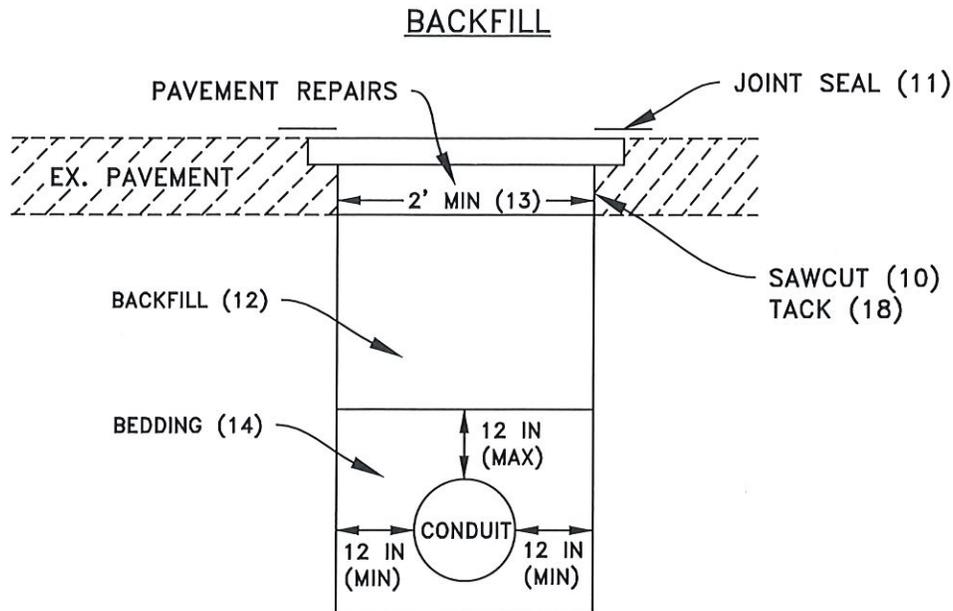


GENERAL NOTES

1. A CONSTRUCTION PERMIT IS REQUIRED FOR ALL EXCAVATIONS WITHIN THE PUBLIC RIGHT-OF-WAY, AS SET FORTH BY LANCASTER CITY CODE, CHAPTER 901.16 AND ISSUED IN ACCORDANCE WITH PROVISIONS IN THE GENERAL RULES AND REGULATIONS OF THE CITY OF LANCASTER ENGINEERING DEPARTMENT.
2. THE CONTRACTOR SHALL COMPLY WITH THE CURRENT CITY OF LANCASTER CONSTRUCTION AND MATERIAL SPECIFICATIONS, INCLUSIVE OF THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, 2019 EDITION.
3. WHEN THE PAVEMENT IS REMOVED AND THE CONTRACTOR IS UNABLE TO COMPLETE THE REQUIRED REPLACEMENT IN TIME FOR IT TO BE OPENED TO TRAFFIC AS INDICATED ON THE PERMIT, THE EXCAVATION SHALL BE FILLED WITH THOROUGHLY COMPACTED BITUMINOUS COLD MIX WITH A MINIMUM OF 2" DURABLE SURFACE (OR APPROVED BITUMINOUS MATERIAL) OR PROPERLY PLATED. THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN THESE TEMPORARY MEASURES WHILE THEY ARE IN SERVICE.
4. PERMANENT RESTORATION OF ANY SIDEWALK, CURB, STREET PAVEMENT (INCLUDING CRACK SEALING OR HEAT WELDING), ETC., SHALL OCCUR NO LATER THAN 30 DAYS AFTER CONCLUSION OF ANY UTILITY REPAIR OR INSTALLATION ACTIVITY. CONSTRUCTION ACTIVITY COMPLETED NOVEMBER THROUGH APRIL SHALL BE RESOLVED NO LATER THAN MAY 31ST.
5. NO PERMIT SHALL BE GRANTED FOR CUTTING A STREET THAT WAS RESURFACED LESS THAN THREE (3) YEARS PRIOR, EXCEPT FOR THE PURPOSE OF REPAIRING LEAKING PIPES OR WORK DEEMED NECESSARY BY THE DIRECTOR OF PUBLIC SERVICE, CITY ENGINEER OR DESIGNEE. EMERGENCY REPAIRS OR PAVEMENT OPENINGS WITHIN THREE (3) YEARS MAY HAVE ADDITIONAL AND SPECIFIC REQUIREMENTS.
6. CURB RAMPS SHALL BE INSTALLED PER THE CITY OF LANCASTER STANDARD DRAWING P-8 AND MEET ADA RULES AND REGULATIONS.
7. PAVEMENT MARKINGS SHALL BE REPLACED IN LIKE KIND PER; ODOT ITEM 642 TRAFFIC PAINT, ODOT ITEM 644 THERMOPLASTIC, ODOT ITEM 645 PREFORMED OR ODOT ITEM 646 EPOXY (CONCRETE SURFACES) WITHIN 30 DAYS OF THE PAVEMENT REPAIR, OR BY MAY 31ST FOR WINTER REPAIRS. TEMPORARY MARKINGS MAY BE REQUIRED AS DETERMINED BY THE ENGINEER.
8. THE TYPICAL STREET TYPES FOUND IN THE CITY CAN BE CLASSIFIED AS FOLLOWS: FLEXIBLE PAVEMENT MATERIALS ARE AGGREGATES, BITUMINOUS MIXTURES AND ASPHALT; RIGID PAVEMENT CONSISTS OF CONCRETE, CEMENT MIXTURES AND BRICK; COMPOSITE PAVEMENTS TYPICALLY CONSIST OF A FLEXIBLE SURFACE WITH A RIGID BASE; BRICK PAVEMENTS ARE TYPICALLY A BRICK SURFACE ON A RIGID BASE PAVEMENT REPAIRS SHALL CONFORM TO THE TYPE AND THICKNESS OF THE EXISTING PAVEMENT.
9. FOR ALLEY AND DRIVEWAY REPAIRS, THE PAVEMENT REPLACEMENT SHALL CONFORM TO THE TYPE AND THICKNESS OF THE EXISTING PAVEMENT. THE MINIMUM PAVEMENT THICKNESS, REGARDLESS OF TYPE, SHALL BE 6 INCHES. IF MORE THAN 1/3 OF THE WIDTH OF AN ALLEY IS REMOVED, THE ENTIRE WIDTH SHALL BE RESURFACED.
10. SAWCUT THE EXISTING PAVEMENT AT EXCAVATION LIMITS AND AS NECESSARY TO PREVENT DISTURBING OR UNDERMINING THE REMAINING PAVEMENT. PROCEDURES USED FOR THE PAVEMENT REMOVAL AND REPLACEMENT SHALL NOT CAUSE SPALLING OR CRACKING OF THE ADJACENT PAVEMENT.
11. FOR PAVEMENT REPAIR JOINT SEALING, THE FOLLOWING METHODS ARE PERMITTED:
 - A. THE PREFERRED METHOD IS TO SEAL THE PERIMETER SURFACE OF THE REPAIRED AREA BY APPLYING A 4 INCH STRIP OF ODOT ITEM 423 CRACK SEALING.
 - B. A SECOND OPTION IS TO HEAT WELD A 12 INCH WIDE STRIP, CENTERED ON THE CUT, TO A DEPTH OF 2 INCHES, PER ODOT ITEM 423.
 - C. KOLD-FLO® POURABLE CRACK FILLER MAY BE USED AROUND SMALL REPAIR AREAS WITH A PERIMETER LESS THAN 50 LINEAR FEET. THE APPLICATION SHALL FOLLOW THE MANUFACTURES RECOMMENDATIONS. OTHER MODIFIED ASPHALT EMULSION SEALING PRODUCTS MAY BE USED WITH THE ENGINEERS APPROVAL.
 - D. QUIKJOINT TAPE MAY BE USED AND INSTALLED PER MANUFACTURES SPECIFICATIONS AND RECOMMENDATIONS.

APPROVED <u>1/27/23</u>  CITY ENGINEER	PAVEMENT REPAIR GENERAL NOTES	CITY OF LANCASTER, OHIO DEPARTMENT OF ENGINEERING STANDARD CONSTRUCTION DRAWING DWG. BY: ...ADH..... CHK'D BY: ...CMS.....
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12. FOR BACKFILLING UNDER THE INFLUENCE LINE (SEE P-28) OF ALL PAVED SURFACES, THE FOLLOWING OPTIONS ARE PERMITTED:

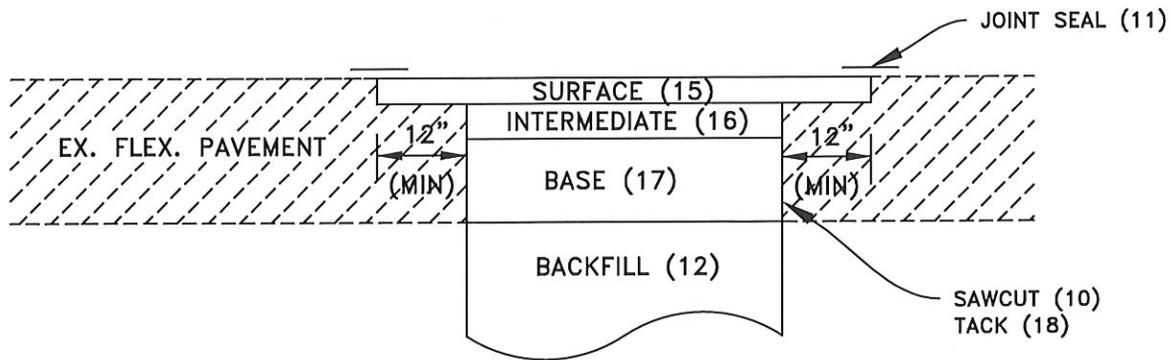
- A. THE PREFERRED BACKFILL IS LANCASTER/ODOT ITEM 613 LOW STRENGTH MORTAR (LSM). NO PAVEMENT SHALL BE PLACED ON THE LSM UNTIL BLEED WATER IS ABSENT FROM THE SURFACE. LSM SHALL BE USED IN SMALL TRENCHES WHERE TYPICAL COMPACTION EQUIPMENT CANNOT BE USED.
- B. COMPACTED GRANULAR BACKFILL PER ODOT ITEM 304, AGGREGATE BASE, MAY BE USED WHERE THE TRENCH WIDTH IS SUFFICIENT TO ACHIEVE PROPER COMPACTION. BEFORE SPREADING SAMPLE THE MATERIAL AND DETERMINE THE OPTIMUM MOISTURE CONTENT PER ODOT ITEM 304.0.3. SPREAD THE MATERIAL ACCORDING TO ODOT ITEM 304.04, IN LIFTS RANGING FROM 4 TO 8 INCHES, DEPENDANT ON THE COMPACTION EQUIPMENT. VIBRATORY EQUIPMENT MAY BE USED IN SMALL AREAS. COMPACTION TESTING MAY BE REQUIRED TO ASSURE THAT 98% OF THE MAXIMUM DRY DENSITY IS ACHIEVED. THIS METHOD REQUIRES FULL TIME CITY INSPECTION.

BACKFILL SHALL NOT EXTEND INTO THE PAVEMENT AND SHALL NOT BE PLACED HIGHER THAN THE SUBGRADE ELEVATION. BACKFILL IS NOT PERMITTED AS A TEMPORARY DRIVING SURFACE.

13. THE PAVEMENT PORTION OF THE TRENCH SHALL BE A MINIMUM OF 2 FT IN WIDTH. THIS IS TO ALLOW FOR THE PROPER COMPACTION OF THE ASPHALT PAVEMENT. IF THE TRENCH FOR PLACING CONDUIT IS NARROWER THAN 2 FT THEN THE PAVEMENT PORTION SHALL BE CUT BACK TO PROVIDE THE 2 FT MINIMUM FOR PAVING OPERATIONS.
14. BEDDING MATERIAL MAY BE PLACED ACCORDING TO THE UTILITY OWNER AND CONDUIT MANUFACTURERS SPECIFICATIONS AND STANDARDS, HOWEVER IS SUBJECT TO APPROVAL OR DENIAL OF THE ENGINEER, TO PROTECT THE INTEGRITY OF THE STREET FOUNDATION. THE FOLLOWING RESTRICTIONS APPLY:
 - A. BEDDING MAY BE PLACED TO A MAXIMUM OF 12 INCHES ABOVE THE CONDUIT.
 - B. THE TRENCH WIDTH SHALL BE SUFFICIENT TO PROVIDE AT LEAST 12 INCHES ON EITHER SIDE OF THE CONDUIT TO ALLOW FOR THE PROPER COMPACTION OF THE BEDDING MATERIAL.
 - C. THE BEDDING MATERIALS SHALL BE COMPACTIBLE AND INCLUDE SAND, GRANULAR MATERIAL, LOW STRENGTH MORTAR AND CONCRETE. THE BEDDING MATERIAL IS SUBJECT TO APPROVAL BY THE CITY ENGINEER.

APPROVED <u>1/27/23</u>  CITY ENGINEER	PAVEMENT REPAIR BACKFILL	CITY OF LANCASTER, OHIO DEPARTMENT OF ENGINEERING			
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STANDARD CONSTRUCTION DRAWING					
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FLEXIBLE



THE SURFACE COURSE ON ALL FLEXIBLE AND COMPOSITE PAVEMENTS, SHALL BE 1.5 INCHES OF ODOT ITEM 441 ASPHALT CONCRETE, SURFACE COURSE, TYPE 1. PRIOR TO PLACEMENT, ITEM 407 TACK COAT SHALL BE APPLIED ON THE INTERMEDIATE COURSE AT A RATE OF 0.1 GAL/SY.

THE SURFACE COURSE SHALL EXTEND A MINIMUM OF 12 INCHES BEYOND THE TRENCH WALL, AND SHALL BE OF AN ACCEPTABLE SHAPE AS PRESENTED ON SHEETS 7 & 8 OF THIS DRAWING, AND AS DESCRIBED BELOW:

- A. WHEN AN EXCAVATION EXCEEDS 100 FEET IN LENGTH, THE SURFACE REPAIR SHALL INCLUDE THE FULL LANE WIDTH OF ALL LANES THAT ARE ENCROACHED UPON.
- B. WHEN AN EXCAVATION CROSSES A LANE AT A FREQUENCY OF 2 OR MORE LATERAL EXCAVATIONS WITHIN 25 FEET OF EACH OTHER, THE SURFACE REPAIR SHALL INCLUDE THE FULL LANE WIDTH OF ALL LANES THAT ARE AFFECTED AND EXTEND 2 FEET BEYOND THE LATERAL EXCAVATIONS.
- C. THE SURFACE REPAIR OF ALL IRREGULAR-SHAPED EXCAVATIONS SHALL ALWAYS BE A RECTANGLE WITH SIDES THAT ARE PARALLEL/PERPENDICULAR TO THE DIRECTION OF TRAVEL OF THE STREET.

TRENCHES THAT REQUIRE FULL LANE RESURFACING SHALL INCLUDE FULL LANE RESURFACING ON ALL CONNECTING TRENCHES AND ASSOCIATED VALVE OR CASTING WORK AREAS ALONG ADJACENT STREETS (UTILITY SERVICE REPAIRS SHALL BE AS PER SHEETS 7 AND 8) REGARDLESS OF THE LENGTH OF THE CONNECTING TRENCH.

16. THE INTERMEDIATE COURSE ON ALL FLEXIBLE AND COMPOSITE PAVEMENTS, SHALL BE 1.75 INCHES OF ODOT ITEM 441 ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 2. THE MAXIMUM LIFT THICKNESS IS 3 INCHES. THE MINIMUM COMPACTED DEPTH IS 1.75 INCHES. PRIOR TO PLACEMENT, ITEM 407 TACK COAT SHALL BE APPLIED ON THE BASE COURSE AT A RATE OF 0.15 GAL/SY.

FOR COMPOSITE PAVEMENTS, IF THE MINIMUM DEPTH CANNOT BE ACHIEVED BETWEEN THE RIGID BASE AND THE AC SURFACE, THEN THE SURFACE COURSE SHALL EXTEND TO THE RIGID BASE.

WHERE RESURFACING APPLIES, THE INTERMEDIATE COURSE MAY BE PLACED TO THE FINISHED SURFACE TEMPORARILY UNTIL THE PLANING AND RESURFACING CAN BE PERFORMED. THE INTERMEDIATE COURSE IS NOT PERMITTED AS THE FINAL SURFACE COURSE.

17. THE BASE COURSE FOR FLEXIBLE PAVEMENTS SHALL BE 2" OR 3" LIFTS OF ODOT ITEM 301, ASPHALT CONCRETE BASE TO MAKE A MAXIMUM TOTAL LIFT OF 6". EACH LIFT MAY BE COMPACTED WITH A 3-5 TON ROLLER OR VIBRATORY PLATE COMPACTORS, OR EQUIVALENTS APPROVED BY THE CITY ENGINEER. THE TEMPERATURE OF THE ASPHALT WHEN DELIVERED TO THE PAVER SHALL BE A MINIMUM OF 250° F.

18. TACK COAT SHALL BE APPLIED AT A RATE OF 0.25 GAL/SY TO THE SIDES OF THE SAWN PAVEMENT AND BASE MATERIAL BEFORE PLACING THE ASPHALT CONCRETE. THE TACK COAT SHALL MEET THE REQUIREMENTS OF ITEM 407.

APPROVED 1/27/23


CITY ENGINEER

REVISED: 27 JAN 23

PAVEMENT REPAIR
FLEXIBLE

CITY OF LANCASTER, OHIO
DEPARTMENT OF ENGINEERING

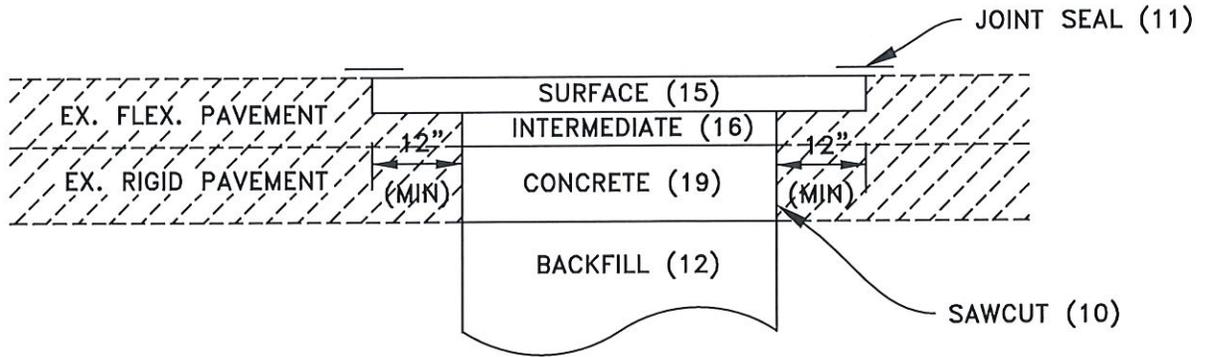
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COMPOSITE



19. THE RIGID BASE FOR COMPOSITE AND BRICK PAVEMENTS SHALL BE ODOT ITEM 305, CONCRETE BASE. THE THICKNESS SHALL MATCH THE EXISTING (6 INCHES MINIMUM) AND IT SHALL BE PLACED TO THE LEVEL OF THE EXISTING ADJACENT CONCRETE BASE.

THE CONCRETE BASE SHALL NOT BE REINFORCED WITH STEEL.

FOR COMPOSITE PAVEMENTS (8), THE CONCRETE BASE (19) MAY BE TEMPORARILY PLACED TO THE SURFACE, TO BE MILLED DOWN TO THE TOP OF THE ADJACENT RIGID BASE. THE INTERMEDIATE AND SURFACE COURSES SHALL BE PLACED IN A APPROPRIATE TIME.

APPROVED 1/27/23

 CITY ENGINEER

PAVEMENT REPAIR
 COMPOSITE

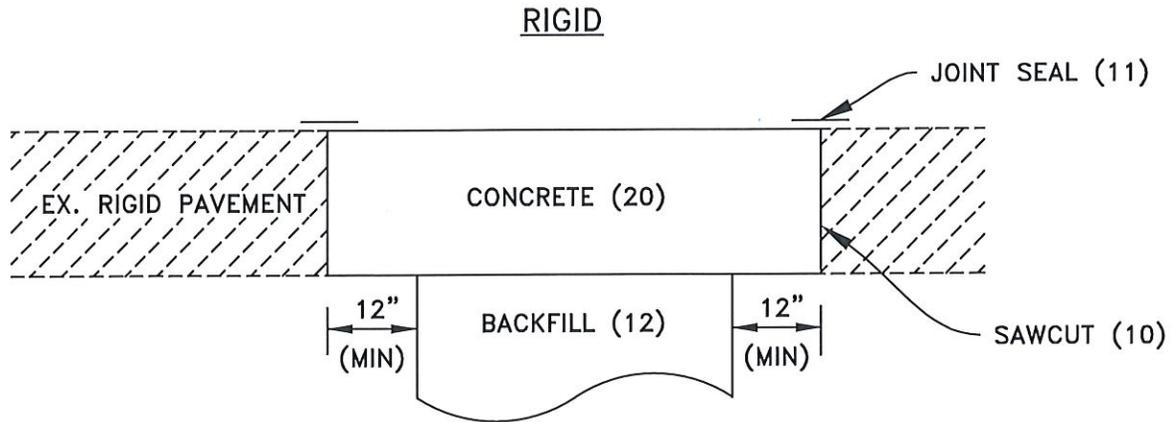
CITY OF LANCASTER, OHIO
 DEPARTMENT OF ENGINEERING

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20. FOR RIGID PAVEMENT REPAIRS, THE REPLACED PAVEMENT SHALL MATCH THE EXISTING THICKNESS AND SHALL BE REINFORCED IF THE EXISTING PAVEMENT IS REINFORCED. THE FOLLOWING OPTIONS ARE PERMITTED:

- A. ODOT ITEM 451, REINFORCED CONCRETE PAVEMENT, CLASS QC1.
- B. ODOT ITEM 452, NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1.

THE LIMITS OF THE CONCRETE REPAIR SHALL EXTEND 12 INCHES (MINIMUM) BEYOND THE TRENCH.

IF THE UTILITY TRENCH CUT IS WITHIN 6 FT OF A TRANSVERSE OR LONGITUDINAL JOINT, THE LIMITS OF THE REPAIR SHALL EXTEND TO THE JOINT. THIS MAY REQUIRE THE ENTIRE PANEL TO BE REPLACED.

IF MAINTENANCE OF TRAFFIC REQUIREMENTS LIMIT THE CURING TIME, FAST SETTING (CLASS QCFS) OR MEDIUM SETTING (CLASS QCMS) MAY BE USED IF APPROVED BY THE ENGINEER.

APPROVED 1/27/23

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CITY ENGINEER

REVISED: 27 JAN 23

PAVEMENT REPAIR
RIGID

CITY OF LANCASTER, OHIO
DEPARTMENT OF ENGINEERING

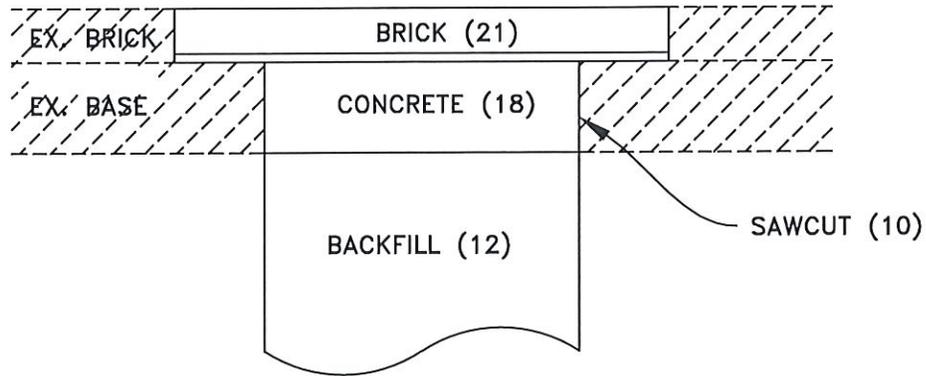
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BRICK



21. WHEN EXCAVATING AND REPAIRING BRICK STREETS, THE MATERIAL USED FOR REPLACEMENT SHALL MATCH THE EXISTING.

BRICKS OR PAVERS REMOVED FROM A REPAIR AREA SHALL BE STORED IN A SAFE PLACE BY THE CONTRACTOR FOR REUSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ANY BRICKS OR PAVERS THAT ARE STOLEN OR DAMAGED, AT NO ADDITIONAL COST TO THE CITY.

IF BRICKS OR PAVERS ARE SUPPLIED BY THE CONTRACTOR, THEY MUST CLOSELY MATCH THE EXISTING BRICKS OR PAVERS AND FIRST BE APPROVED BY THE CITY.

SAW CUTTING: ALL PARTIAL BRICKS SHALL BE SAWCUT. FURTHER, NO BRICK WILL BE PERMITTED TO BE CUT, FOR REPLACEMENT, TO A LENGTH LESS THAN 1/2 ITS ORIGINAL LENGTH. THIS MAY REQUIRE SAW CUTTING OF ADJACENT UNDISTURBED BRICK(S).

DURING REMOVAL OF THE EXISTING BASE MATERIAL, IT SHALL BE CUT BACK TO AS NEARLY VERTICAL AS POSSIBLE. IF SHEARING OF THE ADJACENT BASE RESULTS, THE CONTRACTOR SHALL REMOVE ADDITIONAL BASE MATERIAL UNTIL A VERTICAL FACE IS ACHIEVED.

DURING INSTALLATION, THE BRICK IS TO BE RESET IN REASONABLY CLOSE CONFORMITY TO THE PATTERN OF THE EXISTING BRICK PAVEMENT ON A SETTING BED OVER ITEM 305 CONCRETE BASE. THE SETTING BED FOR HISTORICAL BRICK STREETS SHALL CONSIST OF 1 INCH OF SAND; WHEREAS, 3/4-INCH BITUMINOUS SETTING BED FOR NEWER STYLE ROADWAY PAVERS. THE CONCRETE BASE THICKNESS SHALL MATCH THE EXISTING BASE OR A MINIMUM OF 7 INCHES.

HISTORICAL BRICKS WITHOUT SPACING LUGS: THE MAXIMUM WIDTH OF A BRICK JOINT SHALL BE 1/2 INCH. THIS RESTRICTION SHALL ALSO APPLY TO THE JOINT FORMED ADJACENT TO THE PERIMETER OF A REPAIR AREA, WHERE THE ROWS MAY NOT BE PARALLEL TO ONE ANOTHER. ALL JOINTS SHALL BE FILLED WITH POLYMERIC SAND FOLLOWING MANUFACTURER'S INSTRUCTIONS. THIS MAY REQUIRE MORE THAN ONE APPLICATION. FURTHER, MECHANICAL VIBRATION WILL BE REQUIRED FOR CONSOLIDATION OF DRY MORTAR MIX.

APPROVED 1/27/23

 CITY ENGINEER

PAVEMENT REPAIR
 BRICK

CITY OF LANCASTER, OHIO
 DEPARTMENT OF ENGINEERING

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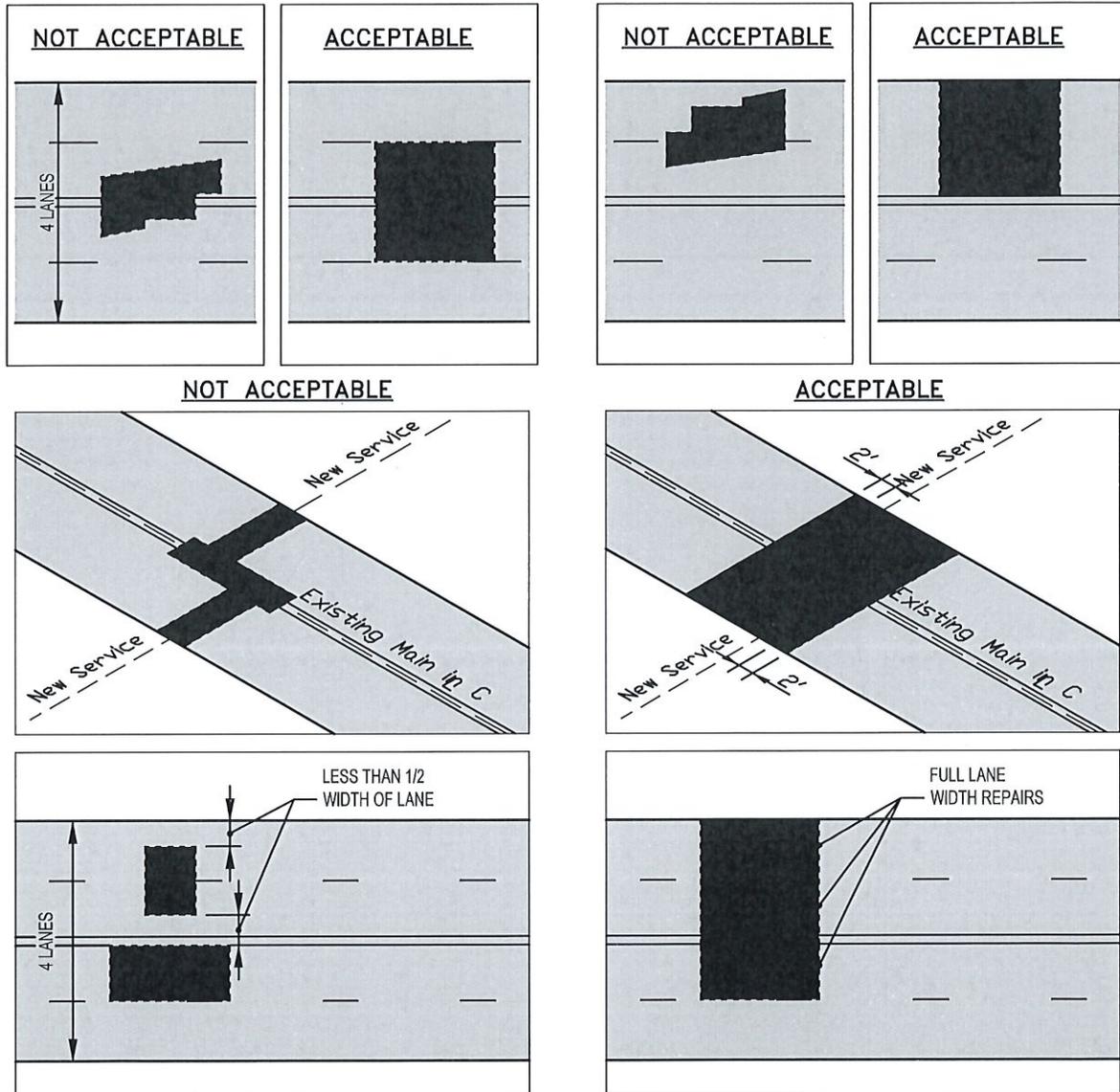
22. AREAS TO BE RESURFACED SHALL BE PLANED ACCORDING TO ODOT ITEM 254 PAVEMENT PLANING, THOROUGHLY CLEANED AND DRIED, THEN TACKED PER ODOT ITEM 407 PRIOR TO PLACING AND COMPACTING THE ASPHALT CONCRETE WITH A ROLLER AND PAVER.

THE RESURFACING SHALL NOT INTRODUCE ANY LONGITUDINAL PAVEMENT JOINTS. WHEN RESURFACING OUTSIDE LANES, RESURFACING SHALL EXTEND TO THE FACE OF CURB OR EDGE OF PAVEMENT.

IF PAVEMENT PLANING DOES NOT PROVIDE A UNIFORM PLANED SURFACE DUE TO THE EXISTING PAVEMENT CONDITION, THE DEPTH OF THE PAVEMENT REMOVAL AND RESURFACING SHALL BE ADJUSTED ACCORDINGLY.

WHERE THE PROPOSED RESURFACING IS IN CLOSE PROXIMITY TO AN EXISTING LONGITUDINAL JOINT, THE RESURFACING SHALL BE EXTENDED TO MEET OR OVERLAP THAT JOINT.

WHEN RESURFACING ADJOINS AN AREA WITH EXISTING OVERLAID GUTTER, THE RESURFACING SHALL EXTEND THE FULL LANE WIDTH TO THE EXISTING PAVEMENT EDGE AT THE FACE OF CURB.



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 CITY ENGINEER

PAVEMENT REPAIR
 RESURFACE

CITY OF LANCASTER, OHIO
 DEPARTMENT OF ENGINEERING

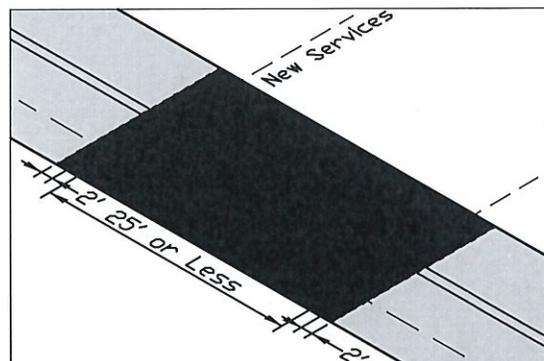
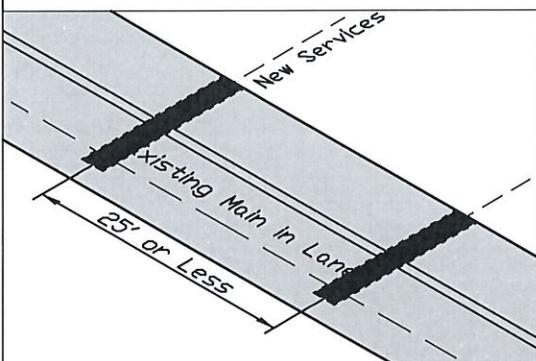
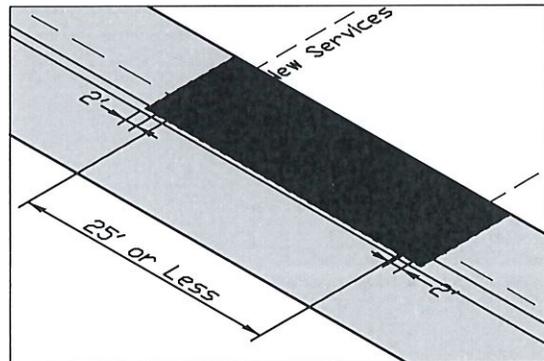
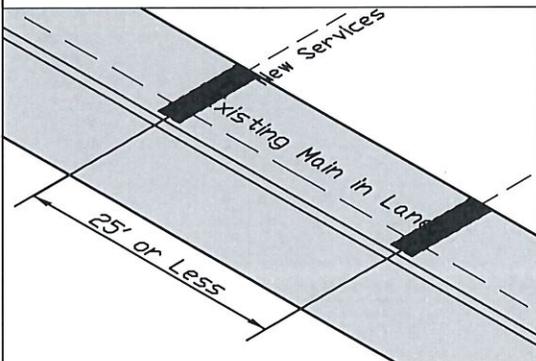
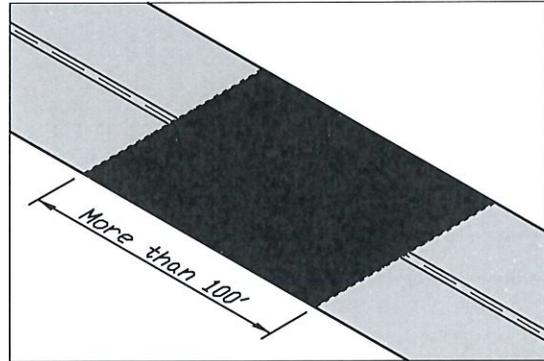
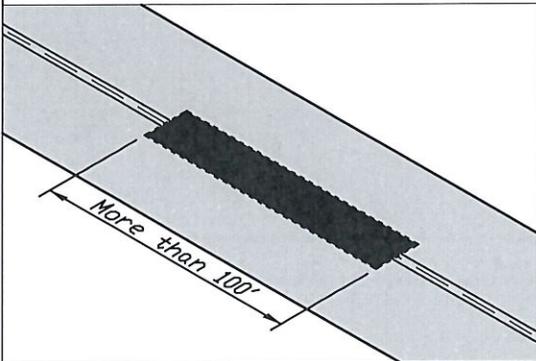
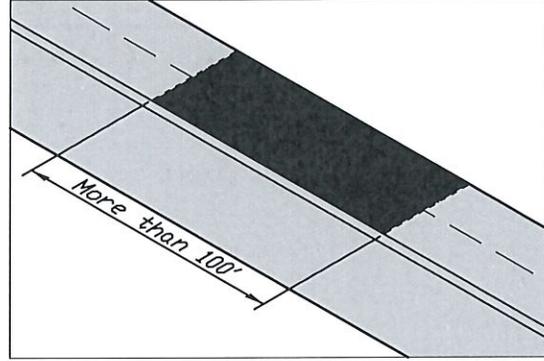
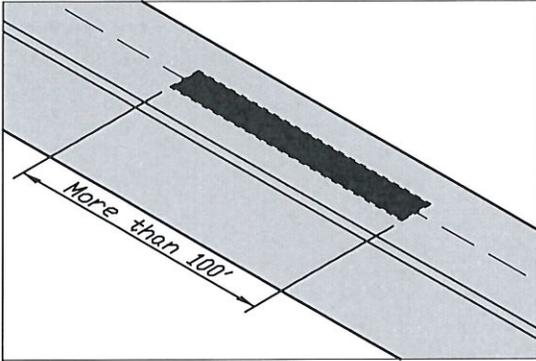
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NOT ACCEPTABLE

ACCEPTABLE



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 CITY ENGINEER

REVISED: 27 JAN 23

PAVEMENT REPAIR
 RESURFACE

CITY OF LANCASTER, OHIO
 DEPARTMENT OF ENGINEERING

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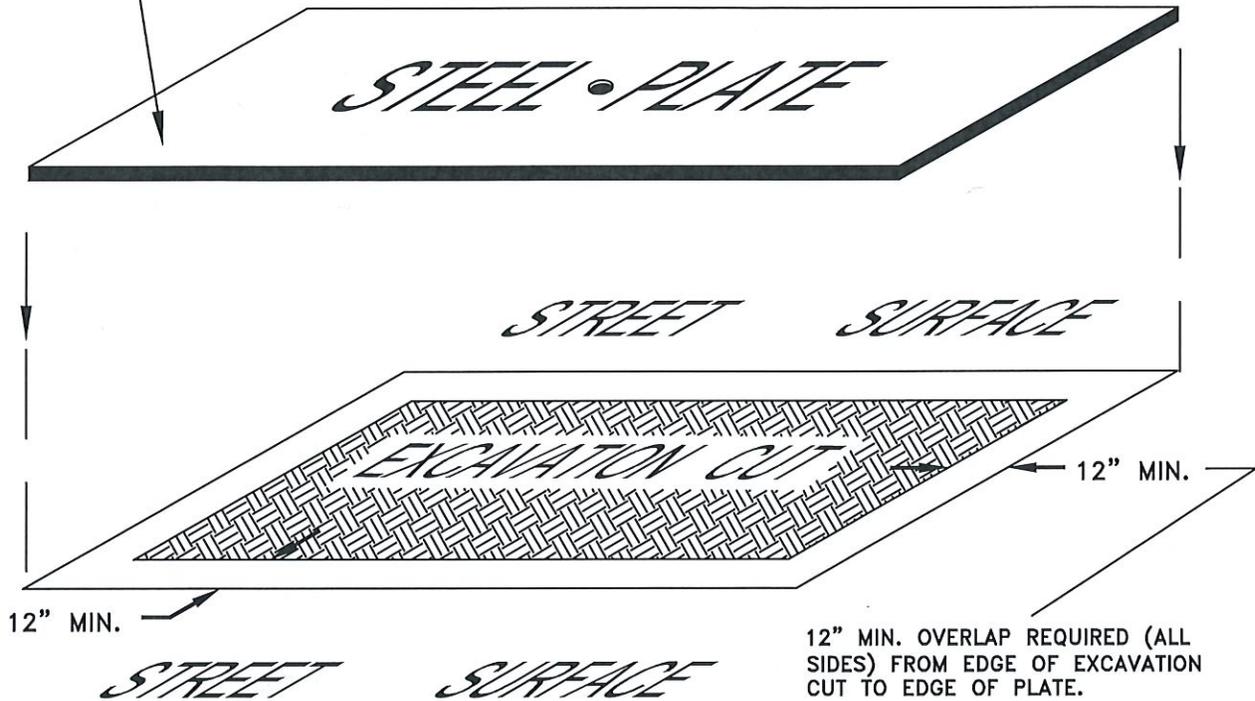
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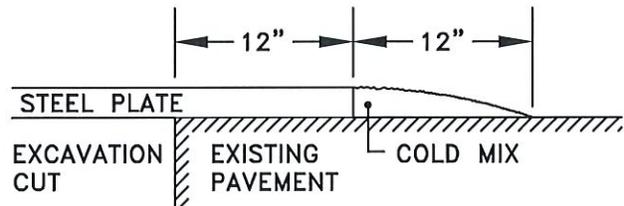
ALL STEEL PLATES MUST HAVE THE FOLLOWING INFORMATION CLEARLY AND LEGIBLY 'ETCHED' INTO THEIR TOP SURFACE:

1. OWNER'S NAME.
2. A 24 HOUR EMERGENCY CONTACT PHONE NUMBER.



NO STEEL PINS ARE PERMITTED.
SEE NEXT SHEET FOR SIGNING REQUIREMENTS

MINIMUM THICKNESS OF STEEL PLATES	
SIZE OF PLATE	THICKNESS
4' x 4'	1/2"
4' x 6'	3/4"
LARGER	1"



CONTACT CITY OF LANCASTER DEPARTMENT OF TRANSPORTATION AT (740) 687-6668, TO REPORT THE LOCATION OF STEEL PLATES.

APPROVED 1/27/23

[Signature]
CITY ENGINEER

PAVEMENT REPAIR
STEEL PLATES

CITY OF LANCASTER, OHIO
DEPARTMENT OF ENGINEERING

STANDARD
CONSTRUCTION DRAWING

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SIGNS ARE TO BE 36"x36" FOR RESIDENTIAL AND DOWNTOWN AREAS AND 48"x48" ON MULTI-LANE, HIGH SPEED (45 MPH OR GREATER) ROADWAYS.

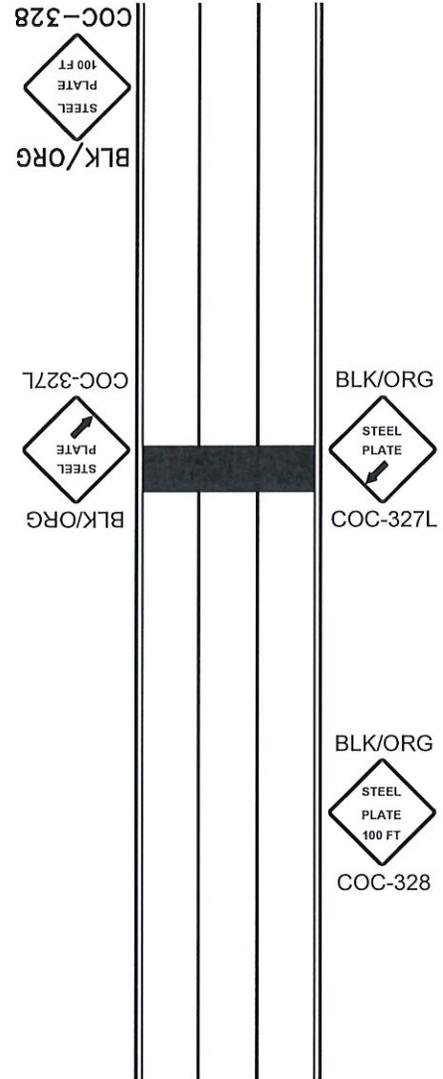
SIGN COC-327 (R/L) IS REQUIRED AT ALL PLATE LOCATIONS. SIGN COC-328 IS REQUIRED WHEN POSTED SPEED IS 35 MPH OR GREATER.

SIGNS SHOULD BE PLACED IN ALL DIRECTIONS THAT ARE AFFECTED. SIGN SPACING SHALL INCREASE TO 250' WHEN SPEED EXCEEDS 45 MPH.

SIGNS SHOULD BE DUAL MOUNTED ON MULTI-LANE, ONE-WAY ROADWAYS.

ALL SIGNS SHALL BE MOUNTED IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD).

SIGNS SHALL NOT BE PLACED IN A MANNER THAT WOULD BLOCK PARKING, BIKE LANES, OR RESTRICT A PEDESTRIAN FROM USING ANY SIDEWALK INCLUDING CURB RAMPS. PAR SHALL BE MAINTAINED AT ALL TIMES.



APPROVED 1/27/23

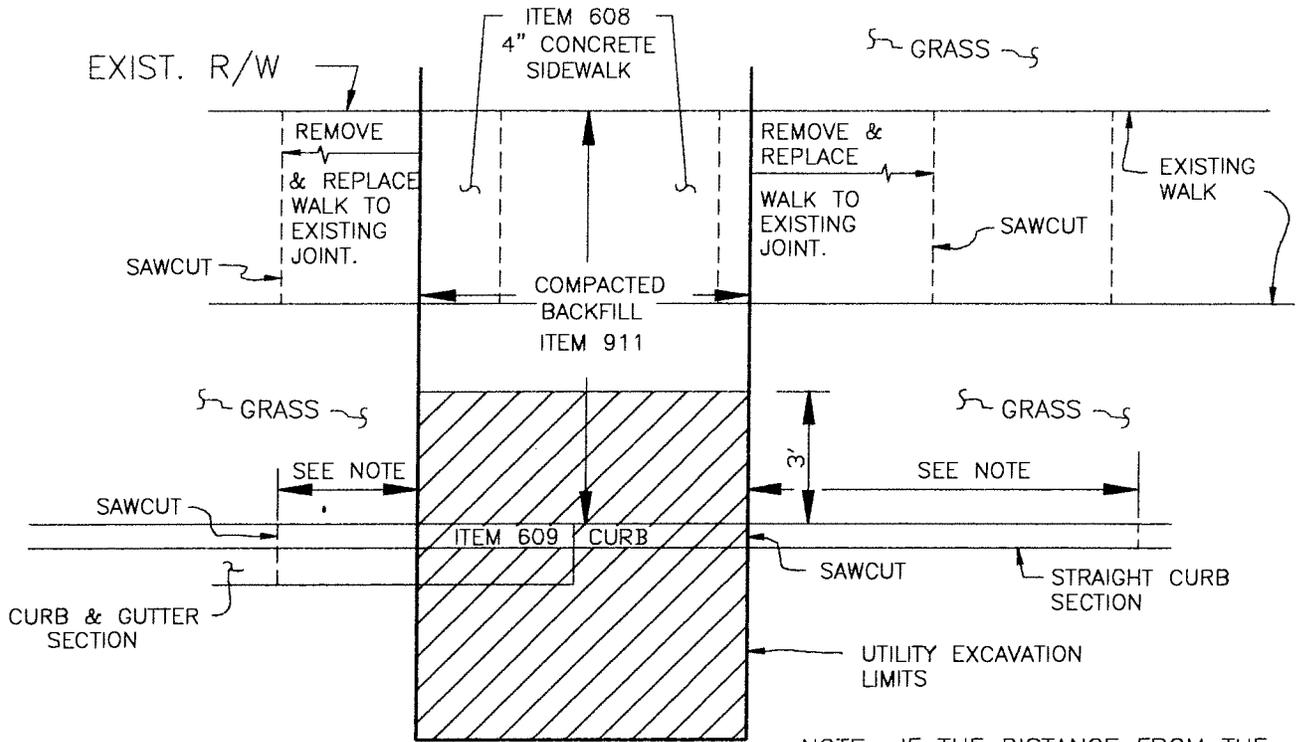
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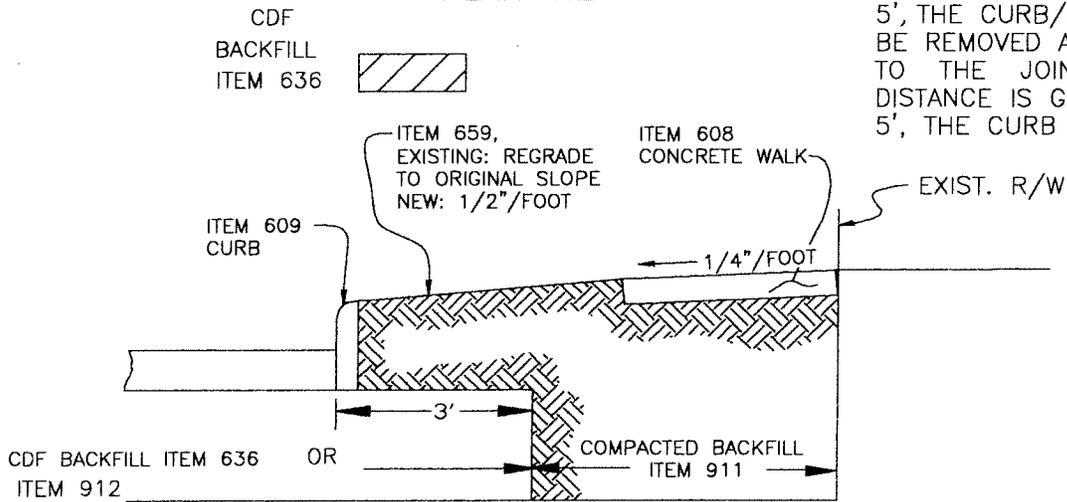
PAVEMENT REPAIR
 STEEL PLATES

CITY OF LANCASTER, OHIO
 DEPARTMENT OF ENGINEERING
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SIDEWALK AND CURB REPAIR DETAILS



NOTE: IF THE DISTANCE FROM THE CUT TO THE NEAREST JOINT IN THE CURB IS LESS THAN 5', THE CURB/GUTTER SHALL BE REMOVED AND REPLACED TO THE JOINT. IF THE DISTANCE IS GREATER THAN 5', THE CURB MAY REMAIN.



ALL GRASS AREAS SHALL BE SEEDED IN ACCORDANCE WITH ITEM 659 SEEDING AND MULCHING, LAWN MIXTURE.

APPROVED 1-22-01

Keith Houston
CITY ENGINEER

REVISED:

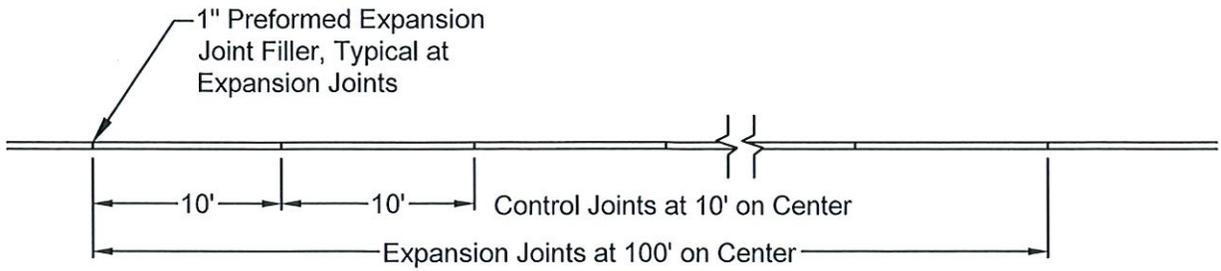
TYPICAL
PAVEMENT
AND UTILITY
CUT REPAIR
STANDARDS

CITY OF LANCASTER, OHIO
DEPARTMENT OF ENGINEERING

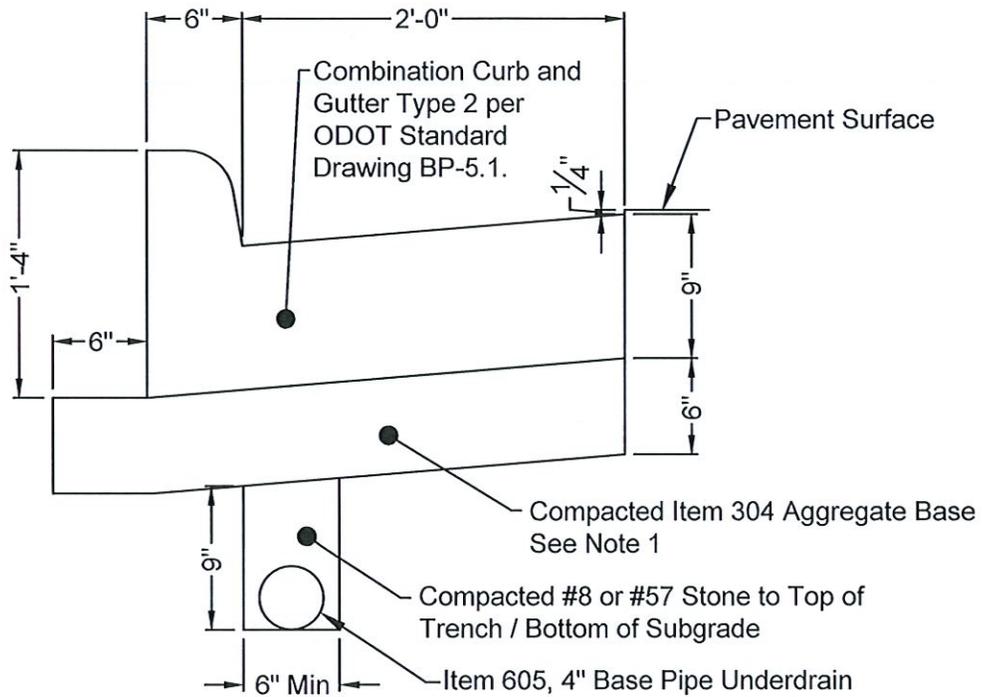
STANDARD
CONSTRUCTION DRAWING

DWG. BY: DDK
CHK'D BY: RM

FILE NUMBER
P-2 1 of 1



JOINT SPACING DETAIL

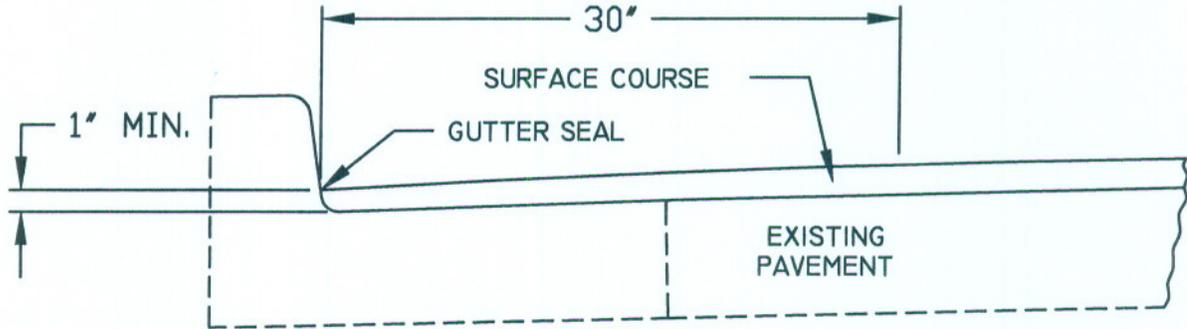
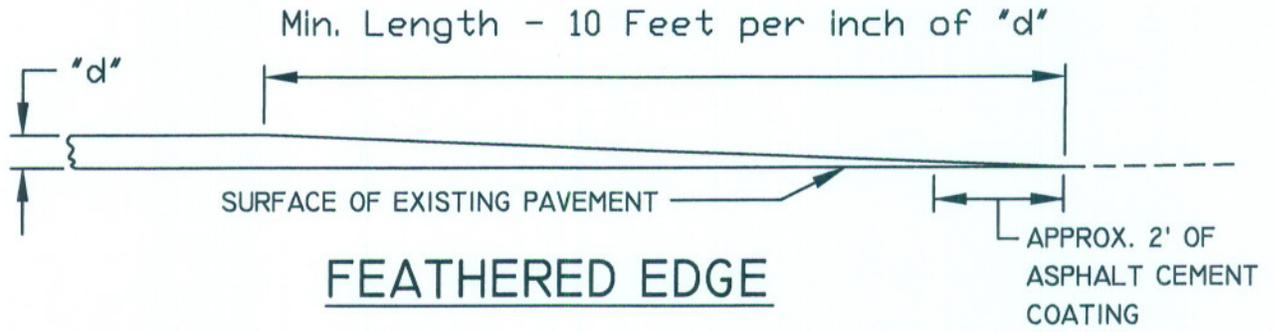


NOTES:

1. On curb replacement projects that do not involve road widening a #57 aggregate base may be used
2. All exposed concrete surfaces shall have a brush finish.
3. Control joints shall be per Item 609 and expansion joint material shall be per Item 705.03.

DATE: 09/25/2025	STANDARD CONSTRUCTION DRAWING	
	COMBINATION CURB AND GUTTER	9/25/25
		P-3

NOTE: GUTTER TO BE SEALED WITH ASPHALT CEMENT



GUTTER FINISH

PREVIOUSLY 007AI

APPROVED 3/17/10
Brad Fagrell
CITY ENGINEER

TYPICAL
PAVEMENT
FEATHERING

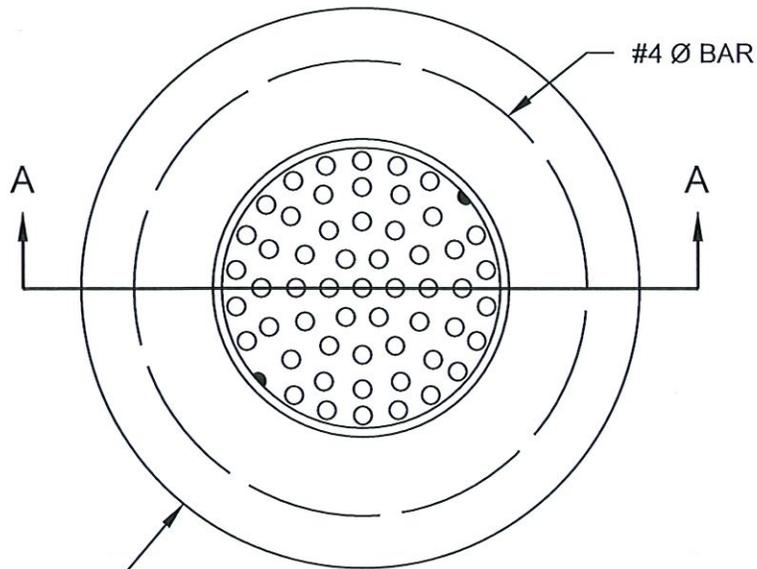
CITY OF LANCASTER, OHIO
DEPARTMENT OF ENGINEERING

STANDARD
CONSTRUCTION DRAWING

DWG. BY: DDK
CHK'D BY: RM

FILE NUMBER
P-4

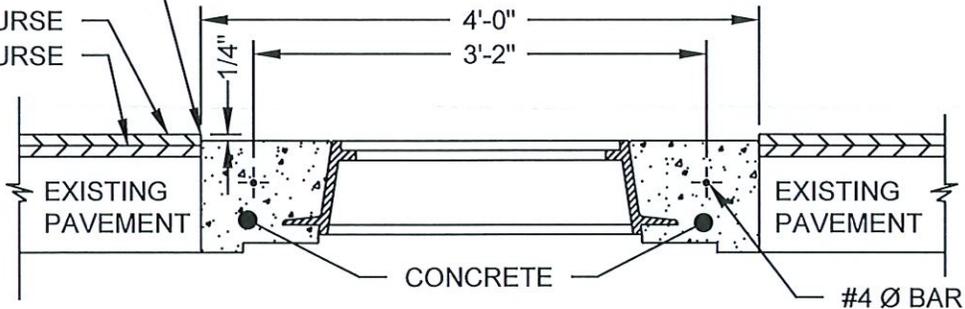
REVISED: 2 FEB 10



PLAN

SEAL WITH 4" WIDE
SQUEEGEE APPLICATION
OF RS-1 EMULSION
OR PG BINDER 702.01

SURFACE COURSE
LEVELING COURSE



SECTION A-A

MANHOLE

SHEET 1 OF 2

DATE: 02/12/2026

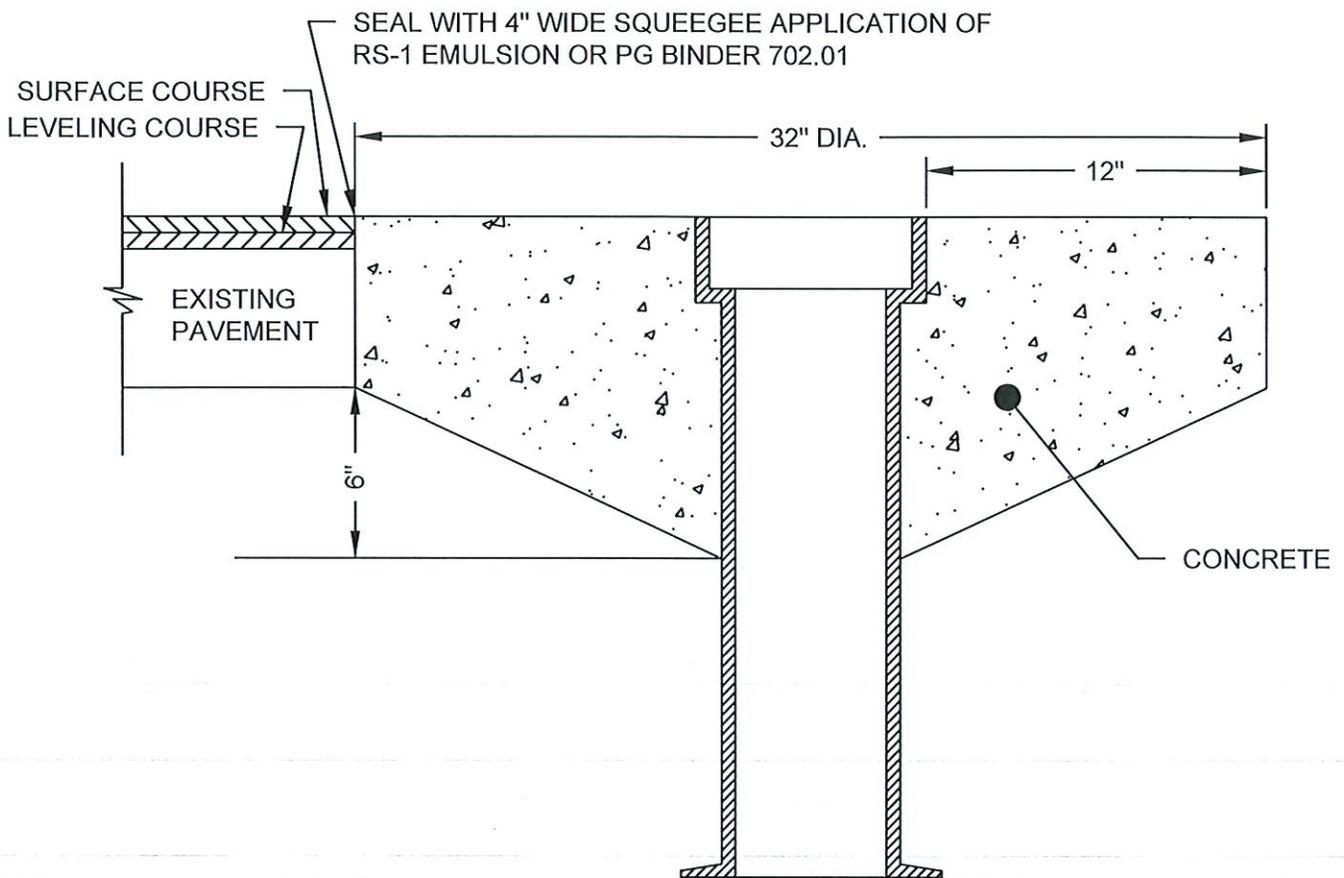
STANDARD CONSTRUCTION DRAWING



UTILITY CASTING ADJUSTMENT

[Signature]
2/13/26

P-5



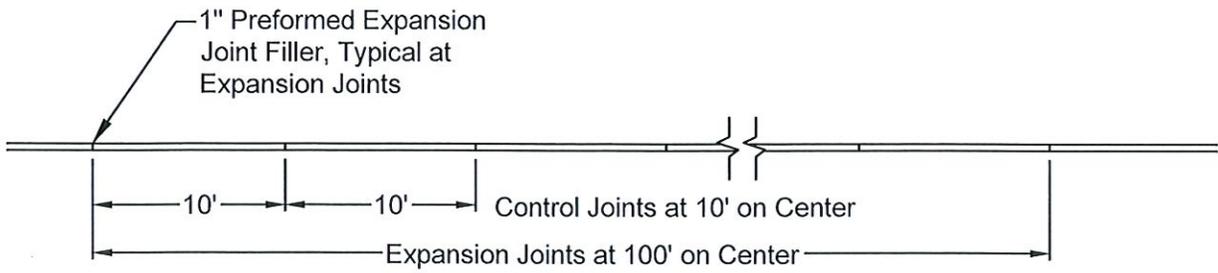
VALVE BOX

NOTES:

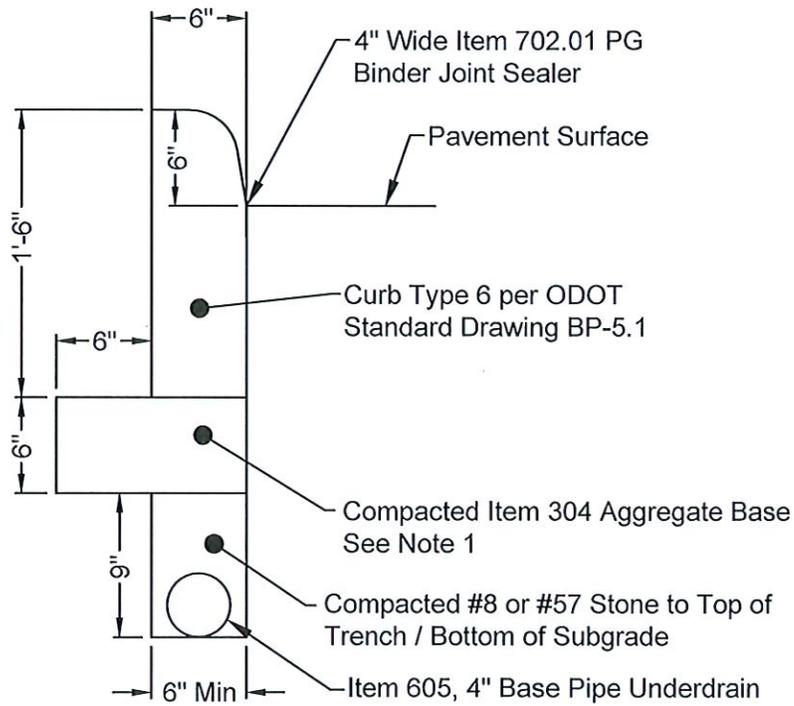
1. NO ON-SITE CONCRETE MIXING WILL BE PERMITTED. ONLY CONCRETE FROM A BATCH PLANT SHALL BE INSTALLED.
2. CONCRETE SHALL BE ITEM 511 CLASS QC2 CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 2000-PSI WITHIN 6 HOURS AND A MAXIMUM WATER/CEMENT RATIO OF 0.40.
3. ADD POLYPROPYLENE / POLYETHYLENE SYNTHETIC MACROFIBER TO CONCRETE AT 3.0 POUNDS PER CUBIC YARD.
4. USE CONCRETE VIBRATOR TO ASSURE THAT AIR VOIDS ARE MINIMIZED AND THAT CONCRETE BINDS TO CASTING.
5. A STANDARD DRUM WITH WARNING LIGHT PER THE OMUTCD SHALL BE PLACED ON THE CASTING UNTIL SUFFICIENT TIME HAS ELAPSED FOR THE CONCRETE TO CARRY TRAFFIC.
6. RISERS WITH FLANGES ARE NOT PERMITTED WITHIN 2 INCHES OF THE FINISHED SURFACE.

SHEET 2 OF 2

DATE: 02/13/2026	STANDARD CONSTRUCTION DRAWING	<i>[Signature]</i> 2/13/26
	UTILITY CASTING ADJUSTMENT	P-5



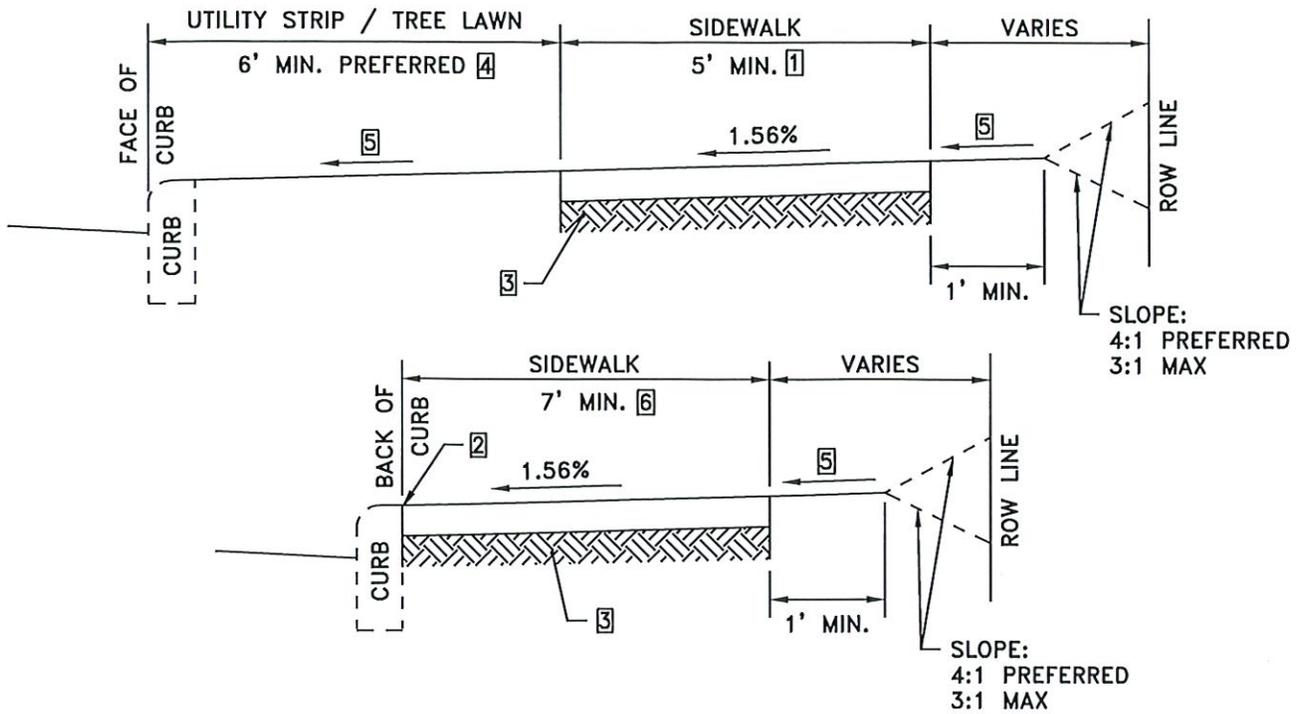
JOINT SPACING DETAIL



NOTES:

1. On curb replacement projects that do not involve road widening a #57 aggregate base may be used
2. All exposed concrete surfaces shall have a brush finish.
3. Control joints shall be per Item 609 and expansion joint material shall be per Item 705.03.

DATE: 09/26/2025	STANDARD CONSTRUCTION DRAWING	 <u>9/26/25</u>
	<h2>STRAIGHT CURB</h2>	<h2>P-6</h2>



- ① 4' MIN. MAY BE ALLOWED IN RESIDENTIAL AREAS WHERE EXISTING ADJOINING WALKS ARE 4' WIDE.
- ② EXPANSION JOINT BETWEEN CURB AND WALK
- ③ ITEM 203 – COMPACTED MATERIAL CONSISTING OF EARTH, ITEM 304 AGGREGATE, #57 AGGREGATE OR APPROVED EQUAL.
- ④ IN AREAS WITH GEOMETRIC CONSTRAINTS THE MINIMUM MAY BE REDUCED, BUT NOT LESS THAN 3'.
- ⑤ 2% MINIMUM TO 8% MAXIMUM SLOPE.
- ⑥ 5' MIN. MAY BE ALLOWED IN RESIDENTIAL AREAS WHERE EXISTING ADJOINING WALKS ARE 5' WIDE.

1. THE OUTSIDE EDGE OF SIDEWALK SHALL BE PARALLEL, CONCENTRIC ON CURVE, TO THE RIGHT OF WAY LINE, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER. THE GRADE OF THE SIDEWALK SHALL FOLLOW THE GRADE OF CURB AND/OR EDGE OF STREET PAVEMENT. SIDEWALKS SHALL SLOPE TOWARD THE STREET UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER. SIDEWALK WIDTHS SHALL BE PER THE APPROVED STREET PLAN, OR AS DESIGNATED BY THE CITY ENGINEER.
2. EXPANSION JOINT FILLER SHALL BE ITEM 705.03 1/2 INCH THICK PERFORMED EXPANSION JOINT FILLER, EXTENDING THE FULL DEPTH OF THE WALK.
3. ANY MANHOLE LIDS AND VALVE BOXES IN THE SIDEWALK AREA SHALL BE ADJUSTED TO MATCH WALK GRADE.
4. ROOF DRAINS SHALL BE EXTENDED UNDER THE SIDEWALK AND THROUGH THE CURB PER STANDARD CONSTRUCTION DRAWING P-22.
5. ALL WORK SHALL CONFORM TO THE PUBLIC RIGHT-OF-WAY ACCESSIBILITY GUIDELINES UNDER THE AMERICANS WITH DISABILITIES ACT (ADA).

APPROVED 218/24

[Signature]
CITY ENGINEER

REVISED: 8 FEB 24

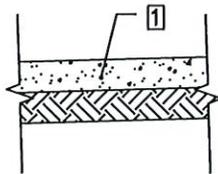
SIDEWALKS

CITY OF LANCASTER, OHIO
DEPARTMENT OF ENGINEERING

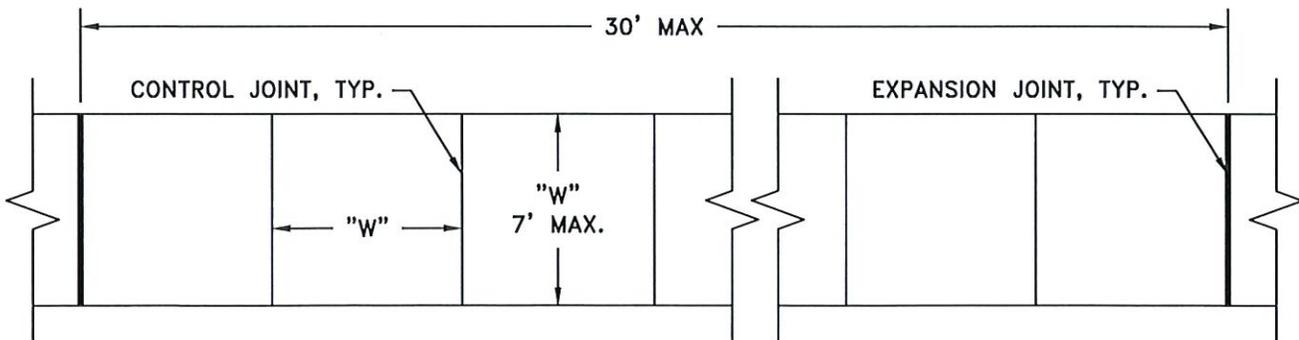
STANDARD
CONSTRUCTION DRAWING

DWG. BY: ADH	FILE NUMBER
CHK'D BY: JB	P-7 SHEET 1 OF 2

1. ALL WORK AND MATERIALS SHALL CONFORM TO CMSL ITEM 608, CONCRETE WALK.
2. SIDEWALKS SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE QC1 AS PER ODOT ITEM 499. THE SLUMP SHALL BE A MAXIMUM OF 4 INCHES AND THE AIR CONTENT SHALL BE 6%–8%.
3. PORTLAND CEMENT CONCRETE SIDEWALKS SHALL BE 6 INCHES THICK THROUGH RESIDENTIAL DRIVE AREAS AND 8 INCHES THICK THROUGH COMMERCIAL DRIVE AREAS.
4. SUB-GRADE SHALL BE MOISTENED THOROUGHLY AND HAVE NO STANDING WATER IMMEDIATELY PRIOR TO PLACING CONCRETE.
5. NO CONCRETE SHALL BE PLACED UNTIL THE TEMPERATURE IS 35°F AND RISING. ONCE PLACED CONCRETE SHALL BE PROTECTED FROM FREEZING UNTIL SPECIMEN BEAMS ATTAIN A MODULUS OF RUPTURE OF 600 PSI.
6. THE SURFACE OF WALKS SHALL BE DIVIDED INTO EQUALLY SPACED BLOCKS WITH TRANSVERSE CONTROL JOINTS AT INTERVALS EQUAL TO THE WALK WIDTH TO FORM RECTANGULAR BLOCKS NO GREATER THAN 7 FEET IN ANY DIMENSION. CONTROL JOINTS SHALL BE SAW CUT OR TOOLED JOINTS EXTENDING TO A DEPTH NOT LESS THAN 1/4TH THE SLAB THICKNESS AND BE 1/8 INCH WIDE.
7. ALL CONCRETE SHALL BE PLACED IN ONE COURSE, STRUCK-OFF AND SMOOTHED WITH A FLOAT TO A SANDY TEXTURE. CONCRETE SHALL BE BROOM FINISHED CREATING A NON-SLIP SURFACE.
8. EXPANSION JOINTS SHALL BE PLACED WHERE NEW CONCRETE ABUTS EXISTING CONCRETE, AT ANY FIXED STRUCTURE, AT THE JUNCTION WITH CURBS, AND AT INTERVALS NOT EXCEEDING 30 FEET.
9. IMMEDIATELY AFTER FINISHING, CONCRETE SHALL BE CURED IN AN APPROVED MANNER AS PER ODOT ITEM 451.



1] ITEM 608 - 4" MIN. CONCRETE WALK, 6" MIN. THROUGH RESIDENTIAL DRIVEWAYS AND ALLEYS, AND 8" MIN. THROUGH COMMERCIAL DRIVES.



APPROVED 2/8/24

 CITY ENGINEER
 REVISED: 8 FEB 24

SIDEWALKS
 CONCRETE

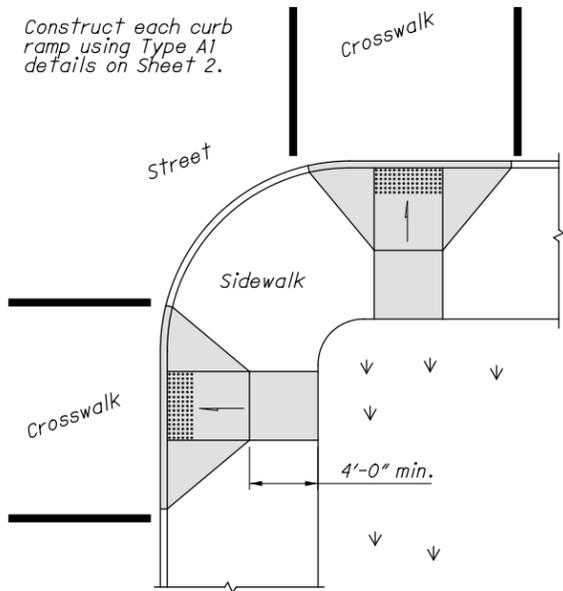
CITY OF LANCASTER, OHIO
 DEPARTMENT OF ENGINEERING
 STANDARD
 CONSTRUCTION DRAWING
 DWG. BY: ADH FILE NUMBER
 CHK'D BY: JB P-7 SHEET
 2 OF 2

The City uses the Ohio Department of Transportation's (ODOT) *Standard Roadway Construction Drawings* for curb ramps.

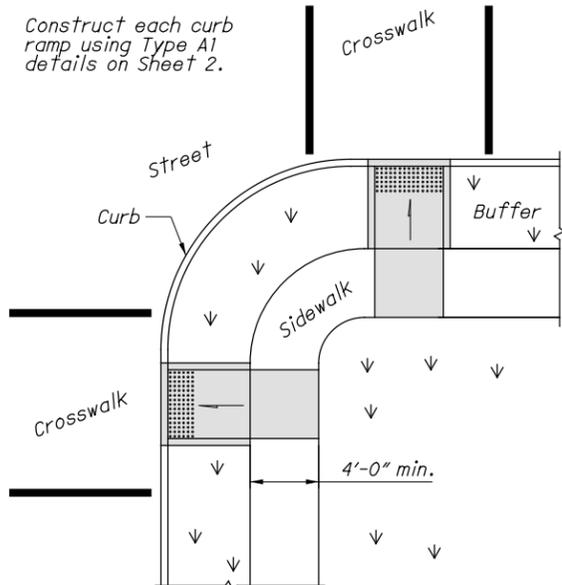
For new ramps, use the newest revision of BP-7.1 that may be found on the ODOT website at:

<http://www.dot.state.oh.us/Divisions/Engineering/Roadway/DesignStandards/roadway/Pages/StandardConstructionDrawing.aspx>

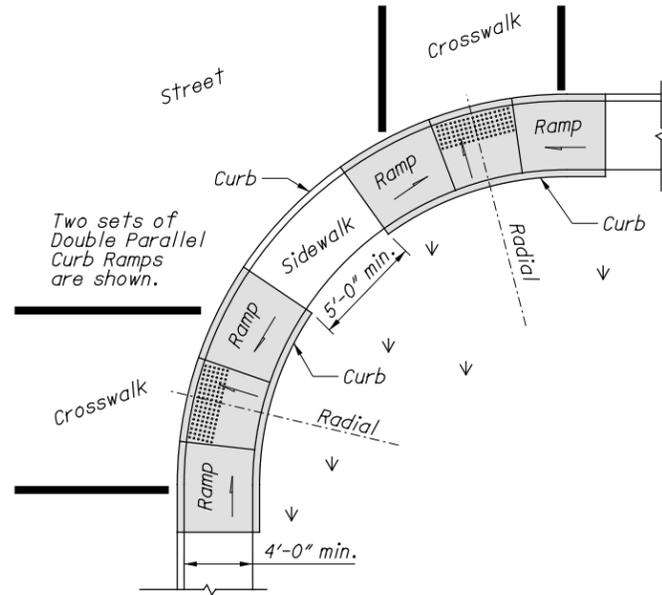
APPROVED _____ _____ CITY ENGINEER	TYPICAL CURB RAMP STANDARDS	CITY OF LANCASTER, OHIO DEPARTMENT OF ENGINEERING	
REVISED: 15 SEP 14		STANDARD CONSTRUCTION DRAWING	
		DWG. BY: CHK'D BY:	FILE NUMBER P-8



Construct each curb ramp using Type A1 details on Sheet 2.

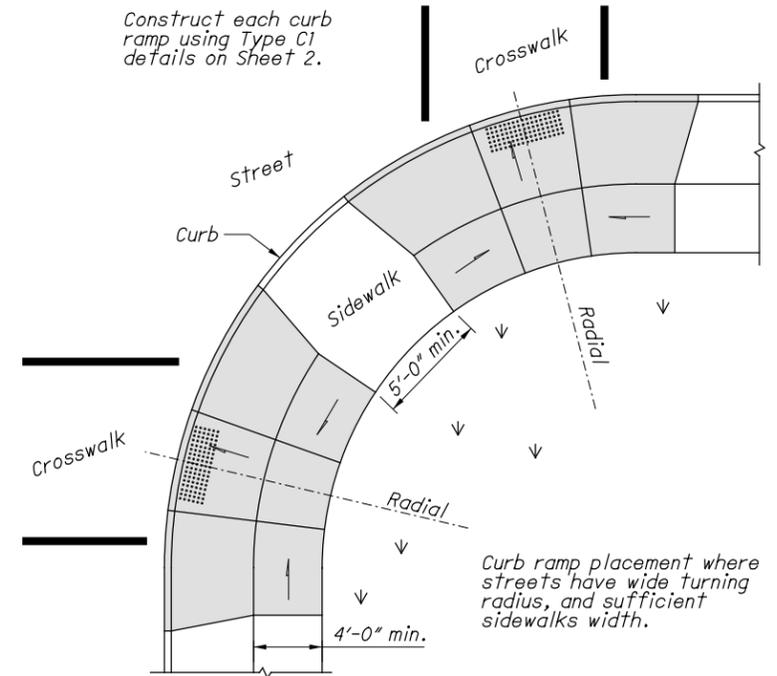


Construct each curb ramp using Type A1 details on Sheet 2.



Two sets of Double Parallel Curb Ramps are shown.

Place on streets having wide turning radius and where sidewalks are narrow.



Construct each curb ramp using Type C1 details on Sheet 2.

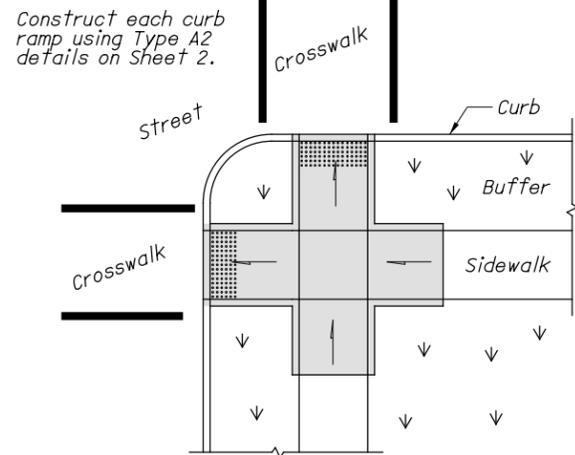
Curb ramp placement where streets have wide turning radius, and sufficient sidewalks width.

PERPENDICULAR CURB RAMPS

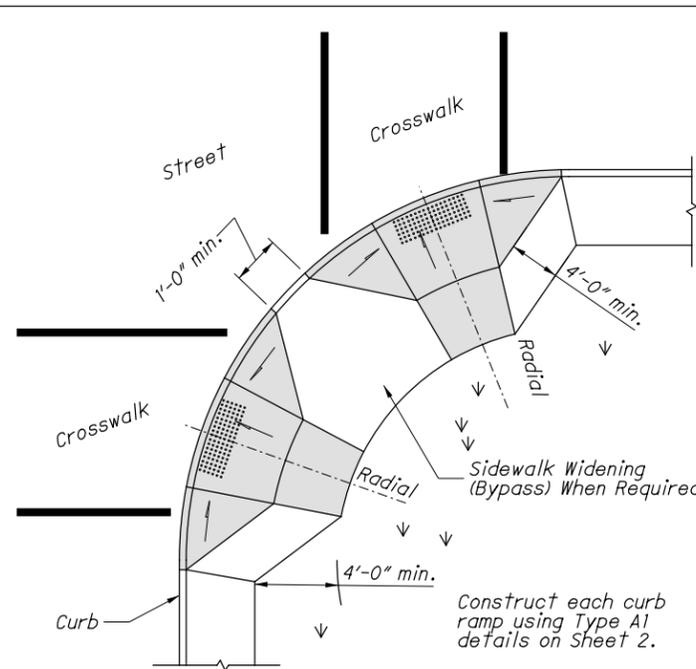
PARALLEL CURB RAMPS

COMBINATION CURB RAMPS

PREFERRED CONSTRUCTION PLACEMENT



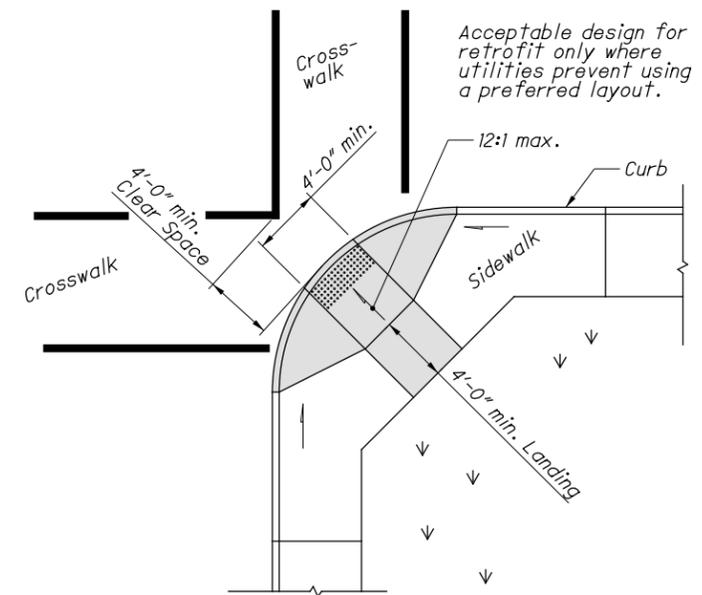
Construct each curb ramp using Type A2 details on Sheet 2.



Construct each curb ramp using Type A1 details on Sheet 2.

Acceptable design on corners with wide turning radius where user is able to maneuver within crosswalk limits so as not to encroach into adjacent traveled lanes.

PERPENDICULAR RAMPS



Acceptable design for retrofit only where utilities prevent using a preferred layout.

Use this design only for existing walks, and when site constraints prohibit other designs. The diagonal Type D ramp may be constructed as either a Perpendicular, Parallel or Combination curb ramp type. Avoid using where curb radii are less than 20'-0".

DIAGONAL RAMP (Type D)

ACCEPTABLE CONSTRUCTION PLACEMENT

NOTES

GENERAL: This drawing shows curb ramp types details and placement examples for curb ramp construction, including the installation of detectable warnings.

Curb ramp types are shown on Sheet 2 and include Perpendicular, Parallel, and Combined types as specified to be constructed in the locations shown on the project plans.

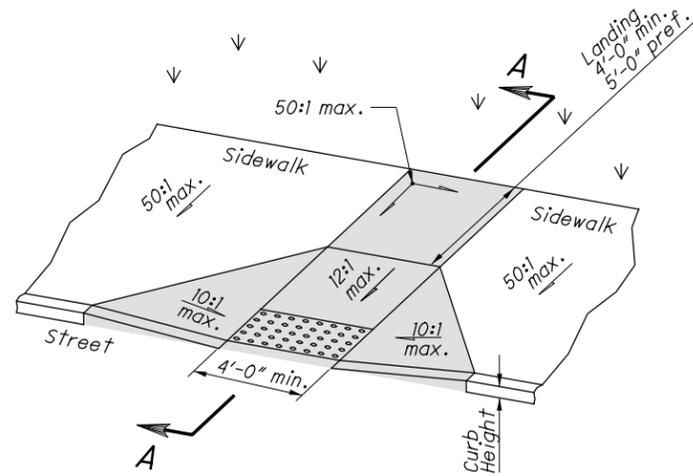
Curb ramps added to an existing intersection or walk should be individually detailed on the project plans to assure that the design is appropriate for site constraints and all items can be constructed to ADA standards. The contractor may adjust the placement of curb ramps if existing field conditions warrant with the approval of the Engineer.

PAYMENT: Measure and pay for the ramp area within the shaded limits of this drawing as Item 608 Curb Ramp, Square Foot. This includes the cost of any curb or curb and gutter, detectable warnings, landing areas and any additional materials, installation, grading, forming, and finishing required within the shaded area.

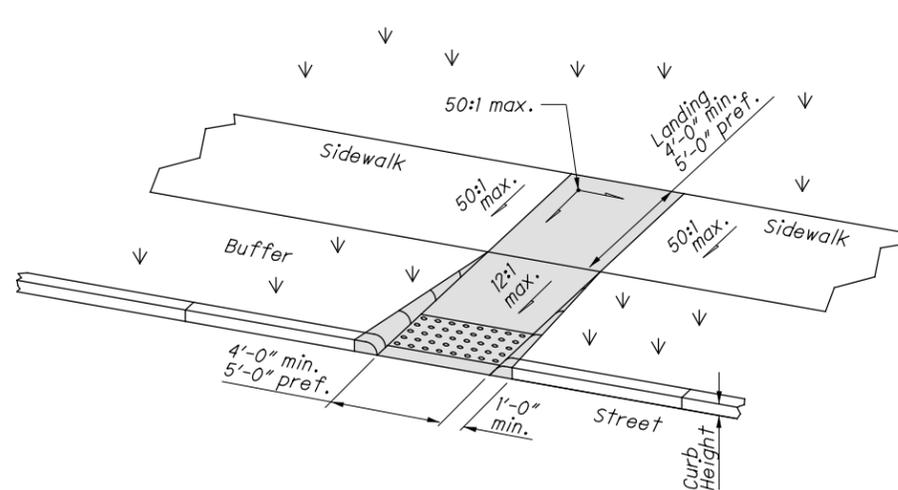
Work beyond the shaded ramp/landing area is paid for as curb (609) and walk (608). Removal of existing curb, walk (or existing curb ramps) are paid under Item 202.

For at-grade crossing locations where only detectable warnings are required in order to achieve ADA compliance, measure and pay for the strip of detectable warnings as Item 608 Detectable Warning, Square Foot. The work to cast the tiles in place will also require removal of existing pavement (Item 202) to the nearest joint, or if no joint exists, a minimum of 4 feet.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION ADMINISTRATOR	REVISION DATE
David L. Holstein	7-20-2018
STANDARD ROADWAY CONSTRUCTION DRAWING NEW CURB RAMPS (with Detectable Warnings)	OFFICE OF ROADWAY ENGINEERING
STATION ENGINEER	D. Fisher
THIS DRAWING REPLACES BP-7.1 DATED 7-18-14.	SCD NUMBER
	BP-7.1
	1 / 3

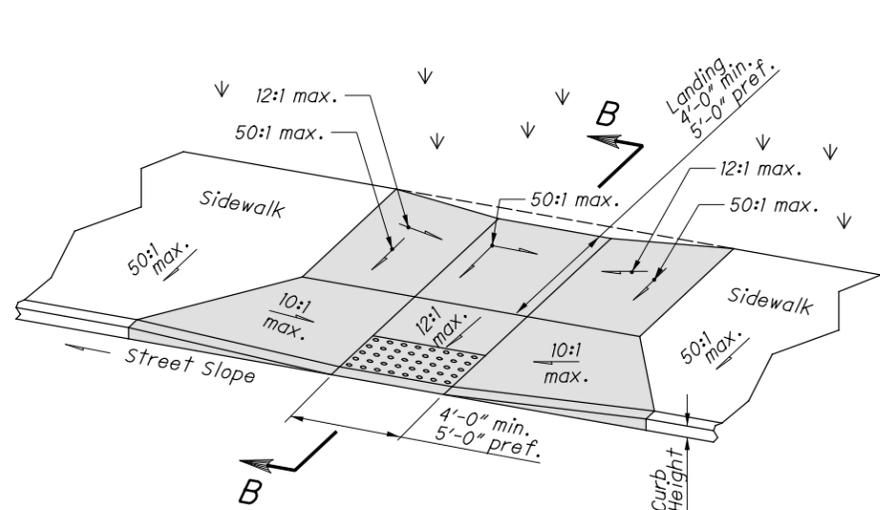


Type A1 (Perpendicular with flared sides)

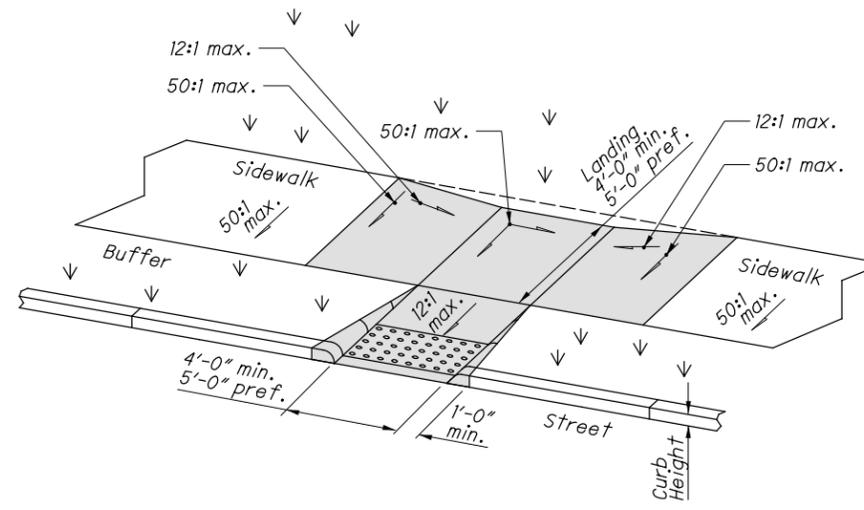


Type A2 (Perpendicular with returned curb)

PERPENDICULAR CURB RAMP DETAILS

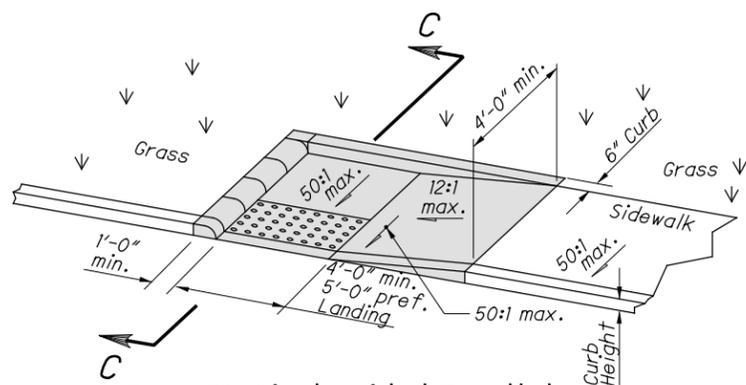


Type C1 (Combined with flared sides)

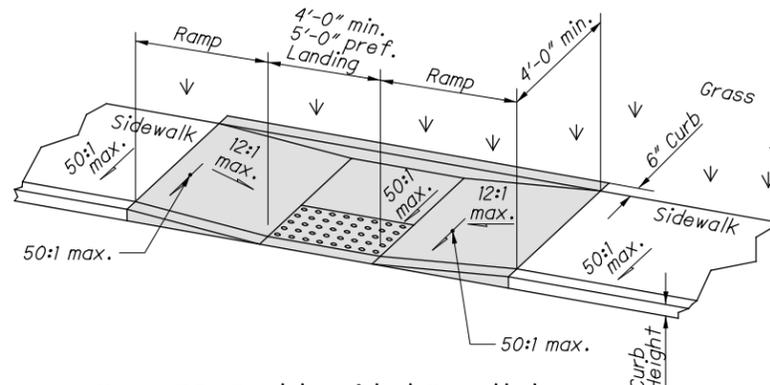


Type C2 (Combined with returned curb)

COMBINED CURB RAMP DETAILS

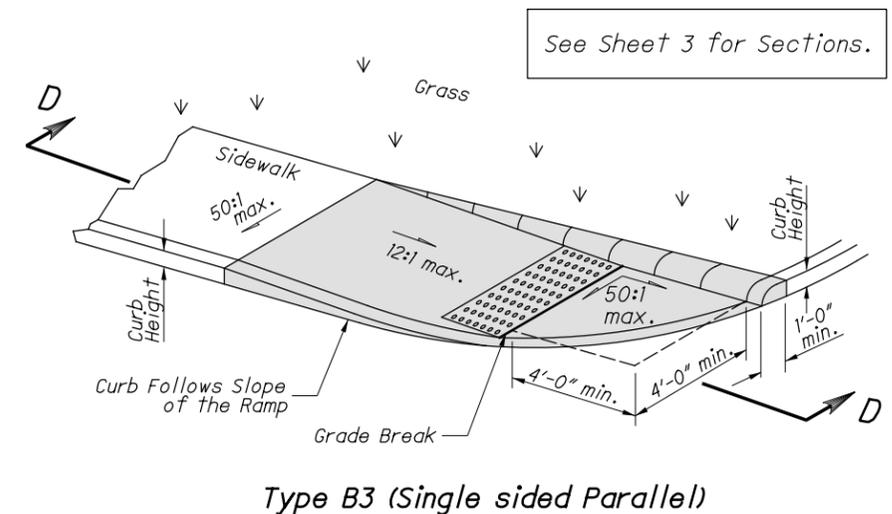


Type B1 (Single sided Parallel)



Type B2 (Double sided Parallel)

PARALLEL CURB RAMP DETAILS



Type B3 (Single sided Parallel)

NOTES CONTINUED

The running slope of the curb ramp shall be a 12:1 maximum or flatter. In existing sidewalks, where the maximum ramp slope is not feasible due to site constraints (e.g. utility poles or vaults, right-of-way limits) it may be reduced as follows:

- A) 10:1 for a max. rise of 6",
- B) 8:1 for a max. rise of 3",
- C) 6:1 over a max. run of 2'-0" for historic areas where a flatter slope is not feasible.

To prevent chasing the grade indefinitely, the transition from existing sidewalk to the shaded curb ramp area is not required to exceed 15 feet in length.

While ramps may be skewed to the crosswalk, the entire lower landing area must fall within the cross walk that the ramp serves and cannot be located in the traveled lane of opposing traffic.

The counter slope of the gutter or street at the foot of a curb ramp, landing, or blended transitions shall be 20:1 or flatter.

The bottom edge of the ramp shall change planes perpendicular to the landing.

The edge of the curb shall be flush with the edge of the adjacent pavement and gutter and surface slopes that meet grade breaks shall also be flush.

Ramp landings shall be 4' min. x 4' min. with a 50:1 or flatter cross slope and running slope.

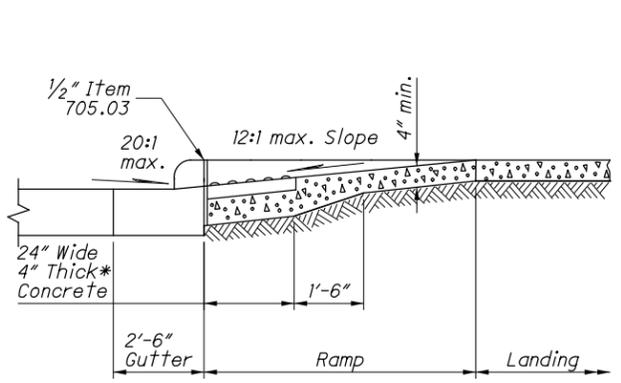
DETECTABLE WARNINGS: Install Detectable Warnings on each curb ramp with approved materials, as shown on Sheet 3. Install these proprietary products as per manufacturer's written instructions.

DRAINAGE: Contractor is to ensure the base of each constructed curb ramp allows for proper drainage, without exceeding allowable cross slope or ramp slopes. Vertical change in level exceeding 1/8" between the 1) pavement and gutter, and 2) gutter and ramp, are not allowed.

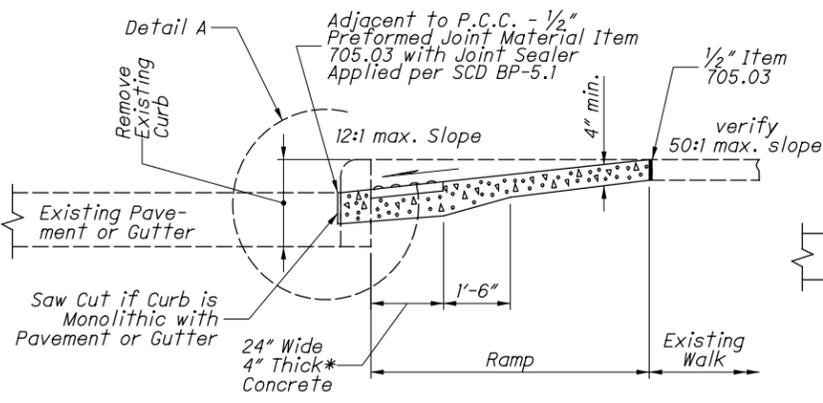
SURFACE TEXTURE: Texture concrete surfaces by coarse brooming transverse to the ramp slopes to be rougher than the adjacent walk.

JOINTS: Provide expansion joints in the curb ramp as extensions of walk joints and consistent with Item 608.03 requirements for a new concrete walk. Provide a 1/2" Item 705.03 expansion joint filler around the edge of ramps built in existing concrete walks. Lines shown on this drawing indicate the ramp edges and slope changes, and do not necessarily indicate joint lines.

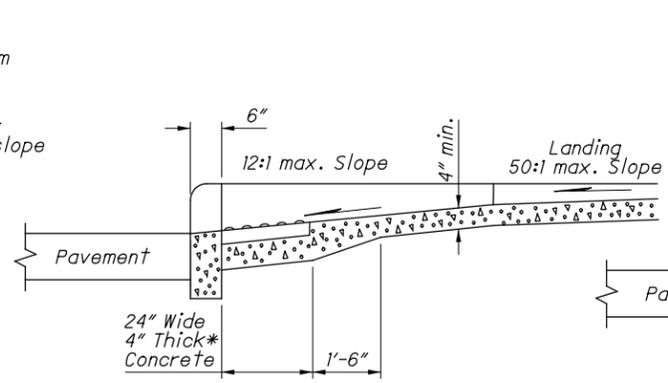
See Sheet 3 for Sections.



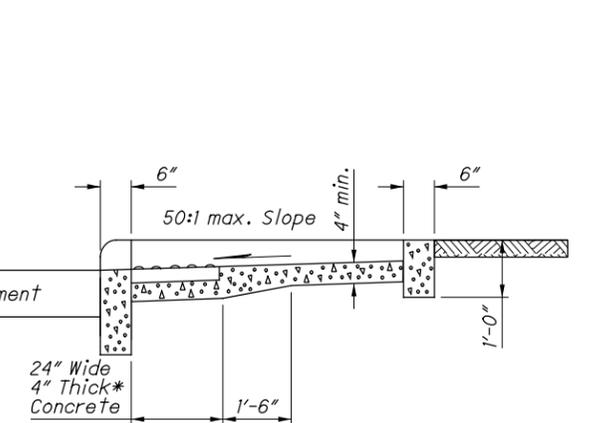
SECTION A-A
NORMAL DETAIL
See Sheet 2.



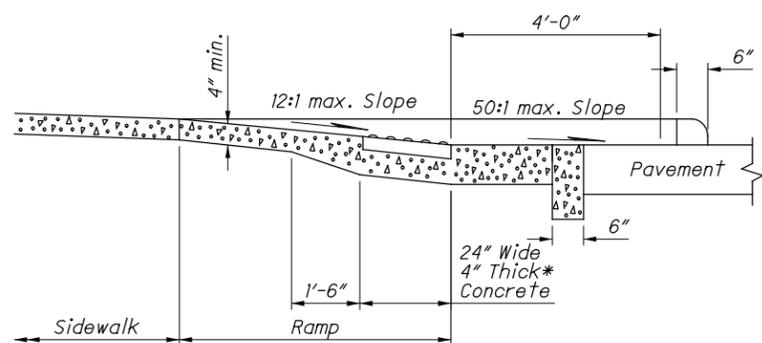
SECTION A-A
EXISTING WALK DETAIL
See Sheet 2.



SECTION B-B
See Sheet 2.

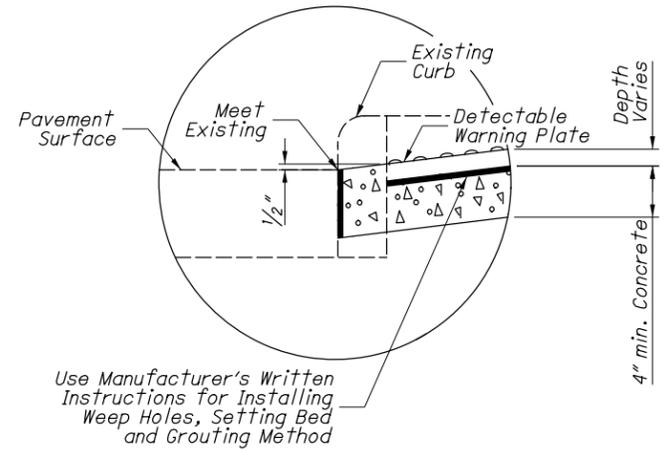


SECTION C-C
See Sheet 2.

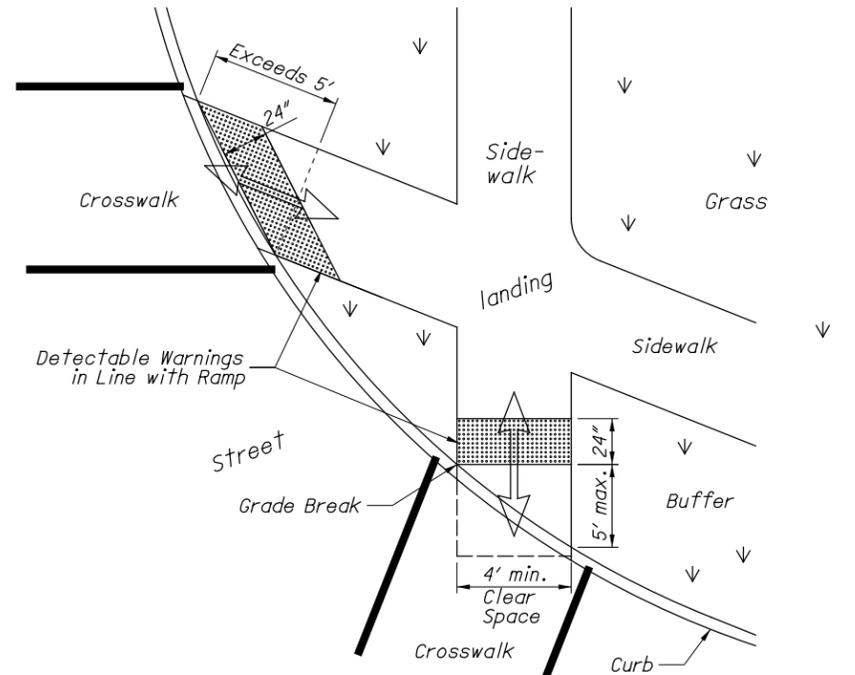


SECTION D-D
See Sheet 2.

*Where possible, pour ramp area integral with the curb, otherwise use 6" thick walk.



DETAIL A



DETECTABLE WARNING ALIGNMENT

DETECTABLE WARNINGS NOTES

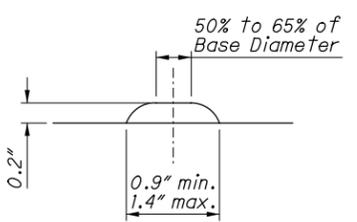
GENERAL: Detectable Warnings are a distinctive surface pattern of truncated domes which are detectable by cane or underfoot to alert people with vision impairments of their approach to streets and hazardous drop-offs.

PLACEMENT: Detectable warnings are to be installed at any location where pedestrians might cross paths with vehicular traffic lanes, such as the base of curb ramps or at blended curbs. A 24" strip of domes is to be installed for the full width of the ramp or walk. Typical street corner placement locations are shown on Sheet 1.

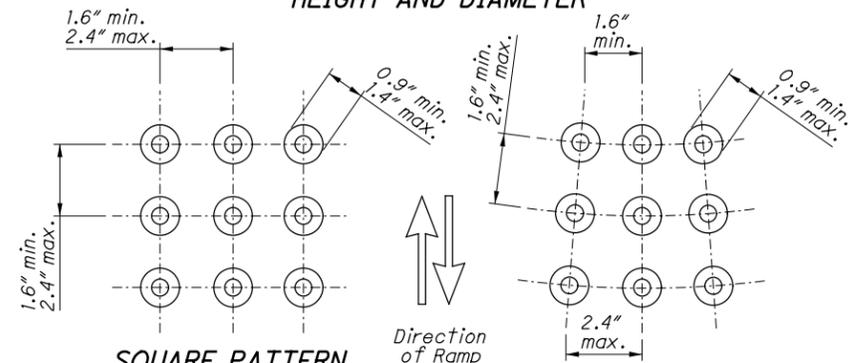
The depth of concrete underneath detectable warning products shall be a minimum of 4". See DETAIL A.

ALIGNMENT: Truncated domes should be aligned with the primary direction of the ramp as shown on the DETECTABLE WARNING ALIGNMENT Detail. Normally the detectable warnings should be flush with the back of the curb, but for skewed conditions see DETECTABLE WARNING ALIGNMENT Detail. For non-standard layouts, detectable warning materials may have to be mitered and placed segmentally.

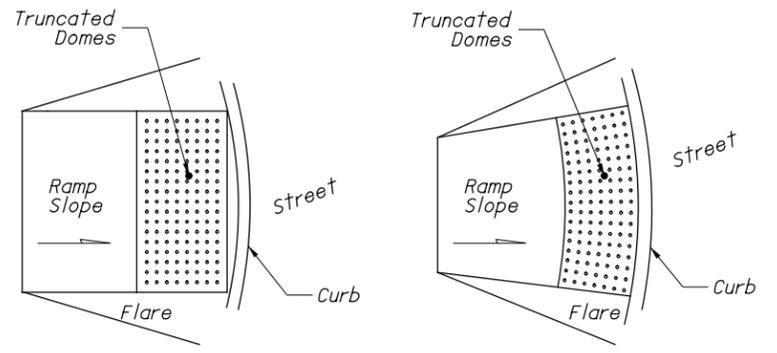
PRODUCTS & COLORS: Color of the detectable warnings should contrast with surrounding concrete walk and ramp. Black is not an acceptable color. Approved products and guidance on color may be found on the Office of Roadway Engineering Service's Detectable Warnings Approved List. Install products as per manufacturer's printed instructions.



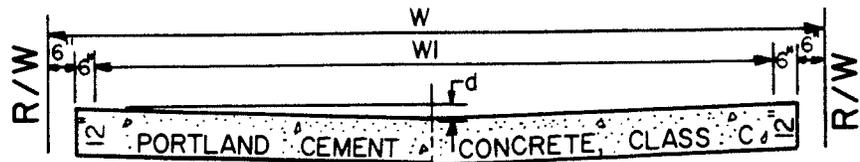
HEIGHT AND DIAMETER



SQUARE PATTERN, PARALLEL ALIGNMENT
RADIAL ALIGNMENT
TRUNCATED DOMES DETAILS



DOME ALIGNMENT ON RADIUSSED CURB

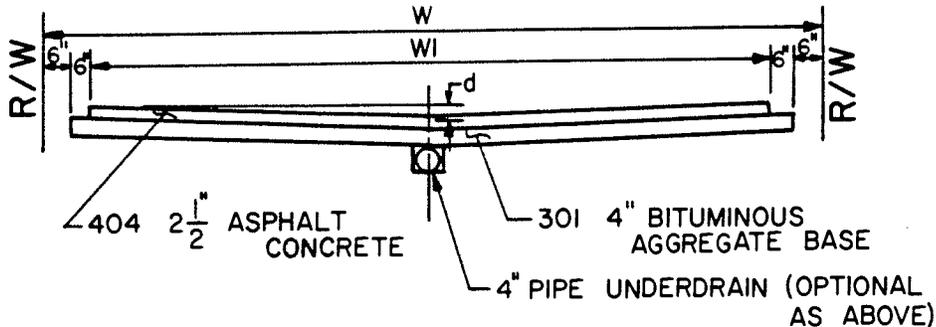


NO. 8 OR NO. 57 AGGREGATE 4" PIPE UNDERDRAIN (OPTIONAL)

CONCRETE PAVEMENT

TYPE A

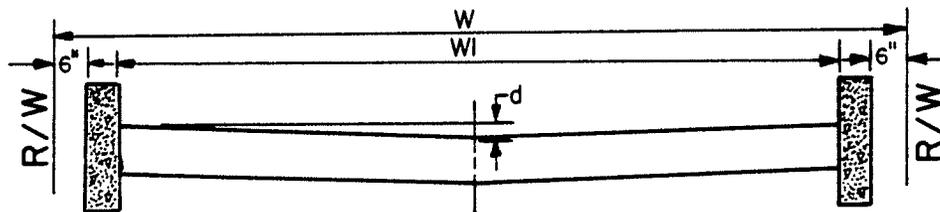
W	W1	d
20'	18'	3 1/2"
18'	16'	3 1/4"
16'	14'	3"
15'	13'	2 3/4"
12'	10'	2"



ASPHALT PAVEMENT

TYPE B

RAISED EDGE OR CURB ON ALLEY SECTION WILL BE INCLUDED IN AREA OF CONCRETE PAVING AND PAID FOR UNDER THIS ITEM.



NOTE: 6" x 18" CONCRETE CURB NOT TO EXTEND FURTHER THAN PROPERTY OR R/W LINE OF STREET.

ASPHALT OR CONCRETE PAVEMENT W/CURBS

TYPE C

PREVIOUSLY 020 A1

APPROVED 20 MAY 1986
DATE

Perry J. Payne
CITY ENGINEER

REVISED:

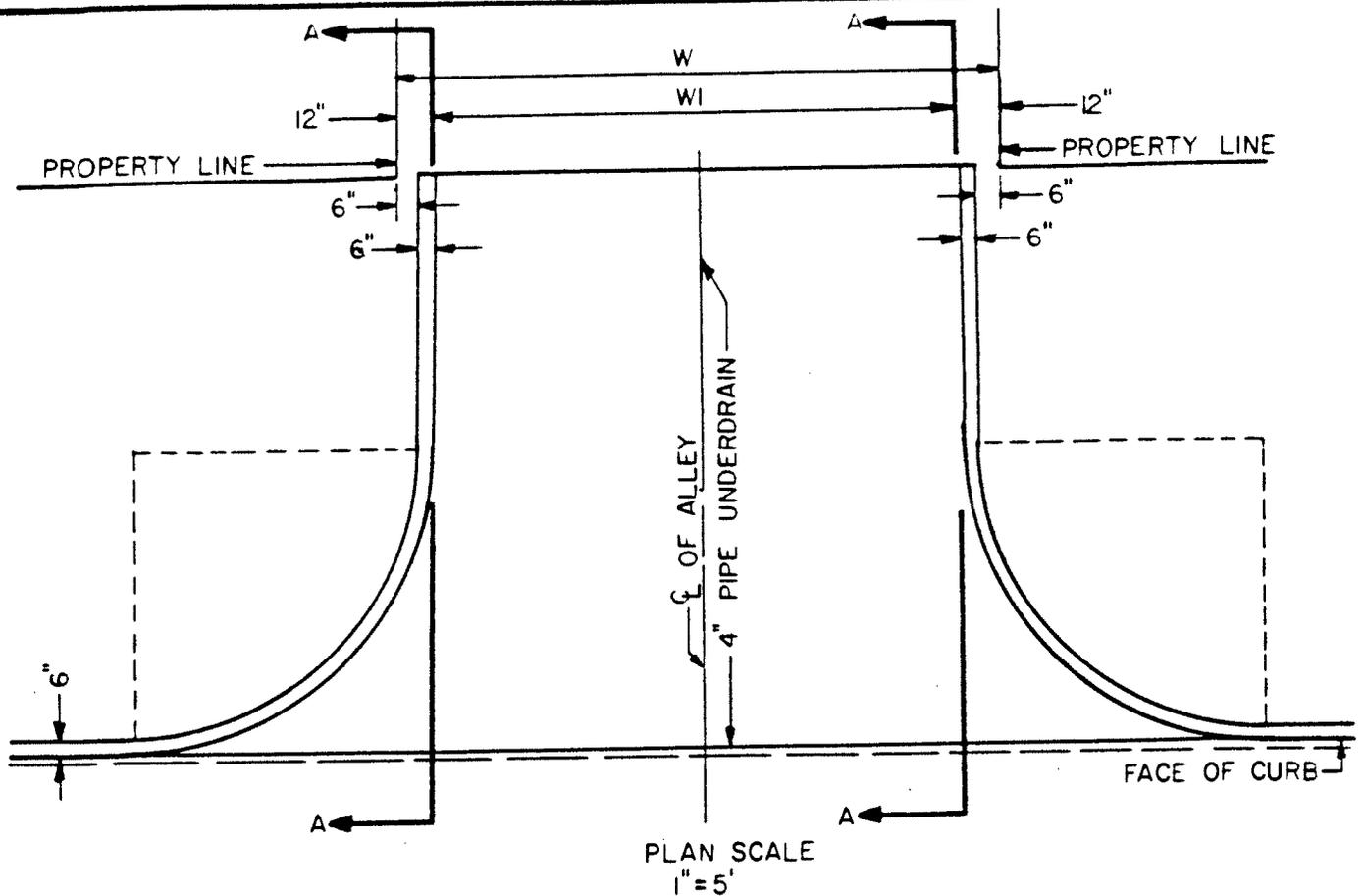
TYPICAL
ALLEY
SECTION

CITY OF LANCASTER, OHIO
DEPARTMENT OF ENGINEERING

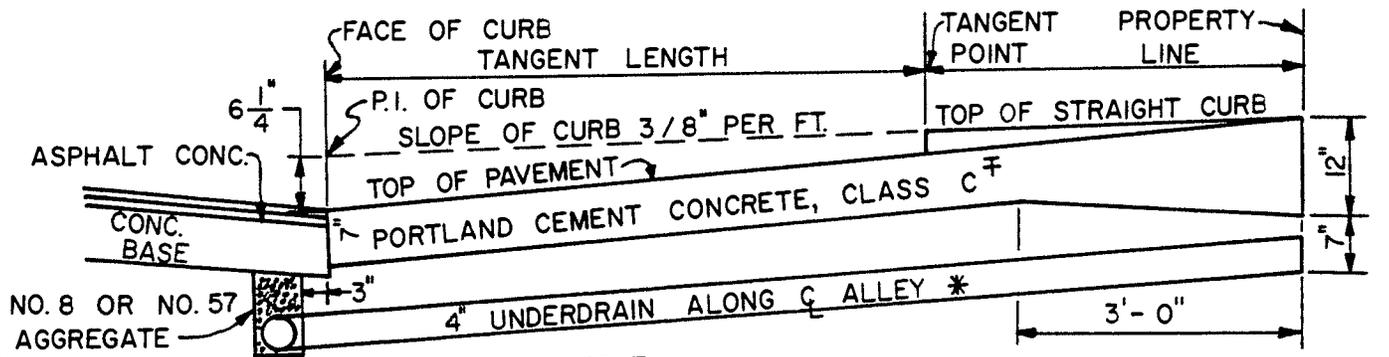
STANDARD
CONSTRUCTION DRAWING

DWG. BY: SLH
CHK'D BY: P.M.

FILE NUMBER
P-9



PLAN SCALE
1" = 5'



SECTION A-A
SCALE 1" = 2'

* - PER OPTION OF CITY ENGINEER.

W	WI
20'	18'
18'	16'
16'	14'
15'	13'
12'	10'

‡ - FOR BITUMINOUS PAVEMENT SECTION MAINTAIN CONSTANT PAVEMENT DEPTH PER STANDARD DRAWING P-9.

RAISED EDGE OR CURB ON ALLEY SECTION WILL BE INCLUDED IN AREA OF CONCRETE PAVING AND PAID FOR UNDER THIS ITEM.

PREVIOUSLY 020A2

APPROVED 23 May 1986
DATE

Perry D. Payne
CITY ENGINEER

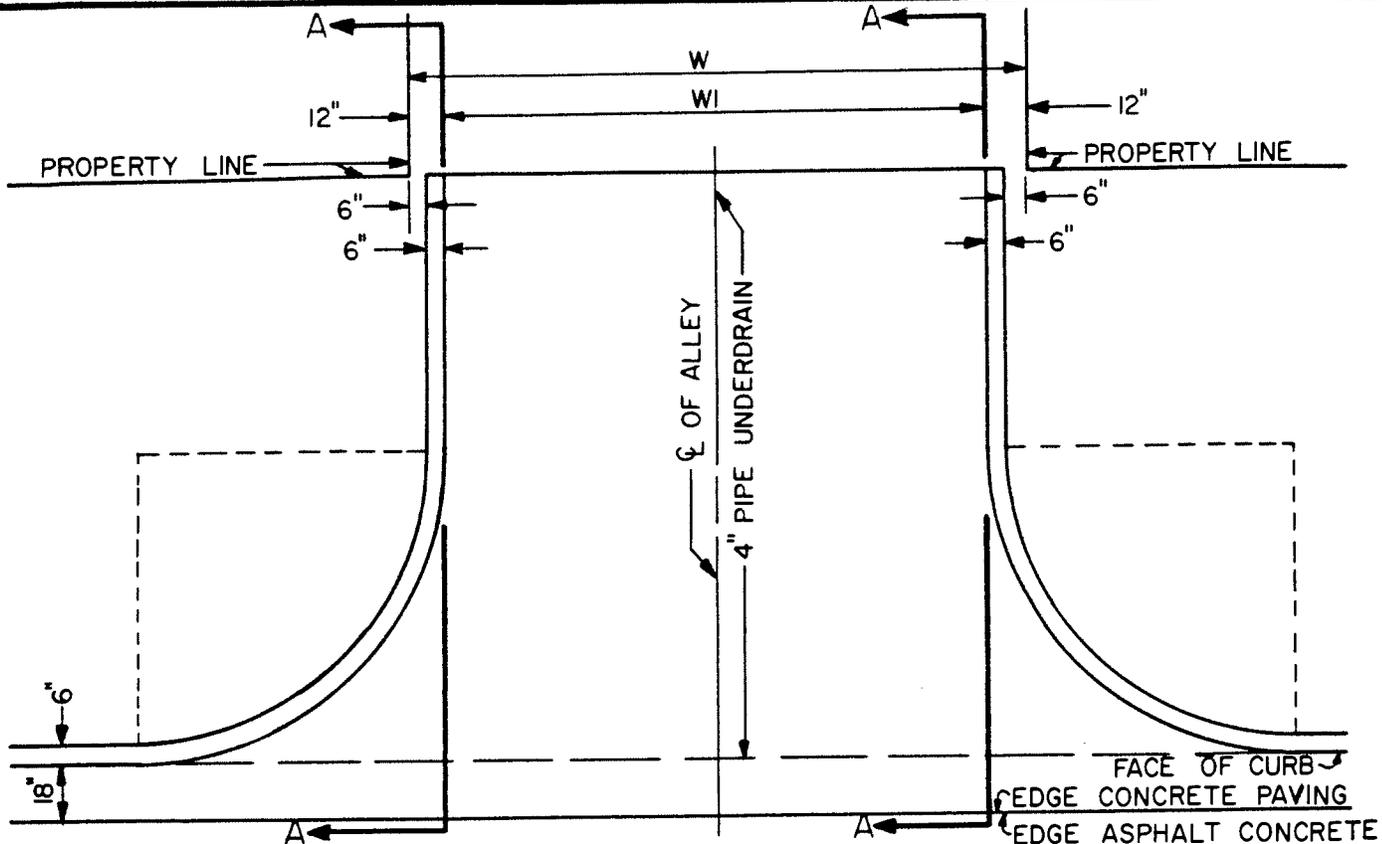
REVISED:

TYPICAL ALLEY
INTERSECTION
WITH STRAIGHT
CURB

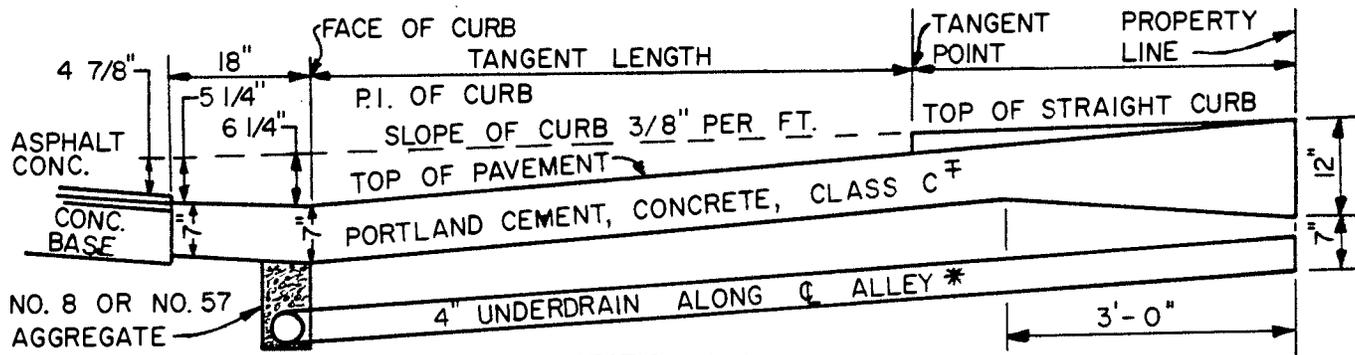
CITY OF LANCASTER, OHIO
DEPARTMENT OF ENGINEERING

STANDARD
CONSTRUCTION DRAWING

DWG. BY: SLH FILE NUMBER
CHK'D BY: P.M. P-10



PLAN SCALE
1" = 5'



SECTION A-A
SCALE 1" = 2'

* - PER OPTION OF CITY ENGINEER

W	WI
20'	18'
18'	16'
16'	14'
15'	13'
12'	10'

‡ - FOR BITUMINOUS PAVEMENT SECTION MAINTAIN CONSTANT PAVEMENT DEPTH PER STANDARD DRAWING P-9.

RAISED EDGE OR CURB ON ALLEY SECTION WILL BE INCLUDED IN AREA OF CONCRETE PAVING AND PAID FOR UNDER THIS ITEM.

FOR JOINT DETAILS SEE STANDARD DRAWING P-12

APPROVED 23 MAY 86 DATE

Perry J. Payne
CITY ENGINEER

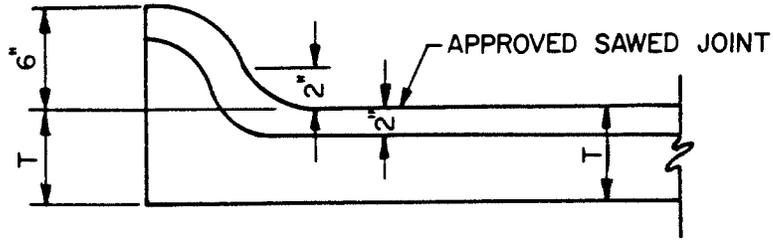
REVISED:

TYPICAL ALLEY
INTERSECTION
WITH CURB
AND GUTTER

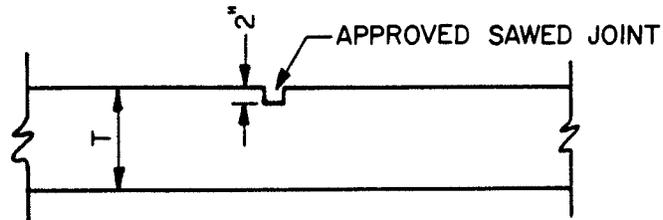
CITY OF LANCASTER, OHIO
DEPARTMENT OF ENGINEERING

STANDARD
CONSTRUCTION DRAWING

DWG. BY: SLH
CHK'D BY: R.M.
FILE NUMBER
P-11

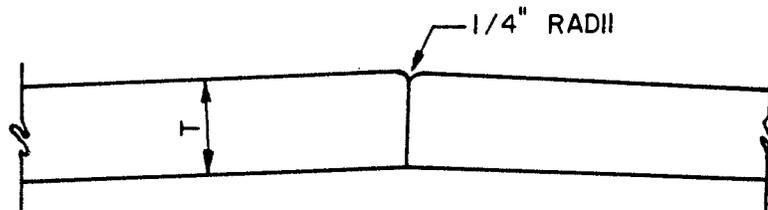


TRANVERSE CONTRACTION JOINT AT INTEGRAL CURB

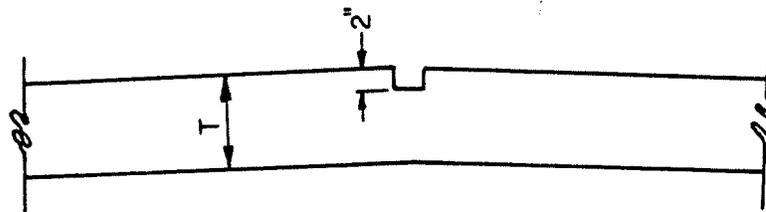


TRANVERSE CONTRACTION JOINT

PROVISION FOR LONGITUDINAL CONTRACTION IN CONCRETE PAVEMENT SHALL BE MADE BY SAWING JOINTS AT INTERVALS OF 18' MAX. JOINTS SHALL BE 2" IN DEPTH AT RIGHT ANGLES TO THE ϕ OF THE PAVEMENT. THIS OPERATION SHALL BE PERFORMED AS SOON AS THE INITIAL SETTING OF THE CONCRETE WILL PERMIT MOVEMENT OF THE SAWING EQUIPMENT WITHOUT DAMAGE TO THE SURFACE.



ϕ CONSTRUCTION LONGITUDINAL JOINT



ϕ SAWED LONGITUDINAL JOINT

APPROVED 27 MAY 86
DATE

Perry J. Payne
CITY ENGINEER

REVISED:

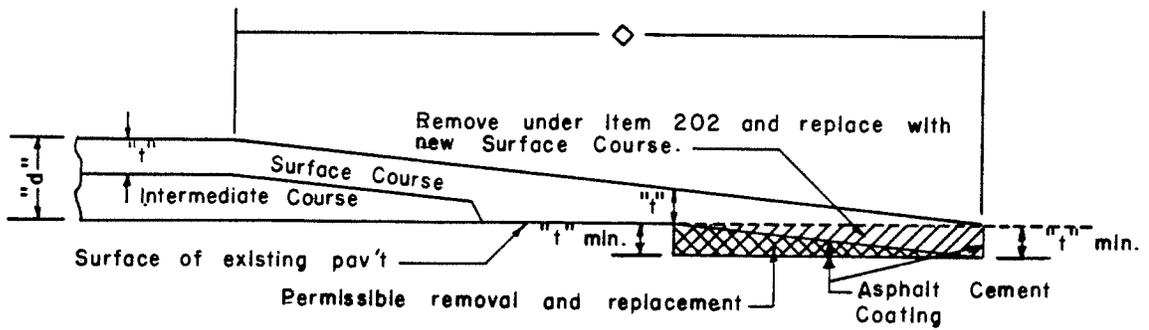
JOINT DETAILS
FOR PORTLAND
CEMENT CONCRETE
PAVING

CITY OF LANCASTER, OHIO
DEPARTMENT OF ENGINEERING

STANDARD
CONSTRUCTION DRAWING

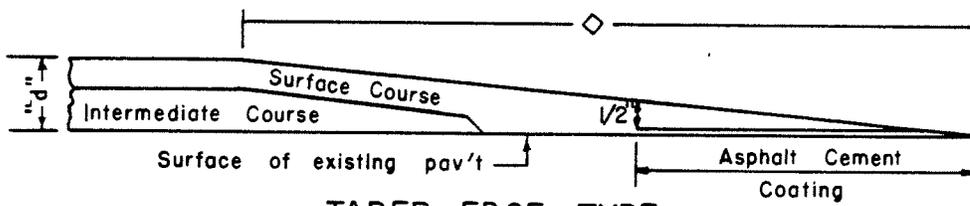
DWG. BY: *SLH*
CHK'D BY: *RM*

FILE NUMBER
P-12



BUTT JOINT TYPE

◇ Min length = 10 feet per inch of "d".
 Unless otherwise directed use 25 feet per inch of "d" for 50 mph or greater speeds.



TAPER EDGE TYPE

NOTE: Either butt or taper type may be used unless type is specified by the plan

APPROVED 4/26/90 DATE
Kent Huston
 CITY ENGINEER

RESURFACING
 END FEATHER
 DETAILS

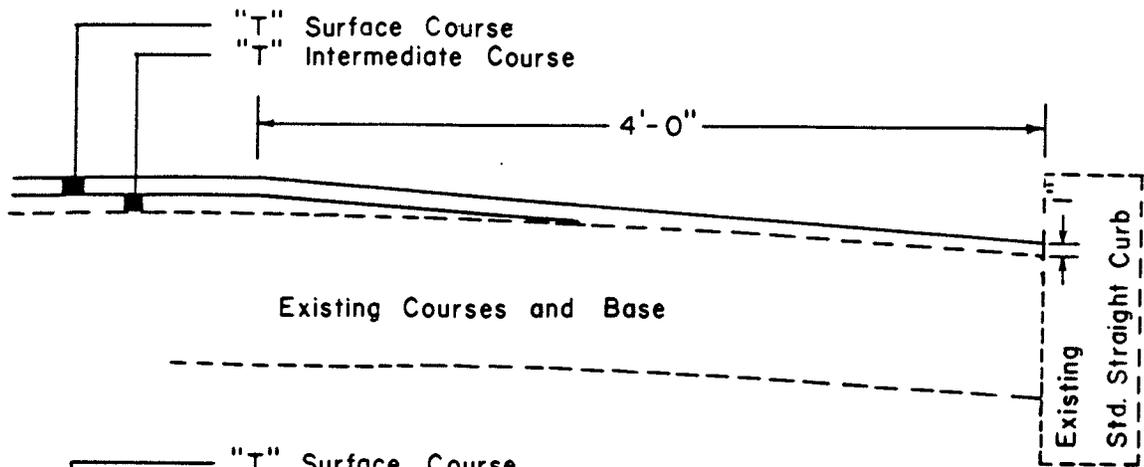
CITY OF LANCASTER, OHIO
 DEPARTMENT OF ENGINEERING

STANDARD
 CONSTRUCTION DRAWING

DWG. BY: R.F.M.
 CHK'D BY: RM

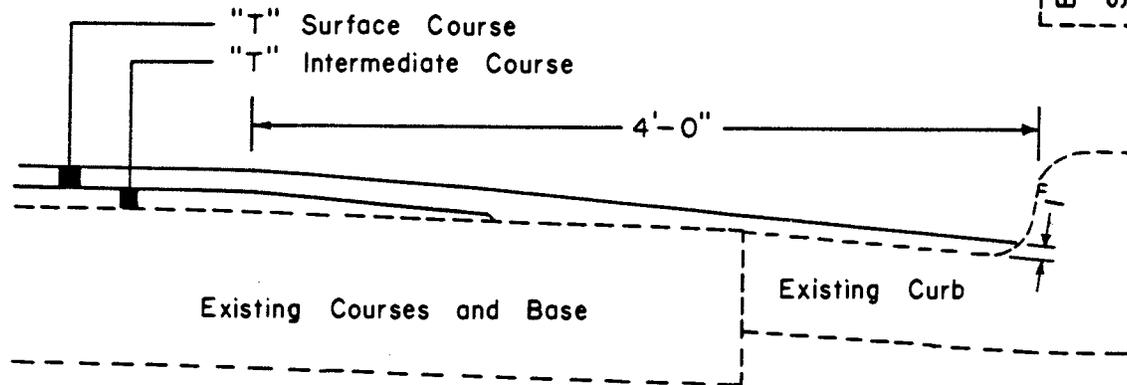
FILE NUMBER
 P-13

REVISED:



Existing Courses and Base

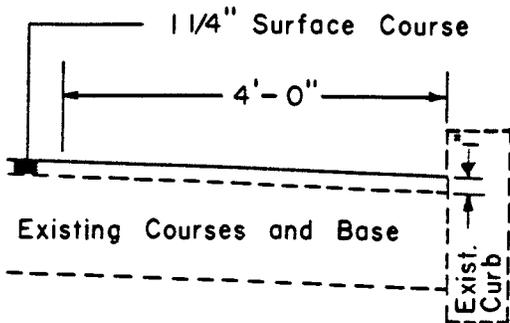
Existing Std. Straight Curb



Existing Courses and Base

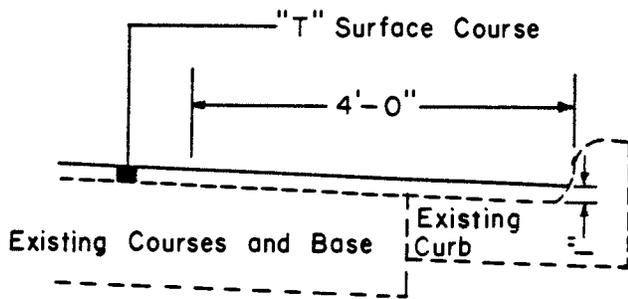
Existing Curb

TYPE 1



Existing Courses and Base

Exist. Curb



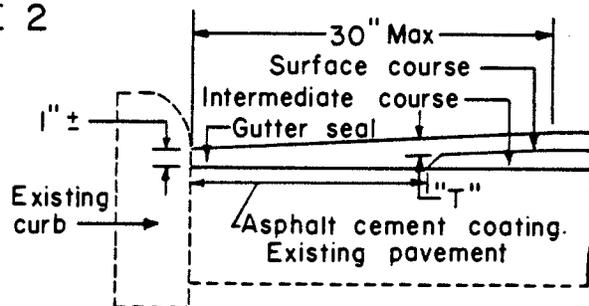
Existing Courses and Base

Existing Curb

TYPE 2

"T" = depth of overlay in inches

NOTE: Special care shall be taken during construction to obtain maximum compaction of bituminous concrete in gutters.



TYPE 3

APPROVED 4/26/90 DATE

Kent Huston CITY ENGINEER

REVISED:

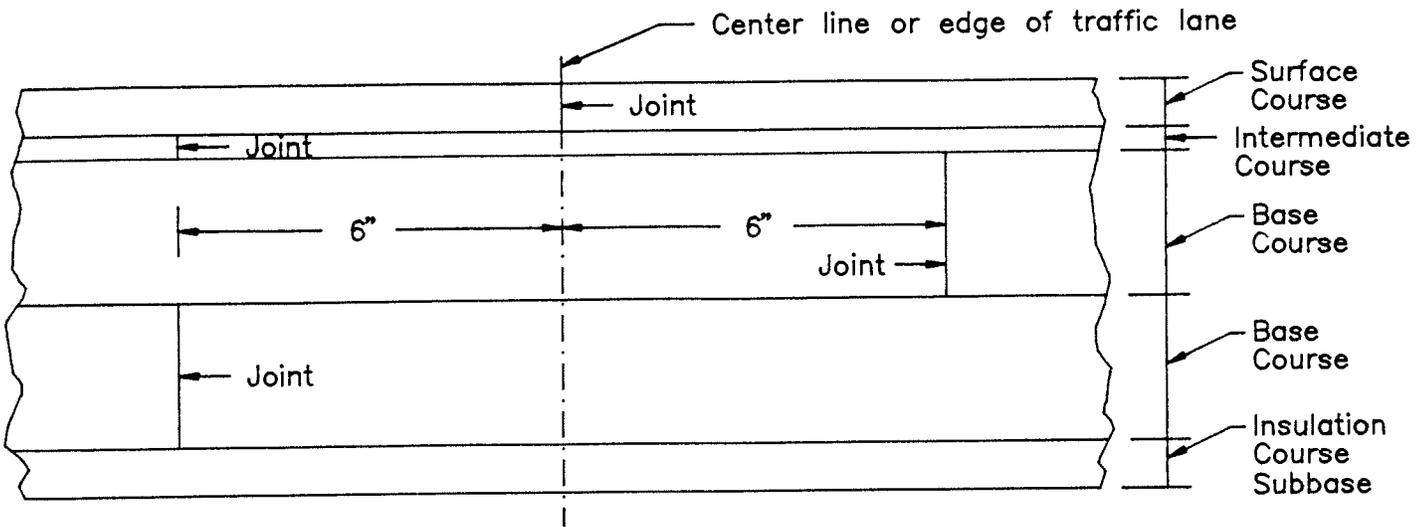
RESURFACING
GUTTER
FEATHERING
DETAILS

CITY OF LANCASTER, OHIO
DEPARTMENT OF ENGINEERING

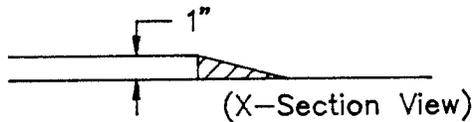
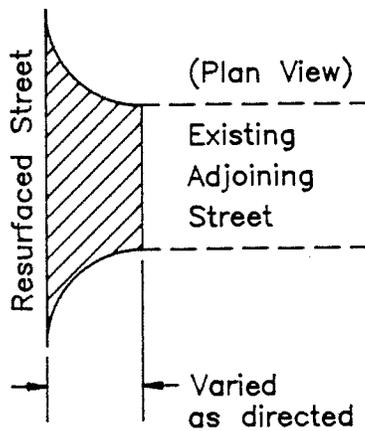
STANDARD
CONSTRUCTION DRAWING

DWG. BY: R.F.M.
CHKD BY: RM

FILE NUMBER
P-14



LAPPING LONGITUDINAL JOINTS



FEATHERING AT ADJOINING STREETS

APPROVED 5-14-93

Kent Huston
CITY ENGINEER

REVISED: 5-3-93

RESURFACING
MISCELLANEOUS
DETAILS

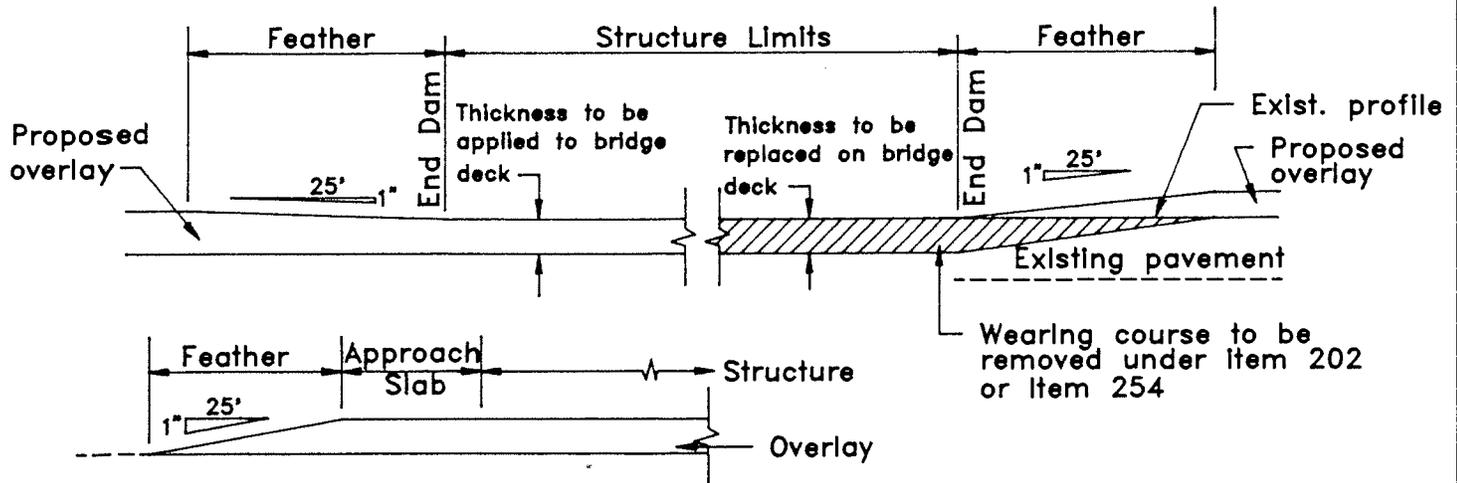
CITY OF LANCASTER, OHIO
DEPARTMENT OF ENGINEERING

STANDARD
CONSTRUCTION DRAWING

DWG. BY: C.S.W.
CHK'D BY: R.M.

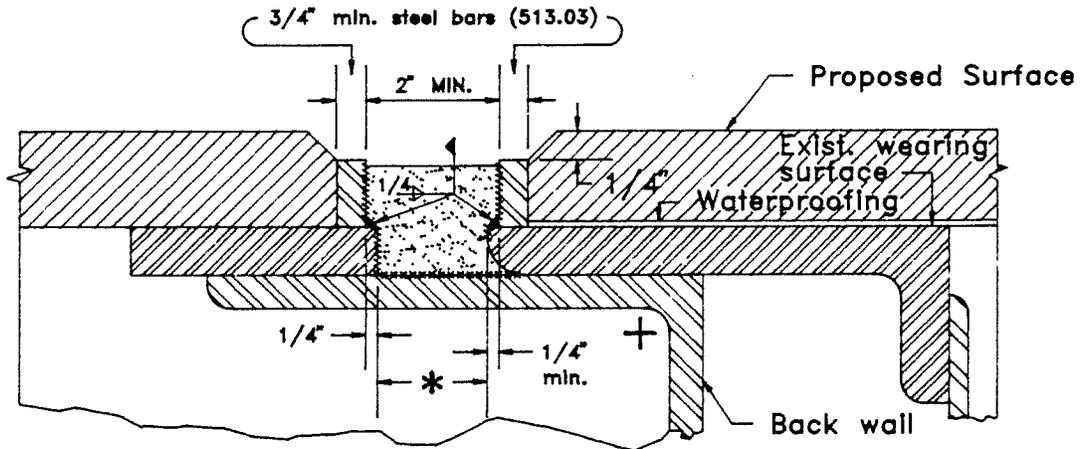
FILE NUMBER

P-15



Detail assume non-settled approach slabs. Smoothing of the profile for settlement is required per plan grade or as directed by the Engineer.

- + Increase as necessary to maintain 2" min. opening.
- * Vertical extension of joints found to be closed to 1/2" or less may be non-performed as directed by the Engineer.



Seal joint with a hot applied bridge deck waterproofing material meeting the requirements of 705.04. Sandblast vertical surfaces (±) and wipe clean. Seal joint before rust forms. Use bond breaker on the horizontal surface. Payment of the aforesaid work shall be included in the unit price for Item 516.

Maintenance of Traffic: Generally the base shall be welded while the lane is closed. If traffic is routed over the bars before resurfacing, temporary ramps shall be constructed using 402 or 404 feathering at a maximum slope of 6 ft/in. The ramps shall be removed before resurfacing. Payment for placing and removing the ramp shall be included in the lump sum bid for Item 614.

APPROVED 5-14-93

Kent Huston
CITY ENGINEER

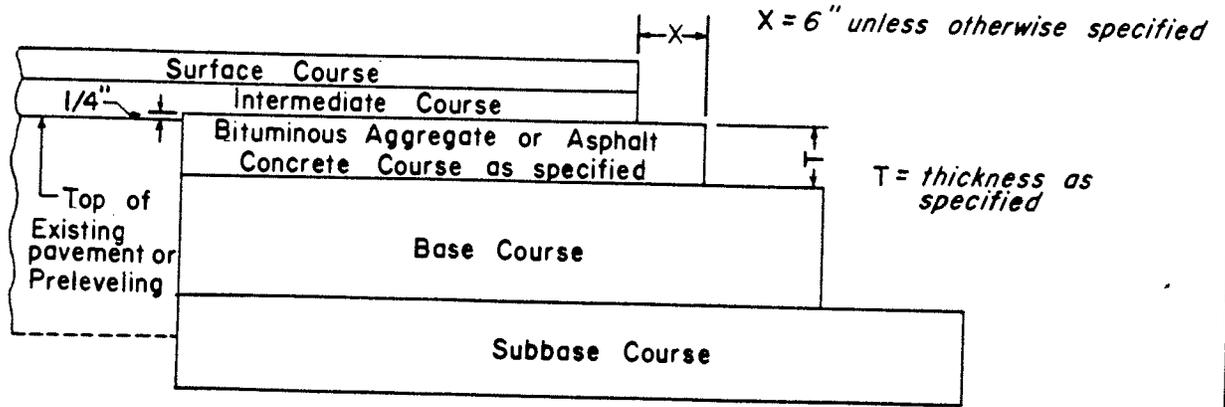
REVISED: 5-3-93

RESURFACING
AT STRUCTURE
DETAILS

CITY OF LANCASTER, OHIO
DEPARTMENT OF ENGINEERING

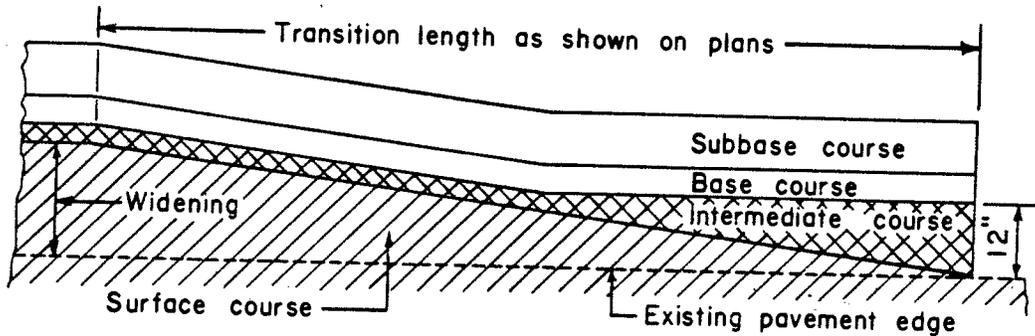
STANDARD
CONSTRUCTION DRAWING

DWG. BY: C.S.W. FILE NUMBER
CHK'D BY: RM P-16



The Bituminous Aggregate in the upper part of the base widening shall finish approximately $\frac{1}{4}$ " above the edge of the existing pavement where no preleveling is used. Where a preleveling (using intermediate course material) is specified it shall be placed prior to excavation of the widening trench and the upper course of the base widening shall finish approximately $\frac{1}{4}$ " above the preleveling.

COURSE DETAIL FOR WIDENING



MERGING EDGE OF PAVEMENT WIDENING WITH EDGE OF EXISTING PAVEMENT

APPROVED 4/26/90
DATE
Kent Huston
CITY ENGINEER

REVISED:

PAVEMENT WIDENING DETAILS

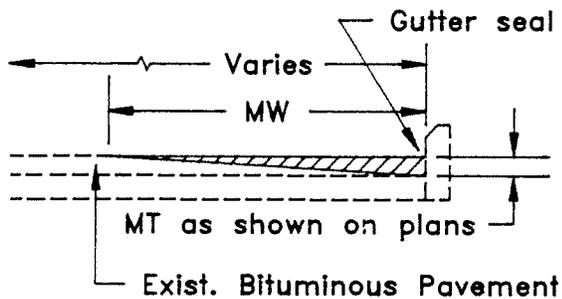
011231 P17.34D

CITY OF LANCASTER, OHIO
DEPARTMENT OF ENGINEERING
STANDARD CONSTRUCTION DRAWING
DWG. BY: *R.F.M.*
CHK'D BY: *RM*
FILE NUMBER
P-17

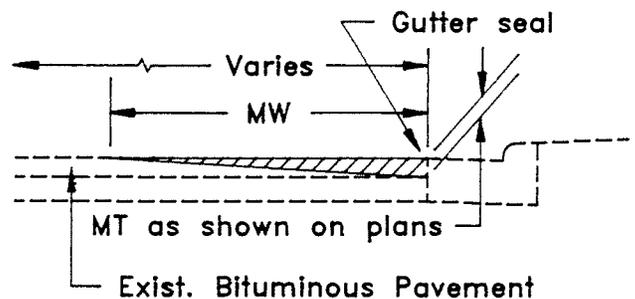
PAVEMENT PLANING, BITUMINOUS, PARTIAL WIDTH

THE PAVEMENT FOR THE STREETS AND LIMITING STATIONS SHOWN BELOW SHALL BE PLANED WITHOUT HEAT ON BOTH SIDES AS SHOWN IN THE DETAIL BELOW. THESE AREAS ARE WHERE THE CONCRETE GUTTER IS EXPOSED OR WHERE THERE IS LIMITED CURB EXPOSURE. THE PLANING SHALL BE TO THE DEPTH SHOWN AT THE CURB OR GUTTER AND FEATHER TO 0" IN A DISTANCE MW AS SHOWN IN THE PLANS. PAYMENT WILL BE FOR THE ACTUAL NUMBER OF SQUARE YARDS PLANED AS MEASURED BY THE ENGINEER, AFTER THE PLANING OPERATION IS PERFORMED, THE ENTIRE PAVEMENT WIDTH BETWEEN THE CONCRETE GUTTERS SHALL BE OVERLAID WITH THE SAME THICKNESS OF ASPHALT CONCRETE AS THE REMAINING UNPLANED SECTION OF THE STREET. QUANTITIES ARE CONTAINED IN THE GENERAL SUMMARY FOR THE ABOVE PURPOSE. THE PLANING SHALL BE FEATHERED AT 1 INCH IN 25 FEET AT BOTH ENDS OF THE PLANED AREA.

ITEM SP-1-PAVEMENT PLANING, BITUMINOUS, WITHOUT HEATING, PARTIAL WIDTH.



PAVEMENT PLANING AT STRAIGHT CURB



PAVEMENT PLANING AT CURB AND GUTTER

APPROVED 5-14-93

Kent Huston
CITY ENGINEER

REVISED: 5-3-93

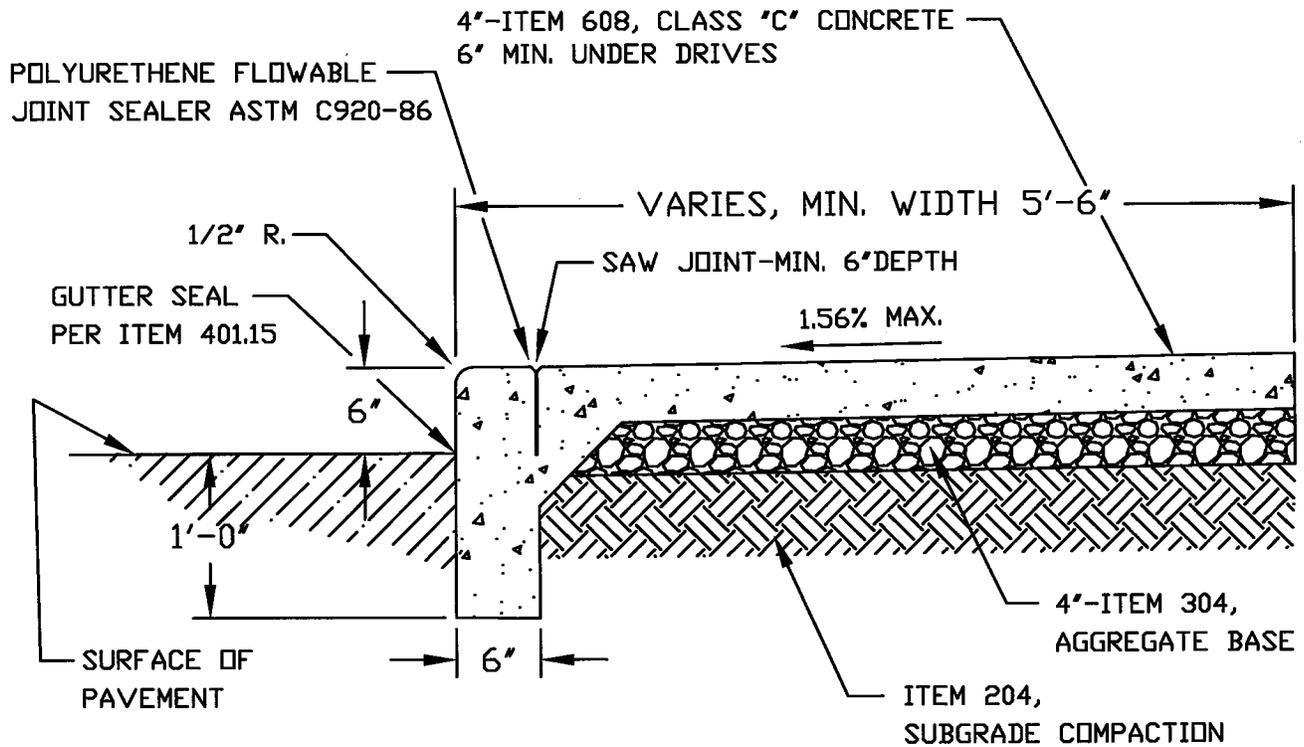
RESURFACING
PARTIAL WIDTH
PAVEMENT PLANING

CITY OF LANCASTER, OHIO
DEPARTMENT OF ENGINEERING

STANDARD
CONSTRUCTION DRAWING

DWG. BY: C.S.W.
CHK'D BY: RM

FILE NUMBER
P-18



NOTE:

1. WORK SHALL BE PER THE PERTINENT SECTIONS OF THE LATEST ADDITION TO THE OHIO DEPARTMENT OF TRANSPORTATION'S CONSTRUCTION AND MATERIAL SPECIFICATIONS.
2. ALL WORK SHALL BE UNDER THE STREET SUPERINTENDENT'S SUPERVISION. FAILURE TO REQUEST INSPECTIONS SHALL BE CAUSE FOR REMOVAL OF THE WORK AT CONTRACTOR'S EXPENSE.
3. THIS DETAIL SHALL ONLY BE USED WITH WRITTEN APPROVAL OF THE LANCASTER TRANSPORTATION SUPERINTENDENT, WHEN SPECIFICALLY ISSUED IN AN APPROVED SET OF CONSTRUCTION DRAWINGS OR WHEN ISSUED WITH A CITY RIGHT-OF-WAY PERMIT.
4. INSPECTIONS OF THIS WORK ARE REQUIRED AFTER THE FORMS ARE SET BUT BEFORE THE CONCRETE IS POURED, AND AT THE COMPLETION OF WORK. CALL 740-687-6668 FOR INSPECTIONS.

APPROVED <u>11-9-13</u>  CITY ENGINEER	INTEGRAL CURB & SIDEWALK	CITY OF LANCASTER, OHIO DEPARTMENT OF ENGINEERING STANDARD CONSTRUCTION DRAWING DWG. BY: <u>DDK</u> CHK'D BY: <u>RM</u>
REVISED: 28 OCT 13		FILE NUMBER P-19

Item numbers refer to the latest edition of the Ohio Department of Transportation, Construction and Material Specifications.

Curb or Combined Curb and Gutter shall be taken out and replaced with concrete, separated from the ramp by 1/2" premolded expansion joint. When less than 5' of a curb section remains after the curb cut is located, it shall also be removed and replaced. Curb shall be constructed in minimum 5' sections and maximum 10' sections.

Fills, if required, shall be Item 310, Subbase or Item 411, Stabilized Crushed Aggregate, compacted in layers not exceeding 4".

Notify the City Engineer's Office when forms will be ready for inspection, at least 24 hours before concrete is to be placed (Telephone 687-6614). In no case shall concrete be placed without approval of form work by the inspector.

Driveways and sidewalks shall be constructed of Plain Portland Cement Concrete, Item 452, 5% to 8% air entrained, containing six and one-half (6 1/2) bags of Cement (Cl. C, Sec.499) per C.Y., and 3" max. slump.

Curb and combined curb and gutter shall conform to Standard Construction Drawings P-6 and P-3 and Item 609, Class C concrete with max. 3" slump, 6-1/2 bag mix, 5-8% air entrainment.

Expansion Joints shall be placed to form utility strips where required at the back of curb between sidewalk and/or drive aprons, and wherever new concrete touches existing concrete or other surface.

Forms shall consist of wood 2" nominal thickness or metal of equal strength.

A Standard Curing Compound shall be properly applied immediately after finish.

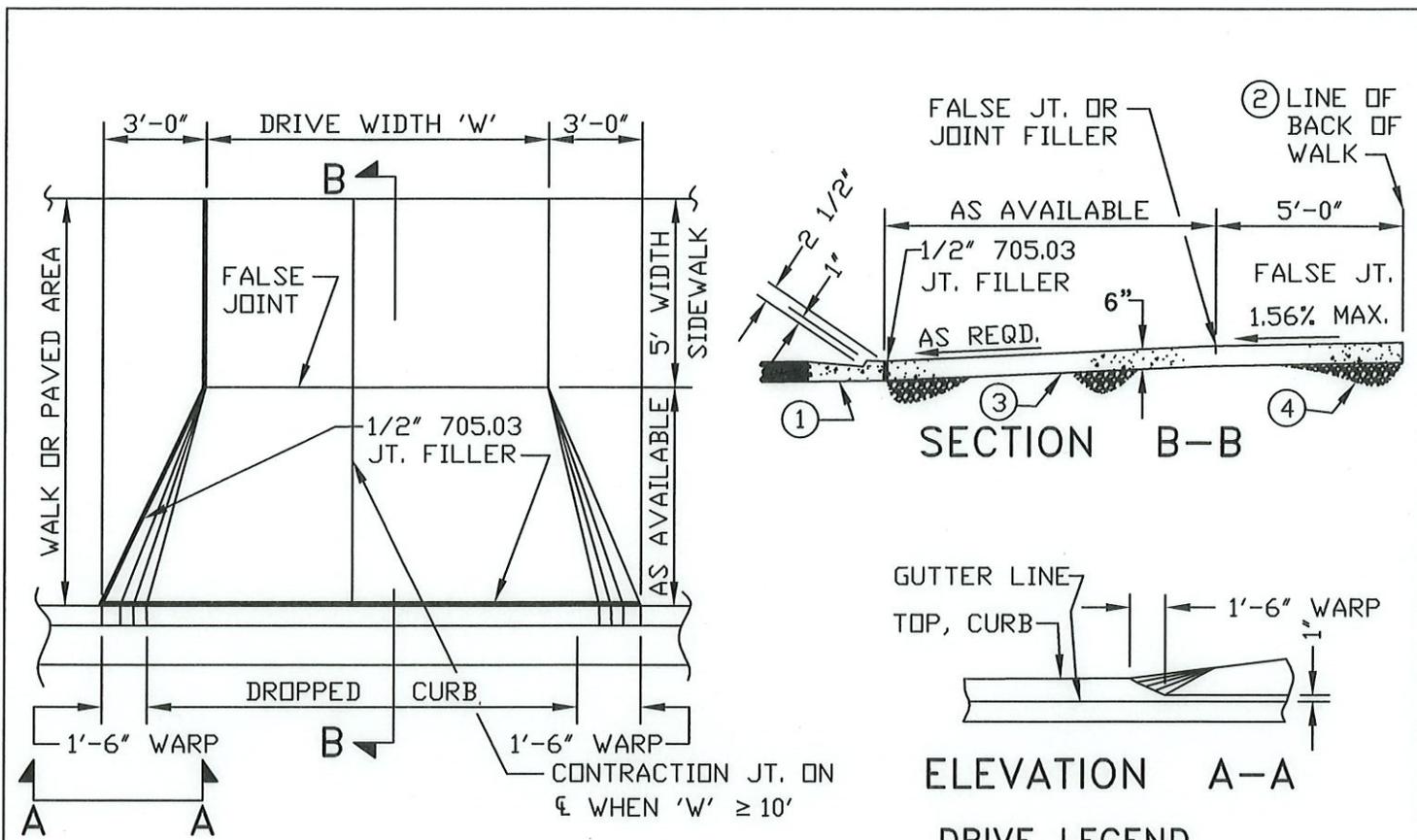
Where Sidewalk is next to curb, sidewalk may be sloped longitudinal, not to exceed 3/8" per ft., to ease the slope on the driveway ramp.

No concrete shall be placed until the temperature is 35 degrees Minimum. Concrete shall be protected in accordance with section 511.12 of Item 511.

Sandstone or limestone curbs are the property of the City. Where stone curbs are to be replaced, the existing stone curbs shall be carefully removed without cutting or marring them in any way. Upon removal of the curbs they shall be placed in a safe location and the City Street Department (687-6668) shall be notified that the curbs are ready to be picked up.

A curb cut or access permit is needed from the Department of Engineering before beginning any removal of curb or curb and gutter in a public right-of-way.

APPROVED <u>8-9-93</u>	DRIVE APPROACH NOTES	CITY OF LANCASTER, OHIO DEPARTMENT OF ENGINEERING
 CITY ENGINEER		STANDARD CONSTRUCTION DRAWING
REVISED:		DWG. BY: <u>C.S.W.</u> FILE NUMBER CHK'D BY: <u>RM</u> P-20



- DRIVE LEGEND**
- ① 609 PCC CURBING
 - ② 608 PCC SIDEWALK
 - ③ 452 PCC DRIVE
 - ④ 310 GRANULAR BED COURSE

NOTE:

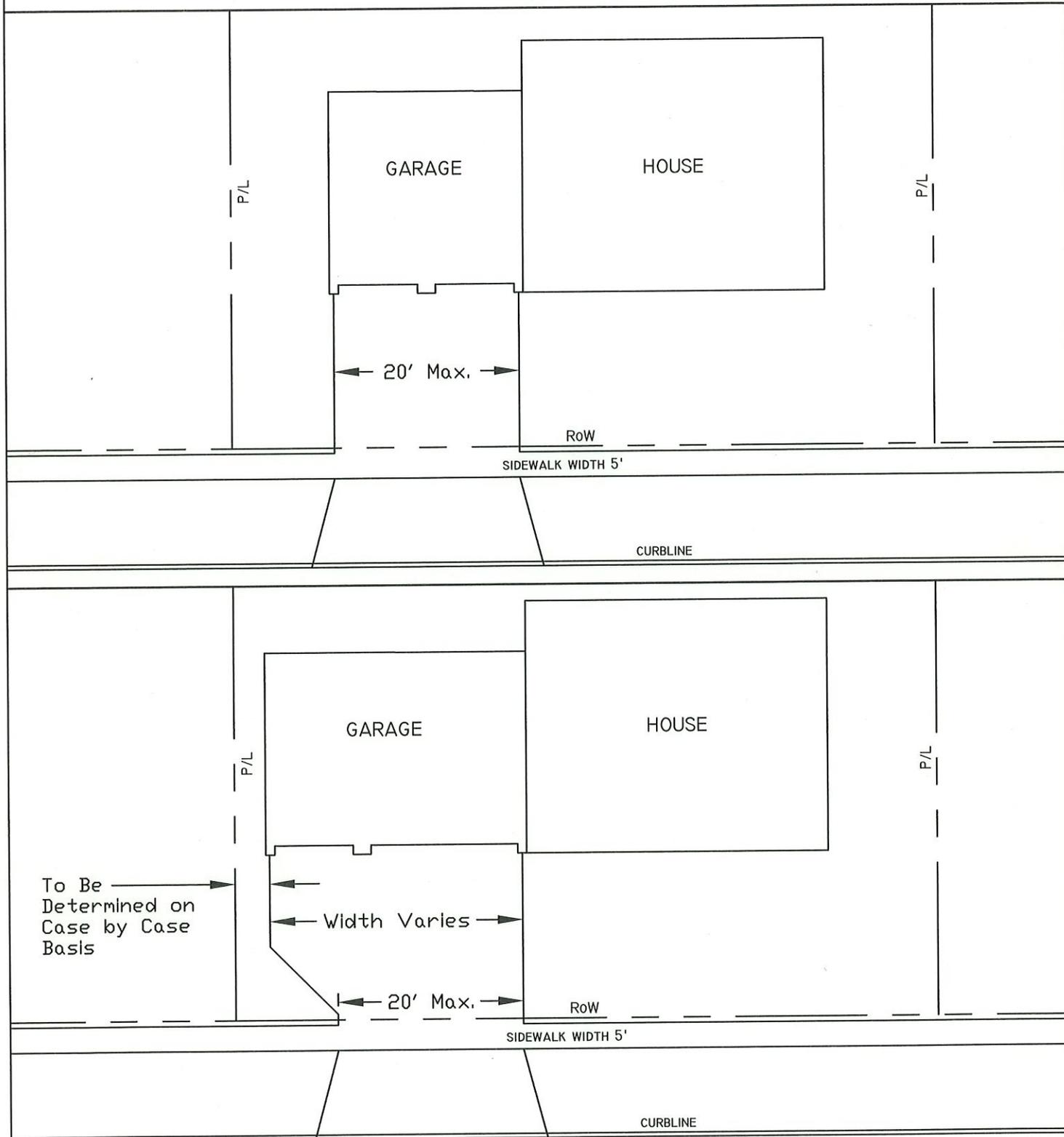
1. WHERE WIDTH 'W' SHALL BE 10' MINIMUM WITH A MAXIMUM WIDTH NOT TO EXCEED 20', UNLESS APPROVED ALTERNATE BY CITY ENGINEER.
2. SEE STD. CONST. DWG. P-20 FOR NOTES ON DRIVE APPROACH.

APPROVED 7-18-19
Mitch Walrus
 CITY ENGINEER
 REVISED: 18 JUL 19

RESIDENTIAL
 DRIVE APPROACH
 FOR CURBED STREETS

CITY OF LANCASTER, OHIO
 DEPARTMENT OF ENGINEERING
 STANDARD
 CONSTRUCTION DRAWING
 DWG. BY:DDK.....
 CHK'D BY:MN.....
 FILE NUMBER
P-21 1 of 2

EXAMPLE SITE LAYOUT FOR RESIDENTIAL DRIVEWAY



APPROVED 7-18-19
Mitch Valerif
 CITY ENGINEER

REVISED: 18 JUL 19

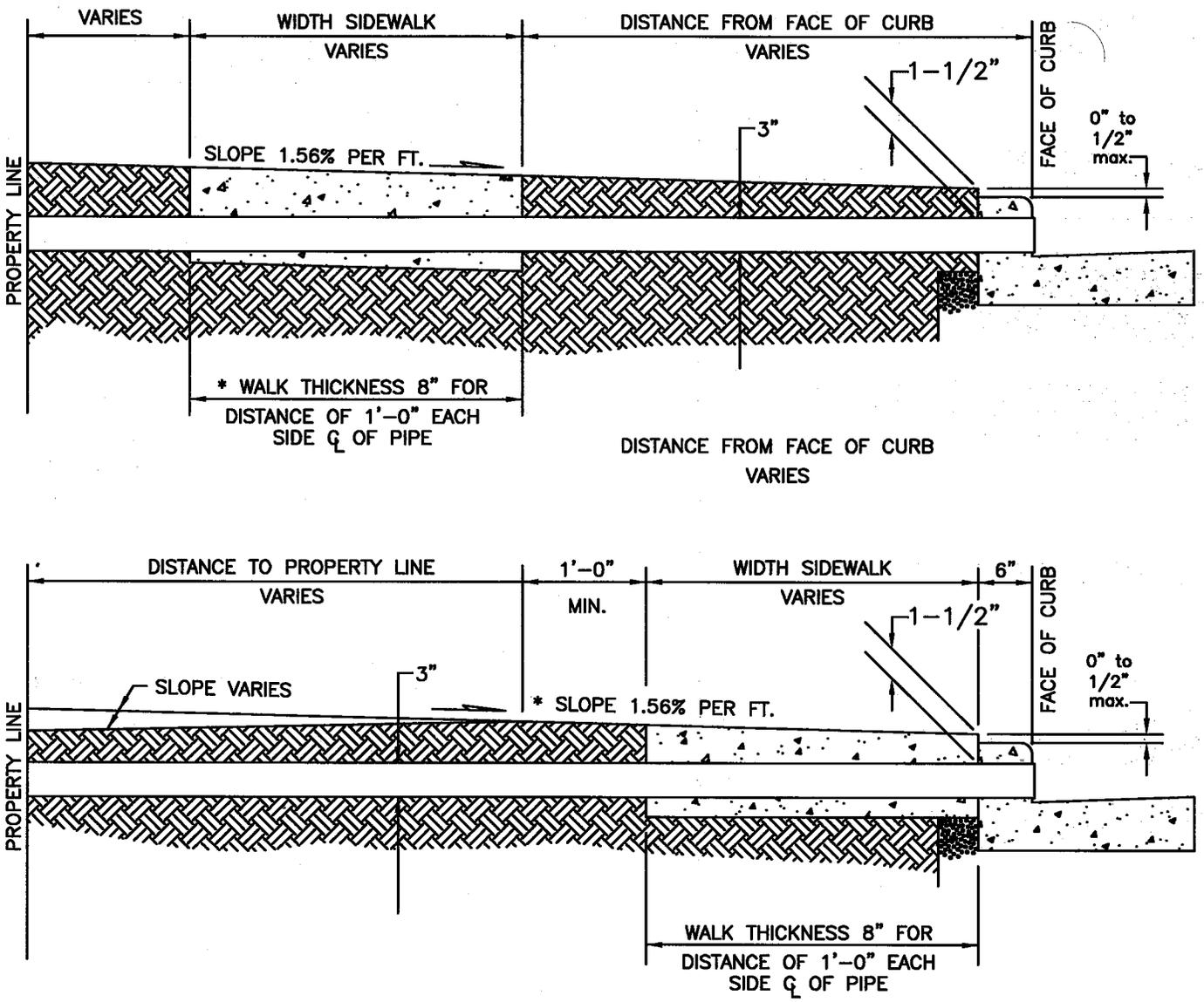
RESIDENTIAL
 DRIVE APPROACH
 FOR CURBED STREETS

CITY OF LANCASTER, OHIO
 DEPARTMENT OF ENGINEERING

STANDARD
 CONSTRUCTION DRAWING

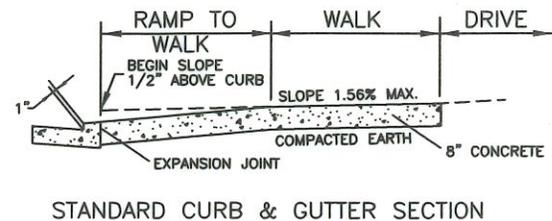
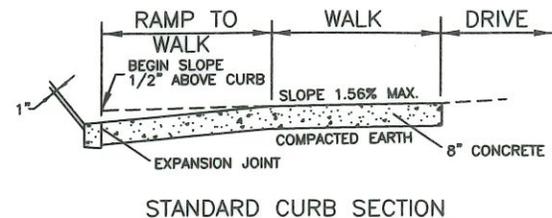
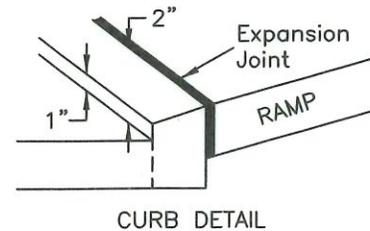
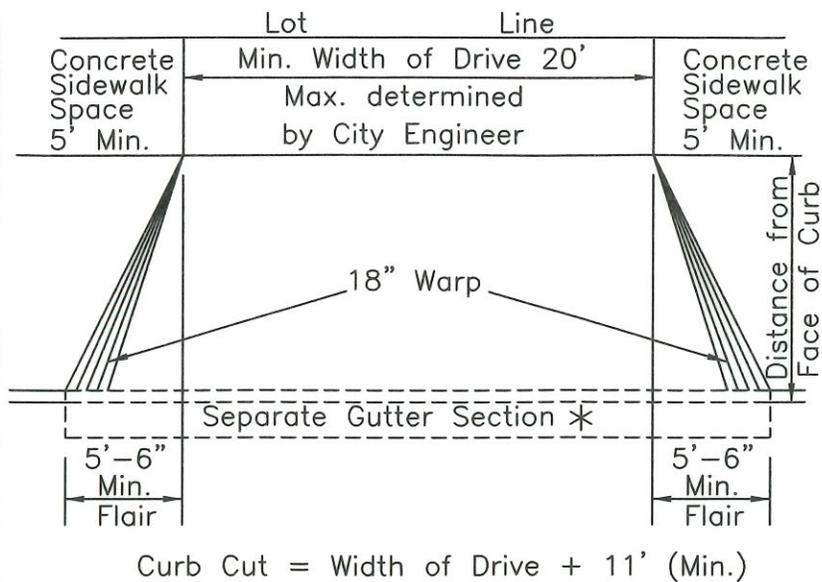
DWG. BY:DDK.....
 CHK'D BY:MN.....

FILE NUMBER
P-21 2 of 2



* APPLICABLE ONLY WHERE THICKNESS OF CONCRETE OVER PIPE IS LESS THAN 4".
 EXISTING CURB MUST BE CORE DRILLED FOR ROOF DRAIN OPENING.

APPROVED <u>3-11-13</u> <i>Brad Fagrell</i> CITY ENGINEER	PIPE ROOF DRAIN, ITEM 618	CITY OF LANCASTER, OHIO DEPARTMENT OF ENGINEERING	
REVISED: 8 MAR 13		STANDARD CONSTRUCTION DRAWING	FILE NUMBER
		DWG. BY: DDK CHK'D BY: <i>RJ</i>	P-22



Curb or Combined Curb and Gutter shall be taken out and replaced with concrete, separated from the ramp by 1/2" premolded expansion joint per ASTM D-994. When less than 5' of a curb section remains after the curb cut is located, it shall be removed and replaced. Curb removal may be by sawing only if pre-approved by the Engineer.

Fills if required shall be of earth compacted in 2" layers, or of Item 304, Aggregate Base, Compacted in layers not Exceeding 4".

Driveways and Sidewalks shall be Constructed of plain portland cement concrete, Item 452, 5% to 8% Air Entrained, (CL.C, Sect. 499) Per C.Y. and 3" Max. slump (as shown in details.)

Expansion joints shall be placed to form utility strips where required, and wherever new concrete touches existing construction. Expansion material shall be 1/2" asphalt, non-extruding and meet ASTM D-994. It shall extend the full-depth of the concrete.

Forms shall consist of wood 2" nominal thickness or metal of equal strength.

A standard curing compound shall be properly applied immediately after finish.

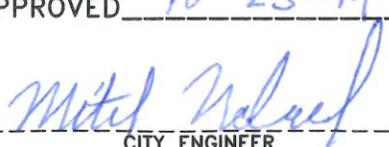
Item numbers Construction and Material Specifications of Lancaster, Ohio, current Edition. All work shall be done in accordance with these specifications.

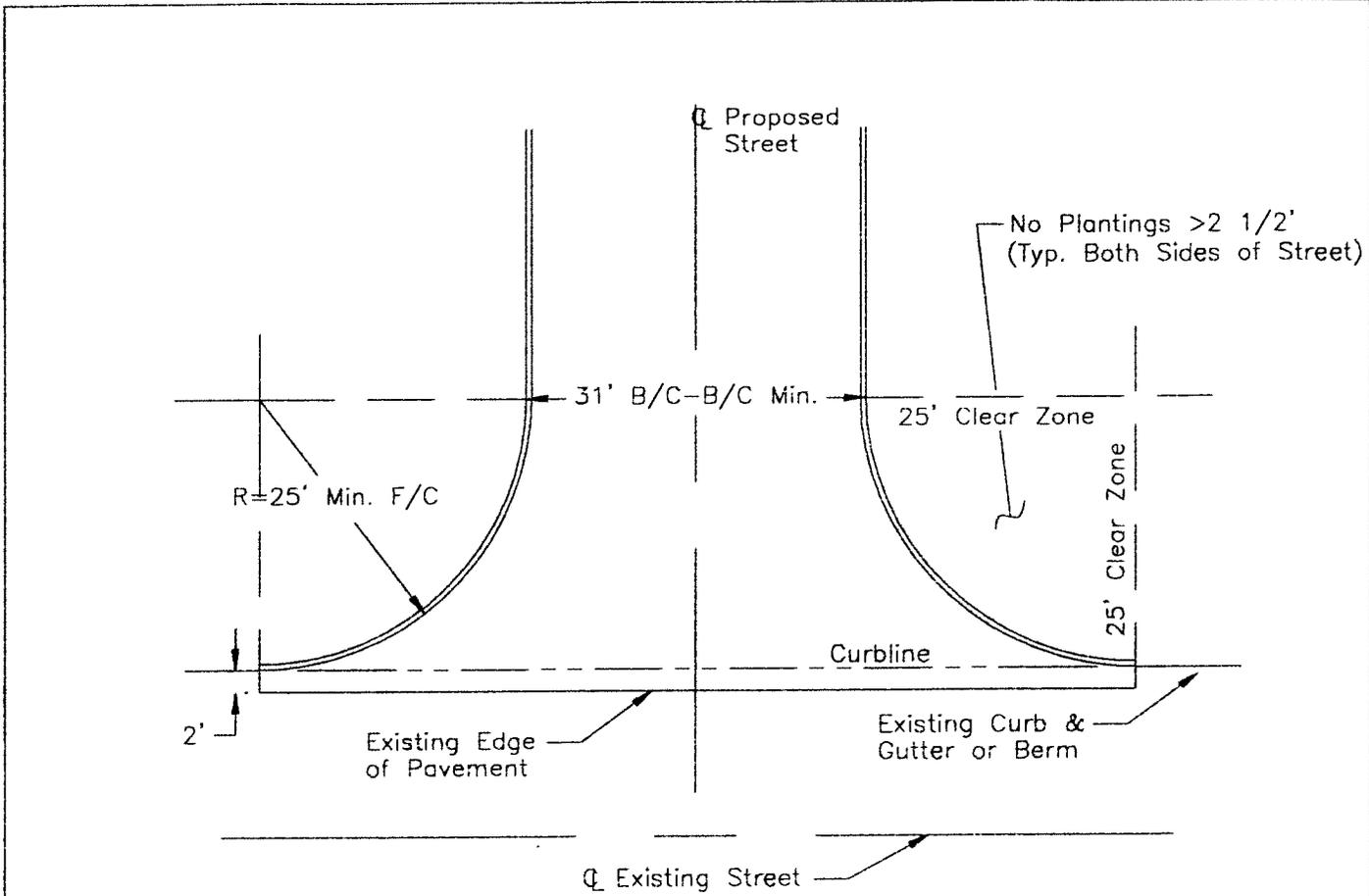
Notify Department of Engineering when forms will be ready for inspection, at least 24 hours before concrete is to be placed. Telephone 687-6614. In no case shall concrete be placed without approval of form work by the inspector.

* Curb shall be constructed in minimum 5' sections and maximum 10' sections.

No concrete shall be placed until temperature is 35° F. Min. Concrete shall be protected in accordance with section 451.10 of Item 451.

Where the adjoining sidewalk is less than 5', the walk portion of the driveway shall not be less than 5'.

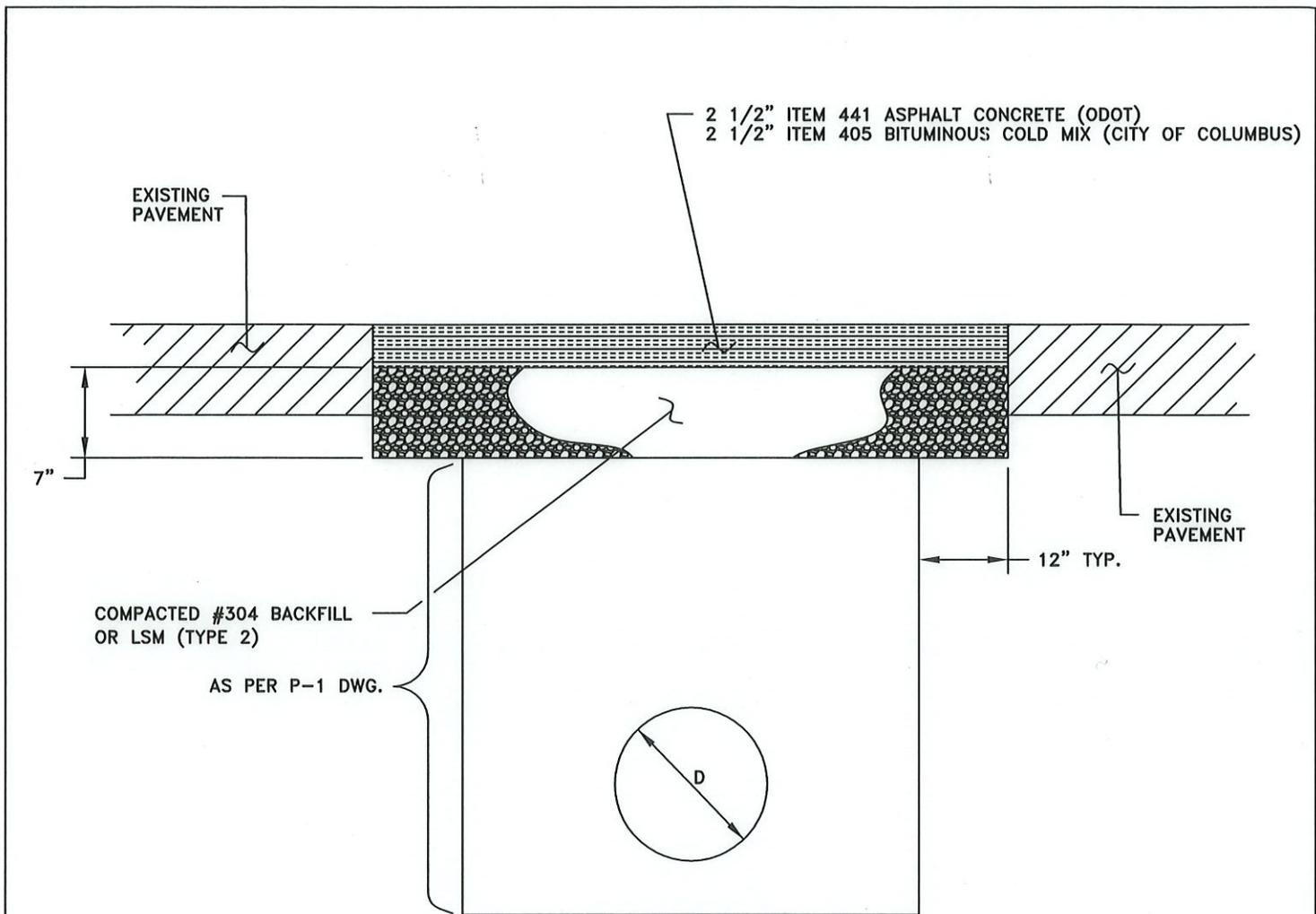
APPROVED <u>10-23-19</u>  CITY ENGINEER	STANDARD DRIVEWAY (COMERCIAL) ON PUBLIC R/W & SPECIFICATIONS (NON ARTERIAL STREET)	CITY OF LANCASTER, OHIO DEPARTMENT OF ENGINEERING	
REVISED: 23 OCT 19		STANDARD CONSTRUCTION DRAWING DWG. BY: DDK CHK'D BY: MN	FILE NUMBER P-23



NOTES:

1. Proposed curb and gutter to match existing curb and gutter at curb return.
2. Where existing street has no curb & gutter the proposed curb shall taper from 6" to 0" in last 10 feet.
3. Contractor shall sawcut existing edge of pavement to provide smooth edge and apply ODOT Item 413 Crack Seal.
4. Catch Basins shall be provided as needed for adequate drainage.
5. Minimum gutter slope is 0.5%.
6. The maximum slope from the existing gutterline is 3% in the first 90 feet.

<p>APPROVED <u>11-6-00</u></p> <p><i>Kent Huston</i> CITY ENGINEER</p>	<p>TYPICAL STREET CONNECTION</p>	<p>CITY OF LANCASTER, OHIO DEPARTMENT OF ENGINEERING</p>	
<p>REVISED:</p>		<p>STANDARD CONSTRUCTION DRAWING</p>	<p>FILE NUMBER</p>
		<p>DWG. BY: DDK CHK'D BY: [Signature]</p>	<p>P-24</p>

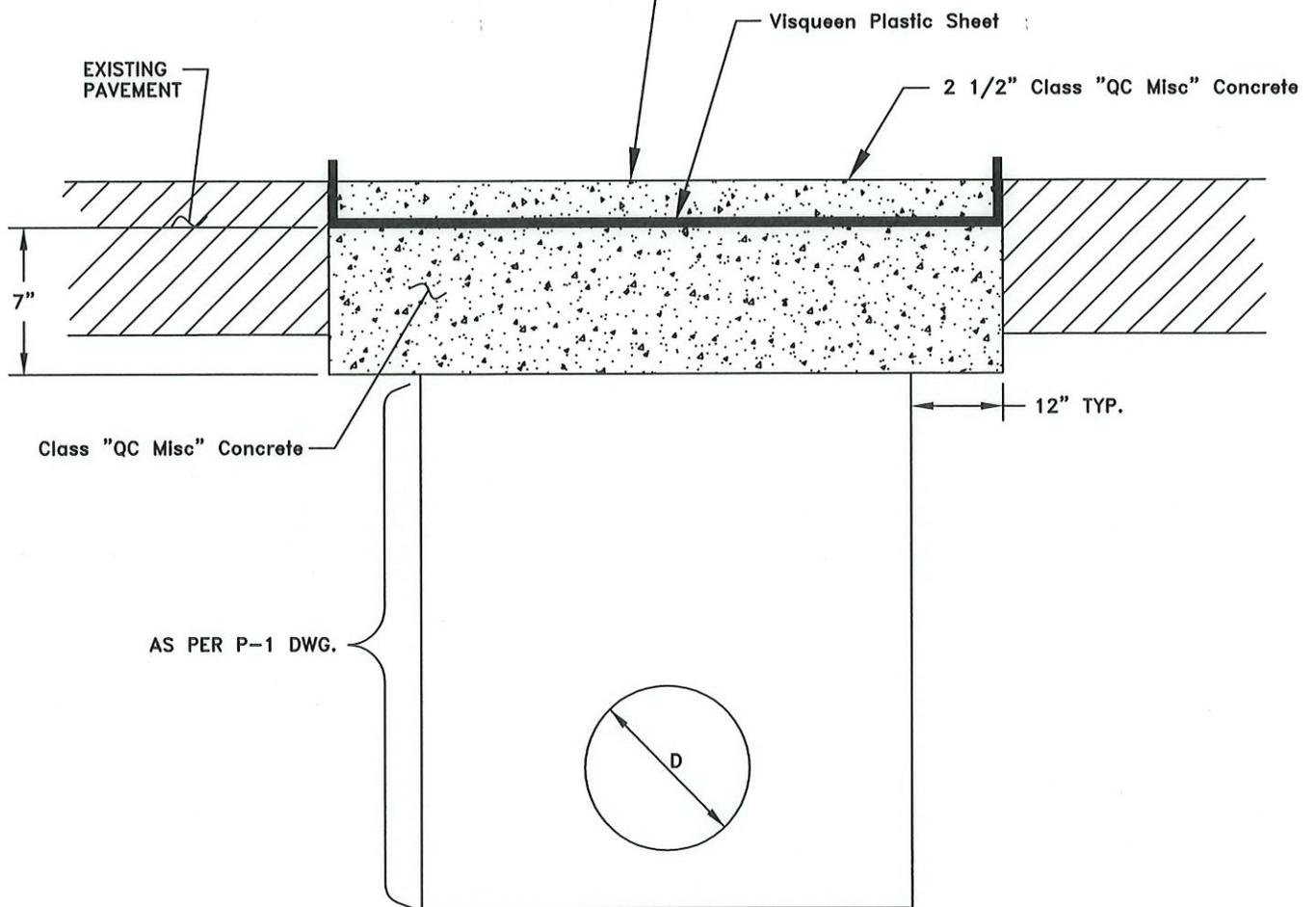


NOTES:

1. TEMPORARY PAVEMENT SHALL BE PROVIDED AS SOON AS THE EXCAVATION HAS BEEN BACKFILLED.
2. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE PERTINENT SECTION OF CMSL.

APPROVED <u>12-18-19</u>  CITY ENGINEER	TEMPORARY PAVEMENT REPLACEMENT	CITY OF LANCASTER, OHIO DEPARTMENT OF ENGINEERING	
REVISED: 18 DEC 19		STANDARD CONSTRUCTION DRAWING DWG. BY: DDK CHK'D BY: MN FILE NUMBER P-25 Sht. 1 of 2	

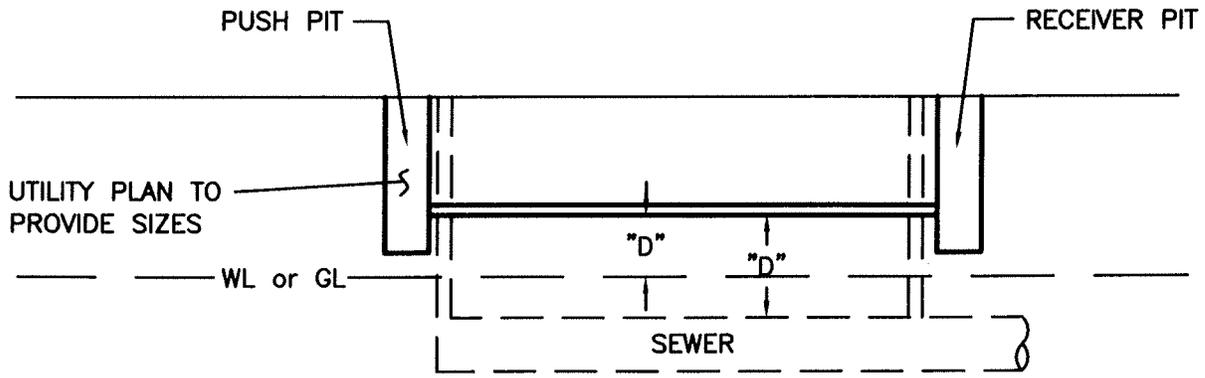
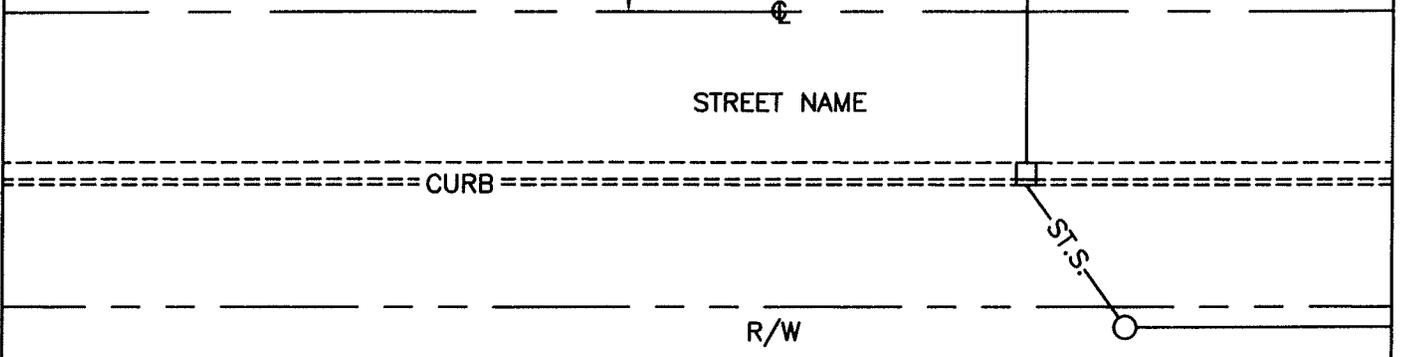
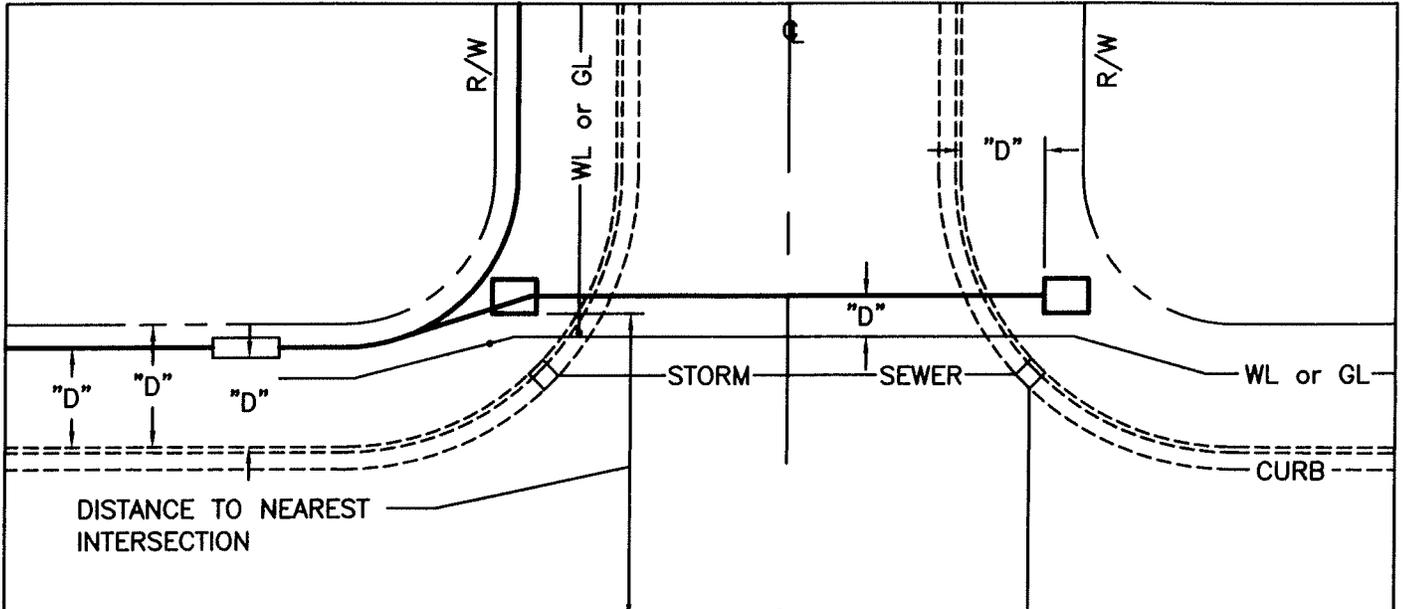
Remove 2 1/2" Concrete and Replace with Asphalt Surface Course, By May 15th of the following Spring.



NOTES:

1. DURING THE MONTHS THAT THE ASPHALT PLANTS ARE SHUT DOWN, THE ABOVE PAVEMENT REPLACEMENT IS TO BE USED.
2. THE VISQUEEN IS TO PROJECT A MINIMUM OF 1-2 INCHES ABOVE THE SURFACE ALL THE WAY AROUND PATCH.
3. WHEN THE PLANTS HAVE RE-OPENED, THE TOP 2 1/2 INCHES OF CONCRETE AND THE VISQUEEN ARE TO BE REMOVED AND SURFACE COURSE ASPHALT IS TO BE PLACED BACK IN THE VOID. SEAL JOINT WITH A BEAD OF HOT APPLIED CRACK & JOINT SEALER.

APPROVED <u>12-18-19</u>  CITY ENGINEER	TEMPORARY WINTER PAVEMENT REPLACEMENT	CITY OF LANCASTER, OHIO DEPARTMENT OF ENGINEERING	
REVISED: 18 DEC 19		STANDARD CONSTRUCTION DRAWING DWG. BY:DDK..... CHK'D BY:MN.....	FILE NUMBER P-25 Sht. 2 of 2



"D" DENOTES WHERE DIMENSIONS ARE NEEDED

PAVEMENT REPLACEMENT SHALL
BE AS PER STANDARD DRAWING P-1

APPROVED 3/4/09
Brad Fagell
CITY ENGINEER

TYPICAL UTILITY
EXCAVATION PLAN DETAIL
REQUIREMENTS

CITY OF LANCASTER, OHIO
DEPARTMENT OF ENGINEERING

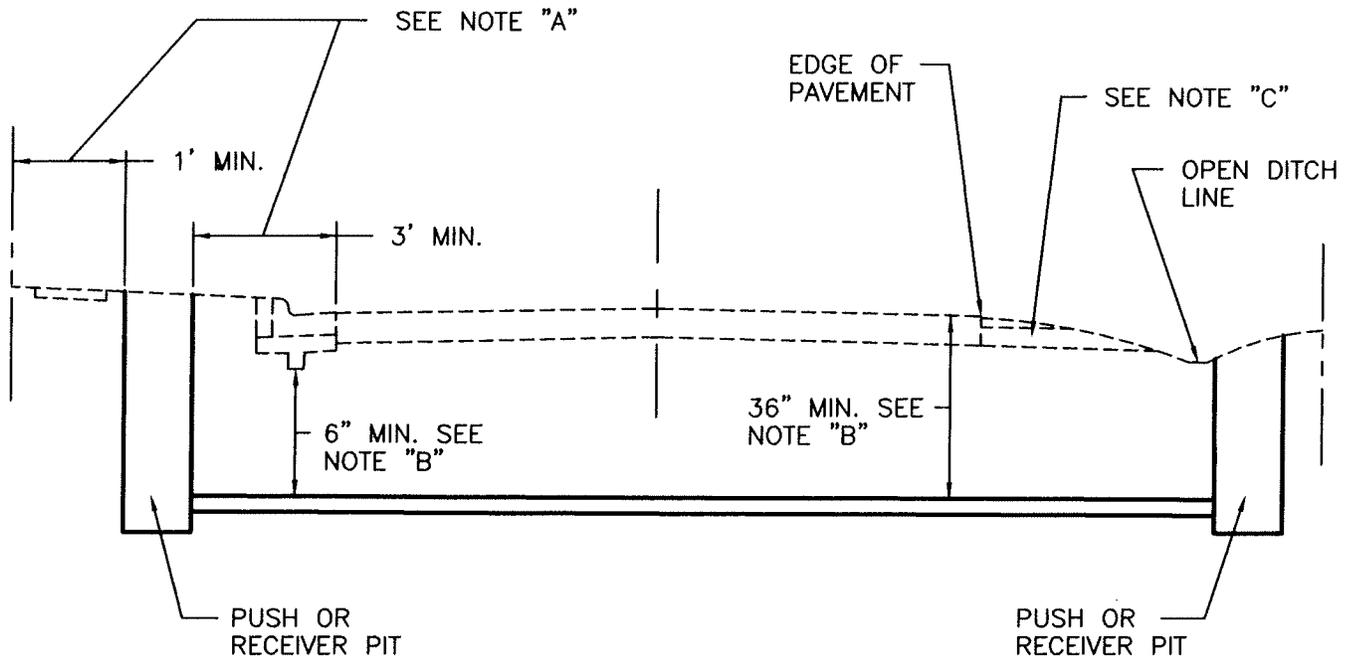
STANDARD
CONSTRUCTION DRAWING

REVISED: 03MAR09

DWG. BY: DDK
CHK'D BY: EM FILE NUMBER
P-26 SHEET
1 of 2

TYPICAL LOCATION
FOR CURBED STREETS

TYPICAL LOCATION
FOR UNCURBED STREETS



NOTES:

"A" MINIMUM OFF SETS SHALL BE 1 FOOT FROM RIGHT-OF-WAY LINES OR 3 FEET FROM EDGE OF PAVEMENT OR EDGE OF SHOULDER.

"B" MINIMUM DEPTH FROM TOP OF PUSH TO TOP OF CURB FOR STANDARD COMBINED CURB AND GUTTER IS 30", STRAIGHT CURB 36", AND FLEXIBLE PAVEMENT 36" BELOW TOP OF PAVEMENT.

"C" IF AGGREGATE DRAINS ARE DISTURBED, THEY MUST BE REPLACED.

APPROVED 3/4/09

Brad Faguell
CITY ENGINEER

REVISED: 03MAR09

TYPICAL UTILITY
EXCAVATION PLAN DETAIL
REQUIREMENTS

CITY OF LANCASTER, OHIO
DEPARTMENT OF ENGINEERING

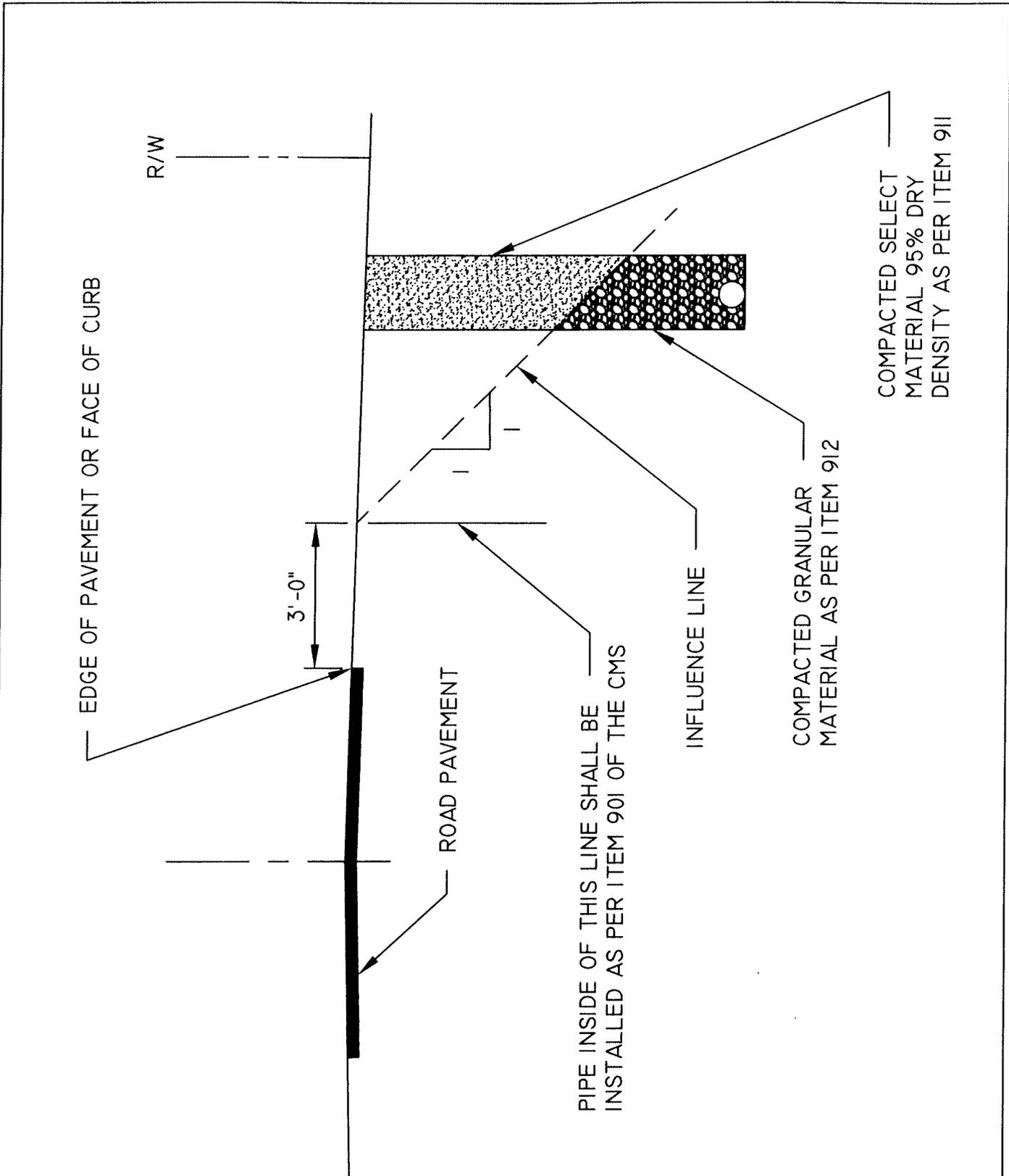
STANDARD
CONSTRUCTION DRAWING

DWG. BY: DDK

CHK'D BY: RM

FILE NUMBER

P-26 SHEET
2 of 2



APPROVED 3/4/09
Brad Fagrell
 CITY ENGINEER

REVISED:

BACKFILLING WITHIN
 HIGHWAY
 RIGHT-OF-WAY

CITY OF LANCASTER, OHIO
 DEPARTMENT OF ENGINEERING

STANDARD
 CONSTRUCTION DRAWING

DWG. BY: DDK
 CHK'D BY: *EM*

FILE NUMBER
P-27

APPROVED 1-12-16
Brad Fagrell
 CITY ENGINEER

REVISED:

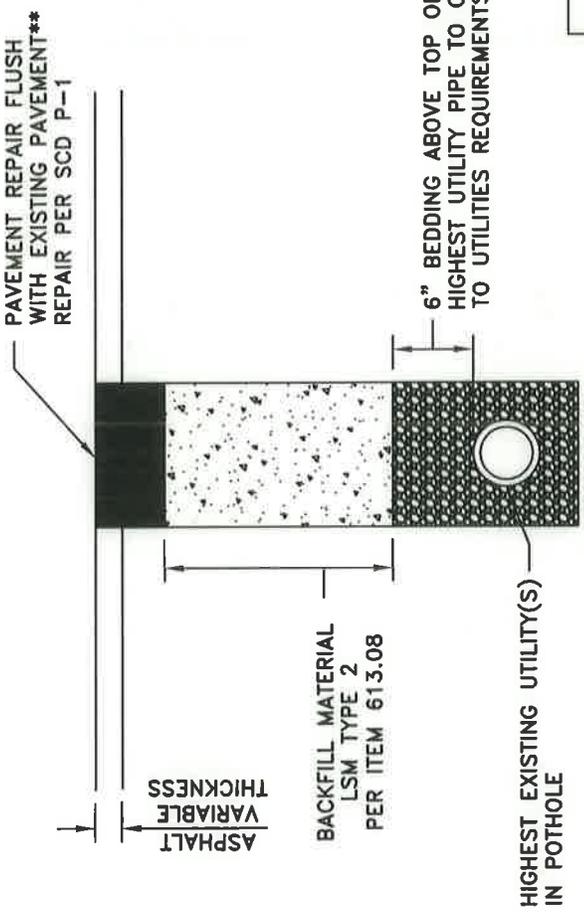
UTILITY
 POTHOLE
 REPAIR

CITY OF LANCASTER, OHIO
 DEPARTMENT OF ENGINEERING

STANDARD
 CONSTRUCTION DRAWING

DWG. BY: DDK
 CHK'D BY: MN

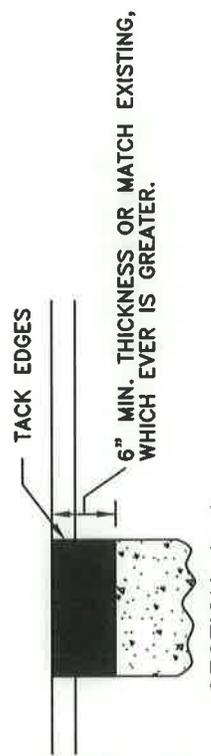
FILE NUMBER
P-28 1 of 4



SECTION VIEW



PLAN VIEW



SECTION A-A

NOTES:
 1. DIMENSIONS ARE NOMINAL.
 2. EDGES SHALL BE CUT TO A NEAT VERTICAL FACE.
 3. PLACE LSM BACKFILL IN ACCORDANCE WITH SECTION 613.08.
 4. PLACE ASPHALT CONCRETE IN MAXIMUM 2" LIFTS, PER SCD P-1.

TYPE A-PAVEMENT REPAIR

* WATER: FILL SAND PER ITEM 802.18
 SEWER: #57 AGGREGATE PER 901.11
 GAS: FILL SAND PER 703.02A

CONTACT NON-CITY UTILITIES FOR THEIR REQUIREMENTS

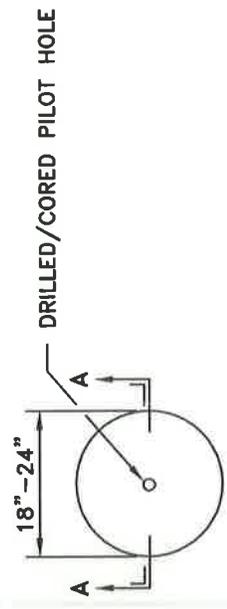
** PAVEMENT PATCH SHALL BE HEAT-WELDED IF PAVEMENT IS ≤ 5 YEARS OLD.

6" BEDDING ABOVE TOP OF THE HIGHEST UTILITY PIPE TO CONFORM TO UTILITIES REQUIREMENTS*

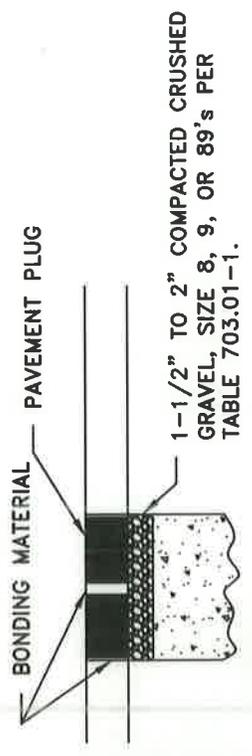
TYPE B-PAVEMENT REPAIR

NOTES:

1. CUT, REMOVE AND REPLACE PAVEMENT PLUG IN ACCORDANCE WITH SECTION 259.07
2. PLACE BACKFILL IN ACCORDANCE WITH SECTION 259.06
3. BONDING MATERIAL SHALL BE AS SPECIFIED IN SECTION 259.03E



PLAN VIEW



SECTION A-A

ITEM 259 KEYHOLE POTHOLE EXCAVATION AND PAVEMENT RESTORATION

259.01 GENERAL

THIS SPECIFICATION COVERS THE REQUIREMENTS FOR KEYHOLE CORING, VACUUM EXCAVATION, BEDDING, BACKFILLING, AND REINSTATEMENT OF THE KEYHOLE CORE IN ASPHALT OR CONCRETE PAVEMENTS TO ALLOW FOR UNDERGROUND UTILITY REPAIRS AND UNDERGROUND EXPLORATORY POTHOLING.

259.02 DEFINITIONS

- A. KEYHOLE CORING: THE OPERATION OF CORING A CIRCULAR HOLE THROUGH THE ROADWAY PAVEMENT USING DIAMOND CORE DRILLING EQUIPMENT.
- B. ITEM ###: A REFERENCE TO ITEM WITH A NUMBER FOLLOWING IT REFERS TO A CONSTRUCTION AND MATERIAL SPECIFICATION OF LANCASTER.

259.03 MATERIALS GENERAL

- A. THE MATERIAL AND PLACEMENT REQUIREMENTS IN THE FINAL BEDDING AREA SHALL BE PER THE UTILITY OWNERS' REQUIREMENTS.
- B. THE MATERIAL AND PLACEMENT REQUIREMENTS IN THE FINAL BACKFILL AREA SHALL BE IN ACCORDANCE WITH ITEM 613 LOW STRENGTH MORTAR BACKFILL, TYPE 2.
- C. IF PERMITTED BY THE ENGINEER IN WRITING, A GRANULAR BACKFILL MAY BE USED. IN THIS INSTANCE, THE MATERIAL AND PLACEMENT REQUIREMENTS IN THE FINAL BACKFILL AREA SHALL BE IN ACCORDANCE WITH ITEM 603.11, "TRENCH EXCAVATION AND BACKFILL."
- D. PAVEMENT KEYHOLE CORES REMOVED SHALL EITHER BE REMOVED FROM THE WORK SITE OR STORED IN A SAFE AND SECURE ON-SITE LOCATION. THE CORES SHALL BE MADE READILY AVAILABLE FOR RESTORING THE PAVEMENT AFTER BACKFILLING IS COMPLETE AND APPROVED.
- E. BONDING AGENT: THE BONDING AGENT SHALL BE A SINGLE COMPONENT CEMENTITIOUS, RAPID HARDENING, HIGH STRENGTH, WATERPROOF BONDING AGENT CONFORMING TO THE PHYSICAL PROPERTIES SHOWN IN TABLE 1.
 - 1. THE BONDING MATERIAL SHALL BE IMPERVIOUS TO WATER PENETRATION AT THE JOINT AFTER APPLICATION.
 - 2. THE BONDING MATERIAL SHALL SECURELY BOND THE UNDAMAGED KEYHOLE CORE TO THE PAVEMENT AND SHALL COMPLETELY FILL THE ANNULAR SPACE AT THE JOINT.
 - 3. THE BONDING MATERIAL SHALL, WITHIN 30 MINUTES AT AN AMBIENT TEMPERATURE OF 70 DEGREES FAHRENHEIT, ALLOW THE CORE TO SUPPORT AN EQUIVALENT TRAFFIC LOAD CONDITION OF AT LEAST THREE (3) TIMES THE AASHTO H-25 STANDARD.
 - 4. THE BONDING MATERIAL SHALL BE UTILIBOND, MANUFACTURED BY UTILICOR TECHNOLOGIES, INC., OR AN ENGINEER APPROVED EQUAL.

APPROVED 1-12-16
Brad Fagell
CITY ENGINEER
REVISED:

UTILITY
POTHOLE
REPAIR

CITY OF LANCASTER, OHIO
DEPARTMENT OF ENGINEERING
STANDARD
CONSTRUCTION DRAWING
DWG. BY: DDK
CHK'D BY: MN
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**TABLE I
BONDING MATERIAL REQUIREMENTS**

PROPERTY	ASTM TEST METHOD	REQUIREMENTS
BOND STRENGTH (SLANT SHEAR), PSI (70 DEGREES F, 30 MINUTE CURE)	C882	200 MIN.
COMPRESSIVE STRENGTH, PSI (70 DEGREES F, 60 MINUTE CURE)	C109	1500 MIN.

259.05 POTHOLE EXCAVATION, GENERAL

A. THE CONTRACTOR SHALL PLACE A TEMPORARY MARK ON THE PAVEMENT AREA WHERE THE KEYHOLE CORE WILL BE TAKEN PRIOR TO CUTTING TO INSURE THAT THE REMOVED SECTION IS REPLACED IN THE SAME ORIENTATION AS ORIGINALLY FOUND IN THE PAVEMENT.

B. THE VERTICAL ALIGNMENT OF THE KEYHOLE CORING SHALL BE PERPENDICULAR TO THE HORIZON, AND THE CUTTING SHALL EXTEND TO THE FULL DEPTH OF THE EXISTING PAVEMENT SECTION.

C. UNLESS OTHERWISE APPROVED BY THE ENGINEER IN WRITING, KEYHOLE CORES SHALL NOT BE GREATER THAN 24-INCHES IN DIAMETER. ADJACENT CORES SHALL NOT BE CLOSER THAN 3 FEET FROM EACH OTHER (EDGE TO EDGE), SHALL NOT CONTAIN A JOINT OR ANY PAVEMENT CRACKS GREATER THAN 1/8-INCH WIDE, AND SHALL NOT BE PERFORMED IN PAVEMENTS WHERE THE SECTION IS LESS THAN 4-INCHES THICK.

D. CORING SHALL BE PERFORMED WITH A KEYHOLE CORING SAW CAPABLE OF REMOVING AN INTACT CORE OF PAVEMENT.

E. SOILS WITHIN POTHOLES SHALL BE REMOVED BY AIR/VACUUM EXTRACTION METHODS TO EXPOSE UTILITIES. THE ZONE OF SOIL REMOVAL SHALL REMAIN ESSENTIALLY WITHIN A VERTICAL PLANE EXTENDING BELOW THE EDGES OF THE REMOVED PAVEMENT.

F. THE CONTRACTOR SHALL REMOVE ALL MATERIALS EXCAVATED FROM THE SITE AND DISPOSE OF IT TO A SPOIL SITE APPROVED BY THE ENGINEER.

259.06 POTHOLE BEDDING, BACKFILL AND COMPACTION

A. THE CONTRACTOR SHALL CAREFULLY PLACE THE BEDDING MATERIAL AROUND THE UTILITY LINE SO AS TO NOT DAMAGE OR HARM THE LINE. THE CONTRACTOR SHALL PLACE THE BEDDING MATERIAL SO AS TO ENSURE ALL VOIDS AROUND THE UTILITY LINE ARE FILLED. THE CONTRACTOR SHALL CAREFULLY COMPACT THE FILL MATERIAL TO THE LIMITS REQUIRED BY THE UTILITY OWNER.

B. BACKFILLING SHALL BE PERFORMED IN ACCORDANCE WITH ITEM 613.08 "PLACING MORTAR".

C. A 1-INCH OR LESS LAYER OF No. 9 AGGREGATE MAY BE PLACED OVER THE LOW STRENGTH MORTAR BACKFILL TO ALLOW SETTING THE KEYHOLE CORE AT THE PROPER ELEVATION.

D. WHERE GRANULAR BACKFILL HAS BEEN PERMITTED IN LIEU OF LOW STRENGTH MORTAR BACKFILL, BACKFILLING SHALL BE COMPLETED IN ACCORDANCE WITH ITEM 603.11, "TRENCH EXCAVATION AND BACKFILL." UNLESS OTHERWISE APPROVED BY THE ENGINEER, THE BACKFILL MATERIAL SHALL BE PLACED IN MAXIMUM 6-INCH LOOSE LIFTS. BACKFILL COMPACTION SHALL CONFORM TO THE REQUIREMENTS OF ITEM 203.07, "COMPACTION AND MOISTURE REQUIREMENTS."

APPROVED <u>1-12-16</u>	UTILITY POTHOLE REPAIR	CITY OF LANCASTER, OHIO DEPARTMENT OF ENGINEERING	
<i>Brad Fagell</i> CITY ENGINEER		STANDARD CONSTRUCTION DRAWING	
		DWG. BY: DDK CHK'D BY: MN	FILE NUMBER P-28 3 of 4
REVISED:			

259.07 PAVEMENT RESTORATION

- A. THE SURFACE CUT BY KEYHOLE CORING RESTORED TO ITS ORIGINAL CONDITION WITH THE REINSTATED CORE FLUSH WITH AND IN THE ORIGINAL ORIENTATION AS THE EXISTING SURFACE, MATCHING EXISTING PAVEMENT SURFACE APPEARANCE.
- B. EXCESS BONDING MATERIAL SHALL BE REMOVED FROM THE RESTORED SURFACE. A PATCHED APPEARANCE SHALL BE AVOIDED IN SURFACE RESTORATION WHEREVER POSSIBLE.
- C. UNLESS OTHERWISE APPROVED BY THE ENGINEER, THE CONTRACTOR SHALL REINSTATE THE BONDED KEYHOLE CORE WITHIN 24 HOURS OF CUTTING THE PAVEMENT. OPENINGS ALLOWED TO BE LEFT OPEN GREATER THAN 24 HOURS SHALL BE COVERED WITH AN APPROVED STEEL ROAD PLATE CAPABLE OF SUPPORTING TRAFFIC LOADS.
- D. SURFACE TOLERANCES: THE REINSTATED CORE SHALL BE FLUSH AND LEVEL WITH THE ADJACENT PAVEMENT. GAPS ATTRIBUTABLE TO THE POSITIONING OF THE CORE SHALL BE LESS THAN 1/16-INCH BETWEEN THE BOTTOM OF A MINIMUM 3-FOOT LONG STRAIGHTEDGE AND THE SURFACE OF THE PAVEMENT IN ANY DIRECTION ON THE SURFACE OF THE KEYHOLE CORE.

259.08 DEFICIENCIES

- A. WHERE THE KEYHOLE CORE IS FOUND TO BE FRACTURED OR DEFECTIVE UPON REMOVAL, OR BECOMES DAMAGED AFTER REMOVAL AND PRIOR TO REINSTATEMENT, THE CORE SHALL NOT BE USED TO RESTORE THE PAVEMENT. THE PAVEMENT AT DAMAGED KEYHOLE CORE LOCATIONS SHALL BE CUT AND A PERMANENT PATCH SHALL BE INSTALLED IN ACCORDANCE WITH ITEM 253, PAVEMENT REPAIR.
- B. A KEYHOLE CORE SHALL BE CONSIDERED UNACCEPTABLE WHEN ONE OF THE FOLLOWING CONDITIONS EXIST:
 - 1. THE KEYHOLE CORE CONTAINS ANY VERTICAL CRACKS WIDER THAN 1/8-INCH EXTENDING FULL DEPTH THROUGH THE CORE; OR
 - 2. ANY DETERIORATED PIECE OF THE KEYHOLE CORE IS LARGER THAN TEN PERCENT OF THE OVERALL AREA OF THE CORE; TWO OR MORE SUCCESSIVE LAYERS OF PAVEMENT IN THE KEYHOLE CORE BECOME HORIZONTALLY DELAMINATED AND CANNOT BE RE-BONDED TO EACH OTHER WITH THE BONDING MATERIAL.
- C. ALL KEYHOLE CORES THAT ARE DAMAGED OR DO NOT MEET THE SURFACE TOLERANCES SHALL BE REMOVED, AND THE CONTRACTOR SHALL CUT AND INSTALL A PERMANENT PATCH IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING P-1 AND ITEM 253, PAVEMENT REPAIR.

259.09 METHOD OF MEASUREMENT

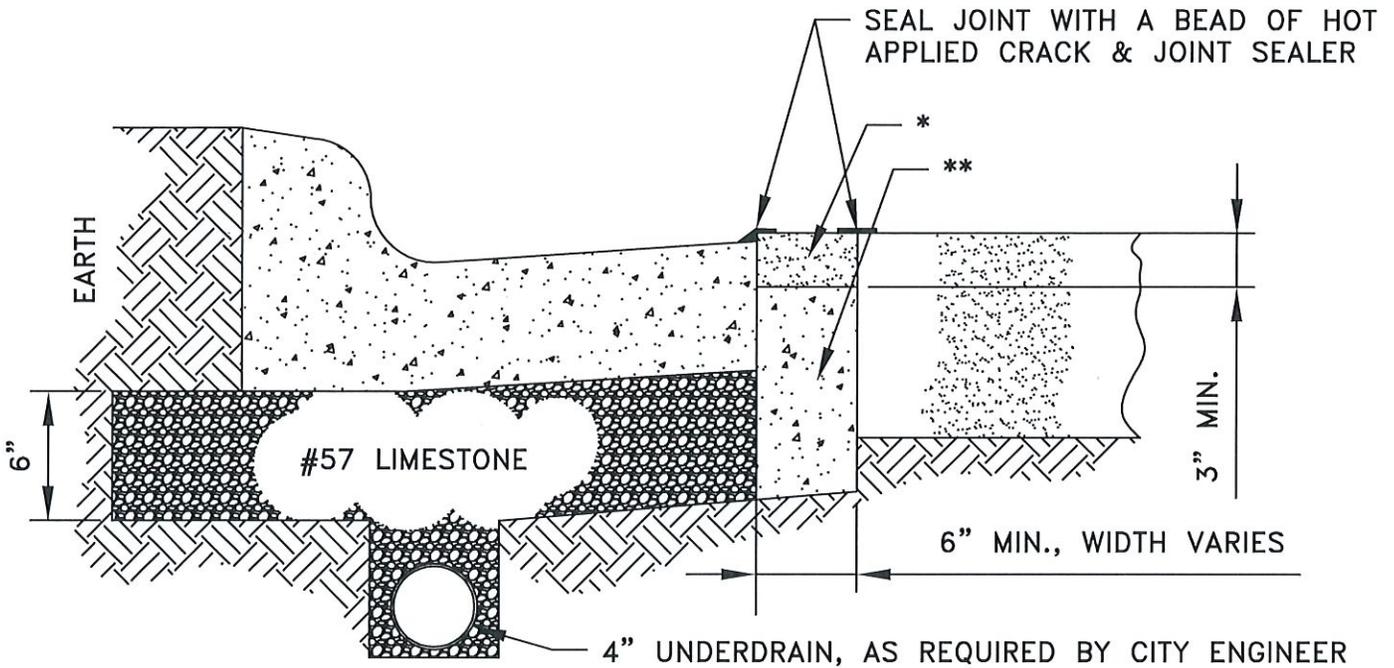
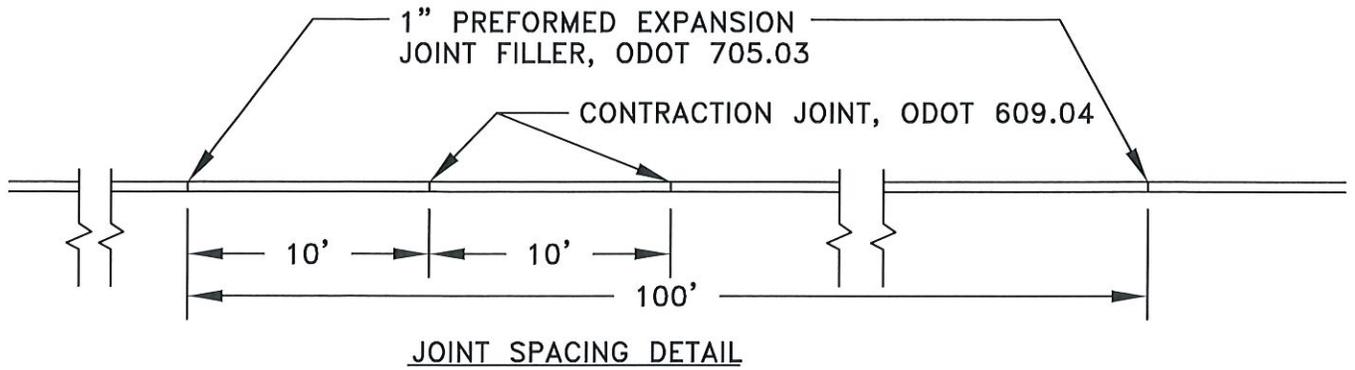
UNLESS OTHERWISE SHOWN IN THE CONTRACT DRAWINGS, THIS ITEM, KEYHOLE POTHOLE EXCAVATION AND PAVEMENT RESTORATION, WILL BE PAID AT AN EACH FOR EACH REPAIR COMPLETED AND ACCEPTED.

259.10 BASIS OF PAYMENT

PAYMENT WILL BE MADE FOR ITEM 259, KEYHOLE POTHOLE EXCAVATION AND PAVEMENT RESTORATION FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS FOLLOWS:

ITEM	UNIT	DESCRIPTION
259	EACH	KEYHOLE PAVEMENT CORE AND REPAIR, ____INCH DIA.

APPROVED <u>1-12-16</u>  CITY ENGINEER REVISED:	UTILITY POTHOLE REPAIR	CITY OF LANCASTER, OHIO	
		DEPARTMENT OF ENGINEERING	
		STANDARD CONSTRUCTION DRAWING	
		DWG. BY: DDK	FILE NUMBER
		CHK'D BY: MN	P-28 4 of 4



A CITY OF LANCASTER REPRESENTATIVE SHALL MARK LOCATIONS OF CURB REMOVAL/REPLACEMENT.

1/2" EXPANSION MATERIAL WILL BE INSTALLED BEHIND THE CURB WHEN A CONCRETE WALK, DRIVE, OR OTHER CONCRETE ITEM IS ADJOINING IT.

EXISTING PAVEMENT WILL BE SAW CUT A MIN. OF 6" OUT FROM THE FACE OF THE GUTTER, OR AS DIRECTED BY THE CITY ENGINEER AND REMOVED DOWN TO THE SUB-GRADE.

** : NEW CONCRETE SHALL BE POURED IN THE VOID UP TO WITH IN 3" OF THE PAVEMENT SURFACE.

* : WHEN CONCRETE HAS SETUP, VOID SHALL BE FILLED IN WITH "HOT MIX" TYPE 448 ASPHALT AND SEALER APPLIED ALONG JOINT.

APPROVED 12-07-20

 CITY ENGINEER

TYPICAL
 CURB AND
 GUTTER
 REPLACEMENT

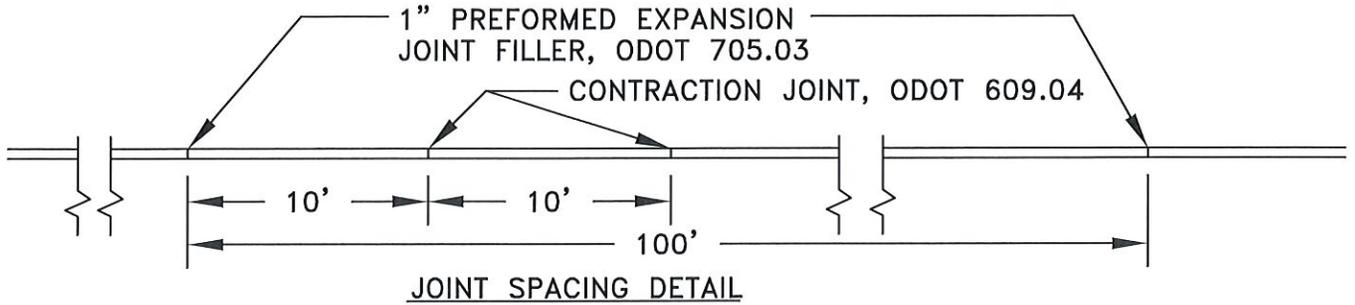
CITY OF LANCASTER, OHIO
 DEPARTMENT OF ENGINEERING

STANDARD
 CONSTRUCTION DRAWING

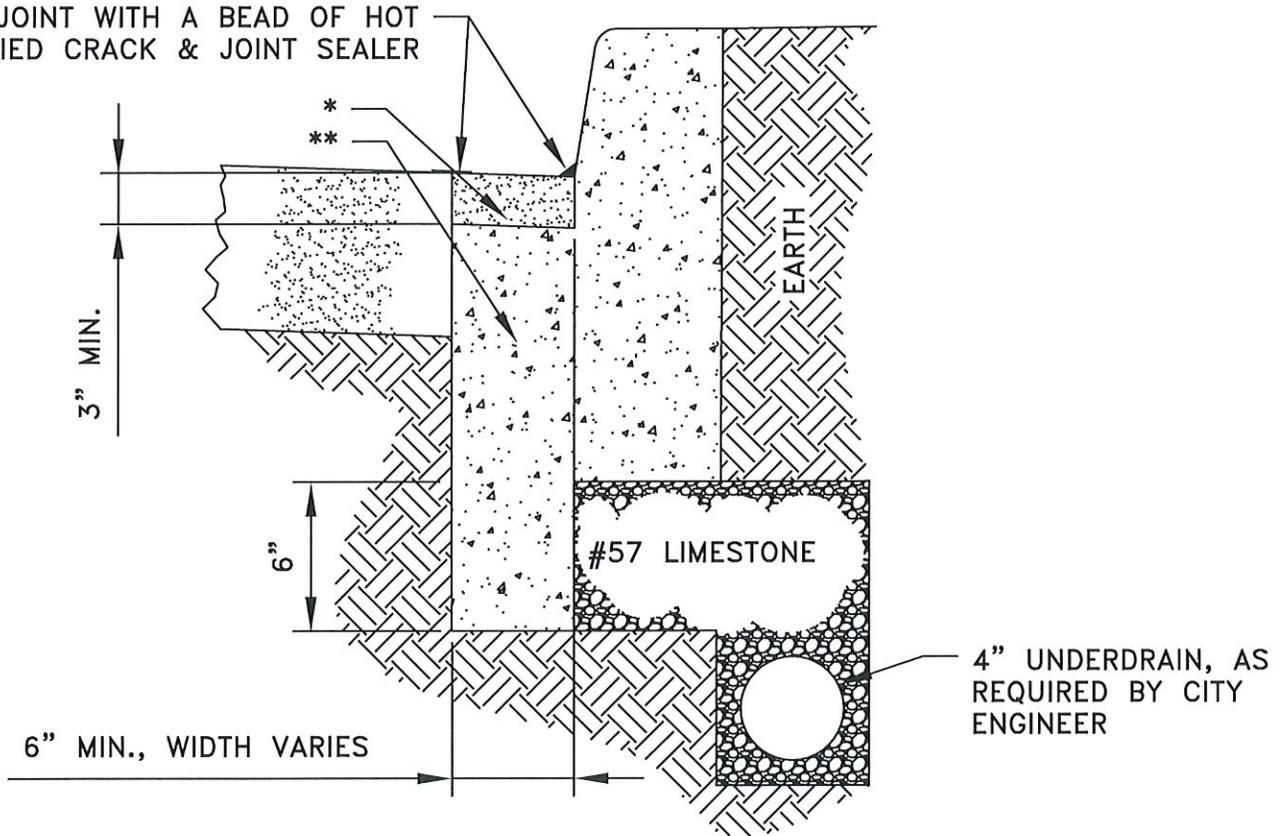
DWG. BY: ...ADH.....
 CHK'D BY: ...MN.....

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P-29 1 of 2

REVISED: 07 DEC 20



SEAL JOINT WITH A BEAD OF HOT APPLIED CRACK & JOINT SEALER



A CITY OF LANCASTER REPRESENTATIVE SHALL MARK LOCATIONS OF CURB REMOVAL/REPLACEMENT.

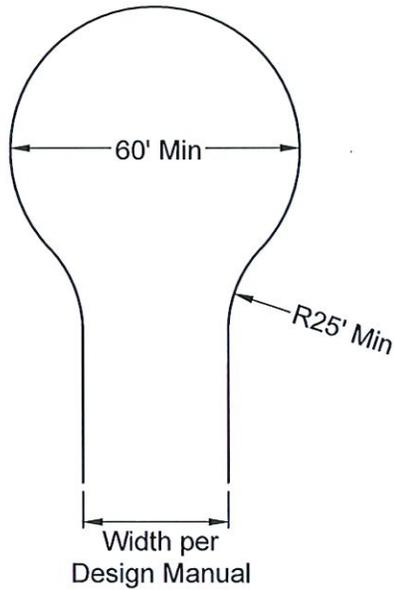
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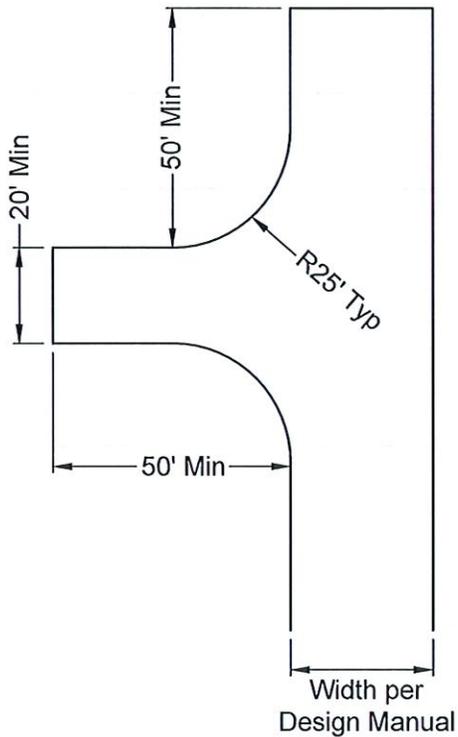
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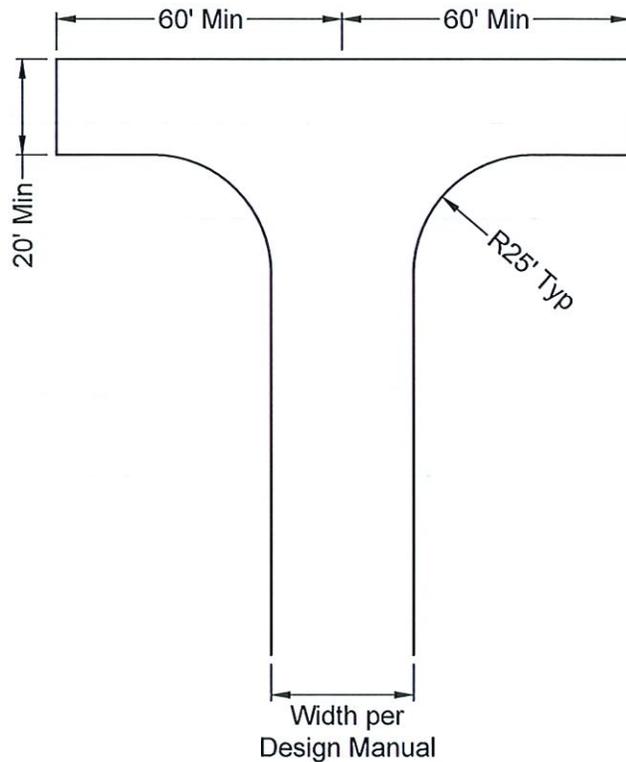
APPROVED <u>12-07-20</u>  CITY ENGINEER	TYPICAL STRAIGHT CURB REPLACEMENT	CITY OF LANCASTER, OHIO DEPARTMENT OF ENGINEERING
REVISED: 07 DEC 20		STANDARD CONSTRUCTION DRAWING DWG. BY: ADH MN CHK'D BY: FILE NUMBER P-29 2 of 2



CUL-DE-SAC



TYPE 1 HAMMERHEAD



TYPE 2 HAMMERHEAD

NOTES:

1. Dimensions are face to face of curb for curbed streets.
2. Dimensions are edge of pavement to edge of pavement, not including shoulders (which includes paved shoulders) for uncurbed sections of roadways.

DATE: 01/05/2026	STANDARD CONSTRUCTION DRAWING	
	TURNAROUNDS	115/26
		P-30