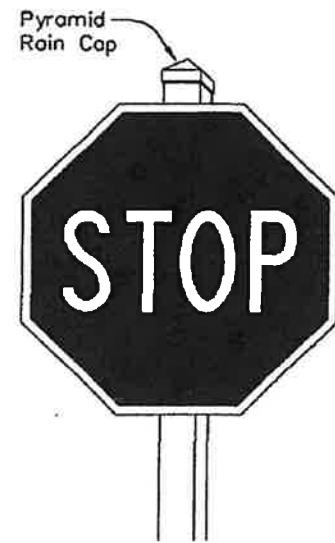
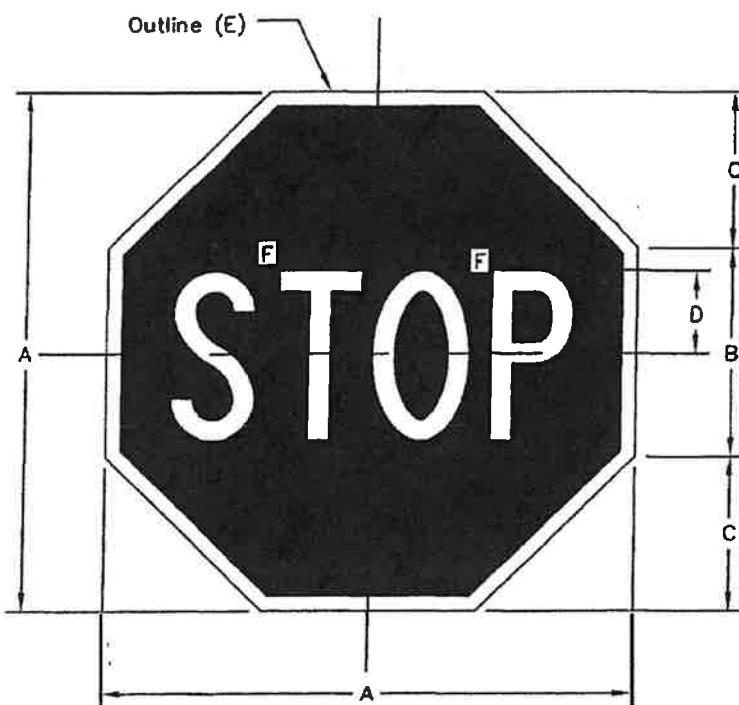


BEXLEY STANDARD DRAWINGS

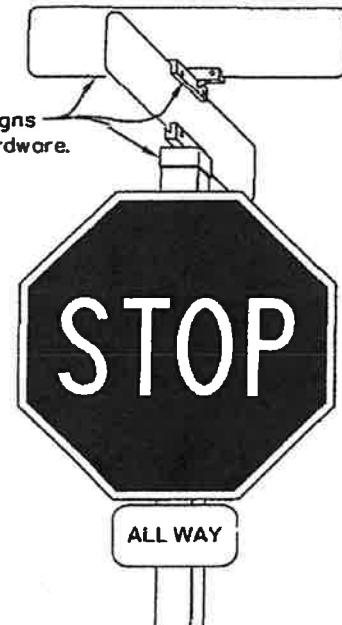
Curbed Planter	2	Bex-ST-19	6/1/07
Down-Spout Connection Detail	1	Bex-ST-07	4/20/06
Rigid Pipe Sewer	1	Bex-UT-01	1/11/19
Type 1 Bedding for Flexible Sewer Pipe	1	Bex-UT-02	1/11/19
Pavement Replacement (Arterial)	1	Bex-UT-03	1/11/19
Pavement Replacement (Residential)	1	Bex-UT-04	1/11/19
Pavement Replacement (Driveways)	1	Bex-UT-05	1/11/19
Pavement Replacement (Temporary)	1	Bex-UT-06	1/11/19
Water Line Tap Requirements	1	Bex-WAT-01	6/1/07
Basement Meter Set	1	Bex-WAT-02	6/1/07
Water Line Bonding Requirements	1	Bex-WAT-03	6/1/07
Sprinkler System	1	Bex-WAT-04	7/25/07
Deduct Meter System	1	Bex-WAT-05	7/25/07
Direct Sprinkler Meter System	1	Bex-WAT-06	7/25/07
Stop Sign	1	Bex-MIS-01	1/11/19
Trash Container	1	Bex-MIS-02	6/1/07
Retaining Wall Detail	1	Bex-MIS-03	1/11/19



NOTES

1. Color: Front—white on red; Rear—Dark green #62383
3/4" Dark Green Border around white edge
ALL WAY Sign Front—white on red; Rear—Dark Green
3/4" Dark Green Border around white edge (where required)
2. Based on ODOT Standard Sign Design
3M Diamond Grade 3 Prismatic Sheeting or Equal
3. 2"x2"x10' Galvanized Square post with Pyramid Cap
dark green #62383.
Powder Coated
4. 2.25"x2.25"x4' Galvanized Steel anchor attached with a J-Bolt.

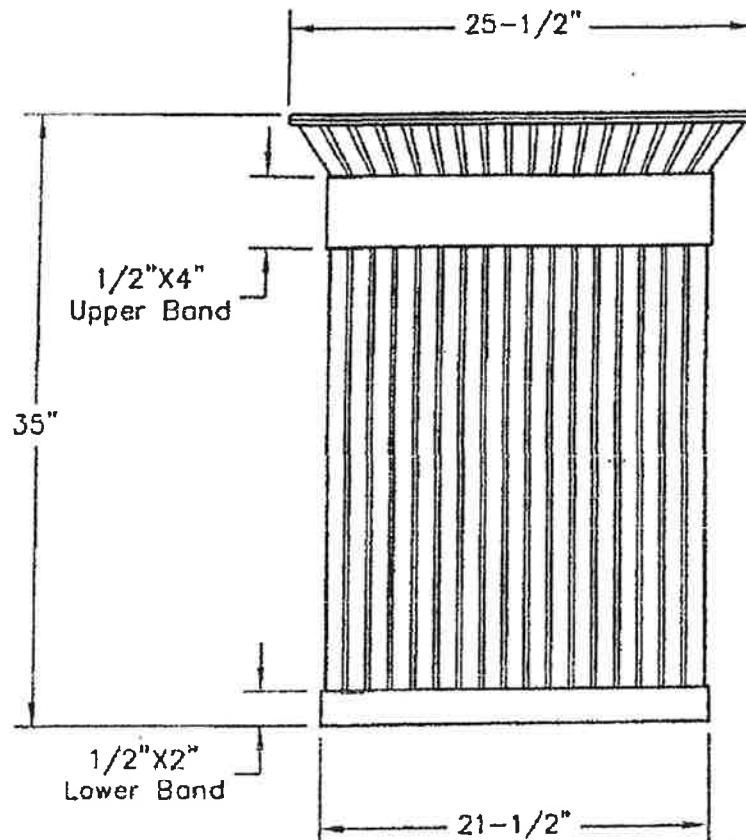
Street Name Signs
w/Mounting Hardware.



VALUES (inch)

LETTER SIZE	A	B	C	D	WHITE OUTLINE	SPACE B/ LETTERS
					E	F
30	30	10" C	10	5	3/4	12 1/2
36	36	12" C	12	6	7/8	15
48	48	16" C	16	8	1 1/4	20

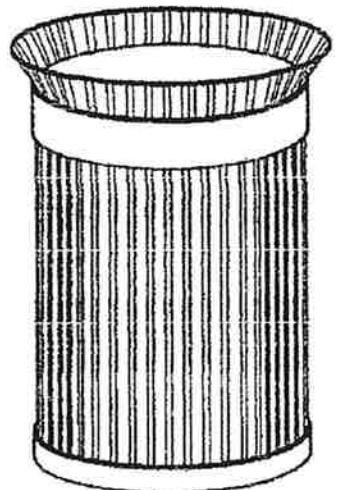
REVISION DATE: 3/8/2019	STOP SIGN	STANDARD CONSTRUCTION DRAWING	
		CITY OF BEXLEY, OHIO	BEX-MIS-01



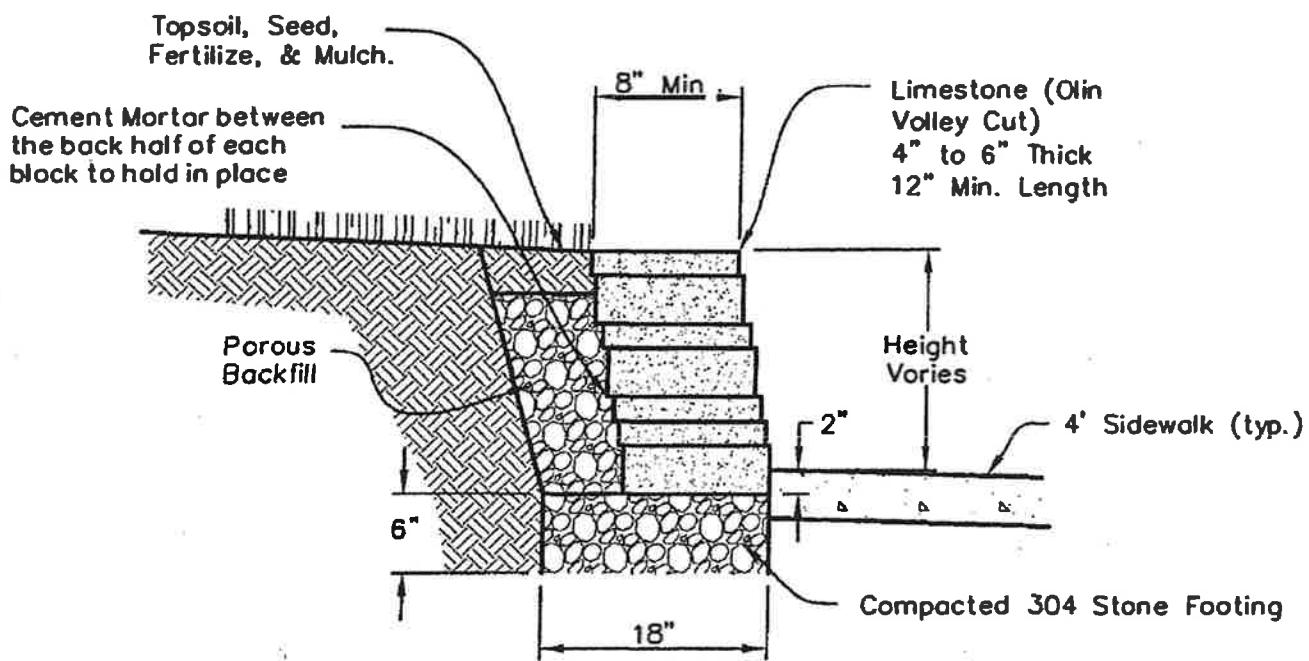
Three adjustable feet
w/plastic pads and
threaded shafts for
mounting on uneven
surfaces.

NOTES

1. Trash Container shall be as manufactured by American Titan, product No. TR-66-23 or approved equal.
2. Material: Fabricated Aluminum Construction; slats are 1/4"x0.1" Upper and lower bands are 0.25" thick; upper 4" wide; lower 2" wide; adjustable height threaded feet
3. Finish: Polyester Powder Coating, 3-5 mils thick coverage; deep block, green or as approved by the City of Bexley.
4. Measurement: Overall height w/ adjustable feet approx.: 35"
Top O.D.: 21.5"
One-Centered.437 Anchor Bolt Hole 23-Gallon PVC liner
Lid: 20" Lexington standard



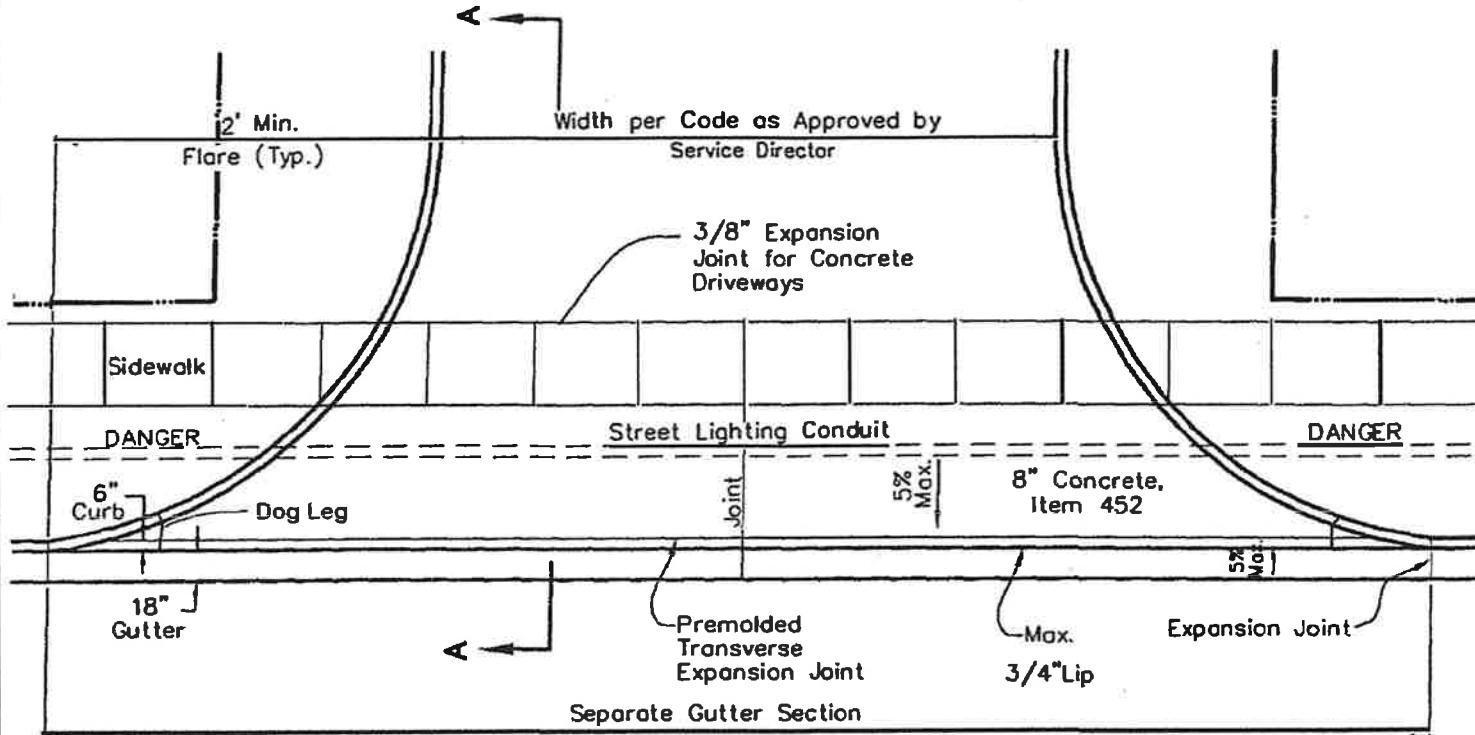
REVISION DATE: 6/1/2007	TRASH CONTAINER	STANDARD CONSTRUCTION DRAWING	
		CITY OF BEXLEY, OHIO	BEX-MIS-02



NOTES

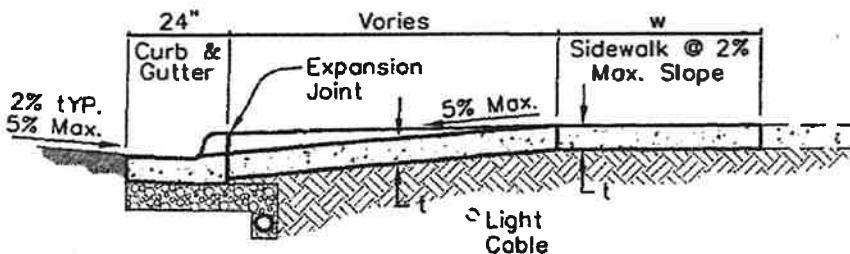
1. The size, shape, thickness, & color of limestone material shall be approved by the City's Engineer prior to placement.
2. All items shown in detail used for the construction of the retaining wall shall have their cost included in the bid price for Item: Special, Retaining Wall.
3. Provide material samples for approval prior to ordering materials.

REVISION DATE: 1/11/2019	RETAINING WALL	STANDARD CONSTRUCTION DRAWING	
		CITY OF BEXLEY, OHIO	BEX-MIS-03



PLAN VIEW

w=4' for Residential and Collector
w=5' for Arterial areas or as otherwise approved



t= 6" for Residential
t= 8" for Alleys/Commercial

SECTION A-A

NOTES

1. Concrete for driveway shall be COC Class "MS", Air Entrained Concrete w/ 57 Limestone Aggregate, maximum 4" slump, broom finish with edge trowel. Contraction joints as shown, sawed not less than 2" deep. No Fly Ash or GGBFS in concrete is permitted.
2. All exposed concrete surfaces shall receive 2 coats of ASTM 1315 Clear Cure and Seal or approved equal.
3. Contractor is responsible for protecting adjacent driveway, sidewalk, under drain, and street lighting cable and replacement of same if damaged due to Contractor's work.
4. See Sidewalk Detail Drawing Bex-ST-13 and Curb Ramp Drawings Bex-ST-10 and Bex-ST-11 for additional details.

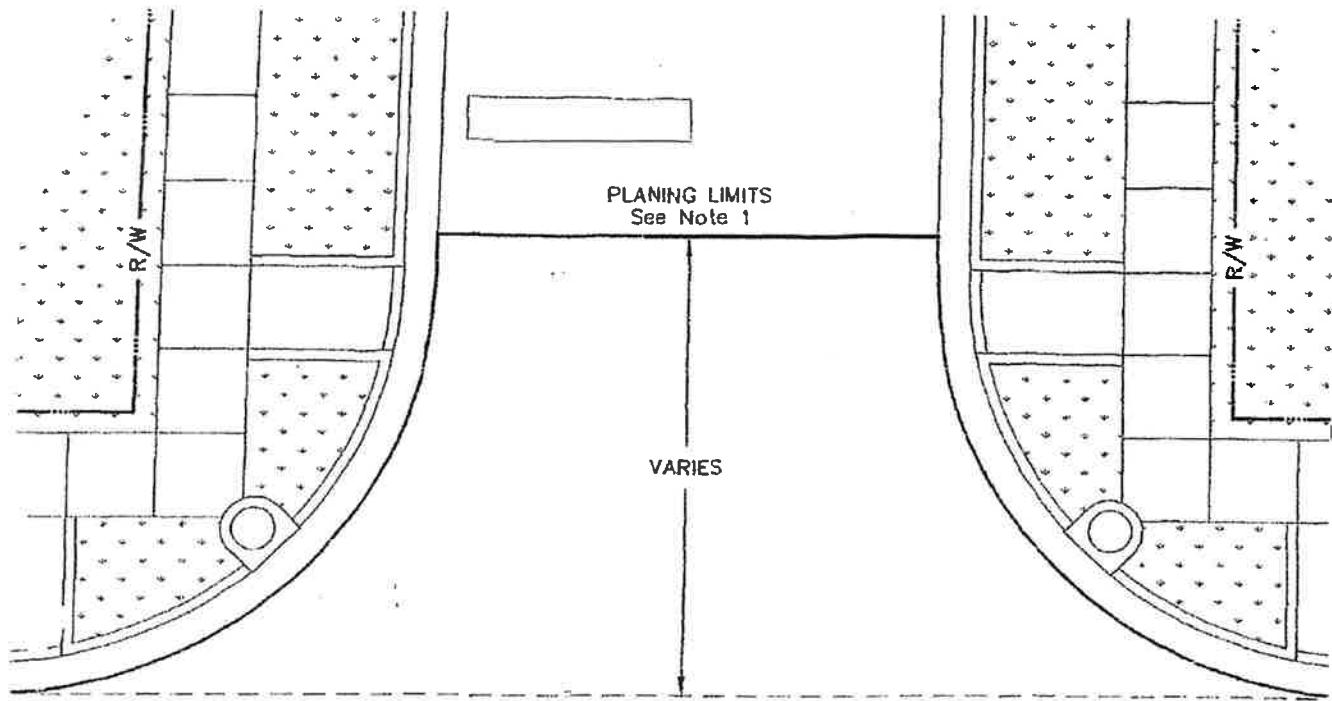
ALLEY APPROACH

STANDARD CONSTRUCTION DRAWING

REVISION DATE: 1/11/2019

CITY OF BEXLEY, OHIO

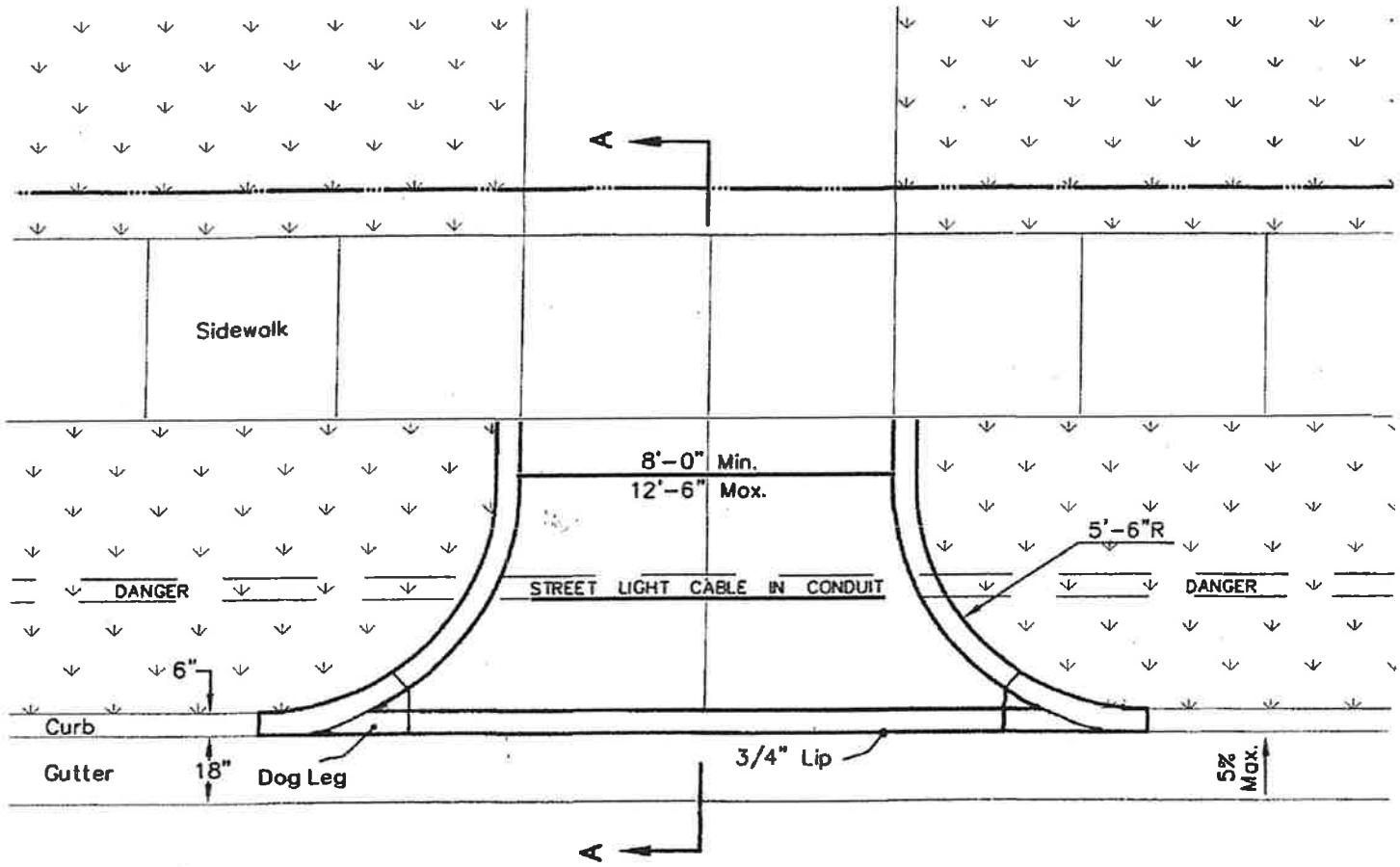
BEX-ST-01



NOTE

1. Planing shall extend to the curb return or 1' beyond edge of curb ramp where applicable.

REVISION DATE: 6/1/2007	INTERSECTION PLANING DETAIL	STANDARD CONSTRUCTION DRAWING	
		CITY OF BEXLEY, OHIO	BEX-ST-02

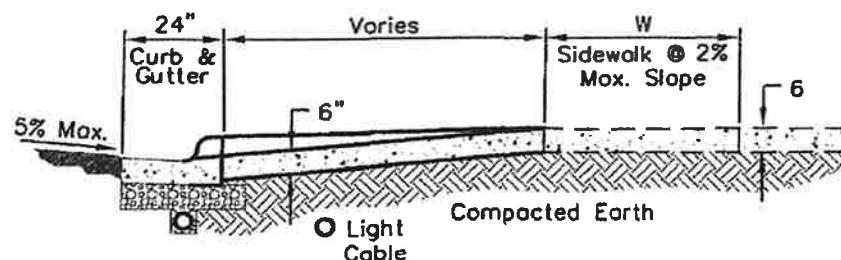


NOTES

1. Concrete for driveway shall be COC Closs "MS", Air Entrained Concrete with No. 57 Limestone Aggregate, maximum 4" slump, broomed finish with edge trowel. No fly ash or GGBFS is permitted.
2. All exposed approach surfaces shall receive 2 coats of ASTM 1315 Clear Cure and Seal
3. Contractor is responsible for protecting adjacent sidewalk, underdrain and street lighting cable and replacement of some if damaged due to Contractor's work.
4. Expansion joints shall be placed wherever new concrete touches existing concrete.
5. See Sidewalk Detail Bex-ST-13 for additional sidewalk details.

PLAN VIEW

w=4' for Residential and Collector
w=5' for Arterial or as otherwise approved.



SECTION "A-A"

REVISION DATE: 1/11/2019	STANDARD DRIVEWAY APPROACH	STANDARD CONSTRUCTION DRAWING
		CITY OF BEXLEY, OHIO BEX-ST-03

NOTES

Type 1 - From Streets Having A Combined Concrete Curb & Gutter

Remove the existing Curb & Gutter from the first joint on each side of the driveway. The concrete gutter will extend approximately 18" into the flow line of the street. All portions of the gutter must be neatly saw cut prior to removal.

On streets having asphalt pavement, the concrete gutter shall be pored to a depth of 1-1/2" below the pavement surface. That portion of the driveway approach facing the concrete gutter along the flow line should be constructed with a 1/2" high lip in order to keep surface water from flowing onto the surface of the new approach.

The curb shall be regular for that portion on the street but shall diminish in height until it runs out at a point 6'-0" back of face of curb.

Driveways shall extend from the curb or gutter to the established line or sidewalk (side near curb). In absence of walks along the street and absence of established line of walk, the driveway entrance shall, at the discretion of the Service Director, extend at least far enough from the curb to complete the 5'-6" radius.

Type 2 - From Streets Having Cut Stone Curb

The top of the curb shall be cut down to 5" below the edge of pavement with square shoulders at end of radii. Replace with concrete slab starting 1" above edge of pavement and extending to line of walk.

Type 3 - From Streets Having Flat Barrel-Type Brick Gutters

The top course of brick shall be removed and replaced with concrete slab from back of gutter to sidewalk location.

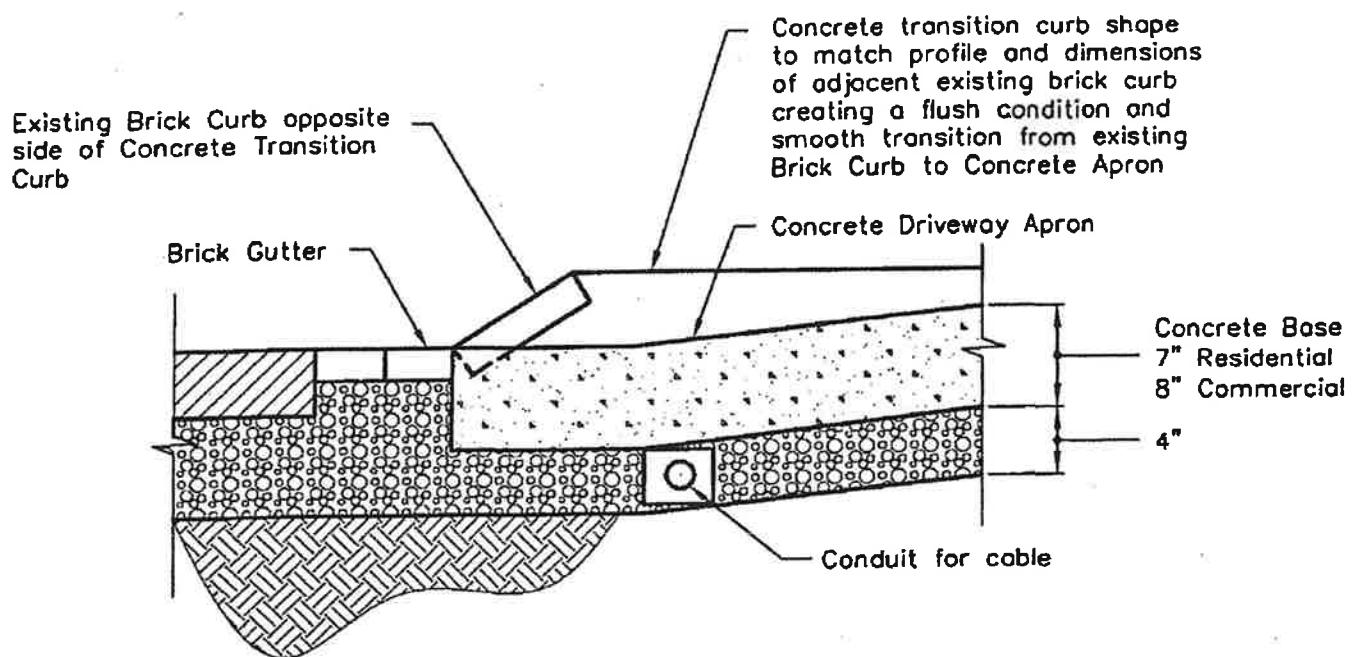
Type 4 - From Streets Having Round Barrel-Type Brick Gutters

The inside edge (toward sidewalk) to be removed down to a point 1" above gutter line and replaced with concrete slab from gutter to sidewalk location.

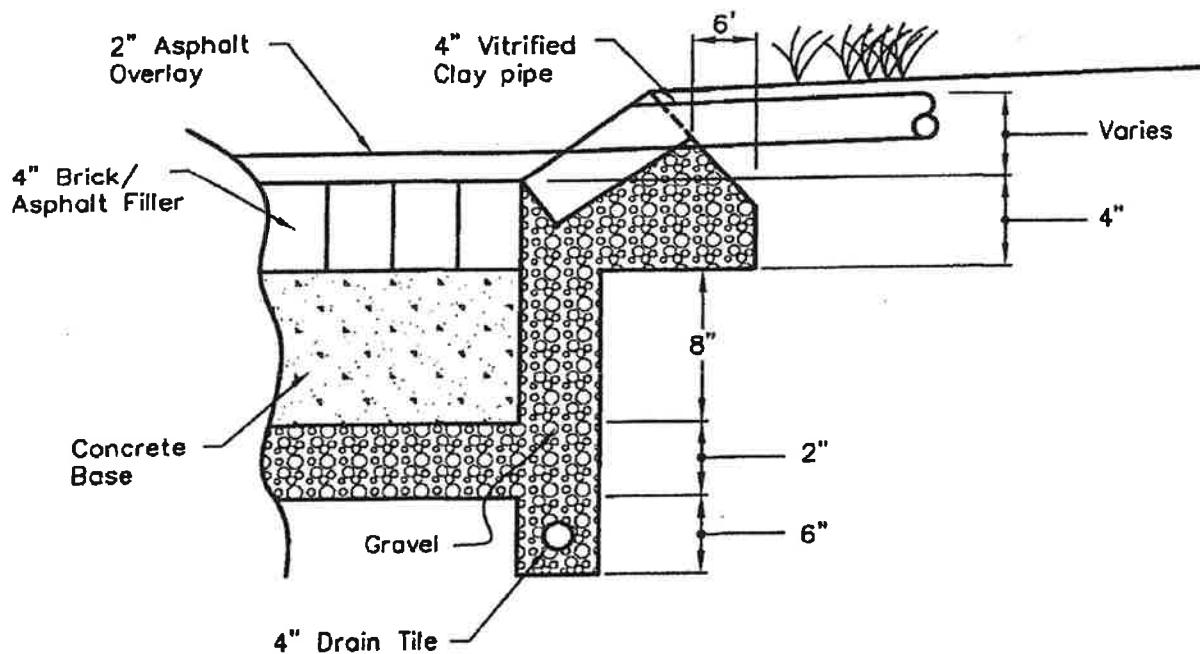
Type 5 - From Streets Having Straight Concrete Curb

This type shall be treated in the same manner as the Cut Stone Curbs.

REVISION DATE: 4/20/2006	STANDARD DRIVEWAY APPROACH	STANDARD CONSTRUCTION DRAWING CITY OF BEXLEY, OHIO	BEX-ST-03.1
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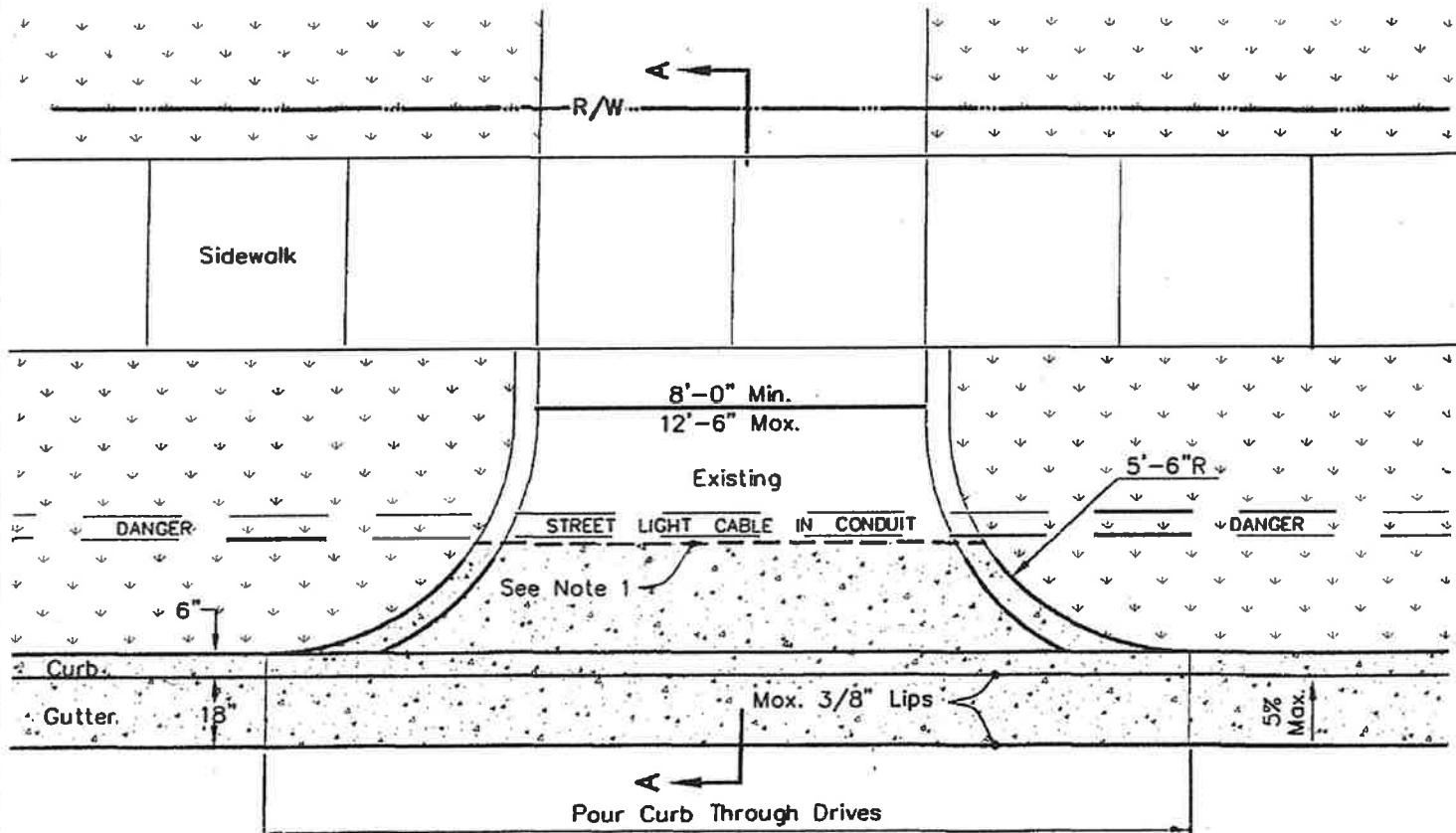


SECTION A-A



SECTION B-B

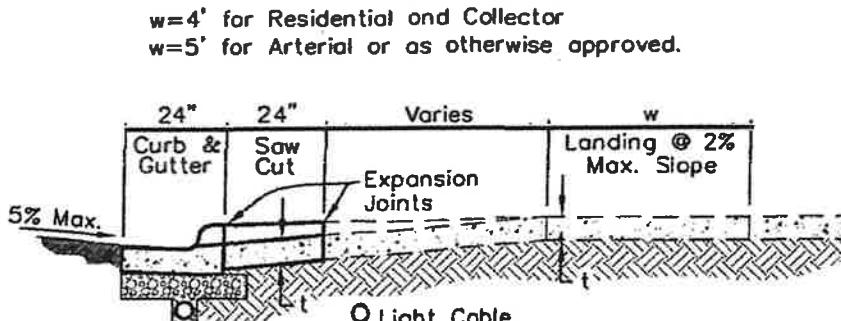
REVISION DATE: 6/1/2007	STANDARD DRIVEWAY APPROACH W/ BRICK CURB	STANDARD CONSTRUCTION DRAWING CITY OF BEXLEY, OHIO
		BEX-ST-04.1



PLAN VIEW

NOTES

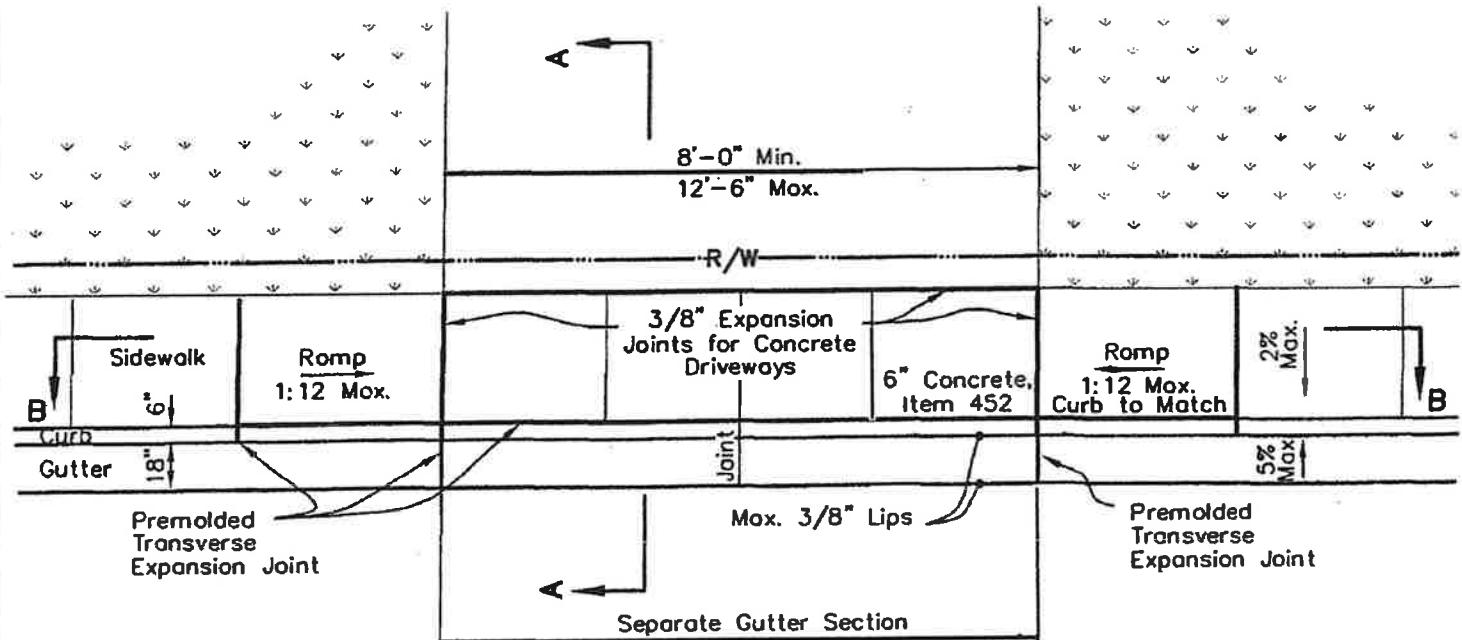
1. Saw cut full depth and remove 1/2 the width of the driveway for continuous curb removal.
2. All exposed surfaces shall receive 2 coats of Dayton Superior J-20 U.V. Cure and Seal or approved equal.
3. Concrete for driveway shall be ODOT Class "S", Air Entrained Concrete w/ No. 57 Limestone Aggregate, maximum 4" slump, broom finish with edge trowel. Expansion joints as shown, sawed not less than 2" deep. No fly ash or GGBFS in concrete permitted.
4. Contractor is responsible for protecting adjacent driveway, sidewalk, underdrain, and street lighting cable and replacement of some if damaged due to Contractor's work.
5. Driveway shall not be closed for more than 5 calendar days or over a weekend. Contractor shall provide steel plates for access if driveway is not opened in time allowed.



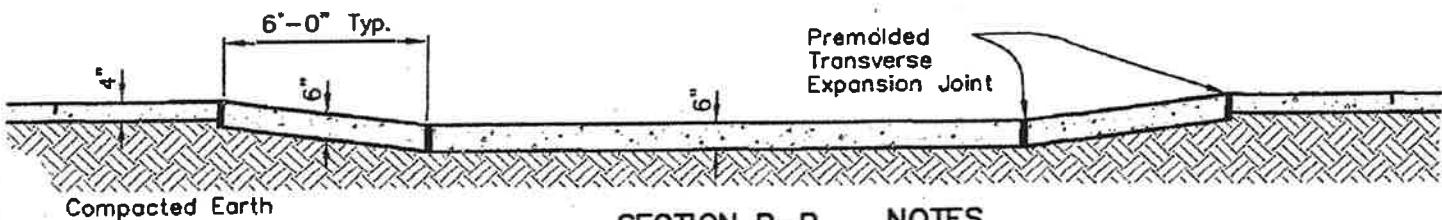
$t = 6"$ for Residential
 $t = 8"$ for Alleys/Commercial

SECTION A-A

	STANDARD DRIVEWAY APPROACH FOR CURB REPLACEMENT	STANDARD CONSTRUCTION DRAWING
REVISION DATE: 6/1/2007		CITY OF BEXLEY, OHIO BEX-ST-05



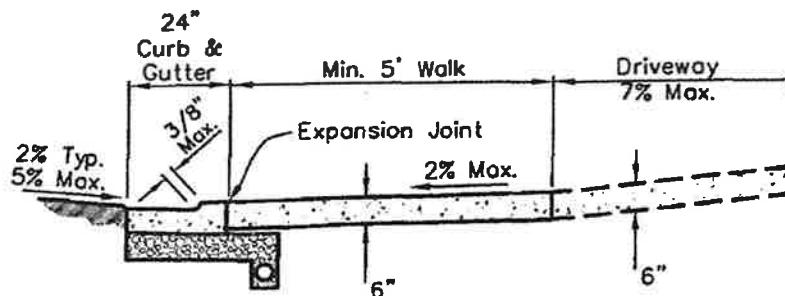
PLAN VIEW



SECTION B-B

NOTES

1. Concrete for driveway shall be COC CMS 452 Class "S", Air Entrained (6% \pm 1%) Concrete w/ 57 Limestone Aggregate, maximum 4" slump, broom finish with edge trowel. Contraction joints as shown, sown not less than 2" deep. No Fly Ash or GGBFS in concrete is permitted.
2. All exposed concrete surfaces shall receive 2 coats of ASTM 1315 Clear Cure and Seal.
3. Contractor is responsible for protecting adjacent driveway, sidewalk, underdrain, and street lighting cable and replacement of same if damaged due to contractor's work.
4. Sidewalks shall be constructed according to Bexley Standard Drawing Bex-ST-13.
5. All joints and edges are to be tooled.
6. All castings shall be set to proper grade.



SECTION A-A

STANDARD DRIVEWAY

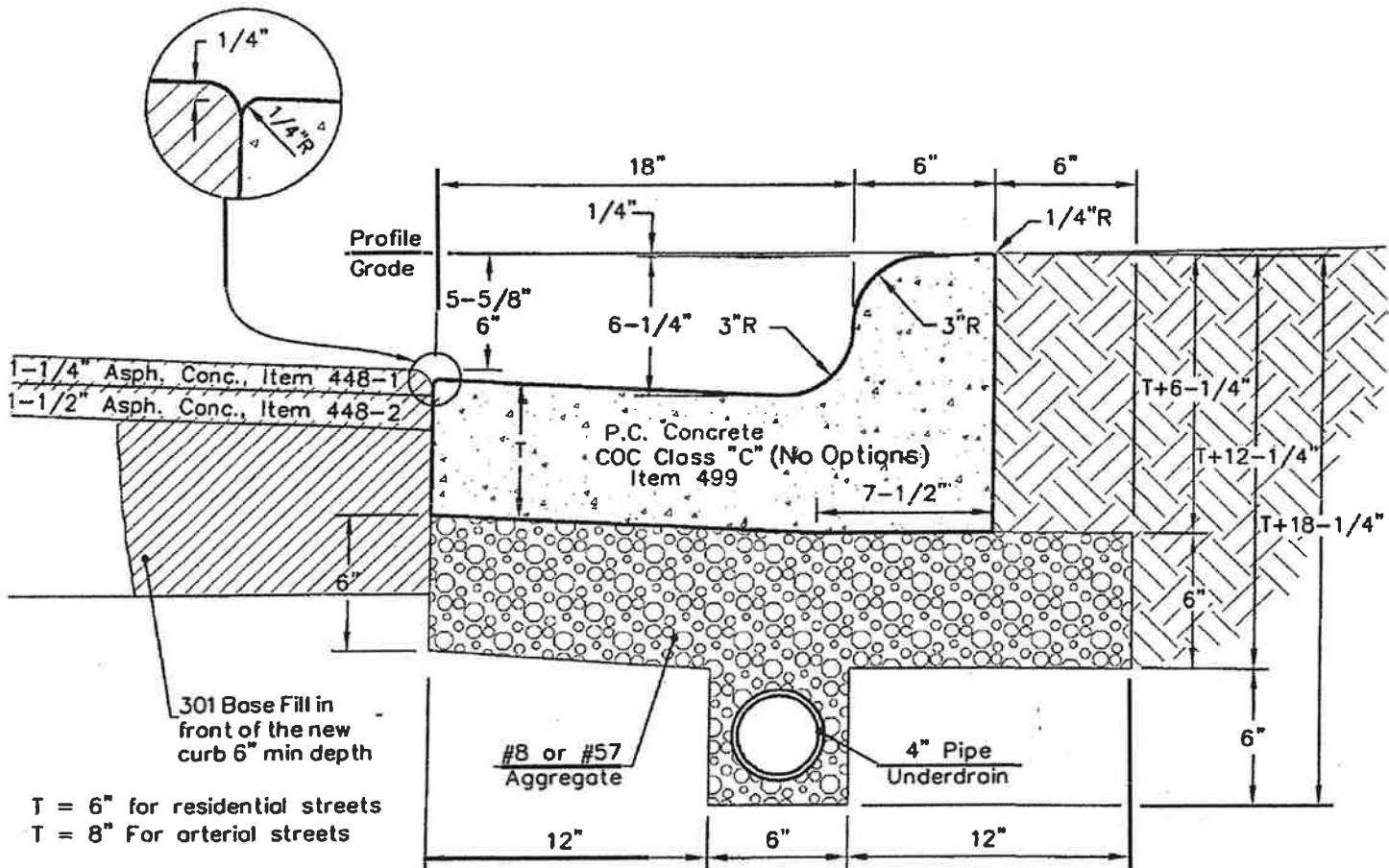
WALK ADJACENT TO CURB

STANDARD CONSTRUCTION DRAWING

REVISION DATE: 3/11/2019

CITY OF BEXLEY, OHIO

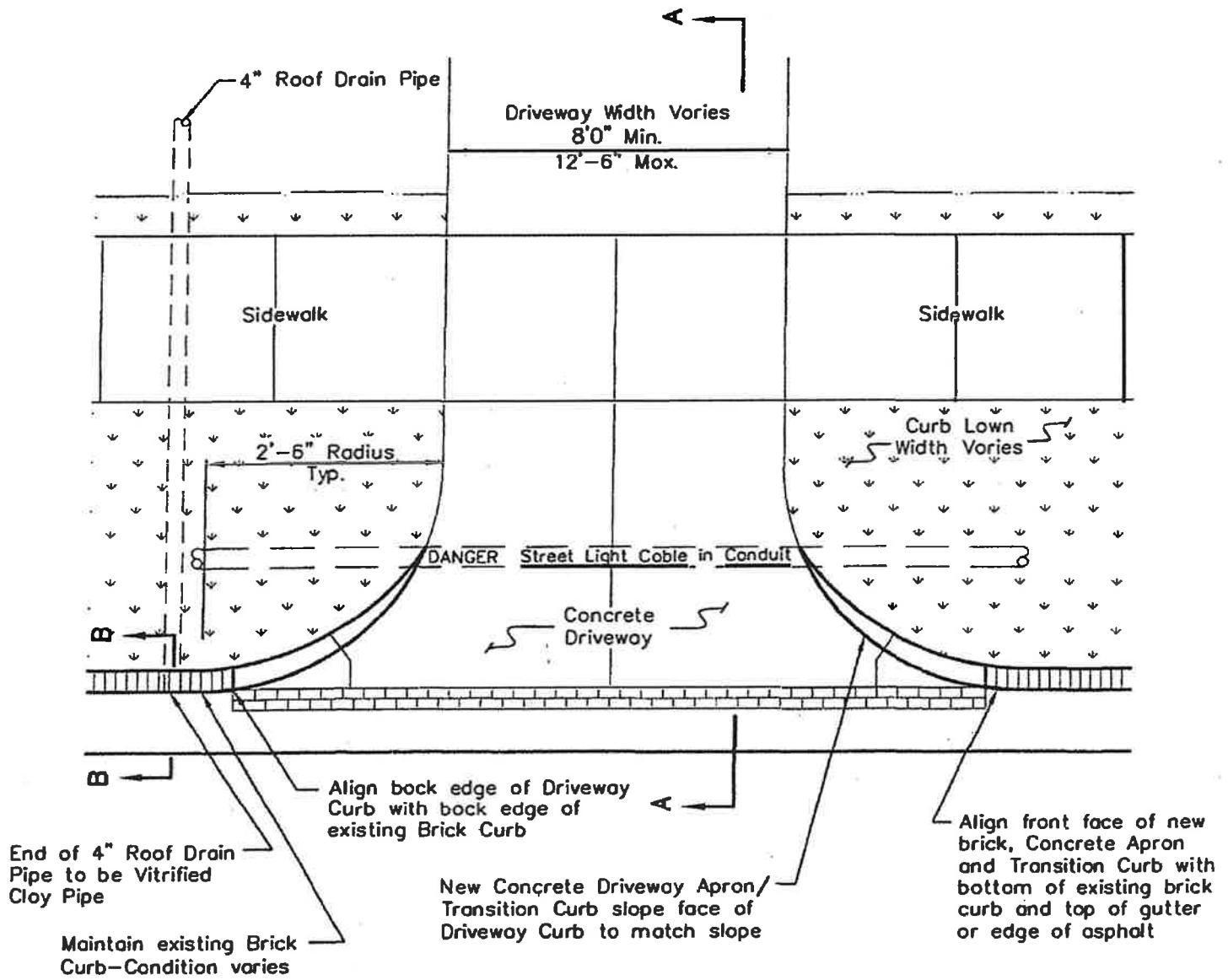
BEX-ST-06



NOTES

1. Curb & Gutter shall consist of 1.26 C.F. of concrete per linear foot: COC Class C- No Options.
2. All exposed surfaces of concrete curb & gutter shall have a brush finish and completely covered with 2 coats of ASTM 1315 Clear Cure and Seal including the back side of curb and all sawn joints.
3. 3/4" expansion joints shall be installed at right angles to the curb line within 5' to 10' of all curb inlets.
4. Control joints shall be saw cut at 10' intervals, not less than 2" deep, and as soon as possible without causing damage to the concrete. Re-coat all sawn joints with cure and seal.
5. Tolerances shall not exceed 1/4" for section, grade, surface variation, or alignment.
6. Excavated area in front of new curb and gutter shall be backfilled with down to 9" below finished grade with 301 Bituminous Base Asphalt Concrete. Area in back of curb shall be backfilled with topsoil and seeded per (See COC 659) with 30% Kentucky Bluegrass 30% Perennial Rye, 40% Fine Fescue Seed Mix.
7. Saw cut full depth through all asphalt and concrete at least 12" in front of proposed curb.
8. All roof drains shall be cored, saw cut and reconnected as directed by Engineer.
9. Face of Curb shall be stamped with a "W" for water services or on "M" when water main valves are present behind curb.

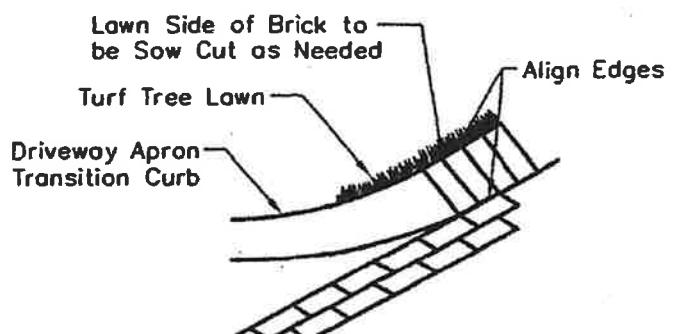
STANDARD CONCRETE	STANDARD CONSTRUCTION DRAWING
REVISION DATE: 1/11/2019	CURB & GUTTER CONTINUOUS



PLAN VIEW

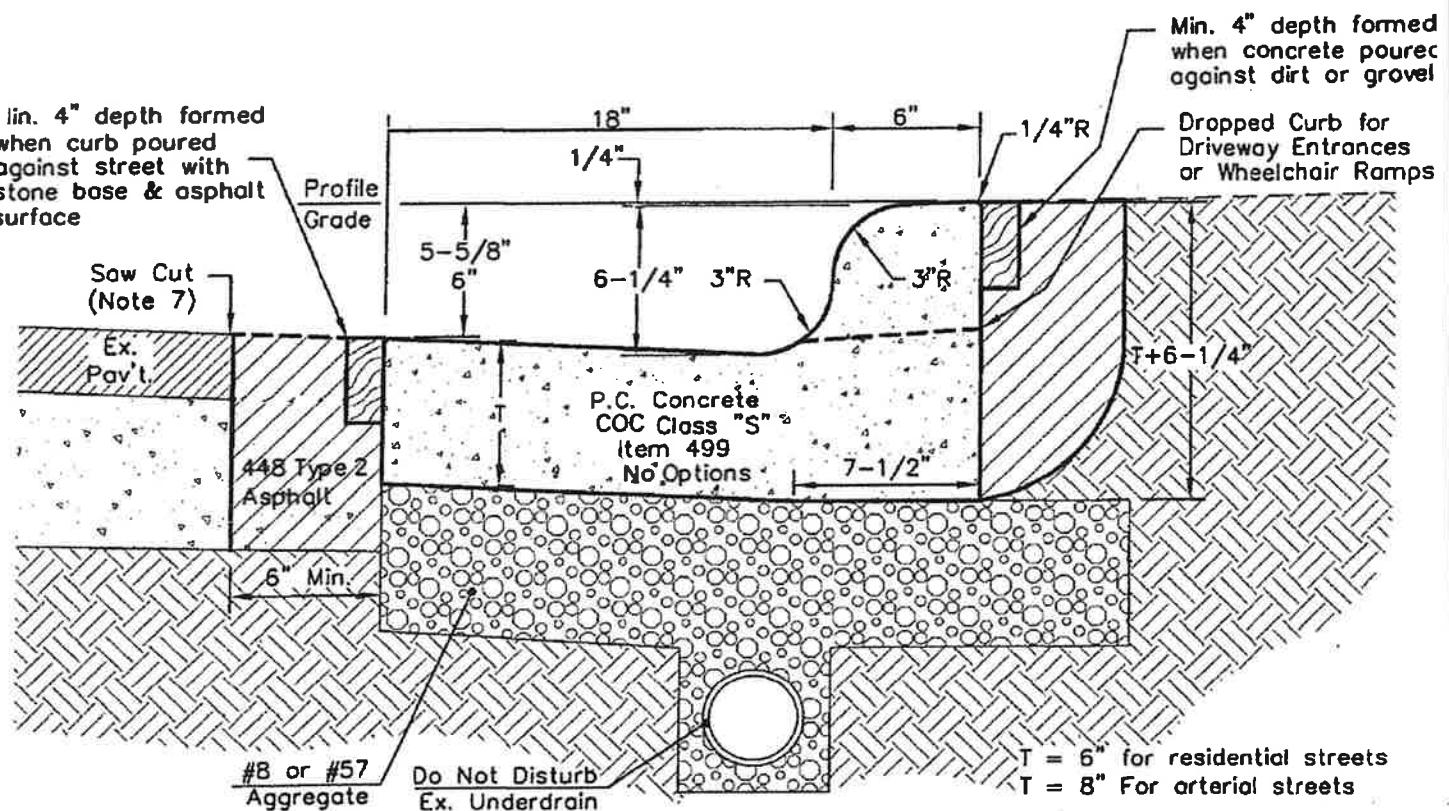
NOTES

1. Important: Call the City of Bexley for Streetlight Cable Location before digging.
2. Return any removed Curb Brick to the City of Bexley.



ISOMETRIC

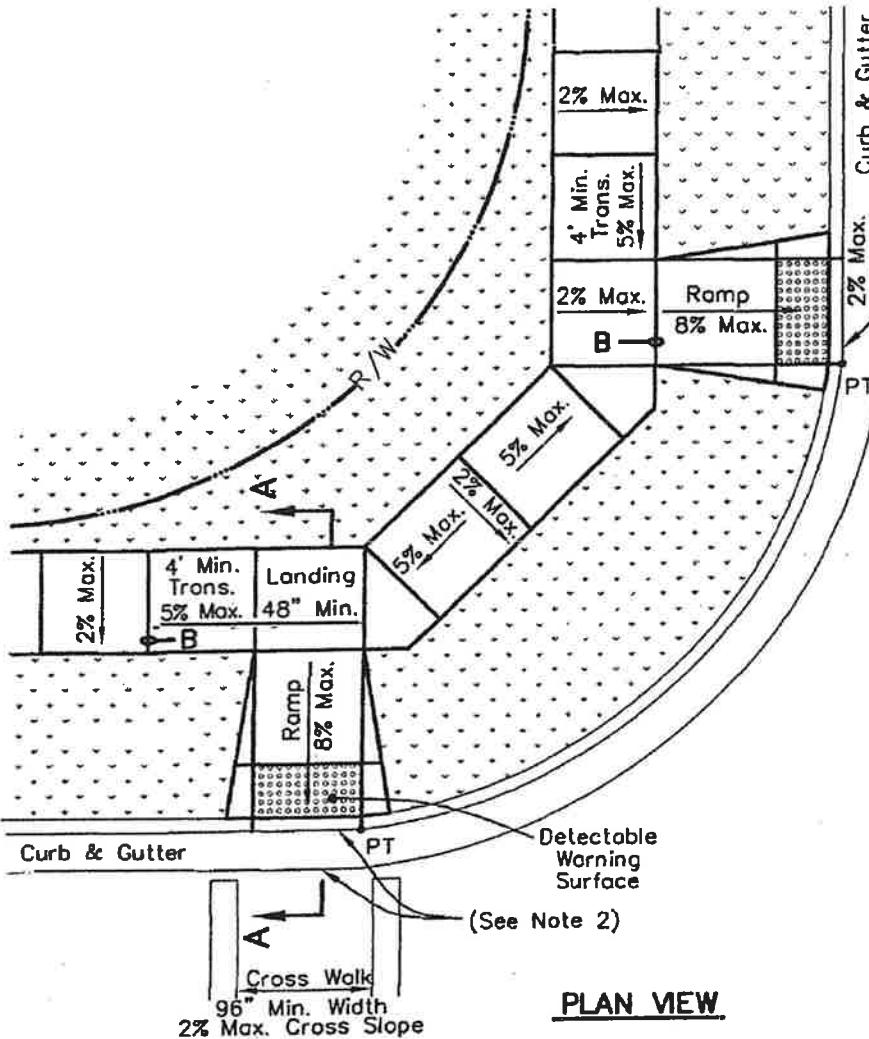
REVISION DATE: 6/1/2007	STANDARD DRIVEWAY APPROACH W/BRICK CURB	STANDARD CONSTRUCTION DRAWING
		CITY OF BEXLEY, OHIO BEX-ST-04



NOTES

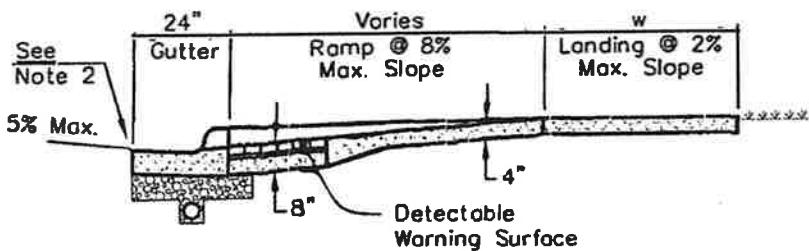
1. Curb & Gutter shall consist of 1.26 C.F. (6") of concrete per linear foot for residential or local streets and 1.59 C.F. (8") of concrete for collector or secondary arterial streets.
2. All exposed surfaces of concrete curb & gutter shall have a brush finish and shall receive 2 coats of ASTM 1315 Clear Cure and Seal, including the back side of curb.
3. 3/4" expansion joints shall be installed at right angles to the curb line 5' to 10' away from all storm inlet structures.
4. Control joints shall be saw cut at 10' intervals, not less than 2" deep, and as soon as possible without causing damage to the concrete. All Saw Cuts Shall be resealed with Curing and Sealing Compound.
5. Tolerances shall not exceed 1/4" for section, grade, surface variation, or alignment. Replace any curb causing water to not drain completely.
6. Excavated area in front of new curb and gutter shall be backfilled with 448 Type 2 Asphalt Concrete up to finished grade and compacted with a vibratory plate compactor. Area in back of curb shall be backfilled with topsoil and seeded per (See ODOT 659) with 30% KentuckyBluegrass 30% Perennial Rye 40% Fine Fescue Seed Mix.
7. Saw cut full depth through all asphalt and concrete no less than 6" in front of curb.
8. All roof drains shall be cored, saw cut and reconnected with Fernco Type boots and 3" SCH 40 PVC Pipe.
9. Face of Curb shall be stomped with a "W" for water services or on "M" when water main valves are present behind curb.

REVISION DATE: 1/11/2019	STANDARD CONCRETE CURB & GUTTER REMOVE AND REPLACE	STANDARD CONSTRUCTION DRAWING CITY OF BEXLEY, OHIO BEX-ST-09
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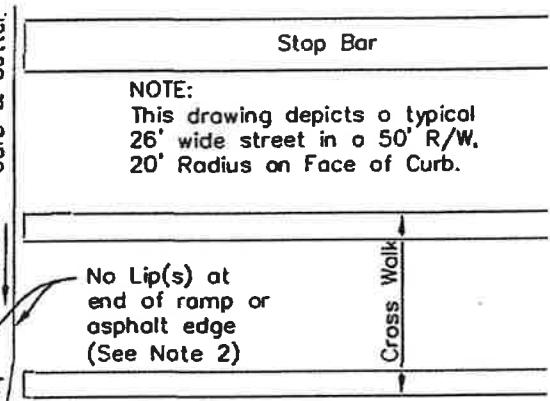


PLAN VIEW

w=4' for Residential and Collector
w=5' for Arterial or as otherwise approved.

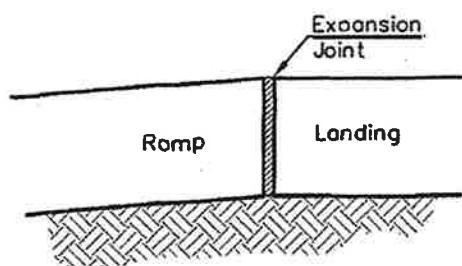


SECTION "A-A"



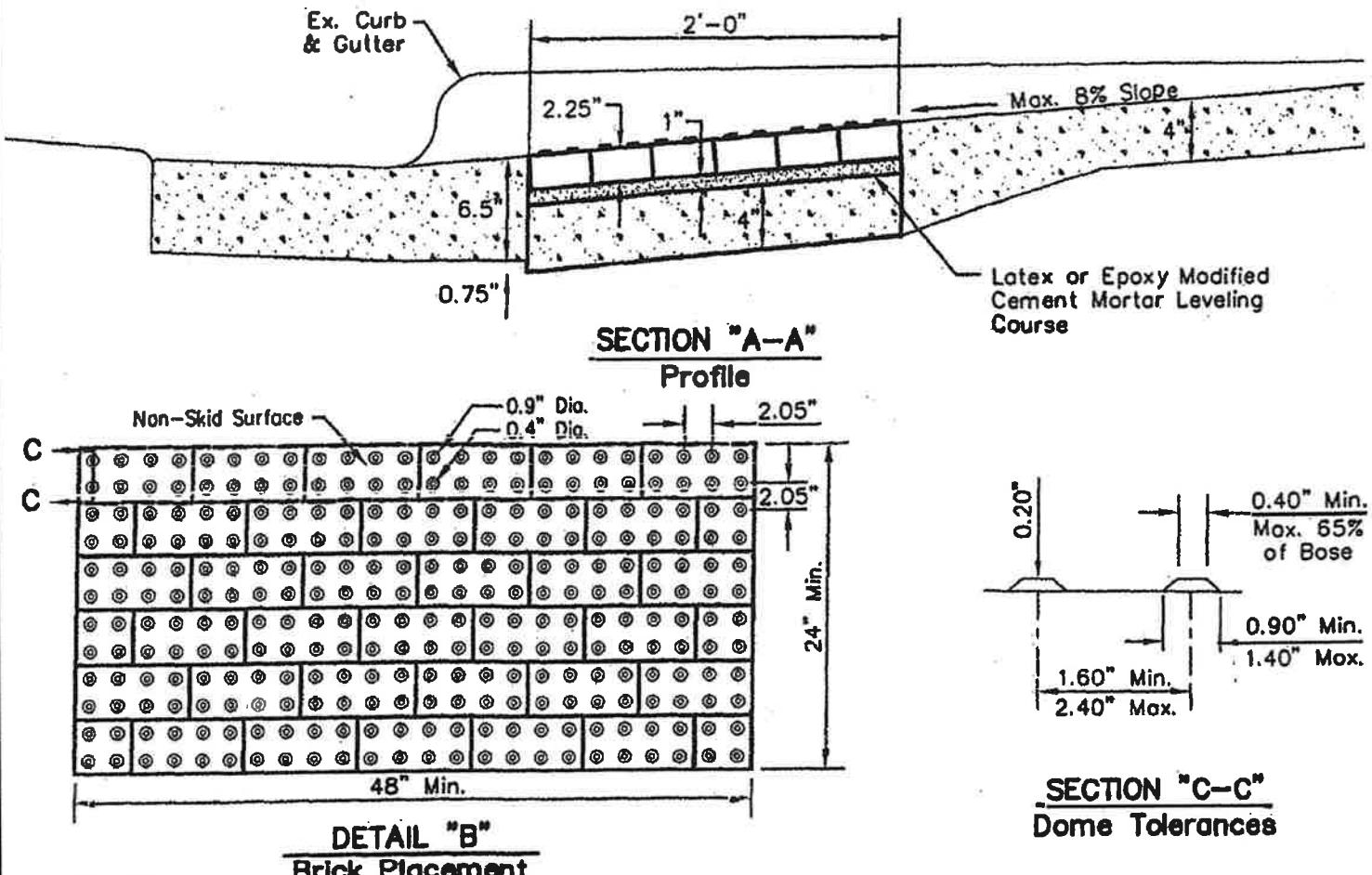
NOTES

1. Curb, Wheel Chair Ramp, Landing and Transitions shall be formed and placed separately. Contractor is responsible to meet all tolerances. Cross slopes for Sidewalks, Ramps, Landings, Gutters, Transitions, and Cross Walks shall not exceed 2%.
2. Contractor shall grind or repave asphalt roadway at edge of pavement if any lip exists or counter slope exceeds 5%.
3. Concrete shall be COC Class S—No Options. Use ASTM 1315 Clear Curing and Sealing Compound, 2 coats.
4. Detectable Warning Surfaces shall conform to Bexley Std. Dwg Bex-ST-12.
5. Ramps must be perpendicular to face of curb and parallel to direction of travel. Ramps shall not direct the pedestrian into traffic.
6. A street landing shall be provided whenever a ramp intersects the radius of the curb. This area shall have a maximum slope of 2% in both directions and be a minimum of 48" x 48".



DETAIL "B"

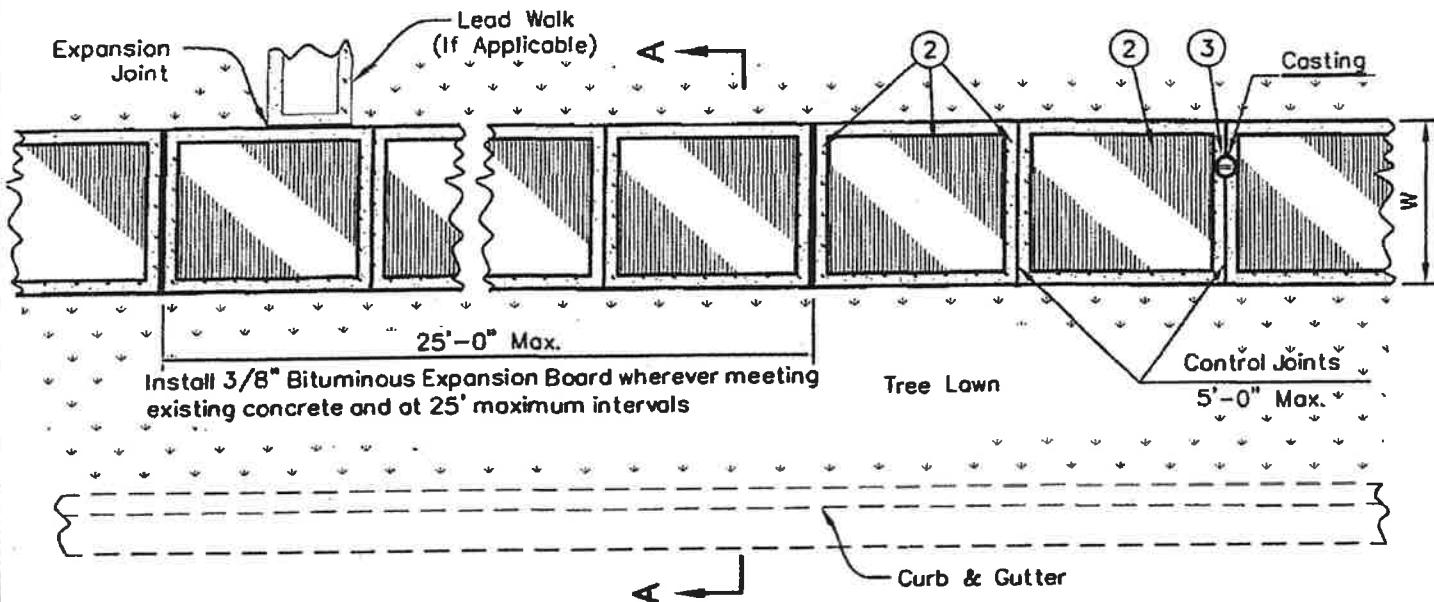
REVISION DATE: 3/11/2019	TYPICAL ADA RAMP RESIDENTIAL NEW CONSTRUCTION	STANDARD CONSTRUCTION DRAWING CITY OF BEXLEY, OHIO BEX-ST-10
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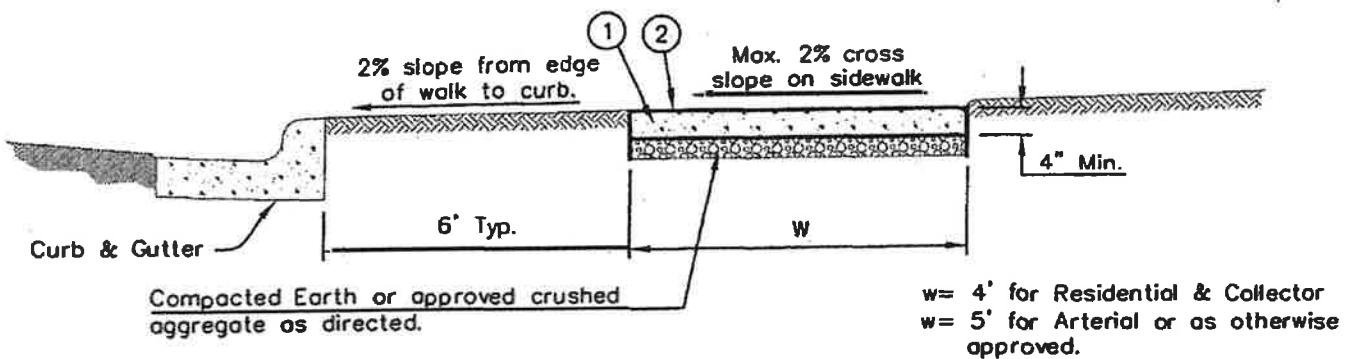
NOTES

1. Detectable Warning Surfaces shall be provided as required by the ADA Accessibility Guideline (ADAAG) 4.29.2 as amended or revised.
2. The material used shall be selected from the following options, or approved equal:
 - 4"x8"x2.25" Pine Hall Detectable Warning Brick, Red (Main Street Detectable Warnings Only)
 - 24"x48" or 24"x60" Armor Tile Replaceable Detectable Warning Mat, Red (All Residential Streets and Broad Street)
3. Detectable warnings shall be as shown in Detail "B" and provide a visual contrast with adjoining surfaces. Bricks must be placed in a standard running-bond pattern, so as that the domes produce an "in-line" pattern, both parallel and perpendicular to the direction of travel. The material used shall provide a slip-resistant surface.
4. Installation shall be per the manufacturers specifications. Detectable Warning Mats shall not be cut.
5. Tolerances shown in Section "C-C" shall be used for inspection criteria.
6. After mortar has set, sand shall be compacted into brick joints to be flush with the brick face and a sealant shall be applied to the surface of the brick and sand.

REVISION DATE: 1/11/2019	ADA CURB RAMP DETECTABLE WARNING SURFACE	STANDARD CONSTRUCTION DRAWING	
		CITY OF BEXLEY, OHIO	BEX-ST-12.1



SIDEWALK PLAN

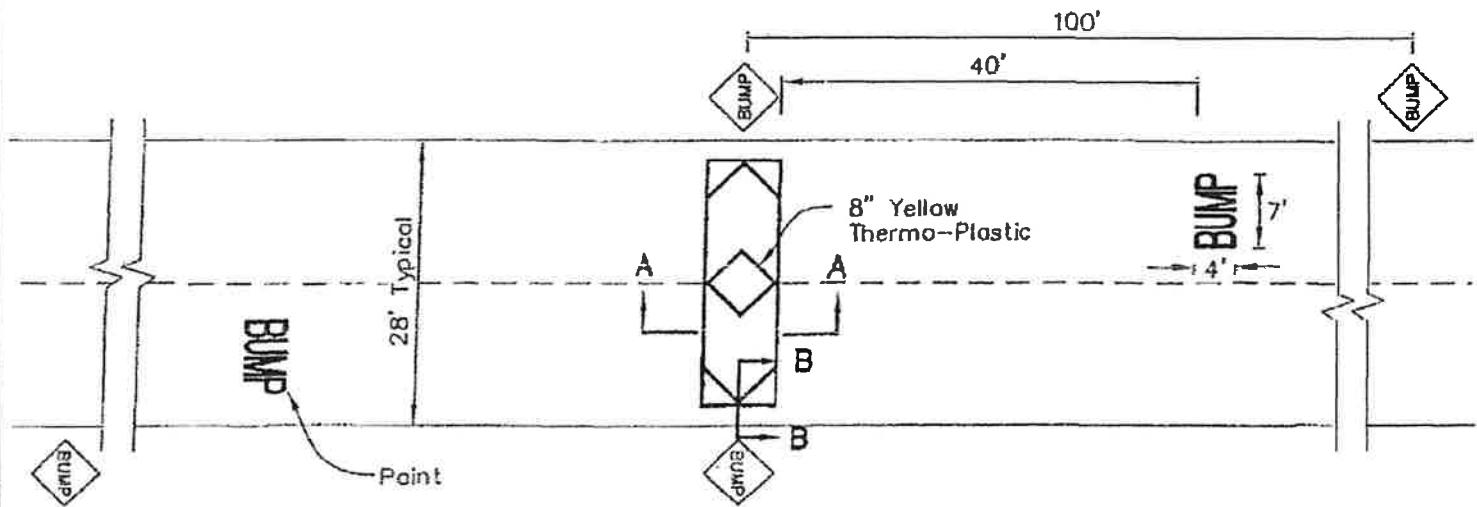


SECTION "A-A"

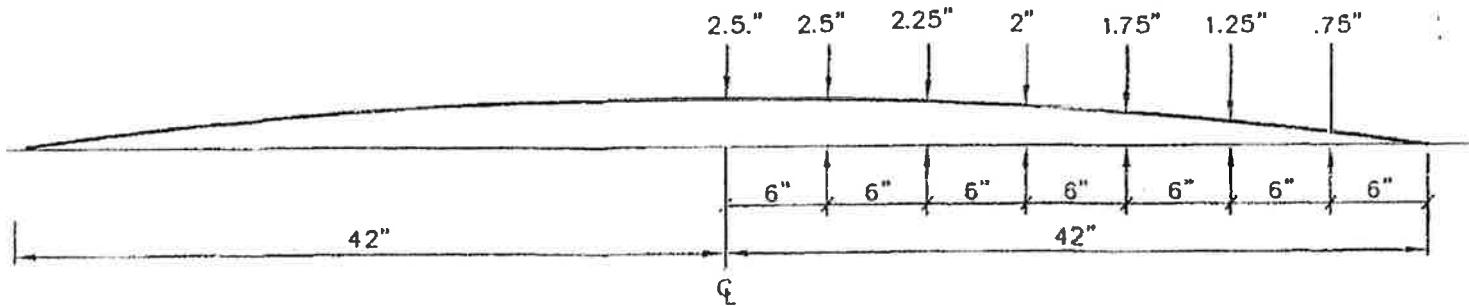
NOTES

1. Sidewalks shall be constructed according to Item 608 per COC CMS, current edition and as modified by these notes.
2. All joints and edges to be tooled after broom finish.
3. All castings within sidewalk shall be set flush with concrete and bolted down.
4. All concrete shall be Columbus Class "S" with 6%, $\pm 1\%$ air entrainment. No fly ash or GGBFS permitted.
5. All exposed sidewalk surfaces shall receive 2 coats of ASTM 1315 Clear Cure and Seal.
6. The minimum repair width shall be a 4' full sidewalk panel, matching ex joints as directed by City.

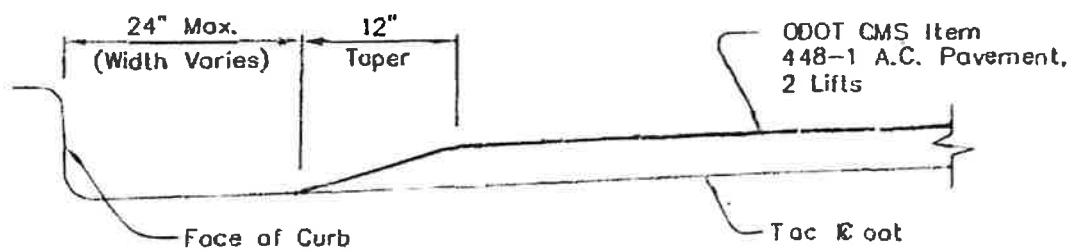
REVISION DATE: 1/11/2019	TYPICAL SIDEWALK	STANDARD CONSTRUCTION DRAWING	
		CITY OF BEXLEY, OHIO	BEX-ST-13



PLAN VIEW

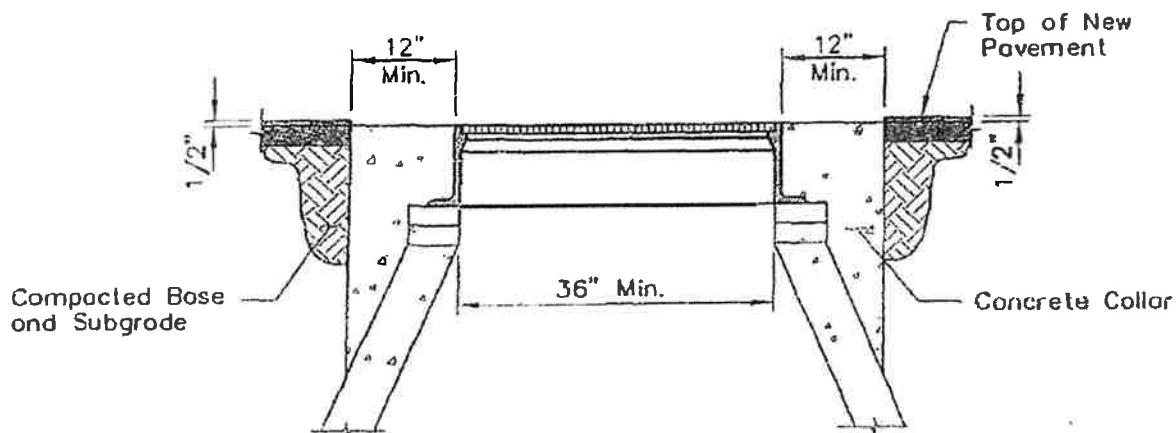
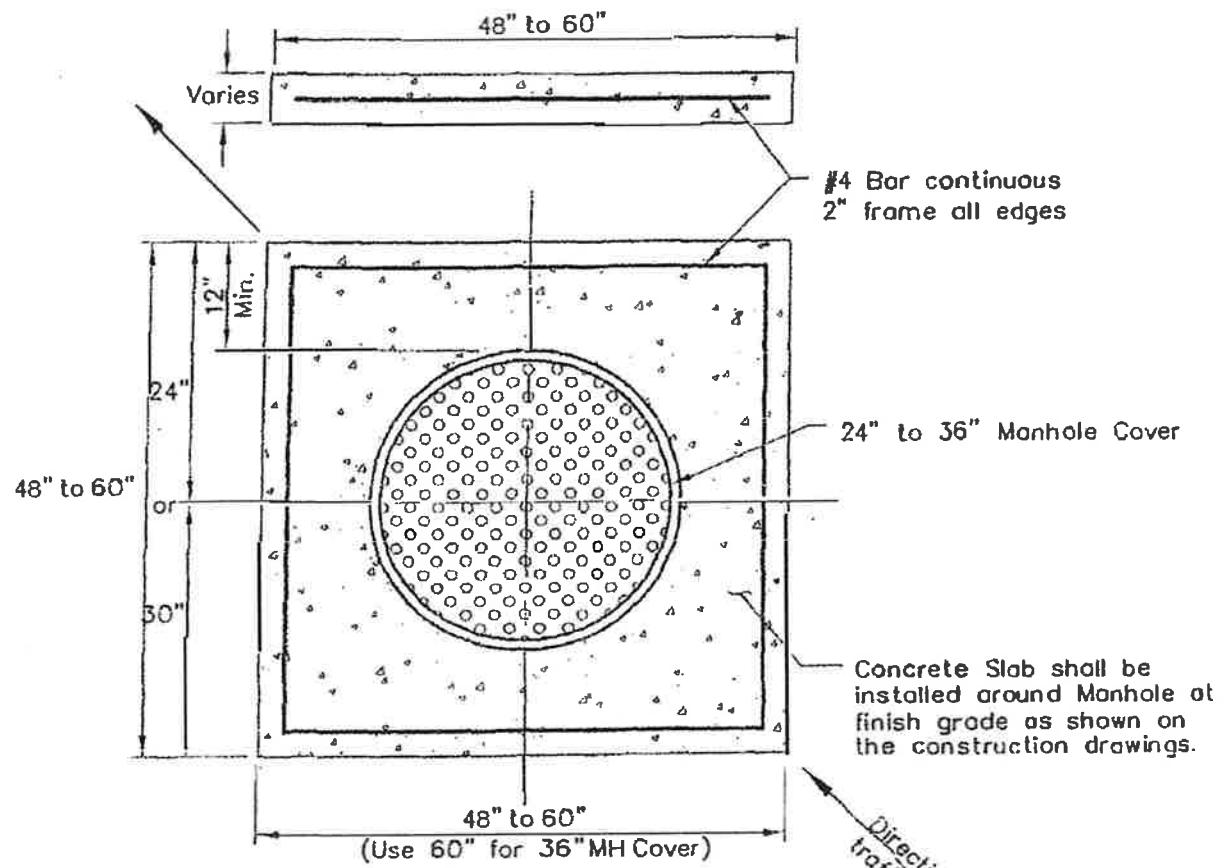


Section A-A
Parabolic Crown
(Tolerance $\pm 0.25"$)



Section B-B
Curb Detail

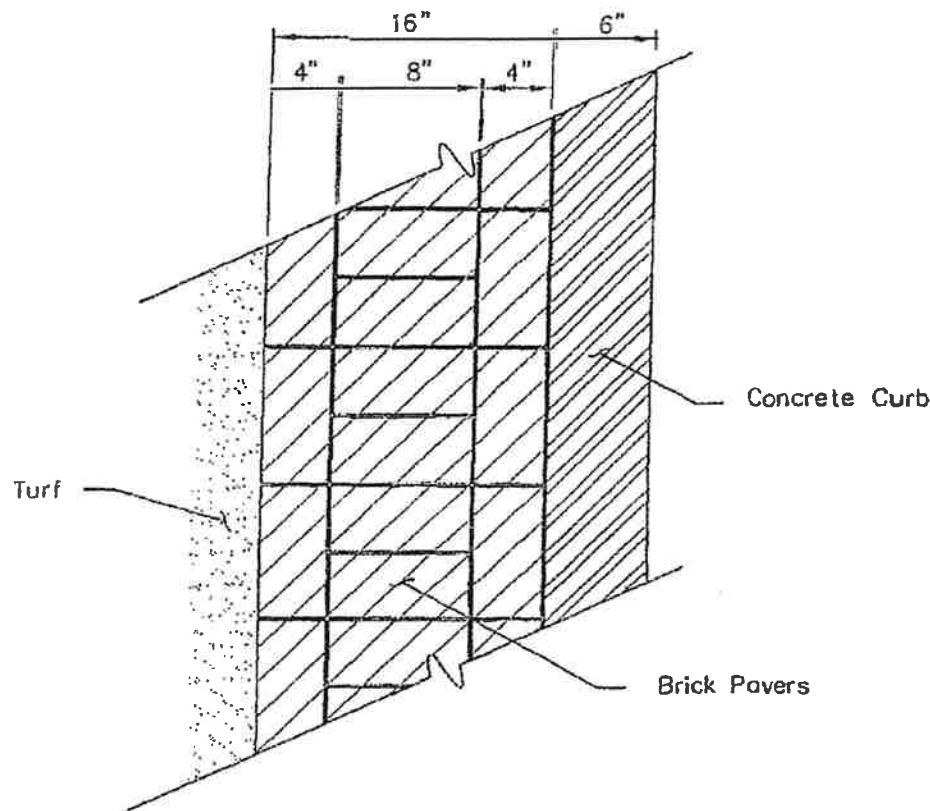
REVISION DATE: 3/11/2019	SPEED BUMP	STANDARD CONSTRUCTION DRAWING CITY OF BEXLEY, OHIO BEX-ST-15
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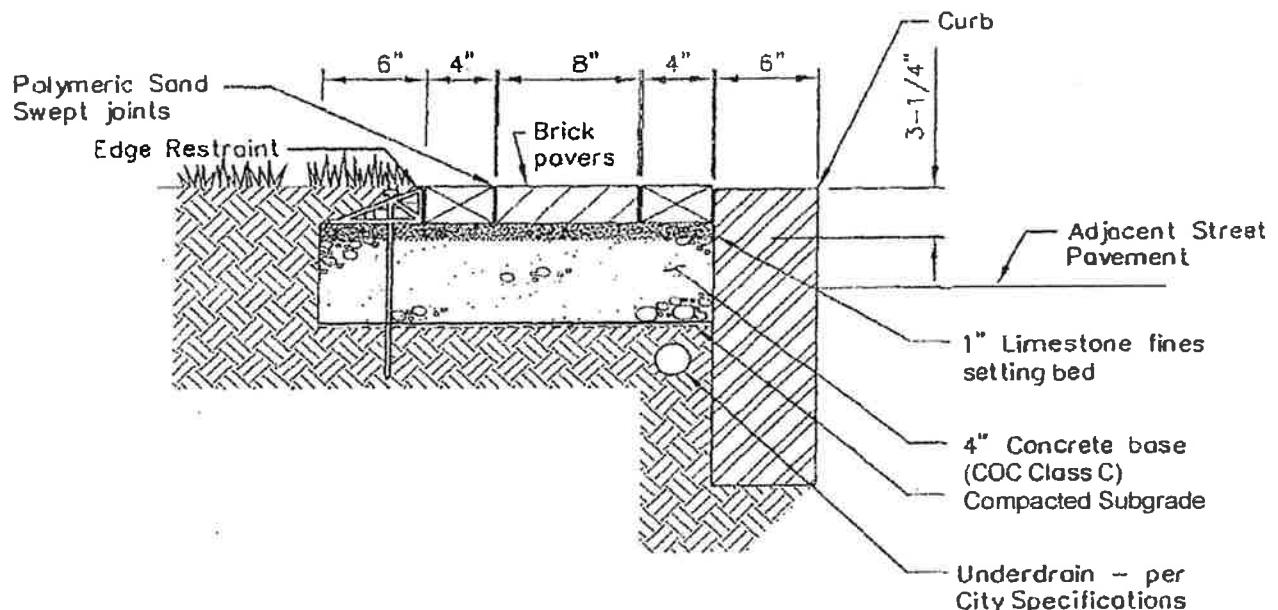
NOTE

Adjust Manhole upward with clay fired bricks and mortar or concrete adjusting rings under the frame. Adjust Manhole downward by removing a portion of Manhole Riser and rebuilding to proper diameter and height. Slope Manhole Rings as required to match street grade and crossslope. Manhole adjustment shall be made after paving to match new pavement slope and grade.

REVISION DATE: 3/11/2019	MANHOLE FRAME ADJUSTMENT DETAIL	STANDARD CONSTRUCTION DRAWING CITY OF BEXLEY, OHIO BEX-ST-16
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PLAN

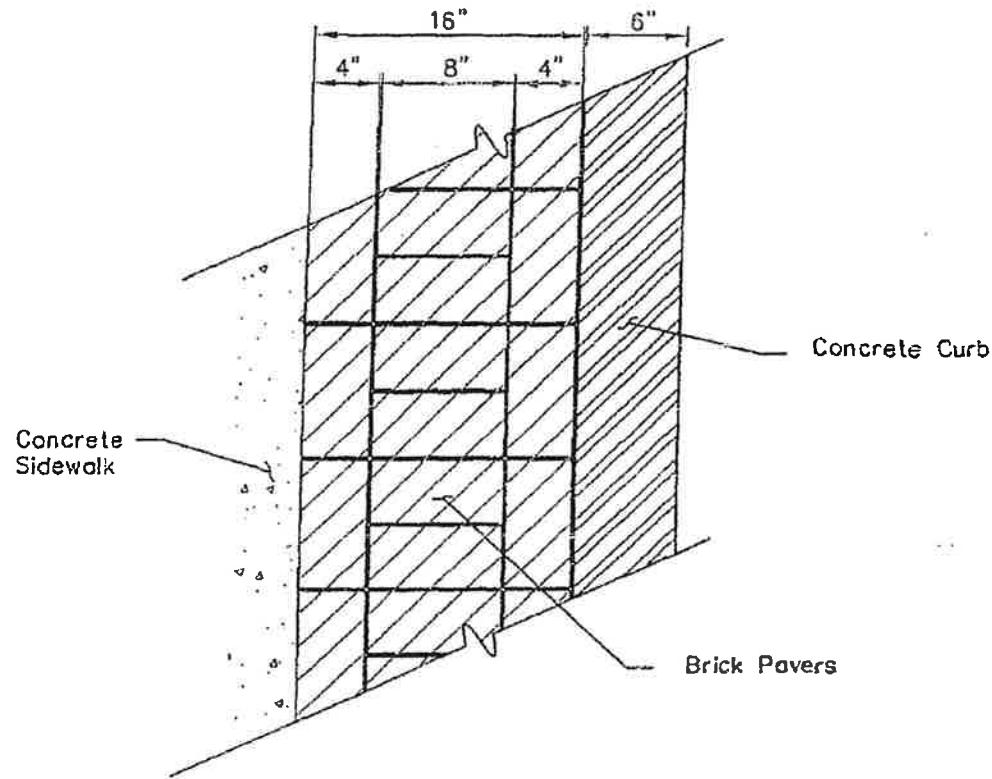


NOTE

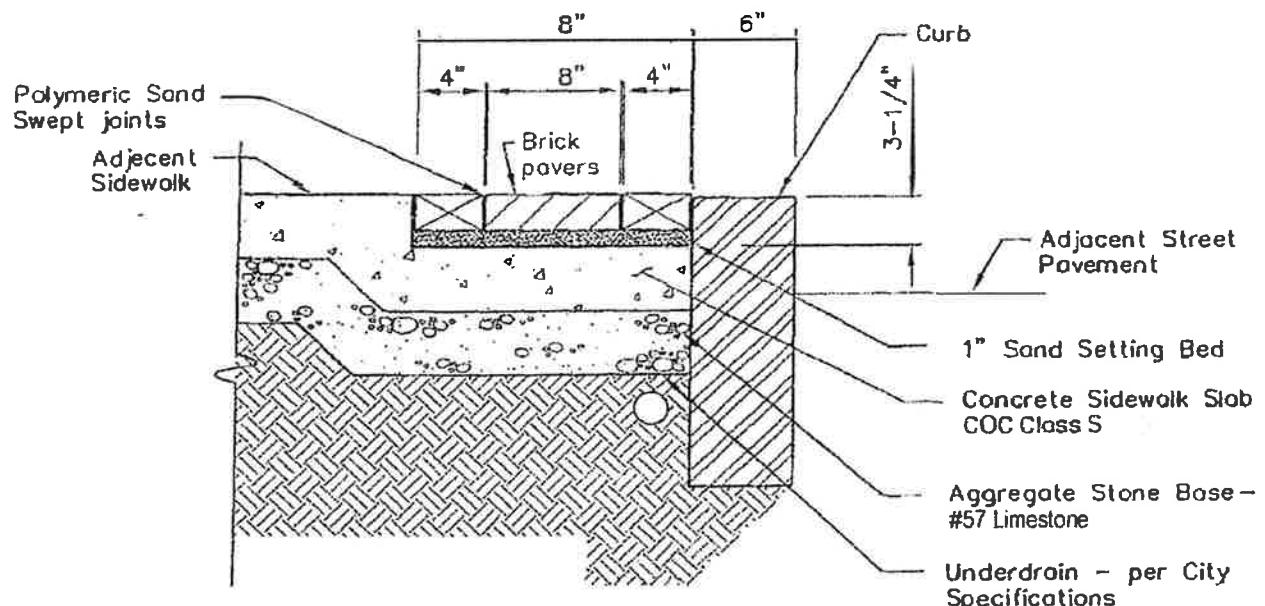
Use Pine Holt English Edge Ironspot paver.

SECTION

REVISION DATE: 3/11/2019	BRICK STRIP DETAIL MAIN STREET TREELAWN	STANDARD CONSTRUCTION DRAWING CITY OF BEXLEY, OHIO BEX-ST-17
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PLAN

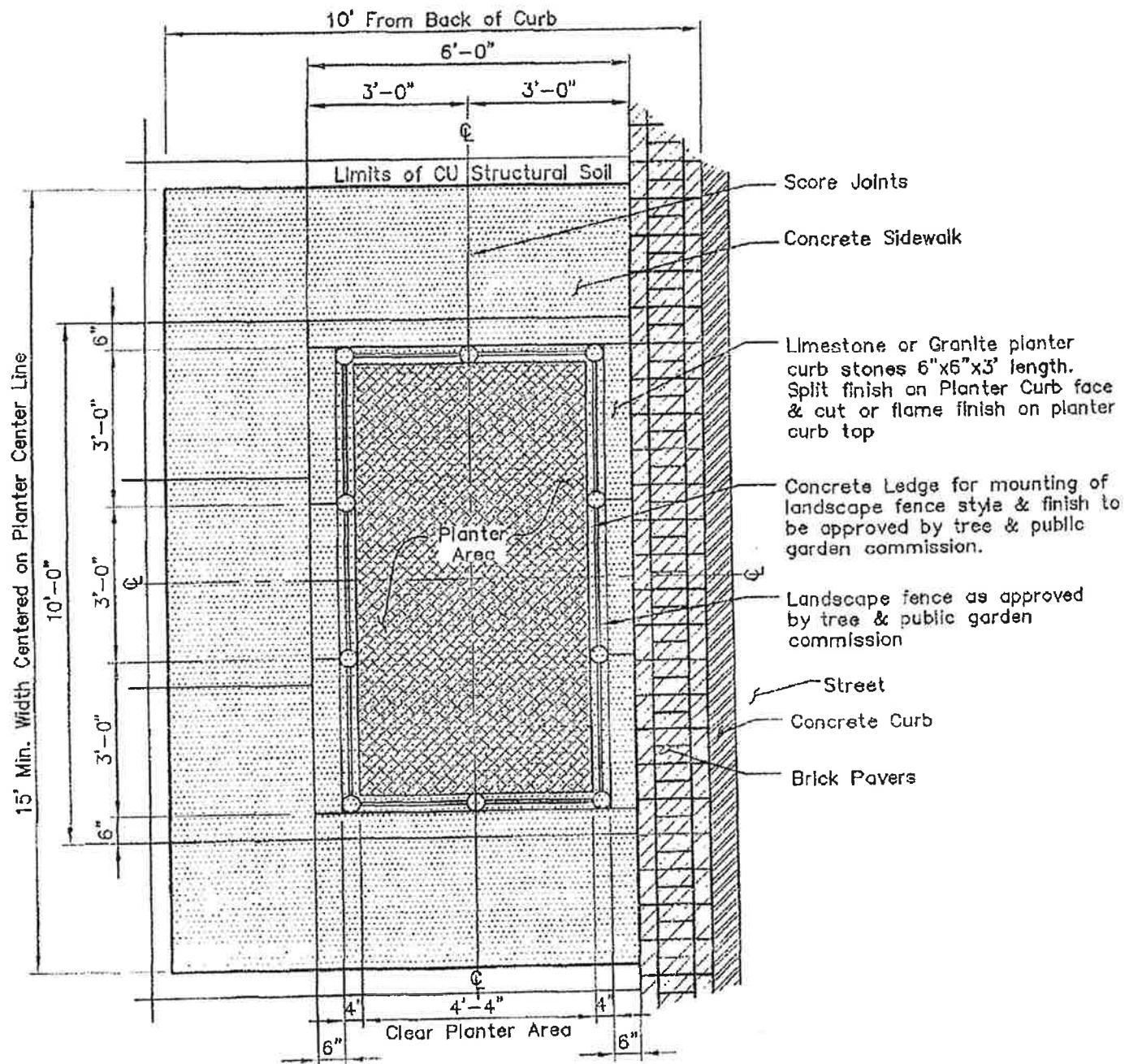


NOTE

Use Pine Hall English Edge Ironspot paver.

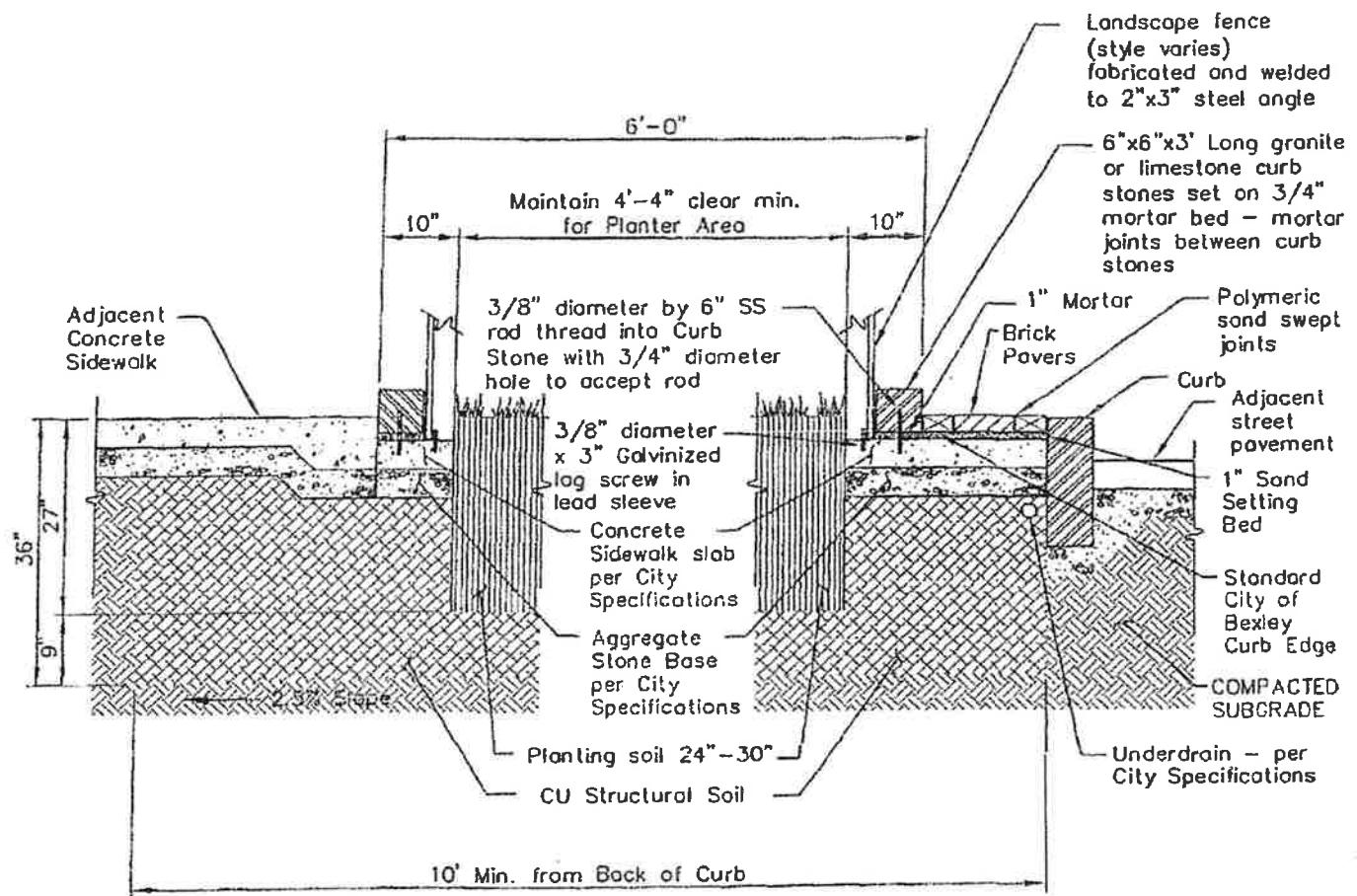
SECTION

REVISION DATE: 3/11/2019	BRICK STRIP DETAIL MAIN STREET SIDEWALK	STANDARD CONSTRUCTION DRAWING CITY OF BEXLEY, OHIO BEX-ST-18
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PLAN VIEW

REVISION DATE: 3/11/2019	CURBED PLANTER DETAIL MAIN STREET	STANDARD CONSTRUCTION DRAWING	
		CITY OF BEXLEY, OHIO	BEX-ST-19

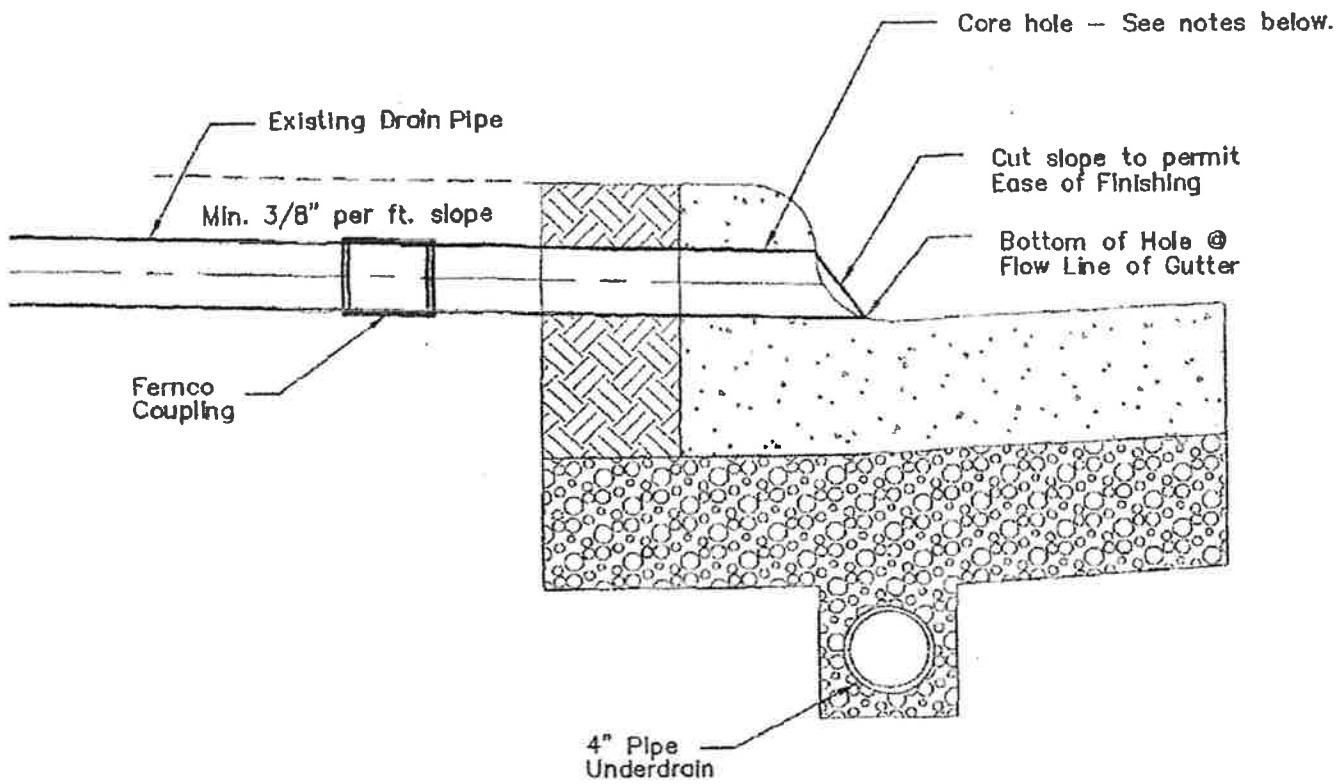


SECTION

NOTES

- 1- Split Faced Flame finish top for granite.
- 2- Split Faced Bush hammered top for limestone.
- 3- Use Pine Holl English Edge Ironspot paver.

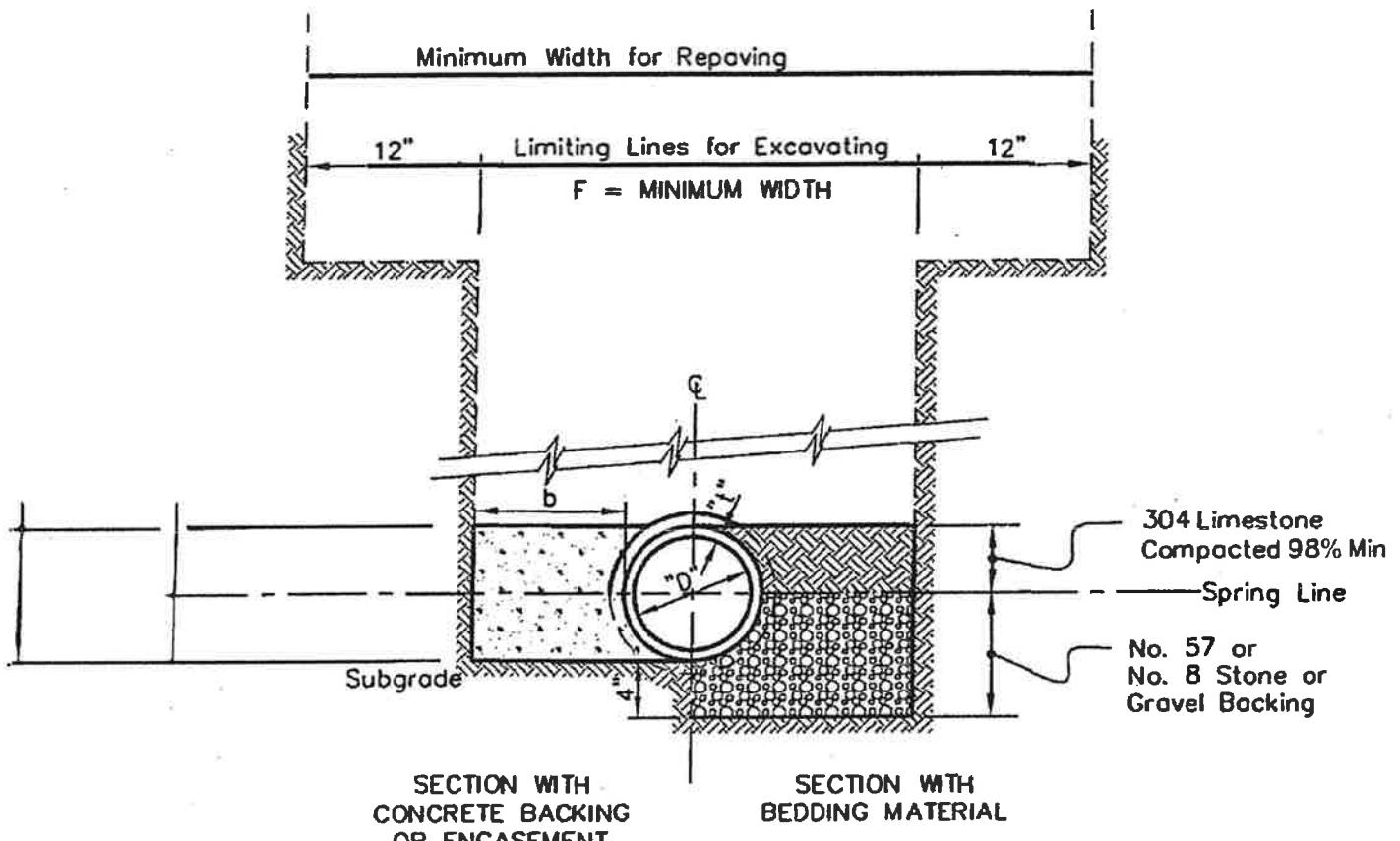
REVISION DATE: 3/11/2019	CURBED PLANTER DETAIL MAIN STREET	STANDARD CONSTRUCTION DRAWING CITY OF BEXLEY, OHIO BEX-ST-19.1
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CORING NOTES

1. Coring of existing curbs shall be performed by the City of Bexley.
2. a. 4" vitrified clay required for connection through brick curbs.
- b. 3" PVC pipe required for connection through concrete curbs.

REVISION DATE: 3/11/2019	DOWNSPOUT CONNECTION THROUGH CURB DETAIL	STANDARD CONSTRUCTION DRAWING CITY OF BEXLEY, OHIO	BEX-ST-20
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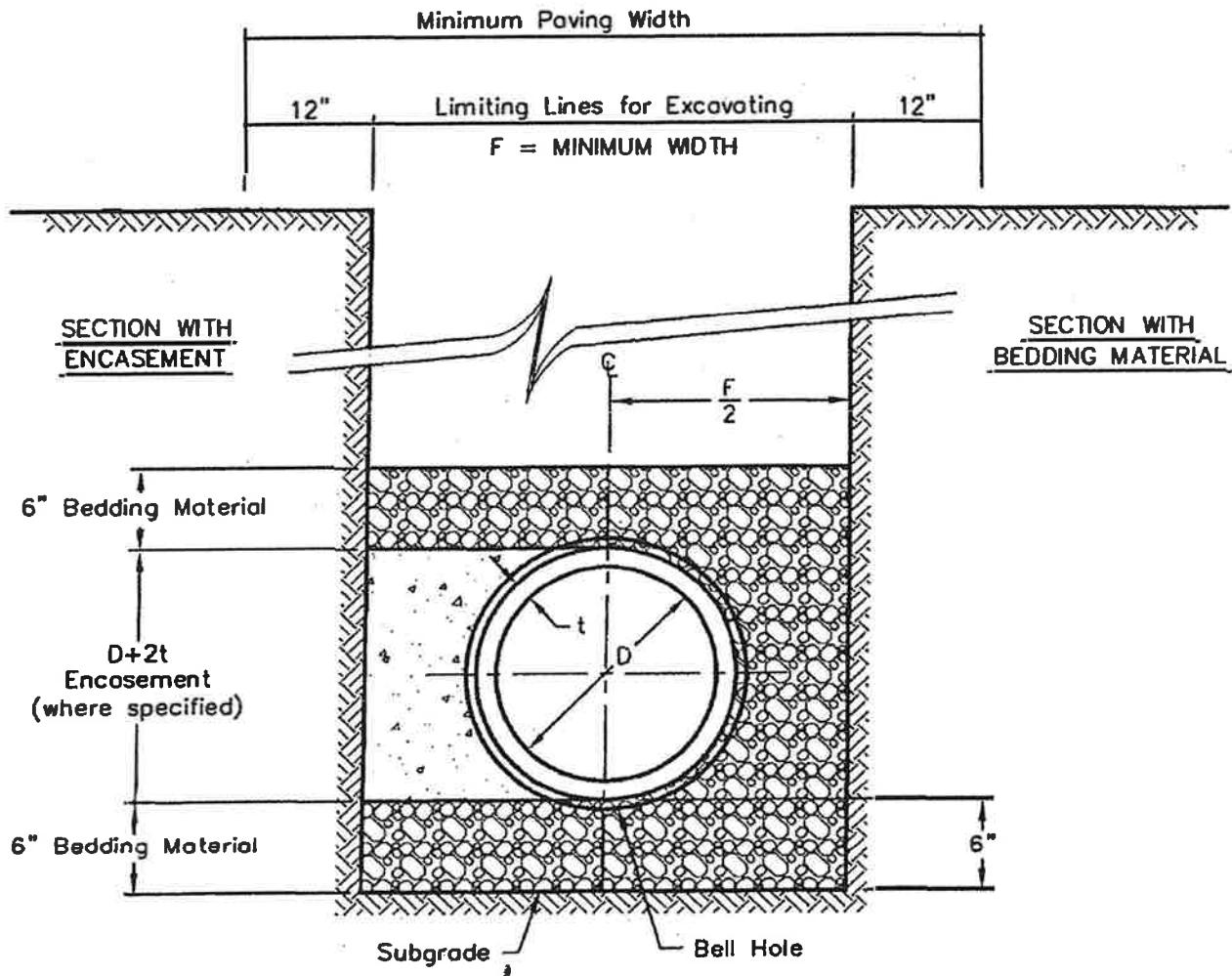


NOTES

1. Sections are symmetrical about \mathcal{C} .
2. Concrete encasement Class "C" to be used when less than 2 feet of cover is provided over the top of pipe in paved areas.
3. Water tight gaskets required on all Sewer Pipe (both Sanitary and Storm Sewer)

D	MT. CLAY PIPE		CONCRETE PIPE		F	CONCRETE BACKING		REPAVING SQ.YD. PER LIN. FT.
	t min.	b	t min.	b		CU.YD. PER LIN. FT.	V.C. PIPE	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
6"	5/8"	11-3/8"	3/4"	11-1/4"	30"	.023	.023	.500
8"	3/4"	10-1/4"	7/8"	10-1/8"	30"	.028	.028	.500
10"	7/8"	9-1/8"	1"	9"	30"	.031	.032	.500
12"	1"	9"	1-3/8"	8-5/8"	32"	.038	.039	.519
15"	1-1/4"	9-1/4"	1-5/8"	8-7/8"	36"	.050	.051	.556
18"	1-1/2"	9-1/2"	2"	9"	40"	.064	.064	.593
21"	2-1/4"	9-1/4"	2-3/4"	8-3/4"	44"	.079	.079	.630
24"	2-1/2"	9-1/2"	3"	9"	48"	.094	.094	.667
27"	2-3/4"	9-3/4"	3-1/4"	9-1/4"	52"	.111	.111	.704

REVISION DATE: 3/11/2019	RIGID PIPE SEWER	STANDARD CONSTRUCTION DRAWING	
		CITY OF BEXLEY, OHIO	BEX-UT-01

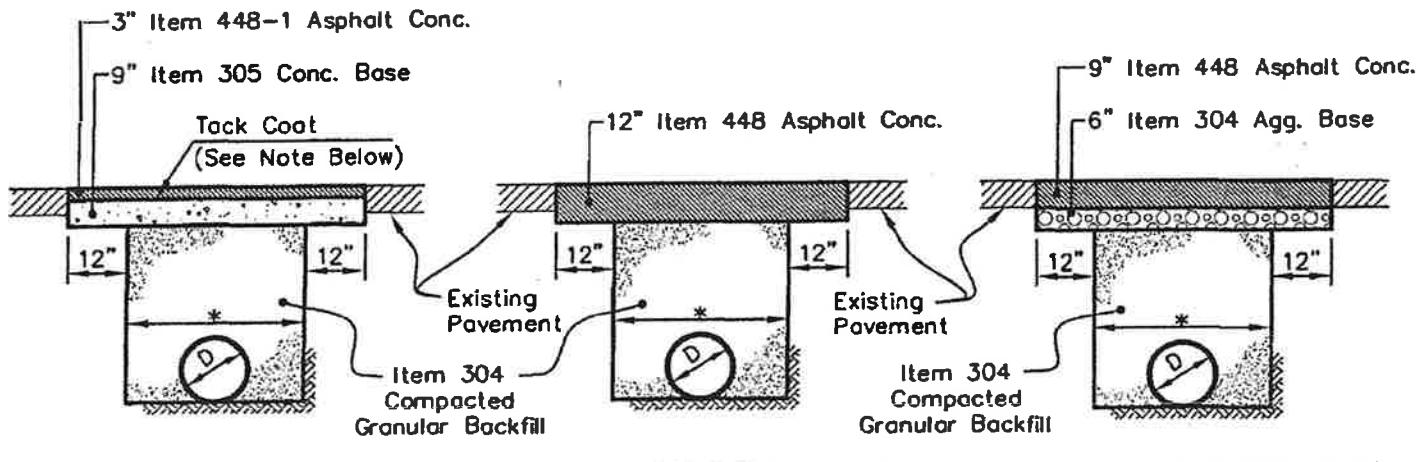


NOTES

1. Sections are symmetrical about \mathcal{C} .
2. All pipe materials shall be in compliance with current COC CMS Section 900 and shall require water tight gaskets for both Sanitary and Storm Sewer.
3. Encasement to be Class "C" Concrete, COC CMS Item 499.
4. On sanitary sewer construction, trench dams are required as directed by City Engineer.
5. Bedding material to be No. 57 or No. 8 stone or gravel.
6. Concrete encasement to be used where less than 4' of cover is provided under pavement.
7. Pavement Replacement shall extend at minimum 12" beyond trench limits.

D (in.)	F (in.)	D (in.)	F (in.)
6	30	24	48
8	30	27	52
10	30	30	56
12	32	36	64
15	36	42	72
18	40	48	80
21	44		

REVISION DATE: 3/11/2019	FLEXIBLE PIPE SEWER	STANDARD CONSTRUCTION DRAWING CITY OF BEXLEY, OHIO
		BEX-UT-02



* TRENCH WIDTH:
ALL UTILITIES SHALL BE SAWCUT A MINIMUM OF 1' BEYOND
THE TRENCH WIDTH PRIOR TO PAVEMENT REPLACEMENT

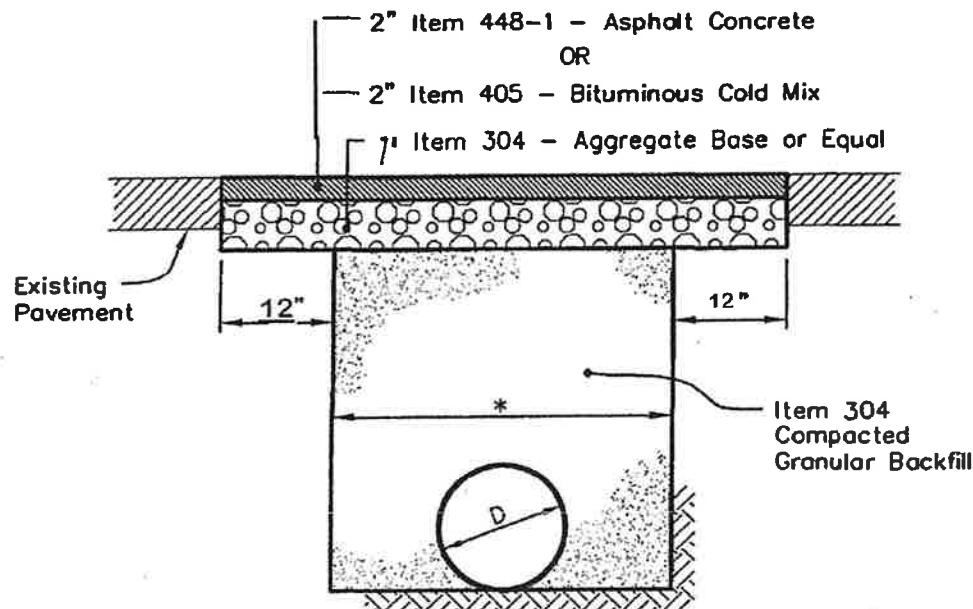
NOTES

1. All materials and construction shall conform to the City of Columbus "Construction and Material Specifications" (COC CMS).
2. Backfill of all trenches, except sanitary sewers and PVC storm sewers, shall be compacted granular backfill With Item 304. Controlled Density FM (CDF) will not be permitted.
3. Permanent repavement shall not be done until so ordered by the Engineer. The edge shall be cut vertically and trimmed to provide a straight line.
4. Asphalt concrete, Item 448, placement not to exceed 3", recompacted, per course.
5. Tack coat, Item 407 bituminous material, 702.02, SS-1 applied at a rate of 0.1 gal. per sq. yd. including vertical edges of the sawcut in all circumstances prior to installing asphalt concrete pavement.
6. Wearing surface less than 2 feet in width remaining adjacent to curb after excavation shall be removed and replaced to the edge of the concrete curb.
7. For all sanitary sewers and PVC storm sewers, the first 36 inches of backfill above the top of the pipe shall be filled with a material meeting the following gradation:

Sieve	Total passing % by weight
1 inch	100
No.8	3-5

with the balance of the trench being compacted limestone 304 aggregate backfill with minimum 98% modified proctor compaction.

REVISION DATE: 3/11/2019	PAVEMENT REPLACEMENT ARTERIAL	STANDARD CONSTRUCTION DRAWING CITY OF BEXLEY, OHIO	BEX-UT-03
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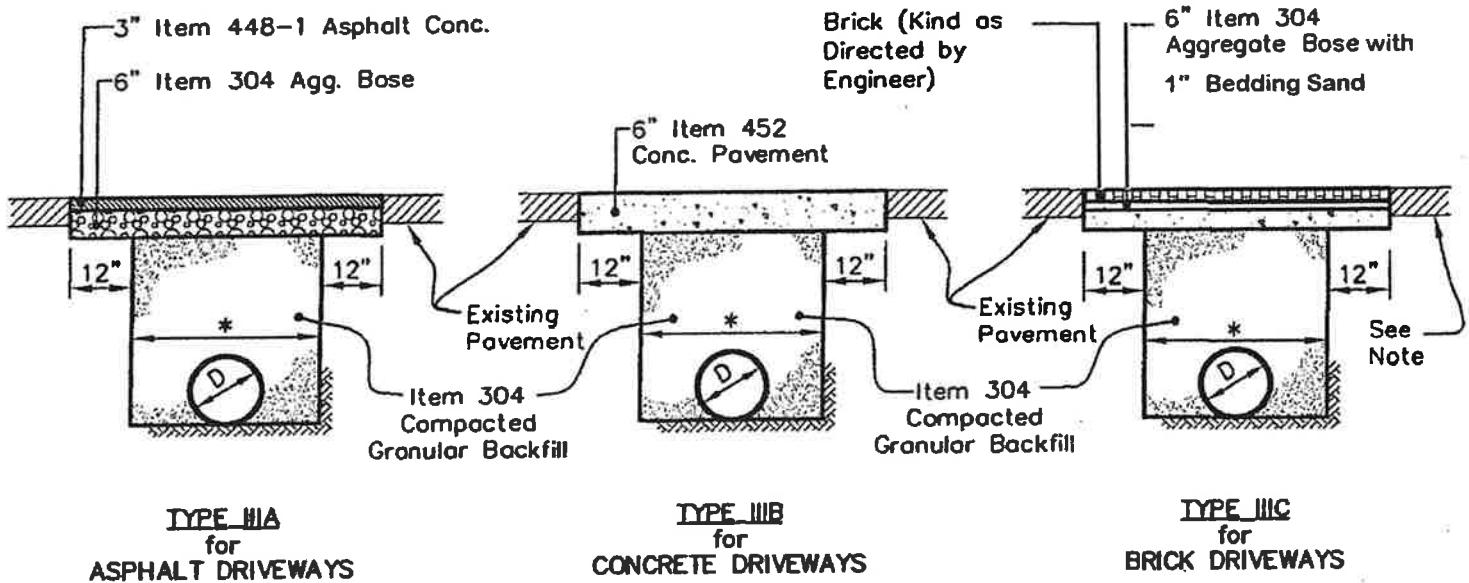


* TRENCH WIDTH: ALL UTILITY TRENCHES SHALL BE SAWCUT & MINIMUM OUTSIDE THE LIMITS OF TRENCH EXCAVATION BEFORE PERMANENT PAVEMENT REPLACEMENT

NOTES

1. All materials and construction shall conform to the City of Columbus "Construction and Material Specifications" (COC CMS)
2. Backfill of all trenches shall be in accordance with Standard Drawings Bex-UT-01 and Bex-UT-02. **Controlled Density Fill (CDF) will not be permitted.**
3. Temporary Pavement shall be placed on the same day the original pavement is cut so that traffic is maintained at all times during non-working hours.
4. Steel Plates with edges restrained by hot mix asphalt wedged around the perimeter may be installed in lieu of temporary pavement when permitted by the City. Contractor must demonstrate no noise from traffic caused by steel plate.

REVISION DATE: 3/11/2019	PAVEMENT REPLACEMENT TEMPORARY	STANDARD CONSTRUCTION DRAWING CITY OF BEXLEY, OHIO	BEX-UT-06
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* TRENCH WIDTH: ALL UTILITY TRENCHES SHALL BE SAWCUT 1' MINIMUM OUTSIDE THE LIMITS OF TRENCH EXCAVATION BEFORE PAVEMENT REPLACEMENT

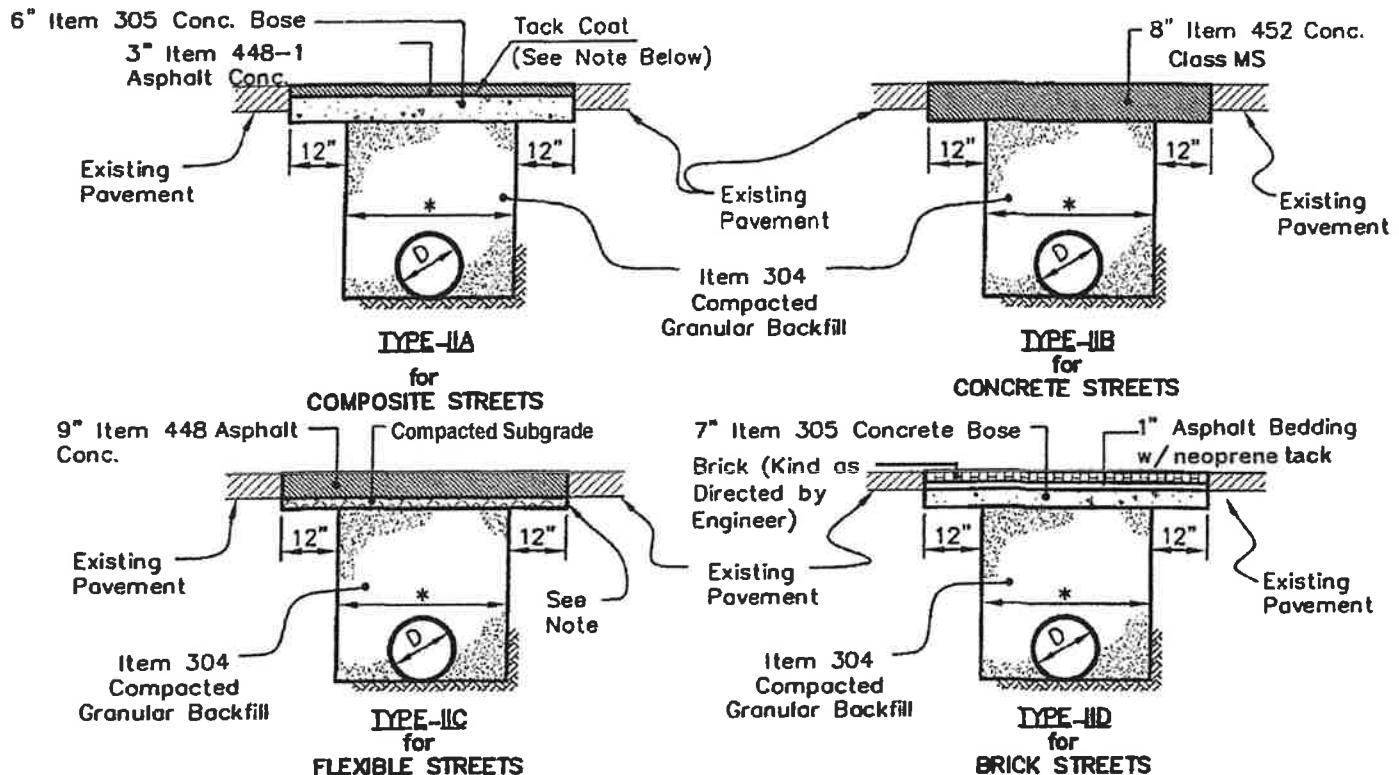
NOTES

1. All materials and construction shall conform to the City of Columbus "Construction and Material Specifications" (COC CMS).
2. Backfill of all trenches, except sanitary sewers and PVC storm sewers, shall be compacted granular backfill with Item 304. Controlled Density Fill (CDF) will not be permitted.
3. Permanent repavement shall not be done until so ordered by the Engineer. The edge shall be cut vertically and trimmed to provide a straight line.
4. Asphalt concrete, Item 448, placement not to exceed 2", recompacted, per course.
5. Tack coat, Item 407 bituminous material, 702.04, SS-1, applied at a rate of 0.1 gal. per sq. yd. including all vertical sawcut edges prior to installing asphalt pavement.
6. Wearing surface less than 2 feet in width remaining adjacent to curb after excavation shall be removed and replaced.
7. For all sanitary sewers and PVC storm sewers, the first 36 inches of backfill above the top of the pipe shall be filled with a material meeting the following gradation:

Sieve	Total passing % by weight
1 inch	100
No.8	3-5

with the balance of the trench being compacted 304 crushed limestone aggregate backfill with minimum 98% compaction per modified proctor.

REVISION DATE: 3/11/2019	PAVEMENT REPLACEMENT DRIVEWAYS	STANDARD CONSTRUCTION DRAWING CITY OF BEXLEY, OHIO BEX-UT-05	
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* TRENCH WIDTH: ALL UTILITY TRENCHES SHALL BE SAWCUT 1' MINIMUM OUTSIDE THE LIMITS OF TRENCH EXCAVATION BEFORE PAVEMENT REPLACEMENT

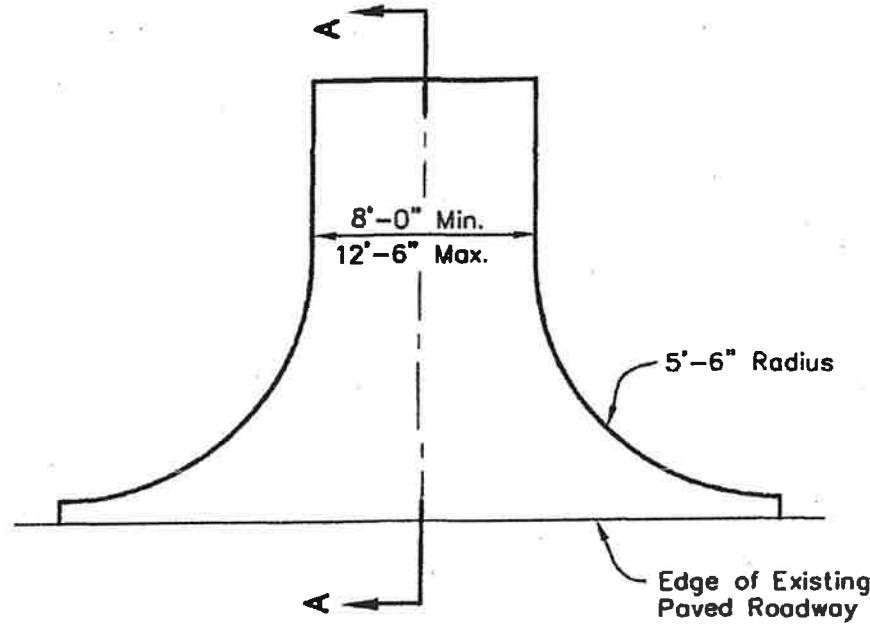
NOTES.

1. All materials and construction shall conform to the City of Columbus "Construction and Material Specifications" (COC CMS).
2. Backfill of oil trenches, except for initial 57 stone bedding of sanitary sewers and PVC storm sewers, shall be compacted granular backfill with Item 304 crushed limestone. Controlled Density Fill (CDF) will not be permitted.
3. Permanent repaving shall not be done until so ordered by the Engineer. The edge shall be cut vertically and trimmed to provide a straight line no less than 12" outside the limits of trench excavation.
4. Asphalt concrete, Item 448-1, placement not to exceed 2", recompacted, per course.
5. Tack coat, Item 407 bituminous material, SS-1, applied at a rate of 0.1 gal. per sq. yd. including vertical edges of all sawcuts to be installed prior to paving.
6. Wearing surface less than 2 feet in width remaining adjacent to curb after excavation shall be removed and replaced to edge of concrete curb.
7. For all sanitary sewers and PVC storm sewers, the first 36 inches of backfill above the top of the pipe shall be filled with a material meeting the following gradation:

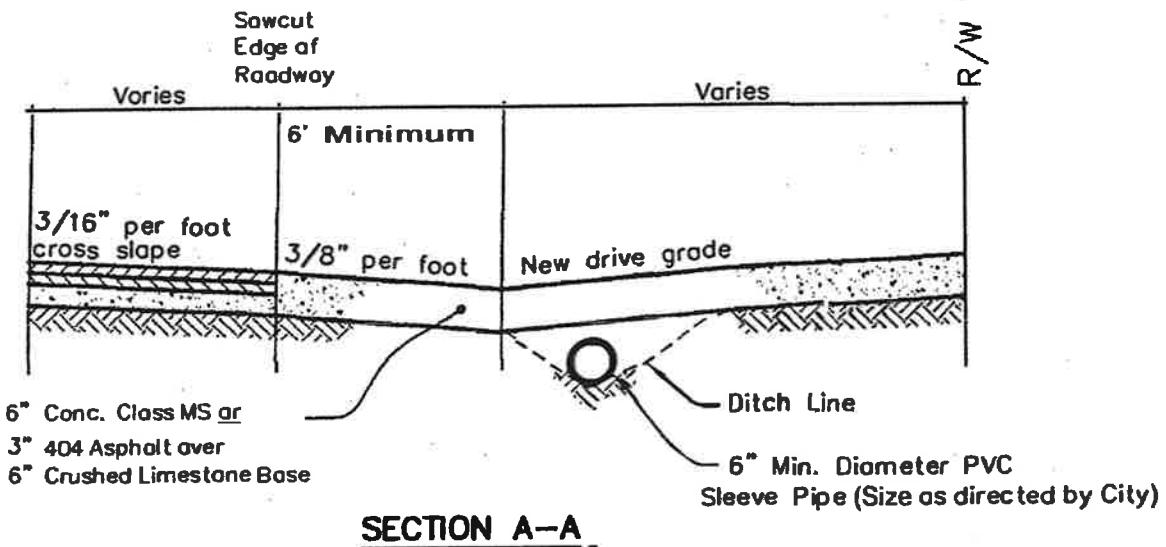
Sieve	Total passing % by weight
1 inch No.8	100 3-5

with the balance of the trench being compacted 304 limestone aggregate backfill with minimum 98% compaction per modified proctor.

REVISION DATE: 3/11/2019	PAVEMENT REPLACEMENT RESIDENTIAL	STANDARD CONSTRUCTION DRAWING CITY OF BEXLEY, OHIO	BEX-UT-04
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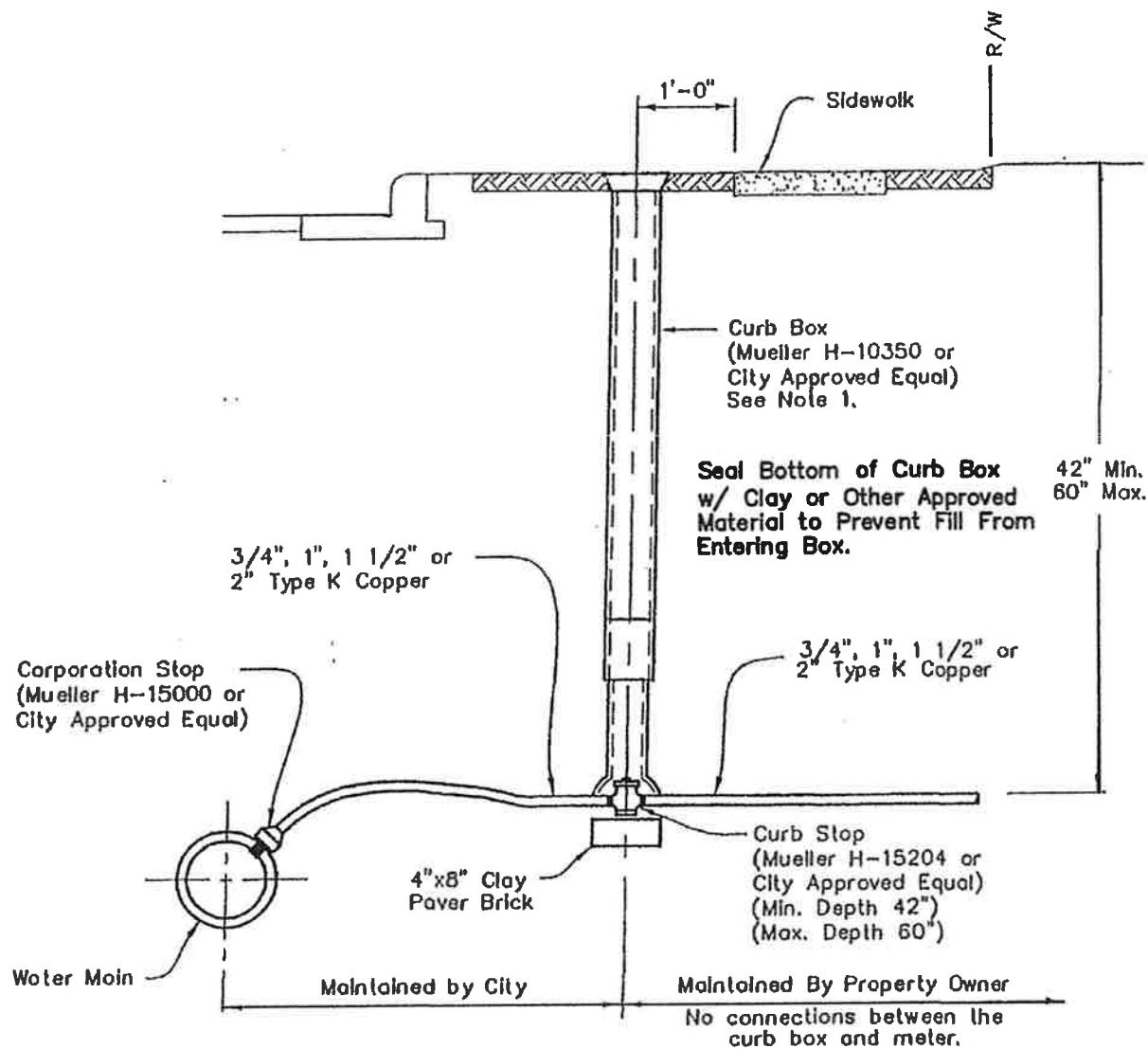
PLAN VIEW



NOTE

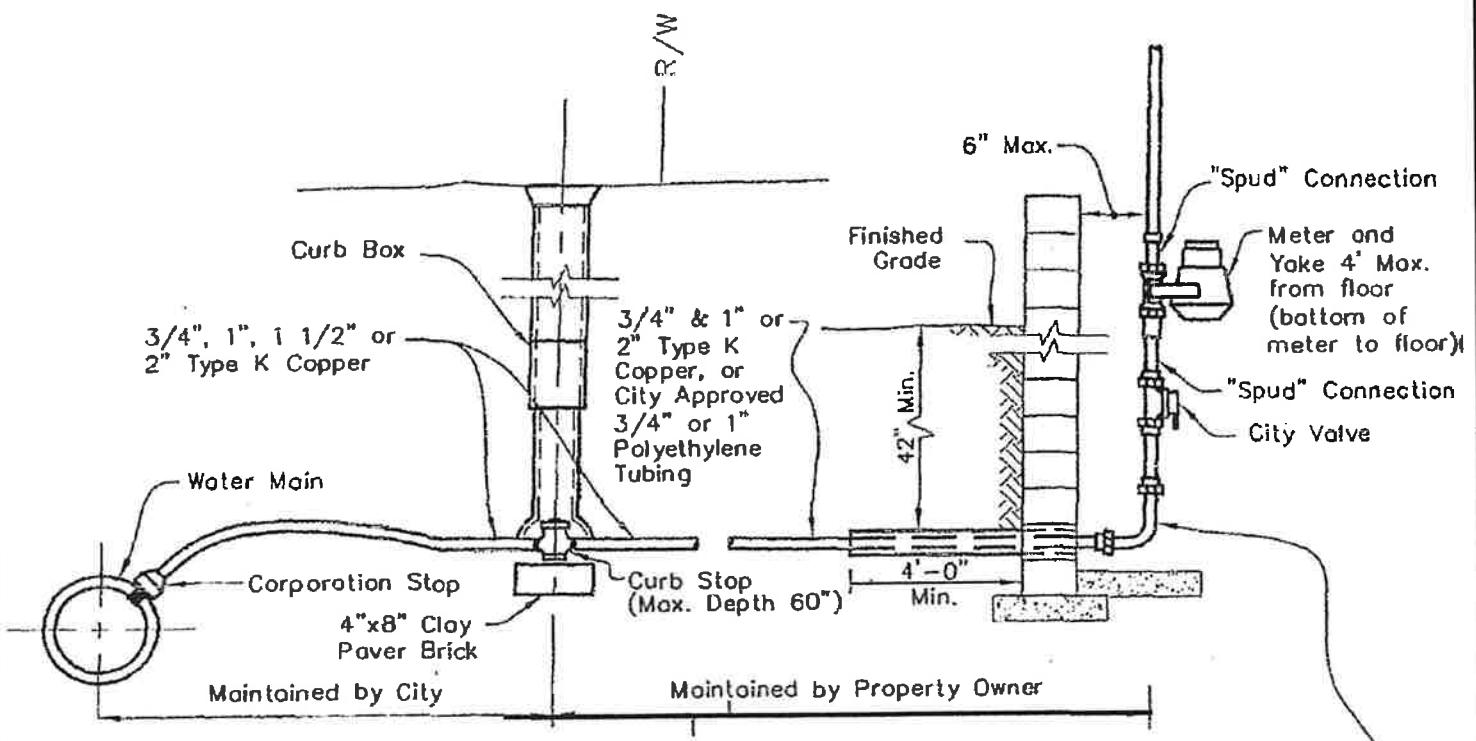
The edge of roadway pavement shall be neatly sawcut and tacked with SS-1 asphalt emulsion prior to paving the driveway.

STANDARD DRIVEWAY STREETS WIHOUT CURBS	STANDARD CONSTRUCTION DRAWING	
REVISION DATE: 1/11/2019	CITY OF BEXLEY, OHIO	BEX-ST-07



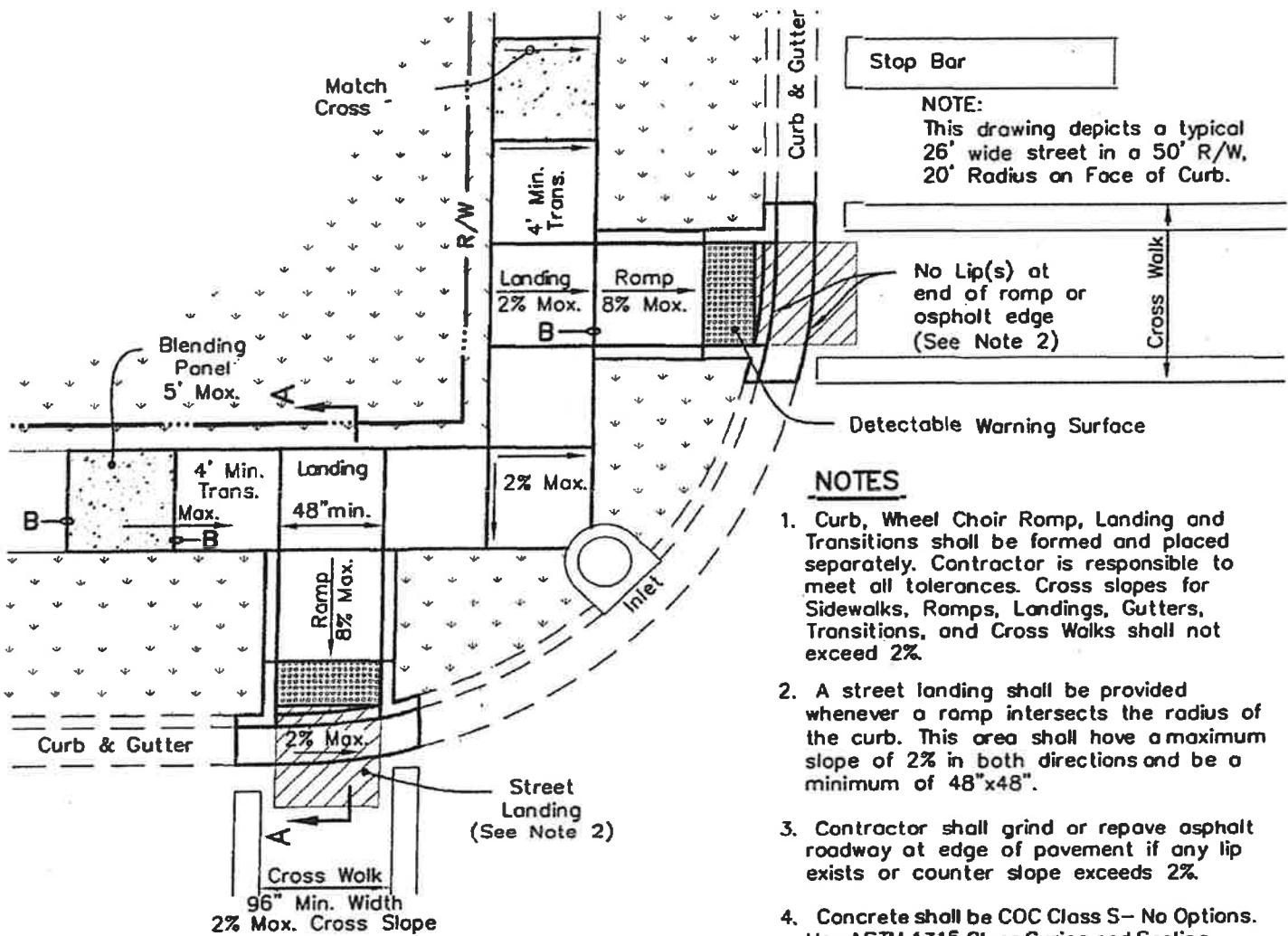
NOTES 1. Curb Boxes shall be placed a minimum of 20' from any foundation or structure.

REVISION DATE: 3/11/2019	WATER LINE TAP REQUIREMENTS	STANDARD CONSTRUCTION DRAWING	
		CITY OF BEXLEY, OHIO	BEX-WAT-01



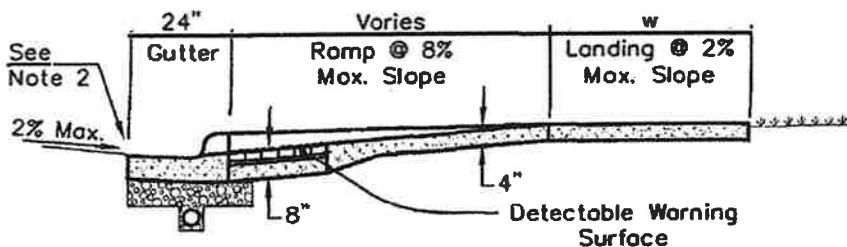
Elbow connection shall be packjoint to packjoint ell with copper nipple between ell and the city valve on a corporation ell with a packjoint inlet and female threaded outlet. A soldered copper ell may be used with a copper service line.

REVISION DATE: 3/11/2019	TYPICAL BASEMENT METER SET	STANDARD CONSTRUCTION DRAWING CITY OF BEXLEY, OHIO BEX-WAT-02
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PLAN VIEW

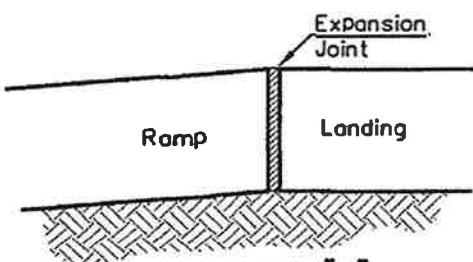
w=4' for Residential and Collector
w=5' for Arterial or as otherwise approved



SECTION "A-A"

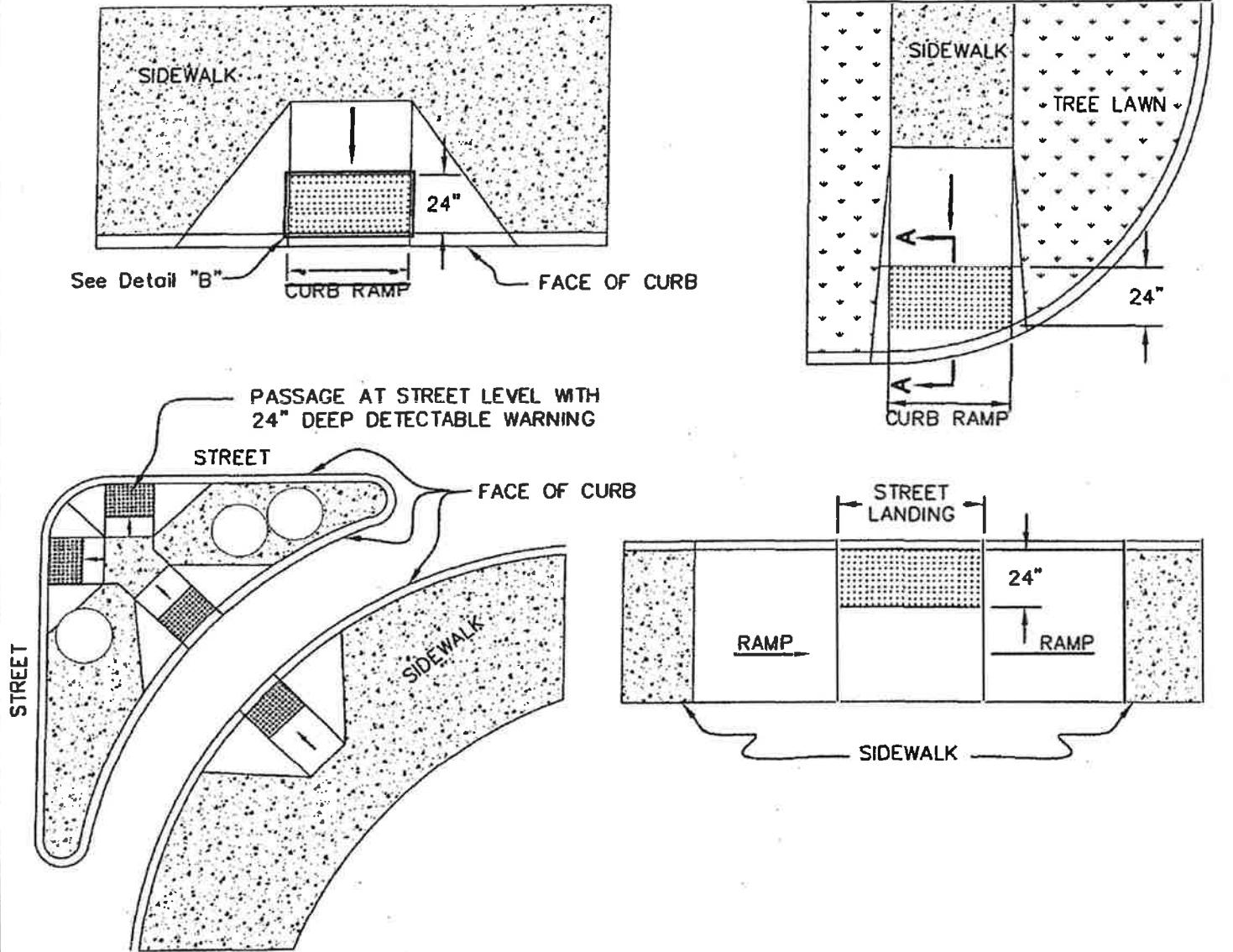
NOTES

1. Curb, Wheel Chair Ramp, Landing and Transitions shall be formed and placed separately. Contractor is responsible to meet all tolerances. Cross slopes for Sidewalks, Ramps, Landings, Gutters, Transitions, and Cross Walks shall not exceed 2%.
2. A street landing shall be provided whenever a ramp intersects the radius of the curb. This area shall have a maximum slope of 2% in both directions and be a minimum of 48" x 48".
3. Contractor shall grind or repave asphalt roadway at edge of pavement if any lip exists or counter slope exceeds 2%.
4. Concrete shall be COC Class S—No Options. Use ASTM 1315 Clear Curing and Sealing Compound, 2 coats.
5. Detectable Warning Surfaces shall conform to Bexley Std. Dwg Bex-ST-12.
6. Ramps must be perpendicular to face of curb and parallel to direction of travel. Ramps shall not direct the pedestrian into traffic.



DETAIL "B"

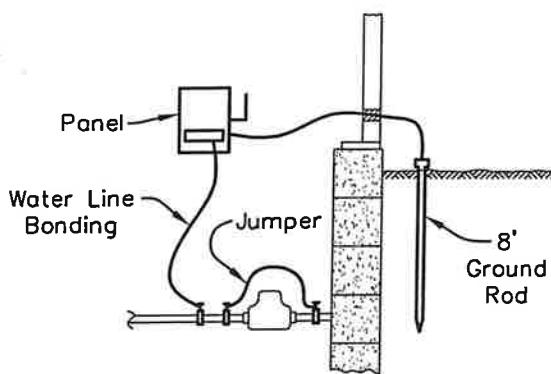
REVISION DATE: 3/11/2019	TYPICAL ADA RAMP RESIDENTIAL RECONSTRUCTION	STANDARD CONSTRUCTION DRAWING CITY OF BEXLEY, OHIO	BEX-ST-11
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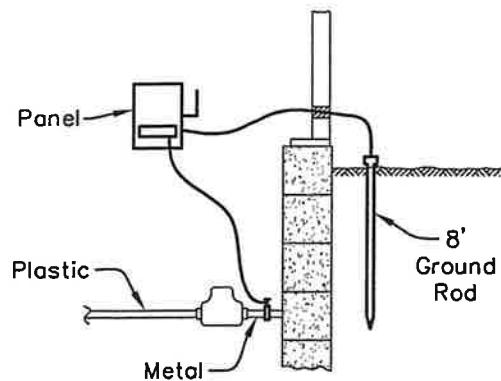
NOTES

1. Detectable warnings shall be provided wherever a curb ramp crosses a vehicular way, excluding unsignalized driveway crossings and shall align exactly with the required direction of travel.
2. Detectable warnings shall be provided 24 inches in the direction of travel and extend the full width of the curb ramp or flush surface. The detectable warning shall be located adjacent to the curb line.
3. Detectable warnings shall be placed 6" to 8" behind face of curb and behind the curb joint.

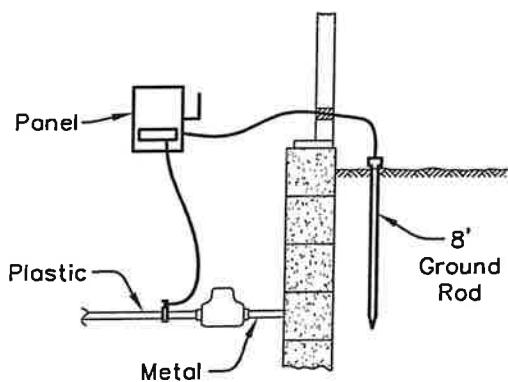
REVISION DATE: 3/11/2019	ADA CURB RAMP DETECTABLE WARNING SURFACE	STANDARD CONSTRUCTION DRAWING CITY OF BEXLEY, OHIO	BEX-ST-12
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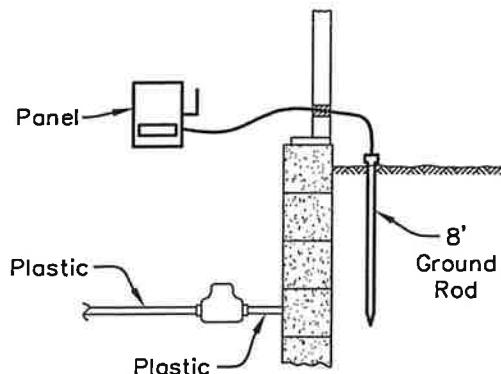
METALLIC PIPE INSIDE & OUTSIDE



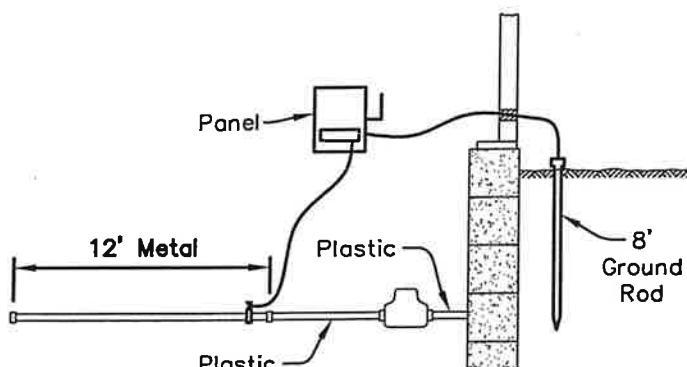
METALLIC PIPE OUTSIDE, PLASTIC INSIDE



PLASTIC PIPE OUTSIDE, METALLIC INSIDE



PLASTIC PIPE INSIDE & OUTSIDE



ISOLATED SECTION OF METALLIC PIPE

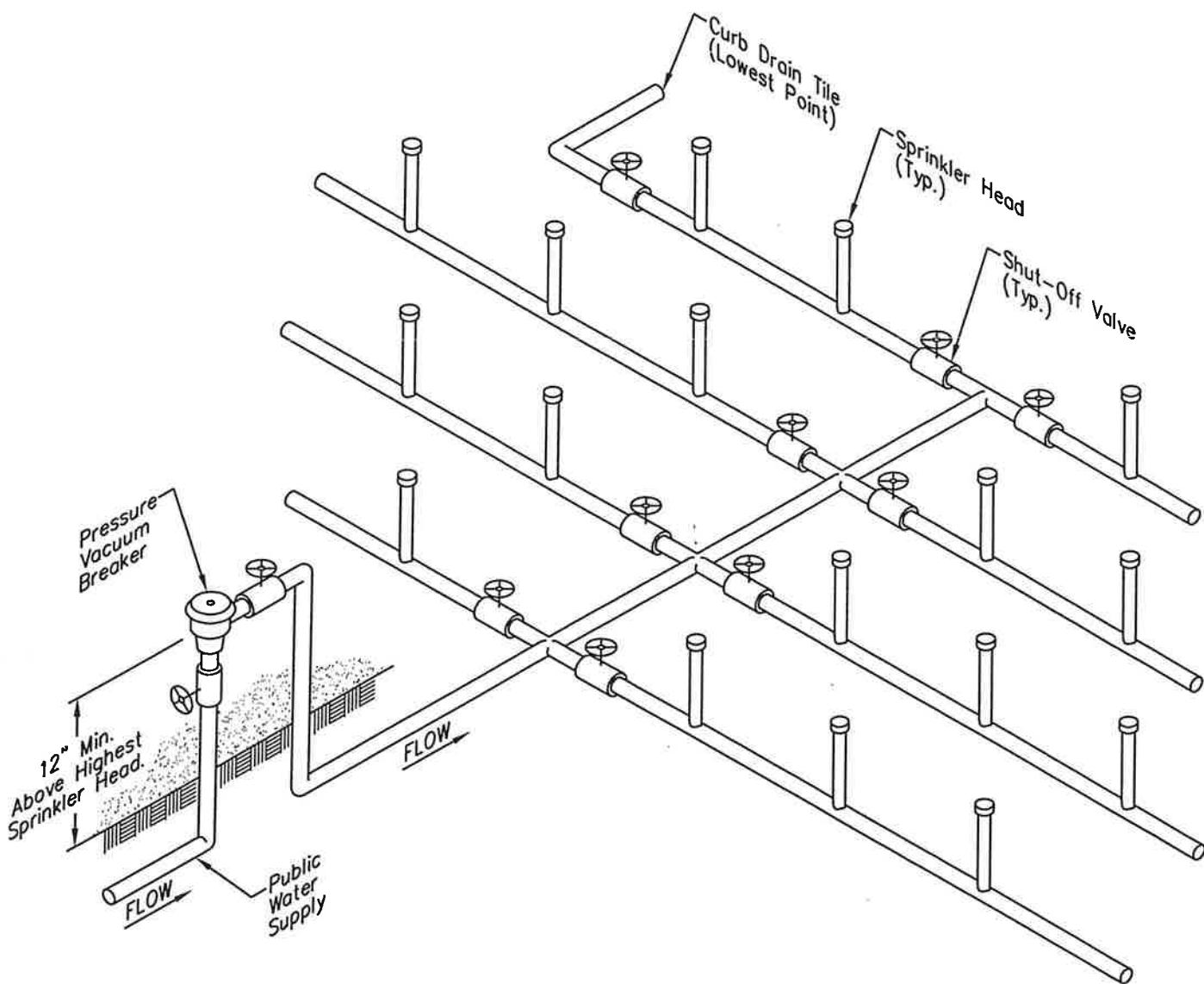
12' OR MORE IN LENGTH

CITY OF BEXLEY, OHIO

WATER LINE BONDING
REQUIREMENTS

STANDARD
CONSTRUCTION DRAWING

Effective Date: 5-26-06	Revision Date: 6-01-07	Dwg. No. Bex-WAT-03
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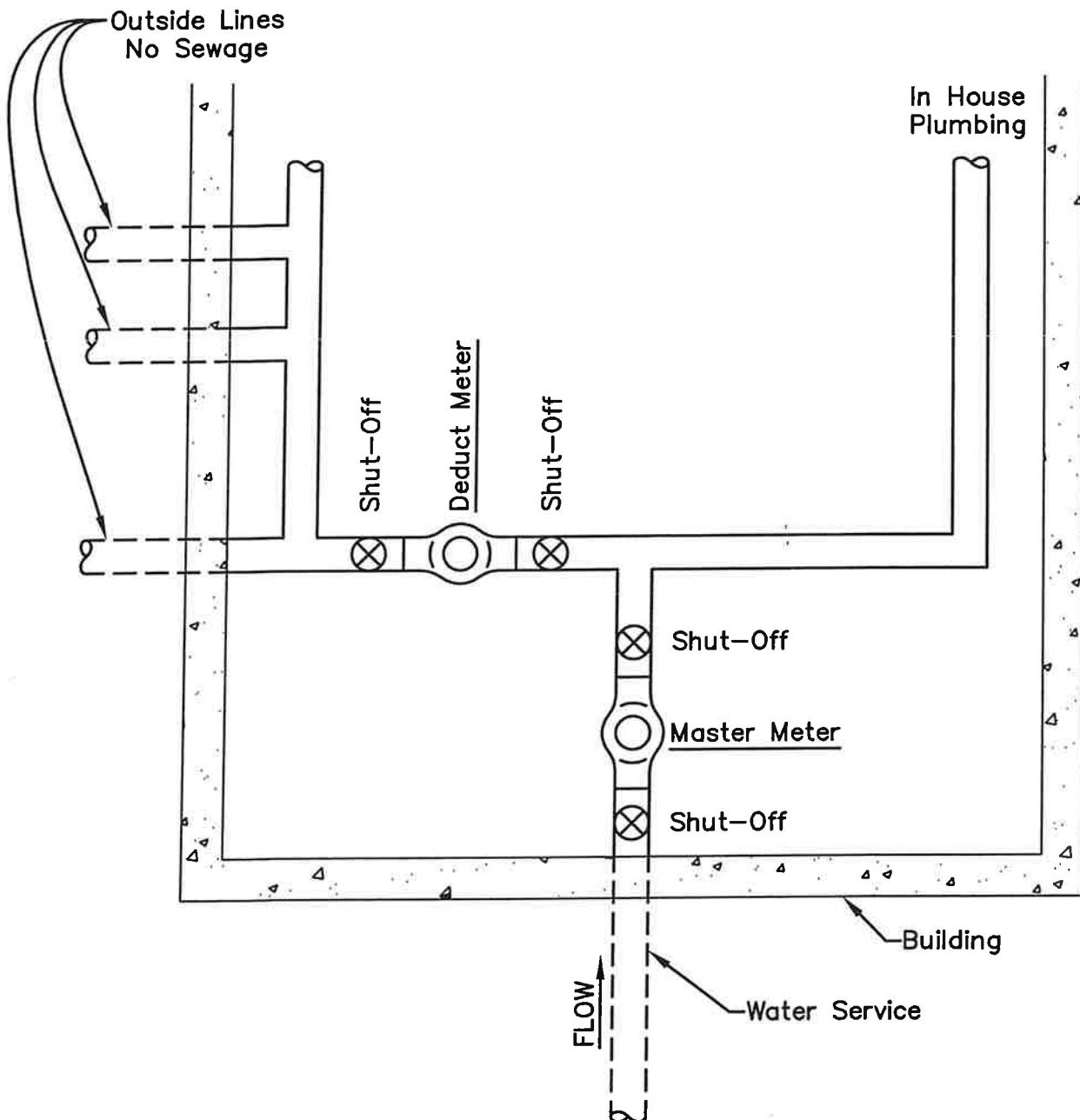


SPRINKLER SYSTEM

CITY OF BEXLEY, OHIO

**STANDARD
CONSTRUCTION DRAWING**

Effective Date:	Revision Date:	Dwg. No.
7-25-07	7-25-07	Bex-WAT-04

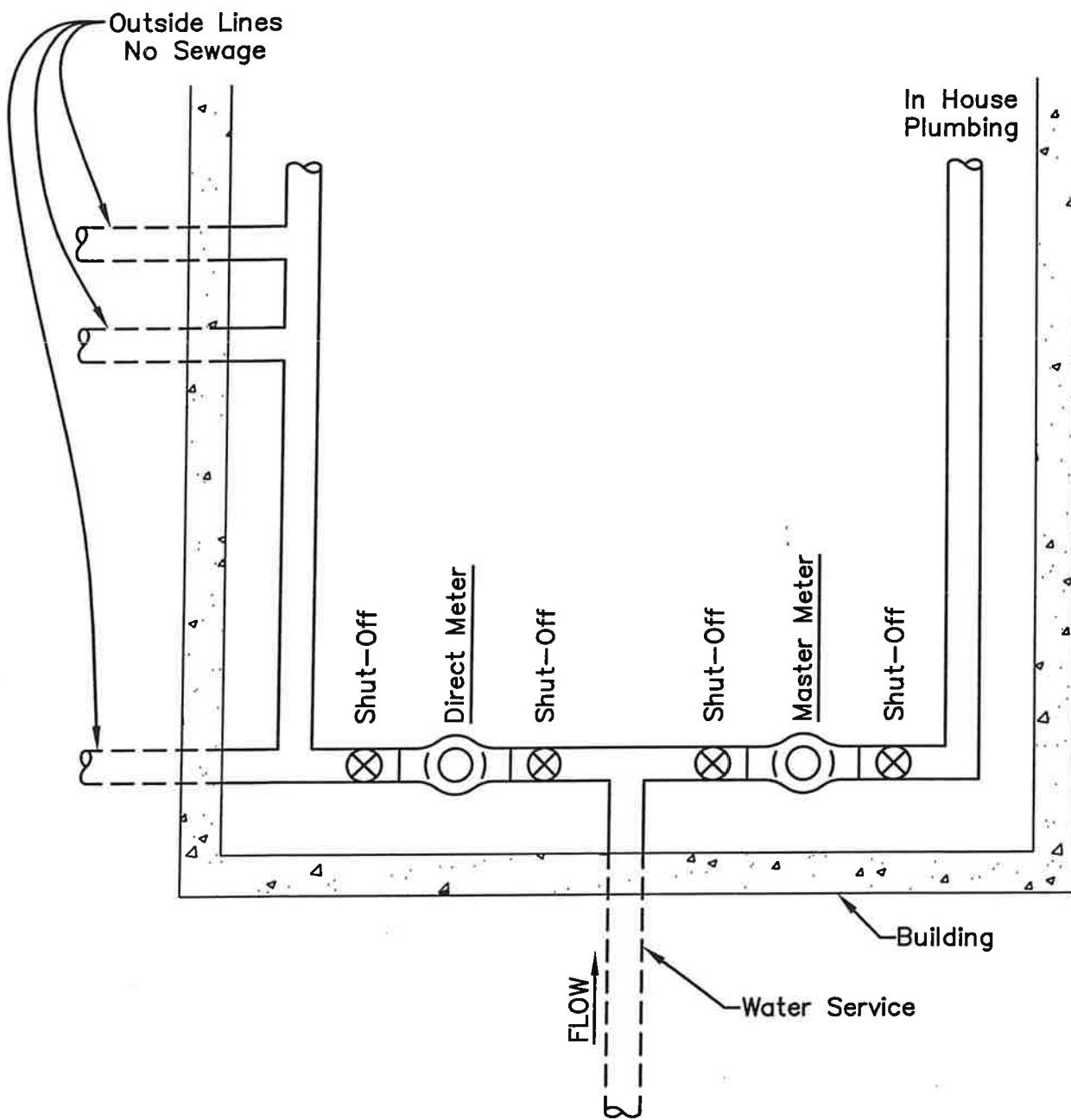


DEDUCT METER SYSTEM

CITY OF BEXLEY, OHIO

STANDARD
CONSTRUCTION DRAWING

Effective Date:	Revision Date:	Dwg. No.
7-25-07	7-25-07	Bex-WAT-05

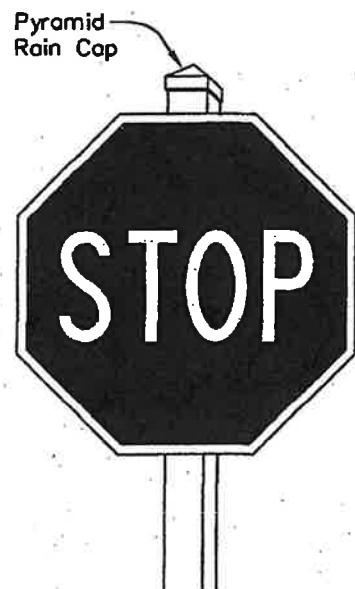
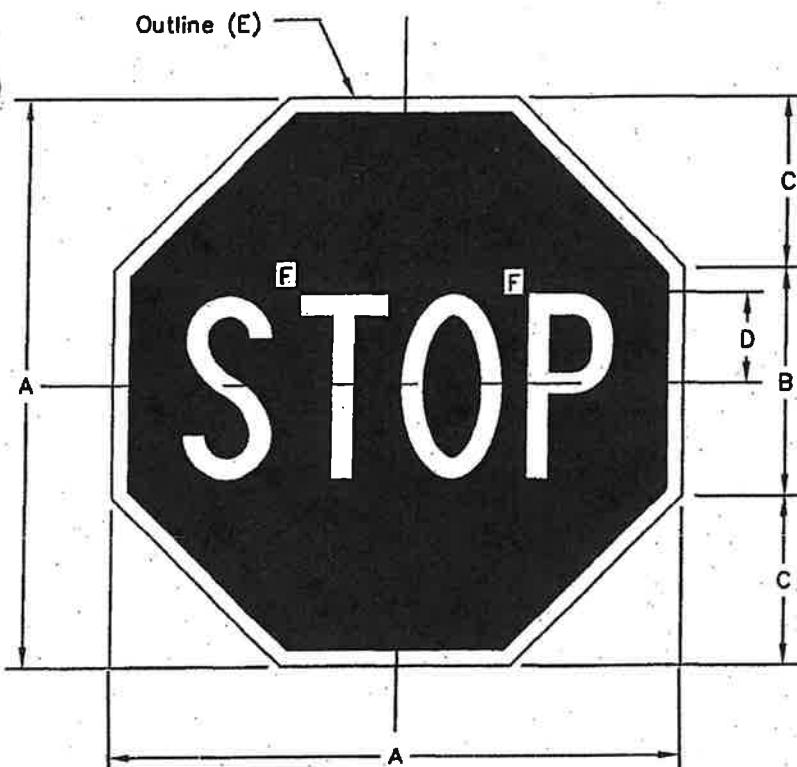


DEDUCT SPRINKLER
METER SYSTEM

CITY OF BEXLEY, OHIO

STANDARD
CONSTRUCTION DRAWING

Effective Date:	Revision Date:	Dwg. No.
7-25-07	7-25-07	Bex-WAT-06



NOTES

1 Color: Front—white on red; Rear—Dark green #62383
 3/4" Dark Green Border around white edge
 ALL WAY Sign Front—white on red; Rear—Dark Green
 3/4" Dark Green Border around white edge (where required)

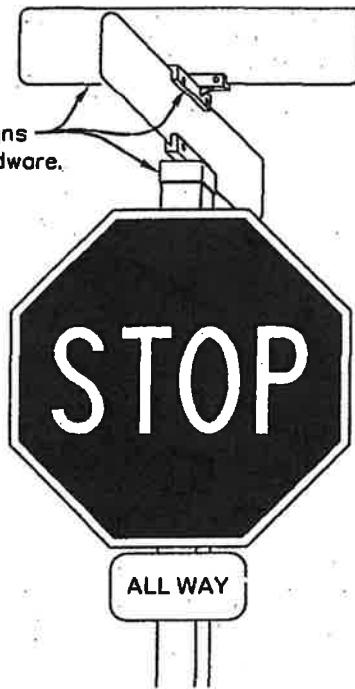
Street Name Signs
 w/Mounting Hardware.

3. Based on ODOT Standard Sign Design
 3M Diamond Grade 3 Prismatic Sheeting or Equal
4. 2"x2"x10' Galvanized Square post with Pyramid Cap
 dark green #62383.
 Powder Coated

2.25"x2.25"x4' Galvanized Steel anchor attached with a J-Bolt.

VALUES (Inch)

	LETTER SIZE			WHITE OUTLINE	SPACE B/ LETTERS
A	B	C	D	E	F
30	10" C	10	5	3/4	12 1/2
36	12" C	12	6	7/8	15
48	16" C	16	8	1 1/4	20

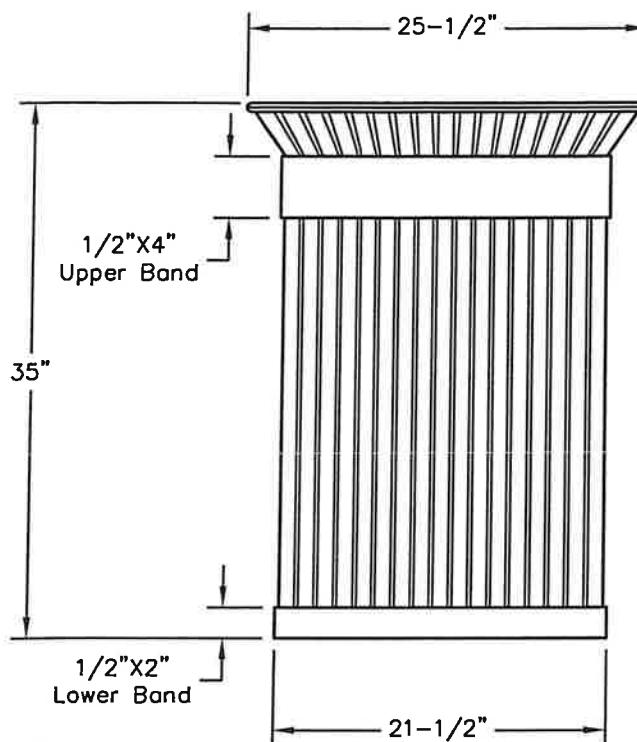


CITY OF BEXLEY, OHIO

STOP SIGN

STANDARD
CONSTRUCTION DRAWING

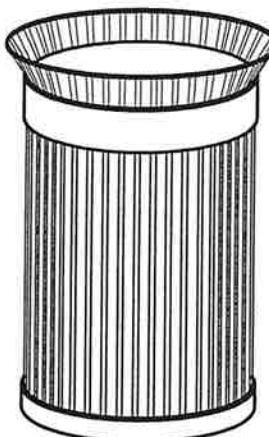
Effective Date:	Revision Date:	Dwg. No.
4-20-06	1-11-19	BEX-MIS-01



Three adjustable feet
w/plastic pads and
threaded shafts for
mounting on uneven
surfaces.

NOTES

1. Trash Container shall be as manufactured by American Titan, product No. TR-66-23 or approved equal.
2. Material: Fabricated Aluminum Construction; slats are 1/4" x 0.1".
Upper and lower bands are 0.25" thick; upper 4" wide; lower 2" wide; adjustable height threaded feet
3. Finish: Polyester Powder Coating, 3-5 mils thick coverage; deep black, green or as approved by the City of Bexley.
4. Measurement: Overall height w/ adjustable feet approx.: 35"
Top O.D.: 21.5"
One-Centered .437 Anchor Bolt Hole 23-Gallon PVC liner
Lid: 20" Lexington standard

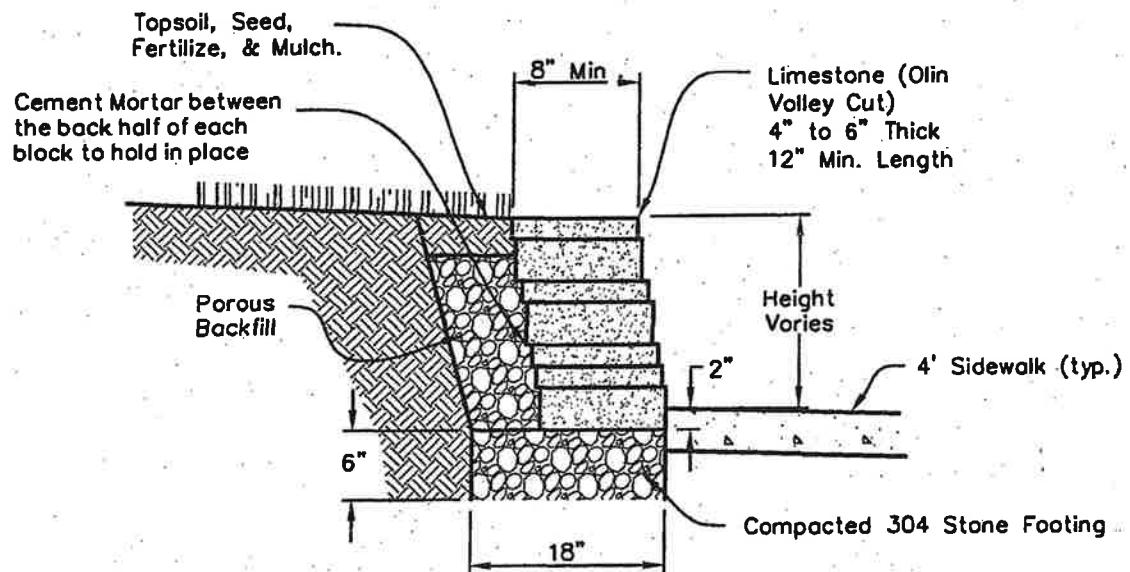


TRASH CONTAINER

CITY OF BEXLEY, OHIO

STANDARD
CONSTRUCTION DRAWING

Effective Date:	Revision Date:	Dwg. No.
4-20-06	6-01-07	Bex-MIS-02



NOTES

1. The size, shape, thickness, & color of limestone material shall be approved by the City's Engineer prior to placement.
2. All items shown in detail used for the construction of the retaining wall shall have their cost included in the bid price for Item: Special, Retaining Wall.
3. Provide material samples for approval prior to ordering materials.

RETAINING WALL DETAIL

CITY OF BEXLEY, OHIO

STANDARD
CONSTRUCTION DRAWING

Effective Date:	Revision Date:	Dwg. No.
2-21-03	1-11-19	BEX-MIS-03

CITY OF BEXLEY, OHIO

Street, Storm, and Water General Notes

1. **SPECIFICATIONS:** The current City of Columbus and Ohio Department of Transportation (ODOT) "Construction and Material Specifications" (CMSC and ODOT CMS respectively) together with the requirements of the City of Bexley, Ohio, including all supplements thereto, in force on the date of the approved plans shall govern all materials and workmanship involved in the improvements shown on these plans except as such specifications are modified by the following specifications, or by the construction details set forth herein. In case of any conflict among these identified technical specifications, the greater requirement shall take precedence (as determined by the sole discretion of the City Engineer) unless directed otherwise by the City Engineer.

General provisions of the ODOT and the City of Columbus CMS as modified herein shall not apply. This exclusion includes but is not necessarily limited to Division 100 of the ODOT and City of Columbus CMS. Also specifically excluded is specification section 401.20 "Asphalt Binder Price Adjustment" of the 2008 ODOT CMS.

2. **ELEVATION DATUM:** Elevations shown on these plans are based on NAVD 88 Datum.
3. **BENCHMARKS:** The Contractor shall carefully preserve benchmarks, property corners, reference points, and stakes. Any benchmark, property corner, or survey marker damaged or disturbed by the Contractor shall be reset by an Ohio Registered Surveyor at the Contractor's expense.
4. **SAFETY REQUIREMENTS:** The Contractor and any and all Subcontractor shall be solely responsible for complying with all federal, state, and local safety requirements, together with exercising precautions at all times for the protection of persons (including employees) and property. It is also solely the responsibility of the Contractor and Subcontractor to initiate, maintain, and supervise all safety requirements, precautions, and programs in connection with the work.
5. **CONFINED SPACE ENTRY:** The Contractor shall be solely responsible for following the OSHA requirements for "Confined Space Entry" (CSE), Title #29 of the Federal Regulations Code, Part 1910.146, while performing work inside any manhole or other confined space requiring a permit.
6. **PERMITS:** The Contractor shall secure and pay for all permits and government fees, licenses, and inspections necessary for the proper execution and completion of the improvements inside of the City of Bexley corporate limits where shown on the plans.
7. **CITY OF COLUMBUS MAINTENANCE OF TRAFFIC PERMIT:** The Contractor shall secure a written permit from the City of Columbus, Transportation Division, a minimum of two weeks prior to beginning work within the City of Columbus right-of-way.
8. **NOTIFICATION:** The Contractor shall notify the City Engineer at least 48 hours in advance (holidays and weekends excluded) of the anticipated start of work requiring

inspection, testing, or approval by the City Engineer. Work shall not commence until a pre-construction conference is held.

The Contractor shall notify all adjacent landowners a minimum of one week in advance of work near their property. The Contractor shall coordinate with City for a suggested format for the notice.

9. INSPECTION: The City of Bexley will provide all construction inspection for this project for work that is located in the public right of way and other work as they deem appropriate. No work shall be commenced until arrangements have been made with the City Engineer and Service Director for inspection services. Contractor may not install any permanent work unless an inspector is present.
10. WORK HOURS: General work hours on this project shall be Monday through Friday, 7:30 to 5:30 and subject to the City of Bexley's Noise Ordinance. Certain streets and intersections may have additional working hour restrictions; for this information, refer to the traffic notes on Sheet # **XX**
11. UTILITIES: The identity and locations of existing underground utilities in the construction area have been shown on the approved construction drawings as accurately as provided by the Owner of the underground utility as required by Section 153.64 or Section 3781.27 of the Ohio Revised Code. The City of Bexley and the Engineer assume no responsibility for the accuracy of locations or depths of underground facilities shown on the approved construction drawings. When unknown or incorrectly located underground utilities are encountered during construction, the Contractor shall immediately notify the utility owner and the City.

The Contractor shall notify the Ohio Utilities Protection Service (OUPS) at (1-800-362-2764) at least 48 HOURS, and NO MORE THAN 10 DAYS PRIOR TO excavating, with such time periods not including weekends or holidays. Contractor shall similarly contact all utility owners who are not subscribers to OUPS.

The following utilities are located within the work limits of this project and the owners do not subscribe to a registered underground utility protection service.

<u>UTILITY</u>	<u>OWNER</u>	<u>TELEPHONE</u>
Water, Sanitary, and Storm Facilities	City of Bexley 2242 E. Main St. Bexley, Ohio 43209	614-559-4200

The City of Bexley is a member of the Ohio Utilities Protection Service.

The following additional utilities are known or can be expected to be located within the limits of this project.

<u>UTILITY</u>	<u>OWNER</u>	<u>TELEPHONE</u>
LIST UTILITIES		

The Contractor is responsible for the investigation, location, support, protection and restoration of all existing utilities and appurtenances whether shown on the plans or not. The Contractor shall proceed with the work and protect all underground utilities in a manner at least as cautious and protective of safety and underground utilities as those methods identified in Sections 3781.25 through 3781.30 of the Ohio Revised Code.

All private utility relocation (gas, electric, phone, etc.) will be the responsibility of the utility owners. The Contractor is responsible for coordinating the relocation and/or protection of any utilities as required by the plan with the owner of the affected utility.

12. EXPOSE EXISTING UTILITY: Where potential grade and alignment conflicts might occur with existing utilities, or as specifically called out on the plans the Contractor shall expose utilities or structure sufficiently in advance of laying pipe for the Engineer to verify the vertical and horizontal effect on the proposed construction. Any discrepancy to the plans shall be coordinated with the Engineer to ensure that there are no construction or conflict issues associated with discrepancy.
13. CONFLICTS: In all conflicts in grades between the water main and gravity sewers, the water main shall be lowered during construction, unless otherwise directed by the City Engineer.
14. HOUSE SERVICE LINES: The Contractor shall assume that each house has at least one water, one sanitary sewer, one roof drain or sump line and one gas service line unless more are marked by the utility company. It is the Contractor's responsibility to locate and support and protect these service lines. Where service lines are cut or broken, the lines are to be restored to the standards of the utility owner at the Contractor's expense.
15. SITE VISIT: The Contractor shall perform field reconnaissance to become acquainted with the existing site conditions and the potential effects upon the scope of work.
16. MISCELLANEOUS WORK: The Contractor shall furnish all labor, materials, tools, equipment, services, and related accessories for a complete project, as shown and described in the plans and specifications. Any costs associated with compliance with these General Notes shall be included in the price bid for the various items and no additional payment will be due the contractor.
17. RIGHTS-OF-WAY: In addition to the direct requirements of the contract specifications, the Contractor shall observe and conform to the specific requirements of all Rights-of-Way, including easements, court entries, rights of entry, or action filed in court in accordance with the code of the applicable governing agency.
18. EASEMENTS: Approval of this plan is contingent on all easements required for the construction of the work being secured and submitted to the City of Bexley for recording prior to commencement of the work, and no work which requires an easement will be allowed to proceed until this has been done.

19. WORK LIMITS: The Contractor is responsible for containing all performed work and all equipment, materials, vehicles, etc., used to complete the work within the rights-of-way of the streets, roadways and permanent easements, as shown on these plans.

The Contractor is responsible for cost of restoration for any area outside of the right-of-way or permanent easement to former condition and to the satisfaction of the Property Owner.

20. CONTRACT WORK PERFORMED BY THE CITY: In the event that it becomes necessary for the City to perform work of an immediate nature (such as the placement of barricades or replacement of signs or other warning or protective devices) required of the Contractor by this contract because of failure or refusal of the Contractor to perform such work, the Contractor shall reimburse the City at the Rate of 2.5 times the actual cost of labor, materials and equipment necessary to perform such work.

21. CONVENIENCE FACILITIES: The Contractor shall furnish and maintain sanitary convenience facilities for the workmen and inspectors for the duration of the work.

22. MAIL SERVICE: The Contractor shall be responsible for maintaining mail service in the construction area. Prior to disturbing any mail boxes, the Contractor shall contact the Postal Authorities and shall temporarily relocate mail boxes in accordance with Postal requirements. The Contractor shall restore mail boxes to their original condition and location.

23. TRASH COLLECTION SERVICE: The Contractor shall contact the City of Bexley for current collection date each week prior to starting work and be responsible for maintaining a 20 foot wide clear area for trash can placement in the front of each lot for trash collection service in the construction area on the designated trash day.

24. NON-RUBBER TIRED VEHICLES: No non-rubber tired vehicles (including vehicles with steel tracks) shall be moved on City streets. Exceptions may be granted by the City of Bexley where short distances and special circumstances are involved. Granting of exceptions must be in writing, and any damage must be repaired by the Contractor to the satisfaction of the City of Bexley.

25. SIGNS, MAILBOXES, FENCES, UNDERGROUND SPRINKLERS, INVISIBLE DOG FENCES, ETC.: The Contractor shall be responsible for restoring all signs, mailboxes, fences, guardrail, shrubs, property, drainage structures, or other physical features disturbed or damaged during construction whether shown on the plans or not to their original location and condition and to the satisfaction of the property owner and the City of Bexley.

26. PROTECTION OF STREET TREES: The City of Bexley has been designated as a "Tree City USA" for its' outstanding street tree resources. The Contractor's cooperation is required to prevent damage to existing street trees. Any damages to limbs, bark, roots, etc. shall cause City to collect or retain \$5,000 per occurrence for a period not to exceed two years. If the tree dies as a result of damages, then money retained shall be used to remove and replace the tree. If the tree survives two years past the final

completion date of the project then funds will be released. The City's Urban Forester will provide a written report and photographic evidence to support his findings to document all damages. A damaged tree may be removed and replaced anytime prior to the two years at the City Urban Forester's sole discretion. If the Contractor believes that he cannot perform the work required by the project without damaging the street tree, he shall so notify the City in advance of such work and a release will be provided from these requirements on a case by case basis. All exposed roots shall be neatly cut and trimmed prior to backfill. The roots shall be inspected by the City's Urban Forester prior to backfill.

27. PRUNING: Branches or growth which interferes with the free construction of the project may be removed from trees/bushes that are to be saved by the use of pruning tools with prior approval from the Engineer and City's Urban Forester. All pruning tools used and methods employed shall meet the approval of the Engineer and City's Urban Forester. The branches shall be removed with a good clean cut made flush with the parent trunk or if having a good healthy lateral branch, the cut shall be a good clean slanting cut close to and beyond the healthy branch. All pruning cuts shall be painted with an accepted pruning preservation.

Trees damaged or destroyed that were not designated for removal or approved by the City's Urban Forester for removal shall be removed replaced at the Contractor's expense, not to exceed \$5,000 per tree, payable to the City of Bexley.

28. STANDARD TOPSOIL, SEEDING, FERTILIZER, AND MULCHING: All topsoil shall be of the highest quality and free of all stones, trash and other deleterious materials greater than $\frac{1}{4}$ ". Organic content shall be tested by an approved lab and certified to be between 10-20% by weight, and all topsoil shall be saturated with water and allowed to settle prior to seeding. Settled areas shall be refilled and saturated again prior to seeding. The grades shall match all existing landscape and any improvements completed under this plan. The Contractor shall scarify the soil surface to open the soil prior to seeding. All seeding, fertilizer, and mulch shall be placed within 5 working days of placing topsoil. The seeding and fertilizer mixes shall be as specified by the City and shall be installed per the manufacturer's recommendations. The starter-fertilizer mix shall contain a minimum of 3% Siduron, to prevent weed establishment. No weeds or undesirable grasses will be accepted in the final inspection. If the initial seeding is not 95% established by September 15th, the Contractor shall re-seed, fertilize, and mulch the bare areas prior to October 1st. Mulch will be applied by Hydromulch spray or broadcast of Penn Mulch or approved equal. Straw will not be used or permitted for Mulch material.

29. DEWATERING: The Contractor is solely responsible to the Ohio Department of Natural Resources (O.D.N.R.) for registry, maintenance, and abandonment of any withdrawal devices used in the construction of this project.

Installation of any well, well point, pit or other device used for the purpose of lowering the groundwater level to facilitate construction of this project shall be properly abandoned in the provisions of Section 3745-9-10 of the Ohio Administrative Code or as directed by the Director or his representatives.

The Contractor shall be required to complete and file a Well Log and a Drilling Report Form with O.D.N.R., Division of Water, within 30 days of the completion of installation of any well, well point, pit or other device used for the purpose of removing groundwater from an aquifer, in accordance with Sections 1521.01 and 1521.05 of the Ohio Revised Code. In addition, any such facility that has a capacity to withdraw waters of the State in an amount greater than 100,000 gallons per day from all sources shall be registered by the Contractor with the Chief of the O.D.N.R., Division of Water, within three months of the completion of the facility in accordance with Section 1521.16 of the Ohio Revised Code. Copies of the necessary paperwork can be obtained at O.D.N.R., Division of Water, Fountain Square, Columbus, OH, 43224-1387 – (614) 265-6717.

The Contractor shall furnish and operate suitable pumping equipment of such capacity, adequate to dewater the trench, should water be encountered. The trench shall be sufficiently dewatered so that the placement of bedding and the laying and joining of pipe is made on firm, dry ground. If dewatering cannot produce acceptable subgrade, and only as directed by the City Engineer, unsuitable materials shall be removed and replaced by CMSC Item 906, stone foundation.

The Contractor shall convey all trench water to a natural drainage channel or storm sewer without damage to property. The Contractor shall be responsible to place and maintain the necessary sediment control measures to filter the dewatering discharge. Cost for the above shall be included in the bid price for the sanitary sewer improvements.

30. REPLACEMENT OF DRAIN TILES AND STORM SEWERS: All drain tile and storm sewers damaged, disturbed, or removed as a result of the Contractor's operations shall be replaced with the same quality pipe or better, maintaining the same gradient as existing. Replaced drain tile shall be laid on compacted bedding equal in density to surrounding stratum. Replacement shall be done at the time of the backfill operation.
31. MAINTAIN DRAINAGE: The flow in all sewers, drains, and watercourses encountered shall be maintained by the Contractor at his own expense, and whenever such watercourses and drains are disturbed or destroyed during the prosecution of the work, they shall be restored by the Contractor at his own cost and expense, unless specific provision is made within the Contract Documents for the measure of and payment for such cost specific items, to a condition satisfactory to the City Engineer.
32. INLET PROTECTION: The Contractor is responsible to keep all storm sewer inlets protected from any amounts of sediments or construction related activities using adequate filtering devices as approved by the City.
33. EROSION & SEDIMENTATION CONTROL: The Contractor shall provide sediment control at all points where storm water runoff leaves the project including waterways, overland sheet flow, and storm sewers. Erosion and sediment control shall be provided as per the requirements of the City of Bexley and the Standards and Specifications of the "Rainwater and Land Development" manual of the ODNR.

Erosion control measures are to be installed per NPDES permit regulations or as directed by the City Engineer, and are to be maintained until such time that they are no longer required by the permit and the City Engineer.

All land disturbing activities shall be subject to inspection and site investigation by the City of Bexley and/or the Ohio EPA. Failure to comply with these regulations is subject to legal enforcement action.

The Contractor is responsible to notify the City of Bexley 48 hours prior to commencement of initial site land disturbance on any site of one or more acres. This includes site clearing, grubbing and any earth moving. Primary erosion and sediment control practices are mandated by regulations to be in place from the beginning of the construction activity.

34. SOIL STOCKPILES: The Contractor shall not be permitted to keep any soil stockpiles in the public right of way or on private or public property without a written agreement with the property owner, including trench excavation stockpiles. Any soil excavated shall be removed daily if not used as backfill that same day.
35. DISPOSAL OF EXCESS EXCAVATION: The Contractor shall dispose of all excess excavation at such location off the project site as approved by the City Engineer. The Contractor shall provide a copy of the signed, written agreement between the Contractor and the off-site Landowner before such disposal occurs. This written agreement shall clearly state the purpose of the agreement and indicate the landowner's permission for such use.
36. CONSTRUCTION DEBRIS: The Contractor shall be responsible for the immediate cleanup of any debris, mud or dirt tracked or spilled on City and/or public streets or private drives whether inside or outside the project area. The Contractor is responsible for the cost of any services contracted and/or completed by the City of Bexley in the cleaning of any tracking or spillage anytime during project construction. The City Engineer may require the Contractor to perform daily street and site cleaning if any amount of dirt and debris is tracked onto City streets. This may include removal by sweeping, power cleaning, or manual methods.
37. CLEAN UP: All debris, rubble, unusable materials, and items not salvaged by the Owner shall become the property of the Contractor and shall be removed from the site by the Contractor and disposed of properly.
38. MAINTENANCE OF TRAFFIC NOTES: All temporary traffic control devices shall be furnished, erected, maintained and removed by the Contractor in accordance with the Ohio Manual of Traffic Control Devices for Construction and Maintenance Operations (current edition), copies of which are available from the Ohio Dept. of Transportation, Bureau of Traffic, 1980 West Broad St., Columbus, OH 43223.

Steady-burning, Type "C" lights shall be required on all barricades, drums, and similar traffic control devices in use at night. Cones are NOT approved for use at night.

All trenches within the road right-of-way shall be backfilled or securely plated during non-working hours.

Access to all properties within the project area shall be maintained at all times.

All traffic lanes shall be fully open to traffic from 7:00 a.m. to 9:00 a.m. and 4:00 to 6:00 p.m. weekdays on Main Street, Broad Street and Livingston Ave. One lane may be closed to traffic during working hours.

Sidewalks may not be closed without permission of the City Engineer. Alternate ADA Accessible routes shall be provided per current ADAAG requirements.

Two-way, one-lane traffic shall be maintained during construction operations in accordance with page C-18 of the Ohio Manual. A uniformed officer may be substituted for each flagman shown on that page at the Contractor's expense.

Police Officers are not needed, unless a hazard develops, for two-way, one-lane traffic in each direction, maintained during construction operations on all roadways within the project area. If a hazard develops, an officer may be required by the City to the project at the Contractor's expense.

All permanent traffic controls not in conflict with the temporary traffic controls shall be maintained through this project by the Contractor. Permanent traffic controls may be temporarily relocated if approved or required by the City Engineer. The Contractor shall assume all liability for missing, damaged, and improperly placed signs.

Any work done by the City, including installation, relocations, removal and/or replacement of permanent traffic control devices as a result of work done by the Contractor or as a result of the negligence of the Contractor shall be at the expense of the Contractor.

39. CONCRETE PIPE AND STRUCTURE INSPECTION: All precast concrete products shall be inspected at the location of manufacture. All concrete pipe, storm, and sanitary sewer structures will be stamped or have such identification noting that said pipe, storm, and sanitary structures have been inspected by the City of Columbus and meets their specifications. Installation of pipe and structures without proper identification will not be permitted. Contractor will pay for the City of Columbus Inspection.

40. PIPE MATERIAL: All sewer pipe on this project shall be in accordance with Section 901 or the CMSC. The following Columbus Construction and Material Specification (CMSC) pipe materials will be permitted for use for public sewers:

SANITARY SEWER PIPE

Outside of R/W Limits

Flexible Pipe will be allowed for sewers <= 18" diameter (PVC Pipe 720.01) that have a minimum of 4' cover and a maximum of 20' cover.

Rigid Pipe will be required for all sewers greater than 18" (Reinforced Concrete Pipe 706.02, Vitrified Clay Pipe 706.08, Ductile Iron 801.03) or for all pipe that will have less than 4' cover or greater than 20' cover.

Within R/W

Flexible Pipe will be allowed for sewer <= 12" diameter (PVC Pipe 720.01) that have a minimum of 4' cover and a maximum of 20' cover.

Rigid Pipe will be required for all sewers greater than 12" (Reinforced Concrete Pipe 706.02, Ductile Iron 801.03) or for all pipe that will have less than 4' cover or greater than 20' cover.

STORM SEWER PIPE

Outside of R/W Limits

Flexible Pipe will be allowed <= 15" diameter (PVC Pipe 720.01) that have a minimum of 4' cover and a maximum of 20' cover.

Rigid Pipe will be required for all sewers greater than 15" (Reinforced Concrete Pipe 706.02, Concrete Box 706.05) or for all pipe that will have less than 4' cover or greater than 20' cover.

Within R/W

Rigid Pipe will be required for all sewers (Reinforced Concrete Pipe 706.02, Concrete Box 706.05)

Flexible pipe will be allowed for 4" and 6" drain tiles within the right-of-way.

41. **TRENCH BACKFILL:** Trenches within the road right of way and/or pavement, including all sidewalks, are to be filled with Compacted Granular Backfill (ODOT No. 4 Aggregate or 304 Aggregate or approved equal). All other trenches can be filled and compacted as per native backfill compacted to a minimum of 95% standard proctor.

Compacted Granular Backfill shall be granular material, conforming to 703.01 No. 4 coarse aggregate or item 304, as directed by the Engineer compacted as stipulated in item 912.03. in all cases granular material shall be used around all manholes, structures and cleanouts.

Aggregate for bedding is No. 57 or No. 8, as per Item 703.

The excavated trench width twelve inches (12") above the conduit may be increased without extra compensation.

42. **TRENCHES:** All trenches shall be maintained as safe as possible by the Contractor at all times and backfilled as soon as practical. All trenches during non-working hours require traffic plates, and/or lighted barricades and construction fence.

43. **TRENCH DAMS:** All sanitary sewers require trench dams between manholes and on service laterals, at the property line, made of bentonite or other approved impermeable

clay. Trench dams shall be constructed on all sanitary sewers in accordance with item 901.11.

44. WATER MAIN SEPARATION: The Contractor shall maintain eighteen inches (18") vertical and ten feet (10') horizontal separations between any water main and sanitary sewer.

45. DEFLECTION TESTING: All flexible storm sewers are subject to Mandrel Testing and video inspection as directed by the City Engineer. Testing shall be performed no sooner than 30 days after the pipe trench has been backfilled and all roadway and site fills over the storm sewers constructed. The testing shall be completed in conformance with the requirements of CMSC Item 901.21. Maximum deflection shall not exceed 5% of the base inside diameter. Cost of the testing shall be at the expense of the contractor.

46. INFILTRATION TESTING: All sanitary sewer mains and manholes will be tested for infiltration and leaks according to the CMSC Item 901.20.

47. GRADE CHECKS – The Contractor shall ensure there is a surveyor's level and rod on the project for use in performing grade checks whenever any structures or pipe are being installed. The Contractor shall make this equipment available for the use of and assist the City Inspector in performing grade checks when requested by the inspector. These checks will be performed to ensure the following:

- A. Proper placement of each structure.
- B. Proper installation of initial runs of pipe from a structure.
- C. Grade, after an overnight or longer shutdown.
- D. Grade, at any other time the inspector has reason to question grade of installation.
- E. A grade check performed by the City Inspector in no way relieves the Contractor for the ultimate responsibility to ensure construction to the plan grade.

48. GRADE CHANGES: If it is determined that the elevation of the existing sewer or existing appurtenance to be connected, differs from the plan elevation or results in a change in the plan sewer slope, the Engineer shall be notified before starting construction of any portion of the proposed sewer, which will be affected by the variance in the existing elevations.

If it is determined that the proposed sewer will intersect an existing sewer or underground utility if constructed as shown on the plan, the Engineer shall be notified before starting construction of any portion of the proposed sewer, which would be affected by the interference with an existing facility.

Grades and elevations shown on the plans shall not be revised under any circumstances without first obtaining written approval from the Engineer. Invert elevations shall not deviate from plan elevations by more than 0.05'. Failing to meet the above requirements is cause for rejection of the affected section of sewer.

49. STRUCTURE ADJUSTMENT: The Contractor shall field verify the top of casting elevation of all proposed manholes and inlets. If precast structures are utilized, a minimum of the top 2" and a maximum of 6", shall be field placed either with precast

concrete grade rings, HDPE grade rings (HS 25 load rating) or clay brick and mortar to allow for field adjustment. Cement brick will not be permitted to adjust structures.

50. **TEMPORARY BULKHEAD:** The Contractor shall install a temporary bulkhead, where directed on the plans, prior to construction of the proposed sewers and shall maintain same until said sewers are accepted by the Engineer.
51. **CITY WATER:** The Contractor must obtain from the City of Bexley Water Department a fire hydrant permit prior to connection of their water supply lines to any fire hydrant. The Contractor shall provide all the necessary gate valves, back flow preventers, and flow meter for each hydrant location. All equipment, fittings, and valves shall be in accordance with City of Bexley Standards. The Contractor shall pay for water at the current City Rates.
52. **INTERRUPTION OF WATER SERVICE:** The Contractor shall give written notice to all affected property owners at least 24 hours, but not more than 72 hours prior to any temporary interruption of water service. Interruption of water service shall be held to a minimum and shall be pre-approved by the City.
53. **STATIONING:** All stationing refers to roadway centerline stationing unless otherwise noted on the plans.
54. **WATER MAIN MATERIALS:** All waterline material on this project shall be in accordance with Section 801 or the CMSC. All waterline installation and testing shall be in accordance with the current rules and regulations of the City of Bexley, Division of Water. The contractor will be responsible to provide all testing for water mains and services.
55. **EXISTING VALVES:** All existing valves shall be operated by City of Bexley Water Department personnel only.
56. **TESTING PROCEDURE:** All water mains shall be hydrostatically tested in accordance with CMSC Section 801.12.

Each valved section of water main shall be tested independently of one another unless otherwise approved by the Engineer. Pressure test shall be conducted with all watch valves open and hydrant foot valves closed.

Any testing performed against existing valves shall be at the Contractor's risk and in strict compliance with the requirements of the Engineer. If satisfactory results cannot be obtained against an existing valve, the new line shall be disconnected from the existing valve, plugged and retested. Disconnection from the existing water main, and any repairs necessary because of damage caused to the existing lines, valves and service connections shall be at the Contractor's expense.
57. **HAND SWABBING:** The Contractor shall hand swab all pipes and fittings that are not otherwise disinfected. The amount of chlorine to be used during hand swabbing operations will be determined by the City. No trench backfill or trench water will be allowed to come in contact with the interior of the pipe or fitting.

58. SERVICE TRANSFER AND WATER LINE ABANDONMENT: Where indicated on plans, the existing water lines shall be abandoned and existing water services off these lines, indicated on the plans and shown by house number, shall be transferred to the new water line.

Prior to abandonment of existing water lines, the proposed new water lines shall be tested and chlorinated and then the existing services shall be transferred to the new water lines. The Contractor shall maintain water service to all water customers affected by transfer of service.

All other existing services shown on the plans and not indicated as transfers shall be abandoned in place.

To ensure that all existing water services are transferred to the new water line, no water line shall be abandoned until all affected water services have been transferred; the new water line is put in service; and the existing water line to be abandoned has been shut down for 24 hours.

All visible valve and service boxes on the water line to be abandoned, which will no longer be in service, shall be removed. The required surface restoration shall be paid for under the appropriate bid Item(s).

59. SERVICE CONNECTIONS: No service connections shall be made to any service taps until the waterline has been disinfected by the Contractor and passing test results from an approved independent testing laboratory provided to the City of Bexley Water Department.

60. DISINFECTION: All water mains shall be disinfected in accordance with Section 801.13 of the City of Columbus Construction and Material Specifications (CMSC). The Disinfection is to be performed by the Contractor at their expense. Special attention is directed to applicable sections of AWWA C-651, particularly for flushing (Section 5) and for chlorinating valves and fire hydrants (Section 7).

61. FOR ALL VALVES: If the top of the operating nut is more than 36 inches below finished grade, an extension stem shall be furnished to bring the top of the operating nut to within 24 inches of finished grade elevation. All valve stem extensions are to be installed with the extension secured directly to the valve operating nut with galvanized restraint clips.

62. BLOCKING: All fittings shall be adequately restrained with concrete blocking per the City of Columbus standard construction drawings. All fittings to be backed must be thoroughly wrapped in a plastic sheeting prior to placing concrete.

63. EXISTING HYDRANTS, PLUGS, CAPS, ETC.: Hydrants, Plugs and caps removed from existing water lines shall be delivered to the Public Service Department, 2242 E. Main St., Bexley, Ohio, unless otherwise directed by the Engineer. No additional payment will be made for this delivery.

64. FIRE HYDRANT REPLACED OR RELOCATED: No existing fire hydrants to be replaced or relocated shall be removed, or taken out of service, until the new water lines are in service and the new fire hydrants are tested and approved by the City of Bexley Water Department.

65. OPERATION OF EXISTING VALVES: Existing valves on "in-service" water mains shall be operated by authorized personnel of the City of Bexley Water Department.

66. WATER SERVICES: Where and as shown on the plans, the water services shall be one piece, without fittings between the corp stop and the curb stop and between the curb stop and the meter. Existing service lines from the new curb stop to the meter shall be the Contractor's responsibility to verify appropriate materials, sizes and connection fittings.

+++++ END OF SECTION +++++

SIGNATURE BLOCK PRESENTED ON FOLLOWING PAGE.

STREET, STORM, AND WATER SIGNATURE BLOCK

"City of Bexley" signatures on this plan signify only concurrence with the purpose and general location of the project. All technical details remain the responsibility of the engineer preparing the plans.

Mayor
City of Bexley, Ohio

Date

Director of Building Services
City of Bexley, Ohio

Date

Director of Public Service
City of Bexley, Ohio

Date

City Engineer, City of Bexley, Ohio

Date