

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2722	03-00118-00-RS	COOK	34	1
ILLINOIS PROJECT M-8003 (462)				
CONTRACT NO. 83796				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID PROJECT
LOCAL AGENCY PAVEMENT PRESERVATION (LAPP)
FAU ROUTE 2722 (MAPLE AVENUE)
BROOKFIELD AVENUE TO 31st STREET
SECTION NO. 03-00118-00-RS
PROJECT M-8003 (462)
VILLAGE OF BROOKFIELD
COOK COUNTY
JOB NO. C-91-063-05



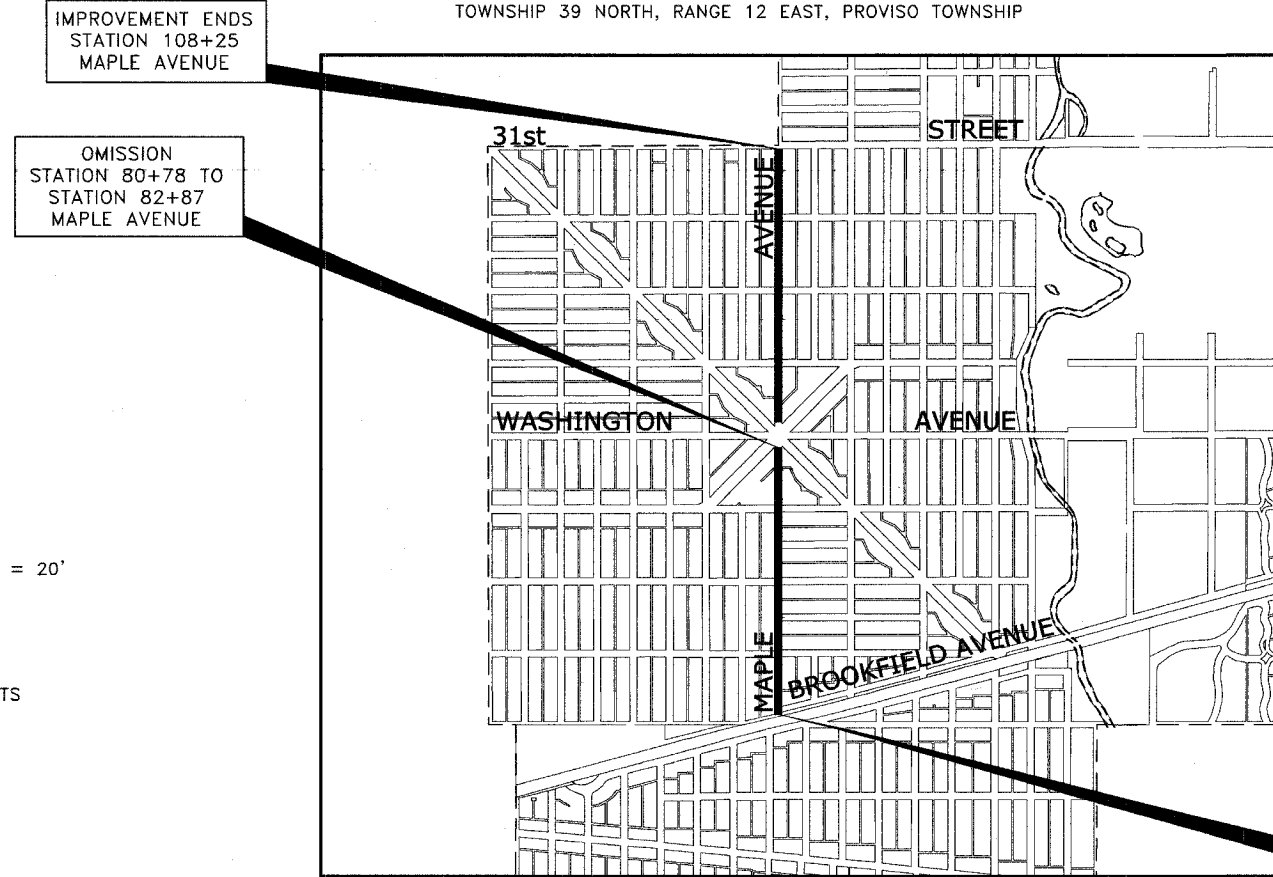
LOCATION OF SECTION INDICATED THUS:

TRAFFIC DATA

2005 ADT = 10,300
 POSTED SPEED LIMIT: 25 MPH

LOCATION MAP

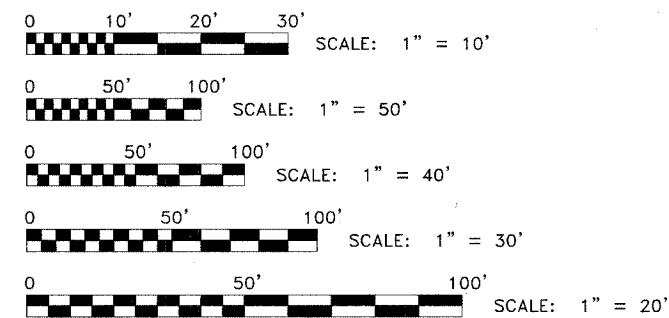
TOWNSHIP 39 NORTH, RANGE 12 EAST, PROVISO TOWNSHIP



IMPROVEMENT ENDS
 STATION 108+25
 MAPLE AVENUE

OMISSION
 STATION 80+78 TO
 STATION 82+87
 MAPLE AVENUE

IMPROVEMENT BEGINS
 STATION 55+98
 MAPLE AVENUE



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

CONTRACT NO. **83796**

MAP SCALE : 1" = 800'

- AREA OF IMPROVEMENT

GROSS LENGTH OF IMPROVEMENT = 5,227 FT. = 0.990 MI.
 NET LENGTH OF IMPROVEMENT = 5,018 FT. = 0.950 MI.



FOR INDEX OF SHEETS SEE SHEET NO. 2

Derek S. Trichel



DATE SIGNED: 04-13-05
 LICENSE EXPIRES: 11-30-05

APPROVED: April 13, 2005
Derek S. Trichel
 LOCAL AGENCY OFFICIAL

PASSED: April 14, 2005
[Signature]
 ENGINEER OF LOCAL ROADS & STREETS

APPROVED: April 14, 2005
[Signature]
 DISTRICT ENGINEER

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

(PRINTED BY AUTHORITY OF THE STATE OF ILLINOIS)

FEDERAL AID PROGRAM ENGINEER : CHARLES RIDDLE, P.E.
 PHONE : (847) 705-4406
 FEDERAL AID DESIGN ENGINEER : EDWIN HANCOCK ENGINEERING COMPANY
 CONSULTANT : 9933 ROOSEVELT ROAD PHONE : (708)865-0300
 WESTCHESTER, ILLINOIS 60154

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET, LOCATION MAP
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34	DETECTOR LOOP INSTALLATION

STANDARDS

ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED TO BE THE LATEST STANDARD OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION AS SHOWN ON THE INDEX OF SHEETS IN THE PLANS.

UNDERGROUND UTILITIES

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRICAL, TELEPHONE AND GAS FACILITIES. (48 HOURS NOTIFICATION IS REQUIRED).

THE LOCATIONS OF THE UNDERGROUND UTILITIES IF SHOWN ON THE PLANS HAVE BEEN OBTAINED BY FIELD SURVEYS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THE DATA IS ESSENTIALLY CORRECT, BUT THE VILLAGE OF BROOKFIELD, THE ILLINOIS DEPARTMENT OF TRANSPORTATION AND/OR OTHER OFFICES AND AGENCIES ASSOCIATED WITH THE DEVELOPMENT OF THESE PLANS DO NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS OF THIS INFORMATION. THE CONTRACTOR WILL BE REQUIRED TO VERIFY THE EXACT LOCATION OF EACH FACILITY WITH THE RESPECTIVE UTILITY COMPANY, AND SHALL TAKE DUE CARE IN ALL PHASES OF THE CONSTRUCTION TO PROTECT ANY SUCH FACILITIES WHICH MAY BE AFFECTED BY THE WORK. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE VILLAGE OF BROOKFIELD.

FRAMES AND GRATES

THE TYPE OF FRAMES AND GRATES REQUIRED FOR ALL SEWER AND/OR WATER MAIN STRUCTURES LISTED IN THE SUMMARY OF QUANTITIES MAY BE FOUND ON THE PLANS AT THEIR RESPECTIVE LOCATIONS. WHERE LIDS ARE CALLED FOR THE PLANS, THEY SHALL BE IN ACCORDANCE WITH ARTICLE 604.04 OF THE STANDARD SPECIFICATIONS AND THE TERM LID IS USED IN LIEU OF GRATE. ALL LIDS ON SANITARY MANHOLES SHALL BE OF THE SELF SEALING TYPE.

ON ALL IMPROVEMENTS, THE FRAMES AND LIDS OF EXISTING SEWER AND/OR WATER MAIN STRUCTURES WHICH ARE TO BE ABANDONED DUE TO CONSTRUCTION OF THIS IMPROVEMENT ARE TO REMAIN THE PROPERTY OF THE VILLAGE OF BROOKFIELD AND BE SALVAGED. THESE ITEMS SHALL BE DELIVERED TO THE VILLAGE OF BROOKFIELD.

MANHOLE OR VALVE COVERS

THE WORD "WATER", "SANITARY", OR "STORM" SHALL BE CAST INTO THE LID OF EACH RESPECTIVE MANHOLE OR VALVE VAULT.

MAINTENANCE OF SEWER FLOWS

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS AS TO MAINTAIN FLOW THROUGH EXISTING STORM AND SANITARY SEWER SYSTEMS AT ALL TIMES. HE SHALL ALSO PROVIDE AND MAINTAIN AN EFFICIENT PUMPING PLANT IF NECESSARY AND A TEMPORARY OUTLET AND BE PREPARED AT ALL TIMES TO DISPOSE OF THE WATER COLLECTED IN A SAFE MANNER WITHOUT DAMAGE OF ANY KIND TO ADJACENT PROPERTIES. THE ENDS OF EXISTING DRAINAGE LINES WHICH ARE NOT TO BE INCORPORATED INTO THE PROJECT ARE TO BE SEALED AS SPECIFIED IN THE SPECIAL PROVISIONS. EXISTING STRUCTURES ARE TO BE INSPECTED BEFORE CONSTRUCTION STARTS - ANY ACCUMULATION OF MATERIAL IN THE STRUCTURE DUE TO CONSTRUCTION OPERATIONS SHALL BE REMOVED BY THE CONTRACTOR AT HIS EXPENSE.

MAINTENANCE OF EXISTING DRAINAGE STRUCTURES

WHEN DURING THE CONSTRUCTION OPERATIONS, ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE OF ANY GUTTERS AND DRAINAGE STRUCTURE SO THAT THE NATURAL FLOW OF WATER IS OBSTRUCTED, IT SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF THE CONSTRUCTION OPERATIONS, ALL DRAINAGE FACILITIES SHALL BE CLEAN AND FREE OF ALL OBSTRUCTIONS DUE TO CONSTRUCTION OPERATIONS. THE COST OF THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT.

SAW CUTTING

THE CONTRACTOR SHALL SAW CUT ASPHALT PAVEMENT AND DRIVEWAY PAVEMENT AS INDICATED ON THE PLANS TO SEPARATE THE EXISTING PAVEMENT TO BE REMOVED BY APPROVED MEANS OR AN APPROVED CONCRETE SAW TO A DEPTH AS DIRECTED BY THE ENGINEER. SUITABLE GUIDELINES OR DEVICES SHALL BE USED TO ASSURE CUTTING A NEAT, STRAIGHT LINE AS SHOWN ON THE PLANS. CARE SHALL BE TAKEN BY THE CONTRACTOR AS NOT TO DAMAGE THE REMAINING PAVEMENT DIRECTLY ADJACENT TO THE PAVEMENT TO BE REMOVED. ANY DAMAGE TO THE EXISTING PAVEMENT RESULTING FROM PAVEMENT REMOVAL OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. THE COST OF SAW CUTTING SHALL BE INCLUDED IN THE ITEM BEING REMOVED.

PRIME COAT

PRIME COAT MUST BE INSTALLED NO EARLIER THAN TWENTY-FOUR (24) HOURS PRIOR TO PLACEMENT OF BITUMINOUS CONCRETE.

GENERAL NOTES

FIELD OFFICE

THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE OR VILLAGE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT OR THE VILLAGE.

BARRICADES

THE CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) WEIGHTED SANDBAGS ON EACH TYPE I OR TYPE II BARRICADE USED, ONE (1) WEIGHTED SANDBAG ACROSS EACH BOTTOM RAIL.

BUTT JOINTS

BUTT JOINT WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT). IN ACCORDANCE WITH THE "BUTT JOINT AND BITUMINOUS TAPER DETAILS" SHEET INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED.

MILLED PAVEMENT OPEN TO TRAFFIC

WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 40 MM (1-1/2 INCHES) WHERE THE SPEED LIMIT IS 80 KM/H (45 MPH) OR LESS AND 25 MM (1 INCH) WHERE THE SPEED LIMIT IS GREATER THAN 80 KM/H (45 MPH). WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 75 MM (3 INCHES) MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H)

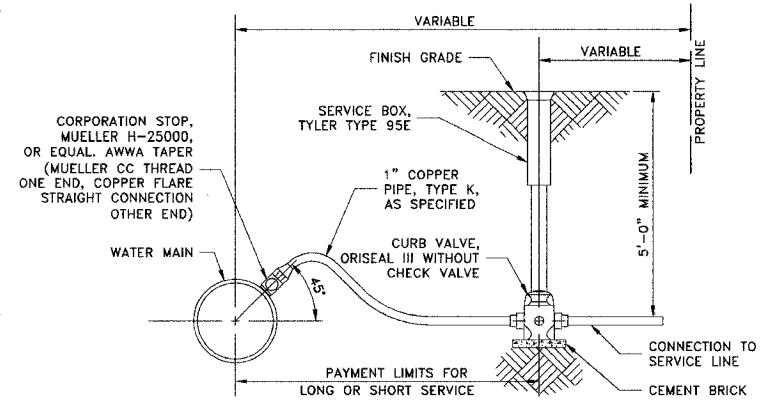
LEGEND OF SYMBOLS

(TO BE USED IN CONJUNCTION WITH I.D.O.T. STANDARD 000001-03)

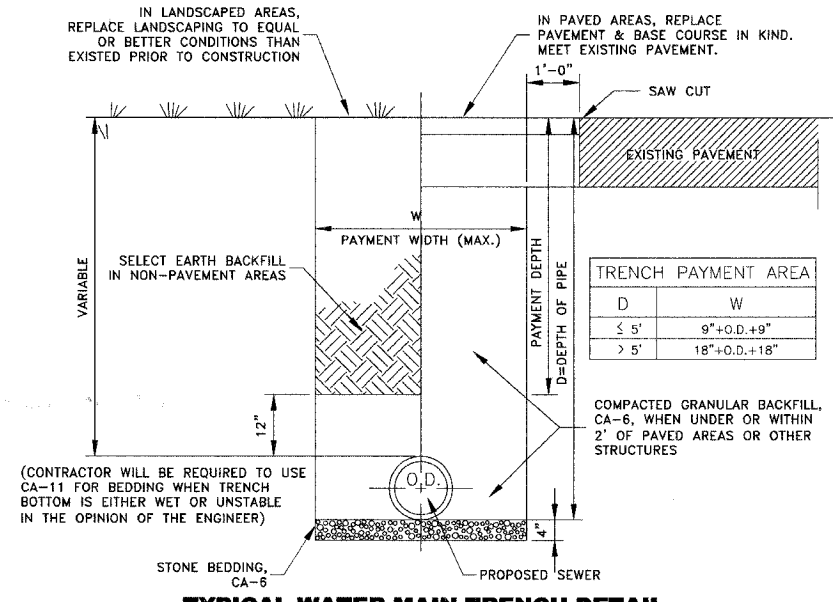
EXISTING	PROPOSED	DESCRIPTION	EXISTING	PROPOSED	DESCRIPTION
		GAS LINE			PROPOSED CONCRETE PAVEMENT, SIDEWALK, OR DRIVEWAY
		TELEPHONE LINE			PROPOSED BITUMINOUS SURFACE COURSE, BITUMINOUS DRIVEWAYS, OR INCIDENTAL BITUMINOUS SURFACING
		SANITARY SEWER			PAVEMENT, SIDEWALK OR DRIVEWAY TO BE REMOVED
		WATER MAIN			BITUMINOUS DRIVEWAYS OR SURFACE TO BE REMOVED (PARKWAY) OR BITUMINOUS BUTT JOINT (PAVEMENT)
		STORM SEWER			CONCRETE CURB & GUTTER
		COMBINATION SEWER			CONCRETE CURB & GUTTER TO BE REMOVED
		FIRE HYDRANT		A	STRUCTURE TO BE ADJUSTED
		POWER POLE		A*	STRUCTURE TO BE ADJUSTED (SPECIAL)
		WATER MAIN VALVE VAULT		A-1C*	STRUCTURE TO BE ADJUSTED (SPECIAL) WITH A NEW TYPE 1 FRAME & LID (C = CLOSED, P = OPEN LID)
		WATER MAIN VALVE BOX		A-1C	STRUCTURE TO BE ADJUSTED WITH A NEW TYPE 1 FRAME & LID (C = CLOSED, P = OPEN LID)
		MANHOLE INLET		R	STRUCTURE TO BE RECONSTRUCTED
		BUFFALO BOX		R-1C	STRUCTURE TO BE RECONSTRUCTED WITH A NEW TYPE 1 FRAME & LID (C = CLOSED, P = OPEN LID)
		CATCH BASIN			
		RIM ELEVATION (SANITARY)			
		INVERT ELEVATION			
		RIM ELEVATION (STORM)			
		INVERT ELEVATION			
		RIM ELEVATION (WATER MAIN)			
		TOP OF WATER MAIN			
		ELEVATION			

I.D.O.T. STANDARD DRAWINGS

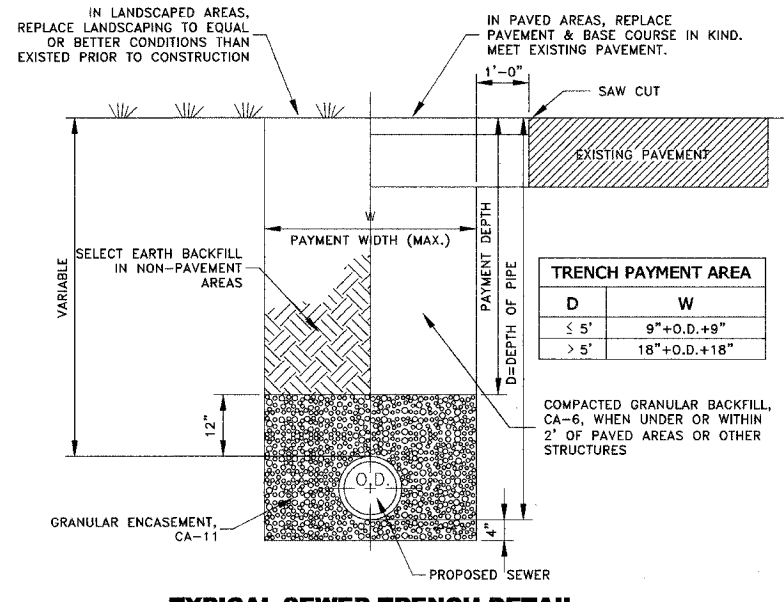
STANDARD NO.	TITLE OR DESCRIPTION
000001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
424001-03	CURB RAMPS FOR SIDEWALKS
442201-01	CLASS C AND D PATCHES
602601	PRECAST REINFORCED CONCRETE FLAT SLAB TOP
604001-02	FRAMES AND LIDS, TYPE 1
701501-02	URBAN LANE CLOSURE, 2-LANE, 2-WAY, UNDIVIDED
702001-05	TRAFFIC CONTROL DEVICES



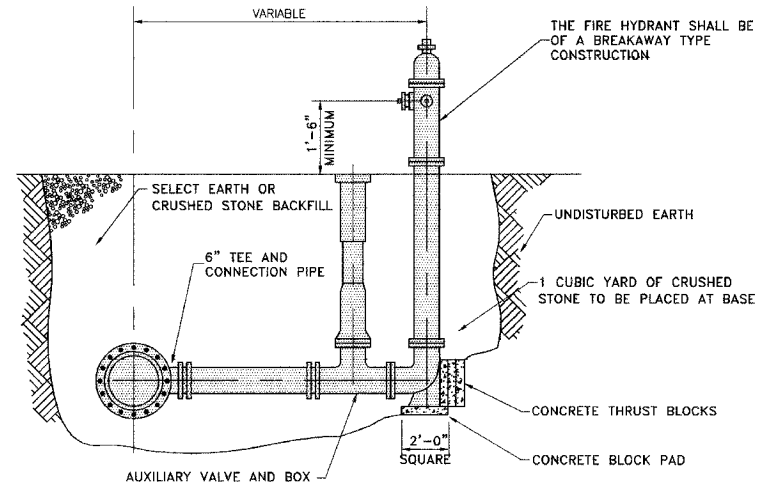
TYPICAL WATER SERVICE DETAIL



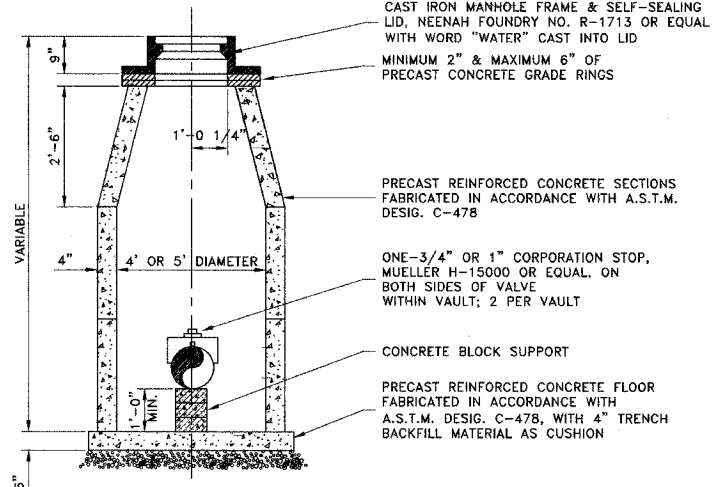
TYPICAL WATER MAIN TRENCH DETAIL



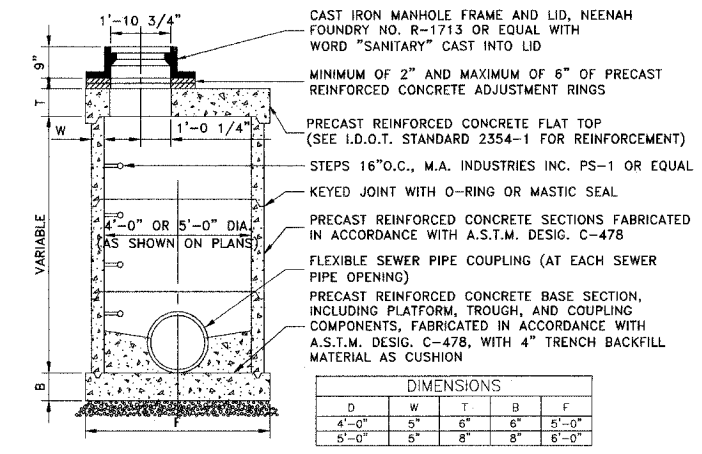
TYPICAL SEWER TRENCH DETAIL



FIRE HYDRANT DETAIL



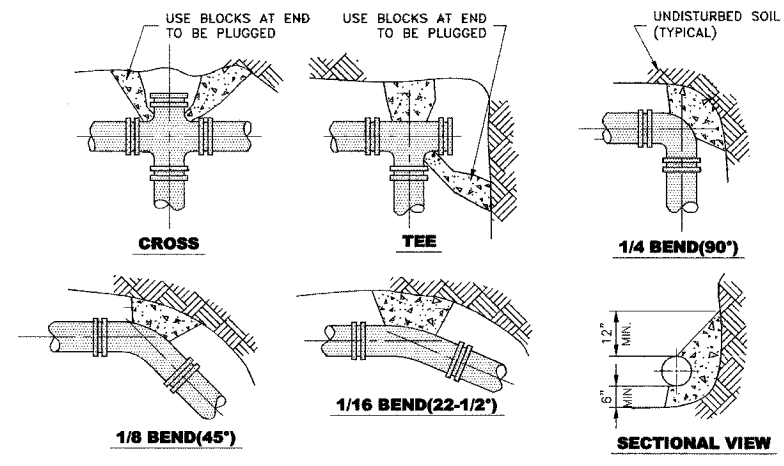
STANDARD VALVE VAULT DETAIL



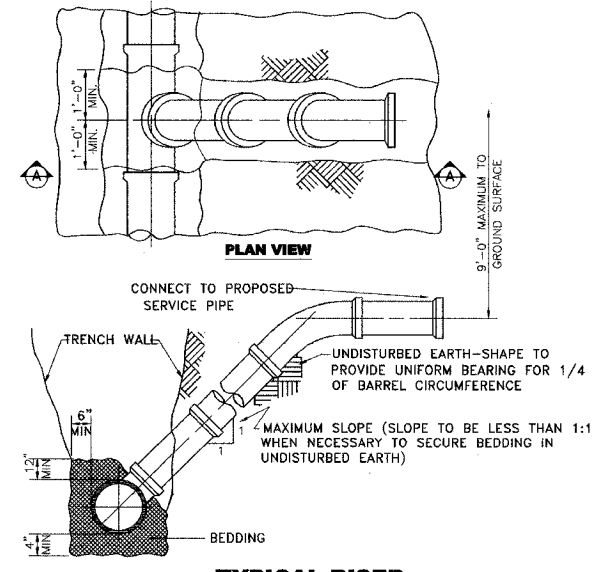
RESTRICTED DEPTH SANITARY MANHOLE

M.W.R.D.G.C. GENERAL NOTES

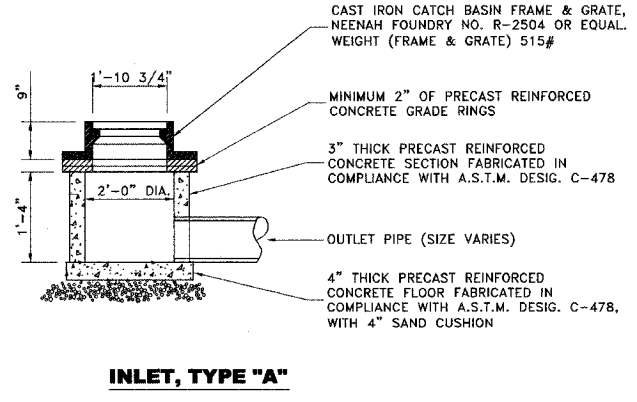
1. THE MWRD SEWER SYSTEMS SECTION FIELD OFFICE MUST BE NOTIFIED AT LEAST TWO (2) WORKING DAYS PRIOR TO THE COMMENCEMENT OF WORK AT (708) 588-4055.
2. ELEVATION DATUM IS U.S.G.S.
3. ALL FLOOR DRAINS SHALL DISCHARGE TO THE SANITARY SEWER SYSTEM.
4. ALL DOWNSPOUTS AND FOOTING DRAINS SHALL DISCHARGE INTO THE STORM SEWER SYSTEM.
5. ALL PVC STORM, COMBINED, AND SANITARY SEWER PIPE JOINTS SHALL CONFORM TO ASTM D-3139. ALL PVC SEWER PIPE 12" IN DIAMETER OR LESS SHALL CONFORM TO ASTM D-2241 (WATER QUALITY PIPE). ALL PVC SEWER PIPE 15" OR GREATER SHALL CONFORM TO ASTM D-3034. ALL PVC SEWER PIPE SHALL BE SDR 26.
6. ALL SANITARY SEWER CONSTRUCTION, AND ALSO STORM SEWER CONSTRUCTION IN COMBINED SEWER AREAS, REQUIRES STONE BEDDING 1/4" TO 1" IN SIZE, WITH A MINIMUM THICKNESS EQUAL TO 1/4 THE OUTSIDE DIAMETER OF THE SEWER PIPE, BUT NOT LESS THAN FOUR INCHES (4") NOR MORE THAN EIGHT INCHES (8"). MATERIAL SHALL BE CA-11 OR CA-13 AND SHALL BE EXTENDED AT LEAST 12" ABOVE THE TOP OF THE PIPE WHEN USING PVC PIPE.
7. "BAND SEAL" OR SIMILAR FLEXIBLE-TYPE COUPLINGS SHALL BE USED IN THE CONNECTION OF SEWER PIPE OF DISSIMILAR MATERIALS.
8. WHEN CONNECTING TO AN EXISTING SEWER MAIN BY MEANS OTHER THAN AN EXISTING WYE, TEE, OR AN EXISTING MANHOLE, ONE OF THE FOLLOWING METHODS SHALL BE USED:
 - 1) CIRCULAR SAW-CUT OF SEWER MAIN BY MECHANICAL CORING MACHINE, AND PROPER INSTALLATION OF HUB-WYE SADDLE OR HUB-TEE SADDLE, IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
 - 2) REMOVE AN ENTIRE SECTION OF PIPE (BREAKING ONLY THE TOP OF ONE BELL) AND REPLACE WITH A WYE OR TEE BRANCH SECTION. AFTER THE WYE OR TEE BRANCH IS INSERTED, CONCRETE SHALL BE PLACED OVER THE BROKEN AREA TO A MINIMUM THICKNESS OF 4" AND TO A DIMENSION OF 8" IN ALL DIRECTIONS.
 - 3) USING PIPE CUTTER, NEATLY AND ACCURATELY CUT OUT DESIRED LENGTH OF PIPE FOR INSERTION OF PROPER FITTING. USE "BAND SEAL" OR SIMILAR COUPLINGS TO HOLD FIRMLY IN PLACE. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR THE INSTALLATION.
9. WHEREVER A SANITARY/COMBINED SEWER CROSSES UNDER A WATER MAIN, THE MINIMUM VERTICAL DISTANCE FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATERMAIN SHALL BE 18 INCHES. FURTHERMORE, A MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN SANITARY/COMBINED SEWERS AND WATERMANS SHALL BE MAINTAINED UNLESS: THE SEWER IS LAID IN A SEPARATE TRENCH, KEEPING A MINIMUM 18" VERTICAL SEPARATION; OR THE SEWER IS LAID IN THE SAME TRENCH WITH THE WATERMAIN LOCATED AT THE OPPOSITE SIDE ON BENCH OF UNDISTURBED EARTH, KEEPING A MINIMUM 18" VERTICAL SEPARATION. IF EITHER THE VERTICAL OR HORIZONTAL DISTANCES DESCRIBED ABOVE CANNOT BE MAINTAINED, OR THE SEWER CROSSES ABOVE THE WATERMAIN, THE SEWER SHALL BE CONSTRUCTED WATERMAIN STANDARDS.
10. ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE A MINIMUM INSIDE DIAMETER OF 48 INCHES, AND SHALL BE CAST IN PLACE OR PRE-CAST REINFORCED CONCRETE.
11. ALL ABANDONED SANITARY SEWERS SHALL BE PLUGGED AT BOTH ENDS WITH A MINIMUM OF TWO (2) FEET LONG CONCRETE/MORTAR PLUG.



THRUST BLOCK DETAIL



TYPICAL RISER FOR SERVICE LATERAL



INLET, TYPE "A"

SUMMARY OF QUANTITIES					
CODE	PAY ITEM	UNIT	TOTAL QTY.	H23	O7C
				I000	I000 100% Village
20800150	TRENCH BACKFILL	CUYD	360	60	300
* 21101615	TOPSOIL FURNISH AND PLACE, 4 INCH	SQYD	400	100	300
* 25000400	NITROGEN FERTILIZER NUTRIENT	POUND	3	3	
* 25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	3	3	
* 25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	3	3	
* 25200100	SODDING	SQYD	400	100	300
* 25200200	SUPPLEMENTAL WATERING	UNIT	3	3	
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	4,710	4,710	
40600300	AGGREGATE (PRIME COAT)	TON	95	95	
40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	30	30	
40600895	CONSTRUCTING TEST STRIP	EACH	2	2	
40600980	BITUMINOUS SURFACE REMOVAL - BUTT JOINT	SQYD	300	300	
42101300	PROTECTIVE COAT	SQYD	250	250	
42300300	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 7 INCH	SQYD	85	85	
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQFT	650	650	
44000008	BITUMINOUS SURFACE REMOVAL 2 1/2"	SQYD	23,500	23,500	
44000200	DRIVEWAY PAVEMENT REMOVAL	SQYD	85	85	
44000600	SIDEWALK REMOVAL	SQFT	650	650	
44001700	COMBINATION CONCRETE CURB AND GUTTER, REMOVAL AND REPLACEMENT	FOOT	725	725	
44200934	CLASS B PATCHES, TYPE II, 8"	SQYD	20		20
44200944	CLASS B PATCHES, TYPE IV, 8"	SQYD	100		100
44201353	CLASS C PATCHES, TYPE II, 10"	SQYD	50	50	
44201357	CLASS C PATCHES, TYPE III, 10"	SQYD	60	60	
44201359	CLASS C PATCHES, TYPE IV, 10"	SQYD	540	300	240
56103000	DUCTILE IRON WATER MAIN 6"	FOOT	100		100
56103100	DUCTILE IRON WATER MAIN 8"	FOOT	350		350
56103300	DUCTILE IRON WATER MAIN 12"	FOOT	20		20
56400820	FIRE HYDRANT WITH AUXILLIARY VALVE AND BOX	EACH	1		1
60228110	MANHOLE, SANITARY, 4' DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1	
60234200	INLETS, TYPE A, TYPE 1 FRAME, OPEN LID	EACH	1	1	
60248700	VALVE VAULTS, TYPE A, 4' DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	2		2
60248900	VALVE VAULTS, TYPE A, 5' DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	6		6
60252800	CATCH BASINS TO BE RECONSTRUCTED	EACH	2	2	
60257900	MANHOLES TO BE RECONSTRUCTED	EACH	7	7	
60300305	FRAMES AND LIDS TO BE ADJUSTED	EACH	29	29	
60300310	FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)	EACH	46	46	
60406000	FRAMES AND LIDS, TYPE 1, OPEN LID	EACH	7	7	
60406100	FRAMES AND LIDS, TYPE 1, CLOSED LID	EACH	5	5	
60500405	FILLING VALVE VAULTS	EACH	13		13

* DENOTES SPECIALITY ITEM

SUMMARY OF QUANTITIES					
CODE	PAY ITEM	UNIT	TOTAL QTY.	H23	O7C
				I000	I000 100% Village
70101800	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1	1	
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	275	275	
* 70300625	TEMPORARY PAINT PAVEMENT MARKING, LINE 4"	FOOT	1,900	1,900	
* 70300660	TEMPORARY PAINT PAVEMENT MARKING, LINE 24"	FOOT	40	40	
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	9,500	9,500	
* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	2,000	2,000	
* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	550	550	
* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	375	375	
* 78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQFT	65	65	
* 88600600	DETECTOR LOOP REPLACEMENT	FOOT	60	60	
X4066424	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE D, N50	TON	2,600	2,600	
X4067100	POLYMERIZED LEVELING BINDER (MACHINE METHOD), SUPERPAVE, IL-4.75, N50	TON	1,050	1,050	
X7015000	CHANGEABLE MESSAGE SIGN	CAL-MO	3	3	
XX001490	GATE VALVES, 8"	EACH	2		2
XX003032	GATE VALVES, 12"	EACH	1		1
XX003037	DUCTILE IRON FITTINGS AND ACCESSORIES	POUND	3,000		3,000
XX004949	INCIDENTAL BITUMINOUS SURFACING, SUPERPAVE	TON	30	10	20
Z0000990	AGGREGATE FOR TEMPORARY ACCESS	TON	20	20	
Z0019600	DUST CONTROL WATERING	UNIT	25	25	
Z0045002	PRESSURE CONNECTION 12" X 8"	EACH	5		5
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1	
Z0056800	SANITARY SEWER 6"	FOOT	15	15	
Z0004900	BITUMINOUS MIXTURE FOR PATCHING POTHOLES (HOT MIX)	TON	40	40	
XX005535	Sewer Spot Repairs, 12"	FOOT	51	51	
XX005634	12" X 6" SEWER SERVICE CONNECTIONS	EACH	3	3	
XX006227	RESTRAINED JOINT, 8"	EACH	10		10
XX006228	RESTRAINED JOINT, 6"	EACH	6		6
XX006196	SHORT WATER SERVICE	EACH	10		10
XX006200	CONNECTION AT ARTHUR AVENUE AND LINCOLN AVENUE	EACH	1		1
XX006201	CONNECTION AT MADISON AVENUE AND LINCOLN AVENUE	EACH	1		1
XX006202	WATER MAIN DISCONNECTION	EACH	3		3
XX006216	Portland Cement Concrete Sidewalk 5 inch (Ramp)	SQFT	40	40	

* DENOTES SPECIALITY ITEM



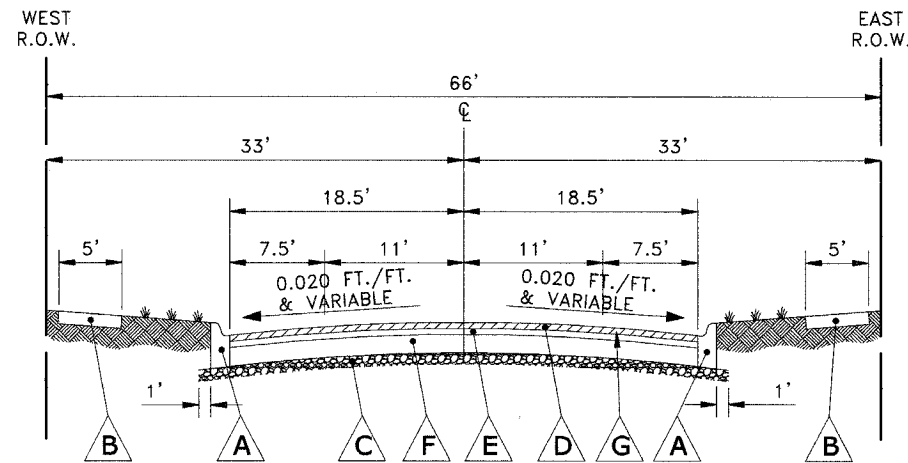
◆ Civil Engineers
◆ Municipal Consultants
◆ Established 1911

9933 Roosevelt Road
Westchester, Illinois 60154-2780
Phone: 708/965-0300
Fax: 708/965-1212

MAPLE AVENUE IMPROVEMENTS
VILLAGE OF BROOKFIELD, ILLINOIS

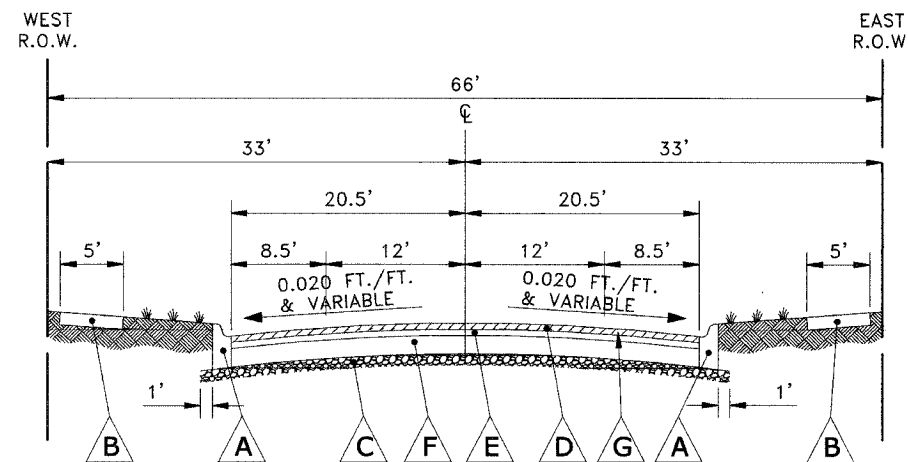
SUMMARY OF QUANTITIES

SCALE:	NONE	SHEET	4 / 34
DRAWN BY:	LEV/DMM/MK		
BOOK NO.:	997/BP/LS		
DATE:	4-12-05		
REVISION:	E.H.E. NO.: 125-04-25005	OF	



EXISTING TYPICAL CROSS SECTION

MAPLE AVENUE
STATION 55+98 TO STATION 80+78

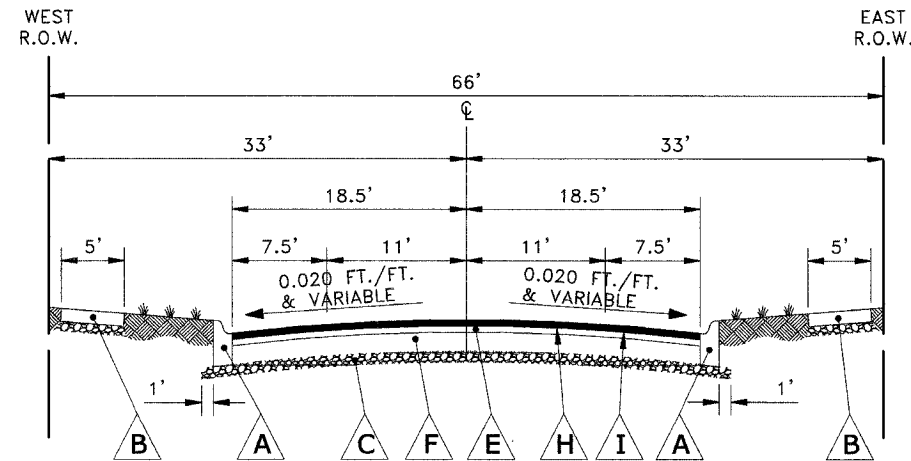


EXISTING TYPICAL CROSS SECTION

MAPLE AVENUE
STATION 82+87 TO STATION 108+25

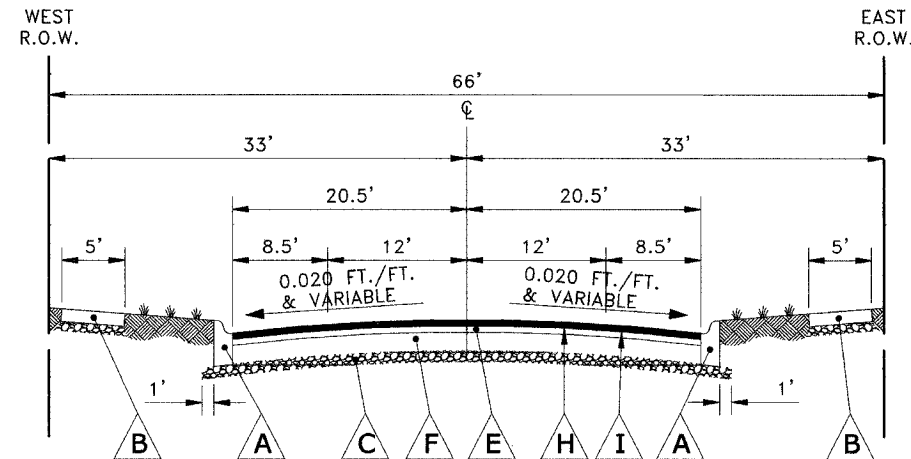
LEGEND OF SYMBOLS

SYMBOL	DESCRIPTION
▲ A	INTERMITTENT COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.18
▲ B	INTERMITTENT PORTLAND CEMENT CONCRETE SIDEWALK, 5"
▲ C	EXISTING SUB-BASE GRANULAR MATERIAL, 4"
▲ D	EXISTING BITUMINOUS CONCRETE SURFACE COURSE, 2"
▲ E	EXISTING BITUMINOUS CONCRETE BINDER COURSE, 2"
▲ F	EXISTING BITUMINOUS BASE COURSE, 10"
▲ G	PROPOSED BITUMINOUS SURFACE REMOVAL, 2-1/2"
▲ H	PROPOSED POLYMERIZED LEVELING BINDER (MACHINE METHOD), SUPERPAVE, IL-4.75, N50, MINIMUM 3/4"
▲ I	PROPOSED BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX D, N50, 1-3/4"



PROPOSED TYPICAL CROSS SECTION

MAPLE AVENUE
STATION 55+98 TO STATION 80+78



PROPOSED TYPICAL CROSS SECTION

MAPLE AVENUE
STATION 82+87 TO STATION 108+25

LEGEND OF SYMBOLS

SYMBOL	DESCRIPTION
A	INTERMITTENT COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.18
B	INTERMITTENT PORTLAND CEMENT CONCRETE SIDEWALK, 5"
C	EXISTING SUB-BASE GRANULAR MATERIAL, 4"
D	EXISTING BITUMINOUS CONCRETE SURFACE COURSE, 2"
E	EXISTING BITUMINOUS CONCRETE BINDER COURSE, 2"
F	EXISTING BITUMINOUS BASE COURSE, 10"
G	PROPOSED BITUMINOUS SURFACE REMOVAL, 2-1/2"
H	PROPOSED POLYMERIZED LEVELING BINDER (MACHINE METHOD), SUPERPAVE, IL-4.75, N50, MINIMUM 3/4"
I	PROPOSED BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX D, N50, 1-3/4"

BITUMINOUS MIXTURE REQUIREMENTS

ITEM	A C TYPE	VOIDS	MAX. R A P %
BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX D, N50	PG 64-22	4% @ 50 GYR.	10
POLYMERIZED LEVELING BINDER (MACHINE METHOD), SUPERPAVE, IL-4.75, N50	SBS/SBR PG 76-28	2.5% @ 50 GYR.	0
INCIDENTAL BITUMINOUS SURFACING, SUPERPAVE	PG 64-22	4% @ 50 GYR.	10
BITUMINOUS MIXTURE FOR PATCHING POTHOLES (HOT MIX)	PG 64-22	4% @ 50 GYR.	10

TEMPORARY SURFACE
OVER PAVEMENT PATCHES

* THE UNIT WEIGHT USED TO CALCULATE ALL BITUMINOUS SURFACE MIXTURES IS 112 LBS/SQYD/IN.

JOB-SITE SIGNING CODES AND SIZES

SYMBOL	SIGN	CODE & SIZE	SYMBOL	SIGN	CODE & SIZE
RCLA		R11-3 60"x36"	ED		M4-8 24"x18"
LTO		R11-4 60"x36"	CMS		
DA		R3-7 30"x30"	NP		R8-3 24"x24" (WHITE)
MS		M4-8 24"x18"			
MN		M4-8 24"x18"			
D ↑		M4-9 30"x24"			
D ↗		M4-9R 30"x24"			
D ↖		M4-9L 30"x24"			
D →		M4-9R 30"x24"			
← D		M4-9L 30"x24"			
RC		R11-2 48"x30" (WHITE)			

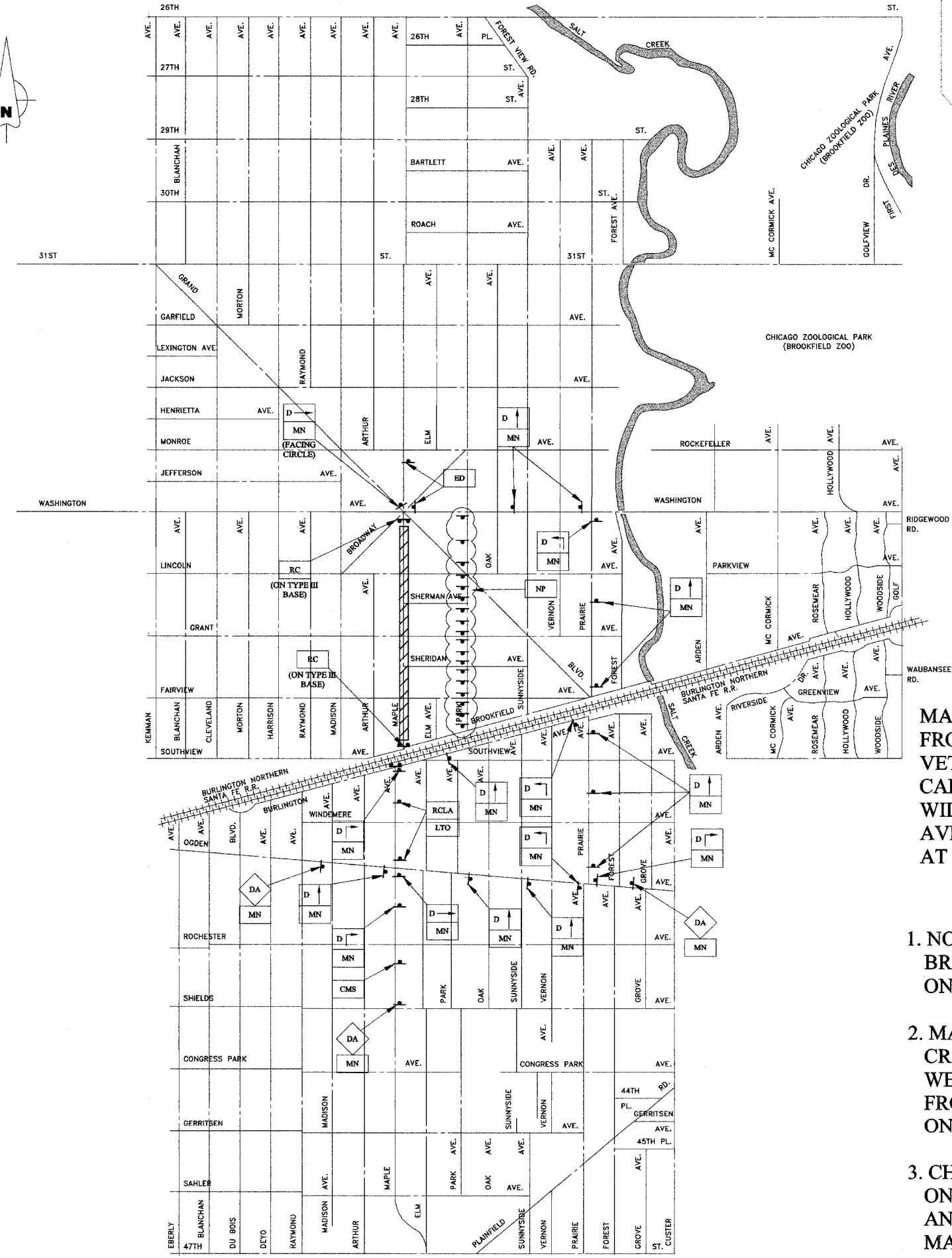
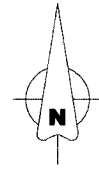
LEGEND OF SYMBOLS

- TYPE II BARRICADE
- TYPE III BARRICADE
- TEMPORARY TRAFFIC SIGN

NOTE:

CONTRACTOR TO CONTACT IDOT HEAD OF TRAFFIC MAINTENANCE, (847) 705-4470 AND VILLAGE OF BROOKFIELD (708) 485-2540, SEVENTY-TWO (72) HOURS IN ADVANCE OF SETTING UP DETOUR ROUTE.

ALL SIGNS TO BE FLUORESCENT ORANGE UNLESS OTHERWISE NOTED.

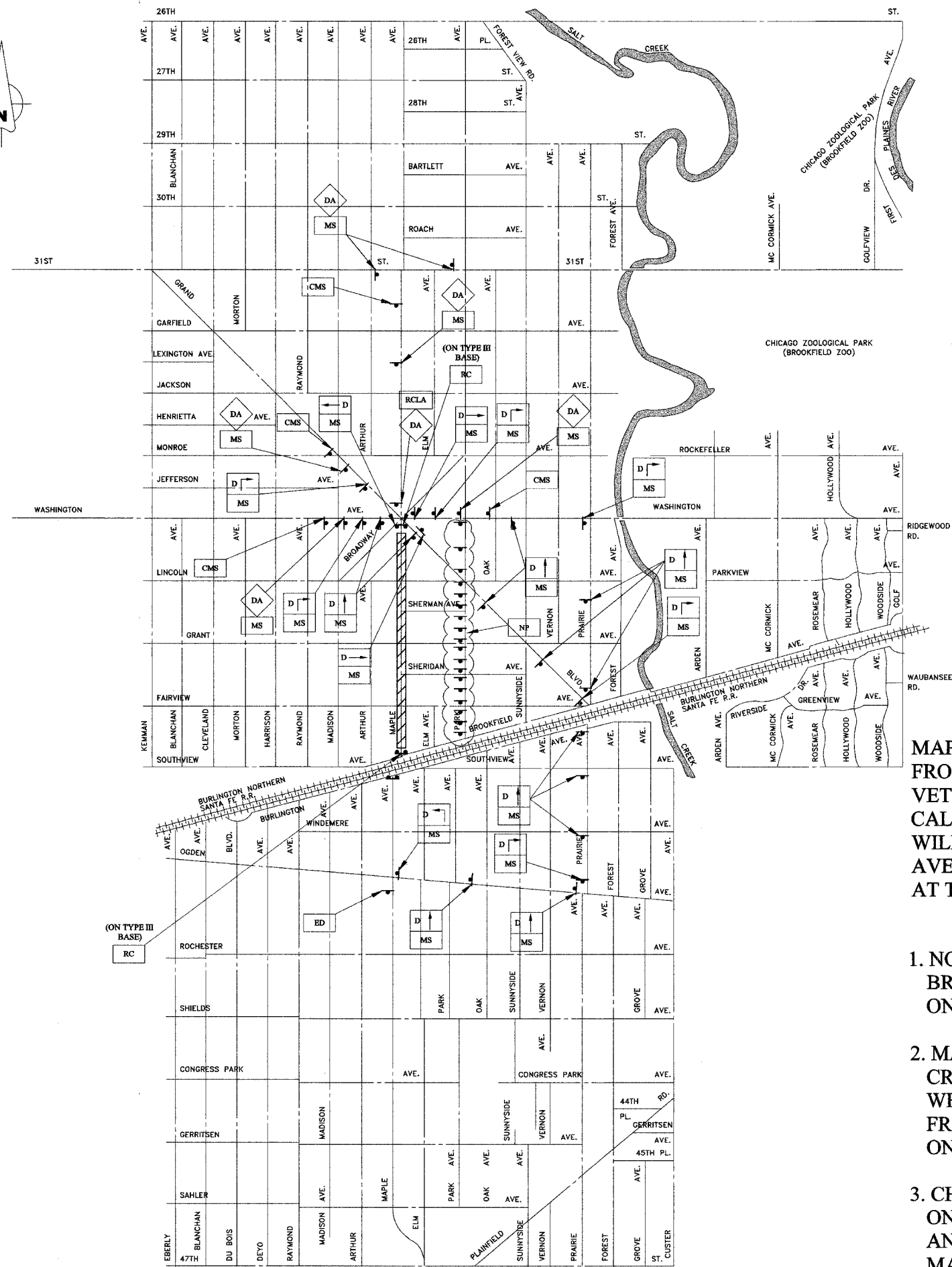
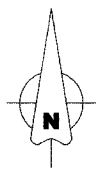


PHASE I WORK

MAPLE AVENUE WILL BE CLOSED TO THROUGH TRAFFIC FROM BROOKFIELD AVENUE TO THE SOUTH SIDE OF VETERANS' MEMORIAL CIRCLE FOR A MAXIMUM OF 28 CALENDAR DAYS. DURING THIS TIME THE CONTRACTOR WILL COMPLETE ALL WORK ON THIS SECTION OF MAPLE AVENUE. THE PHASE I SECTION SHALL NOT BE CLOSED AT THE SAME TIME AS THE PHASE II SECTION.

GENERAL NOTES

1. NO PARKING ON PARK AVENUE FROM BROOKFIELD AVENUE TO GRAND AVENUE ON WEST SIDE OF STREET.
2. MAPLE AVENUE SOUTH OF RAILROAD CROSSING TO BE CLOSED. GAP TO BE LEFT ON WEST SIDE OF CROSSING FOR TRUCK TRAFFIC FROM SOUTHVIEW AVENUE TO GO SOUTH ON MAPLE AVENUE.
3. CHANGEABLE MESSAGE SIGNS TO BE INSTALLED ONE WEEK PRIOR TO CLOSING OF MAPLE AVENUE AND TO REMAIN IN PLACE FOR FIRST WEEK OF MAPLE AVENUE CLOSING (14 DAYS TOTAL).

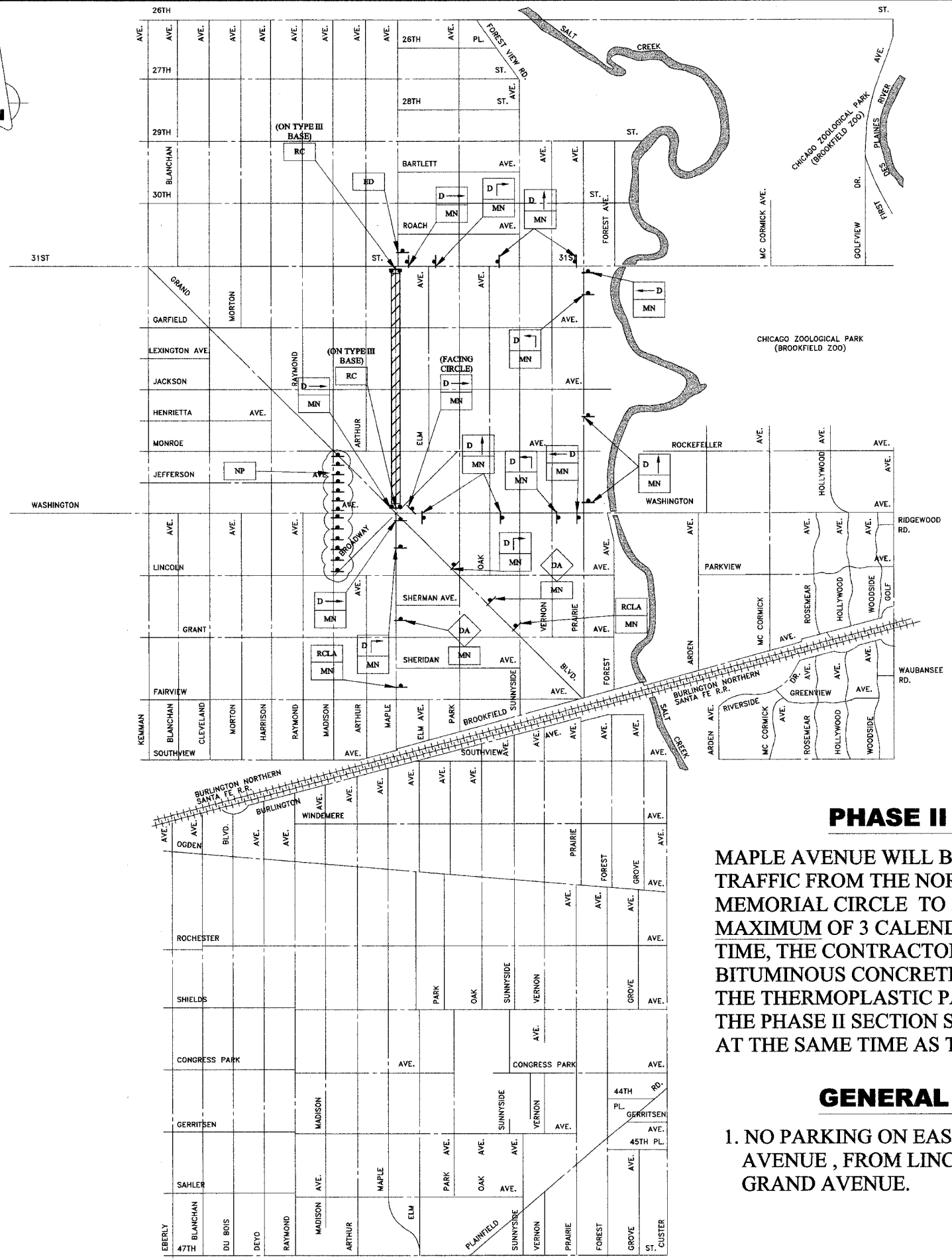
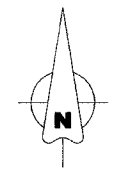


PHASE I WORK

MAPLE AVENUE WILL BE CLOSED TO THROUGH TRAFFIC FROM BROOKFIELD AVENUE TO THE SOUTH SIDE OF VETERANS' MEMORIAL CIRCLE FOR A MAXIMUM OF 28 CALENDAR DAYS. DURING THIS TIME THE CONTRACTOR WILL COMPLETE ALL WORK ON THIS SECTION OF MAPLE AVENUE. THE PHASE I SECTION SHALL NOT BE CLOSED AT THE SAME TIME AS THE PHASE II SECTION.

GENERAL NOTES

1. NO PARKING ON PARK AVENUE FROM BROOKFIELD AVENUE TO GRAND AVENUE ON WEST SIDE OF STREET.
2. MAPLE AVENUE SOUTH OF RAILROAD CROSSING TO BE CLOSED. GAP TO BE LEFT ON WEST SIDE OF CROSSING FOR TRUCK TRAFFIC FROM SOUTHVIEW AVENUE TO GO SOUTH ON MAPLE AVENUE.
3. CHANGEABLE MESSAGE SIGNS TO BE INSTALLED ONE WEEK PRIOR TO CLOSING OF MAPLE AVENUE AND TO REMAIN IN PLACE FOR FIRST WEEK OF MAPLE AVENUE CLOSING (14 DAYS TOTAL).

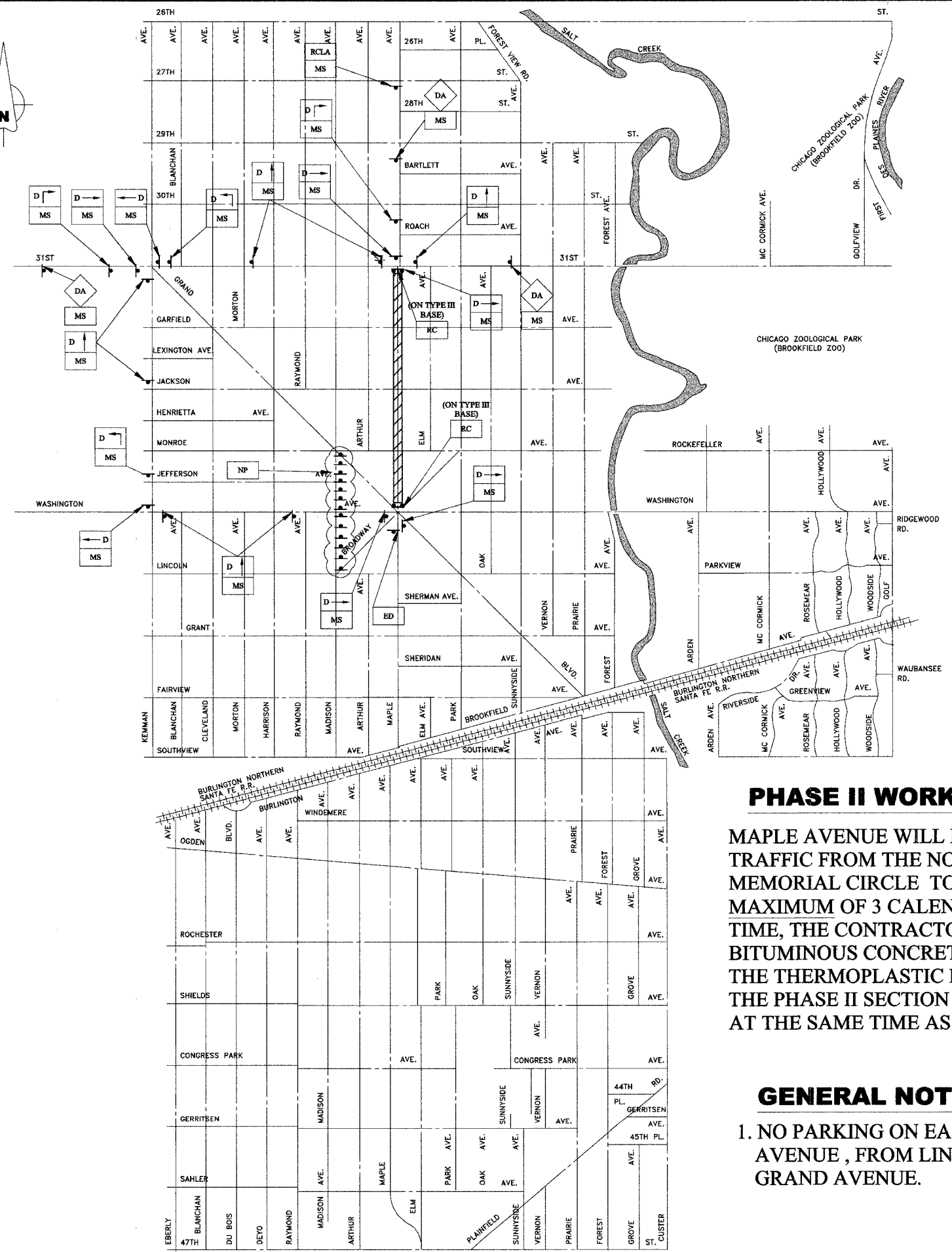
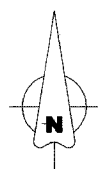


PHASE II WORK

MAPLE AVENUE WILL BE CLOSED TO THROUGH TRAFFIC FROM THE NORTH SIDE OF VETERANS' MEMORIAL CIRCLE TO 31ST STREET FOR A MAXIMUM OF 3 CALENDAR DAYS. DURING THIS TIME, THE CONTRACTOR WILL INSTALL THE BITUMINOUS CONCRETE SURFACE COURSE AND THE THERMOPLASTIC PAVEMENT MARKINGS. THE PHASE II SECTION SHALL NOT BE CLOSED AT THE SAME TIME AS THE PHASE I SECTION.

GENERAL NOTES

1. NO PARKING ON EAST SIDE OF MADISON AVENUE, FROM LINCOLN AVENUE TO GRAND AVENUE.

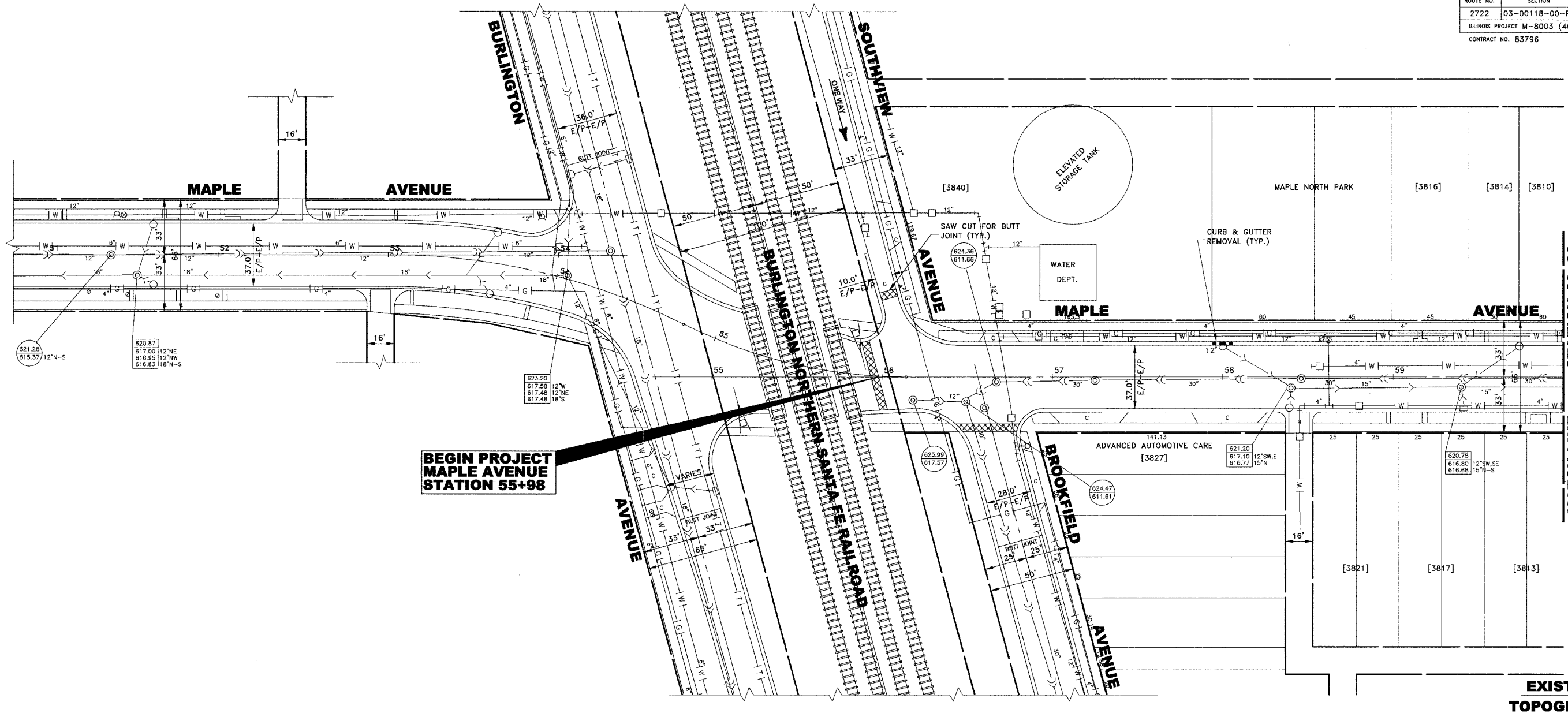


PHASE II WORK

MAPLE AVENUE WILL BE CLOSED TO THROUGH TRAFFIC FROM THE NORTH SIDE OF VETERANS' MEMORIAL CIRCLE TO 31st STREET FOR A MAXIMUM OF 3 CALENDAR DAYS. DURING THIS TIME, THE CONTRACTOR WILL INSTALL THE BITUMINOUS CONCRETE SURFACE COURSE AND THE THERMOPLASTIC PAVEMENT MARKINGS. THE PHASE II SECTION SHALL NOT BE CLOSED AT THE SAME TIME AS THE PHASE I SECTION.

GENERAL NOTES


1. NO PARKING ON EAST SIDE OF MADISON AVENUE, FROM LINCOLN AVENUE TO GRAND AVENUE.



**BEGIN PROJECT
MAPLE AVENUE
STATION 55+98**

**MATCH LINE
STATION 60+00
CONTINUED ON SHEET NO. 14**

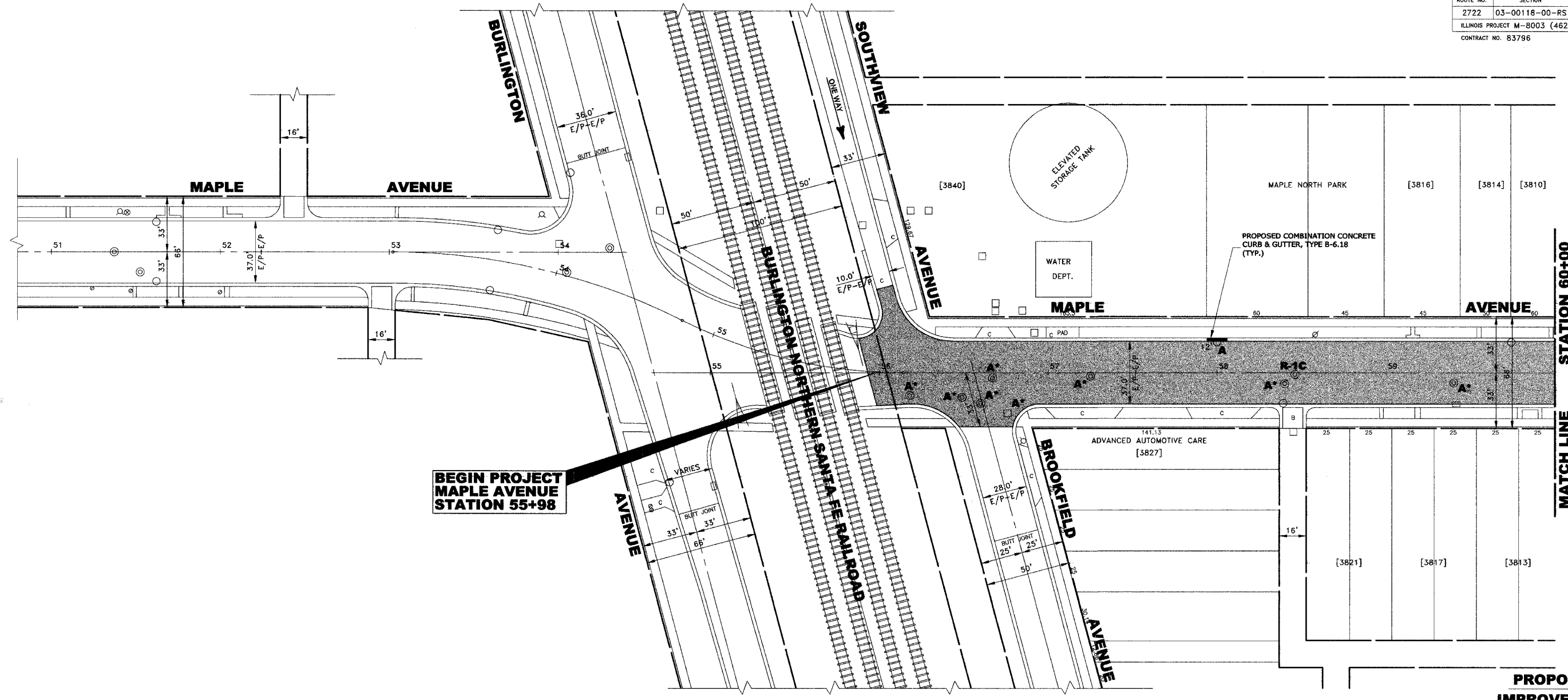
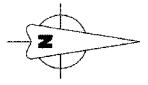
**EXISTING
TOPOGRAPHY**


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 ♦ Municipal Consultants
 ♦ Established 1911
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**MAPLE AVENUE IMPROVEMENTS
VILLAGE OF BROOKFIELD, ILLINOIS**

**MAPLE AVENUE
PAVING IMPROVEMENTS**

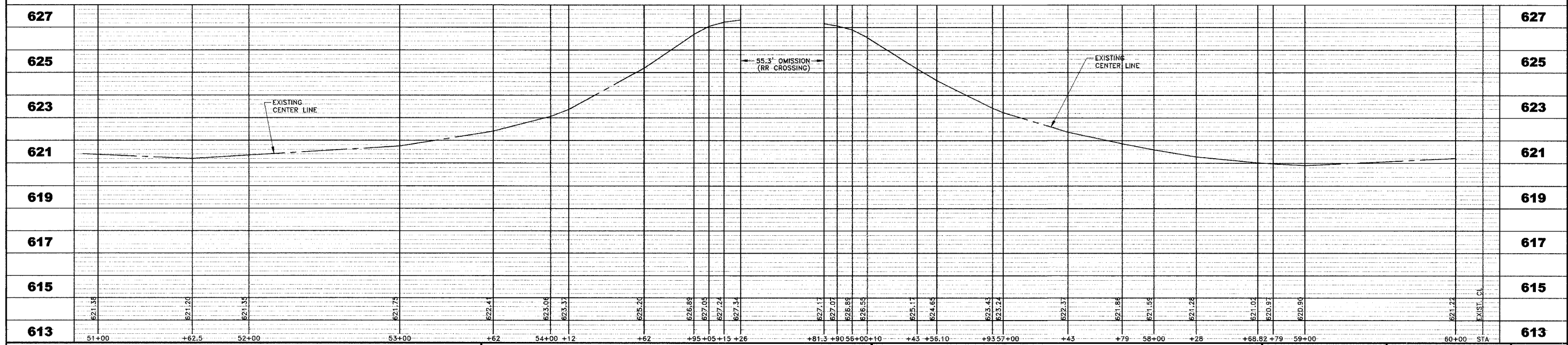
SCALE: 1"=30'H. & 1"=2'V.	SHEET 12 OF 34
DRAWN BY: LEV/DMM/MK	
BOOK NO.: 997/BP/LS	
DATE: 4-12-05	
REVISION:	E.H.E. NO.: 125-04-25005



**BEGIN PROJECT
MAPLE AVENUE
STATION 55+98**

**MATCH LINE
STATION 60+00
CONTINUED ON SHEET NO. 14**

**PROPOSED
IMPROVEMENT**



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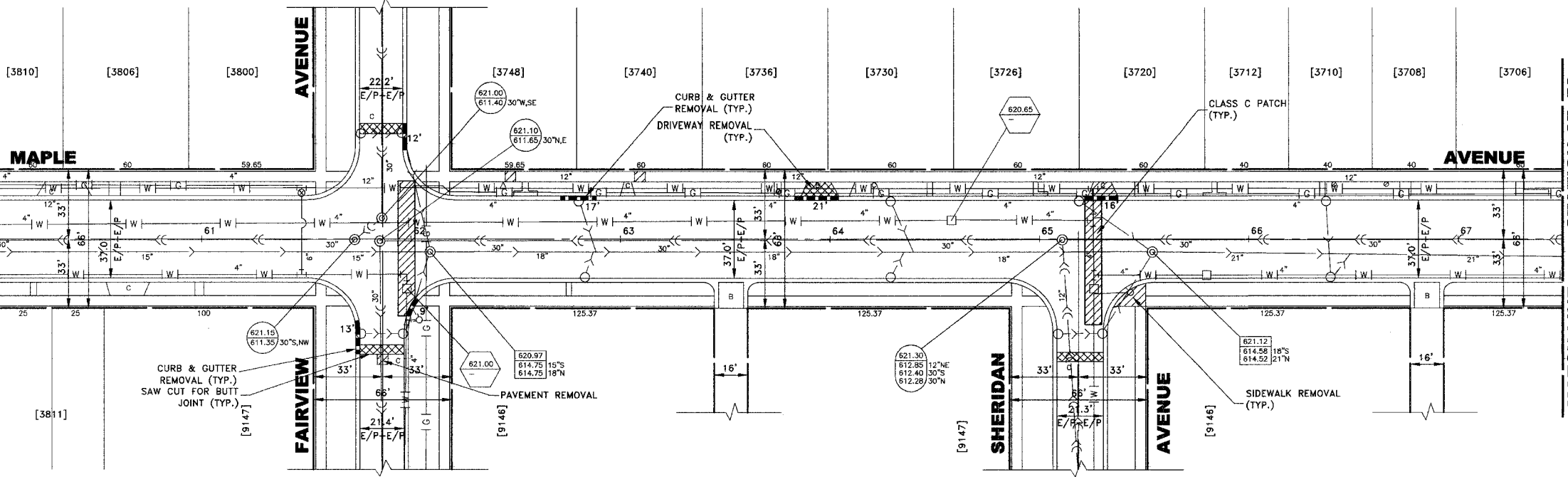
**MAPLE AVENUE IMPROVEMENTS
 VILLAGE OF BROOKFIELD, ILLINOIS**

**MAPLE AVENUE
 PAVING IMPROVEMENTS**

SCALE: 1"=30'H. & 1"=2'V. SHEET
 DRAWN BY: LEV/DMM/MK 13
 BOOK NO.: 997/BP/LS 34
 DATE: 4-12-05
 REVISION: E.H.E. NO.: 125-04-25005 OF



CONTINUED FROM SHEET NO. 12
MATCH LINE STATION 60+00

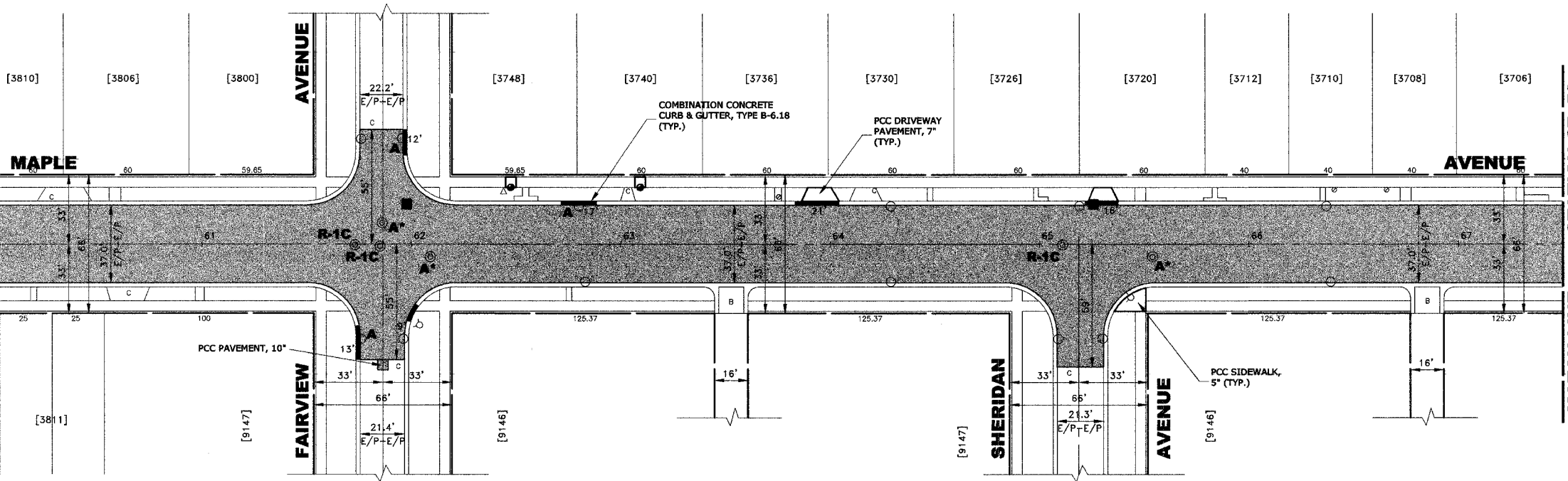


MATCH LINE STATION 67+50
CONTINUED ON SHEET NO. 15

EXISTING TOPOGRAPHY



CONTINUED FROM SHEET NO. 13
MATCH LINE STATION 60+00



MATCH LINE STATION 67+50
CONTINUED ON SHEET NO. 15

PROPOSED IMPROVEMENT

621																621
619																619
617																617
615																615
613																613
STA	60+00	61+00	+40	62+32	63+00	+15	+40	64+00	+30	+75	65+00	+18.78	+65	66+10	67+00	+50

EXISTING CENTER LINE

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**MAPLE AVENUE IMPROVEMENTS
VILLAGE OF BROOKFIELD, ILLINOIS**

**MAPLE AVENUE
PAVING IMPROVEMENTS**

REVISION:

SCALE: 1"=30'H. & 1"=2'V

DRAWN BY: LEV/DMM/MK

BOOK NO.: 997/BP/LS

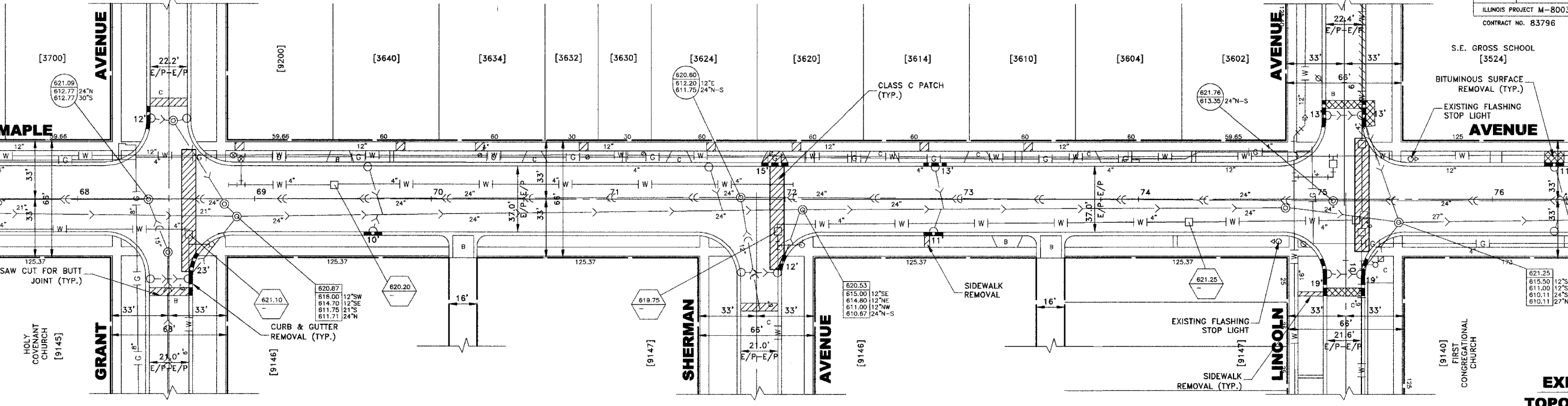
DATE: 4-12-05

E.H.E. NO.: 125-04-25005

SHEET
14
OF
34

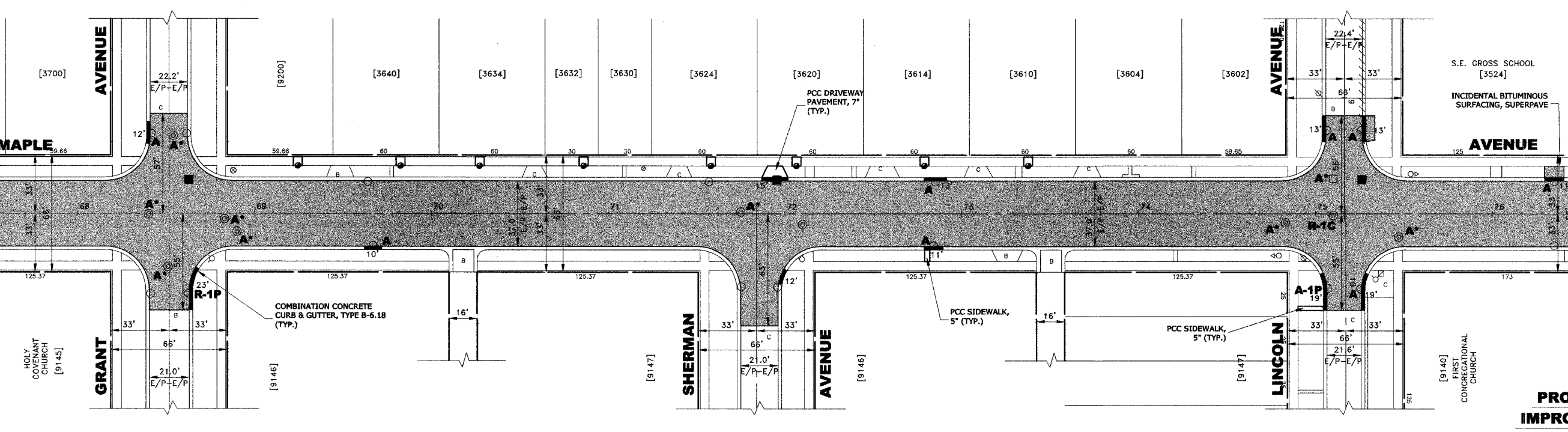
CONTINUED FROM SHEET NO. 14
MATCH LINE
STATION 67+50

MATCH LINE
STATION 76+50
CONTINUED ON SHEET NO. 16



CONTINUED FROM SHEET NO. 14
MATCH LINE
STATION 67+50

MATCH LINE
STATION 76+50
CONTINUED ON SHEET NO. 17



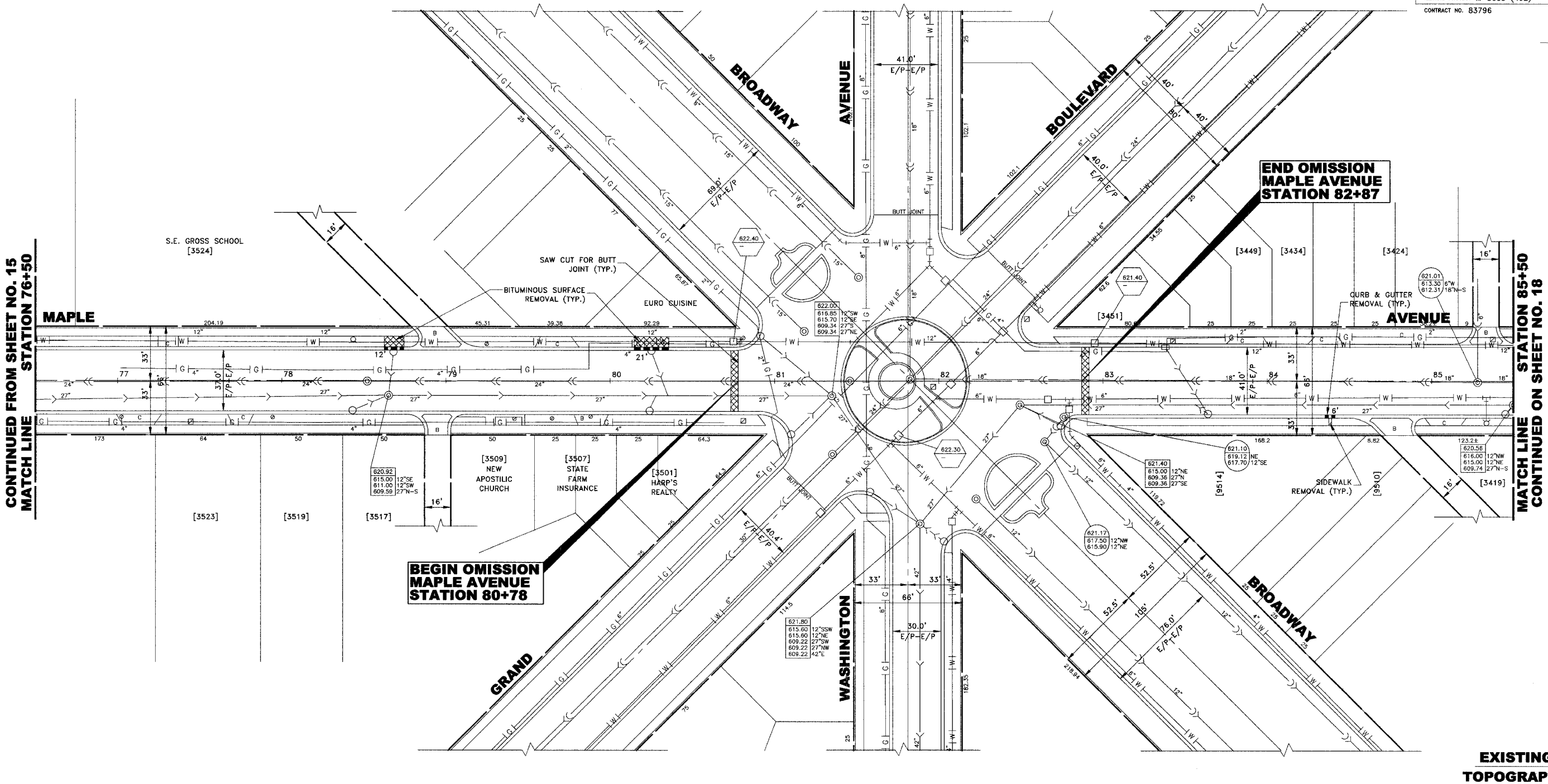
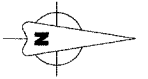
622																				EXIST. CL.	622
620																					620
618																					618
616																					616
614																					614
	+50	68+06	69+00	+65	70+00	+30	71+00	+40	+83.92	72+40	73+00	74+00	75+00	+65	76+00	+50	STA				

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MAPLE AVENUE IMPROVEMENTS VILLAGE OF BROOKFIELD, ILLINOIS

MAPLE AVENUE PAVING IMPROVEMENTS

SCALE: 1"=30'H. & 1"=2'V. SHEET 15/34
DRAWN BY: LEV/DMM/MK
BOOK NO.: 997/BP/LS
DATE: 4-12-05
E.H.E. NO.: 125-04-25005
REVISION:



CONTINUED FROM SHEET NO. 15
MATCH LINE STATION 76+50

MATCH LINE STATION 85+50
CONTINUED ON SHEET NO. 18

**BEGIN OMISSION
MAPLE AVENUE
STATION 80+78**

**END OMISSION
MAPLE AVENUE
STATION 82+87**

**EXISTING
TOPOGRAPHY**

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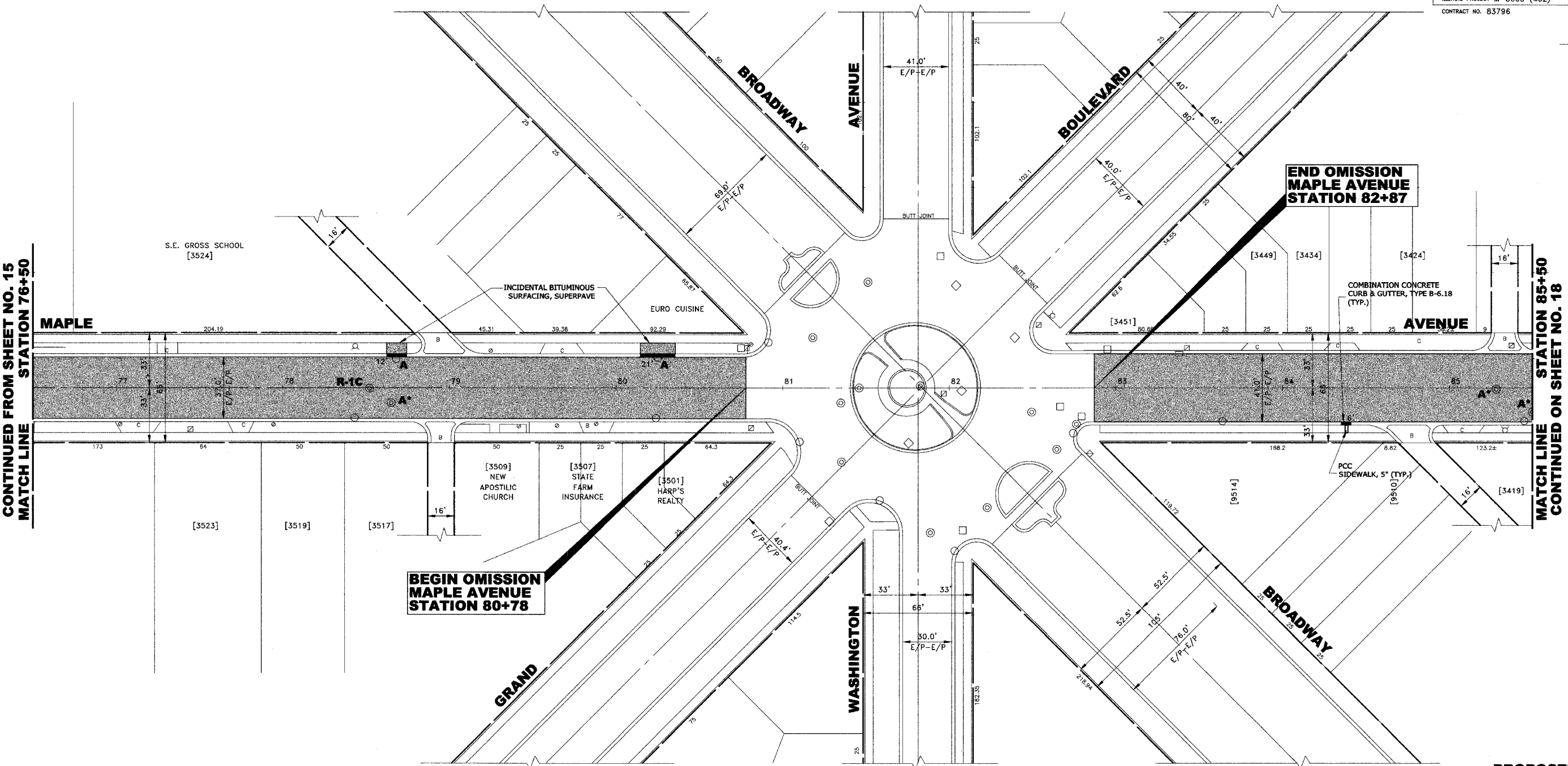
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**MAPLE AVENUE IMPROVEMENTS
VILLAGE OF BROOKFIELD, ILLINOIS**

**MAPLE AVENUE
PAVING IMPROVEMENTS**

REVISION:	SCALE: 1"=30'H. & 1"=2'V	SHEET
	DRAWN BY: LEV/DMM/MK	16
	BOOK NO.: 997/BP/LS	34
	DATE: 4-12-05	
	E.H.E. NO.: 125-04-25005	OF



CONTINUED FROM SHEET NO. 15
MATCH LINE STATION 76+50

MATCH LINE STATION 85+50
CONTINUED ON SHEET NO. 18

PROPOSED IMPROVEMENT

622								EXISTING CENTER LINE							EXISTING CENTER LINE		622
620										77.5' OMISSION (VETERANS MEMORIAL CIRCLE)							620
618																	618
616																	616
614		621.25	621.54	621.62	621.35	621.31	621.35	621.34	621.67	621.57	621.85	621.80	621.40	621.35	621.40	621.11	614
	+50	77+00	78+00	+25	79+00	+25	+45	80+00	+25	+65	81+41	82+18.5	83+00	+50	84+00	85+00	+50

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MAPLE AVENUE IMPROVEMENTS
VILLAGE OF BROOKFIELD, ILLINOIS

MAPLE AVENUE
PAVING IMPROVEMENTS

SCALE: 1"=30'H. & 1"=2'V

DRAWN BY: LEV/DMM/MK

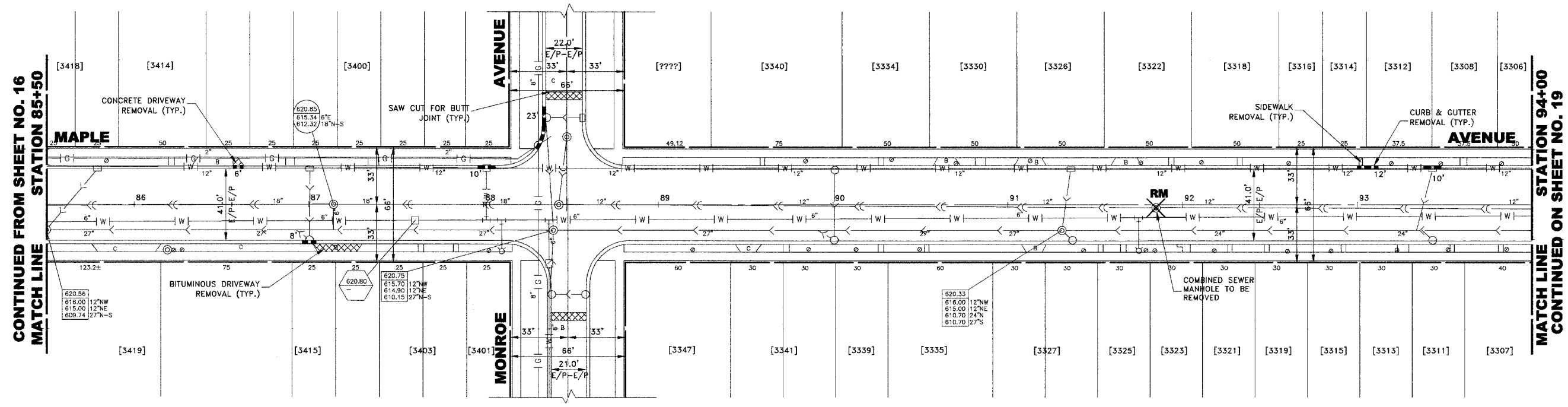
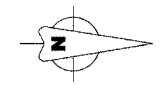
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DATE: 4-12-05

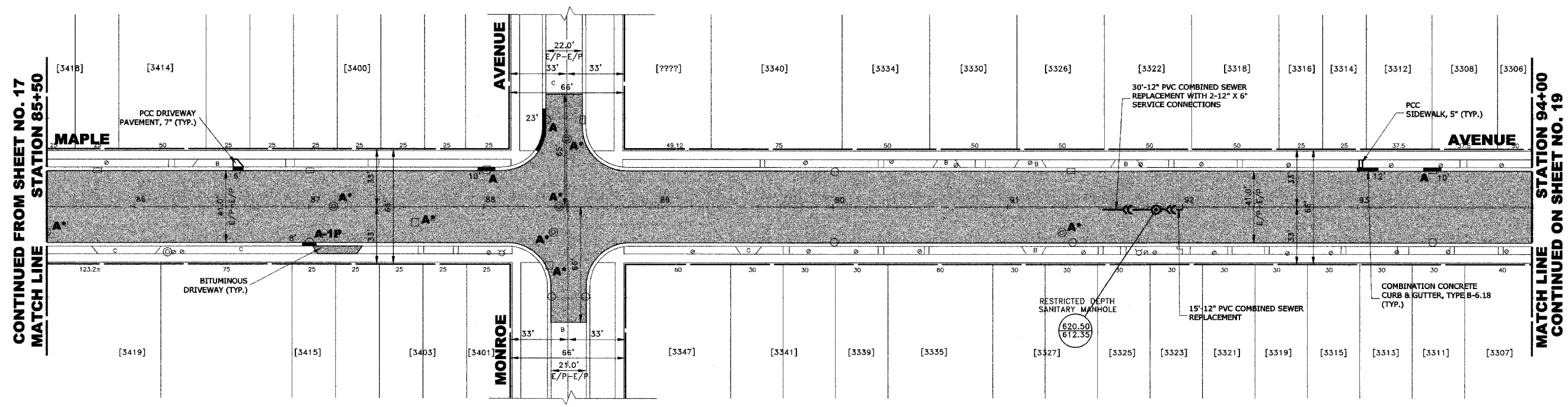
E.I.H. NO.: 125-04-25005

REVISION:

SHEET **17** / **34**



**EXISTING
TOPOGRAPHY**



**PROPOSED
IMPROVEMENT**

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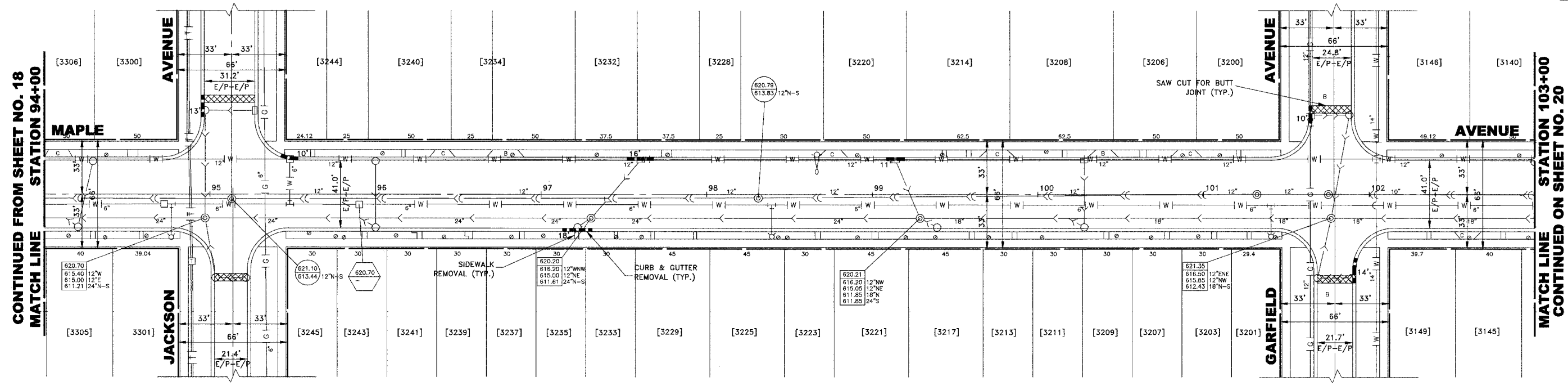
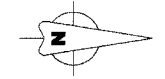
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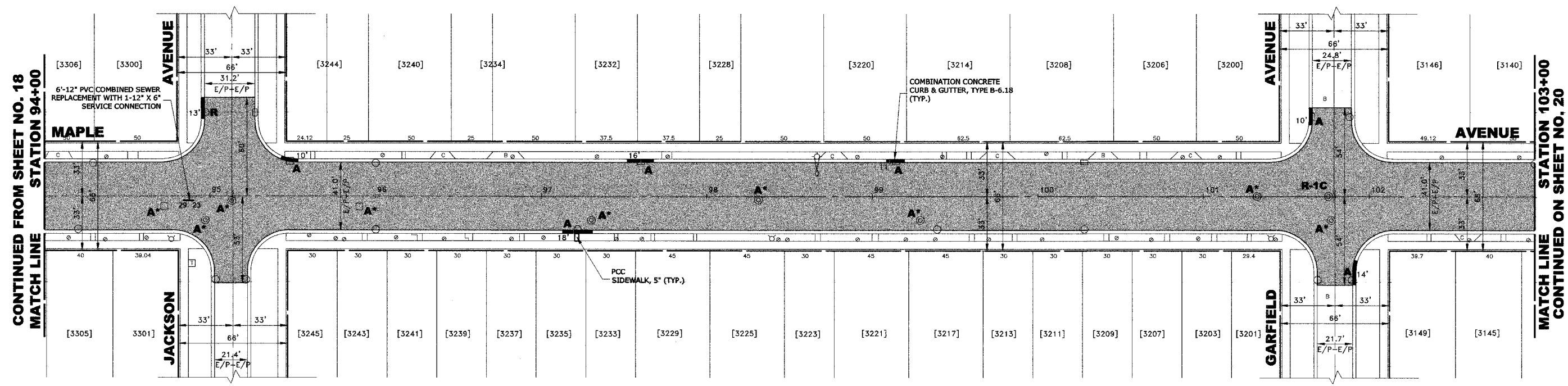
**MAPLE AVENUE IMPROVEMENTS
VILLAGE OF BROOKFIELD, ILLINOIS**

**MAPLE AVENUE
PAVING IMPROVEMENTS**

SCALE: 1" = 30'	18 OF 34
DRAWN BY: LEV/DMM/MK	
BOOK NO.: 997/BP/LS	
DATE: 4-12-05	
REVISION:	E.H.E. NO.: 125-04-25005



**EXISTING
TOPOGRAPHY**



**PROPOSED
IMPROVEMENT**

HANCOCK ENGINEERING

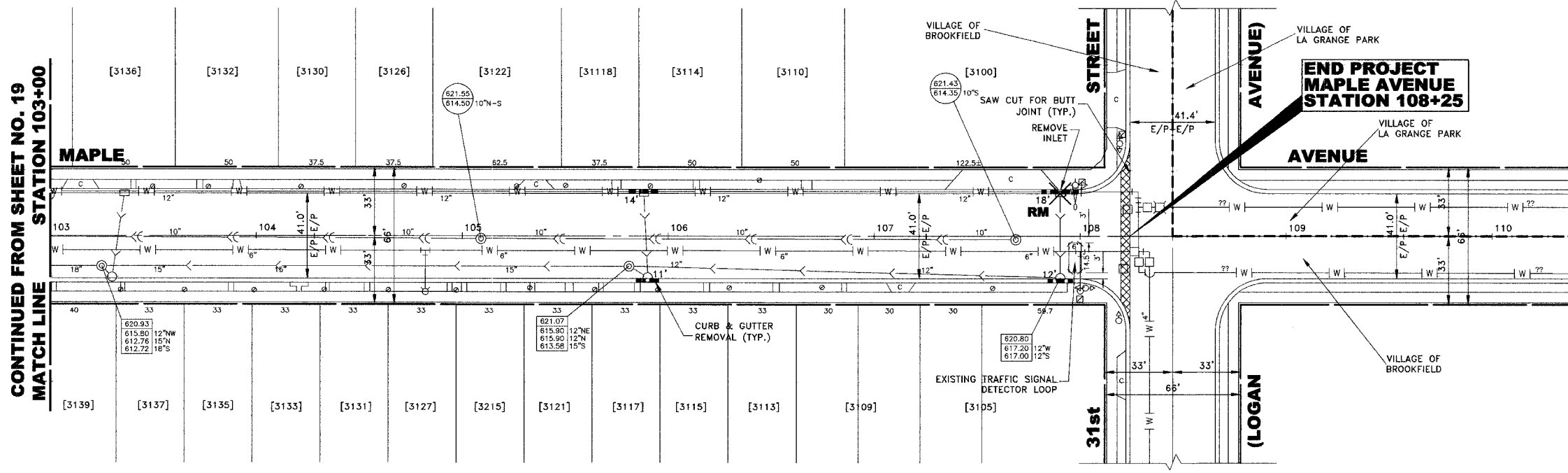
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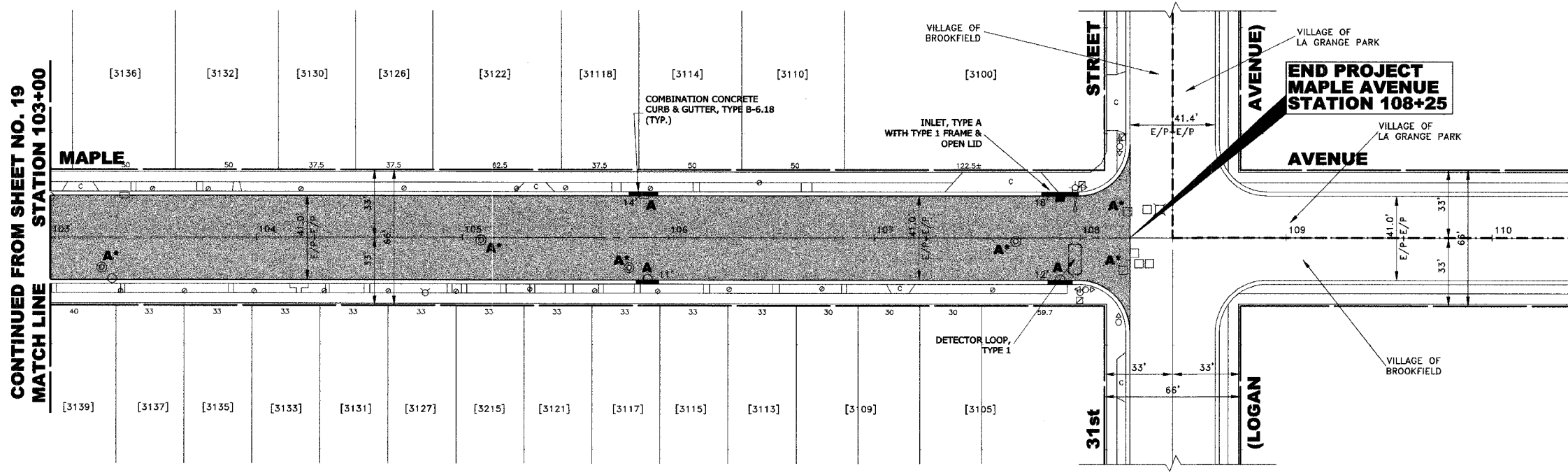
**MAPLE AVENUE IMPROVEMENTS
VILLAGE OF BROOKFIELD, ILLINOIS**

**MAPLE AVENUE
PAVING IMPROVEMENTS**

REVISION:	SCALE: 1" = 30'	SHEET 19 34
	DRAWN BY: LEV/DMM/MK	
	BOOK NO.: 997/BP/LS	
	DATE: 4-12-05	
	E.H.E. NO.: 125-04-25005	OF



EXISTING TOPOGRAPHY



PROPOSED IMPROVEMENT

HANCOCK ENGINEERING

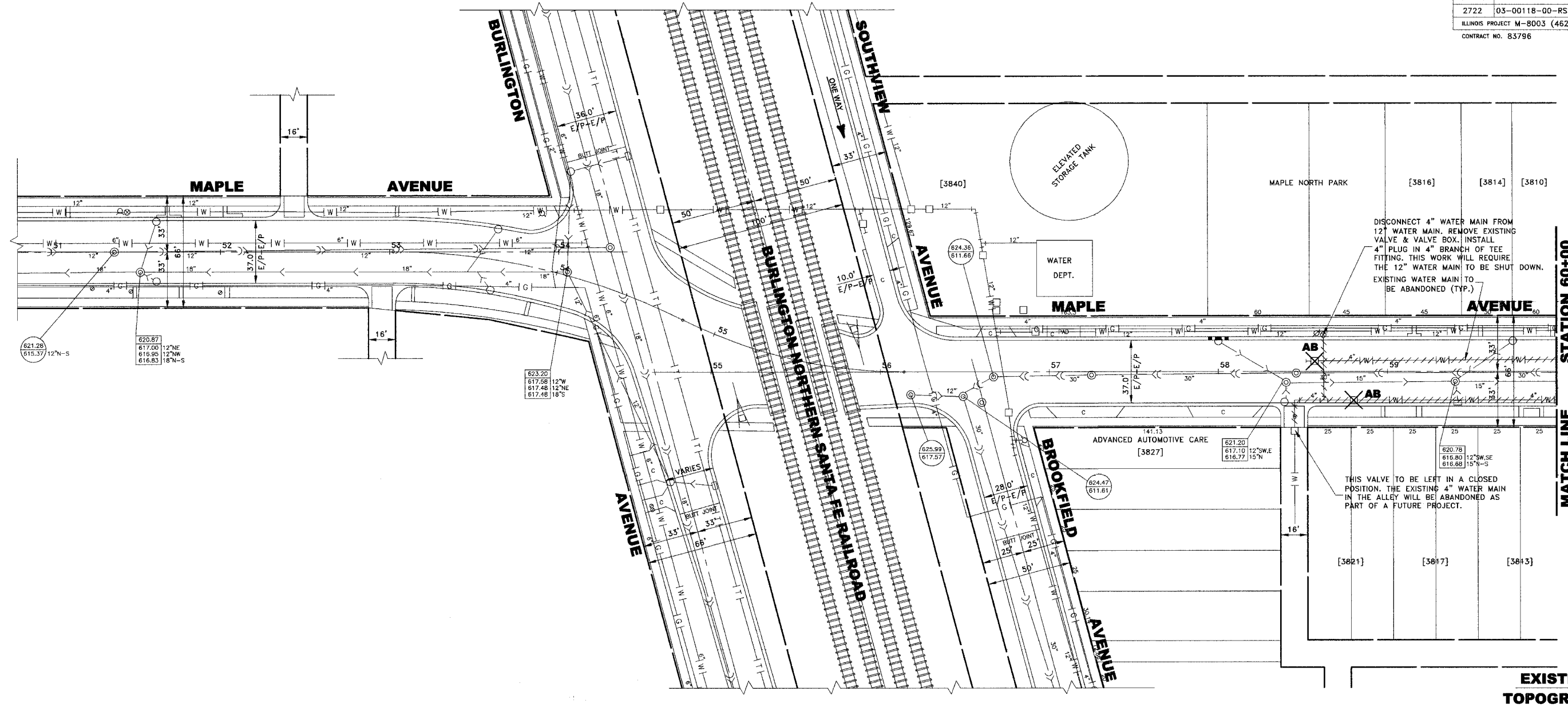
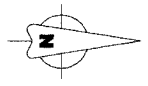
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Fax: 708/865-1212

**MAPLE AVENUE IMPROVEMENTS
VILLAGE OF BROOKFIELD, ILLINOIS**

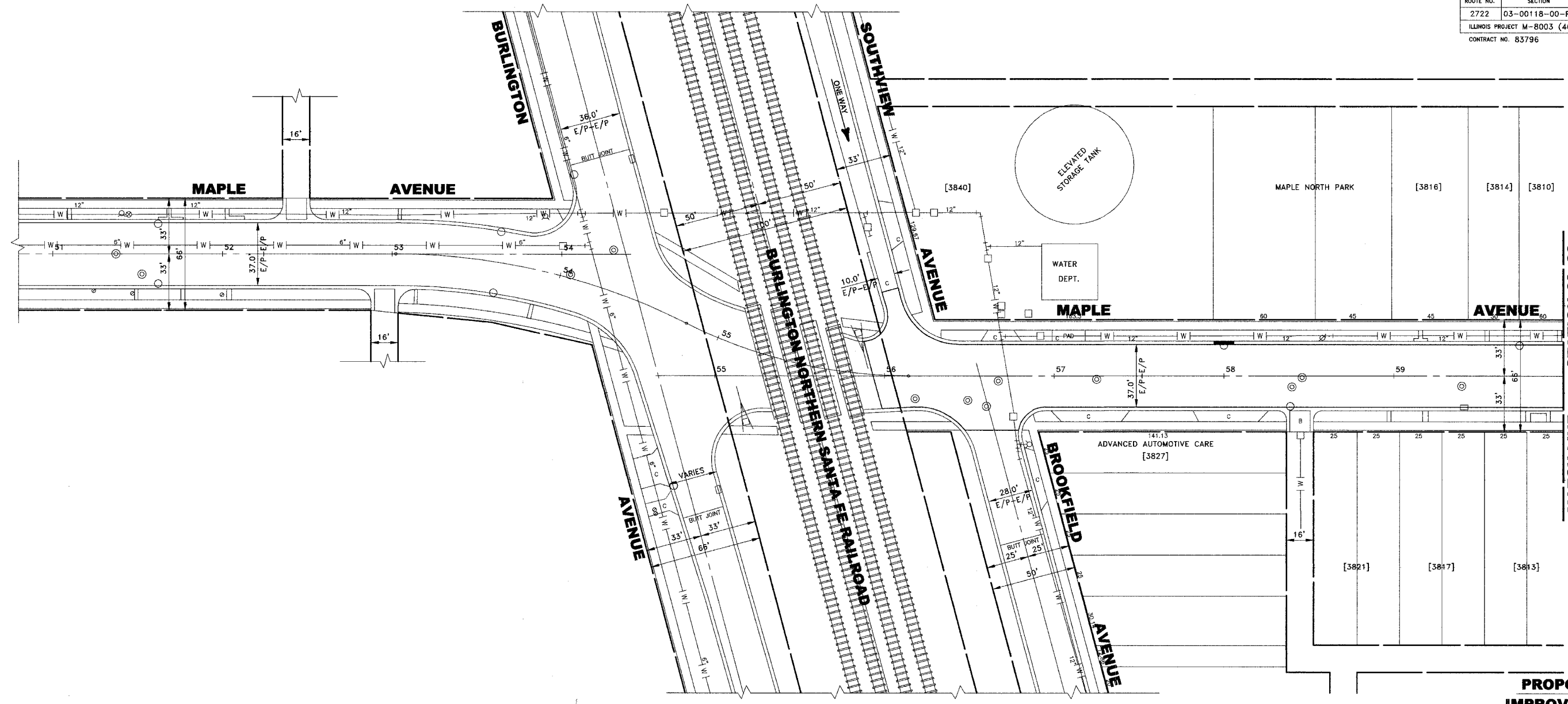
**MAPLE AVENUE
PAVING IMPROVEMENTS**

SCALE: 1" = 30'	SHEET 20 34
DRAWN BY: LEV/DMM/MK	
BOOK NO.: 997/BP/LS	
DATE: 4-12-05	
REVISION:	E.H.E. NO.: 125-04-25005



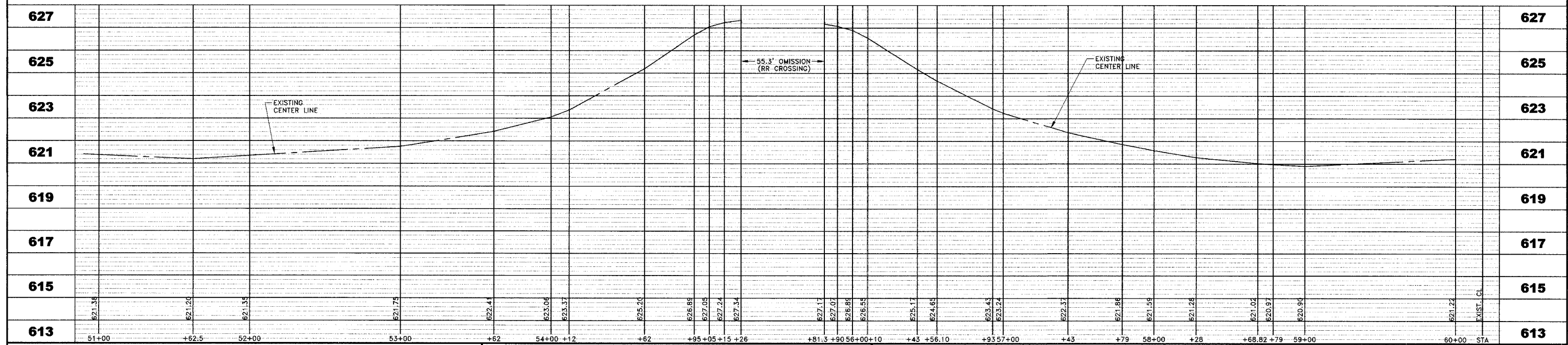
MATCH LINE STATION 60+00 CONTINUED ON SHEET NO. 23

EXISTING TOPOGRAPHY



MATCH LINE STATION 60+00 CONTINUED ON SHEET NO. 23

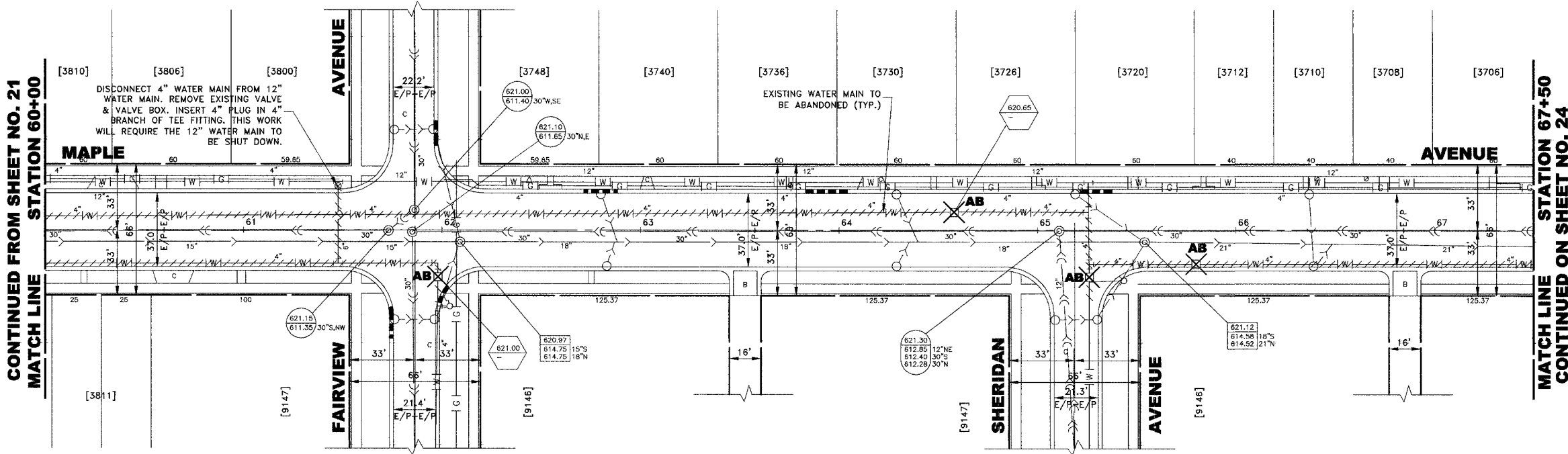
PROPOSED IMPROVEMENT



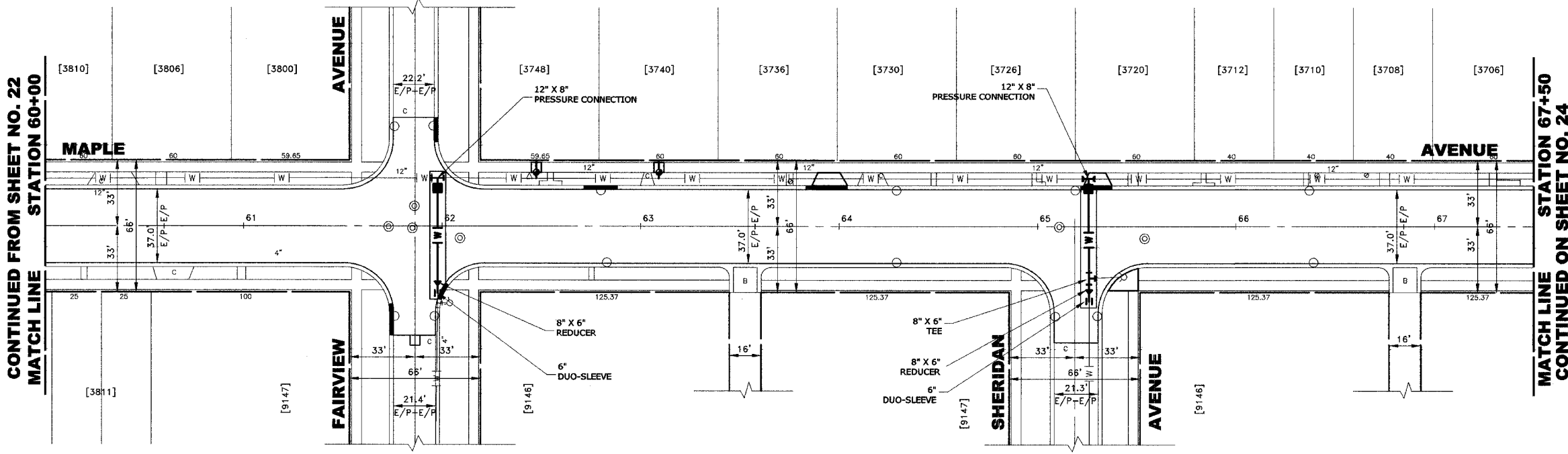
**MAPLE AVENUE IMPROVEMENTS
VILLAGE OF BROOKFIELD, ILLINOIS**

**MAPLE AVENUE
WATER MAIN IMPROVEMENTS**

SCALE: 1"=30'H. & 1"=2'V.	SHEET 22 OF 34
DRAWN BY: LEV/DMM/MK	
BOOK NO.: 997/BP/LS	
DATE: 4-12-05	
REVISION:	E.H.E. NO.: 125-04-25005



EXISTING TOPOGRAPHY



PROPOSED IMPROVEMENT

621	PROFILE AT FAIRVIEW AVENUE	PROFILE AT SHERIDAN AVENUE	621
619	EXISTING PROFILE ALONG ROUTE OF PROPOSED WATER MAIN		619
617	12" X 8" PRESSURE CONNECTION		617
615	EXISTING 12" WATER MAIN	EXISTING 12" WATER MAIN	615
	18" MINIMUM SEPARATION	18" MINIMUM SEPARATION	
613	EXISTING 6" WATER MAIN	EXISTING 6" WATER MAIN	613
	EXISTING 15" STORM SEWER	EXISTING 18" STORM SEWER	
	EXISTING 30" COMBINED SEWER	EXISTING 30" COMBINED SEWER	
	STA		

HANCOCK ENGINEERING

- ◆ Civil Engineers
- ◆ Municipal Consultants
- ◆ Established 1911

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Westchester, Illinois 60154-2780
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Fax: 708/965-1212

**MAPLE AVENUE IMPROVEMENTS
VILLAGE OF BROOKFIELD, ILLINOIS**

**MAPLE AVENUE
WATER MAIN IMPROVEMENTS**

SCALE: 1"=30'H. & 1"=2'V. SHEET 23/34

DRAWN BY: LEV/DMM/MK

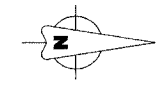
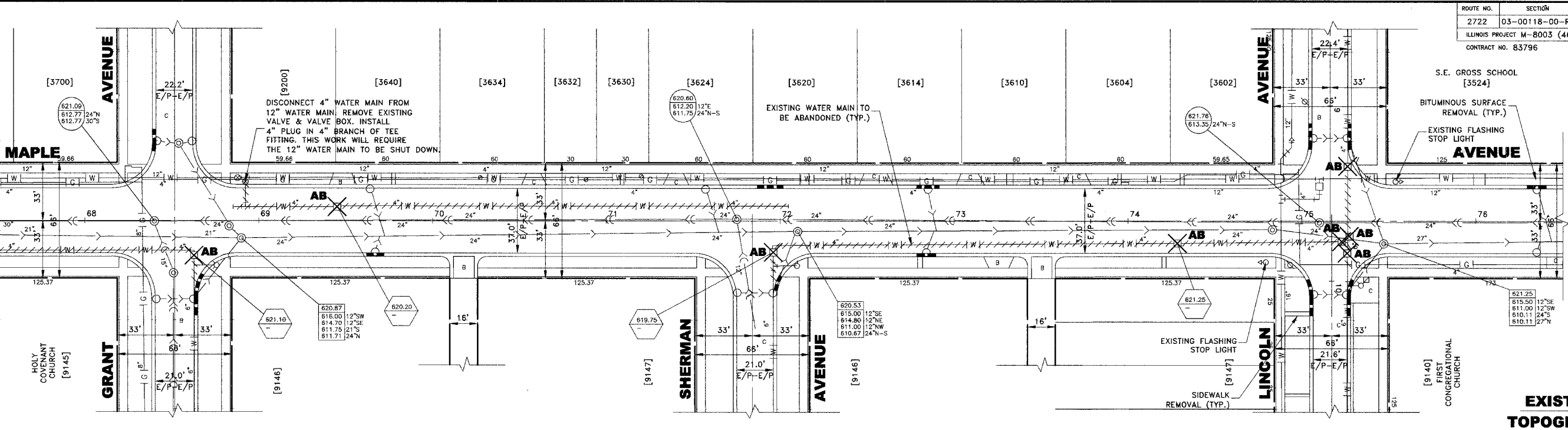
BOOK NO.: 997/BP/LS

DATE: 4-12-05

E.H.E. NO.: 125-04-25005

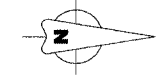
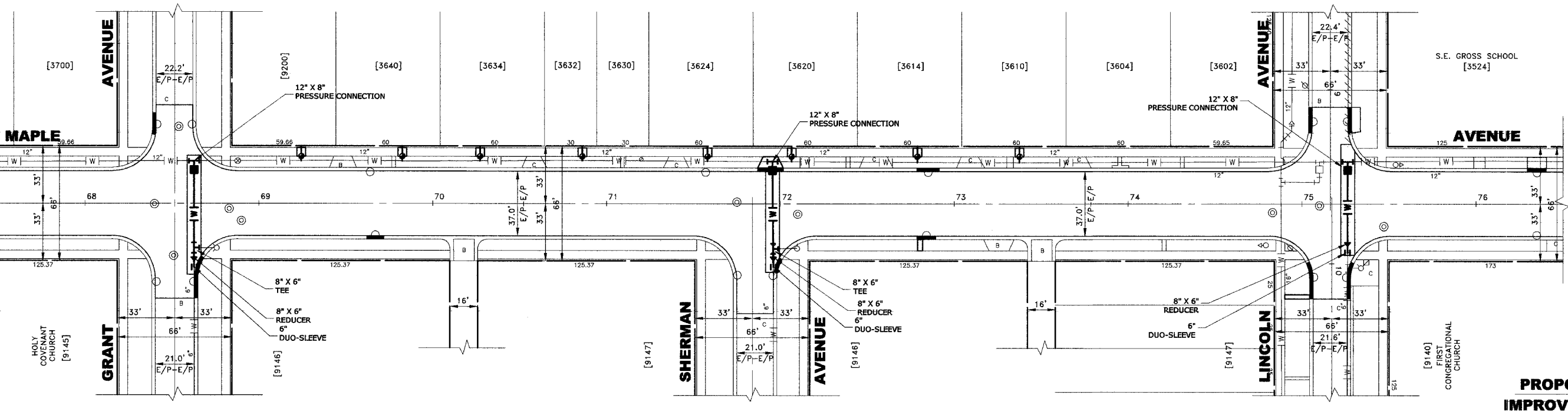
REVISION:

CONTINUED FROM SHEET NO. 23
MATCH LINE STATION 67+50



EXISTING TOPOGRAPHY

CONTINUED FROM SHEET NO. 23
MATCH LINE STATION 67+50



PROPOSED IMPROVEMENT

622	PROFILE AT GRANT AVENUE	PROFILE AT SHERMAN AVENUE	PROFILE AT LINCOLN AVENUE	622
620	EXISTING PROFILE ALONG ROUTE OF PROPOSED WATER MAIN			620
618	EXISTING PROFILE ALONG ROUTE OF PROPOSED WATER MAIN			618
616				616
614				614

HANCOCK ENGINEERING

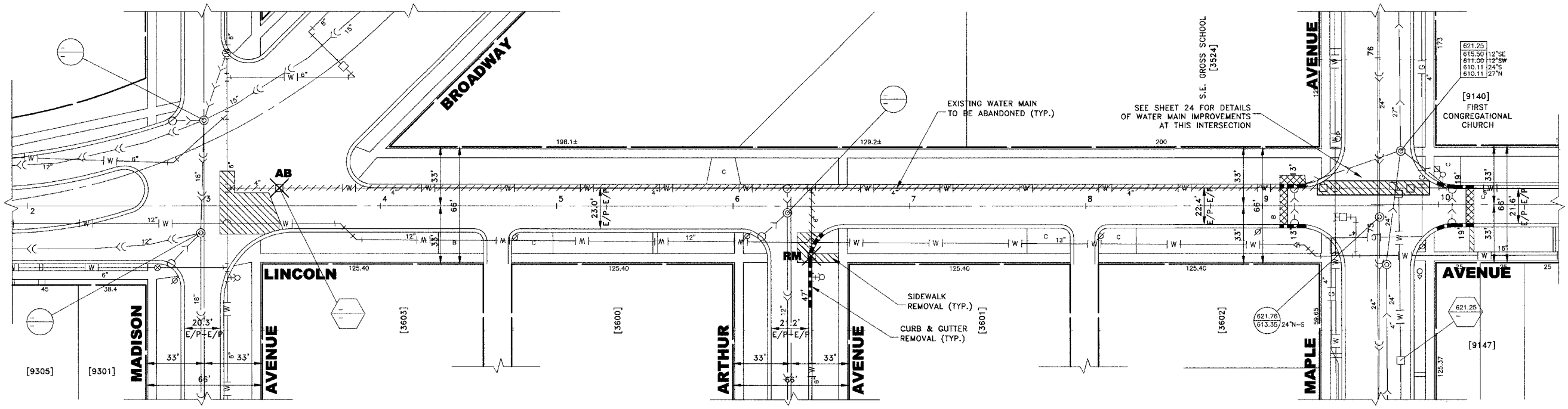
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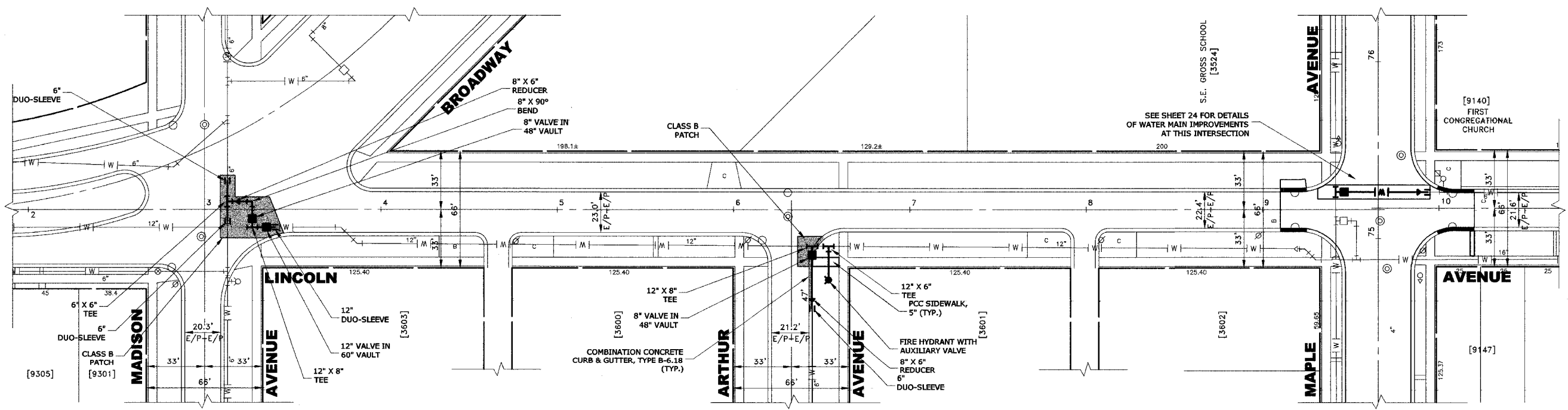
**MAPLE AVENUE IMPROVEMENTS
VILLAGE OF BROOKFIELD, ILLINOIS**

**MAPLE AVENUE
WATER MAIN IMPROVEMENTS**

SCALE: 1"=30'H. & 1"=2'V. SHEET
DRAWN BY: LEV/DMM/MK 24 / 34
BOOK NO.: 997/BP/LS
DATE: 4-12-05
E.H.E. NO.: 125-04-25005



EXISTING TOPOGRAPHY



PROPOSED IMPROVEMENT

HANCOCK ENGINEERING

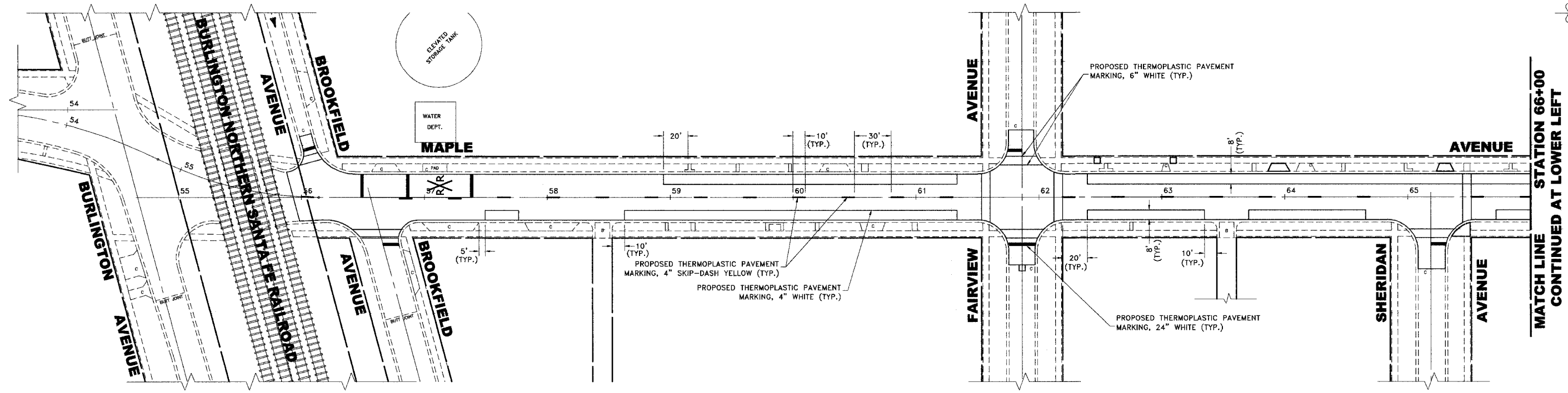
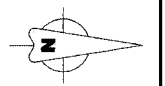
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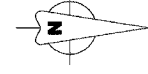
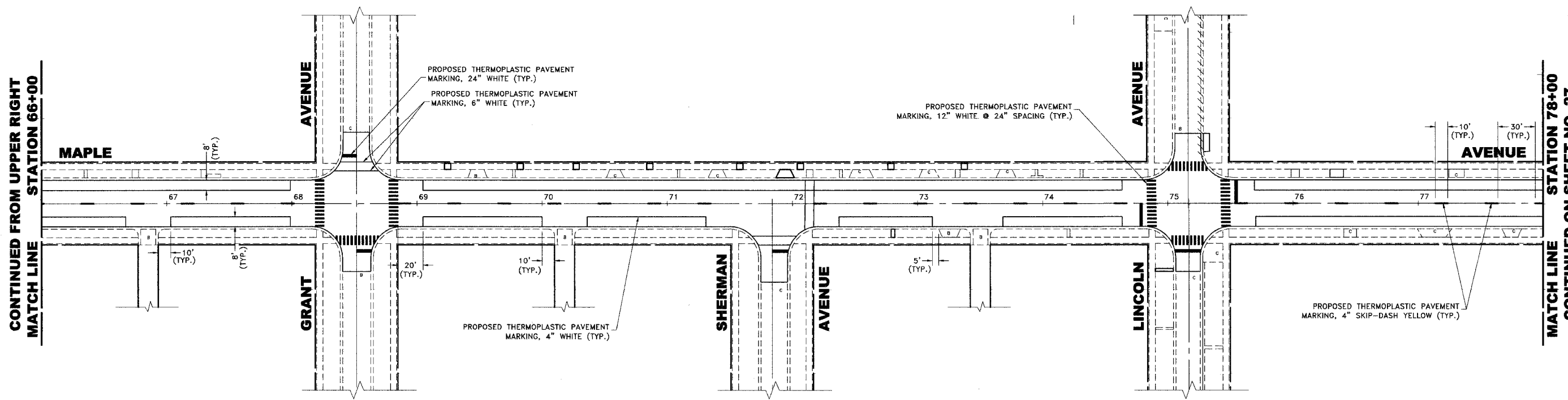
**MAPLE AVENUE IMPROVEMENTS
VILLAGE OF BROOKFIELD, ILLINOIS**

**LINCOLN AVENUE
WATER MAIN IMPROVEMENTS**

SCALE: 1" = 30'	SHEET 25 OF 34
DRAWN BY: LEV/DMM/MK	
BOOK NO.: 997/BP/LS	
DATE: 4-12-05	
REVISION:	E.H.E. NO.: 125-04-25005



MATCH LINE STATION 66+00
CONTINUED AT LOWER LEFT



CONTINUED FROM UPPER RIGHT
MATCH LINE STATION 66+00

MATCH LINE STATION 78+00
CONTINUED ON SHEET NO. 27

HANCOCK ENGINEERING

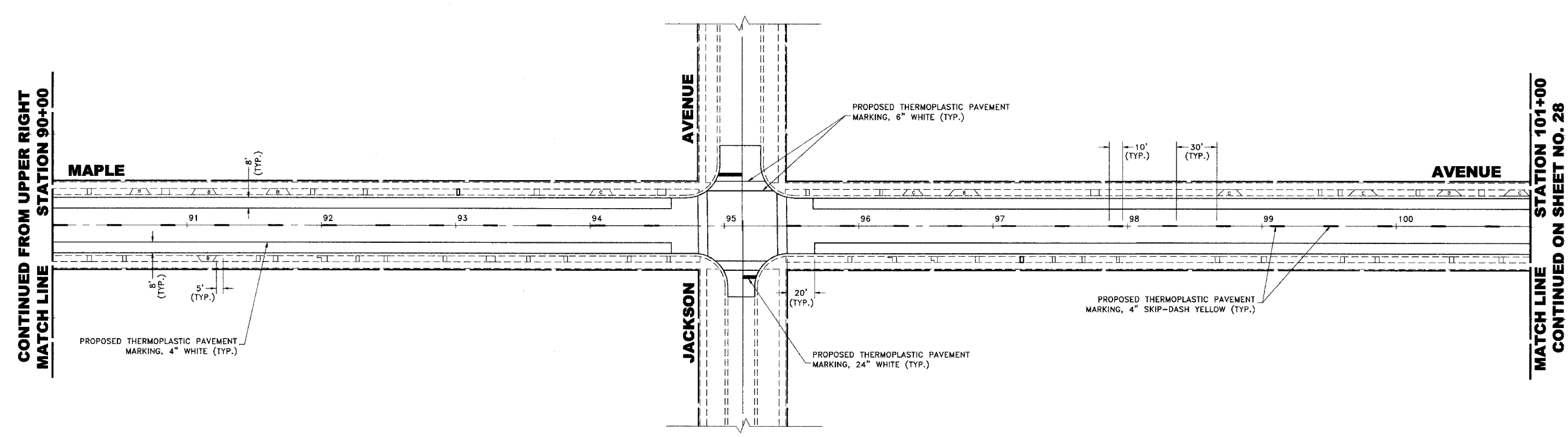
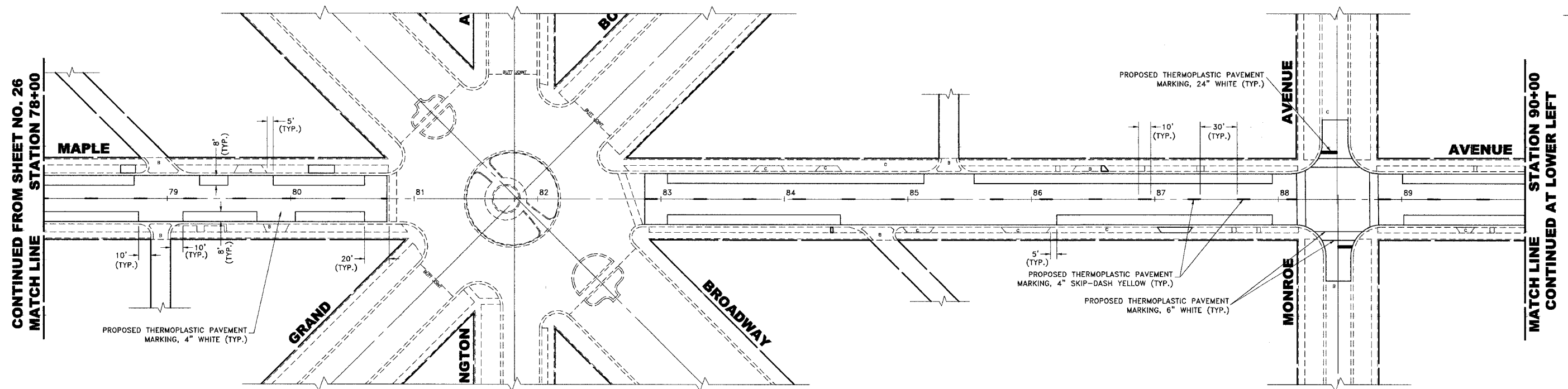
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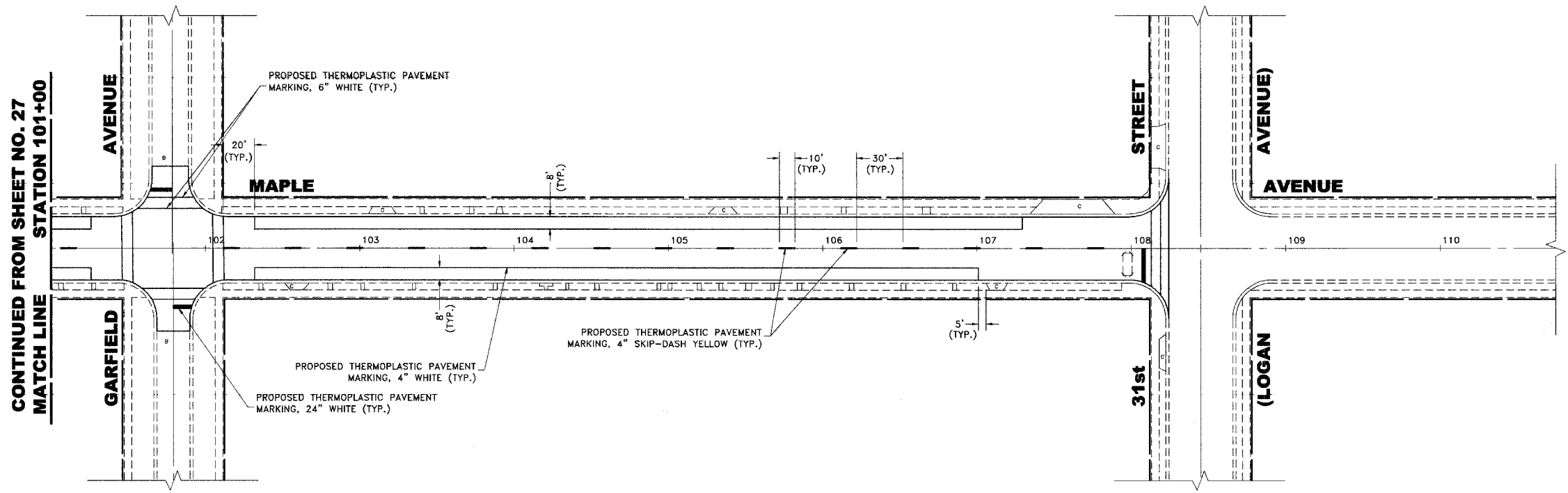
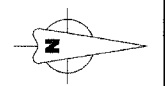
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**MAPLE AVENUE IMPROVEMENTS
VILLAGE OF BROOKFIELD, ILLINOIS**

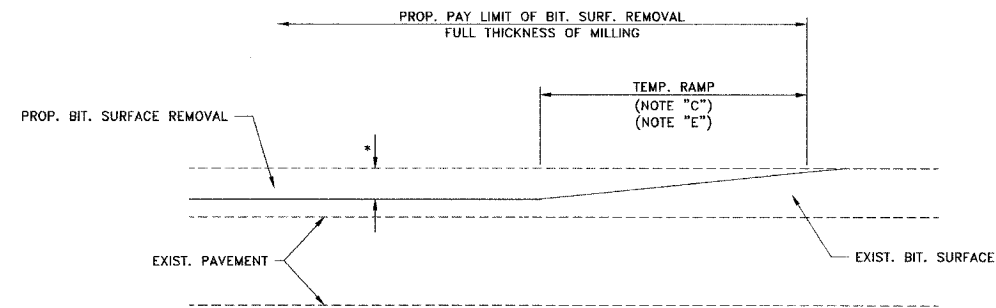
PAVEMENT MARKING PLAN

SCALE: 1" = 40'	26 / 34
DRAWN BY: LEV/DMM/MK	
BOOK NO.: 997/BP/LS	
DATE: 4-12-05	
REVISION:	E.H.E. NO.: 125-04-25005



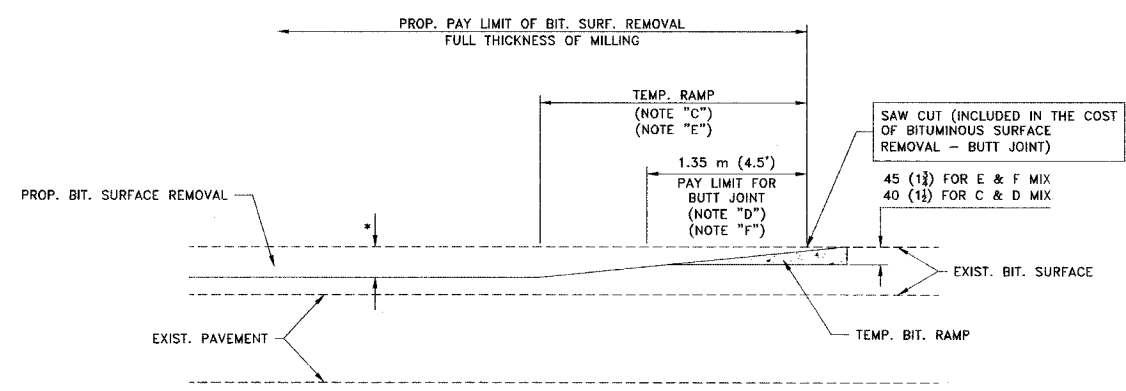


CONTINUED FROM SHEET NO. 27
MATCH LINE STATION 101+00



BITUMINOUS CONSTRUCTED TEMPORARY RAMP
(FOR BUTT JOINT AND BIT. TAPER SEE DETAIL BELOW)

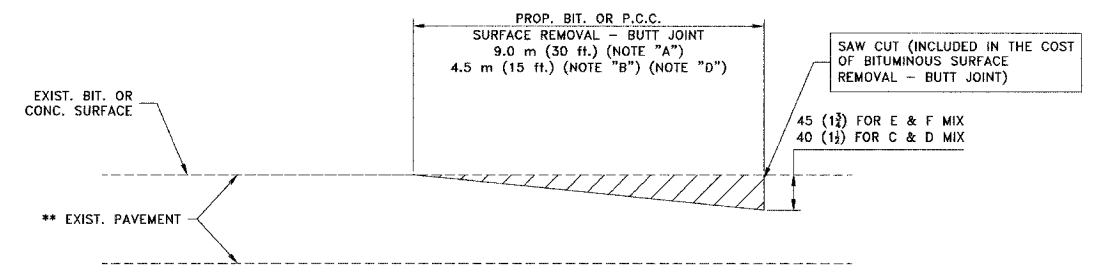
OPTION 1



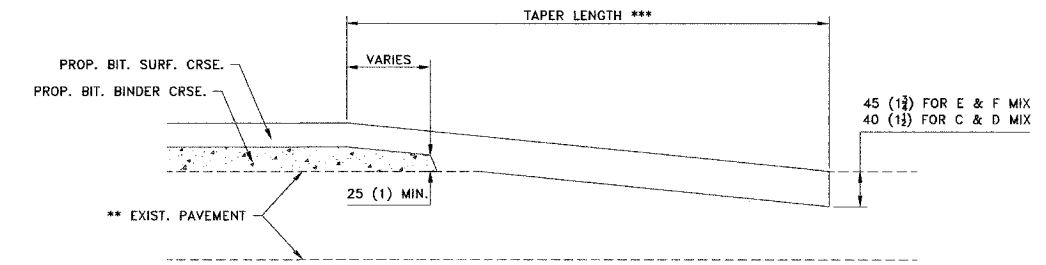
BITUMINOUS CONSTRUCTED TEMPORARY RAMP
(FOR BUTT JOINT AND BIT. TAPER SEE DETAIL BELOW)

OPTION 2

TYPICAL TEMPORARY RAMP



BUTT JOINT DETAIL



BITUMINOUS TAPER DETAIL

TYPICAL BUTT JOINT AND BITUMINOUS TAPER
FOR RESURFACING ONLY

** PC CONCRETE, BITUMINOUS OR BITUMINOUS RESURFACED PAVEMENT.

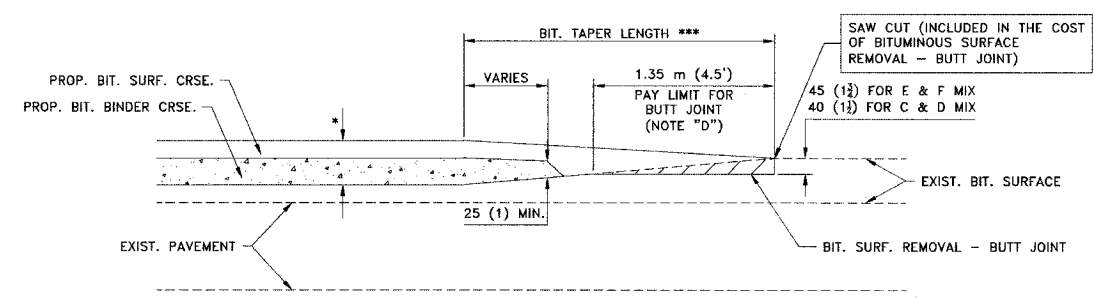
NOTES

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
- B: MINOR SIDE ROADS.
- C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING BITUMINOUS SURFACE.
- D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED BITUMINOUS COURSE.
- E: TAPER THE TEMP. RAMP AT A RATE OF 900 (3 ft.) PER INCH OF MILLING THICKNESS.
- F: INSTALLATION AND REMOVAL OF THE 1.35m (4.5 ft.) TEMP. BIT. RAMP WILL BE PAID AS "BITUMINOUS SURFACE REMOVAL - BUTT JOINT".
- G: SEE ARTICLE 406.18 AND 406.24 OF THE STANDARD SPECIFICATIONS FOR "BITUMINOUS AND PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- *** 6.1 m (20') PER 25 (1) RESURFACING (NOTE "A")
3.0 m (10') PER 25 (1) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR PER SQUARE METER (SQUARE YARD) AS "BITUMINOUS SURFACE REMOVAL - BUTT JOINT" OR AS "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.



BITUMINOUS TAPER DETAIL

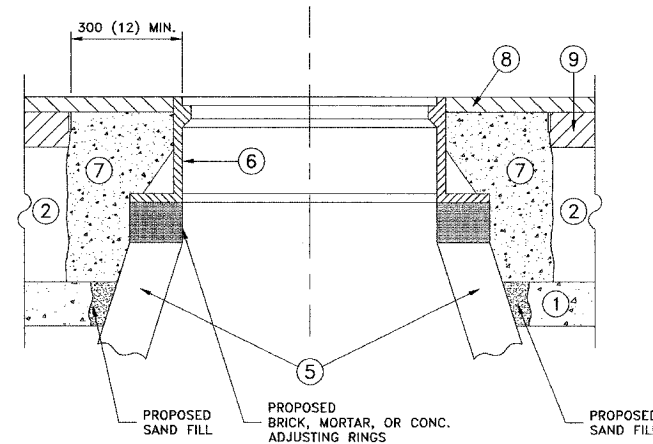
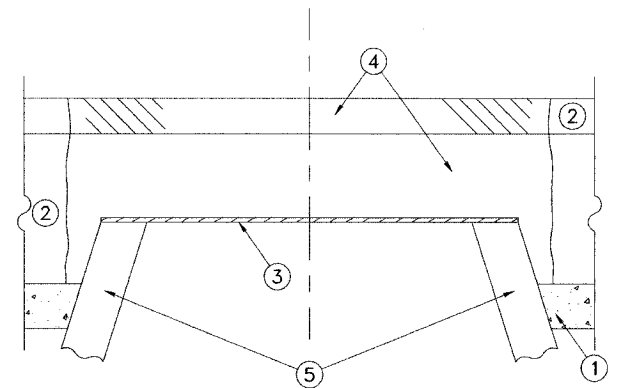
TYPICAL BUTT JOINT AND BITUMINOUS TAPER
FOR MILLING AND RESURFACING ONLY

HANCOCK ENGINEERING
Civil Engineers
Municipal Consultants
Established 1911

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Westchester, Illinois 60154-2780
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REVISIONS	
NAME	DATE
M. DE YOUNG	06/13/90
M. DE YOUNG	07/03/90
M. DE YOUNG	3/27/92
R. SHAH	09/09/94
R. SHAH	10/25/94
A. ABBAS	03/21/97
M. GOMEZ	04/06/01

ILLINOIS DEPARTMENT OF TRANSPORTATION	
BUTT JOINT AND BITUMINOUS TAPER DETAILS	
SCALE: NONE	DRAWN BY: CADD
DATE: 03/25/02	CHECKED BY:



CONSTRUCTION PROCEDURES

STAGE 1 (BEFORE PAVEMENT MILLING)

- A) REMOVE A MINIMUM OF 300 (12) OF THE PAVEMENT FROM AROUND THE STRUCTURE.
- B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
- C) COVER THE STRUCTURE OPENING WITH A 900 (36) DIAMETER METAL PLATE.
- D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 40 (1 1/2) THICK BITUMINOUS MATERIAL APPROVED BY THE ENGINEER.

STAGE 2 (AFTER PAVEMENT MILLING)

- A) REMOVE THE BITUMINOUS MATERIAL AND CRUSHED STONE.
- B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
- C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS SI CONCRETE, OR BITUMINOUS CONCRETE SURFACE OR BINDER COURSE MATERIAL TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS.

LEGEND

- | | |
|--|--|
| ① SUB-BASE GRANULAR MATERIAL | ⑥ FRAME AND LID (SEE NOTES) |
| ② EXISTING PAVEMENT | ⑦ CLASS SI CONCRETE, BITUMINOUS CONCRETE SURFACE OR BINDER COURSE MATERIAL |
| ③ 900 (36) DIAMETER METAL PLATE | ⑧ PROPOSED BITUMINOUS CONCRETE SURFACE COURSE |
| ④ PROPOSED CRUSHED STONE AND BITUMINOUS MATERIAL | ⑨ PROPOSED BITUMINOUS CONCRETE BINDER COURSE |
| ⑤ EXISTING STRUCTURE | |

NOTES:

EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.

CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.

THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

WHEN STRUCTURES ARE TO BE RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE RECONSTRUCTION PAY ITEM.

LOCATION OF STRUCTURES:

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

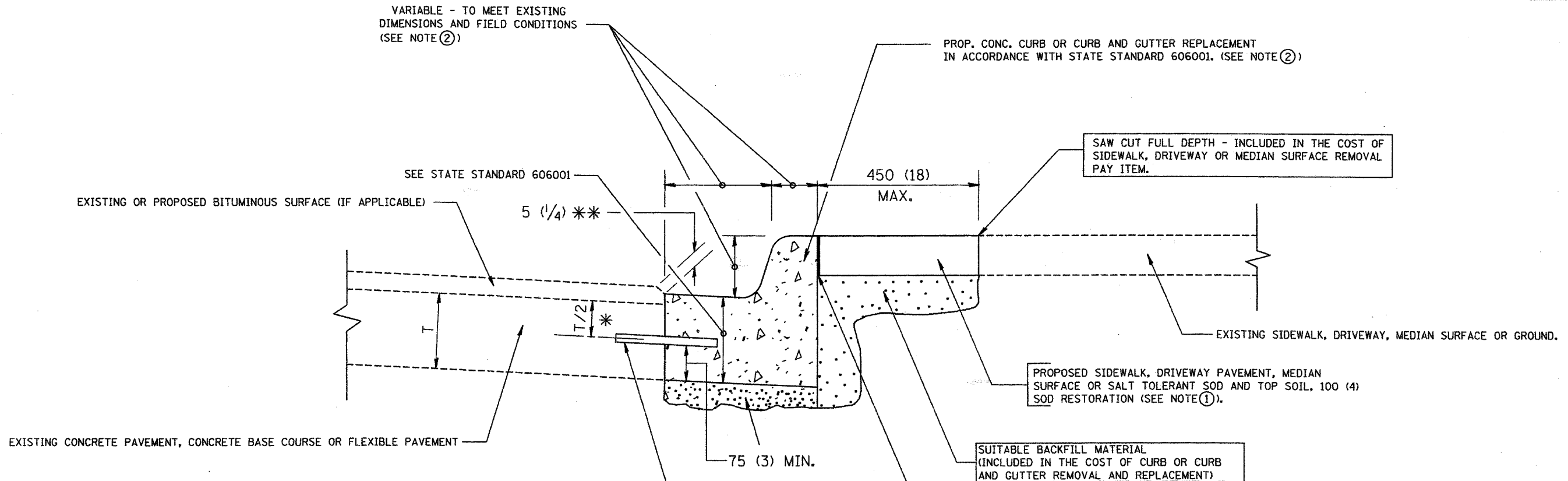
BASIS OF PAYMENT:

FRAMES AND LIDS TO BE ADJUSTED, SPECIAL EACH NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

<p>HANCOCK ENGINEERING ◆ Civil Engineers ◆ Municipal Consultants ◆ Established 1911</p> <p>9933 Roswell Road Westchester, Illinois 60154-2700 Phone: 708/965-0300 Fax: 708/965-1212</p>	<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>NAME</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>R. SHAH</td> <td>10/25/94</td> </tr> <tr> <td>R. SHAH</td> <td>01/30/95</td> </tr> <tr> <td>R. SHAH</td> <td>03/10/95</td> </tr> <tr> <td>A. ABBAS</td> <td>03/21/97</td> </tr> </tbody> </table>		NAME	DATE	R. SHAH	10/25/94	R. SHAH	01/30/95	R. SHAH	03/10/95	A. ABBAS	03/21/97	<p>ILLINOIS DEPARTMENT OF TRANSPORTATION</p> <p>DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING</p>	
	NAME	DATE												
	R. SHAH	10/25/94												
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	SCALE: NONE	DRAWN BY: CADD												
	DATE: 03/25/02	CHECKED BY:												

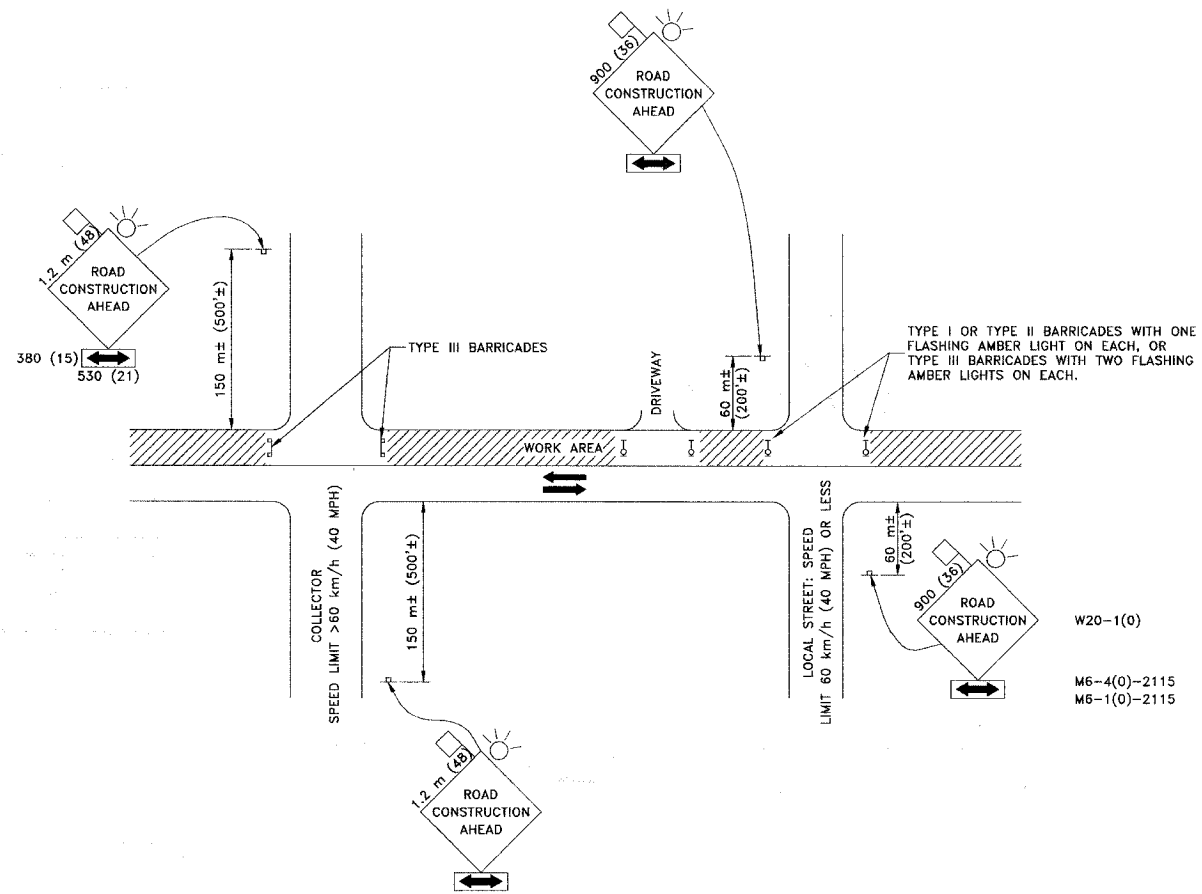


- * 75 (3) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.
 - * * IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.
- NOTE: ① SIDEWALK, DRIVEWAY PAVEMENT OR MEDIAN SURFACE SHALL BE SIMILAR TO THE MATERIAL BEING REMOVED AND WILL BE PAID FOR SEPARATELY.
- SALT TOLERANT SOD AND TOP SOIL, 100 (4) RESTORATION WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.
- ② CURB OR CURB AND GUTTER REPLACEMENT SHALL MATCH THE SHAPE OF THE EXISTING CURB OR CURB AND GUTTER UNLESS OTHERWISE SPECIFIED.
- ③ FOR CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT ADJACENT TO FLEXIBLE PAVEMENT DELETE EPOXY COATED TIE BARS.
- ④ LONGITUDINAL BARS, IF ENCOUNTERED IN THE EXISTING CURB OR CURB AND GUTTER, ARE NOT TO BE REPLACED. CUTTING AND REMOVING LONGITUDINAL BARS SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.
- ⑤ THE COST OF BITUMINOUS SURFACE REMOVAL IN THE EXISTING GUTTER FLAG SHALL BE INCLUDED IN THE COST OF THE CURB AND GUTTER REMOVAL AND REPLACEMENT.

- PROPOSED 20 (3/4) PREFORMED EXPANSION JOINT AT CONCRETE SIDEWALKS, DRIVEWAYS, AND MEDIANS. (INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.)
- UNSUITABLE SUB-BASE MATERIAL TO BE REMOVED, IF DIRECTED BY THE ENGINEER, SHALL BE REPLACED WITH EITHER SUB-BASE GRANULAR MATERIAL, TYPE B OR ADDITIONAL THICKNESS OF CONCRETE.
- REMOVAL AND REPLACEMENT 100 (4) OR LESS IS INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.
- REMOVAL AND REPLACEMENT IN EXCESS OF 100 (4) WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.
- PROPOSED NO. 20 (NO. 6) EPOXY COATED TIE BARS 600 (24) LONG AT 600 (24) CENTERS WILL NOT BE PAID FOR SEPARATELY. DELETE EPOXY COATED TIE BARS IF EXISTING TIE BARS ARE USUABLE AS DETERMINED BY THE ENGINEER. (SEE NOTE ③).

CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

<p>HANCOCK ENGINEERING</p> <p>◆ Civil Engineers ◆ Municipal Consultants ◆ Established 1911</p> <p style="font-size: small;">9933 Roosevelt Road Westchester, Illinois 60154-2700 Phone: 708/945-4300 Fax: 708/945-1212</p>	<p>ILLINOIS DEPARTMENT OF TRANSPORTATION</p> <p style="font-size: large;">CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT</p>	<p>SCALE: NONE</p> <p>DATE: 08/19/99</p>	<p>DRAWN BY: CADD</p> <p>CHECKED BY:</p>																			
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <th>NAME</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>A. HOUSEH</td> <td>03/11/94</td> </tr> <tr> <td>R. SHAH</td> <td>02/24/95</td> </tr> <tr> <td>R. SHAH</td> <td>03/02/95</td> </tr> <tr> <td>R. SHAH</td> <td>08/19/96</td> </tr> <tr> <td>R. SHAH</td> <td>09/12/96</td> </tr> <tr> <td>R. SHAH</td> <td>09/19/96</td> </tr> <tr> <td>R. SHAH</td> <td>10/03/96</td> </tr> <tr> <td>A. ABBAS</td> <td>03/21/97</td> </tr> </tbody> </table>	REVISIONS		NAME	DATE	A. HOUSEH	03/11/94	R. SHAH	02/24/95	R. SHAH	03/02/95	R. SHAH	08/19/96	R. SHAH	09/12/96	R. SHAH	09/19/96	R. SHAH	10/03/96	A. ABBAS	03/21/97	
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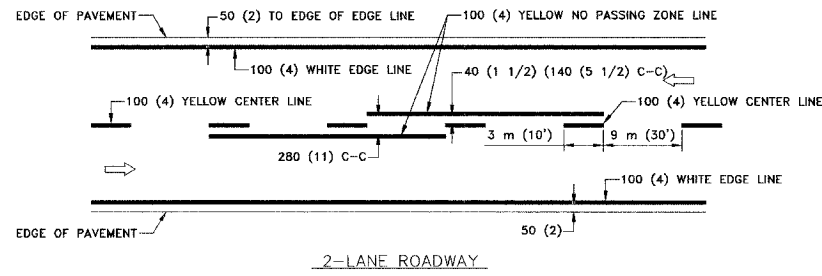
TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

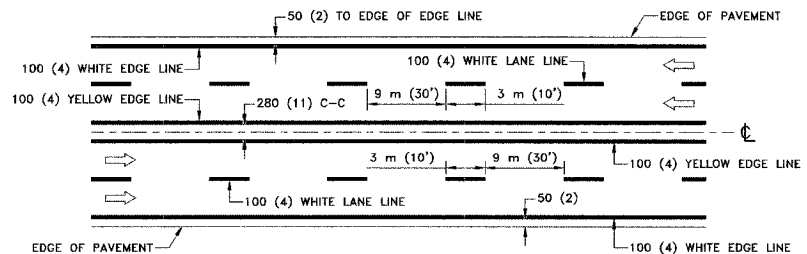
- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS**
- SIDE ROAD WITH A SPEED LIMIT OF 60 km/h (40 MPH) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE "ROAD CONSTRUCTION AHEAD" SIGN 900 X 900 (36 X 36) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 60 m (200') IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II, OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
 - SIDE ROAD WITH A SPEED LIMIT GREATER THAN 60 km/h (40 MPH) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE "ROAD CONSTRUCTION AHEAD" SIGN 1.2m X 1.2m (48" BY 48") WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 150m (500 FT.) IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE II BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).**
- B. FOR LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:**
- USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606, OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.**
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIC TRAFFIC CONTROL STANDARDS OR ITEMS.**

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

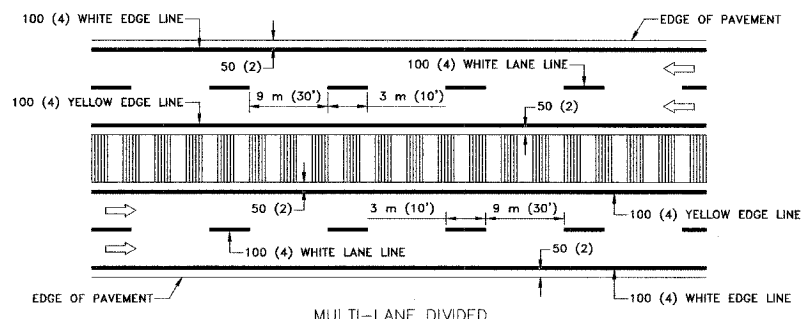
<p>HANCOCK ENGINEERING Civil Engineers Municipal Consultants Established 1911</p>	REVISIONS NAME DATE LHA 06/89 T. RAMMACHER 09/08/94 J. OBERLE 10/18/95 A. HOUSER 03/06/96 A. HOUSER 10/15/96 T. RAMMACHER 01/06/00		ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS	
	SCALE: NONE DATE: 03/25/02	DRAWN BY: CADD CHECKED BY:		
	E.H.E. PROJECT NO. 125-04-25005			



2-LANE ROADWAY



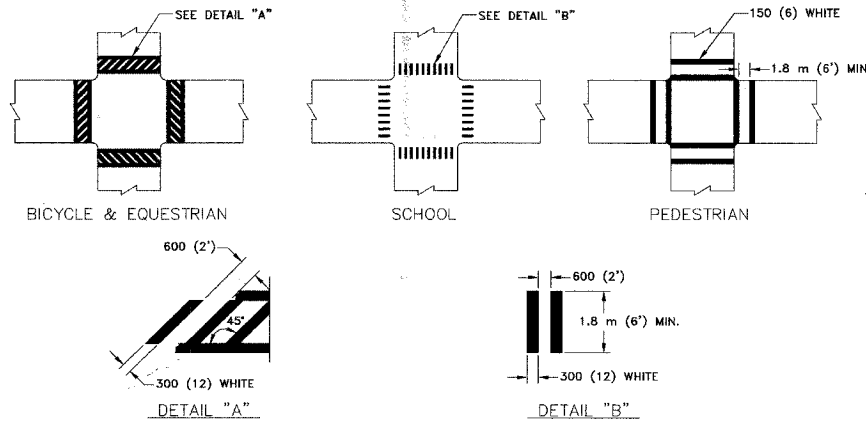
MULTI-LANE UNDIVIDED



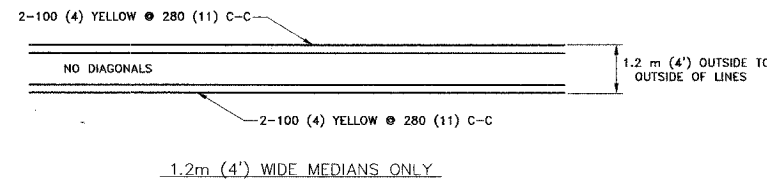
MULTI-LANE DIVIDED WITH MOUNTABLE MEDIAN

NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGELINE.

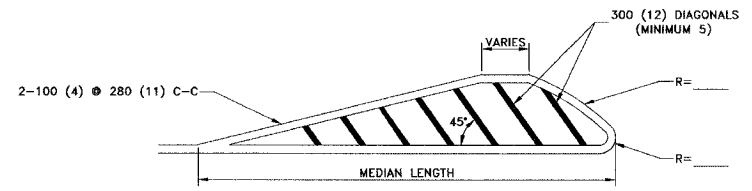
TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



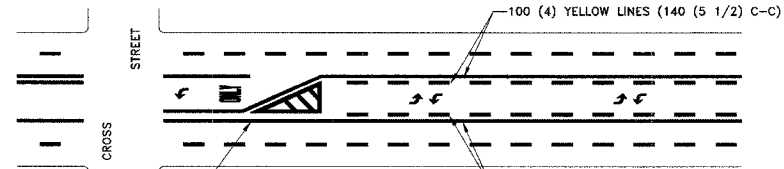
1.2m (4') WIDE MEDIANS ONLY



MEDIANS OVER 1.2 m (4') WIDE

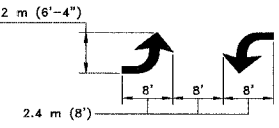
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

DIAGONAL LINE SPACING: 15 m (50') C-C (LESS THAN 50 km/h (30 MPH))
25 m (75') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH))
45 m (150') C-C (MORE THAN 70 km/h (45 MPH))

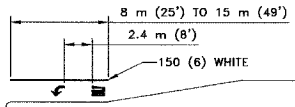


TYPICAL PAINTED MEDIAN MARKING

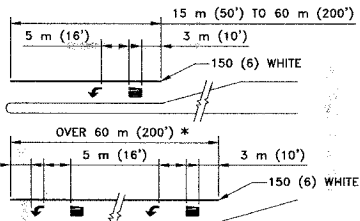
A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 60 m (200') TO 90 m (300') INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE



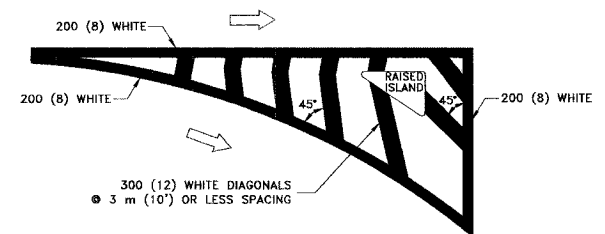
TYPICAL LEFT (OR RIGHT) TURN LANE



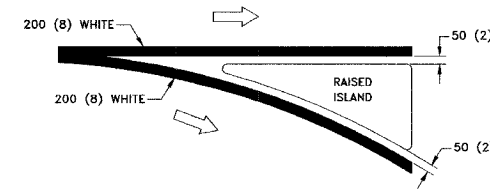
TYPICAL TURN LANE MARKING

FULL SIZE LETTERS 2.4 m (8') AND ARROWS SHALL BE USED.
AREA = 1.5 m² (15.6 SQ. FT.) AREA = 1.9 m² (20.8 SQ. FT.)

* TURN LANES IN EXCESS OF 120 m (400') IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".



ISLAND OFFSET FROM PAVEMENT EDGE



ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING/REMARKS
CENTERLINE ON 2 LANE PAVEMENT	100 (4)	SKIP-DASH	YELLOW	3 m (10') LINE WITH 9 m (30') SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 100 (4)	SOLID	YELLOW	280 (11) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	100 (4) 2 @ 100 (4)	SOLID SOLID	YELLOW YELLOW	140 (5 1/2) C-C FROM SKIP-DASH CENTERLINE 280 (11) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINE	100 (4) 125 (5) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	3 m (10') LINE WITH 9 m (30') SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS BEING EXTENDED	SKIP-DASH	SAME AS BEING EXTENDED	600 (2') LINE WITH 1.8 m (6') SPACE
EDGE LINE	100 (4)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW. EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	150 (6) LINE; FULL SIZE LETTERS & SYMBOLS (2.4 m (8'))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL.
TWO WAY LEFT TURN MARKING	2 @ 100 (4) EACH DIRECTION 2.4 m (8') LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	3 m (10') LINE WITH 9 m (30') SPACE FOR SKIP-DASH; 140 (5 1/2) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL.
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 150 (6) 300 (12) @ 45' 300 (12) @ 90'	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 1.8 m (6') APART 600 (2') APART 600 (2') APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	600 (24)	SOLID	WHITE	PLACE 1.2 m (4') IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT.
PAINTED MEDIANS	2 @ 100 (4) WITH 300 (12) DIAGONALS @ 45' NO DIAGONALS USED FOR 1.2 m (4') WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE ONE WAY TRAFFIC	280 (11) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MAKING.
GORE MARKING AND CHANNELIZING LINES	200 (8) WITH 300 (12) DIAGONALS @ 45'	SOLID	WHITE	DIAGONALS: 4.5 m (15') C-C (LESS THAN 50 km/h (30MPH)) 6 m (20') C-C (50km/h (30MPH) TO 70km/h (45MPH)) 9 m (30') C-C (OVER 70km/h (45 MPH))
RAILROAD CROSSING	600 (24) TRANSVERSE LINES; "RR" IS 1.8 m (6') LETTERS; 400 (16) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=0.40 m ² (4.3 SQ. FT.) EACH "X"=5.0 m ² (54.0 SQ. FT.)
SHOULDER DIAGONALS	300 (12) @ 45'	SOLID	WHITE - RIGHT YELLOW - LEFT	15 m (50') C-C (LESS THAN 50 km/h (30MPH)) 25 m (75') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH)) 45 m (150') C-C (OVER 70 km/h (45MPH))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

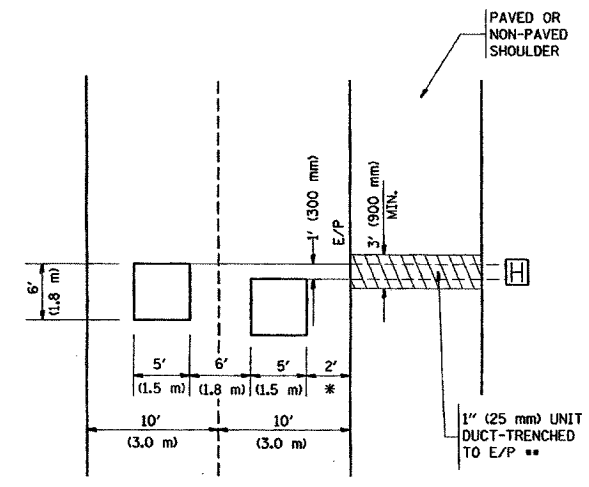
HANCOCK ENGINEERING
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REVISIONS	
NAME	DATE
EVERS	03/19/90
T. RAMMACHER	10/27/94
A. HOUSER	10/09/96
A. HOUSER	10/17/96
T. RAMMACHER	01/06/00

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT ONE TYPICAL PAVEMENT MARKINGS
SCALE: NONE
DATE: 03/25/02
DRAWN BY: CADD
CHECKED BY:
E.H.E. PROJECT NO. 125-04-25005

LOOPS NEXT TO SHOULDERS

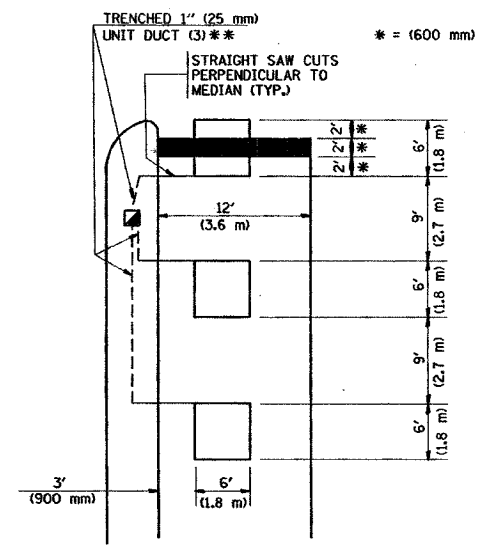
PROVIDE A PAVEMENT REPLACEMENT NOTE WHICH SHOULD EQUAL 3' (900 mm) X WIDTH OF PAVED SHOULDER.



* = (600 mm)
 ** UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

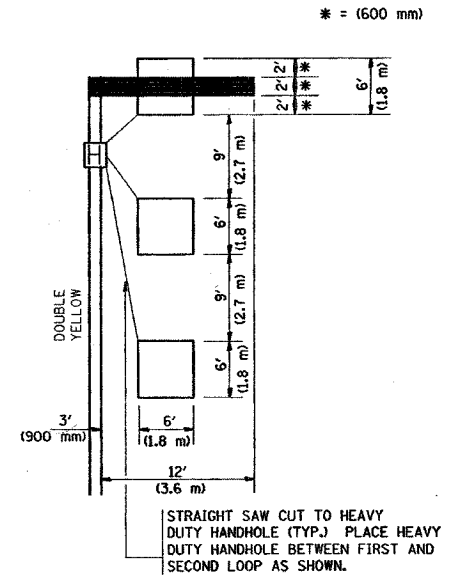
**LEFT TURN LANES WITH MEDIANS
 VOLUME DENSITY ("FAR OUT" DETECTION)
 ON SAME APPROACH
 (PROTECTED / PERMITTED LEFT TURN PHASING)**

HANDHOLE LOCATION MAY VARY DEPENDING ON GEOMETRICS AND DESIGN OF TRAFFIC SIGNALS. HEAVY-DUTY HANDHOLES TO BE USED WHEN THE MEDIAN IS MOUNTABLE. REFER TO STANDARD 814001 TO ENSURE THAT HANDHOLE FITS IN MEDIAN.



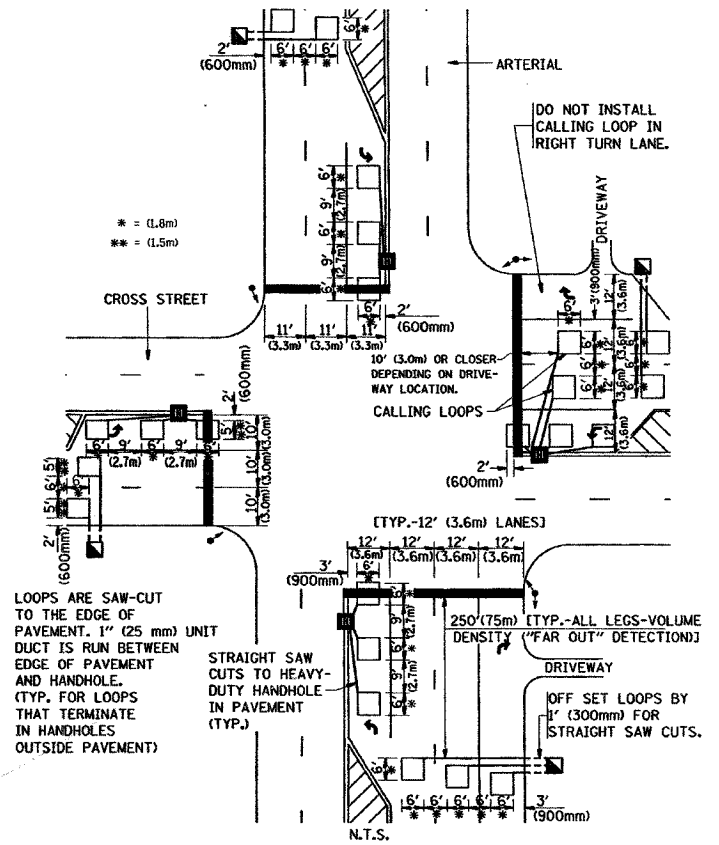
* = (600 mm)
 ** UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.
 NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

**LEFT TURN LANES WITHOUT MEDIANS
 VOLUME DENSITY ("FAR OUT" DETECTION)
 ON SAME APPROACH
 (PROTECTED / PERMITTED LEFT TURN PHASING)**



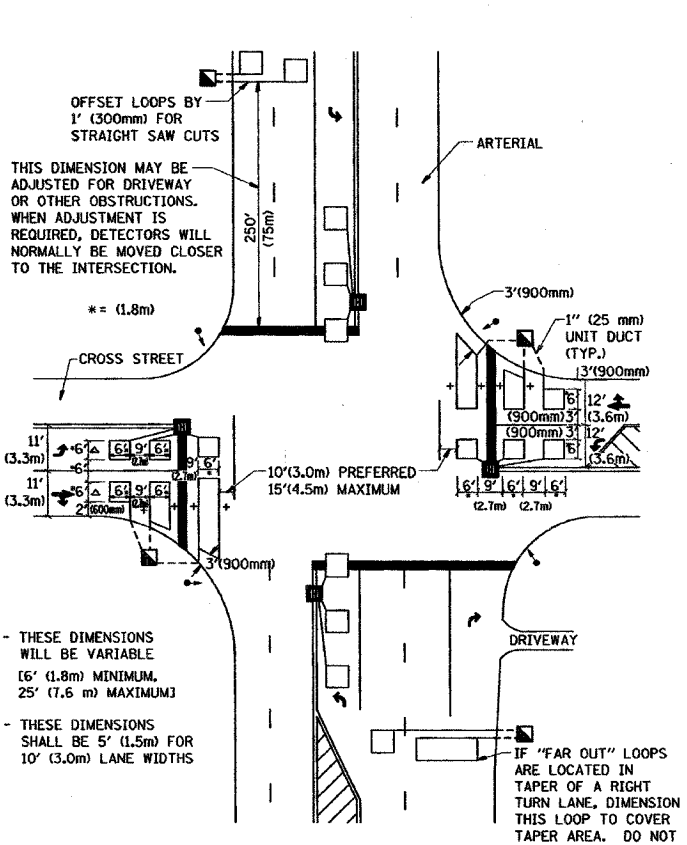
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

**ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)
 CROSS STREET-VOLUME DENSITY ("FAR OUT" DETECTION)**



LOOPS ARE SAW-CUT TO THE EDGE OF PAVEMENT. 1" (25 mm) UNIT DUCT IS RUN BETWEEN EDGE OF PAVEMENT AND HANDHOLE. (TYP. FOR LOOPS THAT TERMINATE IN HANDHOLES OUTSIDE PAVEMENT)
 STRAIGHT SAW CUTS TO HEAVY-DUTY HANDHOLE IN PAVEMENT (TYP.)
 OFF SET LOOPS BY 1' (300mm) FOR STRAIGHT SAW CUTS.
 DETAIL 1
 N.T.S.

**ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)
 CROSS STREET-NON VOLUME DENSITY ("UPTIGHT" PRESENCE DETECTION)**



OFF SET LOOPS BY 1' (300mm) FOR STRAIGHT SAW CUTS
 THIS DIMENSION MAY BE ADJUSTED FOR DRIVEWAY OR OTHER OBSTRUCTIONS. WHEN ADJUSTMENT IS REQUIRED, DETECTORS WILL NORMALLY BE MOVED CLOSER TO THE INTERSECTION.
 * = (1.8m)
 + - THESE DIMENSIONS WILL BE VARIABLE [6' (1.8m) MINIMUM, 25' (7.6 m) MAXIMUM]
 ^ - THESE DIMENSIONS SHALL BE 5' (1.5m) FOR 10' (3.0m) LANE WIDTHS
 IF "FAR OUT" LOOPS ARE LOCATED IN TAPER OF A RIGHT TURN LANE, DIMENSION THIS LOOP TO COVER TAPER AREA. DO NOT COVER THE LEFT TURN LANE OR LEFT TURN LANE TAPER.
 DETAIL 2
 N.T.S.

NOTES:

- VEHICLES LOOP DETECTORS**
- * ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED, SHIELDED.
 - * EACH DETECTOR LOOP SHALL HAVE ITS OWN SAW CUT FROM THE LOOP TO THE EDGE OF PAVEMENT OR TO A HANDHOLE IN THE PAVEMENT.
 - * EACH DETECTOR LOOP SHALL HAVE ITS OWN ONE INCH (25 mm) UNIT DUCT BETWEEN THE EDGE OF PAVEMENT AND THE FIRST HANDHOLE OR JUNCTION BOX. EACH UNIT DUCT RUN SHALL BE SHOWN ON THE PLANS BY THE DESIGNER, BUT SHALL NOT BE PAID FOR SEPARATLY. THIS ITEM IS INCIDENTAL TO THE PAY ITEM FOR DETECTOR LOOPS.
 - * ONE DIMENSION OF ALL DETECTOR LOOPS SHALL BE SIX FEET (1.8 m)
 - * EACH LANE OF NON-LOCKING, PRESENCE DETECTION AND EACH LANE OF A DOUBLE LEFT TURN LANE REQUIRES A SEPARATE INDUCTIVE LOOP DETECTOR AND LEAD IN CABLE.
 - * WHEN NON-LOCKING, PRESENCE DETECTION IS USED, MORE THAN ONE LOOP PER LANE IS REQUIRED BEHIND THE STOP BAR (i.e. 1-1/2, 1-3/4, 2).
 - * WHEN SYSTEM LOOPS ARE REQUIRED ON AN APPROACH OF AN INTERSECTION, THE LOOPS USED FOR VOLUME DENSITY AND INTERSECTION TIMING SHALL ALSO BE USED AS SYSTEM DETECTORS. EACH ONE OF THESE TYPE OF LOOPS REQUIRES A SEPARATE TWO CONDUCTOR NO. 14 TWISTED SHIELDED CABLE AND A SEPARATE INDUCTIVE LOOP DETECTOR WHEN NEW CONTROLLERS ARE UTILIZED. THE DESIGNER SHALL LABEL THESE TYPES OF LOOPS AS "INTERSECTION AND SAMPLING (SYSTEM) DETECTORS" ON THE SIGNAL LAYOUT, THE INTERCONNECT PLAN AND THE SYSTEM CABLE PLAN. WHEN AN EXISTING CONTROLLER IS UTILIZED FOR THIS TYPE OF DETECTION, THE PAY ITEM "INDUCTIVE LOOP DETECTOR WITH SYSTEM OUTPUT" SHOULD BE USED.

PLACEMENT OF DETECTORS

THE FOLLOWING FIGURES REPRESENT THE MOST COMMON DETECTOR LOOP LOCATIONS AND SIZES. ADJUSTMENTS WILL BE NECESSARY FOR SPECIFIC GEOMETRIC CONSIDERATIONS.

LOCATIONS AND DEMENSIONS OF DETECTOR LOOPS ARE REQUIRED ON ALL SIGNAL LAYOUT PLAN SHEETS.

"FAR OUT" DETECTION REFERS TO LOCKING, PRESENCE TYPE DETECTION LOCATED IN THRU LANES, RIGHT TURN LANES, AND RIGHT TURN LANE TAPER AREAS (IF APPLICABLE), USUALLY 250' (75 m) IN ADVANCE OF STOP BARS. "UPTIGHT" DETECTION REFERS TO NON-LOCKING PRESENCE TYPE DETECTION LOCATED IN ALL LANES AND 10'-15' (3.0 m-4.5 m) BEHIND THE CROSSING STREET'S EDGE OF PAVEMENT EXTENDED.

NOTE:
 ALL DETAILS AND NOTES SHOWN ARE FROM THE I.D.O.T. DISTRICT 1 TRAFFIC SIGNAL DESIGN GUIDELINES DATED JANUARY 1995

THIS DRAWING HAS BEEN PREPARED TO ASSIST THE RESIDENT ENGINEER FOR ALL ROADWAY RESURFACING OR S.M.A.R.T. PROJECTS WHERE THE DIMENSIONS ARE NOT SHOWN ON THE PLANS AND THE FINAL LOCATIONS FOR CROSSWALKS OR STOP BARS ARE NOT DETERMINED.

HANCOCK ENGINEERING

◆ Civil Engineers
 ◆ Municipal Consultants
 ◆ Established 1911

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REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE	DISTRICT ONE DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY RESURFACING	
		SCALE: NONE	DRAWN BY: CADD
		DATE: 7/13/2004	CHECKED BY: R.K.F.