#### **Appendices**

Appendix A - Planning Review Checklist

Appendix B – Figures

Figure 1 – Typical Minor Street Section

Figure 2 - Plain Cement Concrete Curb

Figure 3 – Plain Cement Concrete Curb Transition

Figure 4 - Concrete Walk Detail

Figure 5 - Wheelchair Ramp - Single Curb Cut

Figure 6 - Wheelchair Ramp - Double Curb Cut

Figure 7 - Driveway Paving Details

Figure 8 – Private Road Paving Details

Figure 9 – Typical Driveway W/ Trench Drain & Dry Sump Pump Detail

Figure 10 – Standard Bedding For Stormwater Piping

Figure 11 – Concrete Endwall

Figure 12 - Type "C" Inlet

Figure 13 – Type "M" Inlet

Figure 14 – Pavement Treatment At Inlet Location

Figure 15 – Slant Curb Transition To Type "C" Inlet

Figure 16 – Precast Concrete Manhole

Figure 17 – Stop Sign Detail

Figure 18 – Street Name Sign Detail

Figure 19 – No Parking Symbol Sign Detail

Figure 20 – Deciduous Shade & Flowering Tree Detail

Figure 21 - Cul-De-Sac Without Island

Figure 22 – Typical Bituminous Concrete Wedge Curb

Figure 23 – Pipe Underdrain/Pavement Base Drain

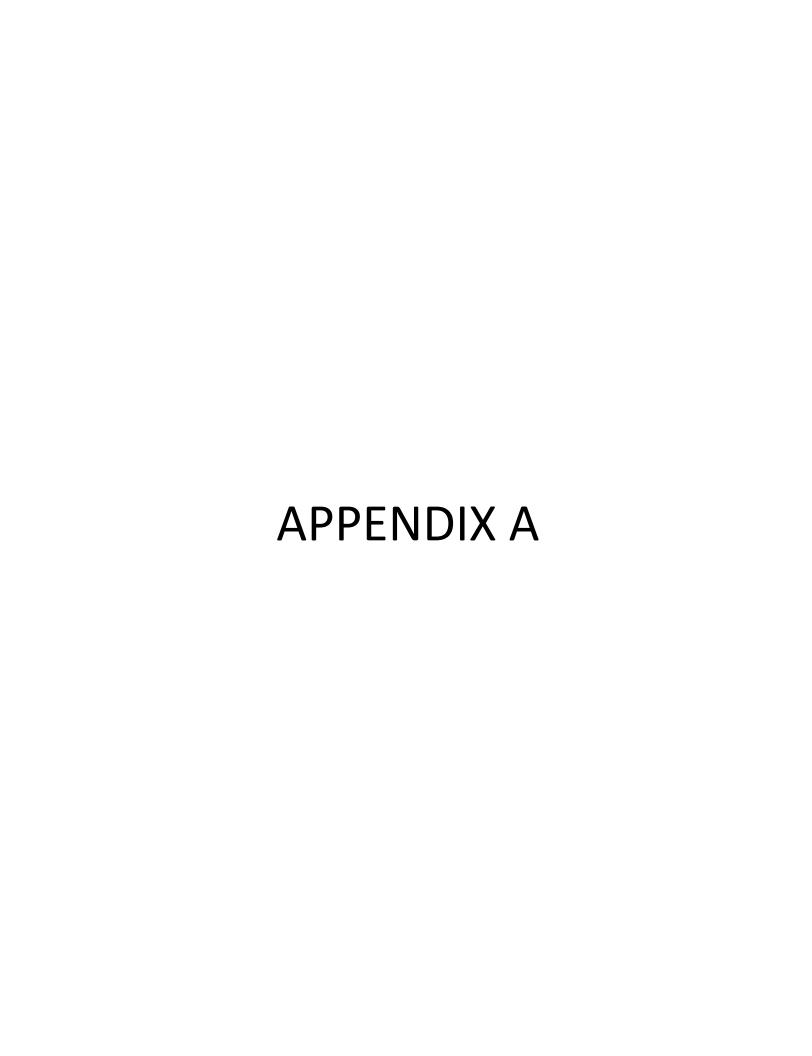
Figure 24 - Superpave HMA Trench Repair

Figure 25 – Type M Inlet (Frame & Bicycle Safe Grate)

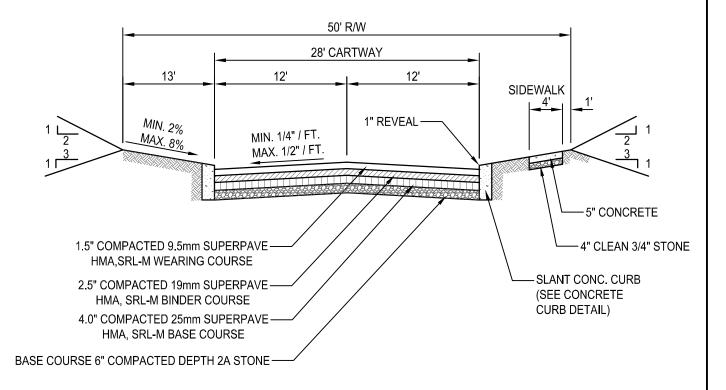
Figure 26 – Parking Configurations

Figure 27 – Typical Signature Block

Appendix C - Recommended Tree and Shrub List





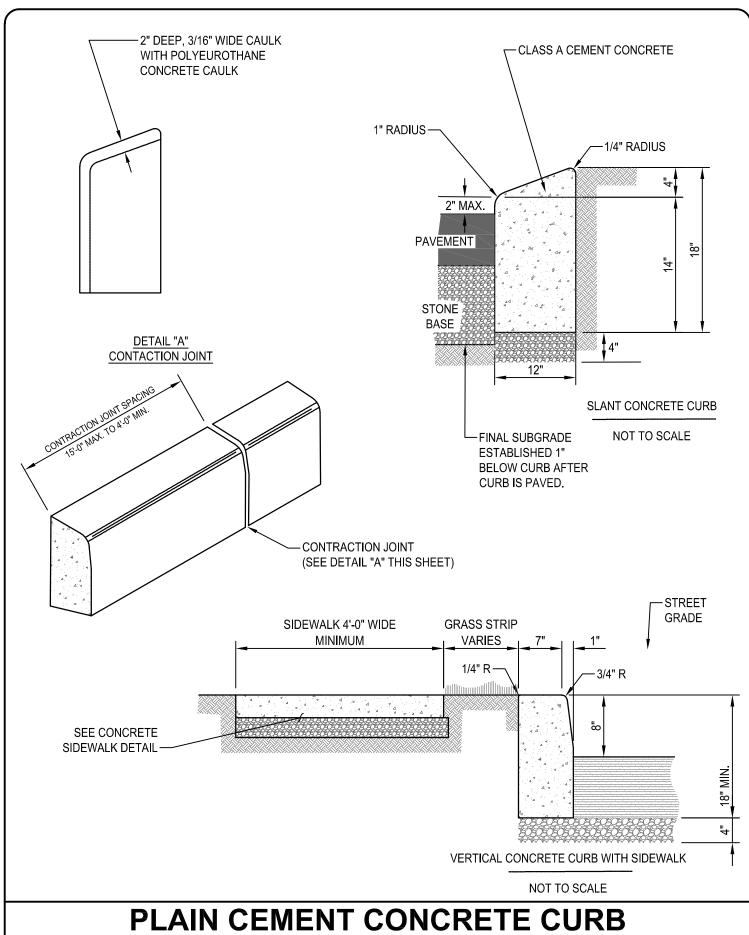


#### NOTE:

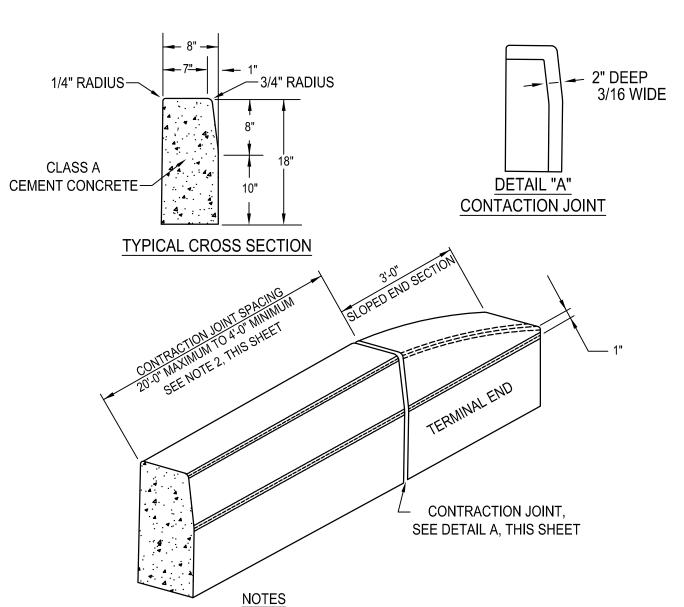
- COLLECTOR STREETS REQUIRE A MINIMUM 60' R.O.W. AND 36' CARTWAY WIDTH
- ARTERIAL STREETS REQUIRE A MINIMUM 80' R.O.W. AND VARIABLE CARTWAY WIDTH AS DETERMINED BY THE TOWNSHIP BASED ON LOCAL CONDITIONS
- BASED ON SITE CONDITIONS, THE TOWNSHIP MAY REQUIRE INSTALLATION OF A SUBDRAINAGE SYSTEM.

## TYPICAL MINOR STREET SECTION







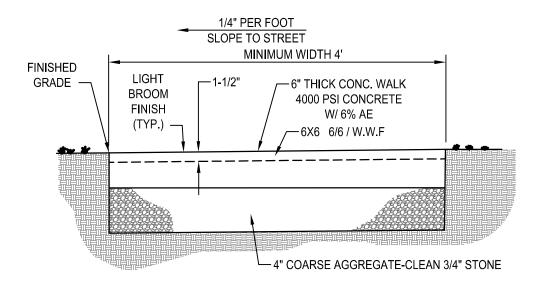


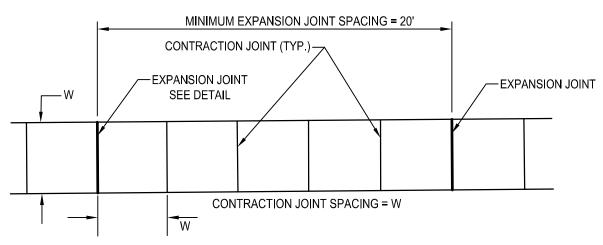
- 1. MATERIALS AND CONSTRUCTION SHALL MEET THE REQUIREMENTS OF PUBLICATION 408, SECTION 630 FOR PLAIN CEMENT CONCRETE CURB.
- 2. SPACE CONTRACTION JOINTS IN UNIFORM LENGTHS OR SECTIONS. SEE DRAWING NO. 2.
- 3. PLACE 3/4-INCH PREMOLDED EXPANSION JOINT FILLER MATERIAL AT STRUCTURES AND AT THE END OF THE WORK DAY. CUT MATERIAL TO CONFORM TO CROSS SECTIONAL AREA OF CURB.

TERMINAL END SECTION NOT TO SCALE

## PLAIN CEMENT CONCRETE CURB TRANSITION







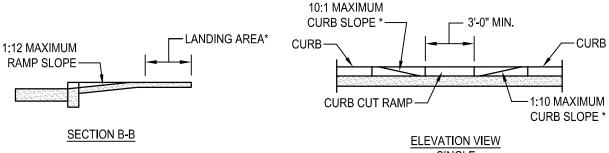
#### NOTES:

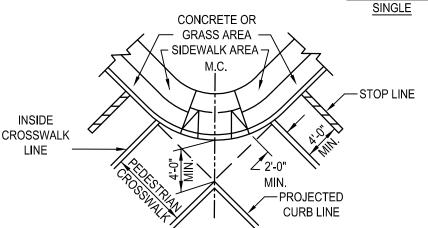
- 1. JOINT SPACING TO MATCH SIDEWALK (W)
- 2. SIDEWALK WIDTH (W) TO BE DESIGNATED ON DRAWINGS. (MIN. 4')
- 3. INSTALL EXPANSION MATERIAL AROUND ALL STRUCTURES EXISTING AND PROPOSED AND AS DIRECTED BY THE TOWNSHIP
- 4. UTILIZE THE ABOVE JOINT PATTERN UNLESS OTHERWISE DETAILED ON THE DRAWINGS OR DIRECTED BY THE TOWNSHIP

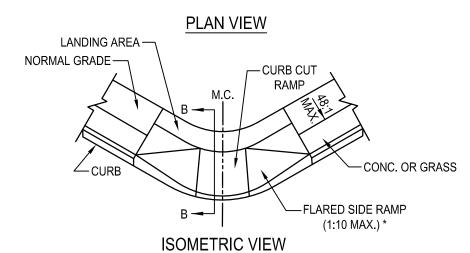
### CONCRETE SIDEWALK TYPICAL JOINT SPACING

## **CONCRETE WALK DETAIL**









## SINGLE CURB CUT RAMP NO SCALE

\* IF LANDING AREA IS LESS THAN 48", THEN THE SLOPE OF THE FLARED SIDE SHALL NOT EXCEED 1:12

NOTE: TRANSITIONS FROM RAMPS TO WALKS, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES. MAXIMUM

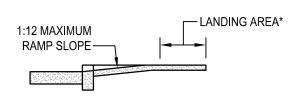
SLOPES OF ADJOINING GUTTERS, ROAD SURFACE

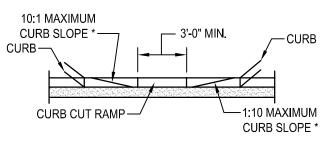
IMMEDIATELY ADJACENT TO THE CURB CUT RAMP SHALL NOT

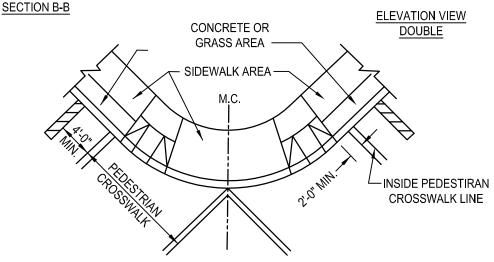
EXCEED 1:20.

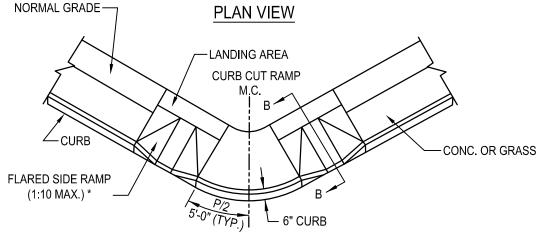
## WHEELCHAIR RAMP AT CURB











## **ISOMETRIC VIEW**

#### DOUBLE CURB CUT RAMP NO SCALE

\* IF LANDING AREA IS LESS THAN 48", THEN THE SLOPE OF THE FLARED SIDE SHALL NOT EXCEED 1:12

NOTE: TRANSITIONS FROM RAMPS TO WALKS, GUTTERS, OR STREETS

SHALL BE FLUSH AND FREE OF ABRUPT CHANGES. MAXIMUM

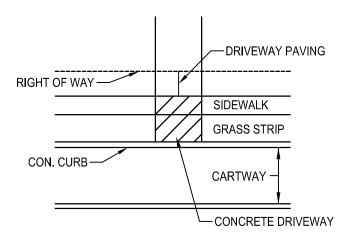
SLOPES OF ADJOINING GUTTERS, ROAD SURFACE

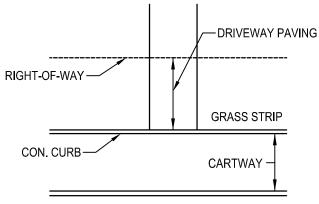
IMMEDIATELY ADJACENT TO THE CURB CUT RAMP SHALL NOT

**EXCEED 1:20.** 

## WHEELCHAIR RAMP AT CURB



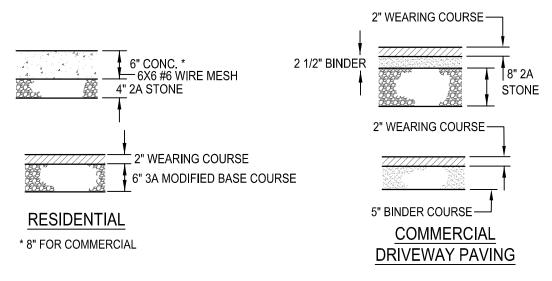




DRIVEWAY PAVING
WITH CONCRETE
SIDEWALK

DRIVEWAY PAVING NO SIDEWALK

**PLAN** 

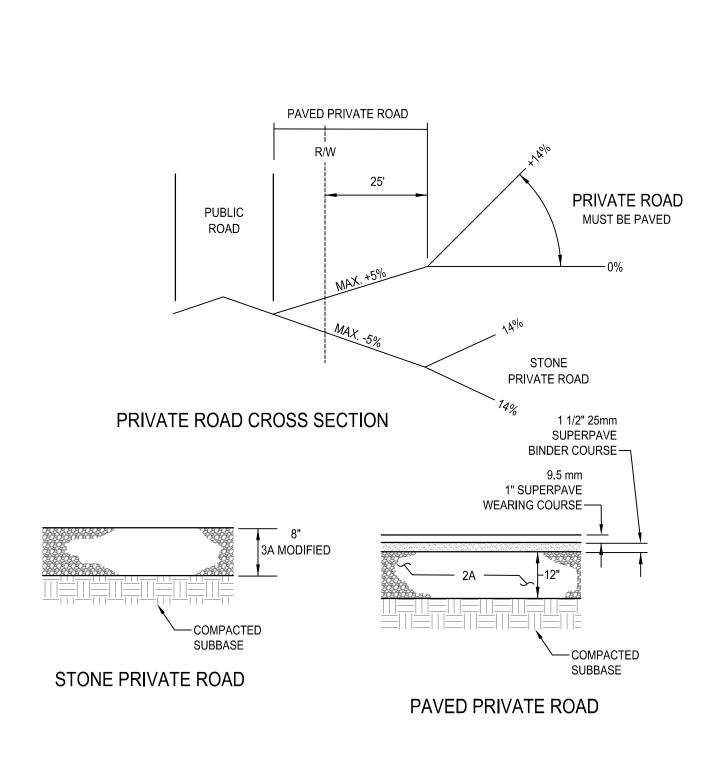


#### TYPICAL SECTION

NOTE: ALL DRIVEWAYS SHALL HAVE A BITUMINOUS OR CONCRETE SURFACE WITHIN ASPHALT PAVED STREET RIGHT-OF-WAY

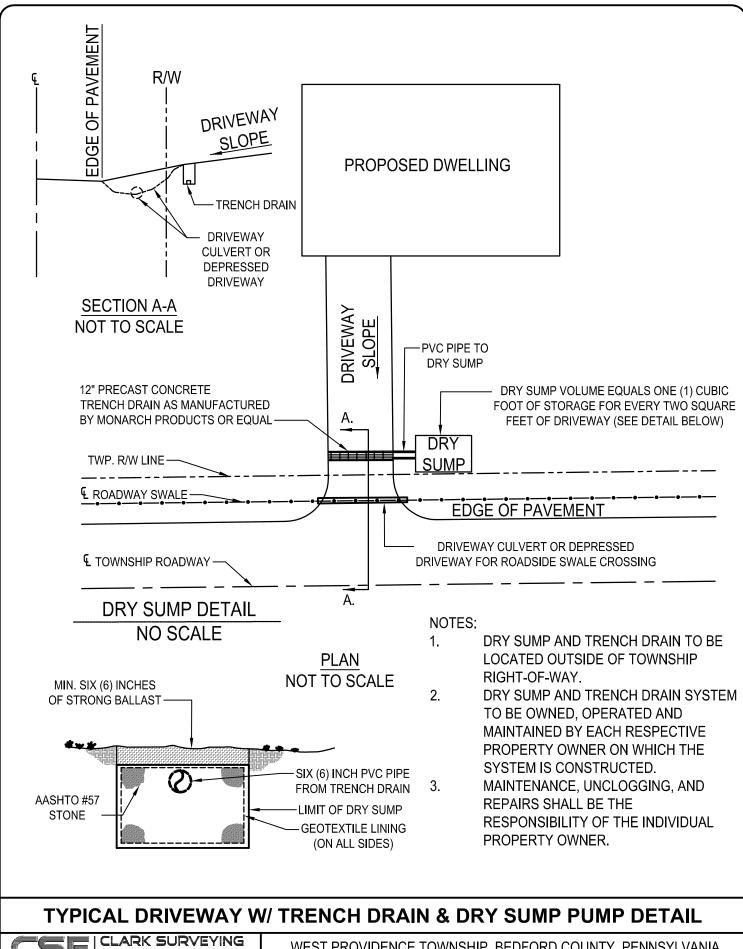
## DRIVEWAY PAVING DETAILS



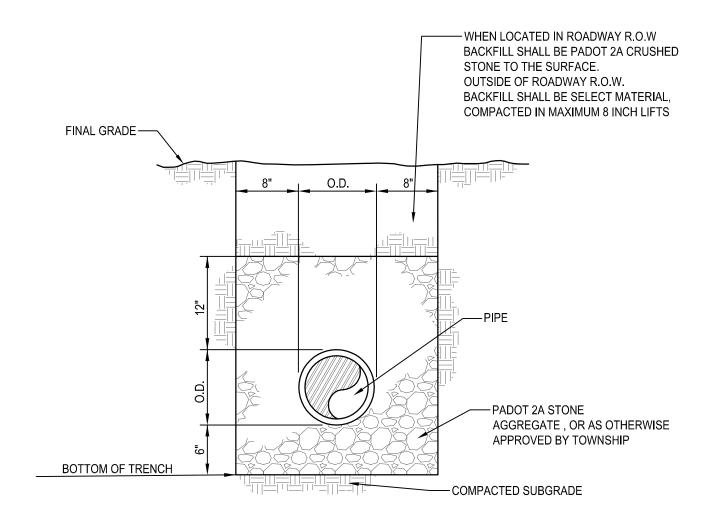


## PRIVATE ROAD PAVING DETAILS





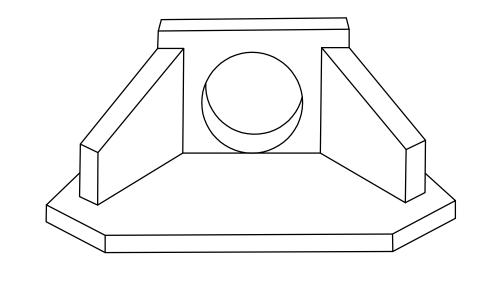


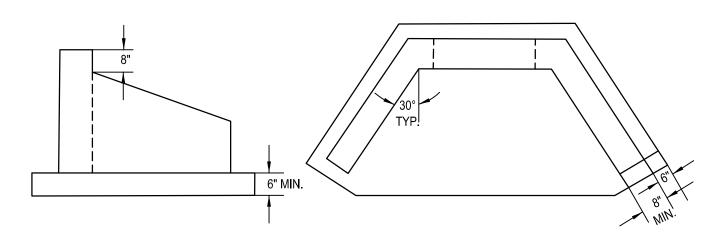


- 1. ALL PIPES SHALL BE BEDDED AS SHOWN ABOVE USING PADOT 2A STONE WITH THE EXCEPTION OF PVC PIPE, AND CONCRETE PIPE
- BEDDING MATERIALS FOR ALL DIAMETERS OF PVC PIPE SHALL BE No. 1B STONE.
- 3. BEDDING MATERIALS FOR ALL DIAMETERS OF CONCRETE PIPE SHALL BE AASHTO NO. 8 STONE

## STANDARD BEDDING FOR STORMWATER PIPING







SIDE VIEW

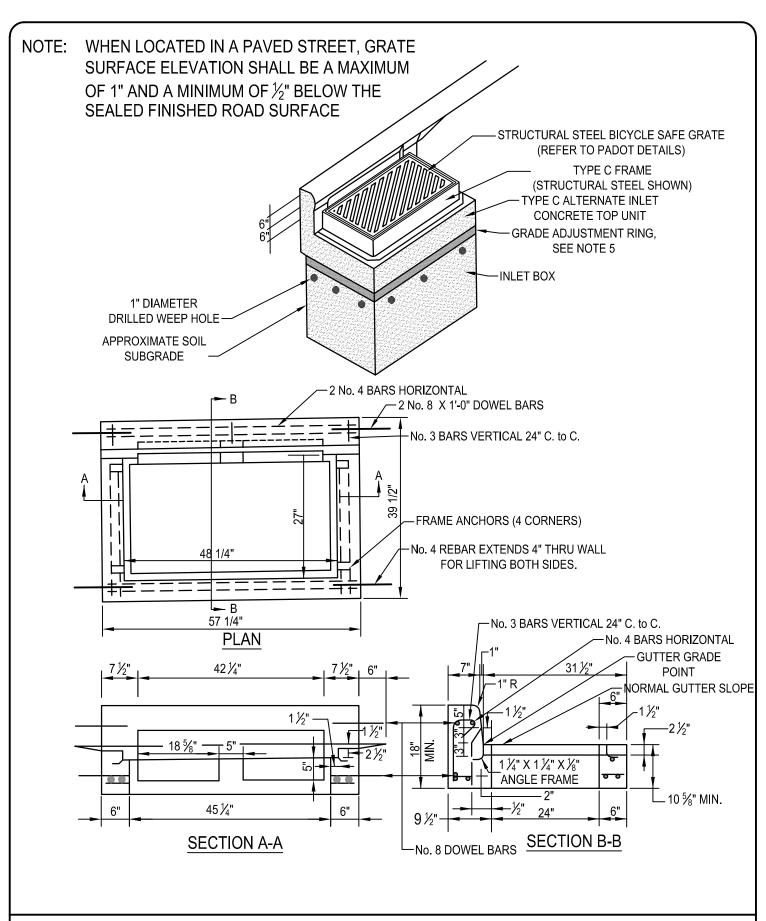
**PLAN VIEW** 

#### NOTES:

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH PA DOT PUBLICATION 408, SECTION 605 & STANDARDS FOR ROADWAY CONSTRUCTION, RC-31M. ENDWALL SIZING SHALL BE BASED ON PIPE SIZES & ALIGNMENT PRIOR TO ORDERING PRECAST STRUCTURES.
- 2. ALL DRAINAGE STRUCTURES SHALL HAVE POURED-IN-PLACE CONCRETE CHANNEL BOTTOMS.
- 3. CONCRETE SHALL BE CLASS "A".
- 4. EXPOSED EDGES SHALL BE CHAMFERED ONE (1) INCH.
- 5. PROVIDE CONCRETE APRON WHEN TRASH RACK IS PROPOSED ON HEADWALL.

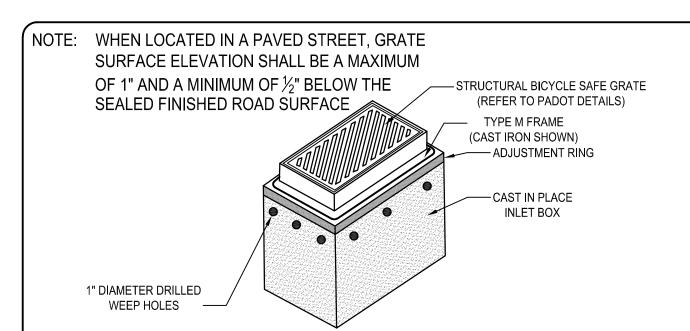
## CONCRETE ENDWALL

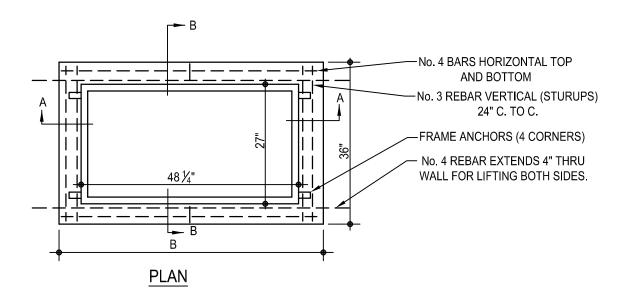


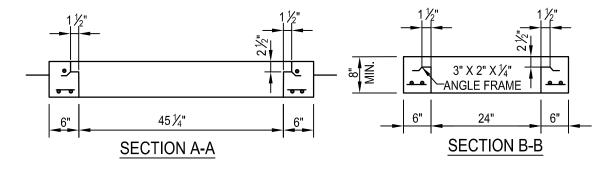


## **TYPE "C" INLET**



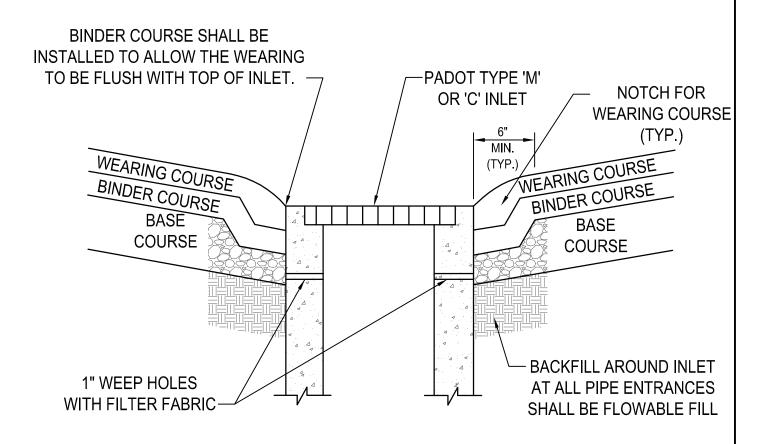






## **TYPE "M" INLET**

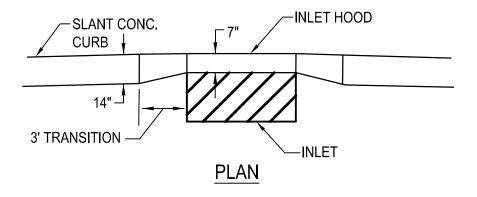


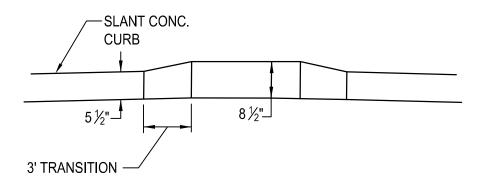


# PAVEMENT DETAIL AT INLET LOCATION NOT TO SCALE

## PAVEMENT TREATMENT AT INLET LOCATION



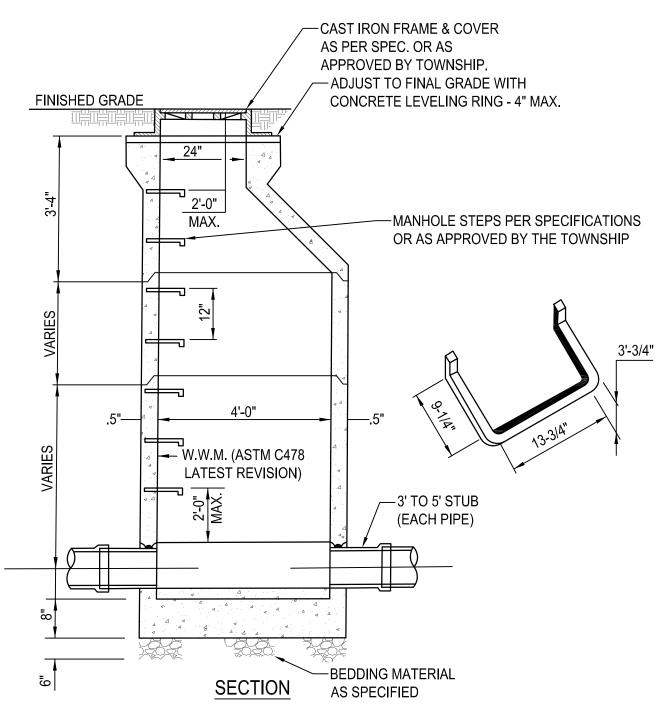




ELEVATION NOT TO SCALE

## **SLANT CURB TRANSITION TO TYPE "C" INLET**





#### NOTES:

- ALL JOINTS TO BE SEALED WATERTIGHT WITH RAMNECK OR EQUAL.
- PRECAST REINFORCED CONCRETE BASE WITH RISER SECTION CHANNEL FORMED ON JOB WITH GROUT AFTER MANHOLE IS SET AND PIPE STUBS INSTALLED, HOLES FOR PIPE CAST TO SUIT JOB CONDITIONS.
- 3. PIPE CONNECTION MADE WITH RUBBER GASKET PER ASTM C-443 CAST INTEGRALLY IN MANHOLE BASE.
- 4. ALL LIFT HOLES SHALL BE PLUGGED WITH AN APPROVED NO SHRINK GROUT.

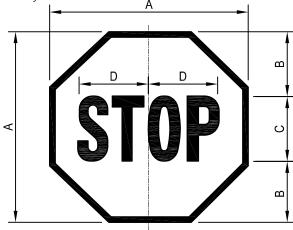
## PRECAST CONCRETE MANHOLE



#### R1-1

#### STOP SIGN

- (a) Justification. The Stop Sign (R1-1) is authorized for use on those streets or highways which intersect with a through highway or at a stop intersection so designated by the Department with reference to State-designated highways or local authorities with reference to highways under their jurisdiction. The R1-1 sign is also authorized for use in work zones involving one-lane, two-way roadways in accordance with Publication 203m (relating to work zone traffic control).
- (b) Authorization. Before local authorities designate any highway as a through highway or stop intersection which will intersect or affect a State-designated highway, approval of such designation shall first be obtained from the Department. Approval to install R1-1 signs in work areas shall not require the approval of the Department or local authorities when the conditions stipulated in Publication 203M (relating to work zone traffic control) are satisfied.
- (c) Placement. The R1-1 sign shall be placed in accordance with Department regulations (relating to location of stop and yield signs), or in accordance with Publication 203M (relating to work zone traffic control). When the number of stop approaches to an intersection is three or more, or two or more at an intersection involving two one-way streets, the Multiway Stop Sign (R1-3) shall be placed below each Stop Sign.
- (d) Size. The standard size R1-1 sign shall be 750 mm by 750 mm; however, at intersections on minor roads and secondary streets, a 600 mm by 600 mm sign may be used. In work zones, the standard size R1-1 sign for controlling one-lane, two-way traffic shall be 750 mm by 750 mm.



SIGN	DI	MEN. (IN m	BOR-	BLANK	
SIZE AxA	В	С	E	DER	STD.
600x600	200	200C	254	15	B1-600
750x750	250	250C	318	20	B1-750
900x900	300	300C	381	20	B1-900
1200x1200	400	400C	508	30	B1-1200

COLOR:

\* REDUCE SPACING 40%

LEGEND AND BORDER: WHITE (REFLECTORIZED)

BACKGROUND: RED (REFLECTORIZED) NOTE: THIS DETAIL CREATED FROM DETAIL DATED 10/8/97 BY THE TRAFFIC ENGINEERING AND OPERATIONS DIVISION BUREAU OF HIGHWAY SAFETY AND TRAFFIC ENGINEERING

## STOP SIGN DETAIL



#### D3-1

#### STREET NAME SIGN

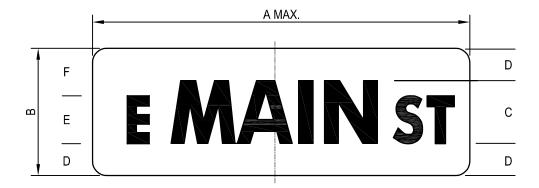
The Street Name Sign (d3-1) shall be authorized for use as a post mounted sign to identify names of streets for motorists and pedestrians. The D3-1, or other official type of street name sign, should be placed at all street intersections regardless of other route marking that may be present.

When the D3-1 signs are used in business districts, they should be placed at least on the diagonally opposite corner so that they will be on the far right-hand side of the intersection for traffic on the more important street. Signs naming both streets should be erected at each location. They should be mounted with their faces parallel to the streets they name, as close to the corner as practical with the nearest part of each sign not less than 0.3 m, and preferably 0.6 m, back from both curb lines.

In residential districts, D3-1 signs should be mounted as in business districts, but a single location at each intersection shall ordinarily suffice on all but the most important thoroughfares.

The name shall appear on street name signs in capital lettering at least 150 mm high. Larger legend, however, is optional. Lettering 200 mm or greater should be composed of lower-case letters with an initial upper-case letter. The overall width of the sign is variable up to 900 mm width with 150 mm legend. Except when necessary to avoid confusion, suffixes such as "ST", "DR", and "RD", or sections of the city such as "NW" should not be used. When used, this supplemental lettering may be in smaller lettering, at least 100 mm high.

The street name sign should be reflectorized or illuminated and should have a white legend on a green or black background or black legen on a white background or other contrasting colors.



COLOR:

LEGEND:

WHITE (REFLECTORIZED) BACKGROUND:

GREEN (REFLECTORIZED) OR BLACK (NON-REFLECTORIZED)

SIGN	DIMEN. (IN mm)						
SIZE AxA	С	D	E	F	G		
600x600	150*	25	100*	75	35		

\* CHOOSE STANDARD ALPHABETS SERIES FOR BEST FIT

OR

LEGEND:

BLACK (NON-REFLECTORIZED)
BACKGROUND:
WHITE (REFLECTORIZED)

NOTE: THIS DETAIL CREATED FROM DETAIL DATED 4/3/97 BY THE TRAFFIC ENGINEERING AND OPERATIONS DIVISION BUREAU OF HIGHWAY SAFETY AND TRAFFIC ENGINEERING

## STREET NAME SIGN DETAIL

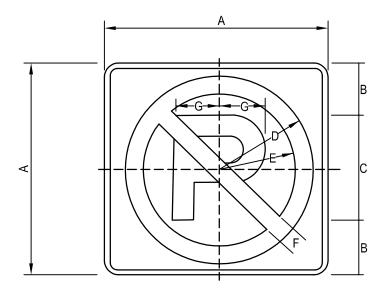


#### R8-3A

#### NO PARKING SYMBOL SIGN

(a) Justification. The No Parking Symbol Sign (R8-3A) shall be authorized for use in accordance with Department regulations (relating to justification and description; placement; and size) to prohibit parking along a given highway. if the restriction applies to a limited area or zone, supplemental signs or messages shall be authorized to show the limits of the restriction. Authorized supplemental signs include, but are not limited to the Restricted Hours Panel (R3 20), No Parking Restricted Hours Plaque (R/2), No Parking Loading Zone Plaque (R7-7), Tow Away Zone Sign (R7-201) and No Parking On Pavement Sign (R8 1). As an alternate to the use of supplemental signs, the appropriate supplemental message and the no parking symbol may be incorporated into a single sign.

(b) Size. The standard size R8-3A sign shall be 300mm by 300mm in business, residential, or park areas and 600mm by 600mm in rural areas. The standard size for expressways shall be 900mm by 900mm.



SIGN DIMENSIONS (IN MILLIMETERS)						MAR-	BOR-	BLANK	
SIZE AxA	В	С	D	E	F	G		DER	STD.
300 X 300	75	150 E(M)	122	97	25	61	10	10	
600 X 600	150	300 E(M)	262	212	50	123	10	15	B3-600
900 X 900	225	450 E(M)	395	320	75	182	10	20	B3-900

COLOR:

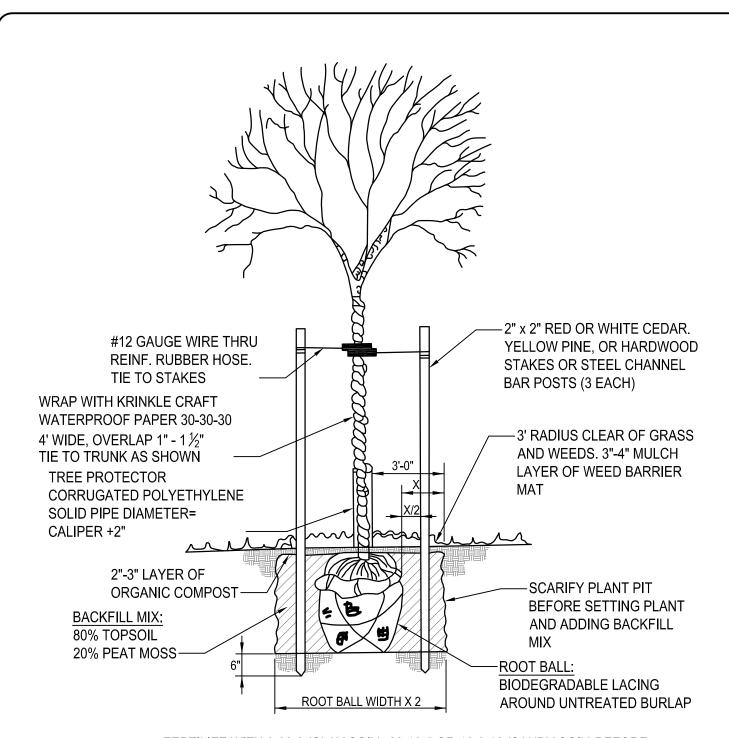
SYMBOL AND BORDER:
BLACK (NON-REFLECTORIZED)

CIRCLE AND DIAGONAL: RED (REFLECTORIZED)

BACKGROUND: WHITE (REFLECTORIZED) NOTE: THIS DETAIL CREATED FROM DETAIL DATED 4/3/97 BY THE TRAFFIC ENGINEERING AND OPERATIONS DIVISION BUREAU OF HIGHWAY SAFETY AND TRAFFIC ENGINEERING

## NO PARKING SYMBOL SIGN DETAIL



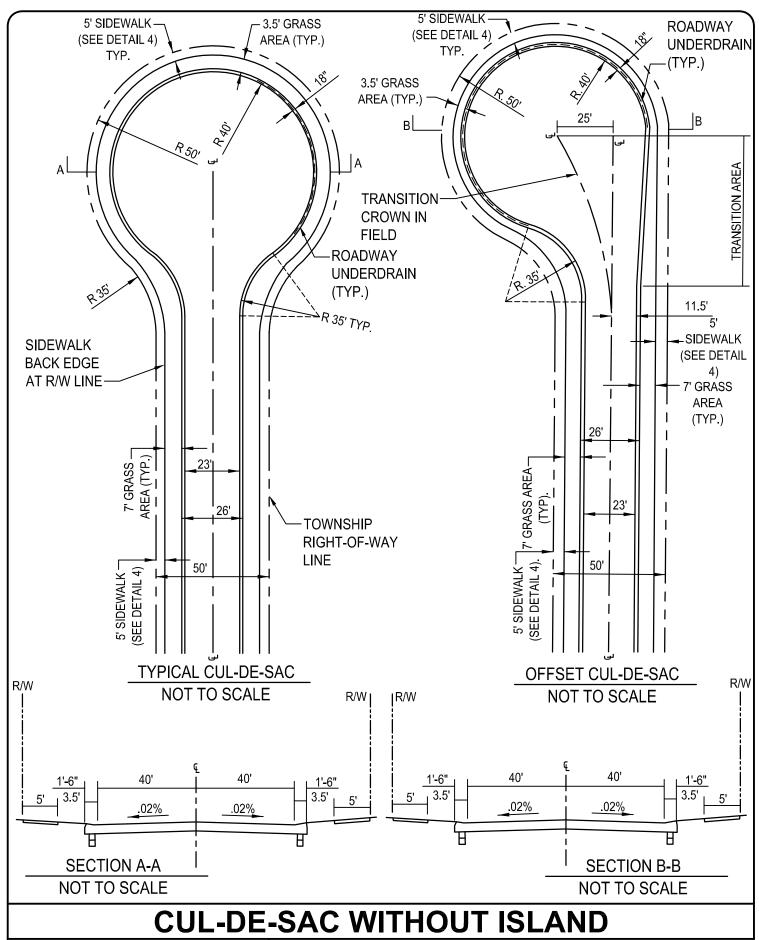


- FERTILIZE WITH 0-20-0 (CLAY SOIL), 20-10-5 OR 16-8-16 (SANDY SOIL) BEFORE MULCHING (1 LB./CU. FT. OF SOIL)
- TREE'S MIN. 10'-0" OFF ROAD R/W.
- SPECIES TO BE SELECTED FROM WEST PROVIDENCE TOWNSHIP APPROVED LIST

## **PLANTING DETAIL**

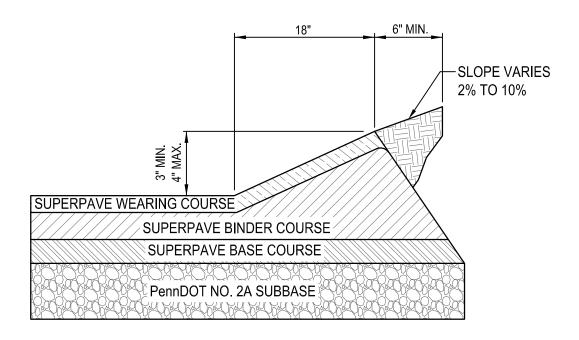
## **DECIDUOUS SHADE & FLOWERING TREE DETAIL**





CLARK SURVEYING

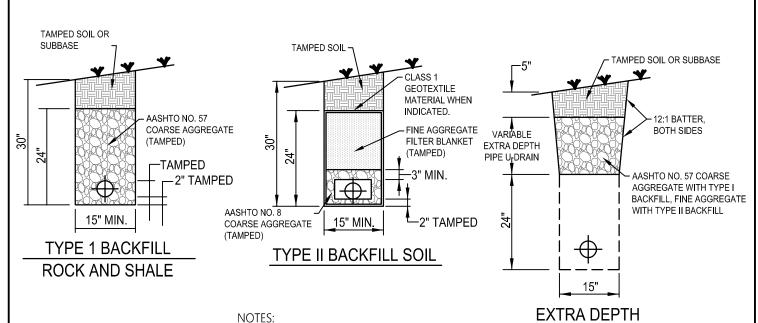
BY ENGINEERING



TYPICAL BITUMINOUS CONCRETE WEDGE CURB
NOT TO SCALE

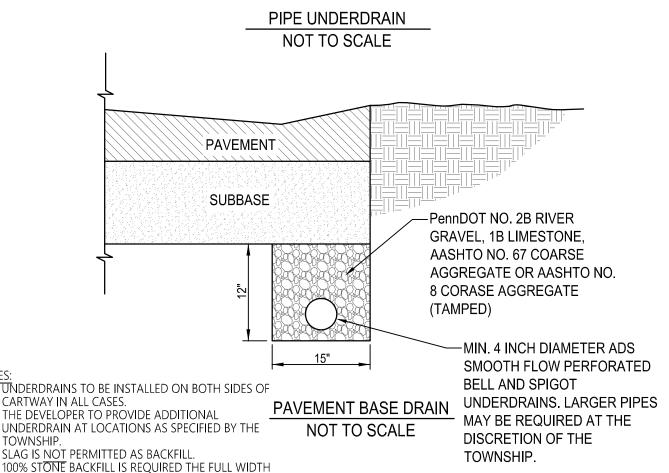
## **TYPICAL BITUMINOUS CONCRETE WEDGE CURB**





SLAG IS NOT PERMITTED AS BACKFILL.

100% ST<del>one</del> Backfill is required the full width OF RIGHT-OF-WAY



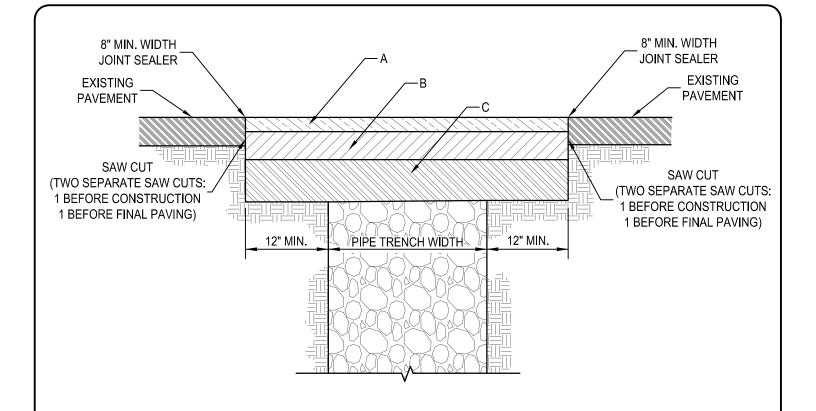
## DERDRAIN/PAVEMENT BASE DRAIN



NOTES:

TOWNSHIP.

OF RIGHT-OF-WAY.



#### **LEGEND**

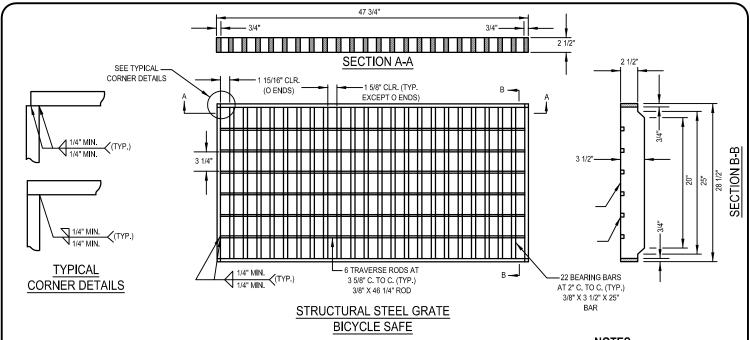
- 1-1/2" MIN. (COMPACTED THICKNESS) OR EXISTING THICKNESS, WHICHEVER IS GREATER, OF SUPERPAVE HMA WEARING COURSE, SRL-H (PENNDOT PUB. 408, SECTION 409)
- B. 3" MIN. (COMPACTED THICKNESS) OR EXISTING THICKNESS, WHICHEVER IS GREATER, OF SUPERPAVE HMA BINDER COURSE, SRL-H (PENNDOT PUB. 408, SECTION 409)
- C. 5" MIN. (COMPACTED THICKNESS)(TWO LIFTS) OR EXISTING THICKNESS, WHICHEVER IS GREATER, OF SUPERPACE HMA BASE COURSE (PENNDOT PUB. 408, SECTION 409)

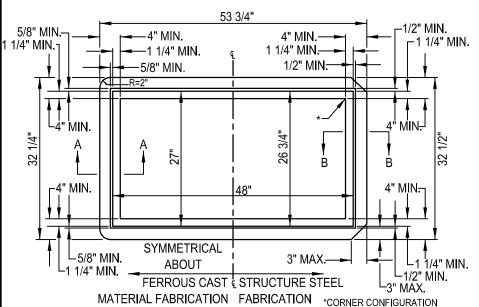
#### **NOTES**

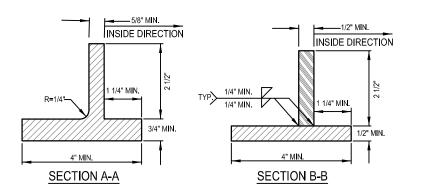
- 1. DURING COLD WEATHER MONTHS PROVIDE AND MAINTAIN A TEMPORARY BITUMINOUS COLD PATCH SURFACE UNTIL WEATHER PERMITS SUPERPAVE HMA PAVING.
- TOWNSHIP ROADMASTER MUST BE NOTIFIED 72 HOURS IN ADVANCE OF ROAD OPENING AND SURFACING.
- 3. SLAG IS NO PERMITTED AS BACKFILL WITHIN TOWNSHIP RIGHT-OF-WAYS OR EASEMENTS.
- 4. 100% 2A STONE BACKFILL IS REQUIRED THE FULL WIDTH OF THE RIGHT-OF-WAY. TEMPORARY PIPE BACKFILL USING EXCAVATED MATERIAL IS NOT PERMITTED.
- 5. ALL UTILITY CROSSINGS MUST BE MADE PERPENDICULAR TO THE CENTERLINE OF THE CARTWAY.
- 6. FOR PIPE BEDDING AND BACKFILL MATERIALS SEE DETAILS RSD-2, RSD-3 AND RSD-4.
- ASPHALY MIX DESIGN MUST BE SUBMITTED TO TOWNSHIP FOR APPROVAL A MINIMUM OF 72 HOURS PRIOR START OF WORK.

## SUPERPAVE HMA TRENCH REPAIR









TYPE M FRAME

#### NOTES

- 1. THIS SHEET DEPICTS THE DIMENSIONS
  REQUIRED FOR UNIFORMITY AND
  INTERCHANGEABILITY. IT DOES NOT
  INCLUDE DETAILS REQUIRED FOR
  FABRICATION OR MANUFACTURING. ONLY
  GRATES SUPPLIED BY A MANUFACTURER
  LISTED IN PennDOT BULLETIN 15 SHALL BE
  PERMITTED
- WELD STRUCTURAL STEEL GRATES IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTION 1105.
- 3. WELD STRUCTURAL STEEL FRAMES IN ACCORDANCE WITH PUBLICATION 408, SECTION 1105. COAT FRAMES WITH AN APPROVED BITUMINOUS PAINT, IN ACCORDANCE WITH PUBLICATION 408 SECTION 605.2(f). AS AN ALTERNATE TO BITUMINOUS PAINT, GALVANIZE FRAMES IN ACCORDANCE WITH PUBLICATION 408, SECTION 1105.2(s).
- PROVIDE TRANSVERSE RODS, MEETING THE REQUIREMENTS OF PUBLICATION 408.
- PROVIDE STRUCTURAL STEEL GRATES
   WITH THE GRATE SPACERS LOCATED
   FLUSH ALONG THE TOP SURFACE OF THE
   GRATE.
- DO NOT USE CAST IRON CRATES OR FRAMES WITHIN THE TOWNSHIP ROADWAYS.
- SOURCE: PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, RC-45M (LATEST EDITION)

## TYPE M INLET (FRAME & BICYCLE SAFE GRATE)

DETAILS ARE FABRICATOR'S

RESPONSIBILTY AND SHALL

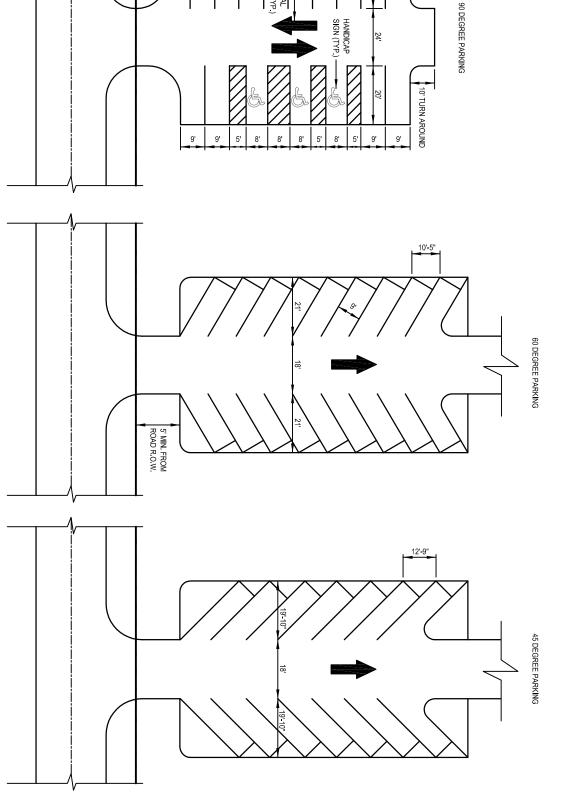
BE APPROVED.



# CONSTRUCTION NOTES

N

- ALL OFF-STREET PARKING AREAS OF MORE THAN FIVE (5) VEHICLES AND (2) ACCESS DRIVES LEADING TO THE PARKING AREA WHICH ARE ACCESSIBLE TO THE GENERAL PUBLIC SHALL BE GRADED FOR PROPER DRAINAGE AND CONSIST OF A STABLE/SLIP RESISTANT MATERIAL.
- HANDICAPPED ACCESSIBLE PARKING SPACES SHALL BE PROVIDED FOR PARKING AREAS PER SECTION 702.9.E OF THE WEST PROVIDENCE TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.
- ALL PARKING AREAS GREATER THAN 20,000 S.F. SHALL INCLUDE INTERIOR LANDSCAPING OF AT LEAST 10% OF THE PARKING AREA PER SECTION 702.9.E.2.



\*10 SPACES MAX.

ARROWS (TYP.

**ARKING CONFIGURATIONS** 

CLARK SURVEYING **# ENGINEERING** 83 East Fifth Avenue, Suite 2, Everett, Per Phone: 814.652.2488 Fax: 1.866.381.4127 Website: www.CSE4078.com

APPROVED BY RESOLUTION OF THE TOWNSHIP BOARD OF SUPERVISO				
(CHAIRMAN)				
(SECRETARY)				
CERTIFICATE FOR APPROVAL WEST PROVIDENCE TOWNSHI		MMISSION		
APPROVED BY RESOLUTION OF THE TOWNSHIP BOARD OF SUPERVISO 20	E WEST PROVIDEN	CE		
(CHAIRMAN)				
(SECRETARY)				
CERTIFICATE OF REVIEW BY BEDFORD COUNTY PLANNING	COMMISSION			
REVIEWED BY THE BEDFORD COU THIS DAY OF		MISSION		
(DIRECTOR)				
SURVEYOR'S CERTIFICATE				
I HEREBY CERTIFY THAT THIS SUR SHOWN TO THE BEST OF MY KNOW			6	
(SIGNATURE)	(DATE)			
(LICENSE NO.				
CERTIFICATE OF OWNERSHIP				
COMMONWEALTH OF PENNSYLVANI, COUNTY OF BEDFORD ON THIS, THE DAY OF		20	_, BEFORE ME,	
THE UNDERSIGNED OFFICER, PERSON WHO BEING DULY SWORN ACCORDI ARE THE OWNER AND/OR EQUITABL PLAN, AND THAT THEY ACKNOWLED THEY DESIRE THE SAME TO BE RECO	ONALLY APPEARED NG TO LAW, DEPOSE E OWNER OF THE PE GE THE SAME TO BE	ES AND SAYS ROPERTY SH THEIR PLAN	THAT THEY OWN ON THIS I, AND THAT	
OWNE	R SIGNATURE)			
OTARIZATION:				
/ORN TO AND SUBSCRIBED TO BE	EFORE ME THIS	DAY OF	=	, 20
	_			
NOTARY PUBLIC	STATE OF:			
NOTART PUBLIC	COUNTY OF			

## **TYPICAL SIGNATURE BLOCK**





## Appendix c Recommended Tree and Shrub List **Landscape Plans for West Providence Township** Bedford County, Pennsylvania

#### **Native Trees**

Height in Feet				
at Maturity	Scientific Name	Common Name		
•				
40	Acer pensylvanicum	Striped Maple		
40	Acer rubrum	Red Maple		
30	Amelanchier canadensis	Shadbush, Serviceberry		
25	Amelanchier laevis	Shadblow, Shadbush		
40	Aralia spinosa	Devil's Walking Stick		
35	Asimina triloba	Pawpaw		
60	Betula lenta	Sweet or Black Birch		
70	Betula lutea	Yellow Birch		
40	Betula nigra	River Birch		
35	Carpinus caroliniana	Hornbeam, Ironwood		
85	Carya cordiformis	Bitternut Hickory		
85	Carya glabra	Pignut Hickory		
85	Carya laciniosa	Shellbark Hickory		
85	Carya ovalis	Sweet Pignut/Red Hickory		
85	Carya ovata	Shagbark Hickory		
85	Carya tomentosa	Mockernut Hickory		
75	Castanea dentate*	American Chestnut		
90	Celtis occidentalis	Common Hackberry		
35	Cercis canadensis	Eastern Redbud		
35	Cornus alternifolia	Pagoda Dogwood		
35	Cornus florida	Flowering Dogwood		
35	Crataegus crusgalli	Cockspur Hawthorn		
20	Crataegus pruinosa	Frosted Hawthorn		
30	Crataegus punctata	Dotted Hawthorn		
60	Diospyros virginiana	Common Persimmon		
60	Gleditsia triacanthos	Common Honeylocust		
45	Ilex opaca	American Holly		
75	Juglans cinerea	Butternut		
60	Juniperus virginiana	Eastern Red Cedar		
90	Liquidambar styraciflua	Sweet Gum		
90	Liriodendron tulipifera	Tulip Tree/Tulip Poplar		
90	Magnolia acuminata	Cucumbertree Magnolia		
35	Malus coronaria	American crabapple		
50	Morus rubra	Red Mulberry		
60	Nyssa sylvatica	Black Gum		
40	Ostrya virginiana	Hop Hornbeam		
60	Picea glauca	White Spruce		
75	Pinus pungens	Table Mountain Pine		
75	Pinus rigida	Pitch Pine		

#### Native Trees, continued

Height in Feet		
at Maturity	Scientific Name	Common Name
70	Diama atuahan	Milita Dina
70	Pinus strobus	White Pine
90	Platanus x acerifolia (hybrid)	London Planetree
35	Prunus americana	American Plum
80	Prunus serotina	Black Cherry
35	Ptelea trifoliate	Common Hoptree
90	Quercus alba	White Oak
90	Quercus bicolor	Swamp White Oak
90	Quercus borealis	Northern Red Oak
80	Quercus coccinea	Scarlet Oak
70	Quercus ellipsoidalis	Northern Pin Oak
20	Quercus ilicifolia	Scrub Oak
50	Quercus imbricaria	Shingle Oak
60	Quercus macrocarpa	Bur Oak
45	Quercus marilandica	Blackjack Oak
80	Quercus montana	Chestnut Oak
50	Quercus muhlenbergi	Chinkapin Oak
20	Quercus prinoides	Dwarf Chinkapin Oak
60	Quercus ruba	Red Oak
60	Quercus shumardii	Shumark Oak
50	Quercus prinus	Chestnut Oak
80	Quercus velutina	Black Oak
50	Sassafras albidum	Common Sassafras
50	Thuga occidentalis	Eastern Arborvitae
90	Tilia americana	American Linden
90	Tsuga canadensis*	Canada Hemlock
90	Ulmus americana*	American Elm
90	Ulmus rubra	Slippery/Red Elm
35	Viburnum lentago	Nannyberry Viburnum
35	Viburnum prunifolium	Black Haw

- \*Purchase only when resistant cultivar is available
- Note: All ash trees are susceptible to the emerald ash borer and should not be planted until a resistant cultivar is available

#### **Native Shrubs**

Height in Feet	C · ···C N	C N
at Maturity	Scientific Name	Common Name
30	Alnus serrulata	Common Alder
9	Aronia arbutifolia	Red Chokeberry
8	Aronia melanocarpa	Black Chokeberry
12	Aronia prunifolia	Purplefruit Chokeberry
5	Callicarpa Americana	Beautyberry
12	Calycanthus floridus	Sweetshrub
3	Ceanothus americanus	Jerseytea Ceanothus
10	Cephalanthus occidentalis	Buttonbush
18	Clethra acuminata	Summersweet
18	Clethra alnifolia	Summersweet
9	Cornus amomum	Silky Dogwood
12	Cornus racemosa	Gray Dogwood
12	Cornus rugosa	Roundleaf Dogwood
10	Cornus stolonifera	Red Osier Dogwood
12	Corylus Americana	American Filbert/Hazelnut
12	Corylus cornuta	Beaked Filbert
3	Diervilla lonicera	Dwarf Bushhoneysuckle
9	Dirca palustris	Atlantic Leatherwood
15	Hamamelis virginiana	Witch Hazel
6	Hydrangea arborescens	Smooth Hydrangea
3	Hypericum prolificum	Shrubby St. Johnswort
3-9	Itea virginica	Sweetspire
9	Ilex glabra	Inkberry
10	Ilex verticillata	Winterberry Holly
6	Kalmia latifolia	Mountain Laurel
8	Lindera benzoin	Spicebush
6	Lonicera canadensis	American Fly Honeysuckle
12	Lyonia ligustrina	He-huckleberry
12	Physocarpus opulifolius	Common Ninebark
15	Rhododendron arborescens	Sweet Azalea
10	Rhododendron canadense	Catawba Rhododendron
20	Rhododendron maximum	Rosebay Rhododendron
9	Rhododendron roseum	Roseshell Azalea
6	Rhododendron nudiflorum	Pinxterbloom Azalea
6	Rhododendron viscosum	Swamp Azalea
8	Rhus aromatica	Fragrant Sumac
20	Rhus copallina	Flameleaf Sumac
15	Rhus glabra	Smooth Sumac
20	Rhus typhina	Staghorn Sumac
6	Ribes americanum	American Black Currant

#### Native Shrubs, continued

Height in Feet		
at Maturity	Scientific Name	Common Name
(	Dibog gymahati	Dootywa Caasahaww
6	Ribes cynobati	Pasture Gooseberry
4	Rosa Carolina	Carolina Rose
12	Salix humilis	Prairie Willow
20	Salix lucida	Shining Willow
12	Sambucus canadensis	Elderberry
12	Sambucus pubens	Scarlet Elder
6	Spirea alba	Narrowleaf Meadowsweet
		Spirea
4	Spirea corymbosa	Corymed Spirea
6	Spirea tomentosa	Hardhack Spirea
12	Staphylea trifolia	American Bladdernut
6	Symphoricarpos albus leavigatus	Snowberry
5	Symphoricarpos orbiculatus	Coralberry
6	Taxus Canadensis	Canada Yew
2	Vaccinium angustifolium	Lowbush Blueberry
6	Vaccinium corymbosum	Highbush Blueberry
12	Vaccinium stamineum	Common Deerberry
5	Viburnum acerifolium	Mapleleaf Viburnum
6	Viburnum cassinoides	Witherod
10	Viburnum dentatum	Arrowwood
15	Viburnum nudum	Smooth Witherod
10	Viburnum rafinesquianum	Rafinesque Viburnum
10	Viburnum trilobum	American Cranberrybush
		Viburnum
6	Yucca filamentosa	Adamsneedle Yucca

#### The following resources provide additional information:

- 1. http://findnativeplants.com/mid-atlantic/pennsylvania-native-plants/ This site lists the nurseries in Pennsylvania that sell native plants.
- 2. Hightshoe, Gary L. <u>Native Trees, Shrubs, and Vines for Urban and Rural America</u> 1988. John Wiley & Sons. New York.
- 3. Rhoads, Ann and Block, Timothy. The Plants of Pennsylvania. 2007. Univ. of Pennsylvania Press. Philadelphia.
- 4. Vincent Cotrone

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