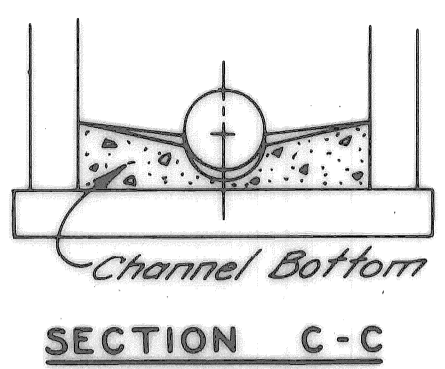
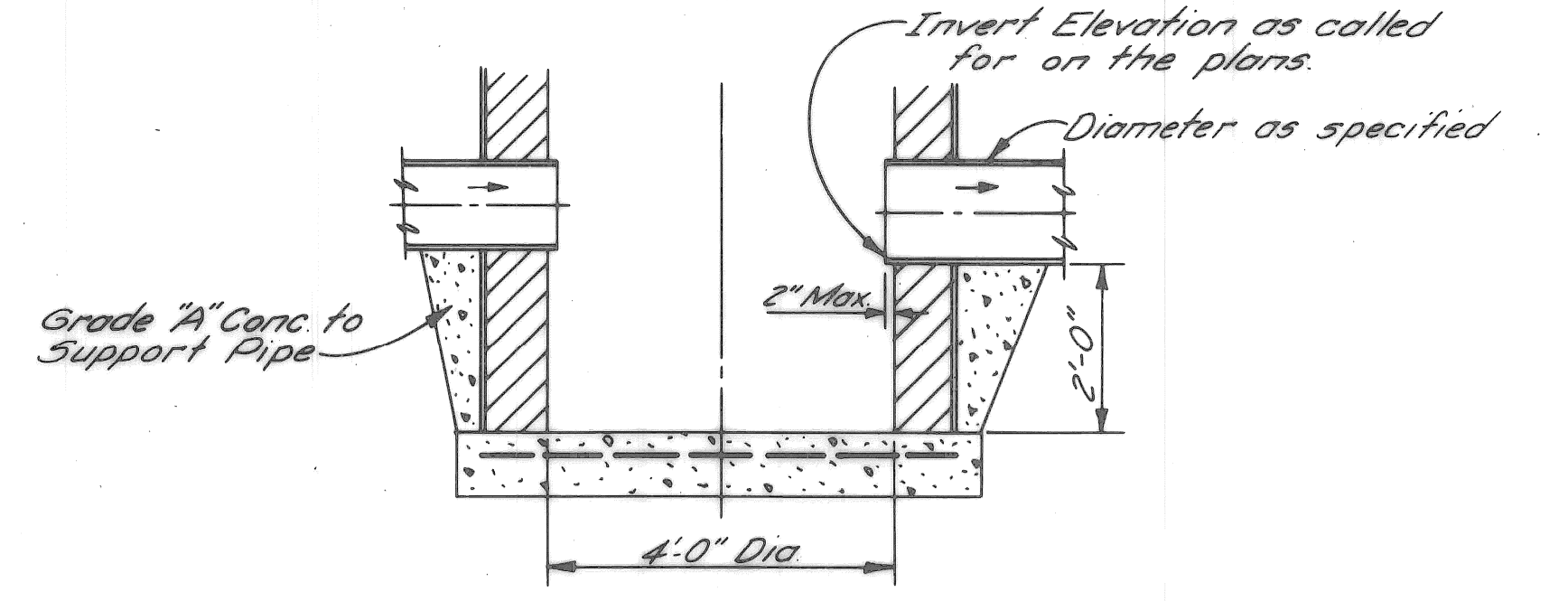


NOTE "A"
 Wall thickness shall be 8" from the top of structure to a depth of 15 feet. Below 15 feet the thickness of wall shall be 12".

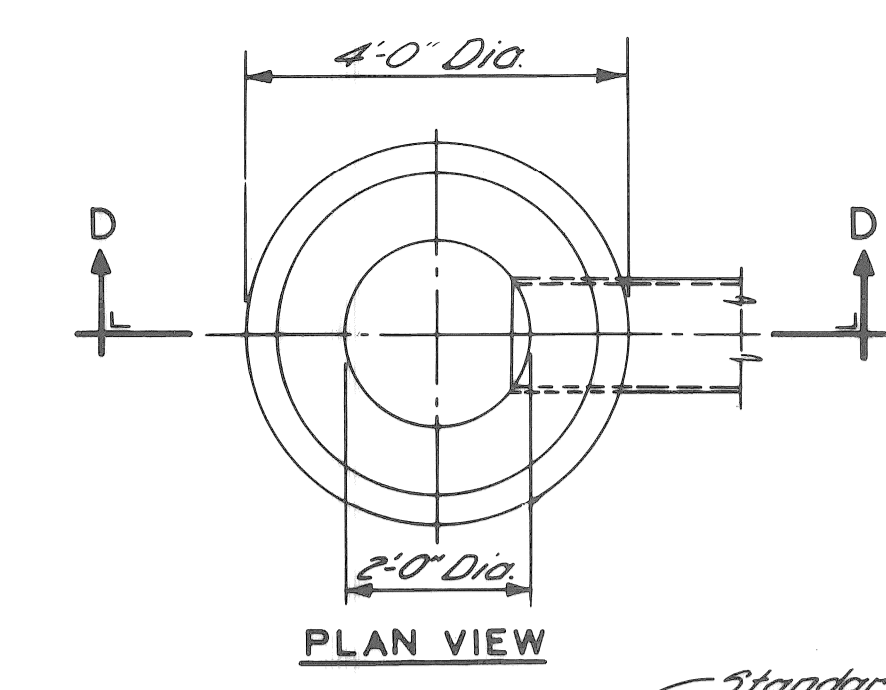


SECTION C-C



DETAIL OF SUMP FOR CATCH BASIN "B"

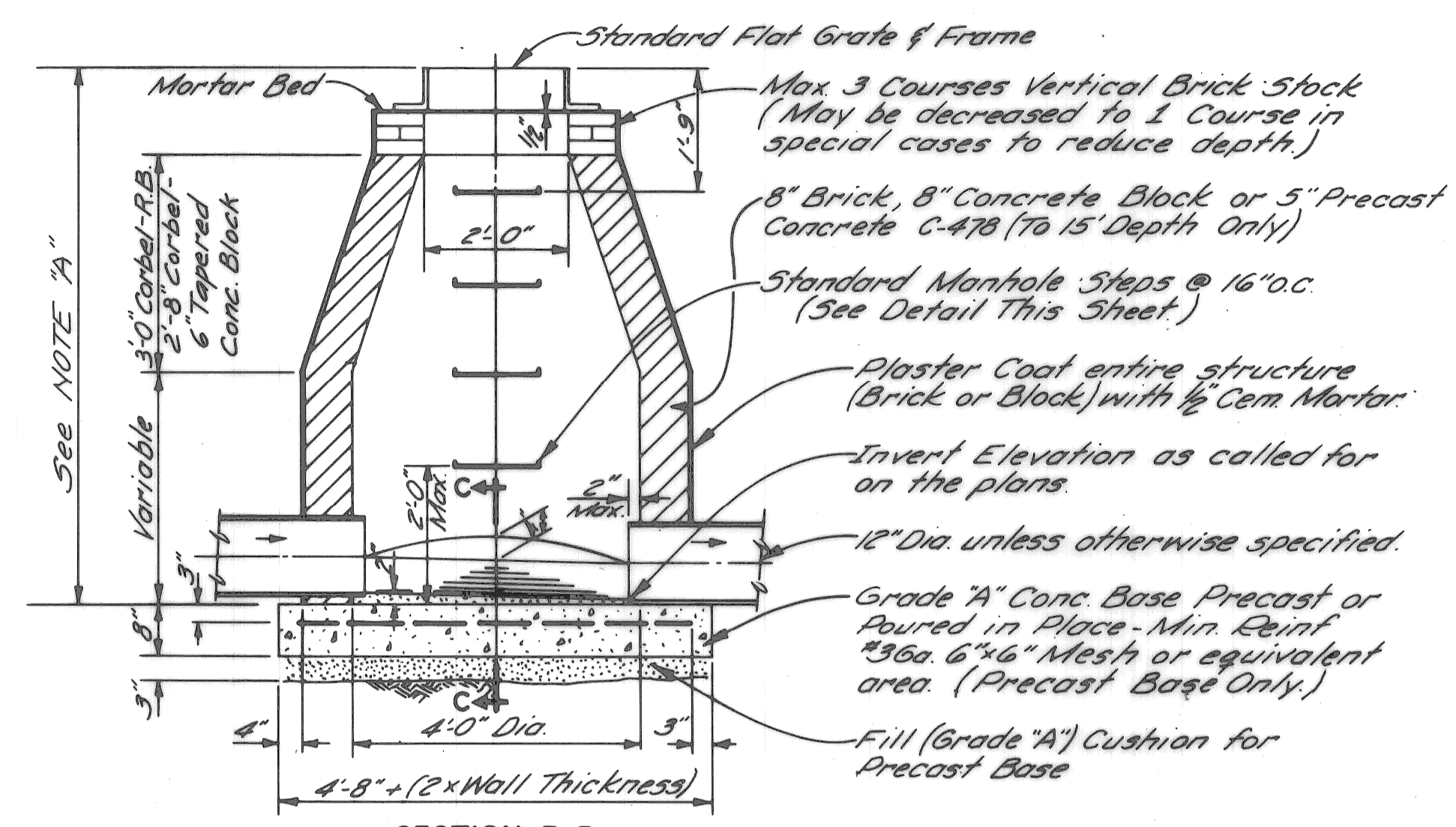
NO SCALE



NOTE:
 Catch Basin "A" will be used only when outletting to a Catch Basin "B"

PLAN VIEW

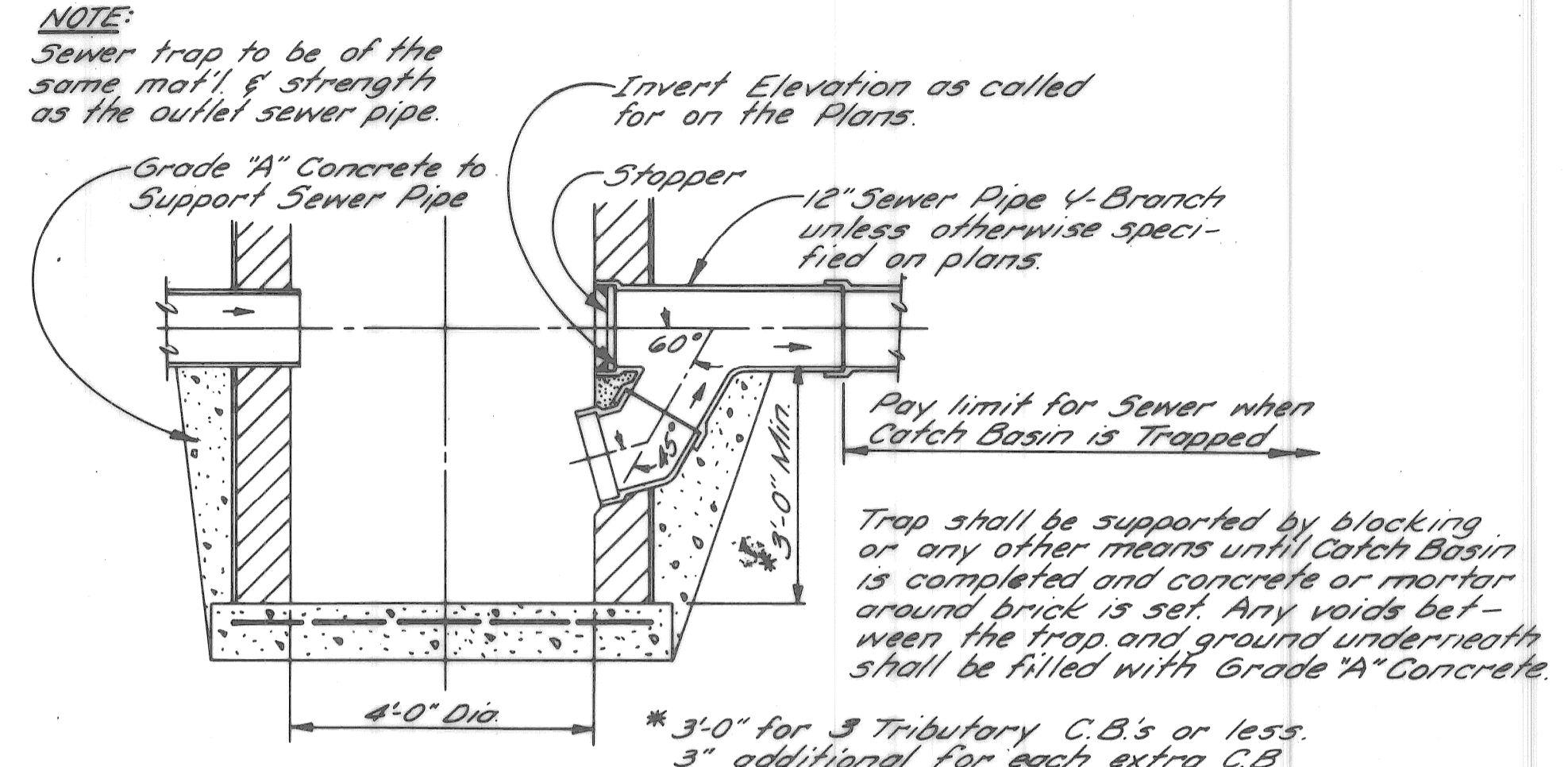
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SECTION B-B

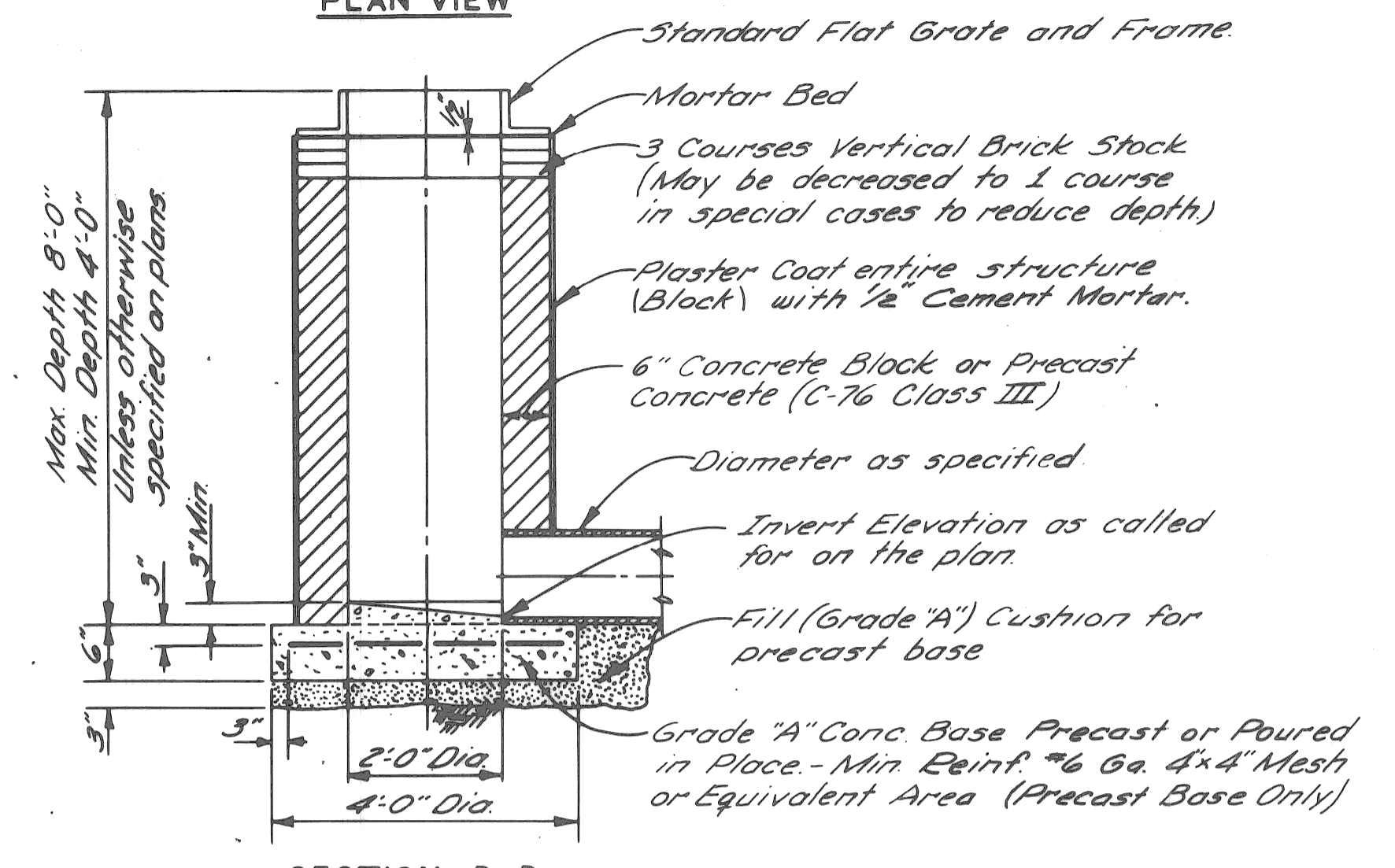
CATCH BASIN "B"

NO SCALE



DETAIL OF TRAP FOR CATCH BASIN "B"

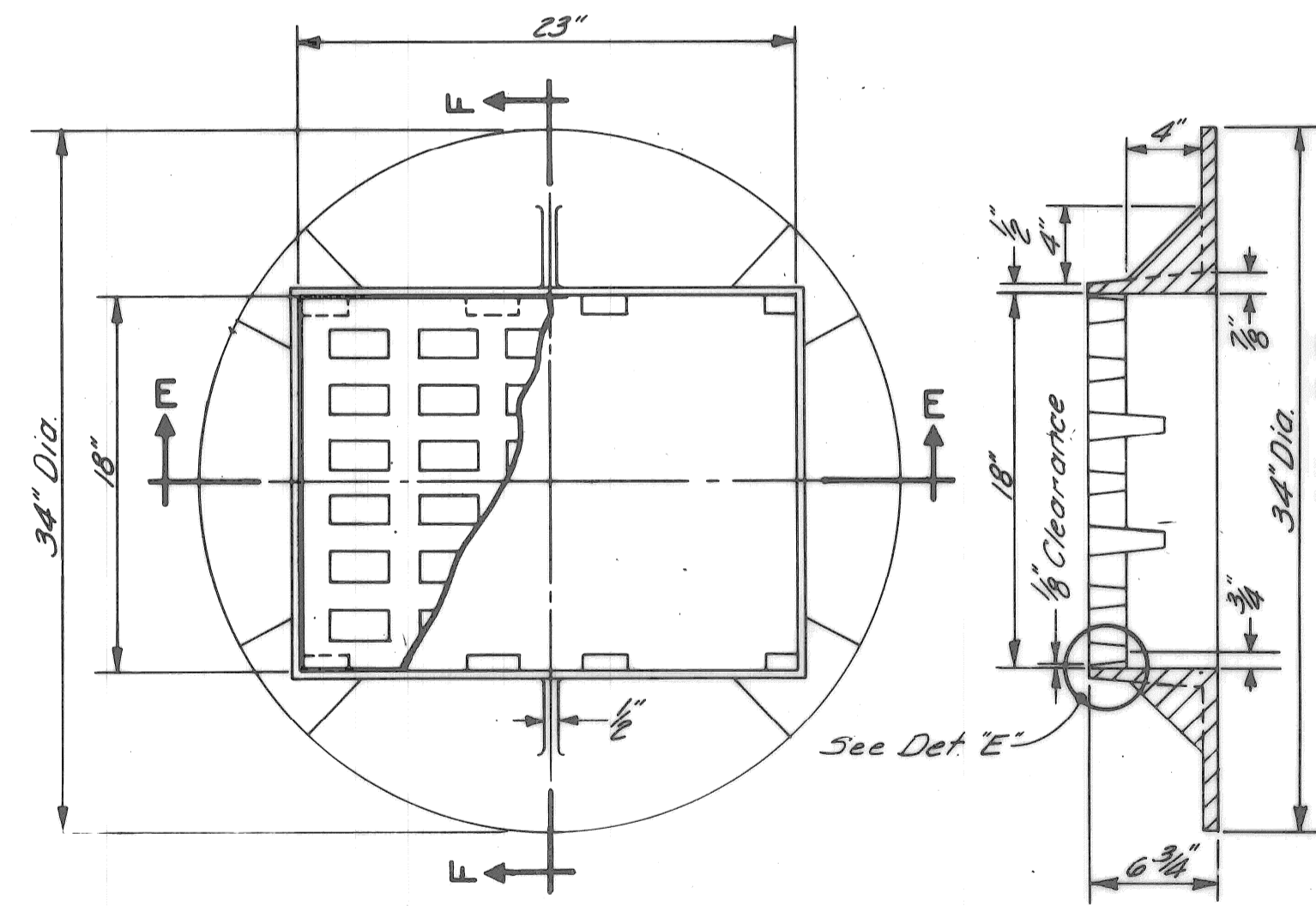
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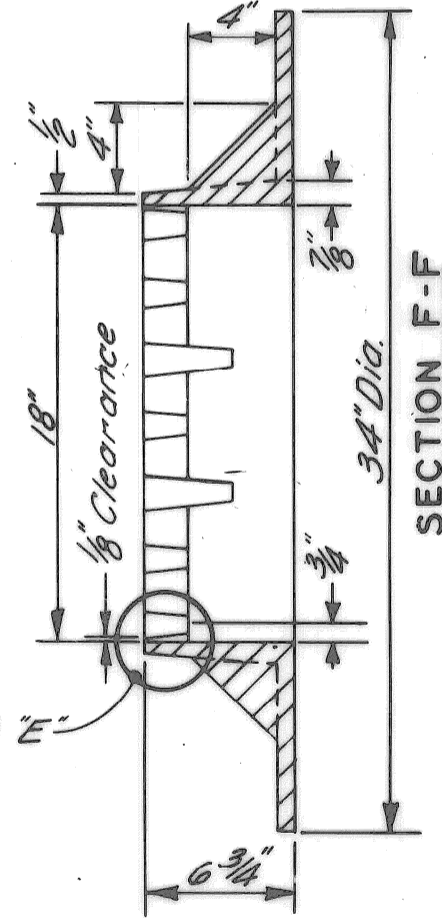
SECTION D-D

CATCH BASIN "A"

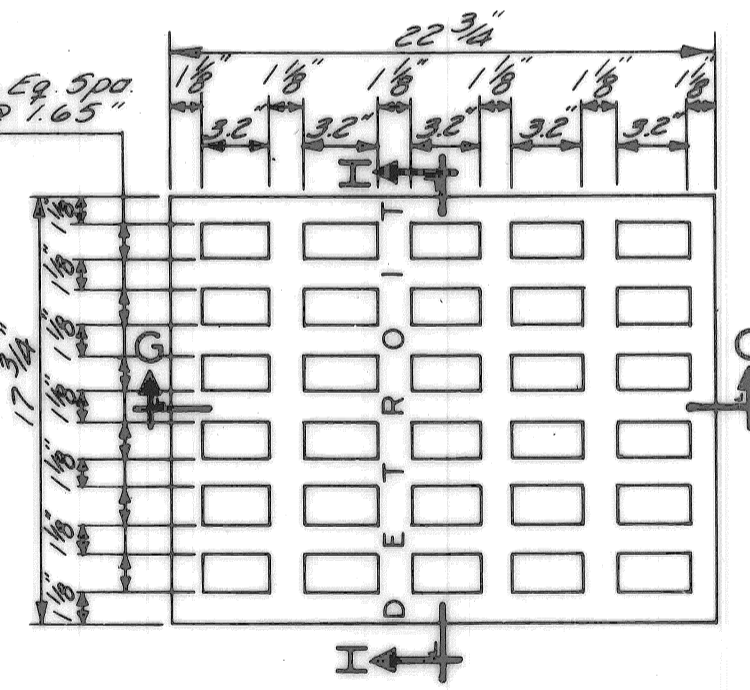
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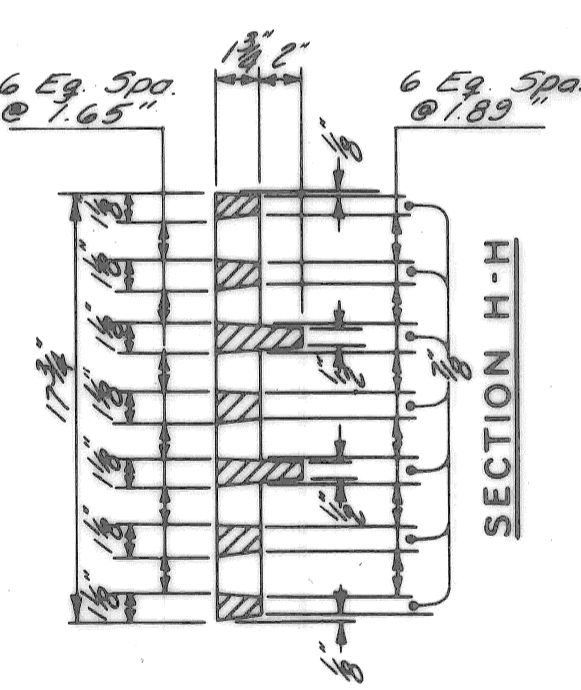
PLAN VIEW OF FRAME



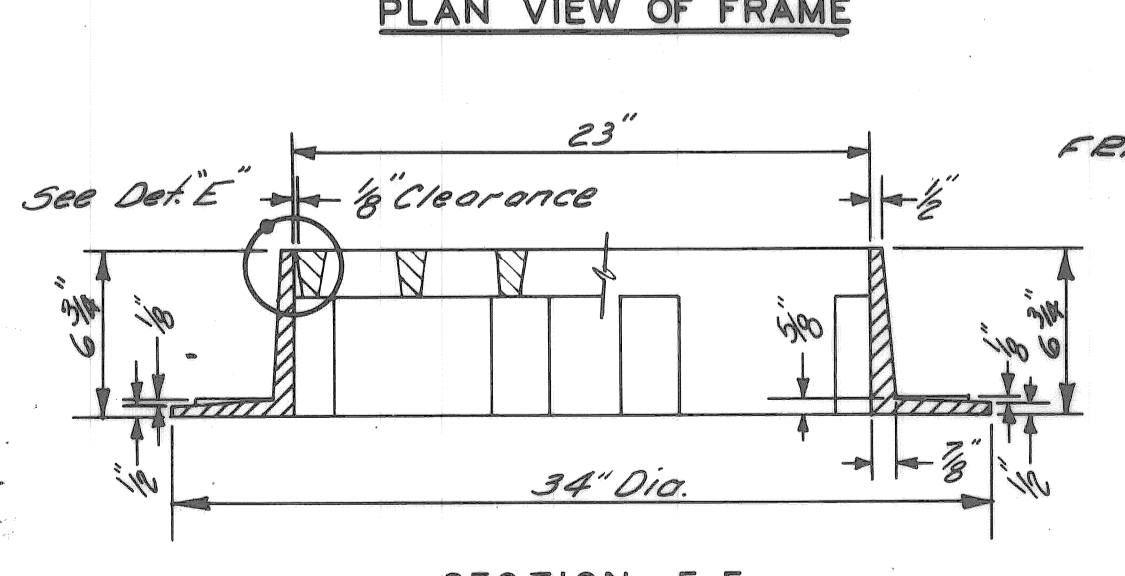
SECTION F-F



PLAN VIEW OF GRATE



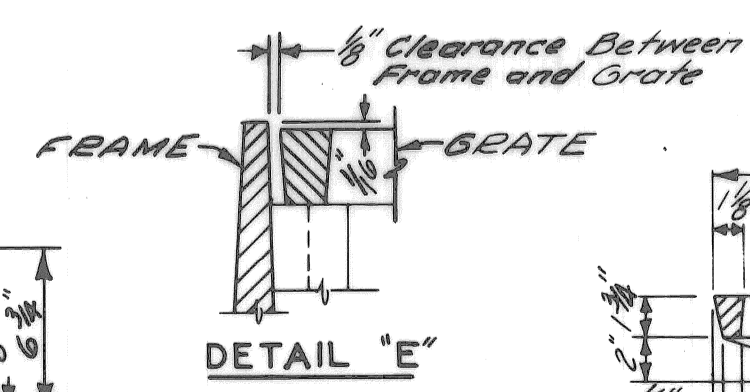
SECTION H-H



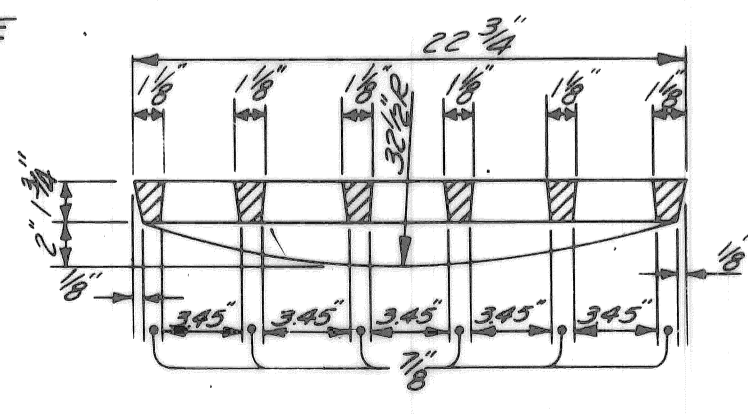
SECTION E-E

STANDARD FLAT GRATE AND FRAME

NO SCALE



DETAIL "E"



SECTION G-G

GENERAL NOTES

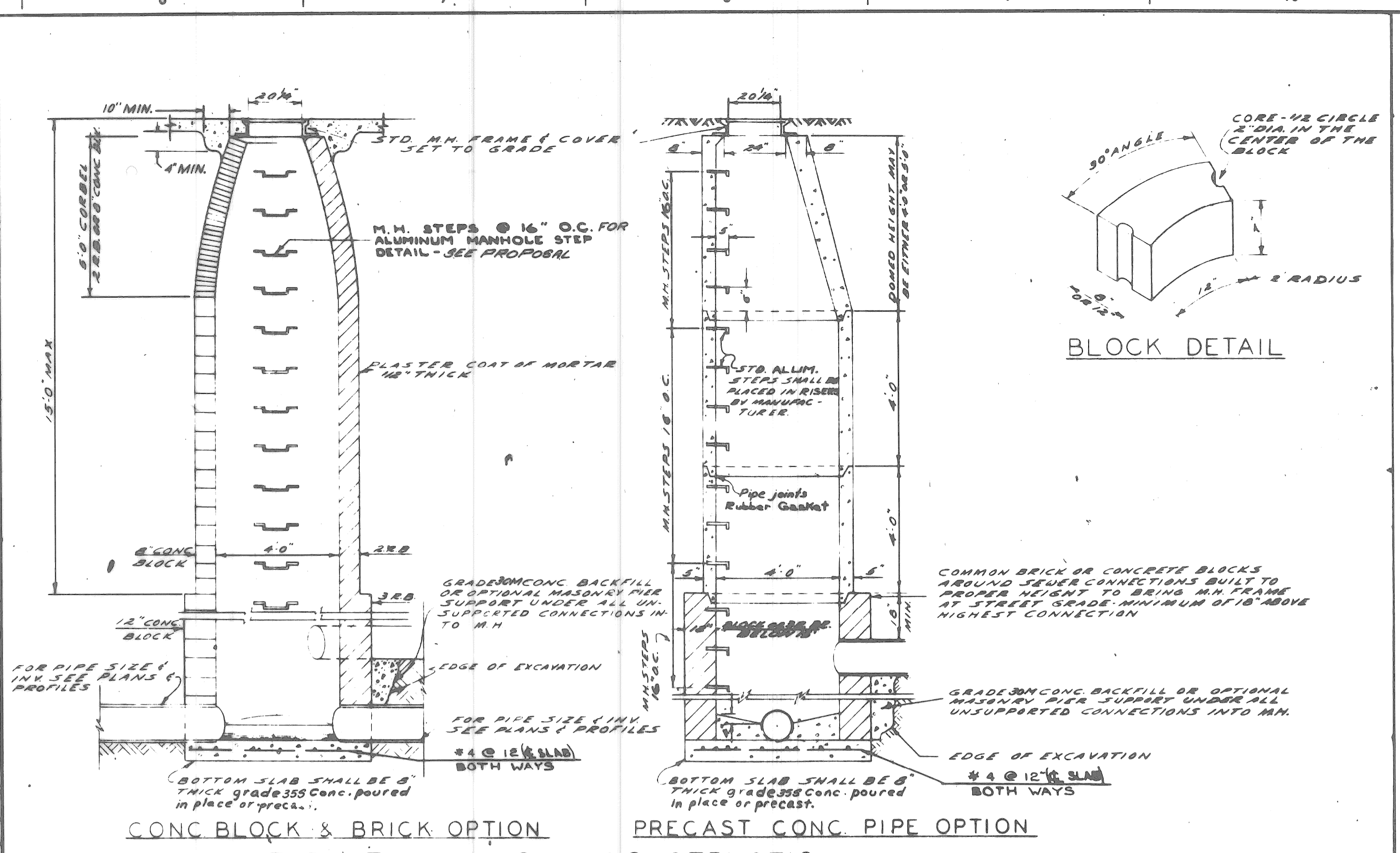
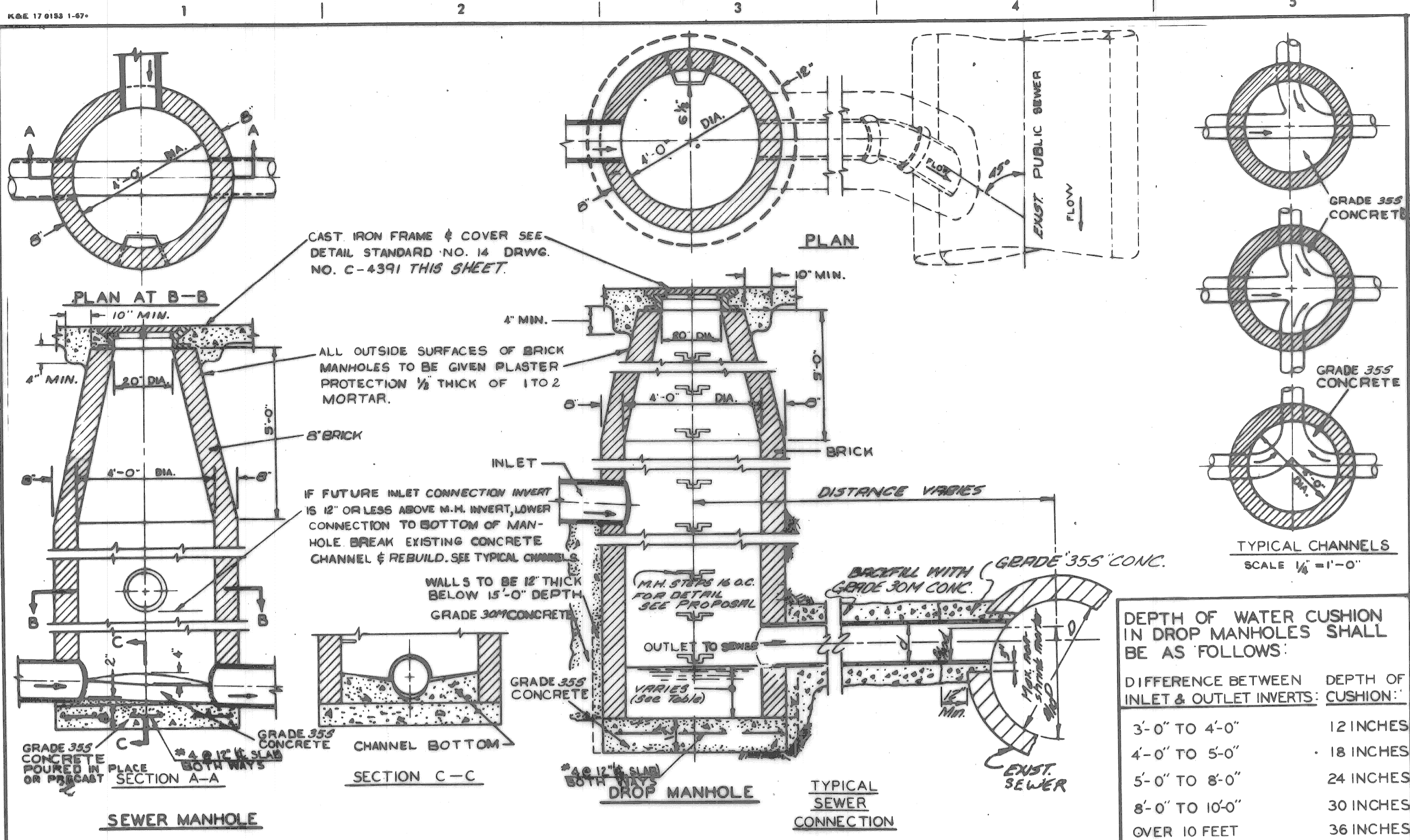
- The materials & workmanship shall be in accordance with the current Standard Specifications.
- Center of Catch Basin shall be 20 inches from back of curb.
- All sizes & flow lines of pipe, and elevations for top & bottom of structures shall be determined from the plans or construction requirements. The bell shall be removed from the first length of outlet pipe projecting through the wall of the structures. When any structure is constructed of precast concrete or concrete block, the top of the masonry shall be left sufficiently low to permit proper adjustment of cover to grade by the use of mortar or bricks as directed by the Engineer.
- A Trap, as detailed on this sheet, shall be placed where called for in the outlet sewer line of Catch Basins "B". This trap shall be set into the masonry wall as shown on the detail. The space between the faces of the wall & the trap shall be completely filled with cement, mortar or concrete, so as to hold Trap securely in place. Tile Traps will be paid for separately at the Contract Unit Price each, which price shall include the extra catch basin construction required and for furnishing and installing the trap.
- A plaster coat of mortar 1/2 inch in thickness shall be applied to the outer surface of the structure as shown. A 1/2 inch cement plaster coat shall be placed on the inside of all sumps.
- Contractor shall verify elevations of existing utilities to enable construction to indicated elevations shown on drawings. If necessary, invert elevations shown on the drawings may be altered in the field to clear existing utilities. Such alterations, upward or downward, shall be at no change in contract price.
- When precast concrete pipe sections are used for catch basins, either a section of the inlet and outlet pipes or an opening or eye for the inlet & outlet pipes shall be cast into the wall of the catch basin pipe when it is being manufactured. Eyes in precast pipe sections shall be furnished to accommodate a flexible joint connection, such as Press-Wedge by Press Seal Gasket Corp or Res-Seal by Scales Mfg. Corp.
- Pay limit for sewers shall be inside faces of structures unless otherwise noted.

DESIGNED BY	M. POLITO	APPROVED:	John Erickson ENGINEER OF STREETS
DRAWN BY			Allen C. Pagan ENGINEER OF EXPRESSWAYS
TRACED BY			W. B. Bannard HEAD CIVIL ENGINEER
CHECKED BY	D. MILZ		

CITY OF DETROIT
 CITY ENGINEERS OFFICE

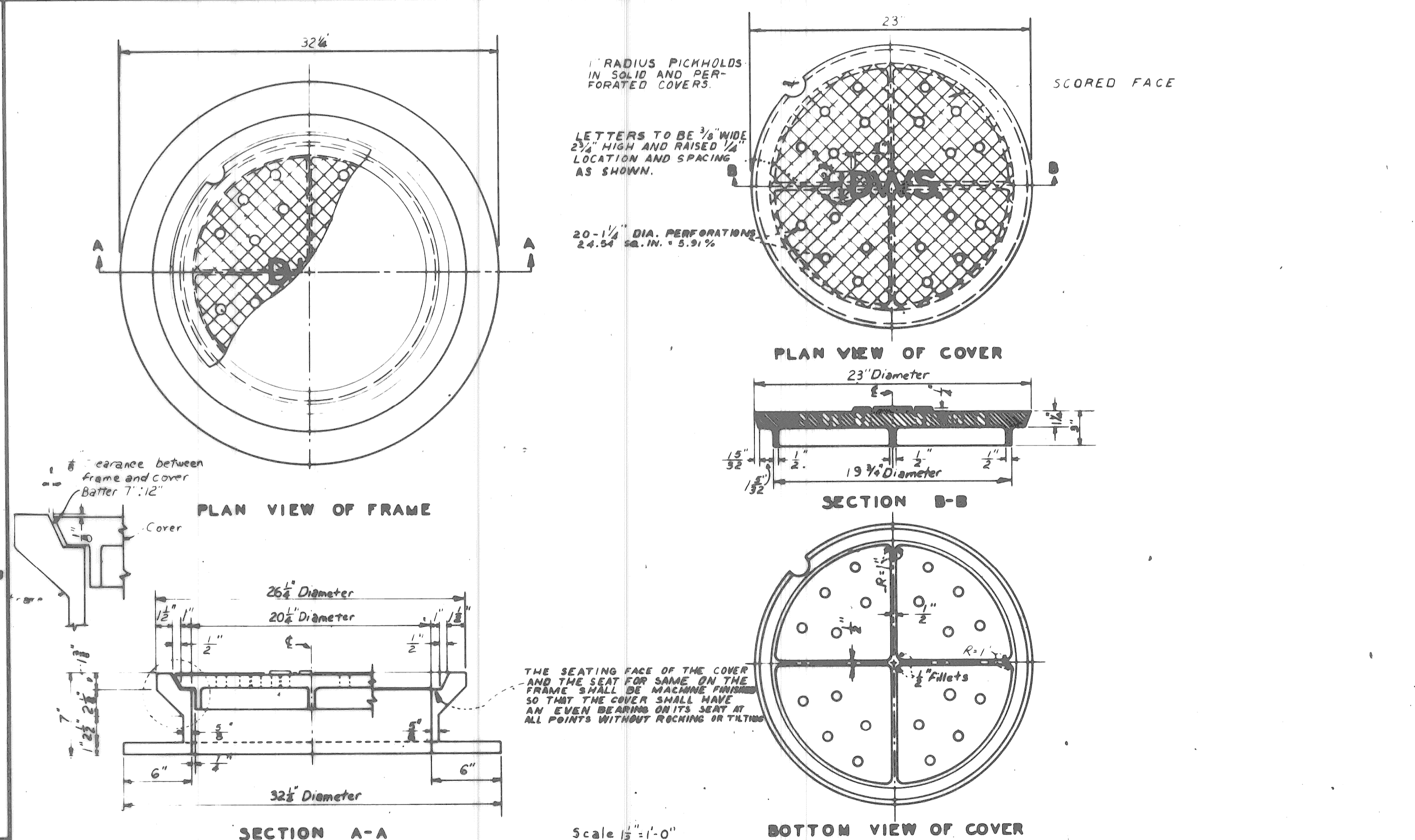
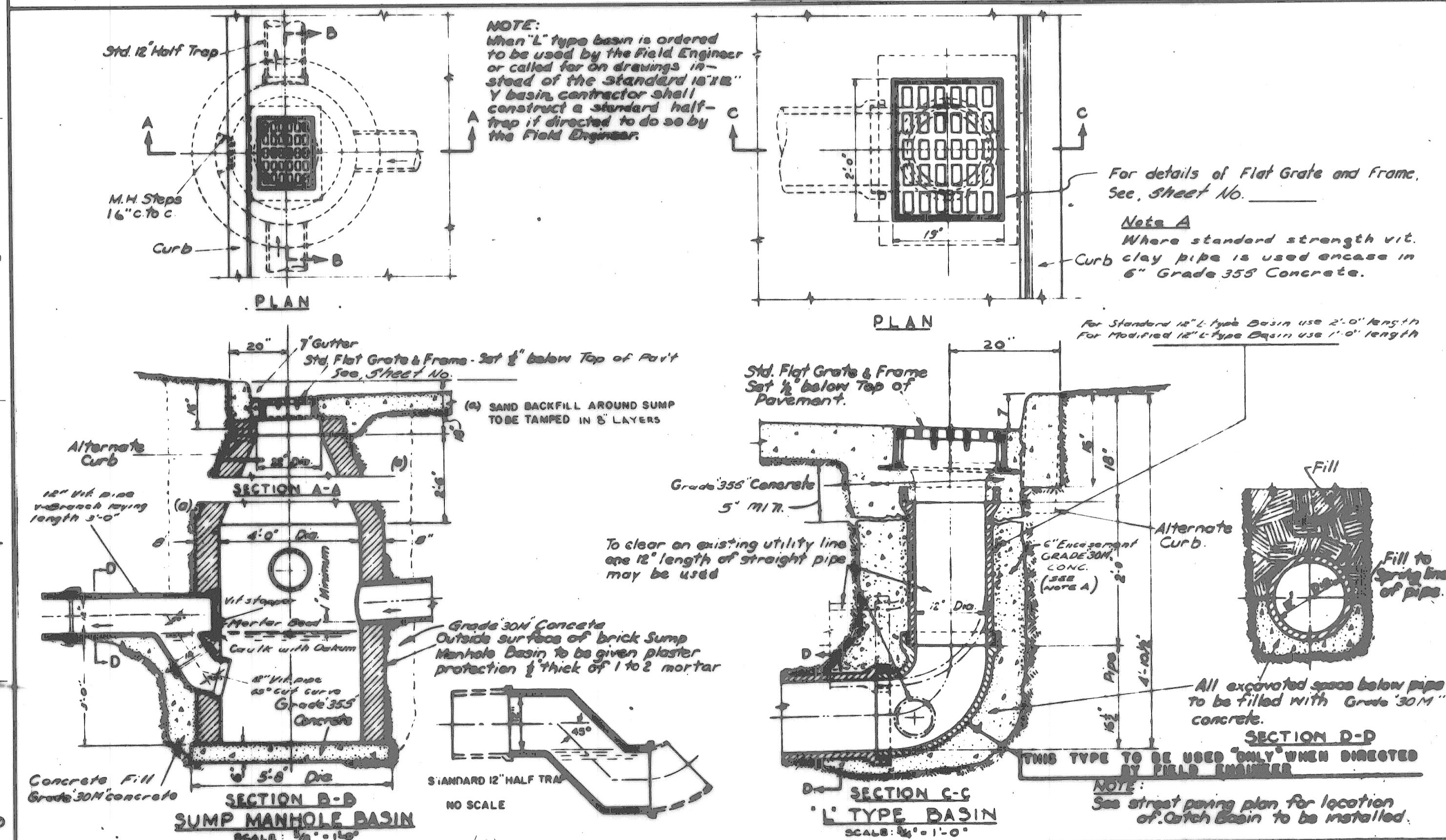
DETAILS OF STANDARD
 CATCH BASINS "A" & "B"
 AND FLAT GRATE & FRAME

SHEET	5 OF 25 SHEETS
PROJECT NO.	17661A
JOB NO.	
DATE	MAY, 1984



DESIGNED BY	APPROVED	CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEER'S OFFICE BUREAU OF DESIGN
DRAWN BY	ENGINEER OF STREETS	
TRACED BY	ASST. CITY ENGINEER	DETAILS OF STANDARD SEWER & DROP MANHOLES
CHECKED BY	CITY ENGINEER	
BOOK NO.	PG.	SCALE 3/8" = 1'-0" DATE: 8-27-66
1971 1970 1969 1968 1967		

DESIGNED BY	APPROVED	CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEER'S OFFICE BUREAU OF DESIGN
DRAWN BY	ENGINEER OF STREETS	
TRACED BY	ASST. CITY ENGINEER	STD SEWER MANHOLES CONSTRUCTION ALTERNATES
CHECKED BY	CITY ENGINEER	
BOOK NO.	SCALE NONE	DWG. NO. C-395A
DATE 8-29-68		



DESIGNED BY	APPROVED	CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEER'S OFFICE BUREAU OF DESIGN
DRAWN BY	ENGINEER OF STREETS	
TRACED BY	ASST. CITY ENGINEER	TYPICAL SUMP MANHOLE & 'L' TYPE CATCH BASINS
CHECKED BY	CITY ENGINEER	
BOOK NO.	SCALE 3/8" = 1'-0"	DETAIL STANDARD NO. 12
DATE 8-27-66		
1971 1970 1969 1968 1967 1966 1965 1964 1963 1962 1961 1960		

DESIGNED BY	APPROVED	CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEER'S OFFICE BUREAU OF DESIGN
DRAWN BY	ENGINEER OF STREETS	
TRACED BY	ASST. CITY ENGINEER	DETAILS OF STANDARD - MANHOLE FRAME AND COVER -
CHECKED BY	CITY ENGINEER	
BOOK NO.	SCALE AS SHOWN	DATE: 8-29-68
DATE 8-29-68		
1971 1970 1969 1968 1967 1966 1965 1964 1963 1962 1961 1960		

COLOR	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
BLACK	---	PROPERTY AND LOT LINES	○	SEWER MANHOLE	#	STREET SIGN POST
"	---	PROPOSED CURB LINES AND HEADERS AT RETURNS	⊙	P.L.C. HANDHOLE	□	CATCH BASIN
"	---	EXISTING CURB LINES OR EDGE OF PAVEMENT	⊕	WATER MANHOLE OR GRATE	(W)	WATER METER
"	---	PROPOSED CURB OR PAVING ON INTERSECTING STREET	⊕	GAS MANHOLE OR GRATE	(-)	WATER SHUT OFF
"	---	PROPOSED SEWER TO CATCH BASINS	⊕	WESTERN UNION MANHOLE	(+)	GAS SHUT OFF
"	---	EXISTING LATERAL SEWERS	⊕	MICHIGAN BELL MANHOLE	⊕	GAS DRIP
"	---	EXISTING PUBLIC SEWERS	⊕	EDISON STEAM MANHOLE	⊕	DRAIN OR VENT
"	---	EXISTING GAS LINES	⊕	EDISON ELECTRIC MANHOLE	⊕	GUY POLE
"	---	EXISTING WATER LINES	⊕	FIRE DEPT MANHOLE	⊕	MAIL BOX
"	---	ELEV OF SEWER INVERT	⊕	POLICE DEPT MANHOLE	⊕	AREAWAY OR COAL CHUTE
"	---	PROPOSED C.B.M.H. & INLET SEWER	⊕	III D.S.R. MANHOLE	⊕	FLAG POLE
"	---	ELEV	⊕	FIRE DEPT STANDARD HYDRANT	⊕	SPRINKLER BOX
"	---	EXISTING C.B.M.H. & INLET SEWERS	⊕	FIRE DEPT HIGH PRESSURE HYDRANT	⊕	DEAD MANHOLE
"	---	PROPOSED C.B.M.H. & INLET SEWERS ON INTERSECTING STREETS	⊕	FIRE DEPT CALL BOX	⊕	TREE
"	---		⊕	FIRE DEPT HIGH PRESSURE MANHOLE	⊕	PLC & FD MANHOLE FILLED WITH SAND
"	---		⊕	POLICE DEPT CALL BOX	⊕	TRACK DRAIN
"	---		⊕	P.L.C. LIGHT POLE	⊕	TRAFFIC SIGNAL LIGHT
"	---		⊕	P.L.C. POLE	⊕	TRAFFIC SIGNAL ON LIGHT POST
"	---		⊕	TELEPHONE POLE	⊕	II D.S.R. DANGER PLATE
"	---		⊕	EDISON POLE	⊕	RR SIGNAL CONTROL BOX
"	---		⊕	TRAFFIC CONTROL BOX	⊕	

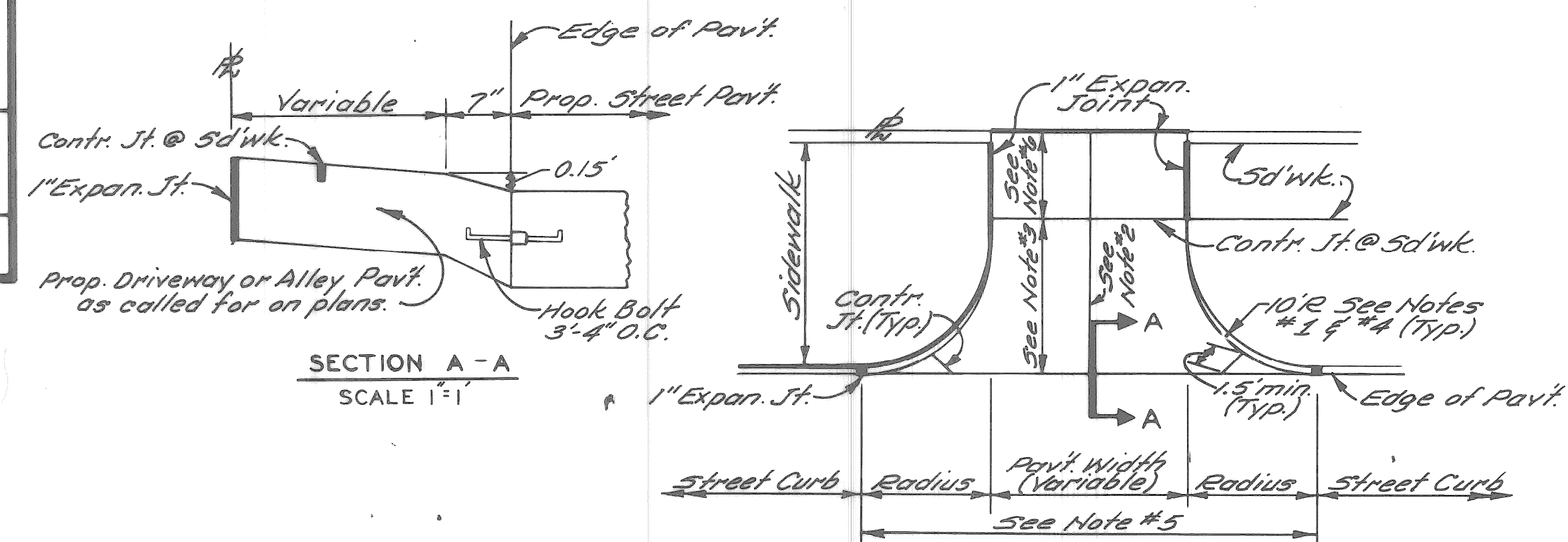
DESIGNED BY	TRACED BY	CHECKED BY
J.R.D.	NBA	

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEER'S OFFICE
BUREAU OF DESIGN

PAVING
DETAIL NO. 25

STANDARD SYMBOLS FOR UTILITIES

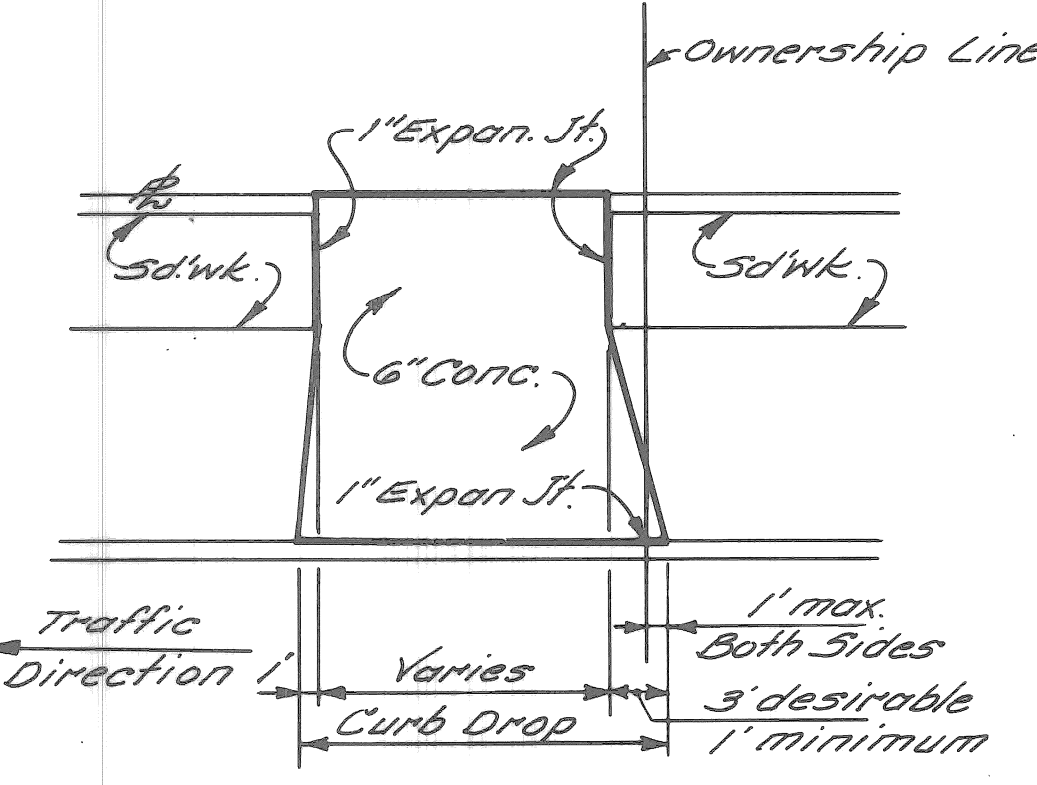
BUILT NO. SCALE NO. SCALE DWG. NO. C-902-A
 EXP. NO. DATE 11-2-58



GENERAL NOTES
COMMERCIAL DRIVEWAYS & ALLEYS

1. Transition edge of driveway or alley from curb at the street to no curb at the end of the driveway or alley radius.
2. Where driveway or alley exceeds 15' in width a contraction joint shall be placed longitudinally along it.
3. When distance exceeds 15', a transverse contraction joint will be required.
4. Radius 10' unless otherwise directed by the Engineer, or as shown on plans.
5. All work & materials req'd to construct the driveway or alley between the end of returns will be paid for as Concrete Pavement of the specified thickness.
6. Minimum & Maximum Slopes of 1/4" ft. & 3/4" ft. shall be used in the sidewalk area.

COMMERCIAL DRIVEWAY OR ALLEY DETAIL
 SCALE 1"=10'



RESIDENTIAL DRIVEWAY DETAIL
 SCALE 1"=10'

REVISIONS	COORDINATES ON SHEET
-----------	----------------------

DESIGNED BY	APPROVED
J.R.D.	<i>Allen & Rogers</i> ENGINEER OF EXPRESSWAYS
TRACED BY	
NBA	

CITY OF DETROIT
CITY ENGINEERING

KELLY ROAD WIDENING
GRAYTON TO N. OF SEYMOUR

SPECIAL STANDARDS & SPECIAL DETAILS

SHEET 7 OF 25 SHEETS
CONTRACT No. I7661A
ASSIGNMENT No. A.O.
DATE MAY, 1984

QUANTITY SHEET - E

ITEMS	AS PER PLANS												
	SHEET NO'S.		2	3	4								
	TOTALS	UNITS	TYPICAL CROSS-SECTIONS	ALIGNMENT REMOVAL - UTILITIES	PLAN - PROFILE								
REMOVING PAVEMENT	118	SQ.YD.		118									
REMOVING CURB	1,118	LIN-FT.		1,118									
REMOVING SIDEWALK	479	SQ.YD.	20	459									
SUBGRADE UNDERCUTTING, TYPE II	10	CU.YD.	10										
REMOVING BITUMINOUS SURFACE	265	SQ.YD.			265								
ADJUSTING WATER SHUTOFFS	2	EACH		2									
BITUMINOUS SURFACING MIXTURE NO 1100L, 20AA	32	TON		2	30								
BITUMINOUS SURFACING MIXTURE NO 1100T, 20AA	31	TON		2	29								
CONC. PAV'T. (REINF.)-9" WITH INTEGRAL CURB (REINF.)	1,206	SQ.YD.			1,206								
CONC. PAV'T. - NONREINF. - 8"	88	SQ.YD.			88								
CEMENT	3	TON	3										
EXPANSION ANCHORED LANE TIES	4,167	LIN-FT.			4,167								
REMOVING PAVEMENT (REPAIR)	47	SQ.YD.	5	42									
CONC. PAV'T. REPAIR, 9", NONREINF.	47	SQ.YD.	5	42									
12" SEWER, C-76-III, TRENCH DETAIL 8	28	LIN-FT.	25		3								
12" SEWER, C 76 III, TRENCH DETAIL 9	76	LIN-FT.			76								
12" SEWER TAP	1	EACH		1									
CLEANING EXISTING STORM DRAINAGE STRUCTURES*	3	EACH	3							* NON FEDERAL			
SEWER CLEANOUT *	150	LIN-FT.	150							* NON FEDERAL			
CONC. CURB, DETAIL "X"	35	LIN-FT.	35										
4" CONCRETE SIDEWALK	3,641	SQ.FT.	180		3,461								
6" CONCRETE SIDEWALK	48	SQ.FT.			48								
SIDEWALK RAMPS, TYPE I	84	SQ.FT.			84								
BARRICADE, TYPE II, LIGHTED, FURNISHED	75	EACH			75								
BARRICADE, TYPE II, LIGHTED, OPERATED	50	EACH			50								
BARRICADE, TYPE III, LIGHTED, FURNISHED	5	EACH			5								
BARRICADE, TYPE III, LIGHTED, OPERATED	3	EACH			3								
SIGN, TYPE B TEMPORARY	40	SQ.FT.			40								
CLASS "A" SODDING	579	SQ.YD.	25		554								
WATER	3	UNIT	1		2								
TOPSOIL SURFACE, 3"	579	SQ.YD.	25		554								
REMOVING TREES, 37" OR LARGER	1	EACH		1									
REMOVING STUMPS, 37" OR LARGER	1	EACH		1									
REMOVING DRAINAGE STRUCTURES	1	EACH		1									
ABANDONING DRAINAGE STRUCTURES	1	EACH		1									
CATCH BASIN "A"	1	EACH			1								
CATCH BASIN "B"	2	EACH			2								
CATCH BASIN "L"	1	EACH	1										
ADJUSTING DRAINAGE STRUCTURE COVERS	1	EACH		1									
RECONSTRUCTING DRAINAGE STRUCTURES	1	EACH		1									
12" SEWER TRAP	2	EACH			2								
RECONSTRUCT GATE WELL	1	EACH		1									
ADJUST GATE WELL COVER	1	EACH		1									
MOBILIZATION	1	L. SUM	1										
MOVING PEDESTRIAN CHAIN AND POSTS	1	L. SUM			1								
MINOR TRAFFIC DEVICES	1	L. SUM	1										