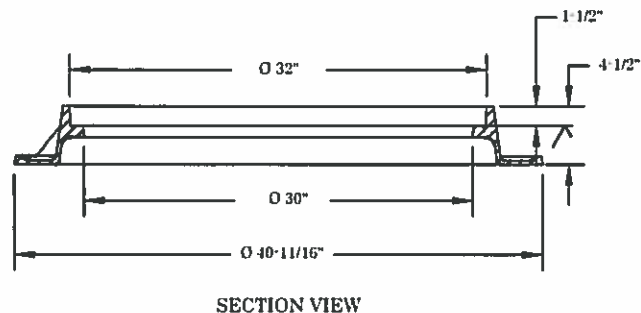
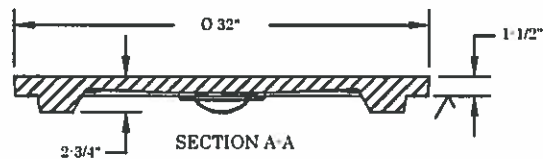
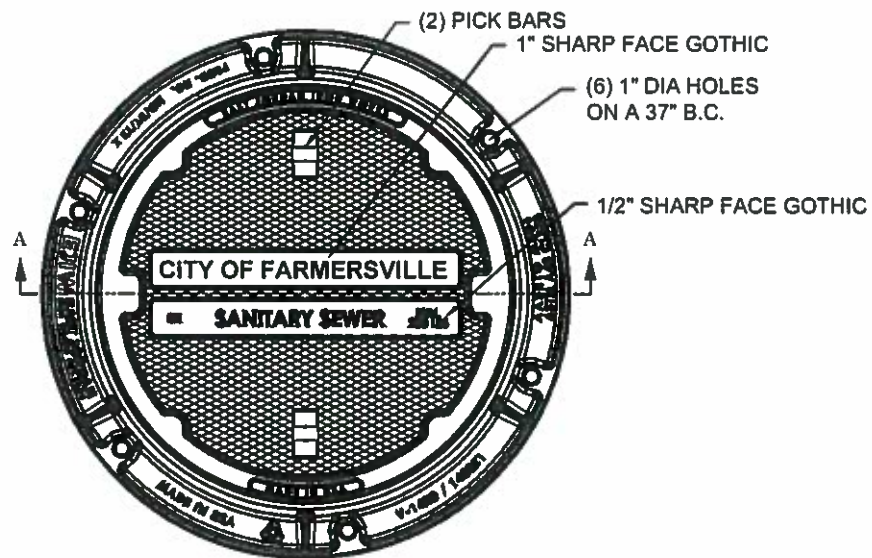
Farmersville

INTERNAL DROP MANHOLE

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-18
REVISION: N/C

505



STANDARD MANHOLE RING AND COVER

WITH PICK SLOTS

BASS AND HAYS FOUNDRY, INC.
MANHOLE: V-1420D-1480

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



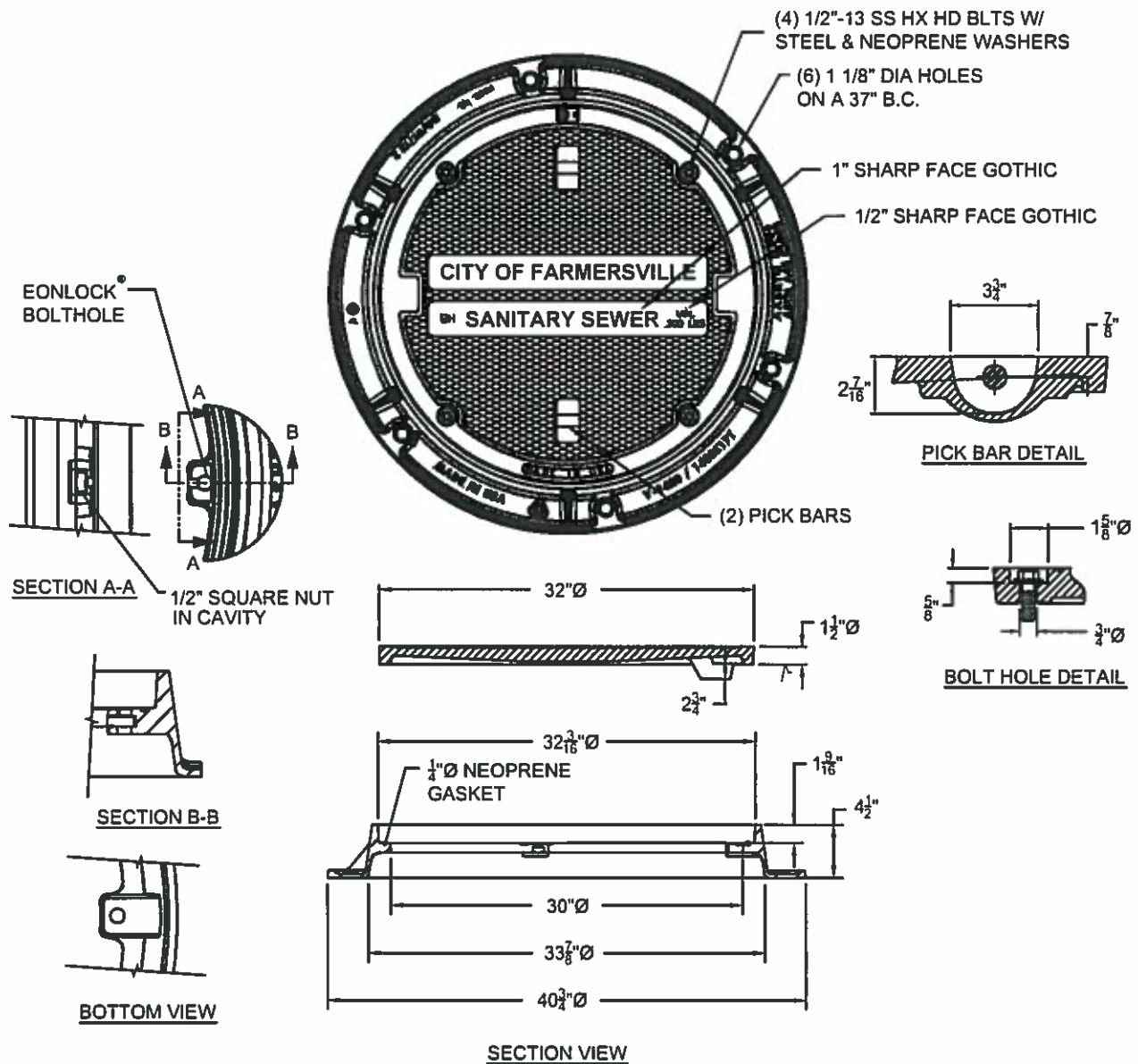
Farmersville

STANDARD MANHOLE RING & COVER

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-16
REVISION: N/C

506



WATERTIGHT BOLTED MANHOLE RING AND COVER

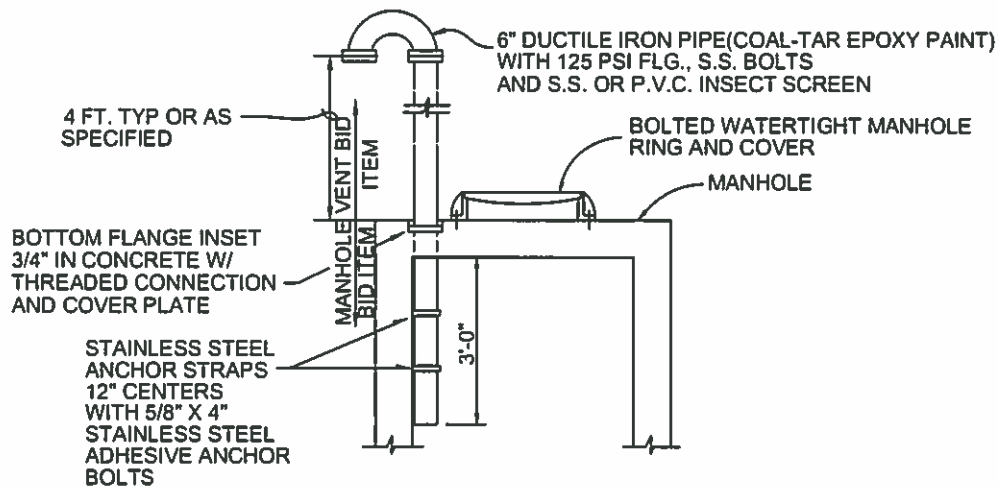
WITH LOCKING DEVICE & PICK SLOTS

BASS AND HAYS FOUNDRY, INC.
MANHOLE V-14200 WT

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS

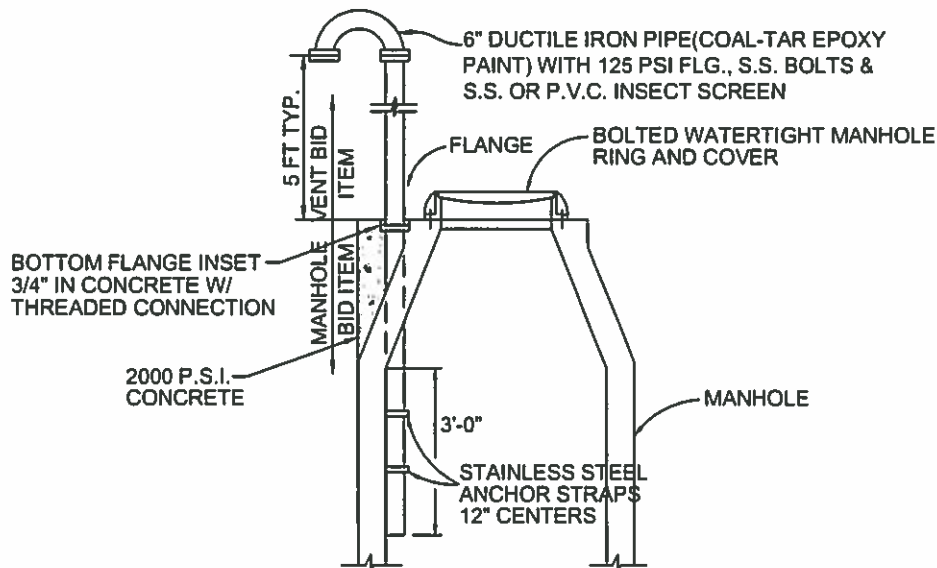


Farmersville



FLAT TOP MANHOLE VENT

NO SCALE



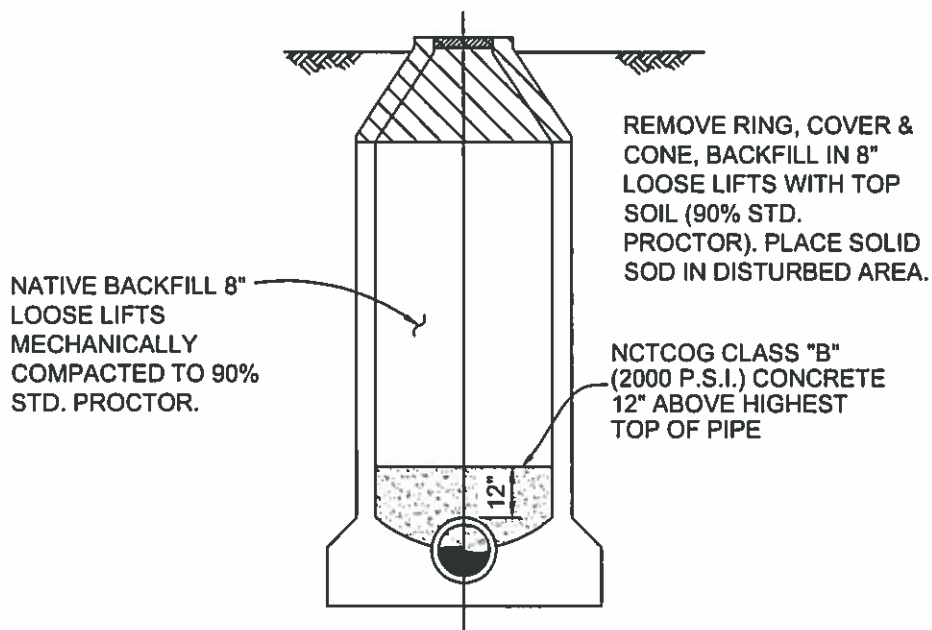
CONE TOP MANHOLE VENT

NO SCALE

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



Farmersville



MANHOLE ABANDONMENT

OUTSIDE PAVEMENT AREA

MONOLITHIC CONCRETE PAVEMENT AROUND MANHOLE SAME THICKNESS AS STREET . BLOCKOUTS SHALL BE MINIMUM 12" THICK (SEE DETAIL THIS SHEET).

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



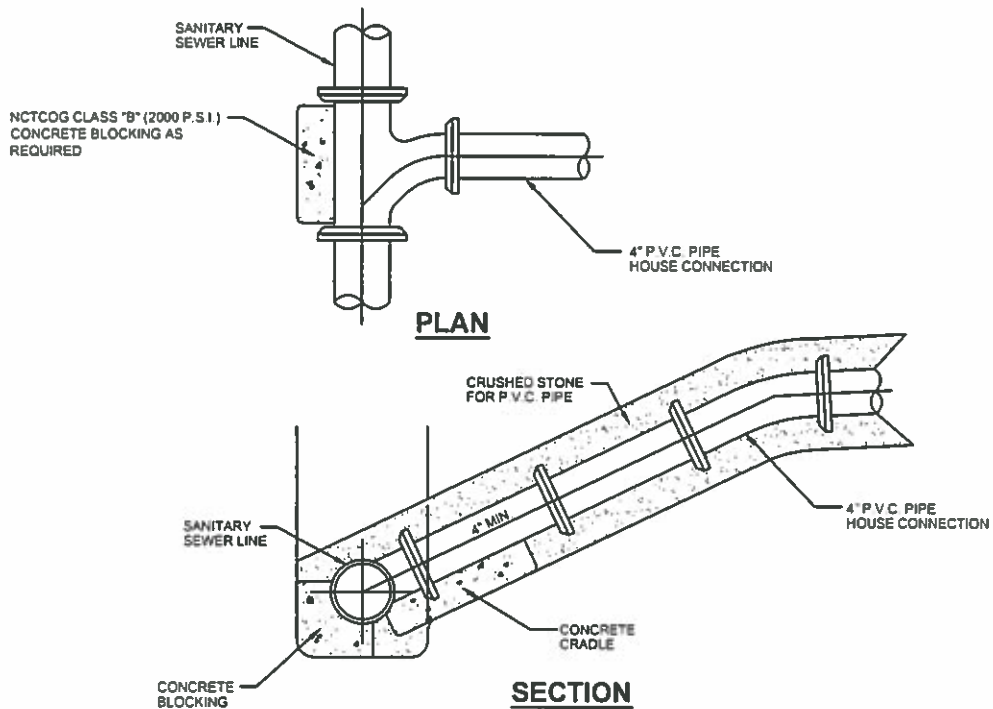
Farmersville

MANHOLE ABANDONMENT

DESIGNED E.W.D.
DRAWN M.K.W. / DBI

DATE 10-27-16
REVISION N/C

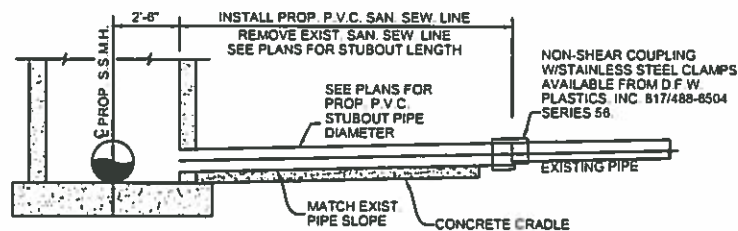
509



TYPICAL SEWER

HOUSE SERVICE CONNECTION

SANITARY SEWER CLEANOUT BOOTS SHALL BE BASS & HAYS # 339 OR APPROVED EQUAL. 4" SERVICE LINE SHALL BE SDR26.



TYPICAL STUBOUT CONNECTION

NO SCALE

NOTE: MATCH SOFFITS UPSTREAM OF MANHOLE
MATCH FLOW LINES DOWNSTREAM OF MANHOLE

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



SANITARY SEWER CONNECTIONS

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-18
REVISION: N/C

510

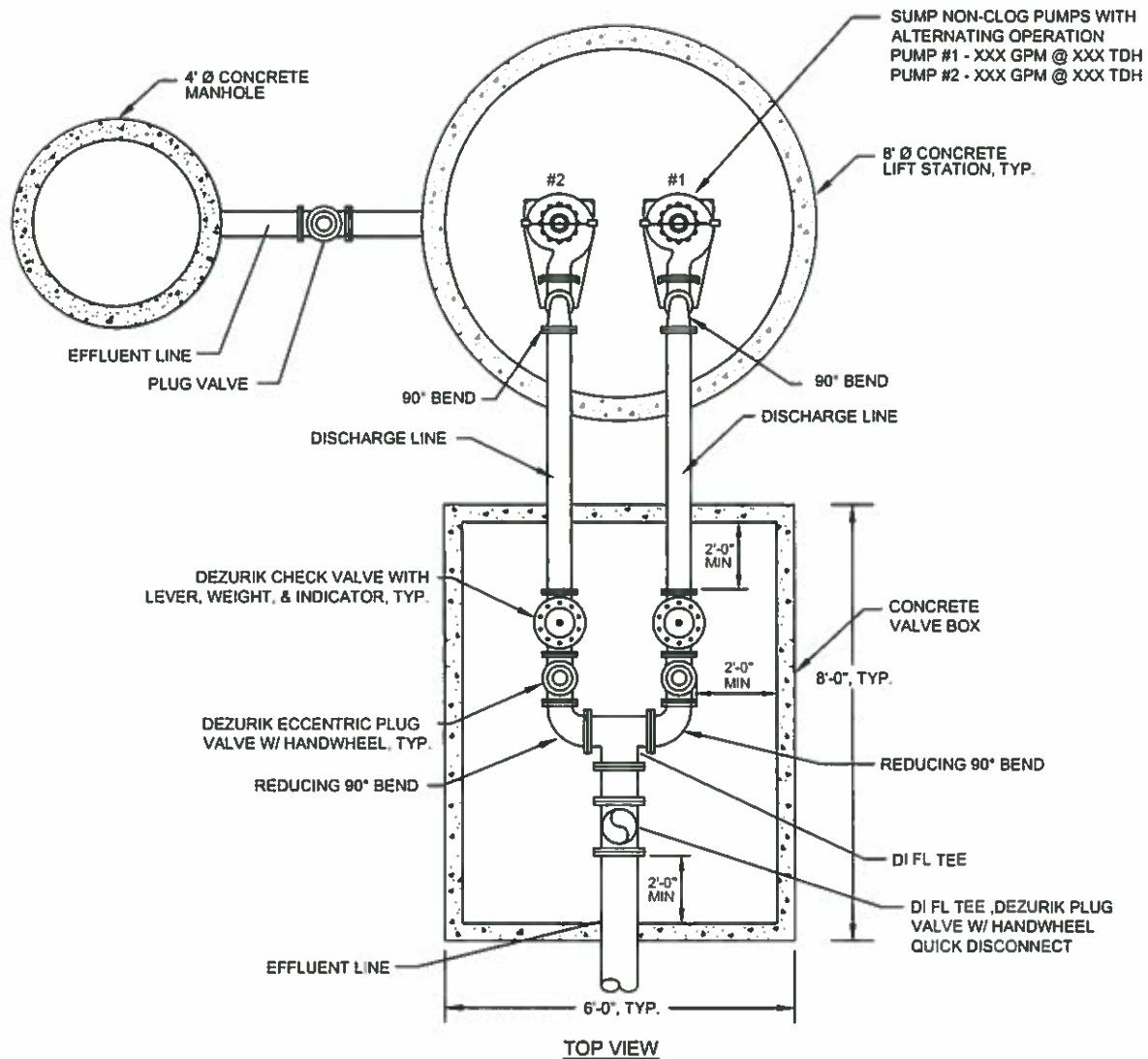
WW-10



- 1 CLASS "B" CONCRETE (NCTCOG ITEM 7.4.5)
2000 P.S.I. COMP. STRENGTH AT 28 DAYS
MIN. 4 SACK OF CEMENT PER C.Y
MAX. W/C = 8.0
COARSE AGG. 1-2-3
- 2 ALL WYES, STACKS AND PIPE SERVICE
CONNECTIONS SHALL BE P.V.C. SDR-35

VERTICAL CLEANOUT CONNECTION

(CONNECTION, WYE, CONCRETE, BENDS, CASTING,
ETC. ALL SUBSIDIARY TO CLEANOUT)



UNDERGROUND LIFT STATION DETAIL

NOT TO SCALE

GENERAL NOTES

1. BACK-UP POWER IS REQUIRED FOR ALL LIFT STATIONS.
2. ALL LIFT STATIONS MUST HAVE CONCRETE ACCESS DRIVE.
3. PUMPS SHALL BE THREE PHASE, 230 VOLT.
4. ALL ELEVATIONS WILL BE VERIFIED BY OWNER.
5. COMPACT BACKFILL ON ALL SIDES AT ONE TIME IN LIFTS NOT MORE THAN 12".
6. SCADA TELEMETRY IS REQUIRED FOR ALL LIFT STATIONS.
7. ALL FITTINGS SHALL BE COATED WITH PROTECTO 401.
8. PUMPS SHALL BE HCP, CONTACT ART JOHNSON @ NORTH TEXAS PUMP CO, INC. 972-562-3880

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS

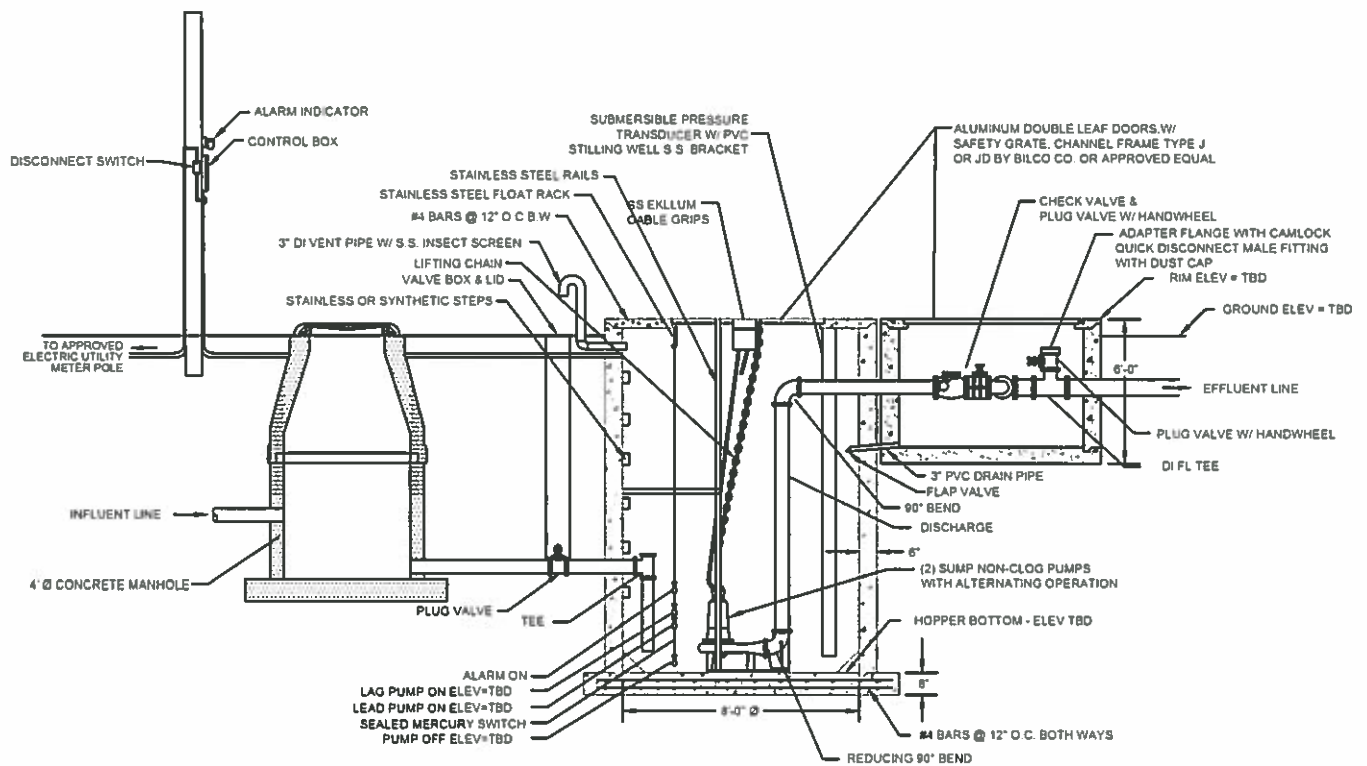


UNDERGROUND LIFT STATION-1

DESIGNED: E W D
DRAWN: M K W / DBI

DATE: 10-27-16
REVISION: NC

512



UNDERGROUND LIFT STATION DETAIL
NOT TO SCALE

STANDARD CONSTRUCTION DETAILS
 FOR
 CITY OF FARMERSVILLE
 COLLIN COUNTY, TEXAS



UNDERGROUND LIFT STATION-2

DESIGNED: E.W.D.
 DRAWN: M.K.W. / D.B.I.

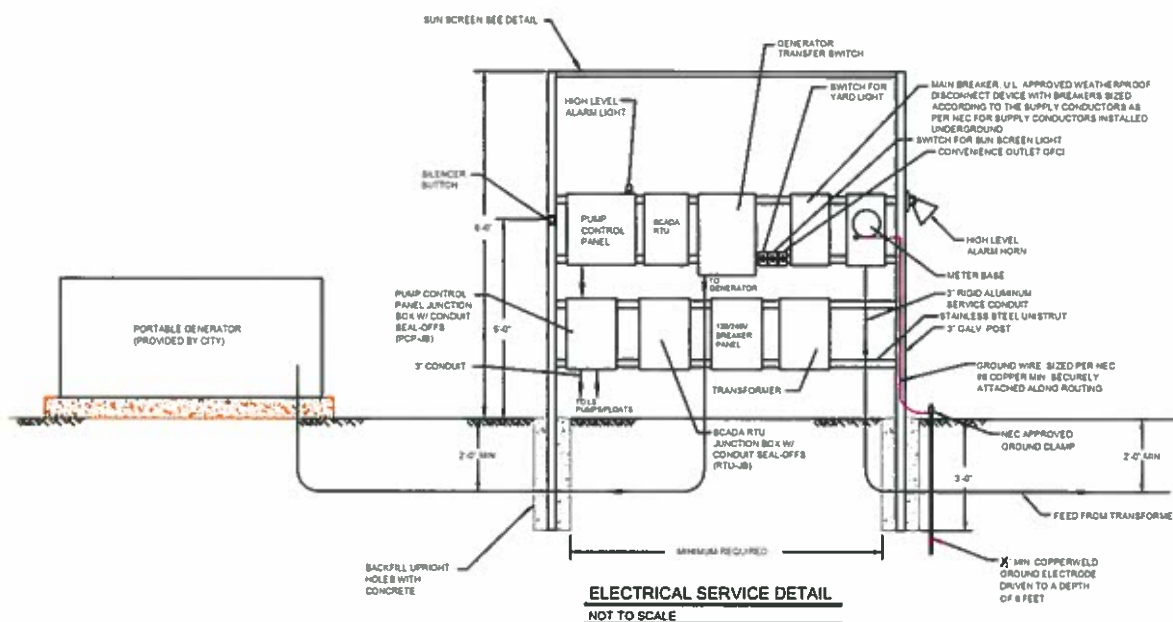
DATE: 10-27-16
 REVISION: N/C

513

WW-13

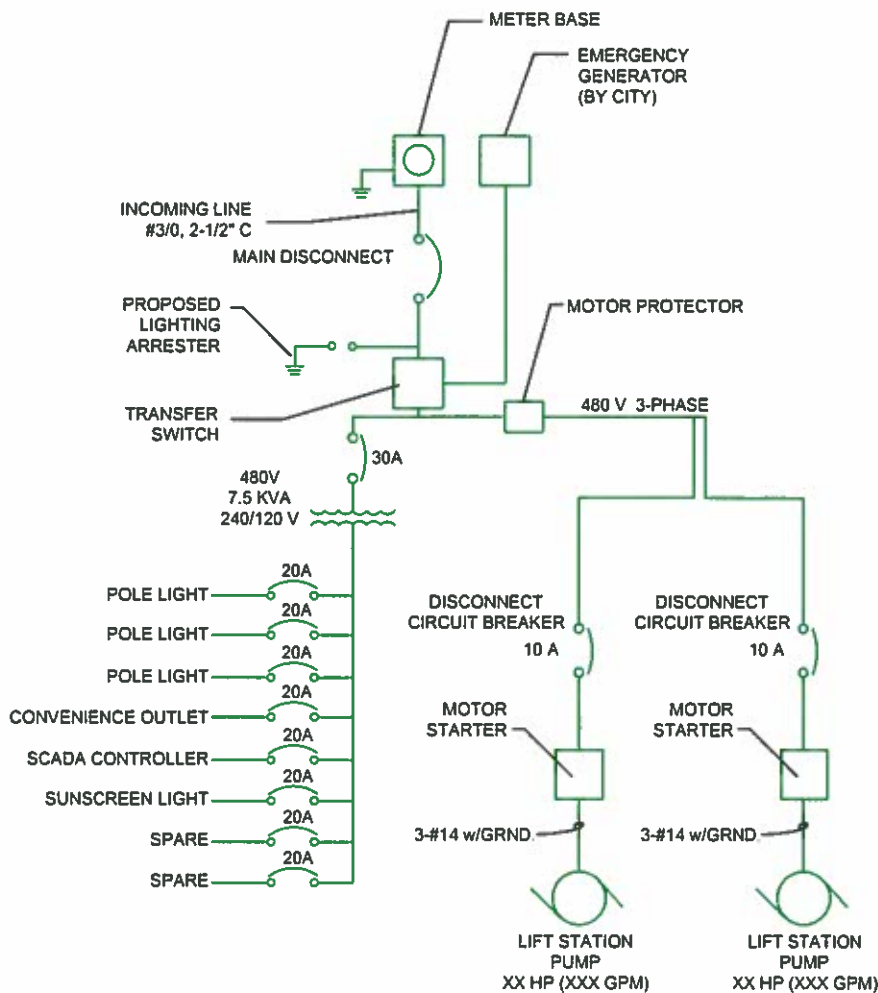

 STANDARD CONSTRUCTION DETAILS
 FOR
 CITY OF FARMERSVILLE
 COLLIN COUNTY, TEXAS

WW-14



NOTES

1. INSTALLATION SHALL MEET ALL REQUIREMENTS OF THE NATIONAL ELECTRIC CODE AND ANY STATE AND MUNICIPAL ORDINANCES
2. INSTALLATION SHALL PASS THE REQUIRED INSPECTION BY THE GOVERNING AUTHORITY
3. ELECTRIC SERVICE AND METER SHALL BE INSTALLED TO MEET ALL REQUIREMENTS OF ELECTRIC UTILITY (CONCORD)
4. SCADA ANTENNA REQUIRED FOR RADIO COMMUNICATION FOR RTU
5. CONDUIT SEAL OFFS SHALL BE CROWDER-HARD EYE SEALING FITTINGS OR APPROVED EQUAL



LIFT STATION ELECTRICAL SERVICE DETAIL

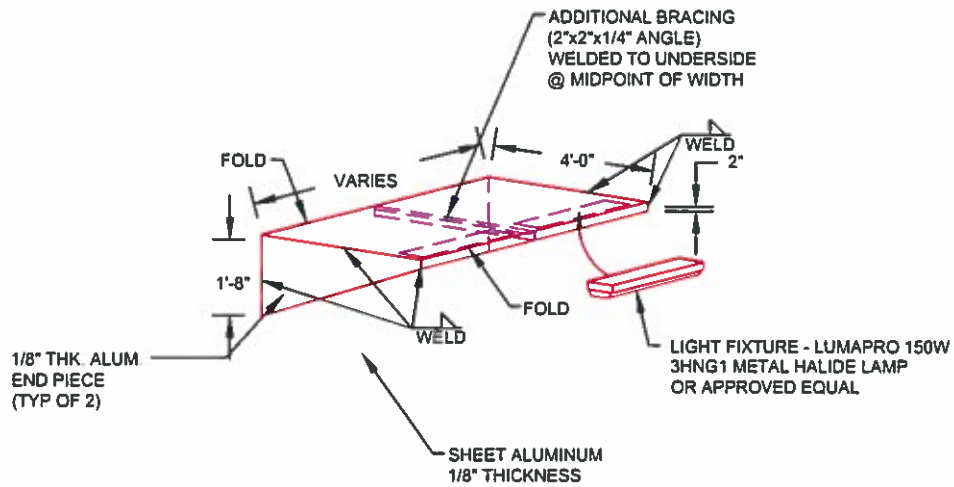
NOT TO SCALE

NOTES:

1. ELECTRICAL PANEL AND MOTOR CONTROLS SHALL BE MOUNTED ON STAINLESS STEEL UNISTRUT.
2. SHIELDED SIGNAL WIRING AND POWER WIRING MUST BE RUN IN SEPARATE CONDUITS.
3. CONTRACTOR WILL COORDINATE UTILITY SERVICE CONNECTIONS WITH ELECTRICAL UTILITY PROVIDER. APPLICATION FOR ELECTRICAL WILL BE MADE BY THE DISTRICT.
4. CONTRACTOR SHALL MEET ALL NATIONAL AND LOCAL ELECTRICAL CODES.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS





SUN SCREEN DETAIL
NOT TO SCALE

NOTE: SUN SCREEN AND VERTICAL SUPPORTS ARE DESIGNED
TO WITHSTAND 90 MPH WIND (3-SECOND GUST) AND 75 MPH
SUSTAINED WIND SPEED

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS

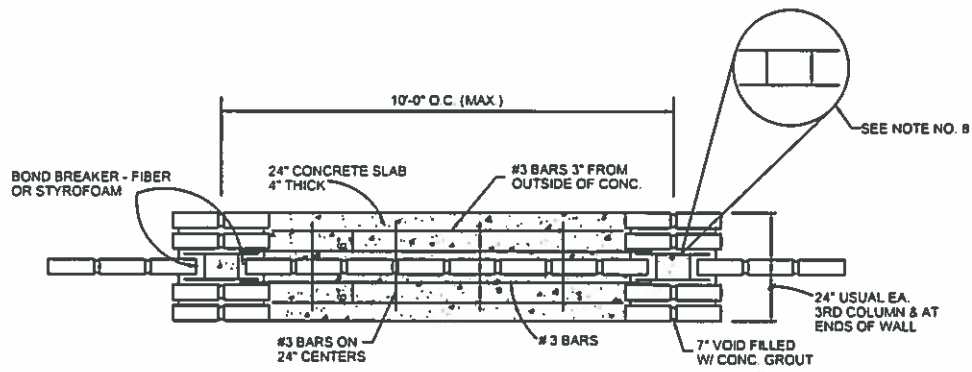


LIFT STATION SUN SCREEN

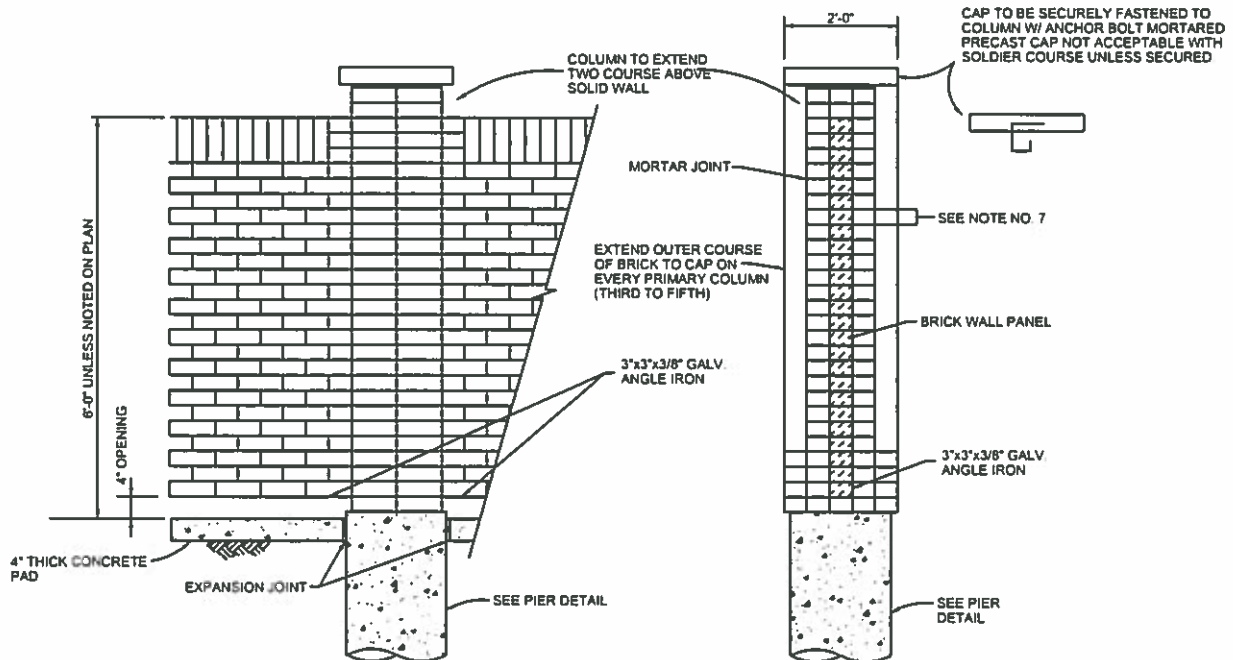
DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-18
REVISION: N/C

516



TYPICAL WALL & COLUMN LAYOUT PLAN



THIN WALL BRICK SCREENING WALL ELEVATION

NOTES:

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 P.S.I. AT 28 DAYS
2. REINFORCING STEEL SHALL BE NEW BILLET STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A-615-GR 60.
3. CONCRETE FOR DRILLED PIERS SHALL BE PLACED WITHIN 8 HOURS OF DRILLING PIER HOLES.
4. BRICK MASONRY SHALL BE AS SPECIFIED IN ITEM 2.3.6 OF THE SPECIAL PREVISIONS
5. MORTAR SHALL BE TYPE "S"
6. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE "RECOMMENDED PRACTICE FOR ENGINEERED BRICK MASONRY"- BRICK INSTITUTE OF AMERICA.
7. USE #9 GAUGE 1-3/4" WIDE GALVANIZED LADDER WIRE TO EXTEND HORIZONTAL IN WALL PANEL DURAWALL CORP. EVERY COURSE.
8. #9 GAUGE WIRE FABRICATED AS SHOWN BETWEEN EACH COURSE OF COLUMN BRICK.
9. THE WALL SHALL BE A MINIMUM OF SIX FEET IN HEIGHT AS MEASURED FROM THE NEAREST ALLEY EDGE OR SIDEWALK GRADE, WHICHEVER IS HIGHER. THE COLOR OF THE WALL SHALL BE SELECTED BY THE CITY.

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



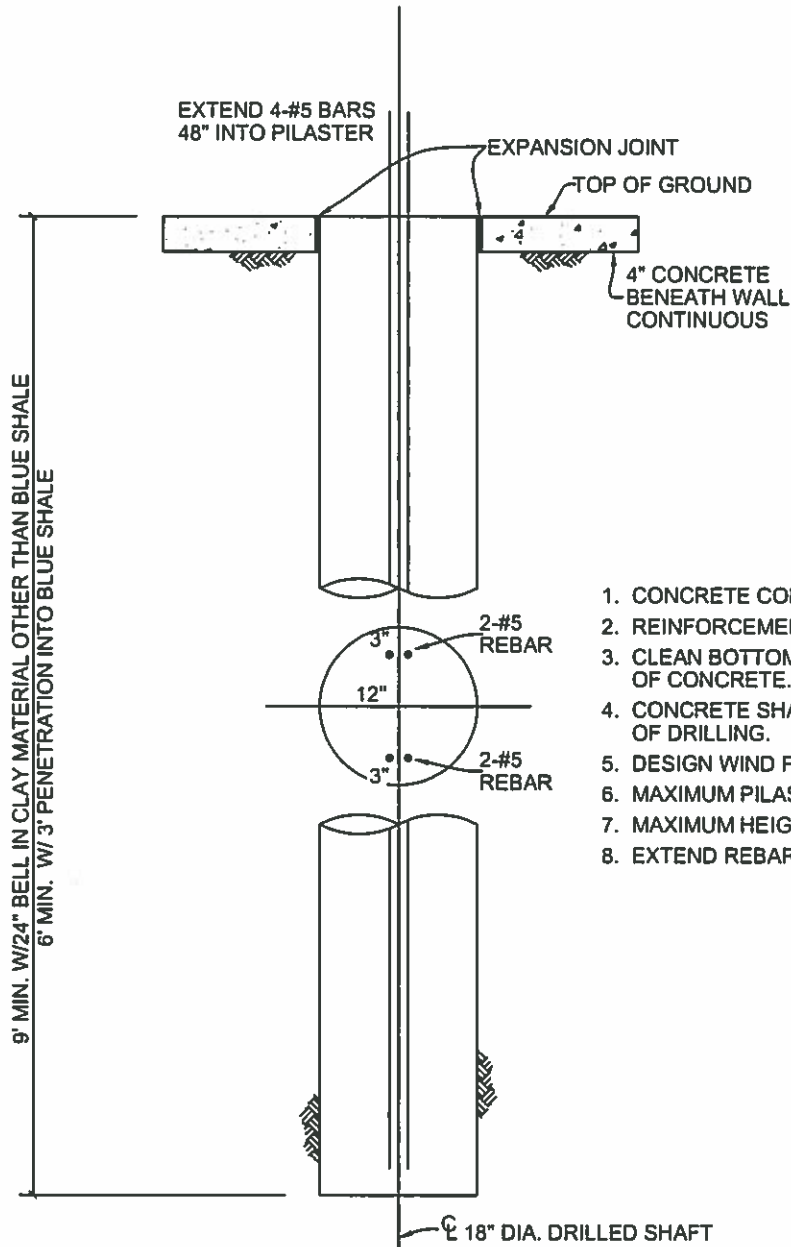
THIN BRICK SCREENING WALL

DESIGNED: E.W.D
DRAWN: M.K.W. / DBI

DATE: 10-27-18
REVISION: N/C

601

WALL-01



1. CONCRETE COMP. STRENGTH-4000 P.S.I.
2. REINFORCEMENT STEEL - ASTM A615 - GR 60.
3. CLEAN BOTTOM OF HOLE PRIOR TO PLACEMENT OF CONCRETE.
4. CONCRETE SHALL BE PLACED WITHIN 8 HOURS OF DRILLING.
5. DESIGN WIND PRESSURE - 20 PSF.
6. MAXIMUM PILASTER SPACING - 10'-0"
7. MAXIMUM HEIGHT OF WALL - 6'-0"
8. EXTEND REBAR 48" INTO PILASTER AND COLUMN.

PIER DETAIL

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



Farmersville

PIER DETAIL

DESIGNED E.W.D.
DRAWN M.K.W. / DBI

DATE 10-27-18
REVISION N/C

602



- 1 CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 3000 P.S.I. AT 28 DAYS
- 2 REINFORCEMENT - ASTM A 36
- 3 MASONRY - COMPRESSIVE STRENGTH SHALL BE AS PRESCRIBED IN ITEM 2 3 6 SPECIAL PROVISIONS
- 4 WIND LOAD - 20 P.S.F
- 5 PIER BEARING STRESSES - SEE BRICK SCREENING WALL NOTES
- 6 MORTAR - TYPE "S"
- 7 PROVIDE CONTROL JOINTS AT 50 FT
- 8 PROVIDE EXPANSION JOINTS AT 200 FT. CENTER MAXIMUM
- 9 PROVIDE MIN. 6" FT. W/ 24" DIA. BELL IN CLAY OR OTHER MATERIAL. EXCEPT BLUE SHALE, 6" MIN. WITH 3' MIN. INTO BLUE SHALE
10. ALL EXPOSED CONCRETE SHALL BE RUBBED FINISHED SURFACE
- 11 SIDEWALKS ADJACENT TO WALLS MUST BE 5'-0" MIN. WIDTH FROM ALL PORTIONS OF THE WALL (INCLUDING PILASTERS, COLUMNS, ETC.)
- 12 MAX. PILASTER SPACING 40 FT
13. WALLS SHALL NOT BE PLACED IN THE VISIBILITY EASEMENT OR STREET R.O.W
14. THE WALL SHALL BE A MINIMUM OF SIX FEET IN HEIGHT AS MEASURED FROM THE NEAREST ALLEY EDGE OR SIDEWALK GRADE WHICHEVER IS THE HIGHER. THE COLOR OF THE WALL SHALL BE LIMITED TO EARTH-TONE COLORS, EXCLUDING GRAY, GREEN AND WHITE. THE COLOR OF THE WALL SHALL BE UNIFORM ON EACH SIDE OF A THOROUGHFARE FOR THE ENTIRE LENGTH BETWEEN INTERSECTING THOROUGHFARES, UNLESS OTHERWISE APPROVED BY THE ENGINEERING DEPARTMENT. THE FINISH OF THE WALL SHALL BE CONSISTENT ON ALL SURFACES.
- 15 IF WROUGHT IRON FENCING IS TO BE UTILIZED ON REQUIRED SCREENING, ALL WROUGHT IRON MUST BE SOLID STOCK, NO TUBULAR STEEL WILL BE ALLOWED.

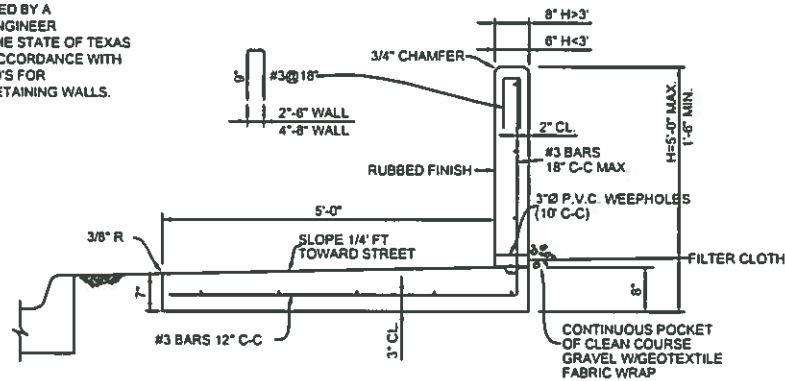


BRICK SCREENING WALL

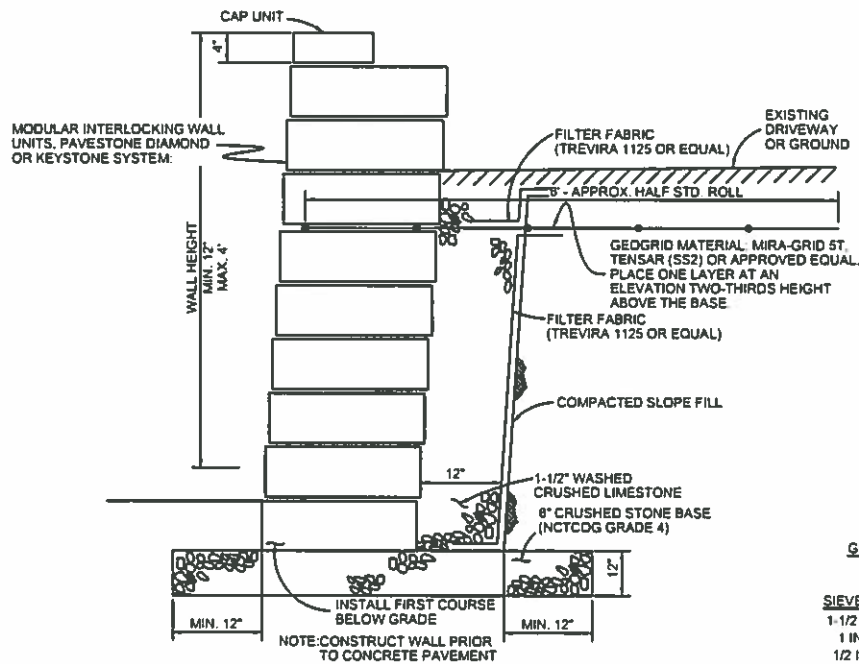
1. 12" DIA. SHAFT EMBEDDED MINIMUM 3'-0" INTO BLUE SHALE. RESULTING BEARING STRESS IS 8.0 KIPS PER SQUARE FOOT.
2. 12" DIA. SHAFT W/ 24" DIA. BELL IN CLAY. RESULTING BEARING STRESS IN 2.0 KIPS PER SQUARE FOOT. * SEE GENERAL NO. 9



NOTE:
ALL RETAINING WALLS OVER 5FT HIGH
SHALL BE DESIGNED BY A
PROFESSIONAL ENGINEER
REGISTERED IN THE STATE OF TEXAS
OR SHALL BE IN ACCORDANCE WITH
TXDOT STANDARD'S FOR
CAST-IN-PLACE RETAINING WALLS.



TYPE 6 RETAINING WALL



STONE RETAINING WALL
NO SCALE

**GRADE 4 CRUSHED STONE
GRADATION**

SIEVE SIZE	% RETAINED
1-1/2 INCH	0
1 INCH	0-5
1/2 INCH	40-75
NO. 4	90-100
NO. 8	95-100

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS

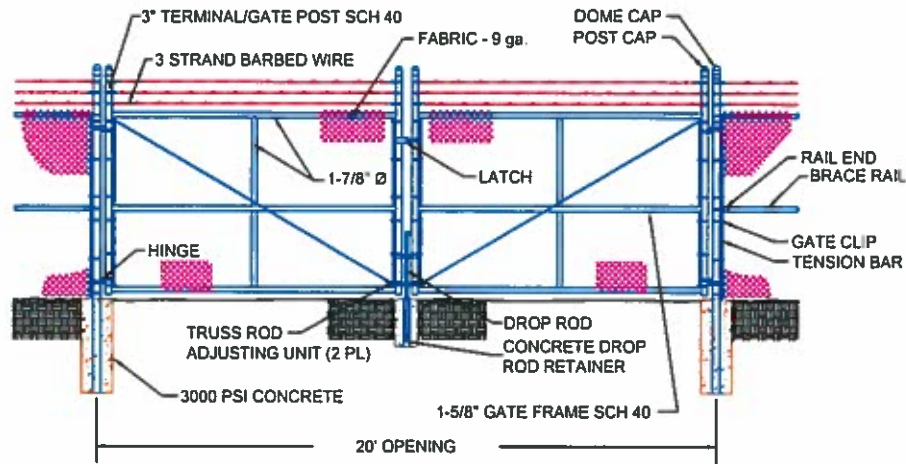


RETAINING WALL

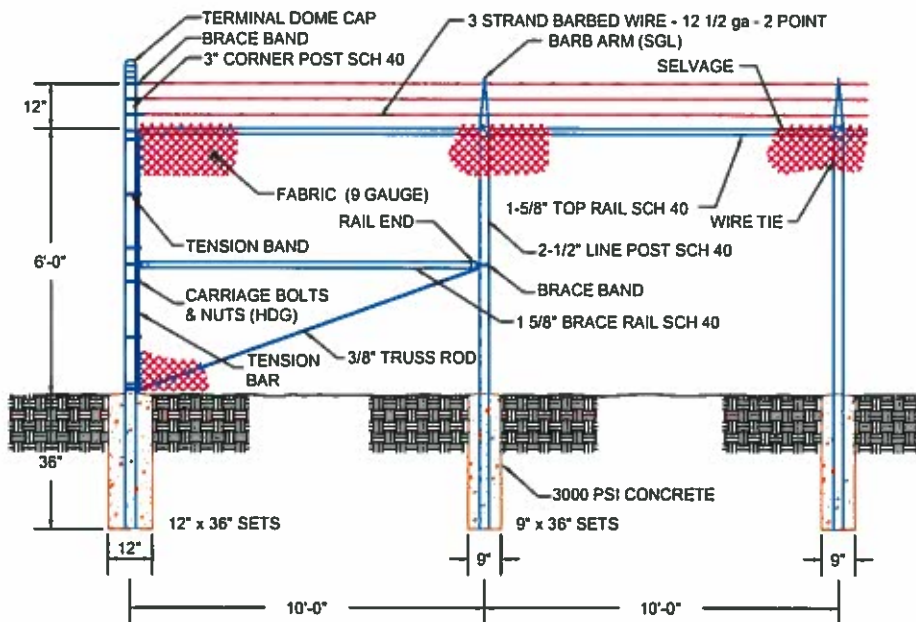
DESIGNED: E.W.D. DATE: 10-27-18
DRAWN: M.K.W. / DBI REVISION: N/C

604

WALL-04



20'-0" WIDE DOUBLE GATE DETAIL
NOT TO SCALE



CHAIN LINK FENCE DETAIL
NOT TO SCALE

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



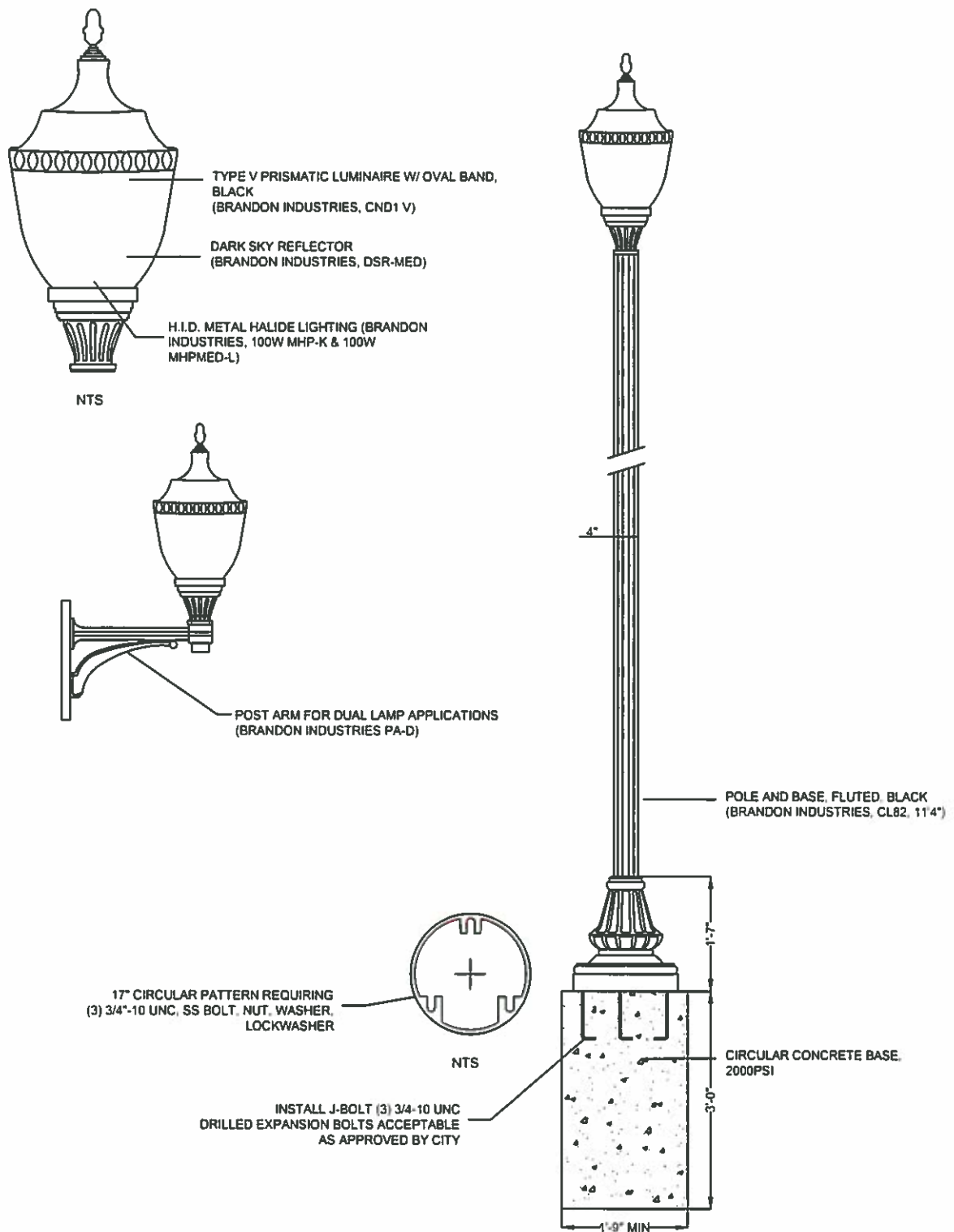
CHAIN LINK FENCE & DOUBLE GATE

DESIGNED: E.W.D.
DRAWN: M.K.W. / OBI

DATE: 10-27-16
REVISION: N/C

701

BLDG-01



STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



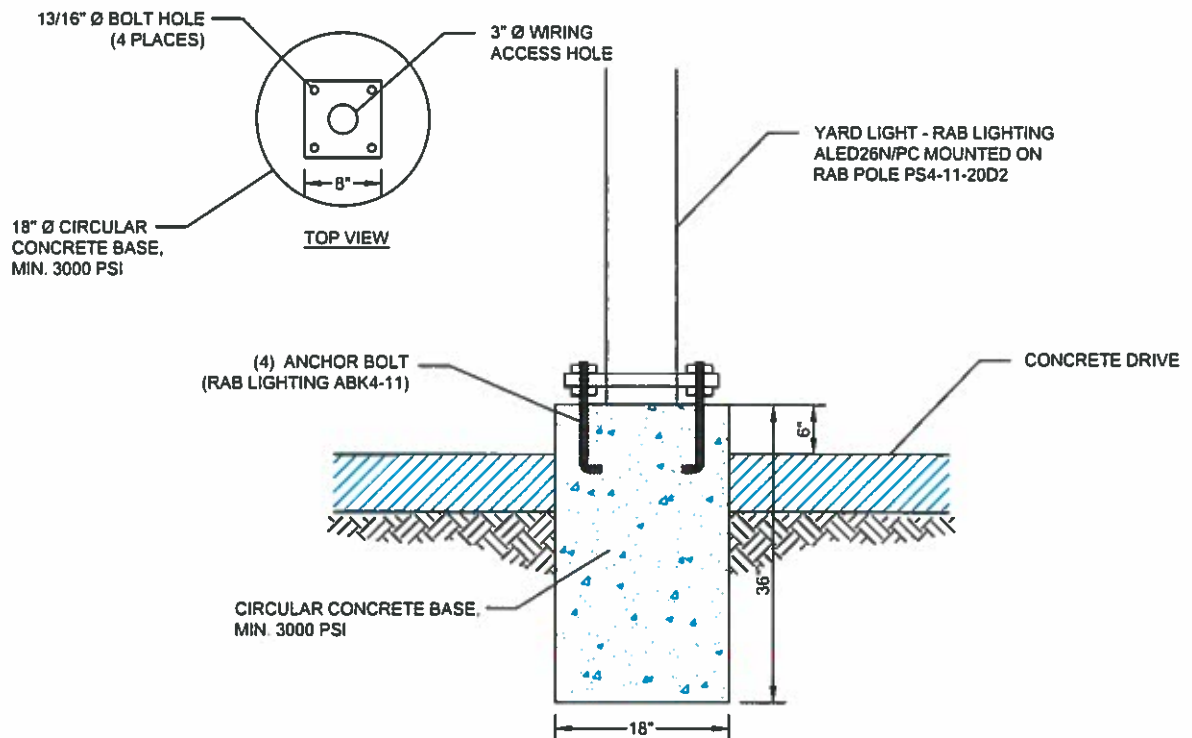
Farmersville

DECORATIVE LAMP

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-16
REVISION: N/C

801



YARD LIGHT POLE CONCRETE BASE

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



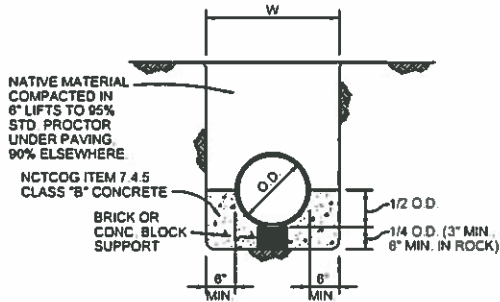
Farmersville

LIFT STATION YARD LIGHT POLE CONCRETE BASE

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

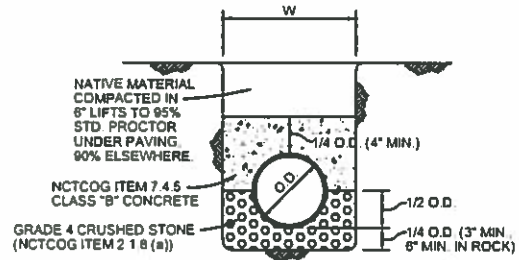
DATE: 10-27-16
REVISION: N/C

802



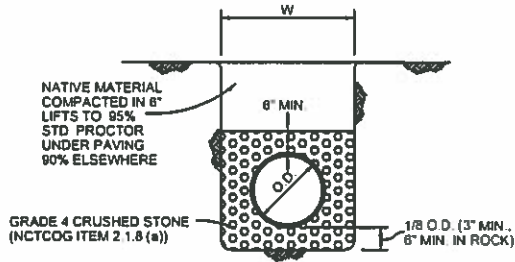
CLASS A EMBEDMENT

CONCRETE CRADLE



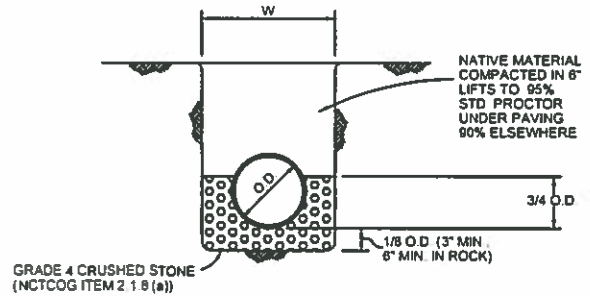
CLASS A-1 EMBEDMENT

CONCRETE CAP



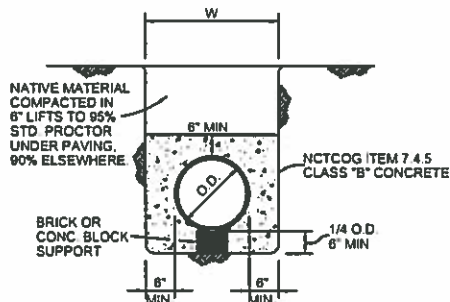
CLASS B+ EMBEDMENT

STD PVC WATER



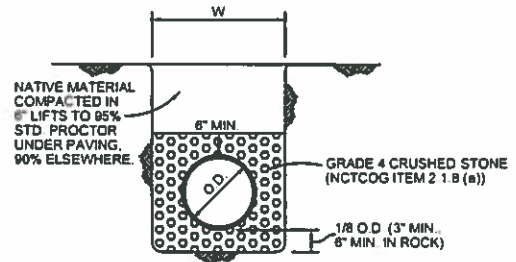
CLASS C EMBEDMENT

STD. DUCTILE IRON WATER OR SEWER
STD. R.C.C.P. WATER
STD. STORM SEWER



CLASS G EMBEDMENT

CONCRETE ENCASEMENT



CLASS H EMBEDMENT

P.V.C. PIPE ONLY
STD. P.V.C. SEWER

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



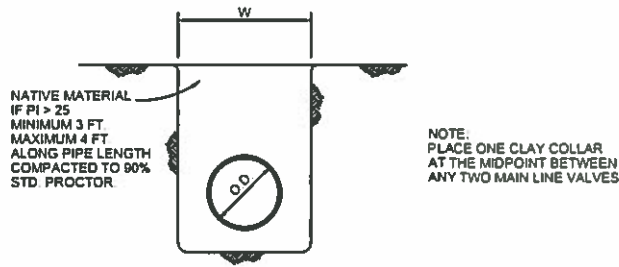
Farmersville

EMBEDMENT

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DRAWN: M.K.W. / DBI

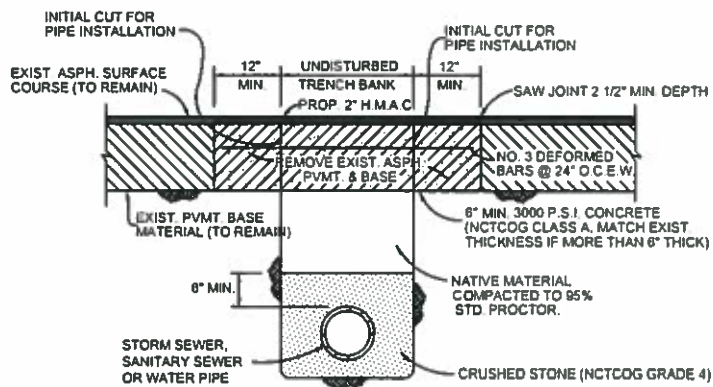
DATE: 10-27-18
REVISION: N/C

901



SEEPAGE BARRIER/CLAY COLLAR

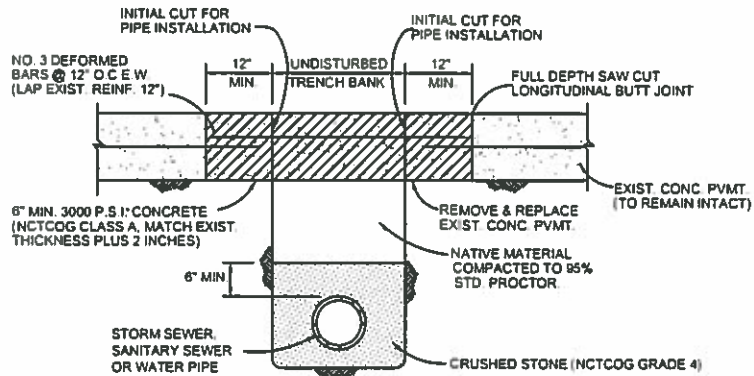
WATER MAINS



ASPHALT STREET OR DRIVEWAY REPAIR

GRADE 4 CRUSHED STONE GRADATION

SIEVE SIZE	% RETAINED
1-1/2 INCH	0
1 INCH	0-5
1/2 INCH	40-75
NO. 4	90-100
NO. 8	95-100



CONCRETE STREET OR DRIVEWAY REPAIR

STANDARD CONSTRUCTION DETAILS
FOR
CITY OF FARMERSVILLE
COLLIN COUNTY, TEXAS



Farmersville

EMBEDMENT

DESIGNED: E.W.D.
DRAWN: M.K.W. / DBI

DATE: 10-27-18
REVISION: N/C

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VI. Regular Agenda