

LEGEND:

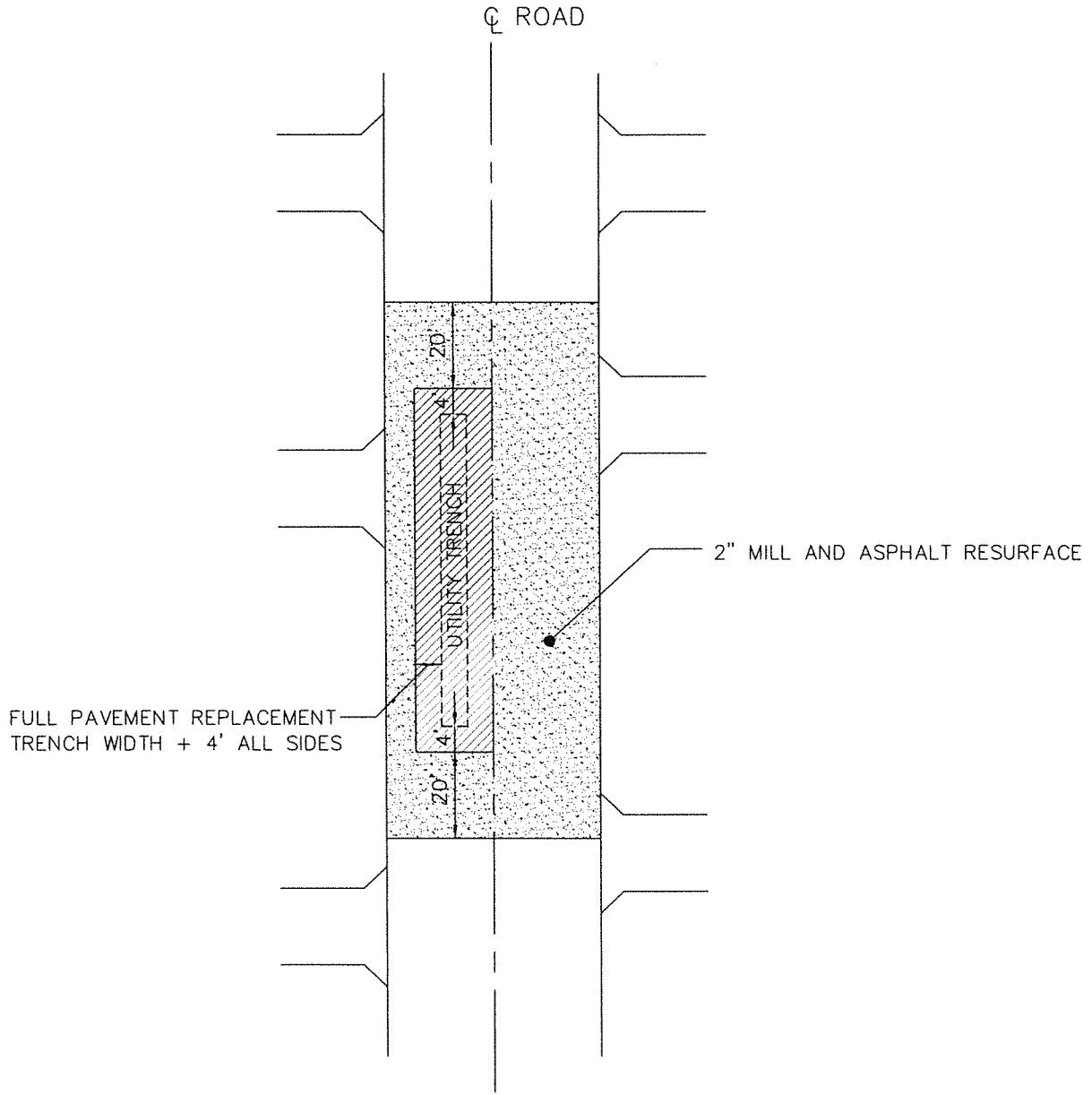
- ① ITEM 403/402 - ASPHALT PAVEMENT (7" ASPHALT BASE + 2" ASPHALT SURFACE).
- ② ITEM 302 - 4" CRUSHED STONE BASE, COMPACTED TO 100% (ASTM D696) (OMIT IF NO STONE BASE)
- ③ ITEM 207 - SUBGRADE RESHAPED AND COMPACTION OF EXISTING CLAY SUBGRADE.
- ④ ITEM SPL - MIRAFI 140N OR EQUIVALENT NONWOVEN GEOTEXTILE, COVERING DRAINAGE BACKFILL, LAPPED 12" INCHES ONTO CLAY EACH SIDE AND 4" INCHES ONTO BACK OF CURB WHERE APPLICABLE.
- ⑤ ITEM 302 - CLEAN NO. 57 CRUSHED STONE (LESS THEN 3% FINES), COMPACTED IN 6" TO 8" LIFTS TO 80% DENSITY (ASTM D453, D4254) VIA VIBRATORY COMPACTOR (NOTE 2)
- ⑥ ITEM 704 - 4" DIA. RIGID PERFORATED PVC PIPE. (NOTE 2)
- ⑦ ITEM 506 - CONCRETE CURB AND GUTTER. (NOTE 2)
- ⑧ PIPE BEDDING
 - A. COMPACT SAND IN TRENCH IN LAYERS 6" OR LESS TO WIDTH AND ELEVATION SHOWN.
 - B. EXCAVATE A GROOVE IN COMPACTED AND TO CONFORM TO PIPE SHAPE WITH APPROX. 4" OF SAND BELOW BOTTOM OF PIPE.
 - C. INSTALL PIPE AT CORRECT ALIGNMENT AND ELEVATION RECOMPACT ANY LOOSE SAND DISTURBED DURING INSTALLATION.
- ⑨ BACKFILL - LOW STRENGTH MORTAR BACKFILL
- ⑩ ITEM 403/407 - 2" MILL AND RESURFACE ASPHALT PAVEMENT



NOTE:

- 1.) LIMITS OF RESURFACING SHALL EXTEND 20' BEYOND LIMITS OF UTILITY TRENCH EXCAVATION.
- 2.) ANY EXISTING UNDER DRAIN DISTURBED DURING TRENCHING CONSTRUCTION SHALL BE REPLACED WITH RIGID 4" DIA. PERFORATED PVC PIPE AND/OR CLEAN NO. 57 STONE AS INDICATED ON THE CITY OF VILLA HILLS STREET DETAIL 1.

CITY OF VILLA HILLS
TYPICAL DETAIL NO. 1
TYPICAL PAVEMENT RECONSTRUCTION
FOR ASPHALT STREETS

SCALE: AS NOTED	DATE: 11-13-15
DRAWN BY: TRP	CHECKED BY: DRW
PROJECT NO: 04-141	FILE: KY-A10

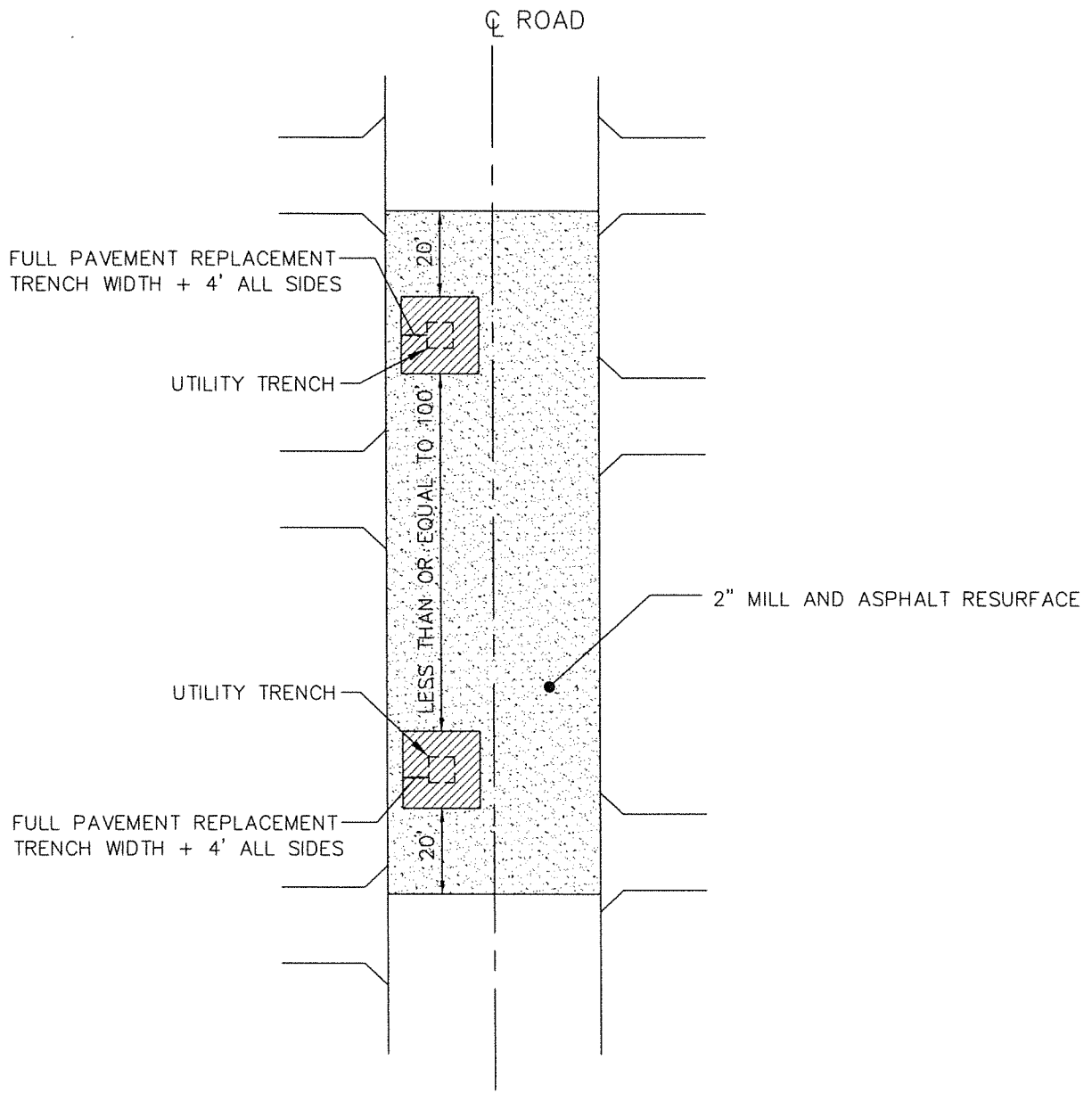




-  INDICATES LIMITS OF MILL AND RESURFACE
-  PROPOSED PAVEMENT CUT

FOR USE WITH TYPICAL
DETAIL NO. 1

CITY OF VILLA HILLS
TYPICAL DETAIL NO. 2
RECONSTRUCTION LIMITS
FOR ASPHALT STREETS

SCALE: AS NOTED	DATE: 11-13-15
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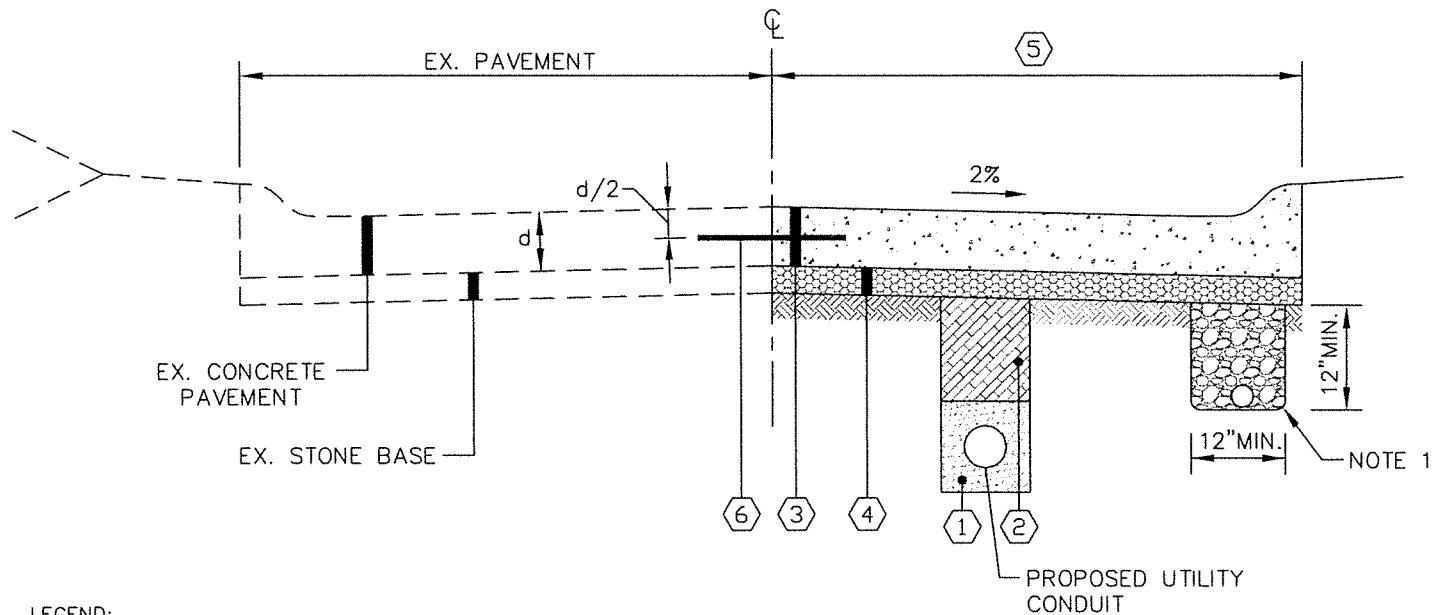


 INDICATES LIMITS OF MILL AND RESURFACE
 PROPOSED PAVEMENT CUT

FOR USE WITH TYPICAL
DETAIL NO. 1

CITY OF VILLA HILLS
 TYPICAL DETAIL NO. 3
 RECONSTRUCTION LIMITS
 (SEVERAL PAVEMENT CUTS ON ONE STREET)

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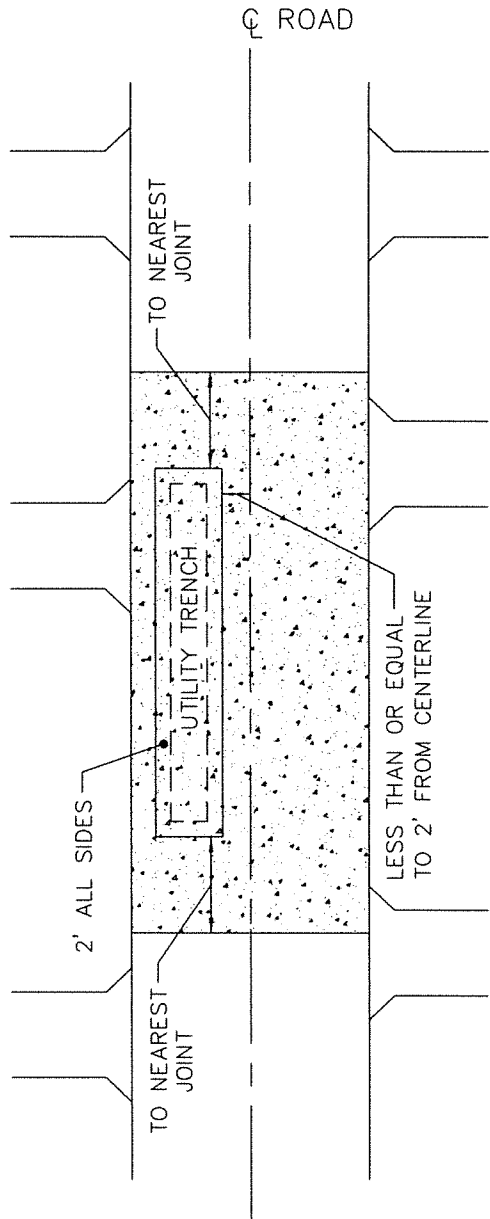
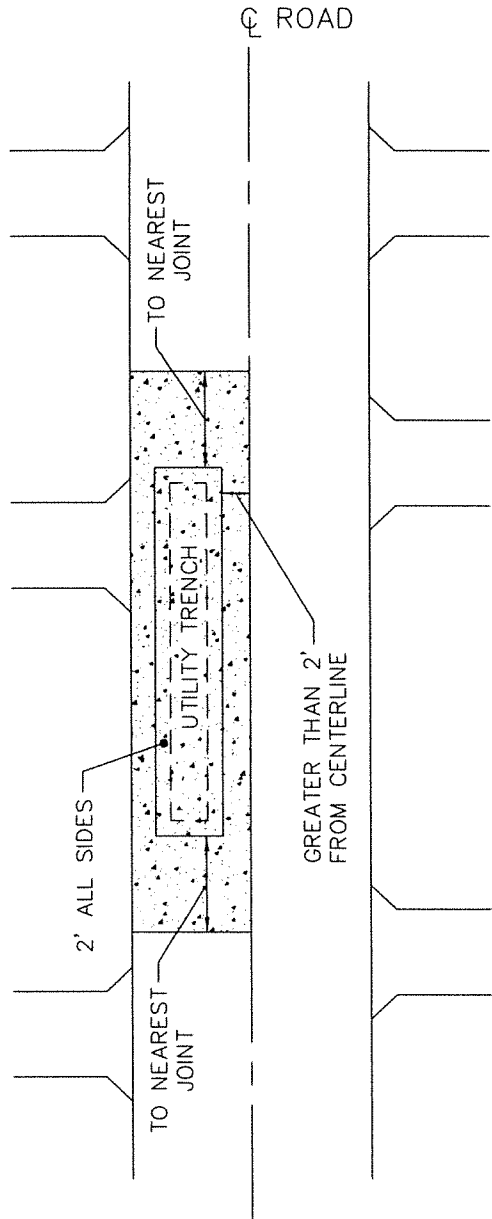
- ① PIPE BEDDING
 - A. COMPACT SAND IN TRENCH IN LAYERS 6" OR LESS TO WIDTH AND ELEVATION SHOWN.
 - B. EXCAVATE A GROOVE IN COMPACTED AND TO CONFORM TO PIPE SHAPE WITH APPROX. 4" OF SAND BELOW BOTTOM OF PIPE.
 - C. INSTALL PIPE AT CORRECT ALIGNMENT AND ELEVATION RECOMPACT ANY LOOSE SAND DISTURBED DURING INSTALLATION.
- ② BACKFILL
 - A. UNDER ROADWAY PAVEMENT
 - 1. LOW STRENGTH MORTAR BACKFILL
- ③ CONCRETE PAVEMENT REPLACEMENT AS PER KENTON COUNTY SUBDIVISION REGULATIONS.
 - A. LOCATION STREETS AND SUB-COLLECTOR STREETS
 - 1. KTC501 - d = 7" CONCRETE PAVEMENT
 - B. SUB-COLLECTOR STREETS
 - 1. KTC501 - d = 8" CONCRETE PAVEMENT
 - C. COLLECTOR STREETS
 - 1. KTC501 - d = 9" CONCRETE PAVEMENT
- ④ DRAINAGE BLANKET
 - A. KTC302 - 4" CRUSHED STONE BASE, COMPACTED TO 100% (ASTM D696) (OMIT IF NO STONE BASE)
- ⑤ CONCRETE PAVEMENT
 - A. CONCRETE PAVEMENT PER KENTON COUNTY SUBDIVISION REGULATIONS.
 - 1. CONCRETE PAVEMENT SHALL BE SAWCUT, REMOVED, AND REPLACED TO THE NEAREST JOINT. MINIMUM REPAIR = 1 BLOCK = 12"x12"; IF UTILITY TRENCH IS LOCATED WITH IN 2" OF THE CENTER LINE OF THE PAVEMENT, THE ENTIRE PAVEMENT WIDTH SHALL BE REPLACED.
- ⑥ 1/2" REBAR, 18" LONG, 18" O.C. DRILLED INTO EXISTING CONCRETE PAVEMENT (ALL SIDES WHERE NEW CONCRETE ABUTS EX. CONCRETE)

NOTE:

- 1.) ANY EXISTING UNDER DRAIN DISTURBED DURING TRENCHING CONSTRUCTION SHALL BE REPLACED WITH RIGID 4" DIA. PERFORATED PVC PIPE AND/OR CLEAN NO. 57 STONE AS INDICATED ON THE CITY OF VILLA HILLS STREET DETAIL 1.

CITY OF VILLA HILLS
TYPICAL DETAIL NO. 4
TYPICAL PAVEMENT RECONSTRUCTION/RESTORATION
FOR CONCRETE STREETS

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LIMITS OF CONCRETE PAVEMENT REPLACEMENT

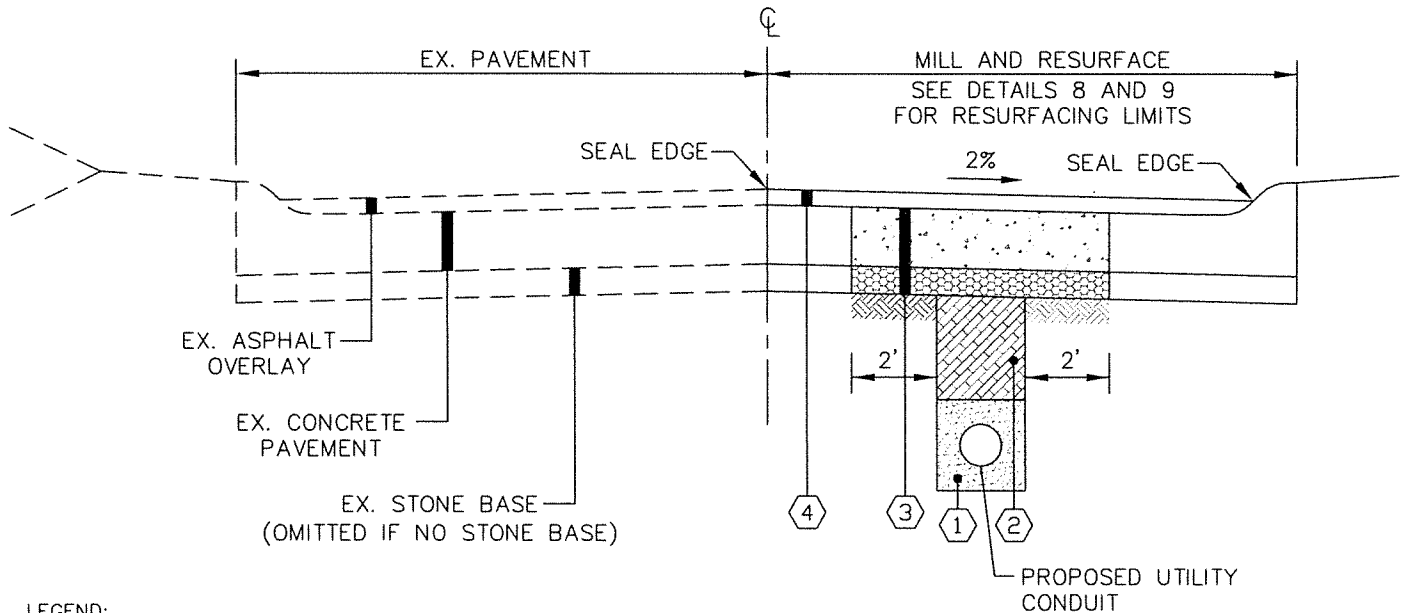
* IF UTILITY TRENCH ENDS WITHIN 2' OF THE NEAREST JOINT, PAVEMENT SHALL BE REPLACED TO THE NEXT JOINT BEYOND THAT.

FOR USE WITH TYPICAL
DETAIL NO. 4

CITY OF VILLA HILLS
TYPICAL DETAIL NO. 5
RECONSTRUCTION/RESTORATION LIMITS
FOR CONCRETE STREETS

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SHEET 1 OF 1



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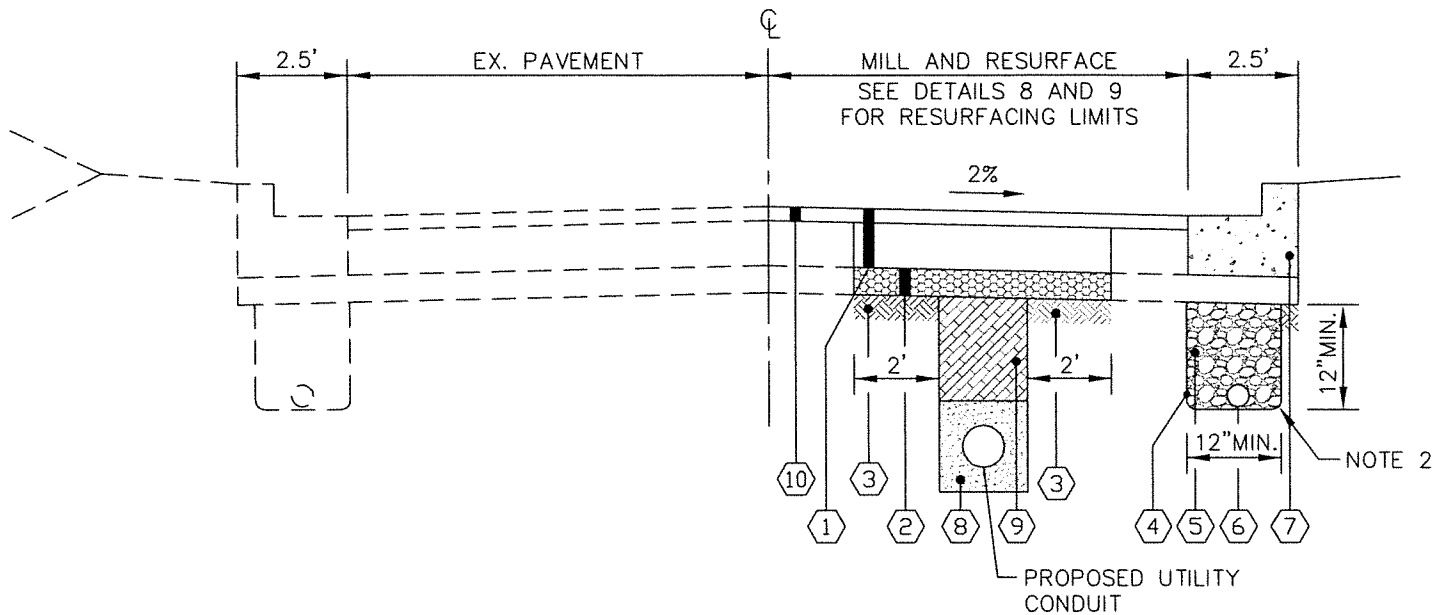
- ① PIPE BEDDING
 - A. COMPACT SAND IN TRENCH IN LAYERS 6" OR LESS TO WIDTH AND ELEVATION SHOWN.
 - B. EXCAVATE A GROOVE IN COMPACTED AND TO CONFORM TO PIPE SHAPE WITH APPROX. 4" OF SAND BELOW BOTTOM OF PIPE.
 - C. INSTALL PIPE AT CORRECT ALIGNMENT AND ELEVATION RECOMPACT ANY LOOSE SAND DISTURBED DURING INSTALLATION.
- ② BACKFILL
 - A. UNDER ROADWAY PAVEMENT
 - 1. LOW STRENGTH MORTAR BACKFILL
- ③ PAVEMENT RESTORATION
 - ASPHALT PAVEMENT SHALL BE RESTORED AS PER THE CITY OF VILLA HILLS PAVEMENT RECONSTRUCTION TYPICAL DETAIL NO. 1 (8" NO. 2 CRUSHED LIMESTONE MAY BE OMITTED IF NO STONE BASE EXISTS UNDER THE EXISTING PAVEMENT.)
- ④ MILL EXISTING ASPHALT PAVEMENT AND RESURFACE WITH ASPHALT PAVEMENT. THICKNESS VARIES - MATCH EXISTING

NOTE:

- 1.) ANY EXISTING UNDER DRAIN DISTURBED DURING TRENCHING CONSTRUCTION SHALL BE REPLACED WITH RIGID 4" DIA. PERFORATED PVC PIPE AND/OR CLEAN NO. 57 STONE AS INDICATED ON THE CITY OF VILLA HILLS STREET DETAIL 1.

CITY OF VILLA HILLS
TYPICAL DETAIL NO. 6
TYPICAL PAVEMENT RESTORATION
FOR CONCRETE STREET WITH ASPHALT OVERLAY

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TRP	DRW
PROJECT NO:	FILE:
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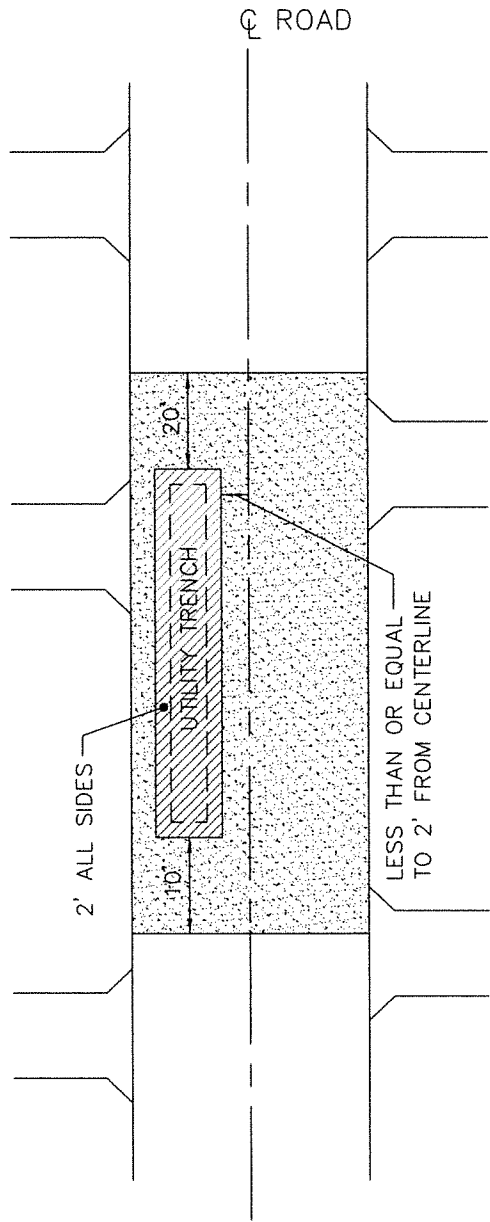
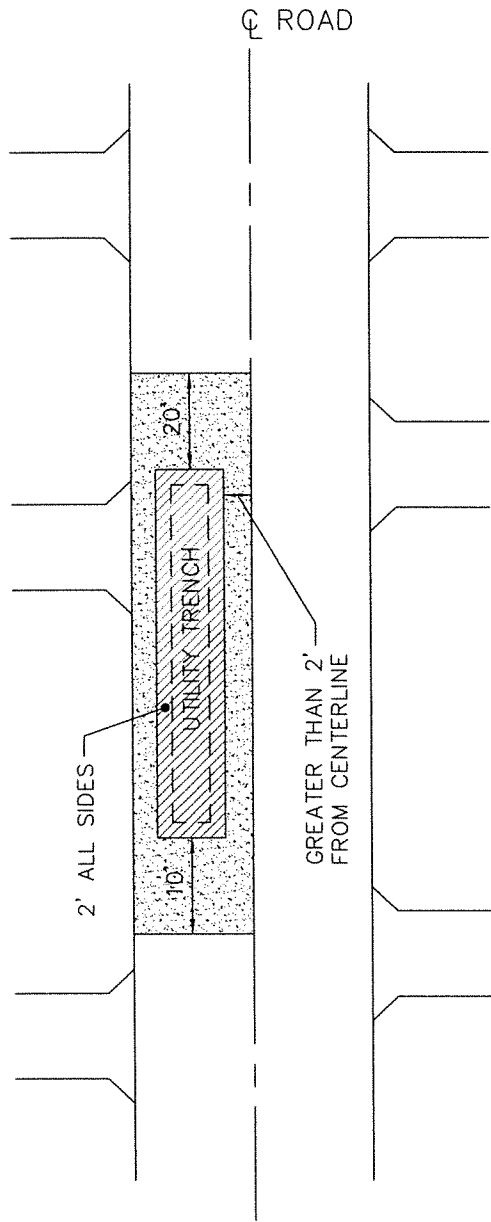
- ① ITEM 403/402 - ASPHALT PAVEMENT (7" ASPHALT BASE + 2" ASPHALT SURFACE).
- ② ITEM 302 - 4" CRUSHED STONE BASE, COMPACTED TO 100% (ASTM D696) (OMIT IF NO STONE BASE)
- ③ ITEM 207 - SUBGRADE RESHAPED AND COMPACTION OF EXISTING CLAY SUBGRADE.
- ④ ITEM SPL - MIRAFI 140N OR EQUIVALENT NONWOVEN GEOTEXTILE, COVERING DRAINAGE BACKFILL, LAPPED 12" INCHES ONTO CLAY EACH SIDE AND 4" INCHES ONTO BACK OF CURB WHERE APPLICABLE.
- ⑤ ITEM 302 - CLEAN NO. 57 CRUSHED STONE (LESS THEN 3% FINES), COMPACTED IN 6" TO 8" LIFTS TO 80% DENSITY (ASTM D453, D4254) VIA VIBRATORY COMPACTOR (NOTE 2)
- ⑥ ITEM 704 - 4" DIA. RIGID PERFORATED PVC PIPE.
- ⑦ ITEM 506 - CONCRETE CURB AND GUTTER.
- ⑧ PIPE BEDDING
 - A. COMPACT SAND IN TRENCH IN LAYERS 6" OR LESS TO WIDTH AND ELEVATION SHOWN.
 - B. EXCAVATE A GROOVE IN COMPACTED AND TO CONFORM TO PIPE SHAPE WITH APPROX. 4" OF SAND BELOW BOTTOM OF PIPE.
 - C. INSTALL PIPE AT CORRECT ALIGNMENT AND ELEVATION RECOMPACT ANY LOOSE SAND DISTURBED DURING INSTALLATION.
- ⑨ BACKFILL - LOW STRENGTH MORTAR BACKFILL
- ⑩ ITEM 403/407 - 2" MILL AND RESURFACE ASPHALT PAVEMENT

NOTE:

- 1.) LIMITS OF RESURFACING SHALL EXTEND 20' BEYOND LIMITS OF UTILITY TRENCH EXCAVATION.
- 2.) ANY EXISTING UNDER DRAIN DISTURBED DURING TRENCHING CONSTRUCTION SHALL BE REPLACED WITH RIGID 4" DIA. PERFORATED PVC PIPE AND/OR CLEAN NO. 57 STONE AS INDICATED ON THE CITY OF VILLA HILLS STREET DETAIL 1.

CITY OF VILLA HILLS
TYPICAL DETAIL NO. 7
TYPICAL PAVEMENT RESTORATION
FOR ASPHALT STREET

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PROJECT NO:	FILE:
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INDICATES LIMITS OF MILL AND RESURFACE



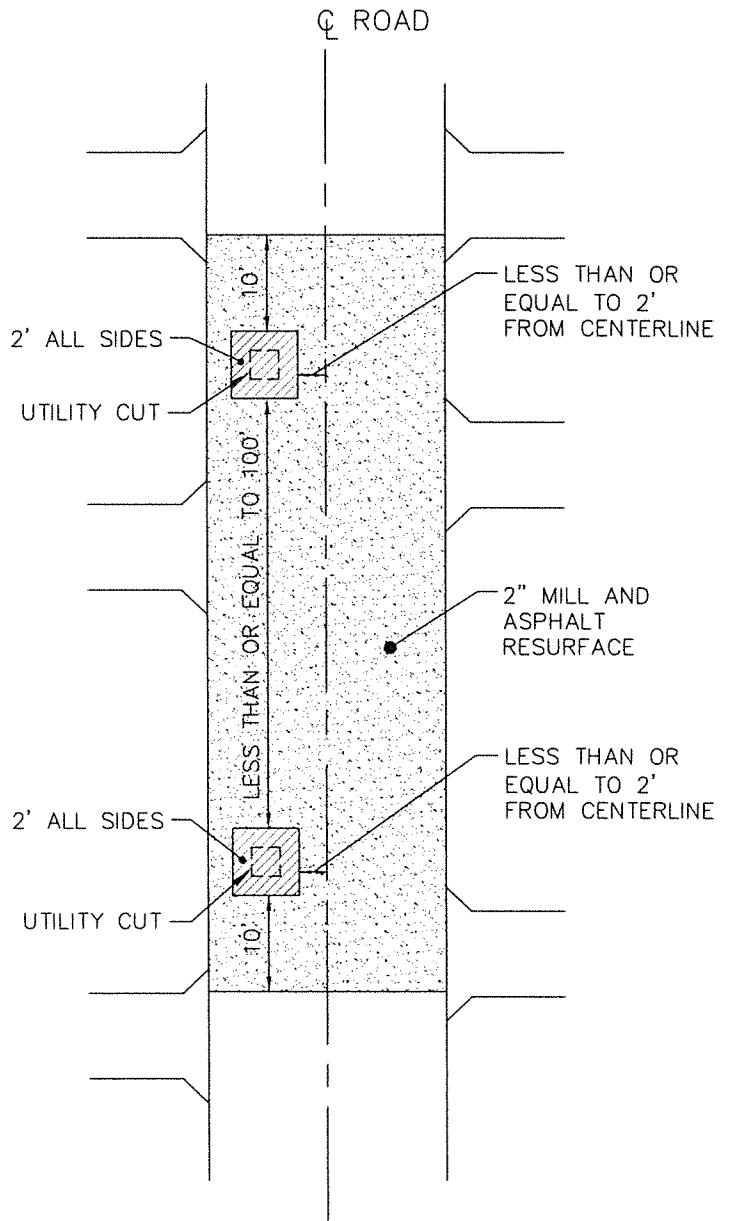
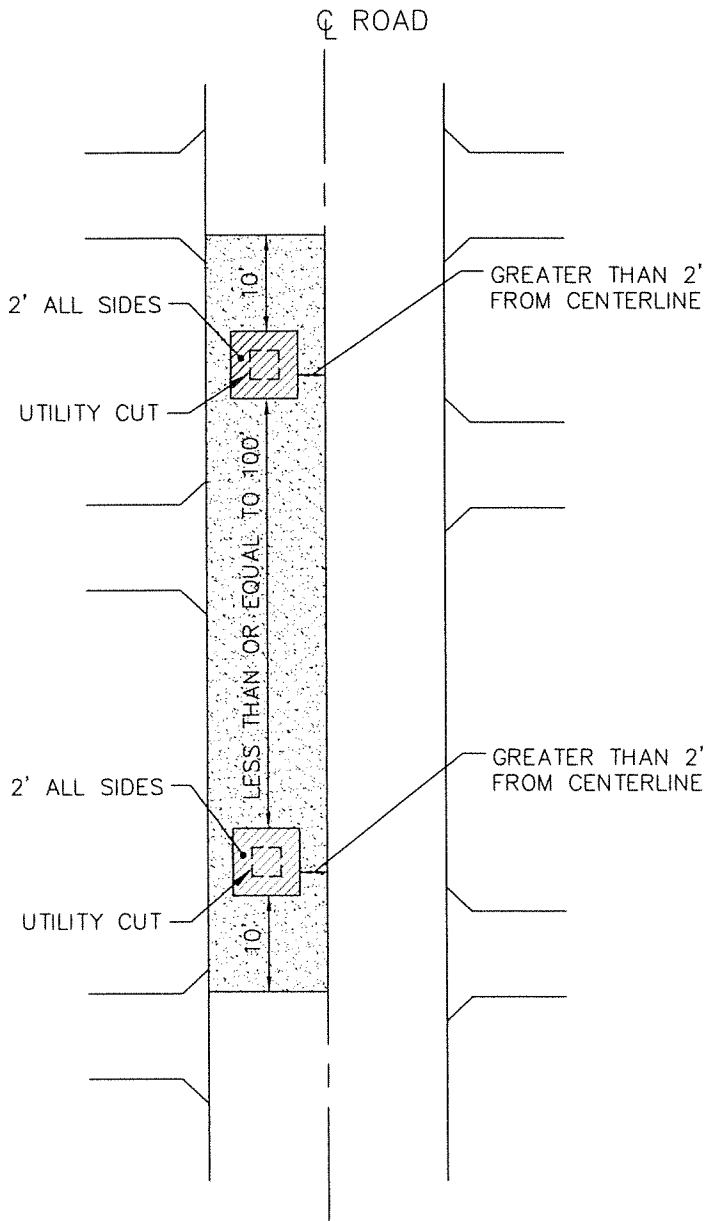
PROPOSED PAVEMENT CUT



FOR USE WITH TYPICAL
DETAIL NO. 6 AND 7

CITY OF VILLA HILLS
TYPICAL DETAIL NO. 8
PAVEMENT RESTORATION LIMITS
(ONE PAVEMENT CUT ON STREET)

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SHEET 1 OF 1



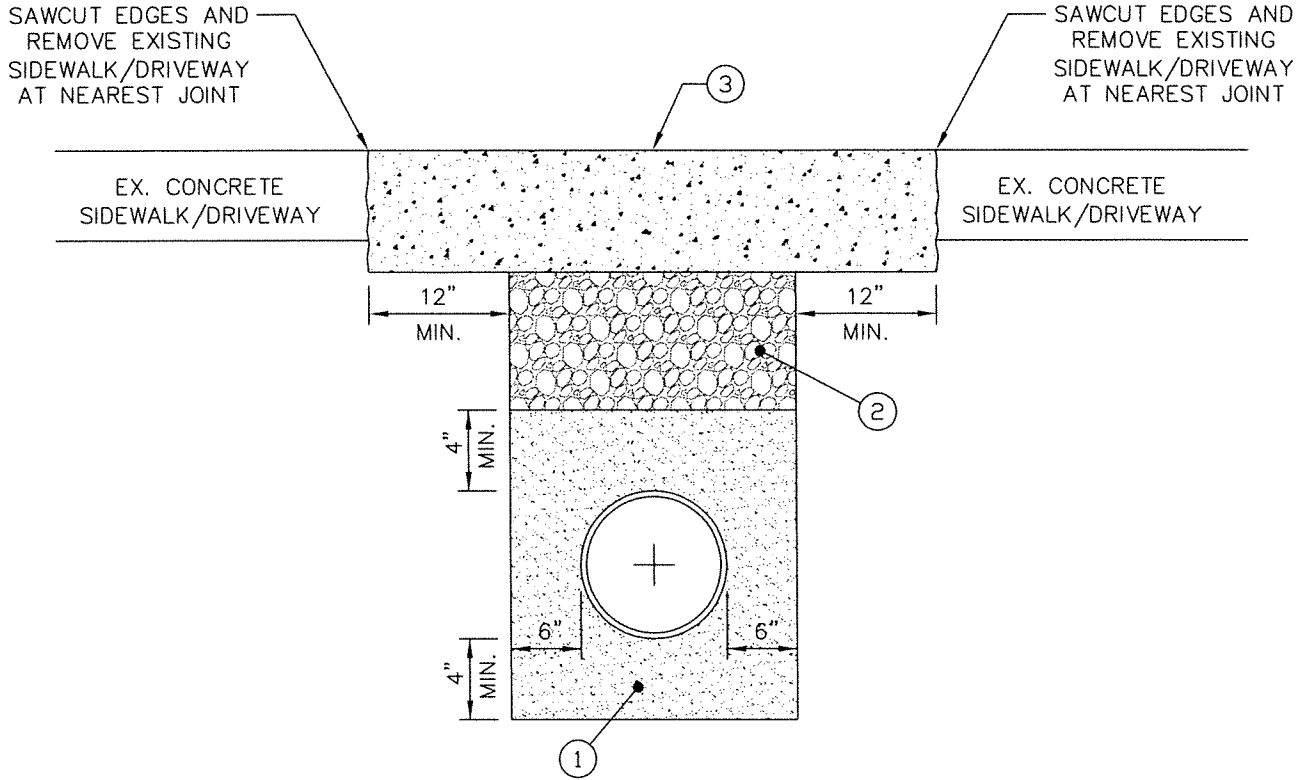
 INDICATES LIMITS OF MILL AND RESURFACE
 PROPOSED PAVEMENT CUT

FOR USE WITH TYPICAL
DETAIL NO. 6 AND 7

CITY OF VILLA HILLS
 TYPICAL DETAIL NO. 9
 PAVEMENT RESTORATION LIMITS
 (SEVERAL PAVEMENT CUTS ON ONE STREET)

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SHEET 1 OF 1

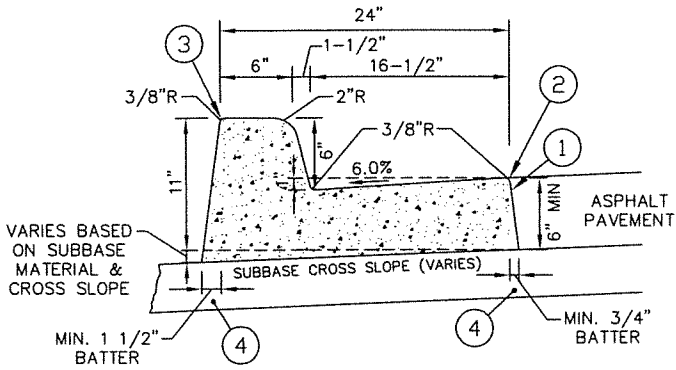


- ① PIPE BEDDING
 - A. COMPACT SAND IN TRENCH IN LAYERS 6" OR LESS TO WIDTH AND ELEVATION SHOWN.
 - B. EXCAVATE A GROOVE IN COMPACTED AND TO CONFORM TO PIPE SHAPE WITH APPROX. 4" OF SAND BELOW BOTTOM OF PIPE.
 - C. INSTALL PIPE AT CORRECT ALIGNMENT AND ELEVATION RECOMPACT ANY LOOSE SAND DISTURBED DURING INSTALLATION.
- ② BACKFILL
 - A. UNDER CONCRETE SIDEWALK OR DRIVEWAY
 - 1. #57 AGGREGATE BACK FILL COMPACTED IN LAYERS OF 6" OR LESS TO PAVEMENT SUBGRADE, COMPACT TO 80% RELATIVE DENSITY (ASTM D4253, D4254)
- ③ SIDEWALK AND DRIVEWAY RESTORATION
 - A. SIDEWALK
 - 1. KTC 605 - 4" CONCRETE SIDEWALK
 - B. CONCRETE DRIVEWAY
 - 1. KTC 505 - 6" CONCRETE DRIVEWAY

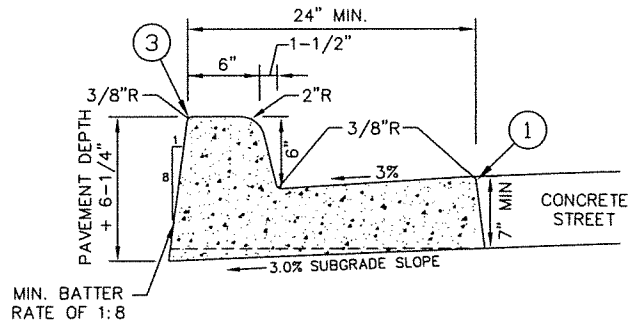
NOTE:
 CONCRETE FOR DRIVEWAYS AND SIDEWALKS SHALL BE KTC 601 CLASS AA STRENGTH MIX SPECIFICATIONS, F=4000 PSI 28 DAY COMPRESSIVE STRENGTH.

CITY OF VILLA HILLS
 TYPICAL DETAIL NO. 10
 DRIVEWAY AND SIDEWALK REPLACEMENT

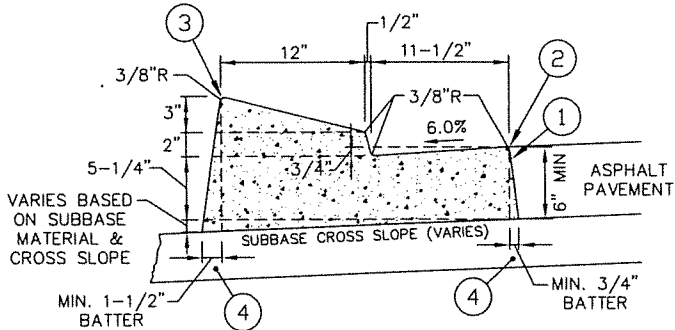
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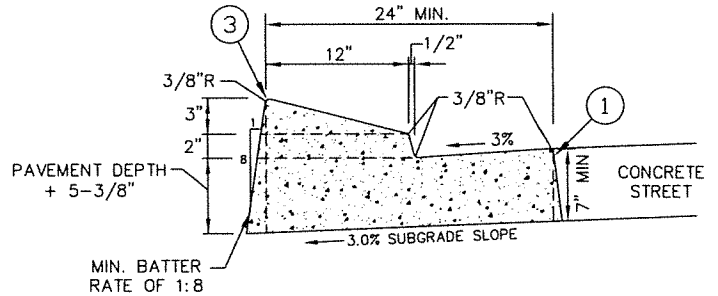
6" BARRIER CURB & GUTTER



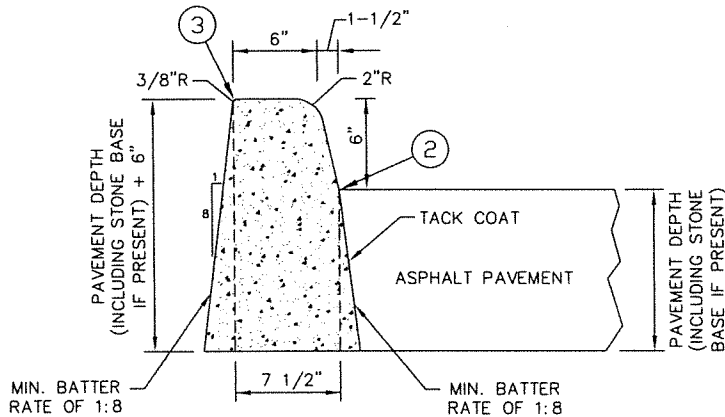
6" BARRIER INTEGRAL CURB



SLOPED CURB
FOR RESIDENTIAL STREETS ONLY



SLOPED INTEGRAL CURB
FOR RESIDENTIAL STREETS ONLY



6" HEADER CURB

NOTE:

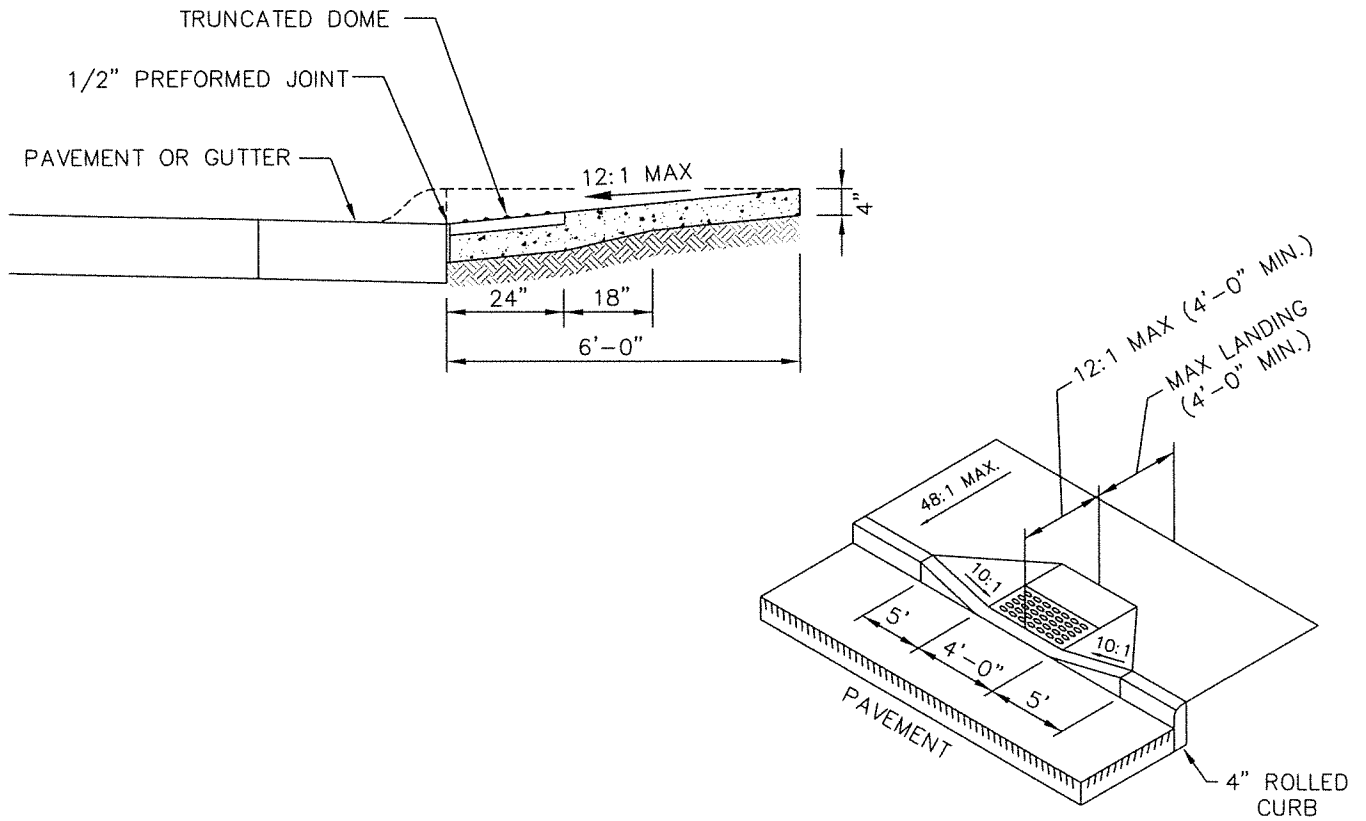
1. THE TYPICAL CURBS SHOWN ARE FOR NEW CONSTRUCTION. WHEN REPLACING EXISTING CURBS, THE SIZE AND SHAPE SHOULD MATCH THE CURB THAT WAS REMOVED.
2. CONTRACTOR SHALL FILL BEHIND CURB TO THE TOP OF CURB WITH TOPSOIL AND RESTORE YARD WITH SEED AND MULCH.
3. CONCRETE FOR CURBS SHALL BE KTC 601 CLASS AA STRENGTH MIX SPECIFICATION, F=4000 PSI 28 DAY COMPRESSIVE STRENGTH.
4. WHEN THE PAVEMENT IS SLOPING AWAY FROM THE CURB (FOR EXAMPLE, AROUND ISLANDS OR ADJACENT TO SUPER ELEVATED PAVEMENT SECTIONS), THE SLOPE IN THE GUTTER SHALL BE REVISED TO MATCH THE SLOPE OF THE PAVEMENT

LEGEND:

- ① SAWCUT AND REMOVE EXISTING CURB (CONCRETE CURB REPLACEMENT SHALL GO FROM NEAREST JOINT TO NEAREST JOINT)
- ② APPLY HOT ASPHALT SEALER WHERE ASPHALT MEETS CURB (BY OTHERS)
- ③ TOP OF REPLACEMENT CURB TO MATCH LINE AND GRADE OF EXISTING CURB
- ④ MAINTAIN SAME BATTER RATE FOR CURB THICKNESSES GREATER THAN 6" BATTER SHOWN ON THESE DETAILS ARE THE MIN. FOR MACHINE FORMER CURBS. HAND FORMED AND PLACED CURBS DO NOT REQUIRE THE BATTER SHOWN

CITY OF VILLA HILLS
TYPICAL DETAIL NO. 11
TYPICAL CONCRETE CURB REPLACEMENT

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PERPENDICULAR HANDICAP RAMP

NOTE:

TRUNCATED DOMES: INSTALL DETECTABLE WARNINGS (TRUNCATED DOMES) FOR A DISTANCE OF 24" FROM THE BACK OF CURB FOR THE ENTIRE WIDTH OF THE RAMP OPENING.

PAVER TO MATCH ADJACENT FIELD PAVEMENT SURFACE.

PAVERS WILL MEET ASTM C 902 CLASS SX, TYPE 1 OR C 936, OR C1272 TYPE R.

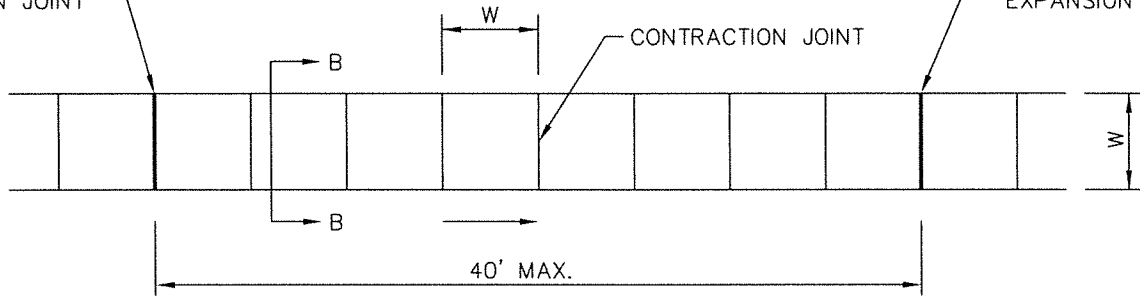
ACCEPTABLE MANUFACTURES AND PRODUCTS:

- WHITACRE-GREER FIREPROOFING COMPANY
1400 S. MAHONING AVE, ALLIANCE, OHIO 44601, (800) WG PAVER, ADA PAVER, 4"x8"x2 1/4", CLEAR RED (RUSTIC) #30, AND MULBERRY #34
- HANOVER ARCHITECTURAL PRODUCTS
240 BENDER ROAD, HANOVER PA, 17331 (717) 837 -0500
DETECTABLE WARNING PAVER, 12"x12"x2" OR 24"x24"x2", COLOR TO MATCH ADJACENT CONCRETE. PROVIDE SAMPLE FOR APPROVAL TO OWNERS REPRESENTATIVE.

CITY OF VILLA HILLS
TYPICAL DETAIL NO. 12
TYPICAL HANDICAP CURB RAMP SECTION
WITH TRUNCATED DOME PAVERS

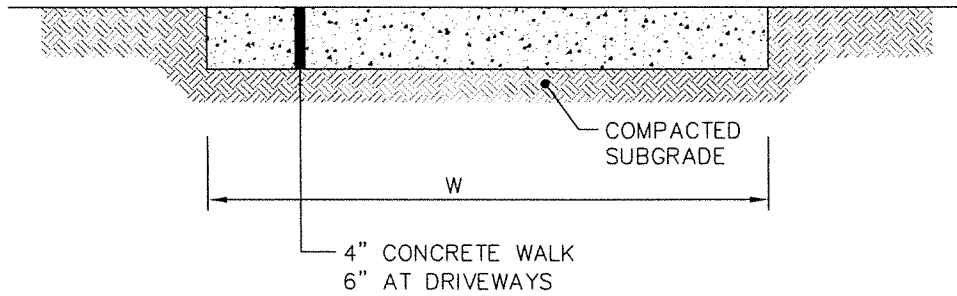
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1/2" PREMOLDED EXPANSION JOINT



PLAN VIEW

W = MATCH EXISTING WIDTH



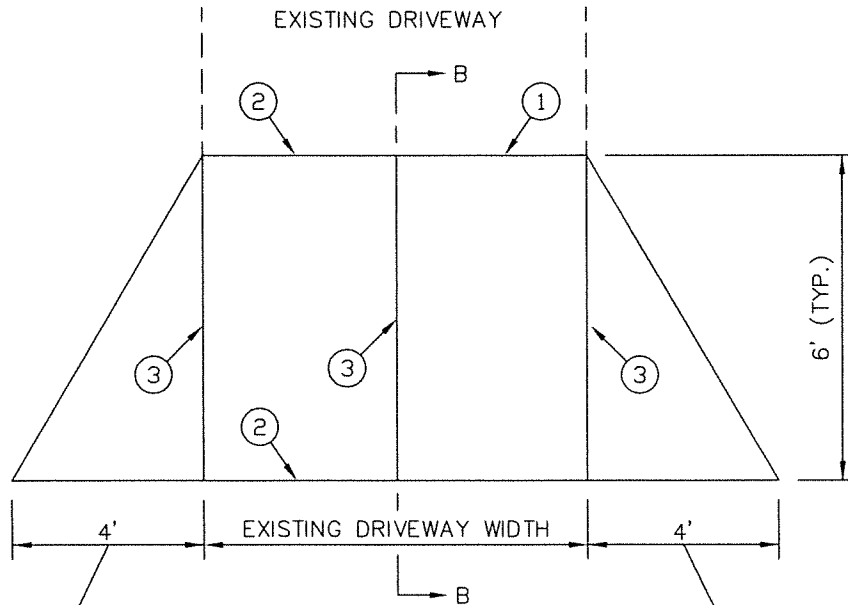
SECTION B-B

NOTE:

CONCRETE FOR DRIVES AND SIDEWALK SHALL BE KTC 601 CLASS AA STRENGTH MIX SPECIFICATIONS, F = 4000 PSI 28 DAY COMPRESSIVE STRENGTH.

CITY OF VILLA HILLS
TYPICAL DETAIL NO. 13
CONCRETE SIDEWALK DETAIL

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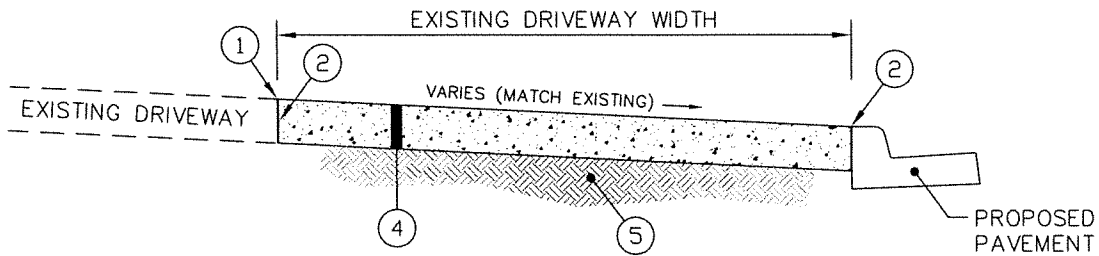


PLAN VIEW

NOTE: EXCEPT WHEN NECESSARY TO AVOID POLE OR AS DIRECTED BY THE ENGINEER

NOTE: EXCEPT WHEN NECESSARY TO AVOID POLE OR AS DIRECTED BY THE ENGINEER

NOTE: ANY YARD AREA DISTURBED BY THE CONSTRUCTION OF THE DRIVEWAY APRON SHALL BE RESTORED WITH TOPSOIL, SEED AND MULCH. (INCIDENTAL TO DRIVEWAY REPLACEMENT)



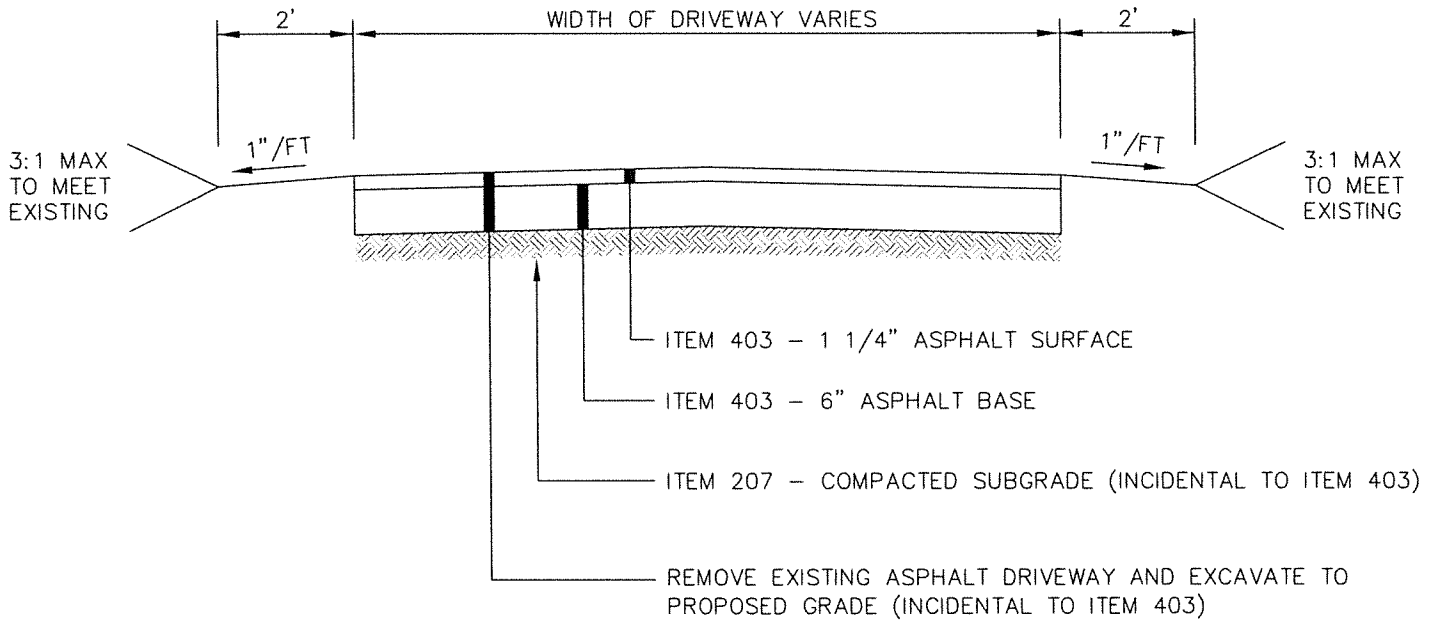
SECTION B-B

LEGEND:

- ① SAWCUT AND REMOVE EXISTING CONCRETE PAVEMENT (INCIDENTAL TO ITEM 505)
- ② 1/2" PREFORMED EXPANSION JOINT MATERIAL
- ③ TOOLED JOINT
- ④ ITEM 505 - 6" CONCRETE DRIVEWAY/APRON
- ⑤ ITEM 207 - SUBGRADE RESHAPING & COMPACTING (INCIDENTAL TO ITEM 505)

**CITY OF VILLA HILLS
TYPICAL DETAIL NO. 14
CONCRETE DRIVEWAY APRON REPLACEMENT DETAIL**

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CITY OF VILLA HILLS
 TYPICAL DETAIL NO. 15
 ASPHALT DRIVEWAY REPLACEMENT

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