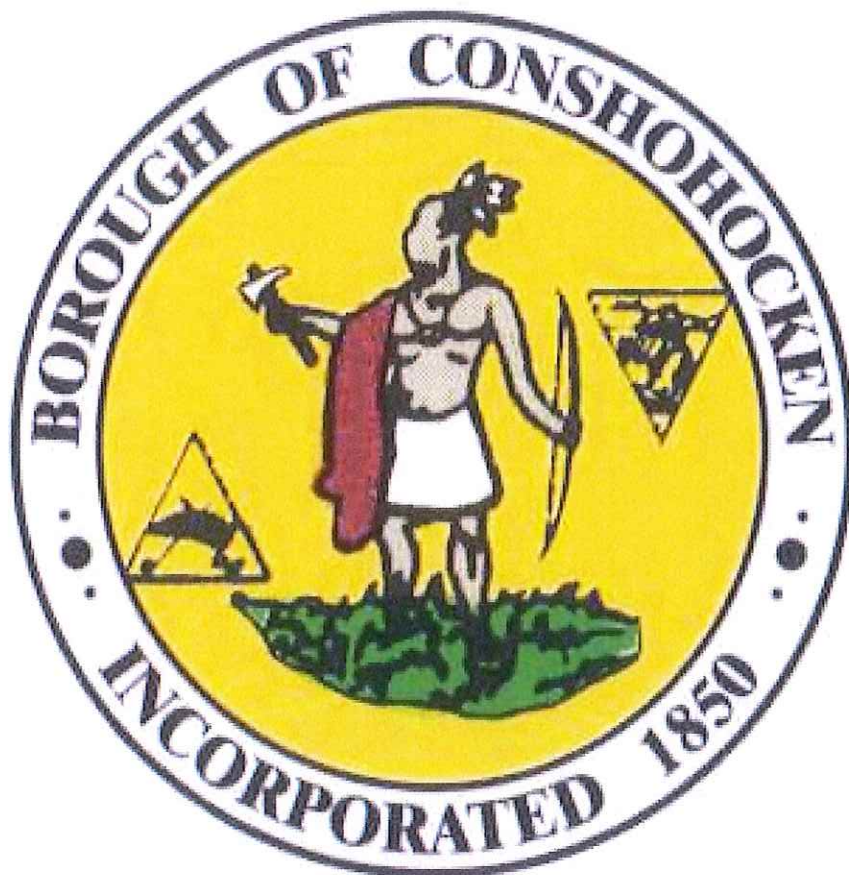


# REQUEST FOR PROPOSALS

## ENGINEERING SERVICES FOR 2020 CDBG CURB RAMP PROJECT



Borough of Conshohocken | 400 Fayette Street, Suite 200 | Conshohocken, PA 19428  
Ph: (610) 828-1092 | Fax: (610)828-0920

Issue Date: Thursday, November 18, 2021

**Responses Due by: Wednesday, December 1, 2021**

**SECTION I: INTRODUCTION:**

The Borough of Conshohocken, located at 400 Fayette Street, Suite 200, Conshohocken, PA 19428 is currently seeking proposals for engineering services to design and participate in the implementation of a Community Development Block Grant (CDBG) project for the installation of code conforming curb ramps, which will improve accessible routes in the Borough.

Conshohocken operates a Community Development Block Grant Program with federal funding through the Pennsylvania Department of Community and Economic Development (DCED). Projects funded with CDBG funds benefit low- and moderate-income residents of Conshohocken; and have included street improvements, housing rehabilitation activities, and accessibility improvements to dwellings, public buildings and street intersections. CDBG projects are subject to all federal and state requirements including, but not limited to environmental assessment and federal labor standards. The Community Development and Grant Coordinator is responsible for oversight of CDBG funded projects.

**SECTION II: SCOPE OF SERVICES**

The selected firm will be responsible for the design and construction supervision for the installation of code conforming curb ramps and seven (7) roadway crossings at either intersections or alley crossings. A list of selected roadway crossings, and the number of ramps involved is included as Appendix A. Services will include the following.

1. Survey and design of the designated number of curb ramps at the selected locations, along with necessary road and/or sidewalk improvements according to Penn DOT Publication 72, RC-67, dated February 19, 2021 ( See Appendix B); and Borough Technical Details (See Appendix C). No diagonal curb ramps designs are permitted. One curb ramp shall be designed for each crossing direction. Revise the designs to address any comments from the Borough.
2. Meet with Borough staff upon design completion, and as needed throughout the project.
3. Develop construction bid documents in conjunction with the Community Development Coordinator, who will provide Davis Bacon wage determination, federal requirements, MBE/WBE list and forms, and Section 3 information and forms.
4. Provide a construction cost estimate.
5. Publicly bid construction project electronically through PennBid. This activity includes responding to any questions from potential bidders.
6. Participate in bid opening and evaluation of bids received, including a recommendation for award of construction contract.
7. Provide construction contract in conjunction with the Community Development Coordinator.

## Borough of Conshohocken | RFP for Engineering Services

8. Conduct pre-construction meeting in conjunction with the Community Development Coordinator.
9. Conduct on-going inspections of work in progress.
10. Review and recommend approval to the Borough of all invoices received from the contractor for payment.
11. Participate in project close-out activities as needed.
12. Conduct inspection and provide Borough with review and recommendations related to release of eighteen (18) month maintenance bond.

### SECTION III: CONTENTS OF PROPOSAL

1. **Executive Summary:** Provide an Executive Summary of not more than two (2) pages detailing and substantiating why the firm should be considered most qualified and be selected by the Borough to provide the services listed above.
2. **Contact Information:** Provide general information for the firm including: name, address, office telephone number, office fax number, and e-mail address of the principal individual contact responsible for the RFP response.
3. **Overview:** Provide general information about the history of the firm, overview of qualifications pertinent to this RFP and demonstration of comparable services for other municipalities in Pennsylvania and Montgomery County.
4. **Understanding of the Scope of Work:** Provide an understanding of the scope of work as described herein. Include a description of the firm's experience working with federally funded projects and federal and state requirements; and how that experience relates to the ability to satisfy the scope of work.
5. **Schedule of Fees:** Provide a schedule of fees including hourly rates for all personnel to be involved, estimated hours for specific activities, reimbursable expenses including travel, and any other applicable fee information. Provide a not-to-exceed price for the Scope of Services.
6. **Project Schedule:** Provide a project schedule detailing a timeline for all proposed tasks to be completed including but not limited to design completion, preparation of bid documents, bidding, contracting, pre-construction meeting, inspections, authorizations for payment, punch list inspection and maintenance bond release inspection.

The tentative schedule and target milestone dates are as follows (excludes progress meetings to be scheduled in coordination with the selected service provider):

## Borough of Conshohocken | RFP for Engineering Services

RFP Advertised	November 18, 2021
Proposal Due Date	December 1, 2021
Administration Evaluation of Proposals	December 8, 2021
Council to Consider Authorizing Award of Contract	December 15, 2021
Construction Deadline	September 30, 2023

7. **References:** Provide at least three (3) client references from the past five (5) years; one (1) of which was for the provision of similar services, and one (1) of which involved the use of federal funds. Include contact names, titles, phone numbers, and e-mail addresses.

### SECTION IV: TIMELINE AND SUBMISSION PROCEDURES

Copies of the Request for Proposals are available at Conshohocken Borough Hall, 400 Fayette Street, Suite 200, Conshohocken, PA 19428; Monday through Friday between the hours of 8:30 a.m. and 4:30 p.m. Copies of the RFP also are available on the Borough website ([www.conshohockenpa.gov](http://www.conshohockenpa.gov)).

Qualified applicants shall submit, in a sealed envelope, one (1) original copy, and one (1) electronic copy via flash drive to:

Borough of Conshohocken  
Attn: Christine Stetler, Community Development and Grant Coordinator  
400 Fayette Street, Suite 200  
Conshohocken, PA 19428  
[cstetler@conshohockenpa.gov](mailto:cstetler@conshohockenpa.gov)

**Proposals shall be stamped received no later than 4:00 p.m. December 1, 2021.**

### SECTION V: SELECTION PROCESS

1. All proposals submitted by the deadline will be opened after the deadline. Proposals which are deemed complete will be further evaluated by Borough Administration. Any firm submitting a complete proposal may be required to provide additional detailed information.
2. Technical evaluation of the proposals will be based on the following:
  - a. The firm's history of providing similar scope of work to those described herein.
  - b. Qualifications of the firm's personnel including management, support staff, and the individual proposed to serve as the primary Borough representative.
  - c. The firm's general approach to providing the required services under this RFP.
  - d. Time frame for completion.
  - e. Capacity of the firm to perform the work within time limitation, taking into consideration the current and planned workload of the firm.
  - f. Costs: Fee schedule, expenses and charging policies.

## **Borough of Conshohocken | RFP for Engineering Services**

- g. Familiarity with federal requirements in designing and overseeing a project funded with federal funds.

### **SECTION VI: GENERAL ADMINISTRATIVE REQUIREMENTS & CONDITIONS**

#### **Contract**

Award of the project shall be contingent upon the execution of a written contract between the selected firm and the Borough in a form, and containing such provisions, as shall be required by the Borough, consistent with the terms of this RFP.

#### **Indemnification**

The selected firm shall defend, indemnify and hold harmless the Borough, its officers, agents and employees and all claims and costs of any nature whether for personal injury, property damage or any other liability arising out of or in any way connected with the negligent acts or omissions perpetrated by employees of the firm.

#### **Insurance**

Provide a description of the firm's insurance coverage applicable to the services described herein. Such coverage must be adequate to sufficiently cover the services described herein and must include at a minimum, general liability insurance coverage and professional liability insurance coverage. Include insurance certificates summarizing such insurance coverage; and showing the Borough of Conshohocken as also insured. The adequacy of insurance coverage and the insurance certificates shall be subject to the review and approval of the Borough.

#### **Right of Refusal**

The Borough reserves the right to reject any and all proposals without qualifications. Proposals will be considered only in their entirety. The Borough reserves the right to add or deduct any specific requirements and associated costs from the selected proposal.

#### **Questions**

Questions related to the RFP may be addressed to:

Christine Stetler, Community Development and Grant Coordinator  
Borough of Conshohocken  
400 Fayette Street, Suite 200  
Conshohocken, PA 19428  
610-828-1092  
[cstetler@conshohockenpa.gov](mailto:cstetler@conshohockenpa.gov)

Appendix A  
2020 CDBG PRORAM  
Curb Ramp Locations

1. Angel Alley and Poplar Street (Intersection)
  - 1 curb ramp on NW corner
  - 1 curb ramp on NE corner
  - 1 curb ramp on SW corner
  - 1 curb ramp on SE corner
  
2. Hallowell Street and East 10<sup>th</sup> Avenue (Intersection)
  - 1 curb ramp on NW corner
  - 1 curb ramp on NE corner
  - 1 curb ramp on SW corner
  - 1 curb ramp on SE corner
  
3. Wells Street between East 7<sup>th</sup> and East 8<sup>th</sup> Avenues (Across Alley)
  - 1 curb ramp on SW corner
  
4. Wells Street between East 6<sup>th</sup> and East 7<sup>th</sup> Avenues (Across Alley)
  - 1 curb ramp on NW corner
  - 1 curb ramp on NE corner
  
5. Jones Street between East 8<sup>th</sup> and East 9<sup>th</sup> Avenues (Across Alley)
  - 1 curb ramp on NW corner
  - 1 curb ramp on SW corner
  
6. Jones Street between East 10<sup>th</sup> and East 11<sup>th</sup> Avenues (Across Alley)
  - 1 curb ramp on NE corner
  - 1 curb ramp on SW corner
  
7. Hallowell Street between East 9<sup>th</sup> and East 10<sup>th</sup> Avenues (Across Alley)
  - 1 curb ramp on NW corner

**APPENDIX B**

**PennDOT Publication 72, RC-67  
Dated February 19, 2021**

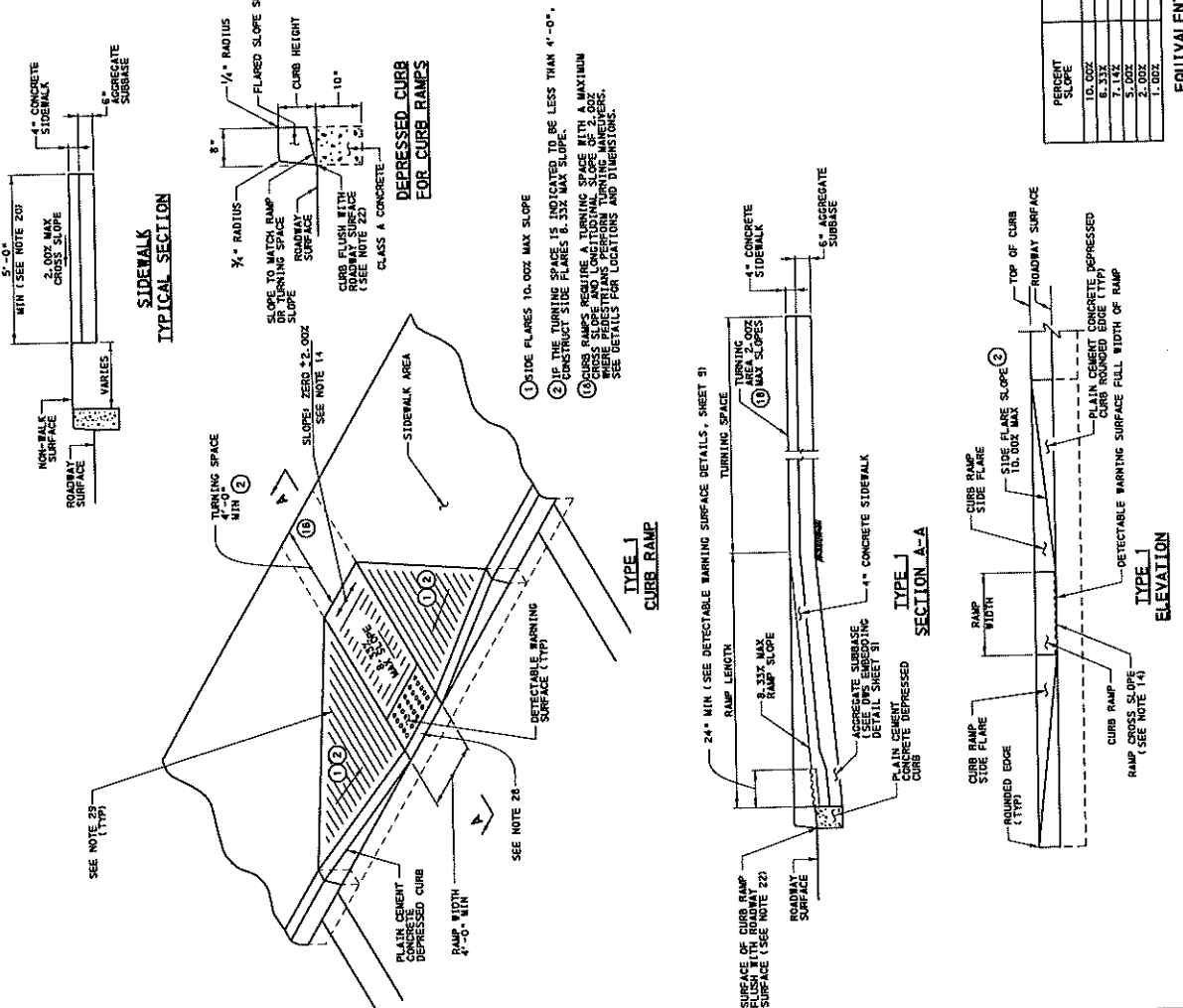
**NOTES**

1. PROVIDE MATERIALS AND CONSTRUCT AS SPECIFIED IN PUBLICATION 408, SECTIONS 350, 413, 630, 676 AND 685.
2. PROVIDE EXPANSION JOINT MATERIAL AT ALL JOINTS BETWEEN RAMP AND ADJACENT PAVEMENT, SIDEWALK OR STRUCTURE WITH THE TOP OF JOINT FLUSH WITH ADJACENT CONCRETE SURFACE.
3. CONSTRUCT CURB RAMP AND SIDEWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICLE TRAVEL LANE. SEE SHEET 7 FOR CROSSWALK DETAILS.
4. SEAL JOINTS WITH AN APPROVED SEALING MATERIAL.
5. PROVIDE SLIP RESISTANT TEXTURE ON CURB RAMP BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP. EXTEND TEXTURE THE FULL WIDTH AND LENGTH OF THE CURB RAMP INCLUDING SIDE FLARES.
6. MODIFY CONSTRUCTION DETAILS TO ADAPT DIMENSIONS TO RAMP AND EXISTING CURB HEIGHTS WHERE THE CURB IS LESS THAN THE STANDARD 9" HEIGHT.
7. CURB RAMP AND SIDE FLARE LENGTHS ARE VARIABLE AND BASED ON CURB HEIGHT AND THE SIDEWALK SLOPE. TO AVOID CHANGING GRADE IMMEDIATELY WHEN ENTERING OR LEAVING THE CURB RAMP LENGTHEN RAMP TO EXCEED 15'-0". ADJUST RAMP SLOPE AS NECESSARY TO MAINTAIN THE 2% MAXIMUM EXTERNT FEASIBLE.
8. NON-FALL AREAS AT THE PEDESTRIAN ACCESS AREA ADJACENT TO THE PEDESTRIAN ACCESS ROUTE MUST BE FLUSH WITH THE PEDESTRIAN ACCESS.
9. THIS DRAWING IS INTENDED TO ILLUSTRATE THE RECOMMENDED PLACEMENT OF PEDESTRIAN ACCESS ROUTES FOR ALTERNATION PROJECTS. PROVIDE ACCESS TO PEDESTRIAN STOPS, WHERE APPLICABLE, TO ALLOW FOR PEDESTRIAN ACCESS.
10. SEE 10-800 FOR ADDITIONAL PEDESTRIAN PUSHBUTTON DETAILS NOT SHOWN.
11. ALTERNATION PROJECTS THAT ARE TRANSECTED BY A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL SHALL BE ADJUSTED TO CURB. SEE SHEET 9 FOR INSTALLATIONS ALONG CURVED SURFACES.
12. PROVIDE DETECTABLE MARKING SURFACES (DMS) 24" MINIMUM IN THE DIRECTION OF PEDESTRIAN TRAVEL ACROSS THE FULL WIDTH OF RAMP AT THE GRADE BREAK NEAR STREET EDGE AND THROUGHOUT THE FULL WIDTH OF RAMP ADJACENT WALKWAY SURFACES, EITHER LIGHT-DUTY OR DARK-DUTY LIGHT FOR THE FULL WIDTH OF RAMP.
13. FOR NEW CONSTRUCTION, DO NOT EXCEED 2.00% CROSS SLOPE ON THE CURB RAMP OR PEDESTRIAN ACCESS ROUTE.
14. CONSTRUCTION OF CURB RAMP AND FLARE SLOPES WITHIN THE DISTANCE THAT EXCEEDS 5.00% SHALL BE RECONSTRUCTED. THE DETAILS, OR CONTRACT DOCUMENTS AS APPLICABLE, WILL NOT BE ACCEPTED.
15. CONSTRUCT SIDEWALKS AT A LONGITUDINAL SLOPE NOT TO EXCEED 4.00% FOR ROUTING NOT TO EXCEED 5.00% FOR ROUTING TO EXCEED 5.00% SHALL BE RECONSTRUCTED.
16. THE CURB RAMP AND ADJOINING ROAD SURFACE IS NOT TO EXCEED 5.00% CROSS SLOPE. THE CROSS SLOPE OF THE OUTER SIDE OF A CURB RAMP, TURNING SPACE OR BLENDING TRANSITION IS NOT TO EXCEED 5.00% FOR THE DETAILS.
17. THE CONSTRUCTION STANDARDS DELETED ARE UNLESS OTHERWISE NOTED OR RESTRICTED. ALL CONSTRUCTION MUST MEET THE STANDARDS CONTAINED HEREIN.
18. ALL SIDEWALKS AND CURB RAMP FLARES SHALL BE TO A FLARE PLANE. THEREFORE, THE LENGTH OF RAMP IS NOT TO EXCEED 20'-0" FOR A 2% SLOPE. (CURB RAMP LENGTH SHALL BE 20'-0" FOR A 2% SLOPE.)
19. SIDEWALK WIDTH MAY BE REDUCED TO 4'-0" WHEN PAVING AREAS 5'-0" X 5'-0" ARE PROVIDED EVERY 20'-0".
20. THE TRAVEL LANE IS DEFINED BY THE WHITE PAVEMENT MARKING LINE. IF A WHITE PAVEMENT MARKING LINE IS NOT PRESENT, THE TRAVEL LANE IS DEFINED BY THE CONTRACT DOCUMENTS.
21. CONSTRUCT CURB RAMP FOR CURB RAMP FLUSH TO ADJACENT ROADWAY. GRADE EDGE OF ROAD ELEVATIONS SHALL BE 1/4" ABOVE CURB RAMP TO ENSURE POSITIVE DRAINAGE AND PREVENT POINTEING FOR LEAKS. BEHIND DEPRESSED CURB RAMP, REMOVE EXCESS JOINT SEALER AND COVER THE SEALED AREA WITH A LIGHT APPLICATION OF DRY SAND.
22. CURB RAMP FLARES ARE PERMITTED WHEN ADJACENT TO NON-PARKING AREAS OR ELEVATION DIFFERENCES CANNOT BE ACCOMMODATED BY CURB WALLS THAT INTERSECT THE PEDESTRIAN PATH.
23. DO NOT USE FOR PLAIN CEMENT CONCRETE DEPRESSED CURB TO BE FLUSH WITH ADJACENT SURFACES (RAMP, SIDEWALKS, FLARES).
24. FOR CURB RAMP THAT LEAD TO A SINGLE CROSSWALK, THE RAMP (EXCLUDING FLARES) TO BE FULLY INSIDE OF MARKED CROSSWALK LINES. SEE SHEET 7 FOR DETAILS.
25. A 4'-0" MAXIMUM DIGITAL DISPLAY LEVEL WILL BE USED TO VERIFY THE SLOPES OF CURB RAMP AND SIDEWALKS.
26. INSTALL DUNNY JOINTS WHERE RAMP, TURNING SPACES, FLARES, AND SIDEWALKS ADJUT.
27. CONSTRUCT DEPRESSED CURB SLOPE TO MATCH ROADWAY AS NEARLY AS POSSIBLE. DO NOT EXCEED 3.00% PER CROSS SLOPE RATE OF CHANGE WHEN TRANSITIONING TO ROADWAY PROFILE.
28. DO NOT SCORE OR MAKE GROOVES ON SLOPED SURFACES. LINES SHOWN ON DETAILS ARE FOR ILLUSTRATION ONLY. SEE NOTE 5.
29. THE DEPRESSED CURB MAY BE PLACED MONOLITHICALLY WITH CURB RAMP SIDE FLARES, OR BOTH. DO NOT PLACE DEPRESSED CURB MONOLITHICALLY WITH OTHER CEMENT CONCRETE SIDEWALK.

**COMMONWEALTH OF PENNSYLVANIA**  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF PROJECT DELIVERY

**CURB RAMPS AND SIDEWALKS**  
 NEW CONSTRUCTION OR  
 ALTERATION DETAILS  
 TYPE 1 CURB RAMPS AND  
 TYPICAL SECTIONS

RECOMMENDED FEB. 19, 2021  
 RECOMMENDED FEB. 19, 2021  
 SHEET 11 OF 14  
 PROJECT NUMBER: RC-67M  
 DESIGNER: [Signature]  
 CHECKED: [Signature]

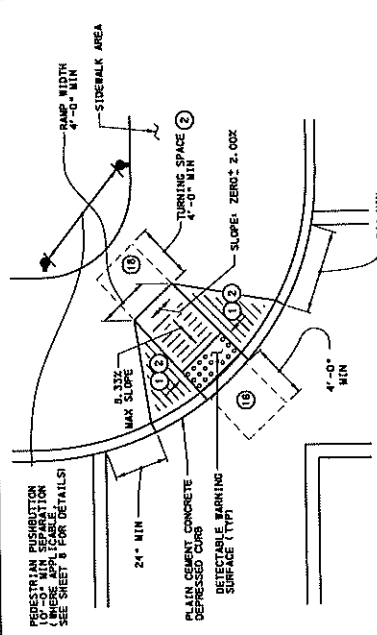


**EQUIVALENT SLOPES**

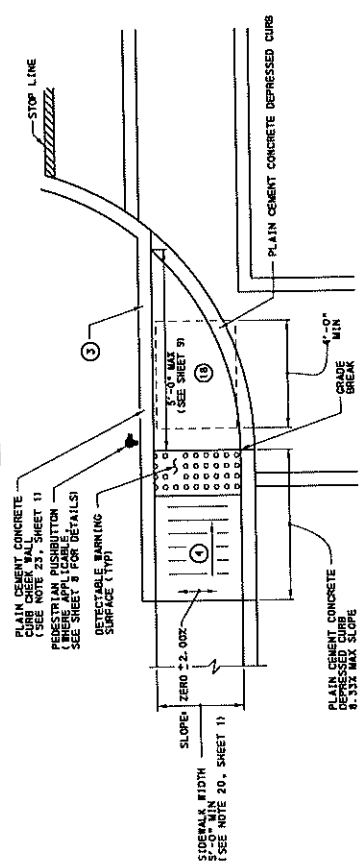
PERCENT SLOPE	EQUIVALENT SLOPE
10.00%	10:1
6.33%	14:1
5.00%	20:1
2.00%	50:1
1.00%	100:1

**EQUIVALENT SLOPES**

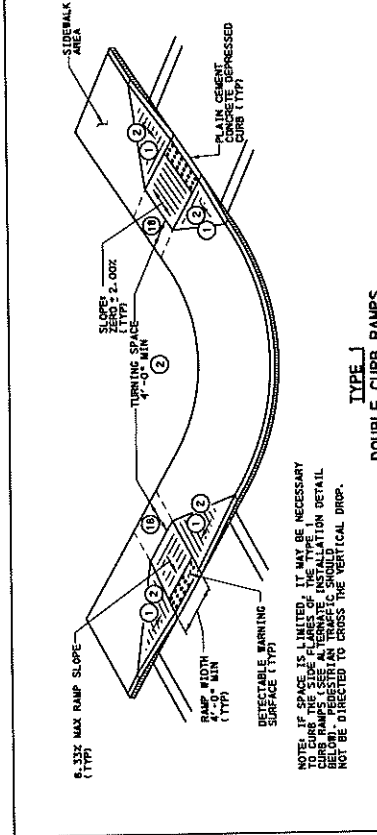




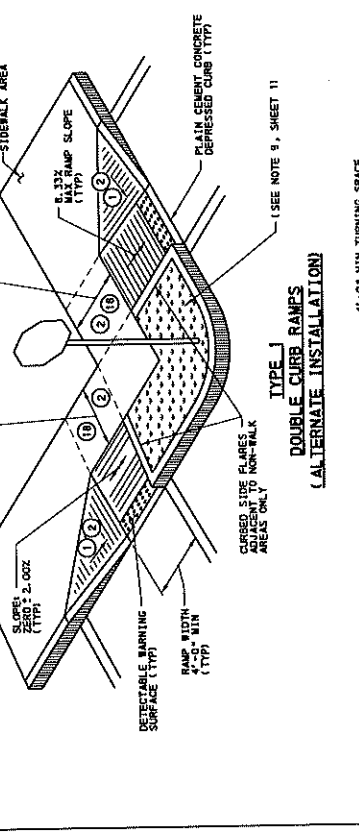
**TYPE J**  
**CURB RAMP**  
**(DIAGONAL - REQUIRES ASSISTANT**  
**DISTRICT EXECUTIVE APPROVAL)**



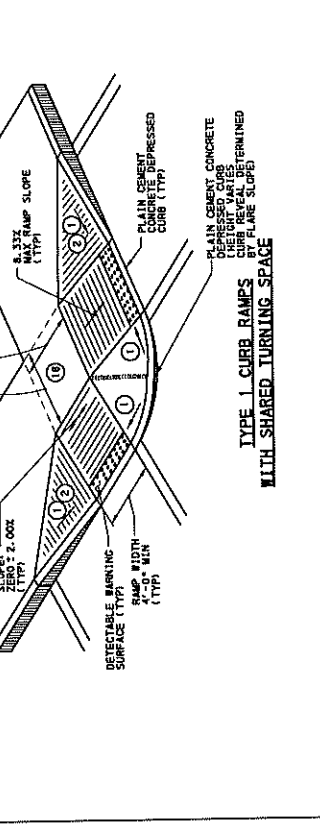
**TYPE 1A**  
**CURB RAMP**  
**ASSISTANT DISTRICT EXECUTIVE APPROVAL**  
**REQUIRED IF TURNING SPACE**  
**IS NOT ENTIRELY ON SIDEWALK**



**TYPE J**  
**DOUBLE CURB RAMP**  
**(PREFERRED INSTALLATION)**



**TYPE J**  
**DOUBLE CURB RAMP**  
**(ALTERNATE INSTALLATION)**



**TYPE 1 CURB RAMP**  
**WITH SHARED TURNING SPACE**

NOTE: IF SPACE IS LIMITED, IT MAY BE NECESSARY TO CONSTRUCT CURB RAMP WITH ALTERNATE INSTALLATION DETAIL BELOW. PEDESTRIAN TURNING SPACE SHOULD NOT BE DIRECTED TO CROSS THE VERTICAL DROP.

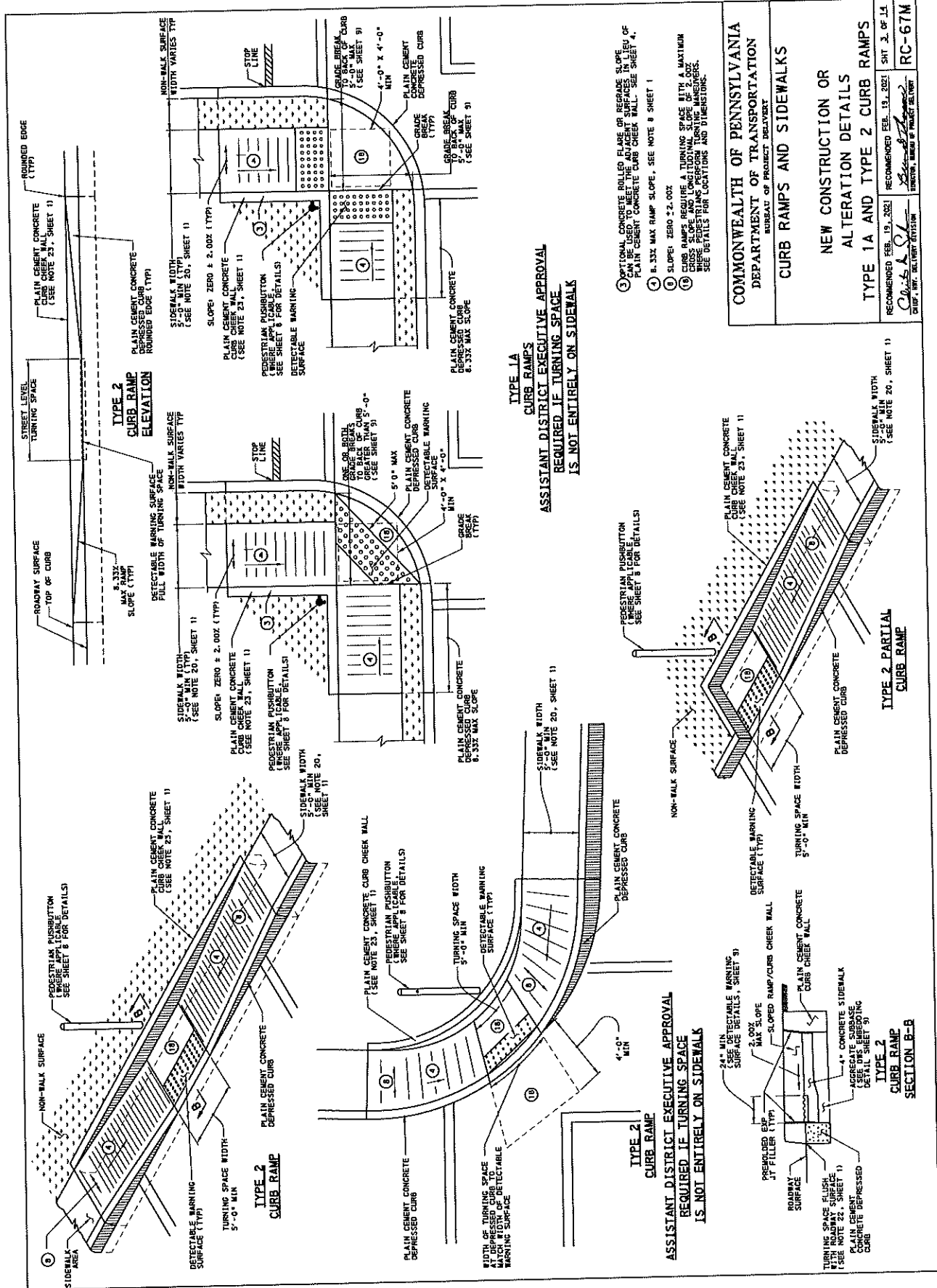
- ① SIDE FLARES 10.00% MAX SLOPE.
- ② IF THE TURNING SPACE IS INDICATED TO BE LESS THAN 4'-0", CONSTRUCT SIDE FLARES 6.33% MAX SLOPE.
- ③ OPTIONAL ROLLED CONCRETE SURFACE OR REGRADE SLOPE CAN BE USED TO MEET THE ADJACENT SURFACES IN LIEU OF A RETURN CURB CHEEK WALL.
- ④ 6.33% MAX RAMP SLOPE, SEE NOTE 8 SHEET 1.
- ⑤ CURB RAMP REQUIRE A TURNING SPACE WITH A MAXIMUM CROSS SLOPE OF 1% PERPENDICULAR TO TURNING MARKERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF PROJECT DELIVERY  
CURB RAMPS AND SIDEWALKS

NEW CONSTRUCTION OR  
ALTERATION DETAILS  
TYPE 1 AND TYPE 1A CURB RAMPS

RECOMMENDED FEB. 13, 2021  
RECOMMENDED FEB. 13, 2021  
SHT. 2 OF 12

RC-67M



- ③ OPTIONAL CONCRETE ROLLED OR REGRADE SLOPE CAN BE USED TO MEET THE ADJACENT SURFACES IN LIEU OF PLAIN CEMENT CONCRETE CURB CHEEK WALL. SEE SHEET 4.
- ④ 0.33% MAX RAMP SLOPE. SEE NOTE 8 SHEET 1
- ⑤ SLOPE: ZERO ± 2.00%
- ⑥ CURB RAMPS REQUIRE A TURNING SPACE WITH A MAXIMUM OF 5'-0" MIN TURNING SPACE FOR TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.

COMMONWEALTH OF PENNSYLVANIA  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF PROJECT DELIVERY

CURB RAMPS AND SIDEWALKS

NEW CONSTRUCTION OR ALTERATION DETAILS  
 TYPE 1A AND TYPE 2 CURB RAMPS

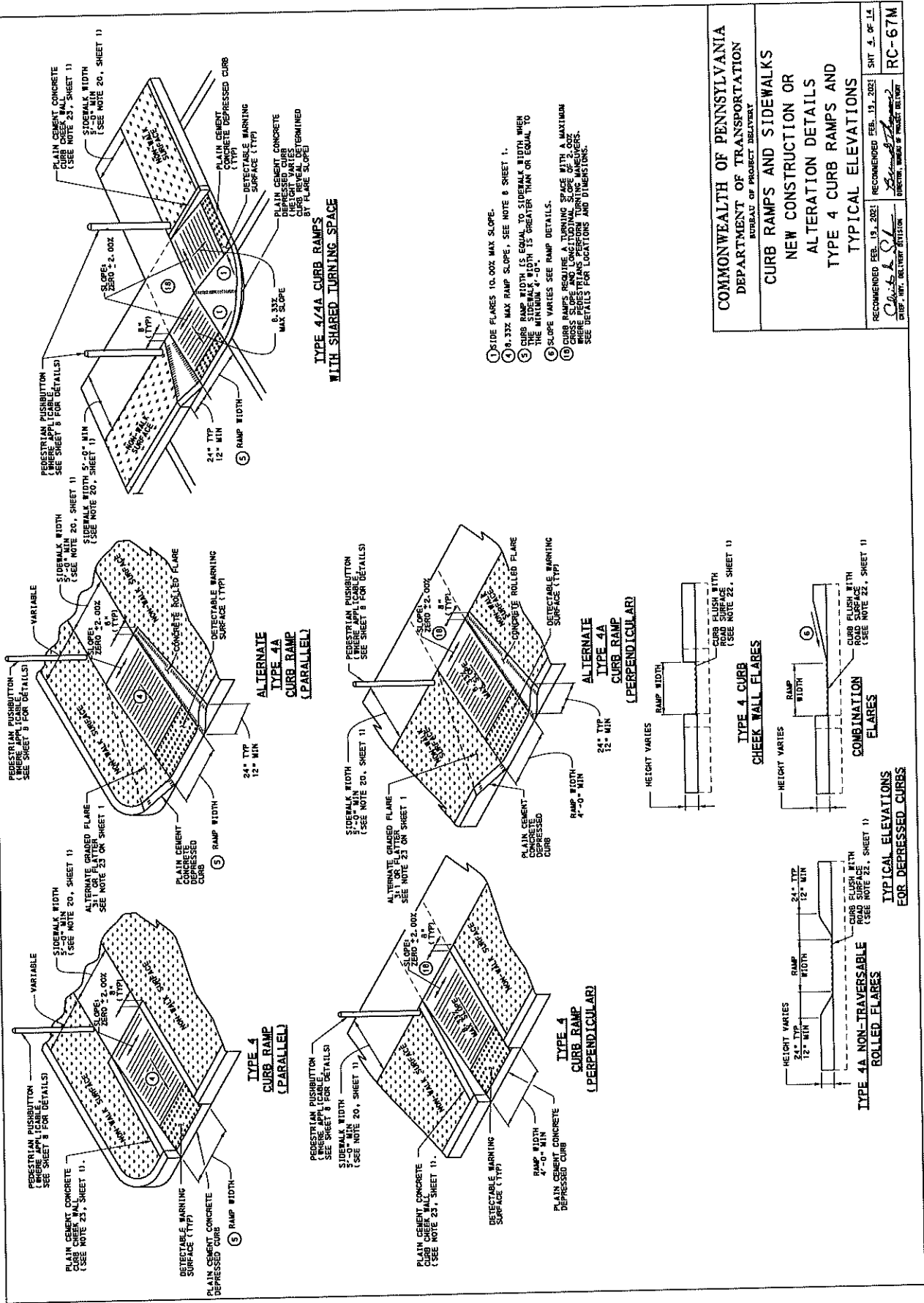
RECOMMENDED FEB. 19, 2021  
 RECOMMENDED FEB. 19, 2021  
 SHT. 3. OF 14  
 RC-67M

TYPE 1A  
 CURB RAMPS  
 ASSISTANT DISTRICT EXECUTIVE APPROVAL  
 REQUIRED IF TURNING SPACE  
 IS NOT ENTIRELY ON SIDEWALK

TYPE 2  
 CURB RAMP  
 ASSISTANT DISTRICT EXECUTIVE APPROVAL  
 REQUIRED IF TURNING SPACE  
 IS NOT ENTIRELY ON SIDEWALK

TYPE 2 PARTIAL  
 CURB RAMP

TYPE 2  
 CURB RAMP  
 SECTION B-B



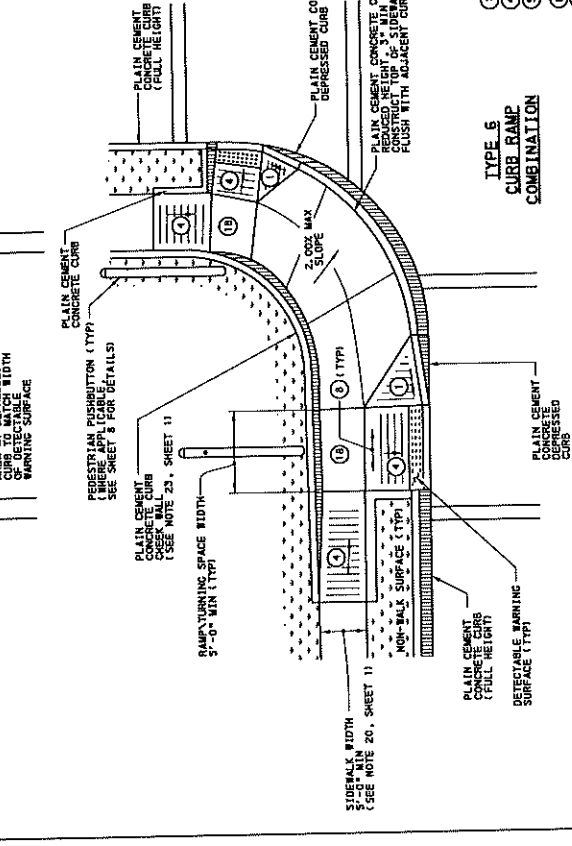
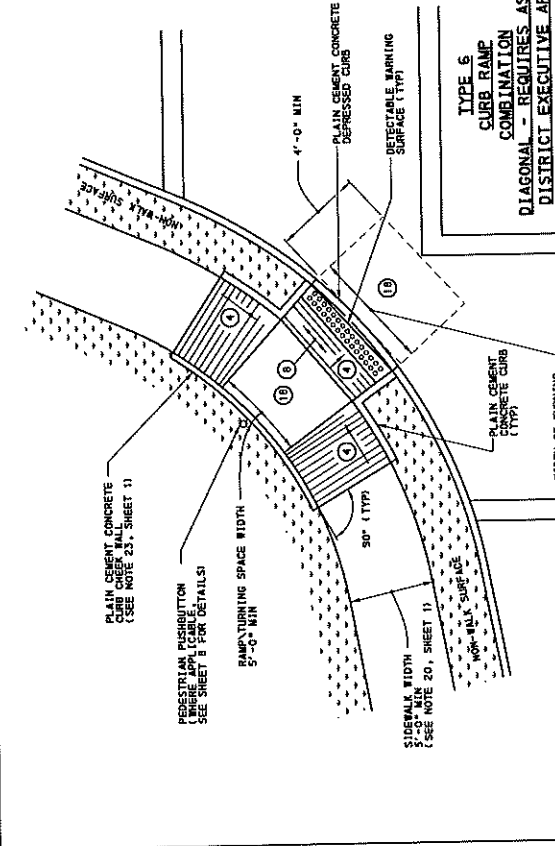
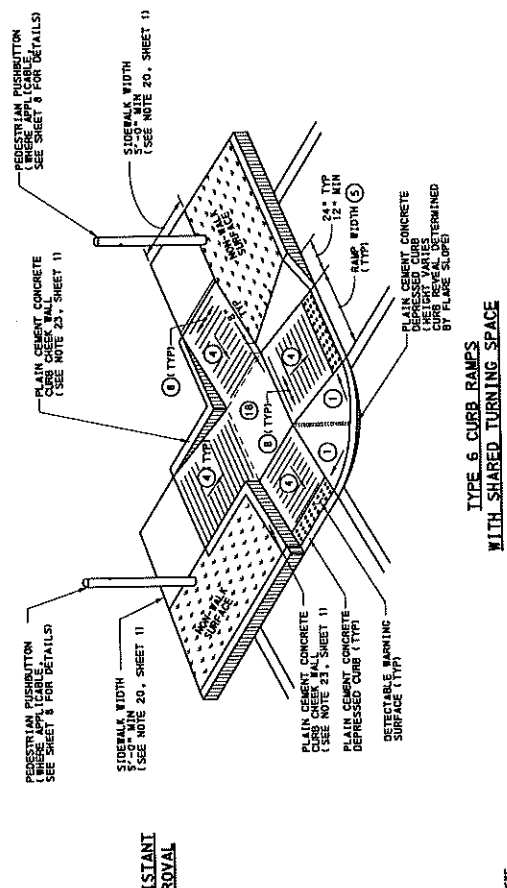
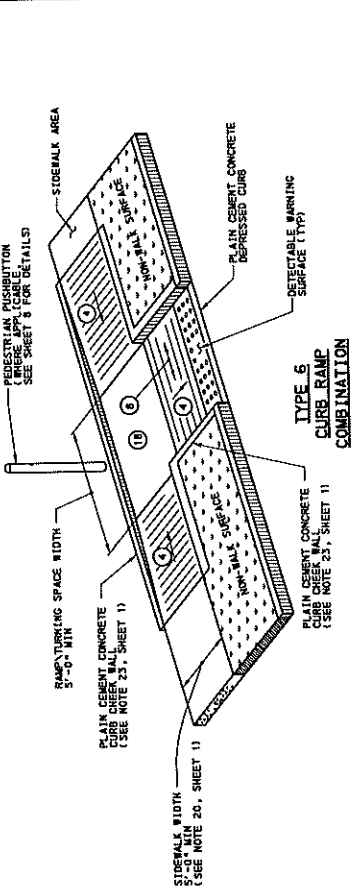
**COMMONWEALTH OF PENNSYLVANIA**  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF PROJECT DELIVERY

**CURB RAMPS AND SIDEWALKS**  
 NEW CONSTRUCTION OR  
 ALTERATION DETAILS  
 TYPE 4 CURB RAMPS AND  
 TYPICAL ELEVATIONS

RECOMMENDED FEB. 19, 2002    RECOMMENDED FEB. 19, 2002    SH1 4 OF 14  
*Charles A. O'Neil*    *Blair J. Higgins*  
 CHIEF - INT. DELIVERY DIVISION    DIRECTOR, BUREAU OF PROJECT DELIVERY

- ① SIDE FLARES 10.00% MAX SLOPE.
- ② 0.33% MAX RAMP SLOPE. SEE NOTE 5.
- ③ CURB RAMP WIDTH IS EQUAL TO SIDEWALK WIDTH WHEN THE SIDEWALK WIDTH IS GREATER THAN OR EQUAL TO THE MINIMUM 4'-0".
- ④ SLOPE VARIES SEE RAMP DETAILS.
- ⑤ CURB RAMPS REQUIRE A TURNING SPACE WITH A MAXIMUM CROSS SLOPE OF 2% FOR SIDEWALK TURNING MARKERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.

**TYPICAL ELEVATIONS FOR DEPRESSED CURBS**



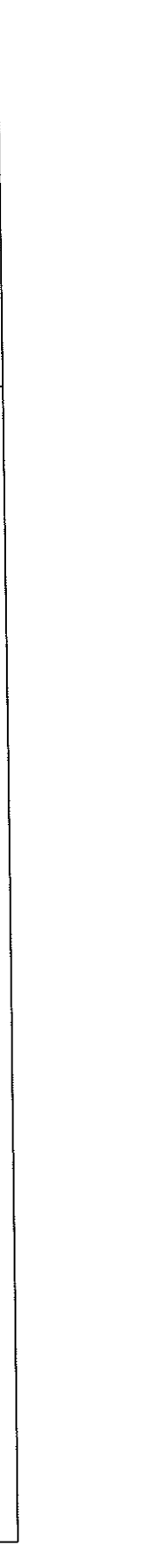
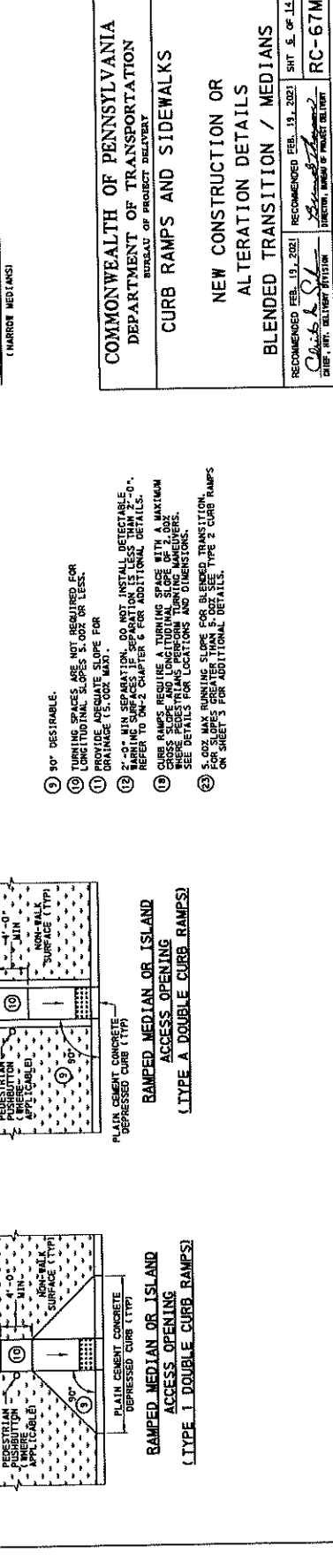
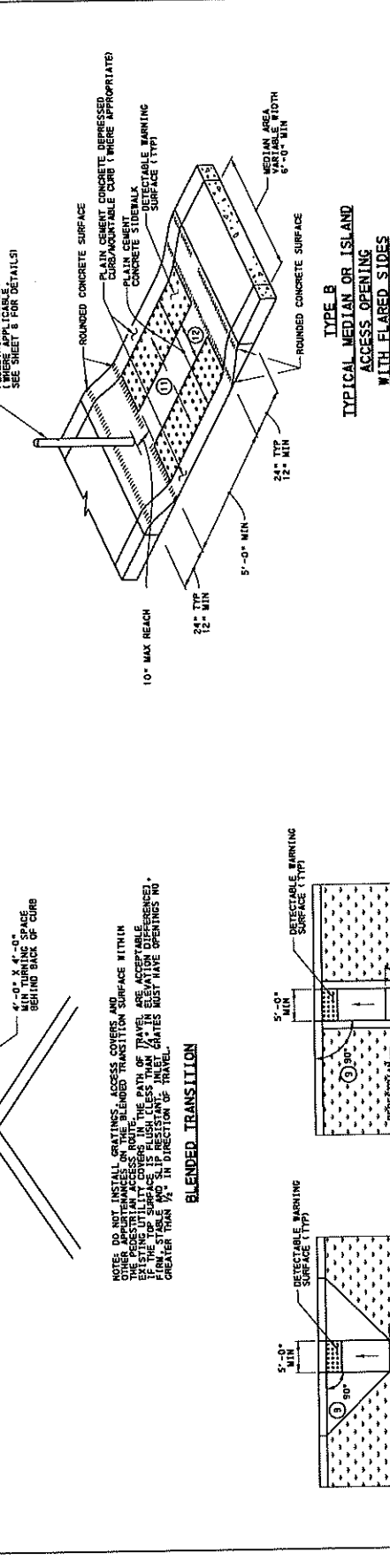
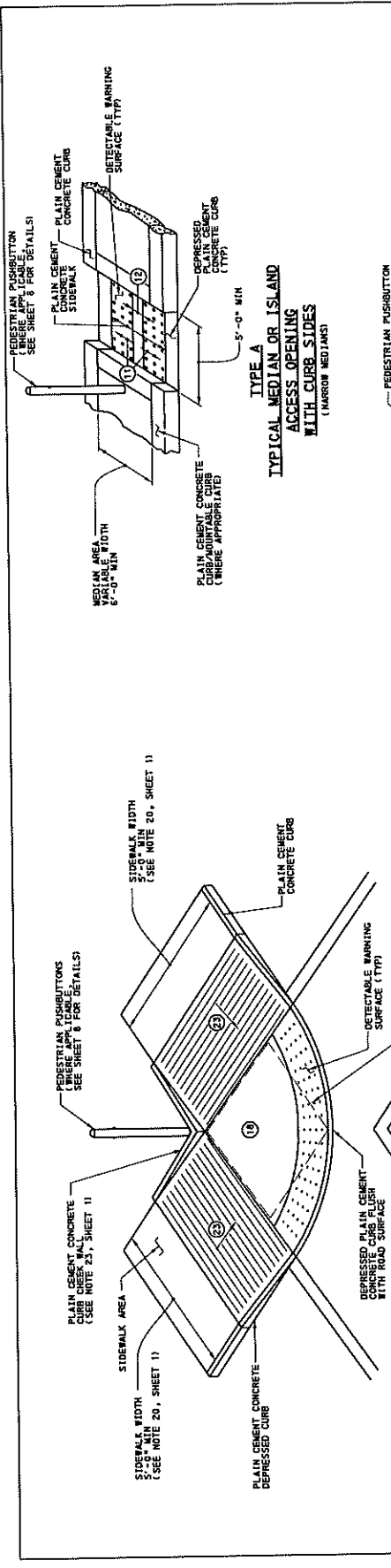
- ① SIDE FLARES 10.00% MAX SLOPE.
- ② 0.33% MAX RAMP SLOPE, SEE NOTE & SHEET 1.
- ③ CURB RAMP WIDTH IS EQUAL TO SIDEWALK WIDTH WHEN THE SIDEWALK WIDTH IS GREATER THAN OR EQUAL TO 4'-0".
- ④ SLOPE ZERO ± 2.00%.
- ⑤ CURB RAMP REQUIRE A TURNING SPACE WITH A MAXIMUM WIDTH OF 24" MIN. WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.

**COMMONWEALTH OF PENNSYLVANIA**  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF PROJECT DELIVERY

**CURB RAMPS AND SIDEWALKS**

**NEW CONSTRUCTION OR ALTERATION DETAILS**  
**TYPE 6 CURB RAMPS**

RECOMMENDED FEB. 15, 2021  
 SHEET 5 OF 14  
 RC-67M



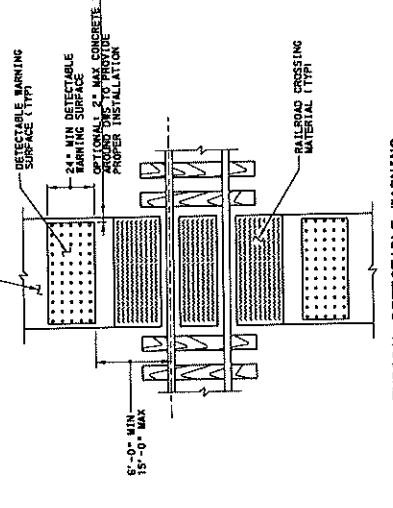
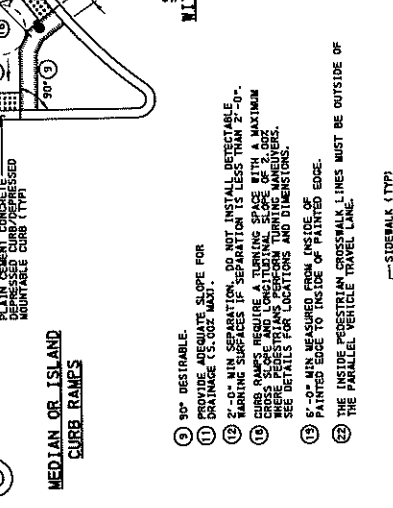
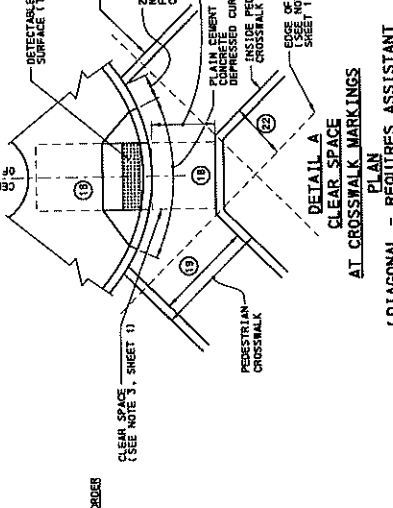
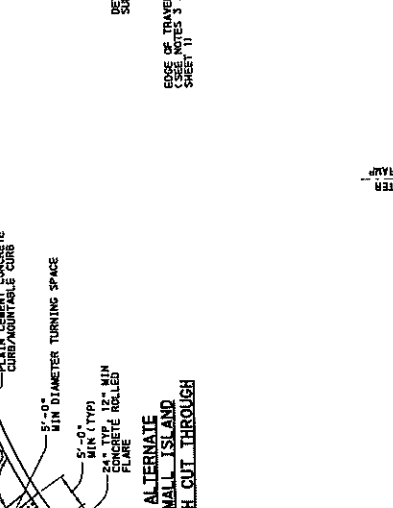
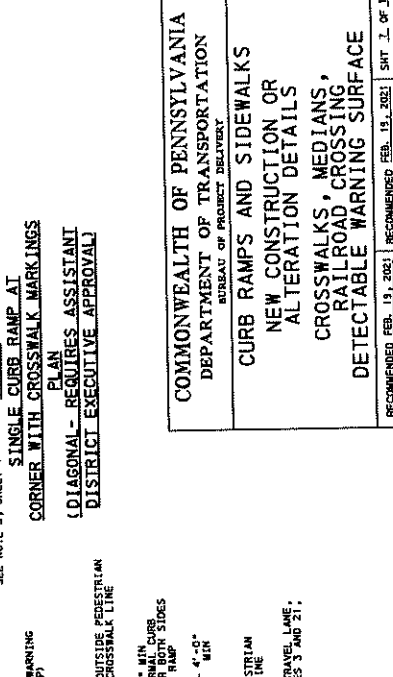
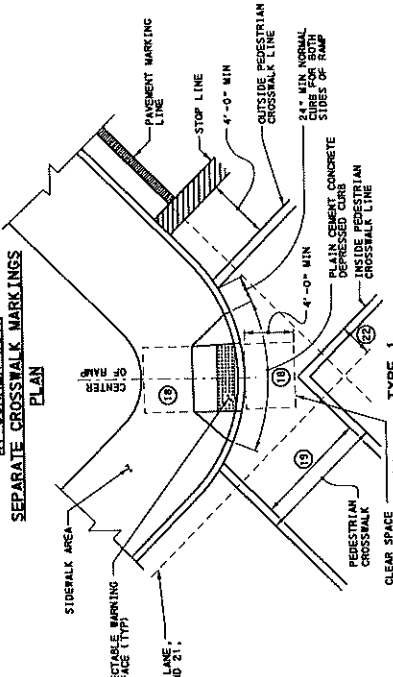
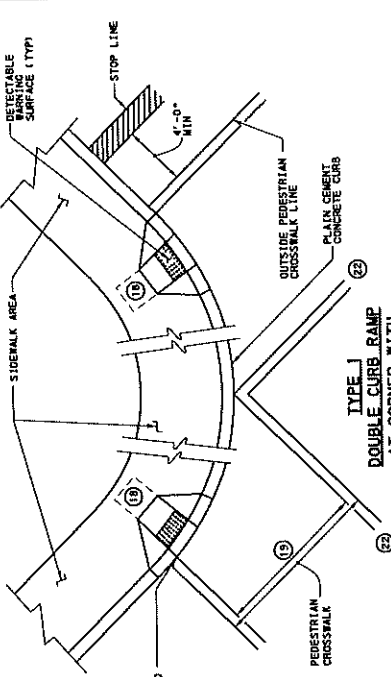
NOTES: DO NOT INSTALL GRATINGS, ACCESS COVERS AND OTHER APERTURES ON THE BLENDED TRANSITION SURFACE WITHIN EXISTING UTILITY COVERS IN THE PATH OF TRAVEL, ARE ACCEPTABLE IF THE TOP SURFACE IS FLUSH WITH THE GRATES. GRATES MUST HAVE OPENINGS NO GREATER THAN 1/2" IN DIRECTION OF TRAVEL.

- ① 90° DESIRABLE.
- ② TURNING SPACES ARE NOT REQUIRED FOR LONGITUDINAL SLOPES 5.00% OR LESS.
- ③ DRAINAGE SLOPES SHALL BE AS SHOWN.
- ④ 2'-0" MIN SEPARATION, DO NOT INSTALL DETECTABLE WARNING SURFACES IF SEPARATION IS LESS THAN 2'-0". REFER TO DM-2 CHAPTER 6 FOR ADDITIONAL DETAILS.
- ⑤ CURB RAMPS REQUIRE A TURNING SPACE WITH A MAXIMUM CROSS SECTIONAL AREA FROM TURNING MARKERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.
- ⑥ 5.00% MAX RUNNING SLOPE FOR BLENDED TRANSITION. FOR SLOPES GREATER THAN 5.00% SEE TYPE 2 CURB RAMPS ON SHEET 3 FOR ADDITIONAL DETAIL.

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF PROJECT DELIVERY

NEW CONSTRUCTION OR ALTERATION DETAILS  
BLENDED TRANSITION / MEDIANS

RECOMMENDED FEB. 19, 2021  
RECOMMENDED FEB. 19, 2021  
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**FOR CURB RAMPS THAT LEAD TO A SINGLE CROSSWALK, FLARES TO BE FULLY INSIDE OF MARKED CROSSWALK LINES**

**TYPE J DOUBLE CURB RAMP AT CORNER WITH SEPARATE CROSSWALK MARKINGS PLAN**

**TYPE I SINGLE CURB RAMP AT CORNER WITH CROSSWALK MARKINGS PLAN**

**DETAIL A AT CROSSWALK MARKINGS PLAN**

**TYPICAL DETECTABLE WARNING SURFACE AT RAILROAD CROSSING**

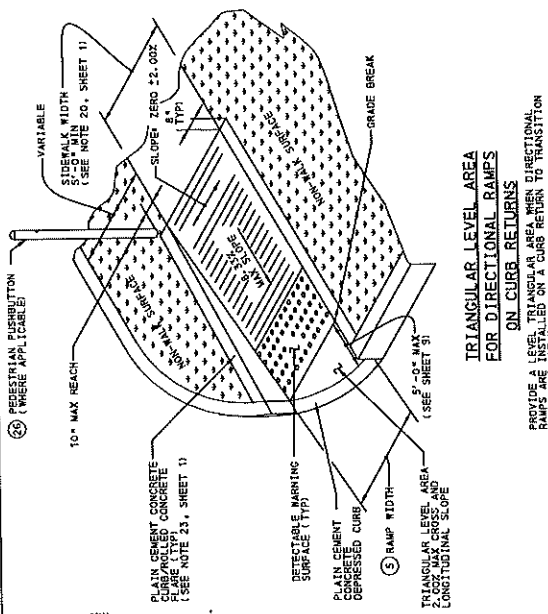
- ① 30° DETECTABLE SURFACE (TYP)
- ② 24" MIN DETECTABLE MARKING SURFACE
- ③ 24" MIN DETECTABLE MARKING SURFACE
- ④ 24" MIN DETECTABLE MARKING SURFACE
- ⑤ 24" MIN DETECTABLE MARKING SURFACE
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COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF PRODUCT DELIVERY

NEW CONSTRUCTION OR ALTERATION DETAILS  
CURB RAMPS AND SIDEWALKS  
RAILROAD CROSSING  
DETECTABLE WARNING SURFACE

RECOMMENDED FEB. 15, 2021  
RECOMMENDED FEB. 15, 2021  
SHT. 1 OF 14  
RC-67M

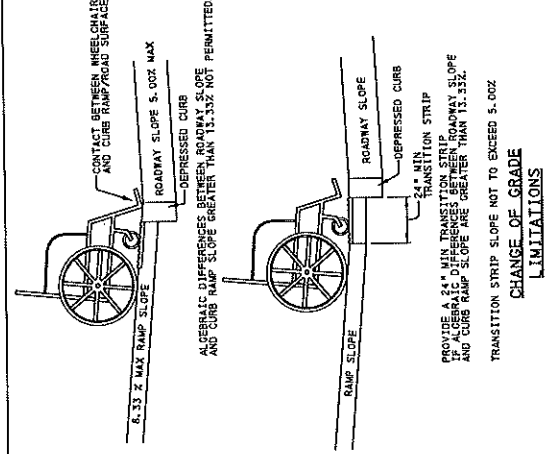
CHIEF, INT. DESIGN DIVISION  
DIRECTOR, BUREAU OF PRODUCT DELIVERY



**TRIANGULAR LEVEL AREA FOR DIRECTIONAL RAMPS ON CURB RETURNS**

PROVIDE A LEVEL TRIANGULAR AREA WHEN DIRECTIONAL RAMPS ARE INSTALLED ON A CURB RETURN TO TRANSITION THE GRADE BREAK.

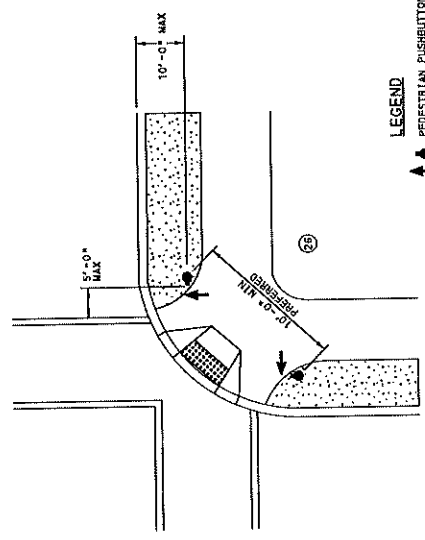
- ① CURB RAMP WIDTH IS EQUAL TO SIDEWALK WIDTH WHEN 4'-0". THE SIDEWALK WIDTH IS GREATER THAN ON EACH 19'-0".
- ② NEW CONSTRUCTION MUST COMPLY WITH THE PROVISIONS TO THE MAXIMUM EXTENT FEASIBLE, AS FOLLOWS:
  - ADJACENT TO A LEVEL NON-SLIP SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS A NON-SLIP WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.
  - WITHIN 5'-0" OF THE CROSSWALK EXTENDED.
  - BETWEEN 1'-6" AND 10'-0" OF THE EDGE OF CURB, SHOULDER OR PAVEMENT.
  - PARALLEL TO THE CROSSWALK TO BE USED.



**CHANGE OF GRADE LIMITATIONS**

TRANSITION STRIP SLOPE NOT TO EXCEED 5.00%

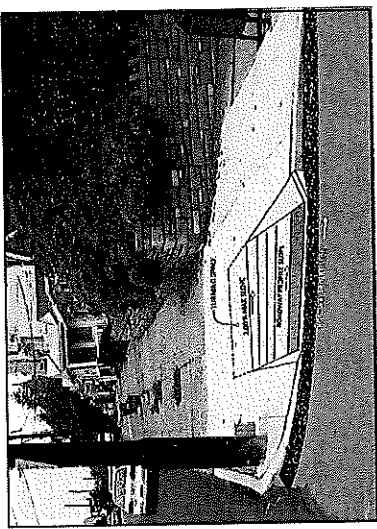
**RECOMMENDED PUSHBUTTON LOCATIONS**



**LEGEND**

▲ PEDESTRIAN PUSHBUTTON

**RECOMMENDED PUSHBUTTON LOCATIONS**



**RAMP CROSS SLOPE TRANSITION TO MATCH ROADWAY PROFILE SLOPE**

- SLOPES SHOWN ARE FOR ILLUSTRATION ONLY.
- TRANSITION CURB RAMP CROSS SLOPE TO MATCH ROADWAY PROFILE IS GRADUALLY AS POSSIBLE. DO NOT EXCEED 3.00% PER 1'-0" CROSS SLOPE RATE OF CHANGE WHEN TRANSITIONING TO ROADWAY PROFILE.
- COMPLETE TRANSITION SLOPE OR USE 1'-6" DETECTABLE WARNING SURFACE TILES.
- CONSTRUCT DEPRESSED CURB SLOPE TO MATCH ROADWAY PROFILE.

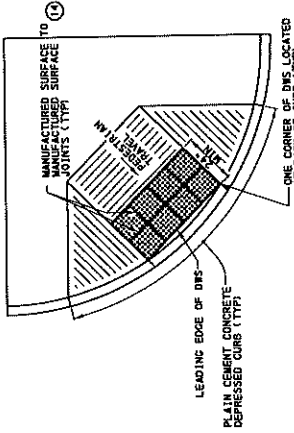
**COMMONWEALTH OF PENNSYLVANIA**  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF PROJECT DELIVERY

**CURB RAMPS AND SIDEWALKS**  
 NEW CONSTRUCTION OR ALTERATION DETAILS  
 PUSHBUTTONS, TRIANGULAR LEVEL AREA, CHANGE OF GRADE AND CROSS SLOPE TRANSITIONS

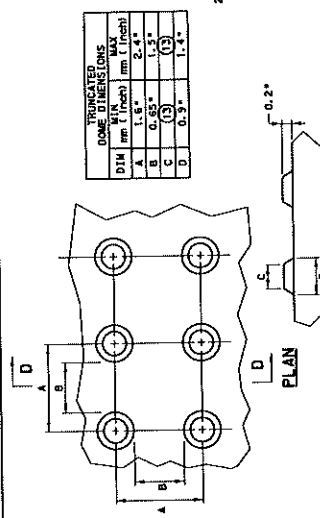
RECOMMENDED FEB. 19, 2021  
 PREPARED BY: *Charles A. O'Neil*  
 CHECKED BY: *Charles A. O'Neil*  
 REVISIONS: NONE AT THIS TIME

SHEET 3 OF 14  
 RC-67M

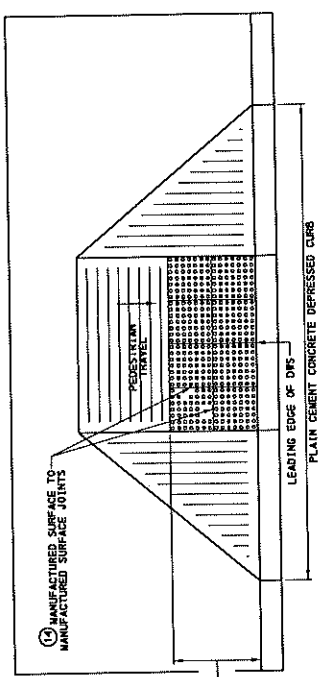
SEE NOTE 3 ON SHEET 1 CONCERNING DIAGONAL RAMPS



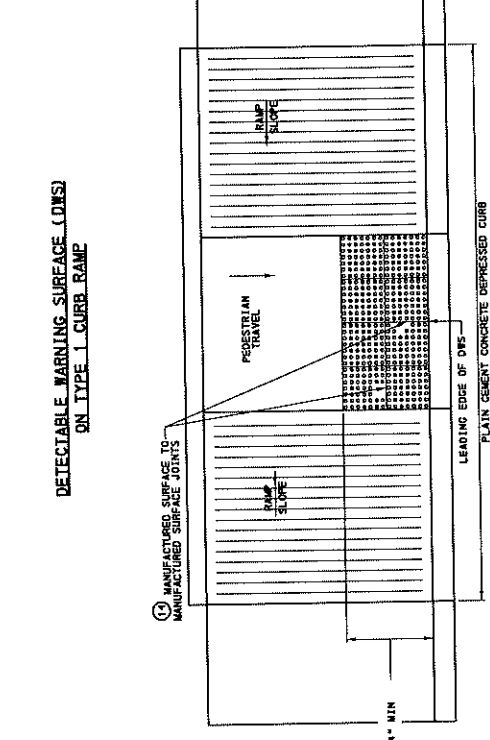
21 GRADE BREAK TO BACK OF CURB LESS THAN 9'-0"



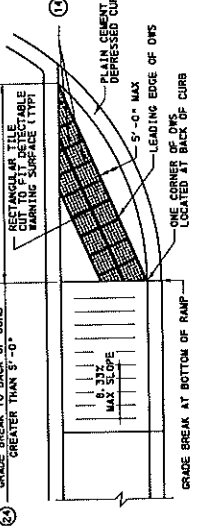
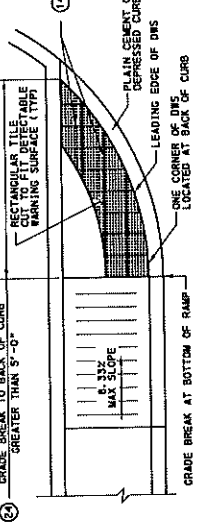
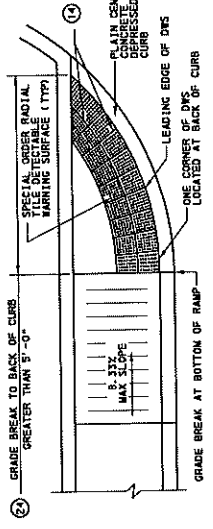
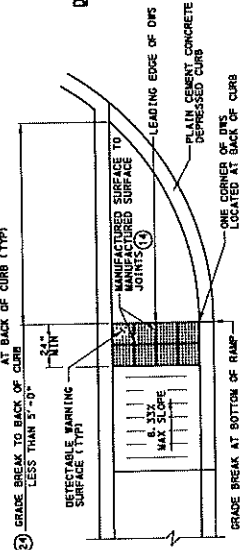
DETECTABLE WARNING SURFACE (DWS) TRUNCATED DOME DETAILS



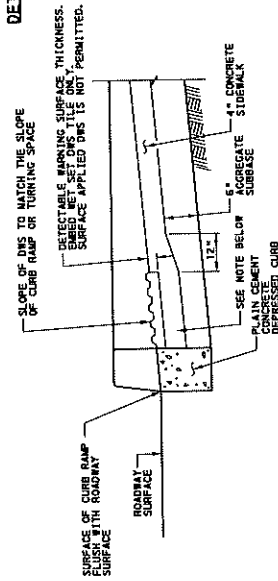
DETECTABLE WARNING SURFACE (DWS) ON TYPE 1 CURB RAMP



DETECTABLE WARNING SURFACE (DWS) ON TYPE 2 CURB RAMP



DETECTABLE WARNING SURFACE (DWS) ON CURVED SURFACES



NOTES:  
CONSTRUCT NOTCH AS SHOWN TO PROVIDE FULL THICKNESS SIDEWALK UNDER DETECTABLE WARNING SURFACE.  
OPTIONAL - CONSTRUCT 2" MAX CONCRETE SYSTEM PROVISION ACCESS AREAS' DETAIL ON SHEET 14, FOR PLAN VIEW DETAILS.

DETECTABLE WARNING SURFACE EMBEDDING DETAIL

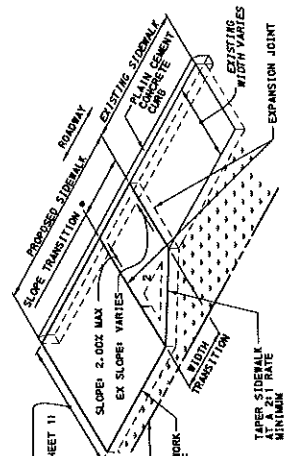
COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF PROJECT DELIVERY

NEW CONSTRUCTION OR ALTERATION DETAILS  
DETECTABLE WARNING SURFACE  
CURB RAMPS AND SIDEWALKS

RECOMMENDED FEB. 19, 2021  
RECOMMENDED FEB. 13, 2021

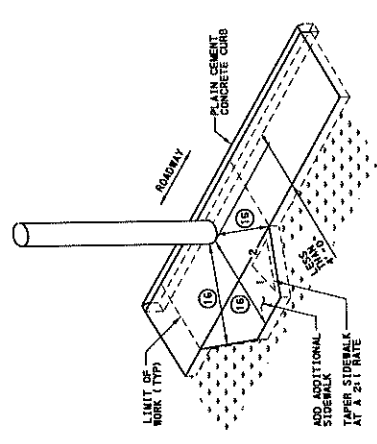
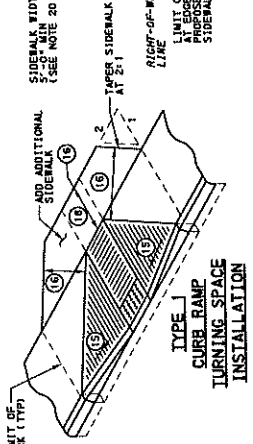
RC-67M





**TRANSITION TO EXISTING SIDEWALK DETAIL**

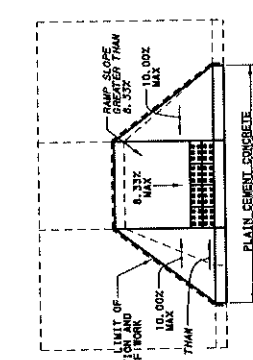
• MINIMUM SIDEWALK TRANSITION LENGTH BASED ON THE DIFFERENCE OF PROPOSED SIDEWALK CROSS SLOPE AND EXISTING SIDEWALK LENGTH TO BE DETERMINED BY THE FOLLOWING FORMULA:  
 $\Delta X \times \text{SLOPE} \times 0.5'$   
 THE MINIMUM WIDTH TRANSITION SHALL BE CALCULATED USING THE FOLLOWING FORMULA:  
 $\frac{\text{EXISTING SIDEWALK WIDTH} \times 2}{\text{SLOPE}}$   
 EITHER THE SLOPE TRANSITION OR WIDTH TRANSITION WILL CONTROL THE LENGTH OF SIDEWALK TRANSITION.  
 TRANSITION AREAS SERVE AS TEMPORARY CONNECTIONS OF THE PAVED SURFACE. THE PAVED SURFACE OF EXISTING SIDEWALK SHALL INCLUDE REMOVING THE TRANSITION AREA AND CONSTRUCTING A FULLY COMPLIANT SIDEWALK.



**SIDEWALK ADDITION DUE TO OBSTRUCTIONS**

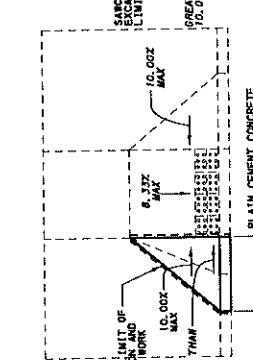
**DETECTABLE WARNING SURFACE (DWS) INSTALLATION INSTRUCTIONS**

1. SAW CUT EXISTING CURB RAMP SURFACE WHERE THE DWS WILL BE PLACED.
2. REMOVE EXISTING CONCRETE FROM THIS AREA.
3. REPLACE AND COMPACT ANY DISTURBED AGGREGATE SUBBASE.
4. PLACE NET CEMENT CONCRETE AND LEVEL TO A 4 INCH DEPTH SO THAT THE TOP OF THE CONCRETE IS EQUIVALENT TO THE EMBEDDING DEPTH OF THE DWS MATERIAL.
5. LAY OUT AND PROPERLY FIT EACH UNIT PRIOR TO SETTING IN NET CONCRETE.
6. CUT UNITS AS NECESSARY ALONG PERIMETER OF DETECTABLE WARNING SURFACE.
7. PLACE UNITS ACROSS THE ENTIRE WIDTH OF THE CURB RAMP SURFACE AND/OR WHERE THE CURB IS CONCRETE.
8. FILL UNITS INTO FULL CONTACT WITH THE FRESH CONCRETE.
9. ADJUST HEIGHT OF EACH UNIT EDGE TO BE LEVEL WITH ADJACENT RAMP SURFACES.
10. ONLY TRUNCATED DOMES SHOULD BE ABOVE THE ADJACENT FINISHED CONCRETE.
11. FILL ANY SAW CUT GAPS WITH APPROVED JOINT SEALANT MATERIAL.



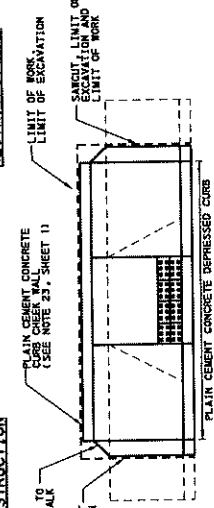
**TOTAL RAMP RECONSTRUCTION**

DETAIL ILLUSTRATES CURB RAMP (INCLUDING FLARES) REPLACEMENT.



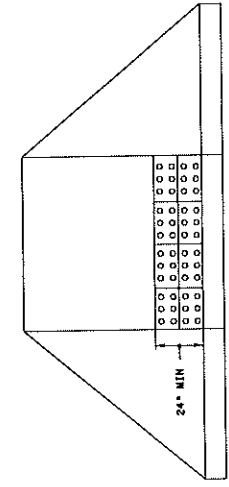
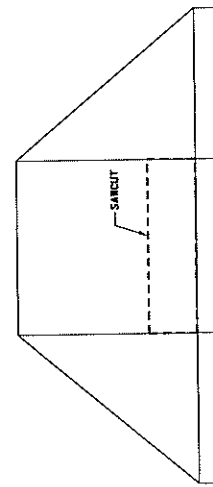
**SIDE FLARE RECONSTRUCTION**

DETAIL ILLUSTRATES FLARE REMOVAL AND REPLACEMENT.



**TOTAL RAMP RECONSTRUCTION (CURB TYPE CHANGE)**

DETAIL ILLUSTRATES A TYPE 1 EXISTING RAMP REPLACED WITH A TYPE 2 RAMP. USE THIS DETAIL AS AN EXAMPLE TO REPLACE ANY RAMP WITH A DIFFERENT CURB RAMP TYPE.



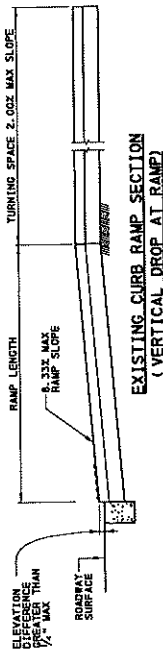
**DETECTABLE WARNING SURFACE (DWS) INSTALLATION DETAIL**

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**DEPARTMENT OF TRANSPORTATION**  
 BUREAU OF PROJECT DELIVERY

**CURB RAMPS AND SIDEWALKS**

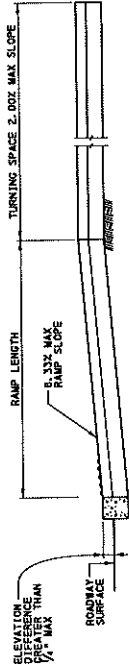
**ALTERATION DETAILS**

RECOMMENDED FEB. 19, 2021  
 RECOMMENDED FEB. 15, 2021  
 SHT. 10 OF 12  
 RC-67M



**EXISTING CURB RAMP SECTION  
(VERTICAL DROP AT RAMP)**

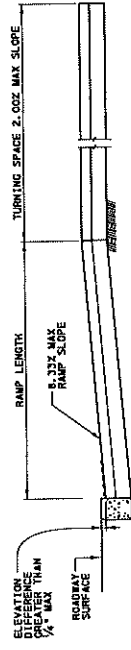
RECOMMENDED CORRECTION FOR PORTIONS OF RAMP, TURNING SPACES AND FLARES WHERE APPLICABLE (SEE RAMP RECONSTRUCTION DETAIL ON SHEET 101.)



**EXISTING CURB RAMP SECTION  
(VERTICAL DROP AT ROAD SURFACE)**

RECOMMENDED CORRECTION FOR PORTIONS OF RAMP, TURNING SPACES AND FLARES WHERE APPLICABLE (SEE RAMP RECONSTRUCTION DETAIL ON SHEET 101.)

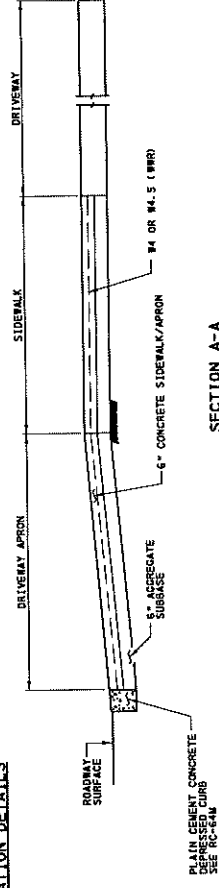
ALTERNATE CORRECTION TO PROVIDE A MAX SLOPE OF 0.33%. FINISHED SURFACE MUST NOT HAVE ELEVATION DIFFERENCES GREATER THAN 1/4".



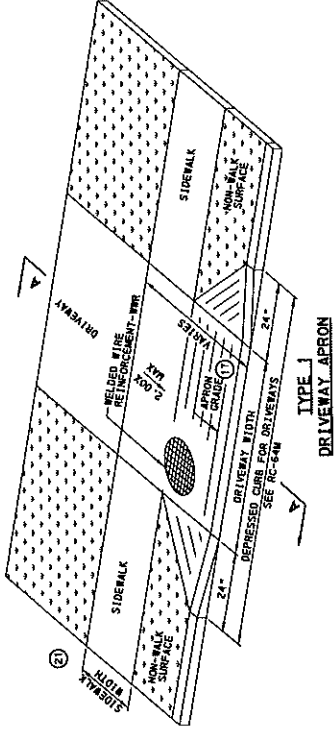
**EXISTING CURB RAMP SECTION  
(RAMP SETTLEMENT)**

RECOMMENDED CORRECTION FOR PORTIONS OF RAMP, TURNING SPACES AND FLARES WHERE APPLICABLE (SEE RAMP RECONSTRUCTION DETAIL ON SHEET 101.)

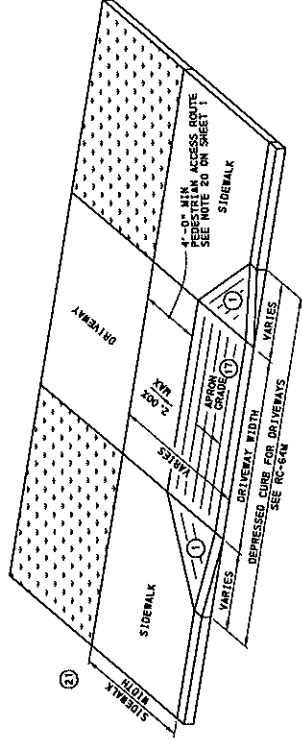
**ALTERATION DETAILS**



**SECTION A-A  
TYPICAL CROSS SECTION FOR SIDEWALKS  
THROUGH DRIVEWAYS**



**TYPE I  
DRIVEWAY APRON**



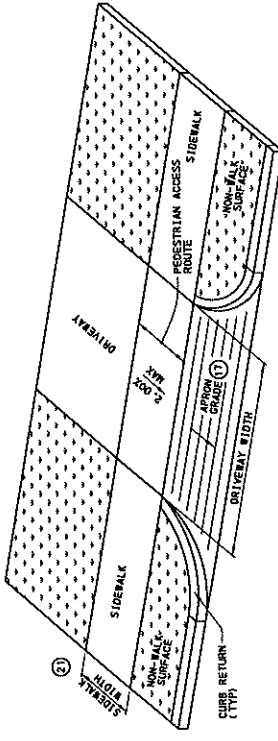
**TYPE IA  
DRIVEWAY APRON**

- ① SIDE FLARES 10.00% MAX SLOPE.
- ② 0.00% MAX CHANGE IN GRADE BETWEEN ROAD SURFACE AND SIDEWALK. SEE NOTE 20 ON SHEET 11.
- ③ 4'-0" MIN PEDESTRIAN ACCESS ROUTE. SEE NOTE 20 ON SHEET 11.

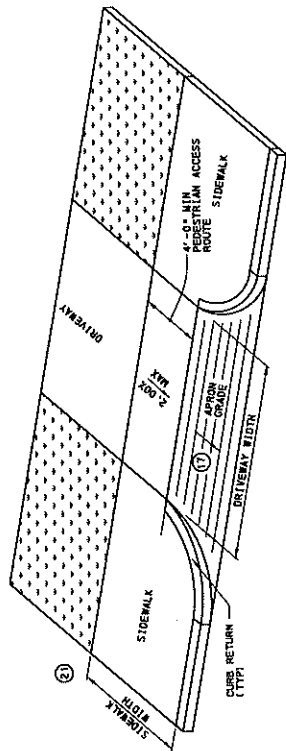
**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF PROJECT DELIVERY**

**CURB RAMPS AND SIDEWALKS**

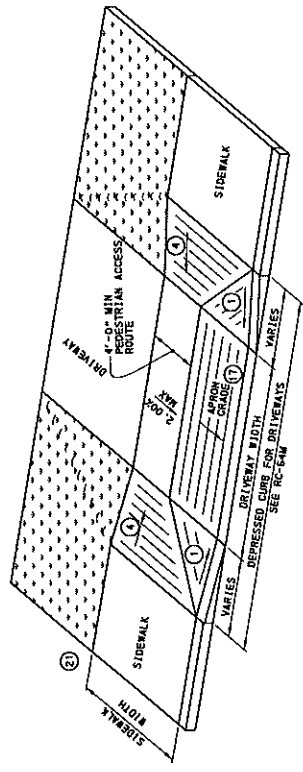
**ALTERATION DETAILS  
AND DRIVEWAY APRONS**



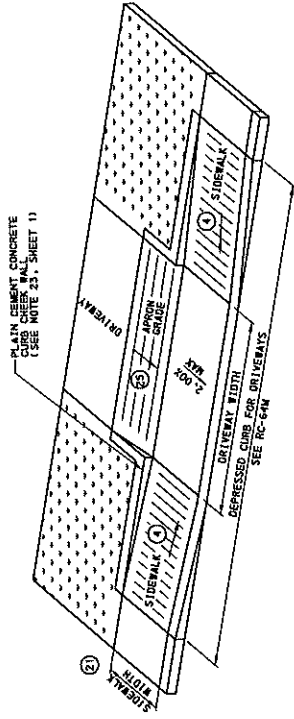
TYPE 2  
DRIVEWAY APRON



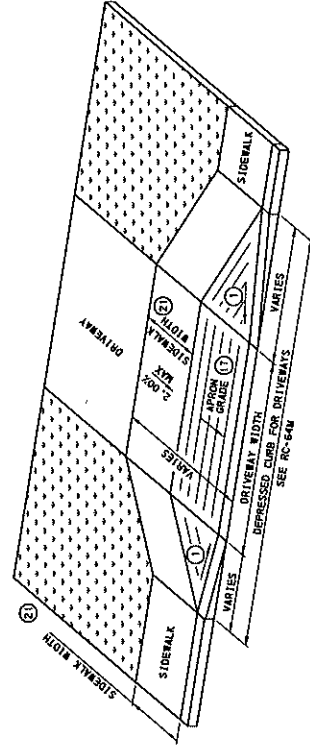
TYPE 2A  
DRIVEWAY APRON



TYPE 3  
DRIVEWAY APRON



TYPE 3A  
DRIVEWAY APRON



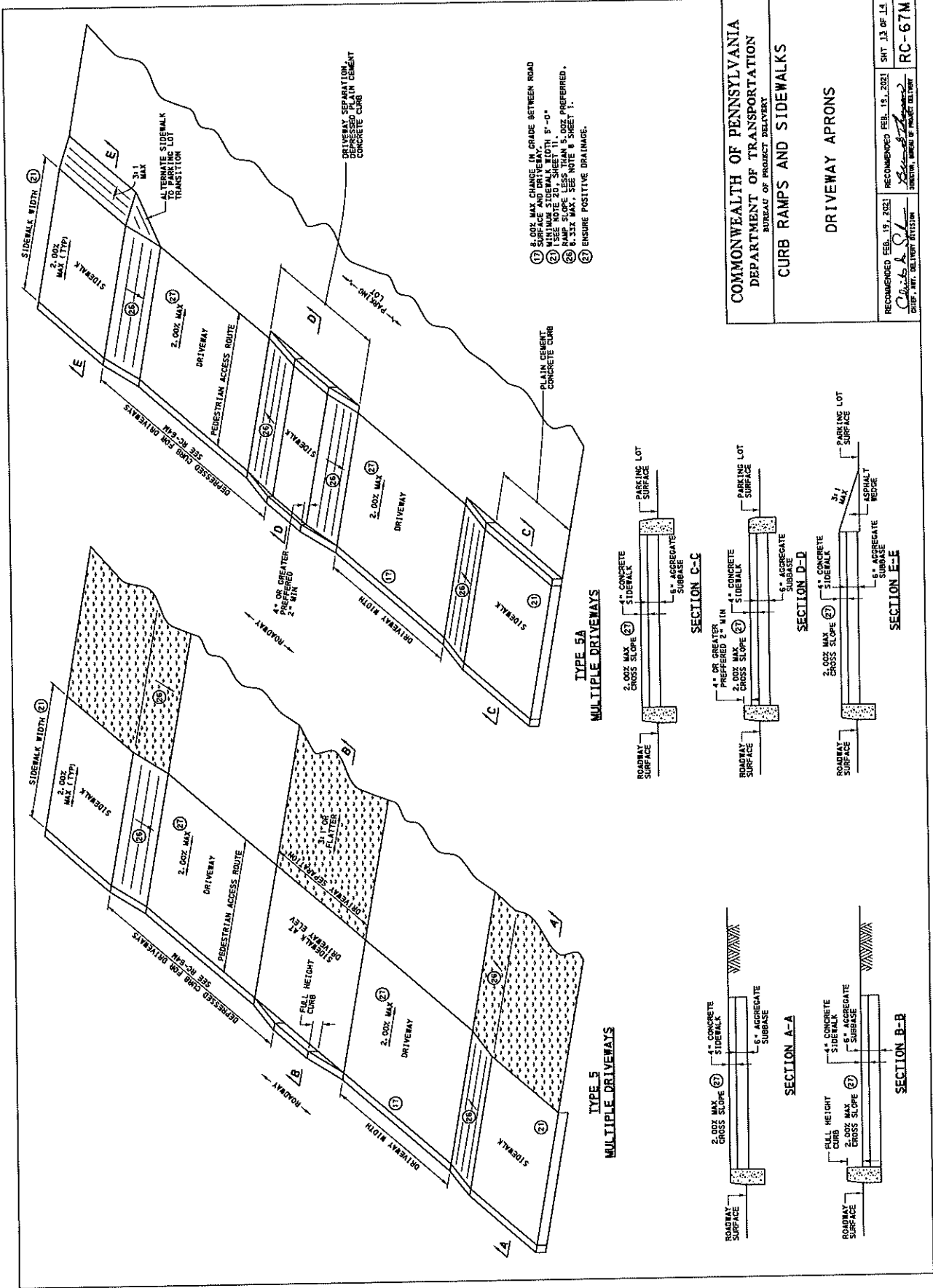
TYPE 4  
DRIVEWAY APRON

- ① SIDE FLARES 10.00% MAX SLOPE.
- ② 0.33% MAX RAMP SLOPE. SEE NOTE 9 SHEET 1.
- ③ 0.00% MAX CHANGE IN GRADE BETWEEN ROAD SURFACE AND DRIVEWAY.
- ④ MINIMUM SIDEWALK WIDTH 5'-0" (SEE NOTE 20, SHEET 1)
- ⑤ 0.00% MAX CHANGE IN GRADE BETWEEN DRIVEWAY SURFACE AND SIDEWALK.

COMMONWEALTH OF PENNSYLVANIA  
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DRIVEWAY APRONS  
CURB RAMPS AND SIDEWALKS

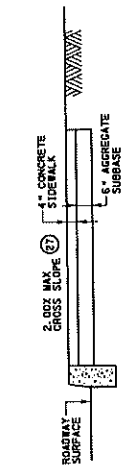
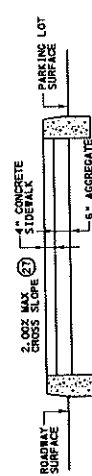
RECOMMENDED FEB. 19, 2021  
RECOMMENDED FEB. 19, 2021  
SHT. 13 OF 15  
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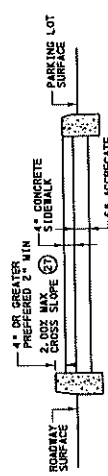
- ① 8.00% MAX CHANGE IN GRADE BETWEEN ROAD SURFACE AND DRIVEWAY WITH 8'-0" MIN. SLOPE
- ② 4" OR GREATER CURB HEIGHT
- ③ RAMP SLOPE LESS THAN 5.00% PREFERRED, 8.33% MAX. SEE NOTE 20, SHEET 11.
- ④ 2.00% MAX. SEE NOTE 20, SHEET 11.
- ⑤ ENSURE POSITIVE DRAINAGE.

**TYPE 5A  
MULTIPLE DRIVEWAYS**

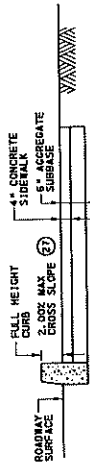
**TYPE 5  
MULTIPLE DRIVEWAYS**



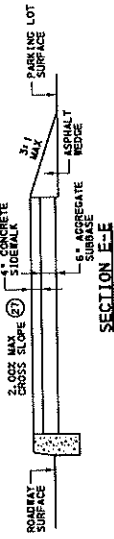
**SECTION A-A**



**SECTION D-D**



**SECTION B-B**



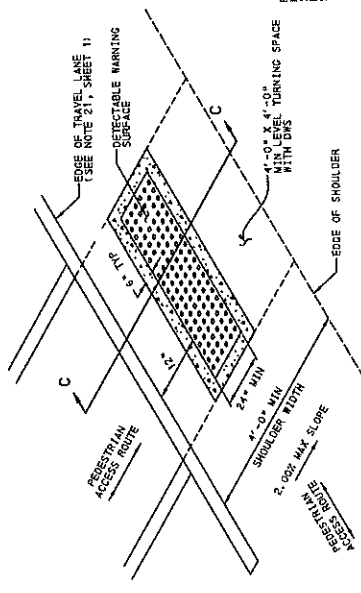
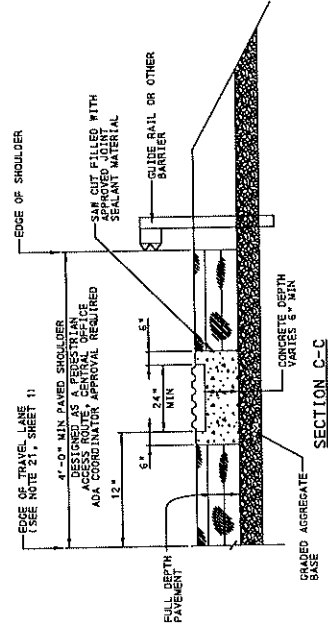
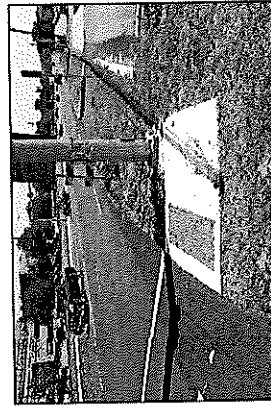
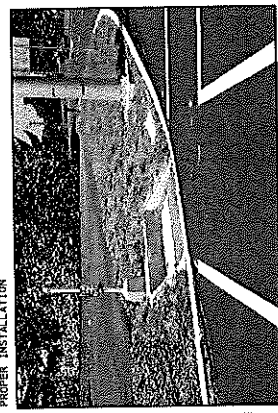
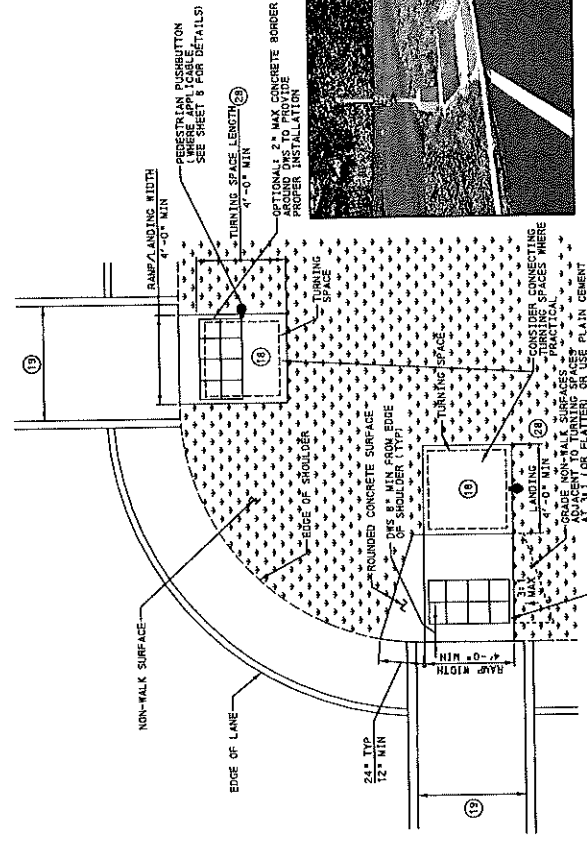
**SECTION E-E**

**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF PROJECT DELIVERY**

**CURB RAMPS AND SIDEWALKS**

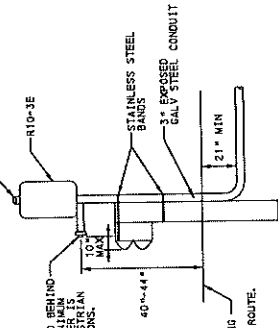
**DRIVEWAY APRONS**

RECOMMENDED FEB. 19, 2021	RECOMMENDED FEB. 19, 2021	SHT. 13 OF 13
CHIEF ENGINEER	PROJECT MANAGER	RC-67M



**PEDESTRIAN PUSHBUTTON ACCESS AREAS**

- 18 CURB RAMPS REQUIRE A TURNING SPACE WITH A MAXIMUM WIDTH OF 4'-0" MINIMUM TURNING SPACES PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.
- 19 5'-0" MIN MEASURED FROM INSIDE OF PAINTED EDGE.
- 20 TURNING SPACES SHOWN ARE TO PROVIDE ACCESS TO PEDESTRIAN PUSHBUTTON. TURNING SPACE MUST BE 5'-0" X 5'-0" WHEN CONFINED ON TWO OR MORE SIDES.



DWS PLACEMENT ON PAVED SHOULDERS DESIGNED AS A PEDESTRIAN ACCESS ROUTE (PAR) CENTRAL OFFICE ADA COORDINATOR APPROVAL REQUIRED

DO NOT INSTALL DETECTABLE WARNING SURFACE UNLESS PEDESTRIAN ACCESS ROUTE IS DESIGNATED AS A PEDESTRIAN ACCESS ROUTE. CENTRAL OFFICE ADA COORDINATOR APPROVAL REQUIRED.

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF PROJECT DELIVERY

CURB RAMPS AND SIDEWALKS  
DWS PLACEMENT ON PAVED SHOULDERS AND AT PEDESTRIAN PUSHBUTTONS

RECOMMENDED FEB. 19, 2021 SMT 14 OF 14  
PC-67M

APPENDIX C

Borough of Conshohocken Typical Details

**TYPICAL DETAILS**  
**BOROUGH OF CONSHOHOCKEN**  
**MONTGOMERY COUNTY, PENNSYLVANIA**

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DETAIL - 19: RECESSED INLET GRATE AND MANHOLE COVER

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ADOPTED MAY 2009

LAST REVISED MARCH 2015

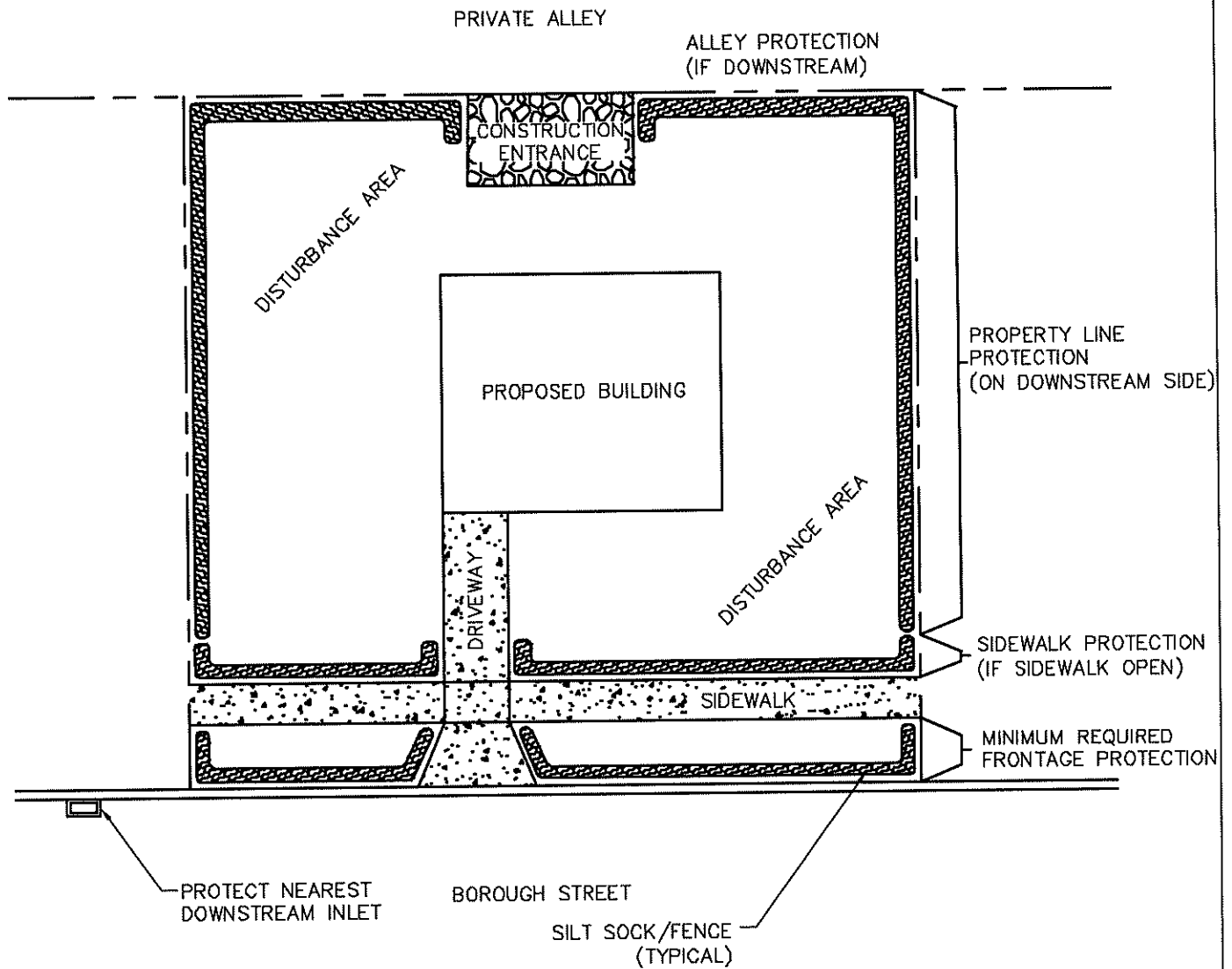
1. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR THE QUALITY AND CORRECTNESS OF COMPLETED WORK. THE PROPERTY OWNER MAY DESIGNATE A CONTRACTOR, CONSULTANT OR OTHER AGENT TO COORDINATE INSPECTIONS WITH THE BOROUGH. THE PROPERTY OWNER IS RESPONSIBLE FOR ALL OUTSIDE CONSULTANT FEES INCURRED BY THE BOROUGH.
2. ANY COMPLETED WORK THAT DOES NOT COMPLY WITH APPLICABLE STANDARDS SUCH AS THE AMERICANS WITH DISABILITIES ACT (ADA), PENNDOT SPECIFICATIONS AND CONSTRUCTION STANDARDS, OR THE BOROUGH OF CONSHOHOCKEN TYPICAL DETAILS SHALL BE REMOVED AND REPLACED. PROPERTY OWNERS ARE ENCOURAGED TO WITHHOLD PAYMENT FOR WORK PERFORMED UNTIL ALL WORK AND RESTORATIONS ARE ACCEPTED BY THE BOROUGH IN WRITING.
3. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ENSURING COMPLIANCE WITH THE BOROUGH STORMWATER MANAGEMENT ORDINANCE. SPECIFICALLY, ALL WORK SITES SHALL BE PROTECTED FROM EROSION AND SEDIMENT RUNOFF IN ACCORDANCE WITH MONTGOMERY COUNTY CONSERVATION DISTRICT REQUIREMENTS. FAILURE TO INSTALL AND MAINTAIN ACCEPTABLE EROSION CONTROLS WILL RESULT IN WORK STOPPAGES AND FINES IN ACCORDANCE WITH THE BOROUGH ORDINANCE.
4. EROSION CONTROL INLET PROTECTION SHALL BE INSTALLED IN THE NEAREST DOWNSTREAM INLET OF ALL WORK SITES. PIPE TRENCHES SHALL BE PUMPED THROUGH A WATER FILTER BAG.
5. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT. THE BOROUGH INSPECTOR WILL VERIFY THAT THE APPROPRIATE CONSTRUCTION DETAILS ARE BEING FOLLOWED AND THAT THE APPROPRIATE METHODS ARE BEING USED. THE BOROUGH INSPECTOR DOES NOT APPROVE ANY PHYSICAL PRODUCT UNTIL THE WORK IS COMPLETE. ANY PERCEIVED APPROVAL OF LAYOUT, FORMWORK, ETC., DOES NOT ABSOLVE THE CONTRACTOR FROM ENSURING THAT THE FINAL PRODUCT COMPLIES WITH ALL APPLICABLE STANDARDS.

**STANDARD NOTES  
BOROUGH OF CONSHOHOCKEN  
MONTGOMERY COUNTY, PENNSYLVANIA**



ADOPTED MAY 2009

LAST REVISED MARCH 2015



### SINGLE LOT EROSION CONTROL DETAIL

N.T.S.

**NOTES:**

1. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY THE BOROUGH CODE DEPARTMENT IN ACCORDANCE WITH BOROUGH ORDINANCE 1-2008.

2. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY THE MONTGOMERY COUNTY CONSERVATION DISTRICT IN ACCORDANCE WITH 25 PA CODE CHAPTER 102.

3. FAILURE TO MAINTAIN EROSION CONTROL MEASURES WILL RESULT IN AN IMMEDIATE WORK STOPPAGE UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN RESTORED TO THE SATISFACTION OF THE BOROUGH CODE DEPARTMENT.

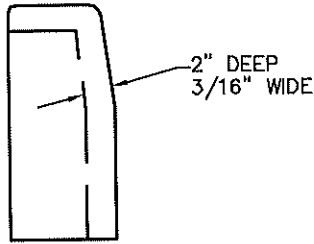
4. SILT SOCK/FENCE SHALL BE INSTALLED AND MAINTAINED PER THE PADEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL, LATEST EDITION.

5. DIAMETER OF SILT SOCK SHALL BE 8" UNLESS OTHERWISE DIRECTED. LARGER SILT SOCK MAY BE REQUIRED FOR SITES WITH A LARGER CONTRIBUTING DISTURBANCE AREA.

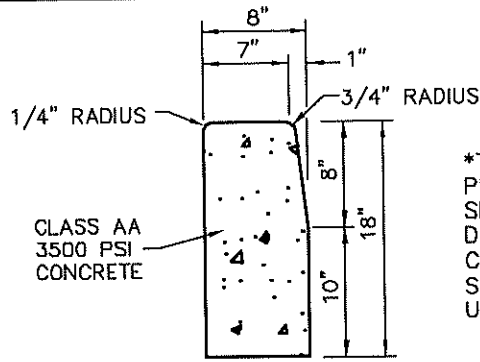
**DETAIL - 1**  
**TYPICAL DETAILS**  
**BOROUGH OF CONSHOHOCKEN**  
**MONTGOMERY COUNTY, PENNSYLVANIA**

ADOPTED MAY 2009

LAST REVISED MARCH 2015



**DETAIL "A"**  
**CONTRACTION JOINT**

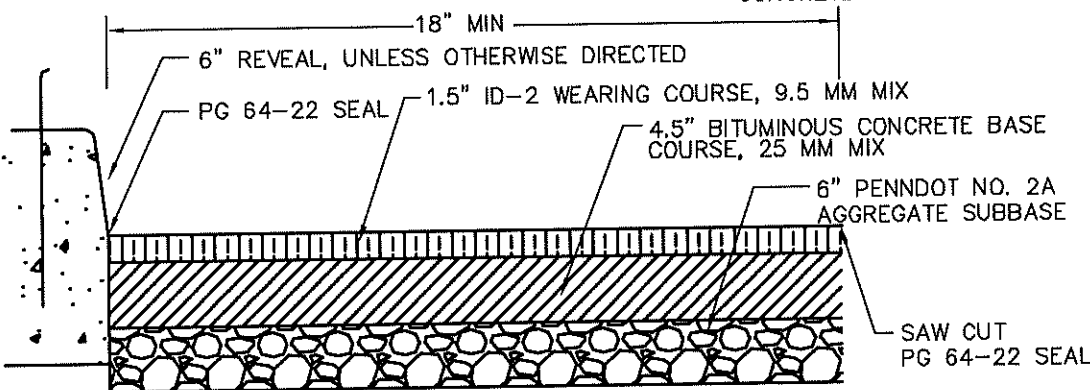
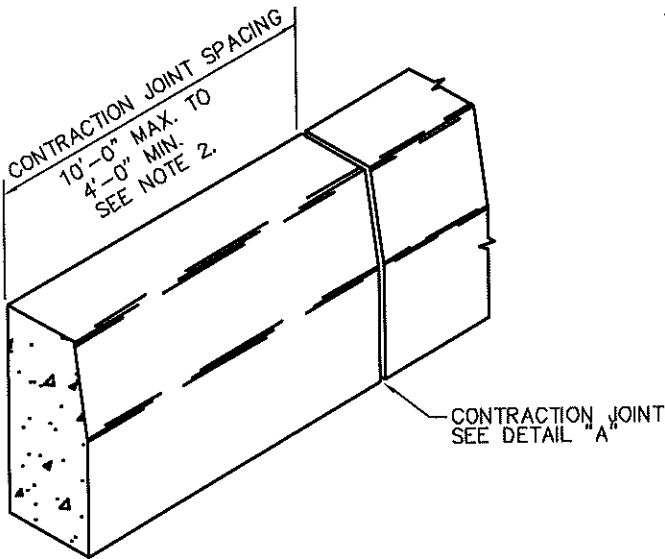


\*THIS DETAIL IS THE STANDARD PENNDOT CONCRETE CURB CROSS SECTION. THE DIMENSIONS SHOWN DO NOT REFLECT THE DESIRED CURB REVEAL. ALL CURB SHALL HAVE A 6" CURB REVEAL UNLESS OTHERWISE DIRECTED.

**TYPICAL**  
**CROSS SECTION**

**NOTES**

1. PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PUBLICATION 408/2000, SECTION 630 FOR PLAIN CEMENT CONCRETE CURB AND DEPRESSED CURB, SECTION 640 FOR PLAIN CEMENT CONCRETE GUTTER AND SECTION 641 FOR PLAIN CEMENT CONCRETE CURB GUTTER.
2. SPACE CONTRACTION JOINTS IN UNIFORM LENGTHS OR SECTIONS.
3. PLACE 3/4" PREMOLDED EXPANSION JOINT FILLER MATERIAL AT STRUCTURES AND AT THE END OF THE WORK DAY CUT MATERIAL TO CONFORM TO AREA ADJACENT TO CURB OR TO CONFORM TO CROSS SECTIONAL AREA OF CURB.
4. SEE RC-50M FOR PLAIN CEMENT CONCRETE CURB SLOPED TOP TREATMENT AT END OF STRUCTURES.
5. ALL CONCRETE IS TO BE CLASS AA, 3500 PSI.
6. DEPRESSED CURB SHALL BE SLOPED 1/4" PER FOOT TOWARDS THE STREET.
7. CURB REPLACEMENT SHALL EXTEND TO THE NEAREST JOINT. SHOULD THE NEAREST JOINT EXTEND ACROSS A PROPERTY THE CURB MAY BE SAWCUT AT A LOCATION TO BE AND MARKED OUT BY THE BOROUGH.
8. CONTRACTOR SHALL PROVIDE EROSION CONTROLS TO CONTAIN OPEN EXCAVATIONS AND PROTECT THE NEAREST DOWNSTREAM INLET.
9. PROJECTS REQUIRING ONE (1.0) CUBIC YARD (CY) OR GREATER SHALL USE PLANT MIX CONCRETE DELIVERED BY A CONCRETE MIXING TRANSPORT TRUCK. 1.0 CY OF CONCRETE YIELDING APPROXIMATELY 27LF OF STANDARD CONCRETE CURB.



**NOTES**

1. ROADWAY RESTORATIONS SHALL BE PERFORMED ALONG STRAIGHT SAWCUT.
2. FAILURES IN THE EXISTING PAVEMENT MAY REQUIRE ANOTHER SAWCUT BE MADE IN ORDER TO INCORPORATE THE IRREGULARITIES INTO THE RESTORATION AREA.
3. ROADWAY RESTORATIONS SHALL INCLUDE AREAS FROM WHICH EXISTING PIPES, PLATES, BRICKS, CHANNELS, ETC. HAVE BEEN REMOVED.
4. ALL PRE-EXISTING PAVEMENT MARKING SHALL REPLACED IN-KIND.

**GUTTER AND ROADWAY RESTORATION DETAIL**

N.T.S.

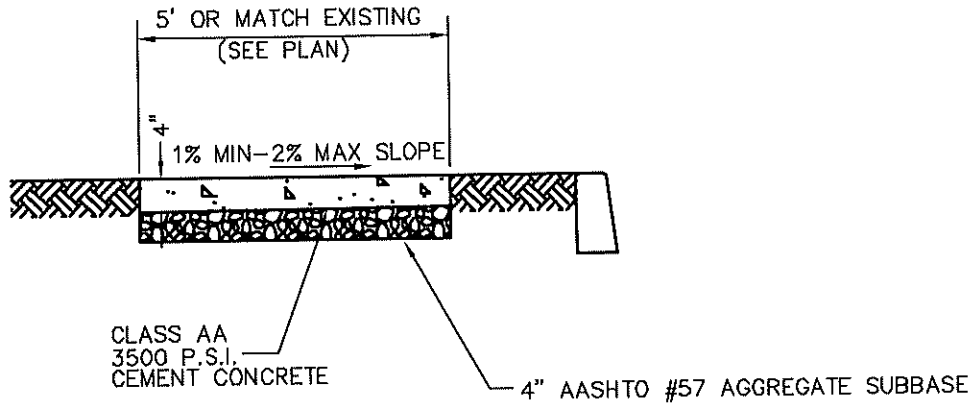
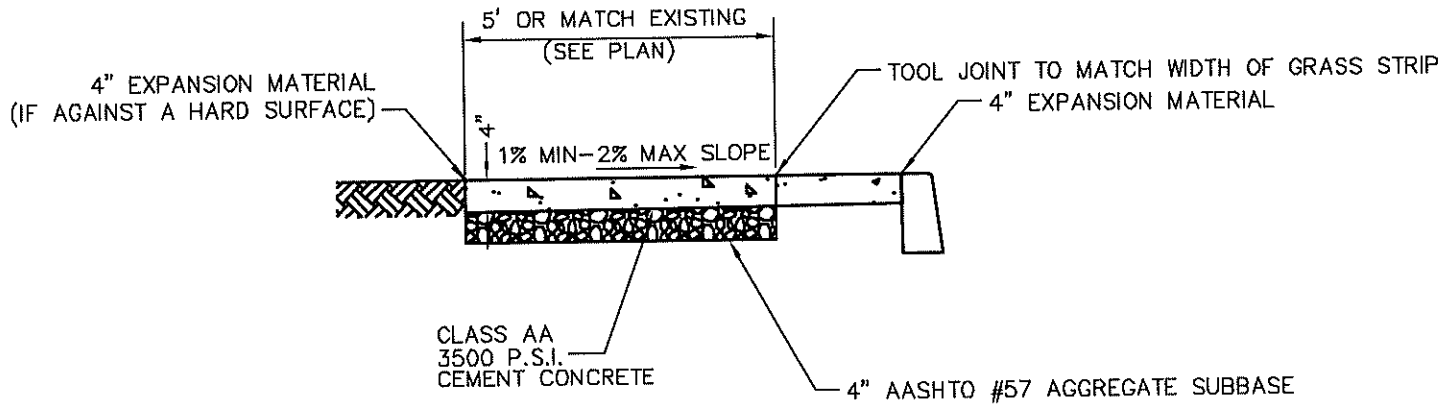
**DETAIL - 2**

**TYPICAL DETAILS**

**BOROUGH OF CONSHOHOCKEN**  
**MONTGOMERY COUNTY, PENNSYLVANIA**

ADOPTED MAY 2009

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## CEMENT CONCRETE SIDEWALK

N.T.S.

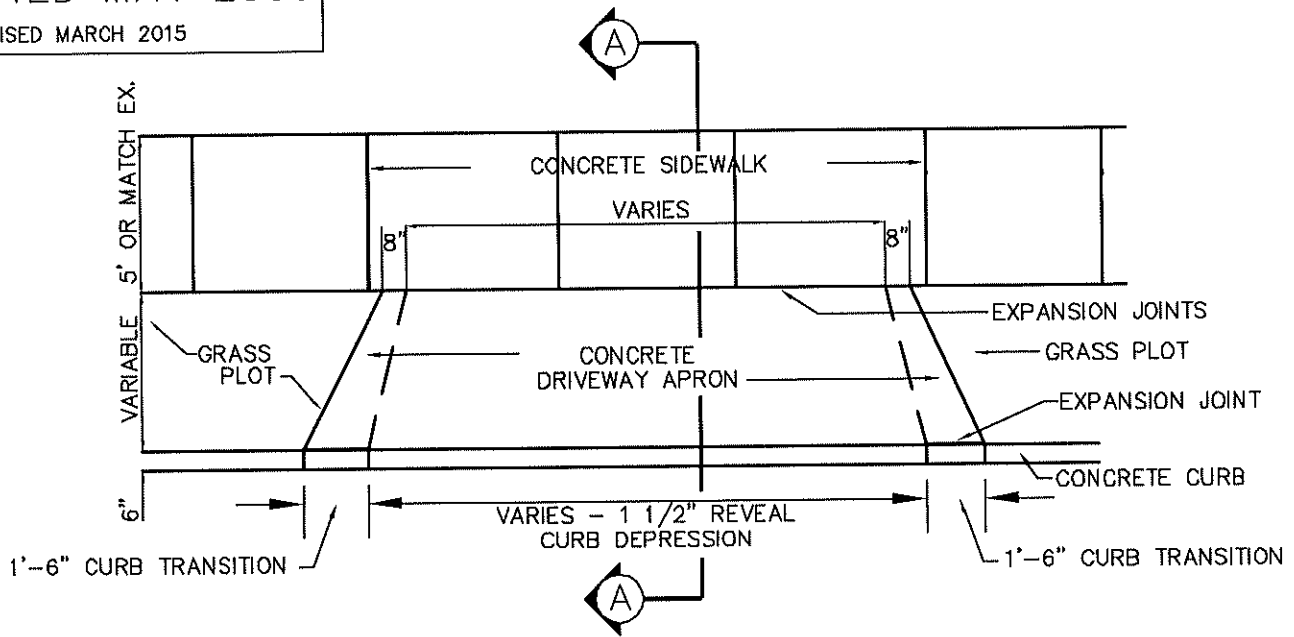
NOTE:

1. ALL CONCRETE IS TO BE CLASS AA, 3500 PSI
2. CONCRETE SIDEWALK SHALL BE SLOPED A MINIMUM OF 1.0% AND A MAXIMUM OF 2% TOWARDS THE TOP OF CURB.
3. CONTRACTOR SHALL PROVIDE EROSION CONTROLS TO CONTAIN OPEN EXCAVATIONS AND PROTECT THE NEAREST DOWNSTREAM INLET.
4. PROJECTS REQUIRING ONE (1.0) CUBIC YARD (CY) OR GREATER SHALL USE PLANT MIXED CONCRETE DELIVERED BY A CONCRETE MIXING TRANSPORT TRUCK. 1.0 CY OF CONCRETE YIELDS APPROXIMATELY 15 LINEAR FEET OF 5' WIDE SIDEWALK OR 20 LINEAR FEET OF 4' WIDE SIDEWALK.

**DETAIL - 3**  
**TYPICAL DETAILS**  
**BOROUGH OF CONSHOHOCKEN**  
**MONTGOMERY COUNTY, PENNSYLVANIA**

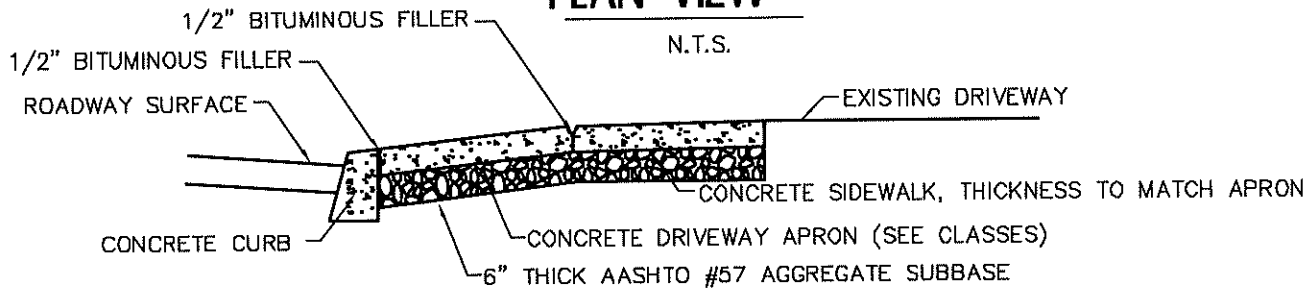
ADOPTED MAY 2009

LAST REVISED MARCH 2015



### PLAN VIEW

N.T.S.



### SECTION "A-A"

N.T.S.

## DRIVEWAY APRON & CURB DEPRESSION

(APPLICABLE WITH STANDARD CURB)

N.T.S.

#### NOTES:

1. ALL CONCRETE IS TO BE CLASS AA, 3500 PSI
2. DEPRESSED CURB SHALL BE SLOPED 1/4" PER FOOT TOWARDS THE STREET.
3. CONCRETE SHALL BE ALLOWED TO CURE FOR SEVEN (7) DAYS.
4. USE OF "HIGH EARLY" CONCRETE MAY BE APPROVED BY THE BOROUGH INSPECTOR.
5. MONOLITHIC POURS SHALL ONLY BE PERMITTED BY SPECIAL EXCEPTION, AND ARE SUBJECT TO APPROVAL BY THE BOROUGH.
6. CONTRACTOR SHALL PROVIDE EROSION CONTROLS TO CONTAIN OPEN EXCAVATIONS AND PROTECT THE NEAREST DOWNSTREAM INLET.
7. PROJECTS REQUIRING ONE (1.0) CUBIC YARD (CY) OR GREATER SHALL USE PLANT MIXED CONCRETE DELIVERED BY A CONCRETE MIXING TRANSPORT TRUCK. 1.0 CY YIELDS APPROXIMATELY 54 SQUARE FEET OF 6" THICK APRON OR 40 SQUARE FEET OF 8" THICK APRON.

### DETAIL - 4

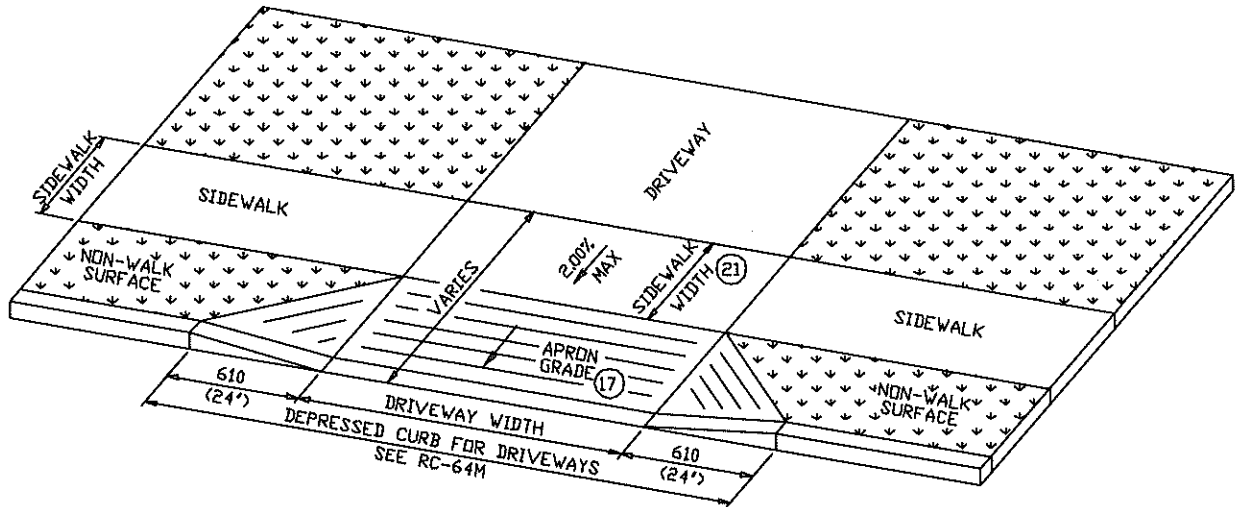
#### DRIVEWAY APRON CLASSES - MINIMUM STANDARDS:

1. RESIDENTIAL - 6" THICKNESS WITH 6X6-W1.4/W1.4 WIREMESH REINFORCEMENT
2. COMMERCIAL - 8" THICKNESS WITH 6X6-W2.1/W2.1 WIREMESH REINFORCEMENT
3. INDUSTRIAL - DESIGN TO BE PROVIDED TO BOROUGH ENGINEER.

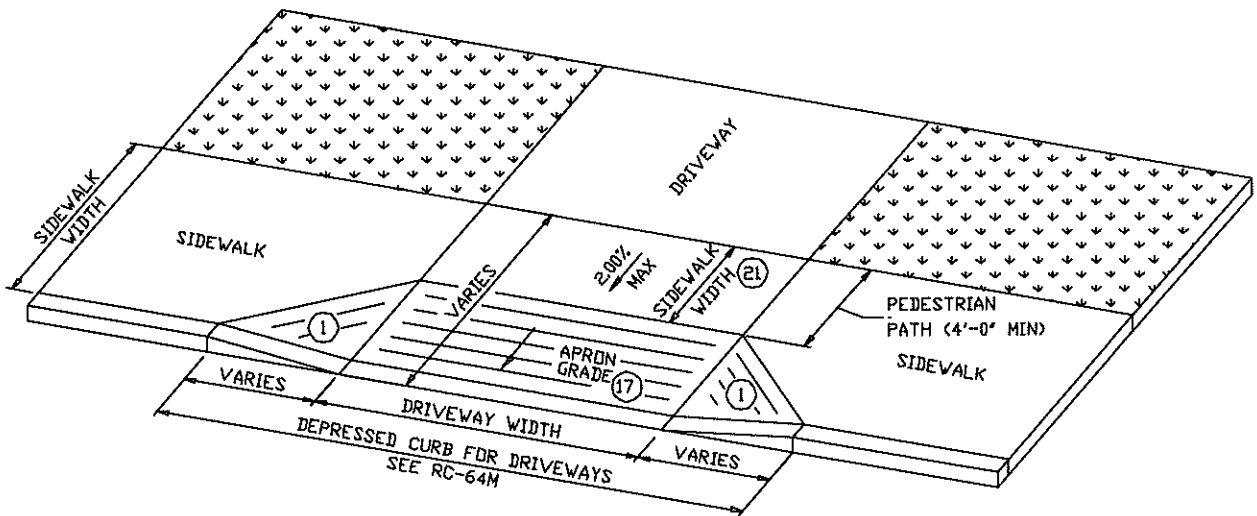
\*DETERMINATION OF CLASS SUBJECT TO APPROVAL BY THE BOROUGH.

### TYPICAL DETAILS

**BOROUGH OF CONSHOHOCKEN  
MONTGOMERY COUNTY, PENNSYLVANIA**



**TYPE 1**  
**DRIVEWAY APRON**  
N.T.S.



**TYPE 1A**  
**DRIVEWAY APRON**  
N.T.S.

- ① SIDE FLARES 10.00% MAX SLOPE
- ①⑦ 8% MAX CHANGE IN GRADE BETWEEN ROAD SURFACE AND DRIVEWAY
- ②① MINIMUM SIDEWALK WIDTH 1525 (4'-0")

1. PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PUBLICATION 408, SECTIONS 350, 409, 630, 676 AND 694.
2. PROVIDE EXPANSION JOINT MATERIAL 13 (1/2") THICK WHERE CURB RAMP ADJOINS ANY RIGID PAVEMENT, SIDEWALK OR STRUCTURE WITH THE TOP OF JOINT FILLER FLUSH WITH ADJACENT CONCRETE SURFACE.
3. CONSTRUCT CURB RAMPS WITH A MINIMUM 1220 X 1220 (4'-0" X 4'-0") CLEAR SPACE BEYOND THE CURB FACE, WITHIN THE WIDTH OF THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICLE TRAVEL LANE. SEE SHEET 7 FOR CROSSWALK DETAILS.
4. SEAL JOINTS WITH AN APPROVED SEALING MATERIAL.
5. PROVIDE SLIP RESISTANT TEXTURE ON CURB RAMP BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP. EXTEND TEXTURE THE FULL WIDTH AND LENGTH OF THE CURB RAMP INCLUDING FLARED SIDE RAMPS.
6. MODIFY CONSTRUCTION DETAILS TO ADAPT DIMENSIONS TO EXISTING CURB HEIGHTS WHERE THE CURB IS LESS THAN THE STANDARD 205 (8") HEIGHT.
7. CURB RAMP AND SIDE FLARE LENGTHS ARE VARIABLE AND BASED ON CURB HEIGHT AND THE SIDEWALK SLOPE.
8. TO AVOID CHASING GRADE INDEFINITELY WHEN TRAVERSING THE HEIGHT OF CURB, RAMP LENGTH NOT TO EXCEED 4500 (15'-0"). ADJUST RAMP SLOPE AS NEEDED TO PROVIDE ACCESS TO THE MAXIMUM EXTENT FEASIBLE.
9. NON-WALK AREA IS AN OBSTRUCTED OR GRASS/NON-PAVED AREA ADJACENT TO THE PEDESTRIAN ACCESS ROUTE THAT IS NOT USED BY THE PEDESTRIAN FOR ACCESS.
10. THE DETAILS DEPICT PEDESTRIAN PUSHBUTTON POLES TO ILLUSTRATE THE RECOMMENDED PLACEMENT OF PEDESTRIAN PUSHBUTTONS. FOR ALTERATION PROJECTS, PROVIDE ACCESS TO EXISTING PEDESTRIAN PUSHBUTTONS TO THE MAXIMUM EXTENT FEASIBLE. INSTALL PEDESTRIAN PUSHBUTTON STUB POLES, WHERE APPLICABLE, SO AS NOT TO CREATE PEDESTRIAN OBSTRUCTIONS.
11. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. US CUSTOMARY UNITS IN () PARENTHESIS.
12. ALIGN DETECTABLE WARNING SURFACE TRUNCATED DOMES ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF THE RAMP AND PERPENDICULAR TO CURB.
13. PROVIDE DETECTABLE WARNING SURFACES (DWS) 610 (24") MINIMUM (IN THE DIRECTION OF PEDESTRIAN TRAVEL) ACROSS FULL WIDTH OF RAMP AT THE GRADE BREAK NEAR STREET EDGE. PROVIDE DWS THAT CONTRAST VISUALLY WITH ADJACENT WALKWAY SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT FOR THE FULL WIDTH OF RAMP.
14. FOR NEW CONSTRUCTION, DO NOT EXCEED 2.00% CROSS SLOPE ON THE CURB RAMP OR PEDESTRIAN ACCESSIBLE ROUTE.
15. FOR NEW CONSTRUCTION AND ALTERATIONS, CONSTRUCT CURB RAMP AND FLARE SLOPES WITH THE FLATTEST SLOPE POSSIBLE. THE SLOPES INDICATED IN THE DETAILS SHOW THE MAX SLOPE ALLOWABLE. SLOPES THAT EXCEED THOSE INDICATED IN THE DETAILS, OR CONTRACT DOCUMENTS AS APPLICABLE, WILL NOT BE ACCEPTED AND WILL BE RECONSTRUCTED.
16. CONSTRUCT SIDEWALKS AT A LONGITUDINAL SLOPE NOT TO EXCEED 5.00%. FOR ROADWAY PROFILE SLOPES THAT EXCEED 5.00%, CONSTRUCT PARALLEL SIDEWALKS ADJACENT TO ROADWAY AT A LONGITUDINAL SLOPE NOT TO EXCEED ROADWAY PROFILE SLOPE.
17. THE CHANGE IN GRADE AT THE BOTTOM OF THE CURB RAMP AND ADJOINING ROAD SURFACE IS NOT TO EXCEED AN ALGEBRAIC DIFFERENCE OF 11.00%. THE COUNTER SLOPE OF THE GUTTER OR ROAD AT THE FOOT OF A CURB RAMP, LANDING OR BLENDED TRANSITION IS NOT TO EXCEED 5.00%. SEE SHEET 8 FOR DETAILS.
18. THE CONSTRUCTION STANDARDS DEPICTED ARE MOST APPROPRIATE FOR NEW CONSTRUCTION. ALL CONSTRUCTION MUST MEET THE STANDARDS CONTAINED HEREIN UNLESS OTHERWISE NOTED OR DIRECTED.
19. ALL SLOPES ARE MEASURED WITH RESPECT TO A LEVEL PLANE. THEREFORE, THE LENGTH OF RAMP IS NOT SOLELY DEPENDANT ON THE HEIGHT OF CURB. (FOR EXAMPLE, A 150 (6") CURB DOES NOT NECESSARILY MEAN A RAMP LENGTH OF 1830 (6'-0") FOR A 12:1 (1:12) SLOPE.
20. SIDEWALK WIDTH MAY BE REDUCED TO 1220 (4'-0"), WHEN PASSING AREAS 1525 X 1525 (5'-0" X 5'-0") ARE PROVIDED EVERY 61 METERS (200').
21. THE TRAVEL LANE IS DEFINED BY THE OUTSIDE EDGE OF THE WHITE PAVEMENT MARKING LINE. IF A WHITE PAVEMENT MARKING LINE DOES NOT EXIST, THE TRAVEL LANE IS DEFINED BY THE CONTRACT DOCUMENTS.
22. CONSTRUCT DEPRESSED CURB FOR CURB RAMPS FLUSH TO ADJACENT ROADWAY. GRADE EDGE OF ROAD ELEVATIONS AT THE FLOW LINE TO ENSURE POSITIVE DRAINAGE AND PREVENT PONDING. FOR LEVEL LANDINGS BEHIND DEPRESSED CURB, ADJUST SLOPES TO PROVIDE POSITIVE DRAINAGE.
23. CHEEK WALLS ARE PERMITTED WHEN ADJACENT TO NON-WALK AREAS OR ELEVATION DIFFERENCES CANNOT BE ACCOMMODATED BY FLARES OR GRADING. GRADE GRASS AREAS OR OTHER NON-WALK AREAS AT 3:1 (1:3) MAXIMUM. DO NOT INSTALL CHEEK WALLS THAT INTERSECT THE PEDESTRIAN ACCESS ROUTE.
24. CONSTRUCT TOP OF PLAIN CEMENT CONCRETE DEPRESSED CURB TO BE FLUSH WITH ADJACENT SURFACES (RAMPS, SIDEWALKS, FLARES).
25. FOR CURB RAMPS THAT LEAD TO A SINGLE CROSSWALK, THE RAMP (EXCLUDING FLARES) TO BE FULLY INSIDE OF MARKED CROSSWALK LINES. SEE SHEET 7 FOR DETAILS.
26. A 1220 (4'-0") MAXIMUM DIGITAL DISPLAY LEVEL WILL BE USED TO VERIFY THE SLOPES OF CURB RAMPS AND SIDEWALKS.
27. DETECTABLE WARNING SURFACES SHALL BE CAST-IN-PLACE POLYMER COMPOSITE BY "ARMOR-TILE" AS MANUFACTURED BY ENGINEERED PLASTICS INC., OR APPROVED EQUAL. FEDERAL COLOR NUMBER 22144.

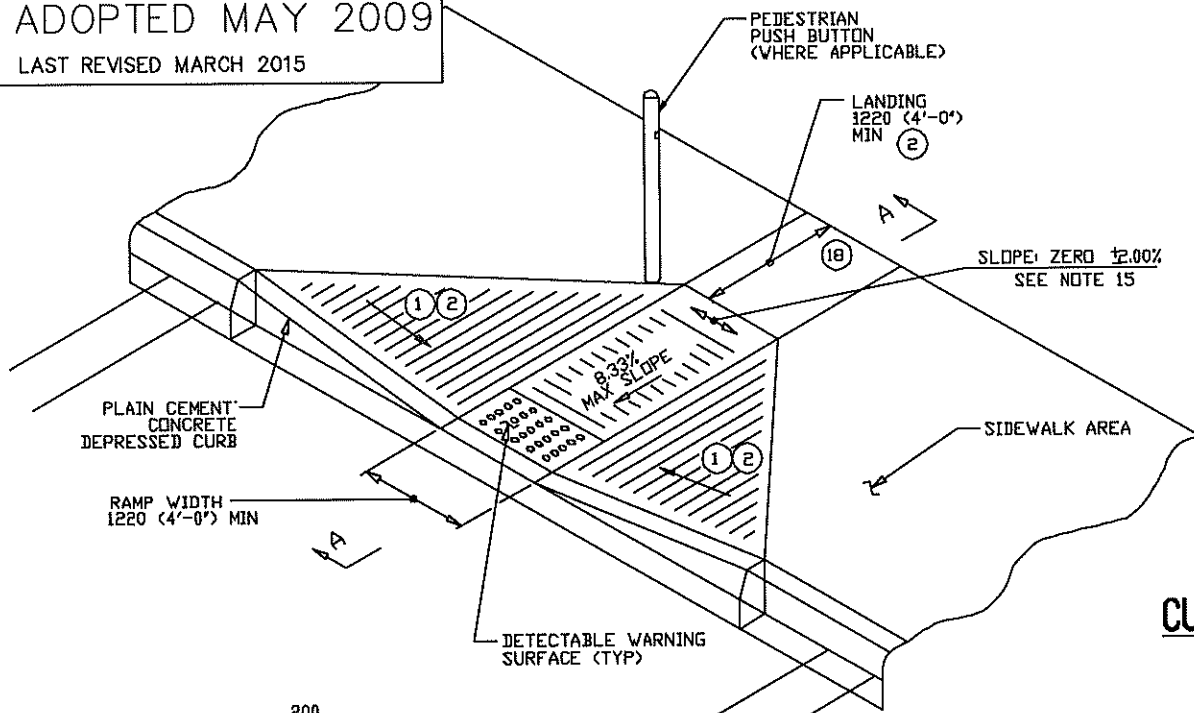
DETAIL - 6

TYPICAL DETAILS

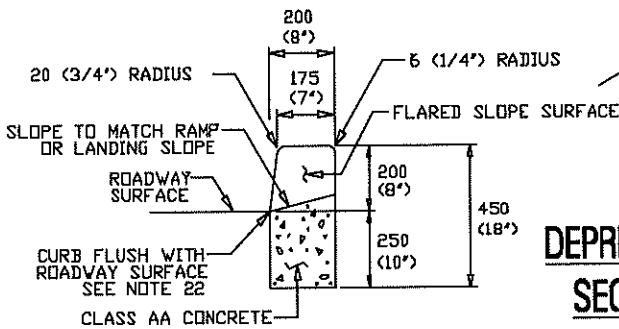
**BOROUGH OF CONSHOHOCKEN**  
**MONTGOMERY COUNTY, PENNSYLVANIA**

ADOPTED MAY 2009

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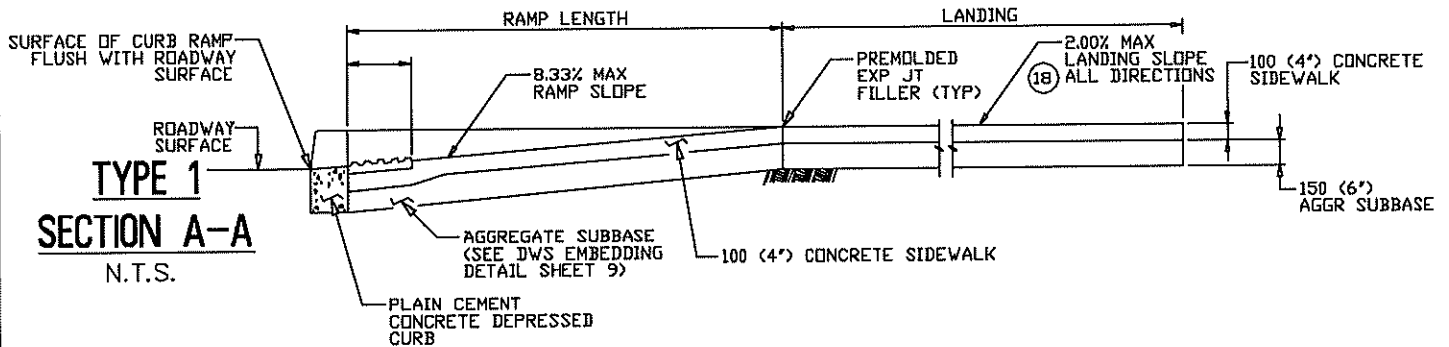


**TYPE 1  
CURB RAMP  
N.T.S.**



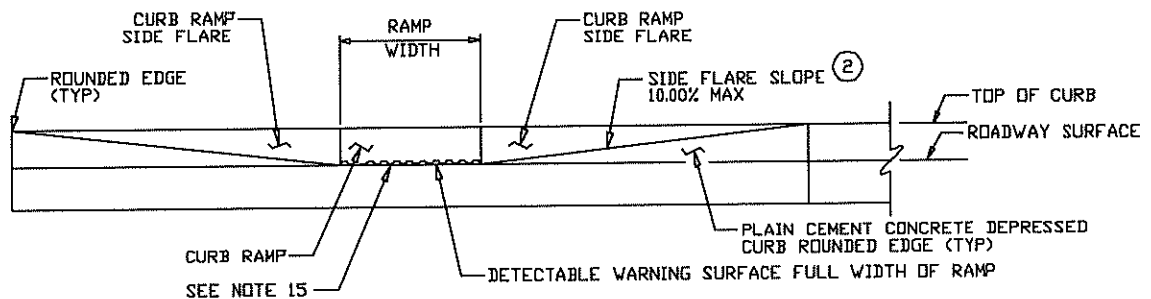
**DEPRESSED CURB  
SECTION B-B  
N.T.S.**

- ① SIDE FLARES 10.00% MAX SLOPE
- ② IF THE LANDING IS INDICATED TO BE LESS THAN 1220 (4'-0"), CONSTRUCT SIDE FLARES 8.33% MAX. SLOPE.
- ⑱ CURB RAMPS REQUIRE A 1220 (4'-0") MINIMUM LANDING WITH A MAXIMUM SLOPE OF 2.00% IN ALL DIRECTIONS WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS.



**TYPE 1  
SECTION A-A  
N.T.S.**

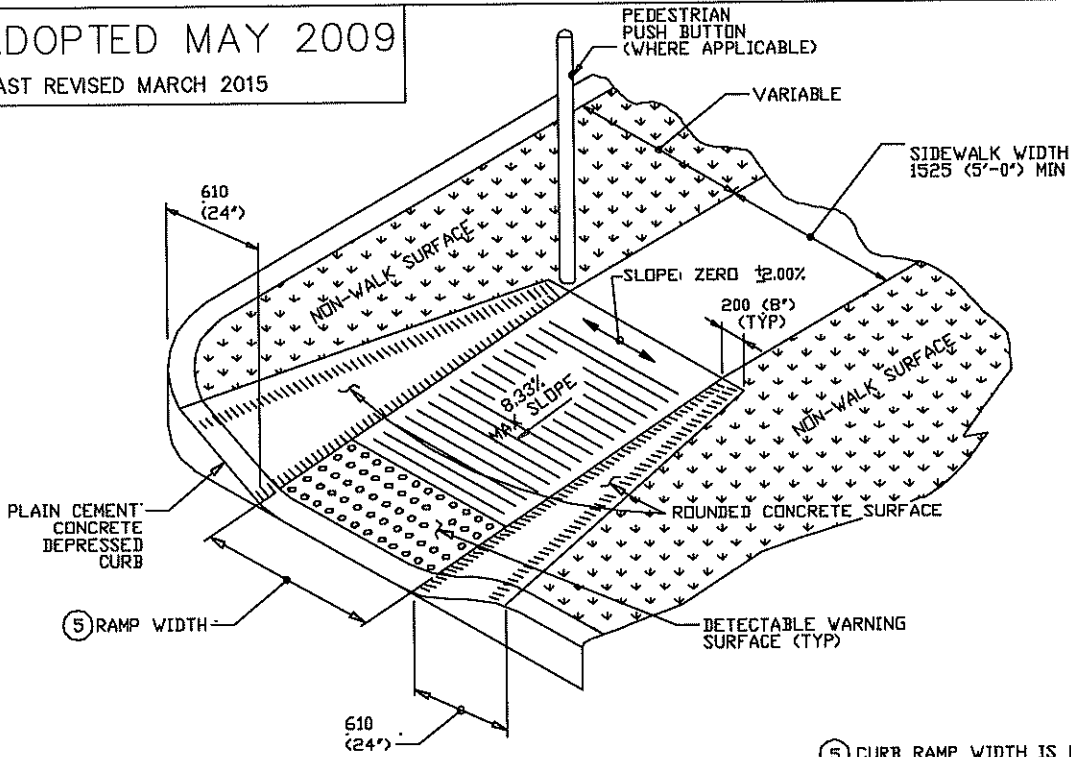
**TYPE 1  
ELEVATION  
N.T.S.**



**DETAIL - 7  
TYPICAL DETAILS  
BOROUGH OF CONSHOHOCKEN  
MONTGOMERY COUNTY, PENNSYLVANIA**

ADOPTED MAY 2009

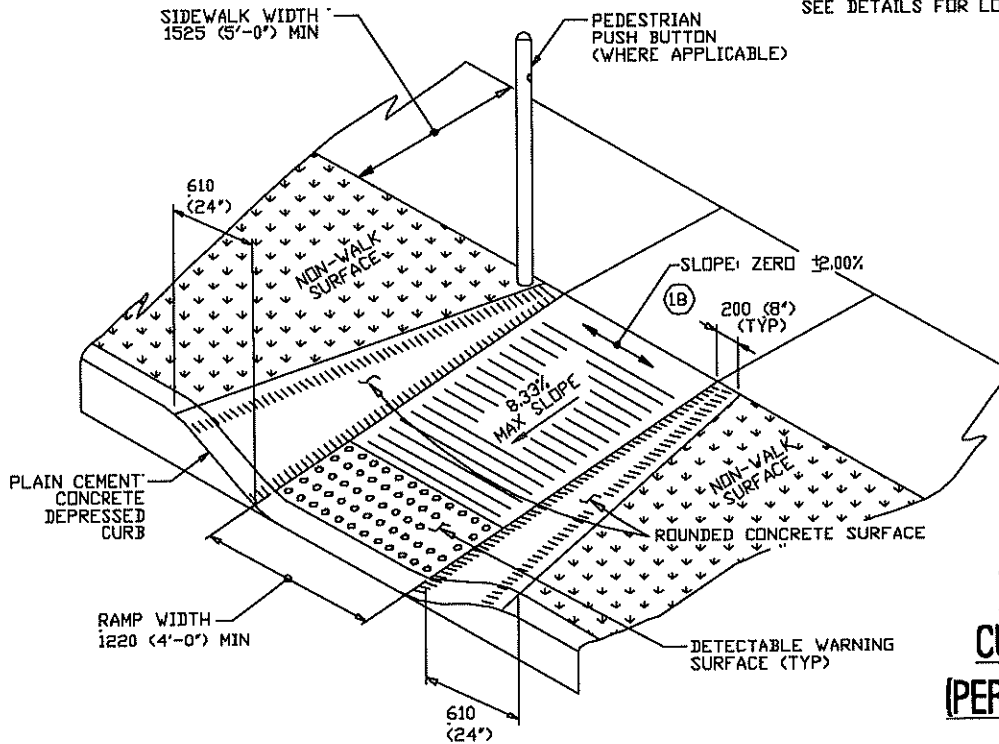
LAST REVISED MARCH 2015



**TYPE 4A**  
**CURB RAMP**  
**(PARALLEL)**  
N.T.S.

⑤ CURB RAMP WIDTH IS EQUAL TO SIDEWALK WIDTH WHEN THE SIDEWALK WIDTH IS GREATER THAN OR EQUAL TO 1220 (4'-0").

⑱ CURB RAMPS REQUIRE A 1220 (4'-0") MINIMUM LANDING WITH A MAXIMUM SLOPE OF 2.00% IN ALL DIRECTIONS WHERE PEDESTRIANS PERFORM TURNING MANEUVERS, SEE DETAILS FOR LOCATIONS.

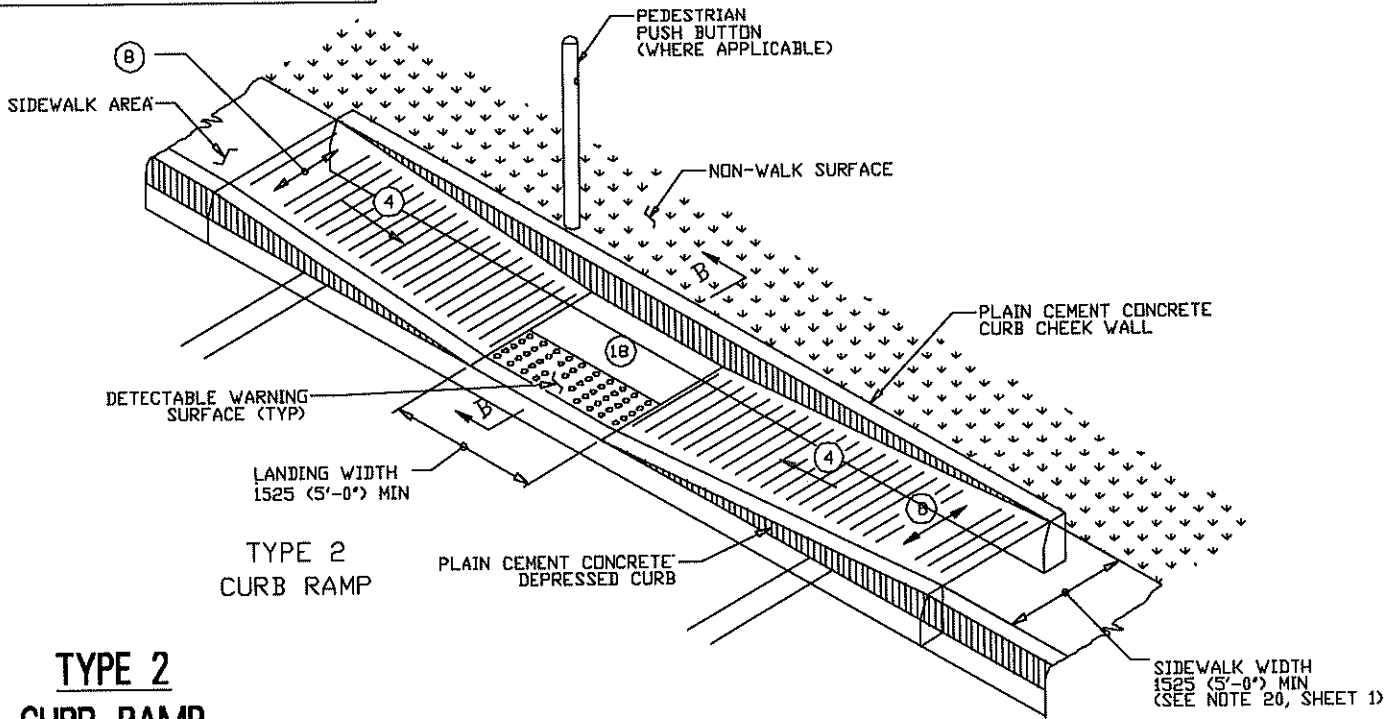


**TYPE 4A**  
**CURB RAMP**  
**(PERPENDICULAR)**  
N.T.S.

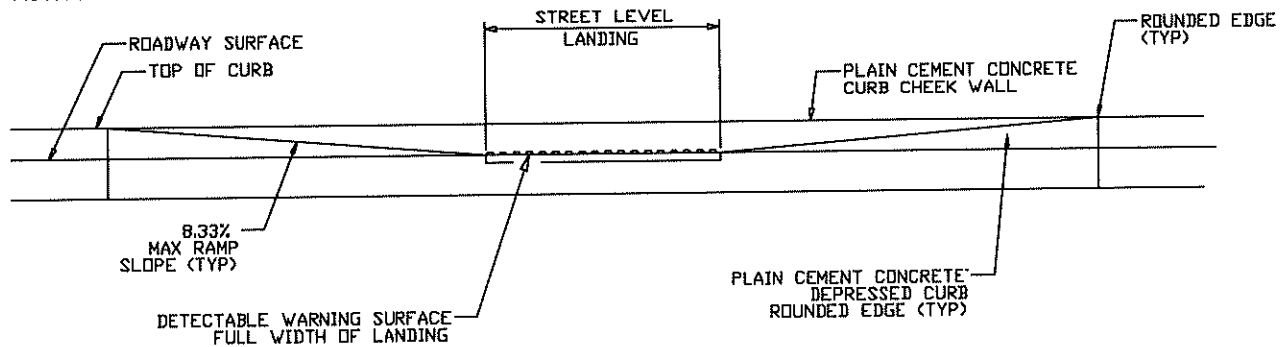


ADOPTED MAY 2009

LAST REVISED MARCH 2015

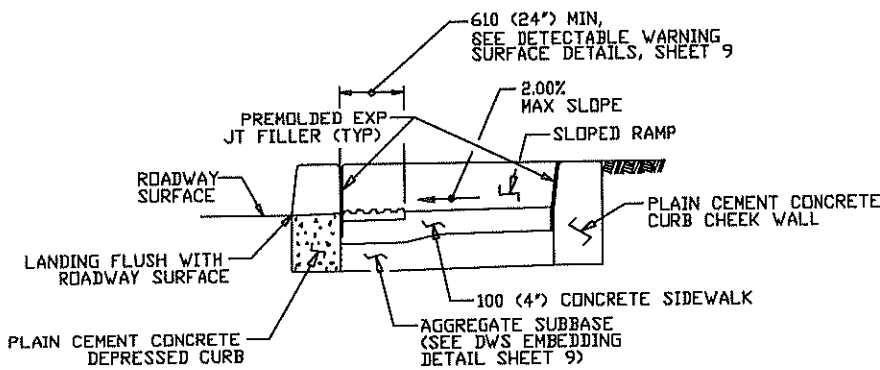


**TYPE 2 CURB RAMP**  
N.T.S.



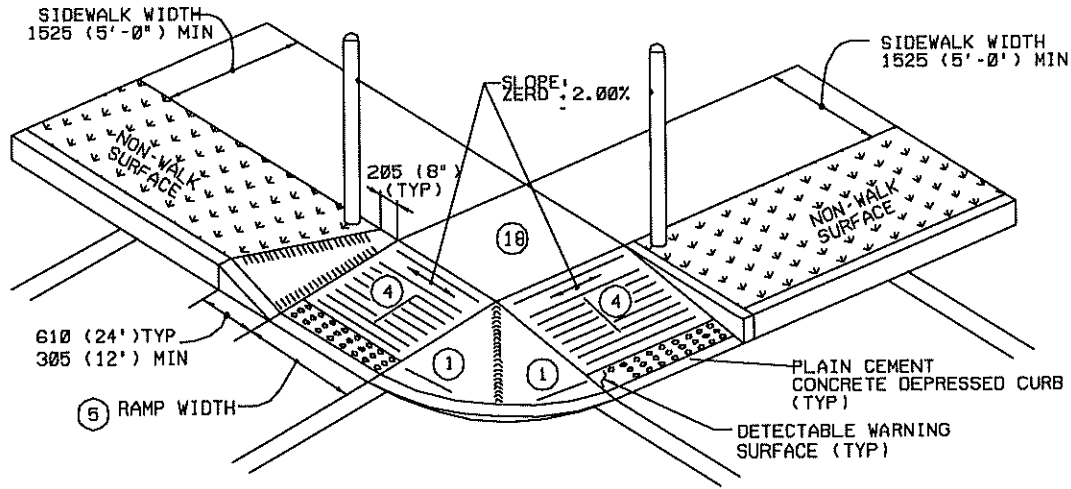
**TYPE 2 ELEVATION**  
N.T.S.

- ① SIDE FLARES 10.00% MAX SLOPE
- ④ 8.33% MAX RAMP SLOPE
- ⑧ SLOPE, ZERO ±2.00%
- ⑬ CURB RAMPS REQUIRE A 1220 (4'-0") MINIMUM LANDING WITH A MAXIMUM SLOPE OF 2.00% IN ALL DIRECTIONS WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS.

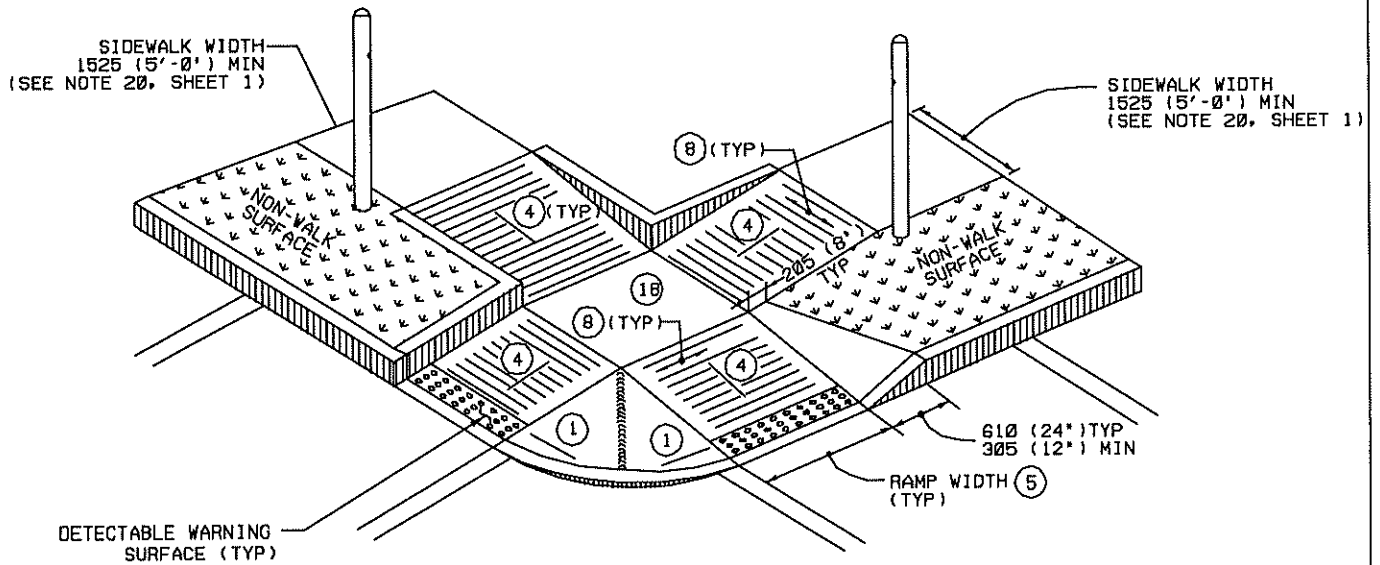


**TYPE 2 SECTION B-B**  
N.T.S.

**DETAIL - 9**  
**TYPICAL DETAILS**  
**BOROUGH OF CONSHOHOCKEN**  
**MONTGOMERY COUNTY, PENNSYLVANIA**

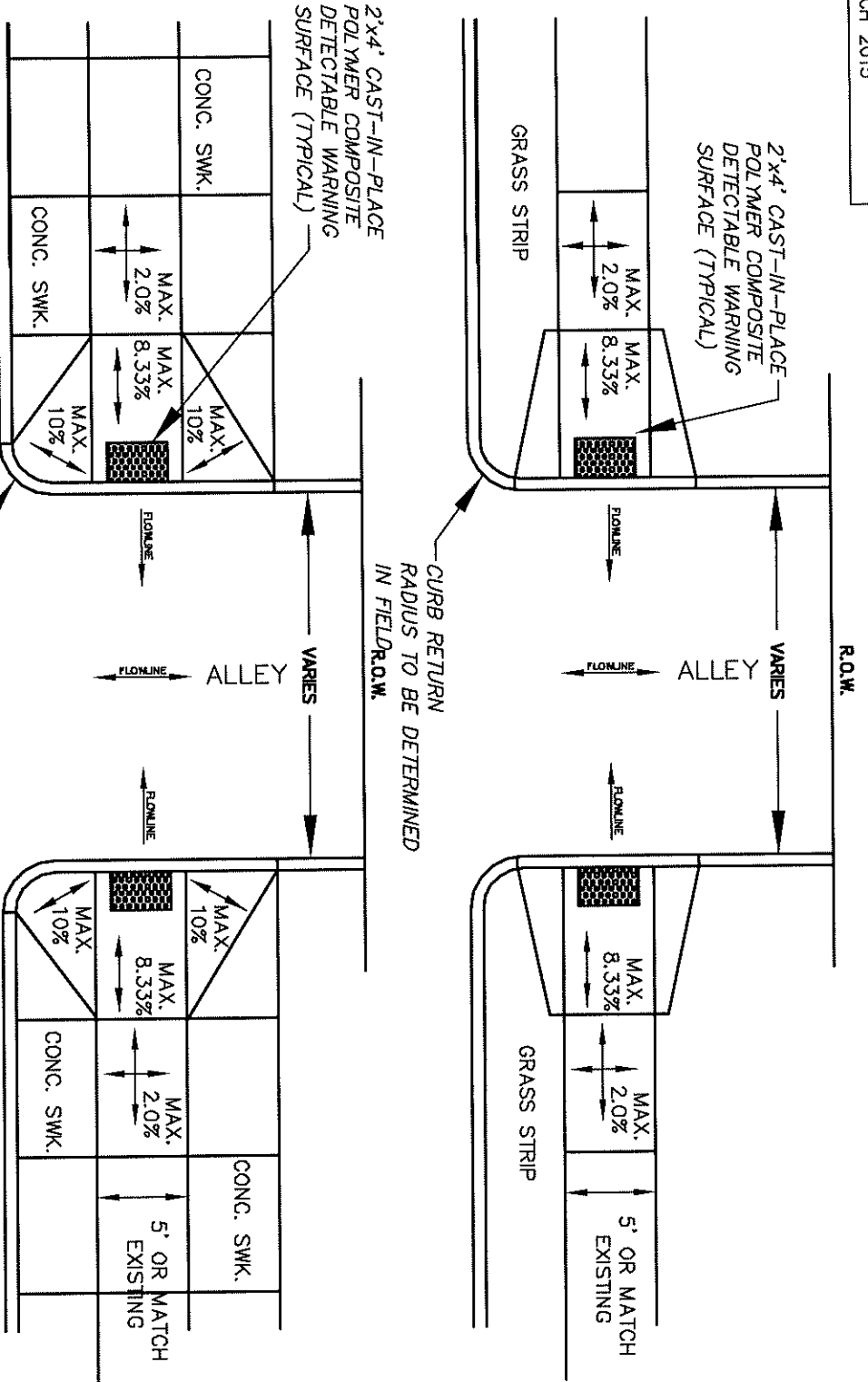


TYPE 4/4A CURB RAMPS  
WITH SHARED LANDING



TYPE 6 CURB RAMPS  
WITH SHARED LANDING

- ① SIDE FLARES 10.00% MAX SLOPE
- ④ 8.33% MAX RAMP SLOPE
- ⑤ CURB RAMP WIDTH IS EQUAL TO SIDEWALK WIDTH WHEN THE SIDEWALK WIDTH IS GREATER THAN OR EQUAL TO 1220 (4'-0").
- ⑧ SLOPE: ZERO +/- 2.00%
- ⑱ CURB RAMPS REQUIRE A 1220 (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.



NOTES:

1. CONDITION OF EXISTING CURB, SIDEWALK AND ALLEY SHALL BE INSPECTED BY THE BOROUGH INSPECTOR, AND A DETERMINATION WILL BE MADE AS TO THE EXTENT OF REPLACEMENT REQUIRED.
2. CONCRETE CURB SHALL BE INSTALLED WHERE NO CURB EXISTS CURRENTLY. CURB RETURNS SHALL BE INSTALLED TO THE RIGHT-OF-WAY LINE.

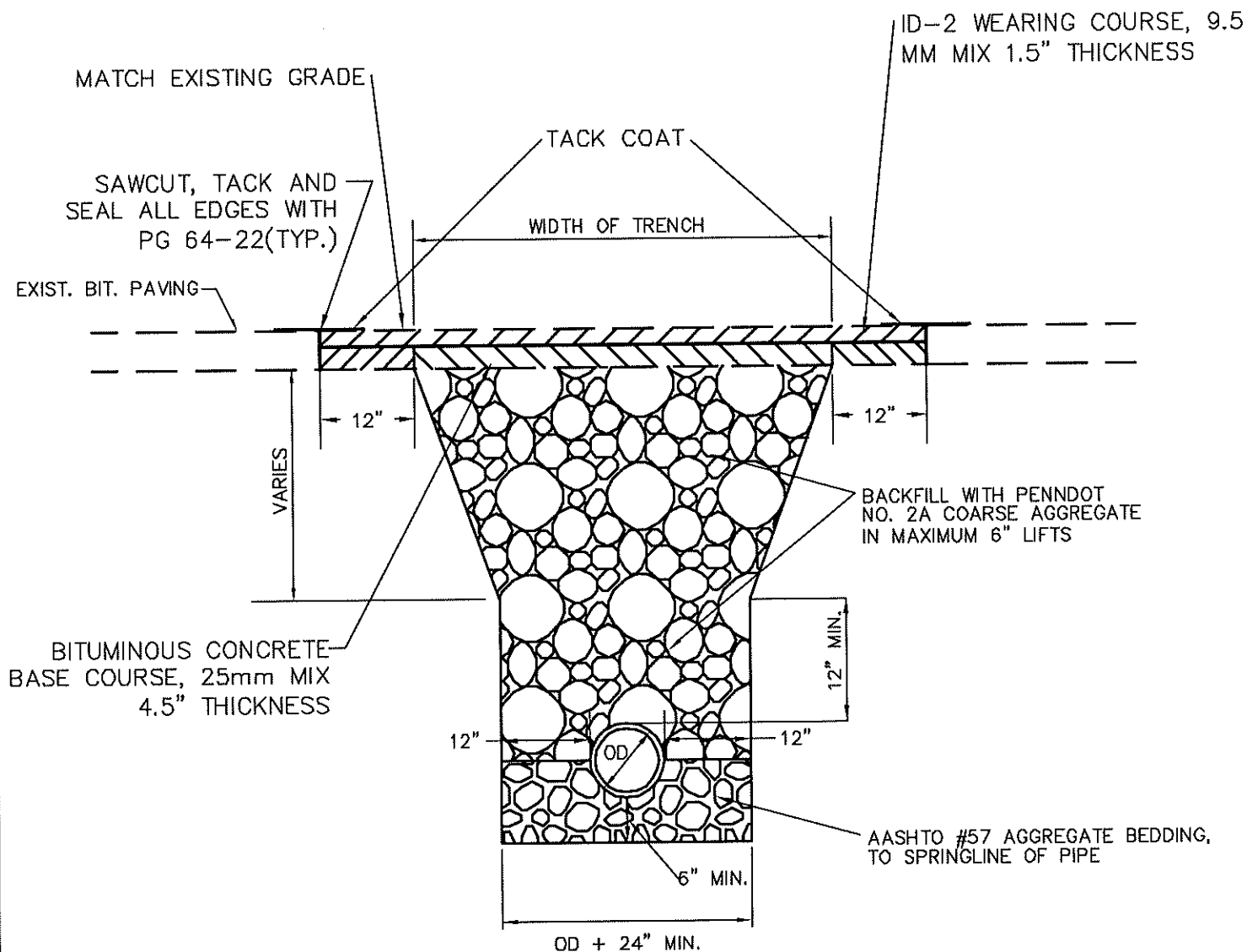
3. THE ALLEY SHALL BE RESTORED AS DIRECTED BY THE BOROUGH INSPECTOR. ALLEY RESTORATIONS WITHIN THE RIGHT-OF-WAY OF THE ADJOINING BOROUGH STREET SHALL BE IN ACCORDANCE WITH BOROUGH STREET RESTORATION STANDARDS.

ALLEY INTERSECTION WITH BOROUGH STREET DETAIL

N.T.S.

DETAIL -- 11

TYPICAL DETAILS  
BOROUGH OF CONSHOHOCKEN  
MONTGOMERY COUNTY, PENNSYLVANIA



## PARALLEL ROADWAY TRENCH AND PAVEMENT RESTORATION DETAIL (BITUMINOUS CONCRETE)

N.T.S.

**NOTE:**

1. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE WIDTH OF TRENCH.
2. FOR UTILITY LATERAL TRENCH RESTORATION SEE DETAIL-13
3. RESTORATIONS ON STATE HIGHWAYS REQUIRE PENNDOT APPROVAL.
4. TRENCHES SHALL BE PUMPED THROUGH A FILTER BAG WHEN DEWATERING.
5. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR TRENCH SAFETY.

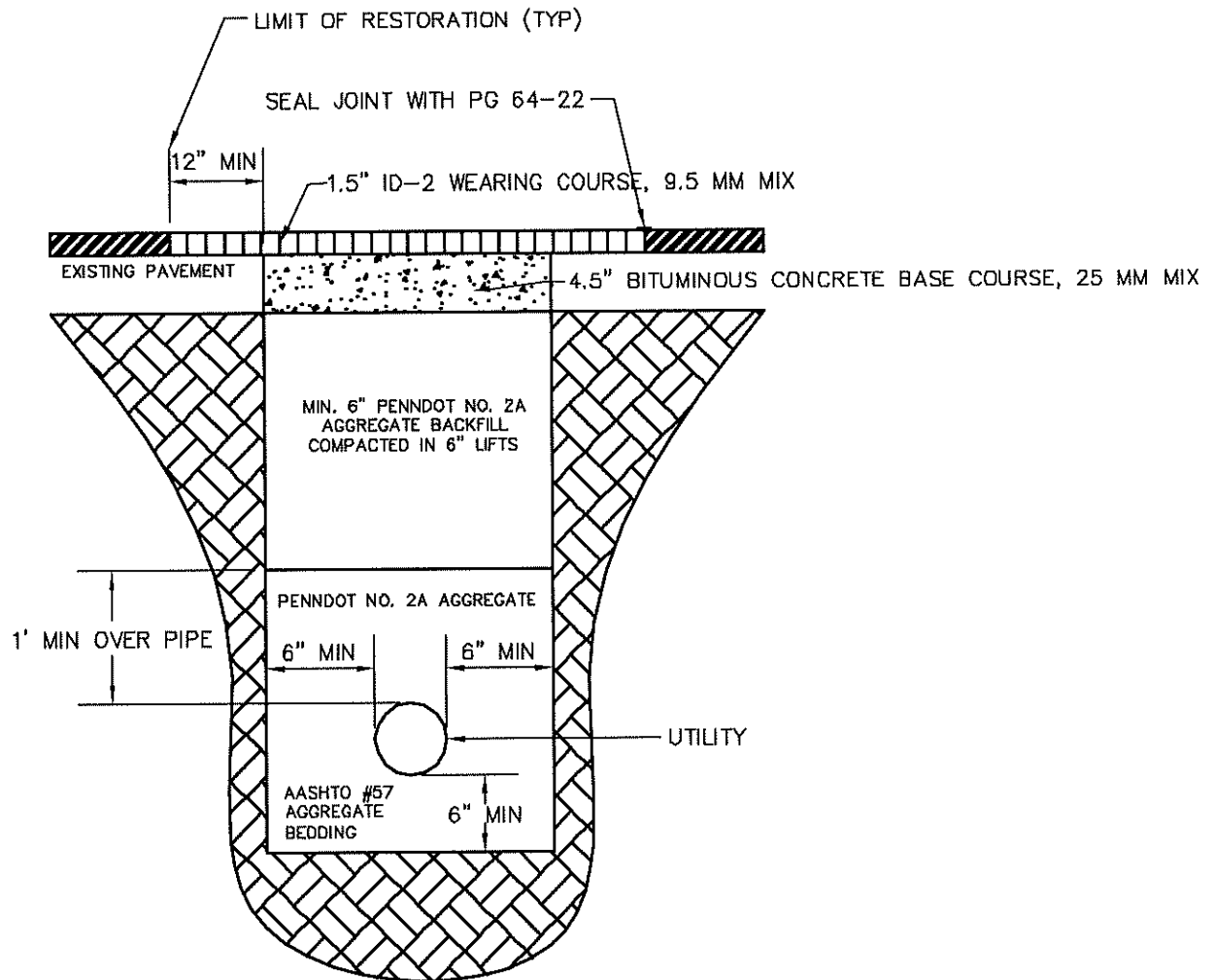
**SPECIAL NOTE:**

1. SEE DETAIL 15 FOR RESURFACING REQUIREMENTS FOR MAIN TRENCHES.
2. SEE DETAIL 16 FOR THE LATERAL AND SERVICE TRENCH DETAIL.

**DETAIL - 12**  
**TYPICAL DETAILS**  
**BOROUGH OF CONSHOHOCKEN**  
**MONTGOMERY COUNTY, PENNSYLVANIA**

ADOPTED MAY 2009

LAST REVISED MAY 2012



## UTILITY LATERAL TRENCH RESTORATION (PERPENDICULAR TO ROADWAY)

N.T.S.

### NOTE:

1. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE WIDTH OF TRENCH.
2. FOR UTILITY MAIN TRENCH RESTORATION SEE DETAIL-12
3. RESTORATIONS ON STATE HIGHWAYS REQUIRE PENNDOT APPROVAL.
4. TRENCHES SHALL BE PUMPED THROUGH A FILTER BAG WHEN DEWATERING.
5. THE CONTRACTOR IS SOLEY RESPONSIBLE FOR TRENCH SAFETY.
6. ALL LATERAL TRENCHES SHALL BE REPAIRED USING AN INFRARED SEAMLESS REPAIR METHOD.

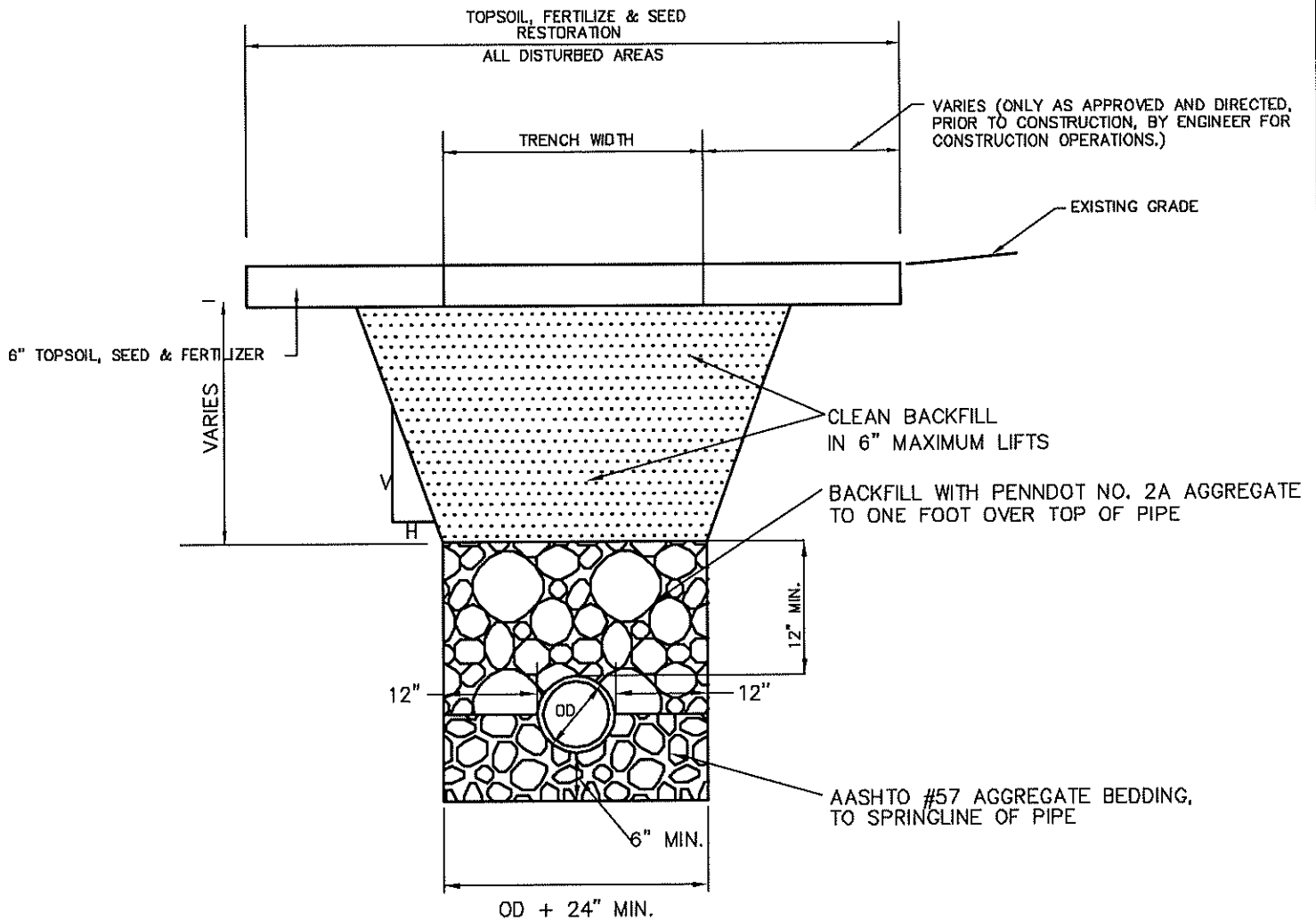
### SPECIAL NOTE:

1. UTILITY PATCHES WITHIN FIVE (5) FEET OF OTHER UTILITY PATCHES SHALL BE JOINED IN ORDER TO LIMIT THE NUMBER OF JOINTS IN THE PAVEMENT. THE PAVEMENT INTERFACE WITH THE CURB IS CONSIDERED A JOINT. PATCHES WITHIN FIVE (5) OF THE CURB SHALL BE EXTENDED TO THE CURB.

**DETAIL - 13**  
**TYPICAL DETAILS**  
**BOROUGH OF CONSHOHOCKEN**  
**MONTGOMERY COUNTY, PENNSYLVANIA**

ADOPTED MAY 2009

LAST REVISED MARCH 2015



**TYPICAL TRENCH DETAIL FOR GRASSED AREA**

N.T.S.

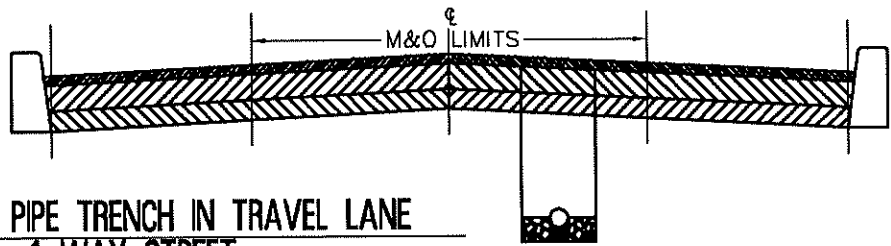
NOTE:

1. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE WIDTH OF TRENCH.
2. TRENCHES SHALL BE PUMPED THROUGH A FILTER BAG WHEN DEWATERING.
3. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR TRENCH SAFETY.

**DETAIL - 14**  
**TYPICAL DETAILS**  
**BOROUGH OF CONSHOHOCKEN**  
**MONTGOMERY COUNTY, PENNSYLVANIA**

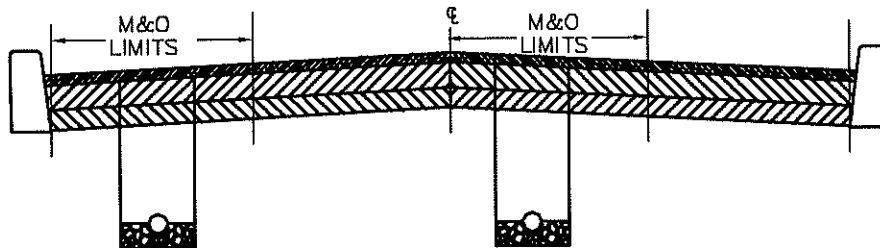
ADOPTED MAY 2009

LAST REVISED MARCH 2015



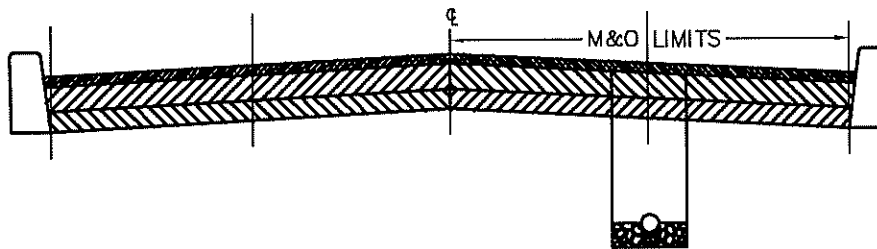
PIPE TRENCH IN TRAVEL LANE  
1-WAY STREET

N.T.S.



PIPE TRENCH IN PARKING LANE, TRAVEL LANE OR ORIGINAL PAVING PASS  
2-WAY STREET

N.T.S.



PIPE TRENCH AFFECTING 2 LANES OR ORIGINAL PAVING PASSES  
2-WAY STREET

N.T.S.

NOTES:

1. UTILITY MAIN REPAIRS OR REPLACEMENTS WILL REQUIRE COMPLETE MILL AND OVERLAY OF THE PARKING LANE, TRAVEL LANE OR ORIGINAL PAVING PASS IN WHICH THE REPAIR FALLS. MAIN REPAIRS OR REPLACEMENTS WHICH REQUIRE TRENCHING ACROSS TWO (2) TRAVEL LANES, A TRAVEL LANE AND A PARKING LANE, OR ACROSS TWO ORIGINAL PAVING PASSES WILL REQUIRE COMPLETE MILL AND OVERLAY OF THE TRAVEL LANE(S) AND/OR PARKING LANE(S) AFFECTED.

2. THE EXACT LIMITS OF PAVING SHALL BE DETERMINED IN THE FIELD. THE BOROUGH RESERVES THE RIGHT TO ADJUST THE PAVING LIMITS IN ORDER TO MATCH THE SEAMS FROM THE ORIGINAL PAVING OPERATION OR OTHERWISE TO PRESERVE TO THE INTEGRITY OF THE ROAD TO THE GREATEST EXTENT PRACTICAL.

3. PAVING LIMITS SHALL BE EXPANDED TO INCLUDE ALL DISTURBANCE FROM LATERAL OF SERVICE INSTALLATIONS

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ALL PAVEMENT MARKINGS REMOVED BY THE UTILITY CONSTRUCTION.

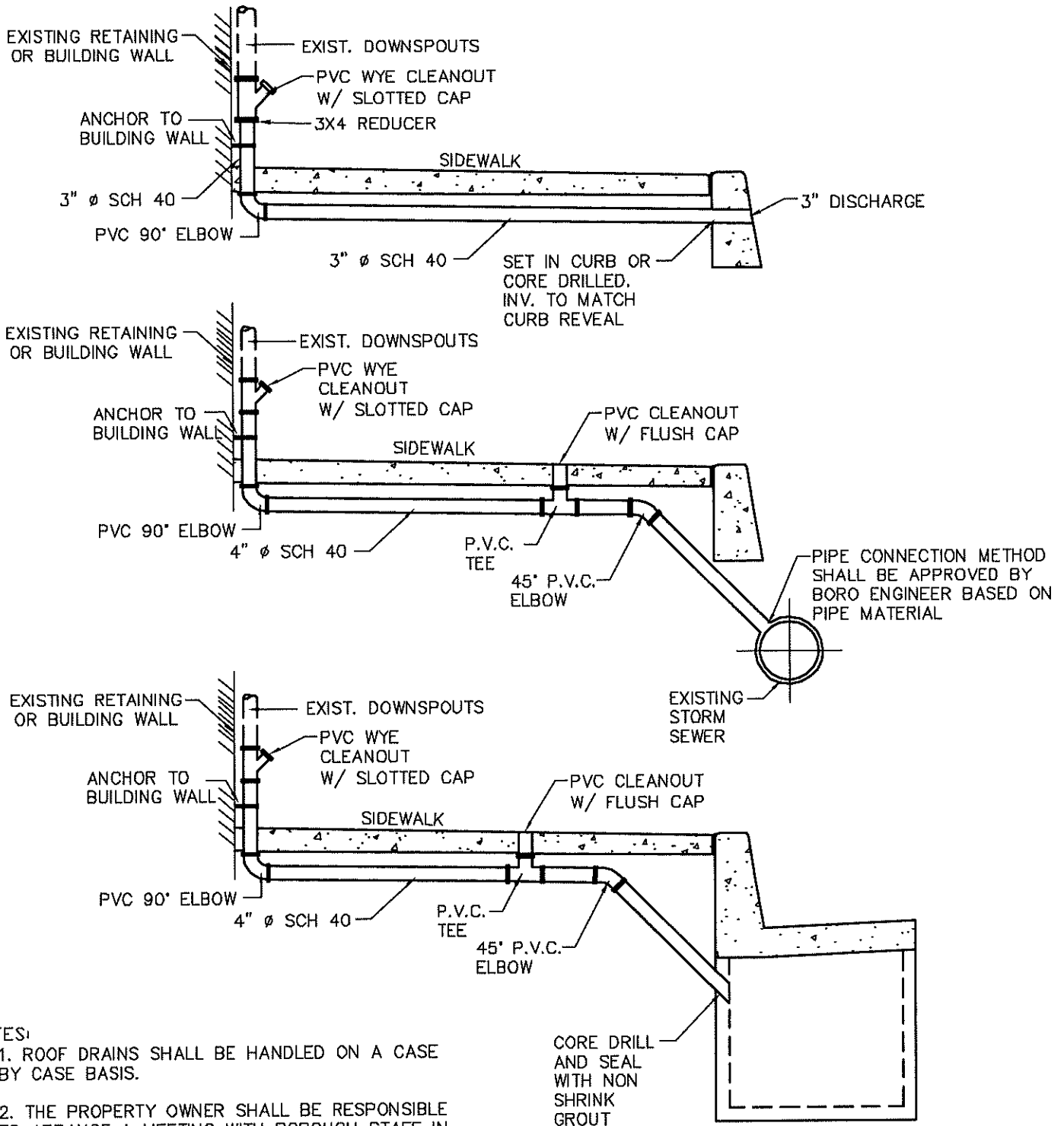
**STREET DEGRADATION RESURFACING DETAILS**

N.T.S.

**DETAIL - 15**

**TYPICAL DETAILS**

**BOROUGH OF CONSHOHOCKEN  
MONTGOMERY COUNTY, PENNSYLVANIA**



NOTES:

1. ROOF DRAINS SHALL BE HANDLED ON A CASE BY CASE BASIS.
2. THE PROPERTY OWNER SHALL BE RESPONSIBLE TO ARRANGE A MEETING WITH BOROUGH STAFF IN ORDER TO DETERMINE THE APPROPRIATE CONSTRUCTION DETAIL.
3. NO WORK SHALL BE PERFORMED WITHOUT THE BOROUGH'S APPROVAL OF THE PROPOSED CONSTRUCTION DETAIL.
4. SEE DETAIL 17 FOR THE STEEL TUBE ROOF DRAIN ENCASEMENT DETAIL.

**ROOF DRAIN DETAILS**

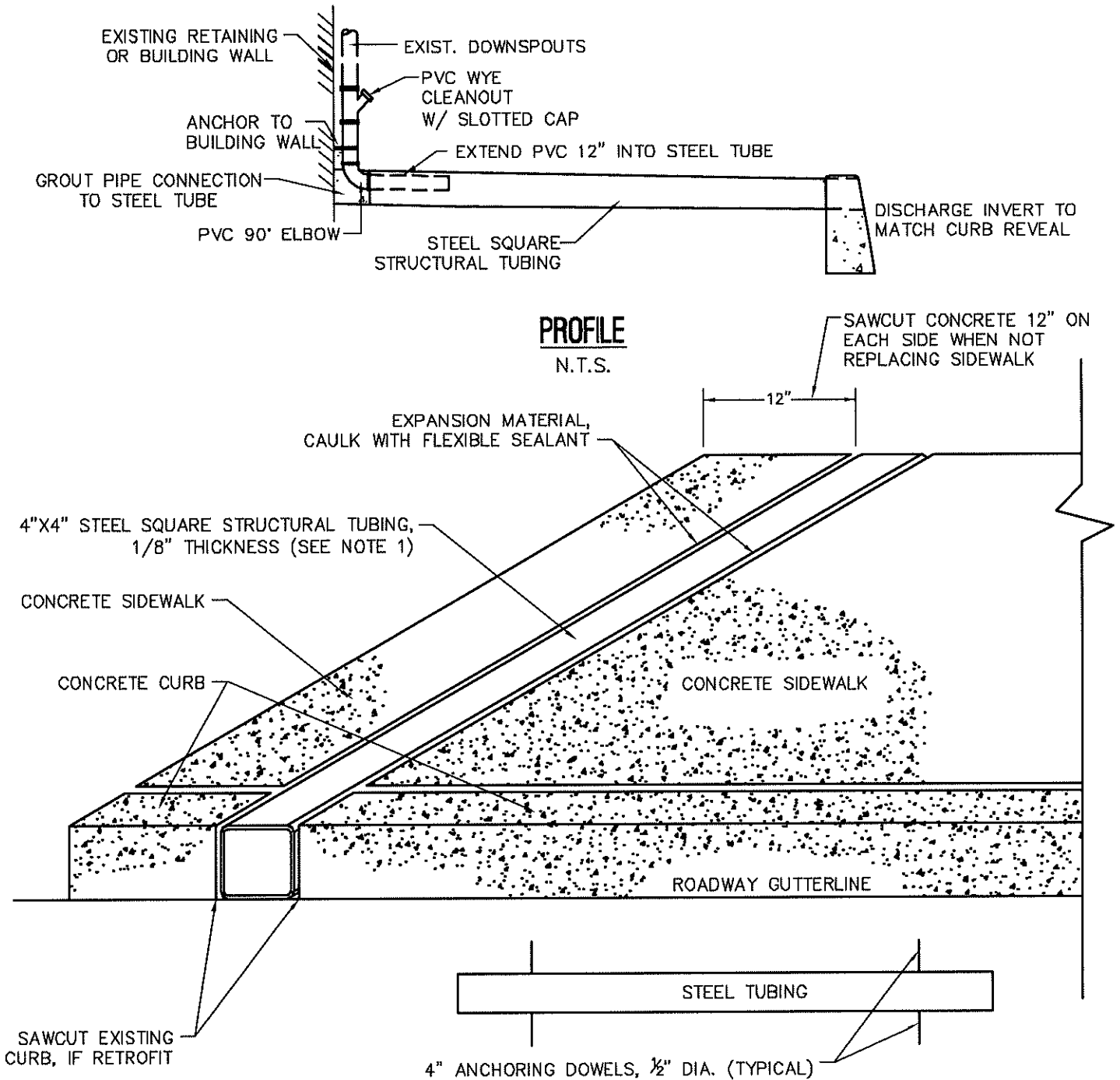
N.T.S.

**DETAIL - 16**  
**TYPICAL DETAILS**  
**BOROUGH OF CONSHOHOCKEN**  
**MONTGOMERY COUNTY, PENNSYLVANIA**



ADOPTED MAY 2009

LAST REVISED MARCH 2015



**STEEL TUBE ROOF DRAIN ENCASEMENT DETAIL**

N.T.S.

NOTES:

1. EXACT SIZE OF STEEL TUBING TO BE DETERMINED BY FIELD CONDITIONS OF PROJECT LOCATION, AND CURB REVEAL.
2. FOR RETROFITS SIDEWALK SHALL BE SAWCUT 12" ON EACH SIDE OF PROPOSED ROOF DRAIN LEADER ENCASEMENT. EXISTING CURB SHALL BE CUT TO THE OUTSIDE DIMENSION OF THE STEEL TUBING.
3. DOWEL SPACING TO BE DETERMINED BY LENGTH OF TUBING AND WIDTH OF SIDEWALK AT THE PROJECT LOCATION. (MINIMUM 4)

**DETAIL - 17**  
**TYPICAL DETAILS**  
**BOROUGH OF CONSHOHOCKEN**  
**MONTGOMERY COUNTY, PENNSYLVANIA**

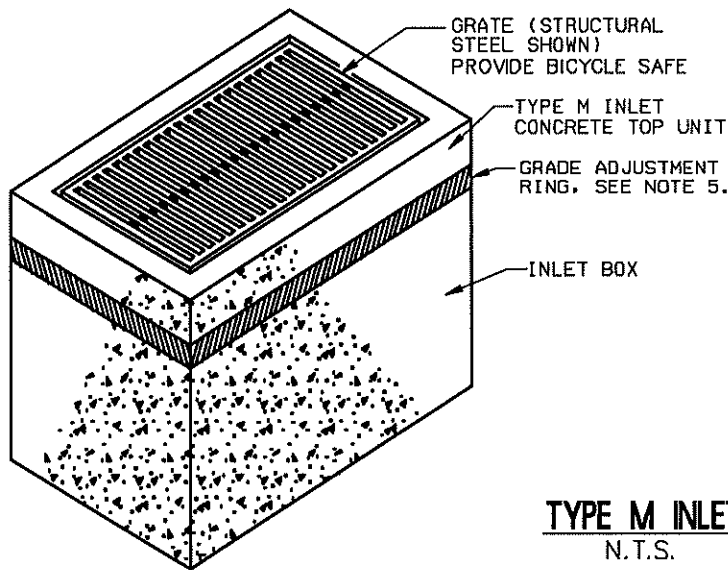
NOTES:

1. PRECAST INLET STRUCTURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH PENNDOT STANDARD DETAIL FOR ROADWAY CONSTRUCTION RC-45M AND RC-46M.

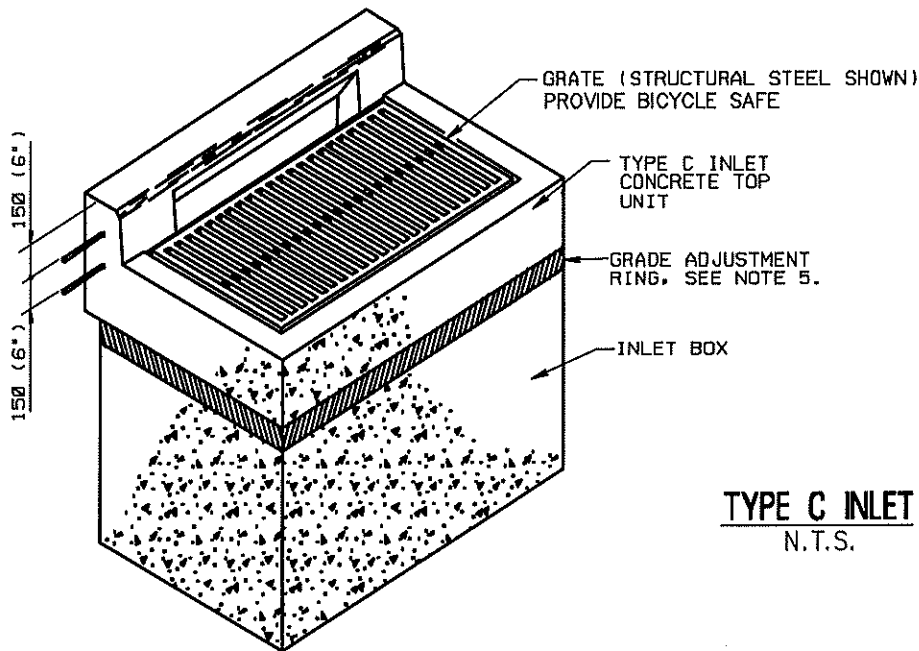
2. ALL INLETS SHALL BE FINISHED WITH CONCRETE FLOW CHANNELS IN THE BASE.

3. INLET TOP UNITS SHALL BE SET TO GRADE AND ADJUSTED TO MATCH THE ROADWAY PROFILE SLOPE.

4. STORMWATER INLETS ASSOCIATED WITH NEW CONSTRUCTION SHALL HAVE 8" TOP UNITS AND BE SET 2.5" BELOW FINISHED GUTTERLINE GRADE PER DETAIL - 19 OF THESE TYPICAL DEATILS.



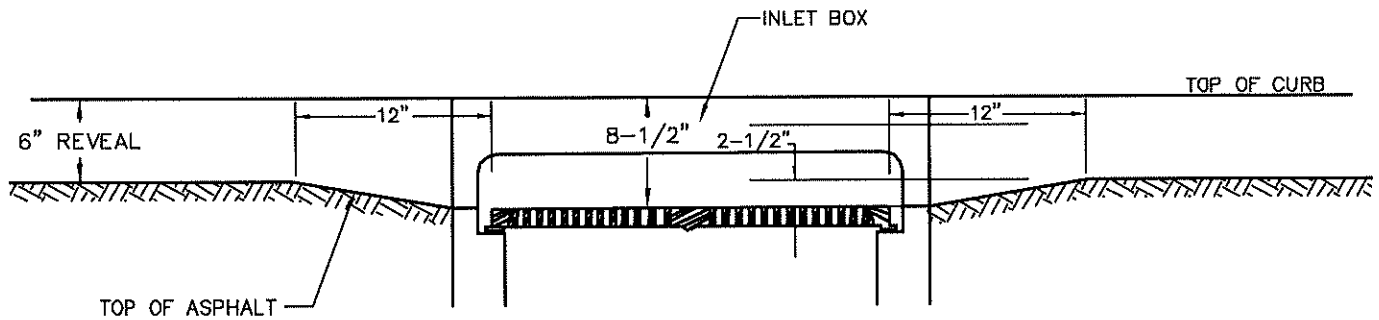
**TYPE M INLET**  
N.T.S.



**TYPE C INLET**  
N.T.S.

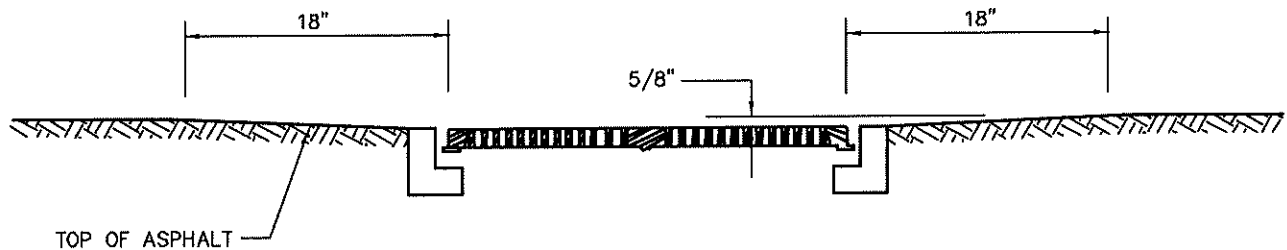
ADOPTED MAY 2009

LAST REVISED MARCH 2015



**RECESSED INLET GRATE DETAIL**

N.T.S.



**RECESSED MANHOLE COVER DETAIL**

N.T.S.

**NOTES:**

1. CONTRACTOR SHALL MAKE EVERY EFFORT TO ADHERE TO THESE DETAILS. SHOULD FIELD CONDITIONS INHIBIT THE CONTRACTOR FROM MEETING THE REQUIRED DIMENSIONS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

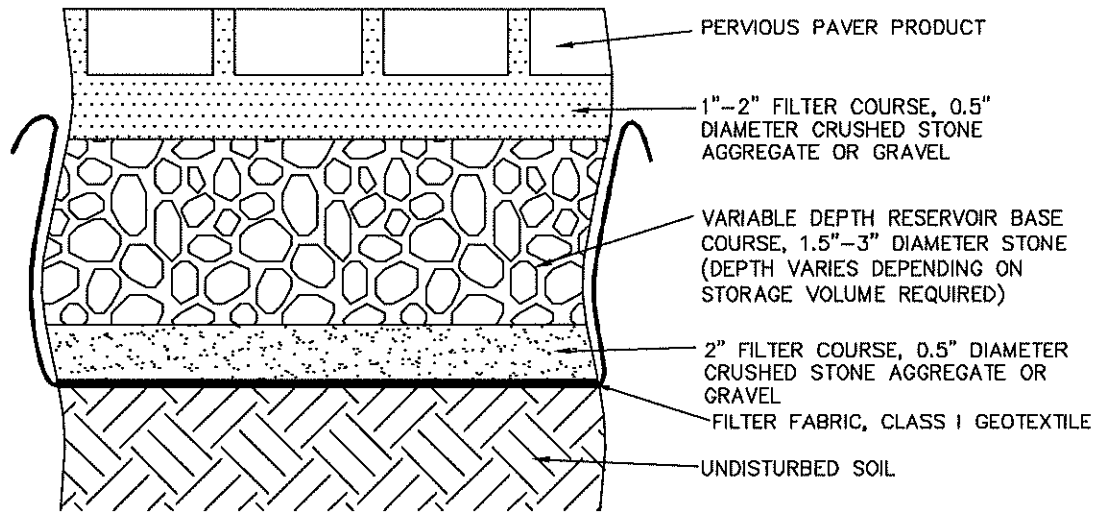
2. THESE DETAILS APPLY TO BOTH ROADWAY REHABILITATIONS, UTILITY TRENCH RESTORATION AND NEW CONSTRUCTION.

3. CURB REVEALS SHALL BE 6" UNLESS OTHERWISE DIRECTED.

**DETAIL - 19**  
**TYPICAL DETAILS**  
**BOROUGH OF CONSHOHOCKEN**  
**MONTGOMERY COUNTY, PENNSYLVANIA**

ADOPTED MAY 2009

LAST REVISED MARCH 2015



### PERMEABLE PAVER SURFACE DETAIL

N.T.S.

NOTES:

1. THE DETAIL PROVIDED IS ILLUSTRATIVE ONLY. THE PROPERTY OWNER SHALL PROVIDE DETAILS FOR THE DESIRED PRODUCT FOR REVIEW BY THE BOROUGH ENGINEER.

2. FILTER COURSE AND RESERVOIR AGGREGATE SHALL BE CLEAN/WASHED STONE.

3. GEOTEXTILE FILTER FABRIC SHALL BE MIRAFI #14N, OR APPROVED EQUAL.

**DETAIL - 20**  
**TYPICAL DETAILS**  
**BOROUGH OF CONSHOHOCKEN**  
**MONTGOMERY COUNTY, PENNSYLVANIA**