STANDARD DRAWINGS

CITY OF BUFORD, GEORGIA

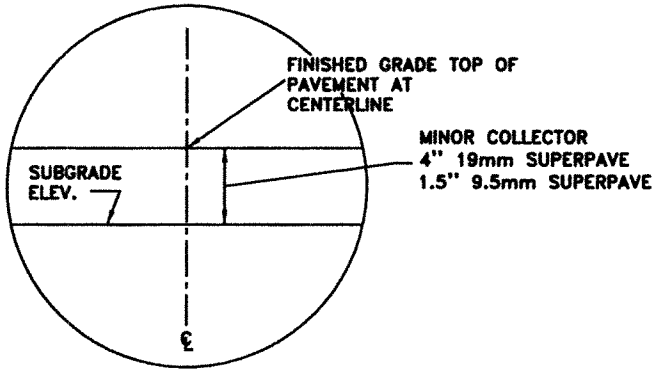
THESE STANDARD DRAWINGS ILLUSTRATE MINIMUM ACCEPTABLE STANDARDS FOR LAND DEVELOPMENT ACTIVITIES AUTHORIZED UNDER THE DEVELOPMENT REGULATIONS OF THE CITY OF BUFORD. HOWEVER, THESE STANDARDS SHALL NOT SUPERSEDE MORE RESTRICTIVE PRUDENT DESIGN REQUIREMENTS OR GOOD ENGINEERING PRACTICE AS APPLIED TO SPECIFIC SITUATIONS ON A CASE-BY-CASE BASIS. UNLESS OTHERWISE SPECIFIED ON THESE STANDARD DRAWINGS OR IN THE DEVELOPMENT REGULATIONS, ALL CONSTRUCTION SHALL MEET OR EXCEED THE MINIMUM STANDARDS ESTABLISHED BY THE GEORGIA DEPARTMENT OF TRANSPORTATION (GDOT).

WHENEVER THERE IS A DISCREPANCY BETWEEN THESE STANDARD DRAWINGS AND OTHER PROVISIONS OF THE CITY CODE, THE MOST RESTRICTIVE SHALL APPLY.

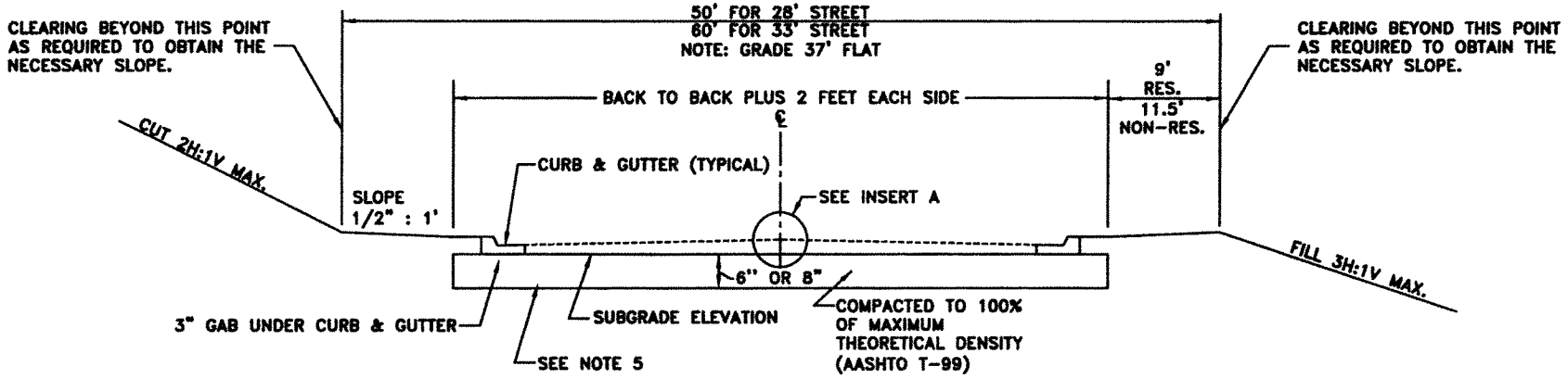
SERIES	
100	SITE GRADING
200	STORM WATER DETENTION & EROSION CONTROL
300	STREETS - DESIGN
400	STREETS - CONSTRUCTION
500	STREETS - UTILITIES
600	DRAINAGE STRUCTURES
700	DRAINAGE PIPES & DITCHES
800	LANDSCAPING & TREE PROTECTION
900	MISCELLANEOUS
1000	SANITARY SEWER
1100	POTABLE WATER

EFFECTIVE:

REVISED: SEPTEMBER 25, 2014



INSERT A



NOTES:

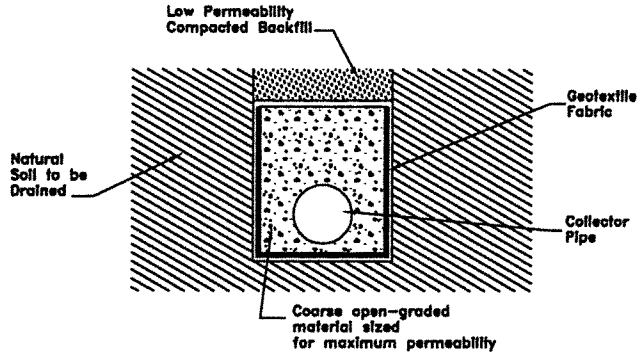
1. TOP OF SHOULDER TO BE GRADED HIGH TO FURNISH MATERIAL TO BACKFILL BEHIND CURB.
2. FOR UTILITY LOCATIONS SEE SHEET 501
3. MAXIMUM CUT SLOPES 2H:1V
4. MAXIMUM FILL SLOPES 3H:1V
5. 6" GAB UNDER PAVEMENT – LOCAL RESIDENTIAL
   8" GAB UNDER PAVEMENT – MINOR COLLECTOR

City of Buford, Georgia

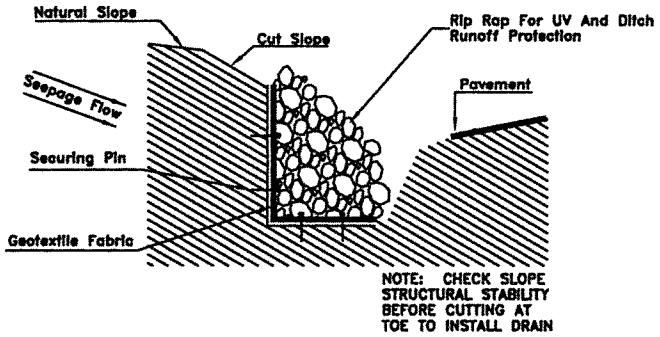
S T A N D A R D D R A W I N G

Street Grading: Local or Minor Collector Street

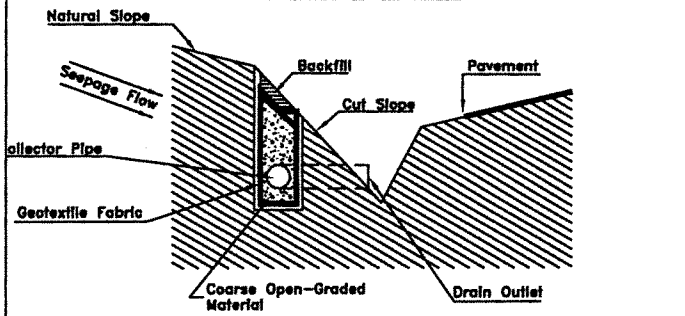
D A T E: APRIL 24, 2017 S H E E T: 101



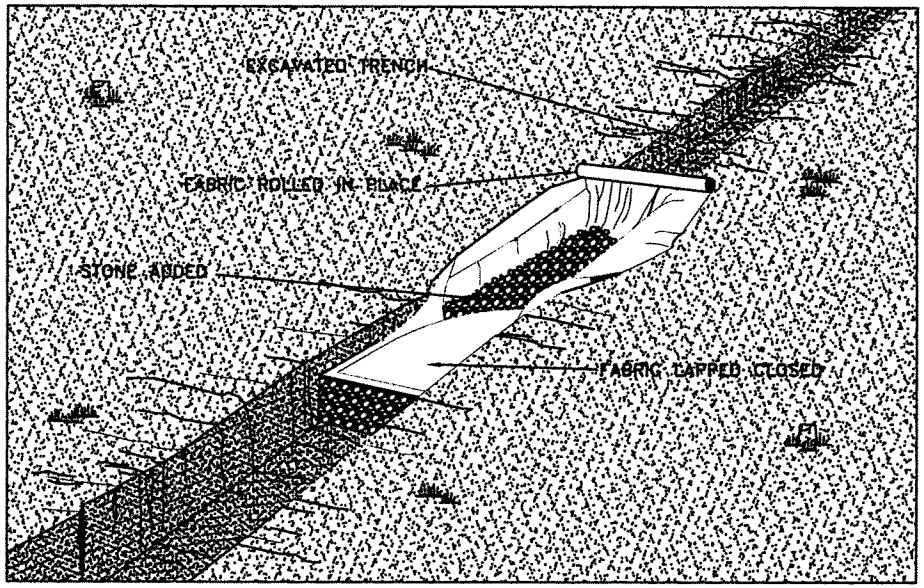
FABRIC-LINED DITCH UNDERDRAIN



ROCK TOE INTERCEPTOR DRAIN FOR
CUT SLOPE SEEPAGE



TRENCH INTERCEPTOR DRAIN FOR
CUT SLOPE SEEPAGE



City of Buford, Georgia

STANDARD DRAWING

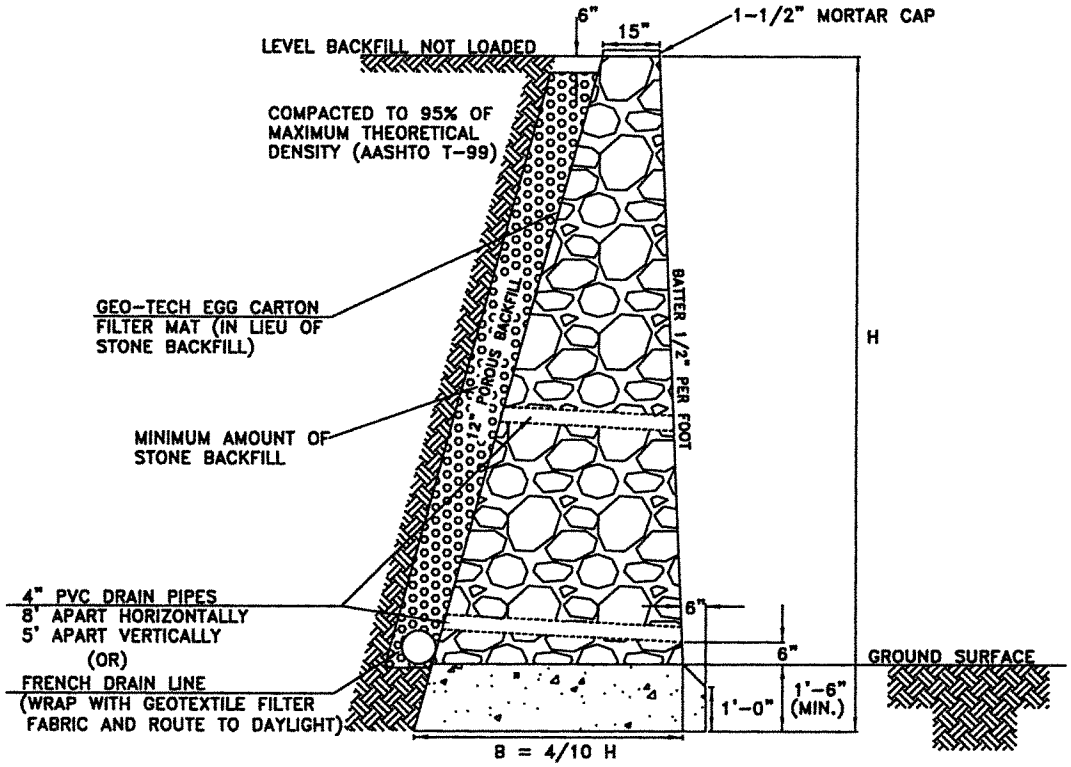
Examples of Geotextiles Used in Drainage Applications

DATE: SEPTEMBER 25 2014 SHEET: 102

DESIGN PARAMETERS

H = HEIGHT IN FEET
BASE = 4/10 H
WEIGHT CU. FT. OF EARTH = 100 LBS
WEIGHT CU. FT. OF RUBBLE OR GRANITE = 150 LBS

HEIGHT OF WALL "H" IN FT.	THICKNESS AT BASE B = 0.4H	MIN. REQUIRED SOIL BEARING CAPACITY (PSF)	AREA OF WALL (SQ.FT.)	AREA OF FOOTING (SQ.FT.)
2	1'-6"	1500	0.75	2.875
3	1'-6"		2.25	2.875
4	1'-7 1/4"		3.828	2.997
5	2'-0"	2000	5.862	3.513
6	2'-4 3/4"		8.212	4.113
7	2'-9 1/2"	2500	12.060	4.615
8	3'-2 1/2"	3000	14.240	5.186
9	3'-7 1/4"		17.813	5.762
10	4'-0"	3500	21.781	6.344
11	4'-4 3/4"	4000	26.148	6.927
12	4'-9 1/2"		30.909	7.516
13	5'-2 1/2"	4500	36.070	8.105
14	5'-7 1/4"	5000	41.629	8.696
15	6'-0"		47.587	9.288



SECTION

NOTES:

1. STONE LAID IN PORTLAND CEMENT (3 PARTS SAND TO ONE PART CEMENT).
2. DRAIN PIPES ARE TO BE ONE CONTINUOUS LENGTH OR BELL AND SPIGOT WITH MORTAR JOINTS.
3. CONCRETE: MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI.
4. FOR CONDITIONS IN WHICH THE ACTUAL SOIL BEARING CAPACITY IS LESS THAN THE REQUIRED MINIMUM, A SPECIAL FOOTING DESIGNED BY A GEORGIA REGISTERED PROFESSIONAL ENGINEER IS REQUIRED.
5. DEPTH OF FOUNDATION TO BE DETERMINED BY SOIL CONDITIONS (1'-6" MINIMUM)
6. THIS WALL IS DESIGNED FOR LEVEL BACKFILL CONDITIONS ONLY WITHOUT SURCHARGE LOADING. WALLS FOR APPLICATIONS WHICH INCLUDE SLOPED BACKFILL CONDITIONS, SURCHARGE LOADS, FLUID DETENTION, ETC. SHALL BE DESIGNED BY A GEORGIA REGISTERED PROFESSIONAL ENGINEER.
7. REQUIRED SOIL BEARING CAPACITY SHALL BE VERIFIED AT THE TIME OF EXCAVATION.

City of Buford, Georgia

STANDARD DRAWING

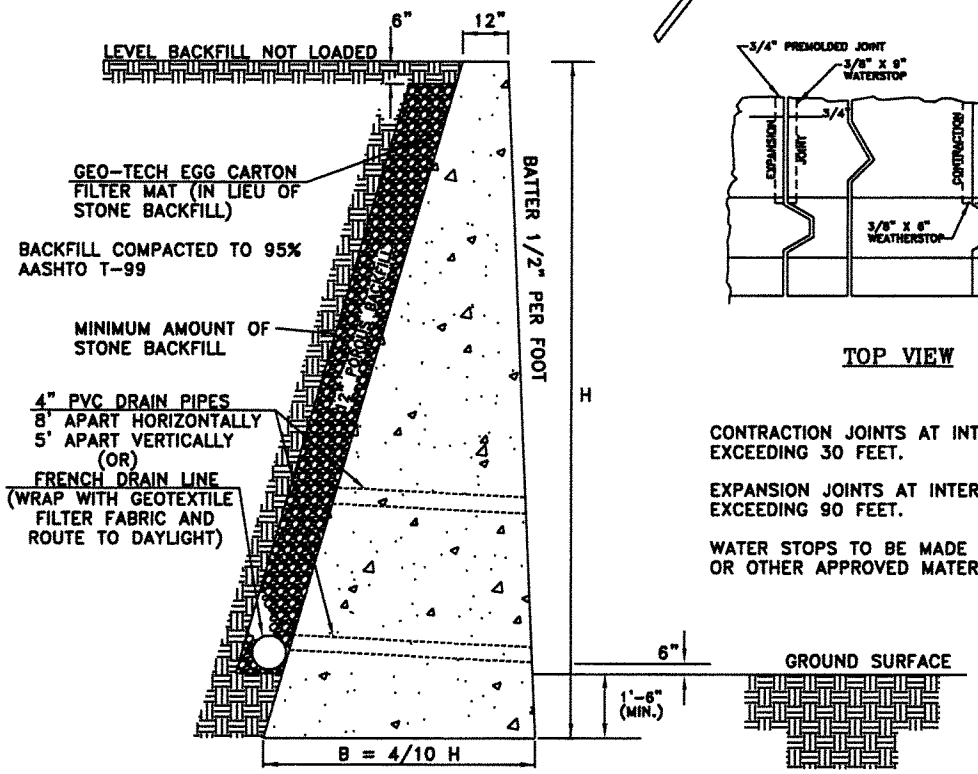
Mortar Rubble - Granite Retaining Wall, Level Backfill

DATE: SEPTEMBER 25, 2014 SHEET: 103

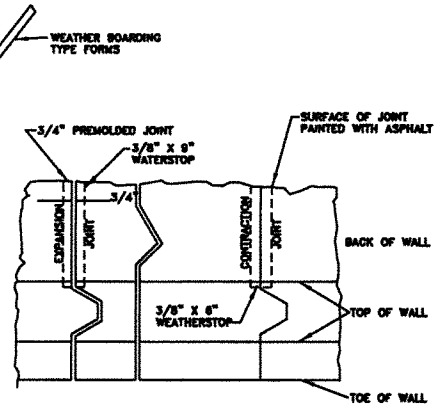
DESIGN PARAMETERS

H = HEIGHT IN FEET
BASE = 4/10 H
WEIGHT CU. FT. OF EARTH = 100 LBS.
WEIGHT CU. FT. OF CONCRETE = 150 LBS

HEIGHT OF WALL "H" (IN FEET)	THICKNESS AT BASE "B"	MIN. REQUIRED SOIL BEARING CAPACITY (PSF)	AREA OF SECTION (SQ.FT.)
2	1'-6"	1500	2.63
3	1'-6"		3.93
4	1'-7 1/4"		5.83
5	2'-0"	2000	8.13
6	2'-4 3/4"		10.83
7	2'-9 1/2"	2500	13.93
8	3'-2 1/2"	3000	17.43
9	3'-7 1/4"		21.33
10	4'-0"	3500	25.63
11	4'-4 3/4"	4000	30.33
12	4'-9 1/2"		35.43
13	5'-2 1/2"	4500	40.93
14	5'-7 1/4"	5000	46.83
15	6'-0"		53.13



SECTION



TOP VIEW

CONTRACTION JOINTS AT INTERVALS NOT EXCEEDING 30 FEET.

EXPANSION JOINTS AT INTERVALS NOT EXCEEDING 90 FEET.

WATER STOPS TO BE MADE OF RUBBER OR OTHER APPROVED MATERIAL.

NOTES:

1. CONCRETE: MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI.
2. FOR CONDITIONS IN WHICH THE ACTUAL SOIL BEARING CAPACITY IS LESS THAN THE REQUIRED MINIMUM, A SPECIAL FOOTING DESIGNED BY A GEORGIA REGISTERED PROFESSIONAL ENGINEER IS REQUIRED.
3. THIS WALL IS DESIGNED FOR LEVEL BACKFILL CONDITIONS ONLY WITHOUT SURCHARGE LOADING. WALLS FOR APPLICATIONS WHICH INCLUDE SLOPED BACKFILL CONDITIONS, SURCHARGE LOADS, FLUID DETENTION, ETC. SHALL BE DESIGNED BY A GEORGIA REGISTERED PROFESSIONAL ENGINEER.
4. REQUIRED SOIL BEARING CAPACITY SHALL BE VERIFIED AT THE TIME OF EXCAVATION.

City of Buford, Georgia

STANDARD DRAWING

Concrete Gravity Retaining Wall

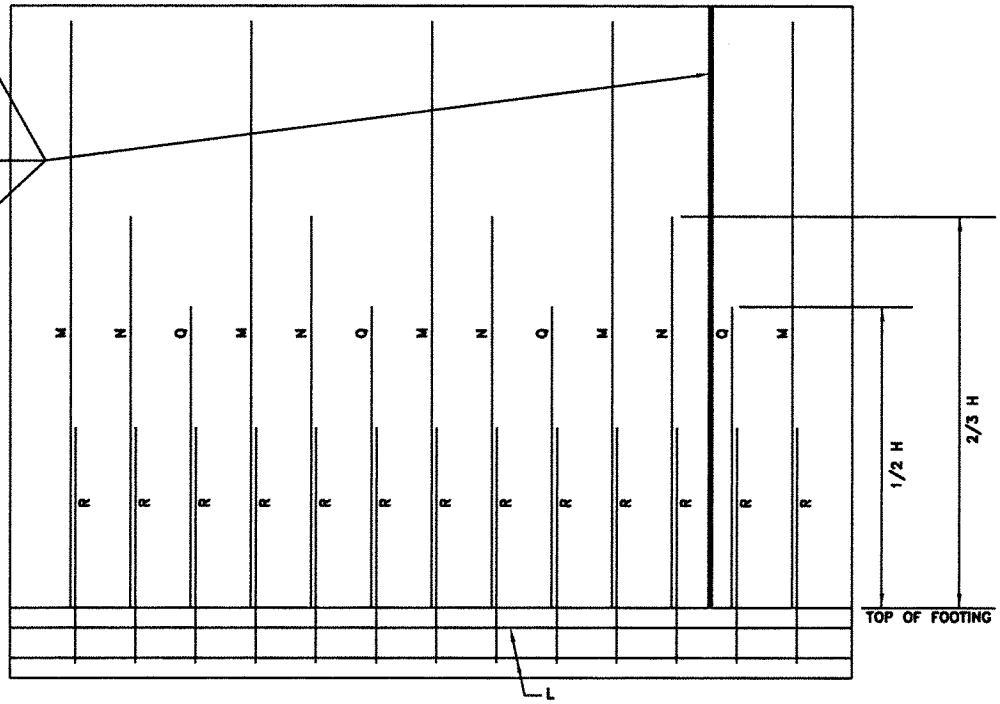
DATE: SEPTEMBER 25, 2014 SHEET: 104

CONTROL JOINTS AT INTERVALS NOT EXCEEDING 30 FEET (INTERRUPT EVERY OTHER HORIZONTAL REBAR 3" EACH SIDE OF EACH JOINT).

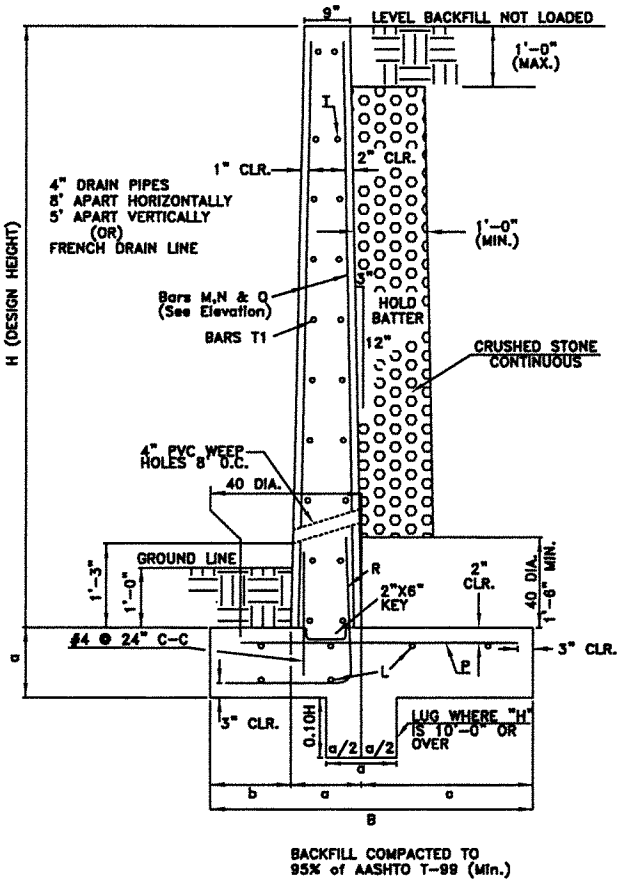
1" EXPANSION JOINTS AT INTERVALS NOT EXCEEDING 90 FEET (EVERY THIRD CONTROL JOINT).

JOINTS SHALL NOT BE PLACED IN FOOTINGS.

WATER STOPS TO BE MADE OF RUBBER OR OTHER APPROVED MATERIAL.



ELEVATION



BACKFILL COMPACTED TO 95% of AASHTO T-99 (Min.)

SECTION

H	a	b	c	B	M BARS	N BARS	Q BARS	P BARS	T BARS	T1 BARS	L BARS	R BARS
3'-0"	0'-10 1/2"	0'-4"	0'-7"	1'-9 1/2"	#3 @ 12"	–	–	#3 @ 18"	#3 @ 12"	#4 @ 12"	#3 @ 12"	#3 @ 12"
4'-0"	0'-11"	0'-6"	0'-10"	2'-3"	#3 @ 12"	–	–	#3 @ 18"	#3 @ 12"	#4 @ 12"	#3 @ 12"	#3 @ 12"
5'-0"	0'-11 1/2"	0'-8"	1'-4"	2'-11 1/2"	#3 @ 12"	–	–	#3 @ 18"	#3 @ 12"	#4 @ 12"	#3 @ 12"	#3 @ 12"
6'-0"	1'-0"	0'-10"	1'-7"	3'-5"	#3 @ 12"	–	–	#3 @ 16"	#3 @ 12"	#4 @ 12"	#3 @ 12"	#3 @ 12"
7'-0"	1'-0 1/2"	1'-0"	1'-10"	3'-10 1/2"	#4 @ 24"	#4 @ 24"	–	#3 @ 10"	#3 @ 12"	#4 @ 12"	#3 @ 12"	#4 @ 12"
8'-0"	1'-1"	1'-1"	2'-1"	4'-3"	#4 @ 20"	#4 @ 20"	–	#4 @ 15"	#3 @ 12"	#4 @ 12"	#3 @ 12"	#4 @ 10"
9'-0"	1'-1 1/2"	1'-2"	2'-9"	5'-0 1/2"	#4 @ 21"	#4 @ 21"	#4 @ 21"	#4 @ 11"	#3 @ 10"	#4 @ 10"	#3 @ 12"	#4 @ 7"
10'-0"	1'-2"	1'-4"	2'-10"	5'-4"	#5 @ 27"	#5 @ 27"	#5 @ 27"	#5 @ 16"	#3 @ 10"	#4 @ 10"	#3 @ 12"	#5 @ 9"
11'-0"	1'-2 1/2"	1'-6"	3'-2"	5'-10 1/2"	#5 @ 21"	#5 @ 21"	#5 @ 21"	#5 @ 12"	#3 @ 10"	#4 @ 10"	#4 @ 12"	#5 @ 7"
12'-0"	1'-3"	1'-8"	3'-7"	6'-6"	#6 @ 27"	#6 @ 27"	#6 @ 27"	#5 @ 10"	#3 @ 10"	#4 @ 10"	#4 @ 12"	#6 @ 9"
13'-0"	1'-3 1/2"	1'-8"	4'-0"	6'-11 1/2"	#6 @ 21"	#6 @ 21"	#6 @ 21"	#4 @ 6"	#3 @ 10"	#4 @ 10"	#4 @ 12"	#6 @ 7"
14'-0"	1'-4"	2'-1"	4'-3"	7'-8"	#6 @ 18"	#6 @ 18"	#6 @ 18"	#4 @ 5"	#4 @ 16"	#5 @ 16"	#4 @ 12"	#6 @ 6"
15'-0"	1'-4 1/2"	2'-1"	4'-7"	8'-0 1/2"	#7 @ 21"	#7 @ 21"	#7 @ 21"	#5 @ 6"	#4 @ 16"	#5 @ 16"	#4 @ 12"	#7 @ 7"
16'-0"	1'-5"	2'-2"	4'-11"	8'-6"	#7 @ 18"	#7 @ 18"	#7 @ 18"	#5 @ 5"	#4 @ 16"	#5 @ 16"	#4 @ 12"	#7 @ 6"
17'-0"	1'-5 1/2"	2'-3"	5'-3"	8'-11 1/2"	#7 @ 15"	#7 @ 15"	#7 @ 15"	#6 @ 6"	#4 @ 16"	#5 @ 16"	#4 @ 12"	#7 @ 5"
18'-0"	1'-6"	2'-4"	5'-7"	9'-5"	#8 @ 18"	#8 @ 18"	#8 @ 18"	#6 @ 5 1/2"	#4 @ 16"	#5 @ 16"	#4 @ 12"	#8 @ 6"
19'-0"	1'-6 1/2"	2'-6"	6'-1"	10'-1 1/2"	#8 @ 15"	#8 @ 15"	#8 @ 15"	#7 @ 6 1/2"	#4 @ 12"	#5 @ 12"	#4 @ 12"	#8 @ 5"
20'-0"	1'-7"	2'-8"	6'-6"	10'-9"	#9 @ 18"	#9 @ 18"	#9 @ 18"	#7 @ 6"	#4 @ 12"	#5 @ 12"	#4 @ 12"	#9 @ 6"

NOTES:

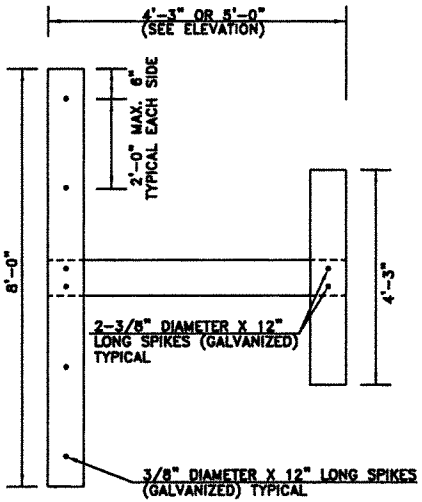
1. CONCRETE: MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI.
2. REINFORCING STEEL: GRADE 60.
3. MINIMUM REQUIRED SOIL BEARING CAPACITY IS 3000 PSF.
5. THIS WALL IS DESIGNED FOR LEVEL BACKFILL CONDITIONS ONLY WITHOUT SURCHARGE LOADING. WALLS FOR APPLICATIONS WHICH INCLUDE SLOPED BACKFILL CONDITIONS, SURCHARGE LOADS, FLUID DETENTION, ETC. SHALL BE DESIGNED BY A GEORGIA REGISTERED PROFESSIONAL ENGINEER.
6. REQUIRED SOIL BEARING CAPACITY SHALL BE VERIFIED AT THE TIME OF EXCAVATION.

City of Buford, Georgia

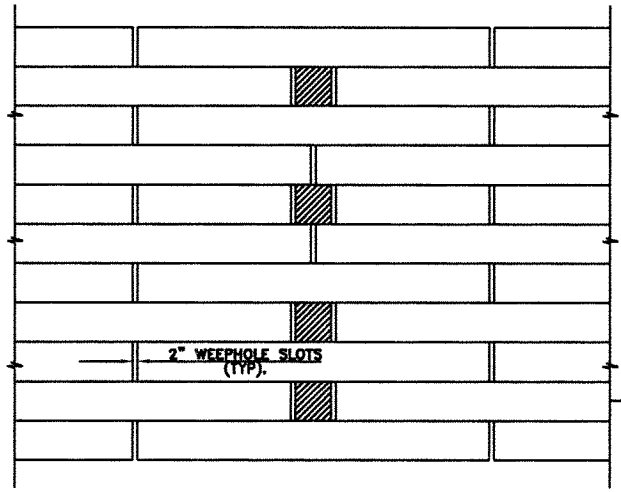
STANDARD DRAWING

Concrete Cantilever Retaining Wall

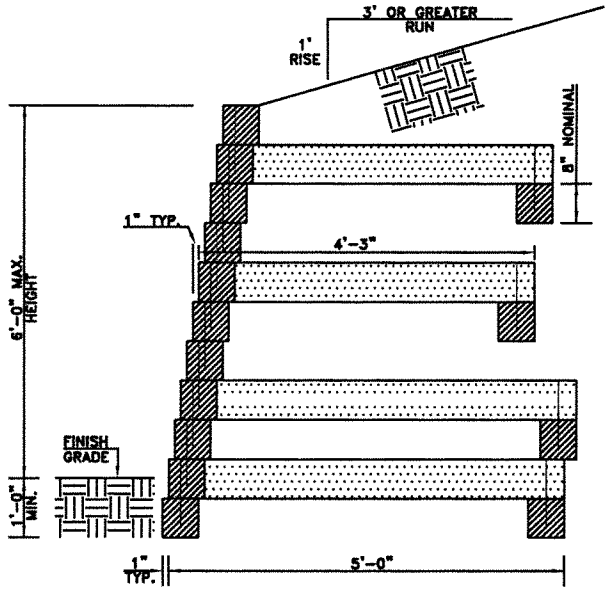
DATE: SEPTEMBER 25, 2014 SHEET: 105



PLAN VIEW



ELEVATION



SECTION ELEVATION

NOTES:

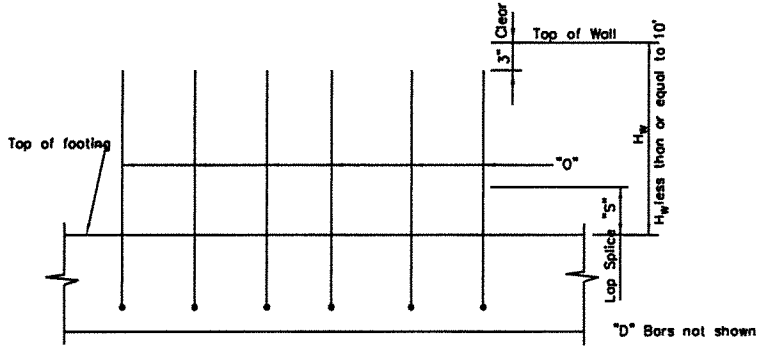
1. THIS DESIGN IS FOR WALLS FROM 4'-0" HEIGHT TO 6'-0" MAXIMUM HEIGHT. A BUILDING PERMIT IS REQUIRED FOR WALLS WHICH EXCEED 4'-0" IN HEIGHT.
2. SOIL BEARING CAPACITY TO BE 2000 PSF MINIMUM.
3. LEVEL BACKFILL WITH SOIL TYPE B. (ASSUMED ACTIVE PRESSURE 45h PCF/L.F.)
4. NOMINAL TIE SIZE TO BE 8" X 8".
5. PROVIDE 2" WEEPHOLE SLOTS AT EVERY 8'-0" LENGTH IN THIRD COURSE OF WALL HEIGHT.
6. SPIKE TIES AS INDICATED ON PLAN WITH GALVANIZED 3/8" DIAMETER X 12" LONG SPIKES. ACCEPTABLE OPTION IS NO. 3 REBARS.
7. ANY VARIATION FROM THIS DETAIL REQUIRES SUBMISSION OF ENGINEERED DESIGN PREPARED BY GEORGIA REGISTERED ENGINEER TO THE CITY FOR A BUILDING PERMIT.
8. BACKFILL SLOPE NOT TO EXCEED A RISE TO RUN RATIO OF 1 IN 3.
9. MINIMUM DISTANCE BETWEEN ADJACENT WALLS NOT TO BE LESS THAN MAXIMUM HEIGHT ABOVE GRADE OF DOWNGRADE WALL.

City of Buford, Georgia

S T A N D A R D D R A W I N G

Cross-Tie Retaining Wall

D A T E: SEPTEMBER 25, 2014 S H E E T: 106

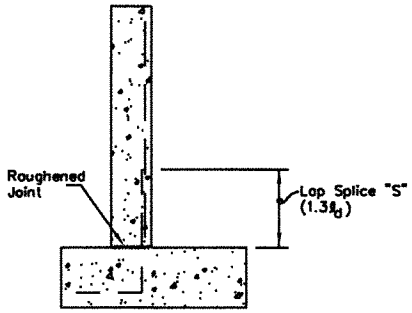


Elevation–Vertical Wall Reinforcement

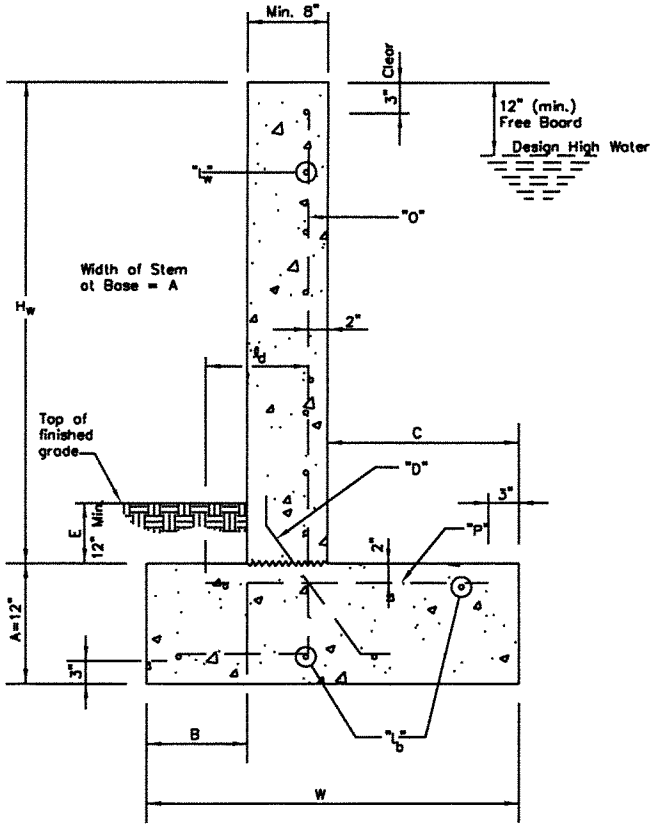
Rebar Development Length ℓ_d (in.)	Rebar Size
22"	#4
27"	#5
32"	#6
39"	#7
51"	#8
64"	#9

General Notes

1. Concrete: minimum 28 day compressive strength of 3000 psi. Reinforcing steel: grade 60.
2. Minimum required soil bearing capacity of 3000 psf must be verified at the time of excavation.
3. This wall is designed for hydrostatic pressure (62.4 pcf) due to water detention.
4. Weir requirements for detention pond wall are beyond the scope of these details, and must be designed by a Georgia registered professional engineer.
5. Refer to tables on this sheet for additional information not indicated in the details.



Optional Splice



Dimensions and Structural Reinforcement for Wall Heights ≤ 10'

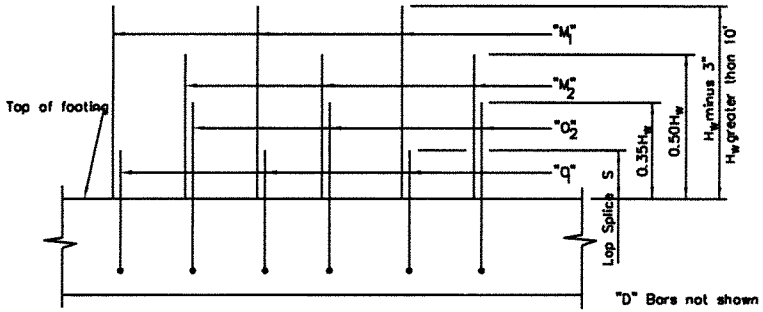
CONCRETE DIMENSIONS				Height above Base	Base Depth	BASE REINFORCEMENT					STEM		Lap Splice	Soil on Footing
Height above Base H_w	Width of Wall A	Heel C	Width of Base W	H_w	A ≥12"	"O" Bar into Stem	Dowels	"D" Bars Diagonal Corner Bars	"L_b" Bars Long.	"P" Top Bars	"M" Bars Straight Lengths	"L_w" Bars Long.		Minimum Soil Depth E
ft.	in.	ft.–in.	ft.–in.	ft.	in.	Size–Spacing	Short Dowel	Size–Spacing	Number–Size	Size–Spacing	Size–Spacing	Size–Spacing	S	
3	8	1'–2"	2'–6"	3	12	#4@18"	None	#4@18"	5–#4	#6@18"	None	#4@12"	22"	12"
4	8	1'–7"	3'–1"	4	12	#4@18"	None	#4@18"	5–#4	#6@18"	None	#4@12"	22"	12"
5	8	2'–7"	4'–3"	5	12	#4@18"	None	#4@18"	5–#5	#6@18"	None	#4@12"	22"	12"
6	8	3'–6"	5'–5"	6	12	#4@15"	None	#4@15"	5–#5	#6@15"	None	#4@12"	22"	12"
7	8	4'–5"	6'–6"	7	12	#4@9"	None	#4@9"	6–#5	#4@9"	None	#4@12"	22"	12"
8	12	4'–11"	7'–7"	8	12	#4@11"	None	#4@11"	6–#6	#5@11"	None	#5@12"	22"	12"
9	12	5'–10"	8'–8"	9	12	#5@12"	None	#4@12"	6–#6	#5@12"	None	#5@12"	22"	12"
10	12	6'–8"	9'–8"	10	12	#5@12"	None	#4@12"	6–#6	#5@12"	None	#5@12"	22"	12"

City of Buford, Georgia

STANDARD DRAWING

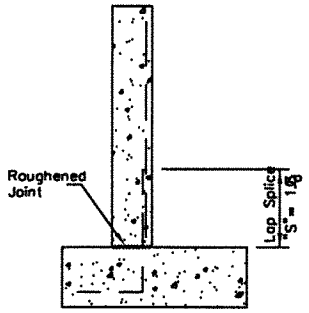
Concrete Cantilever Detention Pond Retaining Wall, Height ≤ 10'

DATE: SEPTEMBER 25, 2014 SHEET: 107



Elevation–Vertical Wall Reinforcement

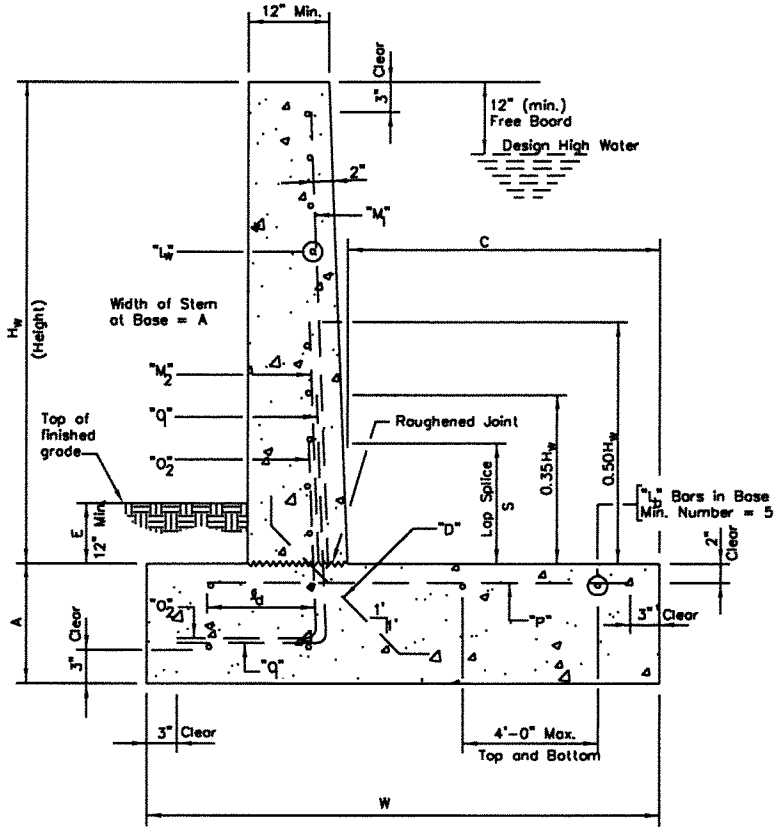
Rebar Development Length ℓ_d (in.)	Rebar Size
22"	#4
27"	#5
32"	#6
39"	#7
51"	#8
64"	#9



Optional Splice

General Notes

1. Concrete: minimum 28 day compressive strength of 3000 psi. Reinforcing steel: grade 60.
2. Minimum required soil bearing capacity of 3000 psf must be verified at the time of excavation.
3. This wall is designed for hydrostatic pressure (62.4 pcf) due to water detention.
4. Weir requirements for detention pond wall are beyond the scope of these details, and must be designed by a Georgia registered professional engineer.
5. Refer to tables on this sheet for additional information not indicated in the details.



Dimensions and Structural Reinforcement for Wall Heights greater than 10'

CONCRETE DIMENSIONS				Height above Base	Base Depth A	BASE REINFORCEMENT					STEM		Lap Splice	Soil on Footing
Height above Base H_w	Width of Wall A	Heel C	Width of Base W	H_w	A ≥12"	"O" Bar Dowels into Stem		"D" Bars Diagonal Corner Bars	"L_b" Bars Long.	"P" Bars Top Bars	"M" Bars Straight Lengths	"L_w" Bars Long.		Mininmum Soil Depth
ft.	in.	ft.–in.	ft.–in.	ft.	in.	Size–Spacing	Short Dowel	Size–Spacing	Number–Size	Size–Spacing	Size–Spacing	Size–Spacing	S	E
11	13	7'–5"	10'–9"	11	13	#6@9"	2'–1"	#4@9"	7–#6	#5@9"	#4@9"	#6@12"	25"	12"
12	14	8'–1"	11'–8"	12	14	#7@9"	2'–5"	#4@9"	7–#7	#6@9"	#5@9"	#6@12"	30"	12"
13	15	8'–10"	12'–9"	13	15	#7@9"	2'–5"	#4@9"	7–#7	#6@9"	#5@9"	#6@11"	30"	16"
14	16	9'–7"	13'–9"	14	16	#8@9"	2'–11"	#5@9"	7–#8	#7@9"	#5@9"	#7@15"	39"	16"
15	18	10'–2"	14'–8"	15	18	#8@9"	2'–11"	#5@9"	8–#8	#7@9"	#6@9"	#8@17"	39"	16"
16	19	10'–11"	15'–9"	16	19	#8@9"	2'–11"	#5@9"	8–#9	#7@9"	#6@9"	#8@16"	39"	16"
17	20	11'–7"	16'–8"	17	21	#9@9"	3'–8"	#6@9"	8–#9	#8@9"	#6@9"	#8@15"	49"	20"
18	21	12'–4"	17'–9"	18	23	#9@9"	3'–8"	#6@9"	8–#10	#8@9"	#7@9"	#8@15"	49"	20"
19	22	13'–1"	18'–9"	19	24	#10@9"	4'–8"	#6@9"	9–#9	#9@9"	#7@9"	#8@14"	63"	20"
20	23	13'–10"	19'–9"	20	26	#10@9"	4'–8"	#7@9"	9–#10	#9@9"	#8@9"	#8@17"	63"	20"

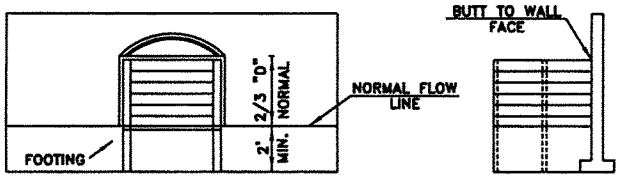
City of Buford, Georgia

S T A N D A R D D R A W I N G

Concrete Cantilevered Detention Pond Retaining Wall, Height Greater than 10'

D A T E: SEPTEMBER 25, 2014 S H E E T: 108

TYPE 2 FOR STRAIGHT HEADWALLS TO BE PLACED AT INLET



FRONT VIEW

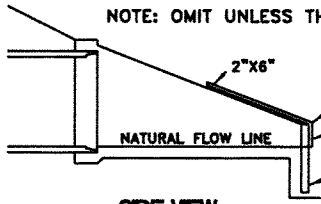
SIDE VIEW

NOTES:

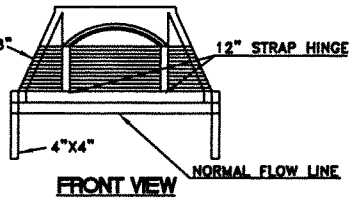
1. ALL TIMBER TO BE TREATED.
2. NO SPACE TO BE ALLOWED BETWEEN BOARDS.

TYPE 4 FOR FLARED END SECTIONS AND SPECIAL DESIGN HEADWALLS

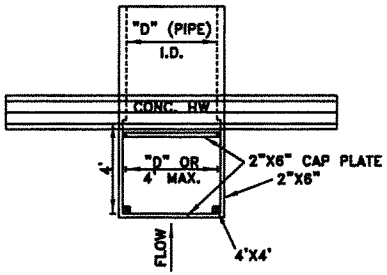
NOTE: OMIT UNLESS THIS TYPE HEADWALL ACCEPTED



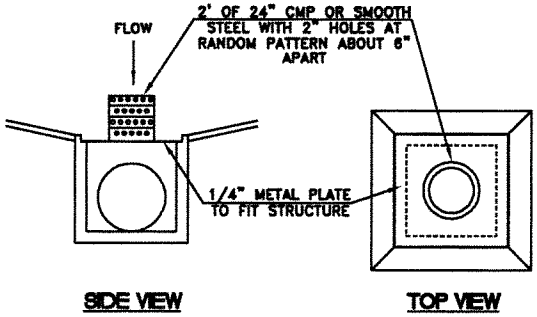
SIDE VIEW



FRONT VIEW

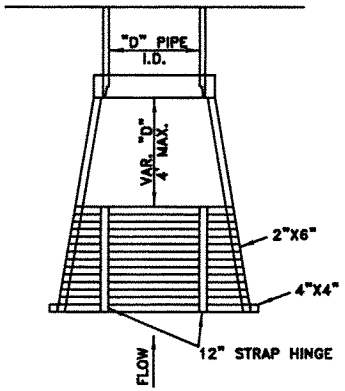


TOP VIEW

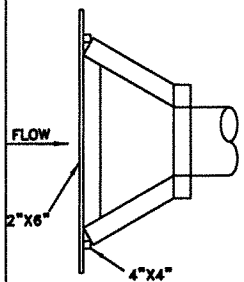


SIDE VIEW TOP VIEW

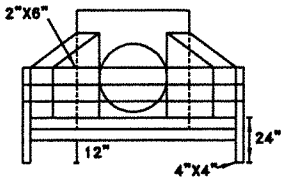
TYPE 3 FOR DROP INLETS AND CATCH BASINS



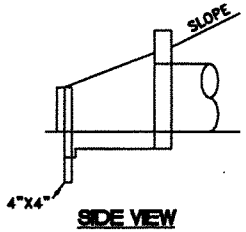
TOP VIEW



TOP VIEW



FRONT VIEW



SIDE VIEW

TYPE 1 TO BE PLACED ON INLET OF PRECAST HEADWALLS

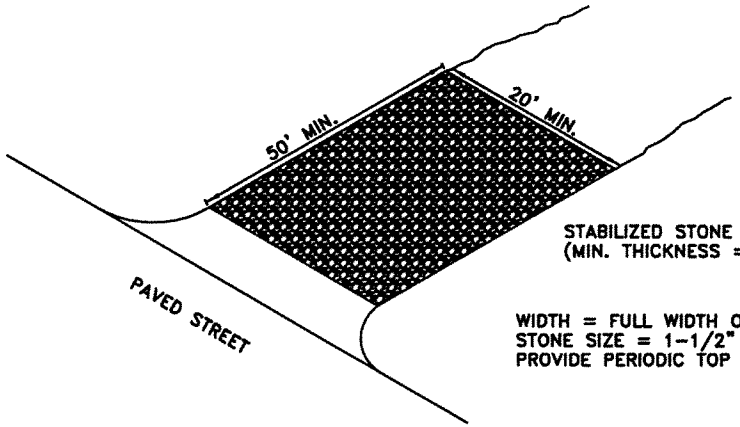
REFER TO S.C.S. "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" LATEST EDITION FOR OTHER DETAILS CONCERNING BEST MANAGEMENT PRACTICES.

City of Buford, Georgia

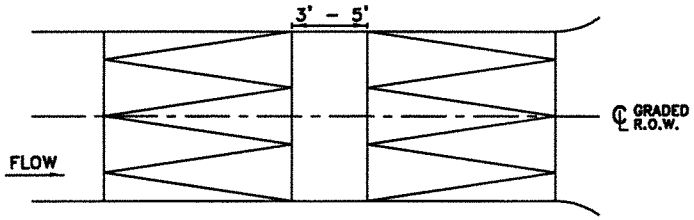
STANDARD DRAWING

Temporary Erosion Control - Silt Gates
Types 1, 2, 3, and 4

DATE: SEPTEMBER 25, 2014 SHEET: 201



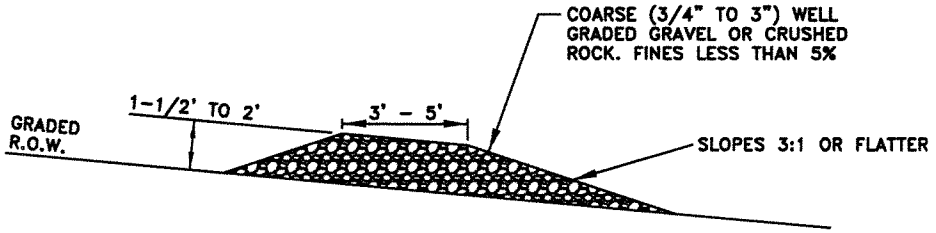
STONE PAD CONSTRUCTION EXIT



PLAN

NOTES:

1. CONSTRUCTION PADS ARE REQUIRED. THE LENGTH AND WIDTH OF THE PAD WILL DEPEND ON THE TYPE OF ACTIVITY AND SITE CONDITIONS. PAD SIZE WILL BE DETERMINED BY THE DESIGNER OF RECORD IN THE FIELD.
2. A WOVEN GEO-TEXTILE SHALL BE PLACED UNDER THE 6" STONE PAD.
3. REMOVE TRAPPED SEDIMENT AFTER EACH STORM. CLEAN OR REPLACE FILTER MATERIAL AS NEEDED.



FILTER BERM

City of Buford, Georgia

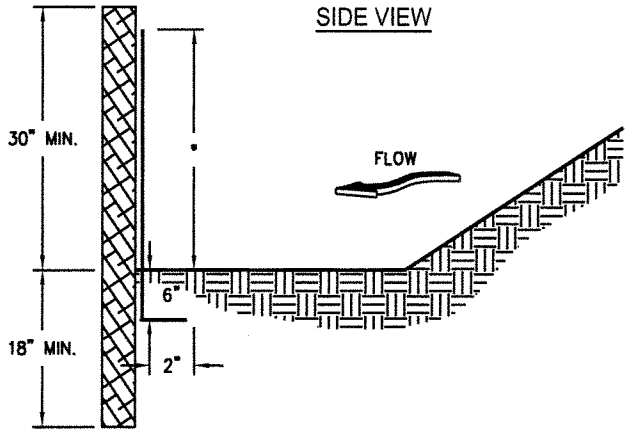
STANDARD DRAWING

Stone Pad Construction Exit and Filter Berm

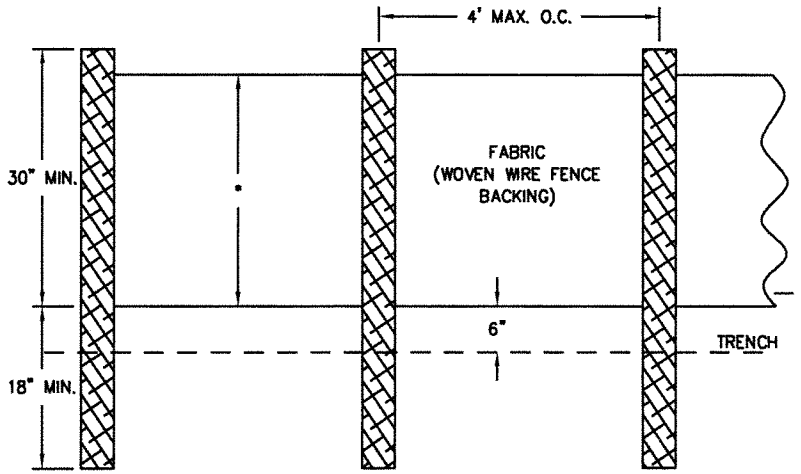
DATE: SEPTEMBER 25, 2014 SHEET: 202

SILT FENCE - TYPE SENSITIVE

SIDE VIEW



FRONT VIEW



NOTES:
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
2. HEIGHT (*) IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

POST SIZE			
TYPE	MIN. LENGTH	TYPE OF POST	SIZE OF POST
NS	4'	SOFT WOOD OAK STEEL	3" DIA. OR 2 X 4 1.5" X 1.5" 1.3 LB./FT. MIN.
S	4'	STEEL OAK	1.3 LB./FT. MIN. 2" X 2"

LAND SLOPE	MAXIMUM SLOPE LENGTH ABOVE FENCE
PERCENT	FEET
< 2	100
2 TO 5	75
5 TO 10	50
10 TO 20	25
> 20*	15
* IN AREAS WHERE THE SLOPE IS GREATER THAN 20%, A FLAT AREA LENGTH OF 10 FEET BETWEEN THE TOE OF SLOPE TO THE BARRIER SHOULD BE PROVIDED.	

City of Buford, Georgia

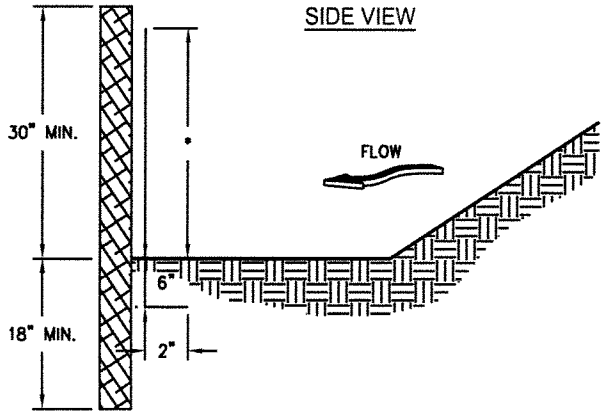
STANDARD DRAWING

Construction of a Silt Fence

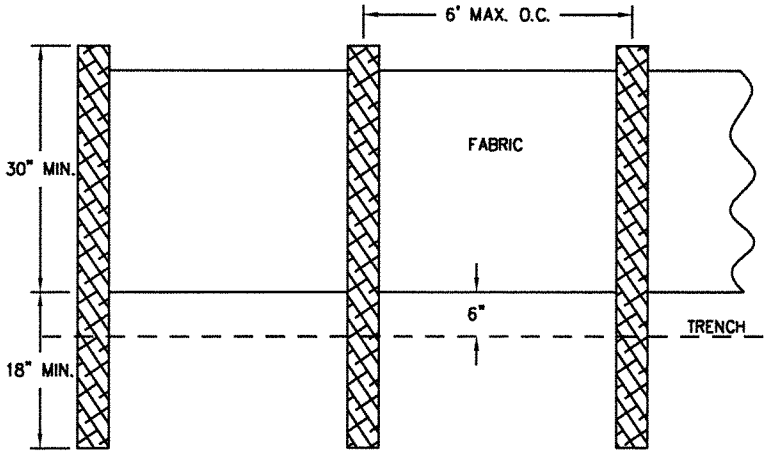
DATE: SEPTEMBER 25, 2014 SHEET: 203

SILT FENCE - TYPE NON-SENSITIVE

SIDE VIEW



FRONT VIEW



NOTES:
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
2. HEIGHT (*) IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

POST SIZE			
TYPE	MIN. LENGTH	TYPE OF POST	SIZE OF POST
NS	4'	SOFT WOOD OAK STEEL	3" DIA. OR 2 X 4 1.5" X 1.5" 1.3 LB./FT. MIN.
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LAND SLOPE	MAXIMUM SLOPE LENGTH ABOVE FENCE
PERCENT	FEET
< 2	100
2 TO 5	75
5 TO 10	50
10 TO 20	25
> 20*	15

* IN AREAS WHERE THE SLOPE IS GREATER THAN 20%, A FLAT AREA LENGTH OF 10 FEET BETWEEN THE TOE OF SLOPE TO THE BARRIER SHOULD BE PROVIDED.

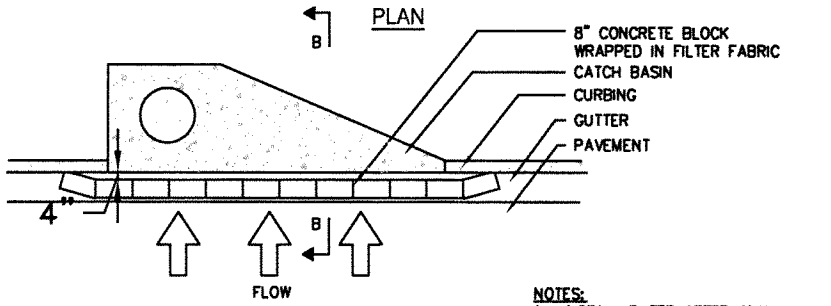
City of Buford, Georgia

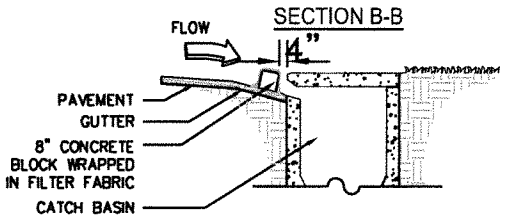
STANDARD DRAWING

Construction of a Silt Fence

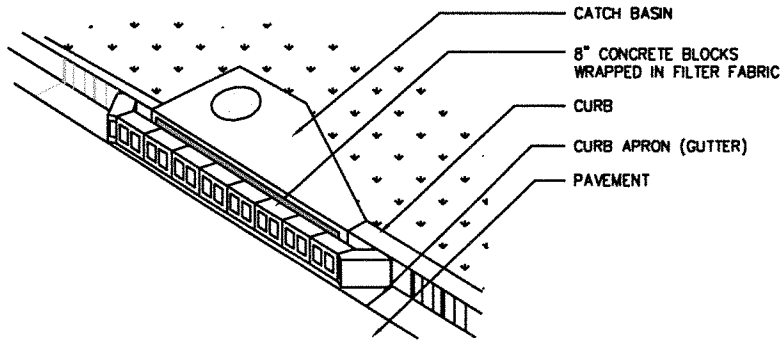
DATE: SEPTEMBER 25, 2014 SHEET: 204

CURB INLET FILTER "PIGS IN BLANKET"





NOTES:
1. INSTALL FILTER AFTER ANY ASPHALT PAVEMENT INSTALLATION.
2. WRAP 8" CONCRETE BLOCKS IN FILTER FABRIC AND SPAN ACROSS CATCH BASIN INLET.
3. FACE OPENINGS IN BLOCKS OUTWARD.
4. LEAVE A GAP OF APPROXIMATELY 4 INCHES BETWEEN THE CURB AND THE FILTERS TO ALLOW FOR OVERFLOW TO PREVENT HAZARDOUS PONDING.
5. INSTALL OUTLET PROTECTION BELOW STORM DRAIN OUTLETS.



City of Buford, Georgia

STANDARD DRAWING

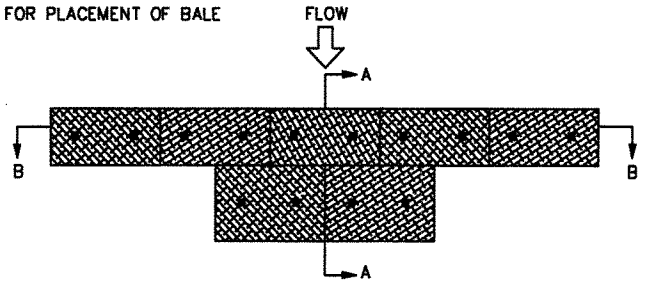
Construction of a Curb Inlet Filter

DATE: SEPTEMBER 25, 2014 SHEET: 205

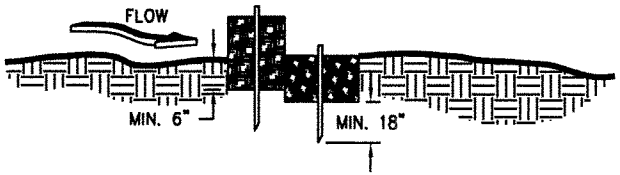
TYPICAL STRAW BALE CHECK DAM

PLAN

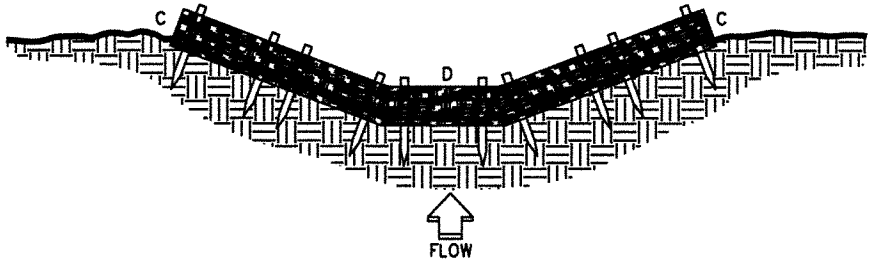
SEE DETAIL FOR PLACEMENT OF BALE



SECTION A-A



SECTION B-B



NOTES:
1. BALES SHOULD BE BOUND WITH WIRE OR NYLON STRING AND SHOULD BE PLACED IN ROWS WITH BALE ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. REMOVE #4 REBAR AFTER STRAW BALES ARE NO LONGER IN PLACE.
3. POINT C OF SECTION B-B SHOULD ALWAYS BE HIGHER THAN POINT D.

City of Buford, Georgia

STANDARD DRAWING

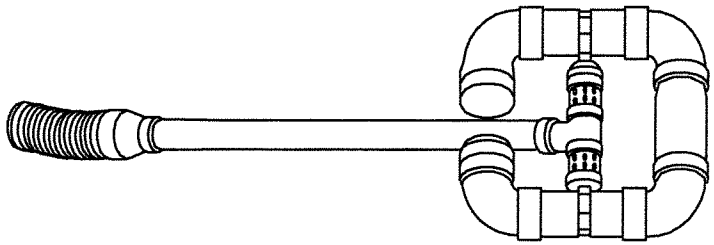
Construction of a Straw Bale Check Dam

DATE: SEPTEMBER 25, 2014 SHEET: 206

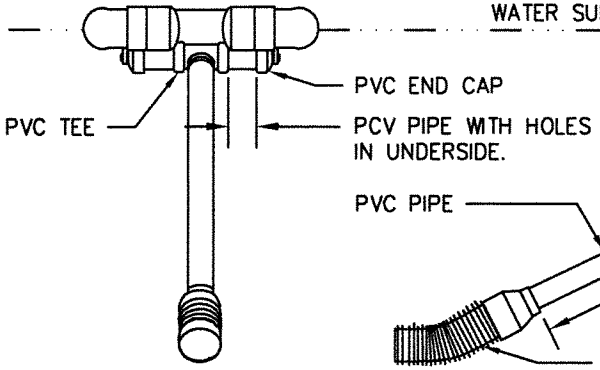
TEMPORARY SEDIMENT POND

NOTE:
SKIMMER CONFIGURATION SHOWN IS TYPICAL. THE DESIGNER/ENGINEER MAY SUBMIT AN ALTERNATE SKIMMER DETAIL FOR REVIEW.

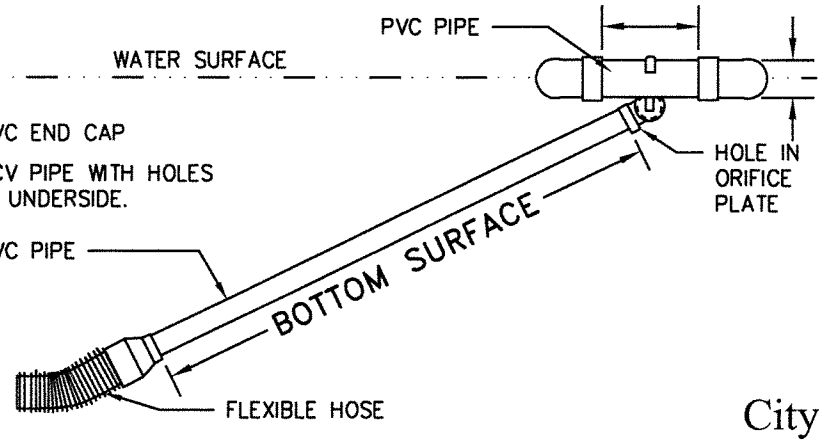
SKIMMER PERSPECTIVE



SKIMMER FRONTAL SECTION VIEW



SKIMMER SIDE SECTION VIEW

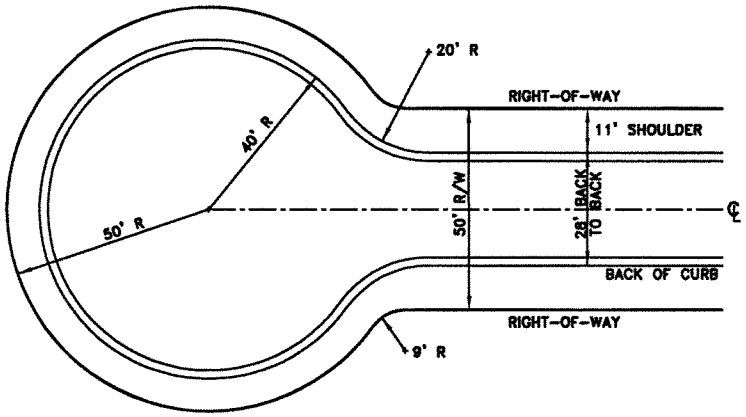


City of Buford, Georgia

STANDARD DRAWING

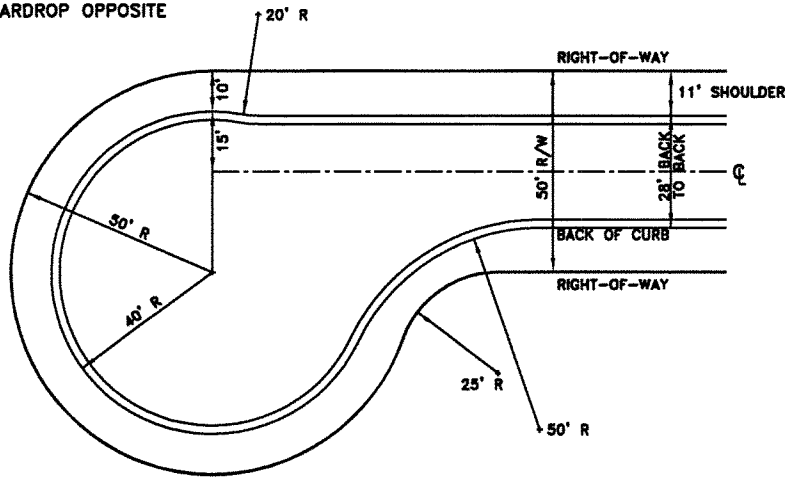
Construction of a Temporary Sediment Pond

DATE: SEPTEMBER 25, 2014 SHEET: 207

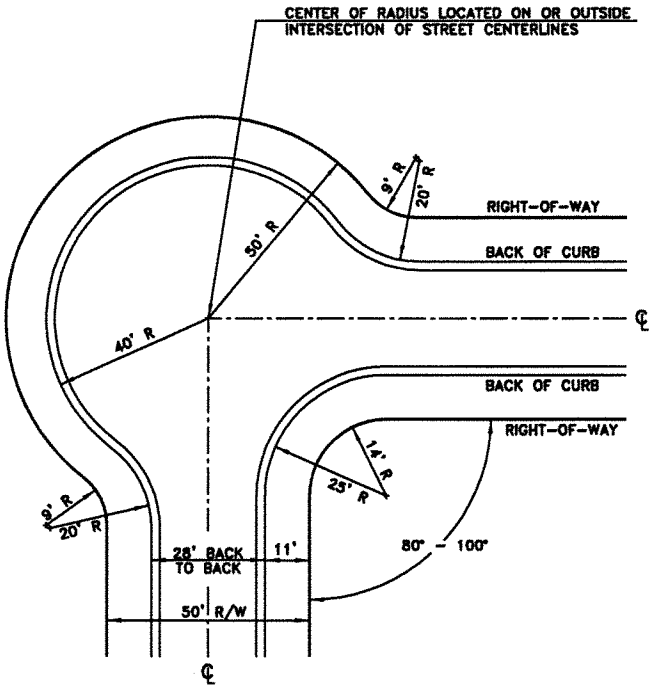


CENTERED

NOTE:
LEFT HAND TEARDROP SHOWN
RIGHT HAND TEARDROP OPPOSITE



TEARDROP



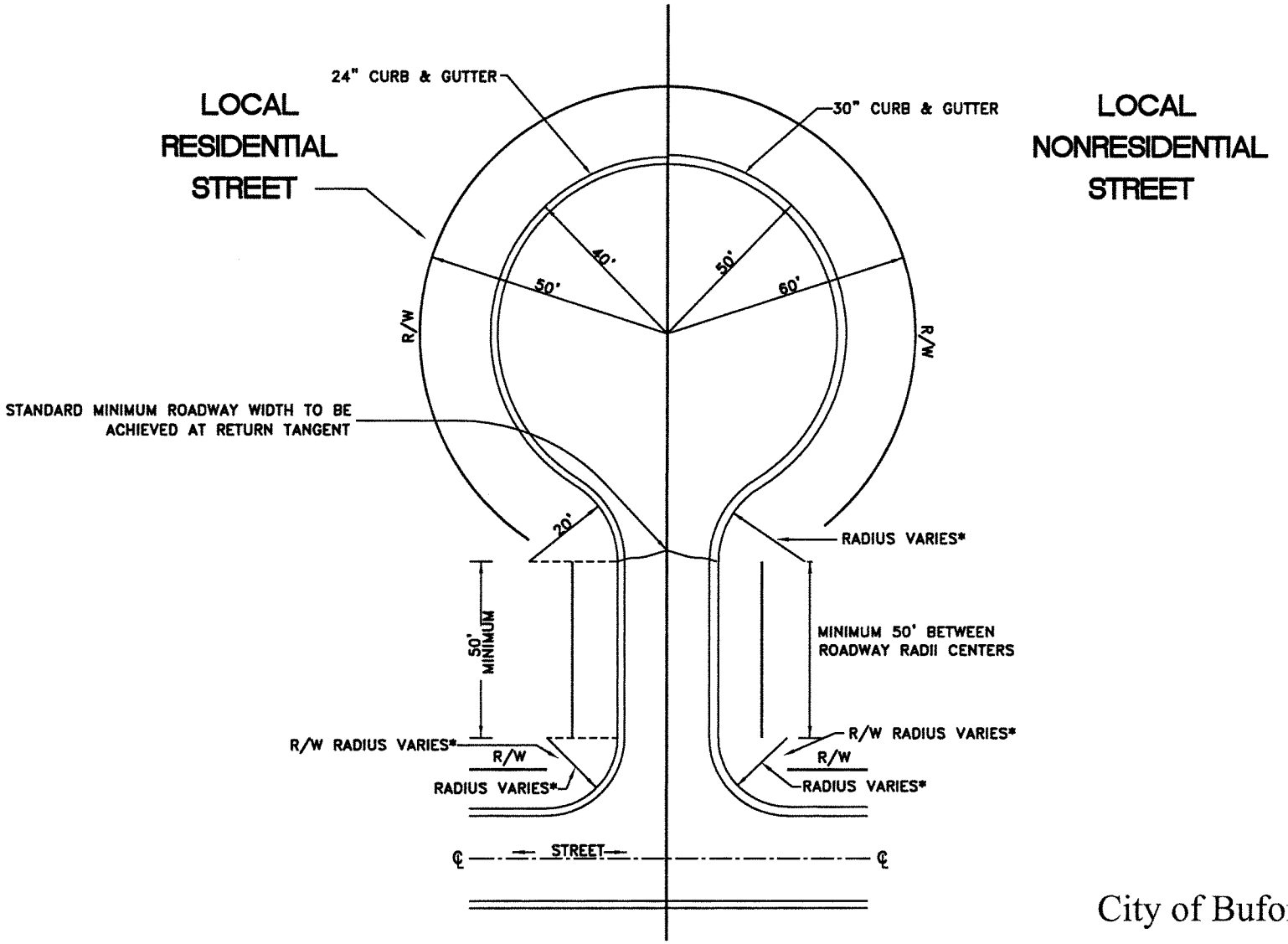
"EYEBROW"
LOCAL RESIDENTIAL STREETS ONLY

City of Buford, Georgia

STANDARD DRAWING

Standard Residential Cul-de-Sac

DATE: SEPTEMBER 25, 2014 SHEET: 301



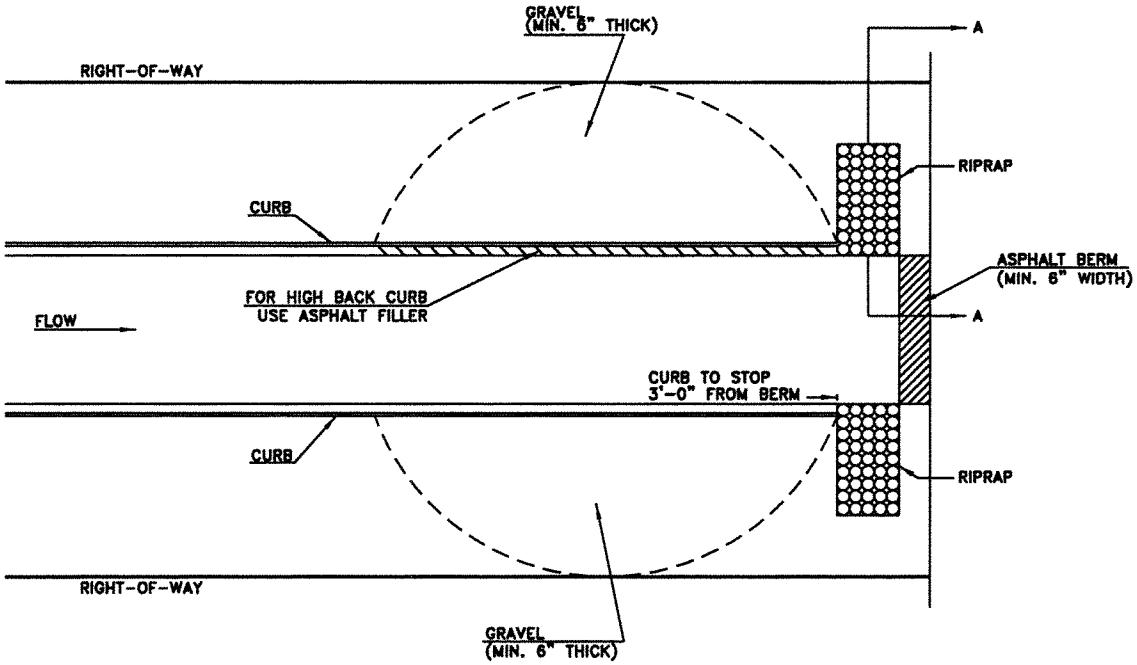
• SEE MINIMUM INTERSECTION RADII REQUIREMENTS IN DEVELOPMENT REGULATIONS.

City of Buford, Georgia

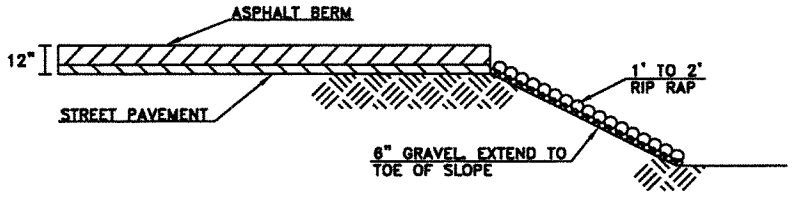
STANDARD DRAWING

Cul-de-Sac Minimum Lengths

DATE: SEPTEMBER 25, 2014 SHEET: 302



PLAN



SECTION A-A

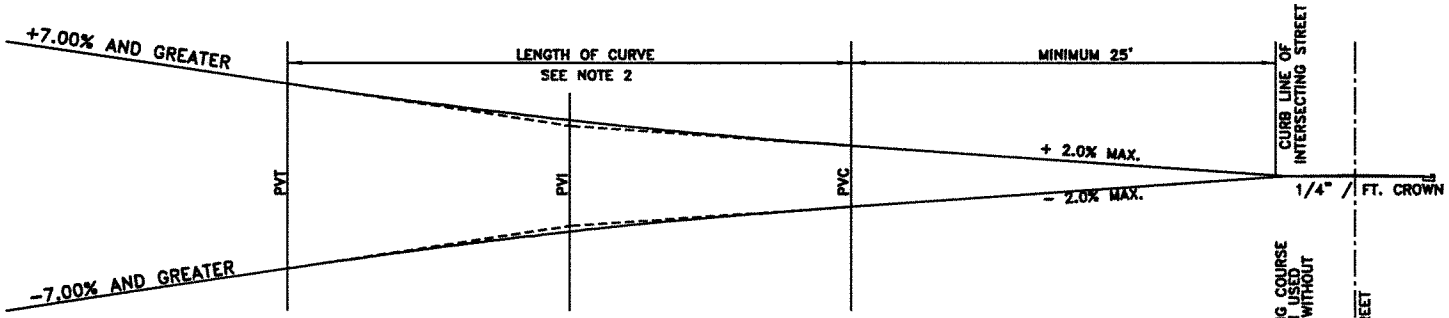
City of Buford, Georgia

STANDARD DRAWING

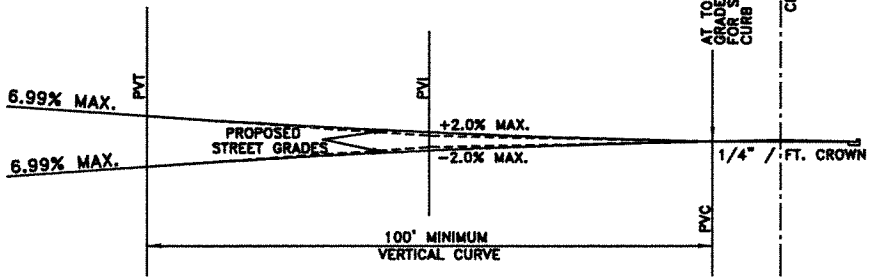
Temporary Vehicular Turnaround

DATE: SEPTEMBER 25, 2014 SHEET: 303

INTERSECTION OF LOCAL OR MINOR COLLECTOR STREETS



GRADES 7.00% AND GREATER



GRADES LESS THAN 7.00%

NOTES:

1) THIS STANDARD IS INTENDED TO BE A MINIMUM DESIGN STANDARD FOR CONTROL OF GRADES OF STREETS APPROACHING AN INTERSECTION WITH A LOCAL OR MINOR COLLECTOR STREET. FOR INTERSECTIONS WITH MAJOR THOROUGHFARES, SEE DEVELOPMENT REGULATIONS.
2) REFER TO DEVELOPMENT REGULATIONS TABLE 9-B FOR "K" VALUES FOR VERTICAL CURVES.

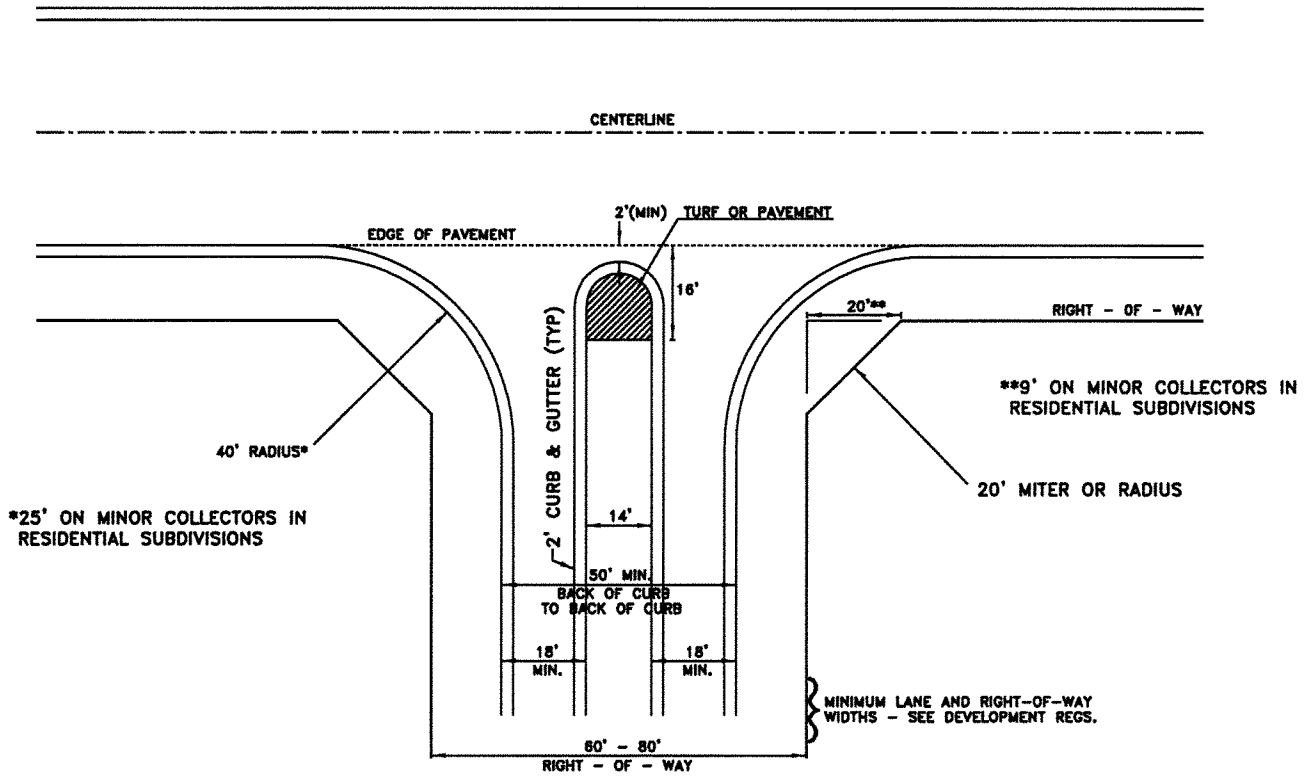
City of Buford, Georgia

STANDARD DRAWING

Vertical Alignment at Intersection with Local or Minor Collector Street

DATE: SEPTEMBER 25, 2014 SHEET: 304

INTERSECTION DETAIL NO. 1

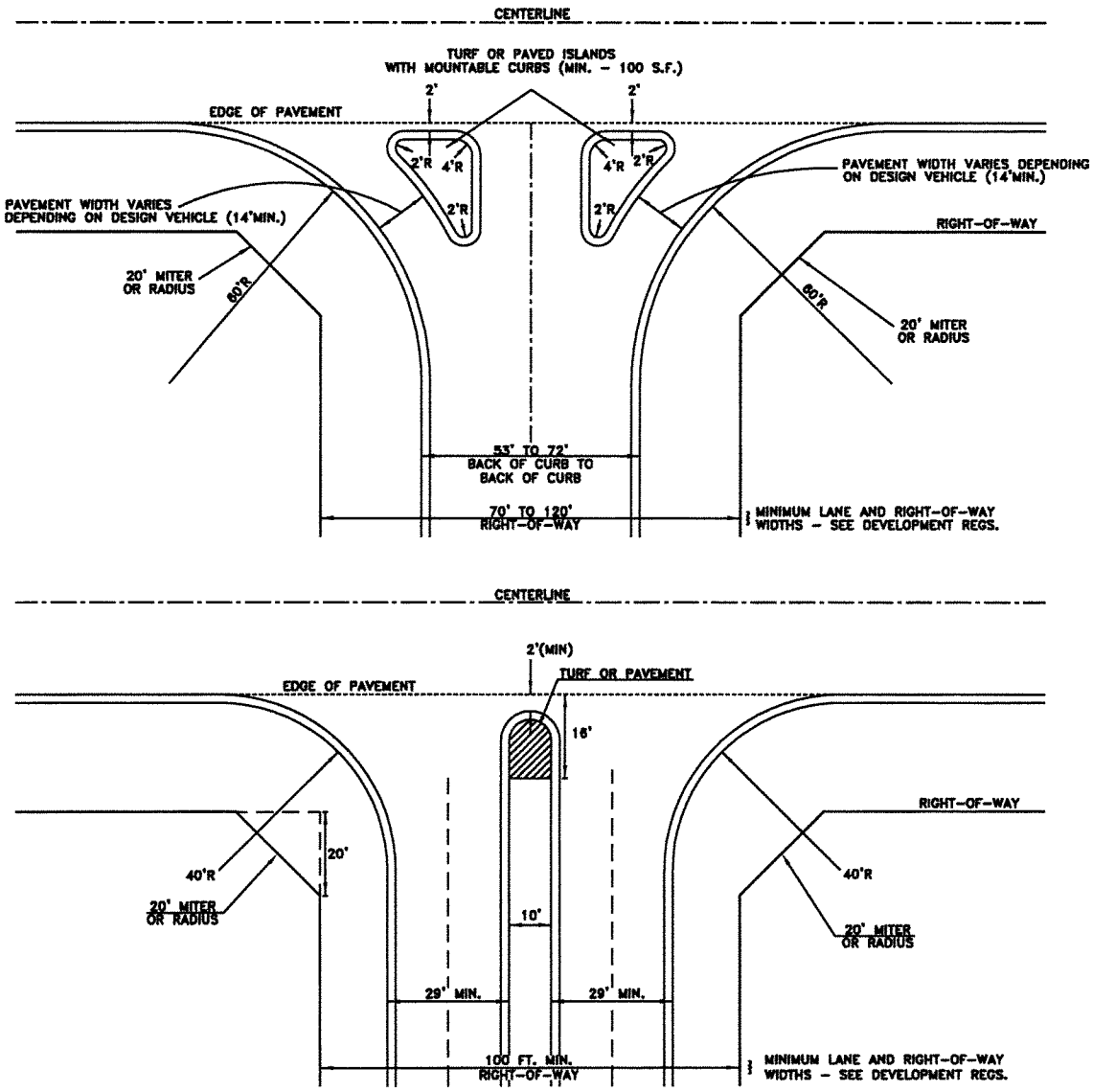


NOTES:

1. INSIDE OF ISLANDS ARE TO BE BACKFILLED WITH PORTLAND CEMENT CONCRETE, OR GRASSED, OR PLANTED WITH VEGETATION NOT EXCEEDING TWENTY-FOUR INCHES IN HEIGHT.
2. DEVELOPER TO MAINTAIN GRASSED OR PLANTED ISLAND.
3. LARGER RADII FOR RIGHT-OF-WAY OR ROADWAY CONNECTIONS MAY BE REQUIRED FOR STREETS INTERSECTING AT ANGLES LESS THAN 90 DEGREES.

City of Buford, Georgia

STANDARD DRAWING
INTERSECTION DETAIL NO. 1
T-Intersection Only - Minor or Major Collector Street Classification
DATE: SEPTEMBER 25, 2014 SHEET: 305



INTERSECTION DETAIL NO. 2

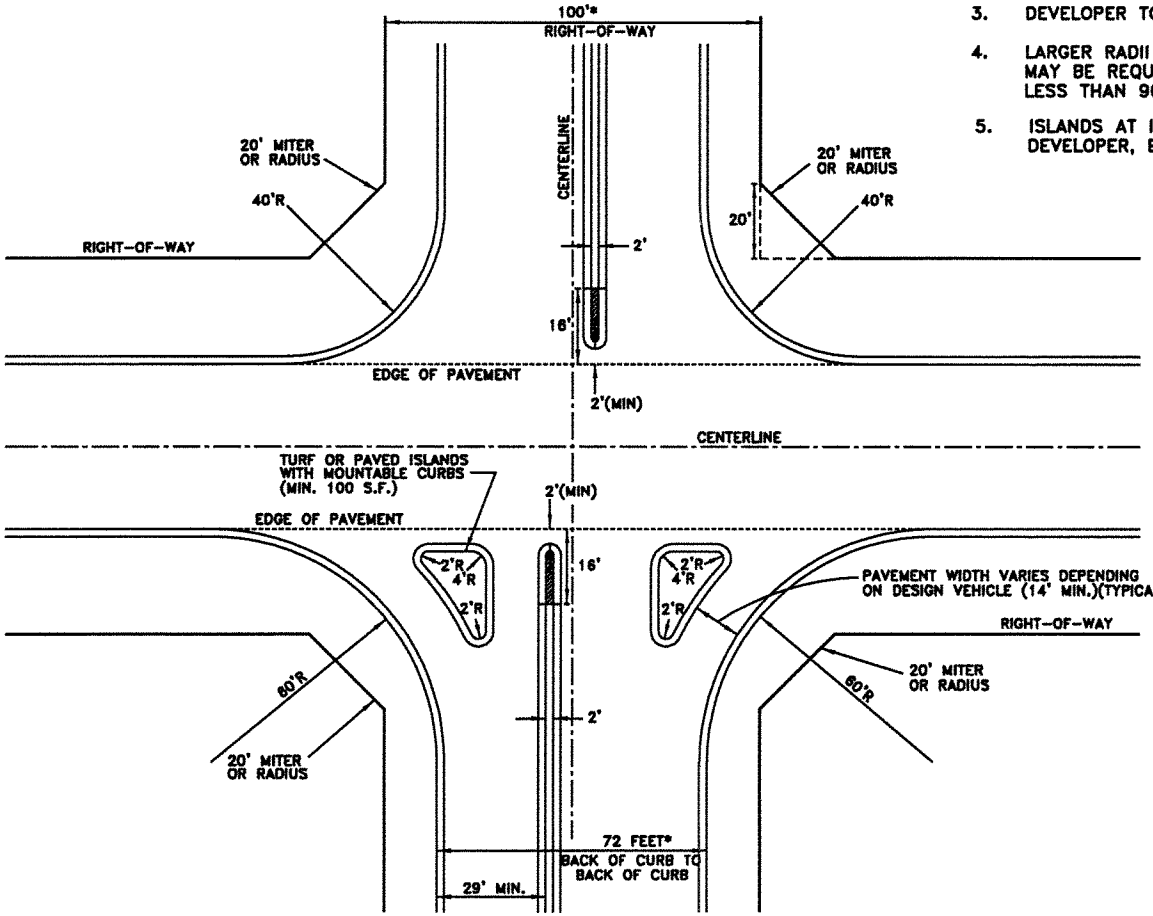
NOTES:

1. A COMBINATION OF THESE TWO DESIGNS MAY BE USED.
2. INSIDE OF ISLANDS IS TO BE BACKFILLED WITH PORTLAND CEMENT CONCRETE, OR GRASSED, OR PLANTED WITH VEGETATION NOT EXCEEDING 24" IN HEIGHT.
3. DEVELOPER TO MAINTAIN GRASSED OR PLANTED ISLAND.
4. LARGER RADII FOR RIGHT–OF–WAY OR ROADWAY CONNECTIONS MAY BE REQUIRED FOR STREETS INTERSECTING AT ANGLES LESS THAN 90 DEGREES.
5. ISLANDS AT INTERSECTIONS ARE AT THE OPTION OF THE DEVELOPER, EXCEPT FOR GDOT CONTROLLED ROUTES.

City of Buford, Georgia

STANDARD DRAWING
INTERSECTION DETAIL NO. 2
T–Intersection Only – Arterial or Major Collector Street Classification
DATE: SEPTEMBER, 25 2014 SHEET: 306

INTERSECTION DETAIL NO. 3



NOTES:

1. A COMBINATION OF THESE TWO DESIGNS MAY BE USED.
2. INSIDE OF ISLANDS IS TO BE BACKFILLED WITH PORTLAND CEMENT CONCRETE, OR GRASSED, OR PLANTED WITH VEGETATION NOT EXCEEDING 24" IN HEIGHT.
3. DEVELOPER TO MAINTAIN GRASSED OR PLANTED ISLAND.
4. LARGER RADII FOR RIGHT-OF-WAY OR ROADWAY CONNECTIONS MAY BE REQUIRED FOR STREETS INTERSECTING AT ANGLES LESS THAN 90 DEGREES.
5. ISLANDS AT INTERSECTIONS ARE AT THE OPTION OF THE DEVELOPER, EXCEPT FOR GDOT CONTROLLED ROUTES.

UNDIVIDED
70' - 120' RIGHT-OF-WAY*
53' - 72' ROADWAY*

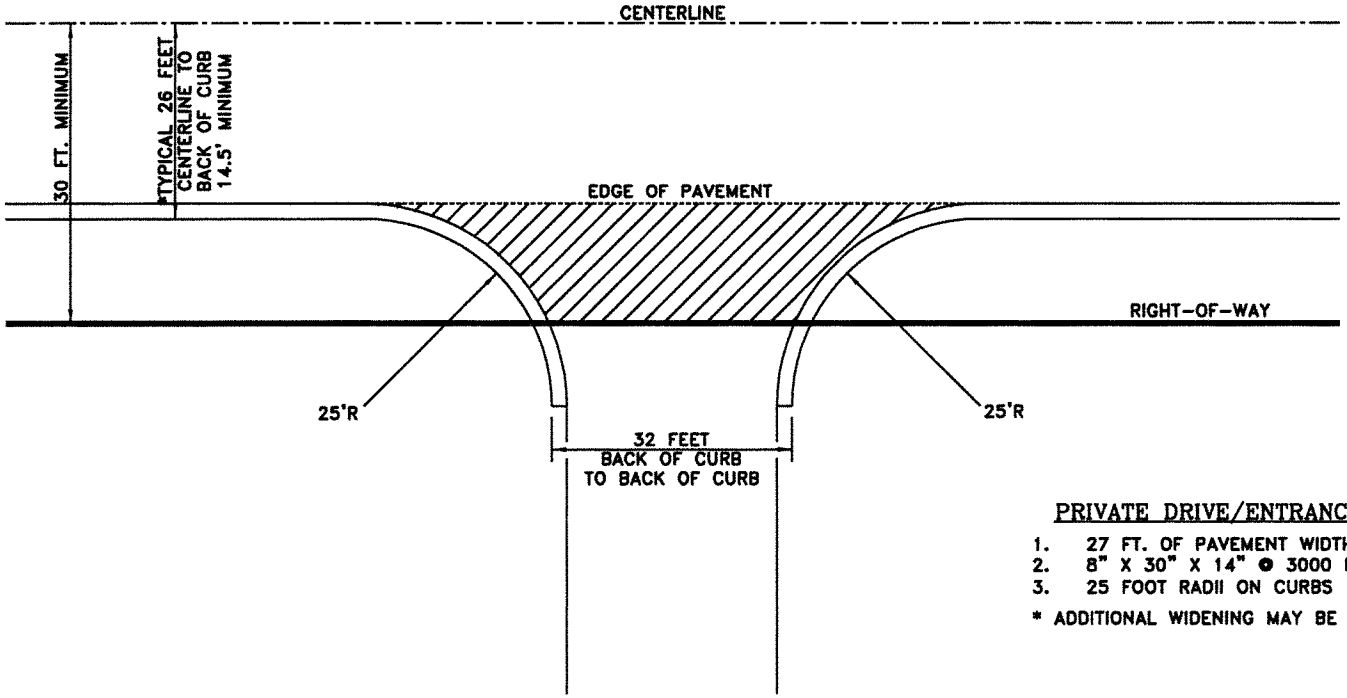
* MINIMUM LANE AND RIGHT-OF-WAY WIDTHS SEE DEVELOPMENT REGULATIONS

City of Buford, Georgia

STANDARD DRAWING
INTERSECTION DETAIL NO. 3
Arterial or Major Collector Street Classification
DATE: SEPTEMBER 25, 2014 SHEET: 307

DRIVEWAY DETAIL 1 – 32 FT. WIDTH, 25 FT. RADIUS

AUTOMOBILE SERVICE STATIONS/GASOLINE CONVENIENCE STORES
COMMERCIAL SITES (OVER 80,000 SQ. FT.)
OFFICE INSTITUTIONAL COMPLEXES (OVER 100,000 SQ. FT.)
APARTMENT/CONDO COMPLEXES (OVER 200 UNITS)
MOBILE HOME COMPLEXES (OVER 200 LOTS)



PRIVATE DRIVE/ENTRANCE

1. 27 FT. OF PAVEMENT WIDTH
2. 8" X 30" X 14" @ 3000 PSI CURB AND GUTTER
3. 25 FOOT RADII ON CURBS

* ADDITIONAL WIDENING MAY BE REQUIRED

City of Buford, Georgia

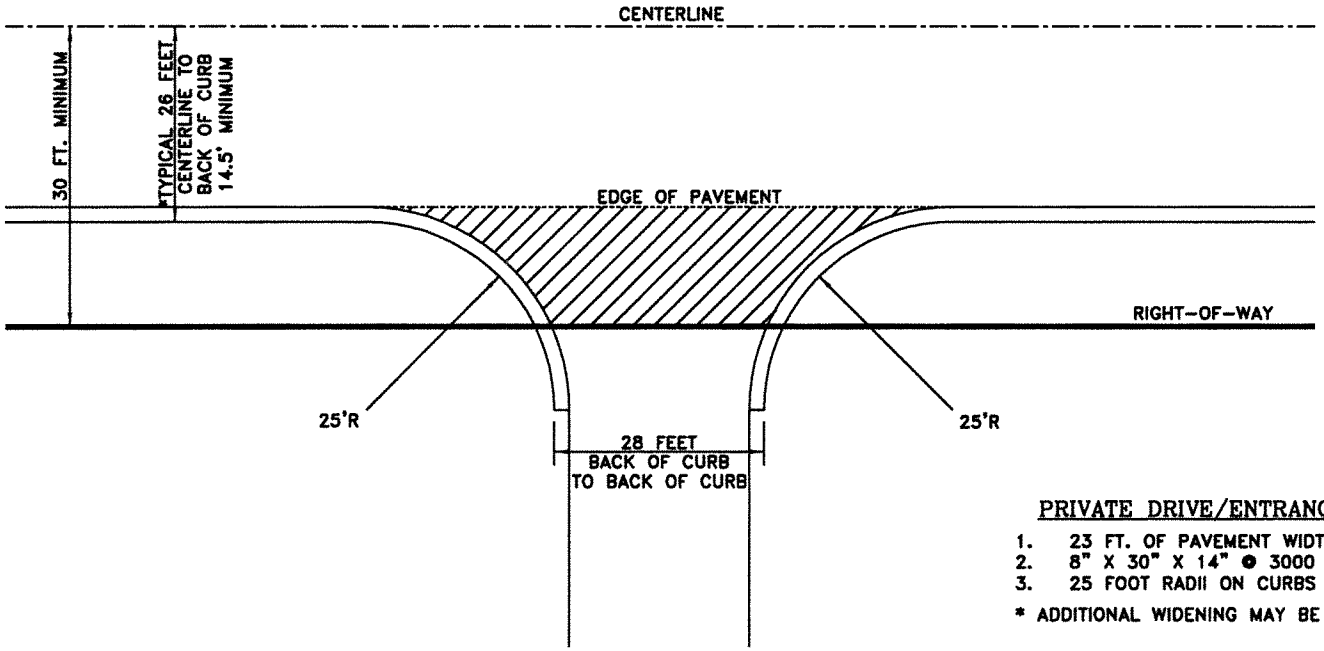
STANDARD DRAWING

Driveway Detail No. 1

DATE: SEPTEMBER 25, 2014 SHEET: 308

DRIVEWAY DETAIL 2 – 28 FT. WIDTH, 25 FT. RADIUS

COMMERCIAL SITES (80,000 SQ. FT. OR LESS)
OFFICE/INSTITUTIONAL COMPLEXES (100,000 SQ. FT. OF LESS)
APARTMENT/CONDO COMPLEXES (200 UNITS OR LESS)
MOBILE HOME COMPLEXES (200 LOTS OR LESS)



PRIVATE DRIVE/ENTRANCE

1. 23 FT. OF PAVEMENT WIDTH
2. 8" X 30" X 14" @ 3000 PSI CURB AND GUTTER
3. 25 FOOT RADII ON CURBS

* ADDITIONAL WIDENING MAY BE REQUIRED

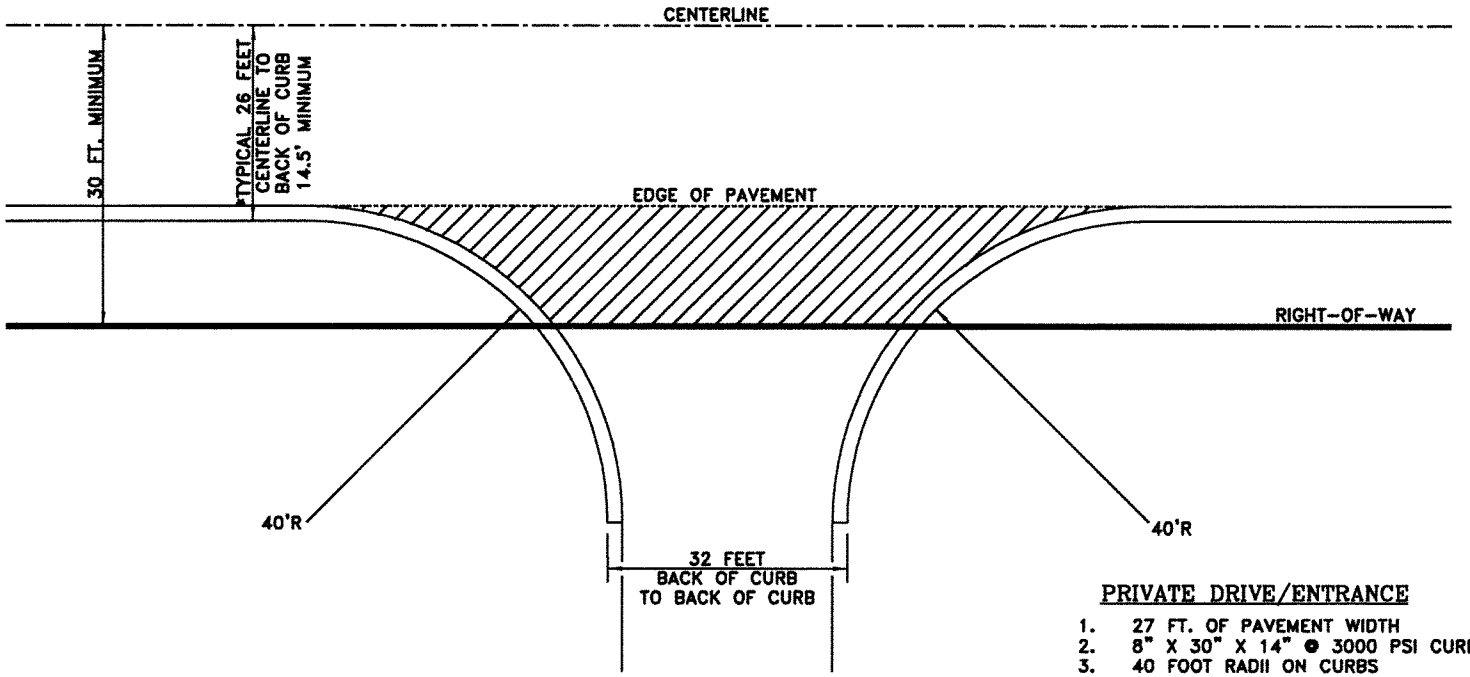
City of Buford, Georgia

STANDARD DRAWING

Driveway Detail No. 2

DATE: SEPTEMBER 25, 2014 SHEET: 309

DRIVEWAY DETAIL 3 – 32 FT. WIDTH, 40 FT. RADIUS



PRIVATE DRIVE/ENTRANCE

1. 27 FT. OF PAVEMENT WIDTH
2. 8" X 30" X 14" @ 3000 PSI CURB AND GUTTER
3. 40 FOOT RADII ON CURBS

* ADDITIONAL WIDENING MAY BE REQUIRED

INDUSTRIAL SITES

City of Buford, Georgia

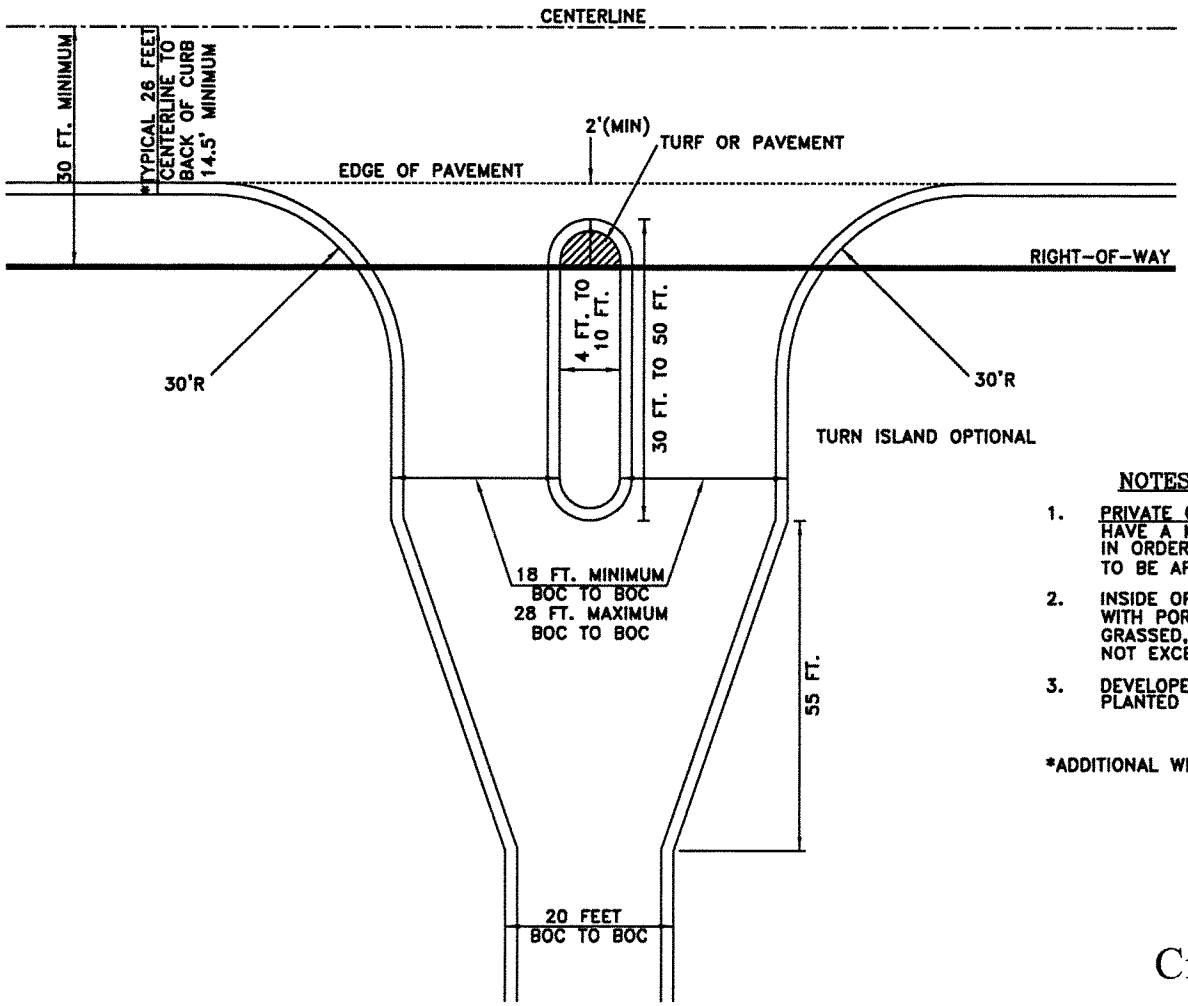
STANDARD DRAWING

Driveway Detail No. 3

DATE: SEPTEMBER 25, 2014 SHEET: 310

DRIVEWAY DETAIL 4 – (OPTIONAL)

PRIVATE COMMERCIAL OR OFFICE STREET ENTRANCES
APARTMENT/CONDO COMPLEXES (OVER 200 UNITS)
MOBILE HOME COMPLEXES (OVER 200 LOTS)



NOTES:

1. PRIVATE COMMERCIAL STREET MUST HAVE A MINIMUM LENGTH OF 300 FEET IN ORDER FOR THIS DRIVEWAY DETAIL TO BE APPLICABLE
2. INSIDE OF ISLAND TO BE BACKFILLED WITH PORTLAND CEMENT CONCRETE (4" THICK), OR GRASSED, OR PLANTED WITH VEGETATION NOT EXCEEDING 24" IN HEIGHT.
3. DEVELOPER TO MAINTAIN THE GRASSED OR PLANTED ISLANDS.

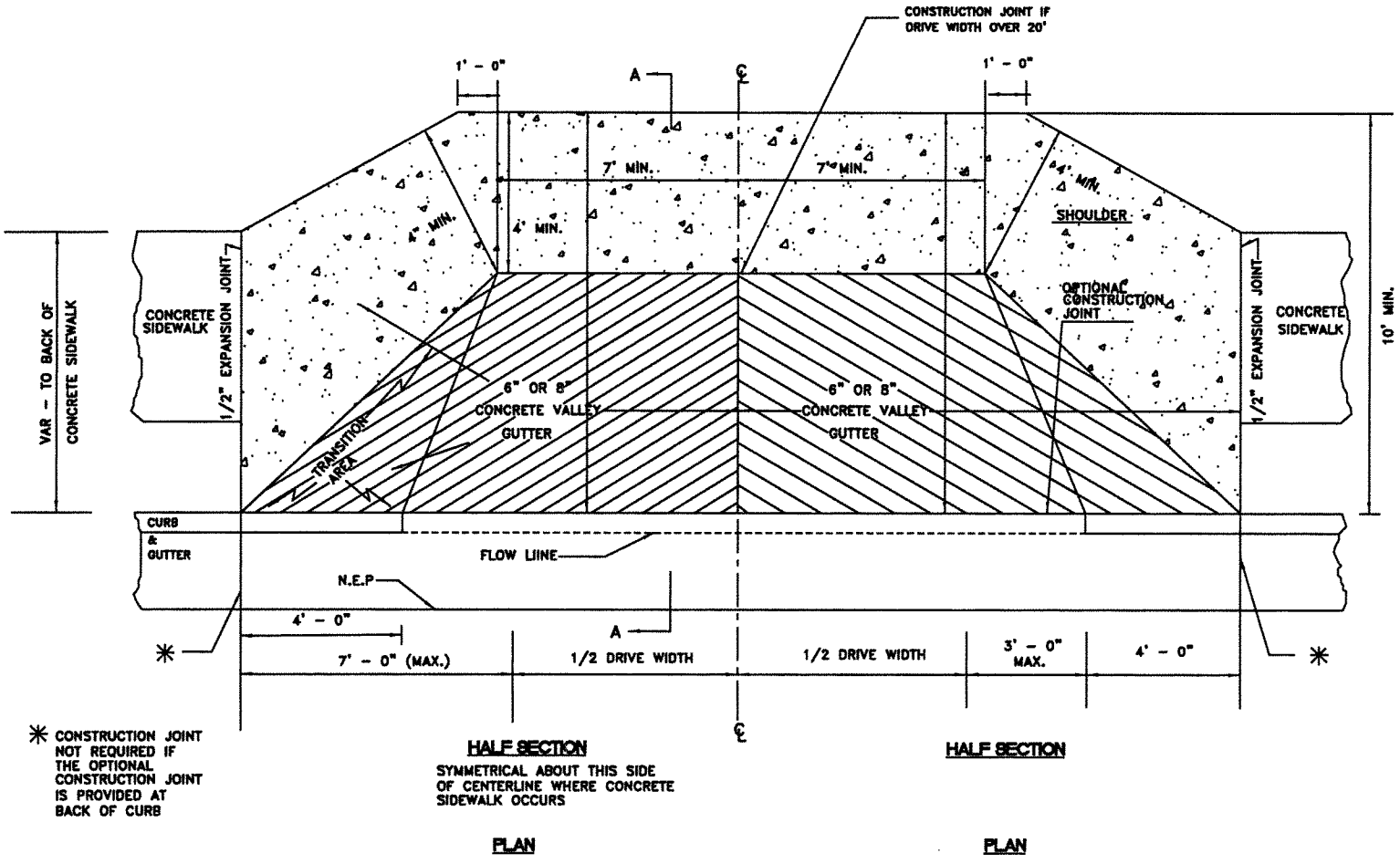
*ADDITIONAL WIDENING MAY BE REQUIRED

City of Buford, Georgia

STANDARD DRAWING

Driveway Detail No. 4

DATE: SEPTEMBER 25, 2014 SHEET: 311



✳ CONSTRUCTION JOINT NOT REQUIRED IF THE OPTIONAL CONSTRUCTION JOINT IS PROVIDED AT BACK OF CURB

HALF SECTION

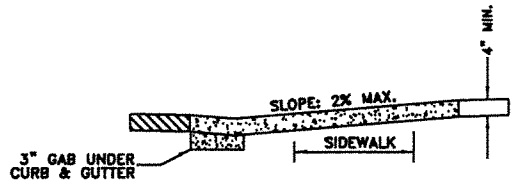
SYMMETRICAL ABOUT THIS SIDE OF CENTERLINE WHERE CONCRETE SIDEWALK OCCURS

PLAN

HALF SECTION

PLAN

CONCRETE: MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI



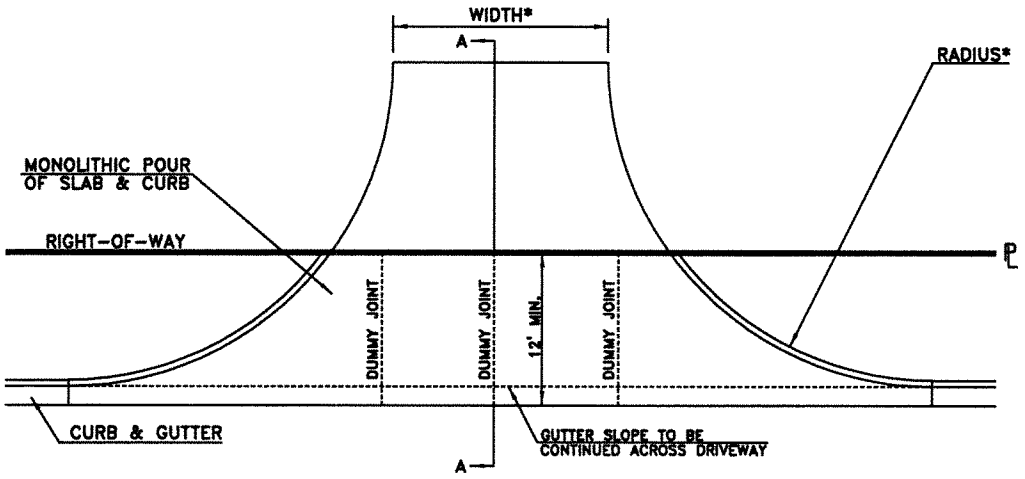
SECTION A-A

City of Buford, Georgia

STANDARD DRAWING

Residential Driveway Entrance with Sidewalk

DATE: JANUARY 13, 2015 SHEET: 312

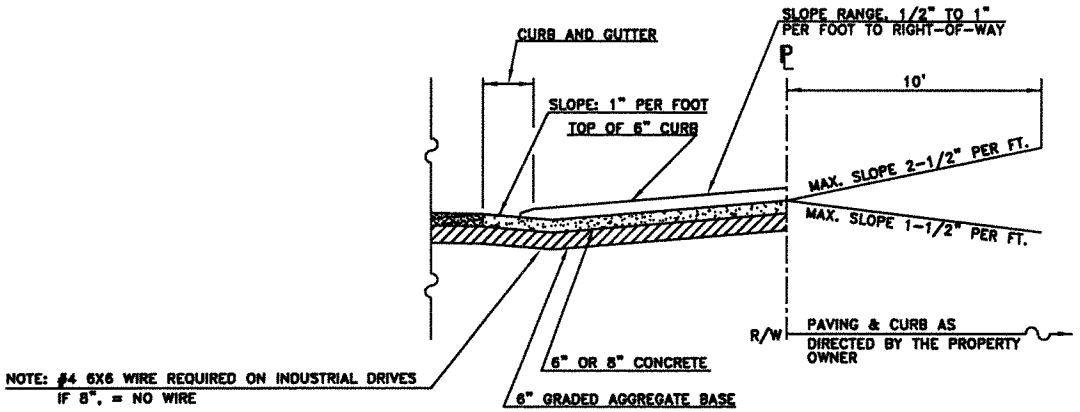


* SEE DRIVEWAY DETAILS FOR WIDTH AND RADIUS

ORIGINAL CURB AND GUTTER TO BE REMOVED.
ASPHALT TO BE PATCHED AS REQUIRED.

CONCRETE: MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI.

PLAN



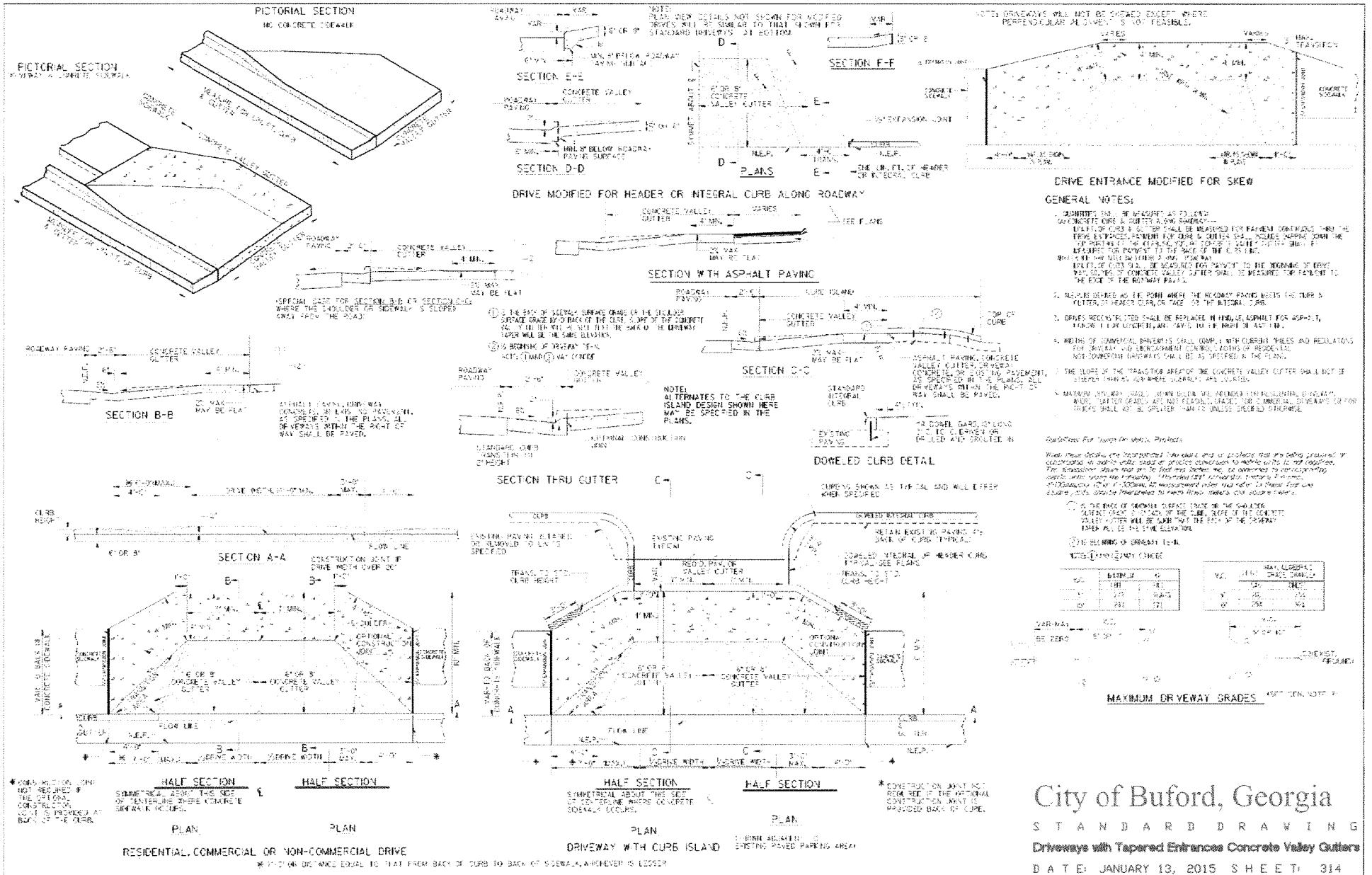
SECTION A-A

City of Buford, Georgia

STANDARD DRAWING

Commercial and Industrial Driveways

DATE: SEPTEMBER 25, 2014 SHEET: 313

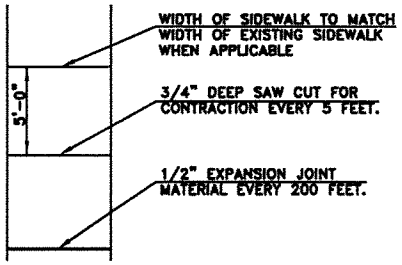


City of Buford, Georgia

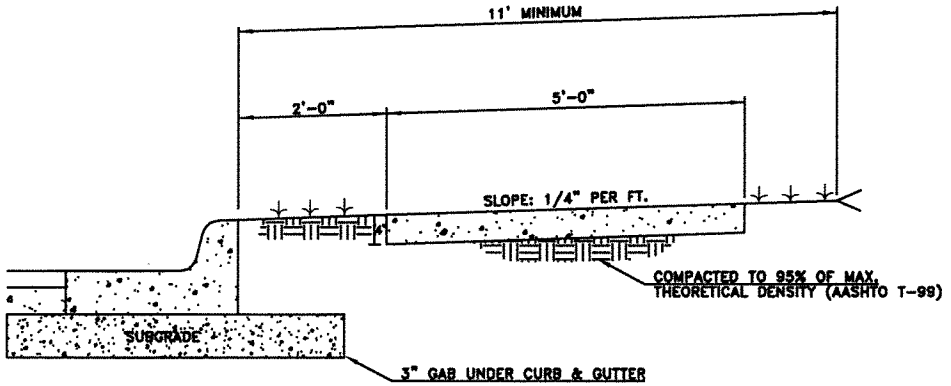
STANDARD DRAWING

Driveways with Tapered Entrances Concrete Valley Gutters

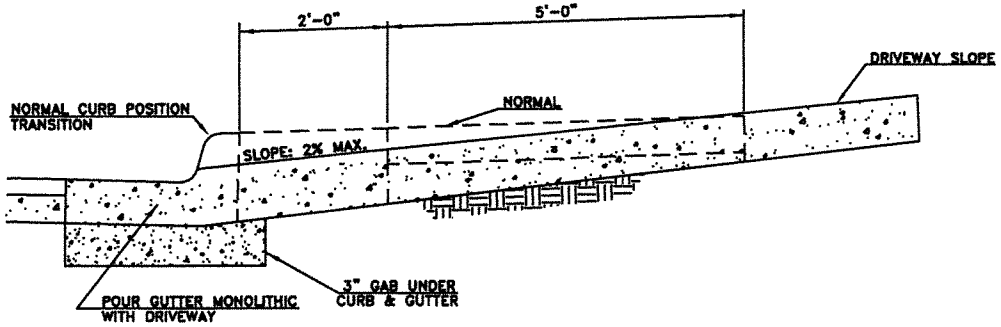
DATE: JANUARY 13, 2015 SHEET: 314



PLAN



TYPICAL SECTION OF 5' - 0" SIDEWALK



SIDEWALK SECTION AT DRIVEWAY

NOTES:

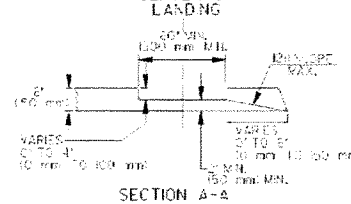
1) SIDEWALK CONCRETE: MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI.
2) SIDEWALK TO BE 4 INCHES (4") THICK.
3) 1/2" PREMOULDED EXPANSION JOINT REQUIRED AT ALL DRIVEWAYS, CURBS, ETC.

City of Buford, Georgia

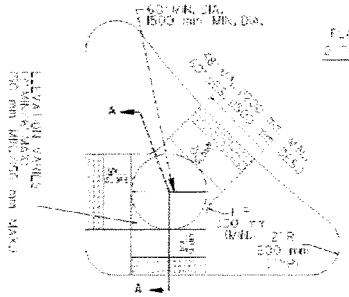
STANDARD DRAWING

Typical Sidewalk Section

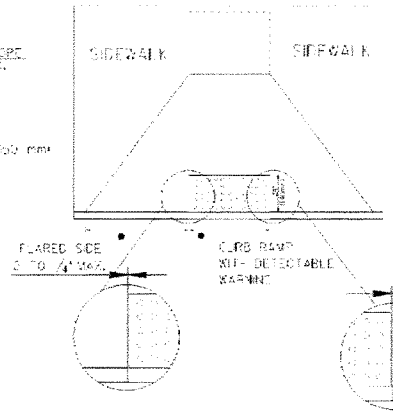
DATE: JANUARY 13, 2015 SHEET: 315

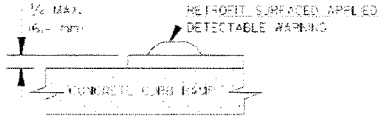


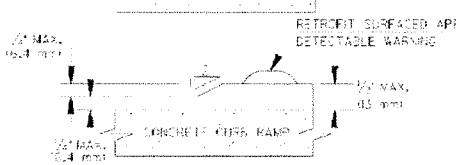
SECTION A-A

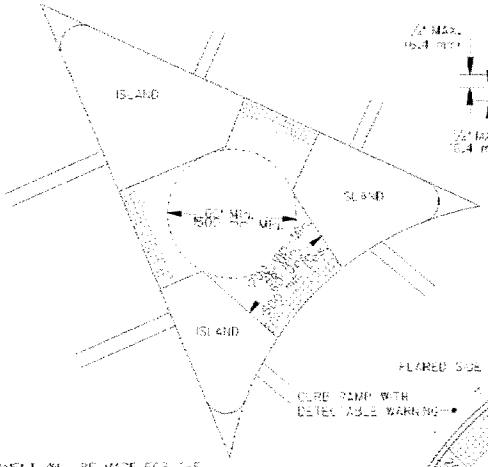


CONCRETE ISLAND WITH ELEVATED CUT THROUGH









DETAIL FOR DETECTABLE WARNING AT CUT-THRU CONCRETE ISLAND

NO SEPARATE PAYMENT WILL BE MADE FOR THE DETECTABLE WARNINGS. THE COST SHALL BE INCLUDED IN THE PRICE BID FOR SIDEWALK (OR CURB CUT RAMP IF THE ITEM IS INCLUDED IN THE PROPOSAL).

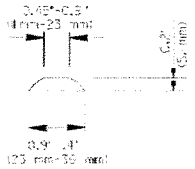
FOR CUT-THRU ISLANDS AND EXISTING RAMPS, WHERE NO SIDEWALK OR CURB CUT RAMPS ARE IN THE PROPOSAL, THE COST OF THE DETECTABLE WARNING SHALL BE INCLUDED IN THE OVERALL BID PRICE SUBMITTED.

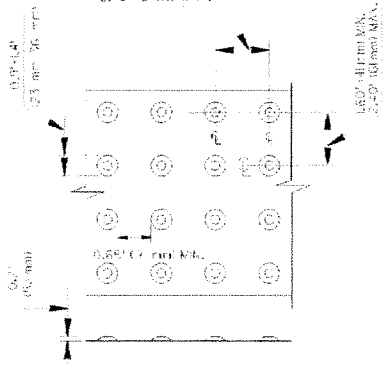
SIZE: DETECTABLE WARNINGS SHALL BE 24 INCHES (610 mm) MIN. IN THE DIRECTION OF PEDESTRIAN TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.

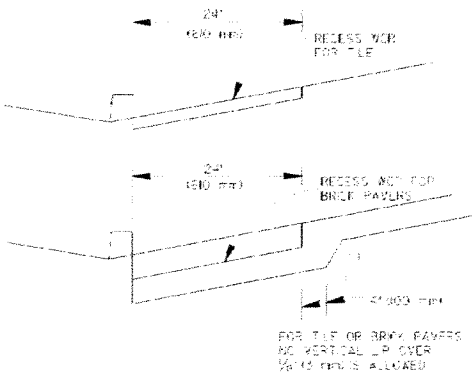
LOCATION: THE DETECTABLE WARNING SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE OR OTHER POTENTIAL HAZARD IS 6 TO 8 INCHES (150 mm TO 200mm) FROM THE CURB LINE OR OTHER POTENTIAL HAZARD, SUCH AS A REFLECTIVE POST, LOCATED OUTSIDE THE DRIVEWAY ENVELOPE OF RAIL OPERATIONS.

DOME SIZE AND SPACING: TRUNCATED DOMES SHALL HAVE A BASE DIAMETER OF 0.9 INCH TO 1.4 INCH (23mm-36mm) AT THE BOTTOM, A DIAMETER OF 0.45 INCH TO 0.9 INCH (11mm-23mm) AT THE TOP, THE TOP DIAMETER SHALL BE A MINIMUM OF 50% AND A MAXIMUM OF 65% OF THE BASE DIAMETER, A HEIGHT OF 0.2 INCH (5mm) AND A CENTER-TO-CENTER SPACING OF 2.35 INCHES (60mm) NOMINAL, 1.60 INCHES (41mm) MINIMUM MEASURED ALONG ONE SIDE OF A SQUARE ARRANGEMENT. DOMES SHALL HAVE A SQUARE ARRANGEMENT. DOMES SHALL BE ALIGNED ON A SQUARE GRID PARALLEL TO PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.

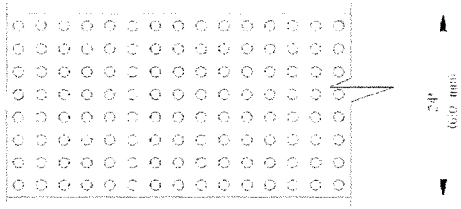
VISUAL CONTRAST: DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH THE ADJACENT WALKING SURFACE EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE VISUAL CONTRAST SHALL BE AN INTEGRAL PART OF THE DETECTABLE WARNING SURFACE.







FOR TILE OR BRICK PAVERS NO VERTICAL LIP OVER ¼" (6 mm) IS ALLOWED



MATERIALS:

RETROFIT OF EXISTING RAMPS

SURFACE APPLIED MATERIALS WILL ONLY BE APPROVED TO BE USED ON EXISTING WHEELCHAIR RAMPS.

INSTALLATION:

BRICK PAVERS SHALL BE SET IN A WET MORTAR BED. THE BED SHALL BE PLACED ON CONCRETE. THE CONCRETE SHALL BE A MINIMUM OF 4" THICK.

DETECTABLE WARNING SHALL BE PROVIDED IN PLACE OR SET IN A WET MORTAR BED. MANUFACTURER RECOMMENDED ADHESIVE OR FASTENER SHALL BE USED IN THE INSTALLATION.

ALL OTHER MATERIALS SHALL BE INSTALLED ACCORDING TO MANUFACTURES DETAILS OR INSTRUCTION.

GENERAL NOTES:

RETROFIT SURFACED APPLIED MATERIALS SHALL:

1. CHANGES IN LEVEL OF ¼" (6 mm) MAX. OR MINIMUM SHALL BE PERMITTED VERTICALLY ON SURFACED APPLIED MATERIALS.
2. CHANGES IN LEVEL BETWEEN ¼" (6.4 mm) MAX. MINIMUM AND ½" (13mm) MAX. MINIMUM SHALL BE BEVELED (X) WITH A SLOPE NO [illegible]

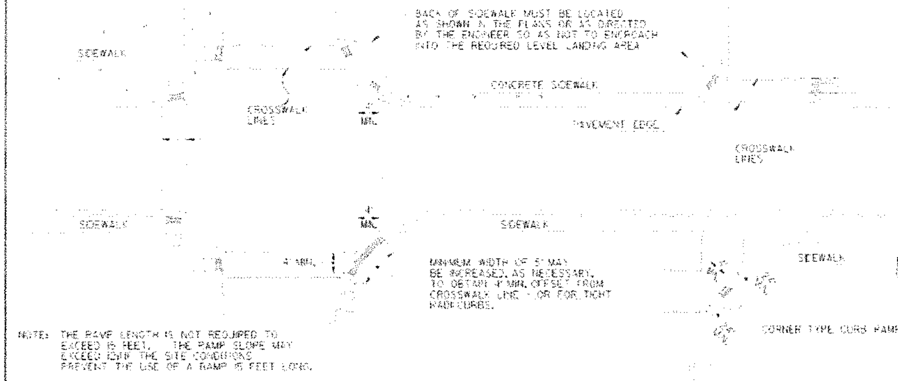
City of Buford, Georgia

STANDARD DRAWING

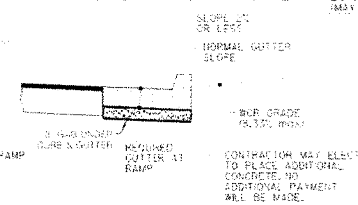
Detectable Warning Surface Truncated Dome Size, Spacing and Alignment Requirements

DATE: JANUARY 13, 2015 SHEET: 316

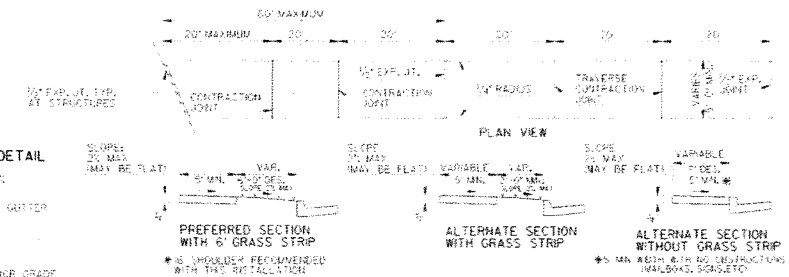
TYPICAL LOCATONS FOR CURB CUT RAMPS - PLAN VIEW



GUTTER TRANSITION DETAIL



CONCRETE SIDEWALK DETAILS



NOTES FOR CONCRETE SIDEWALK:

A. CONCRETE TO BE PLACED 4" THICK AND FINISHED WITH TAMPS, WOOD FLOATS AND STIFF-BRISTLE BROOMS.
B. TRANSVERSE CONTRACTION JOINTS SHALL BE PLACED AT 20 FT. INTERVALS. ALL EDGES TO BE ROUNDED TO ½" RADIUS.
C. ½" EXPANSION JOINTS SHALL BE PLACED, WHERE SIDEWALK TIE INTO A STRUCTURE OR TERMINATE AT CURB, RAMPS OR DRIVEWAYS AND AT 60' INTERVALS.

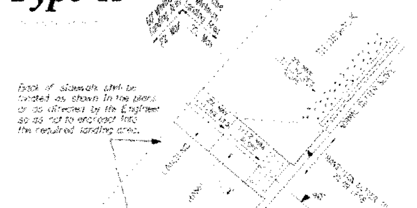
NOTES FOR CURB CUT RAMPS:

1. CURB CUT RAMPS WILL BE LOCATED AS FOLLOWS UNLESS PLANS OR CONTRACT SPECIFY OTHERWISE.
   a) AT ALL PEDESTRIAN CROSSWALKS WHERE CURB IS CONSTRUCTED OR REPLACED.
   b) WHERE THE SIDEWALK, CONCRETE OR UNPAVED, IS INTERRUPTED BY THE CURB AT TURNOUTS OR AT INTERSECTIONS.
   c) AT OTHER LOCATIONS SUCH AS HOSPITALS, NURSING HOMES, REST AREAS, ETC., WHERE THE CURB WOULD OTHERWISE BE AN OBSTRUCTION TO THE PHYSICALLY DISABLED.
2. RAMPS WILL BE CONSTRUCTED FROM CONCRETE. SPECIFICATIONS FOR RAMPS WILL BE THE SAME AS FOR CONCRETE SIDEWALK. RAMPS SHALL HAVE EITHER A ROUGH OR A TEXTURED FINISH.
3. DROP INLETS ARE NOT TO BE LOCATED DIRECTLY IN FRONT OF RAMPS. CATCH BASINS SHOULD BE LOCATED AT LEAST 10 FT. FROM RAMPS WHEN FEASIBLE.
4. WHERE RAMPS ARE LOCATED IN RADII, THE DIMENSIONS SHOWN FOR RAMP WIDTHS AND TAPERS ARE MEASURED PERPENDICULAR TO THE RAMP AND NOT ALONG THE CURVE.
5. WHERE UTILITY STRUCTURES CONFLICT, WHERE SIDEWALK GEOMETRY VARIES, AT SKEWED INTERSECTIONS, OR IN OTHER SPECIAL CASES, THE RAMP DESIGNS MAY BE MODIFIED BY THE DESIGNER OR ENGINEER, PROVIDED THAT THE WIDTH REMAINS A MINIMUM OF 48 INCHES, AND NO SLOPE ON THE ACCESSIBLE PART OF THE RAMP IS STEEPER THAN 12:1.
6. LIN. FT. OF CURB AND GUTTER WILL INCLUDE THE TRANSITIONED CURB IN FRONT OF RAMPS. SQ. YDS. OF CONCRETE SIDEWALK AND CONCRETE MEDIAN PAVING WILL INCLUDE RAMPS. NO ADDITIONAL PAYMENT WILL BE MADE FOR CURB RAMPS. NO ADDITIONAL PAYMENT WILL BE MADE FOR SAWING AND REMOVING EXISTING SIDEWALK OR CURB WHERE NECESSARY FOR RAMP CONSTRUCTION.
7. WHEN A CURB RAMP IS PLACED ON EXISTING PAVEMENT, THE PAVEMENT SHALL BE REMOVED TO PROVIDE A MINIMUM THICKNESS OF 5 INCHES OF CONCRETE AT ALL LOCATIONS. NO SEPARATE PAYMENT WILL BE MADE FOR REMOVAL OF THE PAVEMENT.
8. DETECTABLE WARNING SURFACES ARE REQUIRED ON ALL INTERSECTIONS WITH PUBLIC STREETS, SIGNALIZED COMMERCIAL DRIVEWAYS, AND COMMERCIAL DRIVEWAYS WITH AN AADT OF 25 VPD.

Guidelines For Usage On Metric Projects

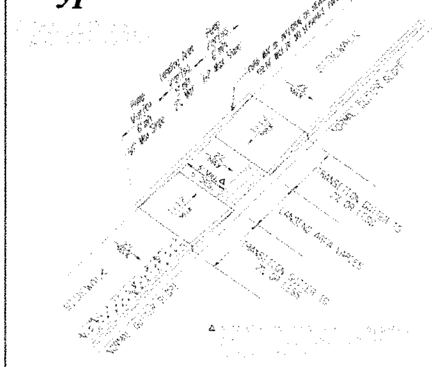
When these details are incorporated into plans and/or projects that are being prepared or constructed in metric units, exact or precise conversion to metric units is not required. The dimensions shown that are in feet and inches may be converted to corresponding metric units using the following "Rounded-Off" conversion factors: 1" = 25mm, 4" = 100mm, and 12" or 1' = 300mm. All measurement notes that refer to linear feet and square yards shall be interpreted to mean linear meters and square meters.

Type A

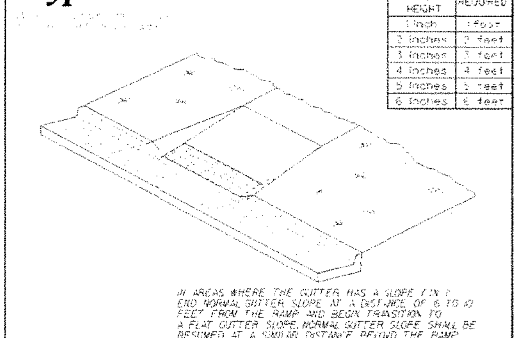


LENGHT REQUIRED FOR A [illegible] SLOPE	
DIFFERENCE IN HEIGHT	LENGTH REQUIRED
1 inch	10 inches
2 inches	1'-8"
3 inches	2'-6"
4 inches	3'-4"
5 inches	4'-2"
6 inches	5 feet

Type B

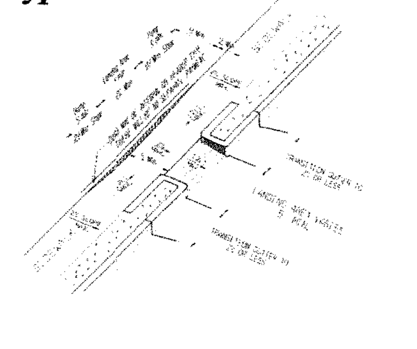


Type D



LENGHT REQUIRED FOR A [illegible] SLOPE	
DIFFERENCE IN HEIGHT	LENGTH REQUIRED
1 inch	1 foot
2 inches	2 feet
3 inches	3 feet
4 inches	4 feet
5 inches	5 feet
6 inches	6 feet

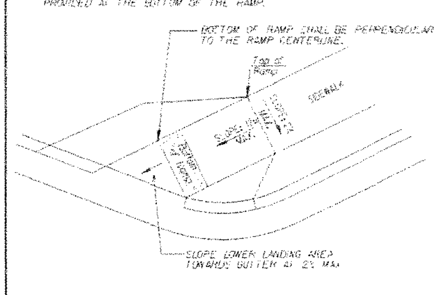
Type C

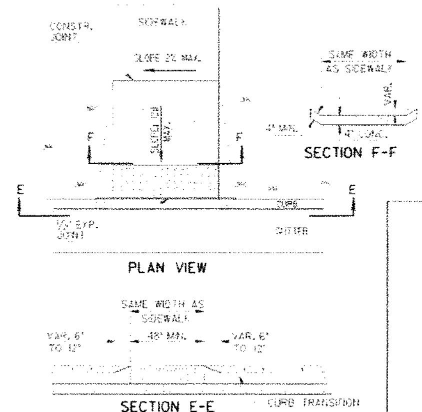


Skewed Ramp Details

(Applies to Type A & Type D Ramps Only)

WHEN THE RAMP CENTERLINE IS NOT PERPENDICULAR TO THE CURB A LEVEL LANDING AREA WITH SLOPES LESS THAN 2% MUST BE PROVIDED AT THE BOTTOM OF THE RAMP.



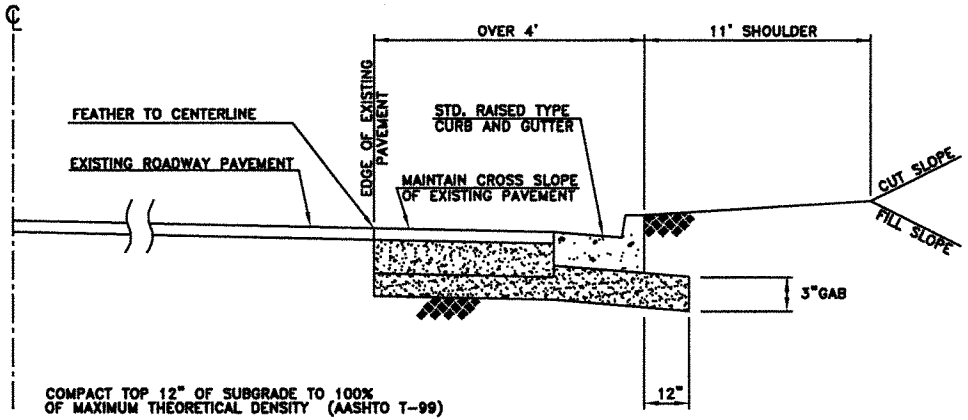


City of Buford, Georgia

S T A N D A R D D R A W I N G

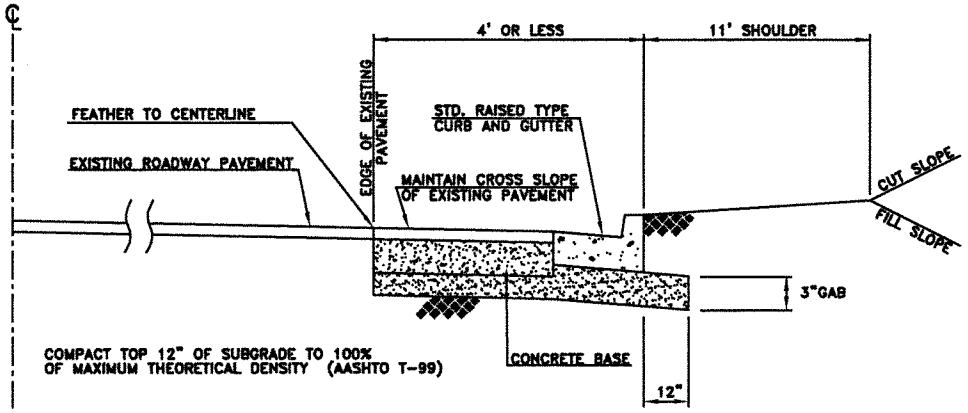
Concrete Sidewalks Details Curb Cut (Wheelchair) Ramp

D A T E: JANUARY 13, 2015 S H E E T: 317



PAVEMENT COMPOSITION

ROADWAY WIDENING SECTIONS OVER 4 FEET ARE TO COMPLY WITH THE CONSTRUCTION STANDARDS FOR NEW STREETS IN ACCORDANCE WITH THE STREET'S CATEGORY. SEE DEVELOPMENT REGULATIONS.



PAVEMENT COMPOSITION

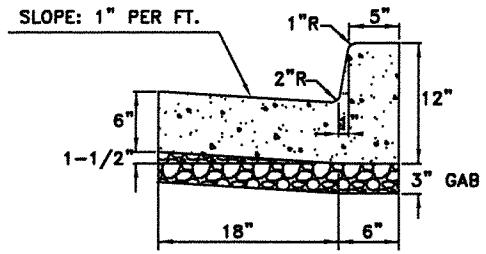
1 1/2" 12.5MM SUPERPAVE WEARING COURSE
5" 3000 PSI CONCRETE BASE (LOCAL STREETS AND MINOR COLLECTORS) OR
7" 3000 PSI CONCRETE BASE (MAJOR COLLECTORS AND ARTERIALS)

City of Buford, Georgia

STANDARD DRAWING

Roadway Widening Section

DATE: SEPTEMBER 25, 2014 SHEET: 401



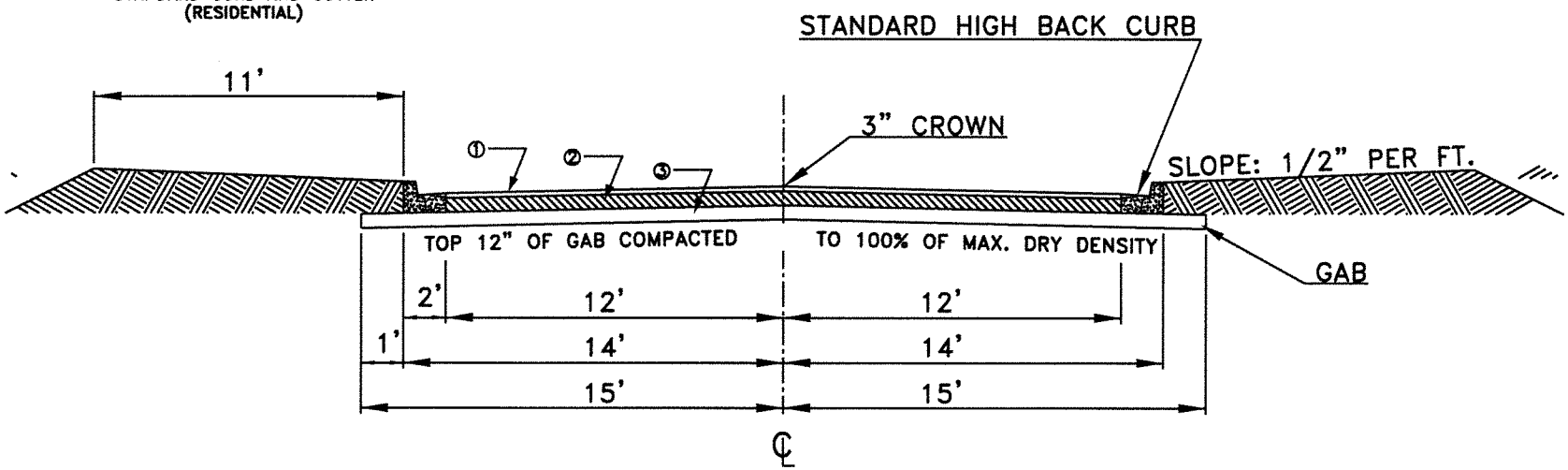
TYPICAL CURB SECTION

STANDARD CURB AND GUTTER
(RESIDENTIAL)

CRUSHED STONE BASE MATERIAL

PAVEMENT COMPOSITION -- TWO-PASS

① 1.5" 12.5MM SUPERPAVE WEARING SURFACE
② 2" 19MM SUPERPAVE BINDER
③ 6" GRADED AGGREGATE BASE



LOCAL OR MINOR COLLECTOR STREETS IN RESIDENTIAL SUBDIVISIONS

NOTES:

1. ANY AREAS OF INADEQUATELY COMPACTED FILL OR UNSUITABLE MATERIAL OF ANY NATURE MUST BE REMOVED AND REPLACED WITH SUITABLE FILL IN WELL COMPACTED LAYERS TO AT LEAST 100% OF MAXIMUM DENSITY (AASHTO T-99), BEFORE ANY TYPE OF PAVING IS APPLIED.
2. DO NOT BEGIN TO APPLY PAVING WITHOUT A RELEASE FROM THE CITY. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR REPLACING ANY PAVING, BASE, AND SUBGRADE WHICH MAY FAIL BECAUSE OF INADEQUATE SUBGRADE CONDITIONS, AS WELL AS FOR ORDINARY PAVING DEFICIENCIES.
2. "MIN." GAB THICKNESS UNDER CURB & GUTTER TO BE 3".

City of Buford, Georgia

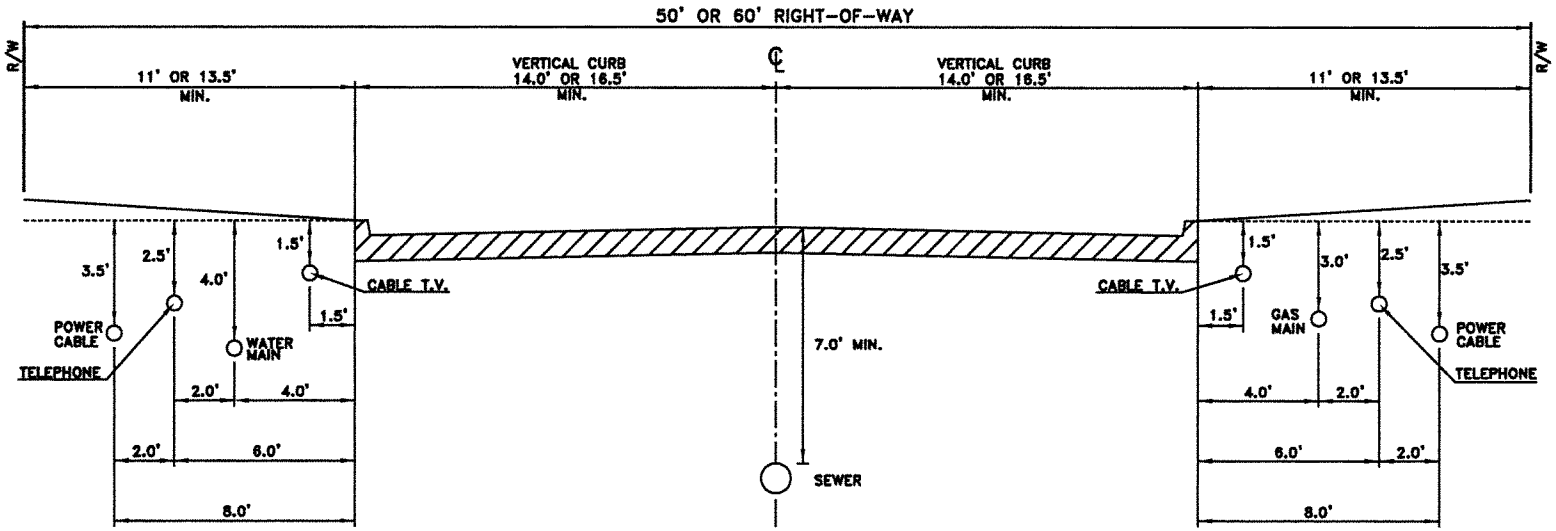
S T A N D A R D D R A W I N G

Residential Subdivision Streets

DATE: SEPTEMBER 25, 2014 SHEET: 402

NORTH OR WEST

SOUTH OR EAST



NOTES:

1. THIS STANDARD DETAIL IS TO BE USED FOR UTILITY LOCATIONS WITHIN RIGHT-OF-WAY OF SUBDIVISIONS ONLY.
2. BEFORE ANY UTILITY IS INSTALLED, THE ENTIRE WIDTH OF THE RIGHT-OF-WAY IS TO BE ROUGH GRADED. SEE DEVELOPMENT REGULATIONS FOR TIMING OF WATER SYSTEM INSTALLATION.
3. IN GENERAL, THE DEEPEST UTILITIES SHOULD BE INSTALLED FIRST TO MINIMIZE ANY POSSIBLE INTERFERENCE WITH LATERALS OR SERVICE LINES.
4. IN CUL-DE-SAC OR EYEBROW TURNAROUNDS, THE DIMENSIONS FROM THE CURB WILL VARY. HOWEVER, THE STANDARD UTILITY SPACING IS TO BE MAINTAINED.
5. BACKFILL OF ALL UTILITY TRENCHES CONSTRUCTED IN THE ROADWAY SHOULDER IS TO BE COMPACTED TO 95% OF STANDARD PROCTOR (AASHTO T-99).
6. EACH UTILITY IS RESPONSIBLE FOR REPAIR OF ANY DAMAGE THEY CREATE TO OTHER UTILITY LINES, OR TO THE STREET IMPROVEMENTS WITHIN THE RIGHT-OF-WAY. NO UTILITY WILLL BE RESPONSIBLE FOR DAMAGES TO ANOTHER UTILITY WHICH IS LOCATED OUTSIDE THEIR ASSIGNED SPACE.
7. ANYONE DIGGING IN THE RIGHT-OF-WAY MUST CALL THE "ONE CALL CENTER" AT 770-623-7411 TO HAVE UTILITIES LOCATED.
8. ONCE THE ROAD BASE HAS BEEN PLACED, ALL FURTHER INSTALLATION OF UTILITIES UNDER THE ROADWAY MUST BE BORED OR OTHERWISE COMPLY WITH THE STREET CUT REQUIREMENTS OF SECTION 7.5 OF THE DEVELOPMENT REGULATIONS.

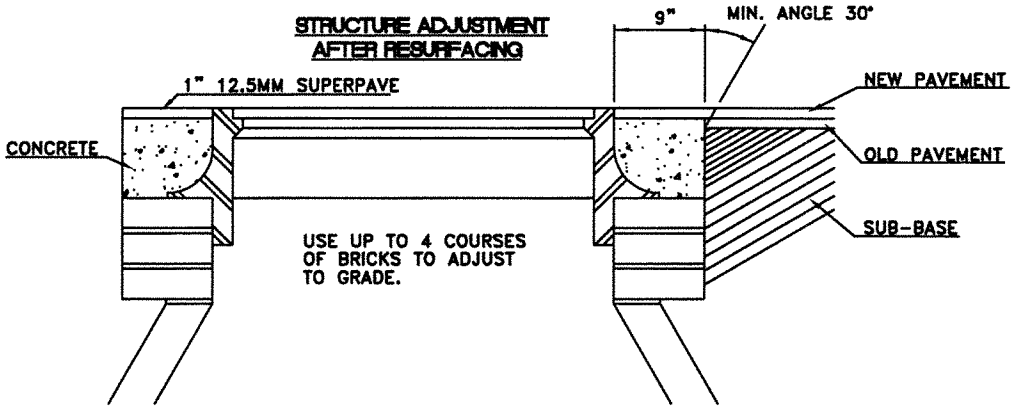
City of Buford, Georgia

STANDARD DRAWING

Utility Placement in Rights-of-Way

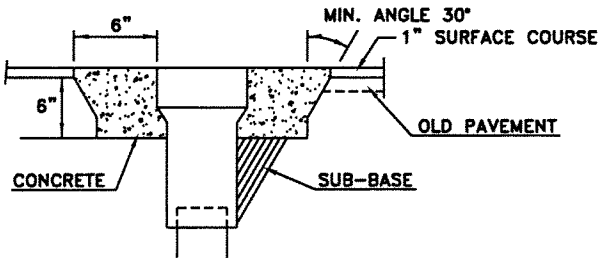
DATE: SEPTEMBER 25, 2014 SHEET: 501

STRUCTURE ADJUSTMENT AFTER RESURFACING



NOTE: IF GREATER THAN (3) BRICK USE 1' RISER SECTION

MANHOLE

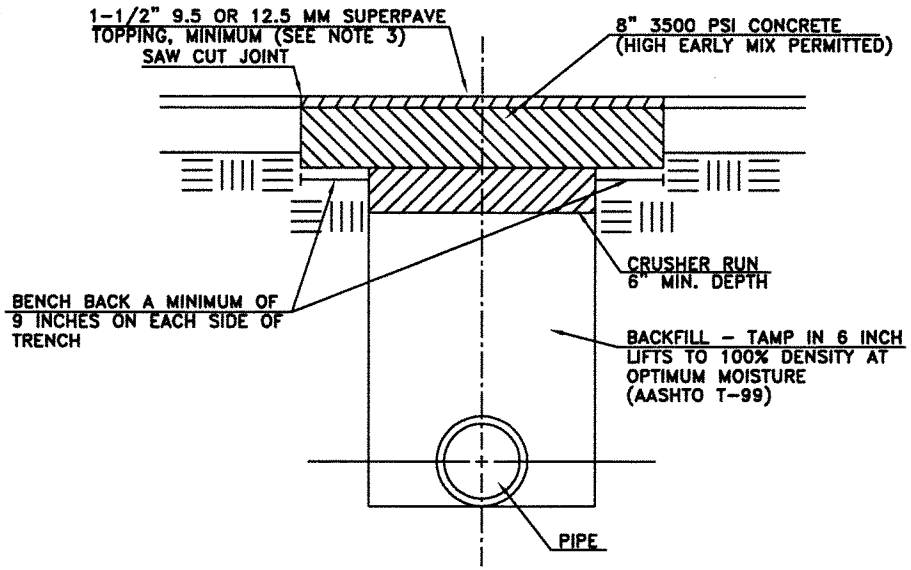


VALVE

NOTES:

1. STRUCTURES WILL NOT BE ADJUSTED FOR A PERIOD OF AT LEAST 24 HOURS AFTER RESURFACING IS COMPLETED IN THAT AREA.
2. ASPHALT WILL BE SAW CUT SO AS TO MAKE A SMOOTH, EVEN EDGE.
3. STRUCTURE COVER WILL BE ADJUSTED TO FIT FLUSH WITH STREET SURFACE.
4. CONCRETE: MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI, UNLESS NOTED OTHERWISE.
5. CONCRETE WILL BE USED TO BACKFILL THE ENTIRE WORKING AREA.
6. PERFORM CONCRETE FINISHING WITH A TROWEL OR FLOAT.
7. SANITARY SEWER MANHOLES MUST BE VENTED IMMEDIATELY AFTER BEING PAVED OVER, THEREFORE WHEN MORE THAN ONE LIFT OF ASPHALT IS TO BE PLACED THE CONTRACTOR MUST ADJUST STRUCTURE PRIOR TO PAVING.

BACKFILLING UTILITY CUTS AND REPLACING PAVEMENT



NOTES:

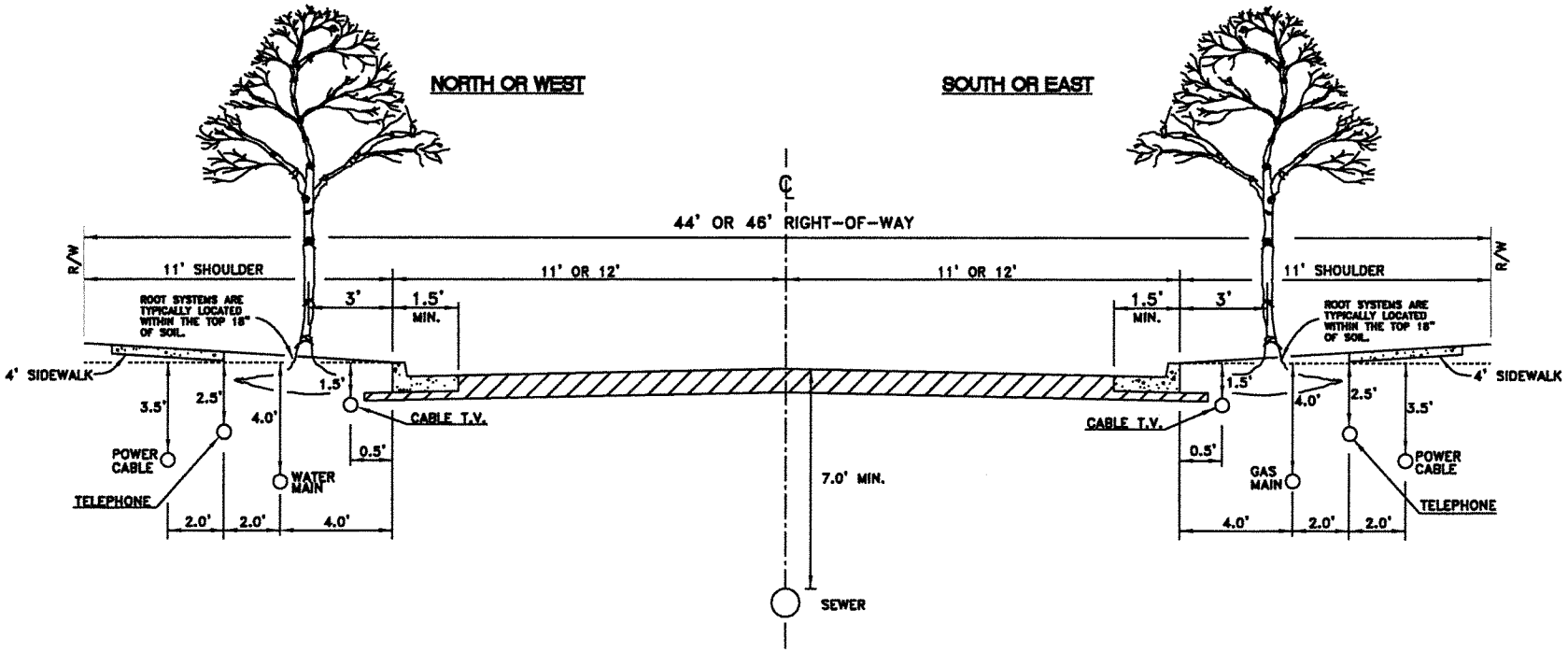
1. ALL LATERAL STREET CUTS MUST BE COVERED WITH STEEL PLATES OF SUFFICIENT THICKNESS TO SPAN THE CUT WITHOUT NOTICEABLE DEFLECTION. PLATES TO REMAIN IN PLACE UNTIL THE CONCRETE BASE HAS GAINED SUFFICIENT STRENGTH TO WITHSTAND TRAFFIC LOADS (24 HOUR MINIMUM).
2. ON LONGITUDINAL CUTS EXCEEDING 50 FEET IN LENGTH AND AT THE DIRECTION OF THE CITY, CONCRETE IN THE TRENCH WILL BE BROUGHT FLUSH WITH THE EXISTING PAVEMENT AND THE ENTIRE WIDTH OF THE ROADWAY RESURFACED WITH A MINIMUM OF 1-1/2" OF 12.5MM SUPERPAVE ASPHALT SURFACE COURSE.
3. SEE TABLE 6C UNDER SECTION 6.10 OF THE CITY OF BUFORD DEVELOPMENT REGULATIONS FOR DETERMINATION OF THE PAVEMENT SURFACE TYPE.

City of Buford, Georgia

STANDARD DRAWING

Utility Street Cuts and Structure Adjustment

DATE: SEPTEMBER 25, 2014 SHEET: 502



NOTES:

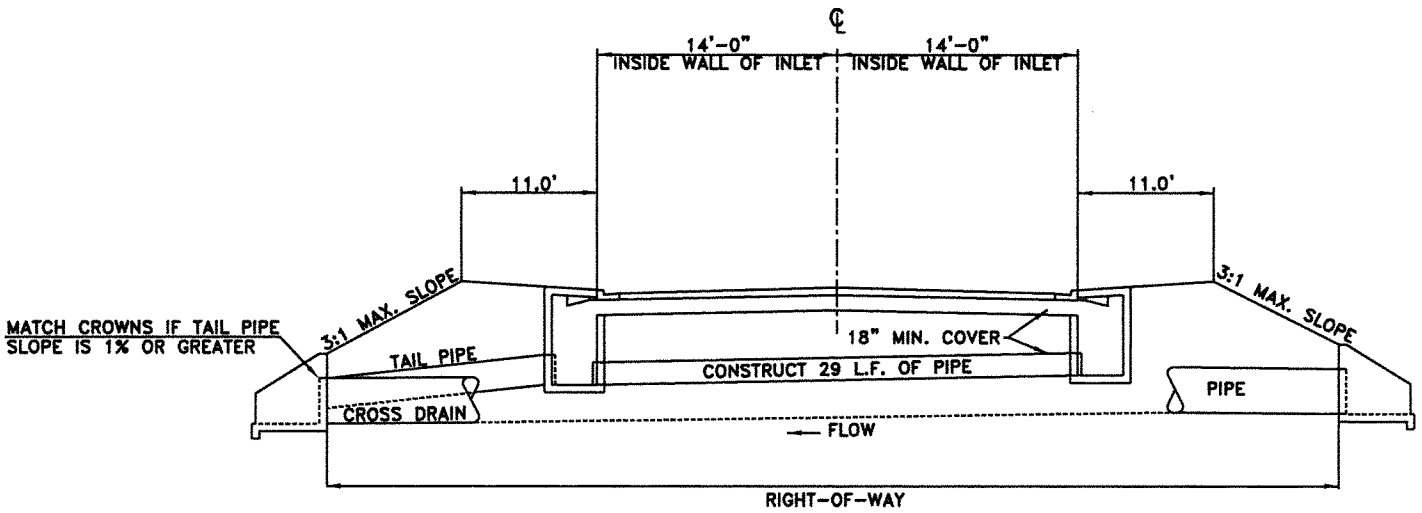
1. THIS STANDARD DETAIL IS TO BE USED FOR UTILITY LOCATIONS WITHIN RIGHT-OF-WAY OF CONSERVATION SUBDIVISION OVERLAY DISTRICT STREETS ONLY.
2. BEFORE ANY UTILITY IS INSTALLED, THE ENTIRE WIDTH OF THE RIGHT-OF-WAY WILL BE ROUGH GRADED. SEE DEVELOPMENT REGULATIONS FOR TIMING OF WATER SYSTEM INSTALLATION.
3. IN GENERAL, THE DEEPEST UTILITIES SHOULD BE INSTALLED FIRST TO MINIMIZE ANY POSSIBLE INTERFERENCE WITH LATERALS OR SERVICE LINES.
4. IN CUL-DE-SAC OR EYEBROW TURNAROUNDS, THE DIMENSIONS FROM THE CURB WILL VARY. HOWEVER, THE STANDARD UTILITY SPACING MUST BE MAINTAINED.
5. BACKFILL OF ALL UTILITY TRENCHES CONSTRUCTED IN THE ROADWAY SHOULDER SHALL BE COMPACTED TO 95% (MIN.) OF MAXIMUM DENSITY.
6. EACH UTILITY WILL BE RESPONSIBLE FOR REPAIR OF ANY DAMAGE THEY CREATE TO OTHER UTILITY LINES, OR TO THE STREET IMPROVEMENTS WITHIN THE RIGHT-OF-WAY. NO UTILITY WILL BE RESPONSIBLE FOR DAMAGES TO ANOTHER UTILITY WHICH IS LOCATED OUTSIDE THEIR ASSIGNED SPACE.
7. ANYONE DIGGING IN THE RIGHT-OF-WAY MUST CALL THE UTILITIES PROTECTION CENTER OF GEORGIA AT 1-800-282-7411 (METRO-ATLANTA AREA: 770-623-7411) TO HAVE EXISTING UTILITIES LOCATED PRIOR TO EXCAVATION.
8. ONCE THE ROAD BASE HAS BEEN PLACED, ALL FURTHER INSTALLATION OF UTILITIES UNDER THE ROADWAY MUST BE BORED OR OTHERWISE COMPLY WITH THE STREET CUT REQUIREMENTS OF SECTION 7.5 OF THE DEVELOPMENT REGULATIONS.

City of Buford, Georgia

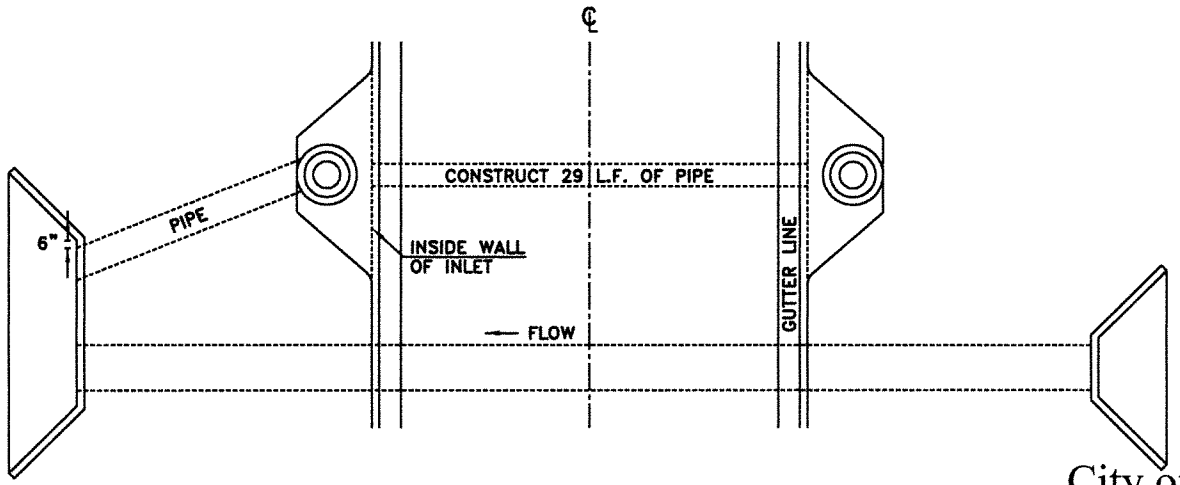
S T A N D A R D D R A W I N G

Utility Placement in Right-of-Way of Conservation Subdivision Overlay District Streets

D A T E: SEPTEMBER 25, 2014 S H E E T: 503



SECTION



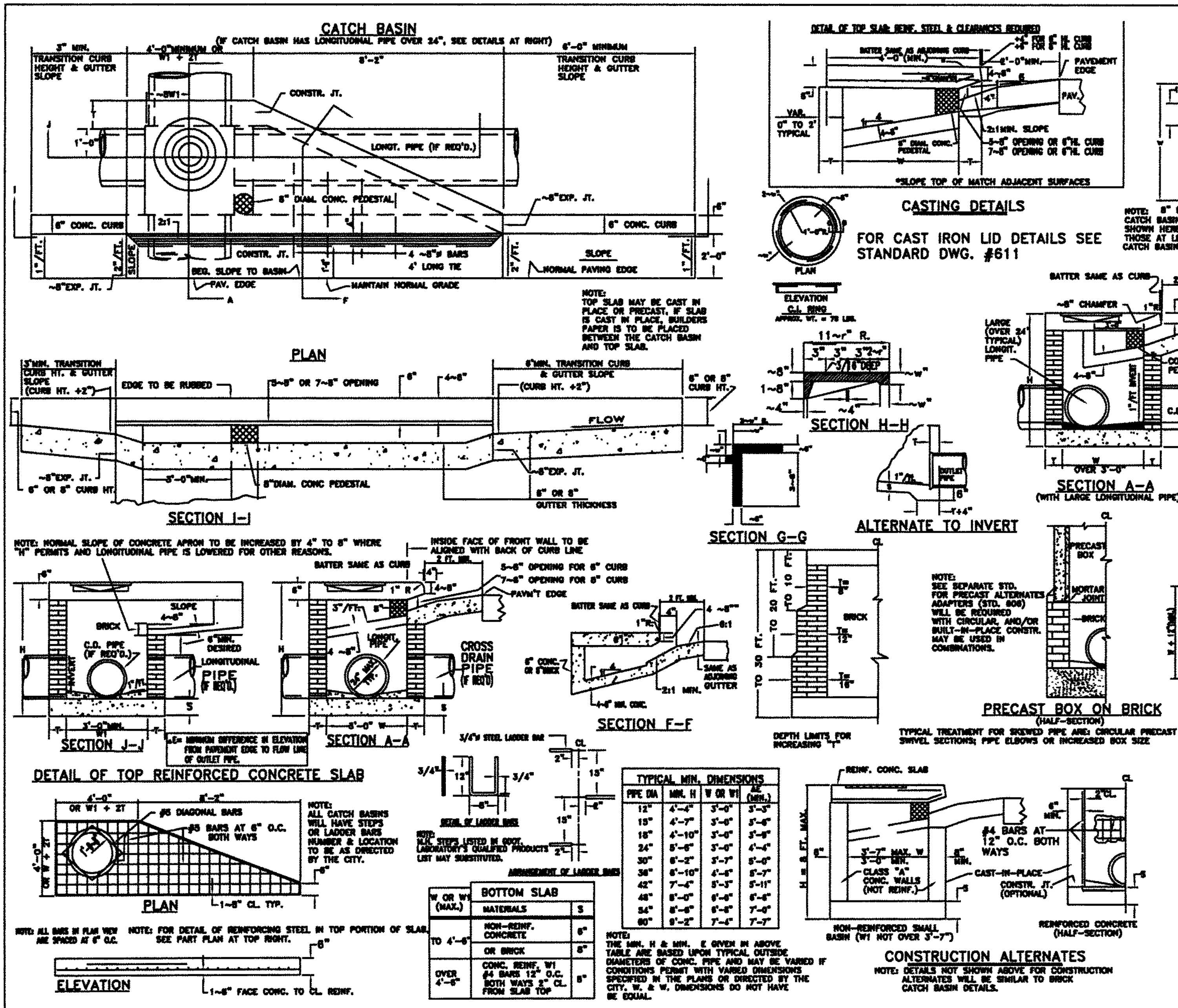
PLAN

City of Buford, Georgia

STANDARD DRAWING

Location of Catch Basins
28 Foot Wide Residential Streets

DATE: SEPTEMBER 25, 2014 SHEET: 601


CATCH BASIN
(IF CATCH BASIN HAS LONGITUDINAL PIPE OVER 24", SEE DETAILS AT RIGHT)
3" MIN. TRANSITION CURB HEIGHT & GUTTER SLOPE
4'-0" MINIMUM OR W1 + 2T
8'-2"
6'-0" MINIMUM TRANSITION CURB HEIGHT & GUTTER SLOPE
CONSTR. JT.
LONGT. PIPE (IF REQ'D.)
8" DIAM. CONC. PEDESTAL
~8" EXP. JT.
6" CONC. CURB
CONSTR. JT.
4 ~8"ø BARS 4' LONG TIE
BEG. SLOPE TO BASIN
PAV. EDGE
MAINTAIN NORMAL GRADE
NORMAL PAVING EDGE
SLOPE
PLAN
NOTE: TOP SLAB MAY BE CAST IN PLACE OR PRECAST. IF SLAB IS CAST IN PLACE, BUILDERS PAPER IS TO BE PLACED BETWEEN THE CATCH BASIN AND TOP SLAB.
EDGE TO BE RUBBED
5~8" OR 7~8" OPENING
FLOW
8" DIAM. CONC PEDESTAL
6" OR 8" GUTTER THICKNESS
SECTION I–I
DETAIL OF TOP SLAB: REINF. STEEL & CLEARANCES REQUIRED
*SLOPE TOP OF MATCH ADJACENT SURFACES
CASTING DETAILS
FOR CAST IRON LID DETAILS SEE STANDARD DWG. #611
PLAN
ELEVATION C.I. RING
SECTION H–H
SECTION G–G
ALTERNATE TO INVERT
(TYPICAL FOR CATCH BASIN WITH LARGE LONGITUDINAL PIPE OR RECESSED BOX)
CATCH BASIN (WITH PROTRUDED BACK)
CONSTR. JOINT
5–# 3 BARS @ 3" – LENGTH 2'-10-8"
NOTE: 8" DIAM. CONC. PED. CATCH BASIN DETAILS NOT SHOWN HERE WILL BE SIMILAR TO THOSE AT LEFT FOR NORMAL CATCH BASIN.
PART PLAN
NO SCALE
NOTE: RECESSED BOX TO BE USED ONLY WHERE SPECIFIED. SHALLOW LONG. PIPE OR UNDERGROUND OBSTRUCTION TYPICAL.
LARGE (OVER 24" TYPICAL) LONGIT. PIPE
CONC. PEDESTAL
SECTION A–A
(WITH LARGE LONGITUDINAL PIPE)
ANY SIZE LONGT. REQ'D
LOCATION OF BOX FRONT VARIED INDIVIDUALLY
NOTE: H2 & W2 TO BE SHOWN IN THE PLANS
SECTION A–A
(WITH RECESSED BOX)
NOTE: NORMAL SLOPE OF CONCRETE APRON TO BE INCREASED BY 4" TO 8" WHERE "H" PERMITS AND LONGITUDINAL PIPE IS LOWERED FOR OTHER REASONS.
INSIDE FACE OF FRONT WALL TO BE ALIGNED WITH BACK OF CURB LINE
5~8" OPENING FOR 6" CURB
7~8" OPENING FOR 8" CURB
BATTER SAME AS CURB
C.D. PIPE (IF REQ'D.)
LONGITUDINAL PIPE (IF REQ'D.)
CROSS DRAIN PIPE (IF REQ'D)
SECTION J–J
SECTION A–A
SECTION F–F
DEPTH LIMITS FOR INCREASING "T"
NOTE: SEE SEPARATE STD. FOR PRECAST ALTERNATES. ADAPTERS (STD. 606) WILL BE REQUIRED WITH CIRCULAR, AND/OR BUILT-IN-PLACE CONSTR. MAY BE USED IN COMBINATIONS.
PRECAST BOX ON BRICK
(HALF-SECTION)
TYPICAL TREATMENT FOR SKEWED PIPE ARE: CIRCULAR PRECAST SWIVEL SECTIONS; PIPE ELBOWS OR INCREASED BOX SIZE
DETAIL OF REINFORCED CONCRETE SLAB
#5 DIAGONAL BARS
#5 BARS AT 6" O.C. BOTH WAYS
PLAN
ELEVATION
DETAIL OF TOP REINFORCED CONCRETE SLAB
NOTE: ALL CATCH BASINS WILL HAVE STEPS OR LADDER BARS NUMBER & LOCATION TO BE AS DIRECTED BY THE CITY.
NOTE: ALL BARS IN PLAN VIEW ARE SPACED AT 6" O.C.
NOTE: FOR DETAIL OF REINFORCING STEEL IN TOP PORTION OF SLAB, SEE PART PLAN AT TOP RIGHT.
1~8" FACE CONC. TO CL. REINF.
3/4"ø STEEL LADDER BAR
DETAIL OF LADDER BARS
NOTE: M.H. STEPS LISTED IN GDOT LABORATORY'S QUALIFIED PRODUCTS LIST MAY SUBSTITUTED.
ARRANGEMENT OF LADDER BARS
REINF. CONC. SLAB
CLASS "A" CONC. WALLS (NOT REINF.)
NON-REINFORCED SMALL BASIN (W1 NOT OVER 3'-7")
#4 BARS AT 12" O.C. BOTH WAYS
CAST-IN-PLACE
CONSTR. JT. (OPTIONAL)
REINFORCED CONCRETE (HALF-SECTION)
CONSTRUCTION ALTERNATES
NOTE: DETAILS NOT SHOWN ABOVE FOR CONSTRUCTION ALTERNATES WILL BE SIMILAR TO BRICK CATCH BASIN DETAILS.

TYPICAL MIN. DIMENSIONS			
PIPE DIA	MIN. H	W OR W1	ΔE (MIN.)
12"	4'-4"	3'-0"	3'-3"
15"	4'-7"	3'-0"	3'-6"
18"	4'-10"	3'-0"	3'-9"
24"	5'-6"	3'-0"	4'-4"
30"	6'-2"	3'-7"	5'-0"
36"	6'-10"	4'-6"	5'-7"
42"	7'-4"	5'-3"	5'-11"
48"	8'-0"	6'-0"	6'-6"
54"	8'-6"	6'-6"	7'-0"
60"	9'-2"	7'-4"	7'-7"

NOTE: THE MIN. H & MIN. E GIVEN IN ABOVE TABLE ARE BASED UPON TYPICAL OUTSIDE DIAMETERS OF CONC. PIPE AND MAY BE VARIED IF CONDITIONS PERMIT WITH VARIED DIMENSIONS SPECIFIED IN THE PLANS OR DIRECTED BY THE CITY. W. & W. DIMENSIONS DO NOT HAVE BE EQUAL.

W OR W1 (MAX.)	BOTTOM SLAB MATERIALS	S
TO 4'-6"	NON-REINF. CONCRETE	6"
	OR BRICK	8"
OVER 4'-6"	CONC. REINF. W1 #4 BARS 12" O.C. BOTH WAYS 2" CL. FROM SLAB TOP	8"

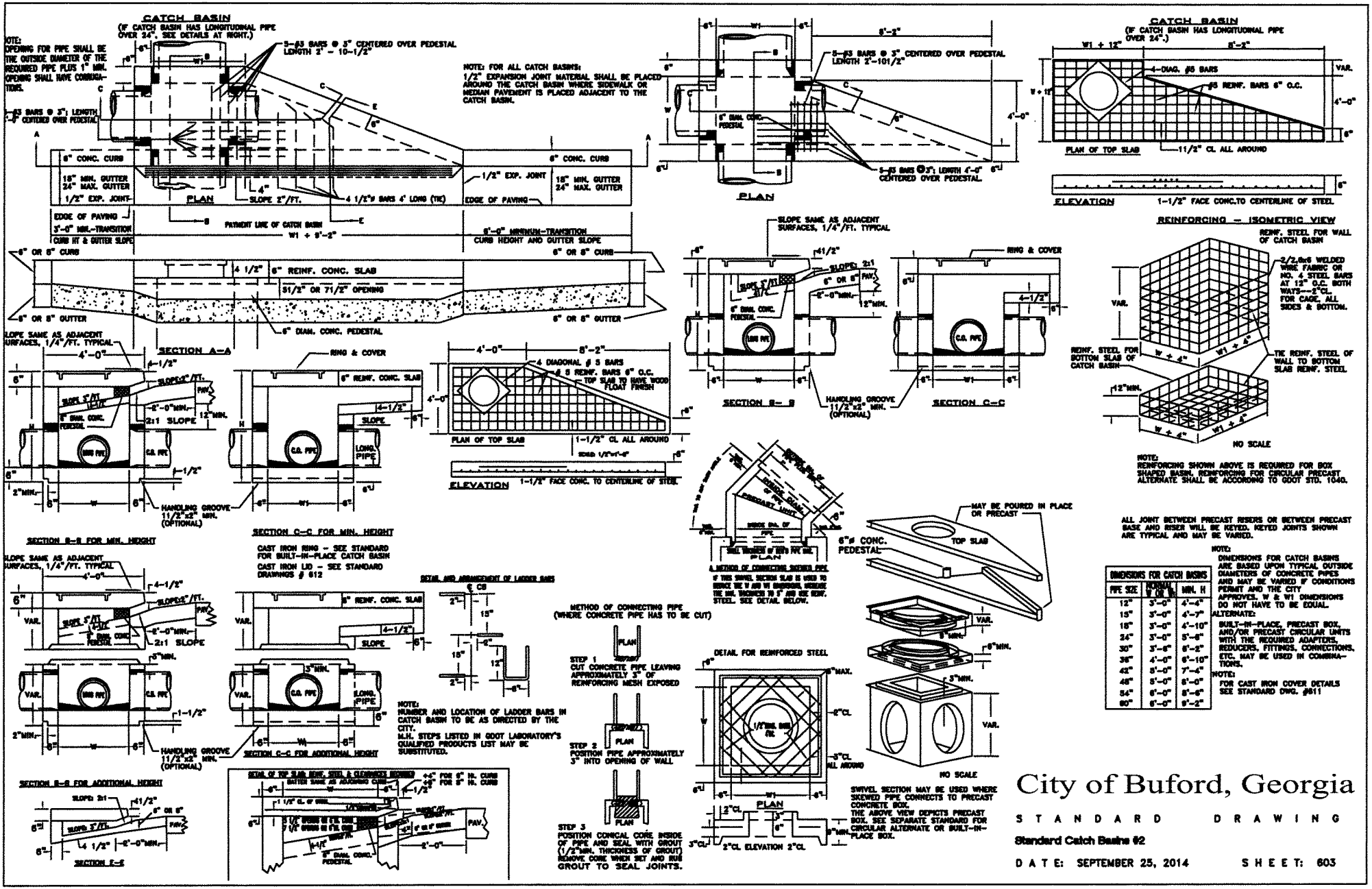
NOTE: PIPE SIZES, NUMBER, ALIGNMENT, AND INVERT SHOWN ARE ILLUSTRATIVE. SEE PLANS FOR SPECIFICS. INVERTS TO BE FORMED WITH GROUT OR CONCRETE AS DIRECTED BY THE CITY OR AS SHOWN IN THE PLANS.

City of Buford, Georgia

STANDARD DRAWING

Standard Catch Basins #1

DATE: SEPTEMBER 25, 2014 SHEET: 602



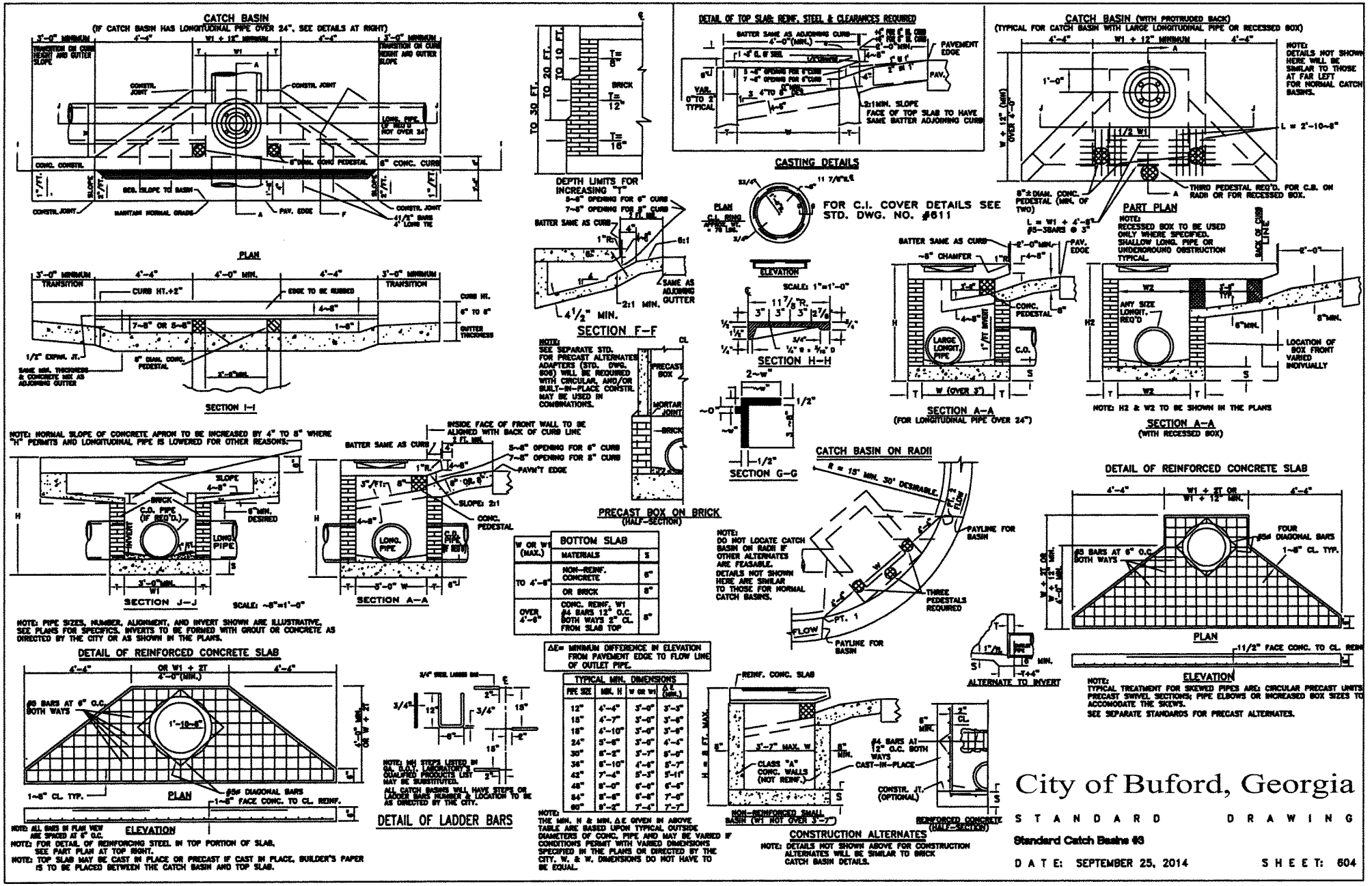
DIMENSIONS FOR CATCH BASINS		
PIPE SIZE	NOMINAL W OR W1	MIN. H
12"	3'-0"	4'-4"
15"	3'-0"	4'-7"
18"	3'-0"	4'-10"
24"	3'-0"	5'-6"
30"	3'-6"	6'-2"
36"	4'-0"	6'-10"
42"	5'-0"	7'-4"
48"	5'-0"	8'-0"
54"	6'-0"	8'-6"
60"	6'-0"	9'-2"

City of Buford, Georgia

STANDARD DRAWING

Standard Catch Basins #2

DATE: SEPTEMBER 25, 2014 SHEET: 603



NOTE: NORMAL SLOPE OF CONCRETE APRON TO BE INCREASED BY 4" TO 8" WHERE "H" PERMITS AND LONGITUDINAL PIPE IS LOWERED FOR OTHER REASONS.

NOTE: PIPE SIZES, NUMBER, ALIGNMENT, AND INVERT SHOWN ARE ILLUSTRATIVE. SEE PLANS FOR SPECIFICS. INVERTS TO BE FORMED WITH GROUT OR CONCRETE AS DIRECTED BY THE CITY OR AS SHOWN IN THE PLANS.

NOTE: ALL BARS IN PLAN VIEW ARE SPACED AT 6" O.C.

NOTE: FOR DETAIL OF REINFORCING STEEL IN TOP PORTION OF SLAB, SEE PART PLAN AT TOP RIGHT.

NOTE: TOP SLAB MAY BE CAST IN PLACE OR PRECAST IF CAST IN PLACE, BUILDER'S PAPER IS TO BE PLACED BETWEEN THE CATCH BASIN AND TOP SLAB.

NOTE: MH STEPS LISTED IN GA. D.O.T. LABORATORY'S QUALIFIED PRODUCTS LIST MAY BE SUBSTITUTED.

ALL CATCH BASINS WILL HAVE STEPS OR LADDER BARS HEARDER A LOCATION TO BE AS DIRECTED BY THE CITY.

ΔE= MINIMUM DIFFERENCE IN ELEVATION FROM PAVEMENT EDGE TO FLOW LINE OF OUTLET PIPE.

NOTE: THE MIN. H & MIN. ΔE GIVEN IN ABOVE TABLE ARE BASED UPON TYPICAL OUTSIDE DIAMETERS OF CONC. PIPE AND MAY BE VARIED IF CONDITIONS PERMIT WITH VARIED DIMENSIONS SPECIFIED IN THE PLANS OR DIRECTED BY THE CITY. W. & W. DIMENSIONS DO NOT HAVE TO BE EQUAL.

NOTE: DETAILS NOT SHOWN HERE WILL BE SIMILAR TO THOSE AT FAR LEFT FOR NORMAL CATCH BASINS.

NOTE: H2 & W2 TO BE SHOWN IN THE PLANS

NOTE: DO NOT LOCATE CATCH BASIN ON RADII IF OTHER ALTERNATES ARE FEASABLE. DETAILS NOT SHOWN HERE ARE SIMILAR TO THOSE FOR NORMAL CATCH BASINS.

NOTE: TYPICAL TREATMENT FOR SKEWED PIPES ARE: CIRCULAR PRECAST UNITS PRECAST SWIVEL SECTIONS; PIPE ELBOWS OR INCREASED BOX SIZES TO ACCOMODATE THE SKEWS.
SEE SEPARATE STANDARDS FOR PRECAST ALTERNATES.

NOTE: DETAILS OF REINFORCING STEEL IN TOP PORTION OF SLAB, SEE PART PLAN AT TOP RIGHT.

NOTE: SEE SEPARATE STD. FOR PRECAST ALTERNATES ADAPTERS (STD. DWG. 606) WILL BE REQUIRED WITH CIRCULAR, AND/OR SUILT-IN-PLACE CONSTR. MAY BE USED IN COMBINATIONS.

W OR W1 (MAX.)	BOTTOM SLAB MATERIALS	S
TO 4'-6"	NON-REINF. CONCRETE	6"
	OR BRICK	9"
OVER 4'-6"	CONC. REINF. W1 #4 BARS 12" O.C. BOTH WAYS 2" CL. FROM SLAB TOP	8"

PIPE SIZE	MIN. H	W OR W1	ΔE (MIN.)
12"	4'-4"	3'-0"	3'-3"
15"	4'-7"	3'-0"	3'-6"
18"	4'-10"	3'-0"	3'-8"
24"	5'-6"	3'-6"	4'-4"
30"	6'-2"	3'-7"	5'-0"
36"	6'-10"	4'-6"	5'-7"
42"	7'-4"	5'-3"	5'-11"
48"	8'-0"	6'-0"	6'-6"
54"	8'-6"	6'-6"	7'-0"
60"	9'-2"	7'-4"	7'-7"

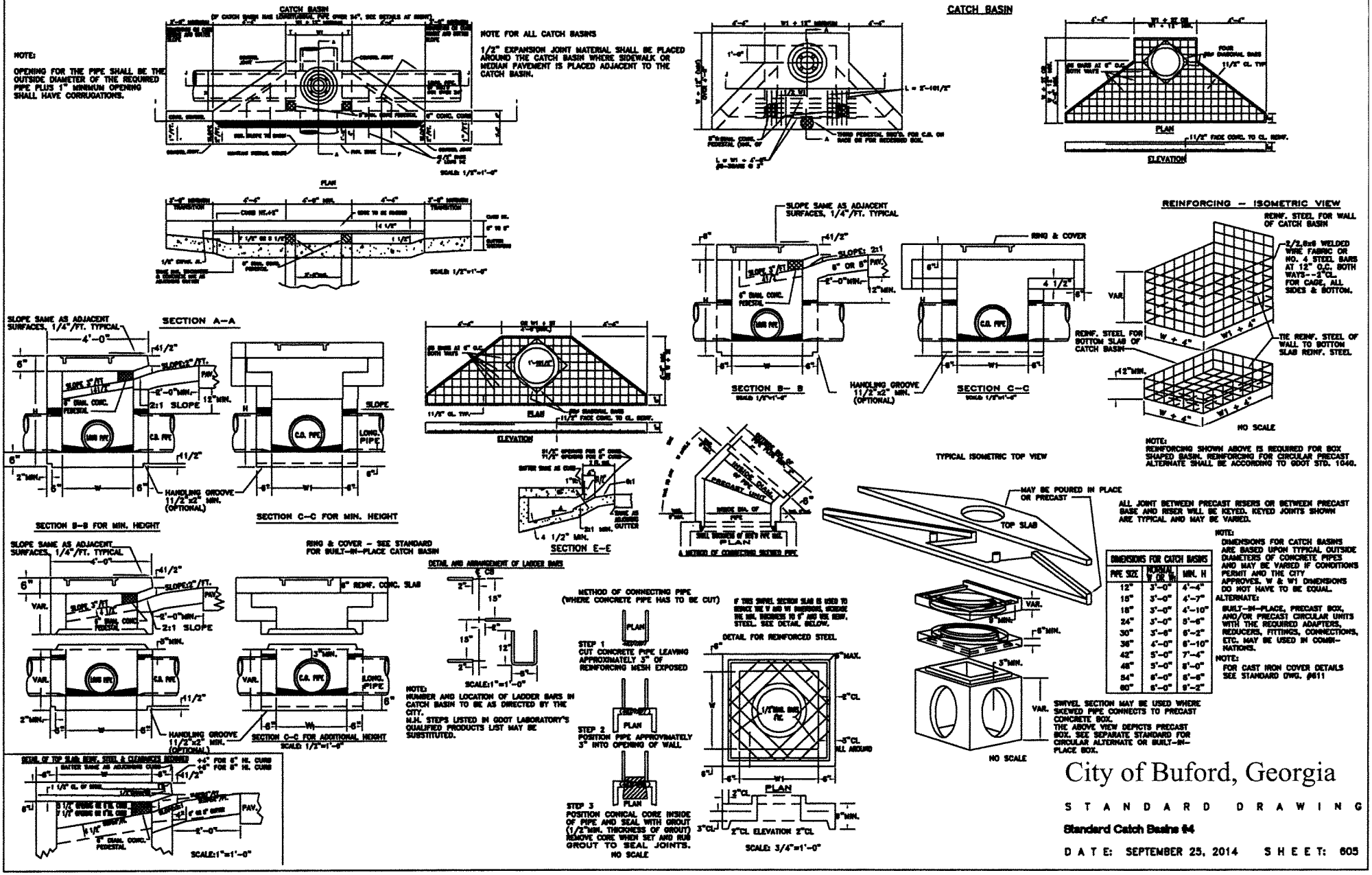
City of Buford, Georgia

STANDARD DRAWING

Standard Catch Basins #3

DATE: SEPTEMBER 25, 2014

SHEET: 604



DIMENSIONS FOR CATCH BASINS		
PIPE SIZE	NORMAL W OR W1	MIN. H
12"	3'-0"	4'-4"
15"	3'-0"	4'-7"
18"	3'-0"	4'-10"
24"	3'-0"	5'-6"
30"	3'-6"	6'-2"
36"	4'-0"	6'-10"
42"	5'-0"	7'-6"
48"	5'-0"	8'-0"
54"	6'-0"	8'-6"
60"	6'-0"	9'-2"

City of Buford, Georgia

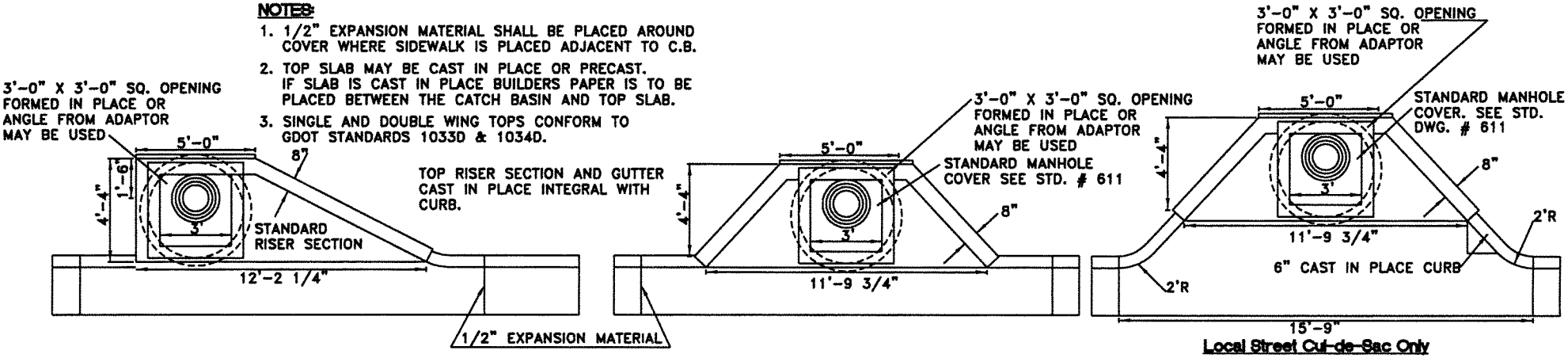
STANDARD DRAWING

Standard Catch Basins #4

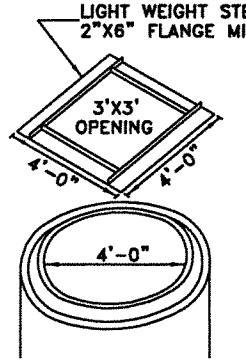
DATE: SEPTEMBER 25, 2014 SHEET: 605

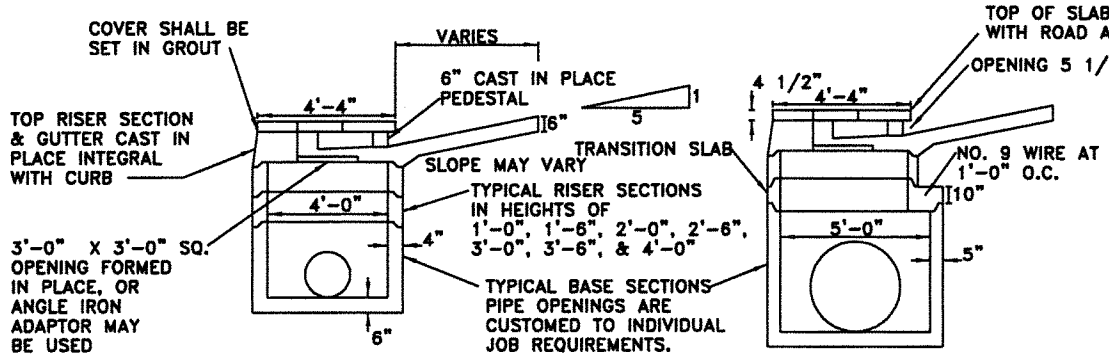
NOTES:

1. 1/2" EXPANSION MATERIAL SHALL BE PLACED AROUND COVER WHERE SIDEWALK IS PLACED ADJACENT TO C.B.
2. TOP SLAB MAY BE CAST IN PLACE OR PRECAST. IF SLAB IS CAST IN PLACE BUILDERS PAPER IS TO BE PLACED BETWEEN THE CATCH BASIN AND TOP SLAB.
3. SINGLE AND DOUBLE WING TOPS CONFORM TO GDOT STANDARDS 1033D & 1034D.



Local Street Cul-de-Sac Only

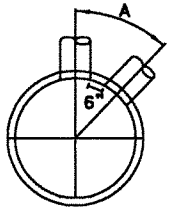




METHOD OF PIPE LAYOUT

ANGLE A					
4'-0" BASE		5'-0" BASE		6'-0" BASE	
PIPE SIZE	A	PIPE SIZE	A	PIPE SIZE	A
12	45°	12	40°		
15	52°	15	47°		
18	60°	18	55°		
21	67°	21	69°		
24	75°	24	70°		
		27	78°		
		30	86°		
		36	115°		
		42	140°	42	90°
				48	115°

METAL ADAPTER OPTIONAL



NOTES:

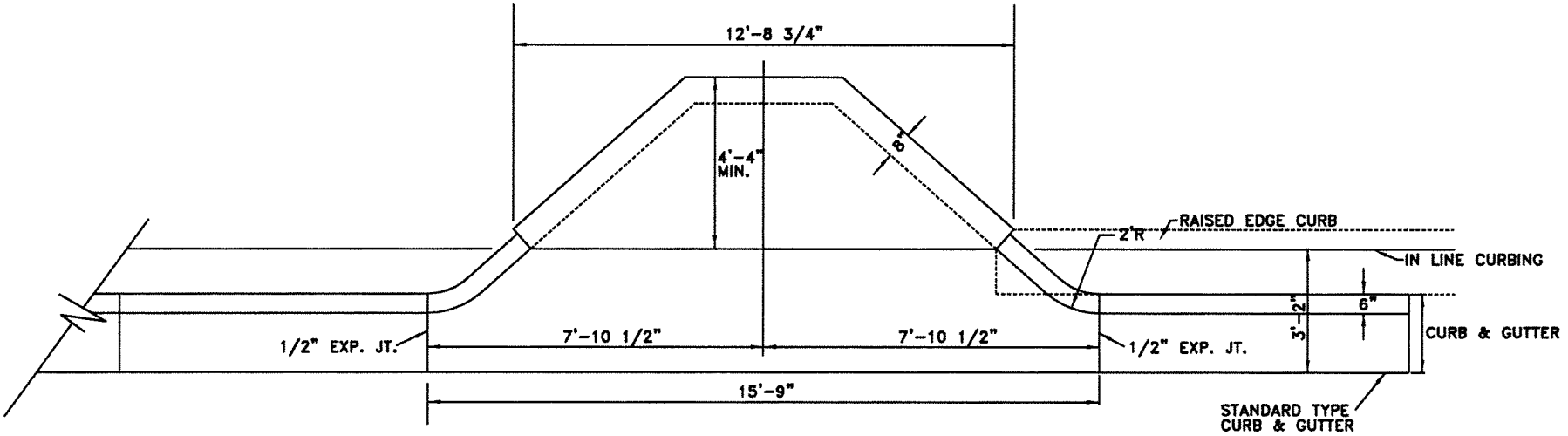
1. SUBGRADE TO BE COMPACTED TO 100% STANDARD PROCTOR (AASHTO T-99).
2. REINFORCEMENT STEEL TO BE PLACED TO ALLOW A MINIMUM OF 2" CLEARENCE, EXCEPT WHERE NOTED.
3. REINFORCEMENT STEEL TO BE GRADE 60 AND TO BE 0.12 SQ. IN. PER FT. IN BOTH DIRECTIONS IN ACCORDANCE WITH ASTM C 476 MANHOLE SPECIFICATIONS.
4. CONCRETE: MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI UNLESS NOTED OTHERWISE.
5. CHAMFER ALL EXPOSED EDGES 3/4".

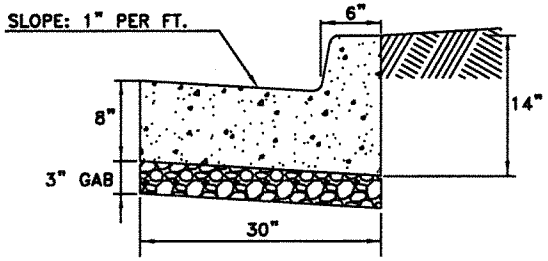
City of Buford, Georgia

STANDARD DRAWING

Round Precast Concrete Catch Basins

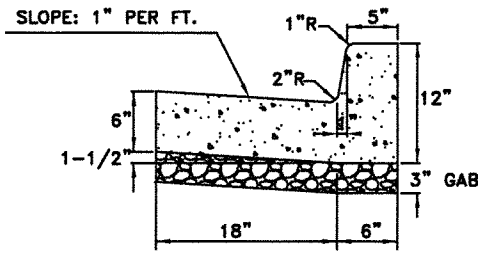
DATE: SEPTEMBER 25, 2014 SHEET: 606





TYPICAL CURB SECTION

HIGH BACK CURB AND GUTTER
(COMMERCIAL AND INDUSTRIAL)



TYPICAL CURB SECTION

STANDARD CURB AND GUTTER
(RESIDENTIAL)

NOTES:

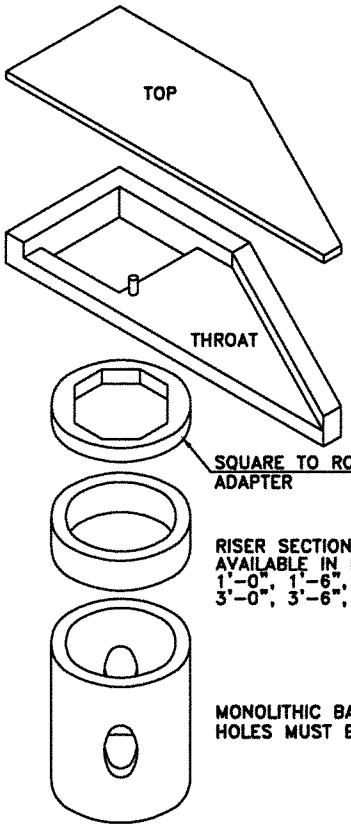
1. EXPANSION JOINTS REQUIRED AT ALL STRUCTURES AND CURB RETURNS.
2. MAXIMUM DISTANCE BETWEEN EXPANSION JOINTS = 250'
3. CONCRETE: MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI.
4. 3" G.A.B. UNDER ALL CURB & GUTTER INSTALLATIONS PER 6.11.6 OF DEVELOPMENT REGULATIONS.

City of Buford, Georgia

S T A N D A R D D R A W I N G

Gutter to Standard Type Curb and Gutter at a Catch Basin

D A T E: SEPTEMBER 25, 2014 SHEET: 607

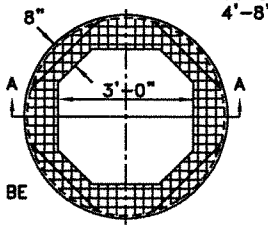


TOP & THROAT WILL NOT BE PRECAST.

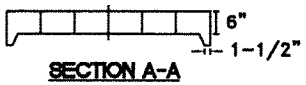
GROUT ALL JOINTS

RISER SECTION (IF REQ'D) AVAILABLE IN HEIGHTS 1'-0", 1'-6", 2'-0", 2'-6", 3'-0", 3'-6", 4'-0"

MONOLITHIC BASE HOLES MUST BE PRECAST

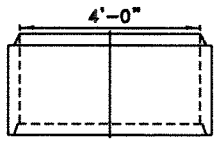


ROUND TO SQUARE ADAPTER



SECTION A-A

REINFORCING TO BE 2/2 6X6 WELDED WIRE FABRIC



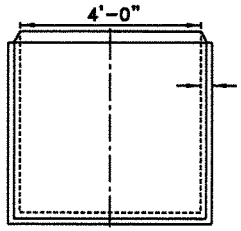
REINFORCING TO BE 2/2 6X6 WELDED WIRE FABRIC

RISER

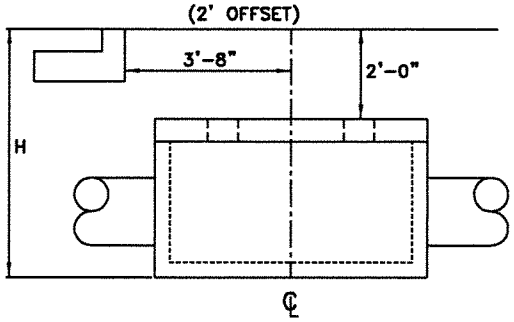
NOTE:

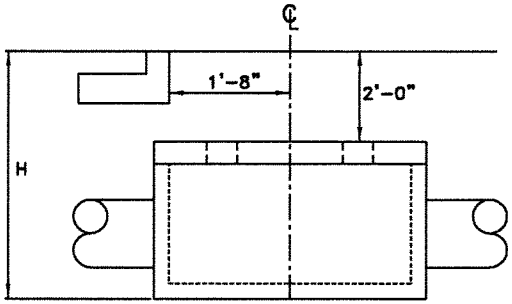
1. STEPS TO BE INSTALLED ON 15" VERTICAL SPACING. SEE PRECAST MANHOLE STANDARD FOR SPECIFICATION.

REINFORCING TO BE 2/2 6X6 WELDED 10 GUAGE WIRE FABRIC WITH 4 #5 BARS 4'-8" DIAMETER



REINFORCING TO BE 3/3 6X8 WELDED WIRE FABRIC





CENTERLINE OF CATCH BASINS

ON-LINE

BASE HEIGHT	METAL PIPE	CONC PIPE	H(MIN)
4' DIA – 2'-6"	18"	12"	5'-0"
3'-0"	24"	18"	5'-6"
3'-6"	30"	24"	6'-0"
4'-0"		30"	6'-6"

NOTES:

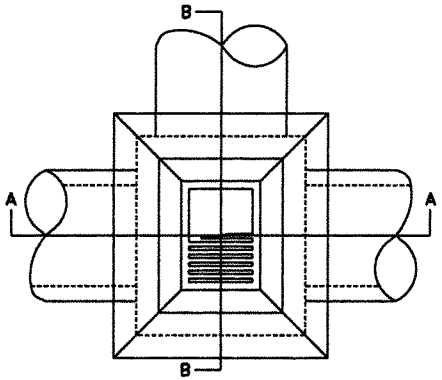
1. CATCH BASIN TO BE INSTALLED WITH PIPE OPENING AS SPECIFIED.
2. CONCRETE: MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI.

City of Buford, Georgia

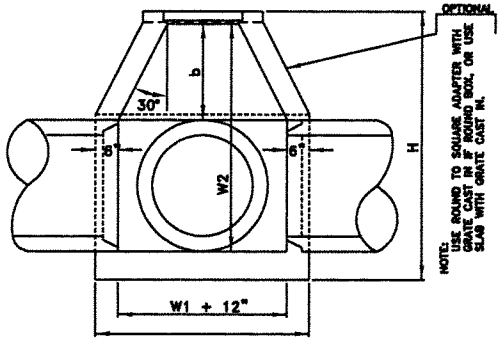
STANDARD DRAWING

Standard Precast Round Catch Basin

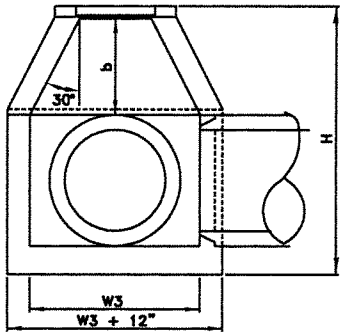
DATE: SEPTEMBER 25, 2014 SHEET: 608



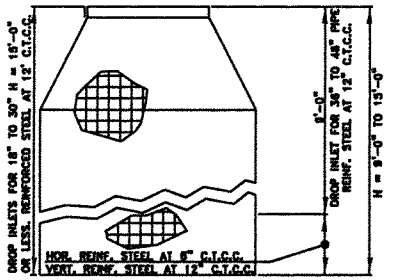
CAN BE BRICK OR PRECAST BOX.



SECTION A-A

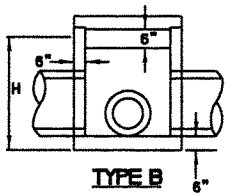


SECTION B-B



IN ALL DROP INLETS 1/2" Ø BAR REINFORCING STEEL TO BE PLACED NOT MORE THAN 12" C TO C AND COVERED NOT LESS THAN 2".

TYPE A



1/2" Ø BARS AT 12" CENTER TO CENTER

TYPE B

NOTES:

1. BRICK INVERTS REQUIRED AT ALL JUNCTION BOXES & DROP INLETS RAISE BOTTOM OF BOX TO OUTFLOW PIPE INVERT. MATCH DIFFERENT SIZE PIPES AT CROWNS.
2. MAXIMUM VERTICAL DEPTH FOR DROP INLET H = 15'-0"

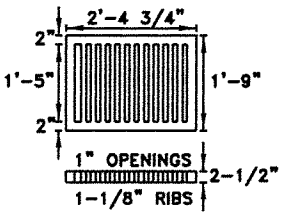
TYPE A							TYPE B		
D	W1	MIN.-W2	W3	a	b	MIN.-H	NORMAL W OR W1	MIN. b	MIN. H
15"	2'-0"	2'-8 1/2"	2'-7"	0'-3 1/2"	0'-6"	3'-3"	2'-0"	2'-7 1/2"	3'-8 1/2"
18"	2'-0"	2'-8 1/2"	2'-7"	0'-3 1/2"	0'-6"	3'-6"	2'-3"	2'-10"	4'-0"
24"	2'-6"	4'-1/2"	3'-3"	0'-7 1/2"	1'-1"	4'-9"	3'-0"	3'-6"	4'-10"
30"	3'-4"	5'-1 1/2"	3'-11"	0'-11 1/2"	1'-6"	5'-10"	3'-6 1/2"	4'-2 1/2"	5'-4 1/2"
36"	3'-10"	6'-1 1/2"	4'-5"	1'-2 1/2"	2'-1 1/4"	6'-10"	4'-2"	4'-10"	6'-0"
42"	4'-5"	7'-2 1/2"	5'-0"	1'-6"	2'-7 1/2"	7'-11"	4'-8 1/2"	5'-4 1/2"	6'-8 1/2"
48"	5'-0"	8'-3 1/2"	5'-7"	1'-9 1/2"	3'- 1 1/4"	8'-0"	5'-3 1/2"	5'-11 1/2"	7'-1 1/2"
54"	5'-7"	9'-4 1/2"	6'-2"	2'-1"	3'-7 1/4"	10'-1"	5'-10"	6'-6"	7'-6"
60"	6'-2"	10'-6 1/2"	6'-9"	2'-4 1/2"	4'-1 1/2"	11'-2"	6'-4 1/2"	7'-0 1/2"	8'-2 1/2"
66"	6'-8"	11'-6 1/2"	7'-4"	2'-8"	4'-7 1/2"	12'-3"	6'-11"	7'-7"	8'-9"
72"	7'-4"	12'-7 1/2"	7'-11"	2'-11 1/2"	5'-1 1/4"	13'-4"	7'-8 1/2"	8'-1 1/2"	9'-3"

CONCRETE D.I.

TYPE A							TYPE B		
D	W1	MIN.-W2	W3	a	b	MIN.-H	NORMAL W OR W1	MIN. b	MIN. H
15"	2'-2"	2'-11"	2'-8"	0'-4 1/2"	0'-6"	3'-9 1/2"	2'-0"	2'-7 1/2"	3'-7 1/2"
18"	2'-2"	3'-2 1/2"	2'-8"	0'-4 1/2"	0'-6"	4'-1"	2'-0"	2'-10"	3'-10"
24"	2'-8"	3'-8"	3'-3"	0'-7 1/2"	1'-1 1/4"	4'-9"	3'-0"	3'-6"	4'-6"
30"	3'-7 1/4"	4'-0"	3'-10"	1'-0"	1'-6"	5'-10"	3'-6 1/2"	4'-2 1/2"	5'-10"
36"	4'-2"	6'-0 1/2"	4'-5"	1'-4 1/2"	2'-1 1/4"	6'-11"	4'-2"	4'-10"	5'-10"
42"	4'-6"	7'-1 3/4"	5'-0"	1'-6"	2'-7 1/4"	8'-0 1/4"	4'-8 1/2"	5'-4 1/2"	6'-11 1/2"
48"	5'-0"	8'-2 3/4"	5'-7"	1'-8 1/2"	3'- 1 1/4"	9'-1 1/4"	5'-3 1/2"	5'-11 1/2"	6'-11 1/2"
54"	5'-7"	9'-4"	6'-2"	2'-1"	3'-7 1/2"	10'-2 1/2"	5'-10"	6'-6"	7'-6"
60"	6'-2"	10'-5"	6'-8"	2'-4 1/2"	4'-1 1/2"	11'-3 1/4"	6'-4 1/2"	7'-0 1/2"	8'-0 1/2"
66"	6'-8"	11'-6"	7'-4"	2'-6"	4'-7 1/2"	12'-4 1/2"	6'-11"	7'-7"	8'-7"
72"	7'-4"	12'-7"	7'-11"	2'-11 1/2"	5'-2"	13'-8 1/2"	7'-8 1/2"	8'-1 1/2"	9'-1 1/2""

BRICK D.I.

APPROX. WT. 200 LB.
DETAIL OF CAST IRON GRATING

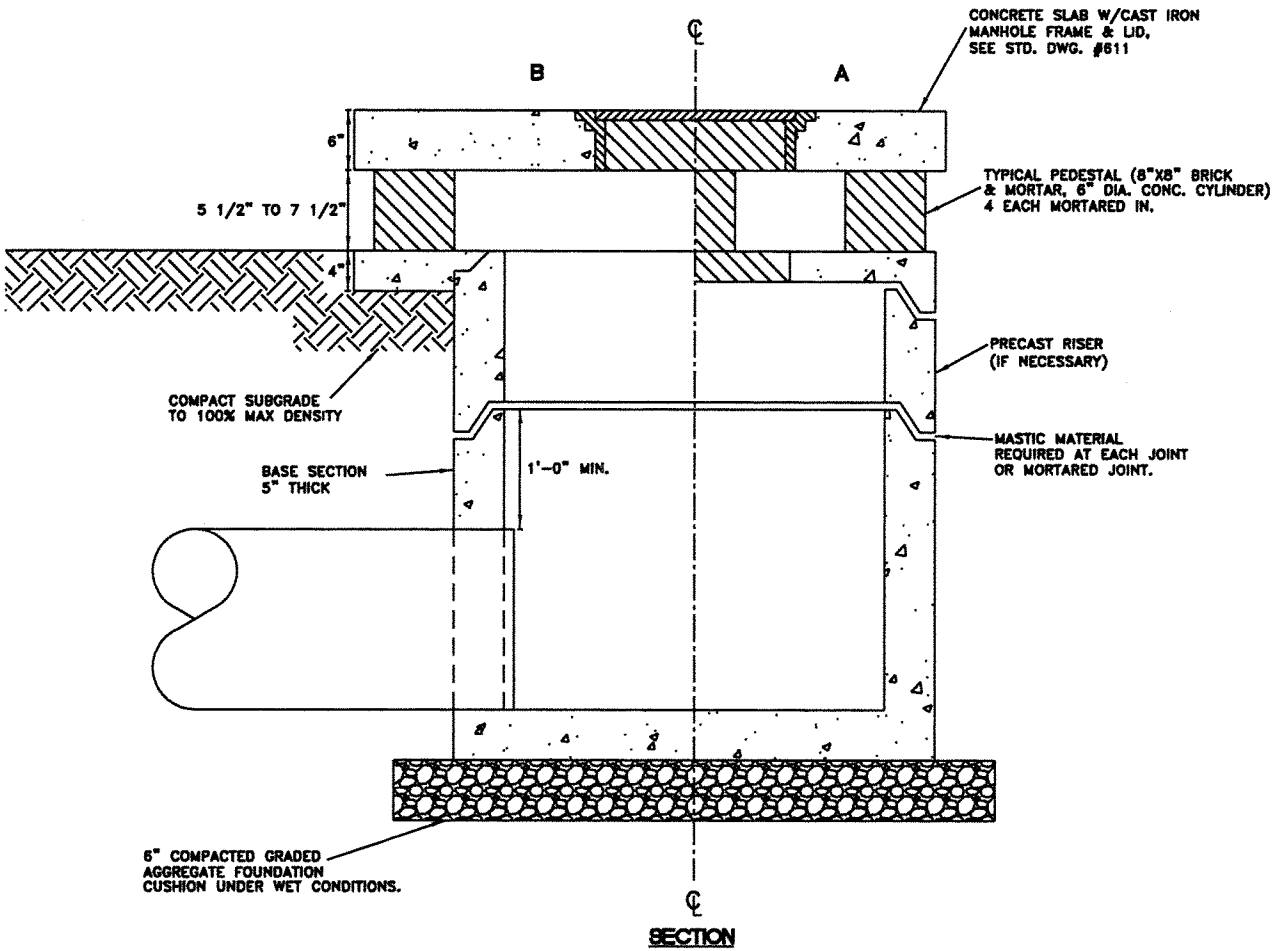


City of Buford, Georgia

STANDARD DRAWING

Standard Drop Inlet

DATE: SEPTEMBER 25, 2014 SHEET: 609



SECTION

NOTES:

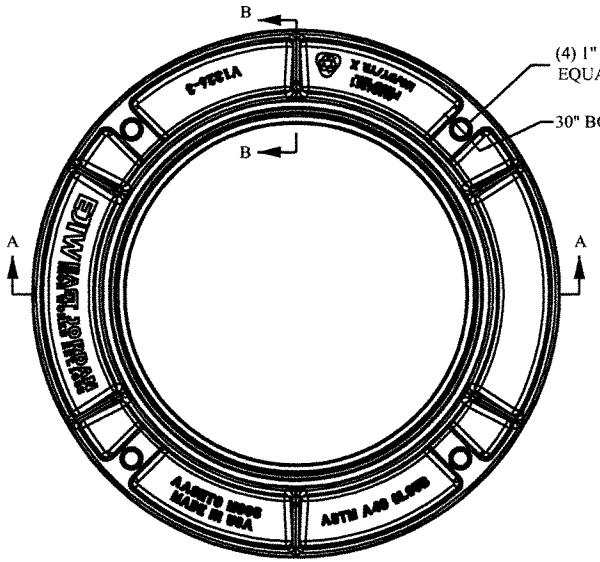
1. SUBGRADE TO BE COMPACTED TO 100% MAX. DRY DENSITY PER STANDARD PROCTOR (AASHTO T-99).
2. PLACE REINFORCEMENT STEEL TO ALLOW A MIN. OF 1 1/2" COVER, EXCEPT WHERE NOTED.
3. REINFORCEMENT STEEL TO BE GRADE 60 AND TO CONSIST OF NO. 4 @ 6" O.C. E.W.
4. CONCRETE: MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI.
5. WHEN 60" & 72" BASE SECTIONS ARE REQUIRED, USE AN ADAPTER SECTION IN CONJUNCTION WITH THE STANDARD CONE.
6. CONCRETE TOP COVER THICKNESS: 8" - VEHICULAR TRAFFIC AREAS.

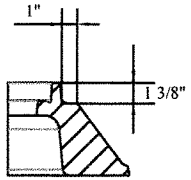
City of Buford, Georgia

STANDARD DRAWING

Standard Round Precast Drop Inlet

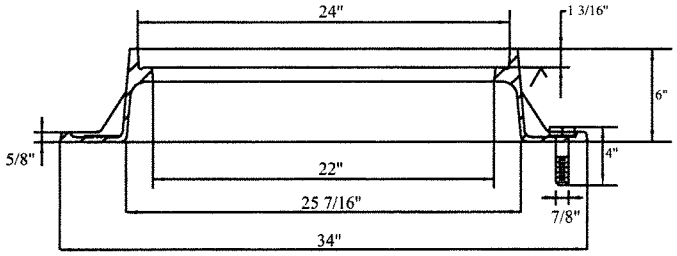
DATE: SEPTEMBER 25, 2014 SHEET: 610





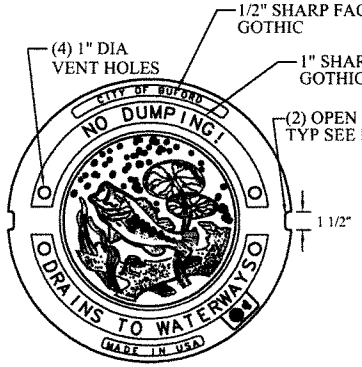
SECTION B-B

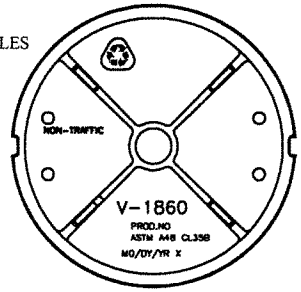
SECTION A-A



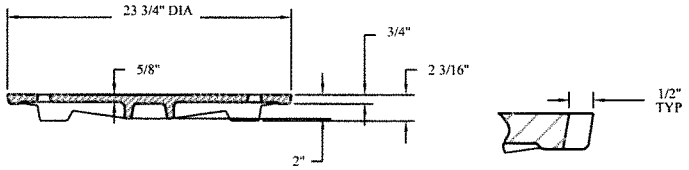
SECTION A-A
Model Number 41326311

FRAME





BOTTOM VIEW



COVER SECTION

COVER

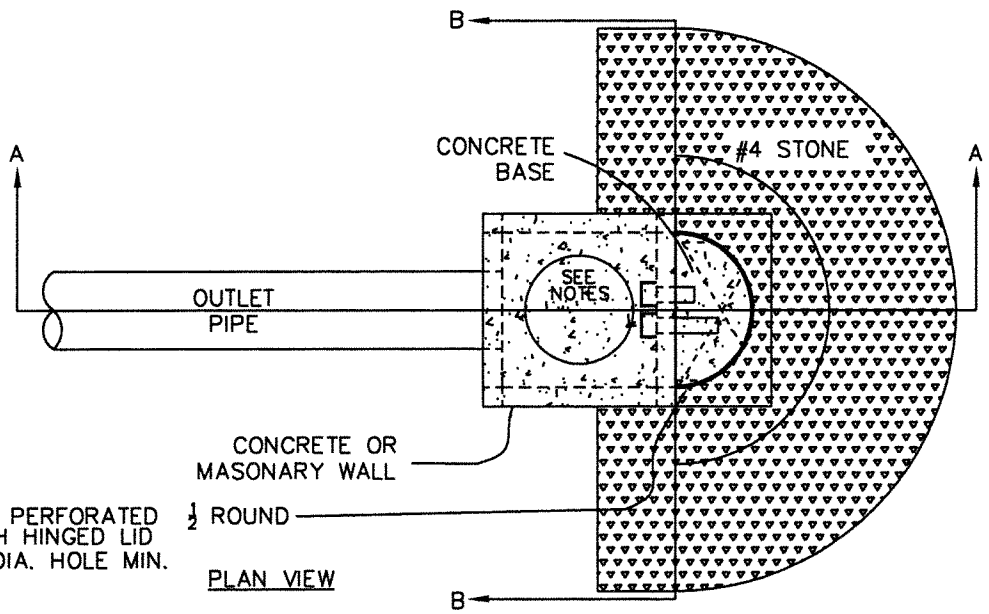
NOTES:
1. MANHOLE FRAME AND COVER TO COMPLY WITH REQUIREMENTS OF AASHTO M306.
2. ATTACH MANHOLE FRAME TO MANHOLE BY ADHESIVE CAPSULE ANCHOR WITH FOUR (4) STAINLESS STEEL 7/8" DIAMETER BOLTS.
3. MANHOLE FRAME AND COVER TO BE EJ GROUP, INC. PRODUCT NO. 41326311 AND NO. 41860086 RESPECTIVELY WITH INDICATED "CITY OF BUFORD" LETTERING, OR APPROVED EQUAL.

City of Buford, Georgia

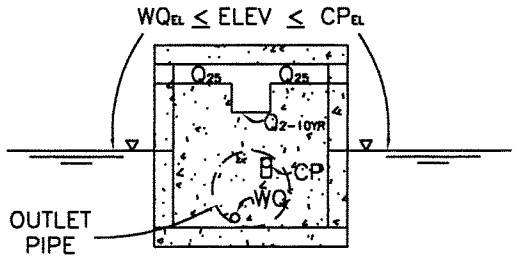
S T A N D A R D D R A W I N G

Storm Drain Frame and Cover

D A T E: SEPTEMBER 25, 2014 S H E E T: 611



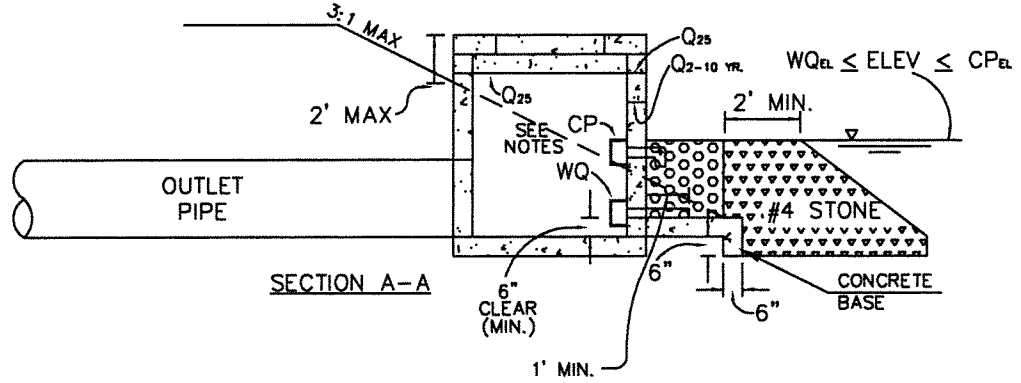
PLAN VIEW



SECTION B–B

NOTES:

1.) WEIR CONFIGURATION SHOWN FOR CONCEPTUAL PURPOSES ONLY
2.) THREADED END CAP WITH ORIFICE REQ'D FOR ORIFICE DIA. < 4".
3.) REFER TO BUFORD STD. DRAWING 629 FOR ORIFICE END-CAPS.
4.) REFER TO BUFORD STD. DRAWING 611 FOR MANHOLE LID.
5.) STONE FILTER SHALL BE #4 STONE OR SMALLER.
6.) FOR ROUND STRUCTURES PROVIDE 48" PERFORATED 3/4 ROUND WITH HINGED LID AND 1/2" DIA. HOLE MIN.



SECTION A–A

TOP OF DAM = _____FT

EMER. SPILLWAY = _____FT

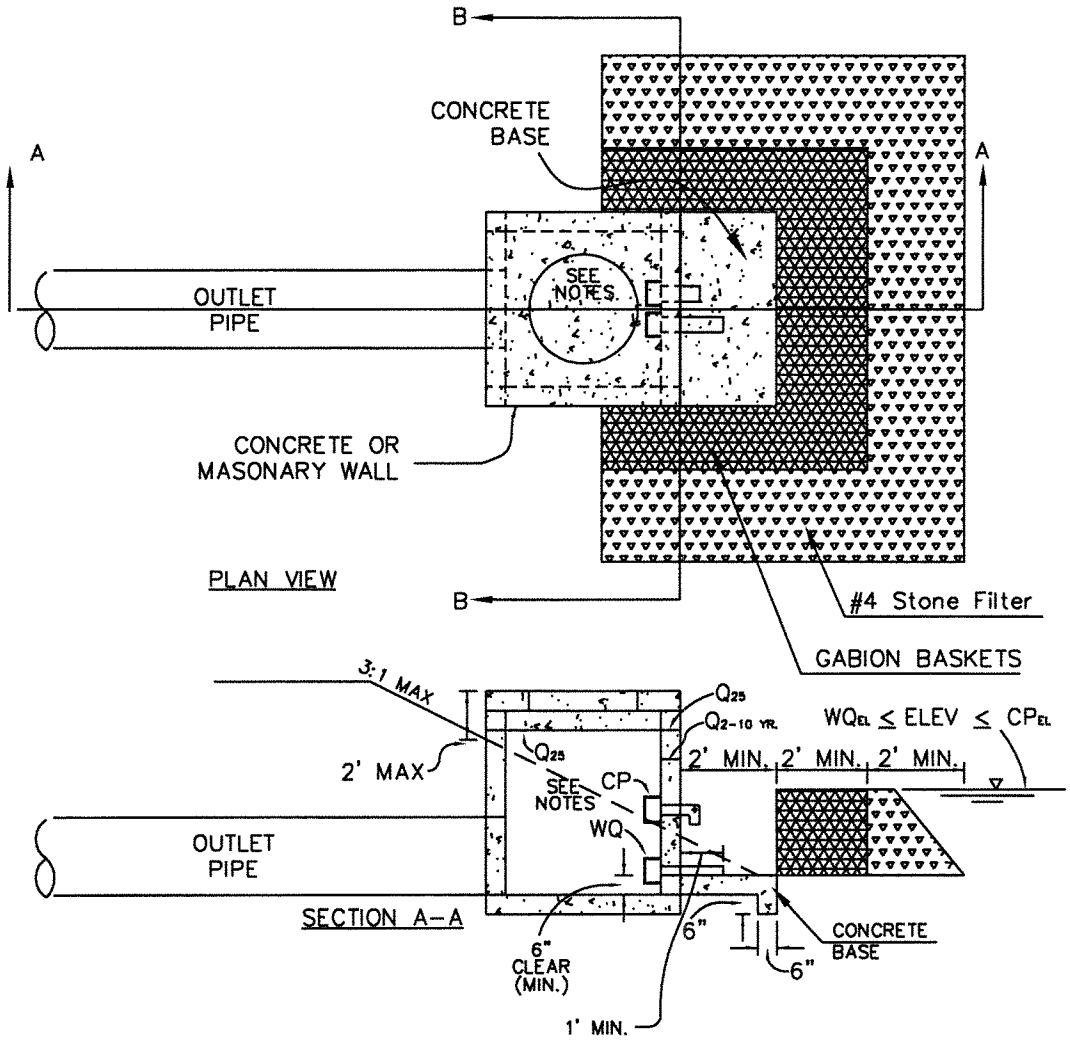
EVENT	ORIFICE/WEIR INV ELEV.	ORIFICE DIA. (IN)	WEIR LEN. (FT)	VOL. (CF)	WSEL
WQ					
CP					
2					
5					
10					
25					
100					

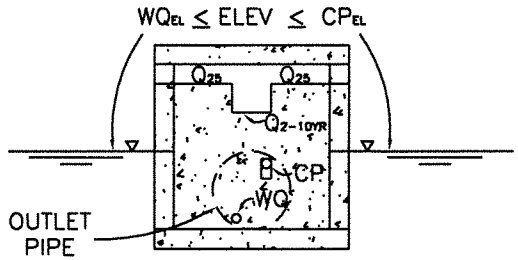
City of Buford, Georgia

STANDARD DRAWING

Outlet Structure Dam Height=5' Max
With 1/2 Round Stone Filter

DATE: SEPTEMBER 25, 2014 SHEET: 612





SECTION B-B

NOTES:

1.) WEIR CONFIGURATION SHOWN FOR CONCEPTUAL PURPOSES ONLY
2.) THREADED END CAP WITH ORIFICE REQ'D FOR ORIFICE DIA. < 4".
3.) REFER TO BUFORD STD. DRAWING 629 FOR ORIFICE END-CAPS.
4.) REFER TO BUFORD STD. DRAWING 611 FOR MANHOLE LID.
5.) STONE FILTER SHALL BE #4 STONE OR SMALLER.

TOP OF DAM = _____FT

EMER. SPILLWAY = _____FT

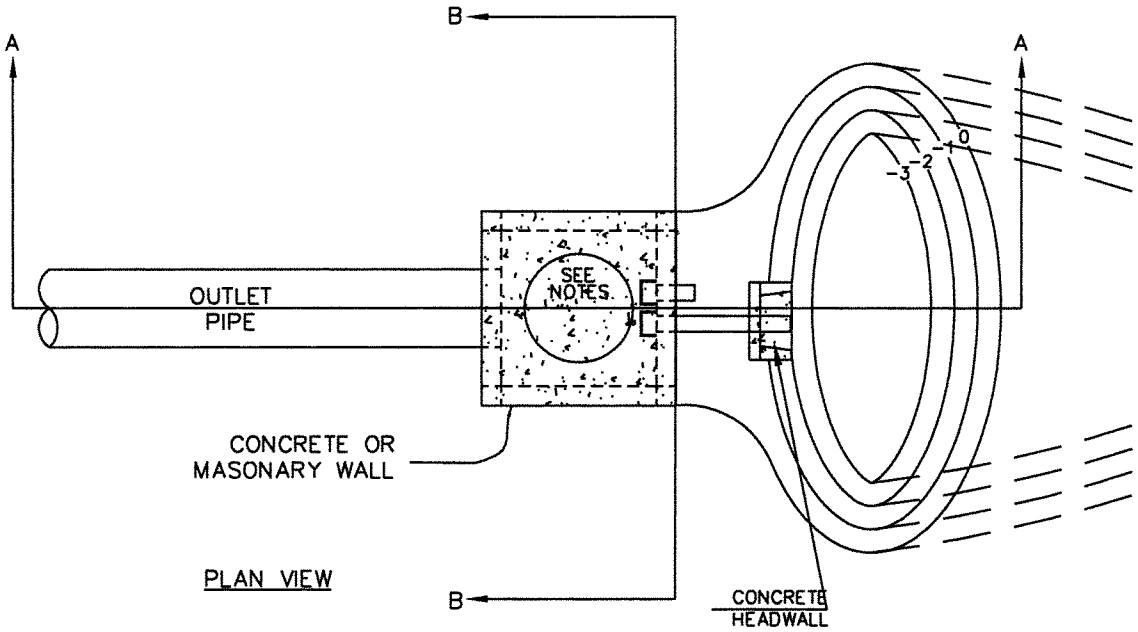
EVENT	ORIFICE/WEIR INV ELEV.	ORIFICE DIA. (IN)	WEIR LEN. (FT)	VOL. (CF)	WSEL
WQ					
CP					
2					
5					
10					
25					
100					

City of Buford, Georgia

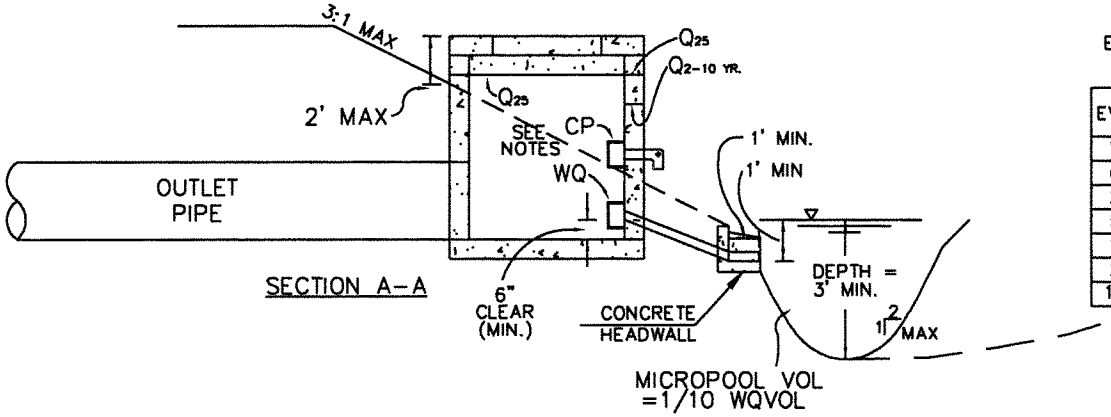
STANDARD DRAWING

Outlet Structure Dam Height=5' Max With Gabion Filter

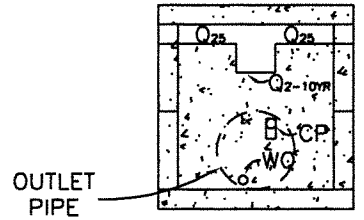
DATE: SEPTEMBER 25, 2014 SHEET: 613



PLAN VIEW



SECTION A–A



SECTION B–B

NOTES:

1.) WEIR CONFIGURATION SHOWN FOR CONCEPTUAL PURPOSES ONLY
2.) THREADED END CAP WITH ORIFICE REQ'D FOR ORIFICE DIA. < 4".
3.) REFER TO BUFORD STD. DRAWING 629 FOR ORIFICE END-CAPS.
4.) REFER TO BUFORD STD. DRAWING 611 FOR MANHOLE LID.

TOP OF DAM = _____FT

EMER. SPILLWAY = _____FT

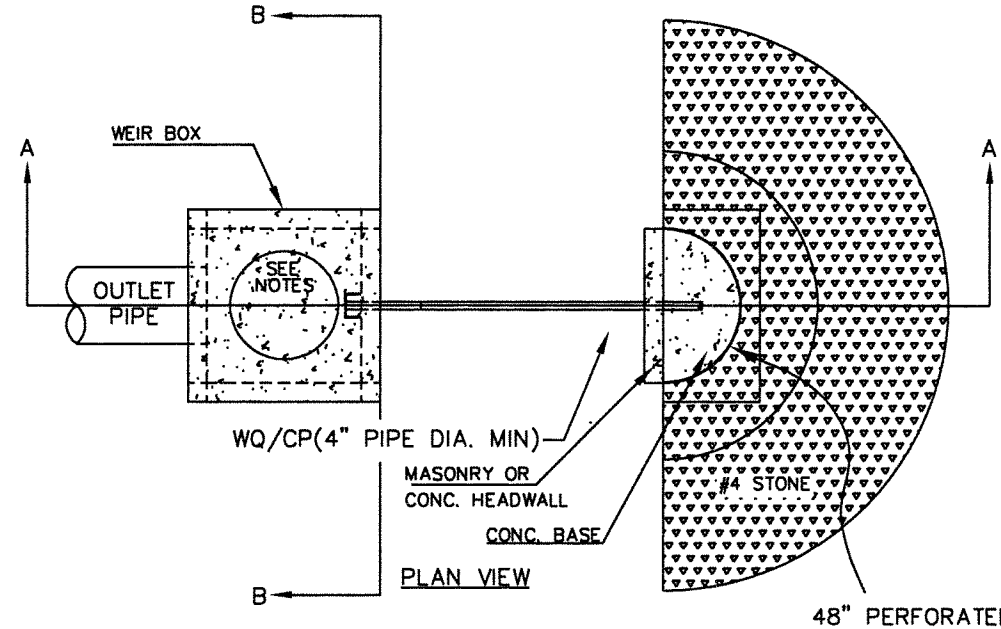
EVENT	ORIFICE/WEIR INV ELEV.	ORIFICE DIA. (IN)	WEIR LEN. (FT)	VOL. (CF)	WSEL
WQ					
CP					
2					
5					
10					
25					
100					

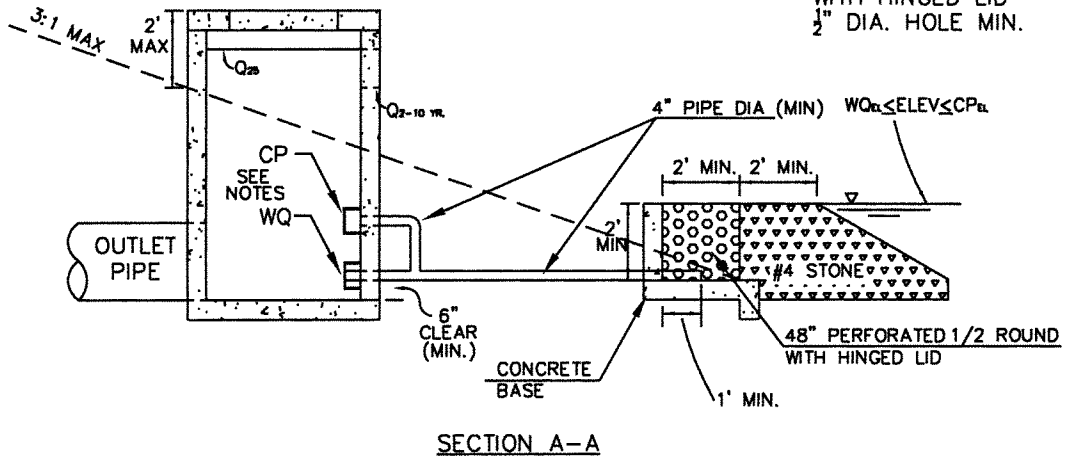
City of Buford, Georgia

STANDARD DRAWING

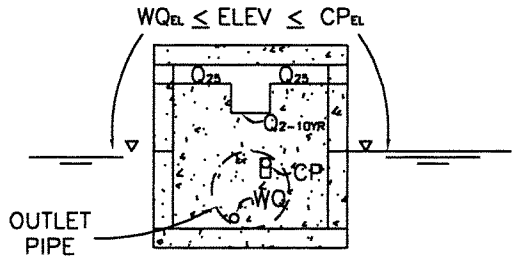
Outlet Structure Dam Height=5' Max
With Micropool Or Wet Pond

DATE: SEPTEMBER 25, 2014 SHEET: 614





SECTION A–A



SECTION B–B

NOTES:

1.) WEIR CONFIGURATION SHOWN FOR CONCEPTUAL PURPOSES ONLY
2.) THREADED END CAP WITH ORIFICE REQ'D FOR ORIFICE DIA. < 4".
3.) REFER TO BUFORD STD. DRAWING 629 FOR ORIFICE END–CAPS.
4.) REFER TO BUFORD STD. DRAWING 611 FOR MANHOLE LID.
5.) STONE FILTER SHALL BE #4 STONE OR SMALLER.
6.) FOR ROUND STRUCTURES PROVIDE 48" PERFORATED ½ ROUND WITH HINGED LID AND ½" DIA. HOLE MIN.

TOP OF DAM = _____FT

EMER. SPILLWAY = _____FT

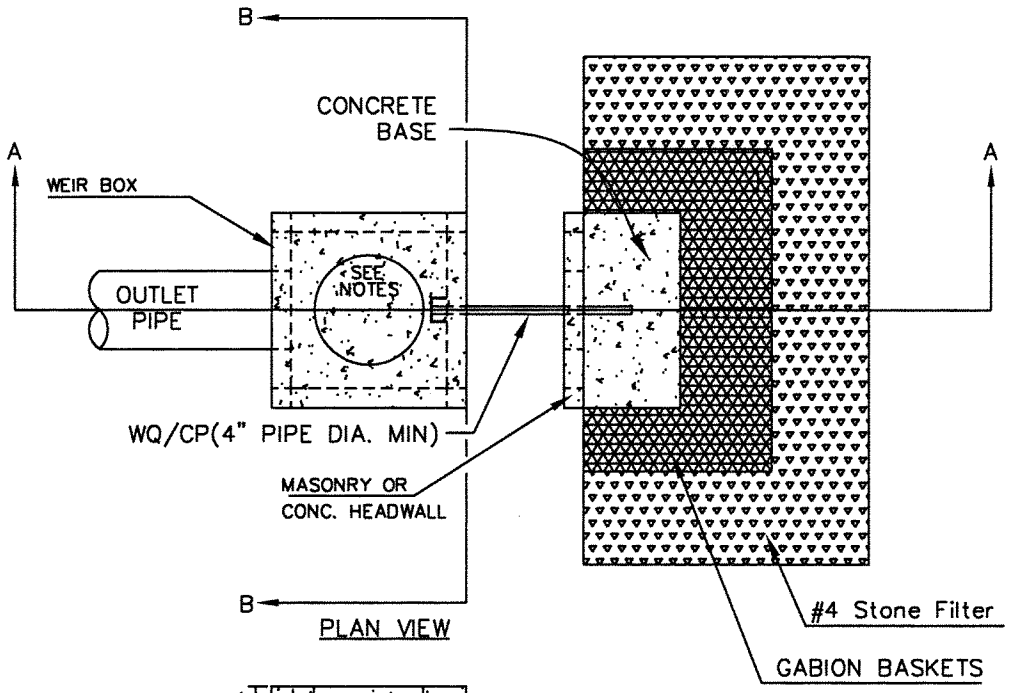
EVENT	ORIFICE/WEIR INV ELEV.	ORIFICE DIA. (IN)	WEIR LEN. (FT)	VOL. (CF)	WSEL
WQ					
CP					
2					
5					
10					
25					
100					

City of Buford, Georgia

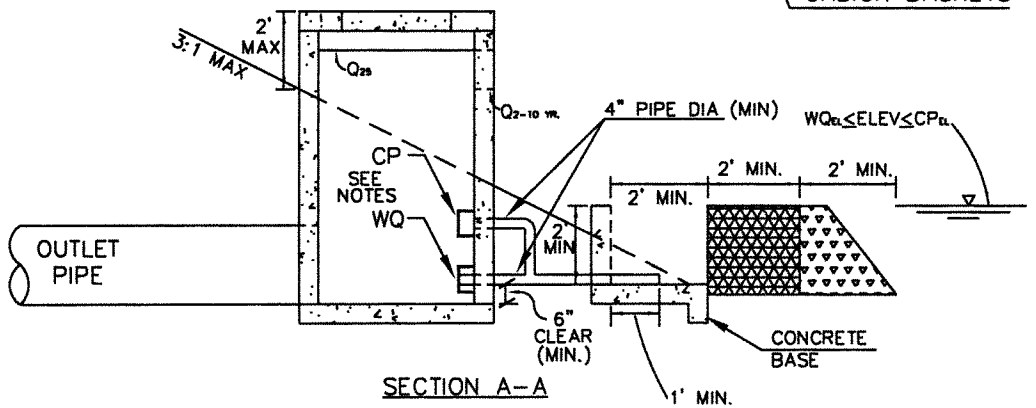
STANDARD DRAWING

Outlet Control 1/2" Round Stone Filter

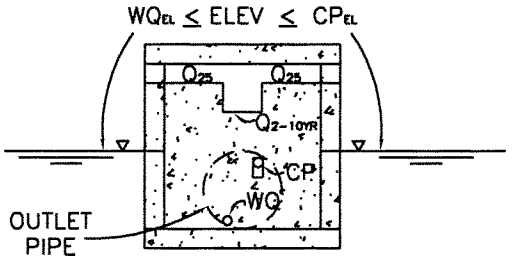
DATE: SEPTEMBER 25, 2014 SHEET: 615



PLAN VIEW



SECTION A–A



SECTION B–B

NOTES:

1.) WEIR CONFIGURATION SHOWN FOR CONCEPTUAL PURPOSES ONLY
2.) THREADED END CAP WITH ORIFICE REQ'D FOR ORIFICE DIA. < 4".
3.) REFER TO BUFORD STD. DRAWING 629 FOR ORIFICE END-CAPS.
4.) REFER TO BUFORD STD. DRAWING 611 FOR MANHOLE LID.
5.) STONE FILTER SHALL BE #4 STONE OR SMALLER.

TOP OF DAM = _____ FT

EMER. SPILLWAY = _____ FT

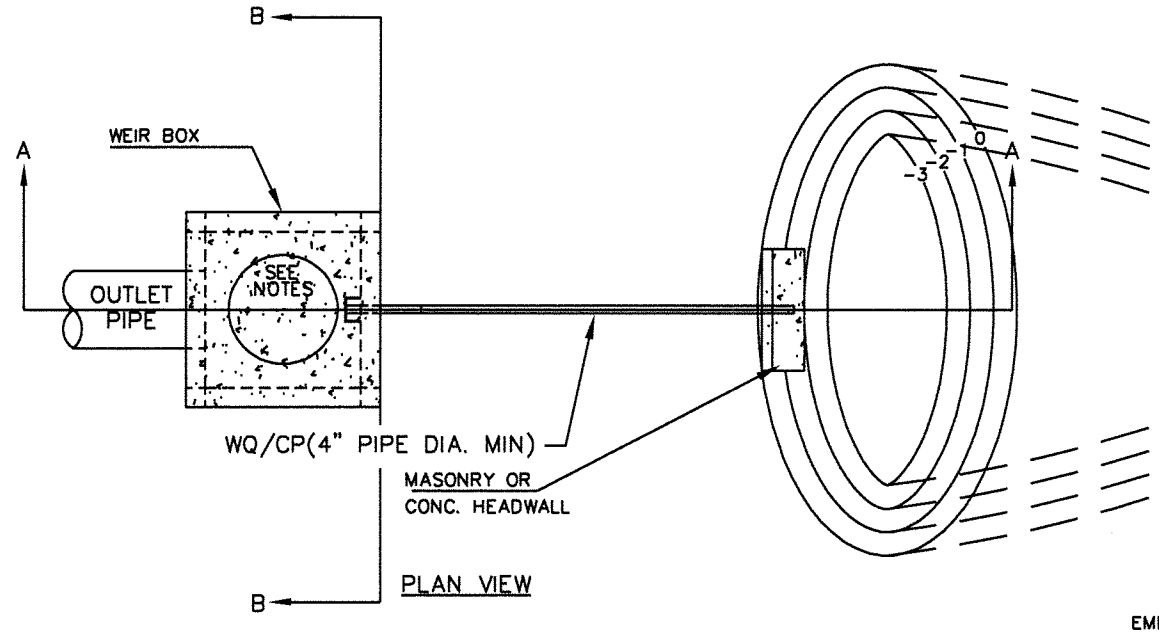
EVENT	ORIFICE/WEIR INV ELEV.	ORIFICE DIA. (IN)	WEIR LEN. (FT)	VOL. (CF)	WSEL
WQ					
CP					
2					
5					
10					
25					
100					

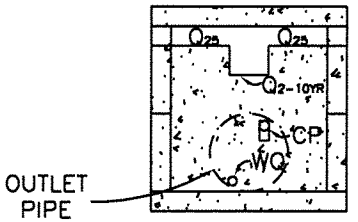
City of Buford, Georgia

STANDARD DRAWING

Outlet Control Structure
With Gabion Filter

DATE: SEPTEMBER 25, 2014 SHEET: 616





SECTION B–B

NOTES:

1.) WEIR CONFIGURATION SHOWN FOR CONCEPTUAL PURPOSES ONLY

2.) THREADED END CAP WITH ORIFICE REQ'D FOR ORIFICE DIA. < 4".

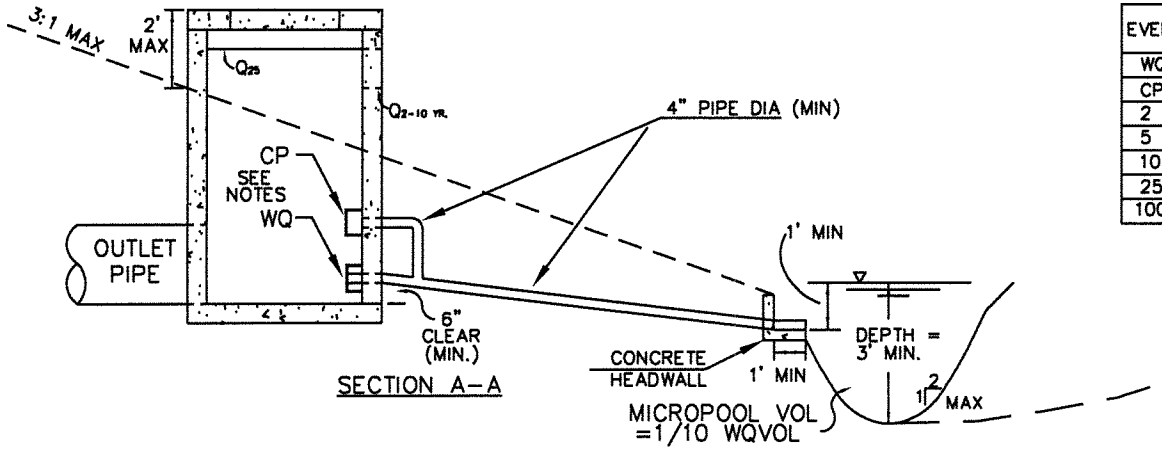
3.) REFER TO BUFORD STD. DRAWING 629 FOR ORIFICE END-CAPS.

4.) REFER TO BUFORD STD. DRAWING 611 FOR MANHOLE LID.

TOP OF DAM = _____FT

EMER. SPILLWAY = _____FT

EVENT	ORIFICE/WEIR INV ELEV.	ORIFICE DIA. (IN)	WEIR LEN. (FT)	VOL. (CF)	WSEL
WQ					
CP					
2					
5					
10					
25					
100					



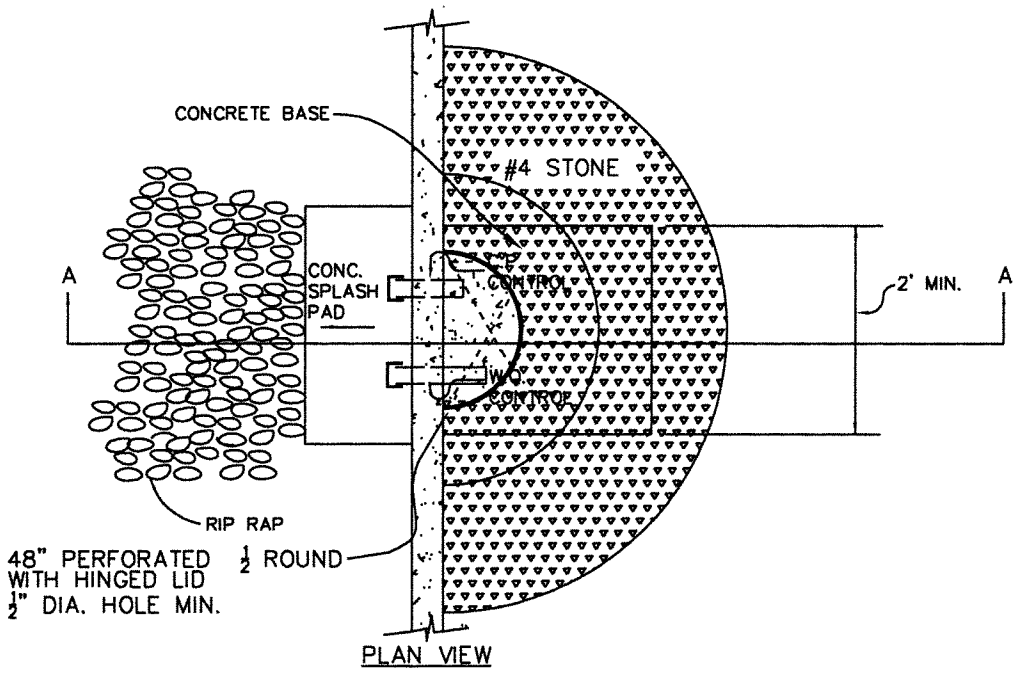
SECTION A–A

City of Buford, Georgia

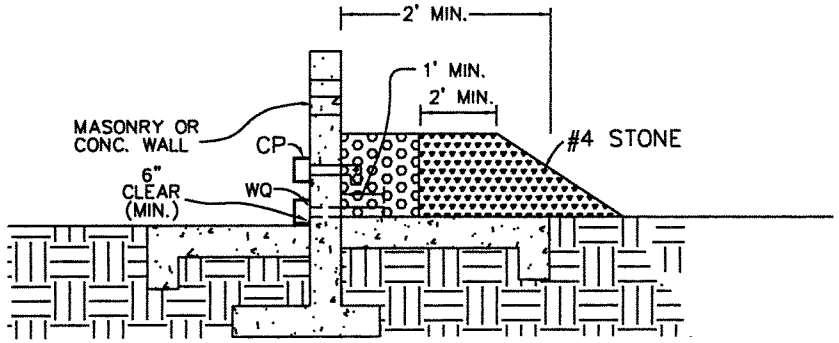
STANDARD DRAWING

Outlet Control Structure
With Micropool Or Wet Pond

DATE: SEPTEMBER 25, 2014 SHEET: 617

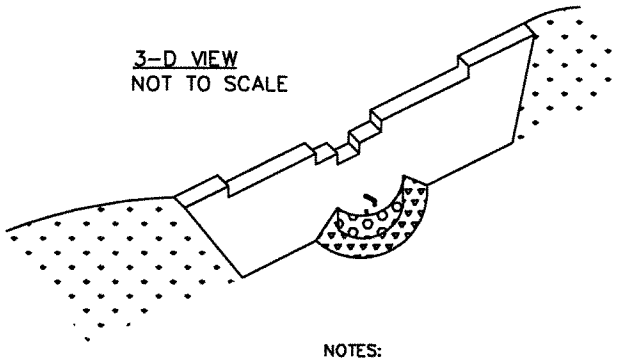


PLAN VIEW



CROSS SECTION A–A

3–D VIEW
NOT TO SCALE



NOTES:

1.) WEIR CONFIGURATION SHOWN FOR CONCEPTUAL PURPOSES ONLY
2.) THREADED END CAP WITH ORIFICE REQ'D FOR ORIFICE DIA. < 4".
3.) REFER TO BUFORD STD. DRAWING 629 FOR ORIFICE END–CAPS.
4.) REFER TO BUFORD STD. DWG. 626 FOR TYPICAL DETENTION POND WALL TIE IN.
5.) STONE FILTER SHALL BE #4 STONE OR SMALLER.
6.) FOR ROUND STRUCTURES PROVIDE 48" PERFORATED ½ ROUND WITH HINGED LID AND ½" DIA. HOLE MIN.

TOP OF WALL = _____ FT

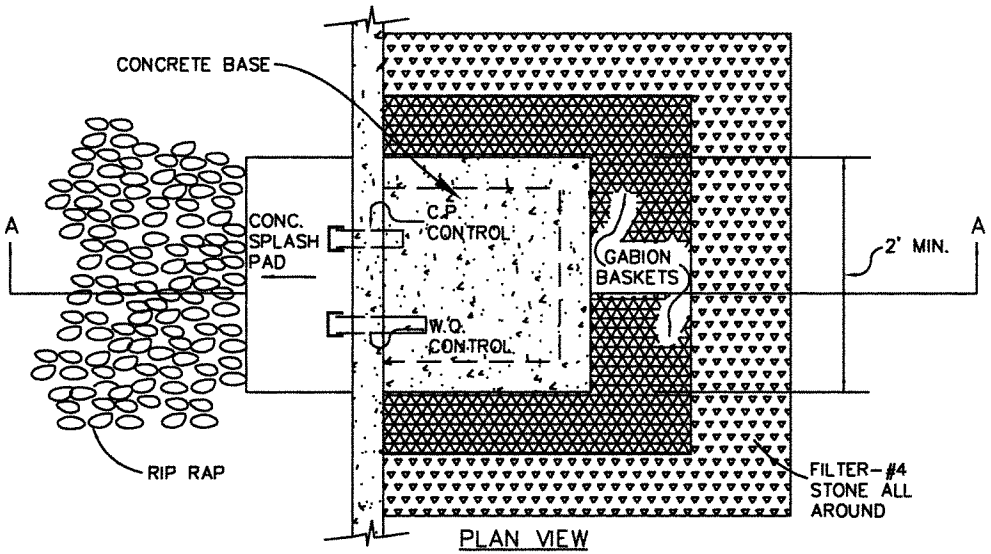
EVENT	ORIFICE/WEIR INV ELEV.	ORIFICE DIA. (IN)	WEIR LEN. (FT)	VOL. (CF)	WSEL
WQ					
CP					
2					
5					
10					
25					
100					

City of Buford, Georgia

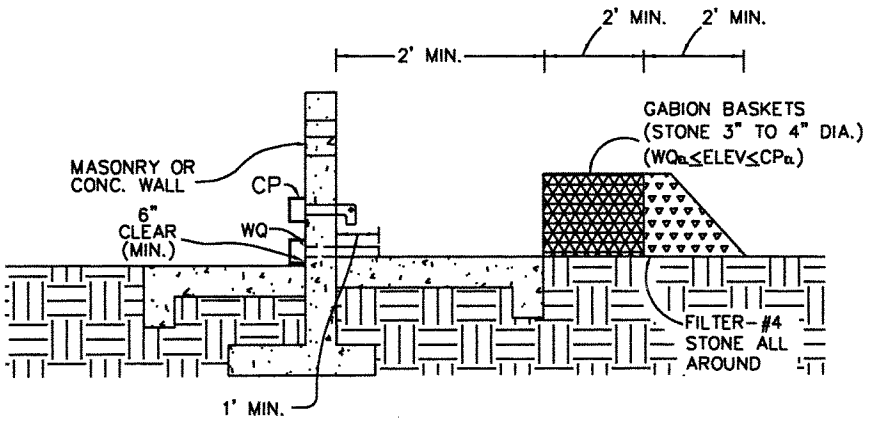
STANDARD DRAWING

Outlet Control With 1/2 Round Stone Filter

DATE: SEPTEMBER 25, 2014 SHEET: 618

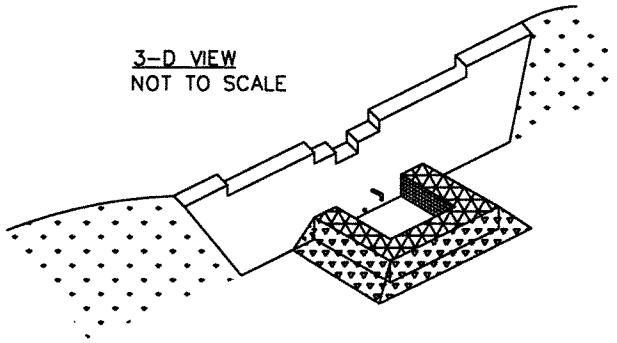


PLAN VIEW



CROSS SECTION A-A

3-D VIEW
NOT TO SCALE



NOTES:

1.) WEIR CONFIGURATION SHOWN FOR CONCEPTUAL PURPOSES ONLY
2.) THREADED END CAP WITH ORIFICE REQ'D FOR ORIFICE DIA. < 4".
3.) REFER TO BUFORD STD. DRAWING 629 FOR ORIFICE END-CAPS.
4.) REFER TO BUFORD STD. DWG. 626 FOR TYPICAL DETENTION POND WALL TIE IN.
5.) STONE FILTER SHALL BE #4 STONE OR SMALLER.

TOP OF WALL =_____ FT

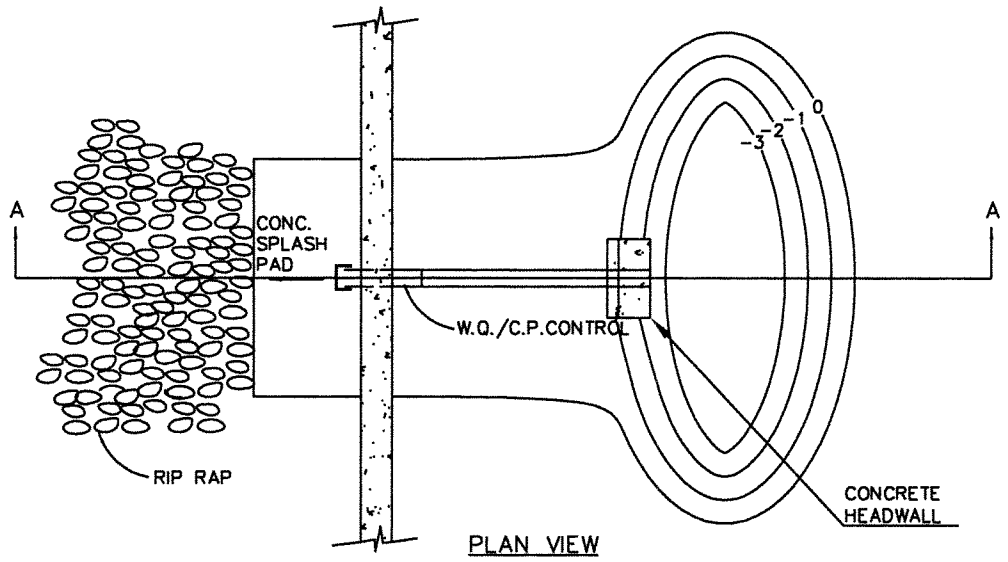
EVENT	ORIFICE/WEIR INV ELEV.	ORIFICE DIA. (IN)	WEIR LEN. (FT)	VOL. (CF)	WSEL
WQ					
CP					
2					
5					
10					
25					
100					

City of Buford, Georgia

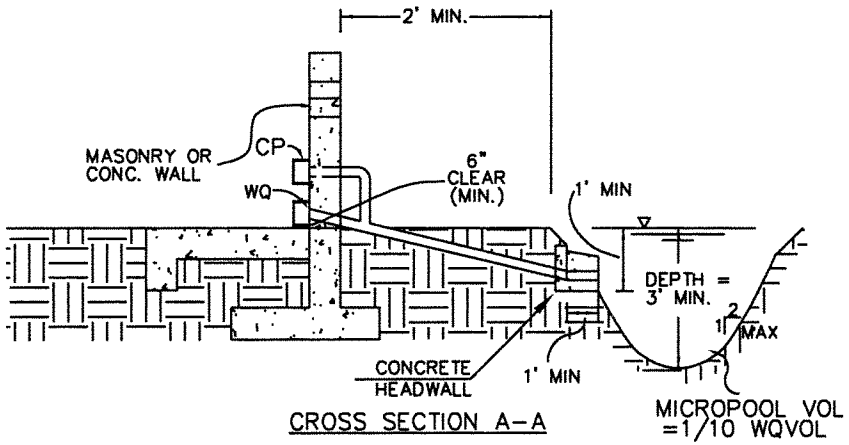
STANDARD DRAWING

Outlet Control Retaining Wall

DATE: SEPTEMBER 25, 2014 SHEET: 619



PLAN VIEW



CROSS SECTION A-A

NOTES:

1.) WEIR CONFIGURATION SHOWN FOR CONCEPTUAL PURPOSES ONLY
2.) THREADED END CAP WITH ORIFICE REQ'D FOR ORIFICE DIA. < 4".
3.) REFER TO BUFORD STD. DRAWING 629 FOR ORIFICE END-CAPS.
4.) REFER TO BUFORD STD. DWG. 626 FOR TYPICAL DETENTION POND WALL TIE IN.

TOP OF WALL = _____ FT

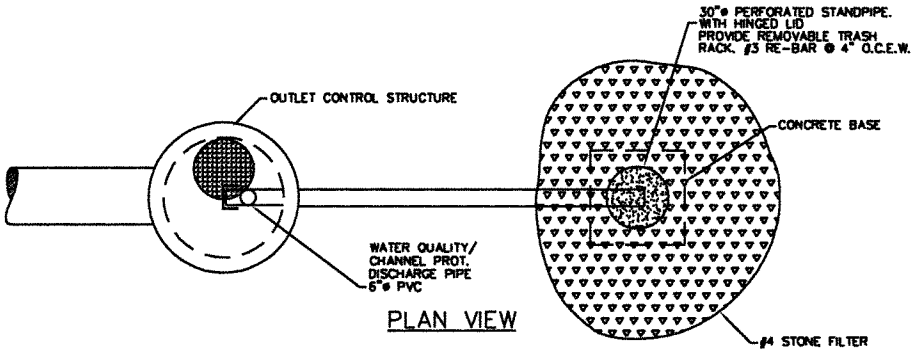
EVENT	ORIFICE/WEIR INV ELEV.	ORIFICE DIA. (IN)	WEIR LEN. (FT)	VOL. (CF)	WSEL
WQ					
CP					
2					
5					
10					
25					
100					

City of Buford, Georgia

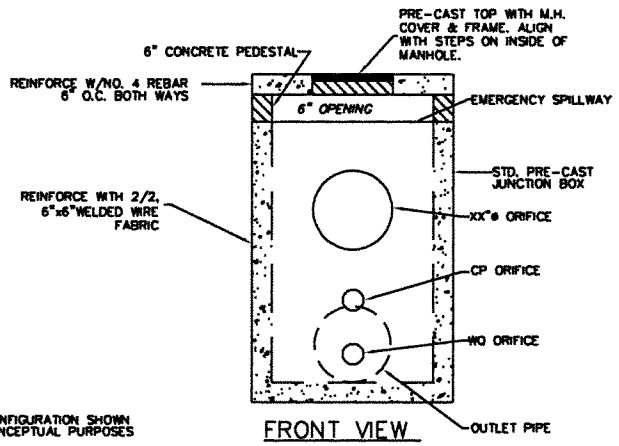
STANDARD DRAWING

Outlet Control Retaining Wall
With Micropool

DATE: SEPTEMBER 25, 2014 SHEET: 620



PLAN VIEW



FRONT VIEW

NOTES:

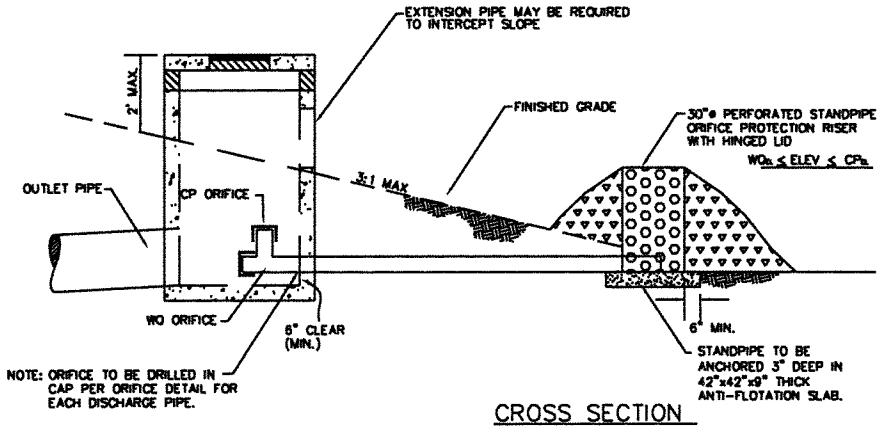
1.) WEIR CONFIGURATION SHOWN FOR CONCEPTUAL PURPOSES ONLY

2.) THREADED END CAP WITH ORIFICE REQ'D FOR ORIFICE DIA. < 4".

3.) REFER TO BUFORD STD. DRAWING 629 FOR ORIFICE END-CAPS.

4.) REFER TO BUFORD STD. DRAWING 611 FOR MANHOLE LID.

5.) STONE FILTER SHALL BE #4 STONE OR SMALLER.



CROSS SECTION

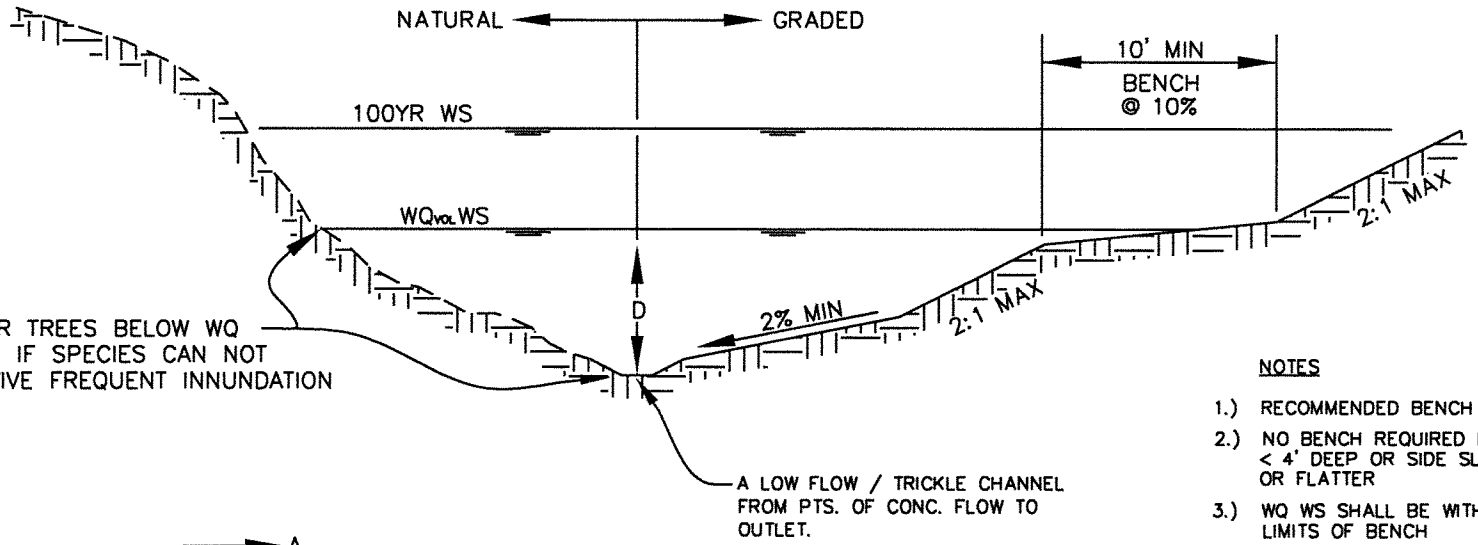
EVENT	ORIFICE/WEIR INV ELEV.	ORIFICE DIA. (IN)	WEIR LEN. (FT)	VOL. (CF)	WSEL
WQ					
CP					
2					
5					
10					
25					
100					

City of Buford, Georgia

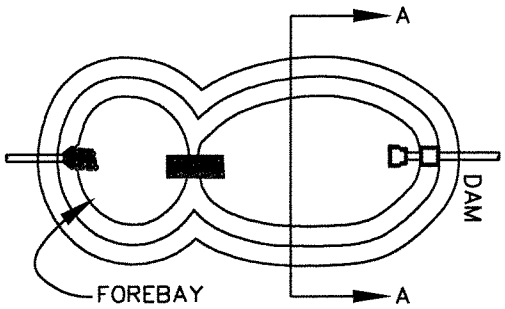
STANDARD DRAWING

Outlet Control Structure
With Standpipe With Stone Filter

DATE: SEPTEMBER 25, 2014 SHEET: 621



SECTION A–A



NOTES

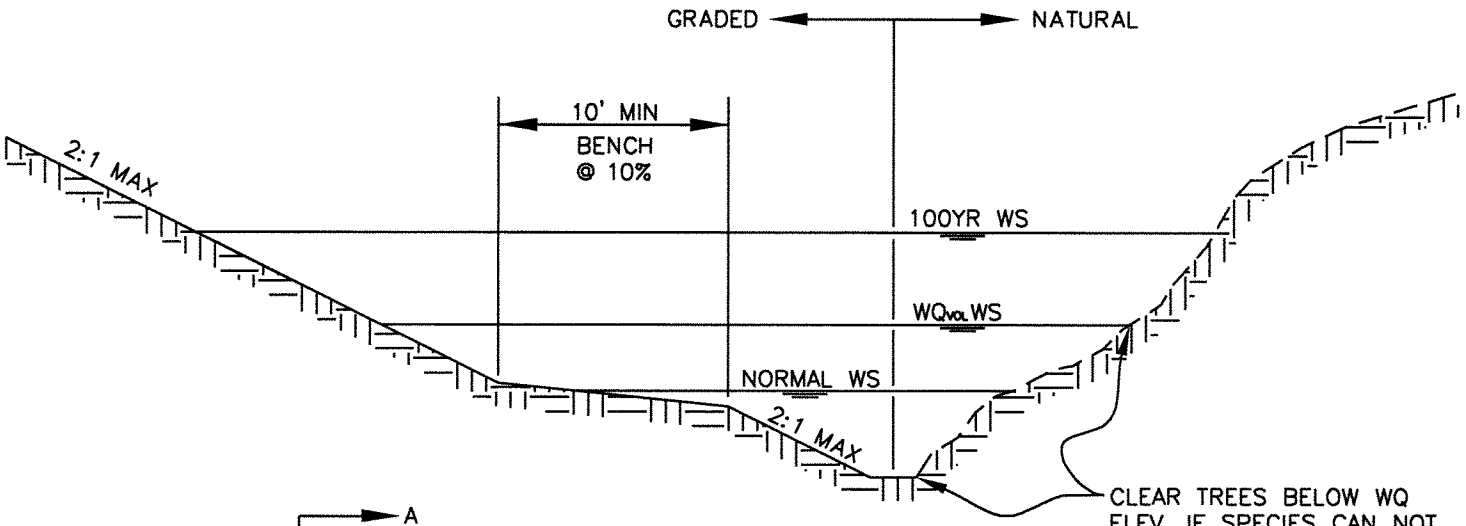
1.) RECOMMENDED BENCH WIDTH = 15'
2.) NO BENCH REQUIRED IF POOL IS < 4' DEEP OR SIDE SLOPES = 4:1 OR FLATTER
3.) WQ WS SHALL BE WITHIN LIMITS OF BENCH
4.) FOR A GRADED LOW FLOW / TRICKLE CHANNEL:
   - LONGITUDINAL SLOPE = 1% MIN.
   - RECOMMEND ROCK OR GRASS WITH GEOTECHNICAL FABRIC FOR STABILIZATION
5.) REFER TO BUFORD STD. DRAWING 625 FOR FOREBAY

City of Buford, Georgia

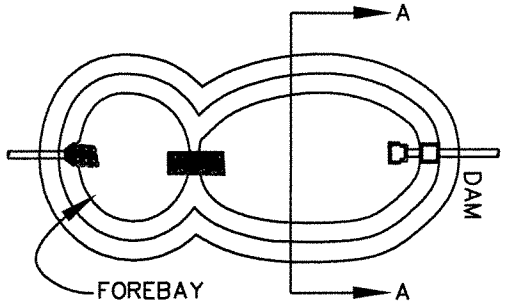
STANDARD DRAWING

X–Section, Dry, Extended Detention

DATE: SEPTEMBER 25, 2014 SHEET: 622



SECTION A–A



NOTES

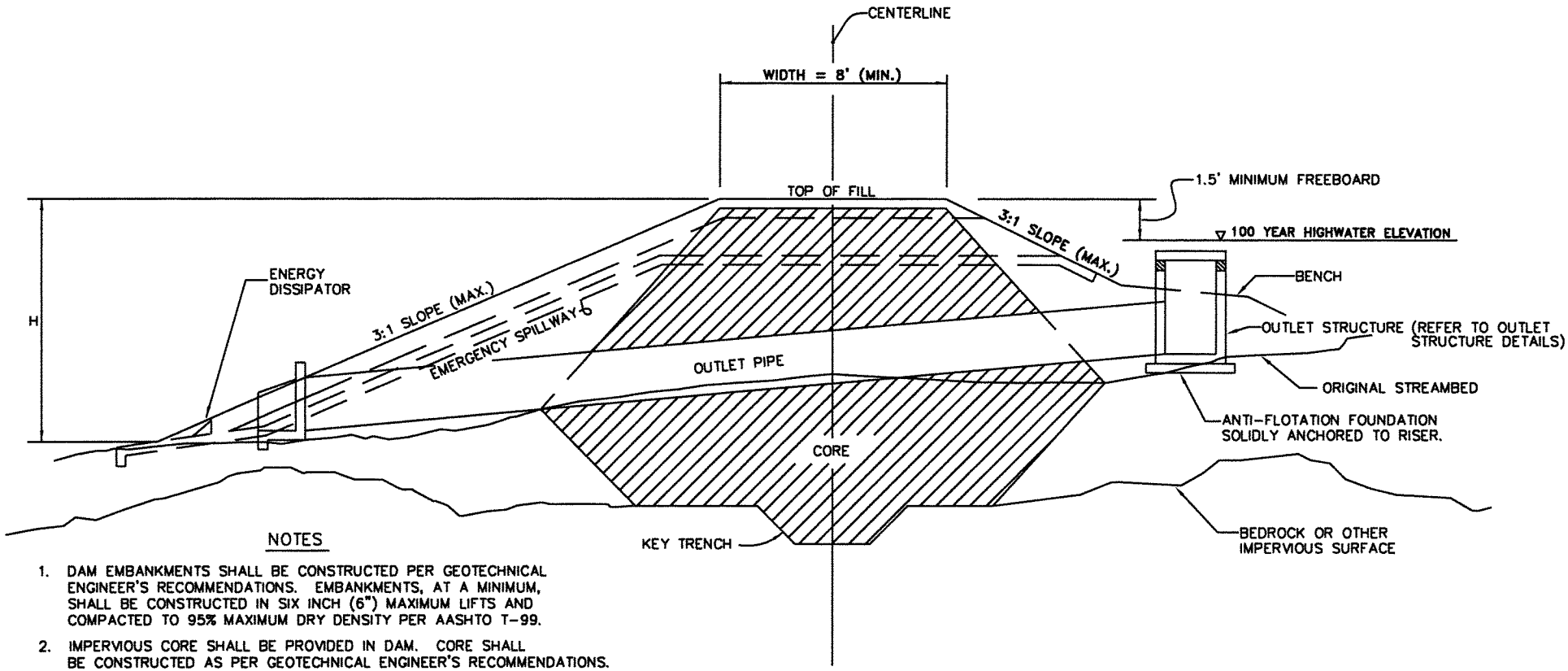
1.) RECOMMENDED BENCH WIDTH = 15'
2.) NO BENCH REQUIRED IF POOL IS < 4' DEEP OR SIDE SLOPES = 4:1 OR FLATTER
3.) NORMAL WS SHALL BE WITHIN LIMITS OF BENCH
4.) REFER TO BUFORD STD. DRAWING 625 FOR FOREBAY

City of Buford, Georgia

STANDARD DRAWING

X–Section, Wet, Extended Detention

DATE: JANUARY 2005 SHEET: 623



NOTES

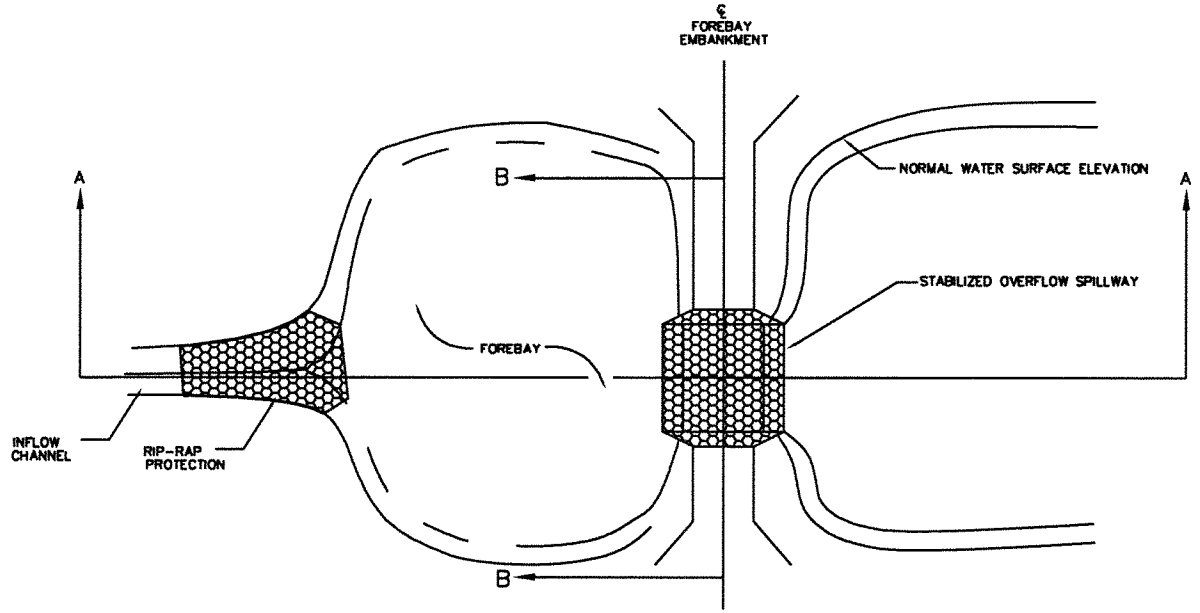
1. DAM EMBANKMENTS SHALL BE CONSTRUCTED PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. EMBANKMENTS, AT A MINIMUM, SHALL BE CONSTRUCTED IN SIX INCH (6") MAXIMUM LIFTS AND COMPACTED TO 95% MAXIMUM DRY DENSITY PER AASHTO T-99.
2. IMPERVIOUS CORE SHALL BE PROVIDED IN DAM. CORE SHALL BE CONSTRUCTED AS PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
3. EMERGENCY SPILLWAY SHALL BE CONSTRUCTED OF STABLE, NON-ERODIBLE MATERIAL PER GEOTECHNICAL ENGINEER'S RECOMMENDATION.
4. OUTLET PIPE SHALL BE REINFORCED CONCRETE PIPE IF H $\geq$ 9' AND STORAGE VOLUME $\geq$ 20 AC-FT. REFER TO SECTION 8.3 OF BUFORD DEVELOPMENT REGULATIONS FOR APPROVED PIPE MATERIALS.
5. BENCH SHALL BE A MINIMUM OF 10' AND SHOULD AVERAGE 15'. NO BENCH IS REQUIRED IF DAM SIDE SLOPE IS 4:1 OR FLATTER OR POOL < 4' DEEP.
6. REFER TO BUFORD STD. DRAWING 630 FOR TRASHRACK DETAIL.

City of Buford, Georgia

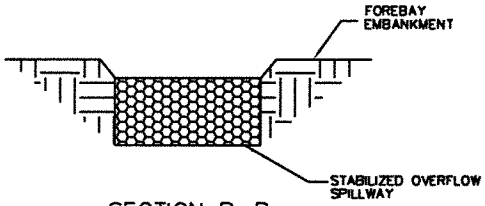
STANDARD DRAWING

Earthfill Dams
Max Height = 25'

DATE: SEPTEMBER 25, 2014 SHEET: 624



PLAN

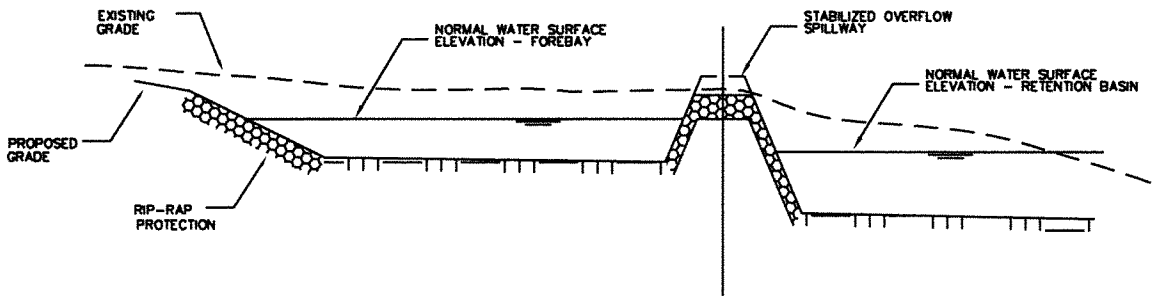


SECTION B-B

NOTES:

1.) STABILIZED OVERFLOW SPILLWAY SHOWN AS RIPRAP. CONCRETE, GABION BASKETS, OR OTHER TYPES OF ARMOR MAY BE USED WITH APPROVAL OF THE CITY.

2.) IF PIPE USED INSTEAD OF IN-FLOW CHANNEL, PIPE INVERT SHALL DISCHARGE ABOVE NORMAL POOL.



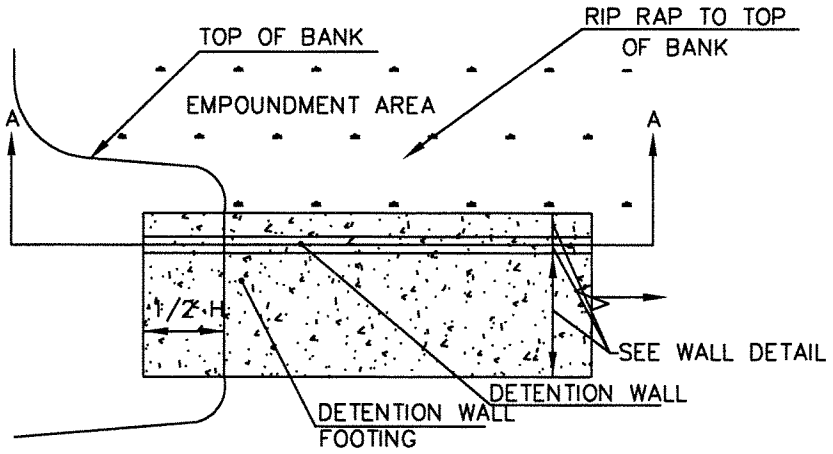
SECTION A-A

City of Buford, Georgia

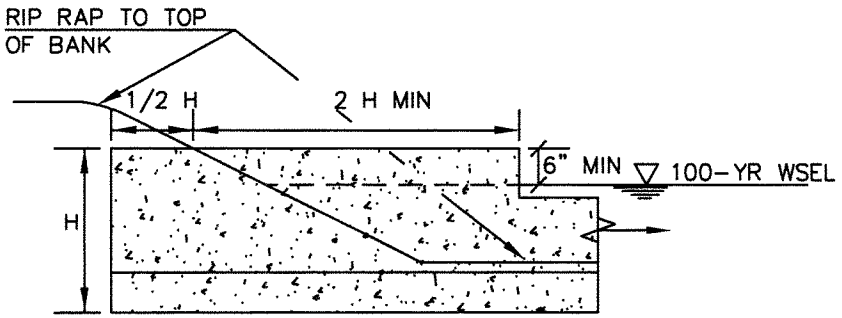
STANDARD DRAWING

Forebay

DATE: SEPTEMBER 25, 2014 SHEET: 625



PLAN VIEW



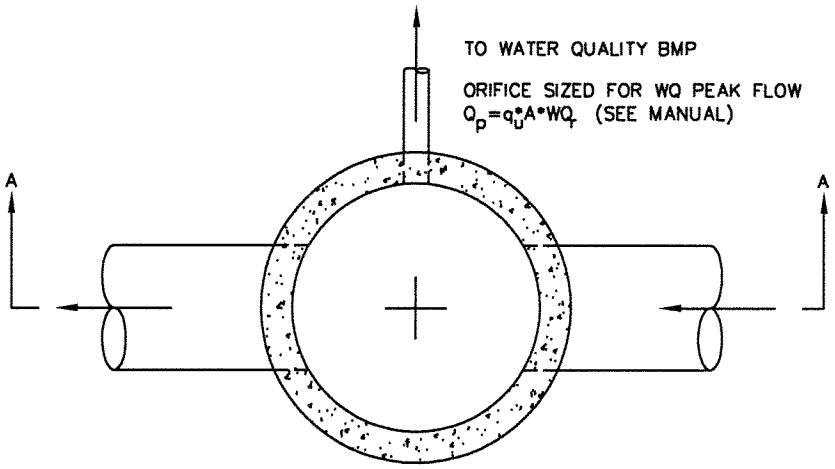
SIDE VIEW
SECTION A-A

City of Buford, Georgia

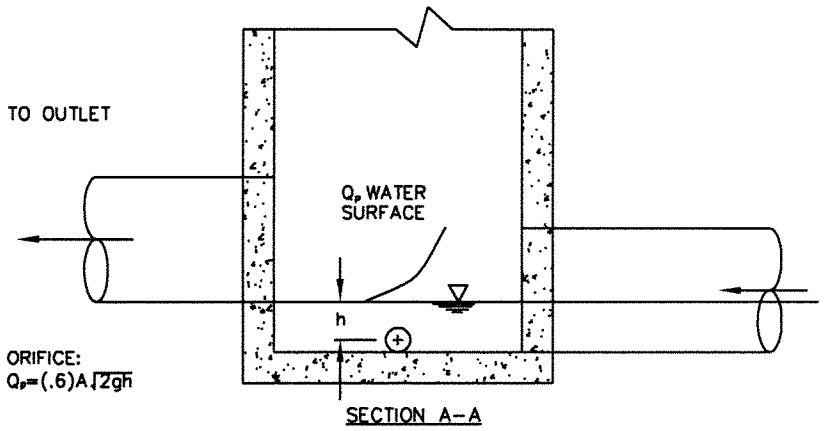
STANDARD DRAWING

Typical Detention Pond
Wall Tie In

DATE: SEPTEMBER 25, 2014 SHEET: 626



PLAN VIEW



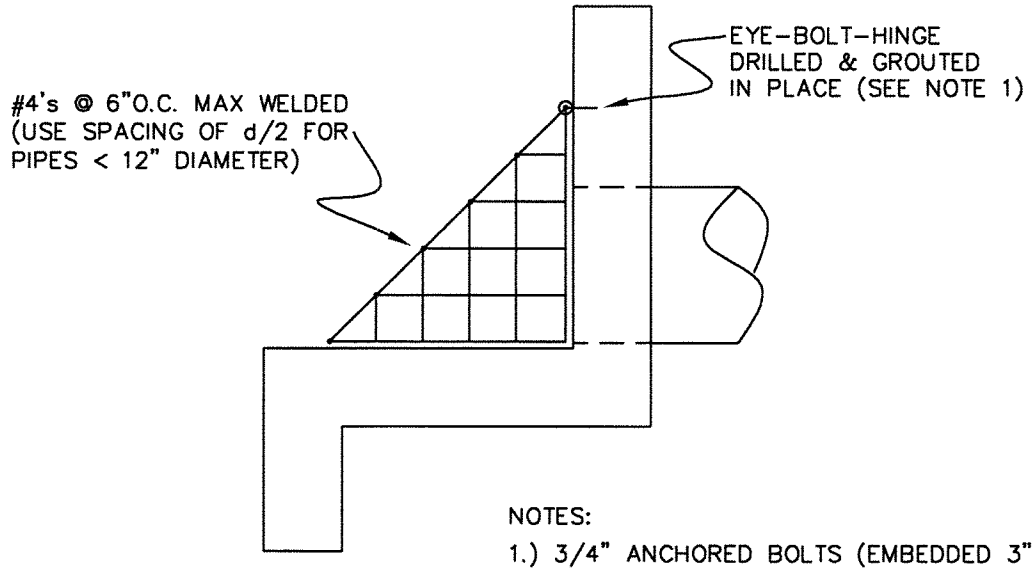
SECTION A–A

City of Buford, Georgia

STANDARD DRAWING

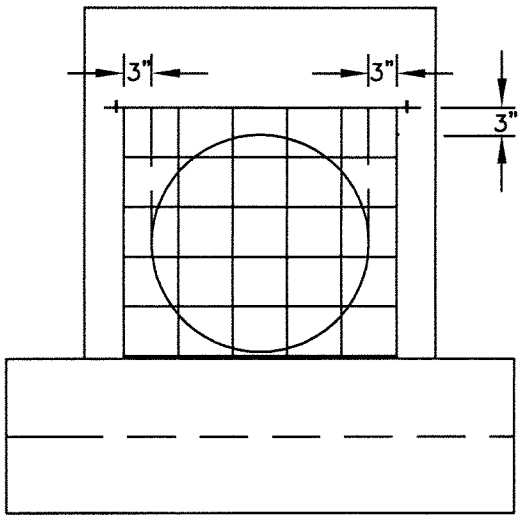
Flowsplitter – Manhole

DATE: SEPTEMBER 25, 2014 SHEET: 627



NOTES:

1.) 3/4" ANCHORED BOLTS (EMBEDDED 3" MIN.)

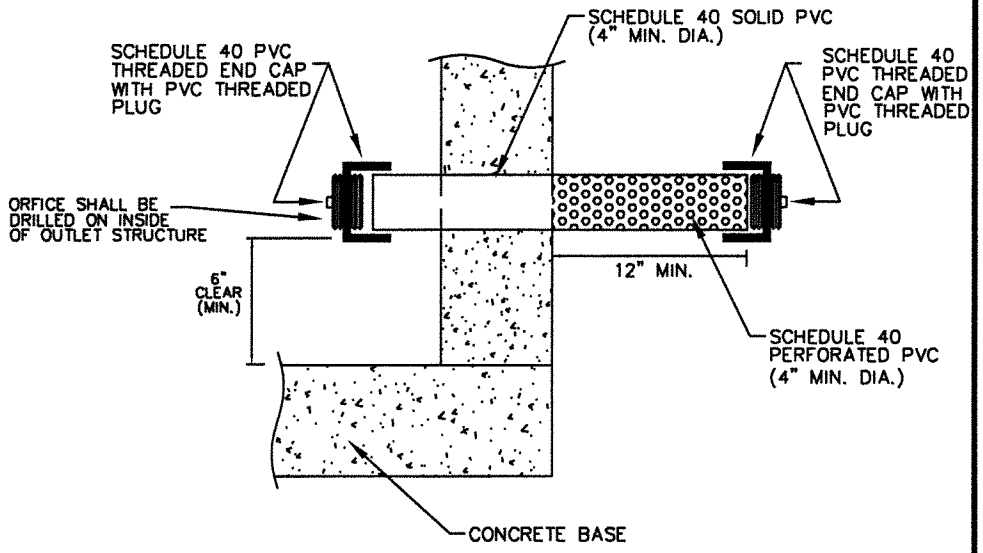


City of Buford, Georgia

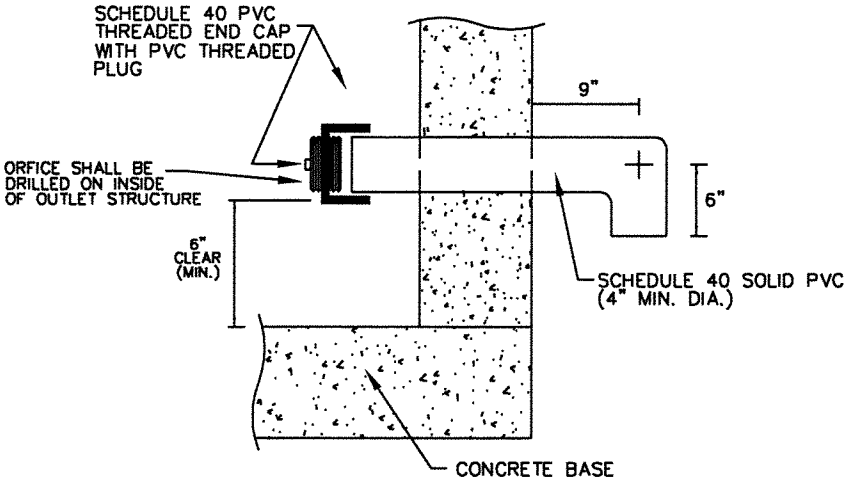
STANDARD DRAWING

Trashrack For Outlet Control Structures

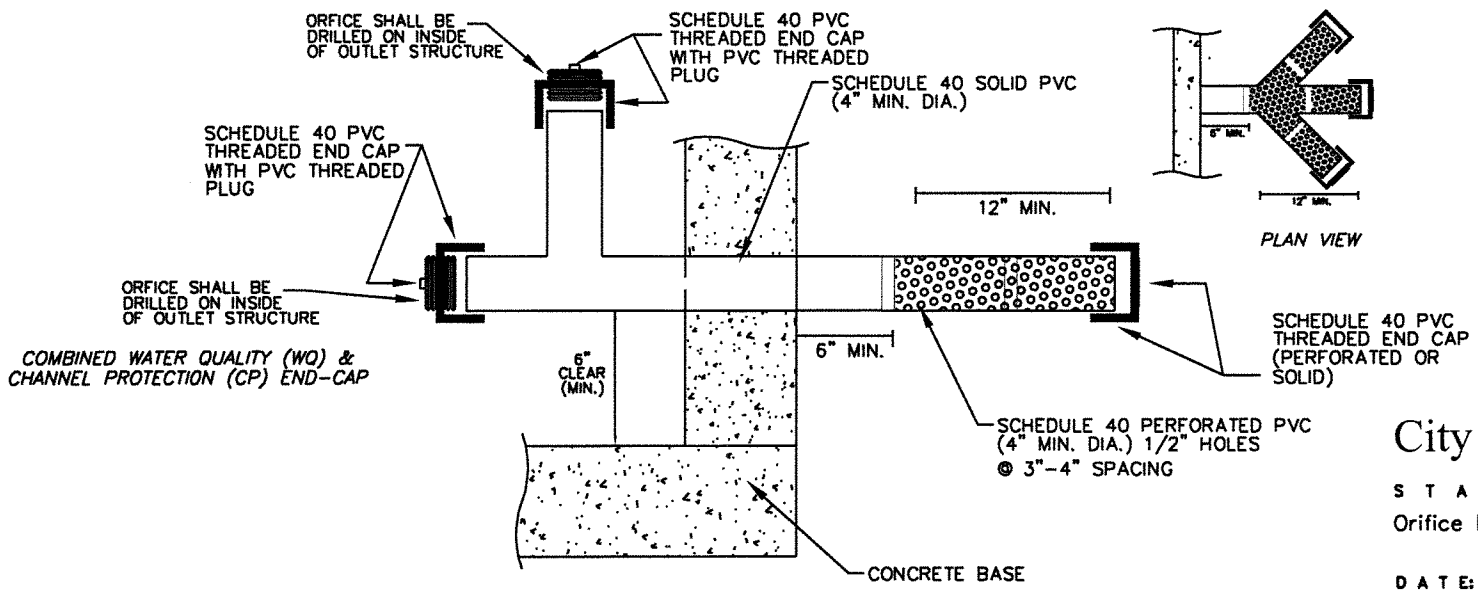
DATE: SEPTEMBER 25, 2014 SHEET: 628



THREADED WATER QUALITY (WQ) ORIFICE END-CAP



THREADED CHANNEL PROTECTION (CP) ORIFICE END-CAP



COMBINED WATER QUALITY (WQ) & CHANNEL PROTECTION (CP) END-CAP

PLAN VIEW

NOTES (TO APPLY TO ALL):

1.) FILL GAP BETWEEN STRUCTURE & PVC WITH MORTAR OR INSTALL A FERNCO ADAPTER.
2.) SIZE ORIFICE AS REQUIRED
3.) FASTEN END CAP TO SYSTEM WITH PVC CEMENT.
4.) PIPE SIZES SHALL BE CONSISTENT.

City of Buford, Georgia

S T A N D A R D D R A W I N G

Orifice End-Cap Details

D A T E: SEPTEMBER 25, 2014 S H E E T: 629

ROUND PIPE - 2-2/3" X 1/2" CORRUGATION

D (IN)	AREA (SQ. FT.)	MAXIMUM HEIGHT OF COVER (FT.) SHEET THICKNESS IN INCHES (GAGE) 0.064 (16)	0.079 (14)	0.109 (12)	0.138 (10)	0.168 (8)	MIN. HEIGHT OF COVER (FT.)
12	.79	100+	100+	NA	NA	NA	
15	1.23	100+	100+	NA	NA	NA	
18	1.77	100+	100+	100+	NA	NA	
21	2.40	100+	100+	100+	NA	NA	
24	3.14	100+	100+	100+	NA	NA	SEE
30	4.91	85	100+	100+	NA	NA	DWG
36	7.1	71+	88	100+	100+	NA	703
42	9.6	NS	76	100+	100+	NA	
48	12.6	NS	66	93	100+	100+*	
54	16.0	NS	NS	82	100+	100+*	
60	19.6	NS	NS	74	95	100+*	
66	23.8	NS	NS	NS	87	100+*	
72	28.3	NS	NS	NS	79	97*	
78	33.2	NS	NS	NS	NS	90*	
84	38.5	NS	NS	NS	NS	83*	

ROUND PIPE - 3" X 1" CORRUGATION

D (IN)	AREA (SQ. FT.)	MAXIMUM HEIGHT OF COVER (FT.) SHEET THICKNESS IN INCHES (GAGE) 0.064 (16)	0.079 (14)	0.109 (12)	0.138 (10)	0.168 (8)	MIN. HEIGHT OF COVER (FT.)
36	7.1	81	100+	100+	NA	NA	
42	9.6	70	87	100+	NA	NA	
48	12.6	61	76	100+	100+	NA	
54	16.0	54	68	95	100+	NA	
60	19.6	48	61	85	100+	NA	SEE
66	23.8	44	55	78	100+	100+*	DWG
72	28.3	NS	51	71	91	100+*	703
78	33.2	NS	47	66	84	100+*	
84	38.5	NS	43	61	78	100+*	
90	44.2	NS	40	57	73	90*	
96	50.3	NS	NS	53	68	84*	
102	56.7	NS	NS	50	64	79*	
108	63.6	NS	NS	47	61	75*	
114	70.9	NS	NS	NS	58	71*	
120	78.5	NS	NS	NS	55	67*	
132	95.0	NS	NS	NS	50	61*	

ROUND PIPE - 5" X 1" CORRUGATION

D (IN)	AREA (SQ. FT.)	MAXIMUM HEIGHT OF COVER (FT.) SHEET THICKNESS IN INCHES (GAGE) 0.064 (16)	0.079 (14)	0.109 (12)	0.138 (10)	0.168 (8)	MIN. HEIGHT OF COVER (FT.)
36	7.1	72	90	100+	NA	NA	
42	9.6	62	77	100+	NA	NA	
48	12.6	54	68	95	100+	NA	
54	16.0	48	60	84	100+	NA	
60	19.6	43	54	76	98	NA	SEE
66	23.8	39	49	69	89	100+*	DWG
72	28.3	NS	45	63	81	100+*	703
78	33.2	NS	41	58	75	92*	
84	38.5	NS	38	54	70	85*	
90	44.2	NS	36	50	65	80*	
96	50.3	NS	NS	47	61	75*	
102	56.7	NS	NS	44	57	70*	
108	63.6	NS	NS	42	54	66*	
114	70.9	NS	NS	NS	51	63*	
120	78.5	NS	NS	NS	49	60*	
132	95.0	NS	NS	NS	44	54*	

PIPE ARCH - 2-2/3" X 1/2" CORRUGATION

SPAN (IN)	RISE (IN)	EQUIV. ROUND PIPE (IN)	AREA (SQ. FT.)	MINIMUM SHEET THICKNESS REQUIRED (IN) (GA)	MAXIMUM HEIGHT OF COVER (FT) MAXIMUM CORNER PRESSURE-LBS/SQ.FT 4000	6000	MIN. HEIGHT OF COVER (FT.)
17	13	15	1.1	.064 (16)	12	14	
21	15	18	1.6	.064 (16)	10	14	
24	18	21	2.2	.064 (16)	7	13	
28	20	24	2.9	.064 (16)	5	11	
35	24	30	4.5	.064 (16)	NS	7	SEE
42	29	36	6.5	.079 (14)	NS	7	DWG
49	33	42	8.9	.079 (14)	NS	6	703
57	38	48	11.6	.109 (12)	NS	8	
64	43	54	14.7	.109 (12)	NS	9	
71	47	60	18.1	.138 (10)	NS	10	
77	52	66	21.9	.168 (8)*	5	10	
83	57	72	26.0	.168 (8)*	5	10	

PIPE ARCH - 3" X1" AND 5" X 1" CORRUGATION

SPAN (IN)	RISE (IN)	EQUIV. ROUND PIPE (IN)	AREA (SQ. FT.)	MINIMUM SHEET THICKNESS REQUIRED (IN) (GA)	MAXIMUM HEIGHT OF COVER (FT) MAXIMUM CORNER PRESSURE-LBS/SQ.FT 4000	6000	MIN. HEIGHT OF COVER (FT.)
40	31	36	7.0	.079 (14)	8	12	
46	36	42	9.4	.079 (14)	8	13	
53	41	48	12.3	.079 (14)	8	13	
60	46	54	15.6	.079 (14)	8	13	
66	51	60	19.3	.079 (14)	9	13	SEE
73	55	66	23.2	.079 (14)	11	16	DWG
81	59	72	27.4	.079 (14)	11	17	703
87	63	78	32.1	.109 (12)	10	16	
95	67	84	37.0	.109 (12)	11	17	
103	71	90	42.4	.109 (12)	10	15	
112	75	96	48.0	.109 (12)	10	16	
117	79	102	54.2	.109 (12)	10	15	
128	83	108	60.5	.138 (10)	9	14	
137	87	114	67.4	.138 (10)	8	13	
142	91	120	74.5	.168 (8)*	7	12	

* AVAILABILITY SHOULD BE QUALIFIED BEFORE SPECIFYING

NA - NOT AVAILABLE

NS - NOT APPROVED (FOR HIGHWAY H-20 LOADINGS)

City of Buford, Georgia

STANDARD DRAWING

Standard Pipe Culverts - Detail No. 1

DATE: SEPTEMBER 25, 2014 SHEET: 701

ROUND PIPE - 2-2/3" X 1/2" CORRUGATION

D (IN)	AREA (SQ. FT.)	MAXIMUM HEIGHT OF COVER (FT.) SHEET THICKNESS IN INCHES (GAGE) 0.060 (16)	0.075 (14)	0.105 (12)	0.135 (10)	0.164 (8)	MIN. HEIGHT OF COVER (FT.)
12	0.8	90	100+	NA	NA	NA	
15	1.2	72	90	NA	NA	NA	
18	1.8	59	75	100+	NA	NA	
21	2.4	52	65	92	NA	NA	
24	3.1	44	56	79	NA	NA	SEE
30	4.9	NS	44	63	NA	NA	DWG
36	7.1	NS	NS	52	68	NA	703
42	9.6	NS	NS	NS	58	NA	
48	12.6	NS	NS	NS	NS	61	
54	15.9	NS	NS	NS	NS	NS	
60	19.6	NS	NS	NS	NS	NS	
66	23.8	NS	NS	NS	NS	NS	
72	28.3	NS	NS	NS	NS	NS	

ROUND PIPE - 3" X 1" CORRUGATION

D (IN)	AREA (SQ. FT.)	MAXIMUM HEIGHT OF COVER (FT.) SHEET THICKNESS IN INCHES (GAGE) 0.060 (16)	0.075 (14)	0.105 (12)	0.135 (10)	0.164 (8)	MIN. HEIGHT OF COVER (FT.)
36	7.1	33	42	60	NA	NA	
42	9.6	28	36	51	NA	NA	
48	12.6	24	31	45	58	NA	
54	15.9	NS	28	39	51	NA	
60	19.6	NS	24	35	46	NA	SEE
66	23.8	NS	NS	32	42	51	DWG
72	28.3	NS	NS	29	38	47	703
78	33.2	NS	NS	NS	35	43	
84	38.5	NS	NS	NS	32	40	
90	44.2	NS	NS	NS	30	37	
96	50.3	NS	NS	NS	NS	34	
102	56.7	NS	NS	NS	NS	32	
108	63.6	NS	NS	NS	NS	NS	
114	70.9	NS	NS	NS	NS	NS	
120	78.5	NS	NS	NS	NS	NS	

PIPE ARCH - 2-2/3" X 1/2" CORRUGATION

SPAN (IN)	RISE (IN)	EQUIV. ROUND PIPE (IN)	AREA (SQ. FT.)	MINIMUM SHEET THICKNESS REQUIRED (IN) (GA)	MAXIMUM HEIGHT OF COVER (FT) MAXIMUM CORNER PRESSURE-LBS/SQ.FT 4000	6000	MIN. HEIGHT OF COVER (FT.)
17	13	15	1.1	.060 (16)	12	15	
21	15	18	1.6	.060 (16)	10	14	
24	18	21	2.2	.060 (16)	7	13	
28	20	24	2.9	.075 (14)	5	11	
35	24	30	4.5	.105 (12)	NS	7	SEE
42	29	36	6.5	.105 (12)	NS	7	DWG
49	33	42	8.9	.135 (10)	NS	6	703
57	38	48	11.6	.164 (8)	NS	8	
64	43	54	14.7	.164 (8)	NS	9	
71	47	60	18.1	.164 (8)	NS	10	
77	52	66	21.9	.164 (8)	NS	10	
83	57	72	26.0	.164 (8)	NS	10	

PIPE ARCH - 3" X 1" AND 5" X 1" CORRUGATION

SPAN (IN)	RISE (IN)	EQUIV. ROUND PIPE (IN)	AREA (SQ. FT.)	MINIMUM SHEET THICKNESS REQUIRED (IN) (GA)	MAXIMUM HEIGHT OF COVER (FT) MAXIMUM CORNER PRESSURE-LBS/SQ.FT 4000	6000	MIN. HEIGHT OF COVER (FT.)
40	31	36	7.0	.075 (14)	8	12	
46	36	42	9.4	.075 (14)	8	13	
53	41	48	12.3	.075 (14)	8	13	
60	46	54	15.6	.075 (14)	8	13	
66	51	60	19.3	.075 (14)	8	13	SEE
73	55	66	23.2	.105 (12)	11	16	DWG
81	59	72	27.4	.105 (12)	11	17	703
87	63	78	32.1	.135 (10)	10	16	
95	67	84	37.0	.135 (10)	11	17	
103	71	90	42.4	.135 (10)	10	15	
112	75	96	48.0	.164 (8)	10	16	
117	79	102	54.2	.164 (8)	10	15	

NA - NOT AVAILABLE

LA - LIMITED AVAILABILITY

NS - NOT APPROVED (FOR HIGHWAY H-20 LOADINGS)

City of Buford, Georgia

STANDARD DRAWING

Standard Pipe Culverts - Detail No. 2

DATE: SEPTEMBER 25, 2014 SHEET: 702

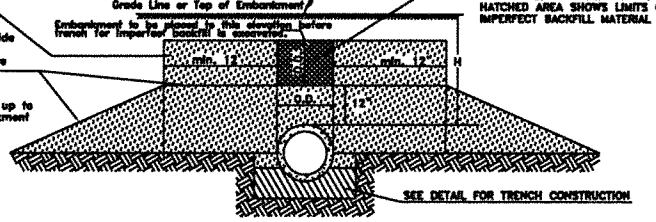
NORMAL BACKFILL

Backfill, as shown by the broken line sections, shall consist of placing compactable soil in 8"(Loose) layers and compacting each layer (according to GDOT Standard Specifications) on both sides of pipe for its full length.

Normal embankment shall be placed a minimum of 12' wide on each side of the pipe and at least the minimum cover over the pipe and compacted to the required density before equipment is allowed to cross.

After backfill has been compacted, the balance of the fill up to grade line shall be constructed in accordance with embankment specifications.

LONGITUDINAL SECTION OF IMPERFECT TRENCH BACKFILL AND BACKFILL METHODS



IMPERFECT BACKFILL

IMPERFECT BACKFILL WILL BE USED WITH CONCRETE PIPE IF AN EXTRAPOLATION OF FILL HEIGHT AND PIPE DIAMETER IN TABLE NO. 1 FALLS ON THE RIGHT SIDE OF THE HEAVY LINE, CROSS HATCHED AREA SHOWS LIMITS OF STRUCTURE EVACUATION AND IMPERFECT BACKFILL MATERIAL TYPE III IN THIS VIEW.

TABLE NO. 1

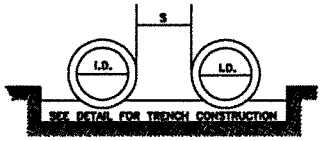
TABLE SHOWING THE MINIMUM CLASSES OF CONCRETE PIPE FOR VARIOUS HEIGHTS OF FILL ABOVE TOP OF PIPE

PIPE DIAMETER (Inches)	HEIGHT OF FILL IN FEET ABOVE TOP OF PIPE											
	1-10	10-15	15-20	20-25	25-30	30-35	35-40	40-50	50-60	60-70	70-80	80-90
12	III	III	IV	V	V	IV	IV	IV	V	V	V	
15	III	III	IV	V	V	IV	IV	IV	V	V	V	
18	III	III	IV	V	V	IV	IV	IV	V	V	V	
24	III	III	IV	V	V	IV	IV	IV	V	V	V	
30	III	III	IV	V	V	IV	IV	IV	V	V	V	
36	III	III	IV	V	V	IV	IV	IV	V	V	V	
42	III	III	IV	V	V	IV	IV	IV	V	V	V	
48	III	III	IV	V	V	IV	IV	IV	V	V	V	
54	III	III	IV	V	V	IV	IV	IV	V	V	V	
60	III	III	IV	V	V	IV	IV	IV	V	V	V	
66	III	III	IV	V	V	IV	IV	IV	V	V		
72	III	III	IV	V	V	IV	IV	IV	V	V		
78	III	III	IV	IV	IV	IV	IV	IV	V			
84	III	III	IV	IV	IV	IV	IV	IV	V			
90	III	III										
96	III	III										
102	III	III										
108	III	III										

FOR CONDITIONS BETWEEN THE HEAVY LINE & DOUBLE LINE CLASS IV CONCRETE PIPE REQUIRES IMPERFECT BACKFILL ACCORDING TO DETAIL "A".

FOR CONDITIONS TO THE RIGHT OF THE DOUBLE LINE CLASS V CONCRETE PIPE REQUIRES IMPERFECT BACKFILL ACCORDING TO DETAIL "B".

MULTIPLE PIPE CULVERT SPACING

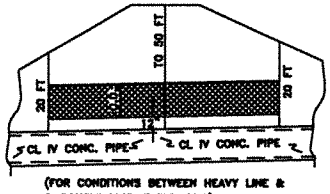


S= One inside diameter of pipe or 3 feet, whichever is smaller.
For pipe arch culverts, substitute span for inside diameter.

NOTE:
For Multiple Lines of C.M. Pipe with metal Flared End Sections, S may be increased enough to avoid overlap of End Section wingtips. Location of metal End Section should be determined before placement of pipe.

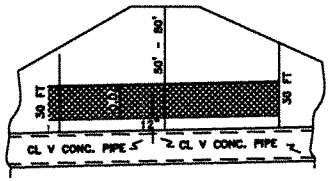
CROSS SECTIONS OF IMPERFECT TRENCH BACKFILL

CROSS HATCHED AREAS SHOW LIMITS OF CONSTRUCTION FOR STRUCTURE EXCAVATION & IMPERFECT TRENCH BACKFILL MATERIAL, TYPE III



(FOR CONDITIONS BETWEEN HEAVY LINE & & DOUBLE LINE, TABLE NO.1)

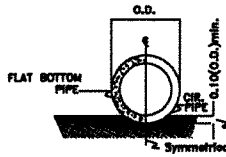
DETAIL "A"



(FOR CONDITIONS ON RIGHT SIDE OF DOUBLE LINE, TABLE NO.1)

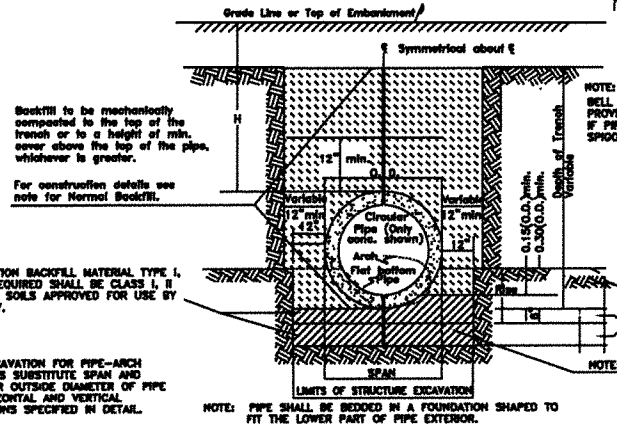
DETAIL "B"

TRENCH CONSTRUCTION FOR SIDE DRAIN



NOTE:
THE PIPE SHALL BE BEDDED TO LINE AND GRADE IN A FIRM FOUNDATION SHAPED TO FIT THE LOWER PART OF THE PIPE EXTERIOR. WHERE ROCK EXISTS, EXCAVATE AND BACKFILL WITH COMPRESSIBLE MATERIAL(Unclassified Excavation) A MINIMUM OF 6" BELOW THE PIPE.

TRENCH CONSTRUCTION FOR STORM DRAIN



NOTE: BELL HOLES SHALL BE PROVIDED IN BEDDING IF PIPE HAS BELL AND SPIGOT JOINTS.

FOUNDATION BACKFILL MATERIAL TYPE I, WHEN REQUIRED SHALL BE CLASS I, II OR III-A SOILS APPROVED FOR USE BY THE CITY.

FOR EXCAVATION FOR PIPE-ARCH CULVERTS SUBSTITUTE SPAN AND RISE FOR OUTSIDE DIAMETER OF PIPE IN HORIZONTAL AND VERTICAL DIMENSIONS SPECIFIED IN DETAIL.

NOTE: PIPE SHALL BE BEDDED IN A FOUNDATION SHAPED TO FIT THE LOWER PART OF PIPE EXTERIOR.

minimum Depth of Trench 0.030(O.D.)

FOUNDATION BACKFILL MATERIAL TYPE I OR II

NOTE: Where an incompressible foundation exists, excavate an additional 6".
Where an unstable foundation material is encountered, excavate an additional depth as shown on Plans or as directed by the City.

DETAIL SHOWING MINIMUM COVER FOR PIPE CULVERTS

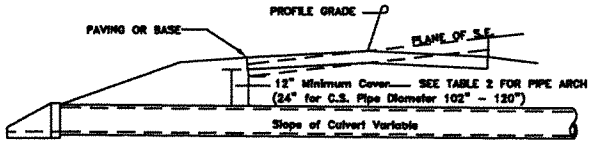


TABLE NO. 3 - (INFORMATION ONLY)

	Cor. Metal Thickness	Equivalent Gage
STEEL	0.064	16
	0.079	14
	0.109	12
	0.138	10
	0.168	8

TABLE NO. 2 (PIPE-ARCH)

TABLE SHOWING MINIMUM THICKNESS IN INCHES OF CORRUGATED STEEL AND MAXIMUM HEIGHTS OF FILL ABOVE THE TOP OF THE PIPE-ARCH.

Diameter of Pipe of Equal Periphery Inch	SPAN INCH	RISE INCH	MIN. THICKNESS (Inches) COR. STEEL ①	②	MINIMUM COVER INCHES	MAX. HT. FILL FEET
15	17	13	.064		18	15
18	21	15	.064		18	15
21	24	18	.064		18	12
24	28	20	.064		18	10
30	35	24	.064		18	9
36	42	29	.064		18	8
	40	31		.079	18	9
42	49	33	.079		18	7
	48	36	.079	.079	18	12
48	57	38	.109		18	7
	53	41		.079	18	14
54	64	43	.109		18	7
	60	46		.079	18	12
60	71	47	.138		18	7
	66	51		.079	18	12
66	77	52	.168		18	7
	73	55		.079	18	15
72	83	57	.168		18	9
	81	58		.079	18	15
78	87	61		.079	18	12
84	95	67		.109	18	12
90	103	71		.109	24	11

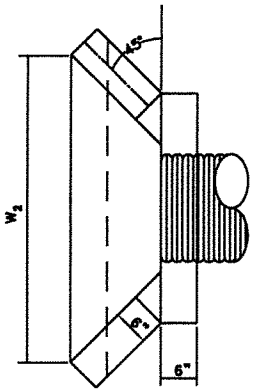
① DENOTES 2-2/3"X1/2" CORRUGATION.
② DENOTES 3"X1" CORRUGATION.

City of Buford, Georgia

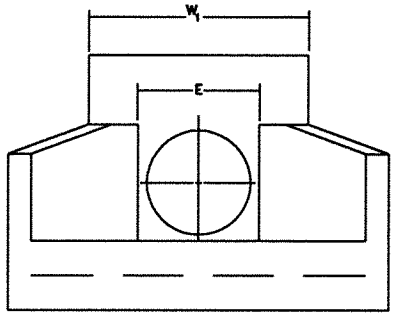
STANDARD DRAWING

Standard Pipe Culverts - Concrete Pipe

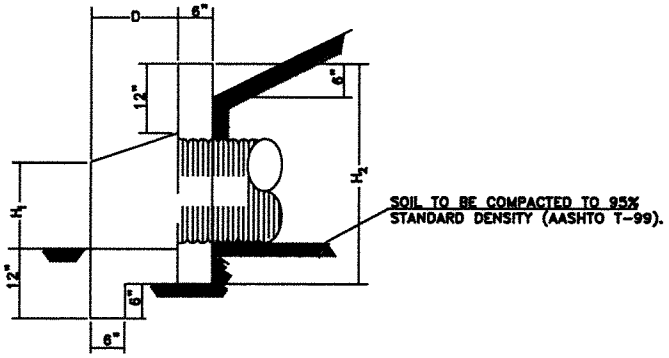
DATE: SEPTEMBER 25, 2014 SHEET: 703



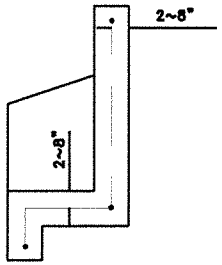
PLAN



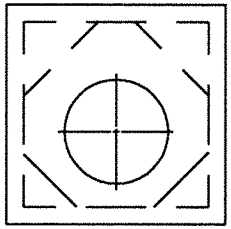
FRONT ELEVATION



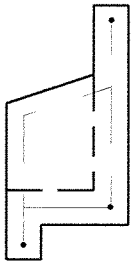
SIDE



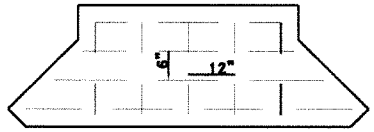
BASE AND WALL SECTION



WALL SECTION



WING SECTION



BASE SECTION

TABLE 1								
HEADWALL DIMENSIONS FOR METAL PIPE*								
INSIDE DIA. OF PIPE	W_1	W_2	H_1	H_2	D	E	WT.	BASE AREA (SQ.FT.)
18"	3'-2"	4'-10"	1'-3"	3'-2"	1'-3"	1'-9"	1,550	7.34
21",24"	3'-8"	6'-1"	1'-9"	3'-8"	1'-6"	2'-3"	2,100	9.90
30"	4'-2"	7'-2"	2'-0"	4'-2"	1'-10"	2'-9"	2,850	13.50
36"	4'-8"	8'-4"	2'-4"	4'-8"	2'-2"	3'-3"	3,700	17.65
42",48",54"	5'-8"	10'-10"	3'-3"	5'-8"	2'-11"	4'-3"	5,600	28.60

*USE NEXT LARGER SIZE FOR CONCRETE PIPE

NOTES:

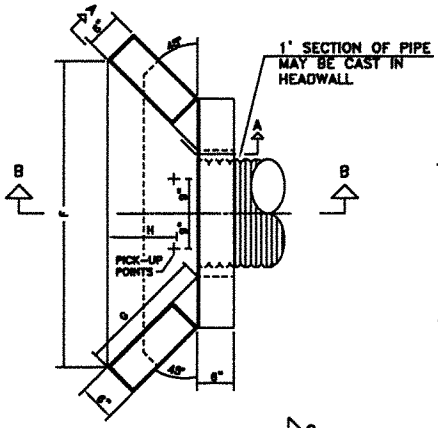
1. CONCRETE: MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI.
2. REINFORCEMENT STEEL TO BE 1/2"ø, GRADE 60.
3. CHAMFER ALL EXPOSED EDGES 3/4".

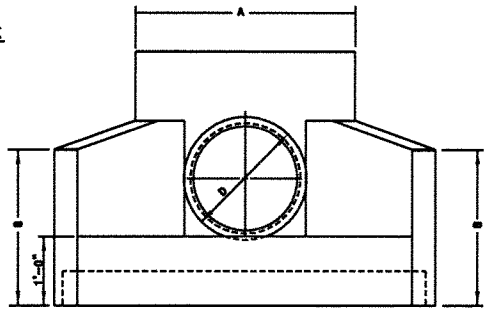
City of Buford, Georgia

STANDARD DRAWING

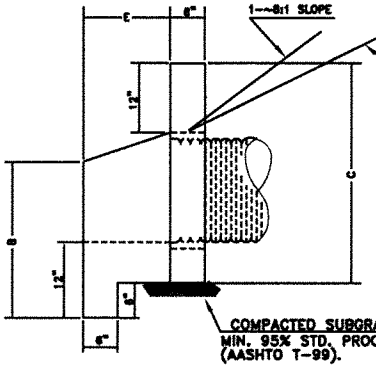
Precast Concrete Headwall System

DATE: SEPTEMBER 25, 2014 SHEET: 704





FRONT ELEVATION

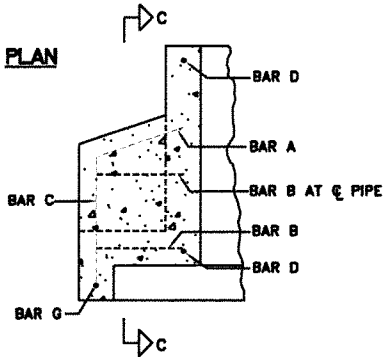


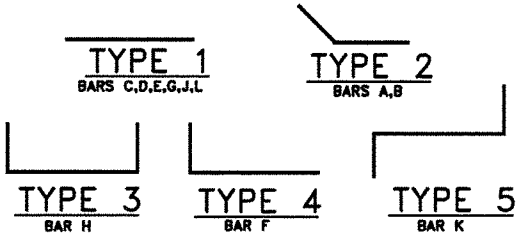
SIDE ELEVATION

NOTES:

1. CONCRETE: MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI.
2. REINFORCEMENT STEEL TO BE 1/2"ø, GRADE 60.
3. PLACE REINFORCEMENT 2" MINIMUM CLEARANCE.
4. CHAMFER ALL EXPOSED EDGES 3/4".

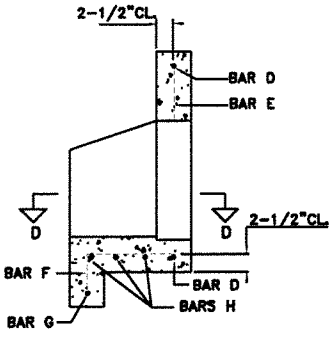
PLAN





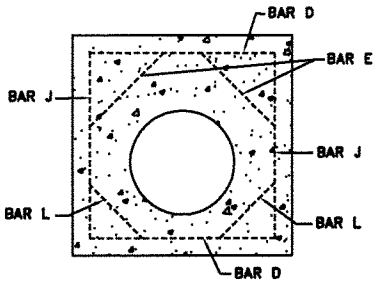
VARIABLE DIMENSIONS(CONCRETE PIPE)												
CU YDS CONC	INSIDE DIA PIPE	AREA DIA PIPE	A	B	C	D	E	F	G	H	WT	BASE AREA
0.43	18"	1.76	3'-3"	2'-4"	3'-4-5"	2'-0"	1'-6"	4'-10"	2'-0"	1'-0-4"	1,763	8.30
0.50	21"	2.40	3'-8-8"	2'-6"	3'-6"	2'-3-8"	1'-6"	5'-3-8"	2'-1-8"	1'-0-r"	2,020	9.40
0.51	24"	3.14	4'-0"	2'-8"	3'-11"	3'-1"	1'-6"	5'-11"	2-4-8"	1'-1-w"	2,088	11.80
0.79	30"	4.91	4'-8-8"	3'-1"	4'-5-8"	3'-1-8"	2'-0"	7'-1-8"	2'-10"	1'-3-r"	3,162	16.10
1.00	36"	7.07	5'-1"	3'-8"	6'-0"	3'-8"	2'-4"	8'-0"	3'-3-8"	1'-6"	4,069	19.60

VARIABLE DIMENSIONS (METAL PIPE)												
CU YDS CONC	INSIDE DIA PIPE	AREA DIA PIPE	A	B	C	D	E	F	G	H	WT	BASE AREA
0.38	18"	1.76	3'-2"	2'-3"	3'-2"	1'-8"	1'-4"	4'-8"	1'-10-8"	0'-11-w"	1,648	7.34
0.44	21"	2.40	3'-5"	2'-5"	3'-5"	2'-0"	1'-6"	4'-10"	2'-0"	1'-0-4"	1,770	8.32
0.52	24"	3.14	3'-8"	2'-7"	3'-8"	2'-3"	1'-7"	5'-6"	2'-3"	1'-1-4"	2,108	9.90
0.70	30"	4.91	4'-2"	2'-11"	4'-2"	2'-8"	1'-11"	6'-7"	2'-8-8"	1'-3-4"	2,834	13.50
0.91	36"	7.07	4'-8"	3'-3"	4'-8"	3'-3"	2'-3"	7'-0"	3'-2-4"	1'-3-8"	3,676	17.65



SECTION B-B

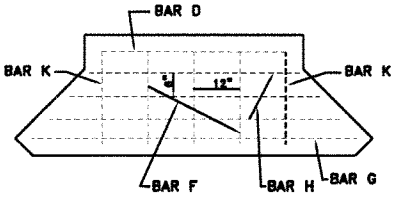
SECTION A-A



SECTION C-C

BAR REINF. DETAILS

REINF. STEEL TO BE 1/2"ø BARS.



SECTION D-D

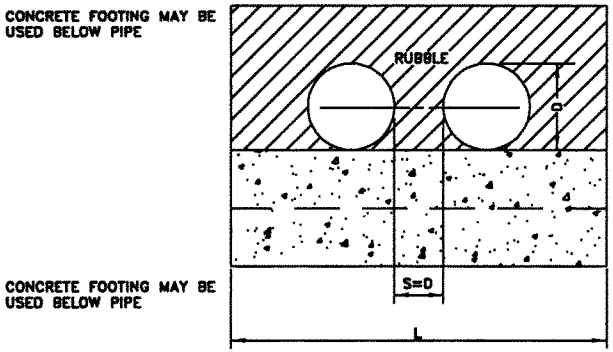
City of Buford, Georgia

STANDARD DRAWING

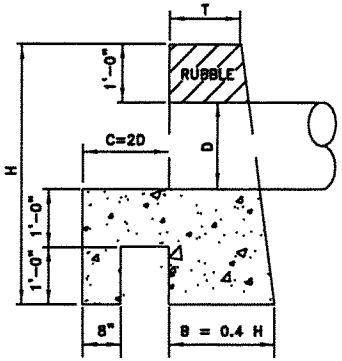
Cast Concrete Headwall

DATE: SEPTEMBER 25, 2014 SHEET: 705

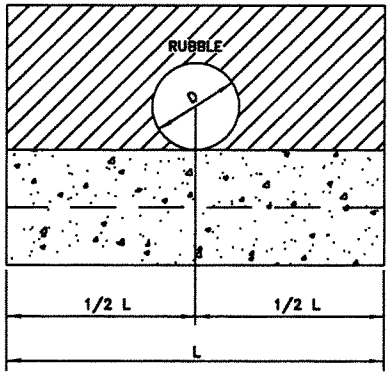
NOTE:
TO BE USED WHERE SPILLING OF MATERIAL AROUND THE END OF WALL WILL NOT IMPEDE FLOW. USE ONLY WHEN AUTHORIZED BY THE CITY.



DOUBLE LINE OF PIPE



SECTION



SINGLE LINE OF PIPE

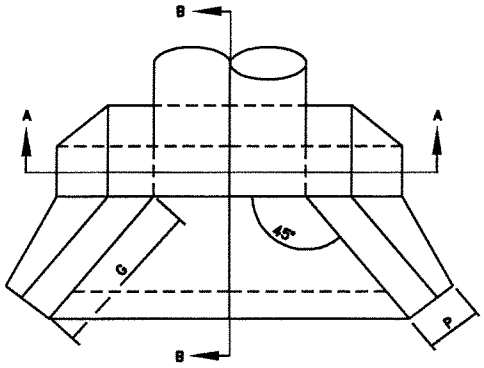
DIMENSIONS AND QUANTITIES FOR ONE END WALL – SINGLE LINE OF PIPE						
D	H	L	T	B	BATTER	CY
12"	4'–0"	4'–6"	15"	1'–7"	1:1	0.91
15"	4'–3"	5'–6"	15"	1'–8"	1–1/4:1	1.22
18"	4'–6"	6'–6"	15"	1'–10"	1–5/8:1	1.58
21"	4'–9"	7'–6"	15"	1'–11"	1–3/4:1	2.03
24"	5'–0"	8'–6"	15"	2'–0"	1–3/4:1	2.37
30"	5'–6"	10'–6"	15"	2'–2"	2–1/8:1	3.40
36"	6'–0"	12'–6"	15"	2'–5"	2–3/8:1	4.68
42"	6'–6"	14'–6"	15"	2'–7"	2–1/2:1	5.30
48"	7'–0"	16'–6"	15"	2'–10"	2–3/4:1	6.12
54"	7'–6"	18'–6"	15"	3'–0"	2–7/8:1	6.99
60"	8'–0"	20'–6"	15"	3'–3"	3:1	7.92
66"	8'–6"	22'–6"	15"	3'–5"	3:1	8.93
72"	9'–0"	24'–6"	15"	3'–7"	3–1/8:1	9.99

City of Buford, Georgia

STANDARD DRAWING

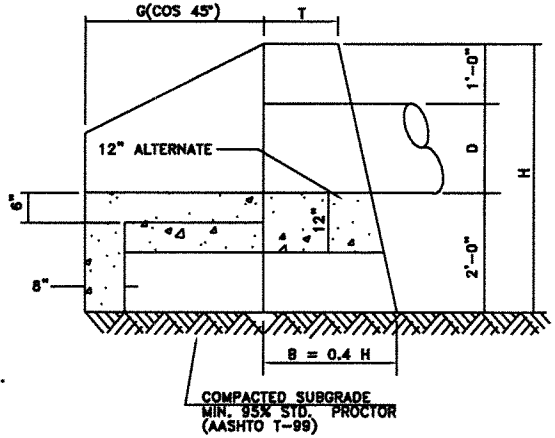
Standard Rubble Headwall

DATE: SEPTEMBER 25, 2014 SHEET: 706

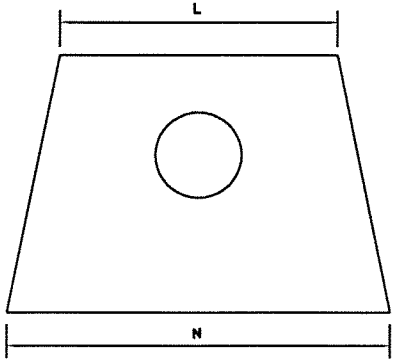


CONCRETE FOR APRON: MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI.

PLAN



SECTION B-B

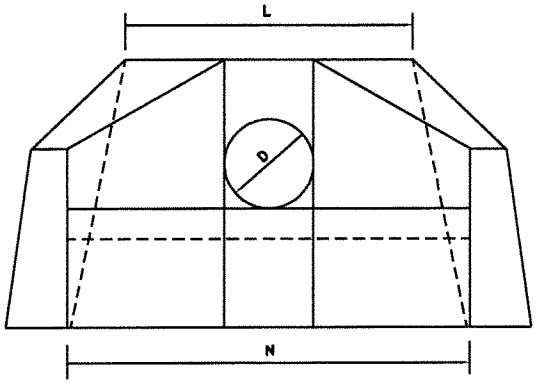


SECTION A-A

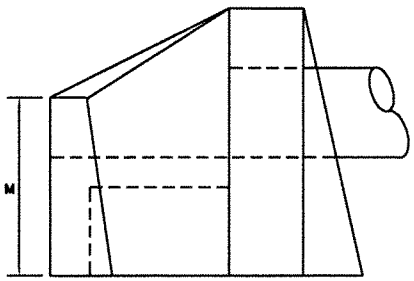
NOTE:

HEADWALLS TO BE BUILT ACCORDING TO GDOT STANDARD SPECIFICATIONS FOR CEMENT RUBBLE MASONRY. STONE TO BE BEDDED IN 1/3 PORTLAND CEMENT MORTAR.
HEADERS TO BE DISTRIBUTED THROUGH WALLS SO AS TO FORM ABOUT ONE SIXTH OF FACE OF WALL, AND TO EXTEND ENTIRELY THROUGH THE WALL.
WALLS TO BE NEATLY TOPPED WITH A LAYER OF 1-1 MORTAR, AT LEAST 1" THICK, TROWELED SMOOTH, AND BEVELED AT EDGES. DEPTH OF WALL BELOW PIPE TO BE VARIED TO SUIT LOCAL CONDITIONS.
WHERE DEPTH OF WALL IS INCREASED BY MORE THAN 2'-0", USE 0.4 OF HEIGHT FOR WIDTH OF BASE INSTEAD OF CONTINUING BATTER.
12" ALTERNATE FOOTING MAY BE USED.

VARIABLE DIMENSIONS								
D	B	G	H	L	M	N	P	T
18	1'-10"	3'-4"	4'-6"	5'-0"	3'-4"	6'-4"	1'-4"	15"
21	1'-11"	3'-6"	4'-9"	5'-3"	3'-6"	6'-11"	1'-5"	15"
24	2'-0"	3'-9"	5'-0"	5'-6"	3'-9"	7'-4"	1'-6"	15"
30	2'-2"	4'-0"	5'-6"	6'-0"	4'-1"	8'-4"	1'-8"	15"
36	2'-5"	4'-6"	6'-0"	6'-6"	4'-5"	9'-4"	1'-10"	15"
42	2'-7"	4'-11"	6'-6"	7'-0"	4'-9"	10'-2"	1'-11"	15"
48	2'-10"	5'-5"	7'-0"	7'-6"	5'-1"	11'-4"	2'-1"	15"
54	3'-0"	5'-11"	7'-6"	8'-0"	5'-5"	12'-2"	2'-2"	15"
60	3'-3"	6'-4"	8'-0"	8'-6"	5'-9"	13'-4"	2'-5"	15"
66	3'-5"	6'-10"	8'-6"	9'-0"	6'-1"	14'-6"	2'-6"	15"
72	3'-7"	7'-4"	9'-0"	9'-6"	6'-5"	15'-2"	2'-7"	15"



FRONT ELEVATION



SIDE ELEVATION

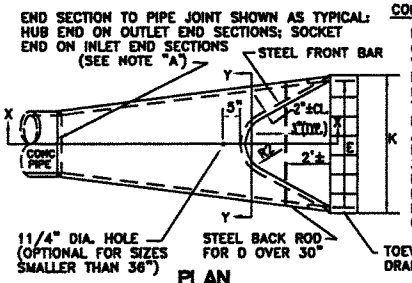
City of Buford, Georgia

STANDARD DRAWING

Standard Rubble Headwall With Wings

DATE: SEPTEMBER 25, 2014 SHEET: 707

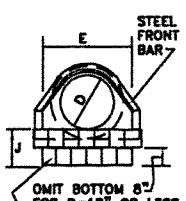
END SECTION TO PIPE JOINT SHOWN AS TYPICAL: HUB END ON OUTLET END SECTIONS; SOCKET END ON INLET END SECTIONS (SEE NOTE "A")



PLAN

CONCRETE FLARED END SECTION

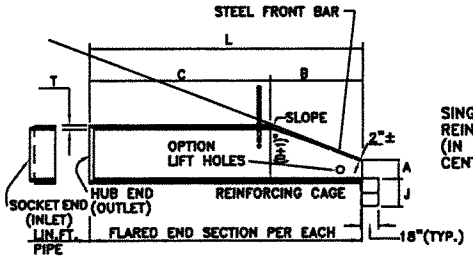
INSTALLATION:(D OVER 30") CABLE,CHAIN,OR LIFTING PIN WILL EXTEND THRU 1-1/4" HOLE WITH A PLATE OR REBAR CONNECTED INSIDE THE CONC. SECTION TO PROVIDE ADEQUATE BEARING AREA OR A LIFTING ASSEMBLY DEVICE MAY BE USED TO GIVE 3 LIFT POINTS. HOOKS CONNECTED DIRECTLY TO CONCRETE IS NOT PERMITTED DAMAGE FROM IMPROPER HANDLING SHALL BE CAUSE FOR REJECTION.



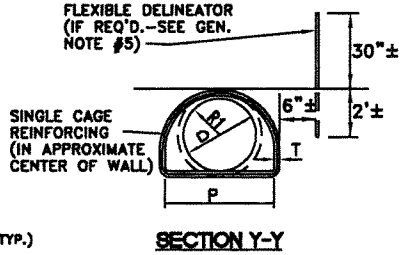
TOEWALL IF REQ'D (TYPICAL FOR STORM DRAIN OUTLETS, SEE GEN. NOTES #1,2&3)

FRONT

NOTE:
DO NOT CUT CONCRETE PIPE. USE FULL LENGTH SECTIONS ONLY. WARP SLOPE TO CONFORM WITH PIPE LENGTH AND END SECTION.



SECTION X-X



SECTION Y-Y

REINFORCING CAGE:
(1) WIRE FABRIC HAVING SAME STEEL AREA AS INNER CAGE FOR CL. III PIPE, AASHTO M-170, BUT PLACED IN CENTER OF WALL.
(2) ALTERNATE; #3 BARS SPACED 12"± LONGITUDINALLY WITH #2 BARS TRANSVERSELY AT 6"O.C. MAX. SPACING, SPOT WELDED OR TIED TO FORM CAGE. (BACK RODS MAY BE OMITTED.)

NOTE "A":
CONTRACTOR WILL INFORM PRODUCER IF CONCRETE FLARED END SECTION IS FOR INLET OR FOR OUTLET END. SOCKET (TONGUE OR SPIGOT) END IS REQUIRED FOR INLETS. HUB (GROOVE OR BELL) END IS REQUIRED FOR OUTLETS. SOCKET TO SOCKET OR HUB TO HUB JOINT WILL NOT BE ACCEPTED UNLESS A REINFORCED CONCRETE COLLAR IS BUILT AROUND THE JOINT WITH NO PAYMENT BEING MADE FOR THE COLLAR. FLARED END SECTIONS TO BE JOINTED TO PIPE WITH ALL SPACE IN THE JOINT FILLED WITH EITHER BITUMINOUS PLASTIC CEMENT OR PRE-FORMED PLASTIC GASKET (GDOT SEC. 848).

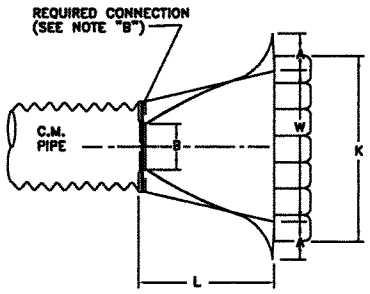
WALL THICKNESS (T) IS SHOWN AS NOMINAL AND MAY BE INCREASED AT PRODUCER'S OPTION FOR DESIRED JOINT DESIGN OR TO ALLOW A FLAT OUTSIDE BOTTOM ON THE FLARE. WITH INSIDE DIMENSIONS OF FLARE RETAINED AS SHOWN. T=PIPE WALL THICKNESS (0.08330+1" TYPICAL)

DIMENSIONS AND REINFORCING FOR CONCRETE FLARED END SECTIONS (± 1" TOLERANCE)

PIPE DIA.	FRONT BAR	BACK RODS	SLOPE	A	B	C	L	E	P	R1	R2
12"	4x5'4"	NOT REQ'D	2.2:1	4"	2'0"	4'1"	8'1"	2'0"	1'8"	10"	8"
15"	4x6'0"	NOT REQ'D	2.2:1	6"	2'3"	5'10"	8'1"	2'6"	2'0"	1'0"	11"
18"	4x7'2"	NOT REQ'D	2.2:1	9"	2'3"	5'10"	8'1"	3'0"	2'3"	1'4"	1'0"
24"	4x9'10"	NOT REQ'D	2.4:1	10"	3'8"	2'6"	8'2"	4'0"	2'9"	1'5"	1'2"
30"	4x11'8"	NOT REQ'D	2.4:1	12"	4'6"	1'8"	8'2"	5'0"	3'1"	1'6"	1'3"
36"	4x13'10"	2-#4x6'3"	2.4:1	15"	5'3"	2'1"	8'2"	6'0"	4'0"	2'0"	1'8"
42"	4x13'10"	2-#4x7'4"	2.4:1	21"	5'3"	2'11"	8'2"	6'6"	4'6"	2'4"	1'10"

NOTE:
SPECIFIED REINFORCING IS MINIMAL AND MAY BE INCREASED AT PRODUCER'S OPTION TO AID CASTING & HANDLING. ALTERNATE REINFORCEMENT PERMITTED IF APPROVED.

METAL FLARED END SECTION
(USE ONLY WITH COR. METAL PIPE)



PLAN

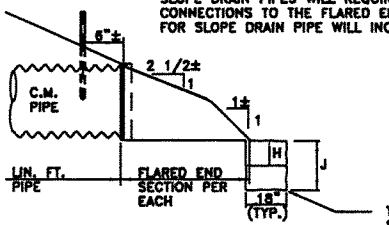
NOTE:
GALVANIZED STEEL FLARED END SECTIONS ARE TO BE USED ONLY WITH CORRUGATED STEEL PIPE UNLESS OTHERWISE APPROVED BY GDOT OFFICE OF MATERIAL AN TESTS.

FLARED END SECTION DIMENSIONS

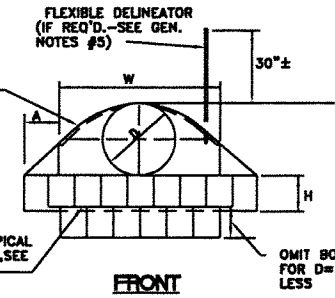
PIPE SIZE "D"	THICKNESS GALV. STEEL	A A=0.40 ± 1"	B B=0.50 ± 1"	H H=0.25D ±1"(MIN6")	L L=1.67D ± 11\2"	W W=2.00 ± 2"
12"	.064"	5"	6"	6"	1'8"	2'0"
15"	.064"	6"	7"	6"	2'3"	2'6"
18"	.064"	7"	9"	6"	2'6"	3'0"
24"	.064"	9"	1'0"	6"	3'4"	4'0"
30"	.079"	1'0"	1'3"	7"	4'2"	5'0"
36"	.079"	1'2"	1'6"	9"	5'0"	6'0"
42"	.109"	1'5"	1'9"	10"	5'10"	7'0"

NOTE:
WHERE METAL FLARED END SECTIONS ARE USED WITH MULTIPLE PIPE LINES, THE STANDARD SPACING BETWEEN PIPES. (S=D OR 3 FT.) MAY HAVE TO BE INCREASED (S=1.75D TYPICAL). TO PREVENT OVERLAP OF END SECTION WINGTIPS, SEE ALSO GDOT STD. 1030D.

NOTE:
SLOPE DRAIN PIPES WILL REQUIRE AN ELBOW FOR CONNECTIONS TO THE FLARED END SECTION. PAYMENT FOR SLOPE DRAIN PIPE WILL INCLUDE THIS ELBOW.



SIDE



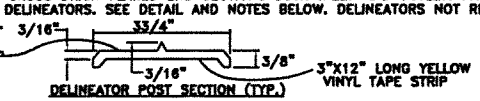
FRONT

TOEWALL DIMENSIONS AND QUANTITIES

D	J	K	ALTERNATE MATERIAL QUANTITIES: SAND CEMENT BAG RIP RAP 8" THICK NO. BAGS	SQ.YDS.	CONCRETE (CL. A OR B) OR MORTAR RUBBLE MASONRY CU.FT.@	CU.YDS.@	STONE GROUT RIP RAP OR STONE DUMP RIP RAP THICKNESS@	SQ.YDS.@
12"	8"	3'	3	0.500	3	0.111	8"	0.500
15"	8"	3'	3	0.500	3	0.111	8"	0.500
18"	8'	4'	4	0.667	4	0.148	8"	0.667
24"	16"	5'	9	1.500	10	0.370	16"	0.833
30"	16"	6'	11	1.833	12	0.444	16"	1.000
36"	16"	7'	13	2.167	14	0.518	16"	1.166
42"	16"	8'	15	2.500	16	0.592	16"	1.333

NOTE "B":
THE CONNECTION BETWEEN METAL FLARED END SECTION AND C.M. PIPE WILL BE ONE OF THE FOLLOWING:
(a) A STRAP BAND OR THREADED ROD PROVIDED BY THE MANUFACTURER WILL LOCK END SECTION ONTO PIPE. A CORRUGATION AT THE PIPE END WILL BE NON-SPIRALED (PERPENDICULAR TO CENTERLINE OF PIPE).
(b) A DIMPLE BAND COLLAR WILL BE SHOP BOLTED TO END SECTION. PIPE WILL BE INSERTED INTO THE BAND COLLAR TO MEET THE END SECTION.
(c) A STUB PIPE WILL BE RIVITED TO THE END SECTION AND THE MAIN PIPE CONNECTED TO THE STUB WITH A NORMAL CONNECTING BAND.
(d) OTHER TYPE CONNECTION IF RECOMMENTED BY MANUFACTURER AND APPROVED BY THE GDOT.

GENERAL NOTES:
1. TOEWALLS ARE FOR OUTLETS OF STORM DRAINS,EXCEPT WHERE CONCRETE DITCH PAVING OR OTHER EROSION PROTECTION IS PROVIDED OR WHERE THE OUTLET VELOCITY IS LESS THAN 8 FT./SEC. TOEWALLS ARE NOT REQUIRED FOR SIDE DRAINS, SLOPE DRAINS OR INLETS OF STORM DRAINS. THIS CRITERIA MAY BE VARIED WHERE SPECIFIED BY THE DESIGNER OR ENGINEER.
2. TOEWALLS WHICH ARE CONSTRUCTED WILL BE PAID FOR AS SQ. YDS. OF SAND CEMENT BAG RIPRAP 8" THICK, CONTRACTOR MAY ELECT TO USE ALTERNATE MATERIALS WITH NO ADJUSTMENTS TO BE MADE FOR PAYMENT.
3. TOEWALL DIMENSIONS ARE NOMINAL. TOEWALLS CONSTRUCTED WITH ALTERNATE MATERIALS TO HAVE APPROXIMATELY THE SAME DIMENSIONS AS INDICATED FOR RIP RAP. TOEWALLS CONSTRUCTED WITH CONCRETE MAY BE TRENCH FORMED. PLACEMENT OF RIP RAP MAY DIFFER FROM DETAILS SHOWN IF SO APPROVED BY THE ENGINEER.
4. CENTERLINE OF FLARED END SECTION WILL ALIGN WITH CENTERLINE OF PIPE. IF PIPE IS SKEWED, THE EMBANKMENT SLOPE WILL BE WARPED TO CONFORM WITH END SECTION.
5. FLEXIBLE DELINEATORS SHALL BE REQUIRED AT CROSS DRAIN FLARED END SECTIONS BOTH INLET AND OUTLET. PAYMENT FOR FLARED END SECTION WILL INCLUDE DELINEATORS. SEE DETAIL AND NOTES BELOW. DELINEATORS NOT REQ'D. FOR SIDE DRAIN, SLOPE DRAIN, OR LONG. PIPE.



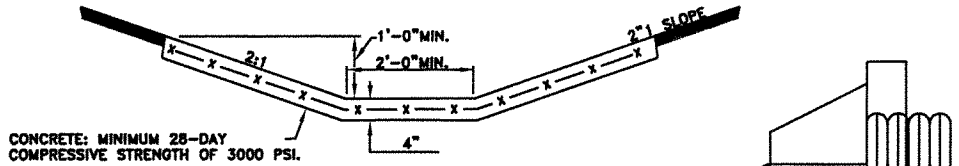
NOTE:
DELINEATOR POST TO CONFORM TO GDOT SEC. 911 FOR FLEXIBLE DELINEATOR POST, EXCEPT REFLECTIVE SHEETING IS NOT REQUIRED AND LENGTH IS 4'-6" FROM TOP TO BOTTOM POINT. ALTERNATES PERMITTED IF APPROVED BY GDOT LABORATORY.

City of Buford, Georgia

STANDARD DRAWING

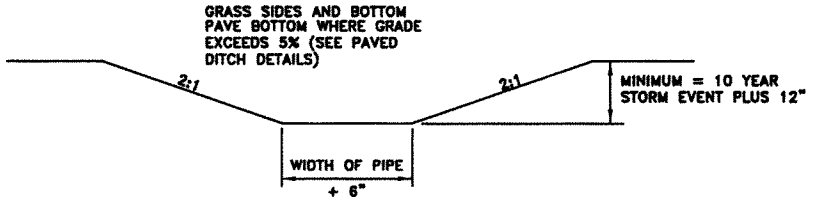
Standard Flared End Setions For Pipes

DATE: SEPTEMBER 25, 2014 SHEET: 708

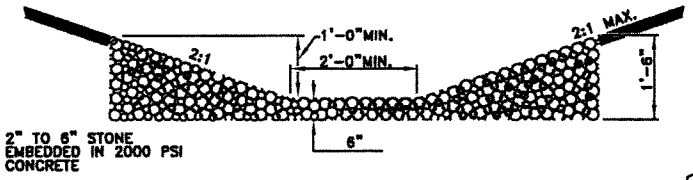


SECTION

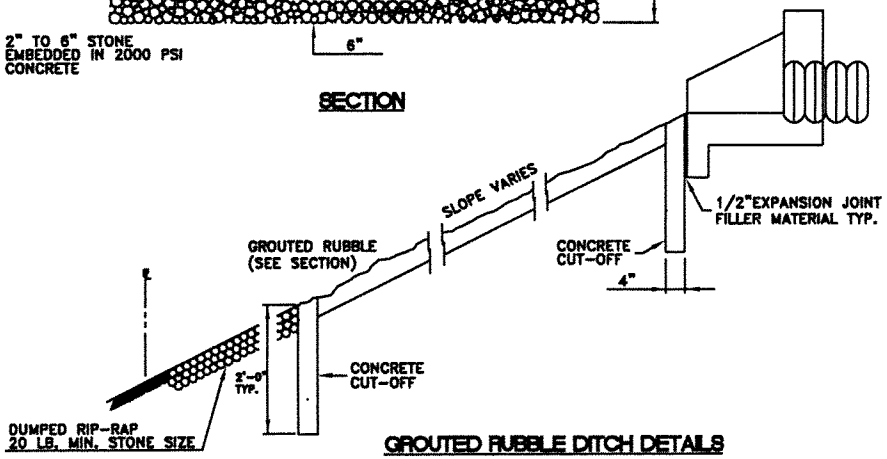
PAVED DITCH DETAILS



TYPICAL DRAINAGE DITCH CROSS SECTION



SECTION



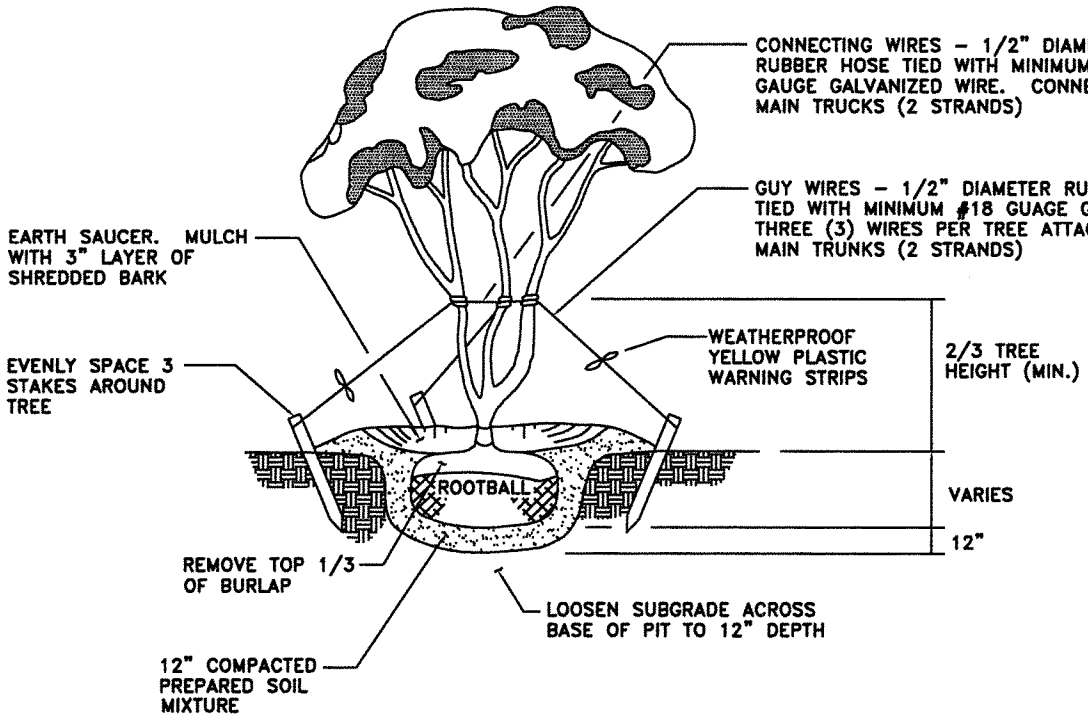
GROUTED RUBBLE DITCH DETAILS

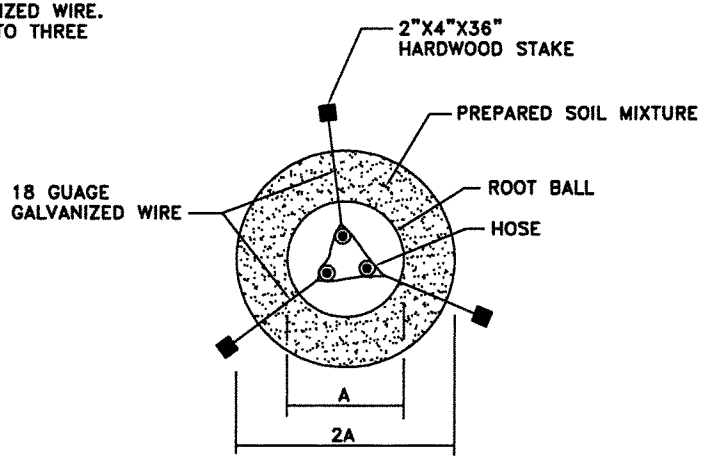
City of Buford, Georgia

STANDARD DRAWING

Drainage Ditch Details

DATE: SEPTEMBER 25, 2014 SHEET: 709





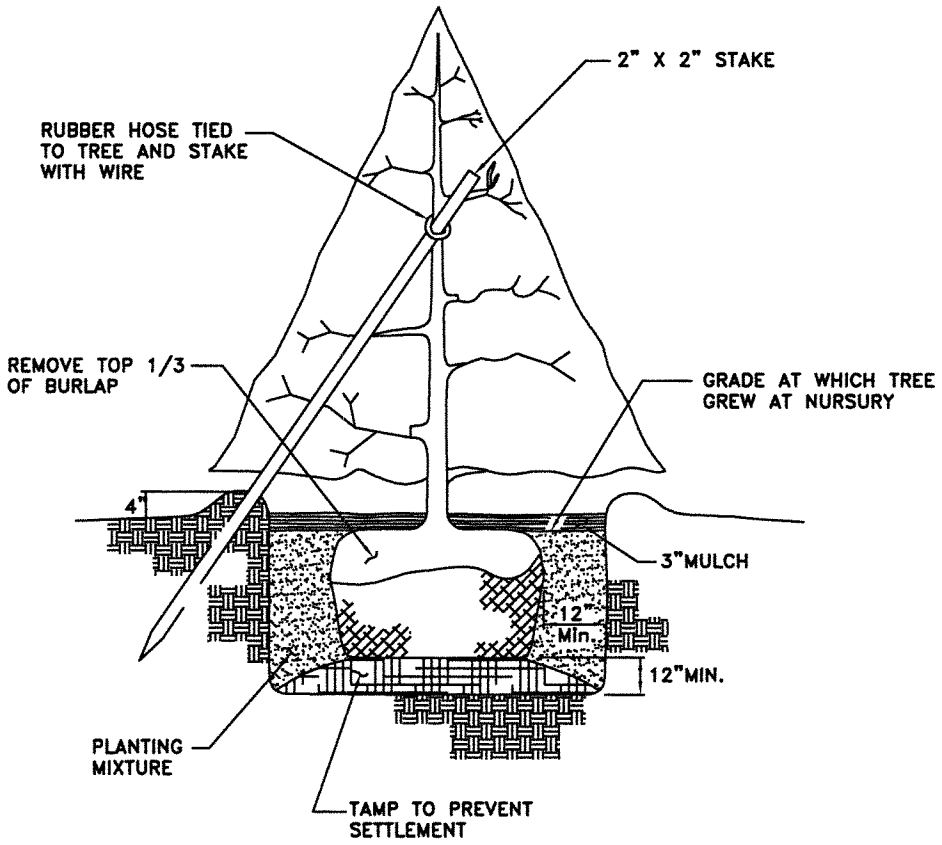
A = DIAMETER OF ROOT BALL
2A = DIAMETER OF PIT

City of Buford, Georgia

STANDARD DRAWING

Multi–Trunk Tree Planting

DATE: SEPTEMBER 25, 2014 SHEET: 801

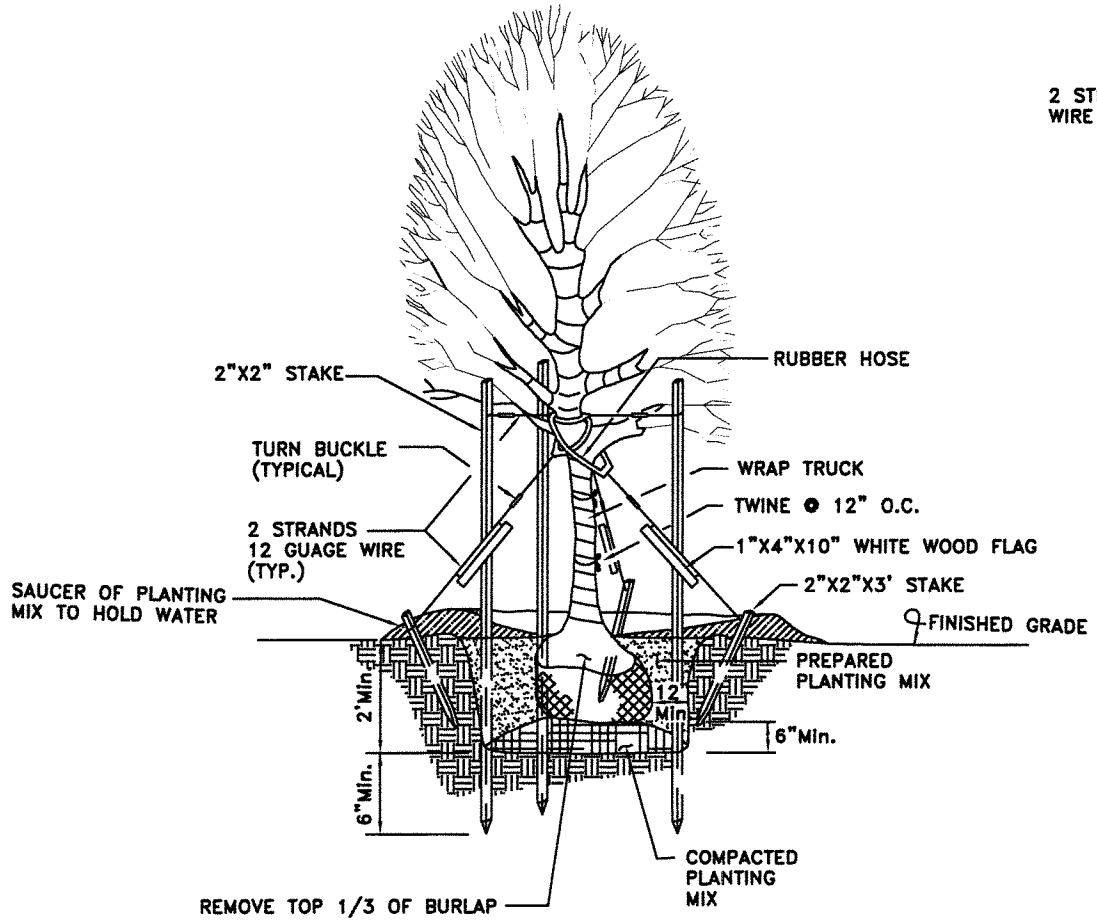


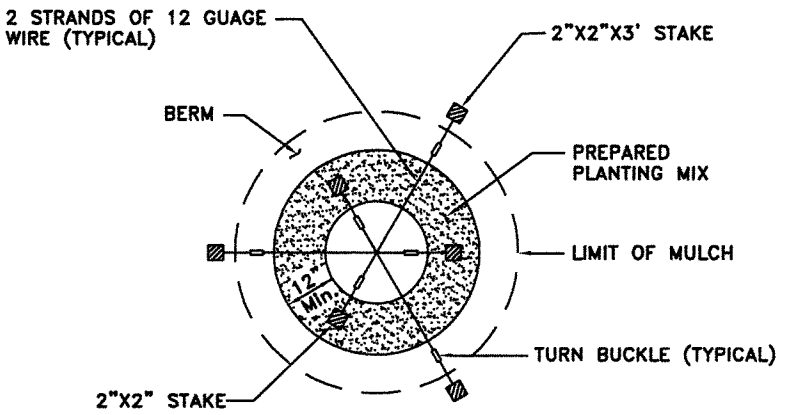
City of Buford, Georgia

STANDARD DRAWING

Evergreen Tree Planting

DATE: SEPTEMBER 25, 2014 SHEET: 802





NOTES

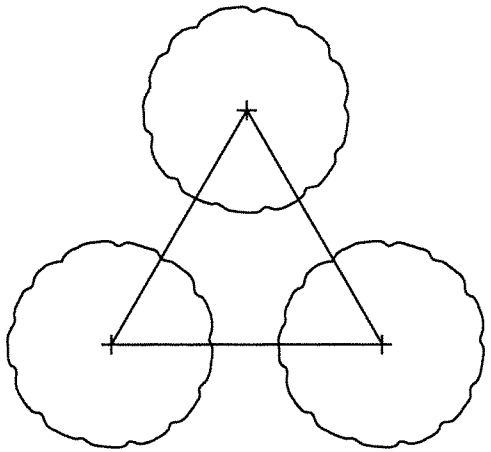
1. MULCH WITH 3" OF CLEAN PINE STRAW.
2. TREES EIGHT FEET HIGH (8') OR LESS TO BE STAKED.
3. TREES TALLER THAN EIGHT FEET (8') TO BE GUYED.

City of Buford, Georgia

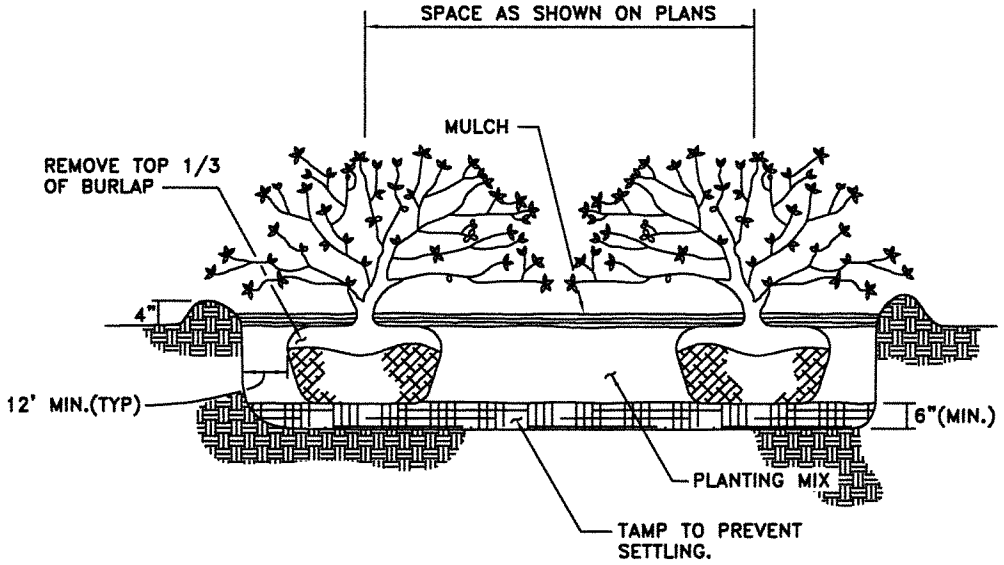
STANDARD DRAWING

Deciduous Tree Planting

DATE: SEPTEMBER 25, 2014 SHEET: 803



PLAN



SECTION

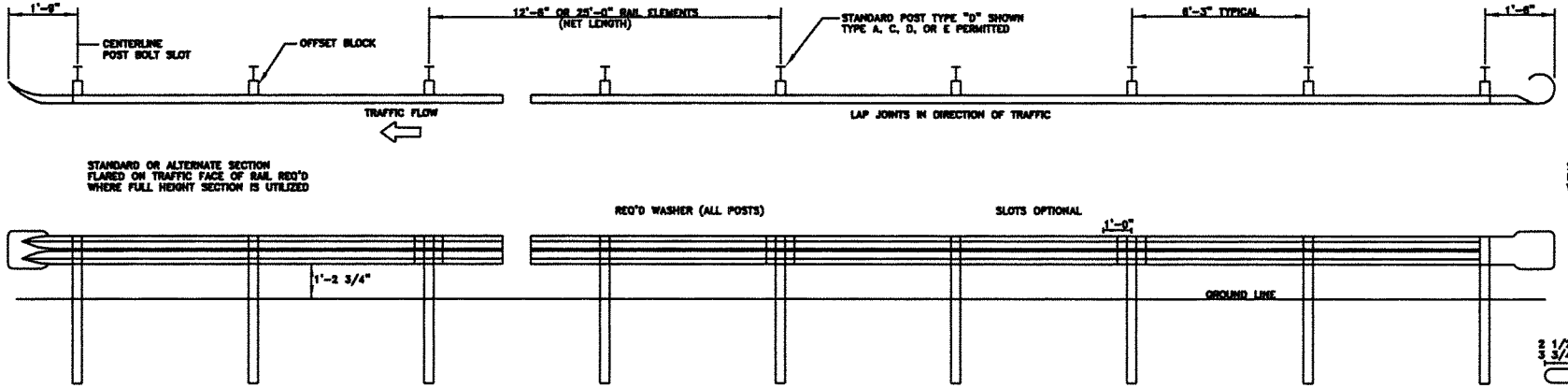
1. LAYOUT PERIMETER PLANTING AS PER SPACING SHOWN ON PLANS.
2. FILL IN PLANTING BED WITH STAGGERED SPACED PLANTING.

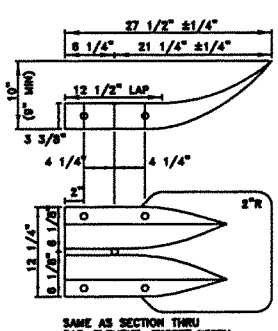
City of Buford, Georgia

STANDARD DRAWING

Shrub and Groundcover Planting

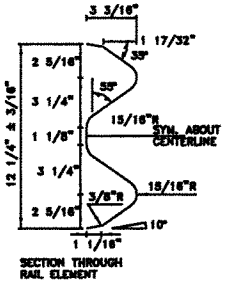
DATE: SEPTEMBER 25, 2014 SHEET: 804



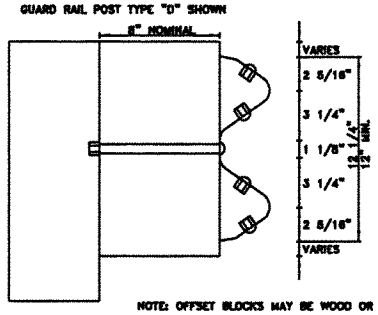


SAME AS SECTION THRU RAIL ELEMENT, EXCEPT WIDTH

STANDARD TERMINAL SECTION

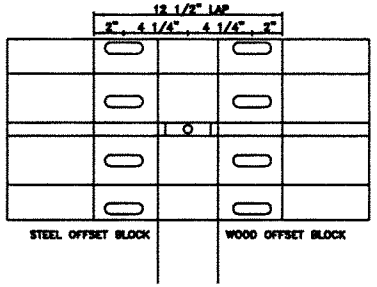


SECTION THROUGH RAIL ELEMENT

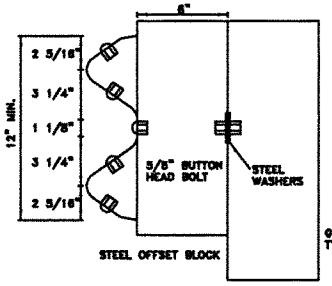


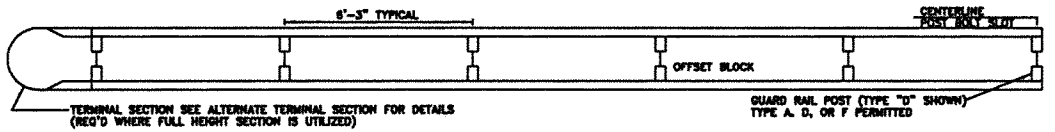
NOTE: OFFSET BLOCKS MAY BE WOOD OR STEEL

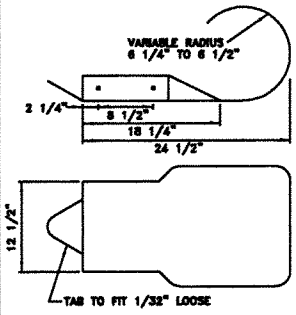
GUARD RAIL SPLICE AT POST



TYPE 2 OR 4 GUARD RAIL ANCHORAGE IF REQUIRED



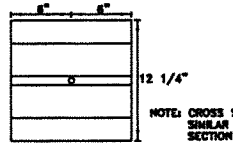




* ALTERNATE TERMINAL SECTION

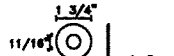
* TERMINAL SECTION FOR DOUBLE FACED GUARD RAIL SIMILAR RADIUS VARIABLE 18" TO 24" AND LENGTH VARIABLE

DOUBLE FACED GUARD RAIL



NOTE: CROSS SECTION OF PLATE SIMILAR TO GUARD RAIL SECTION

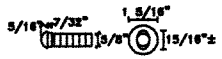
BACK-UP PLATE (REQ'D WITH STEEL OFFSET BLOCKS WHERE RAIL SPLICE DOES NOT OCCUR. LOCATED BACK OF RAIL)



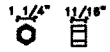
STEEL WASHER (GALV.)

5/8" ø HEX BOLT* AND HEX NUT*

* TO BE USED ONLY FOR ATTACHING STEEL OFFSET BLOCKS TO STEEL POSTS

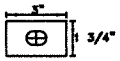


SPLICE BOLT (8 REQ'D PER SPLICE)



15/16" DIA. X 1/16" RECESS

RECESS NUTS



11/16" X 1" OVAL HOLE
NOTE: WASHER REQ'D AT ALL POSTS

RECTANGULAR WASHER (GALV.) (8 GAUGE)

GENERAL NOTES

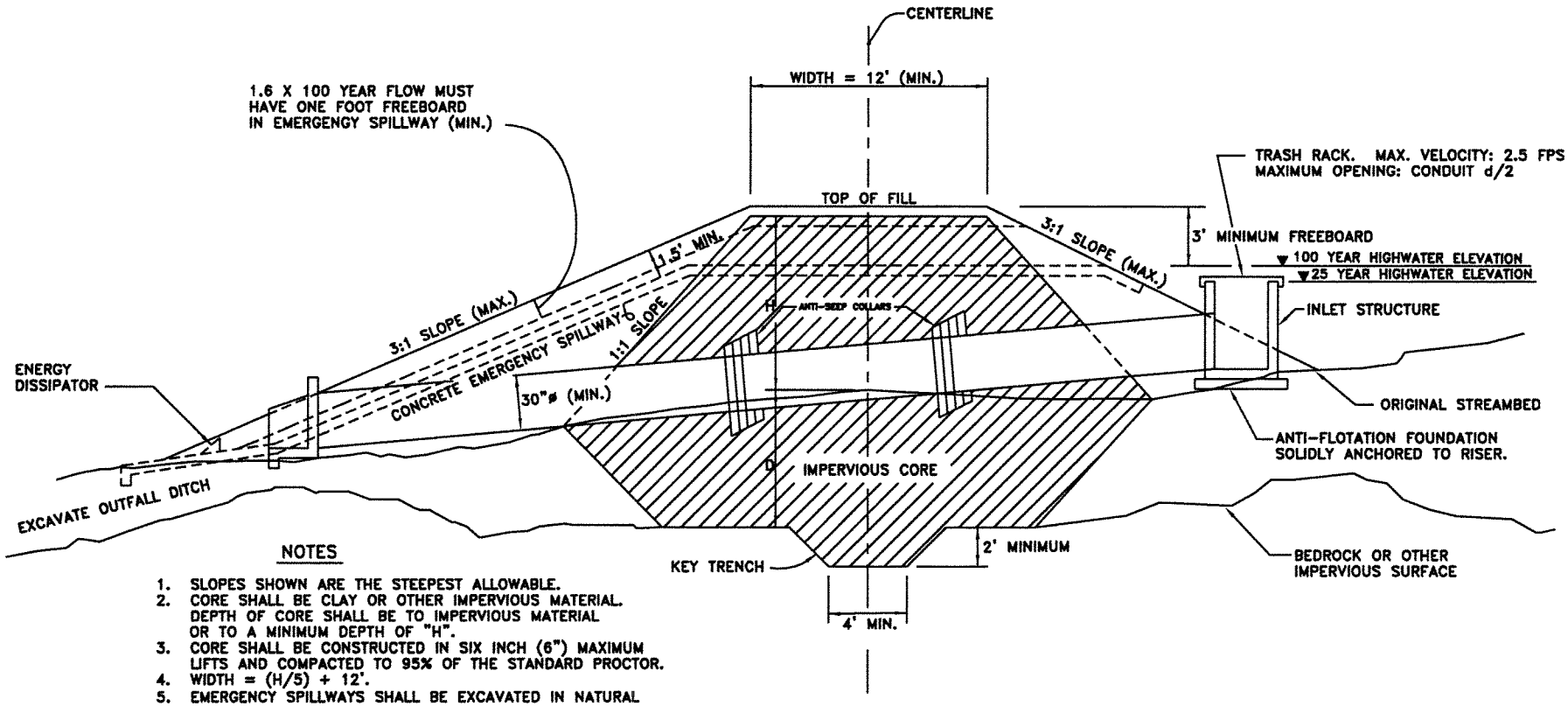
1. GUARD RAIL, ITS FITTINGS, PARTS, ETC. ARE TO BE IN ACCORDANCE WITH GDOT STANDARD SPECIFICATIONS AND/OR SPECIAL PROVISIONS.
2. FOR DETAILS OF POSTS AND OFFSET BLOCKS SEE GDOT STANDARD DWGS.
3. FOR DETAILS OF GUARD RAIL ANCHORAGES SEE GDOT STANDARD DWGS.
4. FOR LOCATION OF GUARD RAIL, SEE GDOT STANDARD DWGS.
5. ON PROJECTS WHERE GUARD RAIL CONNECTIONS AT BRIDGE ENDS HAVE BEEN PLACED ON PREVIOUS CONTRACTS THE END PANEL MAY BE SHORTENED BY CUTTING OR SHEARING TO FIT EXISTING STRUCTURE.
6. WHEN GUARD RAIL IS REQUIRED ON CURVES WITH RADII LESS THAN 150' PRECURVED RAIL WILL BE REQUIRED.
7. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
8. STANDARD NET LENGTH OF RAIL ELEMENTS MAY BE EITHER 12'-6" OR 25'-0" THESE LENGTHS ARE TO BE ARRANGED TO PROVIDE AS NEARLY AS POSSIBLE THE OVERALL LENGTH INDICATED ON THE PLANS.

City of Buford, Georgia

S T A N D A R D D R A W I N G

Beam Type Guardrail

D A T E: SEPTEMBER 25, 2014 S H E E T: 901



NOTES

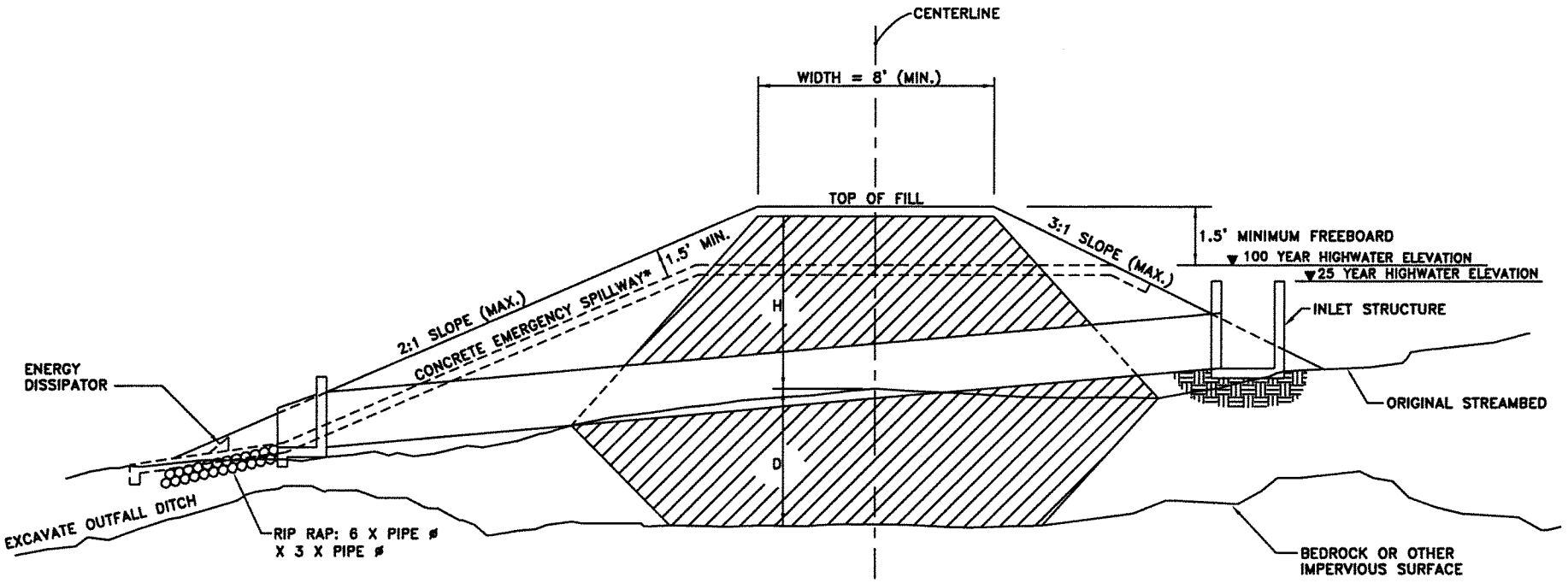
1. SLOPES SHOWN ARE THE STEEPEST ALLOWABLE.
2. CORE SHALL BE CLAY OR OTHER IMPERVIOUS MATERIAL. DEPTH OF CORE SHALL BE TO IMPERVIOUS MATERIAL OR TO A MINIMUM DEPTH OF "H".
3. CORE SHALL BE CONSTRUCTED IN SIX INCH (6") MAXIMUM LIFTS AND COMPACTED TO 95% OF THE STANDARD PROCTOR.
4. WIDTH = (H/5) + 12'.
5. EMERGENCY SPILLWAYS SHALL BE EXCAVATED IN NATURAL GROUND WHEN APPLICABLE.
6. ANTI-SEEP COLLARS ARE REQUIRED.
7. INLET OPENING SHALL BE NINE TIMES THE CROSS SECTIONAL AREA OF THE OUTLET CONDUIT.
8. PROVIDE BOUYANCY CALCULATIONS WITH SUBMITTAL.
9. PROVIDE HEC 1 RUN WITH PLAN SUBMITTAL.
10. ALL JOINTS SHALL BE WATER TIGHT UNDER MAXIMUM HYDROSTATIC LOAD AND JOINT EXTENTION.
11. CONDUIT SHALL BE CLASS V CONCRETE WITH GASKETS, ETC.
12. THESE GUIDELINES ARE A MINIMUM. USDA TR 60 SHALL APPLY IN ALL CASES WHERE TR 60 REQUIREMENTS ARE STRICTER.

City of Buford, Georgia

STANDARD DRAWING

Earthfill Dams for Wet Detention Ponds

DATE: SEPTEMBER 25, 2014 SHEET: 902



NOTES

1. SLOPES SHOWN ARE THE STEEPEST ALLOWABLE.
2. CORE SHALL BE CLAY.
3. DAM SHALL BE CONSTRUCTED IN SIX INCH (6") MAXIMUM LIFTS AND COMPACTED TO 95% OF THE STANDARD PROCTOR.
4. EMERGENCY SPILLWAYS SHALL BE EXCAVATED IN NATURAL GROUND WHEN APPLICABLE.
5. PROVIDE BOUYANCY CALCULATIONS WITH PLAN SUBMITTAL.
6. METAL PIPE SHALL BE FULLY COATED, WITH A PAVED INVERT.**
7. A SEPARATE OUTLET PIPE MAY BE UTILIZED FOR EXTENDED DETENTION.

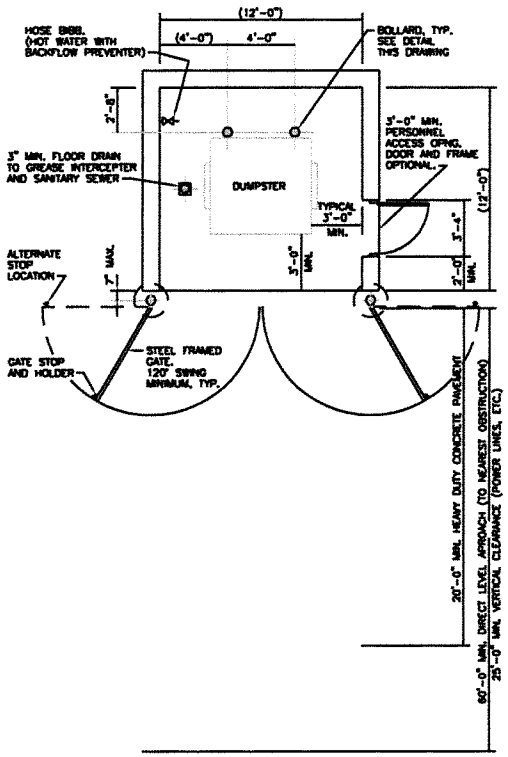
* ALL SWALES EXCEEDING 5% SHALL BE PAVED.
** PAVED INVERT FOR FLOWING STREAMS ONLY.

City of Buford, Georgia

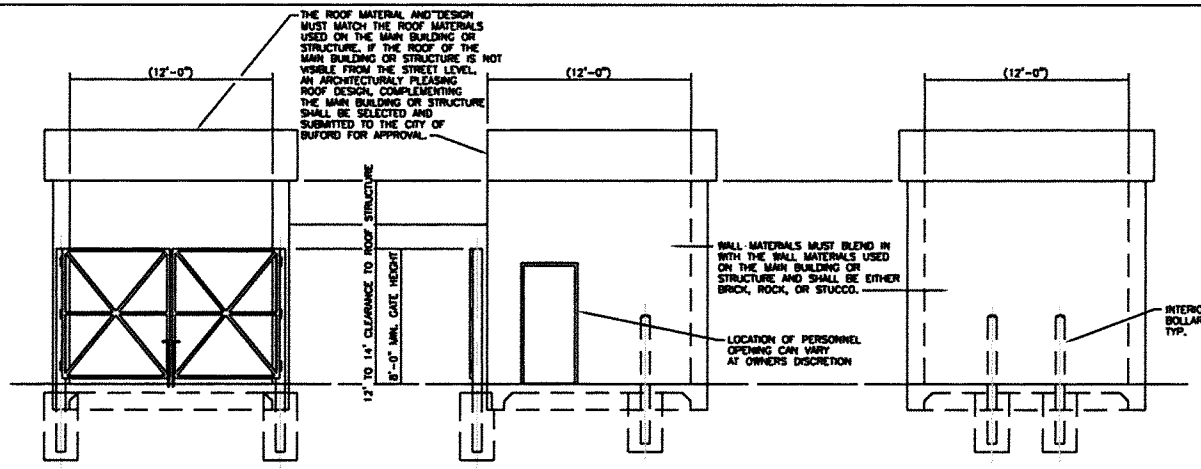
STANDARD DRAWING

Earthfill Dams for Normally Dry Detention Ponds

DATE: SEPTEMBER 25, 2014 SHEET: 903



PLAN
SCALE: 1/8"=1'-0"



FRONT ELEVATION
SCALE: 1/8"=1'-0"

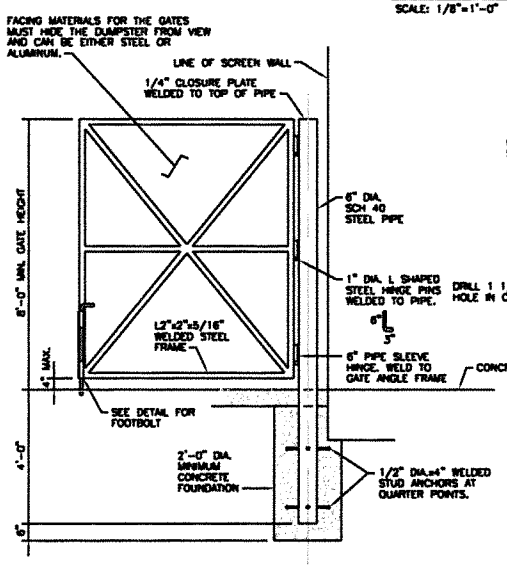
RIGHT SIDE ELEVATION
SCALE: 1/8"=1'-0"

LEFT SIDE ELEVATION OPP. HAND
SCALE: 1/8"=1'-0"

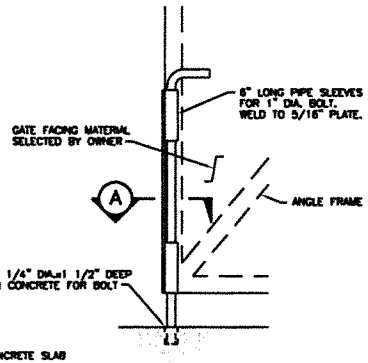
REAR ELEVATION
SCALE: 1/8"=1'-0"

NOTES:

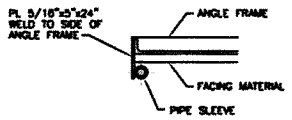
1. DESIGNERS ARE ENCOURAGED TO INCLUDE DUMPSTER ENCLOSURE AS A PART OF THE MAIN BUILDING OR STRUCTURE.
2. DIMENSIONS SHOWN IN PARENTHESIS ( ) MAY BE ADJUSTED TO REFLECT THE DUMPSTER SIZE SELECTED. CLEARANCE DIMENSIONS SHOWN IN PLAN MUST BE ADHERED TO AT ALL TIMES.
3. ROOF OVER DUMPSTER ENCLOSURE IS MANDATORY.
4. SLOPE CONCRETE FLOOR INSIDE ENCLOSURE TO FLOOR DRAIN.



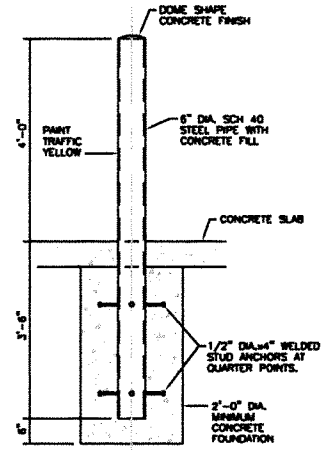
GATE FRAME DETAIL
SCALE: 1/4"=1'-0"



FOOTBOLT DETAIL
SCALE: 1"=1'-0"



SECTION (A)
SCALE: 1"=1'-0"



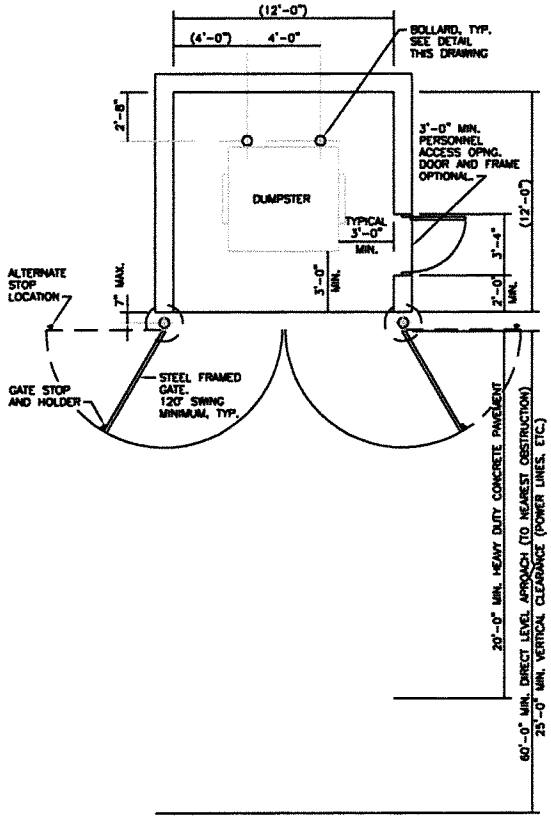
PIPE BOLLARD DETAIL
SCALE: 3/8"=1'-0"

City of Buford, Georgia

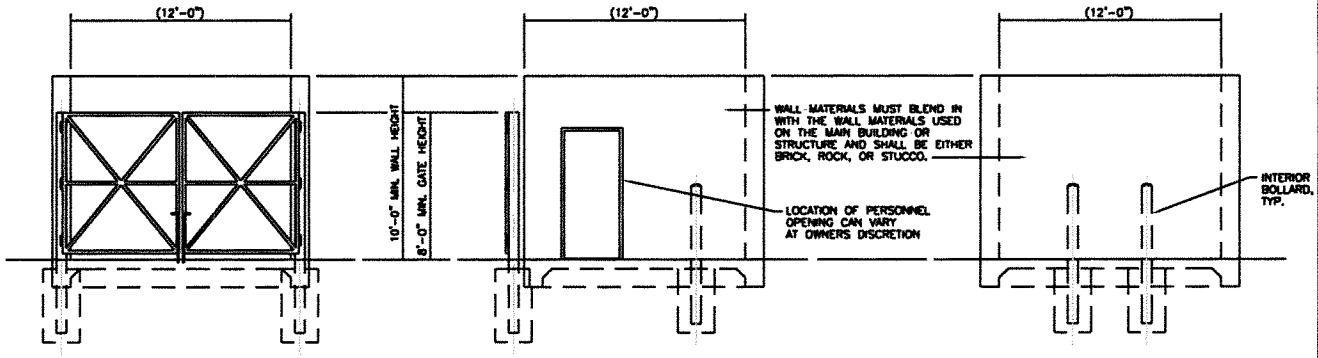
STANDARD DRAWING

Guidelines for Dumpster Enclosure (Food Service)

DATE: SEPTEMBER 25, 2014 SHEET: 904



PLAN
SCALE: 1/8"=1'-0"

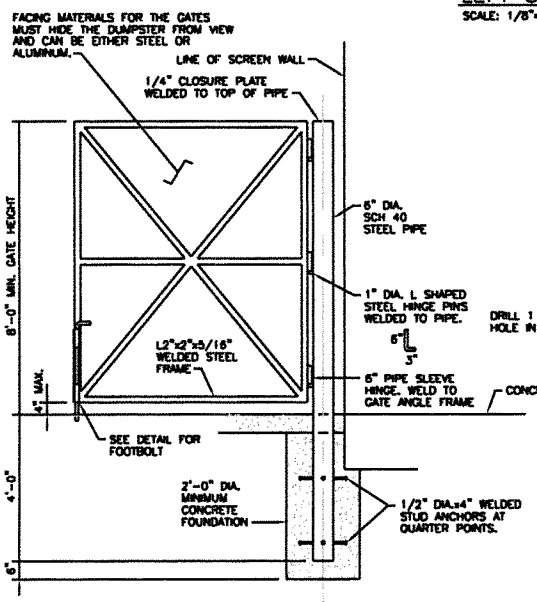


FRONT ELEVATION
SCALE: 1/8"=1'-0"

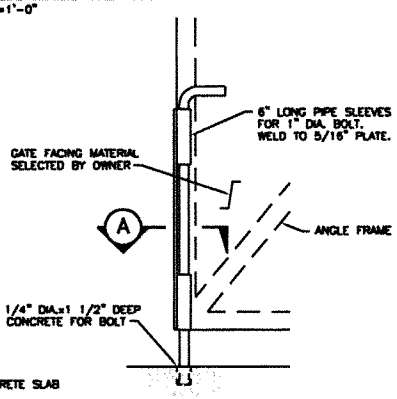
RIGHT SIDE ELEVATION
SCALE: 1/8"=1'-0"

LEFT SIDE ELEVATION OPP. HAND
SCALE: 1/8"=1'-0"

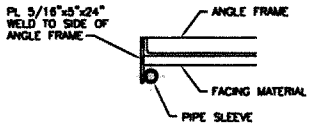
REAR ELEVATION
SCALE: 1/8"=1'-0"



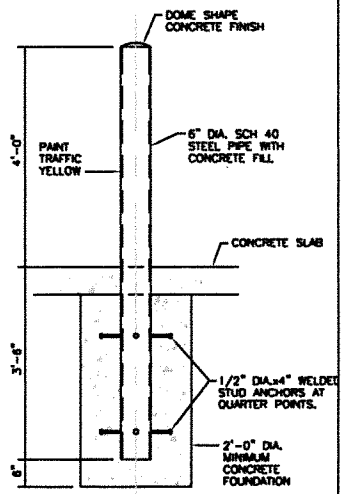
GATE FRAME DETAIL
SCALE: 1/4"=1'-0"



FOOTBOLT DETAIL
SCALE: 1"=1'-0"



SECTION (A)
SCALE: 1"=1'-0"



PIPE BOLLARD DETAIL
SCALE: 3/8"=1'-0"

NOTES:

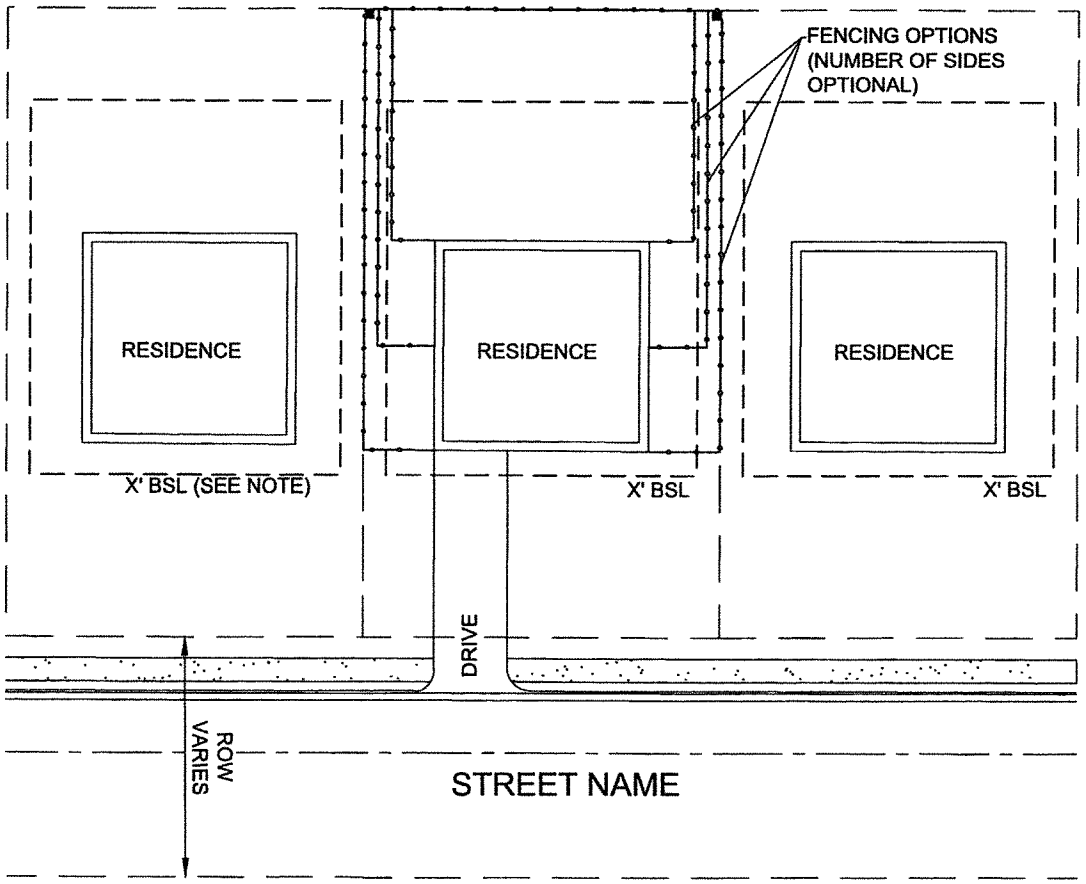
1. DESIGNERS ARE ENCOURAGED TO INCLUDE DUMPSTER ENCLOSURE AS A PART OF THE MAIN BUILDING OR STRUCTURE.
2. DIMENSIONS SHOWN IN PARENTHESIS ( ) MAY BE ADJUSTED TO REFLECT THE DUMPSTER SIZE SELECTED. CLEARANCE DIMENSIONS SHOWN IN PLAN MUST BE ADHERED TO AT ALL TIMES.

City of Buford, Georgia

STANDARD DRAWING

Guidelines for Dumpster Enclosure (Non Food Service)

DATE: SEPTEMBER 25, 2014 SHEET: 905



NOTES:

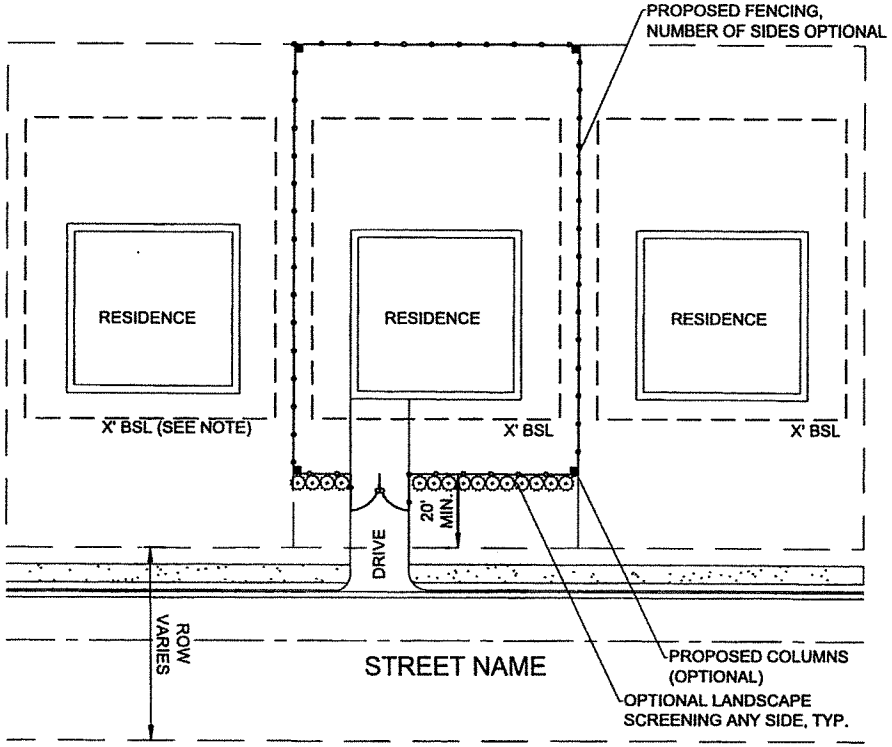
1) FENCING BEHIND THE FRONT ELEVATION OF THE RESIDENTIAL STRUCTURE DOES NOT REQUIRE PERMIT.
2) SEE CITY OF BUFORD ZONING ORDINANCE, SEC 700 - WALLS AND FENCES, FOR FENCE REQUIREMENTS AND DETAILS.
3) FENCING MATERIAL MAY BE WROUGHT IRON, WOOD, OR CHAIN LINK.
4) CORNER LOTS SHALL BE CONSIDERED TO HAVE TWO FRONT YARDS, FACING EACH PUBLIC RIGHT-OF-WAY.
5) SEE CITY OF BUFORD ZONING ORDINANCE, SEC 1401 - MINIMUM YARD AND HEIGHT REQUIREMENTS FOR REQUIRED SETBACKS.
6) SEE CITY OF BUFORD ZONING ORDINANCE, SEC 506 - CLASSIFICATION OF STREETS FOR REQUIRED RIGHT-OF-WAY WIDTHS.

City of Buford, Georgia

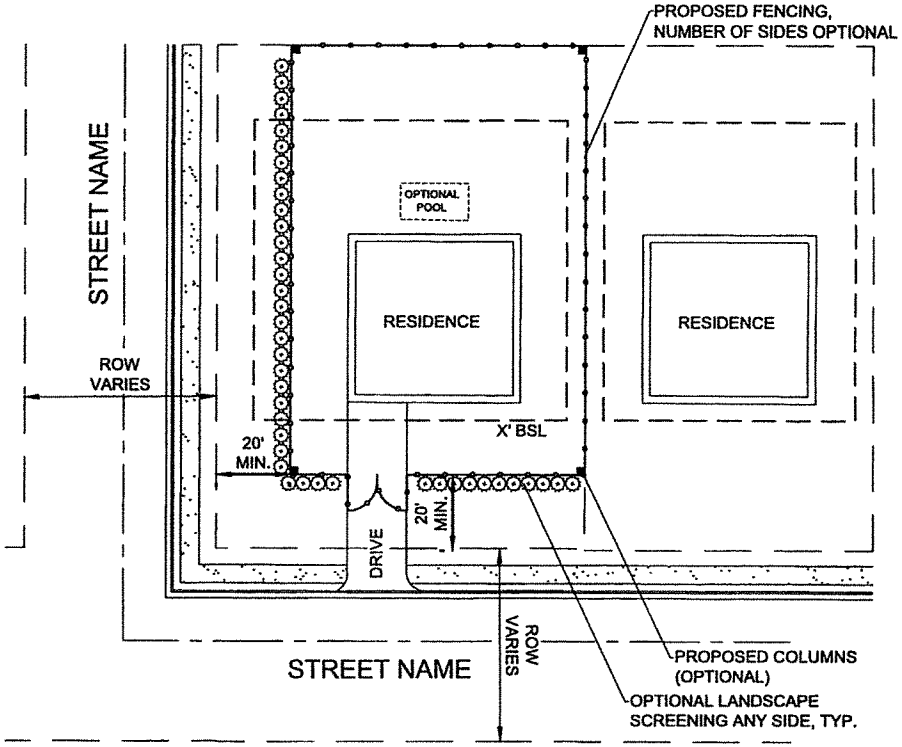
S T A N D A R D D R A W I N G

PERMISSIBLE REAR YARD FENCING

DATE: JANUARY 1, 2025 **SHEET: 908**



FENCING LAYOUT #1 - INTERIOR LOT
SCALE: N.T.S.



FENCING LAYOUT #2- CORNER LOT (OPTIONAL POOL)
SCALE: N.T.S.

NOTES:

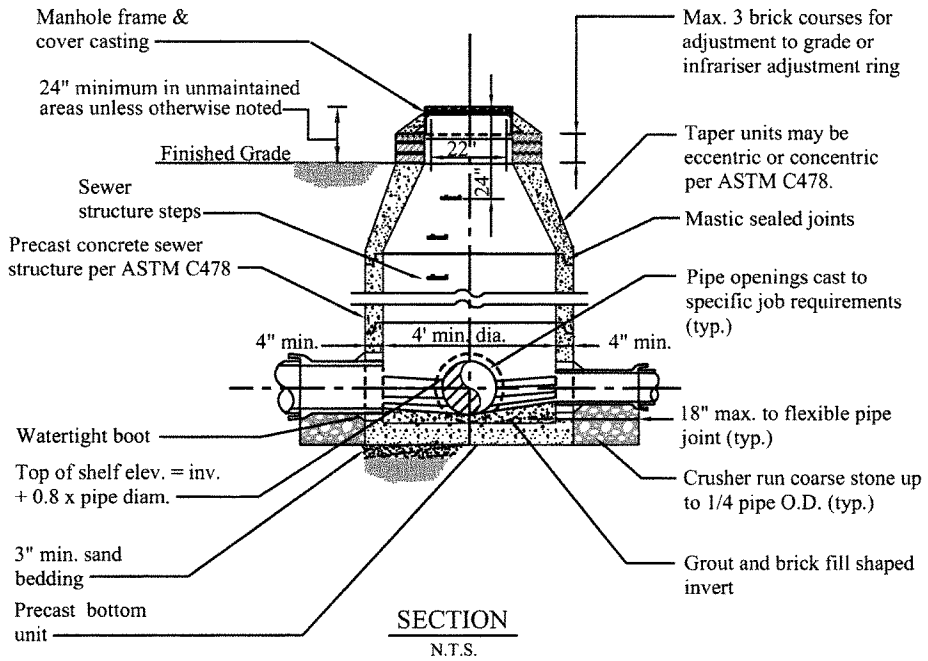
1) FRONT YARD FENCES PROJECTING BEYOND THE FRONT ELEVATION OF THE RESIDENTIAL STRUCTURE ARE REQUIRED TO BE PERMITTED BY THE DIRECTOR OF PLANNING AND DEVELOPMENT.
2) SEE CITY OF BUFORD ZONING ORDINANCE, SEC 700 - WALLS AND FENCES, FOR FENCE REQUIREMENTS AND DETAILS (ORNAMENTAL OR DECORATIVE ALUMINIZED METAL OF WROUGHT IRON PICKET STYLE, BLACK IN COLOR).
3) CORNER LOTS SHALL BE CONSIDERED TO HAVE TWO FRONT YARDS, FACING EACH PUBLIC RIGHT-OF-WAY.
4) SEE CITY OF BUFORD ZONING ORDINANCE, SEC 1401 - MINIMUM YARD AND HEIGHT REQUIREMENTS FOR REQUIRED SETBACKS.
5) SEE CITY OF BUFORD ZONING ORDINANCE, SEC 506 - CLASSIFICATION OF STREETS FOR REQUIRED RIGHT-OF-WAY WIDTHS.

City of Buford, Georgia

S T A N D A R D D R A W I N G

RESIDENTIAL FENCE LAYOUTS

DATE: JANUARY 1, 2025 **SHEET: 907**



SECTION

N.T.S.

NOTES:

1. SEWER STRUCTURE STEP REQUIREMENTS:

   Provide individual steps, mortared or cast into walls and conical tops of all manholes and similar structures. Align steps so as to form a continuous ladder with steps equally spaced vertically, no more than 16 inches apart, using steps having a minimum length of 10-inches and which project a minimum clear distance of four inches from the wall. Steps, fastenings and installation must be capable of supporting a single concentrated load of 300 pounds. Use designs based on imposed loads being concentrated at such points as will cause maximum stresses in the structural element being considered. Construct individual steps as one piece, ferrous casting or plastic coated steel meeting requirements of ASTM D4101-95b and A 615 grade 60.

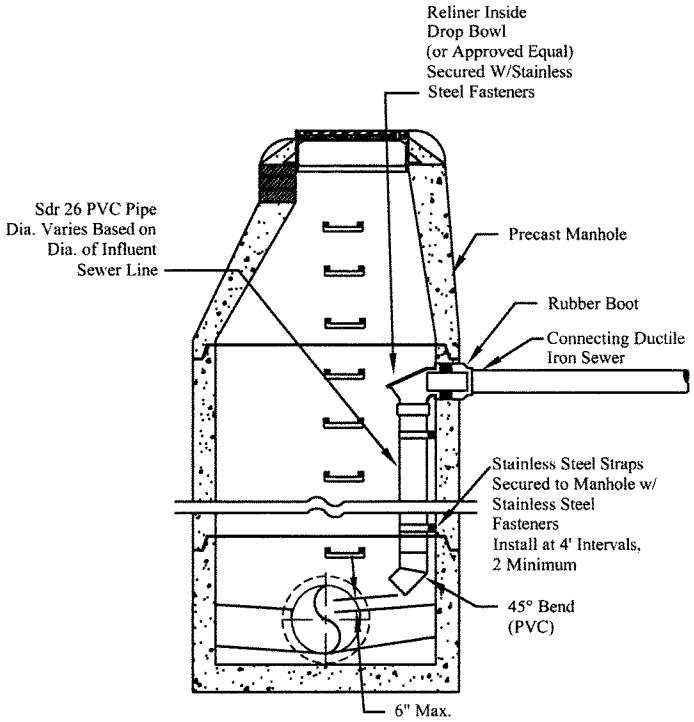
2. Provide watertight boot sleeve of high quality synthetic rubber. Terminate the sleeve at one end in a substantial serrated flange of the same material and cast into the wall of the manhole base to form a water stop. Embed the flange in the wall no less than 4-inches around the entire pipe. Fit the other end of the sleeve around the outside of the pipe and secure to the pipe by means of a stainless steel strap clamp, draw bolt and nut. Furnish synthetic rubber suitable for use in sewage service.

City of Buford, Georgia

STANDARD DRAWING

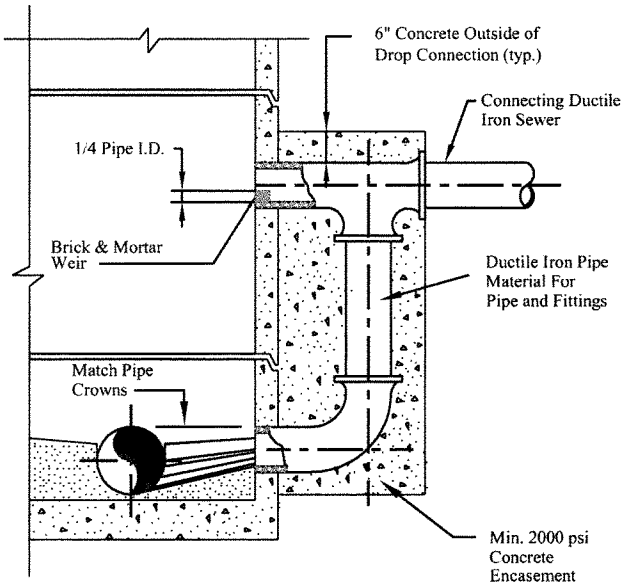
Sanitary Sewer Manhole

DATE: SEPTEMBER 25, 2014 SHEET: 1000



Minimum Manhole I.D.
For Inside Drop Connection
5'-0".

INSIDE DROP CONNECTION



Partial Section

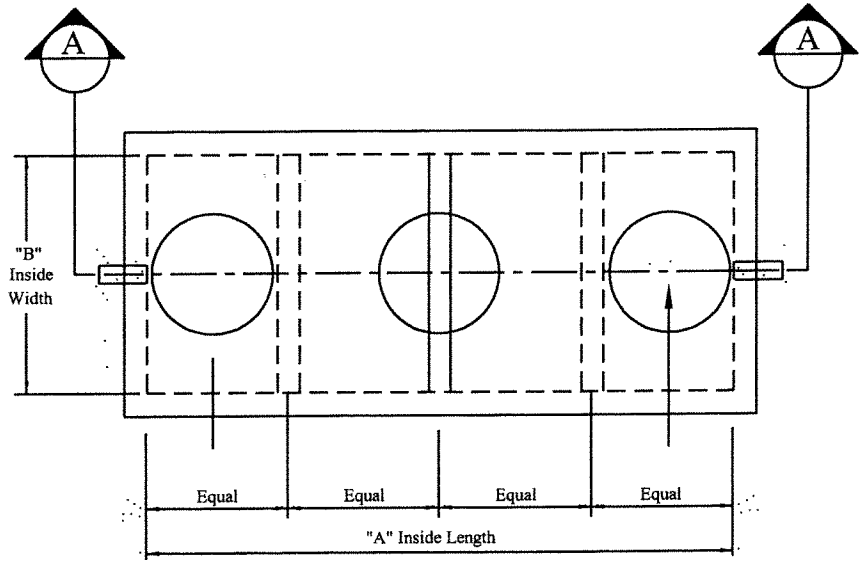
OUTSIDE DROP CONNECTION

City of Buford, Georgia

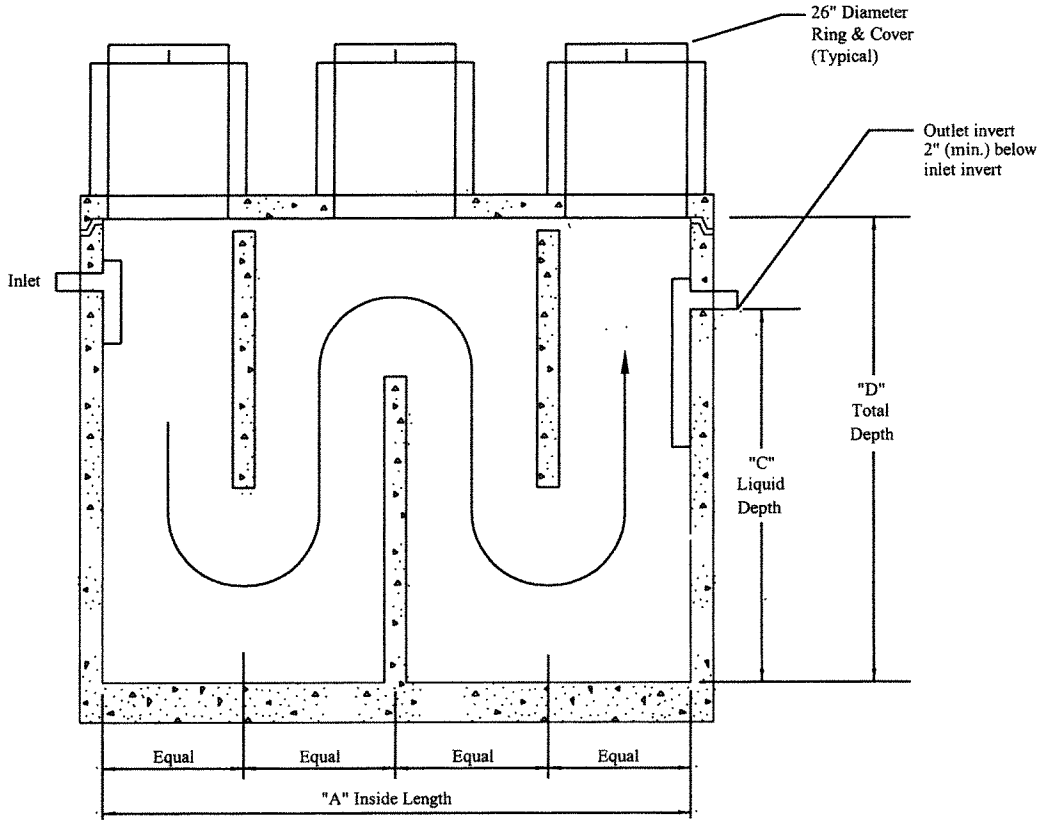
STANDARD DRAWING

Manhole
Drop Connections

DATE: SEPTEMBER 25, 2014 SHEET: 1001



Plan
N.T.S.



Section A-A
N.T.S.

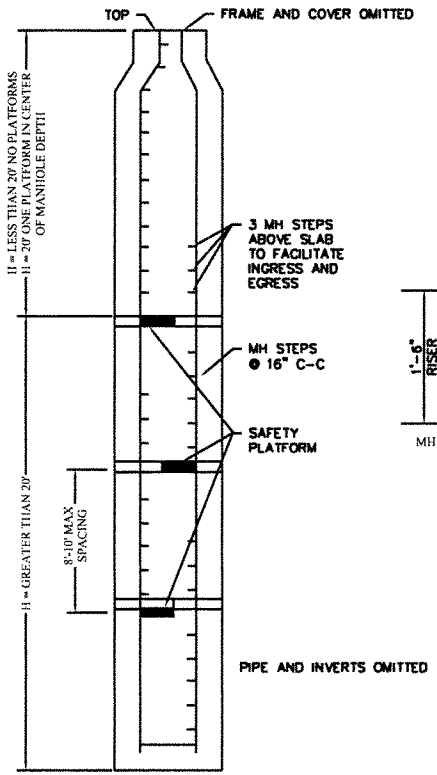
1500 GALLON

City of Buford, Georgia

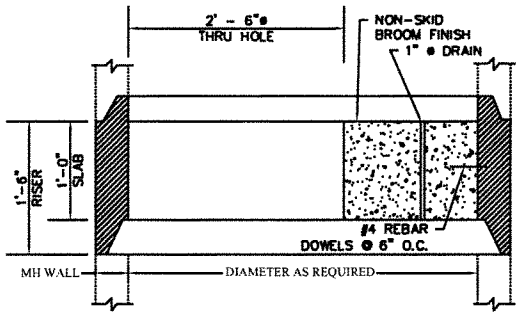
STANDARD DRAWING

Oil Water Separator
With Baffle Walls

DATE: SEPTEMBER 25, 2014 SHEET: 1002



MH CROSS SECTION
N.T.S.



SECTION AT CONCRETE SAFETY PLATFORM
N.T.S.

NOTES:

1. A DEEP MANHOLE IS CONSIDERED TO BE GREATER THAN 24'.
2. SAFETY PLATFORMS ARE REQUIRED ON ALL MANHOLES EQUAL TO OR GREATER THAN 20' IN DEPTH.
3. SAFETY PLATFORMS ARE TO BE PLACED A MAX. DISTANCE OF 8'-10' APART.
4. PLATFORMS ARE TO BE DESIGNED TO OBTAIN A STRENGTH OF 4000 PSI IN 28 DAYS. MANHOLE AND PLATFORM DESIGN SHALL CONFORM TO A.S.T.M. SPECS. C478 LATEST EDITION.
5. REINFORCING STEEL HAS A MIN. YIELD STRENGTH OF 60,000 PSI.
6. SAFETY PLATFORM SLAB IS DESIGNED FOR A CONCENTRATED LOAD (P) AS FOLLOWS:

MH DIAMETER (FT)	P(LB)
4	12,000
5	10,000
6	8,000

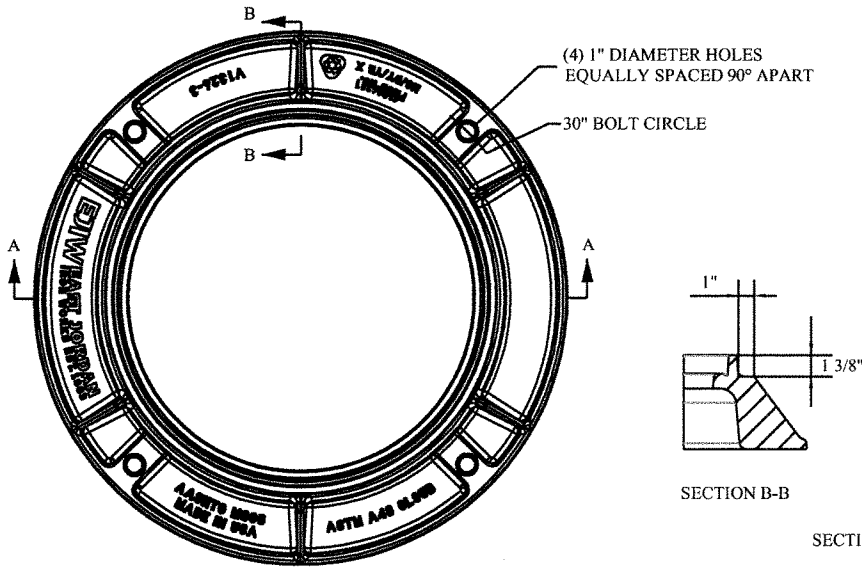
7. SAFETY PLATFORM IS TO BE PLACED BETWEEN RISERS.
8. SAFETY PLATFORM IS TO BE PLACED AT MIDPOINT OF A MANHOLE OVER 20' IN DEPTH. TWO PLATFORMS TO BE PLACED EQUAL DISTANCE AT A MANHOLE DEPTH OF 24'.
9. SAFETY PLATFORM IS TO BE PRECAST CONCRETE OR APPROVED EQUAL.
10. ALTERNATE OPENINGS IN SAFETY PLATFORMS AS INDIVIDUAL DESCENDS.
11. MANHOLES IN EXCESS OF 24' IN DEPTH SHALL BE PRE-APPROVED BY THE CITY AND HAVE SAFETY PLATFORMS WITH 8'-10' SPACING.

City of Buford, Georgia

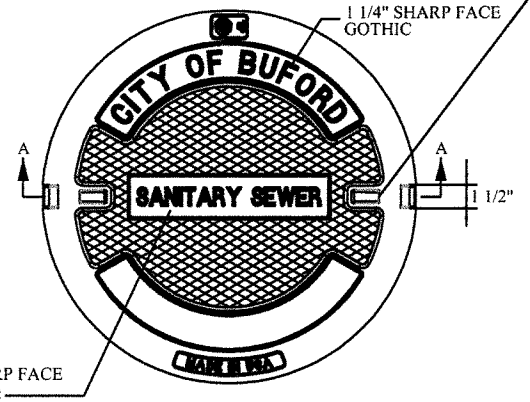
S T A N D A R D D R A W I N G

Deep Manhole
Safety Platform

DATE: SEPTEMBER 25, 2014 SHEET: 1003

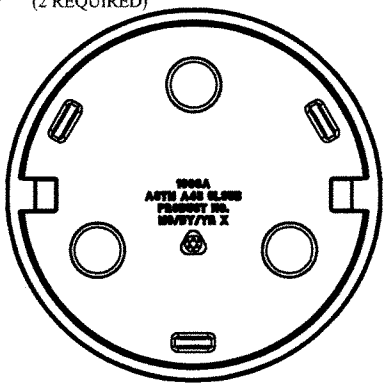


SECTION B-B

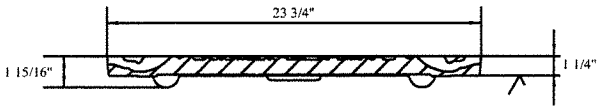


SECTION A-A

TOP VIEW

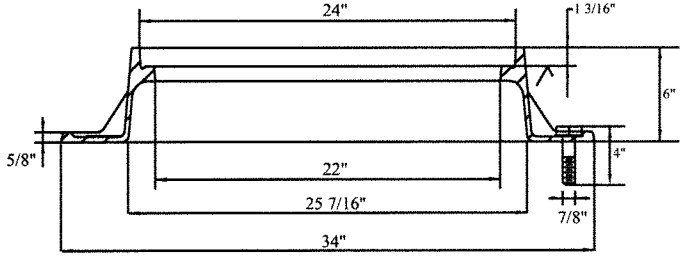


BOTTOM VIEW



SECTION A-A
Model Number 00133894

COVER



SECTION A-A
Model Number 41326311

FRAME

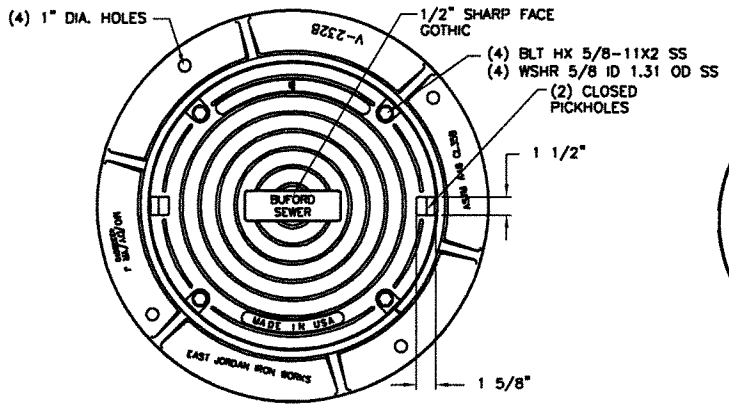
NOTES:
1. MANHOLE FRAME AND COVER TO COMPLY WITH REQUIREMENTS OF AASHTO M306.
2. ATTACH MANHOLE FRAME TO MANHOLE BY ADHESIVE CAPSULE ANCHOR WITH FOUR (4) STAINLESS STEEL 7/8" DIAMETER BOLTS.
3. MANHOLE FRAME AND COVER TO BE EJ GROUP, INC. PRODUCT NO. 41326311 AND NO. 00133894 RESPECTIVELY WITH INDICATED "CITY OF BUFORD" LETTERING, OR APPROVED EQUAL.

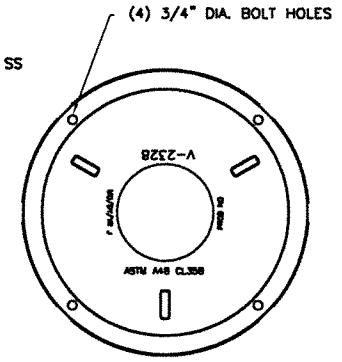
City of Buford, Georgia

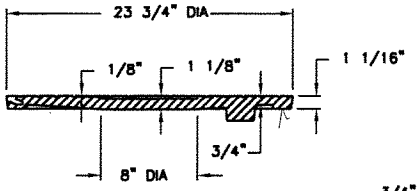
STANDARD DRAWING

Manhole Frame and Cover

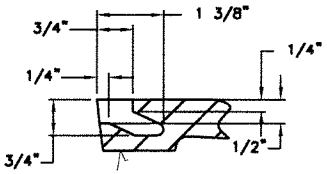
DATE: SEPTEMBER 25, 2014 SHEET: 1004





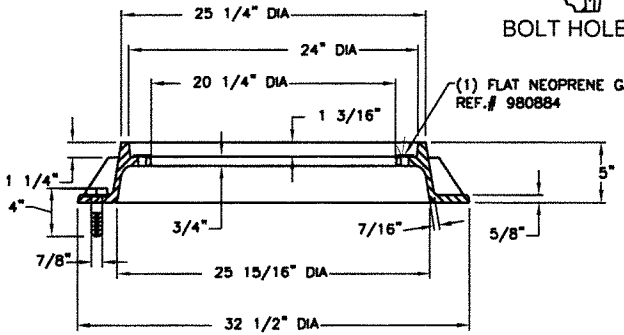


SECTION OF COVER

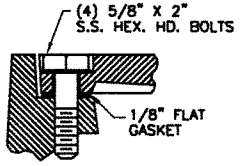


PICKHOLE DETAIL

BOLT HOLE DETAIL



SECTION OF FRAME



WATERTIGHT DETAIL

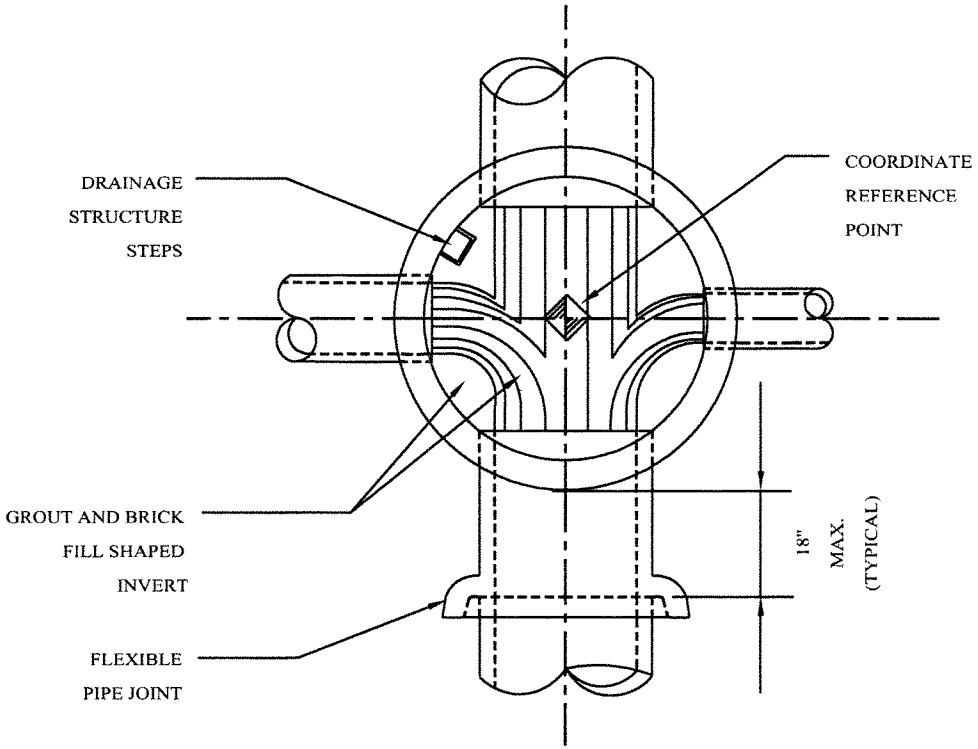
NOTES:
1. MANHOLE FRAME AND COVER TO COMPLY WITH REQUIREMENTS OF AASHTO M306.
2.ATTACH MANHOLE FRAME TO MANHOLE BY ADHESIVE CAPSULE ANCHOR WITH FOUR (4) STAINLESS STEEL 7/8" DIAMETER BOLTS.
3. MANHOLE FRAME AND COVER TO BE EJ GROUP, INC. PRODUCT NO. 42328176 WITH INDICATED "BUFORD SEWER" LETTERING, OR APPROVED EQUAL.

City of Buford, Georgia

S T A N D A R D D R A W I N G

Bolt Down Manhole Frame and Cover

D A T E: SEPTEMBER 25, 2014 S H E E T: 1005



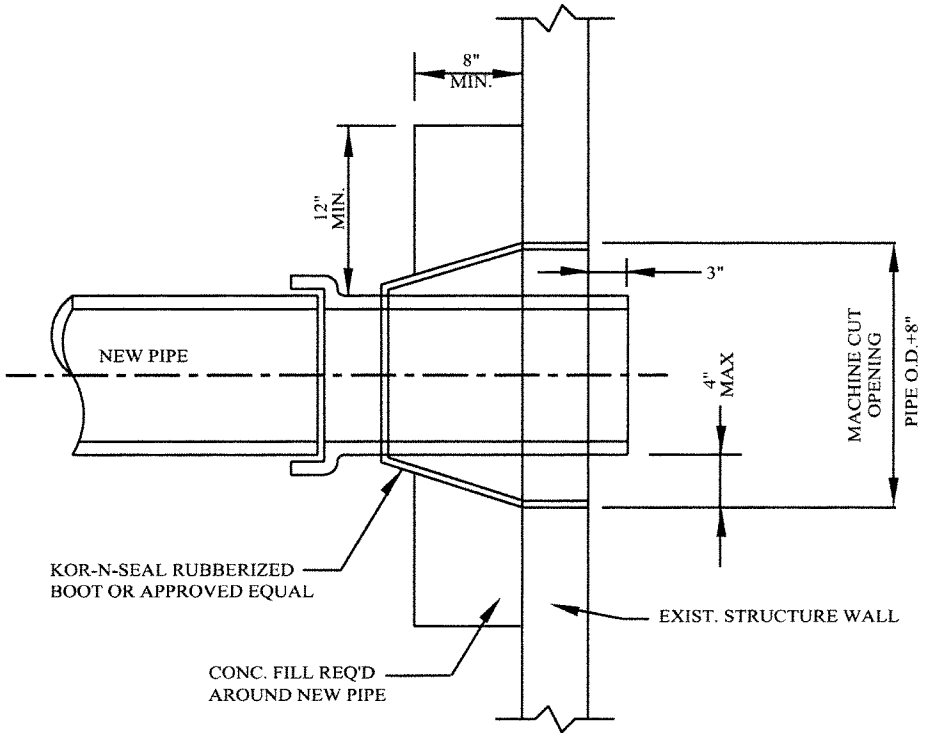
PRE CAST MANHOLE INVERT PLAN

City of Buford, Georgia

STANDARD DRAWING

Precast Manhole Invert Plan

DATE: SEPTEMBER 25, 2014 SHEET: 1006



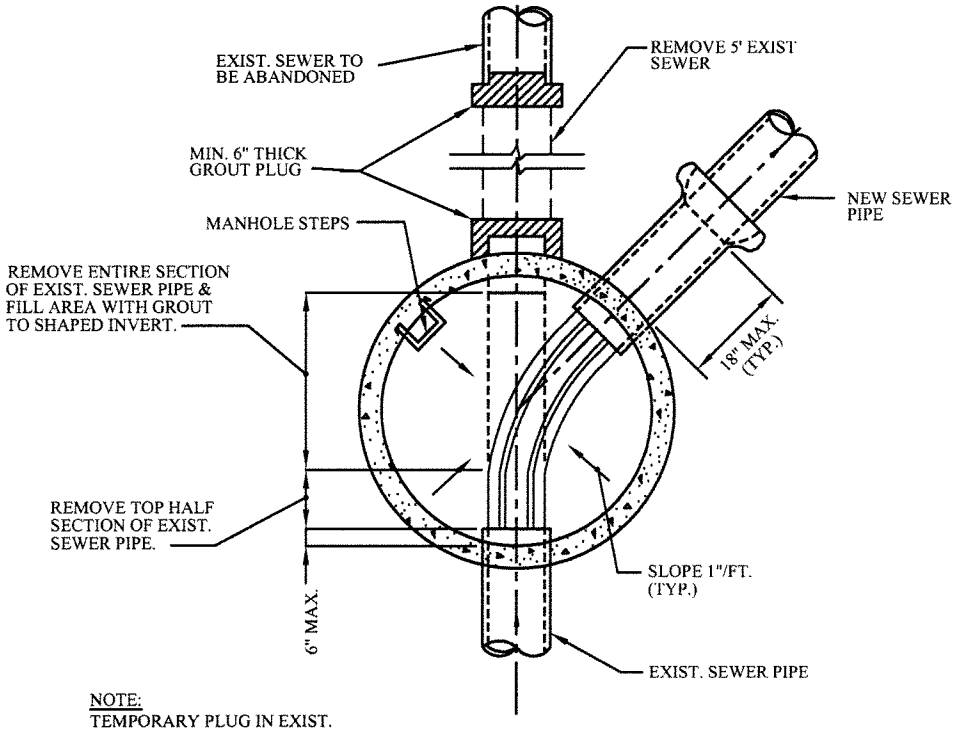
CONNECTION TO EXISTING MANHOLE

City of Buford, Georgia

STANDARD DRAWING

Connect to Existing Manhole

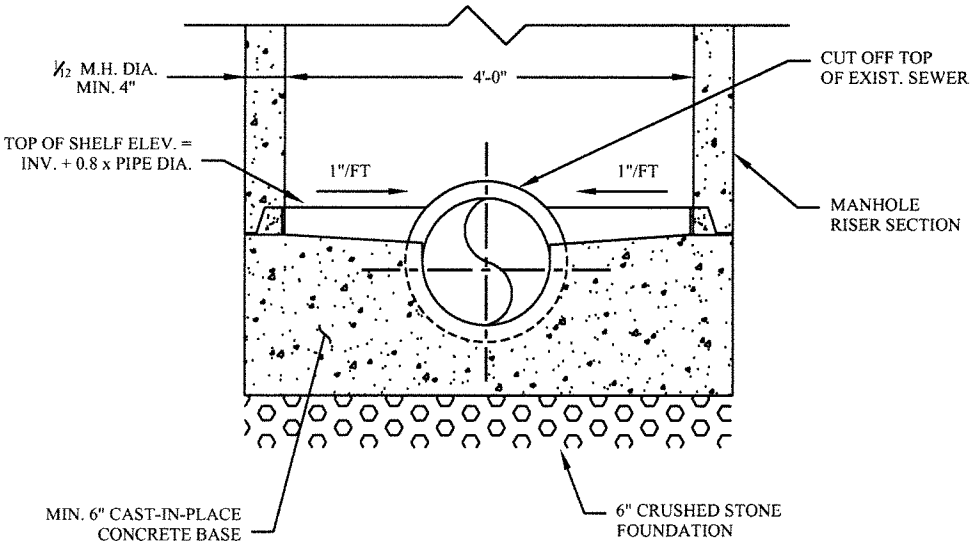
DATE: SEPTEMBER 25, 2014 SHEET: 1007



NOTE:
TEMPORARY PLUG IN EXIST. UPSTREAM SEWER MAY BE USED IF NECESSARY TO ACCOMPLISH INVERT WORK. HOWEVER, CONTRACTOR SHALL MONITOR SEWAGE BACKUP UPSTREAM & BE RESPONSIBLE FOR ANY DAMAGE TO SEWER CUSTOMERS PROPERTY.

MANHOLE OVER EXISTING SEWER PLAN

N.T.S



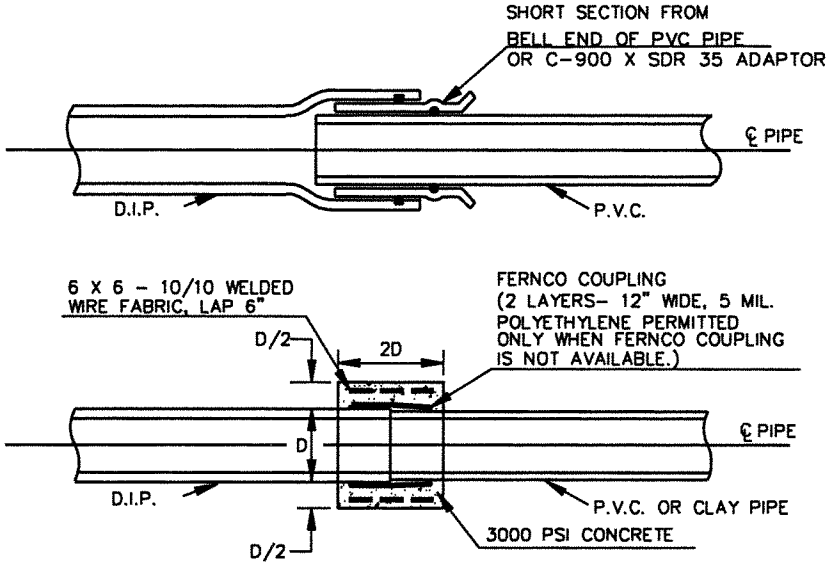
MANHOLE OVER EXISTING SEWER

City of Buford, Georgia

STANDARD DRAWING

Manhole Over Existing Sewer

DATE: SEPTEMBER 25, 2014 **SHEET: 1008**



NOTES:

TRANSITION JOINTS -

FROM DUCTILE IRON PIPE TO P.V.C. PIPE FOR PIPE SIZES LESS THAN 12" SHALL UTILIZE: 1) WATER MAIN TYPE COMPRESSION COUPLINGS (WITH ADAPTER GASKETS IF NEEDED) OR 2) "FERNCO" TYPE COUPLINGS WITH STAINLESS STEEL SHEAR BANDS OR 3) SHALL BE CONSTRUCTED AS SHOWN IN THE DETAIL.

OTHER CONNECTIONS -

SHALL USE A "FERNCO" TYPE COUPLING ENCASED IN CONCRETE, (IF IT IS AVAILABLE IN THE APPROPRIATE SIZE).

THE USE OF POLYETHYLENE WRAP WILL GENERALLY BE PERMITTED ONLY FOR CONNECTIONS INVOLVING LARGE DIAMETER PIPES.

TRANSITION COLLAR

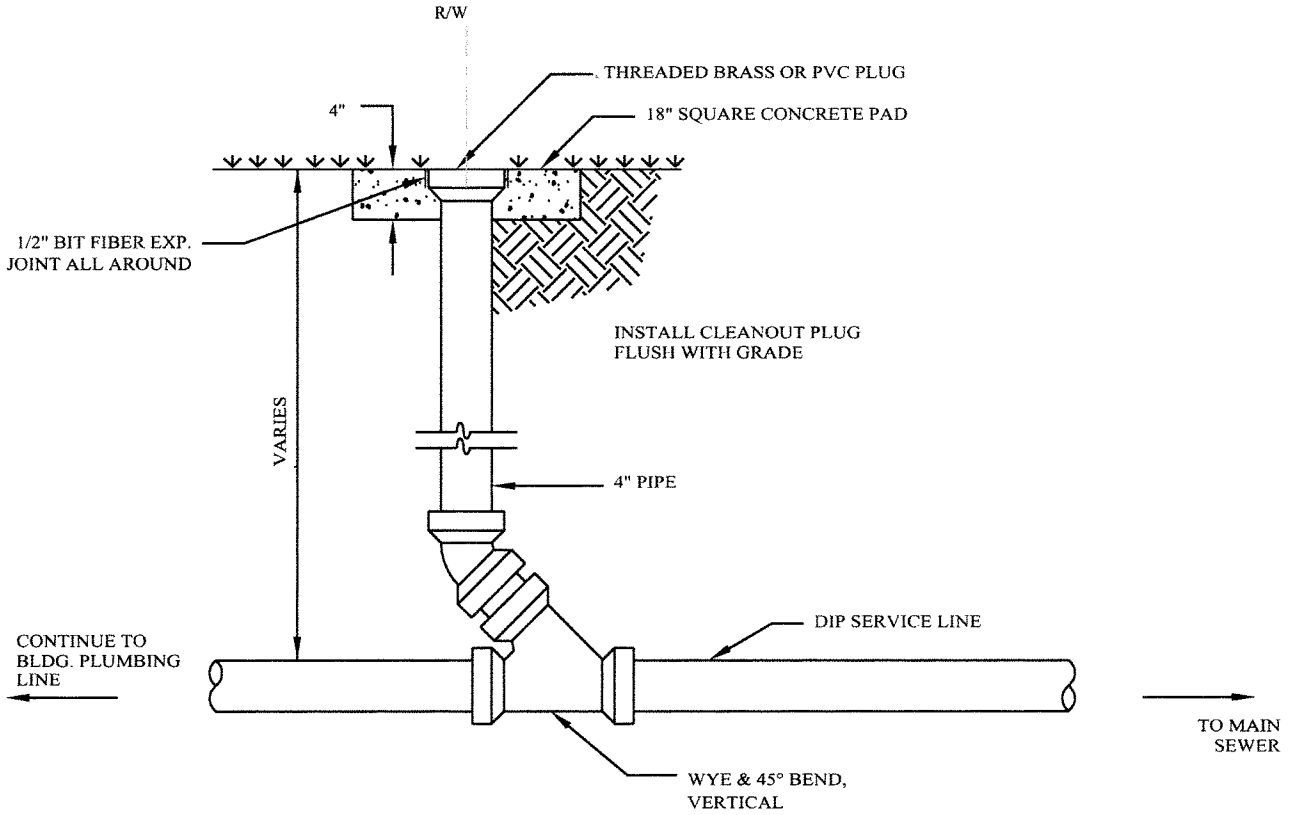
N.T.S.

City of Buford, Georgia

STANDARD DRAWING

Transition Collar

DATE: SEPTEMBER 25, 2014 SHEET: 1009



SEWER SERVICE CLEANOUT

City of Buford, Georgia

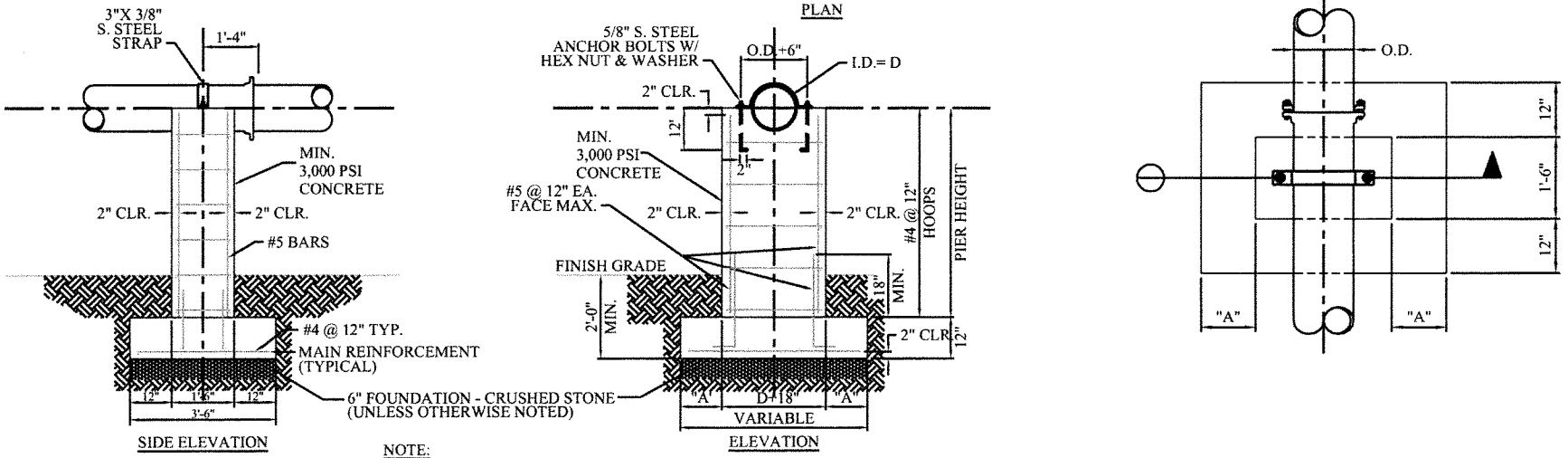
STANDARD DRAWING

Sewer Service Cleanout

DATE: SEPTEMBER 25, 2014 SHEET: 1010

SCHEDULE OF DIMENSION "A"										
PIPE SIZE	PIER HEIGHT									
	0'-3'	3'-5'	5'-7'	7'-9'	9'-11'	11'-13'	13'-15'	15'-17'	17'-19'	19'-21'
8"	12"	12"	12"	12"	12"	12"	24"	24"	24"	24"
10"	12"	12"	12"	12"	12"	12"	24"	24"	24"	24"
12"	12"	12"	12"	12"	12"	24"	24"	24"	24"	24"
14"	12"	12"	12"	12"	24"	24"	24"	24"	24"	36"
16"	12"	12"	12"	12"	24"	24"	24"	24"	36"	36"
18"	12"	12"	12"	12"	24"	24"	24"	24"	36"	36"
20"	12"	12"	12"	12"	24"	24"	24"	36"	36"	36"
24"	12"	12"	12"	24"	24"	24"	36"	36"	36"	36"

SCHEDULE - FOOTING MAIN REINF.			
DIM "A"	NO. & SIZE	DIM "A"	NO. & SIZE
12"	4 - #4	48"	5 - #6
24"	4 - #4	60"	7 - #6
36"	7 - #4	72"	10 - #6



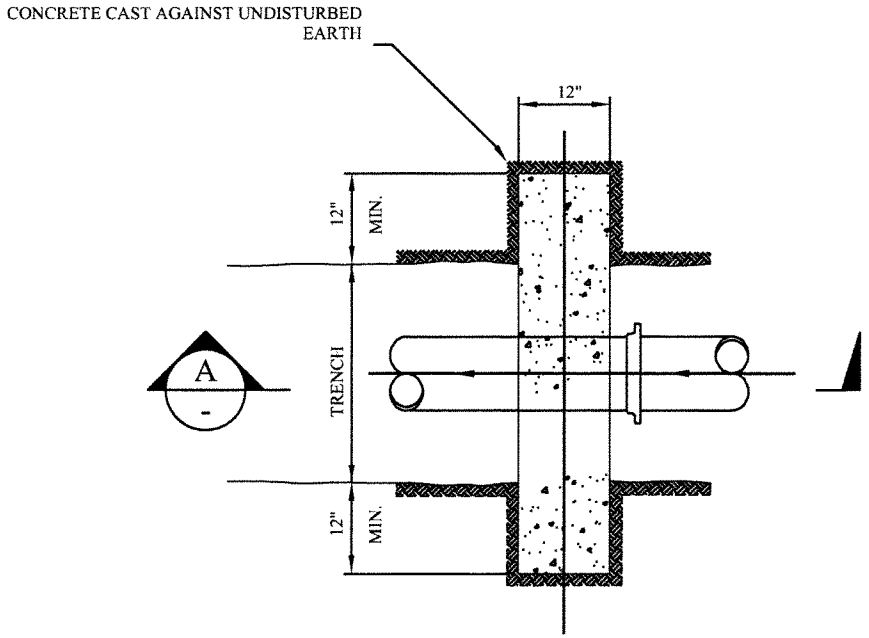
NOTE:
INSTALL 2 PLIES ROOFING FELT BETWEEN PIPE AND PIER.

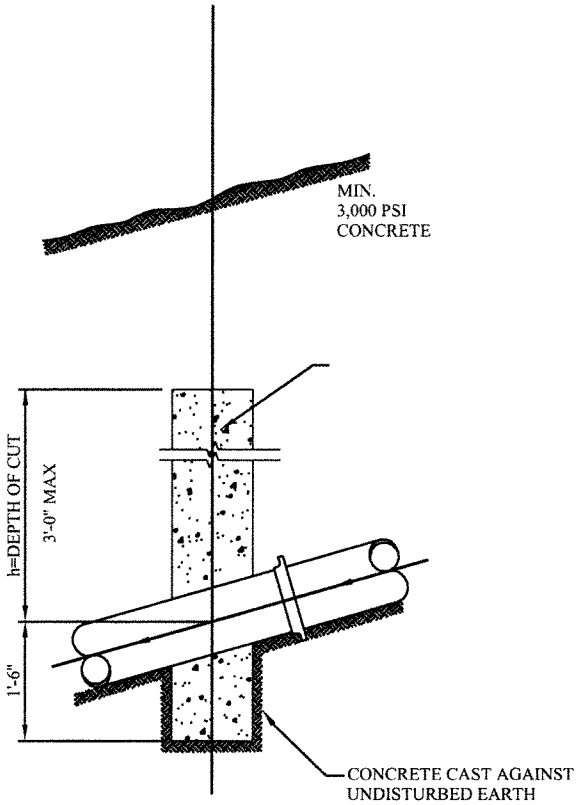
CONCRETE PIER

City of Buford, Georgia

STANDARD DRAWING
Concrete Pier

DATE: SEPTEMBER 25, 2014 SHEET: 1011





SECTION A

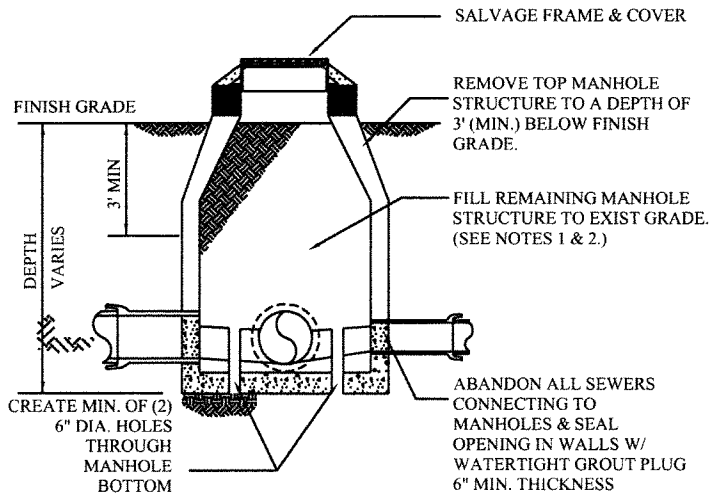
ANTI-SEEP COLLAR

City of Buford, Georgia

STANDARD DRAWING

Anti-Seep Collar

DATE: SEPTEMBER 25, 2014 SHEET: 1012



NOTES:

1. MANHOLES UNDER PAVEMENT - PLUG LINES AS SHOWN, FILL MANHOLE WITH COARSE GRANULAR MATERIAL. PATCH PAVEMENT IN ACCORDANCE WITH THE PAVEMENT PATCH DETAIL.
2. MANHOLES OUTSIDE PAVEMENT - PLUG LINES AS SHOWN, FILL MANHOLE WITH RUBBLE AND COMPACTED EARTH. RESTORE AREA AS REQUIRED IN SPECIFICATIONS.

MANHOLE ABANDONMENT DETAIL

N.T.S.

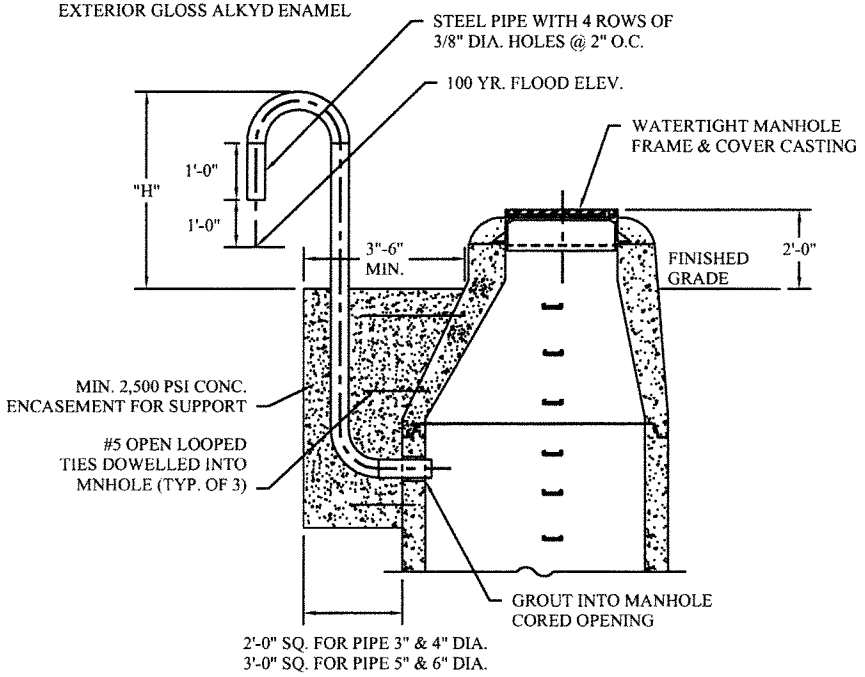
City of Buford, Georgia

STANDARD DRAWING

Manhole Abandonment Detail

DATE: SEPTEMBER 25, 2014 SHEET: 1013

STEEL PIPE SCHEDULE 80
3" DIA. FOR "H" = LESS THAN 6'-0"
4" DIA. FOR "H" = 6'-0" TO 10'-0"
5" DIA. FOR "H" = 10'-0" TO 15'-0"
6" DIA. FOR "H" = MORE THAN 15'-0"
PIPE TO BE PAINTED WITH RUST
INHIBITING PRIMER & 2 COATS
EXTERIOR GLOSS ALKYD ENAMEL



MANHOLE VENT PIPE DETAIL

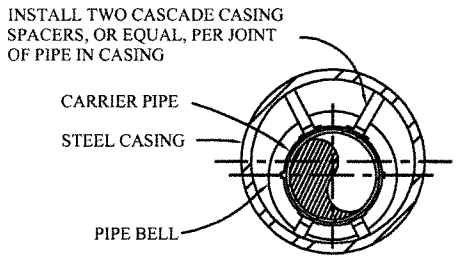
N.T.S

City of Buford, Georgia

STANDARD DRAWING

Manhole Vent Pipe Detail

DATE: SEPTEMBER 25, 2014 SHEET: 1014



NOTES:
1. SEAL ENDS OF TUNNEL LINER TO PREVENT DEBRIS AND MOISTURE FROM ENTERING THE ANNULAR SPACE BETWEEN THE CARRIER PIPE AND TUNNEL LINER.
2. FOR PIPE TUNNEL LINER, PROVIDE END SEAL CONSISTING OF FLEXIBLE SYNTHETIC RUBBER BOOT CONFORMING TO ASTM C-923 OR LINK SEAL PENETRATION SEAL WITH INSULATING PLASTIC PLATE, GALVANIZED BOLTS AND NUTS, AND EPDM RUBBER ELEMENT MANUFACTURED BY THUNDERLINE CORPORATION.

STEEL CASING DETAIL

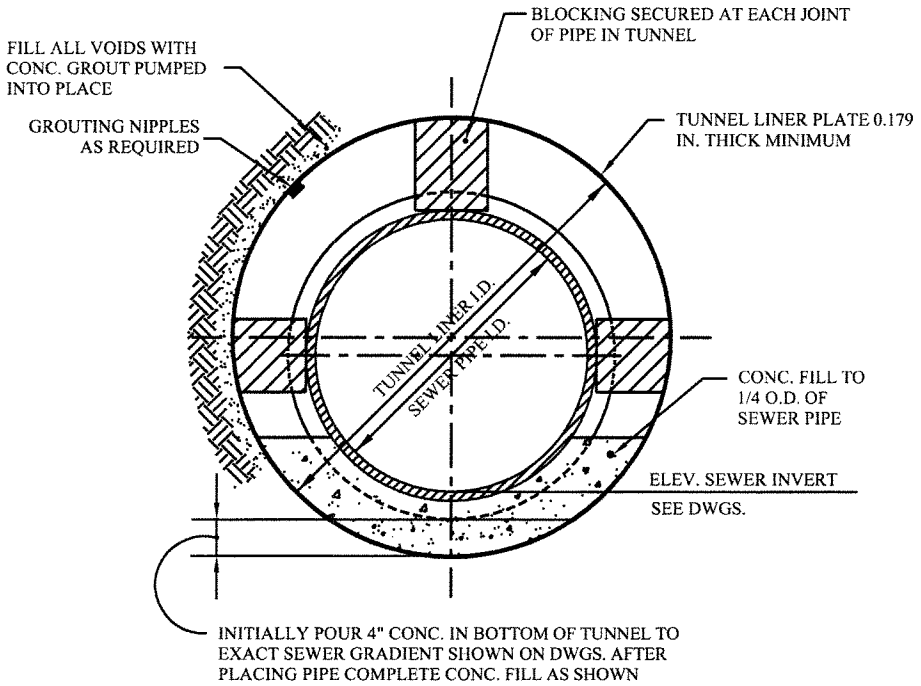
N.T.S.

City of Buford, Georgia

S T A N D A R D D R A W I N G

Steel Casing Detail

DATE: SEPTEMBER 25, 2014 **SHEET: 1015**



NOTES:

1. PROVIDE 12" THICK CMU OR BRICK MASONRY WALL SEAL AT EA. END OF TUNNEL.
2. AT LOW END OF TUNNEL PROVIDE 6" SQ. WEEPHOLE IN BOTTOM OF WALL.
3. AT WEEPHOLE PROVIDE A 2' SQ. X 18" DEEP POCKET OF #57 CRUSHED STONE.
4. PROVIDE MASONRY BLOCKING OR PREFABRICATED BLOCKING SECURED WITH STAINLESS STEEL BANDS OR AS PER THE MANUFACTURERS RECOMMENDATIONS.

TUNNEL LINER PLATE DETAIL

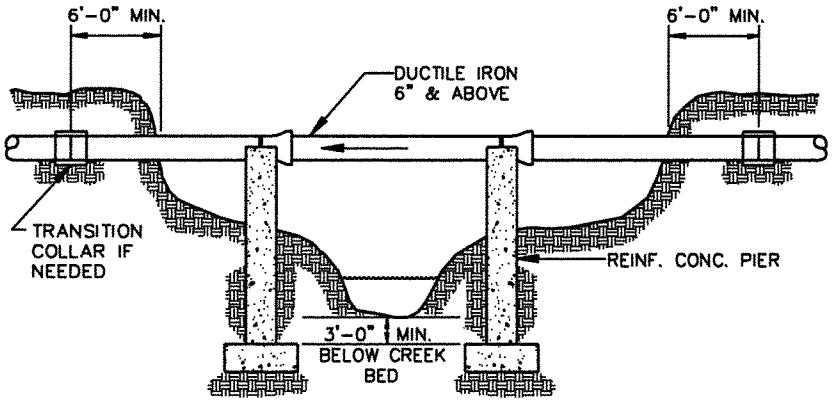
N.T.S.

City of Buford, Georgia

STANDARD DRAWING

Tunnel Liner Plate Detail

DATE: SEPTEMBER 25, 2014 **SHEET: 1016**



NOTE:

1. WHENEVER POSSIBLE NO PIERS SHALL BE PLACED WITHIN NORMAL FLOW OF CREEK. FOOTINGS SHALL BE PLACED 3 FEET MINIMUM BELOW CREEK BED.

2. REINFORCED CONCRETE PIERS SHALL BE PLACED BEHIND BELL OF EACH JOINT OF DUCTILE IRON PIPE.

3. ALL PIER PLACEMENT SHALL BE APPROVED BY THE CITY OF BUFORD.

4. IF PIER PLACEMENT FOR DUCTILE IRON PIPE CAN NOT MEET THE ABOVE STIPULATIONS, STEEL PIPE SHALL BE USED.

5. DISTURBED AREA SHALL BE RIP-RAPPED AS REQUIRED.

PIER PLACEMENT FOR D.I.P. AERIAL LINES

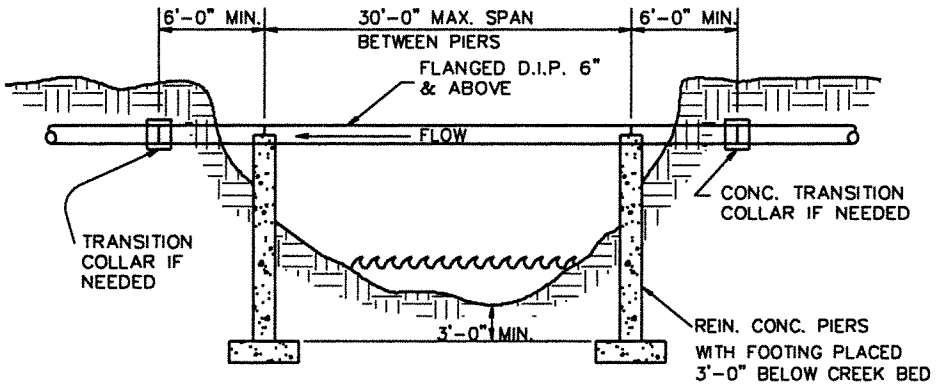
N.T.S.

City of Buford, Georgia

STANDARD DRAWING

Pier Placement for D.I.P. Aerial Lines

DATE: SEPTEMBER 25, 2014 SHEET: 1017



NOTE: PIERS ARE NOT NEEDED
UNLESS AERIAL SPAN IS
OVER 20'-0" IN LENGTH.

NOTES:
1. WHENEVER POSSIBLE NO PIERS SHALL BE PLACED IN NORMAL FLOW OF CREEK.
2. ALL AERIAL CROSSINGS MUST BE APPROVED BY THE CITY OF BUFORD.
3. SPANS EXCEEDING 30 FEET REQUIRES SUBMITTAL OF DESIGN CALCULATIONS.

AERIAL FLANGED D.I.P. PIPE CROSSING

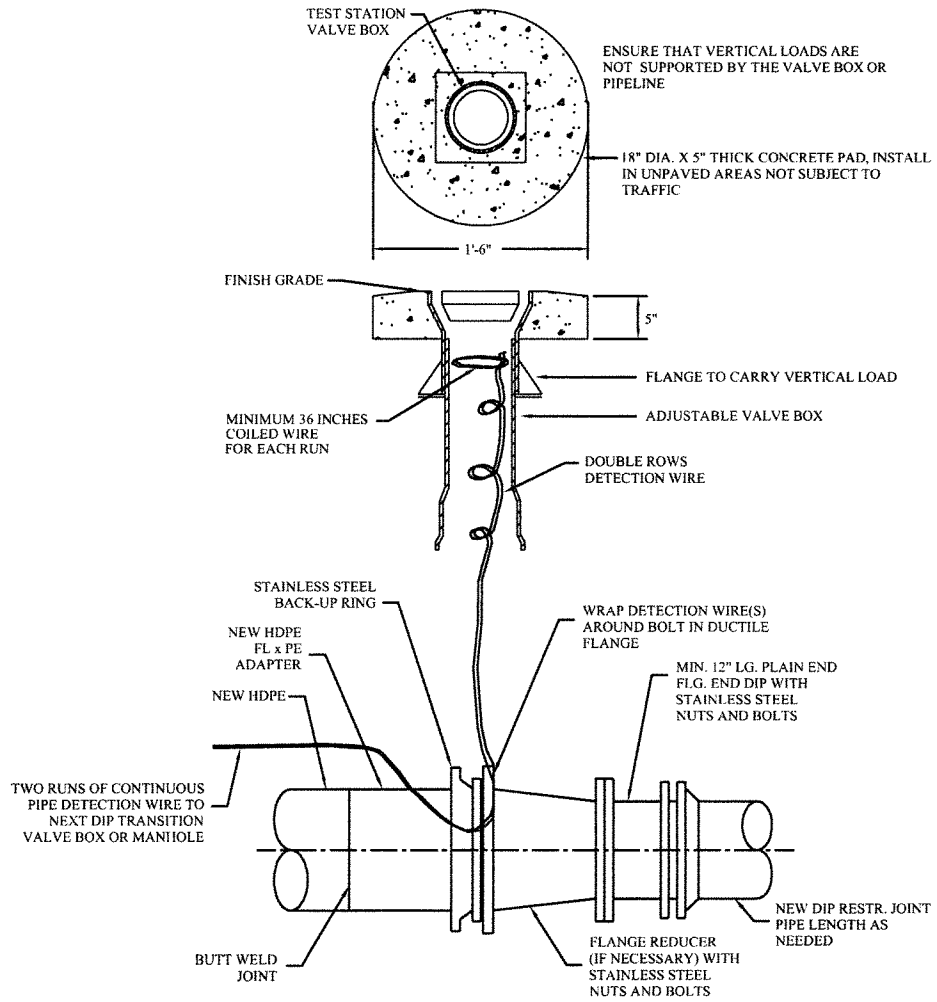
N.T.S.

City of Buford, Georgia

STANDARD DRAWING

Aerial Flanged D.I.P. Pipe Crossing

DATE: SEPTEMBER 25, 2014 SHEET: 1018



NOTE:
PROVIDE STAINLESS STEEL BOLTS & NUTS FOR ALL BURIED FLANGED JOINTS.

DIP TO HDPE TRANSITION DETAIL

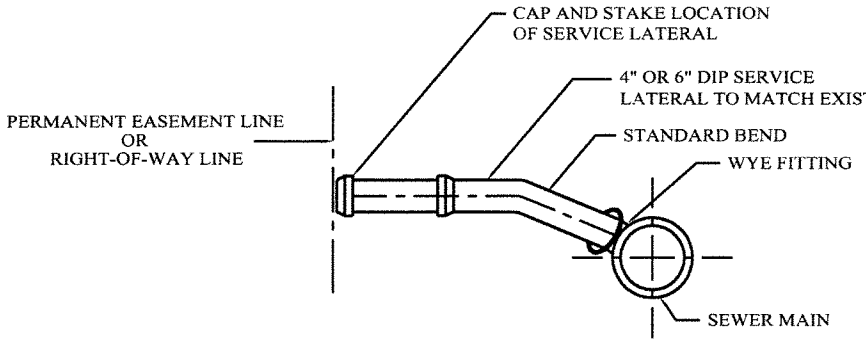
N.T.S.

City of Buford, Georgia

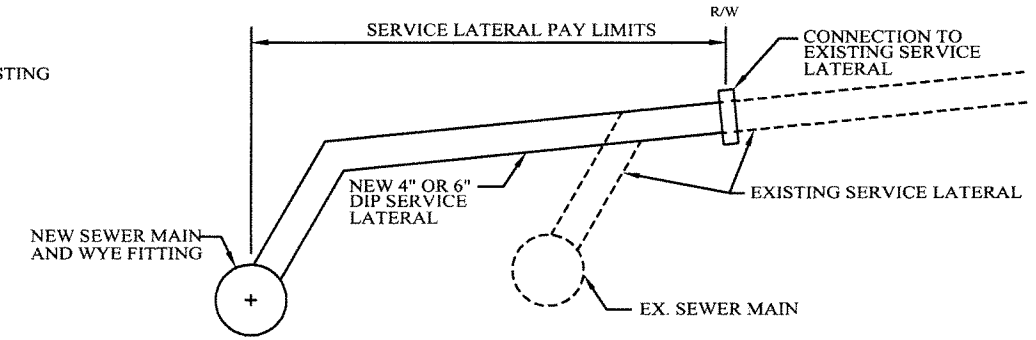
STANDARD DRAWING

DIP to HDPE Transition Detail

DATE: SEPTEMBER 25, 2014 **SHEET: 1019**



SERVICE CONNECTION



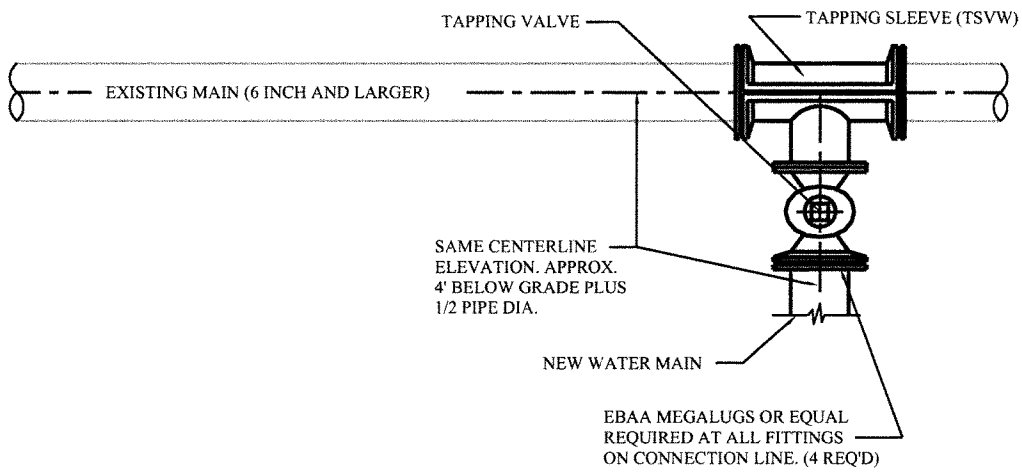
FAR SIDE SERVICE CONNECTION

City of Buford, Georgia

STANDARD DRAWING

Sewer Service Connections

DATE: SEPTEMBER 25, 2014 SHEET: 1020



TYPICAL CONNECTION TO EXISTING MAIN

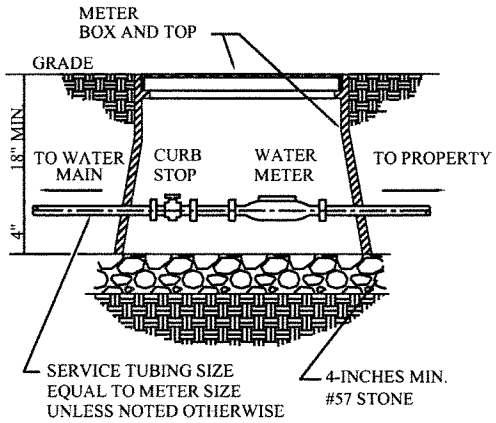
NOTES:
1. MJ TEE AND SLEEVE MAY BE USED IN LIEU OF TAPPING SLEEVE AND VALVE IF APPROVED BY THE ENGINEER AND OWNER AND IF THERE ARE A SUFFICIENT AMOUNT OF EXISTING LINE VALVES.
2. SEE SPECS FOR TYPE OF TAPPING SLEEVE REQUIRED FOR DIFFERENT PIPE MATERIALS.

City of Buford, Georgia

STANDARD DRAWING

Typical Connection to Existing Main

DATE: SEPTEMBER 25, 2014 SHEET: 1101



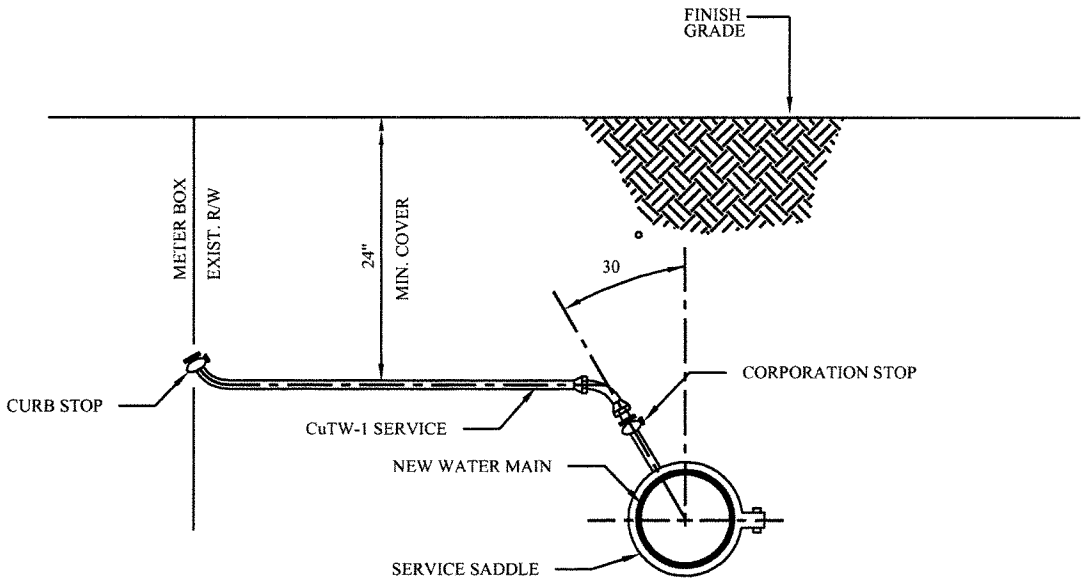
WATER METER BOX

City of Buford, Georgia

STANDARD DRAWING

Water Meter Box

DATE: SEPTEMBER 25, 2014 **SHEET: 1102**



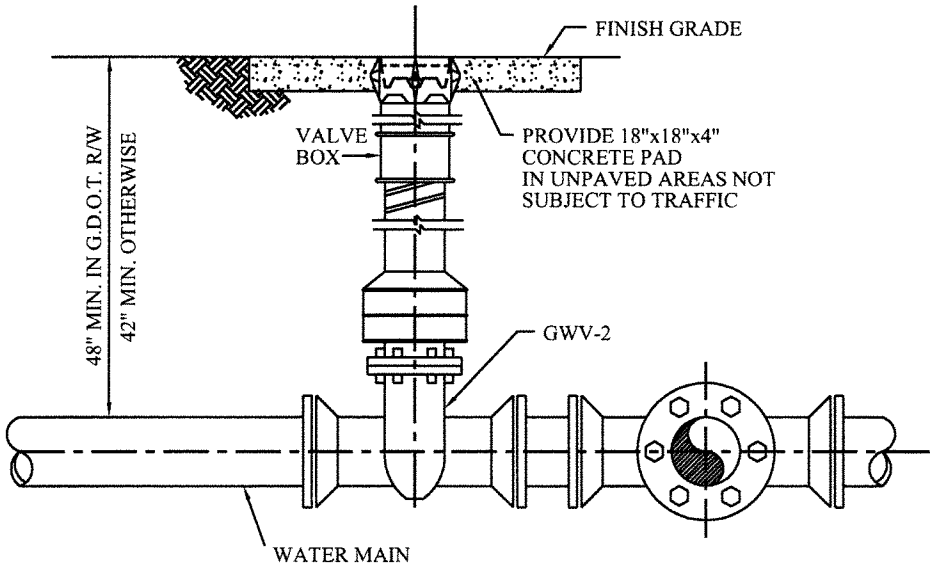
SERVICE CONNECTION DETAIL

City of Buford, Georgia

STANDARD DRAWING

Service Connection Detail

DATE: SEPTEMBER 25, 2014 SHEET: 1103



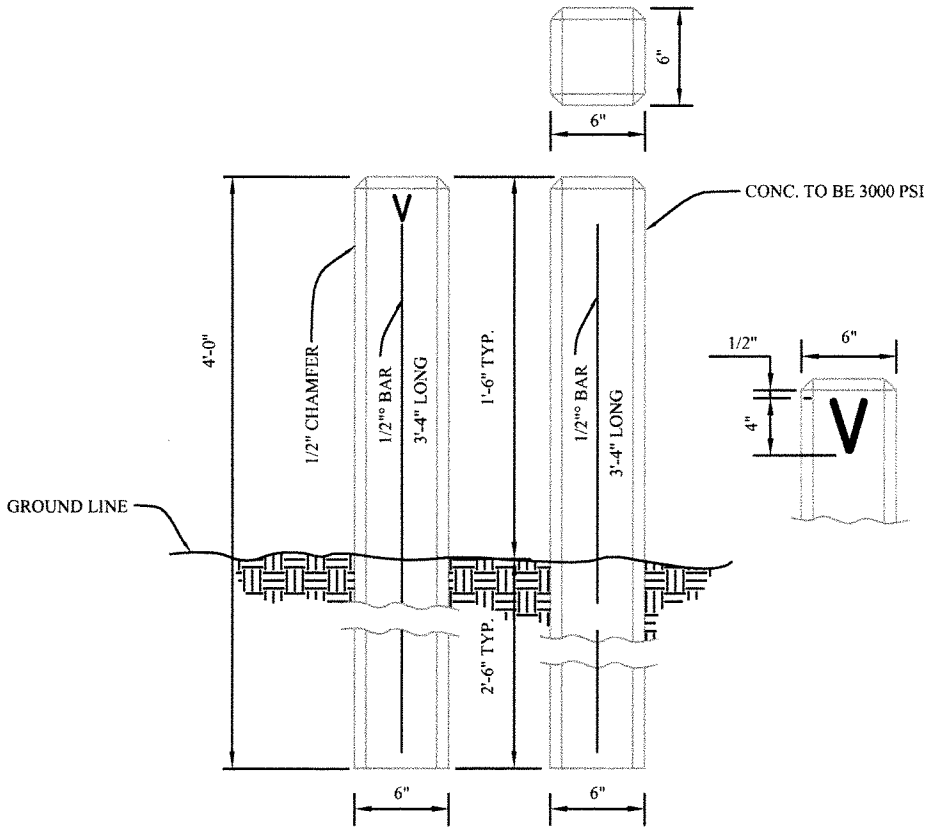
TYPICAL GATE VALVE INSTALLATION

City of Buford, Georgia

STANDARD DRAWING

Typical Gate Valve and Valve Box Installation

DATE: SEPTEMBER 25, 2014 SHEET: 1104



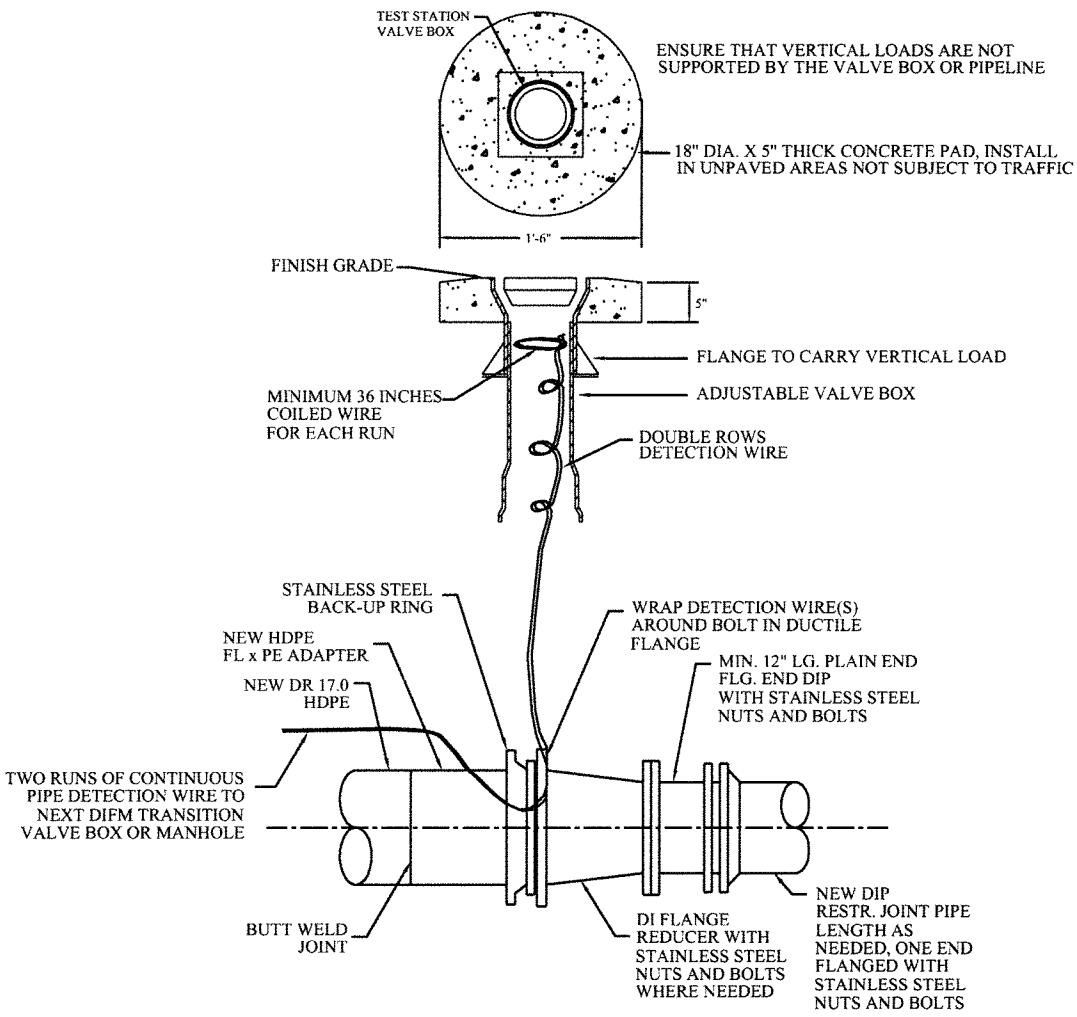
TYPICAL WATER VALVE MARKER

City of Buford, Georgia

STANDARD DRAWING

Typical Water Valve Marker

DATE: SEPTEMBER 25, 2014 SHEET: 1105



DIP TO HDPE TRANSITION DETAIL

NOTES:

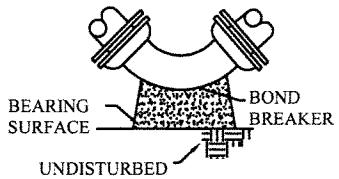
1. PROVIDE STAINLESS STEEL BOLTS & NUTS FOR ALL BURIED FLANGED JOINTS.

City of Buford, Georgia

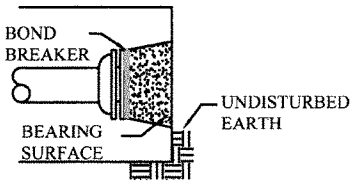
STANDARD DRAWING

DIP to HDPE Transition Detail

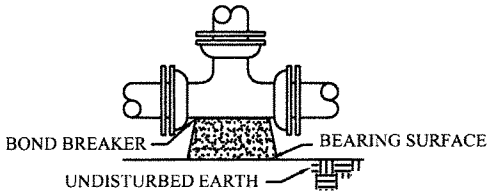
DATE: SEPTEMBER 25, 2014 SHEET: 1106



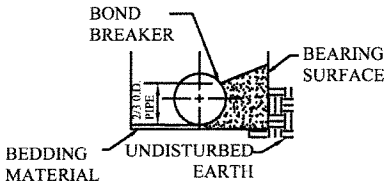
22 1/2°, 45° AND 90° BENDS



DEAD END



TEE



TYPICAL CROSS SECTION

MINIMUM BEARING SURFACE AREA (SQ. FT.)				
PIPE SIZE	BENDS			TEE OR DEAD END
	22.5°	45°	90°	
4"	1.00	1.00	2.00	1.50
6"	1.25	2.25	4.75	3.00
8"	2.00	4.00	8.20	5.25
12"	4.25	8.25	16.75	11.00
16"	6.50	12.50	23.00	16.50
20"	10.00	19.50	35.50	25.00

NOTES

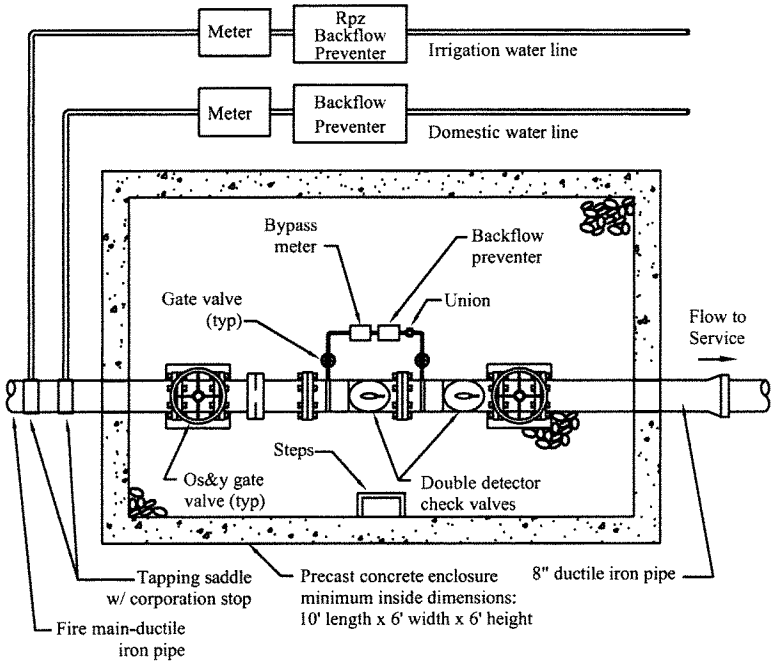
1. BEARING SURFACES IN CHART ARE MINIMUM REQUIRED AREAS BASED ON THE FOLLOWING:
   A. SOIL BEARING CAPACITY = 3000 PSF
   B. INTERNAL PIPE PRESURE = 150 PSI + WATER HAMMER OF 120 PSI FOR 4"- 8" SIZE, 110 PSI FOR 12" SIZE, AND 70 PSI FOR 16" AND 20" SIZES.
2. ACTUAL SOIL AND INSTALLATION CONDITIONS VARY AND MAY REQUIRE ADDITIONAL ANCHORAGE. IT IS THE CONTRACTORS RESPONSIBILITY TO RECOGNIZE SUCH VARIANCES AND ADDITIONAL REQUIREMENTS AND TO PROVIDE APPROPRIATE ADDITIONAL ANCHORAGE.
3. PROVIDE CONCRETE REACTION OR THRUST BACKING OF A MIX NOT LEANER THAN 1 CEMENT, 2 - 1/2 SAND, 5 STONE, HAVING COMPRESSIVE STRENGTH OF NOT LESS THAN 2,000 PSI. PLACE BACKING BETWEEN SOLID GROUND AND THE FITTING TO BE ANCHORED. LOCATE THE BACKING SO THAT THE PIPE AND THE FITTING JOINT WILL BE ACCESSILE FOR REPAIRS. MECHANICAL JOINT RETAINER GLANDS OF ADEQUATE STRENGTH TO PREVENT MOVEMENT OR OTHER SUITABLE MEANS MAY BE USED INSTEAD OF CONCRETE BACKING.

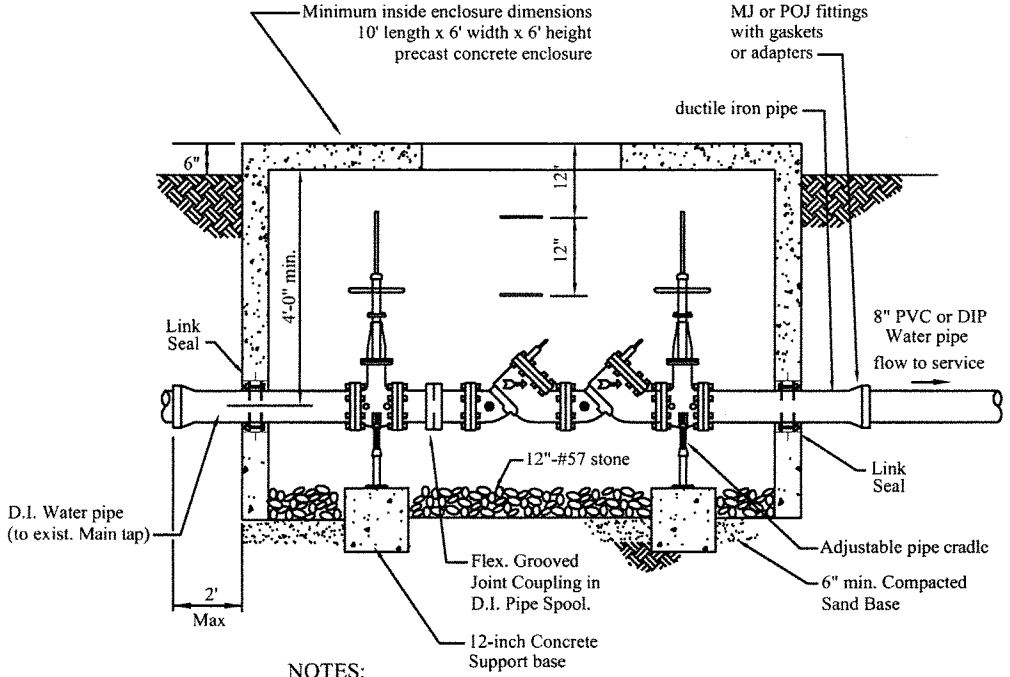
CONCRETE THRUST RESTRAINT

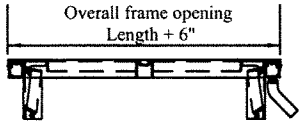
City of Buford, Georgia

STANDARD DRAWING
Concrete Thrust Restraint

DATE: SEPTEMBER 25, 2014 SHEET: 1107

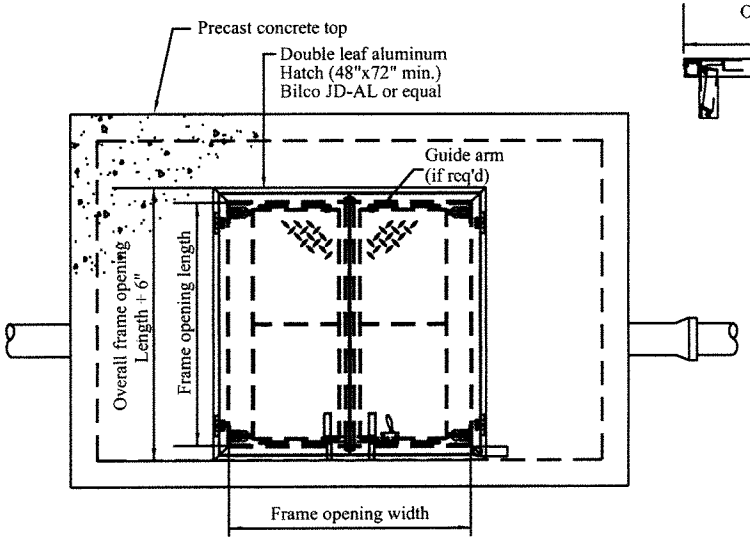


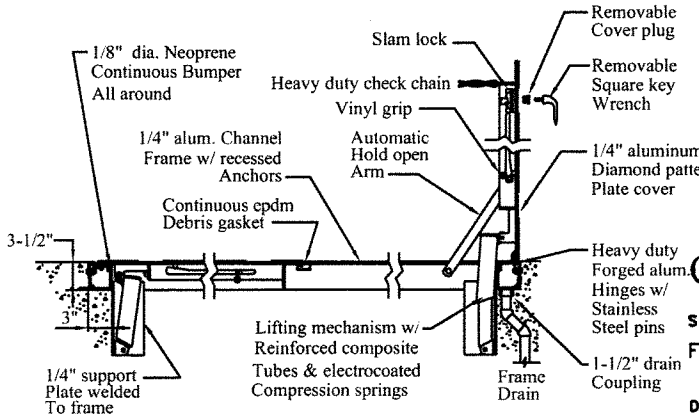




NOTES:

1. For backflow prevention device, provide 8" internally loaded double check assembly complete with os&y gate valves and bronze body ball valve test cocks fitted with bronze plugs and conforming with AWWA C510 and ASSE Std. 1048.
2. Provide concrete supports for pipe & assembly to eliminate Any strain on all pipe joints per mfg. Recommendations.



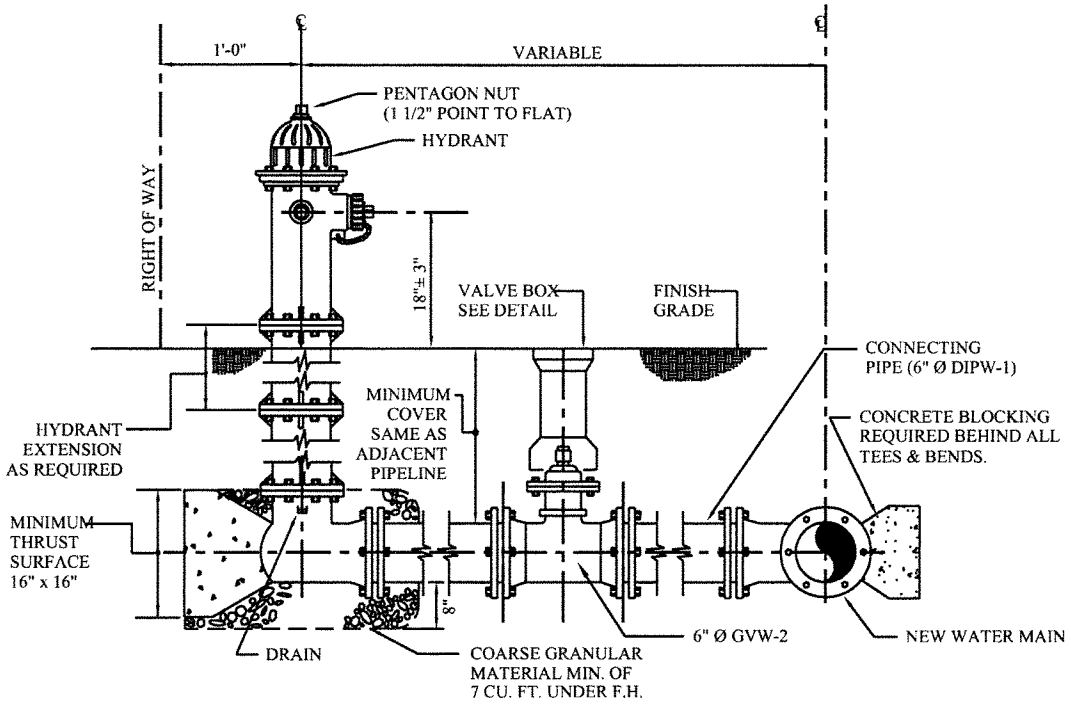


City of Buford, Georgia

STANDARD DRAWING

Fire Main and Water Vault Details

DATE: SEPTEMBER 25, 2014 SHEET: 1108



TYPICAL HYDRANT INSTALLATION

NOTES:

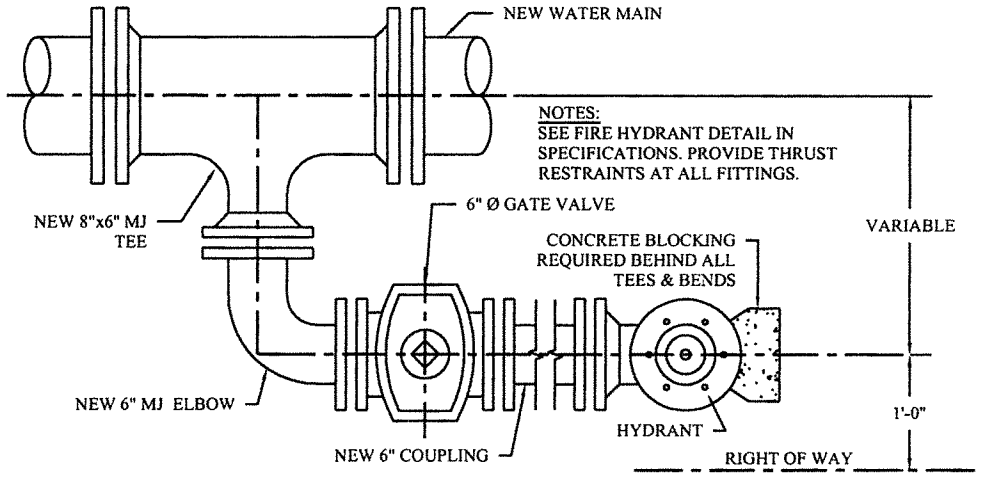
1. HYDRANT LUGS AND TIE RODS MAY BE USED IN LIEU OF CONCRETE REACTION BRACING AT CONTRACTOR'S OPTION.
2. PAINT HYDRANT IN ACCORDANCE W/AWWA C502 COLOR TO BE APPROVED BY CITY.
3. EXACT LOCATION OF HYDRANTS TO BE DETERMINED IN FIELD BY ENGINEER & CITY.

City of Buford, Georgia

STANDARD DRAWING

Typical Hydrant Installation

DATE: SEPTEMBER 25, 2014 **SHEET: 1109**



ALTERNATE HYDRANT INSTALLATION

NOTES:

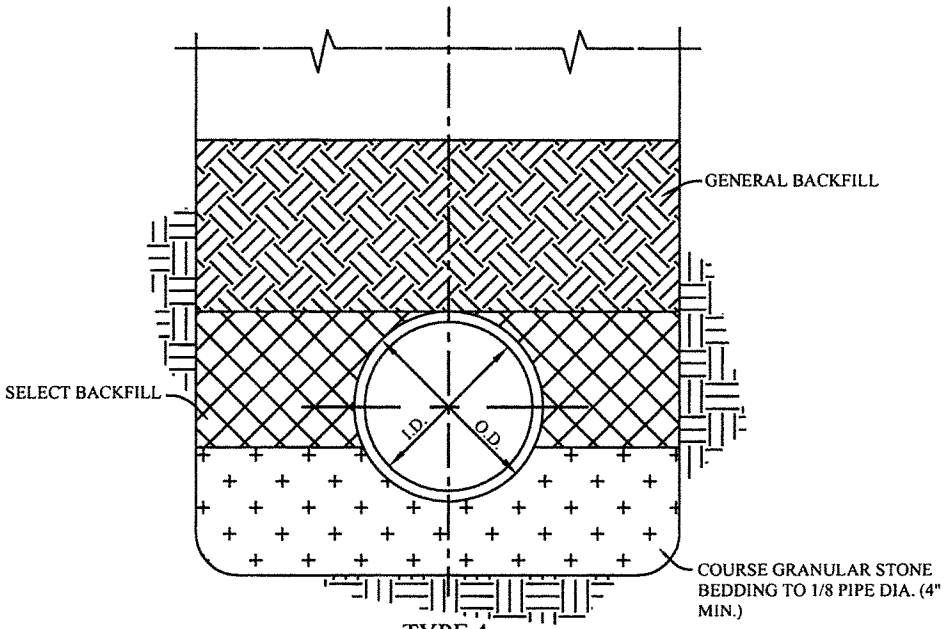
1. HYDRANT LUGS AND TIE RODS MAY BE USED IN LIEU OF CONCRETE REACTION BRACING AT CONTRACTOR'S OPTION.
2. PAINT HYDRANT IN ACCORDANCE W/AWWA C502 COLOR TO BE APPROVED BY CITY.
3. EXACT LOCATION OF HYDRANTS TO BE DETERMINED IN FIELD BY ENGINEER & CITY.

City of Buford, Georgia

STANDARD DRAWING

Alternate Hydrant Installation

DATE: SEPTEMBER 25, 2014 SHEET: 1110



TYPE 4

PIPE BEDDED IN COURSE GRANULAR STONE TO DEPTH OF 1/8 PIPE DIA. (4" MIN.) WITH BACKFILL COMPACTED PER SPECIFICATION

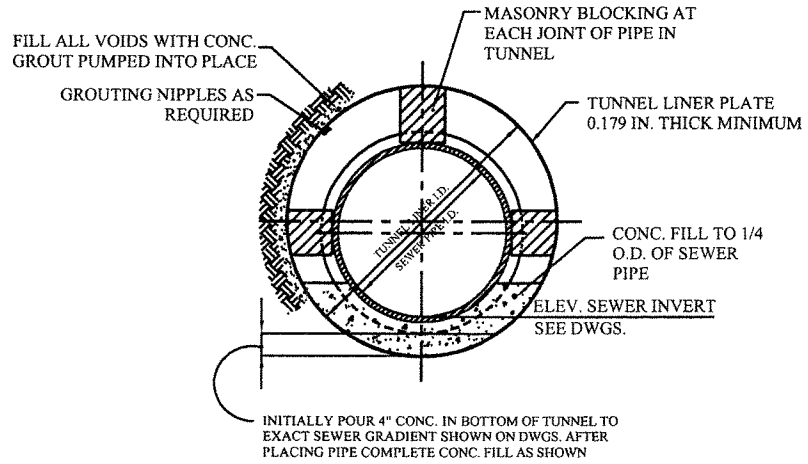
DUCTILE IRON PIPE BEDDING

City of Buford, Georgia

STANDARD DRAWING

Ductile Iron Pipe Bedding

DATE: SEPTEMBER 25, 2014 SHEET: 1111



TUNNEL LINER

NOTES:

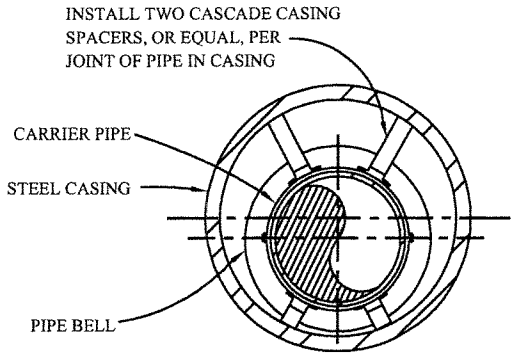
1. PROVIDE 12" THICK MASONRY WALL SEAL AT EA. END OF TUNNEL.
2. AT LOW END OF TUNNEL PROVIDE 6" SQ. WEEPHOLE IN BOTTOM OF WALL.
3. AT WEEPHOLE PROVIDE A 2' SQ. X 18" DEEP POCKET OF CRUSHED STONE.

City of Buford, Georgia

STANDARD DRAWING

Tunnel Liner

DATE: SEPTEMBER 25, 2014 **SHEET: 1112**



STEEL CASING

NOTES:
1. SEAL ENDS OF TUNNEL LINER TO PREVENT DEBRIS AND MOISTURE FROM ENTERING THE ANNULAR SPACE BETWEEN THE CARRIER PIPE AND TUNNEL LINER.
2. FOR PIPE TUNNEL LINER, PROVIDE END SEAL CONSISTING OF FLEXIBLE SYNTHETIC RUBBER BOOT CONFORMING TO ASTM C-923 OR LINK SEAL PENETRATION SEAL WITH INSULATING PLASTIC PLATE, GALVANIZED BOLTS AND NUTS, AND EPDM RUBBER ELEMENT MANUFACTURED BY THUNDERLINE CORPORATION.

City of Buford, Georgia

STANDARD DRAWING
Steel Casing

DATE: SEPTEMBER 25, 2014 SHEET: 1113