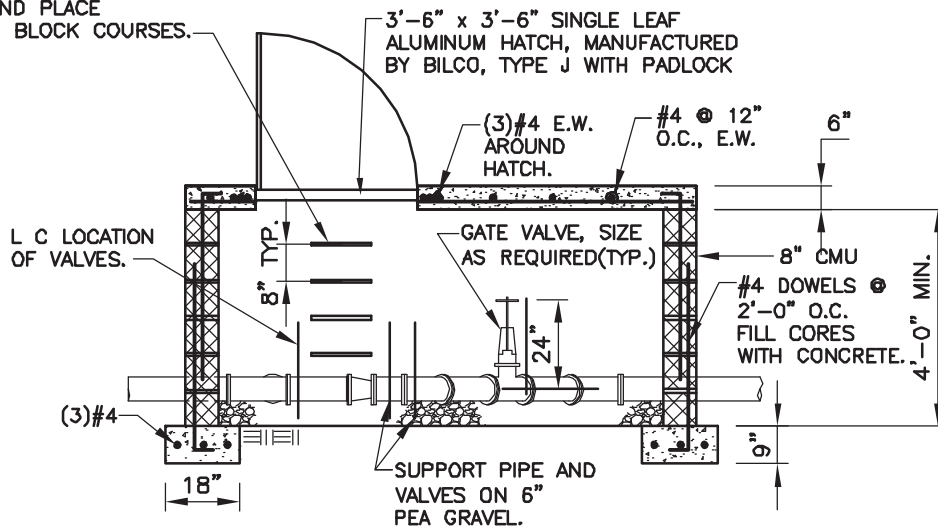
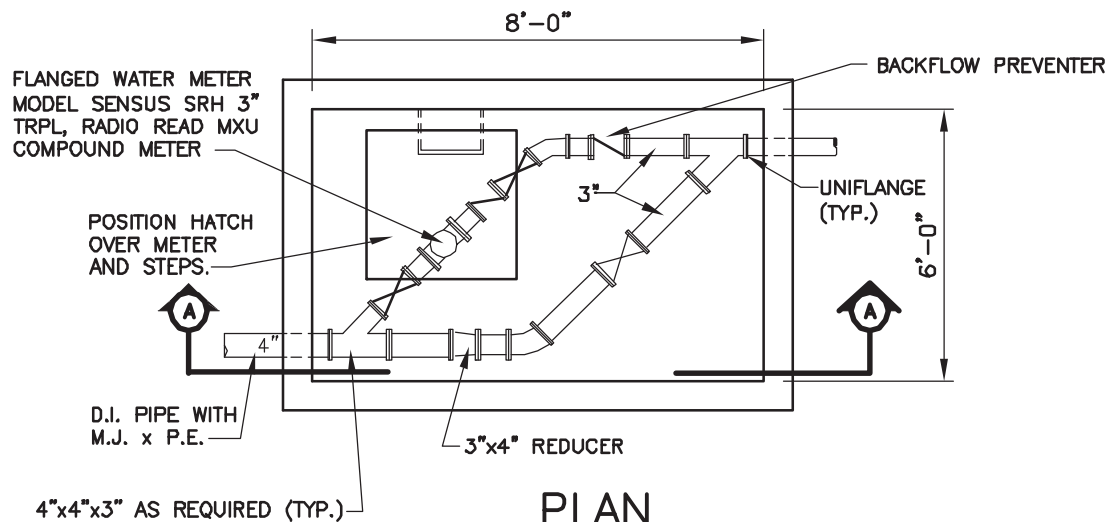


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INSTALL PREFAB MANHOLE
STEPS AND PLACE
BETWEEN BLOCK COURSES.



SECTION "A"



PLAN

NOTES:

1. FOR METERS 4" AND LARGER SUBMIT DESIGN FOR REVIEW
2. INTALL OUTSIDE TRAFFIC AREA IF POSSIBLE. OTHERWISE
DESIGN HATCH AND VAULT FOR HS-20 LOADING.

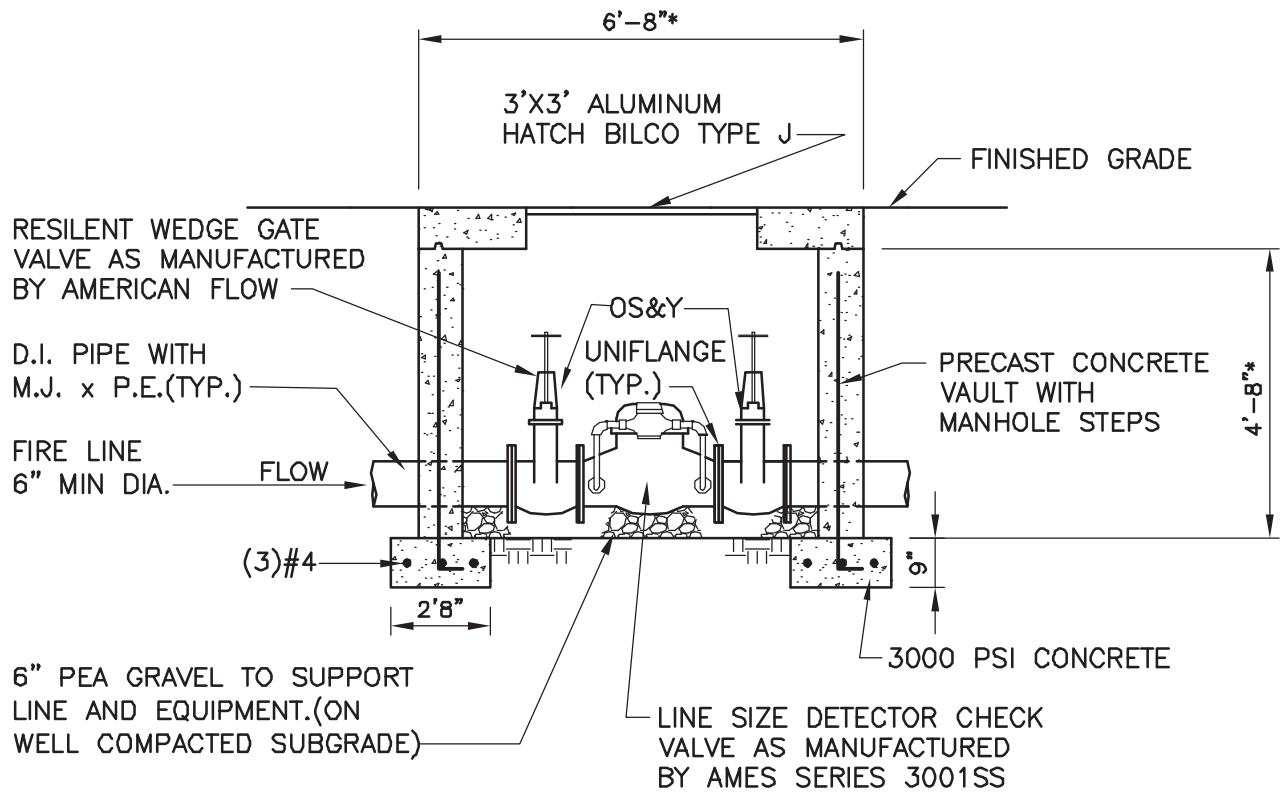
DATE: SEPTEMBER 2007

**TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS**

**INDUSTRIAL / COMMERCIAL METER DETAIL
NO SCALE**

SECTION - 3

DRAWING D-2B-16

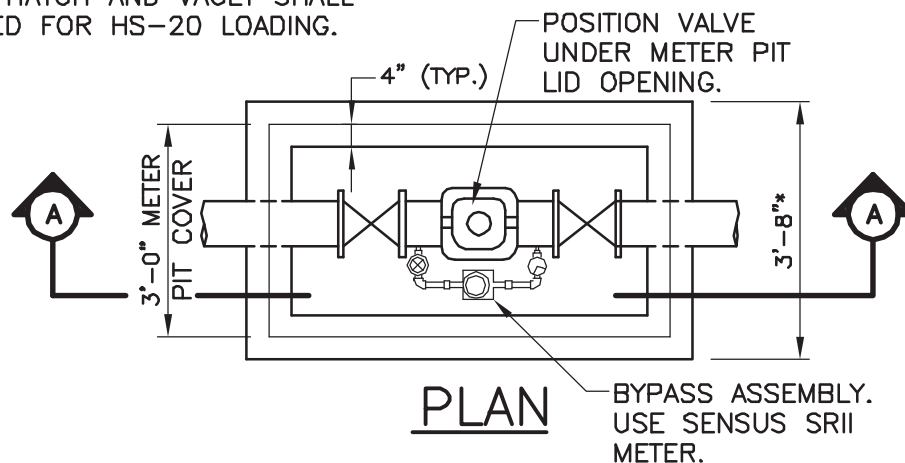


SECTION "A"

NOTES:

1. EQUIPMENT SUPPLIED AND INSTALLED BY DEVELOPER,
2. NOT TO BE INSTALLED IN TRAFFIC AREAS IF POSSIBLE. OTHERWISE HATCH AND VAULT SHALL BE DESIGNED FOR HS-20 LOADING.

*CONTRACTOR TO CONFIRM DIMENSIONS PRIOR TO ORDERING EQUIPMENT.



PLAN

DATE: SEPTEMBER 2007

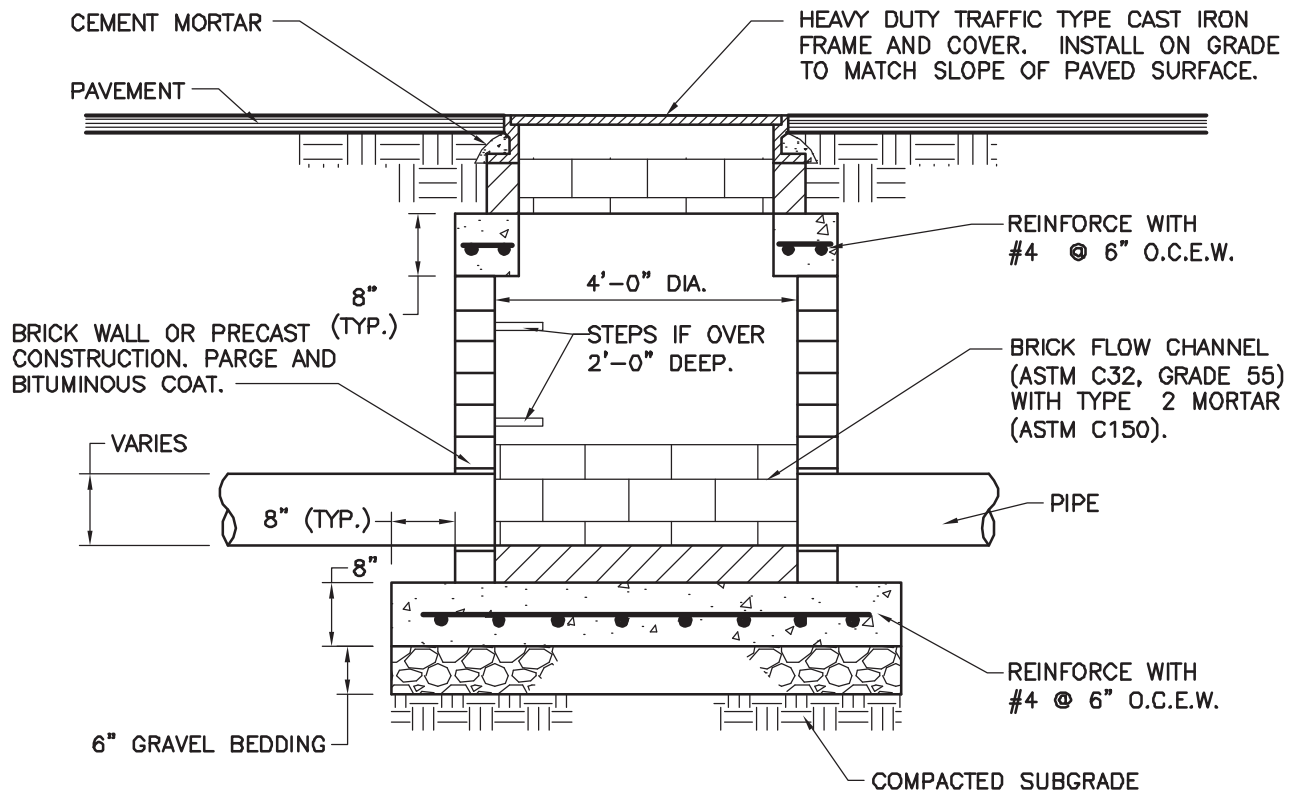
TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS

FIRE LINE BACKFLOW
PREVENTER DETAIL
NO SCALE

SECTION - 3

DRAWING D-2B-17

P:\STANDARD\DETAILS\City Details\Bridgeville DE\D-2C-1.DWG May 02, 2008 - 9:45am, (neug)



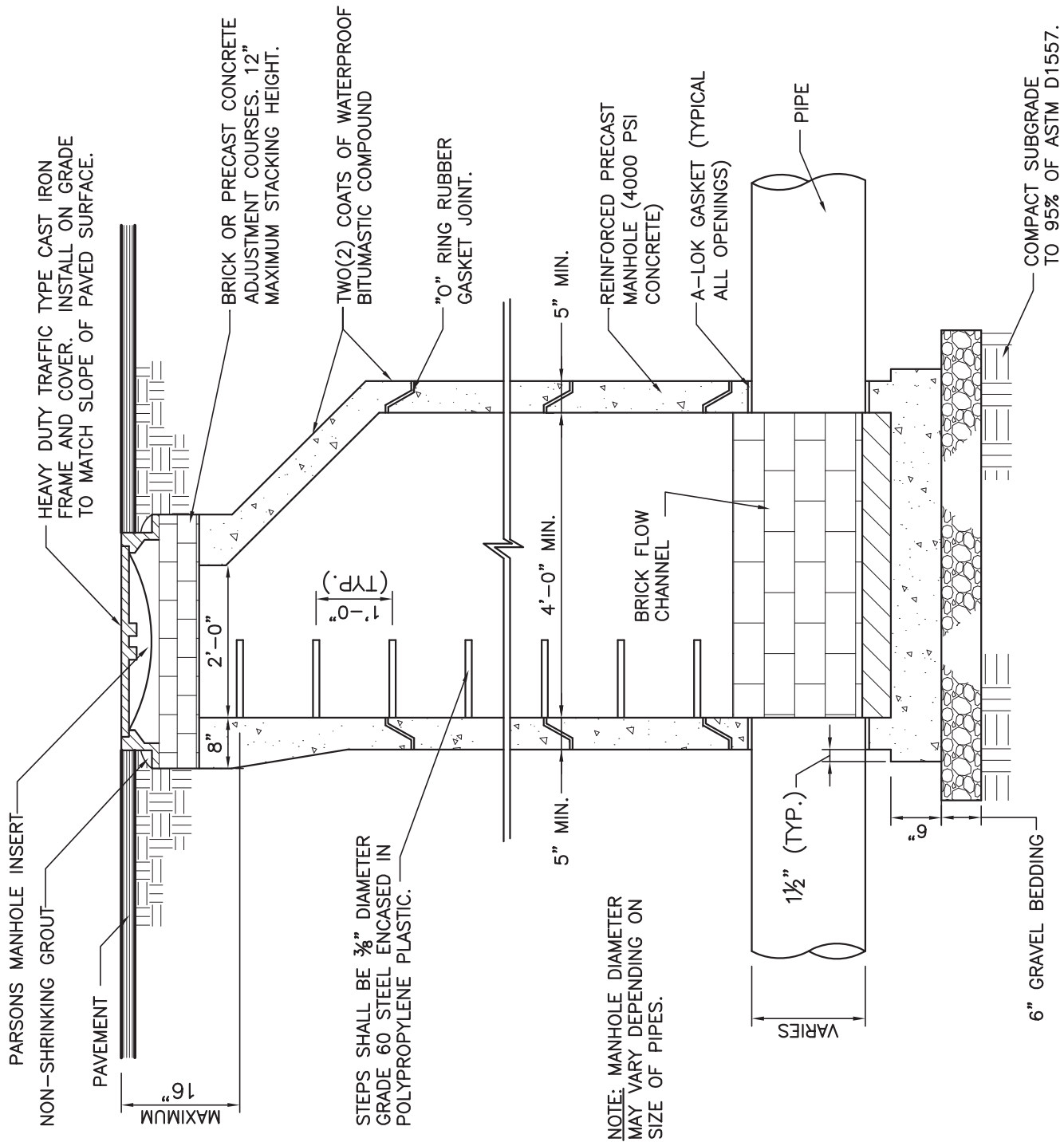
DATE: SEPTEMBER 2007

**TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS**

**SHALLOW MANHOLE DETAIL
NO SCALE**

SECTION - 3

DRAWING D-2C-1



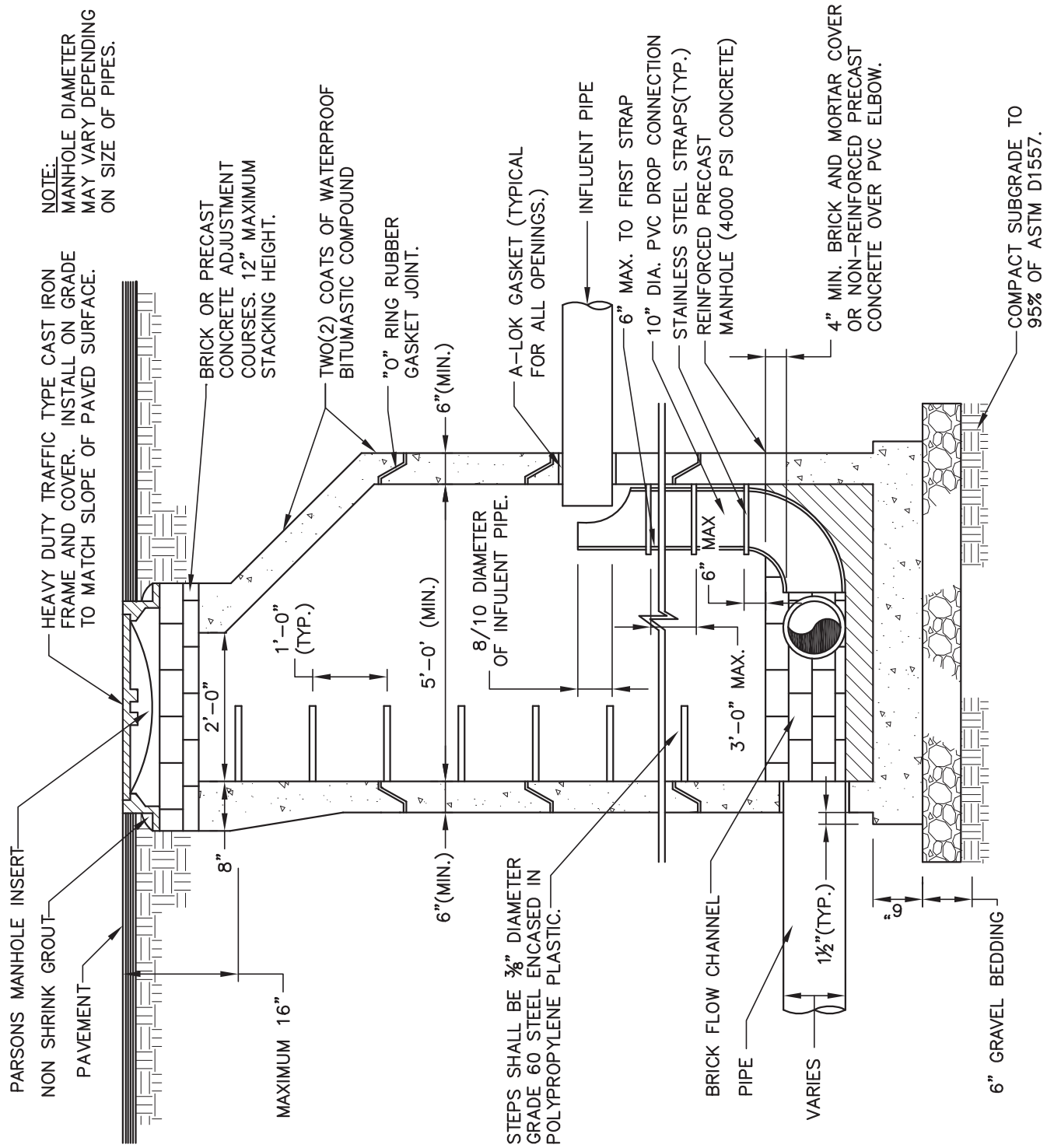
DATE: SEPTEMBER 2007

TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS

PRECAST CONCRETE MANHOLE DETAIL
NO SCALE

SECTION - 3

DRAWING D-2C-2



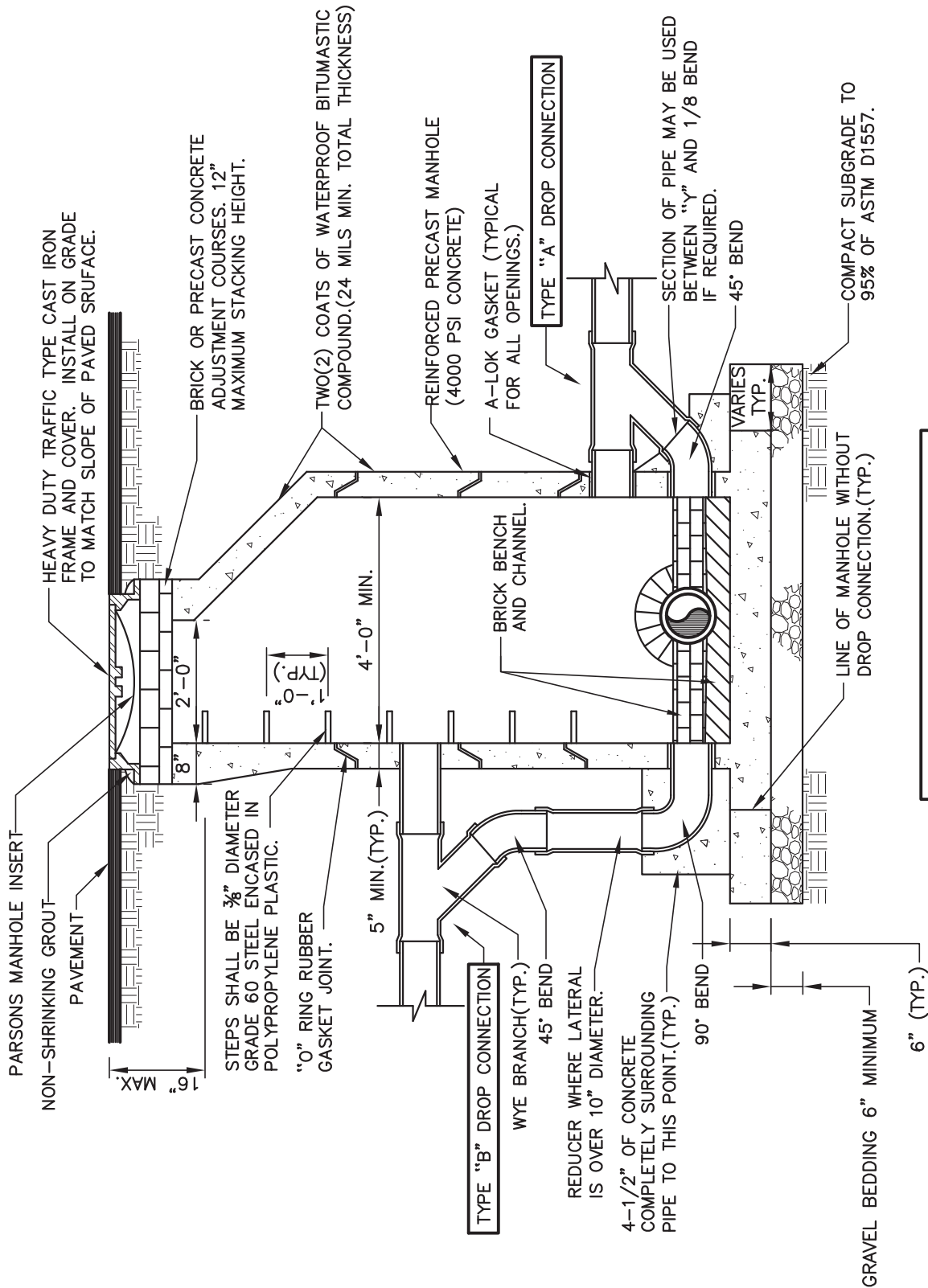
DATE: SEPTEMBER 2007

TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS

INSIDE DROP MANHOLE DETAIL
NO SCALE

SECTION - 3

DRAWING D-2C-3



DROP CONNECTIONS			
SIZE OF SEWER	TYPE "A"		TYPE "B"
	MAX.DROP	MIN.DROP	MIN.DROP
6" OR 8"	3'-9"	1'-9"	3'-9"
10"	4'-0"	2'-0"	4'-0"
12"	6'-0"	2'-6"	6'-0"

DATE: SEPTEMBER 2007

TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS

OUTSIDE DROP MANHOLE DETAIL
NO SCALE

SECTION - 3

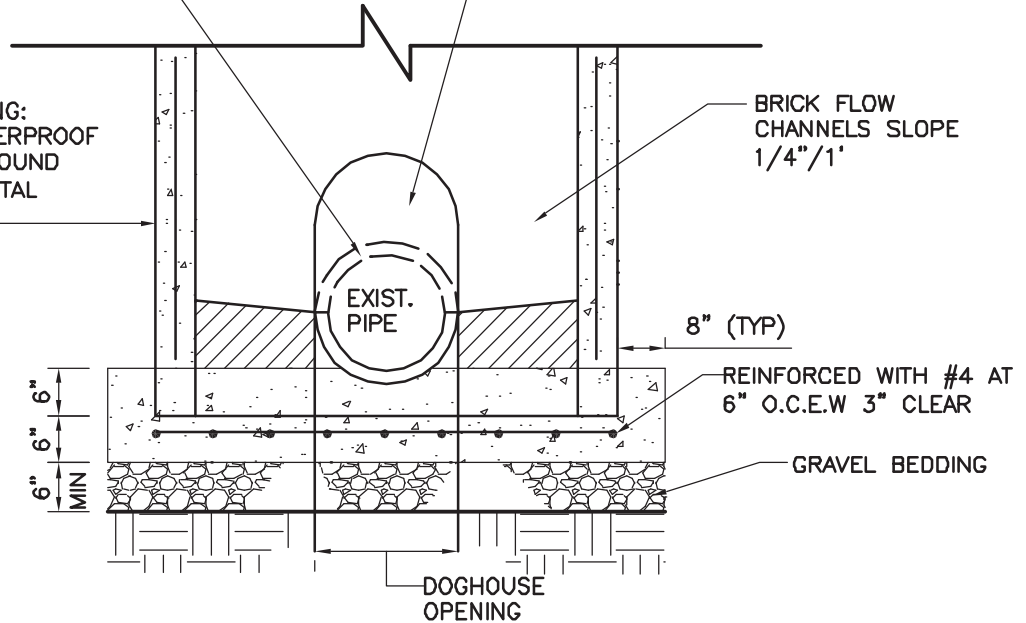
DRAWING D-2C-4

REMOVE TOP HALF OF EXISTING
PIPE AFTER COMPLETION OF
BRICK CHANNEL WORK.

WALL AREA BETWEEN EXISTING PIPE
AND DOGHOUSE OPENINGS SHALL BE
FILLED WITH BRICK AND NON-SHRINK
MORTAR.

EXTERIOR COATING:
2 COATS OF WATERPROOF
BITUMASTIC COMPOUND
(24 MILS MIN. TOTAL
THICKNESS)

BRICK FLOW
CHANNELS SLOPE
1/4"/1'



NOTES:

1. CONCRETE COMPRESSIVE STRENGTH SHALL BE 4,000 P.S.I.
2. MANHOLE SHALL CONFORM TO ASTM-C478, LATEST REVISION.
3. ALL PORTIONS OF MANHOLE SHALL BE CONSTRUCTED AS
DETAILED FOR PRECAST CONCRETE MANHOLE.

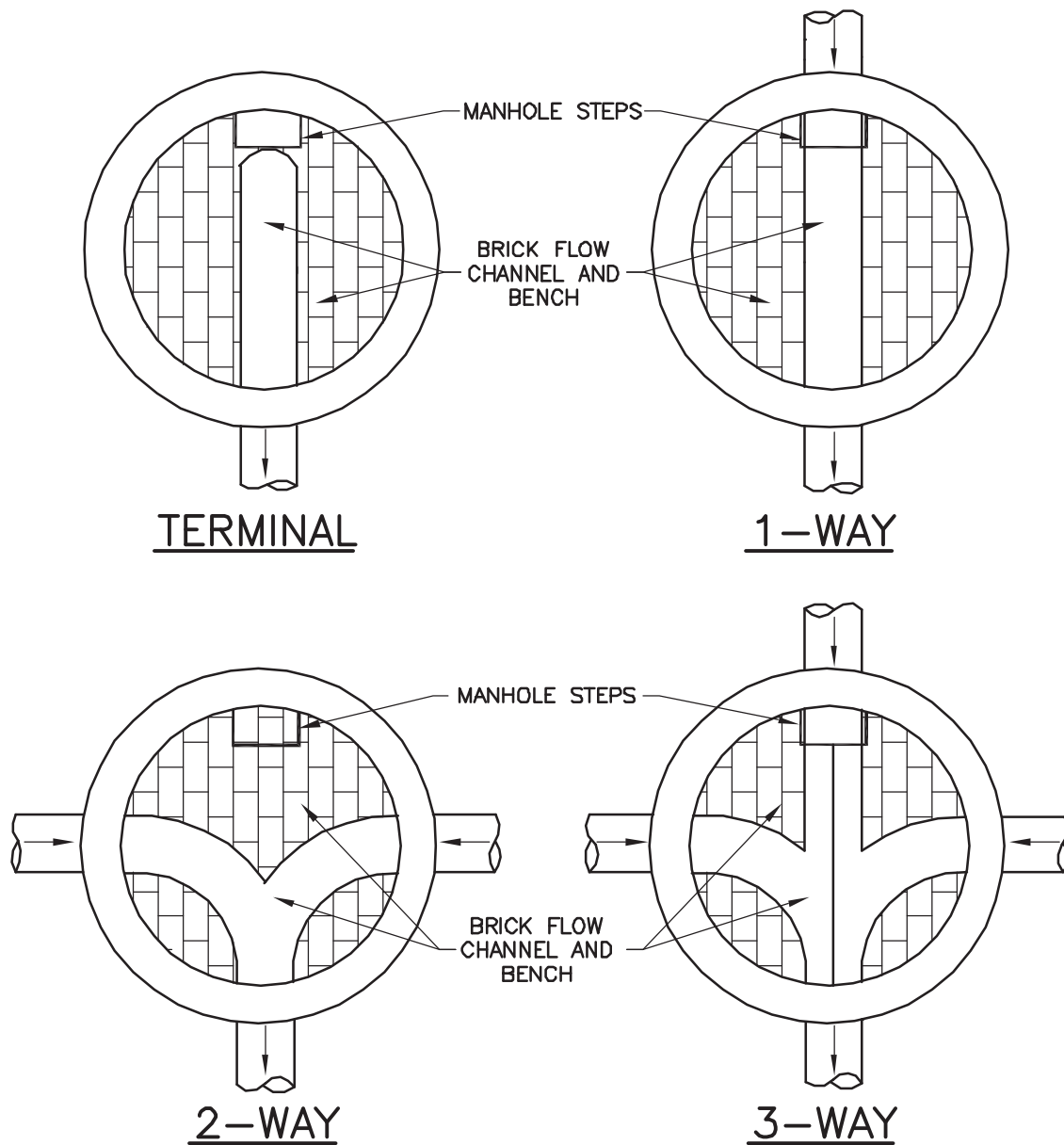
DATE: SEPTEMBER 2007

**TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS**

**DOGHOUSE MANHOLE DETAIL
NO SCALE**

SECTION - 3

DRAWING D-2C-5



DATE: SEPTEMBER 2007

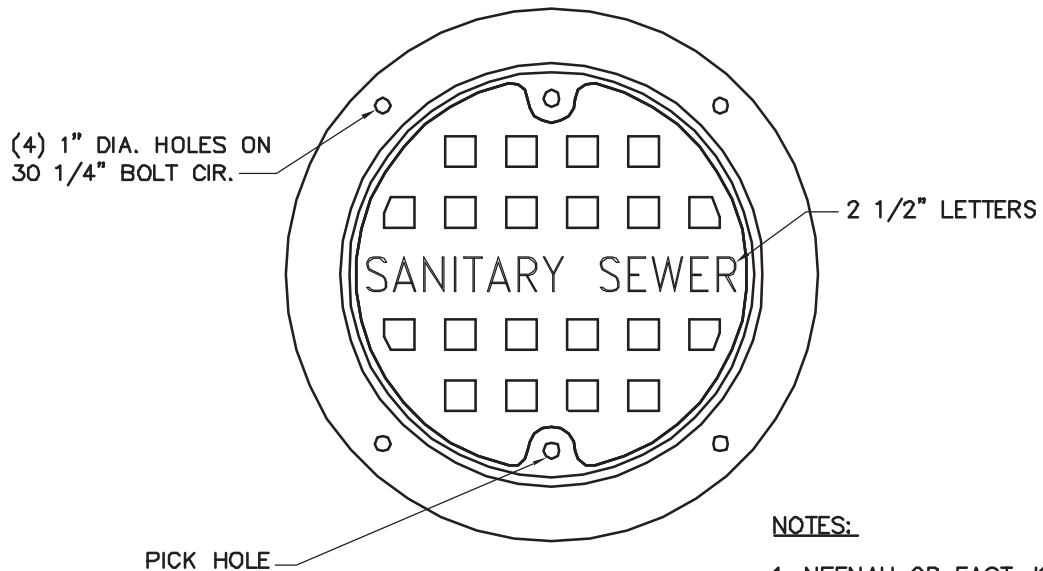
**TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS**

**TYPICAL MANHOLE FLOW CHANNEL DETAIL
NO SCALE**

SECTION - 3

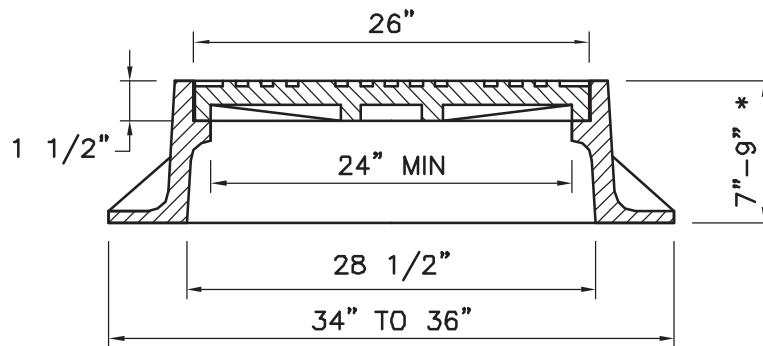
DRAWING D-2C-6

P:\STANDARD\DETAILS\City Details\Bridgeville DE\D-2C-7.DWG May 02, 2008 - 9:42am, (neug)



NOTES:

1. NEENAH OR EAST JORDAN
2. MIN WEIGHT:
FRAME 250 LBS
COVER 170 LBS



*ARV MANHOLES MAY REQUIRE LOW PROFILE,

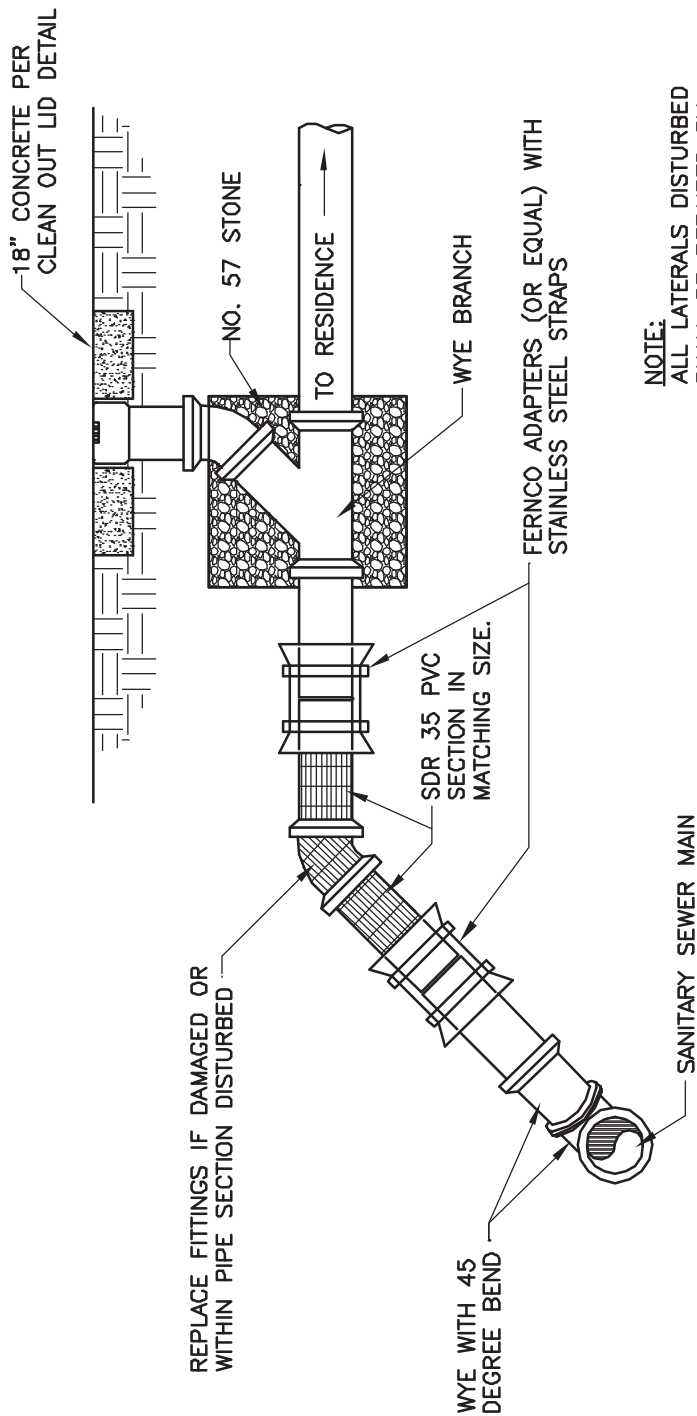
DATE: SEPTEMBER 2007

**TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS**

**MANHOLE FRAME AND COVER DETAIL
NO SCALE**

SECTION - 3

DRAWING D-2C-7



NOTE:
ALL LATERS DISTURBED
SHALL BE REPAIRED BY
THE CONTRACTOR.

DATE: SEPTEMBER 2007

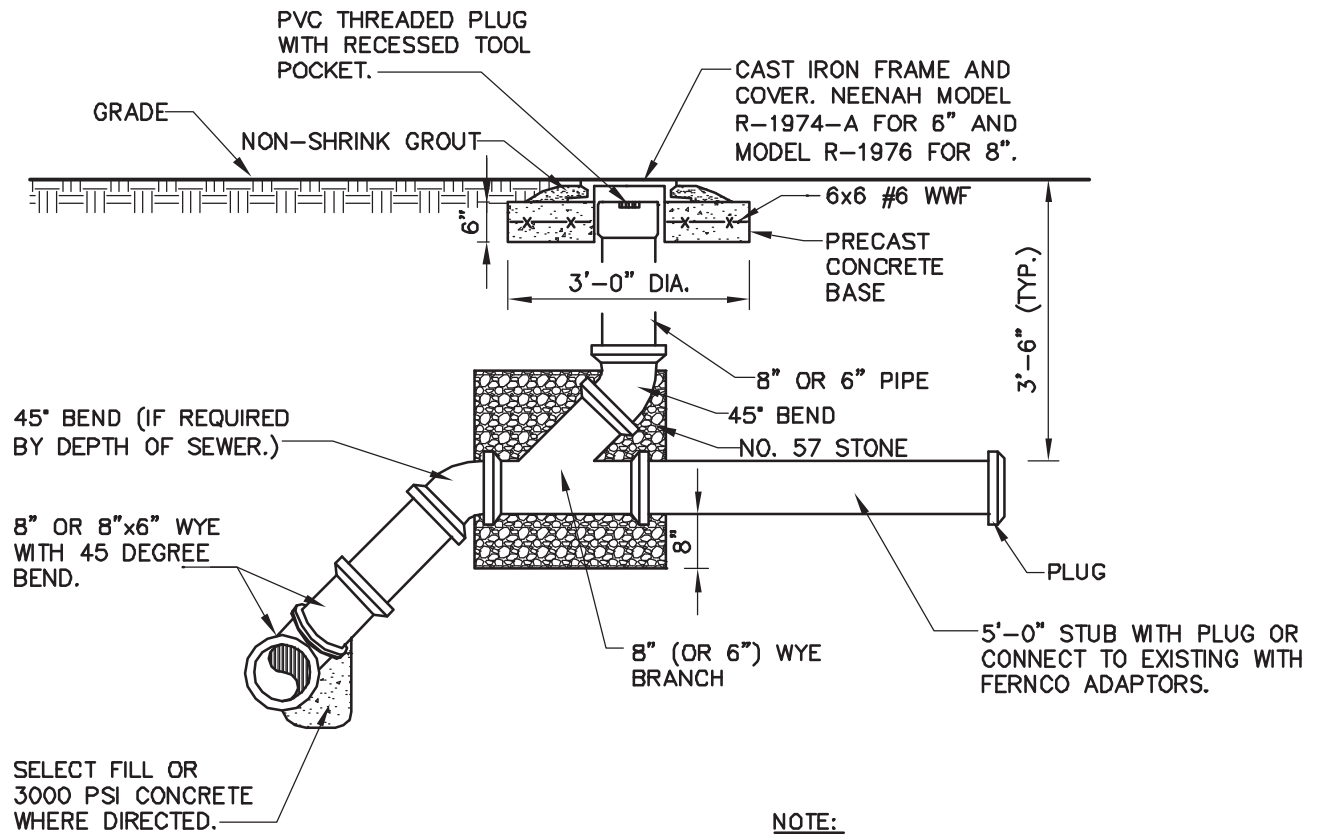
**TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS**

**SEWER LATERAL RESTORATION DETAIL
NO SCALE**

SECTION - 3

DRAWING D-2C-8

P:\STANDARD\DETAILS\City Details\Bridgeville DE\D-2C-9.DWG May 02, 2008 - 9:42am, (neug)



DATE: SEPTEMBER 2007

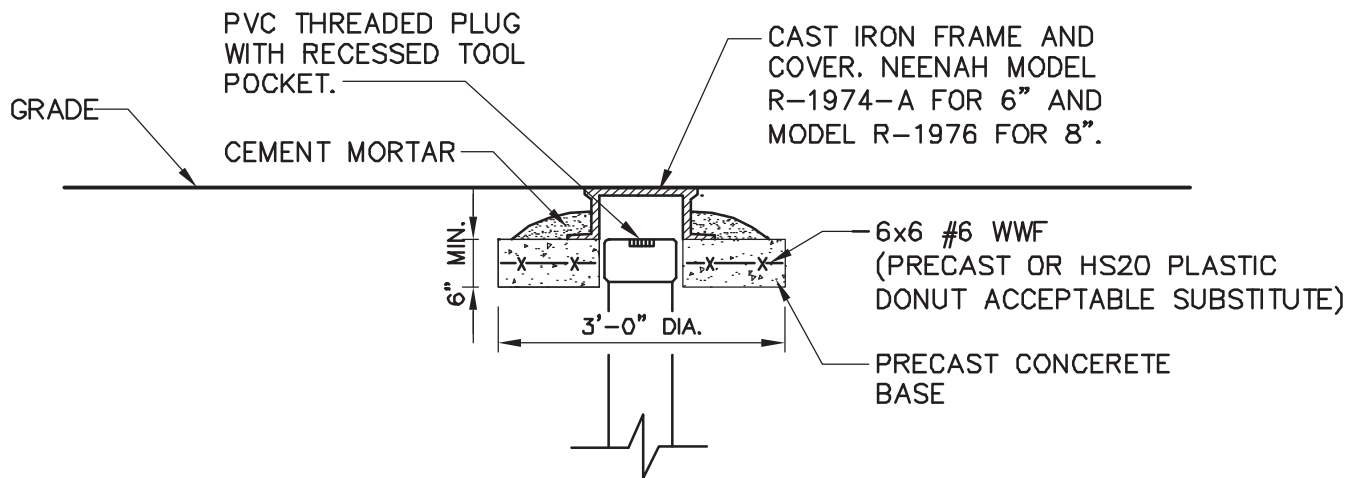
TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS

BUILDING LATERAL CLEANOUT DETAILS
NO SCALE

SECTION - 3

DRAWING D-2C-9

P:\STANDARD\DETAILS\City Details\Bridgeville DE\D-2C-10.DWG May 02, 2008 - 9:41am, (neug)



NOTE:

1. REFER TO DRAWING D-2C-9 FOR LATERAL CLEANOUT DETAIL.
2. GRADE FOR POSITIVE DRAINAGE.

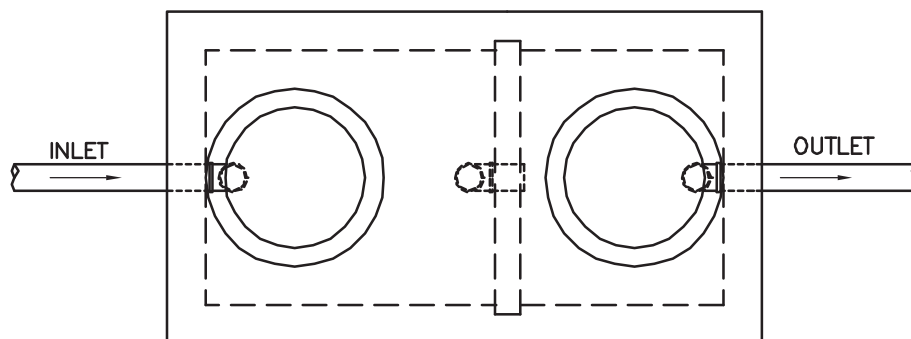
DATE: SEPTEMBER 2007

**TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS**

**CLEANOUT LID DETAIL
NO SCALE**

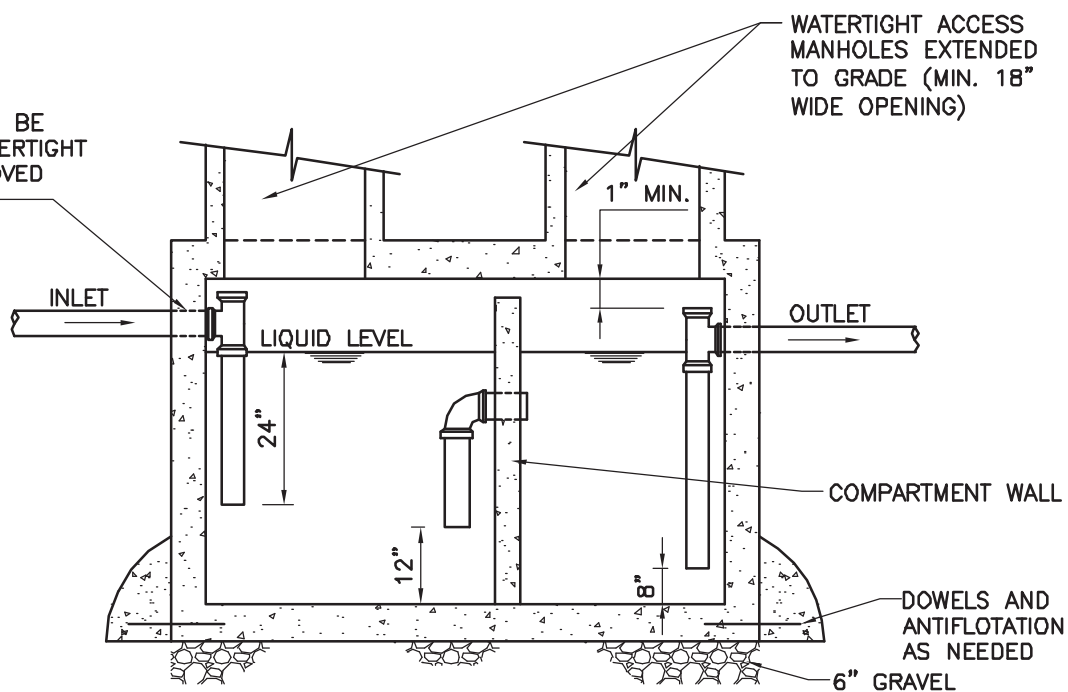
SECTION - 3

DRAWING D-2C-10



PLAN

PIPE CUTOUTS TO BE
SEALED WITH WATERTIGHT
GROUT OR APPROVED
RUBBER GASKET



NOTE:

1. EXCAVATION LIMITS SHALL
EXTEND AT LEAST TWO FEET
BEYOND TANK PERIMETER
2. IN PAVED AREA DESIGN FOR
HS-20 LOADS

SECTION

DATE: SEPTEMBER 2007

**TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS**

**GREASE TRAP DETAIL
NO SCALE**

SECTION - 3

DRAWING D-2C-11

STEPS IF OVER 2' DEEP
CENTER STEPS UNDER
FRAME AND COVER.

EXISTING
FORCE MAIN

WALL AREA BETWEEN EXISTING
FORCE MAIN AND DOGHOUSE
OPENINGS SHALL BE FILLED WITH
BRICK AND NON-SHRINK MORTAR

REDUCER IF
REQUIRED

5'-0"

CHECK
VALVE

45° BEND

CUT IN WYE WITH SLEEVE
OR S.S. TAPPING SLEEVE
AND VALVE IF APPROVED
BY TOWN

ECCENTRIC FULL FLOW BALL
VALVE OR GATE VALVE

6'-0"

PLAN

CEMENT MORTAR

PAVEMENT

HEAVY DUTY TRAFFIC TYPE
CAST IRON FRAME AND COVER.

PRECAST CONSTRUCTION.
BITUMINOUS COAT OUTSIDE.

REDUCER IF REQUIRED

8"(TYP.)

12"

EXISTING
FORCE MAIN

PIPE SUPPORTS
AS REQUIRED

REINFORCE WITH #4
@ 6" O.C.E.W.

6" GRAVEL BEDDING

COMPACTED SUBGRADE

NOTE:
DESIGN FOR HS-20 LOADING
AND ANTIFLOTATION

SECTION

DATE: SEPTEMBER 2007

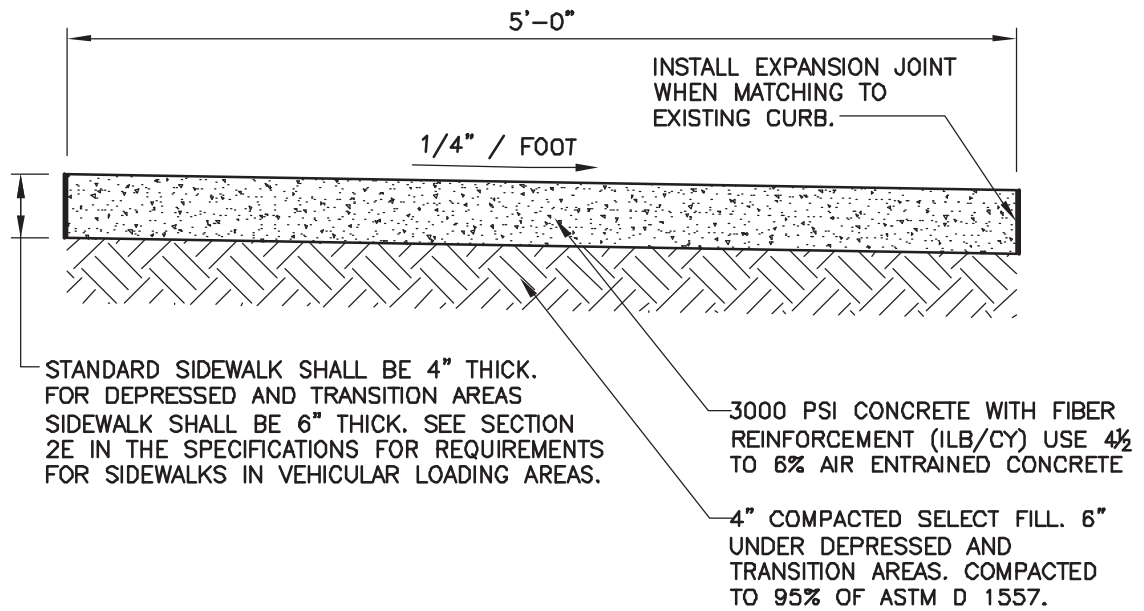
**TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS**

**FORCE MAIN CONNECTION DETAIL
NO SCALE**

SECTION - 3

DRAWING D-2C-12

P:\STANDARD\DETAILS\City Details\Bridgeville DE\D-2E-1.DWG May 02, 2008 - 9:39am, (neug)



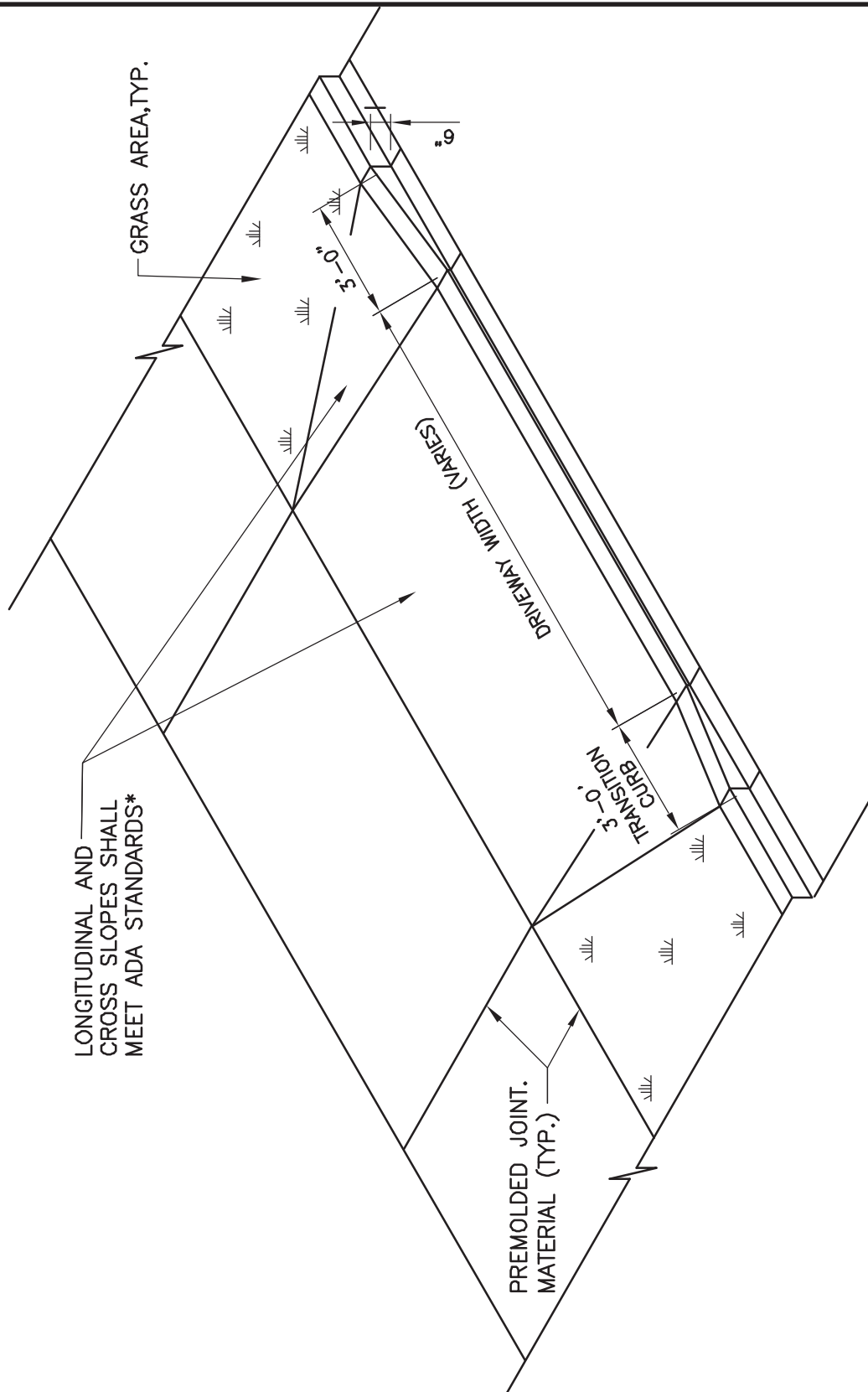
DATE: SEPTEMBER 2007

**TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS**

**SIDEWALK DETAIL
NO SCALE**

SECTION - 7

DRAWING D-2E-1



- NOTES:
1. REFER TO SIDEWALK DETAIL D-2E-1 AND CURB AND GUTTER DETAIL D-2E-4 FOR ADDITIONAL REQUIREMENTS.
 2. MAX LONGITUDINAL (RUNNING) SLOPE = 1:12
 3. MAX CROSS SLOPE = 2%
- * SEE 4.3.7 OF 28CFR PART 36

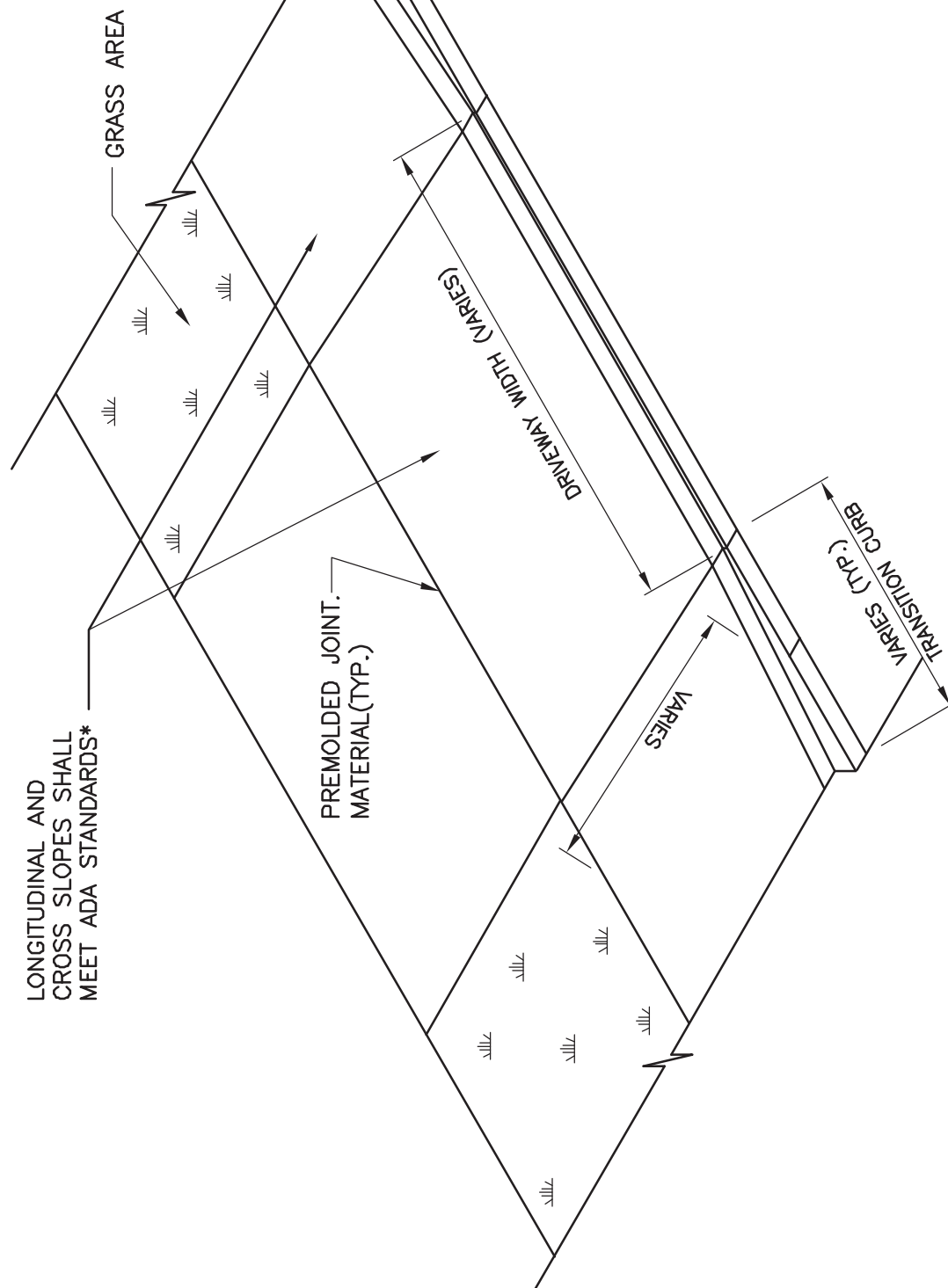
DATE: SEPTEMBER 2007

TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS

DRIVEWAY CURB CUT DETAIL
NO SCALE

SECTION - 3

DRAWING D-2E-3



- NOTES:
1. REFER TO SIDEWALK DETAIL D-2E-1 AND CURB AND GUTTER DETAIL D-2E-4 FOR ADDITIONAL REQUIREMENTS.
 2. MAX LONGITUDINAL (RAMP) SLOPE = 1:12
 3. MAX CROSS SLOPE = 2%
- * SEE 4.3.7 OF 28CFR PART 36

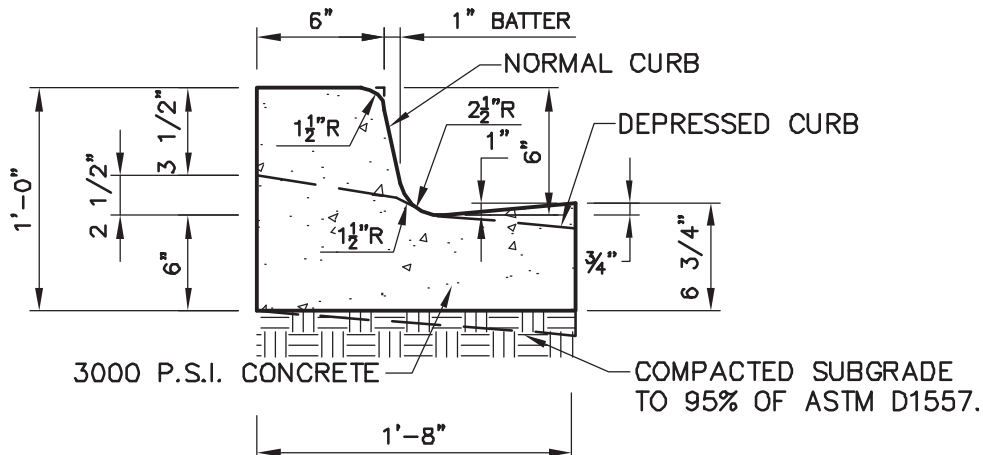
DATE: SEPTEMBER 2007

TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS

DRIVEWAY CURB CUT DETAIL
NO SCALE

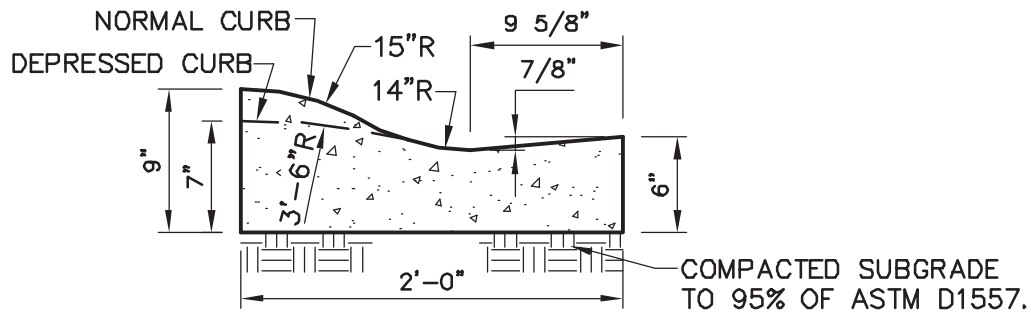
SECTION - 3

DRAWING D-2E-3.1



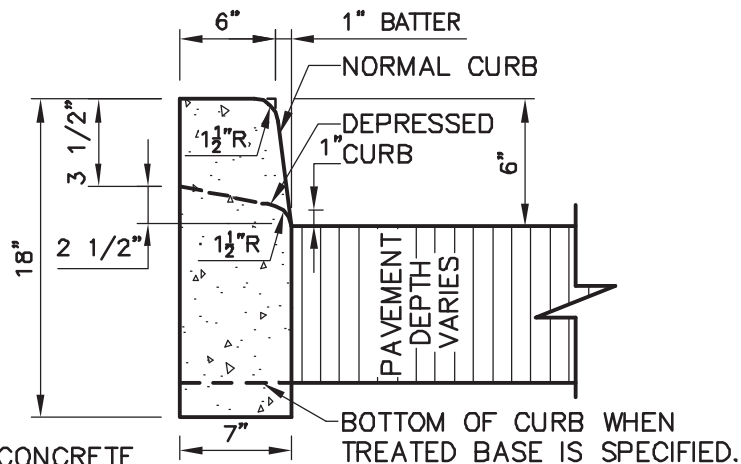
INTEGRAL P.C.C. CURB AND GUTTER

TYPE 3



INTEGRAL P.C.C. CURB AND GUTTER

TYPE 2



NOTES:

1. WHEN ADJACENT TO CONCRETE PAVEMENT, INSTALL APPROVED EXPANSION JOINT.
2. USE 4 1/2 TO 6% AIR ENTRAINED CONCRETE.

P.C.C. CURB

TYPE 2

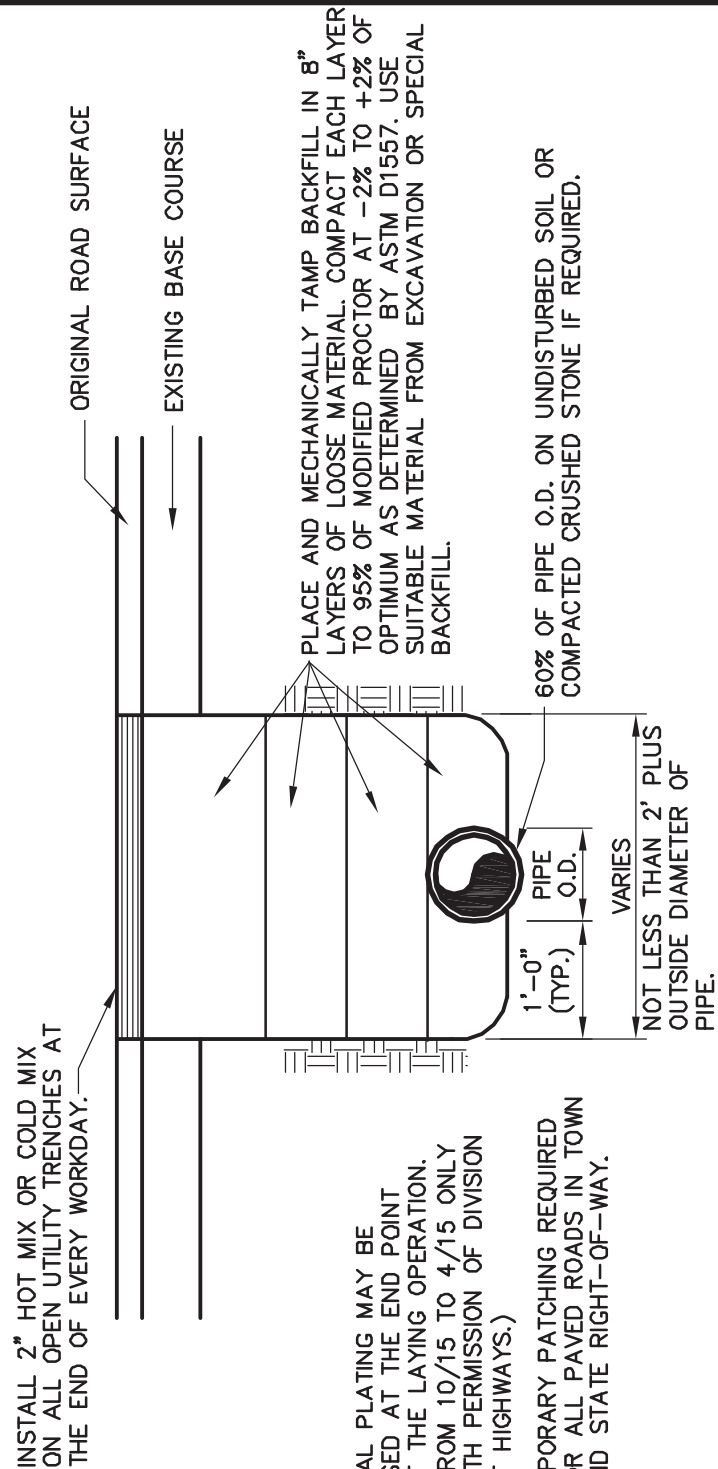
DATE: SEPTEMBER 2007

**TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS**

**CONCRETE CURB AND GUTTER DETAIL
NO SCALE**

SECTION - 3

DRAWING D-2E-4



NOTES:

1. METAL PLATING MAY BE USED AT THE END POINT OF THE LAYING OPERATION. (FROM 10/15 TO 4/15 ONLY WITH PERMISSION OF DIVISION OF HIGHWAYS.)
2. TEMPORARY PATCHING REQUIRED FOR ALL PAVED ROADS IN TOWN AND STATE RIGHT-OF-WAY.

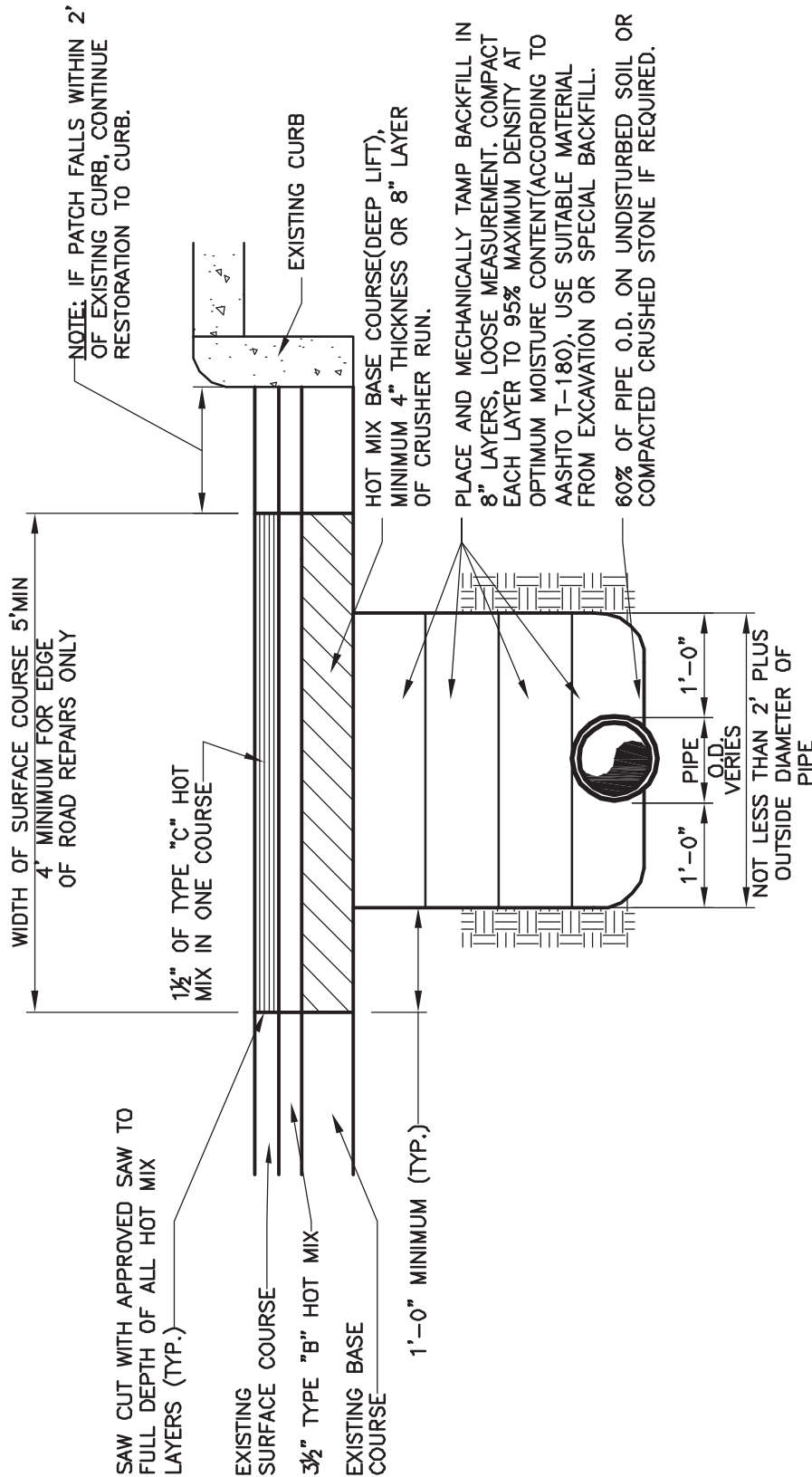
DATE: SEPTEMBER 2007

**TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS**

**TEMPORARY CROSS ROAD AND
LONGITUDINAL PATCH DETAIL
NO SCALE**

SECTION - 3

DRAWING D-2F-1



PERMANENT CROSS ROAD AND LONGITUDINAL PATCH (HOT-MIX OVER DEEP LIFT TYPE BASE COURSE)

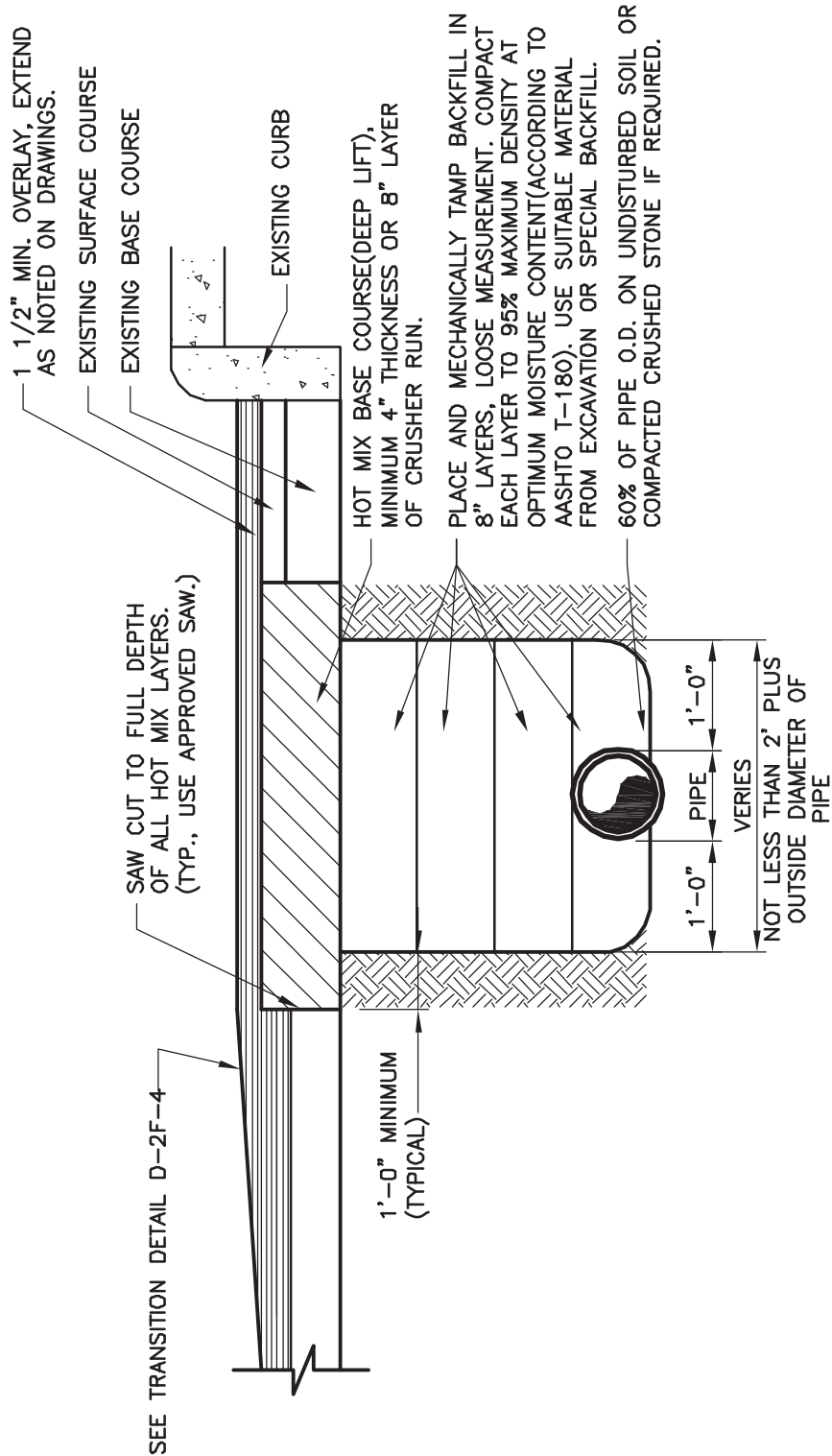
DATE: SEPTEMBER 2007

TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS

PAVEMENT RESTORATION DETAIL #2
FOR TOWN STREETS NO SCALE

SECTION - 3

DRAWING D-2F-2



OVERLAY DETAIL

(HOT-MIX OVER DEEP LIFT TYPE BASE COURSE)

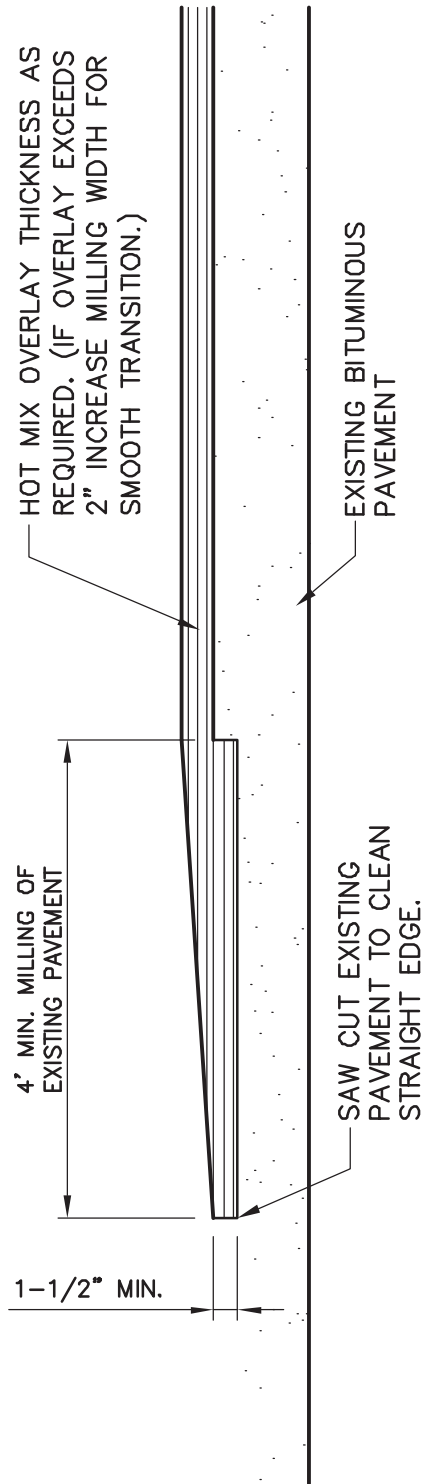
DATE: SEPTEMBER 2007

**TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS**

**PAVEMENT RESTORATION DETAIL #2
FOR TOWN STREETS
NO SCALE**

SECTION - 3

DRAWING D-2F-3



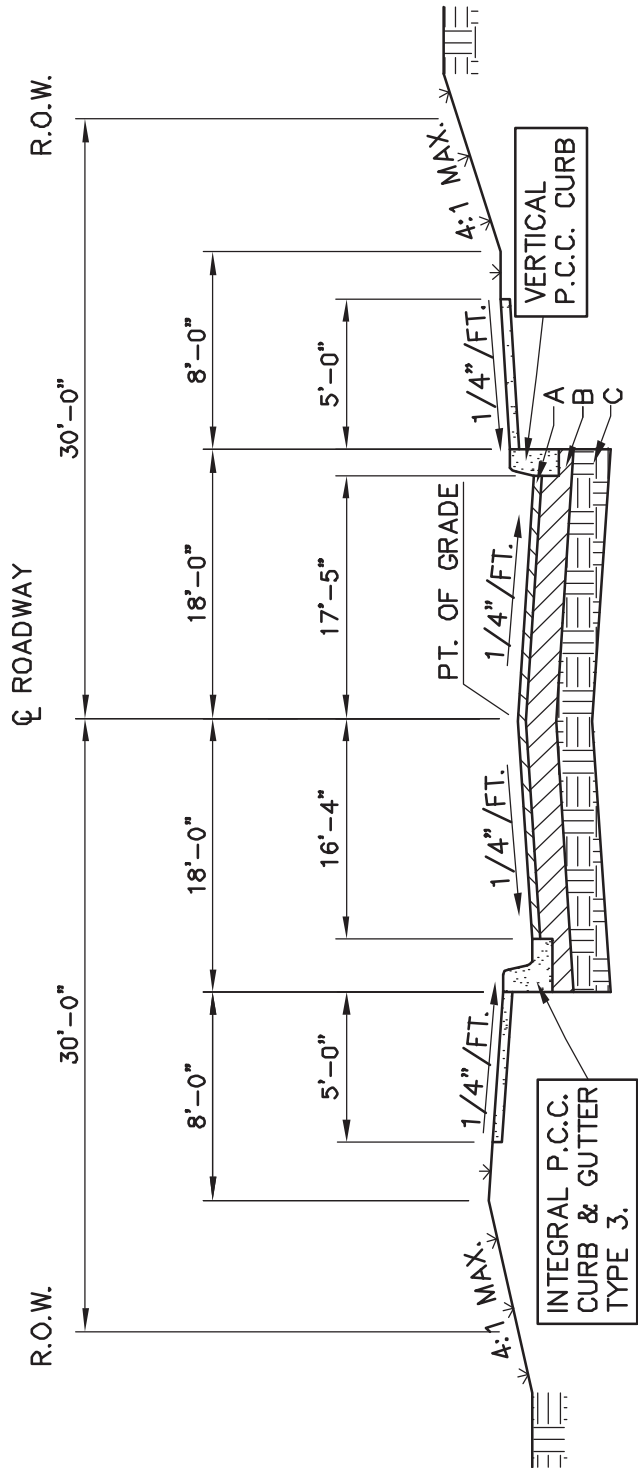
DATE: SEPTEMBER 2007

**TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS**

**TRANSITION DETAIL
NO SCALE**

SECTION - 3

DRAWING D-2F-4



- A - 2" COMPACTED TYPE C HOT MIX ASPHALT SURFACE COURSE.
- B - 4" COMPACTED TYPE B HOT MIX BASE COURSE.
- C - MINIMUM 6" THICKNESS GRADED AGGREGATE BASE COURSE. COMPACTED TO 95% OF ASTM D1557. MODIFIED PROCTOR METHOD AND 6" COMPACTED DEPTH.

NOTES:

1. ↳ ↳ ↳ 4" TOPSOIL SEED AND MULCH.
2. REFER TO SECTION 2E FOR CURB AND SIDEWALK DETAILS AND SPECIFICATIONS

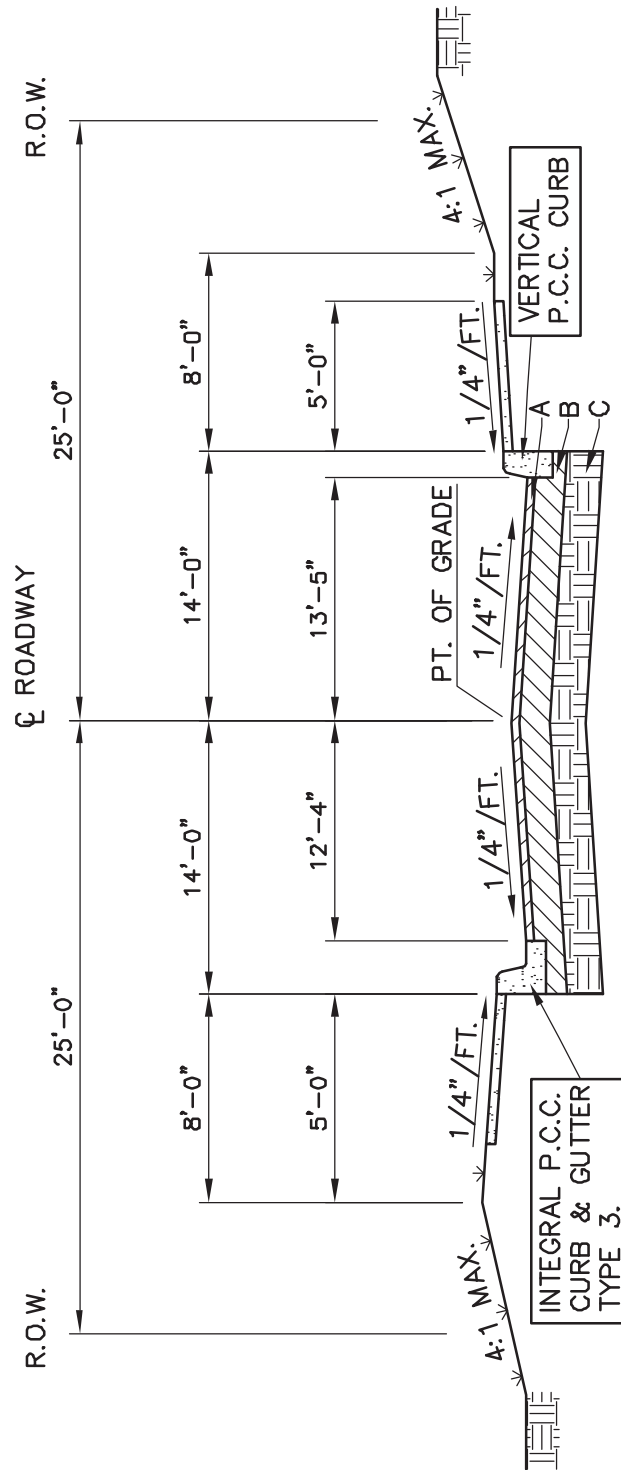
DATE: SEPTEMBER 2007

TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS

TYPICAL SECTION DETAIL COLLECTOR STREET
NO SCALE

SECTION - 3

DRAWING D-2F-5



- A - 1-1/2" COMPACTED TYPE C HOT MIX ASPHALT SURFACE COURSE.
- B - 3 1/2" COMPACTED TYPE B HOT MIX BASE COURSE
- C - MINIMUM 6" THICKNESS GRADED AGGREGATE BASE COURSE. COMPACTED TO 95% OF ASTM D1557. MODIFIED PROCTOR METHOD AND 6" COMPACTED DEPTH.

NOTES:

1. > > > 4" TOPSOIL SEED AND MULCH.
2. REFER TO SECTION 2E FOR CURB AND SIDEWALK DETAILS AND SPECIFICATIONS.

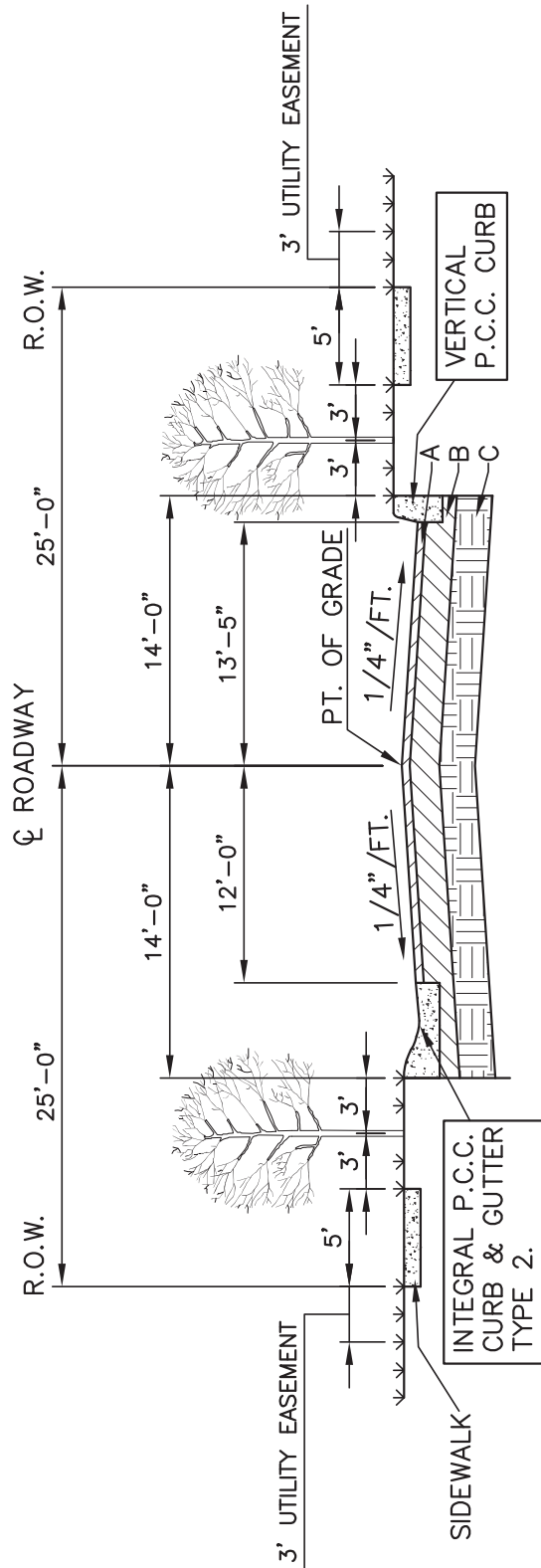
DATE: SEPTEMBER 2007

**TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS**

**TYPICAL SECTION DETAIL MINOR STREET
NO SCALE**

SECTION - 3

DRAWING D-2F-6



NOTES:

1. ↳ ↳ ↳ 4" TOPSOIL SEED AND MULCH.
2. REFER TO SECTION 2E FOR CURB AND SIDEWALK DETAILS AND SPECIFICATIONS.
3. THIS STREET SECTION MAY BE USED UPON APPROVAL BY THE TOWN ON A CASE BY CASE BASIS WHERE DESIGN INNOVATION IS ALLOWED.

- A - 1-1/2" COMPACTED TYPE C HOT MIX ASPHALT SURFACE COURSE.
- B - 3 1/2" COMPACTED TYPE B HOT MIX BASE COURSE
- C - MINIMUM 6" THICKNESS GRADED AGGREGATE BASE COURSE. COMPACTED TO 95% OF ASTM D1557. MODIFIED PROCTOR METHOD AND 6" COMPACTED DEPTH.

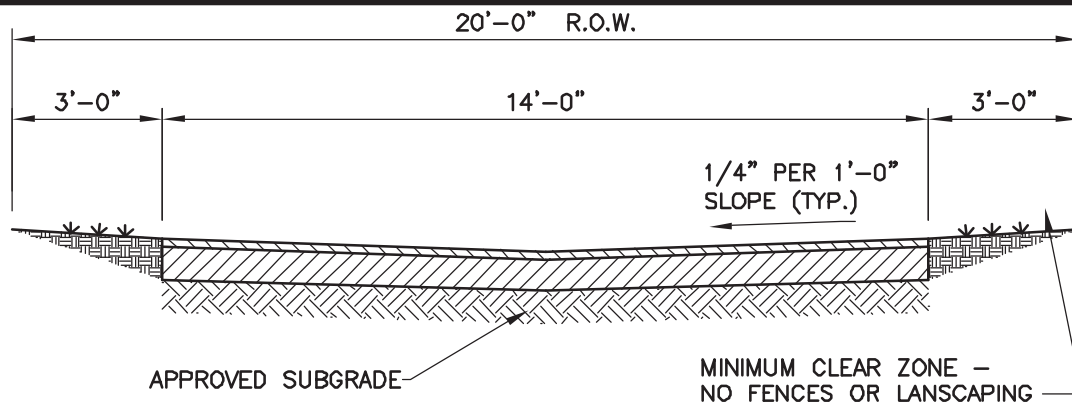
DATE: SEPTEMBER 2007

**TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS**

**TYPICAL SECTION DETAIL RPC STREET
NO SCALE**

SECTION - 3

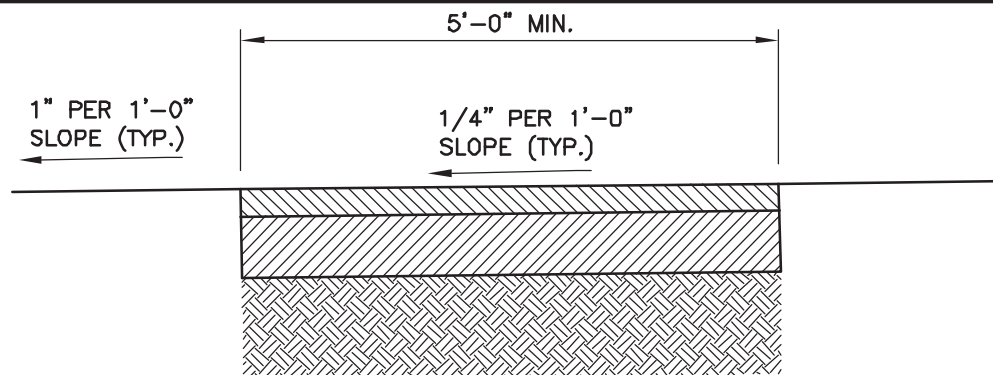
DRAWING D-2F-6.1



ALLEY

NOTES:

1. PROVIDE 4" MIN. TOPSOIL, FERTILIZE, SEED & MULCH ALL DISTURBED AREAS ON BOTH SIDES.
2. PAVING MINIMUM THICKNESSES:
 SURFACE COURSE 1-1/2" TYPE C HOT MIX
 BASE COURSE 3-1/2" TYPE B HOT MIX
 6" GRADED AGGREGATE BASE COURSE COMPACTED TO 95% OF ASTM D1557 MODIFIED PROCTOR.
3. SUBGRADE:
 EXISTING OR IMPROVED SUBGRADE MATERIAL SHALL BE APPROVED PRIOR TO PLACING SUBBASE. SUBGRADE SHALL HAVE A MINIMUM CBR OF 10.
4. LONGITUDINAL SLOPE MINIMUM 0.5%.



BIKE TRAIL

NOTES:

1. 2" OF APPROVED HMA MIX DESIGN OVER 4" OF A GRADED AGGREGATE BASE COMPACTED TO 95% ASTM D1557 MODIFIED PROCTOR, OVER AN APPROVED SUBGRADE.
2. GRADE FOR POSITIVE DRAINAGE.

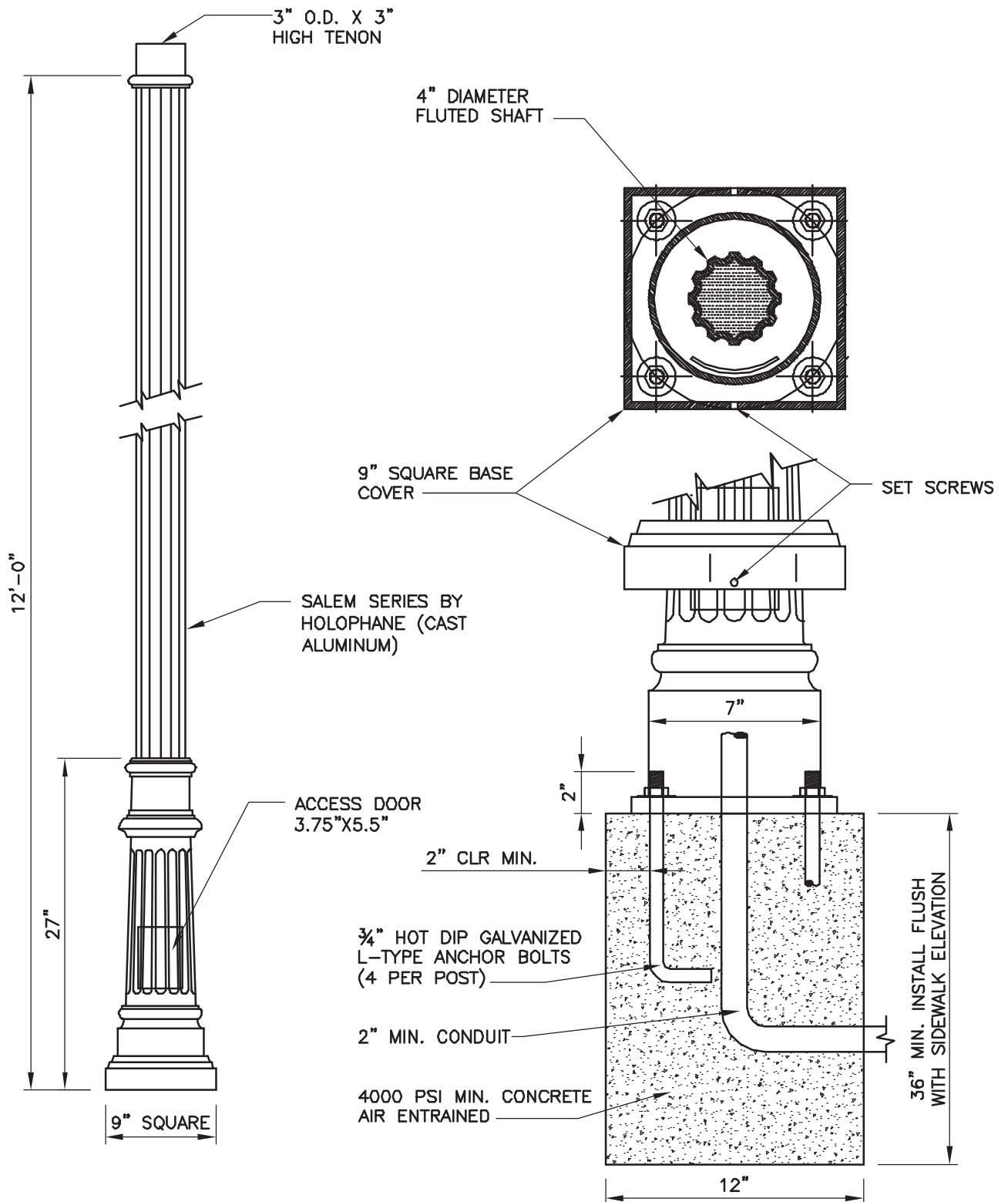
DATE: SEPTEMBER 2007

**TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS**

**RESIDENTIAL ALLEY &
ASPHALT BIKE TRAIL
NO SCALE**

SECTION - 3

DRAWING D-2F-7



DATE: SEPTEMBER 2007

**TOWN OF BRIDGEVILLE
CONSTRUCTION STANDARDS**

**LAMP POST
NO SCALE**

SECTION 3

DRAWING D-2F-8.1

4.7 Curb Ramps

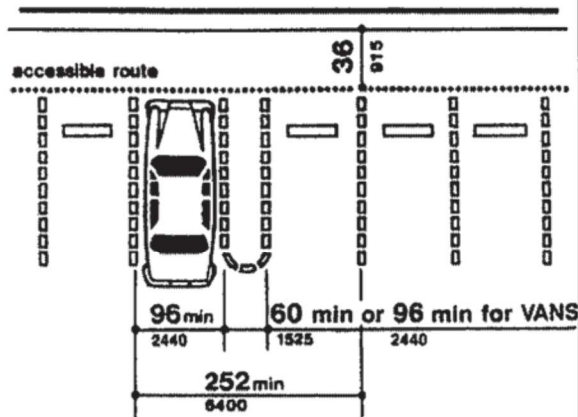


Fig. 9
Dimensions of Parking Spaces

slopes not exceeding 1:50 (2%) in all directions.

4.7 Curb Ramps.

4.7.1 Location. Curb ramps complying with 4.7 shall be provided wherever an accessible route crosses a curb.

4.7.2 Slope. Slopes of curb ramps shall comply with 4.8.2. The slope shall be measured as shown in Fig. 11. *Transitions from ramps to walks, gutters, or streets shall be flush and free of abrupt changes. Maximum slopes of adjoining gutters, road surface immediately adjacent to the curb ramp, or accessible route shall not exceed 1:20.*

4.7.3 Width. The minimum width of a curb ramp shall be 36 in (915 mm), exclusive of flared sides.

4.7.4 Surface. Surfaces of curb ramps shall comply with 4.5.

4.7.5 Sides of Curb Ramps. If a curb ramp is located where pedestrians must walk across the ramp, or where it is not protected by handrails or guardrails, it shall have flared sides; the maximum slope of the flare shall be 1:10 (see Fig. 12(a)). Curb ramps with returned

curbs may be used where pedestrians would not normally walk across the ramp (see Fig. 12(b)).

4.7.6 Built-up Curb Ramps. Built-up curb ramps shall be located so that they do not project into vehicular traffic lanes (see Fig. 13).

4.7.7 Detectable Warnings. A curb ramp shall have a detectable warning complying with 4.29.2. *The detectable warning shall extend the full width and depth of the curb ramp.*

4.7.8 Obstructions. Curb ramps shall be located or protected to prevent their obstruction by parked vehicles.

4.7.9 Location at Marked Crossings. Curb ramps at marked crossings shall be wholly contained within the markings, excluding any flared sides (see Fig. 15).

4.7.10 Diagonal Curb Ramps. If diagonal (or corner type) curb ramps have returned curbs or other well-defined edges, such edges shall be parallel to the direction of pedestrian flow. The bottom of diagonal curb ramps shall have 48 in (1220 mm) minimum clear space as shown in Fig. 15(c) and (d). If diagonal curb ramps are provided at marked crossings, the 48 in (1220 mm) clear space shall be within the markings (see Fig. 15(c) and (d)). If diagonal curb ramps have flared sides, they shall also have at least a 24 in (610 mm) long segment of straight curb located on each side of the curb ramp and within the marked crossing (see Fig. 15(c)).

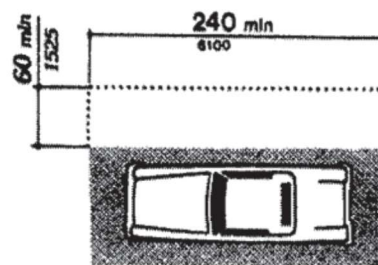


Fig. 10
Access Aisle at Passenger Loading Zones

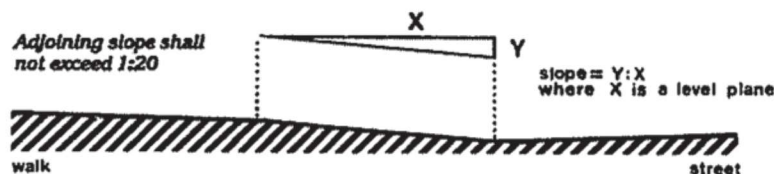


Fig. 11
Measurement of Curb Ramp Slopes

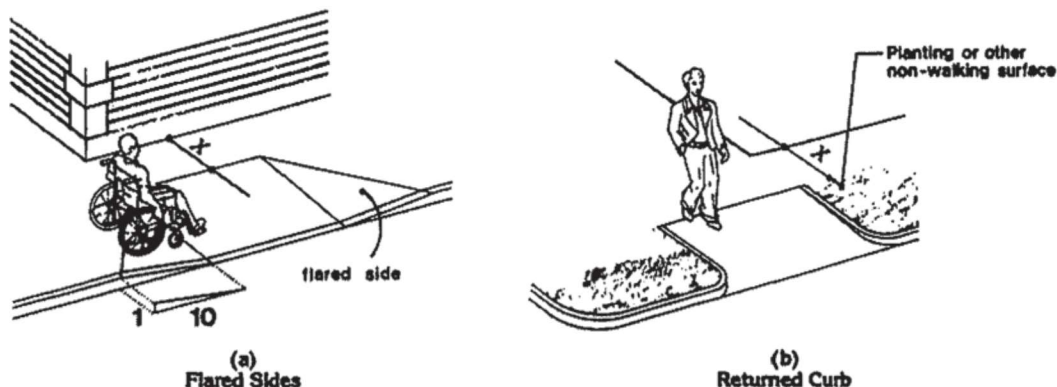


Fig. 12
Sides of Curb Ramps

4.7.11 Islands. Any raised islands in crossings shall be cut through level with the street or have curb ramps at both sides and a level area at least 48 in (1220 mm) long between the curb ramps in the part of the island intersected by the crossings (see Fig. 15(a) and (b)).

4.8 Ramps.

4.8.1* General. Any part of an accessible route with a slope greater than 1:20 shall be considered a ramp and shall comply with 4.8.

4.8.2* Slope and Rise. The least possible slope shall be used for any ramp. The maximum slope of a ramp in new construction shall be 1:12. The maximum rise for any run shall be 30 in (760 mm) (see Fig. 16). Curb ramps and



Fig. 13
Built-Up Curb Ramp

ramps to be constructed on existing sites or in existing buildings or facilities may have slopes and rises as *allowed in 4.1.6(3)(a)* if space limitations prohibit the use of a 1:12 slope or less.

4.8 Ramps

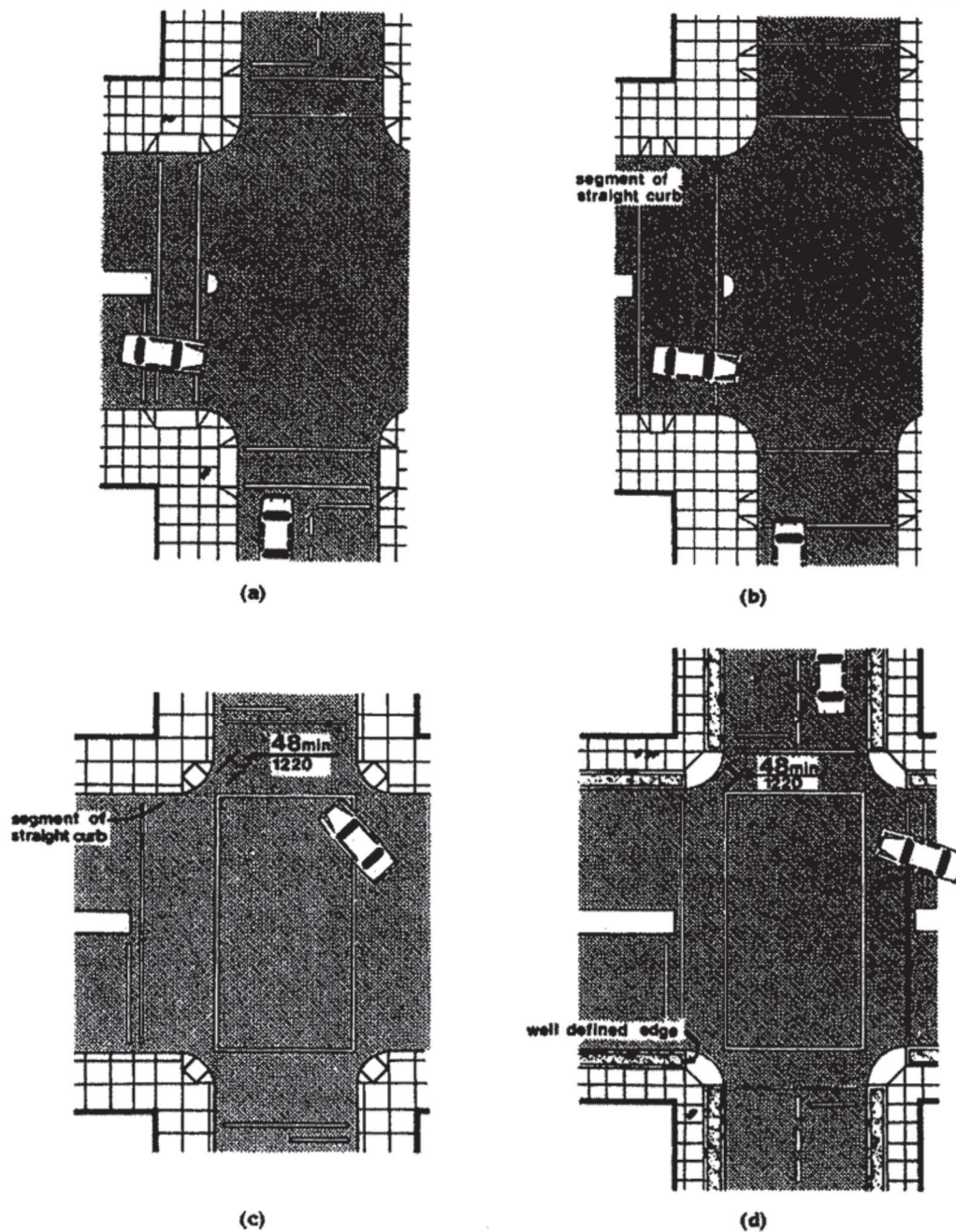


Fig. 15
Curb Ramps at Marked Crossings

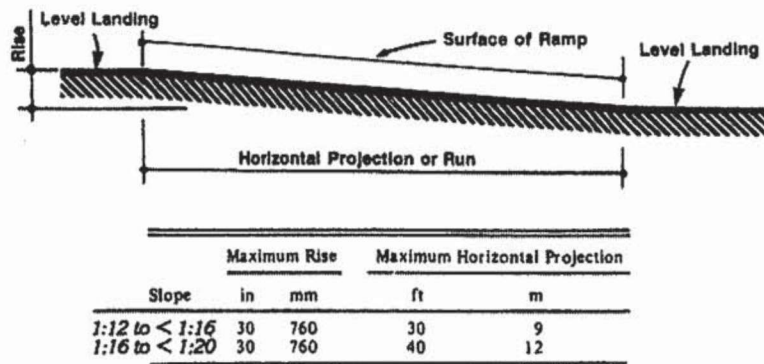


Fig. 16
Components of a Single Ramp Run and Sample Ramp Dimensions

4.8.3 Clear Width. The minimum clear width of a ramp shall be 36 in (915 mm).

4.8.4* Landings. Ramps shall have level landings at bottom and top of each ramp and each ramp run. Landings shall have the following features:

- (1) The landing shall be at least as wide as the ramp run leading to it.
- (2) The landing length shall be a minimum of 60 in (1525 mm) clear.
- (3) If ramps change direction at landings, the minimum landing size shall be 60 in by 60 in (1525 mm by 1525 mm).
- (4) If a doorway is located at a landing, then the area in front of the doorway shall comply with 4.13.6.

4.8.5* Handrails. If a ramp run has a rise greater than 6 in (150 mm) or a horizontal projection greater than 72 in (1830 mm), then it shall have handrails on both sides. Handrails are not required on curb ramps or *adjacent to seating in assembly areas*. Handrails shall comply with 4.26 and shall have the following features:

(1) Handrails shall be provided along both sides of ramp segments. The inside handrail on switchback or dogleg ramps shall always be continuous.

(2) If handrails are not continuous, they shall extend at least 12 in (305 mm) beyond the top and bottom of the ramp segment and shall be parallel with the floor or ground surface (see Fig. 17).

(3) The clear space between the handrail and the wall shall be 1 - 1/2 in (38 mm).

(4) Gripping surfaces shall be continuous.

(5) *Top of handrail gripping surfaces shall be mounted between 34 in and 38 in (865 mm and 965 mm) above ramp surfaces.*

(6) *Ends of handrails shall be either rounded or returned smoothly to floor, wall, or post.*

(7) *Handrails shall not rotate within their fittings.*

4.8.6 Cross Slope and Surfaces. The cross slope of ramp surfaces shall be no greater than 1:50. Ramp surfaces shall comply with 4.5.

4.9 Stairs

4.8.7 Edge Protection. Ramps and landings with drop-offs shall have curbs, walls, railings, or projecting surfaces that prevent people from slipping off the ramp. Curbs shall be a minimum of 2 in (50 mm) high (see Fig. 17).

4.8.8 Outdoor Conditions. Outdoor ramps and their approaches shall be designed so that water will not accumulate on walking surfaces.

4.9 Stairs.

4.9.1* Minimum Number. *Stairs required to be accessible by 4.1 shall comply with 4.9.*

4.9.2 Treads and Risers. On any given flight of stairs, all steps shall have uniform riser heights and uniform tread widths. Stair treads shall be no less than 11 in (280 mm) wide, measured from riser to riser (see Fig. 18(a)). *Open risers are not permitted.*

4.9.3 Nosings. The undersides of nosings shall not be abrupt. The radius of curvature at the leading edge of the tread shall be no greater than 1/2 in (13 mm). Risers shall be sloped or the underside of the nosing shall have an angle not less than 60 degrees from the horizontal. Nosings shall project no more than 1-1/2 in (38 mm) (see Fig. 18).

4.9.4 Handrails. Stairways shall have handrails at both sides of all stairs. Handrails shall comply with 4.26 and shall have the following features:

(1) Handrails shall be continuous along both sides of stairs. The inside handrail on switchback or dogleg stairs shall always be continuous (see Fig. 19(a) and (b)).

(2) If handrails are not continuous, they shall extend at least 12 in (305 mm) beyond the top riser and at least 12 in (305 mm) plus the width of one tread beyond the bottom riser. At the top, the extension shall be parallel with the floor or ground surface. At the bottom, the handrail shall continue to slope for a distance of the width of one tread from the bottom riser; the remainder of the extension shall be horizontal (see Fig. 19(c) and (d)). Handrail extensions shall comply with 4.4.

(3) The clear space between handrails and wall shall be 1-1/2 in (38 mm).

(4) Gripping surfaces shall be uninterrupted by newel posts, other construction elements, or obstructions.

(5) *Top of handrail gripping surface shall be mounted between 34 in and 38 in (865 mm and 965 mm) above stair nosings.*

(6) *Ends of handrails shall be either rounded or returned smoothly to floor, wall or post.*

(7) *Handrails shall not rotate within their fittings.*

4.9.5 Detectable Warnings at Stairs. *(Reserved).*

4.9.6 Outdoor Conditions. Outdoor stairs and their approaches shall be designed so that water will not accumulate on walking surfaces.

4.10 Elevators.

4.10.1 General. Accessible elevators shall be on an accessible route and shall comply with 4.10 and with the ASME A17.1-1990, Safety Code for Elevators and Escalators. *Freight elevators shall not be considered as meeting the requirements of this section unless the only elevators provided are used as combination passenger and freight elevators for the public and employees.*

4.10.2 Automatic Operation. Elevator operation shall be automatic. Each car shall be equipped with a self-leveling feature that will automatically bring the car to floor landings within a tolerance of 1/2 in (13 mm) under rated loading to zero loading conditions. This self-leveling feature shall be automatic and independent of the operating device and shall correct the overtravel or undertravel.

4.10.3 Hall Call Buttons. Call buttons in elevator lobbies and halls shall be centered at 42 in (1065 mm) above the floor. Such call buttons shall have visual signals to indicate when each call is registered and when each call is answered. Call buttons shall be a minimum of 3/4 in (19 mm) in the smallest dimension. The button designating the up direction shall be on top. (See Fig. 20.) *Buttons shall be raised or flush. Objects mounted beneath hall call buttons shall not project into the elevator lobby more than 4 in (100 mm).*