

CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION 1979 STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS.

IN CO-OPERATION WITH MICHIGAN DEPARTMENT OF TRANSPORTATION

AND FEDERAL HIGHWAY ADMINISTRATION

FEDERAL AID URBAN PROJECT NO. MICHIGAN M 2000 (170)-①, M 2000 (217)-②

CONTROL SECTION MU 82400 JOB NO. 17662A-①

15892A-②

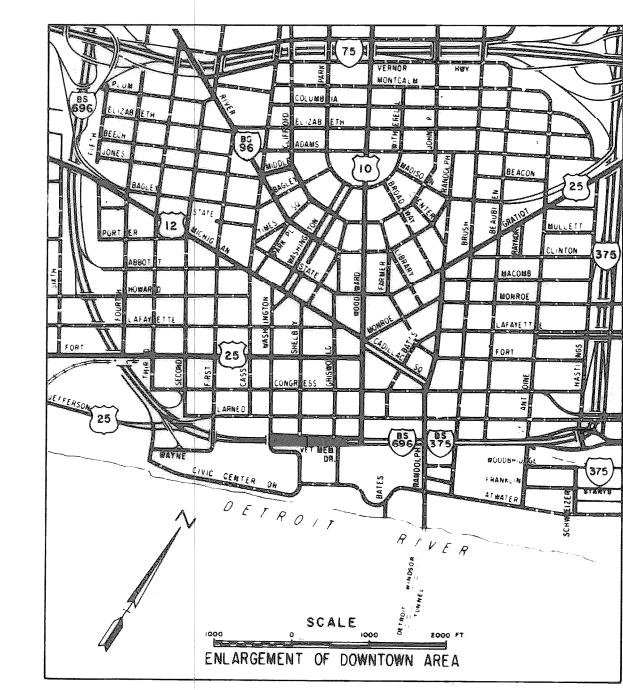
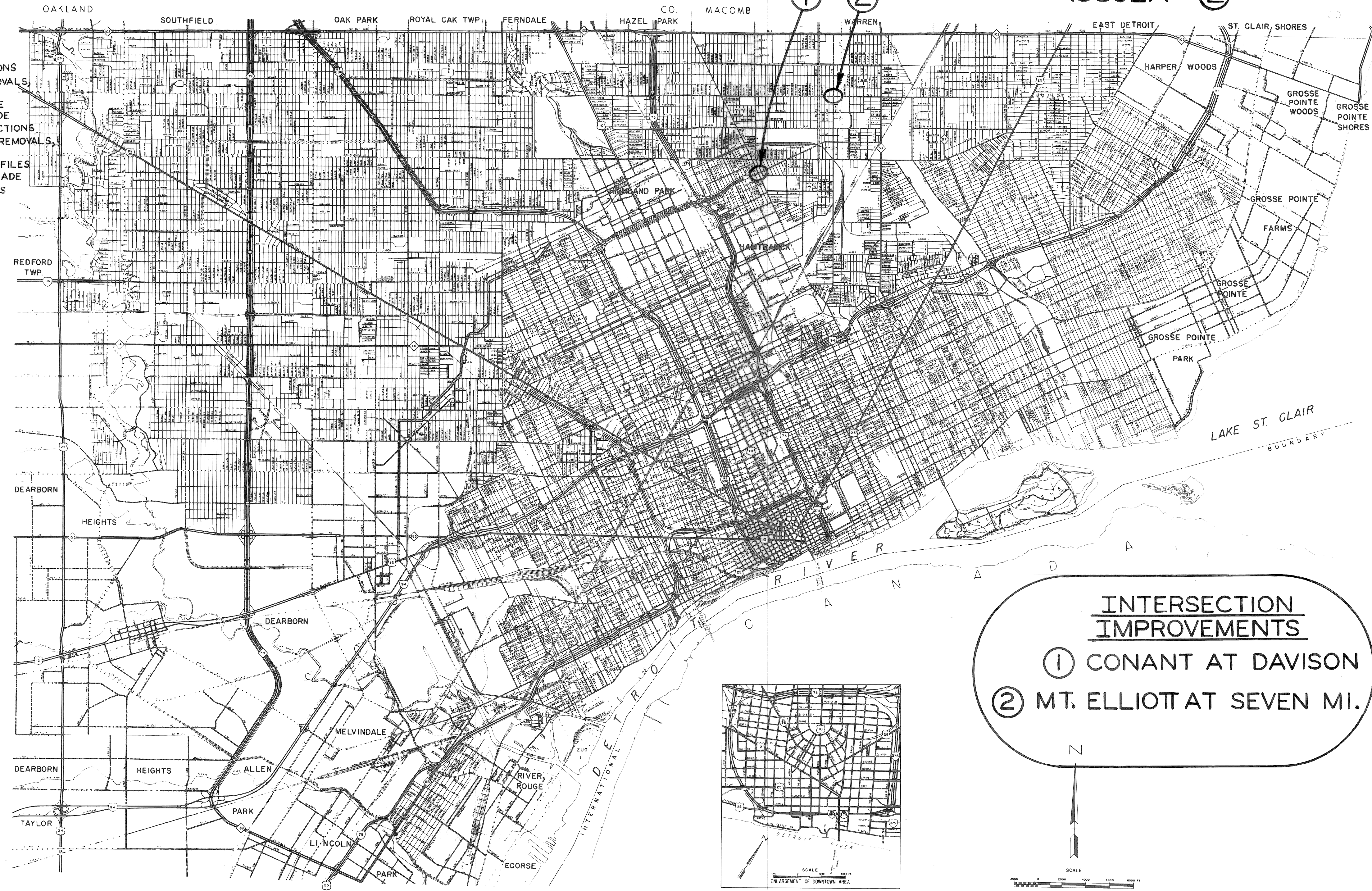
F.H.W.A. REGION	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MICH.				
STREET	CITY	COUNTY	TWP.	SHEET NO.	TOTAL SHEETS

INDEX OF SHEETS

2	CONANT-DAVISON TYPICAL SECTIONS
3	" " UTILITIES, REMOVALS & ALIGNMENT
4	" " PLAN & PROFILE
5	DAVISON - KLINGER DETAILED GRADE
6	MT ELLIOTT - 7 MILE TYPICAL SECTIONS
7	" " ALIGNMENT, REMOVALS, & UTILITIES
8	" " PLAN & PROFILES
9	" " DETAILED GRADE
10-13	SPECIAL STANDARDS & DETAILS
14	QUANTITY SHEET
15-39	PLD ALTERATIONS
40	PLD QUANTITIES

STANDARD PLANS

I 28C	I 43C
I 29D	I 45C
I 39G	I 784D
I 40D	I 100A
I 41D	I 124C
I 42C	I 125F



INTERSECTION IMPROVEMENTS

① CONANT AT DAVISON

② MT. ELLIOTT AT SEVEN MI.

TRAFFIC COUNTS

7 Mi Rd 15,000 ADT

Davison Ave 32,000 ADT

UFO 724 - ①

ITEM NO. UFO 934 - ②

CONTRACT FOR G, DS, P, & UTILITIES

LOCAL AUTHORITY APPROVAL
CITY OF DETROIT
CITY ENGINEERING DIVISION
DEPARTMENT OF PUBLIC WORKS

APPROVED BY: John J. Covert DATE: 1/10/62
ASSISTANT CITY ENGINEER

APPROVED BY: Allen E. Prager DATE: 1/10/62
CITY ENGINEER

PREPARED UNDER SUPERVISION OF

Allen E. Prager 09216
REGISTERED PROFESSIONAL ENGINEER REGISTRATION NO.

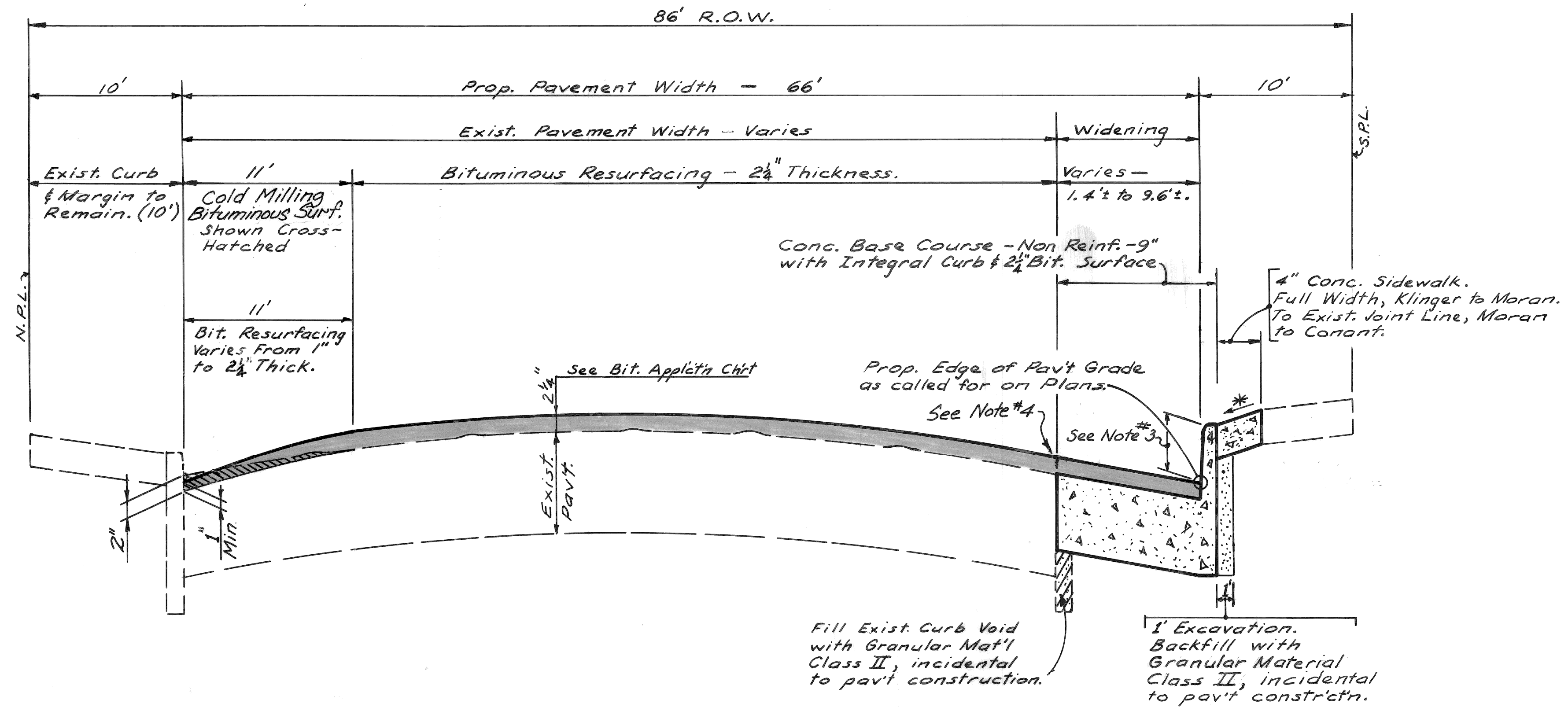
CITY OF DETROIT
ORGANIZATION

DETROIT, MICHIGAN
ADDRESS

(SEAL)

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
17662A-15892A-1			

M2000 (170), (217) - 17662A, 15892A - Item UFO 724, UFO 934



TYPICAL CROSS-SECTION
DAVISON
KLINGER TO CONANT

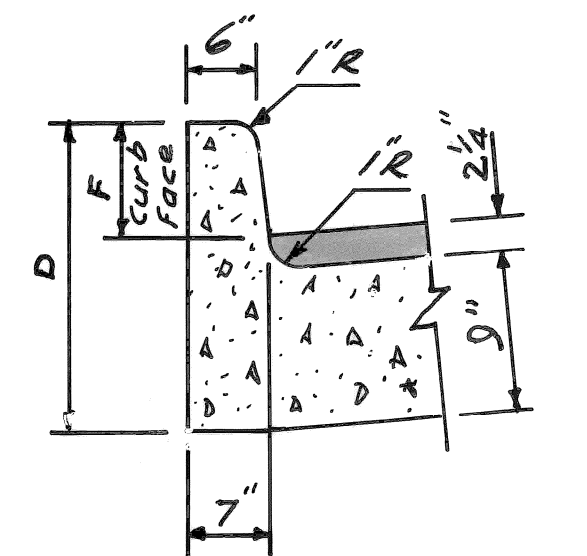
BITUMINOUS APPLICATION CHART			
ITEM	Rate of Application	Estimated Thickness	Asphalt Penetration
Bit. Mixture No. 1100L, 20AA	130 #/sq. ft.	1/2 inch	85-100
Bit. Mixture No. 1100T, 20AA	120 #/sq. ft.	1 inch	85-100
Bit. Bond Coat 0-0.10 Gal./Sq.Yd. to Rigid Bases and 0-0.05 Gal./Sq.Yd. Tack Coat between layers.			

* Full sidewalk shall slope at 3/8 inch per foot unless the Engineer determines otherwise to meet existing conditions. The Engineer will choose within these limits: 1/4 inch per ft. min to 3/4 inch per ft max.

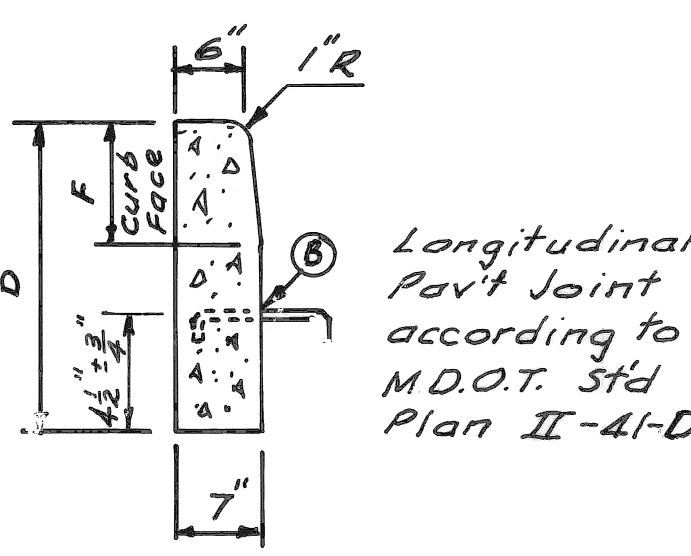
ESTIMATED QUANTITIES FOR USE AT THE DISCRETION OF THE ENGINEER†	
Removing Old Pavement (Patching)	5 Sq. Yds.
Conc. Pav't Patching, Type FS, 9", Nonreinforced	5 Sq. Yds.
Subgrade Undercutting, Type II	25 Cu. Yds.
4" Concrete Sidewalk, Type II	360 Sq. Ft.
Removing Sidewalk	40 Sq. Yds.
Cleaning Existing Storm Drainage Structures	5 Each
Class A Soading	25 Sq. Yds.
Topsoil Surface - 3"	25 Sq. Yds.
Water	1.1 Units
Sewer Cleanout	150 Lin. Ft.
Cement	5 Tons
Concrete Curb, Detail X	35 Lin. Ft.
Removing Drainage Structures	1 Each
Catch Basin, 7'-10"-III, Trench Detail B	1 Each
12" Sewer, C-76-III, Trench Detail B	20 Lin. Ft.
Conditioning Existing Pavement	1 Ton

† Quantities estimated for use throughout the 2 intersection improvements.

CURB DIMENSIONS	
FACE	DEPTH
5"	16 1/4"
6"	17 1/4"
7"	18 1/4"



INTEGRAL CURB



CONCRETE CURB
DETAIL "X"

Longitudinal Pav't Joint according to M.D.O.T. Std Plan II-41-D.

No Scale

GENERAL NOTES

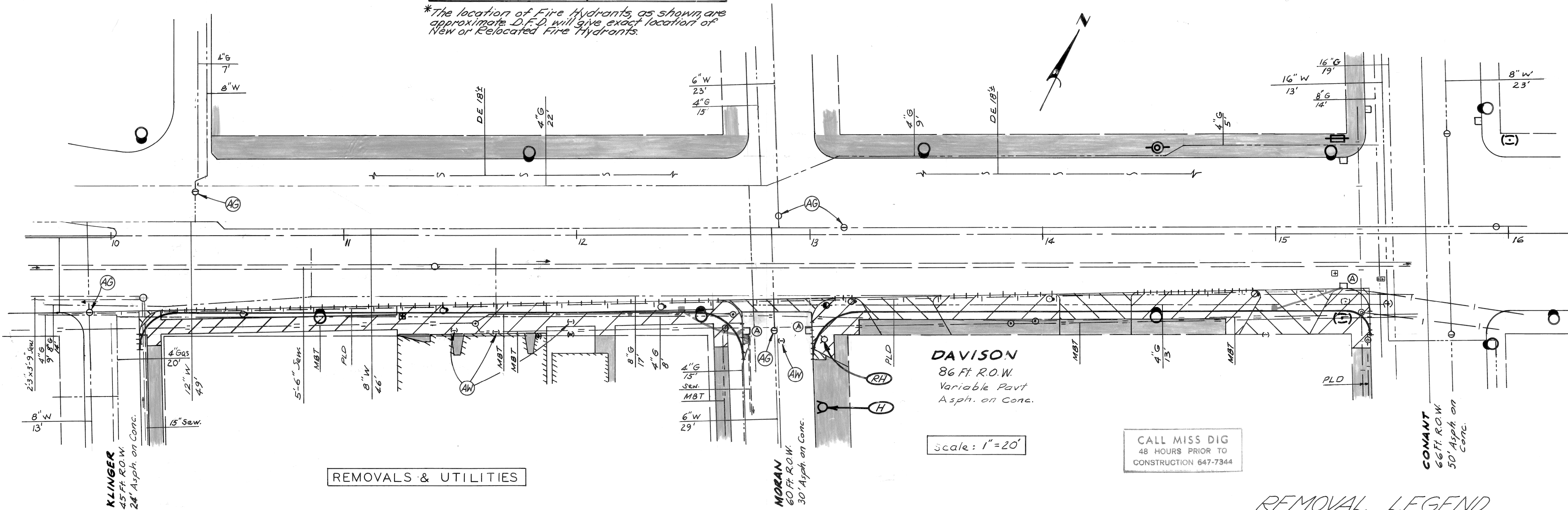
- The prop. curb shall be "Integral Curb" with "Conc. Curb-Detail X" as an option. For details, see this sheet.
- Backfill, if required, under prop. sidewalks and/or pavement shall be Granular Material - Class II (Incidental to prop. sidewalk and/or pavement construction).
- The Curb Face Height shall be 7" unless otherwise called for on the Plans.
- Saw plane of weakness joints over the existing joint as required by the Engineer. This work will be paid for as "Sawed Longitudinal Plane of Weakness Joint".

MISCELLANEOUS QUANTITIES†	
Mobilization	1 Lump Sum
On The Job Training	1 Each
Minor Traffic Devices	1 Lump Sum

REVISIONS LOCATED BY COORDINATES ON SHEET COORD DESCRIPTION DRN CKD APVD DATE		DESIGNED BY DRAWN BY <i>RBP</i> TRACED BY CHECKED BY <i>WB</i>	APPROVED: ENGINEER OF STREETS HIGHWAY ENGINEER	CITY OF DETROIT CITY ENGINEERING DIVISION - D. P. W. BUREAUS OF STREETS AND HIGHWAYS	CONAN, AT DAVISON TYPICAL CROSS-SECTION	SHEET 2 OF 40 SHEETS CONTRACT NO. 17662A ASSIGNMENT NO. DATE Jan, 1983
-------------------------------------------------------------------------------------------------	--	-------------------------------------------------------------------------	------------------------------------------------------	--------------------------------------------------------------------------------------------	--------------------------------------------	-------------------------------------------------------------------------------------------------------------

HYDRANT ALTERATION WORK	
ITEM	QUANTITY & UNIT
Install New Fire Hydrant*	1 Each
Remove Fire Hydrant Method I or Method II	1 Each

*The location of Fire Hydrants, as shown, are approximate. D.F.D. will give exact location of New or Relocated Fire Hydrants.



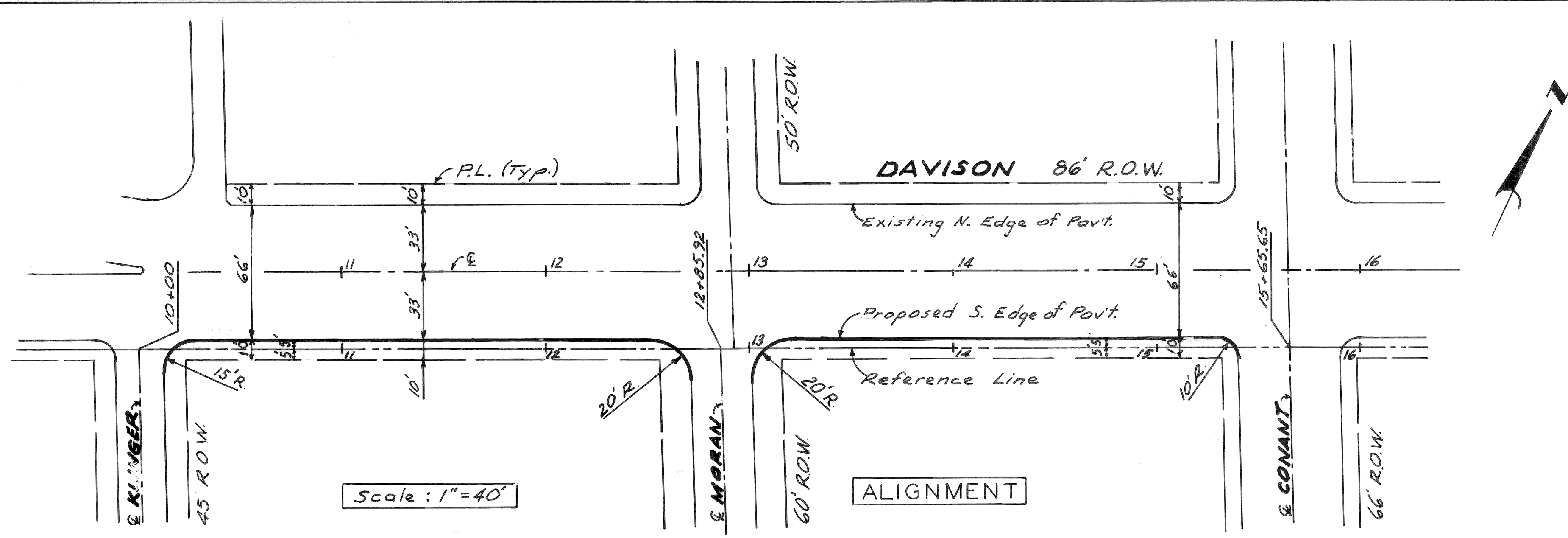
CALL MISS DIG
48 HOURS PRIOR TO
CONSTRUCTION 647-7344

REMOVAL LEGEND

- AG Adjusting Gatewell Manhole Covers
- AW Adjusting Water Shutoffs
- H Install New Fire Hydrant
- RH Remove Fire Hydrant Method I or Method II
- Removing Pavement
- Removing Sidewalk
- Existing Sidewalk or Driveway to Remain
- Existing Building
- Removing Curb
- A Abandoning Drainage Structures
- Removing Old Pavt (Patching) & Replace with conc. Pavt Patching, Type F.S., 9\", Nonreinf.

NOTES

1. For Utility Legend, See Sh.# 12.
2. Locations of existing utility lines are based on the best available records and are not guaranteed for accuracy.



REVISIONS LOCATED BY COORDINATES ON SHEET COORD DESCRIPTION DRN CKD APVD DATE		DESIGNED BY DRAWN BY <i>RBP</i> TRACED BY CHECKED BY <i>WLB</i>	APPROVED: ENGINEER OF STREETS HIGHWAY ENGINEER	CITY OF DETROIT CITY ENGINEERING DIVISION-D. P. W. BUREAUS OF STREETS AND HIGHWAYS	CONANT AT DAVISON UTILITIES, REMOVALS, & ALIGNMENT	SHEET 3 OF 40 SHEETS CONTRACT NO. 17662A ASSIGNMENT NO. DATE Jan, 1983
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P.B.M. # 52-251, Elev. 147.69
S.E. Cor. Davison & Conant.

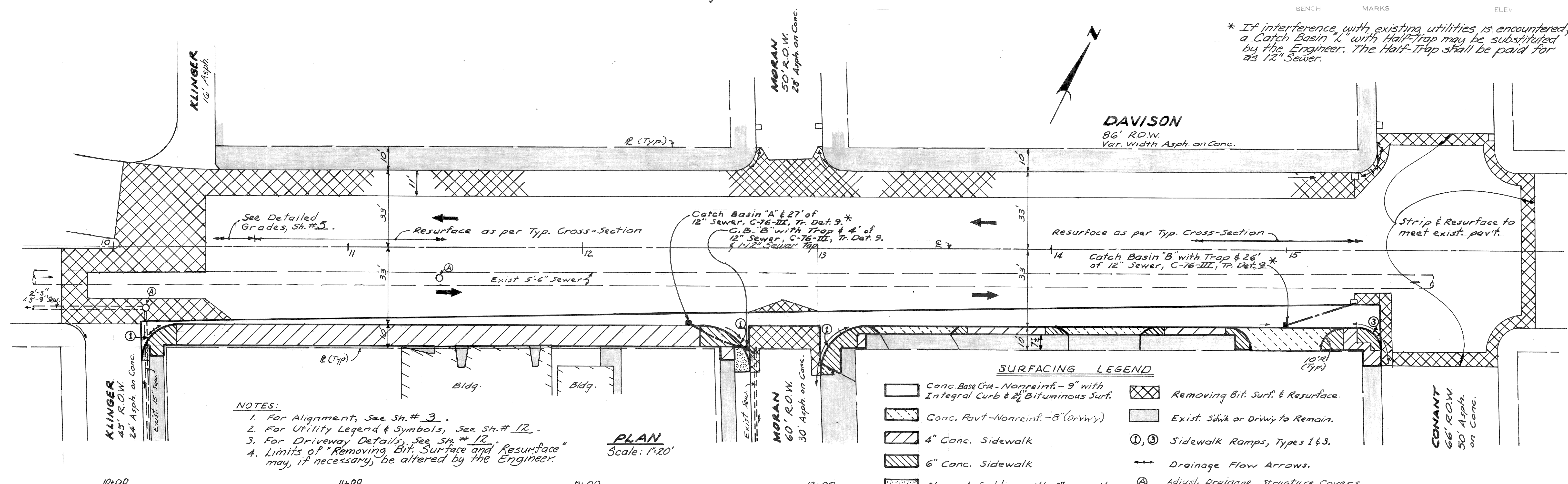
C.B.M. Elev. 151.77 Arrow on Hydrant
S.E. Corner Davison & Moran.

C.B.M. Elev. 152.69 Arrow on Hydrant
S.W. Corner Davison & Klinger.

SCALE	HORIZONTAL 1" = 20'	VERTICAL 1" = 2'
BOOK	NO.	PG.
LEVEL	DATE	
BEFORE STARTING CONSTRUCTION CONTRACTOR MUST CHECK WITH UTILITIES FOR LOCATIONS OF EXISTING STRUCTURES WHETHER OR NOT INDICATED ON PLANS.		

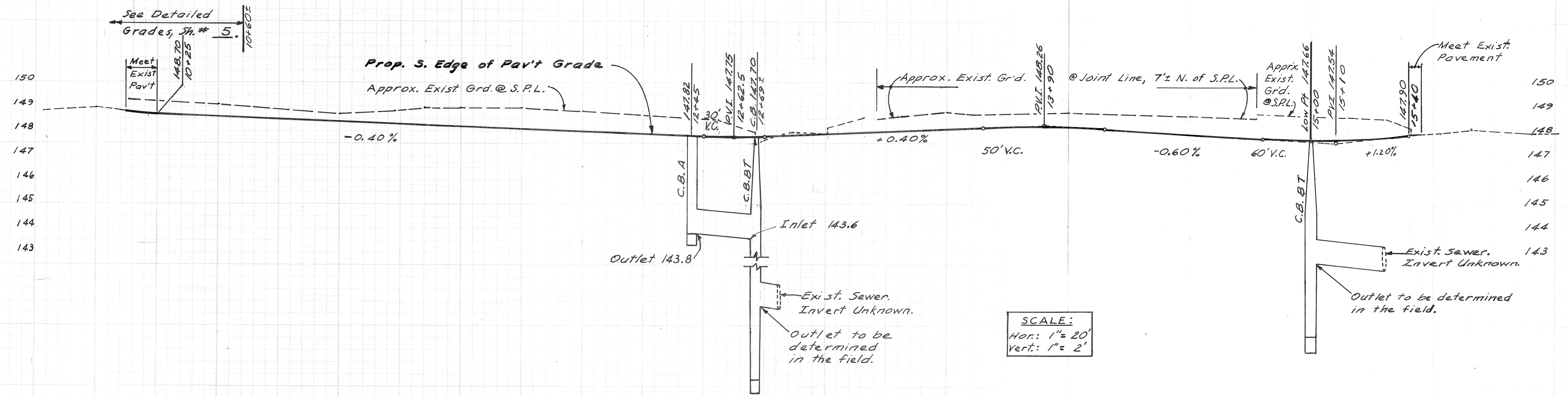
BENCH MARKS ELEV

* If interference with existing utilities is encountered, a Catch Basin "L" with Half-Trap may be substituted by the Engineer. The Half-Trap shall be paid for as 12" Sewer.



- NOTES:**
- For Alignment, See Sh. # 3.
 - For Utility Legend & Symbols, See Sh. # 12.
 - For Driveway Details, See Sh. # 12.
 - Limits of "Removing Bit. Surface and Resurface" may, if necessary, be altered by the Engineer.

PLAN
Scale: 1"=20'



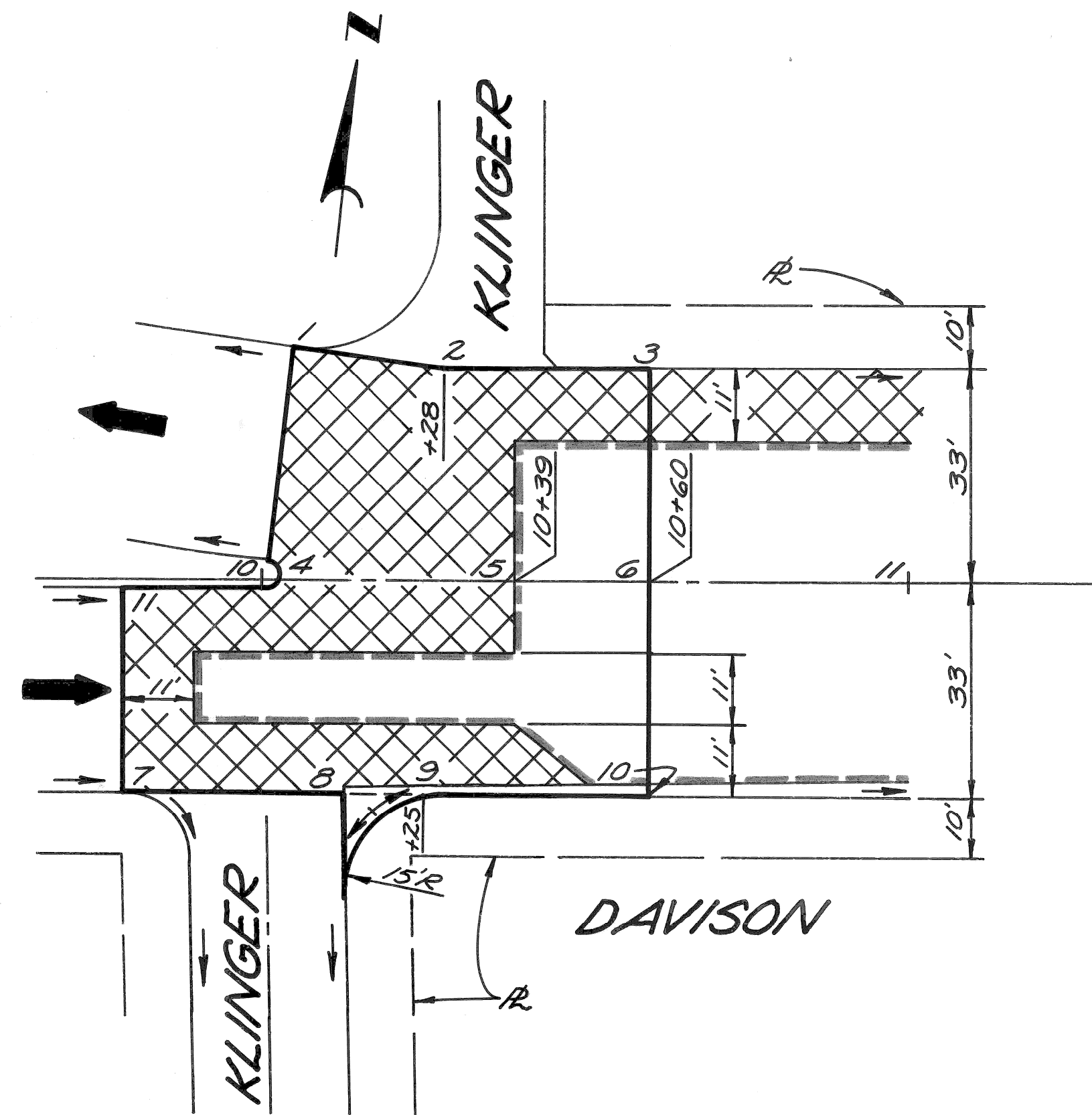
SCALE:
Hor.: 1"=20'
Vert.: 1"=2'

10+00		11+00		12+00		13+00		14+00		15+00	
BY RBP		CHECKED BY WB		APPROVED:		CITY OF DETROIT		CONANT AT DAVISON		INDEX NO.	
GRADE RBP		WB		ENGINEER OF STREETS		CITY ENGINEERING DIVISION - D.R.W.		PLAN AND PROFILE		SHEET 4 OF 40 SHEETS	
ESTIMATE		REVIEW		HIGHWAY ENGINEER		BUREAUS OF STREETS AND HIGHWAYS		CONTRACT NO. 17662A		ASSIGNMENT NO.	
DESCRIPTION		DRN		CK'D		AP'VD		DATE		DATE Jan, 1983	
REVISIONS		CHECK		REVIEW							

SCALE	HORIZONTAL	BOOK NO.	PG.	LEVEL DATE	BEFORE STARTING CONSTRUCTION CONTRACTOR MUST CHECK WITH UTILITIES FOR LOCATIONS OF EXISTING STRUCTURES WHETHER OR NOT INDICATED ON PLANS.
	VERTICAL				

NOTE - FOR SYMBOLS (A) ETC. SEE STANDARD DETAIL DRAWING NO. C-4375

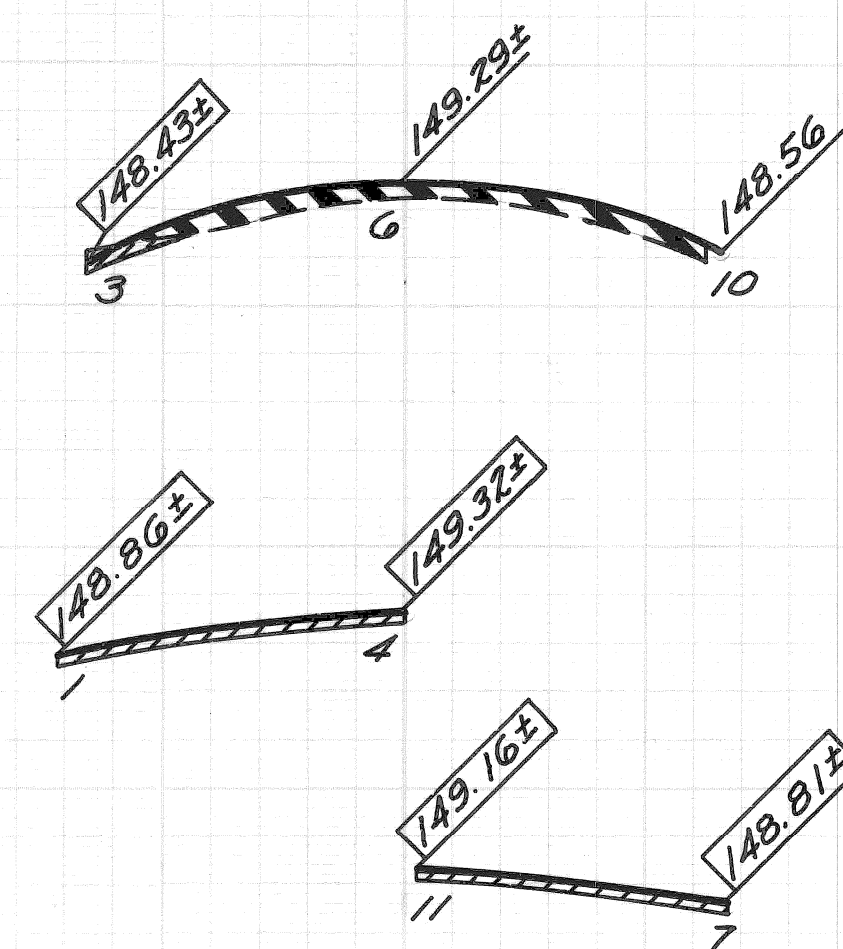
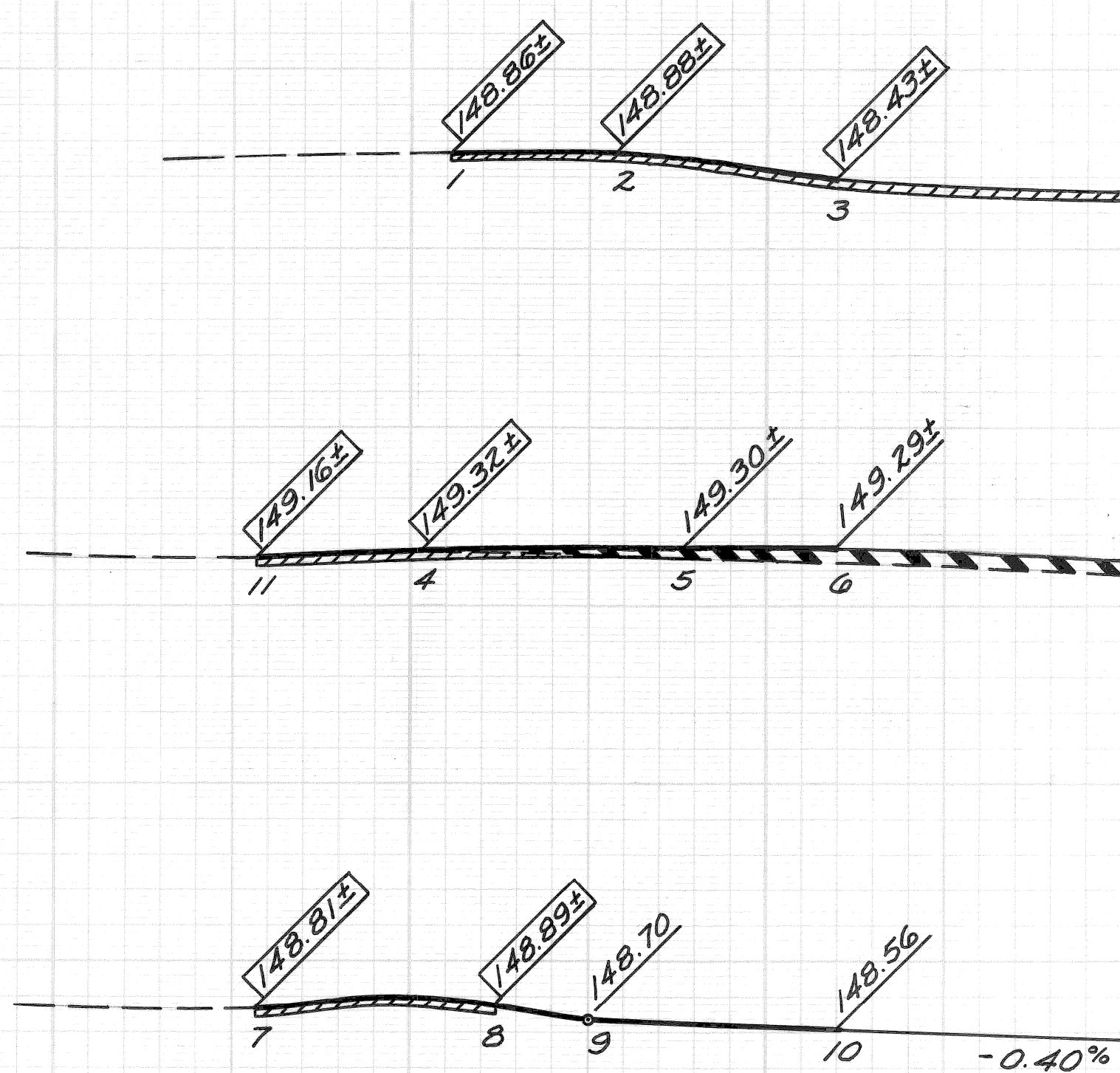
BENCH MARKS ELEV.



PLAN
Scale: 1"=20'

PLAN LEGEND

	Limits of Detailed Grade Area
	Drainage Flow Arrows
	Conc. Base Crse. - Nonreinf. - 9" with Integral Curb & 2 1/4" Bit. Surf.
	Bituminous Resurfacing (2 1/4" maximum)
	Removing Bituminous Surface and Resurface (1" minimum resurfacing)



PROFILES & CROSS-SECTIONS

	Removing Bituminous Surface & Resurface (1" minimum resurfacing)
	Bituminous Resurfacing (2 1/4" maximum)
	Existing Pavement Grade
	Proposed Pavement Grade
	Proposed Pavement Grade within Detailed Grade area
	Approximate existing pavement elevation to be matched by proposed resurfacing.

SCALE
Horizontal: 1"=20'
Vertical: 1"=2'

NOTES:

1. Except for points 9 and 10, all elevations shown are approximate. Meet existing pavement elevations where indicated. Using this sheet as a guide, the Engineer shall see that the proposed resurfacing meets the existing pavement smoothly and drains properly.
2. All Profiles and Cross-Sections shown are drawn true length.

PLAN	BY W.B.	CHECKED BY RBP	APPROVED:
GRADE	BY W.B.	CHECKED BY RBP	ENGINEER OF STREETS
ESTIMATE			ADMINISTRATIVE ENGINEER
REVISIONS	DRN	CK'D	AP'D
FINAL	CHECK	REVIEW	HEAD CIVIL ENGINEER

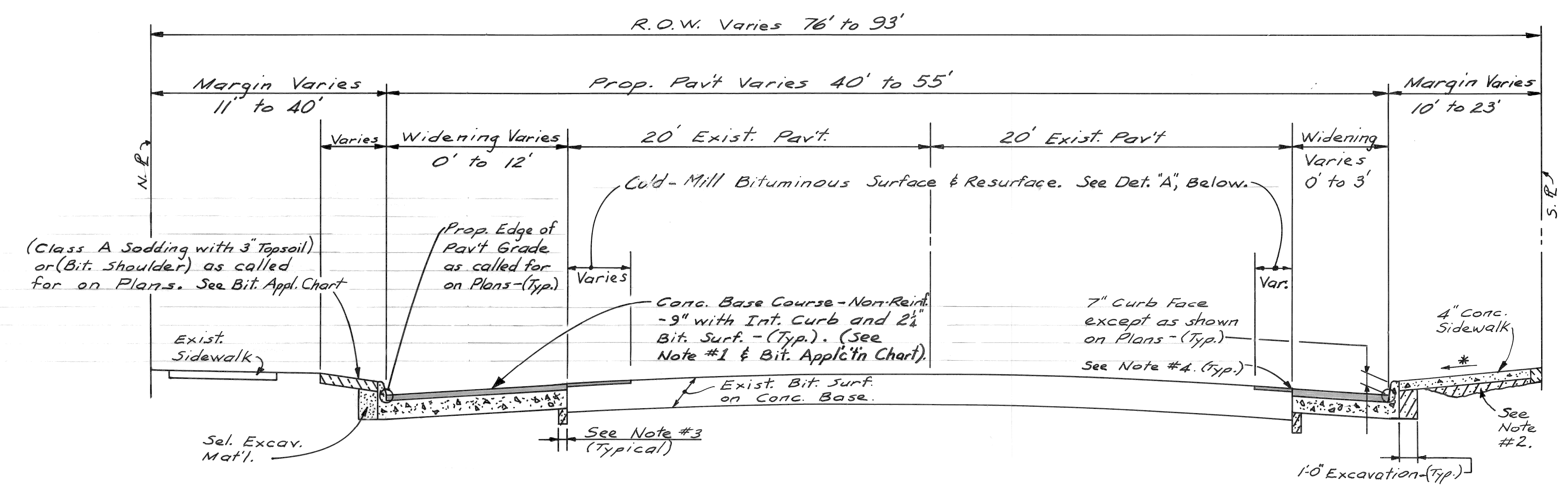
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE

CONANT AT DAVISON

DAVISON - KLINGER DETAILED GRADE

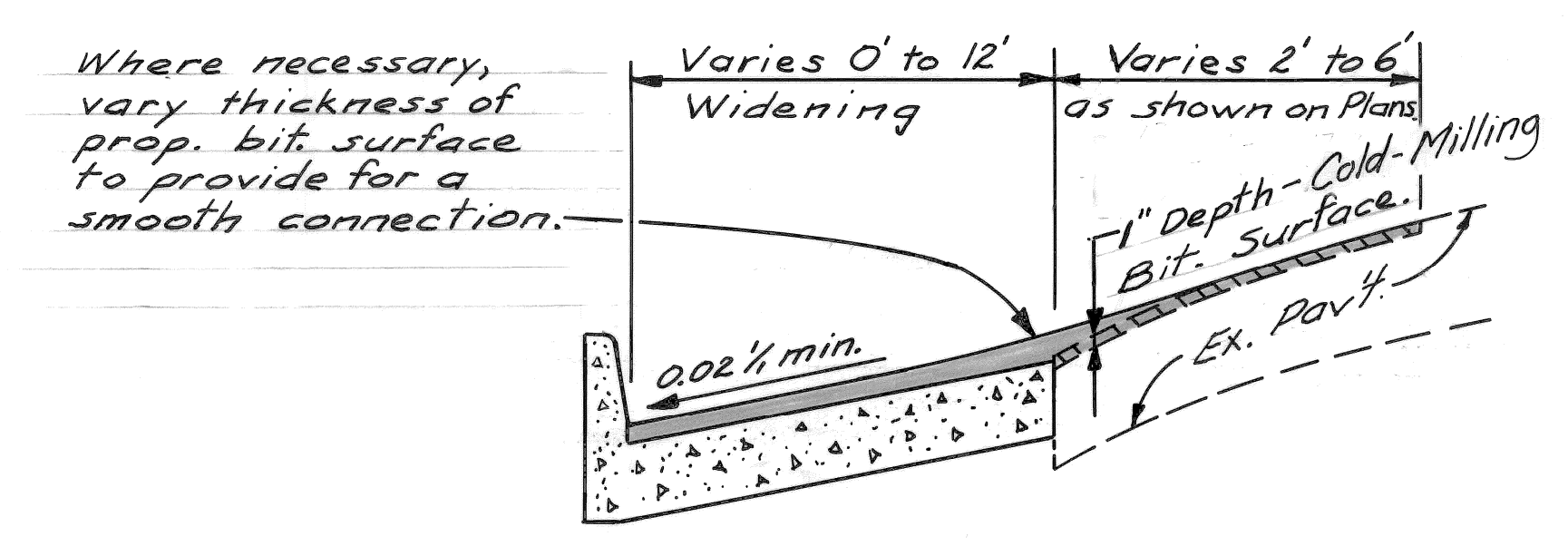
INDEX NO.	SHEET 5 OF 40 SHEETS
CONTRACT NO.	17662A
ASSIGNMENT NO.	
DATE	Jan., 1983

BITUMINOUS APPLICATION CHART			
ITEM	Rate of Application	Estimated Thickness	Asphalt Penetration
Bit. Mixture No. 1100L, 20AA	130#/Sq.Yd.	1 1/2 inch	85-100
Bit. Mixture No. 1100T, 20AA	120#/Sq.Yd.	1 inch	85-100
Bituminous Shoulders	340#/Sq.Yd.	3 inches	200-250
Bit. Bond Coat 0-0.10 Gal./Sq.Yd. to Rigid Bases and 0-0.05 Gal./Sq.Yd. Tack Coat between layers.			



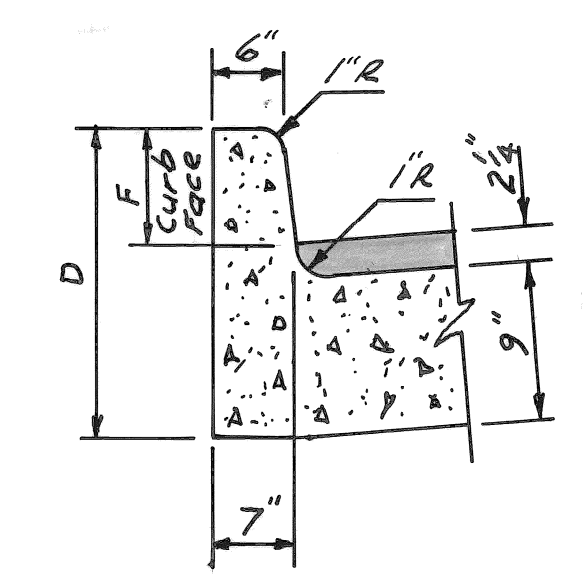
TYPICAL CROSS-SECTION
SEVEN MILE RD., ST. LOUIS TO E. OF FILER
NO SCALE

* Full Sidewalk shall slope at 3/8 inch per foot unless the Engineer determines otherwise to meet existing conditions. The Engineer will choose within these limits: 1/4 inch per ft. min. to 3/4 inch per ft. max.

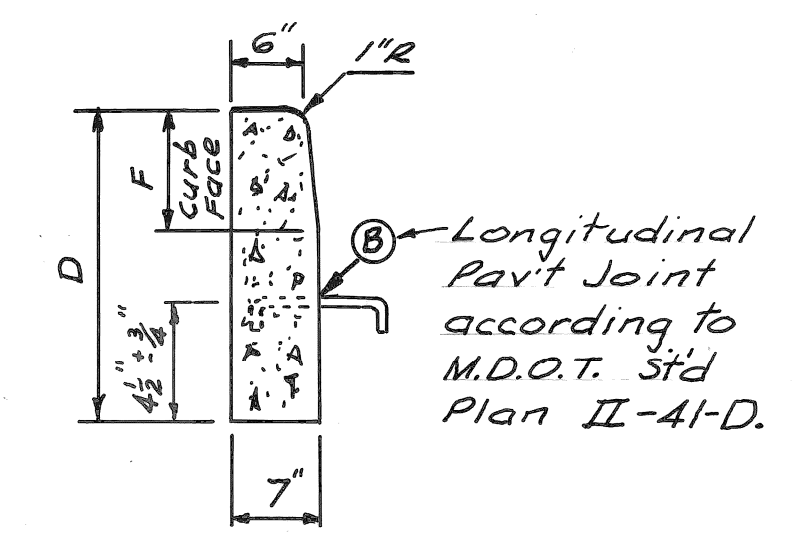


DETAIL "A"
NO SCALE

CURB DIMENSIONS	
FACE F	DEPTH D
5"	16 1/2"
6"	17 1/2"
7"	18 1/2"



INTEGRAL CURB
NO SCALE

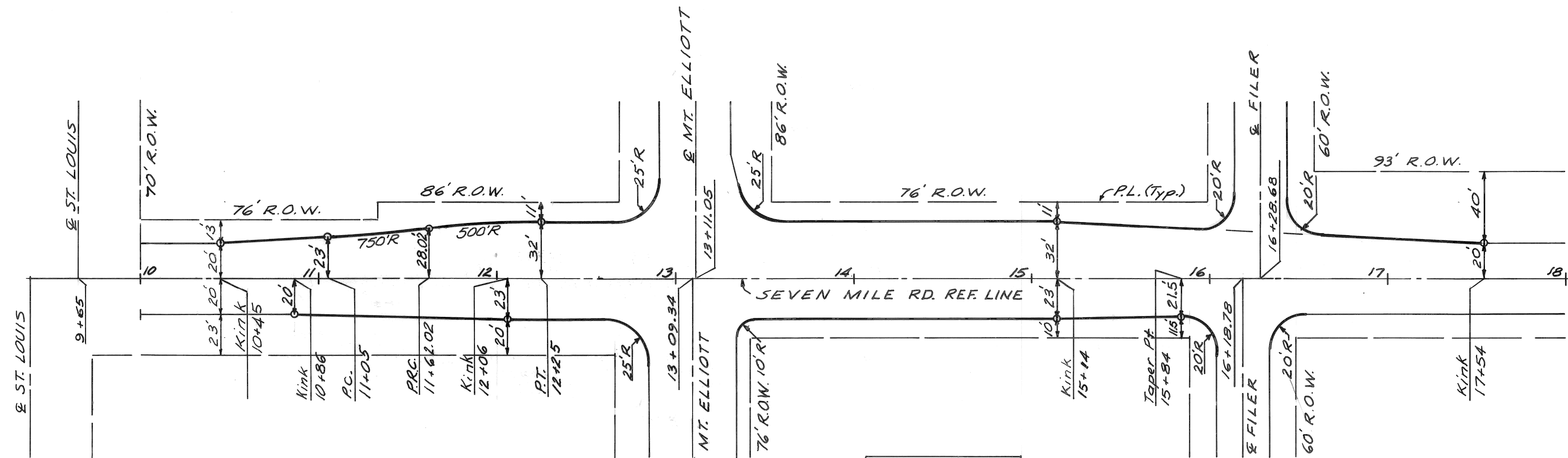


CONCRETE CURB
DETAIL "X"
NO SCALE

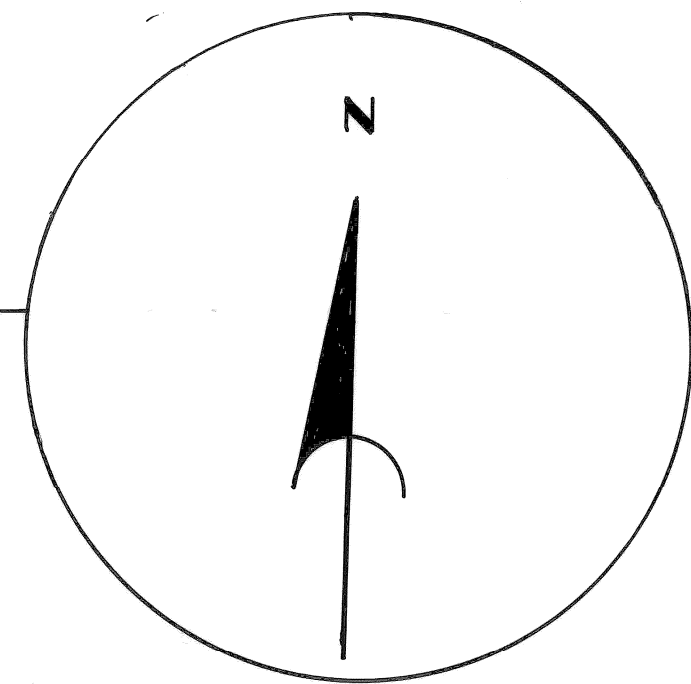
GENERAL NOTES

1. The prop. curb shall be "Integral Curb" with "Conc. Curb-Detail X" as an option. For Details, See this sheet.
2. Backfill, if required, under prop. sidewalks and/or pavement shall be Granular Material - Class II (Incidental to prop. sidewalk and/or pavement construction).
3. Fill exist. curb void with Granular Mat'l Cl. II (Incidental to pavement construction).
4. Saw plane of weakness joints over the existing joint. This work will be paid for as "Sawed Longitudinal Plane of Weakness Joint". Saw as required by the Engineer.

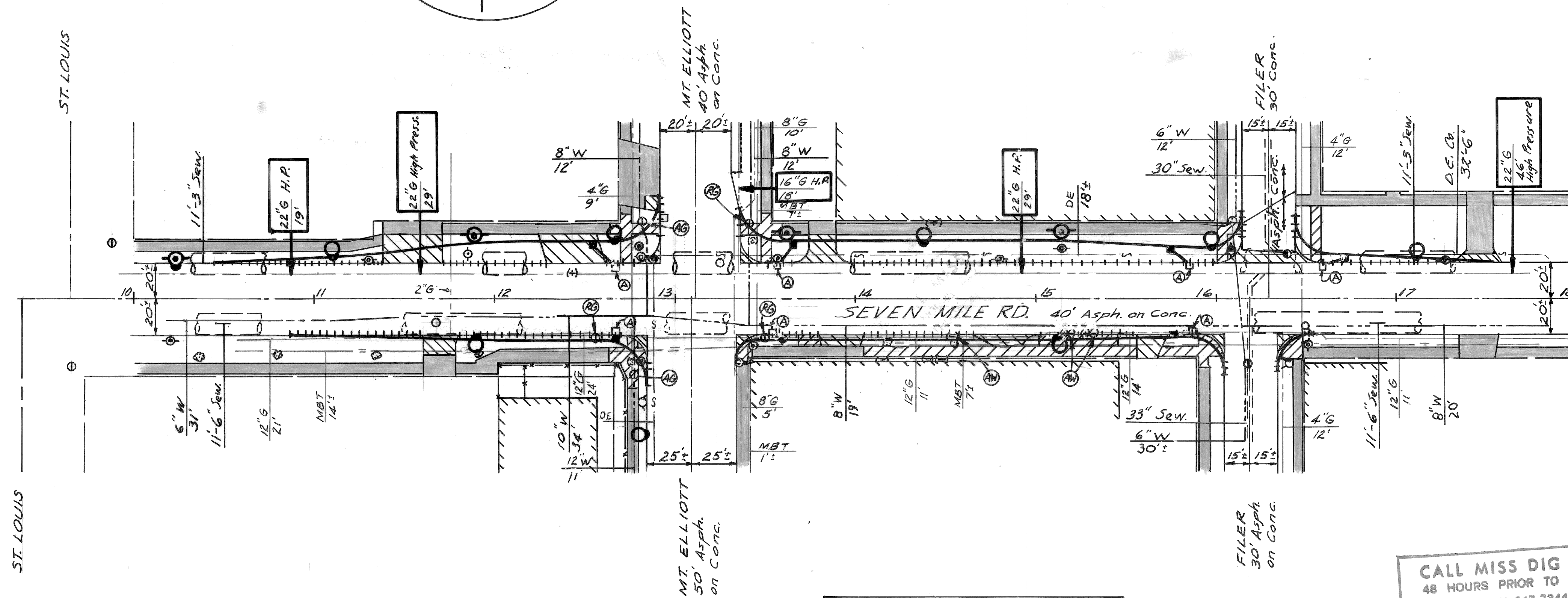
REVISIONS LOCATED BY COORDINATES ON SHEET COORD DESCRIPTION DRN CKD APVD DATE		DESIGNED BY RBP	APPROVED: ENGINEER OF STREETS HIGHWAY ENGINEER	CITY OF DETROIT CITY ENGINEERING DIVISION - D. P. W. BUREAUS OF STREETS AND HIGHWAYS	MT ELLIOTT AT SEVEN MILE ROAD	SHEET 6 OF 40 SHEETS CONTRACT NO. 15892A ASSIGNMENT NO. DATE Jan, 1983
CHECKED BY WB		TYPICAL CROSS-SECTION				



ALIGNMENT



Scale: 1" = 40'



REMOVALS & UTILITIES

- REMOVAL LEGEND**
- Removing Pavement
 - Removing Sidewalk
 - Existing Sidewalk or Driveway to Remain
 - Existing Building
 - Abandoning Drainage Structures
 - Removing Curb
 - Adjusting Gatewell Manhole Covers
 - Reconstruct Gatewell Manhole
 - Adjusting Water Shutoffs

- NOTES**
- For Utility Legend, See Sh.# 12.
 - Locations of existing utility lines are based on the best available records and are not guaranteed for accuracy.

CALL MISS DIG
48 HOURS PRIOR TO
CONSTRUCTION 647-7344

DESIGNED BY	RBP
DRAWN BY	RBP
TRACED BY	
CHECKED BY	WB
APPROVED:	
ENGINEER OF STREETS	
HIGHWAY ENGINEER	

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

MT. ELLIOTT AT SEVEN MILE ROAD
ALIGNMENT, REMOVALS, AND UTILITIES

SHEET	7.40	OF	70	SHEETS
CONTRACT NO.	15892A			
ASSIGNMENT NO.				
DATE	Jan, 1983			

C.B.M. Elev. 145.74 Arrow on Hydrant
S.E. Corner Seven Mile & St. Louis.

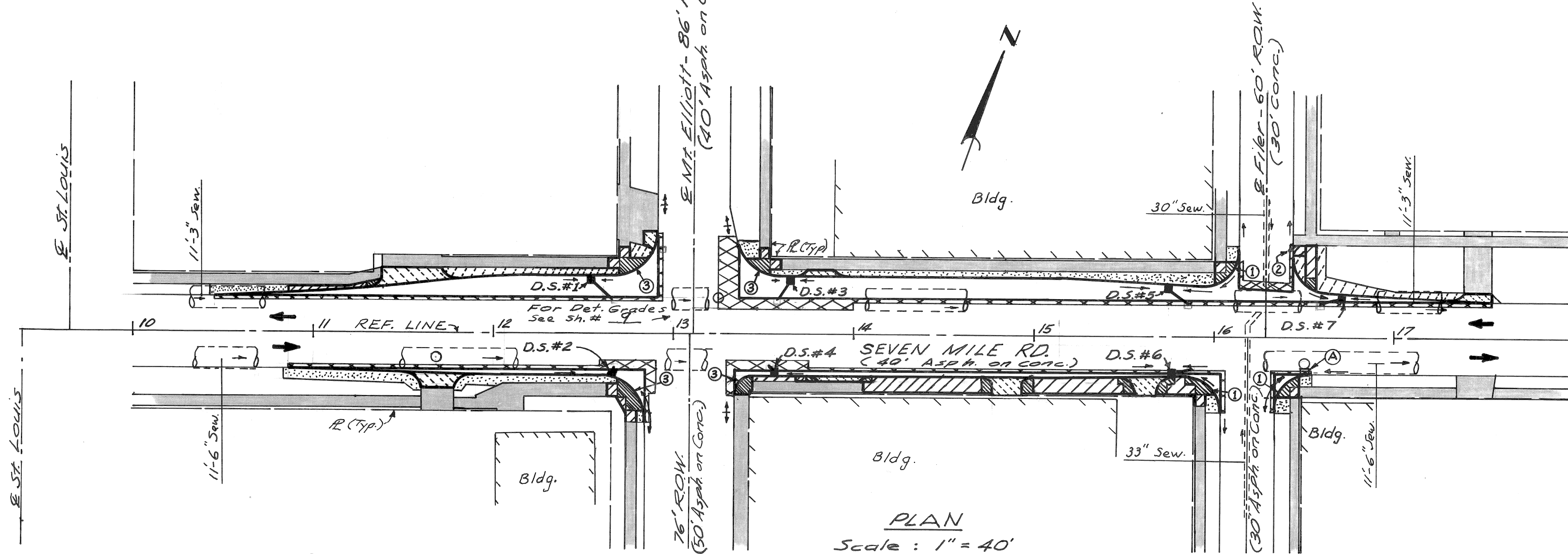
C.B.M. Elev. 144.75 Arrow on Hydrant
on Hydrant S.W. Corner
Seven Mile & Mt. Elliott.

C.B.M. Elev. 144.46 Arrow on Hydrant
N.E. Corner Seven Mile & Mt. Elliott.

C.B.M. Elev. 144.57 Arrow on Hydrant
S.E. Corner Seven Mile & Filer.

SURFACING LEGEND

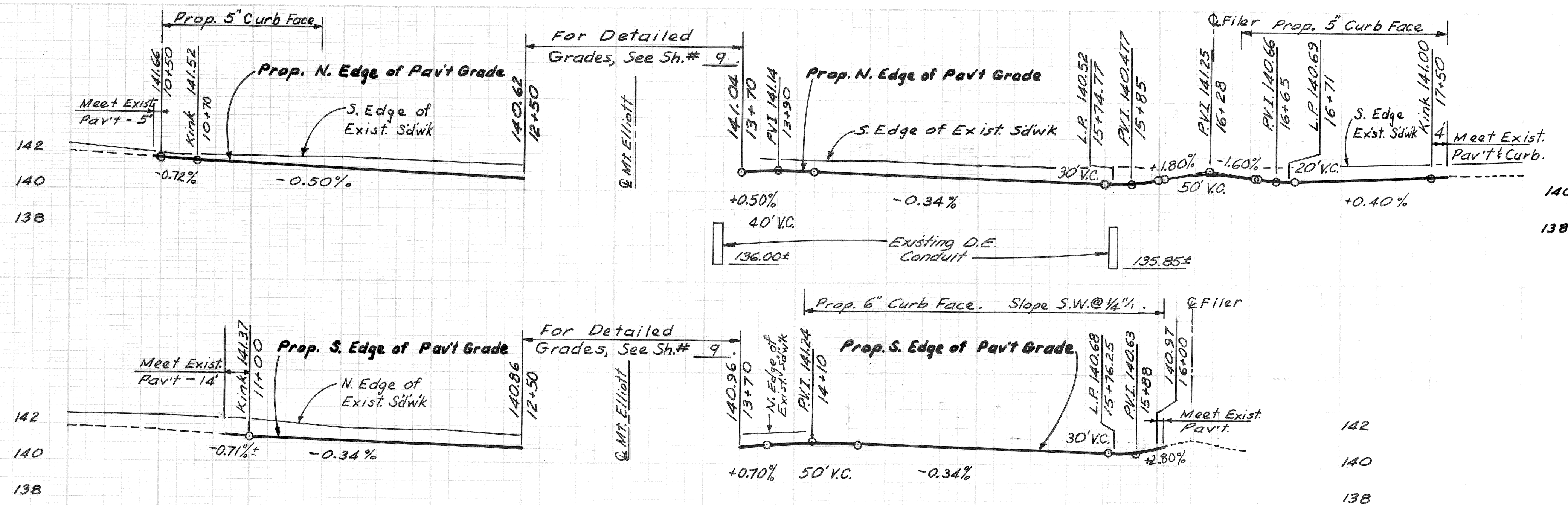
- Conc. Base Course - Nonreinf. - 9" with Integral Curb & 2" Bituminous Surface
- Conc. Pav't - Nonreinforced - 8" (Driveway)
- 4" Concrete Sidewalk
- 6" Concrete Sidewalk
- Bituminous Shoulder (3" Thickness)
- Removing Bituminous Surface & Resurface
- Class "A" Sodding with 3" Topsoil
- Existing Sidewalk or Driveway to Remain
- Sidewalk Ramps, Types 1 & 3 & 2
- Drainage Flow Arrows
- Adjusting Drainage Structure Covers



D.S. - See Note #4.

NOTES:

1. For Alignment, See Sh.# 7.
2. For Utility Legend & Symbols, See Sh.# 12.
3. For Driveway Details, See Sh.# 12.
4. Proposed Drainage Structures (D.S.) #1 through #7 shall be Catch Basins Type "B" with Trap and 12 inch. Sewer C-76-III, Trench Detail 9. Each shall drain to the outlet sewer of a near-by existing catch basin, as shown. If necessary, to clear existing obstacles, the Engineer may substitute a Catch Basin "L" with Half Trap for a C.B. "B". The Half Trap shall be paid for as 12" sewer.
5. Limits of "Removing Bituminous Surface and Resurface" may, if necessary, be altered by the Engineer.



Scale
Hor. 1" = 40'
Vert. 1" = 4'

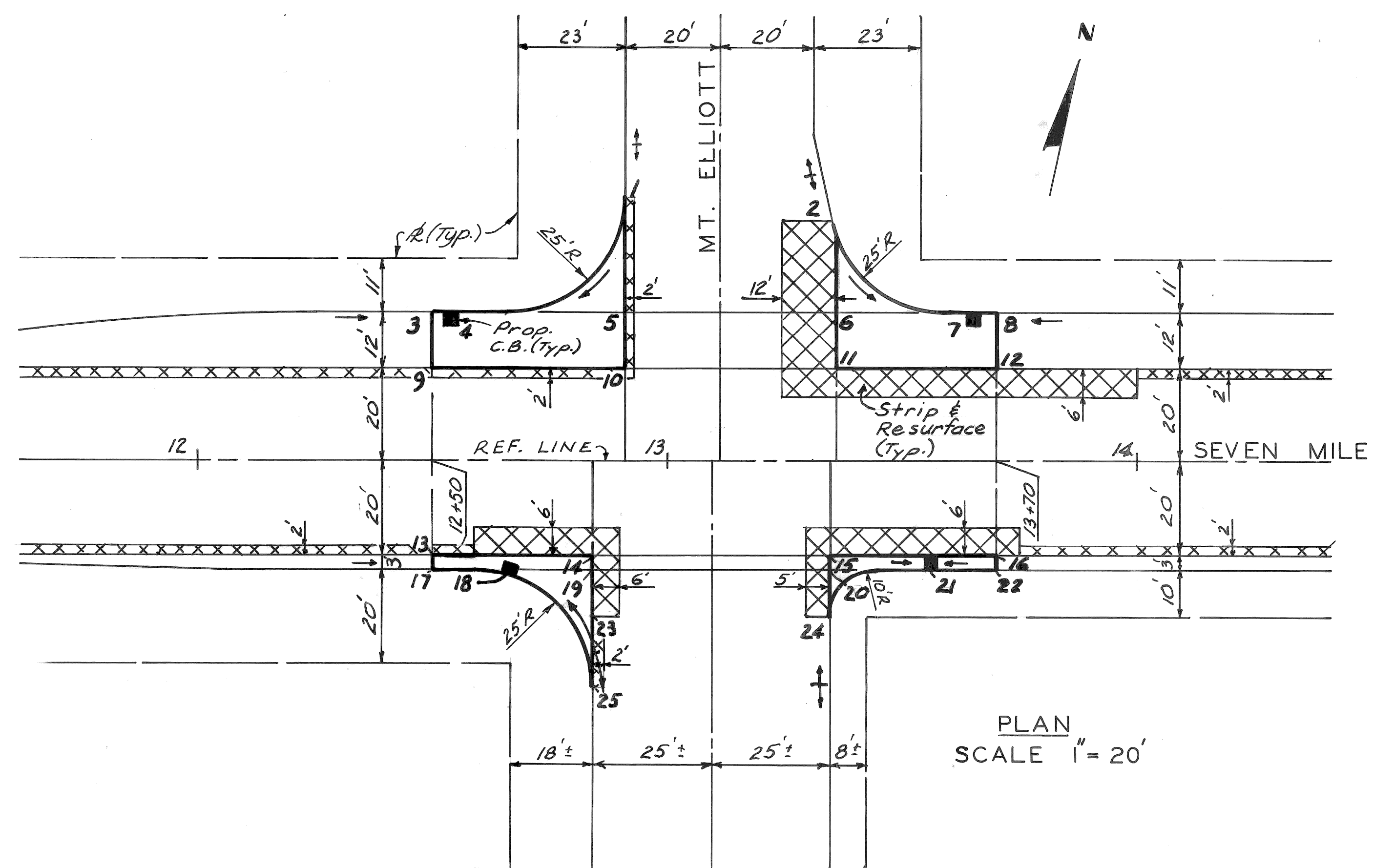
10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00

	BY RP	CHECKED BY WB	APPROVED:	CITY OF DETROIT CITY ENGINEERING BUREAUS OF STREETS AND HIGHWAYS	MT. ELLIOTT AT SEVEN MILE ROAD	INDEX NO. SHEET 8 OF 40 SHEETS
	GRADE RP	WB	ENGINEER OF STREETS			CONTRACT NO. 15892A
	ESTIMATE		HIGHWAY ENGINEER			ASSIGNMENT NO.
DESCRIPTION	DR N	CK D	AP VD	DATE		DATE Jan, 1983
REVISIONS						

SCALE	HORIZONTAL	VERTICAL	BOOK	NO.	PG.	LEVEL	DATE	BEFORE STARTING CONSTRUCTION CONTRACTOR MUST CHECK WITH UTILITIES FOR LOCATIONS OF EXISTING STRUCTURES WHETHER OR NOT INDICATED ON PLANS.

NOTE - FOR SYMBOLS (A) ETC. SEE STANDARD DETAIL DRAWING NO. C-473

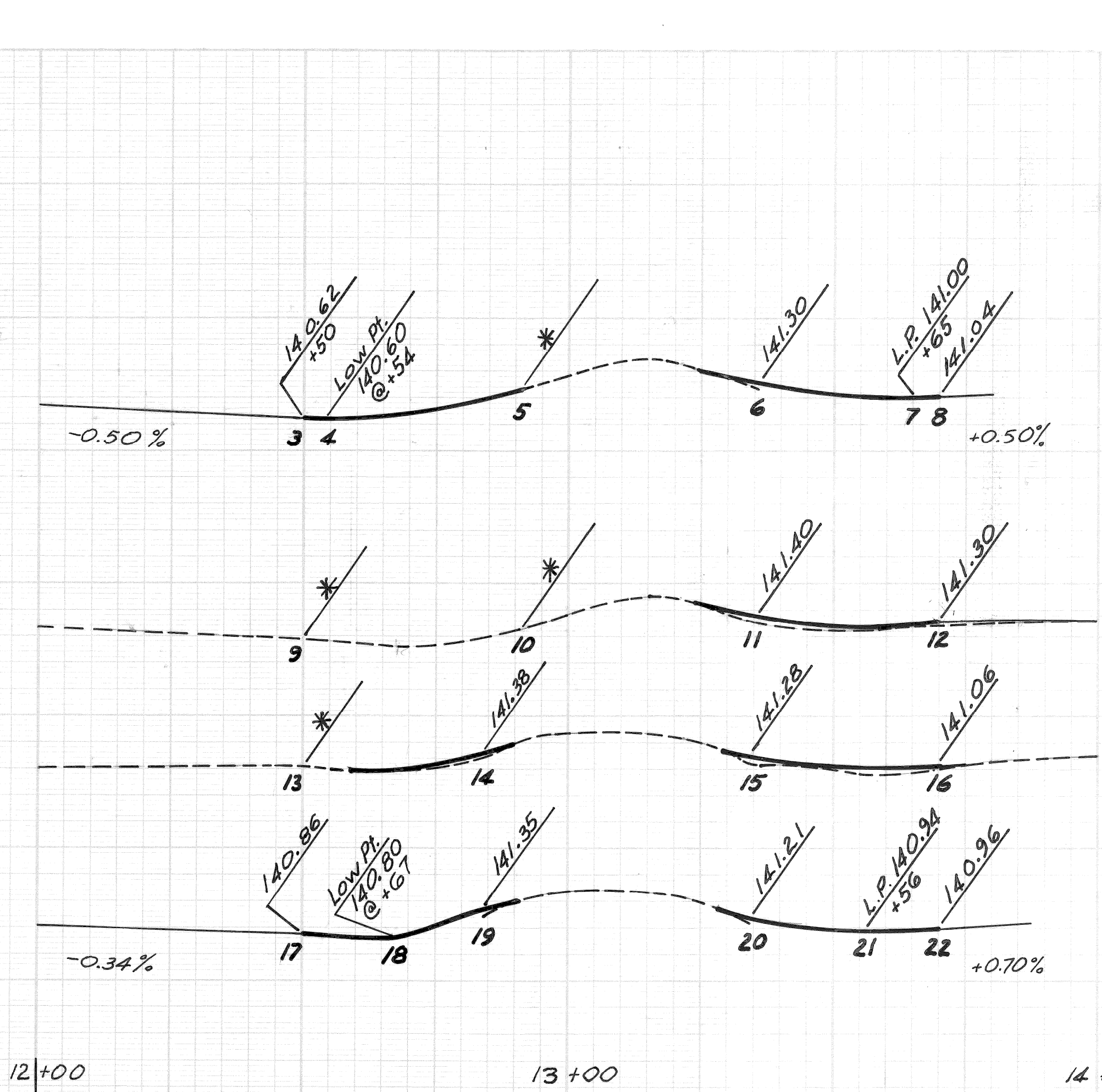
BENCH MARKS ELEV



PLAN LEGEND

- Proposed Pavement (Detailed Grade area)
- Removing Bituminous Surface & Resurface
- Proposed Catch Basin
- Drainage Direction Arrow

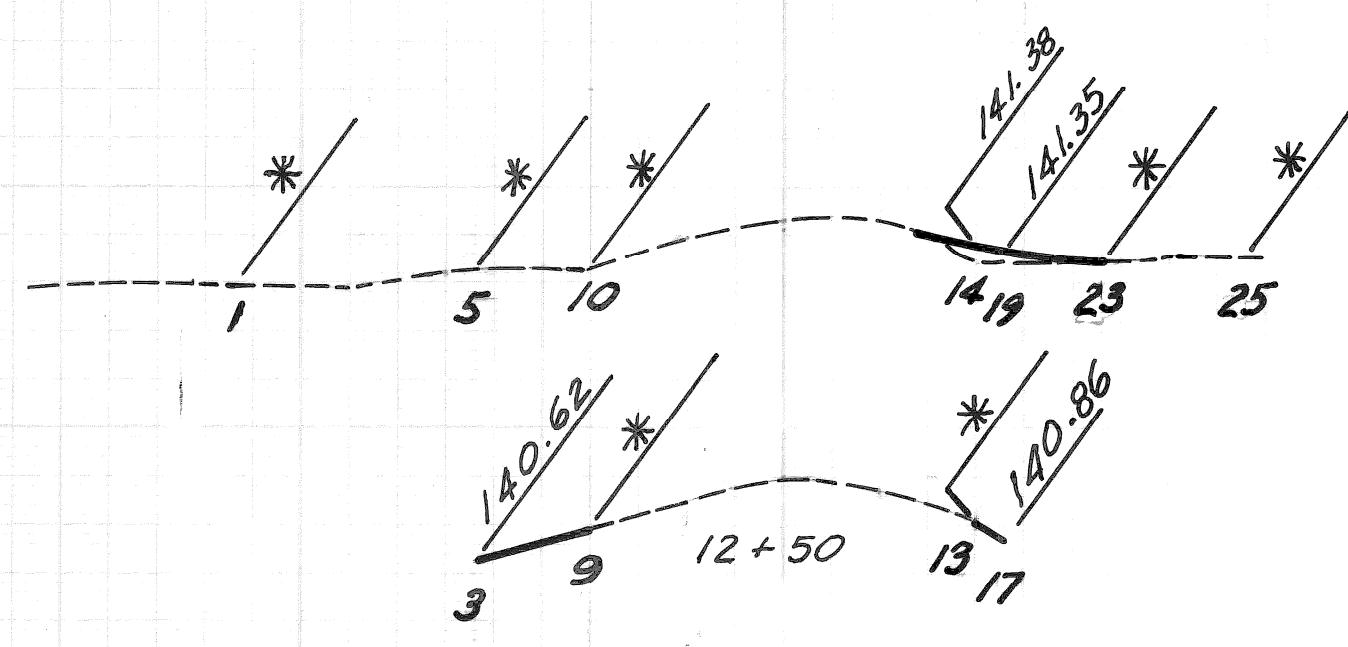
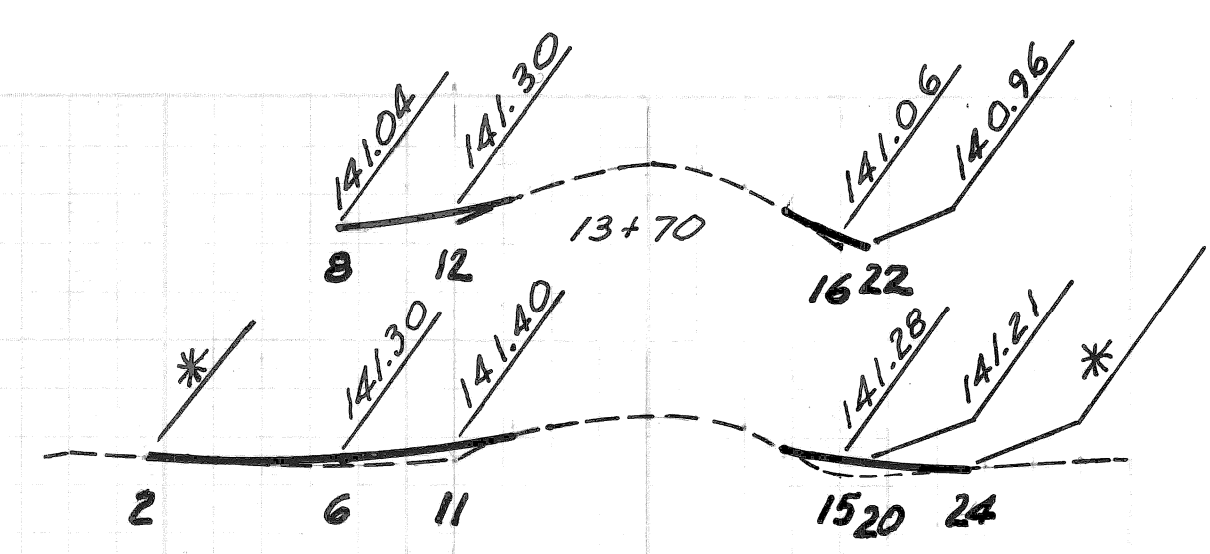
PLAN SCALE 1" = 20'



LEGEND

- * Existing Pav't Elevation
- Exist. Pav't Profile
- Prop. Pav't Profile

SCALE
Hor. 1" = 20'
Vert. 1" = 2'

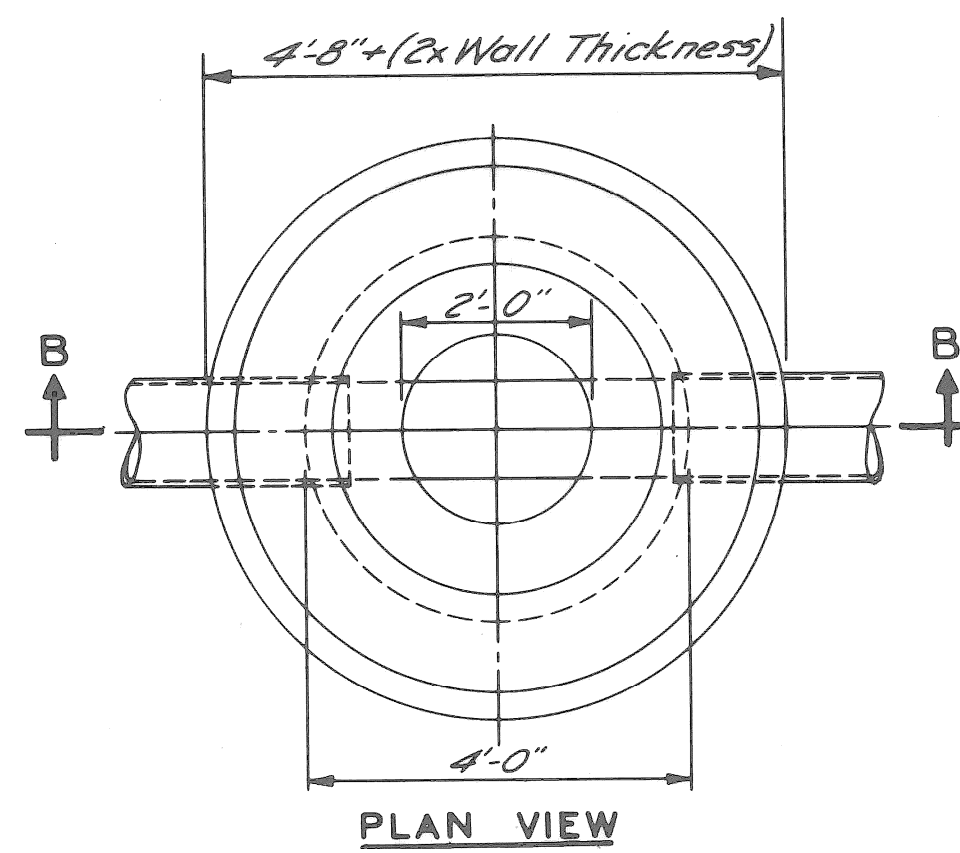


DESCRIPTION	DRN	CK'D	AP'D	DATE	BY	CHECKED BY	APPROVED:
REVISIONS					RP 3/10/81	WB	
					RP 3/22/81	WB	

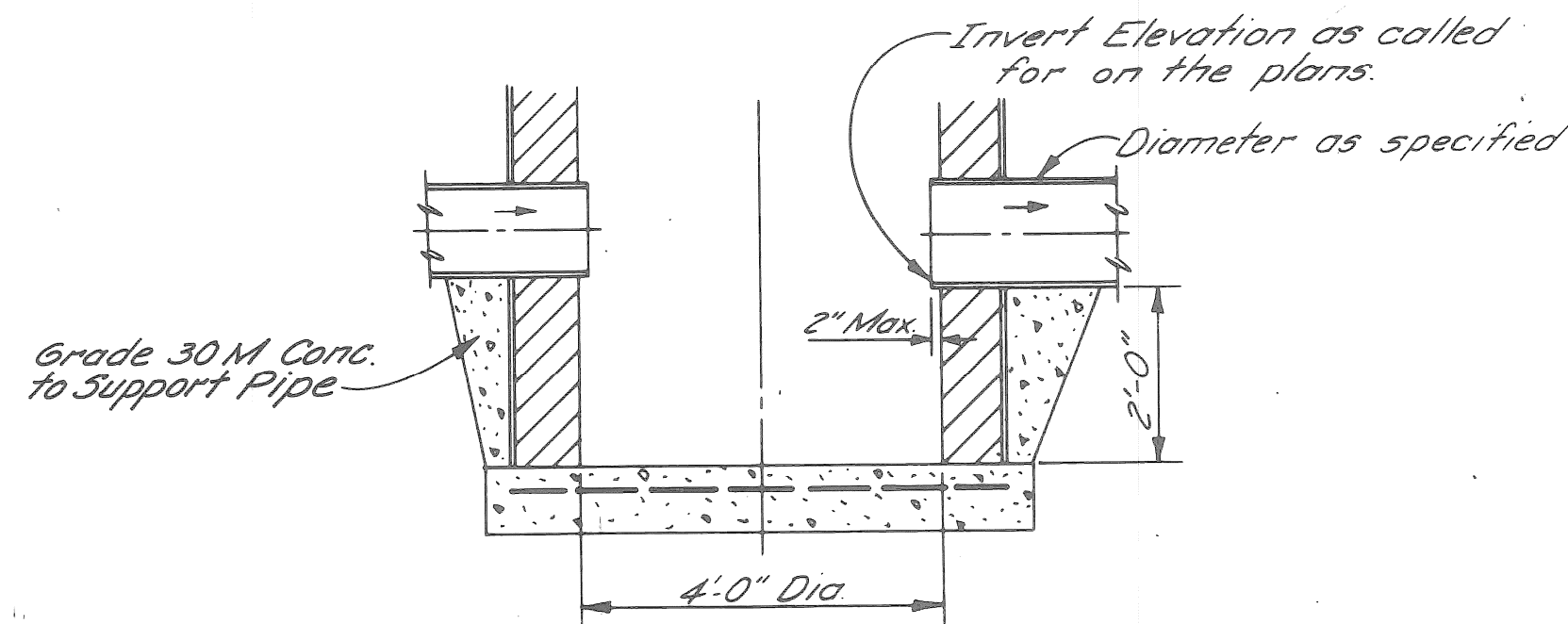
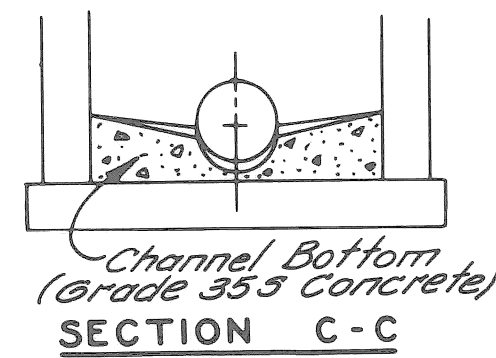
CITY OF DETROIT
CITY ENGINEERING
BUREAUS OF STREETS AND HIGHWAYS

MT. ELLIOTT AT SEVEN MILE ROAD
SEVEN MILE - MT. ELLIOT DETAILED GRADE

INDEX NO.	SHEET 9 OF 40 SHEETS
TOP NO.	CONTRACT NO. 15892A
INDEXED NO.	ASSIGNMENT NO.
	DATE Jan, 1983

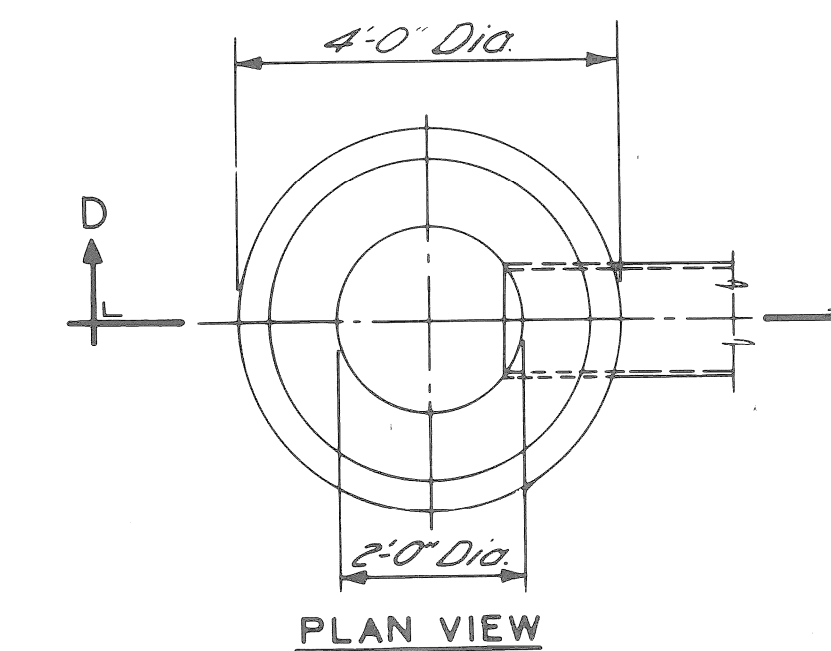


NOTE 'A'
Wall thickness below a depth of 15 feet shall be 12 inches.

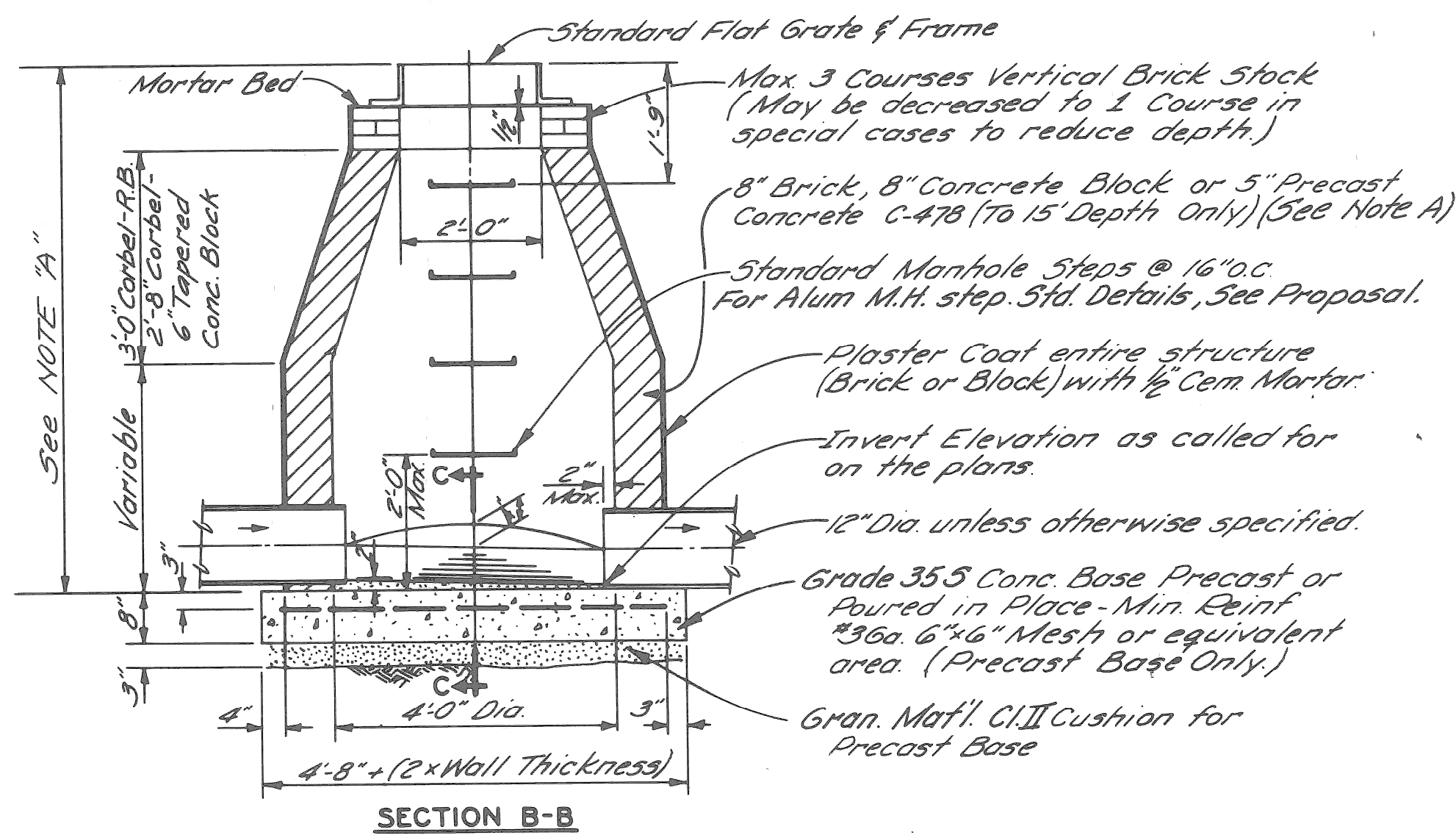


DETAIL OF SUMP FOR CATCH BASIN "B"

NO SCALE

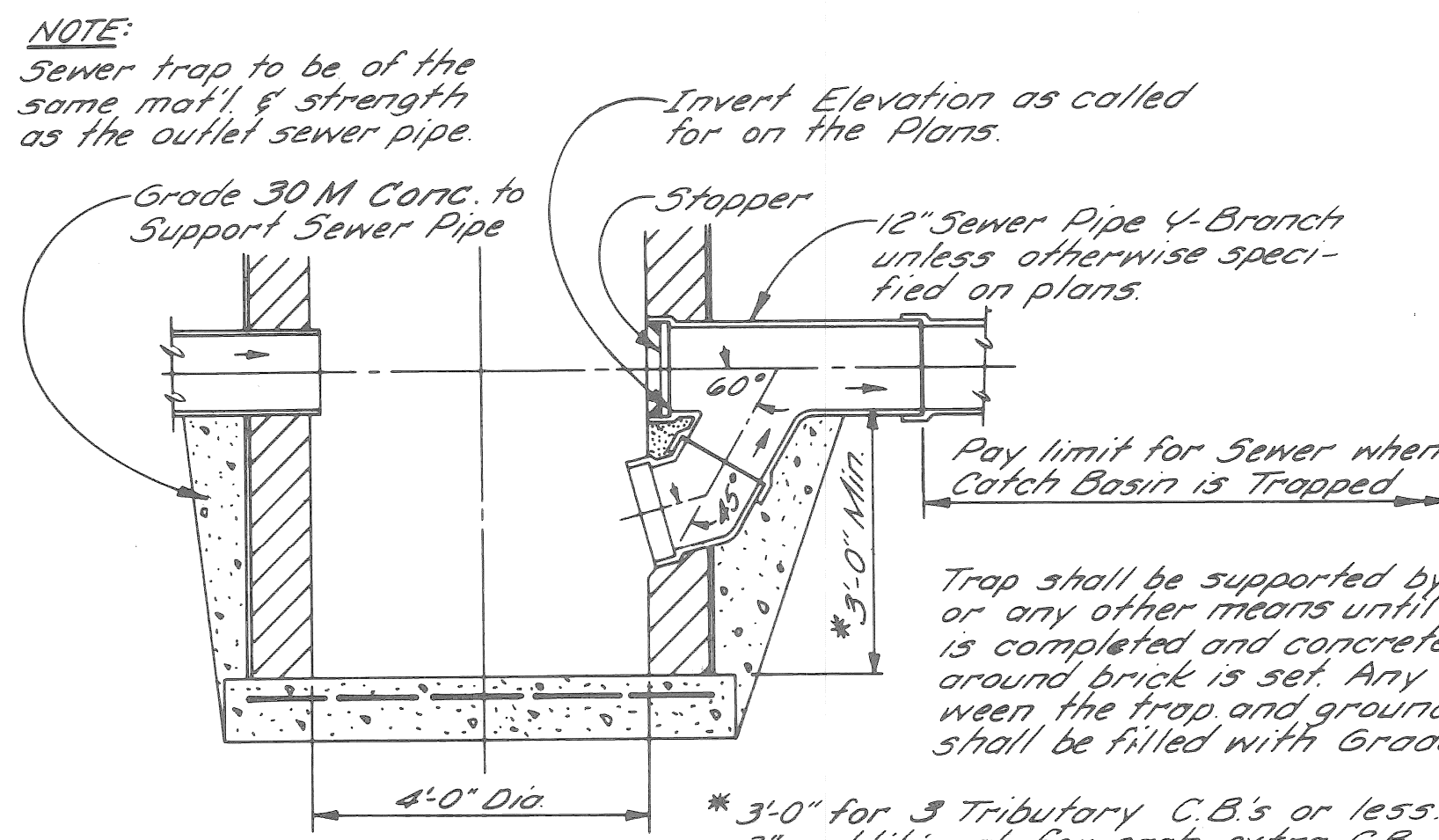


NOTE:
Catch Basin "A" will be used only when outletting to a Catch Basin "B"



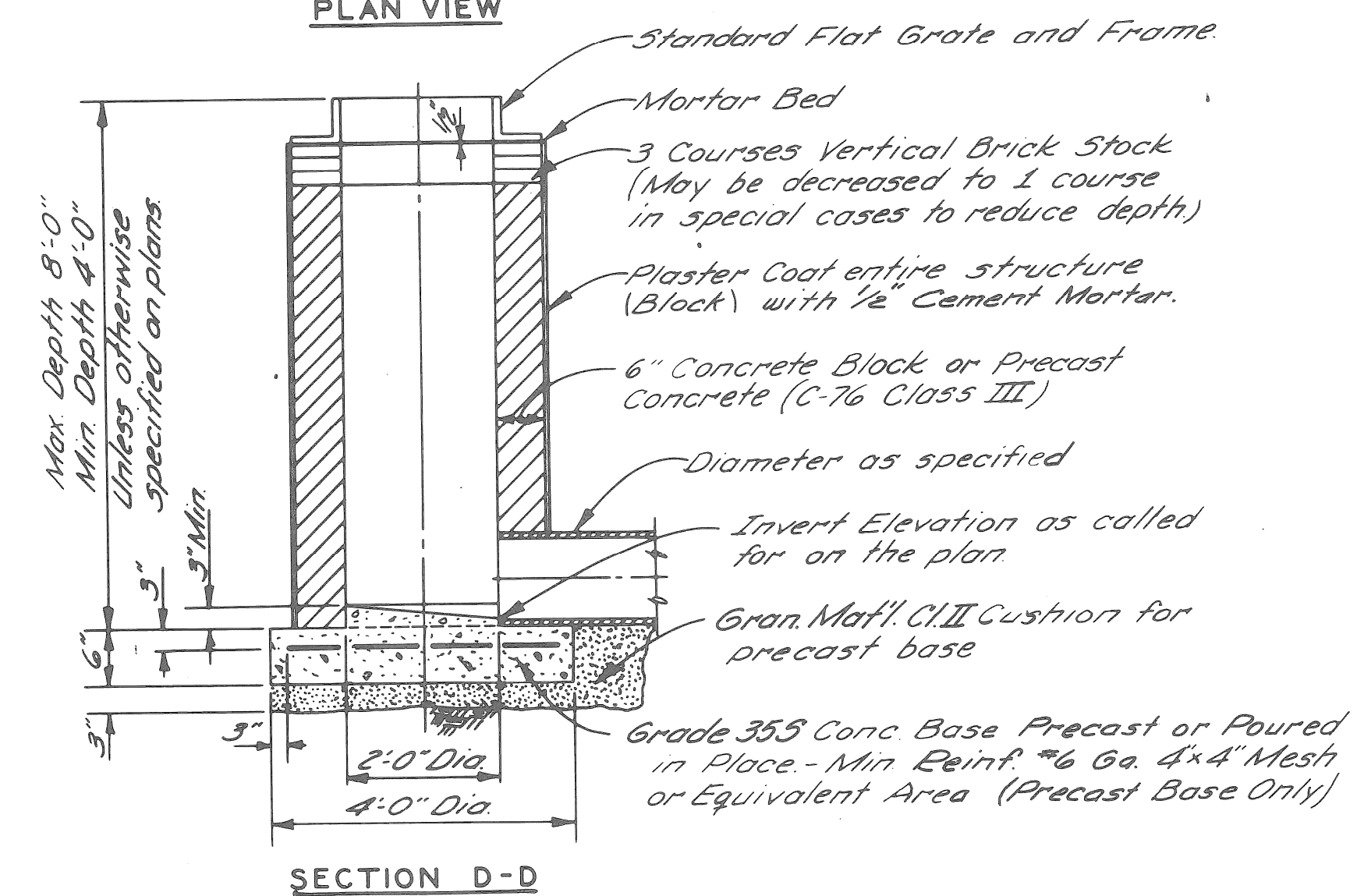
CATCH BASIN "B"

NO SCALE



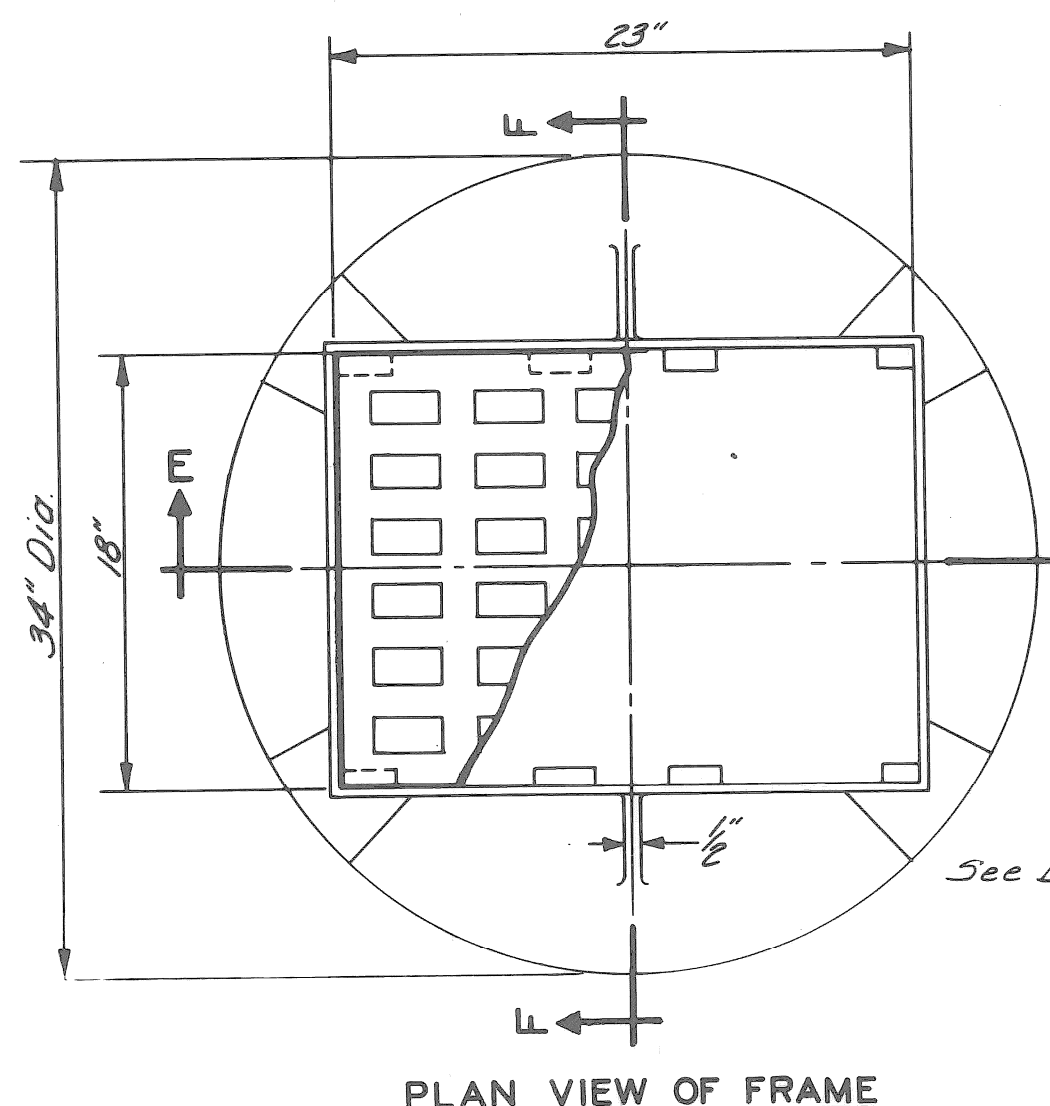
DETAIL OF TRAP FOR CATCH BASIN "B"

NO SCALE

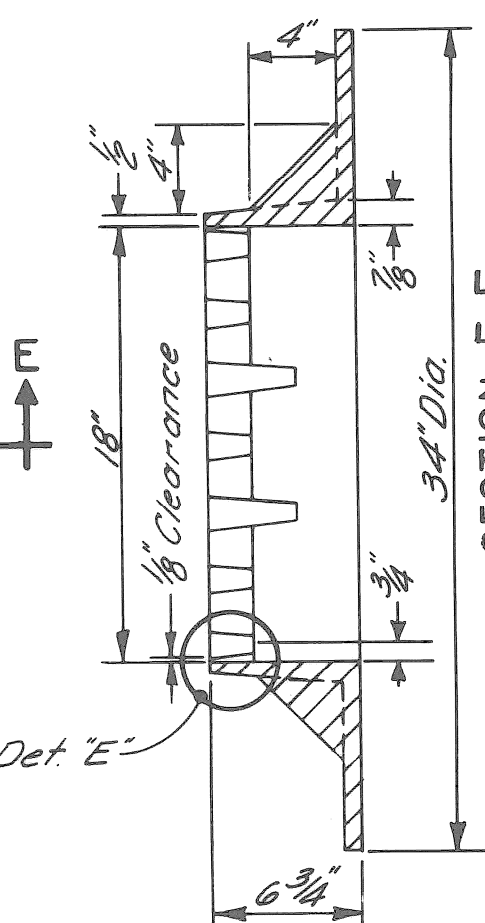


CATCH BASIN "A"

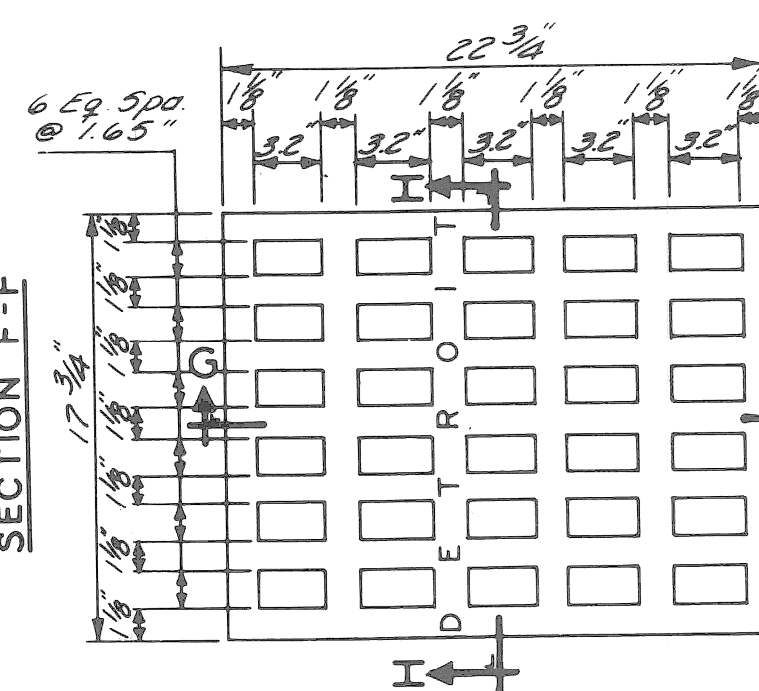
NO SCALE



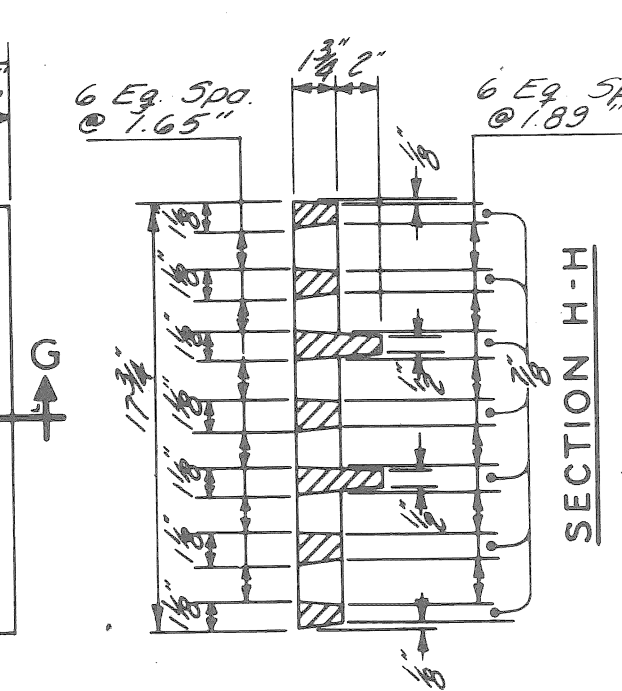
PLAN VIEW OF FRAME



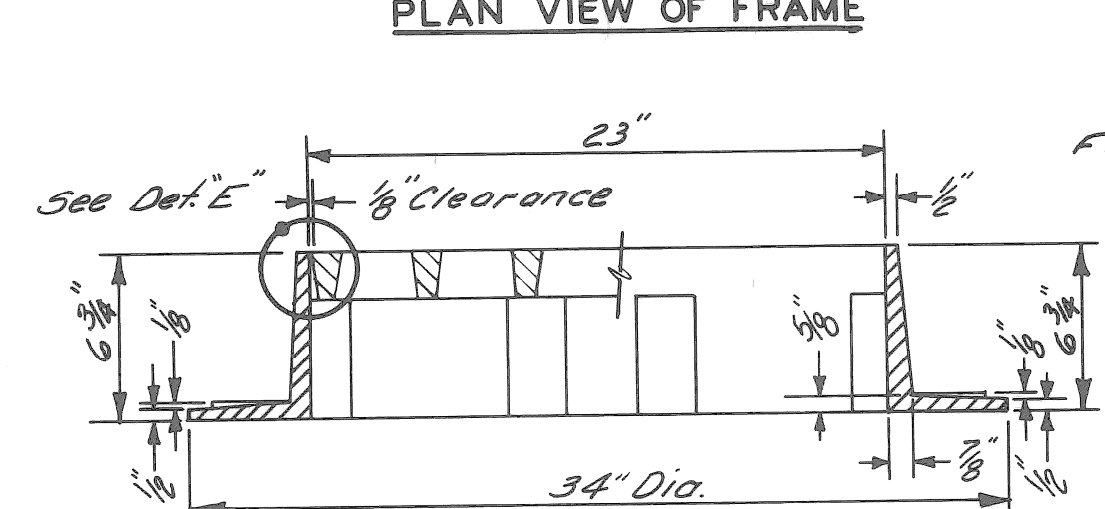
SECTION F-F



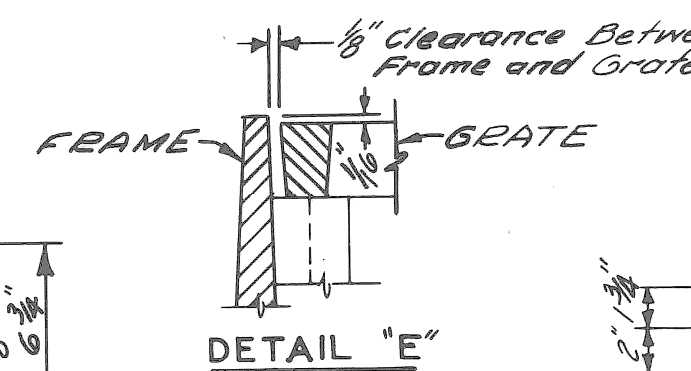
PLAN VIEW OF GRATE



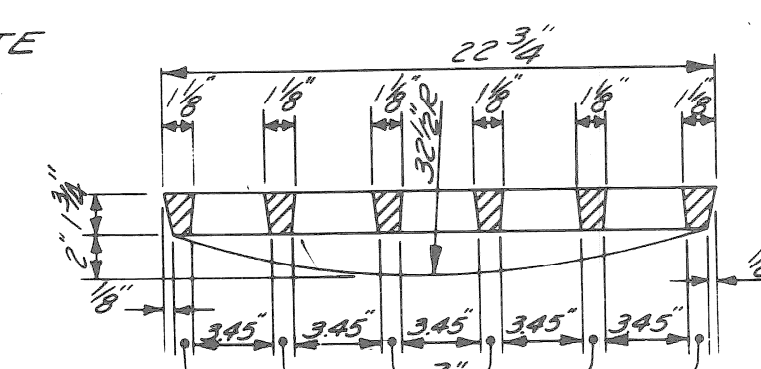
SECTION H-H



SECTION E-E



DETAIL 'E'



SECTION G-G

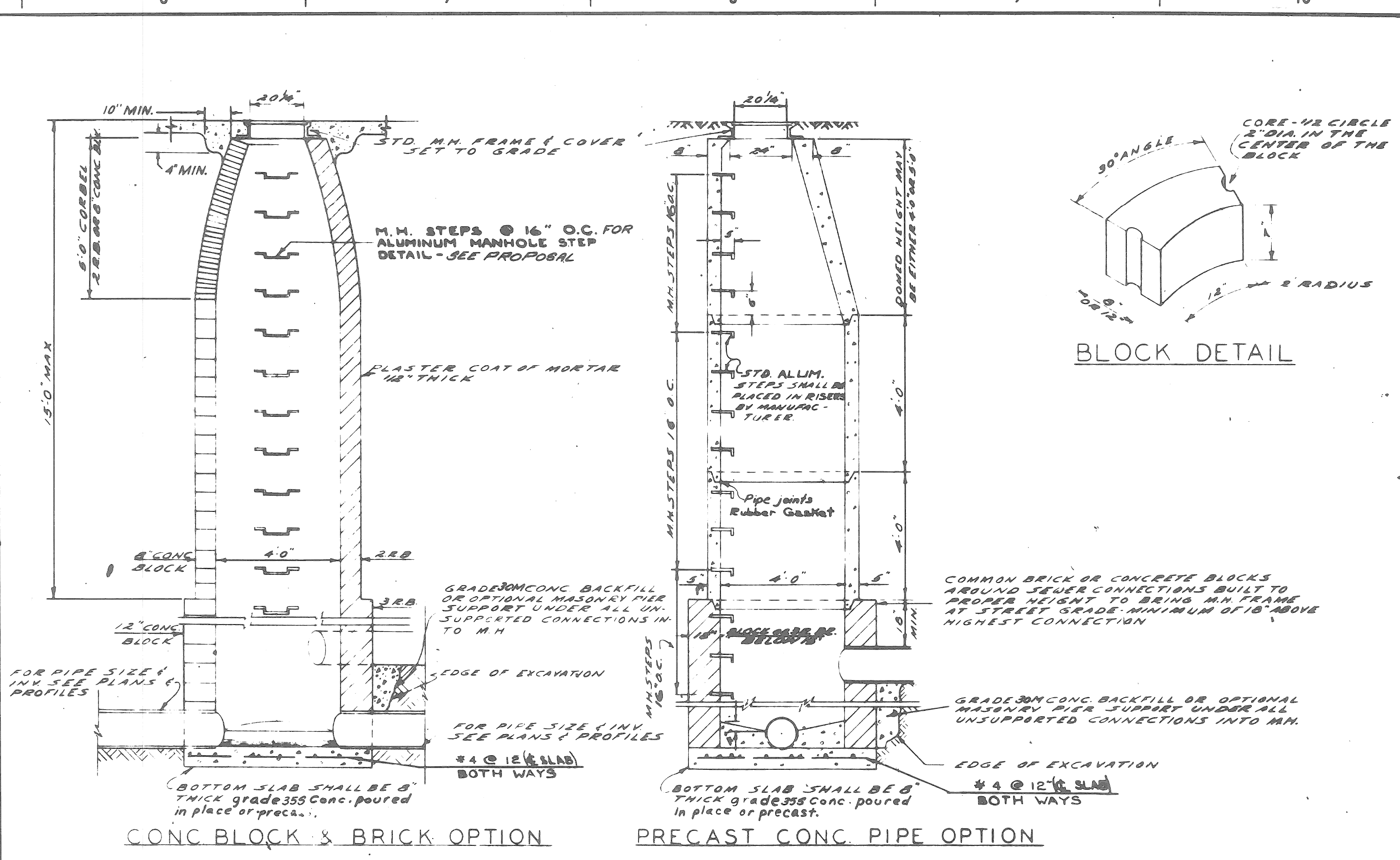
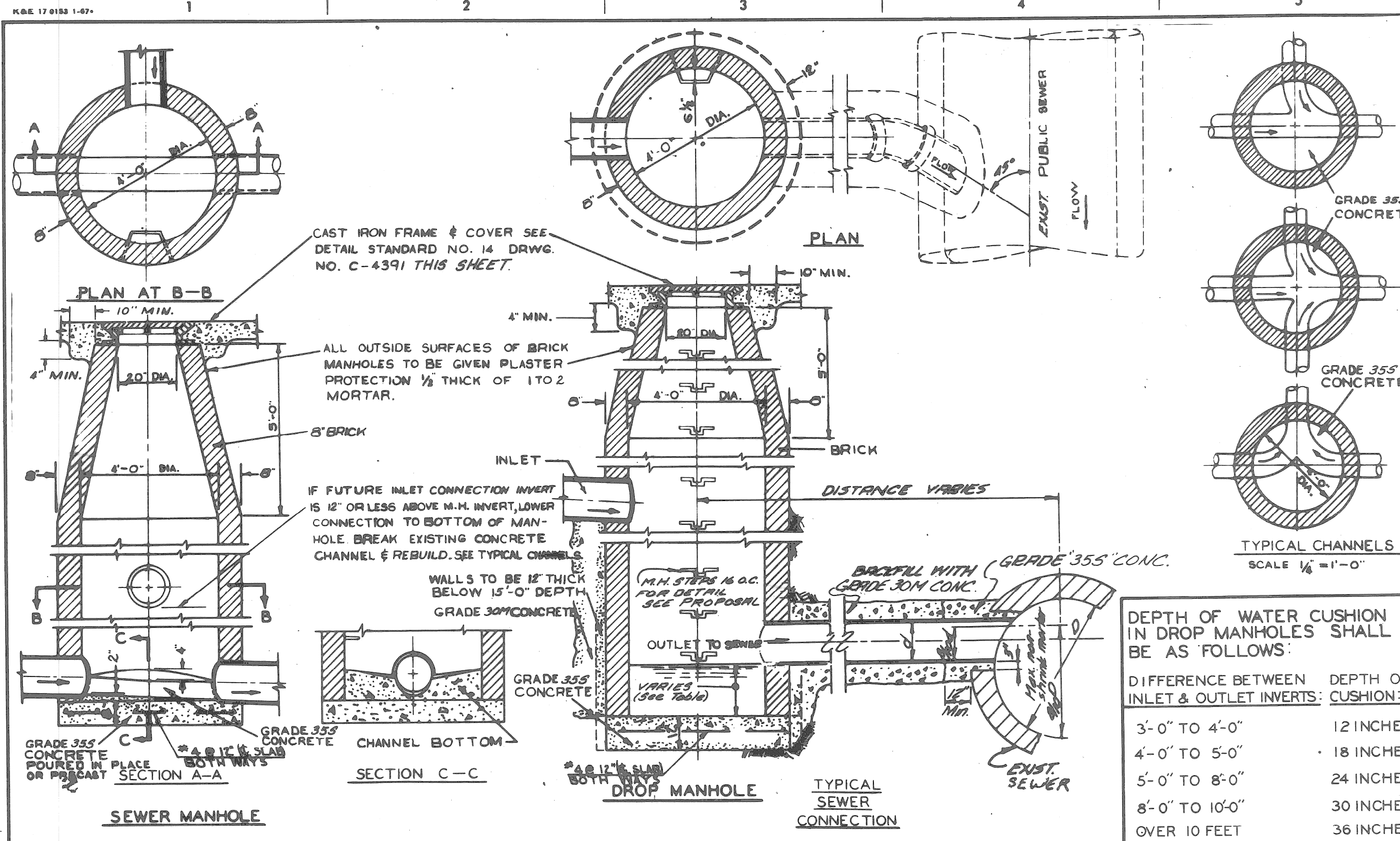
STANDARD FLAT GRATE AND FRAME

NO SCALE

GENERAL NOTES

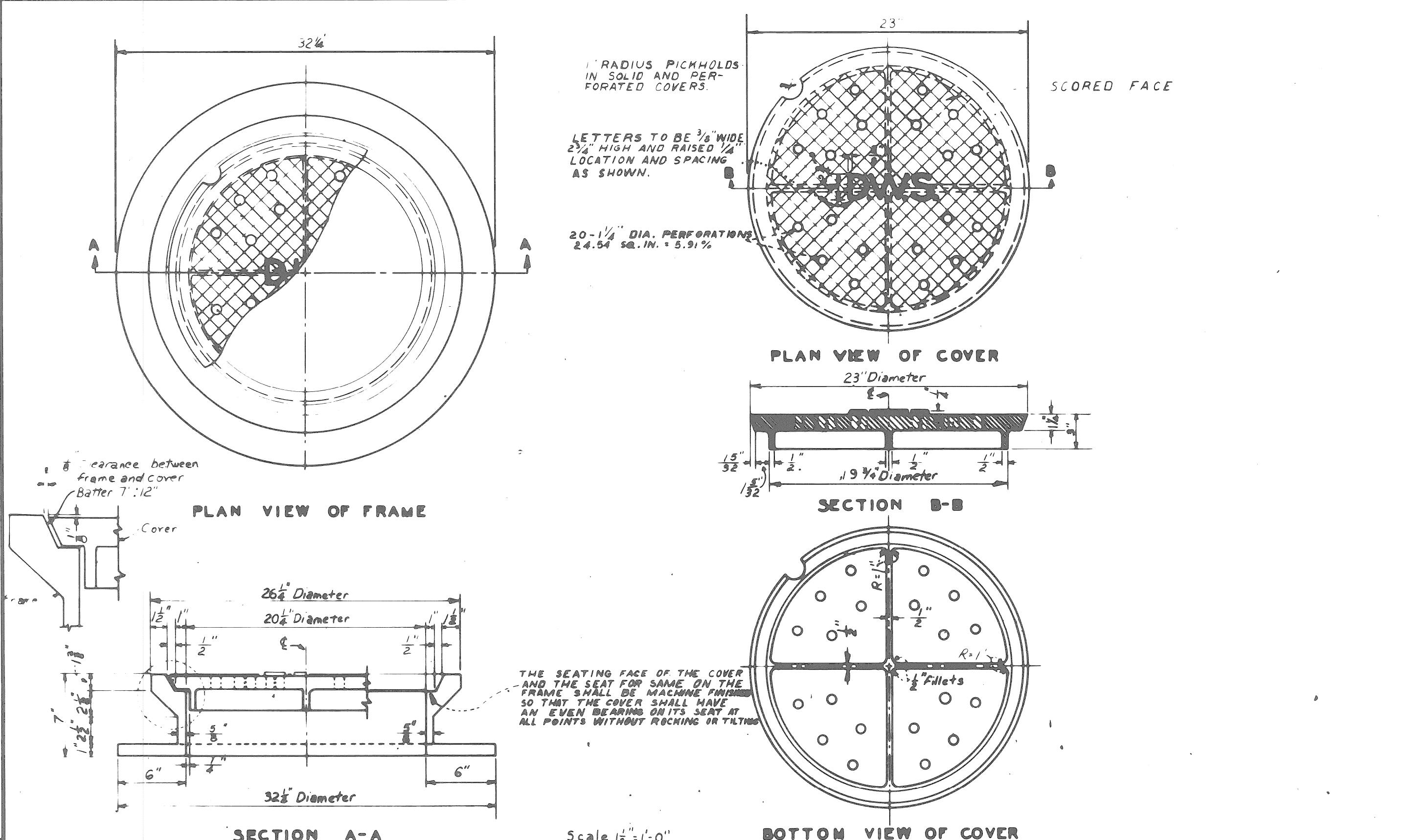
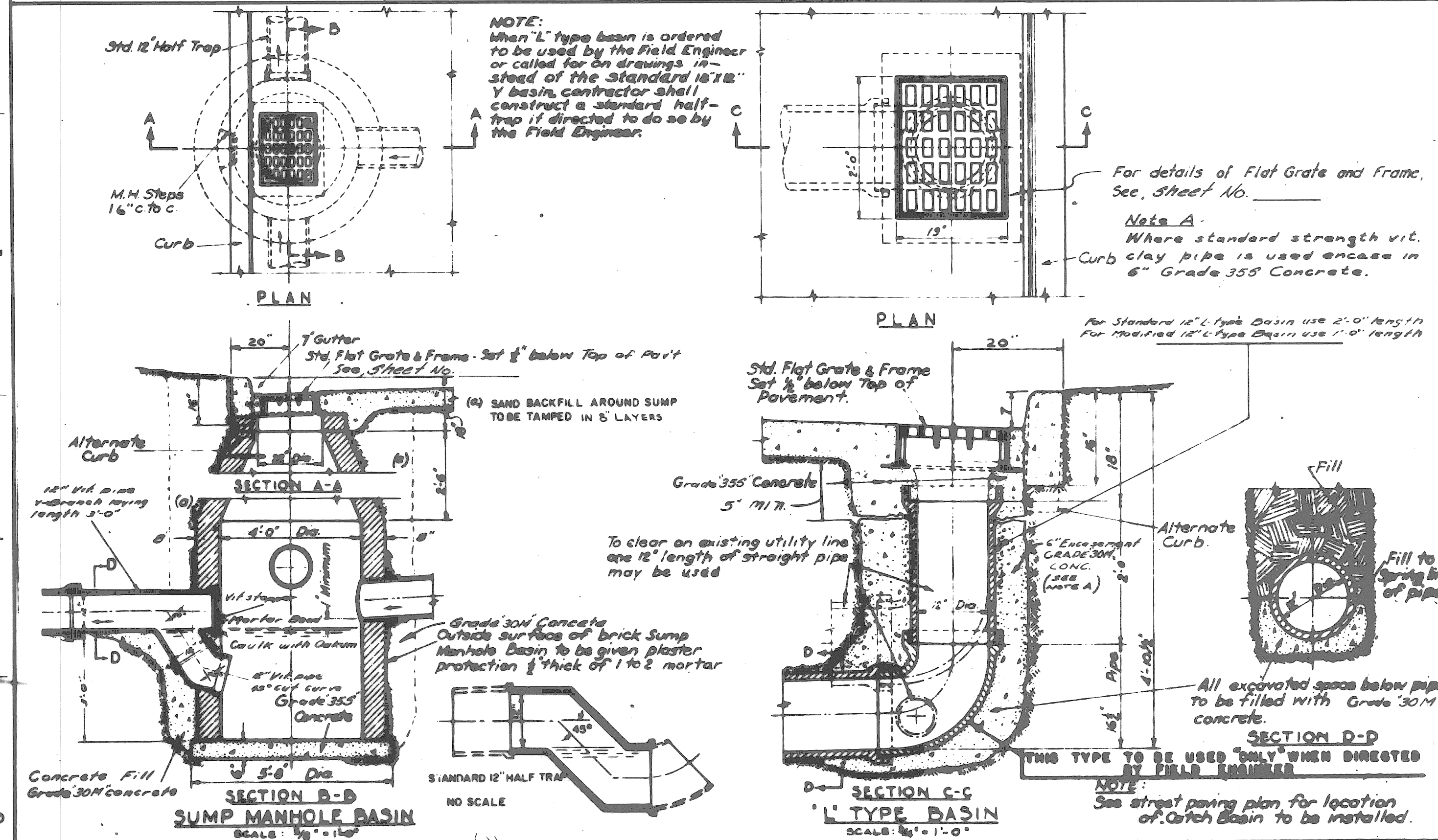
- The materials & workmanship shall be in accordance with the current Standard Specifications.
- Center of Catch Basin shall be 20 inches from back of curb.
- All sizes & flow lines of pipe, and elevations for top & bottom of structures shall be determined from the plans or construction requirements. 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.

REVISIONS LOCATED BY COORDINATES ON SHEET DESCRIPTION DRW. CKD. APVD. DATE	DESIGNED BY	APPROVED:	CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEERS OFFICE	SHEET 10 OF 40 SHEETS CONTRACT No. 17662A 15892A ASSIGN. NO. DATE Jan., 1983	
	DRAWN BY	<i>John Erickson</i>			ENGINEER OF STREETS
	TRACED BY	<i>Alan E. Pappas</i>			ENGINEER OF EXPRESSWAYS
	CHECKED BY	<i>W. B. Bannard</i>			HEAD CIVIL ENGINEER
	M. POLITO				
	D. MILZ				



DESIGNED BY	APPROVED BY	CITY OF DETROIT
DRAWN BY	ENGINEER OF STREETS	DEPARTMENT OF PUBLIC WORKS
TRACED BY	ASST. CITY ENGINEER	CITY ENGINEER'S OFFICE
DESCRIPTION	REVISIONS	BUREAU OF DESIGN
DETAILS OF STANDARD SEWER & DROP MANHOLES		DETAIL STANDARD NO. 10 DWG. NO. C-4387
BOOK NO.	PG.	SCALE 3/8" = 1'-0" DATE: 8-27-66
1971 1970 1969 1968 1967		

DESIGNED BY	APPROVED BY	CITY OF DETROIT
DRAWN BY	ENGINEER OF STREETS	DEPARTMENT OF PUBLIC WORKS
TRACED BY	ASST. CITY ENGINEER	CITY ENGINEER'S OFFICE
DESCRIPTION	REVISIONS	BUREAU OF DESIGN
STD SEWER MANHOLES CONSTRUCTION ALTERNATES		DETAIL STANDARD NO. 18
BOOK NO.	PG.	SCALE NONE DATE: 8-28-68
1971 1970 1969 1968 1967		



DESIGNED BY	APPROVED BY	CITY OF DETROIT
DRAWN BY	ENGINEER OF STREETS	DEPARTMENT OF PUBLIC WORKS
TRACED BY	ASST. CITY ENGINEER	CITY ENGINEER'S OFFICE
DESCRIPTION	REVISIONS	BUREAU OF DESIGN
TYPICAL SUMP MANHOLE & 'L' TYPE CATCH BASINS		DETAIL STANDARD NO. 12 DWG. NO. C-4390
BOOK NO.	PG.	SCALE AS SHOWN DATE: MAR. 2, 1969
1971 1970 1969 1968 1967 1966 1965 1964 1963 1962 1961 1960		

DESIGNED BY	APPROVED BY	CITY OF DETROIT
DRAWN BY	ENGINEER OF STREETS	DEPARTMENT OF PUBLIC WORKS
TRACED BY	ASST. CITY ENGINEER	CITY ENGINEER'S OFFICE
DESCRIPTION	REVISIONS	BUREAU OF DESIGN
MANHOLE FRAME AND COVER		DETAIL STANDARD NO. 18
BOOK NO.	PG.	SCALE AS SHOWN DATE: DECEMBER 4, 1966
1971 1970 1969 1968 1967 1966 1965 1964 1963 1962 1961 1960		

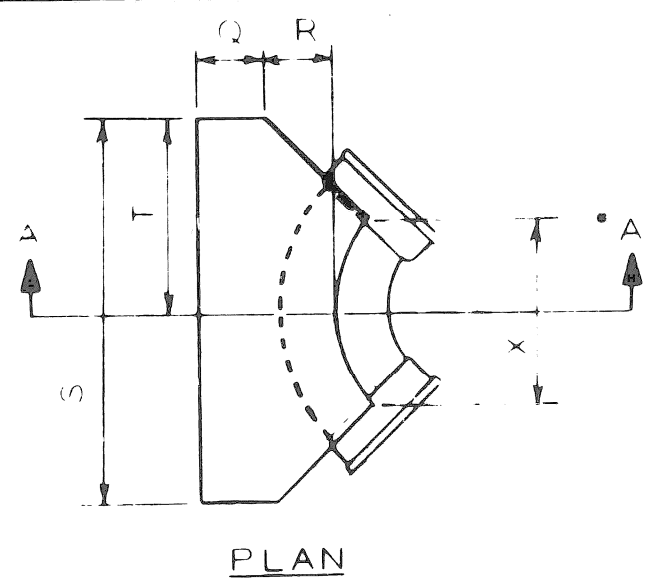
DESIGNED BY	APPROVED BY	CITY ENGINEER
DRAWN BY		
TRACED BY		
CHECKED BY		
DESCRIPTION	REVISIONS	
REVISIONS LOCATED BY COORDINATES ON SHEET		

CITY OF DETROIT
CITY ENGINEERING DEPARTMENT

INTERSECTION IMPROVEMENTS

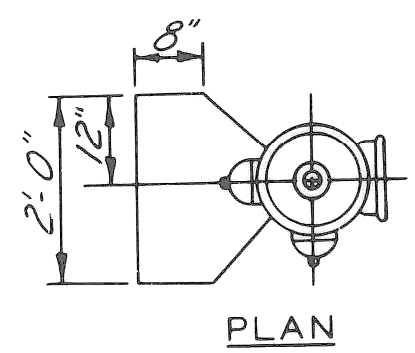
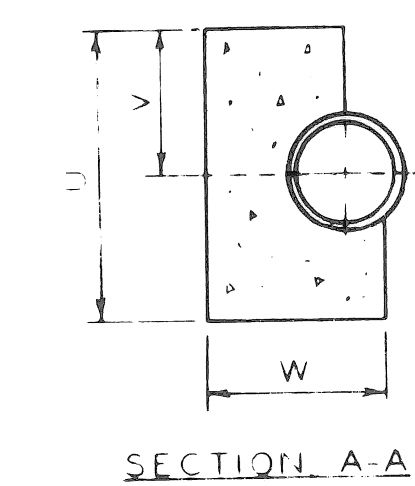
SPECIAL DETAILS

SHEET	11	OF	40	SHEETS
CONTRACT NO.	17662A 15892A			
ASSIG.				
DATE	Jan., 1983			

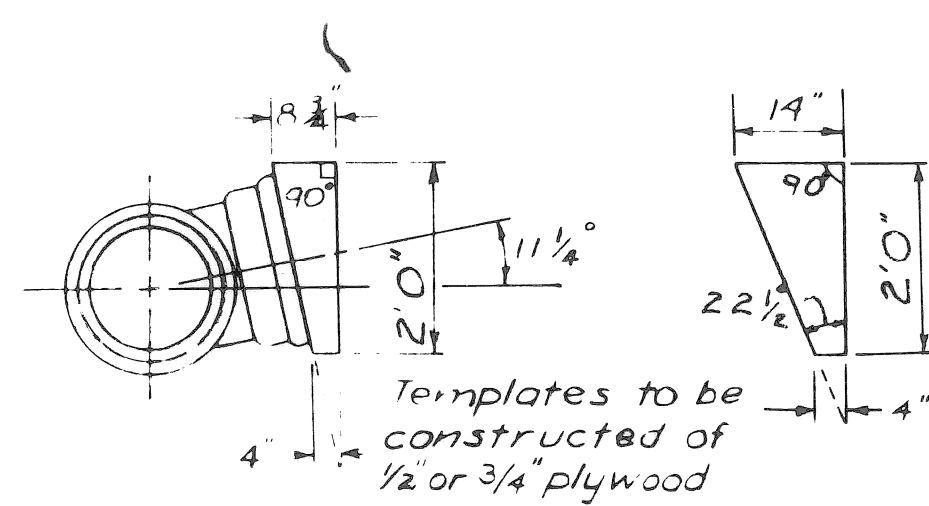


BEND SIZE	ANGLE	CODE									
		G	R	S	T	U	V	W	X	Y	Z
6" x 8"	90°	0' 9"	1' 0"	3' 4"	1' 8"	2' 6"	1' 3"	1' 11"	1' 2"		
12"	90°	0' 9"	1' 4"	5' 6"	2' 9"	3' 0"	1' 6"	2' 4"	1' 8"		
16"	90°	1' 0"	1' 8"	6' 0"	3' 0"	5' 0"	2' 6"	3' 0"	2' 8"		
6" x 8"	45°	0' 9"	1' 0"	2' 4"	1' 2"	2' 0"	1' 0"	1' 11"	1' 4"		
12"	45°	0' 9"	1' 4"	3' 6"	1' 9"	2' 6"	1' 3"	2' 4"	1' 4"		
16"	45°	1' 0"	1' 8"	5' 4"	2' 8"	3' 0"	1' 6"	3' 0"	2' 6"		
6" x 8"	22 1/2°	0' 9"	1' 0"	2' 6"	1' 3"	2' 0"	1' 0"	2' 0"	1' 4"		
16"	22 1/2°	1' 0"	1' 8"	3' 4"	1' 8"	2' 6"	1' 3"	3' 0"	1' 2"		

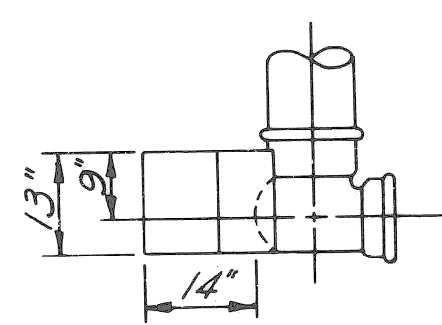
DETAIL OF STANDARD THRUST BLOCKS FOR BENDS
No Scale



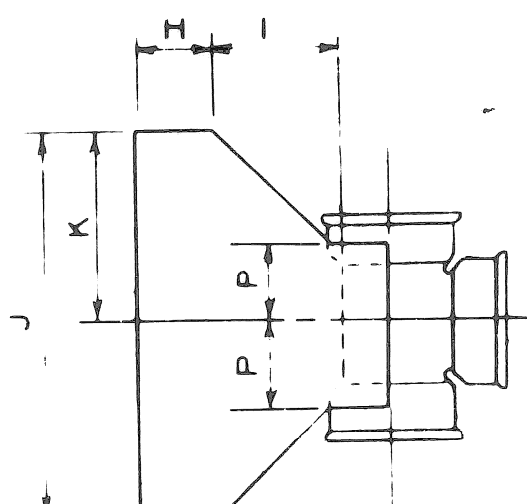
PLAN



TEMPLATE FOR SETTING TEES
AT 11 1/4° & 22 1/2° ANGLES
No Scale



THRUST BLOCK FOR 6" HYDRANT
No Scale

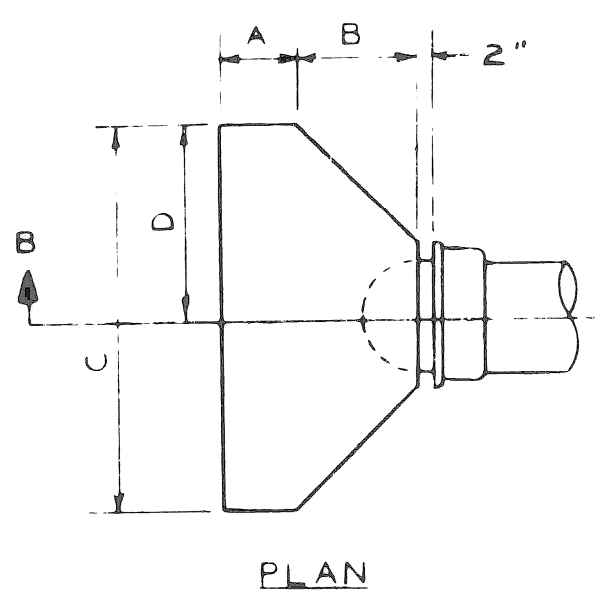


PLAN

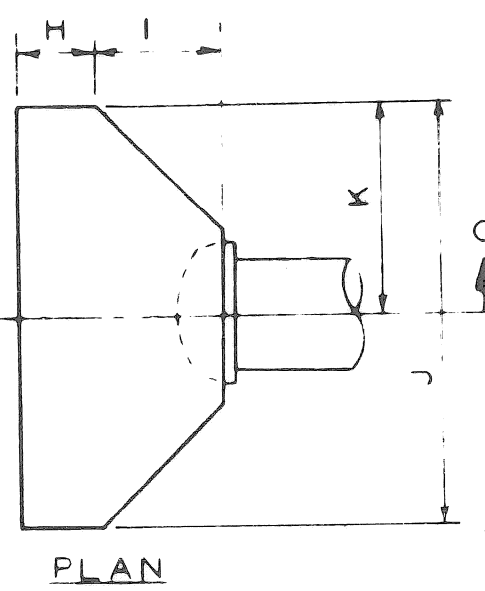
TEE SIZE	CODE							
	H	I	J	K	L	M	N	P
8" x 8"							8' 2' 3"	8' 0' 6"
12" x 8"	0' 9"	1' 0"	3' 0"	1' 6"	2' 0"	1' 0"	12' 2' 5"	12' 0' 8"
16" x 8"							16' 2' 9"	16' 0' 6"
12" x 12"	0' 9"	1' 4"	4' 0"	2' 0"	3' 0"	1' 6"	12' 2' 9"	8' 0' 8"
16" x 12"							16' 3' 1"	16' 0' 8"
16" x 16"	1' 0"	1' 8"	5' 0"	2'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

DETAIL OF STANDARD THRUST BLOCKS FOR TEES
No Scale

Notes:
The bearing face of all thrust blocks shall be poured against undisturbed earth. Thrust blocks will be required on all bends 6 inches in diameter or larger and greater than 11 1/4°.



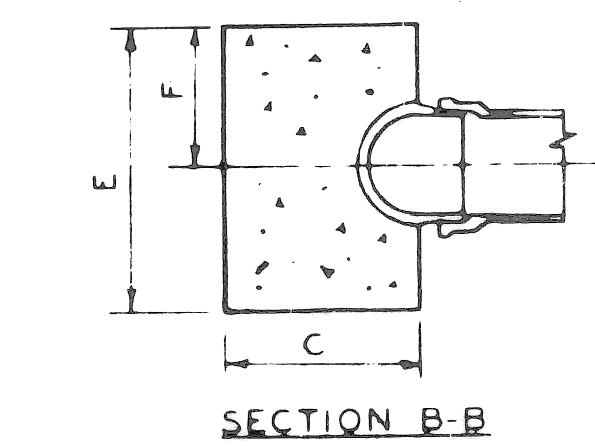
PLAN



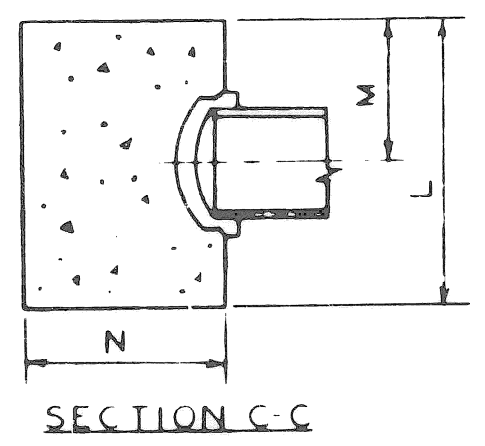
PLAN

PLUG SIZE	CODE						
	A	B	C	D	E	F	G
6" x 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"

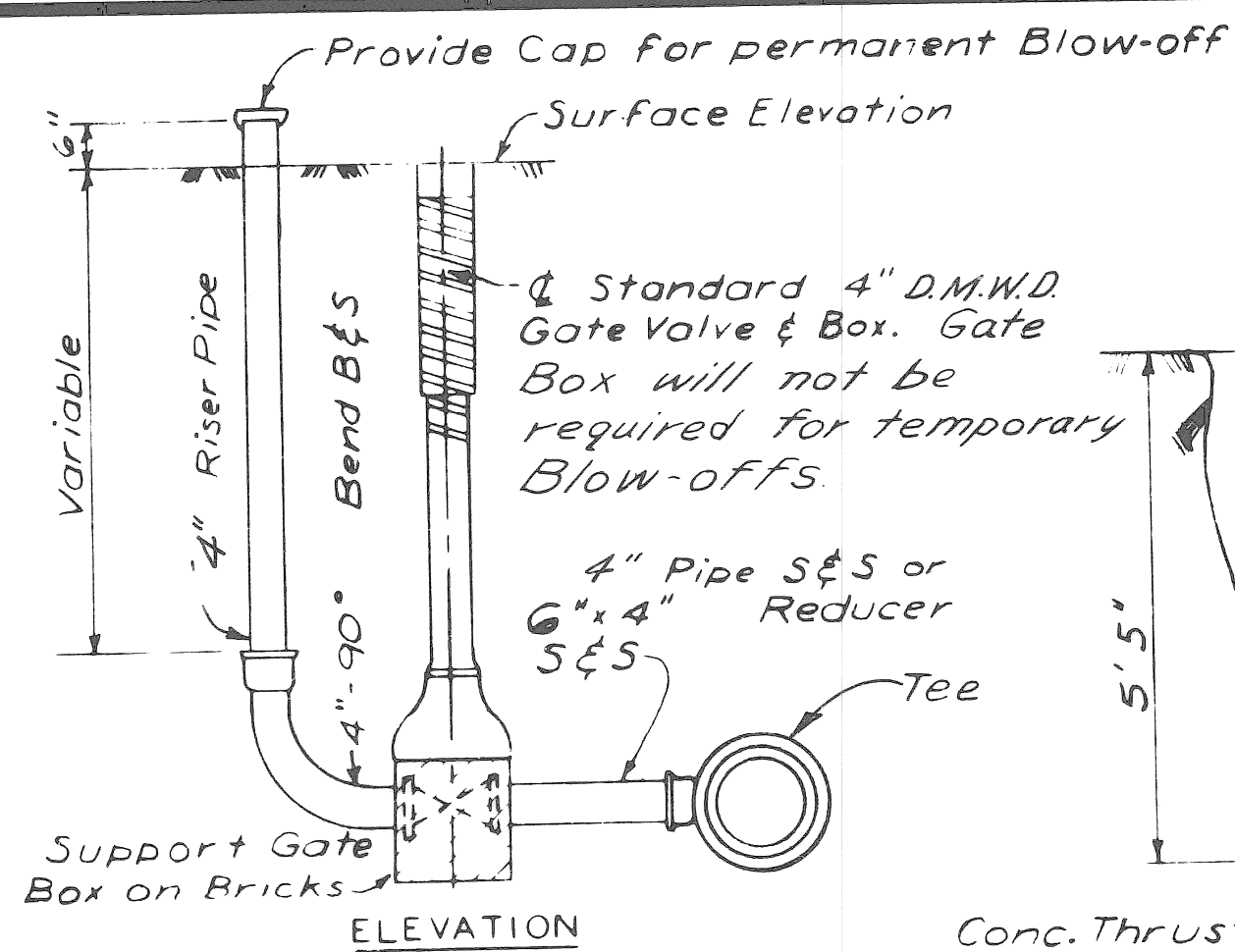
DETAIL OF STANDARD THRUST BLOCKS FOR PLUGS & CAPS
No Scale



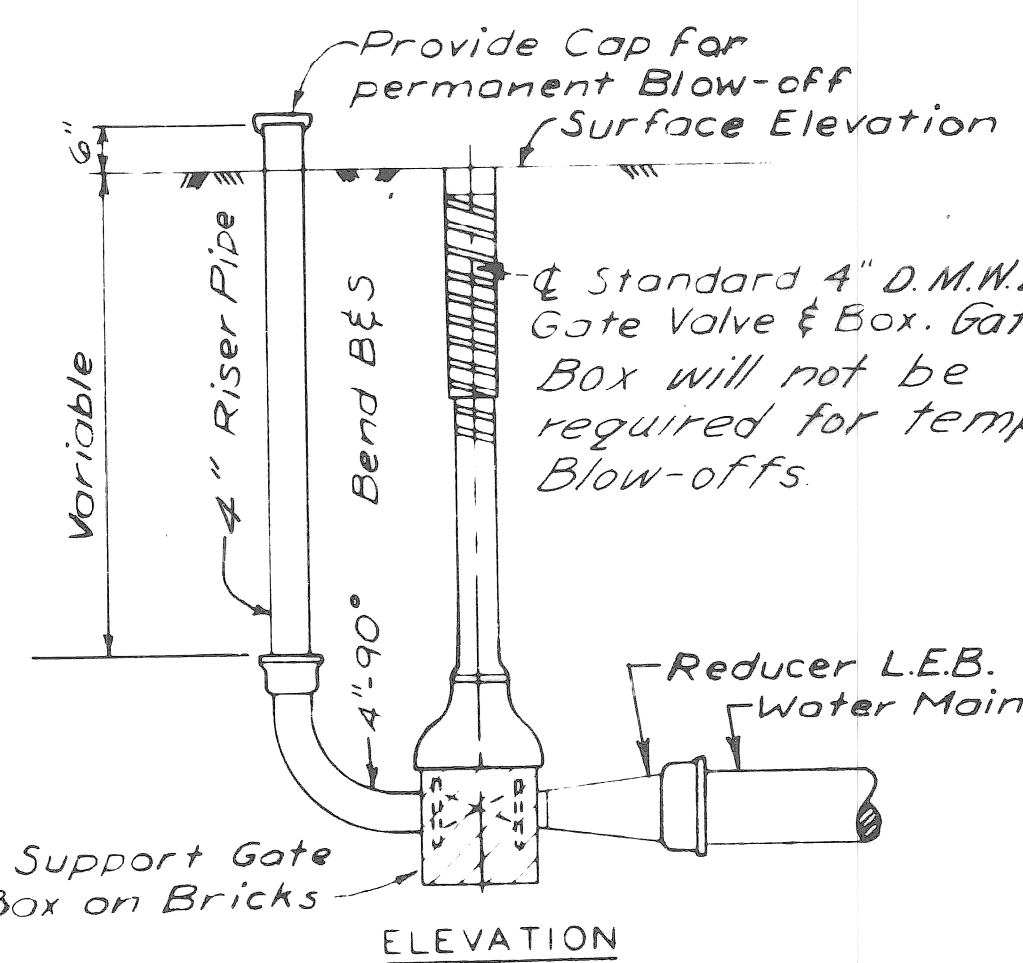
SECTION B-B



SECTION C-C

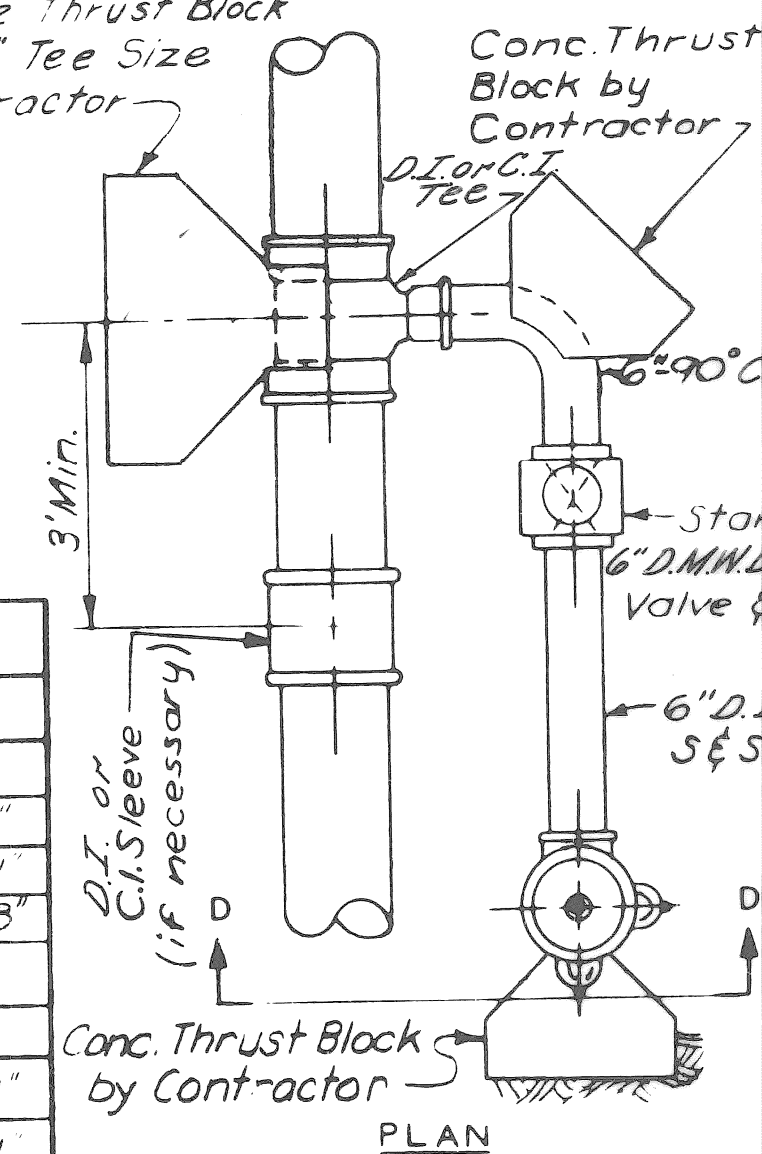


DETAIL OF 4" BLOW-OFF
No Scale



DETAIL OF 4" BLOW-OFF
No Scale

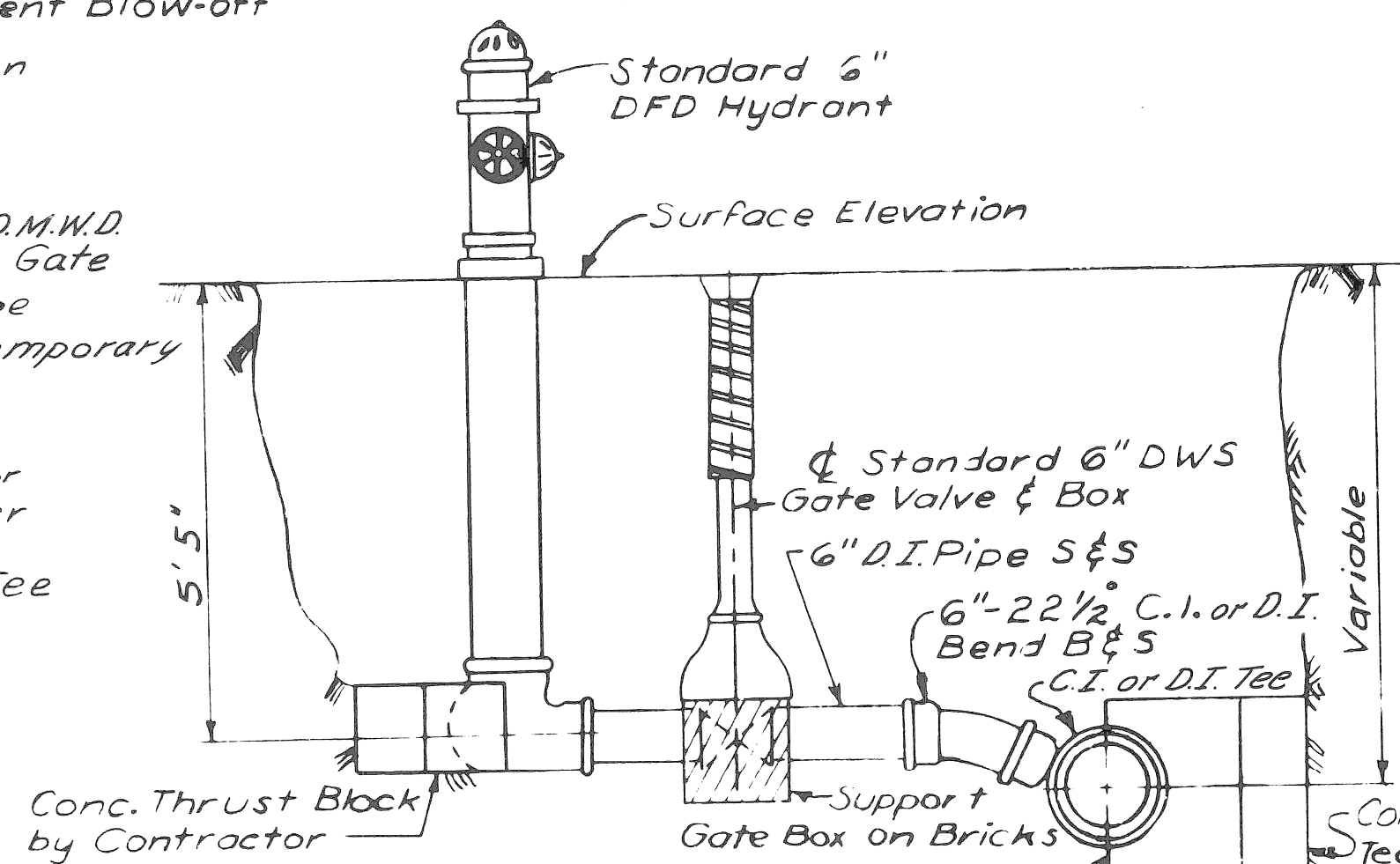
Concrete Thrust Block for 8" x 8" Tee Size by Contractor



From the new main the Contractor shall install the Tee, 6" 90° Bend S&S, 6" Pipe, 6" D.M.W.D. Gate Valve & Box, 6" Pipe Concrete Thrust Blocks and Hydrant. From any existing main the complete Hydrant installation shall be done by the Contractor.

Hydrants to be a minimum of 6' behind the Curb, unless otherwise shown on the drawings. Dimensions given from Curb are from Pavement Joint line which is at face of Curb.

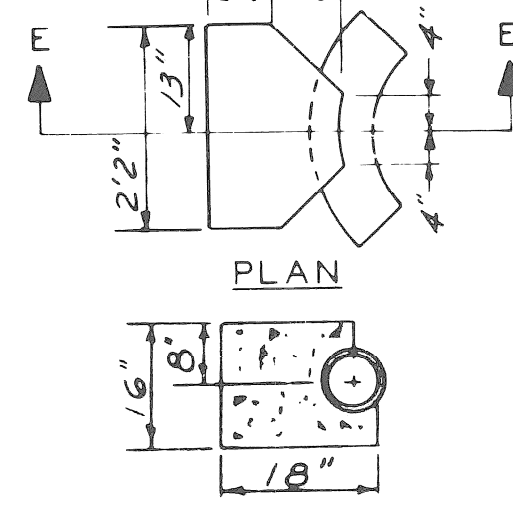
DETAIL OF 6" HYDRANT INSTALLATION
No Scale



From the new main the Contractor shall install the Tee, 6" 22 1/2° Bend S&S, 6" Pipe, 6" D.M.W.D. Gate Valve & Box, 6" Pipe Concrete Thrust Blocks, and Hydrant. From any existing main the complete Hydrant installation shall be done by the Contractor.

Hydrants to be a minimum of 6' behind Curb, unless otherwise noted on the drawings. Dimensions given from the Curb are from Pavement Joint line which is at face of Curb.

DETAIL OF 6" HYDRANT INSTALLATION
No Scale



THRUST BLOCK FOR 6" HYDRANT BEND
No Scale

GENERAL NOTES

"Ductile Iron Pipe in sizes 3" through 16" is permitted as a part of the Cast Iron Pipe Specifications."

17662A

PROJECT NO. 15892A ASSIGN No.

FIRE HYDRANT MISCELLANEOUS DETAILS

NO.	REVISIONS	DATE	BY

DRAWN BY	RBP
CHECKED BY	MP
DESIGNED BY	J.D.
DATE	

10-31-75
Use for City of...

QUANTITY SHEET - E

ITEMS	AS PER PLANS														SHEET NOS.	
	SHEET NO'S. 2		3		4		7		8		TOTALS		SHEET NOS.			
	CONTRACT TOTALS	UNITS	TYPICAL CROSS SECTIONS	CONVANT - DAVISON UTILITIES, RE-MOVALS, & ALIGN.	CONVANT - DAVISON UTILITIES, RE-MOVALS, & ALIGN.	CONVANT - DAVISON UTILITIES, RE-MOVALS, & ALIGN.	CONVANT - DAVISON UTILITIES, RE-MOVALS, & ALIGN.	CONVANT - DAVISON UTILITIES, RE-MOVALS, & ALIGN.	CONVANT - DAVISON UTILITIES, RE-MOVALS, & ALIGN.	CONVANT - DAVISON UTILITIES, RE-MOVALS, & ALIGN.	TOTALS	UNITS	TOTALS	UNITS		
Removing Pavement	478	Sq. Yd.		265	610	167		311		167	311					
Removing Curb	1,265	Lin. Ft.		636	361	391		874		391	874					
Removing Sidewalk	835	Sq. Yd.	40	425	338	466		329		486	349					
Abandoning Drainage Structures	10	Each		2	2	3		7		3	7					
Earth Excavation	548	Cu. Yd.		337	224	114		434		114	434					
Subgrade Undercutting, Type II	25	Cu. Yd.	25							10	15					
Cold-Milling Bituminous Surface	74	Cu. Yd.			137	833		54		20	54					
Adjust Water Shut-Off	7	Each					4		3	4	3					
Bituminous Surfacing Mixture No. 1100L, 20AA	325	Ton		2	87	257	0.2	270.8		54	271					
Bituminous Surfacing Mixture No. 1100T, 20AA	361	Ton		15	133	297	0.2	284.8		76	285					
Conditioning Existing Pavement	29	Ton	1		28			28		28.5	0.5					
Bituminous Shoulders (3" Thickness)	18	Ton							18	18						
Concrete Pavement-Nonreinforced-B"	214	Sq. Yd.			57	247		64		150	64	150				
Sawed Longitudinal Plane of Weakness Joint	1,885	Lin. Ft.			34	29		575		1,310	575	1,310				
Concrete Base Course-Nonreinforced-9"	1,273	Sq. Yd.			300	805		382		891	382	891				
with Integral Curb																
Cement	5	Ton	5							2	3					
Removing Old Pavement-Patching	8	Sq. Yd.	5	24	24	3				5	3					
Concrete Pavement Patching-Type FS-9"	8	Sq. Yd.	5	24	24	3				5	3					
- Nonreinforced																
Catch Basin "B"	9	Each			4	4		2		7	7					
Catch Basin "C"	1	Each			3	1				0.5	0.5					
12" Sewer, C-76-III, Trench Detail 8	20	Lin. Ft.	20							10	10					
12" Sewer, C-76-III, Trench Detail 9	105	Lin. Ft.			192	127		57		48	57	48				
12" Sewer Tap	1	Each			3			1		1						
Adjusting Drainage Structure Covers	3	Each			1	2		2		2	1					
12" Sewer Trap	9	Each			4	4		2		7	7					
Cleaning Existing Storm Drainage Structures	5	Each	5					NON FED. PART		2	3					
Sewer Cleanout	150	Lin. Ft.	150					NON FED. PART		75	75					
Concrete Curb Detail "X"	35	Lin. Ft.	35							18	17					
4" Concrete Sidewalk	4,360	Sq. Ft.	360		1,026	1,476		2,212		1,788	2,390	1,970				
6" Concrete Sidewalk	880	Sq. Ft.			1,160	1,219		441		439	441	439				
Sidewalk Ramps, Type 1	240	Sq. Ft.			200	80		120		120	120	120				
Sidewalk Ramps, Type 2	40	Sq. Ft.								40	40	40				
Sidewalk Ramps, Type 3	300	Sq. Ft.			120	240		60		240	60	240				
Lighted Arrow, Type A, Furnished	1	Each				1				1	1	1				
Lighted Arrow, Type A, Operated	1	Each				1				1	1	1				
Barricade, Type II, Lighted, Furnished	138	Each			69	66		30		102	36	102				
Barricade, Type II, Lighted, Operated	92	Each			46	44		24		68	24	68				
Barricade, Type III, Lighted	3	Each			3	4		3		3	3	3				
Sign, Type B, Temporary	205	Sq. Ft.			111	135		85		120	85	120				
Temp Pavt Marking Type NR	350	U. F.								150	200					
Class A Sodding	306	Sq. Yd.	25		161	30		9		272	21	285				
Water	2	Unit	11		0.5	0.1		0.1		0.8	0.5	1.5				
Topsail Surface - 3"	306	Sq. Yd.	25		161	30		9		272	21	285				
Temp Pavt Marking Type R	350	U. F.								150	200					
Fire Hydrant	1	Each		2				1		1						
Remove Hydrant- Method I	1	Each		1				1		1						
Remove Hydrant- Method II	1	Each		1				1		1						
Reconstruct Gate Well	3	Each		1						3	3	3				
Adjust Gate Well Cover	7	Each			2		5		2	5	2					
Removing Drainage Structures	1	Each	1							0.5	0.5					
Catch Basin "A"	1	Each						1		1						
On The Job Training	1	Each	1							0.5	0.5					
Mobilization	1	Lump Sum	1							0.5	0.5					
Minor Traffic Devices	1	Lump Sum	1							0.5	0.5					