

*FRANK G. JACKSON*  
*MAYOR*

*JOMARIE WASIK*  
*DIRECTOR OF PUBLIC SERVICE*

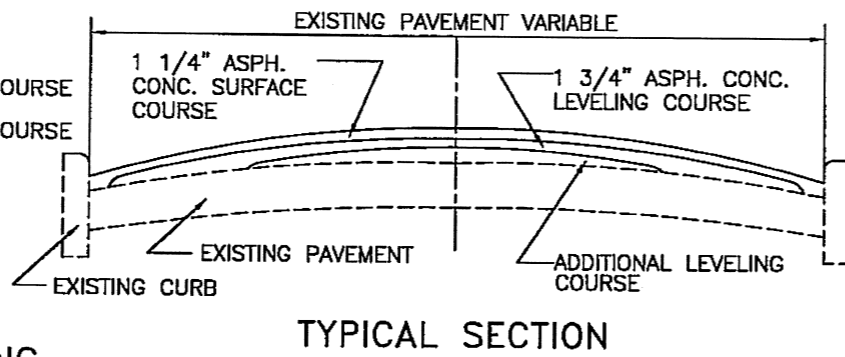
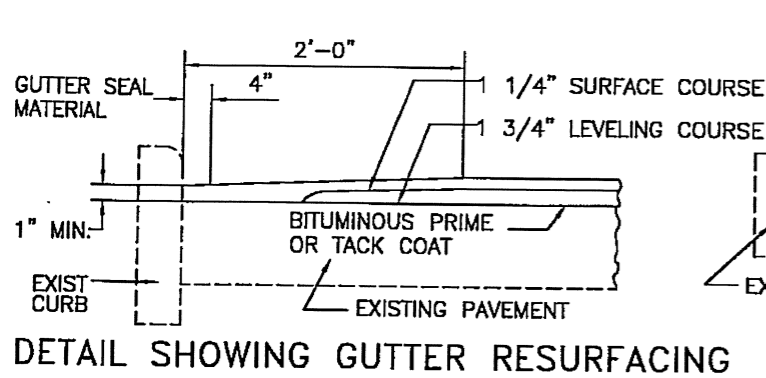
*RANDALL E. DEVAUL*  
*COMMISSIONER OF ENGINEERING*  
*AND CONSTRUCTION*



*DIVISION OF ENGINEERING AND CONSTRUCTION*  
*STANDARD CONSTRUCTION DRAWINGS*

*2008*

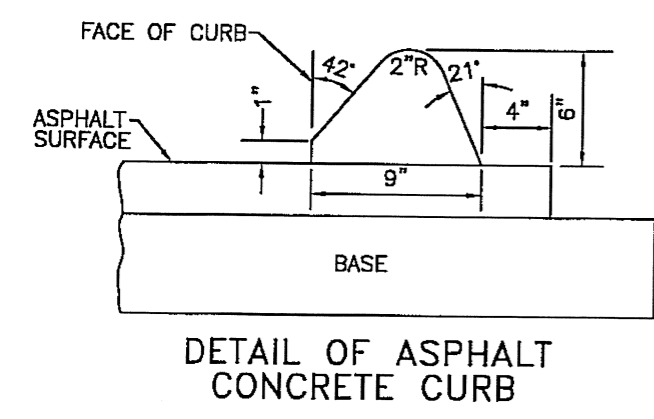
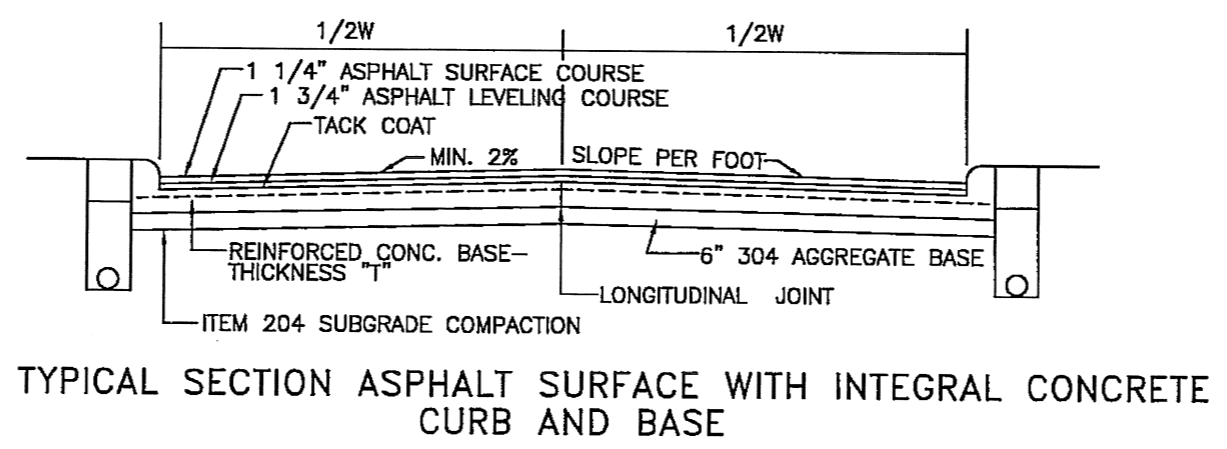
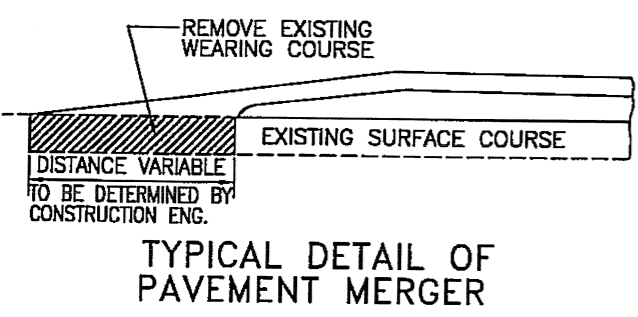
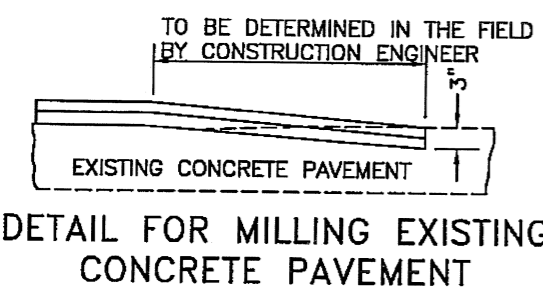
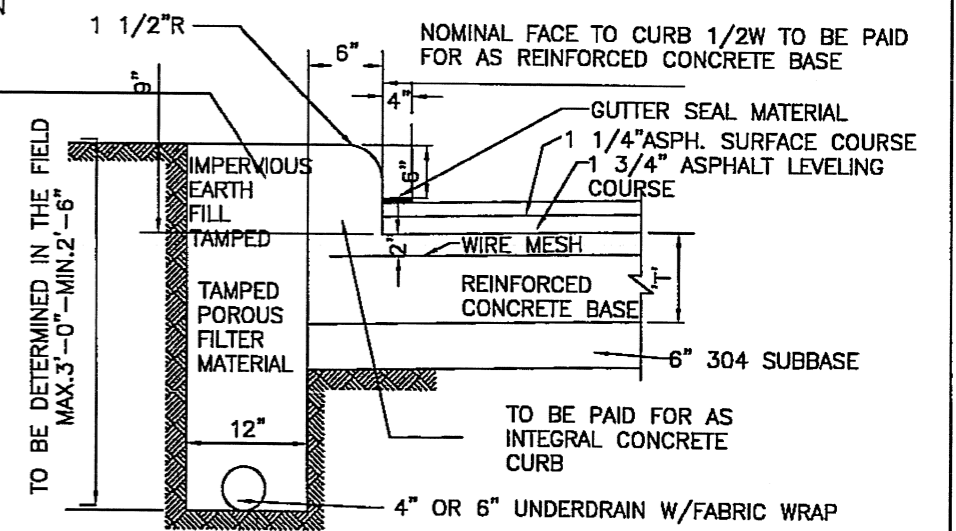
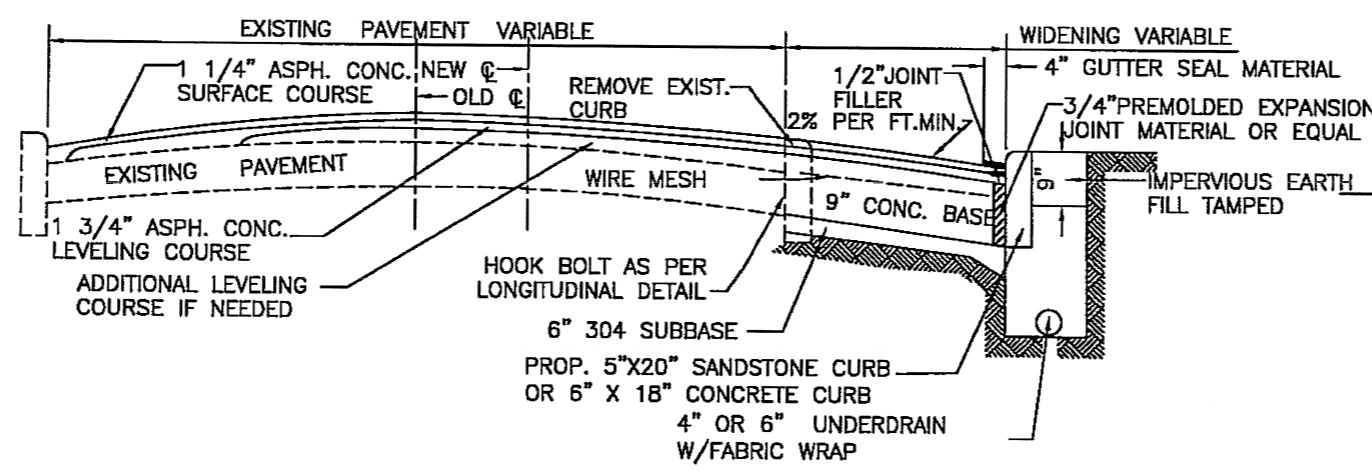
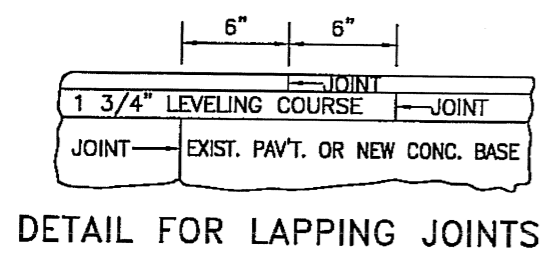
FILE NO.	TITLE	PAGE NO.	FILE NO.	TITLE	PAGE NO.	FILE NO.	TITLE	PAGE NO.
	TABLE OF CONTENTS	1	CR-1	TYPICAL CONSTRUCTION CURB RAMPS 11 & ROLLED CURB DETAIL	16	CB-1	PLAN FOR REBUILDING OLD STYLE CATCH BASIN	31
ASPH 1	STANDARD CONSTRUCTION DETAILS OF ASPHALT RESURFACED PAVEMENTS	2	CD-1	CURB DETAILS	17	CB-1	PLAN FOR CATCH BASIN 2	32
CONC 1	CONSTRUCTION DETAILS OF REINFORCED CONCRETE PAVEMENT SHEET 1/4	3	CD-1	STANDARD PLAN OF TYPICAL CURB & DETAILS AT DRIVEWAYS	18	CB-1	DETAIL PLAN FOR CATCH BASINS ADJUSTED TO LINE & GRADE	33
CONC 1	TYPICAL CONSTRUCTION DETAILS FOR PLAIN CONCRETE PAVEMENT SHEET 2/4	4	CR-1	STANDARD DETAILS SHOWING MALL CURBING	19	A-503	PLAN FOR STANDARD MANHOLE FRAME CAST IRON	34
CONC 1	TYPICAL CONSTRUCTION DETAILS FOR PLAIN CONCRETE PAVEMENT SHEET 3/4	5	149 ME	MISCELLANEOUS CONCRETE CONSTRUCTION DETAILS	20	A-605	STANDARD CAST IRON MANHOLE COVER	35
CONC 1	TRANSVERSE PAVEMENT JOINTS SHEET 4/4	6	164 ME	SHEETING & BRACING CHART	21	A-695	PLAN OF STANDARD CAST IRON OPEN GRATE MANHOLE COVER	36
BP 1	BUS PAD	7	146 ME	STANDARD TRENCH FOR PIPE SEWERS	22	CB-1	DETAIL PLAN FOR SPECIAL CAST IRON INLET BASIN	37
PR 1	STREET OPENING REPAIR	8	MH-1	DETAIL PLAN OF PRECAST CONCRETE MANHOLE	23	MB-1C	MONUMENT BOX ASSEMBLIES	39
PR 1	STREET OPENING REPAIR	9	73 M	STANDARD PLAN FOR EGG SHAPED SEWERS DIMENSIONS & AREAS	24	TP-1	TYPICAL CONSTRUCTION DETAIL SIDEWALK TREE BUMPOUT SHEET 1/2	39
244 ME	DETAIL PLAN FOR INTEGRAL CONCRETE RADIUS CURBING & WALK	10	B-429	VITRIFIED BLOCK SEWER CONSTRUCTION DETAILS	25	TP-1	TREE PIT SHEET 2/2	40
CR-1	TYPICAL CONSTRUCTION CURB RAMPS 1 & 2	11	CB-1	RECTANGULAR PRECAST CATCH BASIN	26			
CR-1	TYPICAL CONSTRUCTION CURB RAMPS 3 & 4	12	CB-1	STANDARD RECTANGULAR PRECAST INLET BASIN	27			
CR-1	TYPICAL CONSTRUCTION CURB RAMPS 5 & 6	13	CB-1	DETAILS FOR TWIN BASIN - CB-3	28			
CR-1	TYPICAL CONSTRUCTION CURB RAMPS 7 & 8	14	8 ME	PLAN FOR GUTTER CATCH BASIN	29			
CR-1	TYPICAL CONSTRUCTION CURB RAMPS 9 & 10	15	39 ME	STANDARD PLAN FOR PARK STYLE CATCH BASIN	30			



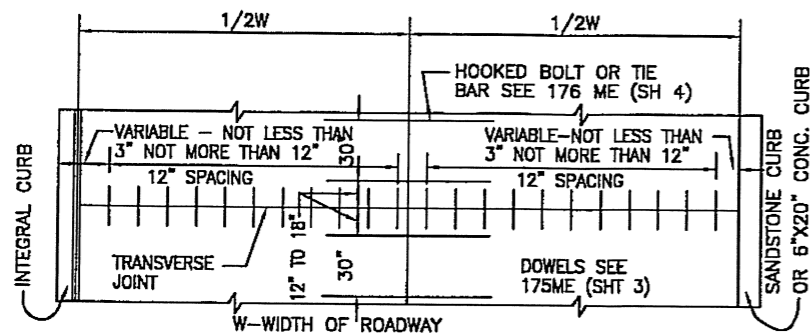
**NOTES**

SURFACE COURSE AS PER 448 TYPE I HEAVY TRAFFIC  
 LEVELING COURSE AS PER 448 TYPE II HEAVY TRAFFIC  
 ADDITIONAL LEVELING COURSE AS PER 448 TYPE II HEAVY TRAFFIC  
 BITUMINOUS TACK COAT AS PER 407 & SPECIAL  
 9" CONCRETE BASE AND INTEGRAL CONCRETE CURB & BASE AS PER 305 & SPECIAL AND 609.04  
 IF REQUIRED 12 INCH (W4) X 6 INCH (W8.5) EPOXY COATED REINFORCING MESH MEETING ODOT 709.14  
 AGGREGATE BASE AS PER 304 & SPECIAL  
 JOINT FILLER AS PER 705.04 (HOT APPLIED)

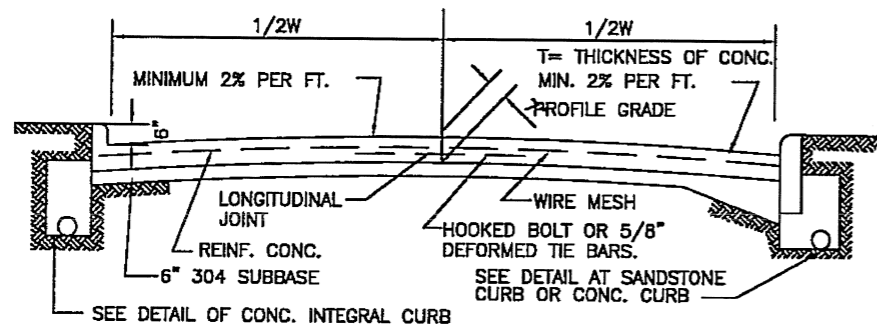
GUTTER SEAL MATERIAL SAME TYPE OF ASPHALT CEMENT USED IN THE ASPHALT CONCRETE  
 PREMOLDED EXPANSION JOINT MATERIAL AS PER 705.03 NO. 8 TAMPED POROUS FILTER MATERIAL, LIMESTONE OR GRAVEL  
 UNDERDRAIN AS PER 605 & SPECIAL  
 INTEGRAL CONCRETE CURB AND BASE JOINT DETAIL SHALL BE AS SHOWN ON DRAWING 644 M SHEETS 4 & 5 (LONGITUDINAL) AND 175 ME SHEET 6 (TRANSVERSE).



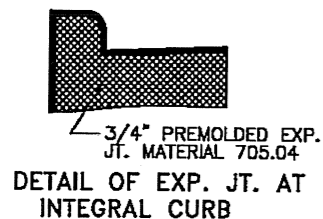
**CITY OF CLEVELAND**  
 DEPARTMENT OF PUBLIC SERVICE  
 DIVISION OF ENGINEERING & CONSTRUCTION  
 JOMARIE WASIK—DIRECTOR OF PUBLIC SERVICE  
 STANDARD CONSTRUCTION DRAWING  
 ASPHALT RESURFACING AND ASPHALT SURFACE ON REINFORCED CONCRETE BASE  
 NOT TO SCALE  
 DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08  
 SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08  
 APPROVED: *[Signature]* DATE: 7-8-08  
 COMMISSIONER OF ENGINEERING & CONSTRUCTION  
 FILE NO ASPH 1 SHEET 1/1



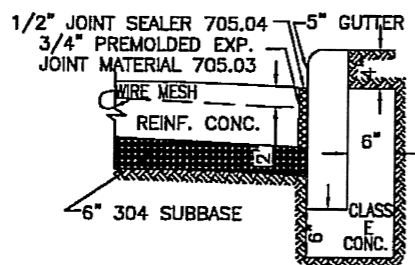
TYPICAL PLAN OF PAVEMENT



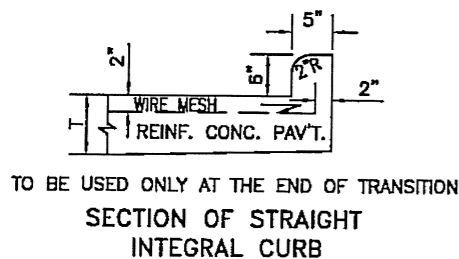
TYPICAL SECTION OF PAVEMENT



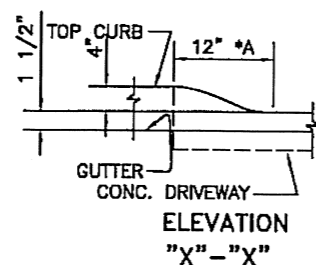
DETAIL OF EXP. JT. AT INTEGRAL CURB



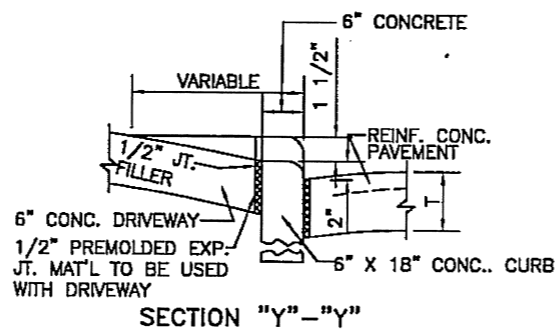
DETAIL OF CONC. BACKING AT STONE CUT TO RADIUS CURB (25' RADIUS & UNDER)



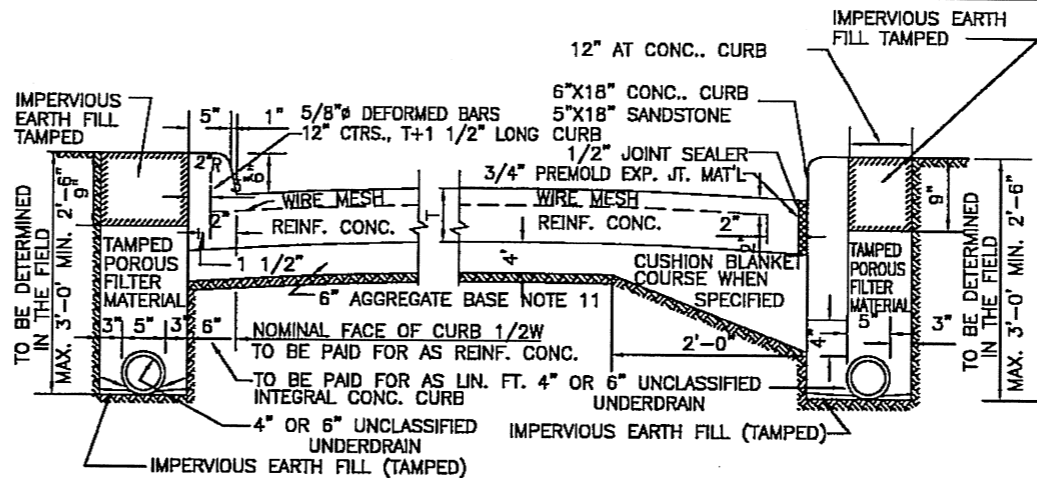
TO BE USED ONLY AT THE END OF TRANSITION SECTION OF STRAIGHT INTEGRAL CURB



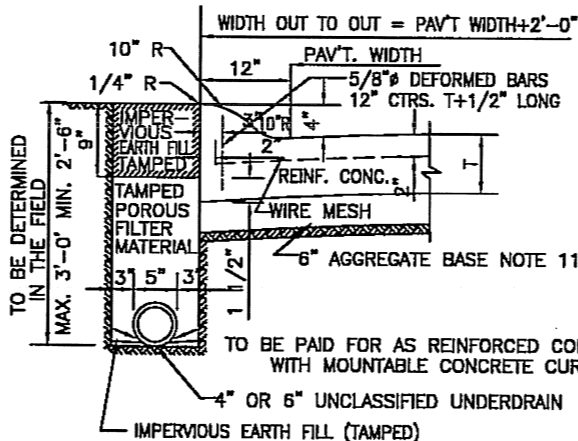
ELEVATION "X"-"X"



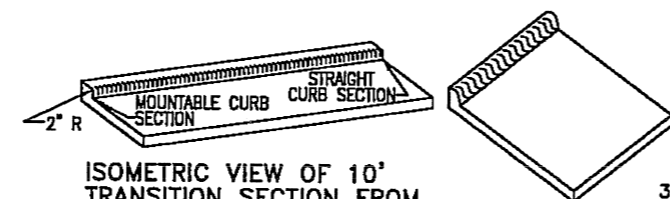
SECTION "Y"-"Y"



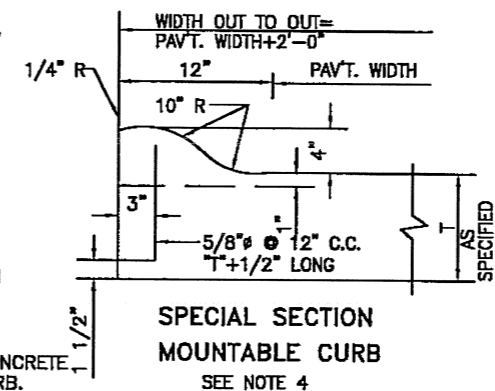
DETAIL OF CONC. INTEGRAL CURB DETAIL OF SANDSTONE CURB



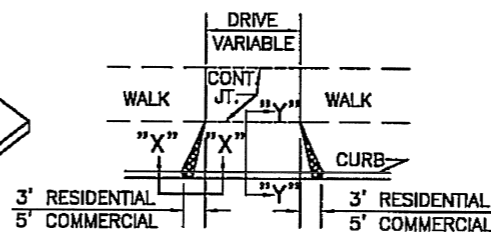
DETAIL OF CONC. MOUNTABLE CURB



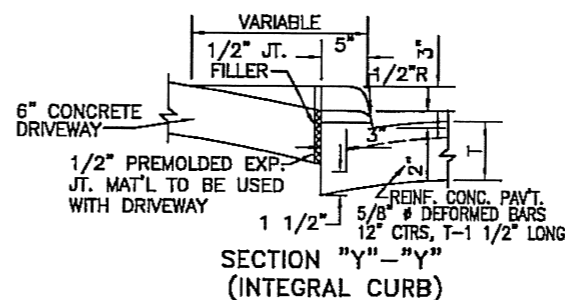
ISOMETRIC VIEW OF 10' TRANSITION SECTION FROM MOUNTABLE CURB TO STRAIGHT CURB



SPECIAL SECTION MOUNTABLE CURB SEE NOTE 4



TYPICAL CONC. DRIVEWAY DETAIL



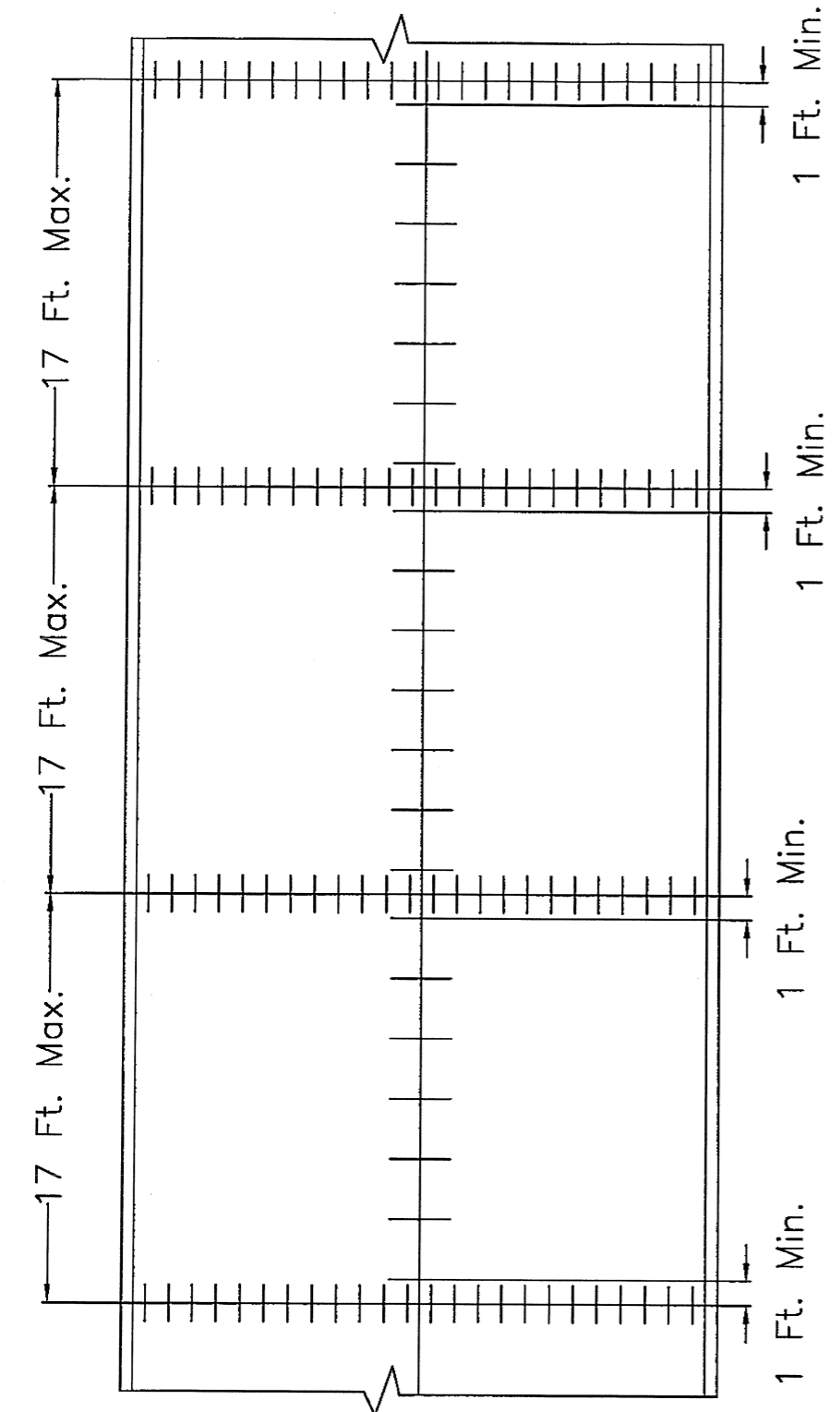
SECTION "Y"-"Y" (INTEGRAL CURB)

NOTES:

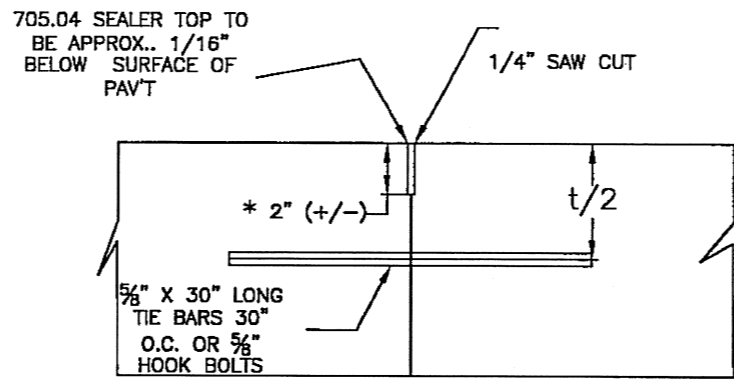
1. REINFORCED CONCRETE PAVEMENT SHALL MEET THE REQUIREMENTS OF 451 AND SPECIAL. CONCRETE SHALL MEET THE REQUIREMENTS OF CITY OF CLEVELAND 650 MIX.
2. IF THE CURB IS PLACED AFTER THE PAVEMENT, OMIT THE ASPHALT EXPANSION JOINT AND PAVE FULL WIDTH. FILL THE VOID BETWEEN THE CURB & EXP. JOINT WITH DRY SAND TO 1/2" FROM THE CONCRETE SURFACE. THE REMAINING 1/2" SHALL BE FILLED WITH JOINT FILLER AS PER 705.04 (HOT APPLIED JOINT FILLER).
3. TRANSITION FROM STANDARD CURB SECTION TO DROP CURB SECTION TO BE MADE IN 12".
4. CONCRETE FOR CURB WHICH IS TO BE INTEGRAL WITH THE CONCRETE BASE OR PAVEMENT SHALL BE PLACED WHILE THE CONCRETE IS PLASTIC.
5. TRANSVERSE JOINT IN THE PAVEMENT SHALL EXTEND THROUGH CURBS.
6. CONTRACTION JOINT (IMPRESSED OR SAWED) SHALL BE PLACED AT MAXIMUM OF 17' CENTERS.
7. PAVEMENT JOINT ASSEMBLIES SHALL BE AS PER 451.02 (709.13).
8. LONGITUDINAL JOINT SHALL BE 5/8" X 30" DEFORMED EPOXY BAR AS PER 451.02 & 709.00 OR 2- 7/8" X 8" EPOXY HOOK BOLTS PLACED AT 30" CENTERS. TRANSVERSE JOINT SHALL BE AS SHOWN ON DRAWING 175 ME (SHEET 6).
9. STEEL FOR TIE BARS, HOOK BOLTS AND DOWEL BARS SHALL MEET THE REQUIREMENTS OF 451.02.
10. 12 INCH (W4) X 6 INCH (W8.5) EPOXY COATED REINFORCING MESH MEETING ODOT 709.14
11. AGGREGATE BASE AS PER 304 & SPECIAL
12. HOT APPLIED JOINT SEALER AS PER 705.04.
13. PREFORMED EXPANSION JOINT MATERIAL AS PER 705.03.
14. TAMPED POROUS FILTER MATERIAL AS PER 605.
15. UNCLASSIFIED PIPE UNDERDRAIN AS PER 707.31 OR 707.41.

**CITY OF CLEVELAND**  
 DEPARTMENT OF PUBLIC SERVICE  
 DIVISION OF ENGINEERING & CONSTRUCTION  
 JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
 STANDARD CONSTRUCTION DRAWING  
 CONSTRUCTION DETAILS OF REINFORCED CONCRETE PAVEMENT  
 NOT TO SCALE  
 DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08  
 SUBMITTED BY: W. McLAUGHLIN DATE: 4/8/08  
 APPROVED: *[Signature]* DATE: 7-8-08  
 COMMISSIONER OF ENGINEERING & CONSTRUCTION

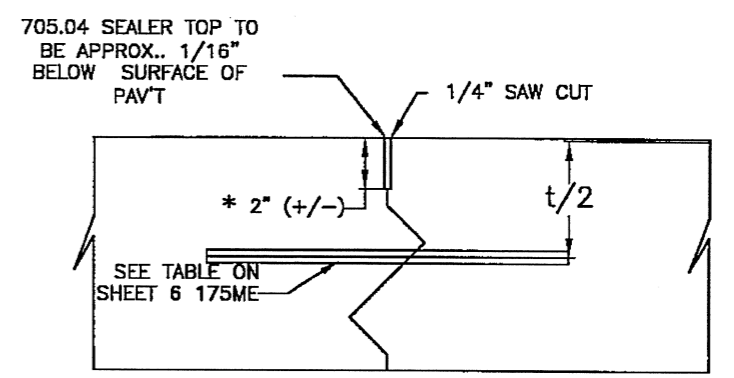
FILE NO.: CONC 1 SHEET 1/4 ③



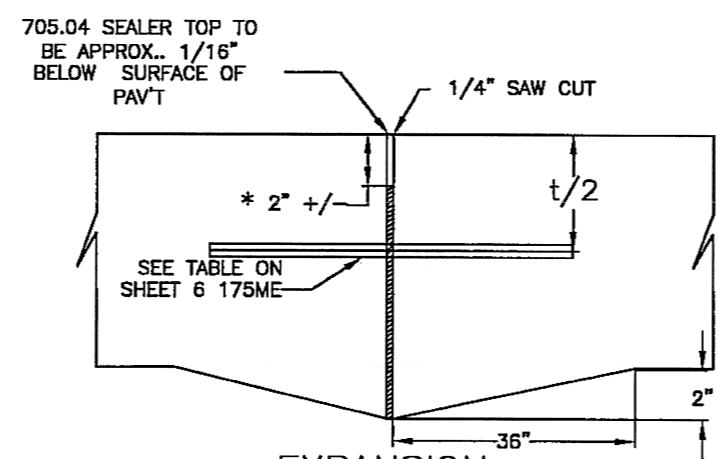
SPACING DIAGRAM FOR JOINTS AND TIE BARS  
NOT TO SCALE



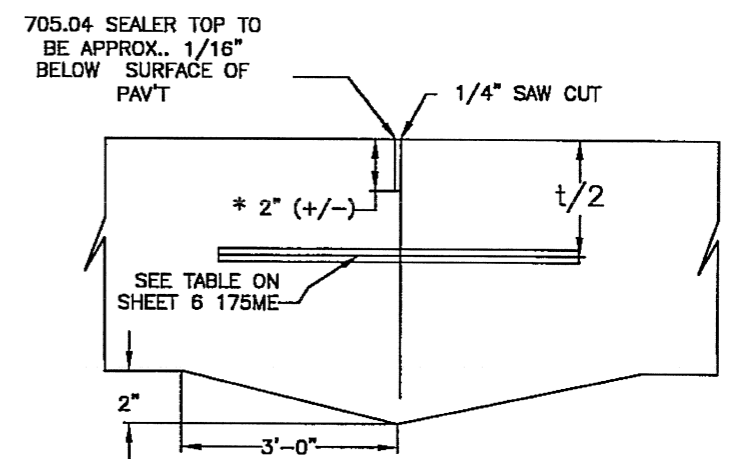
LONGITUDINAL



CONTRACTION



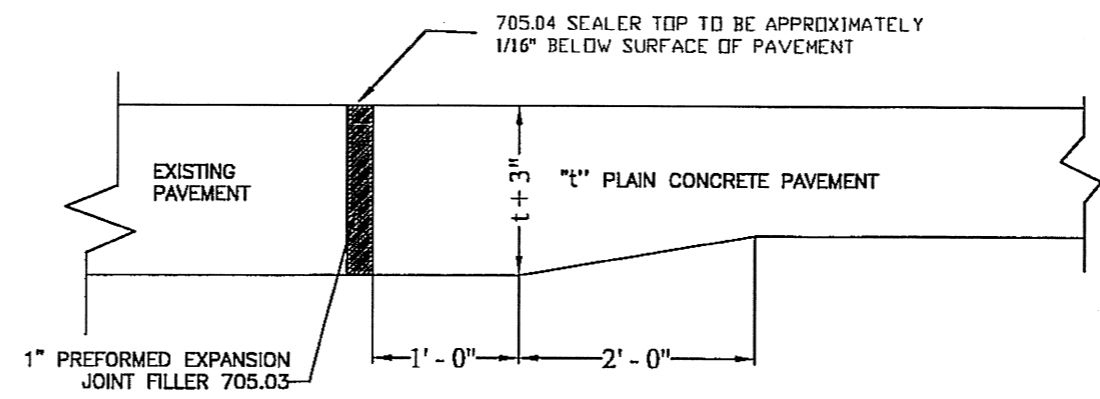
EXPANSION  
(THICKENED)



CONSTRUCTION  
(THICKENED)

DOWELS - ALL DOWELS, HOOK BOLTS AND TIE BARS  
SHALL BE EPOXY COATED (709.00), AS PER  
PLAN OR DIRECTION OF THE ENGINEER

\* IF CONCRETE IS THICKER THAN 8" USE  $t/4$   
FOR THE JOINT DEPTH



BUTT JOINT  
(THICKENED)

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STANDARD CONSTRUCTION DRAWINGS  
TYPICAL CONSTRUCTION  
DETAILS FOR PLAIN  
CONCRETE PAVEMENT  
NOT TO SCALE

DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08

SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08

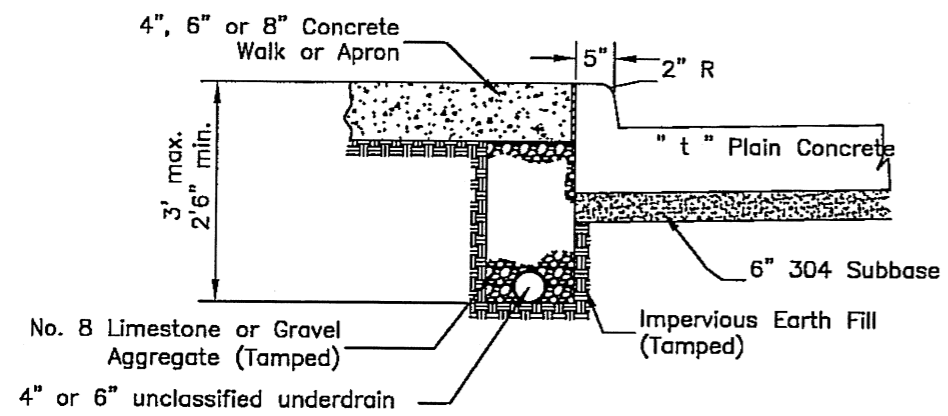
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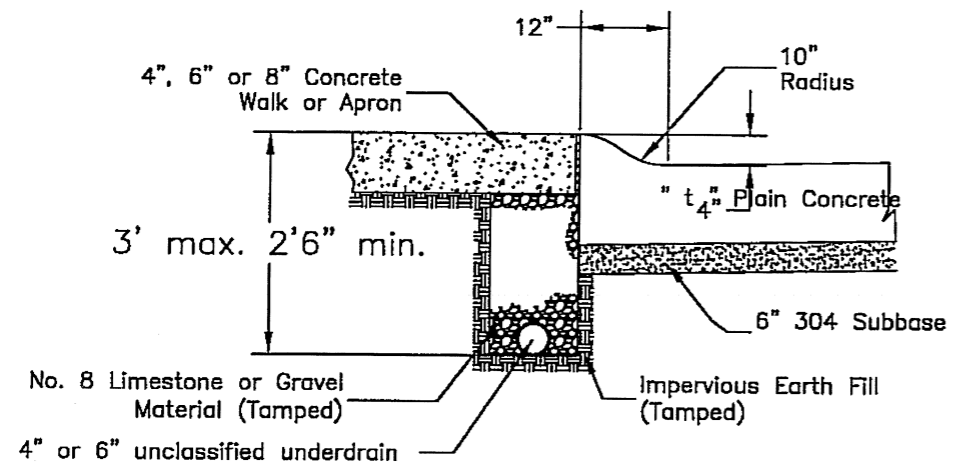
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SHEET 2/4

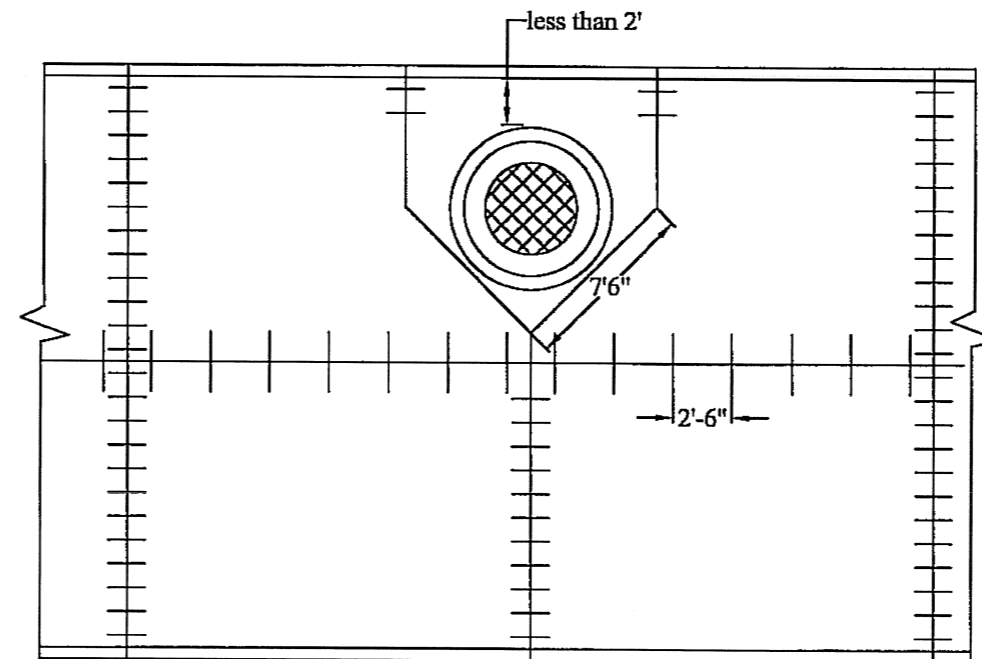
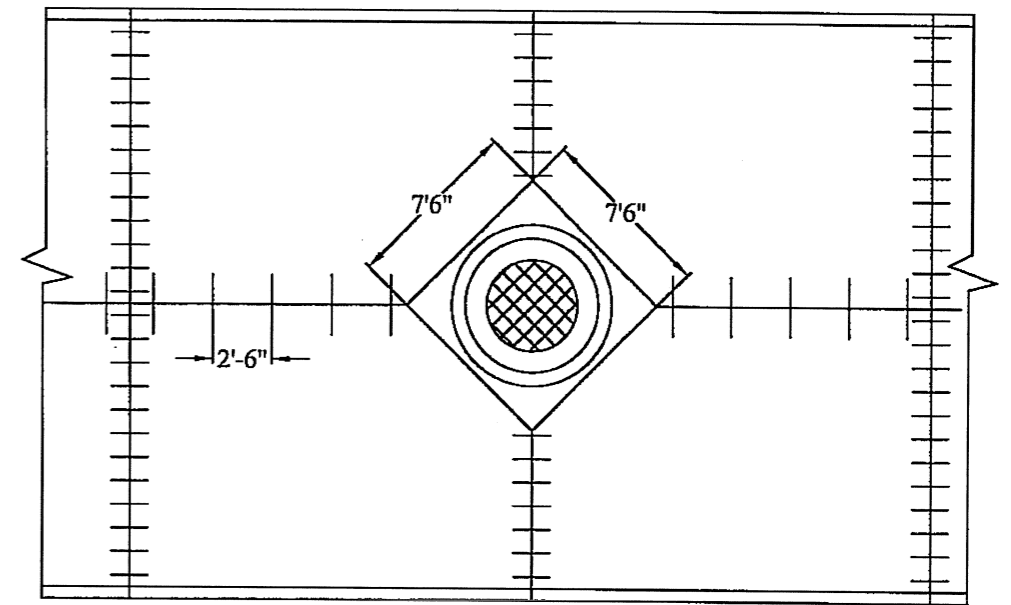
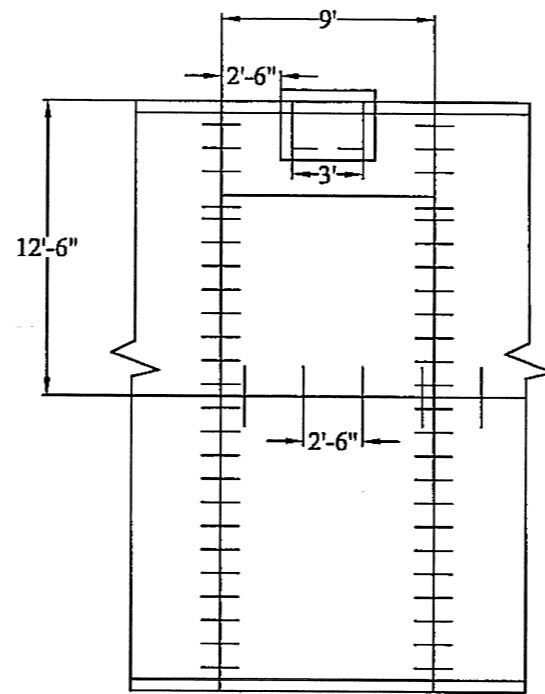
4



DETAIL OF CONCRETE INTEGRAL CURB  
NOT TO SCALE



DETAIL OF CONCRETE MOUNTABLE CURB  
(NOT TO SCALE)



TYPICAL BOXOUTS FOR MANHOLES AND CATCH BASINS

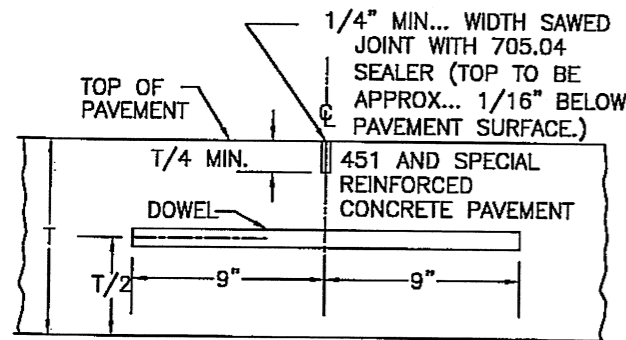
CITY OF CLEVELAND  
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JOMARIE WASIK—DIRECTOR OF PUBLIC SERVICE  
STANDARD CONSTRUCTION DRAWING  
TYPICAL CONSTRUCTION  
DETAILS FOR PLAIN  
CONCRETE PAVEMENT  
NOT TO SCALE

DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08  
SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08  
APPROVED: *[Signature]* DATE: 7-6-08  
COMMISSIONER OF ENGINEERING & CONSTRUCTION

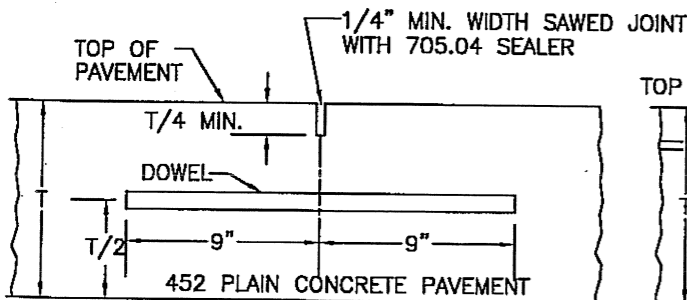
FILE NO. : CONC 1	SHEET 3/4	⑤
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# TRANSVERSE JOINTS

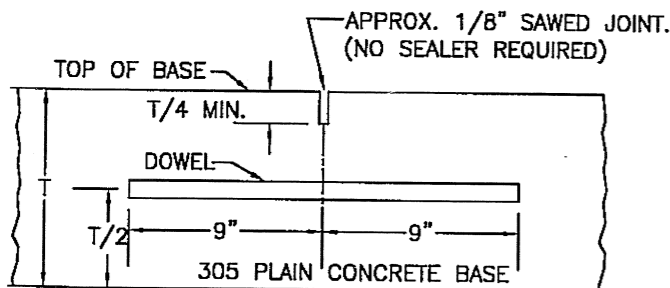
## CONTRACTION JOINTS



SECTION-451 AND SPECIAL (PAVEMENT)

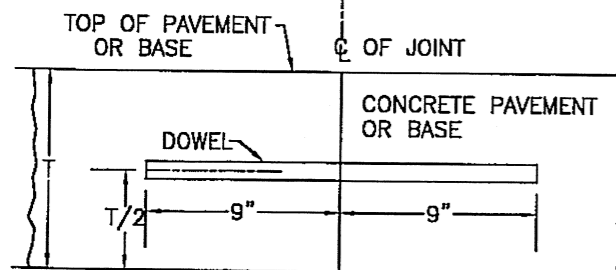


SECTION-452 PLAIN CONCRETE (PAVEMENT)



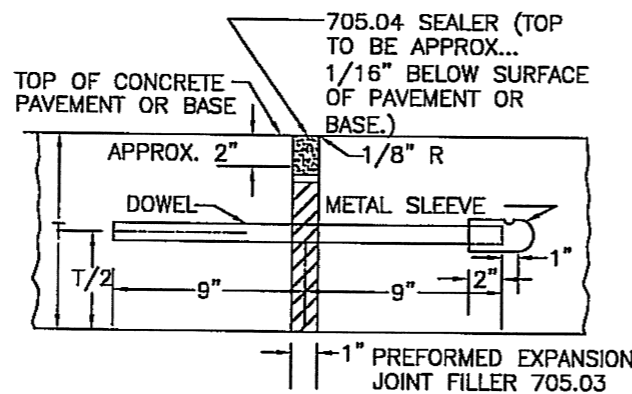
SECTION-305 AND SPECIAL (BASE)

## CONSTRUCTION JOINT

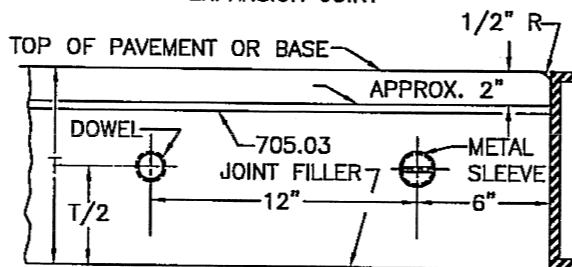


SECTION THROUGH CONSTRUCTION JOINT

## EXPANSION JOINT



SECTION THROUGH EXPANSION JOINT



SIDE ELEVATION OF EXPANSION JOINT

ASSEMBLY: NOTES AND DETAILS SHOWN ON THIS DRAWING SHALL BE CONSIDERED IN CONJUNCTION WITH AND SUPPLEMENTAL TO THE PERTINENT SPECIFICATIONS FOR PORTLAND CEMENT CONCRETE PAVEMENTS AND BASES, AND INCIDENTALS RELATED THERETO.

ALL JOINTS SHALL BE CONSTRUCTED NORMAL TO THE CENTERLINE OF THE PAVEMENT LANE UNLESS OTHERWISE DIRECTED.

WHERE DOWELS ARE SPECIFIED THEY SHALL BE ROUND, STRAIGHT STEEL BARS OF THE SIZE INDICATED IN THE FOLLOWING TABLE, AND SHALL BE EPOXY COATED ODOT 709.13. DOWELS SHALL BE SPACED AT 12" CENTERS, BEGINNING 6" FROM THE LONGITUDINAL JOINT.

BASKET SUPPORTS SHALL BE USED FOR POSITIONING OF THE DOWEL BARS AS SPECIFIED IN THE FOLLOWING TABLE, PROVIDE A FUSION-BONDED EPOXY COATED BASKET DOWEL ASSEMBLY. REPAIR UNCOATED AREAS WITH SURFACE PREPARATION AND PATCHING MATERIAL EQUIVALENT TO THE ORIGINAL EPOXY COATING.

DOWEL SIZE	
THICKNESS OF PAVEMENT	DIAMETER OF DOWEL
8" OR LESS	1"
9"	1 1/8"
10"	1 1/4"
OVER 10"	AS SHOWN ON PLANS

ASSEMBLY: EACH JOINT ASSEMBLY USED TO HOLD DOWELS IN POSITION SHALL BE CONTINUOUS BETWEEN LONGITUDINAL JOINTS OR BETWEEN LONGITUDINAL JOINT AND PAVEMENT EDGE.

THE ASSEMBLY SHALL BE FIRMLY HELD IN PROPER POSITION BY AT LEAST EIGHT 1/2" STEEL PINS DRIVEN AT AN ANGLE TO BRACE THE ASSEMBLY FROM LATERAL AND VERTICAL DISPLACEMENT DURING THE PLACING OF THE CONCRETE. THESE PINS SHALL BE AT LEAST 18" IN LENGTH. TWO OF THESE PINS SHALL BE DRIVEN OPPOSITE EACH OTHER AT EACH END OF THE ASSEMBLY AND THE REMAINING PINS SHALL BE DRIVEN IN STAGGERED POSITIONS ON EACH SIDE OF THE ASSEMBLY. IN EXCEPTIONAL CASES WHERE IT IS IMPRACTICAL TO USE THE 18" LENGTH PINS, SUCH AS WHERE HARDPAN OR ROCK IS ENCOUNTERED, THE ENGINEER MAY AUTHORIZE USE OF SHORTER PINS PROVIDED THE ASSEMBLY IS HELD FIRMLY. WHERE THE ASSEMBLY IS PLACED ON GRANULAR MATERIAL WHICH MAY ALLOW SETTLEMENT OR DISTORTION OF THE ASSEMBLY, A MINIMUM OF 6 STEEL PLATES, EACH HAVING A BEARING AREA OF APPROXIMATELY 25 SQUARE INCHES AND A CROSS-SECTION WHICH WILL NOT BEND UNDER THE IMPOSED LOAD, SHALL BE PLACED UNDER THE ASSEMBLY. ONE PLATE SHALL BE USED AT EACH OF THE FOUR END PINS. THE REMAINING PLATES SHALL BE SPACED UNIFORMLY ON EACH SIDE OF THE ASSEMBLY. THE METHOD OF STAKING AND PLACING BEARING PLATES SHALL BE APPROVED BY THE ENGINEER.

DOWEL SPACING IS SHOWN FOR PAVEMENT LANES OF EVEN FOOT WIDTHS. WHERE OTHER WIDTHS ARE SPECIFIED, STANDARD CAGES MAY BE USED WITH DOWEL SPACINGS ADJUSTED AS FOLLOWS:

THE 6" DOWEL SPACING SHALL BE MAINTAINED AT THE LONGITUDINAL JOINT. THE SPACING AT THE OUTER EDGE OF THE LANE MAY BE INCREASED UP TO 12". WHERE AN ODD WIDTH OF LANE OCCURS, A DOWEL SHALL BE PLACED 6" FROM THE OUTER EDGE OF THE LANE IF THE STANDARD CAGE WOULD PROVIDE FOR A SPACE EXCEEDING 12". SUCH A DOWEL SHALL BE HELD RIGIDLY IN PROPER POSITION BY A METHOD SATISFACTORY TO THE ENGINEER, OR A DOWEL CAGE OF GREATER LENGTH THAN REQUIRED MAY BE USED BY CUTTING THE ASSEMBLY AND SPLICING TO ATTAIN THE REQUIRED LENGTH.

THIS DRAWING IS INTENDED FOR USE WITH A UNIFORM DEPTH PAVEMENT. WHEN THE PROJECT INVOLVES THE PLACING OF VARIABLE DEPTH PAVEMENT, THE JOINT COMPONENTS SHALL BE HELD IN PLACE IN ACCORDANCE WITH THE METHOD SHOWN IN THE PLAN OR AS APPROVED BY THE ENGINEER.

EXPANSION JOINTS: EXPANSION JOINT FILLER SHALL BE PLACED AT 90° TO THE DOWELS, BOTH HORIZONTALLY AND VERTICALLY, SHALL BE HELD RIGIDLY IN POSITION BY THE USE OF A METAL CAP WHICH SHALL BE REMOVED AT SUCH A TIME IN THE FINISHING OPERATION THAT WILL ENABLE THE BEST WORKMANSHIP IN FINISHING THE JOINT TO THE DIMENSIONS SPECIFIED. JOINT FILLER SHALL BE CONTINUOUS FOR THE FULL WIDTH OF EACH LANE.

SMOOTH DOWELS SHALL BE USED, AND FREE MOVEMENT SHALL BE PROVIDED BY APPLYING A COATING OF AN OIL SUCH AS S.A.E. 140 OR OTHER APPROVED "BOND BREAKING" MATERIAL JUST PRIOR TO PLACING THE CONCRETE, ONE FREE END OF EACH DOWEL SHALL BE EQUIPPED, AFTER COATING, WITH A METAL SLEEVE APPROXIMATELY 3" LONG, DESIGNED WITH CRIMPED END AND OVERLAPPING SEAMS, FITTING CLOSELY AROUND THE DOWEL. EACH SLEEVE SHALL BE PROVIDED WITH A DEPRESSION OR INTERIOR PROJECTION TO ACT AS A STOP FOR THE DOWEL, SUFFICIENTLY DISTANT FROM THE CRIMPED END TO ALLOW 1" FOR LONGITUDINAL DOWEL MOVEMENT WITH PAVEMENT EXPANSION. IN LIEU OF THIS REQUIREMENT, ANY OTHER MEAN MAY BE USED IF APPROVED BY THE ENGINEER.

CONTRACTION JOINTS: DOWELS SHALL BE USED IN CONTRACTION JOINTS IN 451 AND SPECIAL REINFORCED CONCRETE PAVEMENT. THEY SHALL BE SMOOTH BARS, AND FREE MOVEMENT SHALL BE PROVIDED BY APPLYING A COATING OF AN OIL SUCH AS S.A.E. 140 OR OTHER "BOND-BREAKING" MATERIAL JUST PRIOR TO PLACING THE CONCRETE.

CONTRACTION JOINTS OF THE TYPE SPECIFIED SHALL BE SPACED IN ACCORDANCE WITH THE FOLLOWING TABLE:

CONTRACTION JOINT SPACING	
TYPES OF PAVEMENT OR BASE	MAXIMUM SPACING BETWEEN JOINTS
451 AND SPECIAL REINFORCED CONCRETE PAVEMENT	17'-0"
305 AND SPECIAL CONCRETE BASE	17'-0"
452 PLAIN CONCRETE PAVEMENT	17'-0"

CONSTRUCTION JOINTS: EITHER SMOOTH OR DEFORMED DOWELS SHALL BE USED IN CONSTRUCTION JOINTS IN ALL PORTLAND CEMENT CONCRETE PAVEMENT AND BASE. DOWELS SHALL BE THOROUGHLY CLEANED OF ALL OIL OR OTHER SUBSTANCE THAT WOULD BREAK THE BOND BETWEEN THE STEEL AND CONCRETE. THE JOINT SHALL BE FORMED BY USING A 2" MINIMUM THICKNESS WOOD BULKHEAD OR EQUAL, WITH OPENINGS PROVIDED FOR DOWEL BARS SPACED AT INTERVALS NOT TO EXCEED 12" AS DIRECTED. THE BULKHEAD SHALL BE SHAPED TO FIT THE TYPICAL SECTION OF THE PAVEMENT OR BASE, AND DOWELS SHALL BE HELD RIGIDLY IN POSITION DURING THE PLACING OF THE CONCRETE. THE CONCRETE SHALL BE CAREFULLY FINISHED SO AS TO PROVIDE A NEAT, TIGHT FITTING JOINT THAT WILL NOT REQUIRE SEALING.

CONSTRUCTION JOINTS IN REINFORCED CONCRETE PAVEMENT SHALL NOT BE LOCATED AT A CONTRACTION JOINT, NOR SHALL THEY BE LOCATED CLOSER THAN 10' TO ANY OTHER PARALLEL JOINT. IN PLAIN CONCRETE PAVEMENT OR BASE, THEY SHALL NOT BE LOCATED CLOSER THAN 5' TO ANOTHER PARALLEL JOINT.

## CITY OF CLEVELAND

DEPARTMENT OF PUBLIC SERVICE  
DIVISION OF ENGINEERING & CONSTRUCTION  
JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
STANDARD CONSTRUCTION DRAWING  
PAVEMENT JOINTS

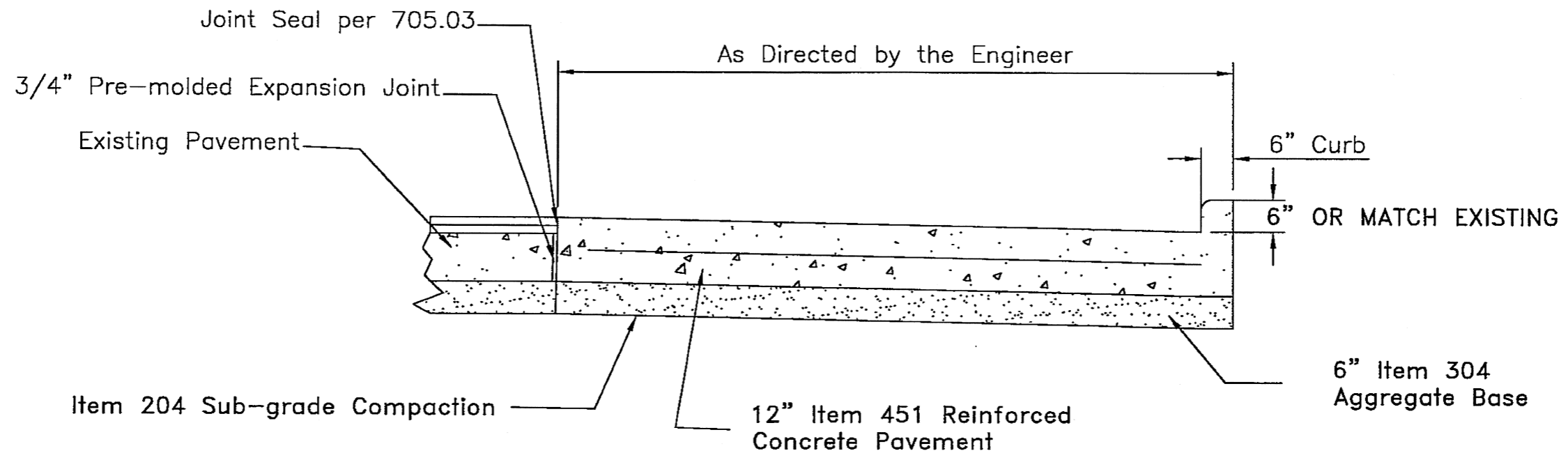
NOT TO SCALE  
DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08

SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08

APPROVED: *[Signature]* DATE: 7-8-08

COMMISSIONER OF ENGINEERING & CONSTRUCTION

FILE NO.: CONC 1 SHEET 4/4

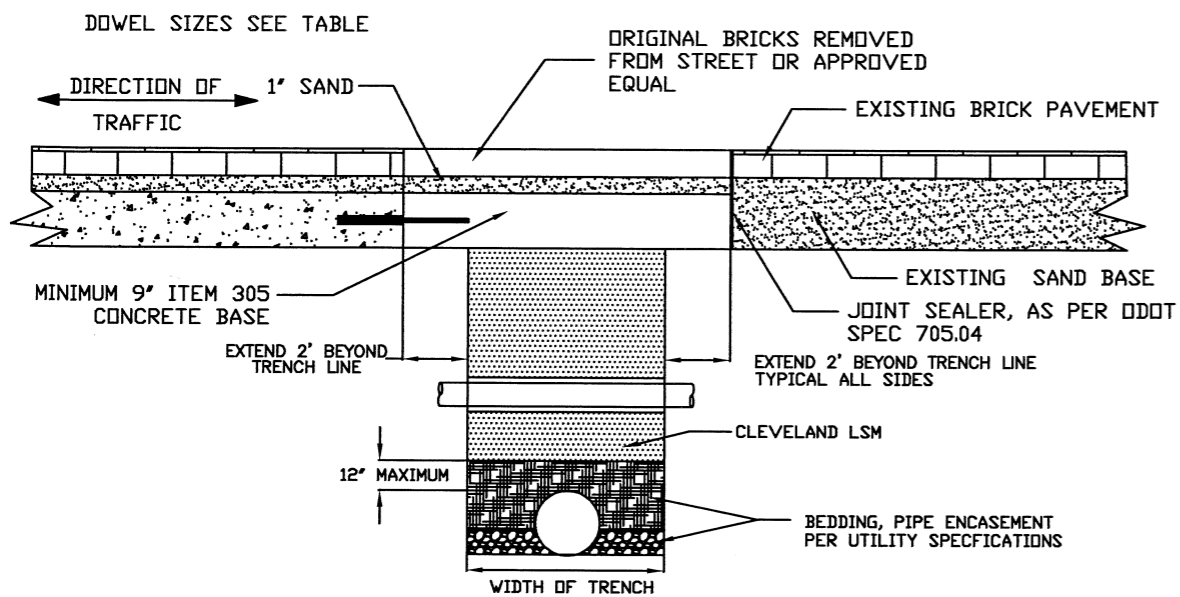


The work performed under this item will be paid for per square yard under item "Concrete Bus Pad" includes:

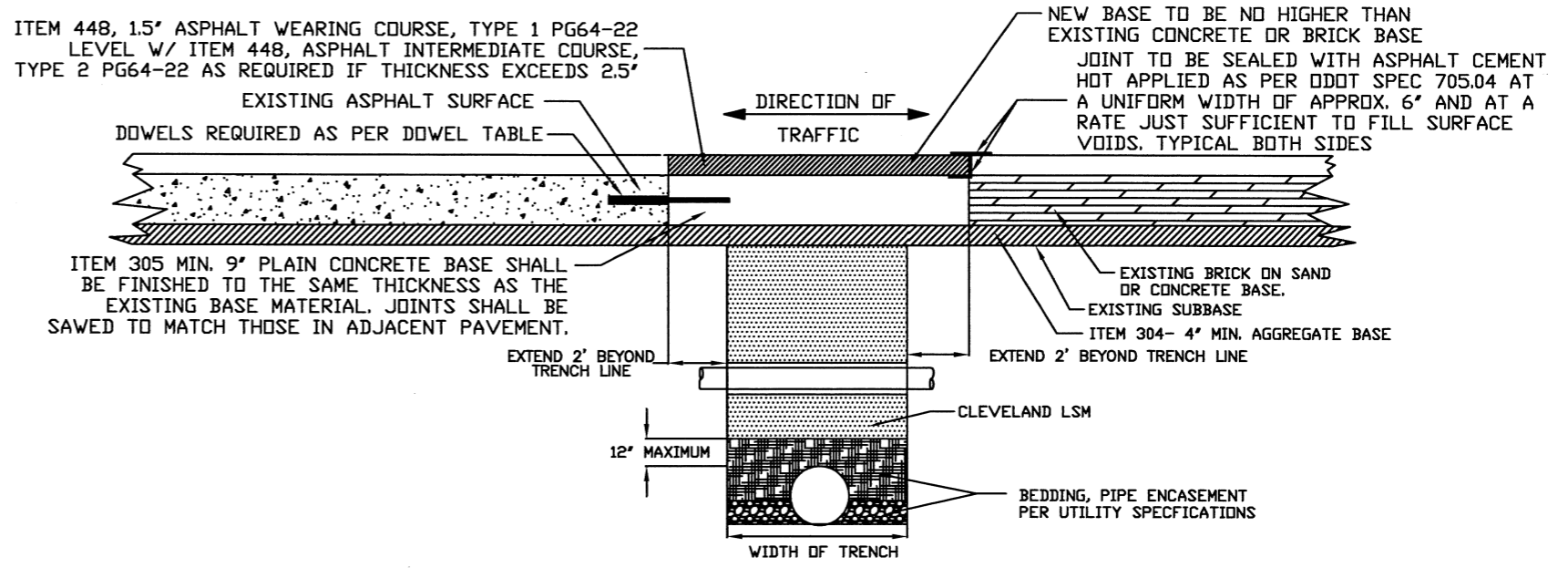
- 1 - Full depth sawcutting, removal of existing pavement including subbase.
- 2 - Excavation and embankment required to achieve proper subgrade.
- 3 - Item 304 - Aggregate Base
- 4 - Item 451 - 12" Reinforced Concrete Pavement Joint spacing 17 feet maximum and minimum 5 feet.  
12 inch (W4) X 6 inch (w8.5) epoxy coated reinforcing mesh meeting ODOT 709.14
- 5 - Item 604 - Integral Concrete curb as per plan
- 6 - All incidental items to install Concrete Bus pad in-place as per detail shown herein.

<p><b>CITY OF CLEVELAND</b>          DEPARTMENT OF PUBLIC SERVICE          DIVISION OF ENGINEERING &amp; CONSTRUCTION          JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE          STANDARD CONSTRUCTION DRAWING          TYPICAL CONSTRUCTION          DETAILS FOR BUS PAD          NOT TO SCALE</p>	
DRAWN BY: <u>R. PLIODZINSKAS</u>	DATE: <u>4/8/08</u>
SUBMITTED BY: <u>W. MCLAUGHLIN</u>	DATE: <u>4/8/08</u>
APPROVED: <u><i>[Signature]</i></u>	DATE: <u>4/14/08</u>
COMMISSIONER OF ENGINEERING & CONSTRUCTION	
FILE NO. : BP 1	SHEET 1/1



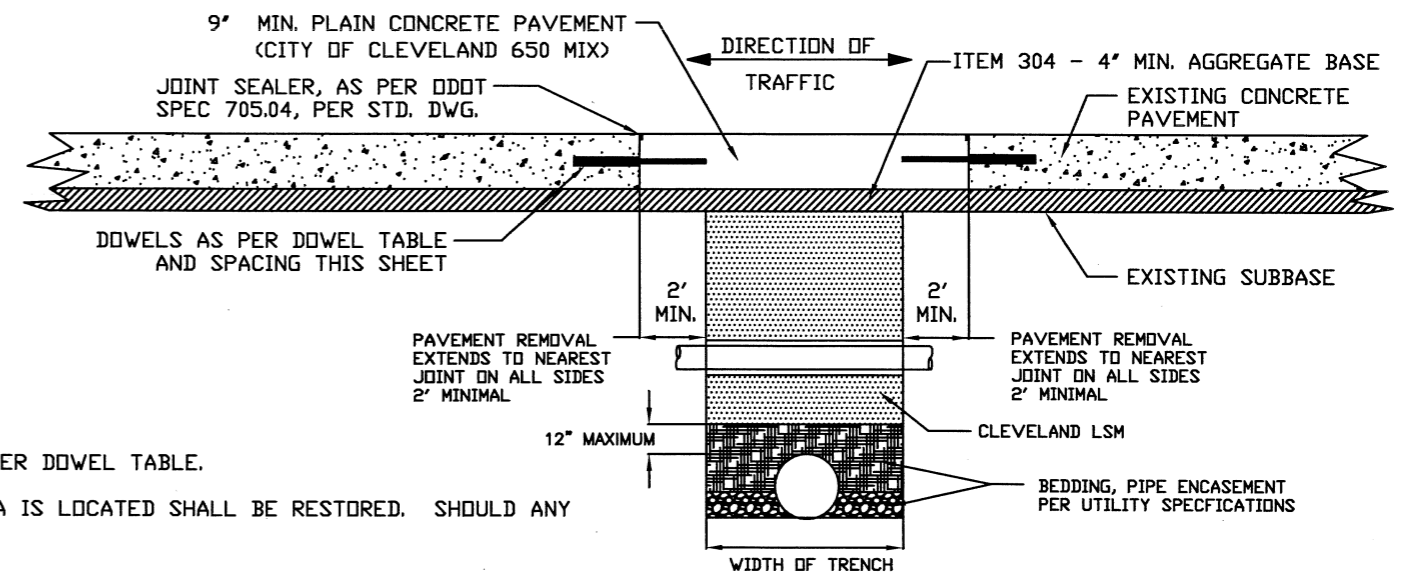


PAVEMENT REPAIR IN BRICK PAVEMENT



ASPHALT ON CONCRETE OR BRICK BASE

DOWEL TABLE	
PAVEMENT THICKNESS	DIAMETER OF DOWELS
8" OR LESS	1"
9"	1 1/8"
10"	1 1/4"
OVER 10"	AS DIRECTED
DOWELS SHALL BE SPACED EVERY 30"	



CONCRETE PAVEMENT

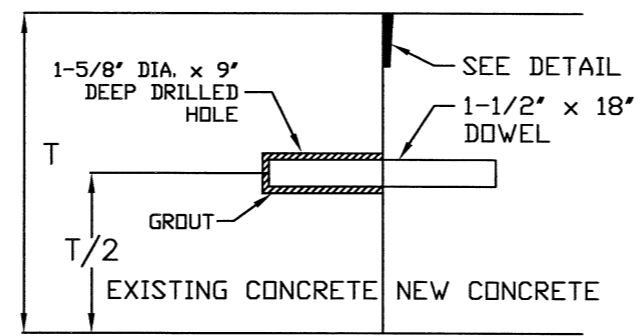
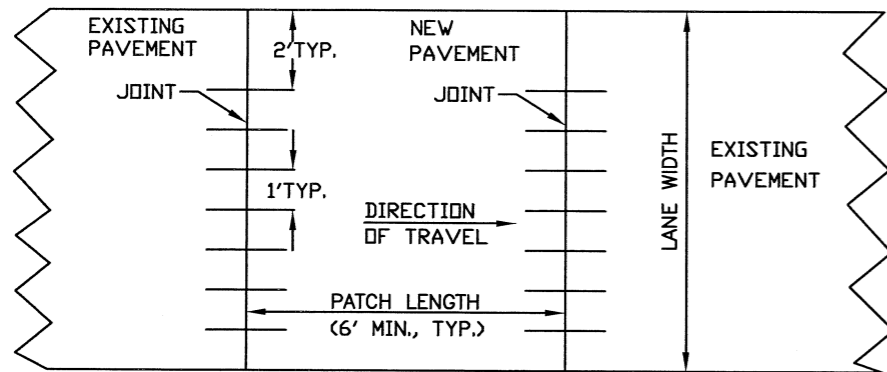
- NOTES:
- ALL PAVEMENT OPENINGS SHALL BE SAWED FULL DEPTH AND HAVE SMOOTH VERTICAL FACES. DOWELS SHALL BE REQUIRED, AS PER DOWEL TABLE.
  - CONCRETE REPAVING SHALL BE PERFORMED IN SUCH A MANNER THAT THE ENTIRE LANE AND/OR SLAB IN WHICH THE REPAIR AREA IS LOCATED SHALL BE RESTORED. SHOULD ANY PORTION OF THE REPAIR AREA EXTEND INTO AN ADJACENT LANE AND/OR SLAB, THAT LANE OR SLAB SHALL ALSO BE REPAVED.
  - EXTEND OVERCUT IN LONGITUDINAL DIRECTION TWO FEET (2') ONTO UNDISTURBED SUBGRADE.
  - ASPHALT RESURFACING SHALL BE PERFORMED IN SUCH A MANNER THAT THE ENTIRE LANE IN WHICH THE REPAIR AREA IS LOCATED SHALL BE RESTORED. SHOULD ANY PORTION OF THE REPAIR AREA EXTEND INTO AN ADJACENT LANE, THAT LANE SHALL ALSO BE RESURFACED. THE RESURFACING SHALL TAKE PLACE FROM BEGINNING PROJECT TO END PROJECT (I.E. WORK LIMITS). FOR PAVEMENTS WITH A WIDTH OF 40' OR LESS A LANE SHALL BE CONSIDERED 1/2 THE PAVEMENT WIDTH.
  - BRICKS REMOVED FROM A REPAIR SHALL BE STORED IN A SAFE PLACE BY THE CONTRACTOR FOR REUSE. THE CONTRACTOR WILL BE RESPONSIBLE FOR REPLACING ANY BRICKS THAT ARE STOLEN OR DAMAGED AT NO COST TO THE CITY.
  - ALL NEW BRICKS SUPPLIED BY THE CONTRACTOR MUST FIRST BE APPROVED BY THE CITY BEFORE THEY ARE USED.
  - SAWCUTTING: ALL PARTIAL BRICKS SHALL BE SAWCUT. FURTHER, NO BRICK WILL BE PERMITTED TO BE CUT, FOR REPLACEMENT, TO A LENGTH LESS THAN ONE-HALF ITS ORIGINAL LENGTH. THIS MAY REQUIRE SAWCUTTING OF ADJACENT UNDISTURBED BRICK(S).
  - THE PERIMETER FACES OF THE EXISTING BASE MATERIAL SHALL BE CUT BACK TO AS NEARLY VERTICAL ORIENTATION AS POSSIBLE. IF SHEARING OF THE ADJACENT BASE RESULTS, THE CONTRACTOR SHALL REMOVE ADDITIONAL BRICK AND BASE AS SHOWN IN THE DETAIL.
  - THE MAXIMUM WIDTH OF A BRICK MORTAR JOINT SHALL BE 1/2" THIS RESTRICTION WILL ALSO APPLY TO THE PERIMETER OF A REPAIR AREA, WHERE THE ROWS MAY NOT BE PARALLEL TO ONE ANOTHER.
  - MORTARING OF JOINTS: ALL JOINTS SHALL BE MORTARED WITH A 50/50 MIXTURE BY VOLUME OF SAND /CEMENT, TO PROVIDE FOR A FLUSH FINISH. THIS MAY REQUIRE MORE THAN ONE APPLICATION; FURTHER MECHANICAL VIBRATION WILL BE REQUIRED FOR COMPACTION.
  - ALL BACKFILL MATERIALS USED UNDER ANY PAVEMENTS SHALL BE CLEVELAND LSM PLACED FROM THE INITIAL ONE FOOT OVER THE TOP OF UTILITIES, TO THE SUBGRADE.
  - TO PREVENT FLOTATION AND ENTRY OF FLOWABLE FILL INTO ANY OTHER AREAS COVER ALL JOINTS IN CLAY PIPE IN THE TRENCH AREA WITH POLYETHYLENE MATERIAL BEFORE POURING FLOWABLE FILL. REPAIR TECHNIQUES SHALL BE IN ACCORDANCE WITH THE UTILITY COMPANY'S STANDARD REPAIR PROCEDURES.

REVISED 8/3/09

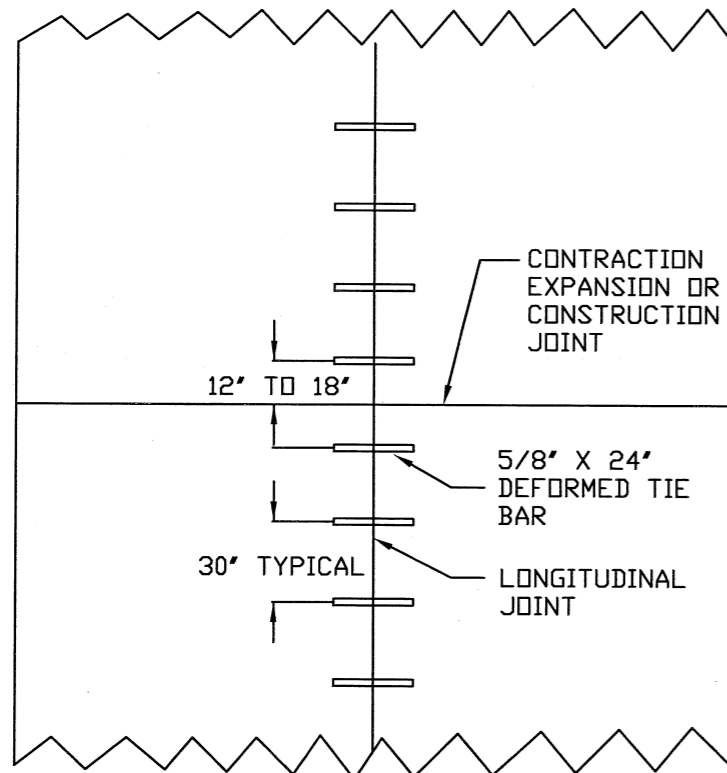
**CITY OF CLEVELAND**  
 DEPARTMENT OF PUBLIC SERVICE  
 DIVISION OF ENGINEERING & CONSTRUCTION  
 JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
**STREET OPENING REPAIR-SUPPLEMENTAL**  
 NOT TO SCALE

DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08  
 SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08

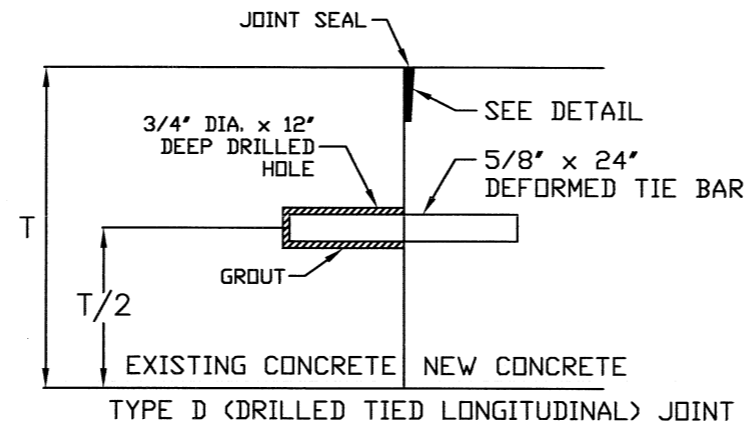
APPROVED: [Signature] DATE: 4/14/08  
 COMMISSIONER OF ENGINEERING AND CONSTRUCTION



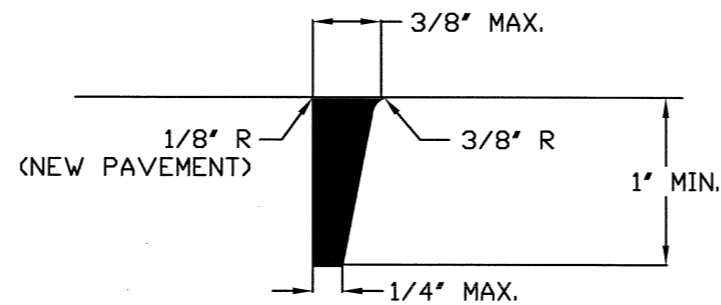
SECTION THROUGH TRANSVERSE JOINT



TIE BAR SPACING



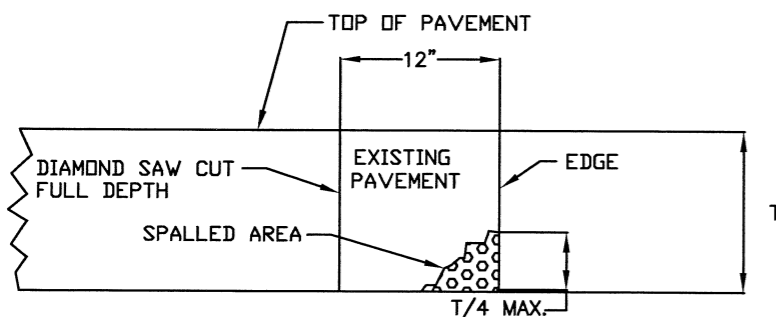
TYPE D (DRILLED TIED LONGITUDINAL) JOINT



GROOVE & SEAL DETAIL

NOTES:

- ALL JOINTS SHALL BE CONSTRUCTED NORMAL TO THE CENTERLINE OF THE PAVEMENT LANE.
- ALL DOWEL HOLES SHALL BE DRILLED BY A MECHANICAL DEVICE THAT WILL ALLOW INDEPENDENT ADJUSTMENT OF ALL DRILL SHAFTS IN THE HORIZONTAL AND VERTICAL DIRECTION. THE DEVICE SHALL BE CAPABLE OF DRILLING A MINIMUM OF THREE HOLES AT ONE TIME.
- ALL SMOOTH DOWELS SHALL BE COATED WITH A THIN LAYER OF OIL OR OTHER "BOND-BREAKING" MATERIAL AFTER THEY HAVE BEEN INSTALLED IN THE EXISTING PAVEMENT AND JUST PRIOR TO PLACING THE PATCH. ALL DOWELS SHALL BE PLACED PARALLEL TO THE PAVEMENT SURFACE AND THE CENTERLINE OF THE PAVEMENT LANE.
- ADDITIONAL PAVEMENT REMOVAL:** IF AFTER THE REMOVAL OF THE PAVEMENT FROM THE AREA TO BE REPAIRED, THE FACE OF THE REMAINING PAVEMENT IS SPALLED OF DETERIORATED FOR A HEIGHT GREATER THAN ONE-FOURTH (1/4) THE THICKNESS OF THE RIGID PAVEMENT, ADDITIONAL REMOVAL SHALL BE MADE AS SHOWN.
- LONGITUDINAL JOINT:** FOR PATCHES 10 FEET OR GREATER IN LENGTH THE LONGITUDINAL JOINT SHALL BE CONSTRUCTED AS PER STANDARD DRAWING. SPACING OF THE TIE BARS SHALL BE NO MORE THAN 30' NOR LESS THAN 24'.
- TYPE D (DRILLED TIED LONGITUDINAL) JOINT:** TYPE D JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ODDT SPEC. 255.05. GROUT SHALL MEET THE REQUIREMENTS OF ODDT SPEC. 255.02. THE USE OF 5/8" EXPANSION ANCHORS, FF-S-325, GROUP VIII, TYPE I OF GROUP II, TYPE 4, CLASS I MAY BE USED IN LIEU OF THE 5/8" x 24" DEFORMED TIE BAR AND SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. THE USE OF SELF DRILLING EXPANSION SHIELD ANCHORS, FF-S-325, GROUP III, TYPE I (A) AND (C) SHALL NOT BE PERMITTED.
- SEALING JOINTS:** SAWED OR HAND FORMED JOINTS SHALL BE SEALED WITH ODDT 705.04 JOINT SEALER.



ADDITIONAL PAVEMENT REMOVAL

REVISED 8/3/09

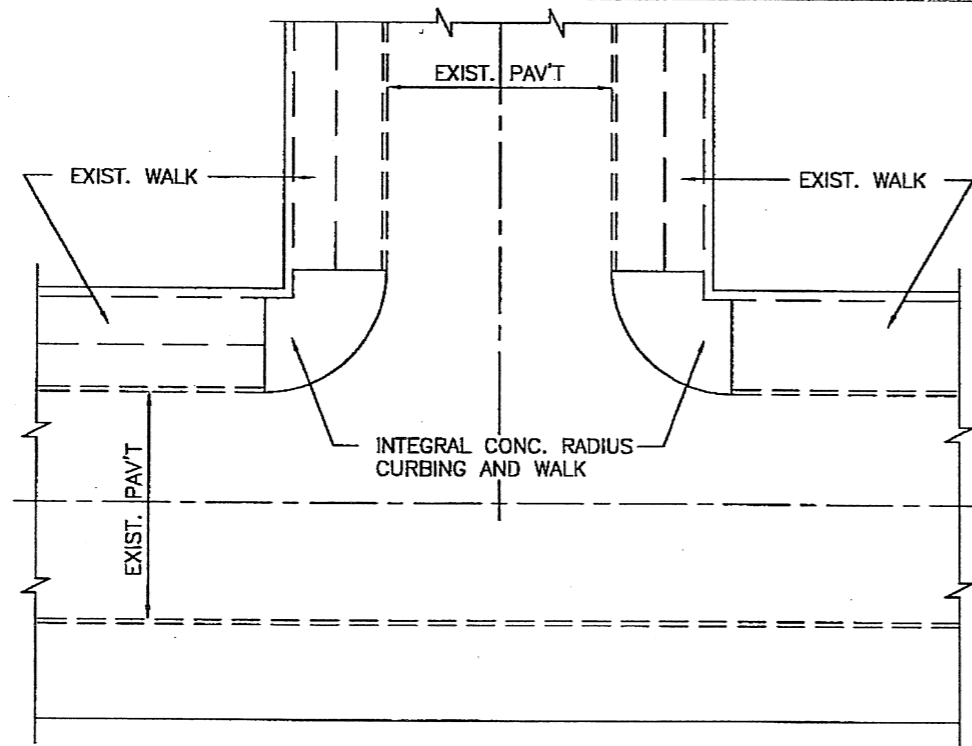
CITY OF CLEVELAND

DEPARTMENT OF PUBLIC SERVICE  
DIVISION OF ENGINEERING & CONSTRUCTION  
JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
STREET OPENING REPAIR  
NOT TO SCALE

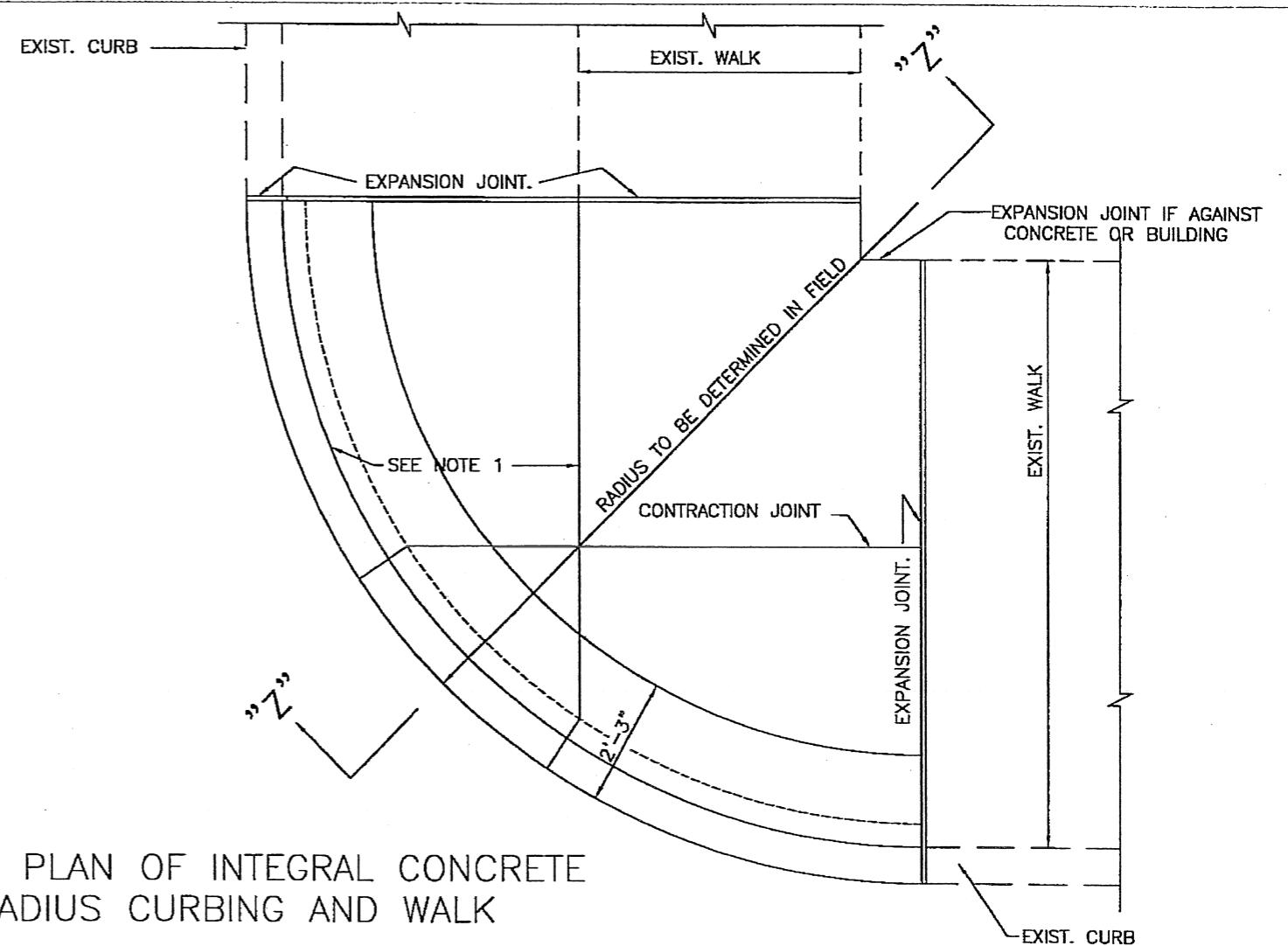
DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08  
SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08

APPROVED: *[Signature]* DATE: 4/14/08

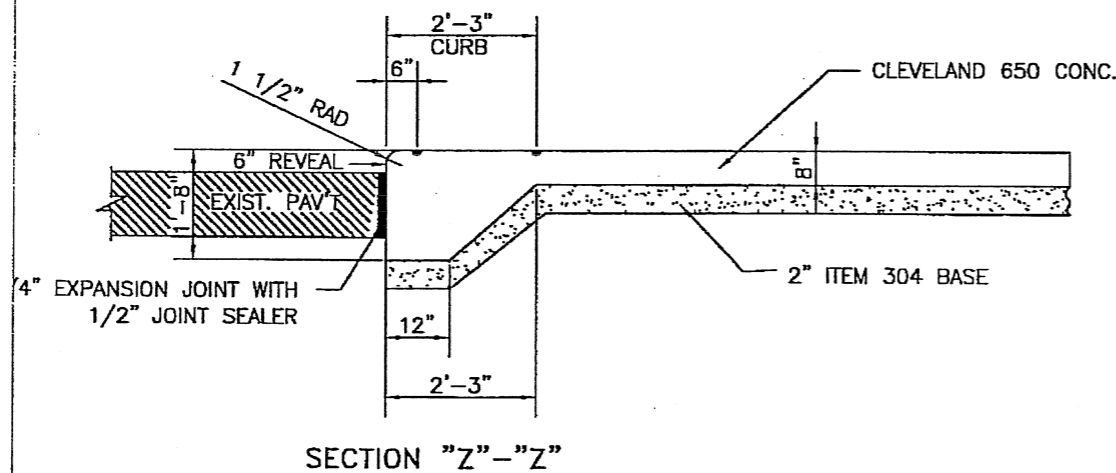
COMMISSIONER OF ENGINEERING AND CONSTRUCTION



TYPICAL PLAN SHOWING INTEGRAL CONCRETE RADIUS CURBING AND WALK



DETAIL PLAN OF INTEGRAL CONCRETE RADIUS CURBING AND WALK

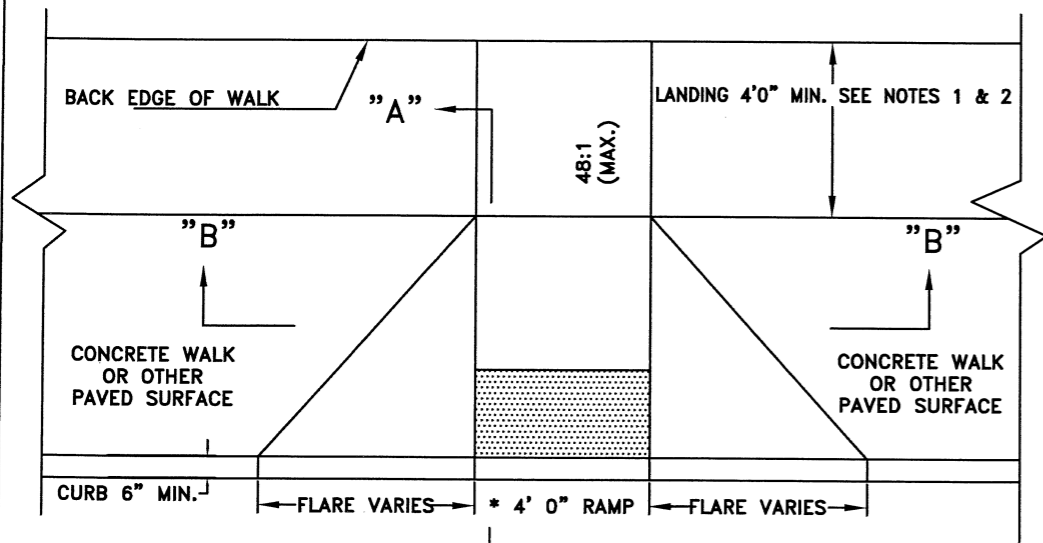


NOTES

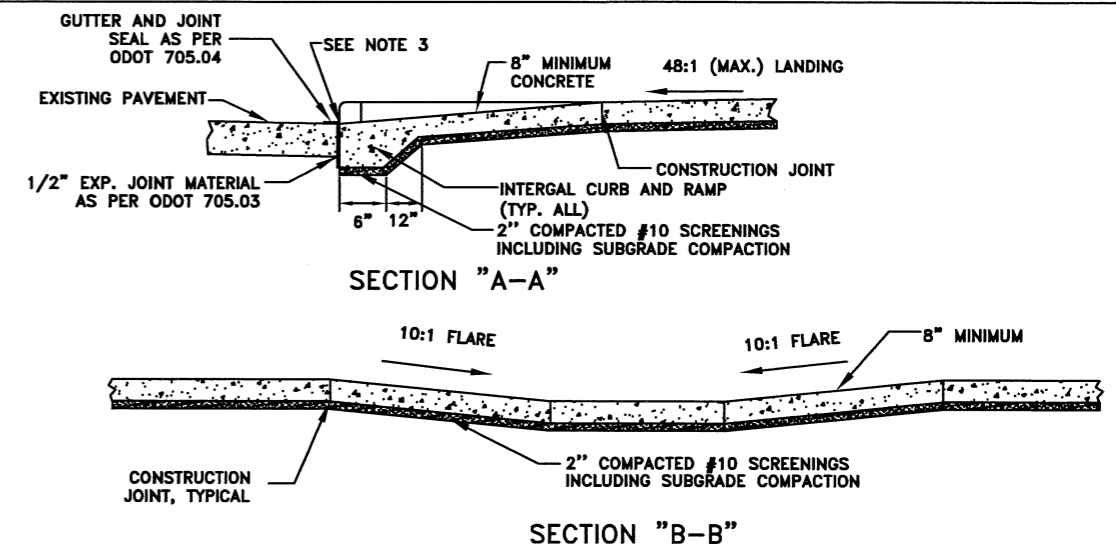
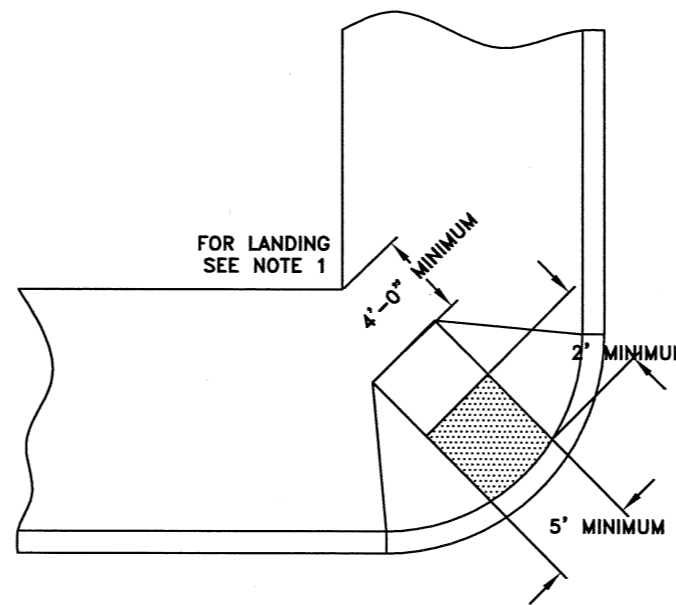
- 1- THE WALK SURFACE SHALL BE CUT INTO SLABS NOT LONGER THAN SIX FEET ON ANY ONE SIDE BY JOINTING IMMEDIATELY BEFORE FINISHING. JOINTS SHALL BE FORMED 6" FROM THE EDGE OF ANY THICKENED SECTION. THESE JOINTS ARE TO BE 1/4" DEEP WITH EDGES ROUNDED TO A 1/4" RADIUS.
- 2- NUMBER OF RAMPS (1 OR 2) IS DEPENDENT ON FIELD CONDITIONS AND NUMBER OF REQUIRED PEDESTRIAN CROSSINGS.
- 3- ALL REQUIRED HANDICAP RAMPS, LAYOUT, AND CONCRETE SHALL BE INCLUDED IN THE PER SQ. FT. OR LUMP SUM BID ITEM FOR:  
 "INTEGRAL RADIUS CURBING AND RAMP WITH STAMPED TRUNCATED DOMES"  
 OR  
 "INTEGRAL RADIUS CURBING AND RAMP WITH ARMOR TILES" AS INDICATED IN THE SCHEDULE OF ITEMS.

CITY OF CLEVELAND  
 DEPARTMENT OF PUBLIC SERVICE  
 DIVISION OF ENGINEERING & CONSTRUCTION  
 JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
 STANDARD CONSTRUCTION DRAWING  
 DETAIL PLAN FOR INTEGRAL CONCRETE RADIUS CURBING & WALK  
 NOT TO SCALE  
 DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08  
 SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08  
 APPROVED: *Russell* DATE: 4/14/08  
 COMMISSIONER OF ENGINEERING & CONSTRUCTION

FILE NO. :244-ME	SHEET 1/1	⑩
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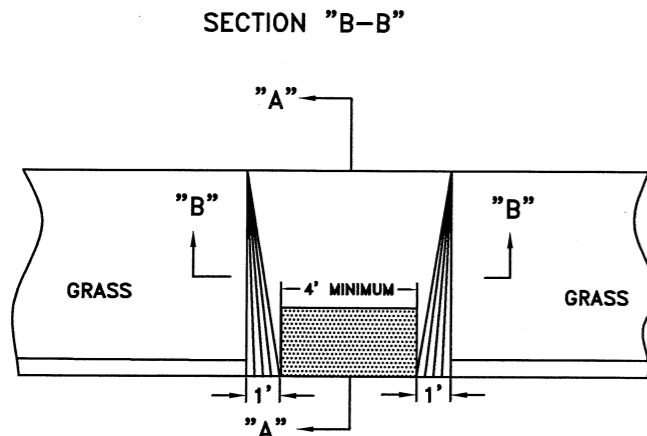
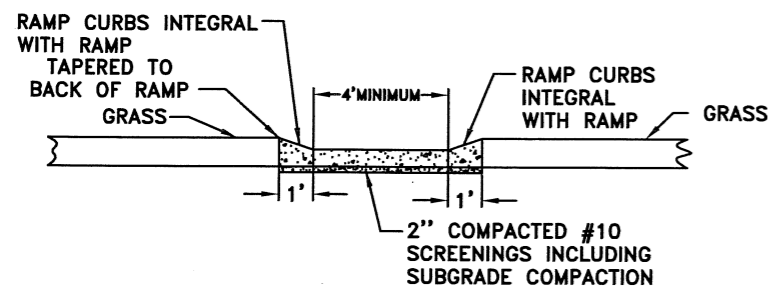
\* 3'-0" RAMP WIDTH MAY BE ACCEPTED WITH THE APPROVAL OF ENGINEER



CR-1

NOTES:

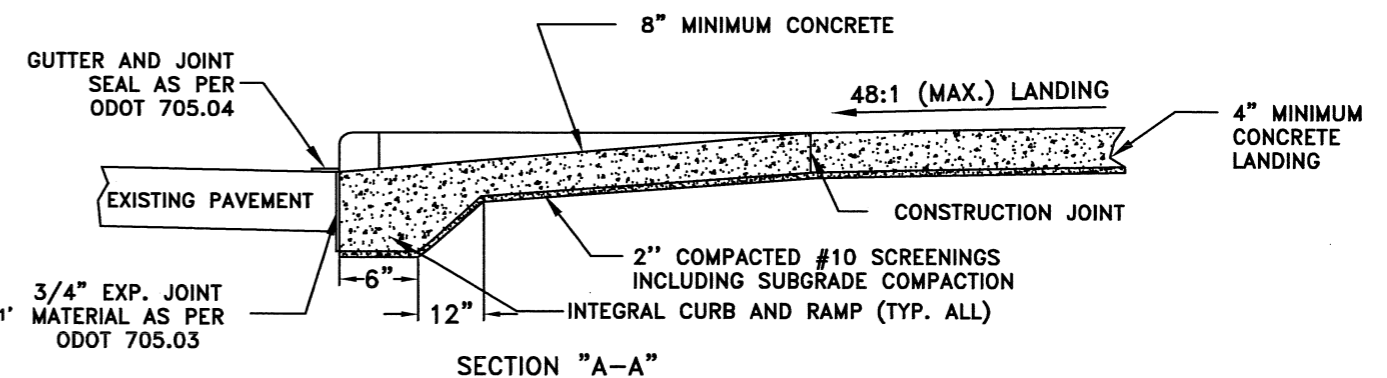
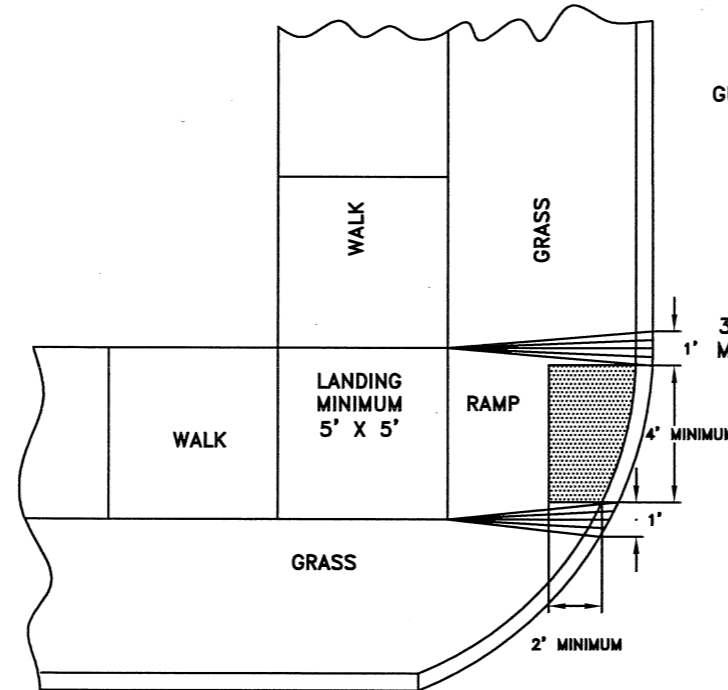
- 1) MAY BE REDUCED TO 3'-0" IN EXISTING SIDEWALK IF THE LANDING IS CONSTRAINED ALONG THE BACK EDGE.
- 2) WHERE THE LANDING IS LESS THAN 4'-0", THE RAMP FLARE SHALL BE INCREASED TO 12:1.
- 3) GUTTER SEAL, 705.04, 4" WIDE THE BOTTOM EDGE OF THE ADJACENT PAVEMENT AND GUTTER LINE.
- 4) SURFACE TEXTURE OF ALL RAMPS SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE RAMP SLOPES AS DIRECTED BY THE ENGINEER AND SHALL BE ROUGHER THAN ADJACENT WALK.



\* 3'-0" RAMP WIDTH MAY BE ACCEPTED WITH THE APPROVAL OF ENGINEER

NOTES:

- 1-THE BOTTOM EDGE OF THE CURB RAMP SHALL BE FLUSH WITH THE EDGE OF THE ADJACENT PAVEMENT AND GUTTER LINE.
- 2-SURFACE TEXTURE OF ALL RAMPS SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE RAMP SLOPES AS DIRECTED BY THE ENGINEER AND SHALL BE ROUGHER THAN ADJACENT WALK.
- 3-GUTTER SEAL, 705.04, 4" WIDE THE BOTTOM EDGE OF THE ADJACENT PAVEMENT AND GUTTER LINE.



CR-2

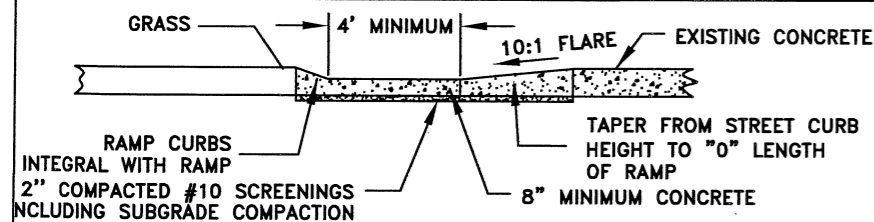
REVISED 12/8/09

CITY OF CLEVELAND  
 DEPARTMENT OF PUBLIC SERVICE  
 DIVISION OF ENGINEERING & CONSTRUCTION  
 JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
 TYPICAL CONSTRUCTION  
 CURB RAMPS  
 NOT TO SCALE

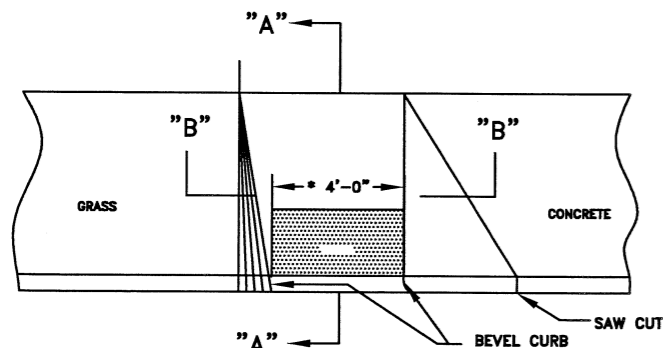
DRAWN BY: R. PIODZINSKAS DATE: 4/8/08  
 SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08

APPROVED: *[Signature]* DATE: 4/14/08  
 COMMISSIONER OF ENGINEERING AND CONSTRUCTION

FILE NO.: CR-1 SHEET 1/6

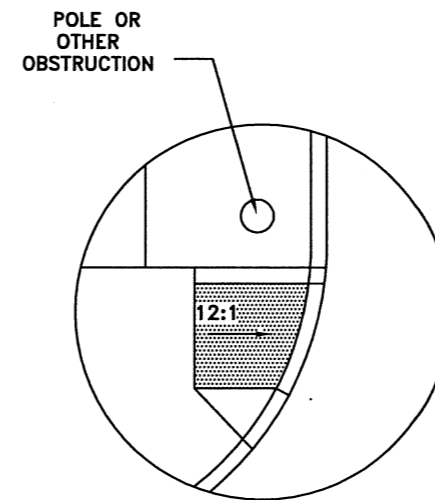
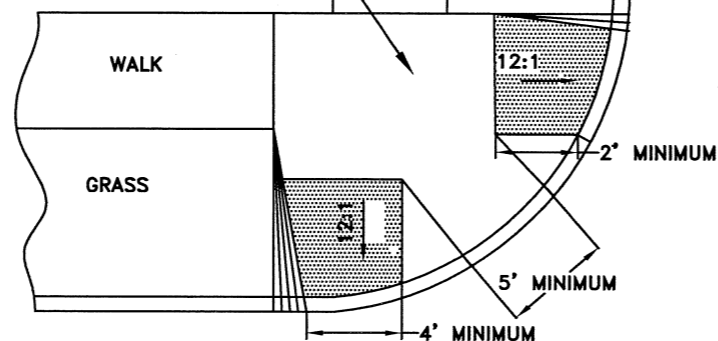


SECTION "B-B"

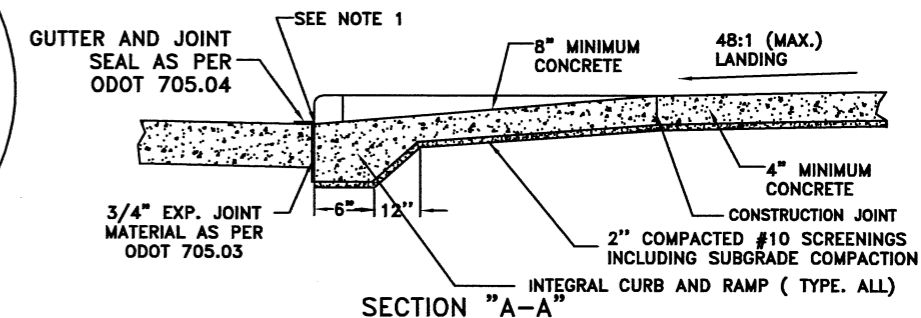


\* 3'-0" RAMP WIDTH MAY BE ACCEPTED WITH THE APPROVAL OF ENGINEER

LANDING MINIMUM 5' X 5'

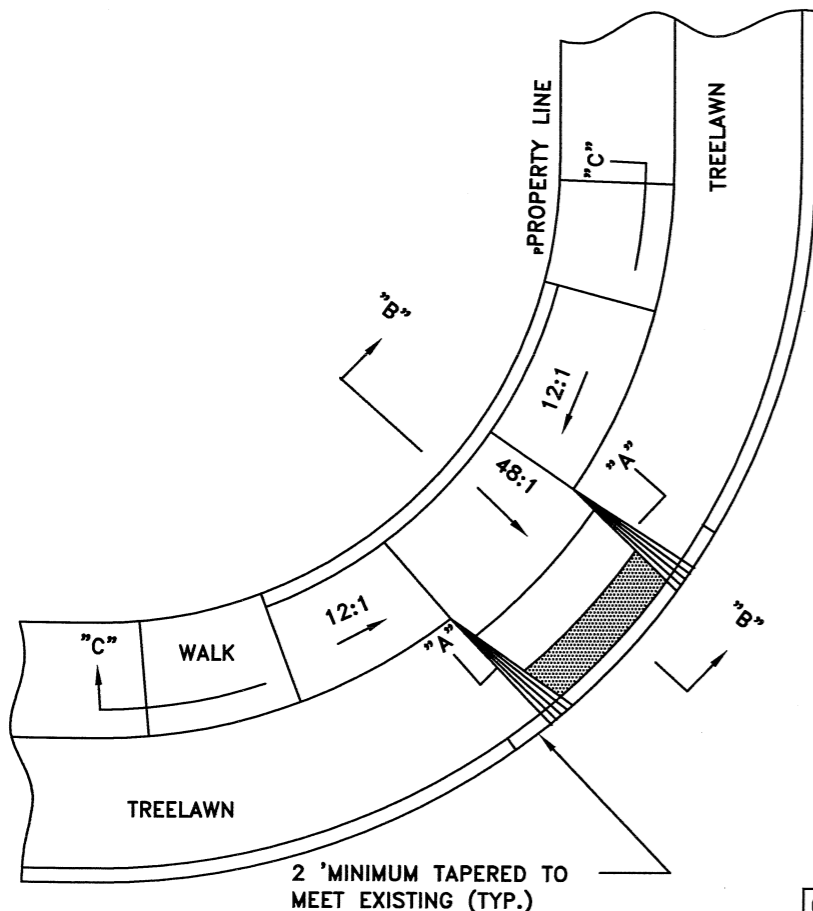


LAYOUT WHEN OBSTRUCTION PRESENT, AS DIRECTED BY THE ENGINEER



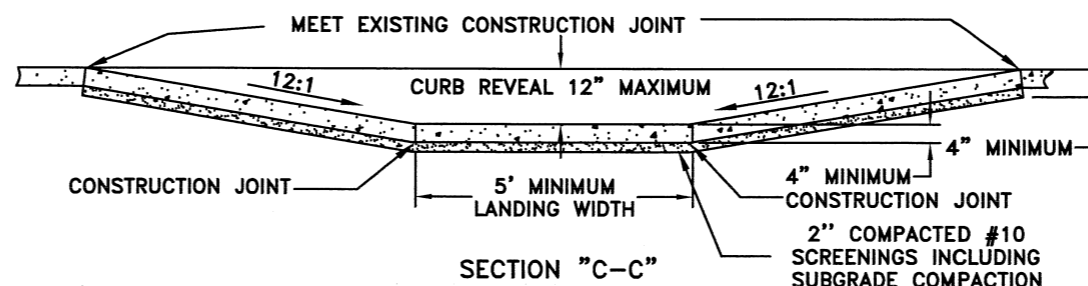
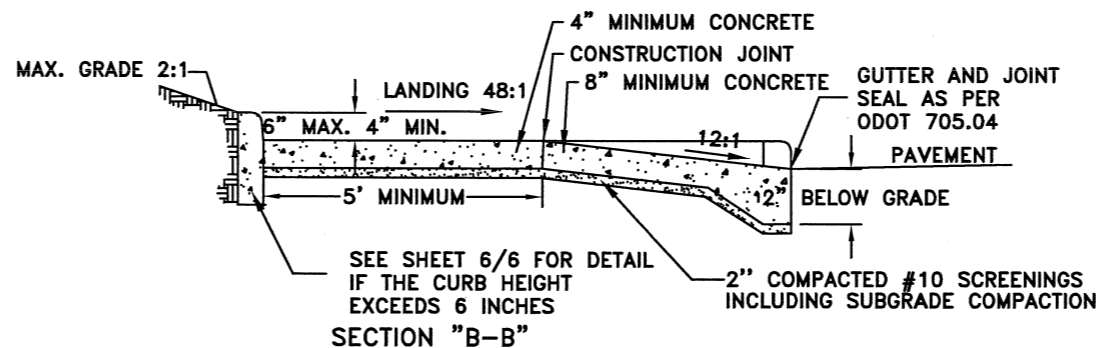
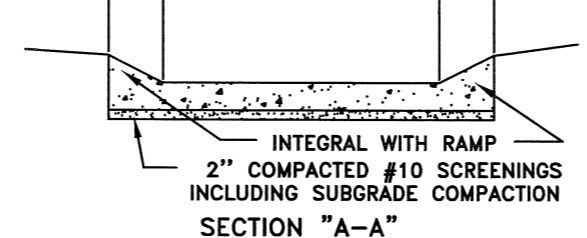
CR-3

- NOTES:
- 1-THE BOTTOM EDGE OF THE CURB RAMP SHALL BE FLUSH WITH THE EDGE OF THE ADJACENT PAVEMENT AND GUTTER LINE.
  - 2-SURFACE TEXTURE OF ALL RAMPS SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE RAMP SLOPES AS DIRECTED BY THE ENGINEER AND SHALL BE ROUGHER THAN ADJACENT WALK.
  - 3-BARRIER CURB INSTALLATION ONLY WHEN ADJACENT OBSTACLE PRESENT AND AS DIRECTED BY THE ENGINEER



CR-4

1' MIN. 5' MINIMUM 1' MIN.



- NOTES:
- 1 - WHERE A ROLLED CURB EXCEEDS SIX INCHES ABOVE THE WALK, THE CONTRACTOR SHALL INSTALL TYPE "6" CURB (6" X 18"). ROLLED CURB SHALL BE INSTALLED ONLY AT THE DIRECTION OF THE ENGINEER.
  - 2 - THE BOTTOM EDGE OF THE CURB SHALL BE FLUSH WITH THE EDGE OF THE ADJACENT PAVEMENT AND GUTTER LINE.
  - 3 - SURFACE TEXTURE OF ALL RAMPS SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE RAMP SLOPES AS DIRECTED BY THE ENGINEER AND SHALL BE ROUGHER THAN ADJACENT WALK.

REVISED 12/8/09

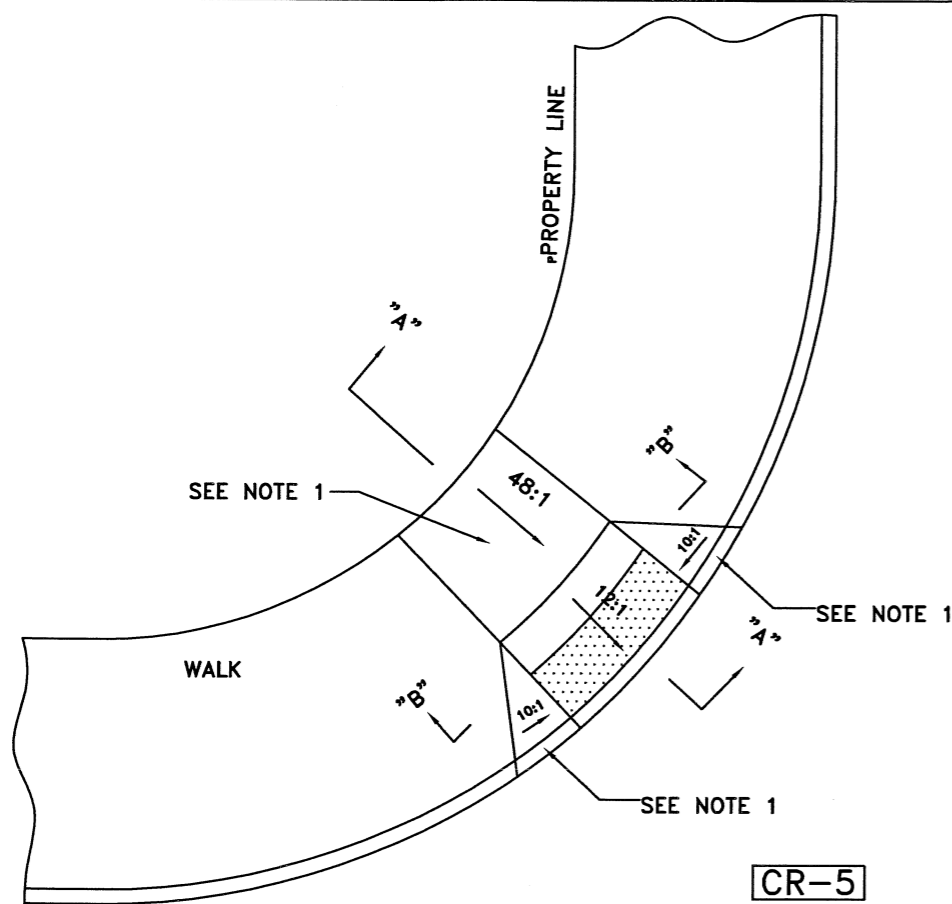
CITY OF CLEVELAND  
DEPARTMENT OF PUBLIC SERVICE  
DIVISION OF ENGINEERING & CONSTRUCTION  
JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
TYPICAL CONSTRUCTION  
CURB RAMPS  
NOT TO SCALE

DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08  
SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08  
APPROVED: *[Signature]* DATE: 4/14/08  
COMMISSIONER OF ENGINEERING AND CONSTRUCTION

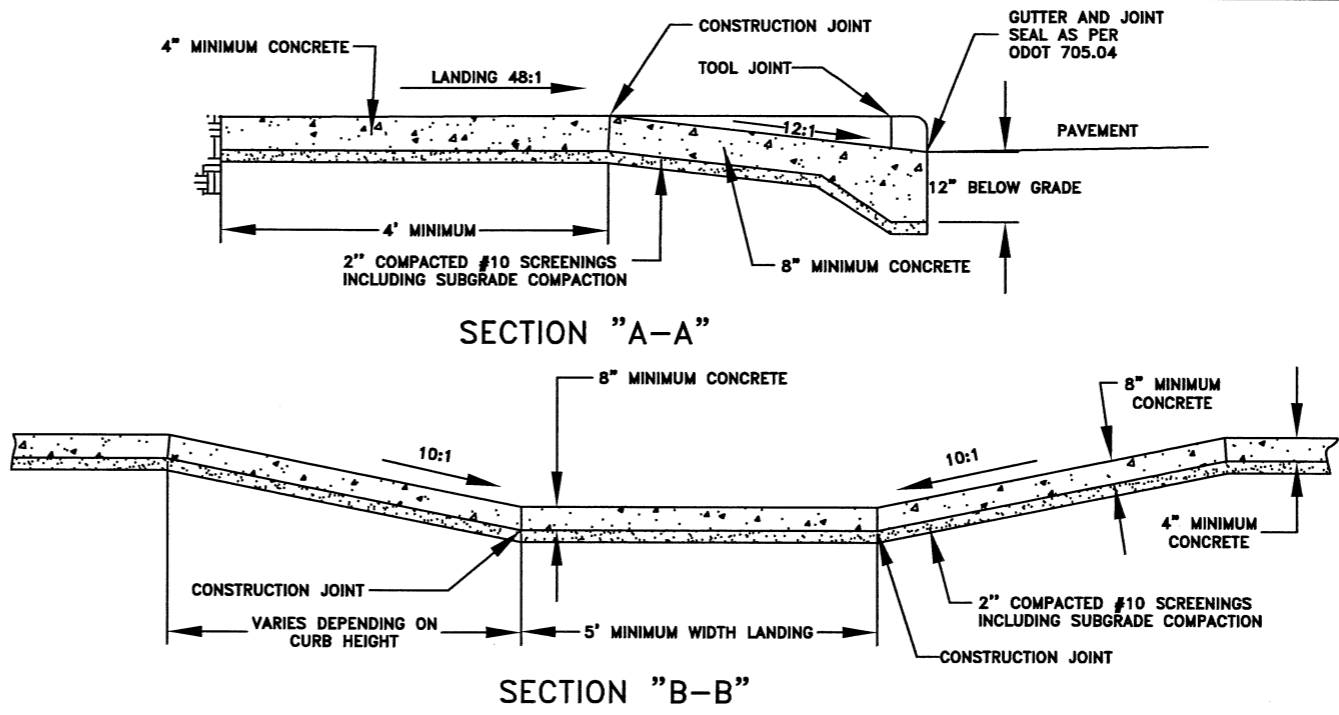
FILE NO.: CR 1

SHEET 2/6

12

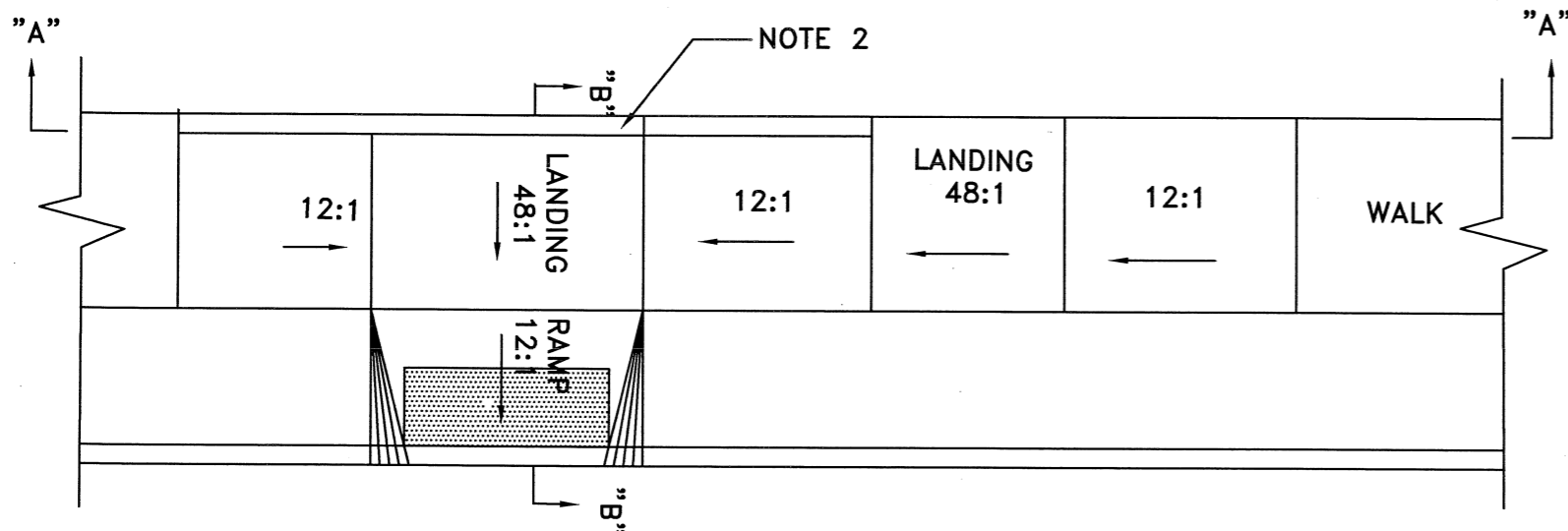


CR-5

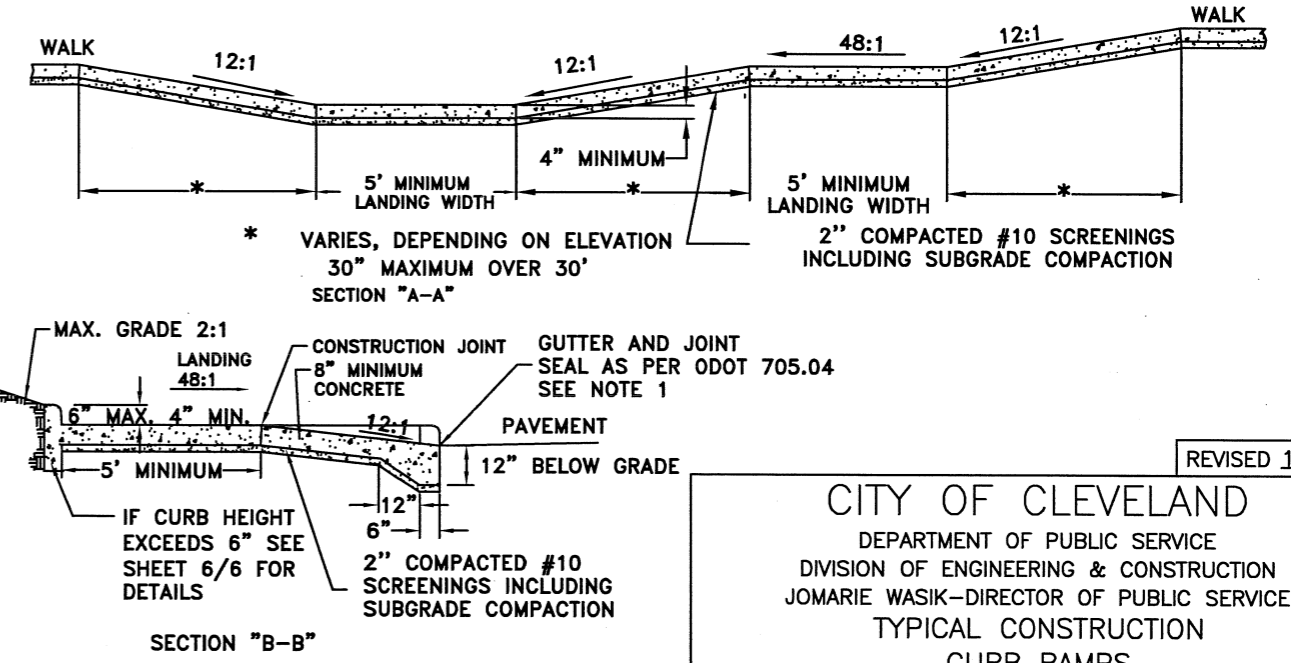


NOTES:

- 1 - WHERE THE LANDING IS LESS THAN 4'-0" THE RAMP FLARE SHALL BE INCREASED TO 12:1.
- 2 - SURFACE TEXTURE OF ALL RAMPS SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE RAMP SLOPES AS DIRECTED BY THE ENGINEER AND SHALL BE ROUGHER THAN ADJACENT WALK.
- 3 - THE BOTTOM EDGE OF THE CURB RAMP SHALL BE FLUSH WITH THE EDGE OF THE ADJACENT PAVEMENT OR GUTTER LINE.
- 4 - GUTTER SEAL, 705.04, 6" WIDE THE BOTTOM EDGE OF THE ADJACENT PAVEMENT AND GUTTER LINE.



CR-6



NOTES:

- 1 - THE BOTTOM EDGE OF THE CURB RAMP SHALL BE FLUSH WITH THE EDGE OF THE ADJACENT PAVEMENT OR GUTTER LINE.
- 2 - WHERE A ROLLED CURB EXCEEDS SIX INCHES ABOVE THE WALK, THE CONTRACTOR SHALL INSTALL TYPE "6" CURB (6" X 18"). ROLLED CURB SHALL BE INSTALLED ONLY AT THE DIRECTION OF THE ENGINEER.
- 3 - SURFACE TEXTURE OF ALL RAMPS SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE RAMP SLOPES AS DIRECTED BY THE ENGINEER AND SHALL BE ROUGHER THAN ADJACENT WALK.

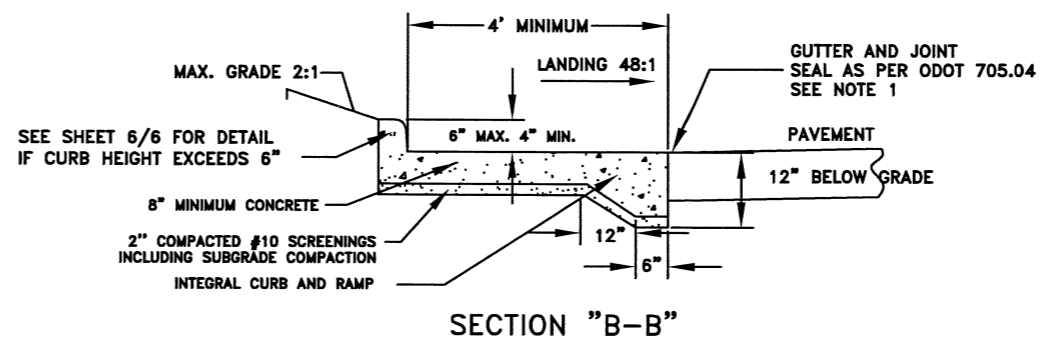
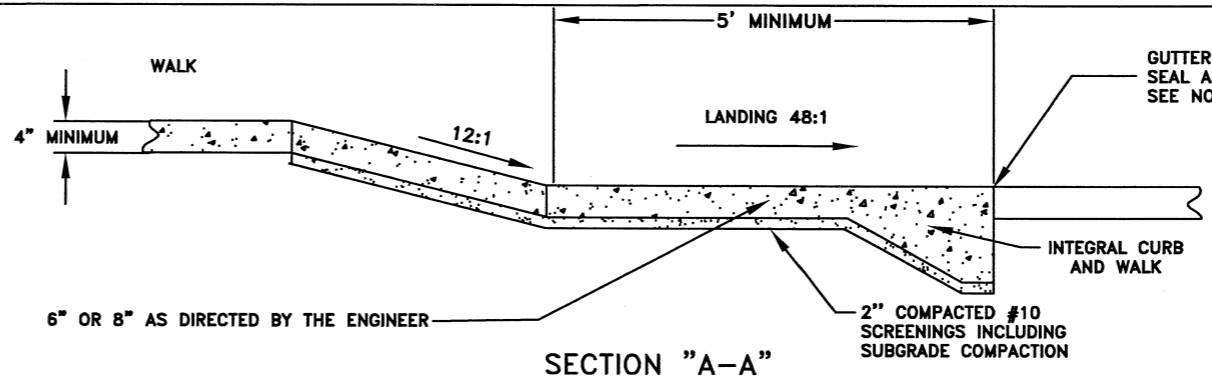
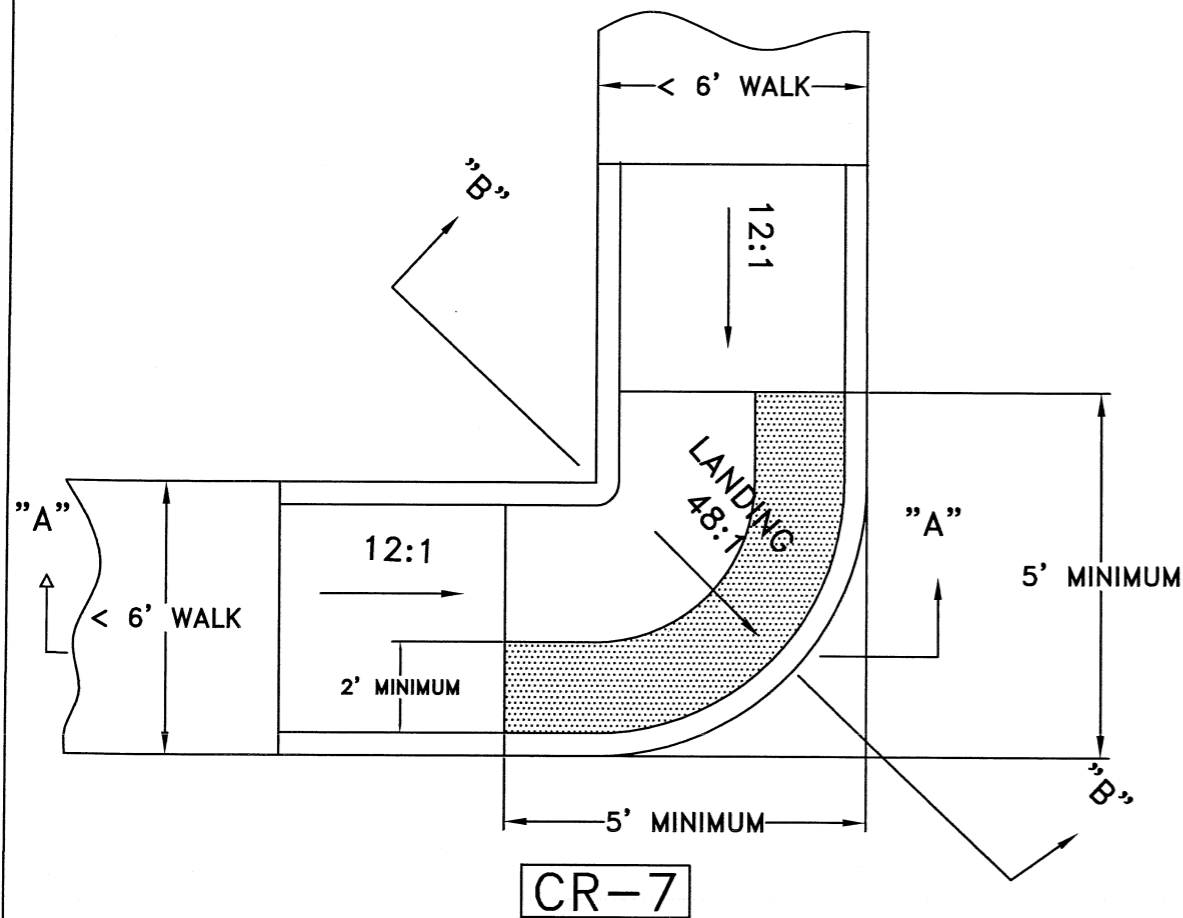
REVISED 12/8/09

**CITY OF CLEVELAND**  
 DEPARTMENT OF PUBLIC SERVICE  
 DIVISION OF ENGINEERING & CONSTRUCTION  
 JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
 TYPICAL CONSTRUCTION  
 CURB RAMPS  
 NOT TO SCALE

DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08  
 SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08

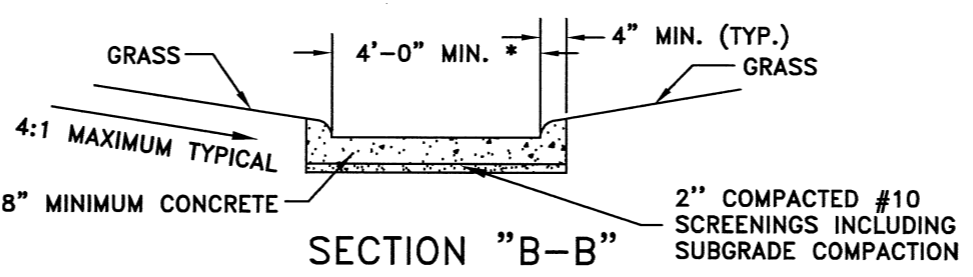
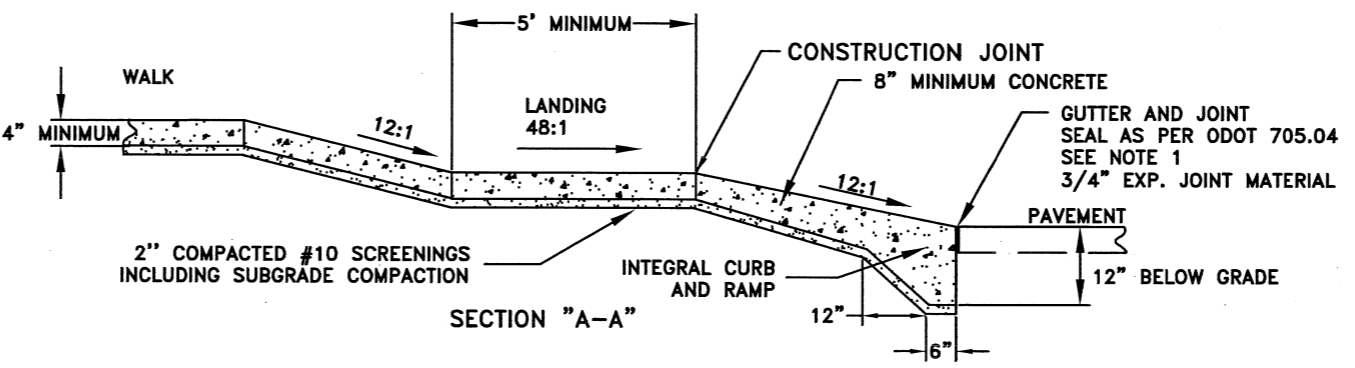
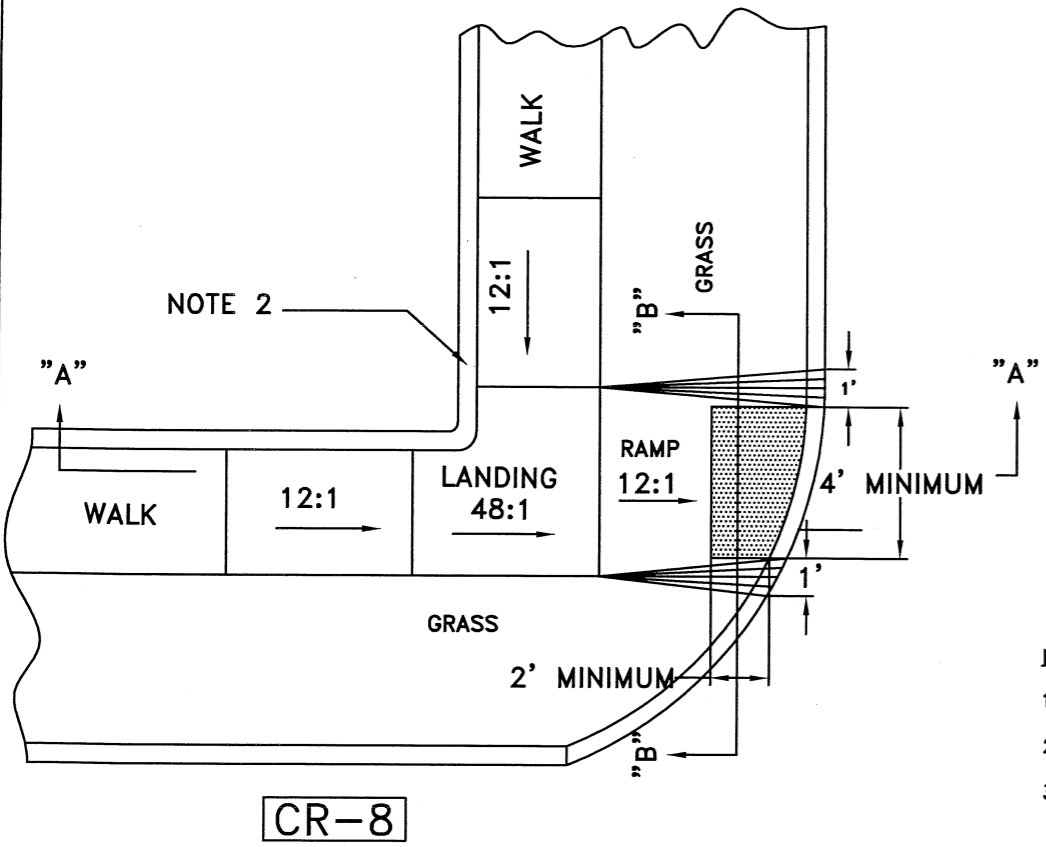
APPROVED: [Signature] DATE: 4/14/08  
 COMMISSIONER OF ENGINEERING AND CONSTRUCTION

FILE NO.: CR 1 SHEET 3/6



**NOTES:**

- 1 - THE BOTTOM EDGE OF THE CURB RAMP SHALL BE FLUSH WITH THE EDGE OF THE ADJACENT PAVEMENT OR GUTTER LINE.
- 2 - WHERE A ROLLED CURB EXCEEDS SIX INCHES ABOVE THE WALK, THE CONTRACTOR SHALL INSTALL TYPE "6" CURB (6" X 18"). ROLLED CURB SHALL BE INSTALLED ONLY AT THE DIRECTION OF THE ENGINEER.
- 3 - SURFACE TEXTURE OF ALL RAMPS SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE RAMP SLOPES AS DIRECTED BY THE ENGINEER AND SHALL BE ROUGHER THAN ADJACENT WALK.



**NOTES:**

- 1 - THE BOTTOM EDGE OF THE CURB RAMP SHALL BE FLUSH WITH THE EDGE OF THE ADJACENT PAVEMENT OR GUTTER LINE.
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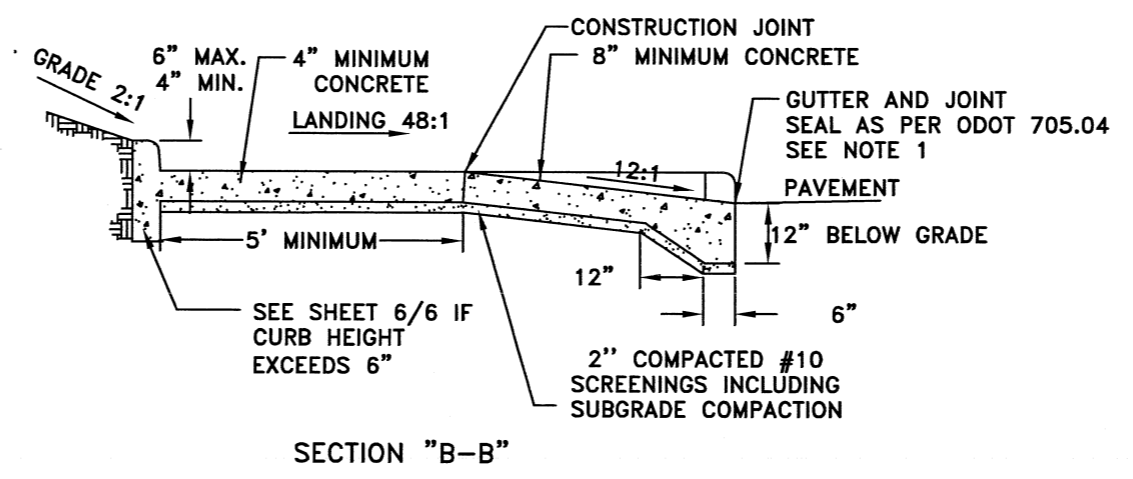
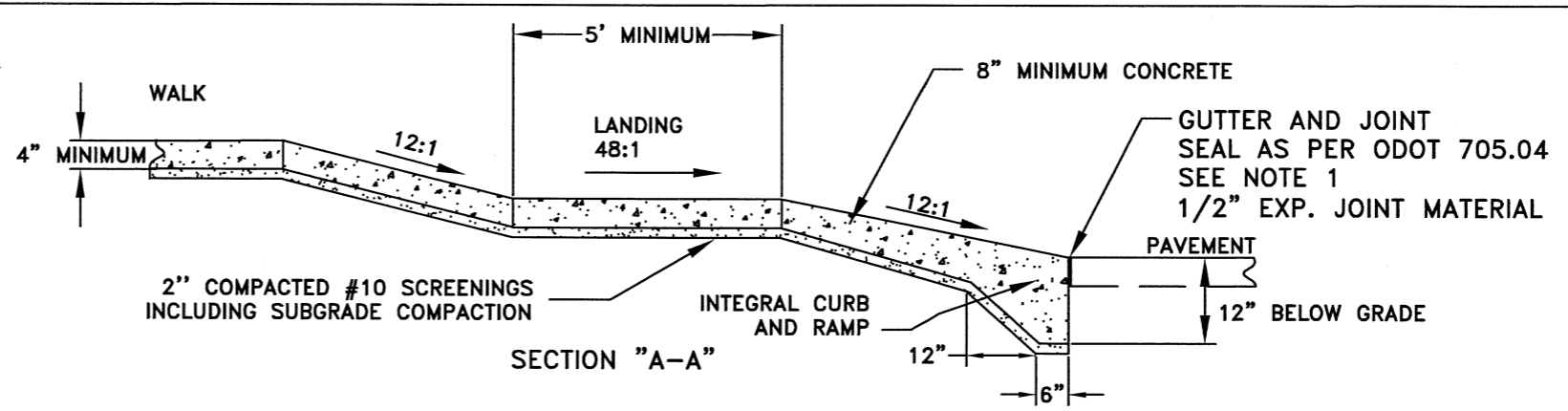
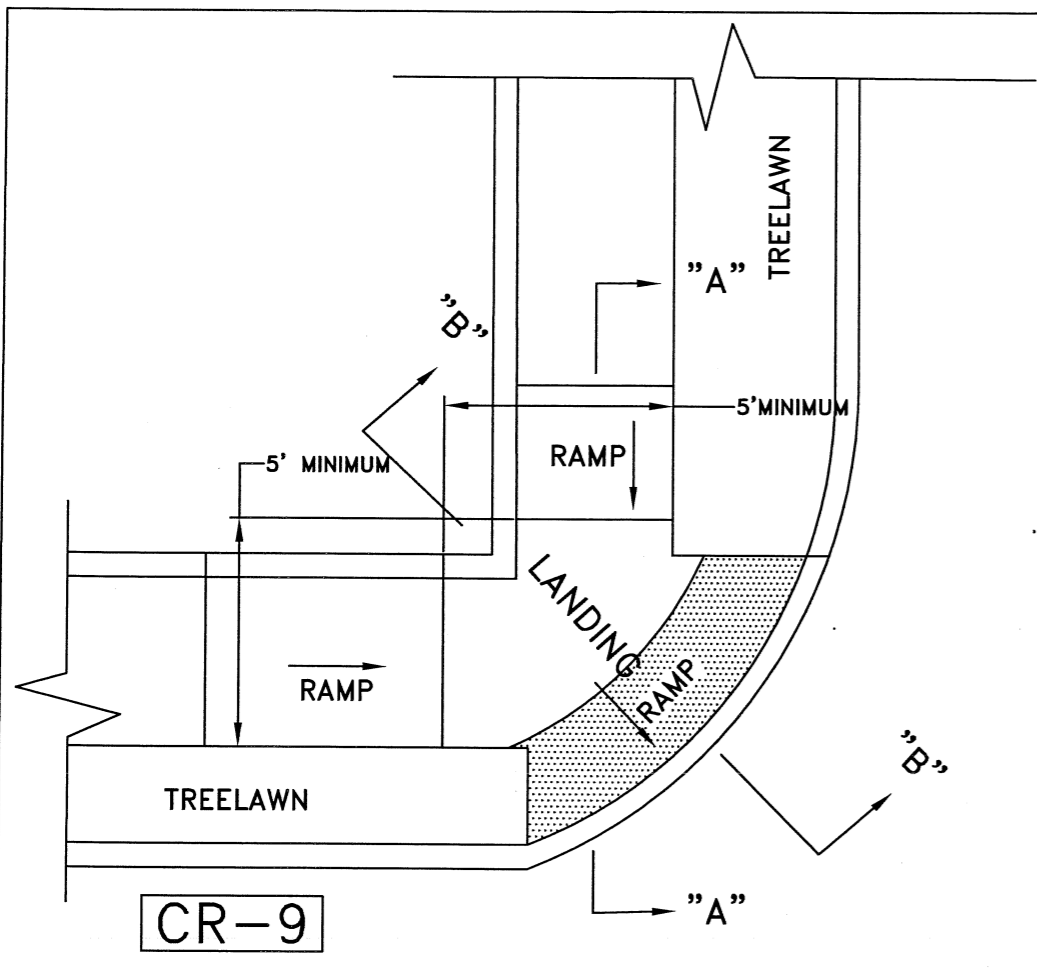
REVISED 12/8/09

**CITY OF CLEVELAND**  
 DEPARTMENT OF PUBLIC SERVICE  
 DIVISION OF ENGINEERING & CONSTRUCTION  
 JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
 TYPICAL CONSTRUCTION  
 CURB RAMPS  
 NOT TO SCALE

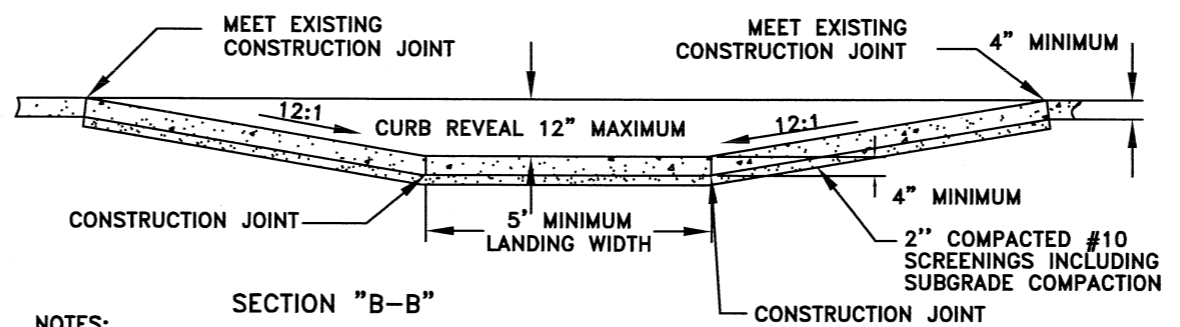
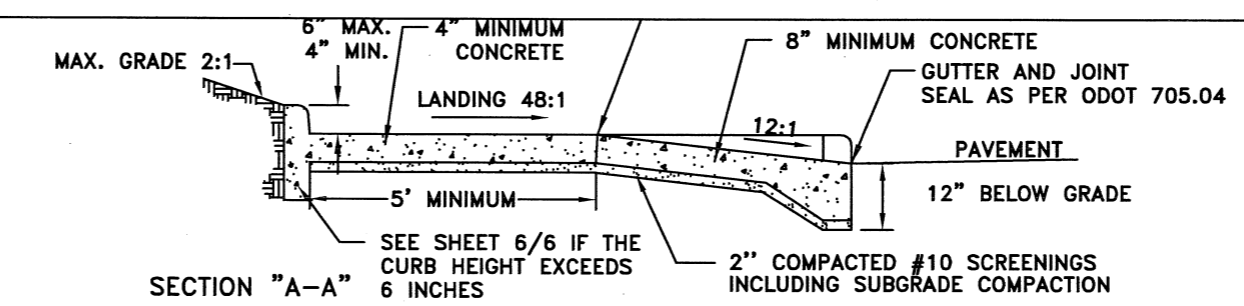
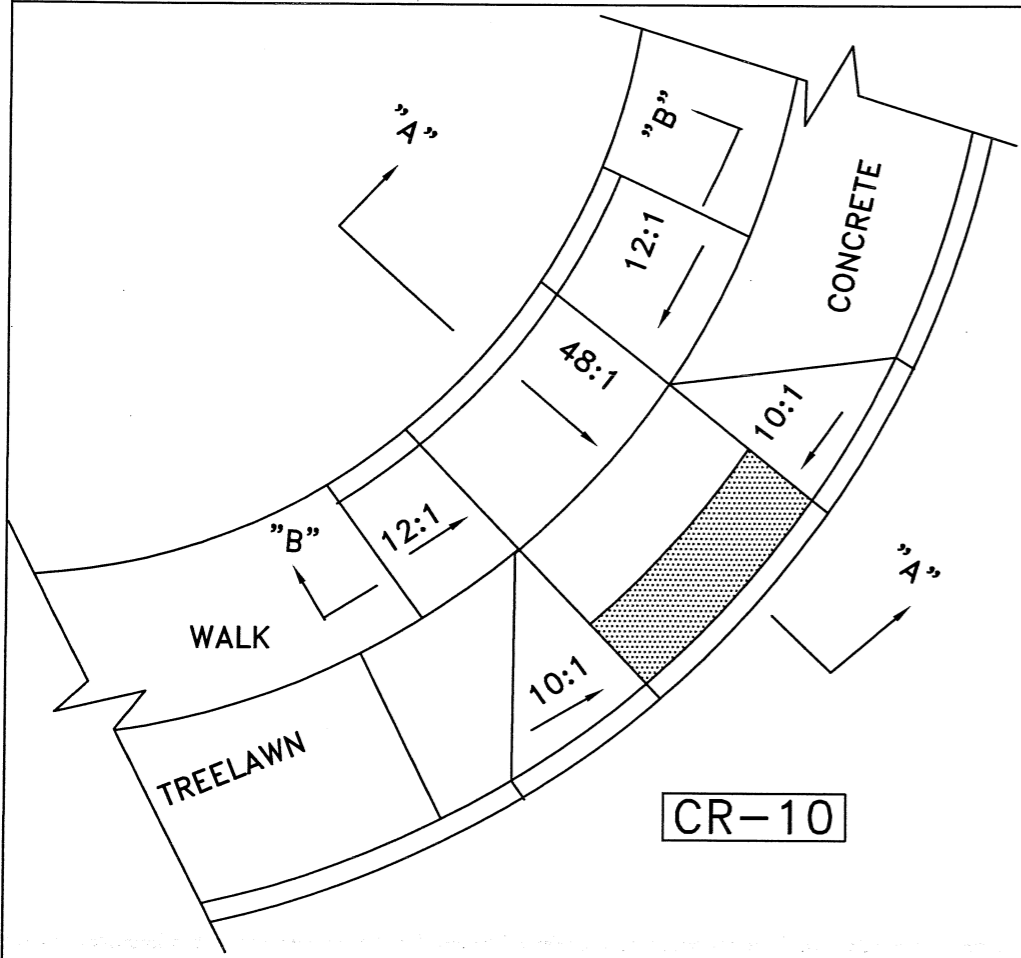
DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08  
 SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08

APPROVED: [Signature] DATE: 4/14/08  
 COMMISSIONER OF ENGINEERING AND CONSTRUCTION

FILE NO.: CR 1 SHEET 4/6



- NOTES:**
- 1 - THE BOTTOM EDGE OF THE CURB RAMP SHALL BE FLUSH WITH THE EDGE OF THE ADJACENT PAVEMENT OR GUTTER LINE.
  - 2 - WHERE A ROLLED CURB EXCEEDS SIX INCHES ABOVE THE WALK, THE CONTRACTOR SHALL INSTALL TYPE "6" CURB (6" X 18"). ROLLED CURB SHALL BE INSTALLED ONLY AT THE DIRECTION OF THE ENGINEER.
  - 3 - SURFACE TEXTURE OF ALL RAMPS SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE RAMP SLOPES AS DIRECTED BY THE ENGINEER AND SHALL BE ROUGHER THAN ADJACENT WALK.



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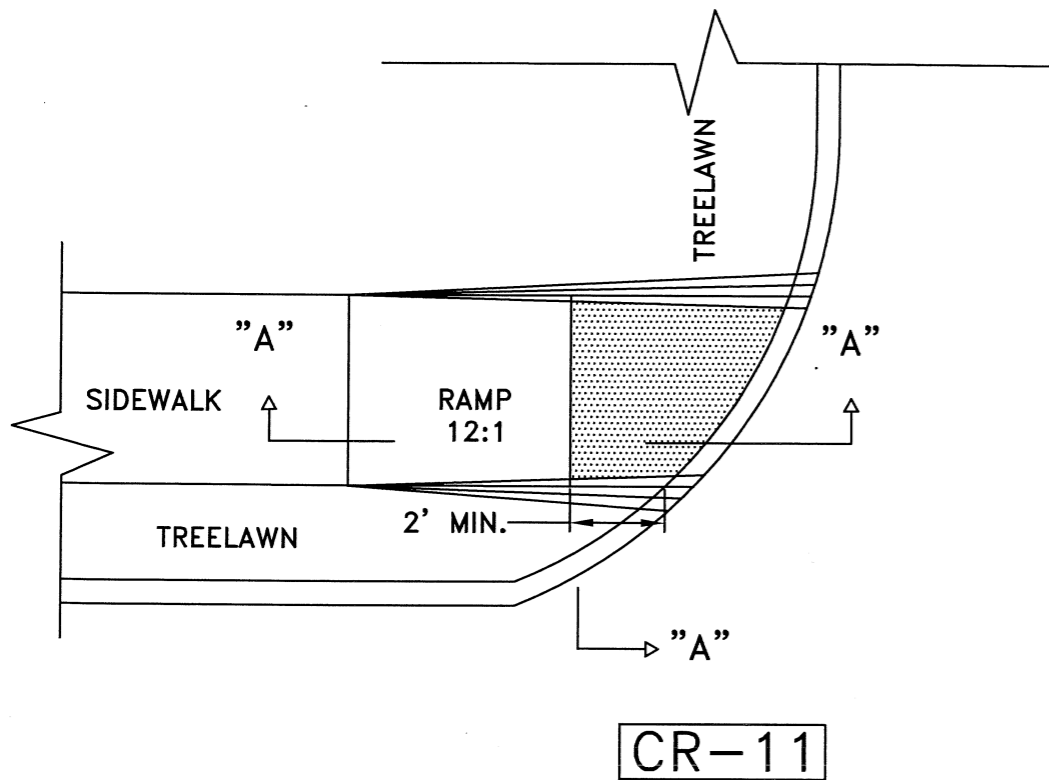
REVISED 12/8/09

CITY OF CLEVELAND  
 DEPARTMENT OF PUBLIC SERVICE  
 DIVISION OF ENGINEERING & CONSTRUCTION  
 JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
 TYPICAL CONSTRUCTION  
 CURB RAMPS  
 NOT TO SCALE

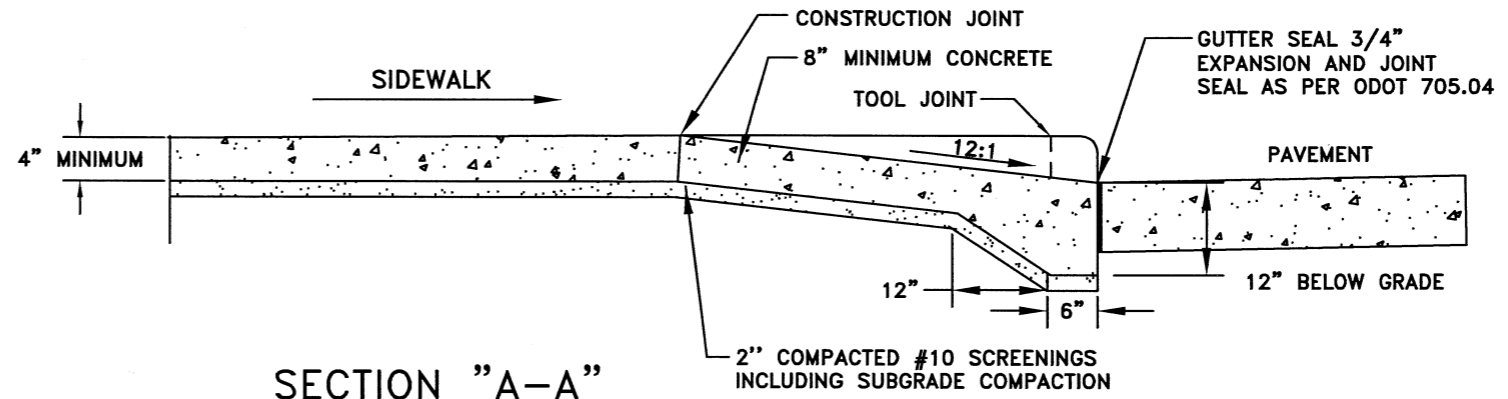
DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08  
 SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08

APPROVED: *[Signature]* DATE: 4/14/08  
 COMMISSIONER OF ENGINEERING AND CONSTRUCTION





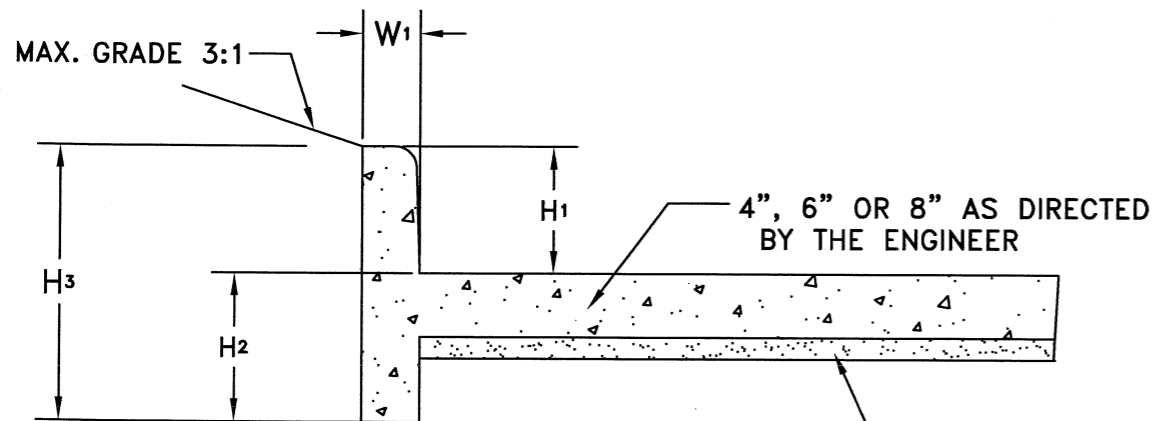
CR-11



SECTION "A-A"

NOTES:

- 1 - WHERE A ROLLED CURB EXCEEDS SIX INCHES ABOVE THE WALK, THE CONTRACTOR SHALL INSTALL TYPE "6" CURB ( 6" X 18"). ROLLED CURB SHALL BE INSTALLED ONLY AT THE DIRECTION OF THE ENGINEER.
- 2 - THE BOTTOM EDGE OF THE CURB SHALL BE FLUSH WITH THE EDGE OF THE ADJACENT PAVEMENT AND GUTTER LINE.
- 3 - SURFACE TEXTURE OF ALL RAMPS SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE RAMP SLOPES AS DIRECTED BY THE ENGINEER AND SHALL BE ROUGHER THAN ADJACENT WALK.
- 4 - THIS DETAIL SHALL ONLY BE USED TO RETROFIT EXISTING CURB RAMPS AND SHALL NOT BE USED FOR NEW CURB RAMP CONSTRUCTION.



H <sub>1</sub>	W <sub>1</sub>	H <sub>2</sub>	H <sub>3</sub>
6"	6"	6"	12"
8"	6"	10"	18"
10"	8"	12"	22"
12"	10"	12"	24"

ROLLED CURB  
INSTALL ONLY AT THE DIRECTION  
OF THE ENGINEER

2" COMPACTED #10 SCREENINGS  
INCLUDING SUBGRADE COMPACTION

NOTES:

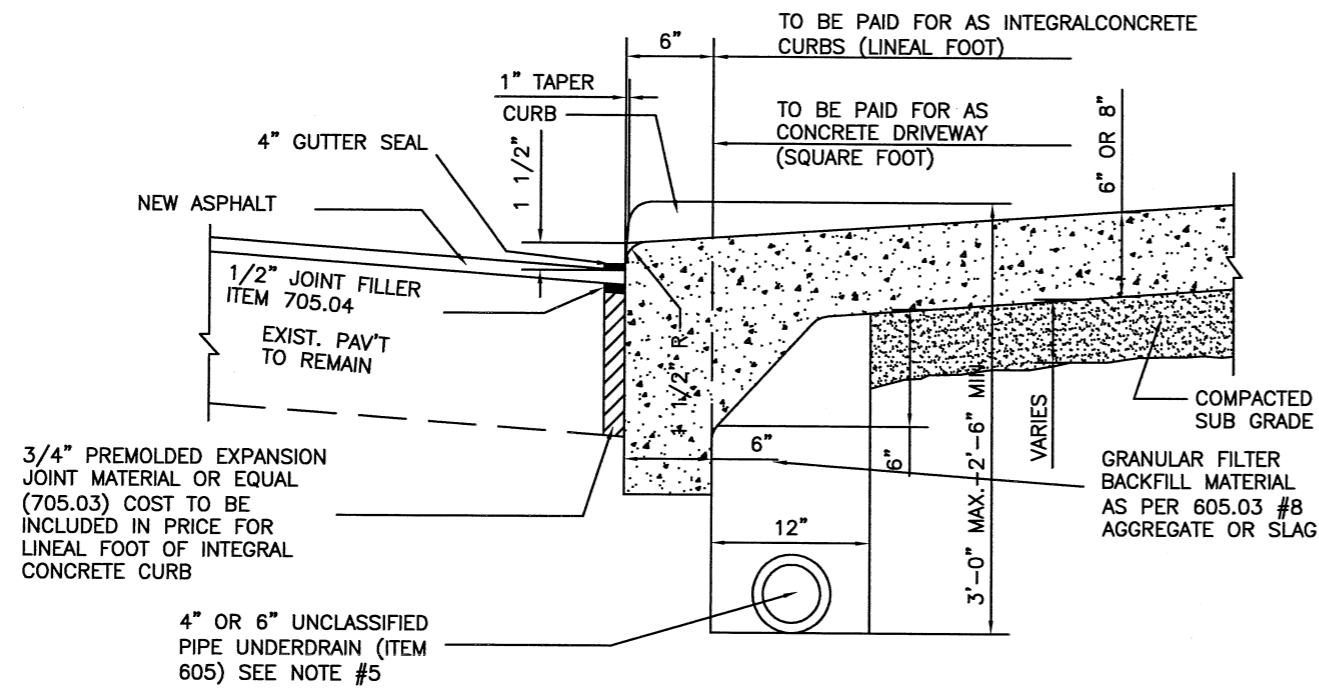
- 1 - WHERE A ROLLED CURB EXCEEDS SIX INCHES ABOVE THE WALK, THE CONTRACTOR SHALL INSTALL CURB PER THIS DETAIL. ROLLED CURB SHALL BE INSTALLED ONLY AT THE DIRECTION OF THE ENGINEER.

REVISED 12/8/09

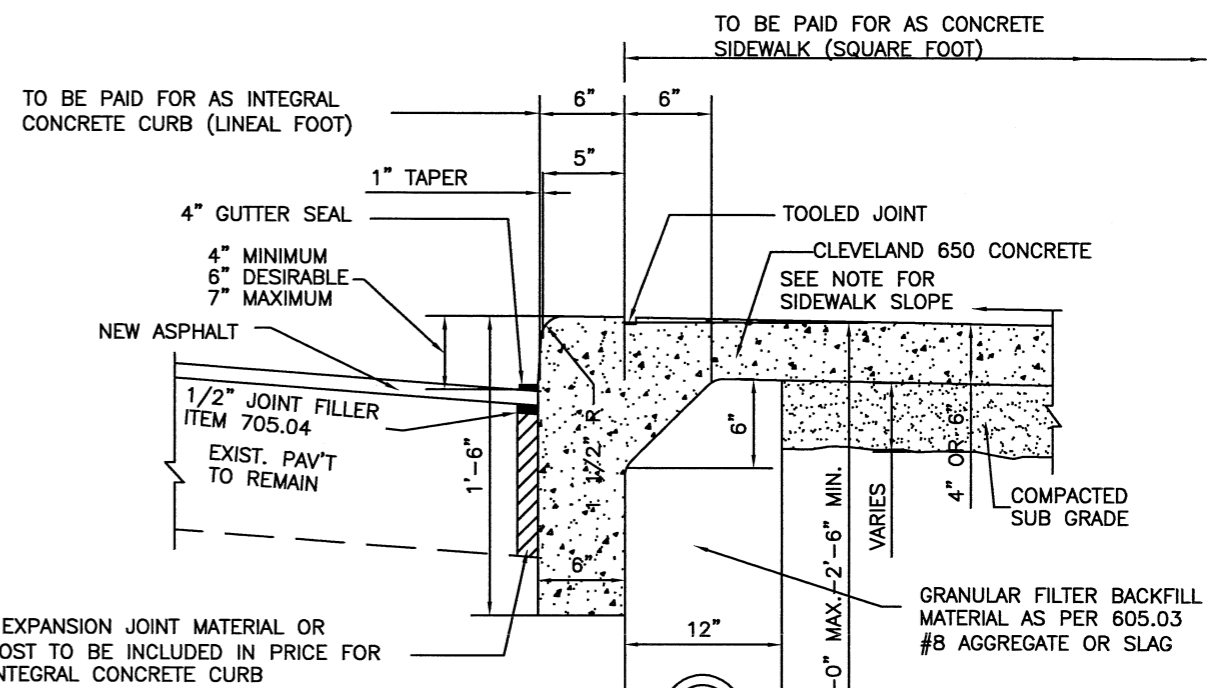
CITY OF CLEVELAND  
DEPARTMENT OF PUBLIC SERVICE  
DIVISION OF ENGINEERING & CONSTRUCTION  
JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
TYPICAL CONSTRUCTION  
CURB RAMPS & ROLLED CURB DETAIL  
NOT TO SCALE

SUBMITTED BY: R. PIODZINSKAS DATE: 4/8/08  
W. MCLAUGHLIN DATE: 4/8/08

[Signature] DATE: 4/14/08  
COMMISSIONER OF ENGINEERING AND CONSTRUCTION

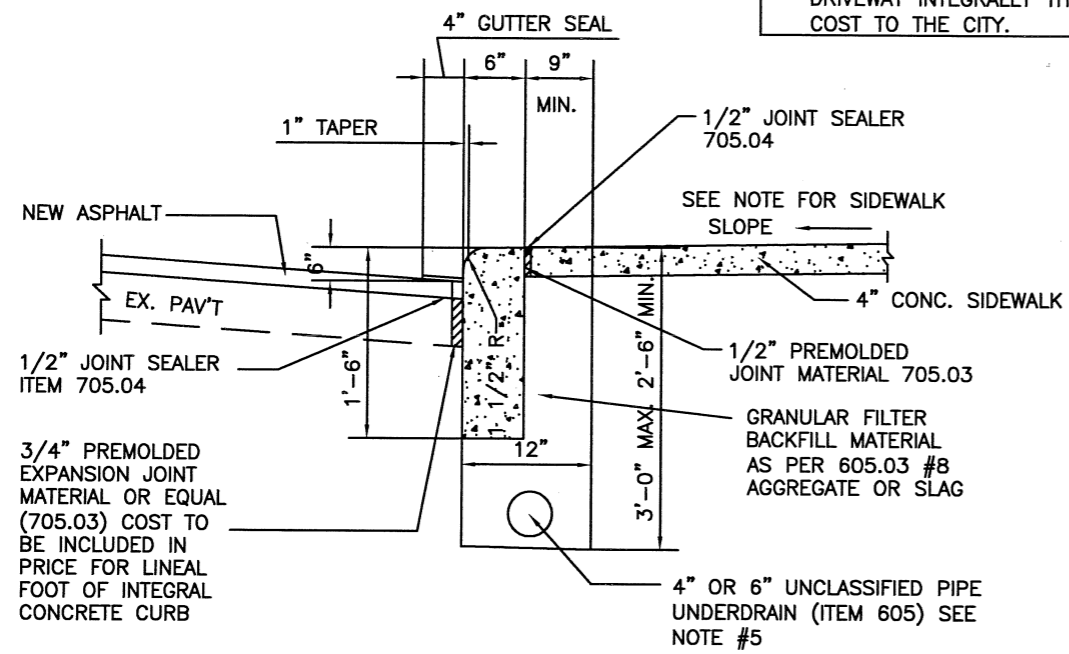


**INTEGRAL CONCRETE DRIVEWAY**  
NO SCALE



**INTEGRAL CONCRETE CURB & WALK**  
NO SCALE

**OPTIONAL DETAIL**  
THE CONTRACTOR MAY USE THIS DETAIL IF GRANTED PERMISSION TO POUR THE CURB AND SIDEWALK OR DRIVEWAY INTEGRALLY THERE SHALL BE NO ADDITIONAL COST TO THE CITY.



**CAST-IN-PLACE CONCRETE CURB**  
NO SCALE

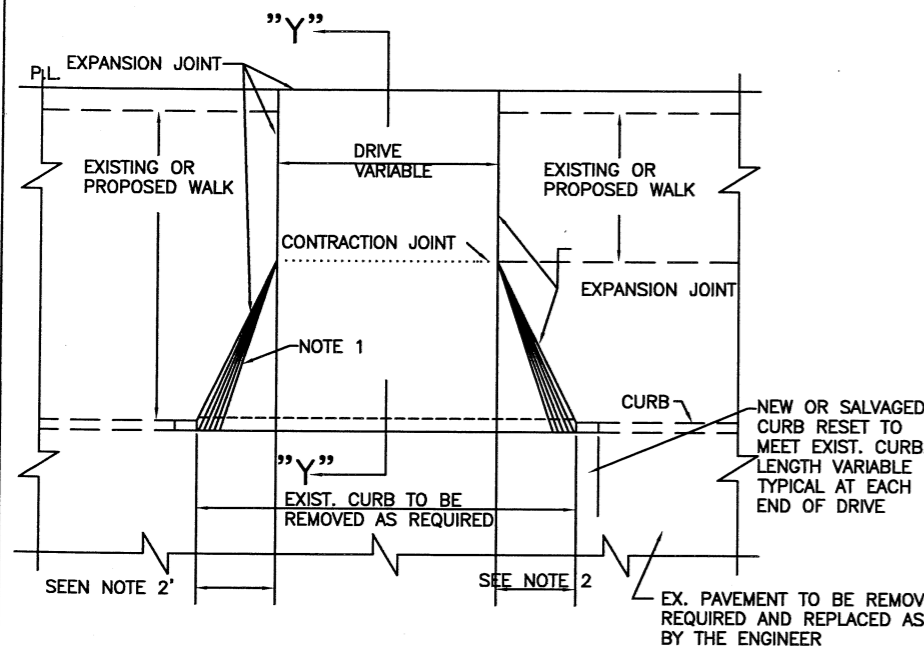
**NOTES:**

1. SAND BACKFILL AS REQUIRED TO ACHIEVE PROPOSED SUB GRADE. COST TO BE INCLUDED IN UNIT PRICE BID PER SQUARE FOOT OF SIDEWALK OR CONCRETE DRIVEWAY.
2. TRANSVERSE CONTRACTION JOINTS (5'CTRS) AND EXPANSION JOINTS TO BE CONSTRUCTED AS DIRECTED BY THE ENGINEER. JOINTS SHALL BE TOOLED 5" FROM THE STREET FACE OF THE CURB. 1/4" DEEP WITH EDGES ROUNDED TO A 1/4" RADIUS. COST TO BE INCLUDED IN PRICE PER SQUARE FOOT OF SIDEWALK OR CONCRETE DRIVEWAY.
3. TRANSITION FROM STANDARD CURB SECTION TO DROP CURB SECTION TO BE MADE IN 18" DISTANCE FROM DRIVEWAY.
4. SLOPE SHALL BE PROVIDED AS NEEDED TO DRAIN SIDEWALK AND TREELAWN AREA. 1/8"/ FT. MIN. (1/4"/ FT. DESIRABLE AND 5/8"/ FT. MAX.) IF THE EXISTING CONDITIONS RESULT IN A UNIFORM SLOPE GREATER THAN 1/4"/ FT. THEN THE SLOPE IN THE TREELAWN AREA MAY EXCEED THE MAX. AS NEEDED TO PROVIDE A SIDEWALK SLOPE OF 1/4"/ FT. THE SLOPE IN THE WALK AREA OF DRIVE APRONS MUST NOT EXCEED ADA REQUIREMENTS OF 1/4"/ FT. CROSS SLOPE.
5. UNDERDRAINS TO BE INSTALLED IN AREAS WHERE CURB IS TO BE REPLACED. THE UNDERDRAIN SHALL BE CONSTRUCTED SO AS TO MATCH THE LOCATION OF ANY EXISTING UNDERDRAIN TO REMAIN. UNDERDRAIN SHALL OUTLET AT CATCH BASIN. UNDERDRAINS SHALL HAVE FILTER FABRIC WRAP OR TRENCH IS WRAPPED WITH FILTER FABRIC AS SPECIFIED.

REVISED 12/3/09

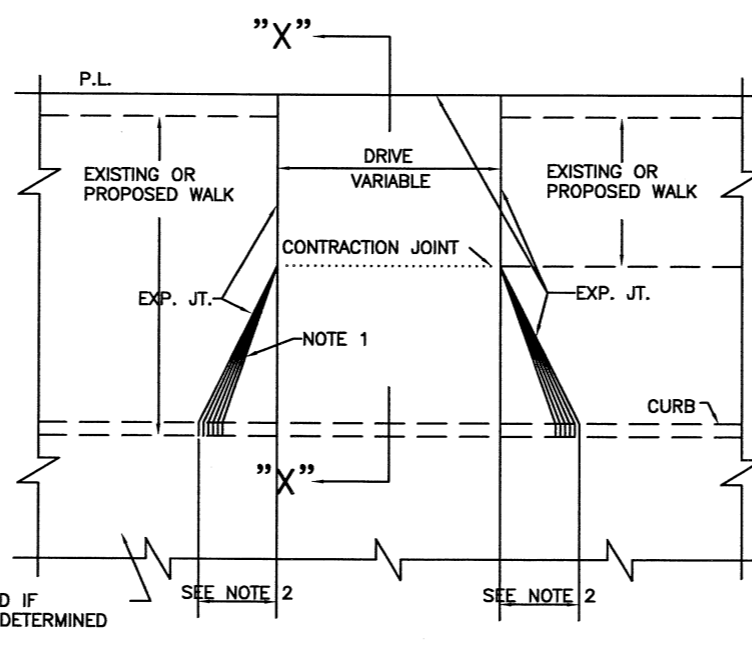
**CITY OF CLEVELAND**  
DEPARTMENT OF PUBLIC SERVICE  
DIVISION OF ENGINEERING & CONSTRUCTION  
JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
**CURB DETAILS**  
NOT TO SCALE

DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08  
SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08  
APPROVED: *[Signature]* DATE: 4/14/08  
COMMISSIONER OF ENGINEERING AND CONSTRUCTION



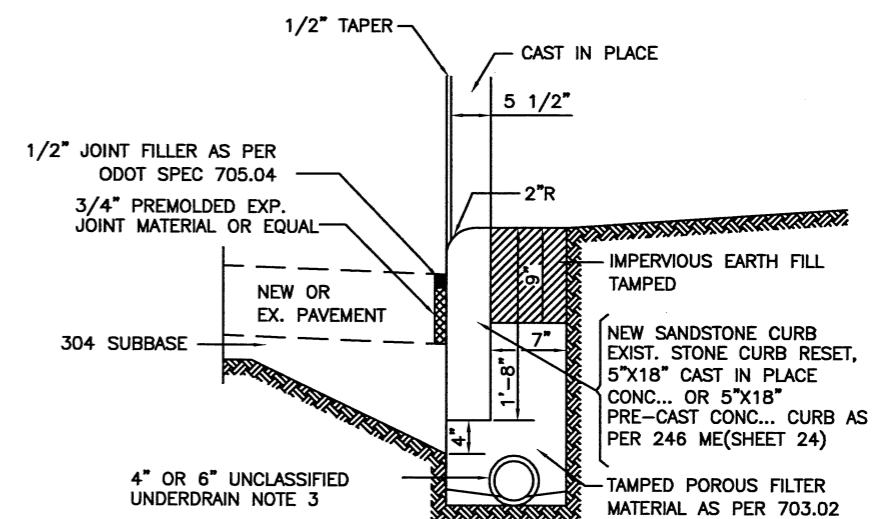
PLAN FOR NEW DRIVE WITH INTEGRAL CONCRETE CURB

NOT TO SCALE



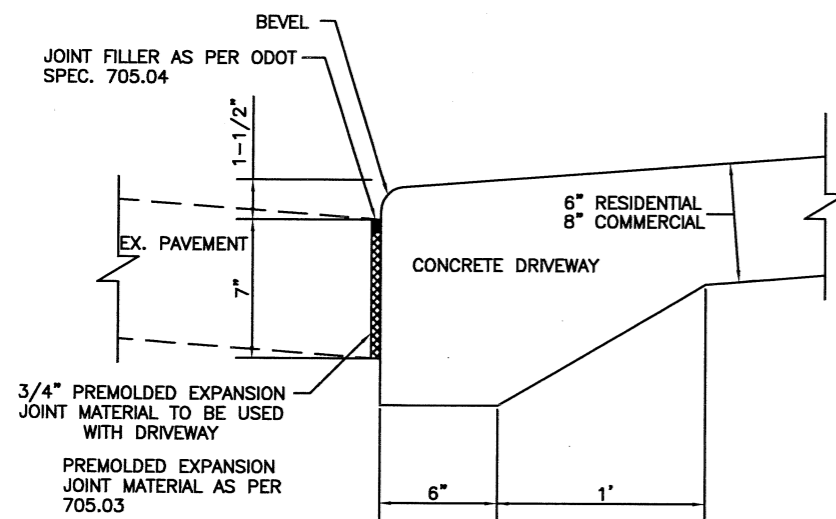
PLAN FOR NEW DRIVE WITH CURB CUT

NOT TO SCALE



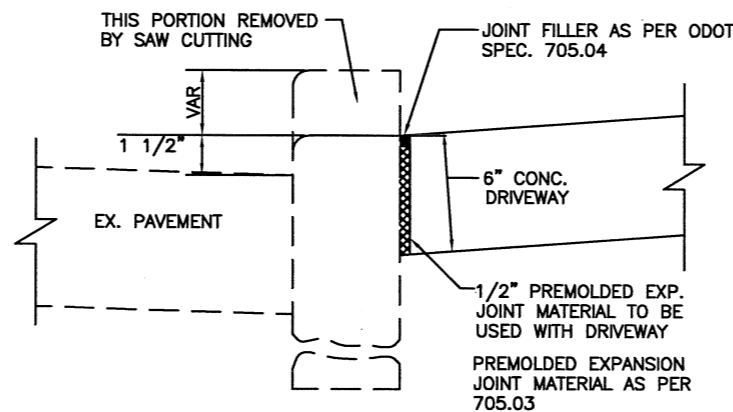
TYPICAL CURB CONSTRUCTION DETAIL

NOT TO SCALE



SECTION "Y"- "Y"

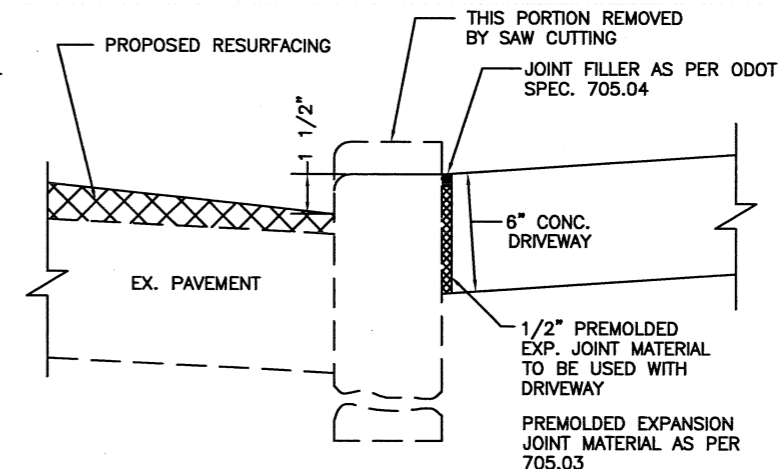
NOT TO SCALE



SECTION "X"- "X"

SHOWING PROPOSED DRIVE GUTTER WITHOUT RESURFACING

NOT TO SCALE



SECTION "X"- "X"

SHOWING PROPOSED DRIVE GUTTER WITH RESURFACING

NOT TO SCALE

NOTES:

- 1 - ON STREETS WITH NARROW TREELAWNS AND SIDEWALKS OR WITH APPROVAL OF THE ENGINEER THE FOLLOWING DETAIL MAY BE USED.
- 2 - APRON FLARES ARE 3' FOR RESIDENTIAL AND 5' COMMERCIAL
- 3 - UNDERDRAINS SHALL HAVE FILTER FABRIC WRAP OR TRENCH IS WRAPPED WITH FILTER FABRIC AS SPECIFIED.

REVISED 8/3/09

**CITY OF CLEVELAND**  
 DEPARTMENT OF PUBLIC SERVICE  
 DIVISION OF ENGINEERING & CONSTRUCTION  
 JOMARIE WASIK - DIRECTOR OF PUBLIC SERVICE

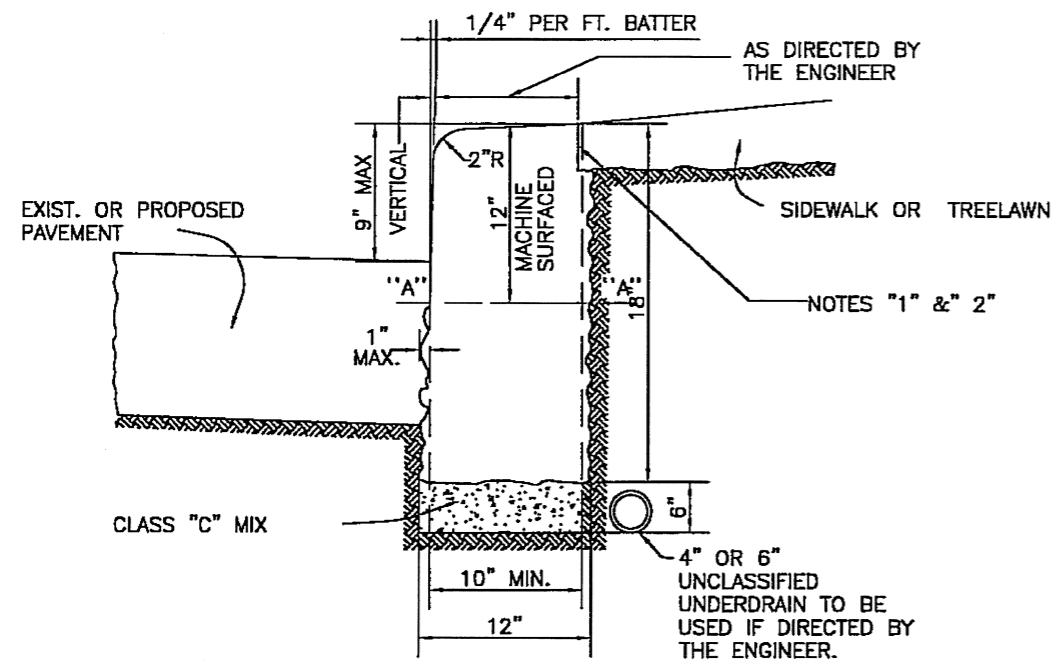
**STANDARD PLAN OF  
 TYPICAL CURB & DETAILS  
 AT DRIVEWAYS**

NOT TO SCALE

DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08  
 SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08

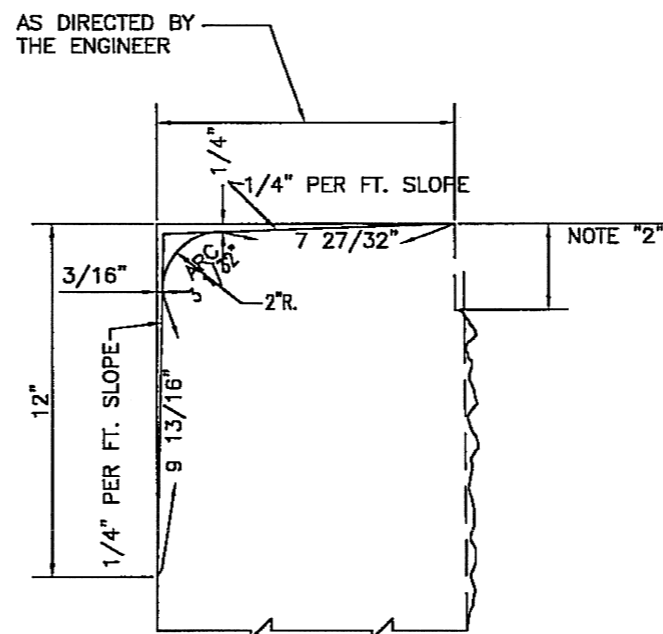
APPROVED: [Signature] DATE: 4/14/08  
 COMMISSIONER OF ENGINEERING AND CONSTRUCTION

FILE NO. CD 1	SHEET 2/3	(18)
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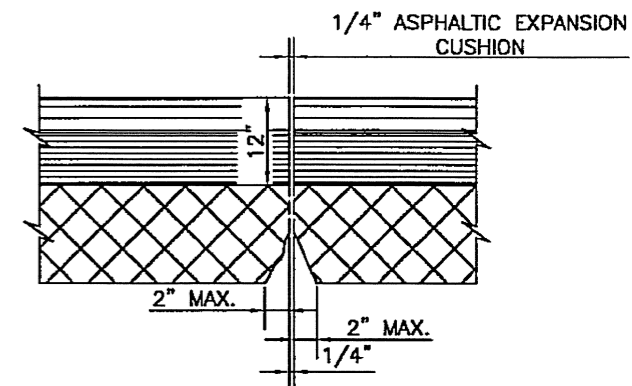


**CURB TO BE USED ON STRAIGHT SECTION**

TOP FACE AND ENDS OF CURB ABOVE LINE "A"-"A" ARE TO BE MACHINED. ALSO BACK OF CURB 1" FROM TOP AS SHOWN.



**DETAIL OF CURB CUTTING**



**ELEVATION SHOWING CURB JOINT SECTION "A" - "A"**

**NOTES**

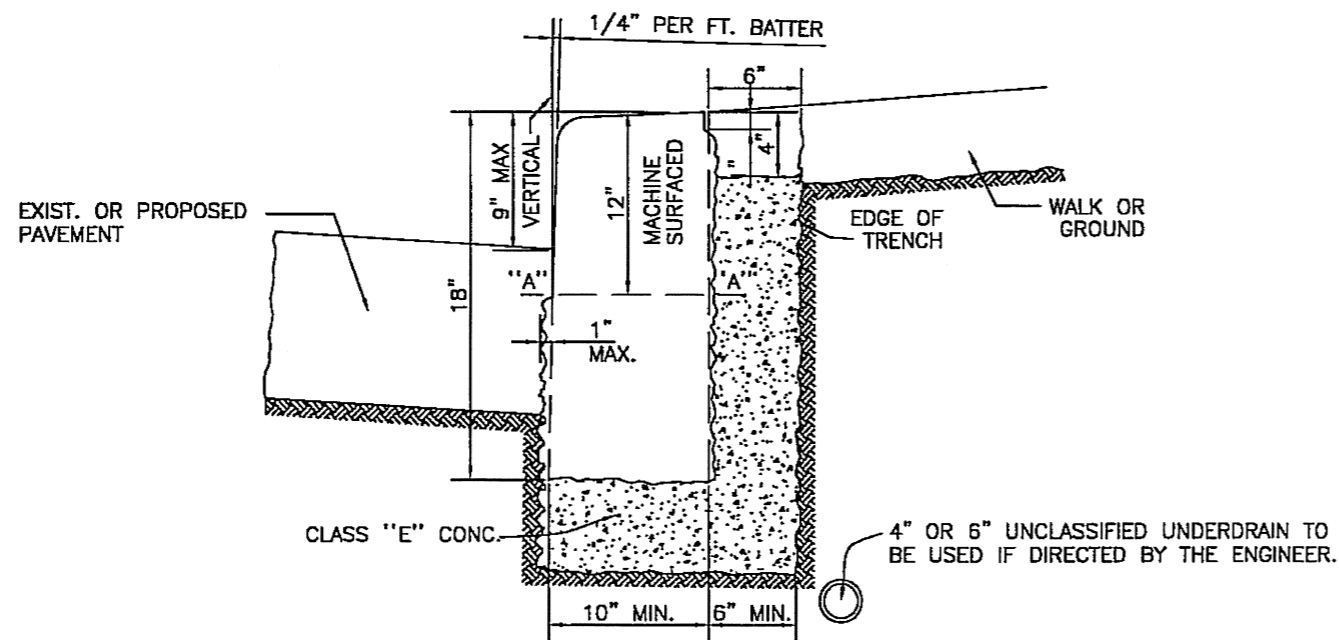
CURB SHALL BE SET IN AND BACKED WITH A MINIMUM OF CLASS "C" CONCRETE AS SHOWN. THE ENTIRE CURB TRENCH IS TO BE COMPLETELY FILLED WITH CONCRETE UP TO THE LEVEL SHOWN ON THE SECTION. SEE STANDARD SPECIFICATIONS.

CURB TO BE LIGHT GRAY GRANITE TO MATCH EXISTING CURBING IN MALL. LENGTH TO BE 4"-6" WITH CLOSURE STONE NOT LESS THAN 3' LONG.

1 - EXPANSION JOINT NOT SHOWN

2 - 6" MINIMUM, INCREASE IF REQUIRED TO MATCH EXISTING WALK OR APRON THICKNESS

3 - FOR 8" OR 12" MALL CURBING DECREASE OR INCREASE THE THICKNESS DIMENSIONS AND TOLERANCES BY 2"



**CURB DETAIL TO BE USED ON ALL CURVED SECTIONS**

**CITY OF CLEVELAND**

DEPARTMENT OF PUBLIC SERVICE  
 DIVISION OF ENGINEERING & CONSTRUCTION  
 JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
 STANDARD CONSTRUCTION DRAWING  
 STANDARD DETAILS SHOWING GRANITE CURBING  
 NOT SCALE

DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08

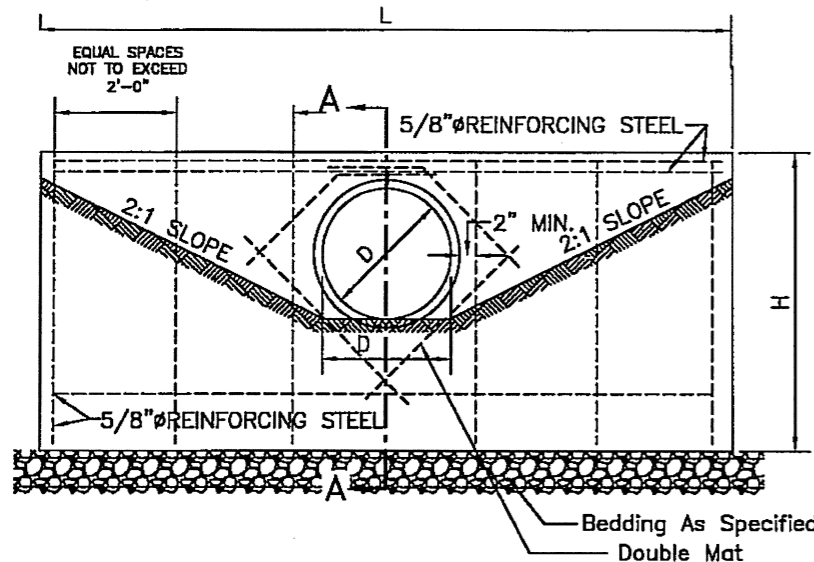
SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08

APPROVED: [Signature] DATE: 4/14/08

COMMISSIONER OF ENGINEERING & CONSTRUCTION

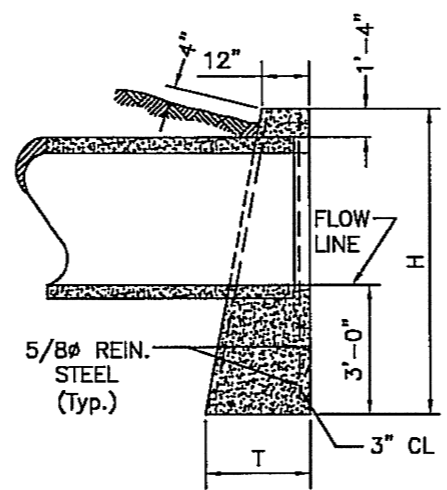
FILE NO. CR 1

SHEET 3/3



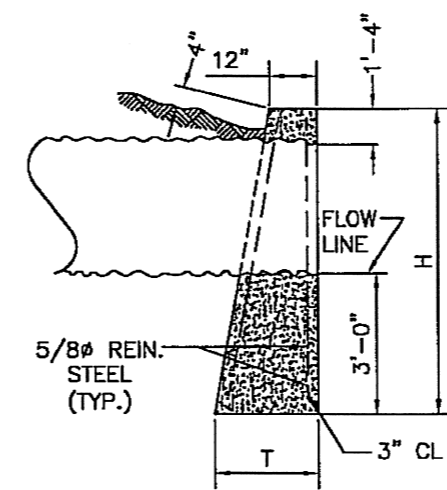
**HEADWALL ELEVATION**

NOTE: ALL REINFORCEMENT IS TO BE EPOXY COATED



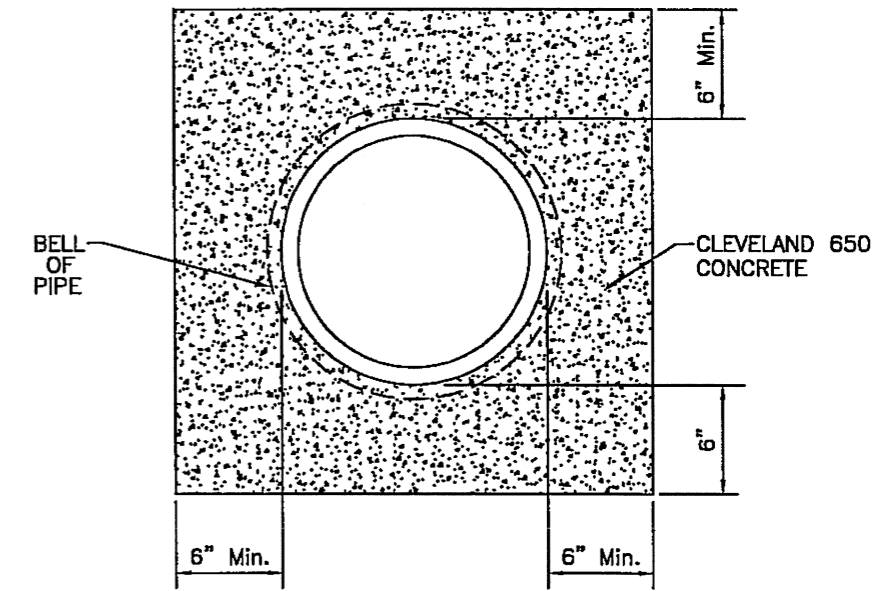
**SECTION A-A**

RIGID PIPE

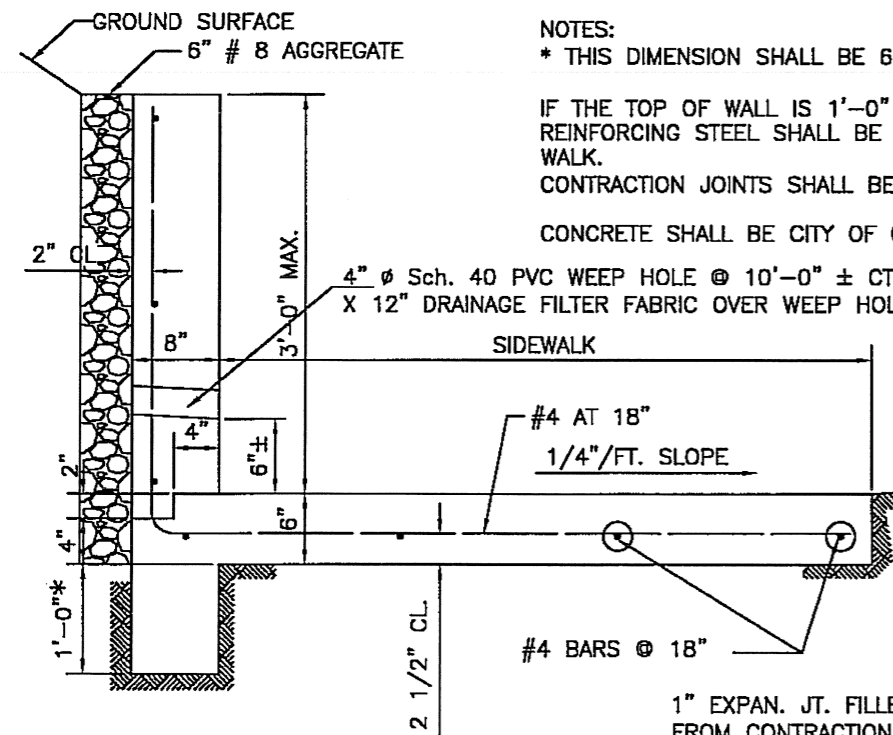


**SECTION A-A**

CORRUGATED PIPE



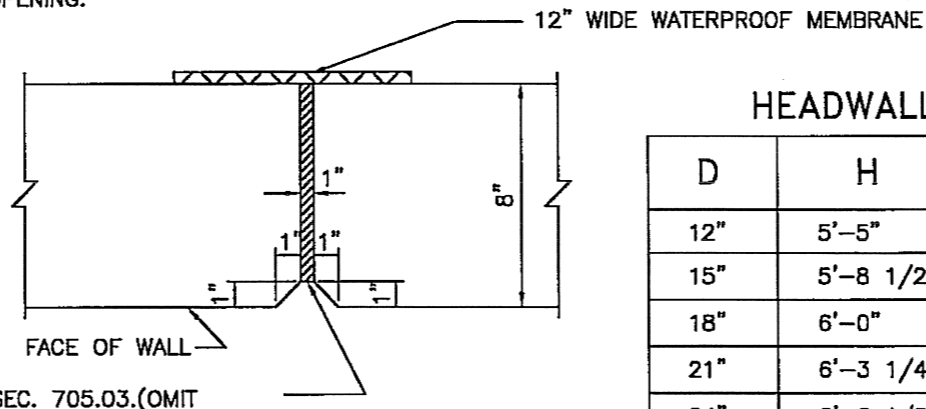
**STANDARD SECTION OF PIPE SEWER  
INCASED IN 6" CONCRETE**  
NOTE: 6" IF FORMED, OTHERWISE EXTEND  
TO UNDISTURBED EARTH



**DETAIL FOR CONCRETE  
WALL & SIDEWALK**

NOTE: ALL REINFORCEMENT IS TO BE EPOXY COATED

NOTES:  
\* THIS DIMENSION SHALL BE 6" IF THE TOP OF WALL IS 1'-0" TO 2'-0" ABOVE TOP OF WALK.  
IF THE TOP OF WALL IS 1'-0" OR LESS ABOVE TOP OF WALK, THE FOOTING KEY AND THE REINFORCING STEEL SHALL BE OMITTED, AND THE WALL SHALL BE POURED MONOLITHICALLY WITH THE WALK.  
CONTRACTION JOINTS SHALL BE PROVIDED AT 30'-0" MAX. AND EXPANSION JOINTS AT 90'-0" MAX.  
CONCRETE SHALL BE CITY OF CLEVELAND 650 MIX



**DETAIL OF EXPANSION  
JOINT AND  
CONTRACTION JOINT**

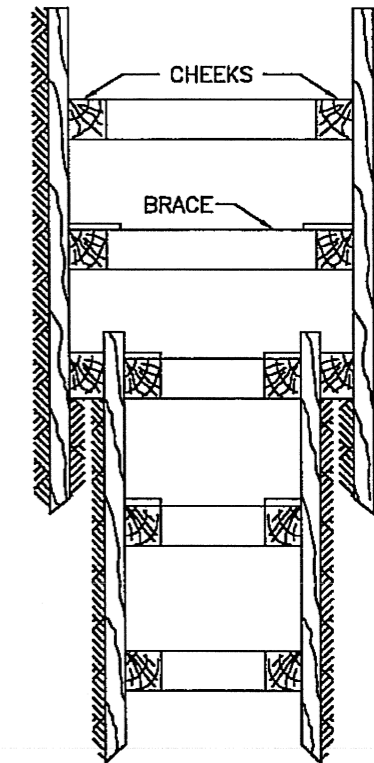
**HEADWALL DIMENSIONS**

D	H	L	T
12"	5'-5"	5'-6"	1'-9"
15"	5'-8 1/2"	5'-9"	1'-11"
18"	6'-0"	6'-0"	2'-0"
21"	6'-3 1/4"	7'-0"	2'-2"
24"	6'-6 1/2"	8'-0"	2'-5"
27"	6'-10 1/2"	9'-0"	2'-8"
30"	7'-1 1/2"	10'-0"	2'-11"
36"	7'-8"	12'-0"	3'-2"

**CITY OF CLEVELAND**  
DEPARTMENT OF PUBLIC SERVICE  
DIVISION OF ENGINEERING & CONSTRUCTION  
JOMARIE WASIK- DIRECTOR OF PUBLIC SERVICE  
STANDARD CONSTRUCTION DRAWING  
MISCELLANEOUS CONCRETE CONSTRUCTION DETAILS  
NO SCALE

DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08  
SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08  
APPROVED: *[Signature]* DATE: 7-8-08  
COMMISSIONER OF ENGINEERING & CONSTRUCTION

DEPTH OF TRENCH IN FEET	2 IN. SHEETING FEET BOARD MEAS.	SIZE OF SEWERS																						
		12"	21"	30"	42"	54"	66"	72"	84"	90"	102"	108"	120"											
		15"	24"	33"	48"	60"	#10C BR.	78"		96"		114"												
		18"	27"	36"	#4C BR.	#7C BR.	#11C BR.	#13C BR.																
				#2C BR. #3C BR.	#5C BR. #6C BR.	#8C BR. #9C BR.	#12C BR.	#14C BR. #15C BR.																
WIDTH OF TRENCH IN FEET (SEE NOTE)																								
3	4	5	6	7	8	9	10	11	12	13	14													
SIZE OF BRACES AND CHEEKS IN INCHES																								
6x6	6x6	6x6	6x6	8X8	6x6	8X8	6x6	8X8	6x6	8X8	6x6	8X8	6x6	8X8	6x6	8X8	6x6	8X8	6x6	8X8				
6	24	15	16	18	20	34	21	36	22	39	24	42	25	44	27	47	28	50	30	52	31	55	TWO SETS OF BRACES	
8	32	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	" "	
10	40	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	" "	
12	48	27	28	28	29	51	30	52	30	53	31	55	32	56	33	57	33	59	34	60	35	61	THREE SETS OF BRACES	
14	56	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	" "	
16	64	34	35	36	37	65	38	67	38	68	39	70	40	71	41	73	41	74	42	76	43	77	2 SETS OF SHEETING FOUR SETS OF BRACES	
18	80	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	" " "	
20	88	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	" " "	
22	96	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	" " "	
24	104	43	44	45	46	80	46	81	47	83	48	84	49	86	49	87	50	89	51	90	52	92	FIVE SETS OF BRACES	
26	112	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	" "	
28	120	43	44	45	46	80	46	81	47	83	48	84	49	86	49	87	50	89	51	90	52	92	FIVE SETS OF BRACES	



- NOTES:
- 1 - THE MIN. TRENCH WIDTH IS DETERMINED AS PER DWG. ME 146 AND IS THE TRENCH WIDTH AT THE TOP OF THE SEWER OR AT THE TOP OF THE UTILITY BEING INSTALLED AS PER OWNING UTILITIES REQUIREMENTS.
  - 2 - THIS CHART SHOWS MINIMUM SHEETING & BRACING REQUIREMENTS. CONTRACTOR SHALL SUBMIT A SHEETING & BRACING SCHEDULE, COMPLETE WITH CALCULATIONS, DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF OHIO

**CITY OF CLEVELAND**  
DEPARTMENT OF PUBLIC SERVICE  
DIVISION OF ENGINEERING & CONSTRUCTION  
JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
STANDARD CONSTRUCTION DRAWING  
SHEETING & BRACING CHART  
NOT TO SCALE

DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08  
SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08

APPROVED: *[Signature]* DATE: 7-8-08  
COMMISSIONER OF ENGINEERING & CONSTRUCTION

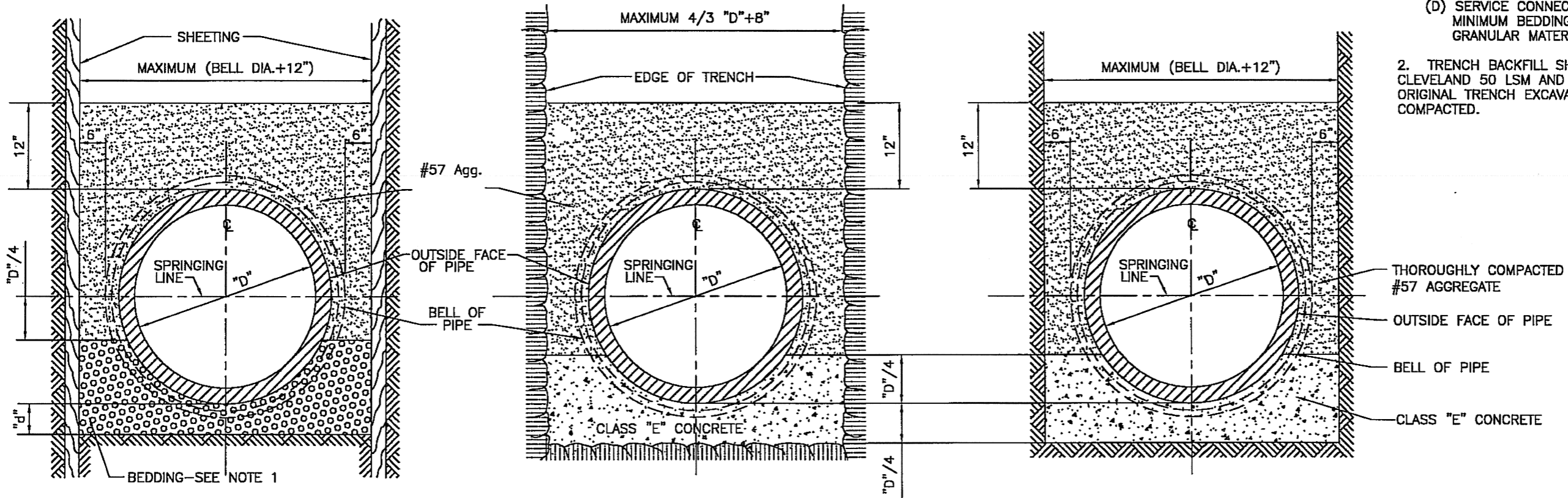
FILE NO. : 164ME (21)

NOTES:

1. THE PIPE BEDDING MATERIAL SHALL BE COARSE NATURAL AGGREGATE COMPLYING WITH 703.01 WITH THE FOLLOWING PROVISIONS:

- (A) 4" BEDDING DEPTH "d" OF NO. 57 GRANULAR MATERIAL FOR 8" TO 24" PIPE
- (B) 6" BEDDING DEPTH "d" OF NO. 5 GRANULAR MATERIAL FOR 27" TO 60" PIPE
- (C) 8" BEDDING DEPTH "d" OF NO. 4 GRANULAR MATERIAL FOR PIPE SIZES GREATER THAN 60". THE MINIMUM DEPTH OF THE BEDDING SHALL BE 2" BELOW THE PIPE BELLS, IF ANY, BUT IN NO CASE SHALL THE BEDDING BE LESS THAN 8"
- (D) SERVICE CONNECTIONS SHALL HAVE A 3" MINIMUM BEDDING DEPTH OF NO. 57 GRANULAR MATERIAL.

2. TRENCH BACKFILL SHALL IN PAVED AREAS SHALL BE CLEVELAND 50 LSM AND OUTSIDE OF PAVED AREAS ORIGINAL TRENCH EXCAVATION MAY BE USED, PROPERLY COMPACTED.



TYPICAL SECTION

PIPE SEWERS IN  
ORDINARY EARTH BEDDING

TYPICAL SECTION

PIPE SEWER IN ROCK  
AND OR SHALE  
WHERE DIRECTED

TYPICAL SECTION

PIPE SEWER IN  
CONCRETE CRADLE

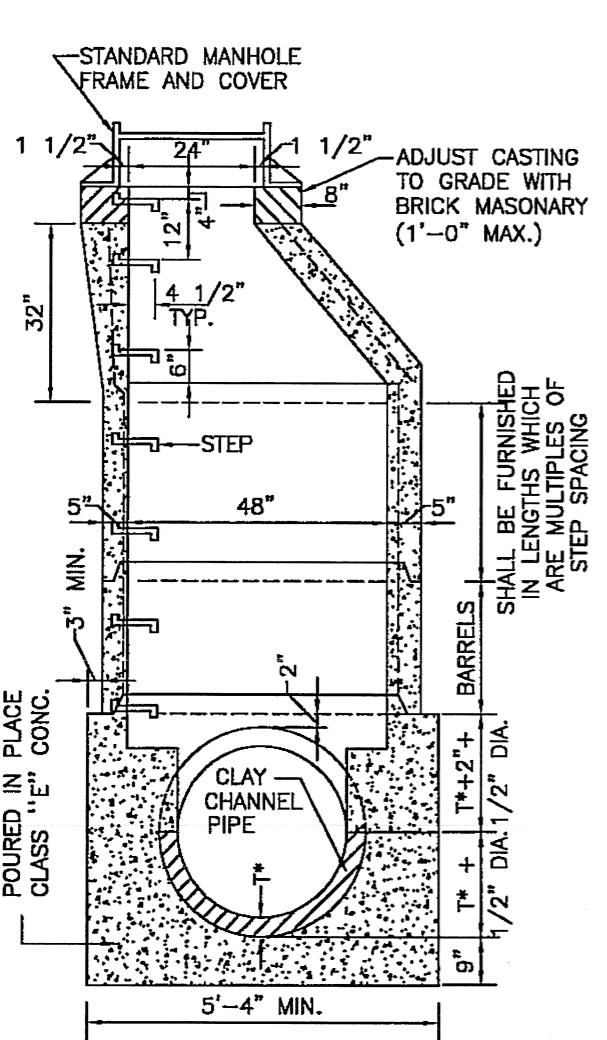
CITY OF CLEVELAND

DEPARTMENT OF PUBLIC SERVICE  
DIVISION OF ENGINEERING & CONSTRUCTION  
JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
STANDARD CONSTRUCTION DRAWING  
STANDARD TRENCH FOR PIPE SEWERS  
NOT TO SCALE

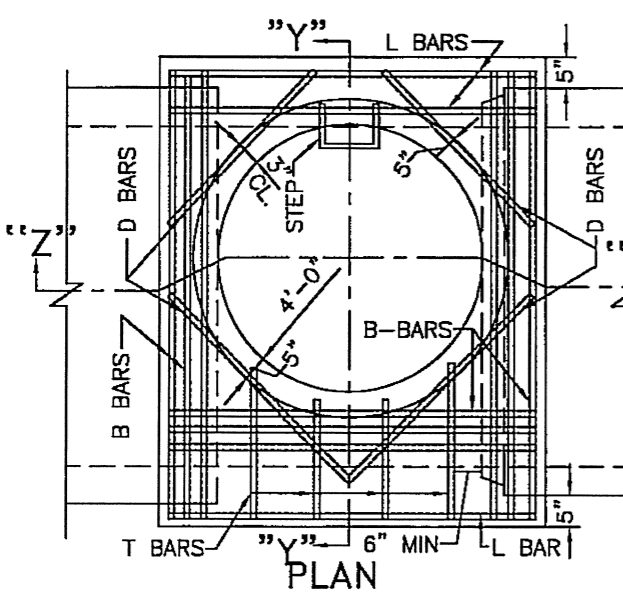
DRAWN BY: R. PLIODZINSKAS — DATE: 8/28/07

SUBMITTED BY: W. MCLAUGHLIN — DATE: 8/28/07

APPROVED: *[Signature]* DATE: 7-8-08  
COMMISSIONER OF ENGINEERING & CONSTRUCTION

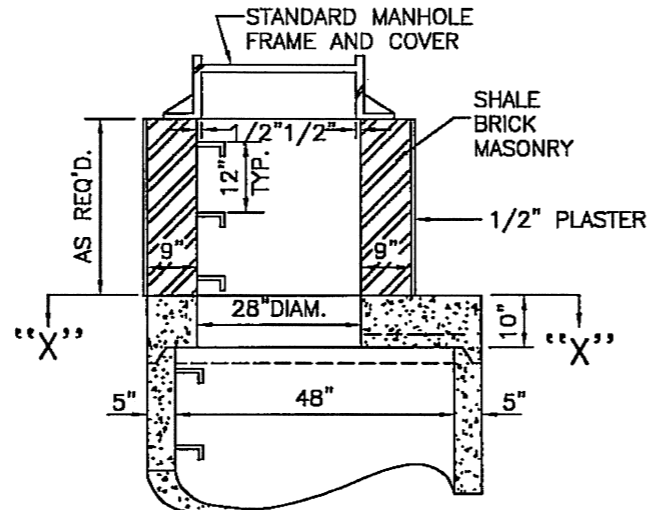


SEWERS 42" AND UNDER

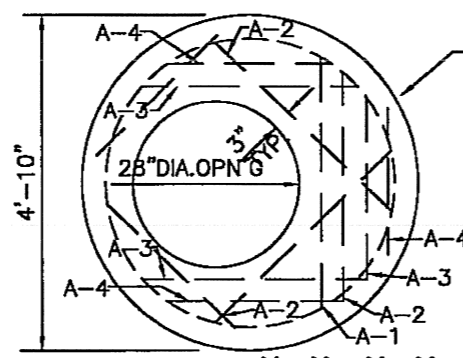


PLAN

CONNECTION BOX FOR PRECAST MANHOLES ON SEWERS 48" AND OVER



ALTERNATE DOME

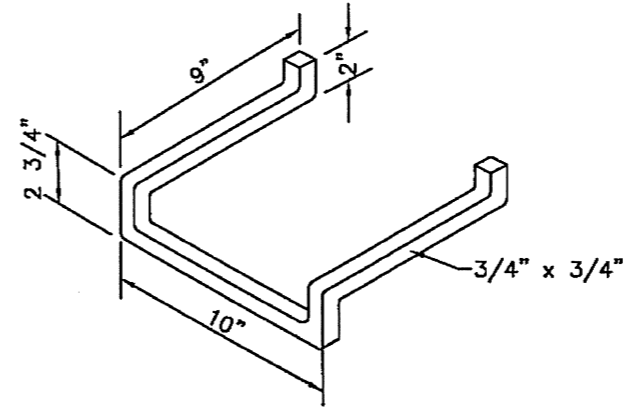


SECTION "X" - "X"

NOTE:  
ALL REINFORCING STEEL  
#5 BARS @ 4" C.C.

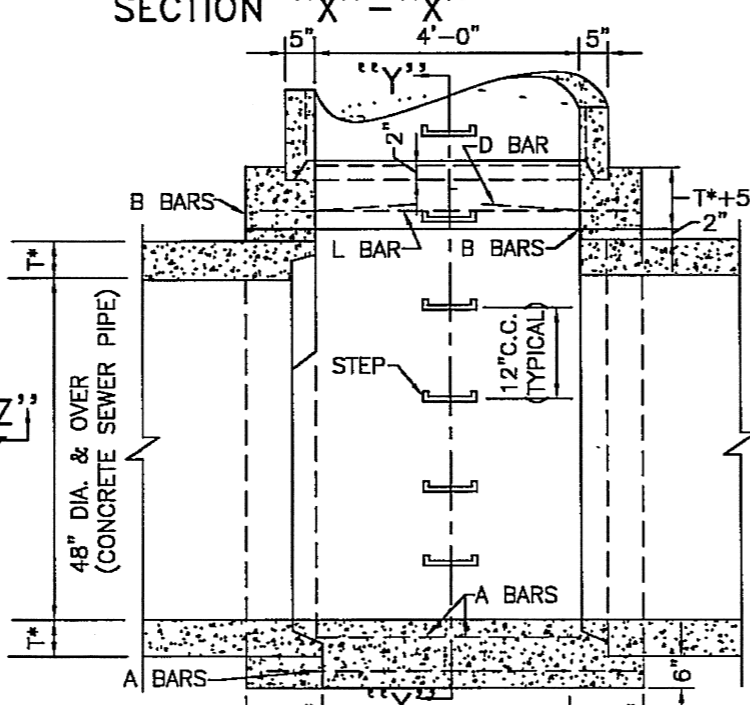
BAR LENGTHS  
A-1 - 3'-10"  
A-2 - 3'-7"  
A-3 - 3'-0"  
A-4 - 2'-2"

T\* - REPRESENTS  
THICKNESS OF PIPE

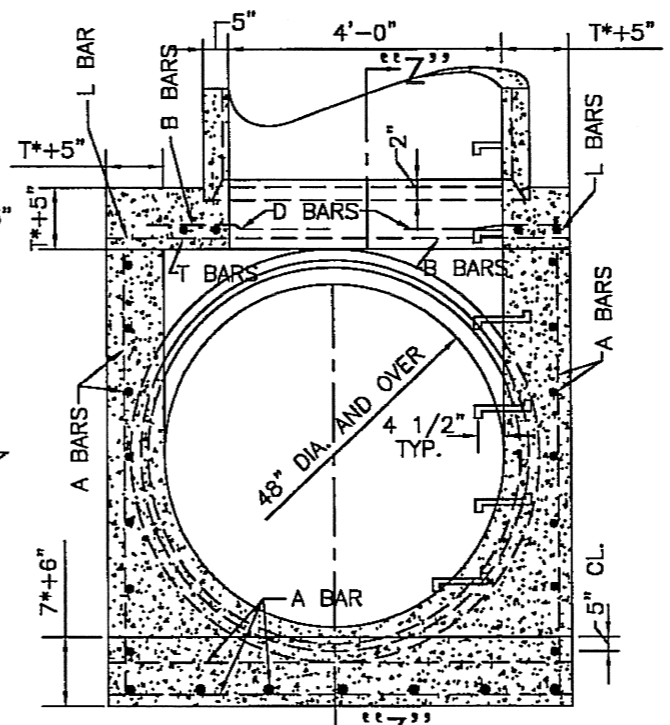


STEP DETAIL

NOTE:  
STEPS SHALL BE CAST IRON AS  
PER ASTM A 48 CLASS 30 GRAY  
IRON OR ALUMINUM AS PER  
ASTM B 221,6061-T6



SECTION "Z" - "Z"



SECTION "Y" - "Y"

NOTES:

NO HOLES FOR 12" INLET OR CATCH BASIN CONNECTIONS SHALL BE CUT IN ANY SECTION LESS THAN 36" MANHOLE BARREL. NOT MORE THAN 2 INLET CONNECTIONS SPACED 2± FEET APART HORIZONTALLY PERMITTED IN 3 OR 4 FOOT MANHOLE SECTIONS.

ALL JOINTS AND PIPE OPENINGS IN THE MANHOLE SHALL BE THOROUGHLY CALKED WITH 1:3 CEMENT MORTAR HAVING A 1/2" MINIMUM THICKNESS.

PRECAST REINFORCED CONCRETE MANHOLE SECTIONS SHALL COMPLY WITH THE REQUIREMENTS OF ASTM DESIGNATION C 478-06a: MINIMUM WALL THICKNESS SHALL BE 5 INCHES.

CONNECTION BOXES FOR SEWERS 48" AND OVER IN DIAMETER SHALL BE REINFORCED AS SHOWN AND AS SPECIFIED BELOW:

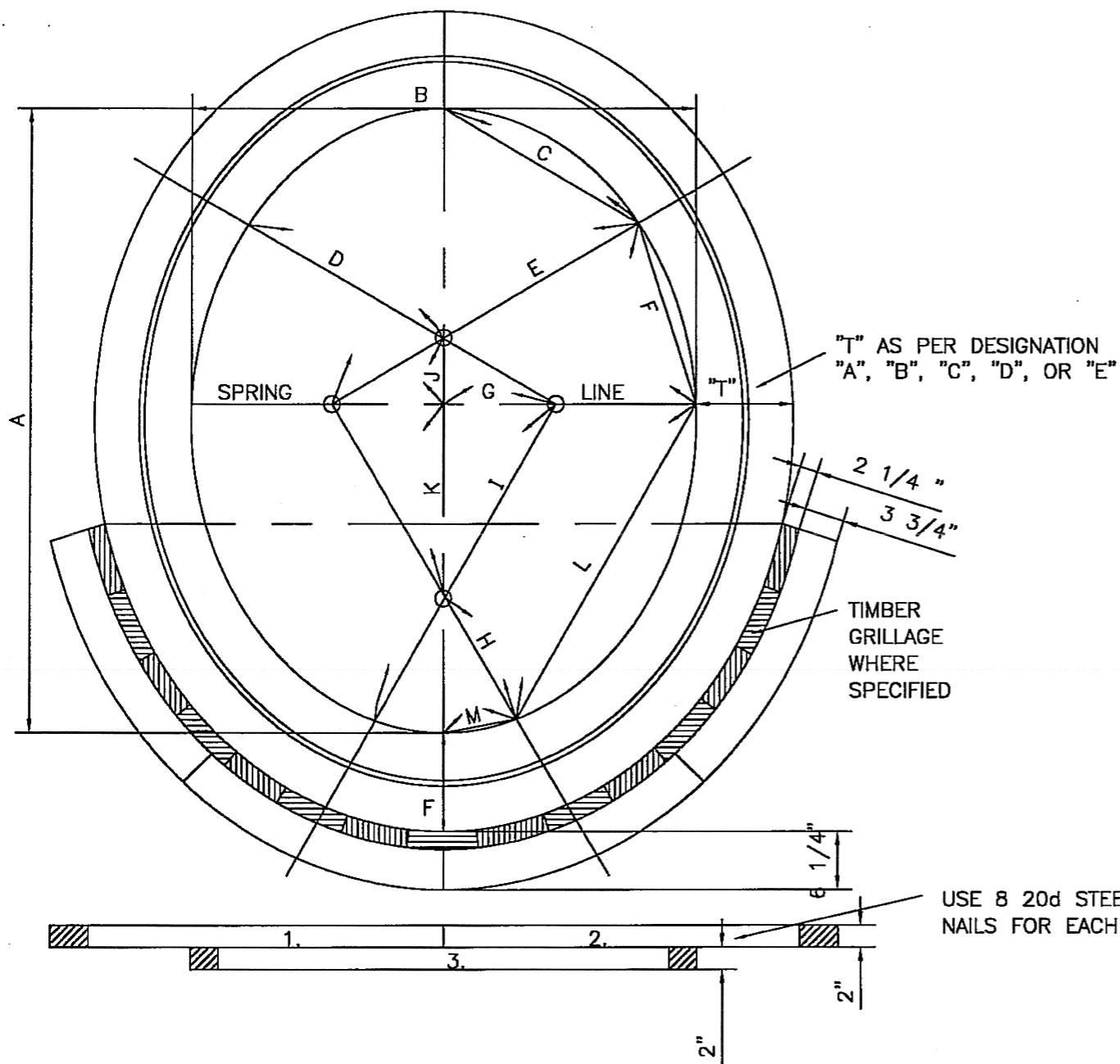
- A) BARS SHALL BE SPACED AT 12" CENTERS IN BOTH DIRECTIONS.
- B) BARS SHALL BE SPACED AT 3" CENTERS IN BOTH DIRECTIONS.  
A, B & L BARS SIZES:  
5/8" DIAM. FOR 48" TO 60" SEWERS.  
3/4" DIAM. FOR 66" TO 78" SEWERS.  
7/8" DIAM. FOR 84" TO 96" SEWERS.
- C) T BARS SHALL BE 5/8" DIAM. SPACED AT 12" CENTERS.
- D) BARS SHALL BE 5/8" DIAMETER EPOXY COATED REINFORCING STEEL SHALL HAVE 2" CLEARANCE EXCEPT WHERE OTHERWISE SPECIFIED.
- E) STANDARD MANHOLE FRAME AS PER A-503 (SHEET 61) AND COVER AS PER A-605 (SHEET 62) OR A-695 (SHEET 63)

**CITY OF CLEVELAND**  
DEPARTMENT OF PUBLIC SERVICE  
DIVISION OF ENGINEERING & CONSTRUCTION  
JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
STANDARD CONSTRUCTION DRAWING  
DETAIL PLAN OF PRECAST CONCRETE MANHOLE  
NOT TO SCALE

DRAWN BY: R. PLIODZINSKAS      DATE: 8/28/07  
SUBMITTED BY: W. MCLAUGHLIN      DATE: 8/28/07

APPROVED: *[Signature]*      DATE: 7-8-08  
COMMISSIONER OF ENGINEERING & CONSTRUCTION

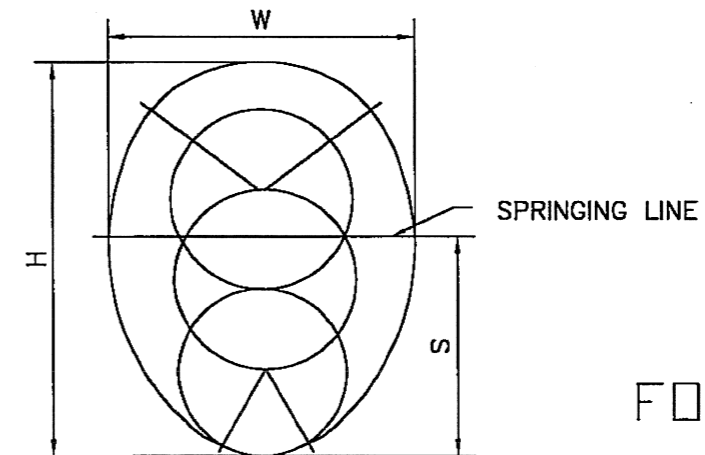




EGG SHAPED SEWERS					NO.	H FEET	W FEET	S FEET	AREA SQ. FT.	NO.	H FEET	W FEET	S FEET	AREA SQ. FT.
NO.	H FEET	W FEET	S FEET	AREA SQ. FT.	8	5.12	4.04	2.71	16.00	15	7.79	6.14	4.12	36.99
2	2.25	1.94	1.28	3.41	9	5.54	4.37	2.93	18.72	16	8.13	6.41	4.30	40.32
3	2.75	2.23	1.64	4.75	10	5.94	4.69	3.14	21.54	17	8.47	6.68	4.47	43.71
4	3.23	2.54	1.70	6.35	11	6.33	4.99	3.35	24.46	18	8.79	6.94	4.65	47.17
5	3.74	2.95	1.98	8.55	12	6.71	5.29	3.55	27.47	19	9.12	7.19	4.82	50.70
6	4.23	3.34	2.23	10.90	13	7.08	5.58	3.74	30.57	20	9.43	7.44	4.98	54.29
7	4.69	3.70	2.48	13.39	14	7.44	5.87	3.93	33.74					

### TYPES OF EGG SHAPED SEWERS

- "A"—1 RING OF BRICK ALL AROUND.
- "B"—1 RING OF BRICK ALL AROUND & 1 RING EXTRA ON ARCH.
- "C"—2 RINGS OF BRICK ALL AROUND .
- "D"—2 RINGS OF BRICK ALL AROUND & 1 RING EXTRA ON ARCH.
- "E"—3 RINGS OF BRICK ALL AROUND.



FOR RECORD ONLY

TABULAR DIMENSIONS FOR EGG SHAPED SEWERS NO.2 TO NO. 8

NO.	A	B	C	D	E	F	G	H	I	J	K	L	M
2	2'-3"	1'-11 1/4"					6 3/8"	9"	1'-6"		6 3/8"		
3	2'-9"	2'-2 3/4"					10 5/8"	9"	2'-0"		10 5/8"		
4	3'-2 3/4"	2'-6 5/8"	1'-2 1/8"	1'-2 1/8"	1'-10 1/2"	11 1/2"	7 3/16"	8 1/8"	1'-10 1/2"	4 1/16"	12 3/16"	1'-10 1/2"	4 1/4"
5	3'-9"	2'-11 3/8"	1'-4 3/8"	1'-4 3/8"	2'-1 7/8"	1'-1 3/8"	8 3/16"	9 1/2"	2'-1 7/8"	4 3/4"	1'-2 1/4"	2'-1 7/8"	4 7/8"
6	4'-2 3/4"	3'-4"	1'-6 1/2"	1'-6 1/2"	2'-5 1/4"	1'-3 1/8"	9 1/4"	10 3/4"	2'-5 1/4"	5 3/8"	1'-4 1/8"	2'-5 1/4"	5 1/2"
7	4'-8 1/4"	3'-8 3/8"	1'-8 1/2"	1'-8 1/2"	2'-8 1/2"	1'-4 3/4"	10 5/16"	11 7/8"	2'-8 1/2"	5 15/16"	1'-5 13/16"	2'-8 1/2"	6 1/8"
8	5'-1 1/2"	4'-0 1/2"	1'-10 1/2"	1'-10 1/2"	2'-11 1/2"	1'-6 1/4"	11 1/4"	1'-1"	2'-11 1/2"	6 1/2"	1'-7 1/2"	2'-11 1/2"	6 3/4"

CITY OF CLEVELAND

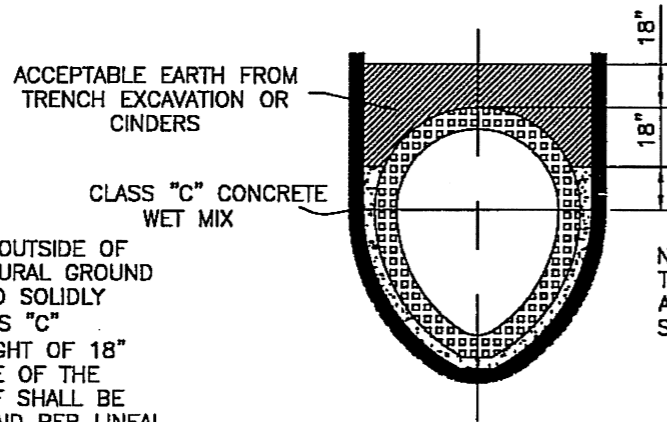
DEPARTMENT OF PUBLIC SERVICE  
 DIVISION OF ENGINEERING & CONSTRUCTION  
 JOMARIE WASIK—DIRECTOR OF PUBLIC SERVICE  
 STANDARD CONSTRUCTION DRAWING  
 STANDARD PLAN FOR EGG SHAPED SEWERS  
 DIMENSIONS & AREAS  
 NOT TO SCALE

DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08

SUBMITTED BY: W. McLAUGHLIN DATE: 4/8/08

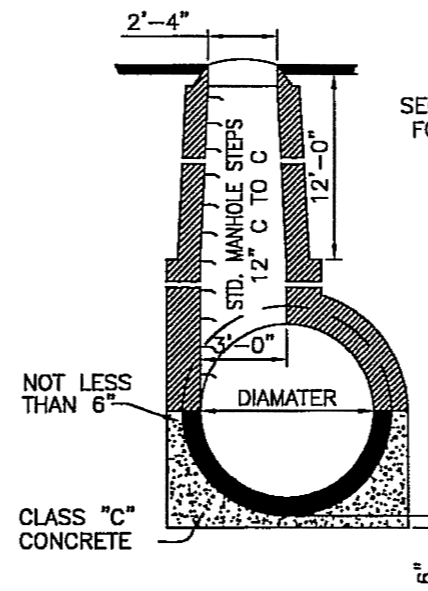
APPROVED: *[Signature]* DATE: 7-8-08  
 COMMISSIONER OF ENGINEERING & CONSTRUCTION

TYPICAL SECTION OF TRENCH  
FOR  
VITRIFIED BLOCK CONSTRUCTION



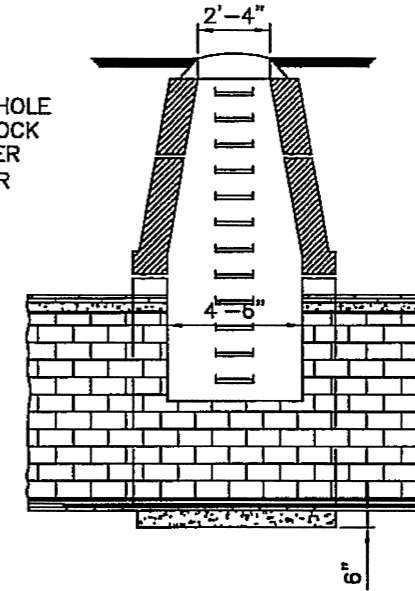
THE SPACE BETWEEN THE OUTSIDE OF THE BLOCKS AND THE NATURAL GROUND SHALL BE COMPLETELY AND SOLIDLY FILLED WITH WET MIX CLASS "C" CONCRETE UP TO THE HEIGHT OF 18" ABOVE THE SPRINGING LINE OF THE SEWER. THE COST THEREOF SHALL BE INCLUDED IN THE PRICE PAID PER LINEAL FOOT OF SEWER CONSTRUCTED.

NOTE:  
THIS SECTION APPLIES  
ALSO FOR CIRCULAR  
SECTION

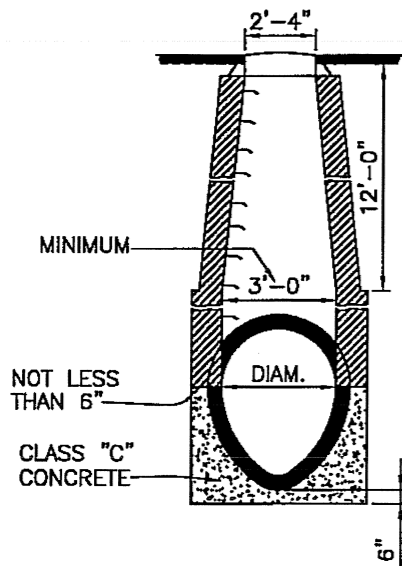


SECTION "A-A"

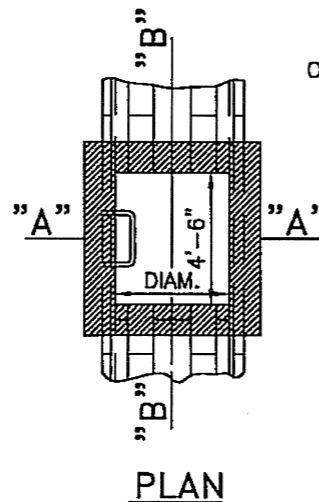
SECTIONS OF MANHOLE  
FOR VITRIFIED BLOCK  
CIR. SEWER OVER  
4'-6" DIAMETER



SECTION "B-B"

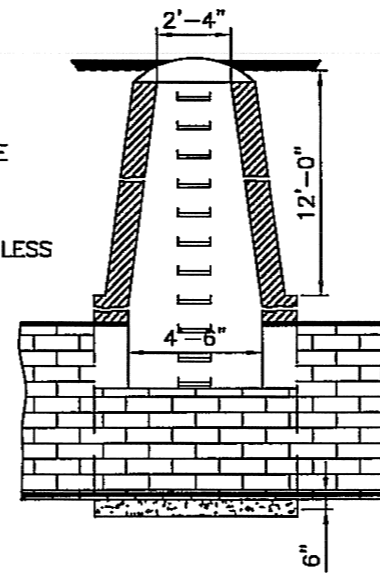


SECTION "A-A"

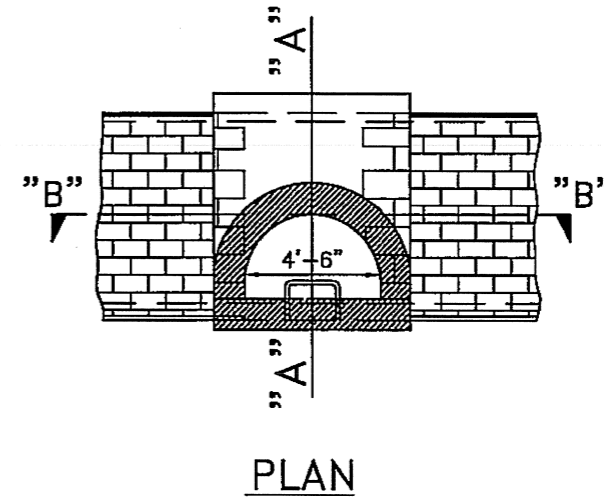


PLAN

SECTIONS OF MANHOLE  
FOR  
VITRIFIED BLOCK &  
CIR. SEWER  
OF 4'-6" DIAMETER OR LESS



SECTION "B-B"



PLAN

MORTAR SHALL BE COMPOSED OF  
ONE PORTLAND CEMENT (SEC.  
701.04) TO TWO PARTS SAND (SEC.  
703.03) BY VOLUME.

RECORD ONLY

CITY OF CLEVELAND

DEPARTMENT OF PUBLIC SERVICE  
DIVISION OF ENGINEERING & CONSTRUCTION  
JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
STANDARD CONSTRUCTION DRAWING  
VITRIFIED BLOCK SEWER CONSTRUCTION DETAILS  
NOT TO SCALE

DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08

SUBMITTED BY: W. McLAUGHLIN DATE: 4/8/08

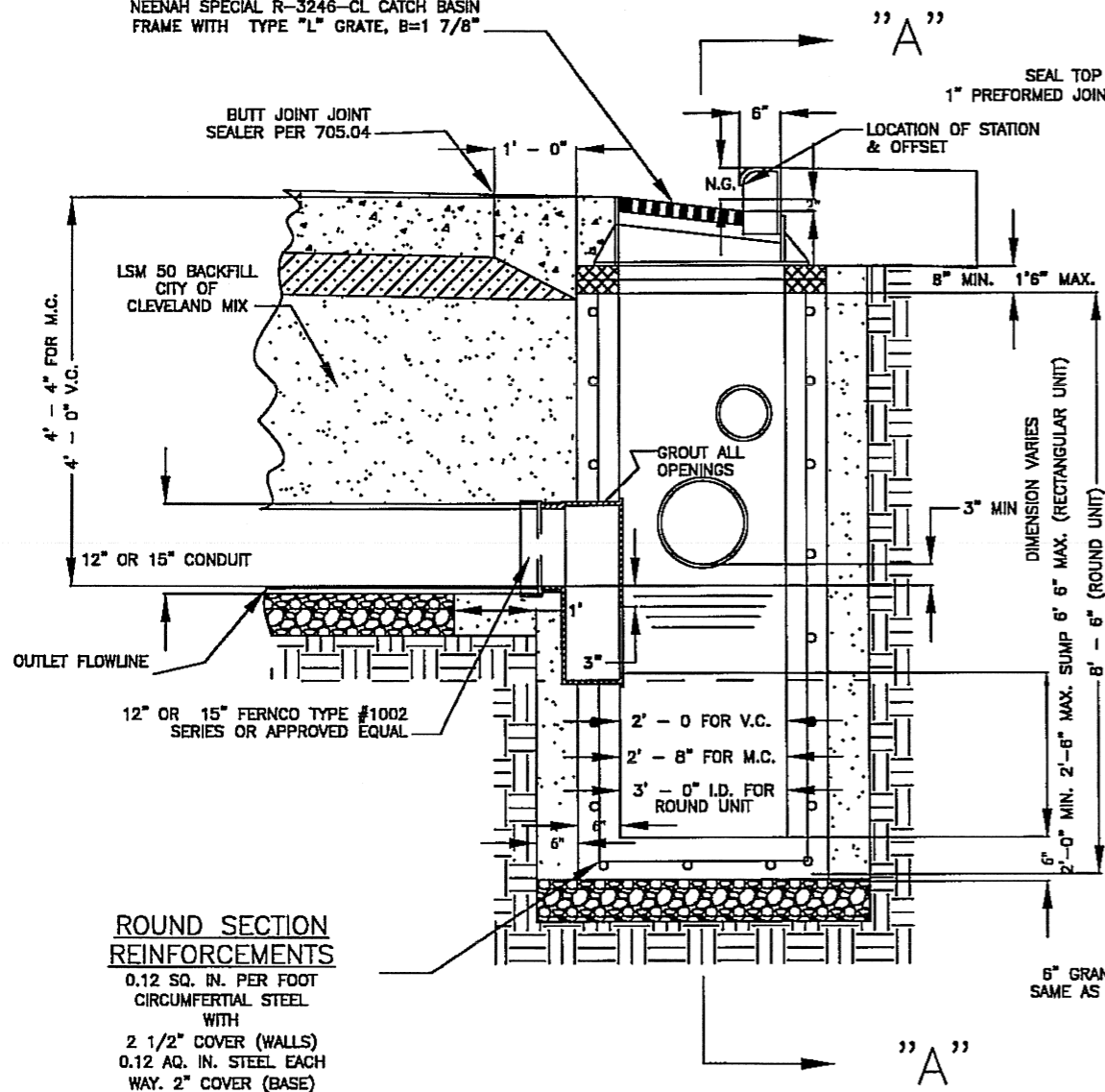
APPROVED: *[Signature]* DATE: 7-8-08  
COMMISSIONER OF ENGINEERING & CONSTRUCTION

FILE NO. B-429

25

# CB-1 CATCH BASIN

EAST JORDON IRONWORKS INC. CAT. No. 7035  
 WITH TYPE M2 GRATE AND TYPE T1 BACK OR  
 APPROVED EQUAL  
 NEENAH SPECIAL R-3246-CL CATCH BASIN  
 FRAME WITH TYPE "L" GRATE, B=1 7/8"

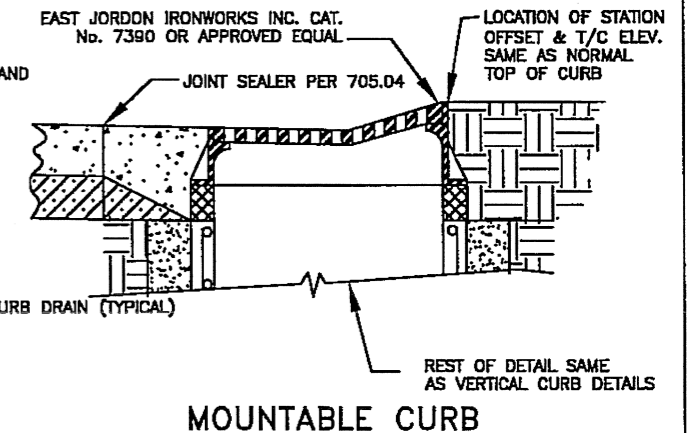
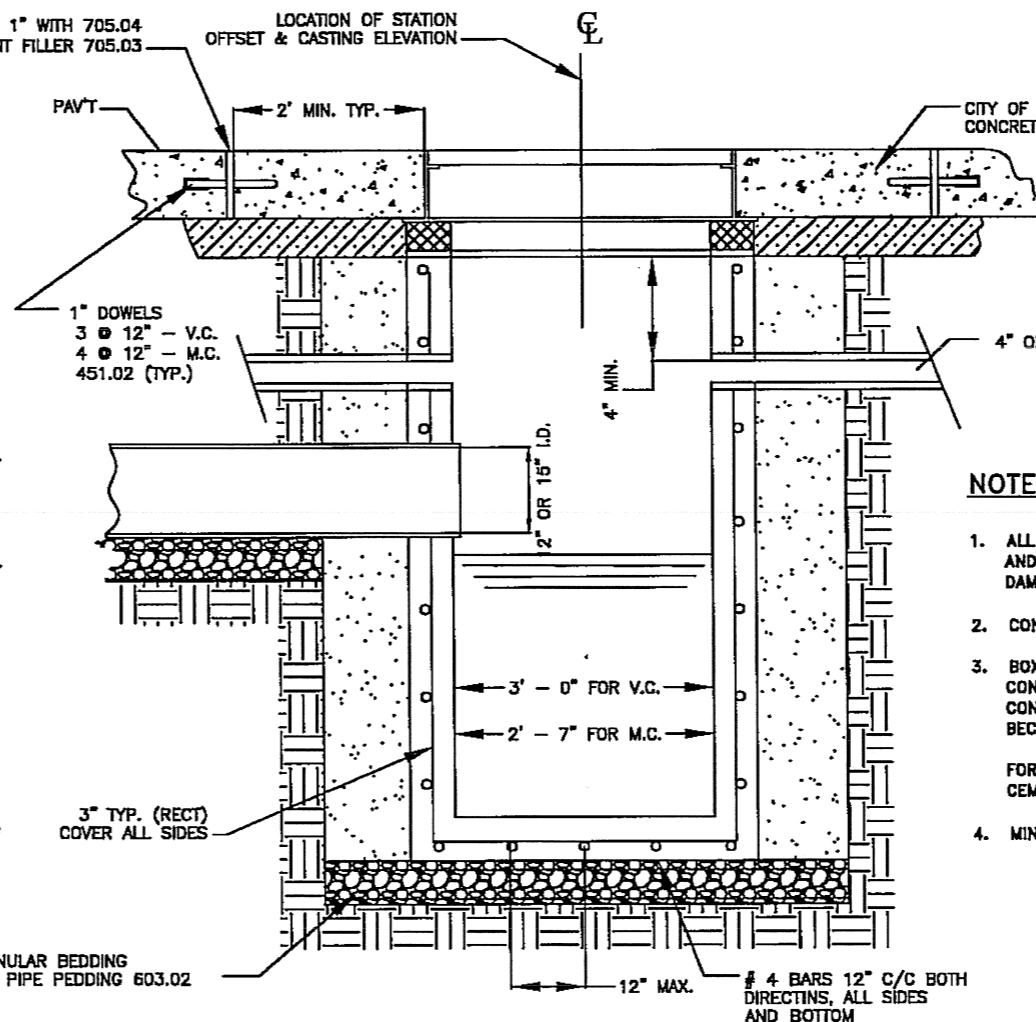


**ROUND SECTION REINFORCEMENTS**  
 0.12 SQ. IN. PER FOOT CIRCUMFERTIAL STEEL WITH  
 2 1/2" COVER (WALLS)  
 0.12 SQ. IN. STEEL EACH WAY. 2" COVER (BASE)

**ALTERNATE BASIN SHAPE**

A ROUND PRECAST CONCRETE UNIT MAY BE USED IN LIEU OF RECTANGULAR UNIT. THE ROUND SECTION SHALL BE 36" I.D. UNIT WITH INTEGRAL BASE AND PRECAST TOP TRANSITION SECTION (ROUND TO RECTANGULAR) TO FIT CASTING BEING USED. THE TRANSITION UNIT REQUIRES A # 5 REBAR AT CORNERS OF THE RECTANGULAR SHAPED SECTION AND 3 X 8 W6 X W5 WELDED WIRE FABRIC IN VERTICAL SECTION. ALSO, IF APPROVED BY THE ENGINEER, 8" THICK MASONRY WALL MAY BE USED IN LIEU OF PRECAST UNITS.

NOTE: IF PRECAST CATCH BASIN IS CONSTRUCTED IN TWO PIECES THE JOINT BETWEEN UNITS MUST BE A PERMIUM JOINT, PER 706.11.



**NOTES**

- ALL REINFORCING SHALL BE # 4 DEFORMED BARS, AS PER ODOT 709, AND SUFFICIENT TO PERMIT SHIPPING AND PLACEMENT WITHOUT DAMAGE TO DECTANGULAR SHAPE.
- CONCRETE SHALL BE ODOT 499 CLASS "C" 4000 PSI IN 28 DAYS.
- BOX-OUT SHALL BE PAID FOR AS PAVEMENT IN PORTLAND CEMENT CONCRETE PAVEMENT AND AS PART OF THE CATCH BASIN IN ASPHALTIC CONCRETE PAVEMENT WITH NO REDUCTION IN PAVEMENT OR CURB QUANTITY BECAUSE OF CASTING.  
 FOR FULL WIDTH ASPHALTIC CONCRET PAVEMENT CONSTRUCT A PORTLAND CEMENT CONCRET APRON.
- MINIMUM WALL THICKNESS 8" CAST IN PLACE AND 6" FOR PRECAST.

"A" - "A"

**LEGEND**

V.C.	=	VERTICAL CURB
M.C.	=	MOUNTABLE CURB
T/C	=	TOP OF CASTING
N.G.	=	NORMAL GUTTER

**CITY OF CLEVELAND**

DEPARTMENT OF PUBLIC SERVICE  
 DIVISION OF ENGINEERING & CONSTRUCTION  
 JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
 STANDARD CONSTRUCTION DRAWING  
 STANDARD DETAIL FOR  
 RECTANGULAR CATCH BASIN  
 NOT TO SCALE

REVISED BY: R. PLIODZINSKAS DATE: 4/8/08

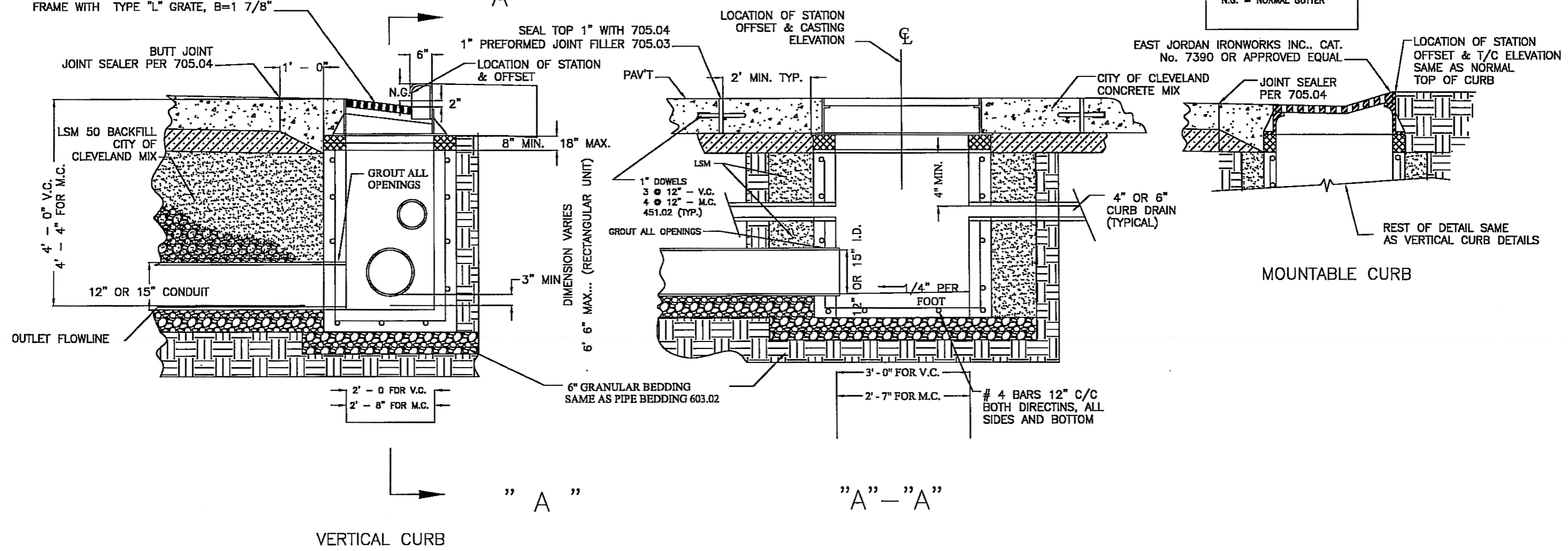
SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08

APPROVED:  DATE: 7-8-08  
 COMMISSIONER OF ENGINEERING & CONSTRUCTION

EAST JORDAN IRONWORKS INC... CAT. No. 7035  
 WITH TYPE M2 GRATE AND TYPE T1 BACK  
 OR APPROVED EQUAL  
 NEENAH SPECIAL R-3246-CL CATCH BASIN  
 FRAME WITH TYPE "L" GRATE, B=1 7/8"

# INLET BASIN

**LEGEND**  
 V.C. = VERTICAL CURB  
 M.C. = MOUNTABLE CURB  
 T/C = TOP OF CASTING  
 N.G. = NORMAL GUTTER



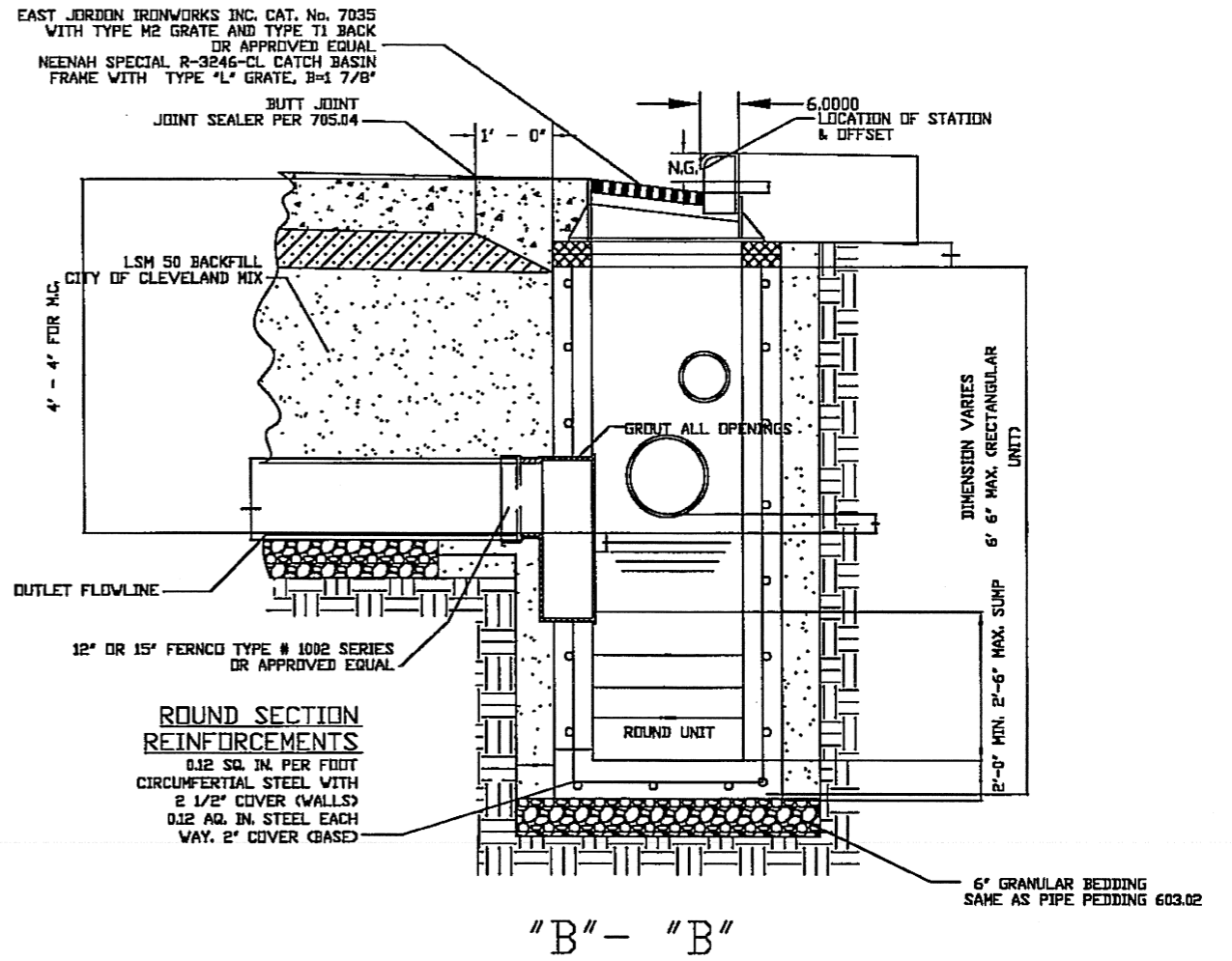
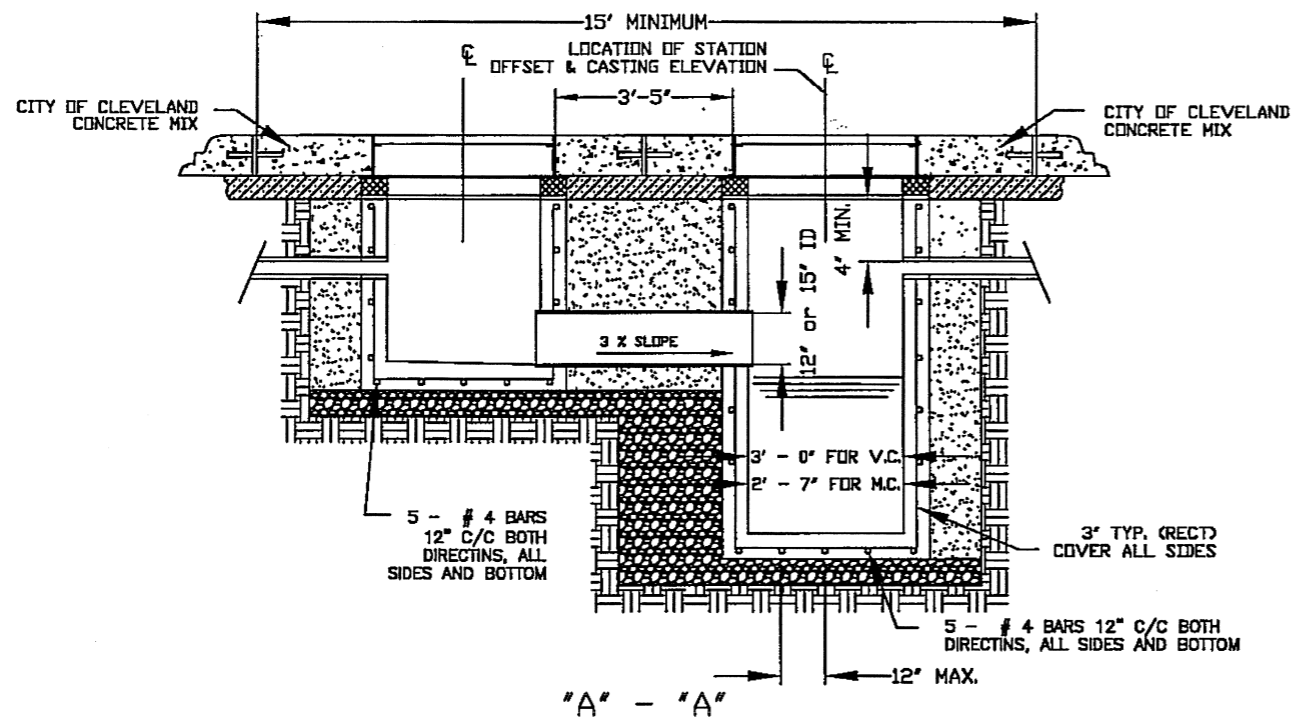
**NOTES**

1. ALL REINFORCING SHALL BE # 4 DEFORMED BARS, AS PER ODOT 709, AND SUFFICIENT TO PERMIT SHIPPING AND PLACEMENT WITHOUT DAMAGE TO RECTANGULAR SHAPE.
2. CONCRETE SHALL BE ODOT 499 CLASS "C" 4000 PSI IN 28 DAYS.
3. BOX-OUT SHALL BE PAID FOR AS PAVEMENT IN PORTLAND CEMENT CONCRETE PAVEMENT AND AS PART OF THE CATCH BASIN IN ASPHALTIC CONCRETE PAVEMENT WITH NO REDUCTION IN PAVEMENT OR CURB QUANTITY BECAUSE OF CASTING.
4. FOR FULL WIDTH ASPHALTIC CONCRETE PAVEMENT-- CONSTRUCT A PORTLAND CEMENT CONCRETE APRON.
5. MINIMUM WALL THICKNESS 8" FOR CAST IN PLACE AND 6" FOR PRECAST

**CITY OF CLEVELAND**  
 DEPARTMENT OF PUBLIC SERVICE  
 DIVISION OF ENGINEERING & CONSTRUCTION  
 JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
 STANDARD CONSTRUCTION DRAWING  
 STANDARD RECTANGULAR PRECAST CONCRETE  
 INLET BASIN  
 NOT TO SCALE

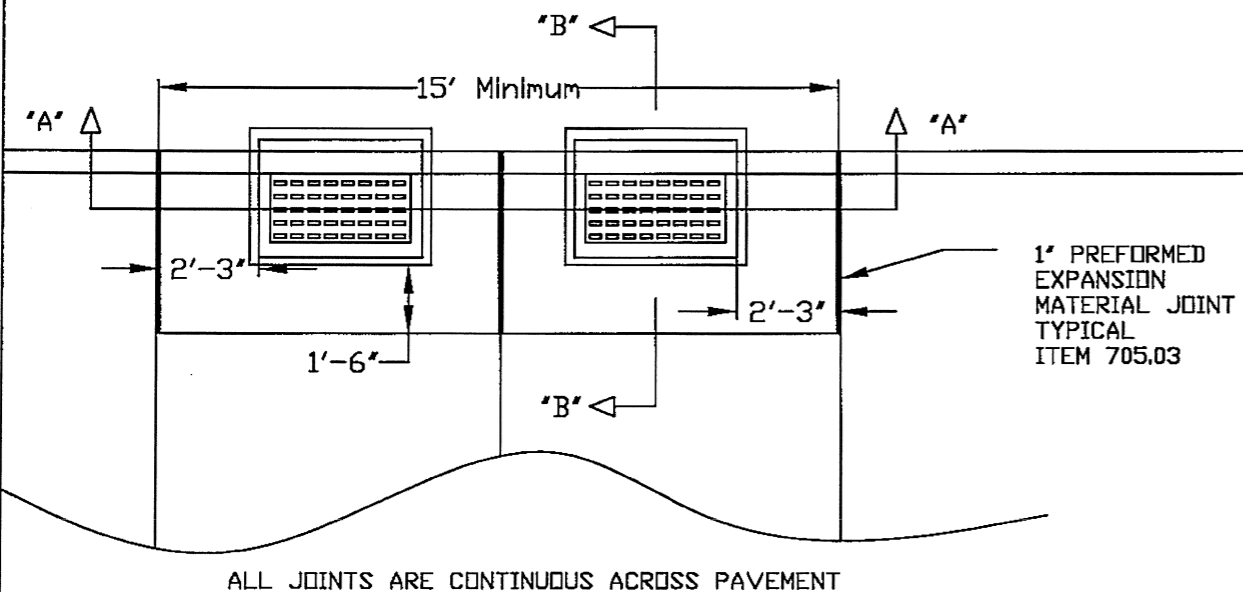
DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08  
 SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08  
 APPROVED: [Signature] DATE: 7-8-08  
 COMMISSIONER OF ENGINEERING & CONSTRUCTION

FILE NO. CB-1 | SHEET 2/7 | (27)



**NOTES**

1. THE CATCH BASIN SHALL BE SET AT THE LOW POINT OF A SAG VERTICAL CURVE OR AT THE POINT WHERE THE GRADE OF THE STREET CHANGES FROM NEGATIVE TO POSITIVE OR DOWNSTREAM FROM THE INLET BASIN.
2. THE CONCRETE BETWEEN THE CASTINGS SHALL BE SLOPED TO MATCH THE SLOPE OF THE CASTINGS.
3. REFER TO CB-1 AND IB-1 FOR FULL DETAILS AND DIMENSIONS.
4. PIPE BETWEEN BASINS SHALL BE EXTRA STRENGTH VCP PIPE AND IS INCLUDED IN THE BID ITEM FOR TWIN BASIN CB-3.
5. DOWEL SPACING AND SIZE SHALL BE AS FOLLOWS:  
 1" DOWELS-  
 3 @ 12" - V.C.  
 4 @ 12" - M.C.  
 451.02 (TYP.)
6. MINIMUM WALL THICKNESS 8" FOR CAST IN PLACE AND 6" FOR PRECAST



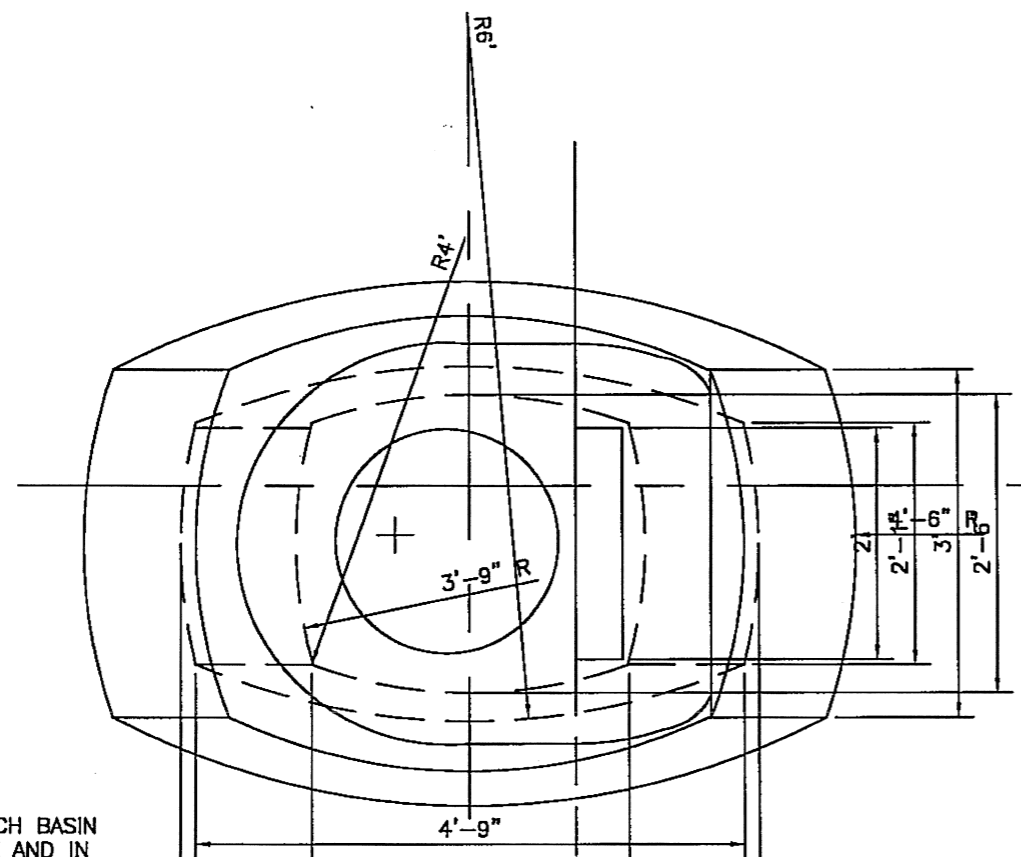
ALL JOINTS ARE CONTINUOUS ACROSS PAVEMENT

CITY OF CLEVELAND  
 DIVISION OF ENGINEERING & CONSTRUCTION  
 JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
 STANDARD CONSTRUCTION DRAWING  
 DETAILS FOR  
 TWIN BASIN - CB-3  
 NOT TO SCALE

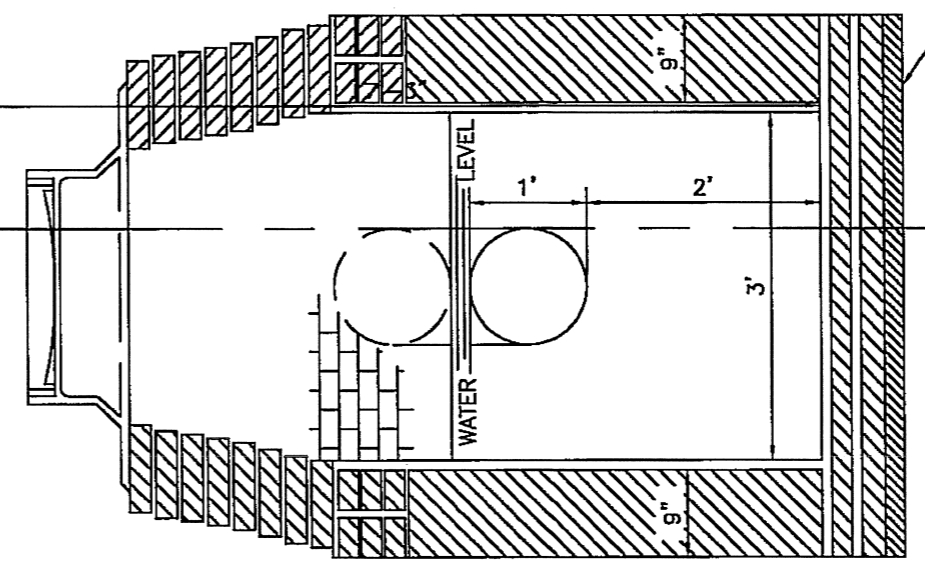
DRAWN BY: R. PLIODZINSKAS      DATE: 4/8/08  
 SUBMITTED BY: W. MCLAUGHLIN      DATE: 4/8/08

APPROVED: *[Signature]*      DATE: 7-8-08  
 COMMISSIONER OF ENGINEERING & CONSTRUCTION

FILE NO. CB 1      SHEET 3/7      (28)

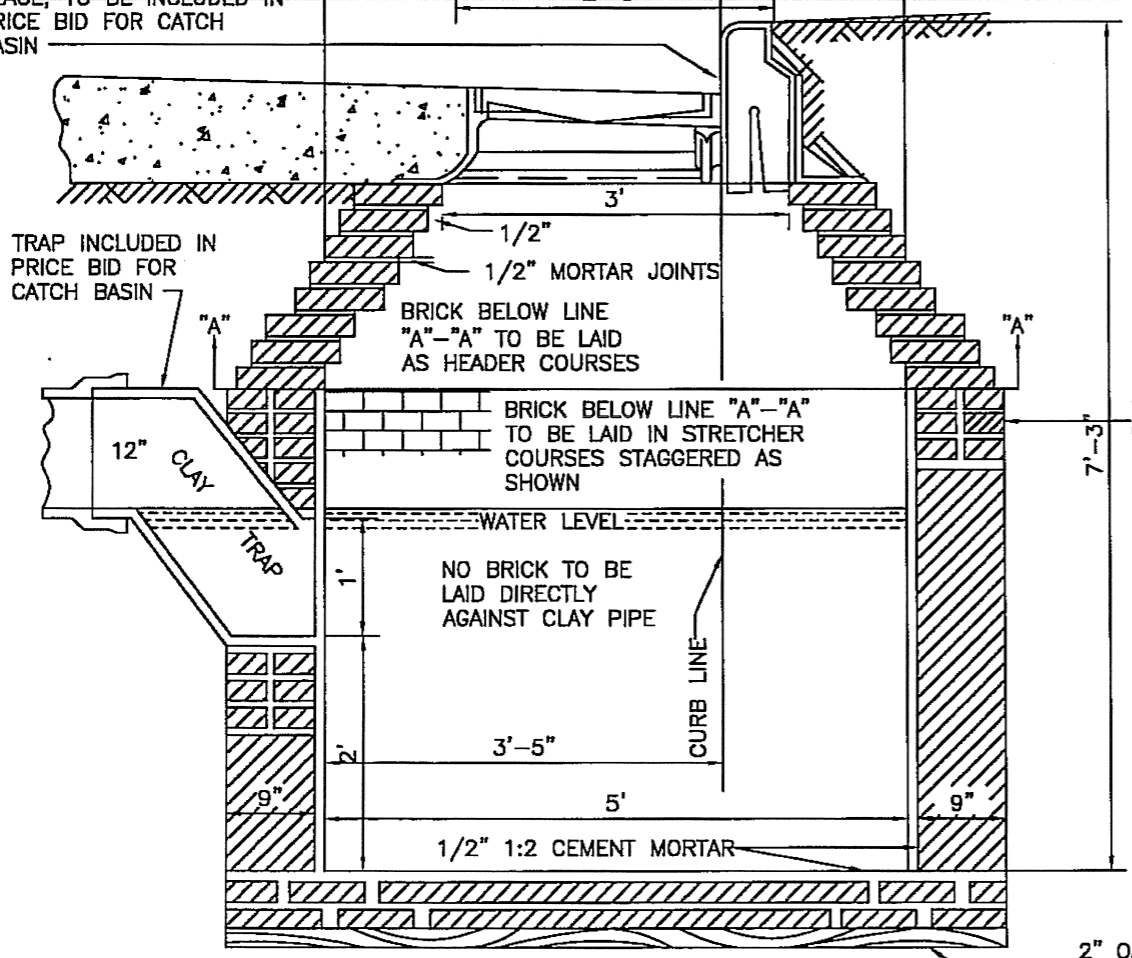


TOP OF CURB



TRANSVERSE SECTION

STANDARD CATCH BASIN  
TOP COMPLETE AND IN  
PLACE, TO BE INCLUDED IN  
PRICE BID FOR CATCH  
BASIN

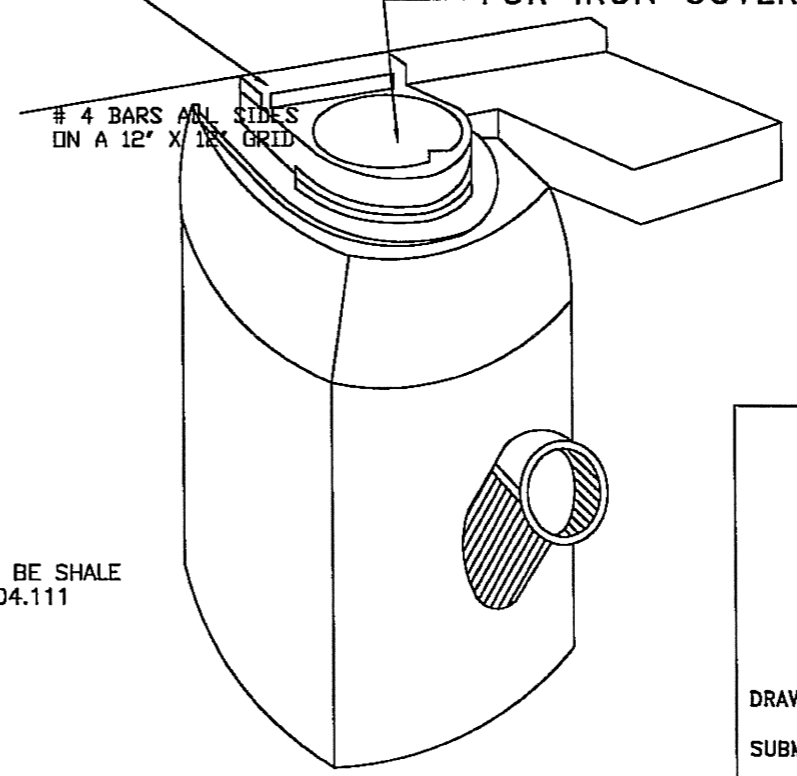


LONGITUDINAL SECTION

2" OAK GRILLAGE  
IF REQUIRED BY  
THE ENGINEER

FOR CAST IRON CURB BOX SEE DRAWING A-694

FOR IRON COVER SEE DRAWING A-693



PERSPECTIVE  
NOT TO SCALE

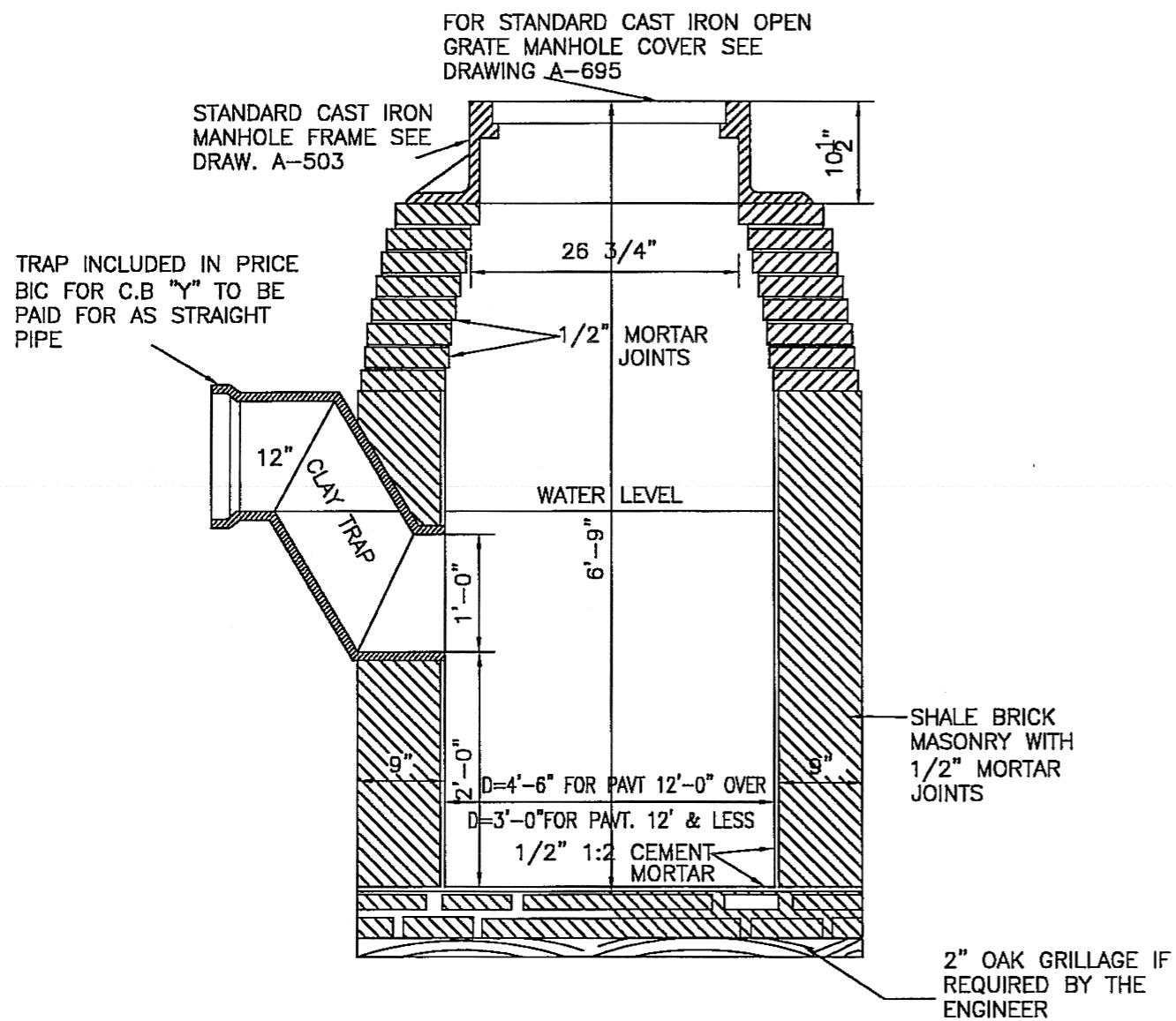
FOR RECORD ONLY

SPECIFICATIONS:  
ALL BRICK SHALL BE SHALE  
BRICK AS PER 704.111

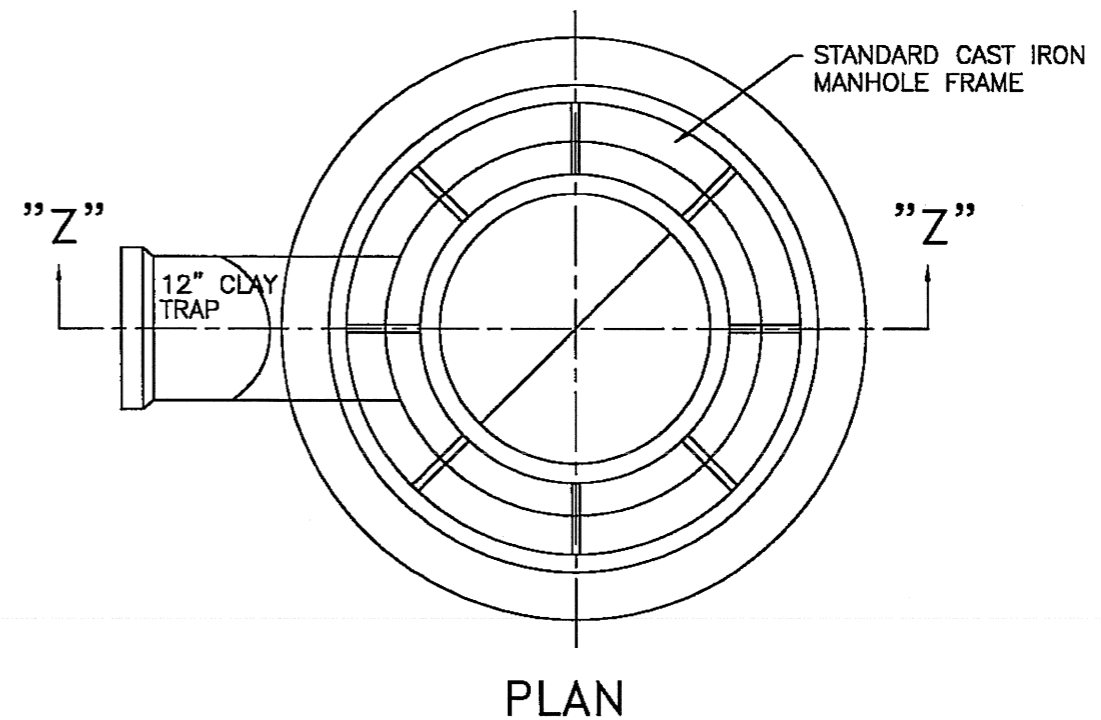
**CITY OF CLEVELAND**  
DEPARTMENT OF PUBLIC SERVICE  
DIVISION OF ENGINEERING & CONSTRUCTION  
JOMARIE WAKSIK-DIRECTOR OF PUBLIC SERVICE  
STANDARD CONSTRUCTION DRAWING  
STANDARD PLAN FOR GUTTER CATCH BASIN  
NOT TO SCALE

DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08  
SUBMITTED BY: W. McLAUGHLIN DATE: 4/8/08  
APPROVED: [Signature] DATE: 7-8-08  
COMMISSIONER OF ENGINEERING & CONSTRUCTION

FILE NO. CB 1	SHEET 4/7	(29)
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SECTION "Z-Z"



MORTAR SHALL BE COMPOSED OF ONE PART PORTLAND CEMENT (701.04) TO TWO PARTS SAND (SEE 703.03) BY VOLUME.

FOR RECORD ONLY

CITY OF CLEVELAND  
 DEPARTMENT OF PUBLIC SERVICE  
 DIVISION OF ENGINEERING & CONSTRUCTION  
 JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE STANDARD PLAN FOR PARK STYLE CATCH BASIN  
 NOT TO SCALE  
 DRAWN BY: R. PLIODZINSKAS DATE: 8/28/07  
 SUBMITTED BY: W. McLAUGHLIN DATE: 8/28/07  
 APPROVED: *[Signature]* DATE: 7-8-08  
 COMMISSIONER OF ENGINEERING & CONSTRUCTION

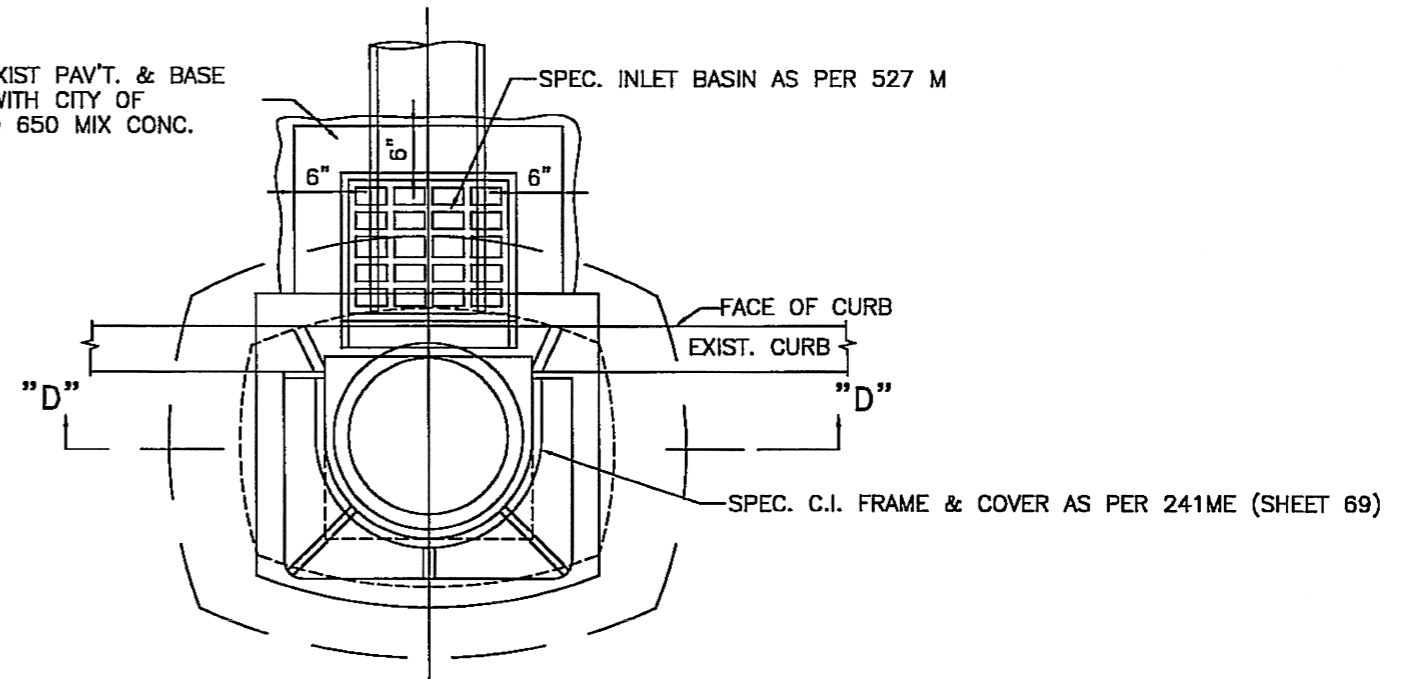
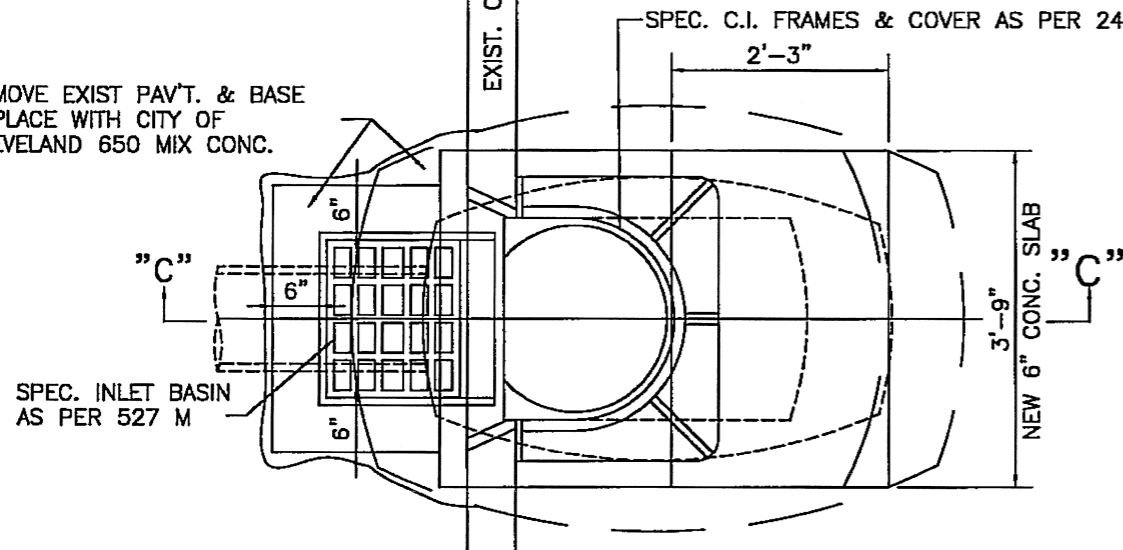
DETAIL "A"

DETAIL "B"

REMOVE EXIST PAV'T. & BASE  
REPLACE WITH CITY OF  
CLEVELAND 650 MIX CONC.

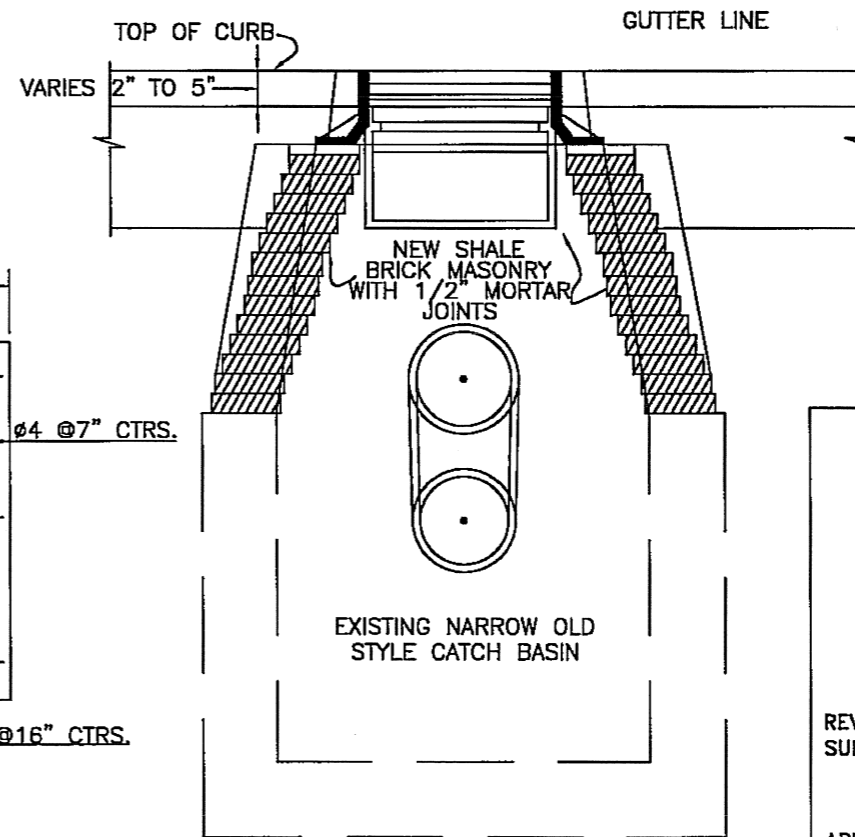
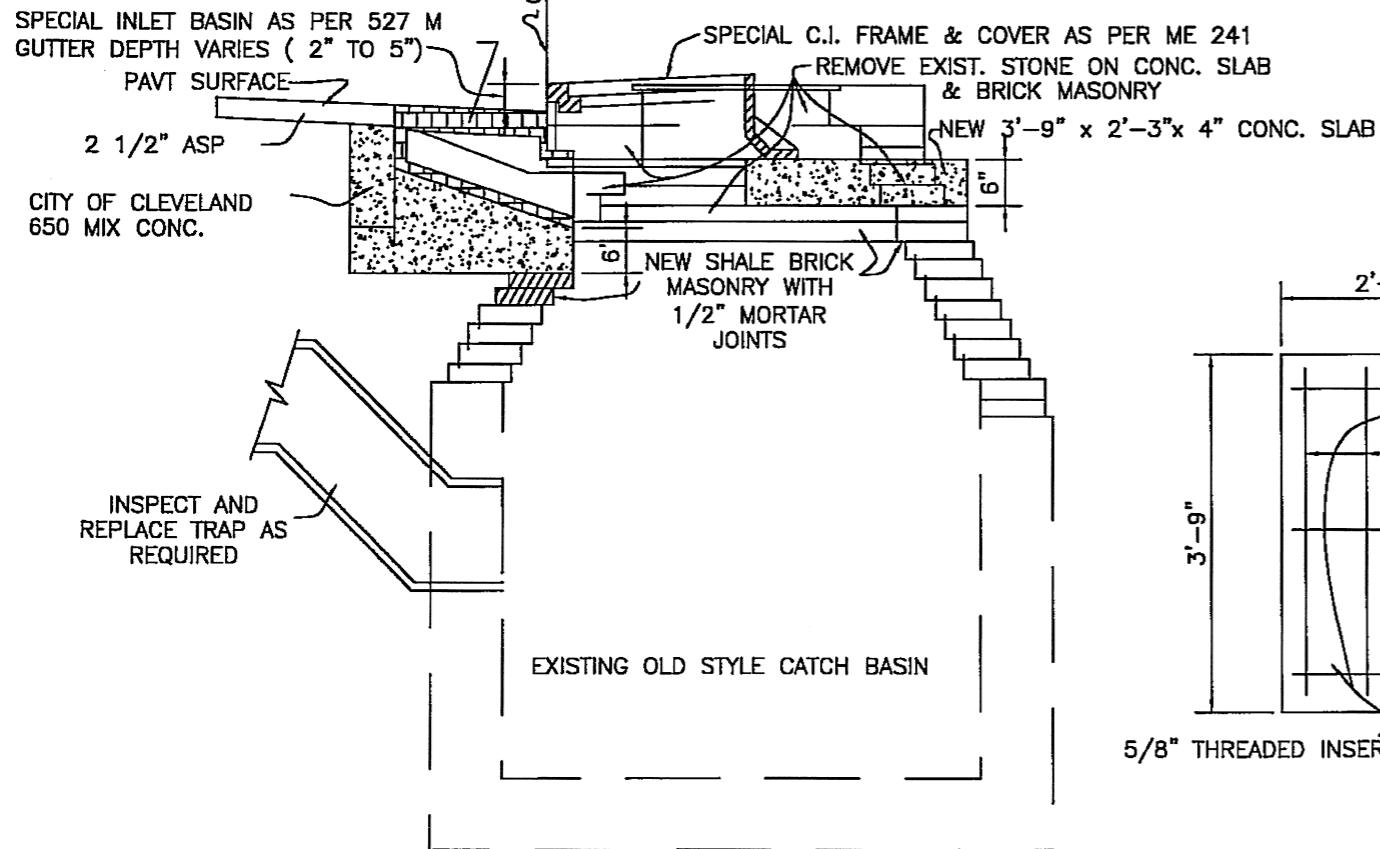
REMOVE EXIST PAV'T. & BASE  
REPLACE WITH CITY OF  
CLEVELAND 650 MIX CONC.

SPEC. INLET BASIN AS PER 527 M



PLAN OF CATCH BASIN  
WITH SPECIAL INLET

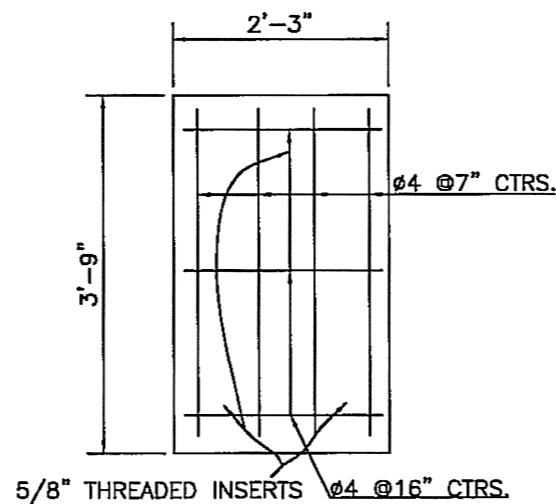
PLAN OF NARROW CATCH BASIN  
WITH SPECIAL INLET



MORTAR SHALL BE COMPOSED OF ONE PART  
PORTLAND CEMENT (SEC. 701.04) TO TWO  
PARTS OF SAND (SEC. 703.03) BY VOLUME.

NOTE: THIS PLAN TO BE USED FOR OLD STYLE  
CATCH BASIN RECONSTRUCTION AT LOCATIONS  
WITH DEFICIENT DEPTH OF GUTTER

SECTION "C"—"C"



PLAN OF  
6" CONCRETE SLAB

SECTION "D"—"D"

CITY OF CLEVELAND

DEPARTMENT OF PUBLIC SERVICE  
DIVISION OF ENGINEERING & CONSTRUCTION  
JOMARIE WASIK—DIRECTOR OF PUBLIC SERVICE  
STANDARD CONSTRUCTION DRAWING  
PLAN FOR REBUILDING OLD STYLE CATCH BASIN  
NOT TO SCALE

REVISED BY: R. PLIODZINSKAS  
SUBMITTED BY: W. MCLAUGHLIN

DATE: 4/8/08  
DATE: 4/8/08

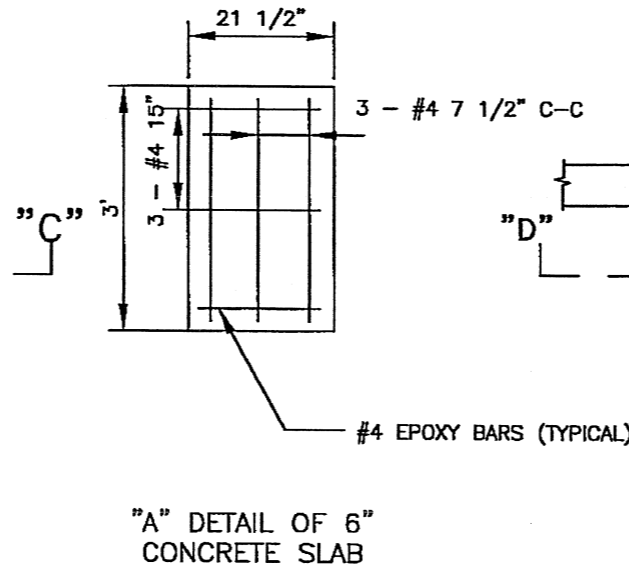
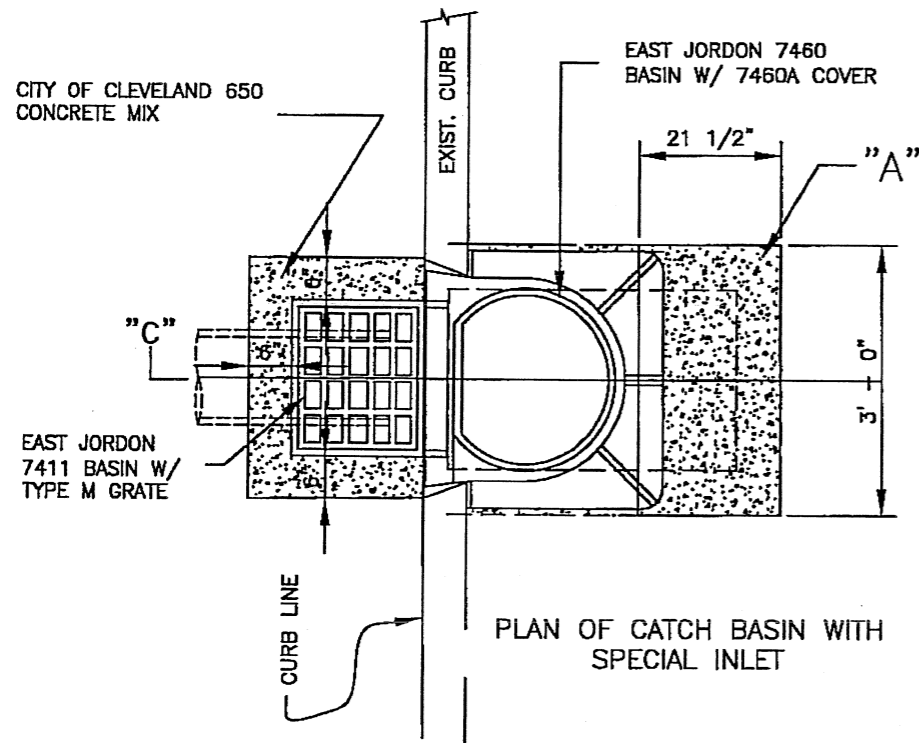
APPROVED: *[Signature]*

DATE: 7-8-08

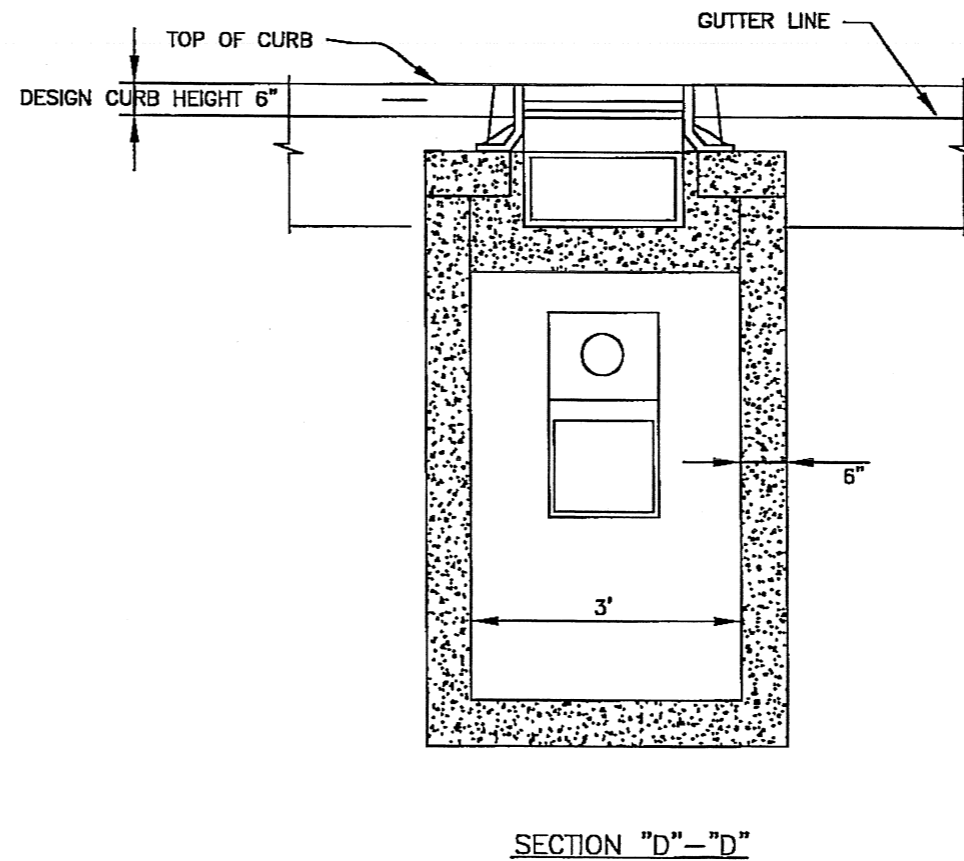
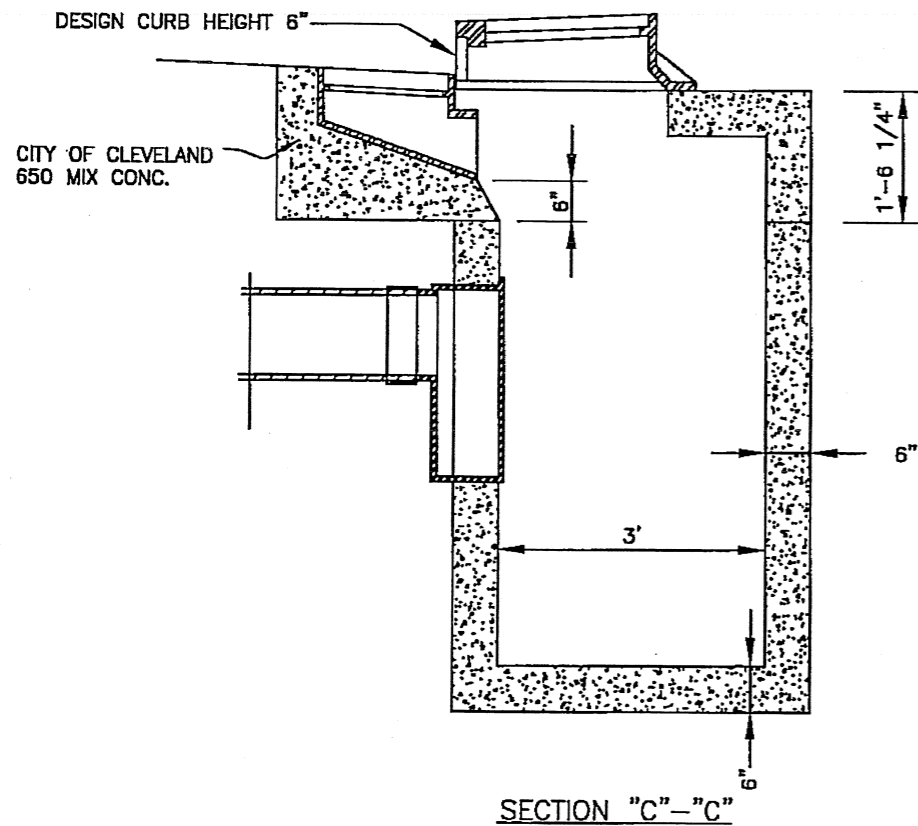
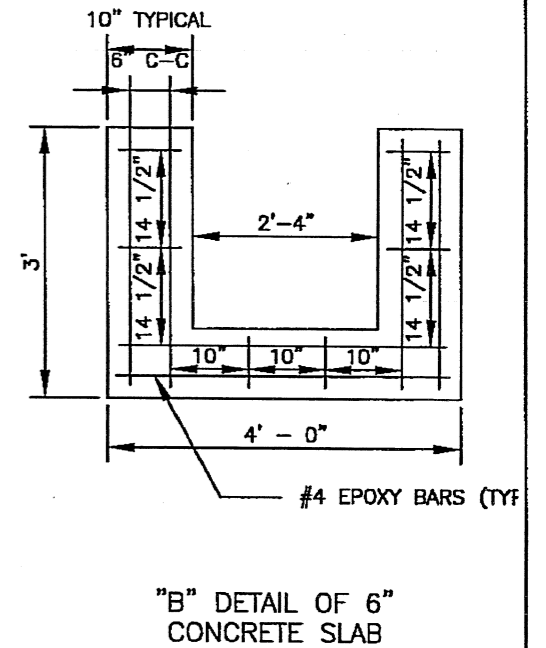
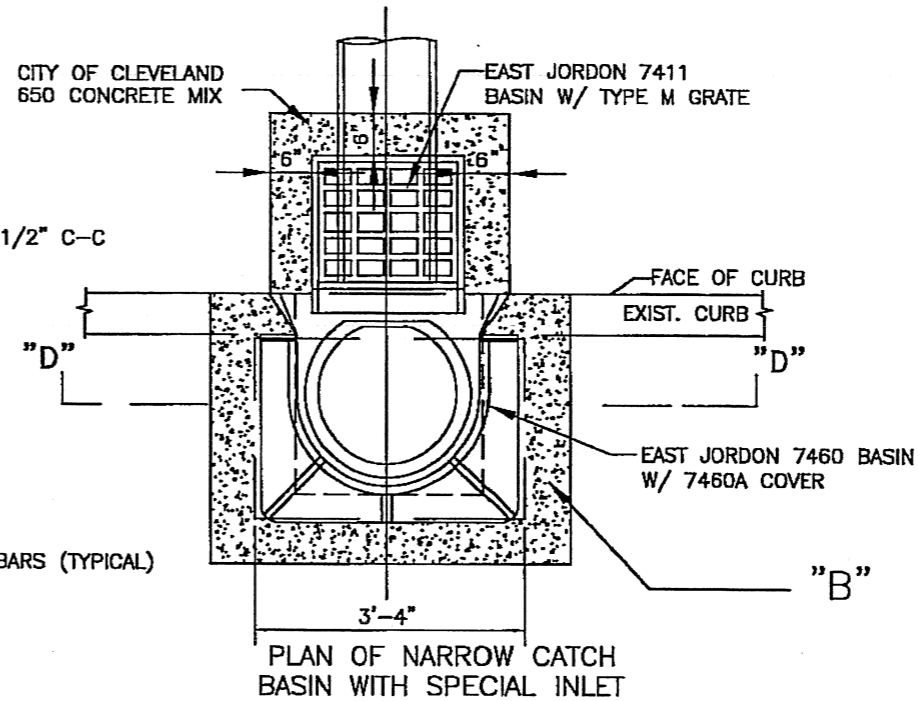
COMMISSIONER OF ENGINEERING & CONSTRUCTION



SETTING METHOD "A"



SETTING METHOD "B"



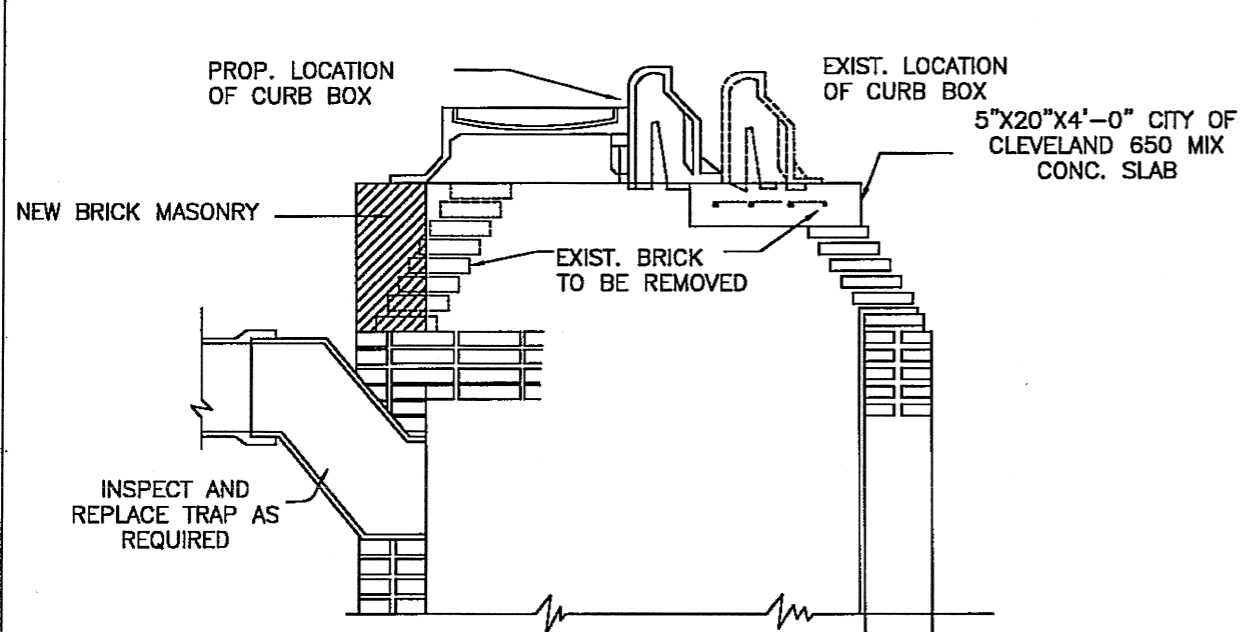
NOTE:  
 THIS CATCH BASIN TO BE USED FOR CONSTRUCTION AT LOCATIONS WHICH PREVENT THE INSTALLATION OF A CB-1 IN THE ROADWAY, AS DIRECTED BY THE ENGINEER.  
 CATCH BASIN BASE DIMENSIONS ON DRAWING CB-1, ONLY RECTANGULAR BASIN SHALL BE ALLOWED.  
 THIS DETAIL FOR STREETS WITH VERTICAL CURB ONLY

**CITY OF CLEVELAND**  
 DEPARTMENT OF PUBLIC SERVICE  
 DIVISION OF ENGINEERING & CONSTRUCTION  
 JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
 STANDARD CONSTRUCTION DRAWING  
 PLAN FOR CATCH BASIN 2  
 NOT TO SCALE

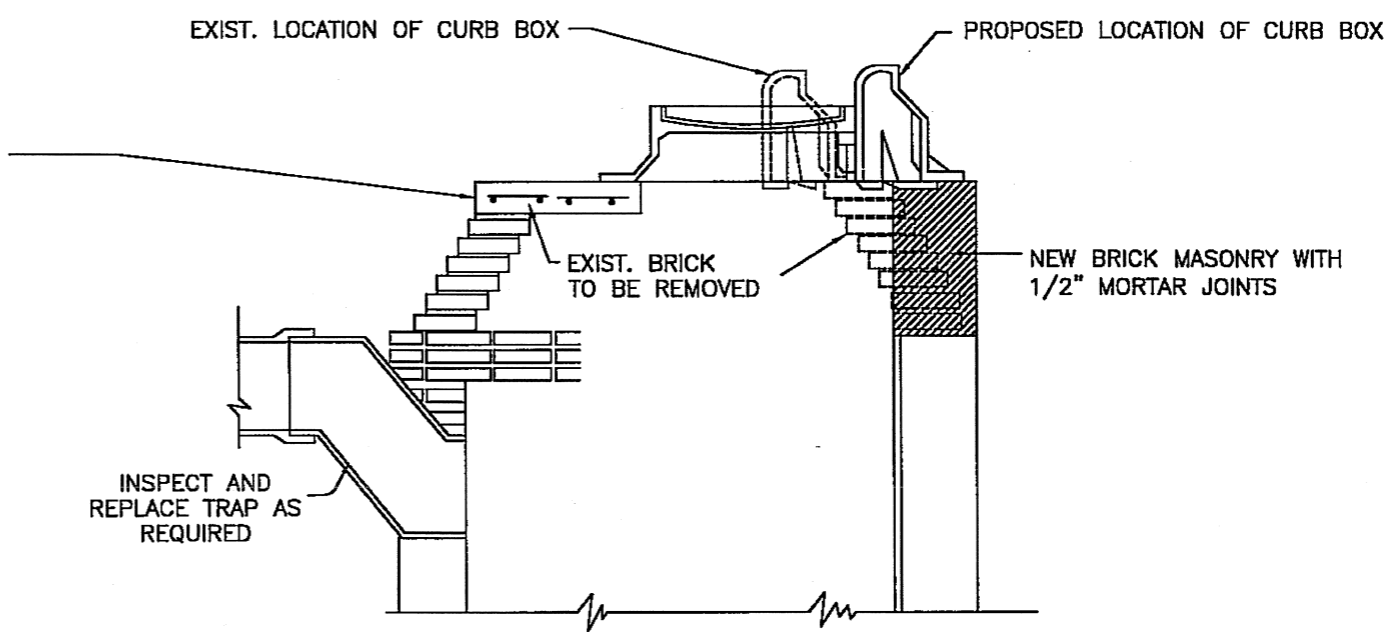
REVISED BY: R. PLIODZINSKAS      DATE: 4/8/08  
 SUBMITTED BY: W. MCLAUGHLIN      DATE: 4/8/08

APPROVED: *[Signature]*      DATE: 7-8-08  
 COMMISSIONER OF ENGINEERING & CONSTRUCTION

FILE NO. CB-1    SHEET 6/7    (32)



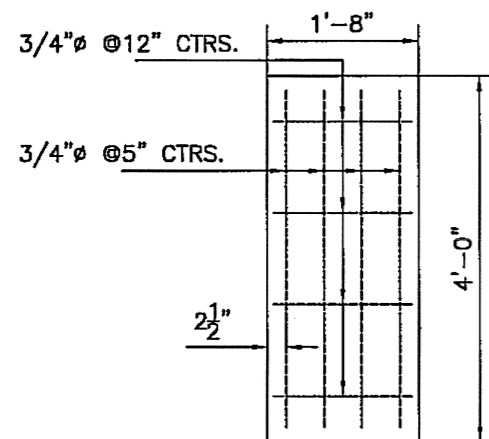
ADJUSTING INWARD  
1/2"=1'-0"



ADJUSTED OUTWARD  
1/2"=1'-0"

MORTAR SHALL BE COMPOSED OF ONE PART PORTLAND CEMENT (SEC.701.04) TO TWO PARTS SAND (SEC. 703.03) BY VOLUME.

NOTE : CATCH BASINS SPECIFIED TO BE ADJUSTED TO LINE AND GRADE SHALL INCLUDE REBUILDING BRICKWORK AND MOVING CASTING NOT TO EXCEED ONE FOOT.

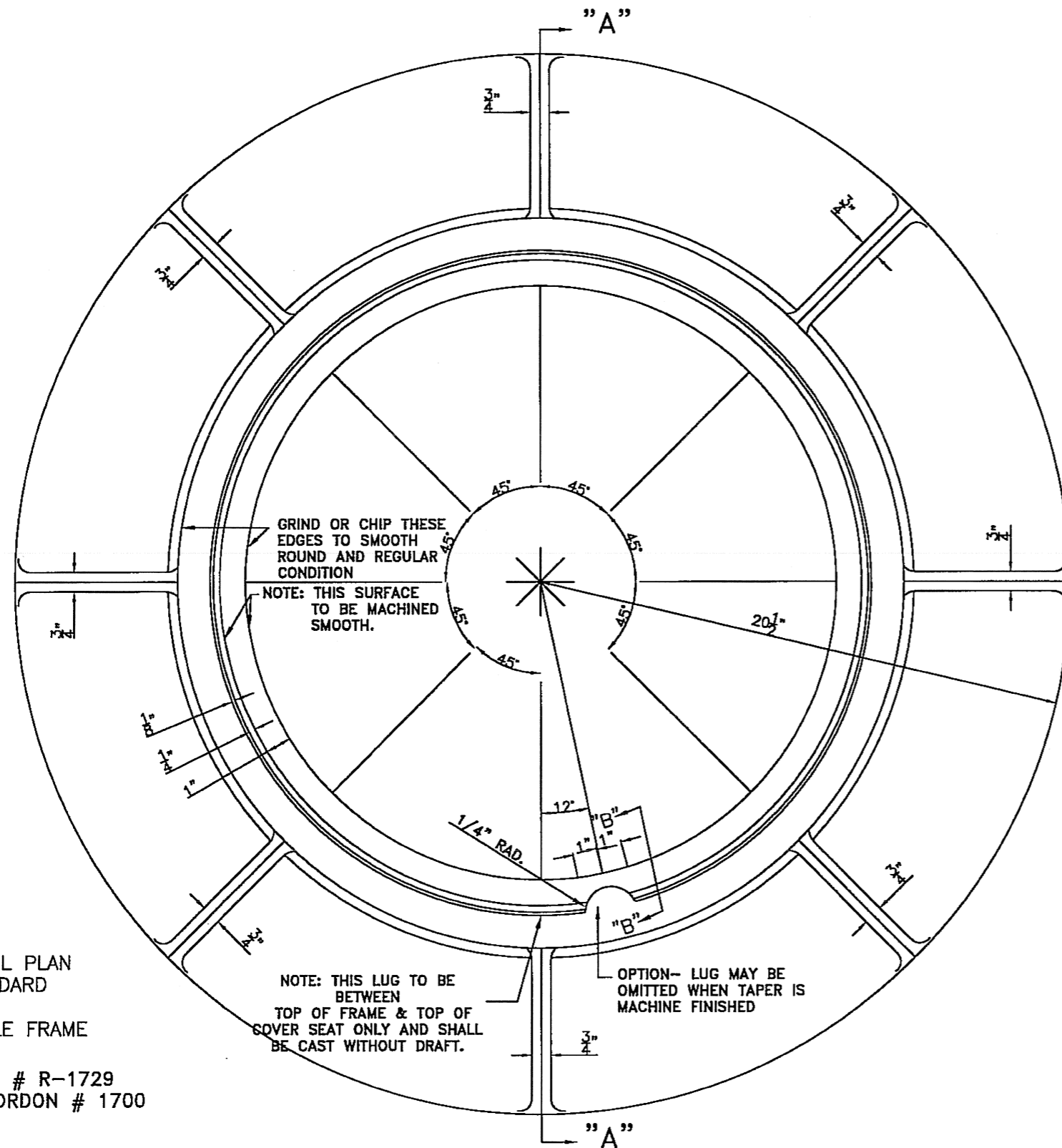


DETAILS OF CONC. SLAB  
1/2"=1'-0"

**CITY OF CLEVELAND**  
 DEPARTMENT OF PUBLIC SERVICE  
 DIVISION OF ENGINEERING & CONSTRUCTION  
 JOMARIE WASIK—DIRECTOR OF PUBLIC SERVICE  
 STANDARD CONSTRUCTION DRAWING  
 DETAIL PLAN FOR CATCH BASINS  
 ADJUSTED TO LINE & GRADE  
 NOT TO SCALE

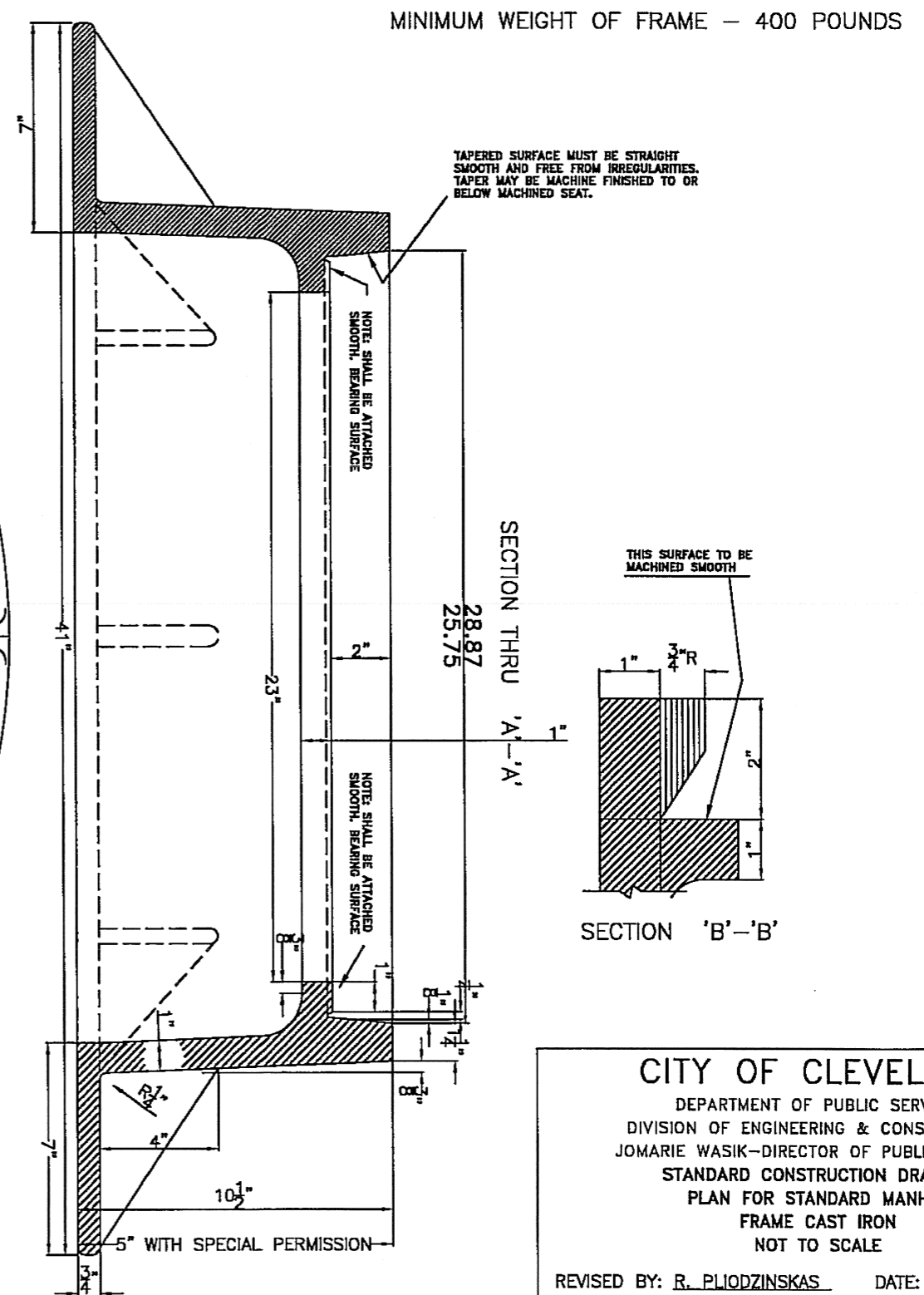
DRAWN BY: R. FLIODZINSKAS      DATE: 4/8/08  
 SUBMITTED BY: W. MCLAUGHLIN      DATE: 4/8/08  
 APPROVED: *[Signature]*      DATE: 7-8-08  
 COMMISSIONER OF ENGINEERING & CONSTRUCTION

FILE NO. CB 1	SHEET 7/7	33
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DETAIL PLAN  
STANDARD  
MANHOLE FRAME  
NEENAH # R-1729  
EAST JORDON # 1700

EXCEPT WHERE LIMITS ARE NOTED -- A CASTING VARIATION OF 1/8" PER FOOT PERMITTED



CITY OF CLEVELAND  
DEPARTMENT OF PUBLIC SERVICE  
DIVISION OF ENGINEERING & CONSTRUCTION  
JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
STANDARD CONSTRUCTION DRAWING  
PLAN FOR STANDARD MANHOLE  
FRAME CAST IRON  
NOT TO SCALE

REVISED BY: R. PLIODZINSKAS DATE: 4/8/08

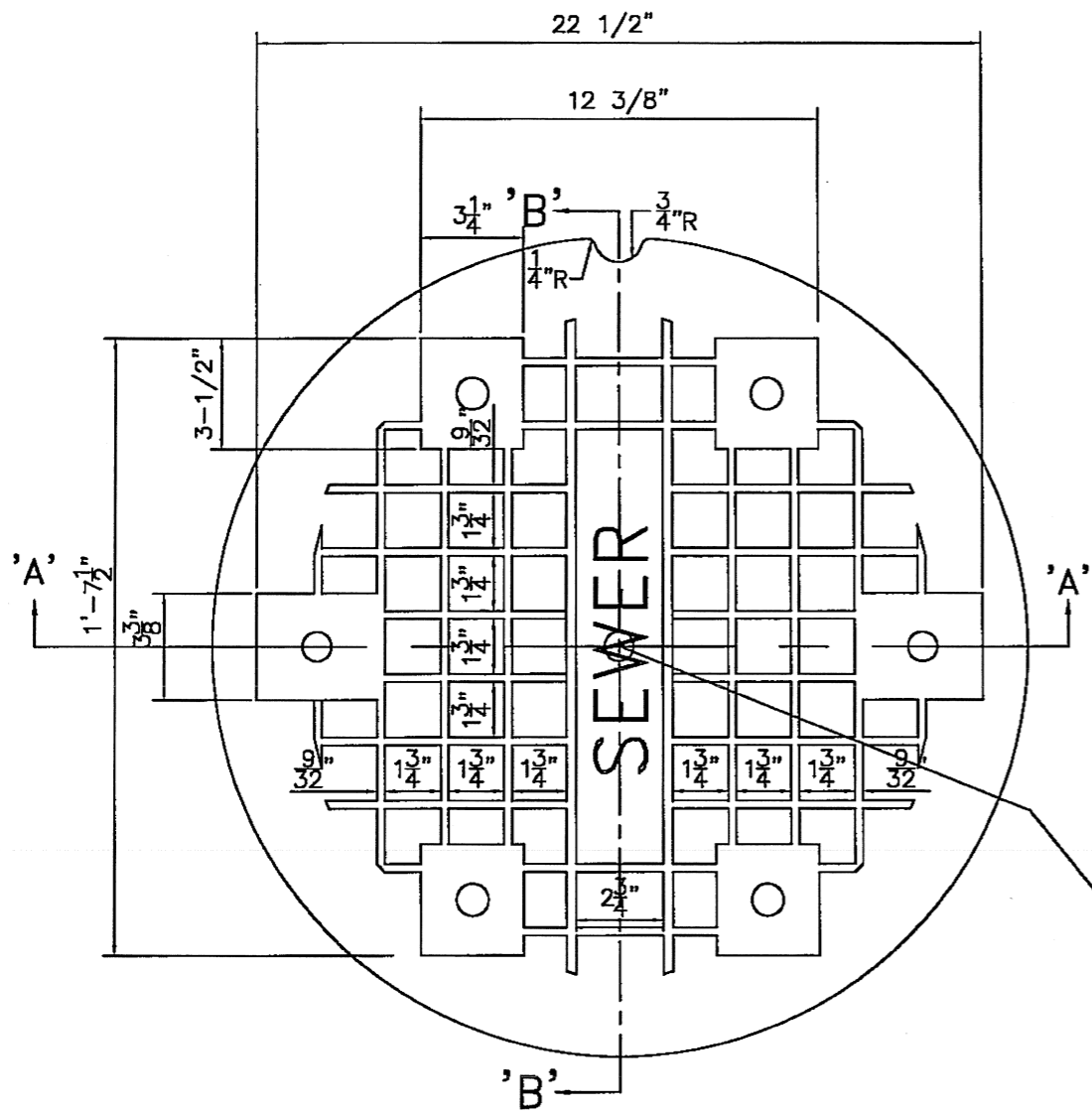
SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08

APPROVED: *[Signature]* DATE: 7-8-08

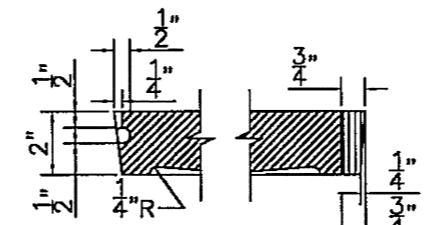
COMMISSIONER OF ENGINEERING & CONSTRUCTION

FILE NO. A-503

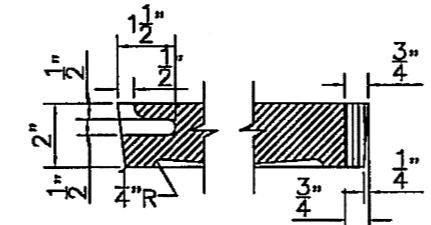
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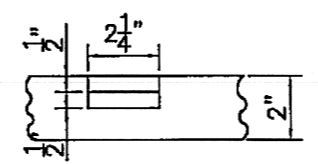
DETAIL PLAN  
TOP



SECTION 'B' - 'B'  
(ALTERNATE A)

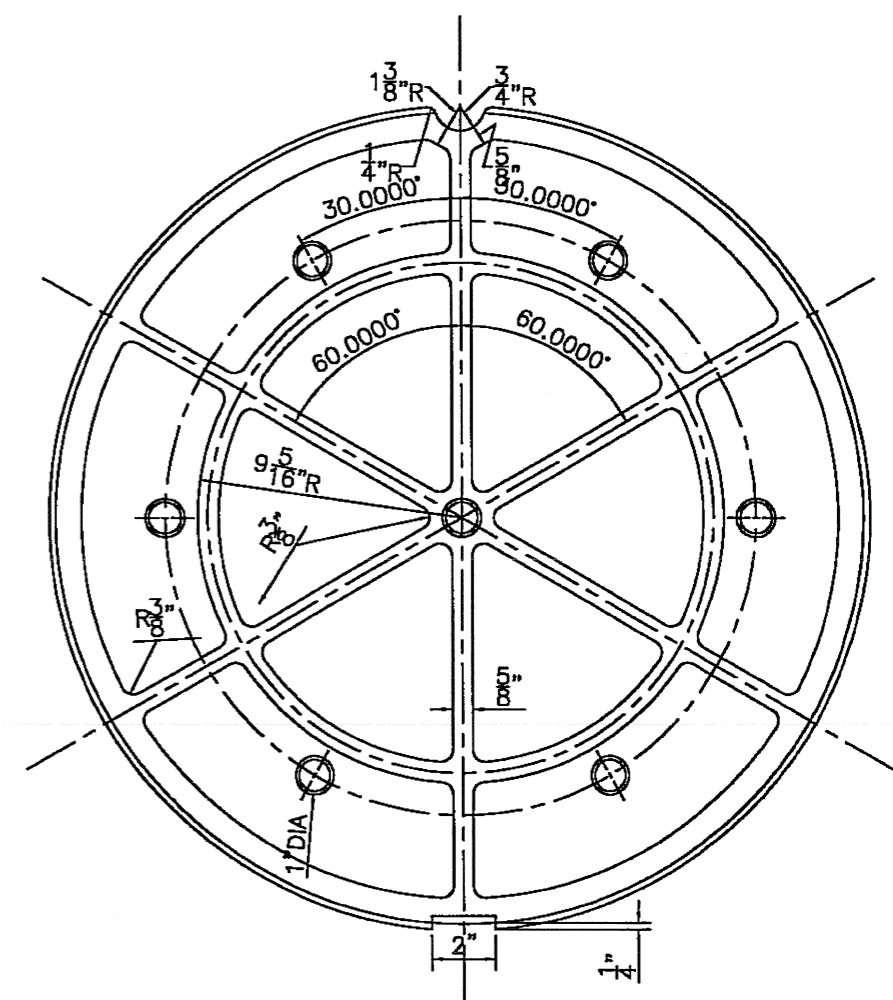


SECTION 'B' - 'B'  
(ALTERNATE B)



END VIEW  
(ALTERNATE B)

FRAME COVERS  
NEENAH # R-1729 VENTED  
EAST JORDON # 1700 TYPE "M" VENTED

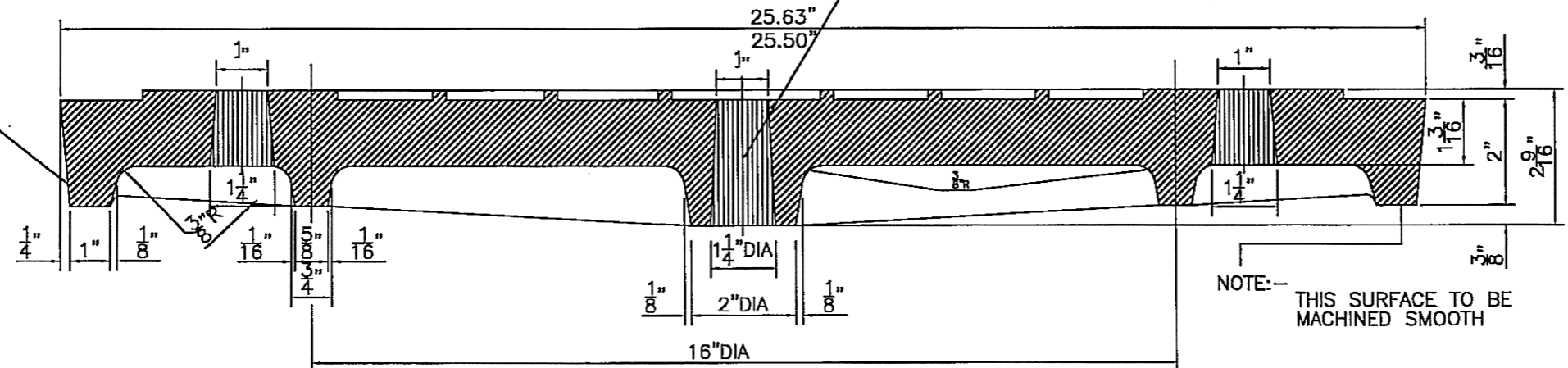


DETAIL PLAN  
BOTTOM

MINIMUM WEIGHT OF COVER - 195 POUNDS

OPTION  
CENTER HOLE  
MAY BE OMITTED

THIS SURFACE  
MUST BE STRAIGHT  
AND SMOOTH



SECTION 'A' - 'A'

NOTE: - THIS SURFACE TO BE  
MACHINED SMOOTH

CITY OF CLEVELAND  
DEPARTMENT OF PUBLIC SERVICE  
DIVISION OF ENGINEERING & CONSTRUCTION  
JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
STANDARD CONSTRUCTION DRAWING  
STANDARD CAST IRON MANHOLE COVER  
NOT TO SCALE

REVISED BY: R. PLIODZINSKAS DATE: 4/8/08

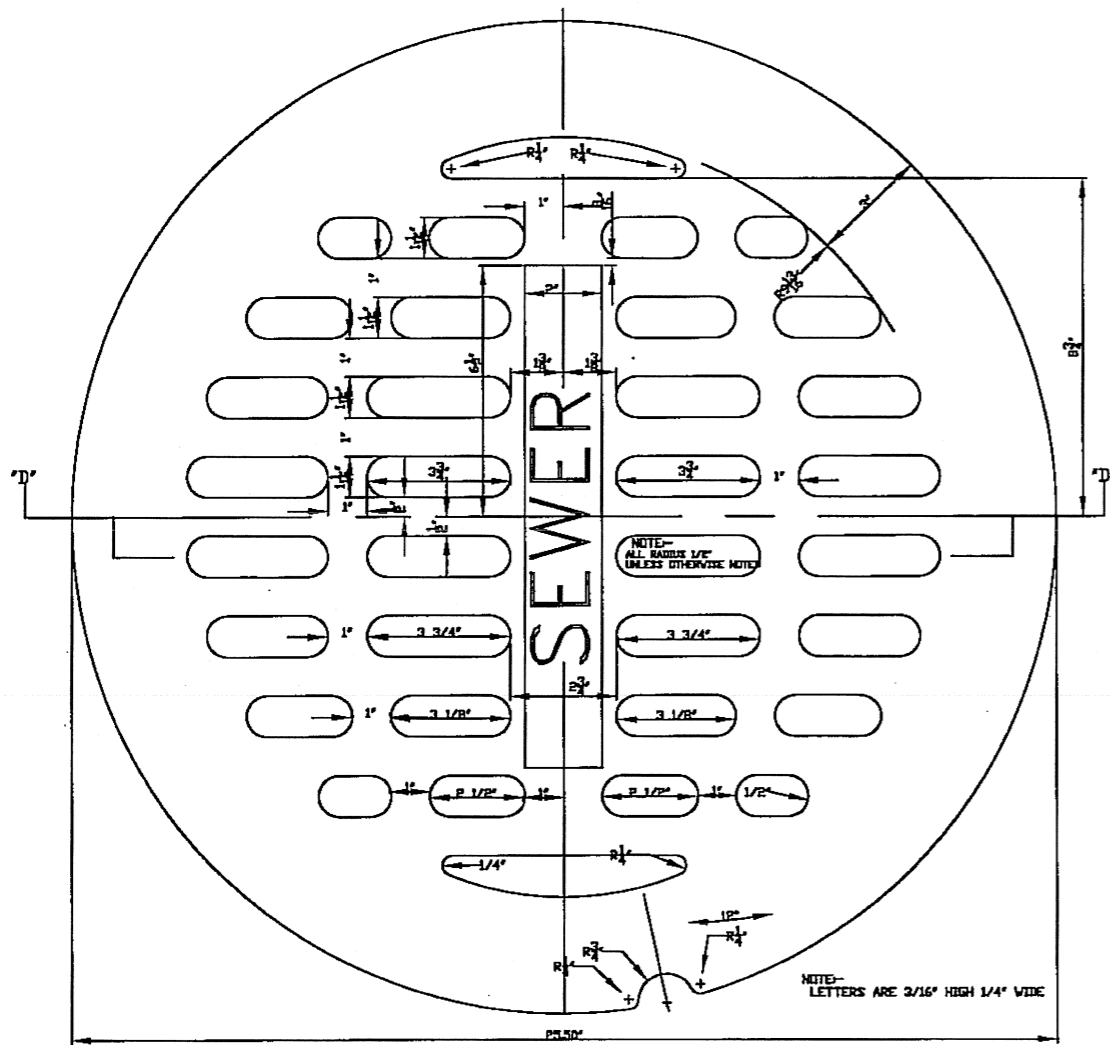
SUBMITTED BY: W. McLAUGHLIN DATE: 4/8/08

APPROVED: *[Signature]* DATE: 7-8-08

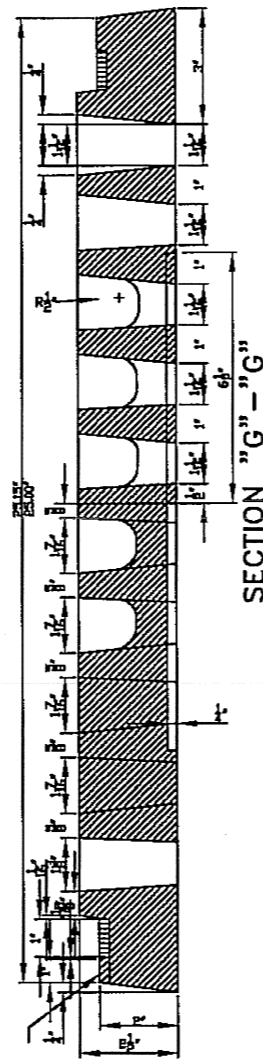
COMMISSIONER OF ENGINEERING & CONSTRUCTION

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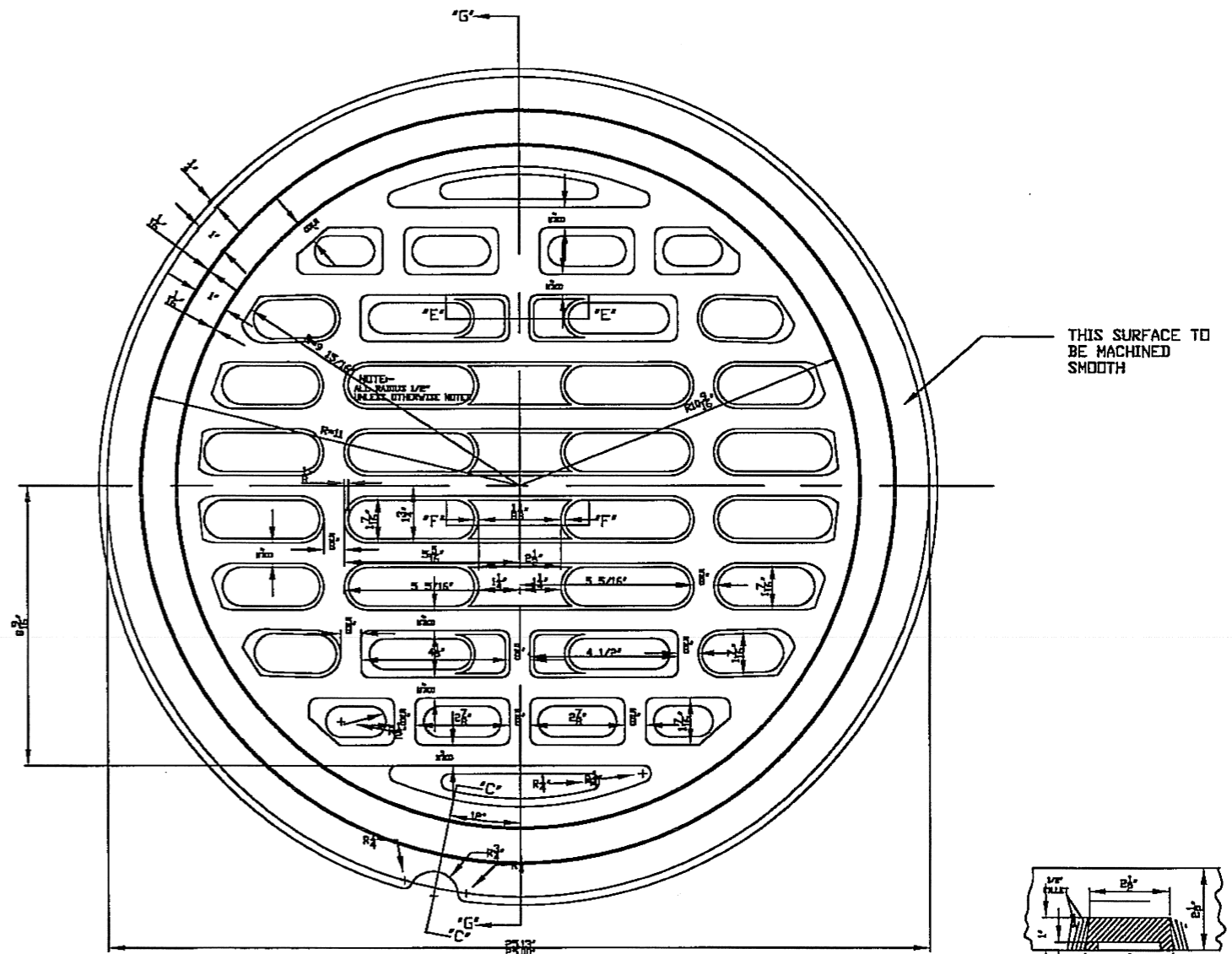
MINIMUM WEIGHT OF COVER - 190 POUNDS



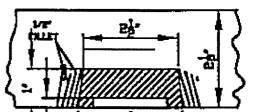
PLAN OF TOP



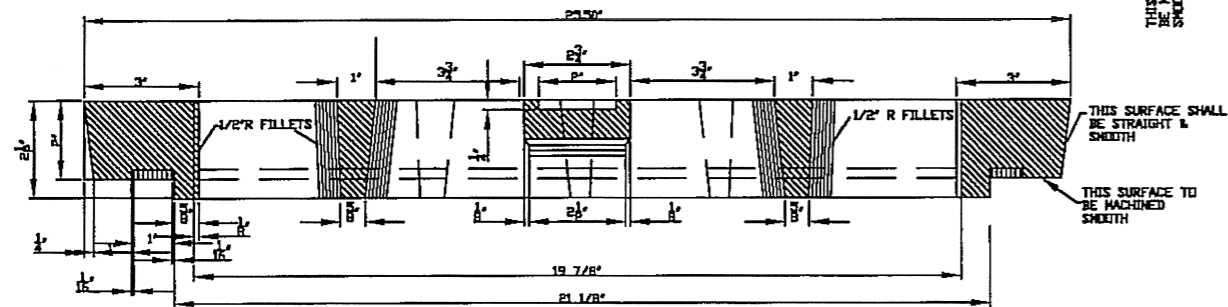
SECTION "G"-"G"



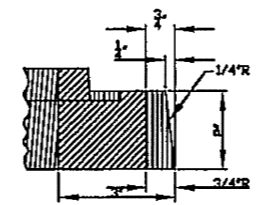
PLAN OF BOTTOM



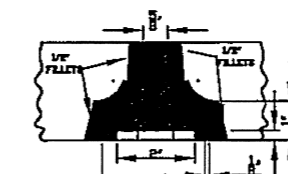
SECTION-"F"-"F"



SECTION "D"-"D"



SECTION-"C"-"C"



SECTION-"E"-"E"

FRAME COVER  
EAST JORDON # 1700 TYPE "M" FLAT COVER

EXCEPT WHERE LIMITS ARE NOTED-A  
CASTING VARIATION ON 1/8" PER FOOT  
PERMITTED

CITY OF CLEVELAND

DEPARTMENT OF PUBLIC SERVICE  
DIVISION OF ENGINEERING & CONSTRUCTION  
JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
STANDARD CONSTRUCTION DRAWING  
STANDARD CAST IRON MANHOLE COVER  
NOT TO SCALE

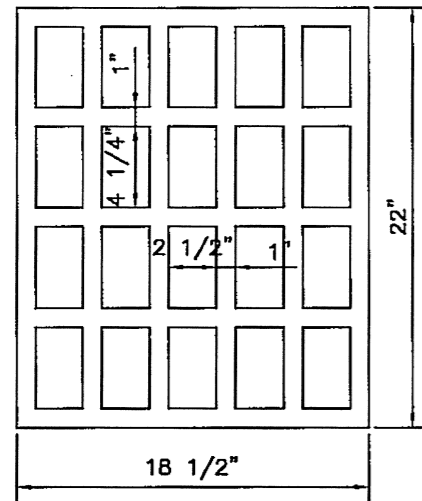
REVISED BY: R. PLIODZINSKAS DATE: 4/8/08

SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08

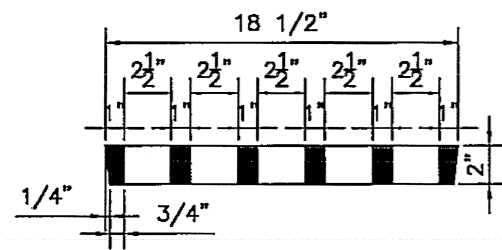
APPROVED: *[Signature]* DATE: 7-2-08

COMMISSIONER OF ENGINEERING & CONSTRUCTION

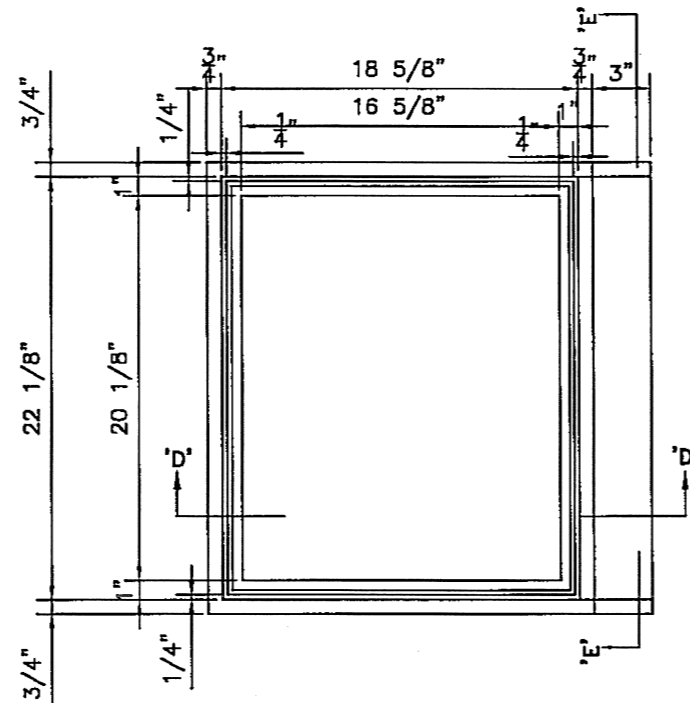
FILE NO. A-695



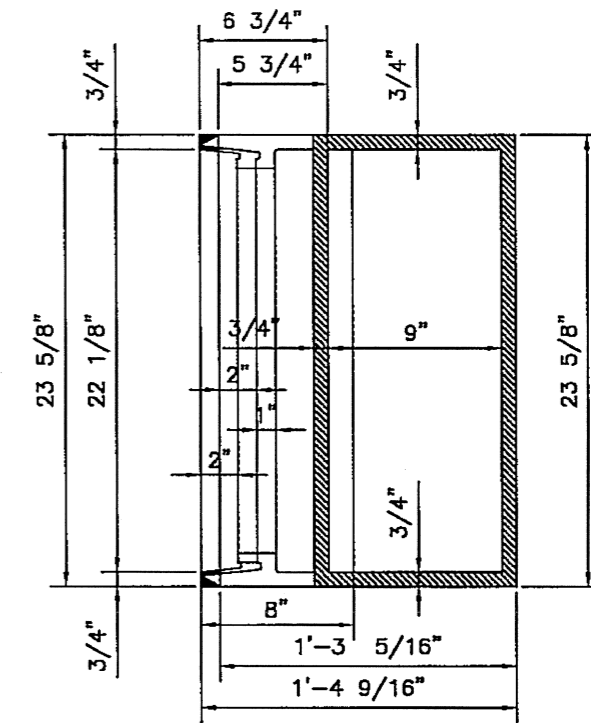
PLAN OF GRATE



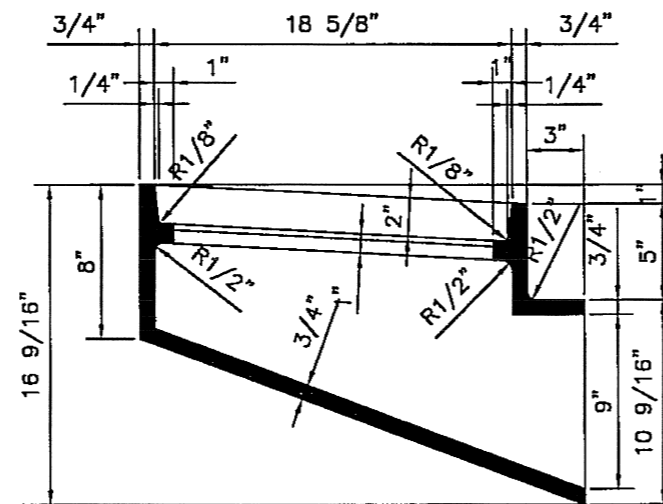
SECTION 'C'-'C'



PLAN OF INLET BASIN



SECTION 'E'-'E'



SECTION 'D'-'D'

MINIMUM WEIGHT OF GRATE - 90 POUNDS  
MINIMUM WEIGHT OF FRAME - 330 POUNDS

CITY OF CLEVELAND  
DEPARTMENT OF PUBLIC SERVICE  
DIVISION OF ENGINEERING & CONSTRUCTION  
JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
STANDARD CONSTRUCTION DRAWING  
DETAIL PLAN FOR SPECIAL  
CAST IRON INLET BASIN  
NOT TO SCALE

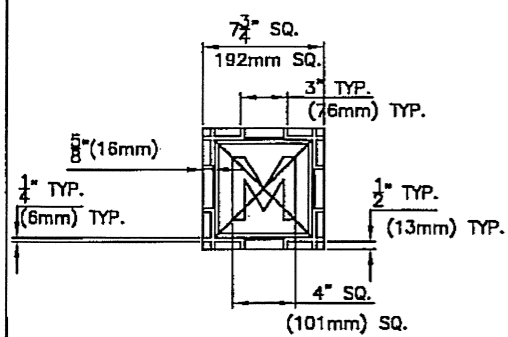
REVISED BY: R. PLIODZINSKAS DATE: 4/8/08

SUBMITTED BY: W. McLAUGHLIN DATE: 4/8/08

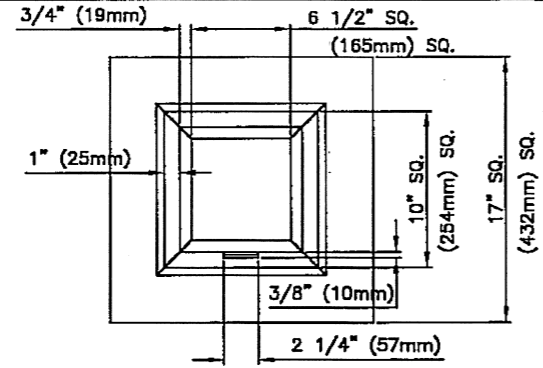
APPROVED: *[Signature]* DATE: 7-8-08

COMMISSIONER OF ENGINEERING & CONSTRUCTION

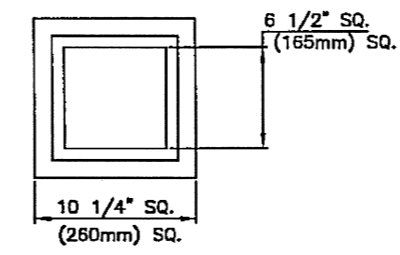
EAST JORDON IRON WORKS  
CATCH BASIN CURB INLET # 7411  
GRATE # 7411M



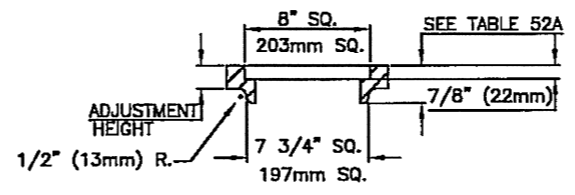
PLAN OF COVER



PLAN OF FRAME

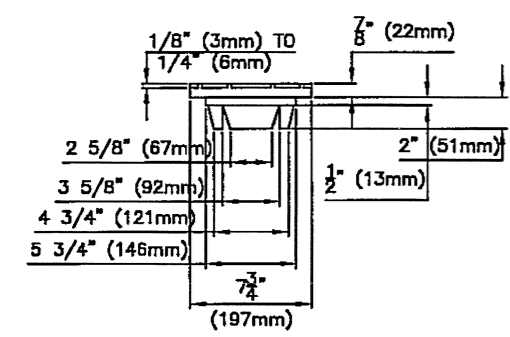


ADJUSTING RING

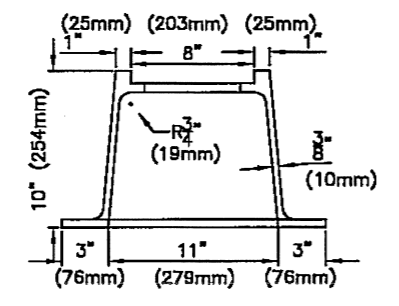


NOTE: ADJUSTING RING IS TO BE TACK WELDED TO THE FRAME BY LEAST TWO (2) POINTS OF AN APPROVED METHOD.

ADJUSTMENT HEIGHT	DIMENSION 52A	MINIMUM HEIGHTS
1-1/8" (29mm)	2" (51mm)	14-LBS. (6.4 kg)
1-1/2" (38mm)	2-3/8" (60mm)	20-LBS. (9.1 kg)
2-1/2" (64mm)	3-3/8" (86mm)	27-LBS. (12.2 kg)
3" (76mm)	3-7/8" (98mm)	30-LBS. (13.6 kg)
3-1/2" (89mm)	4-3/8" (111mm)	32-LBS. (14.5 kg)

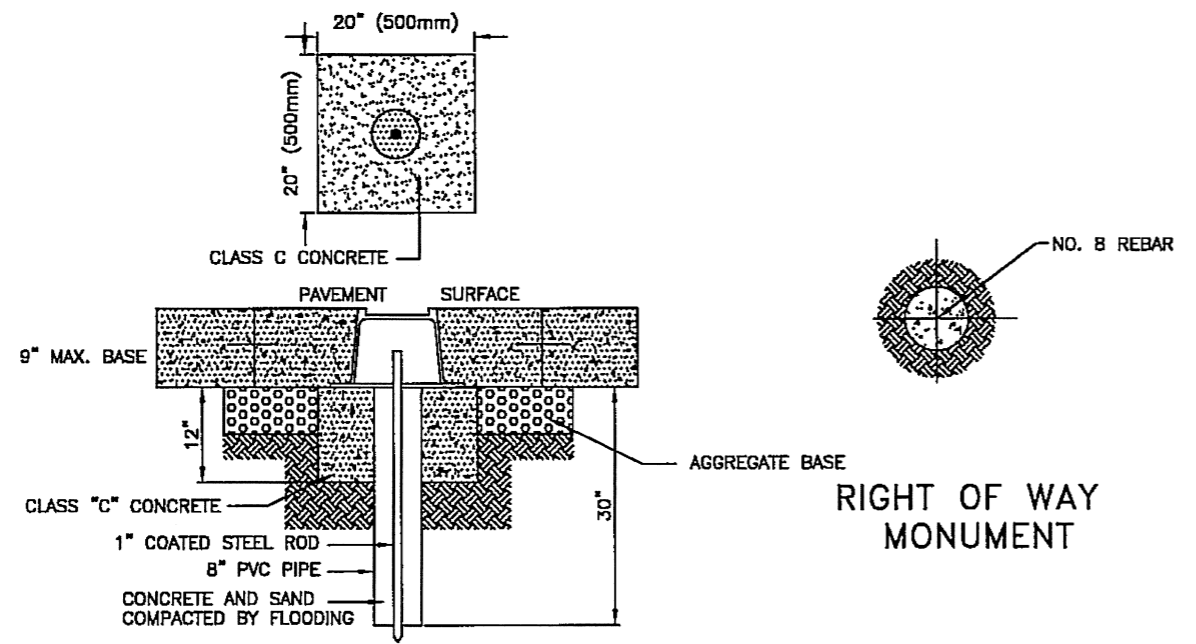


SIDE VIEW OF COVER



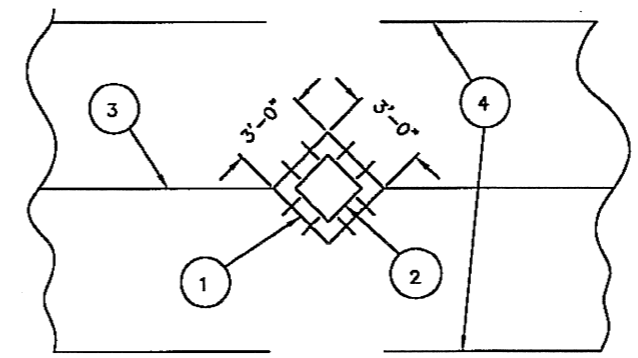
SECTION OF FRAME

MONUMENT ASSEMBLY SECTION



ROADWAY MONUMENT ASSEMBLY

RIGHT OF WAY MONUMENT



- ① MONUMENT ASSEMBLY BLOCK OUT CONSTRUCTION JOINT H/12" (305mm) LONG 1-1/4" (32mm) DIA. DOWELS. (BY CONTRACTOR)
- ② MONUMENT BOX (BY CONTRACTOR)
- ③ TYPICAL LONGITUDINAL JOINT
- ④ 451 OR 452 CONC. PAYMENT A.P.P

NOTE: 36" ROUND BOX OUT MAY BE APPROVED UNDER SPECIAL CONDITIONS BY THE ENGINEER. 8-9 EQUALLY SPACED DOWELS SHALL BE INSTALLED.

TYPICAL BLOCK OUT IN RIGID PAVEMENT. (OMIT FOR FULL DEPTH FLEXIBLE PAVEMENT)

**NOTES**  
 CASTING SHALL MINIMALLY MEET THE REQUIREMENTS OF 604.02-711.12 A.S.T.M. A 48 CLASS 35 GRAY IRON OR 711.13 DUCTILE IRON.  
 THE ASSEMBLY SHALL BE ESSENTIALLY THE SAME AND EQUALLY AS STRONG AS THOSE SHOWN HEREON.  
 MINIMUM WEIGHTS:  
 FRAME --- 94 LBS. (42.6 kg)  
 COVER --- 16 LBS. (7.3 kg)  
 PROVIDED THEY COMPLY WITH THE SPECIFICATIONS. DETAILS, DIMENSIONS AND MINIMUM WEIGHTS.  
 EAST JORDAN - NO. 8360  
 OR APPROVED EQUAL CASTINGS ARE ACCEPTABLE.

BEARING AREAS SHALL BE FINISHED AS TO PROVIDE A FIRM AND EVEN SEAT. NO PROJECTION SHALL EXIST ON THE BEARING AREAS AND THE COVER SHALL SEAT IN ITS FRAME WITHOUT ROCKING.

PRIOR TO CONSTRUCTION OF PAVEMENT, THE FRAME SHALL BE SET TO GRADE IN SUCH A MANNER THAT WILL PREVENT ANY PAVEMENT MATERIAL FROM ENTERING THE CASTING.

CONTACT CITY OF CLEVELAND SURVEY DEPT. AT (216) 664-2460 AT LEAST TWO (2) WEEKS PRIOR TO THE DISTURBANCE OF ANY EXISTING MONUMENTS.

ALL MONUMENTS ARE TO BE SET UNDER THE DIRECTION OF A REGISTERED SURVEYOR. (REF. O.A.C. 4733-37-03)

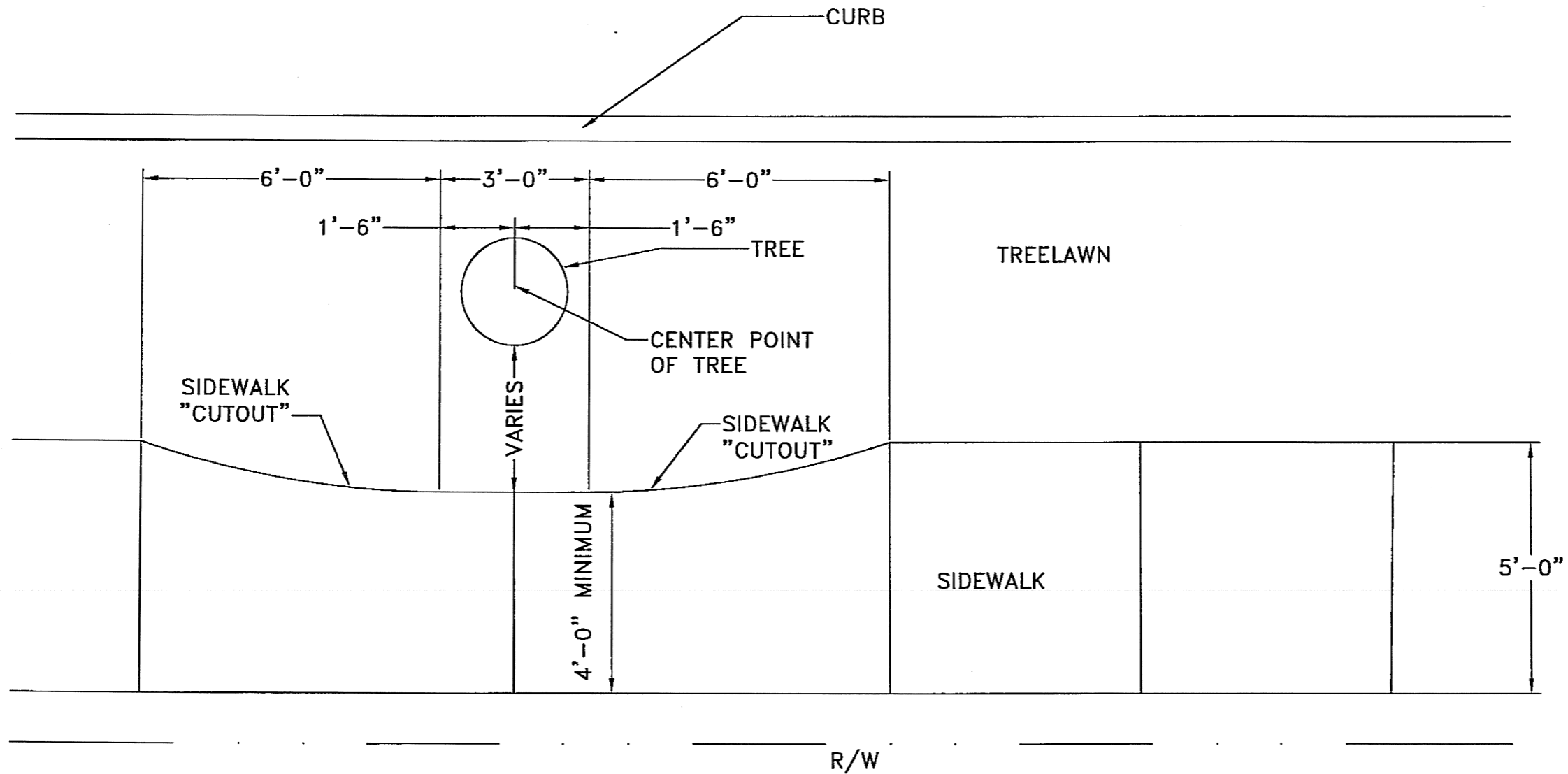
WHERE CLEVELAND REGIONAL GEODETIC SURVEY (C.R.G.S.) MONUMENT ASSEMBLIES ARE MARKED ON THE PLANS TO BE ABANDONED, THE CONTRACTOR SHALL CAREFULLY REMOVE AND STORE THE MONUMENT CASTINGS AND BRONZE C.R.G.S. MARKERS FOR SALVAGE BY THE COUNTY. THE CONTRACTOR SHALL ALSO NOTIFY THE REGIONAL GEODETIC SURVEY OFFICE AT (216) 348-3846. SO THAT THE MONUMENT CASTINGS AND BRONZE C.R.G.S. MARKERS MAY BE PICKED UP. PAYMENT SHALL BE MADE UNDER ITEM 202-MONUMENT ASSEMBLY ABANDONED. C.R.G.S. MONUMENT.

- ITEM 202-MONUMENT ASSEMBLY ABANDONED. C.R.G.S. MONUMENT
- ITEM 604- CITY OF CLEVELAND MONUMENT BOX
- ITEM 604- CITY OF CLEVELAND ROADWAY MONUMENT ASSEMBLY
- ITEM 604- CITY OF CLEVELAND RIGHT OF WAY MONUMENT
- ITEM 604- MONUMENT BOX ADJUSTED TO GRADE. AS PER PLAN (ONLY WHEN EXISTING MONUMENT BOX CONFORMS TO MB-1C AND IS SUITABLE FOR REUSE)

- LEGEND**
- CONCRETE GLASS "C"
  - SAND (703.02). COMPACTED AS REQUIRED
  - SUBBASE/AGGREGATE BASE PER THE PLANS.
  - UNDISTURBED EARTH OR SUITABLE BACKFILL AND FIRM FOUNDATION IN ACCORDANCE WITH 604.04 AND TO THE SATISFACTION OF THE ENGINEER.

**CITY OF CLEVELAND**  
 DEPARTMENT OF PUBLIC SERVICE  
 DIVISION OF ENGINEERING & CONSTRUCTION  
 JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
**MONUMENT BOX ASSEMBLIES**  
 NOT TO SCALE

REVISED BY: R. PLIODZINSKAS DATE: 4/8/08  
 SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08  
 APPROVED: [Signature] DATE: 7-8-08  
 COMMISSIONER OF ENGINEERING & CONSTRUCTION



NOTES:  
 THIS DETAIL IS TO BE USED ONLY AT THE DIRECTION OF THE ENGINEER WITH  
 CONSULTATION WITH THE DIVISION OF URBAN FORESTRY.

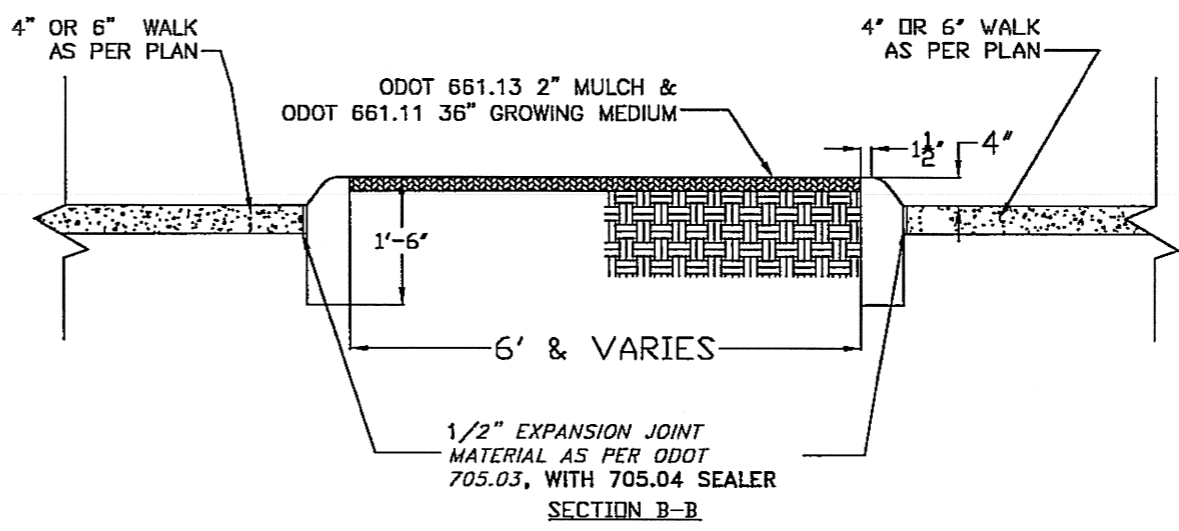
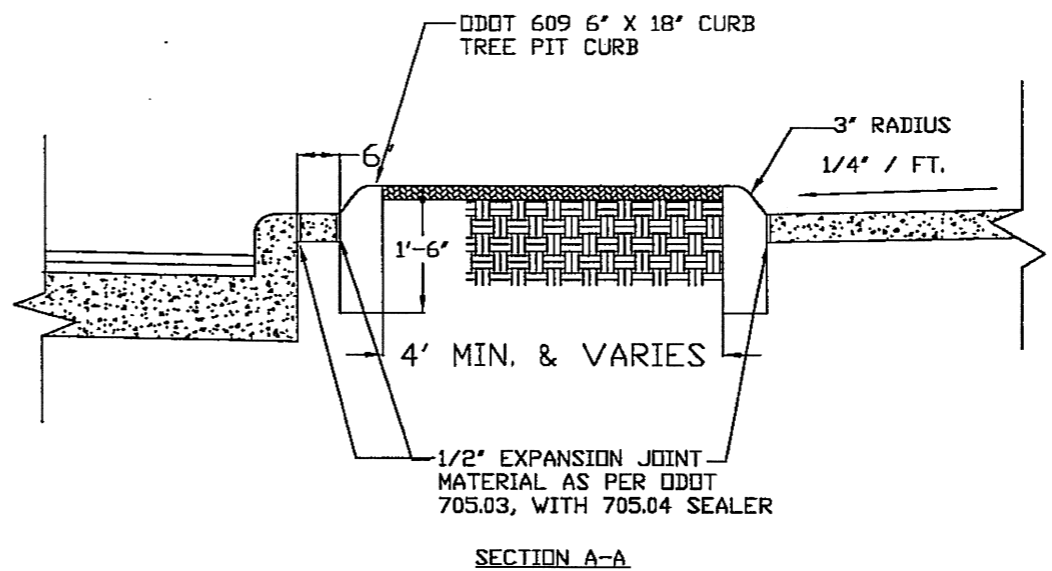
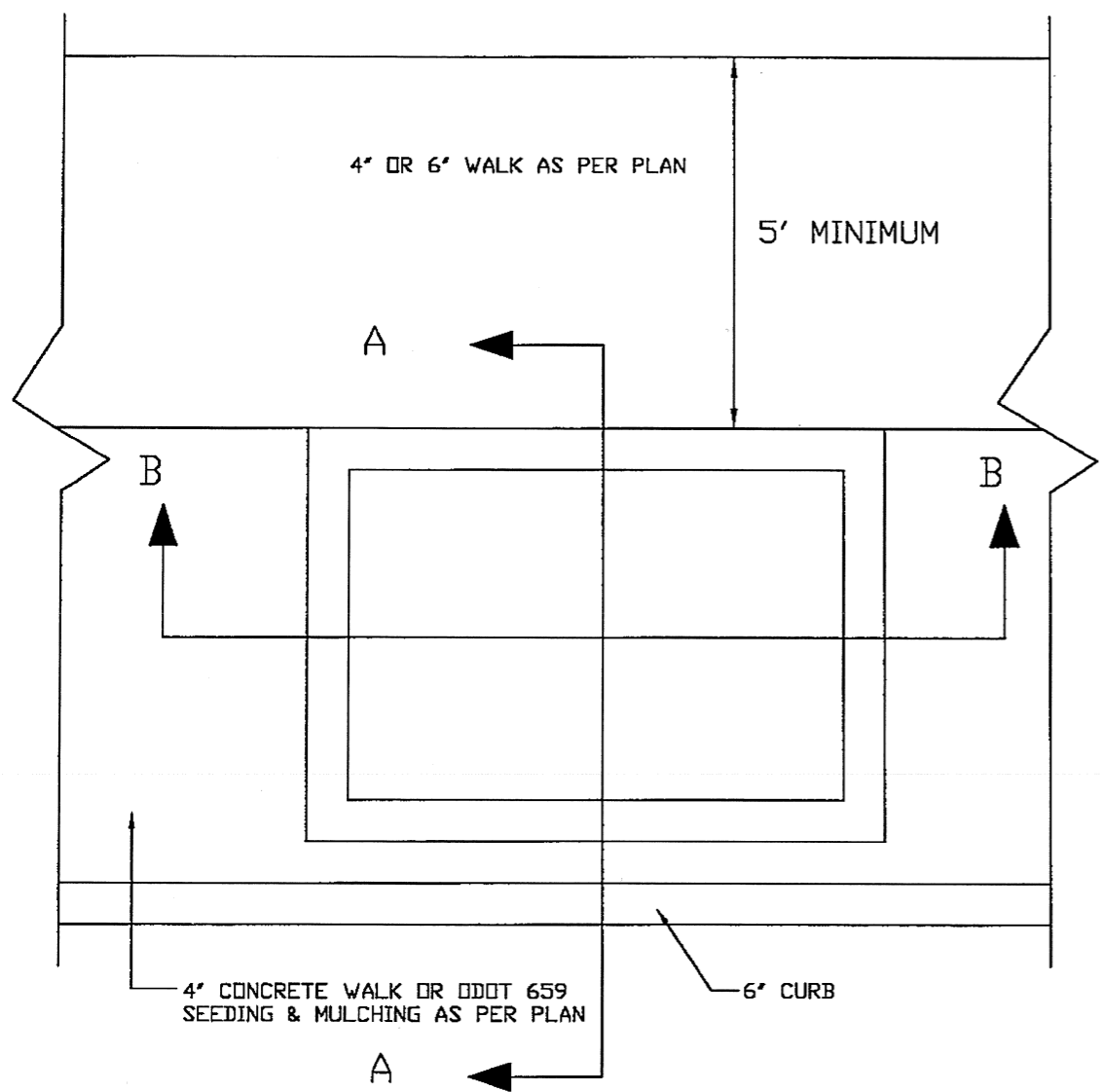
CITY OF CLEVELAND  
 DEPARTMENT OF PUBLIC SERVICE  
 DIVISION OF ENGINEERING & CONSTRUCTION  
 JOMARIE WASIK—DIRECTOR OF PUBLIC SERVICE  
 STANDARD CONSTRUCTION DRAWING  
 TYPICAL CONSTRUCTION DETAIL  
 SIDEWALK TREE BUMPOUT  
 NOT TO SCALE

DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08  
 SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08

APPROVED: *R. E. Cell* DATE: 4/14/08  
 COMMISSIONER OF ENGINEERING & CONSTRUCTION

FILE NO. TP 1 | SHEET 1/2 | 39





NOTE:  
 1 - 6" THICK SIDEWALK IN BUSINESS DISTRICTS  
 2 - CONTRACTOR SHALL OBTAIN APPROVAL FROM THE DIVISION OF URBAN FORESTRY FOR SPACING REQUIREMENTS AND TREE SPECIES.  
 3 -

CITY OF CLEVELAND  
 DEPARTMENT OF PUBLIC SERVICE  
 DIVISION OF ENGINEERING & CONSTRUCTION  
 JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE  
 STANDARD CONSTRUCTION DRAWING  
 TREE PIT  
 NOT TO SCALE

DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08  
 SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08

APPROVED: *Russell* DATE: 4/14/08  
 COMMISSIONER OF ENGINEERING & CONSTRUCTION

FILE NO. TP 1 SHEET 2/2 40