

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

FOR INDEX OF SHEETS SEE SHEET NO. 2

**PLANS FOR
PROPOSED FEDERAL AID PROJECT
FAU 2732 PRAIRIE AVENUE
WASHINGTON AVENUE (FAU 1472) TO
31ST STREET (FAU 1467)
VILLAGE OF BROOKFIELD
SECTION 00-00115-00-WR
RESURFACING AND RECONSTRUCTION
PROJECT M-8003(371)
COOK COUNTY
C-91-130-04**

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 2732	**	COOK	49	1
ILLINOIS PROJECT		M-8003(371)		
VILLAGE SECTION		00-00115-00-WR		
CONTRACT NO. 83823				



LOCATION OF SECTION INDICATED THUS:

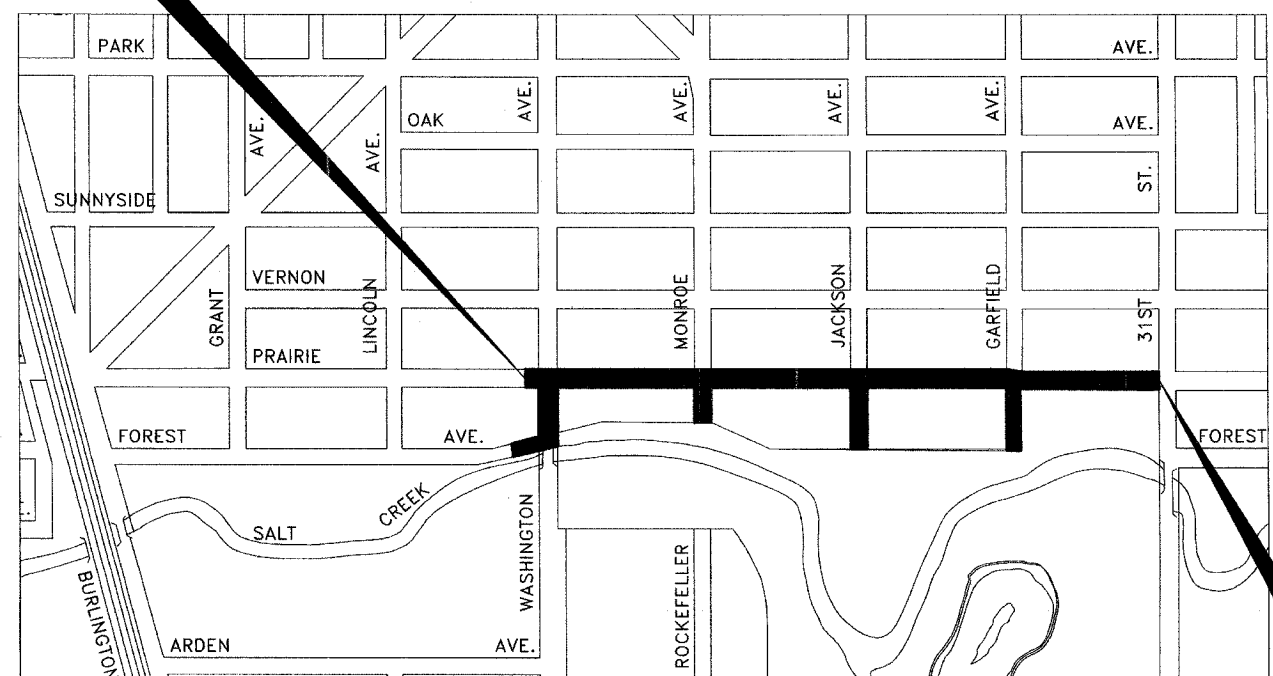
TRAFFIC DATA

2030 ADT = 6,000
POSTED SPEED LIMIT: 30 MPH
DESIGN SPEED LIMIT: 30 MPH

PROJECT LOCATED IN THE VILLAGE OF BROOKFIELD

PROJECT BEGINS STATION 23+05 PRAIRIE AVENUE

LOCATION MAP
TOWNSHIP 39 NORTH, RANGE 12 EAST, SECTION 34



PROVISO TOWNSHIP MAP SCALE: (NOT TO SCALE)

— AREA OF IMPROVEMENT

GROSS AND NET LENGTH OF PROJECT = 2,710 FT. = 0.513 MI.



Derek S. Treichel



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

APPROVED: *[Signature]* 20
11-04-05
LOCAL AGENCY OFFICIAL

APPROVED: *[Signature]* 20
NOVEMBER 8, 2005
LOCAL ROADS ENGINEER

APPROVED: Nov. 10 20 05
Piomo M. O'Keefe, Conf.
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

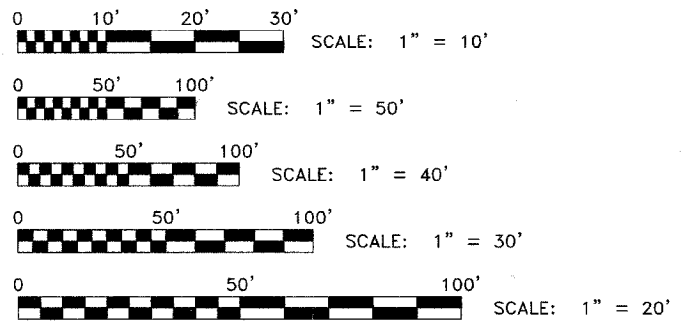
(PRINTED BY AUTHORITY OF THE STATE OF ILLINOIS)

E.H.E. NO. 125-04-26301

FEDERAL AID DESIGN ENGINEER: ABIGAIL BRINKS PHONE: (847) 705-4233
CONSULTANT: EDWIN HANCOCK ENGINEERING COMPANY
9933 ROOSEVELT ROAD PHONE: (708) 865-0300
WESTCHESTER, ILLINOIS 60154

CONTRACT NO. 83823

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.



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET, LOCATION MAP
2	INDEX OF SHEETS, LEGEND, BENCHMARKS, I.D.O.T. STANDARD DRAWINGS
3	GENERAL NOTES
4-5	SUMMARY OF QUANTITIES
6	TYPICAL CROSS SECTIONS
7-8	MAINTENANCE OF TRAFFIC PLAN
9-19	PLAN AND PROFILE
20	ROADWAY DETAILS
21-31	DRAINAGE AND UTILITIES
32-34	DRAINAGE AND UTILITIES DETAILS
35	EROSION CONTROL PLAN
36	SIGNING LEGEND AND NOTES
37	PAVEMENT MARKING AND SIGNING PLAN
38	ASPHALT AND LANDSCAPING PLAN
39	DISTRICT ONE TYPICAL PAVEMENT MARKINGS
40	TRAFFIC CONTROL AND PROTECTION FOR SIDEROADS, INTERSECTIONS, AND DRIVEWAYS
41	BUTT JOINTS AND BITUMINOUS TAPER DETAILS
42	DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING
43	DETECTOR LOOP INSTALLATION
44-49	STATION CROSS SECTIONS

BENCHMARKS

BM-01.	North-northwest bonnet bolt on fire hydrant at southwest corner of Prairie Avenue and Washington Avenue	617.51
BM-02.	North-northeast bonnet bolt on fire hydrant in front of 3423 Prairie Avenue	620.24
BM-03.	North-northeast bonnet bolt on fire hydrant at southeast corner of Monroe Avenue and Prairie Avenue	622.57
BM-04.	East-northeast flange bolt on fire hydrant at 3325 Prairie Avenue	620.55
BM-05.	East-northeast flange bolt on fire hydrant at southeast corner of Jackson Avenue and Prairie Avenue	621.36
BM-06.	East-northeast flange bolt on fire hydrant at southeast corner of Garfield Avenue and Prairie Avenue	620.37
BM-07.	North-northeast bonnet bolt on fire hydrant at southeast corner of 31 st Street and Prairie Avenue	620.01

LEGEND OF SYMBOLS

(TO BE USED IN CONJUNCTION WITH I.D.O.T. STANDARD 000001-04)

SYMBOL	DESCRIPTION
	EXISTING POWER POLE
	EXISTING GAS VALVE
	EXISTING STREET LIGHT
	EXISTING WATER MAIN BUFFALO BOX
	EXISTING SPRINKLER
	EXISTING WATER MAIN VALVE VAULT
	EXISTING BUSH
	EXISTING TREE
	EXISTING EVERGREEN TREE
	EXISTING BITUMINOUS CONCRETE AREA
	EXISTING CONCRETE AREA
	EXISTING GRASS AREA
	EXISTING STONE OR GRAVEL AREA
	EXISTING STORM SEWER
	EXISTING COMBINATION SEWER
	EXISTING ELECTRIC LINE
	EXISTING GAS LINE
	EXISTING TELEPHONE LINE
	EXISTING WATER MAIN
	EXISTING CURB AND GUTTER
	EXISTING RIGHT OF WAY
	EXISTING STRUCTURE TO BE REMOVED
	EXISTING STRUCTURE TO BE FILLED
	EXISTING STORM SEWER TO BE ABANDONED
	EXISTING WATER MAIN TO BE ABANDONED
	EXISTING CURB AND GUTTER TO BE REMOVED
	BITUMINOUS SURFACE TO BE REMOVED
	EXISTING BITUMINOUS AREA TO BE REMOVED
	EXISTING CONCRETE AREA TO BE REMOVED
	PROPOSED STORM SEWER
	PROPOSED WATER MAIN
	PROPOSED DIRECTION OF FLOW
	PROPOSED SUMMIT
	PROPOSED BITUMINOUS CONCRETE PARKWAY
	PROPOSED CONCRETE AREA
	PROPOSED GRASS AREA
	PROPOSED COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12

I.D.O.T. STANDARD DRAWINGS

STANDARD NO.	TITLE OR DESCRIPTION
000001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-02	TEMPORARY EROSION CONTROL SYSTEMS
424001-04	CURB RAMPS FOR SIDEWALKS
442101-05	CLASS B PATCHES
542121	REINFORCED CONCRETE END SECTIONS FOR MULTIPLE (2 & 3) PIPE CULVERTS 42" THRU 60" DIA. AT RIGHT ANGLES WITH ROADWAY
602601	PRECAST REINFORCED CONCRETE FLAT SLAB TOP
701501-03	URBAN LANE CLOSURE, 2 L, 2 W, UNDIVIDED
701701-04	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-03	LANE CLOSURE, MULTILANE, 1 W OR 2 W CROSSWALK OR SIDEWALK CLOSURE
702001-05	TRAFFIC CONTROL DEVICES
720001	SIGN PANEL MOUNTING DETAILS
720006	SIGN PANEL ERECTION DETAILS
720011	METAL POSTS FOR SIGNS, MARKERS, AND DELINEATORS
729001	APPLICATIONS OF TYPES A AND B METAL POSTS (FOR SIGNS AND MARKERS)
780001-01	TYPICAL PAVEMENT MARKINGS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 2732	**	COOK	49	3
ILLINOIS PROJECT		M- 8003(371)		
VILLAGE SECTION		00-00115-00-WR		
CONTRACT NO. 83823				

ACCESS

THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN ACCESS FOR EMERGENCY VEHICLES TO INGRESS AND EGRESS ONTO PRIVATE & COMMERCIAL PROPERTY DURING THE CONSTRUCTION PERIOD. ALSO DURING CONSTRUCTION, GARBAGE TRUCKS MUST BE PERMITTED ACCESS TO THE WORK ZONE IN ORDER TO PICK UP RESIDENTIAL AND COMMERCIAL GARBAGE FOR THOSE PROPERTIES FRONTING THE WORK ZONE.

STANDARDS

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

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES AS 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. THE CONTRACTOR WILL BE REQUIRED TO VERIFY THE EXACT LOCATION OF EACH FACILITY WITH THE 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.

ADJUSTMENTS REQUIRED BY UTILITY COMPANIES WILL BE PERFORMED BY THE COMPANY INVOLVED OR ITS CONTRACTOR.

COORDINATION OF ALL UTILITY WORK INVOLVED IN THE CONSTRUCTION AREA WILL BE DISCUSSED AT A PRE-CONSTRUCTION CONFERENCE.

THE CONTRACTOR SHALL USE EXTREME CAUTION IN THE REMOVAL OF ABANDONED EXISTING GAS LINES SINCE RESIDUAL MATERIALS CONTAINED THEREIN ARE HIGHLY EXPLOSIVE, FLAMMABLE, AND TOXIC. ONCE THE MAINS ARE ABANDONED BY THE OWNER, THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY DAMAGE AND/OR INJURY OCCURRING ON THE PROJECT DUE TO HIS OPERATIONS NEXT TO THE MAINS AND/OR THE METHOD OF REMOVAL OF THE ABANDONED MAINS. UNDER NO CIRCUMSTANCE SHALL THE UTILITY COMPANIES BE HELD LIABLE FOR ANY DAMAGE AND/OR INJURY ONCE THEIR MAINS HAVE BEEN RELOCATED AND THE EXISTING MAINS HAVE BEEN ABANDONED.

STORM SEWER

THE VERTICAL AND HORIZONTAL CLEARANCES BETWEEN WATER MAINS AND PROPOSED OR EXISTING STORM SEWERS SHALL CONFORM TO THE REQUIREMENTS OF THE I.E.P.A. AS STATED IN THEIR POLICY STATEMENTS, SECTION 31-1.02A THROUGH 31-1.02D.

FRAMES AND GRATES

THE TYPE OF FRAMES AND GRATES REQUIRED FOR ALL CATCH BASINS AND MANHOLES LISTED IN THE SUMMARY OF QUANTITIES MAY BE FOUND ON THE PLANS AT THEIR RESPECTIVE LOCATIONS. WHERE LIDS ARE CALLED FOR ON THE PLANS, THEY SHALL BE IN ACCORDANCE WITH ARTICLE 604.01 OF THE STANDARD SPECIFICATIONS AND THE TERM LID IS USED IN LIEU OF GRATE.

ON ALL IMPROVEMENTS, THE FRAMES AND LIDS OF EXISTING CATCH BASINS, INLETS, MANHOLES, AND VALVE VAULTS WHICH ARE TO BE ABANDONED DUE TO CONSTRUCTION OF THIS IMPROVEMENT ARE TO REMAIN THE PROPERTY OF THE VILLAGE OF BROOKFIELD AND BE SALVAGED. THE CONTRACTOR IS TO DELIVER FRAMES AND LIDS TO THE VILLAGE OF BROOKFIELD PUBLIC WORKS YARD LOCATED AT 4545 EBERLY AVENUE.

MAINTENANCE OF SEWER FLOWS

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO AS TO MAINTAIN AT ALL TIMES FLOWS THROUGH EXISTING STORM AND SANITARY SEWER SYSTEMS. 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. THE COST OF ALL THE PREVIOUSLY MENTIONED WORK SHALL BE INCLUDED IN THE CONTRACT. ALL ACCUMULATION OF MATERIAL IN THE STRUCTURE DUE TO CONSTRUCTION OPERATIONS AS WELL AS MATERIAL EXISTING BEFORE CONSTRUCTION, SHALL BE REMOVED BY THE CONTRACTOR AT HIS EXPENSE.

EXISTING STRUCTURE MODIFICATIONS

ALL KNOWN EXISTING STRUCTURES IN THE PAVEMENT OR ADJACENT AREAS WHICH ARE INVOLVED IN THE CONSTRUCTION HAVE BEEN SHOWN ON THE PLANS AND NOTED AS TO BE REMOVED, FILLED, RECONSTRUCTED, OR ADJUSTED BY THE CONTRACTOR EXCEPT THOSE OF AMERITECH, COMED, AND THE NICOR GAS COMPANY, WHICH ARE TO BE ADJUSTED BY THE APPROPRIATE UTILITY FORCE. WHERE EXISTING STRUCTURES ARE TO BE REMOVED OR FILLED, OR THE EXISTING CASTING REPLACED, THE CASTINGS REMOVED FROM THE STRUCTURE BECOME THE PROPERTY OF THE VILLAGE OF BROOKFIELD.

SHEETING OR SHORING

IT SHOULD BE NOTED THAT ANY SHEETING OR SHORING REQUIRED FOR THE STORM SEWER INSTALLATION OR OTHER CONSTRUCTION ELEMENTS REQUIRING RELATIVELY DEEP EXCAVATIONS, SHALL BE INCLUDED IN THE PARTICULAR PAYMENT ITEM AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR ANY SUPPLEMENTAL WORK ASSOCIATED WITH THE MAINTENANCE OF TRENCH SIDES OR OTHER EXCAVATED AREAS.

MAINTENANCE OF EXISTING DRAINAGE STRUCTURES

WHEN DURING THE CONSTRUCTION OPERATIONS, ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE OF ANY GUTTERS OR 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. THE COST OF THIS WORK SHALL BE INCLUDED IN THE CONTRACT.

SAW CUTTING

THE CONTRACTOR SHALL SAW CUT ASPHALT PAVEMENT AND DRIVEWAY PAVEMENT AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER, TO SEPARATE THE EXISTING PAVEMENT TO BE REMOVED BY MEANS OF 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 SO 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 PRICE OF SAW CUTTING, AS NOTED ABOVE, SHALL BE INCLUDED IN THE PARTICULAR PAY ITEMS.

TRAFFIC PROTECTION

CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT WHEN WORK COMMENCES, THE CONTRACTOR SHALL ASSUME THE MAINTENANCE OF ANY PAVEMENT, SHOULDERS, DRAINAGE FACILITIES, TRAFFIC CONTROL SIGNS, PAVEMENT MARKINGS, AND OTHER APPURTENANCES ON ROADWAYS WITHIN THE LIMITS OF THE CONTRACT WHICH ARE TO BE USED BY THE PUBLIC DURING CONSTRUCTION AND TO RETAIN THIS MAINTENANCE RESPONSIBILITY UNTIL THE VILLAGE ASSUMES THE MAINTENANCE. NEED FOR SNOW AND ICE CONTROL DURING THE CONSTRUCTION PERIOD SHALL BE ACCOMMODATED FOR BY OTHERS. ALL UNBALLASTED TYPE I & TYPE II BARRICADES SHALL HAVE TWO SANDBAGS ONE ACROSS EACH BOTTOM RAIL.

EXISTING ROADWAY SIGNS

ALL EXISTING ROADWAY SIGNS, MARKERS, ETC., LOCATED WITHIN THE ROADWAY RIGHT-OF-WAY WHICH ARE INVOLVED IN THIS CONSTRUCTION SHALL BE REMOVED AND DELIVERED TO THE VILLAGE PUBLIC WORKS YARD LOCATED AT 4545 EBERLY AVENUE. ALL WORK ASSOCIATED WITH THIS ITEM SHALL BE CONSIDERED INCLUDED IN THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED.

SOILS REPORT

A SOILS REPORT HAS BEEN PREPARED CONTAINING CERTAIN INFORMATION RELATING TO GENERAL SOIL CONDITIONS TO BE ENCOUNTERED ALONG THE ROUTE OF THE WORK. THE CONTRACTOR WILL BE PERMITTED TO EXAMINE THIS INFORMATION AND DETERMINE ITS VALUE. ANY ADDITIONAL BORINGS DEEMED NECESSARY BY THE CONTRACTOR SHALL BE MADE AT HIS OWN EXPENSE.

PLUGGING EXISTING SEWERS AND DRAINS

UNLESS OTHERWISE SPECIFIED, ABANDONED SEWERS AND DRAINS, AS DESIGNATED BY THE ENGINEER, SHALL BE PLUGGED WITH CLASS "SI" CONCRETE OR BRICK AND SUITABLE MORTAR TO THE SATISFACTION OF THE ENGINEER. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE PAY ITEMS FOR REMOVING AND/OR FILLING THE VARIOUS TYPES OF STRUCTURES.



◆ Civil Engineers
◆ Municipal Consultants
◆ Established 1911

9933 Roosevelt Road
Westchester, Illinois 60154-2780
Phone: 708/865-0300
Fax: 708/865-1212

**PRAIRIE AVENUE IMPROVEMENTS
PHASE I
VILLAGE OF BROOKFIELD, ILLINOIS**

GENERAL NOTES

SCALE:	NONE	SHEET 3 OF 49
DRAWN BY:	MK/LEV	
BOOK NO.:	#1475, #1504	
DATE:	11-04-05	
REVISION:	E.H.E. No.: 125-04-26301	

SUMMARY OF QUANTITIES					
CODE	PAY ITEM	UNIT	TOTAL QUANTITY	1000-2A 75% FEDERAL 25% LOCAL	Y060 100% LOCAL
* 20100110	TREE REMOVAL (6 TO 15 INCH DIAMETER)	UNIT	51	51	
* 20100210	TREE REMOVAL (OVER 15 INCH DIAMETER)	UNIT	1,015	1,015	
* 20101200	TREE ROOT PRUNING	EACH	47	47	
20200100	EARTH EXCAVATION	CUYD	5,600	5,600	
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIALS	CUYD	650	650	
20700420	POROUS GRANULAR EMBANKMENT, SUBGRADE	CUYD	650	650	
20800150	TRENCH BACKFILL	CUYD	3,500	3,250	250
21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQYD	13,000	13,000	
* 21101615	TOPSOIL FURNISH AND PLACE, 4"	SQYD	6,500	6,500	
* 25000400	NITROGEN FERTILIZER NUTRIENT	POUND	80	80	
* 25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	80	80	
* 25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	80	80	
* 25200100	SODDING	SQYD	6,500	6,500	
* 25200200	SUPPLEMENTAL WATERING	UNIT	100	100	
28000510	INLET FILTERS	EACH	30	30	
35101800	AGGREGATE BASE COURSE, TYPE B, 6"	SQYD	1,250	1,250	
35102400	AGGREGATE BASE COURSE, TYPE B, 12"	SQYD	12,000	12,000	
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	4,260	4,260	
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GAL	2,600	2,600	
40600300	AGGREGATE (PRIME COAT)	TON	100	100	
40600980	BITUMINOUS SURFACE REMOVAL - BUTT JOINT	SQYD	450	450	
42101300	PROTECTIVE COAT	SQYD	2,900	2,900	
42300300	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 7 INCH	SQYD	525	525	
42300400	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH	SQYD	65	65	
42400200	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	SQFT	7,000	7,000	
42400800	DETECTABLE WARNINGS	SQFT	500	500	
44000100	PAVEMENT REMOVAL	SQYD	11,900	11,900	
44000200	DRIVEWAY PAVEMENT REMOVAL	SQYD	600	600	
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	5,700	5,700	
44000600	SIDEWALK REMOVAL	SQFT	6,920	6,920	
44200929	CLASS B PATCHES, TYPE I, 8 INCH	SQYD	25	25	
44200934	CLASS B PATCHES, TYPE II, 8 INCH	SQYD	20	20	
55021700	STORM SEWERS, TYPE 2, REINFORCED CONCRETE CULVERT, STORM DRAIN, AND SEWER PIPE, CLASS III, 15"	FOOT	615	615	
55022000	STORM SEWERS, TYPE 2, REINFORCED CONCRETE CULVERT, STORM DRAIN, AND SEWER PIPE, CLASS III, 24"	FOOT	300	300	
55022200	STORM SEWERS, TYPE 2, REINFORCED CONCRETE CULVERT, STORM DRAIN, AND SEWER PIPE, CLASS III, 30"	FOOT	200	200	
55022400	STORM SEWERS, TYPE 2, REINFORCED CONCRETE CULVERT, STORM DRAIN, AND SEWER PIPE, CLASS III, 36"	FOOT	1,050	1,050	
55024500	STORM SEWERS, TYPE 3, REINFORCED CONCRETE CULVERT, STORM DRAIN, AND SEWER PIPE, CLASS IV, 36"	FOOT	75	75	
55022500	STORM SEWERS, TYPE 2, REINFORCED CONCRETE CULVERT, STORM DRAIN, AND SEWER PIPE, CLASS III, 42"	FOOT	470	470	
55024600	STORM SEWERS, TYPE 3, REINFORCED CONCRETE CULVERT, STORM DRAIN, AND SEWER PIPE, CLASS IV, 42"	FOOT	15	15	
56103000	DUCTILE IRON WATER MAIN, 6"	FOOT	80	30	50
56103100	DUCTILE IRON WATER MAIN, 8"	FOOT	450	0	450
56400400	FIRE HYDRANTS TO BE RELOCATED	EACH	1	1	
56400500	FIRE HYDRANTS TO BE REMOVED	EACH	2	0	2
56400510	FIRE HYDRANTS TO BE REMOVED AND REPLACED	EACH	1	1	
56400820	FIRE HYDRANT WITH AUXILIARY VALVE AND BOX	EACH	2		2
60213800	RESTRICTED DEPTH CATCH BASINS, 4' DIAMETER, TYPE 1 FRAME, OPEN LID	EACH	29	29	
60224600	RESTRICTED DEPTH MANHOLES, 4' DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	3	3	
60225400	RESTRICTED DEPTH MANHOLES, 5' DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	14	14	
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
60266100	VALVE VAULTS TO BE RECONSTRUCTED	EACH	5	5	
60300305	FRAMES AND LIDS TO BE ADJUSTED	EACH	2	2	
60406100	FRAMES AND LIDS, TYPE 1, CLOSED LID	EACH	7	7	
60500040	REMOVING MANHOLES	EACH	1	1	
60500050	REMOVING CATCH BASINS	EACH	1	1	
60500060	REMOVING INLETS	EACH	10	10	
60500205	FILLING CATCH BASINS	EACH	23	23	

* DENOTES SPECIALTY ITEM



◆ Civil Engineers
 ◆ Municipal Consultants
 ◆ Established 1911

9933 Roosevelt Road
 Westchester, Illinois 60154-2780
 Phone: 708/865-0300
 Fax: 708/865-1212

**PRAIRIE AVENUE IMPROVEMENTS
 PHASE I
 VILLAGE OF BROOKFIELD, ILLINOIS**

SUMMARY OF QUANTITIES

SCALE:	NONE	SHEET	4
DRAWN BY:	MK/LEV	OF	49
BOOK NO.:	#1475, #1504		
DATE:	11-04-05		
REVISION:	E.H.E. NO.: 125-04-26301		

SUMMARY OF QUANTITIES					
CODE	PAY ITEM	UNIT	TOTAL QUANTITY	I000-2A 75% FEDERAL 25% LOCAL	Y060 100% LOCAL
60500370	FILLING VALVE BOXES	EACH	1		1
60500405	FILLING VALVE VAULTS	EACH	2	1	1
60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	6,600	6,600	
67000400	ENGINEER'S FIELD OFFICE - TYPE A	CALMO	6	6	
67100100	MOBILIZATION	L SUM	1	1	
70101800	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1	1	
72000100	SIGN PANEL - TYPE 1	SQFT	110	110	
72900100	METAL POST - TYPE A	FOOT	30	30	
72900200	METAL POST - TYPE B	FOOT	220	220	
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	5,100	5,100	
* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	1,100	1,100	
* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	325	325	
* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	180	180	
* 88600600	DETECTOR LOOP REPLACEMENT	FOOT	150	150	
* A2000924	TREE, ACER PLATANOIDES EMERALD QUEEN (EMERALD QUEEN NORWAY MAPLE), 3" CALIPER, BALLED AND BURLAPPED	EACH	10	10	
* A2001024	TREE, ACER RUBRUM (RED MAPLE), 3" CALIPER, BALLED AND BURLAPPED	EACH	9	9	
* A2006520	TREE, QUERCUS BICOLOR (SWAMP WHITE OAK), 2-1/2" CALIPER, BALLED AND BURLAPPED	EACH	10	10	
* B2005520	TREE, PYRUS CALLERYANA ARISTOCRAT (ARISTOCRAT CALLERY PEAR), 2-1/2" CALIPERED, TREE FORM, BALLED AND BURLAPPED	EACH	9	9	
X0323426	SEDIMENT CONTROL, DRAINAGE STRUCTURE INLET FILTER CLEANING	EACH	30	30	
X4066424	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX D, N50	TON	160	160	
X4073001	BITUMINOUS CONCRETE PAVEMENT (FULL-DEPTH), SUPERPAVE, 6"	SQYD	1,150	1,150	
X4073061	BITUMINOUS CONCRETE PAVEMENT (FULL-DEPTH), SUPERPAVE, 9"	SQYD	12,000	12,000	
* X7015000	CHANGEABLE MESSAGE SIGN	CAL-MO	1	1	
XX000541	EXPLORATORY EXCAVATION	CUYD	50	50	
XX000836	PRESSURE TESTING AND DISINFECTION	L SUM	1		1
XX001490	GATE VALVES, 8"	EACH	2		2
XX003036	STORM SEWERS, PVC, SDR 26, 10"	FOOT	433	433	
XX003037	DUCTILE IRON FITTINGS AND ACCESSORIES	POUND	2,500	500	2000
XX002907	WATER SERVICE CONNECTION (SHORT)	EACH	3		3
XX005634	12" X 6" PVC SEWER SERVICE CONNECTIONS	EACH	3	3	
XX005636	PIPE UNDERDRAINS, PERFORATED POLYVINYL CHLORIDE PIPE, 6"	FOOT	200	200	
XX006227	RESTRAINED JOINT, 8"	EACH	20		20
XX006228	RESTRAINED JOINT, 6"	EACH	25	10	15
Z0004900	BITUMINOUS MIXTURE FOR PATCHING POTHoles (HOT MIX)	TON	50	50	
Z0019600	DUST CONTROL WATERING	UNIT	100	100	
XX00464	SANITARY SEWERS, PVC, 6"	FOOT	650	650	
XX006445	RESTRICTED DEPTH COMBINED SEWER MANHOLES, 4' DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	9	9	
XX006446	RESTRICTED DEPTH COMBINED SEWER MANHOLES, 5' DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1	
XX006447	REINFORCED CONCRETE END SECTIONS FOR MULTIPLE (2) PIPE CULVERTS, 42"	EACH	1	1	
XX001672	STORM SEWERS, PVC, SDR 26, 12"	FOOT	70	70	
XX005689	STORM SEWERS, DIP, CLASS 52, 10"	FOOT	155	155	
XX005690	STORM SEWERS, DIP, CLASS 52, 12"	FOOT	100	100	
XX006448	10" PVC COMBINED SEWER PIPE REPLACEMENT	FOOT	100	100	
XX006449	12" PVC COMBINED SEWER PIPE REPLACEMENT	FOOT	66	66	
XX006450	15" PVC COMBINED SEWER PIPE REPLACEMENT	FOOT	354	354	
XX006451	10" X 6" PVC SEWER SERVICE CONNECTIONS	EACH	6	6	
XX006452	15" X 6" PVC SEWER SERVICE CONNECTIONS	EACH	18	18	
XX006453	6" PVC SEWER SERVICE PIPE REPAIR ACROSS TRENCH	FOOT	100	100	
X0325207	TELEVISION INSPECTION OF SEWER	FOOT	3,325	3,325	
XX006454	WATER SERVICE RELOCATION	EACH	11	11	
XX003517	CONNECTION TO EXISTING WATER MAIN (NON-PRESSURE) 6"	EACH	2		2

* DENOTES SPECIALTY ITEM



◆ Civil Engineers
◆ Municipal Consultants
◆ Established 1911

9933 Roosevelt Road
Westchester, Illinois 60154-2780
Phone: 708/865-0300
Fax: 708/865-1212

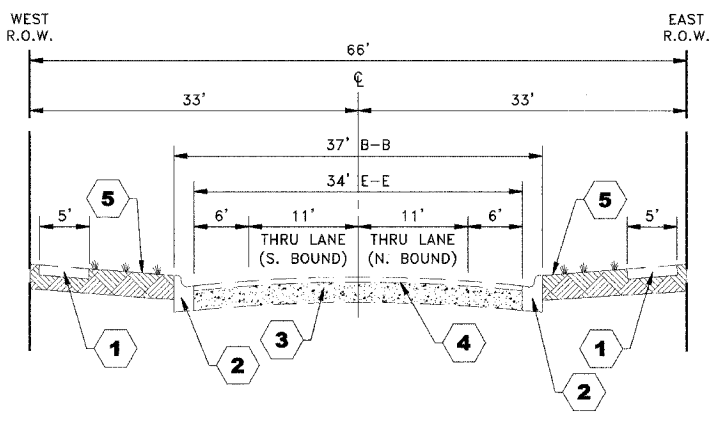
**PRAIRIE AVENUE IMPROVEMENTS
PHASE I
VILLAGE OF BROOKFIELD, ILLINOIS**

SUMMARY OF QUANTITIES

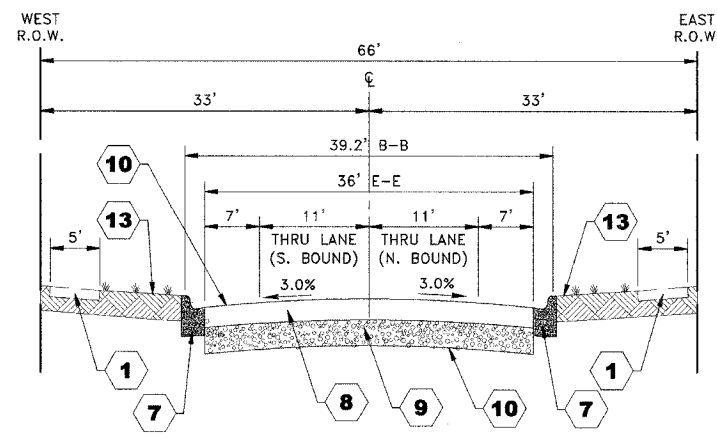
SCALE:	NONE	SHEET 5 49
DRAWN BY:	MK/LEV	
BOOK NO.:	#1475, #1504	
DATE:	11-04-05	
REVISION:	E.H.E. NO.: 125-04-26301	OF

TYPICAL CROSS SECTION LEGEND

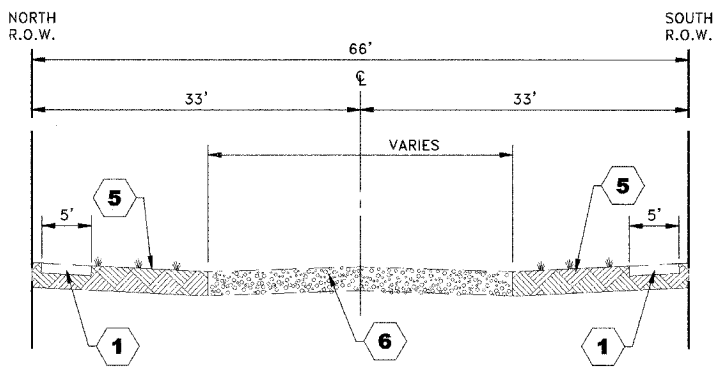
- | EXISTING | | PROPOSED | |
|----------|--|----------|--|
| 1 | PORTLAND CEMENT CONCRETE SIDEWALK, 5" | 7 | COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 |
| 2 | COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 | 8 | BITUMINOUS CONCRETE PAVEMENT (FULL-DEPTH), SUPERPAVE 9" |
| 3 | PORTLAND CEMENT CONCRETE BASE COURSE, 5" - 9 1/2" | 9 | AGGREGATE BASE COURSE, TYPE B, 12" |
| 4 | BITUMINOUS CONCRETE BINDER AND SURFACE COURSE, 3" - 7 1/2" | 10 | GEOTECHNICAL FABRIC FOR GROUND STABILIZATION |
| 5 | SODDED PARKWAY | 11 | BITUMINOUS CONCRETE PAVEMENT (FULL-DEPTH), SUPERPAVE, 6" |
| 6 | AGGREGATE PAVEMENT | 12 | AGGREGATE BASE COURSE, TYPE B, 6" |
| | | 13 | SODDED PARKWAY WITH 4" TOPSOIL |



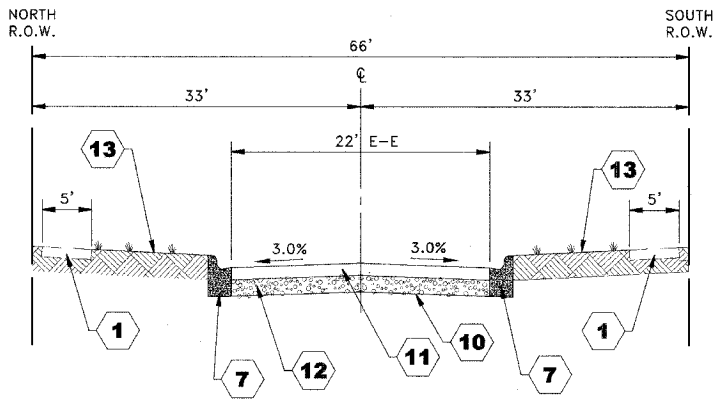
EXISTING TYPICAL CROSS SECTION
PRAIRIE AVENUE
(WASHINGTON AVENUE TO 31ST STREET)



PROPOSED TYPICAL CROSS SECTION
PRAIRIE AVENUE
(WASHINGTON AVENUE TO 31ST STREET)



EXISTING TYPICAL CROSS SECTION
MONROE AVENUE, JACKSON AVENUE, GARFIELD AVENUE
(EAST OF PRAIRIE AVENUE)



PROPOSED TYPICAL CROSS SECTION
MONROE AVENUE, JACKSON AVENUE, GARFIELD AVENUE
(EAST OF PRAIRIE AVENUE)

BITUMINOUS MIXTURE REQUIREMENTS			
ITEM	AC TYPE	VOIDS	RAP%
BITUMINOUS CONCRETE PAVEMENT (FULL-DEPTH), SUPERPAVE, 9" BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL-19.0, N50 (7")	PG 58-22	4% @50 GYR	25
BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX D, N50 (2")	PG 64-22	4% @50 GYR	15
BITUMINOUS CONCRETE PAVEMENT (FULL-DEPTH), SUPERPAVE, 6" BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL-19.0, N50 (4")	PG 58-22	4% @50 GYR	25
BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX D, N50 (2")	PG 64-22	4% @50 GYR	15
BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX D, N50	PG 64-22	4% @50 GYR	15
BITUMINOUS MIXTURE FOR PATCHING POT HOLES (HOT MIX)	PG 64-22	4% @50 GYR	15

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

PAVEMENT CORE SUMMARY						
BORE	STATION	OFFSET	LEFT/RIGHT	BITUMINOUS	CONC. BASE	TOTAL
PC-13	23+99	14'	RIGHT	3"	9 1/2"	12 1/2"
PC-14	26+16	5.5'	RIGHT	6"	6"	12"
PC-15	27+85	5'	LEFT	6"	7"	13"
PC-16	29+50	12.5'	LEFT	5"	NONE	5"
PC-17	31+21	13'	RIGHT	4"	6"	10"
PC-18	32+81	9'	RIGHT	4 1/2"	NONE	4 1/2"
PC-19	34+50	10'	LEFT	8"	8"	16"
PC-20	36+16	14'	LEFT	5 1/2"	NONE	5 1/2"
PC-21	37+83	13'	RIGHT	5 1/2"	NONE	5 1/2"
PC-22	39+51	3.5'	RIGHT	3 1/2"	5 1/2"	8 3/4"
PC-23	41+18	5.5'	LEFT	7 1/2"	5"	12 1/2"
PC-24	42+82	13'	LEFT	4"	NONE	4"
PC-25	44+50	14'	RIGHT	7 1/2"	7"	14 1/2"
PC-26	46+17	4.5'	RIGHT	7 1/2"	NONE	7 1/2"
PC-27	47+85	4'	LEFT	6"	6"	12"
PC-28	49+51	13'	LEFT	5 1/2"	NONE	5 1/2"

POROUS GRANULAR EMBANKMENT SUBGRADE LOCATIONS PER SOIL REPORT

LOCATION	EAST SIDE		WEST SIDE	
	WIDTH	DEPTH	WIDTH	DEPTH
27+00 TO 31+40	18'	6"	18'	6"
33+50 TO 37+85	18'	6"	18'	6"

NOTE:
ACTUAL LOCATIONS, WIDTHS, AND DEPTHS TO BE DETERMINED BY ENGINEER IN THE FIELD.

PROJECT STAGING AND LOCAL ACCESS

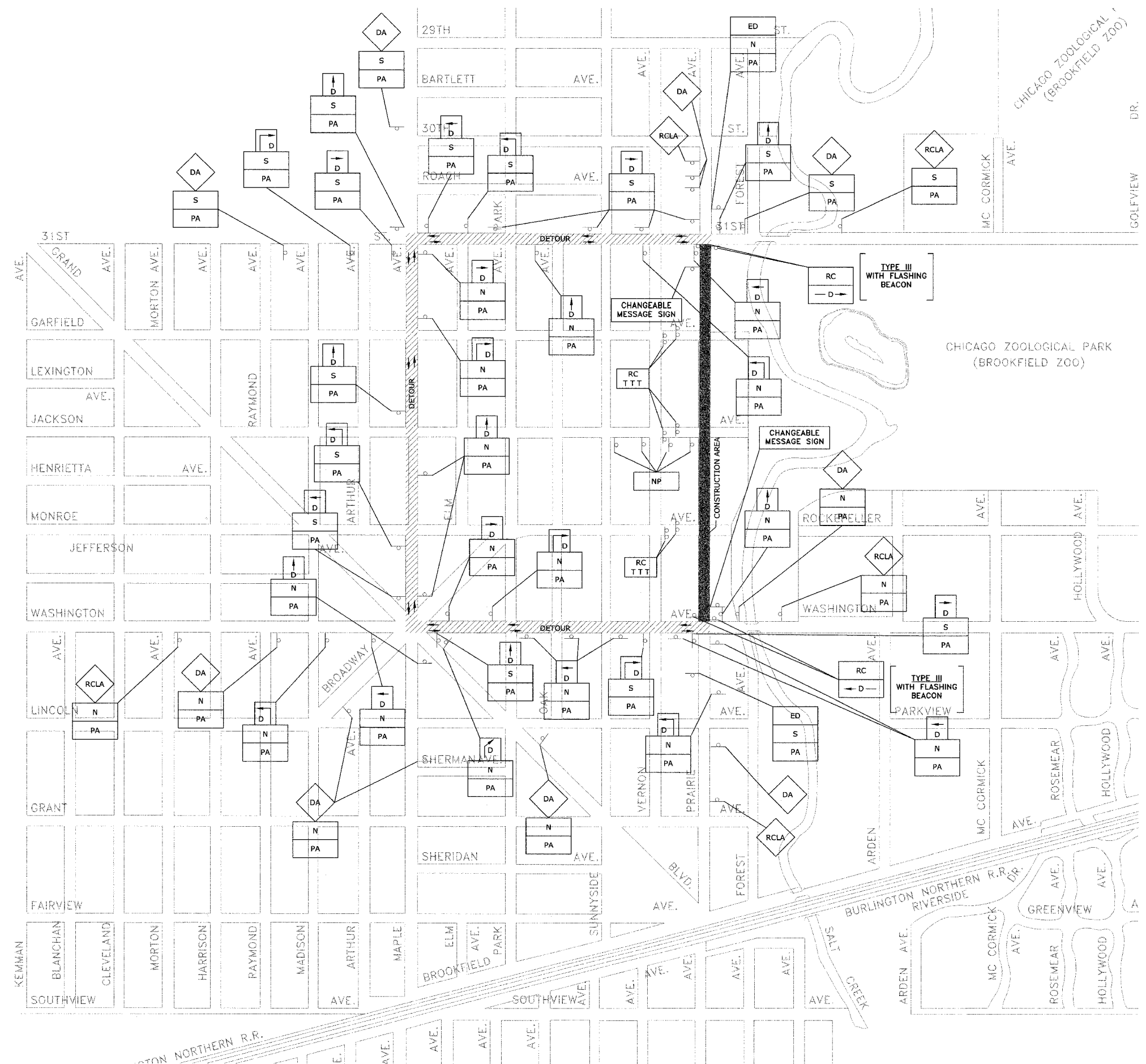
- DURING THE CONSTRUCTION OF THE PROJECT, PRAIRIE AVENUE WILL BE CLOSED TO THROUGH TRAFFIC FROM WASHINGTON AVENUE TO 31ST STREET.
- LOCAL ACCESS WILL BE PROVIDED AT MONROE AVENUE, JACKSON AVENUE, AND GARFIELD AVENUE.
- THE CONTRACTOR WILL MAINTAIN ACCESS TO THE INTERSECTIONS OF MONROE AVENUE, JACKSON AVENUE, AND GARFIELD AVENUE AT ALL TIMES INCLUDING DURING THE RECONSTRUCTION OF THE PAVEMENT SO THAT RESIDENTS WILL HAVE ACCESS TO THE ALLEY BEHIND THE HOUSES ON THE EAST SIDE OF PRAIRIE AVENUE.
- WHILE THE STORM SEWER, COMBINED SEWER, AND CONCRETE WORK IS BEING PERFORMED, ON - STREET PARKING WILL BE ALLOWED ON BOTH SIDES OF THE STREET AND 2 THROUGH LANES TO PERMIT LOCAL ACCESS WILL BE MAINTAINED DURING NON - WORKING HOURS.
- DURING THE INSTALLATION OF THE STORM SEWER AND COMBINED SEWER, ALL TRENCHES SHALL BE SAW - CUT FULL - DEPTH TO ALLOW FOR THE NEAT REMOVAL OF THE EXISTING PAVEMENT.
- DURING THE INSTALLATION OF THE CURB AND GUTTER, THE EXISTING PAVEMENT SHALL REMAIN IN PLACE. THE PAVEMENT SHALL BE SAW CUT FULL - DEPTH 6" FROM THE EDGE OF PAVEMENT TO ALLOW FOR THE NEAT REMOVAL OF THE EXISTING CURB AND GUTTER.
- ALL REQUIRED SAW - CUTTING WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE PERTINENT INDIVIDUAL PAY ITEMS IN THE CONTRACT.
- THE TRENCHES FOR THE STORM SEWER LATERALS AND THE COMBINED SEWER REPAIRS WILL BE BACKFILLED TO THE TOP OF THE EXISTING PAVEMENT TO PROVIDE LOCAL ACCESS.
- THE TRENCH ALONG THE EAST SIDE OF PRAIRIE AVENUE FOR THE STORM SEWER WILL BE BACKFILLED TO THE TOP OF THE EXISTING PAVEMENT TO PROVIDE ACCESS AT ALL DRIVEWAYS, ALLEY RETURNS, INTERSECTIONS AND AS DIRECTED BY THE ENGINEER.
- THE EXCAVATION FOR THE PROPOSED PAVEMENT SHALL BEGIN AFTER THE PLACEMENT OF THE PROPOSED CONCRETE CURB AND GUTTER, DRIVEWAYS AND SIDEWALKS.

LEGEND OF SYMBOLS		
SYMBOL	DESCRIPTION	CODE & SIZE
		W20-3 48"x48"
		W20-2 48"x48"
		R8-3 24"x24"
		R11-2 48"x30"
		R11-4 60"x30"
		R11-4 60"x30"
		R11-4 60"x30"
		M3-1 24"x12"
		M3-1 24"x12"
		M4-8 36"x12"
		M4-8 36"x12"
		M4-8 36"x12"

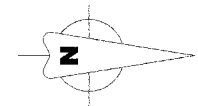
LEGEND OF SYMBOLS		
SYMBOL	DESCRIPTION	CODE & SIZE
		M4-8 24"x18"
		M4-9 30"x24"
		M4-9 30"x24"
		M4-9 30"x24"
		M4-9R 24"x30"
		M4-9L 24"x30"
		M4-10 48"x18"
		M4-10 48"x18"
		M6-1 21"x15"

NOTE:

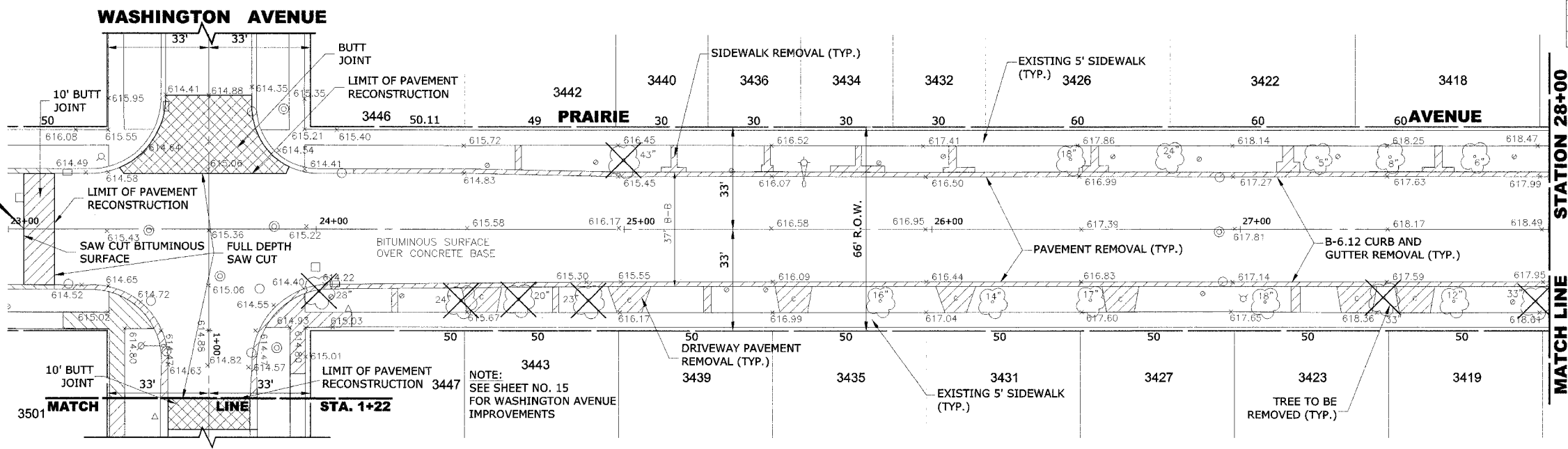
CONTRACTOR TO NOTIFY IDOT HEAD OF TRAFFIC MAINTENANCE (842)705-4470, SEVENTY-TWO HOURS IN ADVANCE OF SETTING UP DETOUR ROUTE.



- NOTES:**
1. WHEN WORK IS PERFORMED WITHIN THE INTERSECTION OF WASHINGTON AVENUE & PRAIRIE AVENUE, THE CONTRACTOR SHALL MAINTAIN EAST-WEST TRAFFIC AT ALL TIMES.
 2. WHEN WORK IS PERFORMED WITHIN THE SOUTH HALF OF THE INTERSECTION OF WASHINGTON AVENUE & PRAIRIE AVENUE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION & MAINTENANCE OF A LOCAL DETOUR FOR NORTH BOUND TRAFFIC ON PRAIRIE AVENUE.
 3. DURING PAVING OPERATIONS IT MAY BE NECESSARY TO COMPLETELY CLOSE THE INTERSECTION OF WASHINGTON AVENUE & PRAIRIE AVENUE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION & MAINTENANCE OF A LOCAL DETOUR.
 4. ALL LOCAL DETOURS SHALL BE APPROVED BY THE VILLAGE AT LEAST 48 HOURS PRIOR TO INSTALLATION.
 5. THE CHANGEABLE MESSAGE SIGNS ARE TO BE ONSITE AND FUNCTIONING FOR 2 WEEKS PRIOR TO PRAIRIE AVENUE BEING CLOSED.



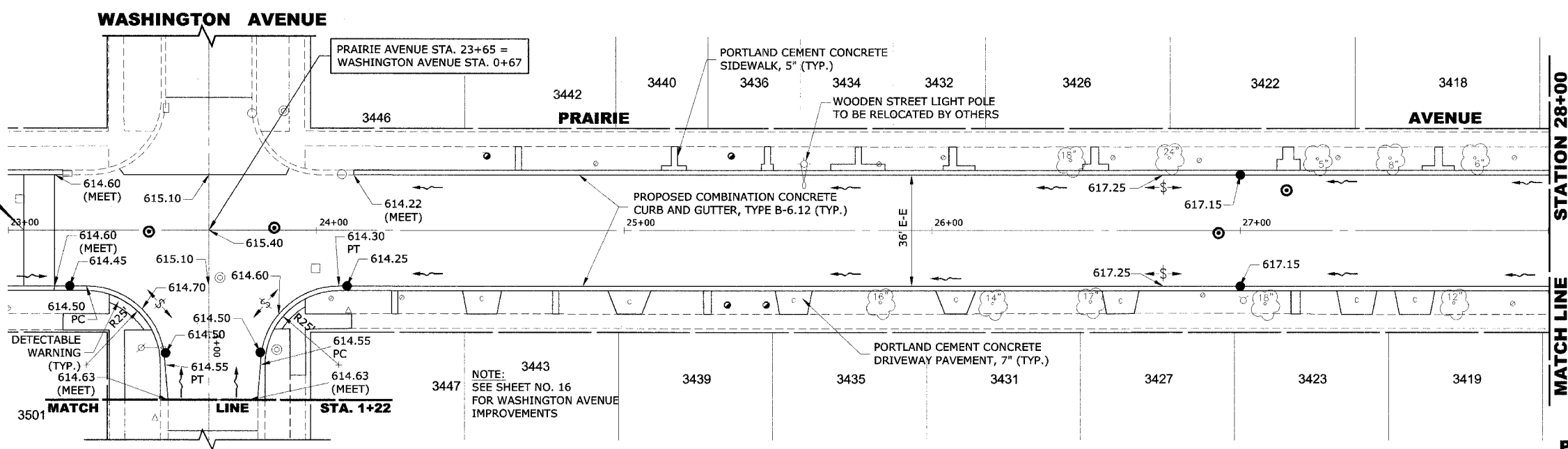
**PRAIRIE AVENUE
BEGIN IMPROVEMENT
STA. 23+05**



STATION 28+00
MATCH LINE

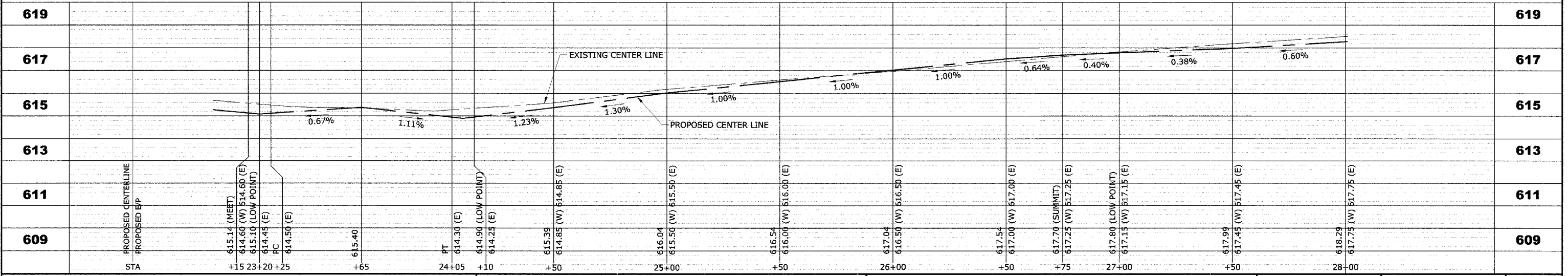
EXISTING TOPOGRAPHY

**PRAIRIE AVENUE
BEGIN IMPROVEMENT
STA. 23+05**



STATION 28+00
MATCH LINE

PROPOSED IMPROVEMENTS



HANCOCK ENGINEERING

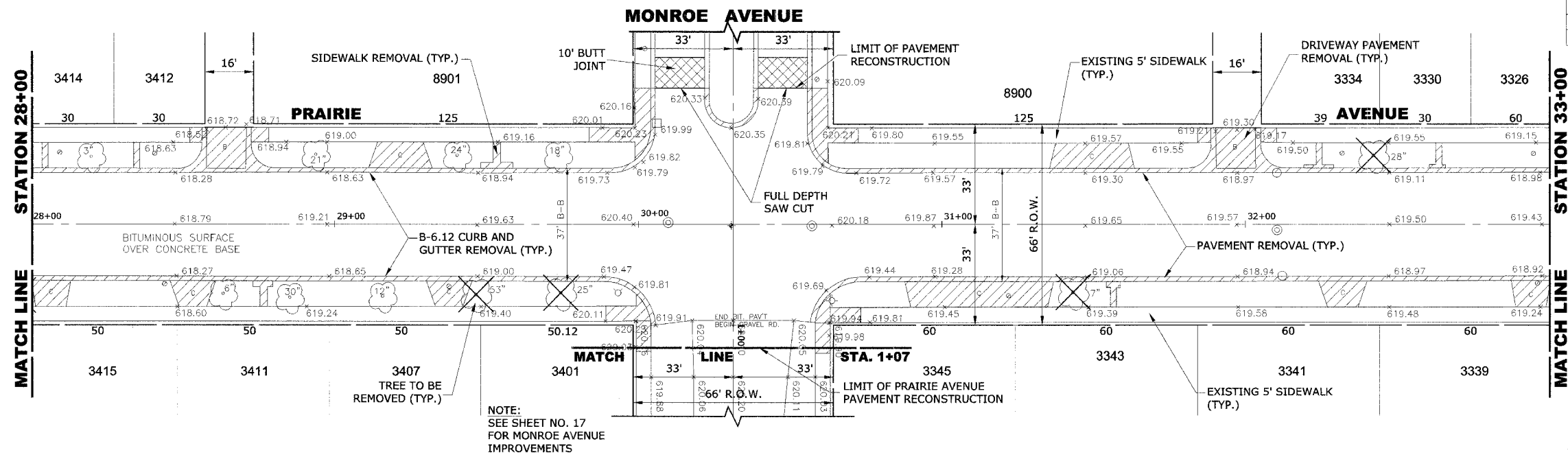
- ◆ Civil Engineers
- ◆ Municipal Consultants
- ◆ Established 1911

9933 Roosevelt Road
Westchester, Illinois 60154-2780
Phone: 708/865-0300
Fax: 708/865-1212

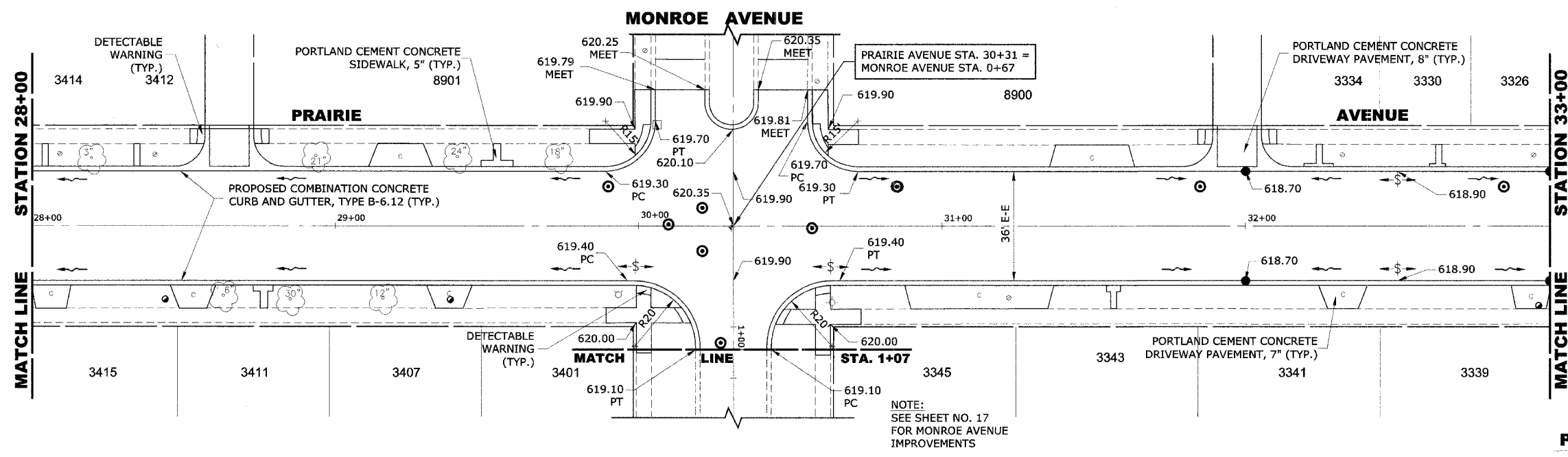
**PRAIRIE AVENUE IMPROVEMENTS
PHASE I
VILLAGE OF BROOKFIELD, ILLINOIS**

**EXISTING AND PROPOSED
PAVING PLAN AND PROFILE**

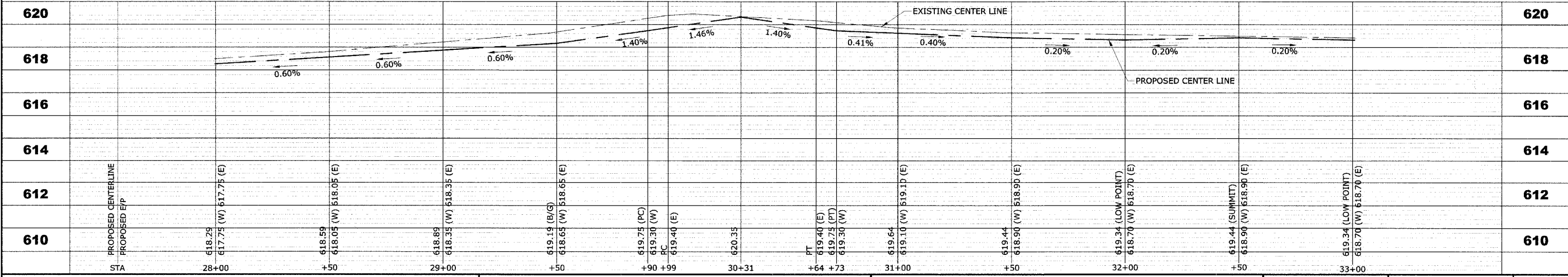
SCALE: H: 1"=20', V: 1"=2'	SHEET 9 / 49
DRAWN BY: MK/LEV	
BOOK NO.: #1475, #1504	
DATE: 11-04-05	
REVISION:	E.H.E. NO.: 125-04-26301



EXISTING TOPOGRAPHY



PROPOSED IMPROVEMENTS



HANCOCK ENGINEERING

- Civil Engineers
- Municipal Consultants
- Established 1911

9933 Roosevelt Road
Westchester, Illinois 60154-2780
Phone: 708/865-0300
Fax: 708/865-1212

**PRAIRIE AVENUE IMPROVEMENTS
PHASE I
VILLAGE OF BROOKFIELD, ILLINOIS**

**EXISTING AND PROPOSED
PAVING PLAN AND PROFILE**

SCALE: H: 1"=20', V: 1"=2'

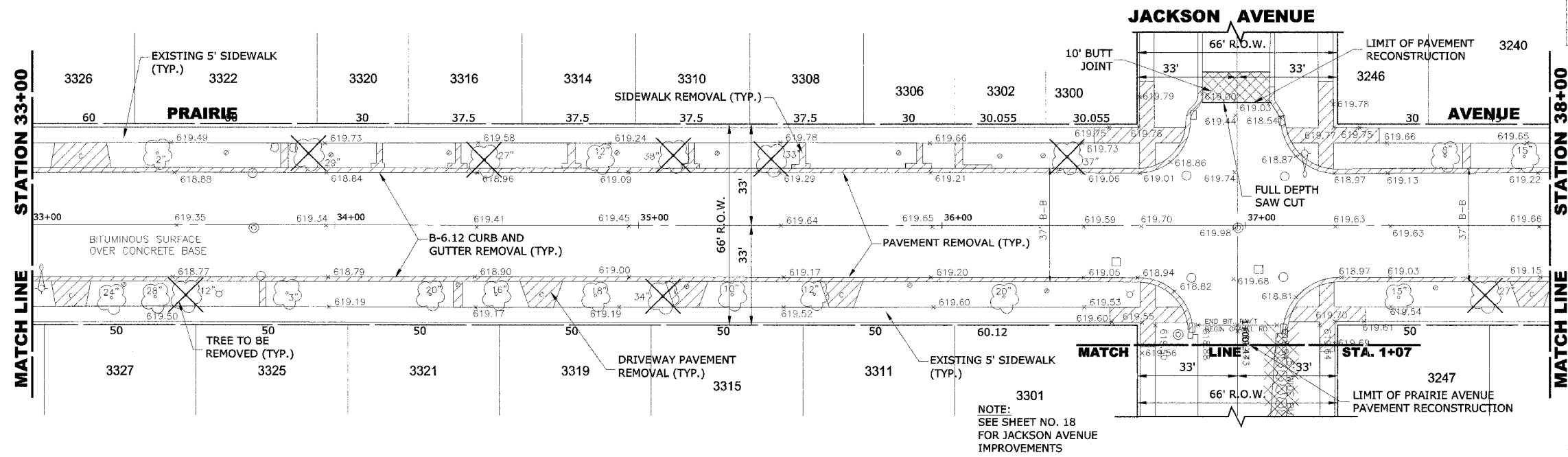
DRAWN BY: MK/LEV

BOOK NO.: #1475, #1504

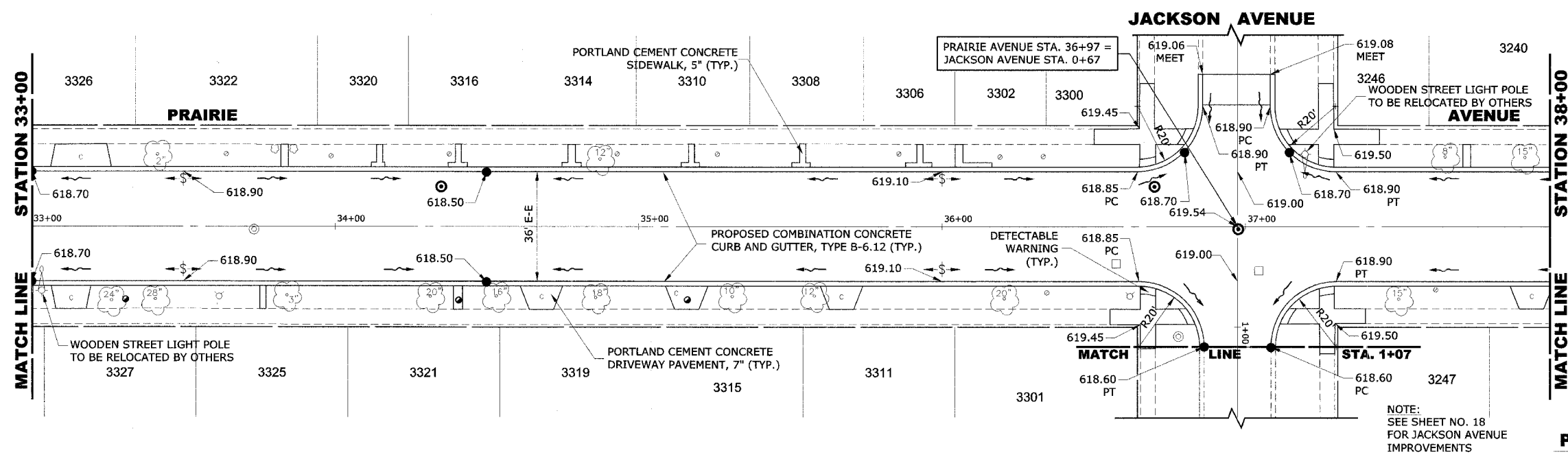
DATE: 11-04-05

E.H.E. NO.: 125-04-26301

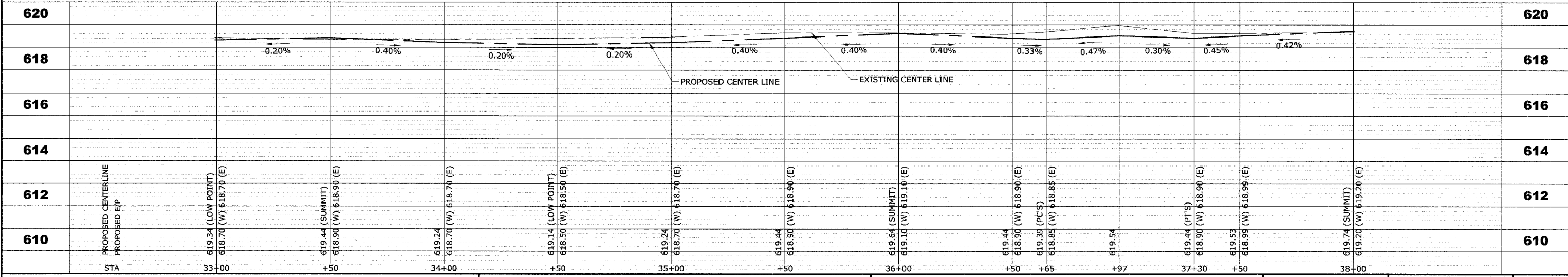
SHEET **10** OF **49**



EXISTING TOPOGRAPHY



PROPOSED IMPROVEMENTS



HANCOCK ENGINEERING

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

9933 Roosevelt Road
Westchester, Illinois 60154-2780
Phone: 708/865-0300
Fax: 708/865-1212

**PRAIRIE AVENUE IMPROVEMENTS
PHASE I
VILLAGE OF BROOKFIELD, ILLINOIS**

**EXISTING AND PROPOSED
PAVING PLAN AND PROFILE**

SCALE: H: 1"=20', V: 1"=2'

DRAWN BY: MK/LEV

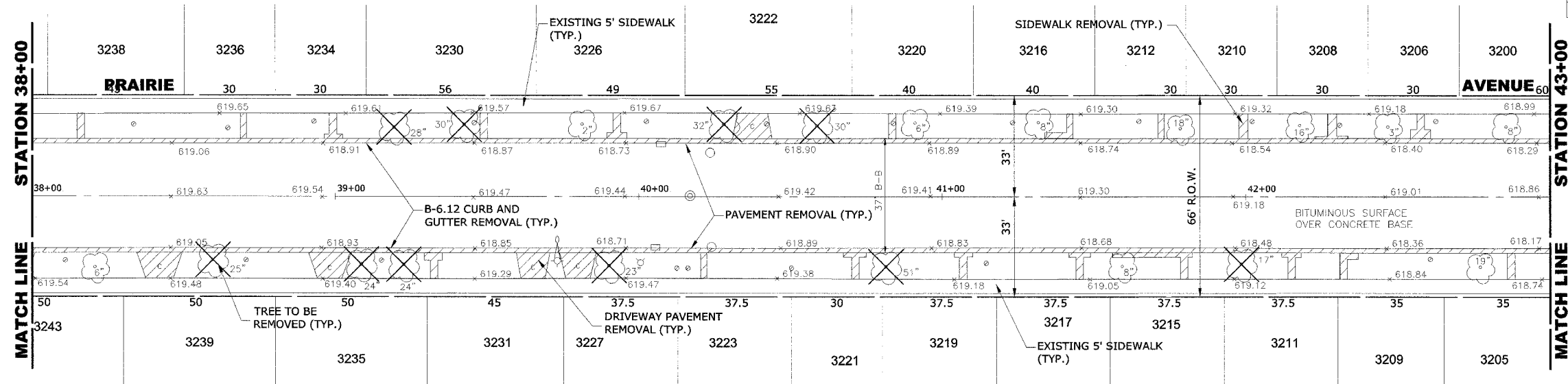
BOOK NO.: #1475, #1504

DATE: 11-04-05

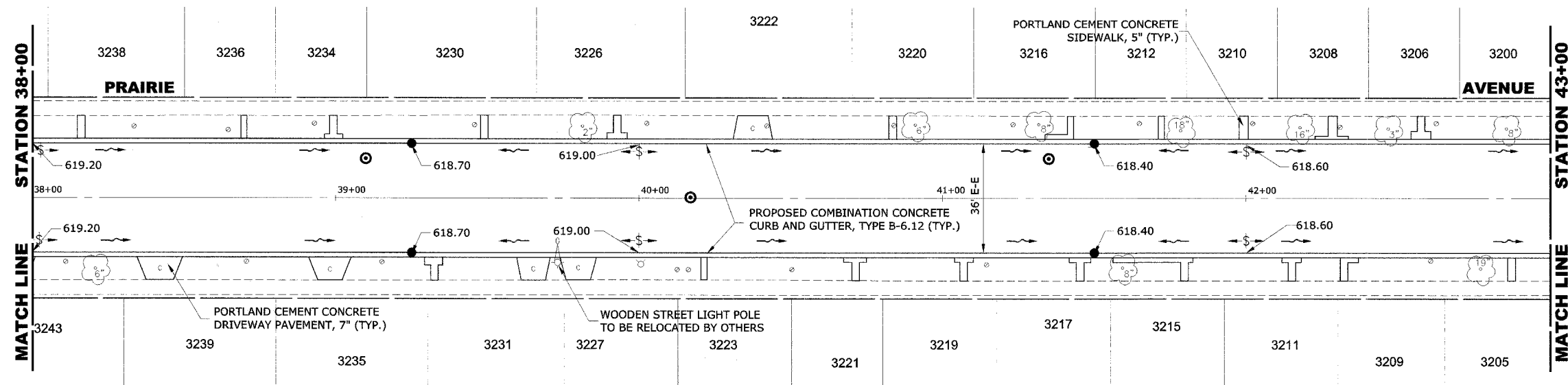
E.H.E. NO.: 125-04-26301

REVISION:

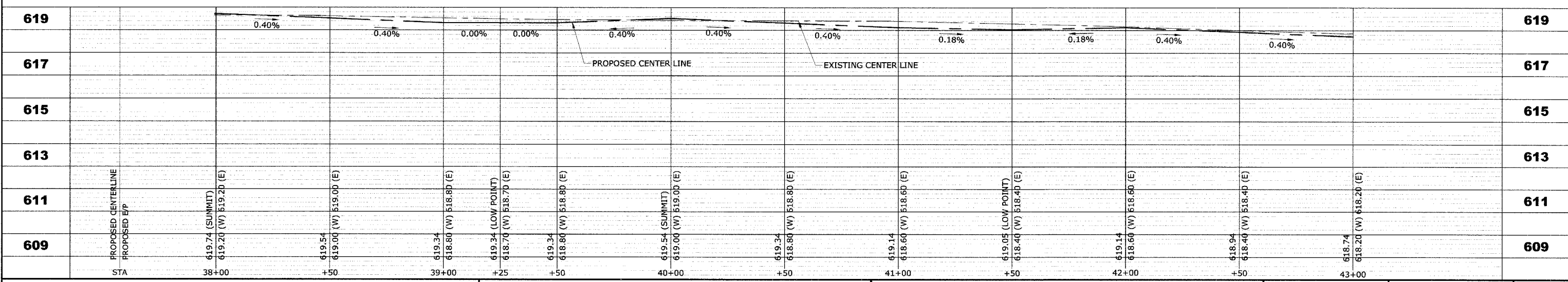
SHEET **11** OF **49**



EXISTING TOPOGRAPHY



PROPOSED IMPROVEMENTS



HANCOCK ENGINEERING

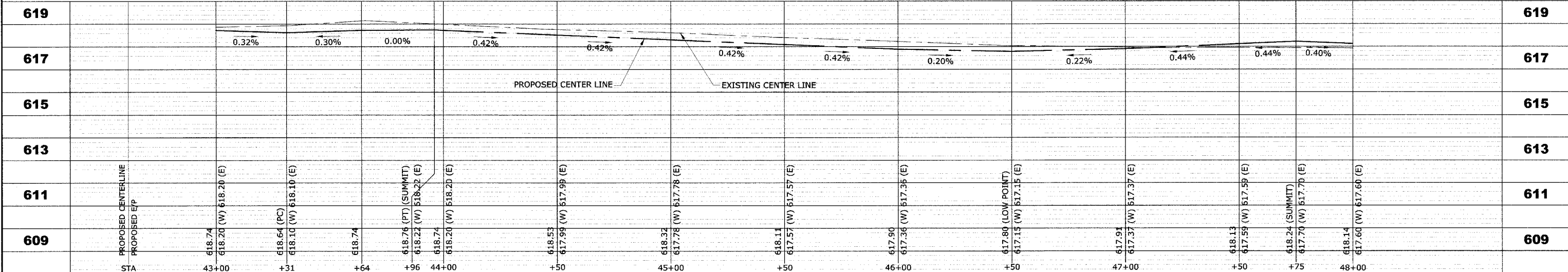
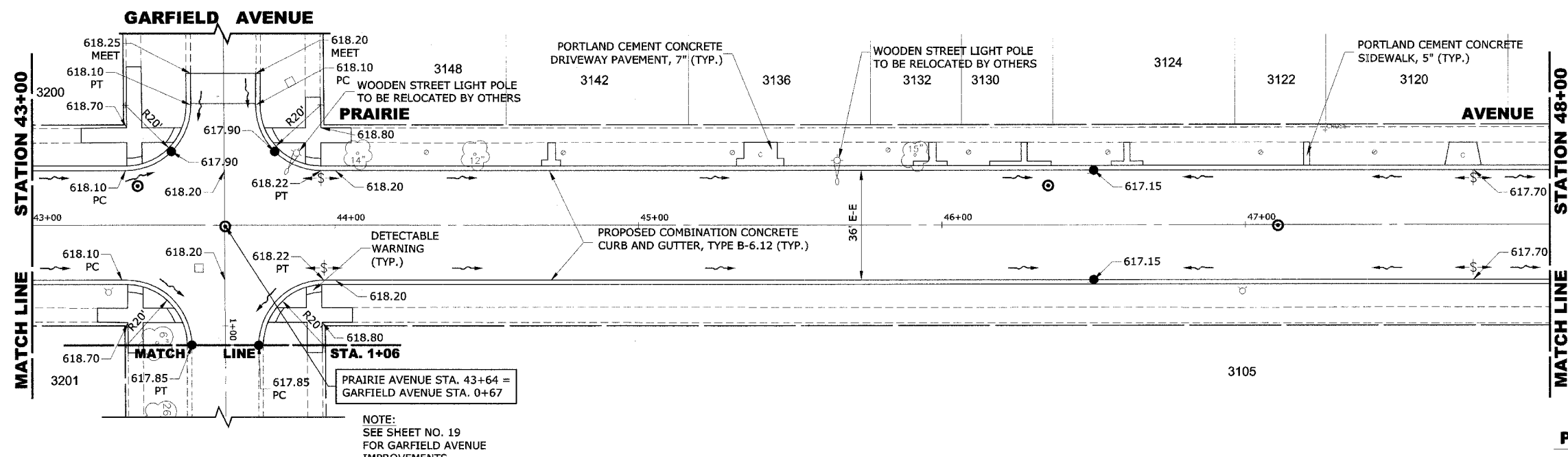
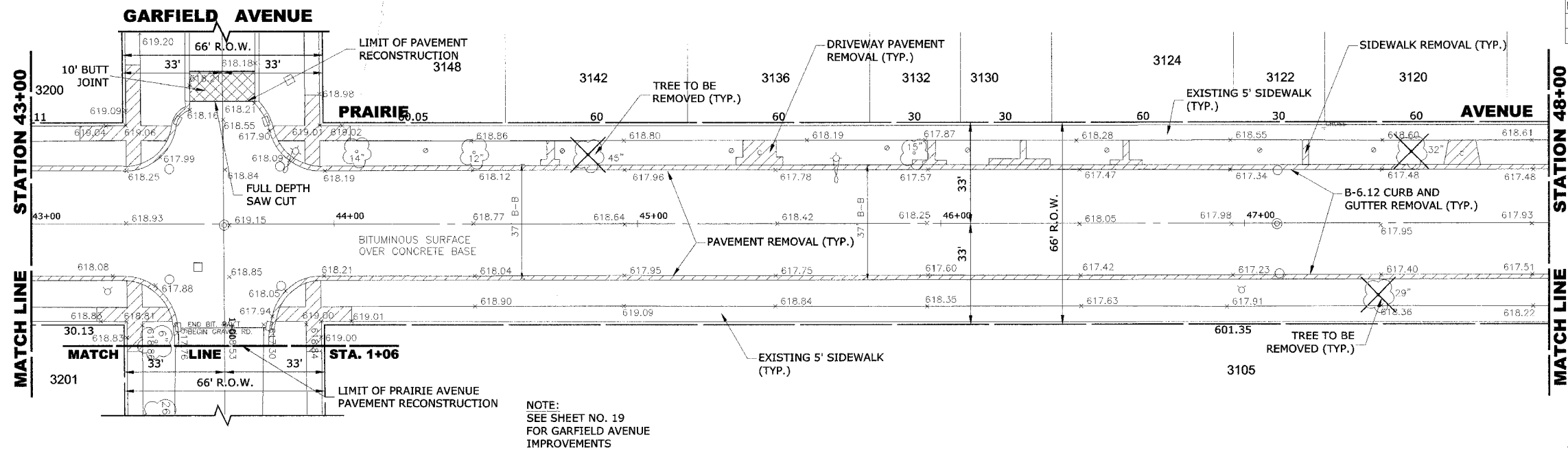
- ◆ Civil Engineers
- ◆ Municipal Consultants
- ◆ Established 1911

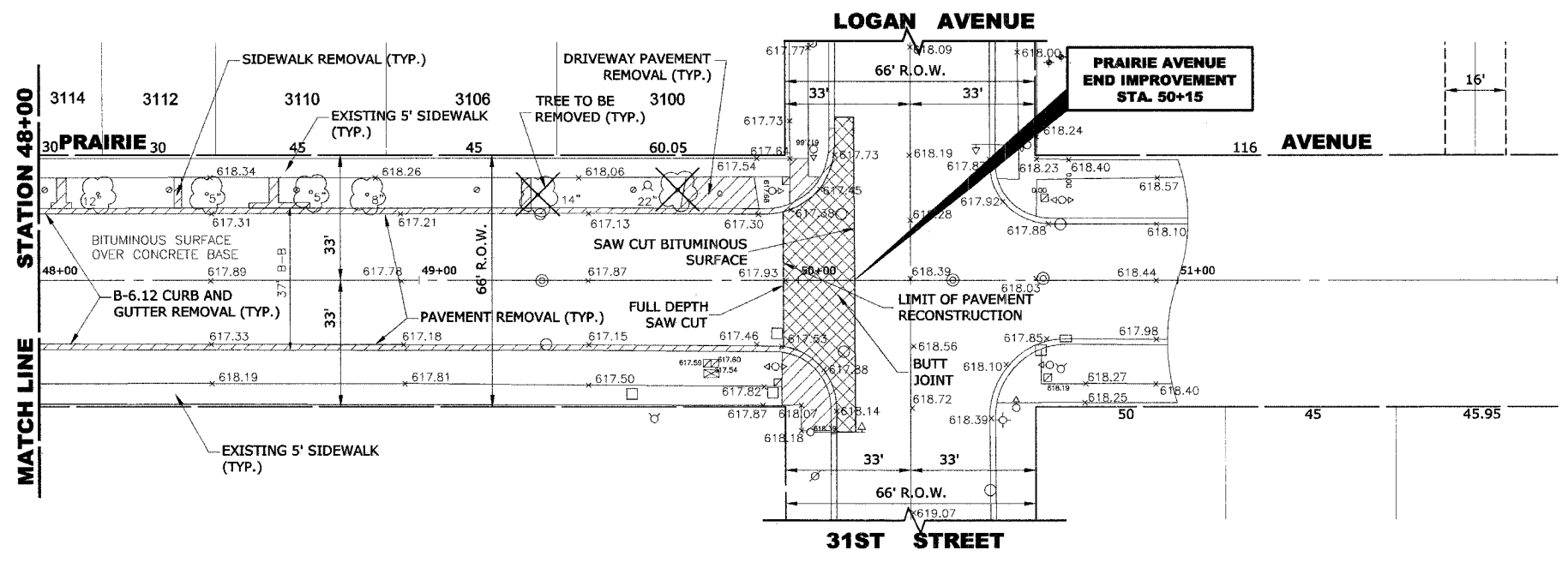
9933 Roosevelt Road
Westchester, Illinois 60154-2780
Phone: 708/865-0300
Fax: 708/865-1212

**PRAIRIE AVENUE IMPROVEMENTS
PHASE I
VILLAGE OF BROOKFIELD, ILLINOIS**

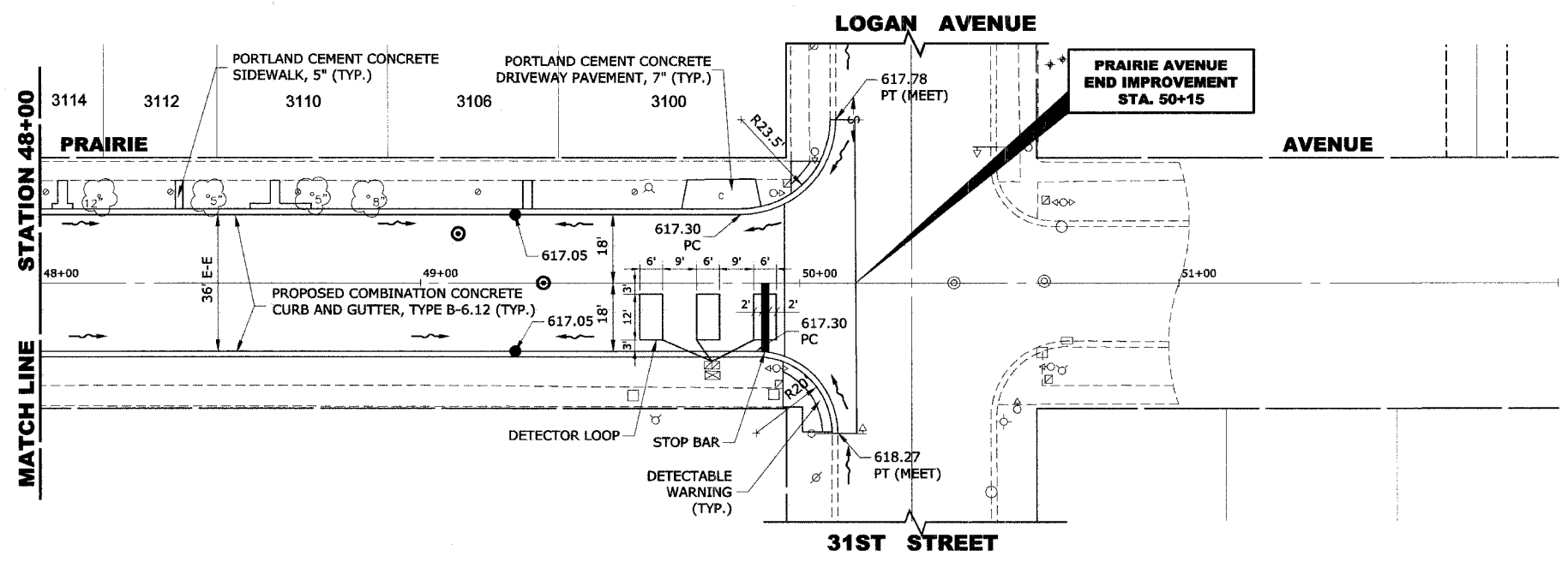
**EXISTING AND PROPOSED
PAVING PLAN AND PROFILE**

SCALE: H: 1"=20', V: 1"=2'	SHEET 12 / 49
DRAWN BY: MK/LEV	
BOOK NO.: #1475, #1504	
DATE: 11-04-05	
REVISION:	E.H.E. NO.: 125-04-26301

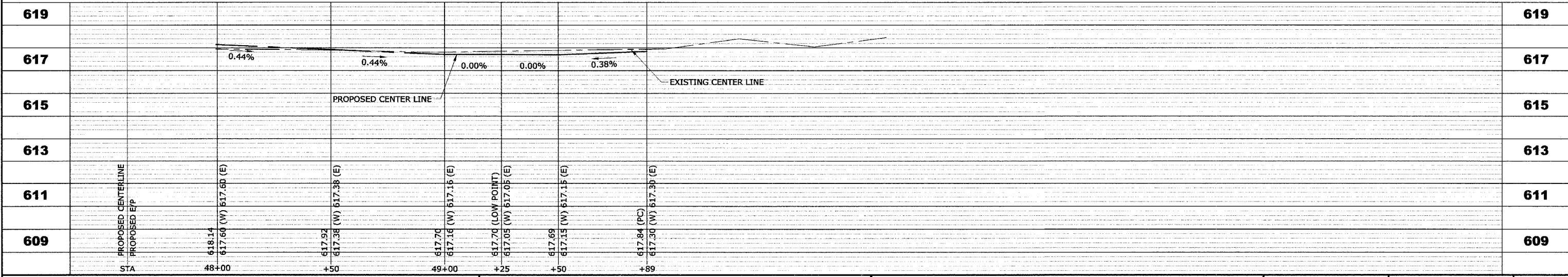




EXISTING TOPOGRAPHY



PROPOSED IMPROVEMENTS



HANCOCK ENGINEERING

- Civil Engineers
- Municipal Consultants
- Established 1911

9933 Roosevelt Road
Westchester, Illinois 60154-2780
Phone: 708/865-0300
Fax: 708/865-1212

**PRAIRIE AVENUE IMPROVEMENTS
PHASE I
VILLAGE OF BROOKFIELD, ILLINOIS**

**EXISTING AND PROPOSED
PAVING PLAN AND PROFILE**

SCALE: H: 1"=20', V: 1"=2'

DRAWN BY: MK/LEV

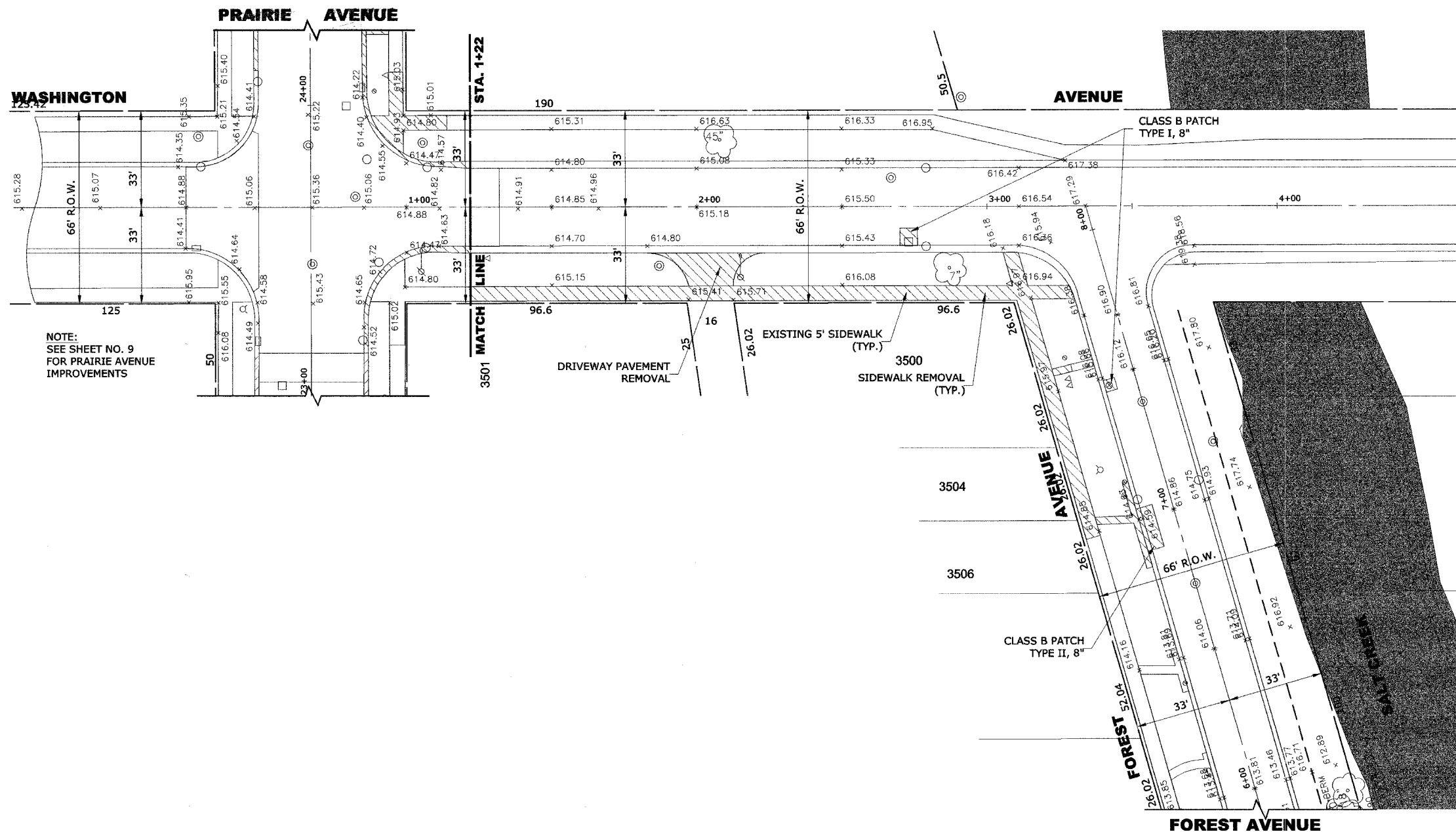
BOOK NO.: #1475, #1504

DATE: 11-04-05

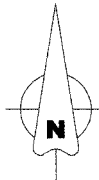
E.H.E. NO.: 125-04-26301

REVISION:

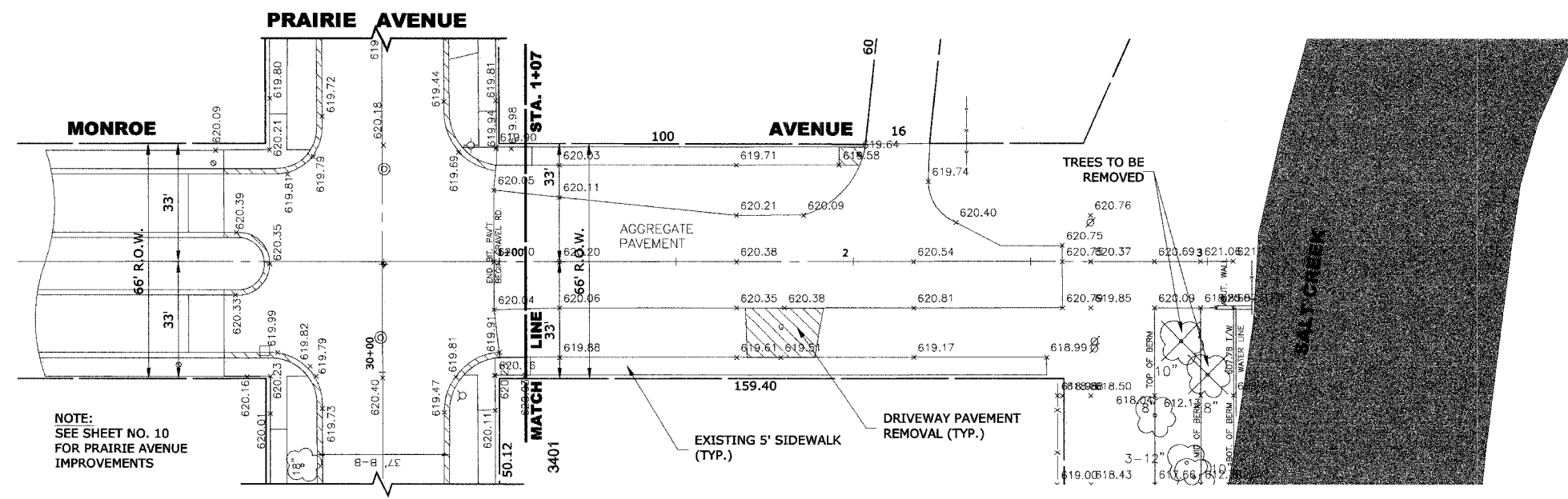
SHEET **14** OF **49**



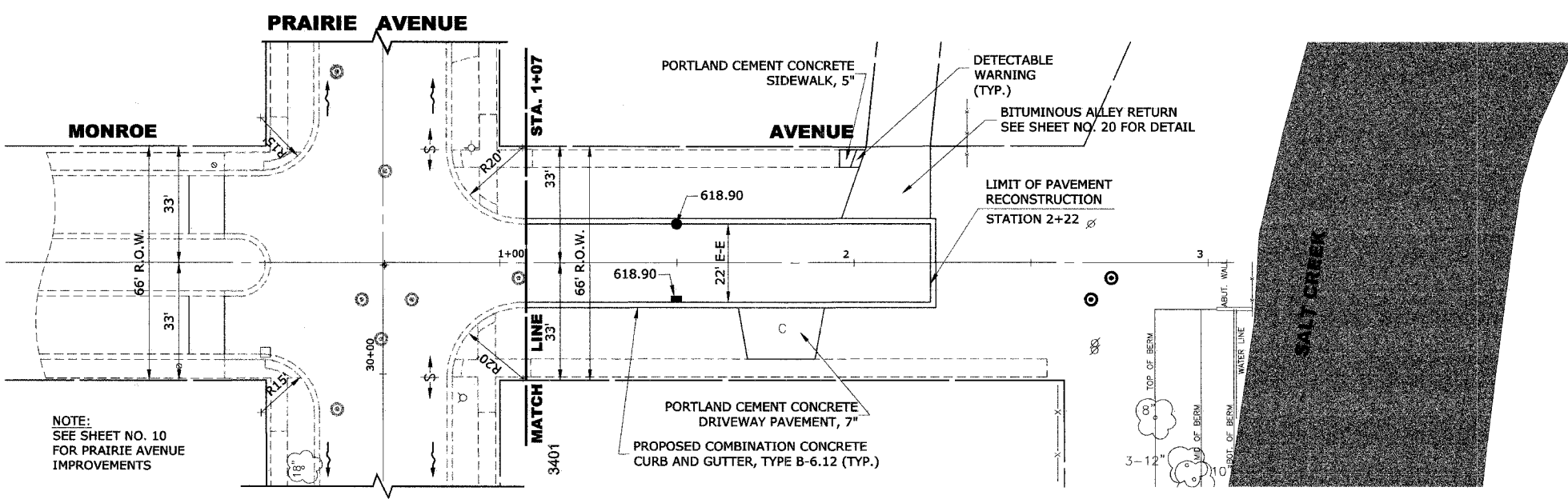
NOTE:
SEE SHEET NO. 9
FOR PRAIRIE AVENUE
IMPROVEMENTS



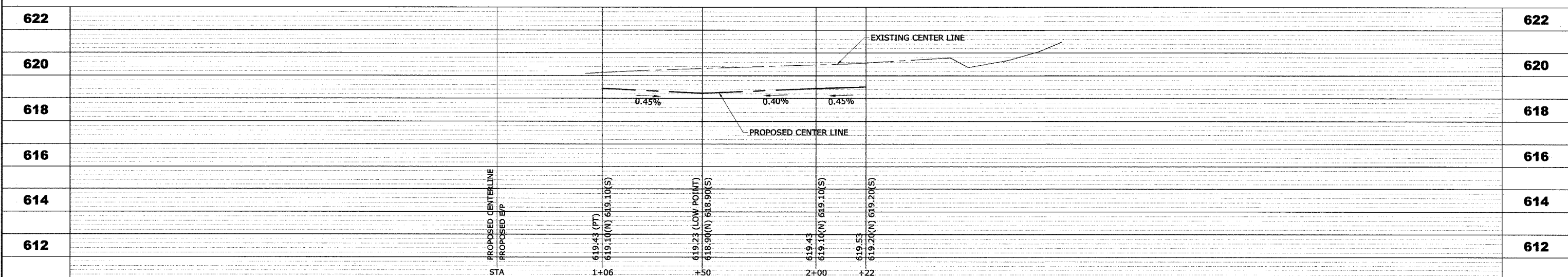
EXISTING TOPOGRAPHY

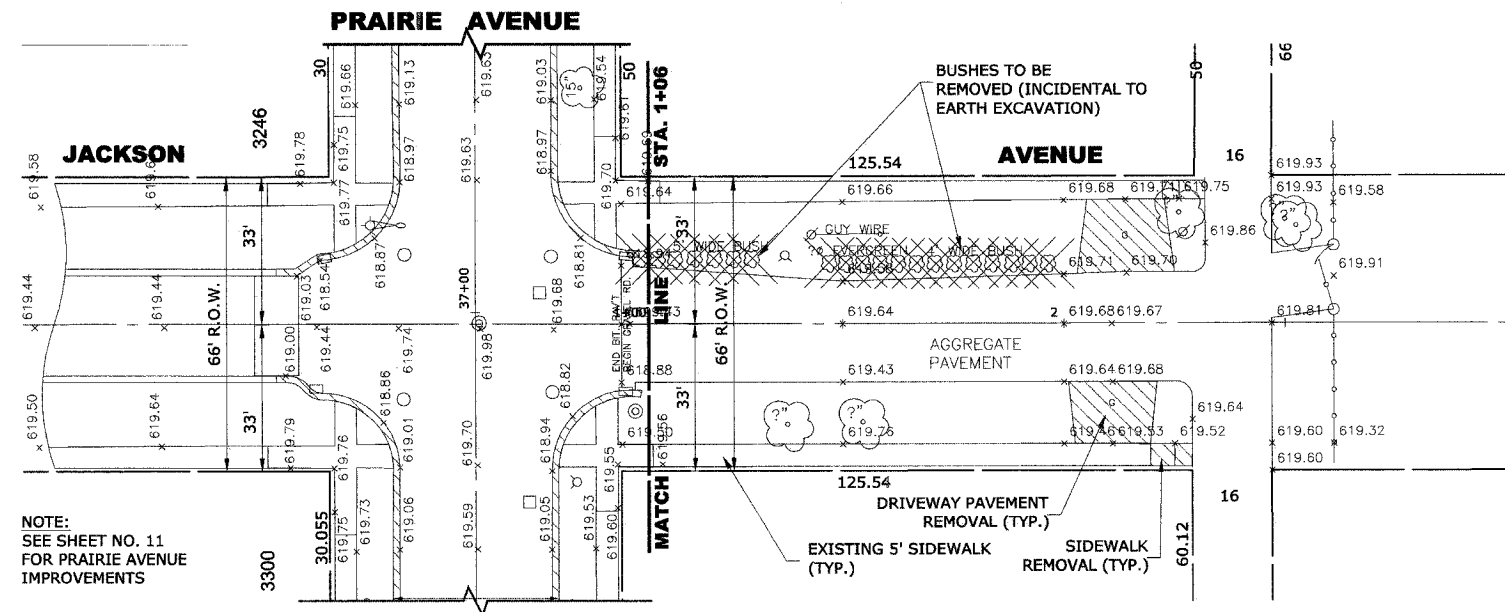


EXISTING TOPOGRAPHY



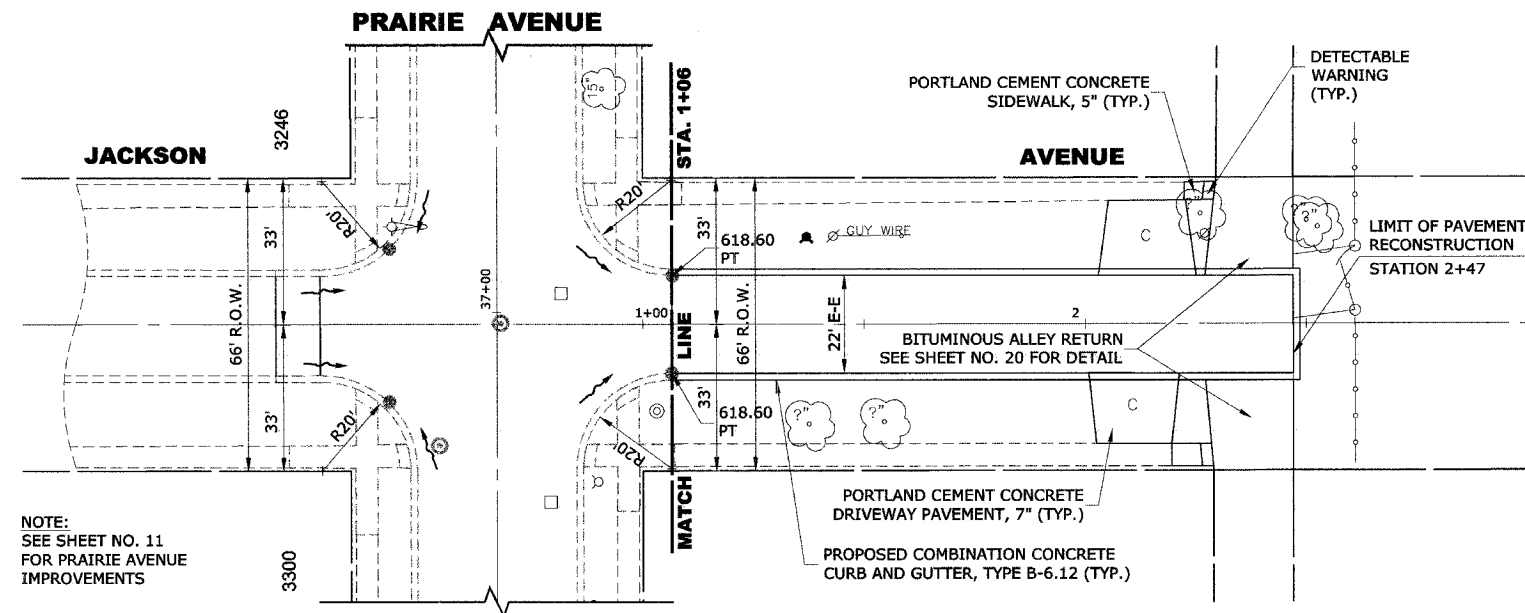
PROPOSED IMPROVEMENTS





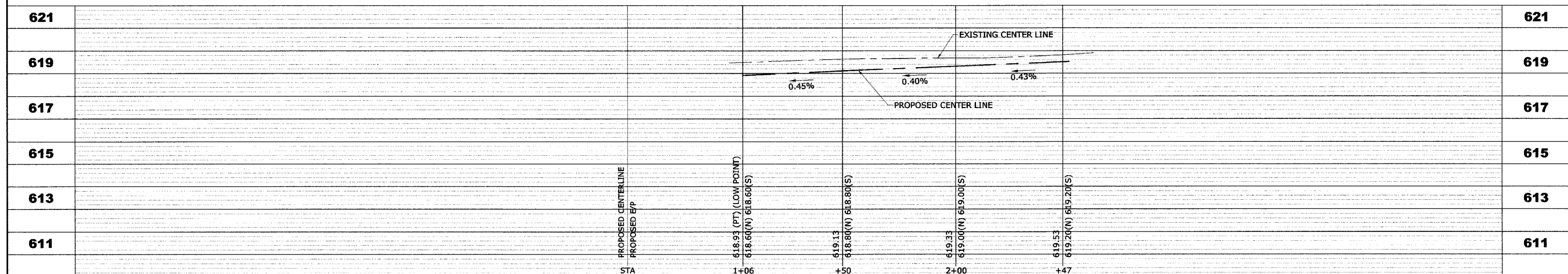
NOTE:
SEE SHEET NO. 11
FOR PRAIRIE AVENUE
IMPROVEMENTS

EXISTING TOPOGRAPHY



NOTE:
SEE SHEET NO. 11
FOR PRAIRIE AVENUE
IMPROVEMENTS

PROPOSED IMPROVEMENTS



◆ Civil Engineers
◆ Municipal Consultants
◆ Established 1911

9933 Roosevelt Road
Westchester, Illinois 60154-2780
Phone: 708/865-8300
Fax: 708/865-1212

**PRAIRIE AVENUE IMPROVEMENTS
PHASE I
VILLAGE OF BROOKFIELD, ILLINOIS**

**EXISTING AND PROPOSED
PAVING PLAN AND PROFILE**

REVISION:

SCALE: H: 1"=20', V: 1"=2'
DRAWN BY: MK/LEV
BOOK NO.: #1475, #1504
DATE: 11-04-05
E.H.E. NO.: 125-04-26301

SHEET
18
OF
49

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 2732	**	COOK	49	20
ILLINOIS PROJECT		M- 8003(371)		
VILLAGE SECTION		00-00115-00-WR		
CONTRACT NO. 83823				

GENERAL NOTES

DEPRESSED CURBS - THE TOP OF CURBS SHALL BE DEPRESSED WHERE THE CURB AND GUTTER IS CONSTRUCTED AT HANDICAP ACCESSIBLE SIDEWALK RAMPS AT ALLEY RETURNS AND STREET INTERSECTIONS, AND FOR PRIVATE DRIVES AND AS DIRECTED BY THE ENGINEER

DETECTABLE WARNINGS - DETECTABLE WARNINGS SHALL BE INSTALLED AT HANDICAP ACCESSIBLE SIDEWALK RAMPS AT ALLEY RETURNS AND STREET INTERSECTIONS.

DRAINAGE OPENINGS - AT ALL LOCATIONS WHERE CASTINGS ARE TO BE INCORPORATED IN THE CURB AND GUTTER, A 3/4" EXPANSION JOINT SHALL BE INSTALLED IN THE CURB AND GUTTER A DISTANCE OF 5 FT. FROM EACH SIDE OF THE CASTING. 2-NO. 4 RE-BARS, 9' IN LENGTH, SHALL BE INCORPORATED IN THE CONTINUOUS PORTION OF CONCRETE CURB BEHIND THE CASTING.

SLIPFORM CONSTRUCTION - VERTICAL FACES MAY BE BATTERED AT THE RATE OF 3/4" PER FOOT OF HEIGHT TO AID IN SLIPFORM OPERATIONS.

DEPRESSED CURB HEIGHT - THE HEIGHT OF THE DEPRESSED CURB SHALL BE 1-1/2" AT DRIVEWAYS. SEE IDOT STANDARD 424001-03 FOR HEIGHT AT SIDEWALK RAMP.

BITUMINOUS EXPANSION JOINTS - THREE QUARTER INCH (3/4") BITUMINOUS PREMOLDED INORGANIC FIBER EXPANSION JOINTS SHALL BE INSTALLED WHERE NEW SIDEWALK OR CURB AND GUTTER OR DRIVEWAY PAVEMENT ABUTS AN EXISTING CONCRETE WALK, DRIVE, OR CURB WHICH IS TO REMAIN IN PLACE, AND AT NOT LESS THAN NINETY FOOT (90') INTERVALS AT LOCATIONS WHERE CURB REPLACEMENT IS IN EXCESS OF NINETY FEET (90'); AT RADIUS POINTS, AT BOTH SIDES OF FRAMES AND GRATES WHICH FALL IN THE CURB; AND AS DIRECTED BY THE ENGINEER.

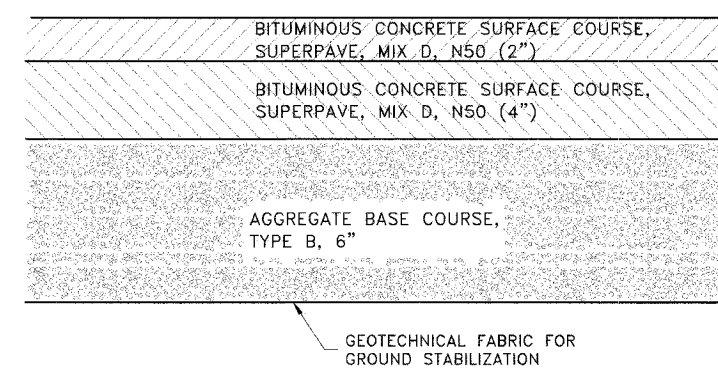
ALL EXPANSION JOINTS LOCATED IN THE CURB AND GUTTER SHALL HAVE TWO (2) THREE QUARTER INCH (3/4") DIAMETER, SMOOTH, ROUND, EPOXY COATED DOWEL BARS, EIGHTEEN INCHES (18") IN LENGTH, WITH GREASED PLASTIC END CAPS INSERTED TO ALLOW THE CURB AND GUTTER TO EXPAND AND CONTRACT LATERALLY. CONTRACTION JOINTS SHALL BE TOOLED INTO THE CURB AND GUTTER AT INTERVALS NOT TO EXCEED FIFTEEN FEET (15'). THESE CONTRACTION JOINTS SHALL BE SAW CUT TO A DEPTH OF TWO INCHES (2") WITHIN TWENTY-FOUR (24) HOURS OF CONCRETE PLACEMENT. THE COST OF THE ABOVE WORK SHALL BE INCLUDED INT THE RESPECTIVE ITEMS FOR CONCRETE INSTALLATION.

CURB AND GUTTER REMOVAL

THE COSTS FOR REMOVAL OF ANY ASPHALT OVERLAY THAT EXTENDS INTO THE GUTTER PORTION OF THE CURB AND GUTTER WILL BE INCLUDED IN THE PRICE FOR COMBINATION CURB AND GUTTER REMOVAL.

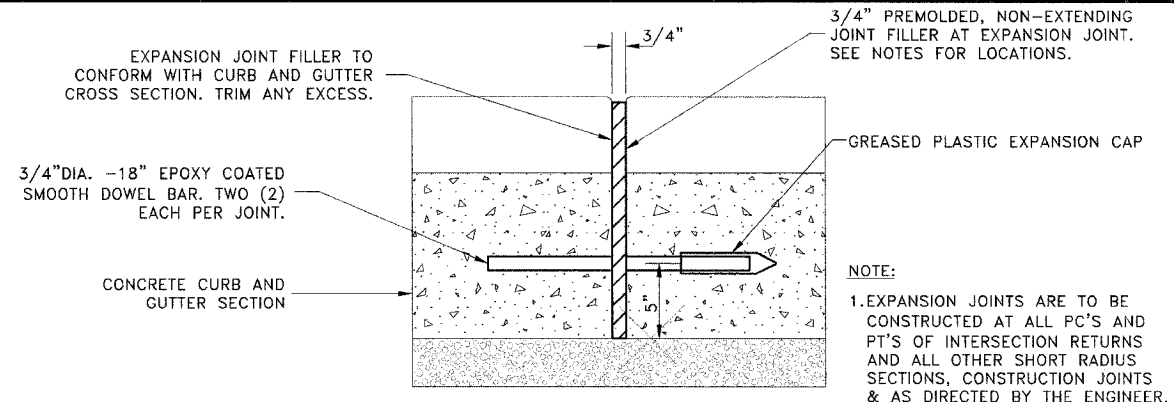
UNDERCUT AND POROUS GRANULAR EMBANKMENT (PGE)

A QUANTITY OF POROUS GRANULAR EMBANKMENT, SUBGRADE (PGES), HAS BEEN PROVIDED FOR USE IF THE EXISTING SOILS ARE UNSUITABLE OR UNSTABLE. THE ACTUAL NEED FOR REMOVAL AND REPLACEMENT WITH PGES WILL BE DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION BY THE ENGINEER. ALL POTENTIALLY UNSTABLE SOILS SHALL BE TESTED WITH A STATIC CONE PENETROMETER AND TREATED IN ACCORDANCE WITH ARTICLE 301.03 AND THE UNDERCUT GUIDELINES IN THE IDOT SUBGRADE STABILITY MANUAL. IF UNSUITABLE MATERIAL IS ENCOUNTERED, THE SOIL SHALL BE REMOVED AND REPLACED WITH PGES AS DETERMINED BY THE ENGINEER. IF UNSUITABLE MATERIAL IS NOT ENCOUNTERED, THEN THE QUANTITY OF PGES WILL REMAIN UNUSED AND NO ADDITIONAL COMPENSATION WILL BE DUE TO THE CONTRACTOR. THE 3-INCH CAPPING AGGREGATE (CA-6 GRADATION) WILL NOT BE REQUIRED SINCE GRANULAR SUBBASE WILL BE PLACED ON TOP OF THE PGE.



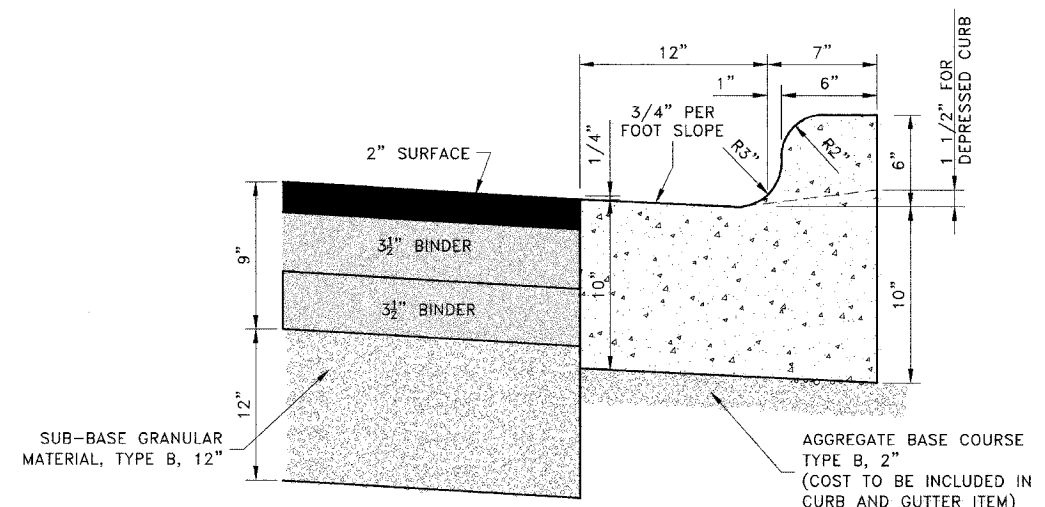
NOTE:
THE EXCAVATION AND GRADING WORK NECESSARY TO ESTABLISH THE SUBGRADE ELEVATIONS OF THE PROPOSED BITUMINOUS ALLEY RETURNS TO BE PAID FOR UNDER THE ITEM FOR EARTH EXCAVATION.

BITUMINOUS ALLEY RETURN DETAIL

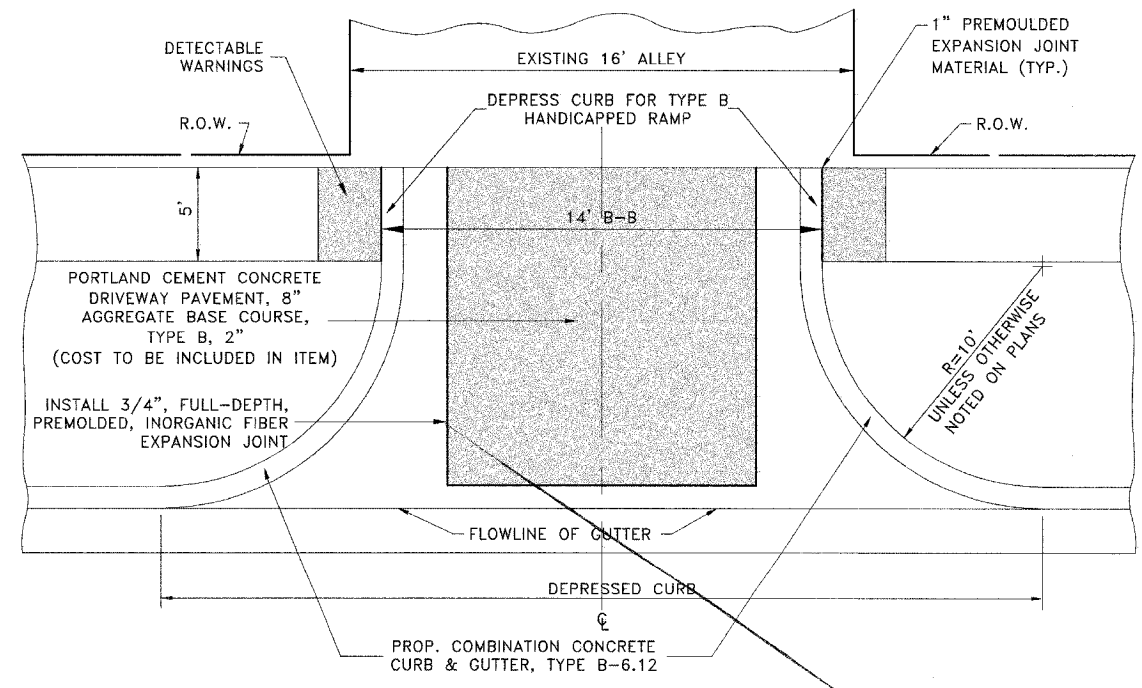


TYPICAL CURB AND GUTTER EXPANSION JOINT

NOTE:
1. EXPANSION JOINTS ARE TO BE CONSTRUCTED AT ALL PC'S AND PT'S OF INTERSECTION RETURNS AND ALL OTHER SHORT RADIUS SECTIONS, CONSTRUCTION JOINTS & AS DIRECTED BY THE ENGINEER.



COMBINATION CONCRETE CURB & GUTTER TYPE B-6.12



NOTE: UNLESS OTHERWISE NOTED ON PLAN USE RADII AS MARKED ABOVE.

CONCRETE ALLEY RETURN DETAIL

HANCOCK ENGINEERING
 ♦ Civil Engineers
 ♦ Municipal Consultants
 ♦ Established 1911
 9933 Roosevelt Road
 Westchester, Illinois 60154-2780
 Phone: 708/865-0300
 Fax: 708/865-1212

PRAIRIE AVENUE IMPROVEMENTS PHASE I VILLAGE OF BROOKFIELD, ILLINOIS

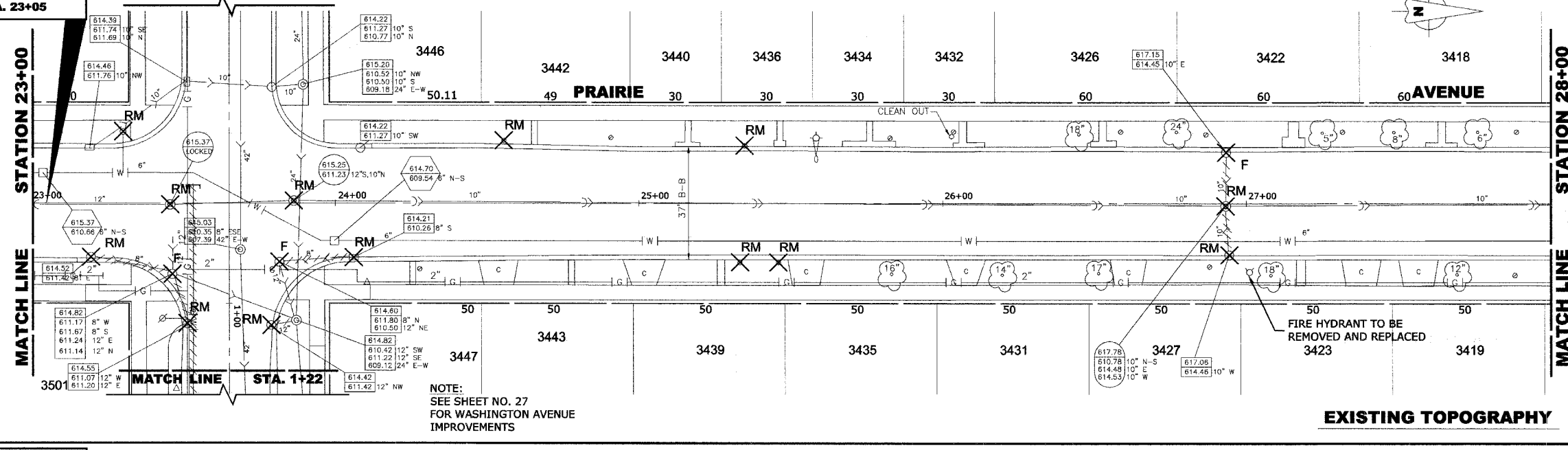
ROADWAY DETAILS

SCALE:	NONE	SHEET 20 49
DRAWN BY:	MK/LEV	
BOOK NO.:	#1475, #1504	
DATE:	11-04-05	
REVISION:	E.H.E. NO.: 125-04-26301	OF

PRAIRIE AVENUE
BEGIN IMPROVEMENT
STA. 23+05

WASHINGTON AVENUE

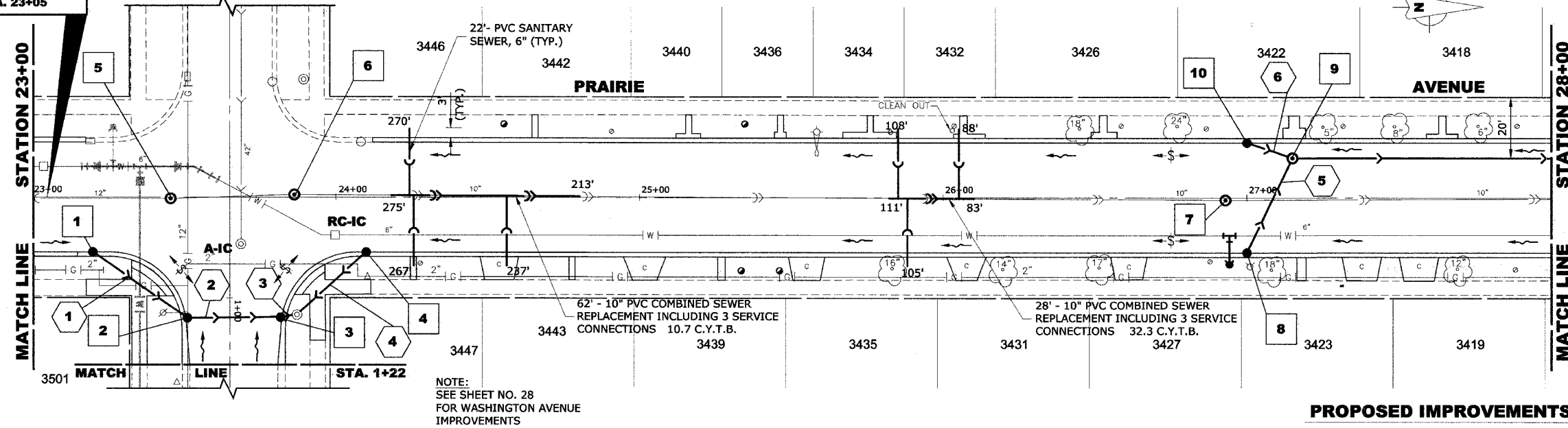
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 2732	**	COOK	49	21
ILLINOIS PROJECT		M- 8003(371)		
VILLAGE SECTION		00-00115-00-WR		
CONTRACT NO. 83823				



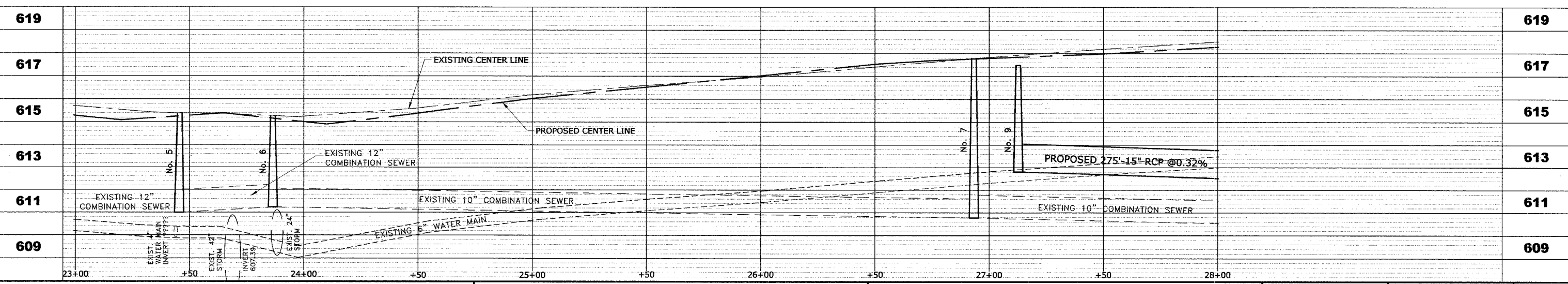
STRUC. NO.	STA.	OFFSET	TYPE	RIM ELEV.	INV. ELEV.
1	23+20	18' RT.	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	614.45	612.20
2	23+51	40' RT.	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	614.50	611.80 SW 611.70 N
3	23+80	40' RT.	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	614.50	611.40 S 611.30 N
4	24+10	18' RT.	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	614.25	610.75
5	23+45	.5' RT.	R.D. COMBINED SEWER MANHOLE, 4' DIA., TYPE 1 FRAME, CLOSED LID	615.25	VERIFY
6	23+86	1' LT.	R.D. COMBINED SEWER MANHOLE, 4' DIA., TYPE 1 FRAME, CLOSED LID	615.15	611.23
7	26+93	1' RT.	R.D. COMBINED SEWER MANHOLE, 4' DIA., TYPE 1 FRAME, CLOSED LID	617.75	610.78
8	27+00	18' RT.	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	617.15	613.15
9	27+15	13' LT.	R.D. MANHOLE, 4' DIA., TYPE 1 FRAME, CLOSED LID	617.50	613.00 SW 612.80 SE 612.80 N
10	27+00	18' LT.	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	617.15	613.15

PRAIRIE AVENUE
BEGIN IMPROVEMENT
STA. 23+05

WASHINGTON AVENUE



PIPE NO.	LENGTH	DIA.	TYPE	SLOPE	C.Y.T.B.
1	40'	10"	SS,PVC, SDR 26	1.00%	2.3
2	30'	12"	SS, DIP, CLASS 52	1.00%	0.6
3	8'	12"	SS,PVC, SDR 26	1.00%	1.3
4	30'	10"	SS,PVC, SDR 26	1.00%	5.5
5	35'	10"	SS,PVC, SDR 26	1.00%	2.1
6	15'	10"	SS,PVC, SDR 26	1.00%	1.0

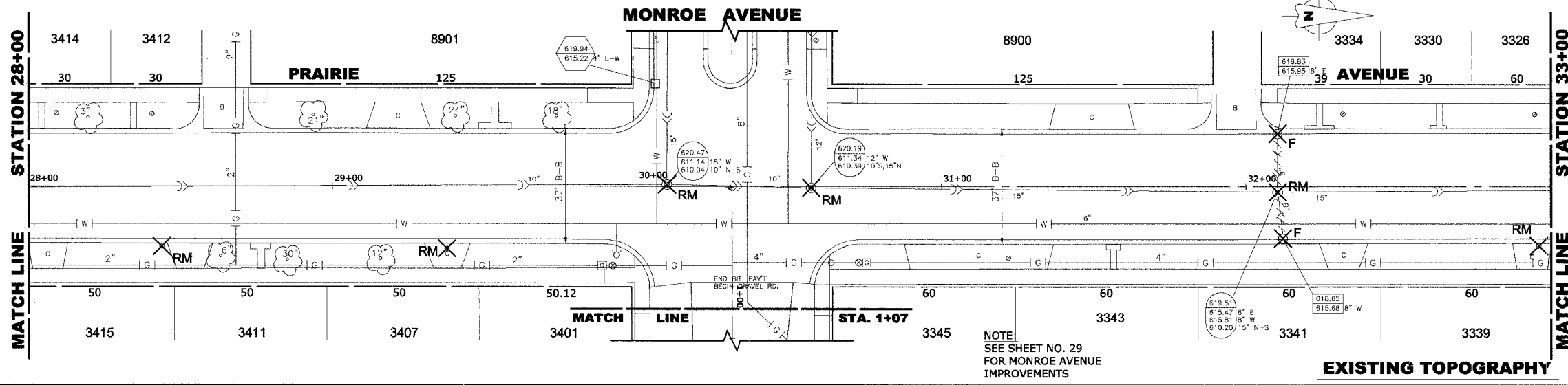


HANCOCK ENGINEERING
 Civil Engineers
 Municipal Consultants
 Established 1911
 9933 Roosevelt Road
 Westchester, Illinois 60154-2780
 Phone: 708/865-0300
 Fax: 708/865-1212

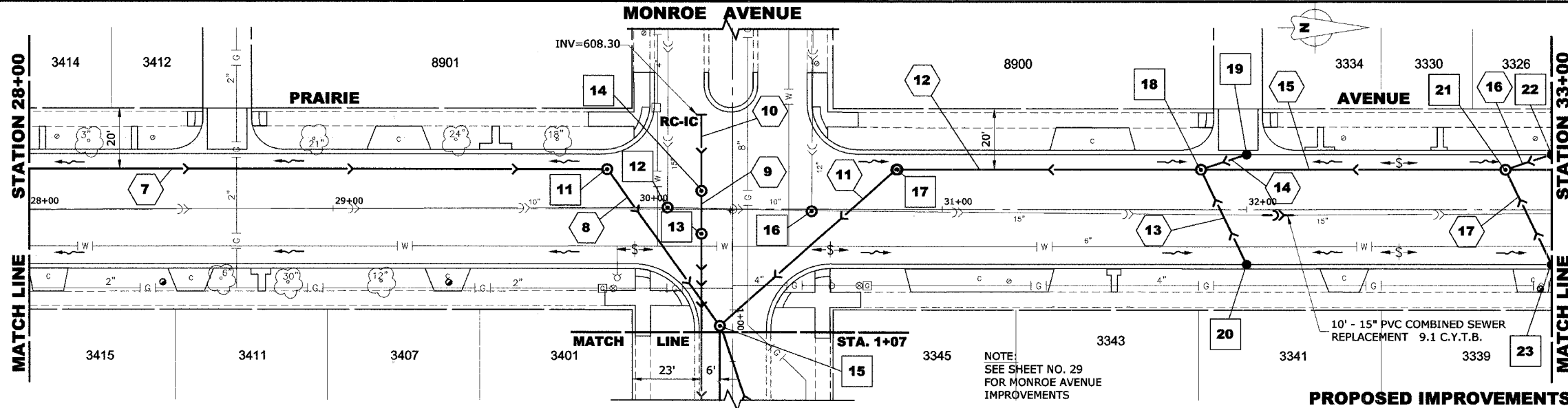
**PRAIRIE AVENUE IMPROVEMENTS
 PHASE I
 VILLAGE OF BROOKFIELD, ILLINOIS**

**EXISTING AND PROPOSED
 DRAINAGE AND UTILITIES
 PLAN AND PROFILE**

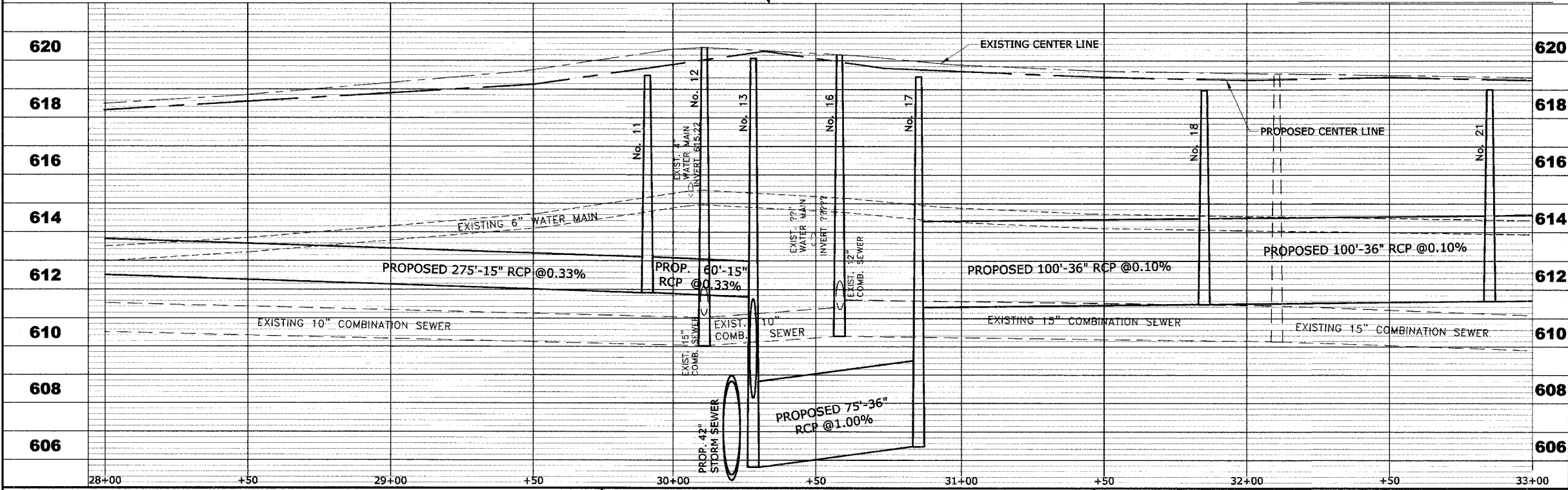
SCALE: H: 1"=20', V: 1"=2'	SHEET 21 OF 49
DRAWN BY: MK/LEV	
BOOK NO.: #1475, #1504	
DATE: 11-04-05	
REVISION:	E.H.E. NO.: 125-04-26301

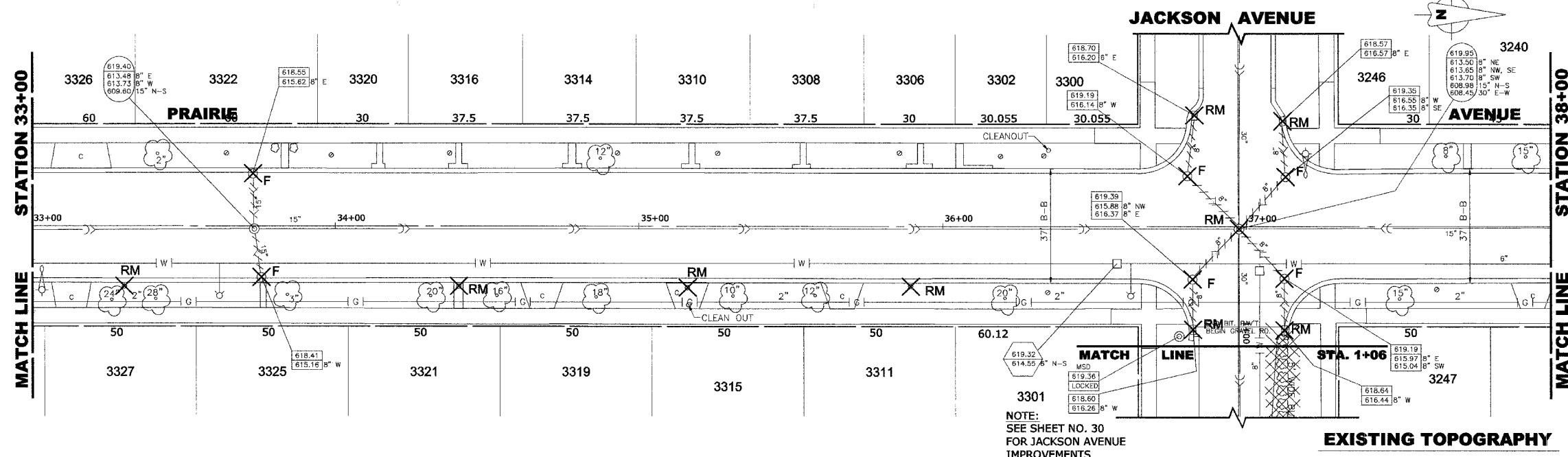


STRUC. NO.	STA.	OFFSET	TYPE	RIM ELEV.	INV. ELEV.
11	29+90	12' LT.	R.D. MANHOLE, 4' DIA., TYPE 1 FRAME, CLOSED LID	619.50	611.90 S 611.90 NE
12	30+10	1' LT.	R.D. COMBINED SEWER MANHOLE, 4' DIA., TYPE 1 FRAME, CLOSED LID	620.05	611.14 W 610.04 N-S
13	30+21	8' RT.	R.D. MANHOLE, 5' DIA., TYPE 1 FRAME, CLOSED LID	620.00	608.24 E 605.30 W
14	30+21	6' LT.	R.D. MANHOLE, 5' DIA., TYPE 1 FRAME, CLOSED LID	620.00	608.27 W 605.50 E
15	30+27	39' RT.	R.D. MANHOLE, 5' DIA., TYPE 1 FRAME, CLOSED LID	619.60	614.15 NE 611.70 SW 608.20 E 605.75 NW
16	30+57	1' RT.	R.D. COMBINED SEWER MANHOLE, 4' DIA., TYPE 1 RAME, CLOSED LID	620.10	611.34 W 610.39 N-S
17	30+85	13' LT.	R.D. MANHOLE, 5' DIA., TYPE 1 FRAME, CLOSED LID	619.45	611.40 N 606.50 SE
18	31+85	13' LT.	R.D. MANHOLE, 5' DIA., TYPE 1 FRAME, CLOSED LID	619.00	614.55 NW 614.35 NE 611.50 N-S
19	32+00	18' LT.	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	618.70	614.70
20	32+00	18' RT.	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	618.70	614.70
21	32+85	13' LT.	R.D. MANHOLE, 5' DIA., TYPE 1 FRAME, CLOSED LID	619.00	614.55 NW 614.35 NE 611.60 N-S
22	33+00	18' LT.	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	618.70	614.70
23	33+00	18' RT.	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	618.70	614.70

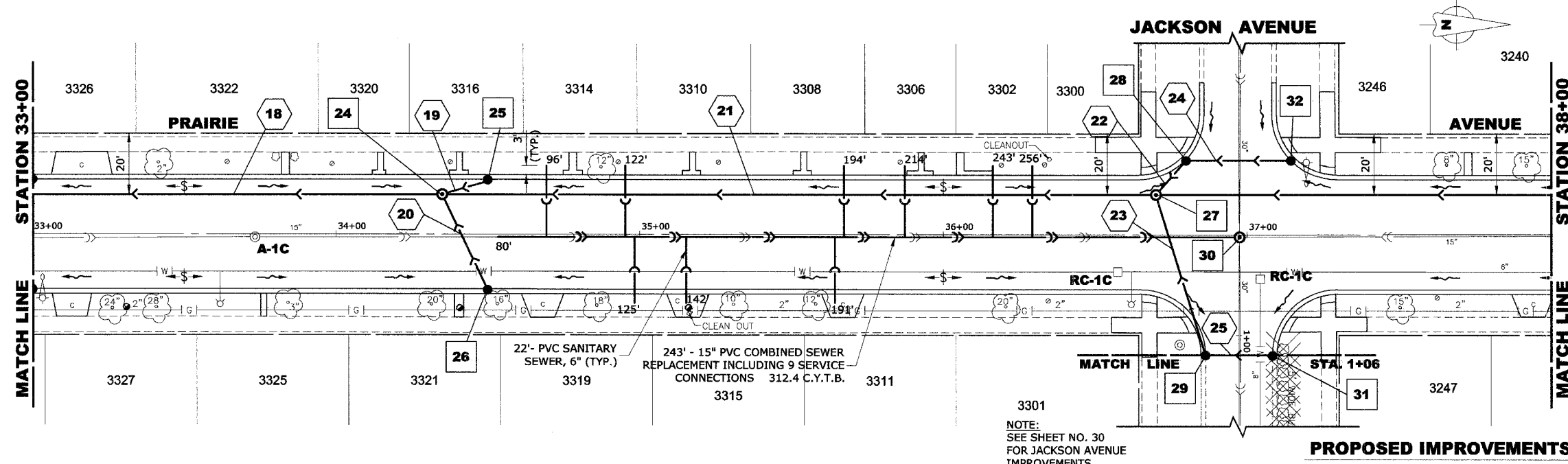


PIPE NO.	LENGTH	DIA.	TYPE	SLOPE	C.Y.T.B.
7	275'	15"	SS, TY-2, RCCP, CL-III	0.33%	163.6
8	65'	15"	SS, TY-2, RCCP, CL-III	0.32%	57.0
9	15'	42"	SS, TY-3, RCCP, CL-IV	1.33%	40.1
10	25'	42"	SS, TY-2, RCCP, CL-III	0.09%	49.5
11	75'	36"	SS, TY-3, RCCP, CL-IV	1.00%	172.5
12	100'	36"	SS, TY-2, RCCP, CL-III	0.10%	100.4
13	35'	10"	SS,PVC, SDR 26	1.00%	2.3
14	15'	10"	SS,PVC, SDR 26	1.00%	1.9
15	100'	36"	SS, TY-2, RCCP, CL-III	0.10%	93.3
16	15'	10"	SS,PVC, SDR 26	1.00%	2.3
17	35'	10"	SS,PVC, SDR 26	1.00%	0.9

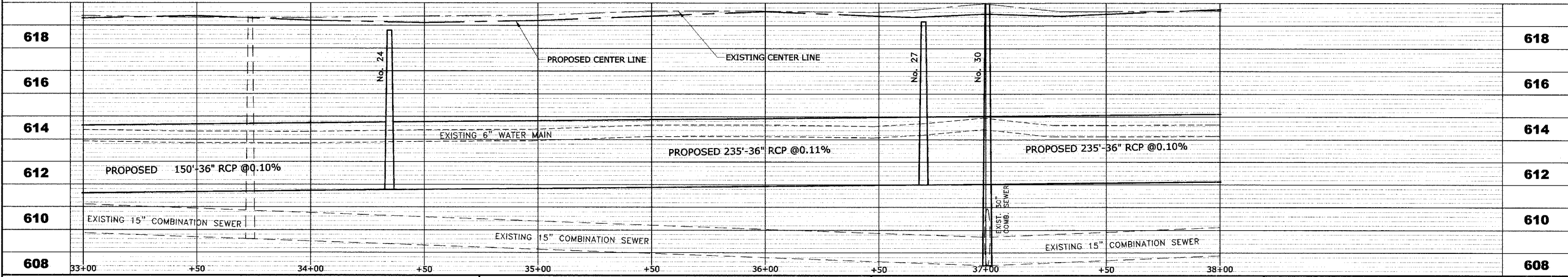


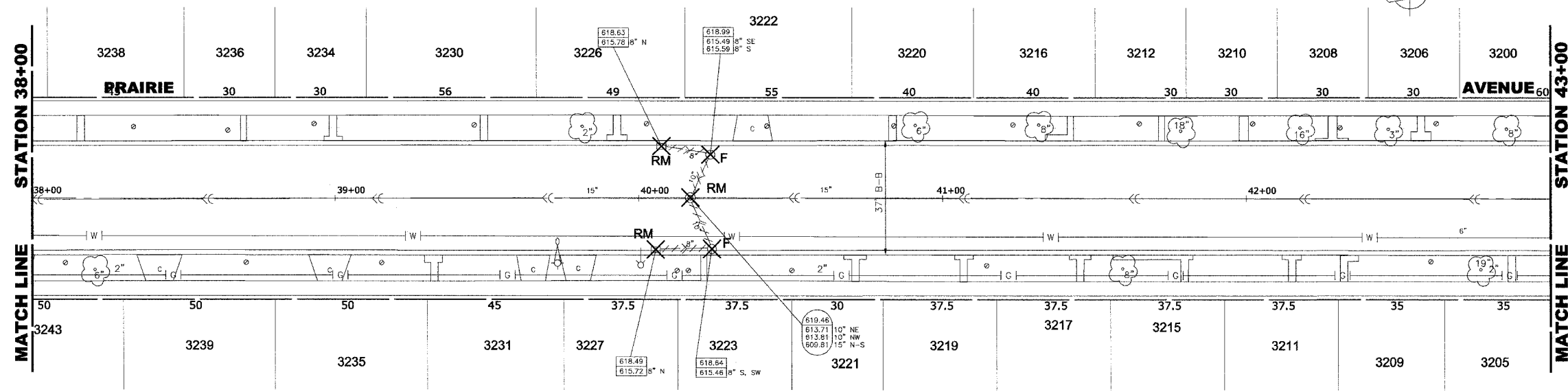


STRUC. NO.	STA.	OFFSET	TYPE	RIM ELEV.	INV. ELEV.
24	34+35	13' LT	R.D. MANHOLE, 5' DIA., TYPE 1 FRAME, CLOSED LID	618.80	614.35 NW 614.15 NE 611.75 N-S
25	34+50	18' LT	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	618.50	614.50
26	34+50	18' RT	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	618.50	614.50
27	36+70	13' LT	R.D. MANHOLE, 5' DIA., TYPE 1 FRAME, CLOSED LID	619.20	614.10 NW 613.75 NE 612.00 N-S
28	36+79	24' LT	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	618.70	614.35 N 614.20 SE
29	36+80	21' RT	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	618.60	614.40 N 614.30 SW
30	36+98	1' RT	R.D. COMBINED SEWER MANHOLE, 5' DIA., TYPE 1 FRAME, CLOSED LID	619.54	608.98 N-S 608.45 E-W
31	37+15	21' RT	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	618.60	614.60
32	37+15	24' LT	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	618.70	614.70



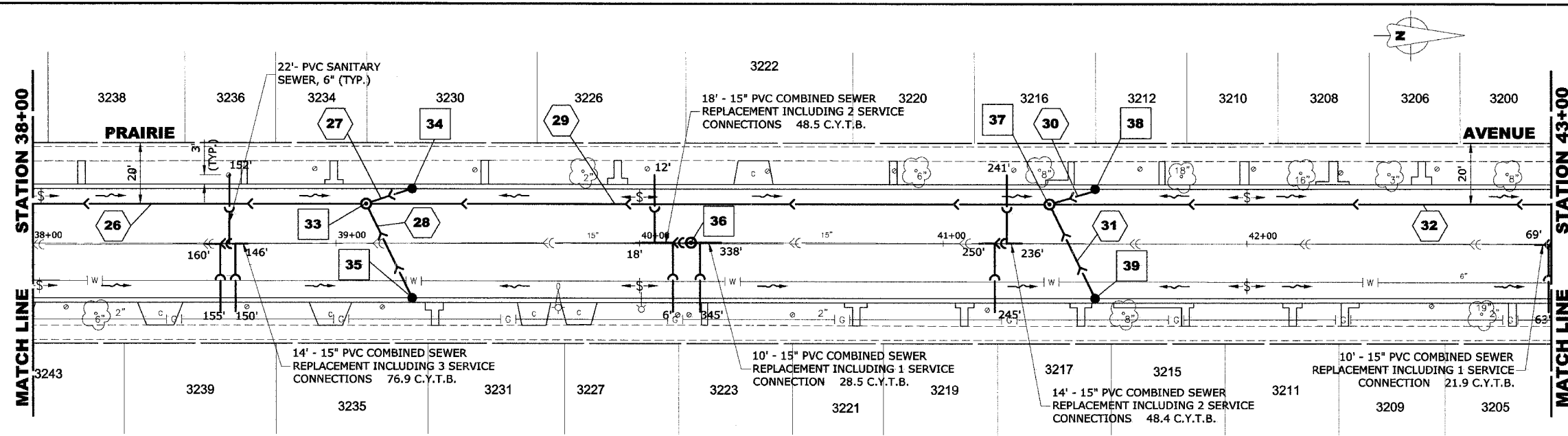
PIPE NO.	LENGTH	DIA.	TYPE	SLOPE	C.Y.T.B.
18	150'	36"	SS, TY-2, RCCP, CL-III	0.10%	132.7
19	15'	10"	SS,PVC, SDR 26	1.00%	0.9
20	35'	10"	SS,PVC, SDR 26	1.00%	2.3
21	235'	36"	SS, TY-2, RCCP, CL-III	0.11%	203.7
22	15'	12"	SS,PVC, SDR 26	1.00%	1.5
23	55'	12"	SS,PVC, SDR 26	1.00%	5.8
24	35'	10"	SS,PVC, SDR 26	1.00%	2.1
25	20'	10"	SS,PVC, SDR 26	1.00%	1.1





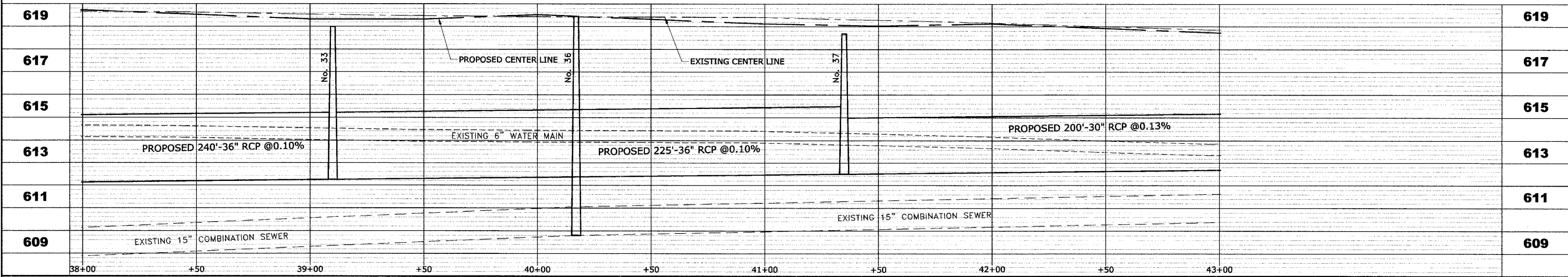
EXISTING TOPOGRAPHY

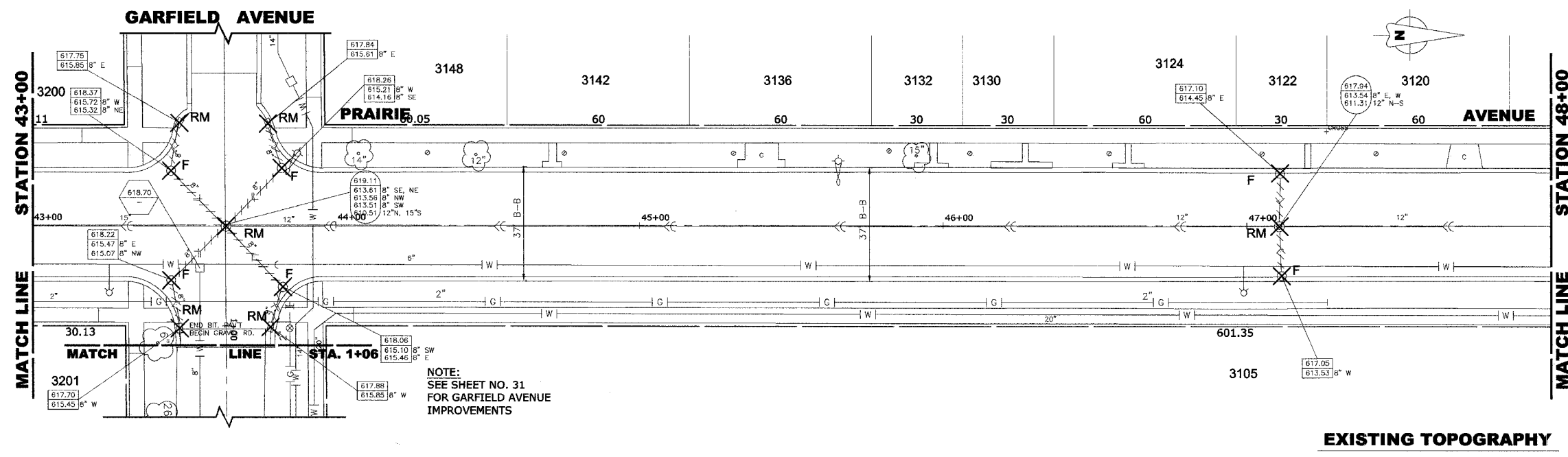
STRUC. NO.	STA.	OFFSET	TYPE	RIM ELEV.	INV. ELEV.
33	39+10	13' LT.	R.D. MANHOLE, 5' DIA., TYPE 1 FRAME, CLOSED LID	619.00	614.55 NW 614.35 NE 612.24 N-S
34	39+25	18' LT.	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	618.70	614.70
35	39+25	18' RT.	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	618.70	614.70
36	40+17	0	R.D. COMBINED SEWER MANHOLE, 4' DIA., TYPE 1 FRAME, CLOSED LID	619.48	609.81
37	41+35	13' LT.	R.D. MANHOLE, 5' DIA., TYPE 1 FRAME, CLOSED LID	618.70	614.25 NW 614.05 NE 612.47 N-S
38	41+50	18' LT.	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	618.40	614.40
39	41+50	18' LT.	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	618.40	614.40



PROPOSED IMPROVEMENTS

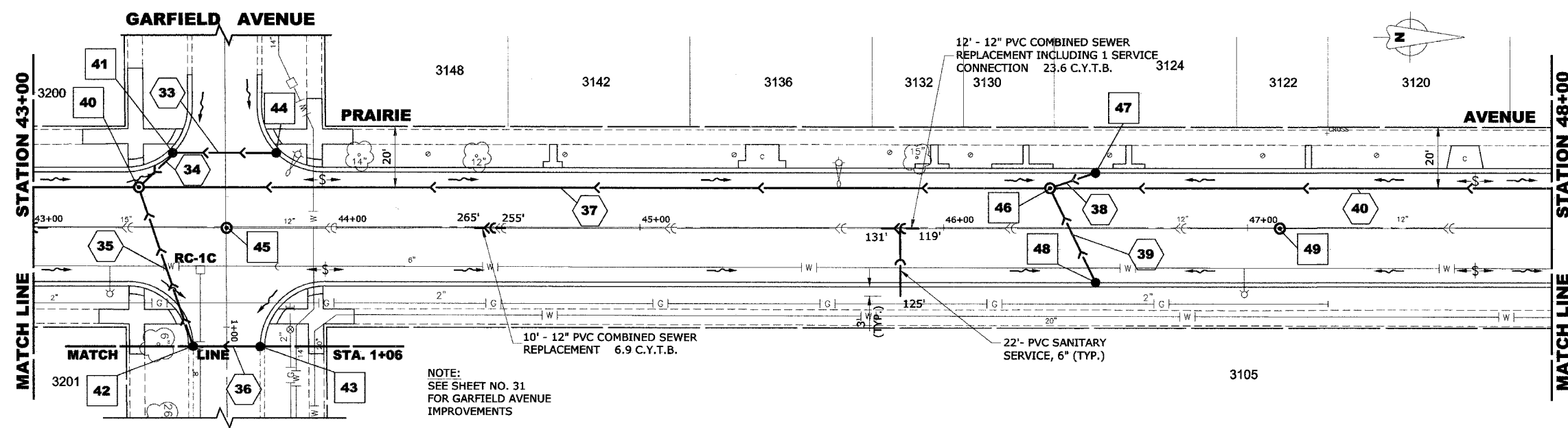
PIPE NO.	LENGTH	DIA.	TYPE	SLOPE	C.Y.T.B.
26	240'	36"	SS, TY-2, RCCP, CL-III	0.10%	198.9
27	15'	10"	SS,PVC, SDR 26	1.00%	0.9
28	35'	10"	SS,PVC, SDR 26	1.00%	2.3
29	225'	36"	SS, TY-2, RCCP, CL-III	0.10%	162.5
30	15'	10"	SS,PVC, SDR 26	1.00%	0.9
31	35'	10"	SS,PVC, SDR 26	1.00%	2.3
32	200'	30"	SS, TY-2, RCCP, CL-III	0.13%	120.2





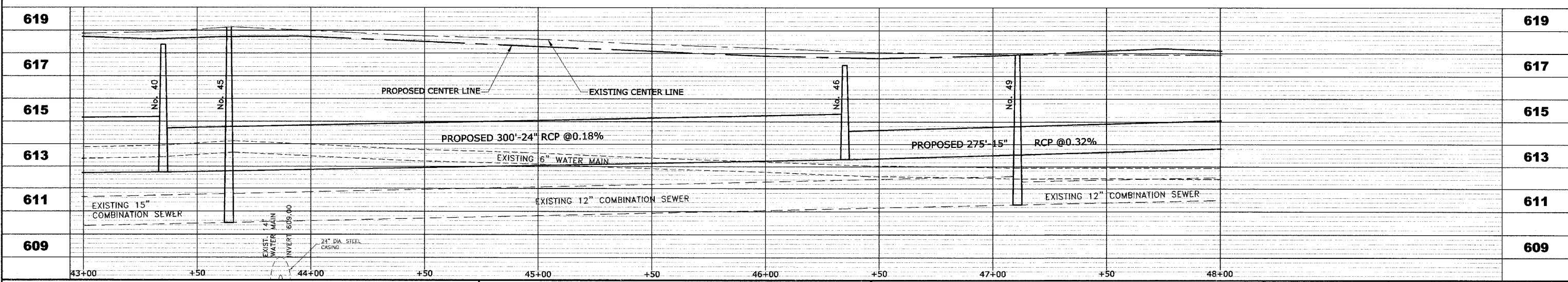
STRUC. NO.	STA.	OFFSET	TYPE	RIM ELEV.	INV. ELEV.
40	43+35	13' LT.	R.D. MANHOLE, 5' DIA., TYPE 1 FRAME, CLOSED LID	618.40	614.00 NW 614.00 NE 612.73 N-S
41	43+46	24' LT.	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	617.90	614.25 N 614.15 SE
42	43+43	21' RT.	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	617.85	614.65 N 614.55 SW
43	43+83	21' RT.	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	617.85	614.85 S
44	43+80	24' LT.	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	617.90	614.60 S
45	43+64	0	R.D. COMBINED SEWER MANHOLE, 4' DIA., TYPE 1 FRAME, CLOSED LID	618.74	610.51 N-S
46	46+35	13' LT.	R.D. MANHOLE, 5' DIA., TYPE 1 FRAME, CLOSED LID	617.50	614.30 NW, NE 613.27 N-S
47	46+50	18' LT.	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	617.15	614.45 SE
48	46+50	18' RT.	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	617.15	614.65 SW
49	47+70	0	R.D. COMBINED SEWER MANHOLE, 4' DIA., TYPE 1 FRAME, CLOSED LID	617.95	611.31 N-S

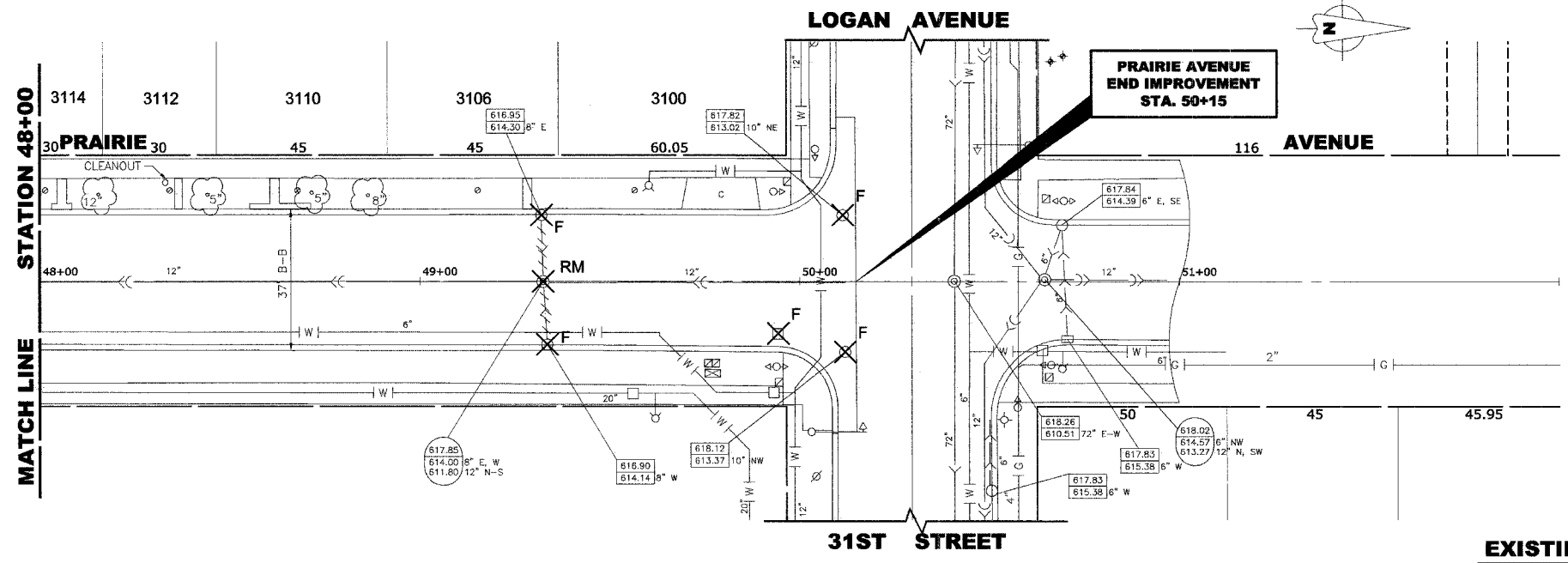
EXISTING TOPOGRAPHY



PIPE NO.	LENGTH	DIA.	TYPE	SLOPE	C.Y.T.B.
33	35'	10"	SS, DIP, CLASS 52	1.00%	2.7
34	15'	12"	SS, DIP, CLASS 52	1.00%	1.9
35	55'	12"	SS, DIP, CLASS 52	1.00%	6.5
36	20'	10"	SS, DIP, CLASS 52	1.00%	1.2
37	300'	24"	SS, TY-2, RCCP, CL-III	0.18%	87.5
38	15'	10"	SS, DIP, CLASS 52	1.00%	0.5
39	35'	10"	SS, DIP, CLASS 52	1.00%	0.9
40	275'	15"	SS, TY-2, RCCP, CL-III	0.32%	37.2

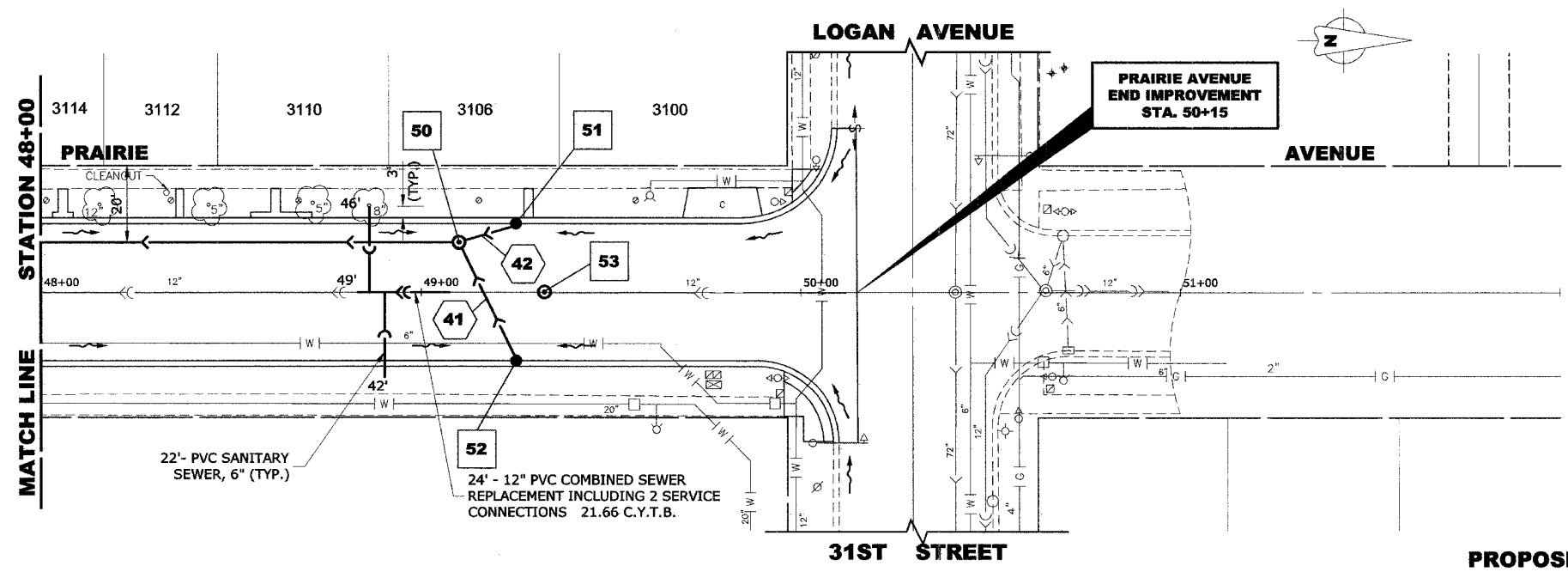
PROPOSED IMPROVEMENTS





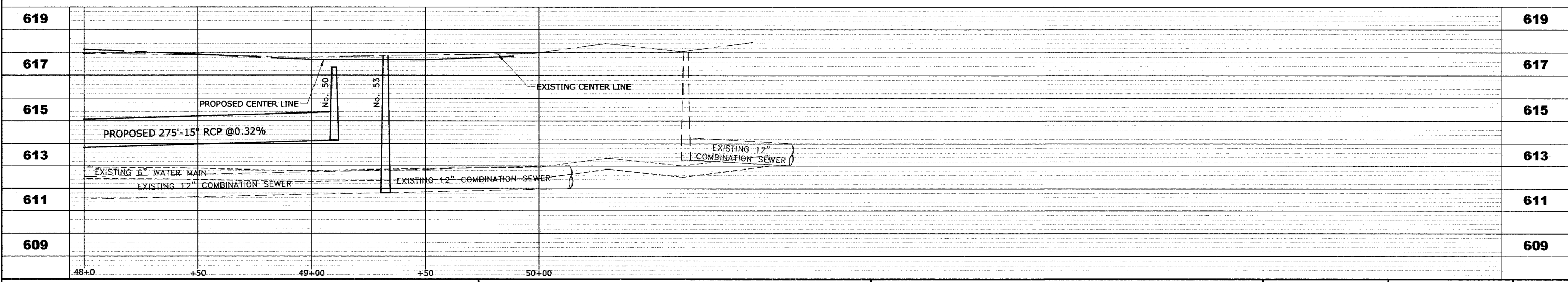
STRUC. NO.	STA.	OFFSET	TYPE	RIM ELEV.	INV. ELEV.
50	49+10	13' LT.	R.D. MANHOLE, 4' DIA., TYPE 1 FRAME, CLOSED LID	617.35	614.15 NW, NE 614.15 S
51	49+25	18' LT.	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	617.05	614.30
52	49+25	18' RT.	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	617.05	614.50
53	49+32	0	R.D. COMBINED SEWER MANHOLE, 4' DIA., TYPE 1 FRAME, CLOSED LID	617.70	611.80

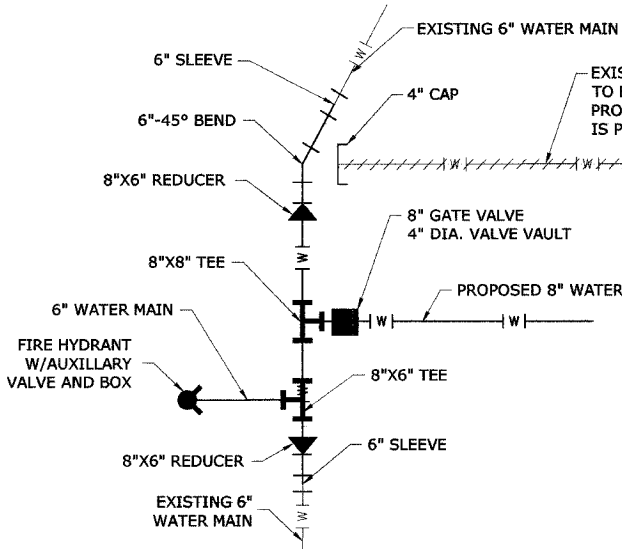
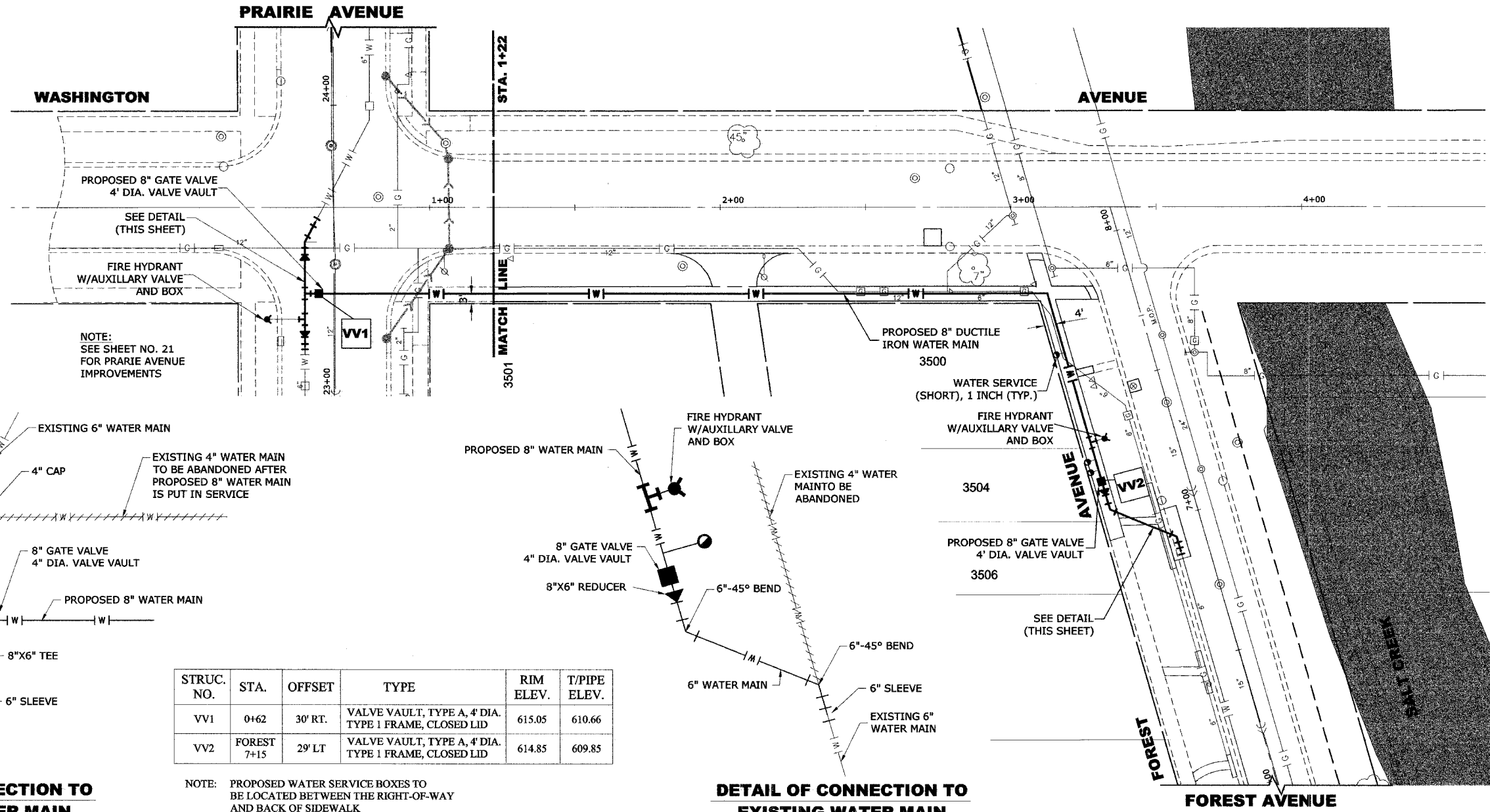
EXISTING TOPOGRAPHY



PIPE NO.	LENGTH	DIA.	TYPE	SLOPE	C.Y.T.B.
41	35'	10"	SS, DIP, CLASS 52	1.00%	0.6
42	15'	10"	SS, DIP, CLASS 52	1.00%	1.0

PROPOSED IMPROVEMENTS

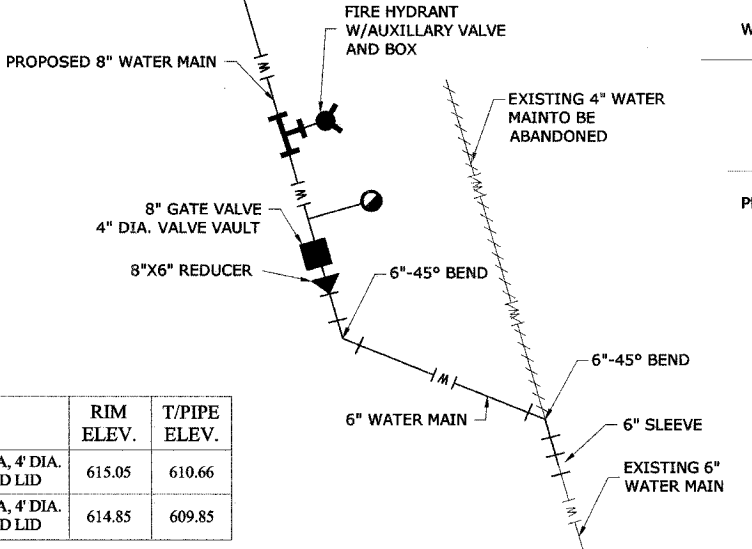




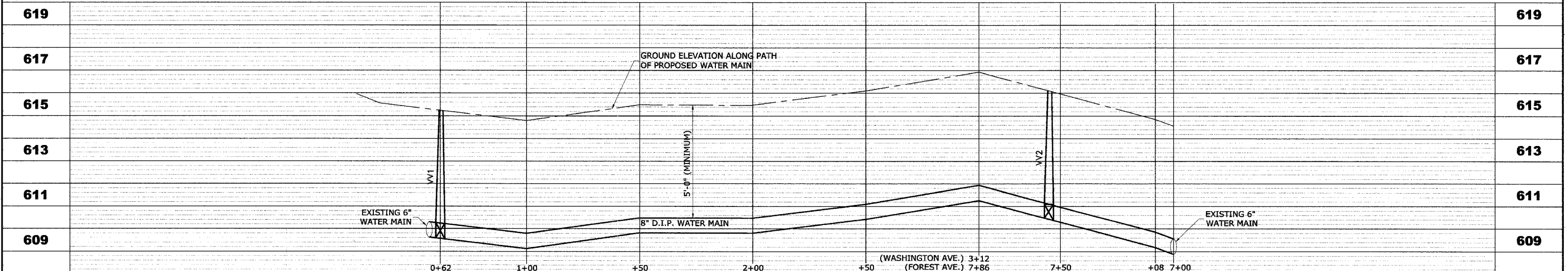
DETAIL OF CONNECTION TO EXISTING WATER MAIN ON PRAIRIE AVENUE

STRUC. NO.	STA.	OFFSET	TYPE	RIM ELEV.	T/PIPE ELEV.
VV1	0+62	30' RT.	VALVE VAULT, TYPE A, 4' DIA. TYPE 1 FRAME, CLOSED LID	615.05	610.66
VV2	FOREST 7+15	29' LT	VALVE VAULT, TYPE A, 4' DIA. TYPE 1 FRAME, CLOSED LID	614.85	609.85

NOTE: PROPOSED WATER SERVICE BOXES TO BE LOCATED BETWEEN THE RIGHT-OF-WAY AND BACK OF SIDEWALK



DETAIL OF CONNECTION TO EXISTING WATER MAIN ON FOREST AVENUE



PROPOSED IMPROVEMENTS

HANCOCK ENGINEERING

- Civil Engineers
- Municipal Consultants
- Established 1911

9933 Roosevelt Road
Westchester, Illinois 60154-2790
Phone: 708/865-8300
Fax: 708/865-1212

**PRAIRIE AVENUE IMPROVEMENTS
PHASE I
VILLAGE OF BROOKFIELD, ILLINOIS**

PROPOSED DRAINAGE AND UTILITIES PLAN

SCALE: H: 1"=20', V: 1"=2'

DRAWN BY: MK/LEV

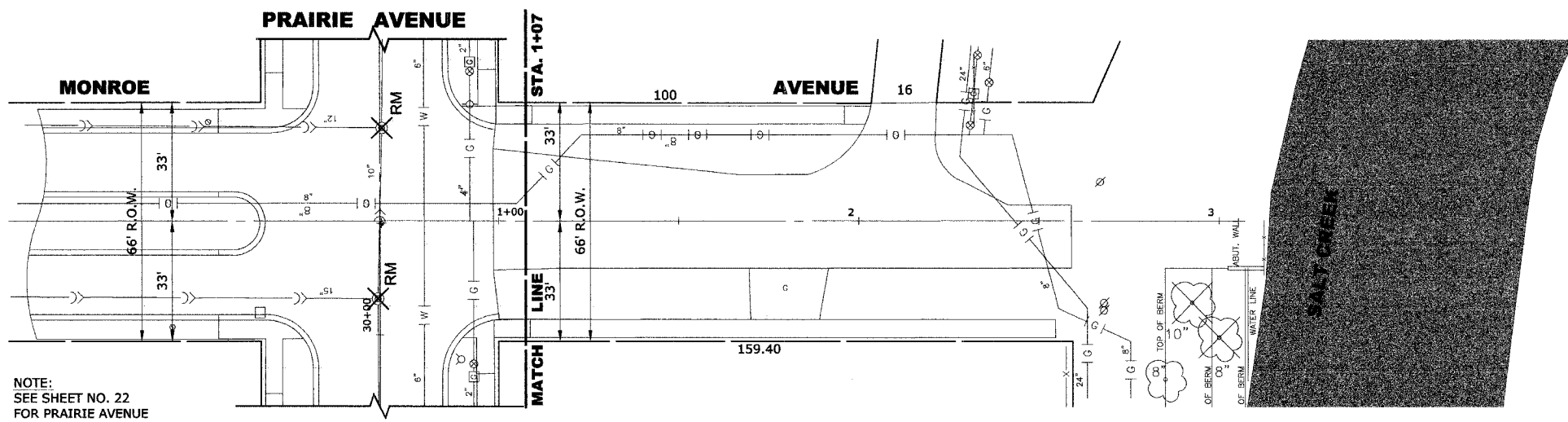
BOOK NO.: #1475, #1504

DATE: 11-04-05

E.H.E. NO.: 125-04-26301

REVISION:

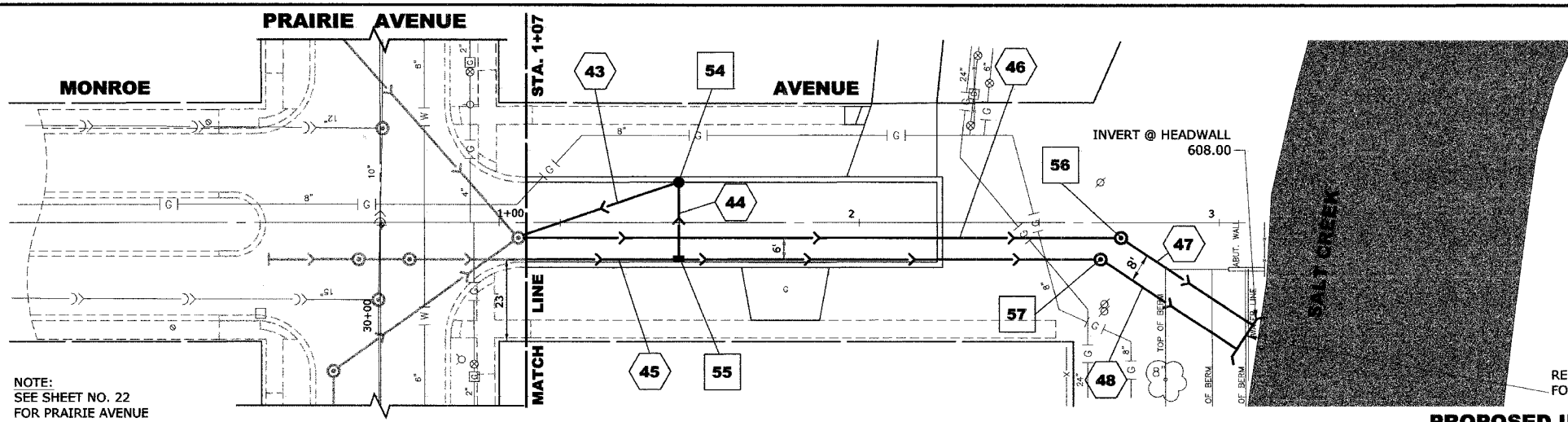
SHEET **28** OF **49**



STRUC. NO.	STA.	OFFSET	TYPE	RIM ELEV.	INV. ELEV.
54	1+50	11' LT.	R.D. CATCH BASIN, 4' DIA. TYPE 1 FRAME, OPEN LID	618.90	614.70 S 614.60 SW
55	1+50	11' RT.	INLET, TYPE A, TYPE 1 FRAME, OPEN LID	618.90	614.90 N
56	2+72	4' RT	R.D. MANHOLE, 5' DIA., TYPE 1 FRAME, CLOSED LID	620.00	608.05 W,SE
57	2+66	10' RT.	R.D. MANHOLE, 5' DIA., TYPE 1 FRAME, CLOSED LID	620.00	608.05 W,SE

NOTE:
SEE SHEET NO. 22
FOR PRAIRIE AVENUE
IMPROVEMENTS

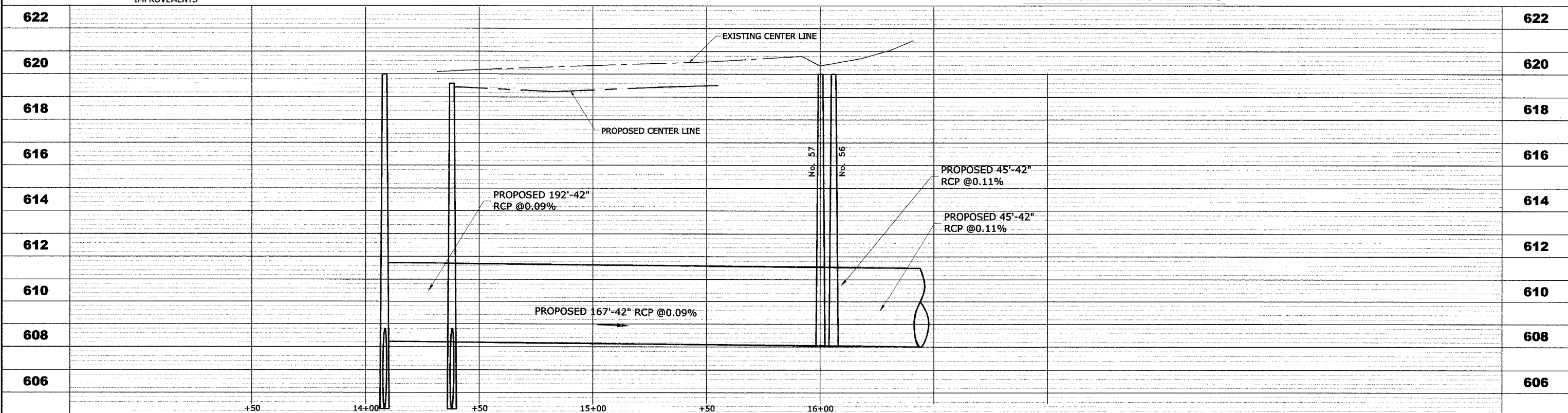
EXISTING TOPOGRAPHY



PIPE NO.	LENGTH	DIA.	TYPE	SLOPE	C.Y.T.B.
43	45'	10"	SS,PVC, SDR 26	1.00%	4.6
44	20'	10"	SS,PVC, SDR 26	1.00%	0.9
45	190'	42"	SS, TY-2, RCCP, CL-III	0.09%	372.8
46	165'	42"	SS, TY-2, RCCP, CL-III	0.09%	325.0
47	45'	42"	SS, TY-2, RCCP, CL-III	0.11%	48.8
48	45'	42"	SS, TY-2, RCCP, CL-III	0.11%	48.8

NOTE:
SEE SHEET NO. 22
FOR PRAIRIE AVENUE
IMPROVEMENTS

PROPOSED IMPROVEMENTS



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

- THE MWRDGC LOCAL SEWER SYSTEMS SECTION FIELD OFFICE MUST BE NOTIFIED AT LEAST TWO (2) WORKING DAYS PRIOR TO THE COMMENCEMENT OF WORK AT (708) 588-4055.
- ELEVATION DATUM IS U.S.G.S.
- ALL FLOOR DRAINS SHALL DISCHARGE TO THE SANITARY SEWER SYSTEM.
- ALL DOWNSPOUTS AND FOOTING DRAINS SHALL DISCHARGE INTO THE STORM SEWER SYSTEM.
- ALL PVC STORM, COMBINED, AND SANITARY SEWER PIPE JOINTS SHALL CONFORM TO ASTM D-3139, AND THE PIPE SHALL CONFORM TO ASTM D-2241. ALL PVC SEWER PIPE SHALL BE SDR 26. ALL RCCP SEWER TO MEET ASTM C-76 AND JOINTS SHALL CONFORM TO ASTM C-443.
- ALL SANITARY SEWER CONSTRUCTION, AND ALSO STORM SEWER CONSTRUCTION IN COMBINED SEWER AREAS, REQUIRES STONE DEDDING 1/2" 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.
- "BAND SEAL" OR SIMILAR FLEXIBLE-TYPE COUPLINGS SHALL BE USED IN THE CONNECTION OF SEWER PIPE OF DISSIMILAR MATERIALS.
- 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:
 - 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.
 - 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.
 - 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 IT FIRMLY IN PLACE. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR THE INSTALLATION.
- 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 WATER MAIN SHALL BE 18 INCHES. FURTHERMORE, A MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN SANITARY/ COMBINED SEWERS AND WATER MAINS 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 WATER MAIN 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 WATER MAIN, THE SEWER SHALL BE CONSTRUCTED TO WATER MAIN STANDARDS.
- ALL EXISTING SEPTIC SYSTEMS SHALL BE ABANDONED. ABANDONED TANKS SHALL BE FILLED WITH GRANULAR MATERIAL OR REMOVED.
- 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.

DRAINAGE AND UTILITIES NOTES

THE LOCATIONS OF EXISTING DRAINAGE STRUCTURES, STORM SEWERS, COMBINED SEWERS, TELEPHONE LINES, COMMUNICATION LINES, ELECTRIC LINES, GAS MAINS, AND WATER SERVICES ARE APPROXIMATE AND THEIR SPECIFIC LOCATIONS ARE TO BE DETERMINED IN THE FIELD AT NO COMPENSATION TO THE CONTRACTOR.

COORDINATION OF ALL UTILITY WORK INVOLVED WITHIN THE CONSTRUCTION AREAS SHALL BE SUBJECT TO DISCUSSION AND CLARIFICATION AT A PRECONSTRUCTION MEETING.

WHEN EXISTING DRAINAGE FACILITIES ARE DISTURBED, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY OUTLETS AND CONNECTIONS FOR ALL PRIVATE OR PUBLIC DRAINAGE STRUCTURES OR SEWERS UNTIL PERMANENT CONNECTIONS TO SEWERS ARE BUILT AND IN SERVICE. THIS WORK SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

WHEN, DURING CONSTRUCTION OPERATIONS, ANY LOOSE MATERIALS ARE DEPOSITED IN THE FLOW LINES OF GUTTERS OR DRAINAGE STRUCTURES SO THAT THE NATURAL FLOW OF WATER IS OBSTRUCTED, THE OBSTRUCTING MATERIALS SHALL BE REMOVED AT THE CLOSE OF EACH WORK DAY. AT THE CONCLUSION OF THE CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES ARE TO BE FREE OF ALL DIRT, DEBRIS, AND OBSTRUCTING MATERIALS. THE WORK SPECIFIED ABOVE WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT.

ALL COSTS INVOLVED IN CONNECTING OF PROPOSED STORM SEWERS AND STORM STRUCTURES TO EXISTING STORM SEWERS OR PROPOSED STORM SEWERS SHALL BE CONSIDERED INCIDENTAL TO THE PROPOSED ITEMS BEING CONSTRUCTED.

ALL PROPOSED WATER MAINS SHALL BE INSTALLED IN ACCORDANCE WITH IN THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS", FIFTH EDITION, DATED 1996, AND ALL REVISIONS THERETO.

THE CONTRACTOR SHALL VERIFY THE TYPE OF ALL WATER MAIN HARDWARE INCLUDING VALVES, FIRE HYDRANTS, VALVE BOXES, CORPORATION STOPS, CURB STOPS, AND WATER SERVICES BOXES WITH THE UTILITY SUPERINTENDENT PRIOR TO ORDERING SUCH MATERIAL.

THE TYPE OF FRAMES AND GRATES REQUIRED FOR ALL CATCH BASINS AND MANHOLES LISTED IN THE SUMMARY OF QUANTITIES MAY BE FOUND ON THE PLANS AT THEIR RESPECTIVE LOCATIONS. WHERE LIDS ARE CALLED FOR ON THE PLANS, THEY SHALL BE IN ACCORDANCE WITH ARTICLE 604.01 OF THE STANDARD SPECIFICATIONS AND THE TERM LID IS USED IN LIEU OF GRATE.

ON ALL IMPROVEMENTS, THE FRAMES AND LIDS OF EXISTING CATCH BASINS, INLETS, MANHOLES, AND VALVE VAULTS WHICH ARE TO BE ABANDONED DUE TO CONSTRUCTION OF THIS IMPROVEMENT ARE TO REMAIN THE PROPERTY OF THE VILLAGE OF BROOKFIELD AND BE SALVAGED. THE CONTRACTOR IS TO DELIVER FRAMES AND LIDS TO THE VILLAGE OF BROOKFIELD PUBLIC WORKS YARD LOCATED AT 4545 EBERLY AVENUE.

ANY COSTS FOR SHEETING OR SHORING REQUIRED FOR THE STORM SEWER INSTALLATION OR OTHER CONSTRUCTION ELEMENTS REQUIRING RELATIVELY DEEP EXCAVATIONS SHALL BE INCLUDED IN THE PARTICULAR PAYMENT ITEM AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR ANY SUPPLEMENTAL WORK ASSOCIATED WITH THE MAINTENANCE OF TRENCH SIDES OR OTHER EXCAVATED AREAS.

UNLESS OTHERWISE SPECIFIED, ABANDONED SEWERS AND DRAINS, AS DESIGNATED BY THE ENGINEER, SHALL BE PLUGGED WITH CLASS "SI" CONCRETE OR BRICK AND SUITABLE MORTAR TO THE SATISFACTION OF THE ENGINEER. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE PAY ITEMS FOR REMOVING AND/OR FILLING THE VARIOUS TYPES OF STRUCTURES.

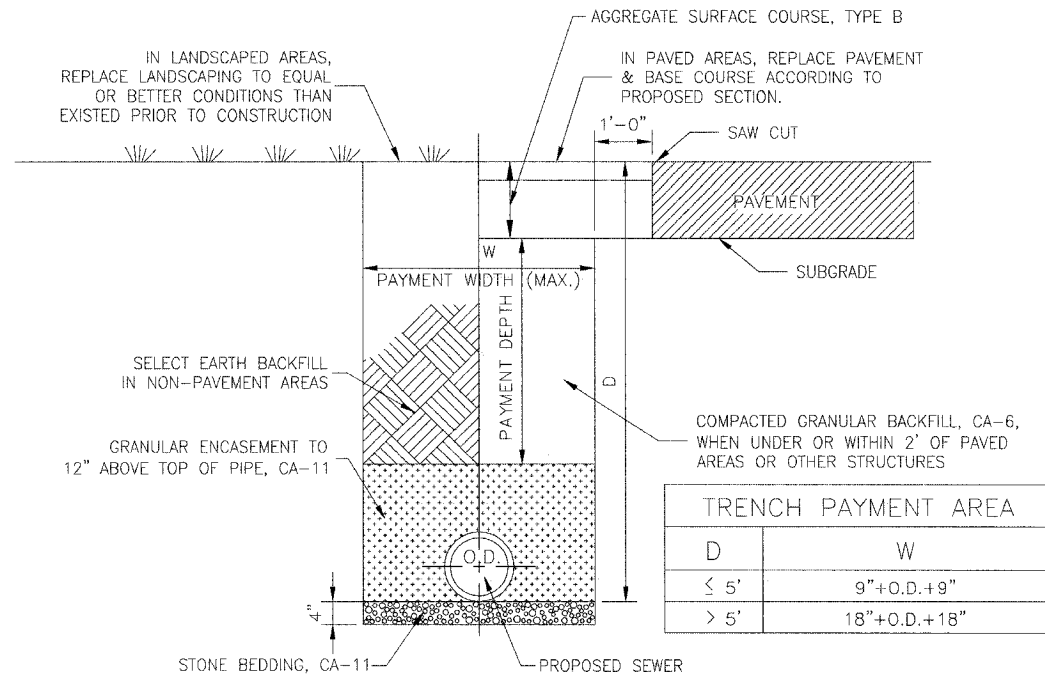
SEWER PIPE INSTALLED ON THIS PROJECT SHALL CONFORM TO THE FOLLOWING STANDARD:

TYPE OF PIPE	MATERIAL STANDARD	JOINT STANDARD
REINFORCED CONCRETE PIPE	ASTM C-76	ASTM C-361
POLYVINYLCHLORIDE PIPE (6"-12")	ASTM D-2241	ASTM D-3139
POLYVINYLCHLORIDE PIPE (6")	ASTM D-3034	ASTM D-3212
POLYVINYLCHLORIDE PIPE (15")	ASTM D-3034	ASTM D-3212

FINAL ADJUSTMENT OF ALL STRUCTURES IN THE PAVEMENT, INCLUDING THOSE IN THE PROPOSED BASE COURSE, SHALL NOT BE COMPLETED UNTIL AFTER THE PLACEMENT OF THE BITUMINOUS CONCRETE BINDER COURSE.

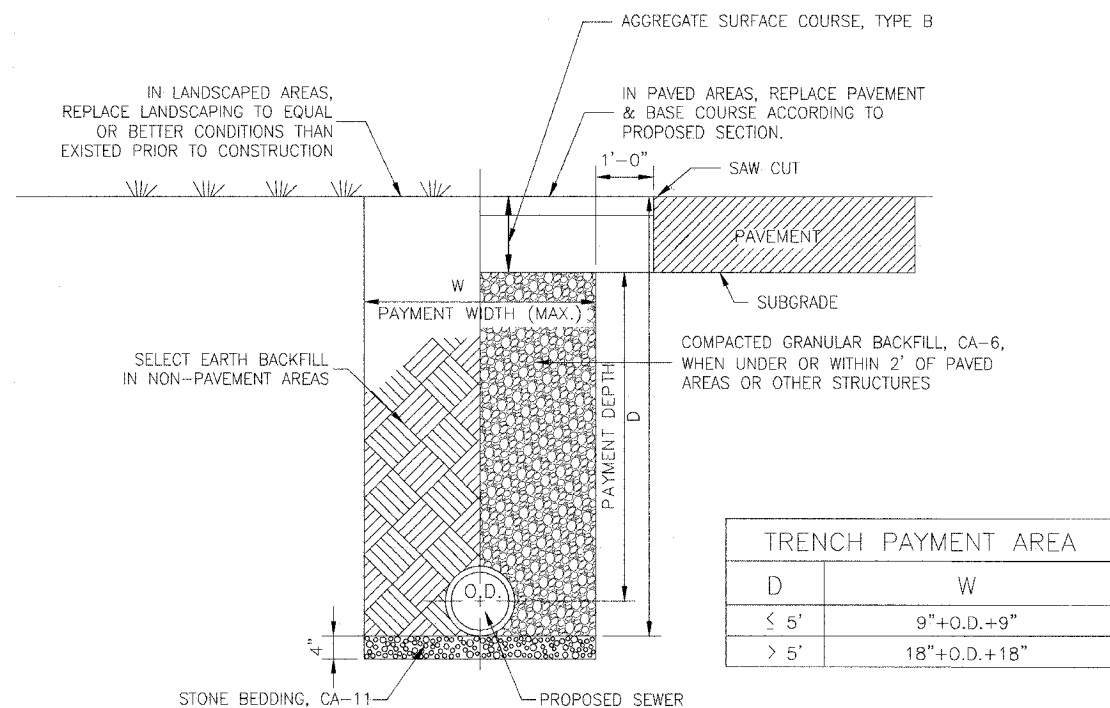
THE AREA WITHIN THE ROUNDOUT SHALL BE FILLED WITH CRUSHED STONE AND A MINIMUM OF 1 1/2" THICK BITUMINOUS MATERIAL APPROVED BY THE ENGINEER. COST IS TO BE INCLUDED IN THE RESPECTIVE PAY ITEM FOR THE NEW, ADJUSTED OR RECONSTRUCTED STRUCTURE.

A 3 FOOT PIECE OF PIPE UNDERDRAIN SHALL BE INSTALLED IN EACH DIRECTION PARALLEL TO THE CURB AND GUTTER AT EACH DRAINAGE STRUCTURE.



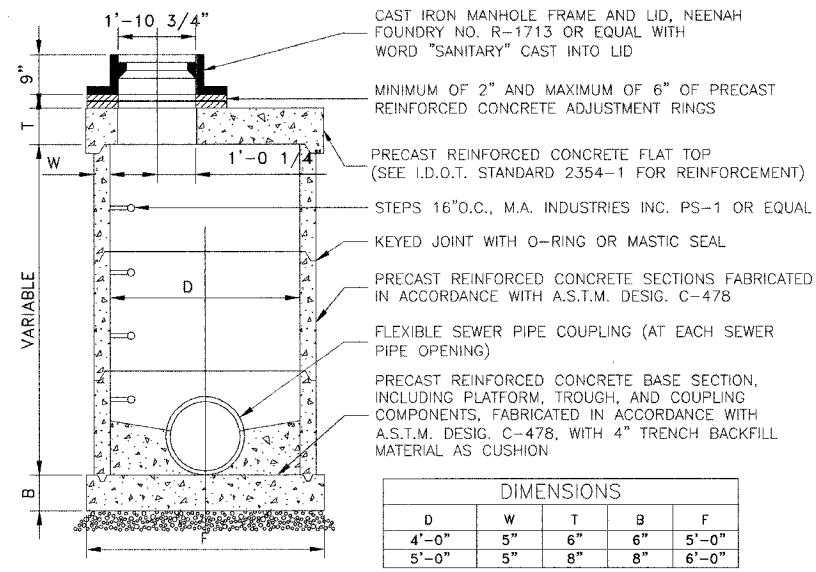
TYPICAL PVC AND DIP SEWER TRENCH DETAIL

TRENCH PAYMENT AREA	
D	W
≤ 5'	9"+O.D.+9"
> 5'	18"+O.D.+18"

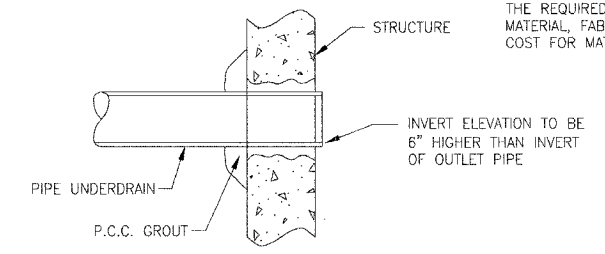
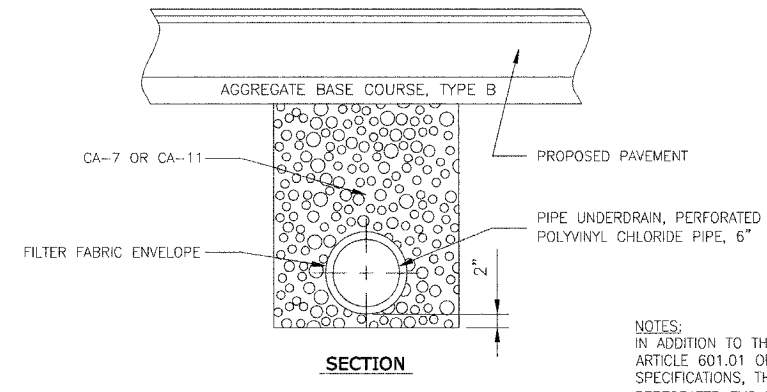


TYPICAL RCCP SEWER TRENCH DETAIL

TRENCH PAYMENT AREA	
D	W
≤ 5'	9"+O.D.+9"
> 5'	18"+O.D.+18"



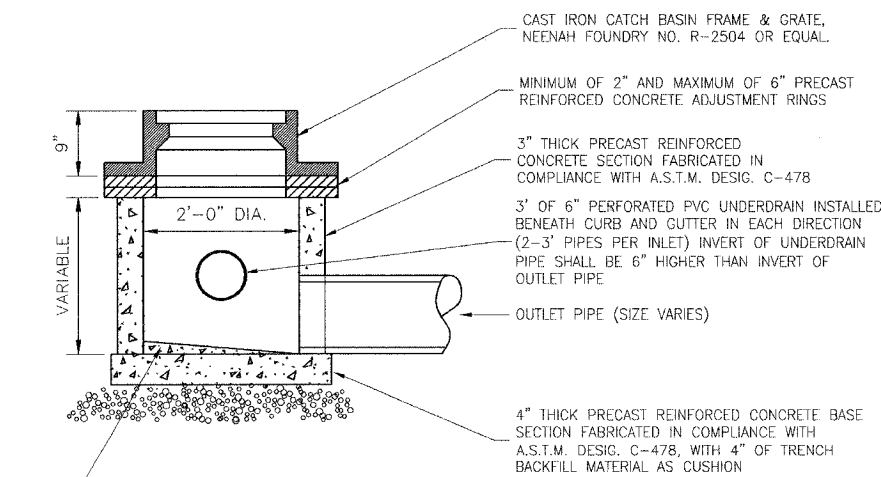
RESTRICTED DEPTH COMBINED MANHOLE



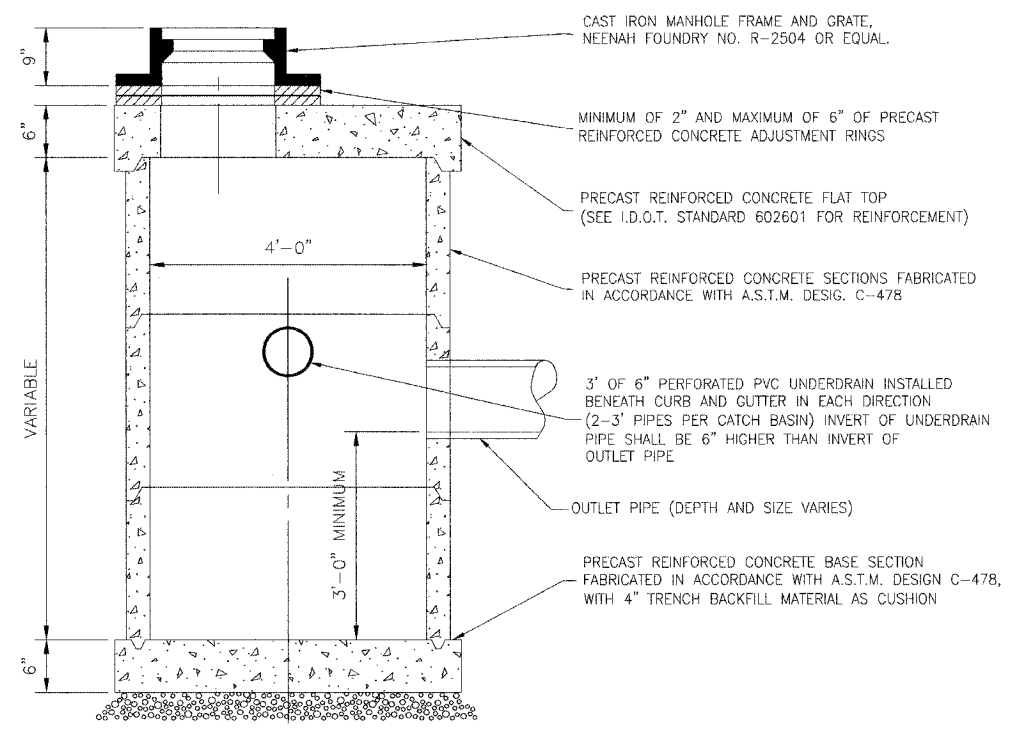
PIPE UNDERDRAIN DETAIL

DUCTILE IRON PIPE SPECIFICATIONS

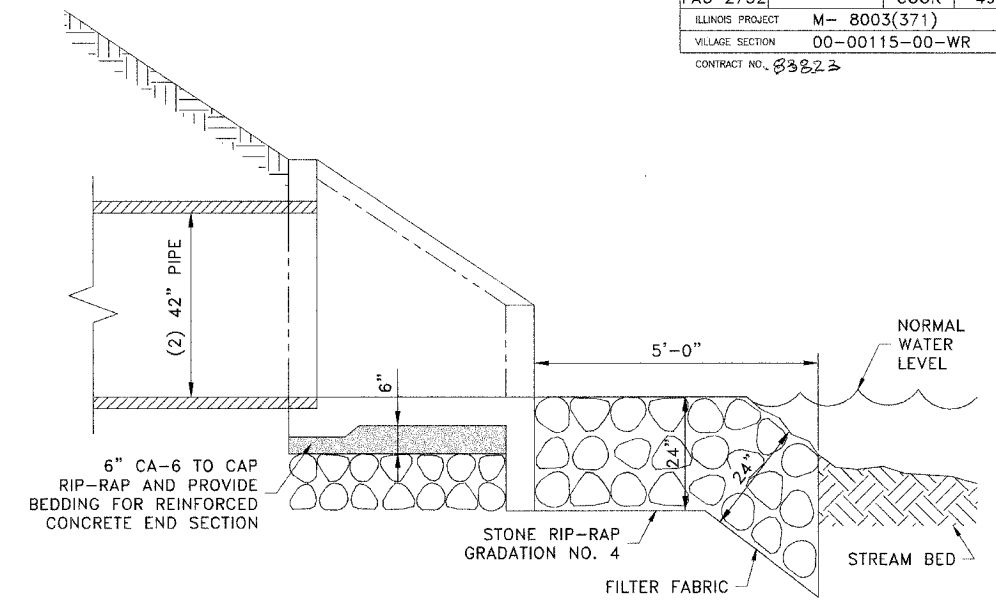
1. ALL DUCTILE IRON PIPE WATER MAINS AND SEWER MAINS SHALL BE CLASS 52, CEMENT-LINED AND TAR-COATED, MEETING THE REQUIREMENTS OF SPECIFICATIONS ANSI/AWWA C151/A21.51 WITH "PUSH-ON" JOINTS MEETING THE REQUIREMENTS OF SPECIFICATIONS ANSI/AWWA C111/A21.11. WHERE SPECIFIED ON THE PLANS, OR IN THE SPECIFICATIONS, MECHANICAL JOINTS AND "LOCK-TYPE" JOINTS SHALL BE USED IN LIEU OF "PUSH-ON" JOINTS.
2. ALL PIPE FITTINGS AND SPECIAL CASTINGS SHALL BE DUCTILE IRON CONFORMING TO ANSI/AWWA C153/A21.53 AND ANSI/AWWA C111/A21.11 SPECIFICATIONS AND SHALL MEET THE MINIMUM REQUIREMENTS OF CLASS 150 DUCTILE IRON PIPE. IF CERTAIN FITTINGS ARE NOT MANUFACTURED IN DUCTILE IRON, CAST IRON FITTINGS SHALL BE ACCEPTABLE. MECHANICAL JOINT TYPE FITTINGS SHALL BE USED.
3. ALL PROPOSED DUCTILE IRON PIPE WATER MAIN AND SEWER MAIN WILL BE ENCASED WITHIN FOUR (4) MIL THICK, HIGH-DENSITY POLYETHYLENE TUBING. ALL FITTINGS SHALL BE ENCASED IN A DOUBLE-LAYER OF POLYETHYLENE TUBING. THE POLYETHYLENE MATERIAL SHALL BE MANUFACTURED AND INSTALLED IN COMPLIANCE WITH ANSI/AWWA C105/A21.5. ALL PROPOSED WATER AND SEWER SERVICES SHALL BE ENCASED IN POLYETHYLENE TUBING FOR A MINIMUM DISTANCE OF THREE FEET (3') FROM THE PROPOSED WATER MAIN AND SEWER MAIN.



INLET, TYPE A

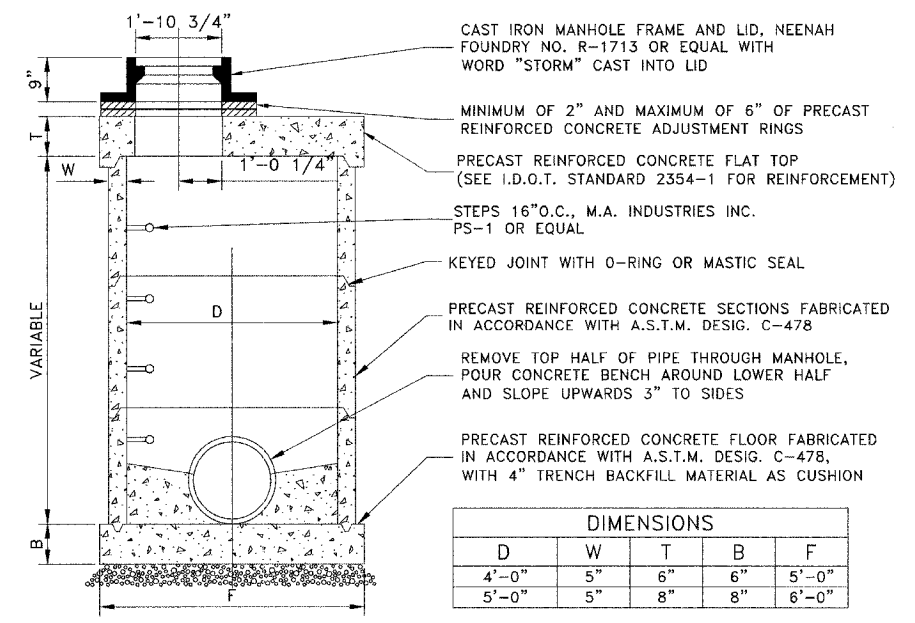


RESTRICTED DEPTH CATCH BASIN

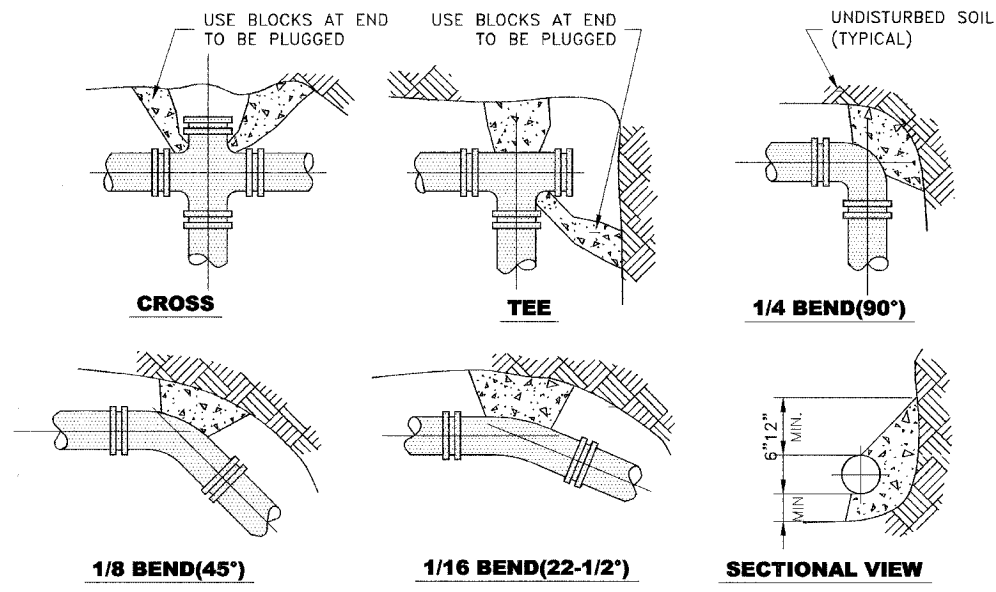


42" REINFORCED CONCRETE END SECTION RIP-RAP DETAIL

- NOTES:**
1. NEENAH R-5050-SF42 AUTOMATIC DRAINAGE GATE ATTACHED TO EACH 42" STORM SEWER OUTLET PIPE



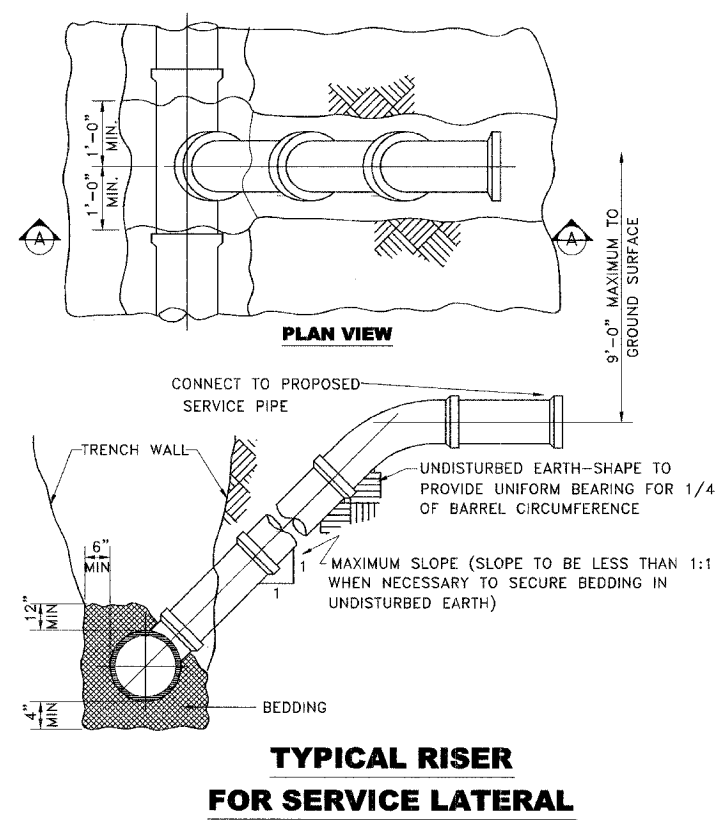
RESTRICTED DEPTH STORM MANHOLE



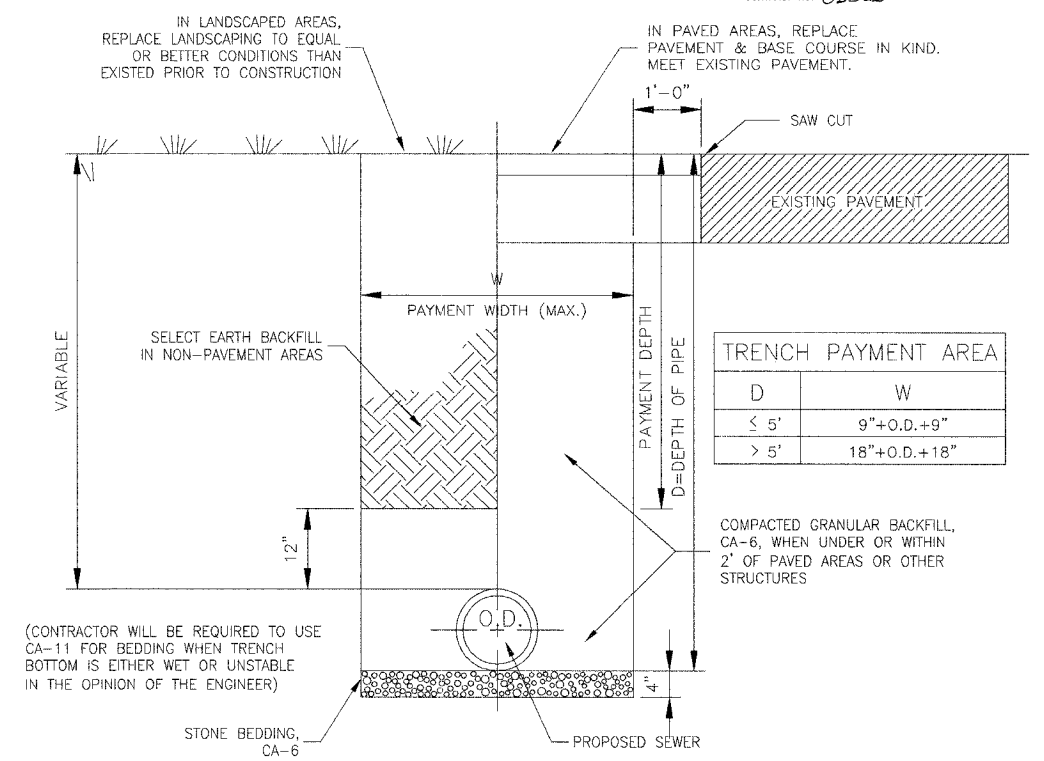
NOTE:

- THRUST BLOCKS TO BE USED AT 1/16(22-1/2°) OR GREATER BENDS & AT ALL ENDS TO BE PLUGGED.
- PRECAST CONCRETE THRUST BLOCKS TO BE PLACED AGAINST FIRM, UNDISTURBED SOIL.

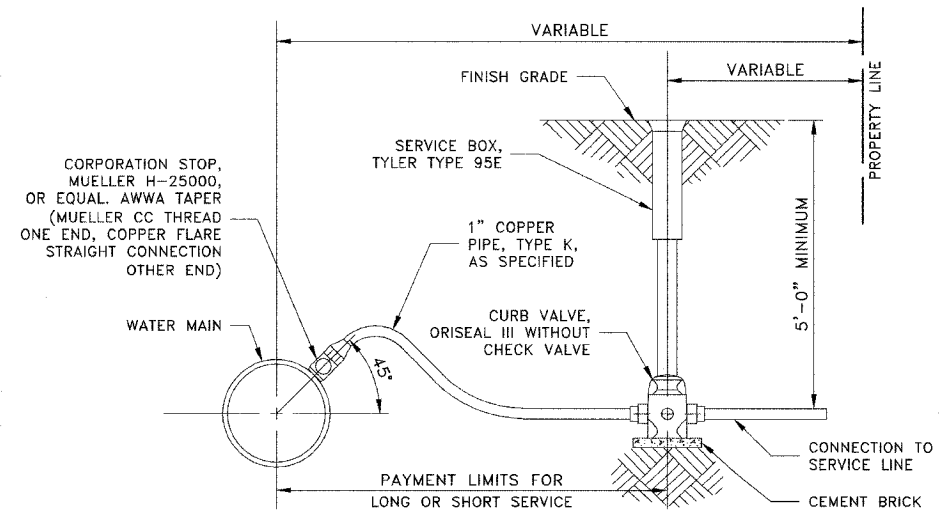
THRUST BLOCK DETAIL



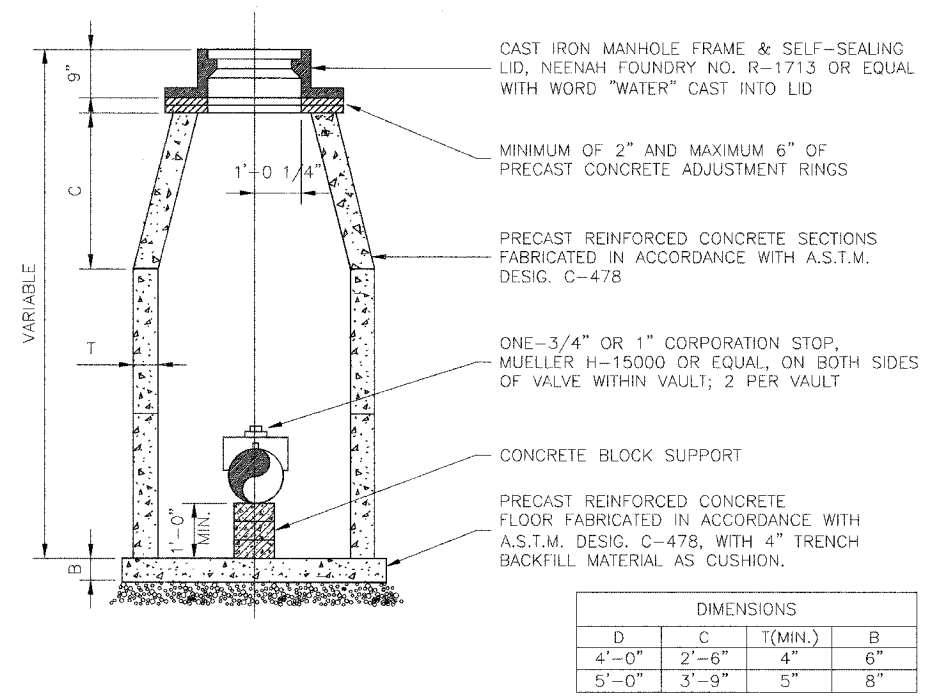
TYPICAL RISER FOR SERVICE LATERAL



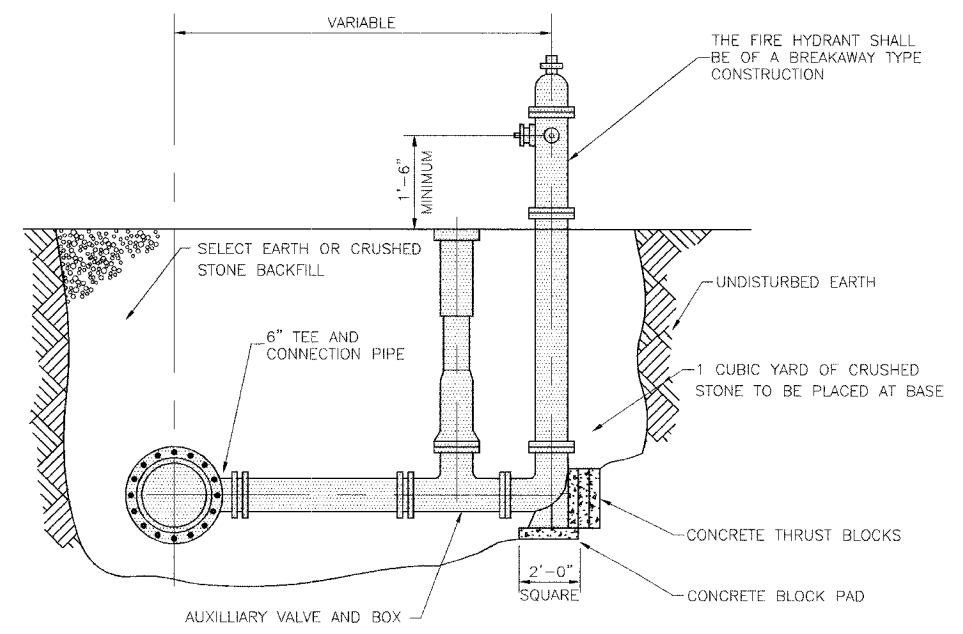
TYPICAL WATER MAIN TRENCH DETAIL



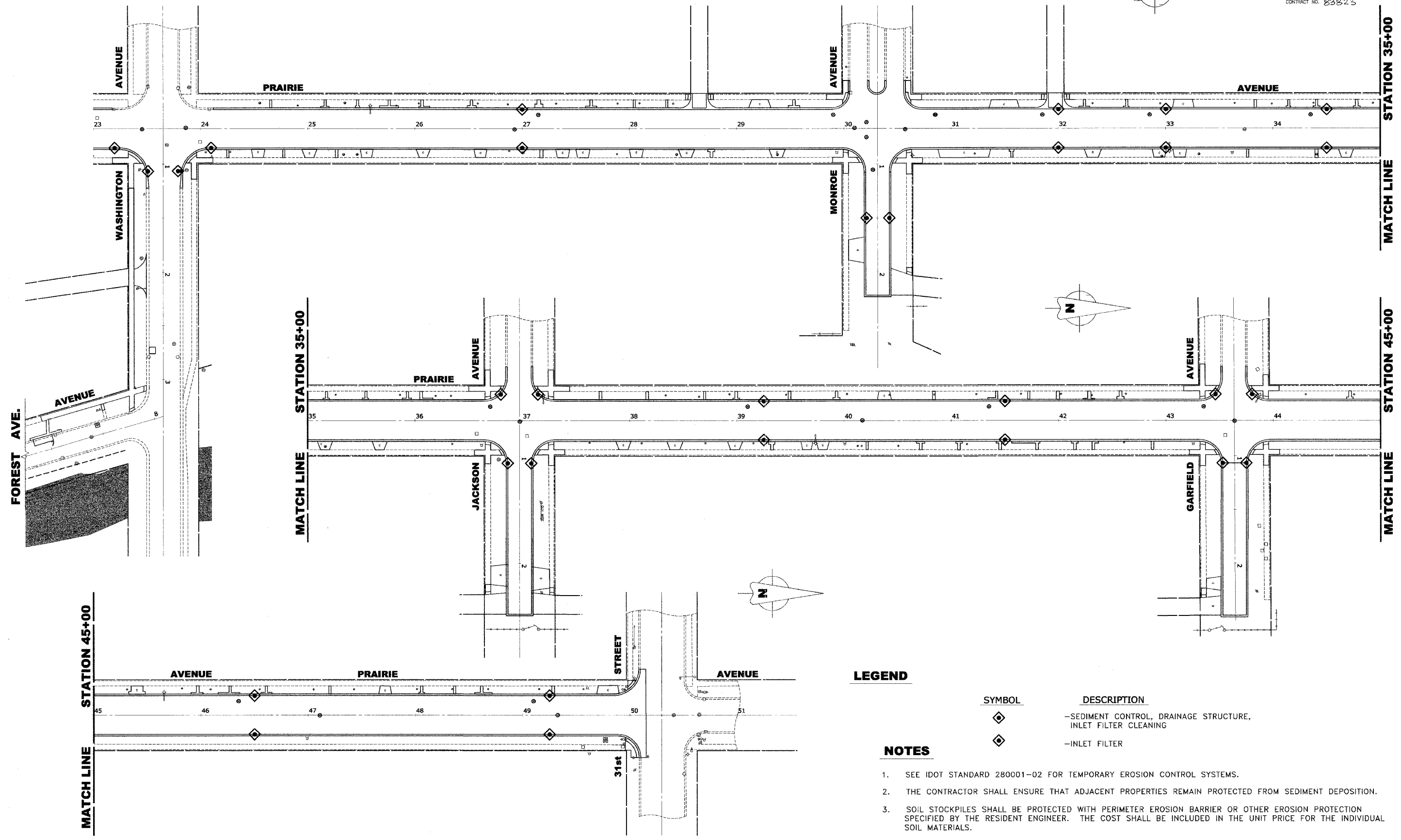
TYPICAL WATER SERVICE DETAIL



STANDARD VALVE VAULT DETAIL



FIRE HYDRANT DETAIL



LEGEND

SYMBOL	DESCRIPTION
◆	-SEDIMENT CONTROL, DRAINAGE STRUCTURE, INLET FILTER CLEANING
◆	-INLET FILTER

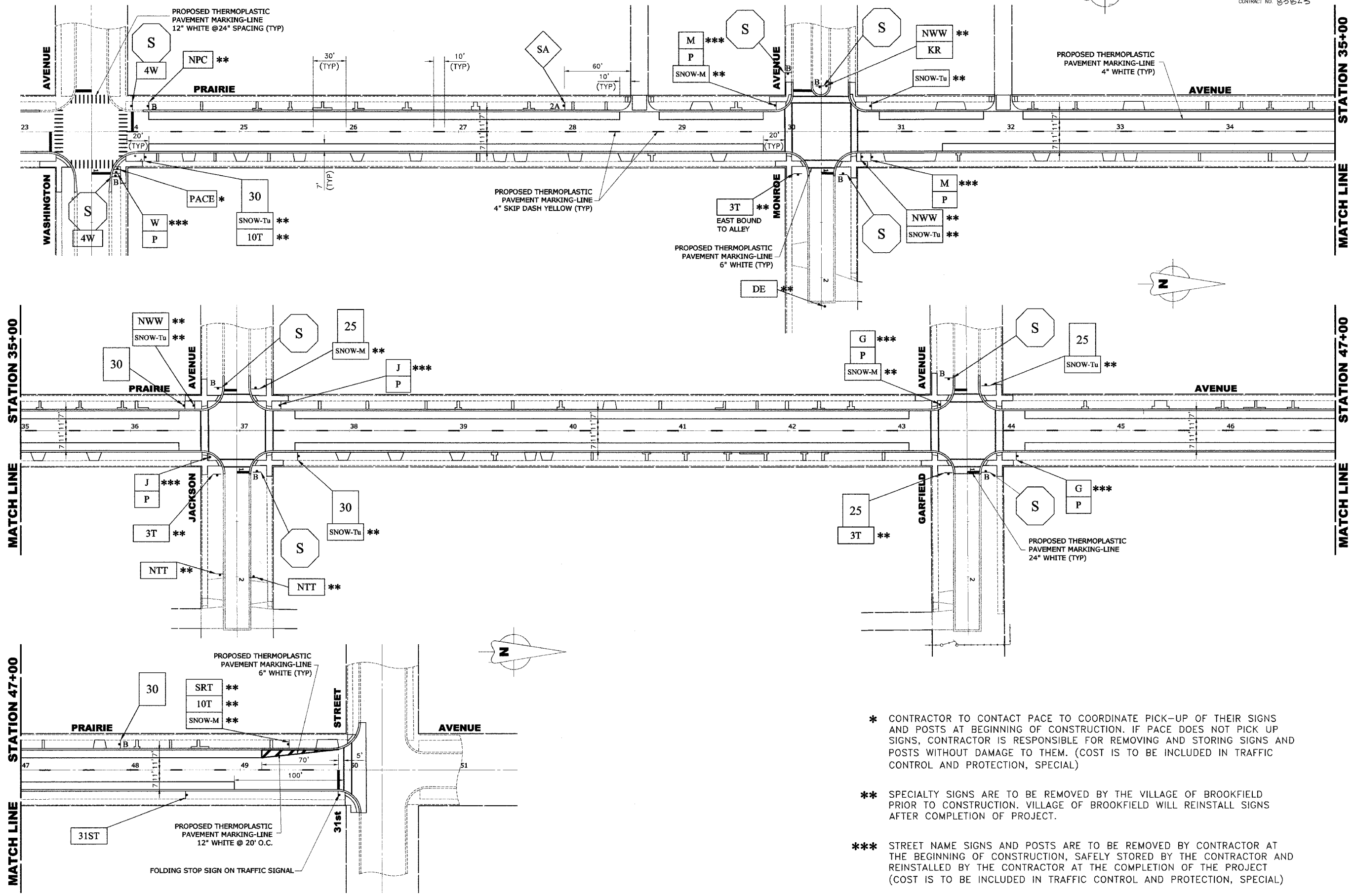
NOTES

- SEE IDOT STANDARD 280001-02 FOR TEMPORARY EROSION CONTROL SYSTEMS.
- THE CONTRACTOR SHALL ENSURE THAT ADJACENT PROPERTIES REMAIN PROTECTED FROM SEDIMENT DEPOSITION.
- SOIL STOCKPILES SHALL BE PROTECTED WITH PERIMETER EROSION BARRIER OR OTHER EROSION PROTECTION SPECIFIED BY THE RESIDENT ENGINEER. THE COST SHALL BE INCLUDED IN THE UNIT PRICE FOR THE INDIVIDUAL SOIL MATERIALS.
- WHEREVER CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED PUBLIC ROADS. PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY RUNOFF OR VEHICLE TRACKING ONTO THE PAVED SURFACE. THE PROVISIONS MAY INCLUDE SPRAYING VEHICLE WHEELS TO CLEAR SEDIMENT BEFORE EXITING THE CONSTRUCTION SITE OR OTHER MEASURES APPROVED BY THE ENGINEER.

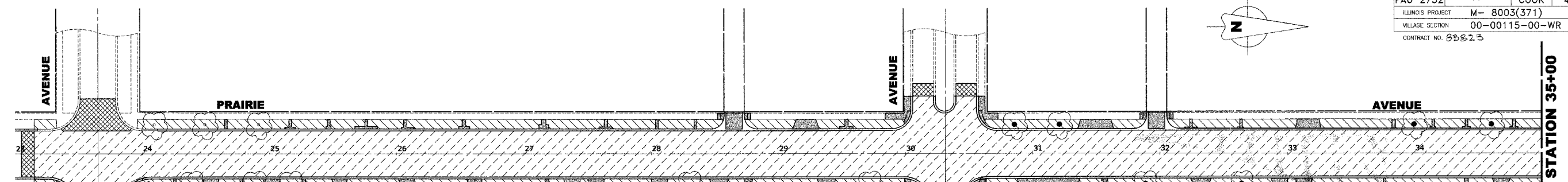
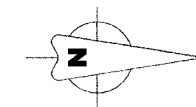
SYMBOL	SIGN	CODE & SIZE	SYMBOL	SIGN	CODE & SIZE	SYMBOL	SIGN	CODE & SIZE
30		R2-1 24"x30"	SNOW-M		TO BE REMOVED AND REPLACED BY VILLAGE OF BROOKFIELD	P		EXISTING STREET SIGN AND POST TO BE REMOVED AND REPLACED BY CONTRACTOR
25		R2-1 24"x30"	SNOW-Tu		TO BE REMOVED AND REPLACED BY VILLAGE OF BROOKFIELD	W		EXISTING STREET SIGN AND POST TO BE REMOVED AND REPLACED BY CONTRACTOR
S		R1-1 30"x30"	PACE		TO BE REMOVED AND REPLACED BY PACE	M		EXISTING STREET SIGN AND POST TO BE REMOVED AND REPLACED BY CONTRACTOR
SA		W3-1w 36"x36"	10 T		TO BE REMOVED AND REPLACED BY VILLAGE OF BROOKFIELD	J		EXISTING STREET SIGN AND POST TO BE REMOVED AND REPLACED BY CONTRACTOR
4W		R1-3 12"x6"	3 T		TO BE REMOVED AND REPLACED BY VILLAGE OF BROOKFIELD	G		EXISTING STREET SIGN AND POST TO BE REMOVED AND REPLACED BY CONTRACTOR
KR		R4-7 24"x30"	DE		TO BE REMOVED AND REPLACED BY VILLAGE OF BROOKFIELD	31ST		EXISTING STREET SIGN AND POST TO BE REMOVED AND REPLACED BY CONTRACTOR
			NWW		TO BE REMOVED AND REPLACED BY VILLAGE OF BROOKFIELD	SRT		TO BE REMOVED AND REPLACED BY VILLAGE OF BROOKFIELD
			NPC		TO BE REMOVED AND REPLACED BY VILLAGE OF BROOKFIELD			
			NTT		TO BE REMOVED AND REPLACED BY VILLAGE OF BROOKFIELD			

LEGEND OF SYMBOLS

SYMBOL	DESCRIPTION
	PROPOSED TRAFFIC SIGN (TYPE A METAL POST)
	PROPOSED TRAFFIC SIGN (2 TYPE A METAL POST)
	PROPOSED TRAFFIC SIGN (TYPE B METAL POST)

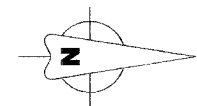
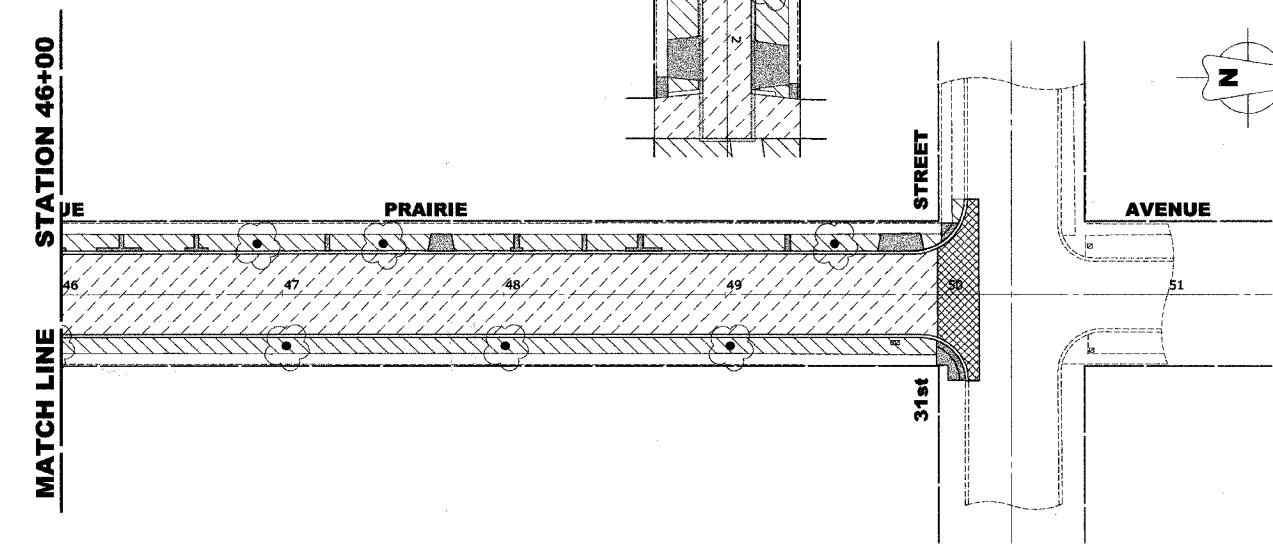
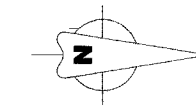
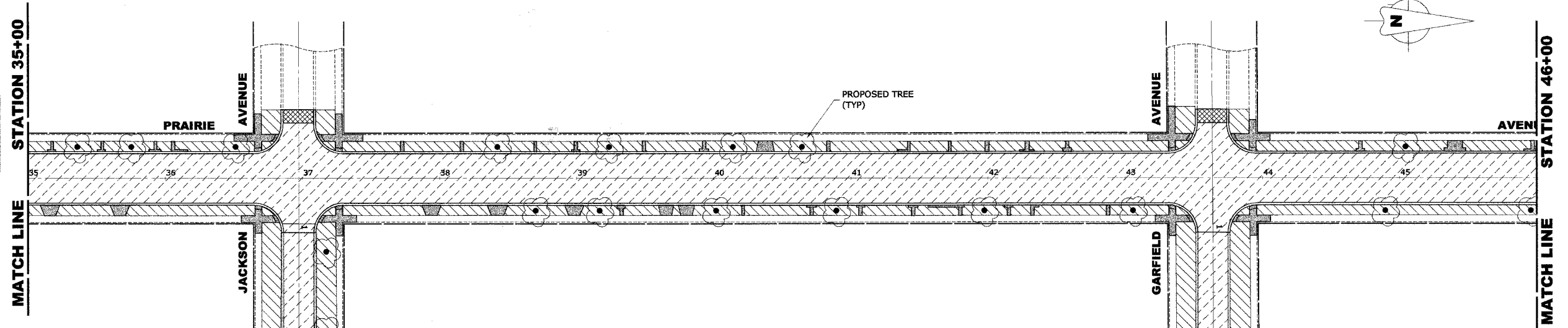
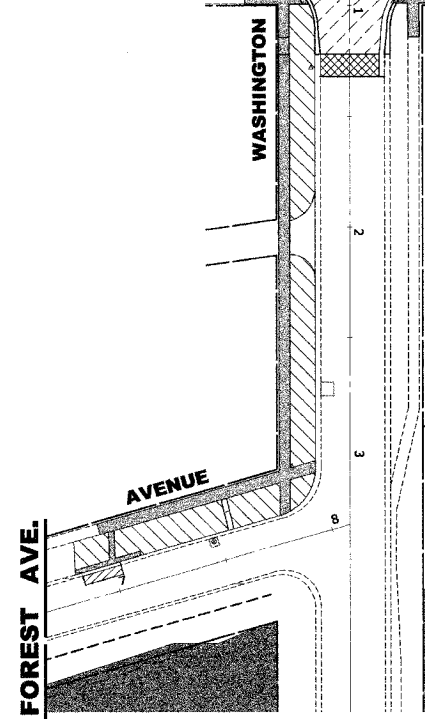


- * CONTRACTOR TO CONTACT PACE TO COORDINATE PICK-UP OF THEIR SIGNS AND POSTS AT BEGINNING OF CONSTRUCTION. IF PACE DOES NOT PICK UP SIGNS, CONTRACTOR IS RESPONSIBLE FOR REMOVING AND STORING SIGNS AND POSTS WITHOUT DAMAGE TO THEM. (COST IS TO BE INCLUDED IN TRAFFIC CONTROL AND PROTECTION, SPECIAL)
- ** SPECIALTY SIGNS ARE TO BE REMOVED BY THE VILLAGE OF BROOKFIELD PRIOR TO CONSTRUCTION. VILLAGE OF BROOKFIELD WILL REINSTALL SIGNS AFTER COMPLETION OF PROJECT.
- *** STREET NAME SIGNS AND POSTS ARE TO BE REMOVED BY CONTRACTOR AT THE BEGINNING OF CONSTRUCTION, SAFELY STORED BY THE CONTRACTOR AND REINSTALLED BY THE CONTRACTOR AT THE COMPLETION OF THE PROJECT (COST IS TO BE INCLUDED IN TRAFFIC CONTROL AND PROTECTION, SPECIAL)



TREE REPLACEMENT			
COMMON NAME	SCIENTIFIC NAME	SIZE	QUANTITY*
EMERALD QUEEN NORWAY MAPLE	ACER PLATANOIDES EMERALD QUEEN	3" CALIPER	10
RED MAPLE	ACER RUBRUM	3" CALIPER	9
SWAMP WHITE OAK	QUECUS BICOLOR	2 1/2" CALIPER	10
ARISTOCRAT CALLERY PEAR	PYRUS CALLERYANA ARISTOCRAT	2 1/2" CALIPER TREE FORM	9

* TYPE OF TREE TO BE PLACED AT EACH LOCATION TO BE DETERMINED IN THE FIELD BY THE ENGINEER
 NOTE: ALL TREES BALLED AND BURLAPPED



LANDSCAPING NOTES

SODDING:
 ALL DISTURBED AREAS INDICATED ON CROSS SECTION OR LANDSCAPING PLANS TO BE SODDED, INCLUDING FERTILIZER NUTRIENTS* AND SUPPLEMENTAL WATERING WHICH IS TO BE USED AFTER THE INITIAL WATERING (AS SPECIFIED AND AS DIRECTED BY THE ENGINEER) AT THE RATE OF 10 GALLONS PER SQUARE YARD SODDING. SODDED SLOPES WHICH ARE 2:1 OR STEEPER SHALL BE STAKED. (PROVIDE A 3" STRIP AROUND CATCH BASINS IN SEEDED AREAS).

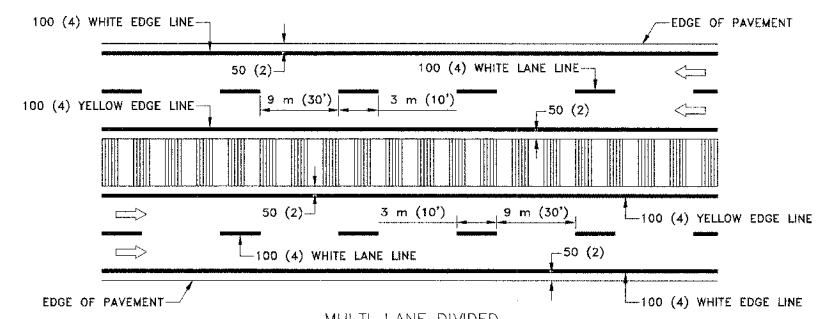
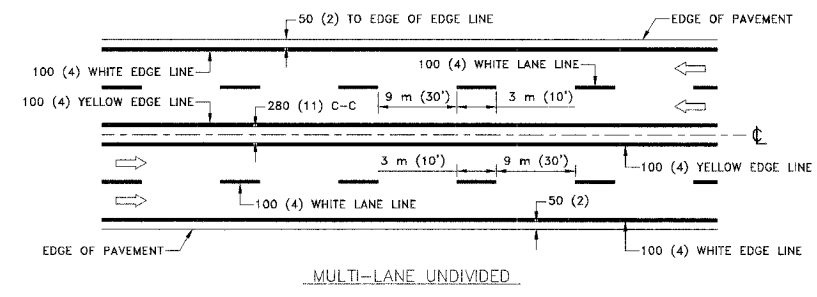
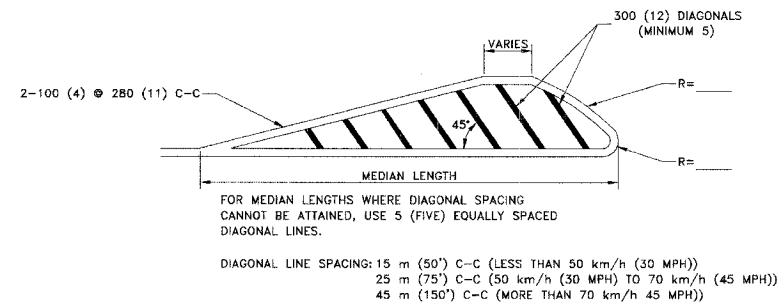
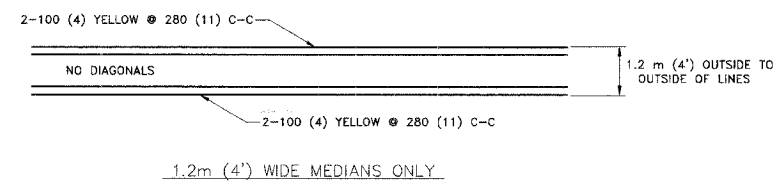
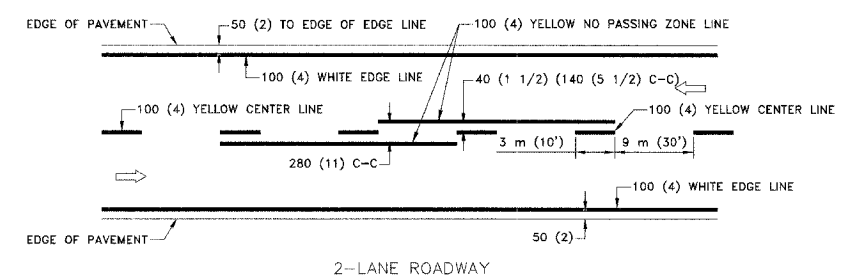
FERTILIZER NUTRIENTS* FOR SODDING:
 USE A FERTILIZER WITH A 1:1:1 RATIO PER ACRE:
 60 LBS. NITROGEN FERTILIZER NUTRIENT
 60 LBS. PHOSPHORUS FERTILIZER NUTRIENT
 60 LBS. POTASSIUM FERTILIZER NUTRIENT
 TOTAL: 180 LBS. PER ACRE

TREE REPLACEMENT:
 TREE TYPE & LOCATION TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

4" TOP SOIL LAYER:
 SOIL SHALL BE SPREAD AS INDICATED ON THE TYPICAL CROSS SECTIONS.
 A MINIMUM OF GRADING TO BE PERMITTED WITHIN AN APPROXIMATE RADIUS OF 6' FROM ALL TREES TO BE SAVED AS DETERMINED BY THE ENGINEER.

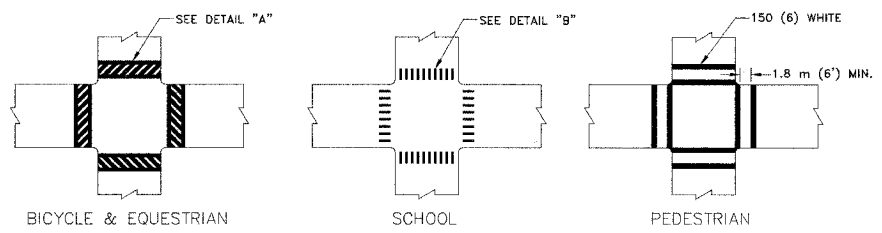
LEGEND OF SYMBOLS

SYMBOL	DESCRIPTION
	PROPOSED CONCRETE AREA
	PROPOSED BITUMINOUS CONCRETE AREA
	PROPOSED SODDED PARKWAY
	PROPOSED BUTT JOINT AREA
	PROPOSED TREE

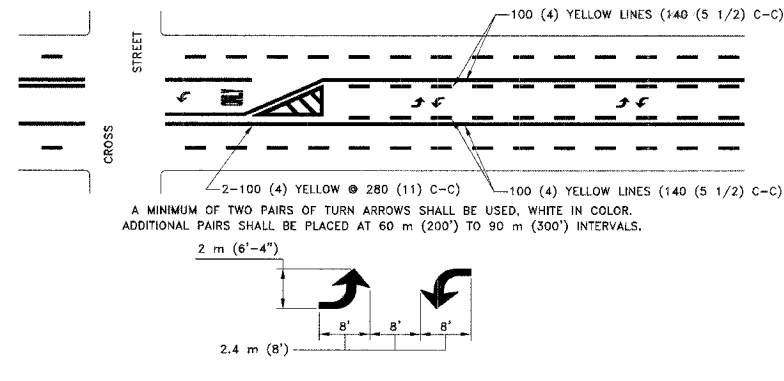


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGELINE.

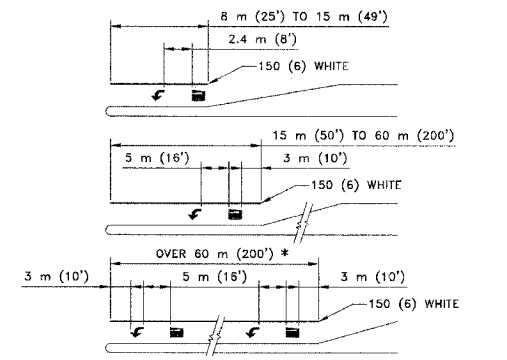
TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



TYPICAL PAINTED MEDIAN MARKING

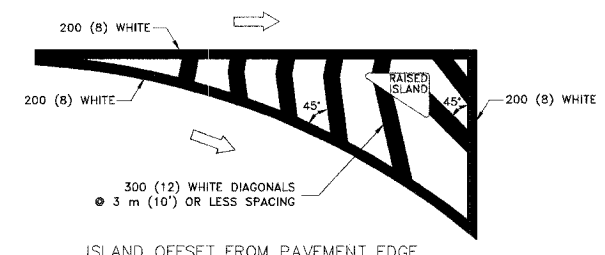


FULL SIZE LETTERS 2.4 m (8') AND ARROWS SHALL BE USED.
 AREA = 1.5 m² (15.6 SQ. FT.) AREA = 1.9 m² (20.8 SQ. FT.)

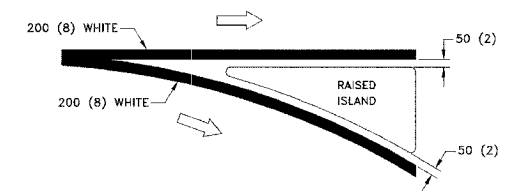
* TURN LANES IN EXCESS OF 120 m (400') IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



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 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

9933 Roosevelt Road
Westchester, Illinois 60154-2780
Phone: 708/965-4300
Fax: 708/965-1212

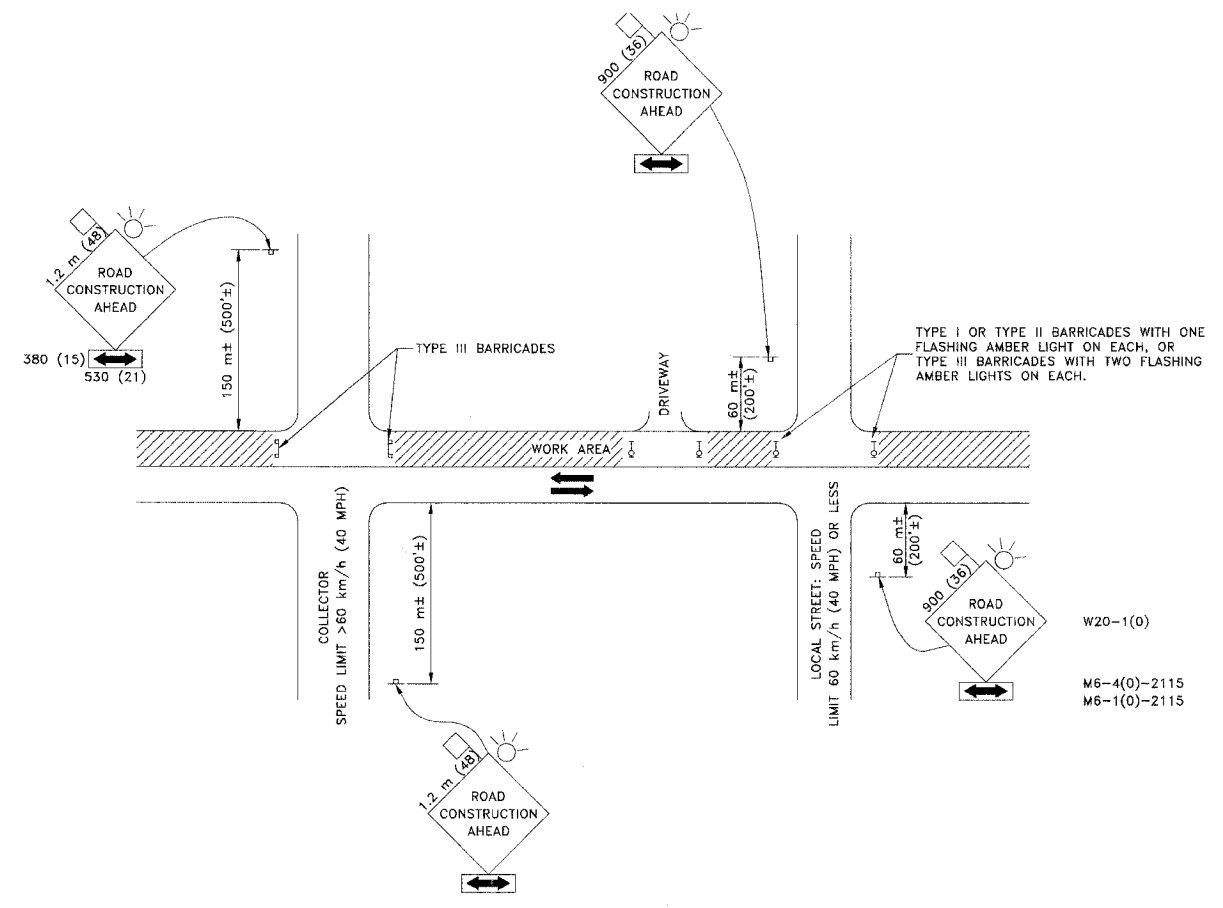
◆ Civil Engineers
◆ Municipal Consultants
◆ Established 1911

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:



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

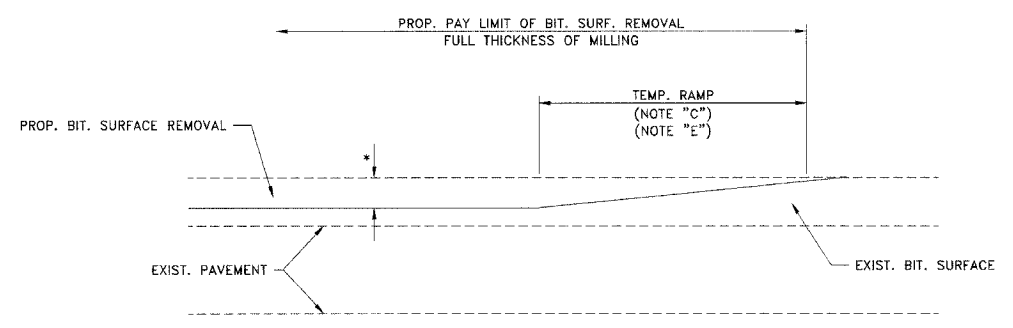
NOTES:

- 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.
 - 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. 701506, 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.

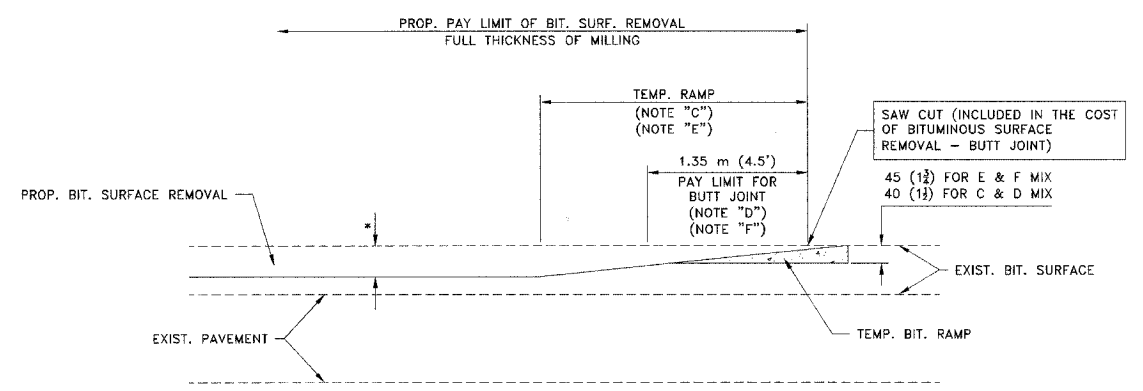
<p>HANCOCK ENGINEERING</p> <p>◆ Civil Engineers ◆ Municipal Consultants ◆ Established 1911</p> <p>9933 Roosevelt Road Westchester, Maryland 20854-2790 Phone: 760-965-0380 Fax: 760-965-1212</p>	<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>NAME</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>LHA</td> <td>06/89</td> </tr> <tr> <td>T. RAMMACHER</td> <td>09/08/94</td> </tr> <tr> <td>J. OBERLE</td> <td>10/18/95</td> </tr> <tr> <td>A. HOUSER</td> <td>03/06/96</td> </tr> <tr> <td>A. HOUSER</td> <td>10/15/96</td> </tr> <tr> <td>T. RAMMACHER</td> <td>01/06/00</td> </tr> </tbody> </table>		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	<p>ILLINOIS DEPARTMENT OF TRANSPORTATION</p> <p>TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS</p>
	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																
<p>SCALE: NONE</p>		<p>DRAWN BY: CADD</p>															
<p>DATE: 03/25/02</p>		<p>CHECKED BY:</p>															
<p>E.H.E. PROJECT NO. 125-04-26301</p>																	

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 2732	**	COOK	49	41
ILLINOIS PROJECT		M- 8003(371)		
VILLAGE SECTION		00-00115-00-WR		
CONTRACT NO. 83823				



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

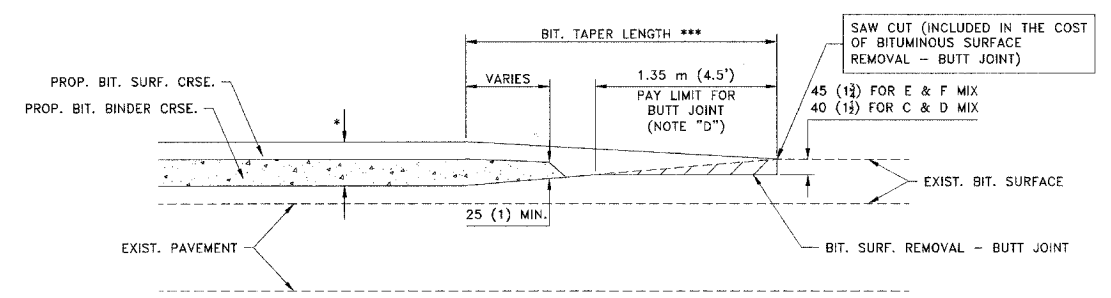
OPTION 1



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

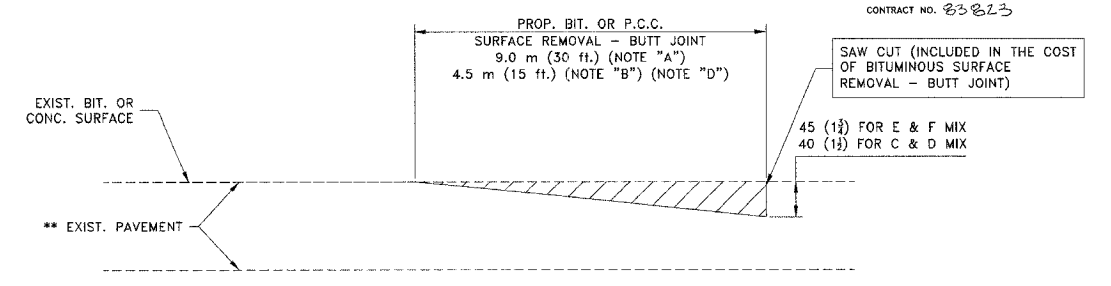
OPTION 2

TYPICAL TEMPORARY RAMP

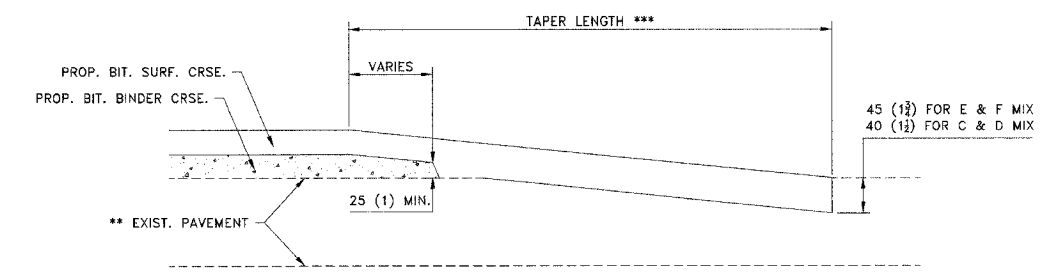


BITUMINOUS TAPER DETAIL

TYPICAL BUTT JOINT AND BITUMINOUS TAPER
FOR MILLING AND RESURFACING ONLY



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".

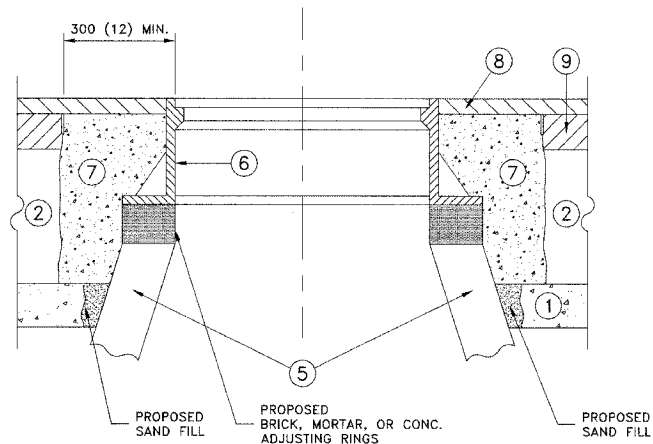
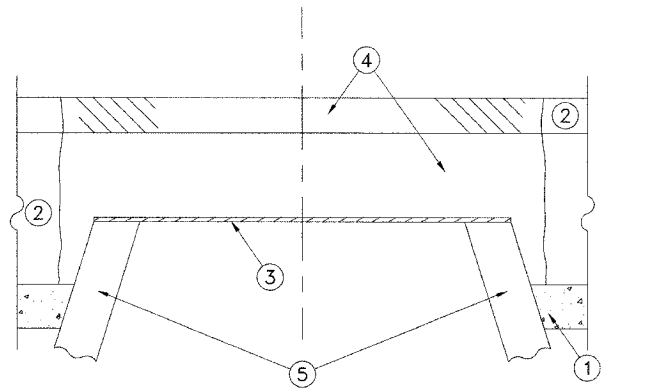
ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

HANCOCK ENGINEERING
 9933 Roswell Road
 Westchester, Illinois 60154-2780
 Phone: 708/665-4300
 Fax: 708/665-4312

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

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

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:

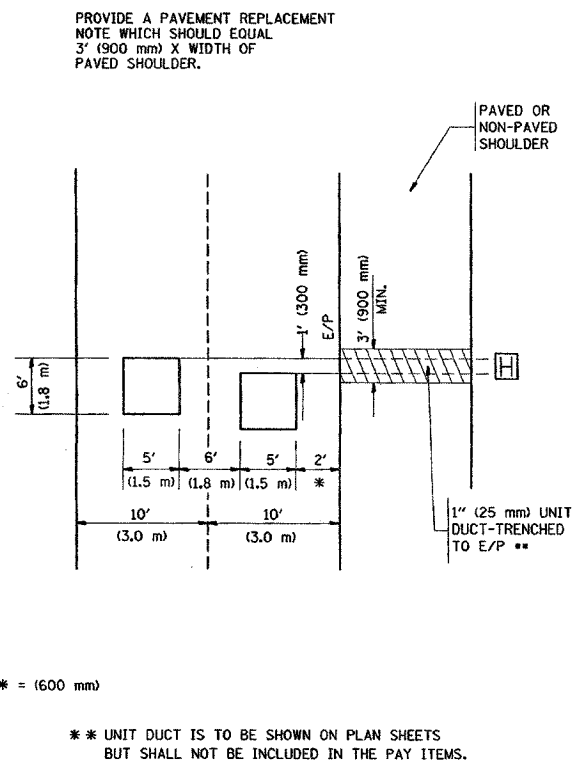
FRAMES AND LIDS TO BE ADJUSTED, SPECIAL EACH NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

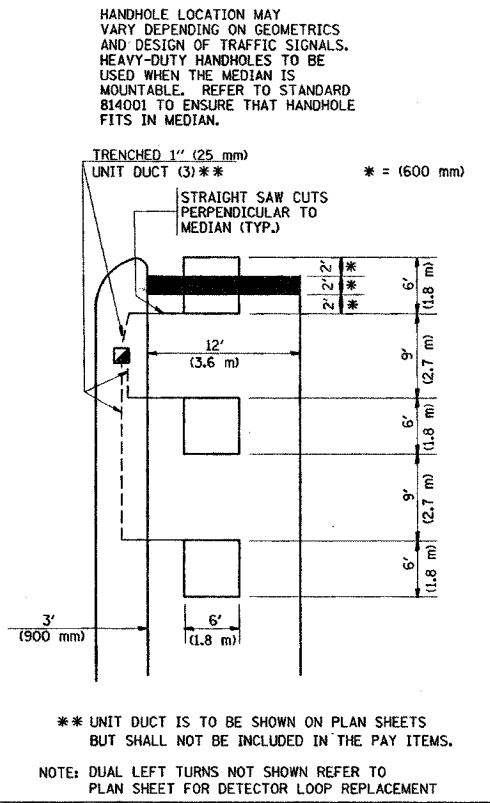
ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

<p>HANCOCK ENGINEERING ♦ Civil Engineers ♦ Municipal Consultants ♦ Established 1911</p> <p>9913 Reservoir Road Wenchester, Illinois 60154-2789 Phone: 708/865-4300 Fax: 708/865-1212</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											
	R. SHAH	01/30/95											
	R. SHAH	03/10/95											
A. ABBAS	03/21/97												
SCALE: NONE	DRAWN BY: CADD												
DATE: 03/25/02	CHECKED BY:												
E.H.E. PROJECT NO. 125-04-26301													

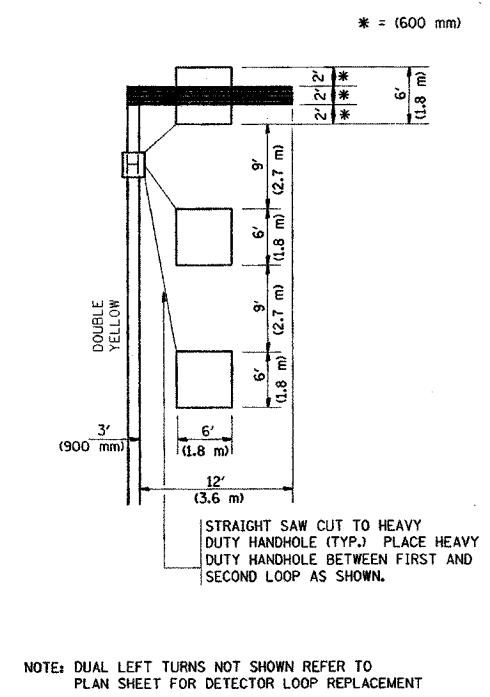
LOOPS NEXT TO SHOULDERS



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

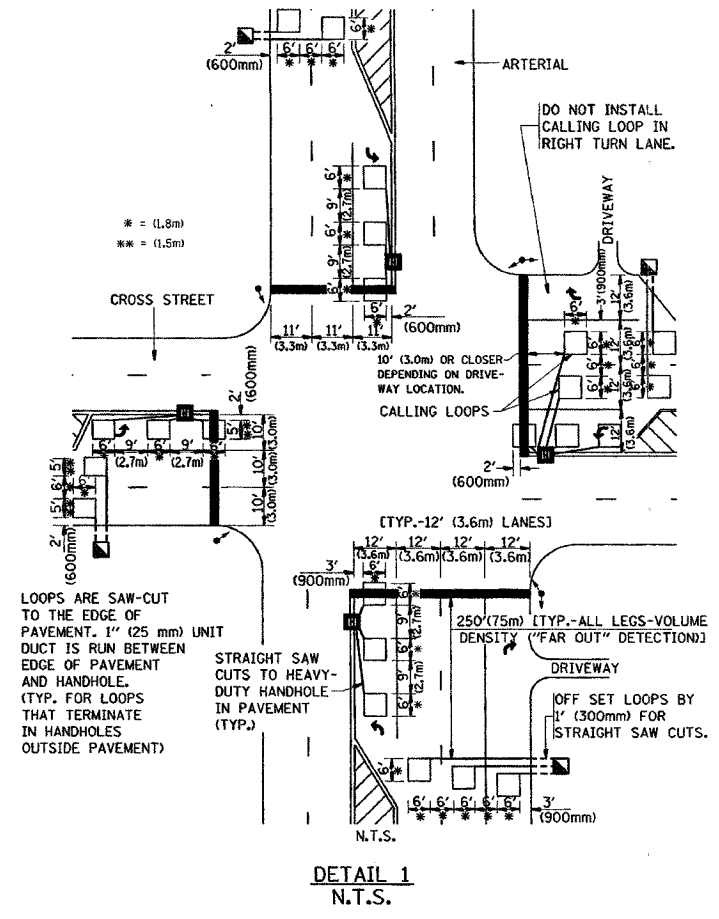


**LEFT TURN LANES WITHOUT MEDIANS
VOLUME DENSITY ("FAR OUT" DETECTION)
ON SAME APPROACH
(PROTECTED / PERMITTED LEFT TURN PHASING)**

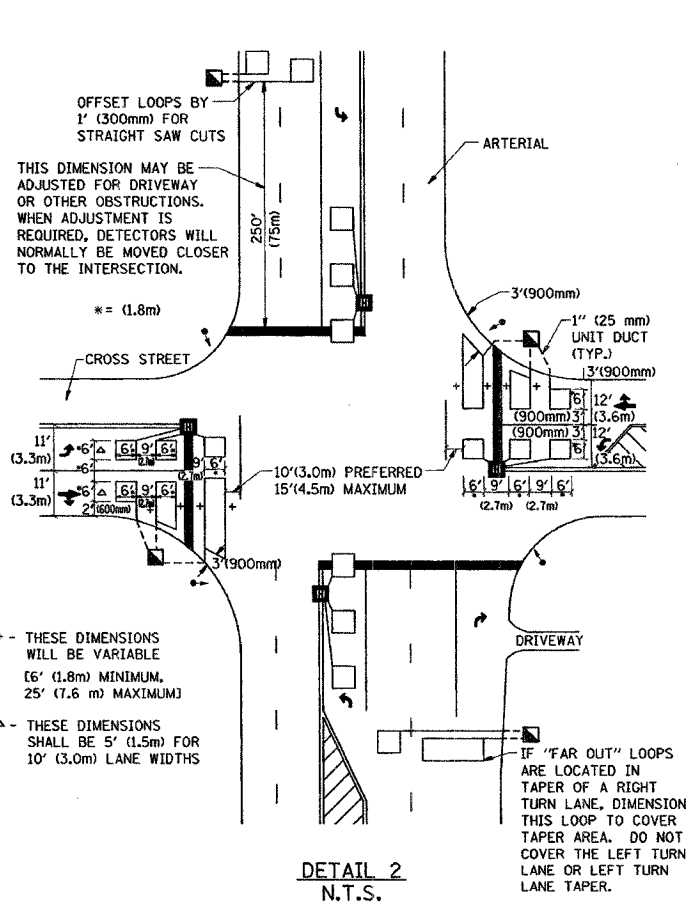


- NOTES:**
- VEHICLES LOOP DETECTORS**
- * ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED, SHIELDED.
 - * EACH DETECTOR LOOP SHALL HAVE ITS OWN SAW CUT FROM THE LOOP TO THE EDGE OF PAVEMENT OR TO A HANDHOLE IN THE PAVEMENT.
 - * EACH DETECTOR LOOP SHALL HAVE ITS OWN ONE INCH (25 mm) UNIT DUCT 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 SEPARATELY. 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.

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



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



- 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

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

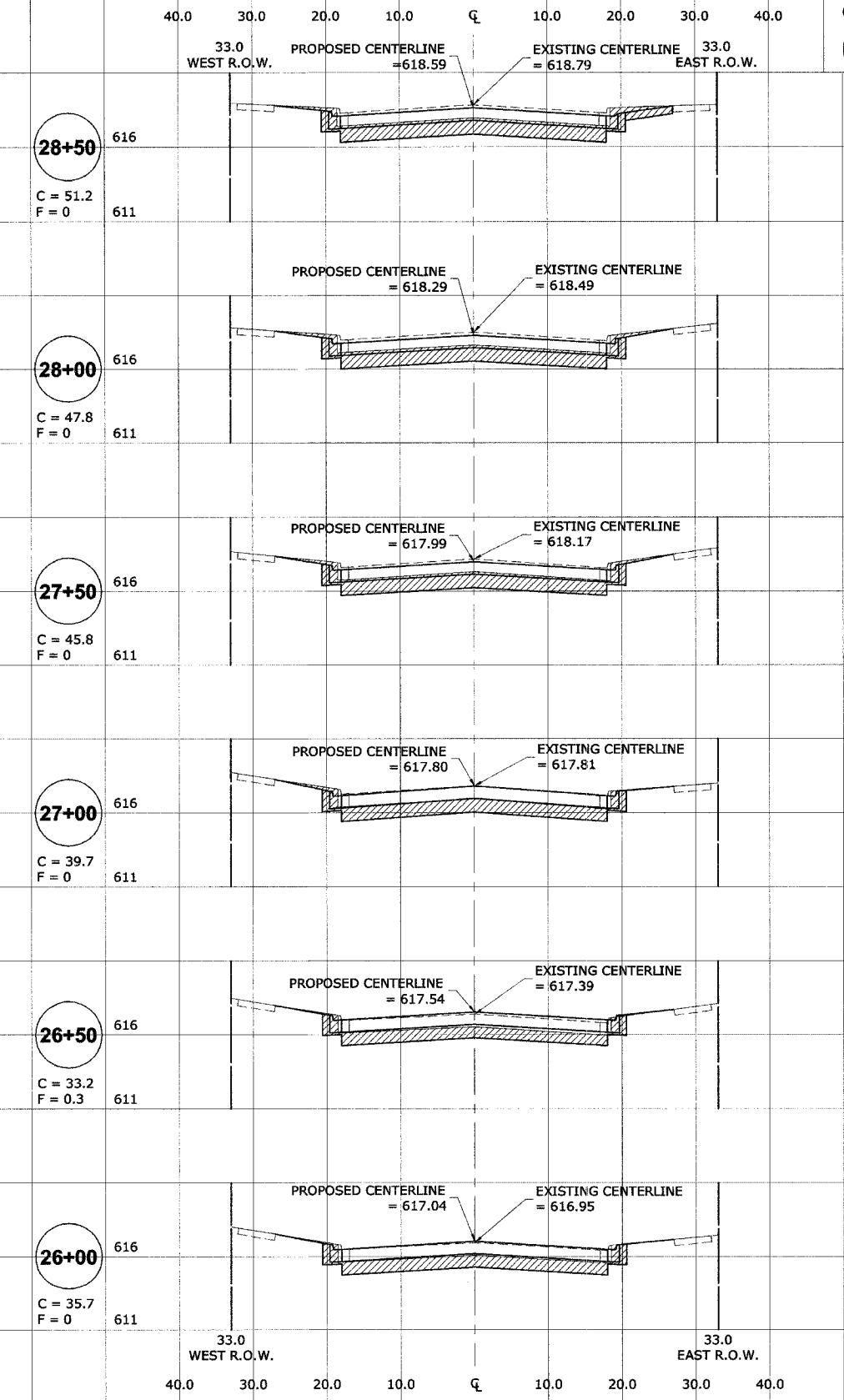
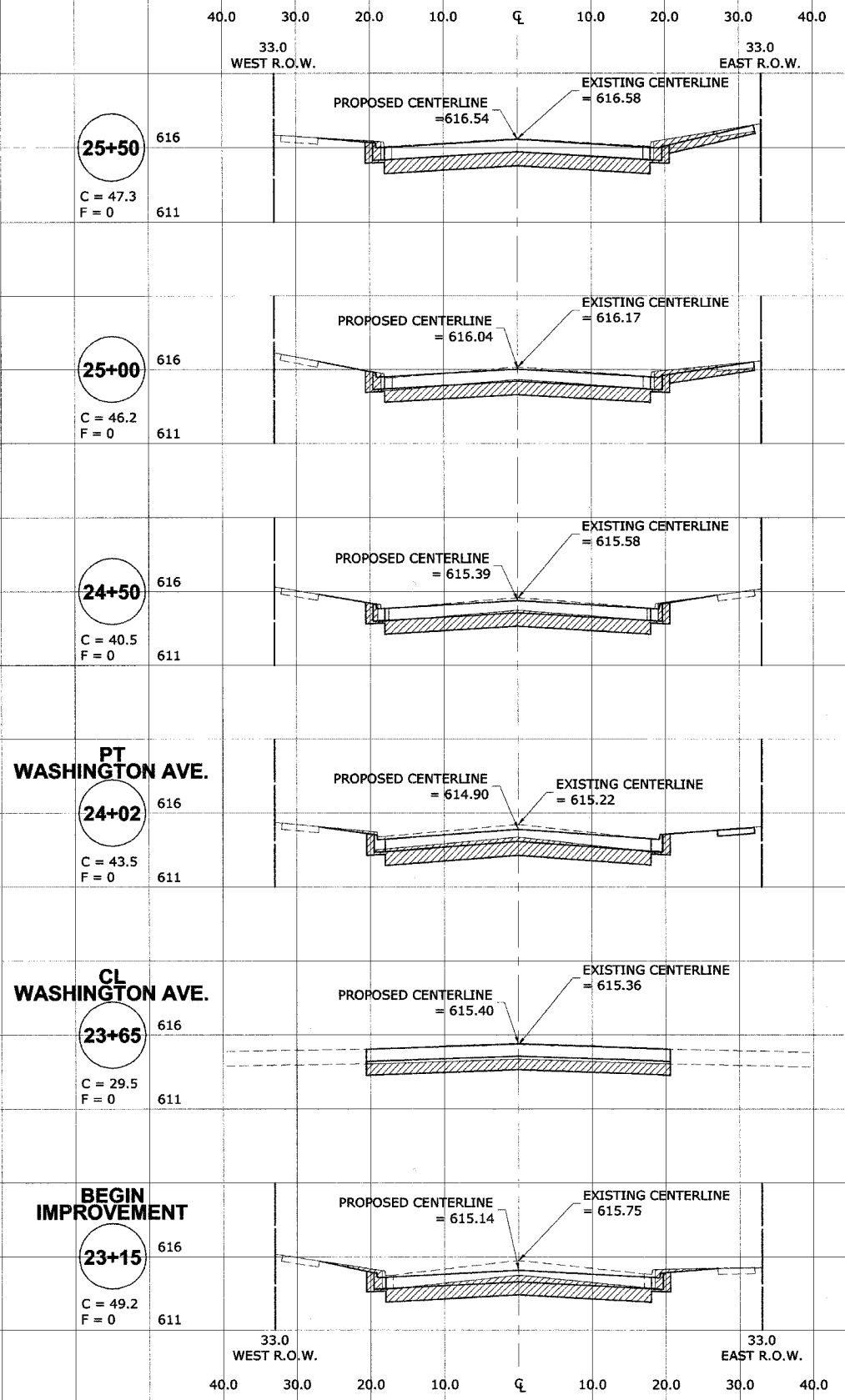
- Civil Engineers
- Municipal Consultants
- Established 1911

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.

CROSS SECTION LEGEND

C = CUT (SQ. FT.)

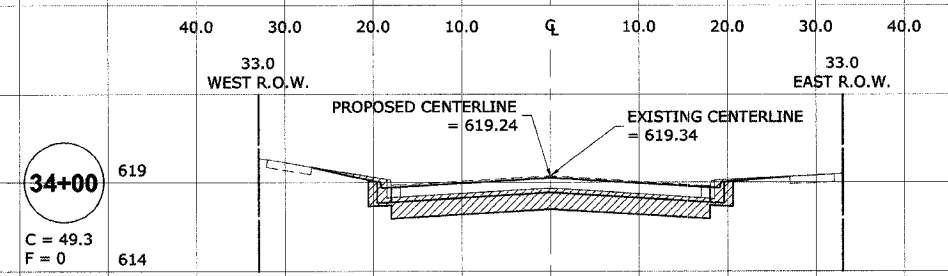
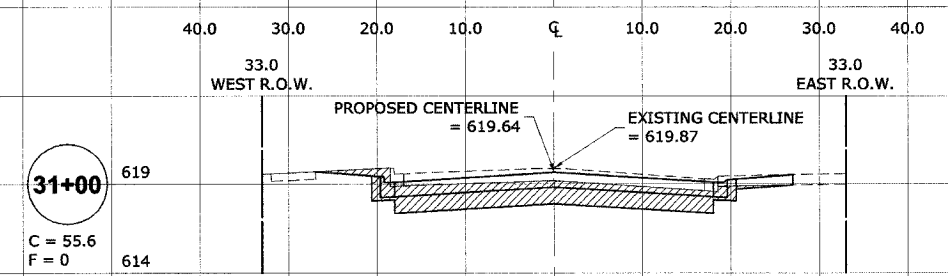
F = FILL (SQ. FT.)



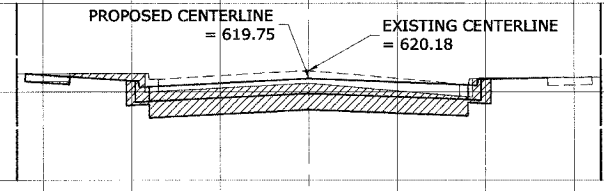
CROSS SECTION LEGEND

C = CUT (SQ. FT.)

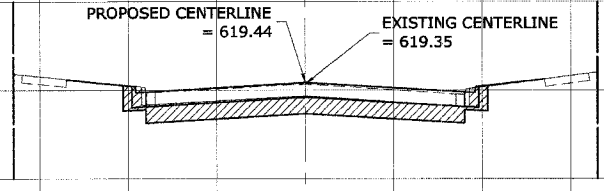
F = FILL (SQ. FT.)



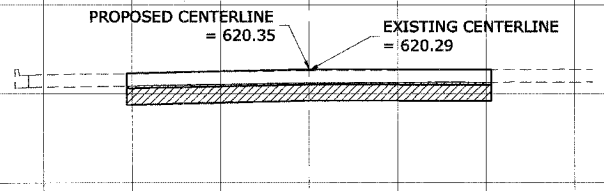
PT MONROE AVE.
30+72
C = 55.4
F = 0



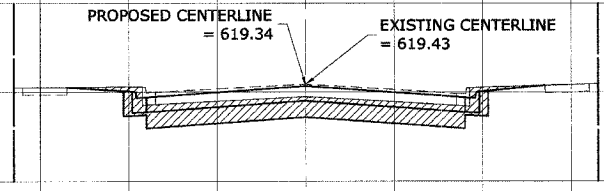
33+50
C = 40.6
F = 0



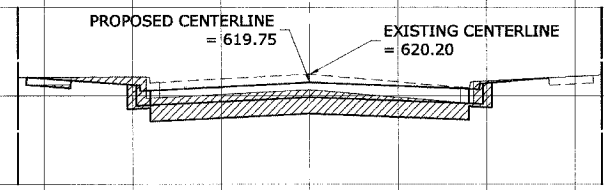
CL MONROE AVE.
30+31
C = 42.6
F = 0



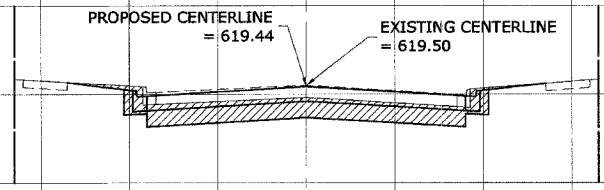
33+00
C = 52.3
F = 0



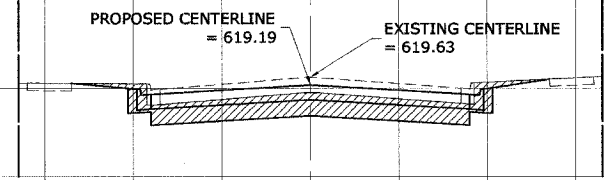
PC MONROE AVE.
29+89
C = 54.8
F = 0



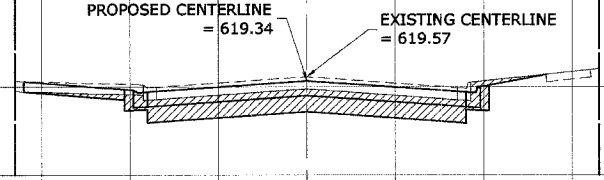
32+50
C = 49.1
F = 0



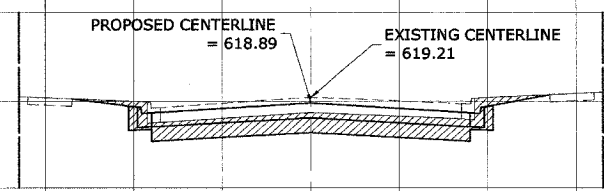
29+50
C = 54.5
F = 0



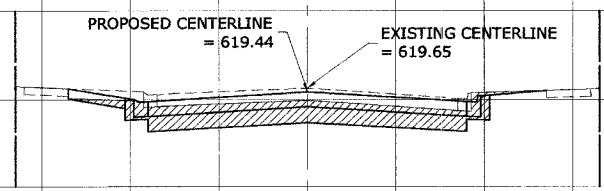
32+00
C = 54.7
F = 0



29+00
C = 54.6
F = 0



31+50
C = 54.5
F = 0



◆ Civil Engineers
◆ Municipal Consultants
◆ Established 1911

9933 Roosevelt Road
Westchester, Illinois 60154-2780
Phone: 708/865-0300
Fax: 708/865-1212

**PRAIRIE AVENUE IMPROVEMENTS
PHASE I
VILLAGE OF BROOKFIELD, ILLINOIS**

**PRAIRIE AVENUE
STATION CROSS SECTIONS
STATION 29+00 TO STATION 34+00**

REVISION:

SCALE: 1"=10'H. & 1"=5'V
DRAWN BY: MK/LEV
BOOK NO.: #1475, #1504
DATE: 11-04-05
E.H.E. NO.: 125-04-26301

CROSS SECTION LEGEND

C = CUT (SQ. FT.)

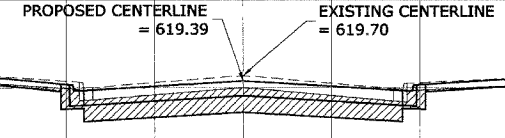
F = FILL (SQ. FT.)

PC JACKSON AVE.

36+64

C = 51.9
F = 0

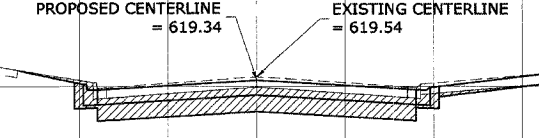
40.0 30.0 20.0 10.0 \bar{C} 10.0 20.0 30.0 40.0
33.0 WEST R.O.W. 33.0 EAST R.O.W.



39+00

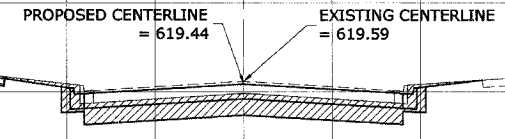
C = 54.1
F = 0

40.0 30.0 20.0 10.0 \bar{C} 10.0 20.0 30.0 40.0
33.0 WEST R.O.W. 33.0 EAST R.O.W.



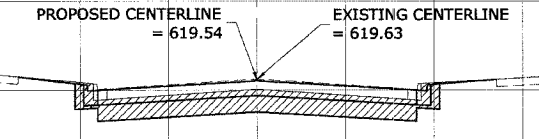
36+50

C = 51.7
F = 0



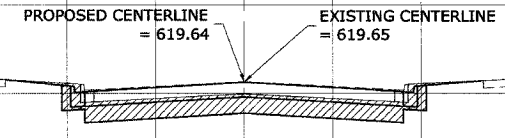
38+50

C = 50.9
F = 0



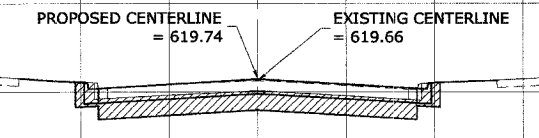
36+00

C = 47.2
F = 0



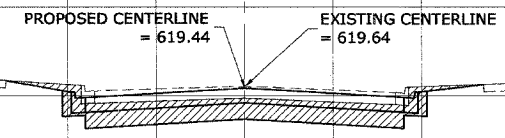
38+00

C = 45.9
F = 0



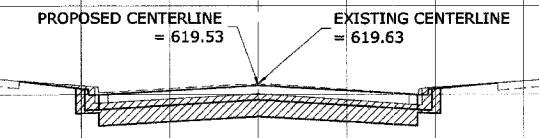
35+50

C = 55.1
F = 0



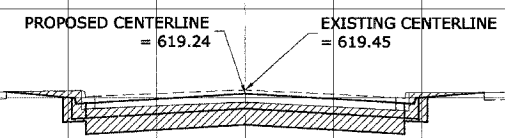
37+50

C = 52.2
F = 0



35+00

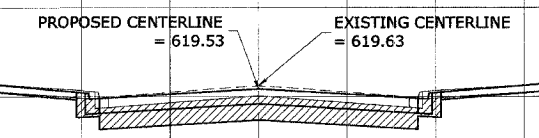
C = 57.4
F = 0



PT JACKSON AVE.

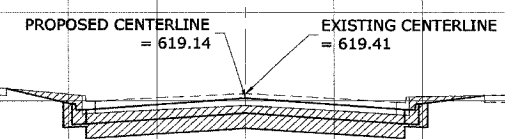
37+32

C = 52.1
F = 0



34+50

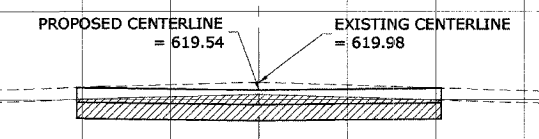
C = 61.5
F = 0



CL JACKSON AVE.

36+97

C = 53.4
F = 0



40.0 30.0 20.0 10.0 \bar{C} 10.0 20.0 30.0 40.0
33.0 WEST R.O.W. 33.0 EAST R.O.W.

40.0 30.0 20.0 10.0 \bar{C} 10.0 20.0 30.0 40.0
33.0 WEST R.O.W. 33.0 EAST R.O.W.



◆ Civil Engineers
◆ Municipal Consultants
◆ Established 1911

9933 Roosevelt Road
Westchester, Illinois 60154-2780
Phone: 708/865-0300
Fax: 708/865-1212

**PRAIRIE AVENUE IMPROVEMENTS
PHASE I
VILLAGE OF BROOKFIELD, ILLINOIS**

**PRAIRIE AVENUE
STATION CROSS SECTIONS
STATION 34+50 TO STATION 39+00**

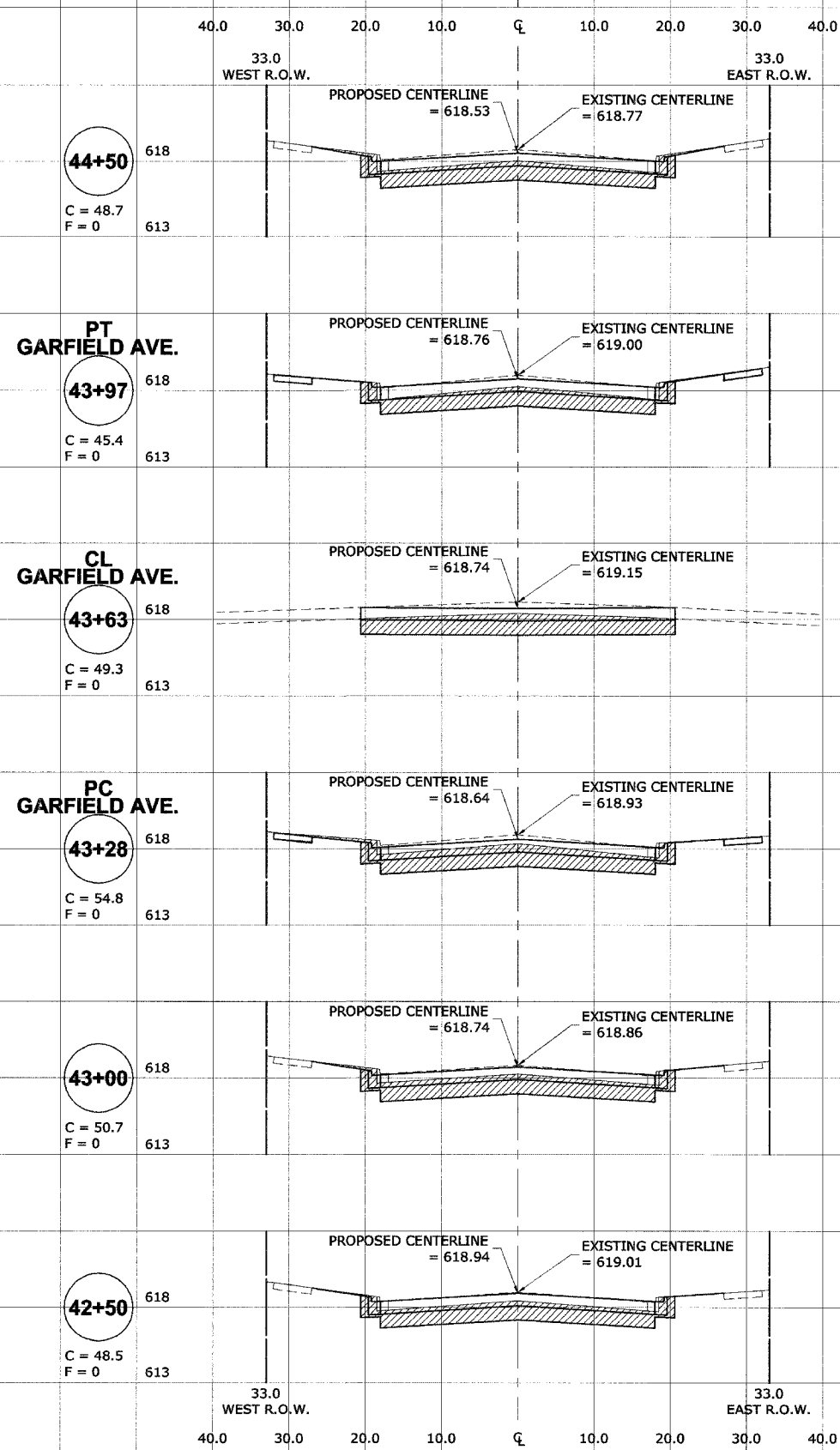
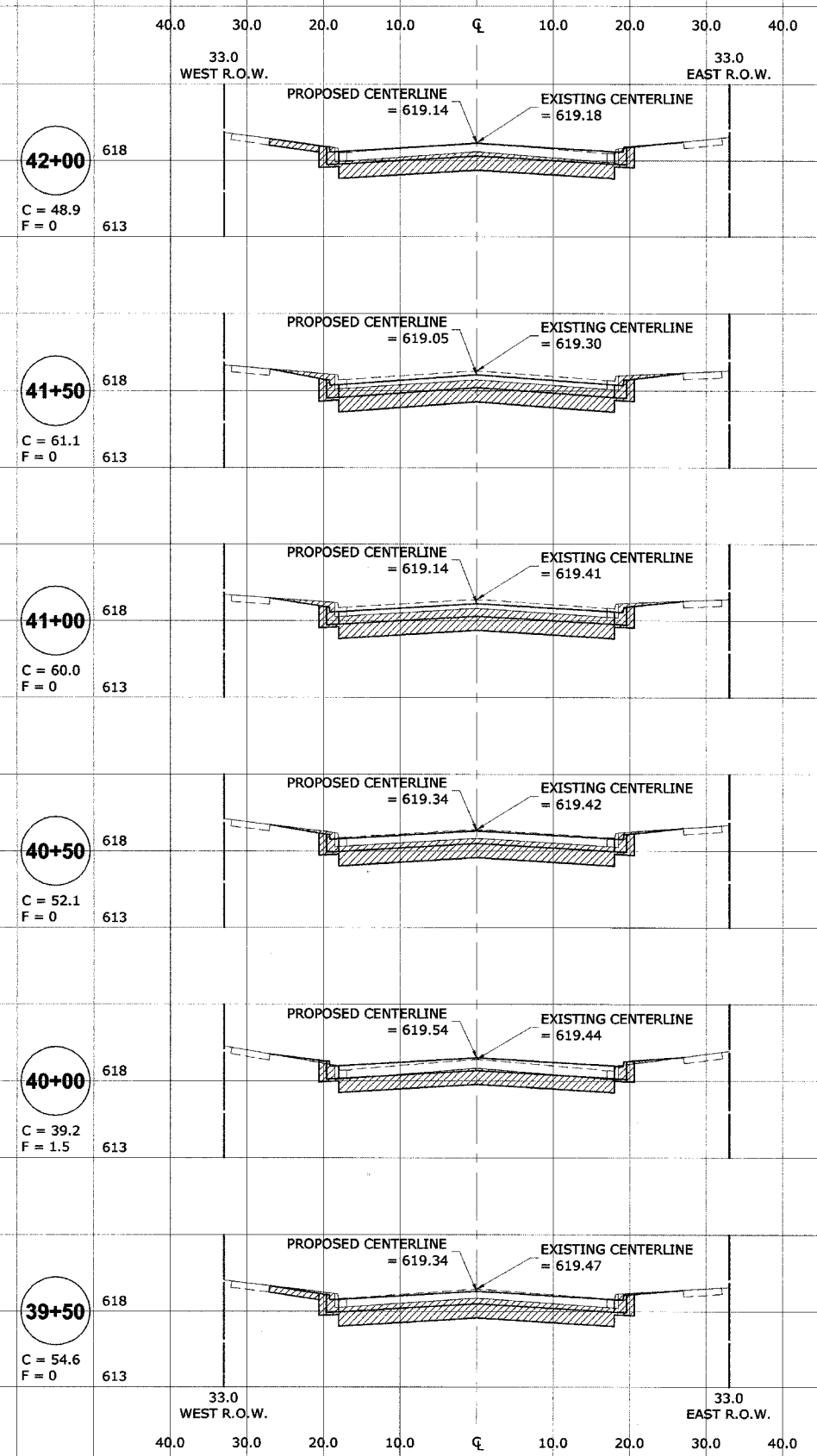
REVISION:

SCALE: 1"=10'H. & 1"=5'V.
DRAWN BY: MK/LEV
BOOK NO.: #1475, #1504
DATE: 11-04-05
E.H.E. NO.: 125-04-26301

CROSS SECTION LEGEND

C = CUT (SQ. FT.)

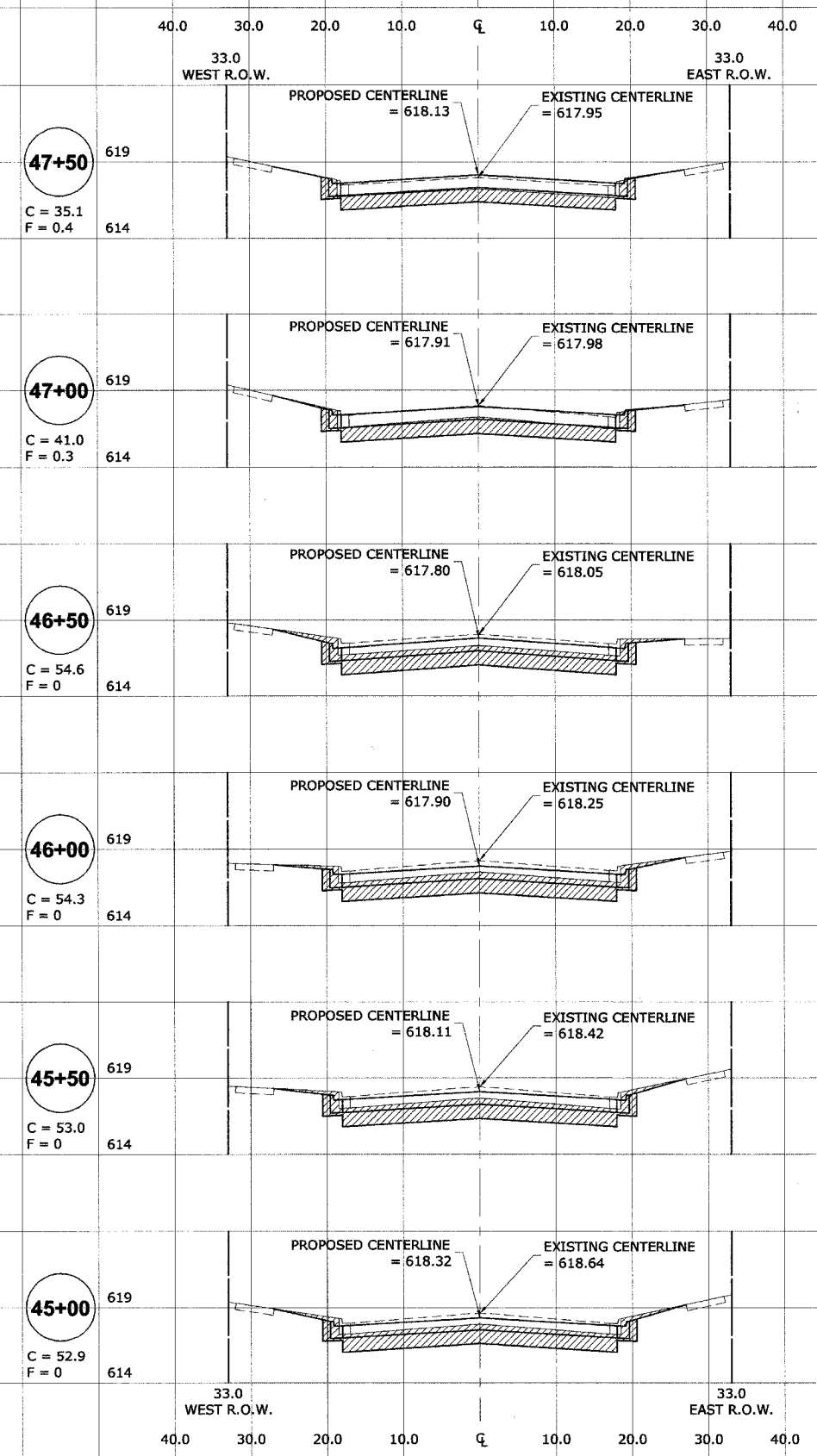
F = FILL (SQ. FT.)



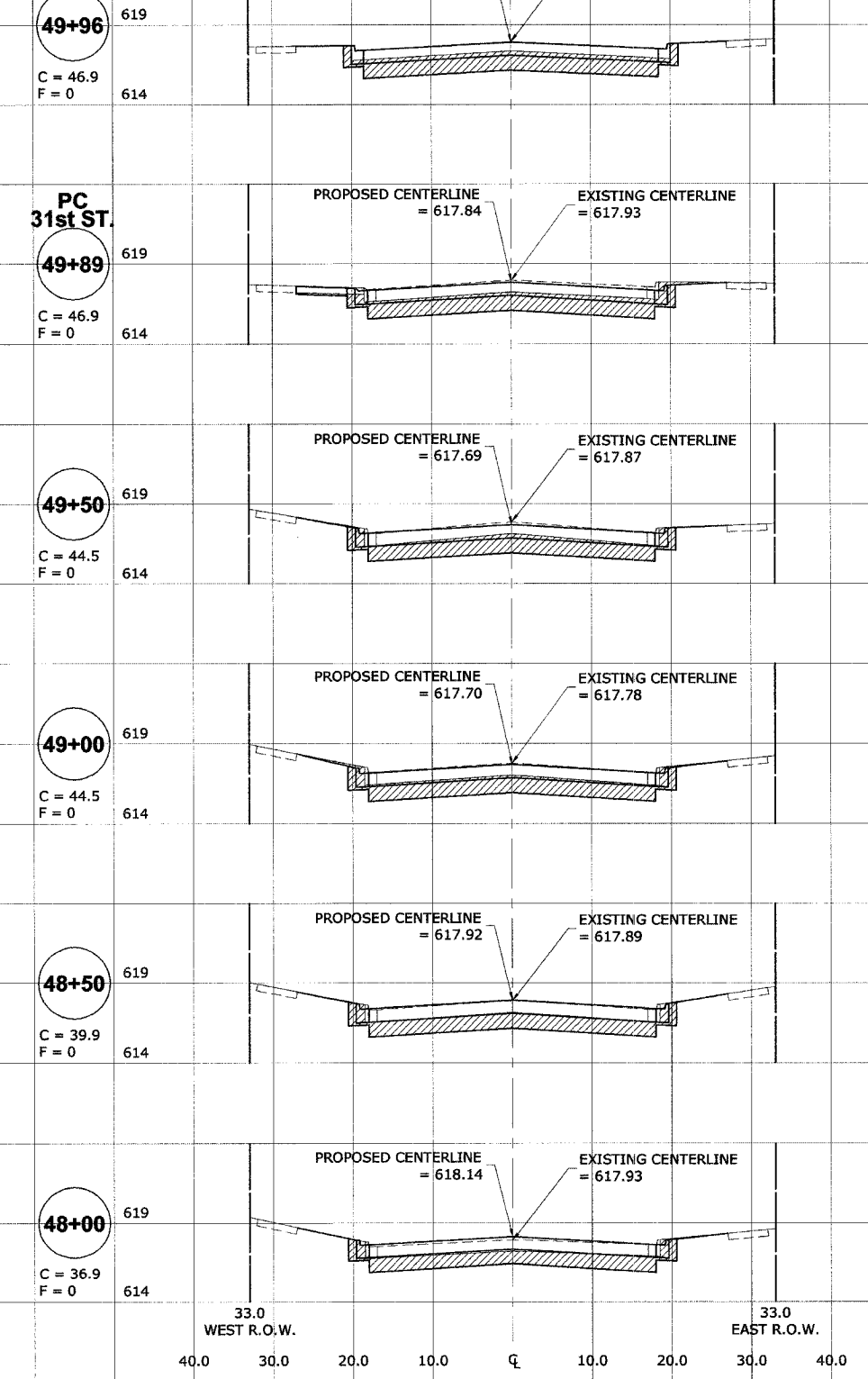
CROSS SECTION LEGEND

C = CUT (SQ. FT.)


F = FILL (SQ. FT.)

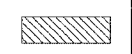


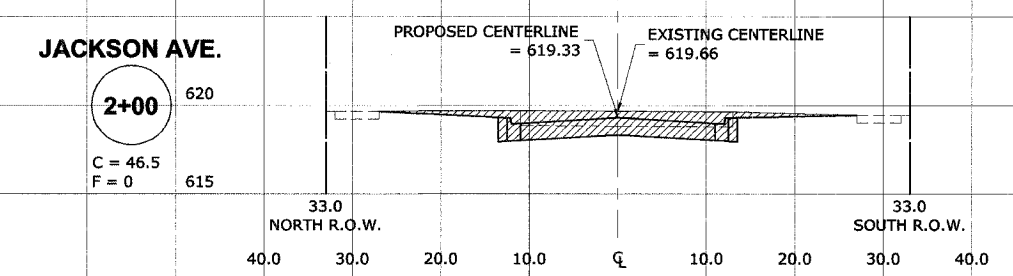
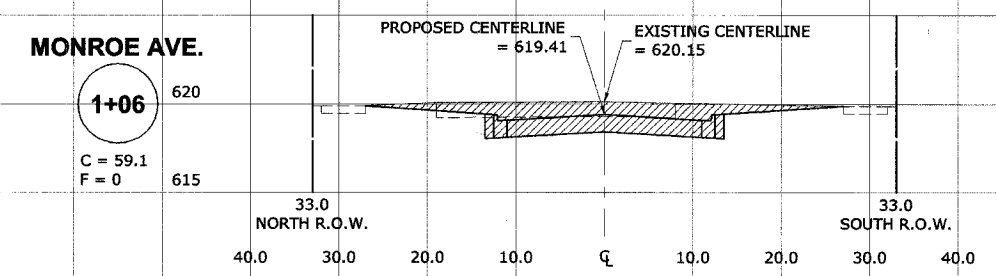
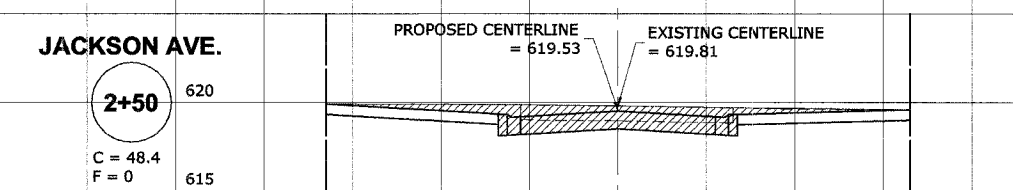
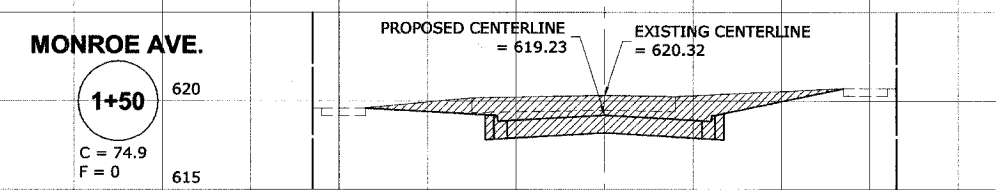
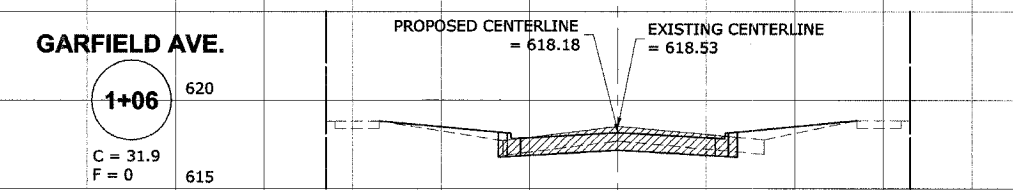
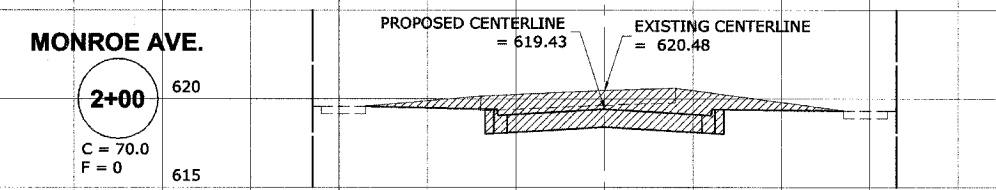
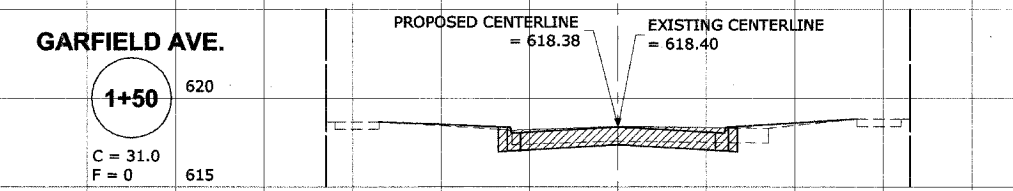
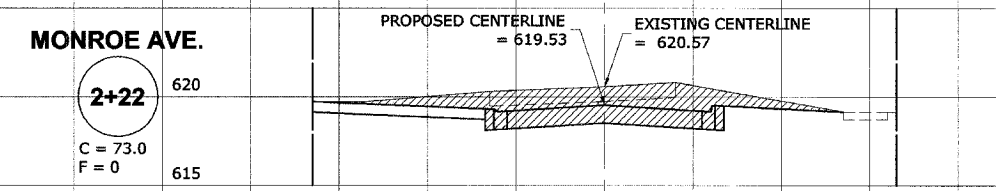
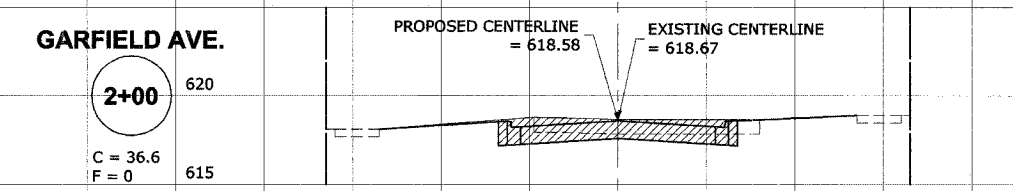
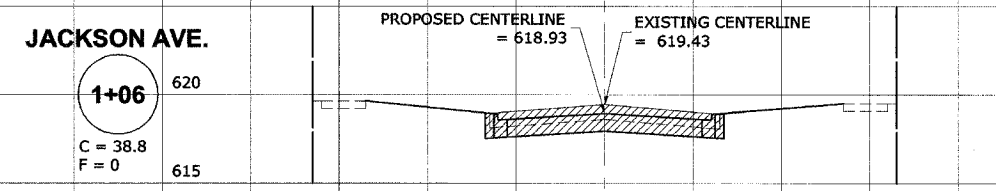
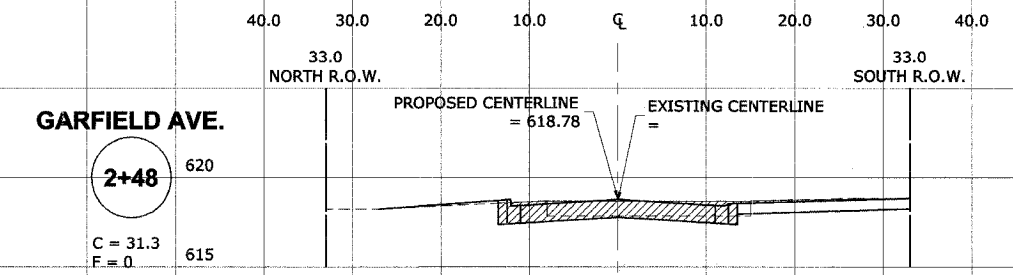
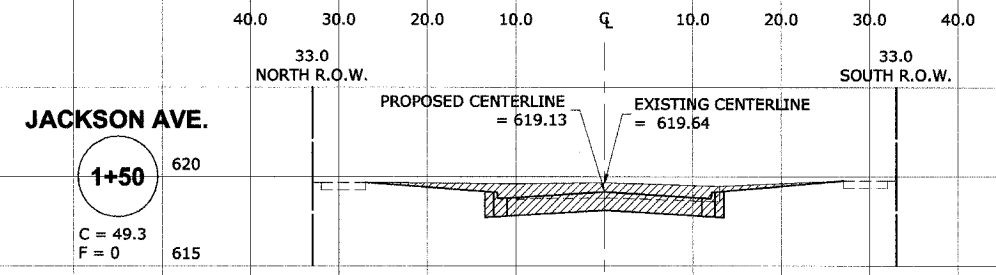
END IMPROVEMENT EP 31st ST.



CROSS-SECTION LEGEND

C = CUT (SQ. FT.) 

F = FILL (SQ. FT.) 



◆ Civil Engineers
◆ Municipal Consultants
◆ Established 1911

9933 Roosevelt Road
Westchester, Illinois 60154-2780
Phone: 708/865-0300
Fax: 708/865-1212

**PRAIRIE AVENUE IMPROVEMENTS
PHASE I
VILLAGE OF BROOKFIELD, ILLINOIS**

**MONROE AVENUE, JACKSON AVENUE,
& GARFIELD AVENUE
STATION CROSS SECTIONS**