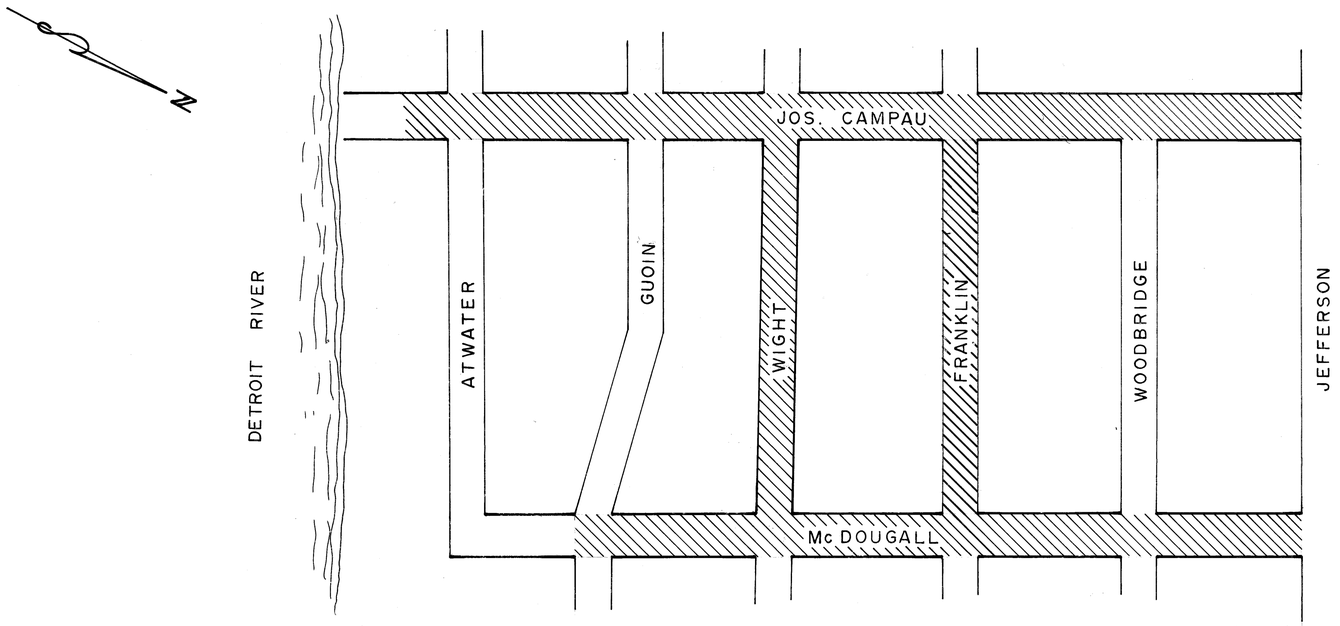
CITY OF DETROIT
COLEMAN A. YOUNG – MAYOR
CITY ENGINEERING DEPARTMENT

PLANS FOR PROPOSED

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, McDOUGALL, WIGHT, AND FRANKLIN ST.
RIVER PLACE DEVELOPMENT



JOS. CAMPAU

INDEX OF SHEETS

PROJECT:
RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, McDOUGALL, WIGHT, AND FRANKLIN ST.
RIVER PLACE DEVELOPMENT

CONTRACT NO. PW 6727

PLANS PREPARED BY

CITY ENGINEERING DEPARTMENT

RECOMMENDED FOR APPROVAL	ENGINEER OF INSPECTION	6/22/87 DATE
RECOMMENDED FOR APPROVAL	W. L. TALLEY / N.O.W. ENGINEER OF STREETS	6/22/87 DATE
APPROVED	ASSISTANT CITY ENGINEER	6-22-87 DATE
APPROVED	DEPUTY DIRECTOR	6/22/87 DATE

DATE 6 - 22 - 87 **DRWG. NO.** 1 OF 27

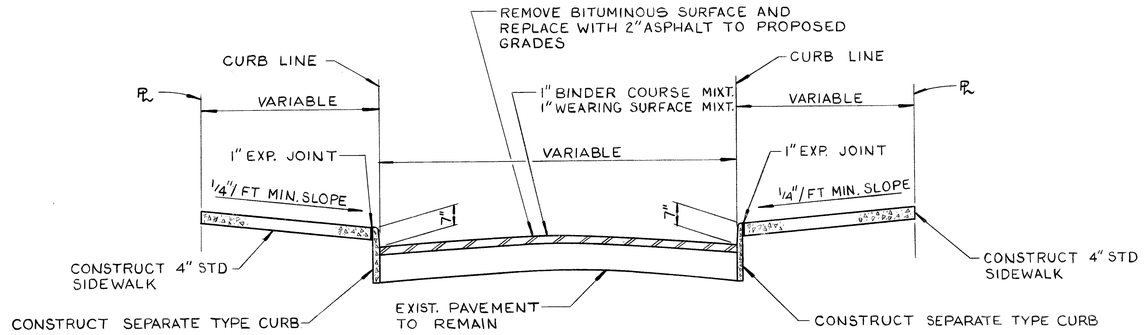
QUANTITY SHEET

ITEM NO.	DESCRIPTION	UNIT	JOS CAMPAU	McDOUGALL	WIGHT	FRANKLIN	TOTAL
1	EXCAVATION	Cyds	50	100	100	50	300
2	FILL (GRADE "A")	Cyds	128	121	390	50	689
3	SIDEWALK REMOVAL	SFT	24490	17281	1758	7825	51354
4	DRIVEWAY REMOVAL	SFT	3875	816	220	1367	6278
5	STREET PAV'T REMOVAL-UNREINFORCED	Syds	550	330	407		1287
6	SEPARATE TYPE CURB REMOVAL	LFT			100		100
7	RAILROAD TRACK REMOVAL	LFT	280				280
8	RAILROAD TRACK BASE REMOVAL	Syds	125				125
9	TREE REMOVAL 18"-24" DIA.	EACH	1			2	3
10	STUMP REMOVAL	EACH	1				1
11	STRIPPING	Syds	41	34			75
12	STRIP AND ADJUST ASPHALT SURFACE	Syds	25	58			83
13	REMOVING BITUMINOUS SURFACE	Syds	5730	3182	1160	1458	11530
14	REMOVE EXISTING CONCRETE BASE	Syds					50
15	REPLACE CONCRETE BASE WITH GRADE "A" CONCRETE	Syds					50
16	RESETTING CATCH BASINS-ALL TYPES	EACH	9	10		2	21
17	RESETTING MANHOLES	EACH	23	37	2	2	64
18	RESETTING STOP BOXES	EACH	1	4	1	3	9
19	BUILDING CATCH BASINS	EACH					1
20	SEMI-REBUILD CATCH BASIN	EACH					1
21	BITUMINOUS BOND COAT	GAL	964	784	220	227	2195
22	SHEET ASPHALT WEARING SURFACE MIXT.	TON	10	10	5		25
23	SIDEWALKS-4" STANDARD **	SFT	27600	17991	7530	8776	61897
24	SIDEWALKS-6" STANDARD **	SFT	2497	2051	168	527	5243
25	DRIVEWAY-8" STANDARD	SFT	3875	2069		478	6422
26	SEPARATE TYPE CURB REPL.-NONREINF.	LFT	2344	1711	1000	942	5997
27	9" UNIF. CONCRETE BASE PAVEMENT	SYDS	550	319	40		909
28	PAVEMENT-9" UNIFORM CONCRETE	SYDS	125				125
29	BRICK PAVERS	SFT	2993	1773			4766
30	CATCH BASIN ABANDONMENT	EACH			4		4
31	CATCH BASIN 18"x12" SPECIAL "Y"	EACH			4		4
32	SEWERS 12" PIPE C-76-III	LFT			20		20
33	MANHOLE ADJUSTMENT	EACH	13	8	2		23
34	STOP BOX ADJUSTMENT	EACH	6	11			17
35	JOINT SAWING	LFT	820	492	1100	100	2512
36	CLEANING EXISTING SURFACE	SYDS	597	545	300		1442
37	CONDITION EXISTING SURFACE	SYDS	199	182	25		406
38	MANHOLE RECONSTRUCT CONE	EACH					1
39	CLEANING STRUCTURES	EACH	1	1			2
40	SODDING	SYDS	15				15
41	TOP SOIL	CYDS	5				5
42	MAINTAINING TRAFFIC	LUMP SUM					
42a	INSTALLATION OF BRICK PAVERS SUPPLIED BY OWNER	LUMP SUM					
43	(WEARING SURFACE MIXTURE)						
	a) 31A(CD)-SLAG-1" AVE. THICKNESS	TONS	334	202	77	78	694
	b) 31A(CD)-NATURA-1" AVE THICKNESS	TONS	354	214	79	83	730
	c) 1100T, 20AA*-1½" AVE THICKNESS	TONS	531	321	119	125	1096
44	(BINDER COURSE MIXTURE)						
	a) 25A(MOD)-SLAG-1" AVE THICKNESS	TONS	325	196	75	76	672
	b) 25A(MOD)-NATURAL 1" AVE THICKNESS	TONS	354	214	79	83	730
	c) 1100L, 20AA*-1½" AVE. THICKNESS	TONS	531	321	119	125	1096

PLD ALTERATIONS FOR QUANTITIES SEE SHEET * 16

* In accordance with Michigan Department of Transportation 1984 Standard Specification for Construction

** Construction Only



TYPICAL SECTION
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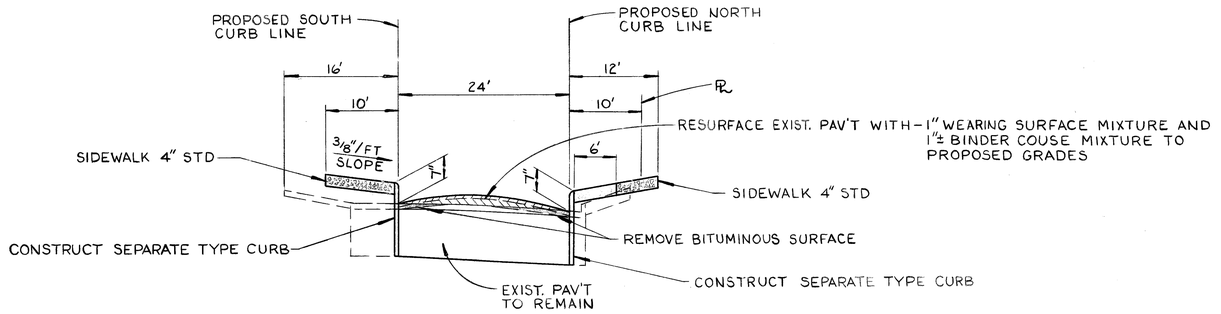


SECTION: F-F
NO SCALE

REVISIONS LOCATED BY COORDINATES ON SHEET	COOR'D	DESCRIPTION	DR'N	CK'D	AP'VD	DATE

REFERENCE DRAWINGS

DESIGNED BY D. C. M.
DRAWN BY A. Brown
TRACED BY
CHECKED BY D. C. M.

APPROVED: N. O. W. ENGINEER OF STREETS

CITY OF DETROIT
CITY ENGINEERING DEPARTMENT
BUREAUS OF STREETS AND HIGHWAYS
FOR

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, McDOUGALL, WIGHT, AND FRANKLIN ST.
RIVER PLACE DEVELOPMENT

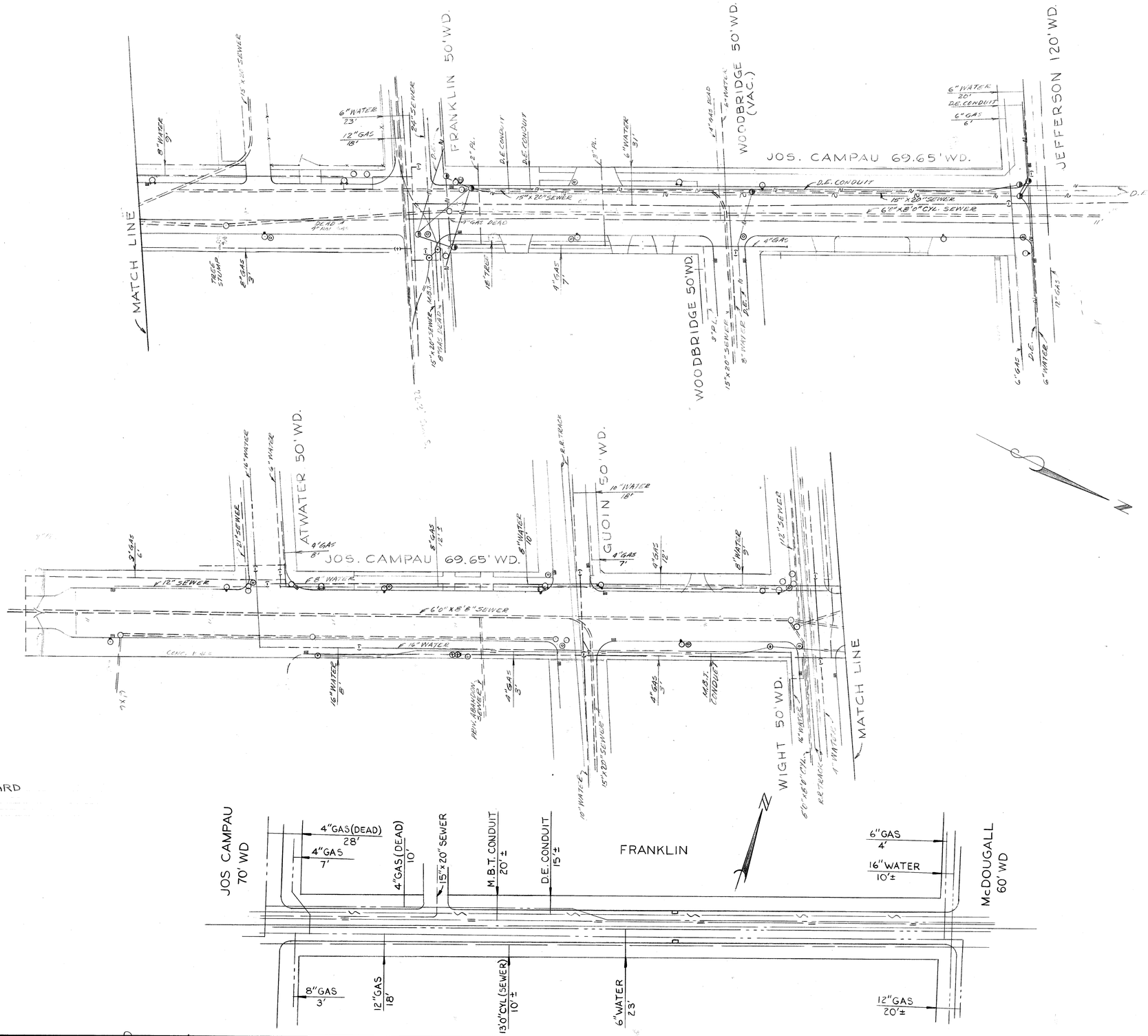
QUANTITY AND SECTION SHEET

SHEET 2 OF 27 SHEETS
CONTRACT NO. PW 6727
ASSIGNMENT NO. 84-14-20
DATE 6-22-87

68458

1 2 3 4 5 6 7 8 9 10 11

A B C D E F G



NOTE:

1. FOR UTILITY LEGEND SEE STANDARD DRAWING NO. C-902-A.

SCALE: 1"=40'

COOR'D	DESCRIPTION	DR'N	CK'D	AP'VD	DATE
REVISIONS LOCATED BY COORDINATES ON SHEET					

REFERENCE DRAWINGS

DESIGNED BY D. G. U.
DRAWN BY KNOX
TRACED BY
CHECKED BY D. G. U.

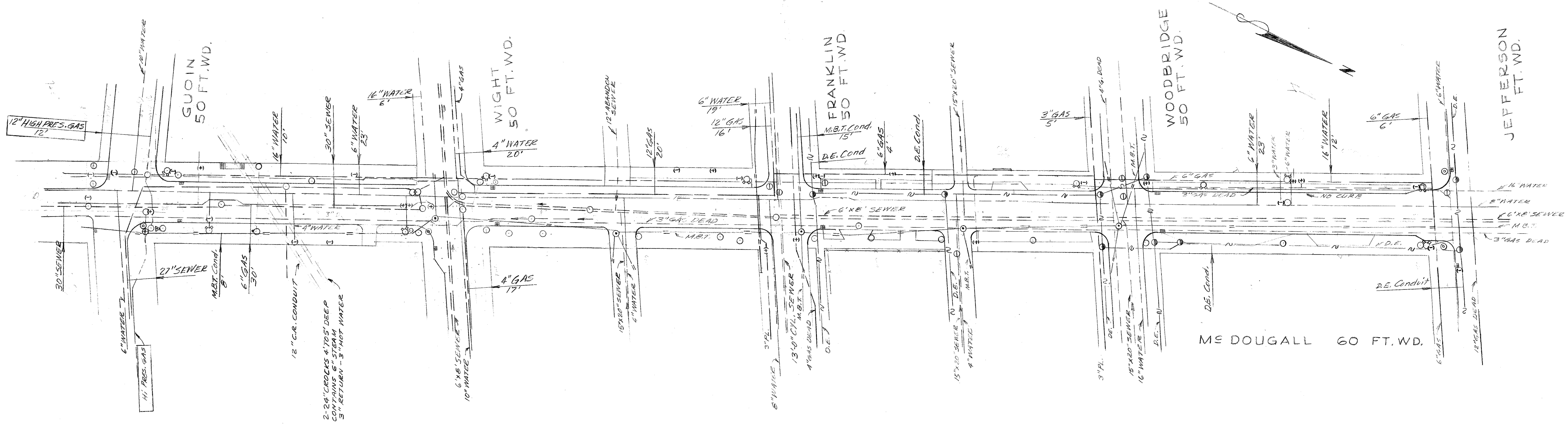
APPROVED: N. O. W. ENGINEER OF STREETS

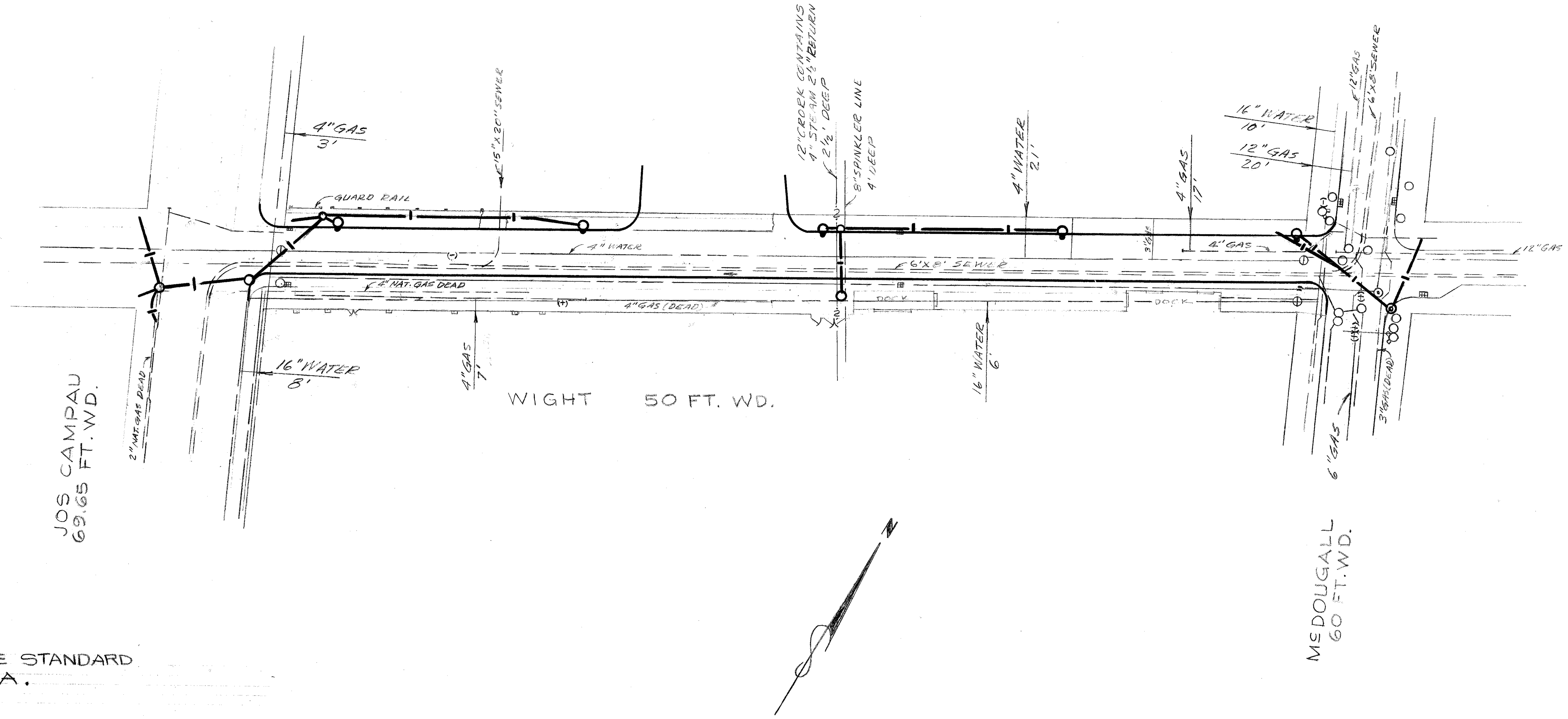
CITY OF DETROIT
CITY ENGINEERING DEPARTMENT
BUREAUS OF STREETS AND HIGHWAYS
FOR

RESURFACING AND MISCELLANEOUS CONSTRUCTION JOS. CAMPAU, McDOUGALL, WIGHT, AND FRANKLIN ST. RIVER PLACE DEVELOPMENT

UTILITY PLAN

SHEET 3 OF 27 SHEETS
CONTRACT NO. PW 6727
ASSIGNMENT NO. 84-14-20
DATE 6-22-87





NOTE:

1. FOR UTILITY LEGEND SEE STANDARD DRAWING NO. C-902-A.

SCALE 1" = 40'

						REFERENCE DRAWINGS	DESIGNED BY	D. Ca. U.	APPROVED: N. O. W. ENGINEER OF STREETS
							DRAWN BY	KNOX	
							TRACED BY		
COOR'D	DESCRIPTION	DR'N	CK'D	AP'VD	DATE		CHECKED BY	D. G. U.	
REVISIONS LOCATED BY COORDINATES ON SHEET									

CITY OF DETROIT
CITY ENGINEERING DEPARTMENT
BUREAUS OF STREETS AND HIGHWAYS
FOR

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, McDOUGALL, WIGHT, AND FRANKLIN ST.
RIVER PLACE DEVELOPMENT

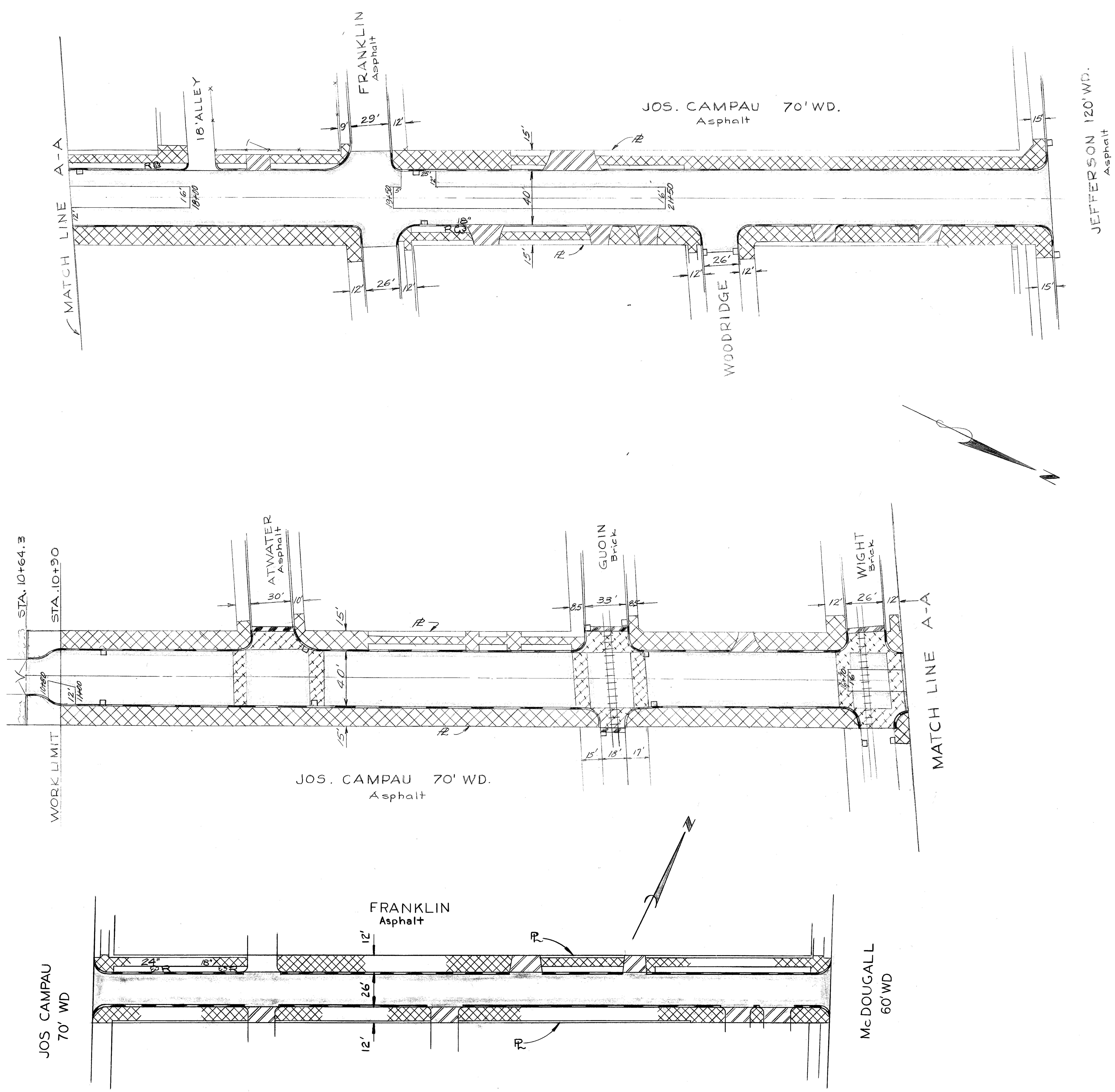
UTILITY PLAN

SHEET 4 OF 27 SHEETS
CONTRACT NO. PW6727
ASSIGNMENT NO. 84-14-20
DATE 6-22-87

66450

1 2 3 4 5 6 7 8 9 10 11

A B C D E F G



NOTES:

1. Before Starting Construction Contractor must check with Utilities for Locations of existing structures whether or not indicated on plans.
2. On Jos. Campau between Sta. 10+90 and Jefferson remove all Curbs, Sidewalks and Driveways on both sides unless directed by the Engineer.
3. Where shown on the plan remove bituminous surface at an average depth of 2" unless otherwise noted.
4. For Quantities See Sheet #2

LEGEND

- SIDEWALK REMOVAL
- DRIVEWAY REMOVAL
- SEPARATE TYPE CURB REMOVAL
- REMOVE BITUMINOUS SURFACE
- RAILROAD TRACK AND BASE REMOVAL
- (E) ABANDON EXISTING CATCH BASIN
- STREET PAVEMENT REMOVAL
- STRIPPING
- ✿R TREE OR STUMP REMOVAL

PLAN

SCALE: 1"= 40'

COOR'D	DESCRIPTION	DR'N	CK'D	AP'VD	DATE

REVISIONS LOCATED BY COORDINATES ON SHEET

REFERENCE DRAWINGS

DESIGNED BY D. C. U.
DRAWN BY KNOX
TRACED BY
CHECKED BY D. C. U.

APPROVED: N. O. W.
ENGINEER OF STREETS

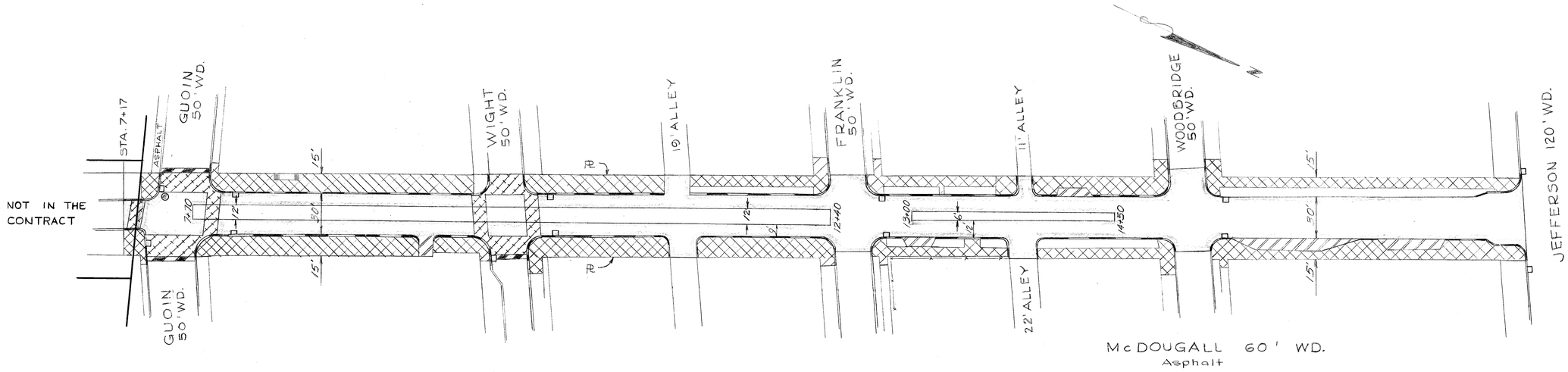
CITY OF DETROIT
CITY ENGINEERING DEPARTMENT
BUREAUS OF STREETS AND HIGHWAYS
FOR

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, McDOUGALL, WIGHT, AND FRANKLIN ST.
RIVER PLACE DEVELOPMENT

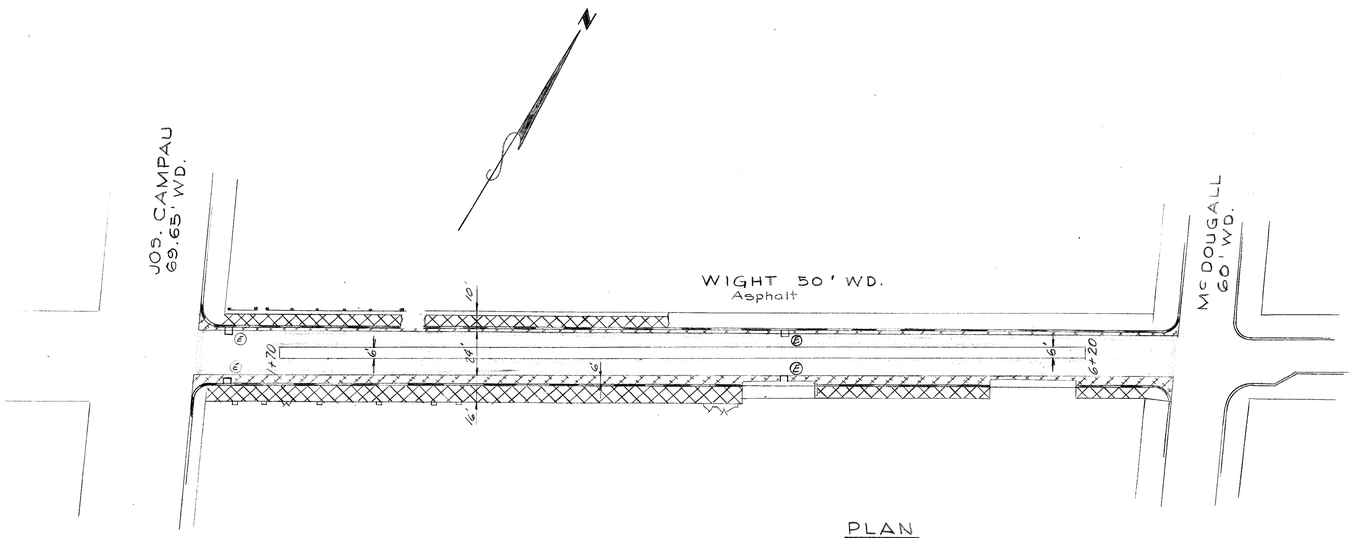
REMOVAL PLAN

SHEET 5 OF 27 SHEETS
CONTRACT NO. PW 6727
ASSIGNMENT NO. 84-14-20
DATE 6-22-87

66450



PLAN
SCALE: 1"=40'



PLAN
SCALE: 1"=40'

NOTES:

1. For Legend See Sh. #5
2. On McDougall between Sta. 7+17 and Jefferson remove all Curbs, Sidewalks and Driveways on both sides unless directed by the Engineer.
3. On Wight and Franklin between Jos Campau and McDougall remove all Curbs, Sidewalks and Driveways on both sides unless directed by the Engineer.
4. For Notes See Sh. #5

COOR'D	DESCRIPTION	DR'N	CK'D	AP'VD	DATE
	REVISIONS LOCATED BY COORDINATES ON SHEET				

REFERENCE DRAWINGS

DESIGNED BY D.E.U.
DRAWN BY J.NOX
TRACED BY
CHECKED BY D.E.U.

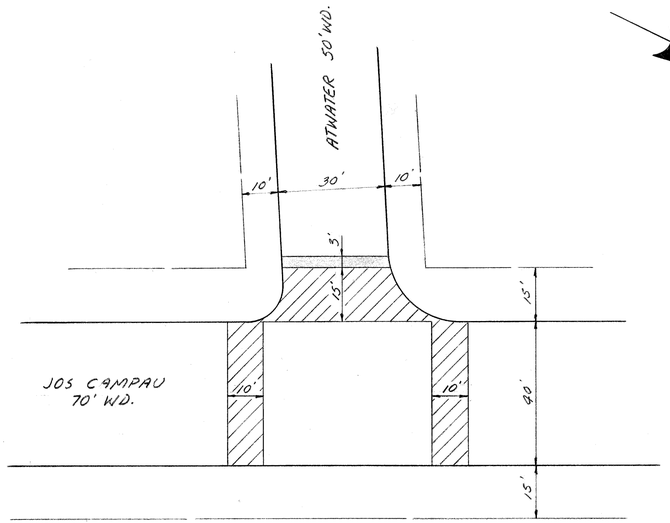
APPROVED: N.O.W. ENGINEER OF STREETS

CITY OF DETROIT
CITY ENGINEERING DEPARTMENT
BUREAUS OF STREETS AND HIGHWAYS
FOR

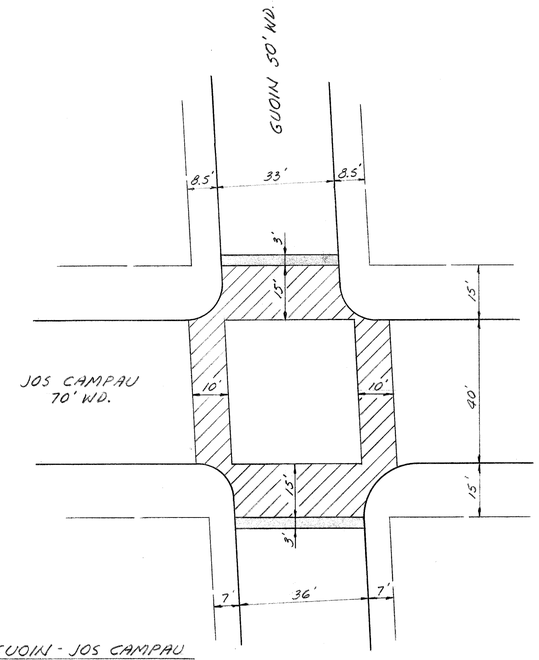
RESURFACING AND MISCELLANEOUS CONSTRUCTION JOS. CAMPAU, McDOUGALL, WIGHT, AND FRANKLIN ST. RIVER PLACE DEVELOPMENT

REMOVAL PLAN

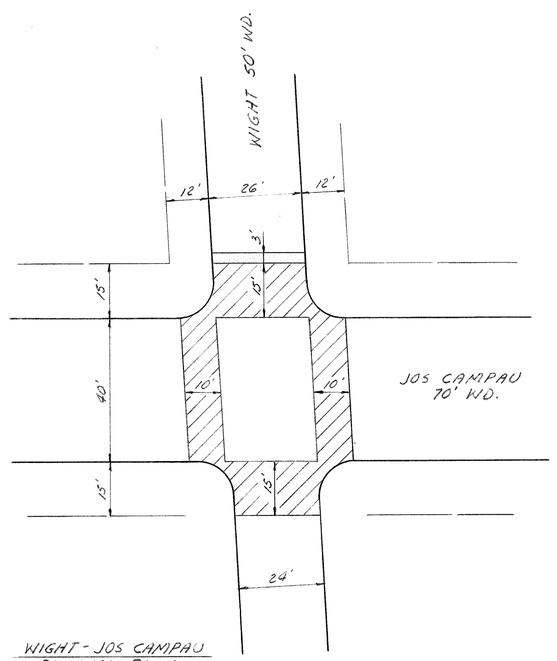
SHEET 6 OF 27 SHEETS
CONTRACT NO. PW6127
ASSIGNMENT NO. 84-14-20
DATE 6-22-87



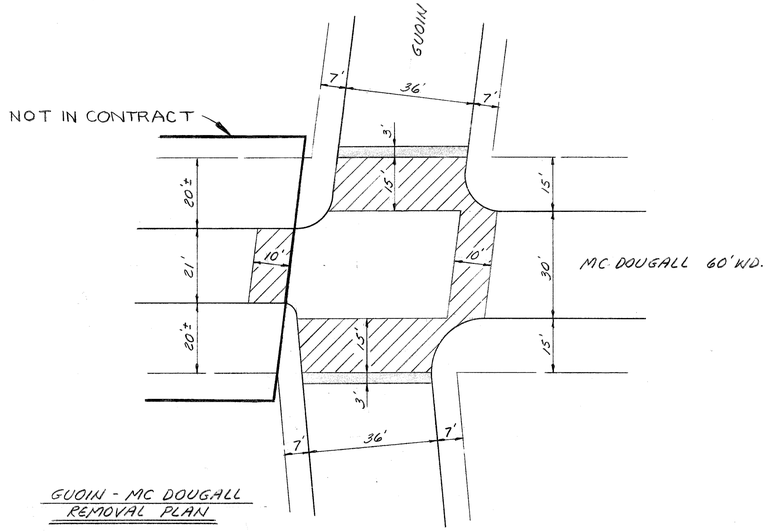
ATWATER - JOS CAMPAU
REMOVAL PLAN



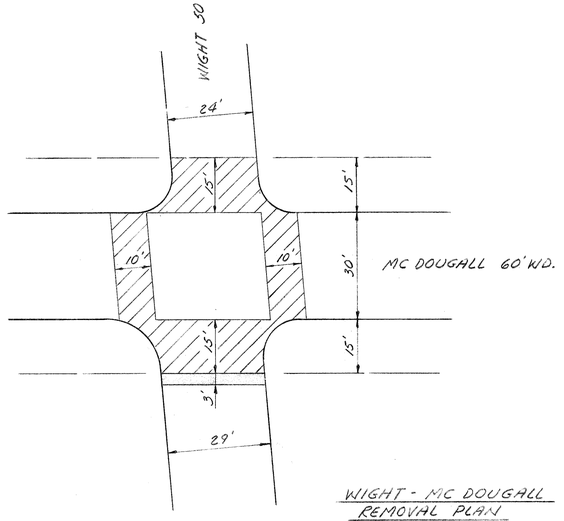
GUOIN - JOS CAMPAU
REMOVAL PLAN



WIGHT - JOS CAMPAU
REMOVAL PLAN



GUOIN - MC DOUGALL
REMOVAL PLAN



WIGHT - MC DOUGALL
REMOVAL PLAN

LEGEND

STREET PAVT. REMOVAL - NON REINF.

STRIPPING

SCALE : 1"= 20'-0"

COOR'D	DESCRIPTION	DR'N	CK'D	AP'VD	DATE	REFERENCE DRAWINGS	
REVISIONS LOCATED BY COORDINATES ON SHEET						DESIGNED BY	D. Co. U
						DRAWN BY	A.G.
						TRACED BY	
						CHECKED BY	D.C.U.

APPROVED: N.O.W. ENGINEER OF STREETS

CITY OF DETROIT
CITY ENGINEERING DEPARTMENT
BUREAUS OF STREETS AND HIGHWAYS
FOR

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, MC DOUGALL, WIGHT, AND FRANKLIN ST.
RIVER PLACE DEVELOPMENT

INTERSECTION REMOVAL PLAN

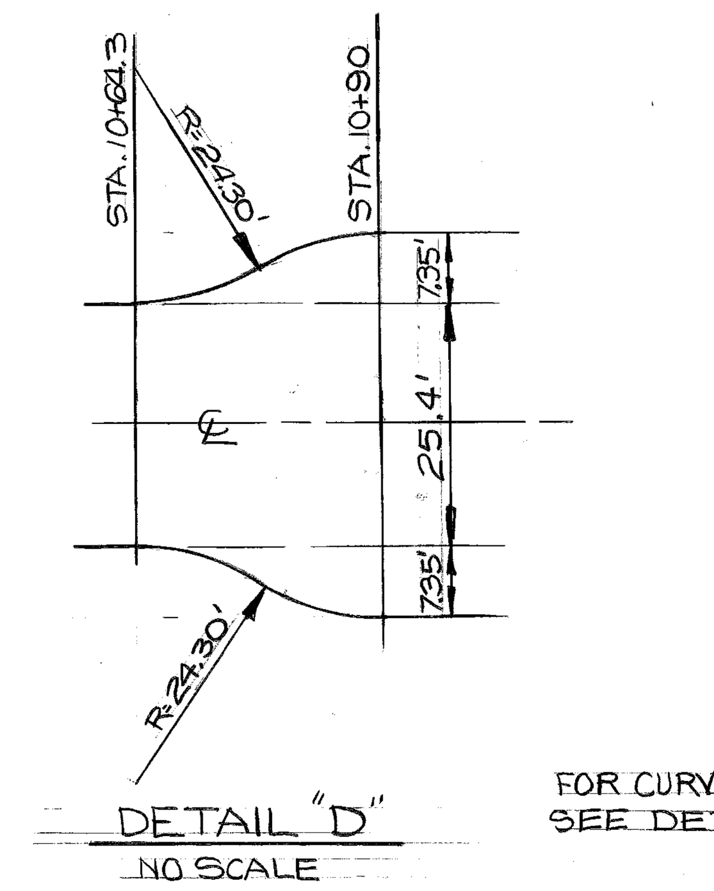
SHEET 7 OF 27 SHEETS
CONTRACT NO. PW-6727
ASSIGNMENT NO. 84-14-20
DATE 6-22-87

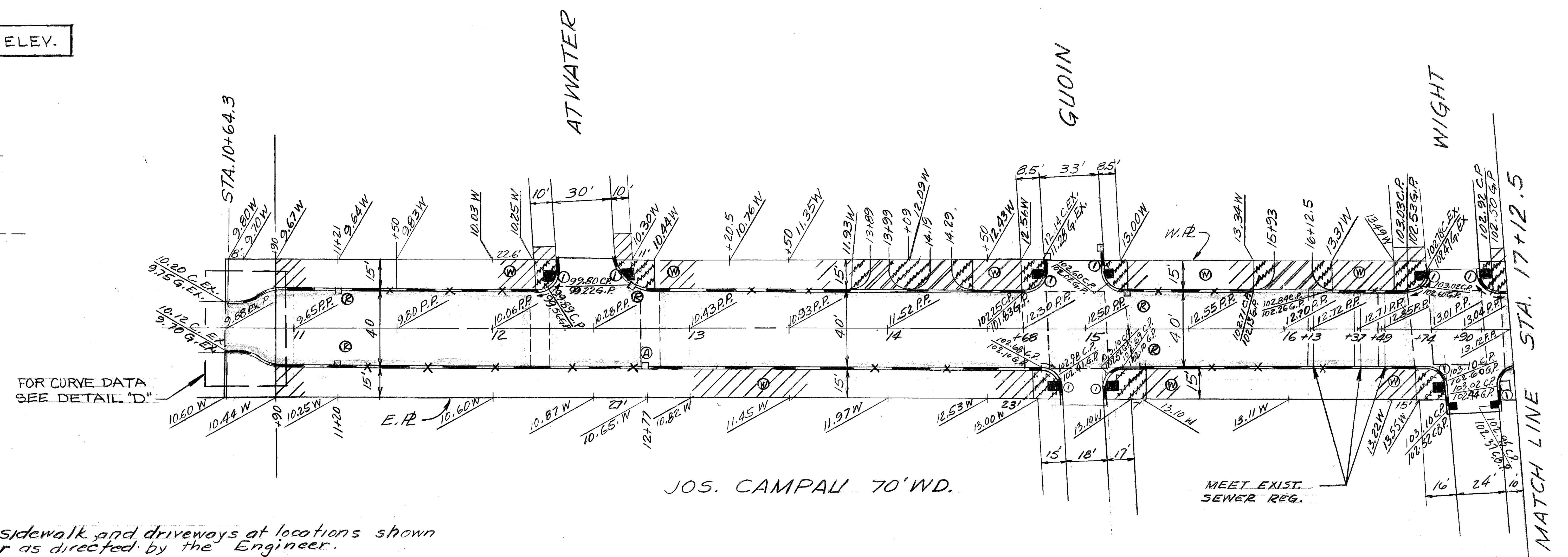
68430

SCALE	HORIZONTAL 1" = 40'	BOOK LL38 F(7) NO. PG.	LEVEL DATE JAN. 1985	BEFORE STARTING CONSTRUCTION CONTRACTOR MUST CHECK WITH UTILITIES FOR LOCATIONS OF EXISTING STRUCTURES WHETHER OR NOT INDICATED ON PLANS.
	VERTICAL 1" = 2'	PAVING COMPLETED		

NOTE - FOR SYMBOLS (A) ETC. SEE STANDARD DETAIL DRAWING NO. C-4176

ADD 90.00' TO ALL ELEV.

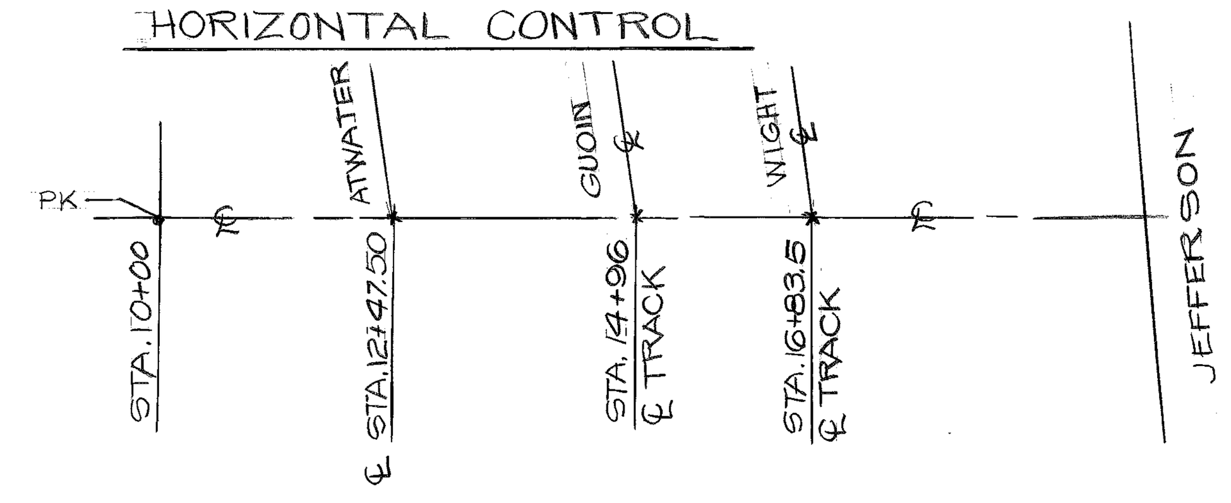




PLAN
SCALE: 1"=40'

BENCH MARKS		ELEV
P.B.M. #38-254	N.E. Cor. Jefferson & Jos. Campau	115.466 R
C.B.M.	Top of 6" Conc. Filled Post N/s Wight	105.040
C.B.M. & HYD.	N.W. Cor. Wight & Jos. Campau	105.360
C.B.M. & HYD.	N.W. Cor Guoin & Jos. Campau	105.435
C.B.M. & HYD.	N.W. Cor Atwater & Jos. Campau	102.895
C.B.M. & HYD.	E/s Jos. Campau S. of Strohs Gate	102.611

HORIZONTAL CONTROL

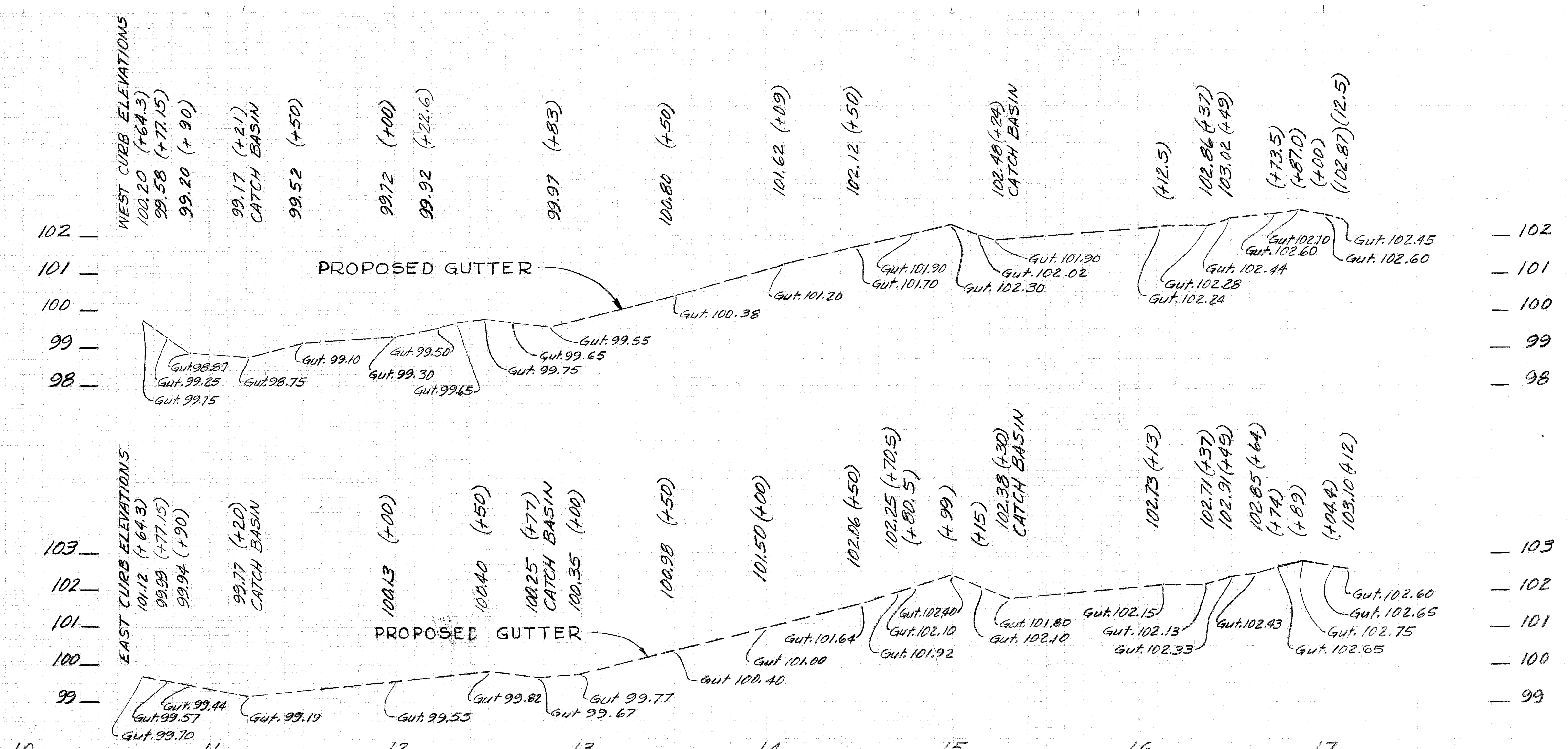


NOTES:

1. Construct curb, sidewalk and driveways at locations shown on the plan or as directed by the Engineer.
2. Resurface to proposed grades unless otherwise directed by the Engineer
3. For Seperate Type Curb Modified see Std. Detail Drwg. #C-4381
4. For Typical Cross Sections see Sh. # 2 .
5. All driveway radii Are 10' unless otherwise noted.
6. For Detailed Quantities see Sh. # 2 .
7. For Sidewalk Ramp Detail see Std. Detail Drwg. # 34
8. At locations where R.R. Track base is removed, replace with 9" uniform conc. pav't. plus 2" Asphalt.
9. For Intersections with Brick Pavers See Sheet # 12 and # 13

CONSTRUCTION LEGEND

- RESURFACING AREA
- SIDEWALK 4" STD.
- SIDEWALK 6" STD.
- DRIVEWAY 8" STD.
- (R) RESET EXIST. CATCH BASINS
- (T) RESET EXIST. MANHOLES
- (S) ADJUST EXIST. MANHOLES
- SIDEWALK RAMP TYPE I
- SEPARATE TYPE CURB NON-REINF.
- SIDEWALK RAMP TYPE III
- (C) CONSTRUCT STD. CATCH BASIN
- (A) ADJUST EXISTING CATCH BASIN



PROFILES
SCALE: VERT. 1" = 2'
HORZ. 1" = 40'

				BY	CHECKED BY	APPROVED:
			PLAN			N.O.W. ENGINEER OF STREETS
			GRADE	D.G.U.		
			ESTIMATE	D.G.U.		
DESCRIPTION	DR'N CK'D AP'VD DATE		FINAL	CHECK D.G.U.	REVIEW	
REVISIONS						

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

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, McDOUGALL, WIGHT, AND FRANKLIN ST.
RIVER PLACE DEVELOPMENT

PAVING PLAN

SHEET	8 OF 27 SHEETS
CONTRACT NO.	PW 6727
ASSIGNMENT NO.	84-14-20
DATE	6-22-87

SCALE	
HORIZONTAL	1" = 40'
VERTICAL	1" = 4'

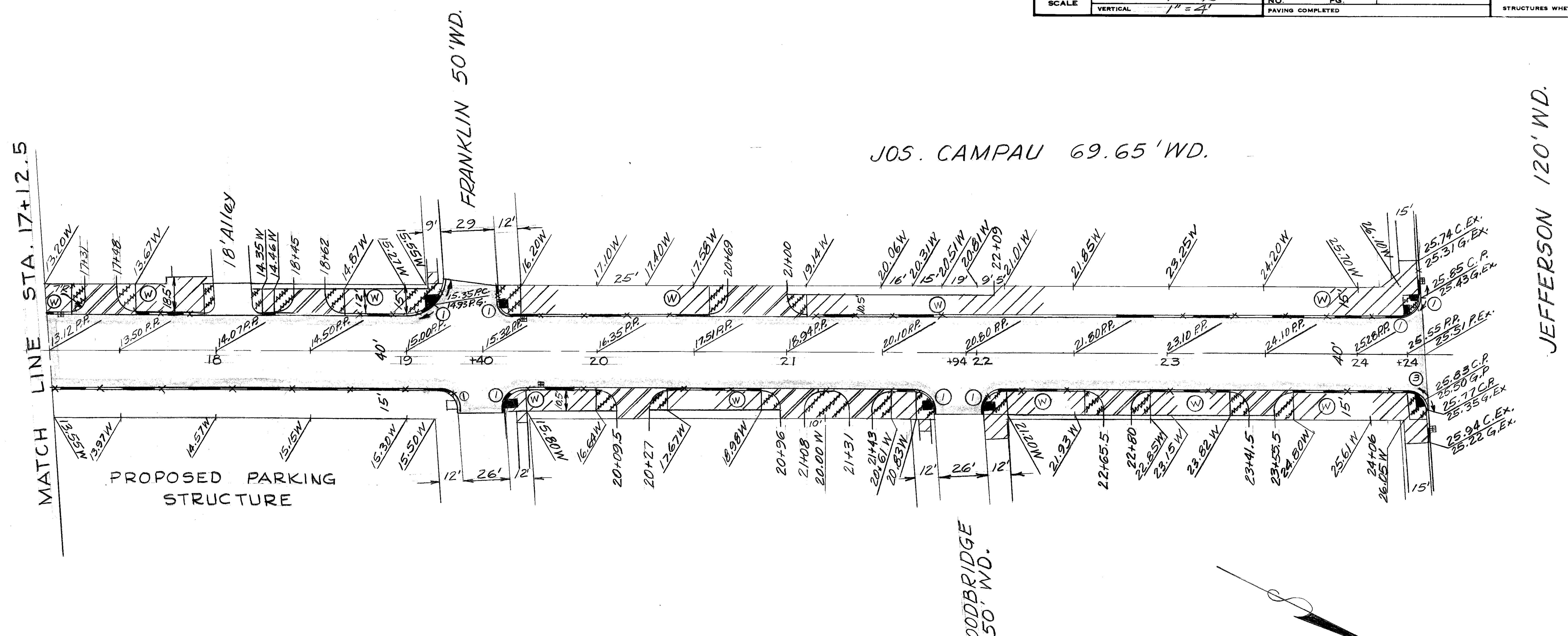
BOOK LL38 F(7) NO. PG. — LEVEL DATE JAN. 1985 — PAVING COMPLETED

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-4378

BENCH	MARKS	ELEV
P.B.M. #38-254	N.E. Cor. Jefferson & Jos. Campau	115.966 R
C.B.M. ↑HYD.	N.W. Cor. Wight & Jos. Campau	105.860
C.B.M. ↑HYD	W/s Jos. Campau 30' S. of Franklin	107.425
C.B.M. ↑HYD	W/s Jos. Campau 30' S. of Woodbridge	112.830

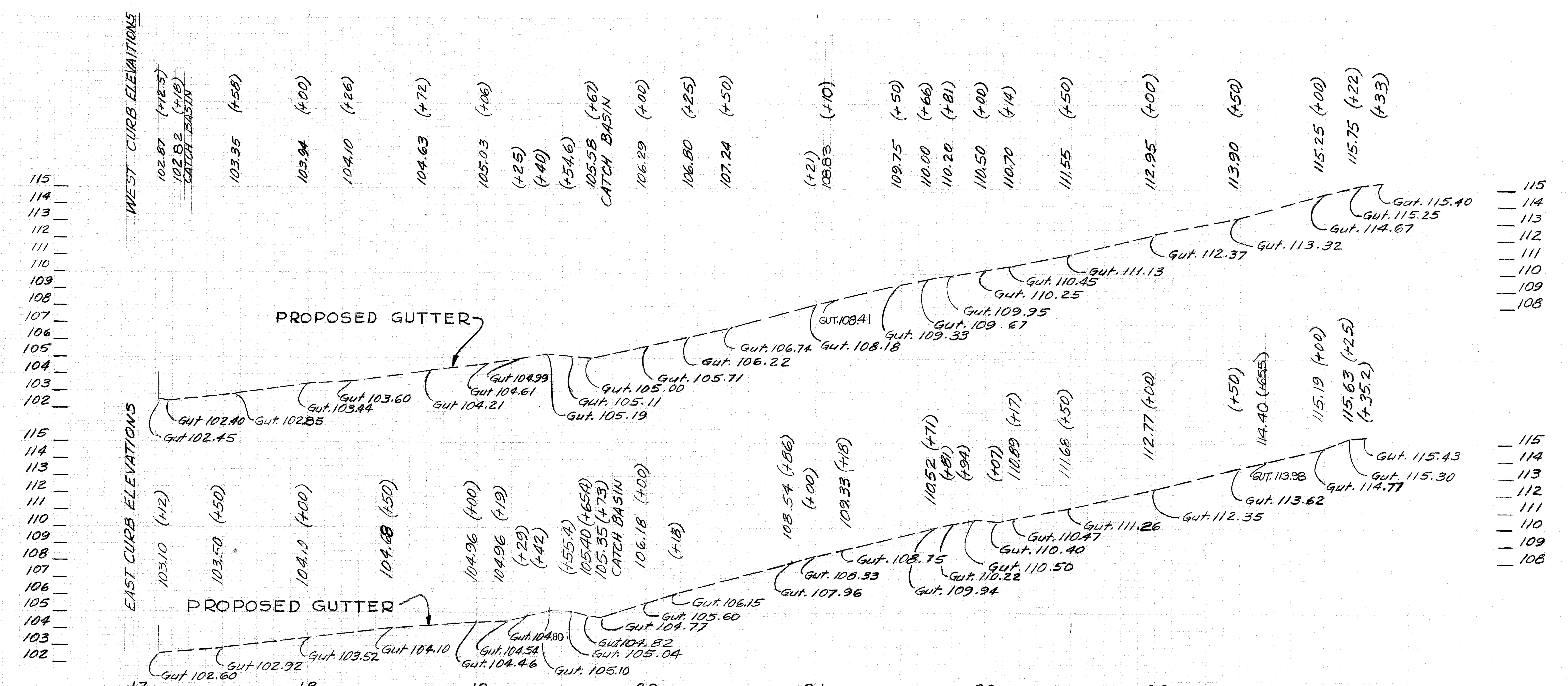
ADD 90.00' TO ALL ELEV.



PLAN
SCALE: 1" = 40'

NOTES:

1. For Notes see sh.# 8
2. For Legend see sh.# 8
3. ~~For Horizontal Control see sh.# 8~~



PROFILES
SCALE: VERT. 1" = 4'
HORZ. 1" = 40'

	BY	CHECKED BY	APPROVED:
PLAN			N.O.W. ENGINEER OF STREETS
GRADE	D.G.U.		
ESTIMATE	D.G.U.		
FINAL	D.G.U.	REVIEW	

DESCRIPTION — DR'N — CK'D — AP. VD — DATE
REVISIONS

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

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, McDOUGALL, WIGHT, AND FRANKLIN ST.
RIVER PLACE DEVELOPMENT
PAVING PLAN

INDEX NO.	SHEET 9 OF 27 SHEETS
TOPO NO.	CONTRACT NO. PW 6727
INDEXED	ASSIGNMENT NO. 84-14-20
	DATE 6-22-87

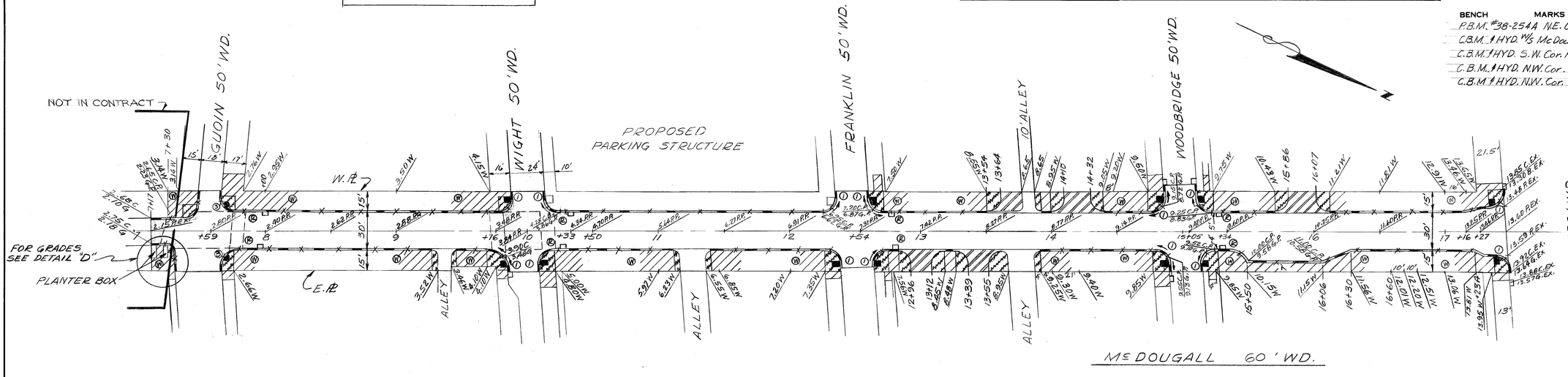
ADD 100.00' TO ALL ELEV.

SCALE		BOOK	LEVEL
HORIZONTAL	1" = 40'	LL 38 F (7)	JAN. 1985
VERTICAL	1" = 4'	NO. PG.	DATE
		PAVING COMPLETED	

BEFORE STARTING CONSTRUCTION——CONTRACTOR MUST CHECK WITH UTILITIES FOR LOCATIONS OF EXISTING STRUCTURES WHETHER OR NOT INDICATED ON PLANS.

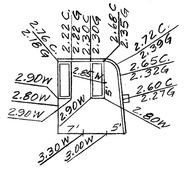
NOTE - FOR SYMBOLS Ⓐ ETC. SEE STANDARD DETAIL DRAWING NO C-4378

BENCH MARKS	ELEV
P.B.M. #38-254A N.E. Cor. Jefferson & McDougall	113.725R
C.B.M. 1 HYD. W/S McDougall 50'W of Woodbridge	113.250
C.B.M. 1 HYD. S.W. Cor. Franklin & McDougall	109.810
C.B.M. 1 HYD. N.W. Cor. Wight & McDougall	107.195
C.B.M. 1 HYD. N.W. Cor. Guoin & McDougall	105.115



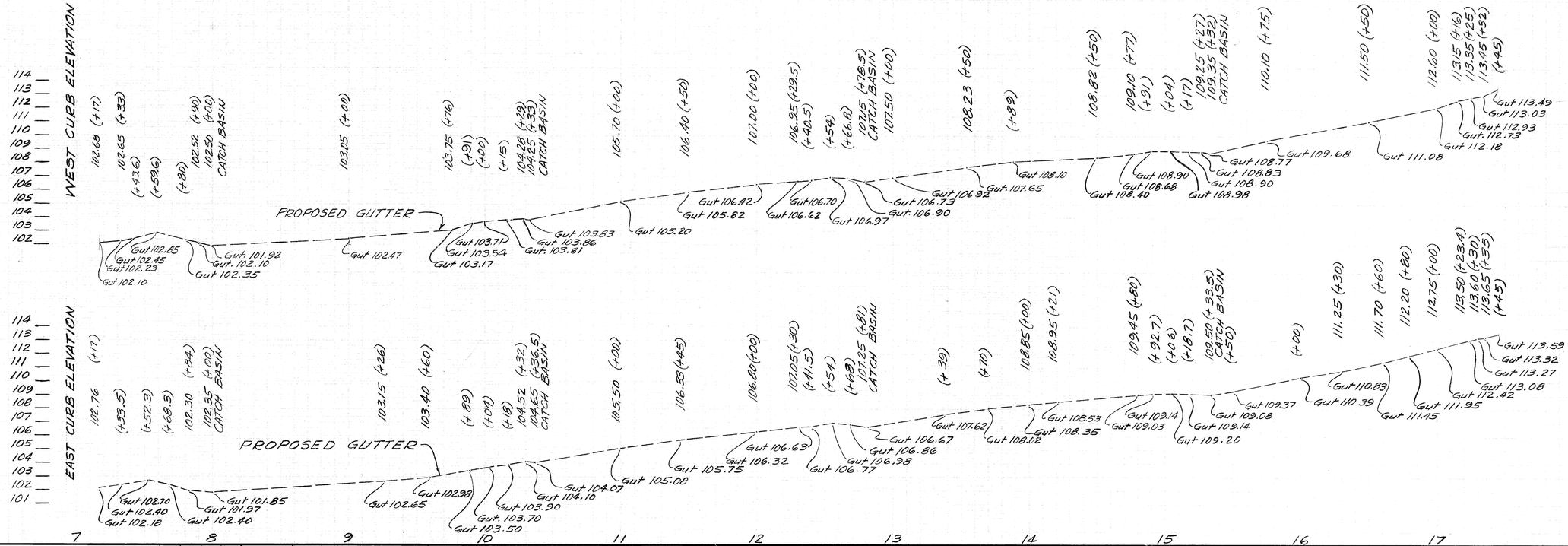
PLAN
SCALE: 1"=40'

NOTES:
1. For Notes See Sh. #8
2. For Construction Legend See Sh. #8



DETAIL "D"
SCALE: 1"= 20'

HORIZONTAL CONTROL
T.L. @ STA. 7+52.3 IS LINE PERPENDICULAR TO McDOUGALL USED TO INDICATE DIRECTION OF GUOIN
PK
PK
STA. 7+52.3 TRANSIT LINE
STA. 12+54 FRANKLIN
USED PK NAILS FOUND AT INTERSECTIONS OF ℄ OF STREETS



PROFILES
SCALE: VERT. 1"= 4'
HORIZ. 1"=40'

	BY	CHECKED BY
PLAN		
GRADE		
ESTIMATE		
FINAL	CHECK	REVIEW

DESCRIPTION | DR'N | CK'D | AP'VD | DATE
REVISIONS

APPROVED:
ENGINEER OF STREETS

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

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS CAMPAU, Mc DOUGALL, WIGHT, AND FRANKLIN ST
RIVER PLACE DEVELOPMENT
PAVING PLAN

INDEX NO.
SHEET 10 OF 27 SHEETS
TOPO NO.
CONTRACT NO. PW6727
INDEXED
ASSIGNMENT NO. 84-14-20
DATE 6-22-87

TELEDYNE POST N3402

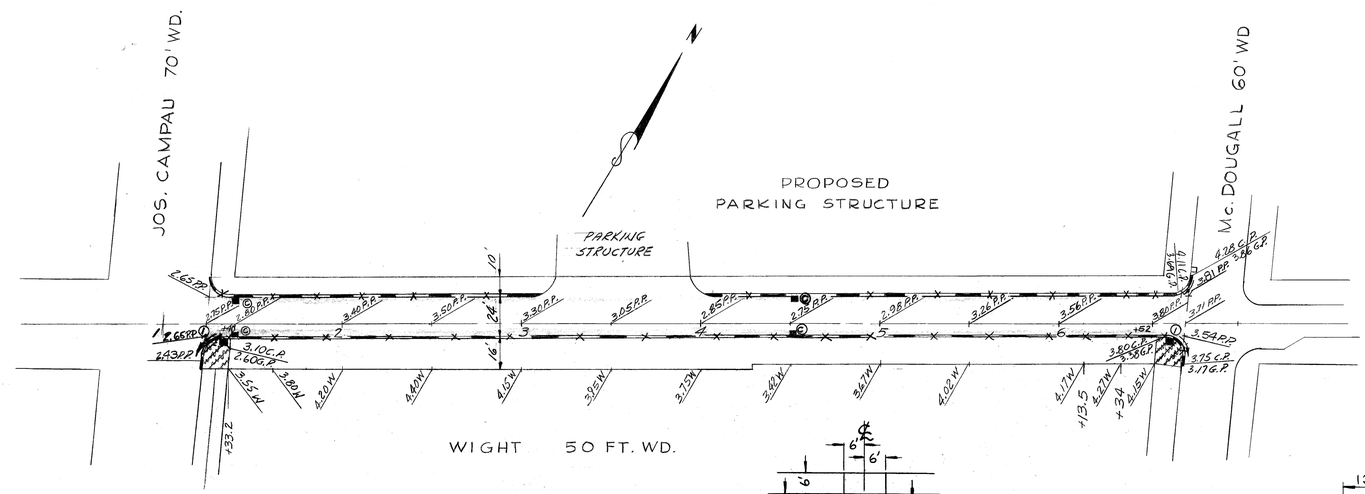
ADD 100.00' TO ALL ELEV.

SCALE		BOOK	LEVEL
HORIZONTAL	1"=40'	L-38F(7)	DATE JAN. 1985
VERTICAL	1"=2'	NO. PG.	
		PAVING COMPLETED	

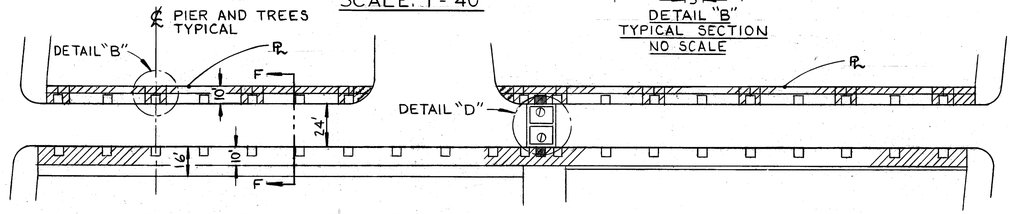
BEFORE STARTING CONSTRUCTION——CONTRACTOR MUST CHECK WITH UTILITIES FOR LOCATIONS OF EXISTING STRUCTURES WHETHER OR NOT INDICATED ON PLANS.

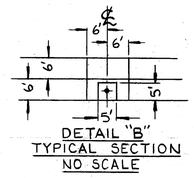
NOTE - FOR SYMBOLS Ⓐ ETC., SEE STANDARD DETAIL DRAWING NO. C-4378

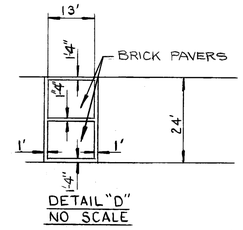
BENCH MARKS	ELEV
P.B.M. #38-254 N.E. Cor. Jefferson & Jos. Campau	115.466 R
P.B.M. #38-254A N.E. Cor. Jefferson & McDougall	113.725 R
C.B.M. in H.Y.D. W/S McDougall 50' N. of Woodbridge	113.250
C.B.M. in H.Y.D. S.W. Cor. Franklin & McDougall	109.810
C.B.M. in H.Y.D. N.W. Cor. Wight & McDougall	107.195
C.B.M. in H.Y.D. N.W. Cor. Wight & Jos. Campau	105.860

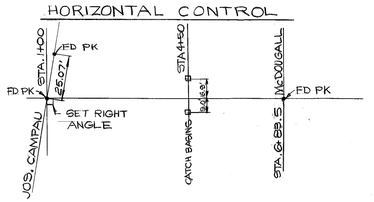


PLAN
SCALE: 1"= 40'



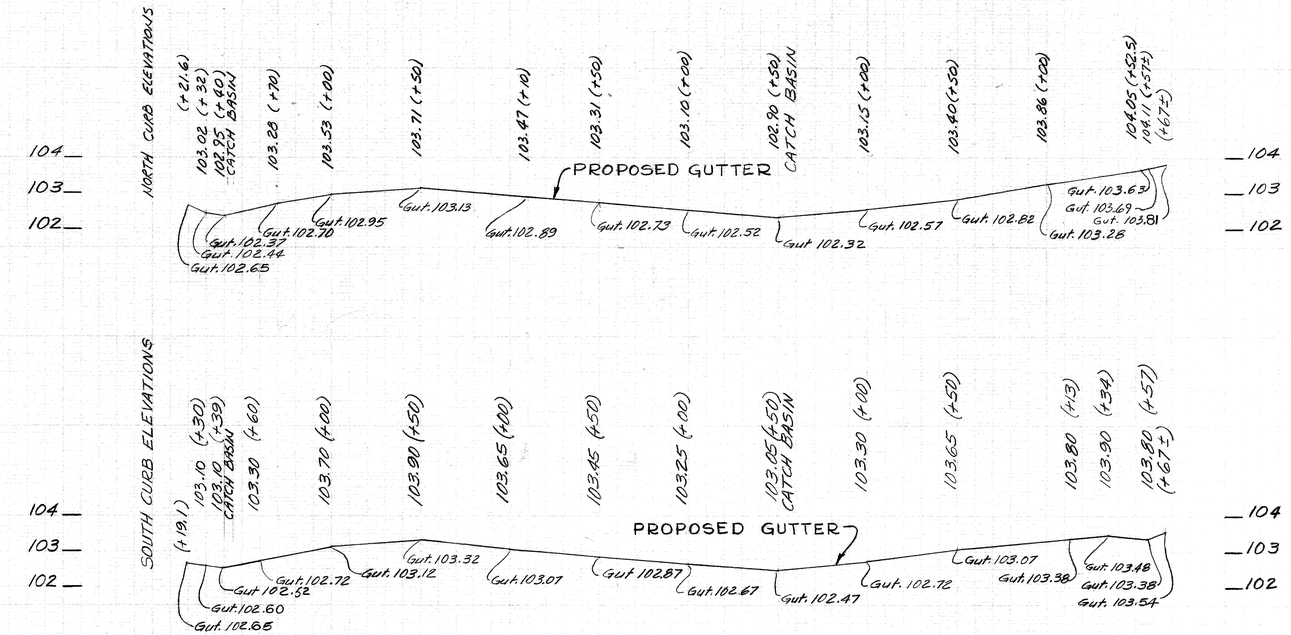






NOTES:

1. For Notes See Sh.# 8
2. For Construction Legend See Sh.# 8



PROFILES
SCALE: VERT. 1"= 2'
HORIZ. 1"= 40'

DESCRIPTION	DR'N	CK'D	AP'VD	DATE
REVISIONS				

	BY	CHECKED BY
PLAN	Knox	
GRADE	D.G.U.	
ESTIMATE	D.G.U.	
FINAL	CHECK D.G.U.	REVIEW

APPROVED: N.O.W. ENGINEER OF STREETS

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

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, Mc DOUGALL, WIGHT, AND FRANKLIN ST.
RIVER PLACE DEVELOPMENT
PAVING PLAN

INDEX NO.
TOPO NO.
INDEXED

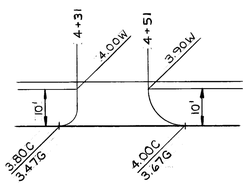
SHEET 11 OF 27 SHEETS
CONTRACT NO. PW 67 27
ASSIGNMENT NO. 84-14-20
DATE 6-22-87

SCALE		BOOK	LEVEL
	HORIZONTAL 1"= 40'	LL 38 F7 15-17	JAN. 1985
	VERTICAL 1"= 2'	NO. PG.	DATE
		PAVING COMPLETED	

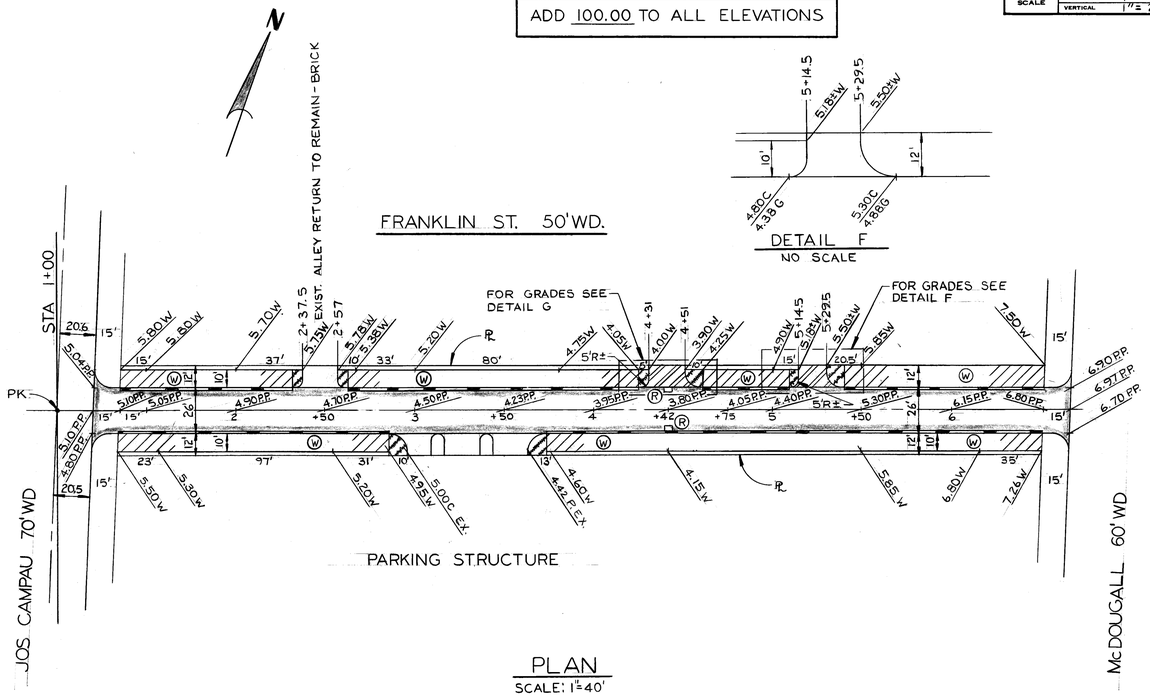
BEFORE STARTING CONSTRUCTION——CONTRACTOR MUST CHECK WITH UTILITIES FOR LOCATIONS OF EXISTING STRUCTURES WHETHER OR NOT INDICATED ON PLANS.

NOTE - FOR SYMBOLS Ⓐ ETC., SEE STANDARD DETAIL DRAWING NO C-4370

ADD 100.00 TO ALL ELEVATIONS



DETAIL G
NO SCALE

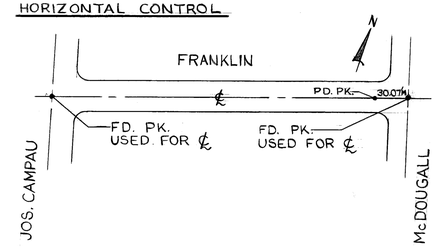


PLAN
SCALE: 1"=40'

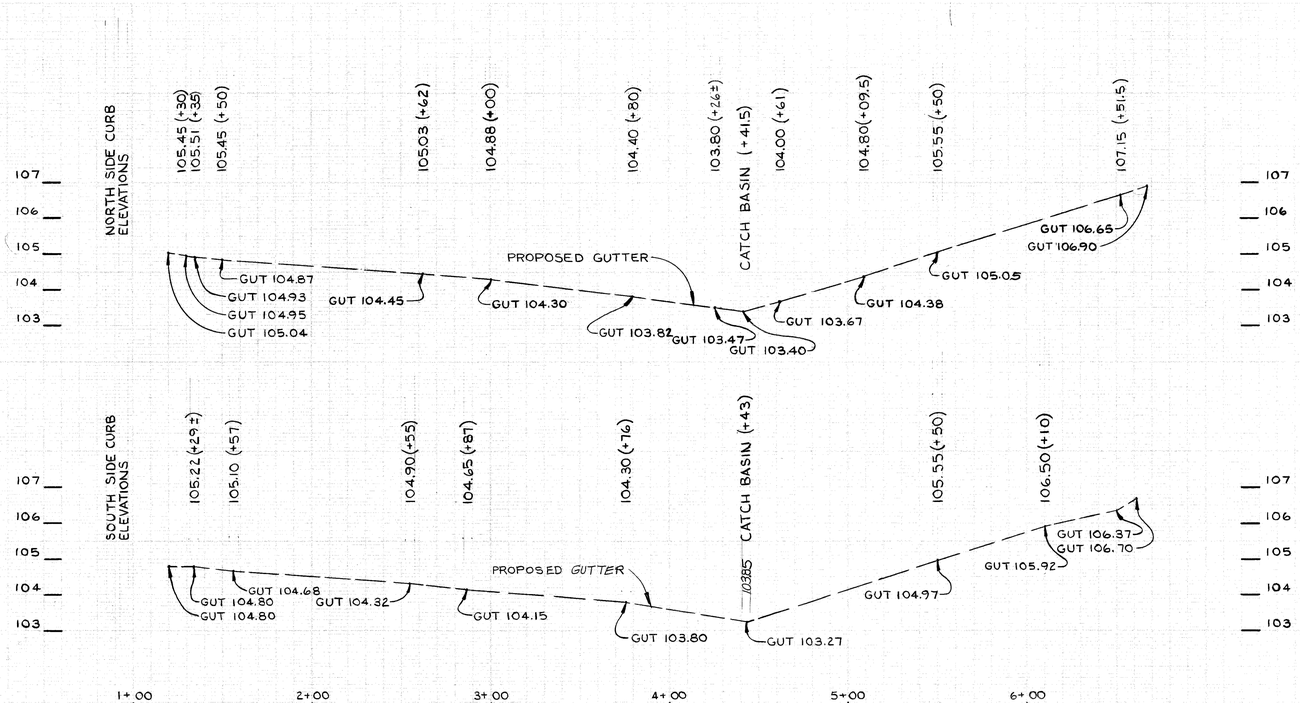
DETAIL F
NO SCALE

BENCH MARKS	ELEV
P.B.M. #38-254 N.E. COR. JEFFERSON & JOS. CAMPAU	115.466 R
P.B.M. #38-254A N.E COR. JEFFERSON & McDOUGALL	113.725 R
C.B.M. HYD. S.W. COR. FRANKLIN & McDOUGALL	109.810
C.B.M. HYD W/S JOS. CAMPAU 30' S OF FRANKLIN	107.425

HORIZONTAL CONTROL



NOTES:
1. FOR CONST. LEGEND SEE SHEET #8
2. FOR NOTES SEE SHEET #8



PROFILES
SCALE: VERT. 1"= 2'
HORZ. 1 = 40'

DESCRIPTION	DR'N	CK'D	AP'VD	DATE
REVISIONS				

	BY	CHECKED BY
PLAN	ΔBrown	
GRADE	D.G.U.	
ESTIMATE	D.G.U.	
FINAL	CHECK D.G.U.	REVIEW

APPROVED: N.O.W. ENGINEER OF STREETS

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

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, McDOUGALL, WIGHT, AND FRANKLIN ST.
RIVER PLACE DEVELOPMENT

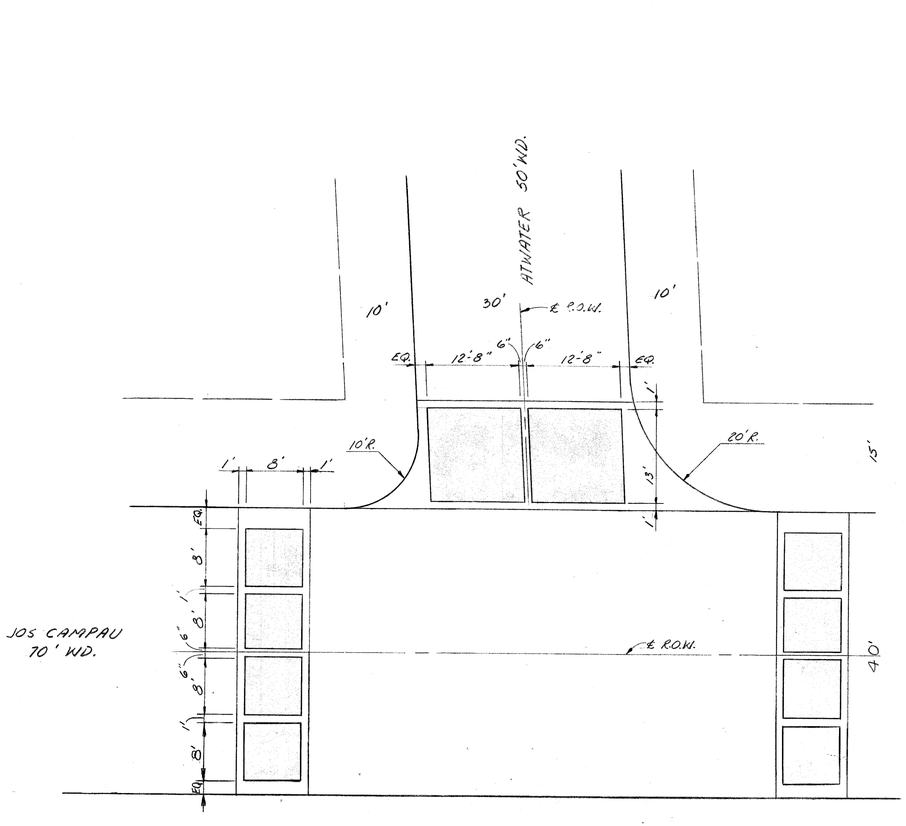
PAVING PLAN

INDEX NO.
TOPO NO.
INDEXED

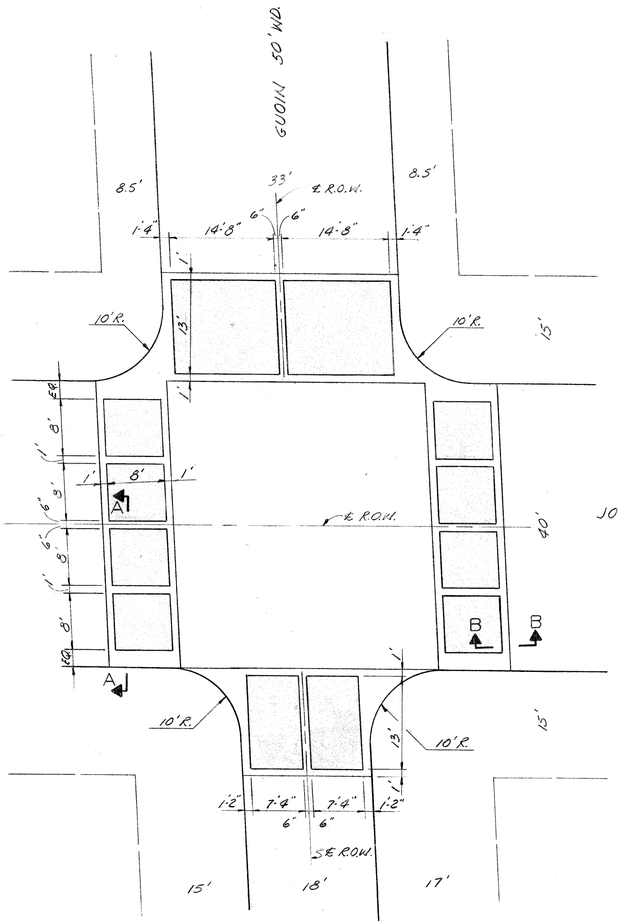
SHEET 11a OF 27 SHEETS
CONTRACT NO. PW 6727
ASSIGNMENT NO. 84-14-20
DATE 6-22-87

ΔBrown

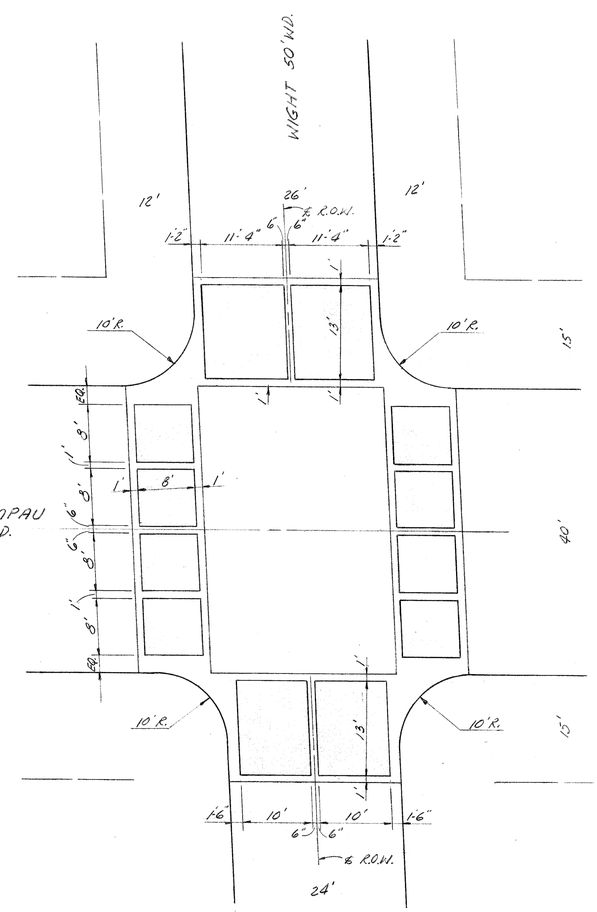
TELEDYNE POST 104402



ATWATER - JOS CAMPAU
CONSTRUCTION PLAN



GUOIN - JOS CAMPAU
CONSTRUCTION PLAN



WIGHT - JOS CAMPAU
CONSTRUCTION PLAN

BRICK PAVERS

SCALE : 1"=10'-0"

COOR'D	DESCRIPTION	DR'N	CK'D	AP'VD	DATE
REVISIONS LOCATED BY COORDINATES ON SHEET					

REFERENCE DRAWINGS

DESIGNED BY	
DRAWN BY	A.G.
TRACED BY	
CHECKED BY	D.G.W.

APPROVED:
M.O.W.
ENGINEER OF STREETS

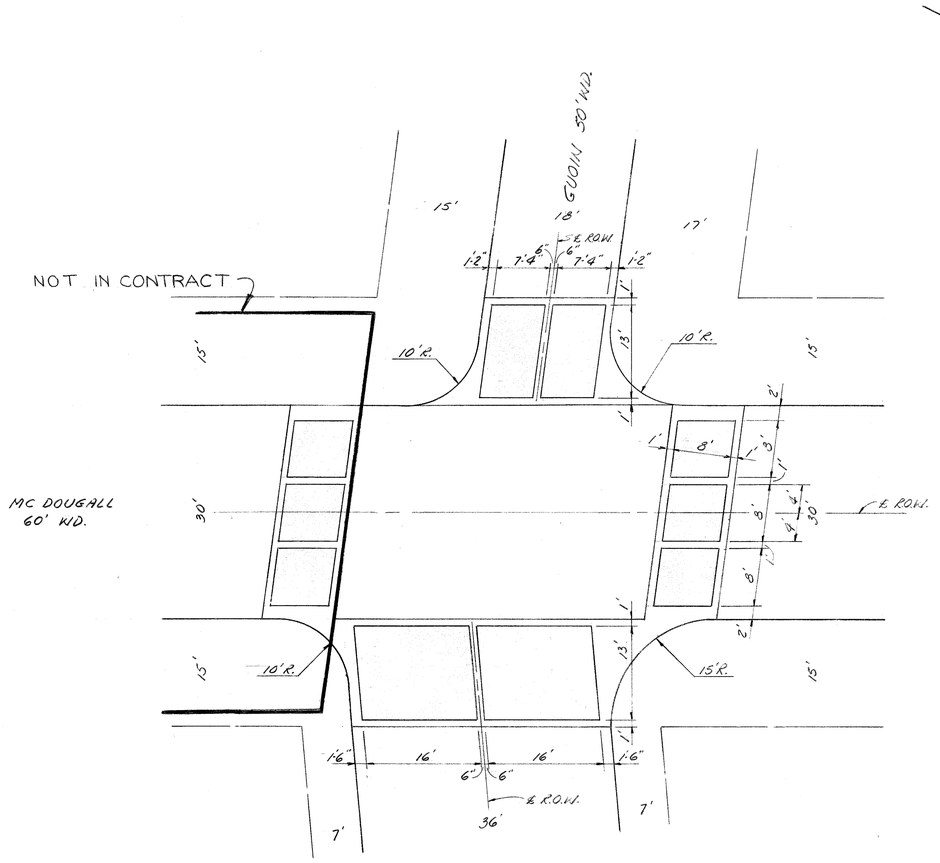
CITY OF DETROIT
CITY ENGINEERING DEPARTMENT
BUREAUS OF STREETS AND HIGHWAYS
FOR

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, MCDOUGALL, WIGHT, AND FRANKIN ST.
RIVER PLACE DEVELOPMENT

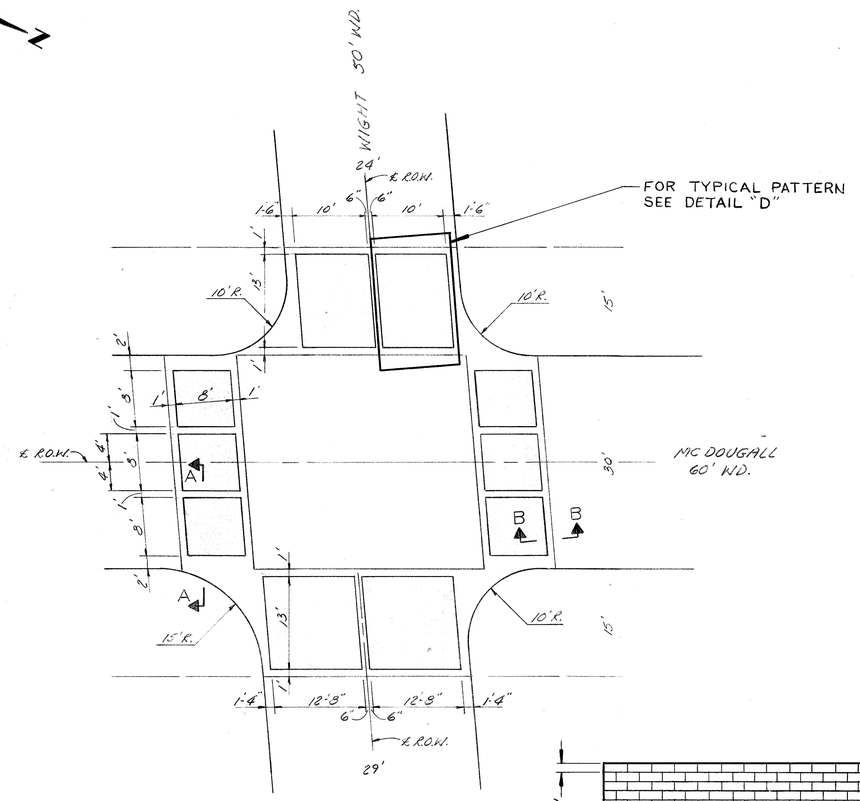
INTERSECTION CONSTRUCTION PLAN

SHEET 12 OF 27 SHEETS
CONTRACT NO. PW-6727
ASSIGNMENT NO. 84-14-20
DATE 6-22-87

65450

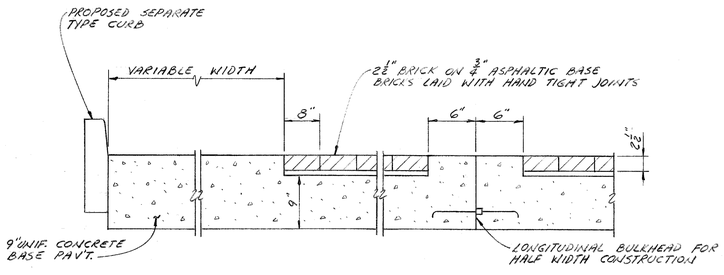


GUOIN - MC DOUGALL
CONSTRUCTION PLAN
SCALE: 1"=10'-0"

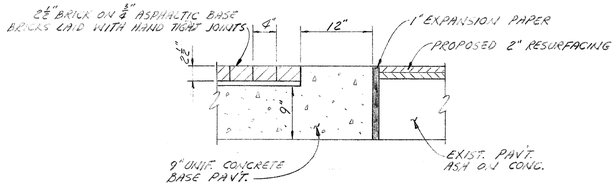


WIGHT - MC DOUGALL
CONSTRUCTION PLAN
SCALE: 1"=10'-0"

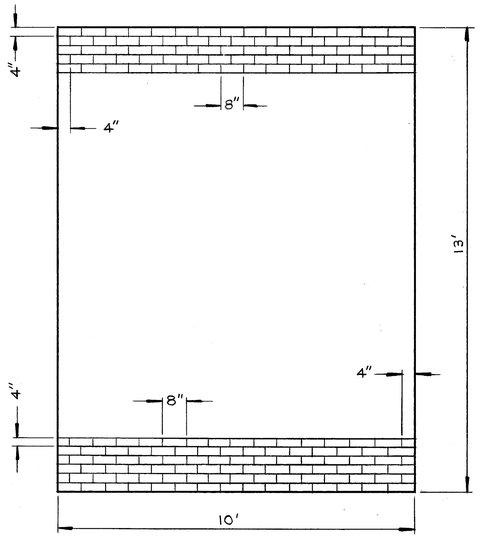
BRICK PAVERS



SECTION A-A
NO SCALE



SECTION B-B
NO SCALE



SECTION "D"
NO SCALE

									REFERENCE DRAWINGS	DESIGNED BY	
										DRAWN BY	A.G.
										TRACED BY	
COOR'D	DESCRIPTION		DR'N	CK'D	AP'VD	DATE				CHECKED BY	
REVISIONS LOCATED BY COORDINATES ON SHEET											

APPROVED:
M. O. W.
ENGINEER OF STREETS

CITY OF DETROIT
CITY ENGINEERING DEPARTMENT
BUREAUS OF STREETS AND HIGHWAYS
FOR

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, MC DOUGALL, WIGHT, AND FRANKLIN ST.
RIVER PLACE DEVELOPMENT

INTERSECTION CONSTRUCTION PLAN

SHEET 13 OF 27 SHEETS
CONTRACT NO. PW-6727
ASSIGNMENT NO. 84-14-20
DATE 6-22-87

LEGEND SHEET

UNDERGROUND

M.H. 1234	EXISTING MANHOLE
	EXISTING HANDHOLE
	EXISTING DUCT RUN
	ABANDON EXISTING DUCT RUN
4-4"	BUILD ENCASED CONDUIT (4-4" SHOWN)
2-3"	GALVANIZED IRON CONDUIT (2-3" SHOWN)
M.H. 5678	BUILD NEW MANHOLE (2-WAY)
M.H. 9012	BUILD NEW MANHOLE (3-WAY)
M.H. 3456	BUILD NEW MANHOLE (4-WAY)
M.H. 7890	BUILD NEW MANHOLE (CORNER)
	BUILD ROUND HANDHOLE
	BUILD TYPE "D" HANDHOLE
	EXISTING DIRECT BURIAL OR PARKWAY CABLE
	ABANDON DIRECT BURIAL OR PARKWAY CABLE
	INSTALL DIRECT BURIAL CABLE (NO. & SIZE AS INDICATED)
1-3"	INSTALL DIRECT BURIAL CONDUIT (1-3" SHOWN)
	EXISTING U.G.-FED ST. LTG. UNIT
	REMOVE U.G.-FED ST. LTG. UNIT & FDN. (EXCEPT AS OTHERWISE INDICATED)
	INSTALL COMB. T.S. & ST. LTG. STD., 6FT. CLAMP-ON BRACKET ARM WITH 3'-0" RISE ON NEW FDN. INSTALL 400W. TYPE LUMINAIRE.
	INSTALL SALVAGED U.G.-FED ST. LTG. UNIT ON NEW FDN.
"T"	INDICATES TRAFFIC SIGNAL CONTACT ON ST. LTG. STD.
	INSTALL CODE 116-02 ST. LTG. UNIT WITH 250W. S.V. RECTANGULAR TYPE II, 480V. LUMINAIRE ON NEW FDN.

SEE DETAILS FOR SIZES & SHAPES OF HOLES.

T	
C	
E	
	EXISTING OVERHEAD LINE
	REMOVE OVERHEAD LINE
	INSTALL OVERHEAD LINE
	INSTALL & LATER REMOVE OVERHEAD LINE
1/2"	INSTALL GUY & ANCHOR (1/2" GUY SHOWN)
	REMOVE GUY & ANCHOR ROD
1/2"	INSTALL POLE GUY (1/2" GUY SHOWN)
3/8"	INSTALL ARM GUY (3/8" GUY SHOWN)
P OR A	REMOVE GUY (TYPE AS INDICATED)
IN.	MATERIAL TO BE INSTALLED
RM	MATERIAL TO BE REMOVED
MSS	MAKE WOOD POLE SELF-SUPPORTING IN CONCRETE
C.P.	CABLE POLE
XYZ	PHASES OF P.L.D. DISTRIBUTION WIRES OR EQUIPMENT
E	D.E. CO. DISTRIBUTION WIRE
es	D.E. CO. SECONDARY WIRE
(C)	INSTALL SUSPENSION INSULATOR
EXISTING → C	P.L.D. DISTRIBUTION WIRE
PROPOSED → C	
EXISTING → CS	P.L.D. SECONDARY WIRE
PROPOSED → CS	
EXISTING → A	P.L.D. SERIES ST. LTG. WIRE
PROPOSED → A	
EXISTING → M	P.L.D. MULT. ST. LTG. WIRE
PROPOSED → M	

OVERHEAD

	EXISTING WOOD POLE (M.B.T. POLE SHOWN)
	REMOVE WOOD POLE (P. L. D. POLE SHOWN)
	REPLACE WOOD POLE (HEIGHT & CLASS AS INDICATED)
	INSTALL WOOD POLE (HEIGHT & CLASS AS INDICATED) (USE SALVAGED POLE WHERE INDICATED)
	EXISTING OVERHEAD ST. LTG. UNIT
	REMOVE OVERHEAD ST. LTG. UNIT (D.E.CO. POLE SHOWN)
	INSTALL OVERHEAD ST. LTG. UNIT

TRAFFIC SIGNAL

	INSTALL 3-SECTION TRAFFIC SIGNAL (1-WAY SHOWN)
	INSTALL 3-SECTION TRAFFIC SIGNAL WITH SALVAGED HEADS (2-WAY SHOWN)
	REMOVE 3-SECTION TRAFFIC SIGNAL (3-WAY SHOWN)
	EXISTING 3-SECTION TRAFFIC SIGNAL (4-WAY SHOWN)
	INSTALL 2-SECTION, 12" PEDESTRIAN (WALK-DON'T WALK) TRAFFIC SIGNAL (2-WAY SHOWN)
	INSTALL 2-SECTION PEDESTRIAN (WALK-DON'T WALK) TRAFFIC SIGNAL WITH SALVAGED HEAD (2-WAY SHOWN)
	REMOVE 2-SECTION PEDESTRIAN (WALK-DON'T WALK) TRAFFIC SIGNAL (1-WAY SHOWN)
	EXISTING 2-SECTION PEDESTRIAN (WALK-DON'T WALK) TRAFFIC SIGNAL (1-WAY SHOWN)
	INSTALL JUNCTION BOX
	INSTALL SALVAGED JUNCTION BOX
	REMOVE JUNCTION BOX
	EXISTING JUNCTION BOX
	INSTALL OVERHEAD PLASTIC JACKETED CABLE
	EXISTING OVERHEAD PLASTIC JACKETED CABLE
	REMOVE OVERHEAD PLASTIC JACKETED CABLE
	INSTALL TRAFFIC SIGNAL CONTROLLER (NEW OR SALVAGED AS INDICATED) ON NEW FDN. (EXCEPT AS OTHERWISE INDICATED).
	INSTALL TRUSS TYPE MAST ARM STD. & MAST ARM ON NEW FOUNDATION (EXCEPT AS OTHERWISE INDICATED).
	INSTALL 8FT. TRAFFIC SIGNAL PEDESTAL ON NEW FOUNDATION (EXCEPT AS OTHERWISE INDICATED).
	INSTALL STEEL STRAIN POLE ON NEW FOUNDATION (POLE HEIGHT AS INDICATED ON PLANS).
	EXISTING TRAFFIC SIGNAL CONTROLLER
	EXISTING MAST ARM STANDARD
	EXISTING PEDESTAL
	EXISTING STEEL STRAIN POLE
	BACK-OUT LAMPS & HOOD SIGNALS (INCIDENTAL TO INSTALLATION OF T.S. ON THIS CONTRACT).
	INSTALL 3-SECTION, 12" TRAFFIC SIGNAL (1-WAY SHOWN)
	REMOVE HOOD & INSTALL LAMPS (INCIDENTAL TO INSTALLATION OF T.S. ON THIS CONTRACT).
POCH	POLE CONTACT HEIGHT OF T.S. SPAN WIRE
L.C.H.	LOW CONTACT HEIGHT OF SPAN WIRE T.S. TO SPAN WIRE.

DIAGRAMS

(U.G.-FED ST. LTG. STD. SYMBOLS SAME AS UNDERGROUND LEGEND OF THIS SHEET)

M.H. 1234	PROPOSED MANHOLE
M.H. 5678	EXISTING MANHOLE
H.H.	PROPOSED HANDHOLE
H.H.	EXISTING HANDHOLE
M.H. 9012	PROPOSED MANHOLE IN SAME LOCATION AS EX. HOLE
	INSTALL U.G. CABLE (NO. & SIZE AS INDICATED.)
	EXISTING U.G. CABLE
	U.G. CABLE TO BE ABANDONED
	U.G. CABLE TO BE REMOVED
	DISCONNECT, INSULATE & CAP CABLE END.
	SPLICE STRAIGHT THRU
	SPLICES
1-#8	INDICATES 7500V., 1-1/C#8 L.C. ST. LTG. CABLE
1/1	INDICATES 2000V., 1-1/C#2 ST. LTG. CABLE & 1-#2 NEUTRAL
1/2	INDICATES 2000V., 2-1/C#2 ST. LTG. CABLES & 1-#2 NEUTRAL
2/1	INDICATES 2000V., 2-1/C#6 ST. LTG. CABLES & 1-#6 NEUTRAL (ALL UNLABELED CABLE GROUPS ON WIRING DIAGRAM ARE SUCH.)
1-#6	INDICATES 2000V., 1-1/C#6 ST. LTG. CABLE
1/1	INDICATES 2000V, 1-1/C #6 ST. LTG. CABLE & 1-#6 NEUTRAL
3/1	INDICATES 2000V, 3-1/C #6 ST. LTG. CABLES & 1-#6 NEUTRAL
POR. 301 A1-1 / POR. 24-26	INDICATES NEW ST. LTG. STANDARD NUMBER / INDICATES OLD ST. LTG. STANDARD NUMBER

GENERAL

	PROPERTY LINE
	EXISTING FACE OF CURB WHEN NEW STREET CONST.
	FUTURE PAVEMENT
S — S	SEWER LINE, MANHOLE & CATCH BASIN
E — E	DET. ED. CO. U.G. LINE & MANHOLE
T — T	MICH. BELL TEL. CO. U.G. LINE & M.H.
W — W	WATERMAIN & GATEWELL (OTHER UTILITIES SIMILAR)

PLAN INDEX

REVISIONS	DATE	DESCRIPTION	CHKD. BY

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, McDOUGALL AND WIGHT STREET
RIVER PLACE DEVELOPEMENT

LEGEND

SHEET 14 OF 27 SHEETS
CONTRACT NO. PW 6727
ASSIGNMENT NO. 84-14-20
DATE

CITY OF DETROIT
CITY ENGINEERING DEPARTMENT

BUREAUS OF STREETS AND HIGHWAYS

DRAWN CEA
CHECKED
APPROVED
DATE 10-86

PLAN PREPARED BY
CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT, MICH. 48221

DRWG. NO. 1 OF 14
FILE NO. CEA 1132

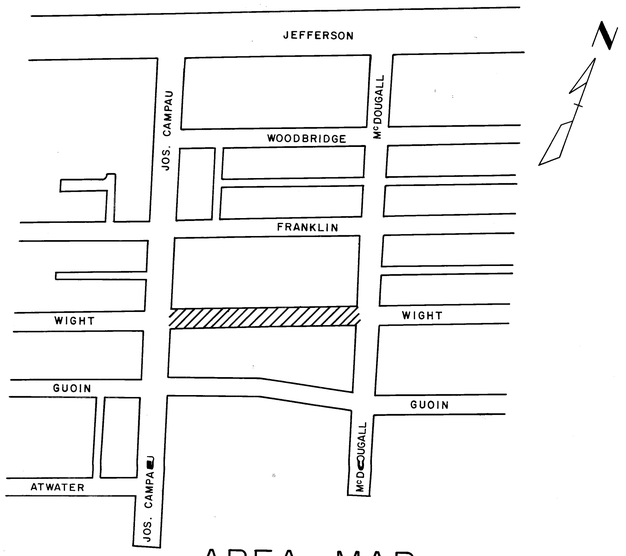
CHECKED BY
APPROVED BY

PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

FILE NO. 51-0601
SHEET NO. 1 OF 14
DATE 10-86

GENERAL INFORMATION SHEET

1. CALL MISS DIG (647-7344) 48HRS. PRIOR TO ANY EXCAVATION FOR THE LOCATIONS OF UNDERGROUND UTILITIES.
2. WHERE ABANDONING OF U.G. CABLES IS CALLED FOR ON PLANS OR DIAGRAMS, CONTRACTOR SHALL CUT & REMOVE CABLES WITHIN MANHOLES & HANDHOLES.
3. WHERE INSTALLATION OF NEW MANHOLES OVER EXISTING CONDUITS (TO ACCOMMODATE NEW & EXISTING CONDUITS) IS CALLED FOR ON PLANS, CONTRACTOR SHALL CAREFULLY & SO AS NOT TO DAMAGE EXIST. CABLES, REMOVE THE EXISTING CONDUITS & ENCASEMENT WITHIN MANHOLES. EXIST. CABLES SHALL BE EXTENDED & PROPERLY TRAINED, RACKED & SUPPORTED.
4. ALL EXISTING STREET LIGHTING, TRAFFIC SIGNAL, PRIMARY, TRANSMISSION ETC. CIRCUITS SHALL ALWAYS BE MAINTAINED IN AN OPERATIONAL CONDITION (EXCEPT WHERE OTHERWISE NOTED).
5. ALL CONDUITS NOT TERMINATING IN STRUCTURES SUCH AS MANHOLES, HANDHOLES OR FOUNDATIONS SHALL EXTEND 2FT. BEYOND PAVEMENT LIMIT (EXCEPT AS OTHERWISE INDICATED). ALL UNOCCUPIED CONDUITS SHALL BE PLUGGED.
6. ALL TREE TRIMMING REQUIRED TO CLEAR NEW OR SALVAGED ST. LTG. & TRAFFIC SIGNAL STD.'S AND O.H. ST. LTG. & TRAFFIC SIGNAL UNITS SHALL BE INCIDENTAL TO THE PAY-ITEM & NO EXTRA PAYMENT SHALL BE MADE.
7. EXISTING O.H. & T.S. FACILITIES ARE NOT NECESSARILY SHOWN ON PLANS.
8. ALL OVERHEAD WIRES & UNDERGROUND CABLES SHALL CONSIST OF COPPER CONDUCTORS AS PER SPECIFICATIONS.
9. NEW CONDUITS BROKEN INTO EXISTING MANHOLES OR HANDHOLES SHALL NOT INTERFERE WITH RACKING AND/OR TRAINING OF CABLES.
10. ALL NEW ANCHOR GUYS SHALL BE INSTALLED ON A 1:1 RATIO OR AS NEARLY AS POSSIBLE (EXCEPT WHERE OTHERWISE NOTED). (STRUT GUYS ARE EXCEPTED).
11. ALL CABLES SHALL BE TAGGED IN ALL MANHOLES & HANDHOLES.
12. INSTALL WOOD POLES SO AS NOT TO INTERFERE WITH TRAFFIC OR FUTURE CONSTRUCTION STAGES.
13. ALL SALVAGED WOOD POLES SHALL BE POLES PREVIOUSLY INSTALLED NEW ON THIS CONTRACT.
14. CONTRACTOR SHALL NOTIFY SYSTEM OPERATING DIVISION OF THE P.L.D. 48HRS. IN ADVANCE OF ANY WORK ON UNDERGROUND OR OVERHEAD TRANSMISSION, DISTRIBUTION AND ST. LTG. CIRCUITS. (PHONE 224-0500)
15. ALL LUMINAIRES SHALL BE PROVIDED WITH **480V**. INTERNAL BALLASTS (EXCEPT AS OTHERWISE INDICATED).
16. FOR LOCATIONS OF P.L.D. INSTALLATIONS ON STRUCTURES SUCH AS CONDUITS, HANDHOLES, CONDUIT SLEEVES, GALVANIZED STEEL CONDUITS & ST. LTG. STD. ANCHOR BOLTS SEE STRUCTURE PLANS.
17. PAVEMENT, SIDEWALK & CURB REMOVAL AND REPLACEMENT SHALL BE DONE ACCORDING TO CITY OF DETROIT SPECIFICATIONS.
18. ALL TRAFFIC STREET SIGNS SUCH AS "NO PARKING", "NO STANDING" ETC. SHALL BE TRANSFERRED FROM OLD STD. OR POLE TO NEW STD. OR POLE AT SAME LOCATION OR IN CLOSE PROXIMITY BY DEPT. OF TRANSPORTATION.
19. ALL TRAFFIC SIGNALS SHALL BE MOUNTED WITH NEW STANDARD TRAFFIC SIGNAL BRACKETS & FITTINGS.
20. ALL TRAFFIC SIGNAL ITEMS, AS CALLED FOR ON PLANS, SHALL INCLUDE AS INCIDENTAL TO THE TRAFFIC SIGNAL ALL CABLES FROM THE CONTROLLER TO THE TRAFFIC SIGNALS & FOUNDATIONS AS INDICATED.
21. WHEN ENTERING PROPOSED CONDUIT INTO EXISTING MANHOLES & HANDHOLES EXERCISE CAUTION NOT TO DISTURB EXISTING CABLES.
22. ALL SALVAGED TRAFFIC SIGNALS SHALL BE TRAFFIC SIGNALS PREVIOUSLY INSTALLED NEW ON THIS CONTRACT. (EXCEPT AS OTHERWISE INDICATED).
23. FOR TRAFFIC SIGNAL SPAN WIRE USE 3/8" SIEMENS-MARTIN GRADE AS PER SPECIFICATIONS.
24. CROSSARMS SHALL BE REMOVED AFTER ALL CONTACTS ARE REMOVED. (INCIDENTAL TO REMOVAL OF OVERHEAD LINES).
25. SEAL-END OF CABLE WHERE COILING OF CABLE IS CALLED FOR ON PLANS. (CONTRACTOR SHALL RECEIVE PAYMENT FOR COILED-UP CABLES).
26. CONTRACTOR SHALL DELIVER WHERE REQUIRED TO THE PUBLIC LIGHTING DEPARTMENT THE T.S. CONTROLLER FOR TIMING. CONTRACTOR SHALL PICK-UP CONTROLLER FROM P.L.D. WHEN READY FOR INSTALLATION.
27. PROPOSED T.S. SHALL BE PUT INTO OPERATION AT TIME OF REMOVAL OF EXISTING T.S. FACILITIES. CONTRACTOR SHALL NOTIFY THE P.L.D. INSPECTOR IF UNABLE TO MAINTAIN T.S. IN AN OPERABLE CONDITION AT ALL TIMES.
28. A MINIMUM CLEARANCE OF 3'-6" HORIZONTAL & 1'-0" VERTICAL MUST BE MAINTAINED BETWEEN PROPOSED P.L.D. FACILITIES & EXISTING U.G. WATER FACILITIES.
29. CONTRACTOR TO NOTIFY MICH. CONS. GAS CO. AT WO.5-8000 IF PROTECTIVE COATED GAS MAIN IS EXPOSED OR DAMAGED.
30. CONTRACTOR TO NOTIFY D.E.CO., MR. J. TYSON AT 237-9564 IF PROTECTIVE COATING OF ANY D.E.CO. HIGH VOLTAGE UNDERGROUND LINE IS EXPOSED OR DAMAGED.
31. ALL NEW U.G.-FED ST. LTG. UNITS SHALL BE INSTALLED 2'-6" BACK OF CURB UNLESS OTHERWISE INDICATED ON PLANS.
32. ALL NEW, SALVAGED & CONVERTED STEEL ST. LTG. STD.'S SHALL BE PAINTED.
33. SIDEWALK RAMPS OF THE TYPE & LOCATION AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER SHALL BE **CONSTRUCTED**.
34. D.S.R. STREETCAR RAILS AND FOUNDATIONS (TRACKS) ARE SHOWN ON THE PLANS IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION. EXACT LOCATIONS WITHIN THE STREETS & INTERSECTIONS ARE NOT KNOWN. SOME RAILS MAY BE REMOVED.
35. UNDERGROUND CABLE QUANTITIES ARE ITEMIZED ON GENERAL PLANS. ALL CABLES SHALL BE TAGGED IN ALL M.H.'S & H.H.'S. THIS INCLUDES EXIST. CABLES THAT ARE CONVERTED TO MULTIPLE, RECONNECTED TO OTHER CIRCUITS OR RENDERED DEAD.
36. THE CANDLEPOWER DISTRIBUTION FOR ALL MERCURY VAPOR & SODIUM VAPOR ST. LTG. LUMINAIRES SHALL BE SEMI-CUTOFF, MEDIUM DISTRIBUTION OF TYPE AS INDICATED ON THE PLANS.
37. ALL NEW & SALVAGED ST. LTG. STD.'S. INSTALLED ON THIS CONTRACT AND EXIST. ST. LTG. STD.'S CONVERTED OR RE-CONNECTED TO OTHER CIRCUITS SHALL BE STENCILLED OR RE-STENCILLED AS SHOWN ON PLANS. (STENCILLING & RE-STENCILLING OF ST. LTG. STD.'S IS INCIDENTAL TO ST. LTG. STD.)
38. WHERE TRIMMING OF TREES ON CITY PROPERTY IS CALLED FOR ON PLANS THE CONTRACTOR SHALL OBTAIN A PERMIT FROM THE RECREATION DEPT. OF THE CITY OF DETROIT AND SHALL HAVE SUCH WORK DONE BY A LICENSED TREE SERVICE CONTRACTOR. CALL MR. CRAIG GRANT AT 931-3950.
39. WHERE U.G. UTILITIES INTERFERE WITH THE INSTALLATION OF A NEW FOUNDATION, INSTALL THE SPECIAL FOUNDATION OF PARTICULAR DIMENSIONS AS INDICATED ON THE DETAIL DRWG. TO SUIT THE FIELD CONDITION. THERE WILL BE NO EXTRA PAYMENT FOR THE SPECIAL FOUNDATION. IT WILL BE PAID FOR AS A NORMAL FOUNDATION.
40. BAND INSULATED CLEVIS TO ST. LTG. STD. SHAFT. BRING U.G. CABLES THRU TOP OF SHAFT WITH WEATHERCAP TO FIT SHAFT OPENING. STORE SHAFT CAP IN BASE OF STANDARD. CONNECTION OF O.H. WIRES TO U.G. CABLES SHALL BE MADE OUTSIDE OF SHAFT. (INCIDENTAL TO INSTALLATION OF O.H. WIRES).
41. BAND SEC. RACK TO ST. LTG. STD. SHAFT. BRING U.G. CABLES THRU TOP OF SHAFT WITH WEATHERCAP TO FIT SHAFT OPENING. STORE SHAFT CAP IN BASE OF STD. CONNECTION OF O.H. WIRES TO U.G. CABLES SHALL BE MADE OUTSIDE OF SHAFT. (INCIDENTAL TO INSTALLATION OF O.H. WIRES).
42. REMOVE WEATHERCAP & INSULATED CLEVIS OR SEC. RACK FROM ST. LTG. STD. SHAFT. MOUNT SHAFT CAP ON ST. LTG. STD. (INCIDENTAL TO REMOVAL OF O.H. WIRES).
43. ALL TRANSFORMER POLES AND CABLE POLES SHALL BE FITTED UP WITH 120" ARMS. (EXCEPT WHERE OTHERWISE INDICATED).
44. INSTALLATION OF ARMS FOR EQUIPMENT, CUTOUTS, POTHEADS, TRANSFORMERS, ETC. ARE NOT SHOWN ON NEW CABLE AND TRANSFORMER POLES. THEY SHALL BE INSTALLED AS PER THE DETAIL DRWG. REQUIREMENT AND SHALL BE INCIDENTAL TO THE FITTING-UP OF THE CABLE AND/OR TRANSFORMER POLE.
45. ALL POTHEADS ON PRIMARY DISTRIBUTION CABLE POLES SHALL BE FLAT DIVERGENT DISCONNECTING TYPE.
46. WHERE A P.L.D. WOOD POLE WITH OTHER UTILITY CONTACTS IS TO BE REMOVED THE P.L.D. INSPECTOR WILL INDICATE IF THE POLE IS IN FACT TO BE REMOVED.
47. WHERE REMOVAL OF LUMINAIRES IS CALLED FOR ON PLANS THE ASSOCIATED O.H. SERIES COIL SHALL BE REMOVED BY THE CONTRACTOR. (REMOVE O.H. COIL IS INCIDENTAL TO REMOVE LUMINAIRE).



AREA MAP

N.T.S

REVISIONS	DATE	DESCRIPTION	CHKD. BY

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, McDOUGALL AND WIGHT STREET
RIVER PLACE DEVELOPMENT
GENERAL INFORMATION & AREA MAP

SHEET 15 OF 27 SHEETS
CONTRACT NO. PW 6727
ASSIGNMENT NO. 84-14-20
DATE

CITY OF DETROIT
CITY ENGINEERING DEPARTMENT
BUREAUS OF STREETS AND HIGHWAYS

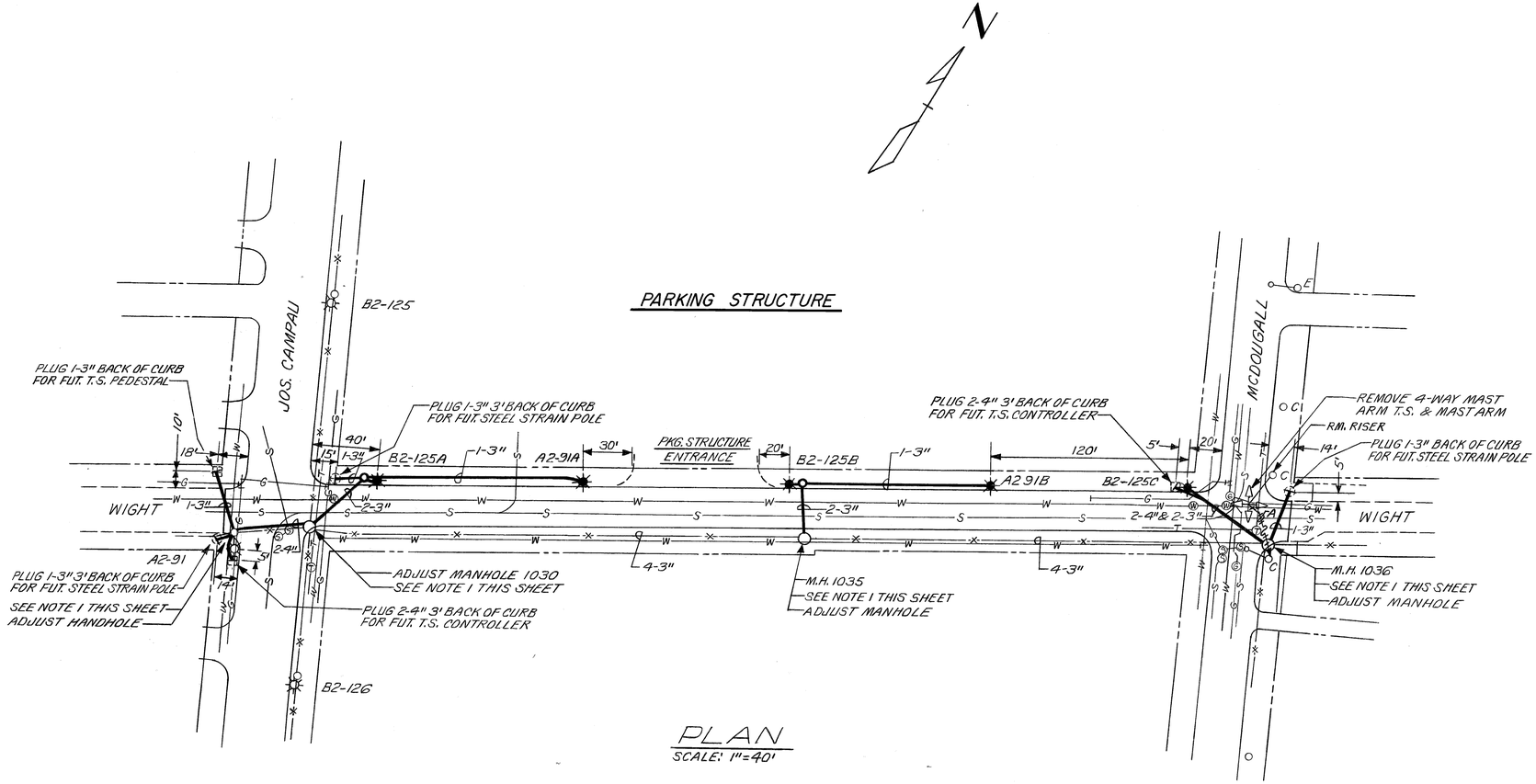
DRAWN CEA
CHECKED
APPROVED
DATE 10-86

PLAN PREPARED BY
CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT, MICH. 48221
DRWG. NO. 2 OF 14
FILE NO. CEA 1132

CHECKED BY
APPROVED BY

PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

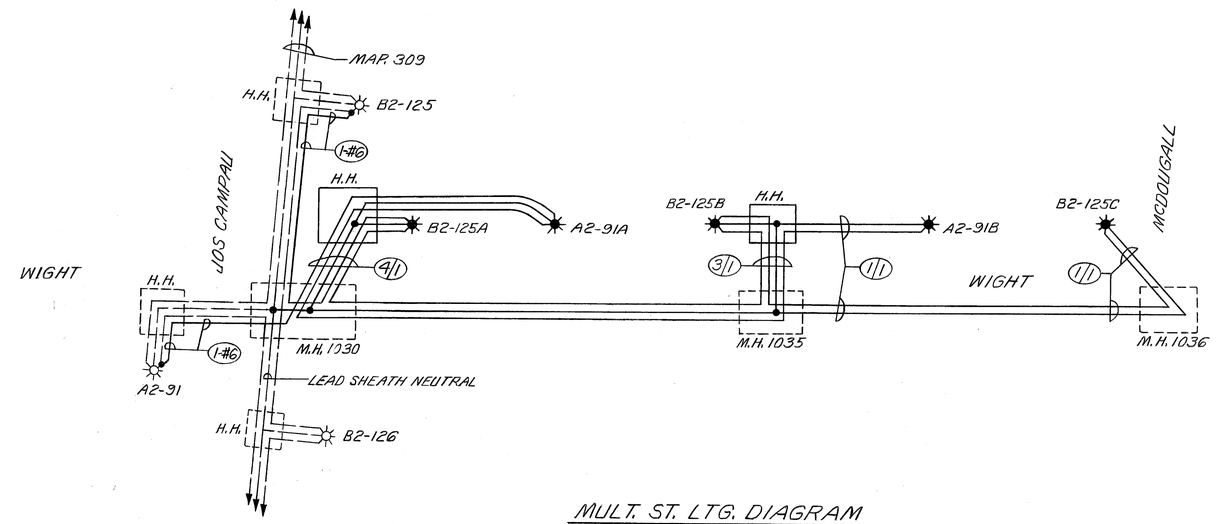
FILE NO. 51-0601
SHEET NO. 2 OF 14
DATE 10-86



PLAN
SCALE: 1"=40'

NOTES:

1. BREAK NEW CONDUIT(S) INTO EX. MANHOLE OR HANDHOLE AS SHOWN. CAUTION-LIVE CABLES!



MULT. ST. LTG. DIAGRAM
MAPLE 309 (480/960V.)

LIST OF MATERIAL	
ITEM	QUANTITIES
1-3" ENCASED CONDUIT	348 LIN. FT.
2-3" ENCASED CONDUIT	71 LIN. FT.
2-4" ENCASED CONDUIT	67 LIN. FT.
2-4" & 2-3" ENCASED CONDUIT	52 LIN. FT.
ADJUST HANDHOLE	1 EACH
ROUND HANDHOLE	2 EACH
ADJUST MANHOLE	3 EACH
CODE 116-02 ST. LTG. UNIT ON NEW FDN.	5 EACH
250W. SODIUM VAPOR RECTANGULAR LUMINAIRE (480V. TYPE II)	5 EACH
2 KV, 1-1/C #6 ST. LTG. CABLE	208 LIN. FT.
2 KV, 1-1/C #6 ST. LTG. CABLE & 1-#6 NEUTRAL	458 LIN. FT.
2 KV, 2-1/C #6 ST. LTG. CABLES & 1-#6 NEUTRAL	453 LIN. FT.
2 KV, 3-1/C #6 ST. LTG. CABLES & 1-#6 NEUTRAL	34 LIN. FT.
2 KV, 4-1/C #6 ST. LTG. CABLES & 1-#6 NEUTRAL	45 LIN. FT.
REMOVE 4-WAY MAST ARM T.S. & MAST ARM	1 EACH

DATE	DESCRIPTION	CHKD BY

REVISIONS

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, McDOUGALL AND WIGHT STREET
RIVER PLACE DEVELOPMENT

GENERAL PLAN

SHEET 16 OF 27 SHEETS
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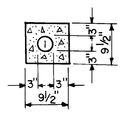
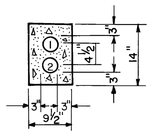
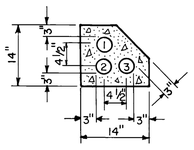


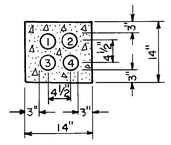
1-3" CONDUIT



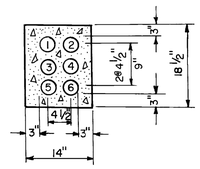
2-3" CONDUITS



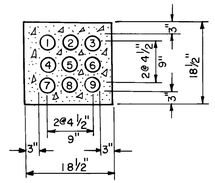
3-3" CONDUITS



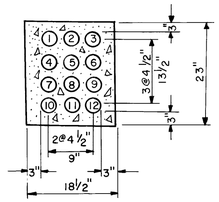
4-3" CONDUITS



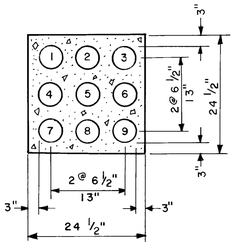
6-3" CONDUITS



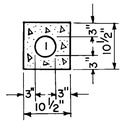
9-3" CONDUITS



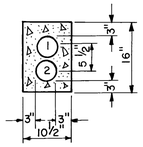
12-3" CONDUITS



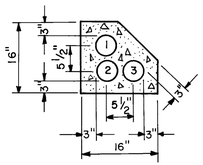
9-5" CONDUITS



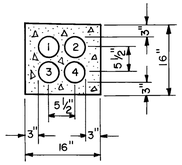
1-4" CONDUIT



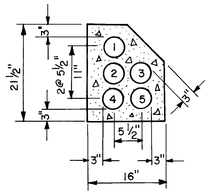
2-4" CONDUITS



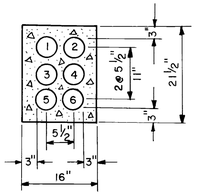
3-4" CONDUITS



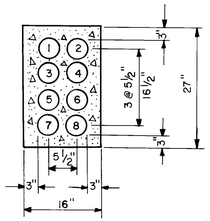
4-4" CONDUITS



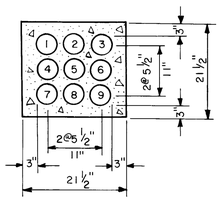
5-4" CONDUITS



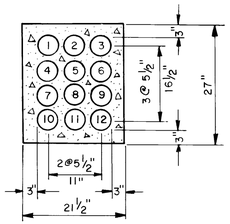
6-4" CONDUITS



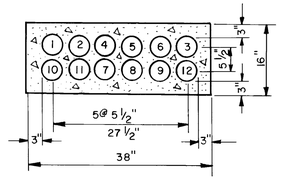
8-4" CONDUITS



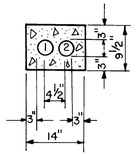
9-4" CONDUITS



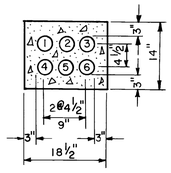
12-4" CONDUITS



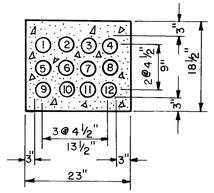
12-4" CONDUITS IN BRIDGE APPROACH



2-3" CONDUITS

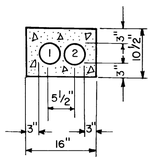


6-3" CONDUITS

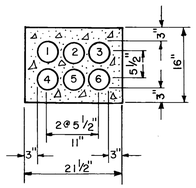


12-3" CONDUITS

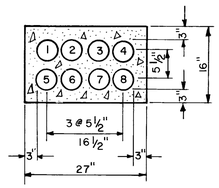
ALTERNATE ARRANGEMENT OF 3" CONDUIT
(TO SUIT FIELD CONDITIONS)
(TO BE APPROVED BY THE ENGINEER)



2-4" CONDUITS



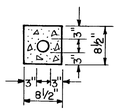
6-4" CONDUITS



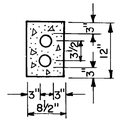
8-4" CONDUITS

ALTERNATE ARRANGEMENT OF 4" CONDUIT
(TO SUIT FIELD CONDITIONS)
(TO BE APPROVED BY THE ENGINEER)

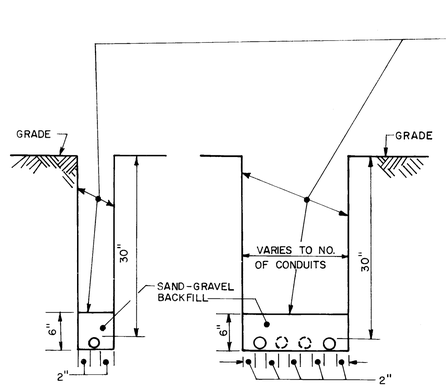
CONCRETE ENCASED CONDUIT SECTIONS



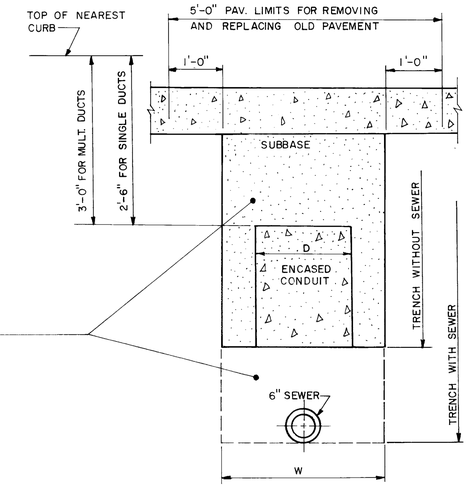
1-2" CONDUIT



2-2" CONDUITS



DIRECT BURIAL CONDUIT(S)



TYPICAL SECTION OF TRENCH
N.T.S.

NOTE:
PREFERRED TRENCH WIDTH "W"
NOT WIDER THAN CONDUIT
ENCASEMENT WIDTH "D"

101

REVISIONS	DATE	DESCRIPTION	CHKD. BY

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, McDOUGALL AND WIGHT STREET
RIVEVER PLACE DEVELOPMENT
MISC. ENCASED CONDUIT SECTIONS
DETAILS

SHEET 17 OF 27 SHEETS
CONTRACT NO. PW 6727
ASSIGNMENT NO. 84-14-20
DATE

CITY OF DETROIT
CITY ENGINEERING DEPARTMENT
BUREAUS OF STREETS AND HIGHWAYS

DRAWN CEA
CHECKED
APPROVED
DATE 10-86
DRWG. NO. 4 OF 14
FILE NO. CEA 1132

PLAN PREPARED BY
CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT, MICH., 48221

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PUBLIC LIGHTING
DEPARTMENT
CITY OF DETROIT

FILE NO. 51-0601
SHEET NO. 4 OF 14
DATE 10-86

PLAN
TYPE "S" HANDHOLE
N.T.S.
PLAN
TYPE "D" HANDHOLE
N.T.S.
SECTION "A-A"
ELEVATION
PLAN
ALTERNATE ROOF-TYPE "S" HANDHOLE
N.T.S.
ELEVATION
PLAN
ALTERNATE ROOF-TYPE "D" HANDHOLE
N.T.S.
SECTION
TYPE "S" HANDHOLE
N.T.S.
SECTION
TYPE "D" HANDHOLE
N.T.S.
SECTION "B-B"
P.L.C. PATTERN NO. 1A
A.S.T.M. CLASS 20 OR 30 GRAY IRON
APPROX. WT. 251 LBS.
HANDHOLE FRAME
NOTE:
1. FRAMES MAY BE A.S.T.M. CLASS 30 GRAY IRON IF THE CONTRACTOR SO ELECTS.
2. ALL FILLETS ARE 1/2" RADIUS, & ALL ROUNDS ARE 1/4" RADIUS.
PLAN
SECTION "C-C"
REINFORCED CONCRETE PIPE (CLASS III)
ROUND HANDHOLE
SECTION "E-E"
SECTION "F-F"
SECTION "D-D"
ALL LETTERING TO BE 1/4" HIGH AND FLUSH WITH SURFACE OF COVER.
PUBLIC LIGHTING COMMISSION
P.L.C. PATTERN NO. 2A
A.S.T.M. CLASS 30 GRAY IRON
APPROX. WT. 145 LBS.
STREET TYPE COVER
TO BE USED IN STREETS & DRIVES
DETAIL "A"
DETAIL "B"
DETAIL "C"
DETAIL "D"
CABLE RACKS
3" STD. 4.1# CHANNEL
N.T.S.
NOTE:
CABLE RACKS SHALL BE GALV. AFTER FAB. IN ACCORDANCE WITH ASTM A-123.
CABLE ARMS SHALL BE GALV. AFTER FAB. IN ACCORDANCE WITH ASTM A-153 53.
ARMS MUST FIT ON INSIDE & OUTSIDE OF RACKS & MUST ALLOW INSULATOR TO FIT LOOSELY.
USE 1/2" GALV. SUPPORTING BOLTS AND EXPANSION ANCHORS.
CABLE ARM INSULATORS
WHITE GLAZED PORCELAIN DRY PROCESS
N.T.S.
PULLING IRON
N.T.S.
DETAIL - "J"
DETAIL "H"
DETAIL "G"
DETAIL "F"
DETAIL "E"
CABLE ARMS
MALLEABLE CAST IRON
N.T.S.
CABLE RACKS, CABLE ARMS, AND CABLE ARM INSULATORS
N.T.S.

TYPE "D" HANDHOLE TABLE FOR #4 BARS		
MARK	NO.	LENGTH
4-46	3	4'-6"
4-40	4	4'-0"
4-39	4	3'-9"
4-36	4	3'-6"
4-30	3	3'-0"
4-16	1	18"
4-13	8	15"
4-10	4	12"

TYPE "S" HANDHOLE TABLE FOR #5 BARS		
MARK	NO.	LENGTH
5-50	2	5'-0"
5-46	8	4'-6"
5-36	4	3'-6"
5-30	6	3'-0"
5-19	10	21"
5-10	8	12"

NOTES:

1. DUCT ENTRANCE TO BE BUILT AS REQUIRED.
2. ALL RAILS TO BE 60#/YD. OR HEAVIER.
3. CABLE PULLING IRONS TO BE GALVANIZED.
4. CABLE RACKS AND ARMS TO BE GALVANIZED.
5. IN PAVEMENT PROVIDE AT LEAST 3" BETWEEN ROOF AND BASE OF PAVEMENT. WHERE EXISTING GRADE IS HIGHER THAN PROP FUTURE GRADE INSTALL BRICK RING OR GROUT (AS REQ'D.) UNDER FRAME TO ALLOW FOR FUTURE FRAME ADJUSTMENT.
6. BAR NUMBERS DENOTE THE SIZE OF BAR REQUIRED IN ACCORDANCE WITH CURRENT USAGE SPECIFIED BY THE CONCRETE REINFORCING STEEL INSTITUTE.
7. EXCAVATION LIMITS FOR PUBLIC LIGHTING DEPARTMENT HANDHOLES SHALL BE ON VERTICAL PLANES OF THE FOOTING OUTLINE.
8. INSTALL ANCHORS & CABLE-RACKS AS SHOWN.
9. WHERE HANDHOLES ARE LOCATED BACK OF CURBS ROOF MUST BE BUILT 18" BELOW CURB GRADE, TO PROVIDE FOR FUTURE WIDENING.

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REVISIONS	DATE	DESCRIPTION	CHKD. BY

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, McDOUGALL AND WIGHT STREET
RIVER PLACE DEVELOPEMENT

HANDHOLE DETAILS

SHEET 18 OF 27 SHEETS
CONTRACT NO. PW 6727
ASSIGNMENT NO. 84-14-20
DATE

CITY OF DETROIT
CITY ENGINEERING DEPARTMENT
BUREAUS OF STREETS AND HIGHWAYS

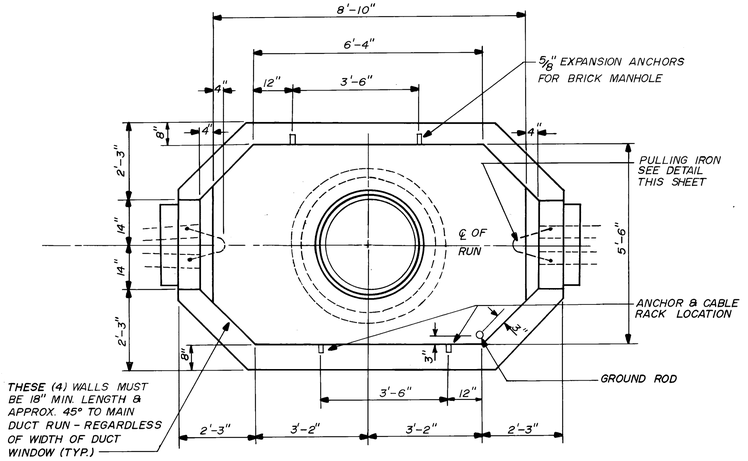
DRAWN CEA
CHECKED
APPROVED
DATE 10-86

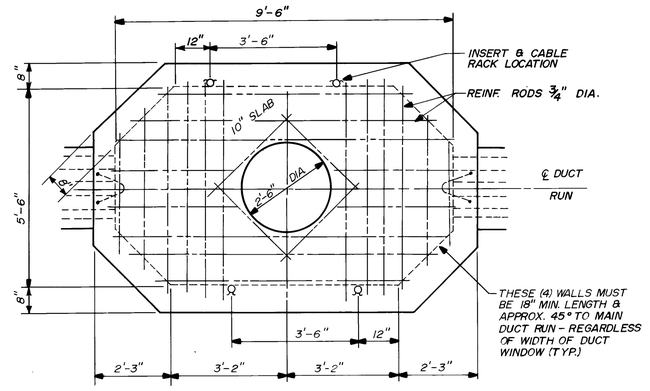
PLAN PREPARED BY
CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT, MICH. 48221
DRWG. NO. 5 OF 14
FILE NO. CEA 1132

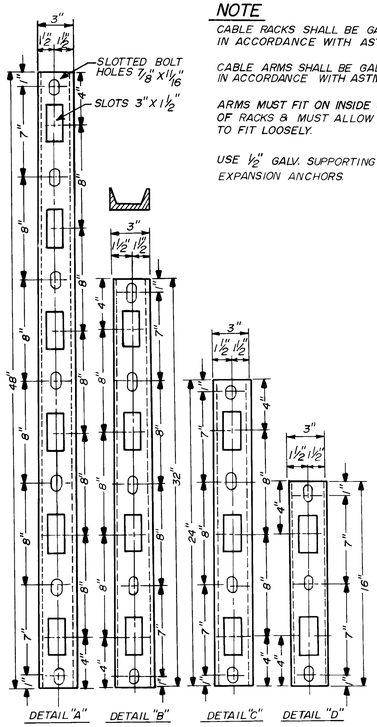
CHECKED BY
APPROVED BY

PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

FILE NO. 51-0601
SHEET NO. 5 OF 14
DATE 10-86







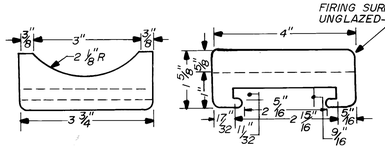
NOTE

CABLE RACKS SHALL BE GALV. AFTER FAB. IN ACCORDANCE WITH ASTM. A-123.

CABLE ARMS SHALL BE GALV. AFTER FAB IN ACCORDANCE WITH ASTM. A-153 53.

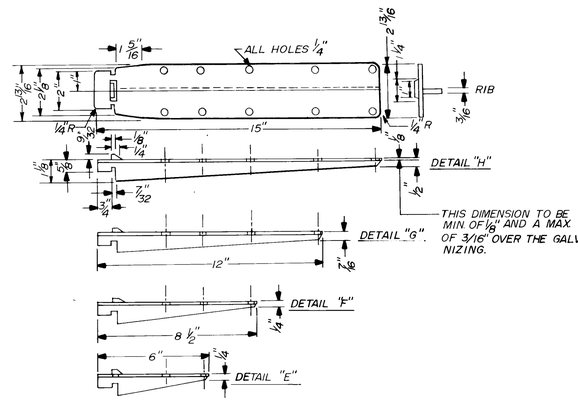
ARMS MUST FIT ON INSIDE & OUTSIDE OF RACKS & MUST ALLOW INSULATOR TO FIT LOOSELY.

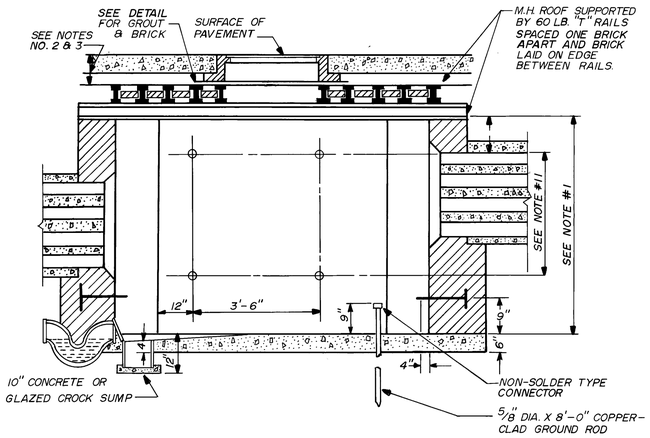
USE 1/2" GALV. SUPPORTING BOLTS AND EXPANSION ANCHORS.



CABLE ARM INSULATORS

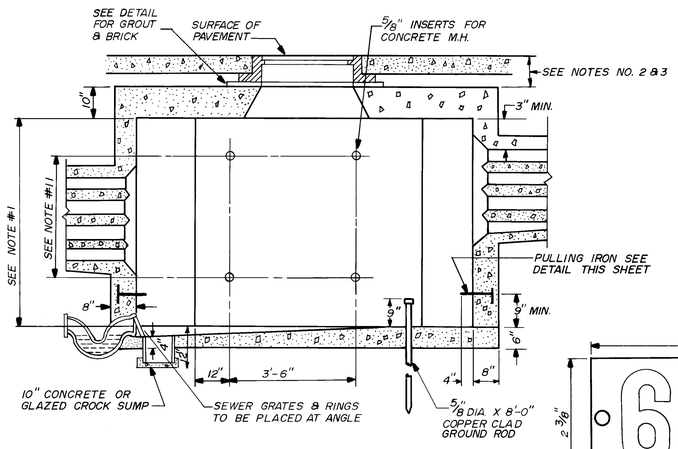
WHITE GLAZED PORCELAIN DRY PROCESS
N.T.S.





BRICK - TWO WAY MANHOLE

N.T.S.



CONCRETE - TWO WAY MANHOLE

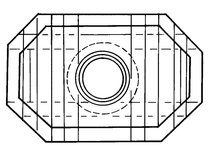
N.T.S.

3/4" DIA. REINFORCING STEEL RODS REQ'D. FOR 2-WAY M.H.

10 PIECES	3'-6" LONG
2 PIECES	5'-0" LONG
8 PIECES	6'-6" LONG
2 PIECES	8'-0" LONG
4 PIECES	10'-0" LONG

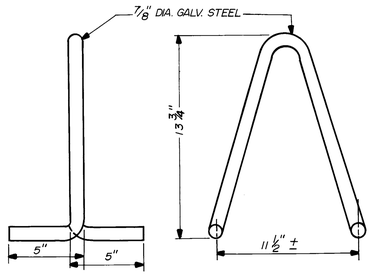
MANHOLE NUMBER DETAIL (LEAD)

N.T.S.



60 LB. "T" RAILS

2 PIECES	4'-6" LONG
2 PIECES	6'-0" LONG
6 PIECES	6'-10" LONG
2 PIECES	9'-3" LONG
2 PIECES	10'-8" LONG
TOTAL WEIGHT	2040 LB.



PULLING IRON

N.T.S.

NOTES:

1. THIS DIMENSION NORMALLY 6'-0". SEE SPECIFICATIONS FOR UNUSUAL CONDITIONS.
2. WHERE M.H.'S ARE LOCATED BACK OF CURBS, TOP OF M.H. ROOF MUST BE BUILT 26" BELOW CURB GRADE TO PROVIDE FOR FUTURE PAVEMENT.
3. IN EXISTING PAVEMENT, PROVIDE AT LEAST 8" BETWEEN TOP OF ROOF AND BASE OF PAVEMENT.
4. BOLTS, RACKS & PULLING IRONS TO BE HOT-DIP GALV.
5. ℄ OF RAILS UNDER M.H. FRAME FLANGE TO BE APPROX. 18" FROM ℄'S OF FRAMES.
6. M.H. NUMBER TO BE INSTALLED ON MANHOLE WALL IN CONSPICUOUS PLACE.
7. MOUNTING HEIGHT FOR LOWER BOLTS OF CABLE RACK SHALL BE THE AVERAGE HEIGHT OF THE BOTTOM OF THE LOWEST DUCTS IN MAIN CONDUITS. INSTALL RACKS ON ALL WALLS.
8. 8" THICK BRICK CHIMNEYS WHERE SPECIFIED SHALL BE INCIDENTAL TO APPLICABLE M.H. ITEM.
9. EXCAVATION LIMITS FOR PUBLIC LIGHTING DEPARTMENT MANHOLES SHALL BE ON VERTICAL PLANES ON THE FOOTING OUTLINE.
10. 1/2" PLASTER OUTSIDE WALLS OF BRICK MANHOLES.
11. SPACING OF INSERTS AS REQUIRED TO ACCOMMODATE CABLE RACK.

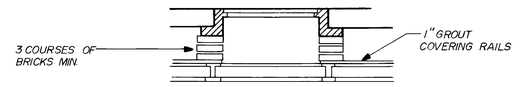
CABLE RACKS

3" STD. 4.1 # CHANNEL
N.T.S.

CABLE ARMS

MALLEABLE CAST IRON

CABLE RACKS, CABLE ARMS, AND CABLE ARM INSULATORS



GROUT & BRICK DETAIL

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REVISIONS	DATE	DESCRIPTION	CHKD. BY

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, McDOUGALL AND WIGHT STREET
RIVER PLACE DEVELOPEMENT

TWO-WAY MANHOLE

SHEET 19 OF 27 SHEETS
CONTRACT NO. PW 6727
ASSIGNMENT NO. 84-14-20
DATE

CITY OF DETROIT
CITY ENGINEERING DEPARTMENT
BUREAUS OF STREETS AND HIGHWAYS

DRAWN BY CEA
CHECKED BY
APPROVED BY
DATE 10-86

PLAN PREPARED BY
CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT, MICH. 48221
DRAWING NO. 6 OF 14
FILE NO. CEA 1132

CHECKED BY
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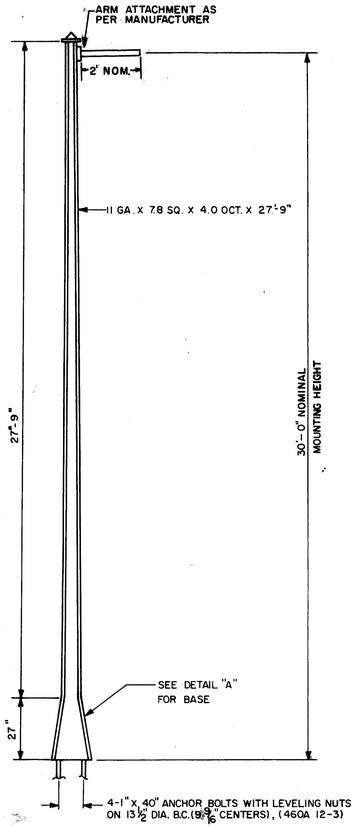
PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

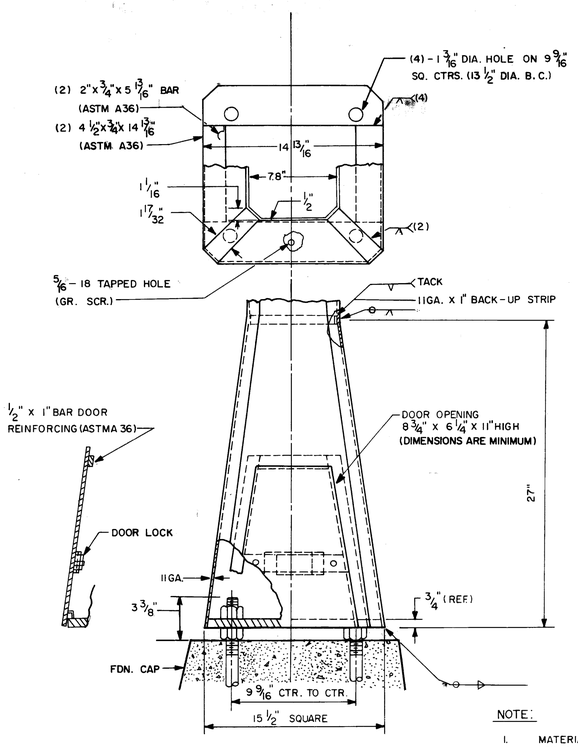
FILE NO. 51-0601
SHEET NO. 6 OF 14
DATE 10-86



POLE, BASE & INTEGRAL ARM

NOTE:

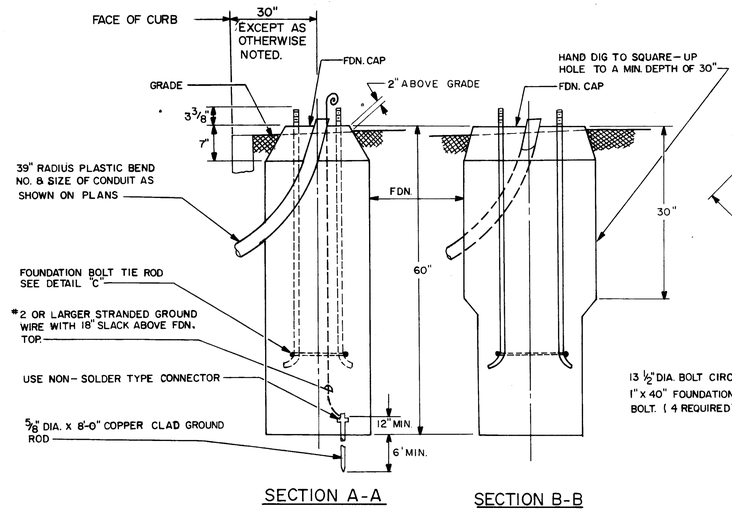
1. MATERIAL - HIGH STRENGTH, LOW ALLOY STEEL, 50,000 PSI. MIN. YIELD 70,000 PSI. MIN. TENSILE.
2. FINISH - PRIME PAINT & CONTACT P.L.D. FOR COLOR OF FINAL COAT.



DETAIL "A" BASE
NTS.

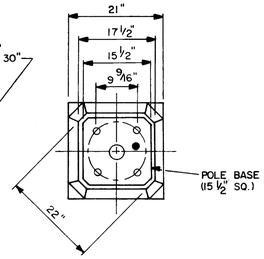
NOTE:

1. MATERIAL - EXCEPT AS NOTED, HIGH STRENGTH, LOW ALLOY STEEL, 50,000 PSI. MIN. YIELD 70,000 PSI. MIN. TENSILE.
2. FINISH - TO MATCH POLE.

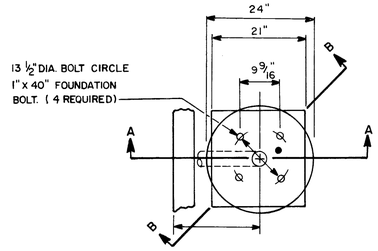


SECTION A-A

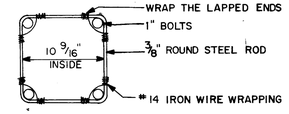
SECTION B-B



FDN. CAP PLAN



FDN. PLAN



FDN. BOLT TIE ROD
DETAIL "C"

FOUNDATION DETAILS

NOTE: (FOUNDATION BOLTS)

1. MATERIAL - HIGH STRENGTH STEEL, 115,000 PSI. MIN. YIELD ASTM. A576, GR 1541 (MODIFIED) STRESS RELIEVED ROD.
2. HOT DIP GALVANIZE PER ASTM A153.
3. THREAD TO BE CLASS 2A PER AMERICAN STD. B1.1 AFTER GALVANIZING.
4. ALL BOLTS ROLLED THREAD.

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DATE	DESCRIPTION	CHKD. BY

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, McDOUGALL AND WIGHT STREET
RIVER PLACE DEVELOPEMENT

ANCHOR BASE ST. LTG. STD. (CODE 116-02) DETAILS

SHEET 20 OF 27 SHEETS
CONTRACT NO. PW 6727
ASSIGNMENT NO. 84-14-20
DATE

CITY OF DETROIT
CITY ENGINEERING DEPARTMENT
BUREAUS OF STREETS AND HIGHWAYS

DRAWN CEA
CHECKED
APPROVED
DATE 10-86

PLAN PREPARED BY
CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT, MICH. 48221
DRWG. NO. 7 OF 14
FILE NO. CEA 1132

CHECKED BY
APPROVED BY

PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

FILE NO. 51-0601
SHEET NO. 7 OF 14
DATE 10-86

USE	VOLT RATING	ITEM NO.	CONDUCTOR	SYNTHETIC RUBBER	IMPREG-NATED PAPER	POLYETH-YLENE	POLYVINYL-CHLORIDE	SHIELD OVER INSULATED CONDUCTOR	TAPE OVER INSULATED CONDUCTOR/S	IMPREG-NATED PAPER BELT	JACKET	LEAD SHEATH	COVERING OVER LEAD	STEEL TAPE ARMOR	COVERING OVER STEEL TAPE	COVERING OVER CONDUCTOR
OVERHEAD LINE WIRE	—	1	#2-#6 AWG. H.D. UNCOATED SOLID COPPER A.S.T.M. B1													0.047 INCH BLACK NEOPRENE
	—	2	#4/0-#2/0AWG. M.HD. UNCOATED 7/STR. COPPER A.S.T.M. B2, B8													0.063 INCH BLACK NEOPRENE
	—	3	#6 AWG. H.D., UNCOATED SOLID COPPER A.S.T.M. B1													0.032 INCH BLACK POLYETHYLENE
	—	4	#2 AWG. H.D., UNCOATED SOLID COPPER A.S.T.M. B1													0.047 INCH BLACK POLYETHYLENE
	—	5	#4/0-#2/0AWG. M.HD. UNCOATED 7/STR. COPPER A.S.T.M. B2, B8													0.063 INCH BLACK POLYETHYLENE
SPECIAL EVENT FEEDER,	2000V.	6					0.062 INCH 75°C, BLACK, OR WHITE AS REQ'D. PIGMENTED NOT IMPRINTED									
MULT. ST. LTG.	2000 V.	7					0.062 INCH, 60°C, BLACK, FIGURE 8 CONSTRUCTION									
TRAFFIC SIG. SECONDARY	2000V.	8														
RECEPTACLE, BRACKET & LAMP POST WIRE	600 V.	9	#8AWG. I/C UNCOATED, SOFT 7/STR. COPPER A.S.T.M. B8													
2/C AERIAL SERVICE	600 V.	10	2/C #8 AWG. UNCOATED, SOFT 7/STR. COPPER A.S.T.M. B8													
DISTRIBUTION CABLES	5000 V. BELTED	11	3/C 350 MCM SECTOR, SOFT UNCOATED COPPER AEIC		0.085 INCH PER CONDUCTOR OIL VISCOSITY 1,000 SUS AT 100°C							0.085 INCH COPPER BEARING LEAD	0.090 INCH. HEAT & LIGHT STABILIZED BLACK HIGH MOLECULAR WEIGHT POLYETHYLENE OVER LEAD SHEATH			
	5000V. BELTED	12	3/C #2/0 AWG. SECTOR, SOFT UNCOATED COPPER AEIC		0.085 INCH PER CONDUCTOR OIL VISCOSITY 1000 SUS AT 100°C							0.085 INCH COPPER BEARING LEAD	0.080 INCH HEAT & LIGHT STABILIZED BLACK HIGH MOLECULAR WEIGHT POLYETHYLENE OVER LEAD SHEATH			
	5000V. BELTED	13	3/C #2 AWG. ROUND, SOFT UNCOATED COPPER AEIC		0.085 INCH PER CONDUCTOR OIL VISCOSITY 1,000 SUS AT 100°C							0.080 INCH COPPER BEARING LEAD	0.080 INCH HEAT & LIGHT STABILIZED BLACK HIGH MOLECULAR WEIGHT POLYETHYLENE OVER LEAD SHEATH			
	7000V. BELTED	14	3/C 350 MCM SECTOR, SOFT UNCOATED COPPER AEIC		0.100 INCH PER CONDUCTOR OIL VISCOSITY 1,000 SUS AT 100°C							0.095 INCH COPPER BEARING LEAD	0.090 INCH HEAT & LIGHT STABILIZED BLACK HIGH MOLECULAR WEIGHT POLYETHYLENE OVER LEAD SHEATH			
	7000V. BELTED	15	3/C #2/0 AWG. SECTOR, SOFT UNCOATED COPPER AEIC		0.100 INCH PER CONDUCTOR OIL VISCOSITY 1,000 SUS AT 100°C							0.085 INCH COPPER BEARING LEAD	0.090 INCH HEAT & LIGHT STABILIZED BLACK HIGH MOLECULAR WEIGHT POLYETHYLENE OVER LEAD SHEATH			
	7000V. BELTED	16	3/C #2 AWG. ROUND, SOFT UNCOATED COPPER AEIC		0.100 INCH PER CONDUCTOR OIL VISCOSITY 1,000 SUS AT 100°C							0.085 INCH COPPER BEARING LEAD	0.080 INCH HEAT & LIGHT STABILIZED BLACK HIGH MOLECULAR WEIGHT POLYETHYLENE OVER LEAD SHEATH			
SERIES ST. LTG. CABLE, IN DUCT	7500 V.	17	1/C #2 AWG. SOLID, SOFT UNCOATED COPPER ASTM B3			0.188 INCH HIGH MOLECULAR NATURAL OVER CONDUCTOR	0.047 INCH 60°C BLACK					0.063 INCH COMMERCIALLY PURE				
SERIES ST. LTG. CABLE DIRECT BURIAL	7500V.	18	1/C #8 AWG. SOLID, SOFT UNCOATED COPPER ASTM B3			0.188 INCH HIGH MOLECULAR NATURAL OVER CONDUCTOR	0.047 INCH 80°C BLACK OVER INSULATED CONDUCTOR					0.063 INCH COMMERCIALLY PURE	0.047 INCH ASPHALTUM SATURATED JUTE OVER LEAD	TWO LAYERS 0.020 INCH GALV. STEEL TAPE	ASPHALTUM SATURATED JUTE OVER STEEL TAPE	
TRANSMISSION CABLES	24000V SHIELDED	19	3/C 500MCM SECTOR, SOFT UNCOATED COPPER * AEIC		0.230 INCH PER CONDUCTOR OIL VISCOSITY 1,000 SUS AT 100°C			COPPER TAPE INTERCALATED WITH SEMI-CONDUCTING OR METALLIZED PAPER TAPE	* *	0.230 INCH PER CONDUCTOR		0.110 INCH HEAT STABILIZED LIGHT BLACK HIGH MOLECULAR WEIGHT POLYETHYLENE OVER LEAD SHEATH				
	24000V SHIELDED	20	3/C 350 MCM SECTOR, SOFT UNCOATED COPPER * AEIC		0.230 INCH PER CONDUCTOR OIL VISCOSITY 1,000 SUS AT 100°C			COPPER TAPE INTERCALATED WITH SEMI-CONDUCTING OR METALLIZED PAPER TAPE	* *	0.230 INCH PER CONDUCTOR		0.110 INCH HEAT STABILIZED LIGHT BLACK HIGH MOLECULAR WEIGHT POLYETHYLENE OVER LEAD SHEATH				
	24000V SHIELDED	21	3/C #2/0 AWG. SECTOR, SOFT UNCOATED COPPER * AEIC		0.245 INCH PER CONDUCTOR OIL VISCOSITY 1,000 SUS AT 100°C			COPPER TAPE INTERCALATED WITH SEMI-CONDUCTING OR METALLIZED PAPER TAPE	* *	0.245 INCH PER CONDUCTOR		0.090 INCH HEAT STABILIZED BLACK HIGH MOLECULAR WEIGHT POLYETHYLENE OVER LEAD SHEATH				
MULTI-CONDUCTOR SIGNAL CABLE, IN DUCT	—	22	#14 AWG. SOLID, SOFT UNCOATED COPPER, NO. OF CONDUCTOR AS REQD. ASTM B3													
MULTI-CONDUCTOR SIGNAL CABLE, AERIAL (IM)	—	23	#14 AWG. SOLID, SOFT UNCOATED COPPER NO. OF CONDUCTORS AS REQD. ASTM B3													
8/C SERIES ST. LTG. IN DUCT	7500 V.	24	8/C #8 AWG. SOLID, SOFT TINNED COPPER ASTM B33													
OVERHEAD FLEXIBLE TRAINER WIRE (UNSHIELDED)	—	25	1/C #2 AWG. LARGER, SOFT CLASS B OR H STRANDING TINNED COPPER ASTM B173	SEMI-CONDUCTING COTTON TAPE OVER CONDUCTOR & 0.1268 OZONE RESISTING BUTYL												

ACCORDING TO SPECIFICATIONS

SPECIAL CONSTRUCTION
CENTRAL CONDUCTOR HAS ADDITIONAL 0.170 INCH VARNISHED CAMBRIC TAPE ONE OF 7 OUTSIDE CONDUCTORS WRAPPED WITH HAVE ADDITIONAL 0.094 INCH VARNISHED CAMBRIC TAPE REMAINING 7 CONDUCTORS EACH WHITE PAPER FOR IDENTIFICATION ALL CONDUCTORS CABLED WITH PARAFFINED JUTE (OUTSIDE FILLER). 0.094 INCH BELT OF OIL SATURATED PAPER OVERALL 0.115 INCH COPPER BEARING LEAD BENEATH OVERALL.

ALL MULTIPLE STREET LIGHTING, TRAFFIC, SIGNAL, SECONDARY AND SPECIAL EVENT CABLES INSTALLED IN CONDUIT SHALL BE AS PER THE FOLLOWING:
CONDUCTORS: COATED, STRANDED COPPER CONDUCTOR PER ASTM B-8 AND B-189. INSULATION: MEETS OR EXCEEDS ALL REQUIREMENTS OF LATEST EDITION OF ICEA S-68-516, NEMA WC 8 FOR ETHYLENE PROPYLENE RUBBER INSULATION AND ASTM D 2802-78 AND UL STANDARD 44. JACKET: MEETS OR EXCEEDS ALL REQUIREMENTS OF LATEST EDITION OF ICEA S-68-516, NEMA WC 8 FOR HEAVY DUTY CHLOROSULFONATED-POLYETHYLENE. LISTED BY UNDERWRITER'S LABORATORIES, INC. AS TYPE RHH OR RHW.

NOTE: PRIOR TO PLACING ORDER FOR PURCHASE OF THIS CABLE, A SAMPLE LENGTH OF CABLE MUST FIRST BE SUBMITTED TO P.L.D. FOR THEIR APPROVAL.

COLOR CODED AS FOLLOWS:
RED – A CIRCUIT
BLACK – B CIRCUIT
WHITE – NEUTRAL

* CARBON BLACK PAPER TAPE OVER CONDUCTOR

** BINDER TAPE OVER SHIELDED INSULATED CONDUCTOR AND FILLERS TO BE COPPER OR BRONZE TAPE INTERCALATED WITH PAPER TAPE OR (2) METALLIZED PAPER TAPES

CONTINUED ON 207

DATE	DESCRIPTION	CHKD. BY
020-6-CTD		

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, McDOUGALL AND WIGHT STREET
RIVER PLACE DEVELOPMENT

CABLE & WIRE SPECIFICATIONS, DETAILS

SHEET 21 OF 27 SHEETS
CONTRACT NO. PW 6727
ASSIGNMENT NO. 84-14-20
DATE

CITY OF DETROIT
CITY ENGINEERING DEPARTMENT
BUREAUS OF STREETS AND HIGHWAYS

DRAWN CEA
CHECKED
APPROVED
DATE 10-86

PLAN PREPARED BY
CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT, MICH. 48221
DRWG. NO. 8 OF 14
FILE NO. CEA 1132

DRAWN BY
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PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

FILE NO. 51-0601
SHEET NO. 8 OF 14
DATE 10-86

1. DISTRIBUTION AND TRANSMISSION CABLES

ALL TRANSMISSION CABLES, (24 K.V., ITEMS 11-16 INCLUSIVE) ARE FOR CIRCUITS WITH GROUNDED NEUTRAL, AND SHALL CONFORM STRICTLY. WITH THE LATEST REVISION OF THE A.E.I.C. "SPECIFICATION FOR IMPREGNATED PAPER INSULATED, LEAD COVERED SOLID TYPE CABLE", 9TH EDITION, DATED APRIL, 1954, AND CONSTRUCTION OPTIONS AS NOTED IN SHEET 1.

ALL DISTRIBUTION CABLES, (7.85 KV, ITEMS 19-21 INCLUSIVE) ARE FOR CIRCUITS WITH UNGROUNDED NEUTRAL AND SHALL ALSO CONFORM WITH THE ABOVE SPECIFICATION, WITH CONSTRUCTION OPTIONS AS NOTED IN TABLE 1.

2. OVERHEAD LINE WIRE

OVERHEAD LINE WIRE SHALL BE IN ACCORDANCE WITH LATEST REVISION OF ASA C8.34 (NEOPRENE COVERING) OR THE LATEST REVISION OF ASA C8.35 (POLYETHYLENE COVERING).

3. 8/C, #8 AWG, STREET LIGHTING CABLE, 7500 V.

THIS IS A SPECIAL CONSTRUCTION AND SHALL BE MADE STRICTLY IN ACCORDANCE WITH THE DESCRIPTION IN TABLE 1.

4. OTHER RUBBER OR THERMOPLASTIC INSULATED CABLES, LEADED & NON-LEADED

WIRE SIZE, INSULATION TYPE AND NOMINAL THICKNESSES, OTHER CONSTRUCTION FEATURES SHALL BE AS SHOWN IN TABLE 1, AND APPLICABLE REFERENCE SPECIFICATIONS SHOWN BELOW:

			POLYVINYL-CHLORIDE 60°C	POLYVINYL-CHLORIDE 75°	HIGH MOLECULAR WEIGHT NATURAL POLYETHYLENE	SYNTHETIC RUBBER 75°C HEAT & MOISTURE RESISTANT	OZONE RESISTING BUTYL RUBBER
ORIGINAL	TENSILE STRENGTH PSI		2300, MIN.	2300, MIN.	1400, MIN.	700, MIN.	600, MIN.
	ELONGATION AT RUPTURE, PERCENT		250, MIN.	250, MIN.	350, MIN.	300, MIN. AND 1/2" SET, MAX.	350, MIN. AND 1/2" SET MAX.
AIR OVEN TEST, TIME & TEMP. AS NOTED	TENSILE STRENGTH % OF ORIGINAL		65, MIN. 168 HRS., 100±1°C	120, MAX. 80, MIN. 168 HRS., 120±1°C	75, MIN. 48 HRS., 100±1°C	—	60, MIN. 168 HRS., 100±1°C
	ELONGATION % OF ORIGINAL		* 65, MIN. 168 HRS., 100±1°C	** 75, MIN. 168 HRS., 120±1°C	75, MIN. 48 HRS., 100±1°C	—	60, MIN. 168 HRS., 100±1°C
OXYGEN PRESSURE TEST	TENSILE STRENGTH % OF ORIGINAL		—	—	—	50, MIN. 168 HRS., 80±1°C	—
	ELONGATION % OF ORIGINAL		—	—	—	50, MIN. 168 HRS., 80±1°C	—
AIR PRESSURE HEAT TEST	TENSILE STRENGTH % OF ORIGINAL		—	—	—	50, MIN. 20 HRS., 127±1°C	50, MIN. 40 HRS., 127±1°C
	ELONGATION % OF ORIGINAL		—	—	—	50, MIN. 20 HRS., 127±1°C	50, MIN. 40 HRS., 127±1°C
HEAT DISTORTION 121±1°C	% OF ORIGINAL		50, MAX.	25, MAX.	—	—	—
OIL IMMERSION 4 HRS., 70±1°C	TENSILE STRENGTH % OF ORIGINAL		# 85, MIN.	## 85, MIN.	—	—	—
	ELONGATION, % OF ORIGINAL		# 85, MIN.	## 85, MIN.	—	—	—
HEAT SHOCK 121±1°C	—		NO CRACKS	NO CRACKS	—	—	—
COLD BEND	—		NO CRACKS -30±1°C	NO CRACKS -30±1°C	NO CRACKS -55±1°C	—	—
INSULATION RESISTANCE CONSTANT AT 15.6°C	—		1,000 MIN.	2,000 MIN.	50,000 MIN.	4,000 MIN.	20,000 MIN.
FLAME RESISTING PROPERTIES	—		SECT. 6.5 IPCEA S-61-402	SECT. 6.5 IPCEA S-61-402	—	—	—
ACCELERATED WATER ABSORPTION REQUIREMENT	ELECTRICAL METHOD	DIELECTRIC CONSTANT, 1 DAY	10, MAX.	10, MAX.	—	5, MAX.	—
		% CAPACITANCE INCREASE	1-14 DAYS-10, MAX. 7-14 DAYS-5, MAX.	1-14 DAYS-4.0 MAX, 7-14 DAYS-2.0 MAX.	—	1-14 DAYS 10.0 MAX. 7-14 DAYS 4.0, MAX.	1-14 DAYS 5.0, MAX. 7-14 DAYS 3.0, MAX.
		TEMP.	50±1°C	75±1°C	—	75±1°C	75±1°C
	OR GRAVIMETRIC METHOD		20 MILLIGRAMS PER SQ INCH MAX.	10 MILLIGRAM PER SQ. INCH MAX.	—	20 MILLIGRAMS PER SQ. INCH, MAX.	15 MILLIGRAMS PER SQ. INCH, MAX.
TEST IN ACCORANCE WITH LATEST REVISION OF			IPCEA S-61-402 (EXCEPTIONS ARE NOTED ABOVE)		IPCEA S-61-402	IPCEA S-19-81 (EXCEPTIONS ARE NOTED ABOVE)	IPCEA S-19-81

FOR #6 AWG AND LARGER, USING BUFFED DIE-CUT SPECIMENS, THE FOLLOWING VALUES SHALL APPLY:

* ELONGATION AFTER AIR OVEN TEST 45% MIN.

** ELONGATION AFTER AIR OVEN TEST 50% MIN.

OR #* TENSILE STRENGTH AFTER OIL IMMERSION 80% MIN.

INSULATIONS

THE MINIMUM INSULATION THICKNESS OF ANY OF THESE CABLES SHALL BE LESS THAN 90% OF THE NOMINAL THICKNESS SHOWN ON TABLE 1.

THE PHYSICAL AND AGING PROPERTIES OF THERMOPLASTIC AND RUBBER INSULATIONS SHALL BE AS FOLLOWS:

CONDUCTORS

ALL CONDUCTORS SHALL BE COPPER, COMPLYING WITH THE LATEST REVISIONS OF ASTM SPECIFICATIONS, AS FOLLOWS:

SOFT OR ANNEALED, BARE COPPER WIRE	ASTM B3
MEDIUM HARD DRAWN COPPER WIRE	ASTM B2
HARD DRAWN COPPER WIRE	ASTM B1
CONCENTRIC-LAY-STRANDED COPPER CONDUCTORS, HARD, MEDIUM HARD OR SOFT, COATED OR UNCOATED, AS REQUIRED.	ASTM B8
ROPE-LAY-STRANDED, SOFT, COPPER CONDUCTORS, COATED OR UNCOATED, AS REQUIRED	ASTM B173
SOFT, SOLID COPPER CONDUCTORS, TINNED	ASTM B33
SOFT, SOLID COPPER CONDUCTORS. LEAD OR LEAD ALLOY COATED	ASTM B189

JACKETS

THE MINIMUM JACKET THICKNESS SHALL NOT BE LESS THAN 80% OF THE NOMINAL THICKNESS SHOWN ON TABLE 1.

		NEOPRENE BLACK, HEAVY DUTY	NEOPRENE BLACK GENERAL PURPOSE	POLYVINL-CHLORIDE, BLACK	HEAT & LIGHT STABILIZED BLACK POLYETHYLENE COVER'G OVER LEAD SHEATH
ORIGINAL	TENSILE STRENGTH PSI	1800, MIN.	1500, MIN.	1500, MIN.	1400, MIN.
	ELONGATION AT RUPTURE, %	300, MIN. 8 3/8" MAX. SET	250, MIN. 8 3/8" MAX. SET	100, MIN.	350, MIN.
AIR OVEN TEST TIME & TEMP. AS NOTED	TENSILE STRENGTH, % OE ORIGINAL	—	—	85, MIN. 120 HRS., 100±1°C	75, MIN.
	ELONGATION % OF ORIGINAL	—	—	60, MIN. 120 HRS., 100±1°C	75, MIN.
OXYGEN PRESSURE TEST 168 HRS. 80±1°C	TENSILE STRENGTH % OF ORIGINAL	50, MIN.	50, MIN.	—	—
	ELONGATION % OF ORIGINAL	50, MIN.	50, MIN.	—	—
AIR PRESSURE HEAT TEST 20 HRS. 127±1°C	TENSILE STRENGTH, % OF ORIGINAL	50, MIN.	50, MIN.	—	—
	ELONGATION, % OF ORIGINAL	50, MIN.	50, MIN.	—	—
OIL IMMERSION TEST, TIME & TEMP. AS NOTED	TENSILE STRENGTH, % OF ORIGINAL	60, MIN. 18 HRS. 121±1°C	60 MIN. 18 HRS. 121±1°C	60 MIN. 4 HRS. 70±1°C	—
	ELONGATION % OF ORIGINAL	60, MIN. 18 HRS. 121±1°C	60 MIN 18 HRS. 121±1°C	60 MIN. 4 HRS. 70±1°C	—
HEAT DISTORTION, PERCENT OF UNAGED VALUE	—	—	—	50, MAX. 121°±1°C	25, MAX. 90±1°C
HEAT SHOCK 121±1°C	—	—	—	NO CRACKS	—
COLD BEND. TEST -35±1°C	—	—	—	NO CRACKS	NO CRACKS
ENVIRONMENTAL CRACKING	—	—	—	—	NO CRACKS
LIGHT ABSORPTIVITY	—	—	—	—	24,000, MIN.
TEST IN ACCORDANCE WITH LATEST REVISION OF		IPCEA S-19-81		IPCA S-61-402	IPCEA INTERIM REVISION #1 PUB. S-54-401 SEPT. 1959

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DATE	DESCRIPTION	CHKD. BY

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, McDOUGALL AND WIGHT STREET
RIVER PLACE DEVELOPMENT
CABLE & WIRE SPECIFICATIONS
DETAILS

SHEET 22 OF 27 SHEETS
CONTRACT NO. PW 6727
ASSIGNMENT NO. 84-14-20
DATE

CITY OF DETROIT
CITY ENGINEERING DEPARTMENT
BUREAUS OF STREETS AND HIGHWAYS

DRAWN CEA
CHECKED BY
APPROVED BY
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CERTIFIED TEST REPORTS

SHIPMENTS OF WIRE AND CABLE SHALL NOT BE CONSIDERED COMPLETE UNTIL CERTIFIED TEST REPORTS ARE RECEIVED AND APPROVED. TEST REPORTS FOR THE VARIOUS ITEMS OF WIRE AND CABLE SHOWN ON SHEET) SHALL CONTAIN THE FOLLOWING TEST RESULTS:

ITEMS 1 - 5 INCLUSIVE – OVERHEAD LINE WIRE

1. CONDUCTOR CONTINUITY. RESISTANCE, TENSILE STRENGTH AND ELONGATION TESTS.
2. COVERING THICKNESS, PHYSICAL AND AGING TESTS.
3. WEIGHT OF FINISHED WIRE.

ALL TESTS IN ACCORDANCE WITH THE LATEST REVISION OF ASA 8.34 (NEOPRENE COVERING) OR ASA 8.35 (POLYETHYLENE COVERING.)

ITEMS 6 - 10 INCLUSIVE

1. CONDUCTOR CONTINUITY, RESISTANCE, TENSILE STRENGTH, AND ELONGATION TESTS IN ACCORDANCE WITH THE LATEST REVISIONS OF ASTM B8, B 33 OR B 189.
2. THE PHYSICAL AND OTHER TESTS FOR THE SPECIFIED INSULATION SHOWN ON SHEET-2.
3. INSULATION THICKNESS MEASUREMENTS.
4. THE ALTERNATING-CURRENT VOLTAGE TEST IN ACCORDANCE WITH THE LATEST REVISION OF IPCEA S-61-402.
5. INSULATION RESISTANCE TEST. INSULATION RESISTANCE CONSTANT AS SHOWN ON SHEET-2.
6. (CABLE ITEM 8 ONLY) MINIMUM, MAXIMUM AND AVERAGE LEAD THICKNESS MEASUREMENTS. SHALL ALSO BE INCLUDED.
7. (CABLE ITEM 10 ONLY) A RIP TEST SHALL ALSO BE INCLUDED AS FOLLOWS:

A SIX-FOOT SAMPLE OF THE COMPLETED 2 CONDUCTOR WIRE WITH CLEANLY CUT ENDS SHALL BE SUBJECTED TO A TEMPERATURE OF -10°F. FOR ONE HOUR. WHILE STILL COLD, THE TWO INSULATED CONDUCTORS SHALL BE SEPARATED AT ONE END FOR A DISTANCE OF APPROXIMATELY 3 INCHES AND THEN SHALL BE TORN APART WITH A STEADY PULL AT A RATE OF 33 INCHES IN ONE SECOND OR LESS. THERE SHALL BE NO DAMAGE TO THE INSULATION.

ITEMS 11 - 16 INCLUSIVE - DISTRIBUTION CABLES UNDER 10 KV RATING

1. CONDUCTOR RESISTANCE.
2. SHEATH THICKNESS MEASUREMENTS.
3. HIGH VOLTAGE TEST.
4. MECHANICAL INTEGRITY TEST.
5. BENDING TEST.
6. SPARK TEST ON COVERING OVER LEAD SHEATH ON EACH LENGTH IF COVERING IS SPECIFIED.

ALL TESTS SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF "SOLID TYPE IMPREGNATED-PAPER-INSULATED LEAD COVERED CABLE SPECIFICATIONS", PUBLISHED BY THE ASSOCIATION OF EDISON ILLUMINATING COMPANIES.

ITEMS 17 - 18 INCLUSIVE - SERIES STREET LIGHTING CABLE

1. CONDUCTOR RESISTANCE AND CONTINUITY, IN ACCORDANCE WITH THE LATEST REVISION OF ASTM B-3.
2. THE PHYSICAL AND OTHER TESTS FOR HIGH MOLECULAR WEIGHT POLYETHYLENE INSULATION AS SHOWN ON SHEET-2.
3. THE PHYSICAL AND OTHER TESTS FOR 60°C. POLYVINYL-CHLORIDE INSULATION AS SHOWN ON SHEET-2.
4. THE FOLLOWING TESTS SHALL ALSO BE MADE AND REPORTED:

HIGH VOLTAGE TEST - AFTER NOT LESS THAN SIX (6) HOURS IMMERSION IN WATER AT 60°F, AND WHILE STILL IMMERSED, EACH REEL OF INSULATED CABLE WITHOUT LEAD, SHALL WITHSTAND A 60 CYCLE POTENTIAL OF 30,000 VOLTS FOR A PERIOD OF FIVE (5) MINUTES.

INSULATION RESISTANCE TEST – THE INSULATION RESISTANCE SHALL NOT BE LESS THAN 26,500 MEGOHMS PER THOUSAND FEET AT 60°F. THIS TEST SHALL BE CONDUCTED UPON COMPLETION OF THE HIGH VOLTAGE TEST.

SHORT-TIME DIELECTRIC STRENGTH TEST - A TEN (10) FT. SAMPLE OF THE FINISHED CABLE WITH ONLY THE LEAD REMOVED, AFTER TWELVE (12) HOURS SUBMERSION IN WATER AND WHILE STILL IMMERSED, SHALL WITHSTAND A VOLTAGE TEST OF 60,000 VOLTS 60 CYCLE A.C. FOR FIVE (5) MINUTES. ON COMPLETION OF THIS TEST, THE VOLTAGE WILL BE GRADUALLY RAISED IN ACCORDANCE WITH I.P.C.E.A. SPECIFICATIONS, UNTIL THE INSULATION IS PUNCTURED. THIS VOLTAGE SHALL BE RECORDED AND SHALL BE NOT LESS THAN 72,000 VOLTS.

EXTERNAL-CORONA TEST - THIS TEST SHALL BE CONDUCTED ON ONE (1) SAMPLE PER 10,000 FT. OR COMPLETED CABLE EIGHTEEN (18) INCHES LONG WITH ONLY THE LEAD SHEATH REMOVED, AFTER WHICH IT SHALL BE WIPED WITH A CLEAN DRY CLOTH. THESE SAMPLES SHALL BE BENT AND MAINTAINED IN A "U-SHAPE" HAVING A BENDING DIAMETER EQUAL TO FIVE TIMES THE INSULATED CABLE DIAMETER. THE BENT SAMPLES SHALL THEN BE PLACED IN A VERTICAL POSITION ON A FLAT METALLIC GROUNDED PLATE AND 60 CYCLE AC. VOLTAGE SHALL BE GRADUALLY APPLIED WITH A CORONA-LEVEL TEST APPARATUS OF THE FILTER-CIRCUIT TYPE, MAINTAINING SUFFICIENT AMPLIFICATION TO INDICATE THE EXISTENCE OF CORONA DISCHARGE. THIS VOLTAGE SHALL BE RAISED UNTIL CORONA IS INDICATED, AND SHALL NOT BE LESS THAN 8,200 VOLTS RMS.

THE VOLTAGE SHALL THAN BE RAISED TO 25,000 VOLTS AND MAINTAINED FOR SIX (6) HOURS WITHOUT FAILURE OF THE INSULATION. THE VOLTAGE SHALL THEN BE RAISED IN 10% STEPS AT TEN (10) MINUTE INTERVALS UNTIL FAILURE OF THE INSULATION OR FLASHOVER OCCURS.

THESE VOLTAGES SHALL BE RECORDED AND REPORTED.

INTERNAL-CORONA LEVEL - EACH LENGTH OF COMPLETED CABLE SHALL BE TESTED IN ACCORDANCE WITH SECTION 6.13 OF THE LATEST REVISION OF I.P.C.E.A. STANDARD S-61-402, EXCEPT THAT THE MINIMUM CORONA LEVEL SHALL BE 8,200 VOLTS.

ITEMS 19 - 21 INCLUSIVE – TRANSMISSION CABLES.

1. CONDUCTOR RESISTANCE.
2. SHEATH THICKNESS MEASUREMENT.
3. HIGH VOLTAGE TEST.
4. MECHANICAL INTEGRITY TEST.
5. BENDING TEST.
6. IONIZATION TEST
7. HIGH VOLTAGE - TIME TEST)
8. DIELECTRIC POWER TEST)
9. POWER FACTOR TEST
10. SPARK TEST ON COVERING OVER LEAD SHEATH ON EACH LENGTH.

ONE TEST PER ORDER OR THERE IS A QUANTITY LIMITATION OF 25,000 FT. ON THESE TESTS PER AEIC

ALL TESTS SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF "SOLID-TYPE IMPREGNATED-PAPER-INSULATED LEAD-COVERED CABLE SPECIFICATION," PUBLISHED BY THE ASSOCIATION OF EDISON ILLUMINATING COMPANIES.

ITEMS 22 - 23 INCLUSIVE - MULTI-CONDUCTOR TRAFFIC SIGNAL CABLE

1. INDIVIDUAL CONDUCTOR RESISTANCE IN ACCORDANCE WITH THE LATEST REVISION OF ASTM B3.
2. INSULATION THICKNESS MEASUREMENTS.
3. INSULATION PHYSICAL AND OTHER TESTS FOR 60°C. POLYVINYLCHLORIDE AS SHOWN ON SHEET-2.
4. ALTERNATING CURRENT VOLTAGE TEST.
5. INSULATION RESISTANCE TEST. INSULATION RESISTANCE CONSTANT IS SHOWN ON SHEET-2.
6. (CABLE ITEM 23 ONLY)
   a. POLYVINYL CHLORIDE JACKET PHYSICAL AND OTHER TESTS SHOWN ON SHEET-2.
   b JACKET THICKNESS MEASUREMENTS.
7. (CABLE ITEM 22 ONLY), LEAD SHEATH THICKNESS MEASUREMENTS.

TESTS NO. 4-7, INCLUSIVE, SHALL BE MADE IN ACCORDANCE WITH THE LATEST REVISION OF IPCEA S-61-402, EXCEPT THAT THE INSULATION RESISTANCE CONSTANT SHALL BE 1000 AT 15.6°C.

ITEM 24 - 8/C SERIES STREET LIGHTING CABLE

1. CONDUCTOR CONTINUITY AND RESISTANCE IN ACCORDANCE WITH THE LATEST REVISION OF ASTM B-33.
2. LEAD SHEATH THICKNESS MEASUREMENTS.
3. A HIGH VOLTAGE TEST CONSISTING OF 22,500 VOLTS, 60 CYCLES AC, FOR A DURATION OF 5 MINUTES, BETWEEN CONDUCTORS AND FROM EACH CONDUCTOR TO THE LEAD SHEATH.

ITEM 25 - FLEXIBLE OVERHEAD TRAINER WIRE

1. CONDUCTOR RESISTANCE, TENSILE STRENGTH AND ELONGATION IN ACCORDANCE WITH THE LATEST REVISION OF ASTM B-173.
2. INSULATION PHYSICAL AND OTHER TESTS SHOWN ON SHEET-2.
3. ADDITIONAL INSULATION TESTS IN ACCORDANCE WITH THE LATEST REVISION OF IPCEA S-19-81 AS FOLLOWS:
   a. ALTERNATING-CURRENT VOLTAGE TEST.
   b. INSULATION RESISTANCE TEST.
   c. DIRECT-CURRENT VOLTAGE TEST.
   d. CORONA LEVEL TEST.
   e. SHORT-TIME DIELECTRIC STRENGTH TEST.
   f. COLD-BENDING AND LONG-TIME DIELECTRIC STRENGTH TEST.
   g. CAPACITY AND POWER FACTOR TEST.
   h. OZONE RESISTANCE TEST.
4. PHYSICAL AND OTHER TESTS ON THE NEOPRENE JACKET (GENERAL PURPOSE OR HEAVY DUTY), AS SHOWN ON SHEET-2.
5. JACKET THICKNESS MEASUREMENTS.

ITEM 26 - SUPERVISORY CONTROL CABLE (MULTI-CONDUCTOR)

1. CONDUCTOR RESISTANCE, TENSILE STRENGTH AND ELONGATION, IN ACCORDANCE WITH THE LATEST REVISION OF ASTM B-3.
2. INSULATION PHYSICAL FOR 60°C. PVC INSULATION AND OTHER TESTS SHOWN ON SHEET 2.
3. INSULATION RESISTANCE TESTS.
4. VOLTAGE TESTS PER IPCEA S-61-402.
5. INSULATION THICKNESS.
6. LEAD SHEATH THICKNESS.
7. THICKNESS OF COVERING OVER LEAD SHEATH.
8. SPARK TEST ON COVER OVER LEAD SHEATH ON EACH LENGTH.

ITEM 27 - INTEGRAL MESSENGER COMMUNICATIONS CABLE (MULTI-PAIR)

ITEM 28 - COMMUNICATIONS CABLE

ITEM 29 - COMMUNICATIONS CABLE – LEAD SHEATH

ITEM 30 - COMMUNICATIONS CABLE, LEAD SHEATH, DIRECT BURIAL

MULTI-PAIR COMMUNICATION CABLES (Maximum Mutual Capacitance = 90 nf per mile) (ALSO FOR TRAFFIC SIGNAL CHRONOPLAN.) AND SUPERVISORY

ITEM NO.	USE AND RATING	CONDUCTOR	INSULATION (b)	TAPE OVER INSULATED CONDUCTORS	INNER BELT	SHIELD OVER TAPE OR BELT	JACKET OR SHEATH	COVERING OVER SHEATH
27	AERIAL (a) 600 V.	#16* OR #19 AWG, SOLID, UNCOATED COPPER (ASTM B 3), NUMBER OF PAIRS AS REQUIRED	0.025-IN. (c) CLASS B POLYETHYLENE (ASTM D 1351)	12.5 PERCENT MINIMUM LAP POLYETHYLENE TEREPHTHALATE		CORRUGATED, LONGITUDINAL, ANNEALED, (c) 0.004-IN. COPPER	BLACK POLYETHYLENE (AS TM D 2308). THICKNESSES OVER CORE AND MESSENGER AND WEB DIMENSIONS IN ACCORDANCE WITH REA SPECIFICATION PE-38.	
28	IN DUCT 600 V.				BLACK POLY-ETHYLENE (ASTM D 2308) 0.010-IN. MIN. 0.030-IN. MAX. THICKNESS		BLACK POLYETHYLENE (ASTM D 2308) THICKNESS IN ACCORDANCE WITH PARAGRAPH 3,6,7,3,7 AND TABLE IV OF FED. SPEC. J.C.111.	
29	IN DUCT 600V.		0.031 IN. (c) DIOCTYL PHTHALATE PLASTICIZED PVC (ASTM D 2219)				LEAD-ANTIMONY THICKNESS PER ITEM 26 EXCEPT 0.063-IN. MIN. THICKNESS (c)	
30	DIRECT BURIAL 600 V.	#16 OR #19 AWG, SOLID, TINNED COPPER (ASTM B 33), NUMBER OF PAIRS AS REQUIRED					COMMERCIALLY PURE LEAD, THICKNESS PER ITEMS 22 & 23.	ASPHALTUM-SATURATED JUTE STEEL ARMOR PER ITEMS 17 & 18.

TEST REPORTS

SHIPMENTS OF WIRE AND CABLE SHALL NOT BE CONSIDERED COMPLETE UNTIL CERTIFIED TEST REPORTS ARE RECEIVED AND APPROVED. TEST REPORTS FOR THE VARIOUS ITEMS ABOVE SHALL SHOW COMPLIANCE WITH CITED SPECIFICATIONS, LISTING TEST. RESULTS, AS WELL AS THE FOLLOWING TESTS:

1. CONDUCTOR RESISTANCE OF EACH LENGTH OF EACH CONDUCTOR IN OHMS PER 1000 Ft.

2. CERTIFICATION OF MUTUAL CAPACITANCE OF ALL CABLES AND OF NON-INJURIOUS EFFECT OF FLOODING COMPOUND ON ITEM 27.

(a) "FIGURE 8" CONSTRUCTION. MESSENGER SHALL BE 7 STRAND EHS GALVANIZED, CLASS A, 1/4-IN. NOMINAL DIAM. (ASTM A 475) AND SHALL BE FULL FLOODED.

(b) COLOR CODED PER FEDERAL SPECIFICATION J-C-111.

(c) NOMINAL THICKNESS, INCHES.

DATE	DESCRIPTION	CHKD. BY

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, McDOUGALL AND WIGHT STREET
RIVER PLACE DEVELOPEMENT
CABLE & WIRE SPECIFICATIONS
DETAILS

SHEET 23 OF 27 SHEETS
CONTRACT NO. PW 6727
ASSIGNMENT NO. 84-14-20
DATE

CITY OF DETROIT
CITY ENGINEERING DEPARTMENT
BUREAUS OF STREETS AND HIGHWAYS

DRAWN BY CEA
CHECKED BY
APPROVED BY
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PLAN PREPARED BY
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16580 WYOMING DETROIT, MICH. 48221

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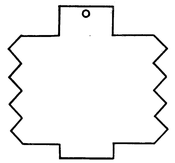
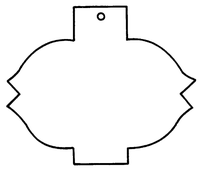
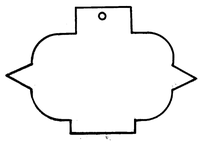


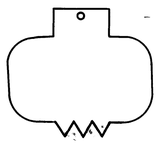
24,000 VOLT TRUNK LINE



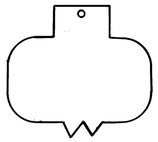
24,000 VOLT FEEDER



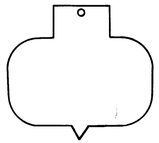
13200 VOLT FEEDER



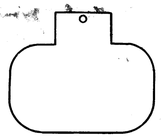
7200 VOLT FEEDER



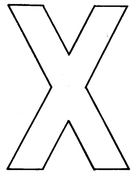
4800 & 5500 VOLT FEEDER



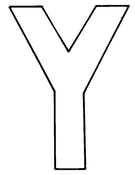
2400 VOLT FEEDER



MISCELLANEOUS



O. H. LINE PHASE TAG



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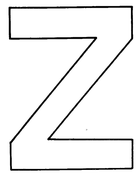

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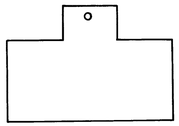
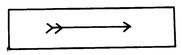
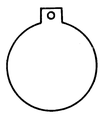


SUPERVISORY CONTROL

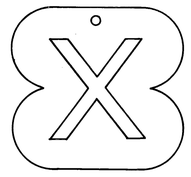


CIRCUIT DIRECTION

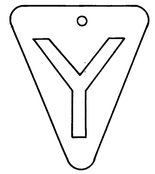
ST. LTG. COND. NO. (FROM 8/C CABLE)



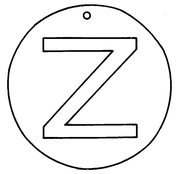
ST. LTG. CIRC. NUMBER



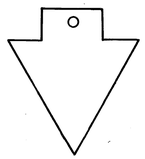
O. H. LINE OR POTHEAD PHASE TAG



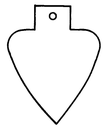
O. H. LINE OR POTHEAD PHASE TAG



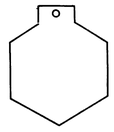
O. H. LINE OR POTHEAD PHASE TAG



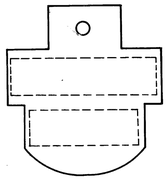
DEAD CABLE



8 COND. CABLE



MULTIPLE LTG. CONTROL



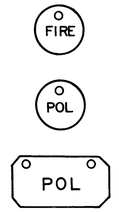
MULTIPLE STREET LIGHTING
ALL VOLTAGES

MULTIPLE INC. LTG.

TRAFFIC SIGNALS

SECONDARY POWER TO SAFETY
ISLANDS & TRAFFIC SIGNALS

TRAFFIC SIGNAL CHRONOLIZER



COMMUNICATION

SUBSTATION NAMES ON IDENTIFICATION TAGS SHALL BE SPELLED AS FOLLOWS

B.I.
BUTZL.
CNFLD.
CONNR
CUSTR
GRNFD.
HUDSN.
J. CAMP.
JOY RD.
LA BEL
LTHRP.
LUDDN.
MAPLE
MCRDY.
MTRSE
PAL. PK.
PHILP.
PORTR
RUSSL.
STNTN.
STONE
TRNTY.
TWNSD
TURNR.

WALTN.
WARRN.
WD. TER.

IDENTIFICATION TAGS
MATERIAL LEAD

NOTE:

LEAD CABLE IDENTIFICATION TAGS WILL BE FURNISHED TO CONTRACTOR BY P.L.D. CABLE TAG MARKINGS SUCH AS SUBSTATION OR CABLE MARKINGS WILL BE AS SHOWN ON PLANS OR WILL BE FURNISHED BY P.L.D.

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REVISIONS	DATE	DESCRIPTION	CHKD. BY

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, McDOUGALL AND WIGHT STREET
RIVER PLACE DEVELOPEMENT

CABLE TAGS DETAILS

SHEET 24 OF 27 SHEETS
CONTRACT NO. PW 6727
ASSIGNMENT NO. 84-14-20
DATE

CITY OF DETROIT
CITY ENGINEERING DEPARTMENT
BUREAUS OF STREETS AND HIGHWAYS

DRAWN C E A
CHECKED
APPROVED
DATE 10 - 86

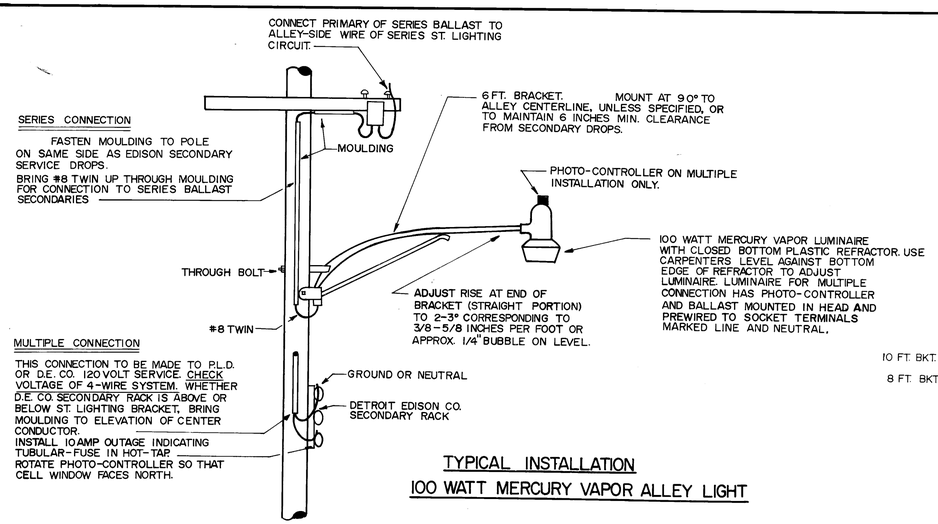
PLAN PREPARED BY
CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT, MICH., 48221

DRWG. NO. 11 OF 14
FILE NO. CE A 1132

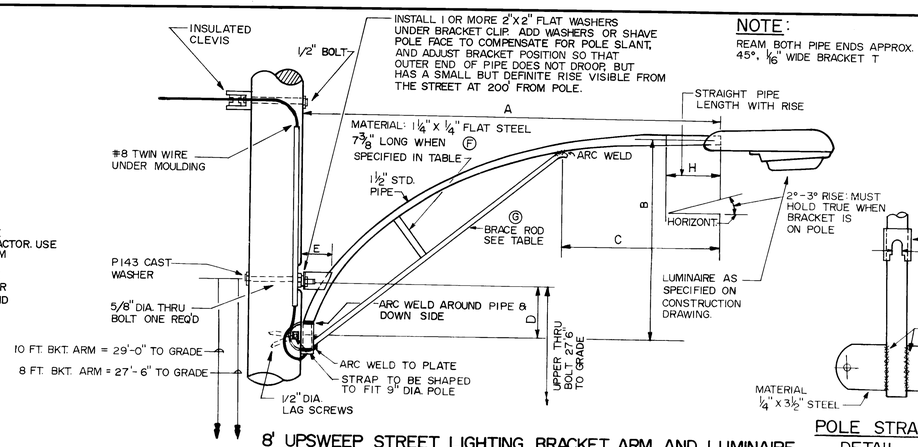
CHECKED BY
APPROVED

PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

FILE NO. 51-0601
SHEET NO. 11 OF 14
DATE 10-86



TYPICAL INSTALLATION
100 WATT MERCURY VAPOR ALLEY LIGHT

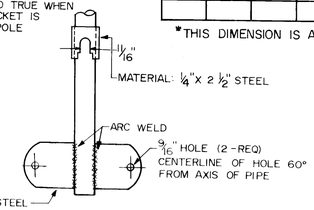


8' UPSWEEP STREET LIGHTING BRACKET ARM AND LUMINAIRE FOR MAIN STREET LIGHTING

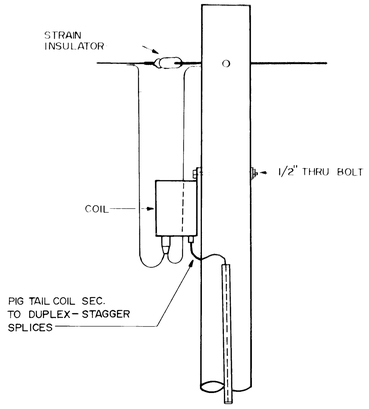
NOTE:
REAM BOTH PIPE ENDS APPROX. 45°. 1/16" WIDE BRACKET T

DIMENSION TABLE								
TYPE	A	B	C	D	E*	F	G	H
6 FT.	6'-0"	2'-8"	2'-5"	8 3/4"	5 1/2"	NO	1" SOLID	1'-2"
8 FT.	7'-8"	4'-0"	3'-0"	8 3/4"	4 1/2"	YES	1" SOLID	8"
10 FT.	10'-2"	2'-9"	3'-6"	8 1/8"	8"	NO	1" SOLID	2'-0"

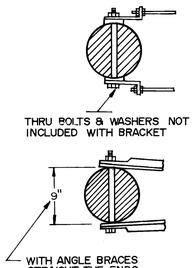
*THIS DIMENSION IS APPROXIMATE

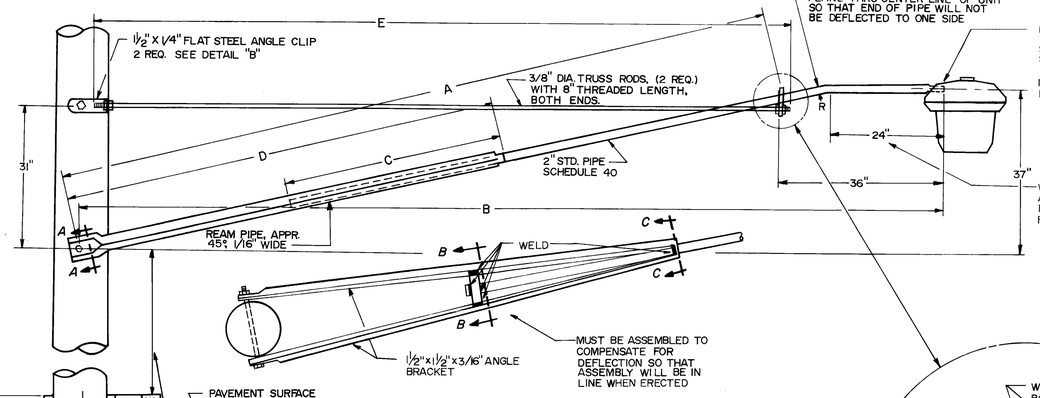


POLE STRAP DETAIL



TYPICAL COIL INSTALLATION

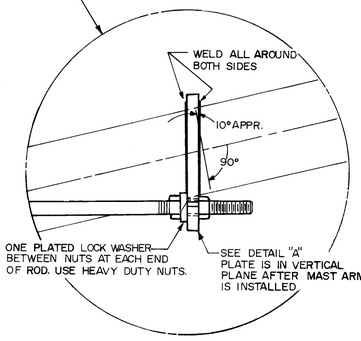


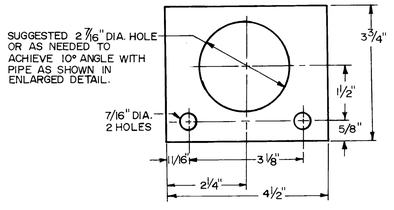


ELEVATION

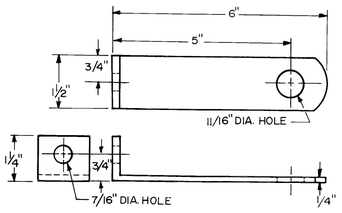
PLAN OF BUTT

DIMENSIONS				ROD LENGTH
A	B	C	D	E
13'-4"	16'-0"	48"	96"	13'-3"
17'-3"	20'-0"	6'-0"	10'-0"	17'-3"

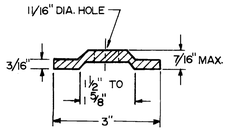




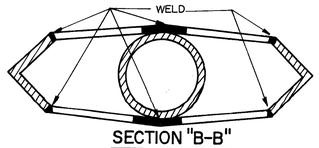
DETAIL "A"
STOCK 5/16" MILD STEEL



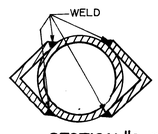
DETAIL "B"
2 REQ.



SECTION "A-A"

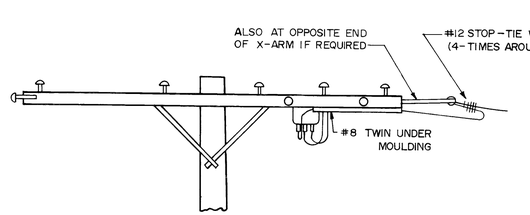


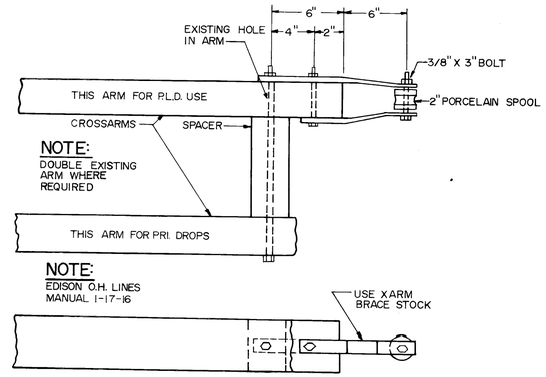
SECTION "B-B"



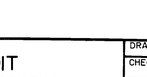
SECTION "C-C"

TYPICAL INSTALLATION - RESIDENTIAL LIGHTING BRACKET ARM AND LUMINAIRE





END OF ARM CONSTRUCTION FOR STREET LIGHTING AT TRANSFORMER OR CABLE POLES



- PLD 45' POLE SET IN 1960
STOCK: 0.332" ALUMINUM MILL FINISH

TYPICAL MARKING WOOD POLE TAGS

USE 1/4" STEEL STAMP FOR LETTERING PIN
SET MARKER 7'-0" ABOVE GRADE

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REVISIONS	DATE	DESCRIPTION	CHKD. BY

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, McDOUGALL AND WIGHT STREET
RIVER PLACE DEVELOPEMENT
MISCELLANEOUS OVERHEAD
DETAILS

SHEET 25 OF 27 SHEETS
CONTRACT NO. PW 6727
ASSIGNMENT NO. 84-14-20
DATE

CITY OF DETROIT
CITY ENGINEERING DEPARTMENT
BUREAUS OF STREETS AND HIGHWAYS

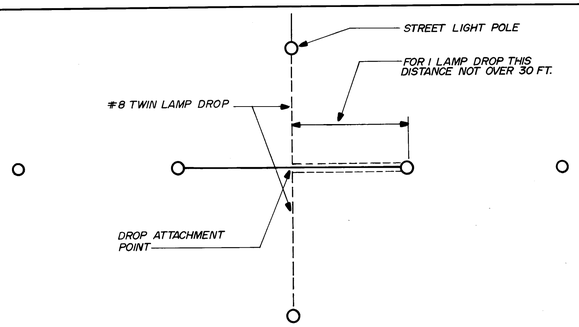
DRAWN BY CEA
CHECKED BY
APPROVED BY
DATE 10-86

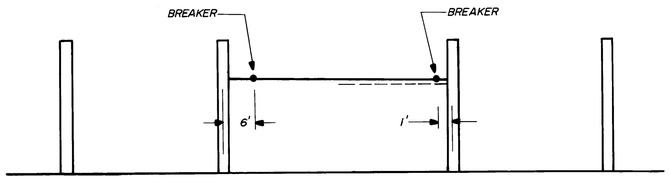
PLAN PREPARED BY
CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT, MICH., 48221
DRWG. NO. 12 OF 14
FILE NO. CEA 1132

CHECKED BY
APPROVED BY

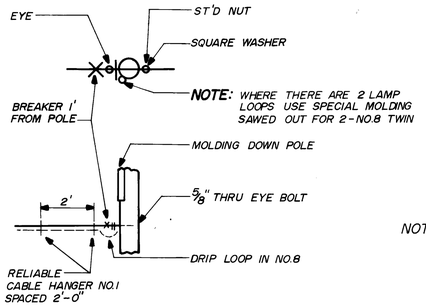
PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

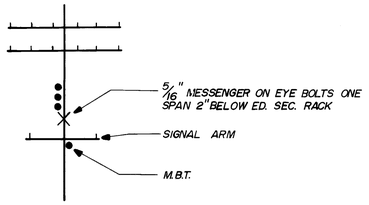
FILE NO. 51-0601
SHEET NO. 12 OF 14
DATE 10-86





N.T.S.

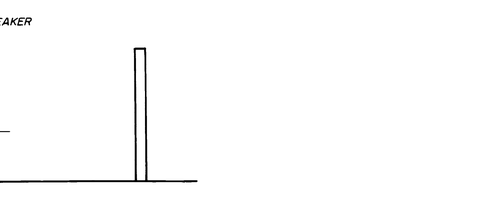




NOTE: INSTALL 3/8" MESSENGER SPAN FIRST WITH SAME SAG AS EDISON SEC. THEN INSTALL NO.8 TWIN DROPS. IN THE CASES WHERE THERE IS A SINGLE DROP AND THE ATTACHMENT POINT IS PULLED OUT AND UP READJUST SAG AT EYE BOLT.

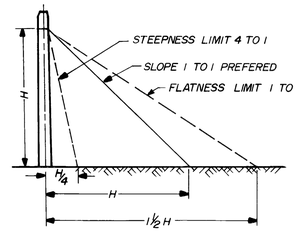
(POLE DETAIL)

MESSENGER WIRE LAMP DROP SUPPORT: STANDARD INSTALLATION METHOD

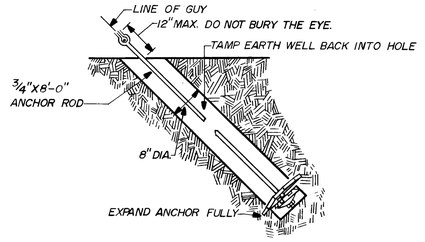


INSTALLATION OF RESIDENTIAL M.V. O.H. LUMINAIRE

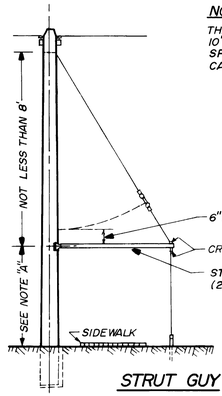
N.T.S.



SLOPE LIMITS FOR ANCHOR GUYS



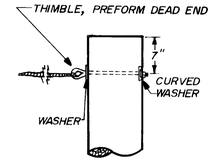
EXPANDING ANCHOR



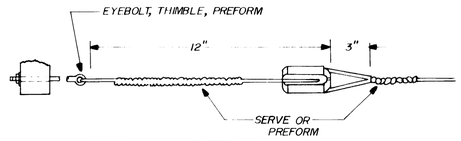
STRUT GUY

POLE HEIGHT	SETTING DEPTH
30'	6.0'
35'	6.0'
40'	6.0'
45'	6.5'
50'	7.0'
55'	7.5'
60'	8.0'

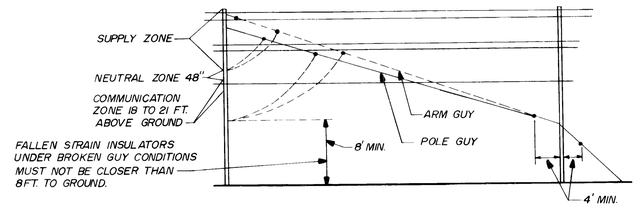
TYPICAL POLE SETTING DEPTH



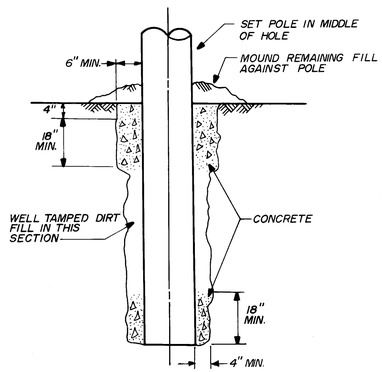
POLE GUY



ARM GUY DETAILS

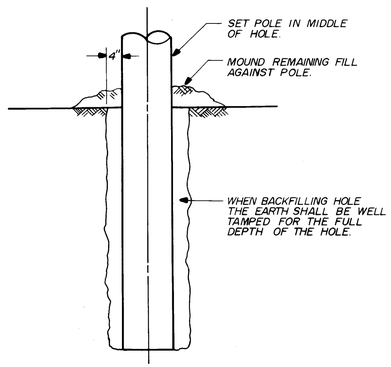


STRAIN INSULATOR POSITIONS IN GUY WIRES



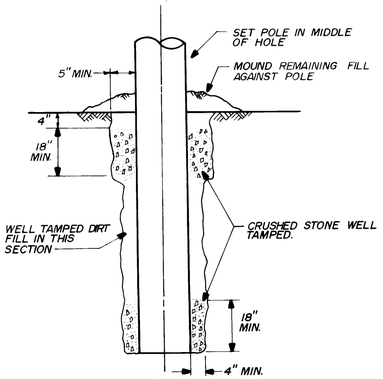
WOOD POLE IN CONCRETE

N.T.S.



WOOD POLE INSTALLATION

N.T.S.



M.S.S.

SELF-SUPPORTING WOOD POLE IN CRUSHED STONE

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REVISIONS	DATE	DESCRIPTION	CHKD. BY

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, McDOUGALL AND WIGHT STREET
RIVER PLACE DEVELOPEMENT

MESSENGER WIRE INSTALLATION & MISC. DETAILS

SHEET 26 OF 27 SHEETS
CONTRACT NO. PW 6727
ASSIGNMENT NO. 84-14-20
DATE

CITY OF DETROIT
CITY ENGINEERING DEPARTMENT
BUREAUS OF STREETS AND HIGHWAYS

DRAWN CEA
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PLAN PREPARED BY
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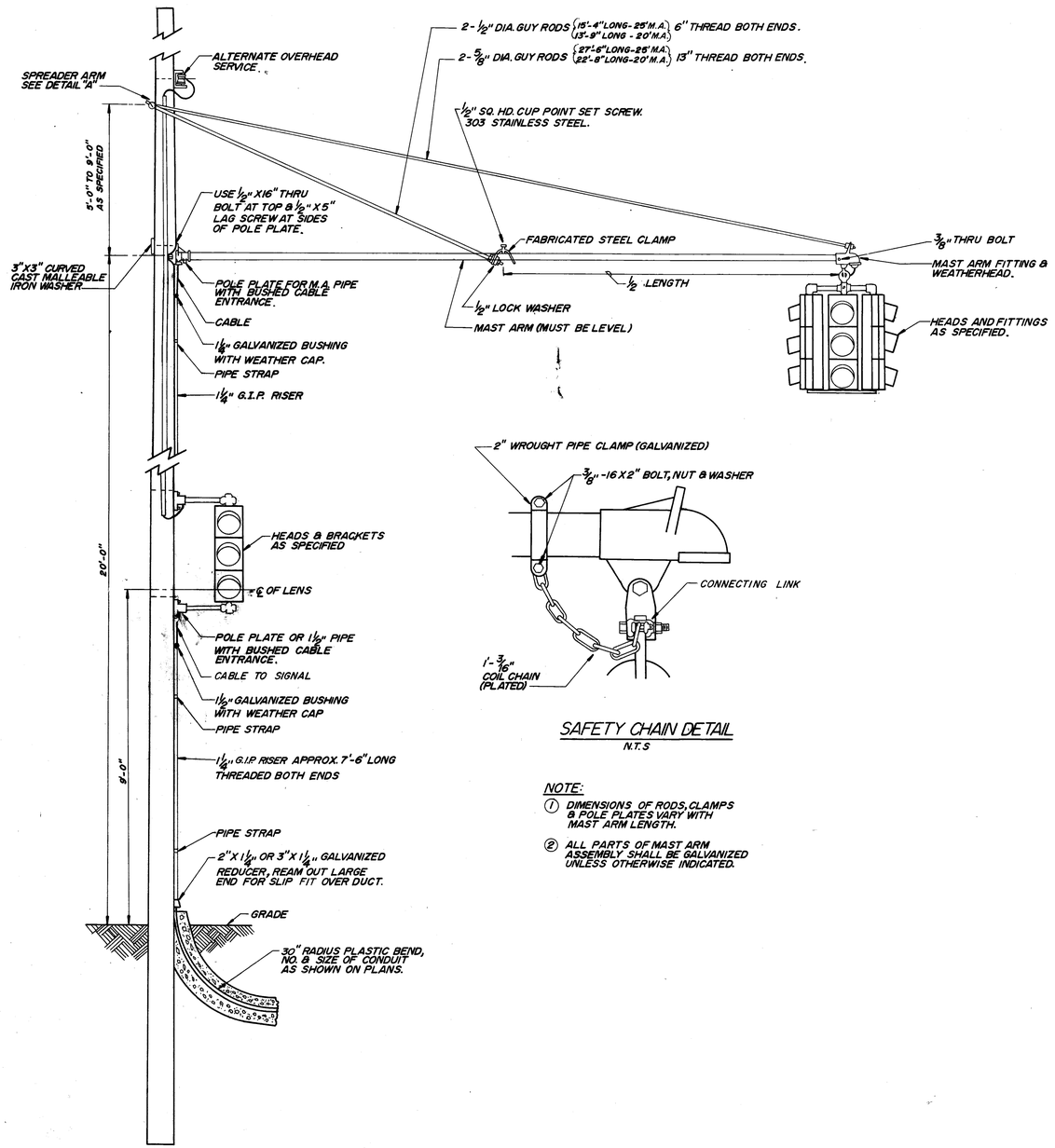
SHEET NO. 13 OF 14
DATE 10-86



SAFETY CHAIN DETAIL
N.T.S

NOTE:
1. DIMENSIONS OF RODS, CLAMPS & POLE PLATES VARY WITH MAST ARM LENGTH.
2. ALL PARTS OF MAST ARM ASSEMBLY SHALL BE GALVANIZED UNLESS OTHERWISE INDICATED.

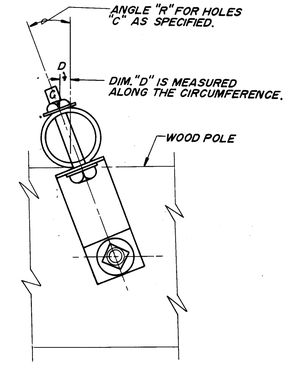
SECTION "Y-Y"
SHOWING GUY RODS ONLY

DETAIL "A"
N.T.S.

GALV FLAT DETAIL "G"
N.T.S

WOOD POLE			
POLE SIZE	DIM. "E"	ANGLE "R"	DIM. "D"
35'	20"	29°	3/16"
40'	21"	21°	9/16"
45'	22"	7°	5/16"
50'	22 3/4"	7°	3/16"
STEEL TUBULAR POLE			
4"	15 1/2"	58°	1 5/16"
5"	16 9/16"	53°	1 9/16"
6"	17 3/8"	48°	1 3/16"

NOTE:
ALL PARTS TO BE GALVANIZED. RED LEAD ALL HOLES & EDGES AFTER DRILLING & CUTTING



SECTION "X-X"

505

DATE	DESCRIPTION	CHKD. BY

REVISIONS

54

RESURFACING AND MISCELLANEOUS CONSTRUCTION
JOS. CAMPAU, McDOUGALL AND WIGHT STREET
RIVER PLACE DEVELOPEMENT
T.S. BACK-BRACE TYPE MAST ARM ASSEMBLY ON WOOD POLE

SHEET 27 OF 27 SHEETS
CONTRACT NO. PW 6727
ASSIGNMENT NO. 84-14-20
DATE

CITY OF DETROIT
CITY ENGINEERING DEPARTMENT
BUREAUS OF STREETS AND HIGHWAYS

DRAWN BY CEA
CHECKED BY
APPROVED BY
DATE 10-86

PLAN PREPARED BY
CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT, MICH. 48221

DRWG. NO. 14 OF 14
FILE NO. CEA 1132

CHECKED BY
APPROVED BY

PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

FILE NO. 51-0601
SHEET NO. 14 OF 14
DATE 10-86