

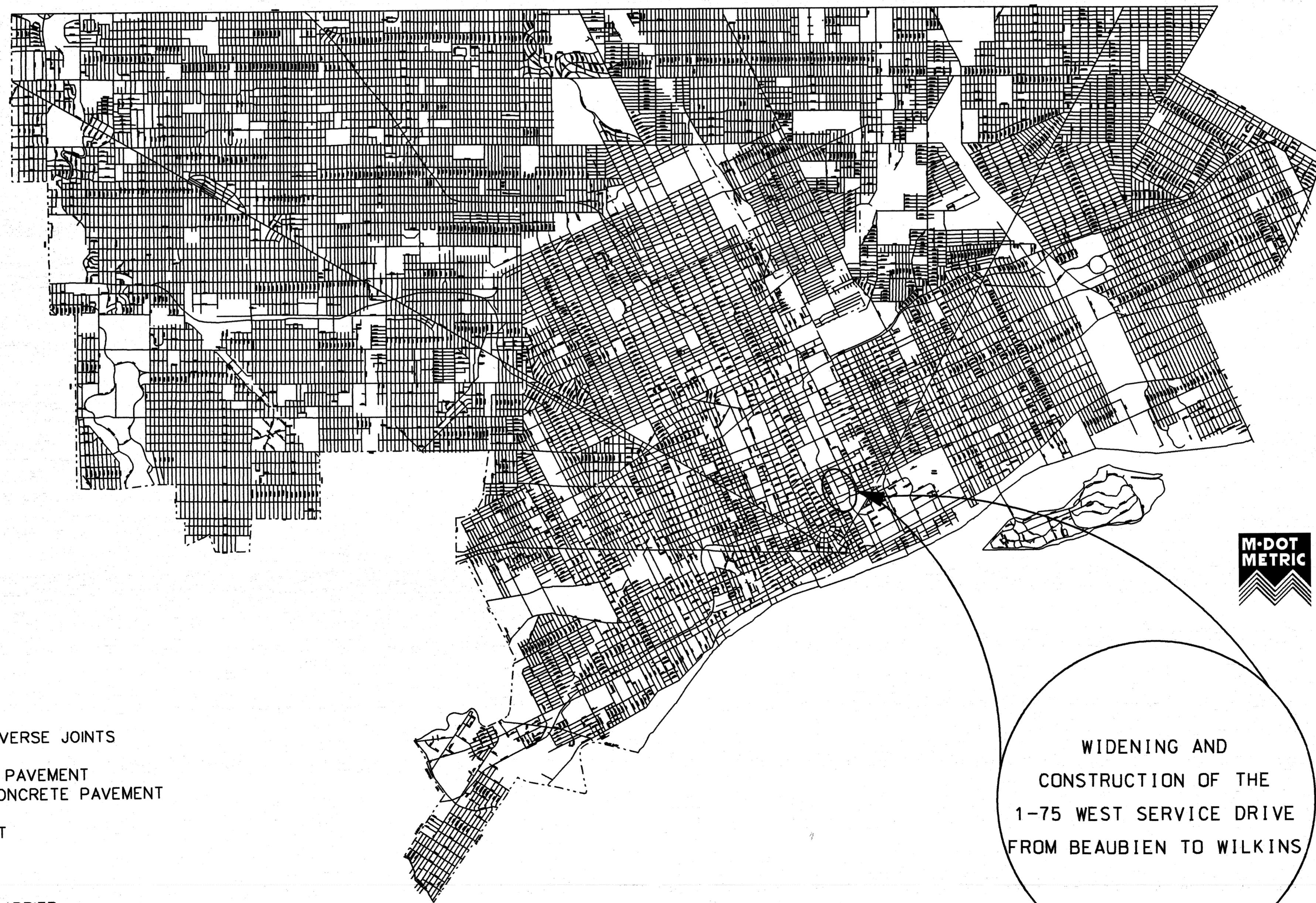
PROPOSED IMPROVEMENTS COVERED BY THESE PLANS ARE IN ACCORDANCE WITH AASHTO : "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS, 1994".

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
IN CO-OPERATION WITH
MICHIGAN DEPARTMENT OF TRANSPORTATION
CONTROL SECTION NO. M 82400
JOB NO. 50049 A

FHWA REGION	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MCH				
STREET	CITY	COUNTY	TWP	SHEET NO	TOTAL SHEETS

TRAFFIC VOLUME	CURRENT	2020
ADT	3,000	8,000
DESIGN SPEED-----	VARIES	
POSTED SPEED-----	25 MPH	

CALL MISS DIG
72 HOURS PRIOR
TO CONSTRUCTION
1-800-482-7171



WIDENING AND
CONSTRUCTION OF THE
1-75 WEST SERVICE DRIVE
FROM BEAUBIEN TO WILKINS

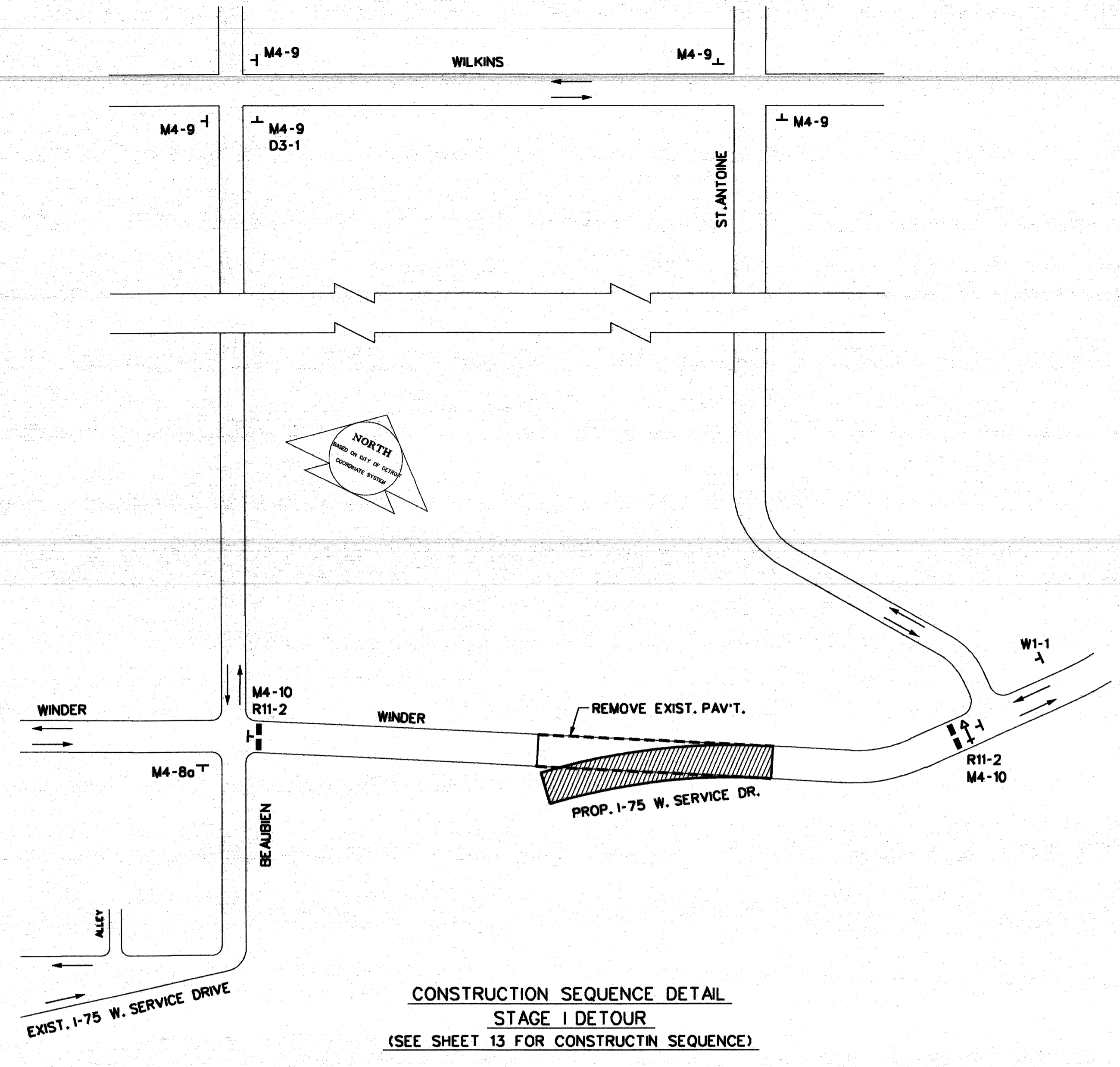
- INDEX OF SHEETS
- 1 TITLE SHEET
 - 2 SITE PLAN
 - 3-4 TYPICAL SECTIONS
 - 5 ALIGNMENT
 - 6 REMOVAL PLAN
 - 7-9 PLANS AND PROFILES
 - 10 DETAILED GRADES
 - 11 UTILITIES
 - 12 PAVEMENT MARKINGS
 - 13 CONSTRUCTION SEQUENCE
 - 14-18 SPECIAL STANDARDS AND DETAILS
 - 19 QUANTITY SHEET
 - 20-47 P.L.D. PLANS
 - 48 P.L.D. QUANTITY SHEETS

- STANDARD PLANS
- R-28-B SIDEWALK RAMP DETAILS
 - R-29-C DRIVEWAY OPENINGS & APPROACHES, AND CONCRETE SIDEWALKS
 - R-39-D TRANSVERSE PAVEMENT JOINTS
 - R-40-C LOAD TRANSFER ASSEMBLIES FOR TRANSVERSE JOINTS
 - R-41-B LONGITUDINAL PAVEMENT JOINTS
 - R-42-B TYPICAL JOINT LAYOUTS FOR CONCRETE PAVEMENT
 - R-43-B LOCATION OF TRANSVERSE JOINTS ON CONCRETE PAVEMENT
 - R-44-B CONCRETE PAVEMENT REPAIR
 - R-45-C CONVENTIONAL PAVEMENT REINFORCEMENT
 - R-83-A UTILITY TRENCHES
 - R-100-B SODDING AND SEEDING
 - R-125-A LIGHTED ARROWS AND BARRICADES
 - R-126-A PLACEMENT OF TEMPORARY CONCRETE BARRIER

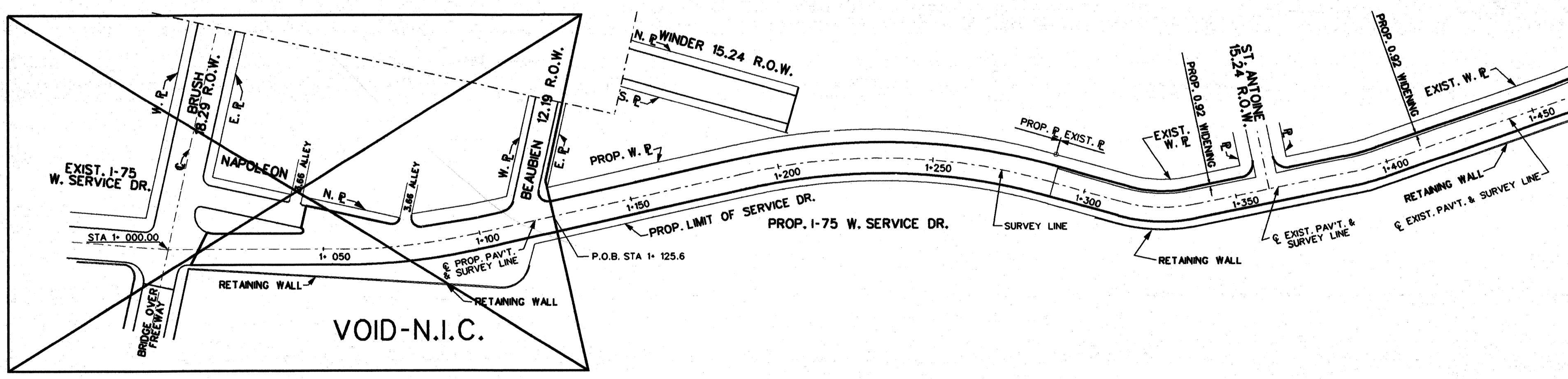
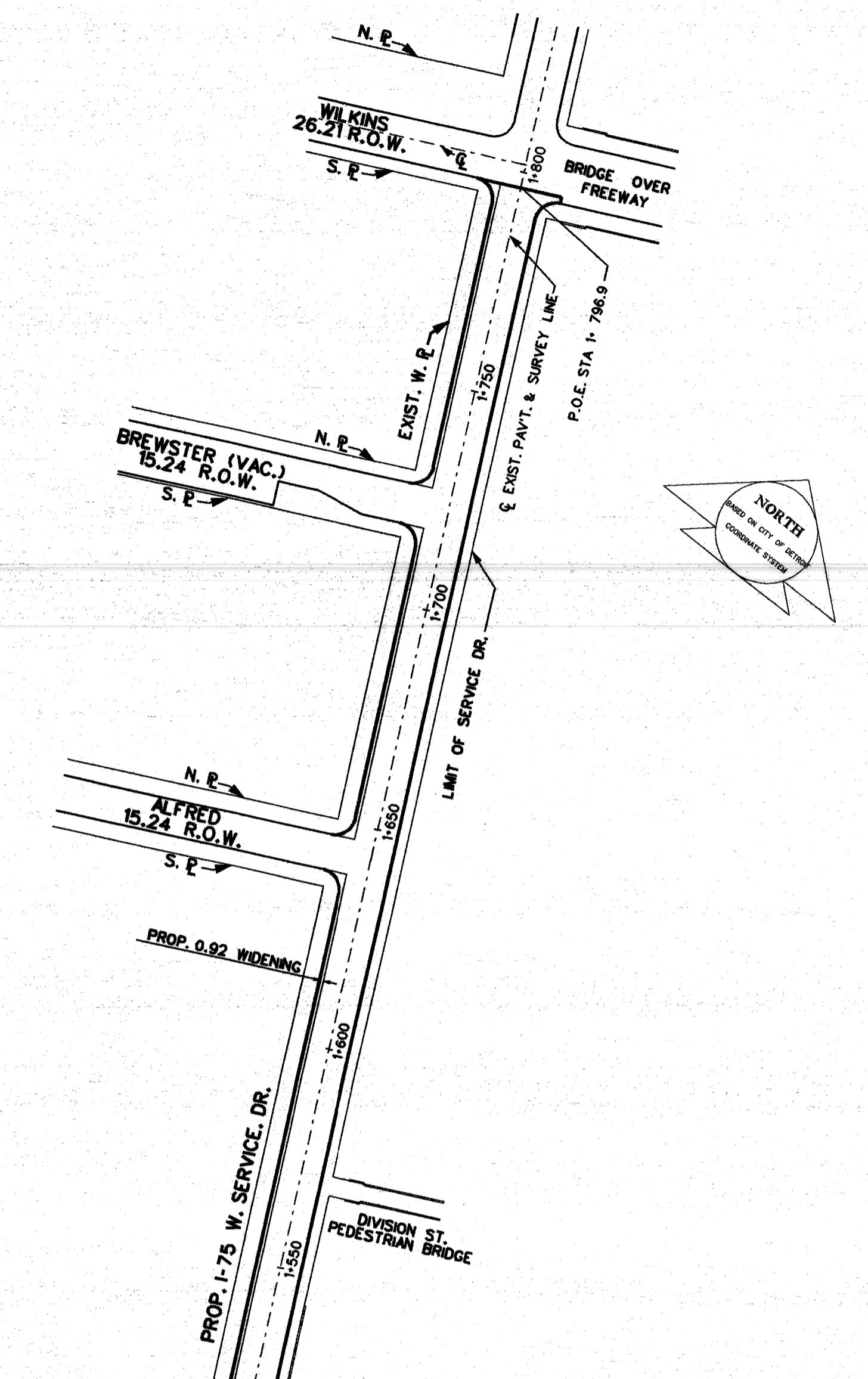
THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION 1996 STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS.

CONTRACT FOR	G.. DS.. P. & UTILITIES	
LOCAL AUTHORITY APPROVAL CITY OF DETROIT CITY ENGINEERING DIVISION DEPARTMENT OF PUBLIC WORKS		
APPROVED BY	<i>William P. Talley</i> HEAD ENGINEER	7/30/99 DATE
APPROVED BY	_____ CITY ENGINEER	_____ DATE
PREPARED UNDER SUPERVISION OF		
	<i>Dadim Haidar</i> REGISTERED PROFESSIONAL ENGINEER	_____ REGISTRATION NO.
CITY OF DETROIT ORGANIZATION		
DETROIT, MICHIGAN ADDRESS		
	(SEAL)	

JOB NO. 50049 A
M 82400
CONTROL SECTION NO. 50049 A



CONSTRUCTION SEQUENCE DETAIL
STAGE I DETOUR
(SEE SHEET 13 FOR CONSTRUCTION SEQUENCE)



SCALE: 1:1000

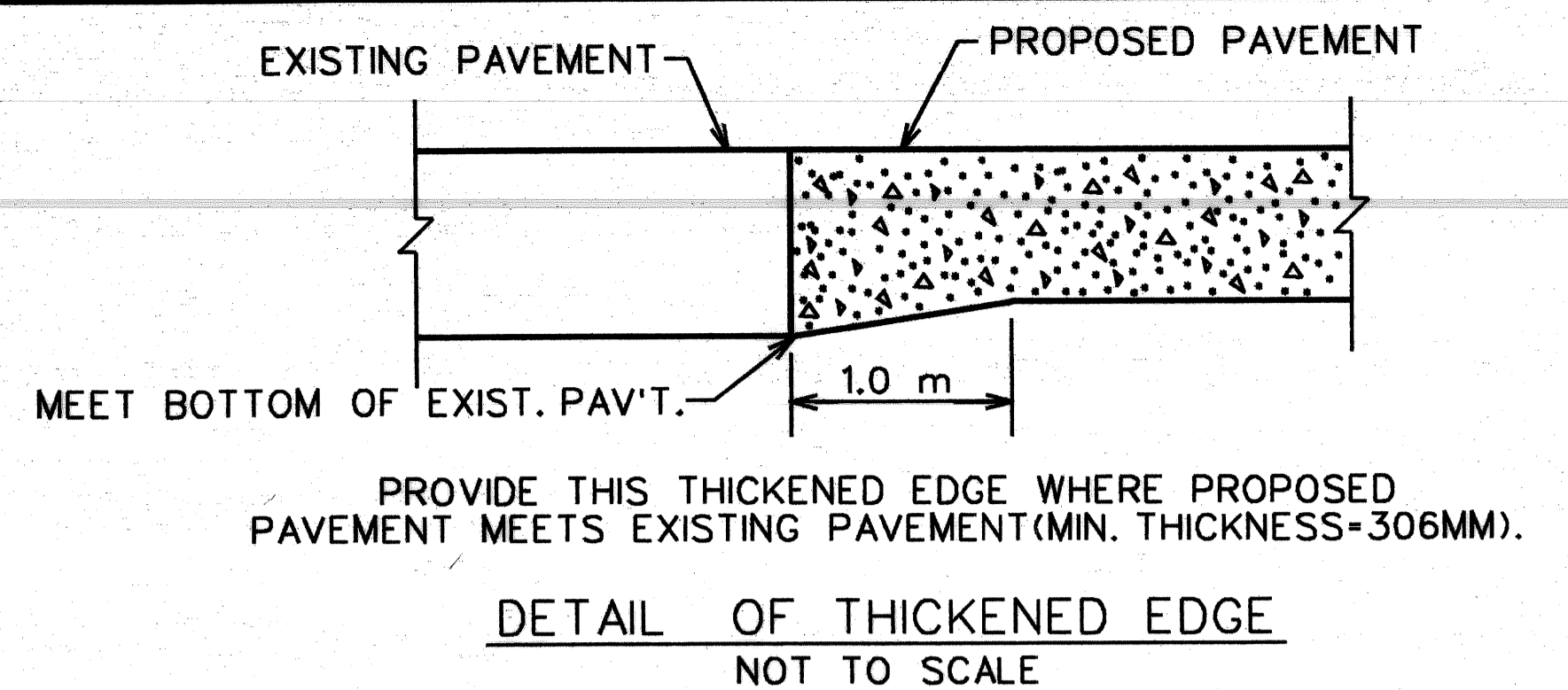
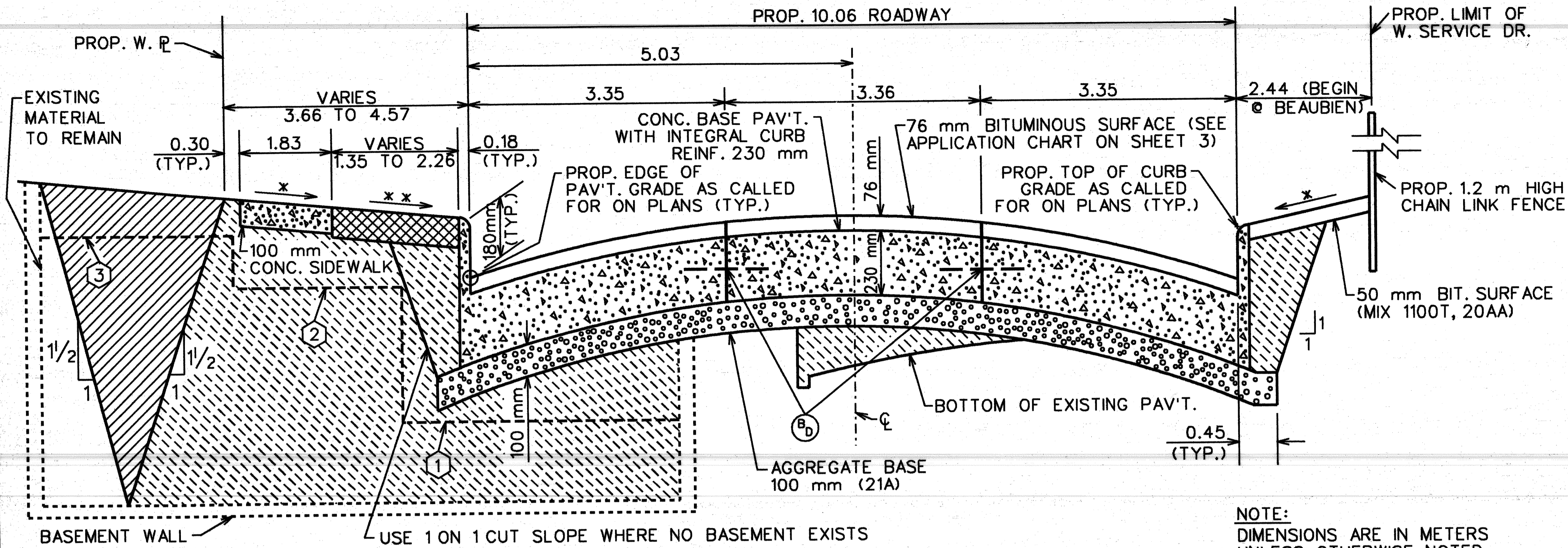
DESCRIPTION	REVISIONS	DATE	BY	CHECKED BY	APPROVED
			K.M.	N.W.	<i>Dadiu Haida</i>
PLAN					
GRADE					
ESTIMATE					
FINAL					

CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAU OF STREETS AND HIGHWAYS

CONSTRUCTION AND WIDENING OF 1-75 W. SERVICE DR.
FROM BEAUBIEN TO WILKINS

SITE PLAN

SHEET 2 OF 48 SHEETS
CONTRACT NO.
ASSIGNMENT NO. 99-22-28
DATE JULY, '99



- JOINT LEGEND**
- (B) LONGITUDINAL BULKHEAD JOINT, ACCORDING TO M.D.O.T. STD. DWG. R-41-B
 - (D) LONGITUDINAL LANE TIE JOINT WITH TIE BAR, ACCORDING TO M.D.O.T. STD. DWG. R-41-B
 - (B_o) OPTIONAL, B OR D

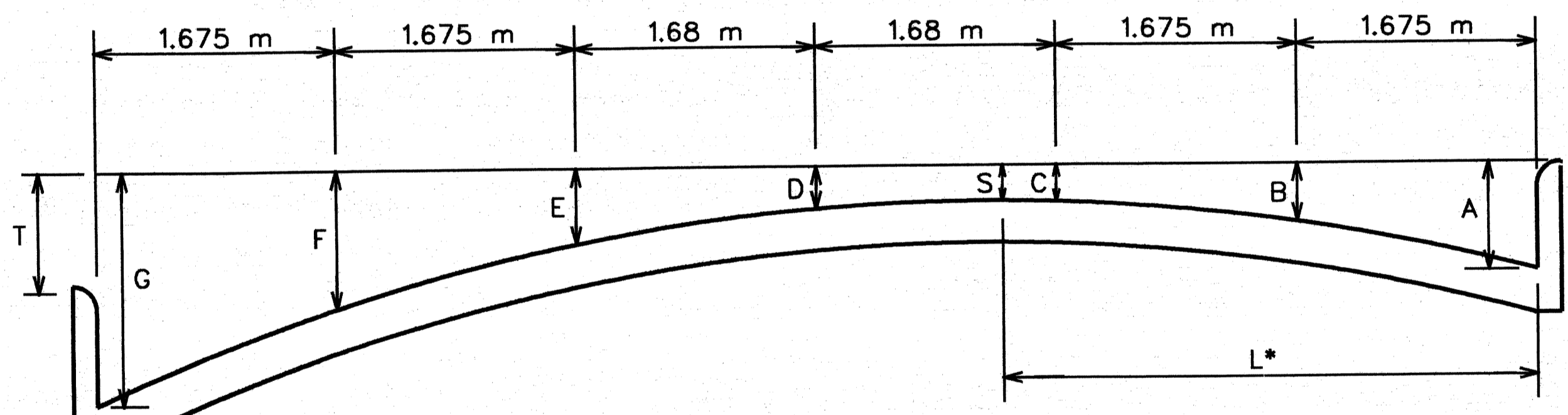
- CROSS-SECTION LEGEND**
- [Hatched pattern] SELECTED EXCAVATED MATERIAL
 - [Dotted pattern] AGGREGATE BASE - CONCRETE (100 mm IN PLACE) - FILL (21A)
 - [Cross-hatched pattern] GRANULAR MATERIAL CLASS II (SEE NOTE #2, SHEET 3.)
 - [Grid pattern] 150 mm TOPSOIL PLUS SEEDING
 - [White box] PROPOSED BITUMINOUS SURFACE

*SLOPE AT 30 mm PER m OR AS DIRECTED BY THE ENGINEER (20 mm PER m MIN., 60 mm PER m MAX.)
 **SLOPE VARIES, 20 mm PER m MIN., 80 mm PER m MAX..

TYPICAL PAVEMENT SECTION FOR I-75 W. SERVICE DR. FROM P.O.B. TO STA. 1+289.85
 NOT TO SCALE

BASEMENT WALL REMOVAL

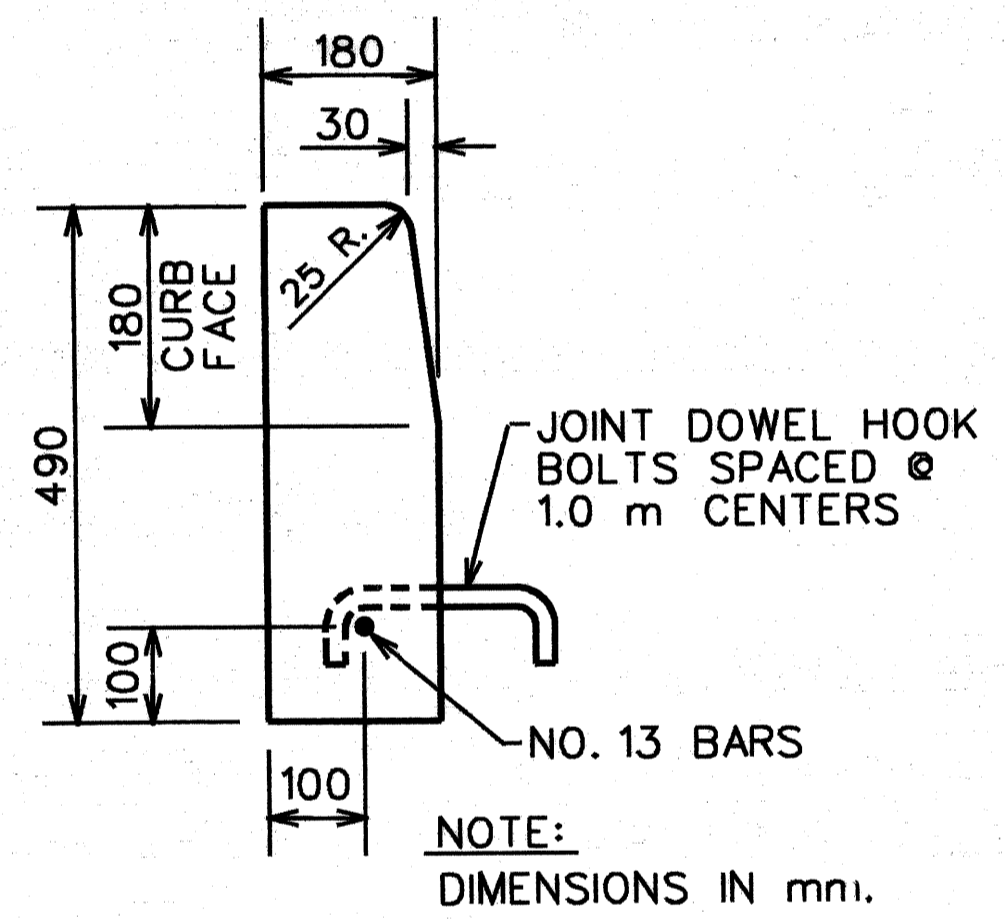
- 1 REMOVE WALLS 0.9m BELOW LOWEST POINT OF PROP. PAV'T. SURFACE UP TO 0.6m BEYOND FACE OF CURB
- 2 REMOVE WALLS TO BOTTOM OF PROP. PAV'T. SLAB IN MEDIAN AND SIDEWALK AREAS
- 3 REMOVE WALLS TO 0.3m BELOW THE PROP. SURFACE ELEVATIONS IN THESE AREAS



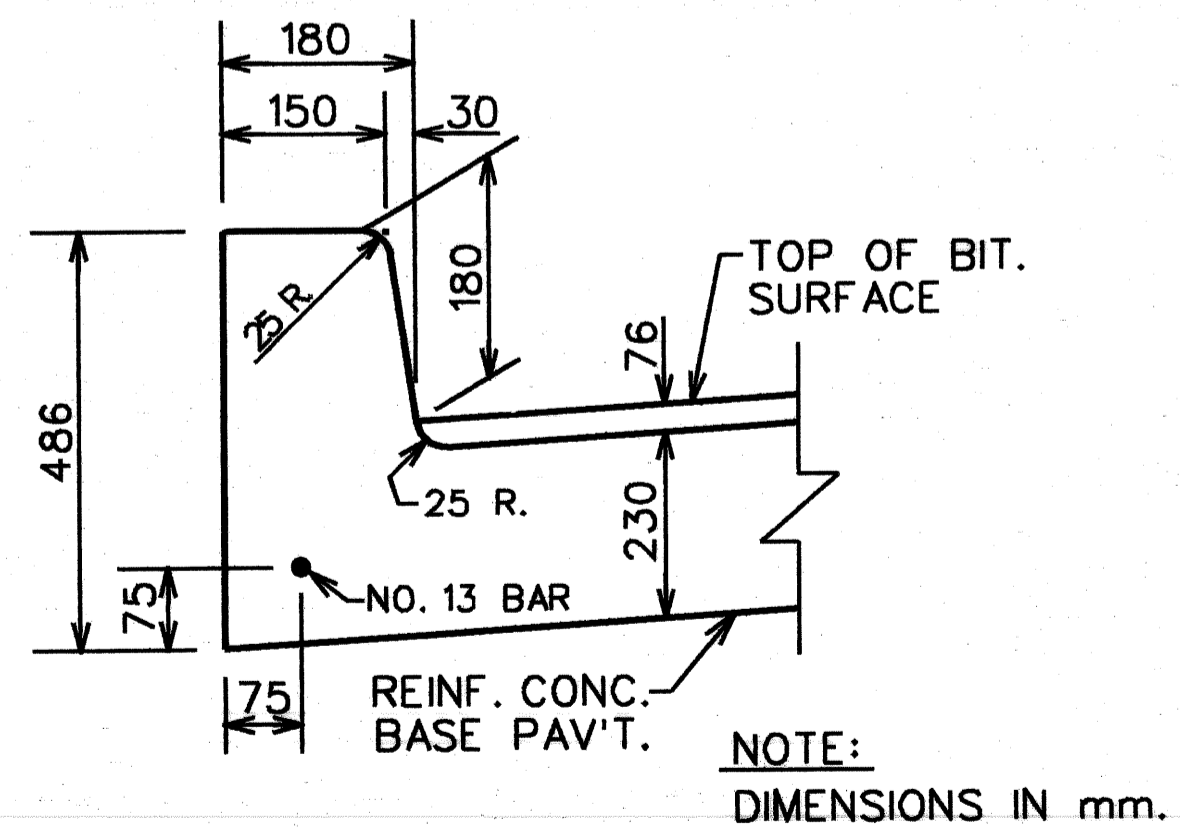
PAVEMENT WIDTH	CURB FACE	T	A	B	C	D	E	F	G	L*	S
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	m	mm
10.06 m	180 mm	0	180	122	87	75	87	122	180	5.03	75
		30	180	127	97	90	107	147	210	4.67	89
		60	180	132	107	105	127	172	240	4.31	103
		90	180	137	117	120	147	197	270	3.94	116
		120	180	142	127	135	167	222	300	3.58	127
		150	180	147	137	150	187	247	330	3.21	137
		180	180	152	147	165	207	272	360	2.84	146
		210	180	157	157	180	227	297	390	2.48	154
		240	180	162	167	195	247	322	420	2.11	161
		270	180	167	177	210	267	347	450	1.75	167
		300	180	172	187	225	287	372	480	1.38	172

*DISTANCE FROM FACE OF CURB (ON HIGH SIDE) TO CROWN

ELEMENTS OF A 10.06 m PAVEMENT
 NO SCALE



CONCRETE CURB - DETAIL "X"
 NO SCALE

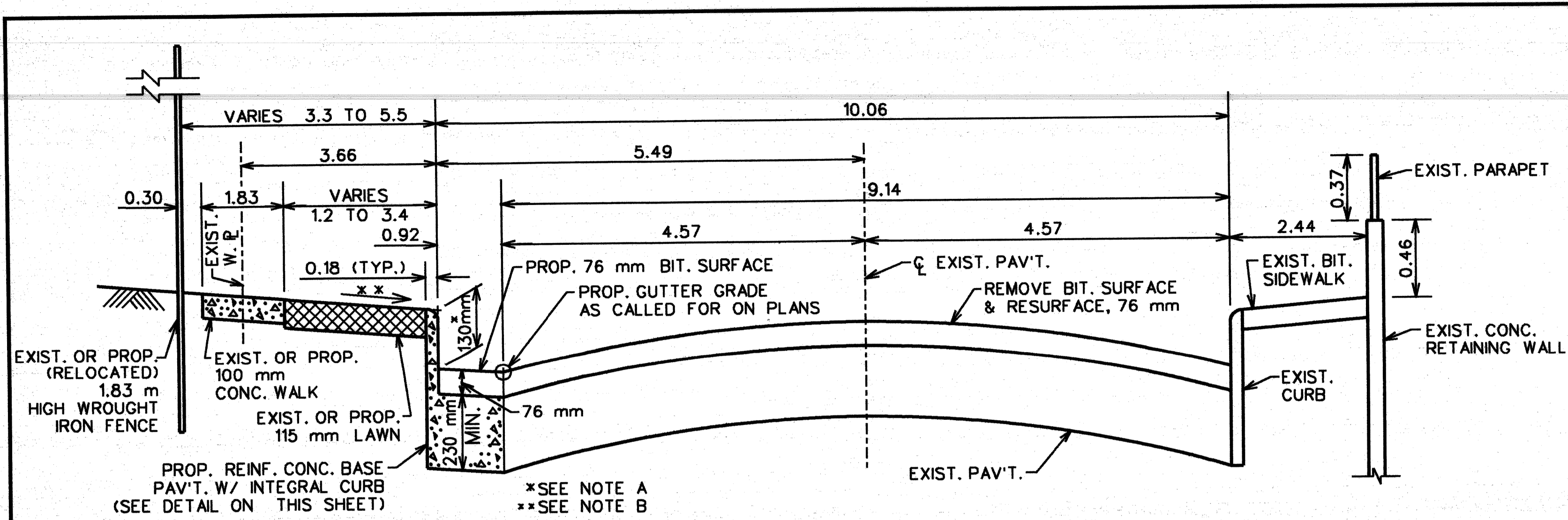


INTEGRAL CURB DETAIL
 NO SCALE

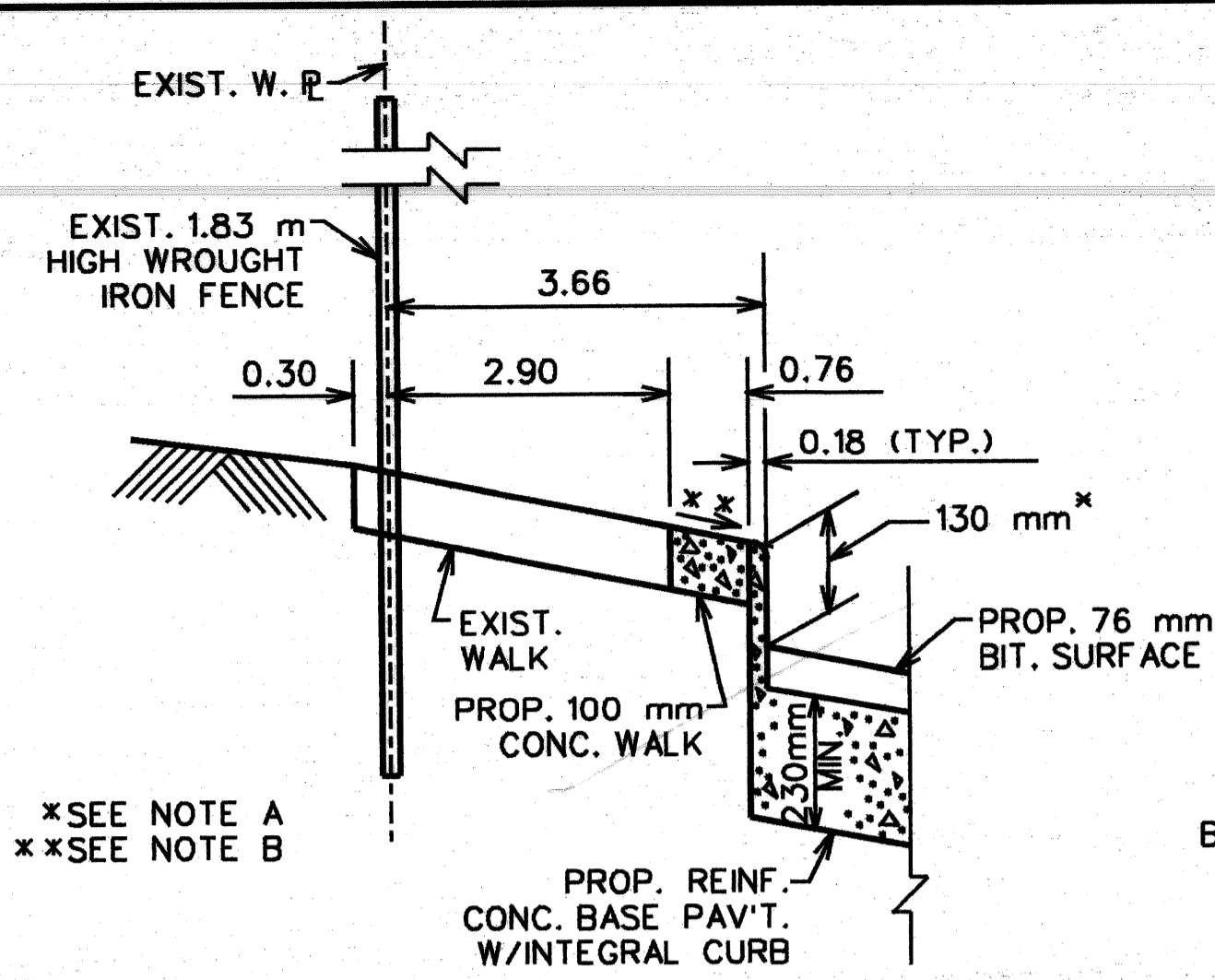
MISCELLANEOUS QUANTITIES	
MOBILIZATION	1 LUMP SUM
MINOR TRAFFIC DEVICES	1 LUMP SUM
FIELD OFFICE	3 MONTHS
ESTIMATED QUANTITIES FOR USE AT THE DISCRETION OF THE ENGINEER	
REMOVING PAVEMENT (REPAIR)	230 SQ. M.
CONC. PAVEMENT REPAIR, 250 mm, NONREINFORCED	230 SQ. M.
BASEMENT CLEANOUT	20 CU. M.
SUBGRADE UNDERCUTTING, TYPE II	500 CU. M.
100 mm CONCRETE SIDEWALK	25 SQ. M.
REMOVING SIDEWALK	10 SQ. M.
CLEANING EXISTING STORM DRAINAGE STRUCTURES	5 EACH
CLASS "A" SODDING	10 SQ. M.
TOPSOIL SURFACE - 76 mm	1 CU. M.
WATER	5 KL
REMOVING MASONRY & CONCRETE STRUCTURES	10 CU. M.
SEWER CLEANOUT	80 LIN. M.
CEMENT	1 TONS
CONCRETE CURB, DETAIL "CD"	10 LIN. M.
RECONSTRUCTING DRAINAGE STRUCTURE, CASE 1	4 EACH
ADJUSTING DRAINAGE STRUCTURE COVER, CASE 2	1 EACH
STRUCTURE COVER	500 Kg.
STANDARD STREET BARRICADE	1 EACH

usr2/msfiles/crysec.dgn

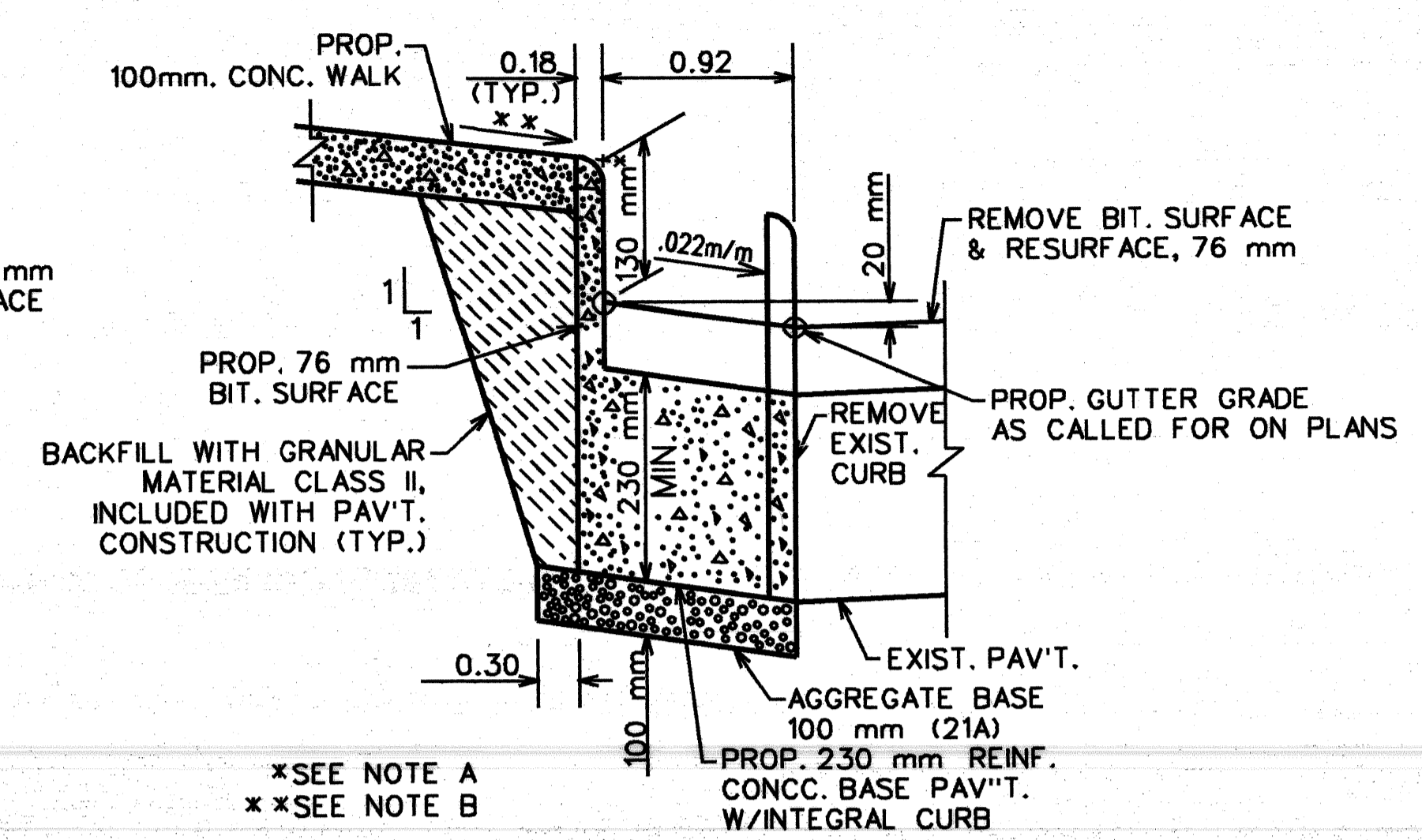
DESCRIPTION REVISIONS	PLAN GRADE ESTIMATE FINAL	BY C.M., J.P.	CHECKED BY N.W.	APPROVED BY <i>Dadine Hoidan</i>	CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAU OF STREETS AND HIGHWAYS	CONSTRUCTION AND WIDENING OF I-75 W. SERVICE DR. FROM BEAUBIEN TO WILKINS	SHEET 3 OF 48 SHEETS CONTRACT NO. ASSIGNMENT NO. 99-22-28 DATE JULY, 1999
	TYPICAL CROSS-SECTIONS						



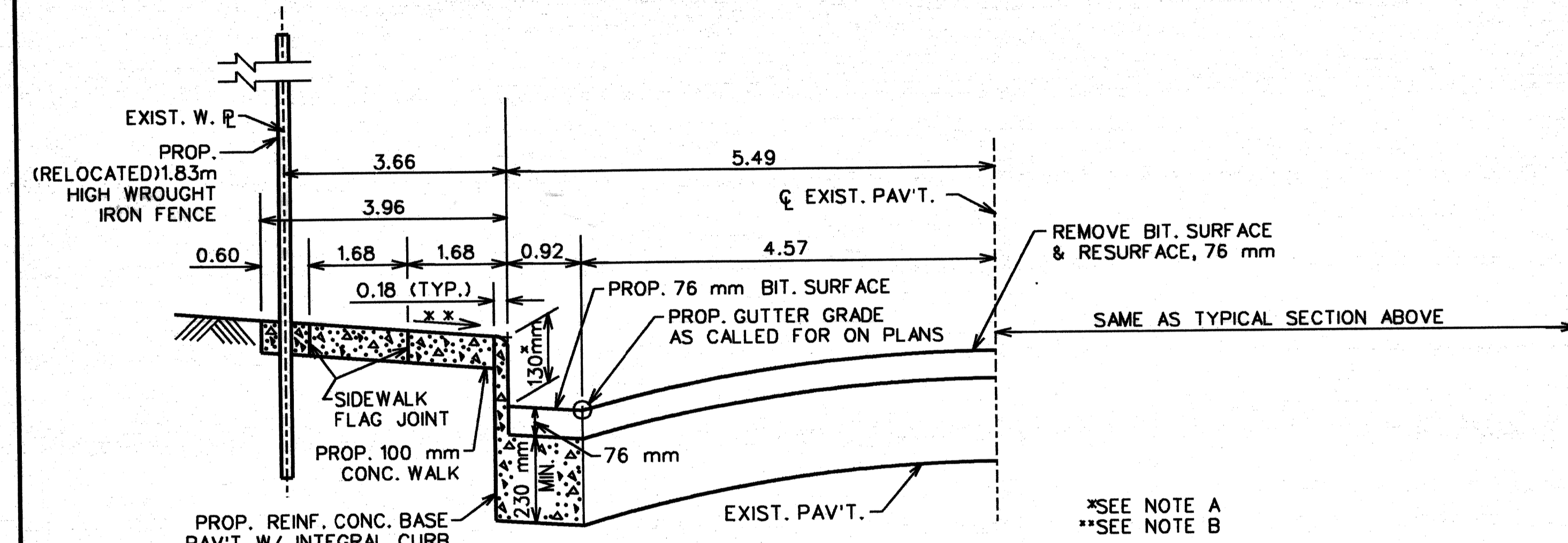
TYPICAL PAVEMENT SECTION FOR W. SERVICE DR.
FROM STA. 1+288.89 TO ST. ANTOINE
NOT TO SCALE



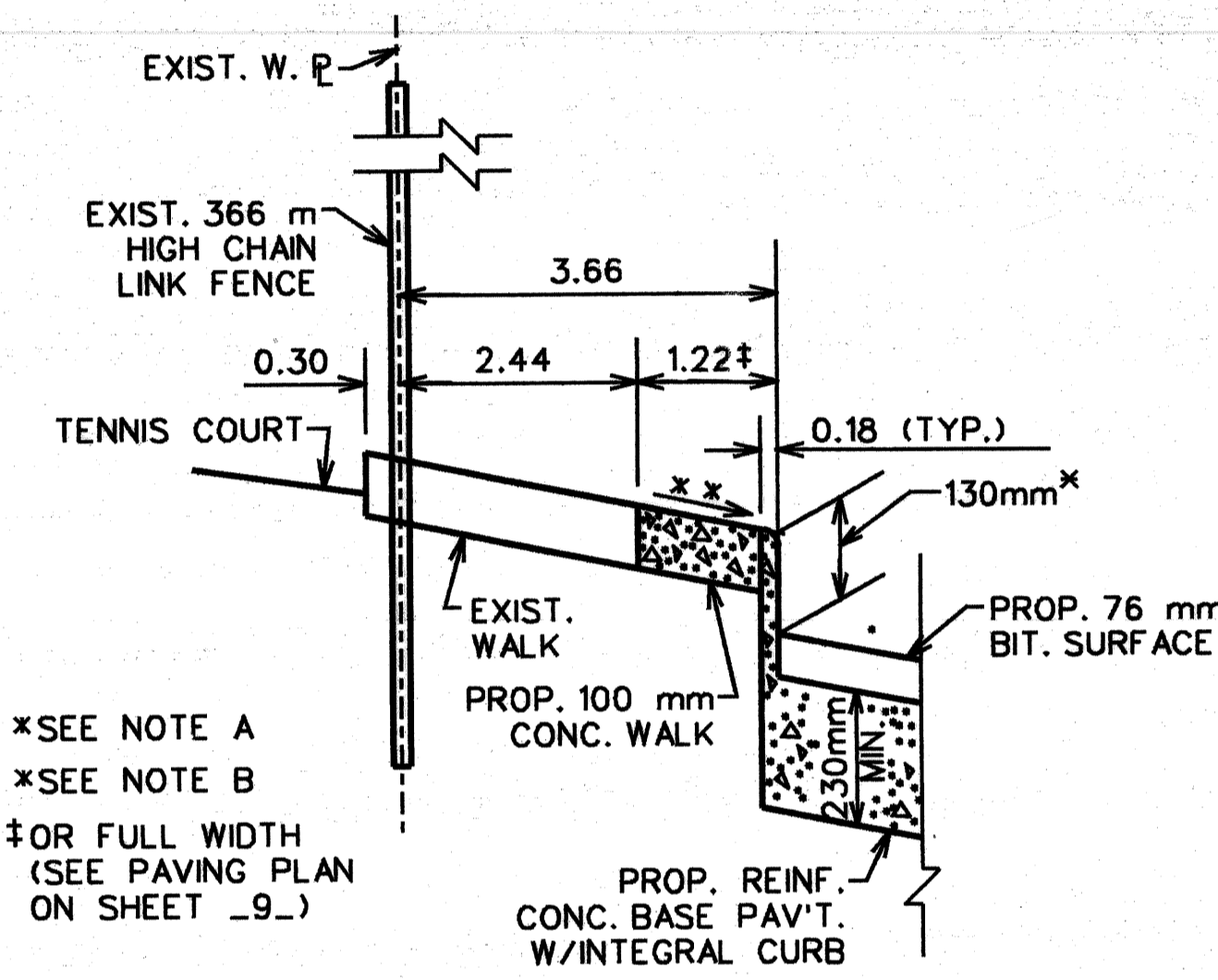
TYPICAL SECTION FOR W. MARGIN
OF W. SERVICE DR.
STA. 1+523.06 TO ALFRED
NOT TO SCALE



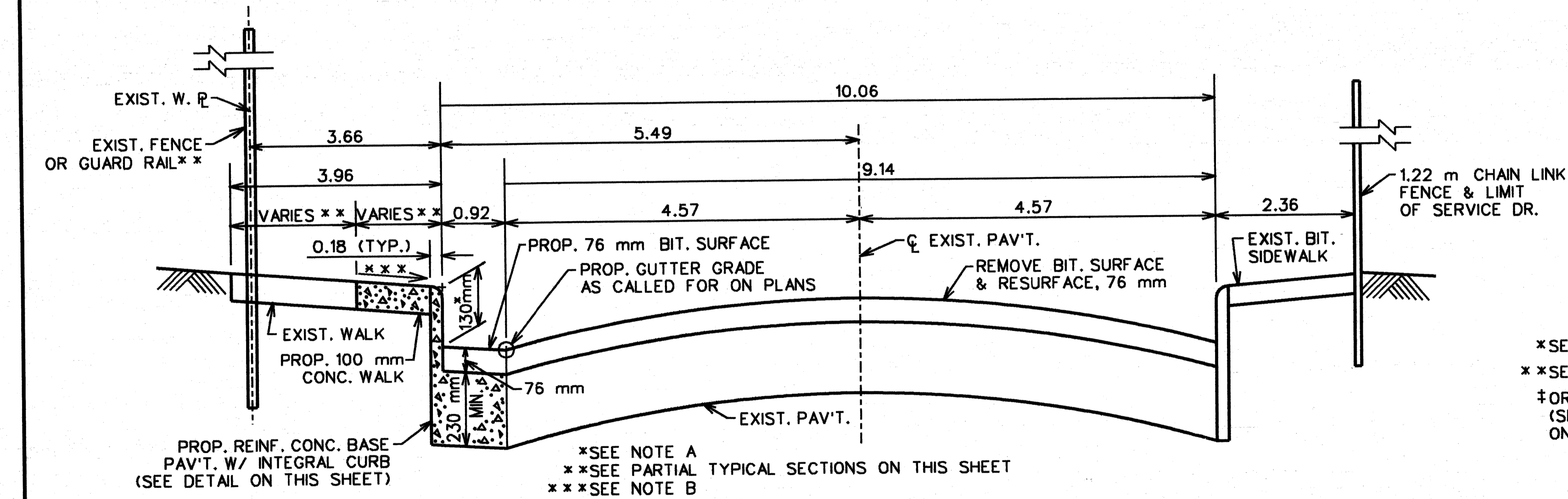
DETAIL FOR PROP. PAV'T. ON W. SERVICE DR.
FROM STA. 1+523.06 TO WILKINS (TYP.)
NOT TO SCALE



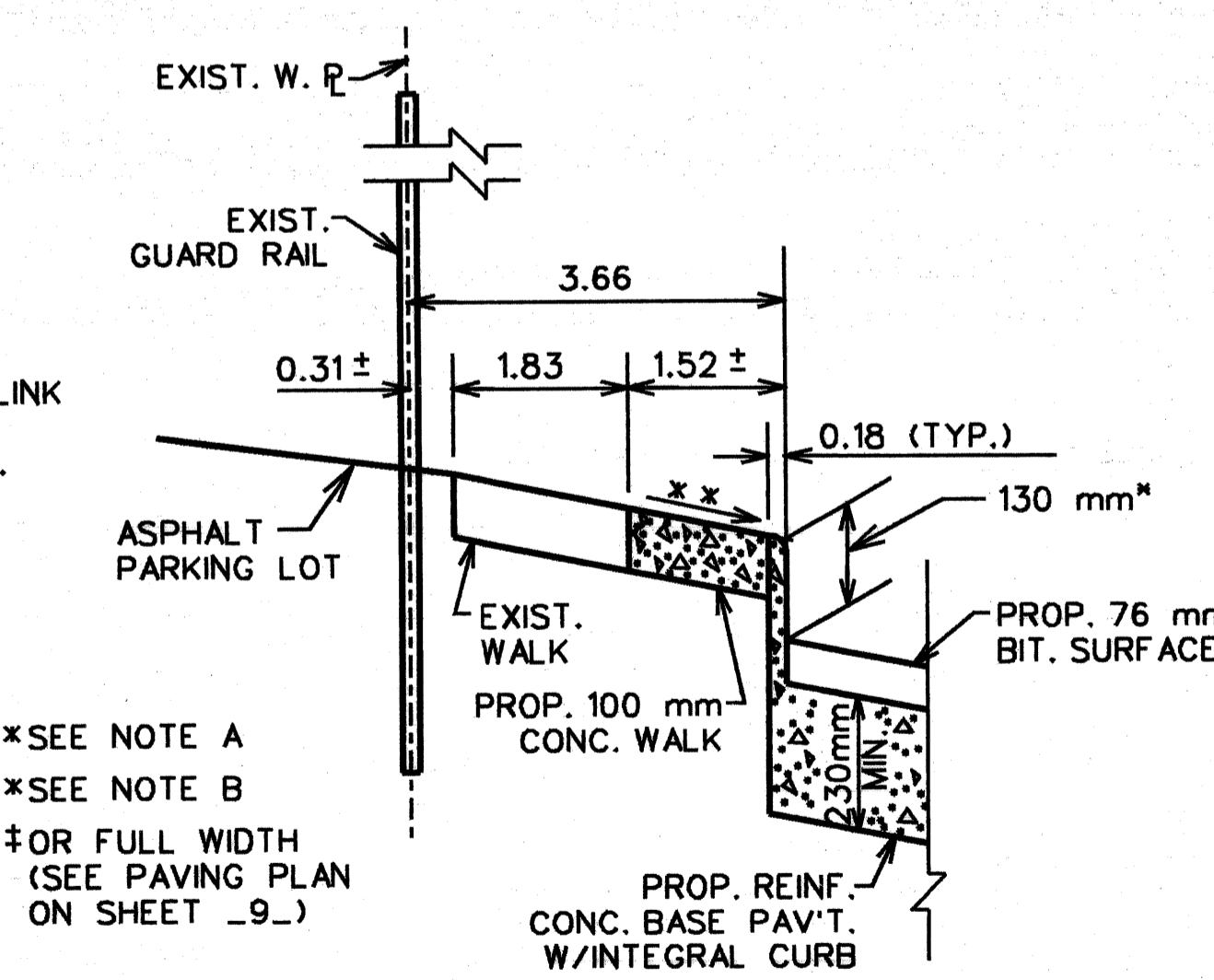
TYPICAL PAVEMENT SECTION FOR W. SERVICE DR.
FROM ST. ANTOINE TO STA. 1+523.06
NOT TO SCALE



TYPICAL SECTION FOR W. MARGIN
OF W. SERVICE DR.
ALFRED TO BREWSTER
NOT TO SCALE



TYPICAL PAVEMENT SECTION FOR W. SERVICE DR.
FROM STA. 1+523.06 TO WILKINS
NOT TO SCALE



TYPICAL SECTION FOR W. MARGIN
OF W. SERVICE DR.
BREWSTER TO WILKINS
NOT TO SCALE

NOTES

- A. OR AS DIRECTED BY THE ENGINEER (100mm MIN., 180mm MAX.)
- B. SLOPE AT 30 mm PER m OR AS DIRECTED BY THE ENGINEER (20mm PER m MIN., 60 mm PER m MAX.)
- C. DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.

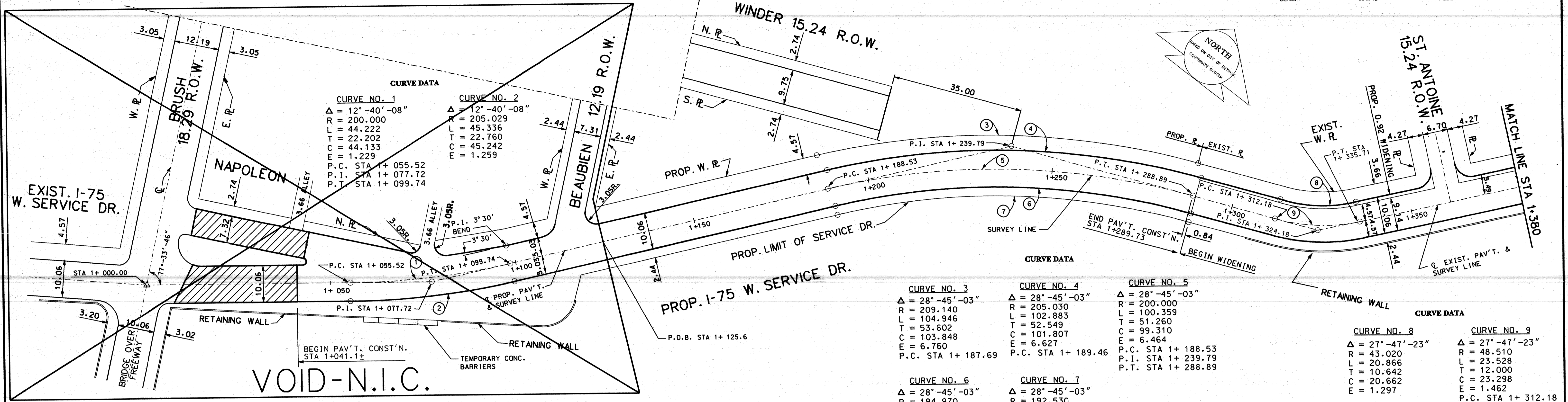
GENERAL NOTES

1. UNLESS SHOWN AS A SEPARATE CURB, THE PROPOSED CURB SHALL BE AN INTEGRAL CURB WITH CONCRETE CURB DETAIL "X" AS AN ALTERNATE (SEE DETAILS OF BOTH ON SHEET NO. 2). REGARDLESS OF CONSTRUCTION METHOD, THE PROPOSED CURB SHALL BE PAID FOR AS "CONCRETE BASE PAVEMENT WITH INTEGRAL CURB - REINFORCED, 230 mm".
2. CONSTRUCT BASE PAV'T. FOR WIDENING TO BOTTOM OF EXISTING PAV'T. (MIN. THICKNESS = 230mm).
3. THE CURB FACE HEIGHT FOR WIDENING SHALL BE 130 mm UNLESS OTHERWISE CALLED FOR ON THE PLANS OR OTHERWISE DIRECTED BY THE ENGINEER.
4. BACKFILL, IF REQUIRED, UNDER PROPOSED SIDEWALK AND/OR PAVEMENT SHALL BE GRANULAR MATERIAL CLASS II.
5. GRANULAR MATERIAL CLASS II SHALL BE PAID FOR AS "EMBANKMENT - GRANULAR MATERIAL CLASS II".
6. SAW PLANE OF WEAKNESS JOINTS OVER THE EXISTING OR PROPOSED JOINT AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE PAID FOR AS A "SAWED LONGITUDINAL PLANE OF WEAKNESS JOINT".

BITUMINOUS APPLICATION CHART

ITEM	RATE OF APPLICATION	ESTIMATED THICKNESS	PERFORMANCE GRADE
BITUMINOUS MIXTURE NO. 1100L, 20AA	93 Kg/m ²	38 mm	58 - 22
BITUMINOUS MIXTURE NO. 1100T, 20AA	87 Kg/m ²	38 mm	58 - 22
BITUMINOUS BOND COAT 0 - 0.50 L/m ² TO RIGID BASES AND 0.25 L/m ² TACK COAT BETWEEN LAYERS			

PLAN A.A., C.M. GRADE ESTIMATE DESCRIPTION REVISIONS	CHECKED BY N.W. APPROVED <i>Dadiu Haidar</i> CITY ENGINEER	CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAU OF STREETS AND HIGHWAYS	CONSTRUCTION AND WIDENING OF I-75 W. SERVICE DR. FROM BEAUBIEN TO WILKINS TYPICAL CROSS-SECTIONS	SHEET 4 OF 48 SHEETS CONTRACT NO. ASSIGNMENT NO. 99-22-28 DATE JULY, 1999
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CURVE DATA

CURVE NO. 1
 $\Delta = 12^\circ-40'-08''$
 $R = 200.000$
 $L = 44.222$
 $T = 22.202$
 $C = 44.133$
 $E = 1.229$
P.C. STA 1+ 055.52
P.I. STA 1+ 077.72
P.T. STA 1+ 099.74

CURVE NO. 2
 $\Delta = 12^\circ-40'-08''$
 $R = 205.029$
 $L = 45.336$
 $T = 22.760$
 $C = 45.242$
 $E = 1.259$

CURVE DATA

CURVE NO. 3
 $\Delta = 28^\circ-45'-03''$
 $R = 209.140$
 $L = 104.946$
 $T = 53.602$
 $C = 103.848$
 $E = 6.760$
P.C. STA 1+ 187.69

CURVE NO. 4
 $\Delta = 28^\circ-45'-03''$
 $R = 205.030$
 $L = 102.883$
 $T = 52.549$
 $C = 101.807$
 $E = 6.464$
P.C. STA 1+ 189.46

CURVE NO. 5
 $\Delta = 28^\circ-45'-03''$
 $R = 200.000$
 $L = 100.359$
 $T = 51.260$
 $C = 99.310$
 $E = 6.464$
P.C. STA 1+ 188.53
P.I. STA 1+ 239.79
P.T. STA 1+ 288.89

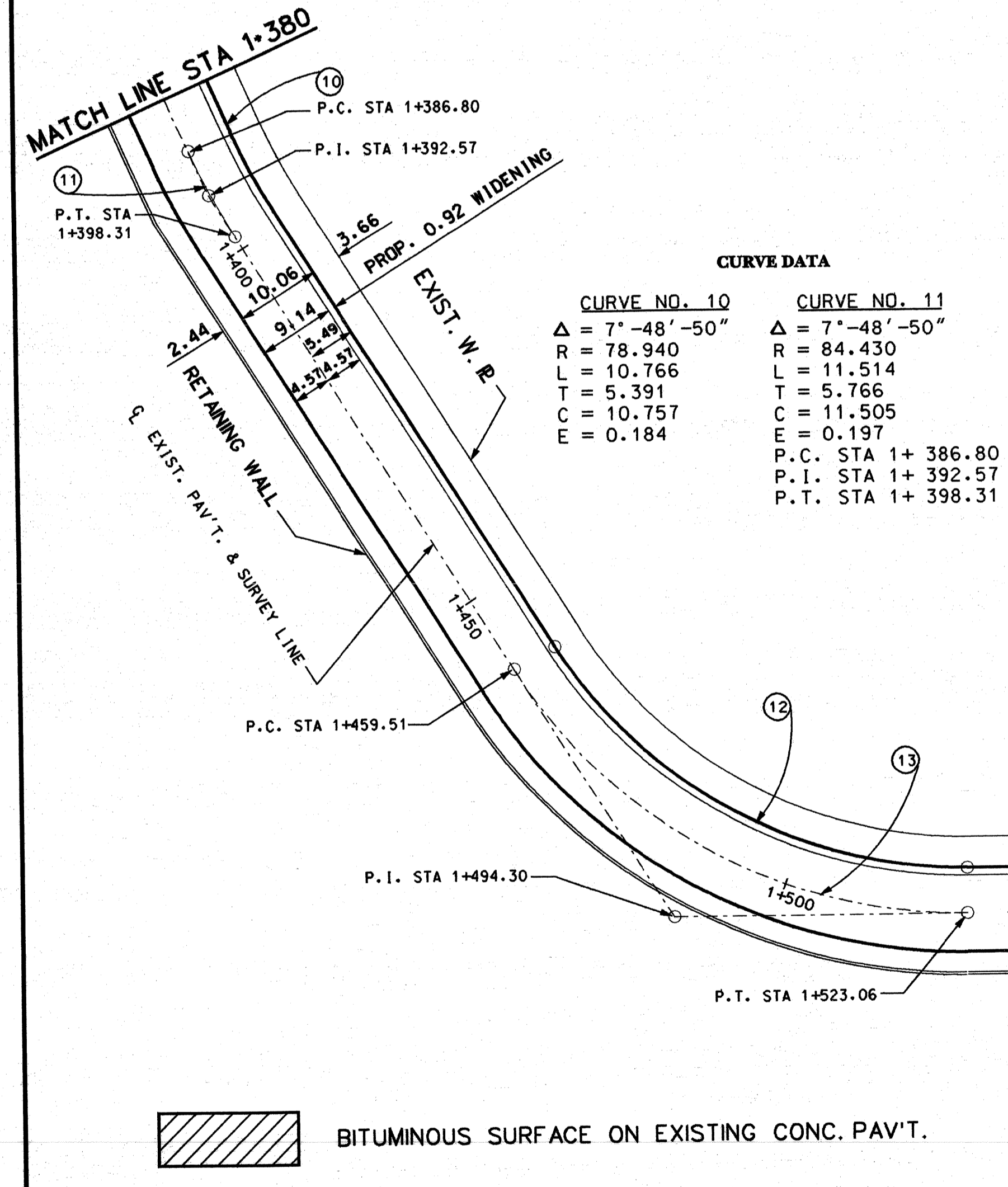
CURVE DATA

CURVE NO. 8
 $\Delta = 27^\circ-47'-23''$
 $R = 43.020$
 $L = 20.866$
 $T = 10.642$
 $C = 20.662$
 $E = 1.297$

CURVE NO. 9
 $\Delta = 27^\circ-47'-23''$
 $R = 48.510$
 $L = 23.528$
 $T = 12.000$
 $C = 23.298$
 $E = 1.462$
P.C. STA 1+ 312.18
P.I. STA 1+ 324.18
P.T. STA 1+ 335.71

NOTE:
CURVES 3, 4, 6 & 7 ARE NOT CONCENTRIC TO CURVE 5.

NOTES:
1. ALL DIMENSIONS SHOWN ARE IN METERS
2. ALL PROPOSED RADII ARE 4.57m UNLESS SHOWN OTHERWISE.
3. SURVEY LINE CHANGES FROM \odot PROP. PAV'T. AT P.C. OF CURVE 5 TO \odot EXIST. PAV'T. AT P.T. OF CURVE 5.



CURVE DATA

CURVE NO. 10
 $\Delta = 7^\circ-48'-50''$
 $R = 78.940$
 $L = 10.766$
 $T = 5.391$
 $C = 10.757$
 $E = 0.184$

CURVE NO. 11
 $\Delta = 7^\circ-48'-50''$
 $R = 84.430$
 $L = 11.514$
 $T = 5.766$
 $C = 11.505$
 $E = 0.197$
P.C. STA 1+ 386.80
P.I. STA 1+ 392.57
P.T. STA 1+ 398.31

CURVE DATA

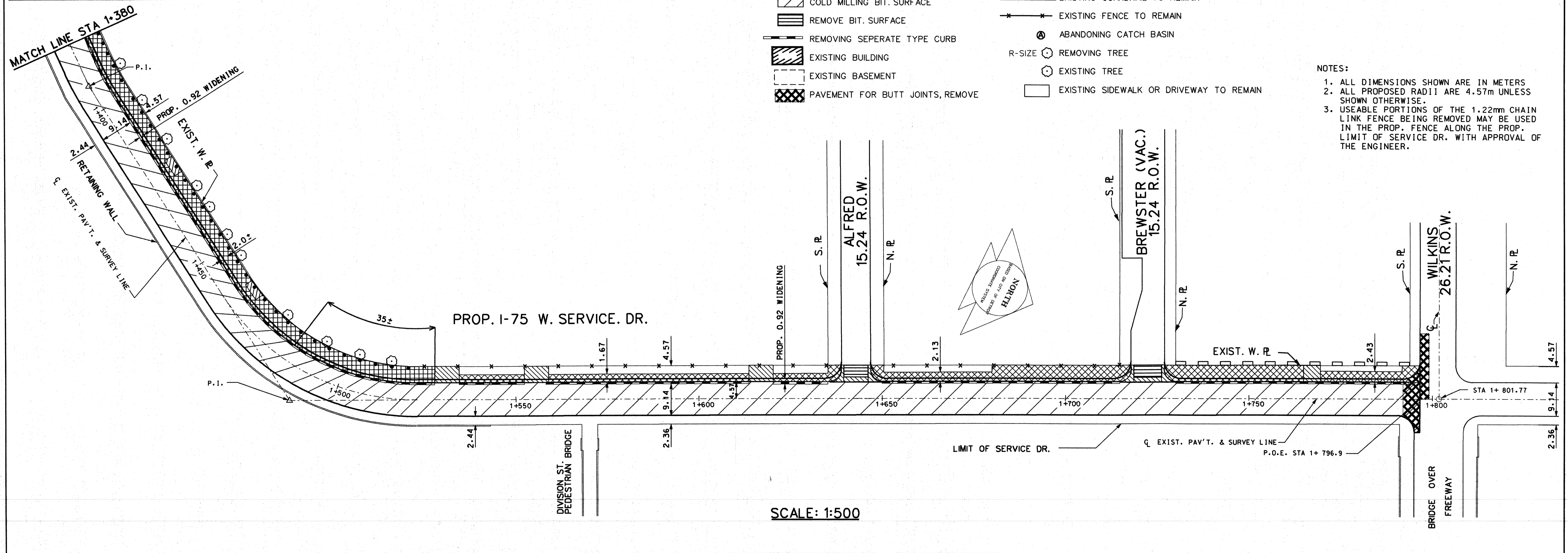
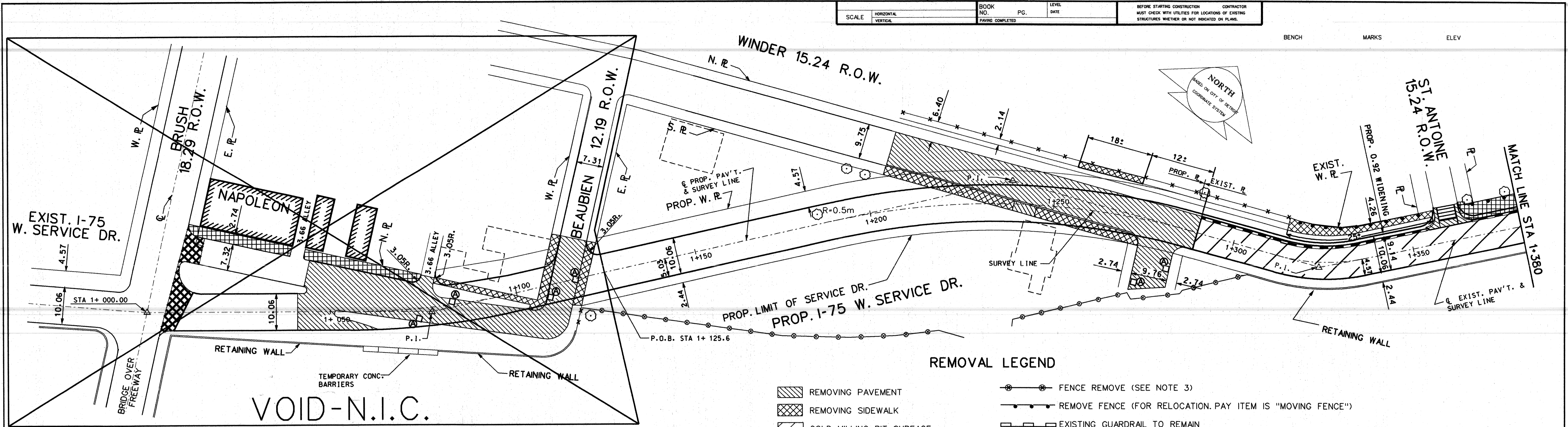
CURVE NO. 12
 $\Delta = 57^\circ-54'-20''$
 $R = 57.390$
 $L = 58.001$
 $T = 31.749$
 $C = 55.564$
 $E = 8.197$

CURVE NO. 13
 $\Delta = 57^\circ-54'-20''$
 $R = 62.877$
 $L = 63.546$
 $T = 34.786$
 $C = 60.876$
 $E = 8.981$
P.C. STA 1+ 459.51
P.I. STA 1+ 494.30
P.T. STA 1+ 523.06

SCALE: 1:500

BITUMINOUS SURFACE ON EXISTING CONC. PAV'T.

DESCRIPTION REVISIONS	PLAN	BY	CHECKED BY	APPROVED	CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAU OF STREETS AND HIGHWAYS	CONSTRUCTION AND WIDENING OF I-75 W. SERVICE DR. FROM BEAUBIEN TO WILKINS ALIGNMENT	SHEET 5 OF 48 SHEETS
	GRADE	K.M.	N.W.	<i>Dadiu Haidar</i>			CONTRACT NO.
	ESTIMATE						ASSIGNMENT NO. 99-22-28
	FINAL	*****	*****				DATE JULY, '99

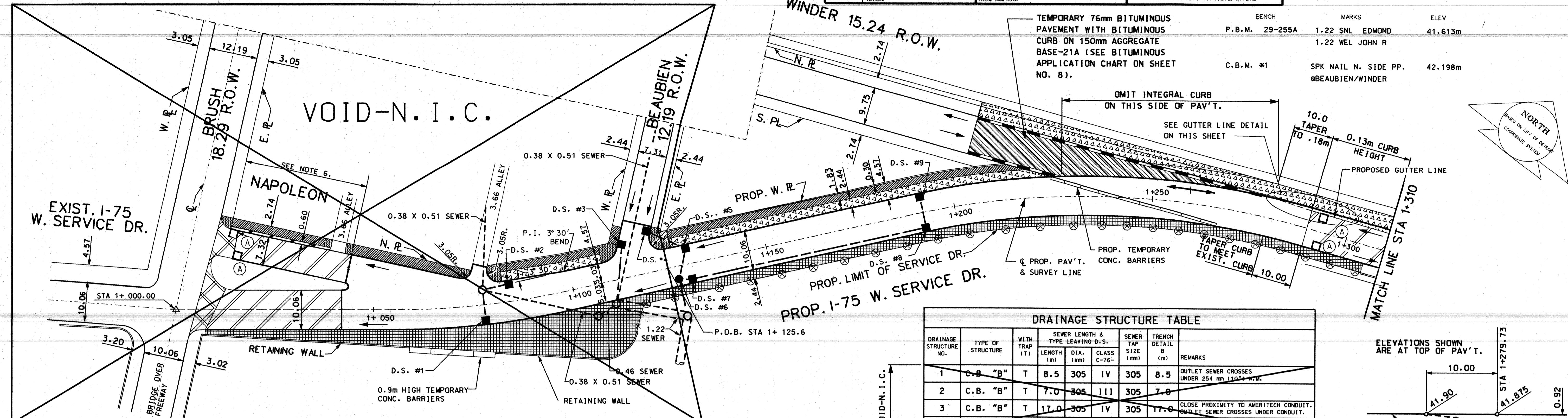


SCALE: 1:500

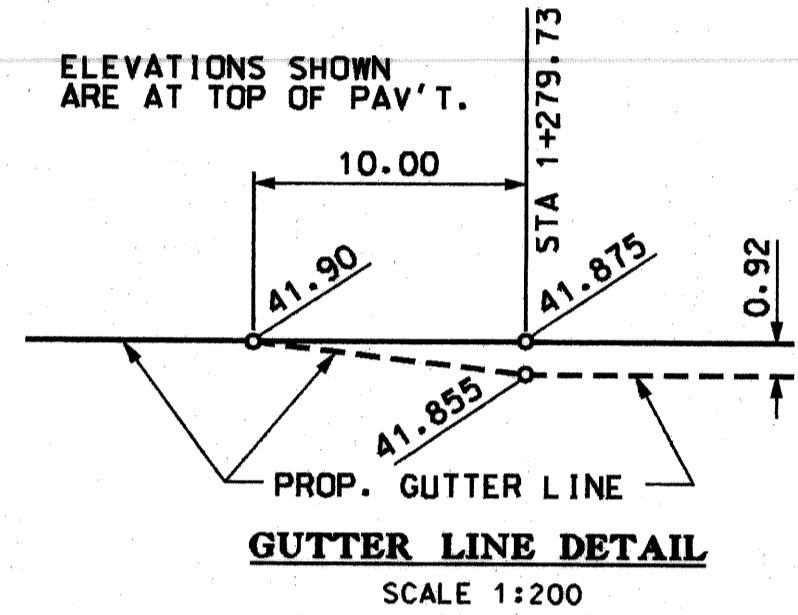
- REMOVAL LEGEND**
- REMOVING PAVEMENT
 - REMOVING SIDEWALK
 - COLD MILLING BIT. SURFACE
 - REMOVE BIT. SURFACE
 - REMOVING SEPERATE TYPE CURB
 - EXISTING BUILDING
 - EXISTING BASEMENT
 - PAVEMENT FOR BUTT JOINTS, REMOVE
 - FENCE REMOVE (SEE NOTE 3)
 - REMOVE FENCE (FOR RELOCATION, PAY ITEM IS "MOVING FENCE")
 - EXISTING GUARDRAIL TO REMAIN
 - EXISTING FENCE TO REMAIN
 - ABANDONING CATCH BASIN
 - REMOVING TREE
 - EXISTING TREE
 - EXISTING SIDEWALK OR DRIVEWAY TO REMAIN

- NOTES:**
- ALL DIMENSIONS SHOWN ARE IN METERS
 - ALL PROPOSED RADII ARE 4.57m UNLESS SHOWN OTHERWISE.
 - USEABLE PORTIONS OF THE 1.22mm CHAIN LINK FENCE BEING REMOVED MAY BE USED IN THE PROP. FENCE ALONG THE PROP. LIMIT OF SERVICE DR. WITH APPROVAL OF THE ENGINEER.

DESCRIPTION REVISIONS	PLAN	BY K.M.	CHECKED BY N.W.	APPROVED <i>Dadiu Haidar</i> ENGINEER OF STREETS	CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAU OF STREETS AND HIGHWAYS	CONSTRUCTION AND WIDENING OF I-75 W. SERVICE DR. FROM BEAUBIEN TO WILKINS	REMOVAL PLAN	SHEET 6 OF 48 SHEETS
	GRADE	ESTIMATE	FINAL	NO.				ASSIGNMENT NO. 99-22-28



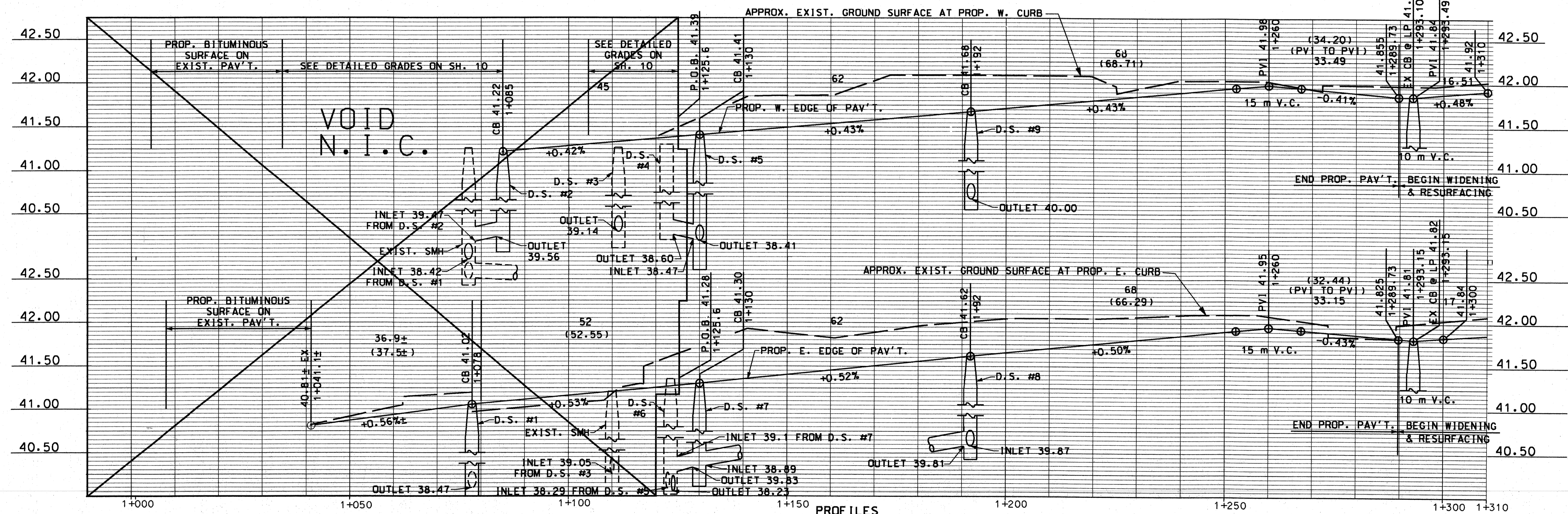
DRAINAGE STRUCTURE NO.	TYPE OF STRUCTURE	WITH TRAP (T)	SEWER LENGTH & TYPE LEAVING D.S. (m)	DIA. (mm)	CLASS (C-76)	SEWER TAP SIZE (mm)	TRENCH DETAIL B (m)	REMARKS
1	C.B. "B"	T	8.5	305	IV	305	8.5	OUTLET SEWER CROSSES UNDER 254 mm (10") W.M.
2	C.B. "B"	T	7.0	305	III	305	7.0	CLOSE PROXIMITY TO AMERITECH CONDUIT. INLET SEWER CROSSES UNDER CONDUIT.
3	C.B. "B"	T	17.0	305	IV	305	17.0	CLOSE PROXIMITY TO DE CONDUIT. OUTLET SEWER CROSSES UNDER CONDUIT.
4	C.B. "A"		9.0	305	IV		9.0	
5	C.B. "B"	T	9.2	305	IV		9.2	
6	STD. M.H.		10.4	305	IV	305	10.4	OUTLET SEWER TAPS INTO EXIST. SEWER M.H. AT INV. ELEV. = 38.15
7	C.B. "B"	T	5.2	305	III		5.2	
8	C.B. "B"		62.0	305	III		62.0	
9	C.B. "A"		9.5	305	III		9.5	



- NOTES**
- FOR ALIGNMENT, SEE SHEET NO. 5.
 - FOR UTILITY LEGEND AND SYMBOLS, SEE SHEET NO. 18.
 - FOR DRIVEWAY DETAILS, SEE SHEET NO. 18.
 - FOR CONSTRUCTION LEGEND, SEE SHEET NO. 8.
 - PROPOSED DRIVEWAY AND ALLEY RADI SHALL BE 3.05 m.
 - ALL PROPOSED DRAINAGE STRUCTURES SHALL BE BOLT DOWN TYPE.
 - REPLACE BASE PAV'T. WHERE NECESSARY ON NAPOLEON AS DIRECTED BY THE ENGINEER. MIN. CURB HEIGHT TO BE 0.10 m.
 - ALL DIMENSIONS ARE IN METERS UNLESS SHOWN OTHERWISE.

- PROFILE NOTES:**
- PROPOSED CURB HEIGHT IS 180mm EXCEPT WHERE NOTED OTHERWISE.
 - DRAINAGE STRUCTURES AND SEWERS ARE NOT DRAWN TO SCALE.
 - DISTANCES ALONG CURVES ARE MEASURED ALONG THE SURVEY LINE. ACTUAL DISTANCES ALONG THE GUTTER ARE SHOWN IN PARENTHESES.

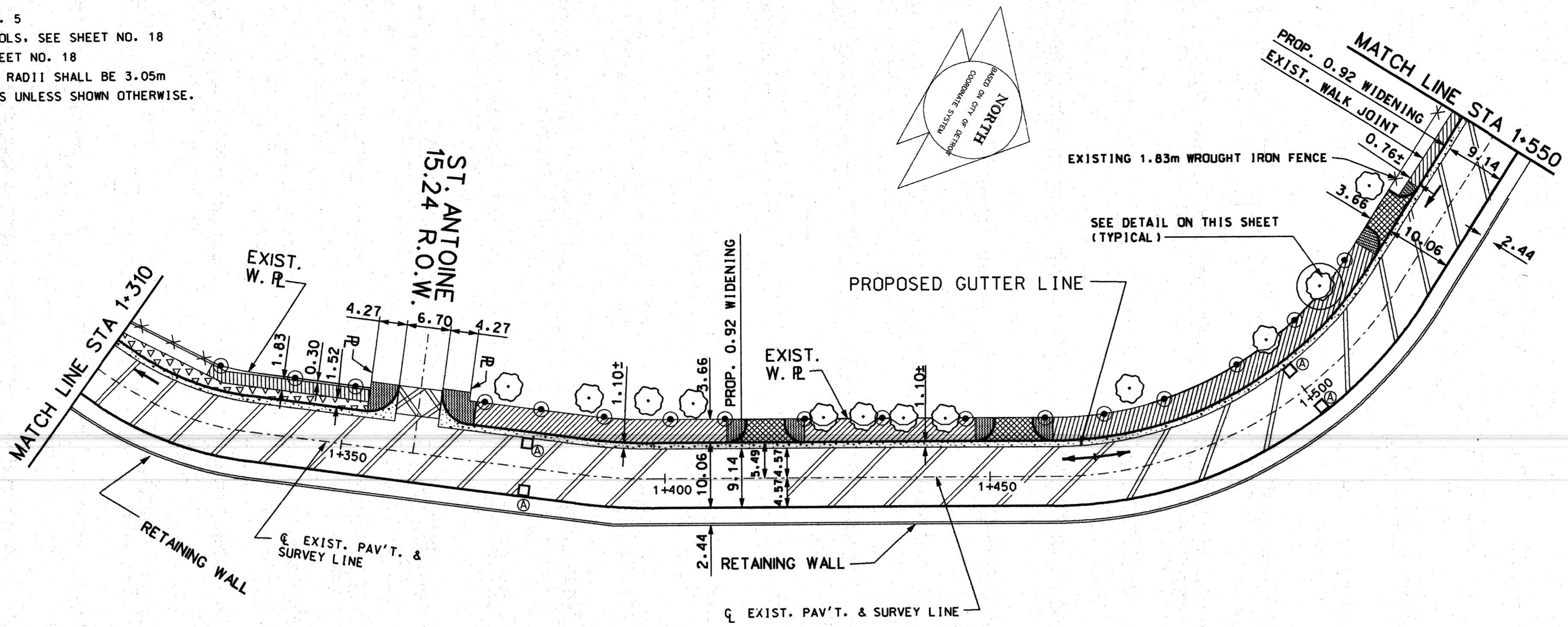
PLAN SCALE 1:500



PROFILES SCALE: 1:500 HORIZ. 1:25 VERT.

REVISIONS	BY	K.M.	N.W.	APPROVED	<i>Dadiu Kaidan</i>	CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAU OF STREETS AND HIGHWAYS	CONSTRUCTION AND WIDENING OF I-75 W. SERVICE DR. FROM BEAUBIEN TO WILKINS PAVING PLAN (AND PROFILES)	SHEET 7 OF 48 SHEETS
	GRADE							CONTRACT NO.
	ESTIMATE							ASSIGNMENT NO. 99-22-28
	FINAL	****	****					DATE JULY, '99

- NOTES:
1. FOR ALIGNMENT, SEE SHEET NO. 5
 2. FOR UTILITY LEGEND AND SYMBOLS, SEE SHEET NO. 18
 3. FOR DRIVEWAY DETAILS SEE SHEET NO. 18
 4. PROPOSED DRIVEWAY AND ALLEY RADIUS SHALL BE 3.05m
 5. ALL DIMENSIONS ARE IN METERS UNLESS SHOWN OTHERWISE.

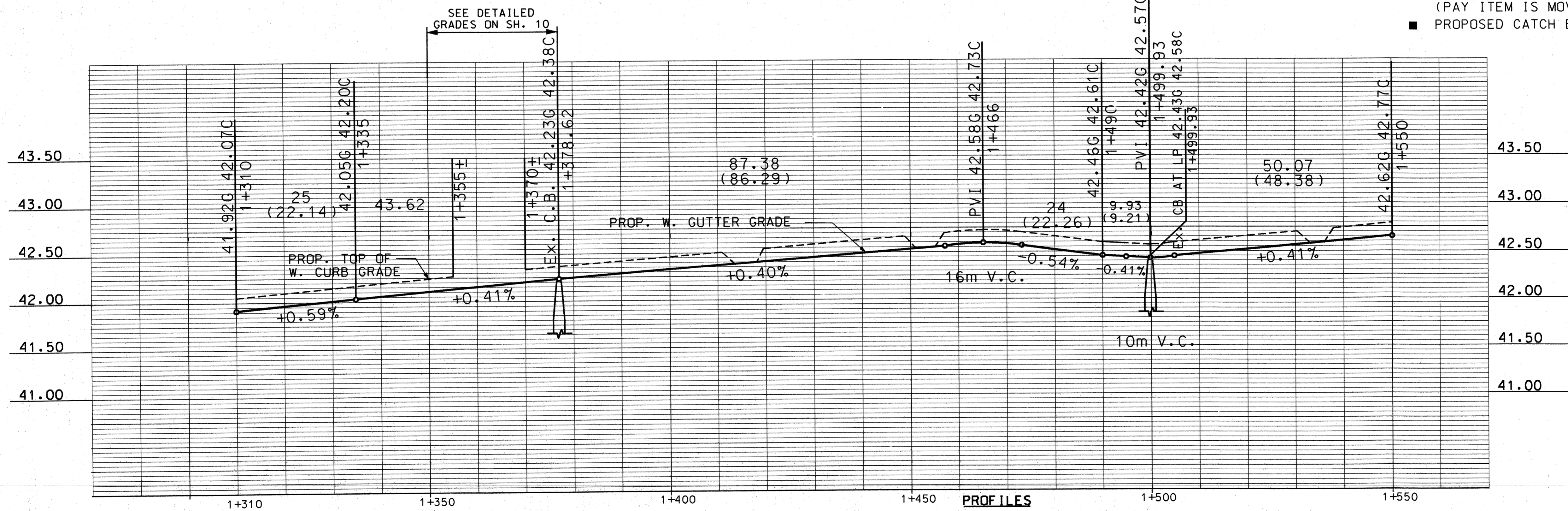


- ### CONSTRUCTION LEGEND
- 230mm REINFORCED CONCRETE BASE PAV'T. WITH REINFORCED INTEGRAL CURB AND 76 mm BITUMINOUS SURFACE
 - 100mm STANDARD SIDEWALK
 - 50mm BITUMINOUS SHOULDER
 - 76mm BITUMINOUS SURFACE
 - CONC. PAV'T. NONREINFORCED - 200mm (DRIVEWAY)
 - 150mm STANDARD SIDEWALK
 - BITUMINOUS APPROACH
 - PROPOSED SOD ON TOP OF 100mm TOPSOIL
 - 76mm BITUMINOUS PAVEMENT ON 150mm AGGREGATE BASE (FILL 21A)
 - BITUMINOUS CURB
 - INTEGRAL CURB AND SIDEWALK
 - ADJUSTING STRUCTURE COVERS
 - EXISTING CATCH BASIN TO REMAIN
 - EXISTING FENCE TO REMAIN
 - EXISTING GUARDRAIL TO REMAIN
 - CONCRETE RETAINING WALL TO REMAIN
 - PROPOSED 1.22m CHAIN LINK FENCE
 - PROPOSED RELOCATED 1.83m HIGH WROUGHT IRON FENCE (PAY ITEM IS MOVING FENCE)
 - PROPOSED CATCH BASIN

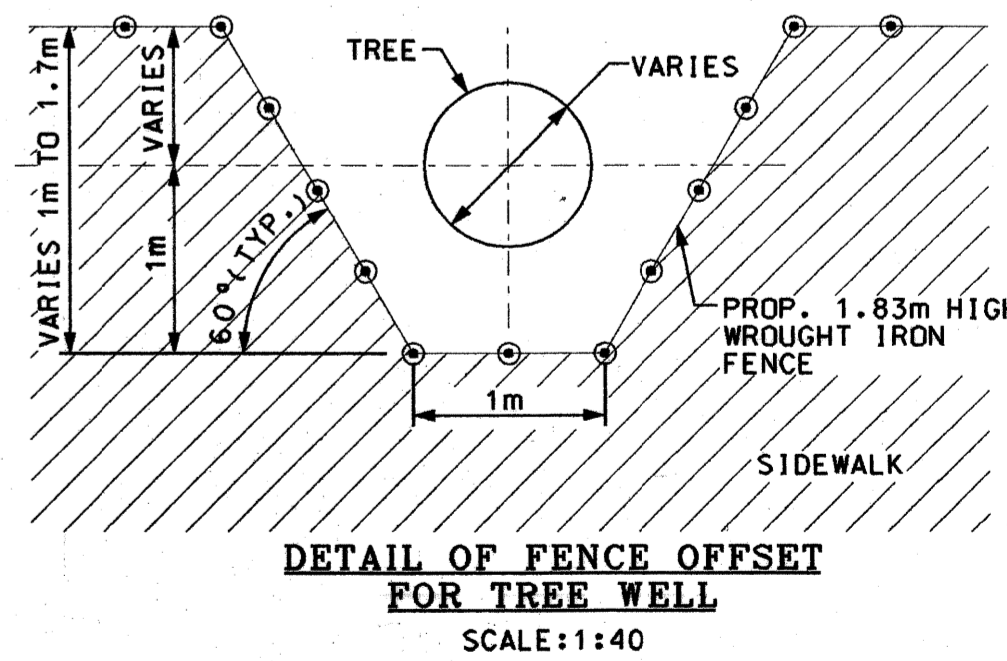
PROFILE NOTES:

1. "G" DENOTES PROP. GUTTER ELEV. (AT EXIST. EDGE OF PAV'T.)
"C" DENOTES PROP. TOP OF CURB ELEV.
2. PROPOSED CURB HEIGHT IS 130mm
3. DRAINAGE STRUCTURES ARE NOT DRAWN TO SCALE.
4. DISTANCES ALONG CURVES ARE MEASURED ALONG THE SURVEY LINE.
ACTUAL DISTANCES ALONG THE GUTTER ARE SHOWN IN PARENTHESIS.

SCALE: PLAN 1:500



SCALE: 1:500 HORIZ. 1:25 VERT.

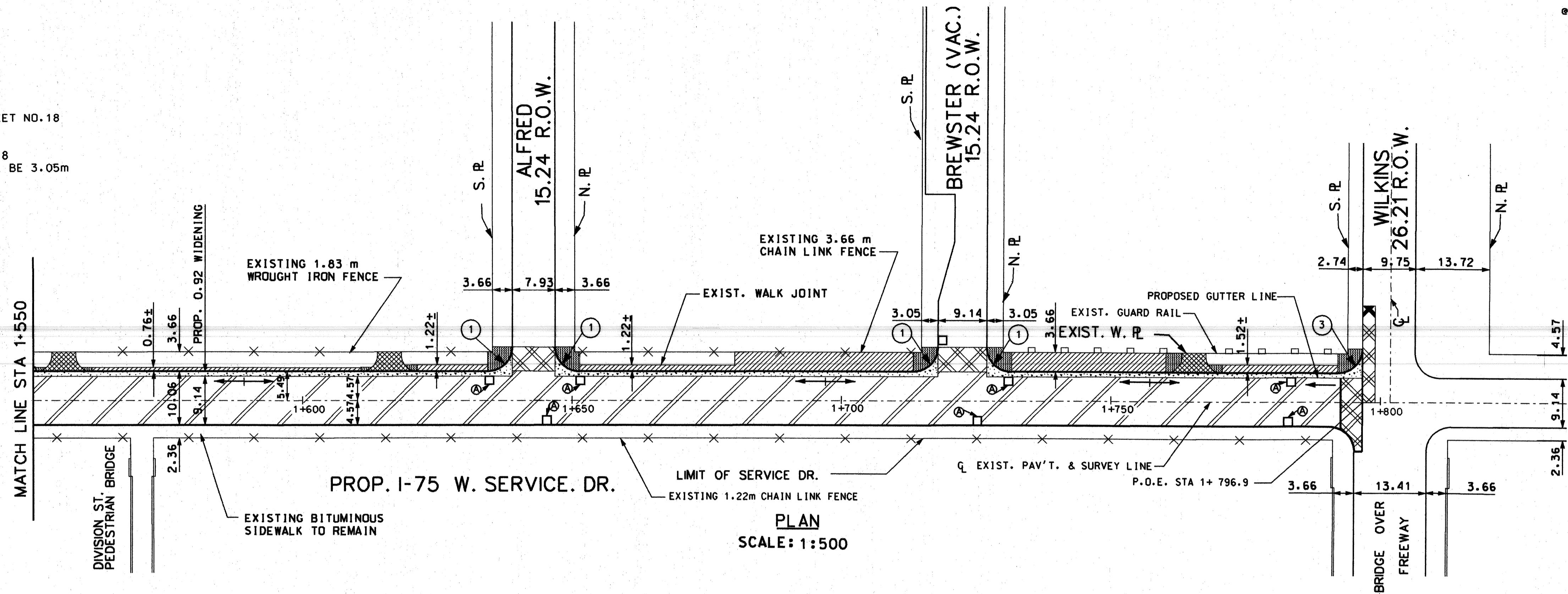


DESCRIPTION	PLAN	BY K.M.	CHECKED BY N.W.	APPROVED: <i>Dodim Harder</i>	CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAU OF STREETS AND HIGHWAYS	CONSTRUCTION AND WIDENING OF I-75 W. SERVICE DR. FROM BEAUBIEN TO WILKINS	SHEET 8 OF 48 SHEETS CONTRACT NO. ASSIGNMENT NO. 99-22-28 DATE JULY, '99
	ESTIMATE	FINAL	*****	*****			
REVISIONS	DR. MCK DAPPY DATE						

BENCH	MARKS	ELEV
P.B.M. 29-255A	1.22 SNL EDMOND 1.22 WEL JOHN R	41.613m
C.B.M. #1	SPK NAIL N. SIDE PP. @BEAUBIEN/WINDER	42.198m

NOTES

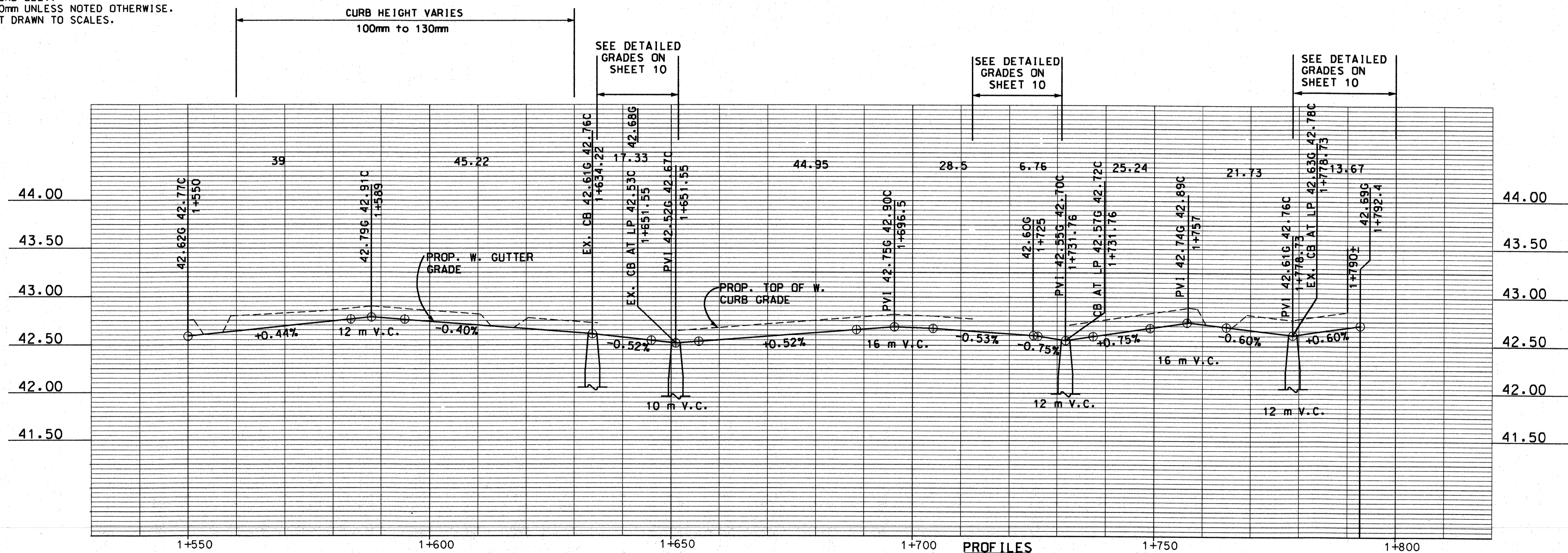
1. FOR ALIGNMENT, SEE SHEET NO.5
2. FOR UTILITY LEGEND AND SYMBOLS, SEE SHEET NO.18
3. FOR DRIVEWAY DETAILS, SEE SHEET NO.18
4. FOR BENCH MARKS SEE SHEET NO.8
5. FOR CONSTRUCTION LEGEND, SEE SHEET NO. 8
6. PROPOSED DRIVEWAY AND ALLEY RADIUS SHALL BE 3.05m
7. ALL DIMENSIONS ARE IN METERS



PLAN
SCALE: 1:500

PROFILE NOTES

1. "G" DENOTES PROP. GUTTER ELEV. (AT EXIST. EDGE OF PAV'T.)
2. "C" DENOTES PROP. TOP OF CURB ELEV.
3. PROPOSED CURB HEIGHT IS 130mm UNLESS NOTED OTHERWISE.
4. DRAINAGE STRUCTURES ARE NOT DRAWN TO SCALES.



PROFILES
SCALE: 1:500 HORIZ.
1:25 VERT.

DESCRIPTION	REVISIONS	DR	CHECK	DATE	DATE	DATE	DATE	DATE
PLAN		BY	CHECKED BY	APPROVED				
GRADE		K.M.	N.W.	<i>Dorine Horder</i>				
ESTIMATE								
FINAL								

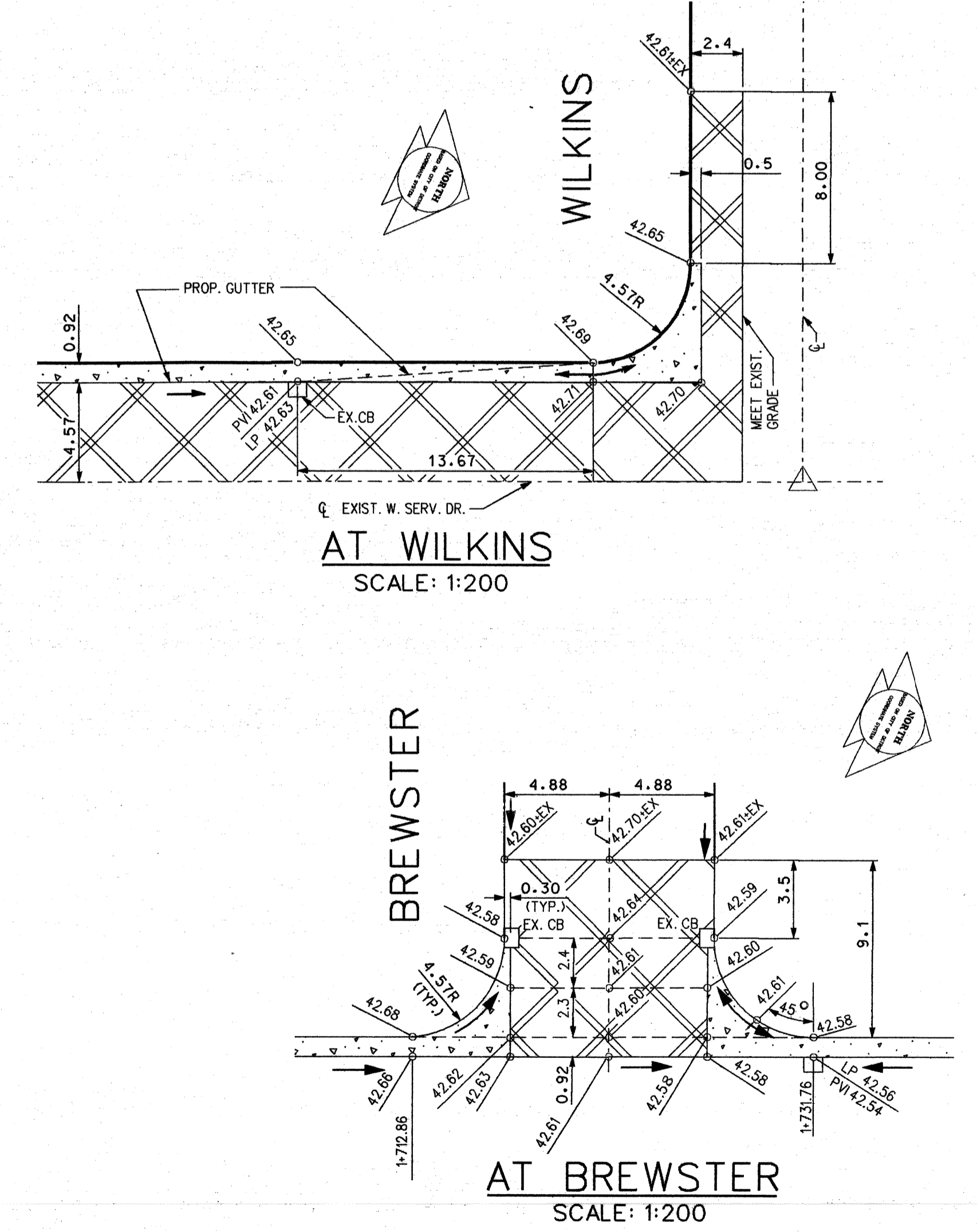
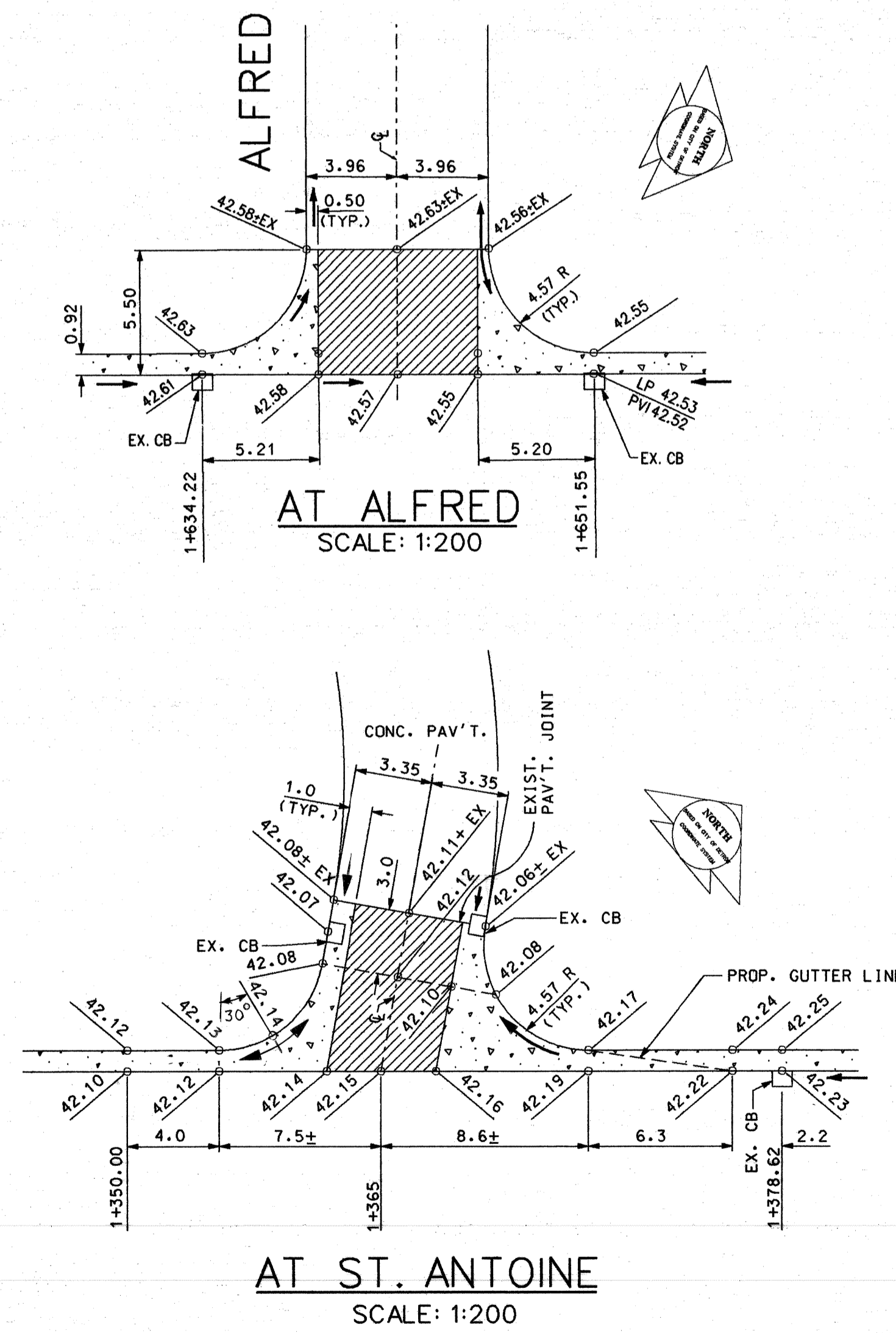
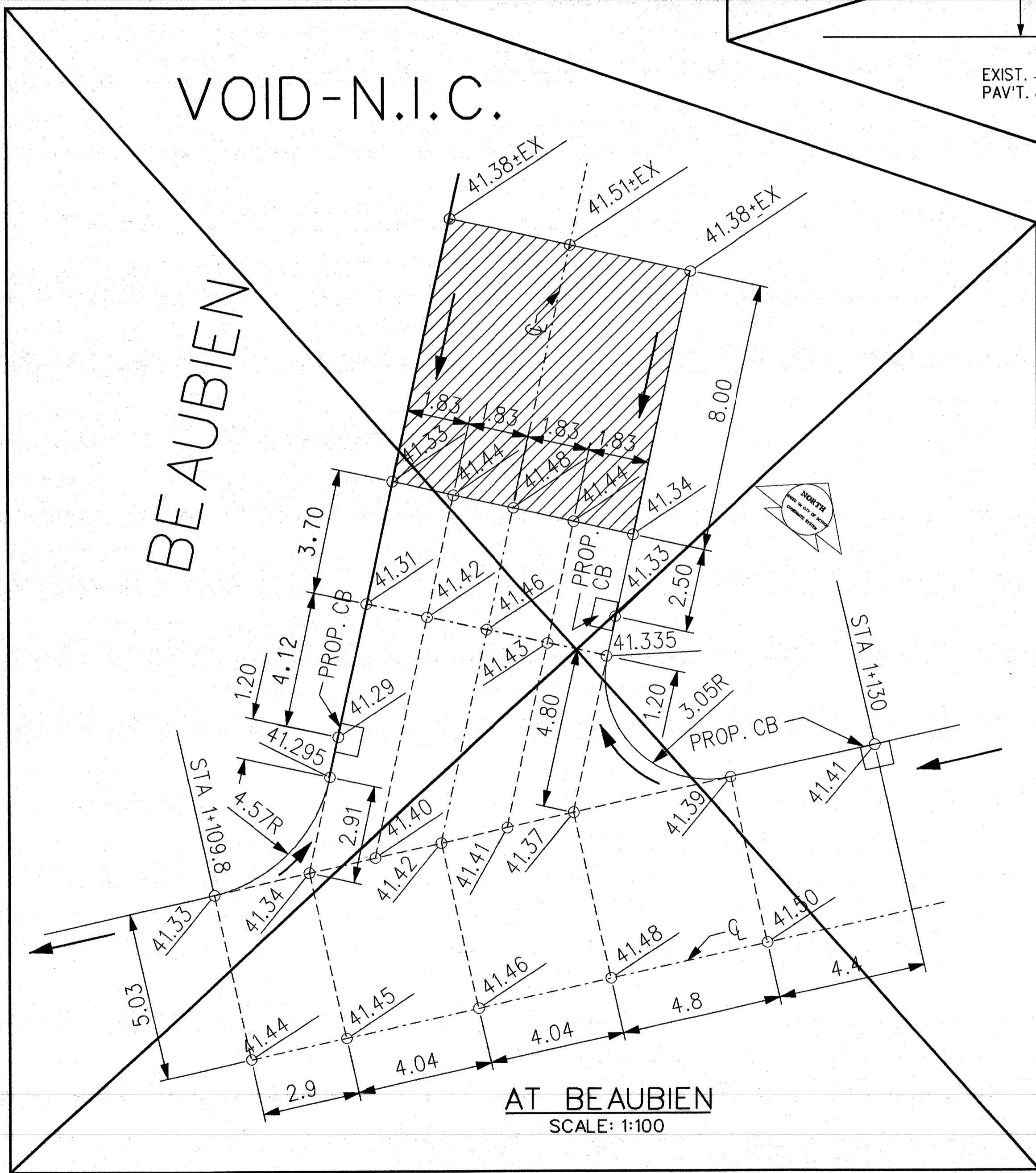
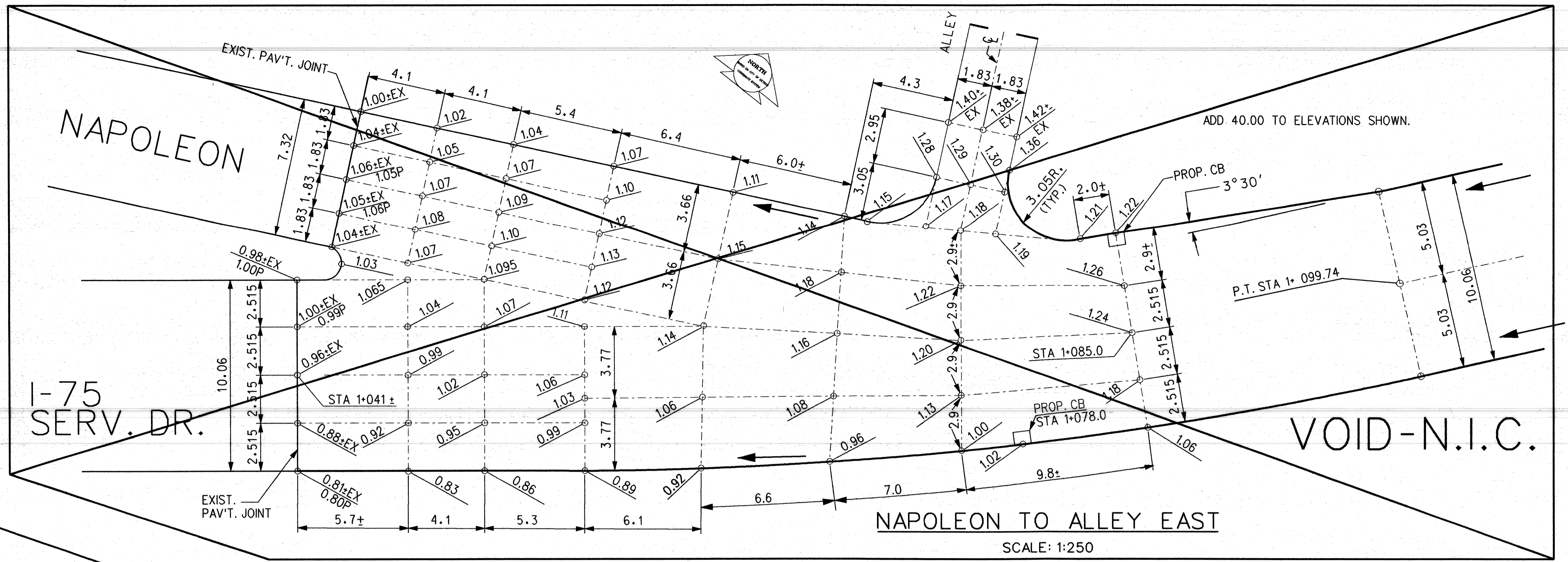
CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAU OF STREETS AND HIGHWAYS

CONSTRUCTION AND WIDENING OF I-75 W. SERVICE DR.
FROM BEAUBIEN TO WILKINS

PAVING PLAN AND PROFILE

SHEET 9 OF 48 SHEETS
CONTRACT NO.
ASSIGNMENT NO. 99-22-28
DATE JULY, '99

- NOTES:
1. "EX" INDICATES EXISTING ELEVATION.
"P" INDICATES PROPOSED ELEVATION.
ALL OTHER ELEVATIONS SHOWN ARE PROPOSED.
 2. ALL DIMENSIONS ARE IN METERS.
 3. FOR PATTERNING SYMBOLS, SEE CONSTRUCTION LEGEND ON SHEET NO. 8.



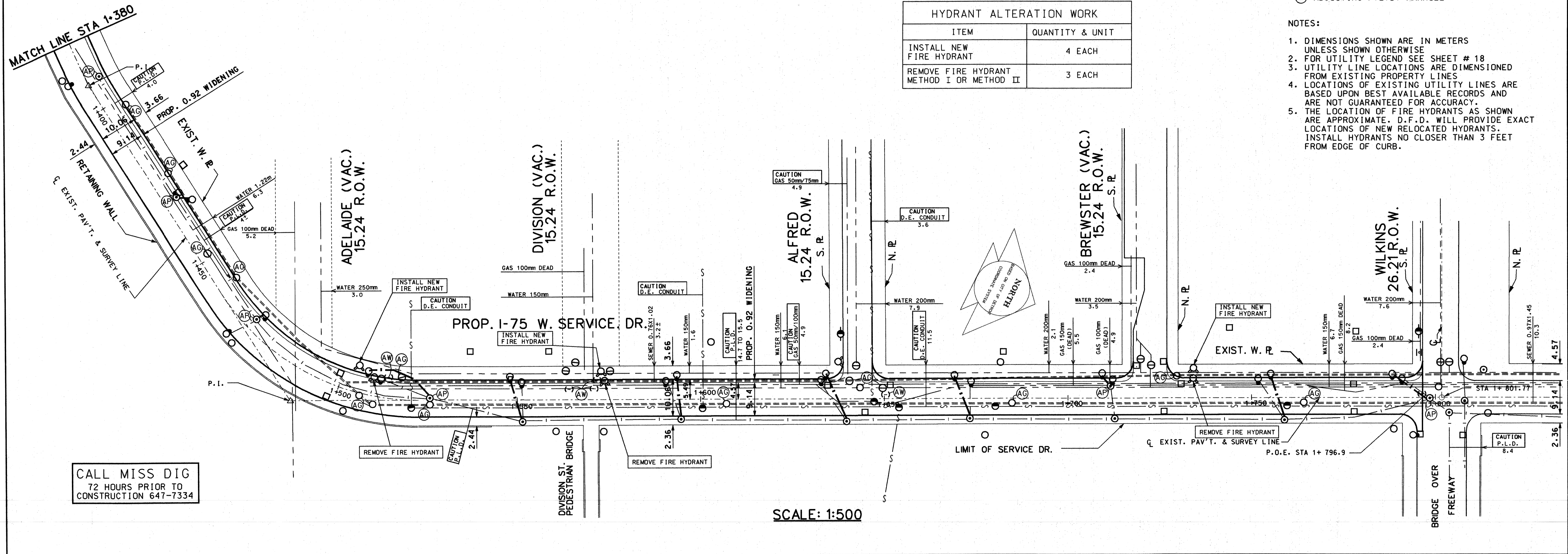
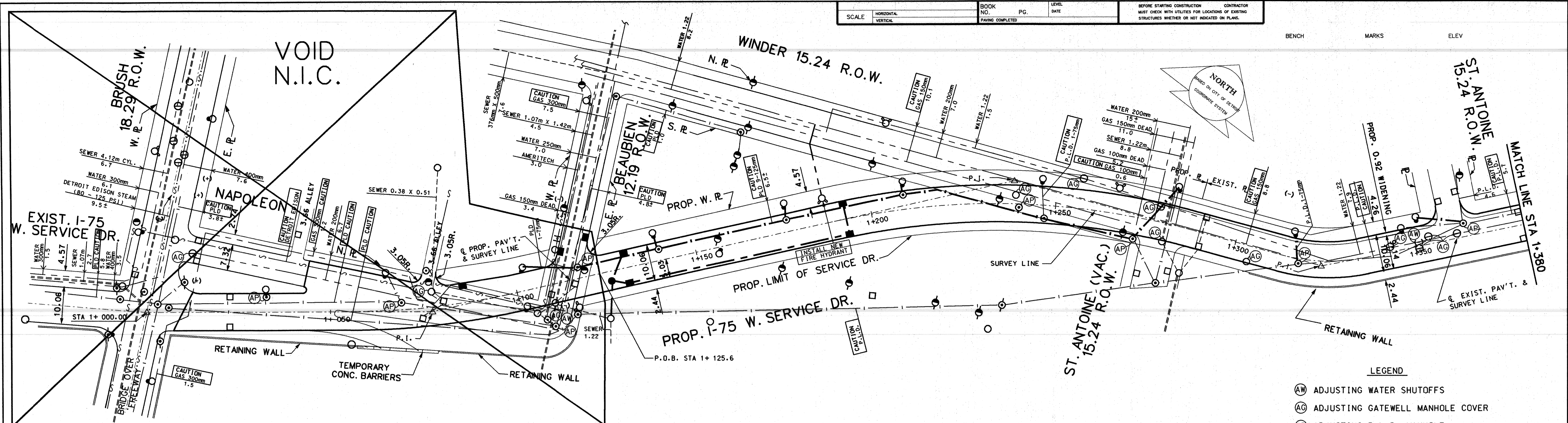
PLAN	BY K.M.	CHECKED BY N.W.	APPROVED: <i>Dedric Harder</i>
GRADE			
ESTIMATE			
DESCRIPTION	OR CHECK DATE	DATE	
REVISIONS			

CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAU OF STREETS AND HIGHWAYS

CONSTRUCTION AND WIDENING OF 1-75 W. SERVICE DR.
FROM BEAUBIEN TO WILKINS

DETAILED GRADES

SHEET 10 OF 48 SHEETS
CONTRACT NO.
ASSIGNMENT NO. 99-22-28
DATE JULY, '99

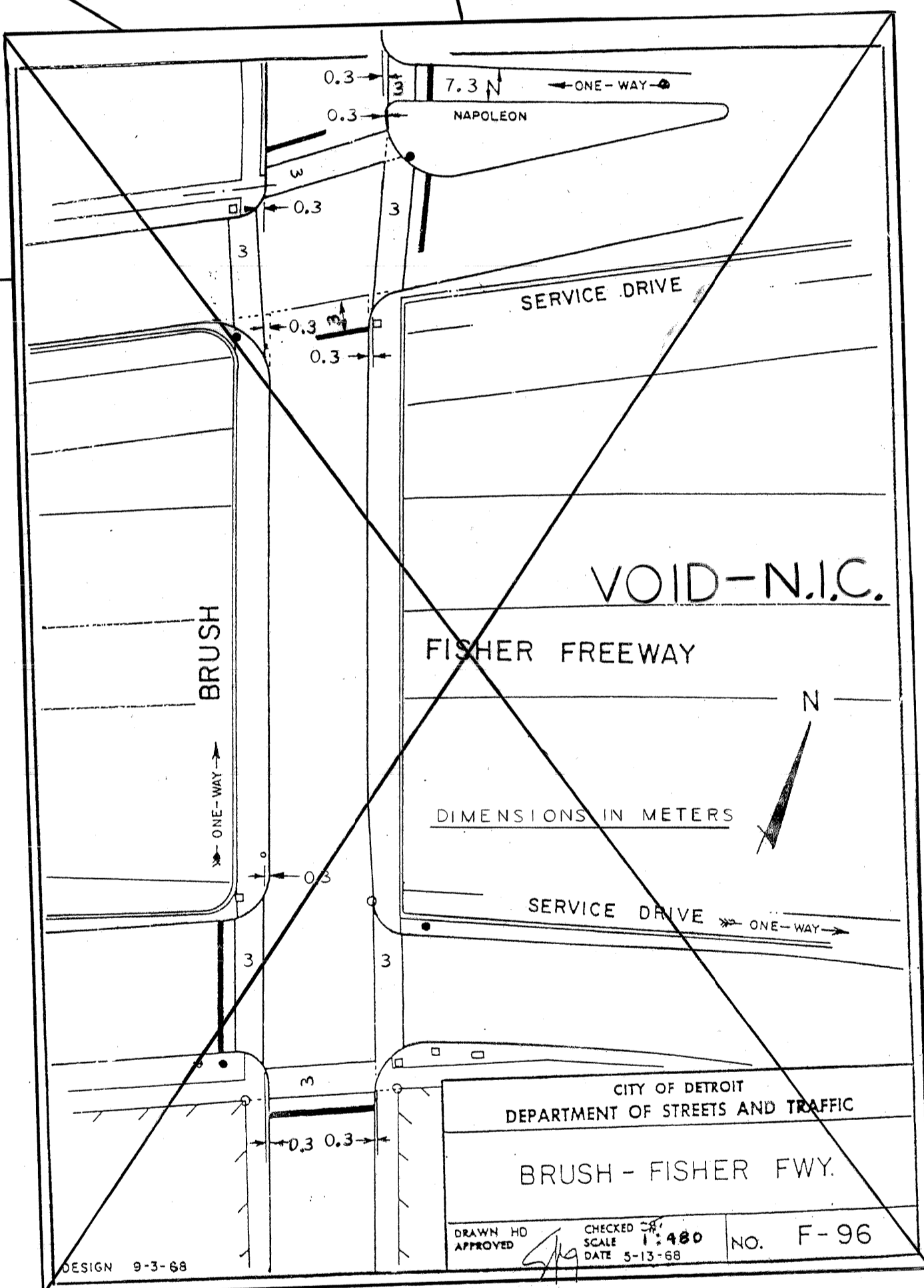
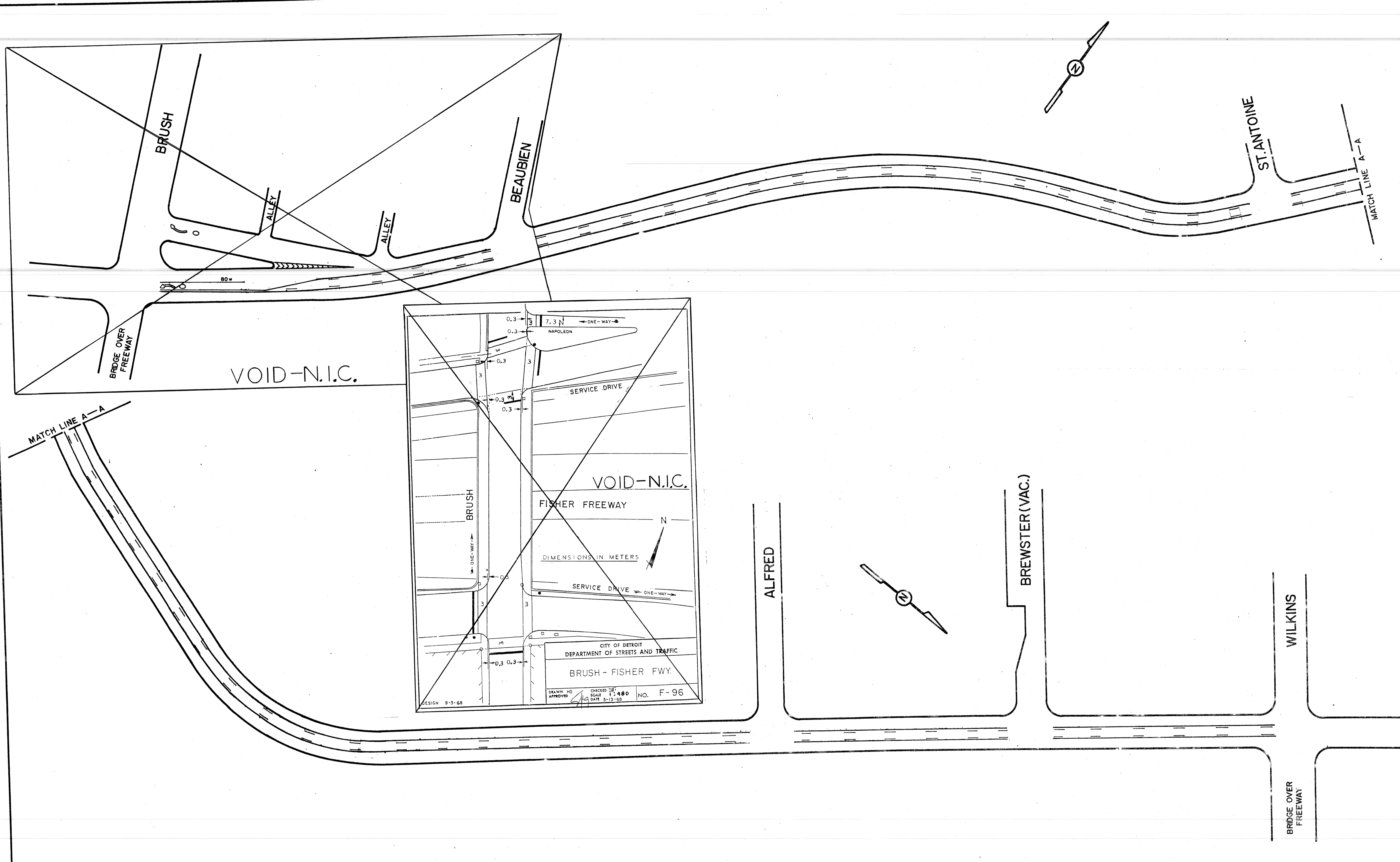


CALL MISS DIG
72 HOURS PRIOR TO
CONSTRUCTION 647-7334

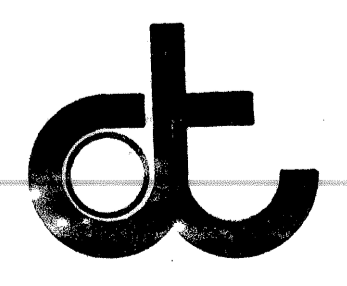
SCALE: 1:500

HYDRANT ALTERATION WORK	
ITEM	QUANTITY & UNIT
INSTALL NEW FIRE HYDRANT	4 EACH
REMOVE FIRE HYDRANT METHOD I OR METHOD II	3 EACH

- LEGEND**
- (AW) ADJUSTING WATER SHUTOFFS
 - (AG) ADJUSTING GATEWELL MANHOLE COVER
 - (AP) ADJUSTING P.L.D. MANHOLE
- NOTES:**
1. DIMENSIONS SHOWN ARE IN METERS UNLESS SHOWN OTHERWISE
 2. FOR UTILITY LINE LEGEND SEE SHEET # 18
 3. UTILITY LINE LOCATIONS ARE DIMENSIONED FROM EXISTING PROPERTY LINES
 4. LOCATIONS OF EXISTING UTILITY LINES ARE BASED UPON BEST AVAILABLE RECORDS AND ARE NOT GUARANTEED FOR ACCURACY.
 5. THE LOCATION OF FIRE HYDRANTS AS SHOWN ARE APPROXIMATE. D.F.D. WILL PROVIDE EXACT LOCATIONS OF NEW RELOCATED HYDRANTS. INSTALL HYDRANTS NO CLOSER THAN 3 FEET FROM EDGE OF CURB.



CITY OF DETROIT
DEPARTMENT OF STREETS AND TRAFFIC
BRUSH - FISHER FWY.
DESIGN 9-3-68
DRAWN BY APPROVED
CHECKED BY SCALE 1:480 DATE 5-13-68
NO. F-96



CITY OF DETROIT
DEPARTMENT OF TRANSPORTATION
TRANSPORTATION ENGINEERING

CONSTRUCTION AND WIDENING
OF 1-75 W. SERVICE DRIVE
FROM BEAUBIEN TO WILKINS

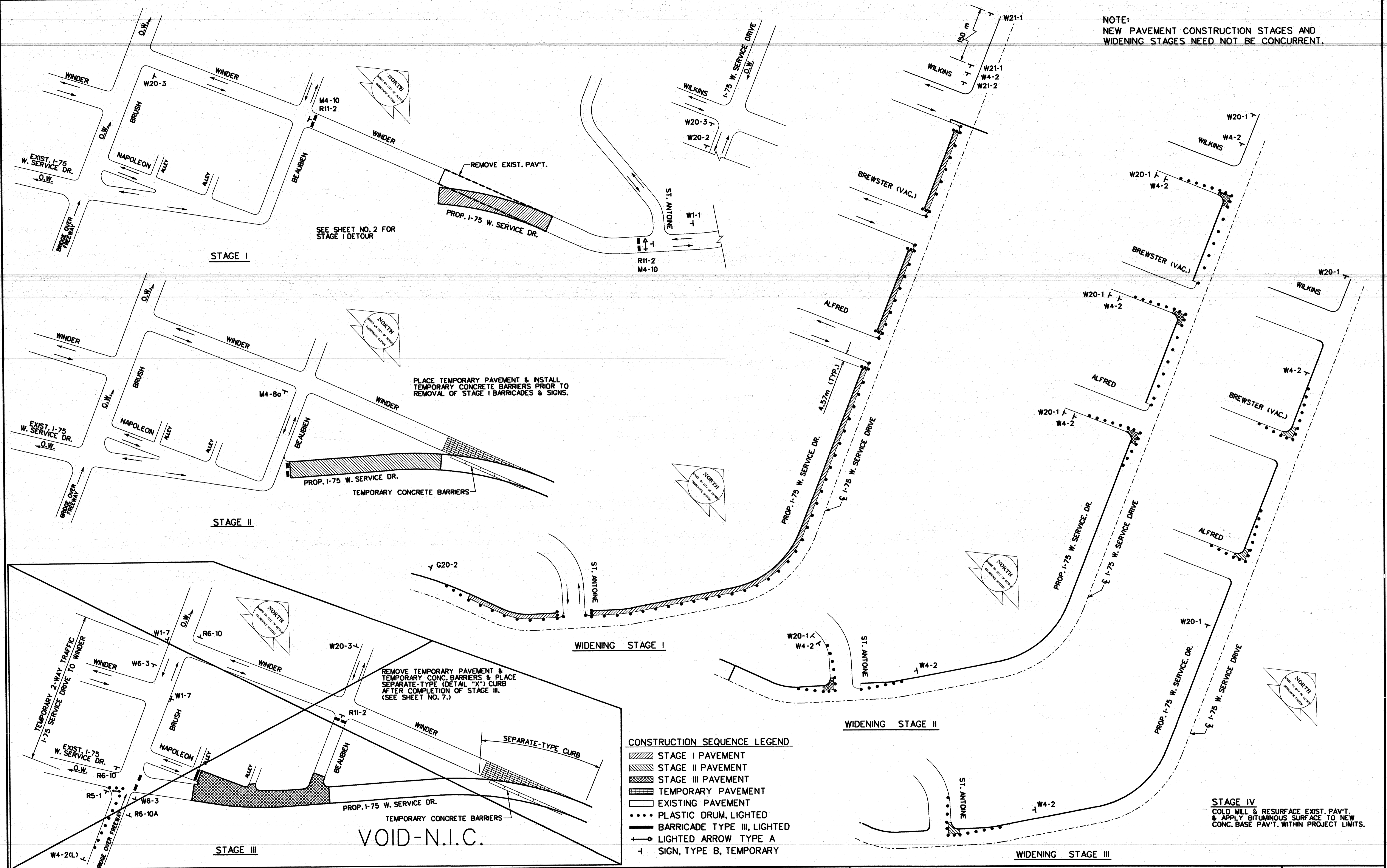
PAVEMENT MARKINGS

SHEET 12 OF 48 SHEETS
SCALE 1 : 500
DRWG No. L91b
DATE JULY, 1999

DESIGNED BY	H.D.	APPROVED
DRAWN BY	J. ROOSE	
TRACED BY		

11A

NOTE:
NEW PAVEMENT CONSTRUCTION STAGES AND
WIDENING STAGES NEED NOT BE CONCURRENT.



CONSTRUCTION SEQUENCE LEGEND

- ▨ STAGE I PAVEMENT
- ▨ STAGE II PAVEMENT
- ▨ STAGE III PAVEMENT
- ▨ TEMPORARY PAVEMENT
- ▨ EXISTING PAVEMENT
- PLASTIC DRUM, LIGHTED
- BARRICADE TYPE III, LIGHTED
- ↔ LIGHTED ARROW TYPE A
- ⊥ SIGN, TYPE B, TEMPORARY

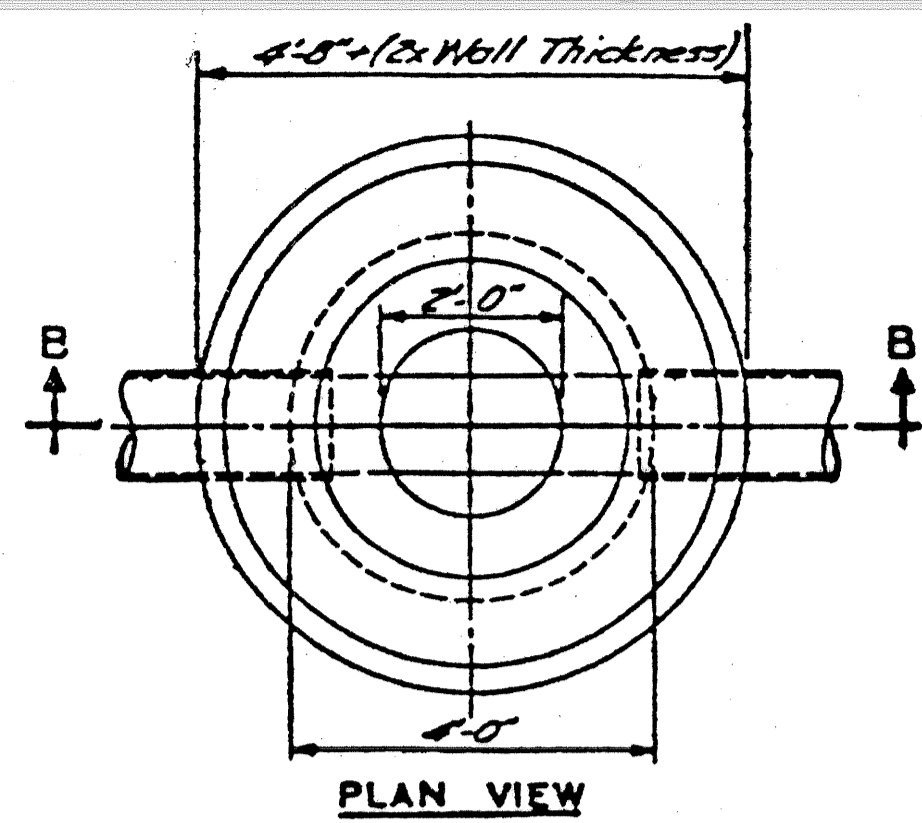
DESCRIPTION	DR	CHK	DATE	DATE
REVISIONS				
PLAN	C. M.	N. W.	APPROVED: <i>Rodrigue Houdin</i>	
GRADE			CITY OF DETROIT	
ESTIMATE			CITY ENGINEERING DIVISION - D.P.W.	
FINAL	*****	*****	BUREAU OF STREETS AND HIGHWAYS	

CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAU OF STREETS AND HIGHWAYS

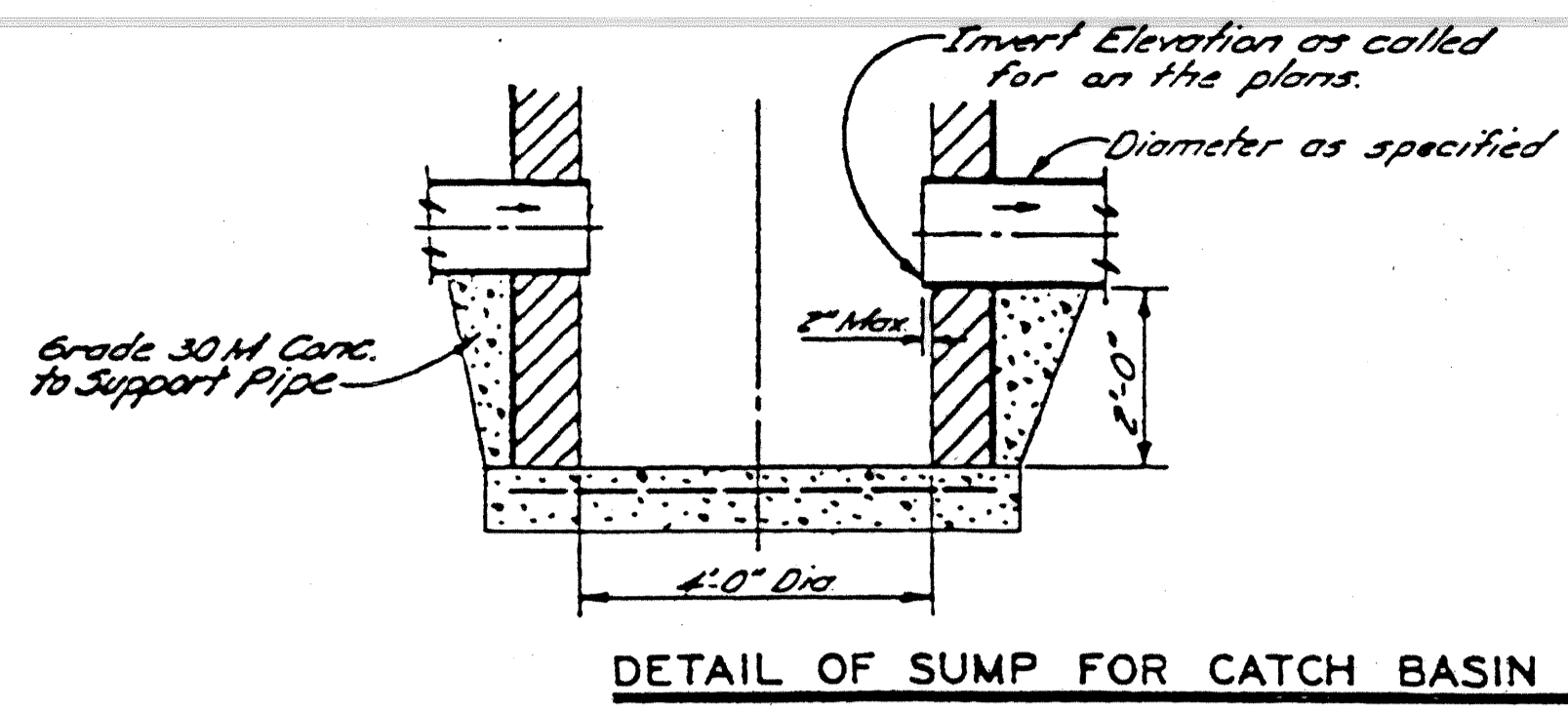
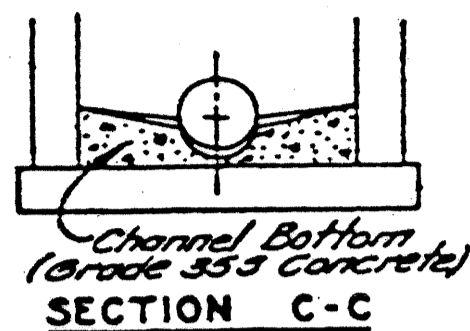
CONSTRUCTION AND WIDENING OF I-75 W. SERVICE DR.
FROM BEAUBIEN TO WILKINS

CONSTRUCTION SEQUENCE

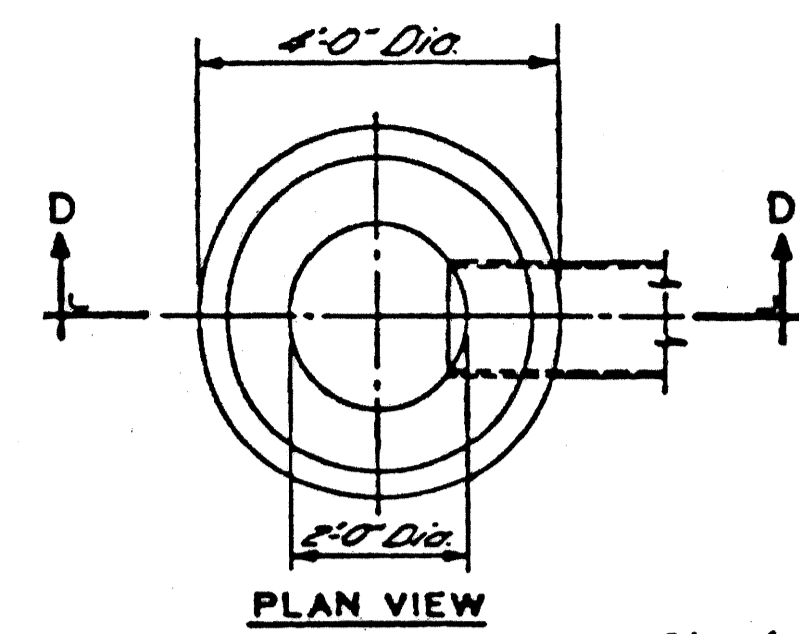
SHEET	13	OF	48	SHEETS
CONTRACT	NO.			
ASSIGNMENT	NO. 99-22-28			
DATE	JULY, 99			



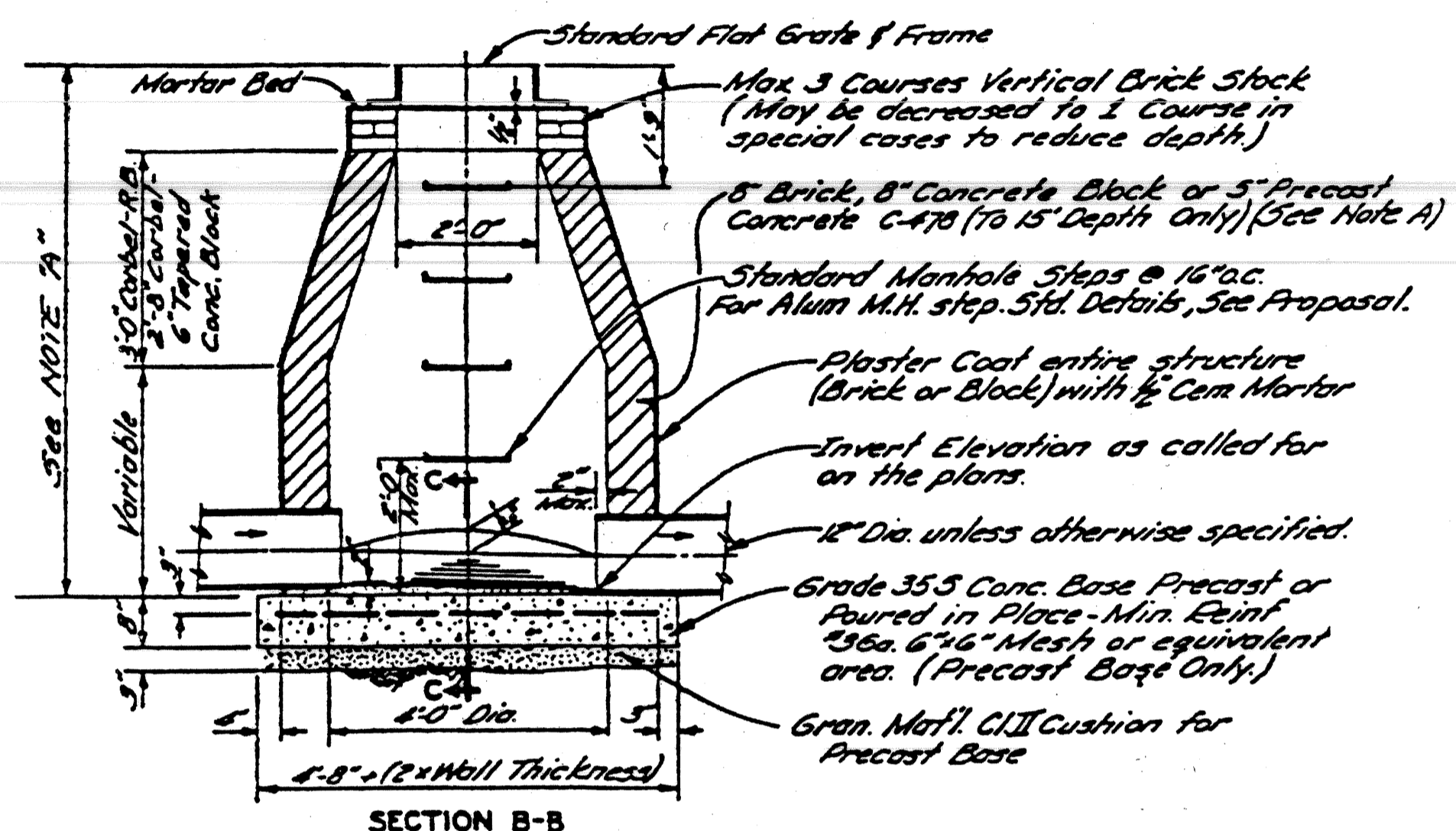
NOTE "A"
Wall thickness below a depth of 15 feet shall be 12 inches.



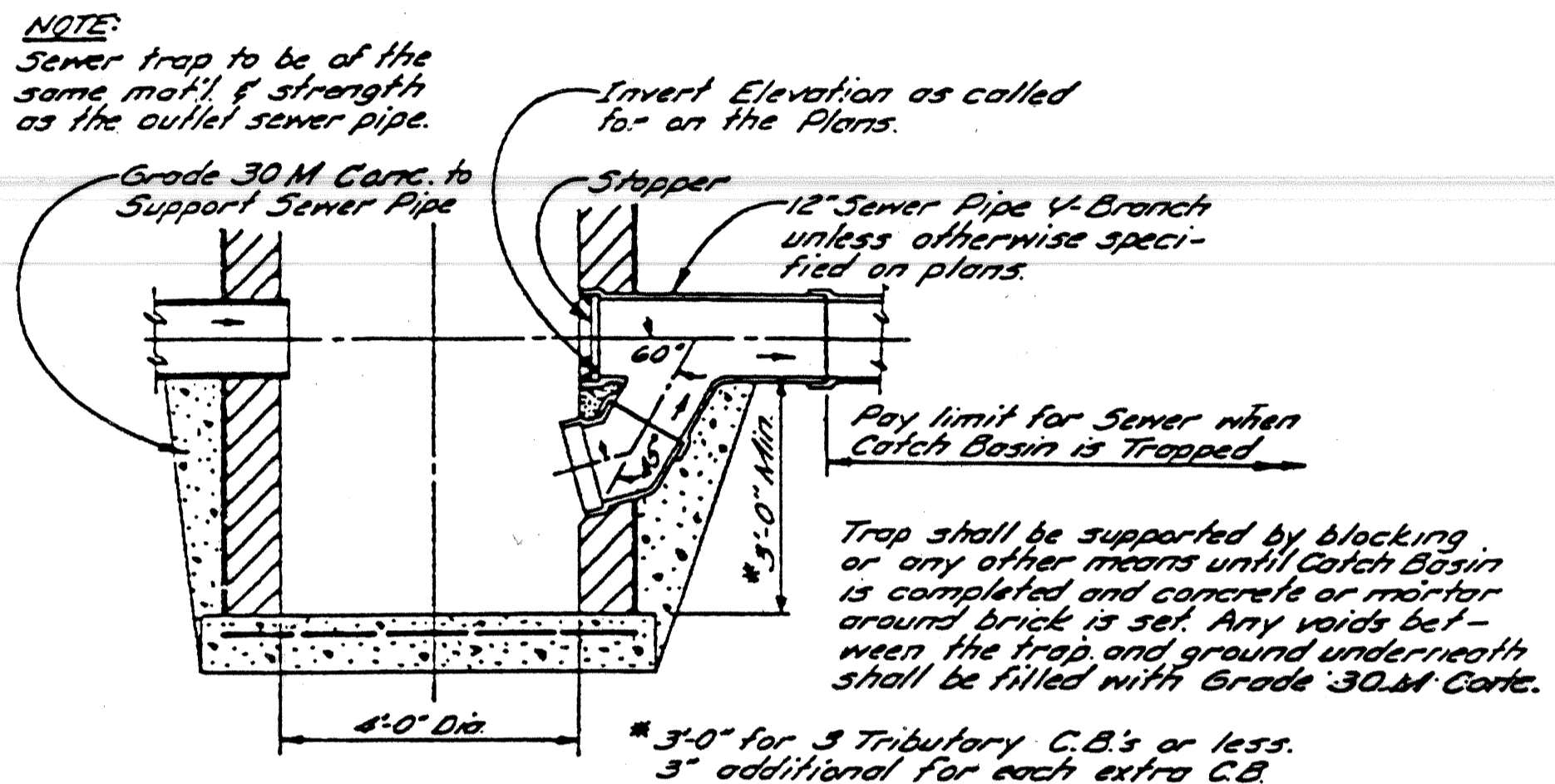
DETAIL OF SUMP FOR CATCH BASIN "B"
NO SCALE



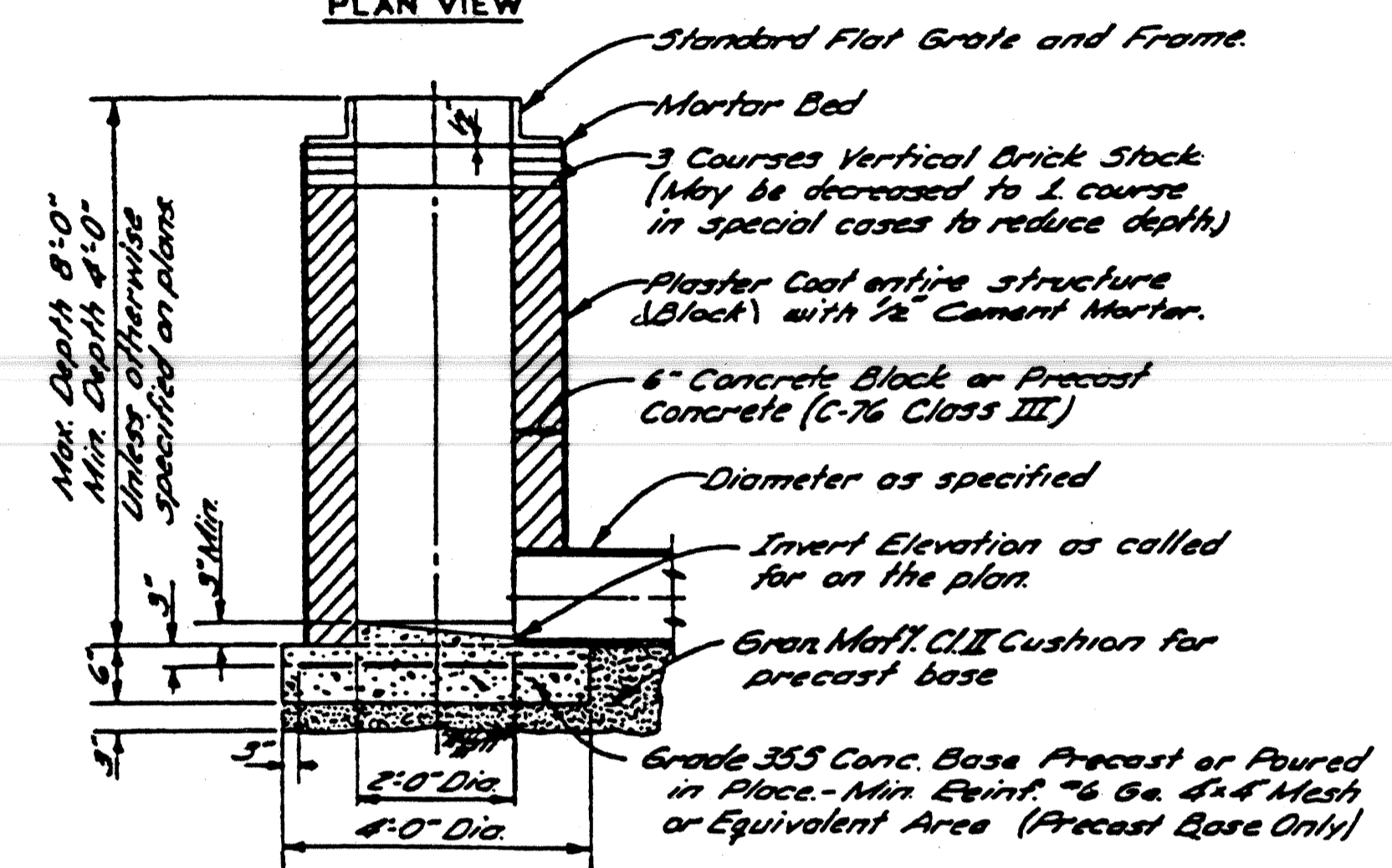
NOTE:
Catch Basin "A" will be used only when outletting to a catch basin "B"



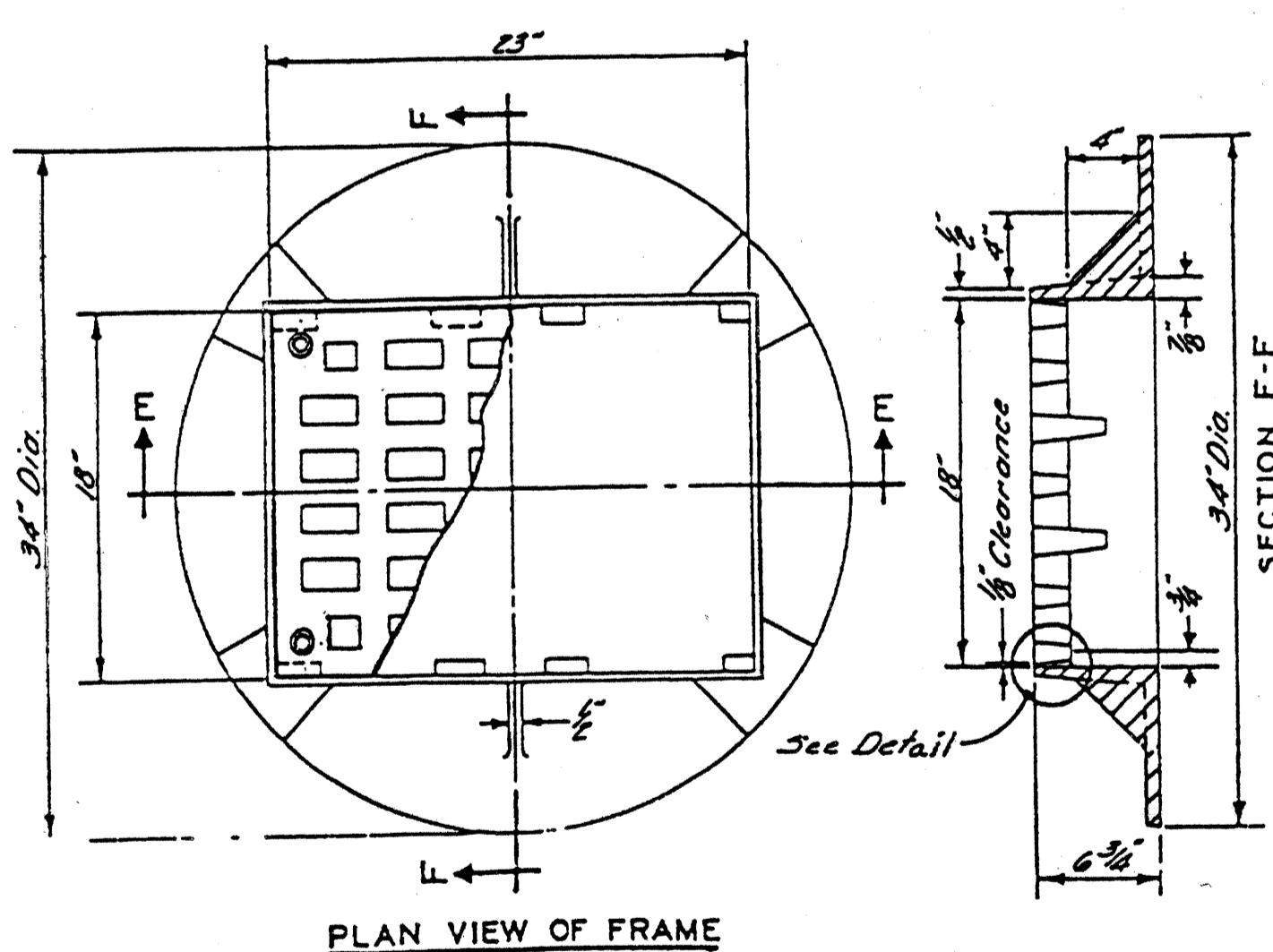
CATCH BASIN "B"
NO SCALE



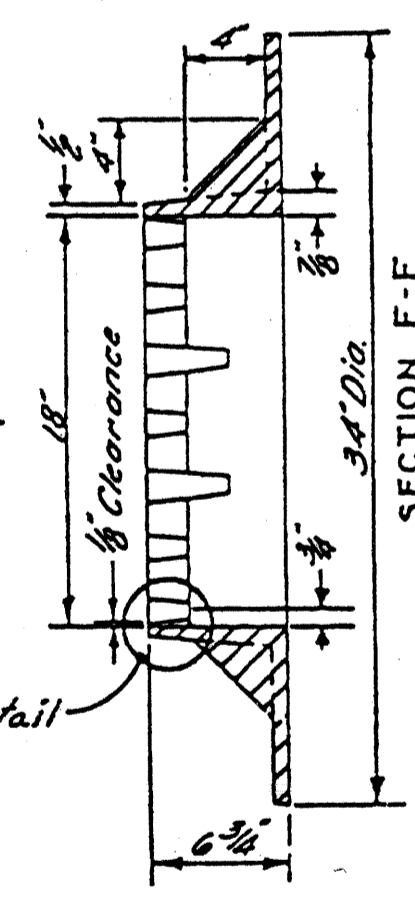
DETAIL OF TRAP FOR CATCH BASIN "B"
NO SCALE



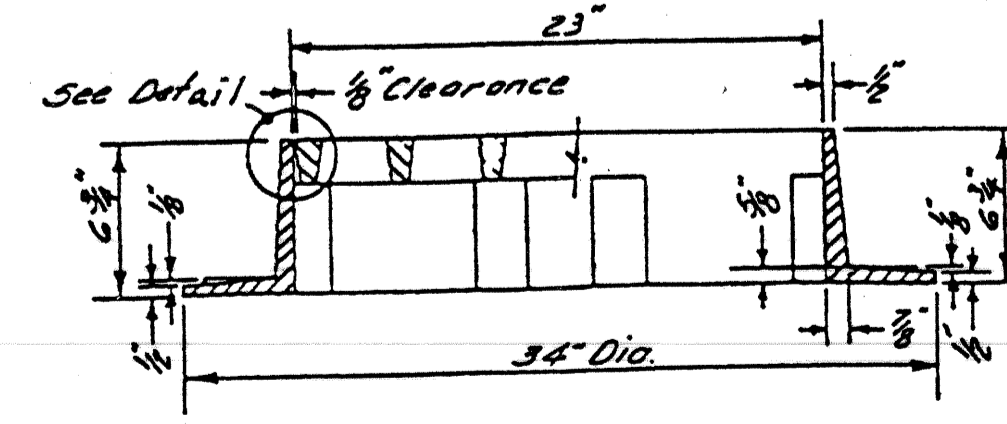
CATCH BASIN "A"
NO SCALE



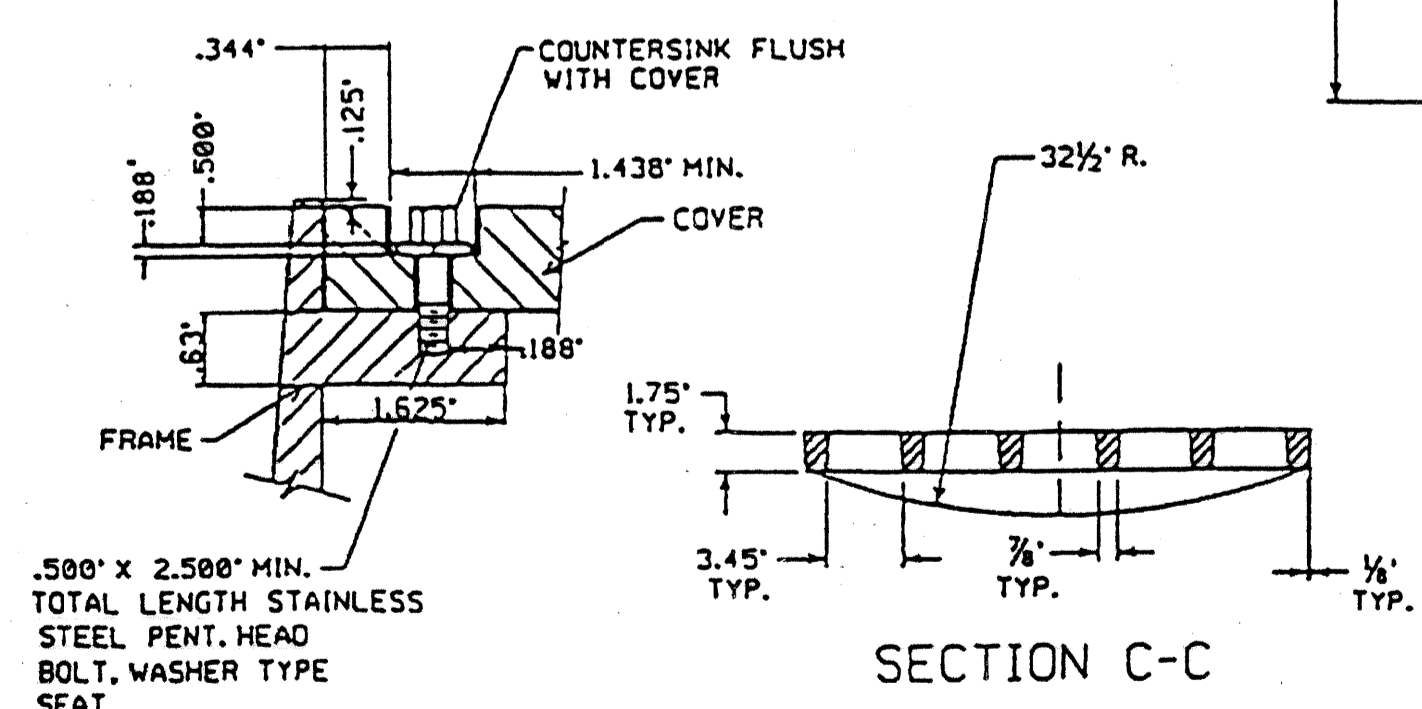
PLAN VIEW OF FRAME



SECTION F-F

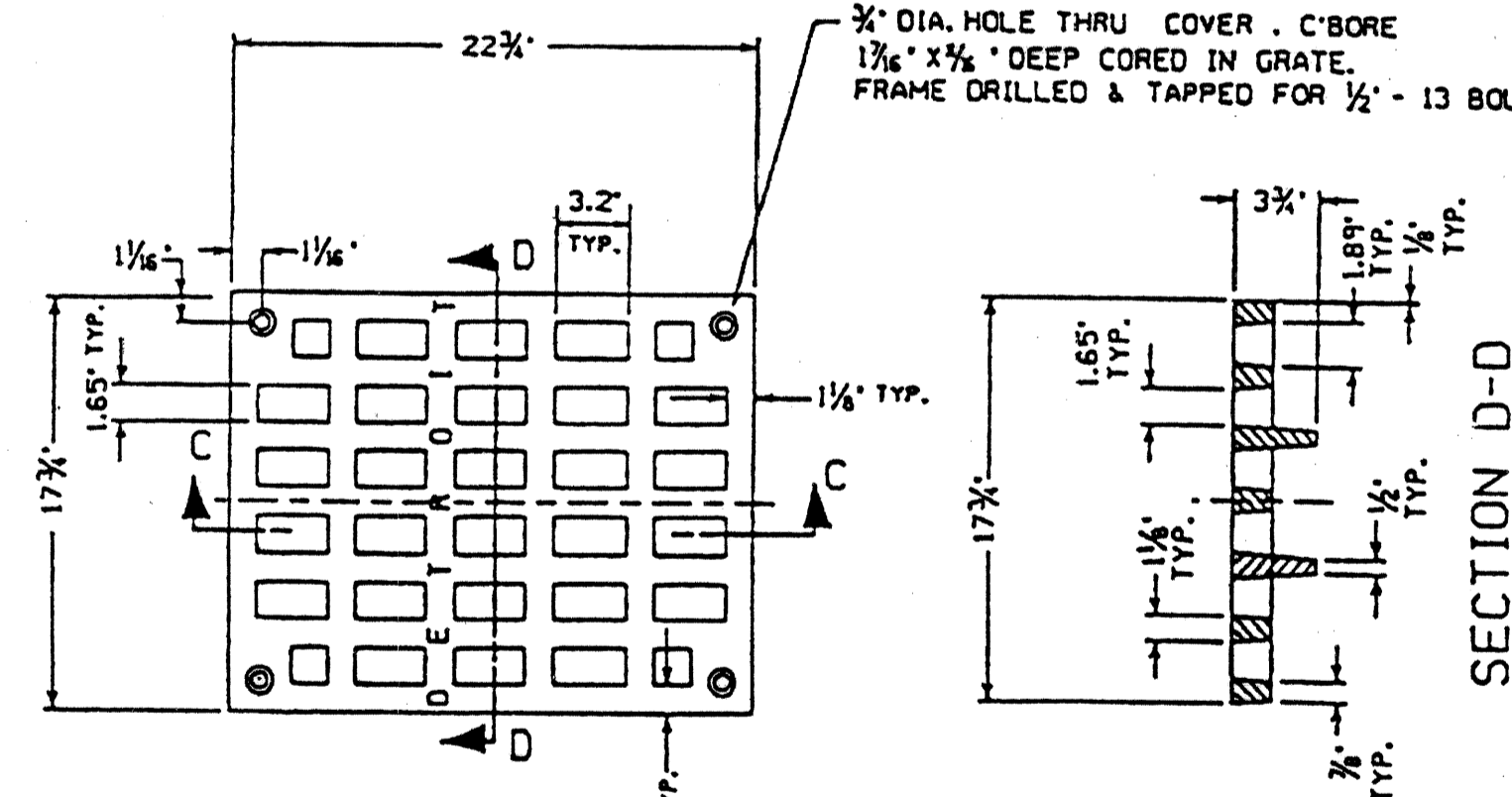


SECTION E-E



COVER BOLT DETAIL

STANDARD FLAT GRATE AND FRAME
NO SCALE



PLAN VIEW OF GRATE

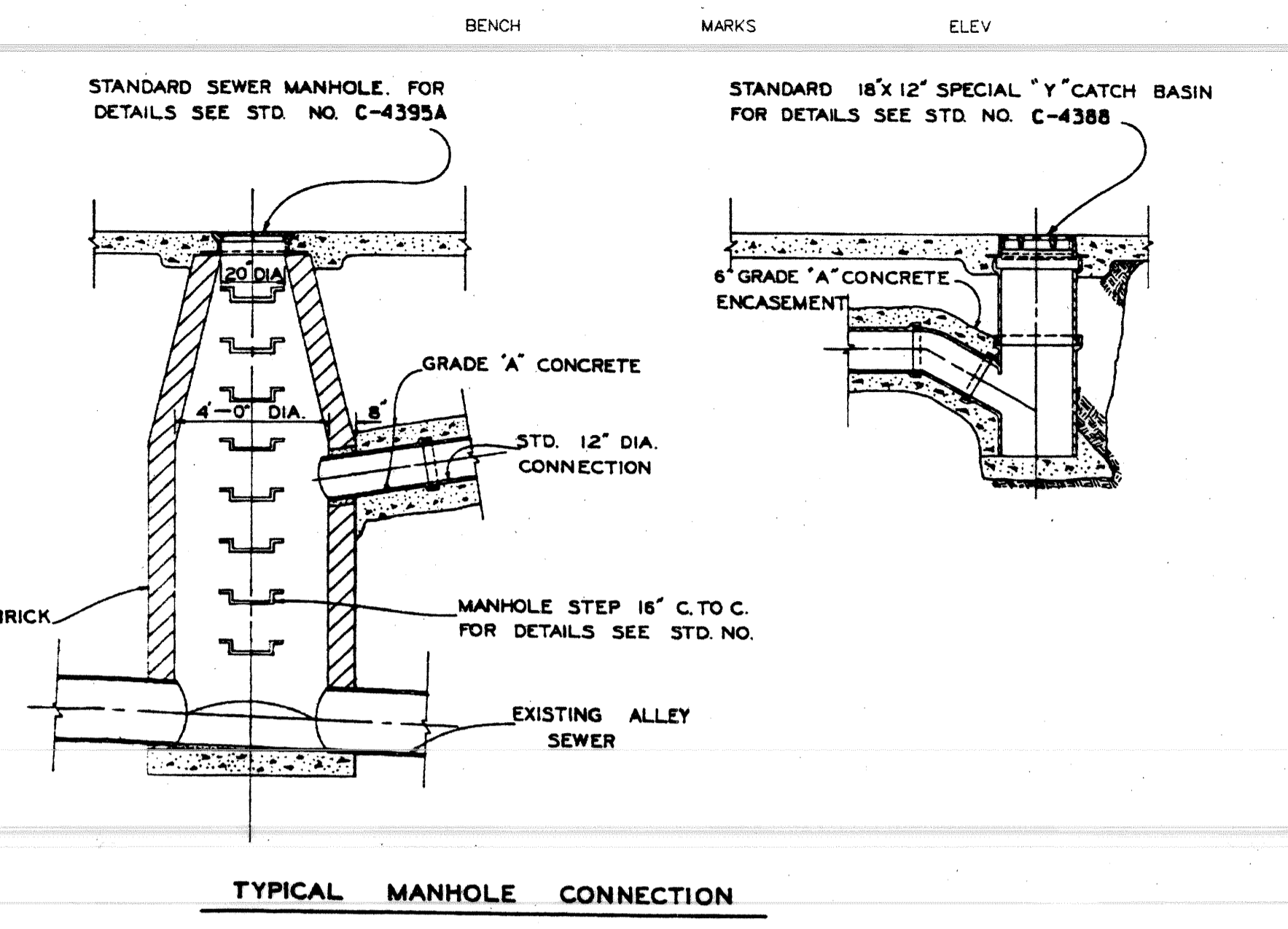
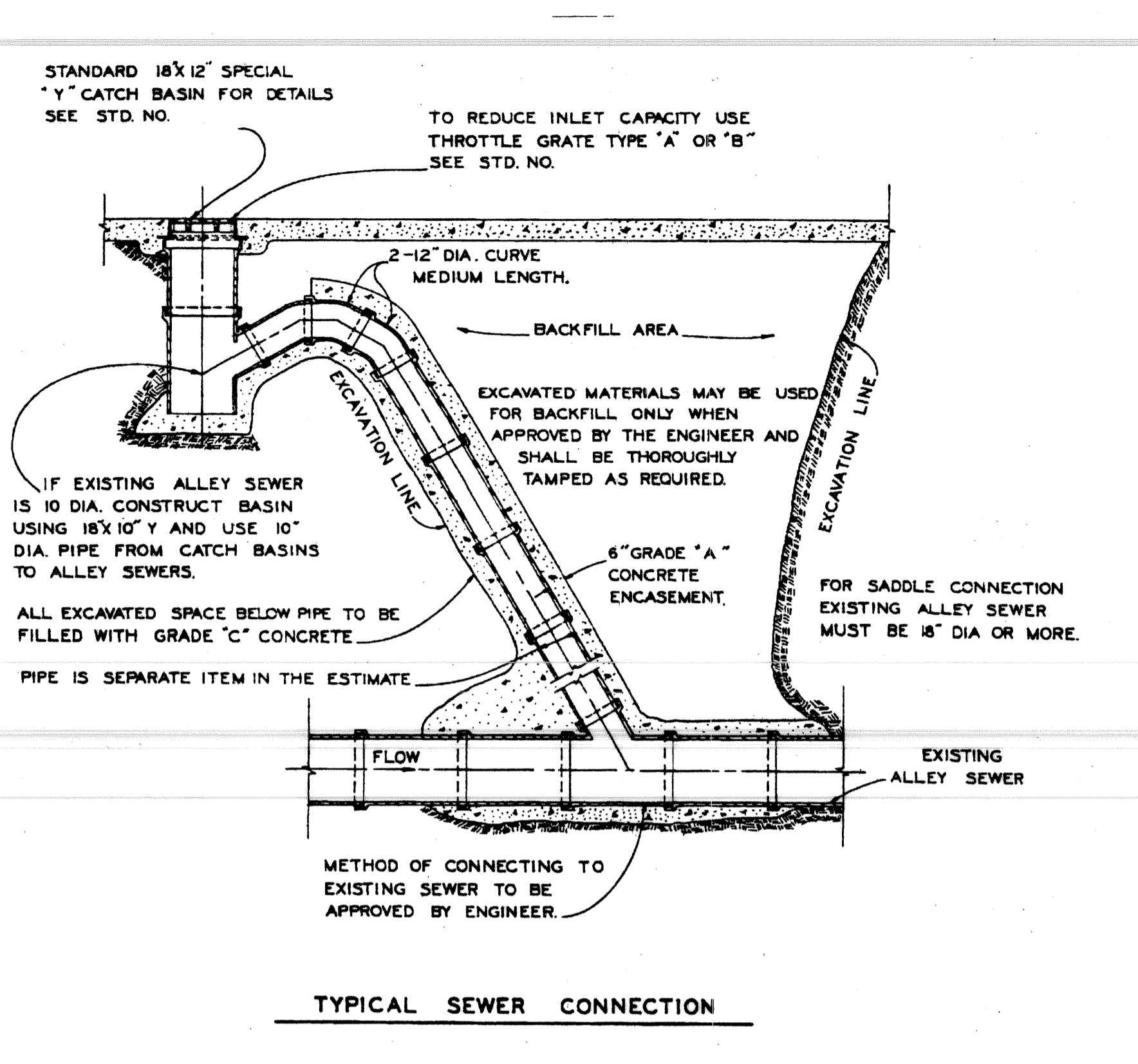
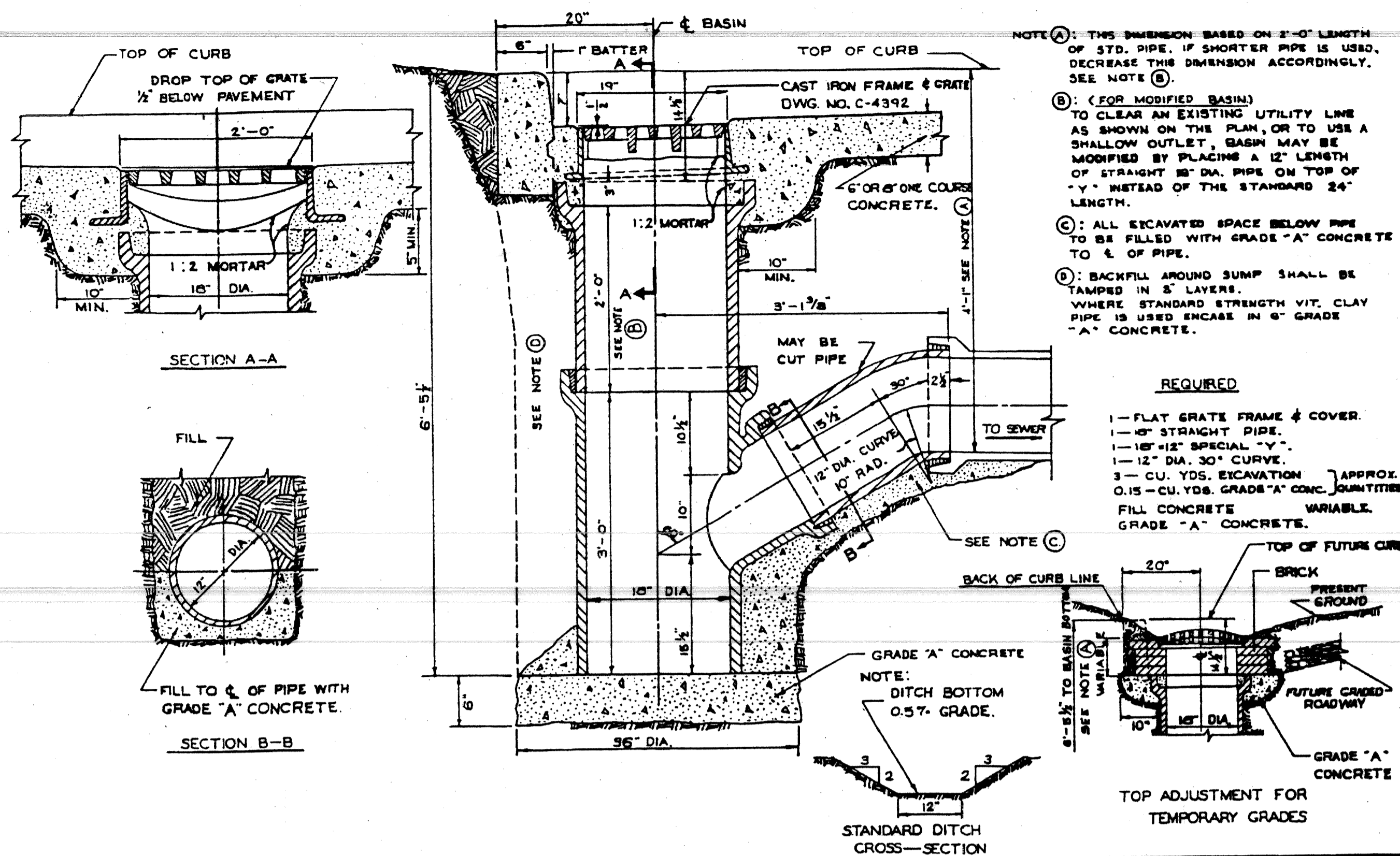
MATERIAL: GRAY IRON A.S.T.M. STD. SPEC. A-48, CLASS 30, BEARING SURFACES OF COVER AND FRAME SHALL BE GRIND TO PREVENT ROCKING, CASTING SHALL NOT BE COATED

NOTE: F= FINISH SURFACE

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 of no charge 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 Seals Mfg. Corp.
- Pay limit for sewers shall be inside faces of structures unless otherwise noted.

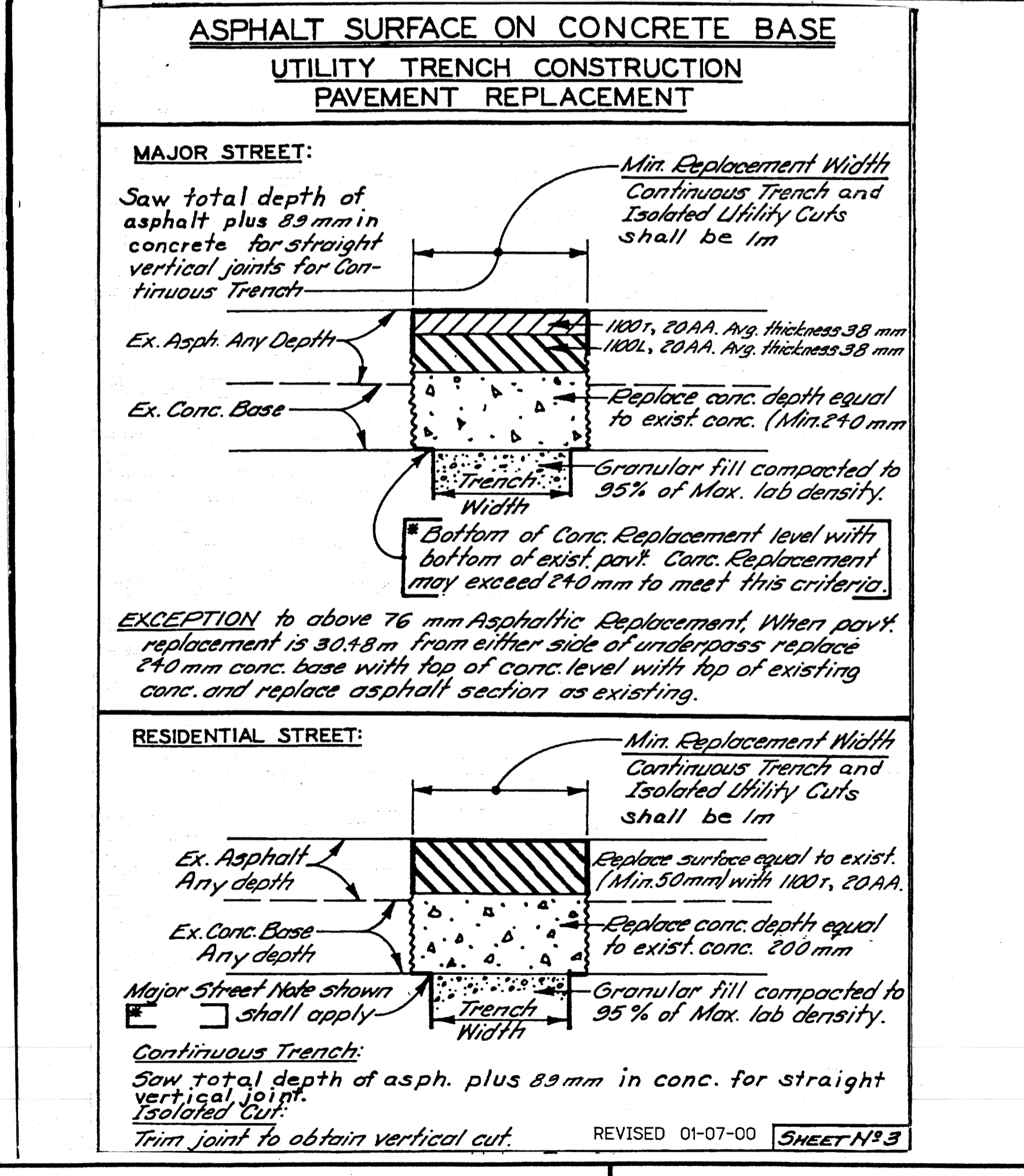
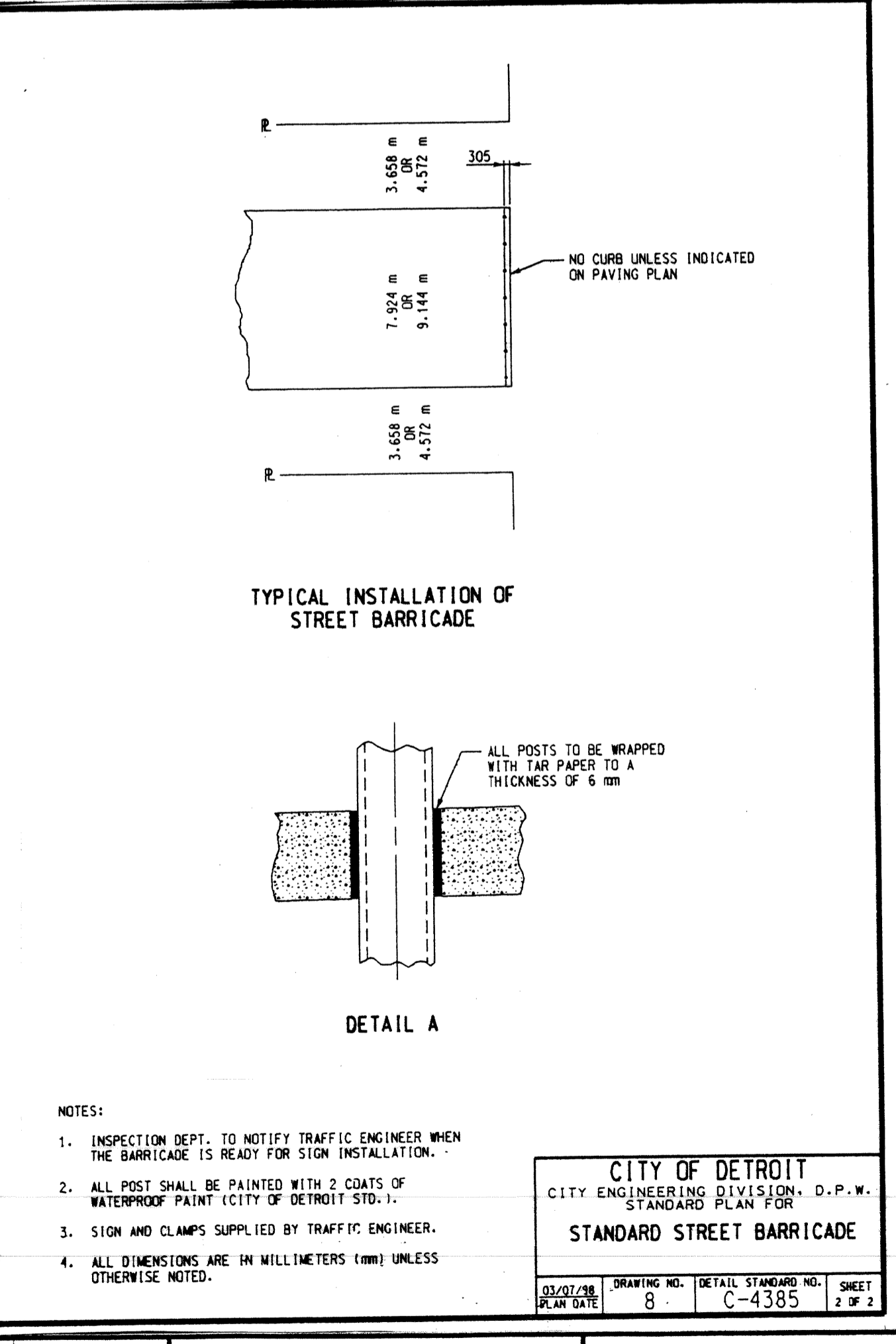
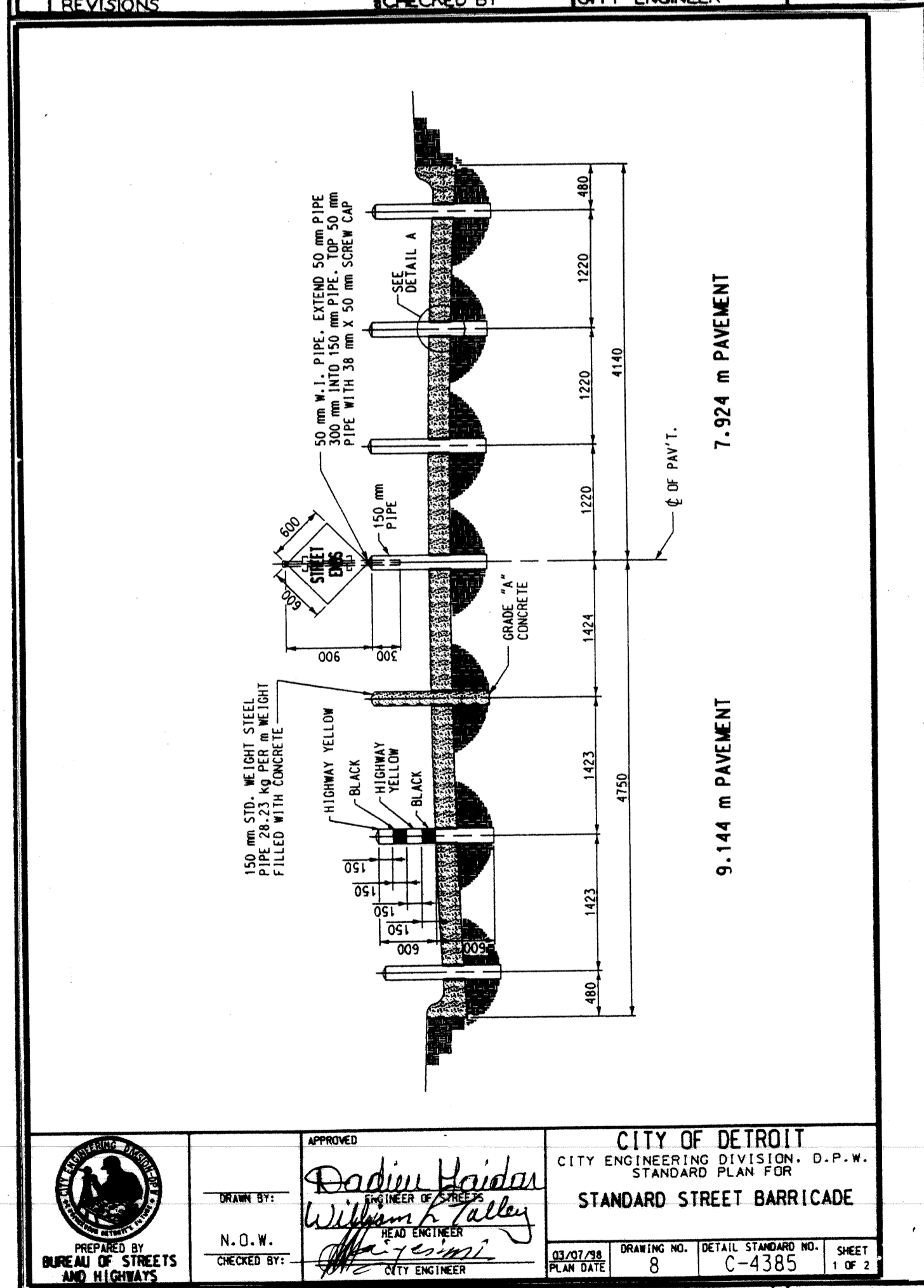
PLAN GRADE ESTIMATE DESCRIPTION REVISIONS		BY: M. POLITO CHECKED BY: D. MILZ APPROVED: John Erickson Allen E. Ferguson W.B. Bannard	CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAU OF STREETS AND HIGHWAYS	CONSTRUCTION AND WIDENING OF I-75 W. SERVICE DR. FROM BEAUBIEN TO WILKINS. DETAILS OF STANDARD CATCH BASINS "A & B", FLAT GRATE & FRAME AND COVER BOLT.	SHEET 14 OF 48 SHEETS CONTRACT NO. ASSIGNMENT NO. 99-22-28 DATE JULY, 1999
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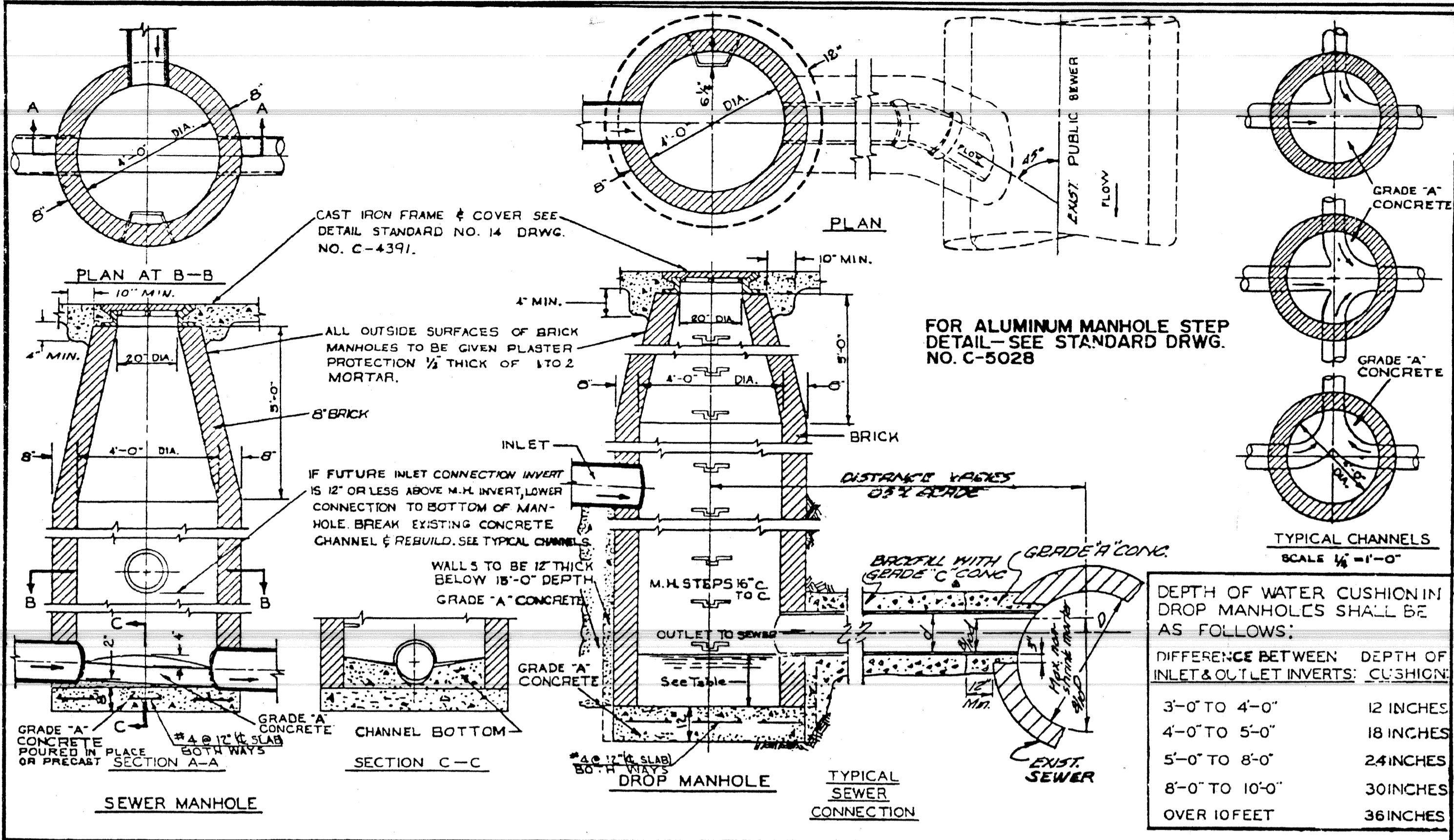


DESIGNED BY	APPROVED	CITY OF DETROIT	STANDARD DESIGN
DRAWN BY	ENGINEER OF STREETS	CITY ENGINEERING DEPARTMENT	18" X 12" SPECIAL "Y" CATCH BASIN TO BE USED UNLESS DIRECTED OTHERWISE BY FIELD ENGINEER
TRACED BY	ASST. CITY ENGINEER	BUREAU OF STREETS AND HIGHWAYS	OTHERWISE BY FIELD ENGINEER
CHECKED BY	CITY ENGINEER	DETAIL: STANDARD NO. 11	BOOK NO. SCALE 1/4"=0' DWG. NO. C-4388

REVISIONS	DESCRIPTION	DATE	BY	APPROVED

DESIGNED BY	APPROVED	CITY OF DETROIT	ALLEY INSTALLATION
DRAWN BY	ENGINEER OF STREETS	CITY ENGINEERING DEPARTMENT	STANDARD 18" X 12" SPECIAL "Y" CATCH BASIN
TRACED BY	ASST. CITY ENGINEER	BUREAU OF STREETS AND HIGHWAYS	
CHECKED BY	CITY ENGINEER	DETAIL: STANDARD NO. 11	BOOK NO. SCALE 1/4"=0' DWG. NO. C-4388

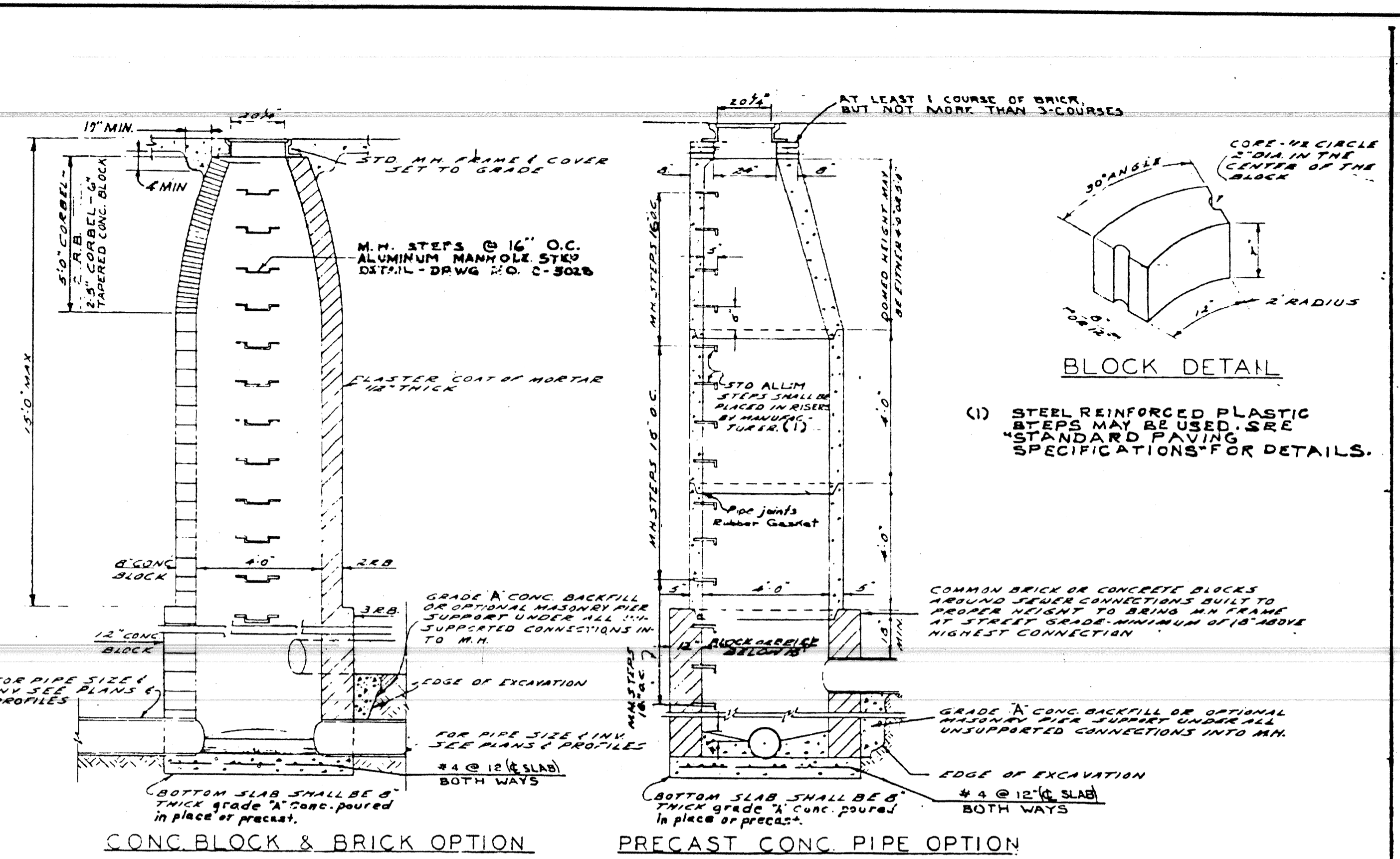




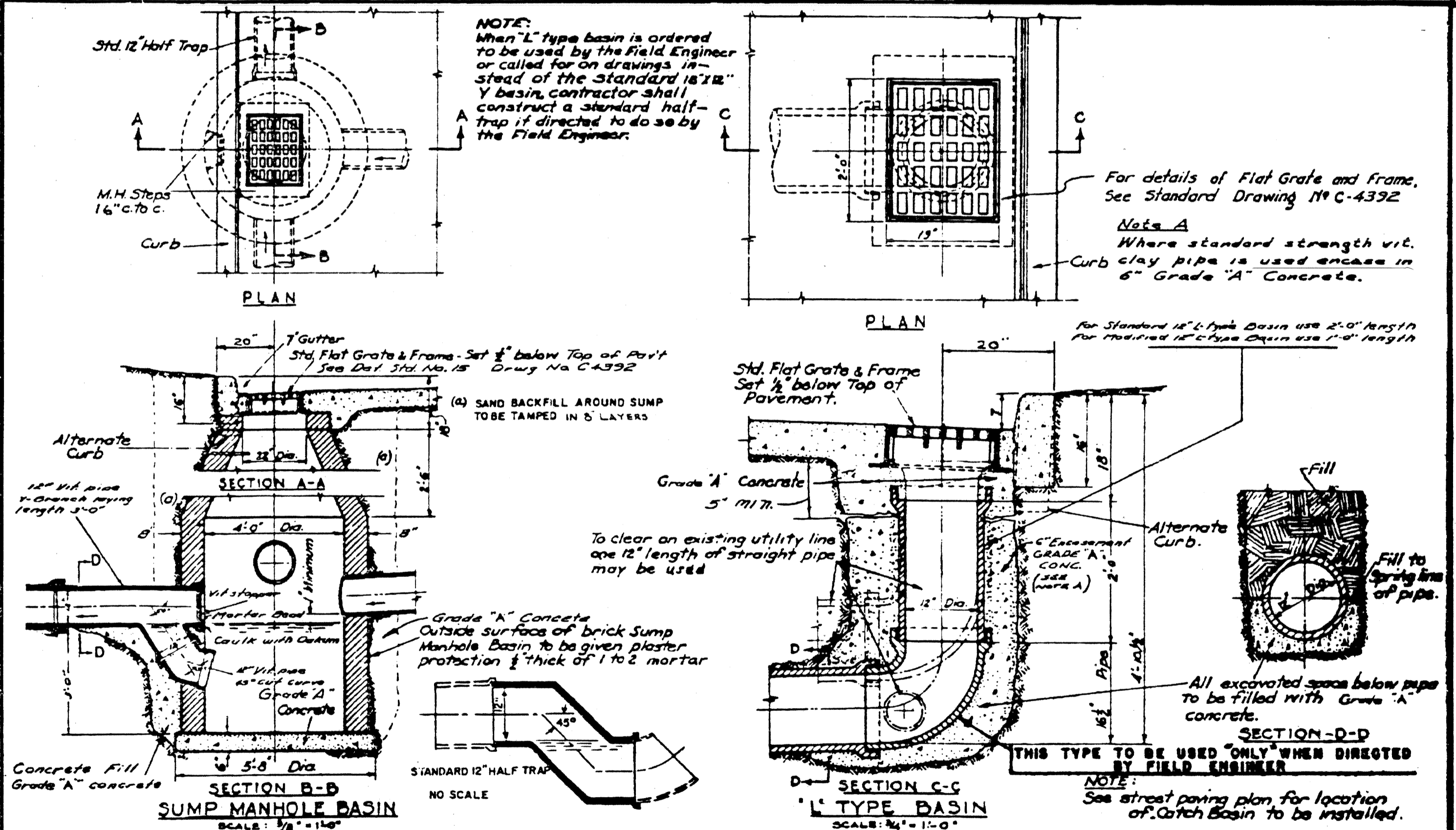
DEPTH OF WATER CUSHION IN DROP MANHOLES SHALL BE AS FOLLOWS:

DIFFERENCE BETWEEN DEPTH OF INLET & OUTLET INVERTS:	CUSHION
3'-0" TO 4'-0"	12 INCHES
4'-0" TO 5'-0"	18 INCHES
5'-0" TO 8'-0"	24 INCHES
8'-0" TO 10'-0"	30 INCHES
OVER 10 FEET	36 INCHES

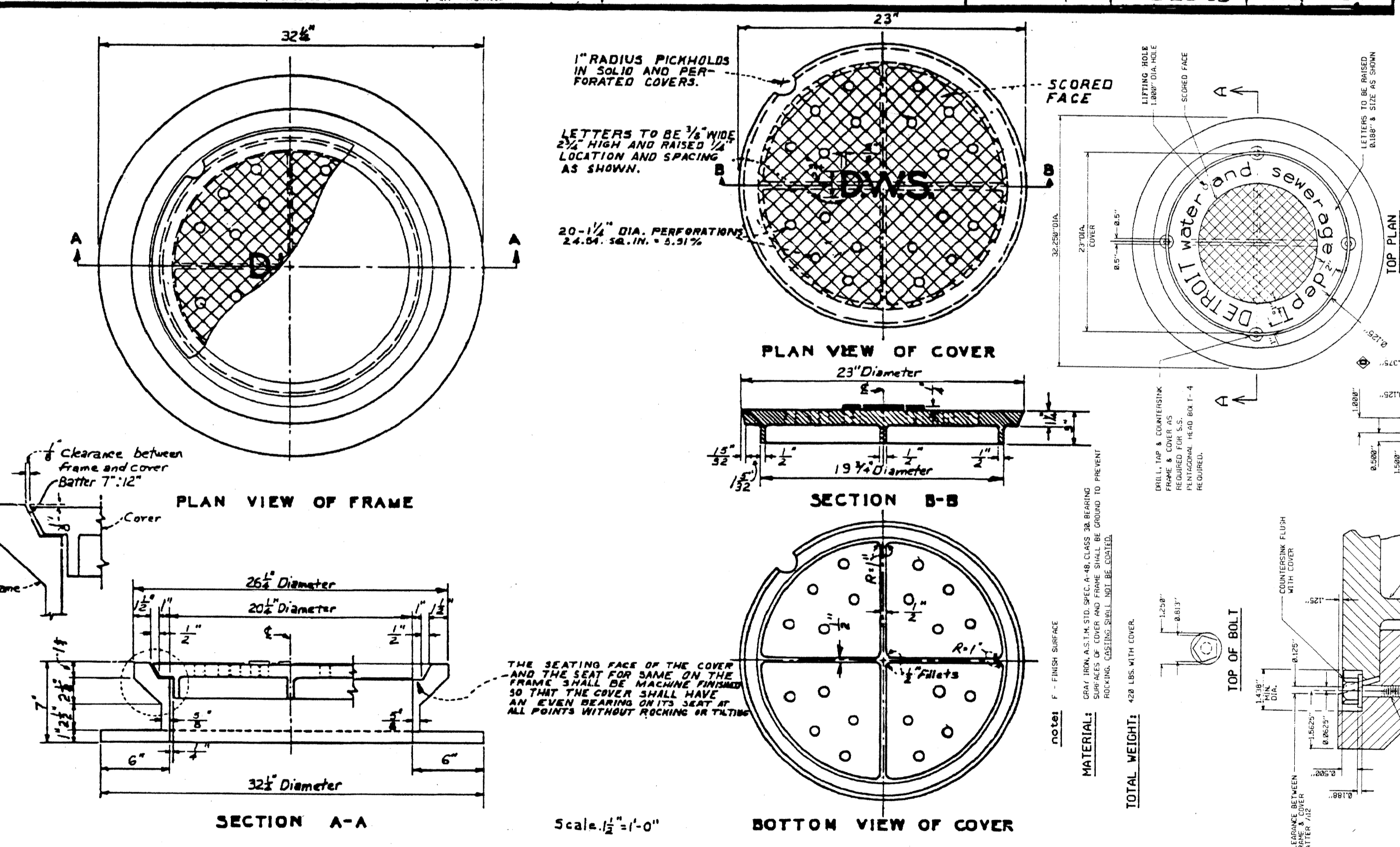
DESIGNED BY <i>John Erickson</i> ENGINEER OF STREETS	APPROVED BY <i>John Erickson</i> ENGINEER OF STREETS	CITY OF DETROIT CITY ENGINEERING DEPARTMENT BUREAU OF STREETS AND HIGHWAYS
DRAWN BY <i>G. Munn</i> TRACED BY <i>W. R. Hecke</i> ASST. CITY ENGINEER	CHECKED BY <i>W. R. Hecke</i> CITY ENGINEER	
DETAILS OF STANDARD SEWER & DROP MANHOLES		BOOK NO. PG. SCALE 3/8" = 1'-0" DATE: 8-27-66 DETAIL STANDARD NO. 10 DWG. NO. C-4397



DESIGNED BY <i>John Erickson</i> ENGINEER OF STREETS	APPROVED BY <i>John Erickson</i> ENGINEER OF STREETS	CITY OF DETROIT CITY ENGINEERING DEPARTMENT BUREAU OF STREETS AND HIGHWAYS
DRAWN BY <i>T. M. H. H. H.</i> TRACED BY <i>W. R. Hecke</i> ASST. CITY ENGINEER	CHECKED BY <i>W. R. Hecke</i> CITY ENGINEER	
STD. SEWER MANHOLES CONSTRUCTION ALTERNATES		BOOK NO. PG. SCALE 3/8" = 1'-0" DATE: 8-27-66 DETAIL STANDARD NO. 10 DWG. NO. C-4395A



DESIGNED BY <i>John Erickson</i> ENGINEER OF STREETS	APPROVED BY <i>John Erickson</i> ENGINEER OF STREETS	CITY OF DETROIT CITY ENGINEERING DEPARTMENT BUREAU OF STREETS AND HIGHWAYS
DRAWN BY <i>G. Munn</i> TRACED BY <i>W. R. Hecke</i> ASST. CITY ENGINEER	CHECKED BY <i>W. R. Hecke</i> CITY ENGINEER	
TYPICAL SUMP MANHOLE & L TYPE CATCH BASINS		BOOK NO. PG. SCALE 3/8" = 1'-0" DATE: 8-27-66 DETAIL STANDARD NO. 10 DWG. NO. C-4398



DESIGNED BY <i>John Erickson</i> ENGINEER OF STREETS	APPROVED BY <i>John Erickson</i> ENGINEER OF STREETS	CITY OF DETROIT CITY ENGINEERING DEPARTMENT BUREAU OF STREETS AND HIGHWAYS
DRAWN BY <i>John Erickson</i> TRACED BY <i>W. R. Hecke</i> ASST. CITY ENGINEER	CHECKED BY <i>W. R. Hecke</i> CITY ENGINEER	
DETAILS OF STANDARD MANHOLE FRAME AND COVER		BOOK NO. PG. SCALE AS SHOWN DATE: OCTOBER 14, 1960 DETAIL STANDARD NO. 14 DWG. NO. C-4391

PLAN	CHECKED BY	APPROVED BY <i>Dadun Hardai</i> ENGINEER OF STREETS	CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAU OF STREETS AND HIGHWAYS	CONSTRUCTION AND WIDENING OF I-75 W. SERVICE DR. FROM BEAUBIEN TO WILKINS	SHEET 16 OF 48 SHEETS CONTRACT NO. ASSIGNMENT NO. 99-22-28 DATE JULY, 1999
GRADE	CHECKED BY	APPROVED BY			
ESTIMATE	CHECKED BY	APPROVED BY	SPECIAL DETAILS		
DESCRIPTION	CHECKED BY	APPROVED BY			

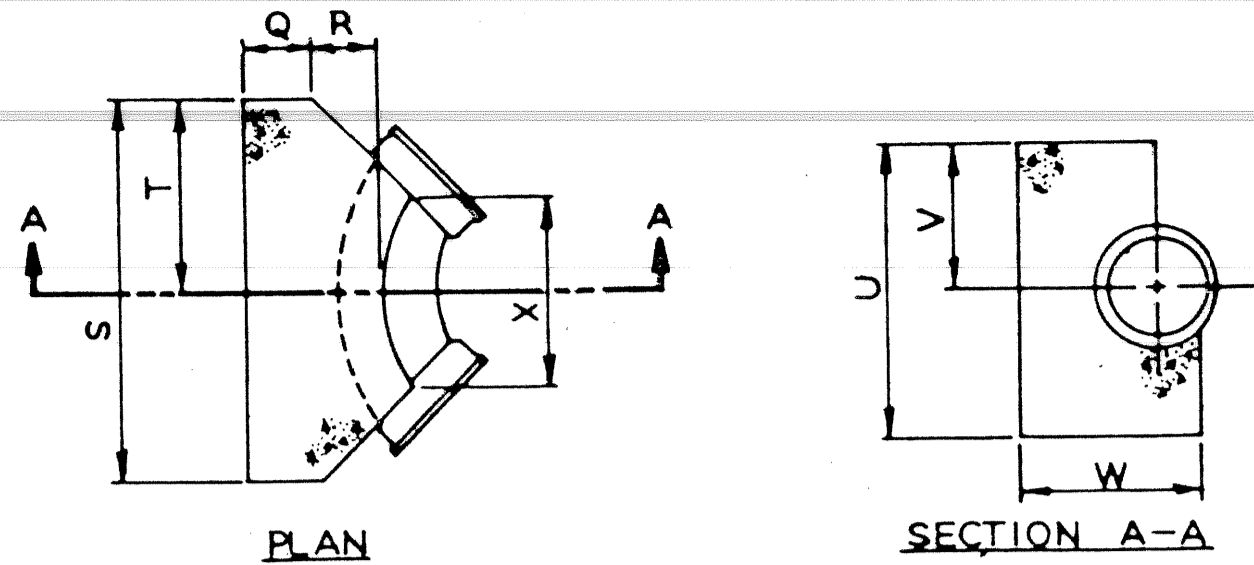
GATE WELL
FRAME & COVER

NO SCALE

city of detroit
water & sewerage department
engineering division

DATE	2/89	V.G.	3/95
BY	N.L.L.		
CHECKED BY			
APPROVED BY			

AL20-234



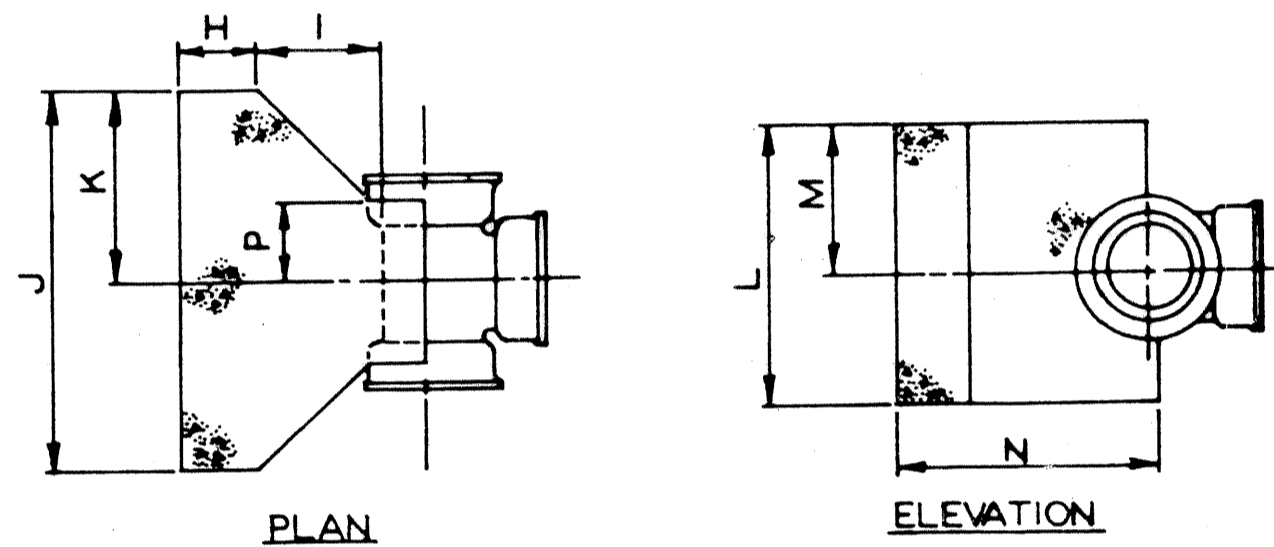
SCHEDULE OF THRUST BLOCK DIMENSIONS

BEND SIZE	Q	R	S	T	U	V	W	X
6"-22 1/2" 44.5"	0'-9"	1'-0"	2'-0"	1'-6"	2'-0"	1'-0"	1'-11"	1'-4"
6"-90"	0'-9"	1'-0"	3'-0"	1'-6"	2'-0"	1'-0"	1'-11"	1'-2"
8"-22 1/2" 44.5"	0'-9"	1'-0"	2'-4"	1'-2"	2'-0"	1'-0"	1'-11"	1'-4"
8"-90"	0'-9"	1'-0"	3'-4"	1'-8"	2'-6"	1'-3"	1'-11"	1'-2"
12"-22 1/2" 44.5"	0'-9"	1'-0"	2'-6"	1'-3"	2'-0"	1'-0"	2'-0"	1'-4"
12"-45"	0'-9"	1'-4"	3'-6"	1'-9"	2'-6"	1'-3"	2'-4"	1'-4"
12"-90"	0'-9"	1'-4"	5'-6"	2'-9"	3'-0"	1'-6"	2'-4"	1'-8"
16"-22 1/2" 44.5"	1'-0"	1'-8"	3'-4"	1'-8"	2'-6"	1'-3"	3'-0"	1'-2"
16"-45"	1'-0"	1'-8"	5'-4"	2'-8"	3'-0"	1'-6"	3'-0"	2'-6"
16"-90"	1'-0"	1'-8"	6'-0"	3'-0"	3'-0"	2'-6"	3'-0"	2'-8"

DETAIL OF STANDARD THRUST BLOCKS FOR BENDS
Not to Scale

NOTES

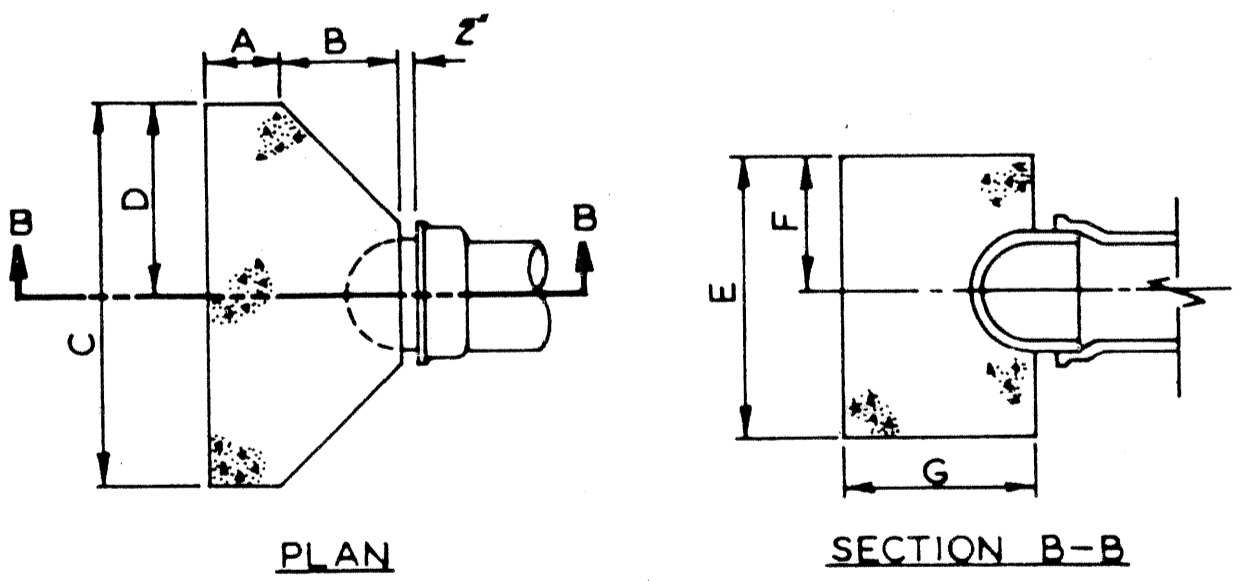
The bearing face of all Thrust Blocks shall be poured against undisturbed earth. Thrust Blocks when required for vertical bends are shown by special details.



SCHEDULE OF THRUST BLOCK DIMENSIONS

TEE SIZE	H	I	J	K	L	M	N	P
6" x 6"	0'-9"	1'-0"	2'-6"	1'-3"	1'-6"	0'-9"	2'-3"	0'-6"
8" x 8"	0'-9"	1'-0"	3'-0"	1'-6"	2'-0"	1'-0"	2'-3"	0'-5"
10" x 10"	0'-9"	1'-2"	3'-6"	1'-9"	2'-6"	1'-3"	2'-7"	0'-7"
12" x 8"	0'-9"	1'-0"	3'-0"	1'-6"	2'-0"	1'-0"	2'-5"	0'-6"
12" x 10"	0'-9"	1'-4"	4'-0"	2'-0"	3'-0"	1'-6"	2'-9"	0'-8"
12" x 12"	0'-9"	1'-4"	4'-0"	2'-0"	3'-0"	1'-6"	2'-9"	0'-8"
16" x 8"	0'-9"	1'-0"	3'-0"	1'-6"	2'-0"	1'-0"	2'-9"	0'-6"
16" x 12"	0'-9"	1'-4"	4'-0"	2'-0"	3'-0"	1'-6"	3'-1"	0'-8"
16" x 16"	1'-0"	1'-8"	5'-0"	2'-6"	4'-0"	2'-0"	3'-8"	0'-11"

DETAIL OF STANDARD THRUST BLOCKS FOR TEES
Not to Scale

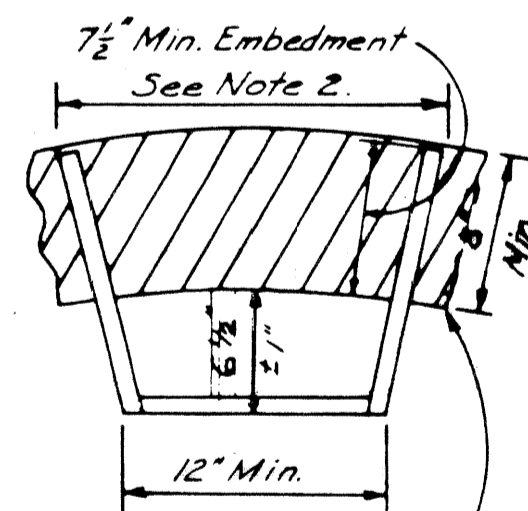


SCHEDULE OF THRUST BLOCK DIMENSIONS

PLUG SIZE	A	B	C	D	E	F	G
6"	0'-9"	1'-2"	3'-0"	1'-6"	2'-0"	1'-0"	1'-11"
8"	0'-9"	1'-2"	3'-0"	1'-6"	2'-0"	1'-0"	1'-11"
12"	0'-9"	1'-4"	4'-0"	2'-0"	3'-0"	1'-6"	2'-1"
16"	1'-0"	1'-8"	5'-0"	2'-6"	4'-0"	2'-0"	2'-8"

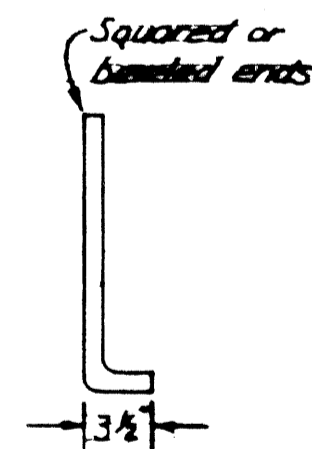
CAP SIZE	H	I	J	K	L	M	N
6"	0'-9"	1'-2"	3'-0"	1'-6"	2'-0"	1'-0"	1'-11"
8"	0'-9"	1'-2"	3'-0"	1'-6"	2'-0"	1'-0"	1'-11"
12"	0'-9"	1'-4"	4'-0"	2'-0"	3'-0"	1'-6"	2'-1"
16"	1'-0"	1'-8"	5'-0"	2'-6"	4'-0"	2'-0"	2'-8"

DETAIL OF STANDARD THRUST BLOCKS FOR PLUGS AND CAPS
Not to Scale



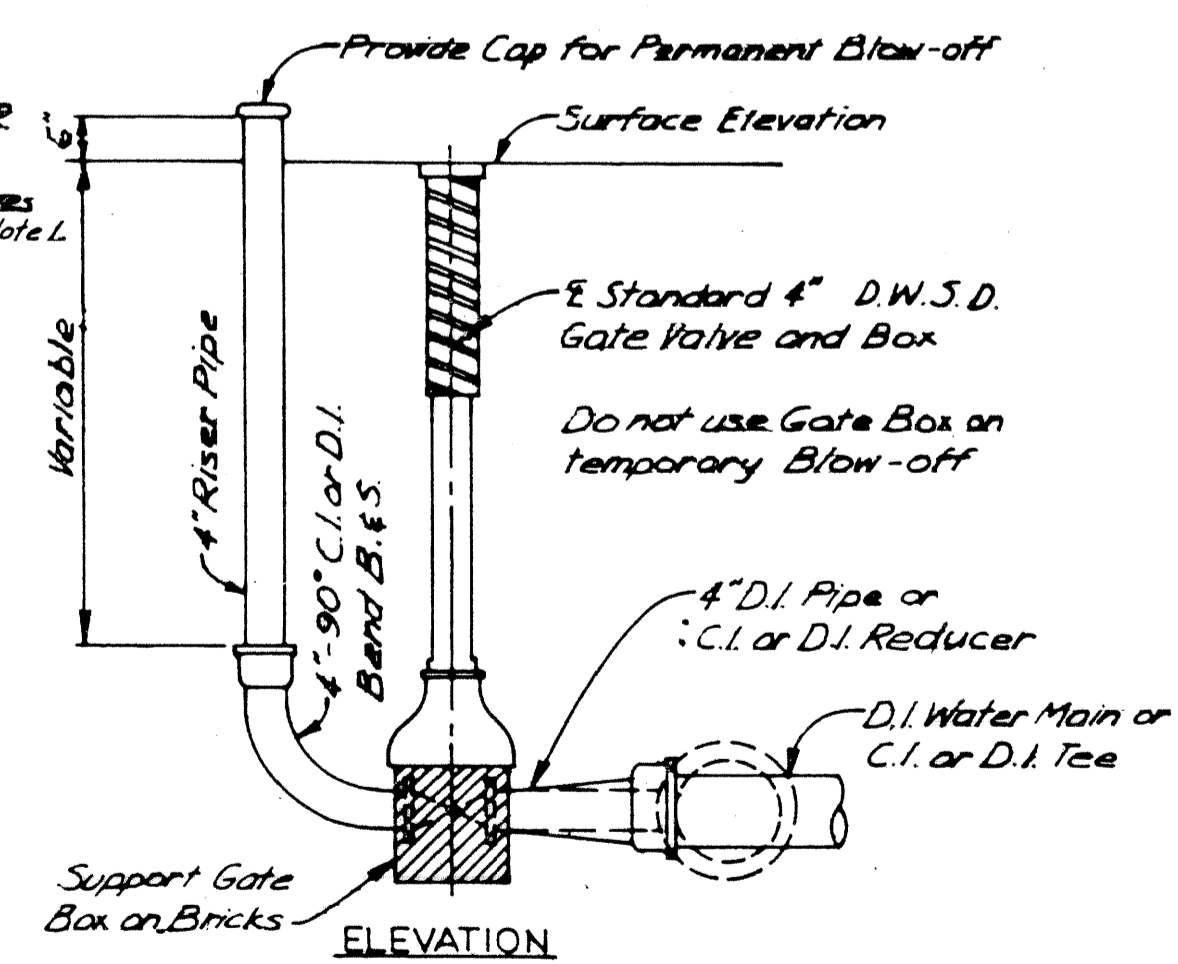
ALUMINUM MANHOLE STEP
Not to Scale

Note: Manhole steps shall conform to the requirements for Aluminum Alloy Extruded Bars, Rods, Shapes and Tubes, A.S.T.M. B.221 (current), Alloy 6061-Temper T-6, or approved equal.

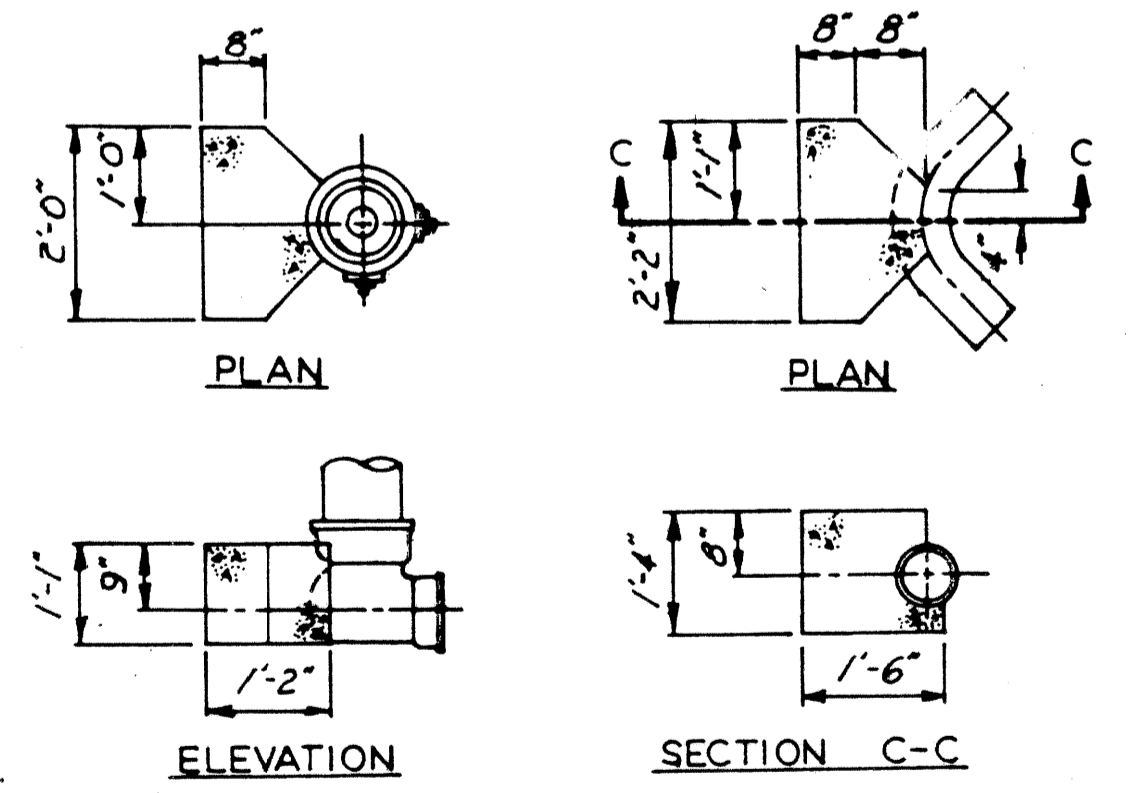


CROSS SECTION OF STEP

Note: 1. In lieu of grooves, alternate foot hold configurations will be considered for approval. 2. Flared legs shall be radial to the manhole wall.

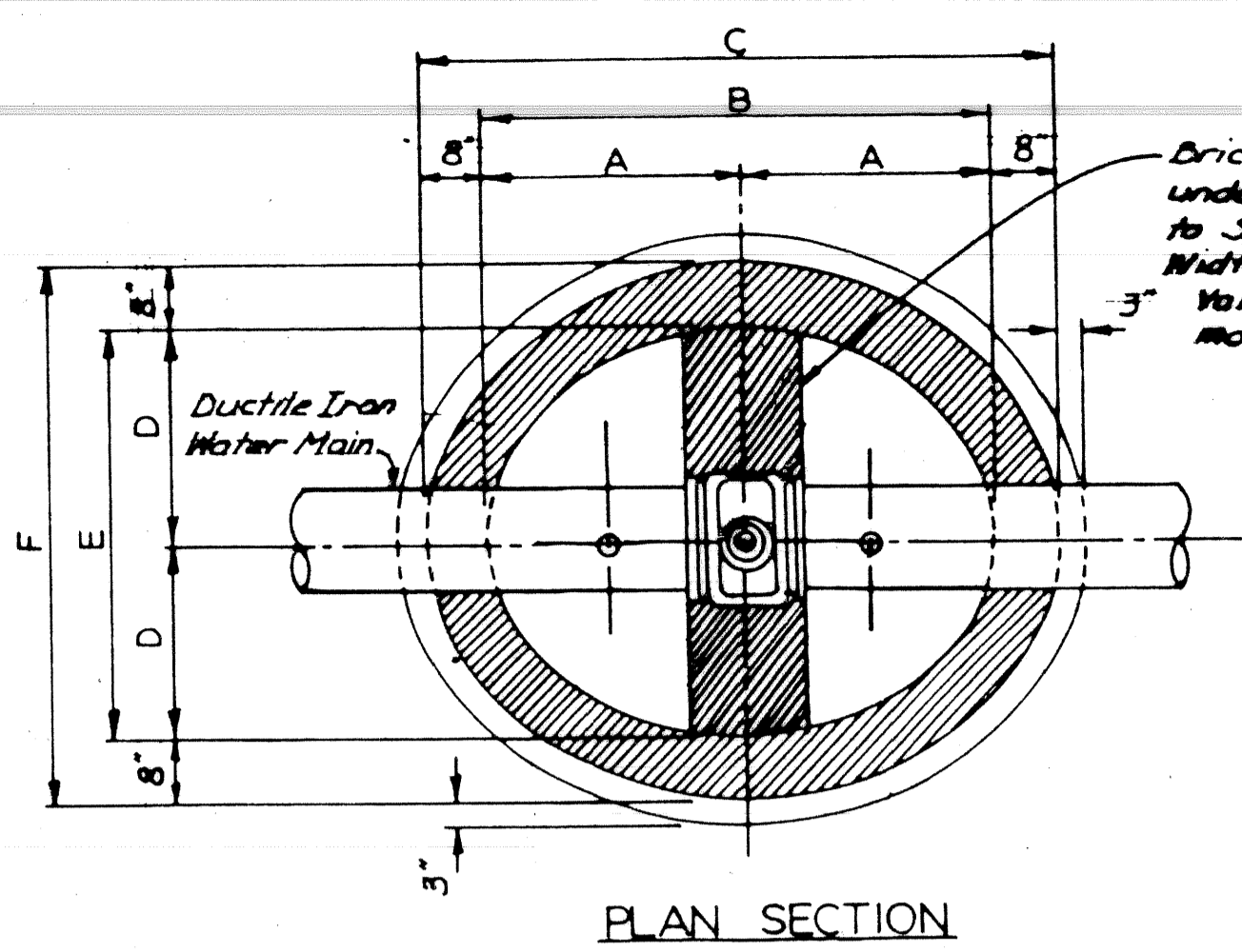


DETAIL OF 4" BLOW-OFF
Not to Scale

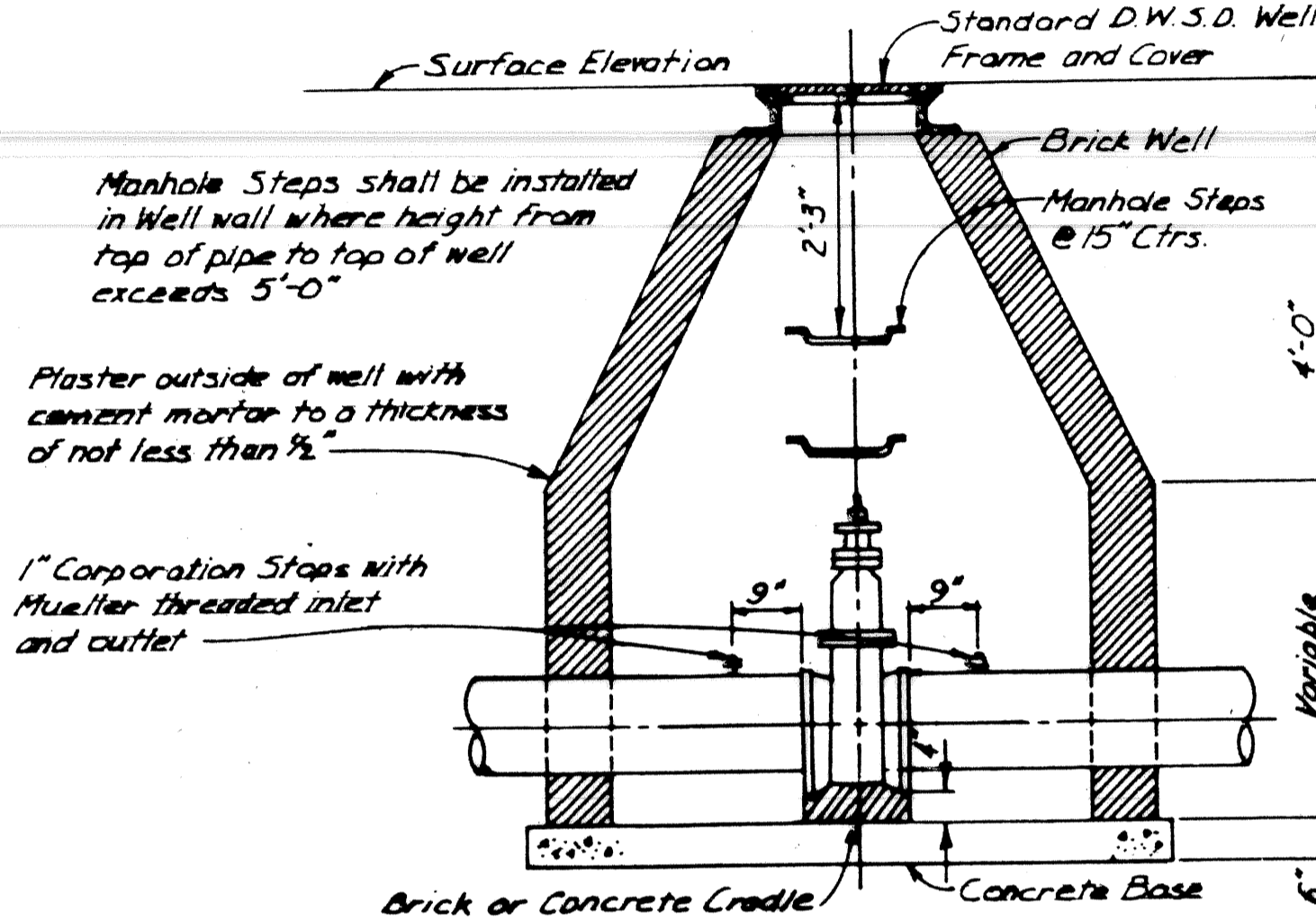


THRUST BLOCK FOR 6" HYDRANT
Not to Scale

Note: The bearing face of Thrust Blocks shall be poured against undisturbed earth.



PLAN SECTION

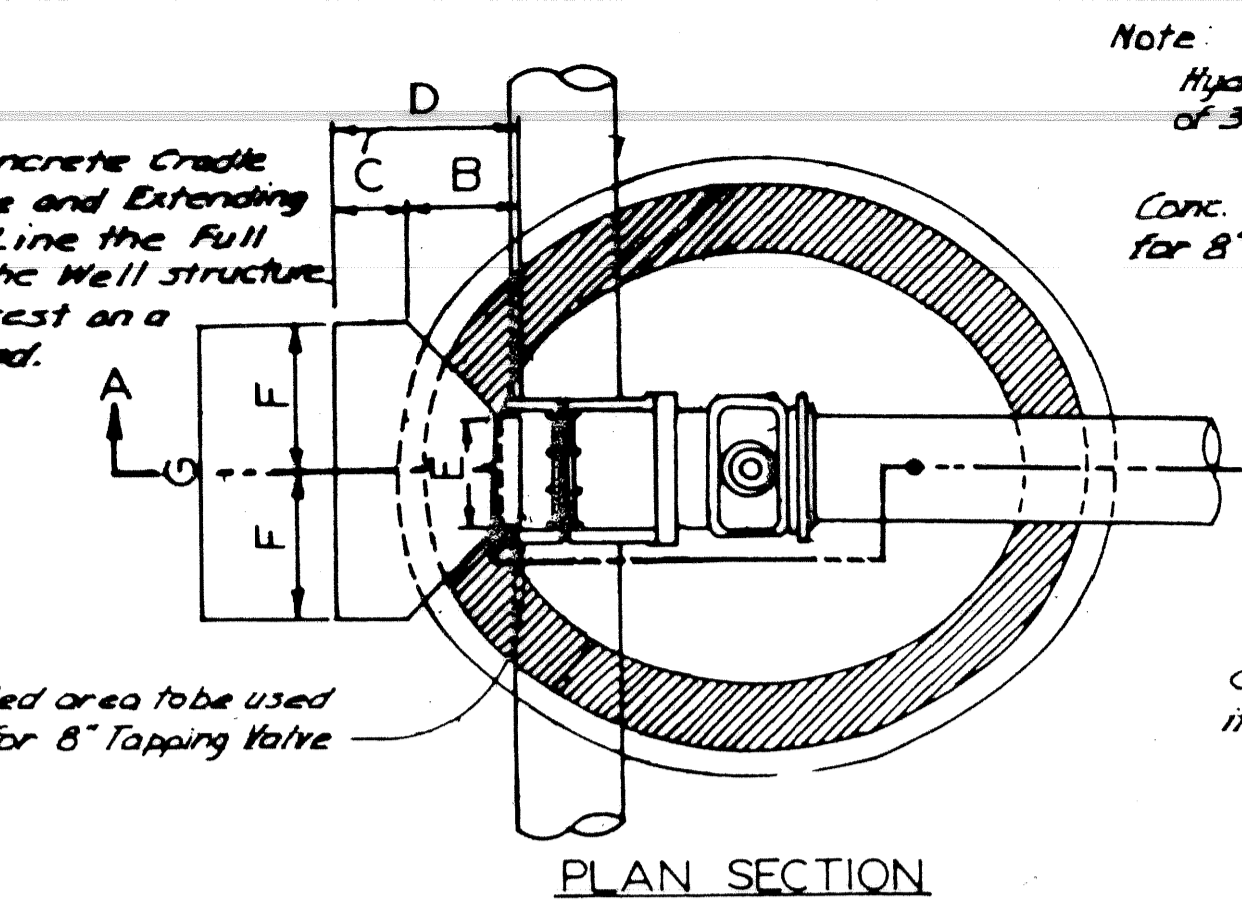


SECTION THROUGH GATE WELL

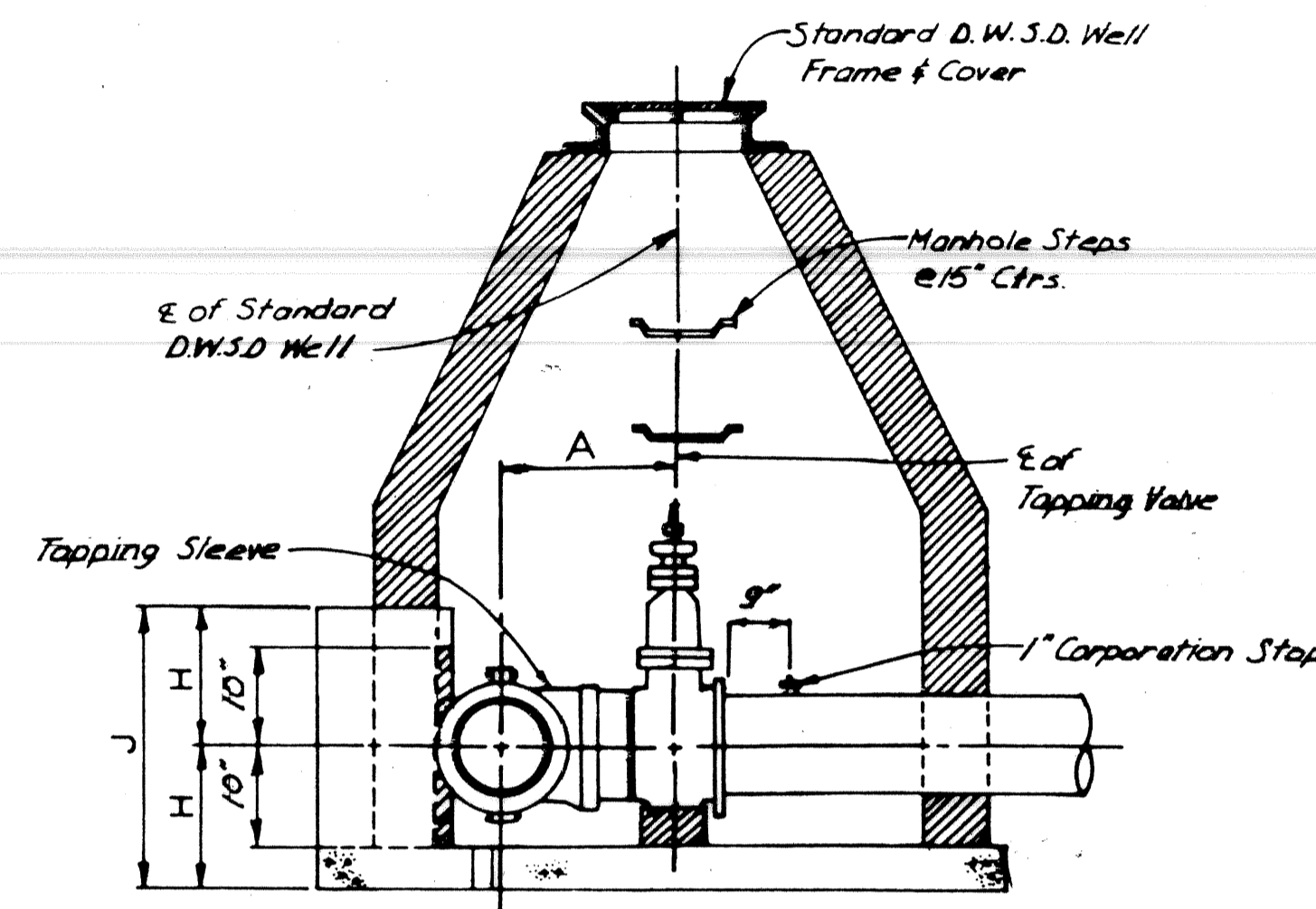
SCHEDULE OF GATE WELL DIMENSIONS

SIZE	A	B	C	D	E	F
6"	2'-6"	5'-0"	6'-4"	2'-0"	4'-0"	5'-4"
8"	2'-6"	5'-0"	6'-4"	2'-0"	4'-0"	5'-4"
12"	2'-9"	5'-6"	6'-10"	2'-3"	4'-6"	5'-10"
16"	3'-0"	6'-0"	7'-4"	2'-9"	5'-6"	6'-10"

DETAIL OF STANDARD GATE WELLS
Not to Scale



PLAN SECTION

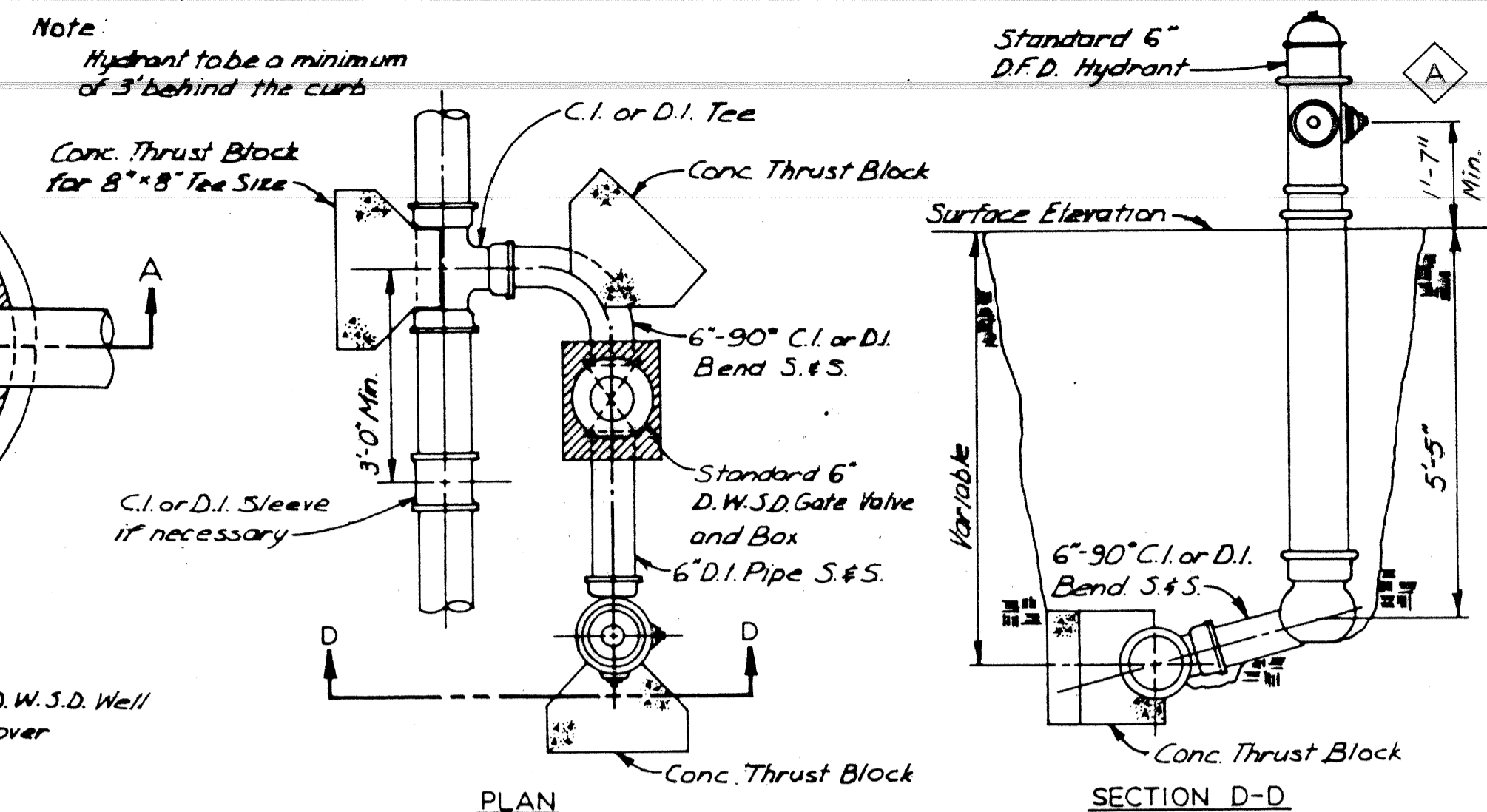


SECTION A-A

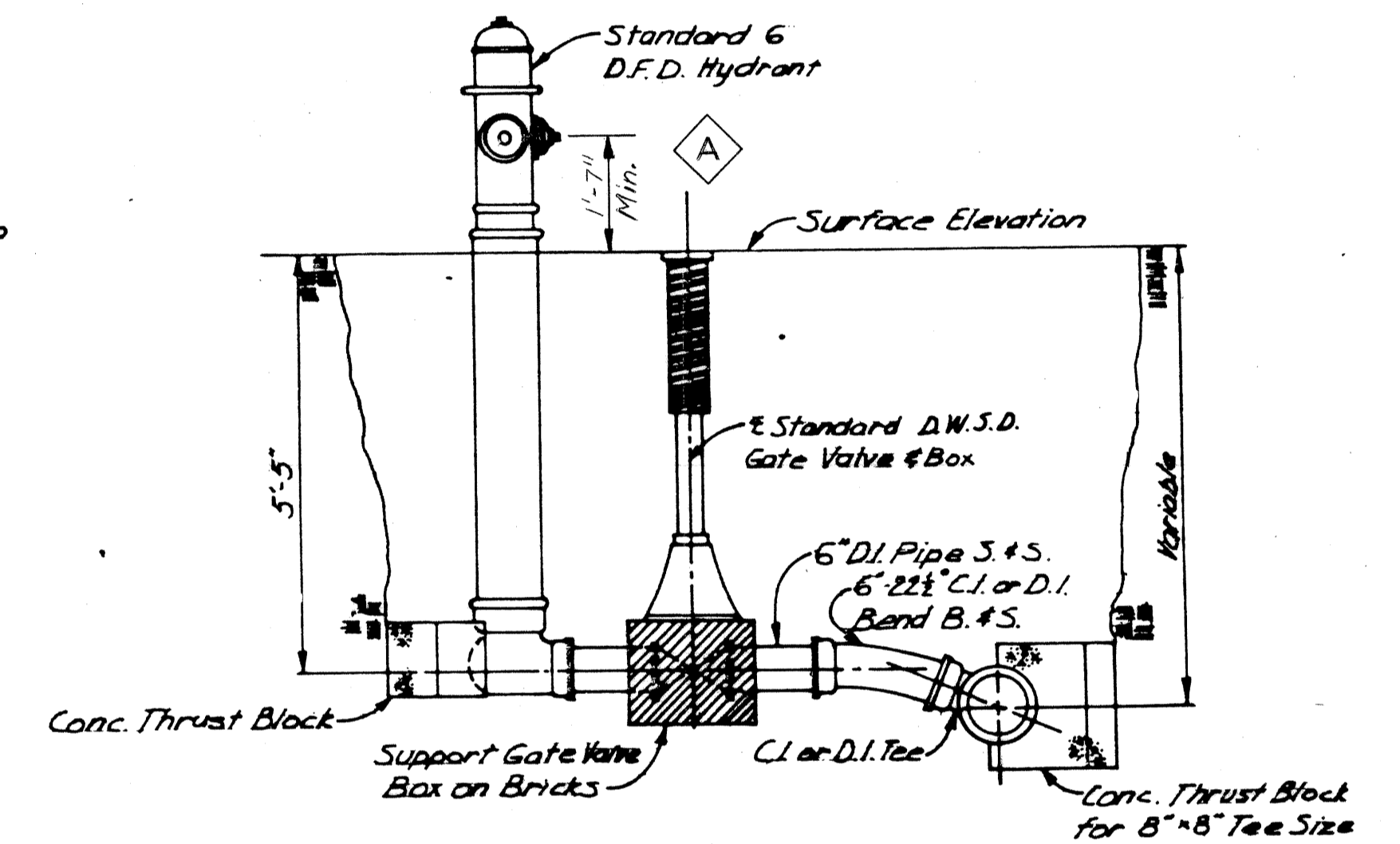
SCHEDULE OF STANDARD THRUST BLOCK DIMENSIONS FOR TAPPING VALVE

SIZE	A	B	C	E	F	G	H	J
8" x 8"	1'-6"			0'-7"				
12" x 8"	1'-9"			0'-7"				
16" x 8"	1'-11 1/2"			0'-7 1/2"				
12" x 12"	1'-8 1/2"	1'-6"	0'-9"	2'-3"	0'-7"	1'-9"	3'-6"	1'-6"
16" x 12"	1'-11 1/2"	1'-6"	0'-9"	2'-3"	0'-10 1/2"	1'-9"	3'-6"	1'-6"
16" x 16"	2'-2"	2'-7"	1'-0"	3'-7"	0'-10 1/2"	2'-11"	5'-10"	1'-8"

DETAIL OF STANDARD THRUST BLOCKS FOR TAPPING VALVES
Not to Scale



DETAIL OF 6" HYDRANT INSTALLATION OFF SET
Not to Scale

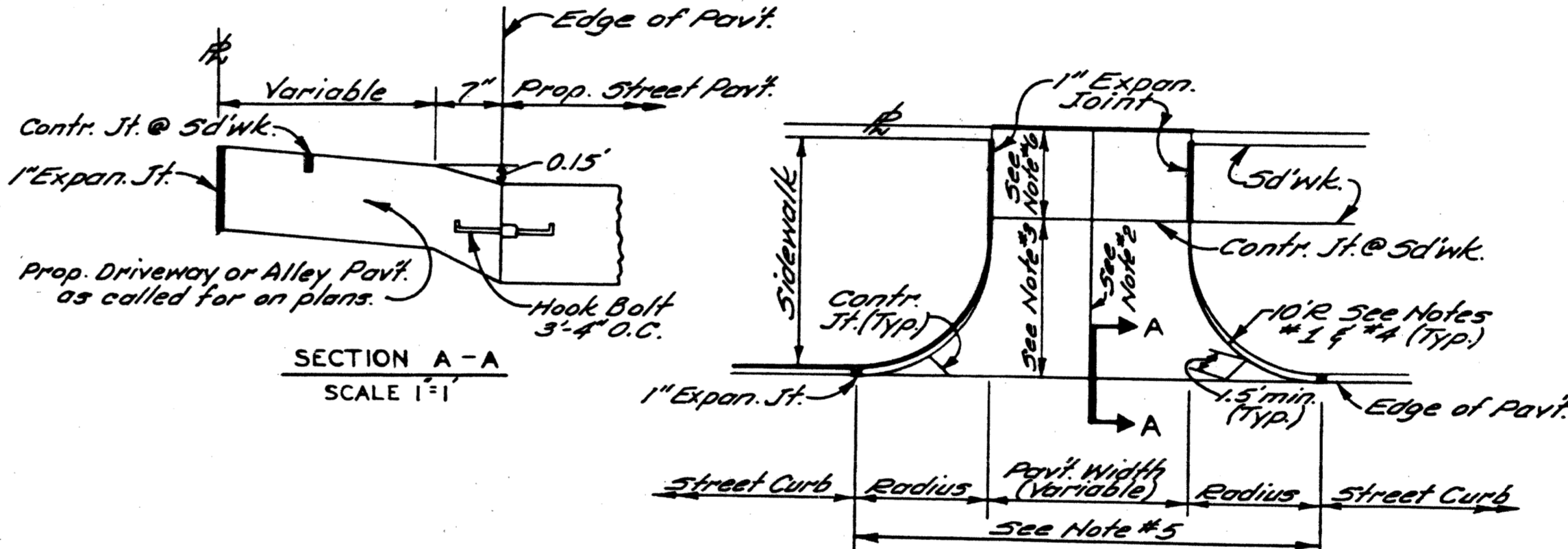


DETAIL OF 6" HYDRANT INSTALLATION STRAIGHT AWAY
Not to Scale

DESIGNED BY		APPROVED		SHEET 17 OF 48	
DRAWN BY R.A.C.				PW -	
CHECKED BY R.T.D.		DIRECTOR OF ENGINEERING		A.O. NO. 99-22-28	
APRVD. DATE 7/97		DIRECTOR		DATE JULY, 1999	
CO-OR.		SCALE AS SHOWN		SECTION MAP	
DESCRIPTION		MISCELLANEOUS DETAILS		YEAR	
REVISIONS		DATE		RABE	
				SECTION	
				PORTION CODE	
				WORK ORDER NO.	

COLOR	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
BLACK	---	PROPERTY AND LOT LINES	---	GUARD RAIL	○	SEWER MANHOLE
	---	PROPOSED CURB LINES AND HEADERS AT RETURNS	○	P.L.C. MANHOLE	○	PLC MANHOLE
	---	EXISTING CURB LINES OR EDGE OF PAVEMENT	○	WATER MANHOLE OR GRATE	○	WATER MANHOLE OR GRATE
	---	PROPOSED CURB OR PAVING ON INTERSECTING STREET	○	GAS MANHOLE OR GRATE	○	GAS MANHOLE OR GRATE
	---	PROPOSED SEWER TO CATCH BASINS	○	WESTERN UNION MANHOLE	○	WESTERN UNION MANHOLE
	---	EXISTING LATERAL SEWERS	○	MICHIGAN BELL MANHOLE	○	MICHIGAN BELL MANHOLE
	---	EXISTING PUBLIC SEWERS	○	EDISON STEAM MANHOLE	○	EDISON STEAM MANHOLE
	---	EXISTING GAS LINES	○	EDISON ELECTRIC MANHOLE	○	EDISON ELECTRIC MANHOLE
	---	EXISTING WATER LINES	○	FIRE DEPT MANHOLE	○	FIRE DEPT MANHOLE
	---	ELEV OF SEWER INVERT	○	POLICE DEPT MANHOLE	○	POLICE DEPT MANHOLE
	---	PROPOSED C.B. M.H. & INLET SEWER	○	D.S.R. MANHOLE	○	D.S.R. MANHOLE
	---	ELEV	○	FIRE DEPT STANDARD HYDRANT	○	FIRE DEPT STANDARD HYDRANT
	---	EXISTING C.B. M.H. & INLET SEWERS	○	FIRE DEPT HIGH PRESSURE HYDRANT	○	FIRE DEPT HIGH PRESSURE HYDRANT
	---	PROPOSED C.B. M.H. & INLET SEWERS ON INTERSECTING STREETS	○	FIRE DEPT CALL BOX	○	FIRE DEPT CALL BOX
	---		○	FIRE DEPT HIGH PRESSURE MANHOLE	○	FIRE DEPT HIGH PRESSURE MANHOLE
	---		○	POLICE DEPT CALL BOX	○	POLICE DEPT CALL BOX
	---		○	P.L.C. LIGHT POLE	○	P.L.C. LIGHT POLE
	---		○	P.L.C. POLE	○	P.L.C. POLE
	---		○	TELEPHONE POLE	○	TELEPHONE POLE
	---		○	EDISON POLE	○	EDISON POLE
	---		○	TREE PLANTER	○	TREE PLANTER
	---		○	DETROIT EDISON ELECTRIC CONDUIT	○	DETROIT EDISON ELECTRIC CONDUIT
	---		○	DETROIT EDISON STEAM CONDUIT	○	DETROIT EDISON STEAM CONDUIT
	---		○	WESTERN UNION BUETS	○	WESTERN UNION BUETS
	---		○	MICHIGAN BELL TELEPHONE DUCTS	○	MICHIGAN BELL TELEPHONE DUCTS
	---		○	P.L.C. CONDUITS	○	P.L.C. CONDUITS
	---		○	DETROIT FIRE OR POLICE DEPT CONDUITS (P.L.C. COMMUNICATIONS)	○	DETROIT FIRE OR POLICE DEPT CONDUITS (P.L.C. COMMUNICATIONS)

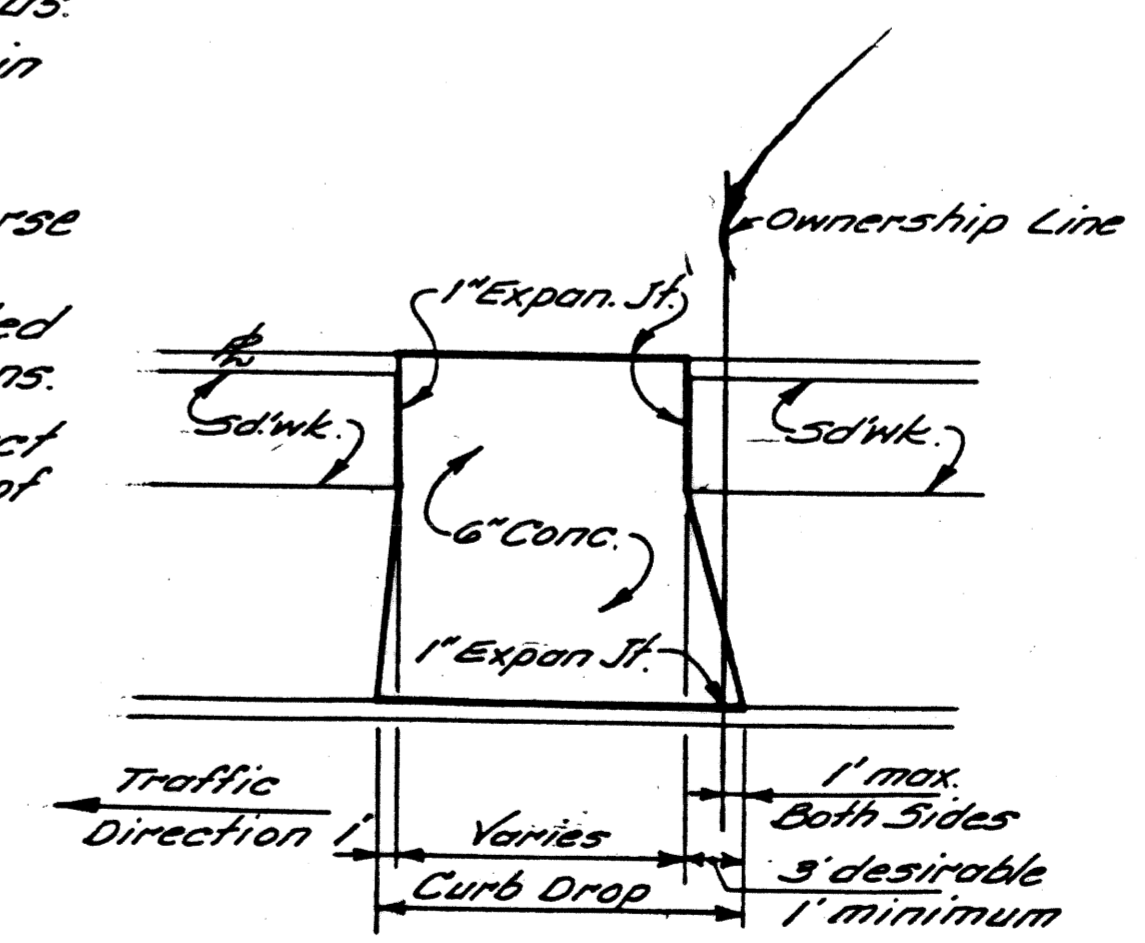
DESIGNED BY		CITY OF DETROIT		STANDARD SYMBOLS FOR UTILITIES	
DRAWN BY		DEPARTMENT OF PUBLIC WORKS			
CHECKED BY		CITY ENGINEER'S OFFICE			
APPROVED BY		BUREAU OF DESIGN			
DATE		PAVING		SCALE	
SHEET NO.		DETAIL NO. 25		C-902-A	



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 &.
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'

CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAU OF STREETS AND HIGHWAYS			CONSTRUCTION AND WIDENING OF I-75 W. SERVICE DR. FROM BEAUBIEN TO WILKINS		
APPROVED: <i>Allen E. Pappas</i> ENGINEER OF EXPRESSWAYS			SHEET 18 OF 48 SHEETS		
DRAWN BY: J.R.D.			CONTRACT No.		
CHECKED BY: N.B.			ASSIGNMENT No. 99-22-28		
SPECIAL STANDARDS & SPECIAL DETAILS			DATE JULY, 1999		

Q U A N T I T Y S H E E T

A S P E R P L A N S

I T E M S

ITEMS	SHEET NO'S.	PLANS									
		3 & 4	6	7	8	9	11	12	13		
TOTALS	UNITS	TYPICAL CROSS SECTIONS	REMOVALS	BRUSH TO STA 1 + 310	STA 1 + 310 TO STA 1 + 550	STA 1 + 550 TO WILKINS	UTILITIES	PAVEMENT MARKINGS	CONSTRUCTION SEQUENCE		
REMOVING TREE, 200 - 450 mm	2	EACH		2							
REMOVING PAVEMENT	1,370	SQ m		1,370							
REMOVING SIDEWALK	1,000	SQ m		1,000							
REMOVING CURB	440	METER		440							
REMOVING FENCE	180	METER		180							
RELOCATING HIGH WROUGHT IRON FENCE - 1.83 m	200	METER			200						
CHAIN LINK FENCE - 1.22 m	195	METER			195						
REMOVING MASONRY AND CONCRETE STRUCTURES	20	CU m	10	10		50					
REMOVE PAVEMENT FOR BUTT JOINT	50	SQ m									
BASEMENT CLEANOUT	20	CU m	10	10							
ABANDONING DRAINAGE STRUCTURE	2	EACH		2							
EARTH EXCAVATION	2,500	CU m	500		1,680	120	200				
SUBGRADE UNDERCUTTING TYPE II	500	CU m	500								
BITUMINOUS SHOULDER	150	TON			150						
LANE TIE EPOXY ANCHORED	1,520	EACH			60	720	740				
EMBANKMENT, CIP	270	CU m			270						
AGGREGATE BASE, 100 mm	240	CU m			170	30	40				
GRANULAR MATERIAL CLASS II	50	CU m									
REMOVING BITUMINOUS SURFACE	100	SQ m				35	65				
BITUMINOUS MIXTURE - NO. 110L, 20AA	480	TON			20	225	235				
BITUMINOUS MIXTURE - NO. 110T, 20AA	450	TON			20	210	220				
COLD-MILLING BITUMINOUS SURFACE	4,640	SQ m		4,640							
BITUMINOUS APPROACH	20	TON				5	15				
CONCRETE PAVEMENT - NONREINFORCED 200 mm	120	SQ m				60	60				
CONDITIONING EXISTING PAVEMENT	10	TON									
CONCRETE BASE PAVEMENT W/INTEGRAL CURB-REINFORCED 230 mm	2,250	SQ m			1,730	220	300				
CEMENT	10	TON	10								
REMOVING PAVEMENT (REPAIR)	230	SQ m	230								
CONCRETE PAVEMENT REPAIR - NONREINFORCED 260 mm	230	SQ m	230								
CLASS C 76M-III SEWER, 300 mm, TRENCH DETAIL B	70	METER			70						
CLASS C 76M-IV SEWER, 300 mm, TRENCH DETAIL B	20	METER			20						
HAND PATCHING	10	TON									
SEWER TAP, 300 mm	1	EACH			1						
MISC. SEWER CLEANOUT-NON-PARTICIPATING	150	METER	150								
MISC. CLEANING DRAINAGE STRUCTURE-NON-PARTICIPATING	20	EACH			7	7	6				
ADJUSTING WATER SHUTOFF	4	EACH						4			
ADJUSTING DRAINAGE STRUCTURE COVER, CASE 1	22	EACH						22			
ADJUSTING DRAINAGE STRUCTURE COVER, CASE 2	5	EACH						5			
MISC. RECONSTRUCTING DRAINAGE STRUCTURE, CASE 1	4	EACH	4								
MISC. RECONSTRUCTING DRAINAGE STRUCTURE, CASE 11	1	EACH	1								
MISC. CATCH BASIN "A"	1	EACH			1						
MISC. CATCH BASIN "B"	1	EACH			1						
MISC. CATCH BASIN "BT"	2	EACH			2						
MISC. MANHOLE - STANDARD	1	EACH			1						
MISC. STRUCTURE COVER	3,100	KG	500				2,600				
SIDEWALK, CONCRETE, 100mm	1,190	SQ m			290	530	370				
SIDEWALK, CONCRETE, 150 mm	65	SQ m			5	35	25				
MISC. SIDEWALK RAMPS-MODIFIED	30	SQ m			5	5	15				
MINOR TRAFFIC DEVICES	1	LSUM	1								
FLAG CONTROL	1	LSUM	1								
FIELD OFFICE	3	MOS	3								
MOBILIZATION	1	LSUM	1								
LIGHTED ARROW, TYPE C - FURNISHED	4	EACH							4		
LIGHTED ARROW, TYPE C - OPERATED	4	EACH							4		
PLASTIC DRUM, LIGHTED - FURNISHED	130	EACH							130		
PLASTIC DRUM, LIGHTED - OPERATED	90	EACH							90		
BARRICADE, TYPE III, LIGHTED - FURNISHED	4	EACH							4		
BARRICADE, TYPE III, LIGHTED - OPERATED	4	EACH							4		
SIGN, TYPE B TEMPORARY	50	SQ m							50		
STANDARD STREET BARRICADE	1	EACH									
REMOVING HYDRANT-METHOD I	2	EACH						2			
REMOVING HYDRANT-METHOD II	1	EACH						1			
FIRE HYDRANT	4	EACH						4			
CLASS A SODDING	500	SQ m			500						
SEEDING MIXTURE TUF	5	KG			5						
WATER	50	KL	50								
TOPSOIL SURFACE, FURN. LM	60	CU m			60						
INLAY COLD PLASTIC PAVEMENT MARKING, 100 mm, YELLOW	1,550	METER							1,550		
INLAY COLD PLASTIC PAVEMENT MARKING, 150 mm, CROSSWALK	40	METER							40		
INLAY COLD PLASTIC PAVEMENT MARKING, 450 mm, STOP BAR	10	METER							10		