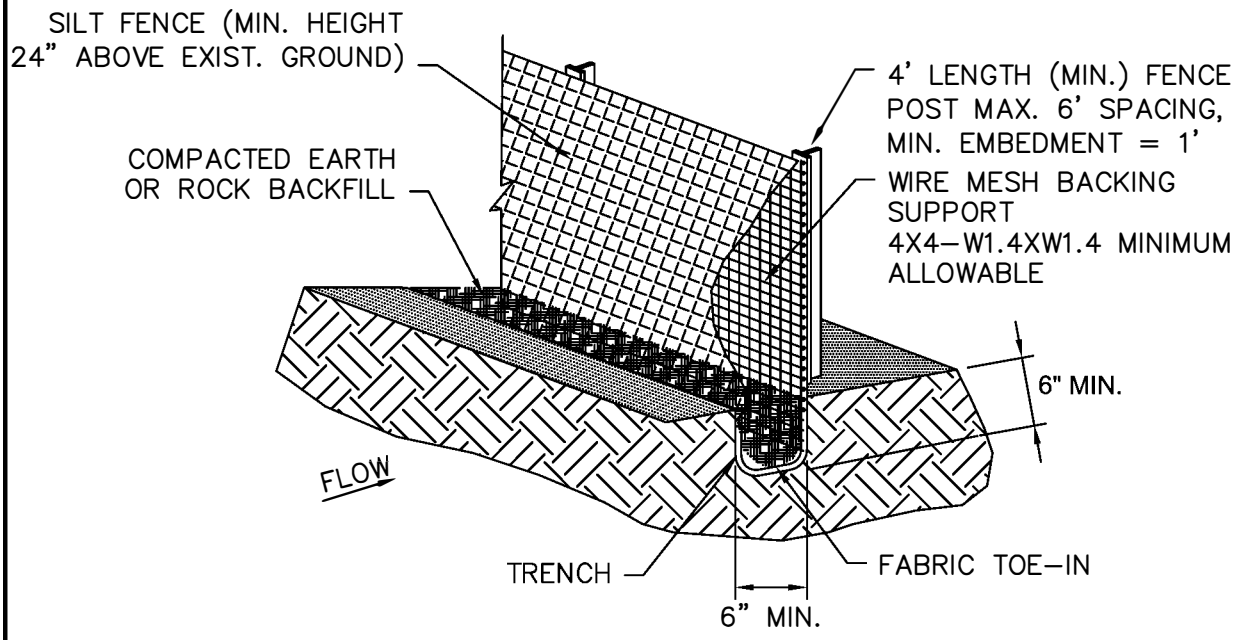
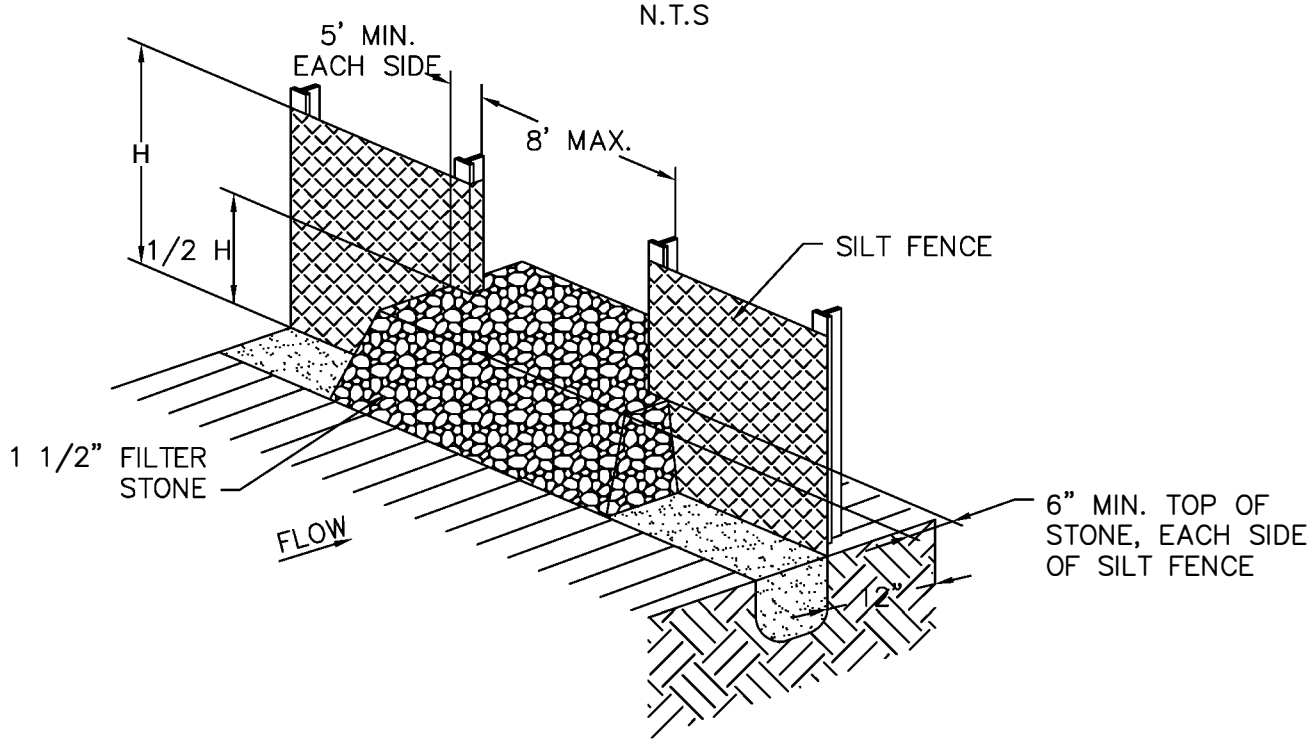


SILT FENCE

N.T.S



SILT FENCE OVERFLOW STRUCTURE

N.T.S

SILT FENCE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.5	
		DATE AUG '23	STANDARD DRAWING NO. 1020A

SILT FENCE GENERAL NOTES:

1. DESIGN SHALL SHOW ON THE DRAWINGS THE LOCATIONS WHERE OVERFLOW STRUCTURES SHALL BE INSTALLED. OVERFLOW STRUCTURES ARE REQUIRED AT ALL LOW POINTS AND AT A SPACING OF APPROXIMATELY 300 FEET WHERE NO LOW POINT IS APPARENT.

2. DESIGNER SHALL SHOW ON THE DRAWINGS THE LOCATIONS WHERE SILT FENCE IS TO BE TURNED UPSLOPE AT THE ENDS. UPSLOPE LENGTHS SHALL BE A MINIMUM OF 10 FEET.

3. POST WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.

4. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.

5. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

6. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH SUPPORT POST OR TO WIRE BACKING, WHICH IN TURN IS ATTACHED TO THE FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.

7. INSPECTION SHALL BE AS SPECIFIED IN THE SWPPP. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.

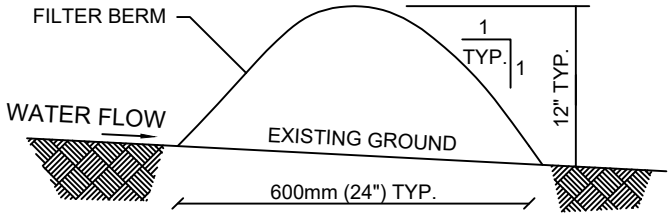
8. SILT FENCE SHALL BE REMOVED WHEN FINAL STABILIZATION IS ACHIEVED OR ANOTHER EROSION OR SEDIMENT CONTROL DEVICE IS EMPLOYED.

9. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

10. SEE NCTCOG STANDARD SPECIFICATIONS (2017), SECTION 202.5

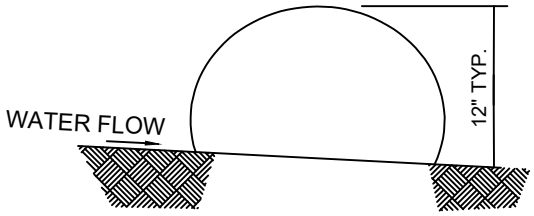
SILT FENCE GENERAL NOTES	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.5 DATE: AUG '23 / STANDARD DRAWING NO.: 1020B

BERM OPTION:

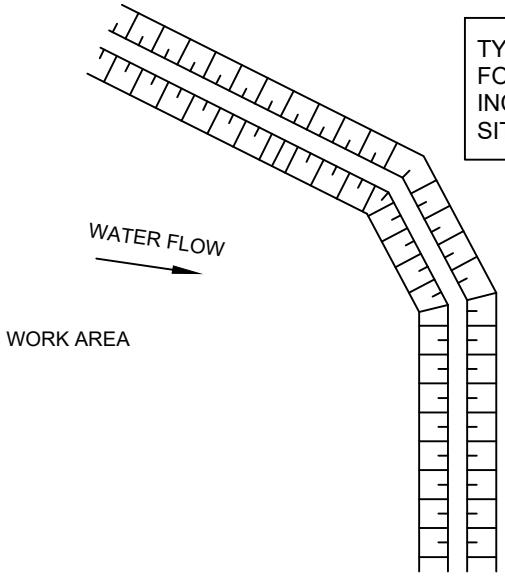


SOCK OPTION:

FILTER SOCK, SIZED TO SUIT CONDITIONS.
12" TO 18" (300mm TO 450mm) TYPICAL.



FILTER COMPOST MATERIAL
AS PER SPECIFICATIONS.



TYPICAL BERM FOR MINIMAL GRADES SHOWN.
FOR STEEPER GRADES, I.E. 2:1 SLOPES
INCREASE BERM SIZE AS DETERMINED ON
SITE BY ENGINEER.

NOTES:

1. ALL MATERIAL TO MEET MANUFACTURER'S SPECIFICATIONS.

2. THE CONTRACTOR SHALL MAINTAIN THE COMPOST FILTER BERM IN A FUNCTIONAL CONDITION AT ALL TIMES AND IT SHALL BE ROUTINELY INSPECTED.

3. WHERE THE BERM REQUIRES REPAIR, IT WILL BE ROUTINELY REPAIRED.

4. THE CONTRACTOR SHALL REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE BERM WHEN THEY REACH 1/3 OF THE EXPOSED HEIGHT OF THE BERM, OR AS DIRECTED BY THE ENGINEER.

5. THE COMPOST FILTER BERM WILL BE DISPERSED ON SITE WHEN NO LONGER REQUIRED, AS DETERMINED BY THE ENGINEER.

M* - CITY OF MELISSA REVISION

EROSION CONTROL BERM

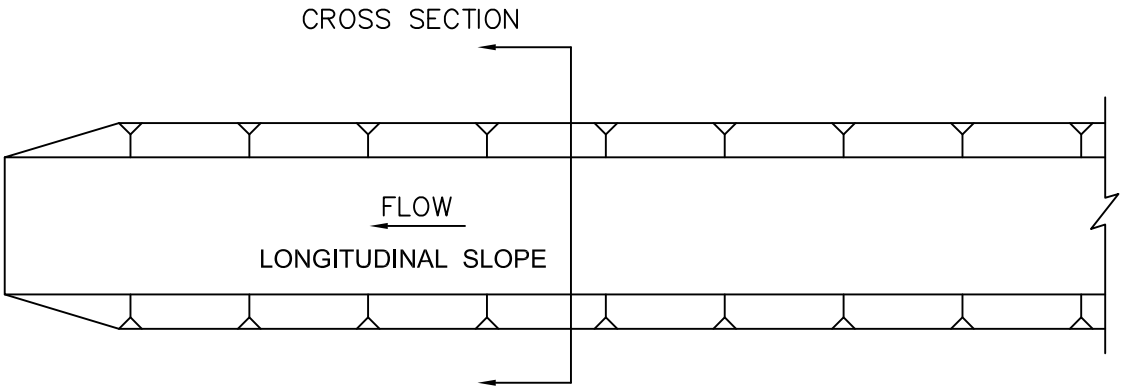
CITY OF MELISSA

MELISSA TX

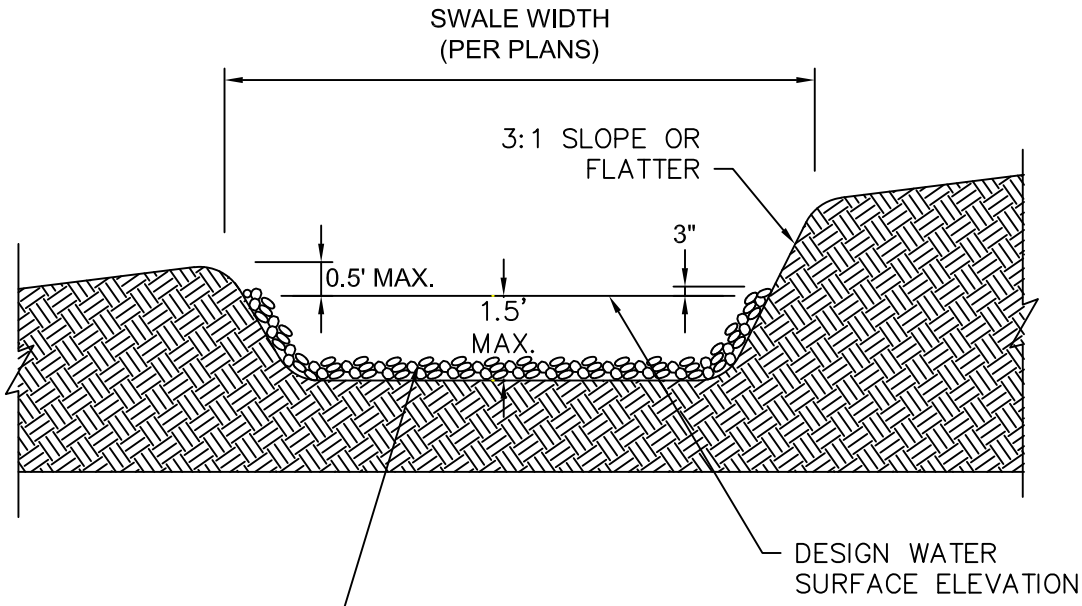
NCTCOG STANDARD SPECIFICATION REFERENCE
201

DATE
11/13/08

STANDARD DRAWING NO.
1020AM*



INTERCEPTOR SWALE PLAN VIEW
N.T.S.



FOR SWALE MATERIAL, SEE NOTE 6

INTERCEPTOR SWALE CROSS SECTION
N.T.S.

INTERCEPTOR SWALE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.6	
		DATE AUG '23	STANDARD DRAWING NO. 1030A

INTERCEPTOR SWALE GENERAL NOTES:

1. ALL TREES, BRUSH, STUMPS, OBSTUCTIONS AND OTHER MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.

2. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS-SECTION AS REQUIRED TO MEET CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.

3. ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE DISPOSED OF IN AN APPROVED SPOILS SITE SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.

4. DIVERTED RUNOFF FROM A DISTURBED OR EXPOSED UPLAND AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.

5. THE ON-SITE LOCATION MAY NEED TO BE ADJUSTED TO MEET FIELD CONDITIONS IN ORDER TO UTILIZE THE MOST SUITABLE OUTLET.

6. FOR LONGITUDINAL SLOPES LESS THAN 2 PERCENT AND VELOCITIES LESS THAN 6 FEET PER SECOND, THE MINIMUM REQUIRED SWALE STABILIZATION SHALL BE GRASS, EROSION CONTROL MATS OR MULCHING. FOR LONGITUDINAL SLOPES IN EXCESS OF 2 PERCENT OR VELOCITIES EXCEEDING 6 FEET PER SECOND, STABILIZATION IS REQUIRED IN THE FORM OF TURF REINFORCEMENT MATS (OR STABILIZED RIP-RAP WITH APPROPRIATE SIZE, GRADATION, AND THICKNESS AS SPECIFIED IN THE PLANS). SEE NOTES 9 AND 10.

7. MINIMUM COMPACTION FOR THE SWALE SHALL BE 95 PERCENT STANDARD PROCTOR.

8. INSPECTION SHALL BE AS SPECIFIED IN THE SWPPP.

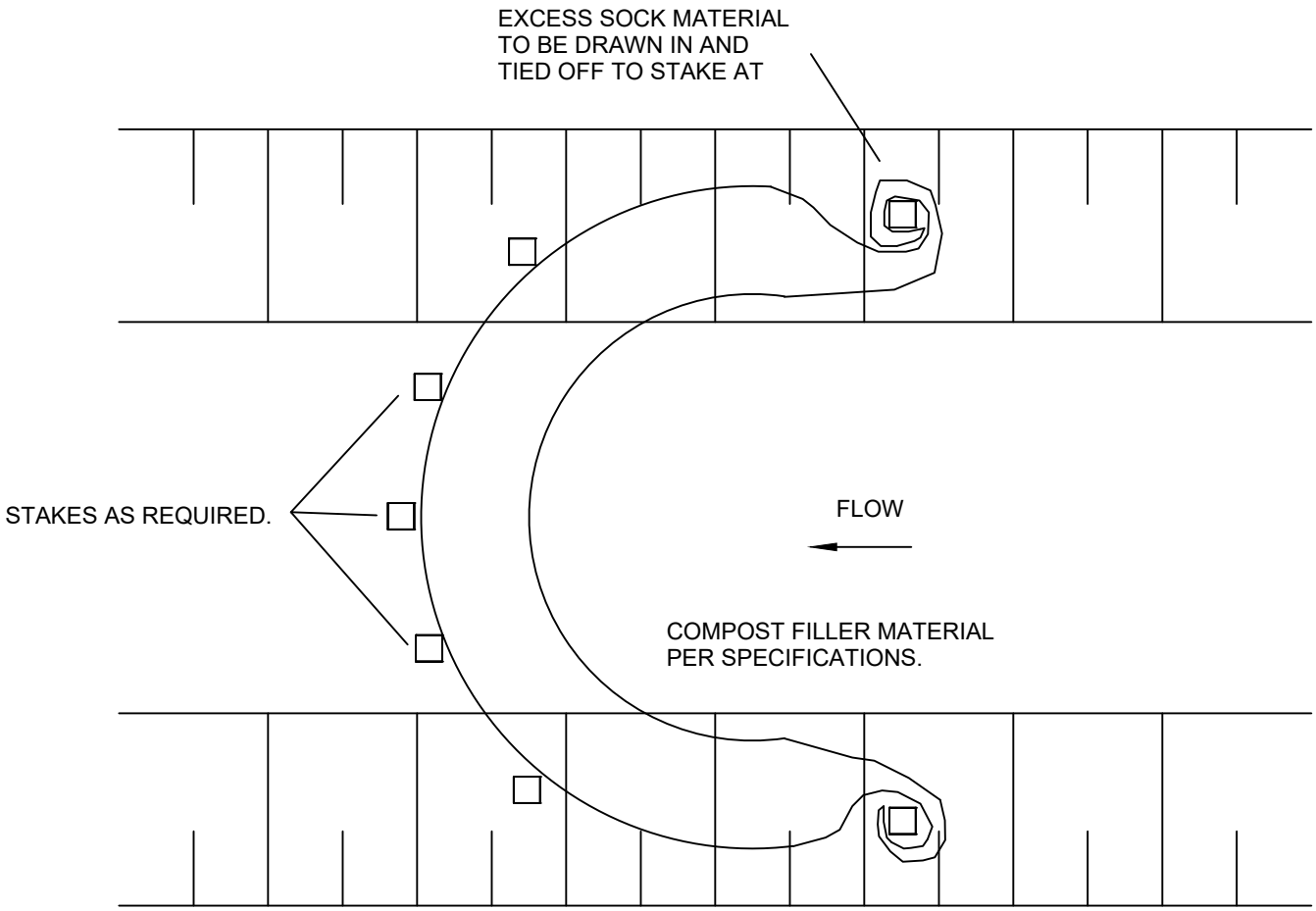
9. FOR TEMPORARY STABILIZATION RIP-RAP; WIDTH, DEPTH, AND SURFACE WATER ELEVATION SHOULD BE DESIGNED BY OWNER OR OWNER'S REPRESENTATIVE

10. REFER TO DRAWING 1210A, B, AND C FOR TURF REINFORCEMENT MAT.

11. SEE INTEGRATED STORMWATER MANAGEMENT MANUAL FOR MORE INFORMATION ON INTERCEPTOR SWALE.

INTERCEPTOR SWALE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE	
GENERAL NOTES		202.6	
		DATE	STANDARD DRAWING NO.
		AUG '23	1030B

FLITER SOCK SIZING TO SUIT CONDITIONS,
(8" TO 18" TYPICAL)



NOTES:

1. ALL MATERIAL TO MEET CITY OF MELISSA SPECIFICATIONS.

2. COMPOST MATERIAL WILL BE DISPERSED ON SITE WHEN NO LONGER REQUIRED, AS DETERMINED BY THE CITY ENGINEER.

M* - CITY OF MELISSA REVISION

DITCH PROTECTION

CITY OF MELISSA

MELISSA TX

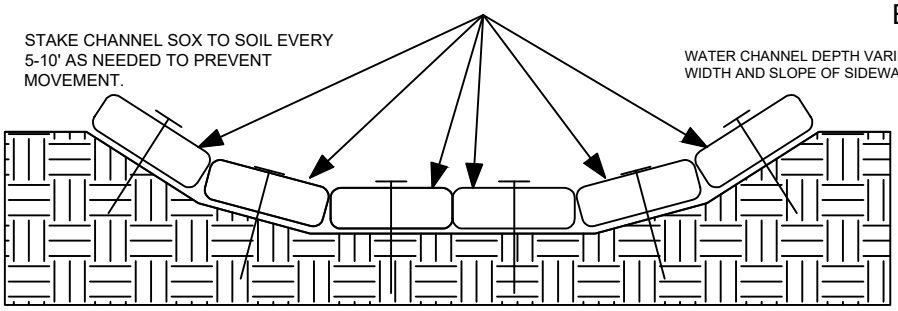
NCTCOG STANDARD SPECIFICATION REFERENCE
201

DATE
11/13/08

STANDARD DRAWING NO.
1040AM*

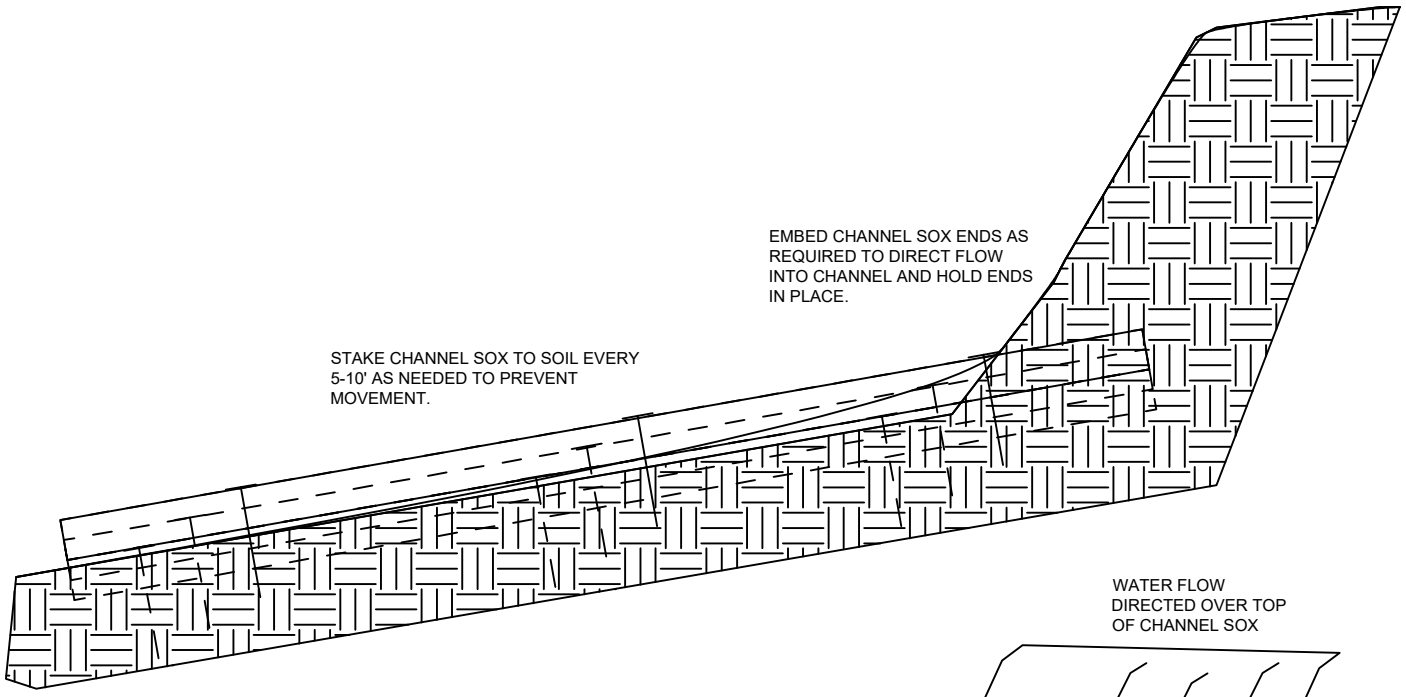
12" CHANNEL SOX

CHANNEL SOX PLACED IN EXISTING CHANNEL



USE SUFFICIENT CHANNEL SOX TO COMPLETELY LINE AREA OF WATER FLOW

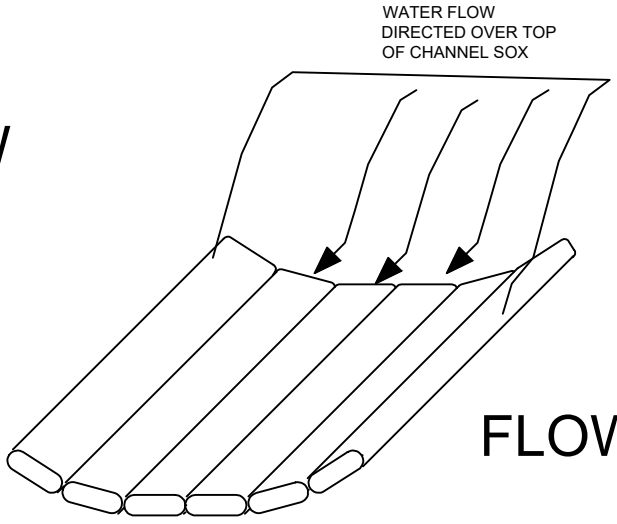
END VIEW



SIDE VIEW

NOTES:

1. ALL MATERIAL TO MEET CITY OF MELISSA SPECIFICATIONS.
2. THE CONTRACTOR SHAL MAINTAIN THE COMPOST FILTER SOX IN FUNCTIONAL CONDITION AT ALL TIMES AND IT SHALL BE ROUTINELY INSPECTED.



FLOW

M* - CITY OF MELISSA REVISION

CHANNEL EROSION CONTROL

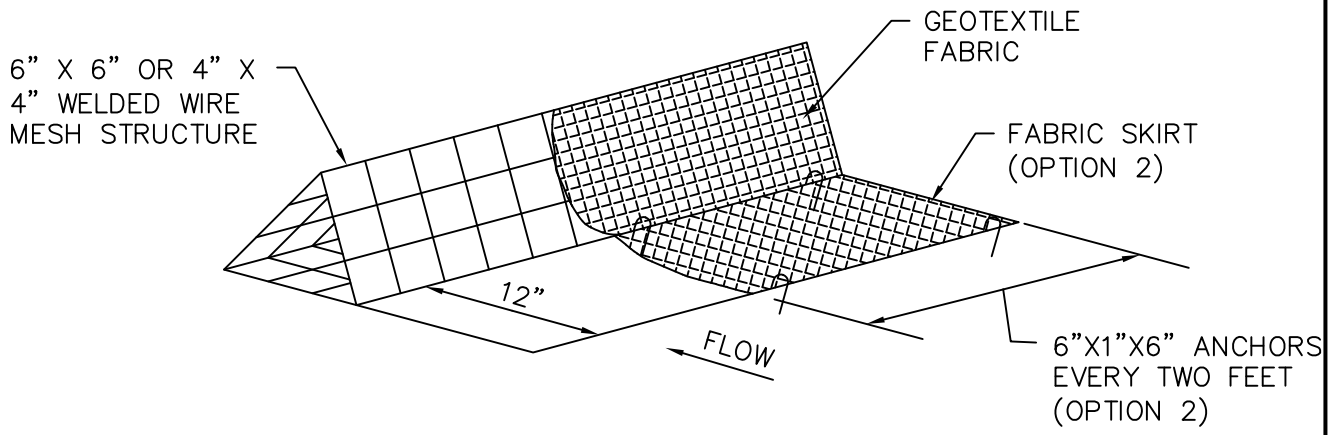
CITY OF MELISSA

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE
201

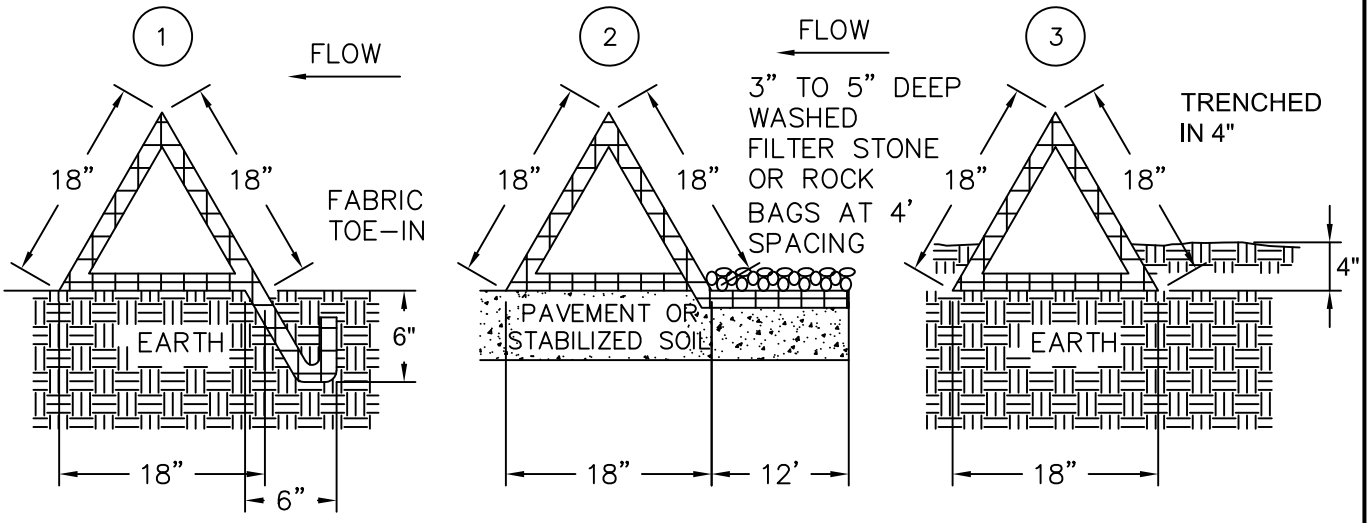
DATE
11/13/08

STANDARD DRAWING NO.
1040BM*



ISOMETRIC PLAN VIEW

N.T.S



1. TOE–IN 6" MIN.
2. FABRIC SKIRT WEIGHTED WITH FILTER STONE
   (ROCK BAGS MAY BE SUBSTITUTED FOR FILTER STONE)
3. TRENCHED IN 4"

CROSS SECTION OF INSTALLATION OPTIONS

N.T.S

TRIANGULAR SEDIMENT FILTER DIKE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.8	
		DATE AUG '23	STANDARD DRAWING NO. 1050A

TRIANGULAR SEDIMENT FILTER DIKE GENERAL NOTES:

1. DIKES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT DIKE.

2. THE FABRIC COVER AND SKIRT SHALL BE A CONTINUOUS EXTENSION OF THE FABRIC ON THE UPSTREAM FACE, AND FABRIC SHALL BE OVERLAPPED A MINIMUM OF 12".

3. THE SKIRT SHALL BE WEIGHTED WITH A CONTINUOUS LAYER OF TYPE 'A' RIP RAP, OR TOED–IN 6" WITH MECHANICALLY COMPACTED MATERIAL. OTHERWISE, THE ENTIRE STRUCTURE SHALL BE TRENCHED TO A DEPTH OF 4 INCHES.

4. DIKES AND SKIRT SHALL BE SECURELY ANCHORED IN PLACE USING 6–INCH WIRE STAPLES ON 2–FOOT CENTERS ON BOTH EDGES AND SKIRTS.

5. FILTER MATERIAL SHALL BE LAPPED OVER ENDS 6" TO COVER DIKE TO DIKE JOINTS. JOINTS SHALL BE FASTENED WITH GALVANIZED SHOAT RINGS.

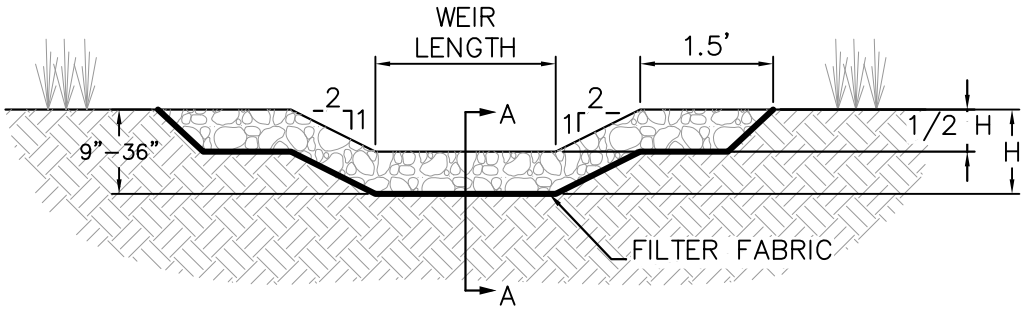
6. THE DIKE STRUCTURE SHALL BE W2.9–6" X 6" OR 4" X 4" WELDED WIRE MESH, 18" ON A SIDE.

7. INSPECTION SHALL BE AS SPECIFIED IN THE SWPPP. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.

8. THE FILTER DIKE SHALL BE REMOVED WHEN FINAL STABILIZATION IS ACHIEVED OR ANOTHER EROSION OR SEDIMENT CONTROL DEVICE IS EMPLOYED.

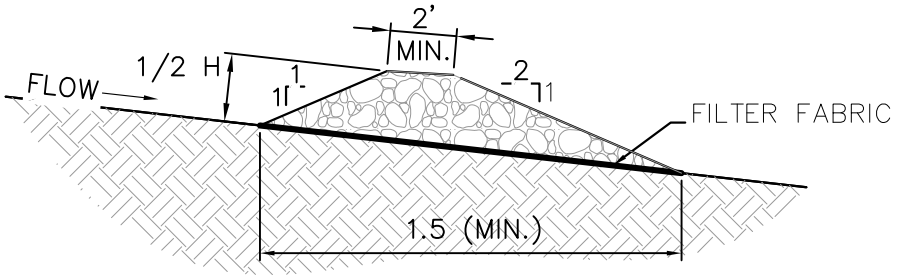
9. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES APPROXIMATELY 6–INCHES IN DEPTH. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

TRIANGULAR SEDIMENT FILTER DIKE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE: 202.8
GENERAL NOTES		DATE: AUG '23 / STANDARD DRAWING NO.: 1050B



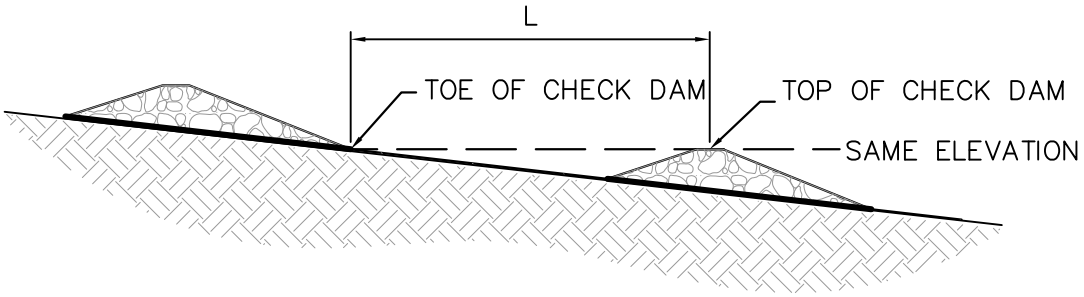
ROCK CHECK DAM VIEW LOOKING UPSTREAM

N.T.S.



CROSS SECTION A–A

N.T.S.



SPACE BETWEEN ROCK CHECK DAMS

N.T.S.

NOTES:
ACTUAL DIMENSIONS OF THE CHECK DAMS SHALL BE DESIGNED BASED ON FLOW CONDITIONS IN THE DRAINAGE SWALE OR DITCH. HEIGHT (H) AND SPACING (L) OF CHECK DAM AS PROVIDED IN PLANS BY OWNER OR OWNER'S REPRESENTATIVE. PROVIDE CALCULATIONS UPON REQUEST OF THE REVIEWING AGENCY.

ROCK CHECK DAM	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.9	
		DATE AUG '23	STANDARD DRAWING NO. 1060A

ROCK CHECK DAM GENERAL NOTES:

1. SEE NCTCOG STANDARD SPECIFICATIONS (2017), SECTION 202.9 CHECK DAM (ROCK)

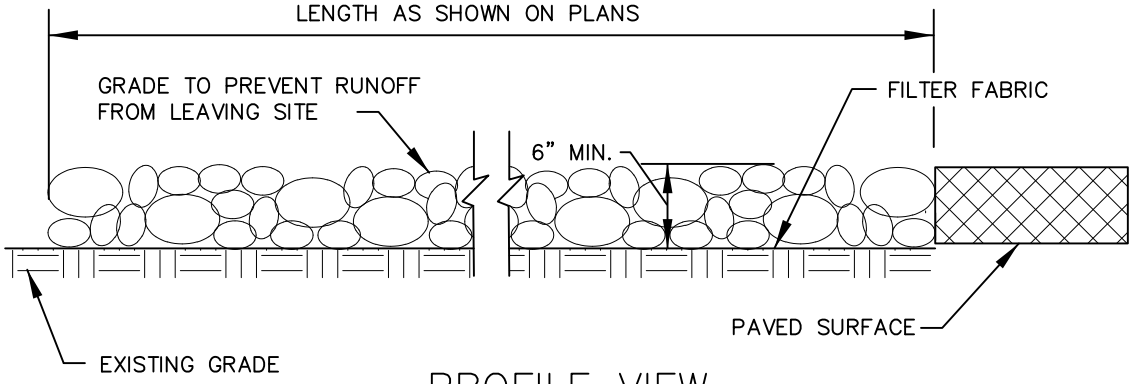
2. STONE SHALL BE WELL GRADED WITH SIZE RANGE FROM 1½ TO 3½ INCHES IN DIAMETER DEPENDING ON EXPECTED FLOWS.

3. THE CHECK DAM SHALL BE INSPECTED AS SPECIFIED IN THE SWPPP AND SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

4. WHEN SILT REACHES A DEPTH EQUAL TO ONE–THIRD OF THE HEIGHT OF THE CHECK DAM OR ONE FOOT, WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF PROPERLY.

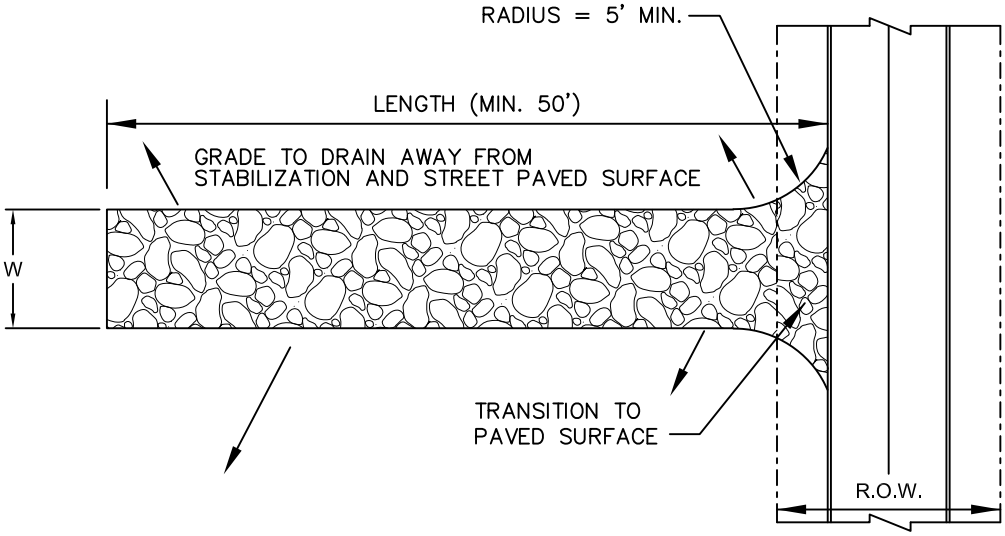
5. WHEN THE SITE HAS ACHIEVED FINAL STABILIZATION OR ANOTHER EROSION OR SEDIMENT CONTROL DEVICE IS EMPLOYED, THE CHECK DAM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

ROCK CHECK DAM	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.9	
GENERAL NOTES		DATE AUG '23	STANDARD DRAWING NO. 1060B



PROFILE VIEW

N.T.S.



WIDTH (W)
20' MIN. FOR < 5 AC SITES
30' MIN. FOR > 5 AC SITES

PLAN VIEW

N.T.S.

EXIT MUST BE SLOPED SO THAT STORM WATER IS NOT ALLOWED TO LEAVE THE SITE AND ENTER ROADWAYS

STABILIZED CONSTRUCTION EXIT	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.11	
		DATE AUG '23	STANDARD DRAWING NO. 1070A

STABILIZED CONSTRUCTION EXIT GENERAL NOTES:

1. SEE NCTCOG STANDARD SPECIFICATIONS (2017), SECTION 202.11

2. THE THICKNESS SHALL NOT BE LESS THAN 6 INCHES.

3. STONE SHALL BE 3 TO 5 INCH DIAMETER COURSE AGGREGATE, NO CRUSHED PORTLAND CEMENT CONCRETE ALLOWED.

4. LENGTH SHALL BE SHOWN ON PLANS, WITH A MINIMUM LENGTH OF 50 FEET.

5. THE WIDTH SHALL BE NO LESS THAN 20' FOR SITES LESS THAN 5 AC, AND 30' FOR SITES GREATER THAN 5 AC, AT ALL POINTS OF INGRESS OR EGRESS.

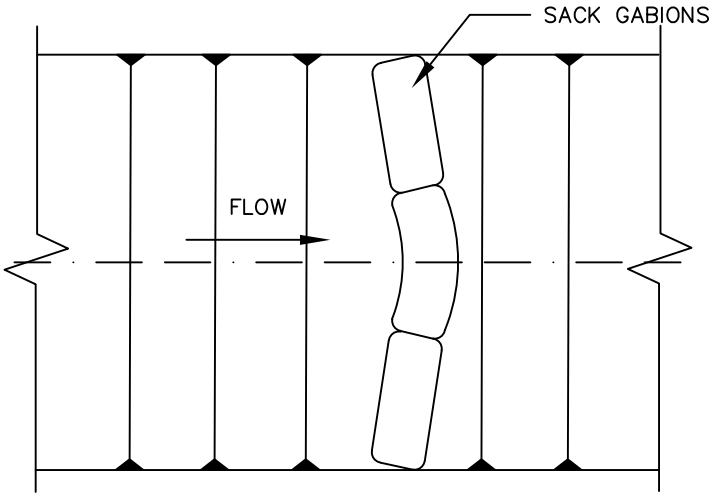
6. WHEN NECESSARY, VEHICLES SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO A PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED
WITH CRUSHED STONE WITH DRAINAGE FLOWING AWAY FROM BOTH THE STREET AND THE STABILIZED EXIT. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.

7. THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PAVED SURFACES. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PAVED SURFACES MUST BE REMOVED IMMEDIATELY.

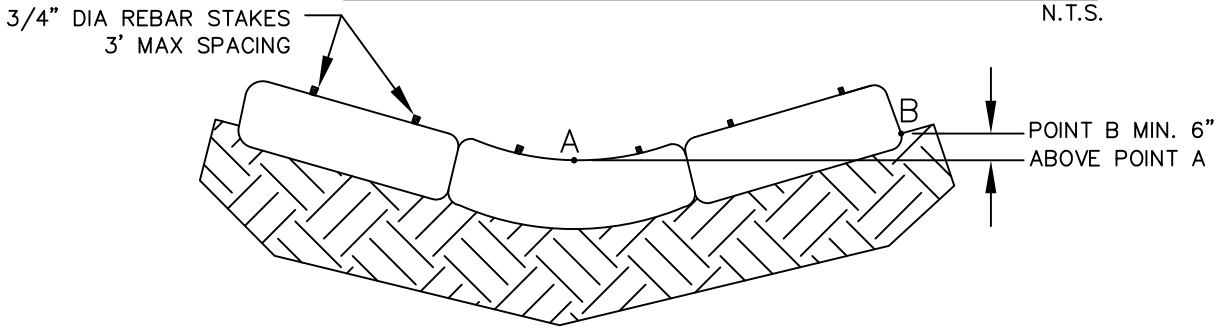
8. THE EXIT MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

9. INSPECTION SHALL BE SPECIFIED IN THE SWPPP.

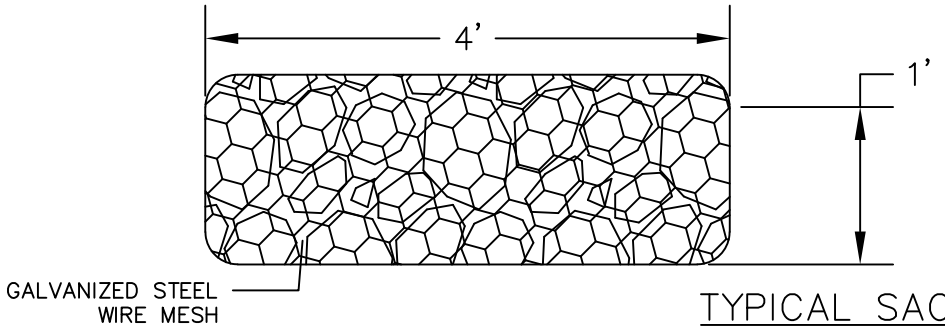
STABILIZED CONSTRUCTION EXIT, GENERAL NOTES	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.11	
		DATE AUG '23	STANDARD DRAWING NO. 1070B



SACK GABION CHECK DAM PLAN VIEW
N.T.S.



SACK GABION CHECK DAM VIEW LOOKING UPSTREAM
N.T.S.



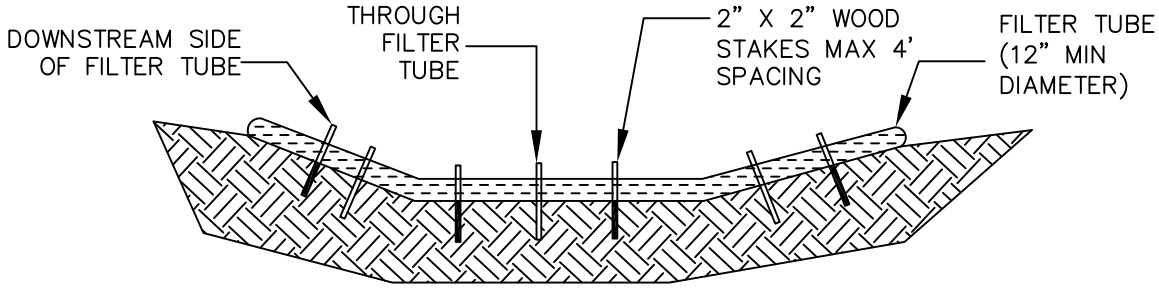
TYPICAL SACK GABION
N.T.S.

SACK GABION CHECK DAM GENERAL NOTES:

1. ACTUAL DIMENSIONS OF THE CHECK DAMS SHALL BE DESIGNED BASED ON FLOW CONDITIONS IN THE DRAINAGE SWALE OR DITCH.
2. HEIGHT (H) AND SPACING (L) OF CHECK DAM AS PROVIDED IN PLANS BY OWNER OR OWNER'S REPRESENTATIVE. PROVIDE CALCULATIONS UPON REQUEST OF THE REVIEWING AGENCY.

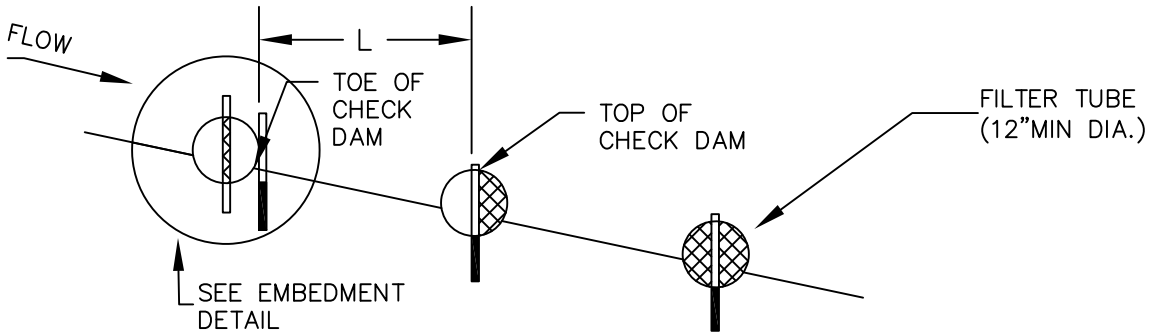
NOTES:
ACTUAL DIMENSIONS OF THE CHECK DAMS SHALL BE DESIGNED BASED ON FLOW CONDITIONS IN THE DRAINAGE SWALE OR DITCH. HEIGHT (H) AND SPACING (L) OF CHECK DAM AS PROVIDED IN PLANS BY OWNER OR OWNER'S REPRESENTATIVE. PROVIDE CALCULATIONS UPON REQUEST OF THE REVIEWING AGENCY.

SACK GABION CHECK DAMS	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE: NA
		DATE: AUG '23 / STANDARD DRAWING NO.: 1080



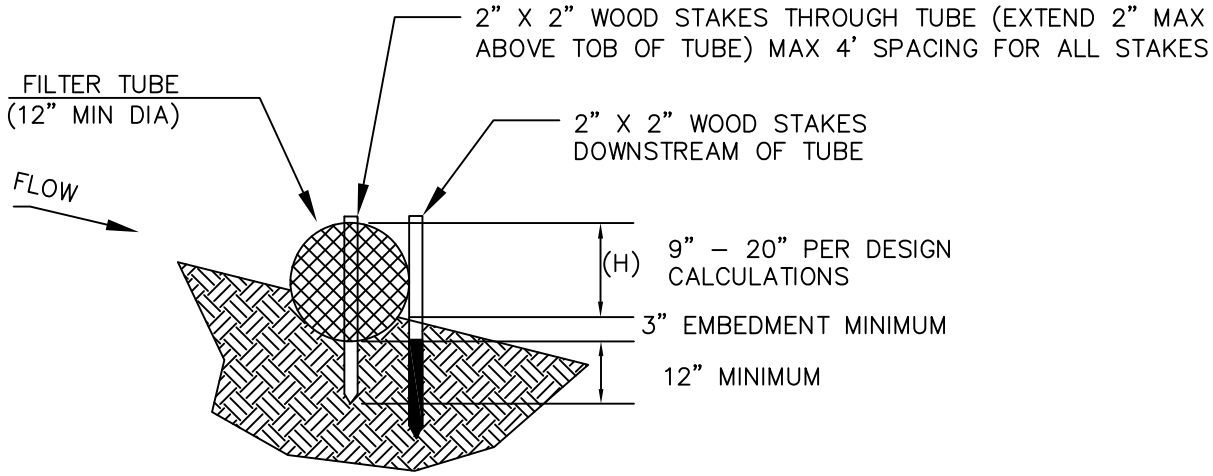
FILTER TUBE CHECK DAM VIEW LOOKING UPSTREAM

N.T.S.



FILTER TUBE CHECK DAM PROFILE

N.T.S.



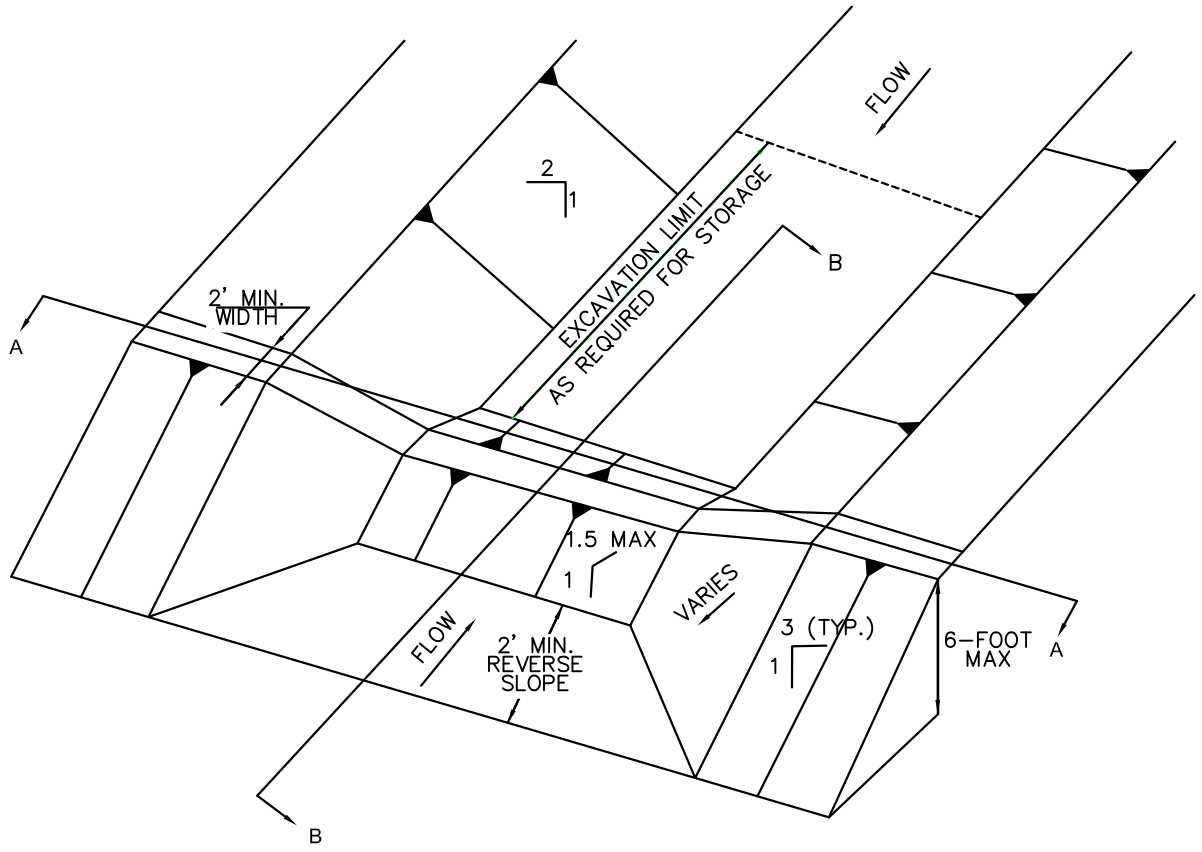
EMBEDMENT DETAIL FOR FILTER TUBE CHECK DAM

N.T.S.

GENERAL NOTES:

1. ACTUAL DIMENSIONS OF THE CHECK DAMS SHALL BE DESIGNED BASED ON FLOW CONDITIONS IN THE DRAINAGE SWALE OR DITCH.
2. HEIGHT (H) AND SPACING (L) OF CHECK DAM AS PROVIDED IN PLANS BY OWNER OR OWNER'S REPRESENTATIVE. PROVIDE CALCULATIONS UPON REQUEST OF THE REVIEWING AGENCY.

FILTER TUBE CHECK DAM	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.10	
		DATE AUG '23	STANDARD DRAWING NO. 1090



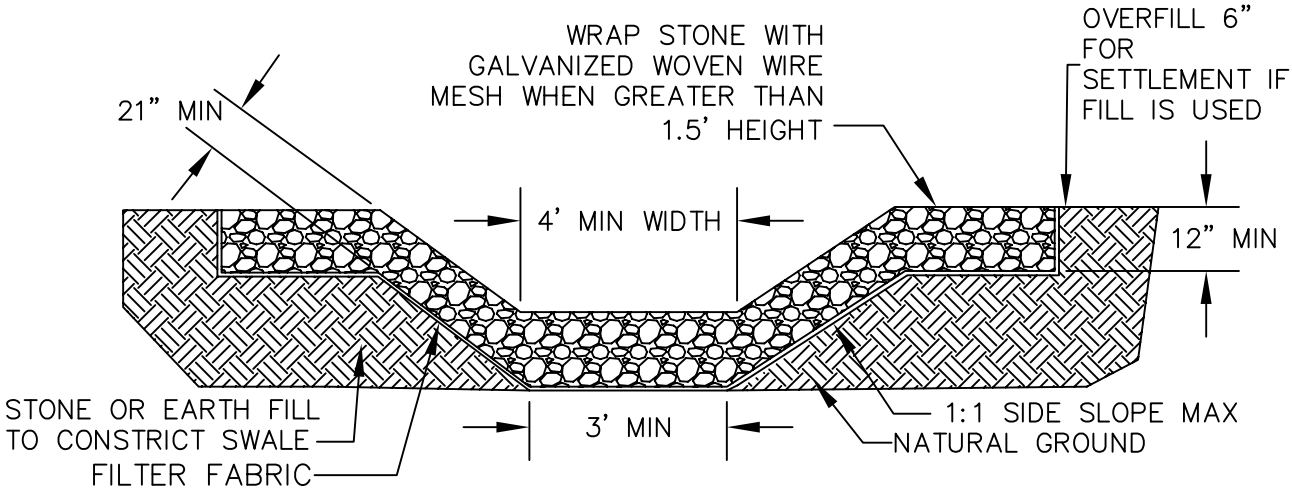
EXCAVATED STONE OUTLET SEDIMENT TRAP ISOMETRIC VIEW

N.T.S.

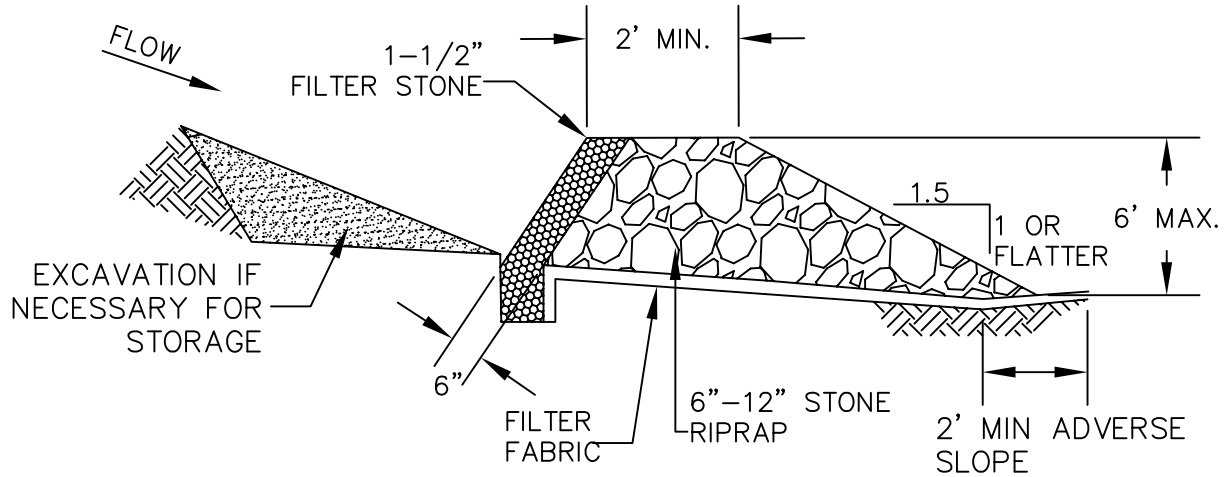
NOTE: ACTUAL DIMENSIONS OF THE SEDIMENT TRAP SHALL BE DESIGNED BASED ON FLOW CONDITIONS AND SITE TOPOGRAPHY. PROVIDE CALCULATIONS THAT DOCUMENT THE FOLLOWING PARAMETER USED TO DESIGN THE TRAP.

- SIZE OF CONTRUBUTING DRAINAGE AREA
- DESIGN STORM VOLUME AND FLOW RATE AT THE TRAP
- HEIGHT, SLOPE, AND LENGTH OF STONE OUTLET
- STORAGE VOLUME
- EXTENT OF GRADING TO PROVIDE THE CONTROLLED OUTLET

EXCAVATED STONE OUTLET	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.12	
SEDIMENT TRAP		DATE AUG '23	STANDARD DRAWING NO. 1100A



EXCAVATED STONE OUTLET SEDIMENT TRAP VIEW
LOOKING UPSTREAM
N.T.S.

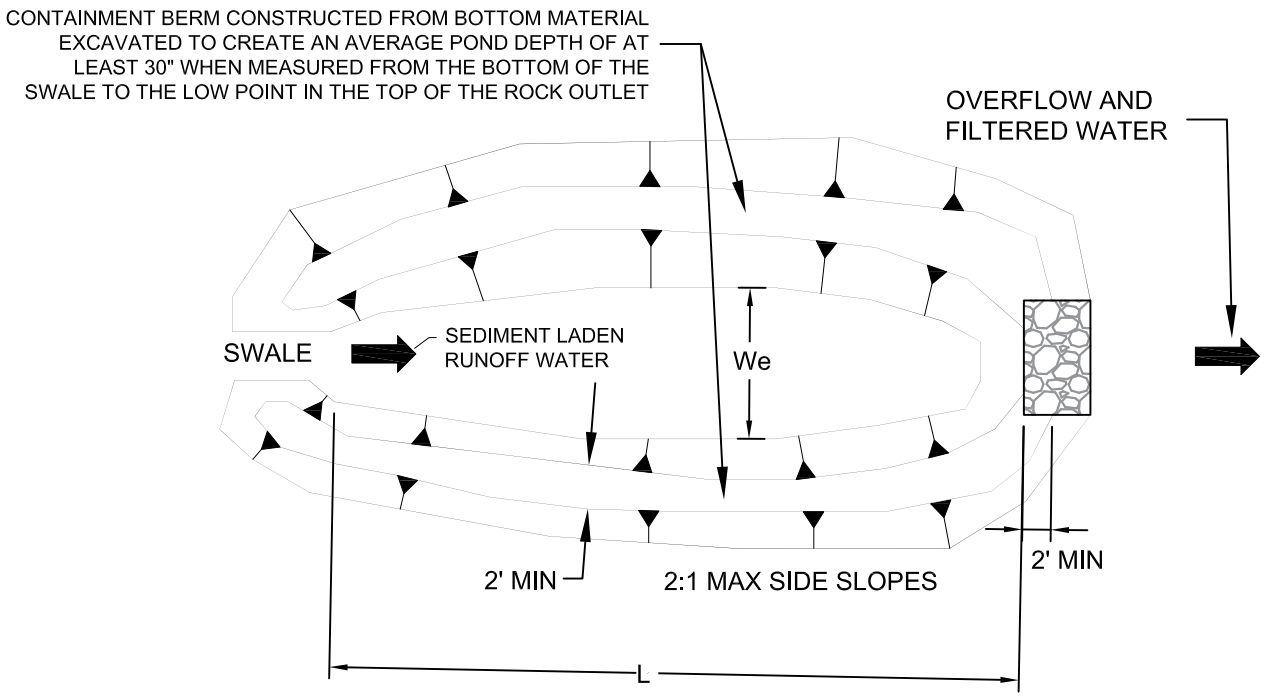


EXCAVATED STONE OUTLET SEDIMENT TRAP SECTION VIEW
N.T.S.

NOTES:

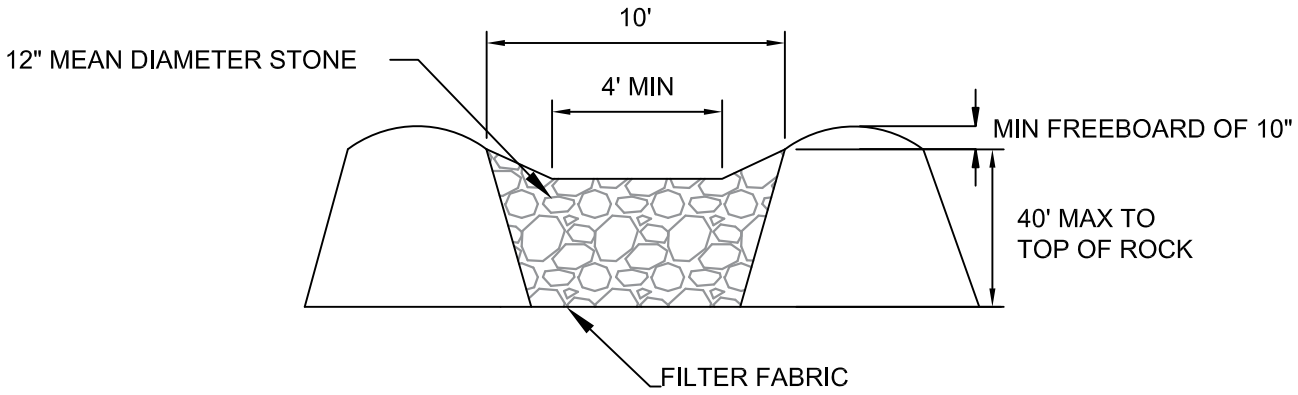
- ACTUAL DIMENSIONS OF THE SEDIMENT TRAP SHALL BE DESIGNED BASED ON FLOW CONDITIONS AND SITE TYPOLOGY.
- PROVIDE CALCULATIONS UPON REQUEST OF THE REVIEWING AGENCY.
- DESIGN VOLUME, HEIGHT, SLOPE, AND LENGTH AS PROVIDED IN PLANS PROVIDED BY OWNER OR OWNER'S REPRESENTATIVE.

EXCAVATED STONE OUTLET	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.12	
SEDIMENT TRAP, GENERAL NOTES		DATE AUG '23	STANDARD DRAWING NO. 1100B



BERMED STONE OUTLET SEDIMENT TRAP PLAN VIEW

N.T.S.



BERMED STONE OUTLET SEDIMENT TRAP SECTION VIEW

N.T.S.

GENERAL NOTES:

1. ACTUAL DIMENSIONS OF THE SEDIMENT TRAP SHALL BE DESIGNED BASED ON FLOW CONDITIONS AND SITE TOPOGRAPHY.

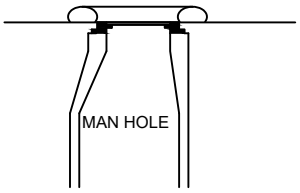
2. PROVIDE CALCULATIONS UPON REQUEST OF THE REVIEWING AGENCY.

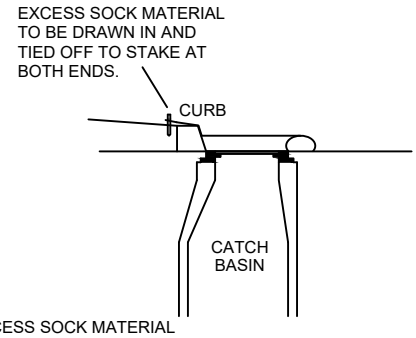
3. DESIGN OF VOLUME, HEIGHT, SLOPE, AND LENGTH AS PROVIDED IN PLANS PROVIDED BY OWNER OR OWNER'S REPRESENTATIVE.

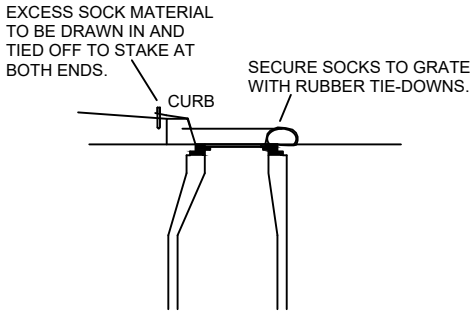
BERMED STONE OUTLET SEDIMENT TRAP	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.12	
		DATE AUG '23	STANDARD DRAWING NO. 1110

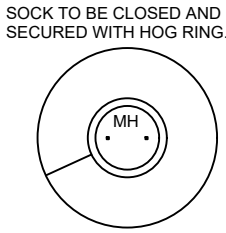
NOTES:

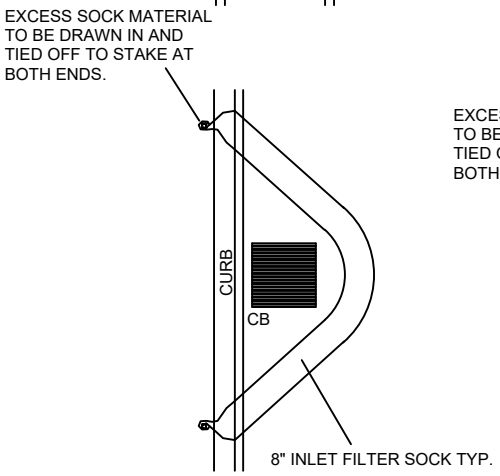
1. ALL MATERIAL TO MEET CITY OF MELISSA SPECIFICATIONS.
2. SECURE INLET FILTER SOCK TO GROUND AT EACH END.

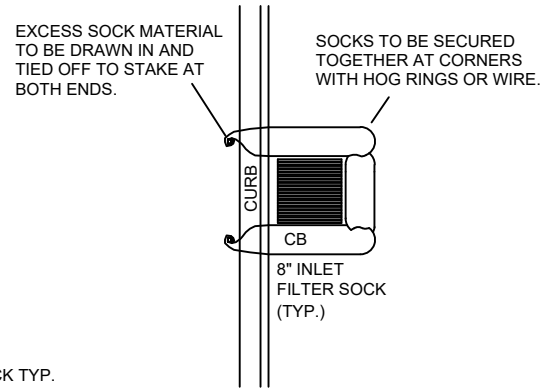












MANHOLE

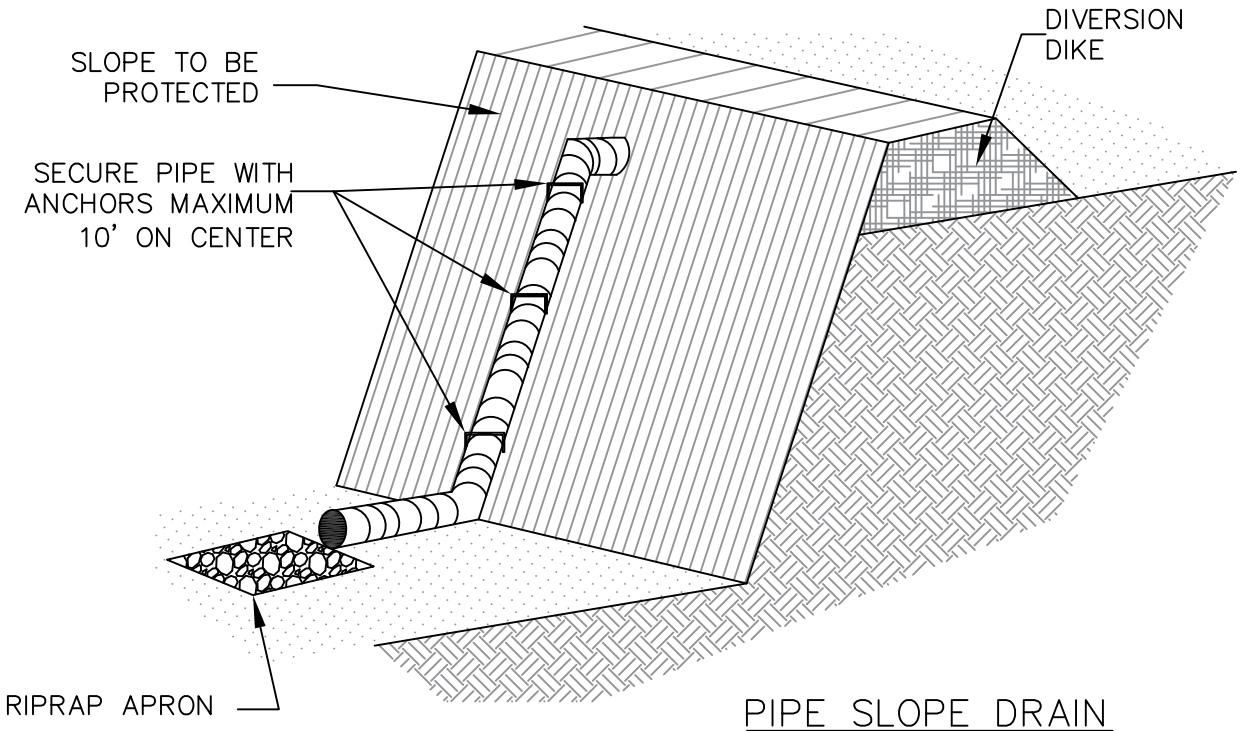
CATCH BASIN (OPTION "A")

CATCH BASIN (OPTION "B")

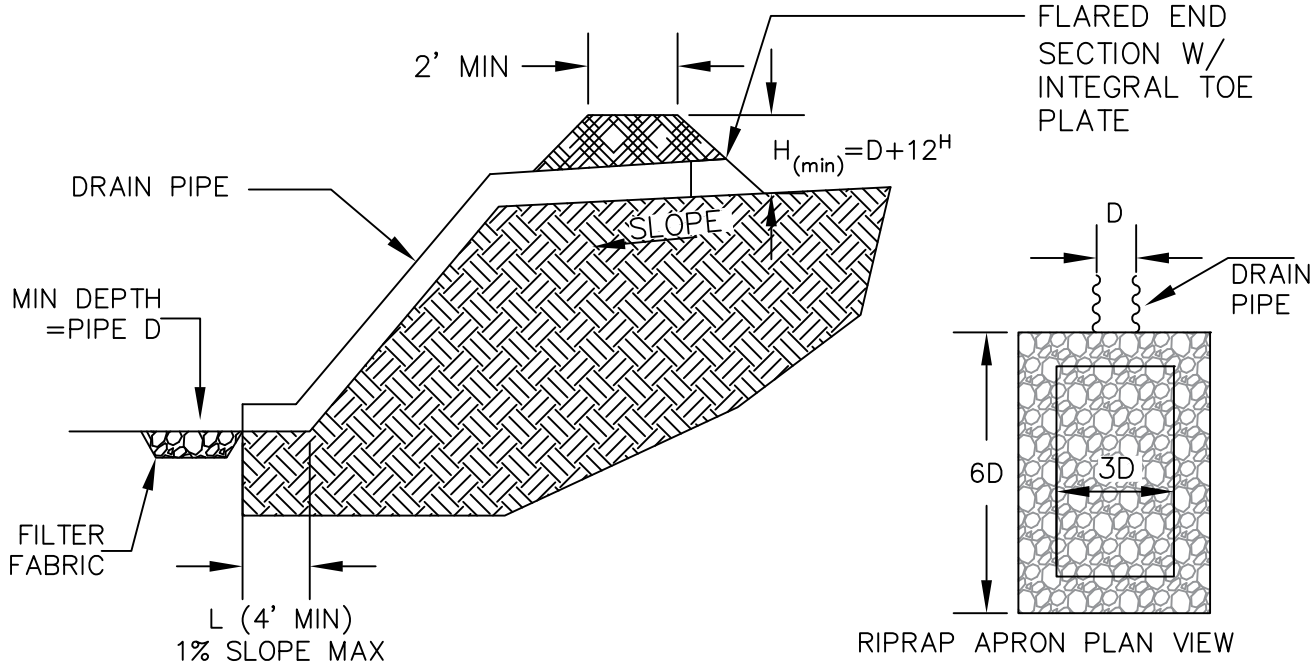
FOR USE IN TIGHTER AREAS, NARROW ROADS ETC.

M* - CITY OF MELISSA REVISION

INLET PROTECTION FILTER BARRIERS		NCTCOG STANDARD SPECIFICATION REFERENCE: 201.14
CITY OF MELISSA	MELISSA TX	DATE: 11/13/08 / STANDARD DRAWING NO.: 1120M*



PIPE SLOPE DRAIN
N.T.S.



PIPE SLOPE DRAIN CROSS-SECTION AND APRON PLAN VIEW
N.T.S.

PIPE SLOPE DRAIN	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.13	
		DATE AUG '23	STANDARD DRAWING NO. 1130A

GENERAL NOTES:

1. DIMENSIONS OF THE PIPE SLOPE DRAIN AND APPURTENANCES SHALL BE DESIGNED BASED ON SITE TOPOGRAPHY AND FLOW CONDITIONS.

2. H, L, AND D AS SHOWN SHALL BE PROVIDED IN PLANS BY OWNER OR OWNER'S REPRESENTATIVE.

3. PROVIDE CALCULATIONS THAT DOCUMENT THE FOLLOWING PARAMETERS USED TO DESIGN THE PIPE SLOPE DRAIN UPON REQUEST OF THE REVIEWING AGENCY.
   - 3.1. PIPE MATERIAL AND SIZE
   - 3.2. DISCHARGE VELOCITY
   - 3.3. STONE SIZE AN DIMENSIONS OF RIPRAP APRON
   - 3.4. PIPE LENGTH AND SLOPE

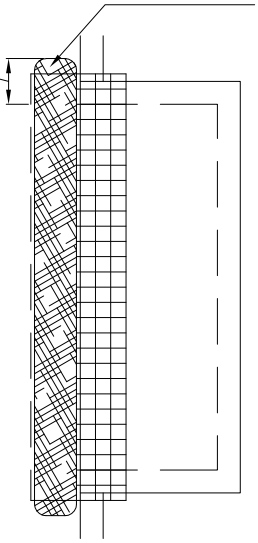
PIPE SLOPE DRAIN	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.13	
GENERAL NOTES		DATE AUG '23	STANDARD DRAWING NO. 1130B

NOT ALLOWED ON ACTIVE CITY STREETS UNLESS APPROVED BY CITY

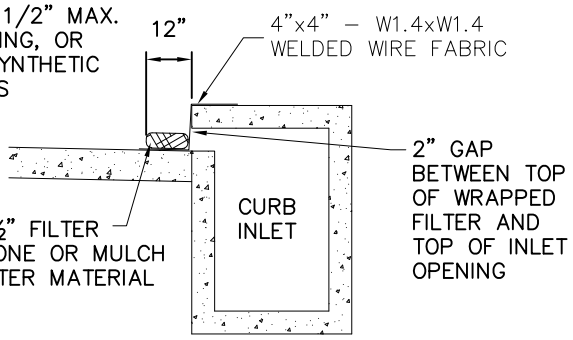
EXTENDED WRAPPED FILTER MATERIAL 24" MIN. BEYOND END OF CURB OPENING ON BOTH SIDES

1. DOUBLE WRAP OF FLEXIBLE WIRE MESH WITH MESH OPENING 3/4" MAX., OR
2. PLASTIC NETTING DOUBLE WRAPPED WITH 1/2" MAX. OPENING, OR
3. GEOSYNTHETIC TUBES

NOTE: PLASTIC OR WIRE TIES AROUND WIRE OR PLASTIC MESH EVERY 12"–18" OR MORE AS NEEDED



PLAN VIEW
N.T.S.

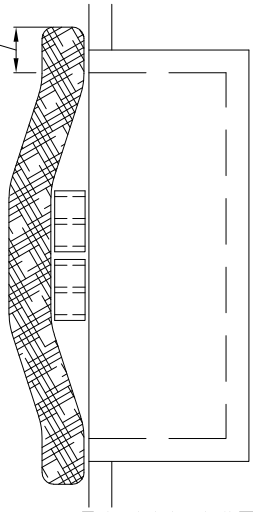


CROSS SECTION
N.T.S.

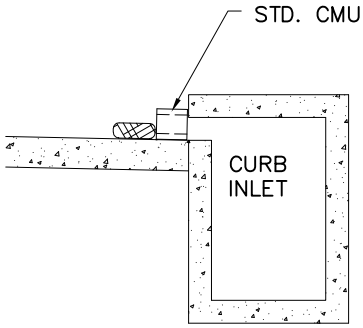
NOTE: VERTICAL PANEL BARRICADES TO BE PLACED WHEN LOCATED ON AN ACTIVE STREET.

TYPE A CURB INLET PROTECTION
N.T.S.

EXTENDED WRAPPED FILTER MATERIAL 24" MIN. BEYOND END OF CURB OPENING ON BOTH SIDES



PLAN VIEW
N.T.S.



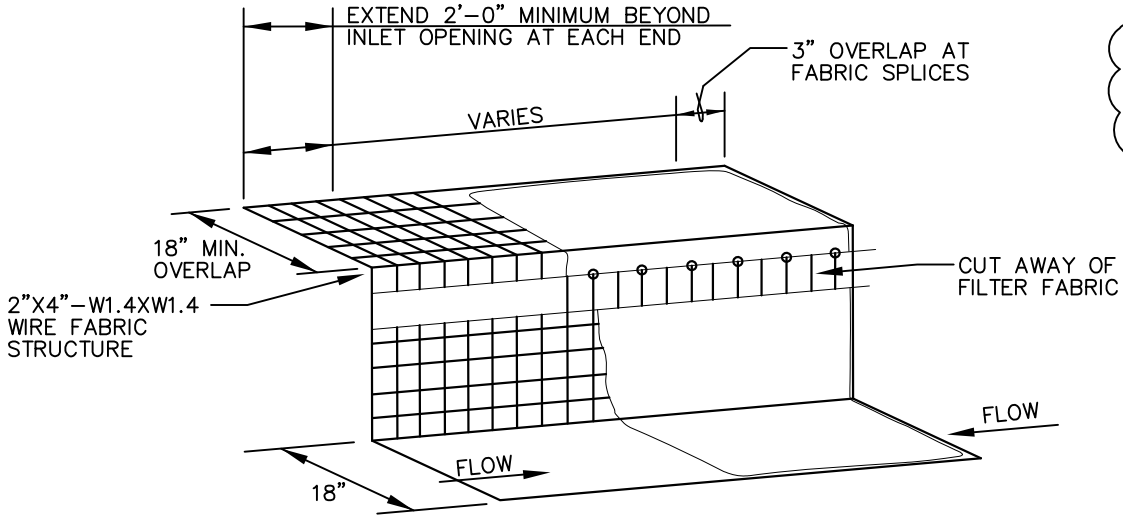
CURB OPENING	MIN. NO. BLOCKS
4'–6'	1
8'–10'	2
12'–14'	3
16'–20'	4

CROSS SECTION
N.T.S.

NOTE: SEE NCTCOG STANDARD SPECIFICATIONS (2017), SECTION 202.14 AND 202.18

ALTERNATIVE FORM FOR TYPE A CURB INLET PROTECTION
N.T.S.

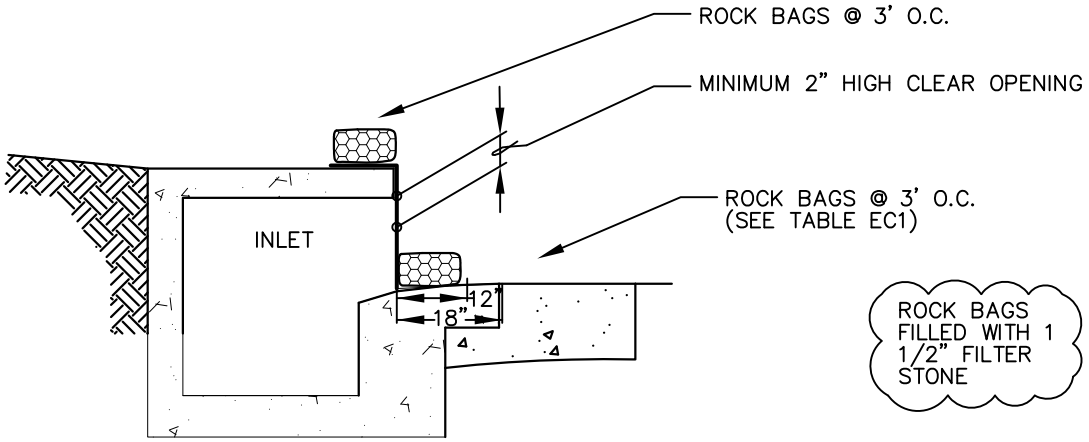
FILTER TUBE CURB INLET PROTECTION	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.14	
		DATE AUG '23	STANDARD DRAWING NO. 1140



NOT ALLOWED ON ACTIVE CITY STREETS UNLESS APPROVED BY CITY

WIRE WEIR CURB INLET PROTECTION ISOMETRIC VIEW

N.T.S.



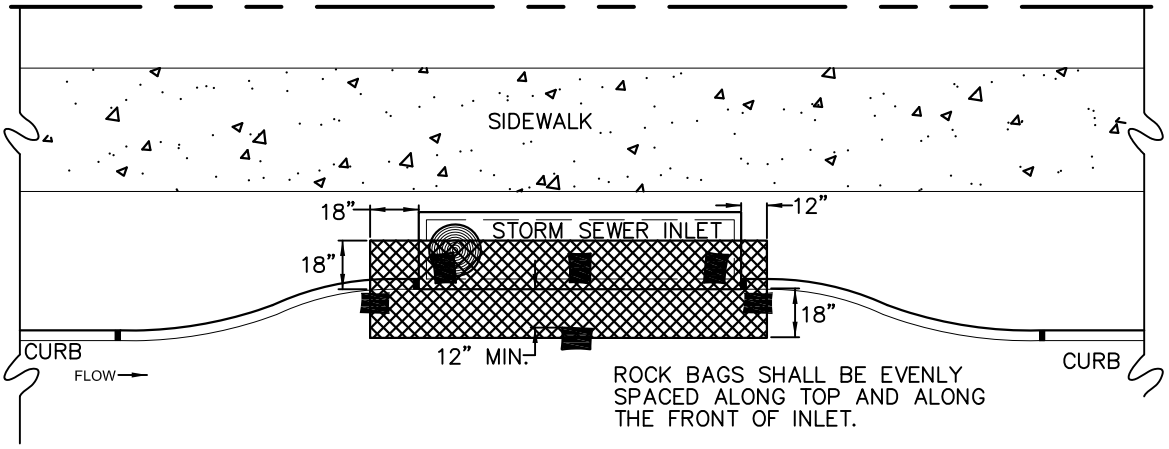
ROCK BAGS FILLED WITH 1 1/2" FILTER STONE

WIRE WEIR CURB INLET PROTECTION CROSS SECTION

N.T.S.

NOTE: THIS CONTROL WILL DECREASE THE CAPACITY OF THE INLET. IT SHALL ONLY BE USED WHEN AN ENGINEER HAS DETERMINED THERE IS ADEQUATE STORAGE OR POSITIVE OVERFLOW.

WIRE WEIR CURB INLET PROTECTION	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.14	
		DATE AUG '23	STANDARD DRAWING NO. 1150A



WIRE WEIR CURB INLET PROTECTION PLAN VIEW

N.T.S

TABLE EC1

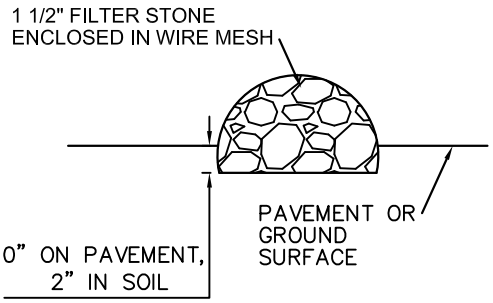
INLET OPENING	MINIMUM NUMBER OF ROCK BAGS	
	TOP	FRONT
5'–0"	2	3
10'–0"	3	3
15'–0"	3	4
20'–0"	4	4

NOT ALLOWED ON ACTIVE CITY STREETS UNLESS APPROVED BY CITY

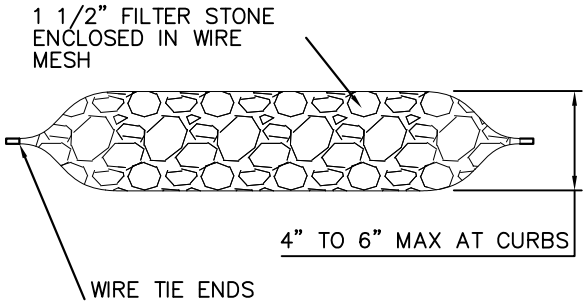
NOTES:

1. A SECTION OF FILTER FABRIC SHALL BE REMOVED AS SHOWN ON THIS DETAIL TO PROVIDE A 2" MINIMUM CLEAR OPENING. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR HOG RINGS AT THIS LOCATION.
2. INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
3. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

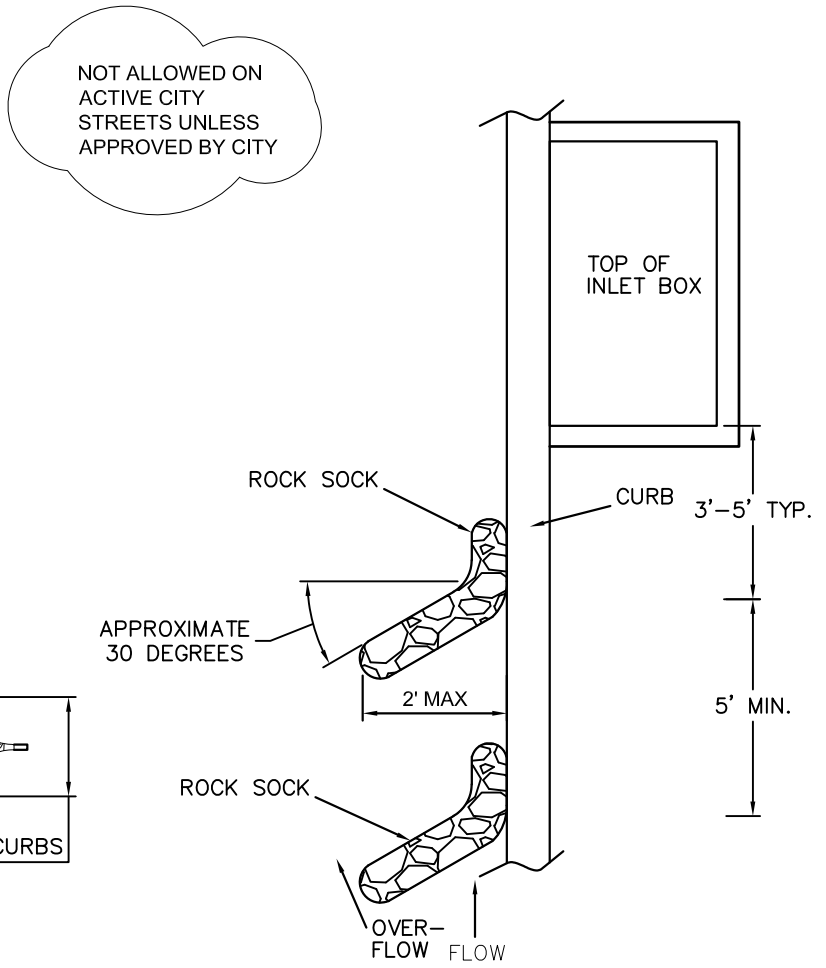
WIRE WEIR CURB INLET PROTECTION	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.14	
		DATE AUG '23	STANDARD DRAWING NO. 1150B



ROCK SOCK SECTION
N.T.S.



ROCK SOCK PLAN
N.T.S.

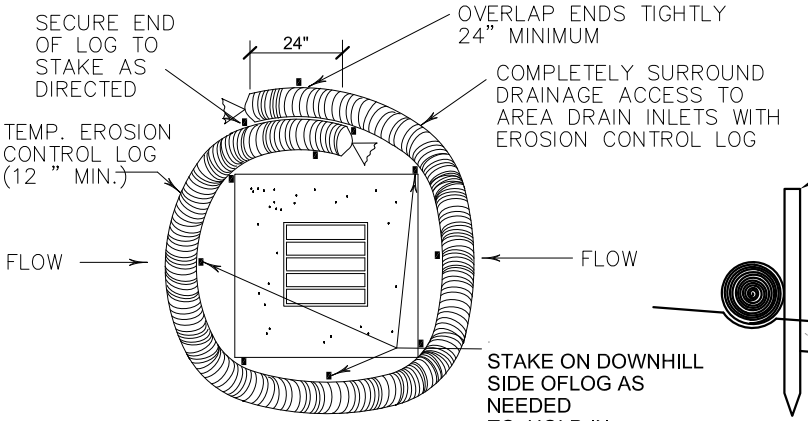


CURB ROCK SOCK ON-GRADE CURB
INLET PROTECTION DETAIL
N.T.S

CURB ROCK SOCK ON-GRADE CURB INLET PROTECTION GENERAL NOTES:

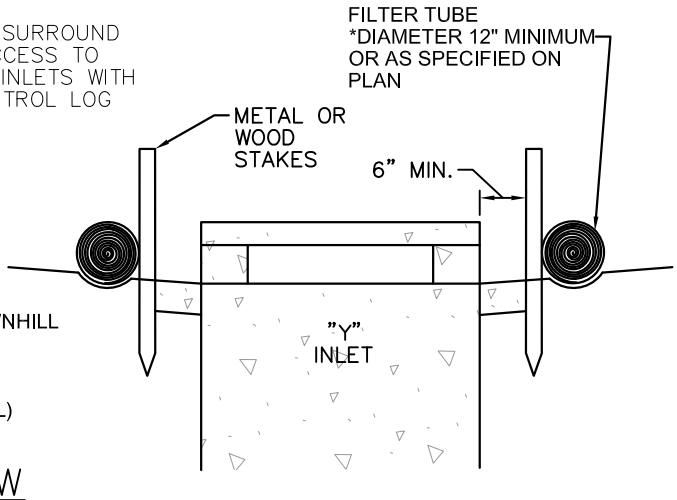
1. THIS DETAIL IS INTENDED FOR USE WITH ON-GRADE INLETS (NOT A LOW POINT) TO TRAP SEDIMENT.
2. DO NOT INSTALL ON INLETS WHERE THE ROCK SOCKS WOULD EXTEND INTO AN ACTIVE TRAVEL LANE.
3. ROCK SOCKS MAY BE USED ON PAVED OR UNPAVED SURFACES.
4. MAXIMUM ROCK SOCK SIAMETER 4" TO 6".
5. MINIMUM OF 2 CURB ROCK SOCKS.

CURB ROCK SOCK ON-GRADE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.14	
CURB INLET PROTECTION		DATE AUG '23	STANDARD DRAWING NO. 1160



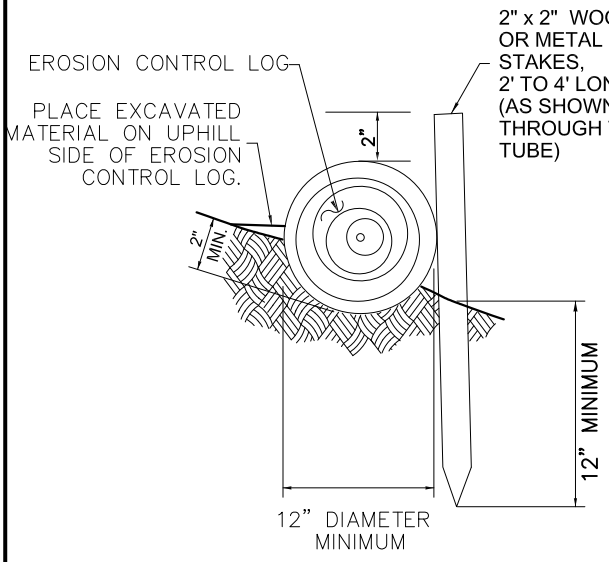
FILTER TUBE AREA INLET PROTECTION PLAN VIEW

N.T.S.



FILTER TUBE "Y" INLET PROTECTION CROSS SECTION

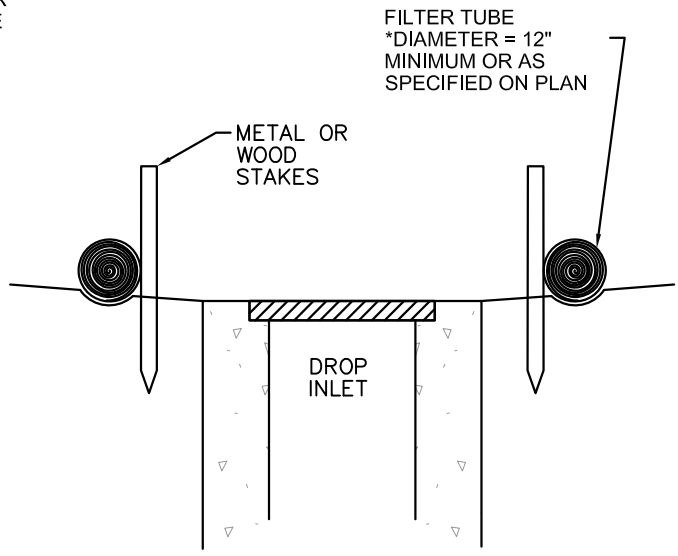
N.T.S.



NOTE: COMPACT EXCAVATED SOIL TO PREVENT UNDERCUTTING.

EMBEDMENT EXAMPLE FOR FILTER TUBE

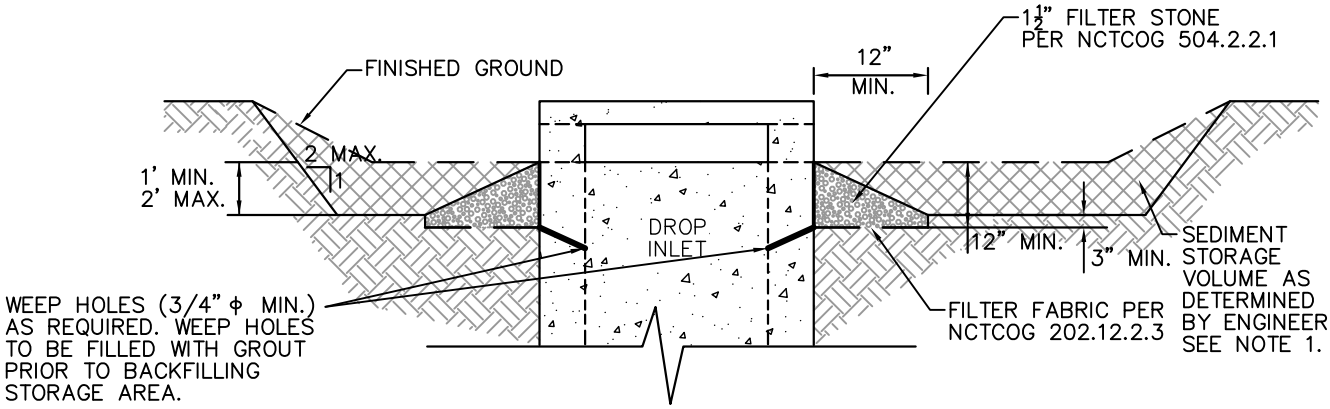
N.T.S.



FILTER TUBE DROP INLET PROTECTION CROSS SECTION

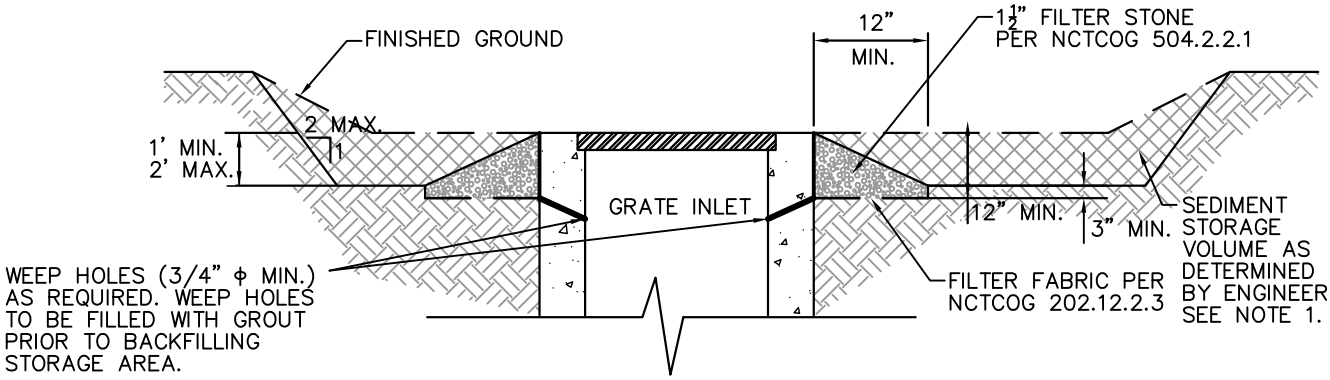
N.T.S.

FILTER TUBE AREA INLET PROTECTION	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.14
		DATE AUG '23 / STANDARD DRAWING NO. 1170



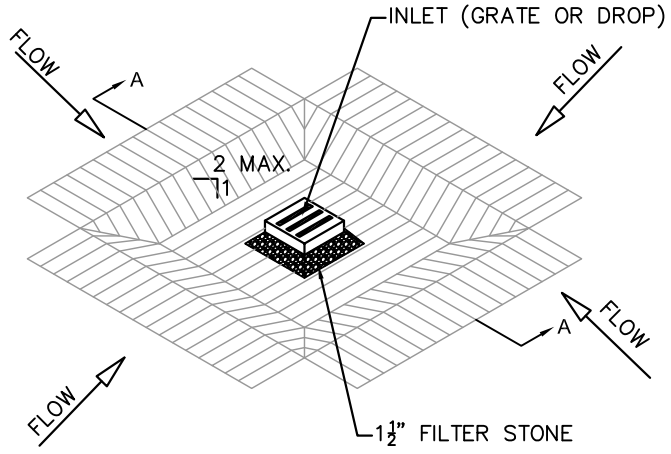
EXCAVATED INLET PROTECTION "Y" INLET SECTION A–A

N.T.S.



EXCAVATED INLET PROTECTION GRATE INLET SECTION A–A

N.T.S.

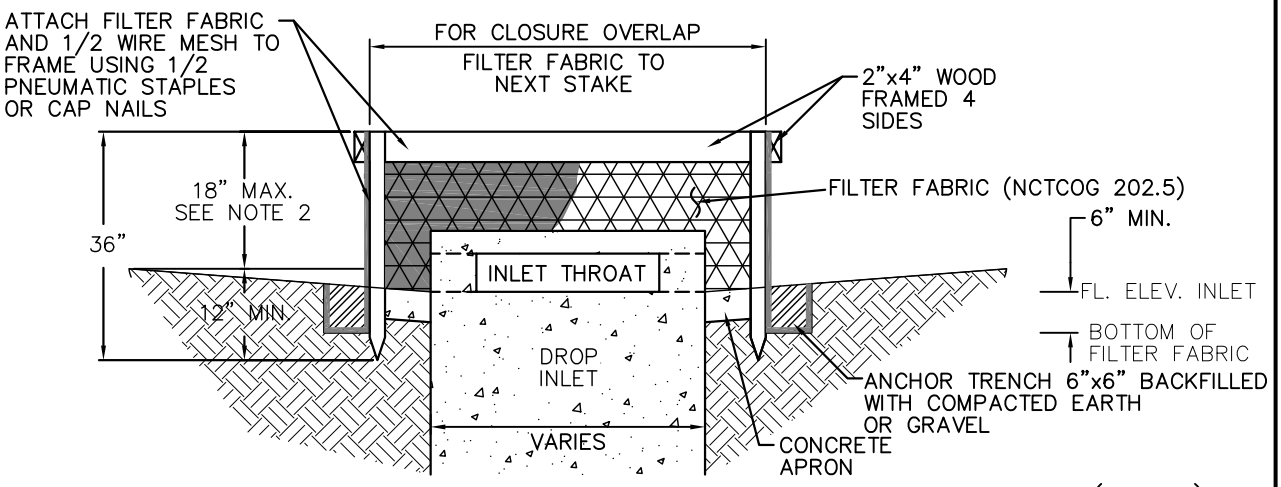


NOTES:
1. STORAGE VOLUME SHALL BE DESIGN STORM VOLUME OR 3,600 CUBIC FEET PER ACRE DISTURBED.
2. CONCENTRATED DITCH FLOW COMING FROM ONE OR MORE SIDES TOWARD THE INLET MAY REQUIRE A STONE OVERFLOW STRUCTURE TO BE CONSTRUCTED ON ONE SIDE OF THE INLET.

EXCAVATED INLET PROTECTION PLAN VIEW

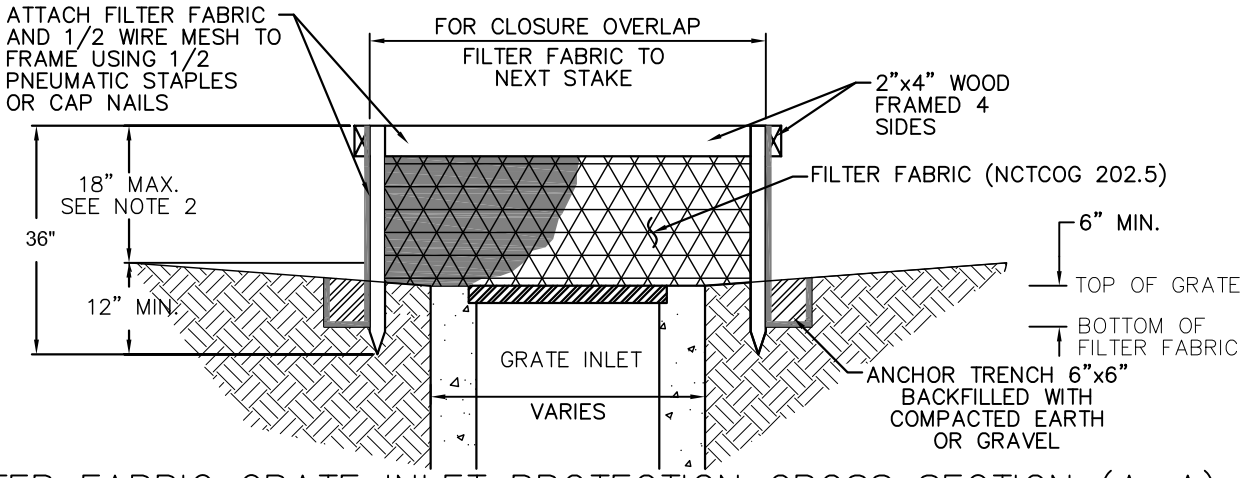
N.T.S.

AREA INLET PROTECTION	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.14	
EXCAVATED IMPOUNDMENT		DATE AUG '23	STANDARD DRAWING NO. 1180



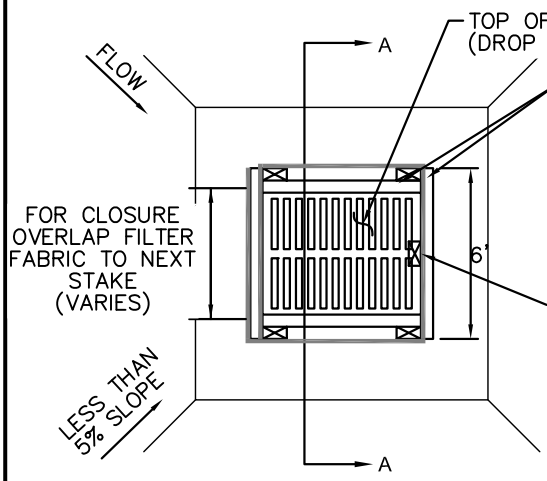
FILTER FABRIC DROP INLET PROTECTION CROSS SECTION (A–A)

N.T.S.



FILTER FABRIC GRATE INLET PROTECTION CROSS SECTION (A–A)

N.T.S.



NOTES:
1. STAKES SHALL CONFORM TO SPECIFICATIONS SECTION 202.5.2.2
2. HEIGHT OF INLET PROTECTION SURROUNDING THE INLET SHALL BE SHOWN ON THE PLANS AND MUST BE CHECKED TO VERIFY PONDING WATER WILL NOT CAUSE FLOODING OF PROPERTY OR DAMAGE.
3. CONCENTRATED DITCH FLOW COMING FROM ONE OR MORE SIDES TOWARD THE INLET MAY REQUIRE A STONE OVERFLOW STRUCTURE TO BE CONSTRUCTED ON ONE SIDE OF THE INLET.
4. POST SHALL BE INSTALLED AT EACH CORNER AND BETWEEN CORNERS IF THE DISTANCE IS GREATER THAN 6' BETWEEN CORNER POSTS.

AREA INLET PROTECTION FILTER BARRIER PLAN VIEW

N.T.S.

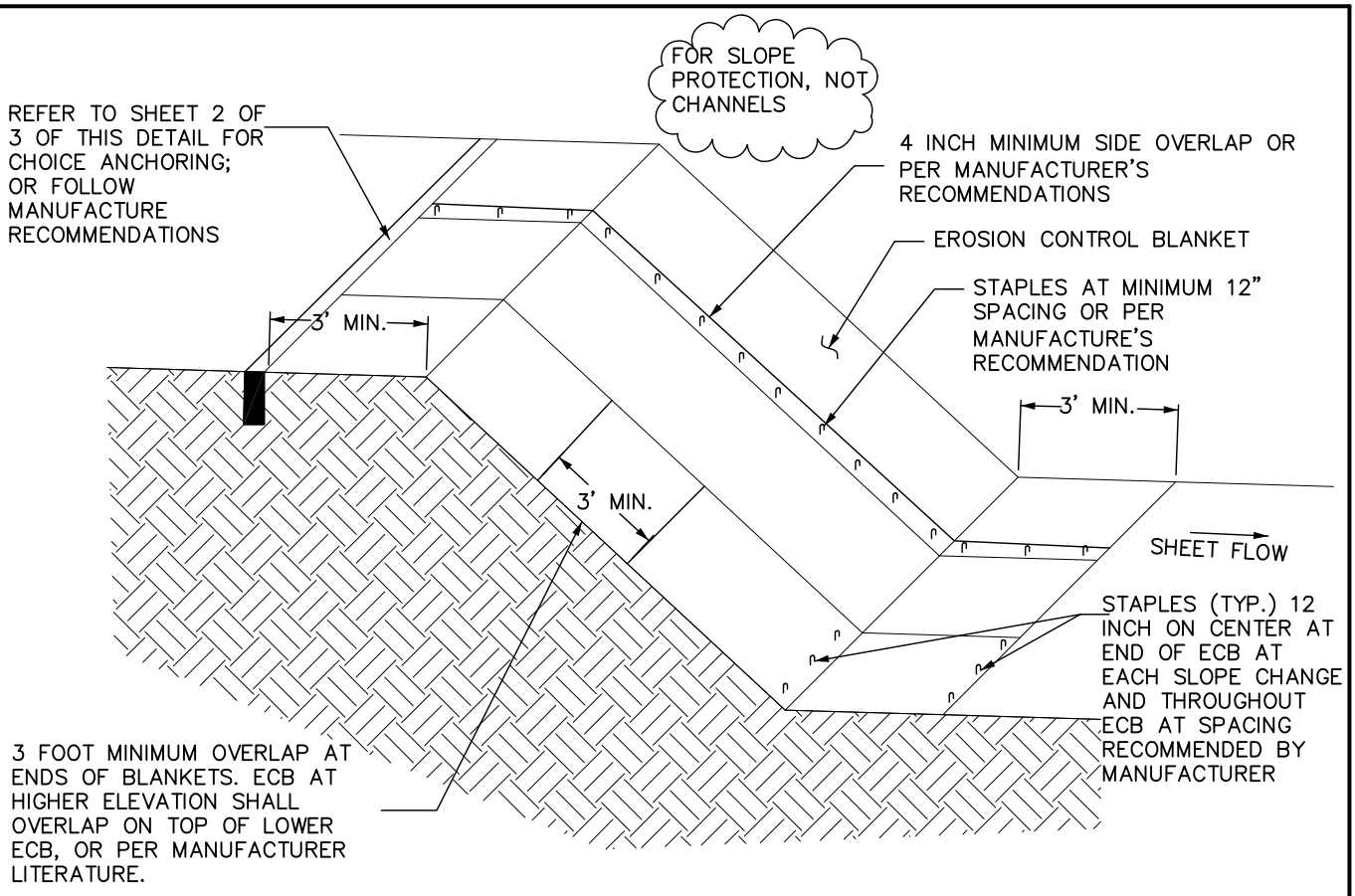
AREA INLET PROTECTION FILTER BARRIER

North Central Texas Council of Governments

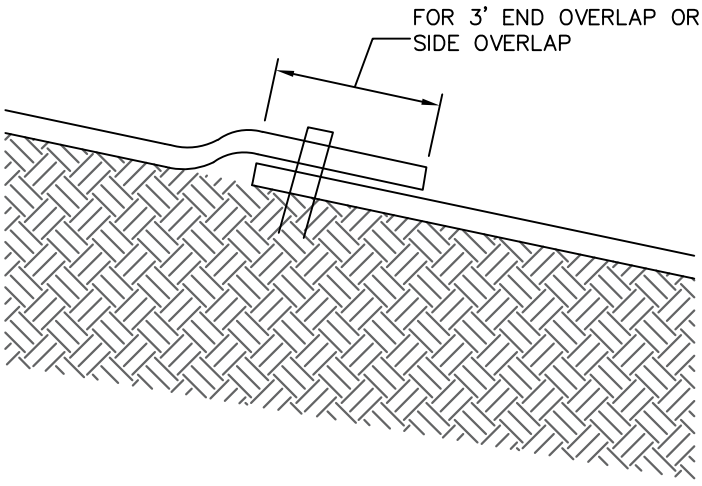
STANDARD SPECIFICATION REFERENCE
202.14

DATE
AUG '23

STANDARD DRAWING NO.
1190



ECB ISOMETRIC PLAN VIEW
N.T.S.



ECB OVERLAP EXAMPLE
N.T.S.

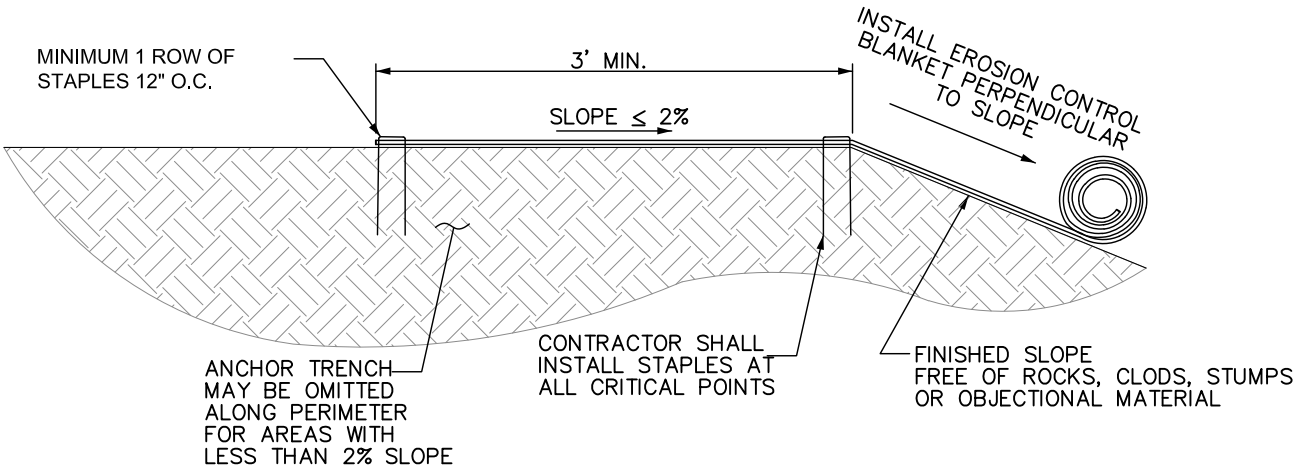
TEMPORARY EROSION CONTROL BLANKETS

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE
202.15

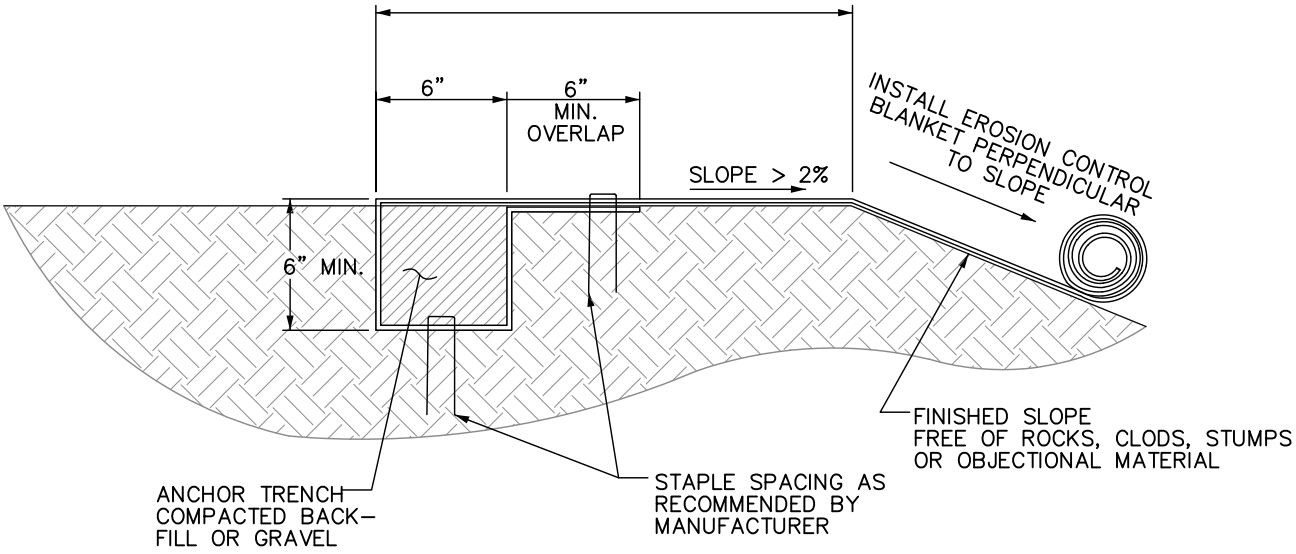
DATE
AUG '23

STANDARD DRAWING NO.
1200A



TOP OF SLOPE ANCHOR EXAMPLE 1

N.T.S.



TOP OF SLOPE ANCHOR TRENCH EXAMPLE 2

N.T.S.

TEMPORARY EROSION CONTROL	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE	
BLANKET, ANCHOR EXAMPLES		202.15	
		DATE: AUG '23	STANDARD DRAWING NO.: 1200B

EROSION CONTROL BLANKETS GENERAL NOTES:

1. NCTCOG STANDARD SPECIFICATIONS (2017) SECTION 202.15.

2. EROSION CONTROL BLANKET SHALL BE INSTALLED VERTICALLY DOWN SLOPE AS SHOWN.

3. PRIOR TO THE INSTALLATION: ALL ROCK, DIRT CLODS, STUMPS, ROOTS, TRASH, AND ANY OTHER OBSTRUCTIONS THAT WOULD PREVENT THE BLANKET FROM LYING IN DIRECT CONTRACT WITH THE SOIL SHALL BE REMOVED.

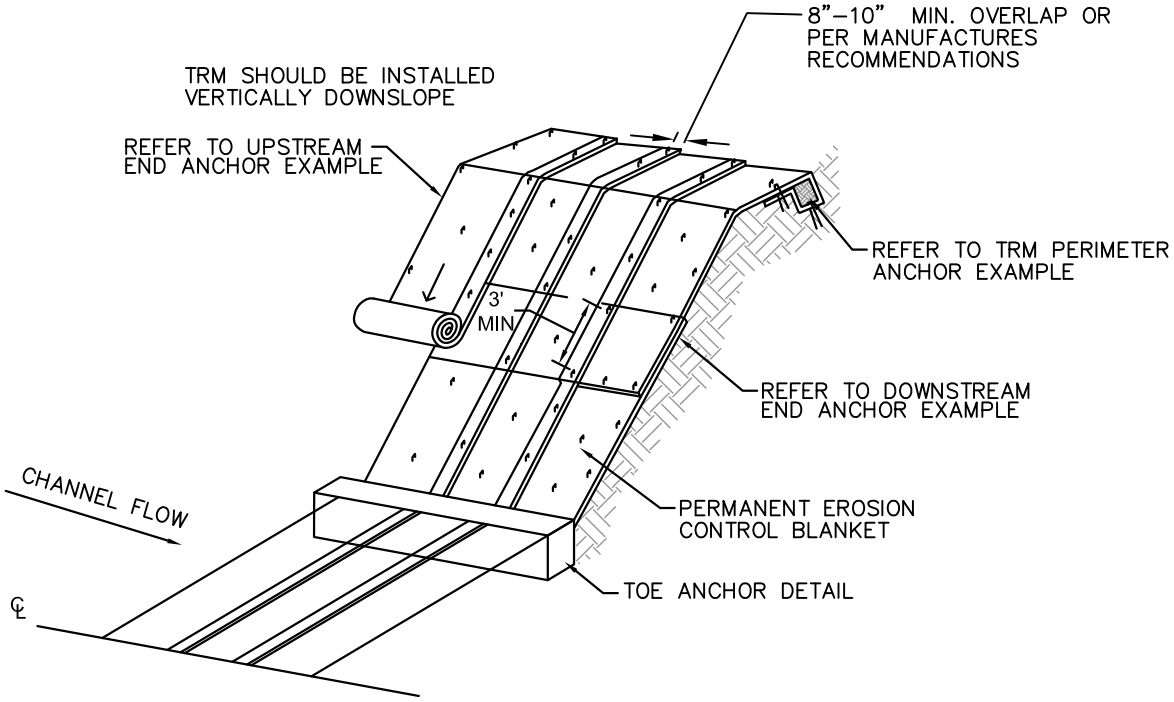
4. ANCHORING METHODS PROVIDED ARE EXAMPLES OF HE TYPE OF ANCHORING THE ECB MANUFACTURER MAY RECOMMEND. ALWAYS FOLLOW THE MANUFACTURER'S RECOMMENDATIONS FOR ANCHORING BASED ON THE SITE-SPECIFIC APPLICATION.

5. INSTALLATION AND ANCHORING SHALL CONFORM TO THE RECOMMENDATIONS SHOWN WITHIN THE MANUFACTURER'S PUBLISHED LITERATURE FOR THE APPROVED EROSION CONTROL BLANKET. PARTICULAR ATTENTION MUST BE PAID TO JOINTS AND OVERLAPPING MATERIAL. AT A MINIMUM, THE END OF EACH ROLL OF ECB SHALL OVERLAP THE NEXT ROLL BY 3 FEET AND THE SIDES OF ROLLS SHALL OVERLAP 4 INCHES.

6. IN ABSENCE OF MANUFACTURE'S LITERATURE, A MINIMUM 11-GAUGE WIRE STAPLES, 6-INCHES IN LENGTH AND 1-INCH WIDTH WILL BE USED.
7. AFTER APPROPRIATE INSTALLATION, THE BLANKETS SHOULD BE CHECKED FOR UNIFORM CONTACT WITH THE SOIL, SECURITY OF THE LAP JOINTS, AND THE FLUSHNESS OF THE STAPLES WITH THE GROUND.

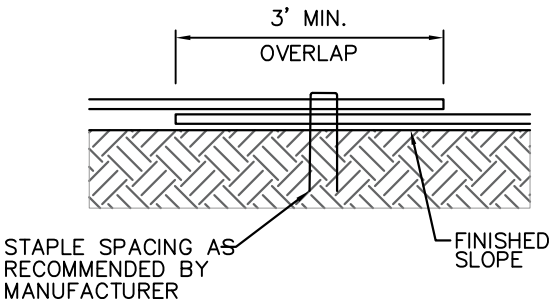
8. INSPECTION SHALL BE AS SPECIFIED IN THE SWPPP.

TEMPORARY EROSION CONTROL	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.15	
BLANKETS, GENERAL NOTES		DATE AUG '23	STANDARD DRAWING NO. 1200C



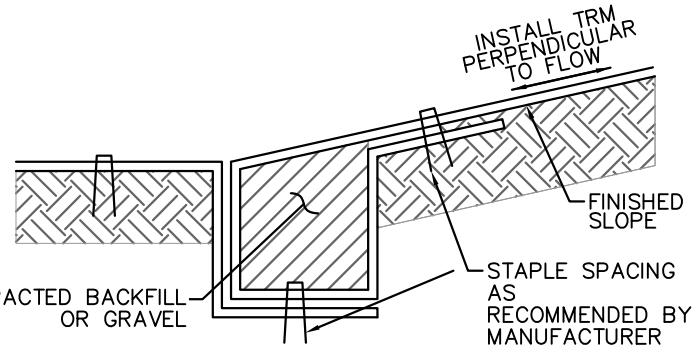
TRM HALF ISOMETRIC PLAN VIEW

N.T.S.



END OF TRM OVERLAP EXAMPLE

N.T.S.



TOE ANCHOR DETAIL

N.T.S.

NOTES:
1. TURF REINFORCEMENT MATS SHALL BE INSTALLED VERTICALLY DOWN SLOPE AS SHOWN.

2. PRIOR TO THE INSTALLATION: ALL ROCKS, DIRT CLODS, STUMPS, ROOTS, TRASH AND ANY OTHER OBSTRUCTIONS THAT WOULD PREVENT THE MAT FROM DIRECT CONTACT WITH THE FINISHED SLOPE, SHALL BE REMOVED.

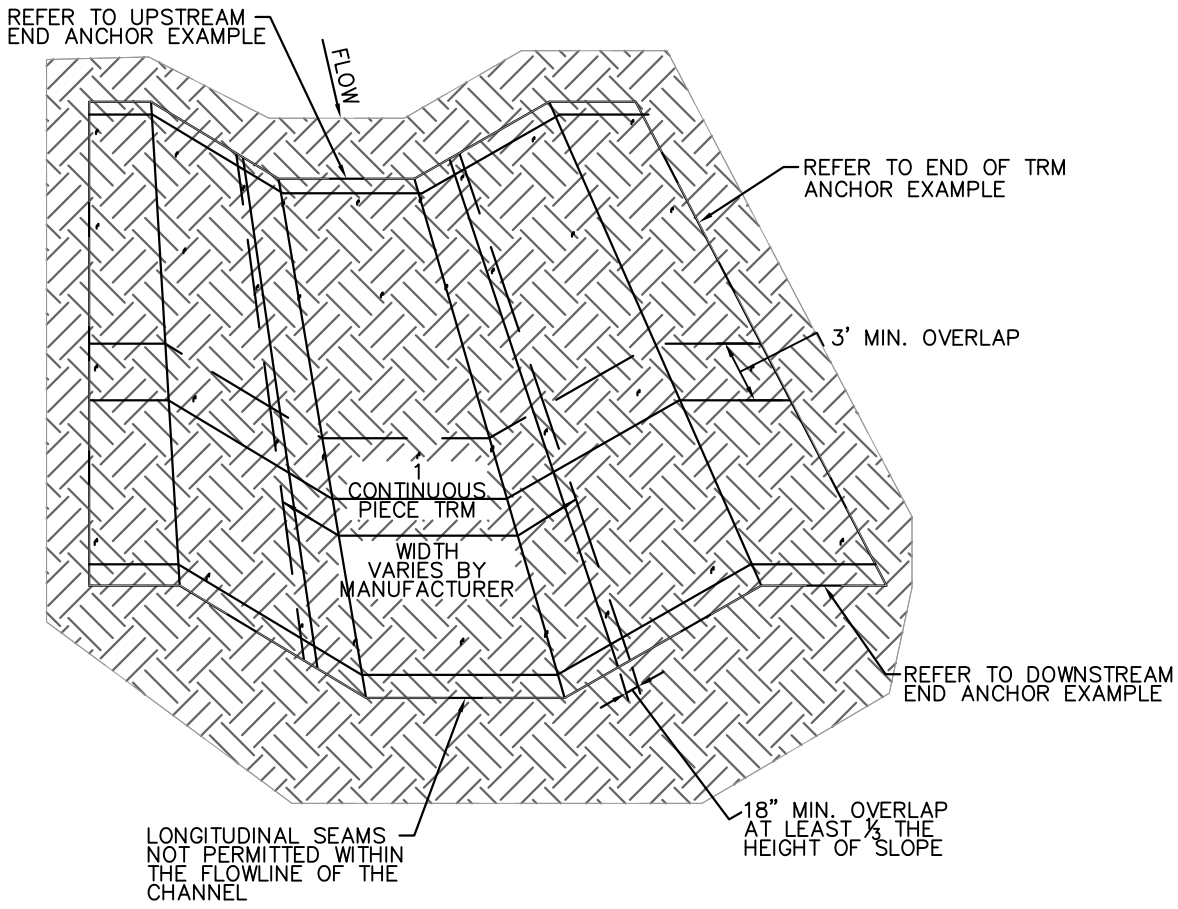
PERMANENT TURF REINFORCEMENT MATS

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE: N/A

DATE: AUG '23

STANDARD DRAWING NO.: 1210A

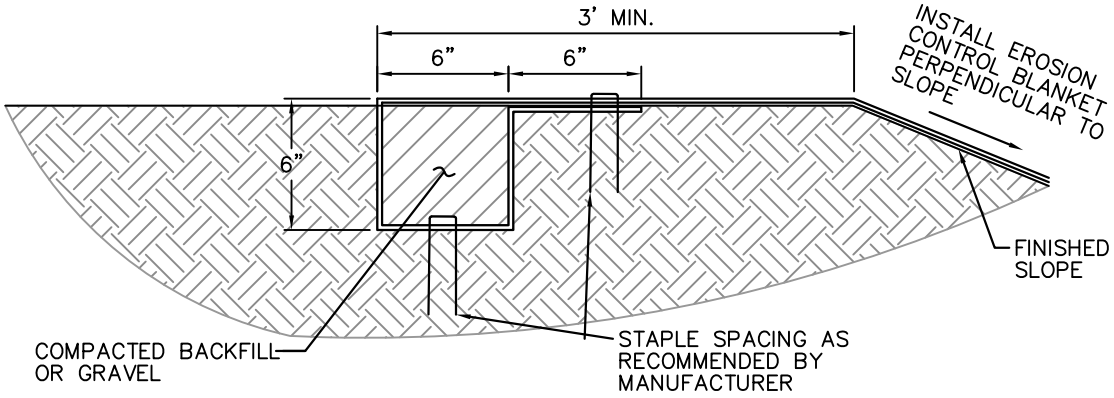


TRM ISOMETRIC PLAN VIEW FOR SMALL CHANNELS/DITCHES

N.T.S.

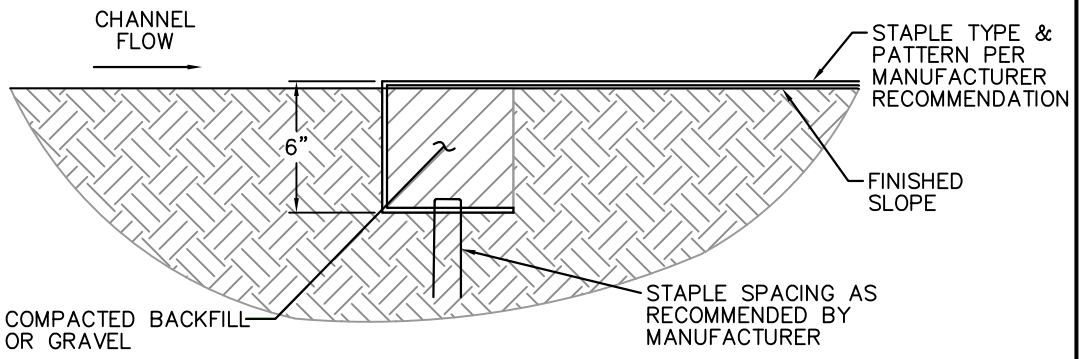
NOTE: LONGITUDINAL INSTALLATION OF TURF REINFORCEMENT MAT PERMITTED ONLY FOR CHANNEL WIDTHS 0' TO 8'. CONTRACTOR SHALL VERIFY MAT MEETS OVERLAP AND SLOPE REQUIREMENTS STATED ABOVE.

PERMANENT TURF REINFORCEMENT MATS	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE: N/A	
		DATE: AUG '23	STANDARD DRAWING NO.: 1210B



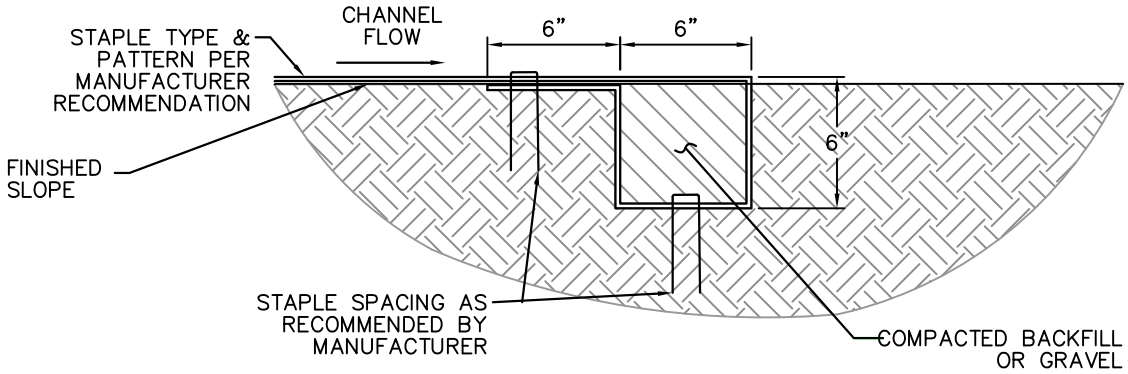
TRM PERIMETER ANCHOR EXAMPLE

N.T.S.



TRM UPSTREAM END ANCHOR EXAMPLE

N.T.S.

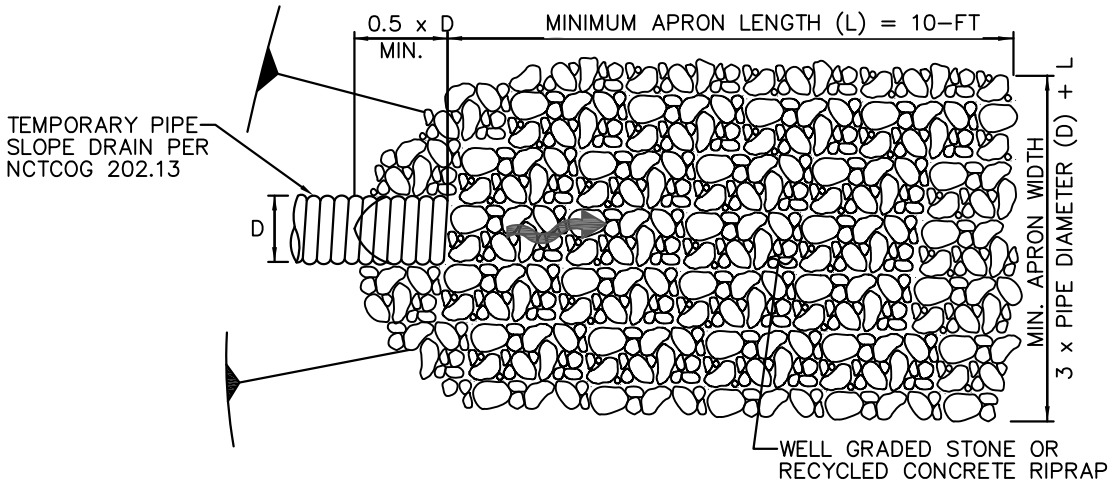


TRM DOWNSTREAM END ANCHOR EXAMPLE

N.T.S.

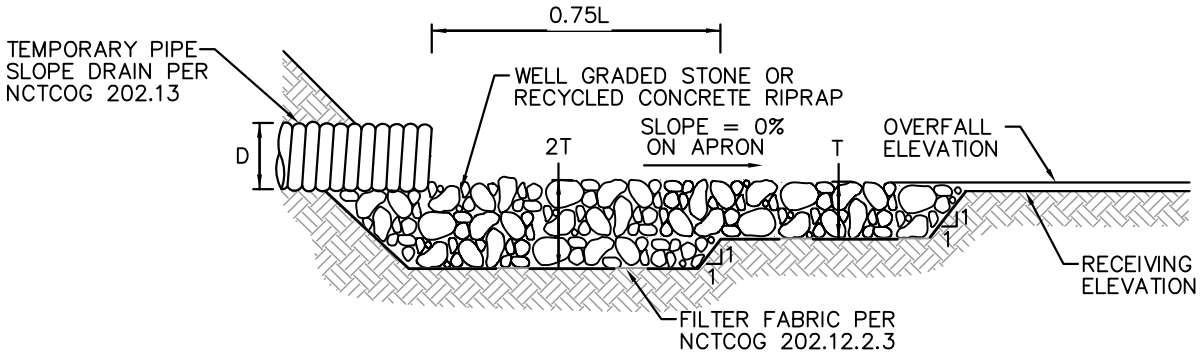
PERMANENT TURF	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE	
REINFORCEMENT MAT ANCHORING		N/A	
		DATE: AUG '23	STANDARD DRAWING NO.: 1210C

SPECIFIC DESIGN INFORMATION ON
THE EROSION CONTROL PLANS IS
REQUIRED FOR EACH INSTALLATION



TEMPORARY VELOCITY DISSIPATION DEVICE PLAN VIEW

N.T.S



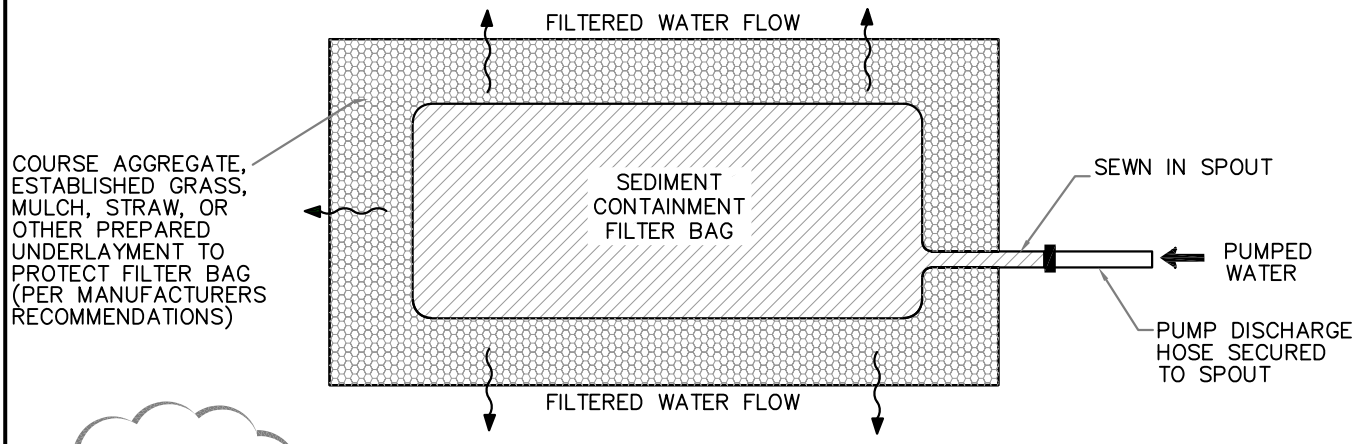
TEMPORARY VELOCITY DISSIPATION DEVICE PROFILE VIEW

N.T.S

NOTE: DIMENSIONS OF THE RIPRAP APRON SHALL BE DESIGNED BASED ON FLOW CONDITIONS. TEMPORARY CONTROL DESIGN STORM (2–YEARS, 24–HOUR). PROVIDE CALCULATIONS THAT DOCUMENT THE FOLLOWING PARAMETERS USED TO DESIGN THE APRON.

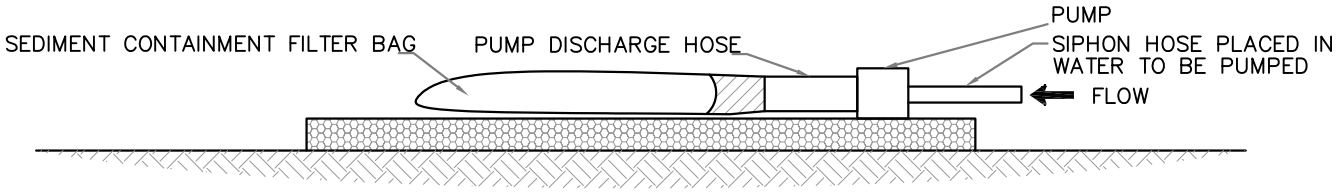
- PIPE DIAMETER (OR EQUIVALENT FOR FLUME, SWALE, ETC.), D, FEET
- DISCHARGE VELOCITY FROM DRAINAGE STRUCTURE, V_{PIPE}, FT/S
- DETERMINE GRADATION FOR d_{50} WELL GRADED STONE OR RECYCLED CONCRETE RIPRAP
- MEDIAN STONE DIAMETER d_{50} AND MAXIMUM STONE DIAMETER (d_{100}), FEET

VELOCITY DISSIPATION DEVICE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.13	
		DATE AUG '23	STANDARD DRAWING NO. 1220



SHOW LOCATIONS OF FILTER BAGS ON THE DRAWINGS.

SEDIMENT FILTER BAG PLAN VIEW
N.T.S.



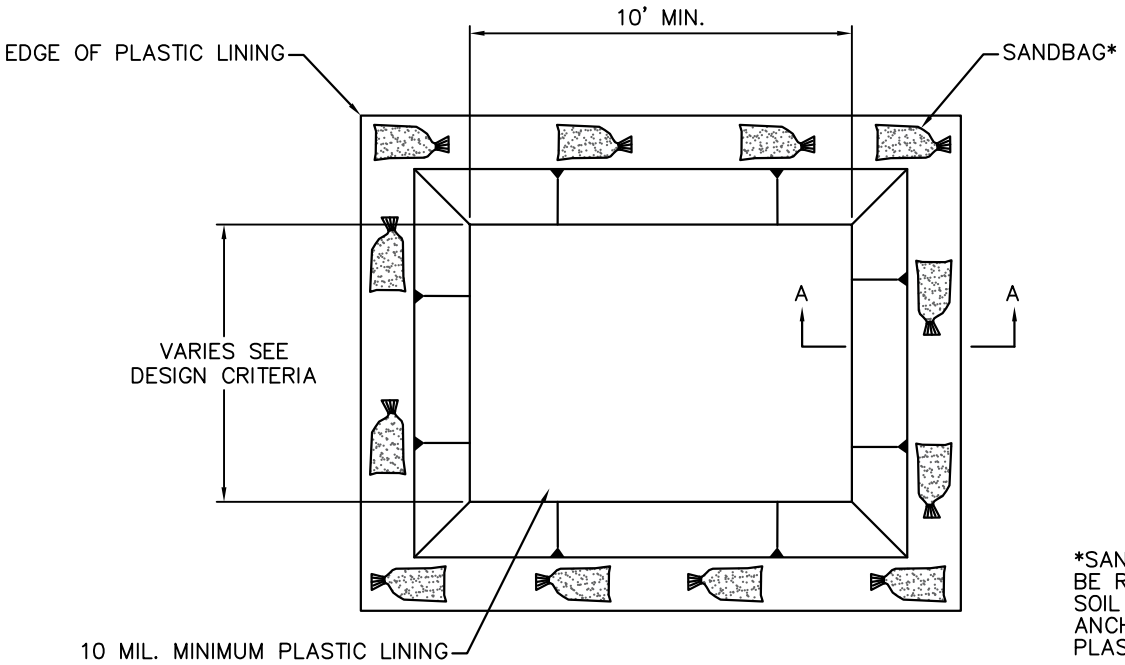
SEDIMENT FILTER BAG PROFILE
N.T.S.

DEWATERING CONTROL GENERAL NOTES:

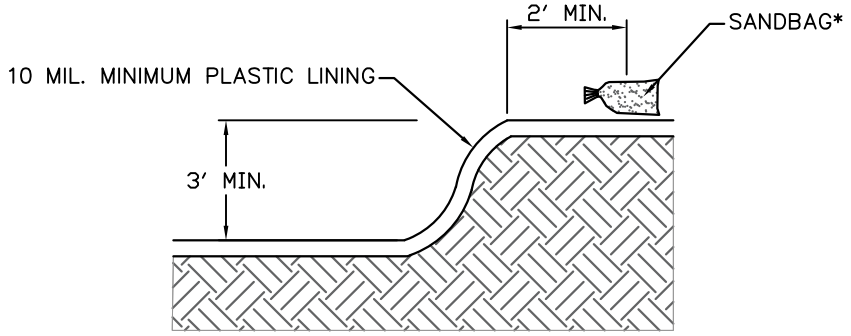
1. THE BAG SHOULD BE A NON-WOVEN, NEEDLE-PUNCHED, GEOTEXTILE. MATERIALS SHOULD CONFORM TO SPECIFICATION 202.5.2.1 AS A MINIMUM.

2. CAPACITY, INSTALLATION, MAINTENANCE, AND REMOVAL OF BAGS AND PUMPS SHOULD CONFORM TO PUBLISHED MANUFACTURER LITERATURE.

DEWATERING CONTROLS	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 203.2	
		DATE AUG '23	STANDARD DRAWING NO. 1230



CONCRETE WASHOUT PLAN VIEW
N.F.S



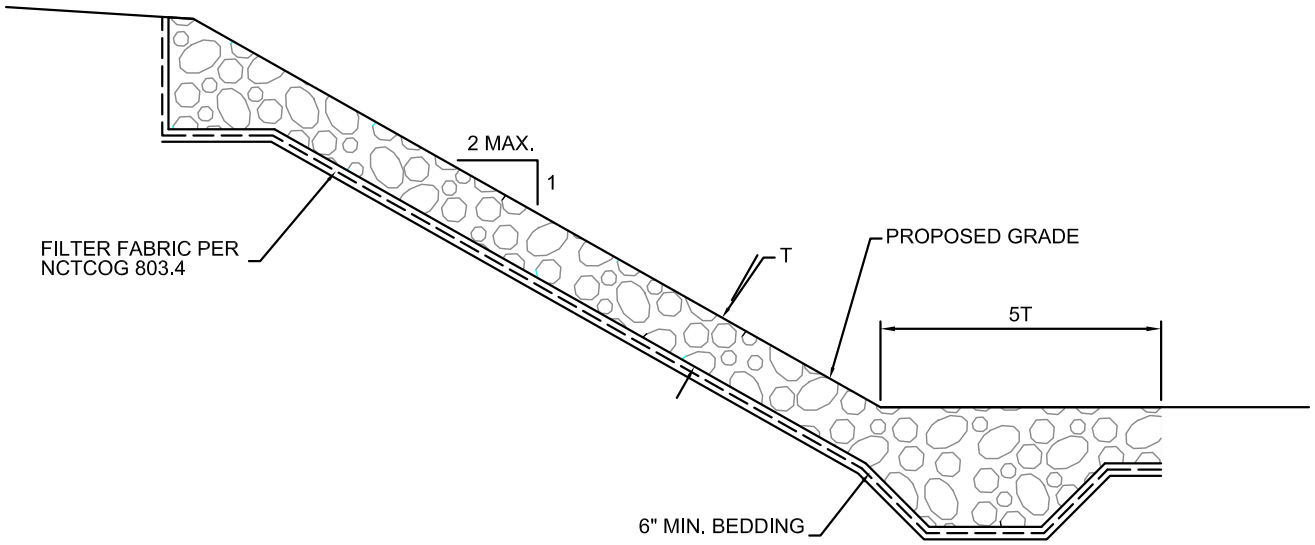
CONCRETE WASHOUT SECTION A–A
N.F.S

CONCRETE WASHOUT NOTES:

1. WASHOUT AREA MUST BE CLEARLY MARKED WITH SIGNAGE NOTING THE WASHOUT AREA.

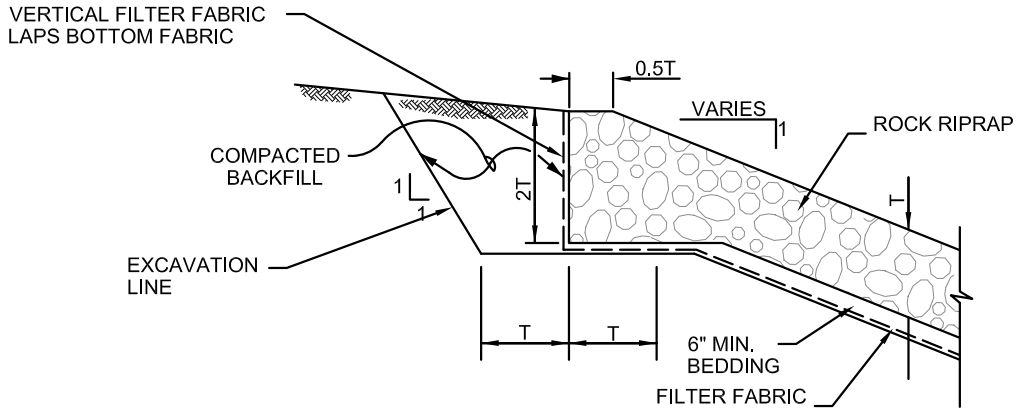
2. WASHOUT STRUCTURES SHALL BE CLEANED OUT WHEN THE STRUCTURE IS 75% FULL. TEMPORARY CONCRETE WASHOUT FACILITY SHOULD BE MAINTAINED TO PROVIDE ADEQUATE HOLDING CAPACITY.

CONCRETE WASHOUT CONTAINMENT	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE: N/A	
		DATE: AUG '23	STANDARD DRAWING NO.: 1240



TYPICAL ROCK RIPRAP SLOPE PROTECTION SECTION

N.T.S.

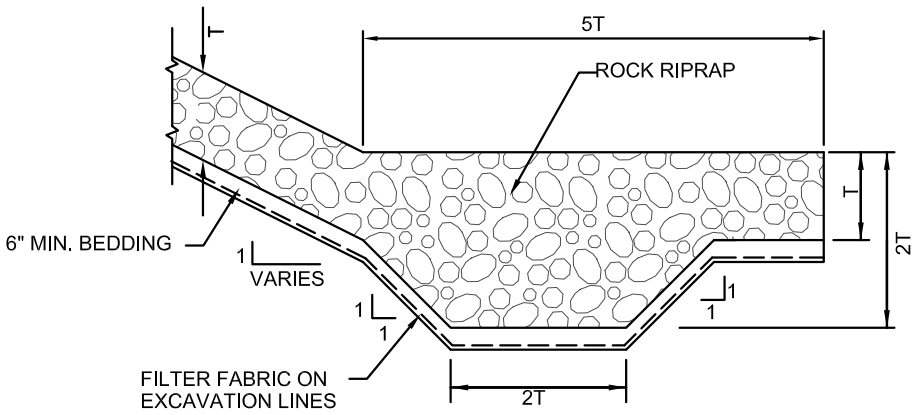


ROCK RIPRAP TOP OF BANK DETAIL

N.T.S.

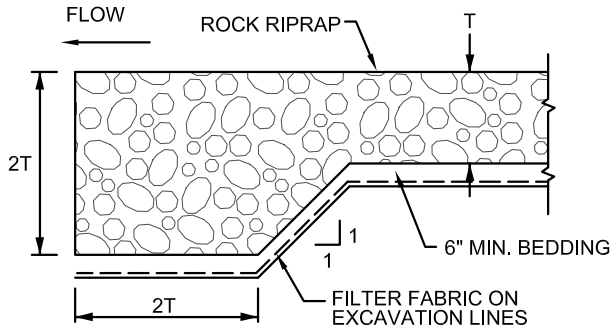
- ROCK RIPRAP DRY OR GROUTED AS SHOWN ON EROSION CONTROL PLANS — $T = 1.5 \times d_{50}$
- FILTER FABRIC SPLICES SHALL HAVE A MINIMUM 18 INCHES OVERLAP — $d_{min.}$=_____
- DETERMINE GRADATION FOR d_{50} WELL GRADED STONE — d_{50} = _____
- MEDIAN STONE DIAMETER d_{50} AND MAXIMUM STONE DIAMETER d_{100}, FEET — d_{100}= _____
- SIZING OF d(min), d(50), AND d(100) AS DETERMINED BY OWNER

GROUTED ROCK RIP RAP	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 803.3	
		DATE AUG '23	STANDARD DRAWING NO. 1250A



ROCK RIPRAP TOE OF SLOPE DETAIL

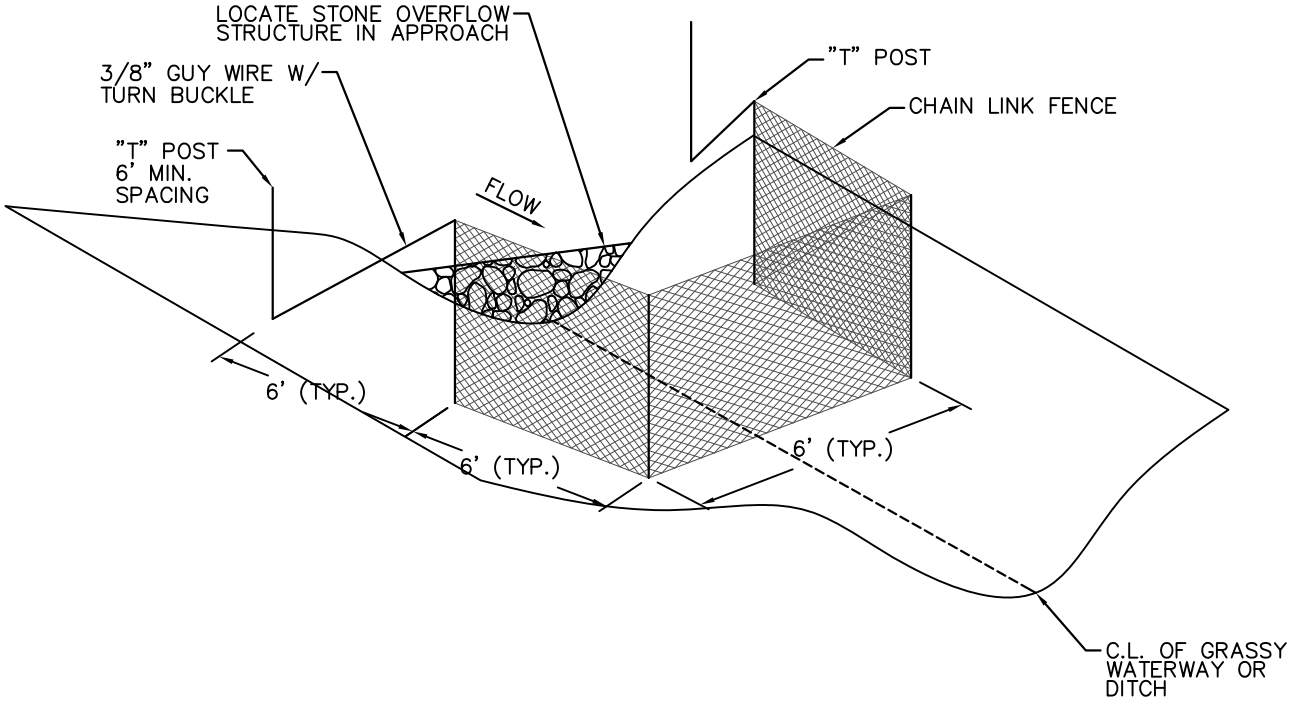
N.T.S.



UPSTREAM ROCK RIPRAP TOE WALL DETAIL

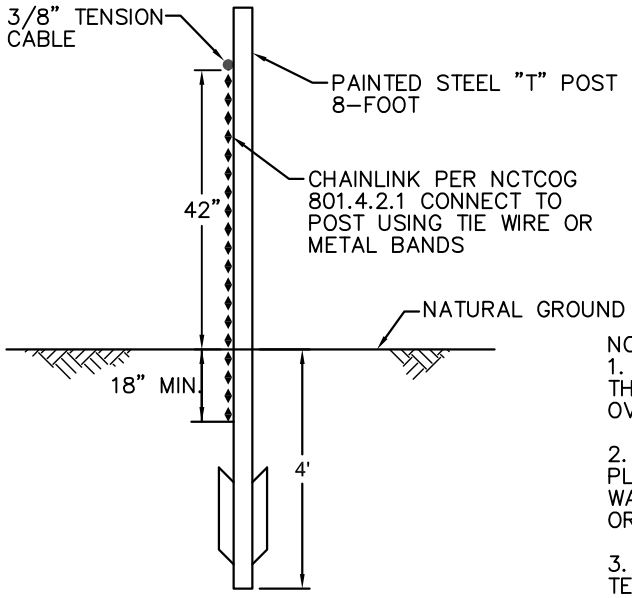
N.T.S.

GROUTED ROCK RIP RAP	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 803.3	
		DATE AUG '23	STANDARD DRAWING NO. 1250B



TEMPORARY TRASH SCREEN DETAIL

N.T.S.



NOTES:
1. CONCENTRATED DITCH FLOW COMING TOWARD THE INSTALLATION WILL REQUIRE A STONE OVERFLOW STRUCTURE TO BE CONSTRUCTED.

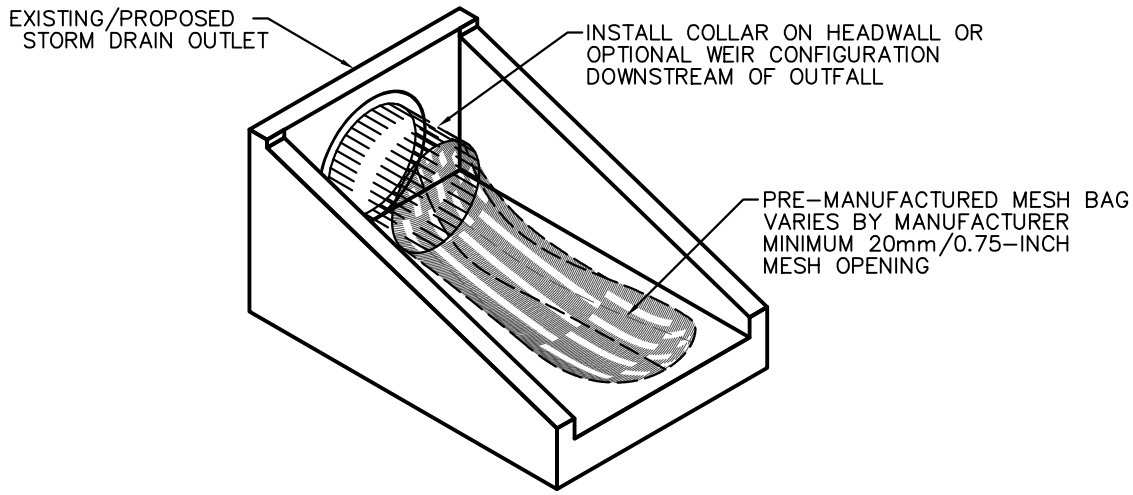
2. HEIGHT OF INSTALLATION SHALL BE SHOWN ON PLANS AND MUST BE CHECKED TO VERIFY PONDING WATER WILL NOT CAUSE FLOODING OF PROPERTY OR DAMAGE.

3. ENGINEER TO VERIFY APPLICABILITY OF TEMPORARY TRASH SCREEN.

PROFILE OFTEMPORARY TRASH SCREEN DETAIL

N.T.S.

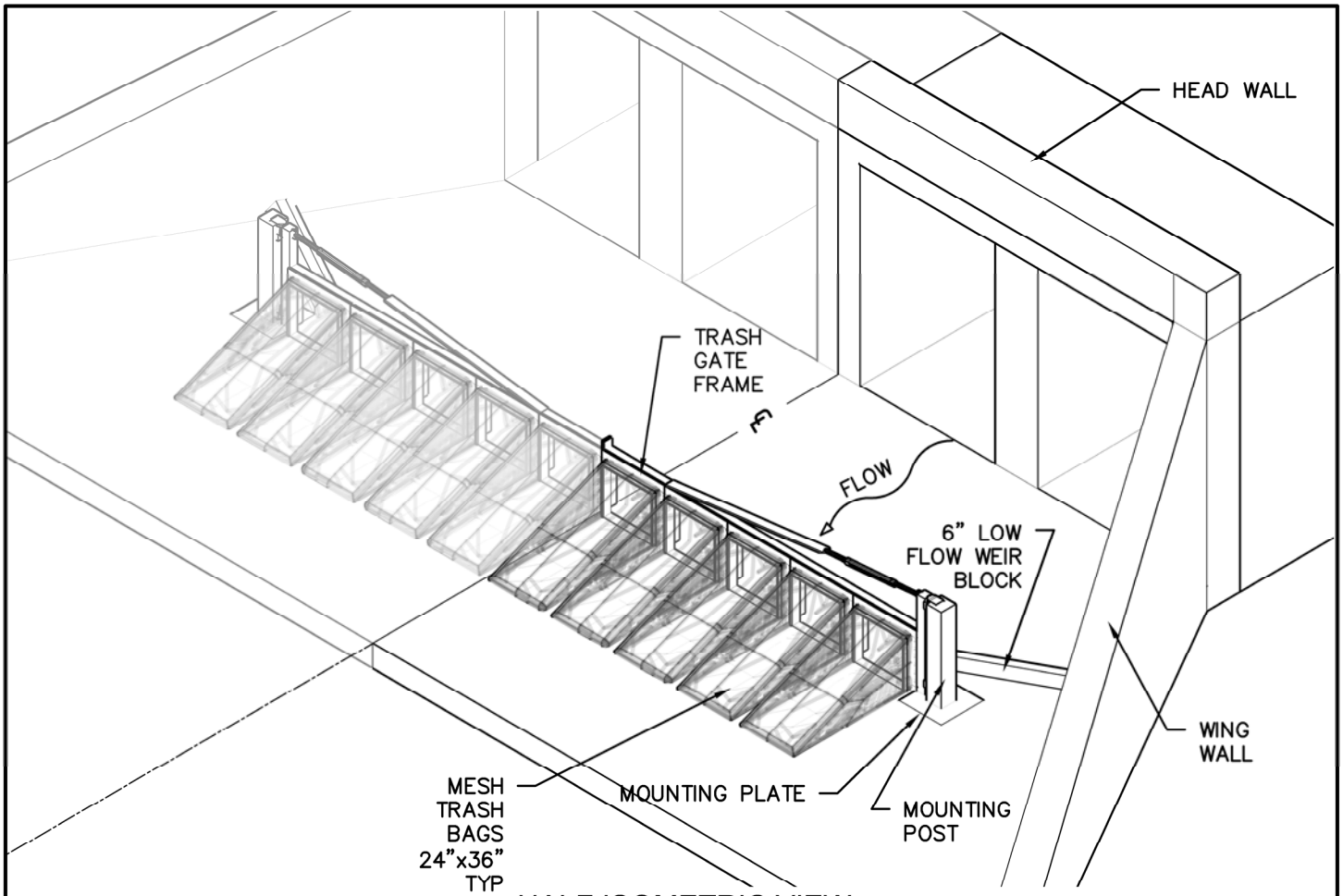
TEMPORARY TRASH SCREEN	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE: N/A	
		DATE: AUG '23	STANDARD DRAWING NO.: 1255



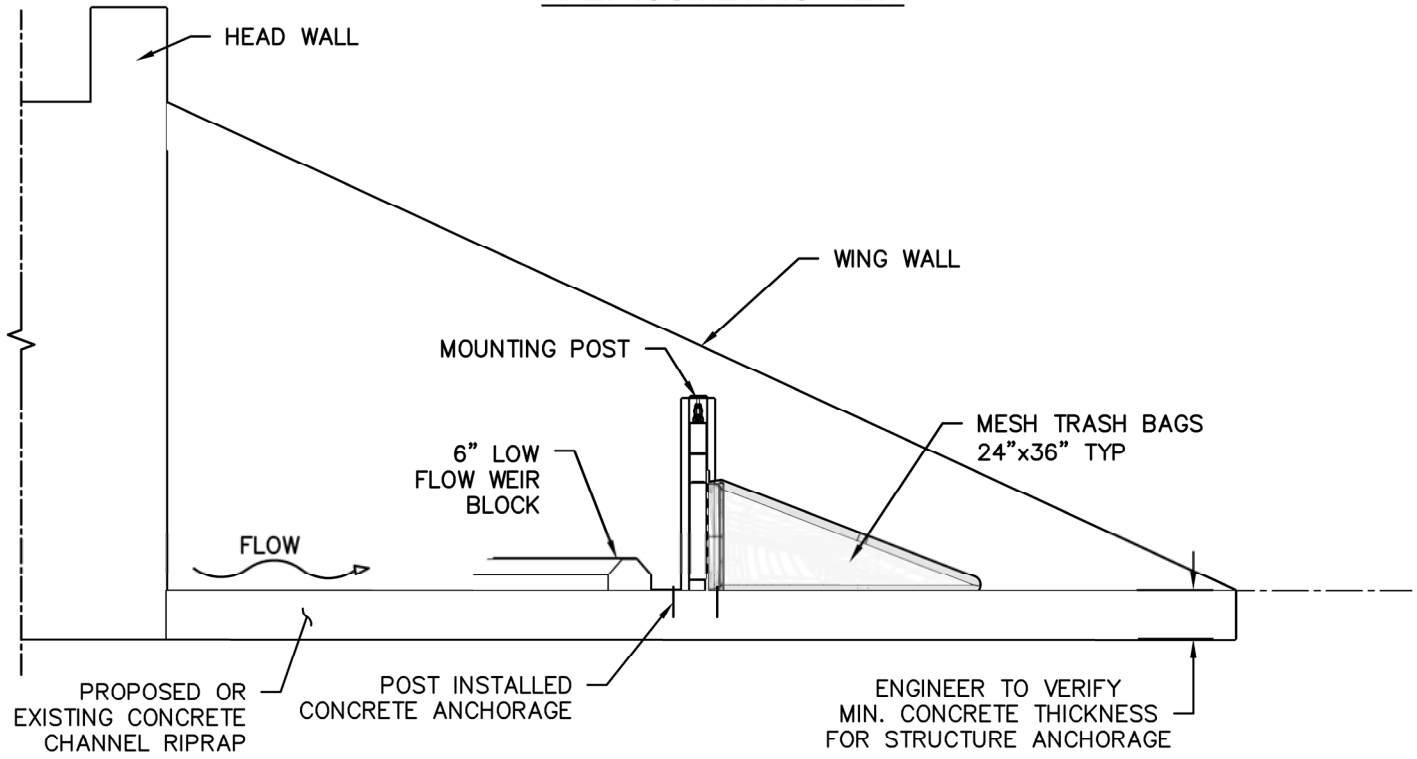
OUTLET TRASH SCREEN BAG
N.T.S.

NOTE: INSTALL COLLAR AND BAG SIZED BY OWNER AND FROM OWNER'S MANUFACTURER OF CHOICE

OUTLET TRASH SCREEN BAG	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE N/A	
		DATE AUG '23	STANDARD DRAWING NO. 1260



HALF ISOMETRIC VIEW



SIDE VIEW WITH HEADWALL

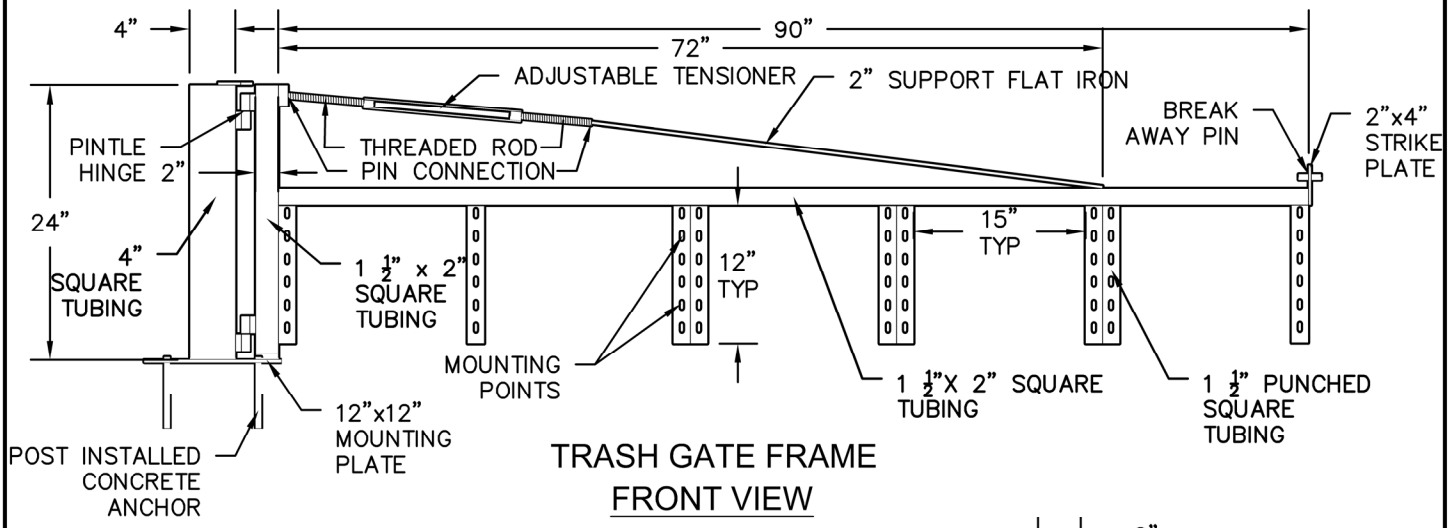
MULTIPLE OUTLET TRASH SCREEN BAG SYSTEM

North Central Texas Council of Governments

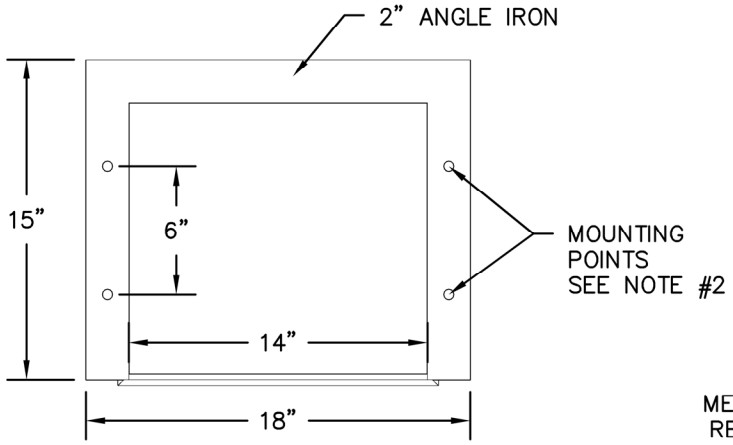
STANDARD SPECIFICATION REFERENCE
N/A

DATE
AUG '23

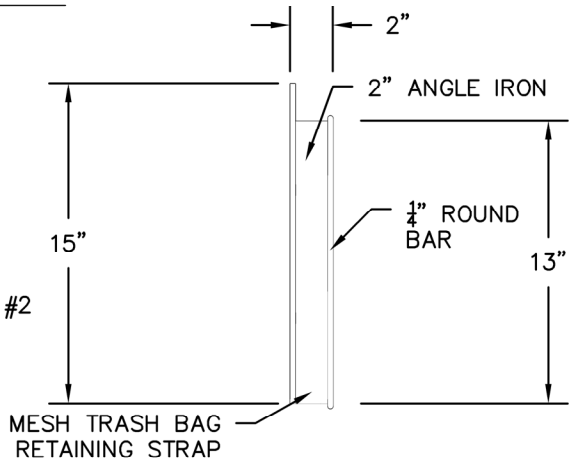
STANDARD DRAWING NO.
1265A



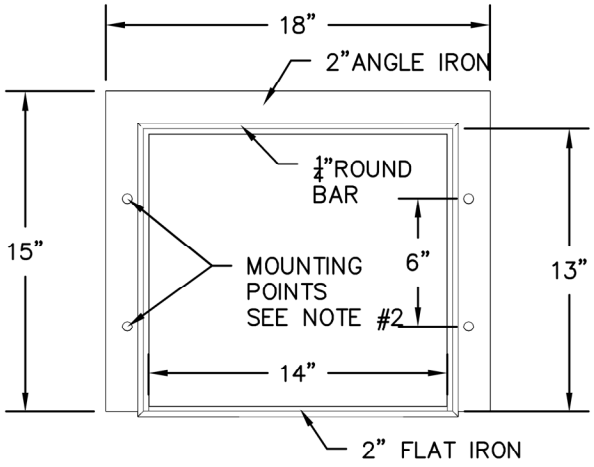
TRASH GATE FRAME
FRONT VIEW



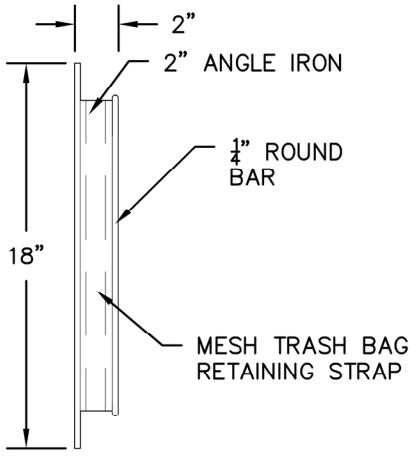
TRASH BAG BRACKET
FRONT VIEW



TRASH BAG BRACKET
SIDE VIEW



TRASH BAG BRACKET
BACK VIEW



TRASH BAG BRACKET
TOP VIEW

NOTES:

1. ALL MATERIAL UNLESS OTHERWISE NOTED IS 1/4" PAINTED STEEL WELDED CONNECTIONS
2. ATTACH USING 1/2" X 2" THREADED BOLTS WITH 12" WASHERS AND NUTS.
3. ALL DIMENSIONS ARE BASED ON FIELD MEASUREMENTS, ENGINEER TO VERIFY LENGTHS AND THICKNESS,DEPENDING ON APPLICATION

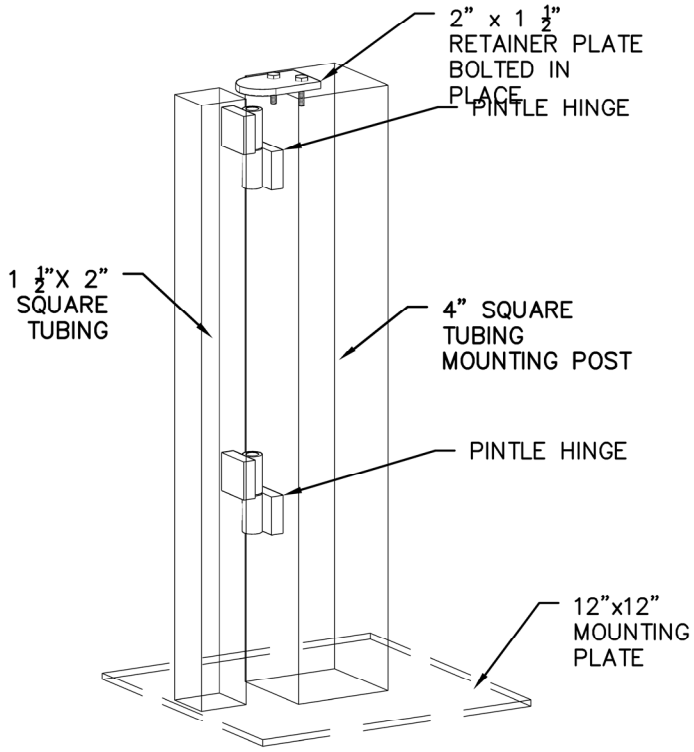
MULTIPLE OUTLET TRASH SCREEN BAG SYSTEM

North Central Texas Council of Governments

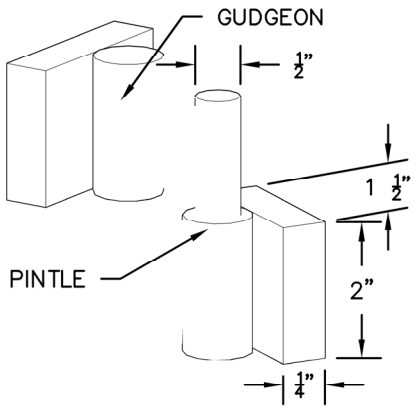
STANDARD SPECIFICATION REFERENCE: N/A

DATE: AUG '23

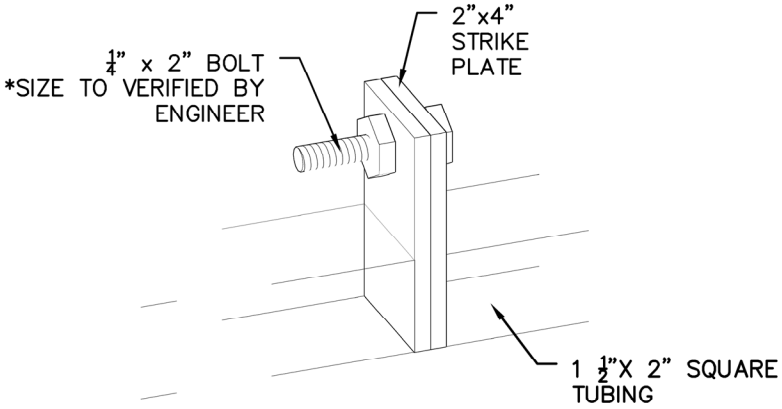
STANDARD DRAWING NO.: 1265B



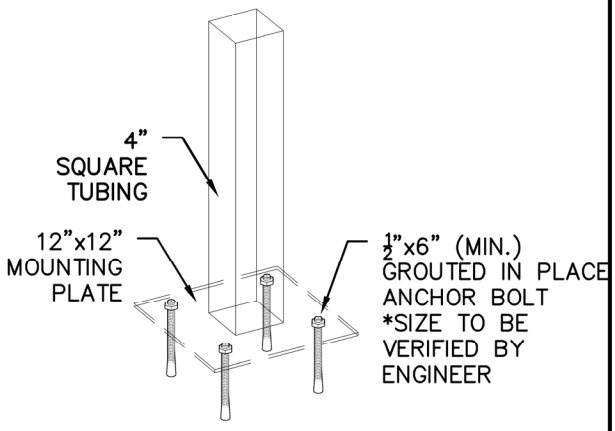
PINTLE HINGE DETAIL



EXPLODED PINTLE HINGE DETAIL



BREAK AWAY PIN DETAIL

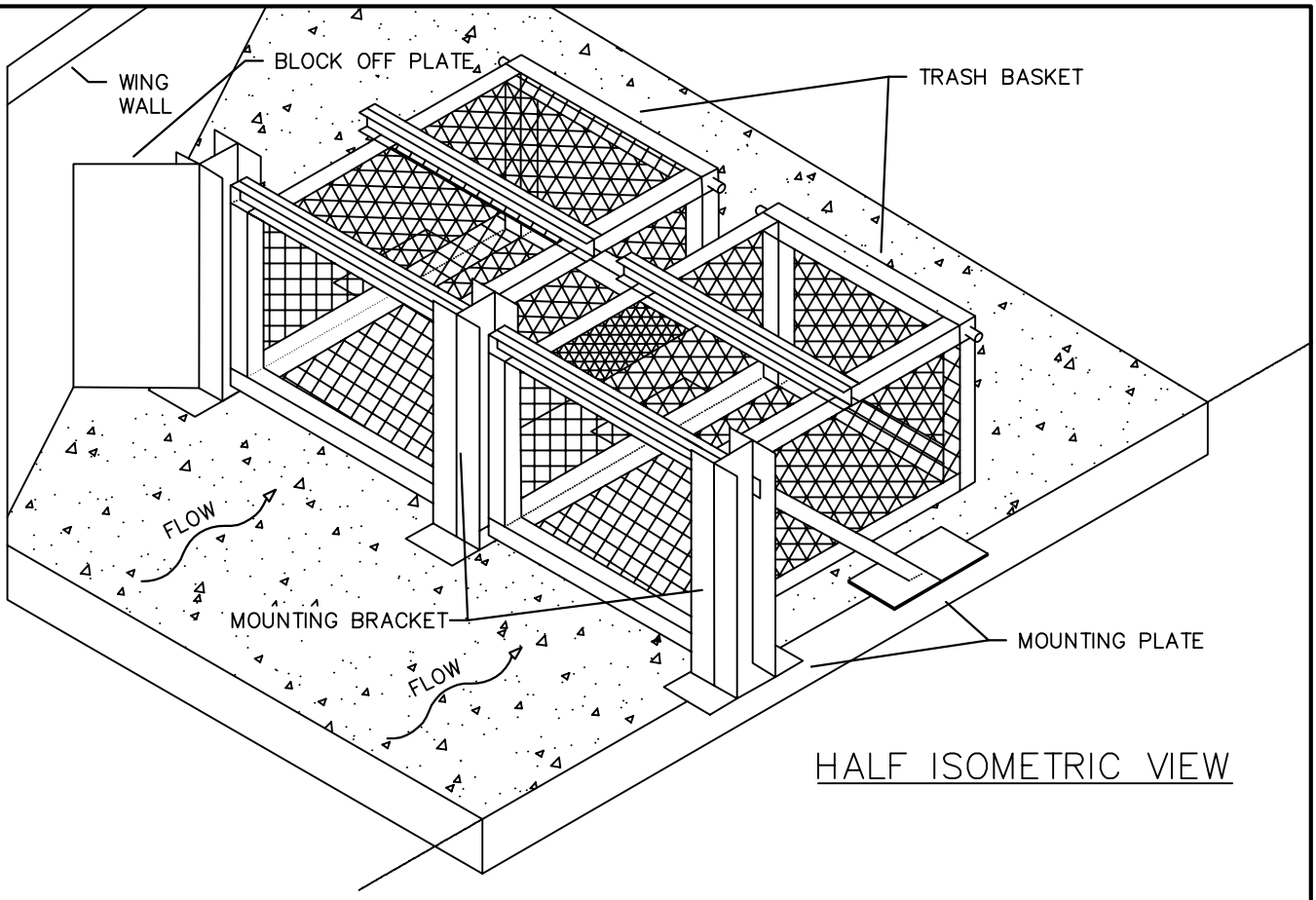


POST INTALLED CONCRETE ANCHOR

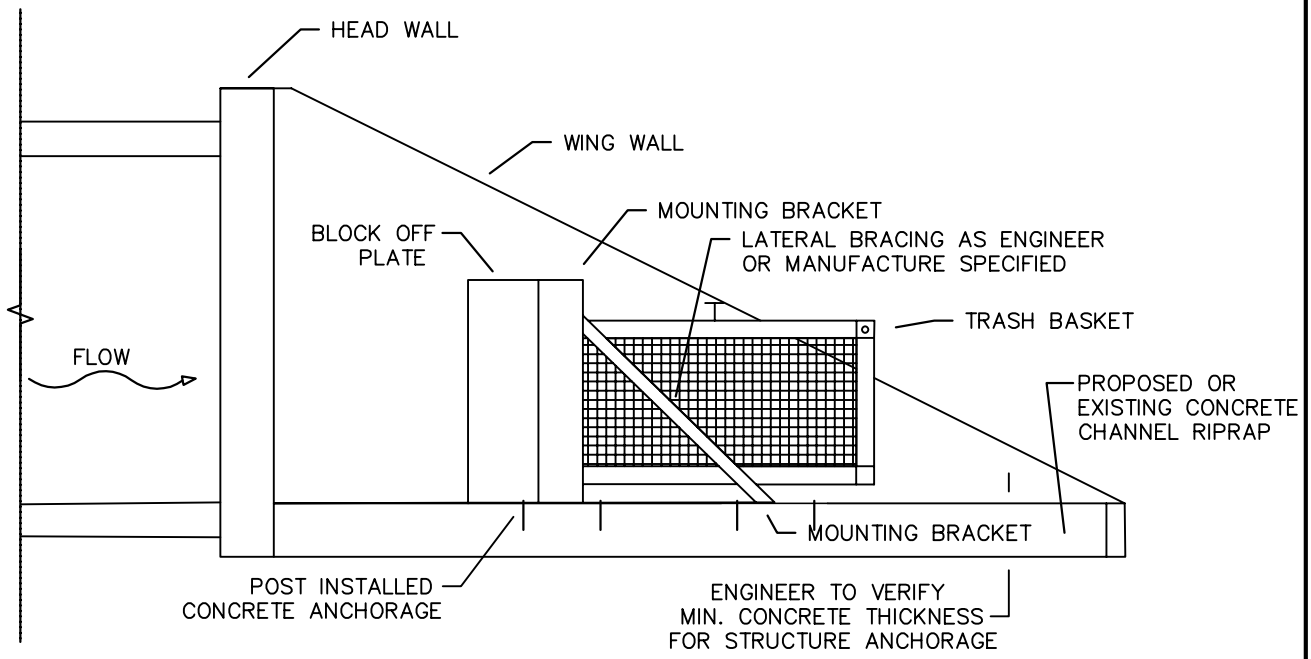
NOTES:

1. ALL MATERIAL UNLESS OTHERWISE NOTED IS ¼" PAINTED STEEL WELDED CONNECTIONS.
2. ATTACH USING ½" X 2" THREADED BOLTS WITH ½" WASHERS AND NUTS.
3. ALL DIMENSIONS ARE BASED ON FIELD MEASUREMENTS, ENGINEER TO VERIFY LENGTHS AND THICKNESS, DEPENDING ON APPLICATION

MULTIPLE OUTLET TRASH SCREEN BAG SYSTEM	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE N/A	
		DATE AUG '23	STANDARD DRAWING NO. 1265C



HALF ISOMETRIC VIEW



SIDE VIEW WITH HEADWALL

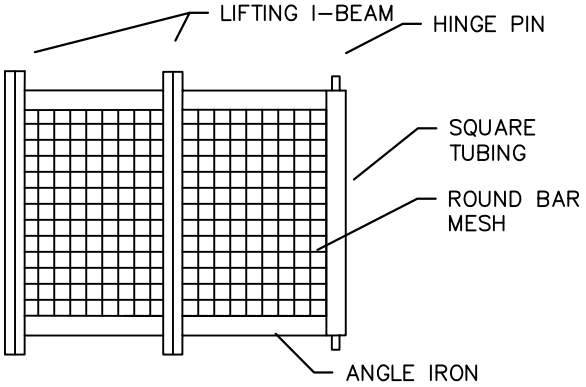
MULTIPLE OUTLET TRASH SCREEN BASKET SYSTEM

North Central Texas Council of Governments

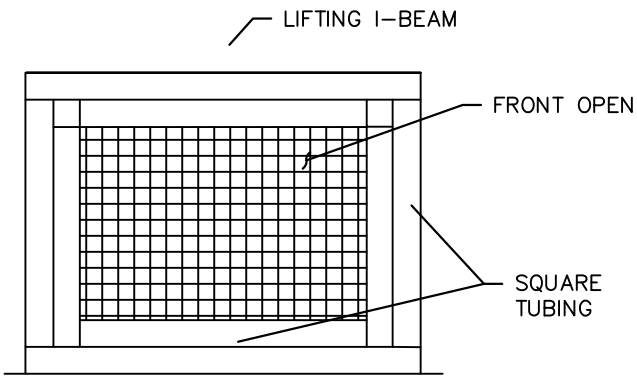
STANDARD SPECIFICATION REFERENCE
N/A

DATE
AUG '23

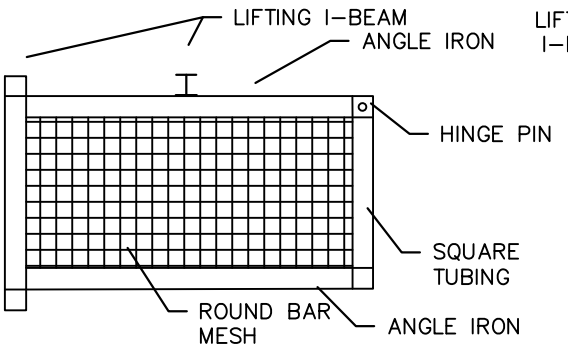
STANDARD DRAWING NO.
1270A



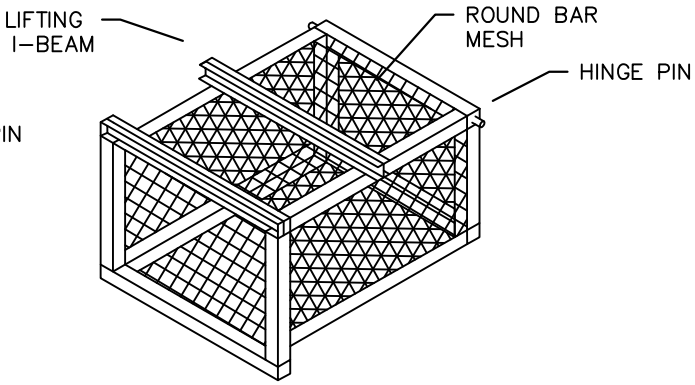
TRASH BASKET
TOP VIEW



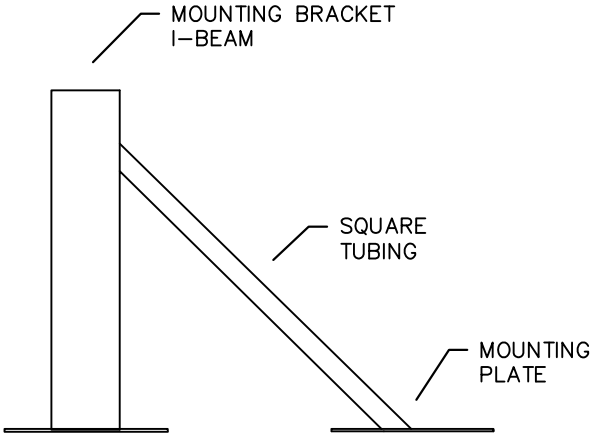
TRASH BASKET
FRONT VIEW



TRASH BASKET
SIDE VIEW



TRASH BASKET
ISOMETRIC VIEW



MOUNTING BRACKET

NOTES:
1. OVERALL SIZE AND LOCATION TO BE DETERMINED BY THE OWNER.
2. SIZE AND SPACING OF MESH TO BE DETERMINED BY THE OWNER.
3. SIZING OF STRUCTURAL MEMBERS AND CONNECTIONS AS DETERMINED BY OWNER.

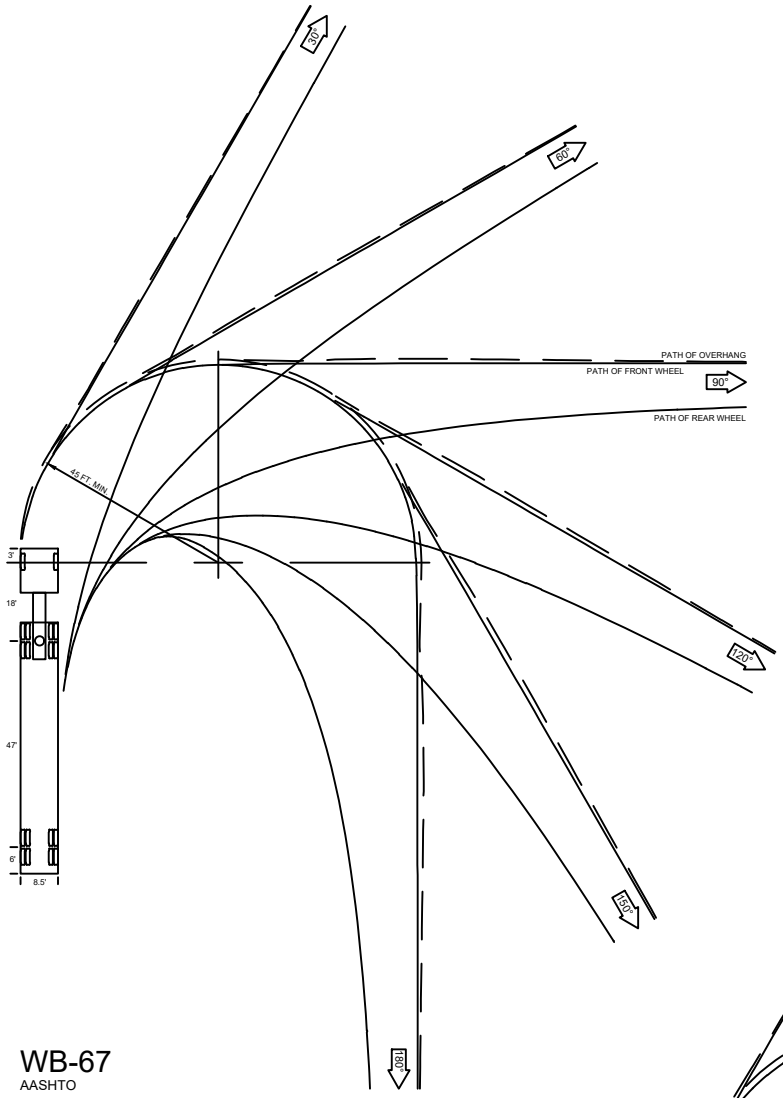
MULTIPLE OUTLET TRASH SCREEN BASKET SYSTEM

North Central Texas Council of Governments

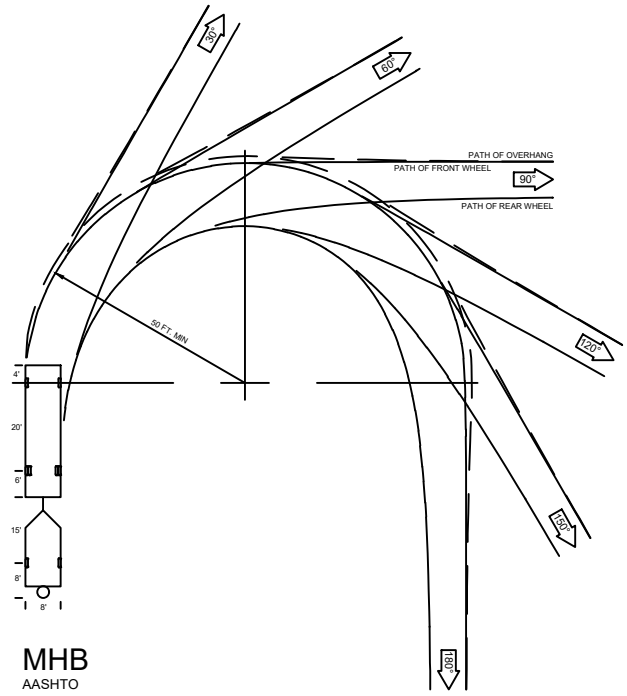
STANDARD SPECIFICATION REFERENCE
N/A

DATE
AUG '23

STANDARD DRAWING NO.
1270B



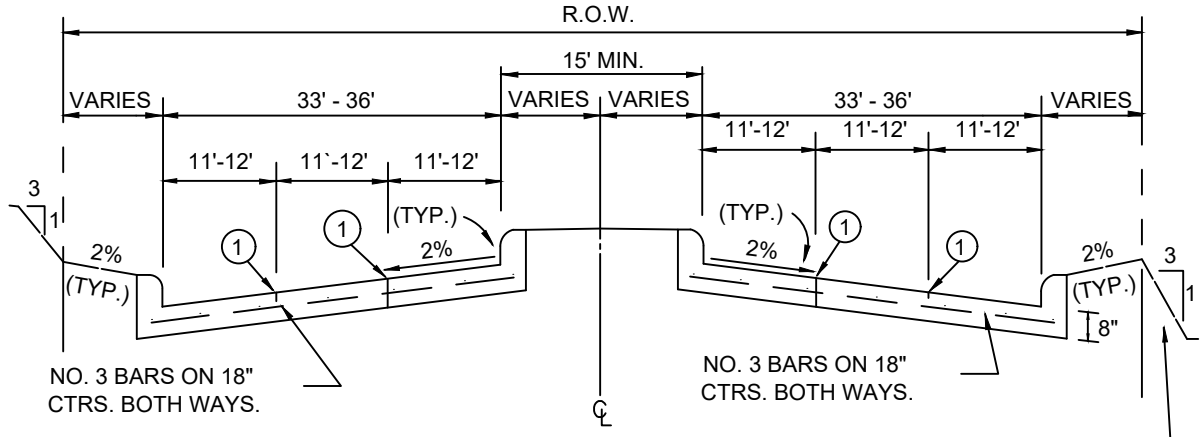
WB-67
AASHTO



MHB
AASHTO

M* - CITY OF MELISSA REVISION

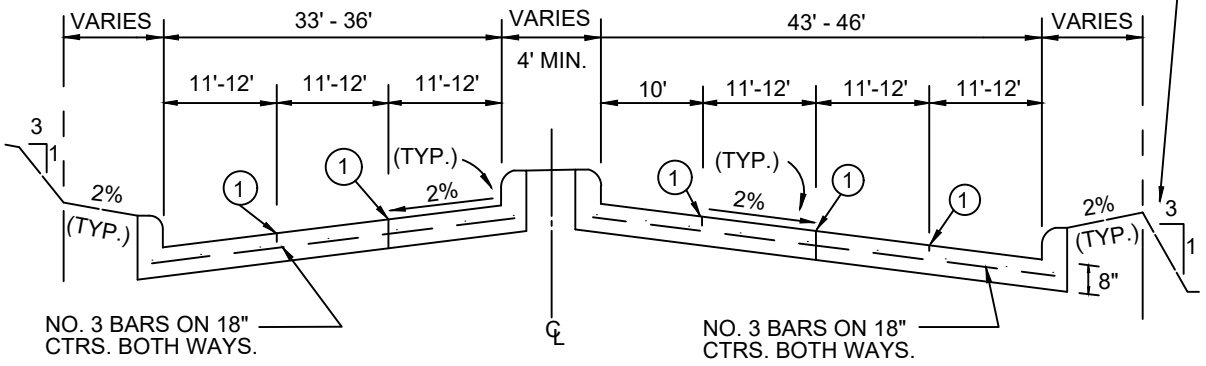
CURB RETURN TEMPLATES		NCTCOG STANDARD SPECIFICATION REFERENCE	
CITY OF MELISSA	MELISSA TX	DATE AUG. 04	STANDARD DRAWING NO. 2005M*



REGULAR SECTION

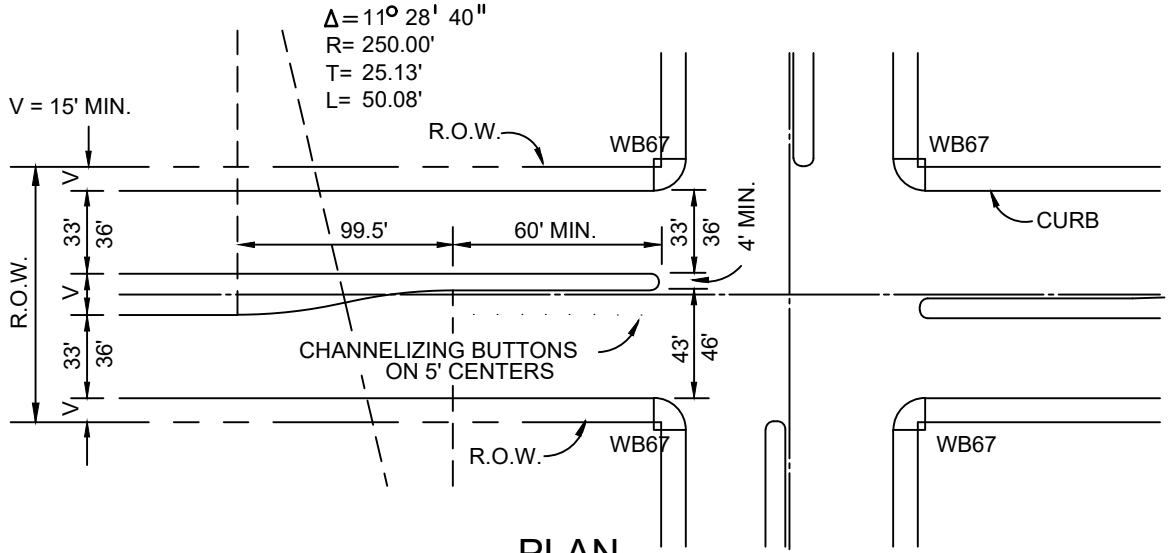
N.T.S.

(FILL SECTIONS ONLY. ALTERNATE REVERSE SLOPE ACCEPTABLE. NOT TO EXCEED 3:1)



LEFT TURN SECTION

N.T.S.



PLAN

N.T.S.

NOTES:

1. MIN. PAVEMENT DEPTH AND STRENGTH SHALL BE 8" - CLASS "C", OR AS SPECIFIED BY OWNER.
2. MIN. CURB HEIGHT AND WIDTH SHALL BE 6", OR AS SPECIFIED BY OWNER.
3. ALTERNATE REINFORCEMENT SHALL BE #4 BARS ON 24" CENTERS BOTH WAYS.

(1) SAWED LONGITUDINAL CONTRACTION JOINT OR CONSTRUCTION JOINT.

M* - CITY OF MELISSA REVISION

REINFORCED CONCRETE PAVEMENT

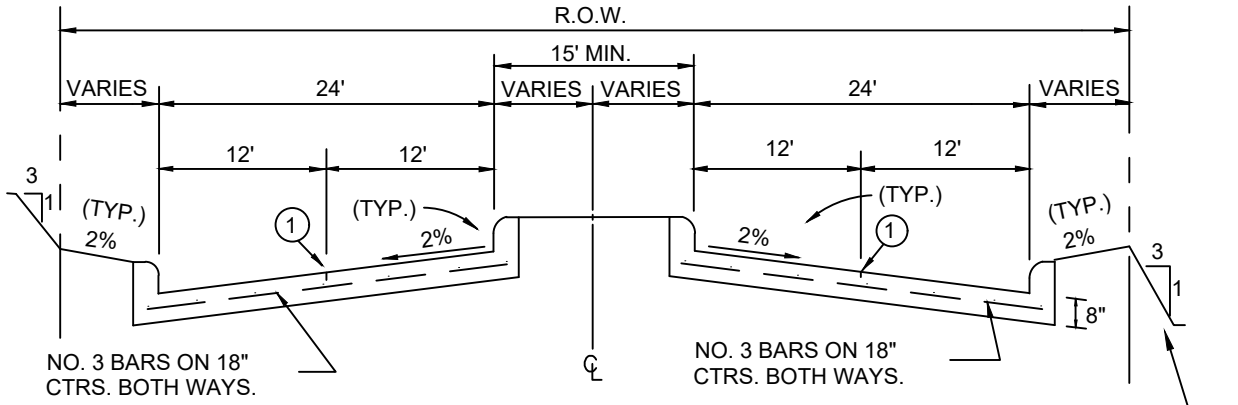
SIX-LANE DIVIDED THOROUGHFARE

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE
303

DATE
11/26/19

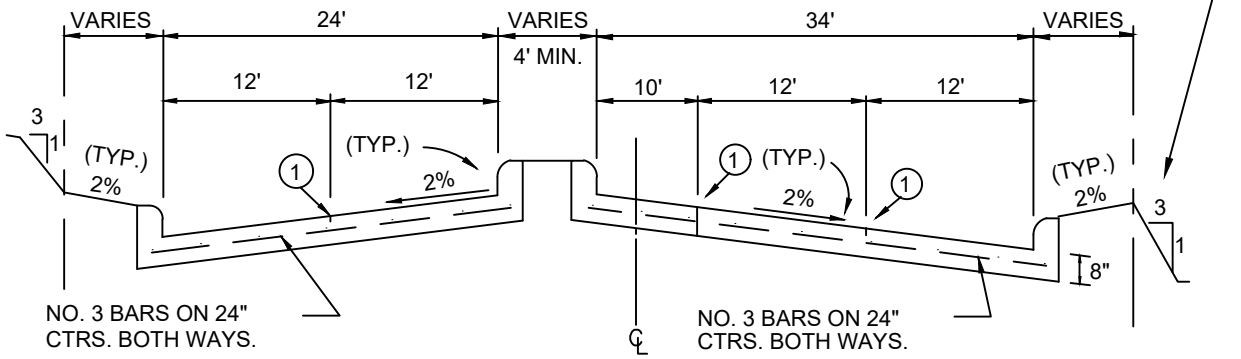
STANDARD DRAWING NO.
2010M*



REGULAR SECTION

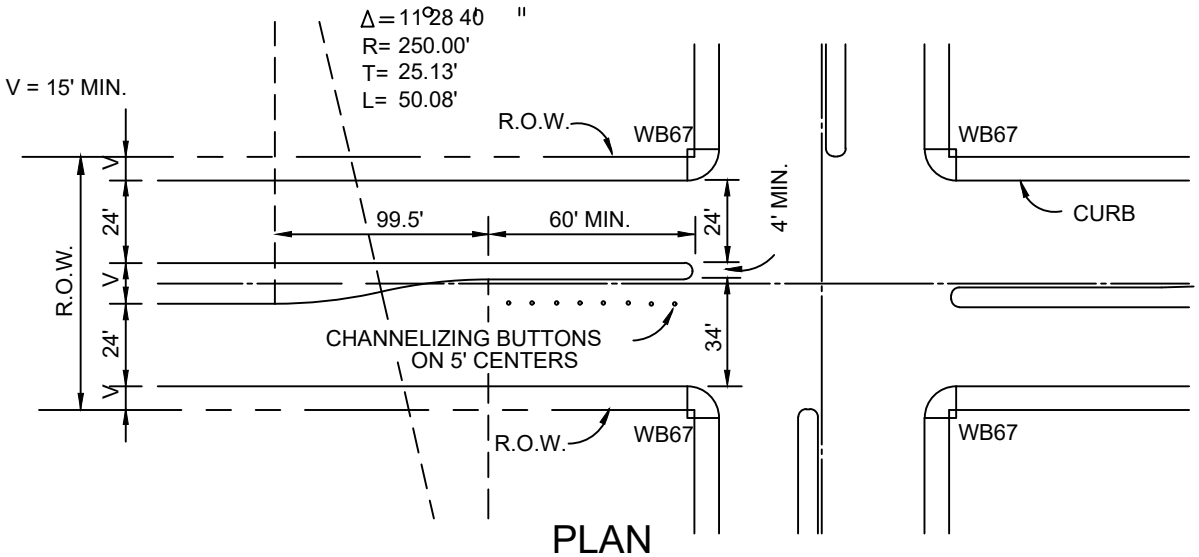
N.T.S.

(FILL SECTIONS ONLY. ALTERNATE REVERSE SLOPE ACCEPTABLE. NOT TO EXCEED 3:1.)



LEFT TURN SECTION

N.T.S.



PLAN

N.T.S.

NOTES:

1. MIN. PAVEMENT DEPTH AND STRENGTH SHALL BE 8" - CLASS "C", OR AS SPECIFIED BY OWNER.
2. MIN. CURB HEIGHT AND WIDTH SHALL BE 6", OR AS SPECIFIED BY OWNER.
3. ALTERNATE REINFORCEMENT SHALL BE #4 BARS ON 24" CENTERS BOTH WAYS.

(1) SAWED LONGITUDINAL CONTRACTION JOINT OR CONSTRUCTION JOINT.

M* - CITY OF MELISSA REVISION

REINFORCED CONCRETE PAVEMENT

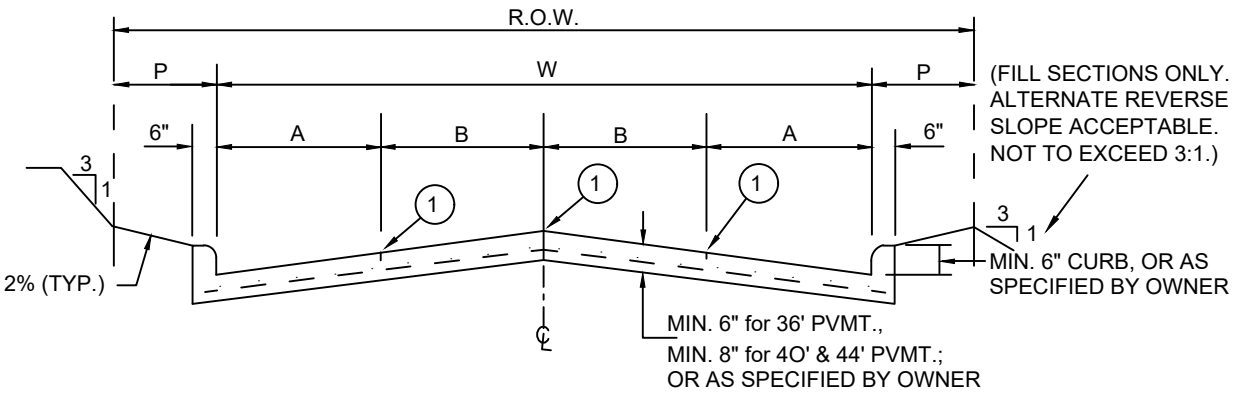
FOUR-LANE DIVIDED THOROUGHFARE

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE
303

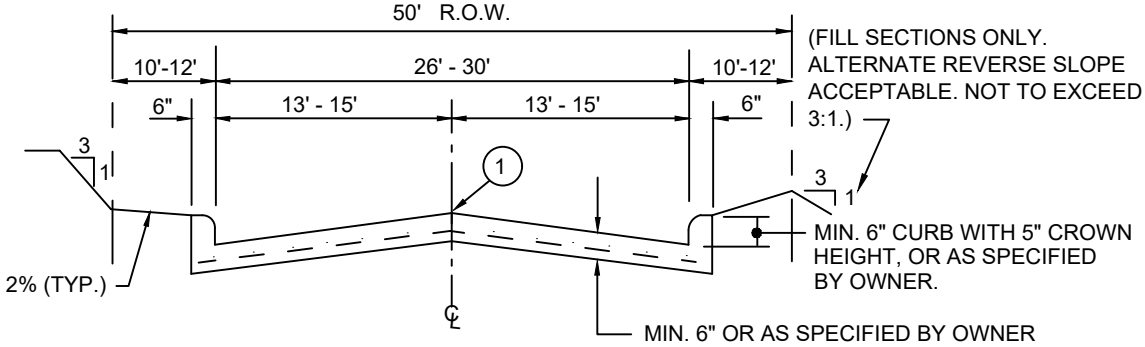
DATE
11/13/08

STANDARD DRAWING NO.
2020M*



STREET WIDTH(W)	A	B	R.O.W. WIDTH	P	CROWN HEIGHT
36'	8'	10'	VARIES	VARIES	6"
40'	8' OR 10'	10' OR 12'	VARIES	VARIES	6"
44'	11'	11'	VARIES	VARIES	8"

FOUR TRAVEL LANES OR
TWO TRAVEL LANES & TWO PARKING LANES
N.T.S.



ONE TRAVEL LANE & TWO PARKING LANES
N.T.S.

① INDICATES SAWED LONGITUDAL CONTRACTION OR CONSTRUCTION JOINT.

NOTES :

1. ALL REINFORCEMENT SHALL BE #3 BARS ON 18" CENTERS BOTH WAYS, UNLESS OTHERWISE SPECIFIED BY OWNER.
2. PAVEMENT STRENGTH SHALL BE A MINIMUM OF 3600 PSI CONCRETE, OR AS SPECIFIED BY THE OWNER.

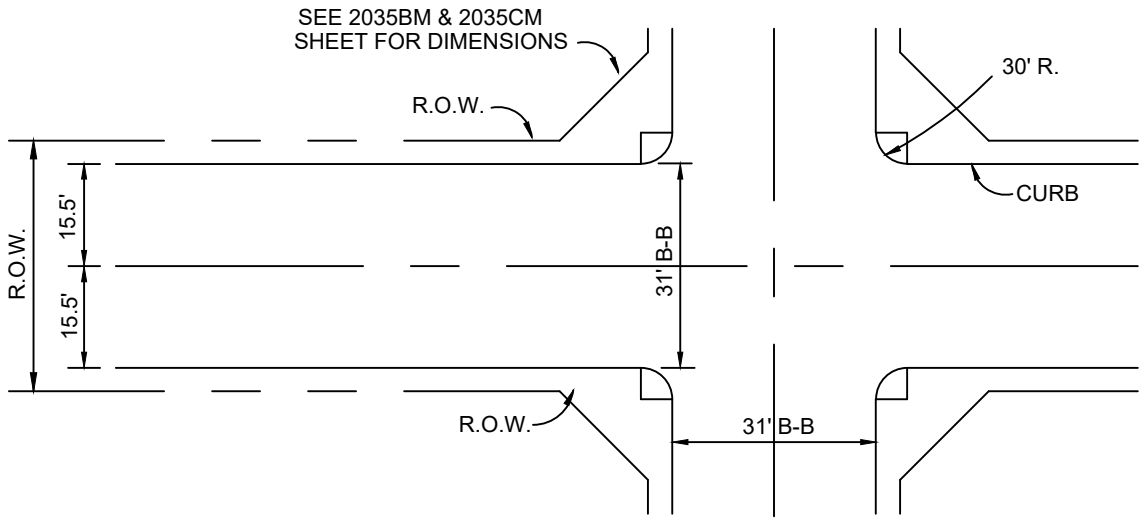
M - CITY OF MELISSA REVISION

REINFORCED CONCRETE PAVEMENT

2- & 4-LANE UNDIVIDED

MELISSA TX

APPLIED DATE	STANDARD SPECIFICATION REFERENCE	
08/29/19	303	
NOTICE DATE	ENFORCED DATE	STANDARD DRAWING NO.
08/29/19	09/29/19	2030M



RESIDENTIAL TO RESIDENTIAL

N.T.S.

ROAD TYPE	R.O.W.
RESIDENTIAL	50'
COLLECTOR	60'
THOROUGHFARE	100'
ARTERIAL	120'

TYPE OF INTERSECTION	TEMPLATE OR RADIUS	MIN. R.O.W. CLIP
RESIDENTIAL TO RESIDENTIAL -	30'	20' X 20'
RESIDENTIAL TO COLLECTOR -	MHB	20' X 20'
RESIDENTIAL TO THOROUGHFARE -	WB67	30' X 30'
RESIDENTIAL TO ARTERIAL -	NOT ALLOWED	NA
COLLECTOR TO THOROUGHFARE -	WB67	30' X 30'
COLLECTOR TO ARTERIAL -	WB67	30' X 30'
THOROUGHFARE TO ARTERIAL -	WB67	30' X 30'

M* - CITY OF MELISSA REVISION

REINFORCED CONCRETE PAVEMENT

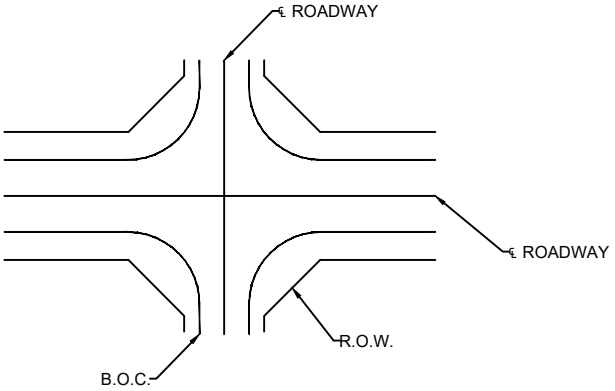
INTERSECTION ROW AND CURB RETURN DETAILS

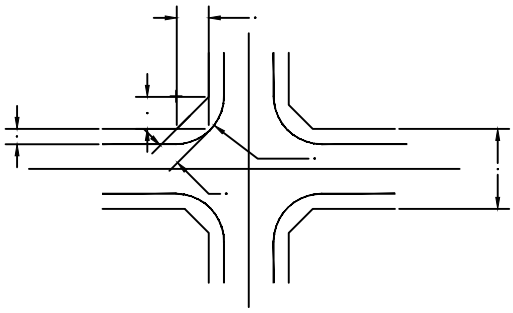
MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE

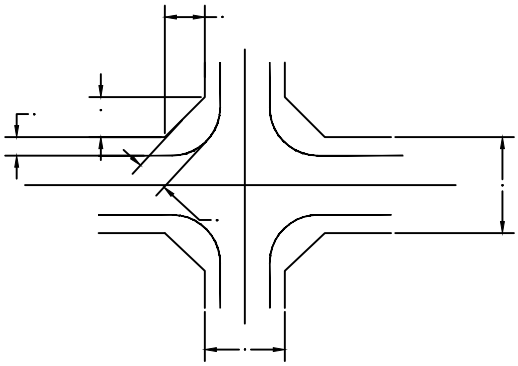
MODIFIED DATE	STANDARD DRAWING NO.
02/5/14	2035AM*

NOTICE DATE	ADOPTED DATE	ENFORCEMENT DATE

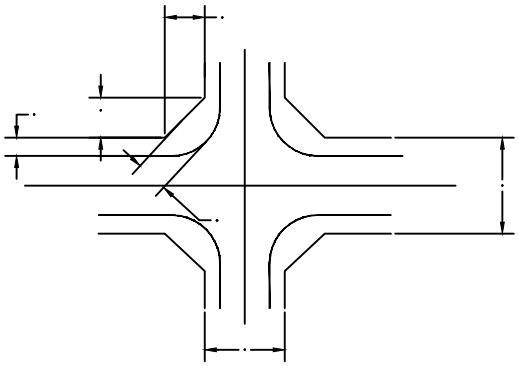




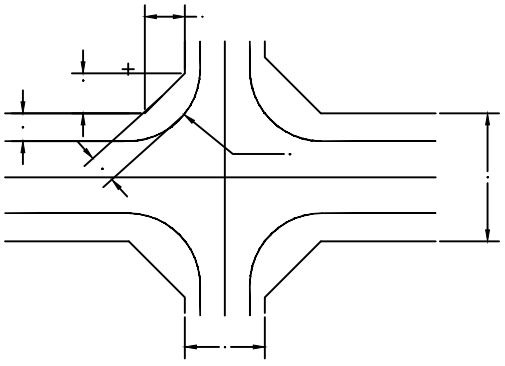
RESIDENTIAL TO RESIDENTIAL



RESIDENTIAL TO MINOR COLLECTOR



ESTATE RESIDENTIAL TO MINOR COLLECTOR
(K2U) (C3U)



RESIDENTIAL TO MAJOR COLLECTOR
(R2U, R3U) (C4U)

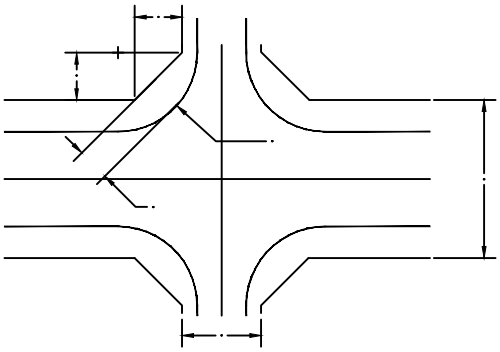
NOTE: ALL DIMENSIONS IN FEET

M* - CITY OF MELISSA REVISION

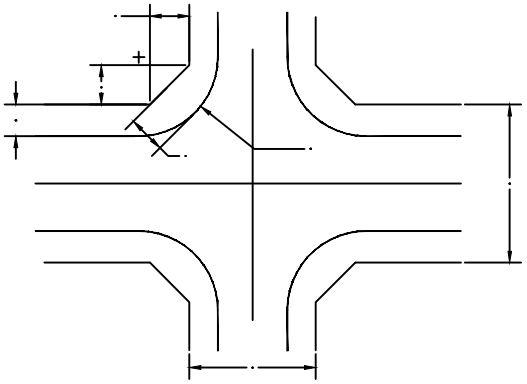
INTERSECTION ROW AND CURB RETURN DETAILS

CITY OF MELISSA

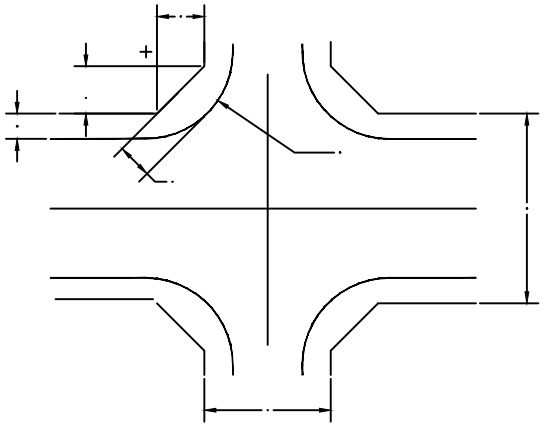
NCTCOG STANDARD SPECIFICATION REFERENCE		
	MPDIFIED DATE	STANDARD DRAWING NO.
	02/5/14	2035BM*
NOTICE DATE	ADOPTED DATE	ENFORCEMENT DATE



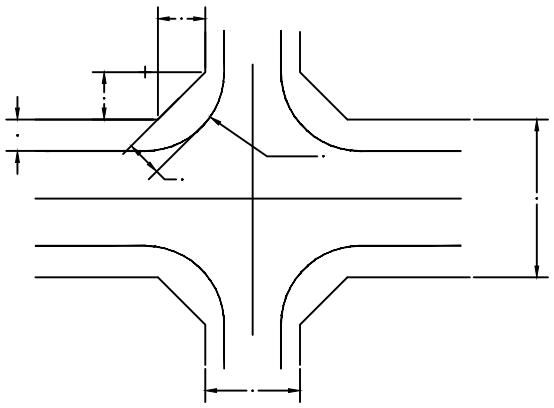
RESIDENTIAL TO THOROUGHFARE
(R2U, R3U) (M4U-M7U)



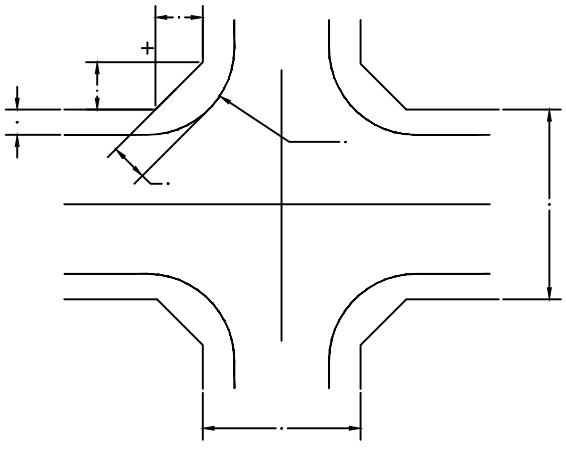
MAJOR COLLECTOR TO THOROUGHFARE
(C4U) (M4U-M7U)



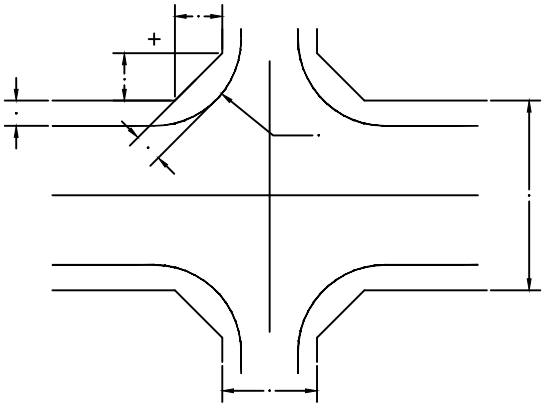
MAJOR COLLECTOR TO ARTERIAL
(C4U) (M4U-M7U)



MINOR COLLECTOR TO THOROUGHFARE
(C3U) (M4U-M7U)



THOROUGHFARE TO ARTERIAL
(M4U-M7U) (M4U-M7U)

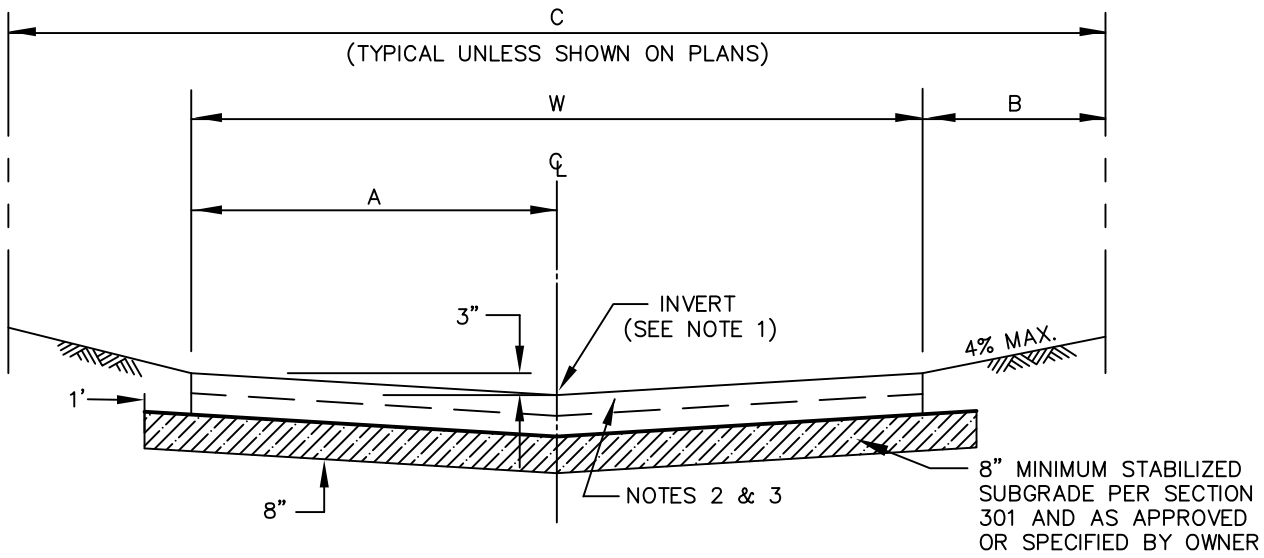


MINOR COLLECTOR TO ARTERIAL
(C3U) (M4U-M7U)

NOTE: ALL DIMENSIONS IN FEET

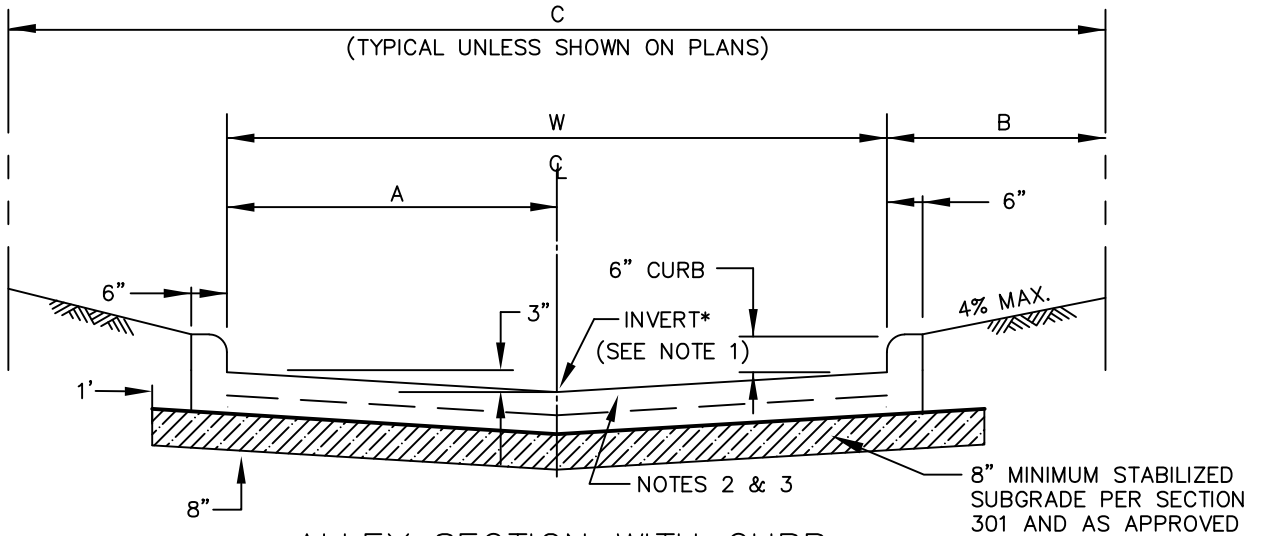
M* - CITY OF MELISSA REVISION

INTERSECTION ROW AND CURB RETURN DETAILS	NCTCOG STANDARD SPECIFICATION REFERENCE	
	MPDIFIED DATE: 02/5/14	STANDARD DRAWING NO.: 2035CM*
CITY OF MELISSA	NOTICE DATE	ADOPTED DATE / ENFORCEMENT DATE



ALLEY SECTION WITHOUT CURB

N.T.S.



ALLEY SECTION WITH CURB

N.T.S.

NOTES:

1. CROWN SECTION MAY BE USED IN LIEU OF INVERT WITH PROVISION OF AN ADEQUATE DRAINAGE DESIGN AND AS APPROVED BY OWNER.
2. REINFORCED WITH NO. 3 BARS AT 18" C–C BOTH WAYS OR AS APPROVED BY OWNER.
3. ALTERNATIVE SUBGRADE, THICKNESS, AND STEEL MAY BE UTILIZED WITH MORE DETAILED STUDY AND ANALYSIS AND AS APPROVED BY OWNER.
4. EXPANSION JOINTS TO BE PLACED AT INTERSECTION AND NOT TO EXCEED 600' BETWEEN JOINTS.
5. CONCRETE SHALL BE CLASS "C" OR "PC", OR AS SPECIFIED BY OWNER.
6. SEE DETAIL 2170 FOR SIDEWALKS.

ALLEY WIDTH (W)	A	B	R.O.W. WIDTH (C)
10'	5'	2'–6"	15'
12'	6'	2'–6"	17'
16'	8'	2'–6"	21'
20'	10'	2'–6"	25'

REINFORCED CONCRETE PAVEMENT

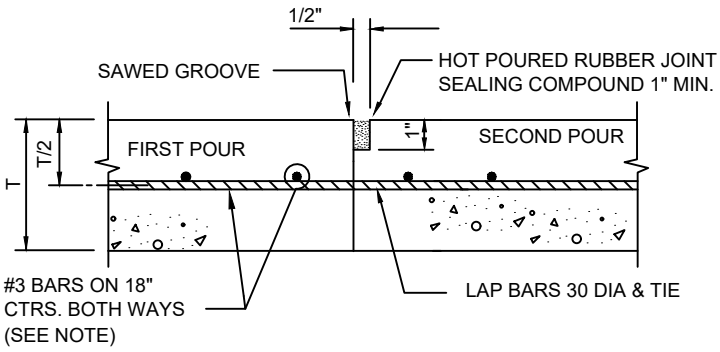
ALLEYS

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE
301, 303

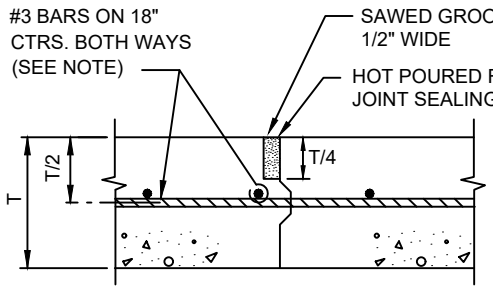
DATE
AUG '23

STANDARD DRAWING NO.
2040



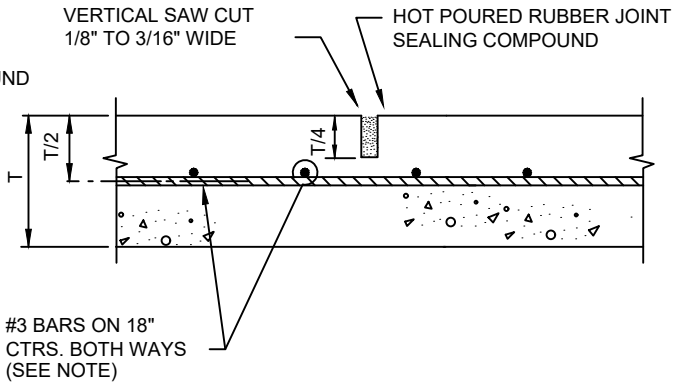
CONSTRUCTION JOINT

N.T.S.



KEYWAY JOINT

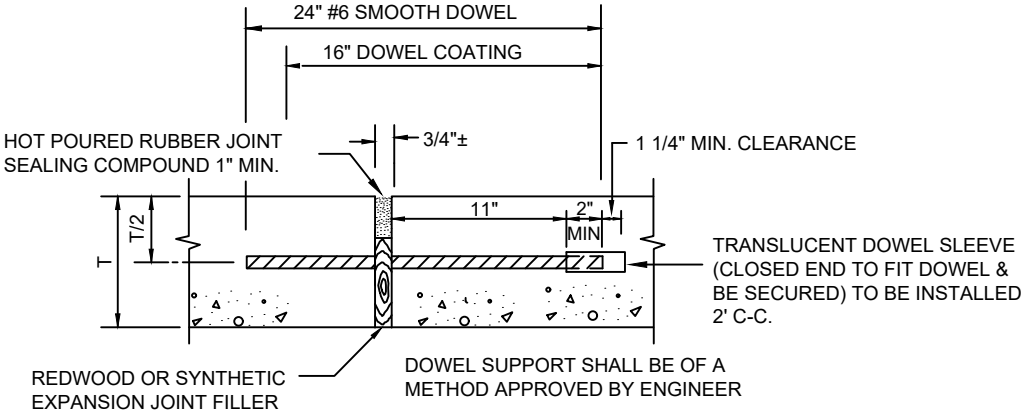
(FOR PAVEMENT THICKNESS > 6")
N.T.S.



SAWED CONTRACTION JOINT

N.T.S.

NOTE:
ALTERNATE REINFORCEMENT
#4 BARS ON 24" CTRS.
BOTH WAYS.



EXPANSION JOINT

(SPACED 600 FT. MAXIMUM; LOCATE AT
STRUCTURES AND AT INTERSECTION P.C.'S & P.T.'S)
N.T.S.

REINFORCED CONCRETE PAVEMENT

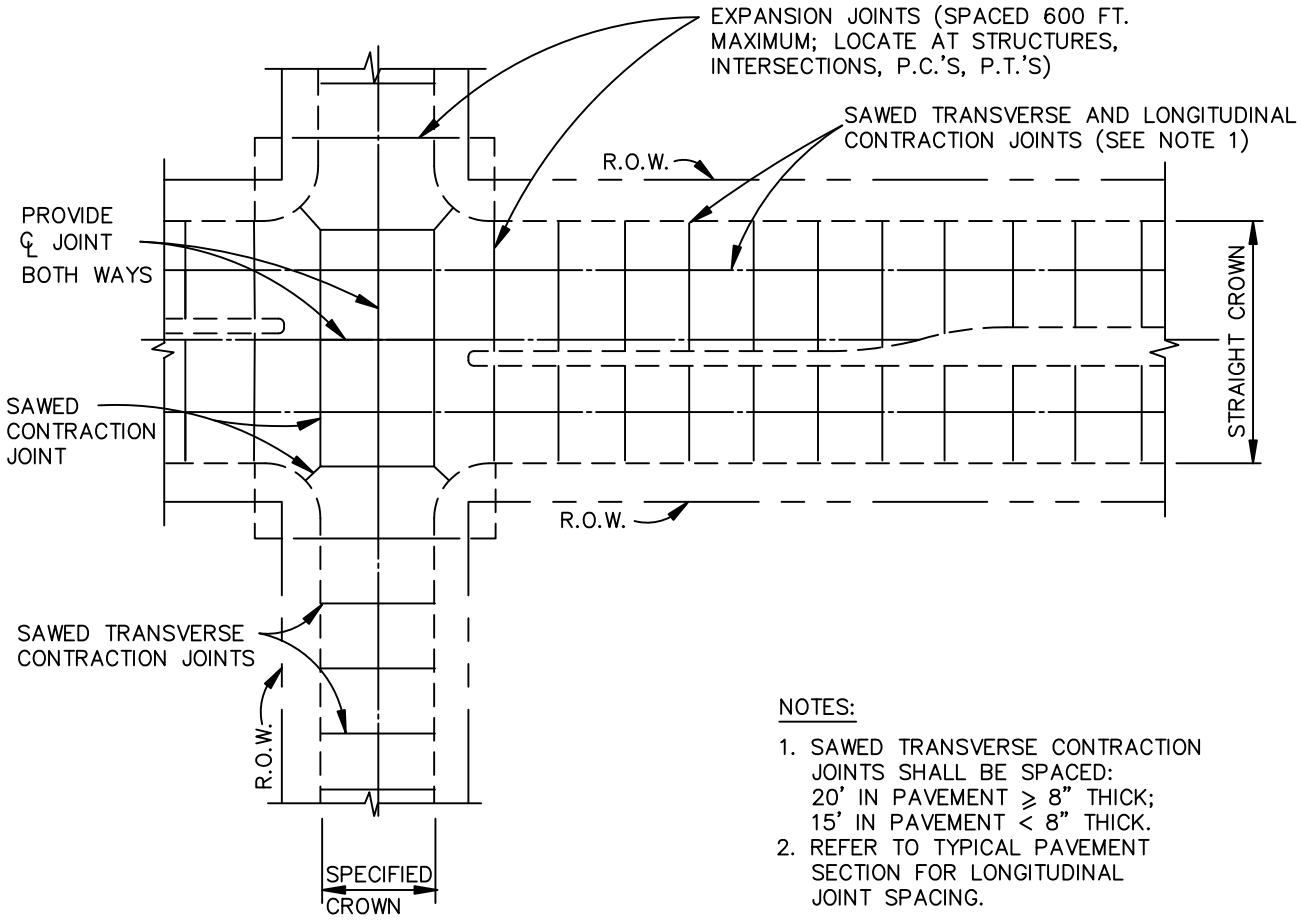
JOINTS

MELISSA

STANDARD SPECIFICATION REFERENCE
303.5.4

DATE
11/26/19

STANDARD DRAWING NO.
2050



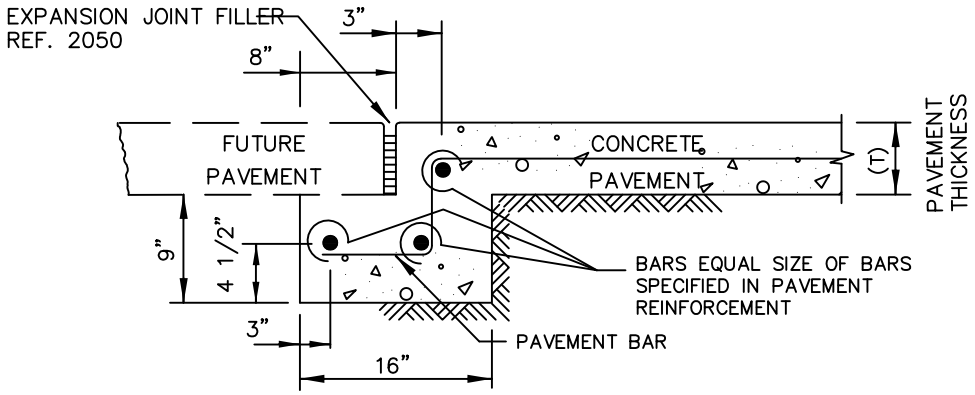
NOTES:

1. SAWED TRANSVERSE CONTRACTION JOINTS SHALL BE SPACED: 20' IN PAVEMENT ≥ 8" THICK; 15' IN PAVEMENT < 8" THICK.
2. REFER TO TYPICAL PAVEMENT SECTION FOR LONGITUDINAL JOINT SPACING.

SPACING DIAGRAM FOR TRANSVERSE JOINTS

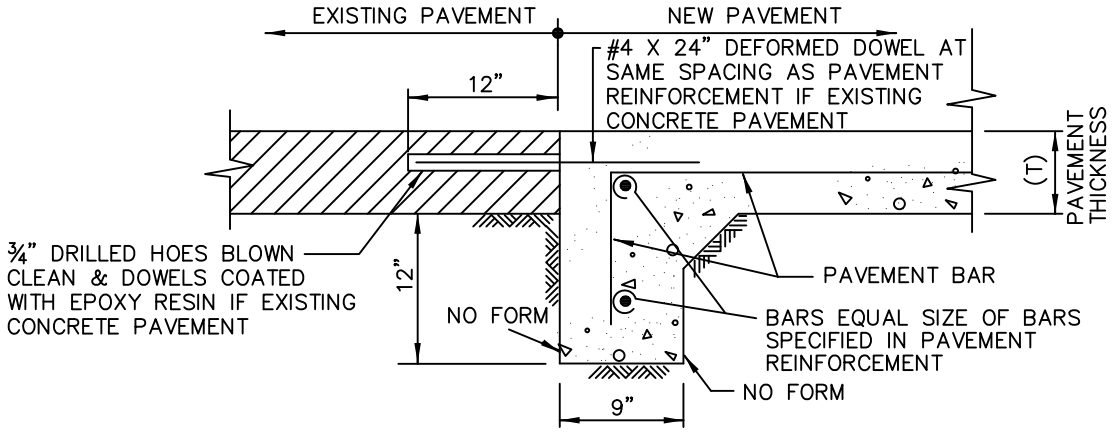
N.T.S.

REINFORCED CONCRETE PAVEMENT	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 303.5.4.	
TRANSVERSE JOINT SPACING		DATE AUG '23	STANDARD DRAWING NO. 2060



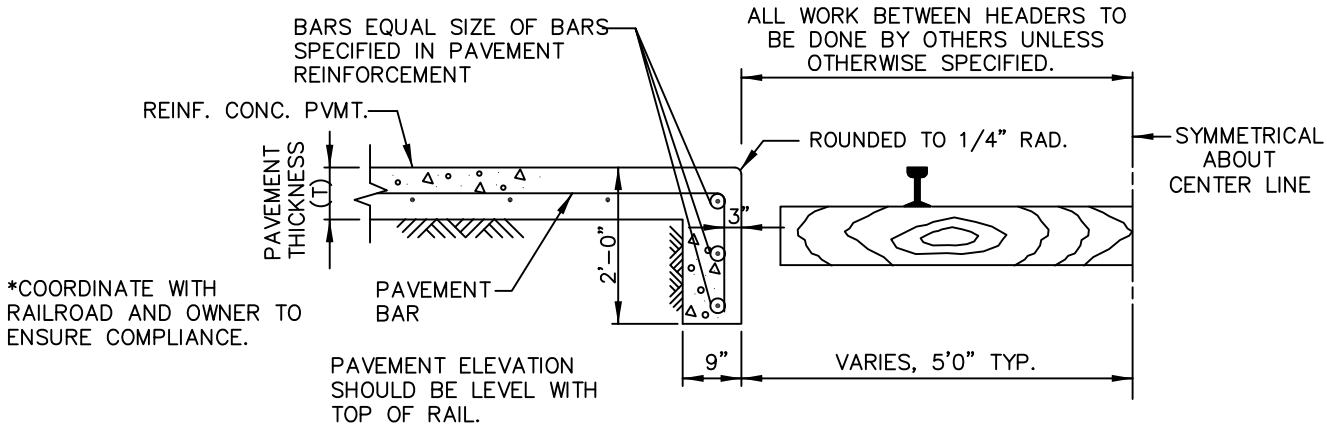
STREET HEADER FOR FUTURE PAVEMENT

N.T.S.



STREET HEADER AT EXISTING PAVEMENT

N.T.S.



STREET HEADER AT RAILROAD

N.T.S.

NOTES:

1. PAVEMENT BARS TO BE BENT DOWN INTO HEADER.
2. HEADER AND PAVEMENT TO BE MONOLITHIC.

REINFORCED CONCRETE PAVEMENT

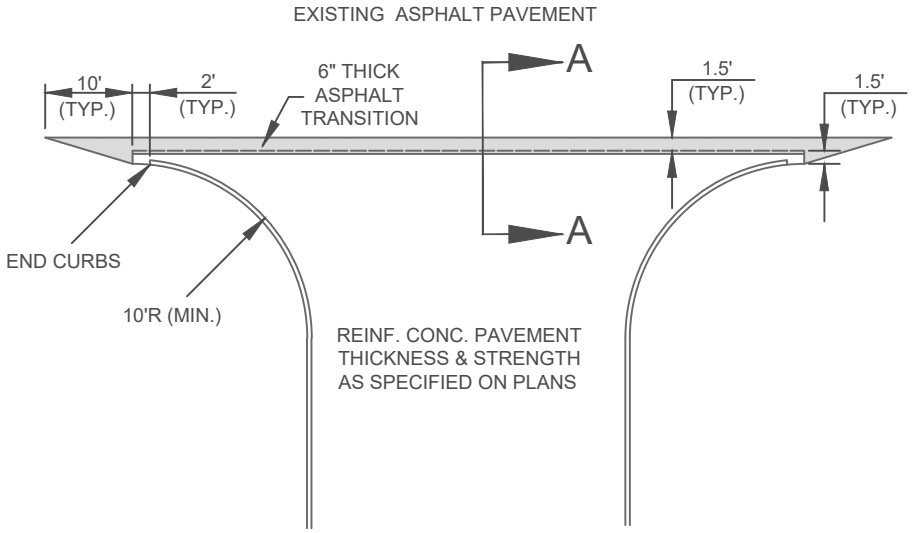
STREET HEADERS

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE
303.5.4.

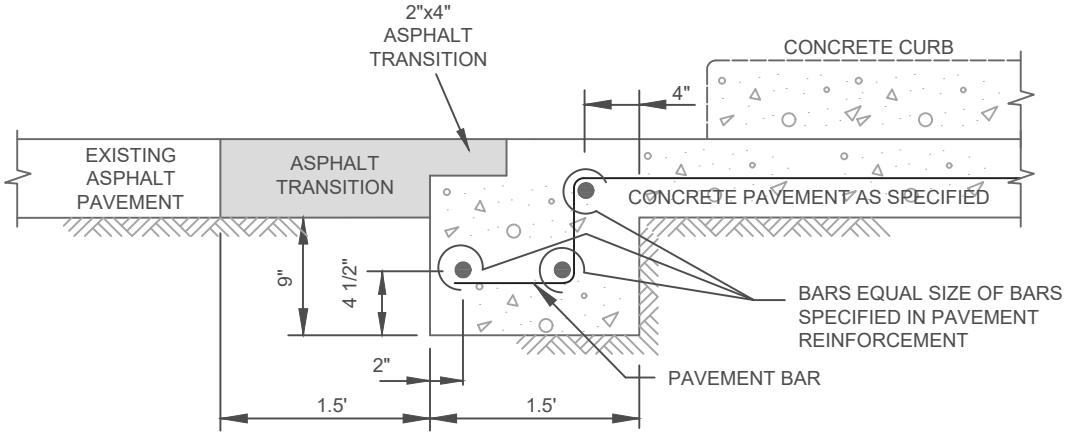
DATE
AUG '23

STANDARD DRAWING NO.
2070



CONCRETE TO ASPHALT CONNECTION

N.T.S.



SECTION A-A

N.T.S.

M* - CITY OF MELISSA REVISION

CONCRETE TO ASPHALT PAVEMENT CONNECTION	MELISSA TX	NCTCOG STANDARD SPECIFICATION REFERENCE: 305.4	
		DATE: 11/13/08	STANDARD DRAWING NO.: 2070AM*

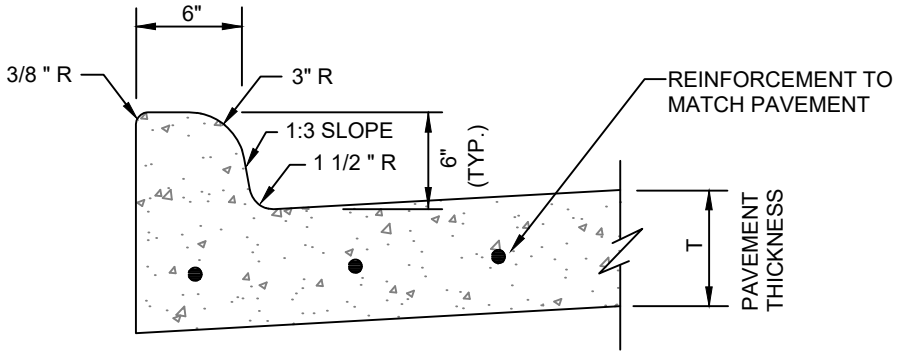
GENERAL NOTES:

1. REINFORCED CONCRETE PAVEMENT:
   A. ALL CURBS SHALL BE PLACED INTEGRAL WITH PAVEMENT UNLESS OTHERWISE APPROVED BY THE OWNER.
   B. CURBS SHALL MEET THE SAME COMPRESSIVE STRENGTH AS SPECIFIED FOR THE PAVEMENT.
   C. BAR LAPS SHALL BE 30 DIAMETERS.
   D. REINFORCING BARS SHALL BE SUPPORTED BY CHAIRS OR OTHER DEVICES APPROVED BY THE OWNER.

2. SUBGRADE: (UNLESS OTHERWISE SPECIFIED BY OWNER)
   A. SUBGRADE UNDER ALL PAVEMENTS SHALL BE STABILIZED TO MINIMUM DEPTH OF 6" FOR 2 LANE RESIDENTIAL ROAD AND 8" FOR ALL OTHERS. IF THE P.I. IS 15 OR GREATER, LIME SHALL BE USED, IF THE P.I. IS LESS THAN 15, CEMENT SHALL USED OR AS RECOMMENDED BY A GEOTECH ENGINEER. LABORATORY TESTS MUST BE PERFORMED TO DETERMINE THE AMOUNT OF CEMENT REQUIRED TO LOWER THE P.I. TO 15 OR BELOW SATURATION P.I. (PH≥ 12.4) WILL BE THE LIMIT WHEN A SOIL'S P.I. CANNOT BE BROUGHT TO 15 OR LOWER.
   B. WHERE THE IN PLACE MATERIAL HAS A P.I. OF LESS THAN 15, THE SUBGRADE SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 6" AND RECOMPACTED.
   C. WHERE SULFATES ARE PRESENT, CONSULT A GEOTECHNICIAL ENGINEER FOR RECOMMEND SUBGRADE TREATMENT.

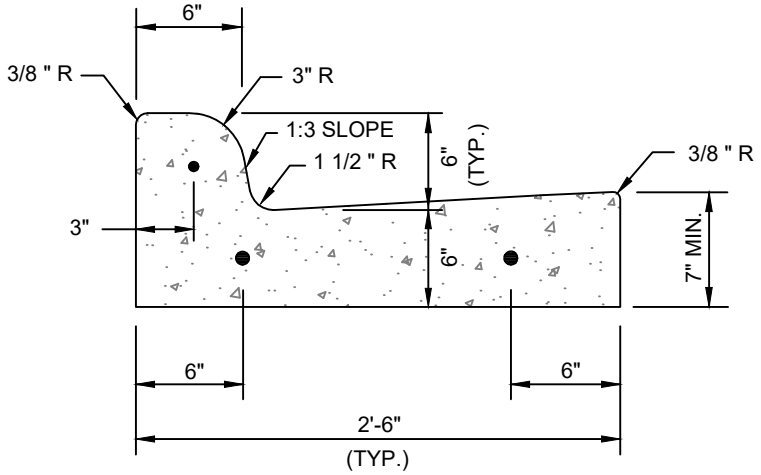
3. IF THE ROADWAY IS A DESIGNATED BIKE ROUTE OR BIKE USAGE IS ANTICIPATED, REFER TO AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS AASHTO GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES (2012, 4TH EDITION) AND THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD):
   https: //mutcd.fhwa.dot.gov/resources/state_info/texas/tx.htm

PAVEMENT SYSTEMS	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE: 301. 302. 303.	
GENERAL NOTES		DATE: AUG '23	STANDARD DRAWING NO.: 2110



INTEGRAL CURB & GUTTER

N.T.S.



SEPARATE CURB & GUTTER

N.T.S.

NOTES:

1. REINFORCEMENT SHALL BE NO. 4 BARS, UNLESS OTHERWISE SPECIFIED.
2. CONCRETE SHALL BE CLASS "C" OR "PC", 3,600 PSI, UNLESS OTHERWISE SPECIFIED.
3. ALL CURBS SHALL BE CONSTRUCTED OF PORTLAND CEMENT CONCRETE UNLESS OTHERWISE SPECIFIED.
4. REBAR STAKES SHALL BE USED IN RAISED CURB SECTIONS FOR HAND PLACED CONCRETE.

M* - CITY OF MELISSA REVISION

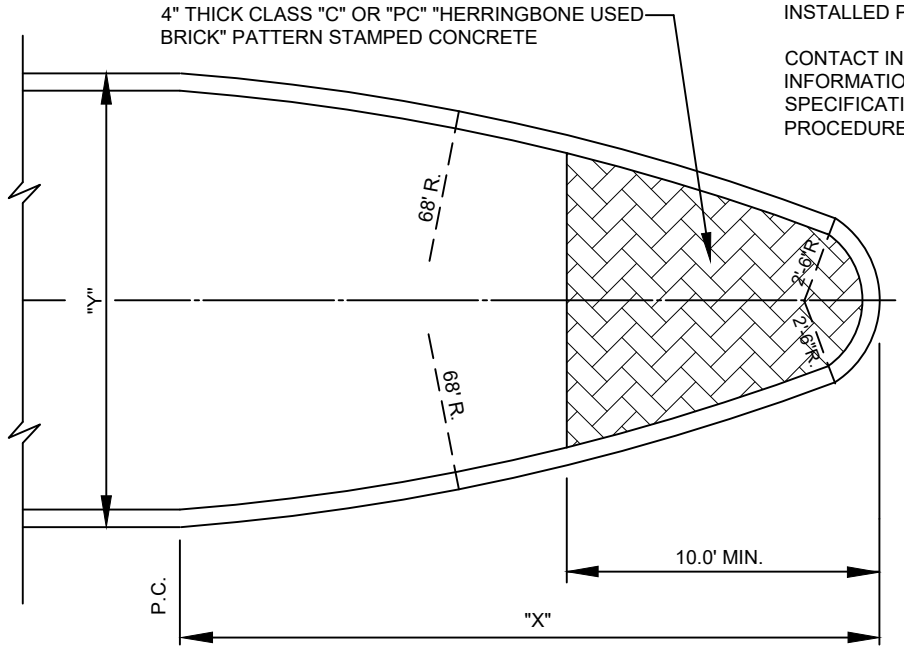
CONCRETE CURB & GUTTER

INTEGRAL & SEPARATE

NCTCOG STANDARD SPECIFICATION REFERENCE		
305.1		
MODIFIED DATE	STANDARD DRAWING NO.	
07/28/23	2120M	
NOTICE DATE	ADOPTED DATE	ENFORCEMENT DATE
07/28/23	07/28/23	08/28/23

NOTE:
STAMPED CONCRETE SHALL BE INTEGRAL STAINED INCRETE COLOR "REDWOOD W/ DARK GRAY" OR APPROVED EQUAL AND SHALL BE INSTALLED PER CITY STANDARDS.

CONTACT INCRETE SYSTEMS FOR ADDITIONAL INFORMATION OR ASSISTANCE WITH SPECIFICATIONS AND INSTALLATION PROCEDURES AT 1-800-752-4626.



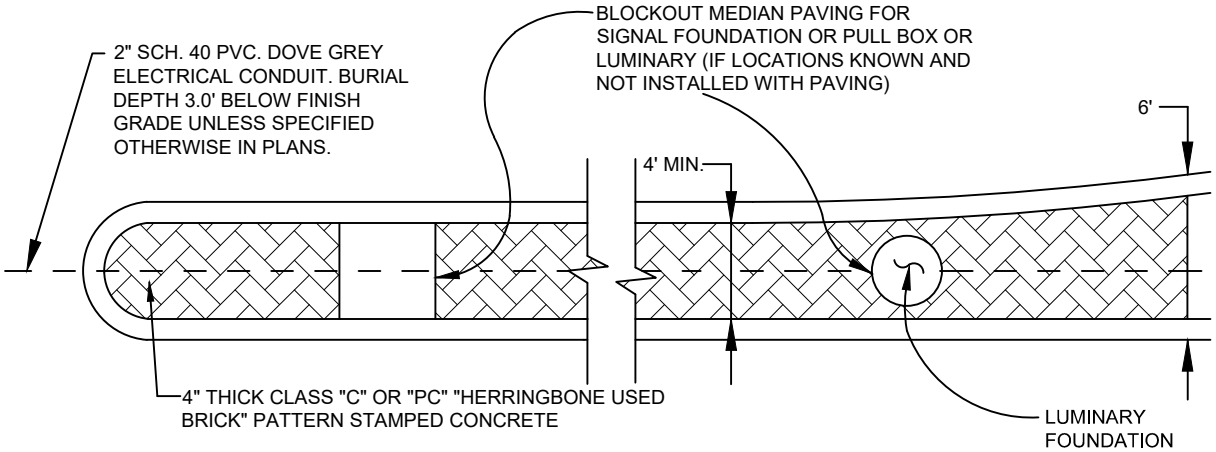
DIMENSIONS OF MEDIAN NOSE

Y = 15'	X = 27.6'
Y = 16'	X = 28.8'
Y = 17'	X = 29.9'
Y = 18'	X = 30.9'

CONCRETE NOSE FOR MEDIAN ISLAND

N.T.S.

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

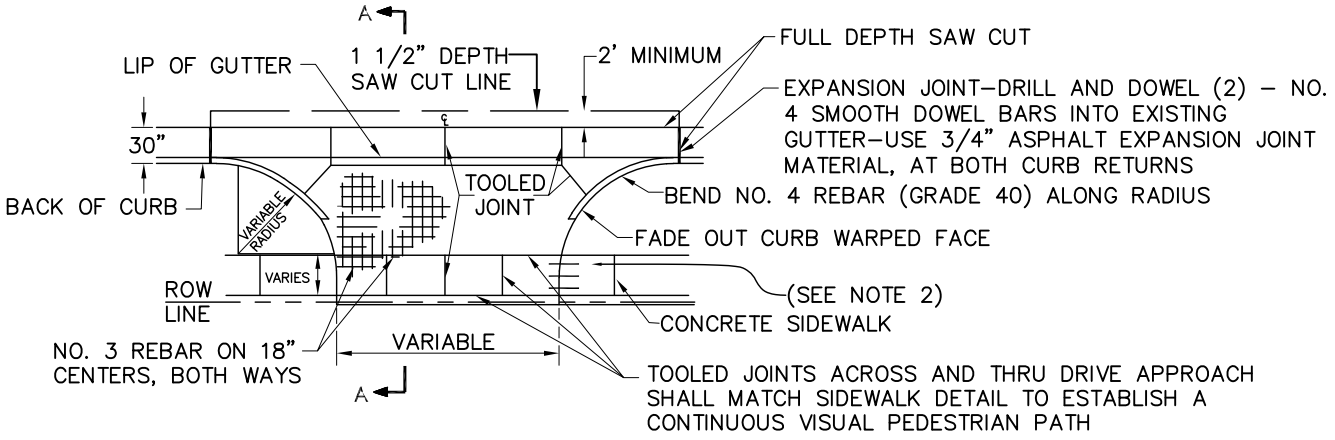


LEFT TURN LANE MEDIAN PAVEMENT

N.T.S.

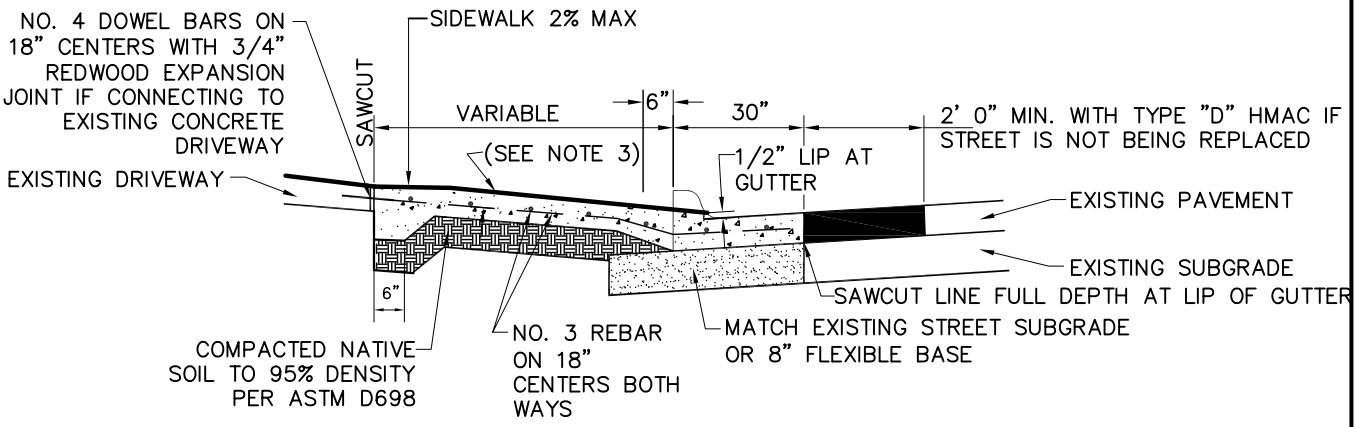
M* - CITY OF MELISSA REVISION

MEDIAN ISLAND PAVEMENT	MELISSA TX	NCTCOG STANDARD SPECIFICATION REFERENCE 305.3	
		MODIFIED DATE	STANDARD DRAWING NO. 2130M*
NOSE & LEFT TURN LANE	NOTICE DATE 02/28/17	ADOPTED DATE 03/30/17	ENFORCEMENT DATE 03/30/17



TYPICAL DRIVE APPROACH CONNECTING TO ASPHALT STREETS WITH CURB AND GUTTER

N.T.S.



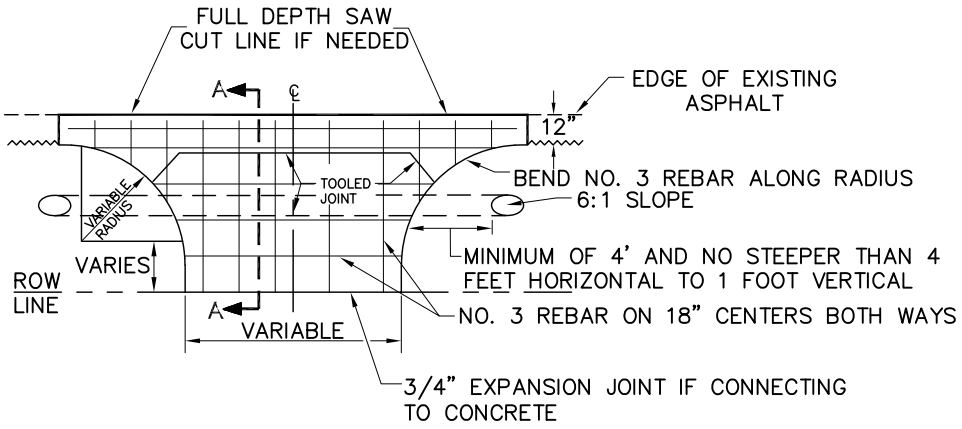
SECTION 'A–A'

N.T.S.

NOTES:

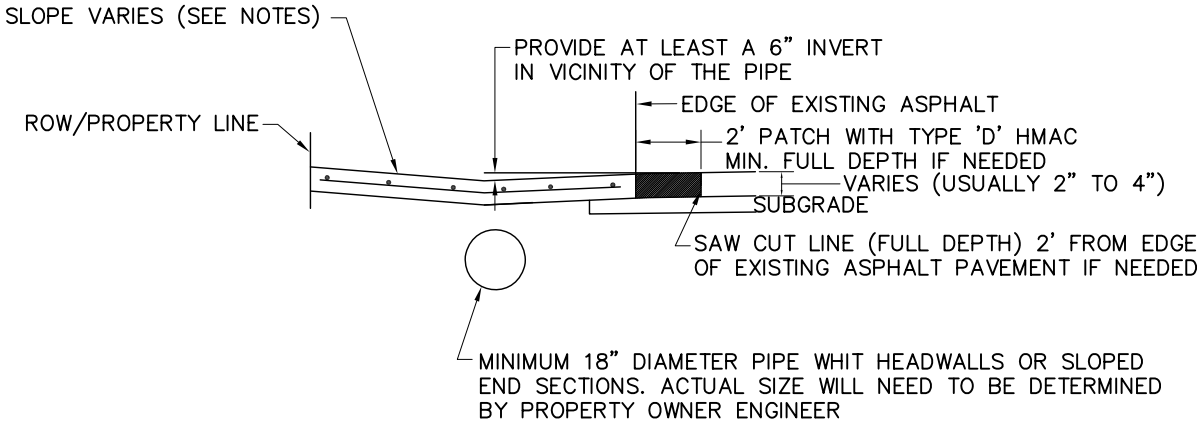
1. THE SLOPE OF THE DRIVE WHERE SIDEWALKS CROSS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2%.
2. REMOVE ANY EXISTING SIDEWALK AT NEAREST JOINT AND CONNECT REPLACED SECTION TO DRIVE WITH (3) – NO. 4 SMOOTH DOWEL BARS ON 18" CENTERS WITH 3/4" REDWOOD EXPANSION JOINT, WITH 1" REMOVABLE CAP STRIP. SEAL WITH SELF LEVELING GRAY SILICONE SEALANT.
3. RESIDENTIAL DRIVE APPROACH 10% MAX SLOPE*; MIN. 5" SLAB THICKNESS
   * MAXIMUM SLOPE AS APPROVED BY OWNER
4. ALL CONNECTIONS TO STATE RIGHT–OF–WAY SHALL USE TXDOT DETAILS.
5. ALL CURB AND GUTTER SHALL BE 30" UNLESS OTHERWISE DIRECTED BY THE CITY.
6. CONCRETE SHALL BE CLASS C, 6 SACK AND HAVE COMPRESSIVE STRENGTH OF 3600 PSI @28 DAYS.
7. IF STREET IS BEING REPLACED, PAVEMENT THICKNESS SHALL BE 6" FOR RESIDENTIAL AND 8" FOR COLLECTOR OR LARGER.

RESIDENTIAL DRIVE APPROACH CONNECTING TO ASPHALT STREETS WITH CURB AND GUTTER	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 305.2	
		DATE AUG '23	STANDARD DRAWING NO. 2150A



TYPICAL DRIVE APPROACH CONNECTING TO EXISTING RURAL TYPE ASPHALT STREETS

N.T.S.



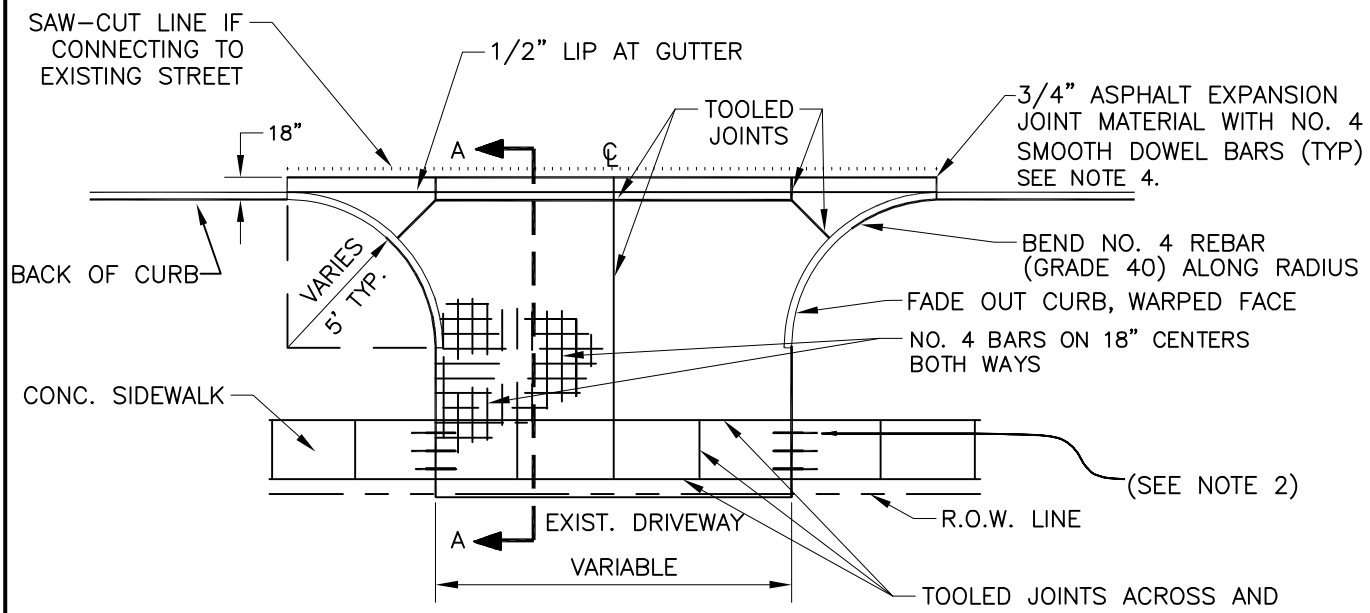
SECTION 'A–A'

N.T.S.

NOTES:

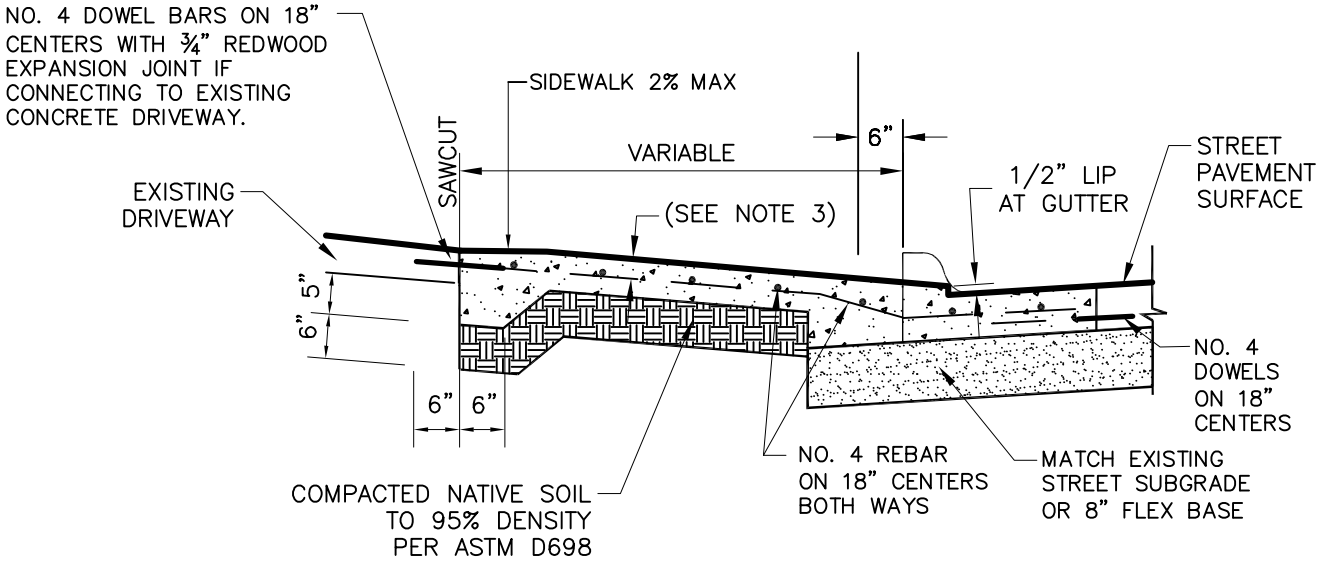
1. THE SLOPE OF THE DRIVE WHERE SIDEWALKS CROSS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2%.
2. RESIDENTIAL DRIVE APPROACH 10% MAX SLOPE*; MIN. 5" SLAB THICKNESS
   * MAXIMUM SLOPE AS APPROVED BY OWNER
3. ALL CONNECTIONS TO STATE RIGHT–OF–WAY SHALL USE TXDOT DETAILS.
4. CONCRETE SHALL BE CLASS C, 6 SACK AND HAVE COMPRESSIVE STRENGTH OF 3600 PSI @ 28 DAYS.
5. MINIMUM VELOCITY THROUGH PIPE IS 2.5fps. MINIMUM SLOPE IN PIPE IS 0.5% UNLESS OTHERWISE DESIGNED TO MEET MINIMUM SLOPE REQUIREMENTS
6. IN SOME CASES A SWALE MAY BE PROVIDED IN LIEU OF THE PIPE. THE PROPERTY OWNER AND OWNER'S ENGINEERS WILL NEED TO DETERMINE IF A SWALE CAN BE USED IN LIEU OF A PIPE.
7. USE OF RURAL SECTION AS APPROVED BY OWNER.

RESIDENTIAL DRIVE APPROACH CONNECTING TO EXISTING RURAL TYPE ASPHALT STREET	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 305.2	
		DATE AUG '23	STANDARD DRAWING NO. 2150B



TYPICAL DRIVE APPROACH ON A CONCRETE STREET

N.T.S.

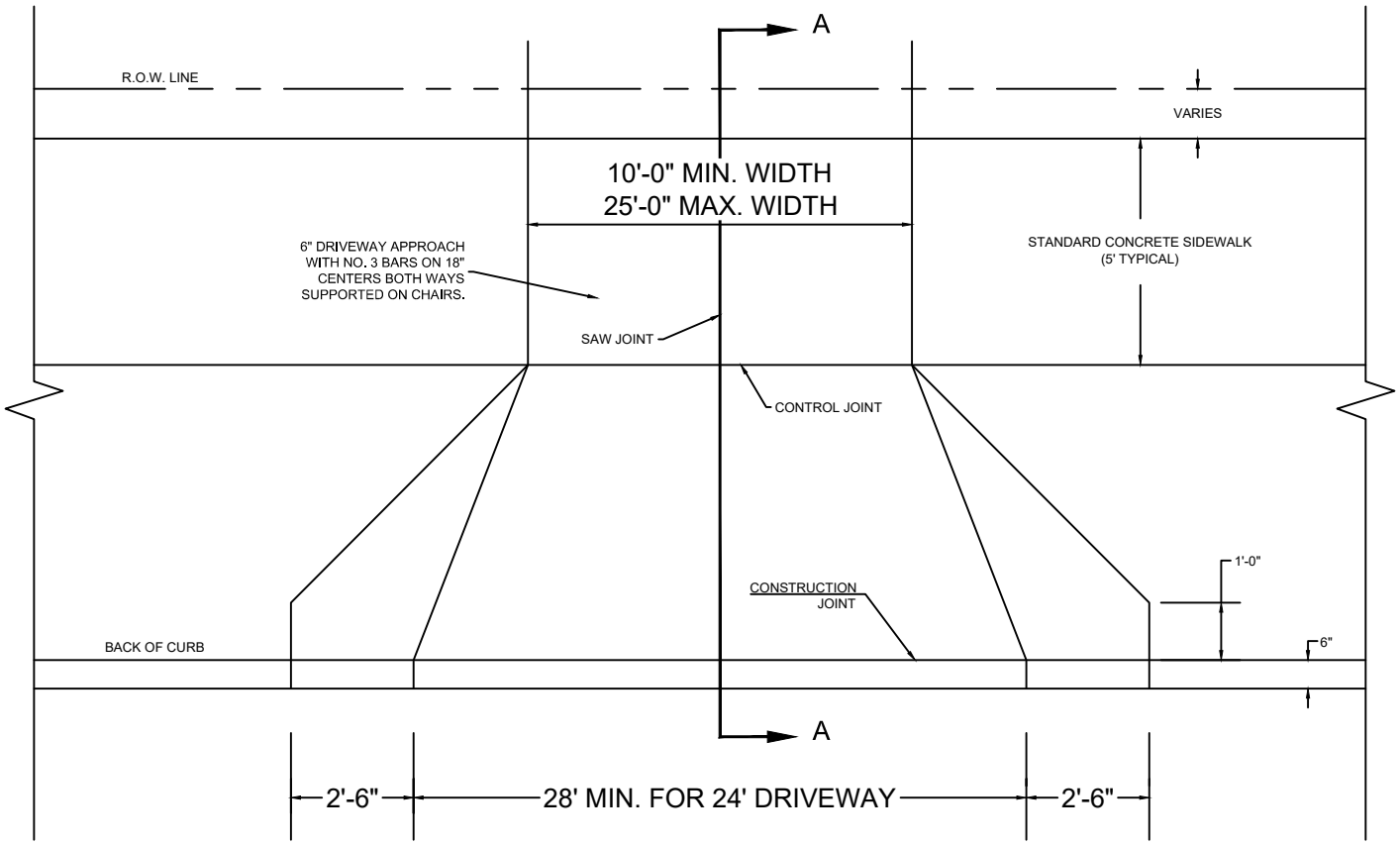


SECTION 'A-A'

N.T.S.

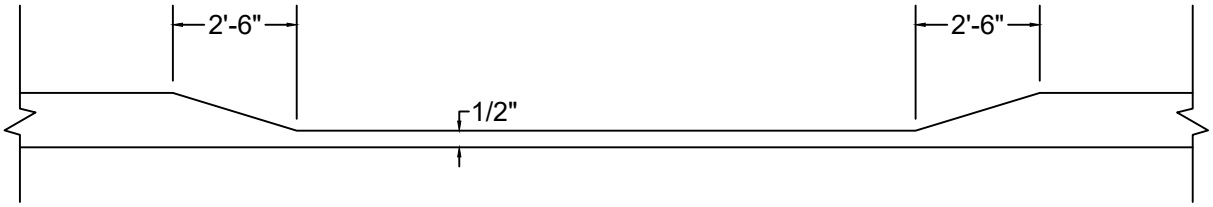
SEE NOTES FOR 2150A

RESIDENTIAL DRIVE APPROACH ON A CONCRETE STREET	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 305.2	
		DATE AUG '23	STANDARD DRAWING NO. 2150C

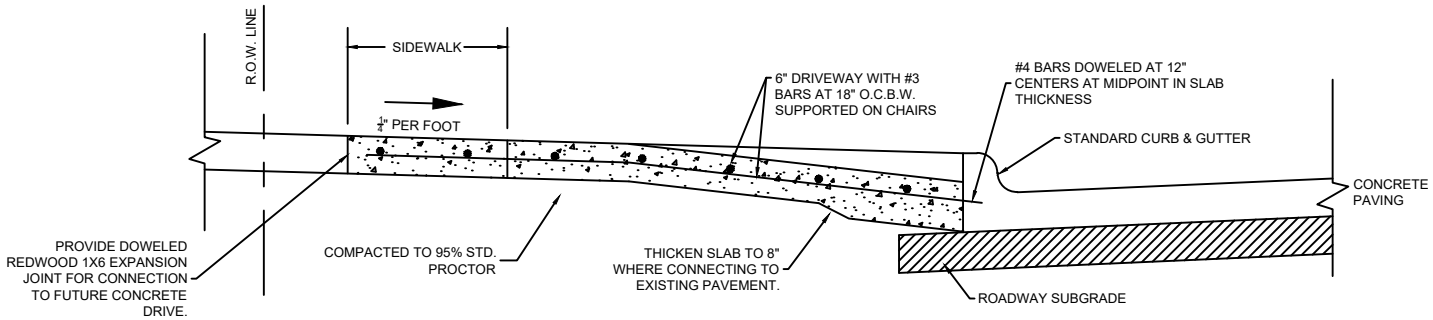


NOTE:
EXISTING CURB AND GUTTER, IF ANY, MUST BE SAWED AS DIRECTED BY THE CITY ENGINEER. HORIZONTAL CURB CUT SHALL BE MADE AT AN ELEVATION OF 1/2" ABOVE THE EXISTING GUTTER WITH A MINIMUM LENGTH AS SHOWN. THE TRADITIONAL SAW CUT SHALL HAVE A RUN OF 2'-6" AND SHALL RISE TO MEET THE EXISTING TOP OF CURB. ALL EXPOSED EDGES SHALL BE GROUND TO A 1/4" RADIUS. SAW CUTTING SHALL BE PERFORMED WITH A RIDE-ON SAW EQUIPPED WITH A DIAMOND SAW BLADE.

PLAN



ELEVATION



SECTION A-A
RESIDENTIAL APPROACH (CONCRETE PAVING)
N.T.S.

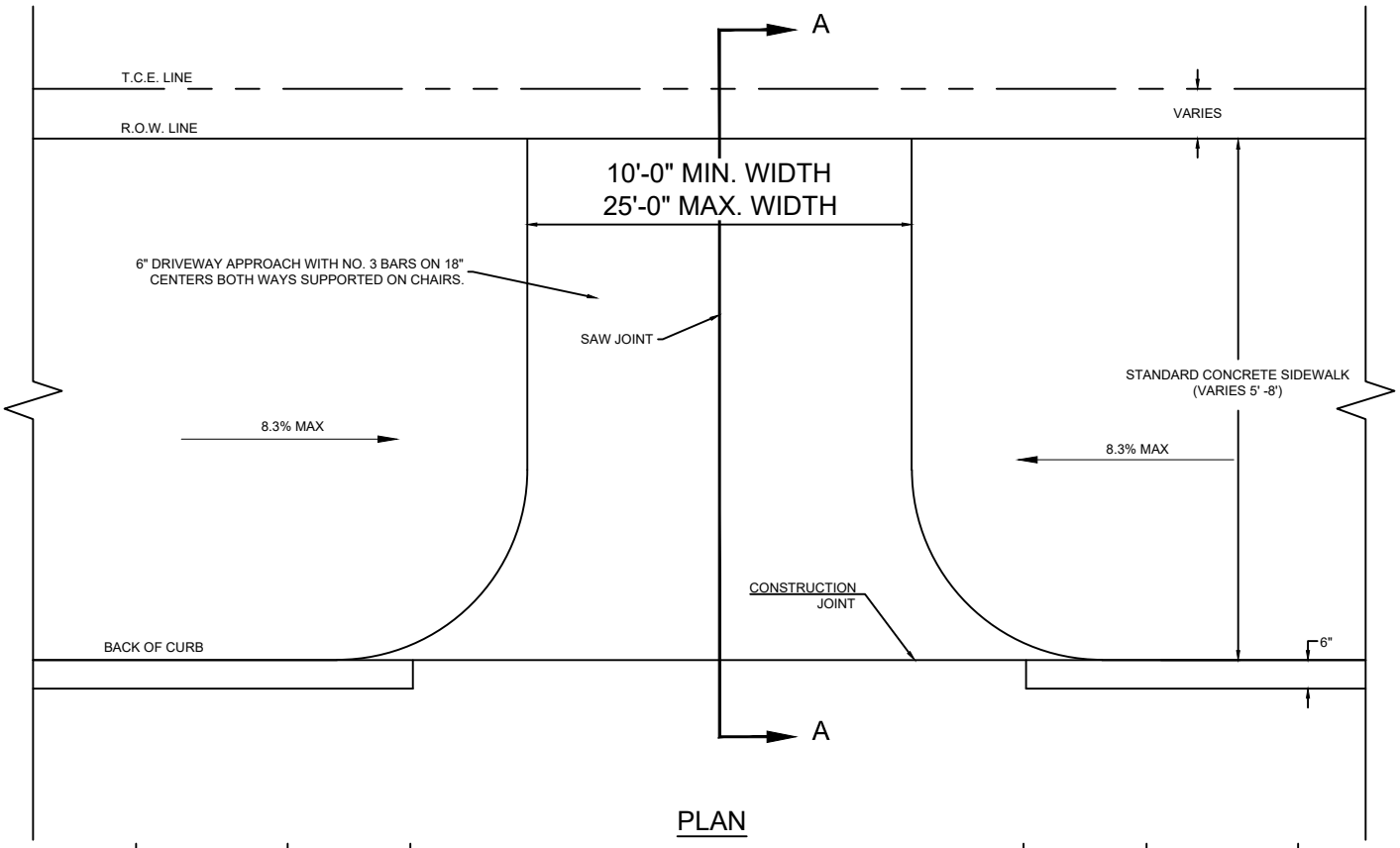
NOTE:
1. SIDEWALK SECTION THRU DRIVEWAY SHALL BE POURED SAME THICKNESS AS DRIVEWAY APPROACH. (EXISTING SIDEWALK, IF ANY, SHALL BE REMOVED & REPLACED).

** THIS WORK SHALL NOT DISRUPT THE DESIGN FLOWLINE OF THE EXISTING GUTTER.

HORIZONTAL CURB CUT DETAIL

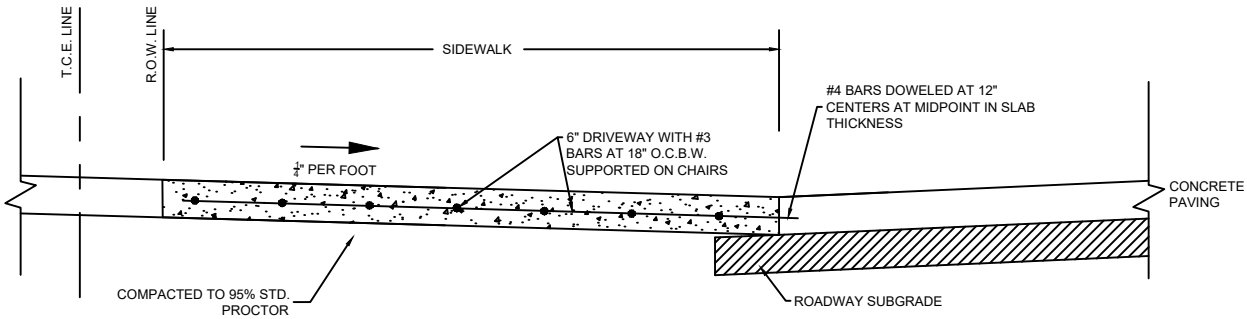
M* - CITY OF MELISSA REVISION

	NCTCOG STANDARD SPECIFICATION REFERENCE	
MELISSA TX	MODIFIED DATE: 06/28/16	STANDARD DRAWING NO.: 2150CM*
NOTICE DATE: 06/28/16	APPLIED DATE: 07/28/16	ENFORCED DATE: 07/28/16



PLAN

ELEVATION



SECTION A-A

RESIDENTIAL APPROACH (CONCRETE PAVING)

N.T.S.

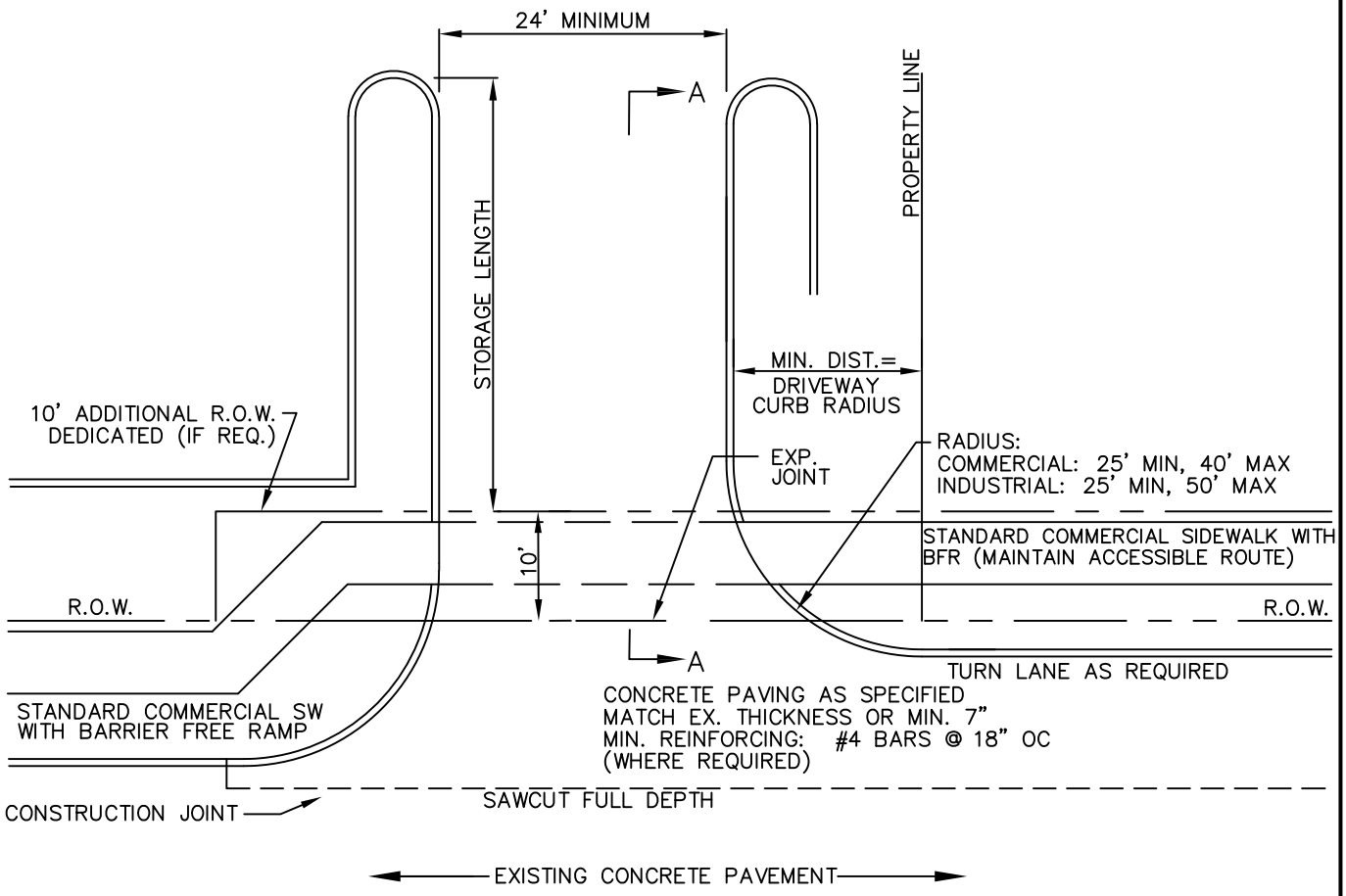
NOTE:
1. SIDEWALK SECTION THRU DRIVEWAY SHALL BE POURED SAME THICKNESS AS DRIVEWAY APPROACH. (EXISTING SIDEWALK, IF ANY, SHALL BE REMOVED & REPLACED).

** THIS WORK SHALL NOT DISRUPT THE DESIGN FLOWLINE OF THE EXISTING GUTTER.

M* - CITY OF MELISSA REVISION

DOD DRIVEWAY DETAIL

	NCTCOG STANDARD SPECIFICATION REFERENCE	
MELISSA TX	MODIFIED DATE: 06/14/24	STANDARD DRAWING NO.: 2150CM-DOD*
NOTICE DATE: 06/14/24	APPLIED DATE: 06/14/24	ENFORCED DATE: 07/14/24



NOTES:

1. THE SLOPE OF THE DRIVE WHERE SIDEWALKS CROSS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2%.
2. REMOVE ANY EXISTING SIDEWALK AT NEAREST JOINT AND CONNECT REPLACED SECTION TO DRIVE WITH (3) – NO. 4 SMOOTH DOWEL BARS ON 18" CENTERS WITH 3/4" REDWOOD EXPANSION JOINT, WITH 1" REMOVABLE CAP STRIP. SEAL WITH SELF LEVELING GRAY SILICONE SEALANT.
3. COMMERCIAL DRIVE APPROACH 10% MAX SLOPE*; MIN. 7" SLAB THICKNESS
   * MAXIMUM SLOPE AS APPROVED BY OWNER
4. ALL CONNECTIONS TO STATE RIGHT–OF–WAY SHALL USE TXDOT DETAILS.
5. ALL CURB AND GUTTER SHALL BE 30" UNLESS OTHERWISE DIRECTED BY THE CITY.
6. CONCRETE SHALL BE CLASS C, 6 SACK AND HAVE COMPRESSIVE STRENGTH OF 3600 PSI @28 DAYS.
7. IF STREET IS BEING REPLACED, PAVEMENT THICKNESS SHALL BE 6" FOR RESIDENTIAL AND 8" FOR COLLECTOR OR LARGER.

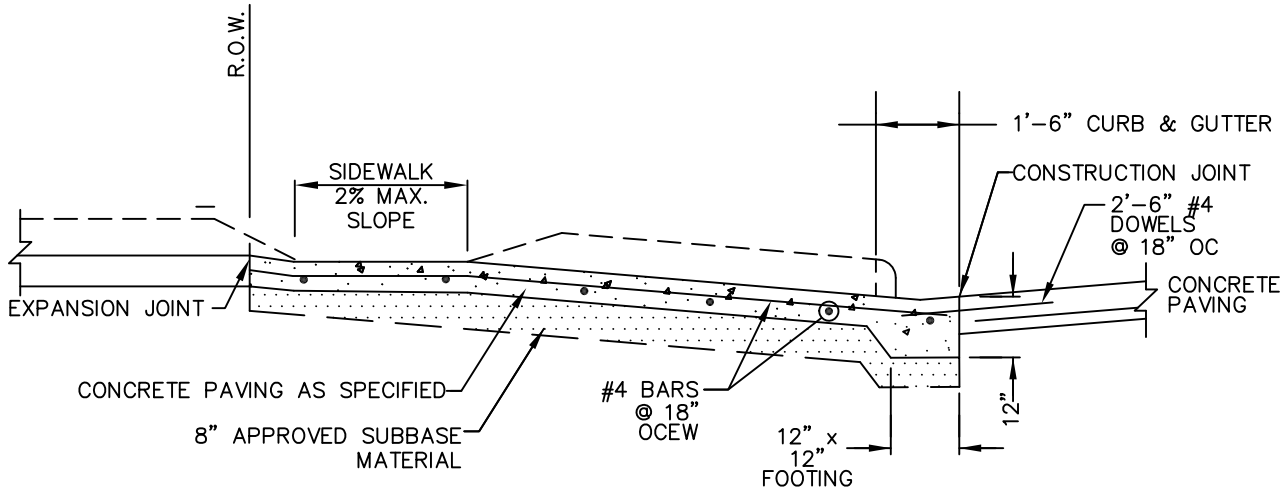
COMMERCIAL DRIVEWAY APPROACH

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE
305.2

DATE
AUG '23

STANDARD DRAWING NO.
2155A



SECTION 'A–A'

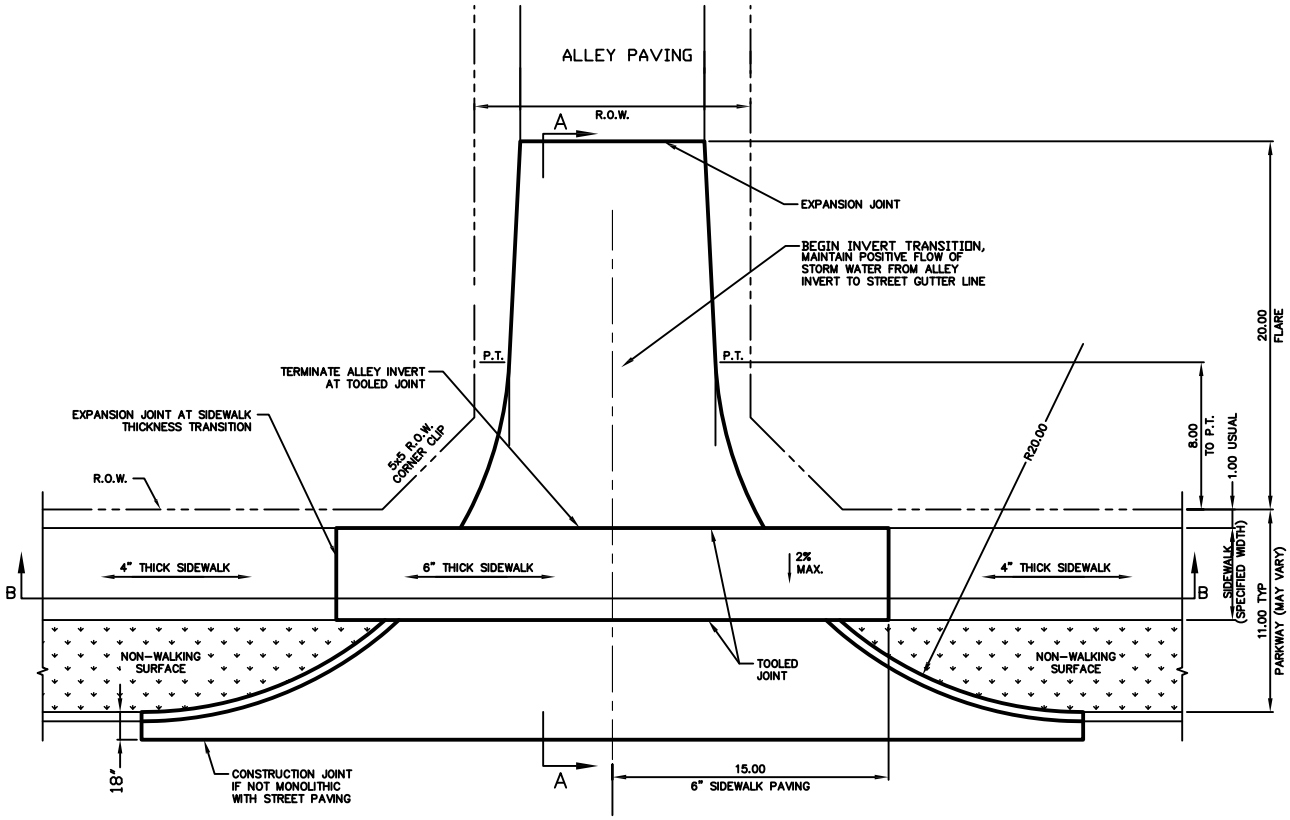
N.T.S.

COMMERCIAL APPROACH (CONCRETE PAVING)

NOTES:

1. THE SLOPE OF THE DRIVE WHERE SIDEWALKS CROSS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2%.
2. REMOVE ANY EXISTING SIDEWALK AT NEAREST JOINT AND CONNECT REPLACED SECTION TO DRIVE WITH (3) – NO. 4 SMOOTH DOWEL BARS ON 18" CENTERS WITH 3/4" REDWOOD EXPANSION JOINT, WITH 1" REMOVABLE CAP STRIP. SEAL WITH SELF LEVELING GRAY SILICONE SEALANT.
3. COMMERCIAL DRIVE APPROACH 10% MAX SLOPE*; MIN. 7" SLAB THICKNESS
   * MAXIMUM SLOPE AS APPROVED BY OWNER
4. ALL CONNECTIONS TO STATE RIGHT–OF–WAY SHALL USE TXDOT DETAILS.
5. ALL CURB AND GUTTER SHALL BE 30" UNLESS OTHERWISE DIRECTED BY THE CITY.
6. CONCRETE SHALL BE CLASS C, 6 SACK AND HAVE COMPRESSIVE STRENGTH OF 3600 PSI @28 DAYS.
7. IF STREET IS BEING REPLACED, PAVEMENT THICKNESS SHALL BE 6" FOR RESIDENTIAL AND 8" FOR COLLECTOR OR LARGER.

COMMERCIAL DRIVEWAY APPROACH	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 305	
SECTION VIEW		DATE AUG '23	STANDARD DRAWING NO. 2155B



ALLEY APPROACH RADIUS RETURN TYPE

N.T.S.

NOTES:

1. THE SLOPE OF THE DRIVE WHERE SIDEWALKS CROSS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2%.
2. REMOVE ANY EXISTING SIDEWALK AT NEAREST JOINT AND CONNECT REPLACED SECTION TO DRIVE WITH (3) – NO. 4 SMOOTH DOWEL BARS ON 18" CENTERS WITH 3/4" REDWOOD EXPANSION JOINT, WITH 1" REMOVABLE CAP STRIP. SEAL WITH SELF LEVELING GRAY SILICONE SEALANT.
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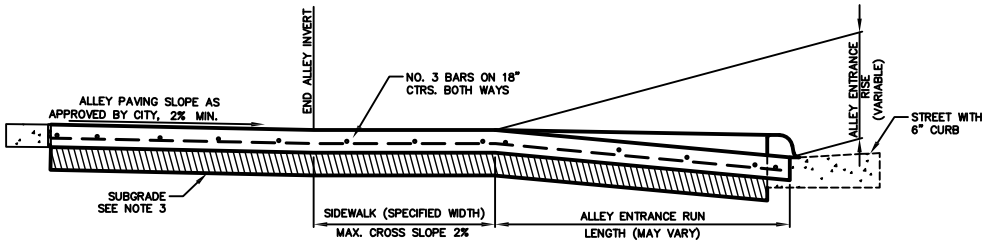
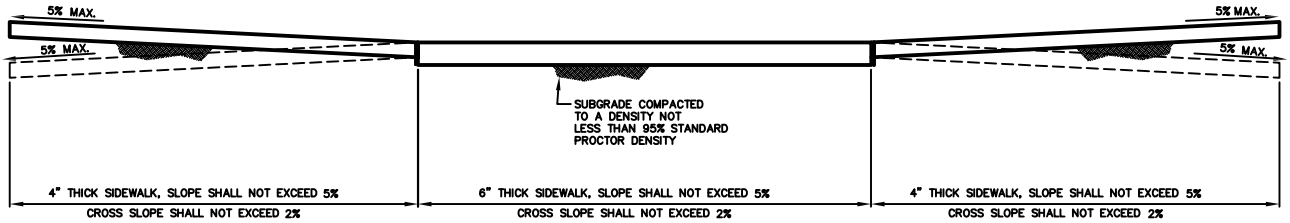


SECTION A–A

N.T.S.



NOTES:

1. MIN. PAVEMENT DEPTH AND STRENGTH SHALL BE 6" – CLASS "C", OR AS SPECIFIED BY CITY.
2. CURB HEIGHT AND WIDTH SHALL BE 6", OR AS SPECIFIED BY CITY. SEE STANDARD CONSTRUCTION DETAIL 2120.
3. SUBGRADE SHALL MATCH ALLEY PAVEMENT SUBGRADE

SECTION B–B

N.T.S.

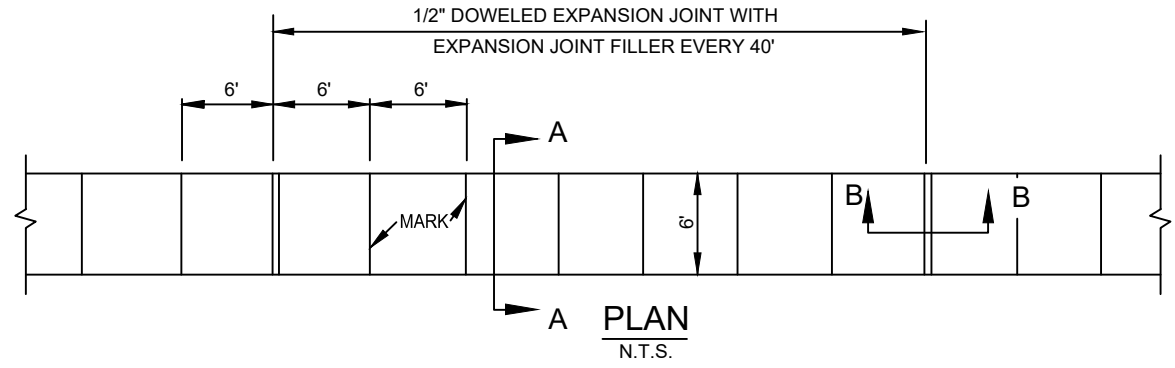
ALLEY APPROACH RADIUS RETURN TYPE

North Central Texas Council of Governments

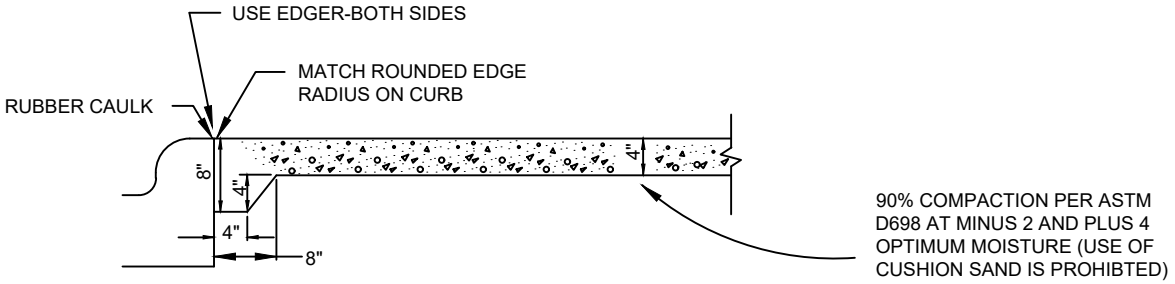
STANDARD SPECIFICATION REFERENCE: 305.2

DATE: AUG '23

STANDARD DRAWING NO.: 2160

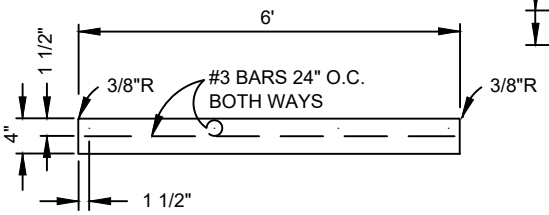


PLAN
N.T.S.

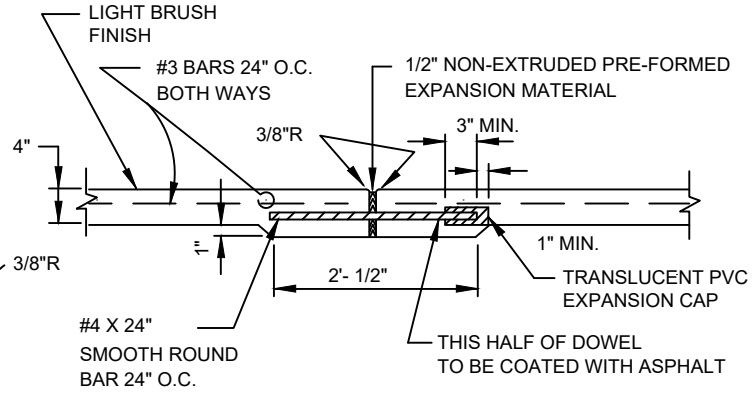


JOINT LUG DETAIL FOR MEDIAN PAVEMENT OR SIDEWALK ADJACENT TO CURB

N.T.S.



SECTION "A-A"
N.T.S.



SECTION "B-B"
N.T.S.

NOTE:

1. REFER TO NCTCOG SECTION 305.2 FOR ALL SIDEWALK SPECIFICATIONS.
2. CROSS SLOPE OF SIDEWALK SHALL BE ± 1/4" PER FT. MIN. TO ± 3/8" PER FT. MAX.
3. 5'-0" SIDEWALK FOR RESIDENTIAL STREETS AND 6'-0" SIDEWALK FOR COLLECTOR AND THOROUGHFARE STREETS.
4. SIDEWALK SHALL BE CLASS "A" CONCRETE UNLESS OTHERWISE SPECIFIED BY OWNER.
5. ALL HONEYCOMB IN BACK OF CURB TO BE TROWEL-PLASTERED BEFORE POURING SIDEWALK.
6. LUG MAY BE FORMED BY SHAPING SUBGRADE TO APPROXIMATE DIMENSIONS SHOWN.

M* - CITY OF MELISSA REVISION

REINFORCED CONCRETE SIDEWALKS

JOINTS AND SPACING

NCTCOG STANDARD SPECIFICATION REFERENCE	
305.2	
MODIFIED DATE	STANDARD DRAWING NO.
07/28/23	2170M*
NOTICE DATE	ADOPTED DATE	ENFORCEMENT DATE
07/28/23	07/28/23	08/28/23

This detail and accompanying notes are a representation of the information from PROWAG and are intended to provide guidance for the design and construction of sidewalk ramps in Melissa. It is the responsibility of the Design Professional and the Contractor to ensure that all ramps constructed meet the requirements of PROWAG.

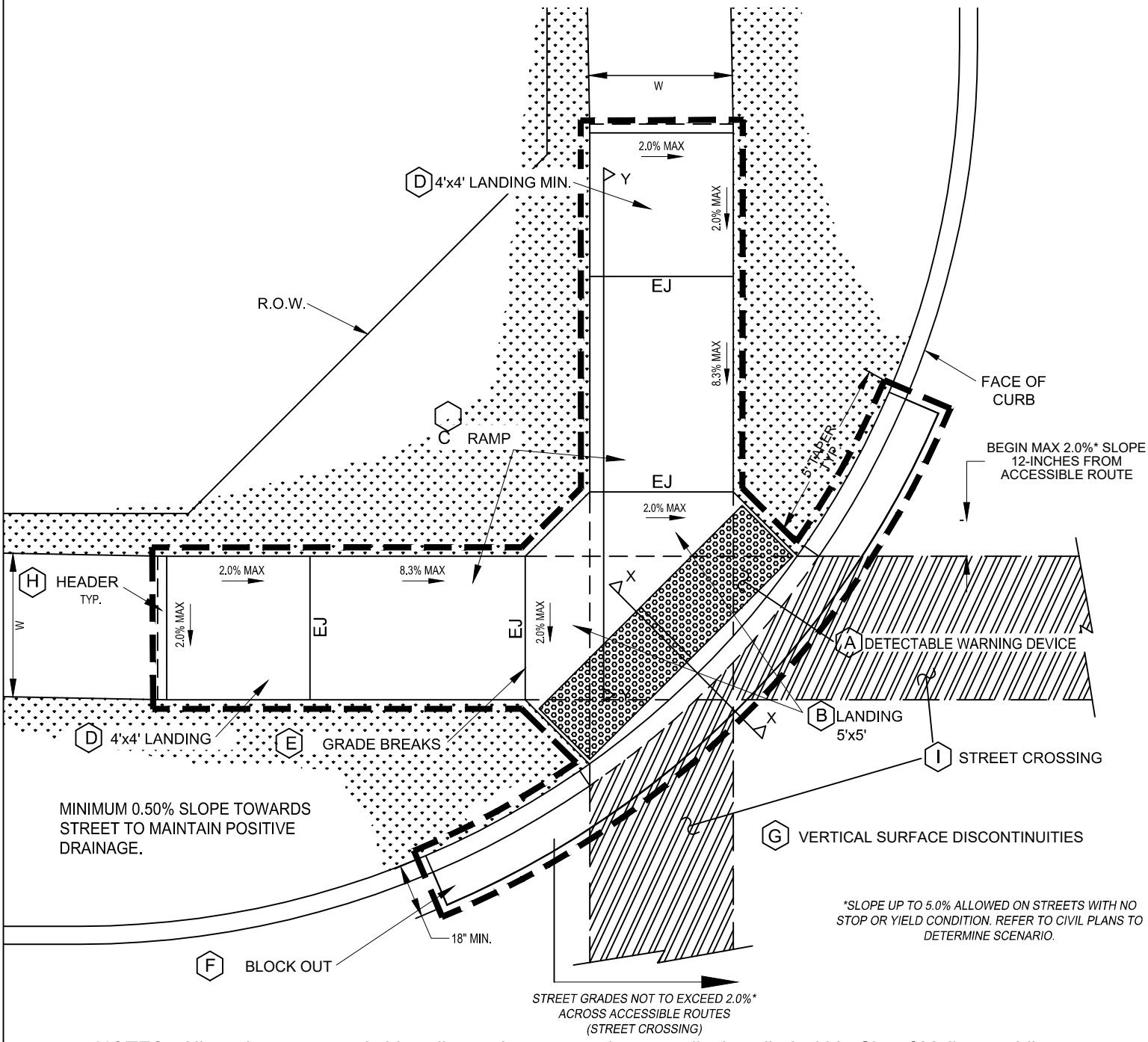
EJ - Expansion Joint

CJ - Construction Joint

\- - - - - Required limits of construction with street installation

PROWAG = Public Rights-of-Way Accessibility Guidelines

W - Sidewalk Width



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

1. See Detail 2171BM for ramp feature descriptions.
2. See Detail 2171CM for Sections X-X and Y-Y.
3. See Detail 2171DM for Additional Notes.

M* - CITY OF MELISSA REVISION

PEDESTRIAN FACILITIES

CURB RAMPS

NCTCOG STANDARD SPECIFICATION REFERENCE	
305.2	
MODIFIED DATE	STANDARD DRAWING NO.
07/28/23	2171AM*
NOTICE DATE	APPLIED DATE	ENFORCED DATE
07/28/23	07/28/23	08/28/23

A

Detectable Warning Devices (DWD) shall be pre-manufactured cast-in-place plates or brick pavers approved by the City of Melissa, installed to the manufacturer's specifications, and meet all ADA requirements. 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 per City standards. 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 ¼-inch grade separation (elevation difference), or ½-inch grade separation if beveled (bevel slope shall not be steeper than 50%).

H

A sidewalk header shall be constructed at ends of all work performed.

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.

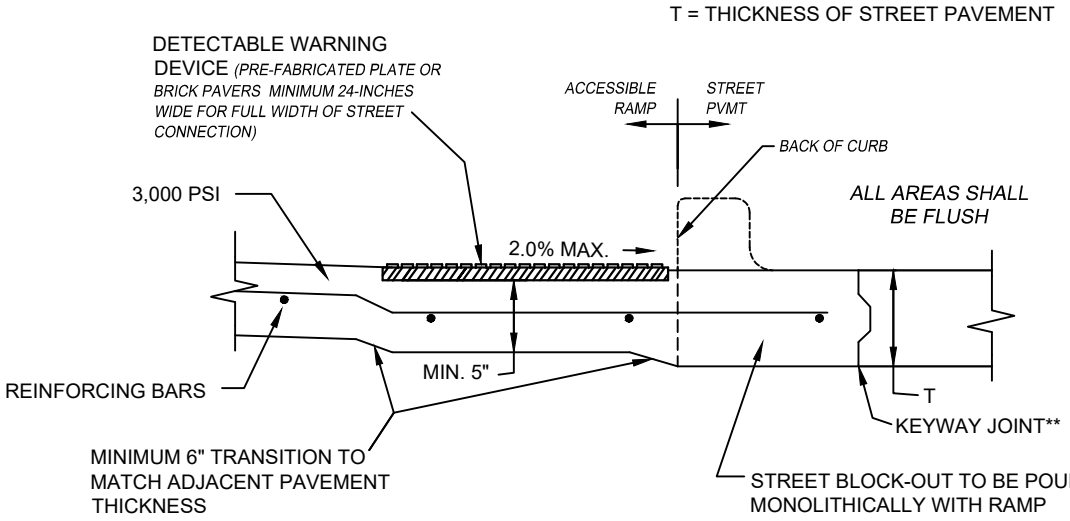
* See PROWAG special design considerations when street crossing has no stop or yield condition.

M* - CITY OF MELISSA REVISION

	NCTCOG STANDARD SPECIFICATION REFERENCE	
	305.2	
	MODIFIED DATE	STANDARD DRAWING NO.
	07/28/23	2171BM*
	NOTICE DATE	APPLIED DATE	ENFORCED DATE
	07/28/23	07/28/23	08/28/23

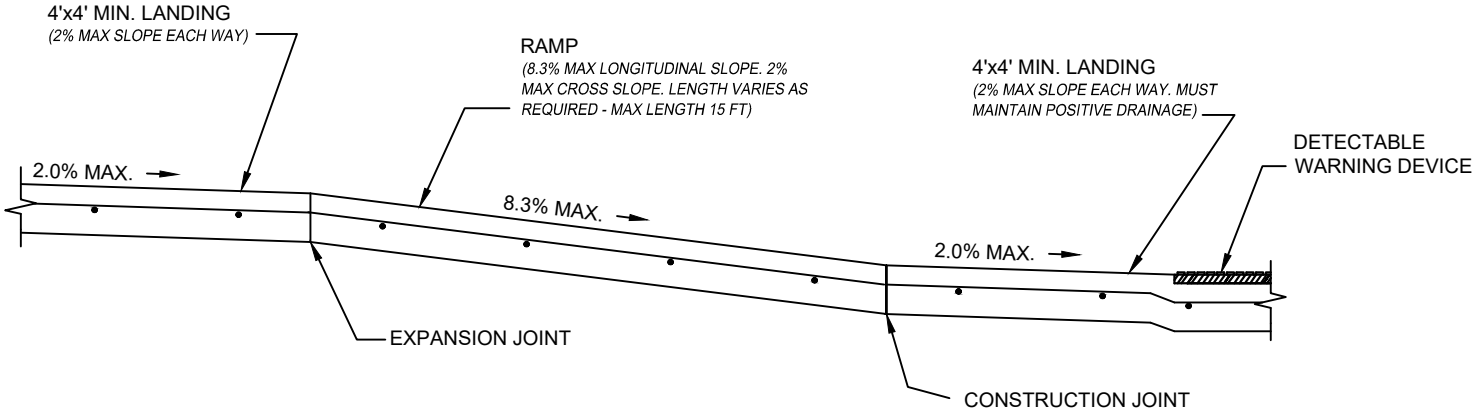
PEDESTRIAN FACILITIES

CURB RAMPS



SECTION X-X

***KEYWAY JOINT FOR NEW CONSTRUCTION. STREET CONNECTION SHALL BE LONGITUDINAL BUTT JOINT FOR CONNECTIONS TO EXISTING ROADWAYS.*



SECTION Y-Y

M* - CITY OF MELISSA REVISION

	NCTCOG STANDARD SPECIFICATION REFERENCE: 305.2	
PEDESTRIAN FACILITIES	MODIFIED DATE: 07/28/23	STANDARD DRAWING NO.: 2171CM*
CURB RAMPS	NOTICE DATE: 07/28/23	APPLIED DATE: 07/28/23 / ENFORCED DATE: 08/28/23

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

All newly constructed sidewalks, curb ramps and crosswalks installed within City of Melissa public rights-of-way shall be considered a pedestrian access route and shall conform to the most current “Draft” 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 Melissa Material Specifications (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

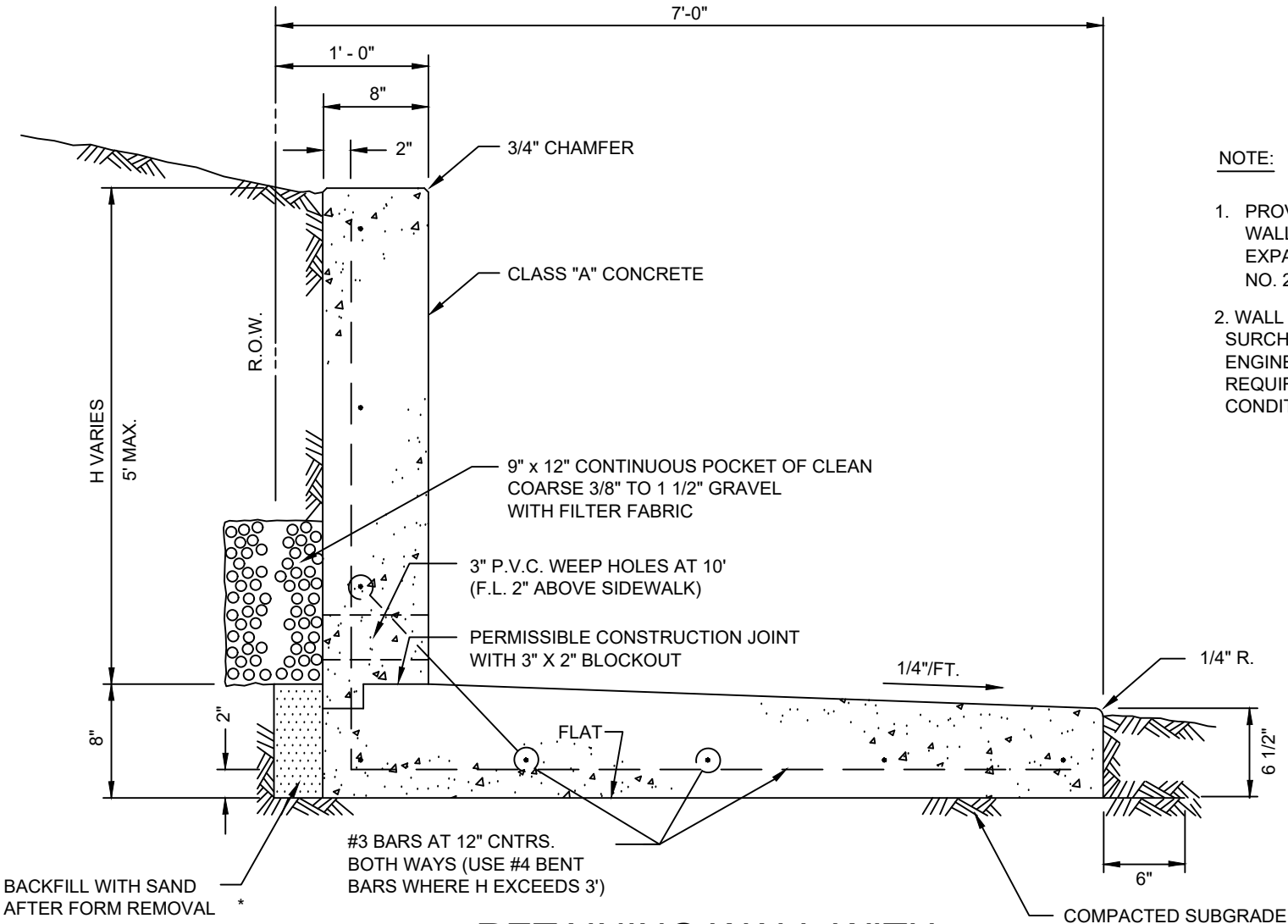
15. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within one or more reach ranges specified in TAS 308.
16. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items so as not 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.

M* - CITY OF MELISSA REVISION

PEDESTRIAN FACILITIES

CURB RAMPS

NCTCOG STANDARD SPECIFICATION REFERENCE	
305.2	
MODIFIED DATE	STANDARD DRAWING NO.
07/28/23	2171DM*
NOTICE DATE	APPLIED DATE	ENFORCED DATE
07/28/23	07/28/23	08/28/23



NOTE:

1. PROVIDE VERTICAL EXPANSION IN WALL AT 25' MAX. SPACING (USE EXPANSION JOINT, STANDARD DRAWING NO. 2050, AND MODIFY AS REQUIRED)
2. WALL DESIGN ASSUMES NO SURCHARGE. A SPECIAL ENGINEERING ANALYSIS IS REQUIRED FOR OTHER CONDITIONS.

RETAINING WALL WITH INTEGRAL SIDEWALK

N.T.S.

* WHEN SPECIFIED ON PLANS

REINFORCED CONCRETE RETAINING WALL

INTEGRAL WITH SIDEWALK

M* - CITY OF MELISSA REVISION

STANDARD DRAWING NO.	NCTCOG STANDARD SPECIFICATION REFERENCE	
2180M*	802.2	
	MODIFIED DATE	STANDARD DRAWING NO.
	12/17/13	2180M*
NOTICE DATE	ADOPTED DATE	ENFORCEMENT DATE
12/17/13	12/17/13	1/17/14

GENERAL NOTES:

1. REINFORCED CONCRETE PAVEMENT:
   - A. ALL CURBS SHALL BE PLACED INTEGRAL WITH PAVEMENT UNLESS OTHERWISE APPROVED BY THE OWNER.
   - B. CURBS SHALL MEET THE SAME COMPRESSIVE STRENGTH AS SPECIFIED FOR THE PAVEMENT.
   - C. CONTRACTOR SHALL PROVIDE STRAIGHT DEFORMED STEEL TIE BARS IN ACCORDANCE WITH THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 360.2.2.2.
   - D. REINFORCING BARS SHALL BE SUPPORTED BY CHAIRS OR OTHER DEVICES APPROVED BY THE OWNER.
   - E. RESIDENTIAL STREETS SHALL BE MACHINE PLACED BY A SLIP FORM PAVER UNLESS OTHERWISE APPROVED BY THE CITY, HAVE A MINIMUM PAVEMENT THICKNESS OF 6" AND A MINIMUM 3600 PSI COMPRESSIVE STRENGTH.
   - F. THOROUGHFARES SHALL BE MACHINE PLACED BY A SLIP FORM PAVER UNLESS OTHERWISE APPROVED BY THE CITY, HAVE A MINIMUM PAVEMENT THICKNESS OF 9" AND A MINIMUM 3600 PSI COMPRESSIVE STRENGTH.
   - G. HAND PLACED CONCRETE SHALL HAVE A MINIMUM 4500 PSI COMPRESSIVE STRENGTH.

2. SUBGRADE: (UNLESS OTHERWISE SPECIFIED BY OWNER)
   - A. SUBGRADE UNDER ALL PAVEMENTS SHALL BE STABILIZED TO A MINIMUM DEPTH OF 6" WITH HYDRATED LIME OR CEMENT WHEN THE P.I. OF THE INPLACE MATERIAL IS GREATER THAN 15. LABORATORY TESTS MUST BE PERFORMED TO DETERMINE THE AMOUNT OF LIME OR CEMENT REQUIRED TO LOWER THE P.I. TO 15 OR BELOW. SATURATION P.I. (PH > 12.4) WILL BE THE LIMIT WHEN A SOIL'S P.I. CANNOT BE BROUGHT TO 15 OR LOWER.
   - B. WHERE THE INPLACE MATERIAL HAS A P.I. OF LESS THAN 15, THE SUBGRADE SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 6" AND RECOMPACTED.
   - C. THE SUBGRADE SHALL BE PROOF ROLLED PER THE NCTCOG PRIOR TO PAVING TO LOCATE ANY UNSTABLE AREAS OF EARTHWORK OR BASE.
   - D. DENSITY TESTING SHALL BE PERFORMED PER THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 132.

3. IF THE ROADWAY IS A DESIGNATED BIKE ROUTE OR BIKE USAGE IS ANTICIPATED, REFER TO NCTCOG'S REGIONAL BICYCLE AND PEDESTRIAN FACILITIES DESIGN MANUAL FOR DESIGN GUIDANCE.

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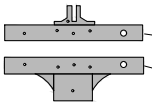
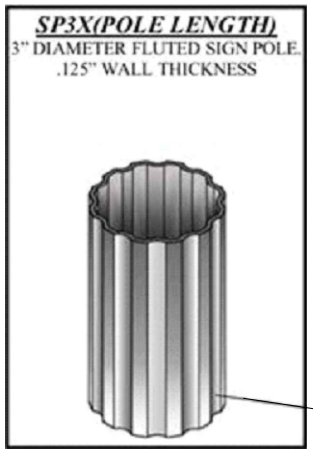
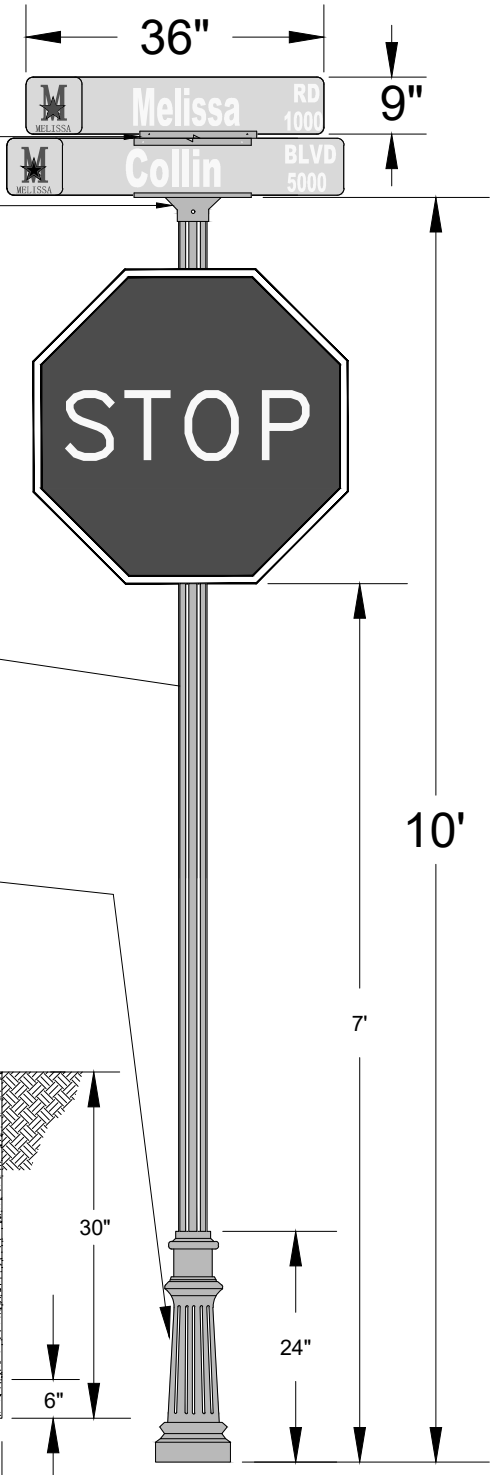
	NCTCOG STANDARD SPECIFICATION REFERENCE	
	302, 303	
	MODIFIED DATE	STANDARD DRAWING NO.
PAVEMENT SYSTEMS	07/28/23	2190M
GENERAL NOTES	NOTICE DATE: 07/28/23	ADOPTED DATE: 07/28/23
		ENFORCEMENT DATE: 08/28/23

MELISSA

3X2WAY12 & 4WAY12 BRACKETS







SLIP OVER POLE AND TIGHTEN THE SET SCREWS IN THE TOP OF BASE

CITY OF MELISSA STREET SIGNAGE DETAIL

SUPER ENGINEER GRADE (SEG) TYPE II REFLECTIVE WHITE SHEETING WITH BLACK ESM OVERLAY ON 0.080" ALUMINUM FLAT BLADE. ALL SIGNAGE TO BE RETRO-REFLECTIVE. HIGHWAY SERIES "B" FRONT SHALL BE USED FOR THE STREET ID'S.

STREET NAMES:
SHALL BE LETTER UPPER CASE FOR EACH WORD CAPITALIZED AND LOWER CASE THEREAFTER. NAME SHALL BE 6" TALL FOR UPPERCASE LETTERS AND 4.5" TALL FOR LOWERCASE.

CITY LOGO:
SHALL BE APPROVED CITY LOGO AS SHOWN AND 6" IN HEIGHT.

ROAD DESIGNATION AND BLOCK NUMBERING:
ROAD DESIGNATION SHALL APPEAR IN THE UPPER RIGHT CORNER AND BLOCK NUMBER INFORMATION IN THE LOWER RIGHT CORNER.

12' LONG, 3" DIAMETER BLACK ALUMINUM POST WITH 2' EMBEDDED IN 3,000 PSI CONCRETE & END PLUGGED TO PREVENT CONCRETE INFILTRATION.

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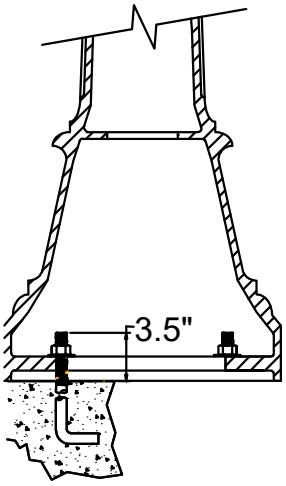
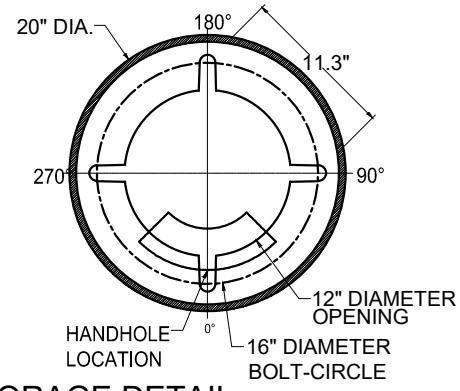
RESIDENTIAL STREET SIGNAGE

CITY OF MELISSA

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE		
	MODIFIED DATE	STANDARD DRAWING NO.
	07/28/23	2300AM*
NOTICE DATE	ADOPTED DATE	ENFORCEMENT DATE
07/28/23	07/28/23	08/28/23

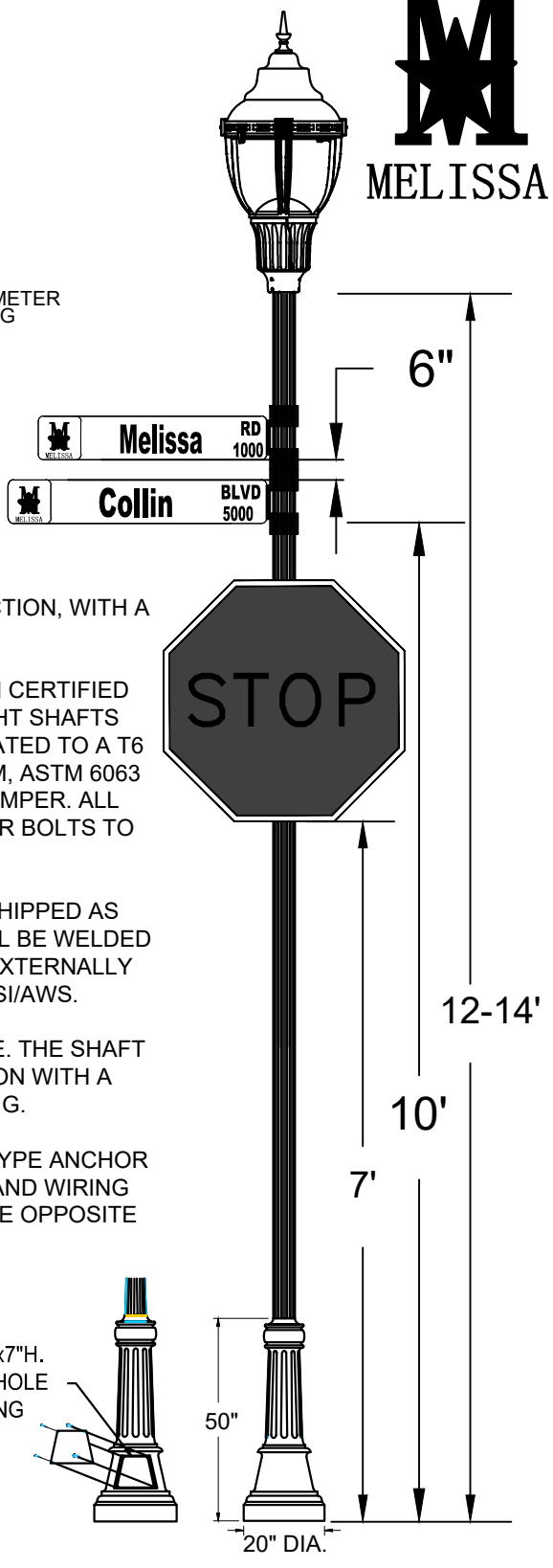




ANCHORAGE DETAIL

NO SCALE

MELISSA

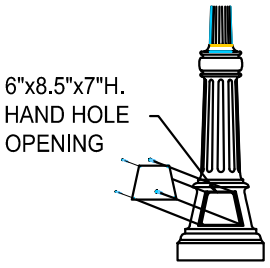


SPECIFICATIONS:

GENERAL DESCRIPTION:
THE LIGHTING POST SHALL BE ALL ALUMINUM, ONE-PIECE CONSTRUCTION, WITH A CLASSIC TAPERED AND FLUTED BASE DESIGN.
MATERIALS:
THE BASE SHALL BE HEAVY WALL, CAST ALUMINUM PRODUCED FROM CERTIFIED ASTM 356.1 INGOT PER ASTM-B-179-95a OR ASTM B26-95. THE STRAIGHT SHAFTS SHALL BE EXTRUDED FROM ALUMINUM, ASTM 6061 ALLOY, HEAT TREATED TO A T6 TEMPER. THE TAPERED SHAFT SHALL BE EXTRUDED FROM ALUMINUM, ASTM 6063 ALLOY, SPUN TO A TAPERED SHAPE, THEN HEAT TREATED TO A T6 TEMPER. ALL HARDWARE SHALL BE TAPMER RESISTANT STAINLESS STEEL. ANCHOR BOLTS TO BE COMPLETELY HOT DIP GALVANIZED.
CONSTRUCTION:
THE SHAFT SHALL BE DOUBLE WELDED TO THE BASE CASTING AND SHIPPED AS ONE PIECE FOR MAXIMUM STRUCTURAL INTEGRITY. THE SHAFT SHALL BE WELDED INSIDE THE BASE CASTING AT THE TOP OF THE ACCESS DOOR, AND EXTERNALLY WHERE THE SHAFT EXITS THE BASE. ALL WELDING SHALL BE PER ANSI/AWS.
DIMENSIONS:
THE POST SHALL BE 12'-0" TO 14'-0" IN HEIGHT WITH A DIAMETER BASE. THE SHAFT DIAMETER SHALL BE 4". AT THE TOP OF THE POST, AN INTEGRAL TENON WITH A TRANSITIONAL DONUT SHALL BE PROVIDED FOR LUMINAIRE MOUNTING.
INSTALLATION:
THE POST SHALL BE PROVIDED WITH FOUR, HOT DIP GALVANIZED L-TYPE ANCHOR BOLTS. A DOOR SHALL BE PROVIDED IN THE BASE FOR ANCHORAGE AND WIRING ACCESS. A GROUNDING SCREW SHALL BE PROVIDED INSIDE THE BASE OPPOSITE THE DOOR.

LAMP BASE DETAIL

NO SCALE



NOTE:
SEE 2300CM & 2300DM FOR LUMINAIRE, FOUNDATION AND ELECTRICAL DETAILS

M* - CITY OF MELISSA REVISION

RESIDENTIAL LIGHT POST STREET SIGNAGE

CITY OF MELISSA

NCTCOG STANDARD SPECIFICATION REFERENCE		
	MPDIFIED DATE	STANDARD DRAWING NO.
MELISSA TX	08/08/13	2300BM*
NOTICE DATE	ADOPTED DATE	ENFORCEMENT DATE
08/08/13	08/08/13	09/08/13

SPECIFICATIONS:

GENERAL DESCRIPTION:
THE LED SHALL BE DESIGNED FOR EASE OF MAINTENANCE WITH THE PLUG-IN ELECTRICAL MODULE. A PRECISION OPTICAL SYSTEM MAXIMIZES POST SPACING WHILE MAINTAINING UNIFORM ILLUMINATION.

OPTICAL SYSTEM:
THE OPTICAL SYSTEM SHALL CONSIST OF A PRECISELY ENGINEERED LED CIRCUIT LOCATED IN THE TOP COVER. A GASKET BETWEEN THE COVER AND RING ALONG WITH A FLAT GLASS PLATE AND GASKET BENEATH THE REFLECTOR CREATE A SEALED OPTICAL COMPARTMENT THAT SHALL MEET AN IP RATING.

LUMINAIR HOUSING:
THE LUMINAIRE HOUSING, CAST OF ALUMINUM, SHALL ANCHOR THE OPTICAL SYSTEM AND PROVIDE AN ENCLOSURE FOR THE PLUG IN ELECTRICAL MODULE. THE ELECTRICAL ENCLOSURE SHALL CONFORM TO AN IP55 RATING. THE NICKEL PLATED LAMP GRIP SOCKET AND THE THREE STATION INCOMING LINE TERMINAL BLOCK SHALL BE PRE-WIRED TO A FIVE CONDUCTOR RECEPTACLE FOR EASE IN CONNECTING THE ELECTRICAL MODULE. A SLIPFITTER WILL ACCEPT A 3" HIGH BY 2 7/8" TO 3 1/8" O.D. POLE TENON.

LUMINAIRE HOUSING DOOR:
CAST OF ALUMINUM, THE HOUSING DOOR SHALL BE HINGED AND LATCHED TO THE HOUSING. THE DOOR FORMS THE MOUNT FOR THE ELECTRICAL MODULE, AND ALLOWS EASY ACCESS DURING MAINTENANCE.

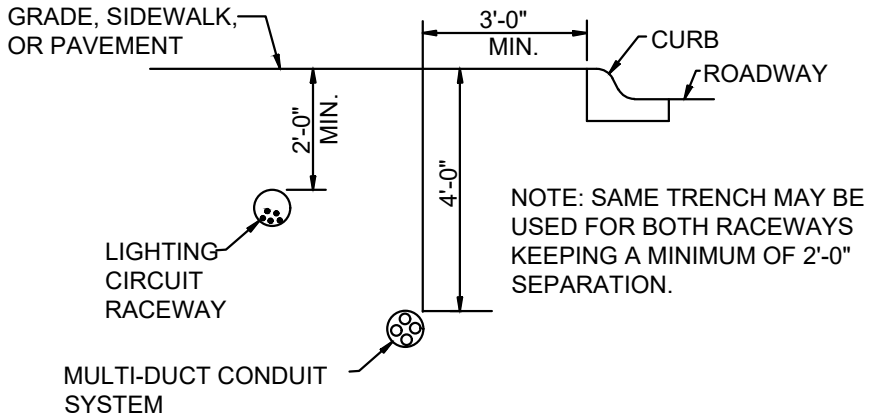
ELECTRICAL MODULE:
THE ELECTRICAL COMPONENTS SHALL BE MOUNTED TO AN ALUMINUM PLATE THAT IS REMOVABLE WITH STANDARD TOOLS. A MATCHING FIVE PLUG CONNECTOR CONNECTS THE ELECTRICAL COMPONENTS TO THE SURGE PROTECTOR FOR QUICK REPLACEMENT.

TOP COVER:
THE TOP COVER, CAST OF ALUMINUM, SHALL BE ATTACHED TO THE TOP RING OF THE LUMINAIRE HOUSING BY A STAINLESS STEEL HINGE PIN. THE COVER SHALL BE LATCHED BY AN OVER CENTER, POSITIVE ACTION, STAINLESS STEEL LATCH WHICH ALLOWS TOOL-LESS ENTRY TO THE LAMP CHAMBER FOR RELAMPING.

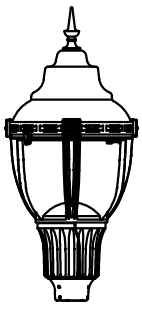
DRIVER:
THE DRIVE SHALL BE 50 OR 60 HZ VOLTAGE SENSING 120-277V>90% EFFICIENT ELECTRONIC. POTTED FOR INCREASED THERMAL MANAGEMENT. REMOVABLE THROUGH HINGED DOOR HOUSING.

FINISH:
THE LUMINAIRE SHALL BE FINISHED WITH BLACK POLYESTER POWDER PAINT APPLIED TO ENSURE MAXIMUM DURABILITY.

UL:
THE LUMINAIRE SHALL BE UL LISTED AS SUITABLE FOR WET LOCATIONS AT A MAXIMUM OF 40 DEGREES C AMBIENT TEMPERATURE.



TRENCH DETAIL
NO SCALE



LUMINAIRE DETAIL
NO SCALE

M* - CITY OF MELISSA REVISION

RESIDENTIAL LIGHT POST STREET SIGNAGE

CITY OF MELISSA

NCTCOG STANDARD SPECIFICATION REFERENCE		
	MPDIFIED DATE	STANDARD DRAWING NO.
	08/12/13	2300CM*
NOTICE DATE	ADOPTED DATE	ENFORCEMENT DATE
08/12/13	08/12/13	09/12/13

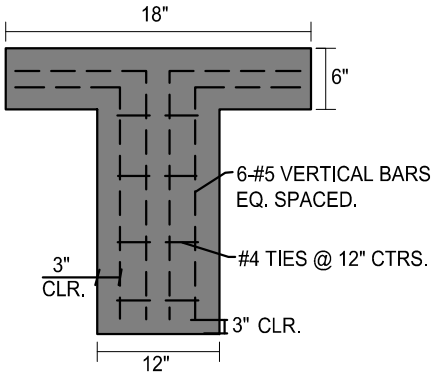
KEYED NOTES:

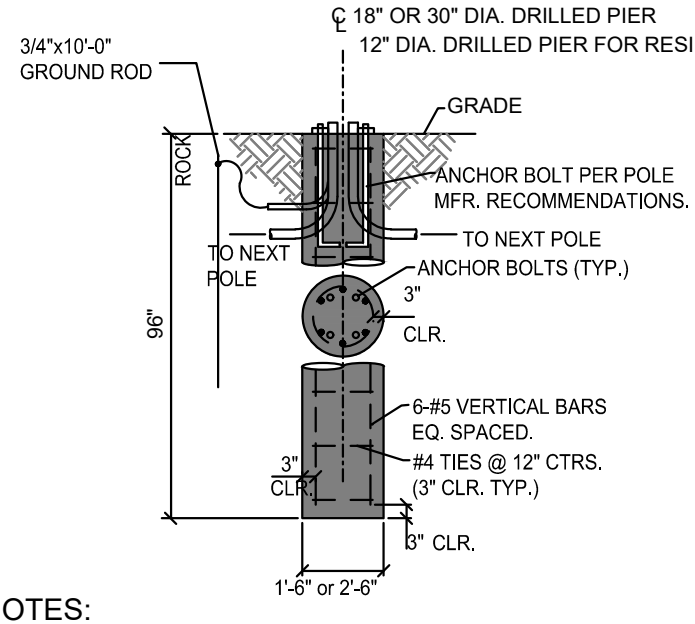
1. CIRCUIT BREAKER IN NEMA 3R ENCLOSURE MOUNTED ON SERVICE POLE WITH LIGHTING ARRESTORS AND SURGE CAPACITORS. THE CIRCUIT BREAKER SHALL BE LABELED FOR SERVICE ENTRANCE USE.

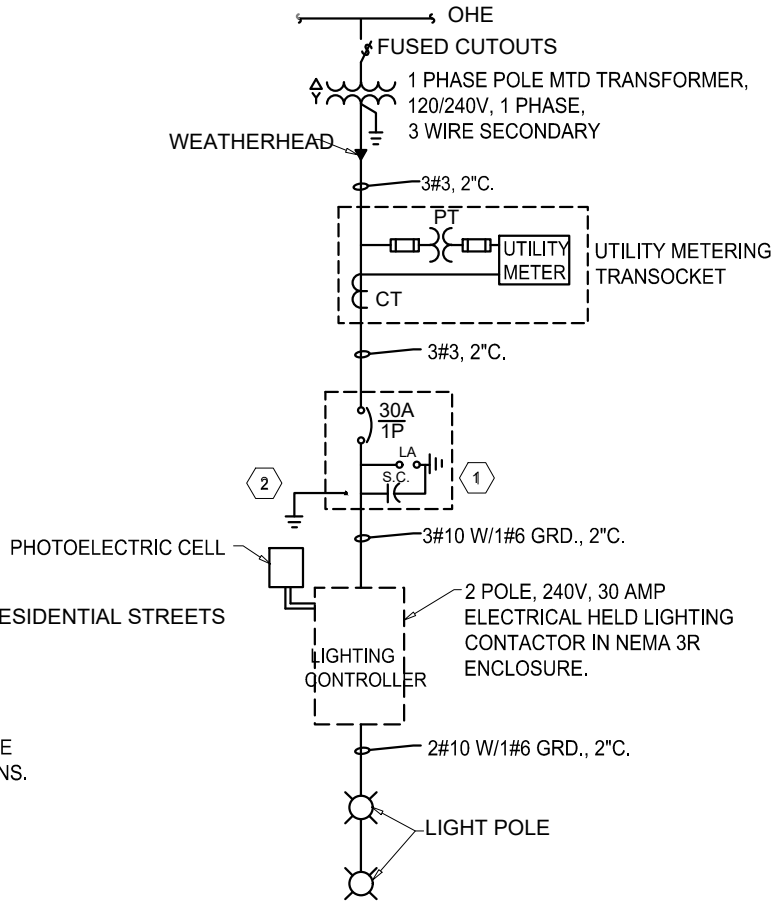
2. BOND NEUTRAL CONDUCTOR TO GROUND, WITH A #2/0 BARE BRAIDED CU GROUNDING CONDUCTOR VIA 1" SCH 40 PVC CONDUIT TO 12" BELOW FINISHED GRADE AT THE SERVICE ENTRANCE CIRCUIT BREAKER.

MELISSA

LIGHT POLE FOUNDATION DETAIL FOR RESIDENTIAL STREETS







LIGHTING CONTROLLER ONE-LINE DIAGRAM

NO SCALE

NOTES:

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. 12" DIA. DRILLED PIERS WILL ONLY BE ALLOWED FOR RESIDENTIAL STREETS

LIGHT POLE FOUNDATION DETAIL

NO SCALE

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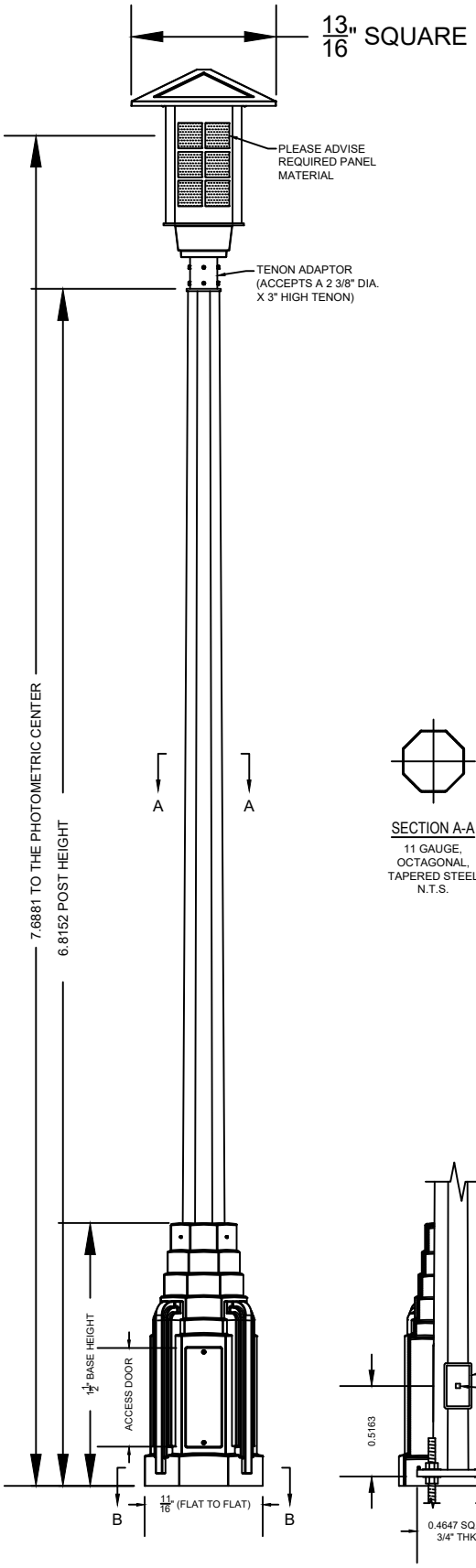
RESIDENTIAL LIGHT POST STREET SIGNAGE

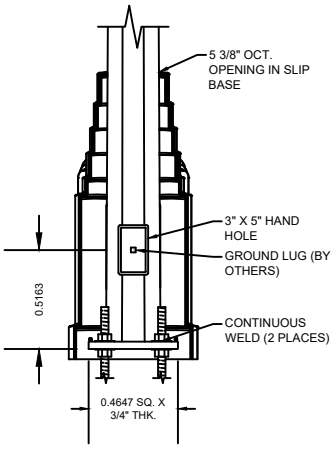
CITY OF MELISSA

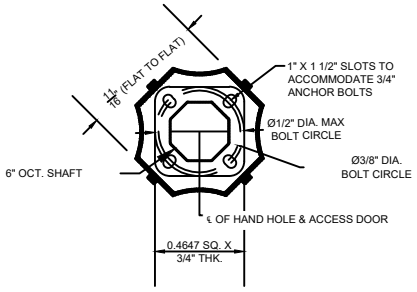
NCTCOG STANDARD SPECIFICATION REFERENCE		
	MPDIFIED DATE	STANDARD DRAWING NO.
MELISSA TX	06/01/18	2300DM*
NOTICE DATE	ADOPTED DATE	ENFORCEMENT DATE
06/01/18	06/01/18	07/01/18



SECTION A-A

11 GAUGE, OCTAGONAL, TAPERED STEEL N.T.S.





SECTION B-B

BASE PLATE DETAIL

Spring City Electrical Mfg. Co.

HALL AND MAIN STREETS - P.O. BOX 19 - SPRING CITY, PA. 19475
PHONE (610) 948-4000 - FAX (610) 948-5577 - WWW.SPRINGCITY.COM

DESCRIPTION	THE 11'-0" FAIR PARK CAST ALUMINUM / STEEL POST WITH RANCH (SMALL) LED LUMINAIRE
OPPORTUNITY	CITY OF MELISSA, TX DOWNTOWN LIGHTING

SCALE	DRAWN BY:	DATE	DRAWING NO.
N.T.S.	B.K.R.	04-28-2023	SPEC-34181

(OR APPROVED EQUAL)

LUMINAIRE SPECIFICATIONS:

STYLE:	RANCH (SMALL)
HEIGHT:	24 1/4"
WIDTH:	16" SQUARE
MATERIAL:	CAST ALUMINUM ALLOY AND FABRICATED ALUMINUM ALLOY
FINISH:	POWDER COAT - PLEASE ADVISE FINISH COLOR
LAMPING:	50 WATT LED SYSTEM
VOLTAGE:	ELECTRONICALLY WIRED AT 120-277 VOLTS
COLOR TEMP.:	3000K (WARM WHITE)
DISTRIBUTION:	TYPE IV (ASYMMETRIC DISTRIBUTION)
PANELS:	FROSTED LED GRADE ACRYLIC
SURGE:	10kV SURGE PROTECTION
MODIFIER:	• ACCEPTS 2 3/8" DIA X 3" HIGH TENON (M1) • 6-PANE CAGE PANELS (CP6)
CATALOG NO.:	ALMRHS-M1-LE050-EVX-1HC-30-CR4-YPLF-CP6-CU

LAMP POST SPECIFICATIONS

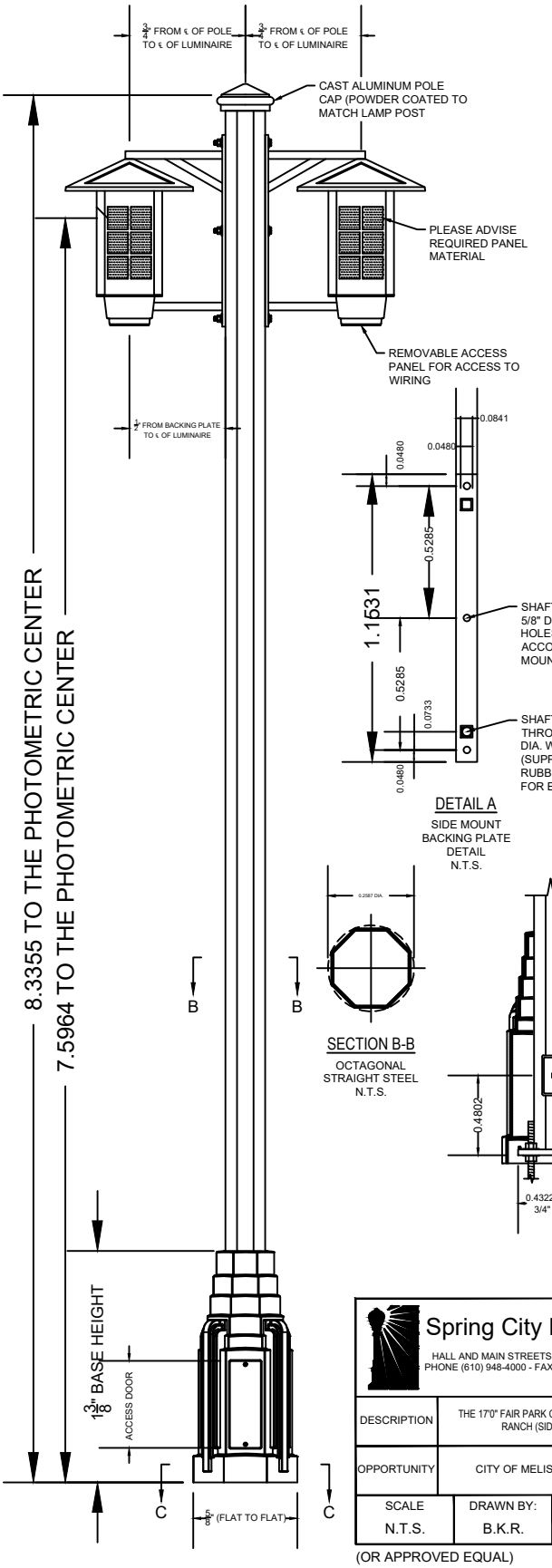
STYLE:	FAIR PARK STEEL
HEIGHT:	11'-0"
BASE:	13" (FLAT TO FLAT)
MATERIAL:	
• SHAFT:	11 GAUGE - OCTAGONAL, TAPERED STEEL MONOTUBE CONSTRUCTION
• BASE:	ONE PIECE (SLIP OVER) CAST ALUMINUM ALLOY A.N.S.I. 356, PER A.S.T.M. B26-95
FINISH:	POWDER COAT - PLEASE ADVISE FINISH COLOR
ACCESS DOOR:	LOCATED IN BASE SECURED WITH TAMPER PROOF HEX SOCKET SECURITY MACHINE SCREWS
GROUND PROVISIONS:	1/4"-20 SQUARE NUT WELDED TO INSIDE WALL OF SHAFT OPPOSITE HAND HOLE TO ACCOMMODATE GROUND STUD (GROUND STUD SUPPLIED BY OTHER)
ANCHOR BOLTS:	(4) 3/4" DIA. X 24" LONG + 3" HOOK (FULLY GALVANIZED WITH 2 GALVANIZED NUTS AND 2 GALVANIZED WASHERS PER BOLT)
BOLT PROJECTION:	5" REQUIRED
TENON:	2 3/8" DIA. X 3" HIGH (TO ACCEPT LUMINAIRE)
CATALOG NO.:	
• BASE:	ASBFRP-13-CU
• SHAFT:	SSHOC-G11-06.00-11.00-TN2.38-3.00-CU
• ANCHOR BOLT:	323/2NW

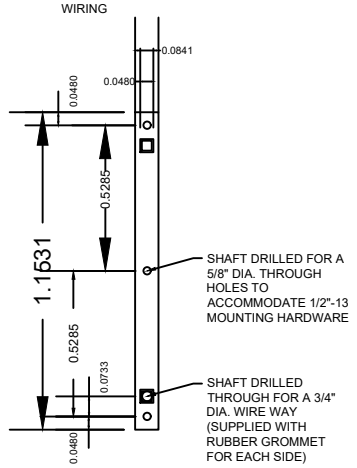
M* - CITY OF MELISSA REVISION

11'-0" FAIR PARK CAST ALUMINUM / STEEL POST WITH RANCH (SMALL) LED LUMINAIRE

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE	
N/A	
MODIFIED DATE: 08/18/23	STANDARD DRAWING NO.: 2301M
NOTICE DATE: 08/18/23	ADOPTED DATE: 08/18/23
ENFORCEMENT DATE: 09/18/23	



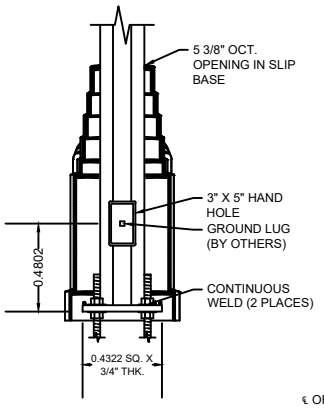


DETAIL A

SIDE MOUNT BACKING PLATE DETAIL
N.T.S.

SECTION B-B

OCTAGONAL STRAIGHT STEEL
N.T.S.



LUMINAIRE SPECIFICATIONS:

STYLE:	RANCH (SIDE MOUNTED)
HEIGHT:	24 3/4"
WIDTH:	16" SQUARE
MATERIAL:	CAST ALUMINUM ALLOY AND FABRICATED ALUMINUM ALLOY
FINISH:	POWDER COAT - PLEASE ADVISE FINISH COLOR
LAMPING:	PLEASE SELECT WATTAGE FROM CHART BELOW
VOLTAGE:	ELECTRONICALLY WIRED AT 120-277 VOLTS
COLOR TEMP.:	PLEASE SELECT COLOR TEMPERATURE FROM CHART BELOW
DISTRIBUTION:	PLEASE SELECT DISTRIBUTION FROM CHART BELOW
PANELS:	SELECT PANEL TYPE FROM CHART BELOW
SURGE:	10kV SURGE PROTECTION
MODIFIER:	• 1 3/4" WIDE X 3/8" THICK BACKING PLATE (M_) • 6-PANE CAGE PANELS (CP6) • OPTIONAL HOUSE SIDE SHIELD WHEN REQUIRED

CATALOG NO.:

AWKRHS-M_-LE___-EVX-1HC-__C_-____-CP6____-CU

CAT. NO	LED WATTAGE	
LE020	20 WATTS	
LE030	30 WATTS	
LE040	40 WATTS	
LE050	50 WATTS	■
LE060	60 WATTS	

CAT. NO	PANELS	
YSDP	SEEDED ACRYLIC	
YPBP	PEBBLED ACRYLIC	
YPLO	CLEAR ACRYLIC	
YPLF	FROSTED ACRYLIC	
YPLW	WHITE ACRYLIC	

CAT. NO	COLOR TEMP.	
27	2700K	
30	3000K	■
40	4000K	
50	5000K	

CAT. NO	SHIELDING	
	NONE	
09HS	90 DEGREES	
18HS	180 DEGREES	

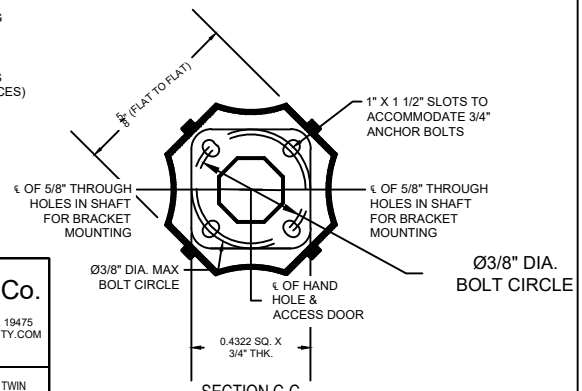
CAT. NO	DISTRIBUTION	
CR3	TYPE III	
CR4	TYPE IV	
CR5	TYPE V	

LAMP POST SPECIFICATIONS

STYLE:	FAIR PARK STEEL
HEIGHT:	17'-0"
BASE:	13" (FLAT TO FLAT)
MATERIAL:	
• SHAFT:	11 GAUGE - OCATGONAL, STRAIGHT STEEL MONOTUBE CONSTRUCTION
• BASE:	ONE PIECE (SLIP OVER) CAST ALUMINUM ALLOY A.N.S.I. 356, PER A.S.T.M. B26-95
FINISH:	POWDER COAT - PLEASE ADVISE FINISH COLOR
ACCESS DOOR:	LOCATED IN BASE SECURED WITH TAMPER PROOF HEX SOCKET SECURITY MACHINE SCREWS
GROUND PROVISIONS:	1/4"-20 SQUARE NUT WELDED TO INSIDE WALL OF SHAFT OPPOSITE HAND HOLE TO ACCOMMODATE GROUND STUD (GROUND STUD SUPPLIED BY OTHER)
ANCHOR BOLTS:	(4) 3/4" DIA. X 24" LONG + 3" HOOK (FULLY GALVANIZED WITH 2 GALVANIZED NUTS AND 2 GALVANIZED WASHERS PER BOLT)
BOLT PROJECTION:	5" REQUIRED
TENON:	NOT REQUIRED
MODIFIER:	• (2) 3/4" DIA. WIRE WAY SUPPLIED WITH RUBBER GROMMET (2WG) • (6) THROUGH HOLES FOR 1/2"-13 MOUNTING HARDWARE FOR BRACKET MOUNTING (2SD)

CATALOG NO.:

• BASE:	ASBFRP-13-CU
• SHAFT:	SSHOCT-G11-05.38-17.00-2WG-2SD-CU
• POLE CAP:	AFNUNV-06-03.38-CU
• ANCHOR BOLT:	323/2NW



SECTION C-C

BASE PLATE DETAIL
N.T.S.

Spring City Electrical Mfg. Co.

HALL AND MAIN STREETS - P.O. BOX 19 - SPRING CITY, PA. 19475
PHONE (610) 948-4000 - FAX (610) 948-5577 - WWW.SPRINGCITY.COM

DESCRIPTION	THE 17'0" FAIR PARK CAST ALUMINUM/STEEL POST WITH TWIN RANCH (SIDE MOUNTED) LED LUMINAIRES		
OPPORTUNITY	CITY OF MELISSA, TX DOWNTOWN LIGHTING		
SCALE	DRAWN BY:	DATE	DRAWING NO.
N.T.S.	B.K.R.	04-28-2023	SPEC-34182

(OR APPROVED EQUAL)

M* - CITY OF MELISSA REVISION

17'-0" FAIR PARK CAST ALUMINUM / STEEL POST WITH TWIN RANCH (SIDE MOUNTED) LED LUMINAIRES

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE: N/A

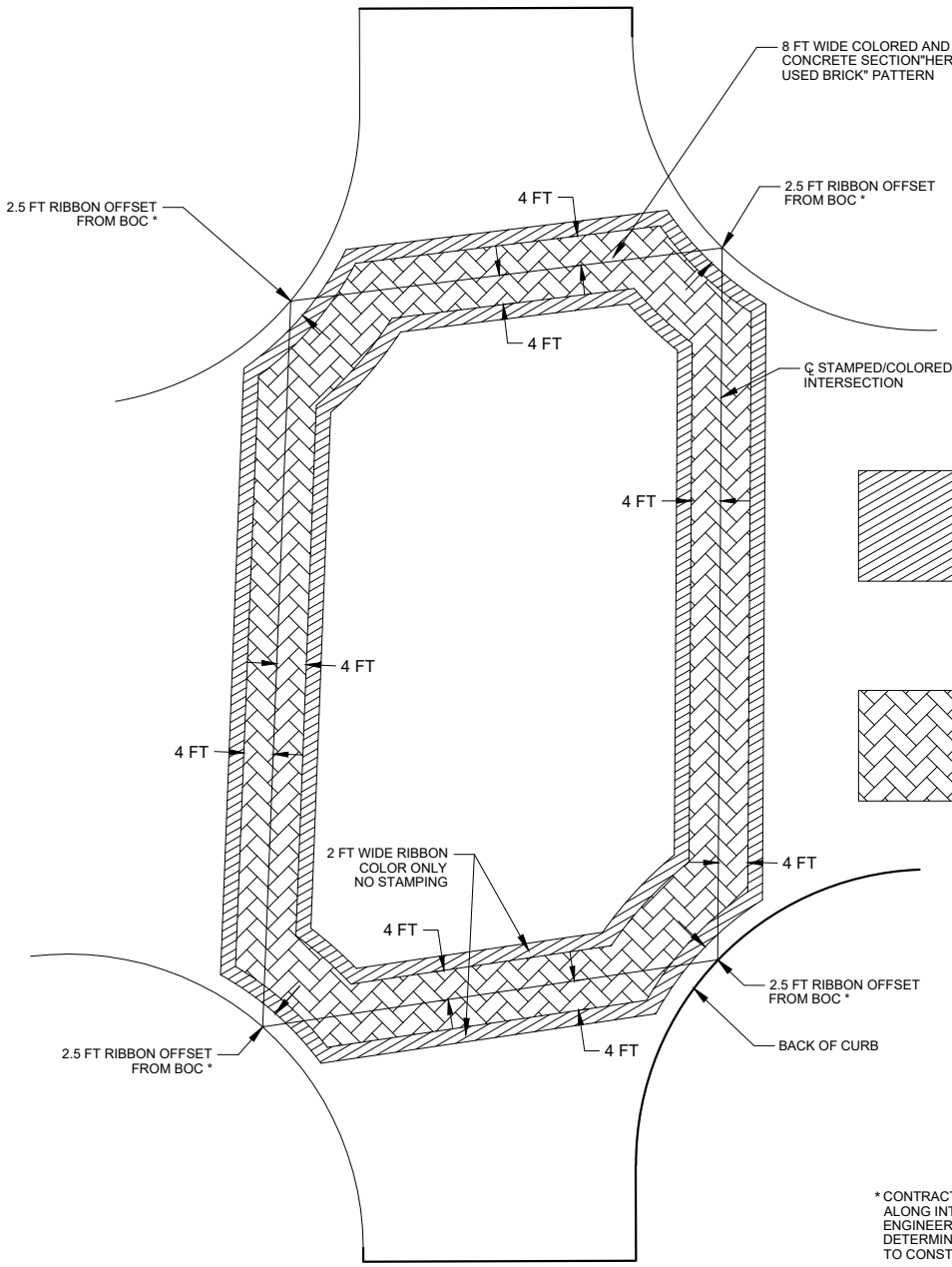
MODIFIED DATE	STANDARD DRAWING NO.
08/18/23	2302M*

NOTICE DATE	ADOPTED DATE	ENFORCEMENT DATE
08/18/23	08/18/23	09/18/23

NOTES:
CONTRACTOR SHALL STAKE LOCATION OF ALL STAMPED/COLORED CONCRETE FOR APPROVAL FROM THE ENGINEER PRIOR TO CONSTRUCTION.

CONTRACTOR SHALL PROVIDE SAMPLES OF ALL INTEGRAL COLORED CONCRETE AND STAMP PATTERNS PRIOR TO ANY APPLICABLE CONSTRUCTION.

FOR STAMPED/COLORED INTERSECTIONS IN A "U" PATTERN (I.E. FOR A 3-LEG INTERSECTION), STAMPED/COLORED CONCRETE SHALL NOT ENCROACH THE PROPOSED BICYCLE LANE CROSSING THE MISSING LEG OF THE INTERSECTION AS SHOWN ON THE PLANS AND TYPICAL SECTIONS. NOTE THAT THIS ONLY APPLIES TO INTERSECTIONS WITH TRAFFIC CONTROL MEASURES (I.E. SIGNAL OR STOP CONDITION) ON THE MINOR STREET AND NO CONTROL ON THE MAJOR STREET.



2 FT WIDE RIBBONS WITHOUT STAMPED PATTERN

NOTE: CONCRETE SHALL BE INTEGRAL STAINED INCRETE COLOR "REDWOOD W/ DARK GRAY" OR APPROVED EQUAL AND SHALL BE INSTALLED PER CITY STANDARDS. CONTACT INCRETE SYSTEMS FOR ADDITIONAL INFORMATION OR ASSISTANCE WITH SPECIFICATIONS AND INSTALLATION PROCEDURES AT 1-800-752-4626.

"HERRINGBONE USED BRICK" PATTERN STAMPED CONCRETE

NOTE: STAMPED CONCRETE SHALL BE INTEGRAL STAINED INCRETE COLOR "REDWOOD W/ DARK GRAY" OR APPROVED EQUAL AND SHALL BE INSTALLED PER CITY STANDARDS.

CONTACT INCRETE SYSTEMS FOR ADDITIONAL INFORMATION OR ASSISTANCE WITH SPECIFICATIONS AND INSTALLATION PROCEDURES AT 1-800-752-4626.

* CONTRACTOR SHALL WRAP STAMPED/COLORED CONCRETE INTERSECTION ALONG INTERSECTION RADII PER THIS DETAIL AND AS APPROVED BY THE ENGINEER. FINAL ORIENTATION OF STAMPED INTERSECTIONS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD AND SHALL BE APPROVED PRIOR TO CONSTRUCTION.

M* - CITY OF MELISSA REVISION

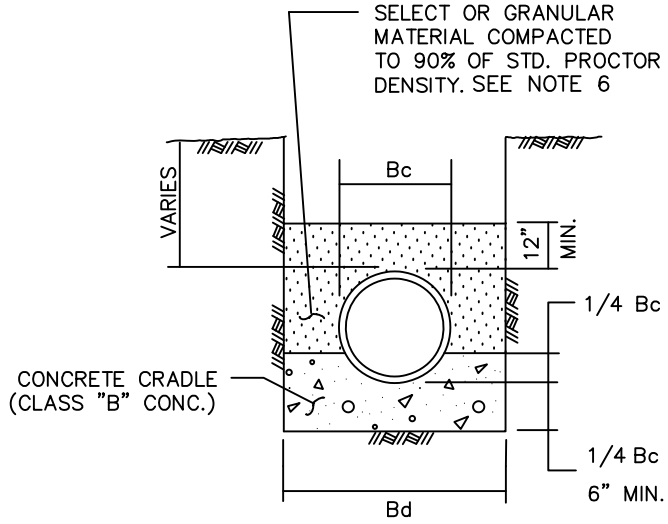
STAMPED/COLORED CONCRETE INTERSECTION

CITY OF MELISSA

NCTCOG STANDARD SPECIFICATION REFERENCE

MODIFIED DATE	STANDARD DRAWING NO.
4/5/18	2310M*

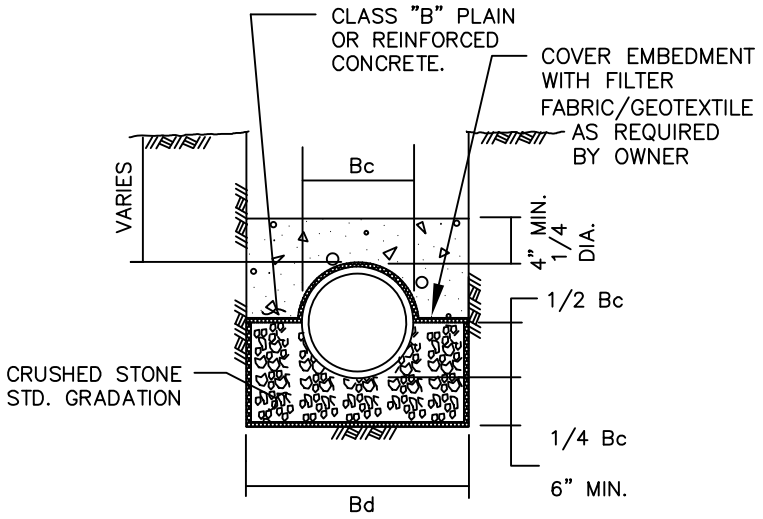
NOTICE DATE	ADOPTED DATE	ENFORCEMENT DATE
4/5/18	4/5/18	5/5/18



CLASS "A"

CLASS "B" CONCRETE CRADLE
PLAIN CONC. LF 2.8
REINF. CONC. LF 3.4 P=0.4%

N.T.S



CLASS "A-1"

CLASS "B" CONCRETE CAP
PLAIN CONC. LF 2.8
REINF. CONC. LF 3.4 P=0.4%
REINF. CONC. LF 4.8 P=1.0%

N.T.S

NOTES:

1. LF. = LOAD FACTOR TO BE USED TO DETERMINE 3 EDGE BEARING BASED ON TYPE OF EMBEDMENT.
2. FREE-FALL OF CONCRETE NOT TO EXCEED 5 FT. MAXIMUM.
3. P = Rho FOR STEEL %
4. Bc = OUTSIDE DIAMETER OF PIPE
5. Bd = TRENCH WIDTH
6. USE OF 95% DENSITY UNDER PAVED SURFACE AND 90% IN UNPAVED AREAS

STANDARD DRAWING NO. 3010

EMBEDMENT

CLASS "A" & "A-1"

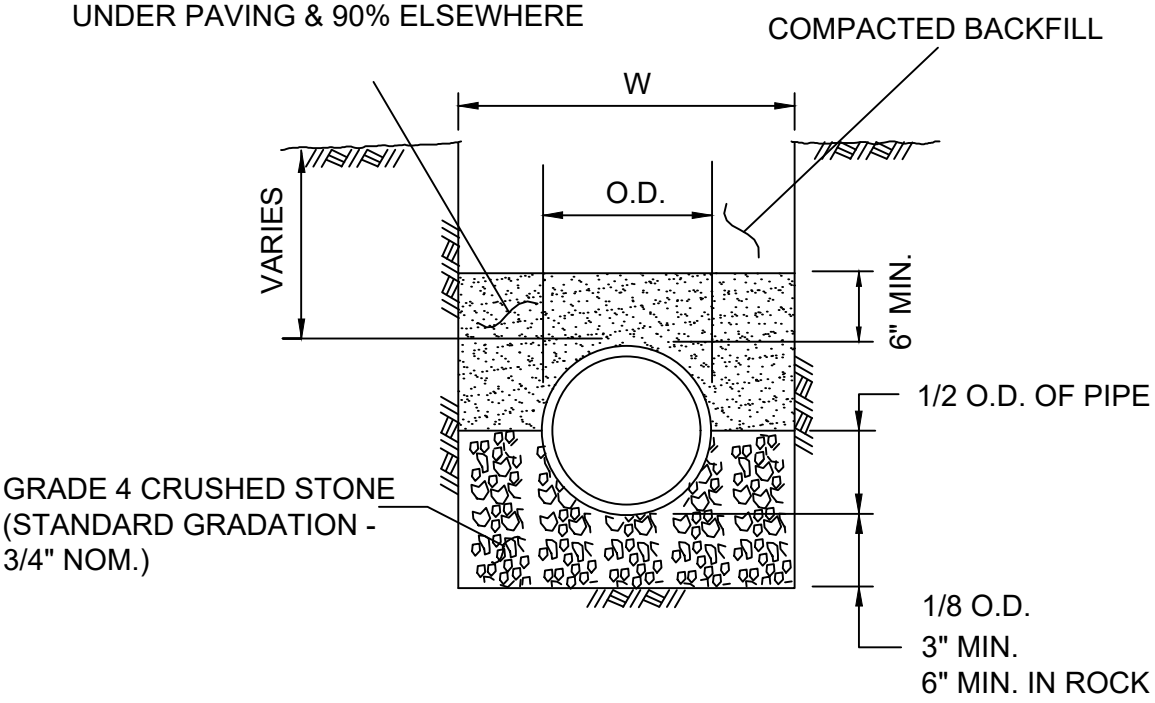
North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE
504.5

DATE
AUG '23

STANDARD DRAWING NO.
3010

TYPE "B" BACKFILL PER NCTCOG
504.2.3.3 (4TH ed.) COMPACTED TO
95% STANDARD PROCTOR DENSITY
UNDER PAVING & 90% ELSEWHERE



NOTES:

1. THE DEPTH OF TRENCH BELOW PIPE ARE AS FOLLOWS:
   3" MIN. FOR 27" PIPE & SMALLER
   4" MIN. FOR 30" TO 60" PIPE
   6" MIN. FOR 66" PIPE & LARGER

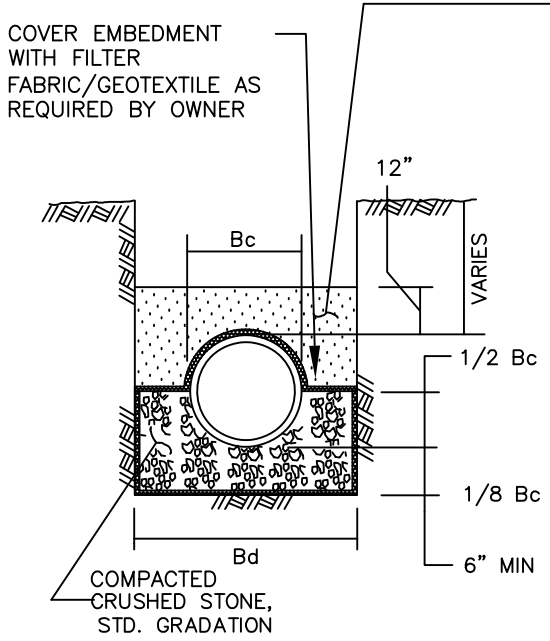
2. O.D. = OUTSIDE DIAMETER OF PIPE.

3. W = TRENCH WIDTH = O.D. PLUS 24" FOR PIPE GREATER THAN 24"
AND O.D. PLUS 16" FOR PIPE 24" AND SMALLER.

M* - CITY OF MELISSA REVISION

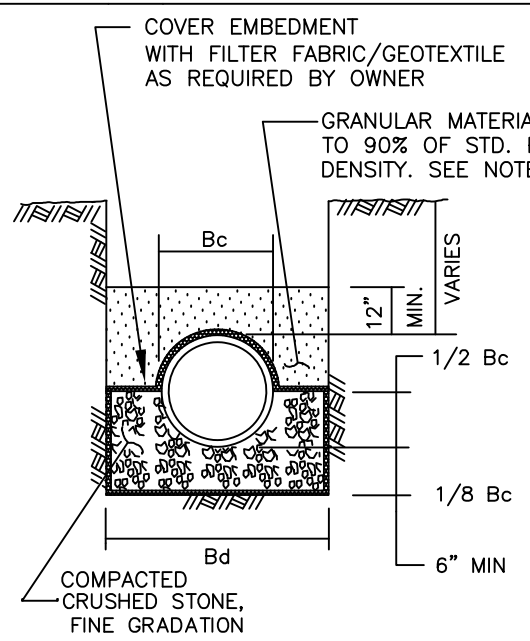
STORM SEWER PIPE BEDDING DETAIL		NCTCOG STANDARD SPECIFICATION REFERENCE 504	
CITY OF MELISSA	MELISSA TX	DATE 02/02/10	STANDARD DRAWING NO. 3010AM*

SELECT OR GRANULAR MATERIAL COMPACTED TO 90% OF STD. PROCTOR DENSITY SEE NOTE 3



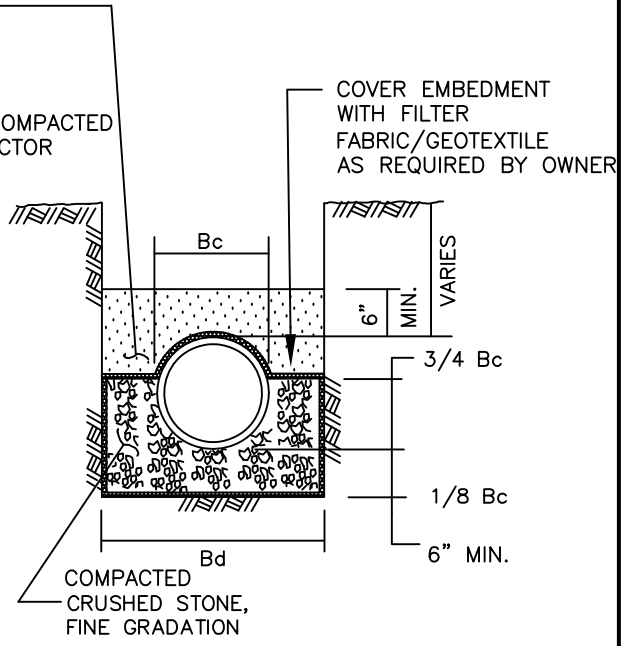
CLASS "B"

N.T.S.



CLASS "B+"

N.T.S.



CLASS "B-1"

N.T.S.

NOTES:

1. Bc = OUTSIDE DIAMETER OF PIPE
2. Bd = TRENCH WIDTH
3. USE 95% DENSITY UNDER PAVED SURFACE AND 90% IN UNPAVED AREAS

STANDARD DRAWING NO. 3020

EMBEDMENT

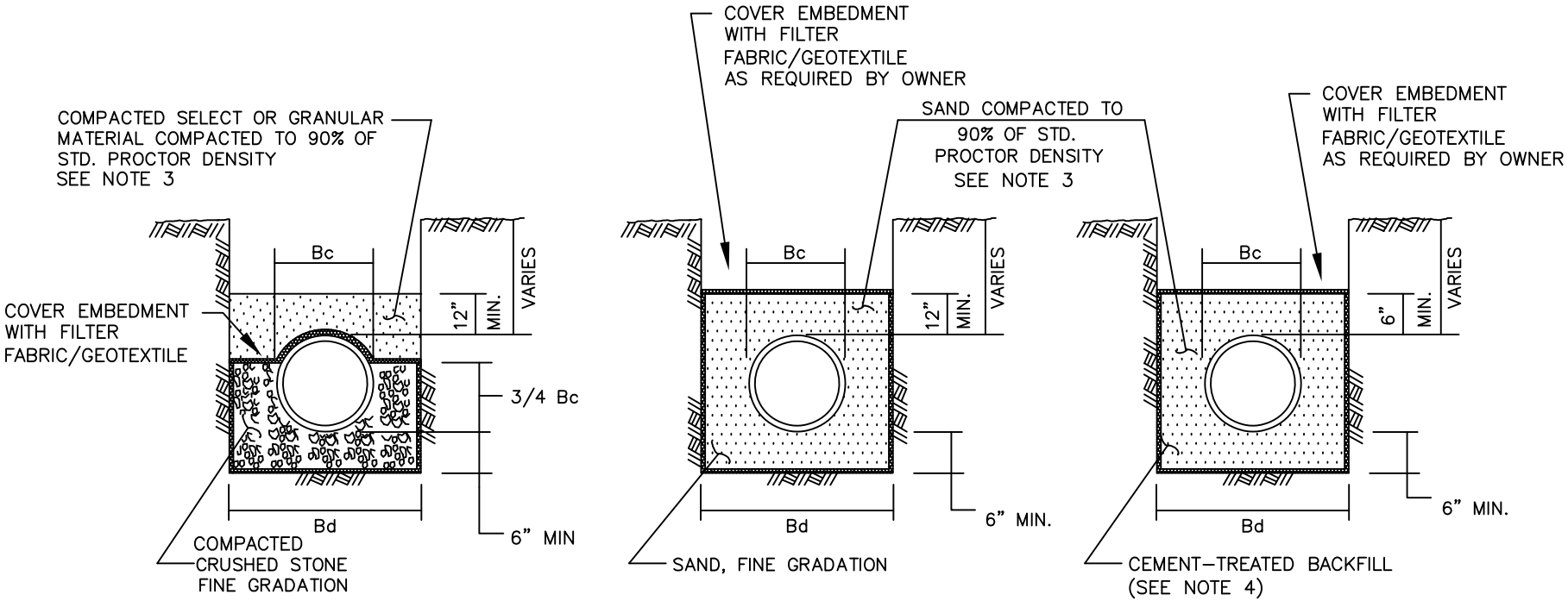
CLASS "B", "B+", & "B-1"

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 504.5

DATE AUG '23

STANDARD DRAWING NO. 3020



CLASS "B-2"

N.T.S.

CLASS "B-3"

N.T.S.

CLASS "B-4"

N.T.S.

NOTES:

1. Bc = OUTSIDE DIAMETER OF PIPE
2. Bd = TRENCH WIDTH
3. USE 95% DENSITY UNDER PAVED SURFACE AND 90% IN UNPAVED AREAS
4. REFER TO 504.6.2

STANDARD DRAWING NO. 3030

EMBEDMENT

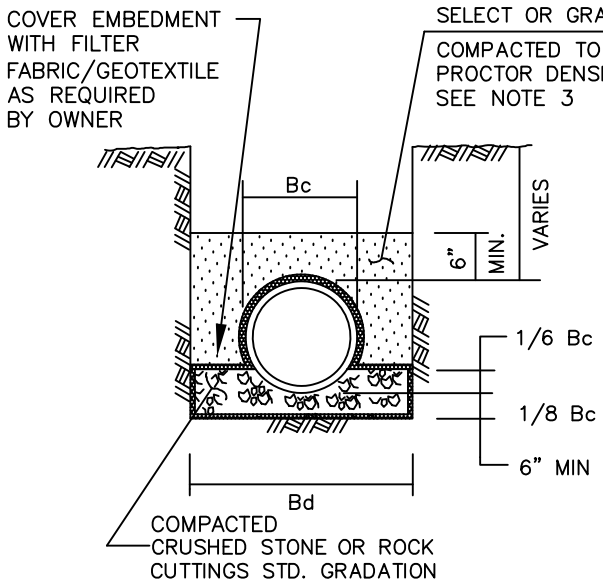
CLASS "B-2", "B-3", & "B-4"

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 504.5

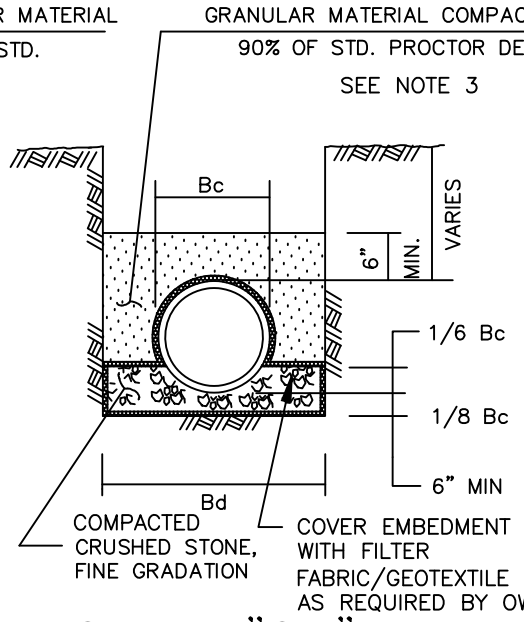
DATE AUG '23

STANDARD DRAWING 3030



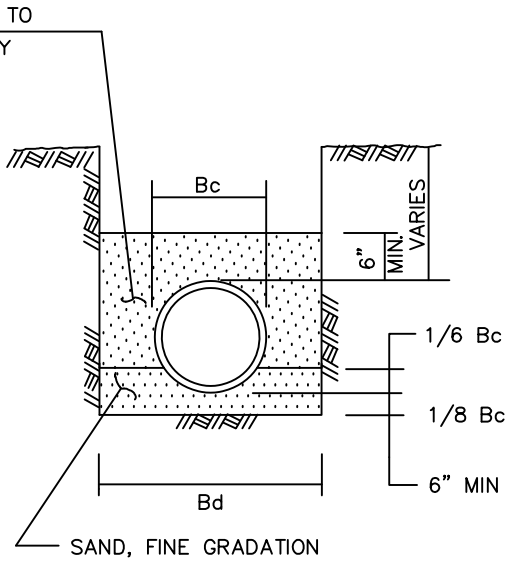
CLASS "C"

N.T.S.



CLASS "C+"

N.T.S.



CLASS "C-1"

N.T.S.

NOTES:

1. Bc = OUTSIDE DIAMETER OF PIPE
2. Bd = TRENCH WIDTH
3. USE 95% DENSITY UNDER PAVED SURFACE AND 90% IN UNPAVED AREAS

STANDARD DRAWING NO. 3040

EMBEDMENT

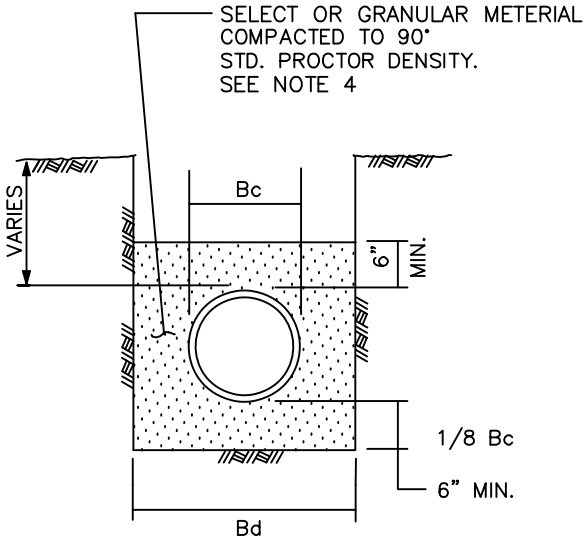
CLASS "C", "C+", & "C-1"

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 504.5

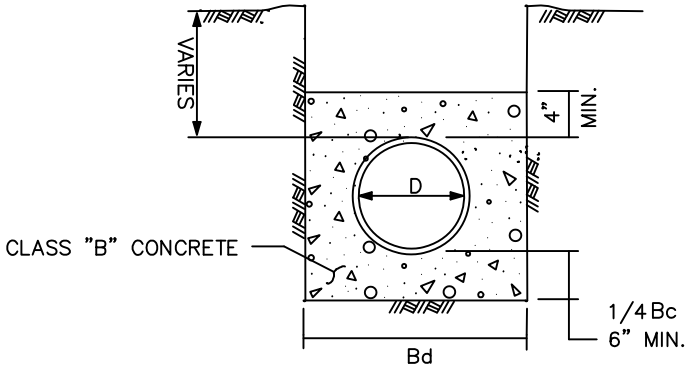
DATE AUG '23

STANDARD DRAWING NO. 3040



CLASS "D+"

N.T.S.



CLASS "G"

N.T.S.

NOTES:

1. Bc = OUTSIDE DIAMETER OF PIPE
2. Bd = TRENCH WIDTH
3. D = INSIDE DIAMETER OF PIPE
4. USE 95% DENSITY UNDER PAVED SURFACE AND 90% IN UNPAVED AREAS

STANDARD DRAWING NO. 3050

EMBEDMENT

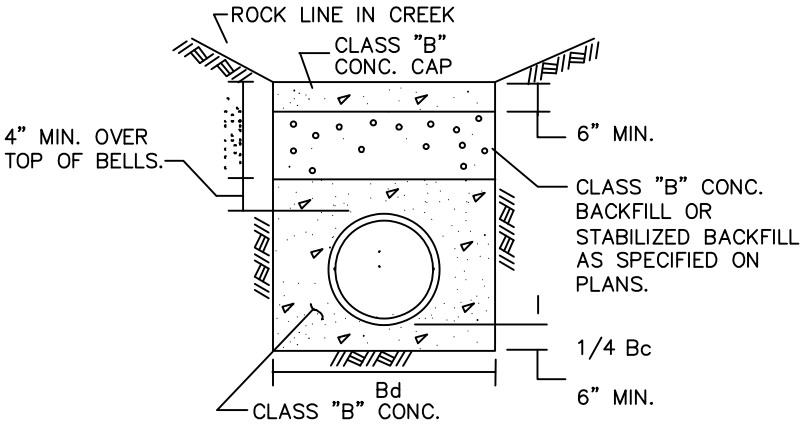
CLASS "D+" & "G"

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 504.5

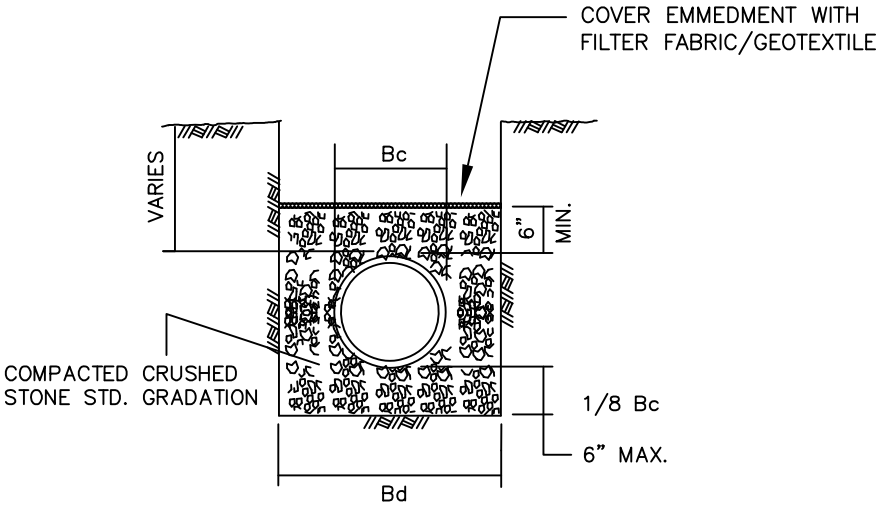
DATE AUG '23

STANDARD DRAWING NO. 3050



CLASS "G-1"

N.T.S.



CLASS "H"

N.T.S.

NOTES:
1. Bc = OUTSIDE DIAMETER OF PIPE
2. Bd = TRENCH WIDTH
3. D = INSIDE DIAMETER OF PIPE
4. USE 95% DENSITY UNDER PAVED SURFACE AND 90% IN UNPAVED AREAS

STANDARD DRAWING NO. 3060

EMBEDMENT

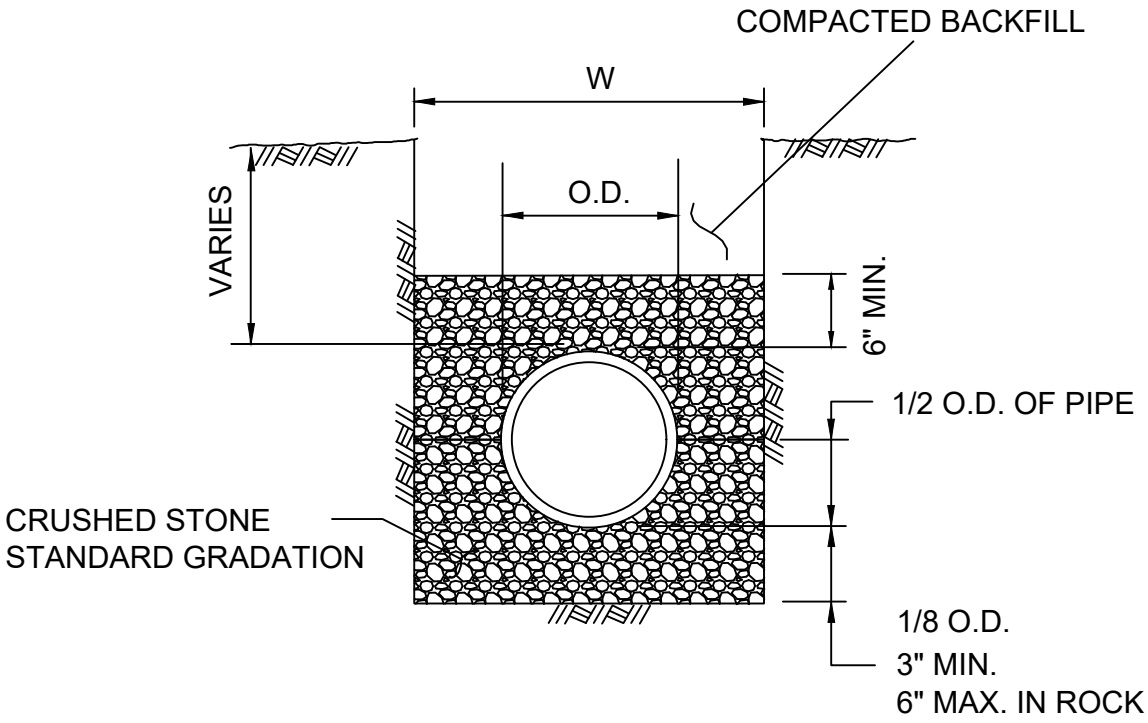
CLASS "G-1" & "H"

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 504.5

DATE AUG '23

STANDARD DRAWING NO. 3060



NOTES:

1. CLASS H EMBEDMENT ACCEPTABLE FOR
STANDARD P.V.C. SEWER INSTALLATION.
STANDARD P.V.C., R.C.C.P., AND DUCTILE IRON WATER LINE INSTALLATION.

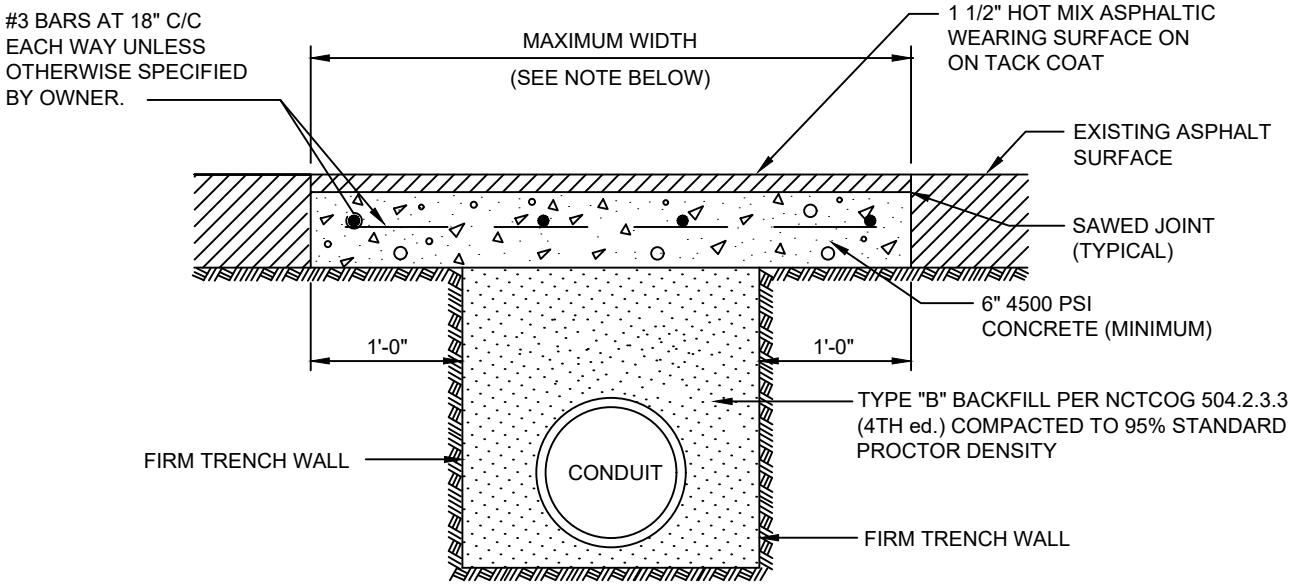
2. O.D. = OUTSIDE DIAMETER OF PIPE.

3. W = TRENCH WIDTH.

WIDTH OF TRENCH SHALL BE 24 INCHES PLUS O.D. FOR PIPE GREATER THAN 24 INCHES IN DIAMETER AND O.D. PLUS SIXTEEN INCHES FOR PIPE LESS THAN OR EQUAL TO 24 INCHES I.D.

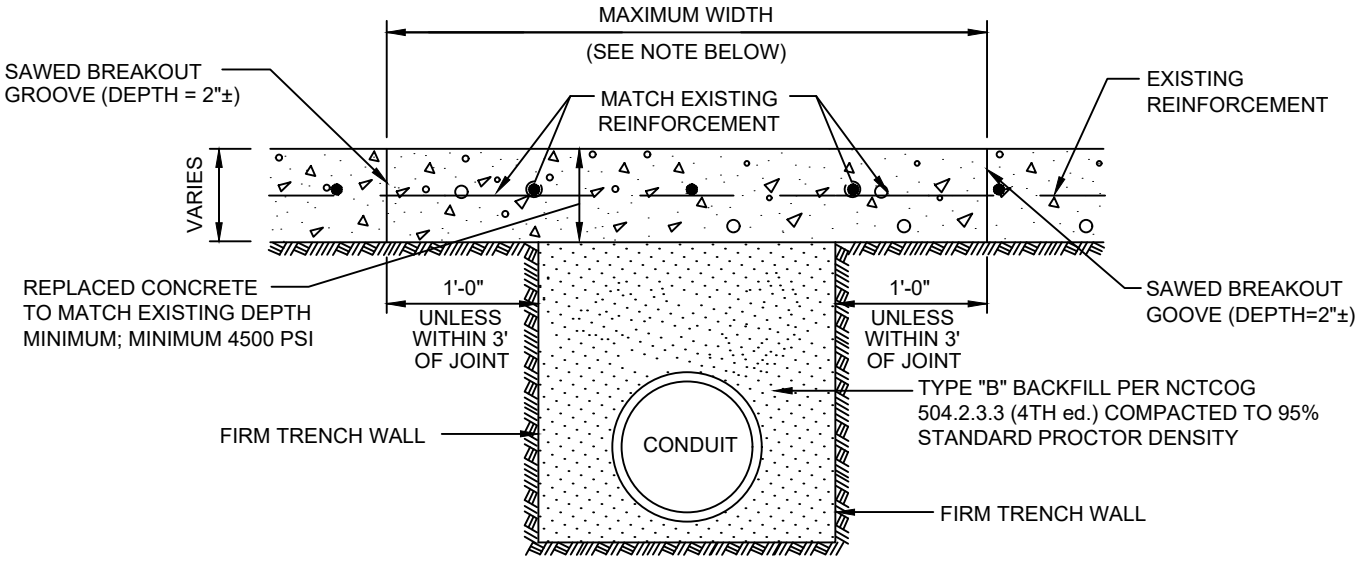
M* - CITY OF MELISSA REVISION

CLASS H EMBEDMENT		NCTCOG STANDARD SPECIFICATION REFERENCE 504	
CITY OF MELISSA	MELISSA TX	DATE 07/20/09	STANDARD DRAWING NO. 3061M*



ASPHALT PAVEMENT

N.T.S.



CONCRETE PAVEMENT

N.T.S.

NOTES:

1. PAYMENT TO THE CONTRACTOR FOR REPLACEMENT OF PAVEMENT AND/OR DRIVEWAYS WILL BE BASED ON ACTUAL MEASUREMENTS UP TO A MAXIMUM WIDTH EQUAL TO THE SPECIFIED MAXIMUM TRENCH WIDTH PLUS 2 FEET. ANY EXISTING PAVEMENT DAMAGED OR REMOVED IN EXCESS OF THE MAXIMUM LIMITS SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
2. WHEN REMOVING CONCRETE PAVEMENT THE CONTRACTOR SHALL ENDEAVOR TO LIMIT DAMAGE TO EXISTING REINFORCEMENT SO IT MAY BE EMPLOYED IN THE REPLACEMENT OPERATION. IF ORIGINAL REINFORCEMENT IS CUT OR BROKEN, REPLACEMENT BARS OF THE SAME SIZE SHALL BE INSTALLED BY DRILLING AND DOWELLING AS DIRECTED BY THE OWNER.

M* - CITY OF MELISSA REVISION

PAVEMENT CUTS REMOVAL & REPLACEMENT

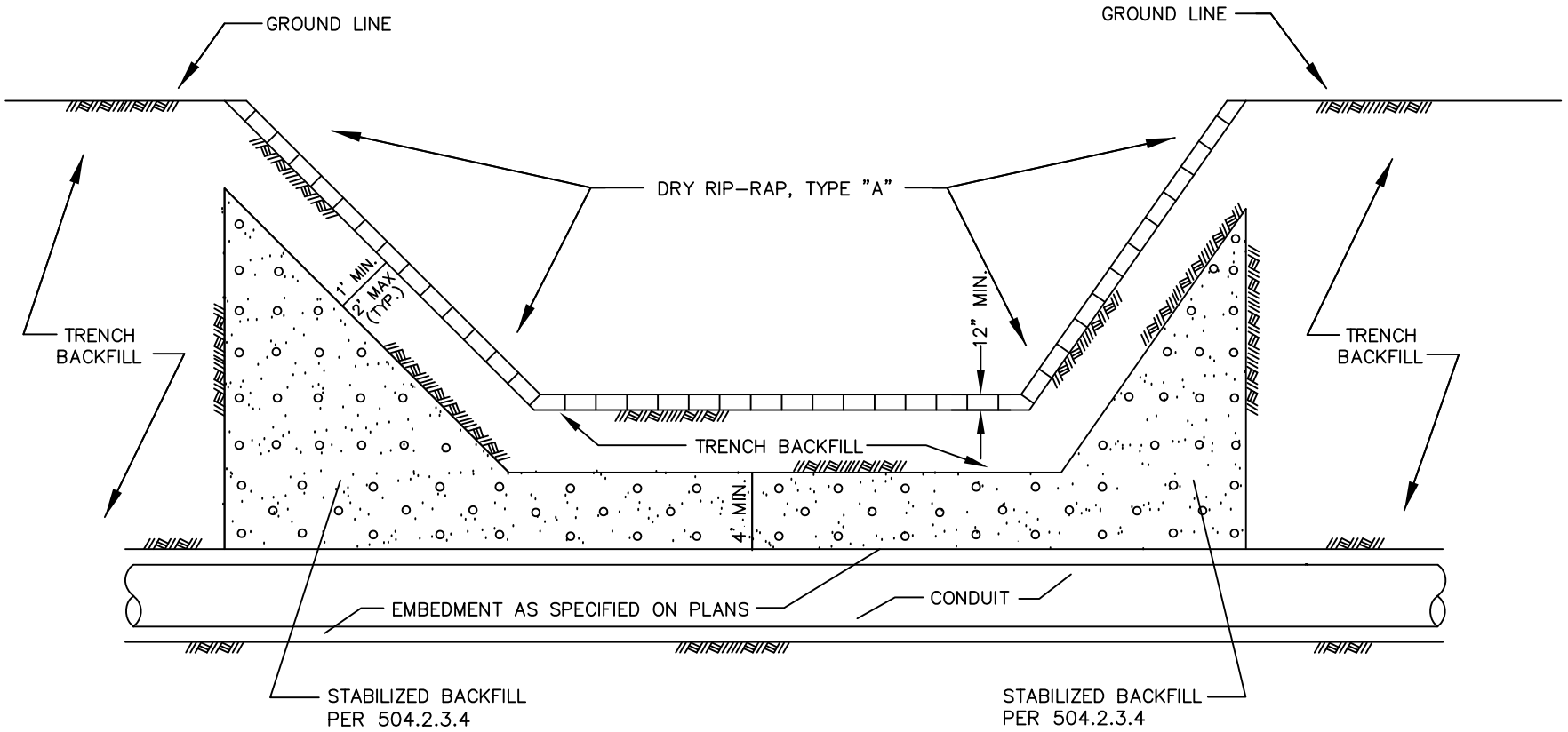
CITY OF MELISSA

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE
402 & 403

ENFORCED DATE
09/01/19

STANDARD DRAWING NO.
3070M*



STANDARD DRAWING NO. 3080

INFILTRATION PROTECTION
CONDUIT UNDER CHANNEL

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE
504; 803

DATE
AUG '23

STANDARD DRAWING NO.
3080

1. GATE VALVES AND BUTTERFLY VALVES SHALL NOT BE OVER 1000 FT APART FOR LINES 12" AND LARGER.

2. GATE VALVES SIXTEEN (16) INCHES AND LARGER SHALL BE PLACED IN A VAULT.

3. MINIMUM COVER FOR WATER LINES:
   4" thru 12" - 4 FT COVER (5 FT UNIMPROVED)
   14" THRU 18" - 5 FT COVER (6 FT UNIMPROVED)
   20" AND LARGER - 6 FT COVER (7 FT UNIMPROVED)

4. THE MINIMUM WATER MAIN SIZE SHALL BE 8" IN RESIDENTIAL (LARGER LINE SIZE MAY BE REQUIRED BY THE COMPREHENSIVE PLAN, WATER MASTER PLAN, OR TO MEET FIRE PROTECTION NEEDS AS DETERMINED BY THE CITY ENGINEER).

5. THERE SHALL BE A MINIMUM OF A FIFTEEN (15) FOOT EASEMENT FOR WATER LINES.

6. THE MINIMUM RESIDENTIAL WATER SERVICE LINE SHALL BE ONE INCH (1") POLY PIPE (SDR 9), AND SHALL BE INSTALLED BEHIND BACK OF CURB IN PARKWAY AWAY FROM DRIVEWAYS.

7. DEAD END MAINS SHALL NOT EXCEED SIX HUNDRED FEET (600'). PROVISIONS SHALL BE PROVIDED FOR FLUSHING DEAD END MAINS WITH A FIRE HYDRANT OR AUTO-FLUSH VALVE PLACED NEAR THE TERMINAL END OF THE LINE.

8. TRACER TAPE SHALL BE INSTALLED ALONG THE TOP CENTERLINE OF ALL NON-METALLIC WATER PIPES A MINIMUM OF TWO FEET ABOVE THE TOP OF PIPE AND SHALL BE DETECTABLE PER MANUFACTURER SPECIFICATIONS BY A METAL DETECTION DEVICE AT THE INSTALLED DEPTH. THE TAPE IS TO CONSIST OF A METAL STRIP COATED WITH A CORROSION RESISTANT SUBSTANCE AND SHALL BE AT LEAST 2" WIDE. TRACER TAPE SHALL ALSO BE PLACED ABOVE SERVICE LINES THAT CROSS THE STREET.

9. A MAXIMUM OF 6 FEET BURY IS ALLOWED FOR FIRE HYDRANTS.

10. REDUCED SIZE DETECTOR VALVES WILL NOT BE ALLOWED.

11. ONLY 5 1/4" WATEROUS PACER FIRE HYDRANT WITH SAFETY FLANGE WILL BE ALLOWED FOR STANDARD HYDRANTS. FIRE HYDRANTS WITH TWO PUMPER NOZZLES SHALL MEET REQUIREMENTS IN STANDARD DRAWING 4120CM AND 4120DM.

12. ALL FIRE HYDRANT LEADS SHALL CONTAIN A GATE VALVE THAT IS WITHIN 2'-5' OF THE HYDRANT.

13. FIRE HYDRANT MARKERS SHALL CONSIST OF A 4" BY 4" BLUE REFLECTOR PAVEMENT MARKER INSTALLED OPPOSITE EACH FIRE HYDRANT ON ALL STREETS' CENTER LINE.

14. MINIMUM 6" WATER LINES SHALL BE PROVIDED UP TO 25 FT OF FIRE HYDRANTS; OTHERWISE 8" OR LARGER MUST BE USED.

15. ALL WATER LINES SHALL MEET THE REQUIREMENTS OF AWWA AND NCTCOG UNDER THE FOLLOWING SPECIFICATIONS:
   - 8" THRU 12" : C900 DR 18 - PVC
   - 14" AND LARGER : AWWA C301 & C303 - REINFORCED CONCRETE CYLINDER PIPE
   : AWWA C900 - PVC - DR 18
   : AWWA C151 - DUCTILE IRON PIPE - THICKNESS CLASS 50

16. ALL FEEDER MAINS SHALL BE LOOPED AND ALL OTHER WATER LINES IN EXCESS OF 600' IN LENGTH SHALL BE LOOPED.

17. ALL WATER LINE FITTINGS SHALL BE DUCTILE IRON PER AWWA C110 OR AWWA C153 WITH CORROSION RESISTANT BOLTS/NUTS PER ASTM A325.

18. ALL GATE VALVES SHALL MEET THE REQUIREMENTS OF AWWA C509 AND NCTCOG 502.6.2. GATE VALVES SHALL INCLUDE VALVE BOXES PER STANDARD DRAWING 4050M AND DEBRIS CAPS/PLUGS PER STANDARD DRAWING 4051M. VALVES SHALL BE FURNISHED WITH EXTENSIONS TO 1' BELOW GRADE AT LOCATIONS WHERE THE VALVE OPERATING NUT IS MORE THAN 3' BELOW GRADE.

19. ALL VALVES, FIRE HYDRANTS, AND FITTINGS SHALL BE INSTALLED WITH ADEQUATE THRUST BLOCKING OR MECHANICAL JOINT RESTRAINT IN ACCORDANCE WITH THE CITY OF MELISSA STANDARD CONSTRUCTION DETAILS. POLYETHYLENE WRAPPING SHALL PRECEDE BLOCKING OR RESTRAINT. ALL JOINT RESTRAINTS SHALL BE MEGALUG OR APPROVED EQUIVALENT.

20. THE CITY ENGINEER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE INSTALLATION OF ANY AND ALL WATER IMPROVEMENTS.

21. DENSITY TESTING FOR UTILITY BACKFILL SHALL BE PERFORMED PER TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF STREETS, HIGHWAYS, AND BRIDGES ITEM 132.

22. HOME BUILDERS SHALL BE REQUIRED TO INSTALL PRESSURE REDUCING VALVES ON THE CUSTOMER SIDE OF THE METER ON LOTS WITH AN ELEVATION OF 657.65' AND LOWER.

M* - CITY OF MELISSA REVISION

GENERAL CONSTRUCTION WATER NOTES

CITY OF MELISSA, TEXAS

NCTCOG STANDARD SPECIFICATION REFERENCE		
500		
MODIFIED DATE	STANDARD DRAWING NO.	
1/6/20	4001M*	
NOTICE DATE	ADOPTED DATE	ENFORCEMENT DATE
1/6/20	2/6/20	2/6/20

WATER PIPELINE TESTING AND DISINFECTION

PART 1 - GENERAL

1.1 WORK OF THIS SECTION

A. THE WORK OF THIS SECTION INCLUDES PREPARATION, DISINFECTION, FLUSHING, SAMPLING, TESTING AND PAYMENT OF ALL PRESSURE PIPELINES AND APPURTENANT PIPING FOR POTABLE WATER AND DISINFECTION OF ALL PIPELINES AND APPURTENANT PIPING FOR POTABLE WATER, COMPLETE, INCLUDING PROVIDING TEST WATER AND ALL DISPOSAL THEREOF.

1.2 STANDARD SPECIFICATIONS

B. EXCEPT AS OTHERWISE INDICATED IN THIS SECTION OF THE SPECIFICATIONS, THE CONTRACTOR SHALL COMPLY WITH THE LATEST EDITIONS OF AWWA AND NCTCoG STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION TOGETHER WITH ALL LATEST STATE OF TEXAS AND TEXAS COMMISSION ON ENVIRONMENTAL QUALITY REQUIREMENTS.

1.3 SPECIFICATIONS AND STANDARDS

A. EXCEPT AS OTHERWISE INDICATED, THE CURRENT EDITIONS OF THE FOLLOWING APPLY TO THE WORK OF THIS SECTION:

1. ANSI/AWWA B300 - HYPOCHLORITES
2. ANSI/AWWA B301 - LIQUID CHLORINE
3. ANSI/AWWA C651 - DISINFECTING WATER MAINS
4. APHA, AWWA, AND WEF - STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER
5. TEXAS, NCTCoG, TCEQ - STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

1.4 TESTING SCHEDULE

A. THE FOLLOWING SHALL BE SUBMITTED TO THE CITY ENGINEER:

1. A TESTING SCHEDULE, INCLUDING PROPOSED PLANS FOR WATER CONVEYANCE, CONTROL, AND DISINFECTION SHALL BE SUBMITTED IN WRITING FOR APPROVAL A MINIMUM OF 48 HOURS BEFORE TESTING IS TO START. THE SUBMITTAL SHALL ALSO INCLUDE THE CONTRACTOR'S PLAN FOR THE RELEASE OF WATER FROM PIPELINES AFTER TESTING AND DISINFECTION HAS BEEN COMPLETED.

1.5 PAYMENT

A. GENERAL CONTRACTOR (CIP) OR DEVELOPER (PRIVATE) WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH BACTERIAL TESTING. TESTING WILL BE CONDUCTED UNTIL SATISFACTORY RESULTS, IN OPINION OF THE OWNER, HAVE BEEN ACHIEVED. THE CONTRACTOR/DEVELOPER WILL BE RESPONSIBLE FOR PAYING AN INVOICE FOR THE UNMETERED WATER USED AFTER EVERY FLUSHING EVENT DURING TESTING. FLUSHING/TESTING CAN RESUME ONLY AFTER THE INVOICE HAS BEEN PAID.

PART 2 - PRODUCTS

2.1 MATERIALS REQUIREMENTS

A. ALL TEST EQUIPMENT, CHEMICALS FOR CHLORINATION, PUMPS, HOSES, TEMPORARY VALVES, TEMPORARY BLOW-OFFS, BULKHEADS, BACKFLOW DEVICES, OR OTHER WATER CONTROL EQUIPMENT AND MATERIALS SHALL BE DETERMINED AND FURNISHED BY THE CONTRACTOR. NO MATERIALS SHALL BE USED WHICH WOULD BE, IN THE OPINION OF THE ENGINEER, INJURIOUS TO THE PIPELINE OR ITS FUTURE FUNCTION.

B. CHLORINE FOR DISINFECTION SHALL BE IN THE FORM OF LIQUID CHLORINE, SODIUM HYPOCHLORITE SOLUTION, OR CALCIUM HYPOCHLORITE GRANULES OR TABLETS.

C. IF USED, LIQUID CHLORINE SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ANSI/AWWA B301. LIQUID CHLORINE SHALL BE USED ONLY:

1. IN COMBINATION WITH APPROPRIATE GAS FLOW CHLORINATORS AND EJECTORS;
2. UNDER THE DIRECT SUPERVISION OF AN EXPERIENCED TECHNICIAN;
3. WHEN APPROPRIATE SAFETY PRACTICES ARE OBSERVED.

D. IF USED, SODIUM HYPOCHLORITE AND CALCIUM HYPOCHLORITE SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ANSI/AWWA B300.

M* - CITY OF MELISSA REVISION

	NCTCOG STANDARD SPECIFICATION REFERENCE: 506	
WATER PIPELINE TESTING AND DISINFECTION	MODIFIED DATE: 11/3/17	STANDARD DRAWING NO.: 4002AM*
CITY OF MELISSA, TEXAS	NOTICE DATE: 11/17/17	ADOPTED DATE: 11/17/17 / ENFORCEMENT DATE: 12/17/17

WATER PIPELINE TESTING AND DISINFECTION

PART 3 - EXECUTION

3.1 GENERAL

A. UNLESS OTHERWISE INDICATED, POTABLE WATER FOR TESTING AND DISINFECTING WATER PIPELINES WILL BE FURNISHED BY THE CONTRACTOR. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS INCLUDING BUT NOT LIMITED TO APPROVED BACKFLOW DEVICES AND ALSO MAKE ALL NECESSARY ARRANGEMENTS FOR CONVEYING THE WATER TO THE POINTS OF USE.

B. ALL PRESSURE PIPELINES SHALL BE PASS HYDROSTATIC TESTING BEFORE CHLORINATING. DISINFECTION SHALL THEN BE ACCOMPLISHED BY CHLORINATION. ALL CHLORINATING AND TESTING OPERATIONS SHALL BE PERFORMED IN THE PRESENCE OF THE CITY'S AUTHORIZED REPRESENTATIVE.

C. DISINFECTION OPERATIONS SHALL BE SCHEDULED BY THE CONTRACTOR AS LATE AS POSSIBLE DURING CONTRACT TIME PERIOD SO AS TO ASSURE THE MAXIMUM DEGREE OF STERILITY OF THE FACILITIES AT THE TIME THE WORK IS ACCEPTED BY THE OWNER.

D. ALL POTABLE WATER FROM THE EXISTING WATER SYSTEM USED FOR TESTING WILL BE MEASURED USING A SONIC FLOW METER. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING A LOCATION FOR THE INSPECTOR TO ATTACH THE FLOW METER TO THE OUTSIDE OF THE PIPE NEAR THE TIE-IN LOCATION TO THE EXISTING SYSTEM.

3.2 HYDROSTATIC TESTING OF PIPELINES

A. PRIOR TO HYDROSTATIC TESTING, ALL PIPELINES SHALL BE FLUSHED OR BLOWN OUT AS APPROPRIATE. THE CONTRACTOR SHALL TEST ALL PIPELINES AS A SINGLE UNIT. NO SECTION OF THE PIPELINE SHALL BE TESTED UNTIL ALL FIELD-PLACED CONCRETE OR MORTAR HAS ATTAINED AN AGE OF 14 DAYS. THE TEST SHALL BE MADE BY CLOSING VALVES WHEN AVAILABLE OR BY PLACING TEMPORARY BULKHEADS IN THE PIPE AND FILLING THE LINE SLOWLY WITH WATER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ASCERTAINING THAT ALL TEST BULKHEADS ARE SUITABLY RESTRAINED TO RESIST THE THRUST OF THE TEST PRESSURE WITHOUT DAMAGE TO, OR MOVEMENT OF, THE ADJACENT PIPE. ANY UNHARNESSED SLEEVE-TYPE COUPLINGS, EXPANSION JOINTS, OR OTHER SLIDING JOINTS SHALL BE RESTRAINED OR SUITABLY ANCHORED PRIOR TO TEST, TO AVOID MOVEMENT AND DAMAGE TO PIPING AND EQUIPMENT. THE CONTRACTOR SHALL PROVIDE SUFFICIENT TEMPORARY AIR TRAPPINGS IN THE PIPELINES TO ALLOW FOR EVACUATION OF ALL ENTRAPPED AIR IN EACH PIPE SEGMENT TO BE TESTED. AFTER COMPLETION OF THE TESTS, SUCH TAPS SHALL BE PERMANENTLY PLUGGED. CARE SHALL BE TAKEN TO SEE THAT ALL AIR VENTS ARE OPEN DURING FILLING.

B. THE PIPELINE SHALL BE FILLED FROM THE LOWEST POINT ON THE LINE AVAILABLE. THE LINE SHALL BE FILLED AT A RATE WHICH WILL NOT CAUSE ANY SURGES OR EXCEED THE RATE AT WHICH THE AIR CAN BE RELEASED THROUGH THE AIR VALVES AT A REASONABLE VELOCITY AND ALL THE AIR WITHIN THE PIPELINE SHALL BE PROPERLY PURGED. AFTER THE PIPELINE (OR SECTION THEREOF) HAS BEEN FILLED, IT SHALL BE ALLOWED TO STAND UNDER A SLIGHT PRESSURE FOR AT LEAST 24 HOURS TO ALLOW THE CONCRETE OR MORTAR LINING, AS APPLICABLE, TO ABSORB WATER AND TO ALLOW THE ESCAPE OF AIR FROM ANY AIR POCKETS. DURING THIS PERIOD, BULKHEADS, VALVES, AND CONNECTIONS SHALL BE EXAMINED FOR LEAKS. IF LEAKS ARE FOUND, CORRECTIVE MEASURES SATISFACTORY TO THE CITY SHALL BE TAKEN.

C. HYDROSTATIC TEST. BEFORE BEING ACCEPTED, ALL GRAY IRON, DUCTILE IRON AND PVC PIPE LINES CONSTRUCTED SHALL BE TESTED WITH A HYDRAULIC TEST PRESSURE OF NO LESS THAN 150 PSI (1,034.3 kPA), MAINTAINED OVER A PERIOD OF NOT LESS THAN 4 HOURS UNLESS OTHERWISE SPECIFIED BY THE OWNER. CONCRETE PRESSURE PIPE SHALL BE TESTED WITH A HYDRAULIC TEST PRESSURE OF 120 PERCENT OF THE DESIGN PRESSURE. STEEL PRESSURE PIPE SHALL BE TESTED WITH A HYDRAULIC TEST PRESSURE NOT TO EXCEED 150 PERCENT AND NOT LESS THAN 120 PERCENT OF THE DESIGN WORKING PRESSURE. CONTRACTOR WILL BE RESPONSIBLE FOR FILLING THE LINE AND PRESSURIZING THROUGH A FLOWMETER SUITABLE FOR TRACKING THE TOTAL USAGE. WATER LINES OF MATERIALS IN COMBINATION SHALL BE TESTED FOR THE TYPE OF PIPE (MATERIAL) WITH THE LEAST STRINGENT HYDRAULIC TEST PRESSURE MAINTAINED OVER A PERIOD OF NO LESS THAN 4 HOURS.

WATER PIPELINE TESTING AND DISINFECTION

D. THE RATE OF LEAKAGE OF ALL PIPE TESTED SHALL NOT EXCEED 11.65 GALLONS PER INCH OF NOMINAL DIAMETER OF PIPE PER MILE (0.01 CU. M. PER CM. OF NOMINAL DIAMETER PER KM.) OVER A 24 HOUR PERIOD. THE MAXIMUM ALLOWABLE LEAKAGE FOR DISTRIBUTION AND TRANSMISSION PIPELINES SHALL BE PER NCTCOG 506.5. THE ALLOWABLE LEAKAGE FOR 4 HOURS SHALL BE DETERMINED AS FOLLOWS:

ALLOWABLE LEAKAGE (GALS.) FOR 4 HOURS = $4*(S*D*\sqrt{P}) / 133,200$

WHERE:

S = LENGTH OF PIPE, FT.
D = DIAMETER OF PIPE, IN.
P = 150 PSI
HEIGHT CORRECTION = 0.43 PSI/FT. (APPLIED WHEN LINES CANNOT BE TESTED AT ITS LOWEST POINT)
VALVE LEAKAGE ALLOWABLE = 0.0078 GAL./HOUR/IN. OF NOMINAL VALVE SIZE
TEST - GRAY IRON, DUCTILE IRON, PLASTIC, AND AC AT 150 PSI
- CONCRETE 120% OF DESIGN PRESSURE
- STEEL 120% MIN. TO 150% MAX. DESIGN WORKING PRESSURE

NCTCOG TABLE 506.5.(a) ALLOWABLE LEAKAGE FOR 4-HOURS AT TEST PRESSURE 150-psi (GALLONS)

LENGTH	PIPE DIAMETER (INCHES)								
(FT.)	8	10	12	14	16	18	20	24	30
25	0.07	0.09	0.11	0.13	0.15	0.17	0.18	0.22	0.28
50	0.15	0.18	0.22	0.26	0.29	0.33	0.37	0.44	0.55
100	0.29	0.37	0.44	0.51	0.59	0.66	0.74	0.88	1.10
500	1.47	1.84	2.21	2.57	2.94	3.31	3.68	4.41	5.52
1000	2.94	3.68	4.41	5.15	5.88	6.62	7.36	8.83	11.03
1500	4.41	5.52	6.62	7.72	8.83	9.93	11.03	13.24	16.55
2000	5.88	7.36	8.83	10.30	11.77	13.24	14.71	17.65	22.07
2500	7.36	9.19	11.03	12.87	14.71	16.55	18.39	22.07	27.58
3000	8.83	11.03	13.24	15.45	17.65	19.86	22.07	26.48	33.10
3500	10.30	12.87	15.45	18.02	20.60	23.17	25.75	30.89	38.62
4000	11.77	14.71	17.65	20.60	23.54	26.48	29.42	35.31	44.13

STEEL PIPE WITH WELDED JOINTS SHALL HAVE NO LEAKAGE.

IN THE CASE OF PIPELINES THAT FAIL TO PASS THE PRESCRIBED LEAKAGE TEST, THE CONTRACTOR SHALL DETERMINE THE CAUSE OF THE LEAKAGE, SHALL TAKE CORRECTIVE MEASURES NECESSARY TO REPAIR THE LEAKS, AND SHALL TEST THE PIPELINES AGAIN AT THEIR OWN EXPENSE.

E. THE CONTRACTOR WILL BE RESPONSIBLE FOR CONDUCTING A SECOND HYDROSTATIC PRESSURE TEST AFTER ALL PAVING OPERATIONS HAVE BEEN COMPLETED AND PRIOR TO THE CITY ISSUING ANY FORM OF ACCEPTANCE. THE WATER USED TO PRESSURIZE THE LINE TO 150 PSI WILL BE CHLORINATED WATER HAVING A CHLORINE CONCENTRATION GREATER THAN 15 MG/L. BUT NOT GREATER THAN 100 MG/L. VALVES WILL NEED TO BE CLOSED TO TEMPORARILY ISOLATE THE SYSTEM FOR TESTING.

M* – CITY OF MELISSA REVISION

WATER PIPELINE TESTING AND DISINFECTION	MELISSA TX	NCTCOG STANDARD SPECIFICATION REFERENCE: 506	
		MODIFIED DATE: 8/16/18	STANDARD DRAWING NO.: 4002CM*
CITY OF MELISSA, TEXAS	NOTICE DATE: 8/16/18	ADOPTED DATE: 8/16/18	ENFORCEMENT DATE: 9/16/18

WATER PIPELINE TESTING AND DISINFECTION

3.3 DISINFECTING PIPELINES

A. GENERAL: ALL POTABLE PIPELINES EXCEPT THOSE APPURTENANT TO HYDRAULIC STRUCTURES SHALL BE DISINFECTED IN ACCORDANCE WITH THE REQUIREMENTS OF ANSI/AWWA C651 USING THE CONTINUOUS-FEED METHOD AS MODIFIED HEREIN. PRELIMINARY AND FINAL FLUSHING SHALL BE DONE AT THE ENDS OF MAINS, WHICH HAVE BEEN HYDROSTATICALLY TESTED.

B. CHLORINATION: A CHLORINE-WATER MIXTURE SHALL BE UNIFORMLY INTRODUCED INTO THE PIPELINE BY MEANS OF A SOLUTION-FEED CHLORINATING DEVICE. THE CHLORINE SOLUTION SHALL BE INTRODUCED AT ONE END OF THE PIPELINE THROUGH A TAP IN SUCH A MANNER THAT AS THE PIPELINE IS FILLED WITH WATER, THE DOSAGE APPLIED TO THE WATER ENTERING THE PIPE SHALL BE APPROXIMATELY 50 MG/L. CARE SHALL BE TAKEN TO PREVENT THE STRONG CHLORINE SOLUTION IN THE LINE BEING DISINFECTED FROM FLOWING BACK INTO THE LINE SUPPLYING THE WATER.

C. CHLORINE RESIDUAL TEST: CHLORINATED WATER SHALL BE RETAINED IN THE PIPELINE FOR AT LEAST 24 HOURS. AFTER THE CHLORINE-TREATED WATER HAS BEEN RETAINED FOR THE REQUIRED TIME, THE FREE CHLORINE RESIDUAL AT THE PIPELINE EXTREMITIES AND AT OTHER REPRESENTATIVE POINTS SHALL BE AT LEAST 25 MG/L. THE CONTRACTOR SHALL MAKE 24-HOUR CHLORINE RESIDUAL TESTS IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE.

D. REPETITION OF TEST: THE DISINFECTION TESTING PROCEDURE SHALL BE REPEATED IF THE INITIAL TESTS FAIL TO PRODUCE SATISFACTORY RESULTS. TWO CONSECUTIVE SATISFACTORY TEST RESULTS SHALL BE REQUIRED AFTER ANY UNSATISFACTORY TEST. THE TABLET METHOD SHALL NOT BE USED FOR REPEATED DISINFECTION.

E. CHLORINATING VALVES: DURING THE PROCESS OF CHLORINATING THE PIPELINES, ALL VALVES, FLUSH POINTS AND OTHER APPURTENANCES SHALL BE OPERATED WHILE THE PIPELINE IS FILLED WITH THE SUPER-CHLORINATED WATER.

F. FINAL FLUSHING: FINAL FLUSHING SHALL BE DONE BY THE CONTRACTOR AFTER ACHIEVING A SATISFACTORY CHLORINE RESIDUAL TEST. AFTER THE APPLICABLE RETENTION PERIOD, THE HEAVILY CHLORINATED WATER SHALL BE FLUSHED FROM THE PIPELINE UNTIL CHLORINE MEASUREMENTS SHOW THE CONCENTRATION IN THE WATER LEAVING THE PIPELINE IS NO HIGHER THAN THAT GENERALLY PREVAILING IN THE SYSTEM OR IS ACCEPTABLE FOR THE INTENDED USE. IF THERE IS ANY QUESTION THAT THE CHLORINATED DISCHARGE WILL CAUSE DAMAGE TO THE ENVIRONMENT, A REDUCING AGENT SHALL BE APPLIED TO THE WATER TO NEUTRALIZE THOROUGHLY THE CHLORINE RESIDUAL REMAINING IN THE WATER WILL BE CONSIDERED SUBSIDIARY TO THE CONTRACT.

G. DISINFECTION OF CONNECTIONS: PIPE AND APPURTENANCES USED TO CONNECT THE NEWLY INSTALLED WATER MAIN SHALL ALSO BE DISINFECTED IN ACCORDANCE WITH AWWA C651.

H. NEUTRALIZATION OF CHLORINATED WATER: WHEN DEEMED NECESSARY BY THE OWNER, NEUTRALIZING AND DISPOSING OF CHLORINATED WATER SHALL BE IN ACCORDANCE WITH APPENDIX "B" OF AWWA STANDARD C651.

3.4 BACTERIOLOGICAL TESTING OF DISINFECTED PIPELINES

A. THE CONTRACTOR SHALL COLLECT A MINIMUM OF 2 SETS OF SAMPLES AFTER COMPLETION OF FINAL FLUSHING AS INDICATED ABOVE AND BY USING ONE OF THE TWO OPTIONS BELOW. SAMPLES WILL BE TAKEN AT LOCATIONS INDICATED IN ANSI/AWWA C651 AND WILL BE TESTED FOR COLIFORM ORGANISMS AND HETEROTROPHIC PLATE COUNT ACCORDING TO THE LATEST EDITION OF "THE STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER." LABORATORY COSTS OF TESTING WILL BE THE CONTRACTOR'S RESPONSIBILITY:

1. OPTION A: BEFORE APPROVING A MAIN FOR RELEASE, TAKE AN INITIAL SET OF SAMPLES AND THEN RESAMPLE AGAIN AFTER A MINIMUM OF 16 HOURS USING THE SAMPLING SITE PROCEDURES OUTLINES IN AWWA C651. BOTH SETS OF SAMPLES MUST PASS FOR THE MAIN TO BE APPROVED FOR RELEASE.

2. OPTION B: BEFORE APPROVING A MAIN FOR RELEASE, LET IT SIT FOR A MINIMUM OF 16 HOURS WITHOUT ANY WATER USE. THEN COLLECT, USING THE SAMPLING PROCEDURES OUTLINES AND WITHOUT FLUSHING THE MAIN, TWO SETS OF SAMPLES A MINIMUM OF 15 MINUTES APART WHILE THE SAMPLING TAPS ARE LEFT RUNNING. BOTH SETS OF SAMPLES MUST PASS FOR THE MAIN TO BE APPROVED FOR RELEASE.

B. SATISFACTORY BACTERIOLOGICAL RESULTS WILL BE
a) ABSENCE OF TOTAL AND FECAL COLIFORM AND,
b) A HETEROTROPHIC PLATE COUNT LESS THAN 500 CFU/mL.

C. IF DISINFECTION FAILS TO PRODUCE SATISFACTORY BACTERIOLOGICAL COUNTS, THE PIPE SHALL BE REFLUSHED, RESAMPLED, AND RETESTED. IF COUNTS FROM ANALYSIS OF THE SECOND SAMPLES EXCEED THE CRITERIA IN STANDARD METHODS, THE PIPE SHALL BE RE-DISINFECTED AND WILL BE RESAMPLED AND RETESTED UNTIL SATISFACTORY RESULTS ARE OBTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BACTERIOLOGICAL TESTING COSTS.

M* – CITY OF MELISSA REVISION

WATER PIPELINE BACTERIAL TESTING FORM

DATE: _____

TO: PROGRAM MANAGER
PUBLIC WORKS/UTILITY BILLING

_____
(PROJECT)

FROM: _____
(CONTRACTOR)

Date	Task	Pipe (in)	Wall Thickness	Type of Pipe	Liner (Y/N)	Temp. (F°)	Gallons*
Total Gallons:							

NOTE- VALUES FOR CHLORINATING AND FLUSHING ARE MEASURED USING A SONIC FLOW METER, USING THE PARAMETERS ENTERED ABOVE. IN SOME CASES, VALUES PER FLUSH POINT ARE ESTIMATED AS FOLLOWS: HYDRANT - 1200 GPM; 2 $\frac{1}{2}$" HYDRANT OUTLET - 480 GPM; 2" - 365 GPM; 1 $\frac{1}{2}$" - 246 GPM; 1" - 120 GPM. BY THE DISCRETION OF THE CITY OF MELISSA & ITS ENGINEERING DEPARTMENT, HYDROSTATIC PRESSURE TESTING VOLUME CAN BE ASSUMED AS THE VOLUME OF SYSTEM BEING TESTED. CHLORINATION VOLUME CAN BE BASED UPON THE TOTAL VOLUME OF THE SYSTEM WITH A 10% WASTE FACTOR ADDED.

ESTIMATED TIME FOR INSPECTOR TO DELIVER SAMPLES TO NTMWD LAB
(HOURS INSPECTOR SPENT ONSITE, DRIVE TIME TO AND FROM LAB): _____

TIME SAMPLED: _____

MILEAGE (MELISSA TO NTMWD LAB, WYLIE): _____

INSPECTOR: _____

FIRST SERIES OF TESTING, COST OF TRAVEL EXPENSES FOR TESTING COVERED

SECOND TEST IN FIRST SERIES

FIRST TEST OF_____ SERIES OF TESTING, PAID BY CONTRACTOR

SECOND TEST OF _____ SERIES, PAID FOR BY CONTRACTOR

CONTRACTOR AGREES TO REIMBURSE OWNER AT THE STANDARD BILLING RATE ($69.00/HR + MILEAGE PER IRS RATES) FOR THE PAY OF THE INSPECTOR(S) ASSIGNED FOR THIS WORK. EXTRANEOUS BACTERIOLOGICAL TESTING WILL BE PAID FOR PRIOR TO SAMPLING WITH A CHECK MADE PAYABLE TO THE **CITY OF MELISSA.** IF PAYMENT FOR EXTRANEOUS SAMPLING IS NOT RECEIVED PRIOR TO SAMPLING, SAMPLES WILL NOT BE TAKEN ON THAT DAY. ADDITIONAL FLUSHING WILL NOT BE PERMITTED.

SIGNED:_____

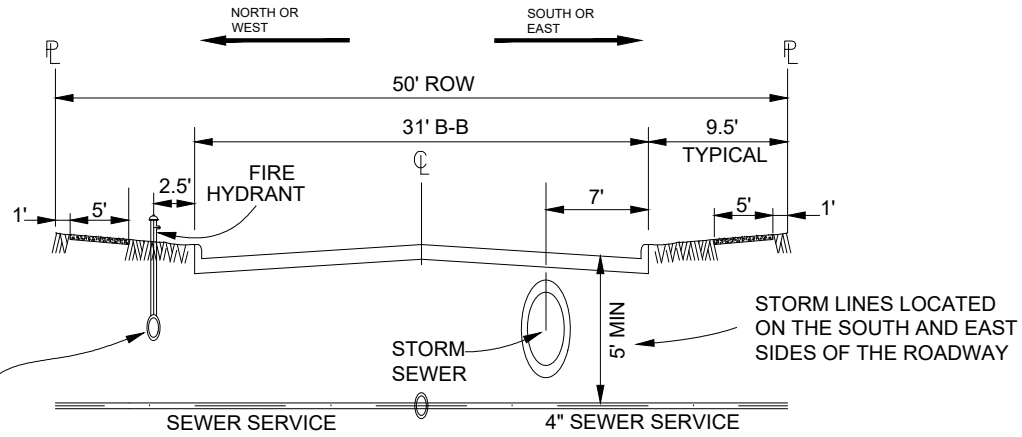
TITLE:_____

M* – CITY OF MELISSA REVISION

WATER PIPELINE BACTERIAL TESTING FORM

CITY OF MELISSA, TEXAS

	NCTCOG STANDARD SPECIFICATION REFERENCE	
	506	
MELISSA TX	MODIFIED DATE	STANDARD DRAWING NO.
	6/14/24	4002EM*
NOTICE DATE	ADOPTED DATE	ENFORCEMENT DATE
6/14/24	6/14/24	7/14/24



TYPICAL UTILITY LOCATION

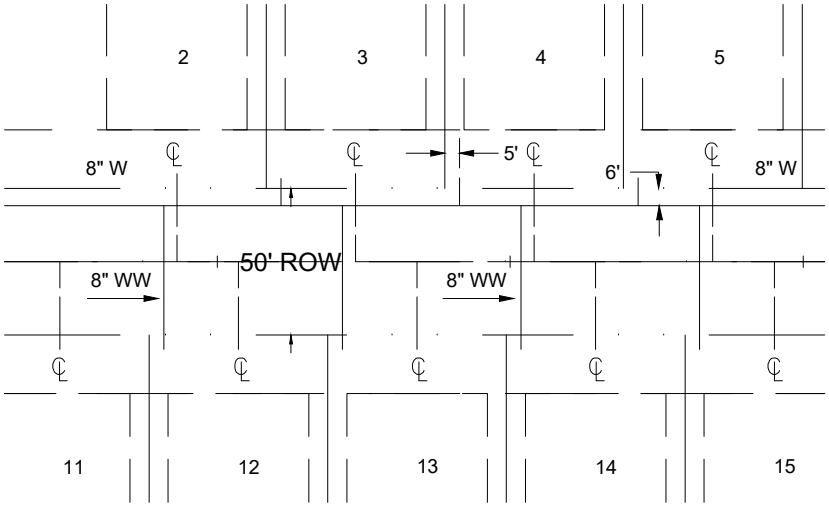
NTS

FIRE HYDRANTS TO BE LOCATED AT PCCR'S OR LOT LINES UNLESS NOTED OTHERWISE

WATER MAINS LOCATED ON THE NORTH & WEST SIDES OF THE ROADWAY WITH 4' MIN COVER OR AS NOTED IN THE GENERAL CONSTRUCTION WATER NOTES.

NOTE:
SANITARY SEWER SERVICE TO BE LOCATED AT CENTER OF LOT & WATER SERVICE TO BE LOCATED 5' OFF PROPERTY LINE UPSTREAM OF SANITARY SEWER SERVICE. NEITHER WATER OR WASTEWATER SERVICES SHALL BE PLACED IN DRIVEWAYS.

WHEN SANITARY SEWER SYSTEMS ENCROACH ON WATER LINES THE SANITARY SEWER MUST BE RATED 150 PSI OR GREATER, COLLECTION SYSTEMS WILL CROSS BELOW THE WATER LINE AND 6-INCHES IS REQUIRED BETWEEN THE OUTSIDE DIAMETERS OF THE PIPES.

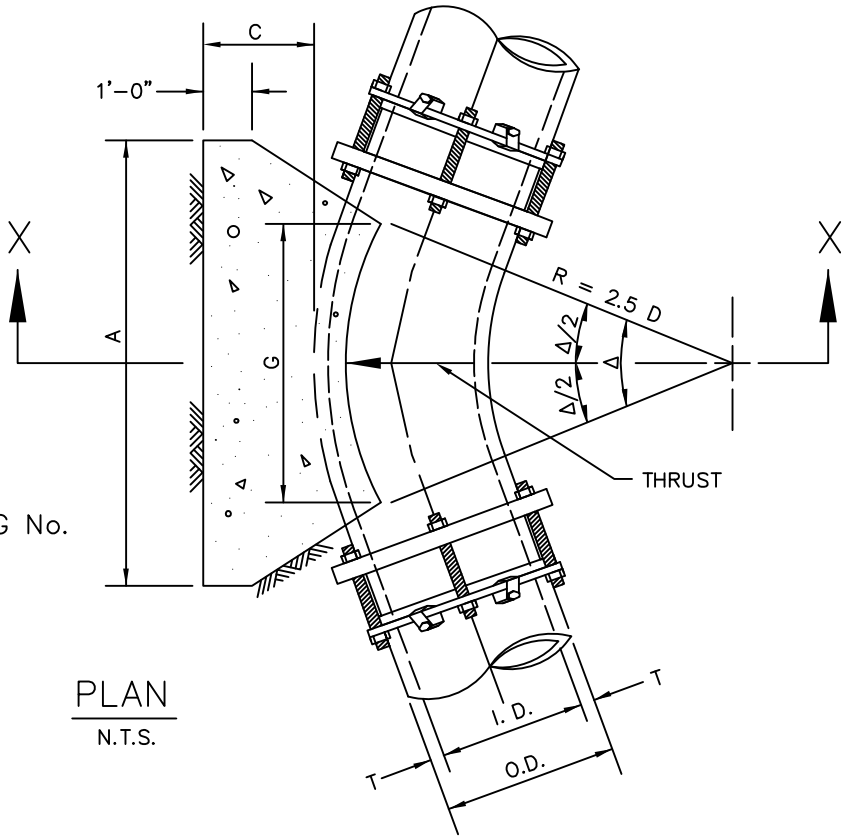


TYPICAL SERVICE LOCATION

NTS

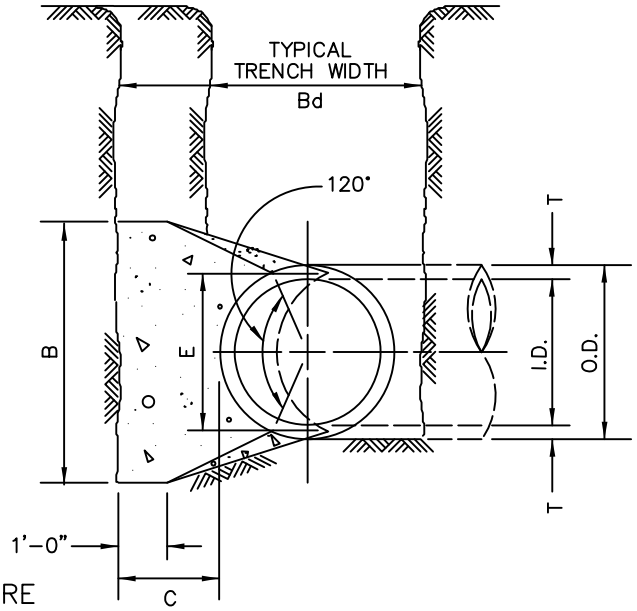
M* - CITY OF MELISSA REVISION

	NCTCOG STANDARD SPECIFICATION REFERENCE	
	NA	
STANDARD WATER & WASTEWATER LOCATIONS	MODIFIED DATE 07/02/13	STANDARD DRAWING NO. 4005M*
CITY OF MELISSA, TEXAS	NOTICE DATE 06/17/13	ADOPTED DATE 07/17/13	ENFORCEMENT DATE 07/17/13



REFER TO STD. DWG No. 4040 FOR GENERAL NOTES

PLAN
N.T.S.



NOTE: ALL FITTINGS REQUIRE A MEGALUG JOINT RESTRAINT IN CONCERT WITH THRUST BLOCKING OR IN REFERENCE TO STANDARD DRAWING 4040 FOR GENERAL NOTES.

SECTION X–X
N.T.S.

HORIZONTAL THRUST BLOCK AT PIPE BEND

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE
502.4

DATE
AUG '23

STANDARD DRAWING NO.
4010A

I.D. (IN.)	T (IN.)	$\Delta = 11.25^\circ$ C (FT.)	$\Delta \geq 22.50^\circ$ C (FT.)	E (FT.)
4,6,8	0.4	1.5	1.5	0.9
10,12	0.5	1.5	1.5	1.2
16,18	0.6	1.5	1.5	1.6
20	0.7	1.5	1.5	1.8
24	0.9	1.5	1.5	2.1
30	2.9	1.5	1.9	2.6
36	4.5	1.5	2.3	3.3
42	5.0	1.8	2.6	3.8
48	5.5	2.0	3.0	4.3
54	6.0	2.3	3.4	4.8
60	6.5	2.5	3.8	5.3
66	6.8	2.8	4.1	5.7
72	7.5	3.0	4.5	6.3
78	7.5	3.3	4.9	6.7
84	8.0	3.5	5.3	7.2
90	8.5	3.8	5.6	7.7
96	9.0	4.0	6.0	8.2

	$\Delta = 11.25^\circ$									$\Delta = 22.50^\circ$							
			EARTH			ROCK						EARTH			ROCK		
I.D. (IN.)	G (FT.)	THRUST (TONS)	A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)	I.D. (IN.)	G (FT.)	THRUST (TONS)	A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)
4,6,8	0.4	1.0	1.0	1.5	0.1	1.0	1.0	0.1	4,6,8	0.8	2.0	1.5	1.5	0.1	1.0	1.0	0.1
10,12	0.6	2.2	1.5	1.5	0.1	1.0	1.5	0.1	10,12	1.1	4.4	2.0	2.5	0.3	1.5	1.5	0.1
16,18	0.8	5.0	2.0	2.5	0.3	1.5	2.0	0.2	16,18	1.6	9.9	3.0	3.5	0.6	2.0	2.5	0.3
20	0.9	6.2	2.0	3.5	0.4	1.5	3.0	0.3	20	1.8	12.3	3.5	3.5	0.7	2.0	3.0	0.4
24	1.1	8.9	3.0	3.5	0.5	1.5	3.0	0.3	24	2.2	17.7	4.0	4.5	1.0	3.0	3.5	0.5
30	1.4	10.4	3.0	3.5	0.6	2.0	3.5	0.4	30	2.7	20.7	5.0	4.5	1.5	3.0	4.0	0.8
36	1.7	15.0	3.5	4.5	0.9	2.0	4.0	0.5	36	3.3	29.8	5.5	5.5	2.3	4.0	4.0	1.3
42	1.9	20.4	4.5	5.0	1.5	2.5	5.0	0.8	42	3.8	40.5	7.0	6.0	3.9	4.5	5.0	2.1
48	2.2	26.6	4.5	6.0	2.0	2.5	6.0	1.1	48	4.4	52.9	8.0	7.0	5.7	4.5	6.0	2.8
54	2.5	33.7	6.0	6.0	3.0	3.0	6.0	1.4	54	4.9	67.0	9.0	8.0	8.0	6.0	6.0	4.1
60	2.7	41.6	6.0	7.0	3.8	3.0	7.0	1.8	60	5.5	82.7	9.5	9.0	10.6	6.0	7.0	5.3
66	3.0	50.3	6.5	8.0	5.1	3.5	8.0	2.7	66	6.0	100.1	10.5	10.0	14.1	6.5	8.0	7.2
72	3.3	59.9	7.5	8.0	6.3	4.0	8.0	3.3	72	6.6	119.1	11.0	11.0	17.6	7.5	8.0	9.1
78	3.6	70.2	8.0	9.0	8.1	4.0	9.0	3.9	78	7.1	139.8	12.0	12.0	22.5	8.0	9.0	11.7
84	3.8	81.5	8.5	10.0	10.3	4.5	10.0	5.3	84	7.6	162.1	13.0	12.5	27.2	8.5	10.0	14.8
90	4.1	93.5	9.5	10.0	12.2	5.0	10.0	6.3	90	8.2	186.1	14.0	13.5	33.7	9.5	10.0	17.7
96	4.4	106.4	10.0	11.0	15.0	5.0	11.0	7.4	96	8.7	211.7	15.0	14.5	41.2	10.0	11.0	21.8

TABLES OF DIMENSIONS AND QUANTITIES

HORIZONTAL THRUST BLOCK AT PIPE BEND

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE
502.4

DATE
AUG '23

STANDARD DRAWING NO.
4010B

I.D. (IN.)	Δ = 30° G (FT.)	THRUST (TONS)	EARTH A (FT.)	EARTH B (FT.)	EARTH VOL. (C.Y.)	ROCK A (FT.)	ROCK B (FT.)	ROCK VOL. (C.Y.)	I.D. (IN.)	Δ = 45° G (FT.)	THRUST (TONS)	EARTH A (FT.)	EARTH B (FT.)	EARTH VOL. (C.Y.)	ROCK A (FT.)	ROCK B (FT.)	ROCK VOL. (C.Y.)
4,6,8	1.0	2.6	2.0	1.5	0.2	1.0	1.5	0.1	4,6,8	1.5	3.9	2.0	2.0	0.2	1.5	1.5	0.1
10,12	1.5	5.9	2.5	2.5	0.3	2.0	1.5	0.2	10,12	2.2	8.7	3.5	2.5	0.5	2.0	2.5	0.3
16,18	2.2	13.2	3.5	4.0	0.8	2.5	3.0	0.4	16,18	3.2	19.5	4.5	4.5	1.2	3.0	3.5	0.6
20	2.4	16.3	4.5	4.0	1.0	3.0	3.0	0.5	20	3.6	24.1	5.5	4.5	1.5	3.5	3.5	0.7
24	2.9	23.4	6.0	4.0	1.4	3.5	3.5	0.7	24	4.3	34.6	8.0	4.5	2.3	4.5	4.0	1.1
30	3.6	27.5	6.5	5.0	1.9	3.5	4.0	0.9	30	5.4	40.6	8.5	5.0	3.2	5.5	4.0	1.6
36	4.4	39.5	7.0	6.0	3.4	4.5	4.5	1.6	36	6.5	58.5	10.0	6.0	5.3	6.5	4.5	2.6
42	5.1	53.8	8.0	7.0	5.1	5.5	5.0	2.5	42	7.5	79.6	11.5	7.0	8.1	8.0	5.0	4.2
48	5.8	70.3	9.0	8.0	7.4	6.0	6.0	3.7	48	8.6	104.0	13.0	8.0	11.9	9.0	6.0	6.3
54	6.5	89.0	10.0	9.0	10.3	7.0	6.5	5.3	54	9.7	131.5	15.0	9.0	17.1	10.5	6.5	8.9
60	7.3	110.0	11.0	10.0	13.9	7.5	7.5	7.3	60	10.7	162.4	16.5	10.0	23.1	11.0	7.5	12.0
66	8.0	132.9	12.5	11.0	18.9	8.5	8.0	9.6	66	11.8	196.5	18.0	11.0	30.1	12.0	8.5	16.2
72	8.7	158.2	13.5	12.0	24.0	9.0	9.0	12.3	72	12.9	233.9	19.5	12.0	38.6	14.0	8.5	20.7
78	9.4	185.6	14.5	13.0	30.0	10.0	9.5	15.6	78	13.9	274.5	21.5	13.0	49.8	14.5	9.5	25.9
84	10.1	215.3	15.5	14.0	37.1	10.5	10.5	19.5	84	15.0	318.4	23.0	14.0	61.2	15.5	10.5	32.6
90	10.9	247.1	16.5	15.0	45.0	11.5	11.0	23.9	90	16.1	365.5	24.5	15.0	74.5	17.5	10.5	39.6
96	11.6	281.2	18.0	16.0	55.5	12.5	11.5	28.9	96	17.1	415.6	26.0	16.0	89.5	18.5	11.5	48.5

I.D. (IN.)	Δ = 67.50° G (FT.)	THRUST (TONS)	EARTH A (FT.)	EARTH B (FT.)	EARTH VOL. (C.Y.)	ROCK A (FT.)	ROCK B (FT.)	ROCK VOL. (C.Y.)	I.D. (IN.)	Δ = 90° G (FT.)	THRUST (TONS)	EARTH A (FT.)	EARTH B (FT.)	EARTH VOL. (C.Y.)	ROCK A (FT.)	ROCK B (FT.)	ROCK VOL. (C.Y.)
4,6,8	2.1	5.6	3.0	2.0	0.3	2.0	1.5	0.2	4,6,8	2.7	7.1	5.0	1.5	0.4	2.0	2.0	0.2
10,12	3.1	12.6	5.5	2.5	0.8	3.5	2.0	0.4	10,12	4.0	16.0	6.5	2.5	1.0	3.5	2.5	0.5
16,18	4.7	28.3	7.5	4.0	1.9	5.5	3.0	0.9	16,18	6.0	36.0	9.0	4.0	2.4	4.5	4.0	1.0
20	5.2	34.9	9.0	4.0	2.3	5.5	3.5	1.2	20	6.6	44.4	10.0	4.5	3.1	6.0	4.0	1.5
24	6.2	50.3	11.5	4.5	3.5	6.5	4.0	1.6	24	7.9	64.0	14.5	4.5	5.0	8.0	4.0	2.1
30	7.8	58.9	12.0	5.0	4.8	7.5	4.0	2.2	30	9.9	75.0	15.0	5.0	6.7	10.0	4.0	3.3
36	9.4	84.9	14.5	6.0	8.2	9.5	4.5	3.8	36	11.9	108.0	18.0	6.0	11.4	12.0	4.5	5.3
42	10.9	115.5	17.0	7.0	12.8	11.0	5.5	6.3	42	13.9	147.0	21.0	7.0	17.8	14.0	5.5	8.7
48	12.5	150.9	19.0	8.0	18.4	13.0	6.0	9.2	48	15.9	192.0	24.0	8.0	26.2	16.0	6.0	12.4
54	14.0	191.0	21.5	9.0	26.0	15.0	6.5	12.9	54	17.9	243.0	27.0	9.0	36.9	18.0	7.0	18.1
60	15.6	235.8	24.0	10.0	35.6	16.0	7.5	17.6	60	19.9	299.8	30.0	10.0	50.3	20.0	7.5	24.0
66	17.1	285.3	26.0	11.0	46.0	18.0	8.0	23.0	66	21.8	362.8	33.0	11.0	66.2	22.0	8.5	32.5
72	18.7	339.5	28.5	12.0	57.8	19.0	9.0	28.4	72	23.8	431.8	36.0	12.0	85.6	24.0	9.0	41.0
78	20.2	398.5	31.0	13.0	75.7	21.0	9.5	37.4	78	25.7	506.7	39.0	13.0	108.2	26.0	10.0	53.2
84	21.8	462.1	33.5	14.0	94.7	22.0	10.5	46.5	84	27.7	587.7	42.0	14.0	134.4	28.0	10.5	64.8
90	23.3	530.5	35.5	15.0	114.4	24.5	11.0	58.2	90	29.0	674.6	45.0	15.0	164.9	30.0	11.5	81.2
96	24.9	603.6	38.0	16.0	138.9	25.5	12.0	70.0	96	31.6	767.5	48.0	16.0	199 0	32.0	12.0	95.1

TABLE OF DIMENSIONS AND QUANTITIES

HORIZONTAL THRUST BLOCK

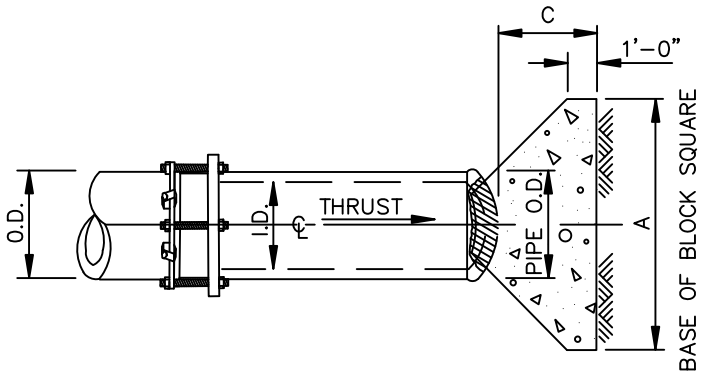
AT PIPE BEND

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE
502.4

DATE
AUG '23

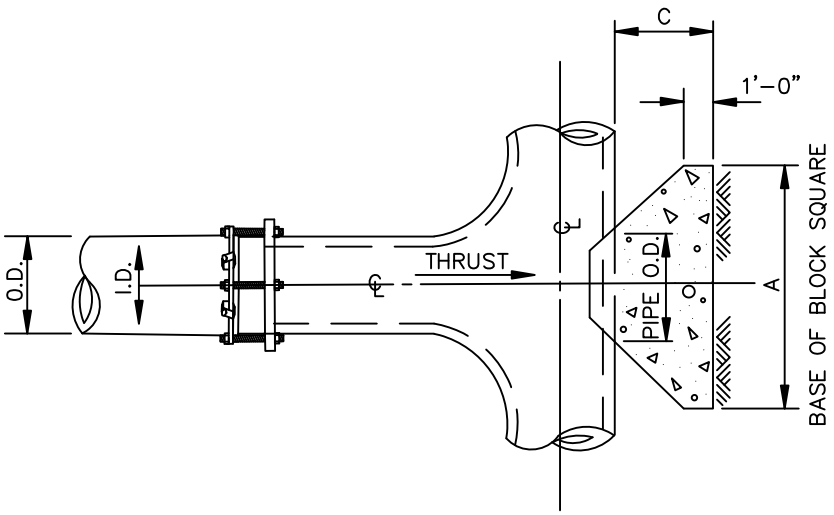
STANDARD DRAWING NO.
4010C



PLAN OF PLUG THRUST BLOCK

N.T.S.

REFER TO
STD. DWG. No. 4040
FOR GENERAL NOTES.



PLAN OF TEE THRUST BLOCK

N.T.S.

			EARTH		ROCK	
I.D. (IN.)	THRUST (TONS)	C (FT.)	A (FT.)	VOL. (C.Y.)	A (FT.)	VOL. (C.Y.)
4,6,8	5.1	1.5	2.5	0.3	2.0	0.2
10,12	11.3	1.5	3.5	0.6	2.5	0.3
16,18	25.5	2.0	5.5	1.6	4.0	0.9
20	31.5	2.0	6.0	1.9	4.0	0.9
24	45.2	2.5	7.0	3.1	5.0	1.7
30	53.0	3.0	7.5	4.1	5.5	2.4
36	76.3	4.0	9.0	7.3	6.5	4.2
42	104.0	4.5	10.5	11.0	7.5	6.2
48	136.0	5.0	12.0	15.6	8.5	8.7
54	172.0	5.5	13.5	21.4	9.5	11.9
60	212.0	6.0	15.0	28.4	10.5	15.7
66	257.0	6.5	16.5	36.8	11.5	20.5
72	305.0	7.5	17.5	47.2	12.5	27.2
78	358.0	8.0	19.0	58.9	13.5	33.7
84	416.0	8.5	20.5	72.3	14.5	41.2
90	477.0	9.0	22.0	87.7	15.5	49.7
96	543.0	9.5	23.5	104.8	16.5	61.0

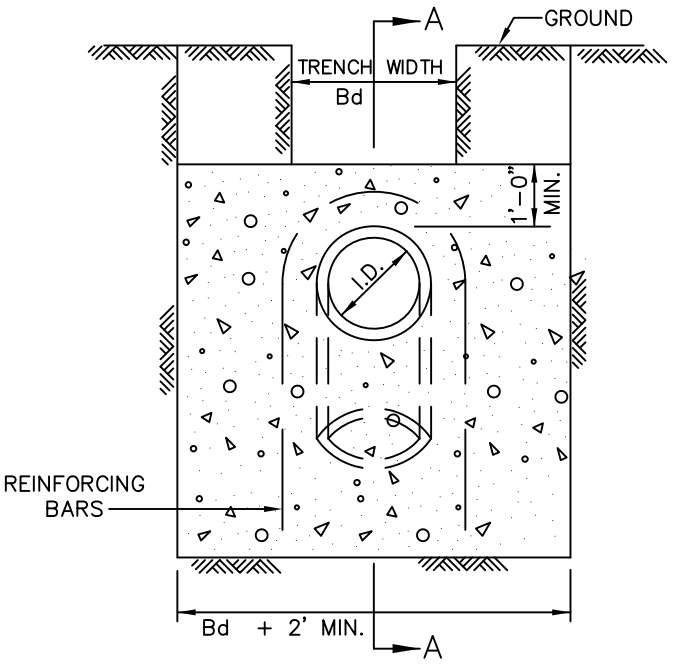
HORIZONTAL THRUST BLOCK AT TEES AND PLUGS

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE
502.4

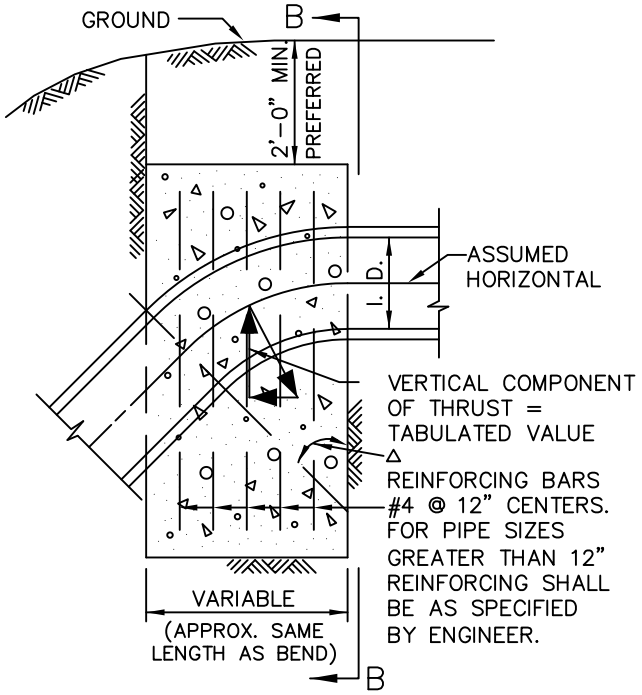
DATE
AUG '23

STANDARD DRAWING NO.
4020



ELEVATION "B–B"

N.T.S.



SECTION "A–A"

N.T.S.

REFER TO
STD. DWG. No. 4040
FOR GENERAL NOTES.

Δ →	11.25°		22.50°		30°		45°		67.50°		90°		← Δ
I.D. (IN.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	I.D. (IN.)
4,6,8	1.0	0.5	2.0	1.0	2.5	1.3	3.6	1.8	4.6	2.3	5.0	2.5	4,6,8
10,12	2.2	1.1	4.3	2.2	5.7	2.8	8.0	4.0	10.5	5.2	11.3	5.7	10,12
16,18	5.0	2.5	9.7	4.9	12.7	6.4	18.0	9.0	23.5	11.8	25.5	12.7	16,18
20	6.1	3.1	12.0	6.0	15.7	7.9	22.2	11.1	29.2	14.5	31.4	15.7	20
24	8.2	4.4	17.3	8.7	22.6	11.3	32.0	16.0	41.8	20.9	45.2	22.6	24
30	10.5	5.2	20.3	10.1	26.5	13.3	37.5	18.8	49.0	24.5	53.1	26.5	30
36	14.9	7.5	29.2	14.6	38.2	19.1	54.0	27.0	70.5	35.3	76.4	38.2	36
42	20.3	10.1	39.8	19.9	52.0	26.0	73.5	36.7	96.0	48.0	104.0	52.0	42
48	26.5	13.2	51.9	26.0	67.9	33.9	96.0	48.0	126.0	62.7	136.0	67.9	48
54	33.5	16.8	65.7	32.9	85.9	42.9	122.0	60.7	159.0	79.4	172.0	85.9	54
60	41.4	20.7	81.2	40.6	106.0	53.0	150.0	75.0	196.0	98.0	212.0	106.0	60
66	50.1	25.0	98.2	49.1	128.0	64.2	182.0	90.7	237.0	119.0	257.0	128.0	66
72	59.6	29.8	117.0	58.4	153.0	76.3	216.0	108.0	282.0	141.0	305.0	153.0	72
78	69.9	35.0	137.0	68.6	179.0	90.0	254.0	127.0	331.0	166.0	358.0	179.0	78
84	81.1	40.5	159.0	79.5	208.0	104.0	294.0	147.0	384.0	192.0	416.0	208.0	84
90	93.1	46.5	183.0	91.3	239.0	119.0	337.0	169.0	441.0	221.0	477.0	239.0	90
96	106.0	53.0	208.0	104.0	272.0	136.0	384.0	192.0	502.0	251.0	543.0	272.0	96

VERTICAL THRUST BLOCK

AT PIPE BEND

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE
502.4

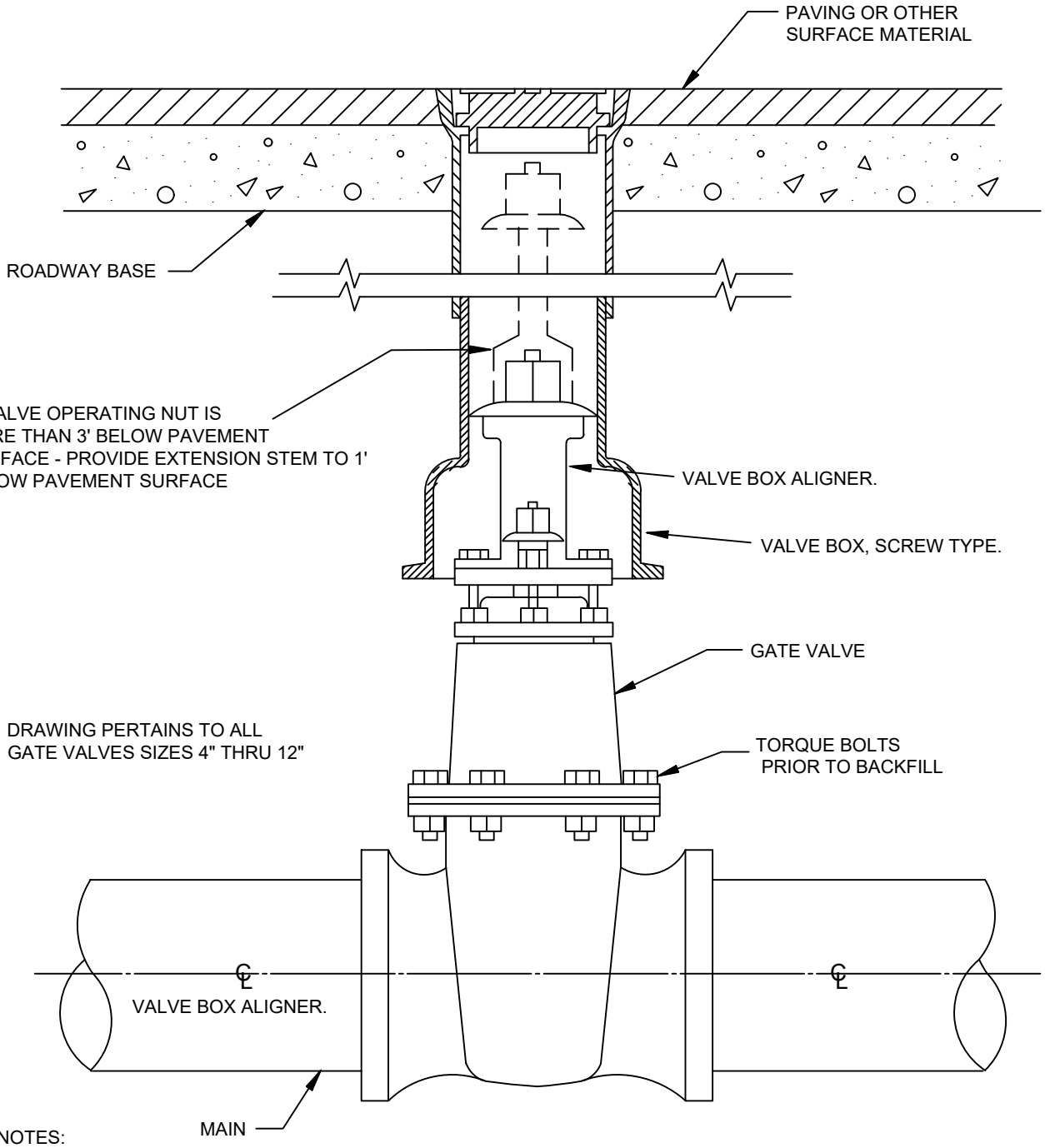
DATE
AUG '23

STANDARD DRAWING NO.
4030

GENERAL NOTES FOR ALL THRUST BLOCKS:

1. CONCRETE FOR BLOCKING SHALL BE CLASS "B".
2. ALL CALCULATIONS ARE BASED ON INTERNAL PRESSURE OF 200 PSI FOR DUCTILE IRON, P.V.V, AND 150 PSI FOR CONCRETE PIPE.
3. VOLUMES OF THRUST BLOCKS ARE NET VOLUMES OF CONCRETE TO BE FURNISHED. THE CORRESPONDING WEIGHT OF THE CONCRETE (CLASS "B") IS EQUAL TO OR GREATER THAN THE VERTICAL COMPONENT OF THE THRUST ON THE VERTICAL BEND.
4. WALL THICKNESS (T) ASSUMED HERE FOR ESTIMATING PURPOSES ONLY.
5. POUR CONCRETE FOR BLOCKS AGAINST UNDISTURBED EARTH.
6. DIMENSIONS MAY BE VARIED AS REQUIRED BY FIELD CONDITIONS WHRE AND AS DIRECTED BY THE ENGINEER. THE VOLUME OF CONCRETE BLOCKING SHALL NOT BE LESS THAN SHOWN HERE.
7. THE SOIL BEARING PRESSURES ARE BASED ON 1000 LBS./S.F. IN SOIL AND 2000 LBS./S.F. IN ROCK.
8. USE POLYETHYLENE WRAP OR EQUAL BETWEEN CONCRETE AND BEND, TEE, OR PLUG TO PREVENT THE CONCRETE FROM STICKING TO IT.
9. CONCRETE SHALL NOT EXPAND BEYOND JOINTS.
10. RESTRAINED JOINTS AND/OR THRUST BLOCKING SHALL BE USED TO RESIST THRUST FORCES AT ALL FITTINGS. IF USED IN LIEU OF THRUST BLOCKING, RESTRAINING LENGTH SHALL BE CALCULATED IN ACCORDANCE WITH AWWA M41 FOR DUCTILE IRON PIPES AND AWWA M23 FOR PVC PIPES.
11. IF ADDING ADDITIONAL SACRIFICIAL ANODE DETAIL: SACRIFICIAL ANODES CAN BE ADDED TO FITTINGS AS DIRECTED BY OWNER AND/OR ENGINEER.

THRUST BLOCK	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.4	
GENERAL NOTES		DATE AUG '23	STANDARD DRAWING NO. 4040



NOTES:

1. IN UNPAVED AREAS, INSTALL 2'x2'x4" CONCRETE VALVE PAD FLUSH WITH THE TOP OF VALVE BOX. REINFORCE WITH #3 BARS ON 6" CENTERS BOTH WAYS.

2. ALL VALVES SHALL BE MARKED ON THE CURB WITH A SAWED "V" AND A BLUE VALVE MARKER CENTERED ON THE "V".

3. ALL VALVE BOX COVERS SHALL BE PAINTED BLUE.

4. ALL VALVES WILL BE CONSTRUCTED WITH GATE BOX ALIGNER USA BLUE BOOK MODEL NUMBER 75181

GATE VALVE BOX AND EXTENSION STEM

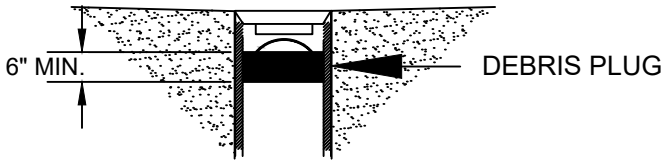
N.T.S.

M * - CITY OF MELISSA REVISION

GATE VALVE 4" TO 12"

BOX & EXTENSION STEM

NCTCOG STANDARD SPECIFICATION REFERENCE		
502.6		
MODIFIED DATE	STANDARD DRAWING NO.	
07/31/23	4050M*	
NOTICE DATE	APPLIED DATE	ENFORCED DATE
10/15/18	10/15/18	11/15/18



DEBRIS PLUG

1. PUSH-IN/PULL OUT PLUG SHALL BE MANUFACTURED OF 1.2 OR 1.7 POUND DENSITY CLOSED-CELL POLYETHYLENE MATERIAL. ALL MATERIALS SHALL BE FLEXIBLE, NON-CRACKING, AND WILL NOT ABSORB WATER.
2. THE POLYETHYLENE PAD SHALL CONFORM TO THE SIDES OF THE ENCLOSURE WITHOUT THE NEED FOR ANY TIGHTENING MECHANISM.
3. THE DEVICE SHALL COME COMPLETE WITH A 350 POUND TEST POLYPROPYLENE HANDLE FOR EASY AND SECURE PLUG REMOVAL AND BE FLEXIBLE SO AS NOT TO INTERFERE WITH THE INSTALLATION OF ANY ENCLOSURE TOP.
4. THE PLUG SHALL BE MANUFACTURED BY INFACT CORPORATION OR APPROVED EQUAL.

M* - CITY OF MELISSA REVISION

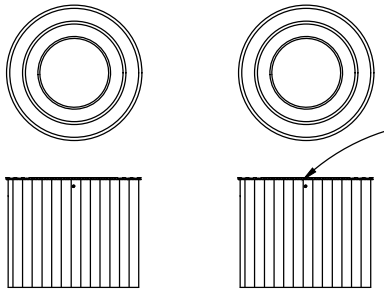
STANDARD DRAWING NO.
4051M*

DEBRIS PLUG

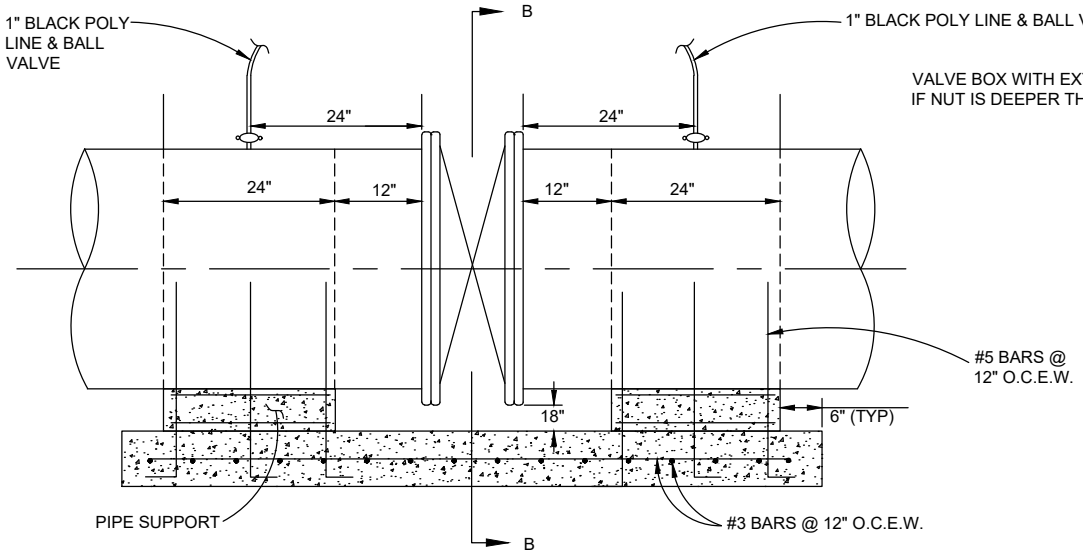
CITY OF MELISSA, TEXAS

MELISSA TX

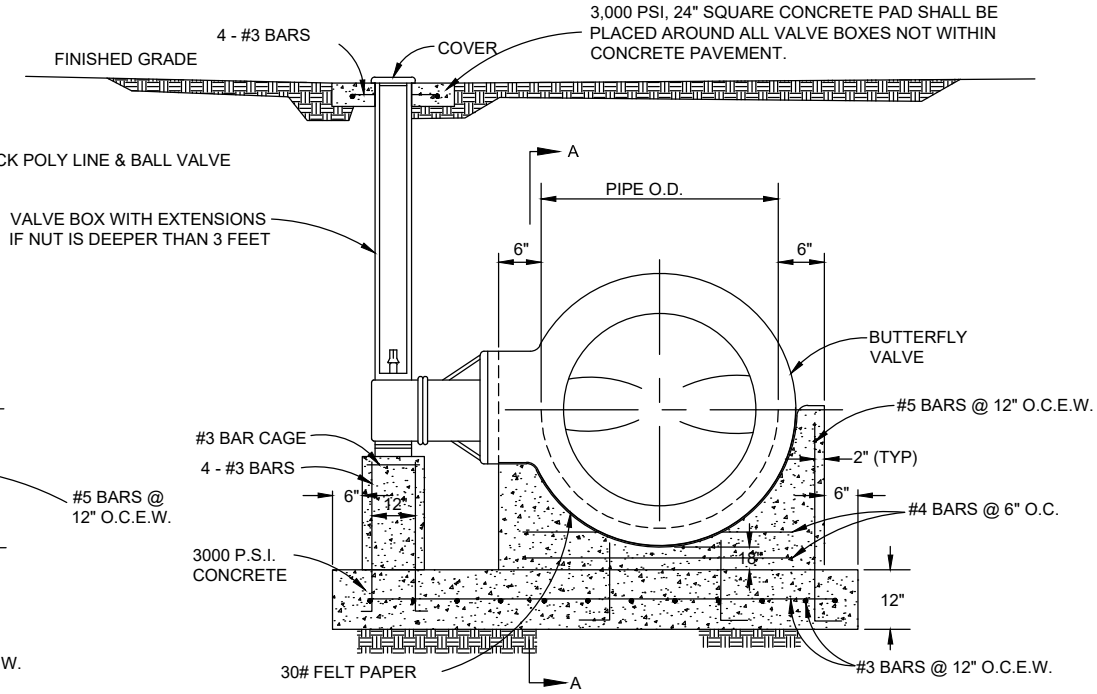
NCTCOG STANDARD SPECIFICATION REFERENCE	
502	
MODIFIED DATE	STANDARD DRAWING NO.
06/14/24	4051M*
NOTICE DATE	APPLIED DATE	ENFORCED DATE
06/14/24	06/14/24	07/14/24



PROVIDE & CENTER METER CANS ABOVE EACH 1" LINE. SEE DETAILS 4141M* & 4142M* FOR ADDITIONAL INFORMATION.



SECTION A-A



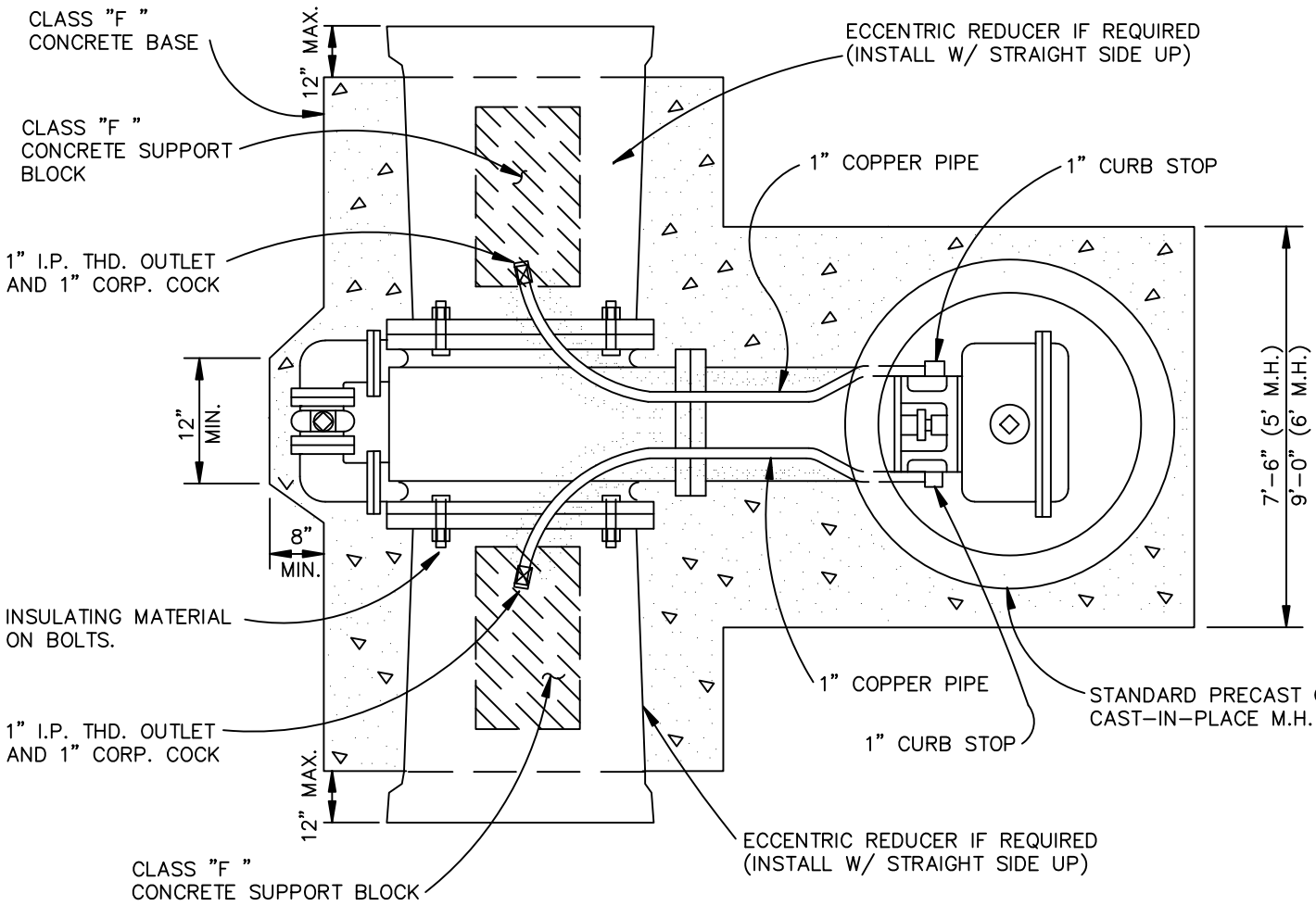
SECTION B-B

BUTTERFLY VALVE DETAIL NOT TO SCALE

M* - CITY OF MELISSA REVISION

BUTTERFLY VALVE ≥ 16"	NCTCOG STANDARD SPECIFICATION REFERENCE: 502	
BOX & EXTENSION STEM	MODIFIED DATE: 07/28/23	STANDARD DRAWING NO.: 4055M*
	NOTICE DATE: 07/28/23	APPLIED DATE: 07/28/23
		ENFORCED DATE: 08/28/23

STANDARD DRAWING NO. 4055M *



PLAN
N.T.S.

STANDARD DRAWING NO. 4060A

VAULT CONSTRUCTION

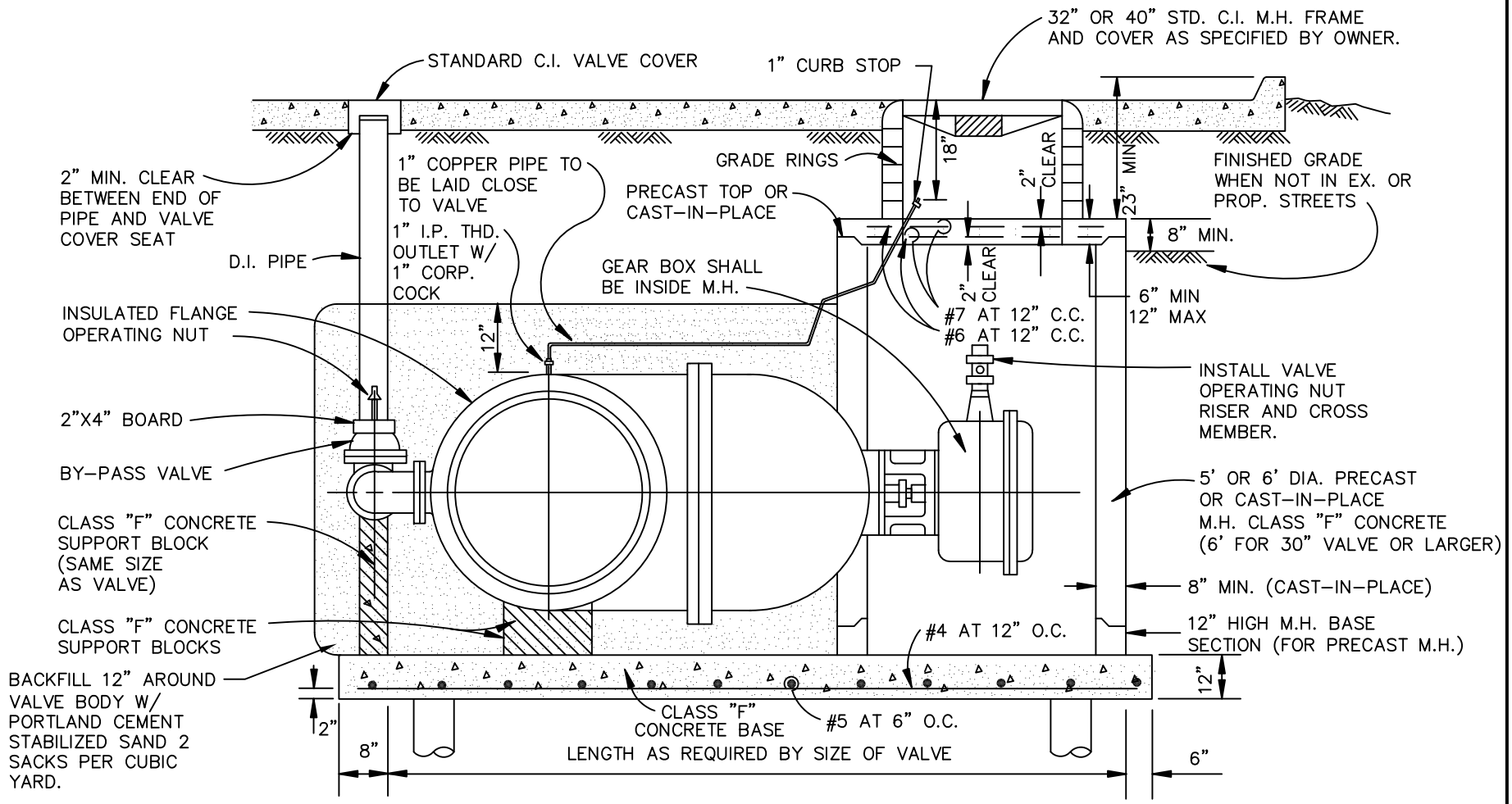
HORIZONTAL GATE VALVE ≧ 16"

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 702.5

DATE AUG '23

STANDARD DRAWING NO. 4060A



PROFILE

N.T.S.

STANDARD DRAWING NO. 4060B

VAULT CONSTRUCTION

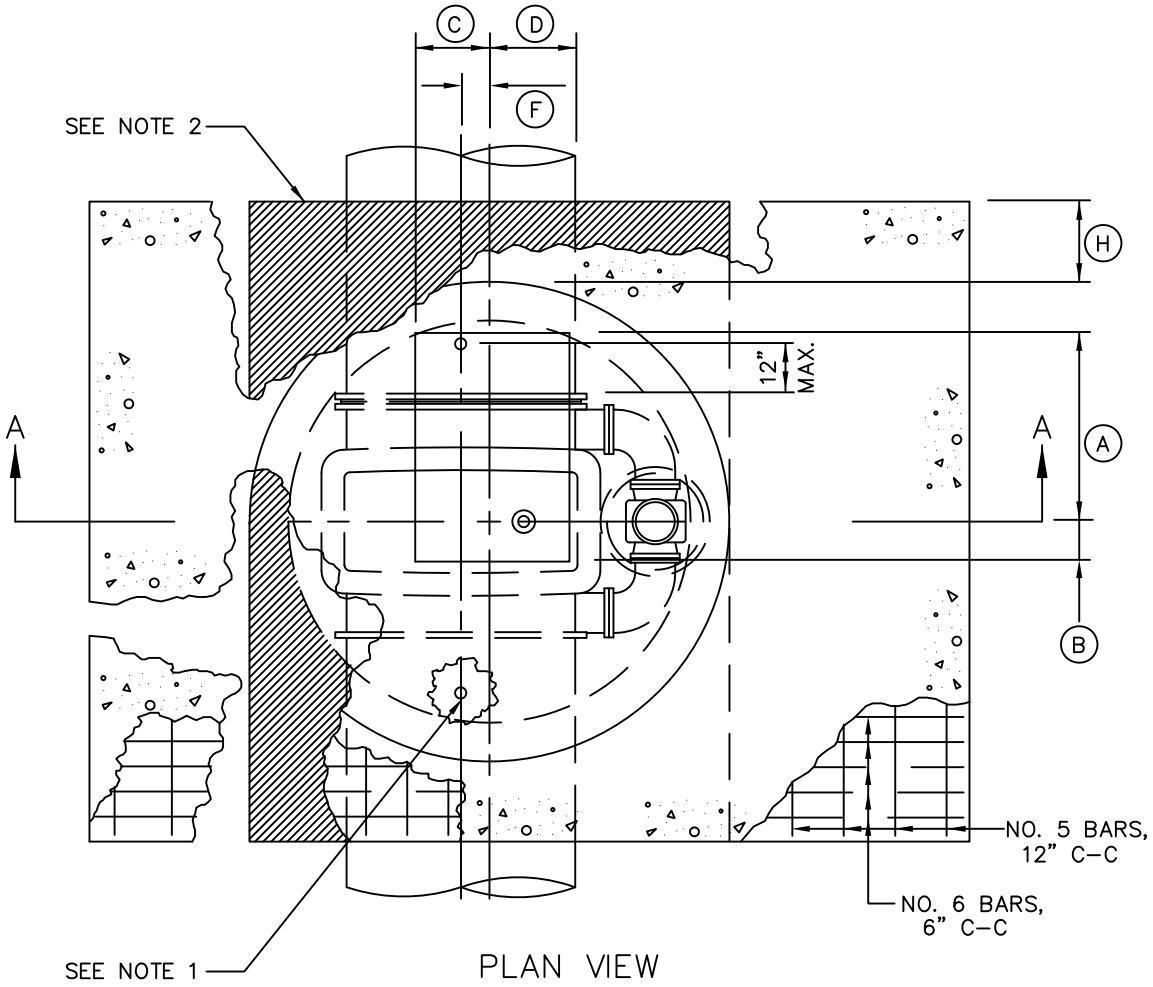
HORIZONTAL GATE VALVE ≥ 16"

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 702.5

DATE AUG '23

STANDARD DRAWING NO. 4060B



PLAN VIEW

(LESS MANHOLE FRAME & COVER INSTALLATION)
N.T.S.

GATE VALVE SIZE	DIMENSION TABLE											
	A	B	C	D	E	F	G	H	J	K	L	M
16"	20"	20"	12"	12"	44 1/2"	1"	48"	12"	10"	24"	12"	16"
18"	20"	20"	12"	12"	51 3/8"	2"	48"	12"	12"	24"	12"	18"
20"	22"	18"	12"	12"	56 5/8"	1"	48"	12"	12"	24"	16"	20"
24"	26"	14"	12"	12"	64 3/8"	1"	60"	18"	14"	30"	18"	24"
30"	28"	12"	12"	12"	80 5/8"	3"	60"	18"	18"	30"	20"	30"
36"	32"	8"	12"	12"	90 1/16"	4"	72"	18"	18"	36"	24"	36"
42"	34"	6"	15"	9"	107 3/4"	5"	84"	24"	20"	36"	30"	42"
48"	36"	4"	14"	10"	121 5/8"	4"	96"	24"	26"	42"	36"	48"
54"	36"	4"	9"	15"	142 1/2"	3"	120"	24"	32"	46"	40"	54"

NOTES:

1. PROVIDE CORPORATION AND CURB STOPS A MAXIMUM OF 12" FROM EACH END OF GATE VALVE, AS SHOWN. CORPORATION AND CURB STOP SIZES SHALL BE 1" FOR 16", 20", AND 24" NOMINAL PIPE DIAMETERS; 2" FOR 30" AND LARGER DIAMETERS. 2" TAPS SHALL BE MADE AS A 2" FLANGED OUTLET WITH INSULATED ADAPTOR KIT. COPPER RISERS SHALL BE PROVIDED BETWEEN THE CORPORATION AND CURB STOPS. CURB STOPS SHALL BE INSTALLED AT AN ELEVATION 12" ABOVE THE TOP SURFACE OF VAULT BOTTOM SLAB.
2. POLYURETHANE CUSHION PAD.
3. STANDARD PRECAST DIMENSIONS MAY BE USED WITH APPROVAL OF THE OWNER AND MAY REQUIRE AN INCREASE IN SIZE TO THE NEXT READILY AVAILABLE PRECAST DIMENSION.

VAULT CONSTRUCTION

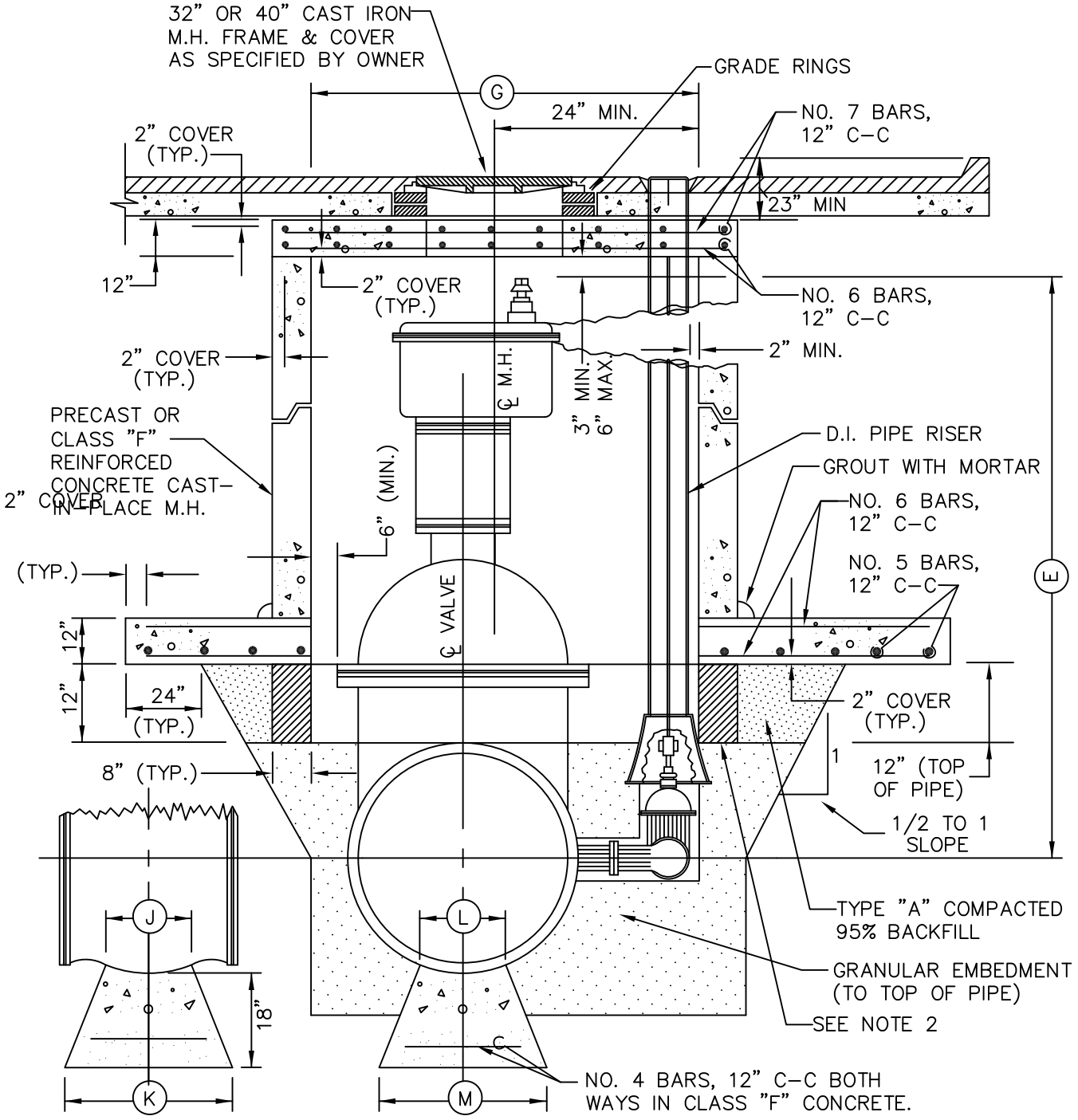
VERTICAL GATE VALVE ≥ 16"

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE
702.5

DATE
AUG '23

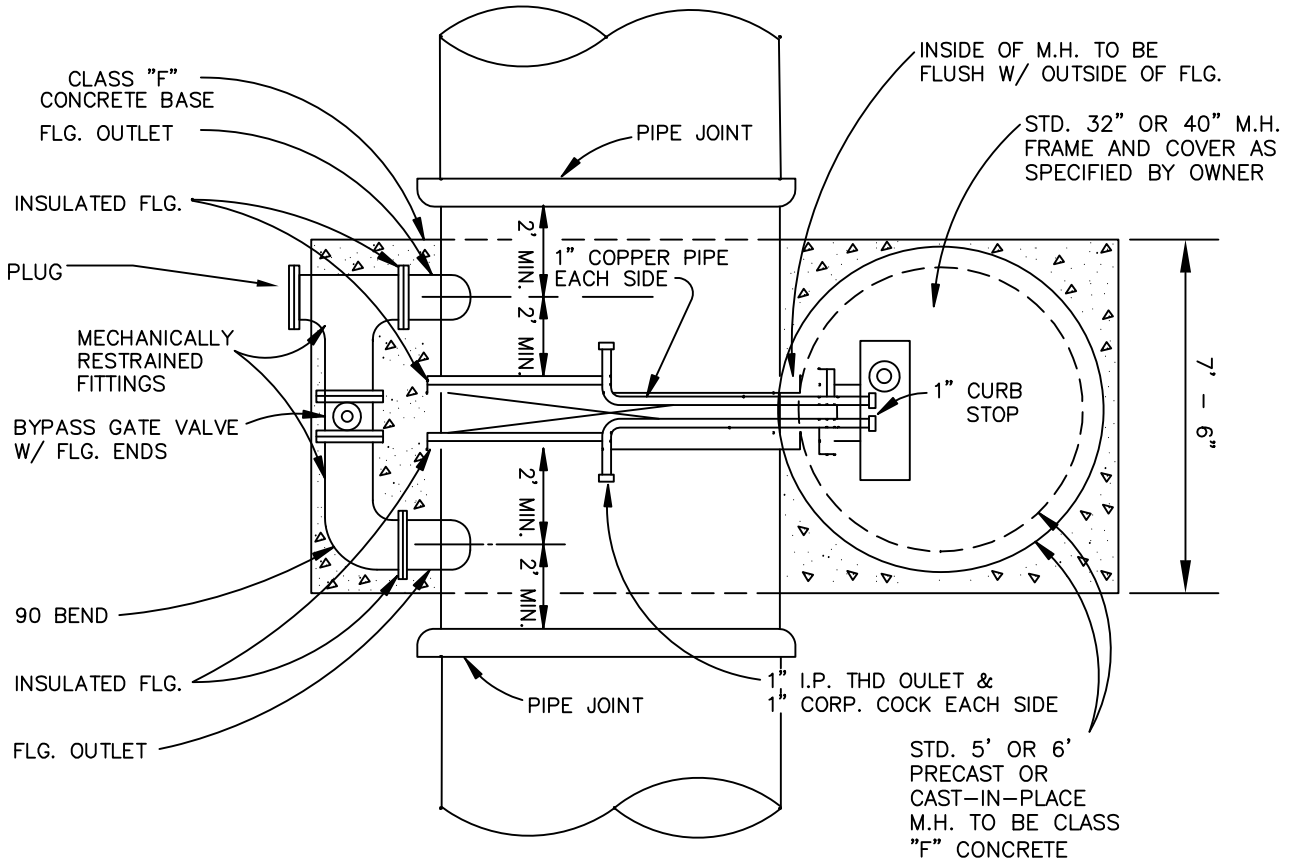
STANDARD DRAWING NO.
4070A



SECTION "A-A"

REFER TO STD. DWG. 4070A FOR DIMENSION TABLE AND GENERAL NOTES.

VAULT CONSTRUCTION	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 702.5	
VERTICAL GATE VALVE ≥ 16"		DATE AUG '23	STANDARD DRAWING NO. 4070B



PLAN

N.T.S.

STANDARD DRAWING NO. 4080A

VAULT CONSTRUCTION

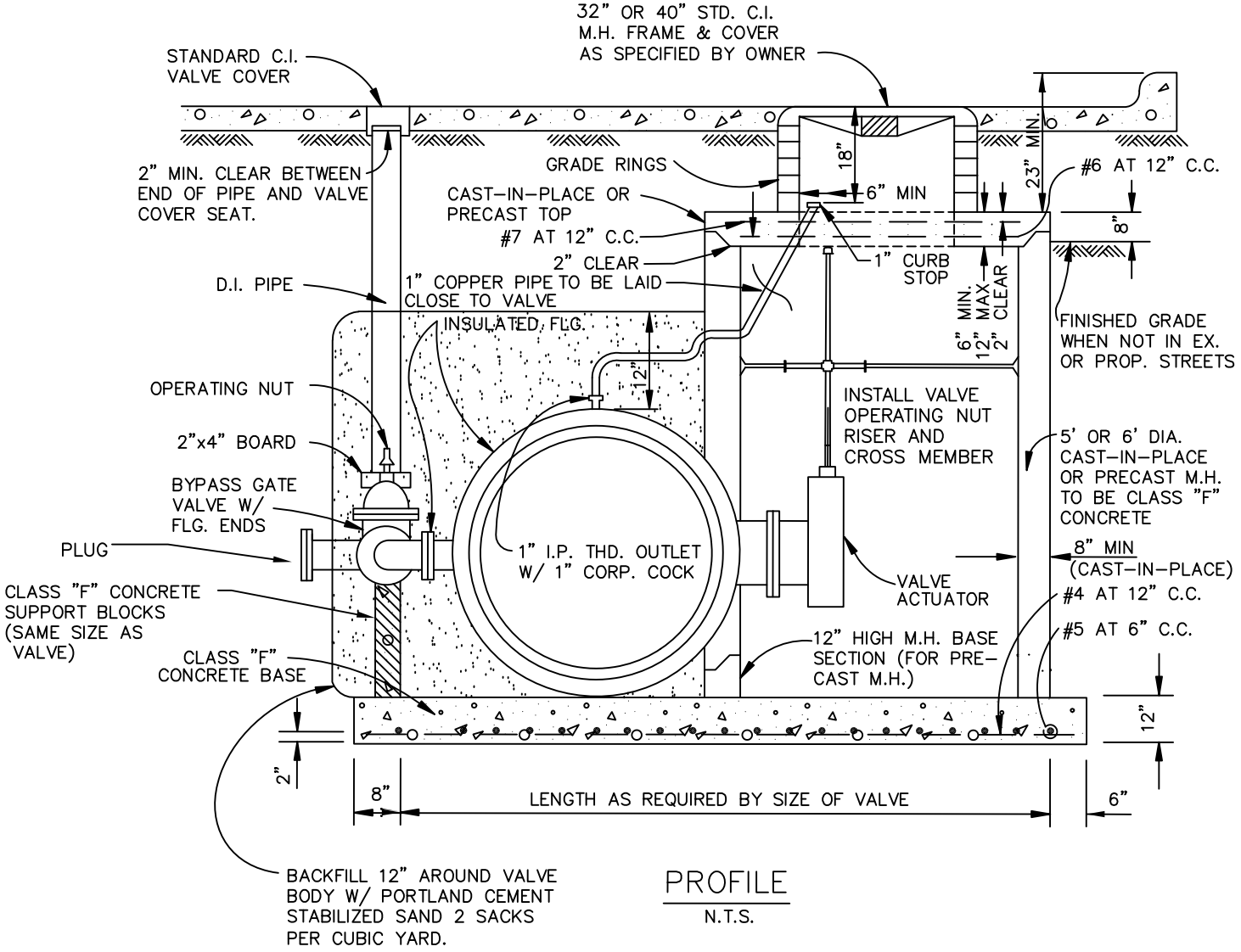
BUTTERFLY VALVE ≥ 48"

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 702.5

DATE AUG '23

STANDARD DRAWING NO. 4080A



PROFILE

N.T.S.

STANDARD DRAWING NO. 4080B

VAULT CONSTRUCTION

BUTTERFLY VALVE ≧ 48"

North Central Texas Council of Governments

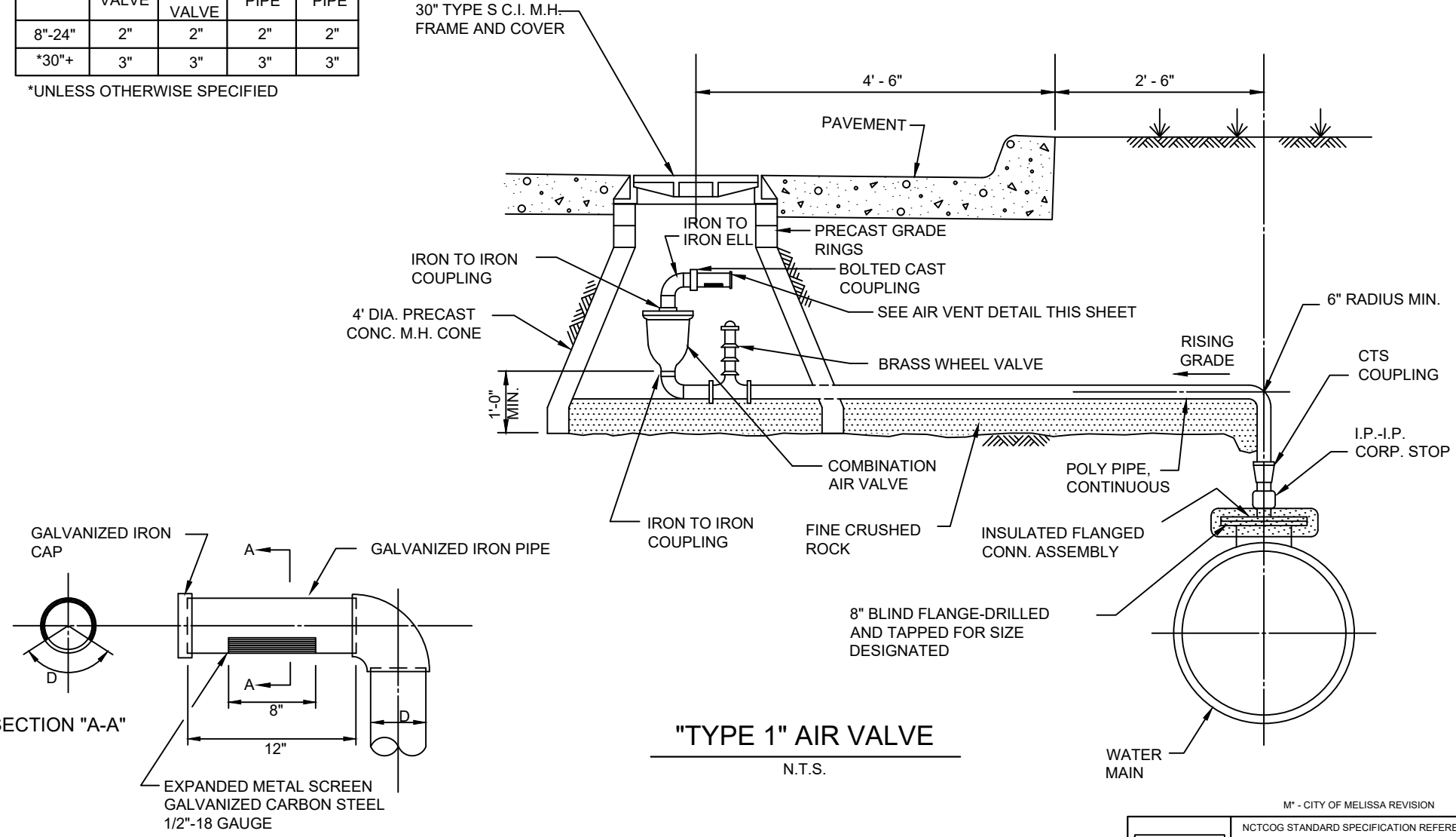
STANDARD SPECIFICATION REFERENCE 702.5

DATE AUG '23

STANDARD DRAWING NO. 4080B

MAIN	AIR VALVE	BRASS WHEEL VALVE	VENT PIPE	POLY PIPE
8"-24"	2"	2"	2"	2"
*30"+	3"	3"	3"	3"

*UNLESS OTHERWISE SPECIFIED



"TYPE 1" AIR VALVE

N.T.S.

AIR VENT

N.T.S.

COMBINATION AIR VACUUM VALVE

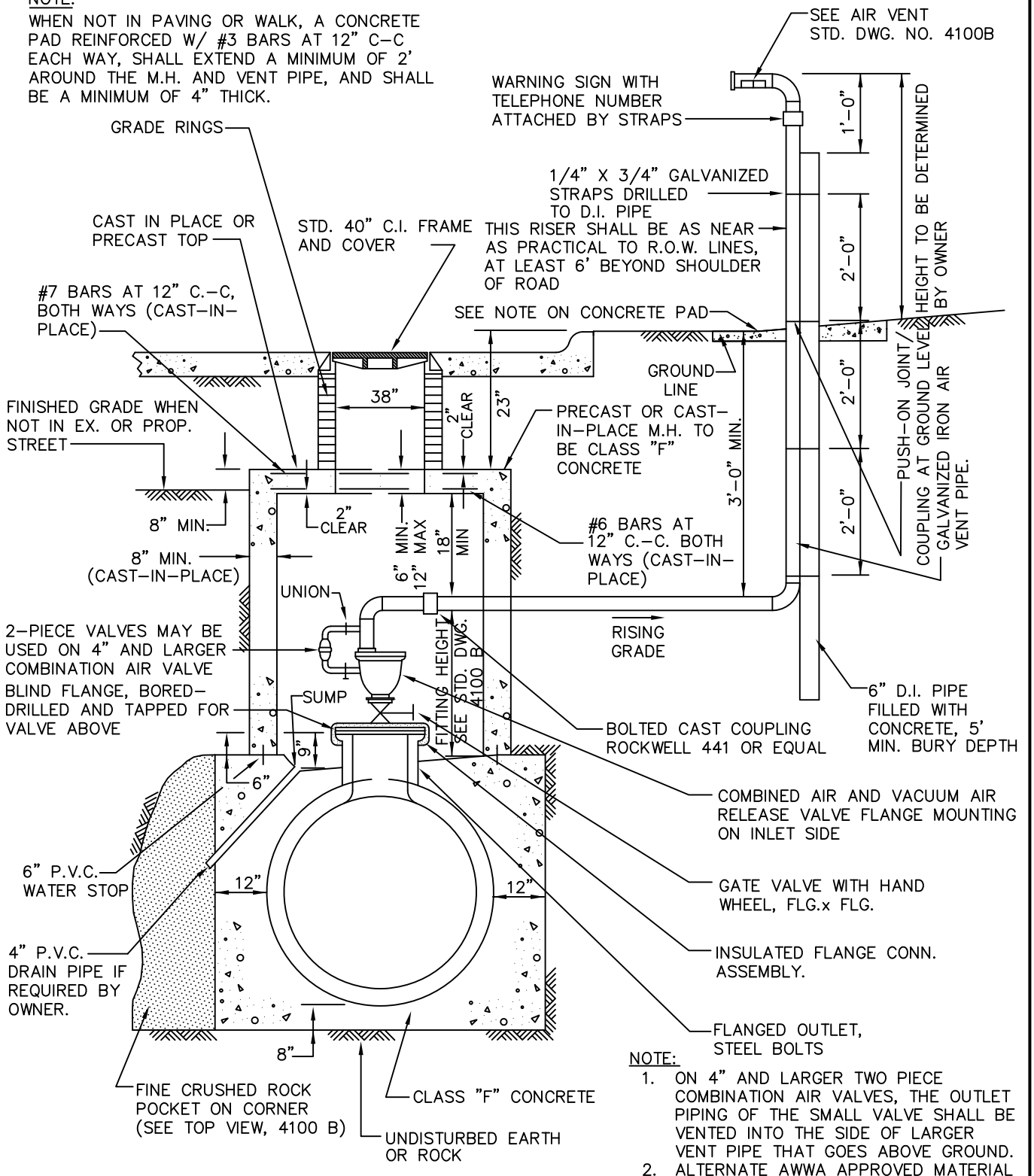
"TYPE 1"

M* - CITY OF MELISSA REVISION

NCTCOG STANDARD SPECIFICATION REFERENCE	
502.6	
MODIFIED DATE	STANDARD DRAWING NO.
09/06/13	4090M*
NOTICE DATE	ADOPTED DATE	ENFORCEMENT DATE
09/06/13	09/06/13	10/06/13

STANDARD DRAWING NO. 4090M*

NOTE:
WHEN NOT IN PAVING OR WALK, A CONCRETE PAD REINFORCED W/ #3 BARS AT 12" C–C EACH WAY, SHALL EXTEND A MINIMUM OF 2' AROUND THE M.H. AND VENT PIPE, AND SHALL BE A MINIMUM OF 4" THICK.



NOTE:
1. ON 4" AND LARGER TWO PIECE COMBINATION AIR VALVES, THE OUTLET PIPING OF THE SMALL VALVE SHALL BE VENTED INTO THE SIDE OF LARGER VENT PIPE THAT GOES ABOVE GROUND.
2. ALTERNATE AWWA APPROVED MATERIAL MAY BE SUBSTITUTED AS APPROVED BY OWNER FOR FITTINGS.

TYPE "2" AIR VALVE
N.T.S.

COMBINATION AIR VACUUM VALVE

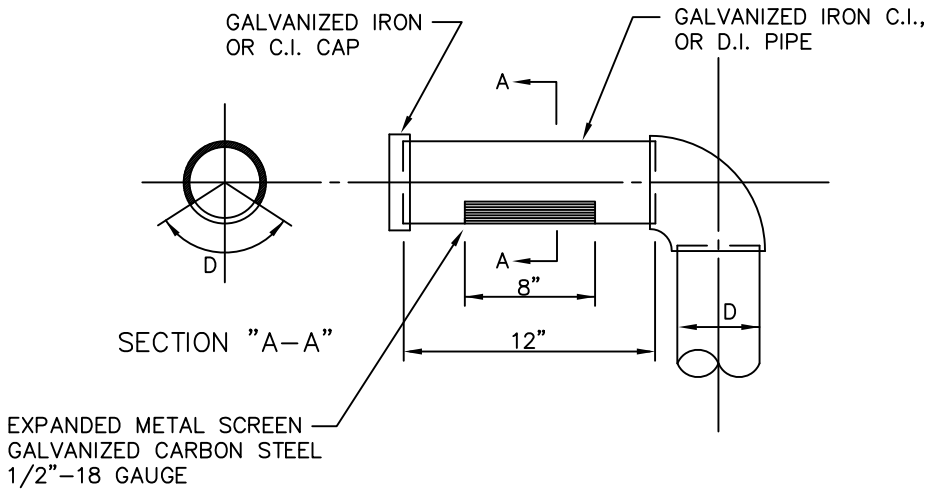
TYPE "2"

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE
502.6

DATE
AUG '23

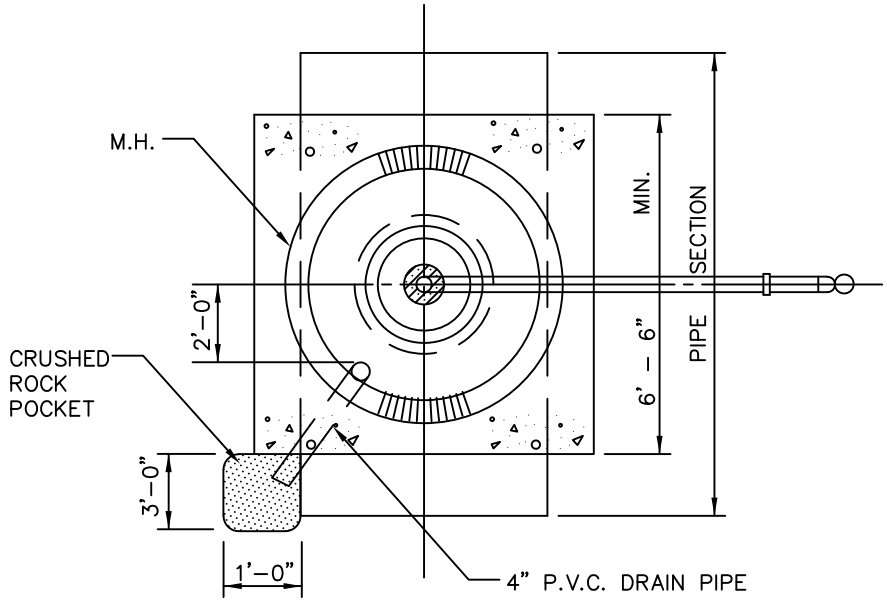
STANDARD DRAWING NO.
4100A



AIR VENT

N.T.S.

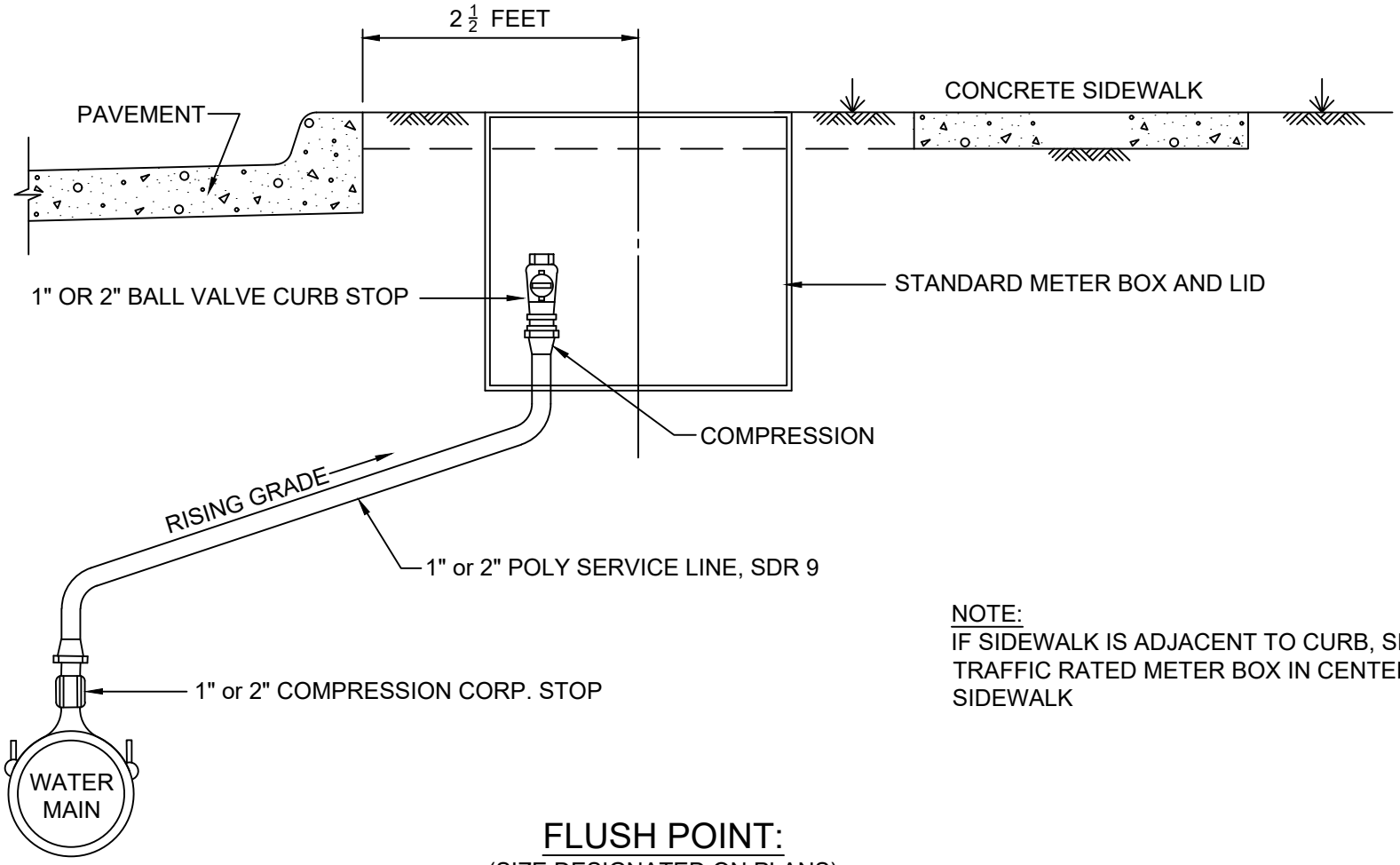
AIR VALVE	GATE VALVE	FLG. OUTLET	MIN. FITTING HEIGHT	VENT PIPE D	M.H. DIA.
2"	2"	8"	26"	2"	5'
3"	3"	18"	31"	3"	5'
4"	4"	18"	38"	4"	5'
6"	6"	18"	46"	6"	5'
8"	8"	18"	53"	8"	6'
10"	10"	20"	62"	10"	6'
12"	12"	24"	72"	12"	6'



PLAN VIEW

N.T.S.

AIR VENT STANDARD DIMENSION AND DETAIL	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.6
		DATE AUG '23 / STANDARD DRAWING NO. 4100B



NOTE:
IF SIDEWALK IS ADJACENT TO CURB, SET TRAFFIC RATED METER BOX IN CENTER OF SIDEWALK

FLUSH POINT:

(SIZE DESIGNATED ON PLANS)
N.T.S.

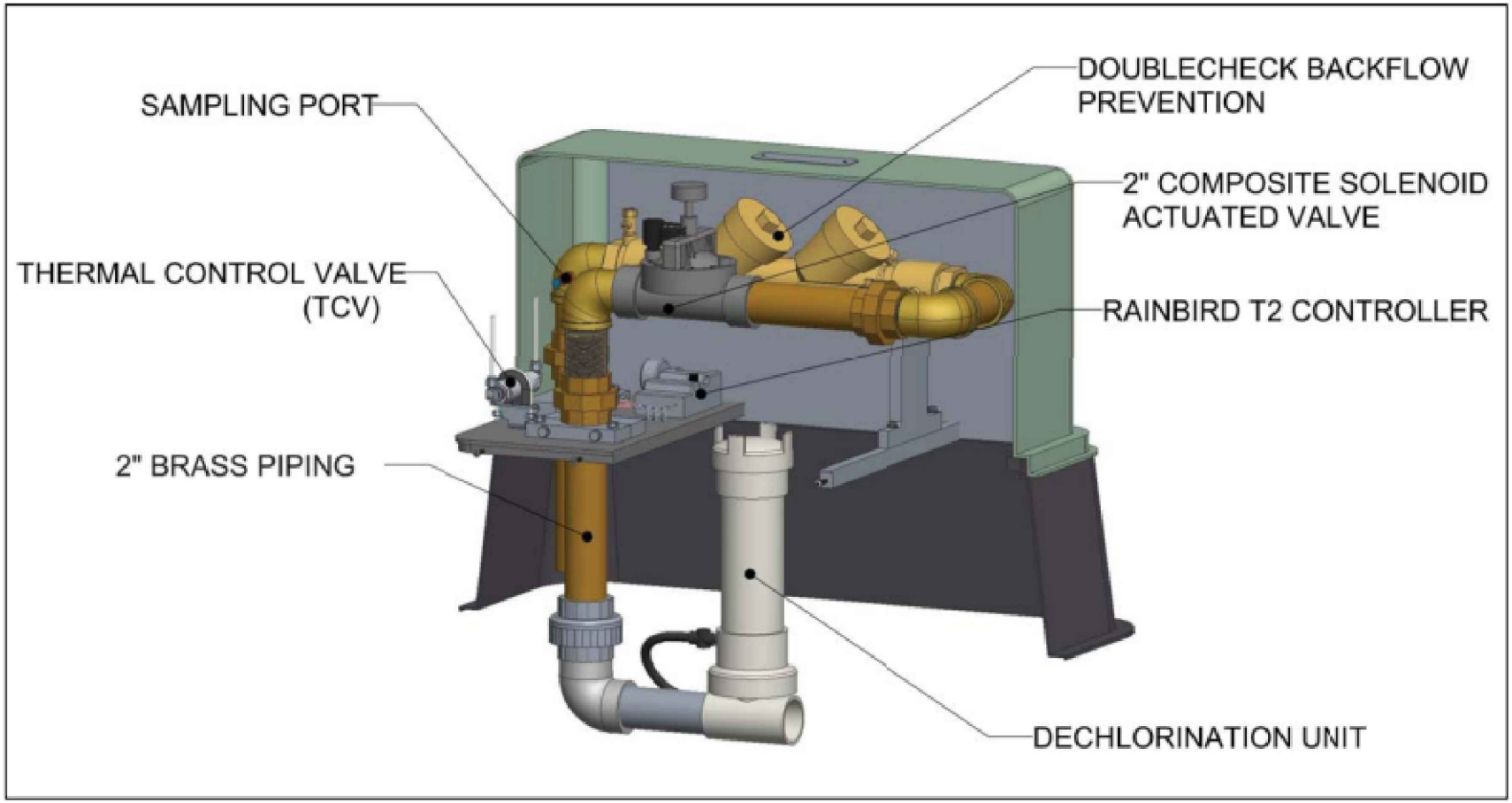
M* - CITY OF MELISSA REVISION

FLUSH POINT INSTALLATION

TYPE "1"

NCTCOG STANDARD SPECIFICATION REFERENCE	
502.10	
MODIFIED DATE	STANDARD DRAWING NO.
09/24/15	4110M*
NOTICE DATE	APPLIED DATE	ENFORCED DATE
09/24/15	09/24/15	10/24/15

STANDARD DRAWING NO.
4110M*



NOTES:

1. MODEL NUMBER IS HG2DRM2BRN018LPLG-TCV
2. THE CONTRACTOR WILL ORDER AND FURNISH TO THE CITY HYDROGUARD'S PORTABLE SAMPLE VALVE TO THE CITY (PART #HG-S1167).
3. METER SHOULD BE SET UPSTREAM FROM AUTO-FLUSH VALVE WITHIN 5 FEET OF UNIT.
4. DISCHARGE PIPE SHALL BE CONNECTED TO NEARBY STORM SEWER SYSTEM.
5. IF UNABLE TO CONNECT TO STORM SEWER, DISCHARGE PIPE CAN BE INSTALLED WHERE WATER WILL DRAIN INTO CREEK OR DRAINAGE SWALE. THE USE OF THIS OPTION WILL BE APPROVED BY CITY ENGINEER PRIOR TO INSTALLATION IN THE FIELD. EROSION CONTROL AS APPROVED BY THE CITY OF MELISSA WILL BE INSTALLED AT THE DISCHARGE LOCATION.

M* - CITY OF MELISSA REVISION

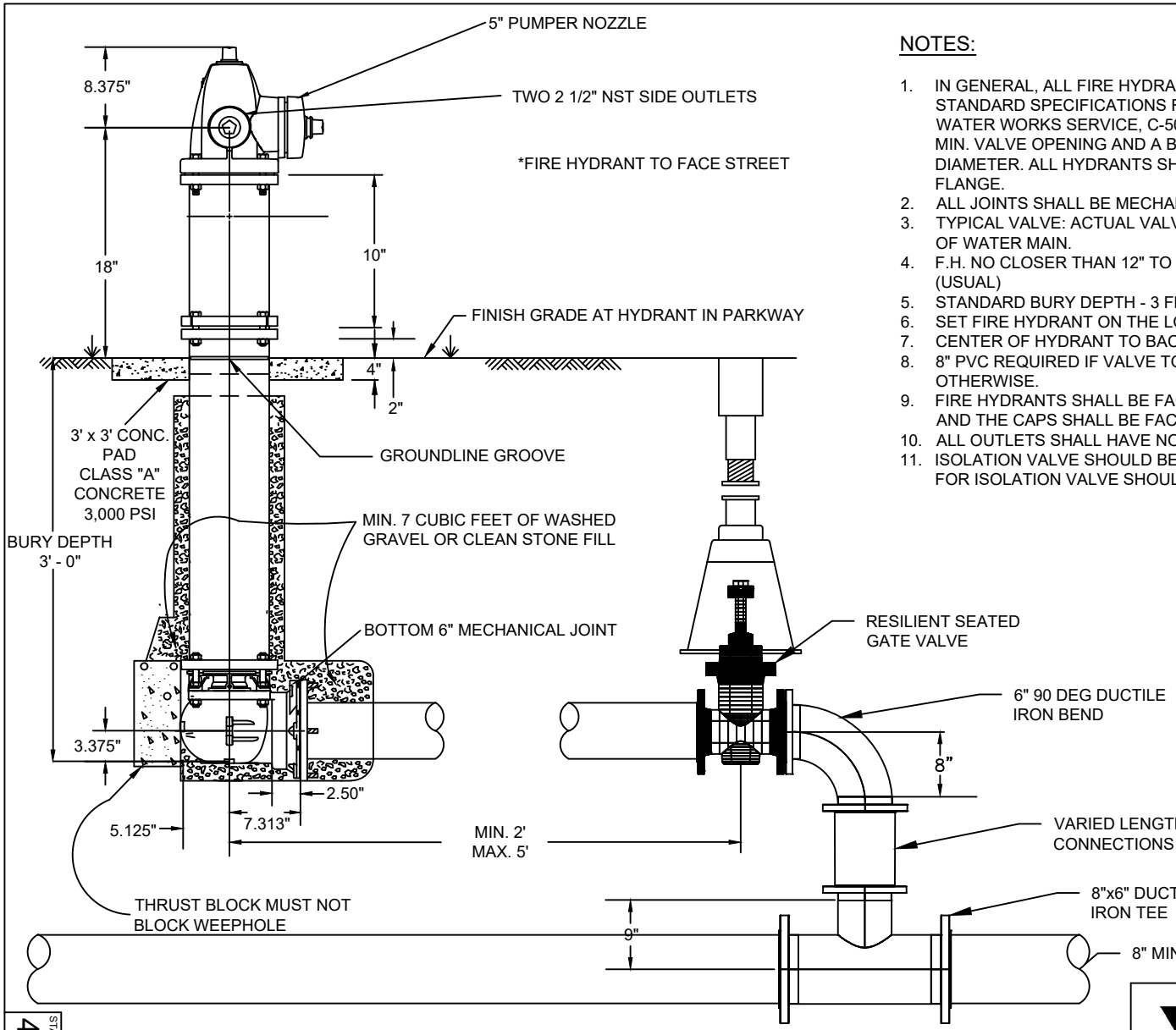
STANDARD DRAWING NO. 4111M*

AUTO-FLUSH VALVE

HG2 UNDERGROUND

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE	
502	
MODIFIED DATE	STANDARD DRAWING NO.
2/8/18	4111M*
NOTICE DATE	APPLIED DATE	ENFORCED DATE
3/1/18	3/1/18	4/1/18



NOTES:

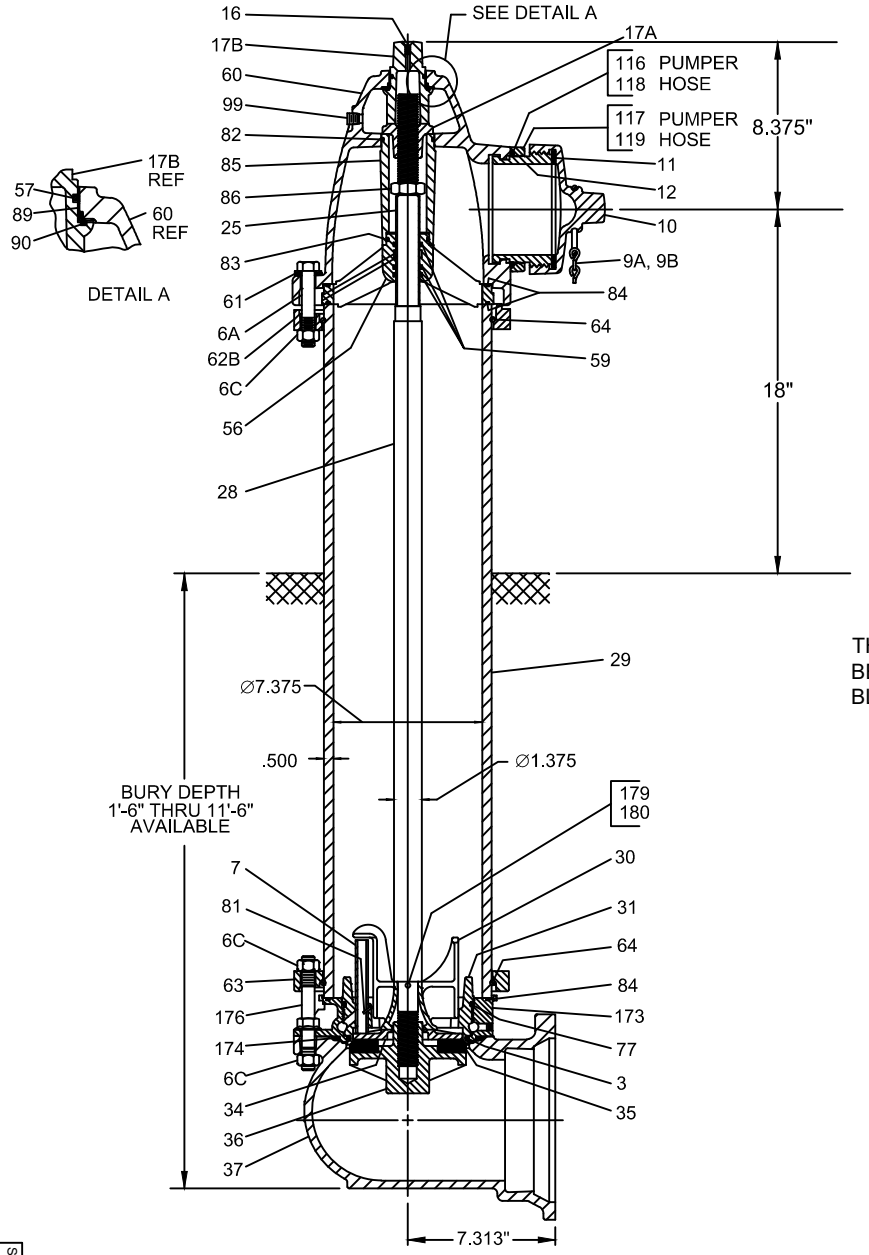
1. IN GENERAL, ALL FIRE HYDRANTS SHALL CONFORM TO AWWA STANDARD SPECIFICATIONS FOR FIRE HYDRANTS FOR ORDINARY WATER WORKS SERVICE, C-502. FIRE HYDRANTS SHALL HAVE A 5 1/4" MIN. VALVE OPENING AND A BARREL APPROXIMATELY 7" INSIDE DIAMETER. ALL HYDRANTS SHALL BE EQUIPPED WITH A BREAKAWAY FLANGE.
2. ALL JOINTS SHALL BE MECHANICAL JOINTS.
3. TYPICAL VALVE: ACTUAL VALVE LOCATION WILL DEPEND ON LOCATION OF WATER MAIN.
4. F.H. NO CLOSER THAN 12" TO EXISTING OR PROPOSED SIDEWALKS. (USUAL)
5. STANDARD BURY DEPTH - 3 FEET WITH 6 FEET MAXIMUM.
6. SET FIRE HYDRANT ON THE LOT LINE EXTENDED WHEN POSSIBLE.
7. CENTER OF HYDRANT TO BACK OF CURB - 2'-6" MIN, 8'-0" MAX.
8. 8" PVC REQUIRED IF VALVE TO HYDRANT DISTANCE IS >25', 6" OTHERWISE.
9. FIRE HYDRANTS SHALL BE FACTORY ENAMEL COATED RED(M-4104), AND THE CAPS SHALL BE FACTORY ENAMEL COATED SILVER(M-4111).
10. ALL OUTLETS SHALL HAVE NON-LOCKING CAPS AND FACE THE STREET.
11. ISOLATION VALVE SHOULD BE 2'-5' AWAY FROM HYDRANT. VALVE LID FOR ISOLATION VALVE SHOULD BE EPOXY-COATED SAFETY RED.

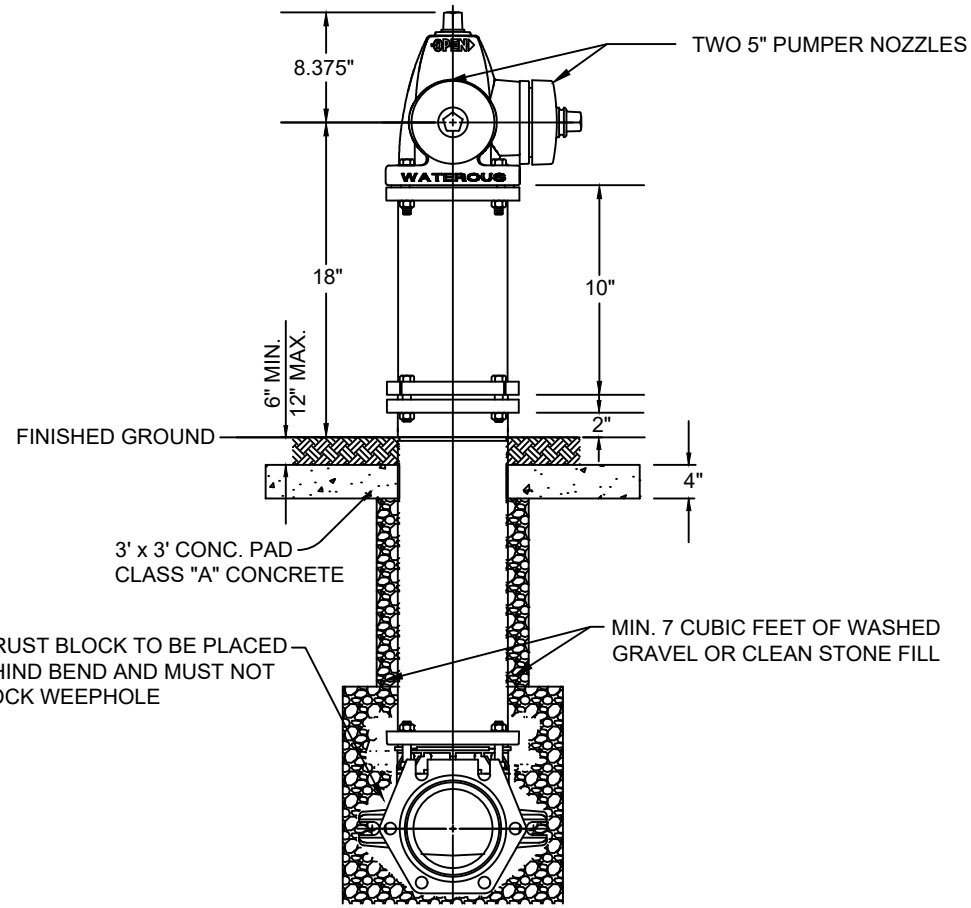
M* - CITY OF MELISSA REVISION

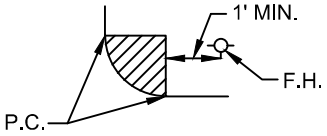
FIRE HYDRANT INSTALLATION

ONE PUMPER NOZZLE

STANDARD DRAWING NO.	NCTCOG STANDARD SPECIFICATION REFERENCE	
4120AM*	502.3	
	MODIFIED DATE: 07/28/23	STANDARD DRAWING NO.: 4120AM*
	NOTICE DATE: 07/28/23	APPLIED DATE: 07/28/23
		ENFORCED DATE: 08/28/23







PLAN VIEW
N.T.S.

M* - CITY OF MELISSA REVISION

FIRE HYDRANT INSTALLATION

TWO PUMPER NOZZLES

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE	
502.3	
MODIFIED DATE	STANDARD DRAWING NO.
07/28/23	4120BM*
NOTICE DATE	APPLIED DATE	ENFORCED DATE
07/28/23	07/28/23	08/28/23

STANDARD DRAWING NO.
4120BM*

PARTS LIST			
ITEM	DESCRIPTION	MATERIAL	A.S.T.M.
3	O-RING, 5-5/8 X 3-3/4 IN.	BUNA N, 90 DUROMETER	D20007GB915B14E14E34E51E61L14
6A	HEX HD BOLT, 5/8-11 X 3-3/4 IN.	ZINC PLATED STEEL	A-307
6B	HEX HD BOLT, 5/8-11 X 3 IN.	ZINC PLATED STEEL	A-307
6C	HEX HD NUT, 5/8-11 (ABOVE GRADE)	ZINC PLATED STEEL	A-307
6C	HEX NUT, 5/8-11 (BELOW GRADE)	STAINLESS STEEL, TYPE 304	F-594
7	DRAIN PLUNGER	RED BREASS	B-135 ALLOY C23000
9A,B	NOZZLE CAP CHAIN, SINGLE OR DOUBLE	ZINC PLATED STEEL	A-307
10	NOZZLE CAP, HOSE PUMPER	DUCTILE IRON	A-536 GRADE 65-45-12
11	CAP GASKET, HOSE PUMPER	NEOPRENE	D735 SC715
12	NOZZLE, HOSE PUMPER	BRASS	B505 ALLOY C83600
16	FLAT HD SCREW, 1/4-20 X 1/2 IN.	STAINLESS STEEL, TYPE 304	F-594
17	OPERATING NUT (ONE-PIECE)	BRONZE	B763 ALLOY C86500 OR C86700
17A	LOWER OPERATING NUT	BRONZE	CDA 67600 OR CDA 67500
17B	UPPER OPERATING NUT	DUCTILE IRON	A536 GRADE 65-45-12
25	ROD BUSHING	RED BRASS	B135 ALLOY C23000
28	ROD (NON-TRAFFIC MODEL)	STEEL ROD	A575 GRADE M 1044M
29	LOWER STANDPIPE (TRAFFIC MODEL)	CENTRIFUGALLY CAST DUCTILE IRON PIPE	ANSI A21.51 (AWWA C151)
30	CROSSARM	BRONZE	B763 ALLOY C99500
31	VALVE SEAT	BRASS	B-584 ALLOY C83600
34	UPPER VALVE WASHER	DUCTILE IRON	A536 GRADE 65-45-12
35	MAIN VALVE RUBBER	URETHANE	D2000M1AA914A13Z1
36	LOWER VAVLE WASHER	DUCTILE IRON/EPOXY COATED	A536 GRADE 65-45-12/AWWA C550
37	HYDRANT BOTTOM	DUCTILE IRON/EPOXY COATED	A536 GRADE 65-45-12/AWWA C550
40	UPPER STANDPIPE (TRAFFIC MODEL)	CENTRIFUGALLY CAST DUCTILE IRON PIPE	ANSI A21.51 (AWWA C151)
56	SUPPORT WHEEL	DUCTILE IRON PIPE	A536 GRADE 65-45-12
57	O-RING(OPERATING NUT), 1-1/2X1-3/4	BUNA N, 70 DUROMETER	D20002BG720B34E14E34E51E61L14
59	O-RING(SUPPORT WHEEL), 1-1/8X1-3/8	BUNA N, 70 DUROMETER	D20002BG720B34E14E34E51E61L14
60	NOZZLE SECTION	DUCTILE IRON	A536 GRADE 65-45-12
61	BURY DEPTH PLATE AND WASHER	ALUMINUM, ZINC PLATED STEEL	
62B	UPPER STANDPIPE FLANGE	DUCTILE IRON	A536 GRADE 65-45-12
63	STANDPIPE FLANGE	DUCTILE IRON	A536 GRADE 65-45-12
64	FLANGE LOCKING RING	STAINLESS STEEL, TYPE 430	
67	COUPLING SLEEVE (TWO HALVES)	GRAY IRON	A48 CLASS 30B
71	UPPER ROD (TRAFFIC MODEL)	STEEL ROD	A575 GRADE M 1044M
72	LOWER ROD (TRAFFIC MODEL)	STEEL ROD	A575 GRADE M 1044M
77	O-RING(UPPER VALVE SEAT) 5-7/8X6-1/4	BUNA N, 70 DUROMETER	D20002BG720B34E14E34E51E61L14
81	GROOVE PIN, 3/32 X 7/16 IN	BERYLLIUM COPPER	
82	O-RING(UPPER TUBE SEAL), 2-3/8X2-5/8	BUNA N, 70 DUROMETER	D20002BG720B34E14E34E51E61L14
83	O-RING(LOWER TUBE SEAL), 1-7/8X2-1/8	BUNA N, 70 DUROMETER	D20002BG720B34E14E34E51E61L14
84	SUPPORT WHEEL/LOWER STANDPIPE GASKET	BUNA N, 70 DUROMETER	D735 SB720-BE3
85	SUPPORT TUBE	DUCTILE IRON	A536 GRADE 65-45-12
86	STOP NUT, 1"-8	ZINC PLATED STEEL	
87	COUPLING NUT, 1/2-20	BRASS	
88	COUPLING STUD, 1/2-20X2-9/16 IN.	STAINLESS STEEL, TYPE 430	
89	NOZZLE SECTION BUSHING	BRASS	CDA 26000
90	THRUST RING	POLYMER BEARING	
92	UPPER STANDPIPE GASKET	NEOPRENE	D2000M4BC814A14B14EO14EO34F17
99	PIPE PLUG, 1/4 NPT	BRASS	
101	WEATHERSHIELD NUT	DUCTILE IRON	A536 GRADE 65-45-12
102	SPIROL PIN, HVY, 1/4X2-1/4 IN.	STAINLESS STEEL, TYPE 302	
113	BREAKABLE FLANGE	DUCTILE IRON	A536 GRADE 65-45-12
116	O-RING (PUMPER NOZZLE), 5-1/4X5-3/4	BUNA N, 70 DUROMETER	
117	PUMPER NOZZLE RETAINER	DUCTILE IRON	A536 GRADE 65-45-12
118	O-RING (HOSE NOZZLE), 3-1/4X3-5/8	BUNA N, 70 DUROMETER	
119	HOSE NOZZLE RETAINER	DUCTILE IRON	A536 GRADE 65-45-12
162	WEATHERSHIELD NUT GASKET	NITRILE, 70 DUROMETER	
173	VALVE SEAT INSERT	BRASS	B584 ALLOY C83600
174	VALVE SEAT INSERT GASKET	NITRILE, 70 DUROMETER	D2000M3CH714A25B14EO16EO36F16Z
176	STUD, 5/8-11X5.65 IN.	STAINLESS STEEL, TYPE 304	F593
179	CLEVIS PIN, 1/4X1-11/16 IN.	STAINLESS STEEL, TYPE 18-8	
180	KICKOUT PIN	STAINLESS STEEL, TYPE 18-8	

NOTES:

1. IN GENERAL, ALL FIRE HYDRANTS SHALL CONFORM TO AWWA STANDARD SPECIFICATIONS FOR FIRE HYDRANTS FOR ORDINARY WATER WORKS SERVICE, C-502. FIRE HYDRANTS SHALL HAVE A 5 1/4" MIN. VALVE OPENING AND A BARREL APPROXIMATELY 7" INSIDE DIAMETER. ALL HYDRANTS SHALL BE EQUIPPED WITH A BREAKAWAY FLANGE.
2. ALL JOINTS SHALL BE MECHANICAL JOINTS.
3. TYPICAL VALVE: ACTUAL VALVE LOCATION WILL DEPEND ON LOCATION OF WATER MAIN.
4. F.H. NO CLOSER THAN 12" TO EXISTING OR PROPOSED SIDEWALKS. (USUAL)
5. STANDARD BURY DEPTH - 5 FEET WITH 6 FEET MAXIMUM.
6. SET FIRE HYDRANT ON THE LOT LINE EXTENDED WHEN POSSIBLE.
7. F.H. SHALL BE LOCATED MINIMUM 1 FOOT OUTSIDE OF THE AREA BETWEEN THE P.C.'S OF THE CORNER TURNING RADII AT INTERSECTIONS. (SEE PLAN VIEW 4120BM)
8. CENTER OF HYDRANT TO BACK OF CURB - 2'-6" MIN, 8'-0" MAX.
9. 8" PVC REQUIRED IF VALVE TO HYDRANT DISTANCE IS >25', 6" OTHERWISE.
10. FIRE HYDRANTS SHALL BE FACTORY ENAMEL COATED RED(M-4104), AND THE CAPS SHALL BE FACTORY ENAMEL COATED SILVER(M-4111).
11. ALL OUTLETS SHALL HAVE NON-LOCKING CAPS AND FACE THE STREET.
12. ISOLATION VALVE SHOULD BE 2'-5' AWAY FROM HYDRANT. VALVE LID FOR ISOLATION VALVE SHOULD BE EPOXY-COATED SAFETY RED.

M* - CITY OF MELISSA REVISION

STANDARD DRAWING NO. 4120CM*

FIRE HYDRANT INSTALLATION

TWO PUMPER NOZZLES

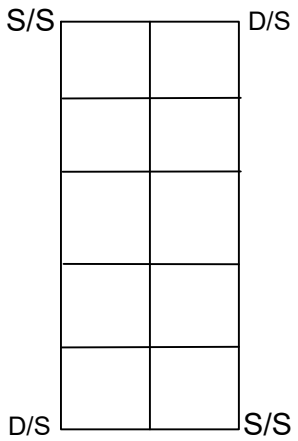
MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE 502.3

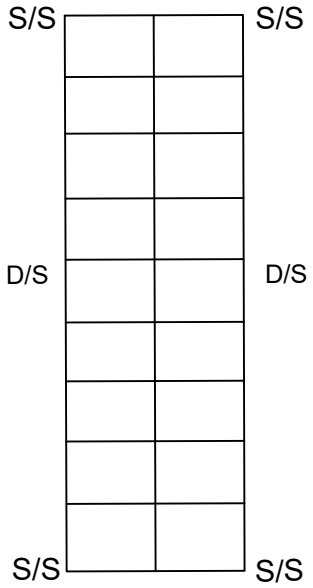
MODIFIED DATE	STANDARD DRAWING NO.
07/28/23	4120CM*

NOTICE DATE	APPLIED DATE	ENFORCED DATE
07/28/23	07/28/23	08/28/23

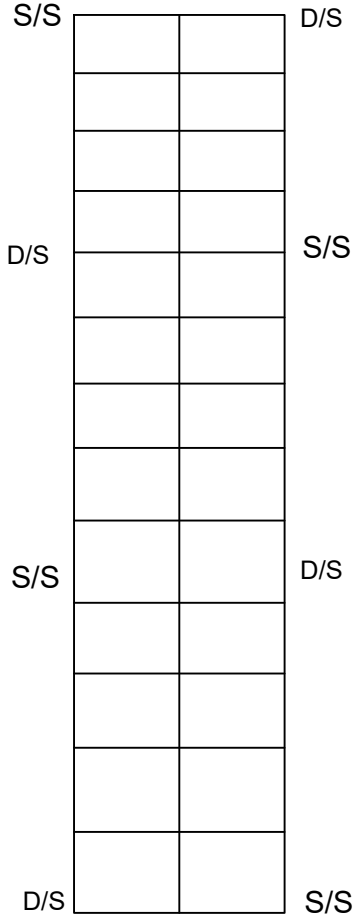
CASE 1



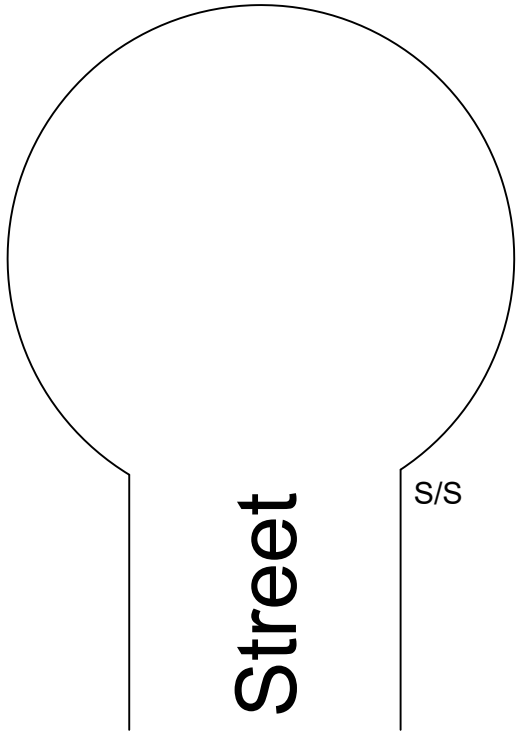
CASE 2



CASE 3



CASE 4



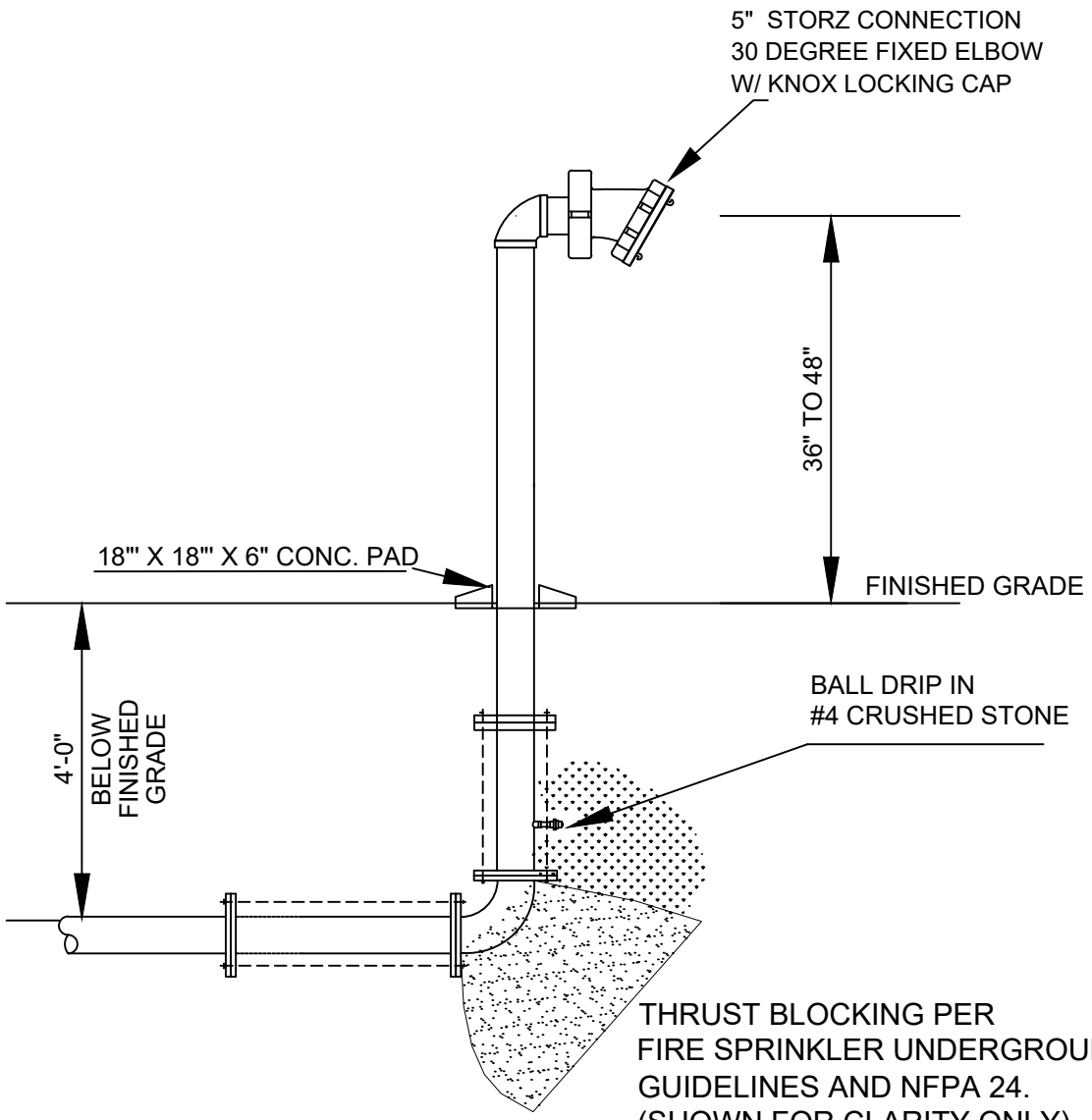
CASE 1: FOR BLOCK LENGTHS OF 300 FEET OR LESS
CASE 2: FOR BLOCK LENGTHS IN BETWEEN 300 AND 1200 FEET
CASE 3: FOR BLOCK LENGTHS ≈1200 FEET
CASE 4: FOR CUL-DE-SACS

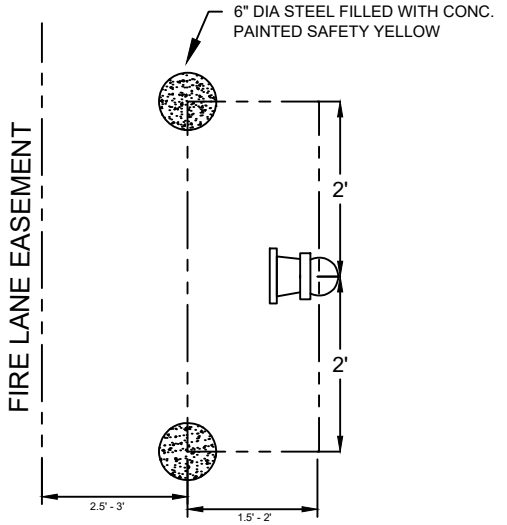
S/S- SINGLE STEAMER FIRE HYDRANT
D/S- DOUBLE STEAMER FIRE HYDRANT

FINAL LOCATION IS BASED ON PREFERENCE OF CITY OF MELISSA FIRE DEPARTMENT

TYPICAL FIRE HYDRANT LOCATION FOR SUBDIVISION BLOCKS

STANDARD DRAWING NO.	502.3		
4120DM*	MODIFIED DATE 09/23/15	STANDARD DRAWING NO. 4120DM*	
	NOTICE DATE	APPLIED DATE	ENFORCED DATE





PLAN VIEW

NOTES

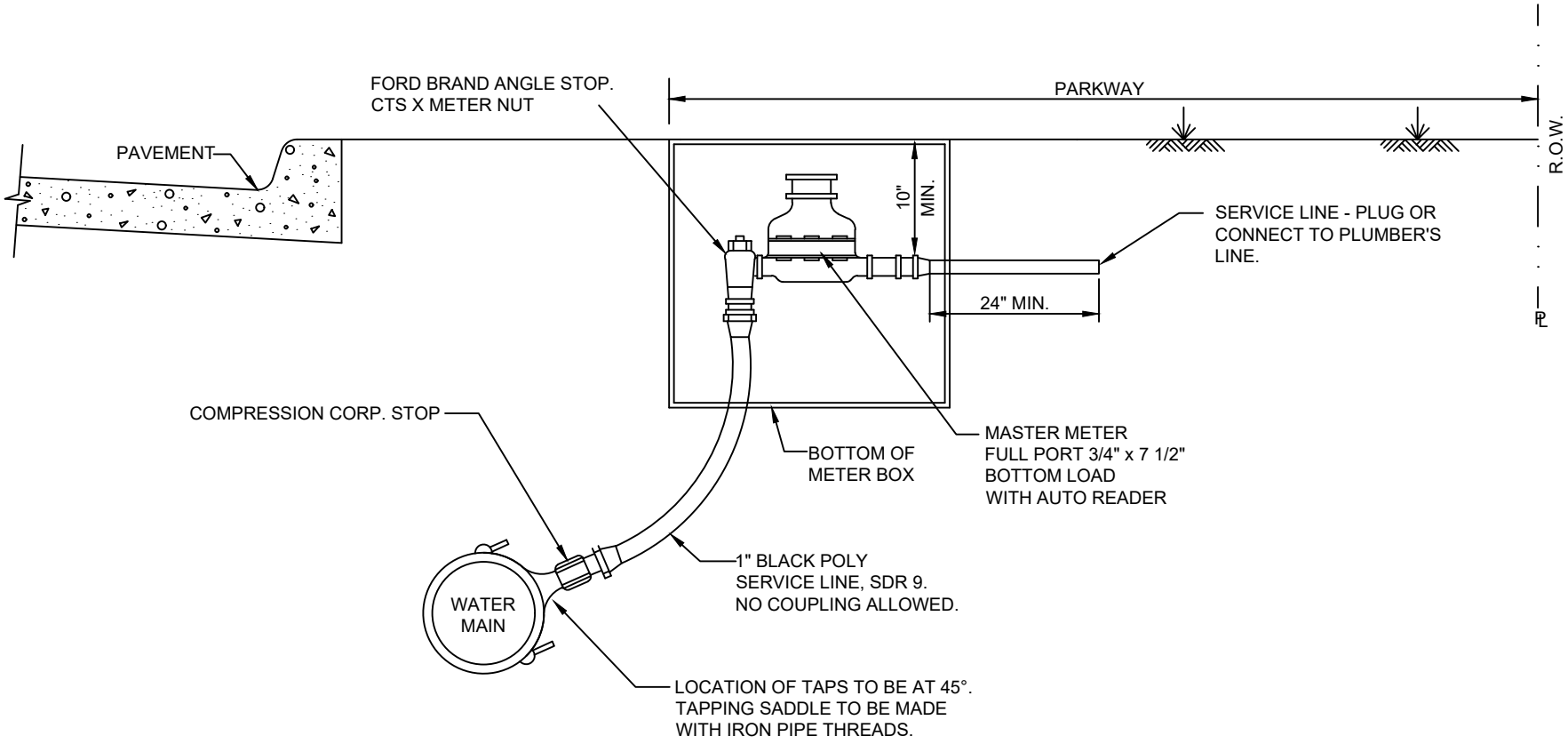
1. MINIMUM PIPE SIZE LEADING TO THE STORZ FDC SHALL BE DETERMINED BY HYDRAULIC CALCULATIONS, BUT SHALL BE A MIN. OF 4". A 6" MIN. IS REQUIRED FOR ALL SYSTEMS WITH A TOTAL DEMAND EXCEEDING 750 GPM.
2. FDC MUST BE IN BETWEEN 15 FEET AND 40 FEET AWAY FROM THE NEAREST HYDRANT
3. KNOX STORZ GUARD LOCKING CAPS ARE REQUIRED ON ALL CONNECTIONS
4. ALL EXPOSED PIPE SHALL BE POLISHED FINISH WITH THE EXCEPTION OF THE STORZ CONNECTION.
5. INSPECTION AND FINAL APPROVAL BY CITY OF MELISSA FIRE DEPARTMENT

M* - CITY OF MELISSA REVISION

REMOTE FDC

WITH BOLLARDS

STANDARD DRAWING NO.	NCTCOG STANDARD SPECIFICATION REFERENCE	
4125M*	MODIFIED DATE: 05/14/18	STANDARD DRAWING NO.: 4125M*
	NOTICE DATE: 05/14/18	APPLIED DATE: 05/14/18
		ENFORCED DATE: 06/14/18



NOTES:

1. METER SHALL NOT BE LOCATED WITHIN SIDEWALKS OR DRIVEWAYS.

2. THE METER AND AUTOMATIC METER READER SHALL BE PROVIDED AND INSTALLED BY THE CITY OF MELISSA AT DEVELOPER'S EXPENSE.

3. METER BOXES SHALL BE CORRUGATED METAL FOR AREAS OF TRAFFIC AND PLASTIC FOR NON TRAFFIC AREAS.

4. SERVICE LINE SHALL BE EMBEDDED IN ⅜" ROCK EMBEDMENT PER DETAIL 3061M.

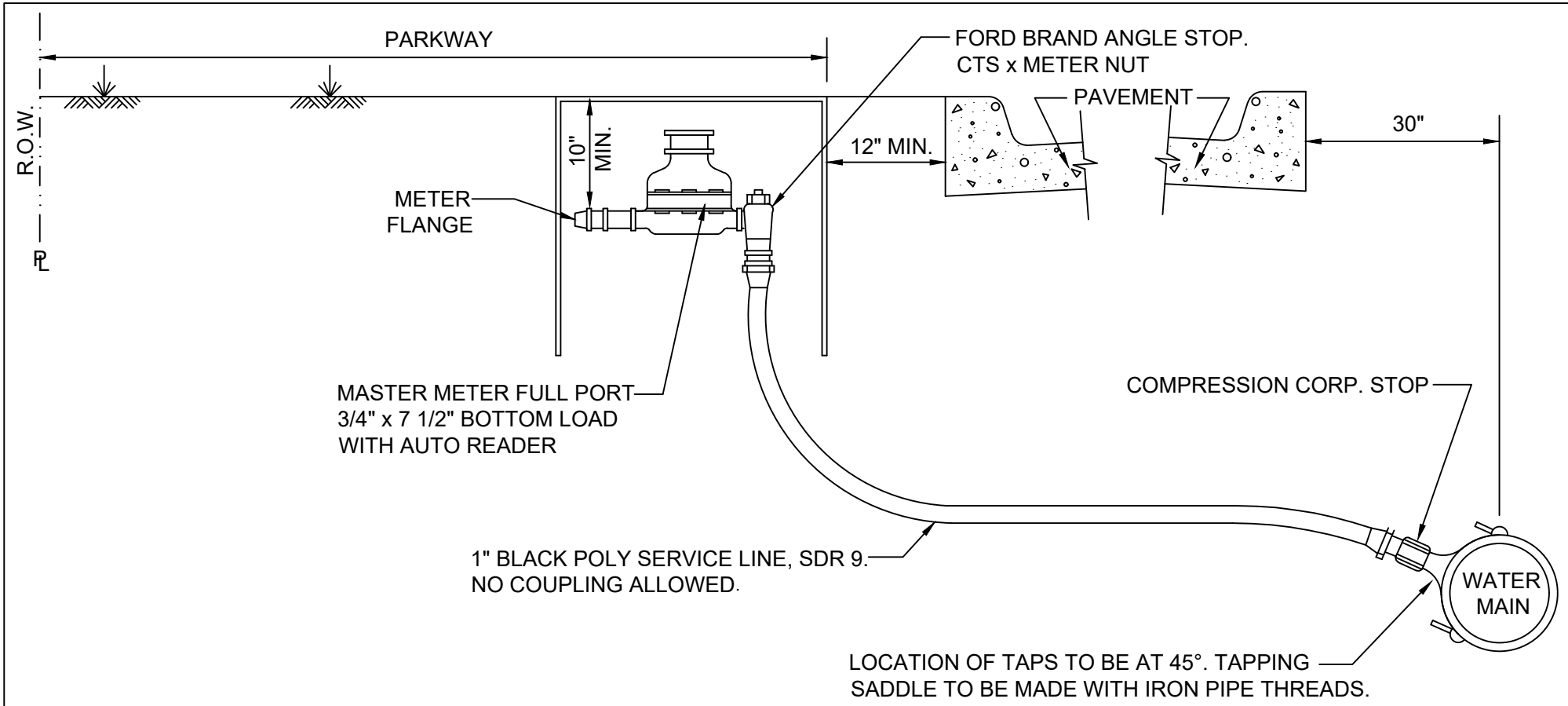
M* - CITY OF MELISSA REVISION

STANDARD DRAWING NO.
4130AM*

WATER SERVICE INSTALLATION
1" LINE FOR 3/4" OR 1" METER

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE		
500		
MODIFIED DATE	STANDARD DRAWING NO.	
07/28/23	4130AM*	
NOTICE DATE	APPLIED DATE	ENFORCED DATE
07/28/23	07/28/23	08/28/23



NOTES:

1. METER SHALL NOT BE LOCATED WITHIN SIDEWALKS OR DRIVEWAYS.

2. THE METER AND AUTOMATIC METER READER SHALL BE PROVIDED AND INSTALLED BY THE CITY OF MELISSA AT DEVELOPER'S EXPENSE.

3. METER BOXES SHALL BE CORRUGATED METAL FOR AREAS OF TRAFFIC AND PLASTIC FOR NON TRAFFIC AREAS.

4. SERVICE LINE SHALL BE EMBEDDED IN ⅜" ROCK EMBEDMENT PER DETAIL 3061M.

M* - CITY OF MELISSA REVISION

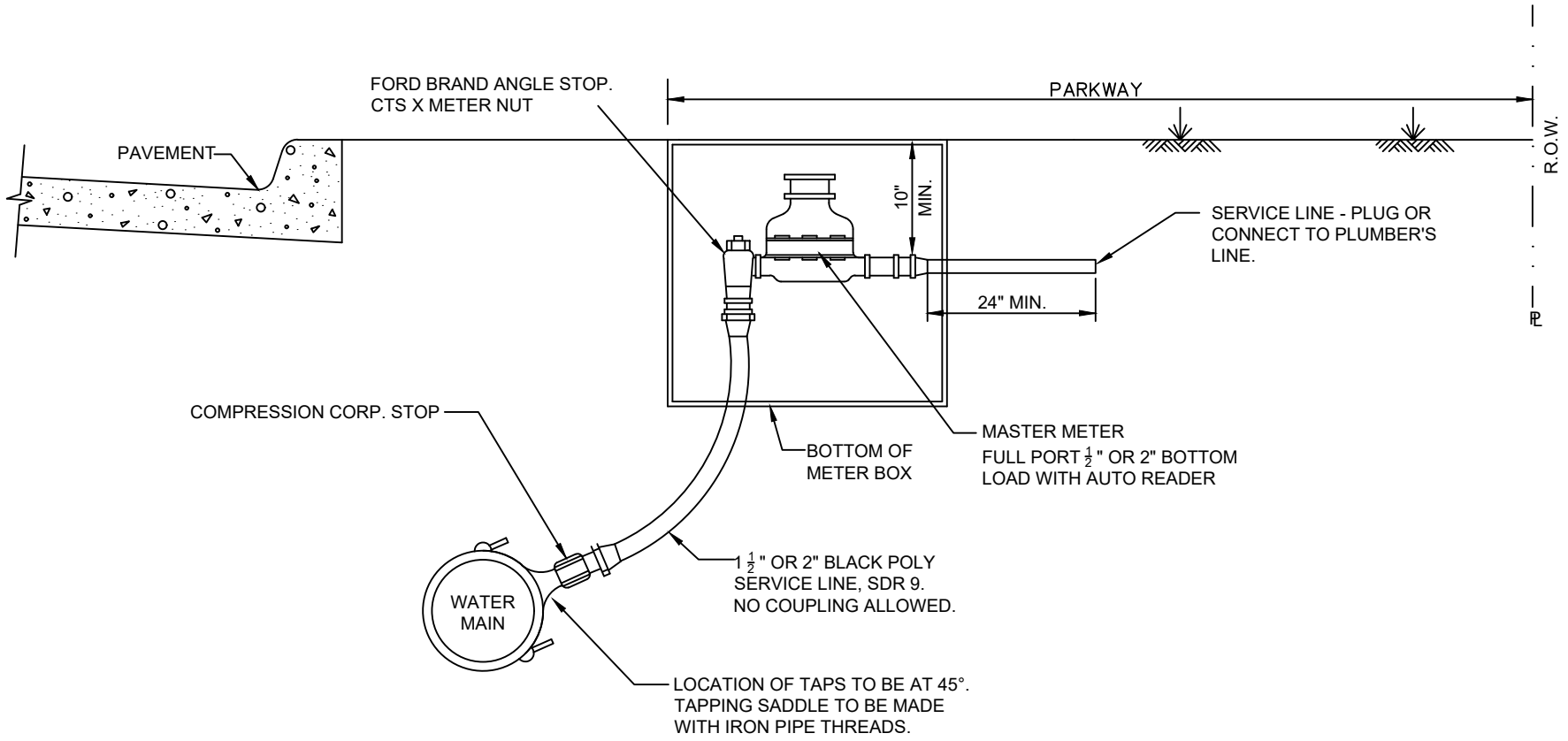
STANDARD DRAWING NO.
4130BM*

WATER SERVICE INSTALLATION

1" LINE FOR 3/4" OR 1" METER

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE	
500	
MODIFIED DATE	STANDARD DRAWING NO.
07/28/23	4130BM*
NOTICE DATE	APPLIED DATE	ENFORCED DATE
07/28/23	07/28/23	08/28/23



NOTES:

1. METER SHALL NOT BE LOCATED WITHIN SIDEWALKS OR DRIVEWAYS.

2. THE METER AND AUTOMATIC METER READER SHALL BE PROVIDED AND INSTALLED BY THE CITY OF MELISSA AT DEVELOPER'S EXPENSE.

3. METER BOXES SHALL BE CORRUGATED METAL FOR AREAS OF TRAFFIC AND PLASTIC FOR NON TRAFFIC AREAS.

4. SERVICE LINE SHALL BE EMBEDDED IN 3/8" ROCK EMBEDMENT PER DETAIL 3061M.

M* - CITY OF MELISSA REVISION

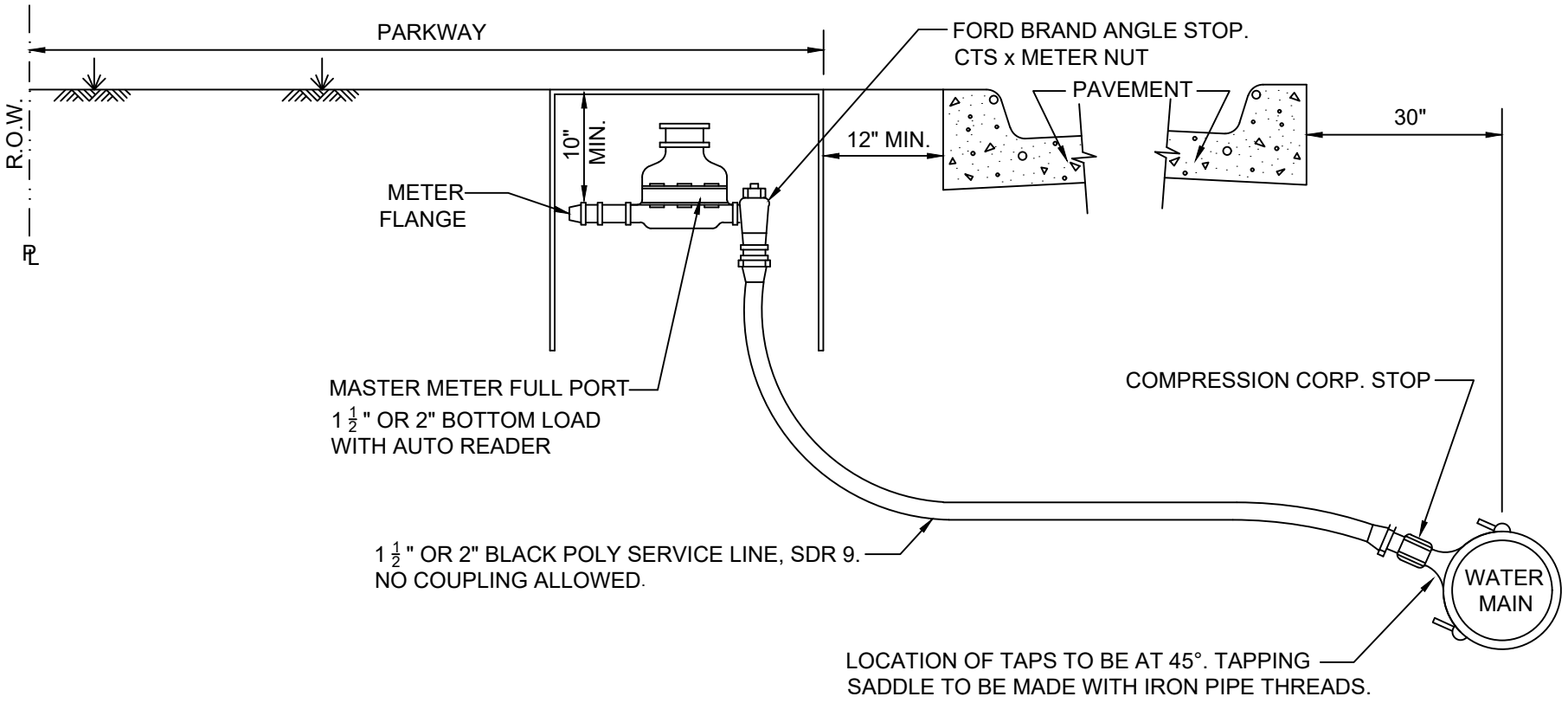
STANDARD DRAWING NO. 4140AM*

WATER SERVICE INSTALLATION

1 1/2" or 2" LINE

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE		
500		
MODIFIED DATE	STANDARD DRAWING NO.	
07/28/23	4140AM*	
NOTICE DATE	APPLIED DATE	ENFORCED DATE
07/28/23	07/28/23	08/28/23



NOTES:

1. METER SHALL NOT BE LOCATED WITHIN SIDEWALKS OR DRIVEWAYS.
2. THE METER AND AUTOMATIC METER READER SHALL BE PROVIDED AND INSTALLED BY THE CITY OF MELISSA AT DEVELOPER'S EXPENSE.
3. METER BOXES SHALL BE CORRUGATED METAL FOR AREAS OF TRAFFIC AND PLASTIC FOR NON TRAFFIC AREAS.
4. SERVICE LINE SHALL BE EMBEDDED IN ⅜" ROCK EMBEDMENT PER DETAIL 3061M.

M* - CITY OF MELISSA REVISION

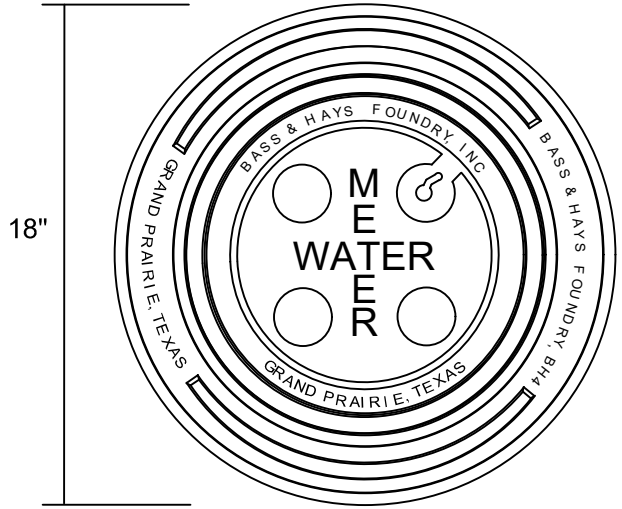
STANDARD DRAWING NO.
4140BM*

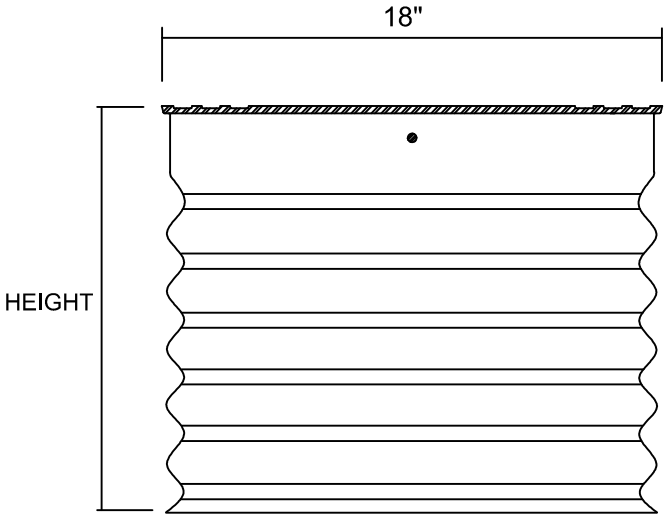
WATER SERVICE INSTALLATION

1 1/2" or 2" LINE

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE	
500	
MODIFIED DATE	STANDARD DRAWING NO.
07/28/23	4140BM*
NOTICE DATE	APPLIED DATE	ENFORCED DATE
07/28/23	07/28/23	08/28/23





62 SERIES GALVANIZED METER BOXES WITH 18" DIA. CORRUGATED CANS		
PART NO.	HEIGHT	WEIGHT
62A	14"	55 LBS
62A1S	14"	55 LBS
62B	18"	70 LBS
62C	24"	80 LBS

METER BOXES SHALL BE PLACED WITHIN THE RIGHT-OF-WAY OR IN A DEDICATED WATER EASEMENT.

FOR METERS LARGER THAN 2", A VAULT IS TO BE USED.

METER BOXES WILL BE INSTALLED AT THE TIME PUBLIC IMPROVEMENTS ARE MADE TO A SUBDIVISION.

M* - CITY OF MELISSA REVISION

STANDARD DRAWING NO. 4141M*

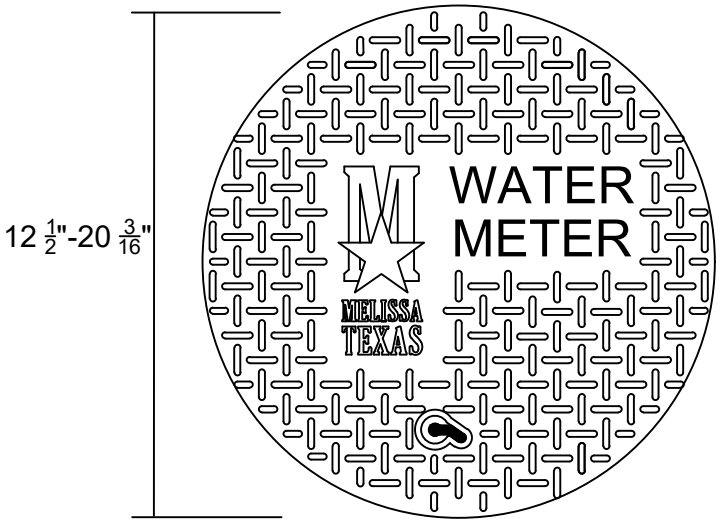
WATER METER BOX DETAIL

TRAFFIC AREAS

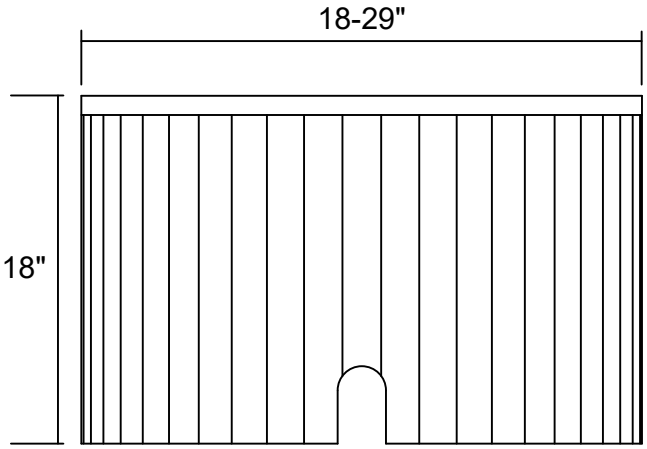
MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE: 502

NOTICE DATE	MODIFIED DATE	STANDARD DRAWING NO.
	09/16/15	4141M*
	APPLIED DATE	ENFORCED DATE



LIST OF ACCEPTABLE WATER METER BOXES
18" DIAMETER CANS: DFW PLASTICS DFW-1818F-B1A STAR MEL BASS & HAYS BHP34P14D1S 3LID P BASS & HAYS BHP34P18D1S 3LID P
24" DIAMETER CANS: DFW PLASTICS DFW-2418F-1BA STAR MEL BASS & HAYS BHP359P18D 3LID P
29" DIAMETER CANS: DFW PLASTICS DFW-2818F-1BA STAR MEL BASS & HAYS BH P55P18 5LIDP



FOR 3/4"-1" METERS, A CIRCULAR POLYMER METER BOX MEASURING 18"x18" IS TO BE USED IN NON TRAFFIC AREAS.

FOR METERS 1 1/2"-2", A CIRCULAR POLYMER METER BOX MEASURING 24"x18" IS TO BE USED IN NON TRAFFIC AREAS OR AS APPROVED BY THE ENGINEER.

FOR METERS LARGER THAN 2", A VAULT IS TO BE USED.

METER BOXES WILL BE INSTALLED AT THE TIME PUBLIC IMPROVEMENTS ARE MADE TO A SUBDIVISION.

ONLY 24" OR 29" METER BOXES SHALL BE USED FOR LOTS WITH FP ELEVATION BELOW 657.65'.

ALL LIDS TO HAVE CITY OF MELISSA LOGO.

M* - CITY OF MELISSA REVISION

WATER METER BOX DETAIL

NON-TRAFFIC AREAS

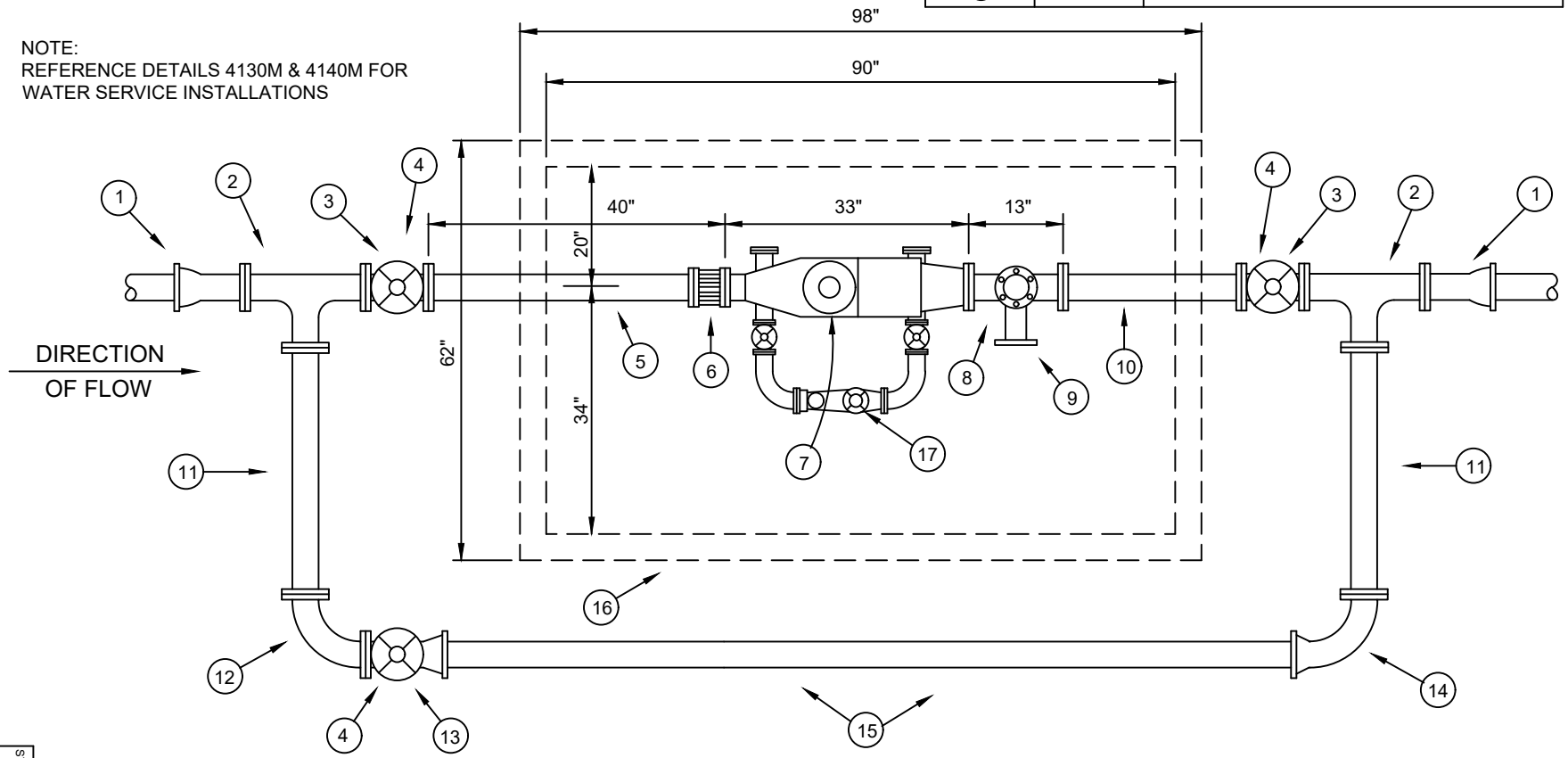
NCTCOG STANDARD SPECIFICATION REFERENCE	
502	
MODIFIED DATE	STANDARD DRAWING NO.
12/09/19	4142M*
NOTICE DATE	APPLIED DATE	ENFORCED DATE
12/10/19	12/10/19	01/10/20

STANDARD DRAWING NO.
4142M*

MATERIALS LIST		
PART NO.	QUANTITY	DESCRIPTION
①	2 EA.	4" X 12" D.I. NIPPLE M.J. X F.
②	2 EA.	4" X 4" D.I. TEE F. X F.
③	2 EA.	4" GATE VALVE F. X F.
④	3 EA.	VALVE STACK RISER COVER & LID
⑤	1 EA.	4" X 40" D.I. NIPPLE F. X SLEEVE
⑥	1 EA.	4" FLANGED COUPLING ADAPTER
⑦	1 EA.	4" MASTER METER WITH RAISED GLASS
⑧	1 EA.	4" X 4" D.I. TEE F. X F. (TEST POINT)
⑨	1 EA.	4" BLIND FLG.

MATERIALS LIST		
PART NO.	QUANTITY	DESCRIPTION
⑩	1 EA.	4" X 24" D.I. NIPPLE F. X F.
⑪	2 EA.	4" X 36" D.I. NIPPLE F. X F.
⑫	1 EA.	4" D.I. 90° BEND F. X F.
⑬	1 EA.	4" GATE VALVE F. X M.J.
⑭	1 EA.	4" D.I. 90° BEND M.J. X F.
⑮	1 EA.	4" D.I. PIPE, CLASS 52, APPROX. 10'
⑯	1 EA.	PRECAST METER VAULT
	1 EA.	VAULT FLOOR (NOT SHOWN)
	1 EA.	ACCESS HATCH (NOT SHOWN)
⑰	1 EA.	BY-PASS METER

NOTE:
REFERENCE DETAILS 4130M & 4140M FOR
WATER SERVICE INSTALLATIONS



M* - CITY OF MELISSA REVISION

STANDARD DRAWING NO.
4150M*

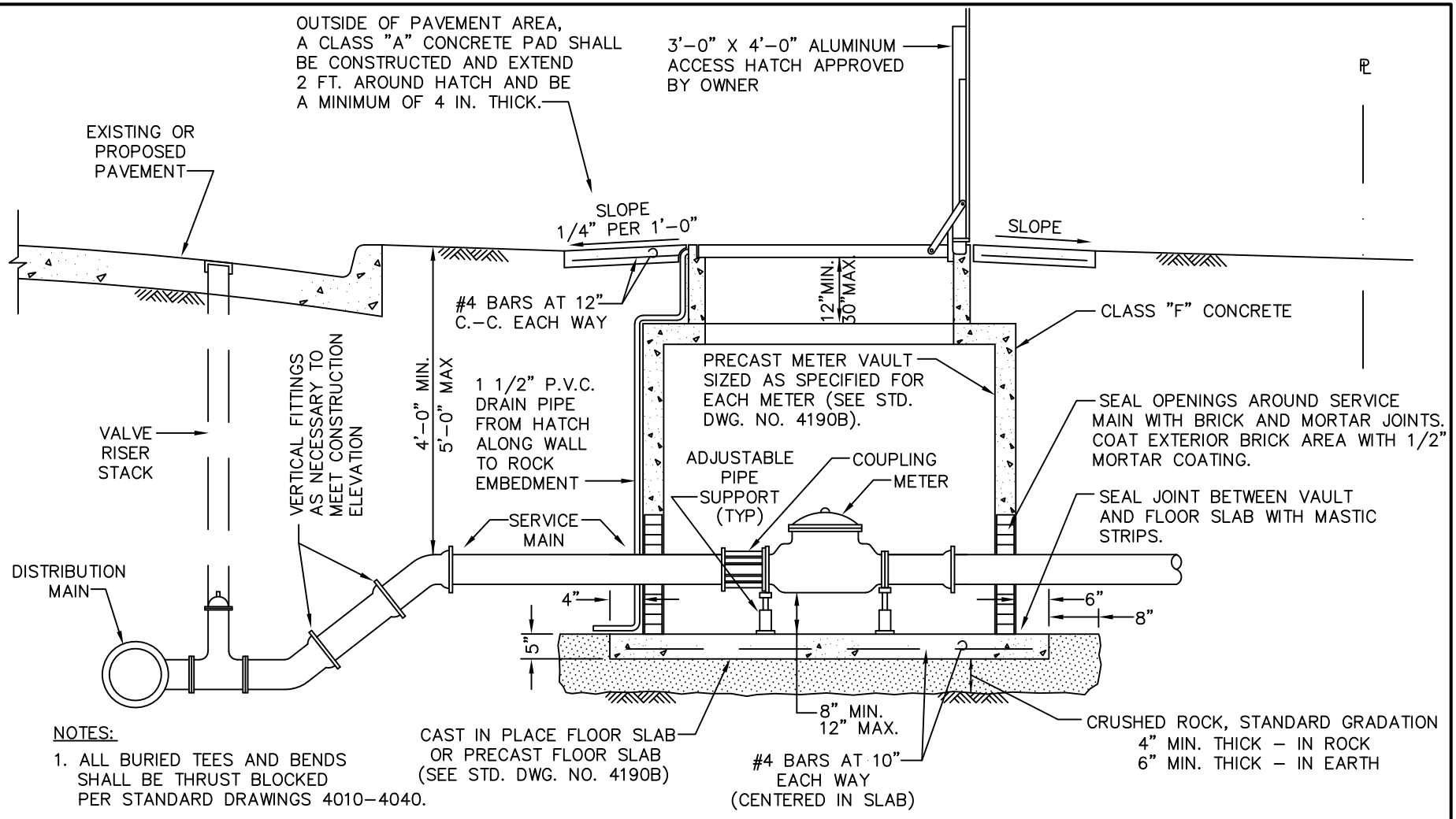
4" COMBINED SERVICE WITH 4" METER

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE
500

DATE
11/13/08

STANDARD DRAWING NO.
4150M*



NOTES:

1. ALL BURIED TEES AND BENDS SHALL BE THRUST BLOCKED PER STANDARD DRAWINGS 4010-4040.
2. ALL BURIED D.I. PIPE AND C.I. FITTINGS SHALL BE POLY-WRAPPED AS SPECIFIED FOR THE ADJECENT DISTRIBUTION MAIN.

ELEVATION VIEW

(D.C. METER SHOWN) N.T.S.

STANDARD DRAWING NO. 4190A

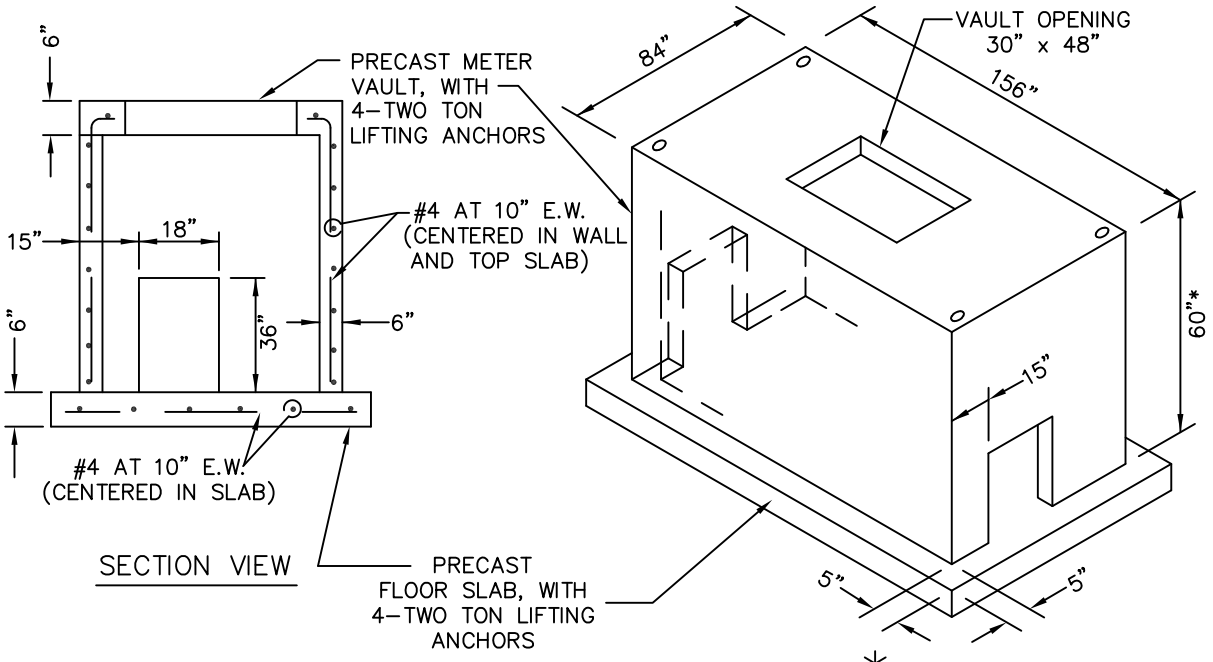
LARGE SERVICE METER VAULT INSTALLATION

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 702.5

DATE AUG '23

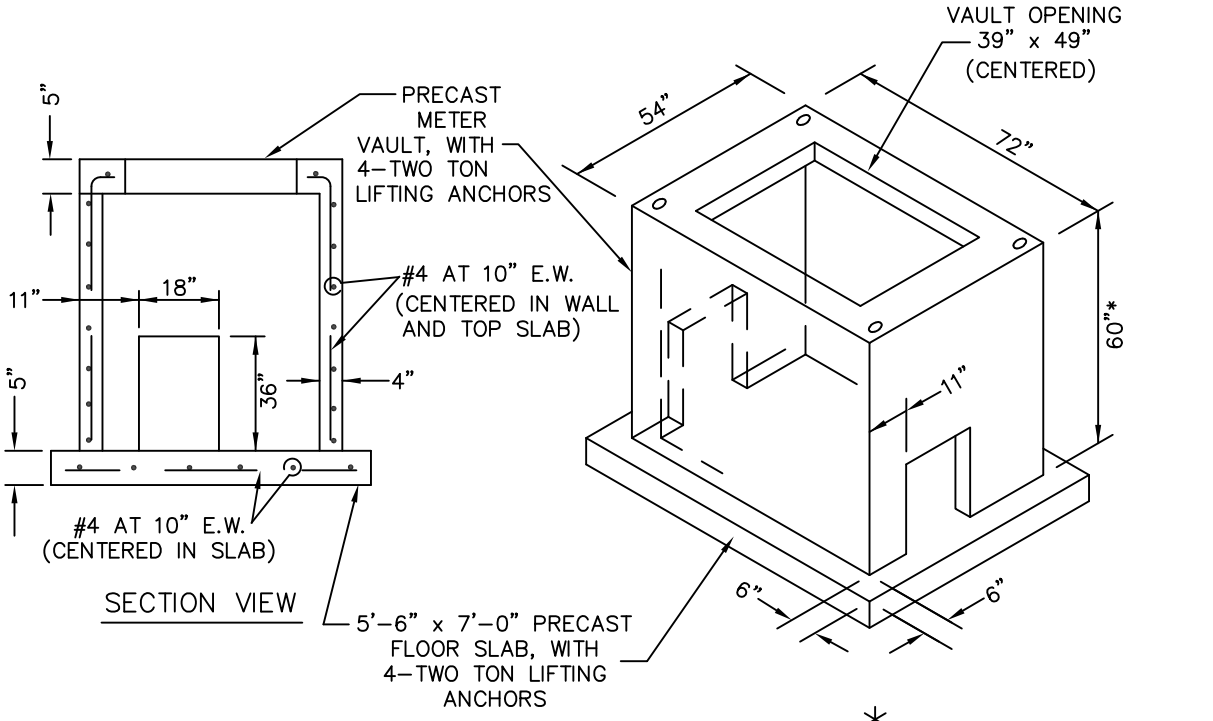
STANDARD DRAWING NO. 4190A



* AVAILABLE HEIGHTS: 36", 48", 60", 90", 96" USE OF WHICH IS SPECIFIED BY OWNER

F.M. METER VAULT

N.T.S.



* AVAILABLE HEIGHTS: 36", 48", 60" USE OF WHICH IS SPECIFIED BY OWNER

D.C. METER VAULT

N.T.S.

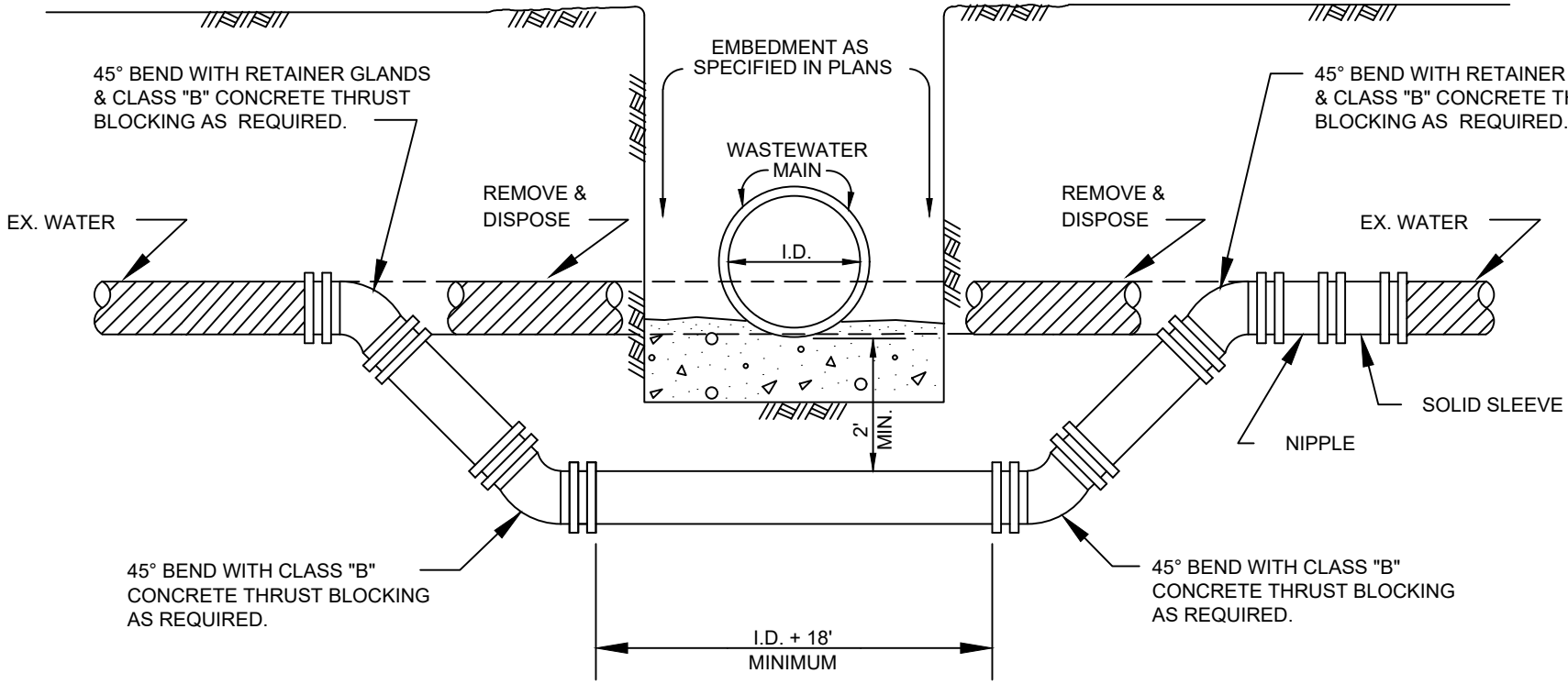
LARGE SERVICE METER PRECAST VAULT

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE: 702.5

DATE: AUG '23

STANDARD DRAWING NO.: 4190B

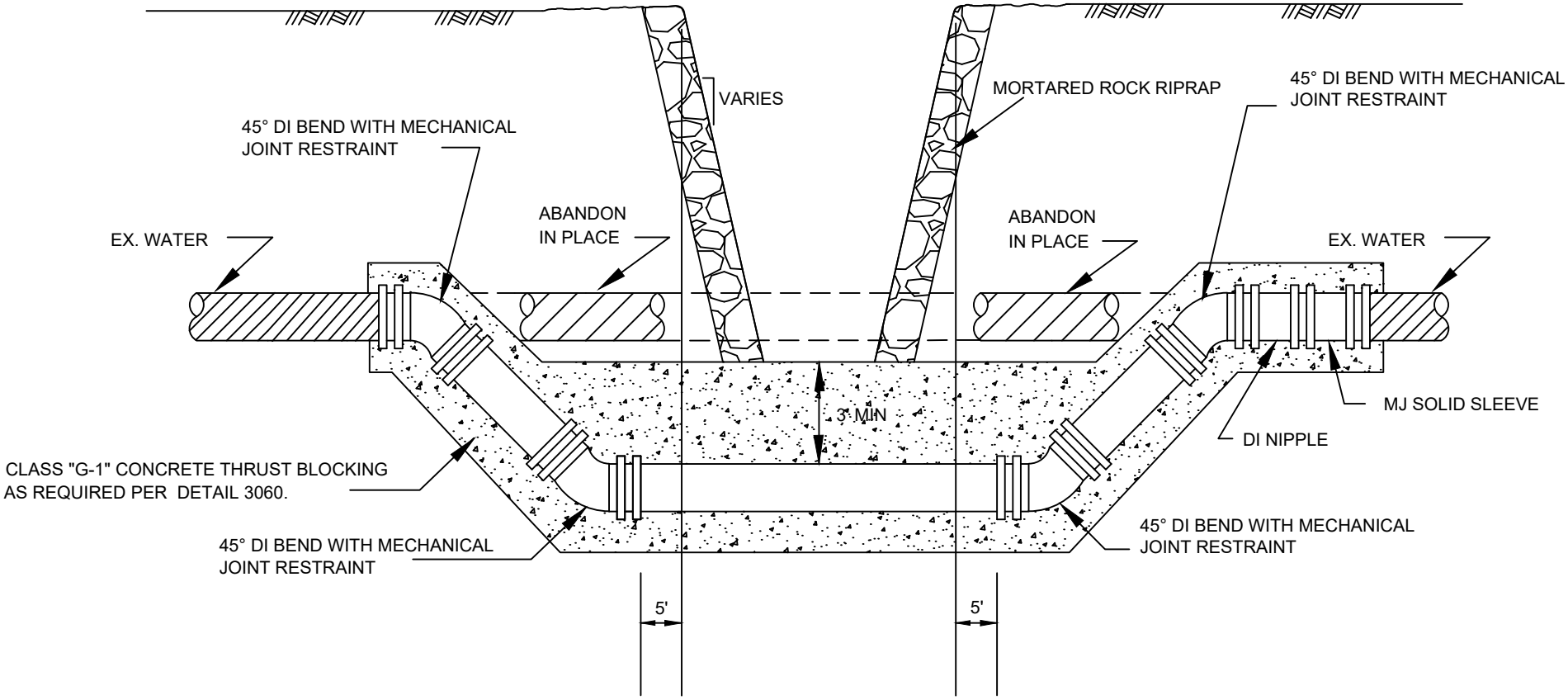


STANDARD DRAWING NO. 4200M

STANDARD WATER MAIN LOWERING

CITY OF MELISSA

	STANDARD SPECIFICATION REFERENCE	
	506.6	
NOTICE DATE	MODIFIED DATE 3/7/2014	STANDARD DRAWING NO. 4200M
	ADOPTED DATE	ENFORCEMENT DATE



M* - CITY OF MELISSA REVISION

STANDARD DRAWING NO. 4201M*

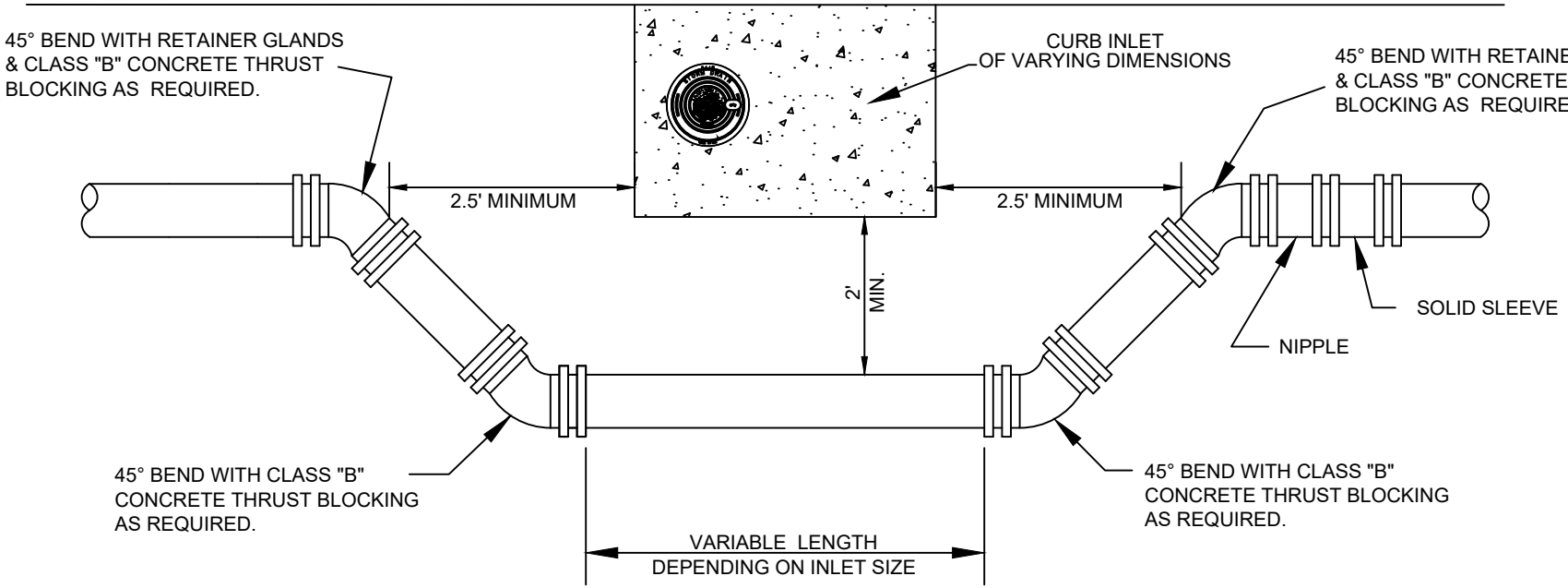
WATER MAIN LOWERING AT CREEK CROSSING

CITY OF MELISSA

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE	
506.6	
DATE	STANDARD DRAWING NO.
08/26/09	4201M*

ROADWAY



STANDARD DRAWING NO. 4202M

STANDARD WATER MAIN ALIGNMENT

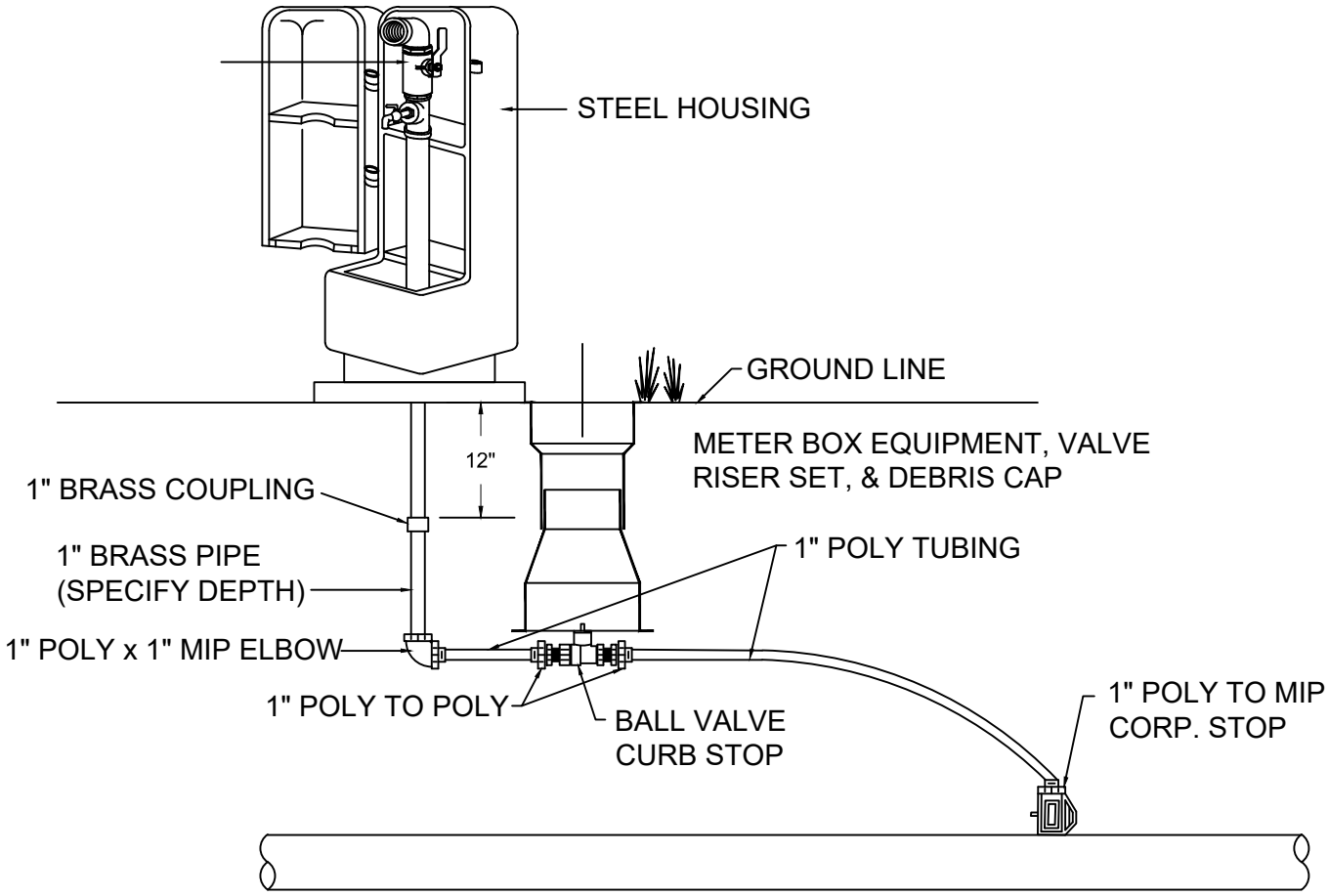
AROUND CURB INLET

MELISSA TX

STANDARD SPECIFICATION REFERENCE		
	MODIFIED DATE	STANDARD DRAWING NO. 4202M
NOTICE DATE 6/14/17	ADOPTED DATE 6/14/17	ENFORCEMENT DATE 7/14/17

APPROVED SAMPLING STATIONS

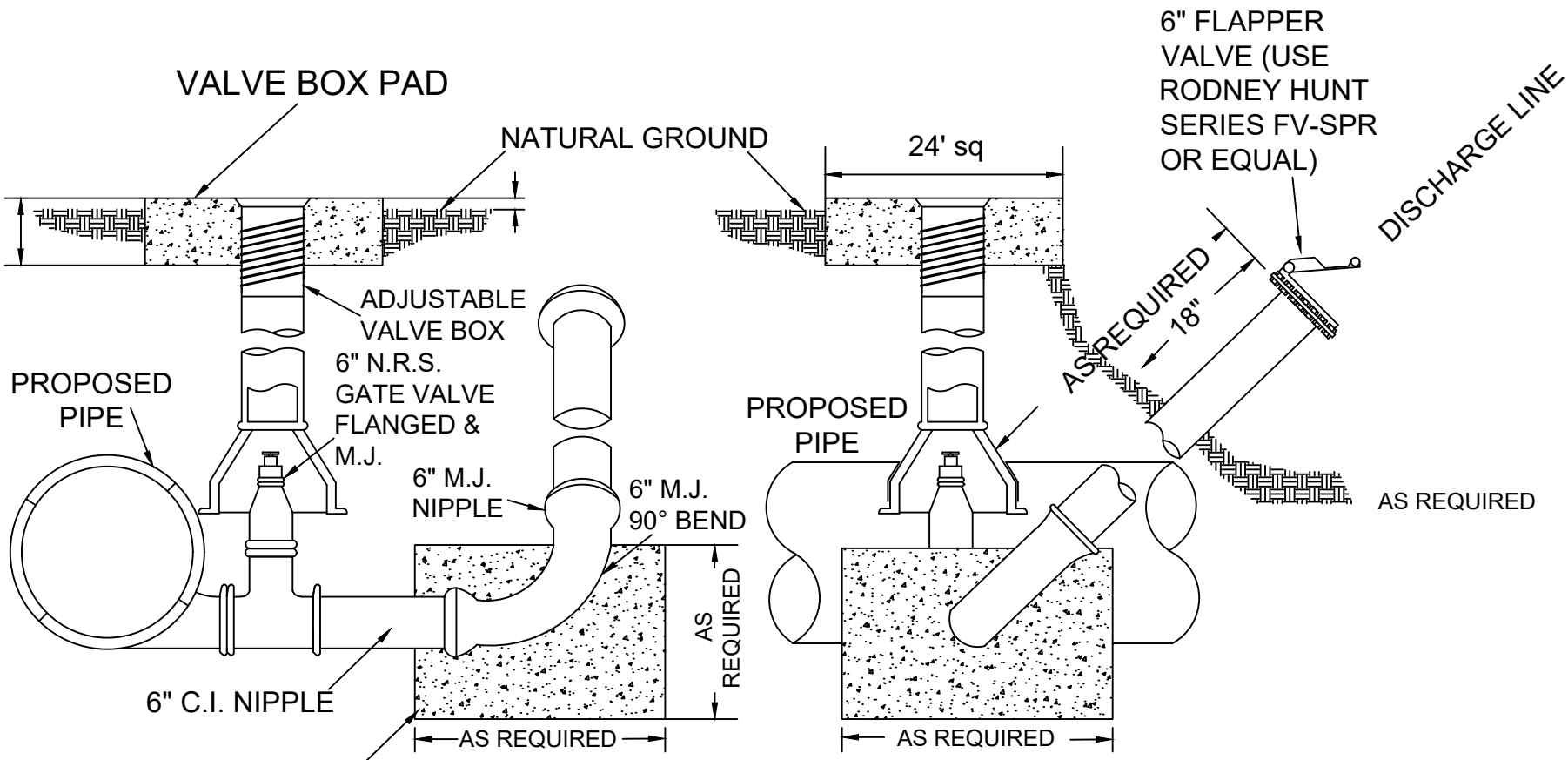
- ECLIPSE NO. 88
- SAFETY GUARD B.O.S.S.



SAMPLING STATIONS SHALL BE 3' BURY, WITH A 1" MIP INLET, AND A 1" FIP DISCHARGE. A 1/4" BENT-NOSE SAMPLING BIBB SHALL BE LOCATED BEFORE THE DISCHARGE. ALL STATIONS SHALL BE ENCLOSED IN A LOCKABLE, NONREMOVABLE, ALUMINUM-CAST HOUSING WITH THE CITY OF MELISSA LOGO. HOUSING SHALL BE ON A 3'-0" x 3'-0" CONCRETE PAD. WHEN OPENED, THE STATION SHALL REQUIRE NO KEY FOR OPERATION, AND THE WATER WILL FLOW IN AN ALL BRASS WATERWAY. ALL WORKING PARTS WILL BE OF BRASS AND SERVICEABLE FROM ABOVE GROUND WITH NO DIGGING. A 1" BALL VALVE WILL CONTROL THE WATER FLOW, AND BE LOCATED BEFORE (OR AFTER) THE SAMPLING BIBB.

M* - CITY OF MELISSA REVISION

	NCTCOG STANDARD SPECIFICATION REFERENCE	
	MODIFIED DATE	STANDARD DRAWING NO.
# SAMPLING STATION	09/25/15	4210M*
# CITY OF MELISSA	NOTICE DATE / APPLIED DATE	ENFORCED DATE



CLASS "B" CONCRETE THRUST BLOCK TO BE PLACED ON UNDISTURBED EARTH.

NOTE:
MUST BE DISCHARGED INTO STORM SEWER, BRIDGE OR CULVERT.

M* - CITY OF MELISSA REVISION

STANDARD DRAWING NO.
4220M *

WATER LINE BLOW OFF VALVE

CITY OF MELISSA

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE	
502	
MODIFIED DATE	STANDARD DRAWING NO.
06/14/24	4220M*
NOTICE DATE	APPLIED DATE	ENFORCED DATE
06/14/24	06/14/24	07/14/24

1. MANHOLE SPACING FOR TRUNK LINES IS AS FOLLOWS:
   - 400' MAX. SPACING FOR UP TO 8" DIAMETER PIPE.
   - 500' MAX. SPACING FOR PIPE 10" THROUGH 15" IN DIAMETER.
   - 800' MAX. SPACING FOR PIPE 16" THROUGH 30" IN DIAMETER.
   - 1000' MAX. SPACING FOR PIPE 31" THROUGH 48" IN DIAMETER.
   - 2000' MAX. SPACING FOR PIPE 54" AND LARGER.
   - AT ALL LOCATIONS WHERE DIAMETER OF PIPE CHANGES.
   - AT ALL LOCATIONS WHERE HORIZONTAL AND VERTICAL ALIGNMENT CHANGES.
   - AT THE ENDS OF ALL MAINS LONGER THAN 400'.
   - AT LATERAL CONNECTIONS 6" AND LARGER.

2. THE MAXIMUM ALLOWABLE MANHOLE SPACING IN SUBDIVISIONS IS 400'. MAXIMUM ALLOWABLE MANHOLE SPACING FOR SEWER LINES WITH HORIZONTAL CURVATURE SHALL BE 300 FEET. A MANHOLE SHALL BE LOCATED AT THE PC AND PT OF THE CURVE.

3. ALL MANHOLES SHALL HAVE A 30" OPENING. THERE SHALL BE A MINIMUM OF 0.10 FEET IN FLOW LINE DROP AT EACH MANHOLE.

4. WHERE SEWER LINES ENTER THE MANHOLE HIGHER THAN 24 INCHES ABOVE THE MANHOLE INVERT, THE INVERT SHALL BE FILLED TO PREVENT SOLIDS DEPOSITION. A DROP PIPE SHALL BE PROVIDED FOR A SEWER LINE ENTERING A MANHOLE MORE THAN 18 INCHES ABOVE THE INVERT. IF THE DROP PIPE IS INSIDE THE MANHOLE, A MINIMUM OF 48 INCHES OF CLEAR SPACE SHALL BE MAINTAINED AND THE DROP SHALL BE PERMANENTLY AFFIXED TO THE WALL OF THE MANHOLE.

5. MANHOLES 10 FEET DEEP SHALL BE A MINIMUM OF 60-INCH DIAMETER AT THE FLOW LINE AND ECCENTRIC WITH ONE VERTICAL WALL.

6. WHEN ECCENTRIC CONES ARE SPECIFIED, THE VERTICAL WALL SHALL BE ALIGNED WITH THE OUTGOING (DOWNSTREAM) PIPE.

7. PIPE MATERIAL SHALL BE AS FOLLOWS:
   - FOR PIPE 6" THROUGH 15" DIAMETER LESS THAN 10' DEEP: USE ASTM D3034 SDR-35 PVC.
   - FOR PIPE 6" THROUGH 15" DIAMETER MORE THAN 10' DEEP: USE ASTM D3034 SDR-26 PVC.
   - FOR PIPE 16" DIAMETER AND LARGER LESS THAN 10' DEEP: USE ASTM F679 SDR-35 (PS 46) PVC.
   - FOR PIPE 16" DIAMETER AND LARGER MORE THAN 10' DEEP: USE ASTM F679 SDR-26 (PS 115) PVC.

8. THE INTERIOR OF ALL WASTEWATER MANHOLES SHALL BE COATED WITH AN APPROVED CORROSION-RESISTANT EPOXY COATING SUCH AS RAVEN 405, SPRAYROQ, NUKOTE AEGIS LINING SYSTEMS, SEWPERCOAT, WARREN EPOXY OR AN APPROVED EQUAL. EPOXY COATING IS NOT REQUIRED FOR MANHOLES LESS THAN 10' DEEP THAT ARE CONSTRUCTED WITH CONSHIELD OR PENETRON BIOMIC SOLUTIONS AEM5772 ADMIXTURES AND CAN BE IDENTIFIED WITH RED TINT. EXISTING MANHOLES THAT ARE ADJUSTED OR CONNECTED TO SHALL BE RECOATED WITH AN APPROVED EPOXY COATING AS NEEDED. NUMBER AND THICKNESS OF COATINGS SHALL BE AS RECOMMENDED BY THE MANUFACTURER.

9. ALL TESTING SHALL CONFORM TO THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION PUBLISHED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG).

10. ALL WASTEWATER LINES SIX (6) INCHES OR LARGER SHALL BE AIR AND MANDREL TESTED, UPON COMPLETION OF FRANCHISE UTILITIES. TELEVISION INSPECTION SHALL ALSO BE REQUIRED WITH MANDREL SHOWN ON VIDEO. ALONG WITH THE PUBLIC WASTEWATER LINES, ALL PRIVATE SEWER LINES WILL BE TESTED PER THE SAME PROCEDURES WITH AN INSPECTOR PRESENT.

11. ALL FORCE MAINS SHALL BE HYDROSTATICALLY TESTED.

12. ALL WASTEWATER MANHOLES SHALL BE VACUUM TESTED, INCLUDING EXISTING SANITARY SEWER MANHOLES THAT ARE ADJUSTED OR CONNECTED TO.

13. SEWER LINES 12 INCHES AND LARGER WILL REQUIRE AN AS-BUILT SURVEY FOR COMPARISON TO THE DESIGN. THE TOLERANCES ALLOWED ARE AS FOLLOWS:
   - FLOW LINE: ±0.10' FROM THE DESIGN
   - PERCENT SLOPE: ±0.10% OF THE DESIGN SLOPE
   - MINIMUM ALLOWABLE SLOPES: AS DEFINED BY TCEQ.

14. THE CITY ENGINEER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS IN ADVANCE OF CONSTRUCTION OF ANY AND ALL PUBLIC IMPROVEMENTS.

15. A PLUG WILL BE INSTALLED IN THE CLOSEST DOWNSTREAM MANHOLE TO THE TIE-IN LOCATION. THE PLUG WILL BE REMOVED ONLY AFTER ALL PUBLIC IMPROVEMENTS HAVE BEEN COMPLETED AND PASSED TESTING.

16. DENSITY TESTING FOR UTILITY BACKFILL SHALL BE PERFORMED PER TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF STREETS, HIGHWAYS, AND BRIDGES ITEM 132.

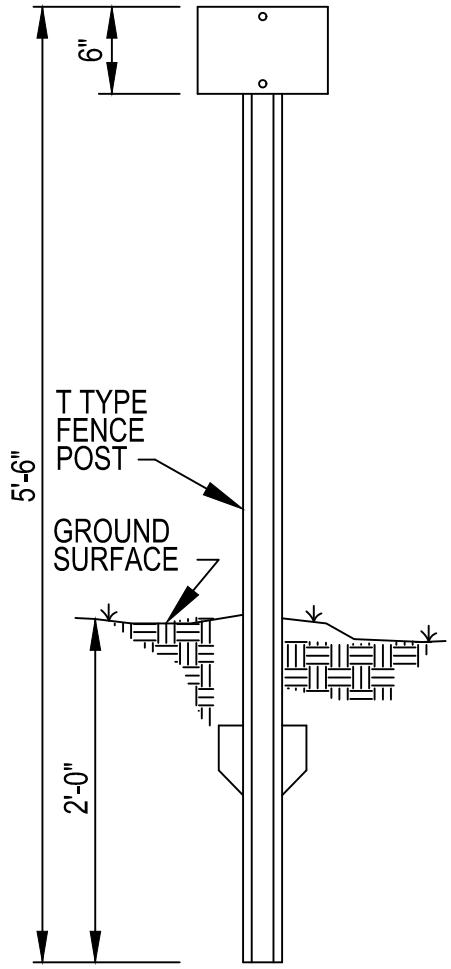
17. PUBLIC WORKS SHALL TV TEST ALL SEWER LATERALS. ANY RE-TV TESTING REQUIRED WILL INCUR A FEE OF $50 PER LATERAL.

M* - CITY OF MELISSA REVISION

GENERAL CONSTRUCTION WASTEWATER NOTES

CITY OF MELISSA, TEXAS

NCTCOG STANDARD SPECIFICATION REFERENCE	
500	
MODIFIED DATE	STANDARD DRAWING NO.
06/14/24	5001M*
NOTICE DATE	APPLIED DATE	ENFORCED DATE
06/14/24	06/14/24	07/14/24



CITY OF MELISSA

SANITARY SEWER

MANHOLE

NOTES:

1. THE CONTRACTOR SHALL FURNISH AND INSTALL THE STEEL POST AND MOUNT THE SIGN ON THE POST.

2. THE SIGN SHALL HAVE BLACK LETTERING ON AN ORANGE BACKGROUND.

3. POST SIGNS SHALLBE MOUNTED WITH TWO 1/4" MACHINE BOLTS, LOCK WASHERS AND HEX NUTS.

4. SIGNS SHALL BE PLACED AT BOTH SIDES OF HIGHWAYS, ROADS OR RAILROAD CROSSINGS WHICH EVER THE CASE MAY BE.

M* - CITY OF MELISSA REVISION

WASTEWATER MARKER SIGN		NCTCOG STANDARD SPECIFICATION REFERENCE N/A	
CITY OF MELISSA, TEXAS	MELISSA TX	DATE 11/06/03	STANDARD DRAWING NO. 5002M*

TELEVISION REPORT ON SANITARY SEWERS

A. THE CONTRACTOR WILL PROVIDE A DIGITAL FILE AND SUITABLE LOG OF INSPECTION PERFORMED BY EXPERIENCED PERSONNEL ON A CLOSED CIRCUIT COLOR TELEVISION (ACCURATE FOOTAGE DISPLAYED ON VIDEO).

B. ALL PERTINENT DATA RECORDED IN AUDIO ON THE MEDIA TO INCLUDE:

1. DATE AND TIME OF RECORDING
2. CONTRACTOR'S NAME, PROJECT NAME, AND CONTRACT NUMBER
3. NAME OF THE COMPANY PERFORMING PERFORMING THE TELEVISION INSPECTION AND THE NAME OF THE OPERATOR
4. LOCATION, DESIGNATION, AND SIZE OF THE MAIN AND THE DIRECTION OF THE TEST
5. EVERY 50-FOOT STATION
6. STATION OF EACH MANHOLE
7. LOCATION AND STATION OF DEFICIENCIES IN ACCORDANCE WITH PACP AS DEFINED BY NASSCO
8. LOCATION AND DIRECTION OF ENTRY OF LATERALS

C. PVC PIPE SHALL HAVE A DEFLECTION TEST USING A 5% (GO NO GO) TEST MANDREL OF APPROPRIATE SIZE WHICH SHALL BE VISIBLE ON VIDEO AT ALL TIMES. MANDREL SHALL STAY 30 FEET IN FRONT OF THE CAMERA AT ALL TIMES.

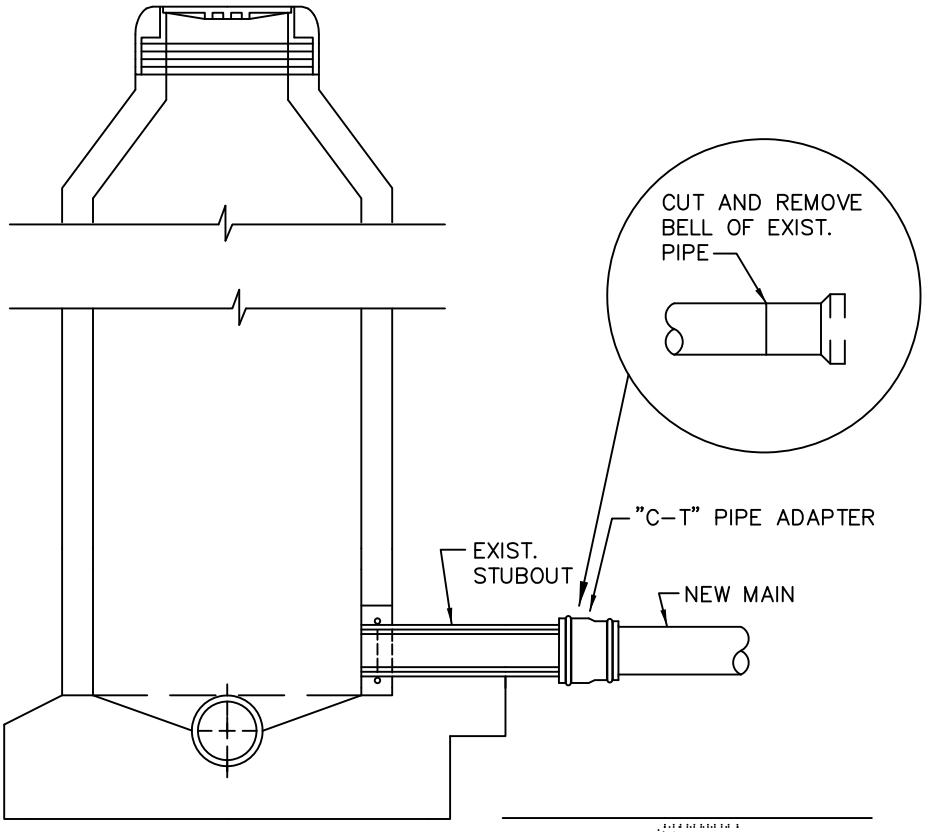
D. THE CONTRACTOR WILL ALSO PROVIDE A WRITTEN TELEVISION REPORT (INDICATING MANHOLE NUMBERS) THAT WILL ACCOMPANY THE VIDEO RECORDING. THIS WRITTEN REPORT MUST INCLUDE:

1. MANHOLE NUMBERS (THESE NUMBERS MUST MATCH MANHOLE NUMBERS ON "AS BUILT" DRAWINGS).
2. SERVICE CONNECTION LOCATIONS RIGHT OR LEFT.
3. REFERENCE TO SERVICE CONNECTION LOCATIONS OUT OF MANHOLES.
4. LOCATIONS OF SUSPECTED AND OBVIOUS DEFICIENCIES (i.e. BAD JOINTS, BREAKS, OR LEAKS, ETC).
5. DEPTH OF EACH MANHOLE.
6. ACTUAL MEASURED DISTANCE (ON GROUND) BETWEEN MANHOLES.

E. ALL VISUAL AND TELEVISION INSPECTIONS SHALL BE COMPLETED AND APPROVED BY THE CITY INSPECTOR FROM THE CITY OF MELISSA ENGINEERING DEPARTMENT PRIOR TO PLACING OF ANY PAVEMENT. AN INSPECTOR FROM THE MELISSA ENGINEERING DEPARTMENT MUST WITNESS THE RECORDING. THE ENGINEERING DEPARTMENT SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE FOR SCHEDULING. TELEVISION RECORDINGS MUST CLEARLY SHOW DETAILS OF STRUCTURAL DEFECTS, MISALIGNMENTS AND INFILTRATION. ALL KNOWN OR INDICATED BREAKS SHALL BE REPAIRED BY THE CONTRACTOR, REGARDLESS OF THE TEST ALLOWANCES. FAULTY SECTIONS OF SEWER LINES OR MANHOLES REJECTED BY THE ENGINEER SHALL BE REMOVED AND RELAID BY THE CONTRACTOR. SUNKEN MANHOLES WILL NOT BE ACCEPTED. ALL MANHOLE INVERTS MUST BE COMPLETED PRIOR TO VIDEO RECORDING.

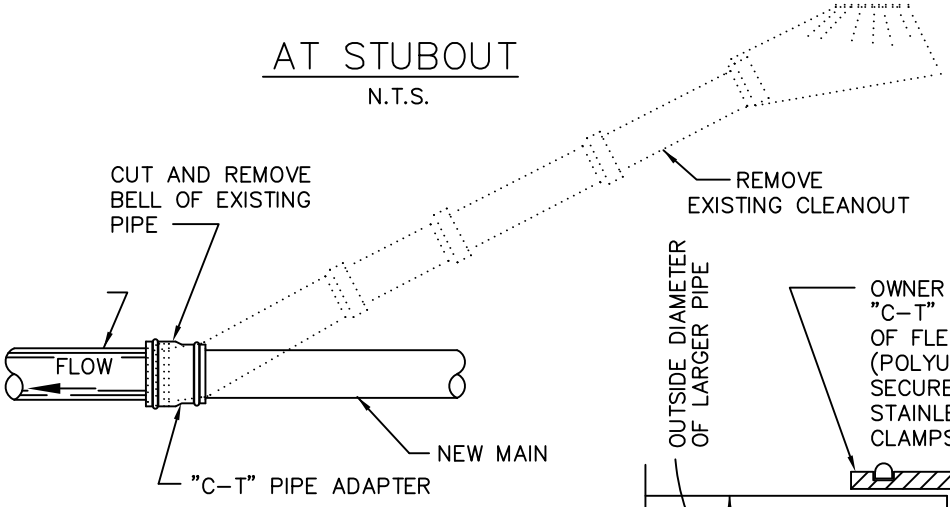
M * - CITY OF MELISSA REVISION

TELEVISION REPORT SPECIFICATION	MELISSA TX	NCTCOG STANDARD SPECIFICATION REFERENCE: 507.5	
		MODIFIED DATE: 5/22/19	STANDARD DRAWING NO.: 5003M*
CITY OF MELISSA, TEXAS	NOTICE DATE: 7/11/19	APPLIED DATE: 7/11/19	ENFORCED DATE: 8/11/19



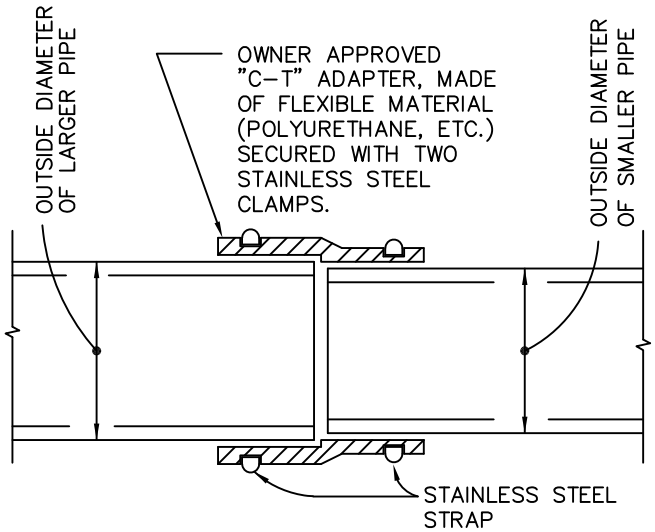
AT STUBOUT

N.T.S.



AT CLEANOUT

N.T.S.



"C–T" PIPE ADAPTER

N.T.S.

NOTE:

THIS DETAIL FOR USE ONLY WHEN NEW MAIN WILL NOT MATE WITH EXISTING MAIN JOINT DUE TO DIFFERENT DIMENSIONS OR MATERIALS AND A MANHOLE IS NOT REQUIRED.

WASTEWATER MAIN TIE–IN

AT CLEANOUT OR M.H. STUBOUT

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE

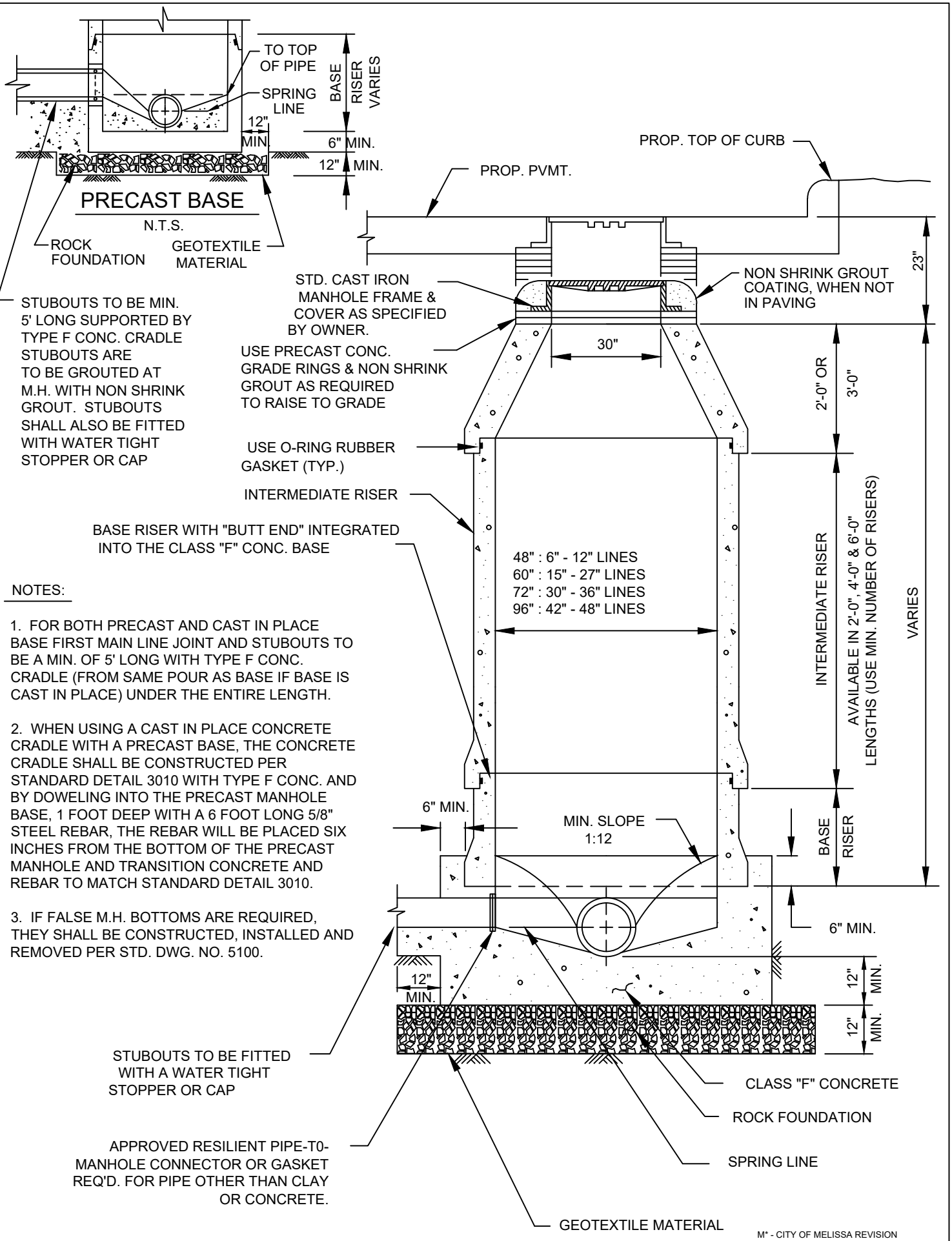
502.10

DATE

AUG '23

STANDARD DRAWING NO.

5010



NOTES:

1. FOR BOTH PRECAST AND CAST IN PLACE BASE FIRST MAIN LINE JOINT AND STUBOUTS TO BE A MIN. OF 5' LONG WITH TYPE F CONC. CRADLE (FROM SAME POUR AS BASE IF BASE IS CAST IN PLACE) UNDER THE ENTIRE LENGTH.

2. WHEN USING A CAST IN PLACE CONCRETE CRADLE WITH A PRECAST BASE, THE CONCRETE CRADLE SHALL BE CONSTRUCTED PER STANDARD DETAIL 3010 WITH TYPE F CONC. AND BY DOWELING INTO THE PRECAST MANHOLE BASE, 1 FOOT DEEP WITH A 6 FOOT LONG 5/8" STEEL REBAR, THE REBAR WILL BE PLACED SIX INCHES FROM THE BOTTOM OF THE PRECAST MANHOLE AND TRANSITION CONCRETE AND REBAR TO MATCH STANDARD DETAIL 3010.

3. IF FALSE M.H. BOTTOMS ARE REQUIRED, THEY SHALL BE CONSTRUCTED, INSTALLED AND REMOVED PER STD. DWG. NO. 5100.

M* - CITY OF MELISSA REVISION

WASTEWATER MANHOLE

PRECAST

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE
502.1

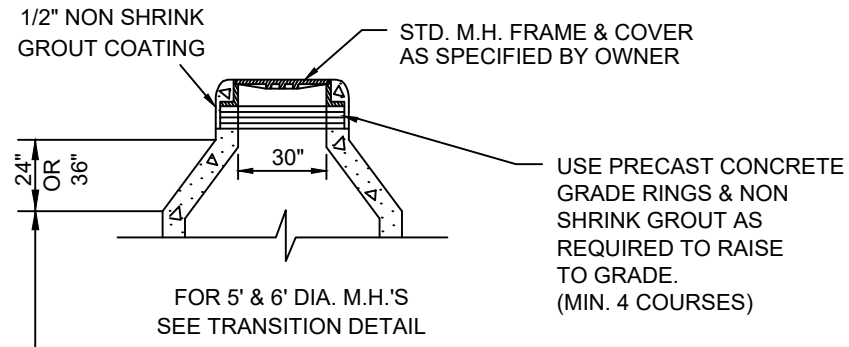
DATE
11/13/08

STANDARD DRAWING NO.
5020M*

ROOF OPTIONS

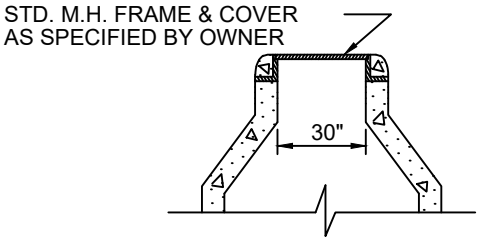
N.T.S.

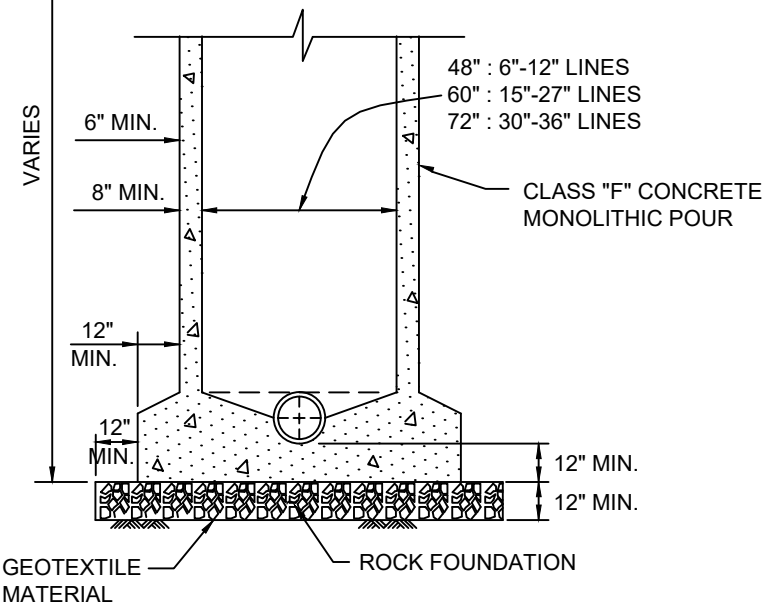
ADJUSTABLE FRAME

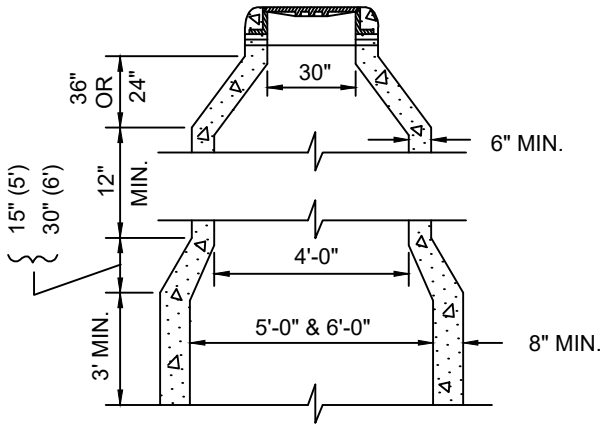


FOR 5' & 6' DIA. M.H.'S
SEE TRANSITION DETAIL

FRAME CAST IN CONC.







TRANSITION DETAIL FOR

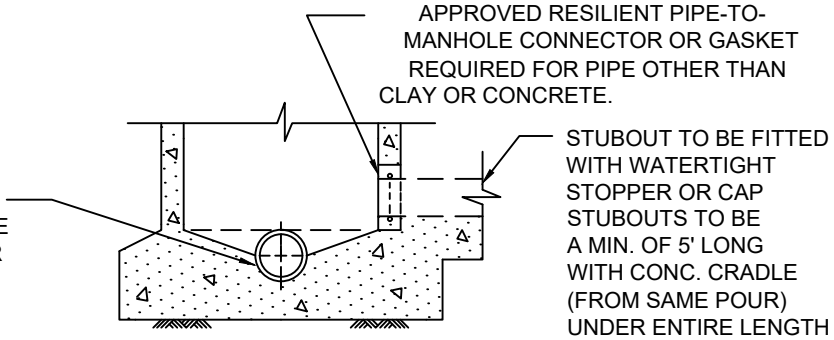
5' & 6' DIA. M.H.'S

N.T.S.

NOTES

1. WHERE M.H.'S ARE IN "PROPOSED" PAVING, FRAME & COVER SHALL BE SET 23" BELOW THE PROPOSED PAVEMENT GRADE.

2. IF FALSE M.H. BOTTOMS ARE REQUIRED THEY SHALL BE CONSTRUCTED, INSTALLED AND REMOVED. PER STD. DWG. NO. 5100.



STUBOUT CONNECTION

N.T.S.

M* - CITY OF MELISSA REVISION

WASTEWATER MANHOLE

CAST-IN-PLACE

MELISSA TX

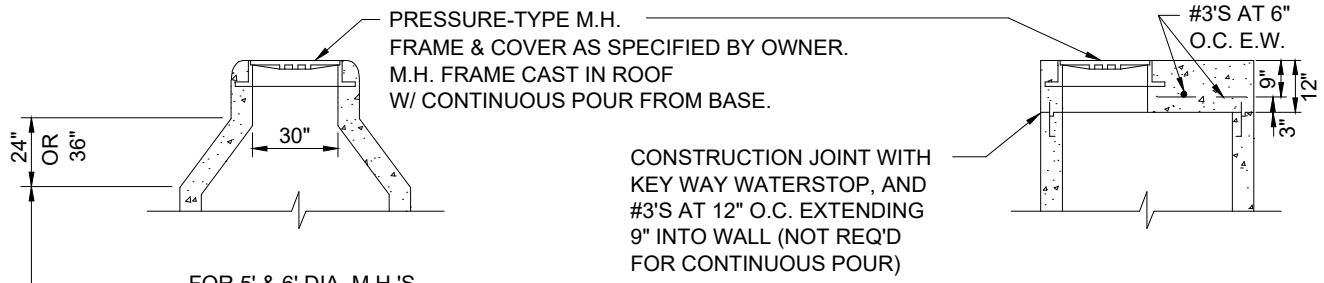
NCTCOG STANDARD SPECIFICATION REFERENCE

502.1

DATE	STANDARD DRAWING NO.
11/13/08	5030M*

CONCRETE CONE ⇦ ROOF OPTIONS ⇨ REINFORCED CONCRETE SLAB

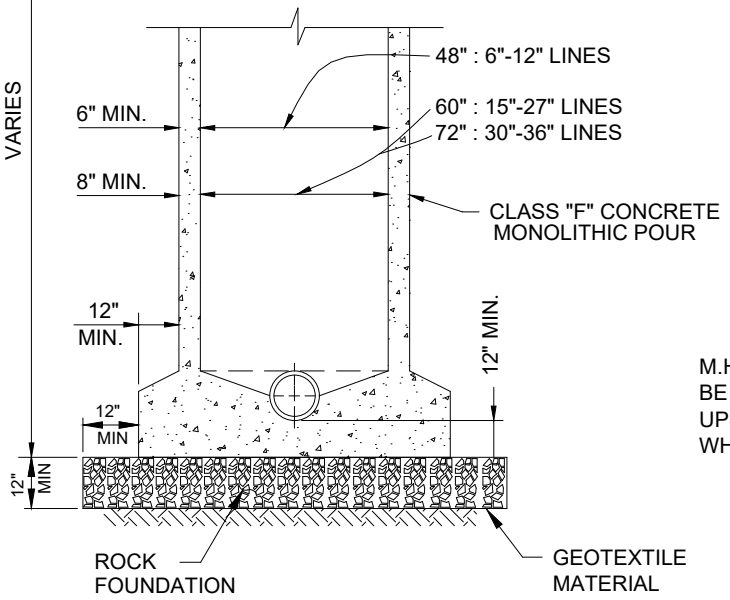
N.T.S.

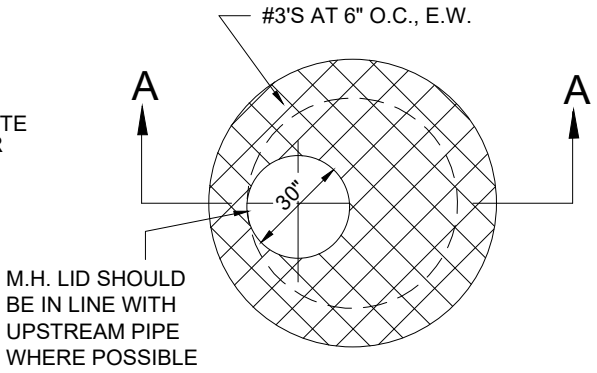


FOR 5' & 6' DIA. M.H.'S SEE TRANSITION DETAIL

SECTION A - A

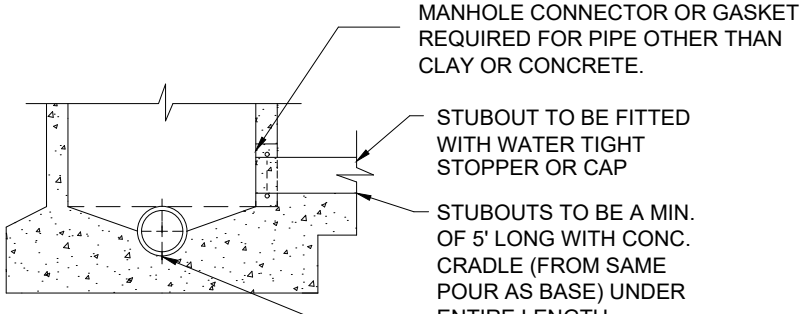
N.T.S.





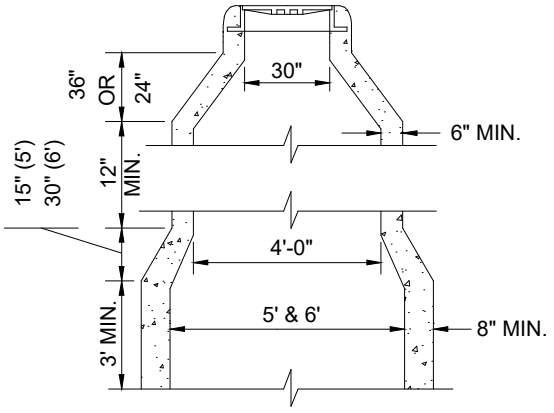
ROOF STEEL LAYOUT

N.T.S.



STUBOUT CONNECTION

N.T.S.



TRANSITION DETAIL FOR 5' & 6' DIA. M.H.'S

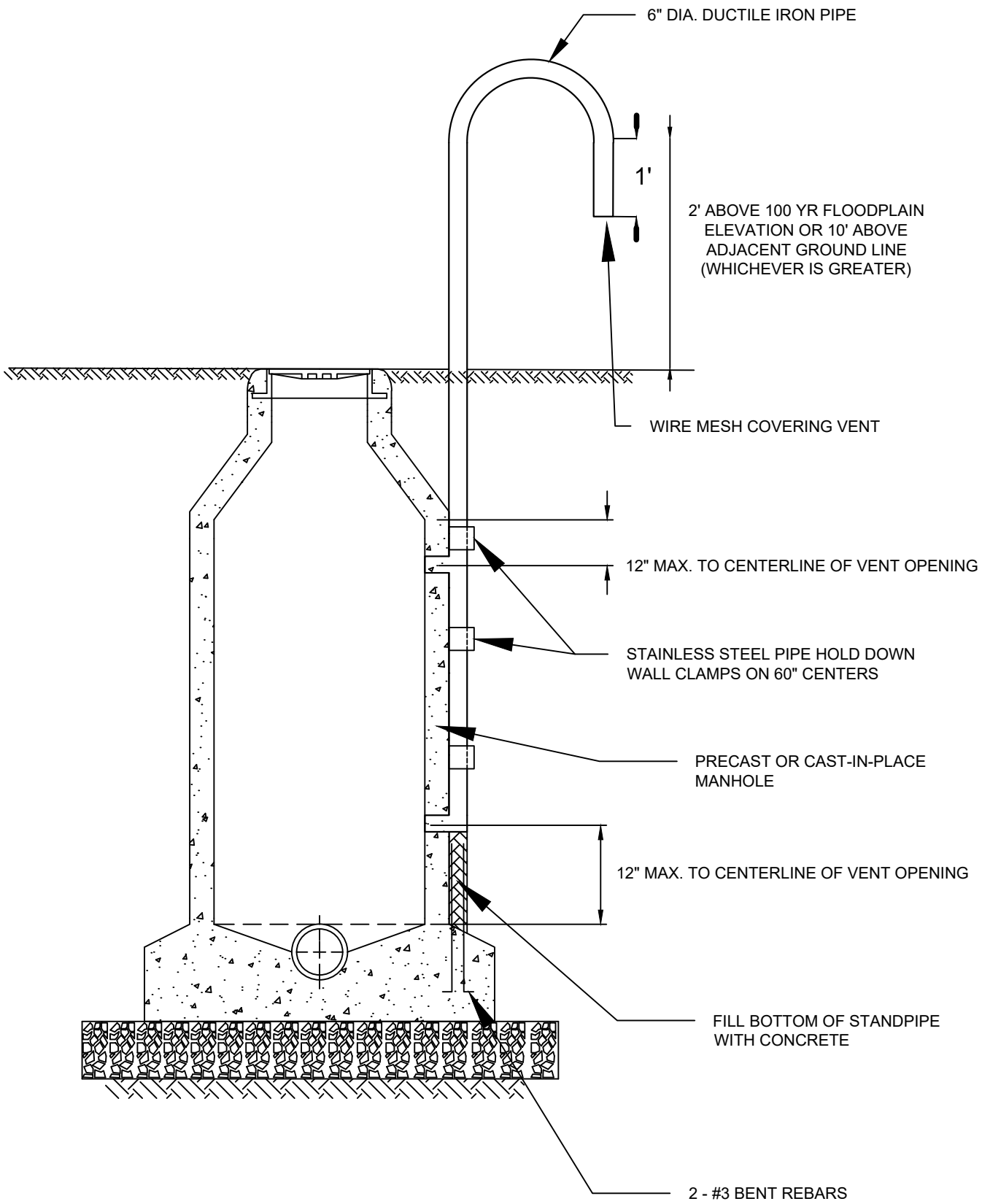
N.T.S.

M* - CITY OF MELISSA REVISION

WASTEWATER MANHOLE

PRESSURE-TYPE

NCTCOG STANDARD SPECIFICATION REFERENCE		
502.1		
MODIFIED DATE	STANDARD DRAWING NO.	
06/14/24	5050M*	
NOTICE DATE	APPLIED DATE	ENFORCED DATE
06/14/24	06/14/24	07/14/24

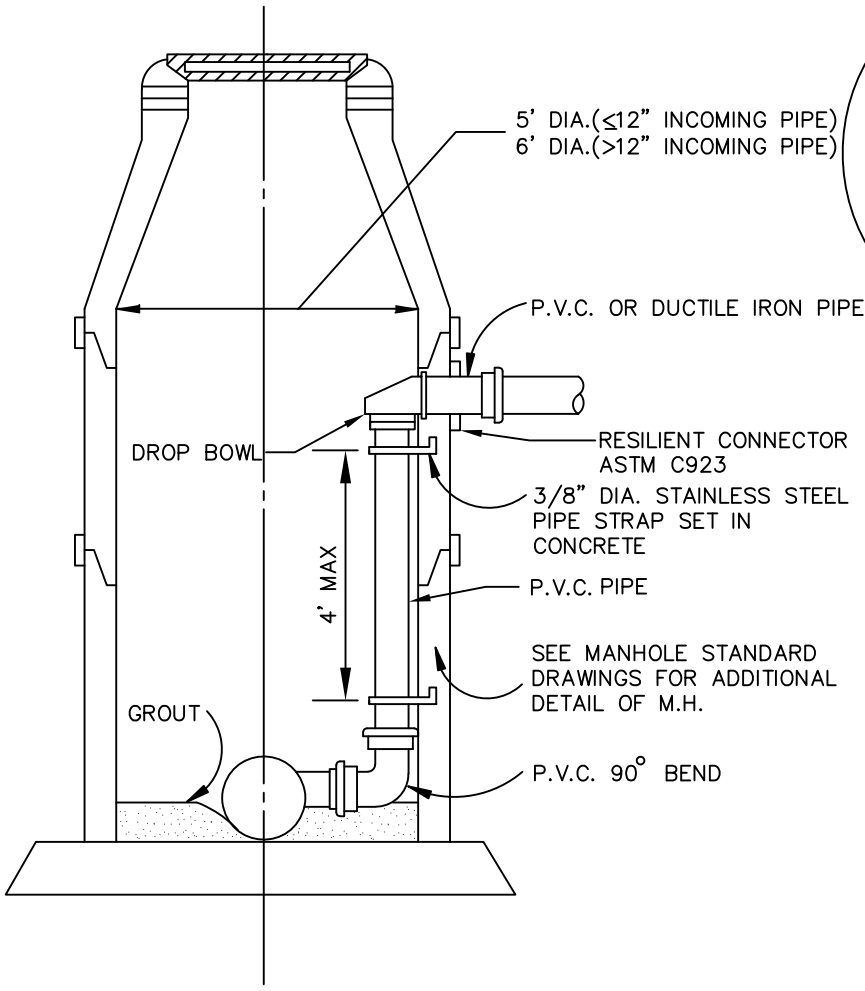


M* - CITY OF MELISSA REVISION

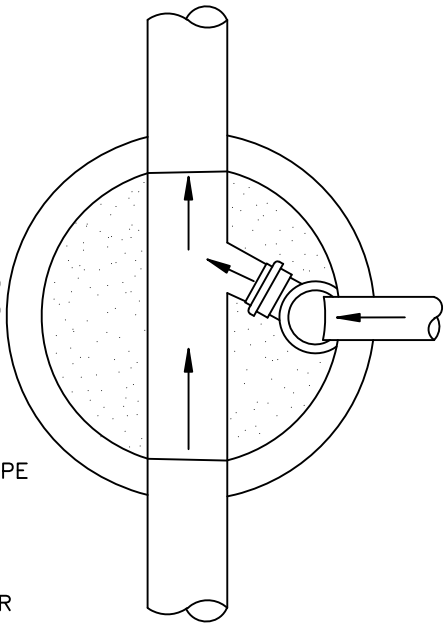
WASTEWATER MANHOLE

VENTED

NCTCOG STANDARD SPECIFICATION REFERENCE		
500		
	MODIFED DATE	STANDARD DRAWING NO.
	06/28/16	5060M*
NOTICE DATE	APPPLIED DATE	ENFORCED DATE
06/28/16	07/28/16	07/28/16



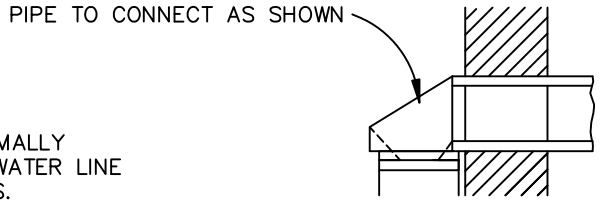
ELEVATION
N.T.S.



PLAN
N.T.S.

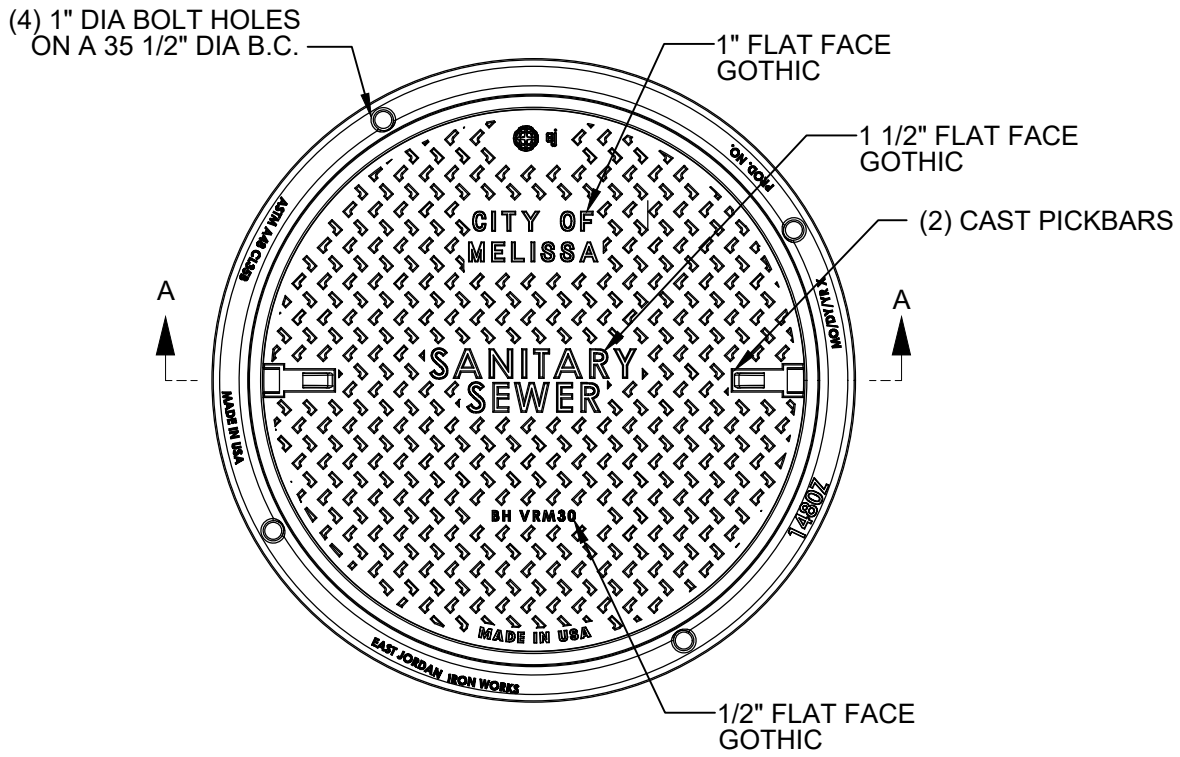
NOTE:

1. FLOW LINE OF SURCHARGE LINE NORMALLY PLACED AT TOP OF EXISTING WASTEWATER LINE UNLESS NOTED OTHERWISE ON PLANS.
2. MAXIMUM SPACING OF 4' ON PIPE STRAPS. 2 STRAPS MINIMUM. ALL STRAP PARTS SHALL BE STAINLESS STEEL.

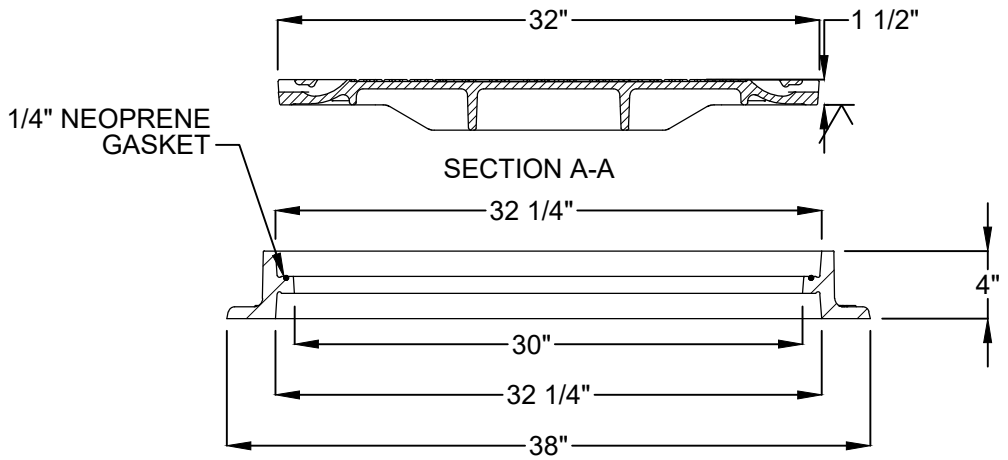


WEIR DETAIL
N.T.S.

WASTEWATER MANHOLE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.1	
INSIDE DROP CONNECTION		DATE AUG '23	STANDARD DRAWING NO. 5080



COVER SECTION



SECTION A-A

FRAME SECTION

NOTES:

1. MANHOLE FRAME AND COVER TO BE APPROVED BY CITY OF MELISSA PRIOR TO PURCHASE.

2. A WATERTIGHT RING AND SEALED COVER (DETAIL 5085BM)SHALL BE USED IN AREAS SUBJECT TO WATER INTRUSION, IN 100-YEAR FLOOD PLAINS, AND FOR ALL FORCE MAIN CONNECTIONS.

3. ALL MANHOLE COVERS SHALL HAVE "SANITARY SEWER" AND "CITY OF MELISSA" STAMPED.

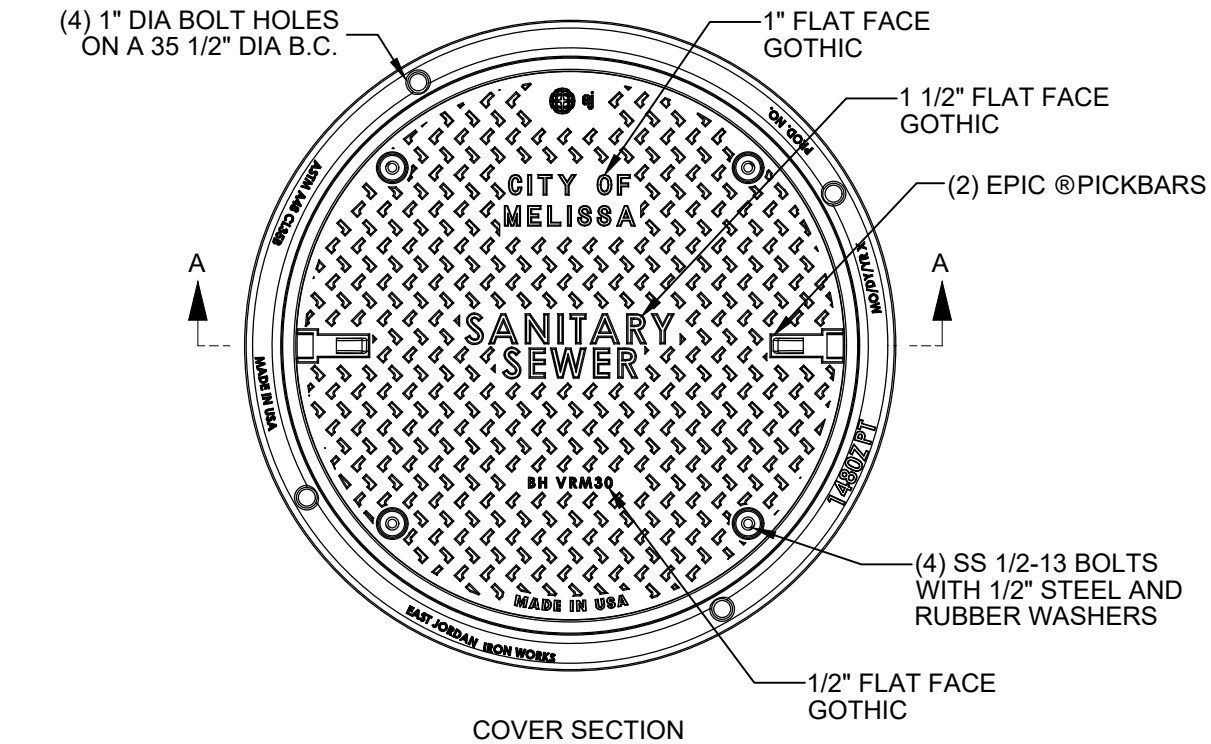
LIST OF ACCEPTABLE WASTEWATER MANHOLE RING & COVERS
32" DIAMETER COVERS: BASS & HAYES VRM30 NEENAH FOUNDRY R-931 GASKETED LID

M* - CITY OF MELISSA REVISION

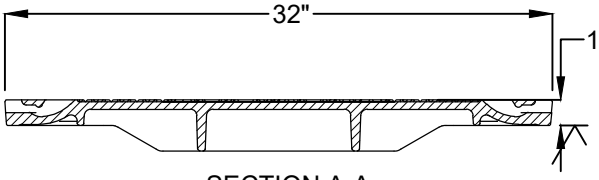
WASTEWATER MANHOLE RING & COVER

LOOSE FIT

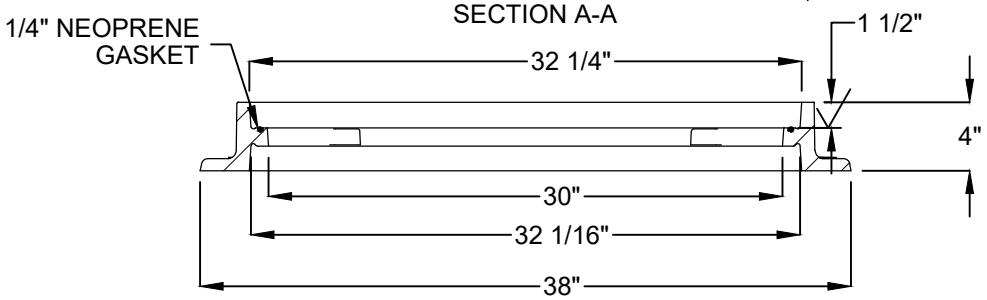
NCTCOG STANDARD SPECIFICATION REFERENCE	
502.1	
MODIFIED DATE	STANDARD DRAWING NO.
7/2/18	5085AM*
NOTICE DATE	ADOPTED DATE	ENFORCEMENT DATE
11/17/17	11/17/17	12/17/17



COVER SECTION



SECTION A-A



FRAME SECTION

NOTES:

1. MANHOLE FRAME AND COVER TO BE APPROVED BY CITY OF MELISSA PRIOR TO PURCHASE.

2. A WATERTIGHT RING AND SEALED COVER (DETAIL 5085BM) SHALL BE USED IN AREAS SUBJECT TO WATER INTRUSION, IN 100-YEAR FLOODPLAINS, AND FOR ALL FORCE MAIN CONNECTIONS.

3. ALL MANHOLE COVERS SHALL HAVE "SANITARY SEWER" AND "CITY OF MELISSA" STAMPED.

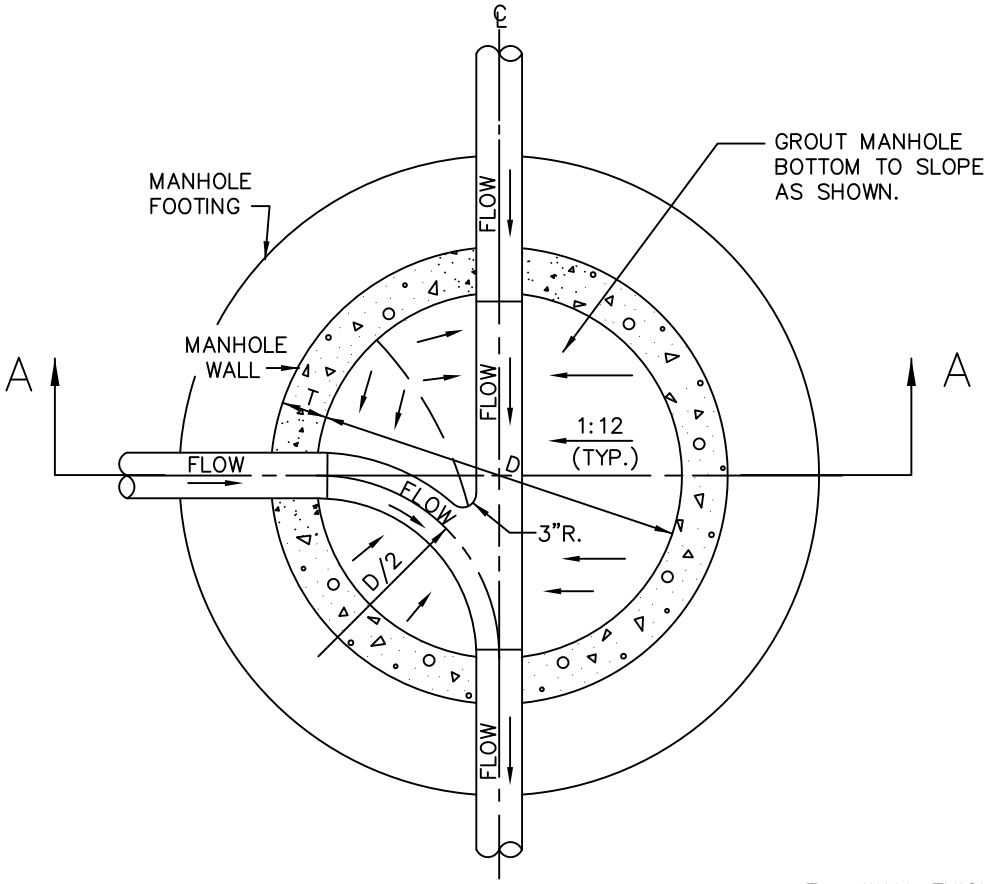
LIST OF ACCEPTABLE WASTEWATER MANHOLE RING & COVERS
32" DIAMETER COVERS: BASS & HAYES VRM30 NEENAH FOUNDRY R-1931 BOLTED & GASKETED LID

M* - CITY OF MELISSA REVISION

WASTEWATER MANHOLE RING & COVER

WATERTIGHT

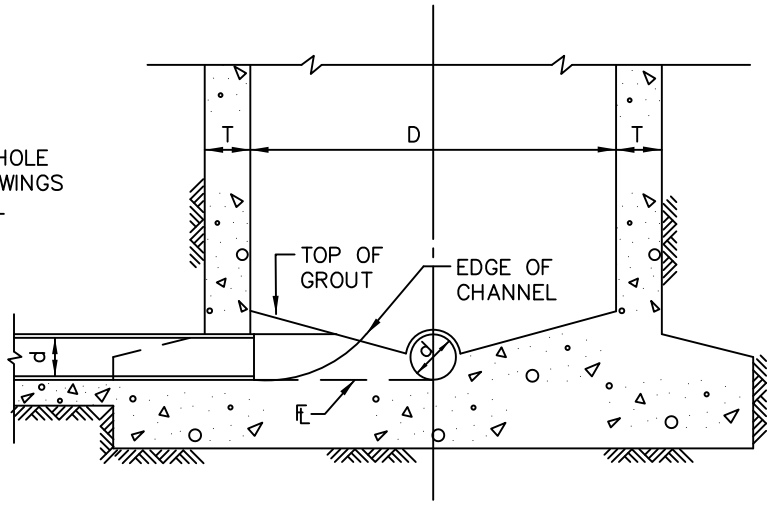
NCTCOG STANDARD SPECIFICATION REFERENCE	
502.1	
MODIFIED DATE	STANDARD DRAWING NO.
7/2/18	5085BM*
NOTICE DATE	ADOPTED DATE / ENFORCEMENT DATE



PLAN
N.T.S.

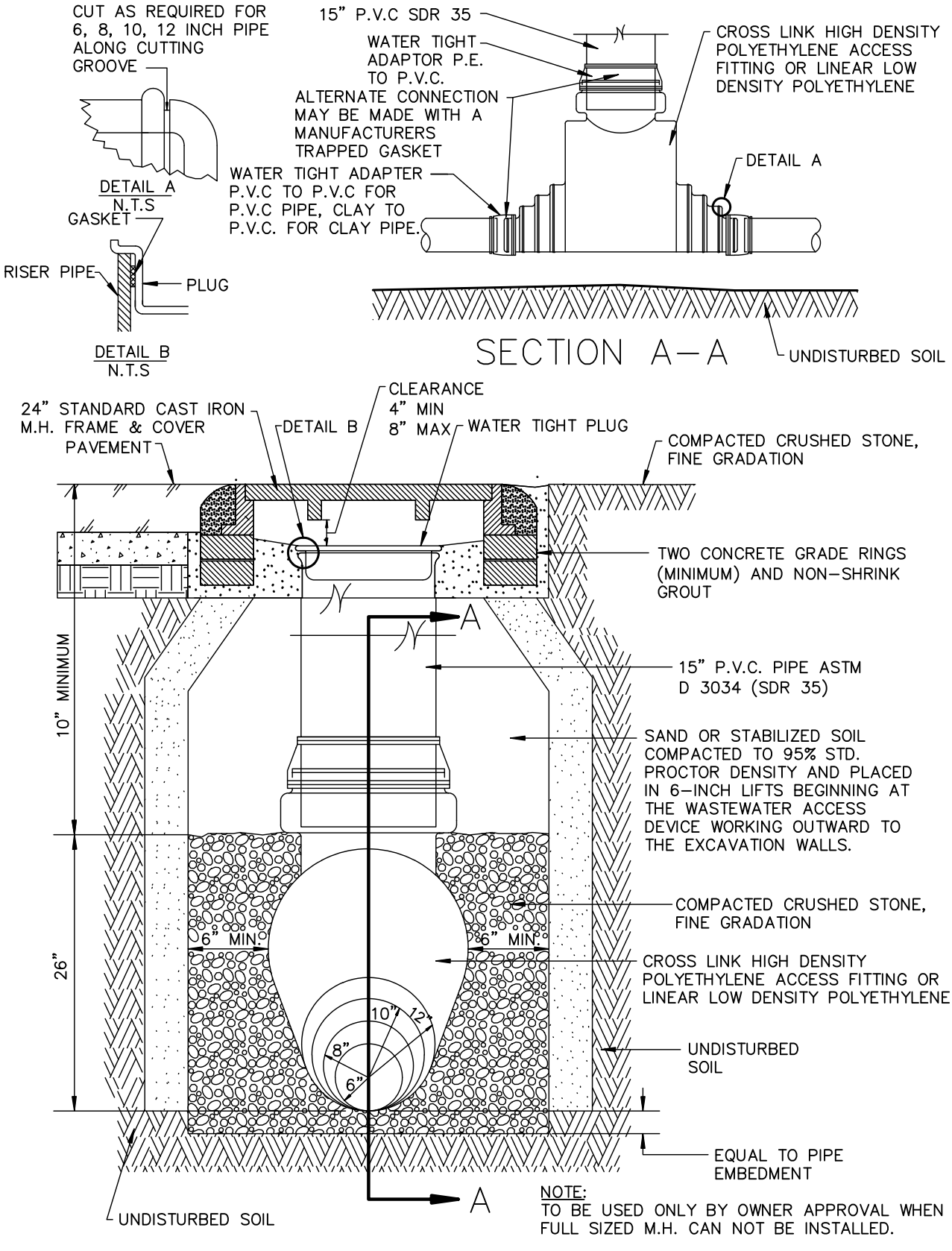
T = WALL THICKNESS
D = MANHOLE DIAMETER
d = PIPE DIAMETER

NOTE:
REFER TO MANHOLE STANDARD DRAWINGS FOR ADDITIONAL DETAIL OF M.H.



SECTION A–A
N.T.S.

WASTEWATER MANHOLE INVERT DETAIL	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.1	
		DATE AUG '23	STANDARD DRAWING NO. 5090

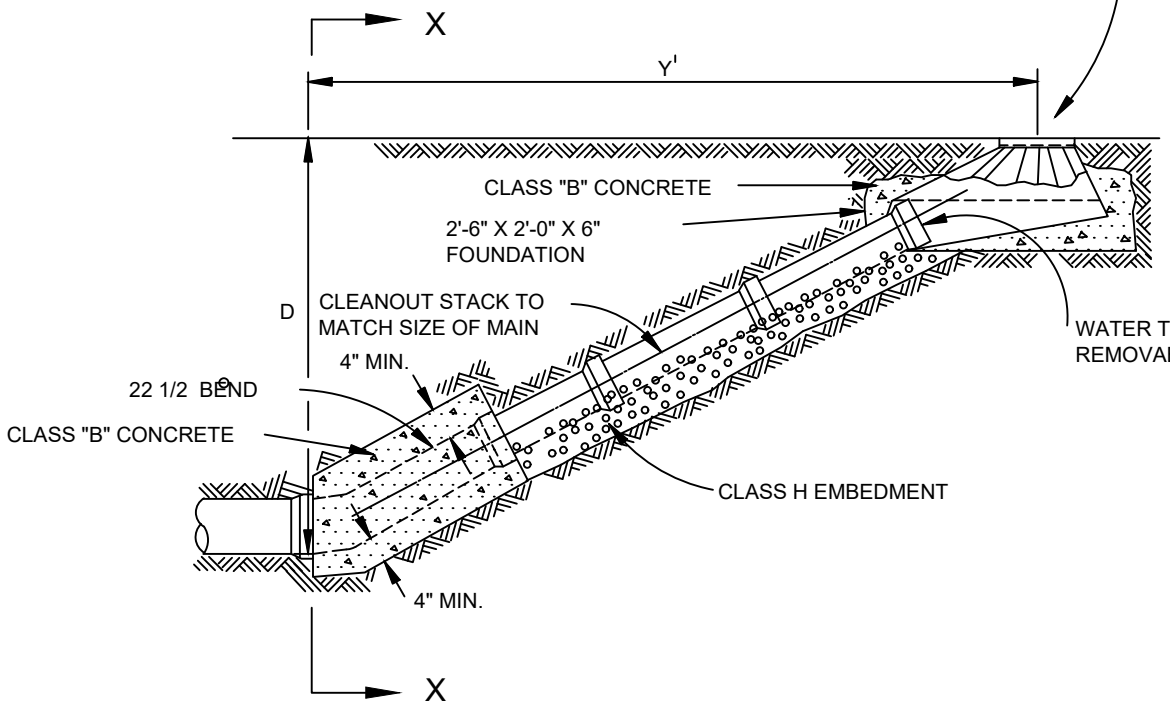


WASTEWATER ACCESS DEVICE

North Central Texas Council of Governments

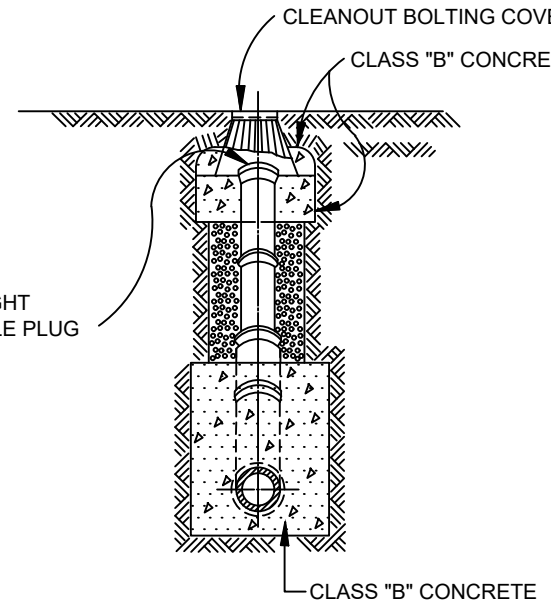
STANDARD SPECIFICATION REFERENCE	
502.1	
DATE	STANDARD DRAWING NO.
AUG '23	5100

D	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	D
Y'	10	12	14	17	19	22	24	27	29	31	34	36	39	41	43	46	48	Y'



PROFILE VIEW

N.T.S.



SECTION X - X

N.T.S.

NOTE:

IF CLEANOUT IS OUTSIDE OF PAVEMENT, CENTER CASTING IN 15"x15" CLASS "A" CONCRETE PAD 4" THICK.

M* - CITY OF MELISSA REVISION

STANDARD DRAWING NO. 5110M *

WASTEWATER MAIN

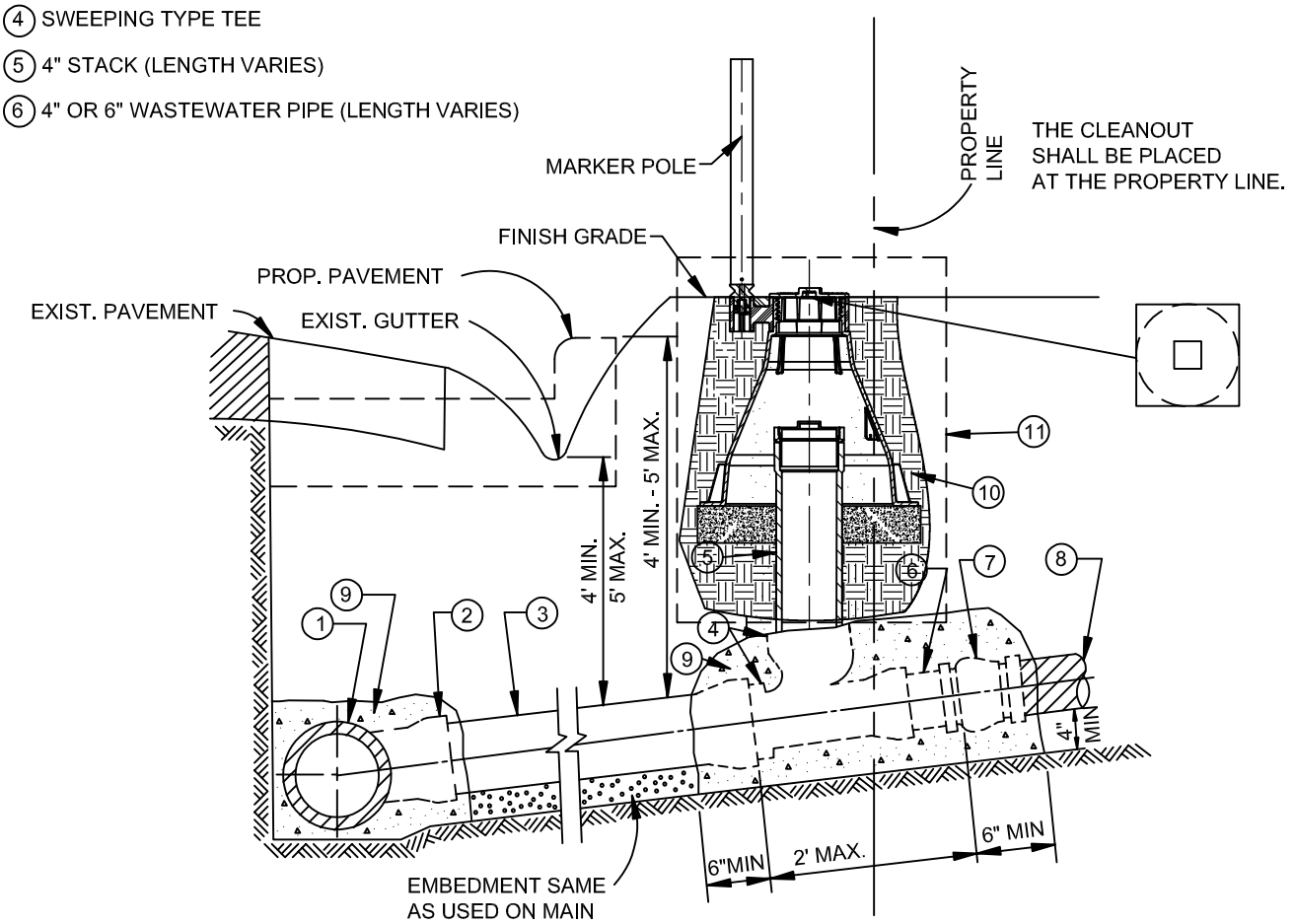
CLEANOUT

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE	
502	
MODIFIED DATE	STANDARD DRAWING NO.
2/21/14	5110M*
NOTICE DATE	APPLIED DATE / ENFORCED DATE

KEY:

1. WASTEWATER MAIN
2. 4" OR 6" SWEEPING TYPE TEE
3. 6" WASTEWATER LAT. FOR COMMERCIAL OR 4" WASTEWATER LAT. FOR SINGLE FAMILY RES.
4. SWEEPING TYPE TEE
5. 4" STACK (LENGTH VARIES)
6. 4" OR 6" WASTEWATER PIPE (LENGTH VARIES)
7. ADAPTER
8. BUILDING SEWER LAT.
9. CLASS "B" CONCRETE
10. COMPACTED AS SPECIFIED
11. REFER TO NOTE 9



NOTES:

1. CLEANOUT ENCLOSURE AND MARKER POLE BY UTILITY DEFENDER OR APPROVED EQUAL TO BE FURNISHED BY DEVELOPER/BUILDER FOR RESIDENTIAL AND FOR COMMERCIAL MAINLINE LATERALS.
2. WASTEWATER LATERAL SHALL BE SDR 35 PVC PIPE.
3. SLOPE OF LATERAL TO BE 1% MIN., 2% MAX. UNLESS INSTRUCTED OTHERWISE BY OWNER.
4. THE WASTEWATER LATERAL SHALL BE CONNECTED TO BUILDING LATERAL AND CONSTRUCTED IN SUCH MANNER AS TO CLEAR EXISTING UTILITIES AND PROPOSED FACILITIES SUCH AS STORM SEWER MAINS, PAVING, SIDEWALKS, RETAINING WALLS, ETC. VERTICAL BENDS (22.5° MAX.) MAY BE USED IF APPROVED BY OWNER.
5. THE MAINLINE LATERAL CONNECTION TO THE PRIVATE BUILDING LATERAL SHALL BE AS CLOSE TO THE PROPERTY LINE AS POSSIBLE.
6. INSTALL 4" STOPPER OR CAP AT PROPERTY LINE IF BUILDING LATERAL DOES NOT EXIST.
7. 4" FITTINGS TO BE USED FOR 4" LATERALS & 6" FITTINGS TO BE USED FOR 6" LATERALS. FOR SINGLE FAMILY RESIDENTIAL, 4" MIN. LATERALS REQUIRED.
8. TYPICAL CLEANOUT STACK & CASTING SHALL BE PLACED AT THE PROPERTY LINE.
9. REFER TO STANDARD DRAWING NO. 5123M AND NO. 5125M FOR THE NON TRAFFIC RATED CLEANOUT ENCLOSURE AND TRAFFIC RATED CLEANOUT ENCLOSURE DETAILS, RESPECTIVELY.

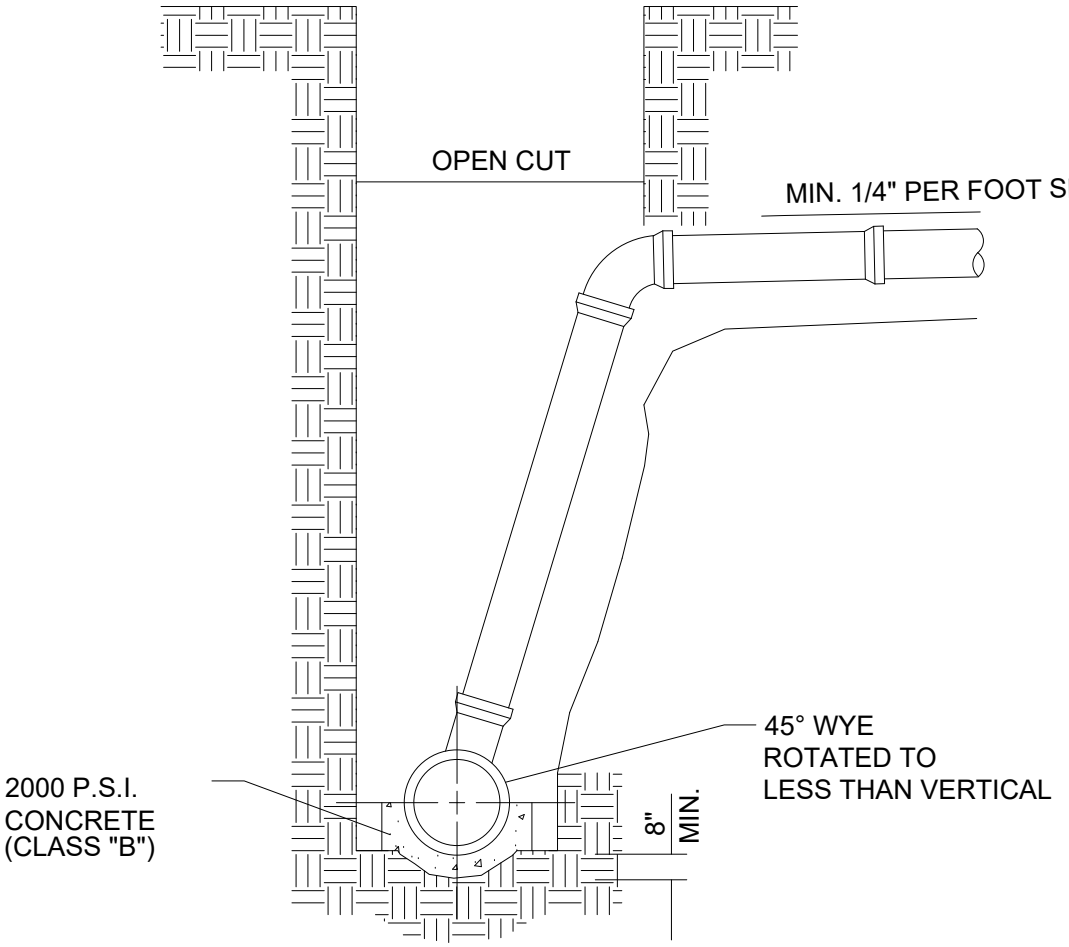
M* - CITY OF MELISSA REVISION

WASTEWATER LATERALS

WITH & WITHOUT CLEANOUT

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE		
500		
MODIFED DATE	STANDARD DRAWING NO.	
07/30/24	5120M*	
NOTICE DATE	APPLIED DATE	ENFORCED DATE
08/01/24	08/01/24	09/01/24

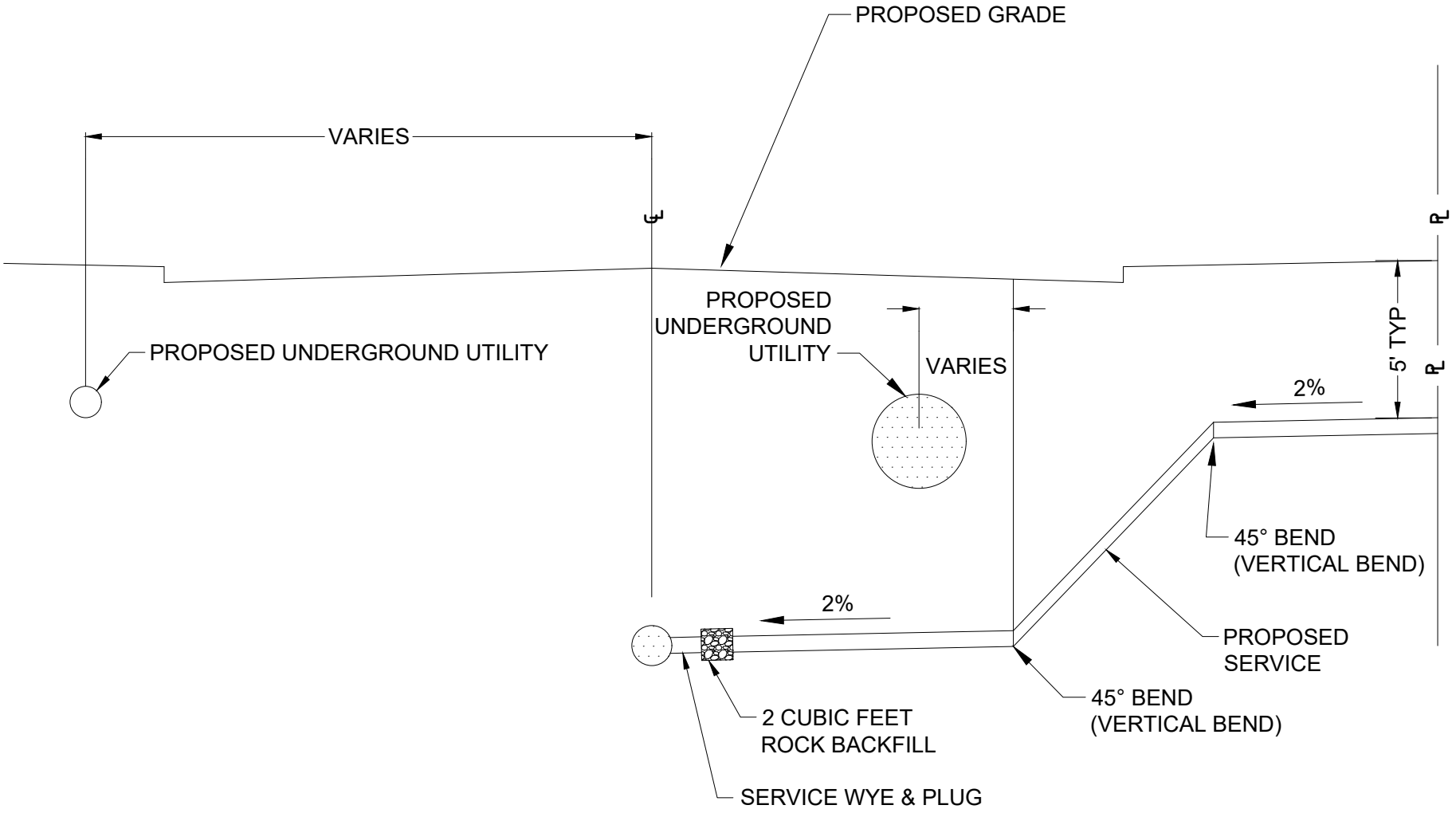


STACKED DEEP CUT

STACKED DEEP CUT LATERALS
SHALL NOT BE INSTALLED WITHOUT
VERIFICATION OF FLOW LINE ELEVATIONS
FOR EACH LOT AND WRITTEN APPROVAL
FROM THE ENGINEER.

M* - CITY OF MELISSA REVISION

STACKED DEEP CUT LATERALS		NCTCOG STANDARD SPECIFICATION REFERENCE: 500
CITY OF MELISSA, TEXAS	DATE: 11/13/08	STANDARD DRAWING NO.: 5121M*



M* - CITY OF MELISSA REVISION

SANITARY SERVICE EXTENSION FROM SEWER MAIN

CITY OF MELISSA, TEXAS

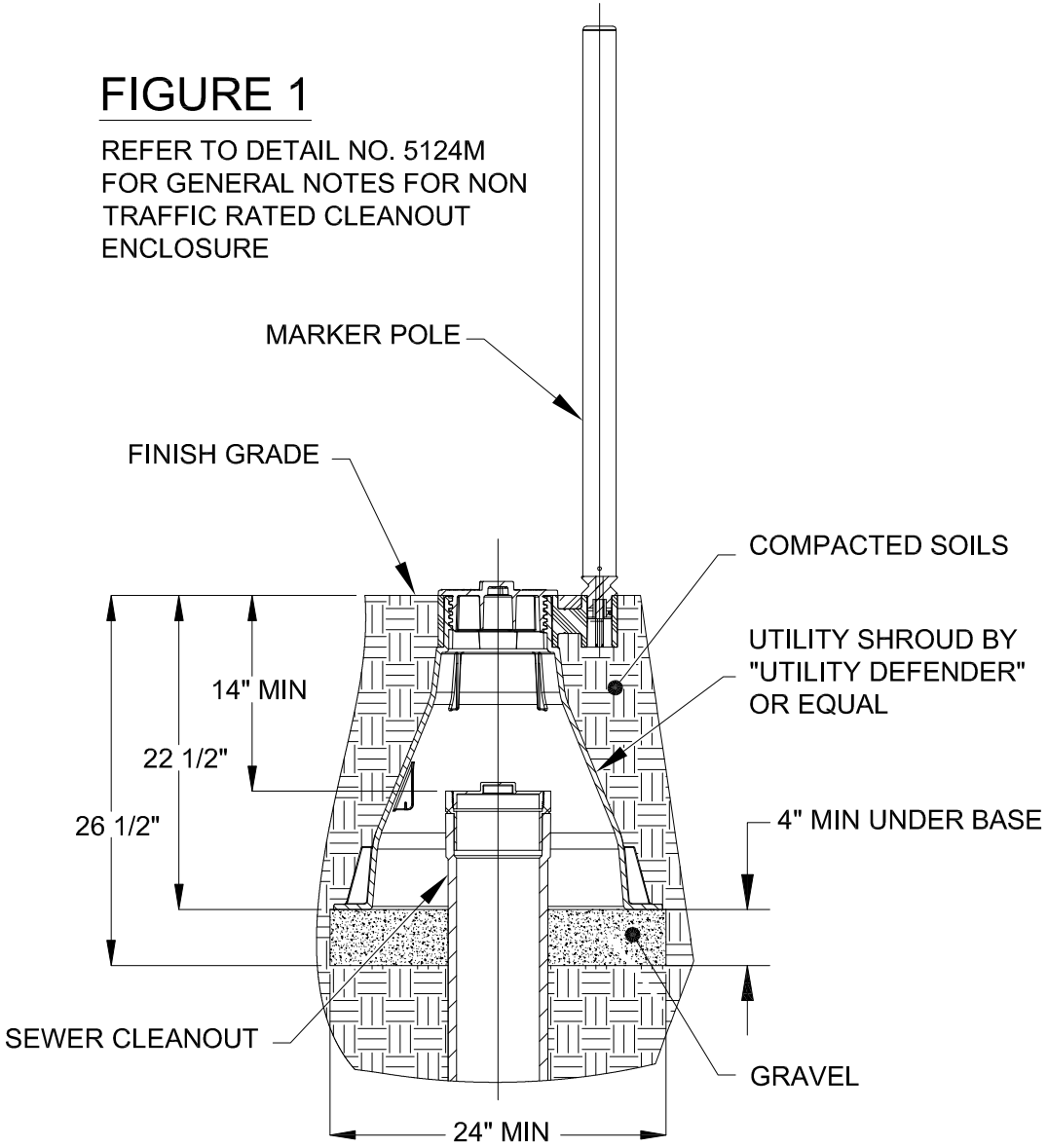
NCTCOG STANDARD SPECIFICATION REFERENCE
500

DATE
12/3/19

STANDARD DRAWING NO.
5122M

FIGURE 1

REFER TO DETAIL NO. 5124M
FOR GENERAL NOTES FOR NON
TRAFFIC RATED CLEANOUT
ENCLOSURE



M* - CITY OF MELISSA REVISION

NON TRAFFIC RATED CLEANOUT ENCLOSURE ASSEMBLY

CITY OF MELISSA, TEXAS

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE	
500	
DATE	STANDARD DRAWING NO.
07/30/24	5123M*

NON TRAFFIC RATED APPLICATION NOTES

1. SEE FIGURE 1; UTILITY SHROUD FOR SEWER CLEANOUT ASSEMBLY NON TRAFFIC RATED APPLICATIONS.

2. EXCAVATE A 24" MINIMUM DIAMETER HOLE CONCENTRICALLY AROUND SEWER CLEANOUT TO A DEPTH OF 26 1/2" BELOW FINISH GRADE.

3. INSTALL A 4" LAYER OF GRAVEL BEDDING TO CREATE THE INSTALLATION SURFACE FOR THE UTILITY SHROUD.

4. THE FINISH GRADE TO THE TOP OF THE GRAVEL SURFACE SHALL BE 22 1/2".

5. INSTALL CLEANOUT CAP ON SEWER PIPE AT 14" MINIMUM DOWN FROM FINISH GRADE.

6. SET UTILITY SHROUD ON GRAVEL SURFACE CENTERED AROUND SEWER CLEANOUT.

7. SECURE MARKER POLE INTO UTILITY SHROUD COLLAR USING THE PROVIDED HARDWARE.

8. PLACE COLLAR WITH MOUNTED MARKER POLE ONTO UTILITY SHROUD AND INSTALL UTILITY SHROUD CAP.

9. BACKFILL HOLE AND COMPACT SOIL TO PREVENT UTILITY SHROUD MOVEMENT.

10. TOP OF COLLAR SHOULD BE AT FINISH GRADE FOR PROPER MARKER POLE OPERATION.

11. UPON COMPLETION OF PROJECT, UNSCREW CAP, REMOVE COLLAR AND MARKER POLE ASSEMBLY, AND REINSTALL CAP.

M* - CITY OF MELISSA REVISION

NON TRAFFIC CLEANOUT ENCLOSURE ASSEMBLY NOTES

CITY OF MELISSA, TEXAS

MELISSA TX

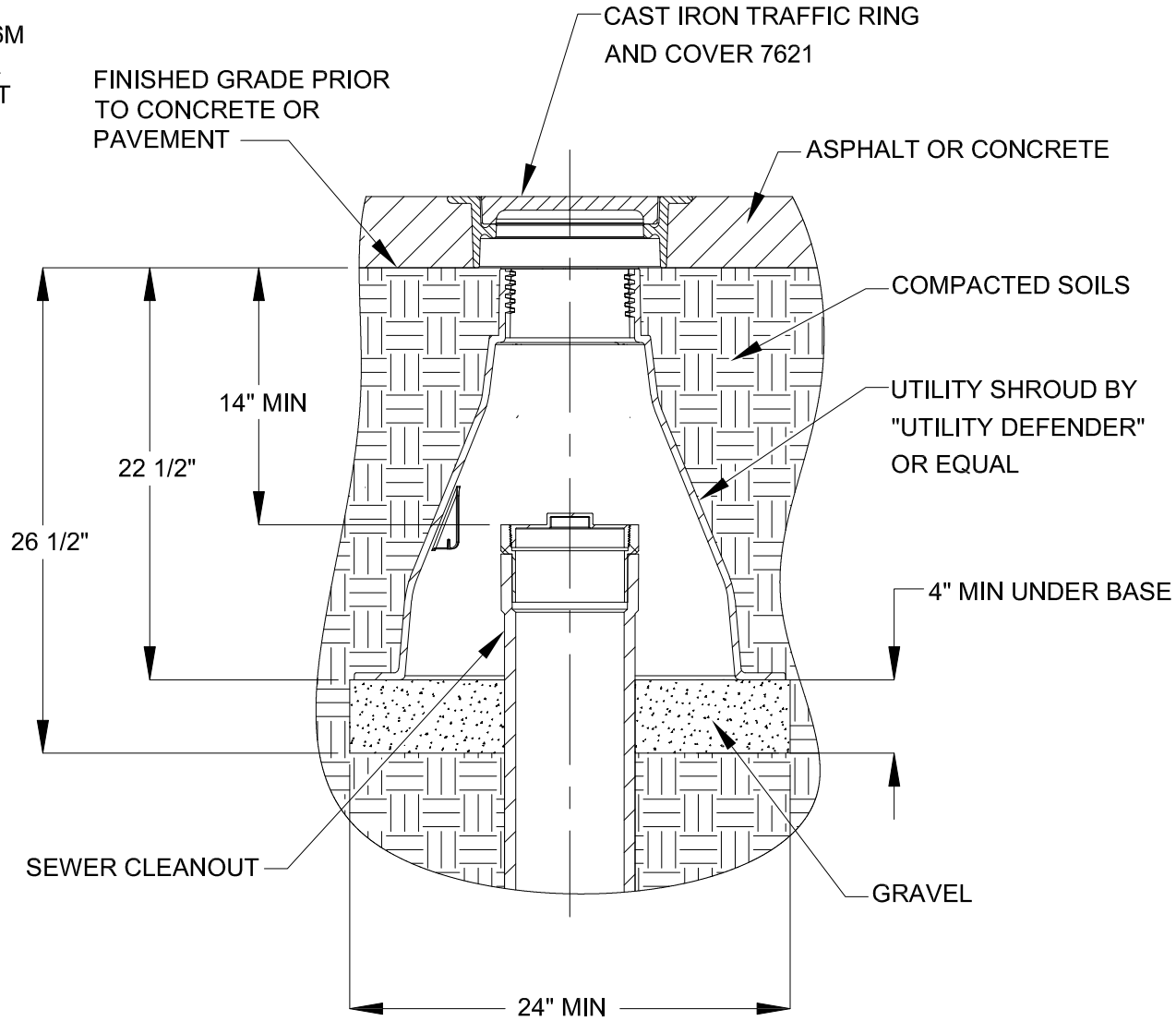
NCTCOG STANDARD SPECIFICATION REFERENCE
500

DATE
07/30/24

STANDARD DRAWING NO.
5124M*

FIGURE 2

REFER TO DETAIL NO. 5126M FOR GENERAL NOTES FOR TRAFFIC RATED CLEANOUT ENCLOSURE



M* - CITY OF MELISSA REVISION

TRAFFIC RATED CLEANOUT ENCLOSURE ASSEMBLY

CITY OF MELISSA, TEXAS

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE	
500	
DATE	STANDARD DRAWING NO.
07/30/24	5125M*

TRAFFIC RATED APPLICATION NOTES

1. SEE FIGURE 2; UTILITY SHROUD FOR SEWER CLEANOUT ASSEMBLY TRAFFIC RATED APPLICATIONS.

2. EXCAVATE A 24" MINIMUM DIAMETER HOLE CONCENTRICALLY AROUND SEWER CLEANOUT TO A DEPTH OF 26 1/2" BELOW FINISH GRADE.

3. INSTALL A 4" LAYER OF GRAVEL BEDDING TO CREATE THE INSTALLATION SURFACE FOR THE UTILITY SHROUD.

4. THE FINISH GRADE TO THE TOP OF THE GRAVEL SURFACE SHALL BE 22 1/2".

5. INSTALL CLEANOUT CAP ON SEWER PIPE AT 14" MINIMUM DOWN FROM FINISH GRADE.

6. SET UTILITY SHROUD ON GRAVEL SURFACE CENTERED AROUND SEWER CLEANOUT.

7. SECURE MARKER POLE INTO UTILITY SHROUD COLLAR USING THE PROVIDED HARDWARE.

8. PLACE COLLAR WITH MOUNTED MARKER POLE ONTO UTILITY SHROUD AND INSTALL UTILITY SHROUD CAP.

9. BACKFILL HOLE AND COMPACT SOIL TO PREVENT UTILITY SHROUD MOVEMENT.

10. TOP OF COLLAR SHOULD BE AT FINISH GRADE FOR PROPER FLAG POLE OPERATION.

11. PRIOR TO PAVING, REMOVE CAP, COLLAR AND MARKER POLE ASSEMBLY. INSTALL CAST IRON TRAFFIC RING AND COVER 7621 OR EQUIVALENT CENTRALLY LOCATED ABOUT UTILITY SHROUD.

M* - CITY OF MELISSA REVISION

TRAFFIC CLEANOUT ENCLOSURE ASSEMBLY NOTES

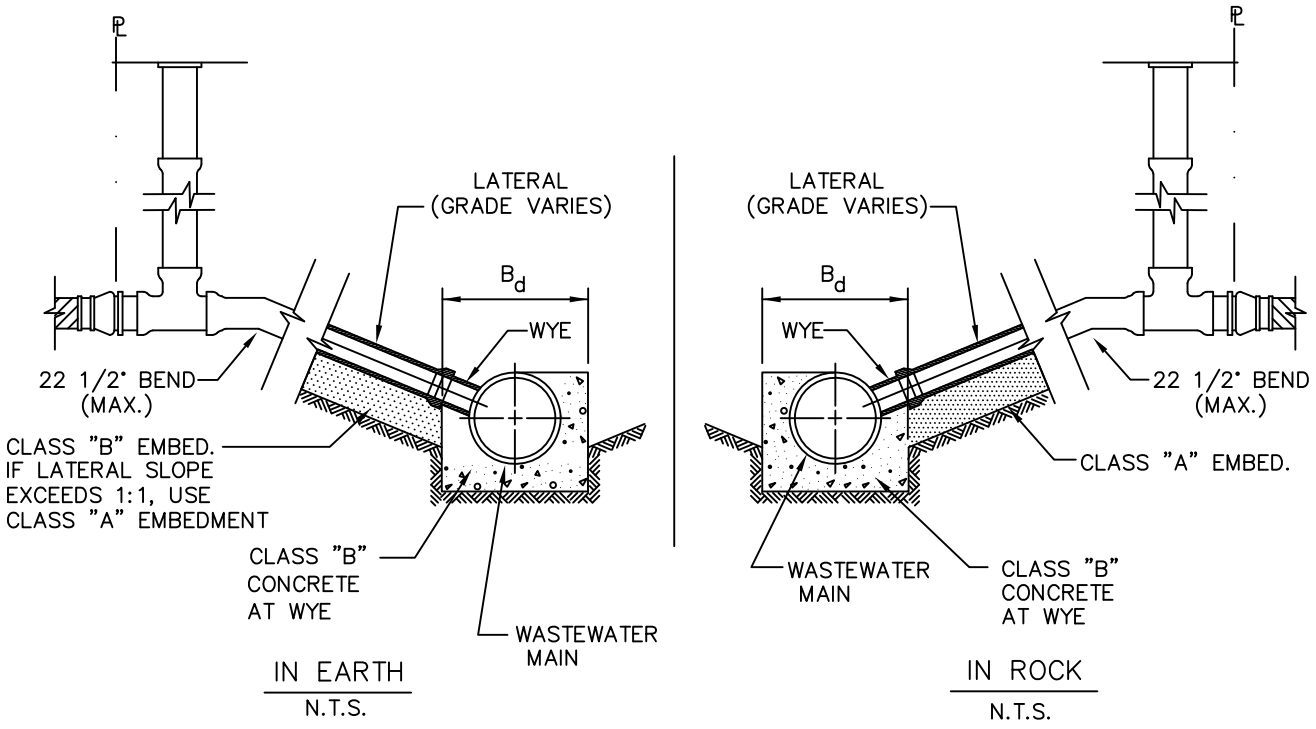
CITY OF MELISSA, TEXAS

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE
500

DATE
07/30/24

STANDARD DRAWING NO.
5126M*



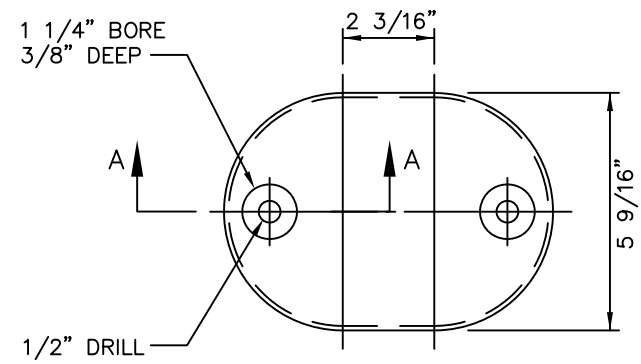
TRENCH WITH SLOPING SIDES

N.T.S.

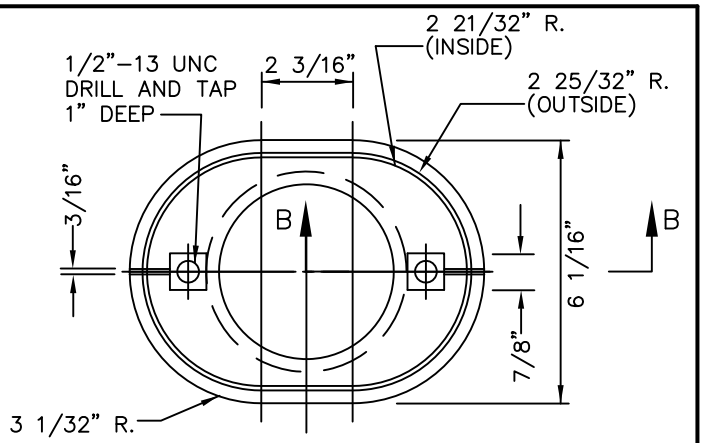
NOTES:

1. WYE SHALL BE SUPPORTED AS SHOWN FOR WYE CONNECTION SUPPORT.
2. LATERALS ARE TO CLEAR ALL EXISTING UTILITIES. 11 1/4" OR 22 1/2° BEND, ONLY, MAY BE REQUIRED.

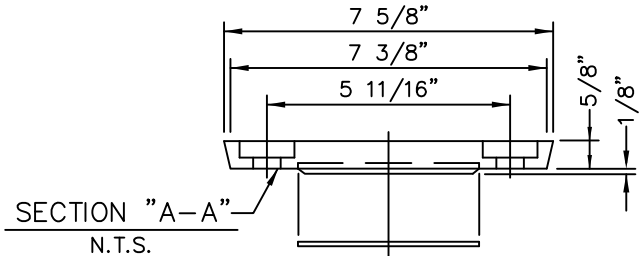
WASTEWATER LATERAL CONNECTIONS IN EARTH & IN ROCK	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.10	
		DATE AUG '23	STANDARD DRAWING NO. 5130



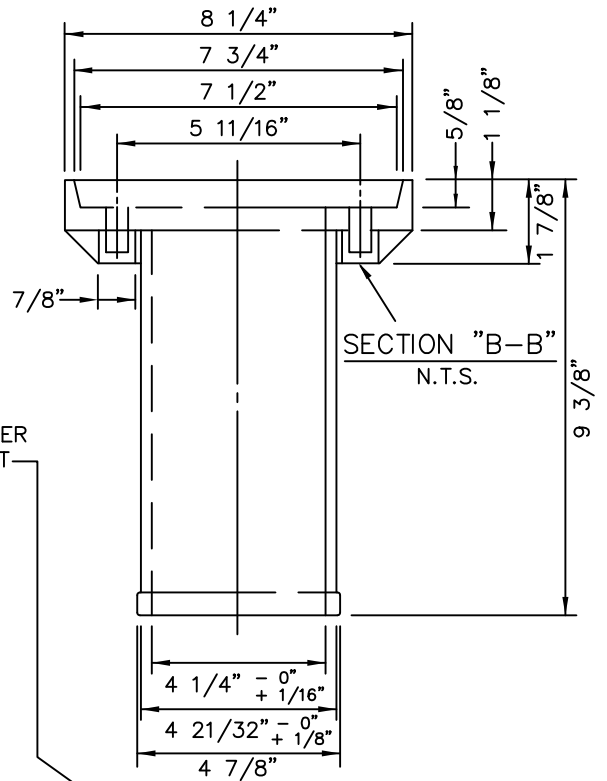
COVER
N.T.S.



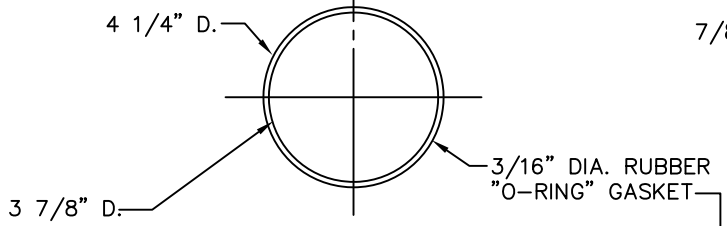
CLEANOUT FRAME TOP
N.T.S.

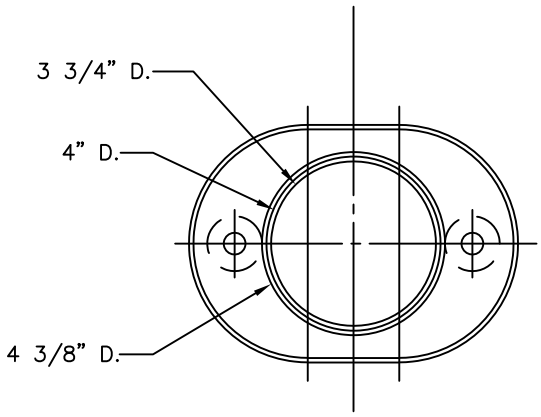


SECTION "A–A"
N.T.S.

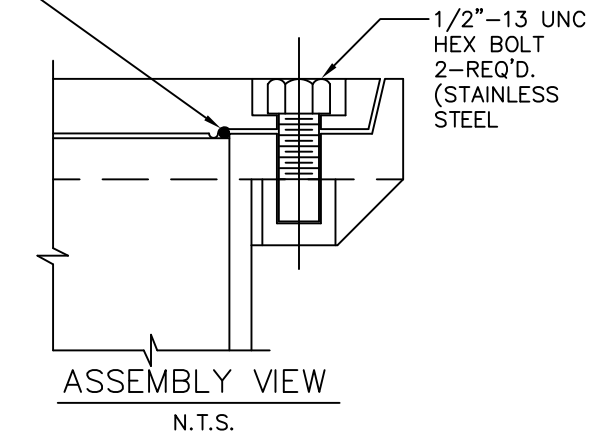


SECTION "B–B"
N.T.S.





CLEANOUT FRAME BOTTOM
N.T.S.



ASSEMBLY VIEW
N.T.S.

NOTES:

1. THE WORDS "WASTEWATER LATERAL CLEANOUT" SHALL BE CAST INTO TOP OF COVER.
2. MATERIALS TO BE CAST IRON, P.V.C. OR ABS PLASTIC.

WASTEWATER LATERAL

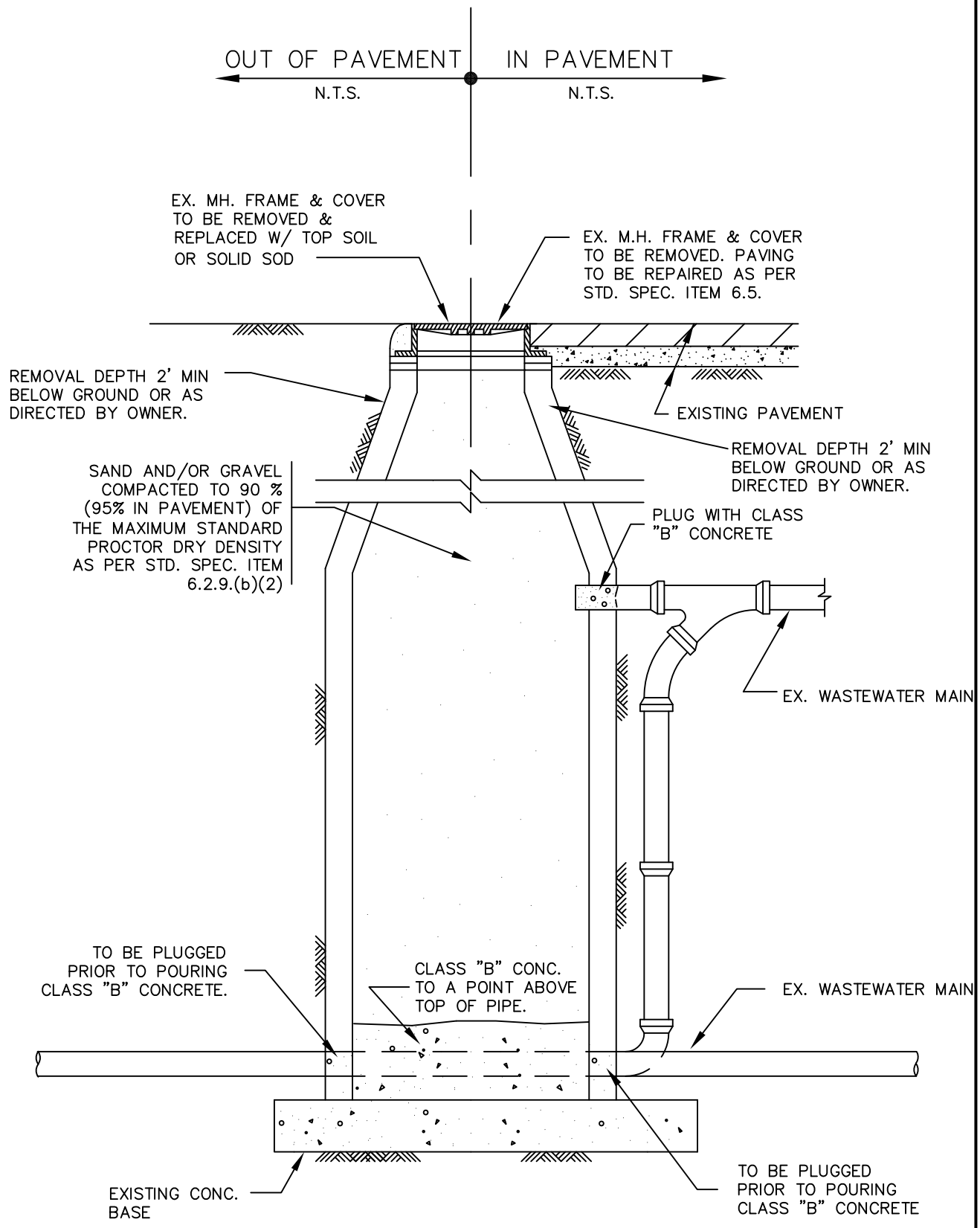
CLEANOUT FRAME & COVER

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE
502.10

DATE
AUG '23

STANDARD DRAWING NO.
5140



ABANDONMENT OF MANHOLE IN OR OUT OF PAVEMENT

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE
504

DATE
AUG '23

STANDARD DRAWING NO.
5170

STORM SEWER GENERAL NOTES & TELEVISION REPORT

A. ACCEPTABLE STORM SEWER MAIN MATERIAL ARE AS FOLLOWS:

1. NCTCOG APPROVED REINFORCED CONCRETE PIPE OR BOX
2. HP STORM BY ADS
3. ALUMINIZED FLOW BY CONTECH

B. THE CONTRACTOR WILL PROVIDE A DIGITAL FILE AND SUITABLE LOG OF INSPECTION PERFORMED BY EXPERIENCED PERSONNEL ON A CLOSED CIRCUIT COLOR TELEVISION (ACCURATE FOOTAGE DISPLAYED ON VIDEO).

C. ALL PERTINENT DATA RECORDED IN AUDIO ON THE MEDIA TO INCLUDE:

1. DATE AND TIME OF RECORDING
2. CONTRACTOR'S NAME, PROJECT NAME, AND CONTRACT NUMBER
3. NAME OF THE COMPANY PERFORMING THE TELEVISION INSPECTION AND THE NAME OF THE OPERATOR
4. LOCATION, DESIGNATION, AND SIZE OF THE MAIN AND THE DIRECTION OF THE TEST
5. EVERY 50-FOOT STATION
6. STATION OF EACH MANHOLE
7. LOCATION AND STATION OF DEFICIENCIES IN ACCORDANCE WITH PACP AS DEFINED BY NASSCO
8. LOCATION AND DIRECTION OF ENTRY OF LATERALS

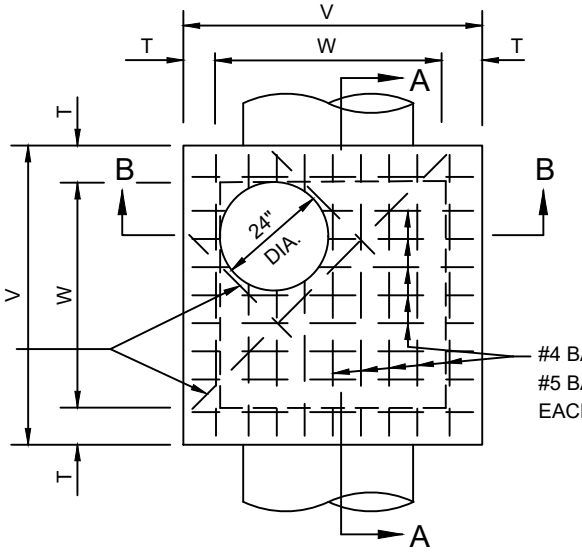
D. THE CONTRACTOR WILL ALSO PROVIDE A WRITTEN TELEVISION REPORT (INDICATING MANHOLE NUMBERS) THAT WILL ACCOMPANY THE VIDEO RECORDING. THIS WRITTEN REPORT MUST INCLUDE:

1. MANHOLE NUMBERS (THESE NUMBERS MUST MATCH MANHOLE NUMBERS ON "AS BUILT" DRAWINGS).
2. SERVICE CONNECTION LOCATIONS RIGHT OR LEFT.
3. REFERENCE TO SERVICE CONNECTION LOCATIONS OUT OF MANHOLES.
4. LOCATIONS OF SUSPECTED AND OBVIOUS DEFICIENCIES (i.e. BAD JOINTS, BREAKS, OR LEAKS, ETC).
5. DEPTH OF EACH MANHOLE.
6. ACTUAL MEASURED DISTANCE (ON GROUND) BETWEEN MANHOLES.

E. ALL VISUAL AND TELEVISION INSPECTIONS SHALL BE COMPLETED AND APPROVED BY THE CITY INSPECTOR FROM THE CITY OF MELISSA ENGINEERING DEPARTMENT PRIOR TO PLACING OF ANY PAVEMENT. AN INSPECTOR FROM THE MELISSA ENGINEERING DEPARTMENT MUST WITNESS THE RECORDING. THE ENGINEERING DEPARTMENT SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE FOR SCHEDULING. TELEVISION RECORDINGS MUST CLEARLY SHOW DETAILS OF STRUCTURAL DEFECTS, MISALIGNMENTS, AND INFILTRATION. ALL KNOWN OR INDICATED BREAKS SHALL BE REPAIRED BY THE CONTRACTOR REGARDLESS OF THE TEST ALLOWANCES. FAULTY SECTIONS OF STORM SEWER LINES, INLETS, AND MANHOLES REJECTED BY THE ENGINEER SHALL BE REMOVED AND REINSTALLED BY THE CONTRACTOR. SUNKEN MANHOLES AND INLETS WILL NOT BE ACCEPTED. ALL MANHOLE AND INLET INVERTS MUST BE COMPLETED PRIOR TO VIDEO RECORDING.

M * - CITY OF MELISSA REVISION

STORM SEWER GENERAL NOTES & TELEVISION REPORT		NCTCOG STANDARD SPECIFICATION REFERENCE 507.5	
		MODIFIED DATE 07/31/24	STANDARD DRAWING NO. 6001M*
CITY OF MELISSA, TEXAS	NOTICE DATE 08/01/24	APPLIED DATE 08/01/24	ENFORCED DATE 09/01/24



3-#4 BARS (4' & 5'M.H.)
OR #5 BARS (6' M.H.) AT
OPENING AS SHOWN.

#4 BARS AT 6" C-C (4' M.H.) OR
#5 BARS AT 8" C-C (5" & 6"M.H.)
EACH WAY. HOOK EACH END

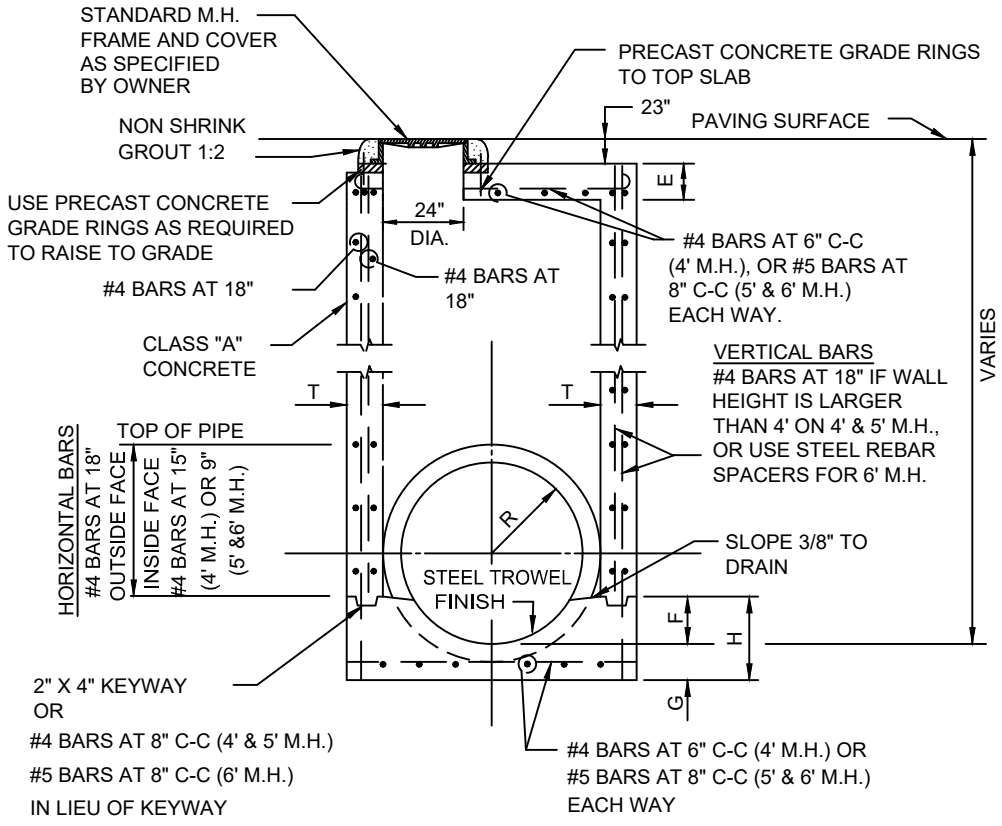
PLAN

N.T.S.

M.H. SIZE(W)	V	T	E	F	G	H
4'	5'-4"	8"	6"	9"	6"	1'-3"
5'	6'-4"	8"	6"	12"	8"	1'-8"
6'	7'-6"	9"	9"	16"	10"	2'-2"

TABLE OF DIMENSIONS

N.T.S.



SECTION B-B

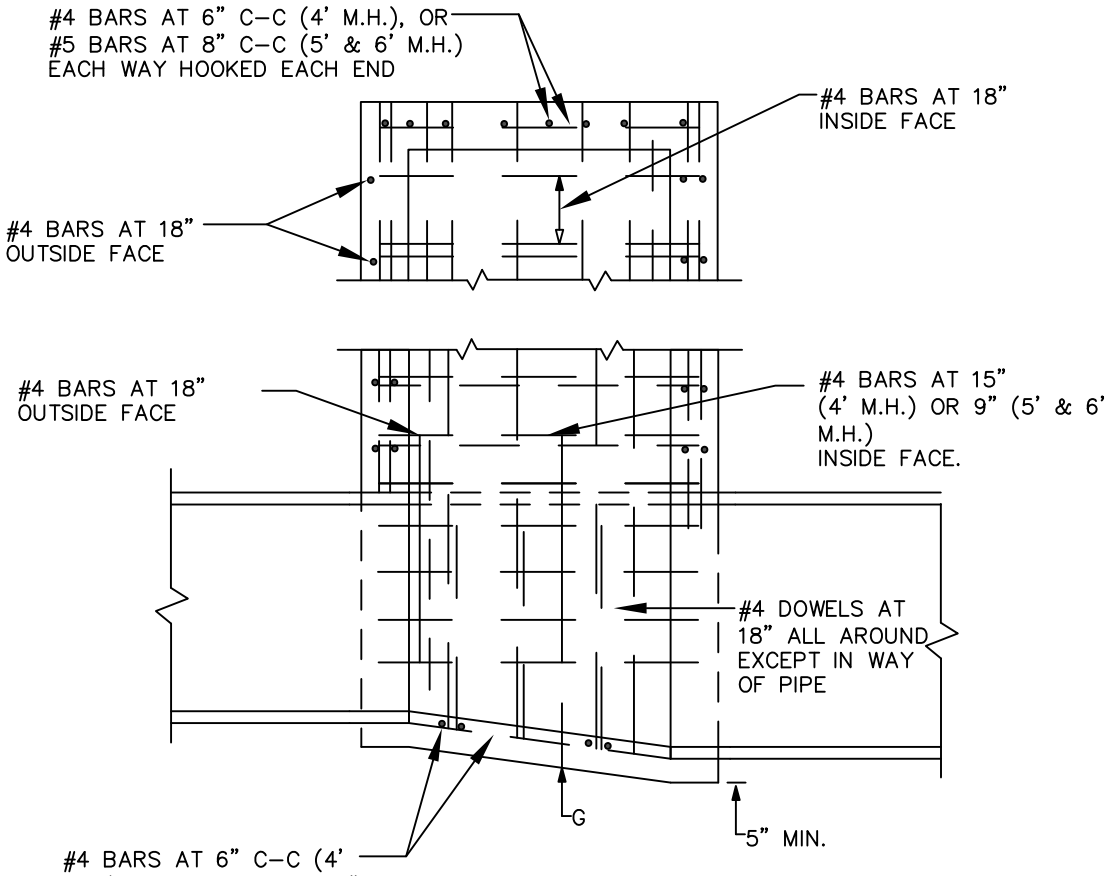
N.T.S.

M* - CITY OF MELISSA REVISION

STORMWATER MANHOLE

4', 5', OR 6' SQUARE

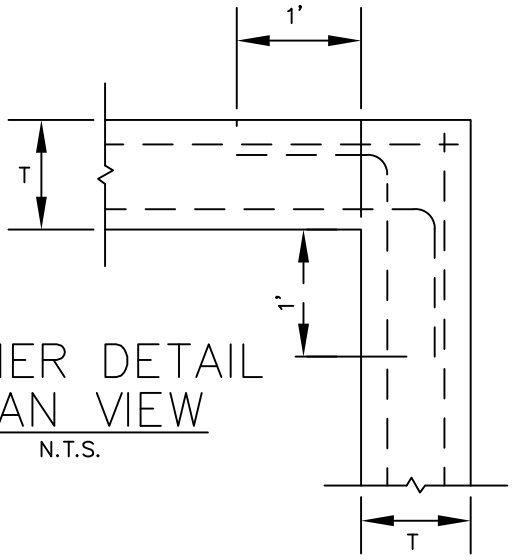
NCTCOG STANDARD SPECIFICATION REFERENCE	
502.1	
MODIFIED DATE	STANDARD DRAWING NO.
12/17/13	6010AM*
NOTICE DATE	ADOPTED DATE	ENFORCEMENT DATE



SECTION A–A

N.T.S.

*REFERENCE TABLE 6010A



CORNER DETAIL PLAN VIEW

N.T.S.

NOTES:

1. SLOPE INVERT OF MANHOLE AS INDICATED ON PLAN–PROFILE SHEET.
2. LAYERS OF REINFORCING STEEL NEAREST THE INTERIOR AND EXTERIOR SURFACE SHALL HAVE A COVER OF 2" CLEAR OF BARS, UNLESS OTHERWISE NOTED.
3. CONCRETE SHALL BE CLASS "C".
4. PRECAST PRODUCTS MAY BE USED AT THE APPROVAL OF THE OWNER.

STORM WATER MANHOLE

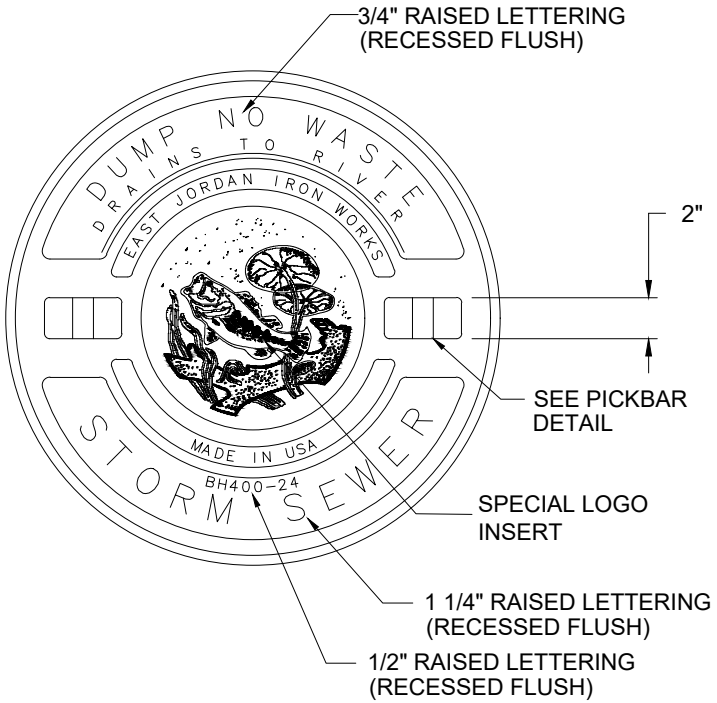
4', 5', OR 6' SQUARE

North Central Texas Council of Governments

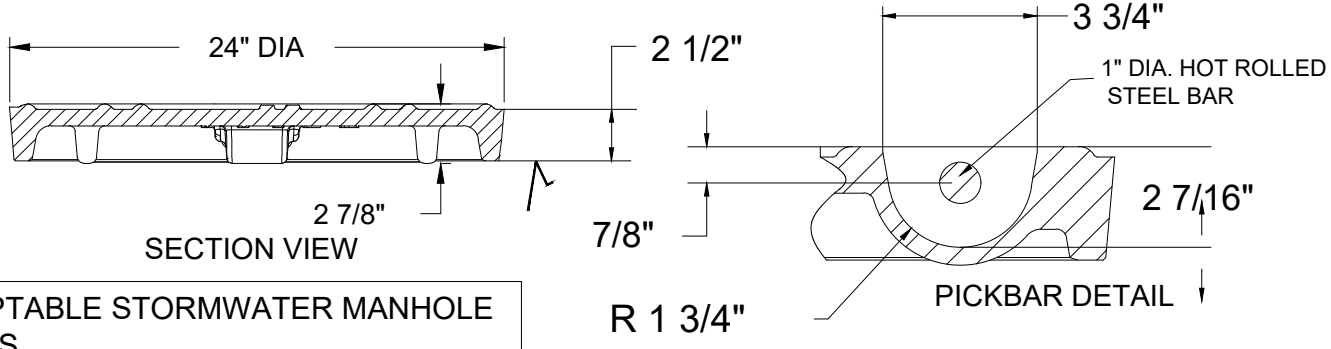
STANDARD SPECIFICATION REFERENCE
502.1.4.1

DATE
AUG '23

STANDARD DRAWING NO.
6010B



BOTTOM VIEW



SECTION VIEW

PICKBAR DETAIL

LIST OF ACCEPTABLE STORMWATER MANHOLE RING & COVERS
24" DIAMETER COVERS:
BASS & HAYES 400-24
NEENAH FOUNDRY DF-1271

EJIW EAST JORDAN IRON WORKS EST.1883
800-626-4653
www.ejiw.com
MADE IN USA

PRODUCT NUMBER	00202425
CATALOG NUMBER	2024 A1
	COVER
LOAD RATING	HEAVY DUTY
COATING	DIPPED
ESTIMATED WEIGHT	COVER: 147 LBS
MATERIAL SPECIFICATION	COVER - GRAY IRON ASTM A48 CL35B
OPEN AREA	N/A
√ DESIGNATES MACHINE SURFACE	
DRAWN TLC	DATE 08/08/03
LAST REVISED DEW	DATE 02/27/08
REFERENCE INFORMATION	00202450.1D 00202425.1C 00202425.LO

M* - CITY OF MELISSA REVISION

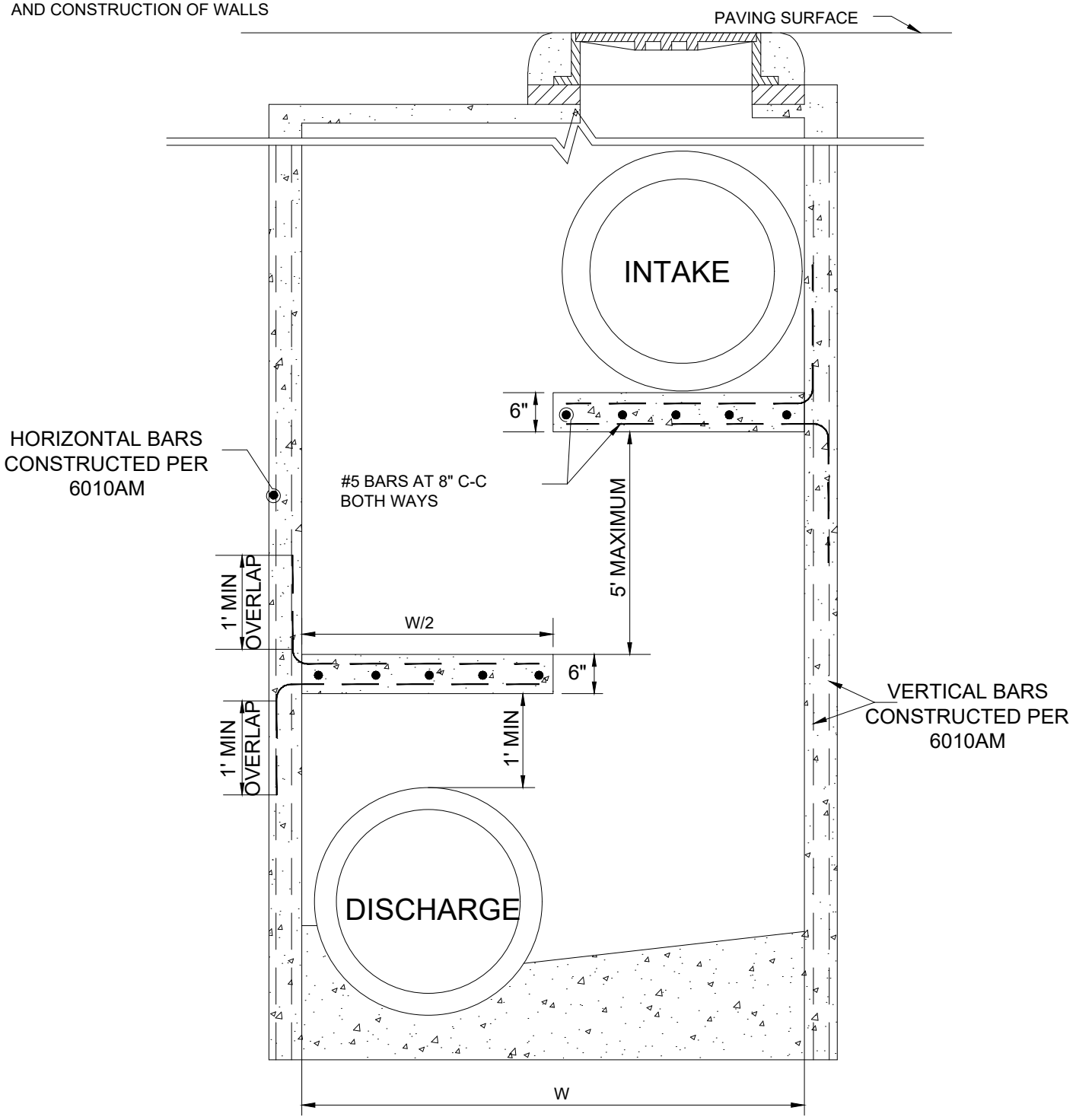
STORMWATER MANHOLE
RING AND COVER

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE	
508	
DATE	STANDARD DRAWING NO.
02/03/09	6011M*

STANDARD DRAWING NO.
6011M*

SEE DETAIL C6O10AM FOR MANHOLE REBAR SPACING
AND CONSTRUCTION OF WALLS



SECTION B-B

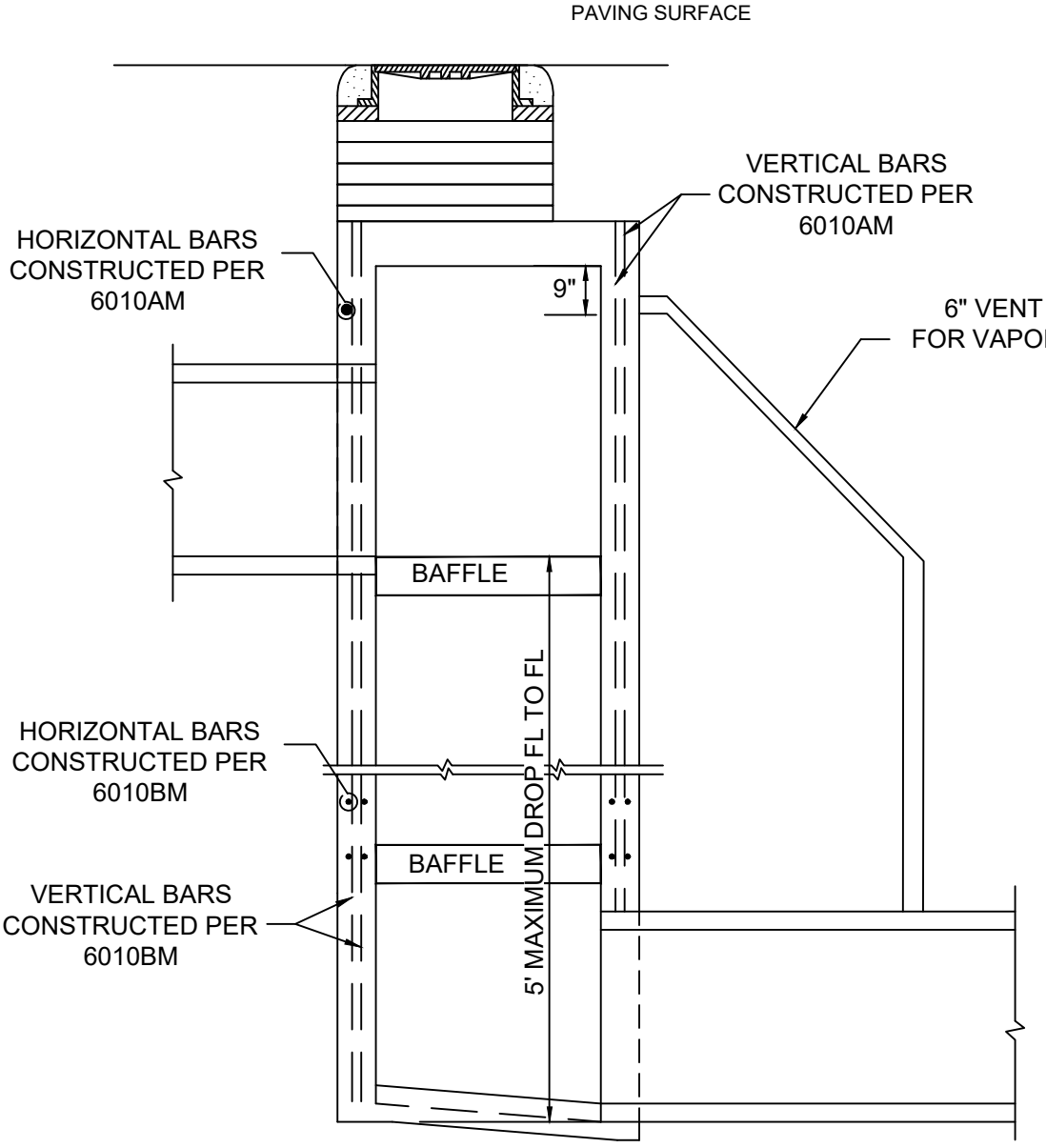
N.T.S.

M* - CITY OF MELISSA REVISION

DROP STORMWATER MANHOLE

6' SQUARE W/ BAFFLES

NCTCOG STANDARD SPECIFICATION REFERENCE		
	MODIFIED DATE	STANDARD DRAWING NO.
	02/24/15	6012AM*
NOTICE DATE	ADOPTED DATE	ENFORCEMENT DATE



SECTION A-A

N.T.S.

IF MAX ALLOWABLE VELOCITY (12 FPS) CANNOT BE MET:

1. MAX DROP FROM FL TO FL = 5' AND BAFFLE IS REQUIRED. BAFFLE CONSTRUCTED PER 6012AM.
2. MIN. MANHOLE SIZE TO BE 6'x6'
3. CLASS IV PIPE IS REQUIRED.
4. 6" DIA. VENT PIPE TO BE INSTALLED D/S OF OUTLET & RECONNECT 9" BELOW TOP

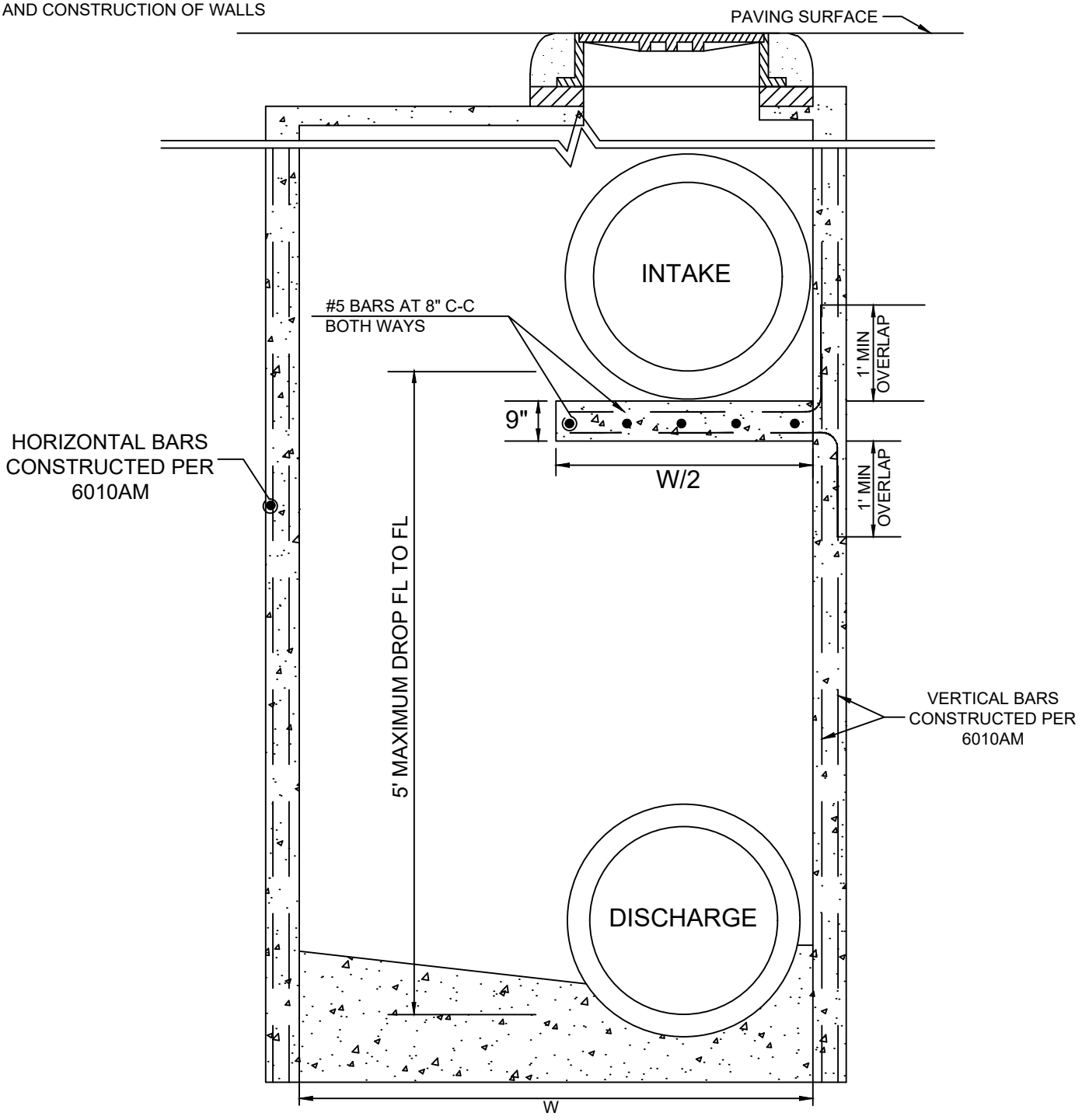
M* - CITY OF MELISSA REVISION

DROP STORMWATER MANHOLE

6' SQUARE W/BAFFLES

NCTCOG STANDARD SPECIFICATION REFERENCE		
	MODIFIED DATE	STANDARD DRAWING NO.
	03/02/15	6012BM*
NOTICE DATE	ADOPTED DATE	ENFORCEMENT DATE

SEE DETAIL 6010AM FOR MANHOLE REBAR SPACING
AND CONSTRUCTION OF WALLS



SECTION B-B (N.T.S.)

MH SIZE(W)	V	T	E	F	G	H
6'	7'-6"	9"	9"	16"	10"	2'-2"

TABLE OF DIMENSIONS
FROM 6010AM

N.T.S.

IF DESIGN IS GREATER THAN MAX ALLOWABLE VELOCITY (12 FPS):

1. MAX DROP FROM FL TO FL = 5' AND BAFFLE IS REQUIRED.
2. MIN. MANHOLE SIZE TO BE 6'x6'.
3. CLASS IV PIPE IS REQUIRED.
4. 6" DIA. VENT PIPE TO BE INSTALLED DOWNSTREAM OF OUTLET & RECONNECTED 9" BELOW TOP.

M* - CITY OF MELISSA REVISION

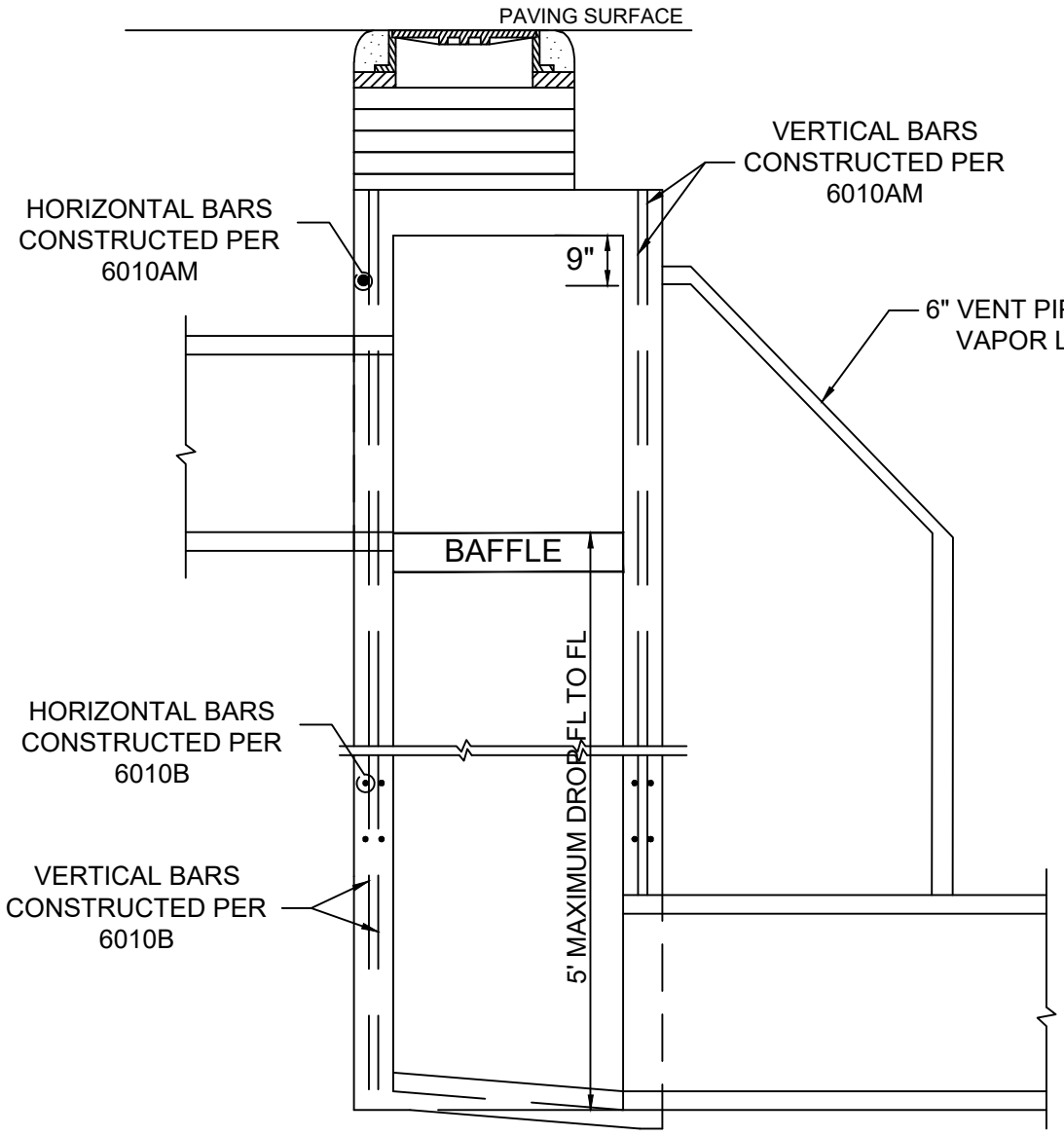
NCTCOG STANDARD SPECIFICATION REFERENCE

DROP STORMWATER MANHOLE

6' SQUARE W/ 1 BAFFLE

MODIFIED DATE	STANDARD DRAWING NO.
09/15/15	6012CM*

NOTICE DATE	APPLIED DATE	ENFORCED DATE



SECTION A-A

N.T.S.

IF DESIGN IS GREATER THAN MAX ALLOWABLE VELOCITY (12 FPS):

1. MAX DROP FROM FL TO FL = 5' AND BAFFLE IS REQUIRED. BAFFLE CONSTRUCTED PER 6012CM.

2. MIN. MANHOLE SIZE TO BE 6'x6'.

3. CLASS IV PIPE IS REQUIRED.

4. 6" DIA. VENT PIPE TO BE INSTALLED DOWNSTREAM OF OUTLET & RECONNECTED 9" BELOW TOP.

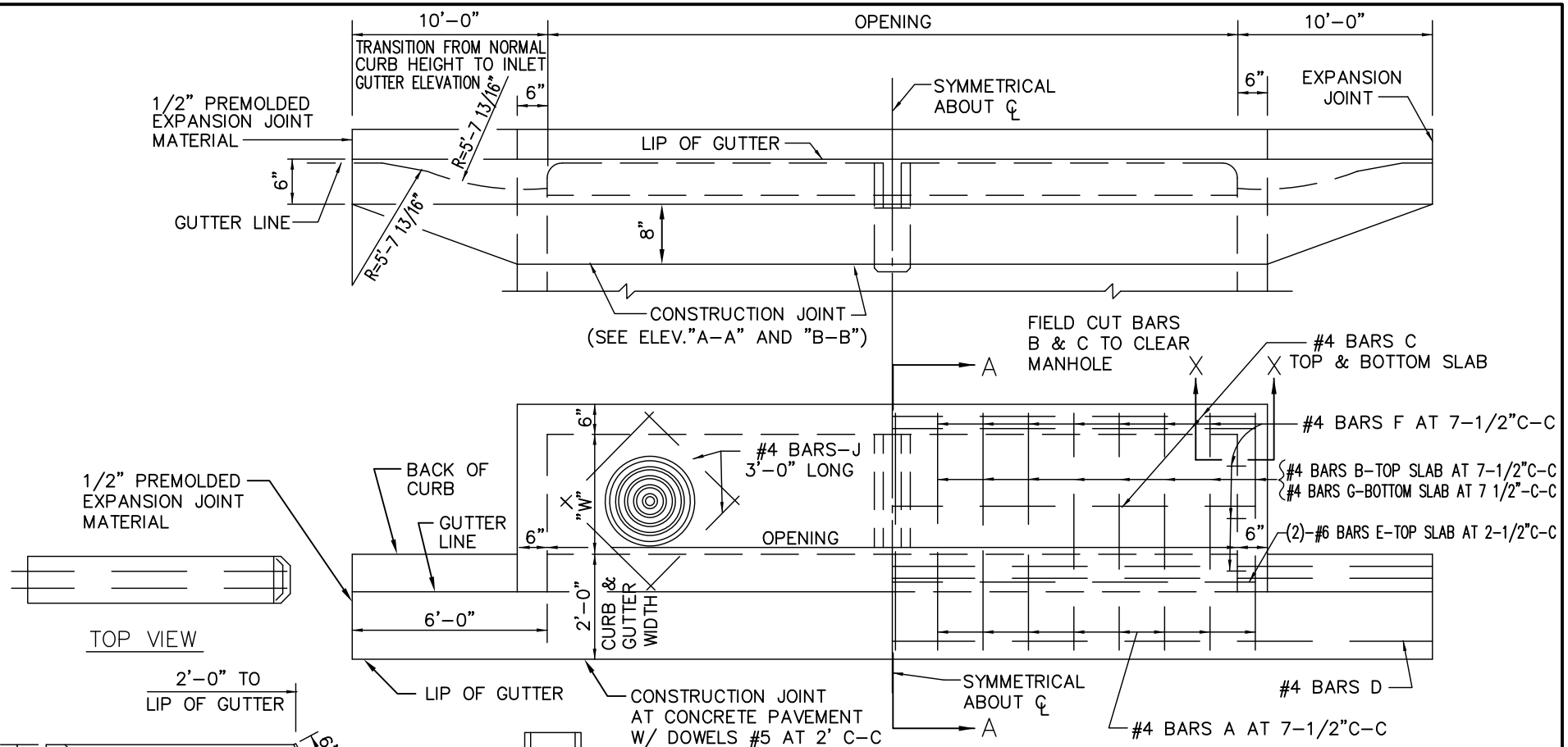
M* - CITY OF MELISSA REVISION

DROP STORMWATER MANHOLE

6' SQUARE W/ 1 BAFFLE

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE		
	MODIFIED DATE	STANDARD DRAWING NO.
	09/15/15	6012DM*
NOTICE DATE	APPLIED DATE	ENFORCED DATE



TRANSVERSE BEAM DETAIL

(FOR USE WITH 15' & 20' INLETS)
N.T.S.

NOTES:

1. LOCATION OF ACCESS OPENING TO BE AT OUTFALL END, UNLESS OTHERWISE DIRECTED BY THE OWNER.
2. INLETS OVER 10' IN WIDTH SHALL HAVE AN ACCESS OPENING AT EACH END.
3. LAYERS OF REINFORCING STEEL NEAREST THE INTERIOR AND EXTERIOR SURFACE SHALL HAVE A COVER OF 2" CLEAR OF BARS, UNLESS OTHERWISE NOTED.

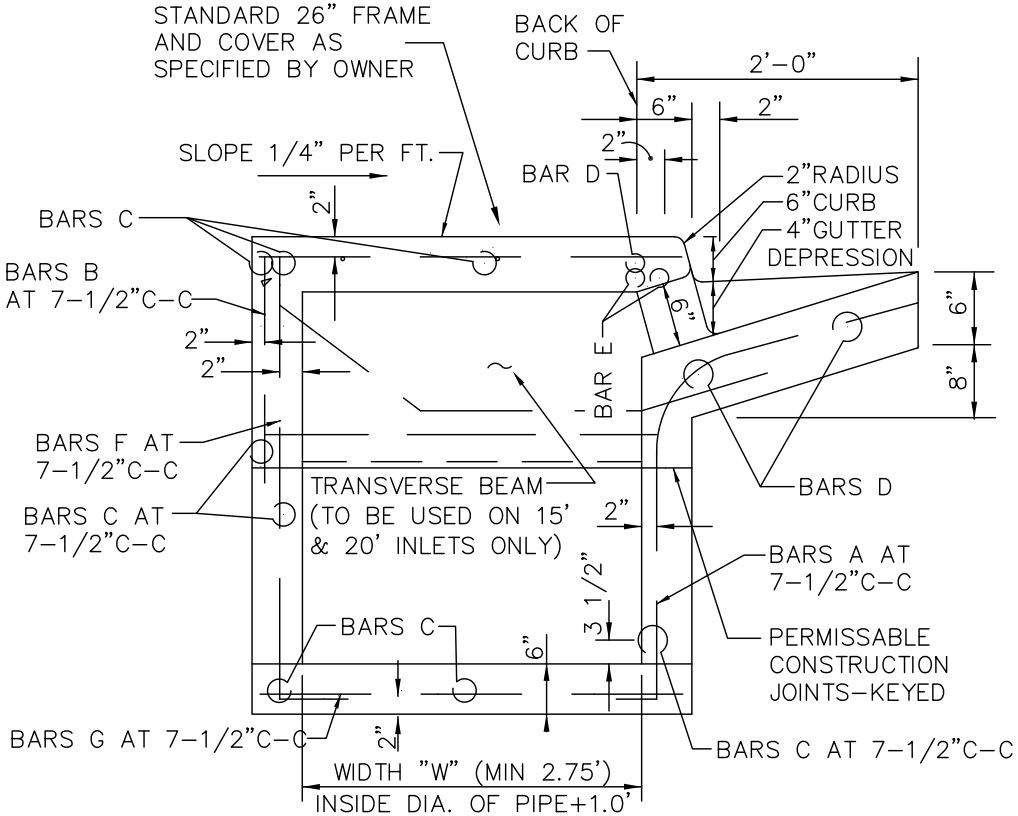
CURB INLET

5', 10', 15' OR 20' OPENING

North Central Texas Council of Governments

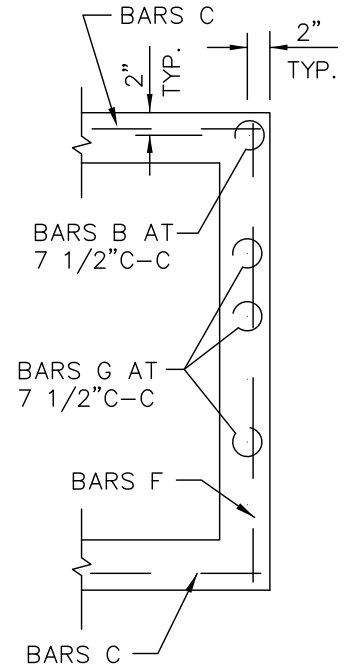
STANDARD SPECIFICATION REFERENCE	
702	
DATE	STANDARD DRAWING NO.
AUG '23	6020A

STANDARD DRAWING NO. 6020A



SECTION "A-A"

N.T.S.



SECTION "X-X"

N.T.S.

GENERAL NOTES:

1. ALL CONCRETE SHALL BE CLASS "C" CONCRETE.
2. REINFORCING BARS SHALL BE STANDARD GRADE STEEL, DEFORMED REINFORCING BARS OF A DIAMETER AND LENGTH AS SHOWN.
3. CHAMFER ALL EXPOSED CORNERS 3/4" EXCEPT WHERE OTHERWISE NOTED.
4. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO OUTSIDE EDGE OF BARS.
5. FIELD CUT AND BEND BARS AS NECESSARY TO ACCOMODATE STORM SEWER PIPE.
6. RING AND COVER SHALL BE APPROVED BY THE OWNER AND INSTALLED BY THE CONTRACTOR.
7. INLET OPENING SHALL BE 6" MIN. OR 8" MAX.
8. PRECAST PRODUCT MAY BE USED AT THE APPROVAL OF THE OWNER.
9. ALLOW 1" MIN. CLEAR SPACE BETWEEN OD OF PIPE OR BOX AND INSIDE WALL OF INLET (OD OF PIPE OR BOX SHOULD ACCOUNT FOR SKEWED CONDITIONS).
10. DEPTHS GREATER THAN 10' NEED TO BE STRUCTURALLY ENGINEERED.
11. KEYWAY JOINT TO BE MIN. 18" ABOVE FLOWLINE, UNLESS APPROVED BY ENGINEER.

STANDARD DRAWING NO. 6020B

CURB INLET

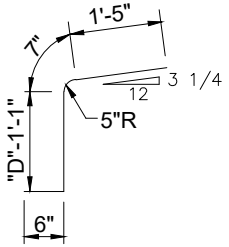
CROSS SECTION & INLET THROAT

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 702

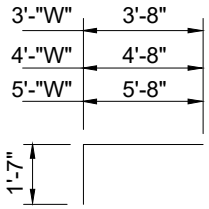
DATE AUG '23

STANDARD DRAWING NO. 6020B



#4 BARS A

N.T.S.



#4 BARS B

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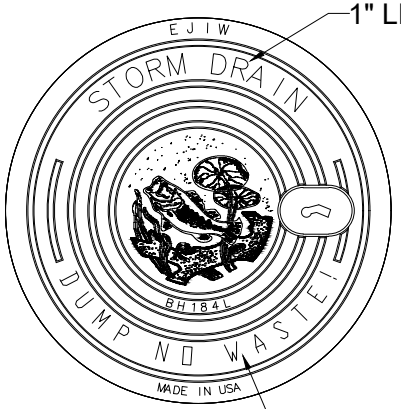
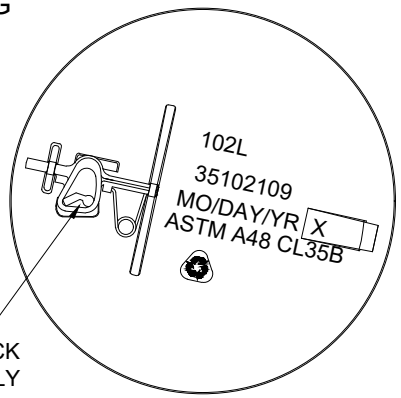
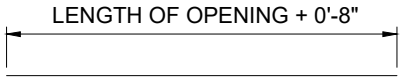




BOTTOM VIEW

#4 BARS C & D

N.T.S.



#4 BARS E

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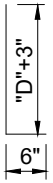

#4 BARS F

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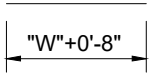

#4 BARS G

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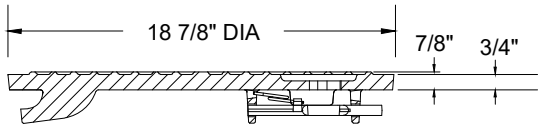
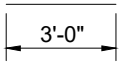


COVER SECTION



#4 BARS J

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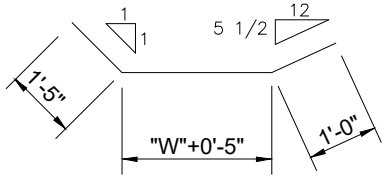
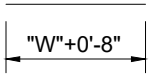


#3 BARS M

N.T.S.



#5 BARS N

N.T.S.

EJIW EAST JORDAN IRON WORKS EST.1883
800-626-4653
www.ejiw.com
MADE IN USA

PRODUCT NUMBER
35102209

CATALOG NUMBER
102 LOCK

LOCK COVER ASSEMBLY

LOAD RATING
LIGHT DUTY

COATING
DIPPED

ESTIMATED WEIGHT
COVER: 60 LBS 27kg

MATERIAL SPECIFICATION
COVER - GRAY IRON
ASTM A48 CL35B

OPEN AREA
N/A

√ DESIGNATES MACHINED SURFACE

DRAWN	DATE
DEW	10/16/06
LAST REVISED	DATE
DAL	07/13/07

REFERENCE INFORMATION
35102110

M* - CITY OF MELISSA REVISION

STANDARD DRAWING NO. 6020CM*

CURB INLET

REBAR & M.H. FRAME & COVER

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE
702

DATE
02/03/09

STANDARD DRAWING NO.
6020CM*

BILL OF REINFORCING STEEL

DEPTH "D"	ALL WIDTHS AND LENGTHS				OPENING LENGTH "L" = 5ft						OPENING LENGTH "L" = 10ft						OPENING LENGTH "L" = 15 ft								OPENING LENGTH "L" = 20 ft							
					Widths "W"						Widths "W"						Widths "W"								Widths "W"							
					3ft	4ft	5ft				3ft	4ft	5ft				3ft	4ft	5ft						3ft	4ft	5ft					
	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS
	C	D	E	J	F	F	F	A	B	G	F	F	F	A	B	G	F	F	F	A	B	G	M	N	F	F	F	A	B	G	M	N
3'–6"	17	3	2	4	20	24	28	10	10	20	28	32	36	18	18	28	36	40	44	26	26	36	2	2	44	48	52	34	34	44	2	2
3'–9"	18	"	"	"	"	"	"	"	"	20	"	"	"	"	"	28	"	"	"	"	"	36	"	"	"	"	"	"	"	44	"	"
4'–0"	19	"	"	"	"	"	"	"	"	24	"	"	"	"	"	32	"	"	"	"	"	40	"	"	"	"	"	"	"	48	"	"
4'–3"	19	"	"	"	"	"	"	"	"	24	"	"	"	"	"	32	"	"	"	"	"	40	"	"	"	"	"	"	"	48	"	"
4'–6"	21	"	"	"	"	"	"	"	"	26	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	"	"	50	"	"
4'–9"	21	"	"	"	"	"	"	"	"	26	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	"	"	50	"	"
5'–0"	21	"	"	"	"	"	"	"	"	26	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	"	"	50	"	"
5'–3"	23	"	"	"	"	"	"	"	"	28	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	"	"	52	"	"
5'–6"	23	"	"	"	"	"	"	"	"	28	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	"	"	52	"	"
5'–9"	25	"	"	"	"	"	"	"	"	30	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	"	"	54	"	"
6'–0"	25	"	"	"	"	"	"	"	"	30	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	"	"	54	"	"
6'–3"	26	"	"	"	"	"	"	"	"	30	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	"	"	54	"	"
6'–6"	27	"	"	"	"	"	"	"	"	32	"	"	"	"	"	40	"	"	"	"	"	48	"	"	"	"	"	"	"	56	"	"
6'–9"	27	"	"	"	"	"	"	"	"	32	"	"	"	"	"	40	"	"	"	"	"	48	"	"	"	"	"	"	"	56	"	"
7'–0"	29	"	"	"	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	"	"	58	"	"
7'–3"	29	"	"	"	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	"	"	58	"	"
7'–6"	30	"	"	"	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	"	"	58	"	"
7'–9"	31	"	"	"	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	52	"	"	"	"	"	"	"	60	"	"
8'–0"	31	"	"	"	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	52	"	"	"	"	"	"	"	60	"	"
8'–3"	32	"	"	"	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	52	"	"	"	"	"	"	"	60	"	"
8'–6"	33	"	"	"	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	54	"	"	"	"	"	"	"	62	"	"
8'–9"	34	"	"	"	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	54	"	"	"	"	"	"	"	62	"	"
9'–0"	35	"	"	"	"	"	"	"	"	40	"	"	"	"	"	48	"	"	"	"	"	56	"	"	"	"	"	"	"	64	"	"
9'–3"	36	"	"	"	"	"	"	"	"	40	"	"	"	"	"	48	"	"	"	"	"	56	"	"	"	"	"	"	"	64	"	"
9'–6"	37	"	"	"	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	58	"	"	"	"	"	"	"	66	"	"
10'–0"	38	"	"	"	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	58	"	"	"	"	"	"	"	66	"	"

NOTES:

– FOR CONVENIENCE, DEPTHS OF INLETS SHOWN IN ABOVE TABLES ARE IN INCREMENTS OF 3 INCHES BUT ANY DEPTHS OTHER THAN THOSE SHOWN ABOVE MAY BE USED WHEREVER DEEMED NECESSARY. QUANTITIES FOR OTHER DEPTHS FALLING WITHIN THE LIMITS OF THE TABLE MAY BE FOUND BY INTERPOLATION.

– DEPTHS GREATER THAN 10' NEED TO BE STRUCTURALLY ENGINEERED.

STANDARD DRAWING NO. 6020D

CURB INLET

BILL OF REINFORCING STEEL

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 702

DATE AUG '23

STANDARD DRAWING NO. 6020D

SUMMARY OF QUANTITIES FOR CURB INLETS

DEPTH "D"	5'–0" OPENING						10'–0" OPENING						15'–0" OPENING						20'–0" OPENING					
	WIDTH 3'–0"		WIDTH 4'–0"		WIDTH 5'–0"		WIDTH 3'–0"		WIDTH 4'–0"		WIDTH 5'–0"		WIDTH 3'–0"		WIDTH 4'–0"		WIDTH 5'–0"		WIDTH 3'–0"		WIDTH 4'–0"		WIDTH 5'–0"	
	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.
3'–6"	2.62	306	2.95	332	3.28	373	4.12	479	4.64	521	5.20	564	5.69	667	6.40	721	7.10	775	7.20	846	8.11	909	9.03	976
3'–9"	2.70	309	3.04	341	3.39	373	4.25	494	4.78	536	5.34	579	5.87	687	6.58	741	7.30	796	7.42	874	8.34	937	9.27	1010
4'–0"	2.78	328	3.14	364	3.49	399	4.38	518	4.92	565	5.49	610	6.05	718	6.77	776	7.49	835	7.64	909	8.58	976	9.51	1046
4'–3"	2.87	334	3.23	370	3.59	406	4.51	526	5.06	573	5.64	619	6.22	729	6.95	787	7.69	847	7.87	922	8.81	990	9.75	1061
4'–6"	2.95	356	3.32	394	3.69	431	4.64	558	5.20	607	5.79	656	6.40	770	7.14	830	7.88	891	8.09	973	9.04	1043	9.99	1115
4'–9"	3.03	361	3.41	410	3.79	438	4.77	566	5.34	616	5.94	665	6.57	780	7.32	841	8.07	903	8.31	986	9.27	1056	10.23	1129
5'–0"	3.12	367	3.51	416	3.90	445	4.90	574	5.47	624	6.09	674	6.75	791	7.51	853	8.27	915	8.53	999	9.50	1070	10.47	1144
5'–3"	3.20	383	3.60	424	4.00	465	5.03	600	5.61	652	6.23	704	6.93	827	7.69	890	8.46	955	8.76	1044	9.73	1118	10.71	1194
5'–6"	3.28	389	3.69	430	4.10	472	5.16	608	5.75	661	6.38	713	7.11	837	7.88	901	8.66	967	8.98	1057	9.97	1131	10.95	1208
5'–9"	3.37	405	3.78	451	4.20	495	5.29	635	5.89	690	6.53	744	7.28	874	8.07	940	8.85	1007	9.20	1102	10.20	1178	11.19	1258
6'–0"	3.45	415	3.88	460	4.30	504	5.42	646	6.03	702	6.68	757	7.45	888	8.25	954	9.05	1022	9.42	1119	10.43	1196	11.43	1276
6'–3"	3.53	425	3.97	470	4.41	515	5.55	661	6.17	718	6.83	773	7.63	908	8.44	975	9.24	1044	9.64	1147	10.66	1223	11.67	1305
6'–6"	3.62	437	4.06	486	4.51	532	5.68	681	6.31	739	6.97	797	7.81	935	8.62	1005	9.43	1057	9.87	1178	10.89	1258	11.92	1340
6'–9"	3.70	441	4.15	490	4.61	537	5.81	688	6.45	747	7.12	806	7.98	945	8.81	1015	9.63	1066	10.09	1191	11.12	1272	12.15	1355
7'–0"	3.78	460	4.25	510	4.71	560	5.94	716	6.59	777	7.27	837	8.16	981	8.99	1053	9.82	1126	10.31	1237	11.35	1319	12.40	1404
7'–3"	3.86	465	4.34	516	4.81	567	6.07	724	6.72	785	7.42	846	8.33	992	9.18	1065	10.02	1138	10.53	1249	11.59	1333	12.64	1418
7'–6"	3.95	477	4.43	529	4.91	570	6.20	742	6.86	804	7.57	866	8.51	1016	9.36	1089	10.21	1163	10.75	1290	11.82	1365	12.88	1451
7'–9"	4.03	491	4.53	544	5.02	597	6.33	762	7.00	826	7.71	890	8.67	1040	9.55	1116	10.41	1193	10.98	1313	12.05	1399	13.12	1498
8'–0"	4.12	496	4.62	550	5.12	604	6.46	770	7.14	834	7.86	899	8.86	1051	9.73	1129	10.60	1205	11.20	1325	12.28	1412	13.36	1510
8'–3"	4.20	504	4.71	559	5.22	613	6.59	784	7.28	849	8.01	915	9.04	1069	9.92	1149	10.80	1228	11.42	1353	12.51	1440	13.60	1529
8'–6"	4.28	519	4.80	576	5.32	632	6.71	804	7.42	871	8.16	938	9.21	1107	10.10	1176	10.99	1257	11.64	1385	12.74	1474	13.84	1565
8'–9"	4.37	528	4.90	586	5.42	643	6.84	819	7.56	886	8.31	954	9.39	1119	10.29	1199	11.18	1280	11.87	1410	12.97	1500	14.08	1592
9'–0"	4.45	545	4.99	605	5.53	664	6.97	842	7.70	912	8.46	982	9.56	1148	10.47	1231	11.38	1313	12.09	1447	13.21	1539	14.32	1631
9'–3"	4.53	554	5.08	614	5.63	674	7.10	858	7.84	929	8.60	999	9.74	1169	10.66	1252	11.57	1335	12.31	1474	13.44	1563	14.56	1660
9'–6"	4.62	568	5.17	630	5.73	692	7.23	878	7.97	950	8.75	1022	9.92	1195	10.84	1280	11.77	1365	12.53	1505	13.67	1600	14.80	1696
10'–0"	4.78	582	5.36	645	5.93	708	7.49	900	8.11	974	9.05	1048	10.27	1227	11.21	1312	12.16	1399	12.98	1546	14.13	1642	15.29	1739

NOTE:

– FOR CONVENIENCE, DEPTHS OF INLETS SHOWN IN ABOVE TABLES ARE IN INCREMENTS OF 3 INCHES BUT ANY DEPTHS OTHER THAN THOSE SHOWN ABOVE MAY BE USED WHEREVER DEEMED NECESSARY. QUANTITIES FOR OTHER DEPTHS FALLING WITHIN THE LIMITS OF THE TABLE MAY BE FOUND BY INTERPOLATION.

– DEPTHS GREATER THAN 10' NEED TO BE STRUCTURALLY ENGINEERED.

STANDARD DRAWING NO. 6020E

CURB INLET

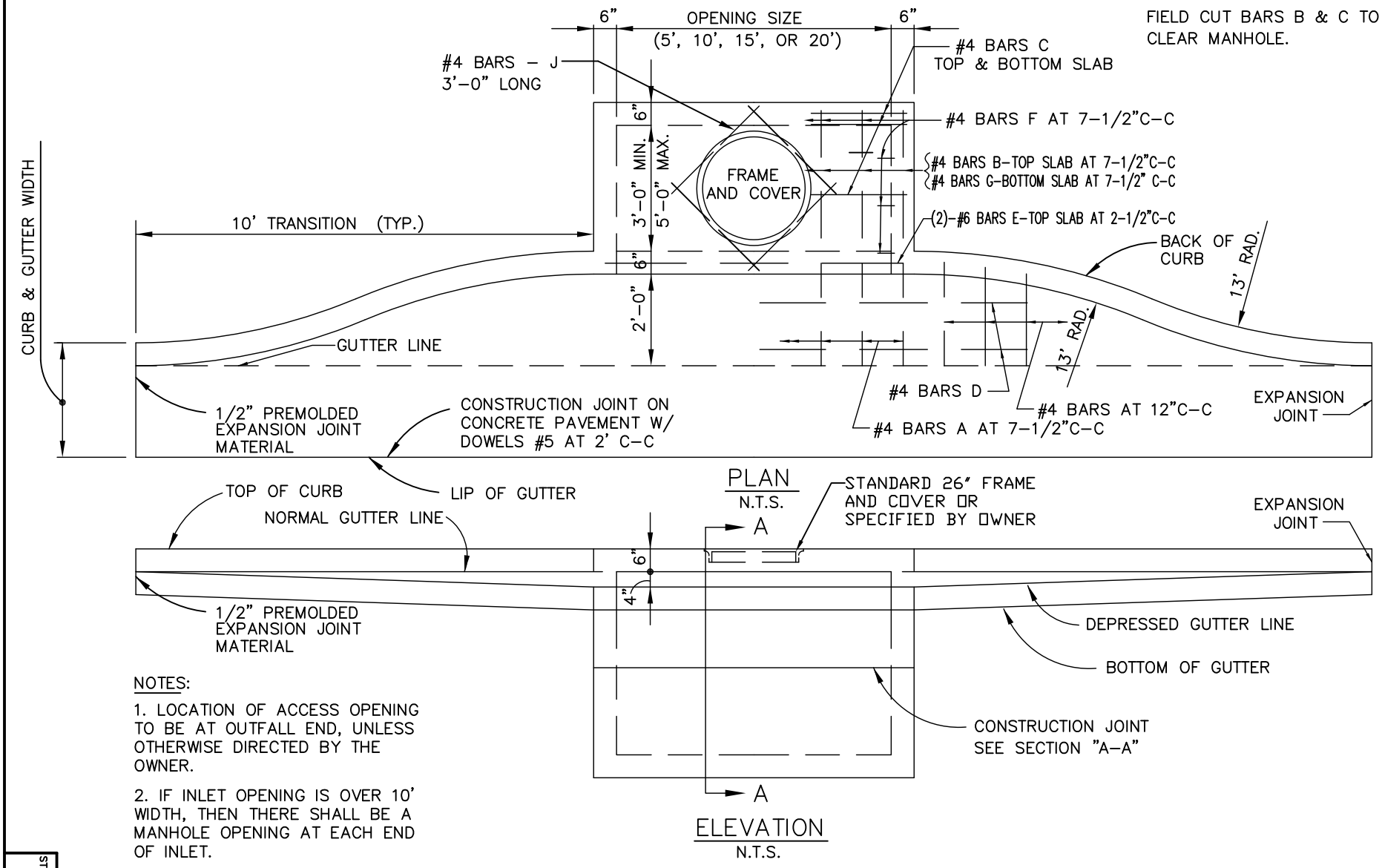
SUMMARY OF QUANTITIES

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 702

DATE AUG '23

STANDARD DRAWING NO. 6020E



NOTES:

1. LOCATION OF ACCESS OPENING TO BE AT OUTFALL END, UNLESS OTHERWISE DIRECTED BY THE OWNER.

2. IF INLET OPENING IS OVER 10' WIDTH, THEN THERE SHALL BE A MANHOLE OPENING AT EACH END OF INLET.

STANDARD DRAWING NO. 6030A

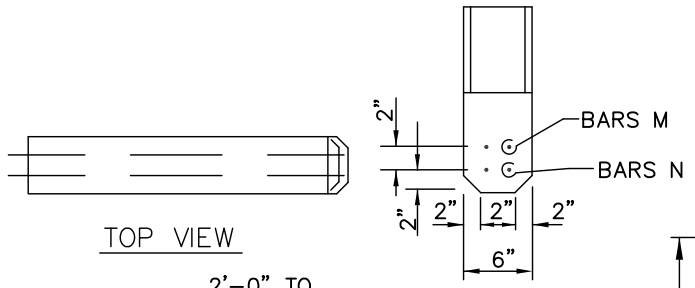
CURB INLET RECESSED
5', 10', 15' OR 20' OPENING

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE
702

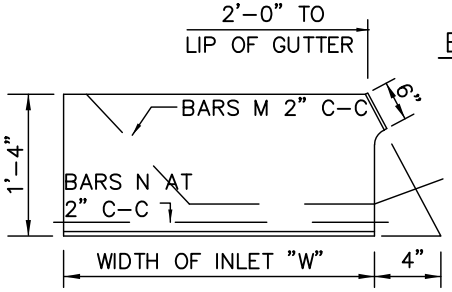
DATE
AUG '23

STANDARD DRAWING NO.
6030A



TOP VIEW

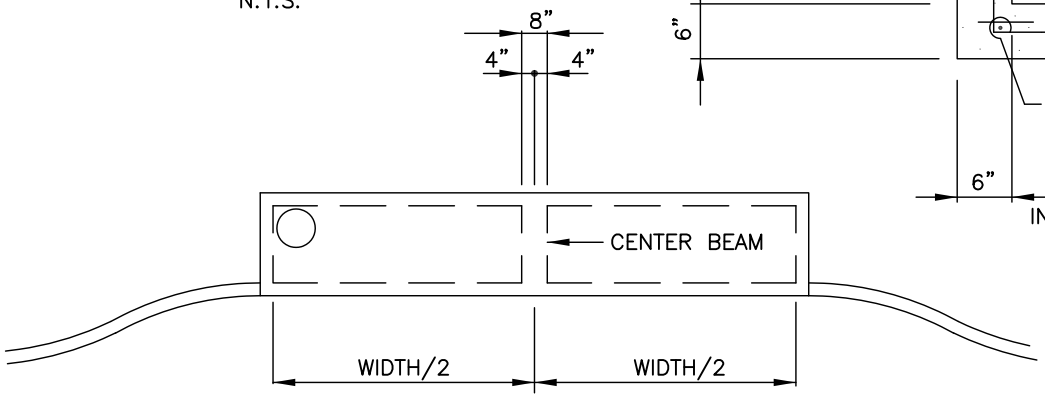
END VIEW



SIDE SECTION

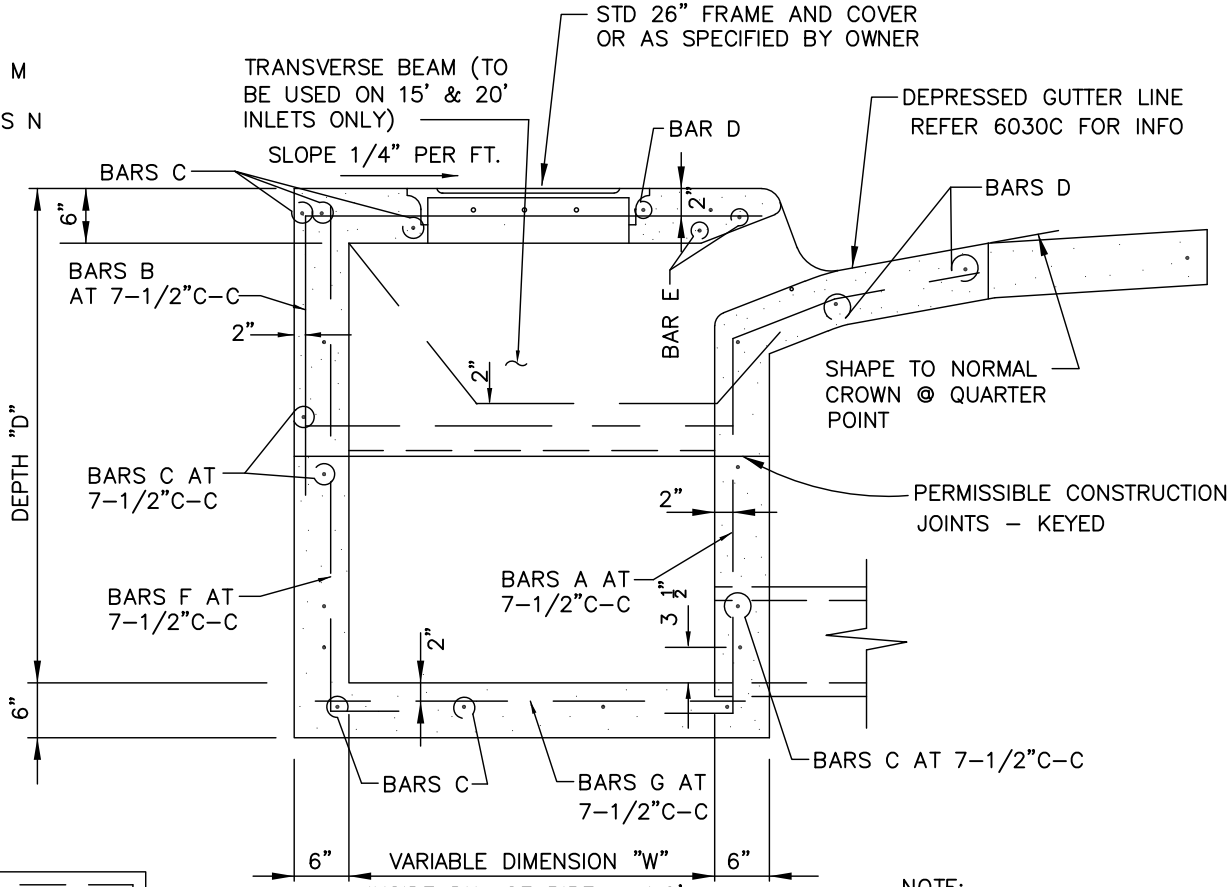
TRANSVERSE BEAM DETAIL

(FOR USE WITH 15' & 20' INLETS)
N.T.S.



TRANSVERSE BEAM FOR 15' AND 20' INLETS

N.T.S.



SECTION A-A

N.T.S.

NOTE:
1. KEYWAY JOINT TO BE MIN. 18" ABOVE FLOWLINE, UNLESS OTHERWISE APPROVED BY ENGINEER.
2. MATCH PAVEMENT THICKNESS TO STREET, TYPICALLY 6".

STANDARD DRAWING NO. 6030B

CURB INLET RECESSED

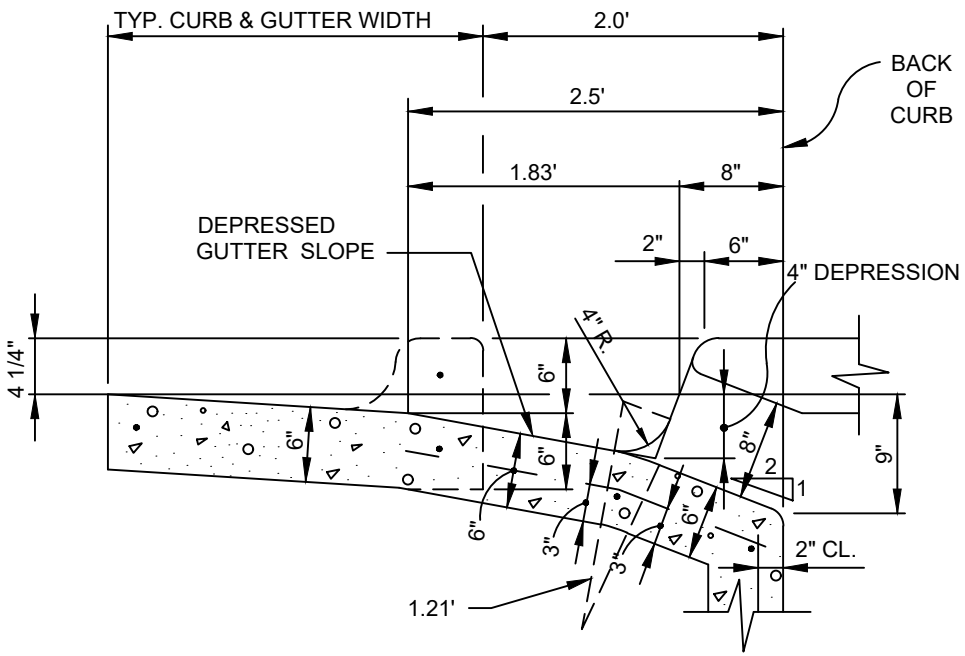
CROSS SECTION & CENTER BEAM

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE
702

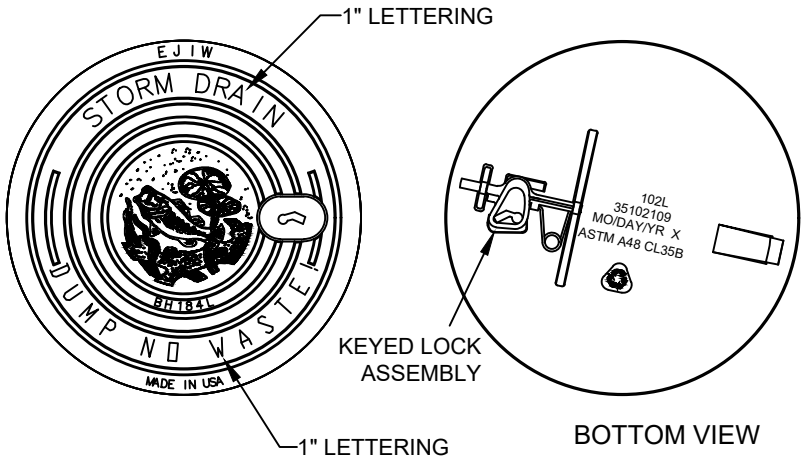
DATE
AUG '23

STANDARD DRAWING NO.
6030B



INLET THROAT

N.T.S.



MANHOLE FRAME & COVER

N.T.S.

EJIW EAST JORDAN IRON WORKS EST.1883
800-626-4653
www.ejiw.com
MADE IN USA

PRODUCT NUMBER	35102209
CATALOG NUMBER	102 LOCK
	LOCK COVER ASSEMBLY
LOAD RATING	LIGHT DUTY
COATING	DIPPED
ESTIMATED WEIGHT	COVER: 60 LBS 27kg
MATERIAL SPECIFICATION	COVER - GRAY IRON ASTM A48 CL35B
OPEN AREA	N/A
√DESIGNATES MACHINED SURFACE	
DRAWN DEW	DATE 10/16/06
LAST REVISED DAL	DATE 07/13/07
REFERENCE INFORMATION	35102110

M* - CITY OF MELISSA REVISION

STANDARD DRAWING NO. 6030CM*

CURB INLET RECESSED

INLET THROAT & M.H. FRAME & COVER

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE	
702	
DATE	STANDARD DRAWING NO.
02/03/09	6030CM*

GENERAL NOTES:

1. ALL REINFORCING STEEL SHALL BE GRADE 60. DEFORMED REINFORCING BARS AT A DIAMETER & LENGTH AS SHOWN.
2. ALL CONCRETE SHALL BE CLASS "C". ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4".
3. ALL REINFORCING STEEL SHALL HAVE A MINIMUM COVER OF 2" CLEAR OF THE BARS.
4. 10'–0" OF EXISTING CURB AND GUTTER UPSTREAM AND 10'–0" OF EXISTING CURB AND GUTTER DOWNSTREAM SHALL BE REMOVED AND REPOURED INTEGRALLY WITH EACH INLET.
5. ALL BACK FILLING SHALL BE PERFORMED BY MECHANICAL TAMPING TO 95% STANDARD PROCTOR DENSITY.
6. PRECAST PRODUCTS MAY BE USED AT THE APPROVAL OF THE OWNER.
7. ALLOW 1" MIN. CLEAR SPACE BETWEEN OD OF PIPE OR BOX AND INSIDE WALL OF INLET (OD OF PIPE OR BOX SHOULD ACCOUNT FOR SKEWED CONDITIONS).
8. FIELD CUT & BEND BARS AS NECESSARY TO ACCOMODATE STORM SEWER PIPE.
9. RING & COVER SHALL BE APPROVED BY THE OWNER AND INSTALLED BT CONTRACTOR.
10. WHEN POURING INVERTS, THE BOTTOM SHALL BE SLOPED NO MORE THAN 1/4"/FT TOWARD PIPE.
11. INLET OPENING SHALL BE 6" MIN OR 8" MAX.
12. 10 FT. MAX DEPTH.

STANDARD DRAWING NO. 6030D

CURB INLET RECESSED

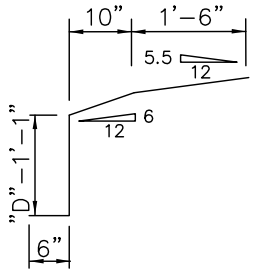
GENERAL NOTES

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 702

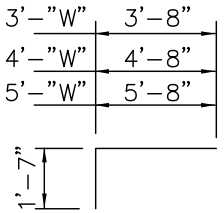
DATE AUG '23

STANDARD DRAWING NO. 6030D



#4 BARS A

N.T.S.



#4 BARS B

N.T.S.

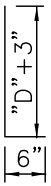
#4 BARS C & D

N.T.S.

FIELD CUT D BARS AS NECESSARY AT TRANSITIONS

#4 BARS E

N.T.S.



#4 BARS F

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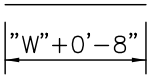
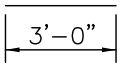


#4 BARS G

N.T.S.



#4 BARS J

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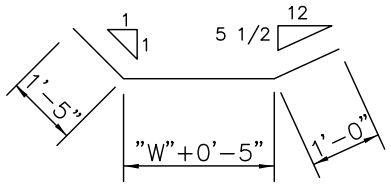
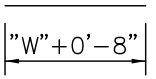


#3 BARS M

N.T.S.



#5 BARS N

N.T.S.

STANDARD DRAWING NO. 6030E

CURB INLET RECESSED

REBAR

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 702

DATE AUG '23

STANDARD DRAWING NO. 6030E

BILL OF REINFORCING STEEL

DEPTH "D"	ALL WIDTHS AND LENGTHS				OPENING LENGTH "L" = 5ft						OPENING LENGTH "L" = 10ft						OPENING LENGTH "L" = 15 ft								OPENING LENGTH "L" = 20 ft							
					Widths "W"						Widths "W"						Widths "W"								Widths "W"							
					3ft	4ft	5ft				3ft	4ft	5ft				3ft	4ft	5ft						3ft	4ft	5ft					
	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS
	C	D	E	J	F	F	F	A	B	G	F	F	F	A	B	G	F	F	F	A	B	G	M	N	F	F	F	A	B	G	M	N
3'–6"	17	3	2	4	20	24	28	10	10	20	28	32	36	18	18	28	36	40	44	26	26	36	2	2	44	48	52	34	34	44	2	2
3'–9"	18	"	"	"	"	"	"	"	"	20	"	"	"	"	"	28	"	"	"	"	"	36	"	"	"	"	"	"	"	44	"	"
4'–0"	19	"	"	"	"	"	"	"	"	24	"	"	"	"	"	32	"	"	"	"	"	40	"	"	"	"	"	"	"	48	"	"
4'–3"	19	"	"	"	"	"	"	"	"	24	"	"	"	"	"	32	"	"	"	"	"	40	"	"	"	"	"	"	"	48	"	"
4'–6"	21	"	"	"	"	"	"	"	"	26	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	"	"	50	"	"
4'–9"	21	"	"	"	"	"	"	"	"	26	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	"	"	50	"	"
5'–0"	21	"	"	"	"	"	"	"	"	26	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	"	"	50	"	"
5'–3"	23	"	"	"	"	"	"	"	"	28	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	"	"	52	"	"
5'–6"	23	"	"	"	"	"	"	"	"	28	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	"	"	52	"	"
5'–9"	25	"	"	"	"	"	"	"	"	30	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	"	"	54	"	"
6'–0"	25	"	"	"	"	"	"	"	"	30	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	"	"	54	"	"
6'–3"	26	"	"	"	"	"	"	"	"	30	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	"	"	54	"	"
6'–6"	27	"	"	"	"	"	"	"	"	32	"	"	"	"	"	40	"	"	"	"	"	48	"	"	"	"	"	"	"	56	"	"
6'–9"	27	"	"	"	"	"	"	"	"	32	"	"	"	"	"	40	"	"	"	"	"	48	"	"	"	"	"	"	"	56	"	"
7'–0"	29	"	"	"	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	"	"	58	"	"
7'–3"	29	"	"	"	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	"	"	58	"	"
7'–6"	30	"	"	"	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	"	"	58	"	"
7'–9"	31	"	"	"	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	52	"	"	"	"	"	"	"	60	"	"
8'–0"	31	"	"	"	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	52	"	"	"	"	"	"	"	60	"	"
8'–3"	32	"	"	"	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	52	"	"	"	"	"	"	"	60	"	"
8'–6"	33	"	"	"	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	54	"	"	"	"	"	"	"	62	"	"
8'–9"	34	"	"	"	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	54	"	"	"	"	"	"	"	62	"	"
9'–0"	35	"	"	"	"	"	"	"	"	40	"	"	"	"	"	48	"	"	"	"	"	56	"	"	"	"	"	"	"	64	"	"
9'–3"	36	"	"	"	"	"	"	"	"	40	"	"	"	"	"	48	"	"	"	"	"	56	"	"	"	"	"	"	"	64	"	"
9'–6"	37	"	"	"	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	58	"	"	"	"	"	"	"	66	"	"
10'–0"	38	"	"	"	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	58	"	"	"	"	"	"	"	66	"	"

NOTE:

– FOR CONVENIENCE, DEPTHS OF INLETS SHOWN IN ABOVE TABLES ARE IN INCREMENTS OF 3 INCHES BUT ANY DEPTHS OTHER THAN THOSE SHOWN ABOVE MAY BE USED WHEREVER DEEMED NECESSARY. QUANTITIES FOR OTHER DEPTHS FALLING WITHIN THE LIMITS OF THE TABLE MAY BE FOUND BY INTERPOLATION.

– DEPTHS GREATER THAN 10' NEED TO BE STRUCTURALLY ENGINEERED.

STANDARD DRAWING NO. 6030F

CURB INLET RECESSED

BILL OF REINFORCING STEEL

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 702

DATE AUG '23

STANDARD DRAWING NO. 6030F

SUMMARY OF QUANTITIES FOR CURB INLETS

DEPTH "D"	5'–0" OPENING						10'–0" OPENING						15'–0" OPENING						20'–0" OPENING					
	WIDTH 3'–0"		WIDTH 4'–0"		WIDTH 5'–0"		WIDTH 3'–0"		WIDTH 4'–0"		WIDTH 5'–0"		WIDTH 3'–0"		WIDTH 4'–0"		WIDTH 5'–0"		WIDTH 3'–0"		WIDTH 4'–0"		WIDTH 5'–0"	
	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.
3'–6"	2.87	324	3.23	357	3.59	390	4.41	496	4.95	540	5.50	584	5.94	684	6.67	742	7.40	799	7.48	858	8.40	926	9.31	995
3'–9"	2.96	333	3.32	367	3.69	401	4.54	512	5.09	556	5.64	601	6.12	706	6.86	764	7.60	822	7.70	886	8.63	955	9.55	1024
4'–0"	3.04	353	3.42	390	3.79	428	4.66	537	5.23	585	5.79	633	6.29	737	7.04	799	7.79	861	7.92	923	8.86	996	9.79	1068
4'–3"	3.12	358	3.51	396	3.89	434	4.79	545	5.37	594	5.94	643	6.47	748	7.23	811	7.99	873	8.14	937	9.09	1010	10.03	1083
4'–6"	3.21	376	3.60	417	4.00	457	4.92	573	5.51	624	6.09	675	6.64	786	7.41	850	8.18	915	8.36	984	9.32	1059	10.27	1134
4'–9"	3.29	382	3.69	423	4.10	464	5.05	581	5.65	633	6.24	684	6.82	796	7.60	862	8.37	927	8.59	997	9.55	1073	10.51	1149
5'–0"	3.37	387	3.79	429	4.20	471	5.18	589	5.79	641	6.38	693	7.00	807	7.78	873	8.57	939	8.81	1011	9.78	1087	10.75	1164
5'–3"	3.46	406	3.88	450	4.30	493	5.31	617	5.92	671	6.53	725	7.17	845	7.97	912	8.76	980	9.03	1057	10.02	1136	10.99	1215
5'–6"	3.54	411	3.97	456	4.40	500	5.44	625	6.06	680	6.68	735	7.35	855	8.15	924	8.96	992	9.25	1071	10.25	1150	11.23	1229
5'–9"	3.62	429	4.06	476	4.50	523	5.57	653	6.20	710	6.83	767	7.52	893	8.34	963	9.15	1034	9.48	1118	10.48	1199	11.48	1280
6'–0"	3.71	435	4.16	482	4.61	530	5.70	661	6.34	719	6.98	776	7.70	903	8.53	975	9.35	1046	9.70	1131	10.71	1213	11.72	1295
6'–3"	3.79	444	4.25	492	4.71	540	5.83	676	6.48	735	7.12	793	7.88	925	8.71	997	9.54	1069	9.92	1159	10.94	1242	11.96	1324
6'–6"	3.87	459	4.34	509	4.81	559	5.96	697	6.62	757	7.27	818	8.05	952	8.90	1026	9.74	1100	10.14	1191	11.17	1276	12.20	1361
6'–9"	3.96	464	4.43	515	4.91	566	6.09	705	6.76	766	7.42	827	8.23	962	9.08	1037	9.93	1112	10.36	1205	11.40	1290	12.44	1376
7'–0"	4.04	482	4.53	536	5.01	589	6.22	733	6.90	796	7.57	859	8.40	1000	9.27	1077	10.12	1154	10.59	1252	11.64	1339	12.68	1427
7'–3"	4.12	488	4.62	542	5.12	595	6.35	741	7.04	805	7.72	869	8.58	1010	9.45	1088	10.32	1166	10.81	1265	11.87	1353	12.92	1442
7'–6"	4.21	497	4.71	552	5.22	606	6.48	756	7.17	821	7.87	885	8.76	1032	9.64	1110	10.51	1189	11.03	1293	12.10	1382	13.16	1471
7'–9"	4.29	512	4.80	568	5.32	625	6.61	777	7.31	843	8.01	910	8.93	1059	9.82	1139	10.71	1219	11.25	1326	12.33	1417	13.40	1508
8'–0"	4.37	517	4.90	574	5.42	632	6.74	785	7.45	852	8.16	919	9.11	1069	10.01	1150	10.90	1231	11.48	1339	12.56	1431	13.64	1522
8'–3"	4.46	526	4.99	584	5.52	642	6.87	800	7.59	868	8.31	936	9.28	1091	10.19	1173	11.10	1254	11.70	1367	12.79	1459	13.88	1551
8'–6"	4.54	541	5.08	601	5.63	661	7.00	820	7.73	891	8.46	961	9.46	1118	10.38	1201	11.29	1285	11.92	1399	13.02	1494	14.12	1588
8'–9"	4.62	550	5.17	611	5.73	672	7.13	836	7.87	907	8.61	978	9.64	1139	10.56	1224	11.49	1308	12.14	1427	13.26	1522	14.36	1617
9'–0"	4.71	565	5.27	628	5.83	691	7.26	856	8.01	929	8.75	1002	9.81	1166	10.75	1252	11.68	1339	12.36	1460	13.49	1557	14.60	1654
9'–3"	4.79	574	5.36	638	5.93	701	7.39	872	8.15	945	8.90	1019	9.99	1187	10.93	1275	11.87	1362	12.59	1487	13.72	1585	14.85	1683
9'–6"	4.87	588	5.45	654	6.03	720	7.52	892	8.29	968	9.05	1044	10.16	1214	11.12	1303	12.07	1393	12.81	1520	13.95	1620	15.09	1720
10'–0"	5.04	603	5.64	670	6.24	738	7.78	916	8.56	993	9.35	1070	10.51	1246	11.49	1337	12.46	1428	13.25	1561	14.41	1662	15.57	1764

NOTE:

- FOR CONVENIENCE, DEPTHS OF INLETS SHOWN IN ABOVE TABLES ARE IN INCREMENTS OF 3 INCHES BUT ANY DEPTHS OTHER THAN THOSE SHOWN ABOVE MAY BE USED WHEREVER DEEMED NECESSARY. QUANTITIES FOR OTHER DEPTHS FALLING WITHIN THE LIMITS OF THE TABLE MAY BE FOUND BY INTERPOLATION.
- DEPTHS GREATER THAN 10' NEED TO BE STRUCTURALLY ENGINEERED.

STANDARD DRAWING NO. 6030G

CURB INLET RECESSED

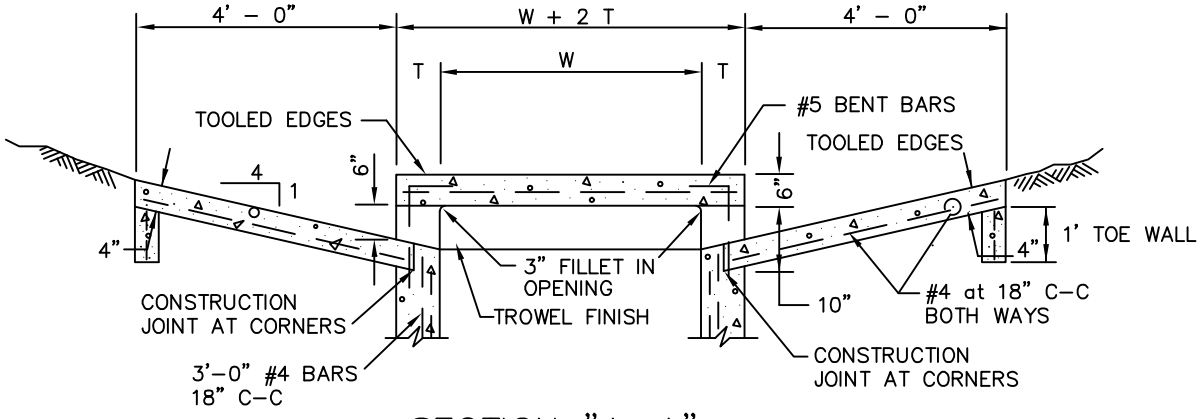
SUMMARY OF QUANTITIES

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 702

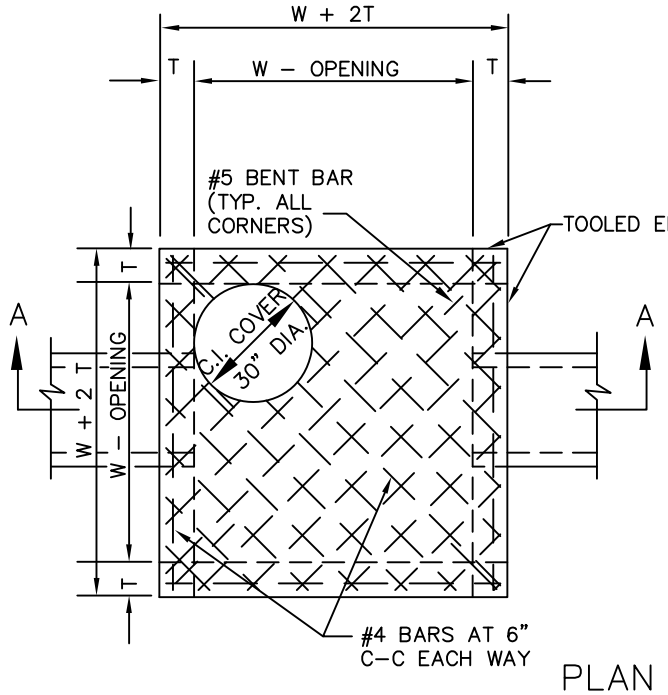
DATE AUG '23

STANDARD DRAWING NO. 6030G



SECTION "A–A"

N.T.S.



INLET SIZE	T	W
2' SQUARE	7"	2'–0"
4' SQUARE	7"	4'–0"
5' SQUARE	8"	5'–0"
6' SQUARE	9"	6'–0"

PLAN OF TOP SLAB

N.T.S.

NOTES:

1. MATERIAL AND WORKMANSHIP SHALL CONFORM WITH THE REQUIREMENTS OF NCTCOG STANDARD SPECIFICATIONS FOR STANDARD CONCRETE MANHOLES. MINIMUM CLASS "C" CONCRETE.
2. LAYERS OF REINFORCING STEEL NEAREST THE INTERIOR AND EXTERIOR SURFACES SHALL HAVE A COVER OF 2" CLEAR OF BARS, UNLESS OTHERWISE NOTED.
3. FOR DETAILS OF REINFORCING OF LOWER PORTION OF INLET SEE APPROPRIATE SQUARE MANHOLE DETAILS.
4. DEPTH OF DROP INLET FROM FINISHED GRADE TO FLOW LINE OF INLET IS VARIABLE. APPROXIMATE DEPTH WILL BE SHOWN ON PLANS AT LOCATION OF INLET.
5. ALL STANDARD DROP INLETS SHALL HAVE ONE OPENING ON EACH SIDE UNLESS OTHERWISE SHOWN ON PLANS.
6. TOP SLAB MAY BE REINFORCED SAME AS 4' SQUARE MANHOLE.
7. PRECAST PRODUCTS MAY BE USED AT THE APPROVAL OF THE OWNER.
8. ALLOW 1" MIN CLEAR SPACE BETWEEN OD OF PIPE OR BOX AND INSIDE WALL OF INLET (OD OF PIPE OR BOX SHOULD ACCOUNT FOR SKEWED CONDITIONS).
9. DEPTHS OF GREATER THAN 10' NEED TO BE STRUCTURALLY ENGINEERED.

DROP INLET

2', 4', 5', OR 6' SQUARE

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE
702

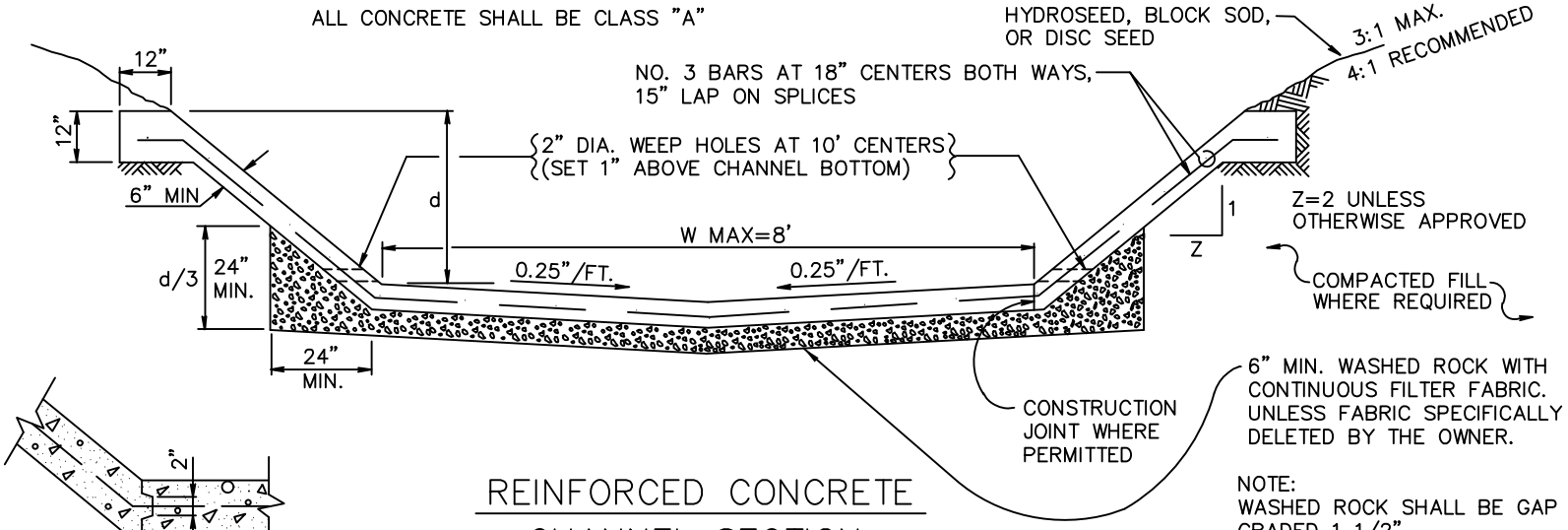
DATE
AUG '23

STANDARD DRAWING NO.
6040

FILL AREAS SHALL BE COMPACTED TO 95% STD. PROCTOR DENSITY AT OPTIMUM MOISTURE CONTENT PRIOR TO CHANNEL EXCAVATION.

* GEO TEXTILE RECOMMENDED AT CONNECTION OF TOP OF SLOPE TO EARTHEN MATERIAL.

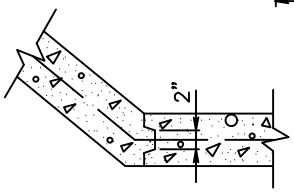
ALL CONCRETE SHALL BE CLASS "A"



NOTE:
WASHED ROCK SHALL BE GAP GRADED 1 1/2".

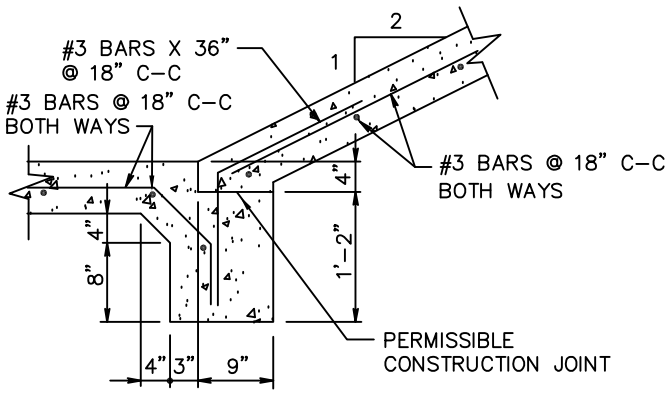
REINFORCED CONCRETE CHANNEL SECTION

N.T.S.



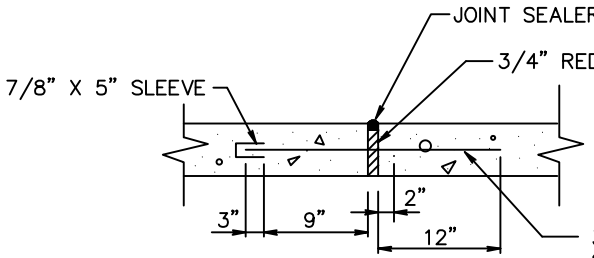
CONSTRUCTION JOINT

N.T.S.



ALTERNATE CONSTRUCTION JOINT

N.T.S.



TRANSVERSE EXPANSION JOINT

SPACE 100' C-C AND USE AT ENDS OF CURVES – P.C. AND P.T.
N.T.S.

*REFER TO ISWM FOR ALTERNATE BIOSWALE OPTIONS

STANDARD DRAWING NO. 6050

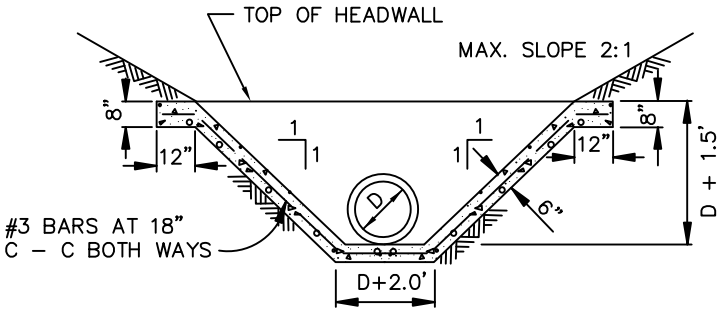
LOW FLOW CHANNEL LINING
CONCRETE REINFORCED

North Central Texas Council of Governments

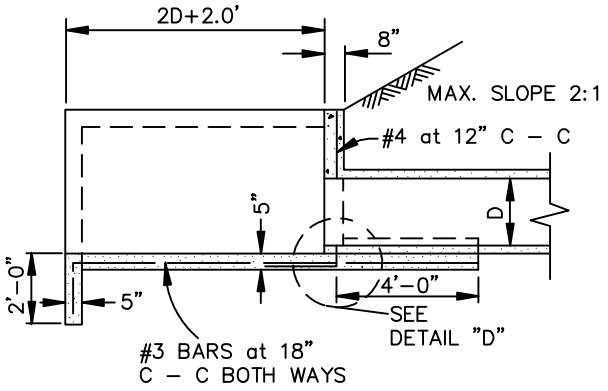
STANDARD SPECIFICATION REFERENCE: 803.3

DATE: AUG '23

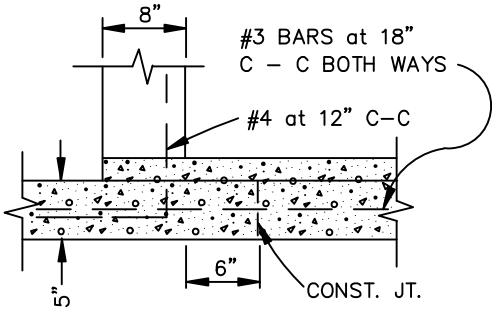
STANDARD DRAWING NO.: 6050



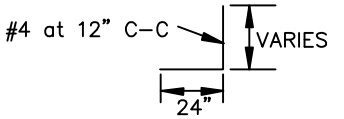
SECTION "B–B"
N.T.S.



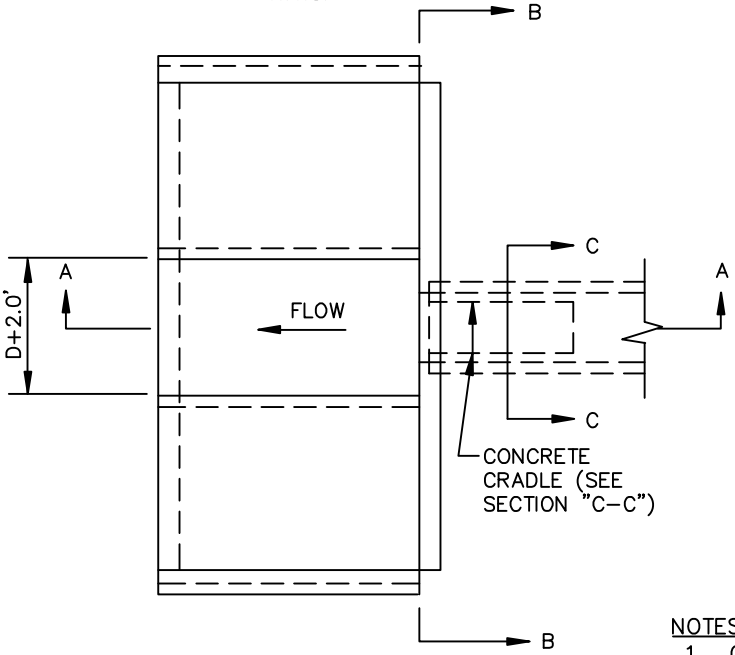
SECTION "A–A"
N.T.S.



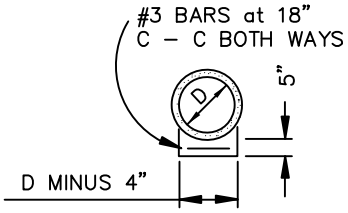
DETAIL "D"
N.T.S.



BAR DETAIL
N.T.S.



PLAN
N.T.S.



SECTION "C–C"
N.T.S.

NOTES:
1. CONCRETE SHALL BE CLASS "C"
2. SEE TXDOT DETAILS FOR ADDITIONAL HEADWALL OPTIONS.

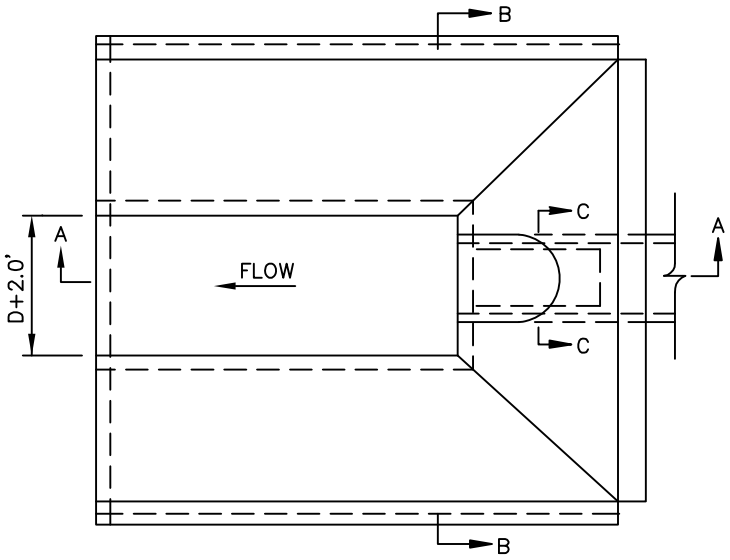
CONCRETE APRON
VERTICAL HEADWALL

North Central Texas Council of Governments

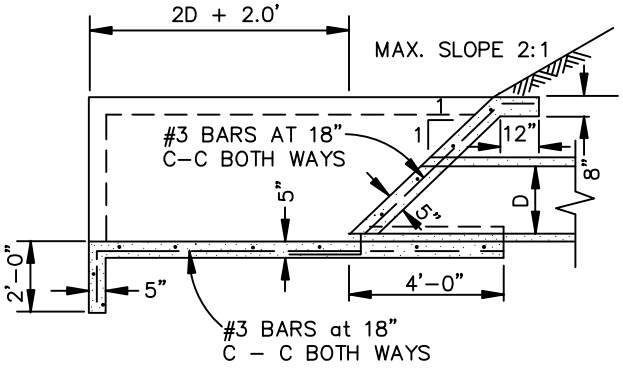
STANDARD SPECIFICATION REFERENCE
803.3

DATE
AUG '23

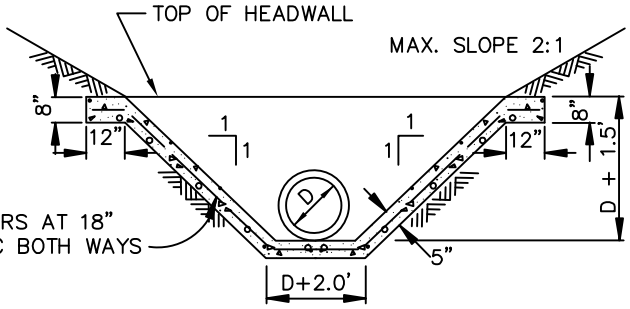
STANDARD DRAWING NO.
6060



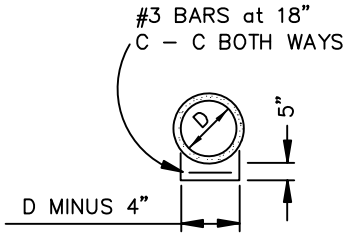
PLAN
N.T.S.



SECTION A–A
N.T.S.



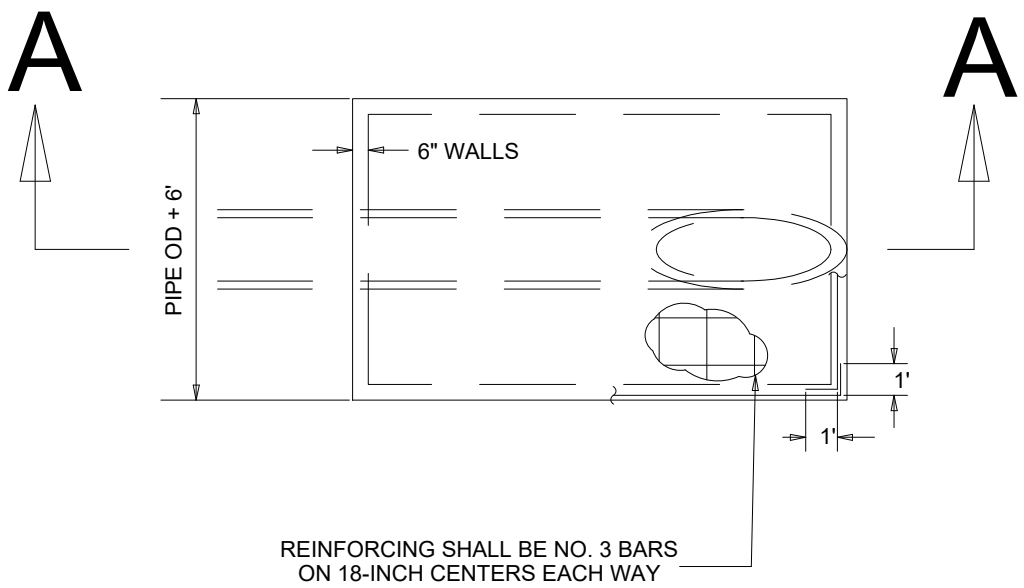
SECTION B–B
N.T.S.

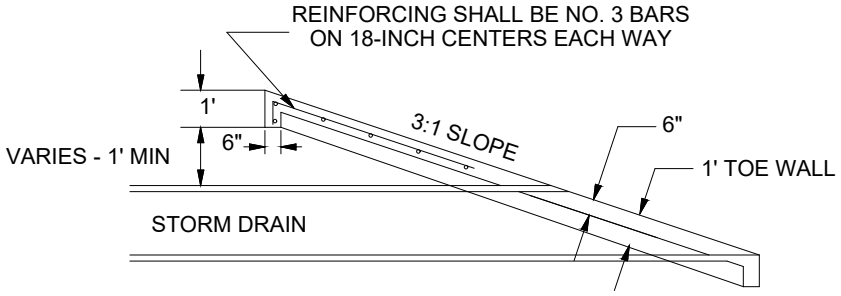


SECTION C–C
N.T.S.

NOTES:
1. CONCRETE SHALL BE CLASS "A".
2. WHEN SITE IT NOT APPLICABLE, SEE TXDOT

CONCRETE APRON	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 803.3	
SLOPING HEADWALL		DATE AUG '23	STANDARD DRAWING NO. 6070





SECTION A-A

NOTE:

CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.

M* - CITY OF MELISSA REVISION

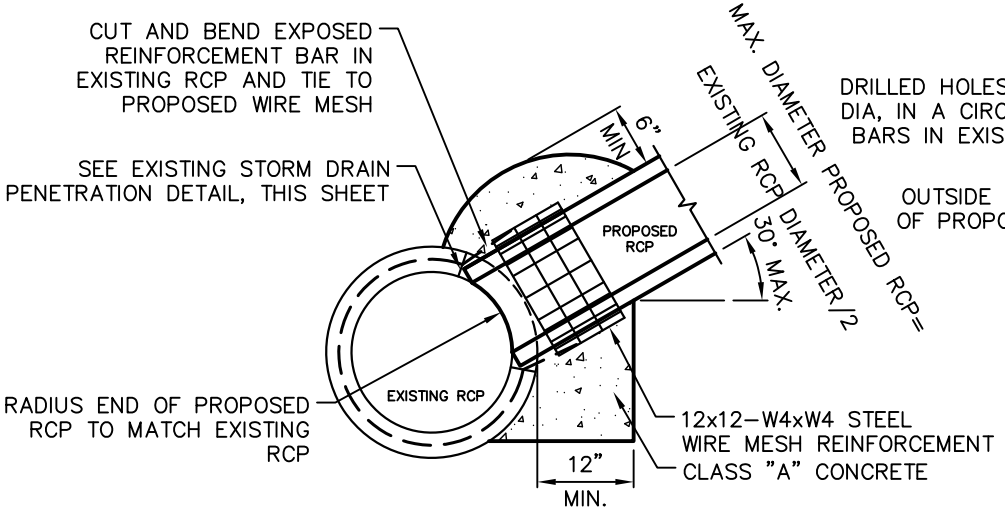
SLOPED END HEADWALL

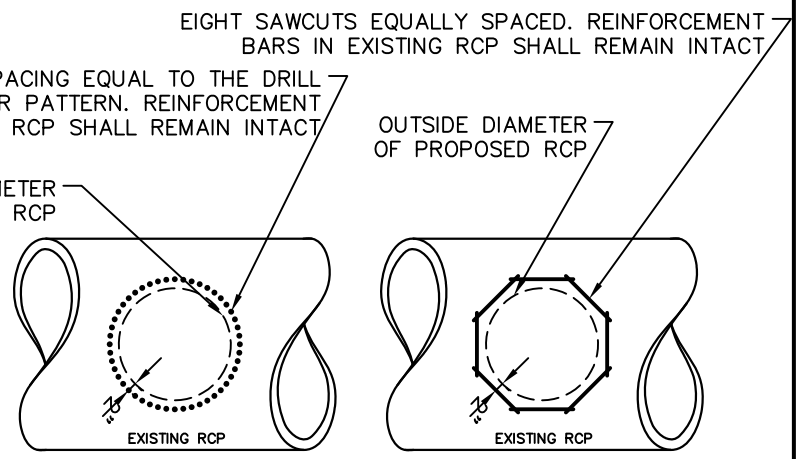
CITY OF MELISSA, TEXAS

NCTCOG STANDARD SPECIFICATION REFERENCE

DATE 12/04/03

STANDARD DRAWING NO. 6070AM*





EXISTING STORM DRAIN PENETRATION METHODS

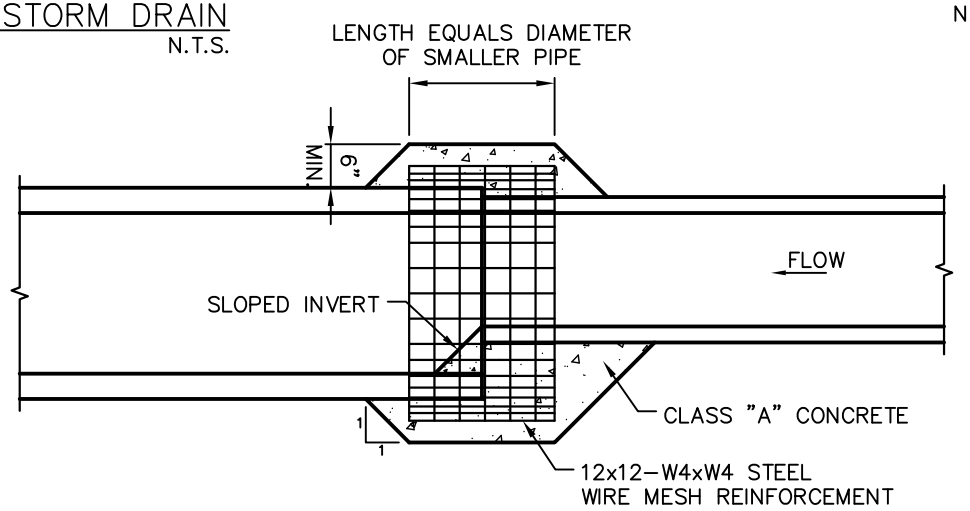
N.T.S.

CONNECTION OF PROPOSED TO EXISTING RCP STORM DRAIN

N.T.S.

NOTES:

1. THE CONNECTION METHODS SHOWN ON THIS DETAIL SHALL ONLY BE EMPLOYED WHEN THE USE OF A PREFABRICATED RCP CONNECTION IS NOT POSSIBLE, AND WITH THE APPROVAL OF THE OWNER.
2. NO. 3 BARS ON 6" CTRS. MAY BE USED IN PLACE OF WIRE MESH REINFORCEMENT.
3. FOR OTHER PIPE MATERIALS, REFER TO MANUFACTURER'S DETAILS.

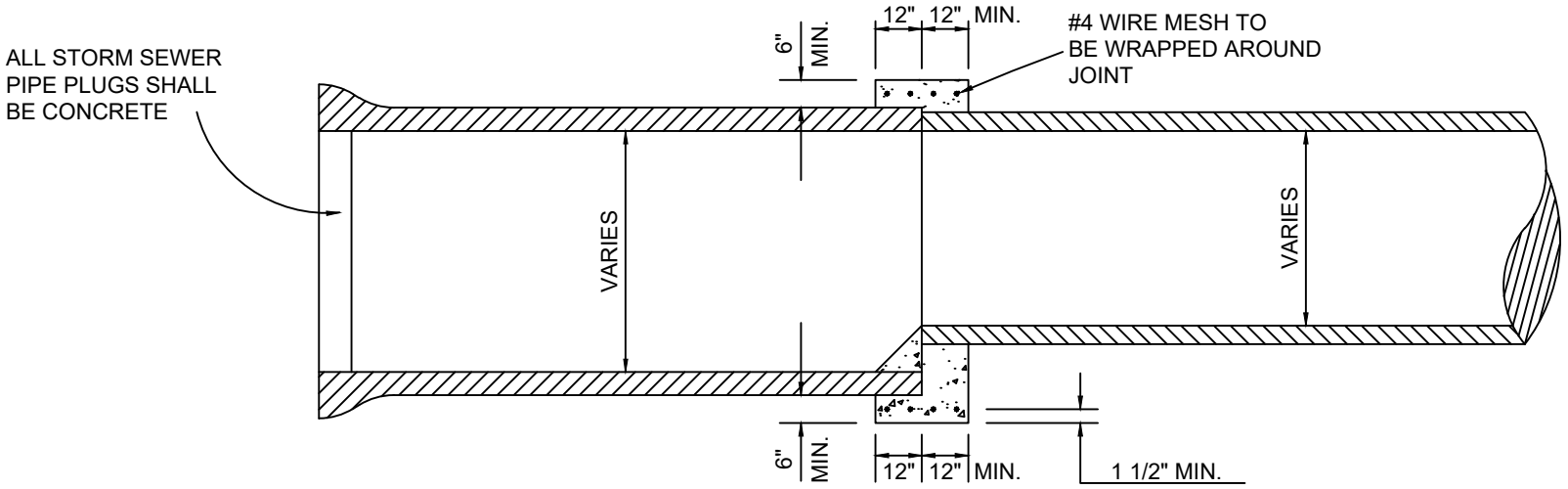


PIPE COLLAR FOR FIELD CONNECTION

N.T.S.

STANDARD DRAWING NO. 6080

STORM DRAIN PIPE COLLAR FOR FIELD CONNECTION	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 501, 702	
		DATE AUG '23	STANDARD DRAWING NO. 6080



DETAIL OF CONCRETE COLLAR FOR PIPE CONNECTIONS

N.T.S.

NOTES:

1. CONCRETE SHALL BE CLASS A CONCRETE (3,000 PSI)

M* - CITY OF MELISSA REVISION

STANDARD DRAWING NO. 6080M*	CONCRETE COLLAR FOR PIPE CONNECTIONS	MELISSA TX	NCTCOG STANDARD SPECIFICATION REFERENCE
			MODIFIED DATE
			STANDARD DRAWING NO. 6080M*
		NOTICE DATE 01/12/17	APPLIED DATE 01/12/17
			ENFORCED DATE 02/12/17

TYPICAL MAINTENANCE ACTIVITIES FOR PONDS

ACTIVITY	SCHEDULE
• CLEAN AND REMOVE DEBRIS FROM INLET AND OUTLET STRUCTURES • MOW WIDE SLOPES • CHECK VISUALLY FOR ILLEGAL DUMPING OR OTHER POLLUTANTS	MONTHLY
• IF WETLAND COMPONENTS ARE INCLUDED, INSPECT FOR INVASIVE VEGETATION	SEMIANNUAL INSPECTION
• INSPECT FOR DAMAGE, PAYING PARTICULAR ATTENTION TO THE CONTROL STRUCTURE • CHECK FOR SIGNS OF EUTROPHIC CONDITIONS • NOTE SIGNS OF HYDROCARBON BUILD-UP, AND REMOVE APPROPRIATELY • MONITOR FOR SEDIMENT ACCUMULATION IN THE FACILITY AND FOREBAY • EXAMINE TO ENSURE THAT INLET AND OUTLET DEVICES ARE FREE OF DEBRIS AND OPERATIONAL • CHECK ALL CONTROL GATES, VALVES OR OTHER MECHANICAL DEVICES • CHECK THE DOWNSTREAM FACE OF DAM FOR SEEPAGE(EARTH AND CONCRETE), SETTLING (EARTH) AND CRACKING (CONCRETE)	ANNUAL INSPECTION
• REPAIR UNDERCUT OR ERODED AREAS	AS NEEDED
• PERFORM WETLAND PLANT MANAGEMENT AND HARVESTING	ANNUALLY (IF NEEDED)
• REMOVE SEDIMENT FROM THE FOREBAY	5 TO 7 YEARS OR AFTER 50% OF THE TOTAL FOREBAY HAS BEEN LOST
• MONITOR SEDIMENT ACCUMULATIONS, AND REMOVE SEDIMENT WHEN THE POOL VOLUME HAS BECOME REDUCED SIGNIFICANTLY, OR THE POND BECOMES EUTROPHIC	10 TO 20 YEARS AFTER 25% OF THE PERMANENT POOL VOLUME HAS BEEN LOST

NOTES:

- A SEDIMENT MARKER SHOULD BE LOCATED IN THE FOREBAY TO DETERMINE WHEN SEDIMENT REMOVAL IS REQUIRED
- SEDIMENTS EXCAVATED FROM STORMWATER PONDS THAT DO NOT RECEIVE RUNOFF FROM DESIGNATED HOTSPOTS ARE NOT CONSIDERED TOXIC OR HAZARDOUS MATERIAL AND CAN BE SAFELY DISPOSED OF BY EITHER LAND APPLICATION OR LANDFILLING. SEDIMENT TESTING MAY BE REQUIRED PRIOR TO SEDIMENT DISPOSAL WHEN A HOTSPOT LAND USE IS PRESENT
- PERIODIC MOWING OF THE POND BUFFER IS ONLY REQUIRED ALONG MAINTENANCE RIGHTS-OF-WAY AND THE EMBANKMENT. THE REMAINING BUFFER CAN BE MANAGED AS A MEADOW (MOWING EVERY OTHER YEAR) OR FOREST.
- CARE SHOULD BE EXERCISED DURING POND DRAWDOWNS TO PREVENT DOWNSTREAM DISCHARGE OF SEDIMENTS, ANOXIC WATER, OR HIGH FLOWS WITH EROSIVE VELOCITIES. THE APPROVING JURISDICTION SHOULD BE NOTIFIED BEFORE DRAINING A STORMWATER POND.
- REGULAR INSPECTION AND MAINTENANCE IS CRITICAL TO THE EFFECTIVE OPERATION OF STORMWATER PONDS AS DESIGNED. MAINTENANCE RESPONSIBILITY FOR A POND AND ITS BUFFER SHOULD BE VESTED WITH A RESPONSIBLE AUTHORITY BY MEANS OF A LEGALLY BINDING AND ENFORCEABLE MAINTENANCE AGREEMENT THAT ITS EXECUTED AS A CONDITION OF PLAN APPROVAL.

M * - CITY OF MELISSA REVISION

STORMWATER POND INSPECTION AND MAINTENANCE REQUIREMENTS

CITY OF MELISSA, TEXAS

MELISSA TX

iSWM TECHNICAL MANUAL REFERENCE		
22.7		
MODIFIED DATE	STANDARD DRAWING NO.	
7/6/19	6090M*	
NOTICE DATE	APPLIED DATE	ENFORCED DATE
7/11/19	7/11/19	8/11/19

1. THE CITY OF MELISSA SHALL MAKE PERIODIC INSPECTIONS OF THE CONSTRUCTION OF IMPROVEMENTS.

2. INSPECTION OF IMPROVEMENTS DOES NOT RELIEVE THE SUBDIVIDER, OR HIS CONTRACTOR, FROM ENSURING THAT THE IMPROVEMENTS ARE CONSTRUCTED IN ACCORDANCE WITH THE ACCEPTED PLANS AND SPECIFICATIONS.

3. THE SUBDIVIDER, OR HIS CONTRACTOR, SHALL MAINTAIN CONTACTS WITH THE CITY ENGINEER, OR HIS REPRESENTATIVE, DURING CONSTRUCTION OF IMPROVEMENTS.

4. SHOP SPECIFICATIONS INCLUDING A TRENCH SAFETY PLAN (IF APPLICABLE), SHALL BE SUBMITTED TO THE CITY ENGINEER OR A REPRESENTATIVE FOR APPROVAL PRIOR TO ANY INSTALLATION OF SUCH ITEM(S).

5. NO SANITARY SEWER, WATER, OR STORM SEWER PIPE SHALL BE COVERED WITHOUT APPROVAL OF THE CITY ENGINEER, OR HIS REPRESENTATIVE. NO FLEXIBLE BASE MATERIAL, SUBGRADE MATERIAL, OR STABILIZATION SHALL BE APPLIED TO THE STREET SUBGRADE WITHOUT SAID APPROVAL. NO CONCRETE SHALL BE POURED NOR ASPHALT APPLIED WITHOUT SAID APPROVAL.

6. THE CITY ENGINEER MAY AT ANY TIME, CAUSE ANY CONSTRUCTION, INSTALLATION, MAINTENANCE, OR LOCATION OF IMPROVEMENTS TO CEASE WHEN, IN HIS JUDGMENT, THE REQUIREMENTS OF THE CITY OF MELISSA OR THE STANDARD AND SPECIFICATIONS HAVE BEEN VIOLATED, AND MAY REQUIRE SUCH RECONSTRUCTION OR OTHER WORK AS MAY BE NECESSARY TO CORRECT ANY SUCH VIOLATION.

7. THE CITY OF MELISSA WILL RETAIN A COMMERCIAL MATERIALS TESTING LABORATORY TO PERFORM TESTS NECESSARY TO VERIFY THAT SPECIFICATIONS ARE BEING MET FOR ALL PUBLIC IMPROVEMENTS.

8. THE COST FOR MATERIALS TESTING SHALL BE REIMBURSED TO THE CITY BY THE DEVELOPER.

9. CONTRACTOR SHALL COORDINATE WITH THE CITY ENGINEER TO ENSURE THAT ALL REQUIRED TESTING IS COMPLETED. FAILURE TO DO SO MAY RESULT IN DELAYS AND/OR REWORK, TO ACCEPT THE COMPLETED PROJECT.

10. MATERIALS AND WORKMANSHIP FOR ALL IMPROVEMENTS SHALL CONFORM TO THE LATEST EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION PUBLISHED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG), UNLESS OTHERWISE SPECIFIED BY THE CITY ENGINEER.

11. THE MAINTENANCE BOND PER DEVELOPMENT PERMIT APPROVAL WILL BE REQUIRED BEFORE THE COMPLETED PROJECT IS ACCEPTED BY THE CITY ENGINEER. IN LIEU OF REQUIREMENTS SHOWN IN SECTION 5.03 OF THE SUBDIVISION ORDINANCE, THE FOLLOWING MAINTENANCE BOND SCHEDULE MAY BE USED:

A. CONSTRUCTION CONTRACT VALUE LESS THAN $100,000
   - MAINTENANCE BOND REQUIRED IS 100% OF CONTRACT VALUE FOR 2 YEARS.
B. CONSTRUCTION CONTRACT VALUE GREATER THAN $100K BUT LESS THAN $500K
   - MAINTENANCE BOND REQUIRED IS 50% OF CONTRACT VALUE FOR 2 YEARS.
C. CONSTRUCTION CONTRACT VALUE GREATER THAN $500K BUT LESS THAN $2 MILLION
   - MAINTENANCE BOND REQUIRED IS 25% OF CONTRACT VALUE FOR 2 YEARS.
D. CONSTRUCTION CONTRACT VALUE GREATER THAN $2 MILLION
   - MAINTENANCE BOND REQUIRED IS 15% OF CONTRACT VALUE FOR 2 YEARS.

*SEE 7001.5M FOR AS-BUILT RECORD DRAWING INFORMATION REQUIRED.

M* - CITY OF MELISSA REVISION

GENERAL CONSTRUCTION NOTES

CITY OF MELISSA

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE		
N/A		
MODIFIED DATE	STANDARD DRAWING NO.	
05/02/14	7001M*	
NOTICE DATE	ADOPTED DATE	ENFORCEMENT DATE

12. AS-BUILT PLANS AND AN ELECTRONIC FILE SHALL BE SUBMITTED TO THE CITY ENGINEER PRIOR TO APPROVAL OF THE COMPLETED PROJECT.

-AS-BUILT FILES SHALL BE SUBMITTED IN DWG/DXF FORMAT, GEOREFERENCE IN THE STATE PLANE; TEXAS NORTH CENTRAL FIPS 4202 (FEET) COORDINATE SYSTEM, USING DATUM OF NAD 83.
-IF SUBMISSIONS FOR THE PROJECT RELATE TO A PLAT, THE FILES SUBMITTED MUST MATCH EXACTLY TO THE PLAT THAT IS SUBMITTED.
-THE FILES SHALL CONTAIN THE FOLLOWING FEATURES LISTED BELOW, AS APPLICABLE:

i. LAYERS FROM FINAL PLAT REQUIREMENTS AS APPLICABLE TO THE PROJECT: (LOT LINES, RIGHT OF WAY LINES, EASEMENT LINES, ETC.)
ii. WATER UTILITY FEATURES: (VALVE NUT ELEVATIONS AND LOCATIONS, FIRE HYDRANTS, BLOWOFF VALVES, AIR RELEASE VALVES, ETC.)
iii. SANITARY SEWER FEATURES: (MANHOLES, FLOWLINES AND CLEANOUTS)
iv. STORM SEWER FEATURES: (JUNCTION BOX & INLET TOPS, HEADWALLS, DITCHES, FLOWLINES, OUTFALL STRUCTURES, PONDS)
v. ROAD SYSTEM FEATURES: (TIE IN POINT, CENTER LINE EVERY 100 LF, PC & PT, BACK OF CURB, GUTTER, SIGNAL POSTS)
vi. GATES, FENCES, STREET SIGNS, MONUMENT SIGNS, LIGHT POLES, RIPRAP, IRRIGATION VALVES.

13. EACH REQUIRED FEATURE GROUP SHOULD BE PROVIDED AS A SEPERATE LAYER WITHIN THE FILE AND LAYER NAMES SHOULD BE REPRESENTATIVE OF THE INFORMATION CONTAINED IN THE LAYER.

14. AS-BUILT PLANS NEED TO REFLECT THE AS-BUILT SURVEY COMPLETED FOR THE PROJECT. ELEVATION DATA OBTAINED FROM THE AS-BUILT SURVEY NEEDS TO BE ADDED TO WATER, SANITARY SEWER, DRAINAGE, AND PAVING SHEETS, STRIKING THROUGH ANY DESIGN ELEVATION AND SLOPE DATA THAT DOESN'T MATCH THE AS-BUILT SURVEY.

15. AS-BUILT SIGNATURE BLOCK PER STANDARD DETAIL 7005M SHALL BE ADDED TO EVERY SHEET OF THE AS-BUILT PLANS, RESIZING THE DETAIL AS NEEDED ACCORDINGLY.

16. A PDF FILE OF THE AS-BUILT PLANS SHALL BE SUBMITTED TO THE CITY OF MELISSA ENGINEERING DEPARTMENT FOR REVIEW BEFORE HARD COPIES ARE DELIVERED. TWO FULL SIZE HARD COPIES OF THE AS-BUILT PLANS AND A CD CONTAINING BOTH PDF AND AUTOCAD FILES SHALL BE SUBMITTED TO THE CITY OF MELISSA DEVELOPMENT AND NEIGHBORHOOD SERVICES DEPARTMENT AFTER APPROVAL TO DO SO IS GRANTED BY THE MELISSA ENGINEERING DEPARTMENT.

17. A LIFE SAFETY PLAN IS REQUIRED FOR AS-BUILT PLANS. THE LIFE SAFETY PLAN SHALL INCLUDE THE LAYOUT AND LOCATION OF THE FOLLOWING:
-FIRE LANES
-HYDRANTS
-FDC'S
-FIRE ALARM PANELS
-ELEVATORS
-ROOF ACCESS
-KNOX BOX LOCATIONS
-ELECTRICAL ROOMS AS WELL AS ELECTRICAL SHUT OFF
-GAS METER AND SHUT OFF
-STORM SHELTERS OR STRONG ROOMS
-RISER ROOM
-ELEVATOR CONTROL ROOMS

UTILITY CONTACTS

	PUBLIC	CONTACT	PHONE NO.	DATE	APPROVAL SIGNATURE
DEPARTMENT	ENGINEERING	NOLAN HARVEY	469.907.5500		
	PUBLIC WORKS	JEFF CARTWRIGHT	469.853.9788		
	FIRE	CARL NIX	214.425.8443		
	PERMITTING	TYLER BREWER	972.838.2036		
	COLLIN COUNTY TXDOT	JENNIFER VORSTER	972.542.2345		
ELECT.	**PRIVATE**	**CONTACT**	**PHONE NO.**		
	ONCOR ELECTRIC	CHRIS DULANEY	972.569.1294		
	GRAYSON-COLLIN ELECTRIC COOP	MICHAEL LAUER WILL McGINNIS	903.482.7183 903.482.7100		
WATER	NORTH COLLIN SPECIAL UTILITY DISTRICT	ALLEN KNIGHT	972.837.2331		
	NORTH TEXAS MUNICIPAL WATER DISTRICT	KEVIN MCNEELY	469.626.4750		
	GREATER TEXOMA UTILITY AUTHORITY	STEVE WHITE	501.760.8933		
GAS	ATMOS ENERGY	DAVID STAGEBERG	214.733.5150		
	ONEOK PIPELINE				
PHONE AND CABLE	ZAYO	LOUISE JUDY	817.665.4702		
	AT&T - LEGACY (LONG DISTANCE)	IKE BUTLER	214-821-5237		
	AT&T - LOCAL - FEEDER LINES	BUFF MAY	972.520.1634		
	AT&T - LOCAL - MAIN LINES	BUFF MAY	972.520.1634		
	AT&T - LOCAL - LINE REPAIR	GREGORY HENDRICKS	214.250.4336		
	GCEC TELECOM	TODD DETRO	903.267.8285		
	TIME WARNER CABLE	CHAD WHIDDEN	817.822.8244		
	OPTIMUM	KEVIN ATKINS (PRG CONSULTING) GARY ESTEP	404.583.2977 469.400.6338		

NOTE: DEVELOPER SHALL SECURE SIGNATURES FROM ANY OF THE ABOVE FRANCHISE UTILITIES AND AGENCIES IF APPLICABLE

SIGNATURE BLOCK

CITY OF MELISSA

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE: N/A

MODIFIED DATE	STANDARD DRAWING NO.
06/14/24	7002M*

NOTICE DATE	APPLIED DATE	ENFORCED DATE
06/14/24	06/14/24	07/14/24

STANDARD DRAWING NO. 7002M*

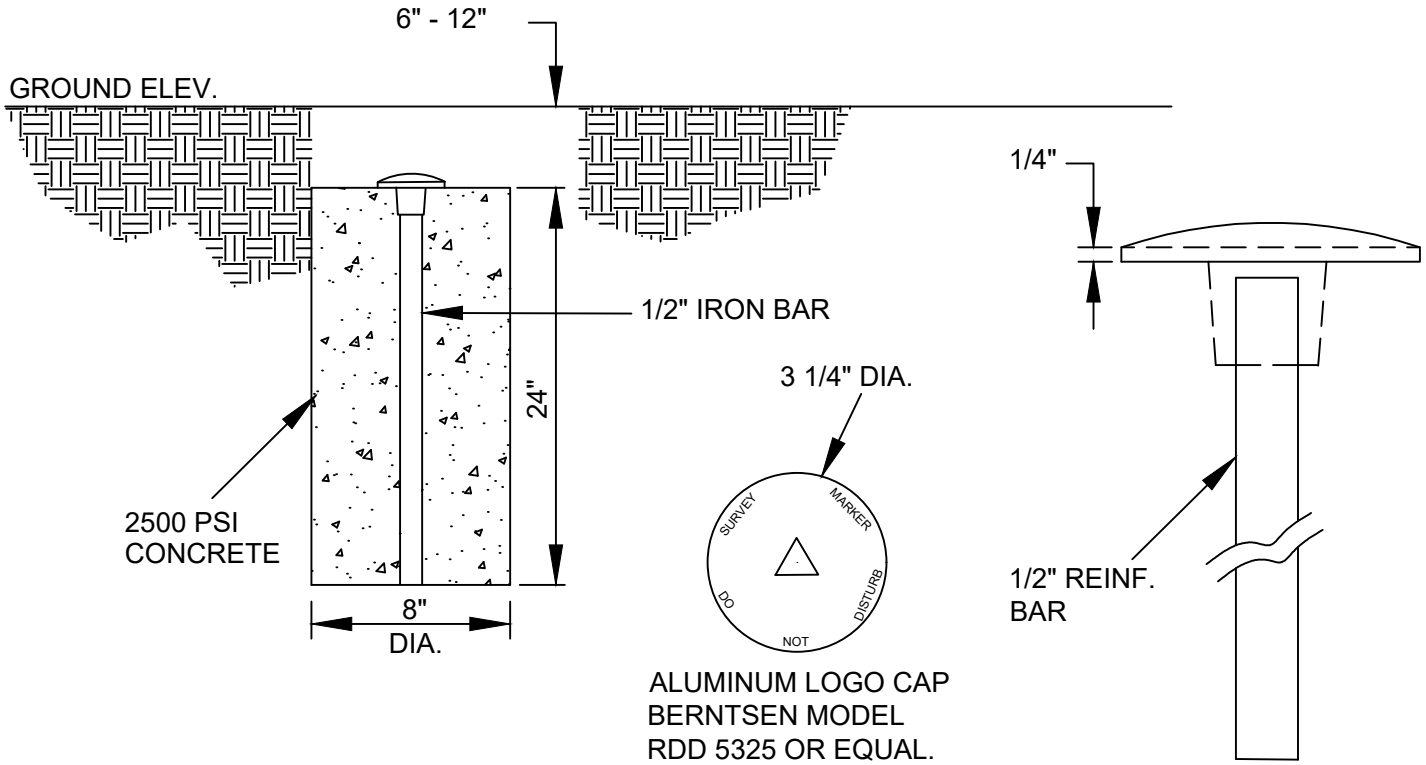
NOTE:

1. ALL LOT MARKERS SHALL BE ONE-HALF INCH (1/2") REINFORCING BAR, EIGHTEEN (18) INCHES LONG, OR APPROVED EQUAL, AND SHALL BE PLACED AT ALL LOT CORNERS FLUSH WITH THE GROUND OR AT SUCH AN ELEVATION THAT THEY WILL NOT BE DISTURBED DURING OR AFTER CONSTRUCTION AND THE TOP OF THE MONUMENT SHALL NOT BE MORE THAN TWELVE (12) INCHES BELOW THE FINISH GROUND ELEVATION.

2. CONCRETE MONUMENTS SHALL BE PLACE ON AT LEAST TWO (2) BLOCK CORNERS, BOUNDARY CORNERS OR ANGLE POINTS FOR EACH PLAT OR PHASE OF A MULTIPLATTED AREA OR SUBDIVISION.

3. CONCRETE MONUMENTS SHALL BE TIED INTO THE PLANE COORDINATES FOR THE LAMBERT CONFORMAL CONIC PROJECTION FOR TEXAS, NORTH CENTRAL ZONE. REFERENCE MAY BE MADE TO SPECIAL PUBLICATION NO. 252, PLANE COORDINATE PROJECTION TABLES FOR TEXAS, PUBLISHED AND PRINTED BY THE UNITED STATES DEPARTMENT OF COMMERCE, COAST AND GEODETIC SURVEY.

4. WHERE NO BENCH MARK IS ESTABLISHED OR CAN BE FOUND WITHIN THREE HUNDRED (300) FEET OF THE BOUNDARY OF THE SUBDIVISION, SUCH BENCH MARK SHALL BE ESTABLISHED AS A MONUMENT, AND SHALL BE READILY ACCESSIBLE AND IDENTIFIABLE ON THE GROUND AND SHALL BE RECORDED ON THE CITY OF MELISSA BENCH MARK DATUM.

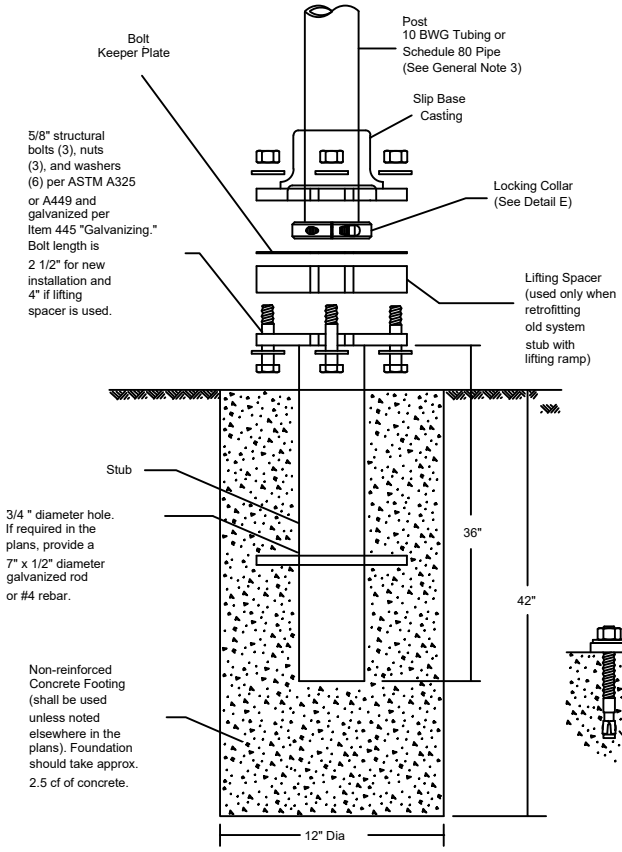


CONCRETE MONUMENT

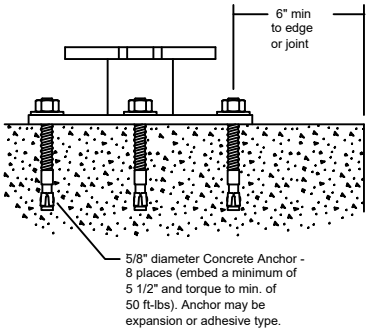
NTS

M* - CITY OF MELISSA REVISION

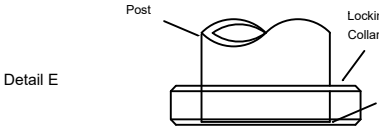
MONUMENTS & MARKERS		NCTCOG STANDARD SPECIFICATION REFERENCE N/A	
CITY OF MELISSA	MELISSA TX	DATE 11/06/03	STANDARD DRAWING NO. 7003M*



SM RD SGN ASSM TY XXXXX(X)SA(X-XXXX)



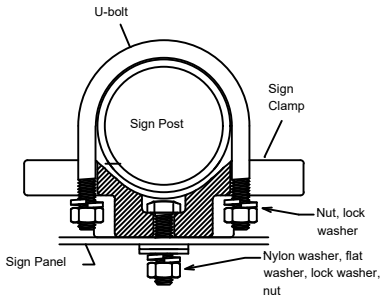
Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. Heavy hex nut per ASTM A563, and hardened washer per ASTM F436. The stud bolt shall have minimum yield and ultimate tensile strengths of 50 and 75 KSI, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Top of bolt shall extend at least flush with top of the nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 5 1/2" minimum embedment, shall have a minimum allowable tension and shear of 3900 and 3100 psi, respectively. Adhesive type anchors shall have stud bolts installed with Type III epoxy per DMS-6100, "Epoxies and Adhesives." Adhesive anchors may be loaded after adequate epoxy cure time, per the manufacturer's recommendations.



Detail E

TEXAS UNIVERSAL TRAINGLE SUBBASE SYSTEM

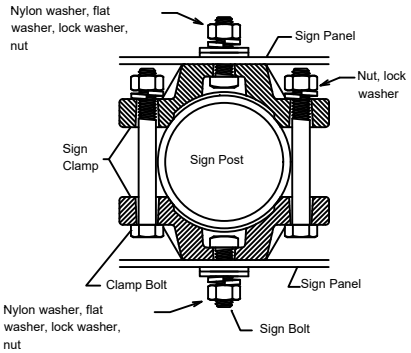
NTS



Bolts used to mount sign panels to the clamp are 5/16-18 UNC galvanized square head with nut, nylon washer, flat washer and lock washer. The bolt length is 1 inch for aluminum and 1 3/4 inch for plywood signs.

When two sign clamps are used to mount signs back-to-back, use a 5/16-18 UNC galvanized hex head per ASTM A307 with nut and helical-spring lock washer. The approximate bolt lengths for various post sizes and sign clamp types are given in the table at right. The bolt length may need to be adjusted depending upon field conditions.

Sign clamps may be either the specific size clamp or the universal clamp.



Pipe Diameter	Approximate Bolt Length	
	Specific Clamp	Universal Clamp
2" nominal	3"	3 or 3 1/2"
2 1/2" nominal	3 or 3 1/2"	3 1/2 or 4"
3" nominal	3 1/2 or 4"	4 1/2"

SIGN ATTACHMENT DETAIL

NTS

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SIGN POST DETAIL

CITY OF MELISSA

NCTCOG STANDARD SPECIFICATION REFERENCE

N/A

DATE

11/06/03

STANDARD DRAWING NO.

7004M*

AS-BUILT DRAWINGS _____

DATE

THIS DOCUMENT IS SUBMITTED AS AN "AS-BUILT DRAWING" FOR RECORD PURPOSES ONLY.

I, _____ THE DEVELOPER OR ITS REPRESENTATIVE, DO HERBY CERTIFY THAT THIS DOCUMENT REPRESENTS IMPROVEMENTS AS CONSTRUCTED AND THAT IMPROVEMENTS WERE CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AS ACCEPTED BY THE CITY OF MELISSA, EXCEPT FOR CHANGES OR MODIFICATIONS REFLECTED HEREON.

SIGNATURE _____ DATE _____

I, _____ P.E., DO HERBY CERTIFY THAT THIS DOCUMENT ACCURATELY REFLECTS AS-BUILT CONDITIONS AS REPORTED BY THE DEVELOPER, ITS REPRESENTATIVE, OR THE CONTRACTOR(S).

SIGNATURE _____ DATE _____

ENGINEERING SEAL

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STANDARD DRAWING NO. 7005M*

AS-BUILT SIGNATURE BLOCK

CITY OF MELISSA

NCTCOG STANDARD SPECIFICATION REFERENCE		
	MODIFIED DATE	STANDARD DRAWING NO.
	09/25/15	7005M*
NOTICE DATE	APPLIED DATE	ENFORCED DATE

Site Plan Summary

	Required	Proposed
Lot Area (sq. ft.)		
Minimum Lot Width (ft.)		
Minimum Lot Depth (ft.)		
Front Yard Setback (ft.)		
Side Yard Setback (ft.)/interior lot		
Side Yard Setback (ft.)/corner lot		
Rear Yard Setback (ft.)		
Maximum Height (stories or ft.)		
Maximum Lot Coverage (%)		
Minimum Dwelling Size (sq. ft.)*		
Maximum Density Per Acre		
Parking**		

*The minimum floor area of any dwelling shall be exclusive of garages, breezeways, and porches.

**Provide detailed parking calculations

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ZONING REQUIREMENTS

CITY OF MELISSA

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE

N/A

DATE

05/05/04

STANDARD DRAWING NO.

7006M*

Non-Residential Landscaping Summary

	Required	Proposed
Minimum Landscaping Area (% of pavement area on site)	10	
Landscaping Along Street ROW	-	-
Minimum Width of Landscape Edge (ft) [a]	10	
Minimum No. of Shade Trees Within Landscape Edge Per 500ft^2 [b]	1	
OR Minimum Number of Approved Ornamental Trees per 500 ft^2	1	
Minimum No. of Shrubs per 500 ft^2 of Landscaped Edge Where Parking Lots and Drives Abut the Landscaped Edge [c]	10	
Shrubs or Berms, If Parking Lot is Located More Than 50 ft. From Street ROW	No	
Interior Parking Lot Landscaping	-	-
Required For At Least 20 Parking Spaces	Yes	
Area of Interior Landscaping For Each 180 Square Foot Parking Space (ft^2)	8	
Minimum No. of Shade Trees For Every 20 Parking Spaces [d]	1	
OR Minimum No. of Approved Ornamental Trees For Every 20 Parking Spaces	1	
Landscaping For Corner Lots	-	-
Only Required For Intersection of Two Major or Larger Throughfares	Yes	
Minimum Width of Landscaped Edge Located Along Street ROW Beginning at the Corner and Extending 175 ft or to the Closest Driveway (ft) [e]	15	
Minimum Landscaped Edge Required at a Right-Turn Lane Location (ft)	7.5	
Minimum Area Located at the Intersection Corner of the Lot (ft^2) [f]	900	
Landscaping/Screening for Parking Lots Adjacent to Residential Areas	-	-
Continuous Screen of Shrubs (5 Gallons Min.) Required Where Parking is Within 50 ft of Residentially Zoned Property and is Not Screened From View By a Screening Wall	Yes	

[a] may be reduced in C-1 district to minimum of 2 ft where lots are less than 2 acres. In such case, a minimum of 1 shade tree (3" caliper minimum) or an approved ornamental tree shall be planted for every 50 ft of frontage on any public street.

[b] 3" caliper minimum

[c] a berm may be placed within the landscaped edge in lieu of the required shrubs. The berm must be 42 in. above the average grade of the street and parking lot curbs. The slope of the berm shall not exceed a 3 to 1 grade.

[d] 4" caliper minimum

[e] beyond this point, the landscaped edge may be gradually reduced (over a distance of 25 feet) to 10 feet in width

[f] this landscaped area shall be provided within the area measured a minimum distance of 40 ft from the projected corner of the intersection on both sides of the lot. No trees should be planted in this area.

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LANDSCAPING REQUIREMENTS

CITY OF MELISSA

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE

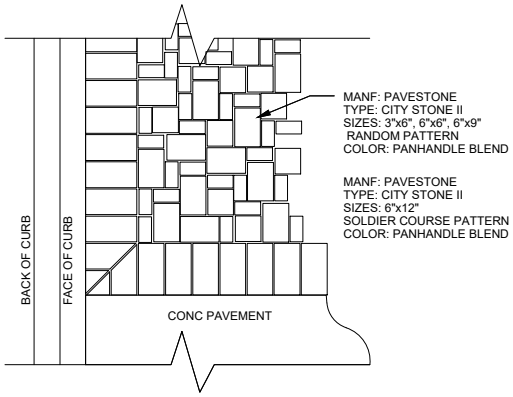
N/A

DATE

05/07/04

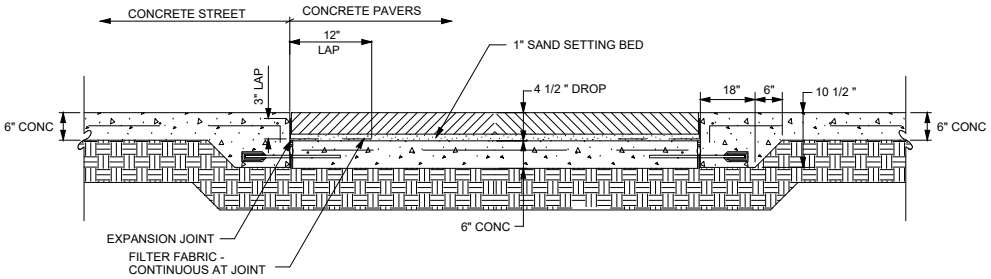
STANDARD DRAWING NO.

7007M*



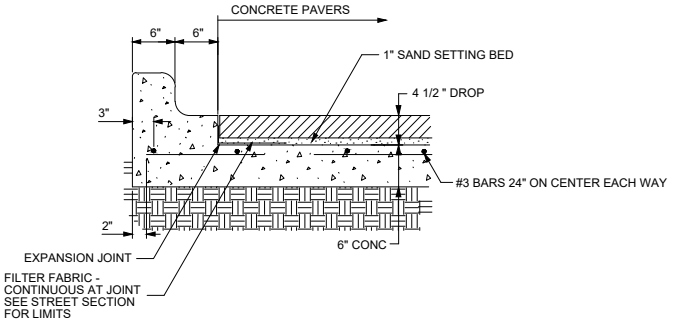
PATTERN DETAIL

NTS



STREET SECTION THROUGH CONCRETE PAVERS

NTS



PAVER DEPRESSION DETAIL

NTS

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PAVE STONE DETAILS

CITY OF MELISSA

MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE

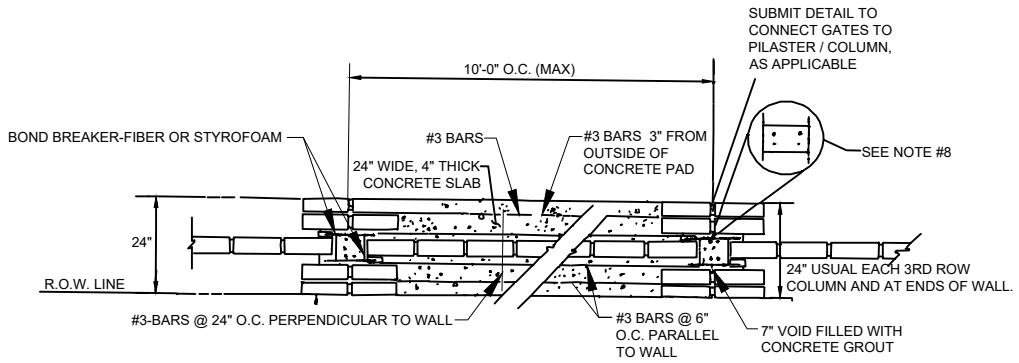
N/A

DATE

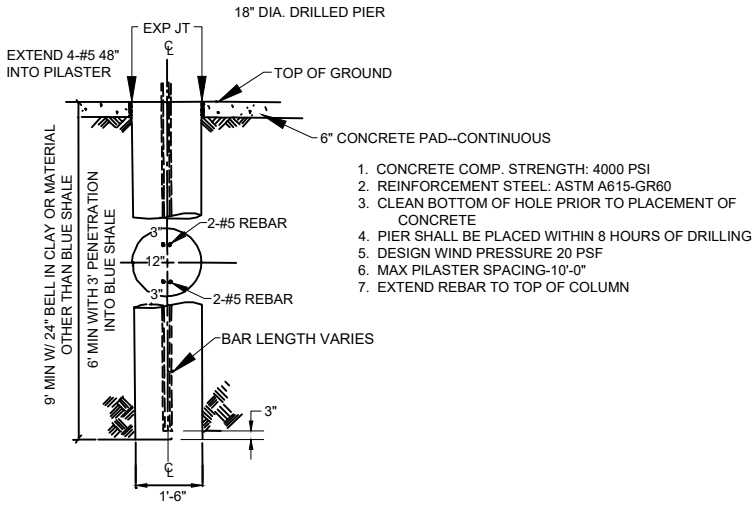
05/03/05

STANDARD DRAWING NO.

7008M*

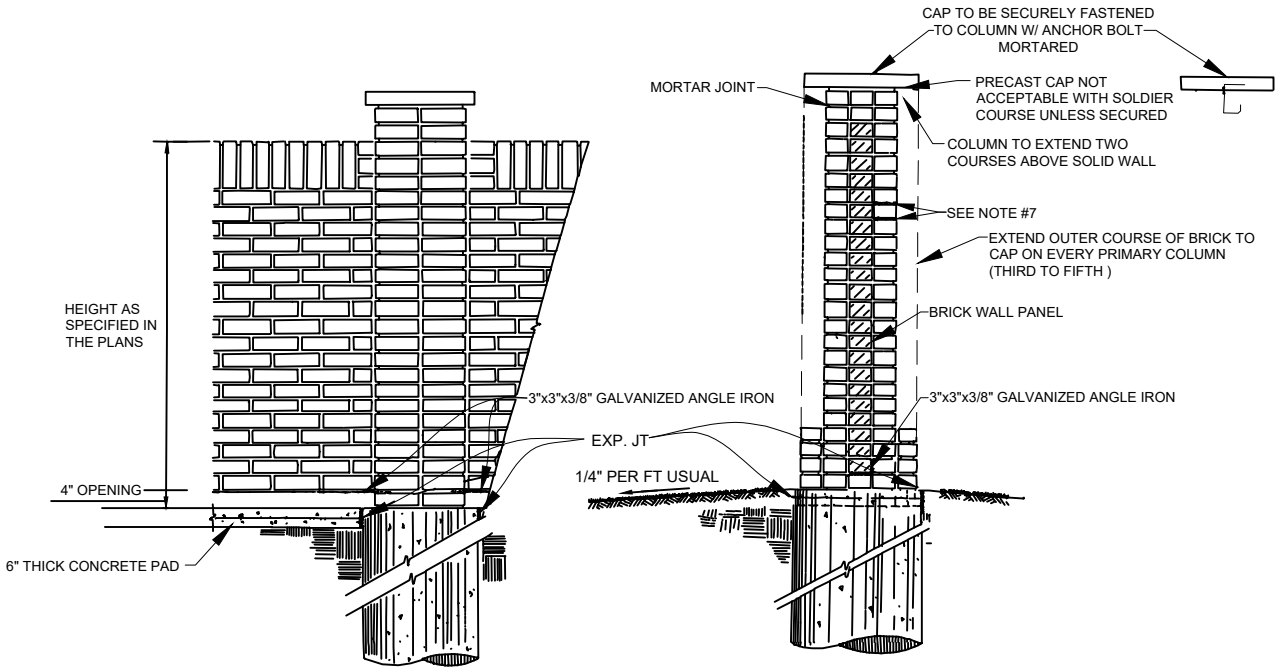


TYPICAL WALL & COLUMN LAYOUT PLAN: NOT TO SCALE



1. CONCRETE COMP. STRENGTH: 4000 PSI
2. REINFORCEMENT STEEL: ASTM A615-GR60
3. CLEAN BOTTOM OF HOLE PRIOR TO PLACEMENT OF CONCRETE
4. PIER SHALL BE PLACED WITHIN 8 HOURS OF DRILLING
5. DESIGN WIND PRESSURE 20 PSF
6. MAX PILASTER SPACING-10'-0"
7. EXTEND REBAR TO TOP OF COLUMN

PIER DETAIL



ELEVATION

NOT TO SCALE

NOTES

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.

2. REINFORCING STEEL SHALL BE NEW BILLET STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A-615-GR60.

3. CONCRETE FOR DRILLED PIERS SHALL BE PLACED WITHIN 8 HOURS OF DRILLING PIER HOLES.

4. BRICK MASONRY SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS.

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.

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STANDARD DRAWING NO. 7009M*

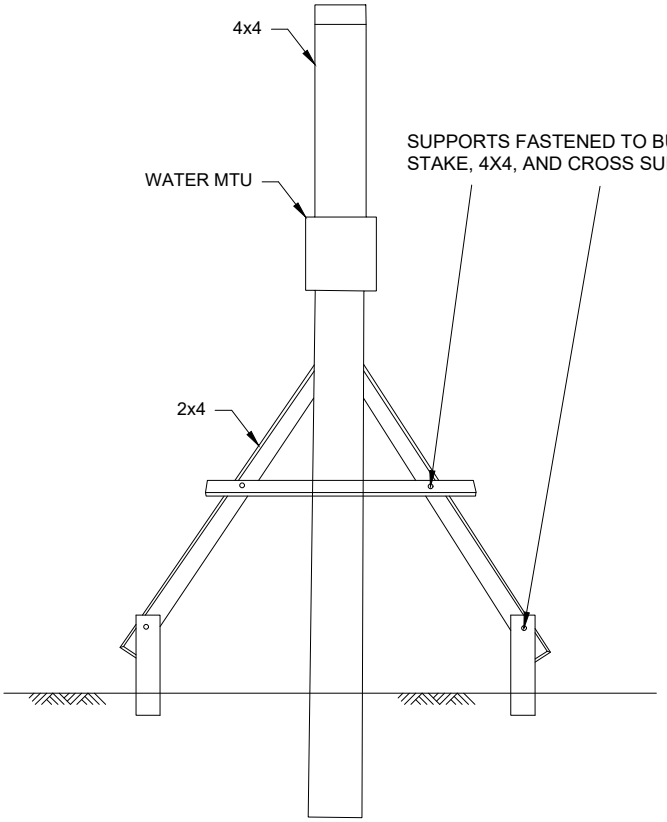
SCREENING WALL

CITY OF MELISSA

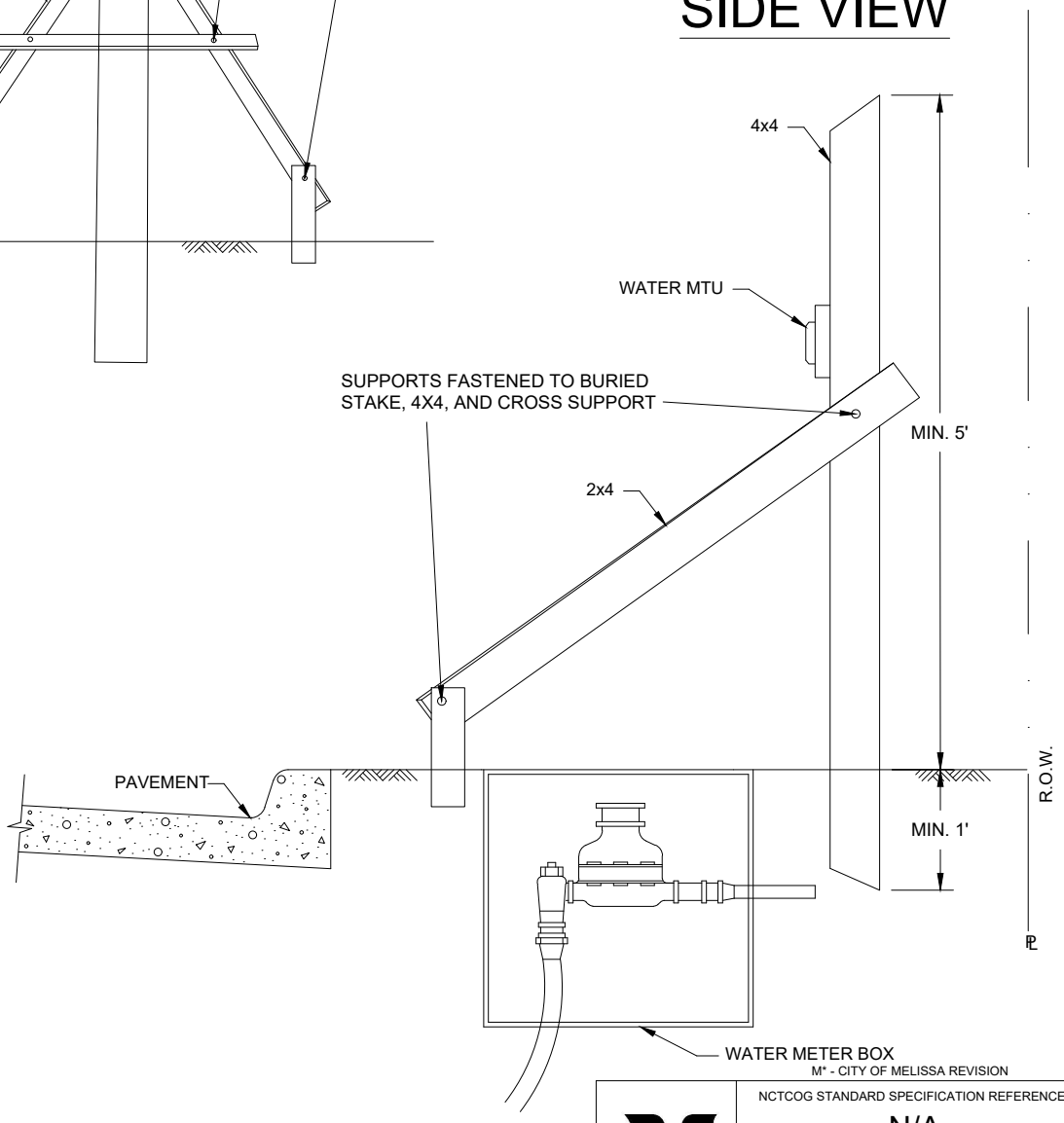
MELISSA TX

NCTCOG STANDARD SPECIFICATION REFERENCE	
MODIFIED DATE	STANDARD DRAWING NO. 7009M*
NOTICE DATE 05/09/17	APPLIED DATE 05/09/17
	ENFORCED DATE 06/09/17

FRONT VIEW



SIDE VIEW



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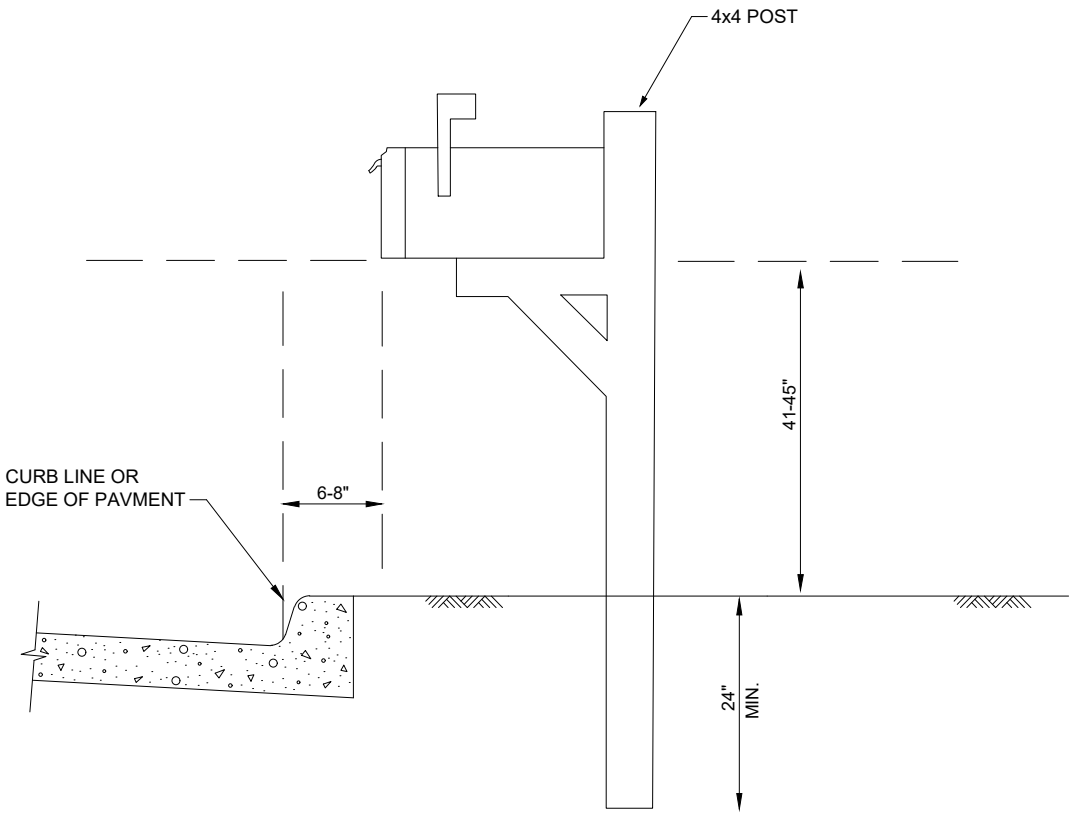
WATER MTU T-POLE DETAIL

CITY OF MELISSA

NCTCOG STANDARD SPECIFICATION REFERENCE		
N/A		
MODIFIED DATE	STANDARD DRAWING NO.	
06/14/24	7010M*	
NOTICE DATE	ADOPTED DATE	ENFORCEMENT DATE
06/14/24	06/14/24	07/14/24

Front

SIDE



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MAILBOX DETAIL		NCTCOG STANDARD SPECIFICATION REFERENCE: N/A	
		MODIFIED DATE: 06/14/24	STANDARD DRAWING NO.: 7011M*
CITY OF MELISSA	NOTICE DATE: 06/14/24	ADOPTED DATE: 06/14/24	ENFORCEMENT DATE: 07/14/24