

STATEMENT OF ESTIMATED QUANTITIES					
SPEC. REF.	ITEM	UNIT	QUANTITIES		
			S.A.P.	STORM SEWER	NON-PART.
SCH. 1.0 STREETS					
2021.501	MOBILIZATION	L.S.	1		
2101.502	CLEARING	TREE	8		2
2101.507	GRUBBING	TREE	8		2
2104.501	REMOVE CONC. CURB & GUTTER	L.F.	1417		
2104.505	REMOVE CONC. DRIVES & SIDEWALKS	S.Y.	840		
2104.505	REMOVE CONC. PAVEMENT	S.Y.	13126		4040
2104.505	REMOVE BITUMINOUS PAVEMENT	S.Y.	2300		
SPEC	GARY ST. REMOVAL & RESTORATION NO. & SO. OF HWY. 10	L.S.			1
SPEC	REMOVE & REINSTALL EX. BRIDGE APPROACH GUARDRAILS	L.F.	190		
SPEC	REMOVE & REINSTALL EX. PLAYGROUND & REC. EQUIPMENT	L.S.			1
2105.501	COMMON EXCAVATION	C.Y.	17961		16120
0112.602	SUBGRADE PREPARATION	S.Y.	27614		12750
SPEC	SUBGRADE CORRECTION FOR BUILDING PAD	C.Y.			8900
2211.501	AGGREGATE BASE, CLASS 5	TON	10333		4470
2331.508	TYPE 41, WEAR COURSE MIXTURE	TON	2975		1285
2331.514	TYPE 31, BASE COURSE MIXTURE	TON	3714		1626
SPEC	2" BITUMINOUS RESTORATION	S.Y.	100		100
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL.	1400		375
0452.603	SHEET PILE RETAINING WALL	S.F.	7550		
SPEC	CONC. CAP FOR RETAINING WALL	L.F.	500		
2506.522	ADJUST FRAME & RING CASTING	EA.	1		
2521.501	CONC. SIDEWALK, 4" THICK	S.F.	36050		475
2531.501	CONC. CURB & GUTTER, B612	L.F.			1590
2531.501	CONC. CURB & GUTTER, B618	L.F.	10861		493
2531.501	CONC. CURB & GUTTER, D412	L.F.			1350
2531.507	CONC. DRIVEWAY PAVEMENT & APRONS	S.Y.	550		
0531.602	CONC. PEDESTRIAN RAMPS	EA.	15		
2535.501	BITUMINOUS CURB	L.F.			1720
2557.523	8' CHAINLINK FENCE	L.F.	500		
0563.601	TRAFFIC CONTROL	L.S.	1		
SPEC	PAVEMENT STRIPING, 4" EQUIV. WIDTH	L.F.	14165		4368
SPEC	PAVEMENT MARKINGS, H.C. SYMBOLS	EA.	4		4
SPEC	SIGN PANELS	S.F.	105		36
2573.501	HAY BALS	EA.	174		97
2573.502	SILT FENCE	L.F.	1530		2730
2575.505	SODDING, LAWN & BOULEVARD	S.Y.	12577		15712
SPEC	SEEDING	AC.	2.35		9.15
SPEC	SUBGRADE DENSITY TEST, INPLACE	EA.	16		16
SPEC	CLASS 5 GRADATION TEST	EA.	1		1
SPEC	CLASS 5 PROCTOR TEST	EA.	1		1
SPEC	CLASS 5 DENSITY TEST, INPLACE	EA.	1		1
SPEC	CONC. TESTING	L.S.	1		1
SPEC	BITUMINOUS PAVEMENT TESTING	L.S.	1		1
SCH. 2.0 STORM SEWER					
2104.501	REMOVE 12" CMP CULVERT	L.F.		165	230
2104.501	REMOVE 15" CMP CULVERT	L.F.		70	368
2104.501	REMOVE 18" CMP CULVERT	L.F.		65	
2104.501	REMOVE 12" RCP CULVERT	L.F.		55	
2104.501	REMOVE 15" RCP CULVERT	L.F.		45	
2104.509	REMOVE EX. STORM MANHOLE	EA.	2		
0451.602	GRANULAR FOUNDATION	TON	180		15
2501.515	12" RC PIPE APRON, CLASS III	EA.	1		
2501.515	15" RC PIPE APRON, CLASS III	EA.	1		1
2501.515	27" RC PIPE APRON WITH TRASH GUARD, CLASS III	EA.	1		
2501.525	88" SPAN RC PIPE APRON WITH TRASH GUARD, CLASS III	EA.	1		
2503.511	12" RC PIPE SEWER, CLASS III	L.F.		256	
2503.511	15" RC PIPE SEWER, CLASS III	L.F.		635	
2503.511	18" RC PIPE SEWER, CLASS III	L.F.		78	
2503.511	21" RC PIPE SEWER, CLASS III	L.F.		787	
2503.511	24" RC PIPE SEWER, CLASS III	L.F.		322	252
2503.511	27" RC PIPE SEWER, CLASS III	L.F.		488	133
2503.511	42" RC PIPE SEWER, CLASS III	L.F.		504	
2503.521	88" SPAN RC PIPE SEWER, CLASS III	L.F.		1052	
0503.603	6" PVC, SDR 35 SEWER	L.F.			194
2506.508	48" DIA. STORM MANHOLE, 0'-8" DEEP	EA.		14	8
SPEC	48" DIA. EXTRA DEPTH MANHOLE, OVER 8' DEEP	L.F.			
2506.508	60" DIA. STORM MANHOLE, 0'-8" DEEP	EA.		1	1
2506.508	72" DIA. STORM MANHOLE, 0'-8" DEEP	EA.		2	
2506.508	84" DIA. STORM MANHOLE, 0'-8" DEEP	EA.		1	
2506.508	90" DIA. STORM MANHOLE, 0'-8" DEEP	EA.		1	
SPEC	88" SPAN RC PIPE TEE MANHOLE	EA.		4	
SPEC	24"X36" STORM CATCH BASIN, 0'-8" DEEP	EA.		7	5
0506.602	CONNECT TO EX. CATCH BASIN	EA.		1	
2511.501	RANDOM RIP RAP, CLASS III	C.Y.		36	5
SPEC	88" SPAN RC PIPE BLOCK & MORTAR BULKHEAD	EA.		1	
SPEC	PROCTOR TEST	EA.		1	1
SPEC	DENSITY TEST, INPLACE	EA.		1	1

THE FOLLOWING STANDARD PLATES AS APPROVED BY FHWA SHALL APPLY:

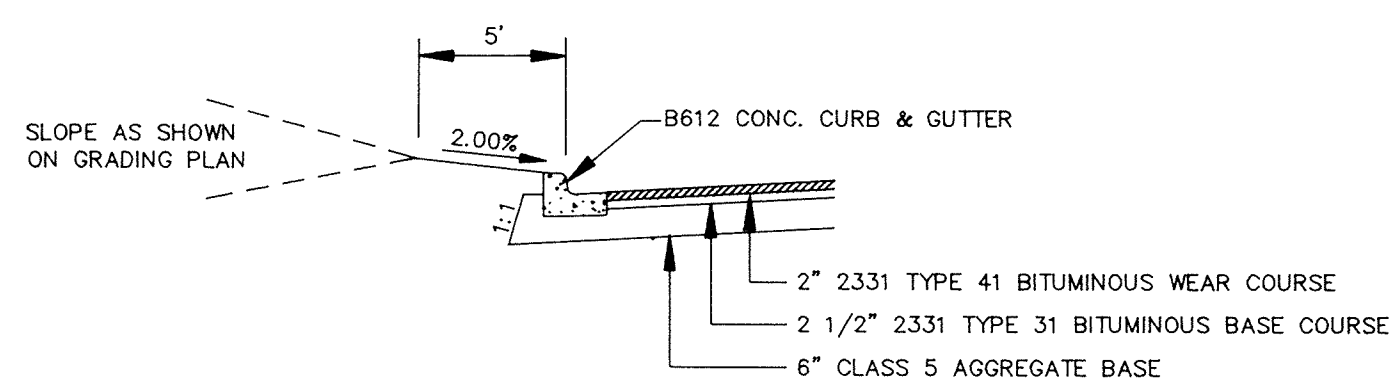
PLATE NO.	DESCRIPTION
0005A	SPECIFICATION REFERENCE TO STANDARD PLATES
3000K	REINFORCED CONCRETE PIPE
3006F	GASKET JOINT FOR RC PIPE
3014J	REINFORCED CONCRETE ARCH PIPE DETAIL
3100G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3110G	CONCRETE APRON FOR REINFORCED CONCRETE ARCH PIPE
3133B	RIP RAP AT RCP OUTLETS
4005K	MANHOLE OR CATCH BASIN
4006K	MANHOLE OR CATCH BASIN
4010G	ADJUSTING RING
7036D	PEDESTRIAN CURB RAMPS
8000I	STANDARD BARRICADES
9102D	TURF ESTABLISHMENT AREAS AT PIPE CULVERT ENDS

STATEMENT OF ESTIMATED QUANTITIES					
SPEC. REF.	ITEM	UNIT	QUANTITIES		
			S.A.P.	STORM SEWER	NON-PART.
SCH. 3.0 WATERMAIN					
0451.602	GRANULAR FOUNDATION	TON			405
0503.605	INSULATION	S.F.			400
0504.602	CONNECT TO EXISTING WATERMAIN	EA.			2
0504.602	HYDRANT WITH 6" VALVE	EA.			17
0504.603	6" DIP WATERMAIN	L.F.			1359
0504.603	8" DIP WATERMAIN	L.F.			712
0504.603	16" DIP WATERMAIN	L.F.			9380
0504.603	16" STEEL CASING PIPE	L.F.			180
0504.603	1" WATER SERVICE PIPE	L.F.			1950
0504.607	6" GATE VALVE	EA.			4
0504.607	8" GATE VALVE	EA.			1
0504.607	16" BUTTERFLY VALVE	EA.			8
0504.620	FITTINGS	LBS.			35000
2511.501	RANDOM RIP RAP, CLASS III	C.Y.			222
2511.515	GEOTEXTILE FILTER FABRIC	S.Y.			760
SPEC	1" SERVICE CONNECTION	EA.			51
SPEC	16" DIP CL. 56 FLEXIBLE JOINT PIPE	L.F.			618
SPEC	16" VALVE MANHOLE	EA.			1
SPEC	16" VALVE MANHOLE WITH AIR RELIEF VALVE	EA.			1
SPEC	PROCTOR TEST	EA.			1
SPEC	DENSITY TEST, INPLACE	EA.			1
SPEC	DISINFECTION TEST	L.S.			1
SCH. 4.0 SANITARY SEWER					
2101.501	CLEARING	AC.			1
2101.506	GRUBBING	AC.			1
2104.509	REMOVE EXISTING SANITARY MANHOLE	EA.	5		
2104.525	ABANDON EXISTING 8" SANITARY SEWER	L.F.			1518
0451.602	GRANULAR FOUNDATION	TON			1775
2503.511	8" PVC PIPE, 0'-8" DEEP	L.F.			80
2503.511	8" PVC PIPE, 8'-10" DEEP	L.F.			655
2503.511	8" PVC PIPE, 10'-12" DEEP	L.F.			723
2503.511	8" PVC PIPE, 12'-14" DEEP	L.F.			668
2503.511	8" PVC PIPE, 14'-16" DEEP	L.F.			1162
2503.511	8" PVC PIPE, 16'-18" DEEP	L.F.			150
2503.511	8" PVC PIPE, 18'-20" DEEP	L.F.			85
2503.511	10" PVC PIPE, 14'-16" DEEP	L.F.			128
2503.511	10" PVC PIPE, 16'-18" DEEP	L.F.			793
2503.511	10" PVC PIPE, 18'-20" DEEP	L.F.			1392
2503.511	10" PVC PIPE, 20'-22" DEEP	L.F.			870
2503.511	10" PVC PIPE, 22'-24" DEEP	L.F.			88
2503.511	18" PVC PIPE, 20'-22" DEEP	L.F.			416
2503.511	18" PVC PIPE, 22'-24" DEEP	L.F.			240
0503.602	CONNECT TO EXISTING SANITARY SEWER MANHOLE	EA.			3
0503.602	CONNECT TO EXISTING FORCEMAIN	EA.			3
0503.602	10"X4" WYE	EA.			12
0503.602	8"X4" WYE	EA.			37
0503.602	6" PLUG	EA.			3
0503.602	4" PVC SDR 35 SERVICE PIPE	L.F.			2000
0503.602	6" PVC SDR 35 SERVICE PIPE	L.F.			175
0503.605	INSULATION	S.F.			520
0504.603	16" STEEL CASING PIPE	L.F.			180
2506.508	SANITARY SEWER MANHOLE, 0'-8" DEEP	EA.			28
SPEC	SANITARY SEWER MANHOLE EXTRA DEPTH, OVER 8'	L.F.			201.1
2511.501	RANDOM RIP RAP, CLASS III	C.Y.			82
2511.515	GEOTEXTILE FILTER FABRIC	S.Y.			335
SPEC	12" PVC FORCEMAIN	L.F.			4684
SPEC	12" DIP CL. 56 FLEXIBLE JOINT PIPE	L.F.			380
SPEC	LIFT STATION, COMPLETE	L.S.			1
SPEC	PROCTOR TEST	EA.			1
SPEC	DENSITY TEST, INPLACE	EA.			1
SCH. 5.0 ELECTRICAL					
SPEC	STREET LIGHTING	L.S.			1
SPEC	LIFT STATION POWER & CONTROLS	L.S.			1

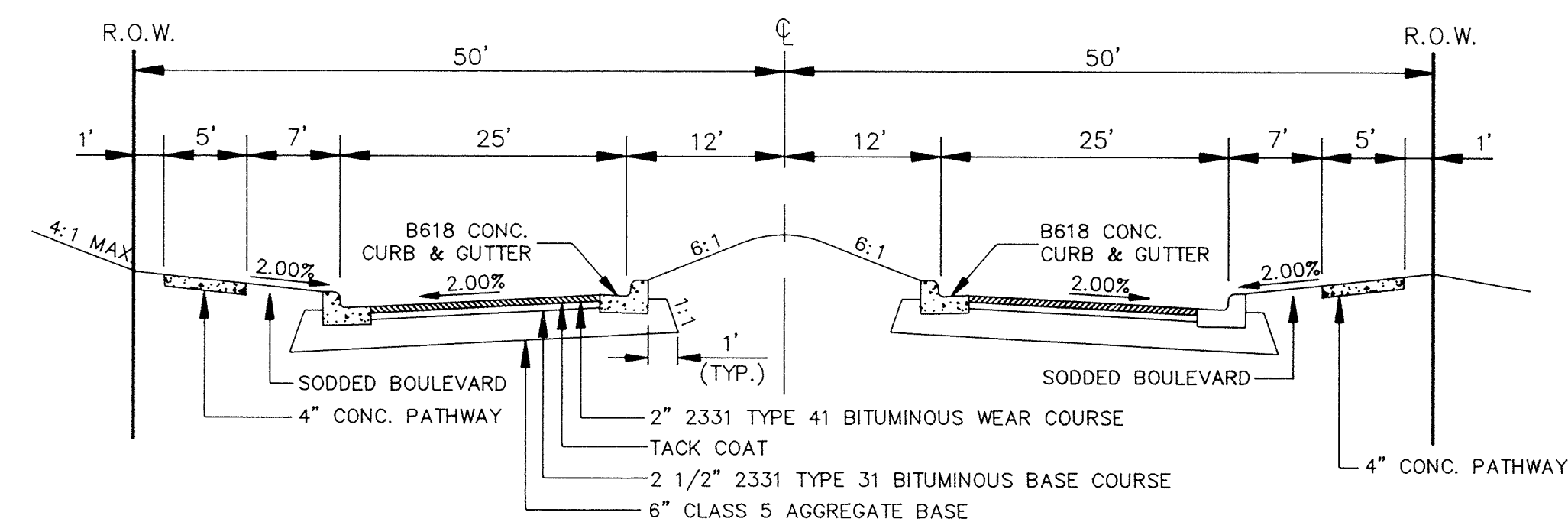
BASIS FOR PLANNED QUANTITIES

- AGGREGATE BASE, CLASS 5:
COMPACTED DRY DENSITY 1.86 TON/C.Y.
- 2331 TYPE 31 BITUMINOUS BASE COURSE:
BITUMINOUS MATERIAL - 5.0% OF MIXTURE BY WEIGHT
BITUMINOUS MIXTURE - 1.98 TON/C.Y.
- 2331 TYPE 41 BITUMINOUS WEAR COURSE:
BITUMINOUS MATERIAL - 6.1% OF MIXTURE BY WEIGHT
BITUMINOUS MIXTURE - 1.98 TON/C.Y.
- BITUMINOUS TACK COAT:
0.05 GAL./S.Y.

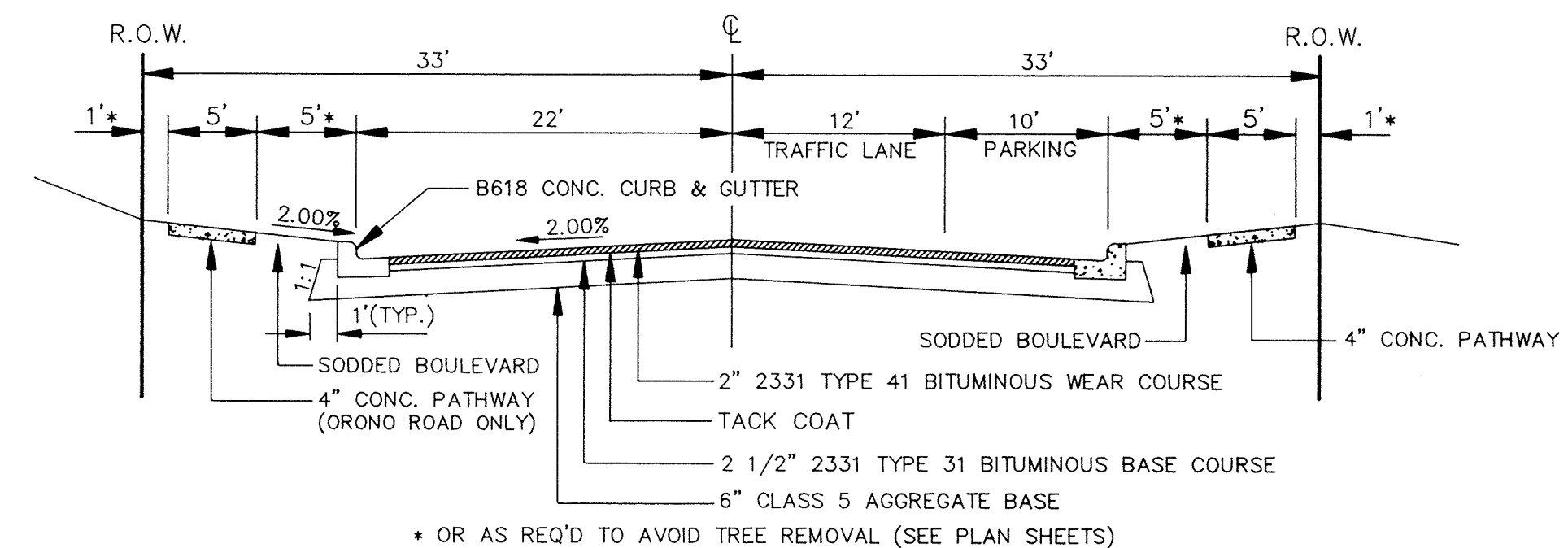
ALL TRAFFIC CONTROL SIGNING AND DEVICES SHALL CONFORM TO THE MUTCD, INCLUDING APPENDIX B, DATED MARCH, 1990.



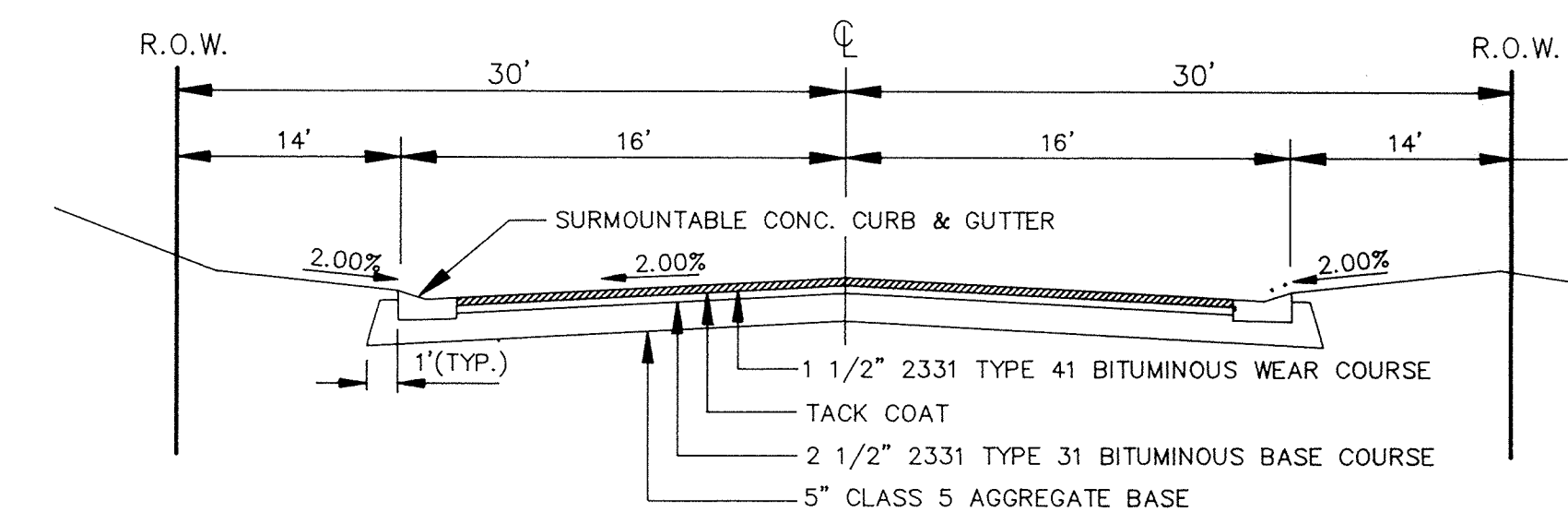
TYPICAL PARKING LOT SECTION
CITY HALL SITE



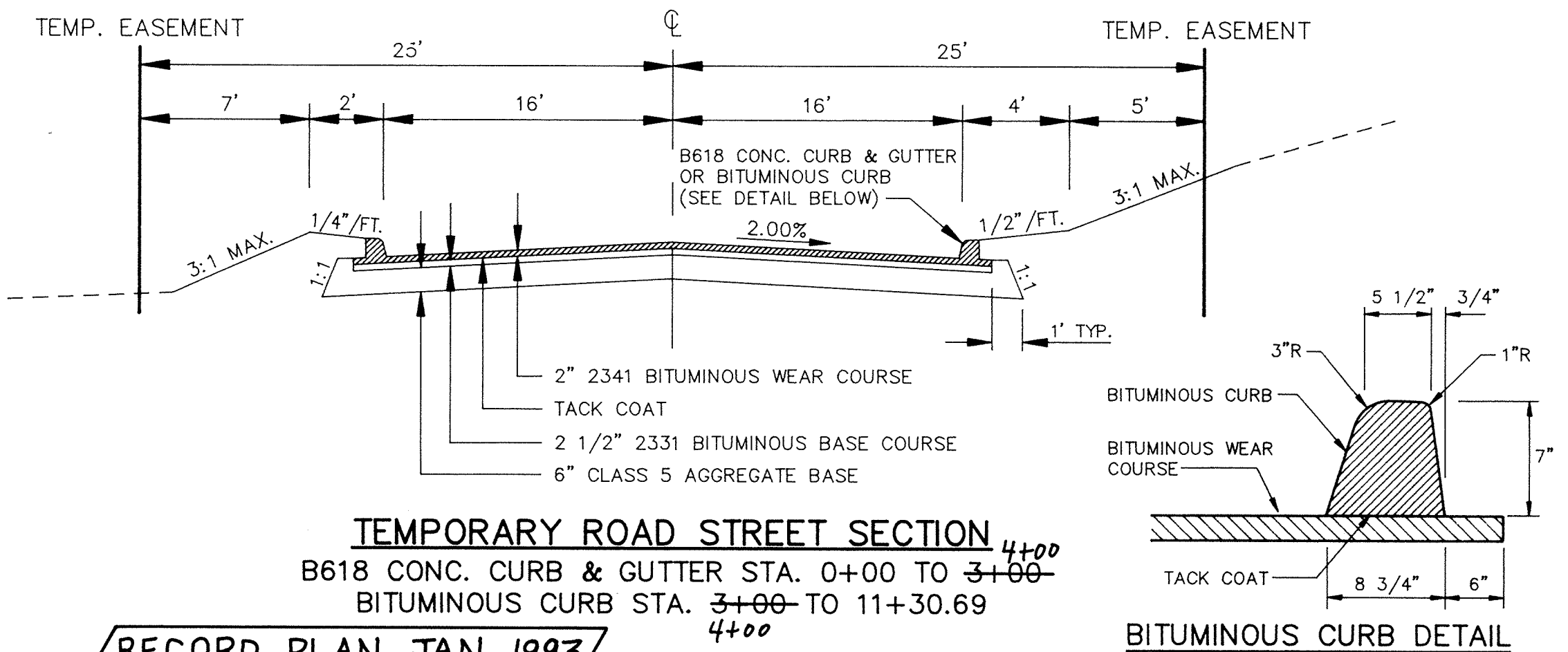
TYPICAL STREET SECTION
ORONO ROAD
STA. 39+00 TO 48+00



TYPICAL STREET SECTION
MAIN STREET/ORONO ROAD
STA. 0+00 TO 39+00



TYPICAL STREET SECTION
ORONO HEIGHTS
183RD COURT



TEMPORARY ROAD STREET SECTION
B618 CONC. CURB & GUTTER STA. 0+00 TO 4+00
BITUMINOUS CURB STA. 3+00 TO 11+30.69

RECORD PLAN JAN. 1993

MAIER STEWART & ASSOCIATES INC. CONSULTING ENGINEERS
9800 SHELARD PARKWAY (612) 546-0432 MINNEAPOLIS, MINNESOTA 55441
1959 SLOAN PLACE (612) 774-6021 ST. PAUL, MINNESOTA 55117

DATE: 3/19/92 REG. NO. 20389

DATE	DESCRIPTION	DESIGNED	CHECKED	DRAWN
		KRR	PEB	GG

CITY OF ELK RIVER
WESTERN AREA IMPROVEMENTS
STREET SECTIONS, NOTES & ESTIMATED QUANTITIES
S.A.P. 204-113-06

DATE: FEB. 1992 SHEET 2 OF 36 SHEETS PROJECT NO. 230-131

DRAWING NUMBER WESTE 92 2