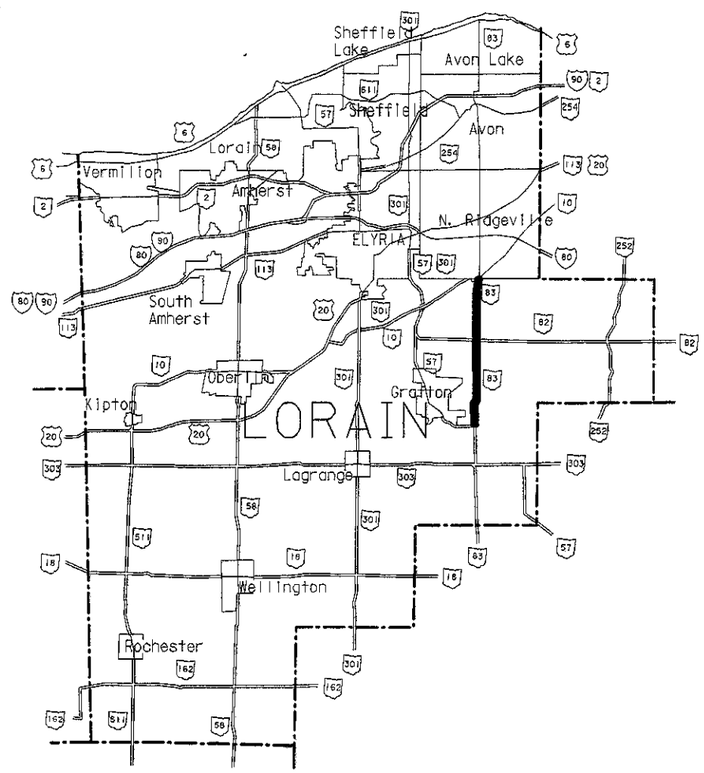
OHIO DEPARTMENT OF TRANSPORTATION

metric units

LOCATION MAP



N

PORTION TO BE IMPROVED

80° 01' 21" W. LONGITUDE 41° 15' 36" N. LATITUDE

LOR - 83 - (6.727-12.746)
000273
DIST 03

PID# 16738
05/24/00

DATE: 17 NOV 1999

WORKSTATION: rtrivoli

I:\projects\16738\Dgn\title.dgn

PART	COUNTY	ROUTE	SECTIONS	PROJECT TERMINI straight line kilometer		NET LENGTH kilometer	CITY	VILLAGE
				BEGIN	END			
A	LORAIN	SR 83	(6.727-12.746)	6.727	16.914	10.187		GRAFTON

Straight Line Kilometers have been converted from mileage - (references in the field are in miles)

PROJECT DESCRIPTION: This project will include pavement repair, resurfacing with an intermediate and a surface course of asphalt concrete, guardrail construction, drainage conduit upgrades, intersection widening, traffic signal upgrade, bridge rehabilitation, and pavement markings as detailed in the plan.

INDEX OF SHEETS:

1 - TITLE SHEET
2,3,3A - GENERAL SUMMARY
4,5,6,6A - GENERAL NOTES
7 - MAILBOX FACILITIES
8 - STRAIGHT LINE DIAGRAM/PAVEMENT DATA
9 - SHOULDER DATA
9-11 - TYPICAL SECTIONS
12,13 - SCHEMATIC PLAN
14,15 - CALCULATIONS
16 - ROADWAY SUB-SUMMARY
17-25 - PLAN AND PROFILE SR 83
26-35 - CROSS SECTIONS SR 83
36-38 - PLAN AND PROFILE SR 82
39-41 - CROSS SECTIONS SR 82
42,43 - PLANING DETAIL
44,45 - INTERSECTION DETAIL
46 - DRIVE DETAILS
47-50 - DRIVE PROFILES
51 - GUARDRAIL GENERAL NOTES
52,53 - ESTIMATED QUANTITES
54 - FIELD DRIVE DETAILS
55 - EMBANKMENT TYPICAL SECTIONS
56-61 - GUARDRAIL DETAILS
62 - BRIDGE TREATMENT
63,64 - STRUCTURE GENERAL NOTES
65 - STRUCTURE SUMMARY
66 - STRUCTURE DETAILS
67,68 - TRAFFIC SIGNAL GENERAL NOTES
69 - TRAFFIC SIGNAL SUMMARY
70-73 - TRAFFIC SIGNAL PLAN AND DETAILS
74 - SIGN SUB-SUMMARY
75 - SIGNING AND PAVEMENT MARKING INFORMATION
76-79 - SIGNING AND PAVEMENT MARKING PLAN
80 - PAVEMENT MARKING TYPICAL DETAILS
81 - MAINTENANCE OF TRAFFIC GENERAL NOTES & SUB-SUMMARY
82-85 - MAINTENANCE OF TRAFFIC PLAN
86 - FLAGGER CLOSING 1 LANE OF A 2 LANE HIGHWAY FOR PAVING OPERATIONS

1997 SPECIFICATIONS

THE STANDARD 1997 SPECIFICATIONS OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND THE PROPOSAL SHALL GOVERN THESE IMPROVEMENTS

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THESE IMPROVEMENTS WILL REQUIRE THE CLOSING OF THE HIGHWAY ON PARTS NO. NONE AND THAT DETOURS WILL BE PROVIDED BY STATE FORCES. THE CLOSING TO TRAFFIC OF THE HIGHWAYS WILL NOT BE REQUIRED ON PARTS NO. A AND PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS INDICATED IN THE PROPOSAL.

APPROVED DATE 11-18-99 James D. Mawhorr
DISTRICT DEPUTY DIRECTOR OF TRANSPORTATION

APPROVED DATE 12-3-99 Gordon Proctor
DIRECTOR, DEPARTMENT OF TRANSPORTATION

TWO WORKING DAYS BEFORE YOU DIG
Call 800-362-2764
TOLL FREE
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS MUST BE CALLED DIRECTLY

ROADWAY ENGINEER'S SEAL

STATE OF OHIO
MICHAEL JOSEPH SCHAFRATH
57943
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: Michael J. Schafrath
DATE: 11/18/99

STRUCTURAL ENGINEER'S SEAL

STATE OF OHIO
DAVID C. MOLLENSHOTT
E-50210
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: David C. Mollenshott
DATE: 11/18/99

STANDARD DRAWINGS		STANDARD DRAWINGS		STANDARD DRAWINGS		STANDARD DRAWINGS	
BP-3.1M	10-28-94	TC-17.10M	02-01-94	TC-21.20M	12-10-96		
BP-4.1M	10-28-94	TC-41.20M	07-01-94	TC-83.10M	11-24-93		
GR-1.1M	10-21-97	TC-42.10M	03-31-94	HL-30.11M	03-31-95		
GR-1.2M	01-03-96	TC-42.20M	03-31-94	HL-30.22M	03-31-95		
GR-1.3M	11-30-94	TC-52.10M	07-29-94	MT-97.10M	04-25-94		
GR-2.1M	10-21-97	TC-52.20M	07-29-94	MT-99.20M	01-30-95		
GR-2.4M	10-21-97	TC-61.10M	03-31-94	MT-101.60M	04-25-94		
GR-3.4M	10-21-97	TC-65.10M	11-01-95	MT-105.10M	04-25-94		
GR-4.2M	10-21-97	TC-65.12M	11-01-95	MT-105.11M	04-25-94		
RM-1.1M	04-29-99	TC-71.10M	09-01-93	MT-97.10M	04-25-94		
CB-1.1M	07-12-95	TC-81.10M	12-10-96	MT-99.20M	01-30-95		
CB-3.2M	07-12-95	TC-82.10M	11-24-93	MT-101.60M	04-25-94		
DM-4.3M	04-29-99	TC-83.20M	11-24-93	MT-105.10M	04-25-94		
DM-4.4M	04-29-99	TC-84.20M	11-24-93	MT-105.11M	04-25-94		
		TC-85.20M	11-24-93				

SUPPLEMENTAL SPECIFICATIONS	
806	09-09-97
814	06-02-98
842	01-06-99
870	08-10-99
877	04-13-99
887	08-10-99
899	10-21-98
904	05-05-98
905	04-01-98

SUPPLEMENTAL SPECIFICATIONS	
906	05-05-98
907	10-21-98
932	10-02-96

PLANS PREPARED BY:

DISTRICT 3 PRODUCTION DEPT.

FEDERAL PROJECT NO. TE21 C990 - (719)

PID NO. 16738

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT CSX RAILROAD

LOR-83-6.727

GENERAL SUMMARY

metric units

SHEET NUMBER 6	7	8	9	14	15	16	51		52	53	75	81	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	REF. SHEET
																	ROADWAY	
													201	11001	LUMP		CLEARING AND GRUBBING, AS PER PLAN	6
						2							201	21800	2	EACH	TREE REMOVED, 0.5 METER	
						484.0			50				202	35100	534.0	METER	PIPE REMOVED, 600 MM AND UNDER	
									241.935				202	38000	241.935	METER	GUARDRAIL REMOVED	
									161.925				202	38200	161.925	METER	GUARDRAIL REMOVED FOR REUSE	
									30.48				202	38501	30.48	METER	BRIDGE RAILING REMOVED, AS PER PLAN	51
									18				202	42000	18	EACH	ANCHOR ASSEMBLY REMOVED, TYPE A	
											550		202	54110	550	EACH	RAISED PAVEMENT MARKER REMOVED FOR STORAGE	
						5							202	58100	5	EACH	CATCH BASIN REMOVED	
						16.6							SPECIAL	20270100	16.6	METER	PIPE CLEANOUT	5
						1							202	98100	1	EACH	REMOVAL MISC.: DRAINAGE STRUCTURE	5
				1286								295	203	12000	1581	CUBIC METER	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	
				1508									203	20000	1508	CUBIC METER	EMBANKMENT	
									187				203	20001	187	CUBIC METER	EMBANKMENT, AS PER PLAN	51
				4972									203	50000	4972	SQUARE METER	SUBGRADE COMPACTION	
			18720										203	60100	18720	METER	LINEAR GRADING	
	18												203	60700	18	EACH	GRADING MAILBOX APPROACHES	
						1							604	38500	1	EACH	MONUMENT ASSEMBLY	
		1				3							604	39500	4	EACH	MONUMENT BOX ADJUSTED TO GRADE	
										192.405			606	13000	192.405	METER	GUARDRAIL, TYPE 5	
										60.96			606	13020	60.96	METER	GUARDRAIL, TYPE 5 WITH DOUBLE RAILS	
										161.925			606	16500	161.925	METER	GUARDRAIL REBUILT, TYPE 5	
							25						606	18000	25	EACH	GUARDRAIL POST	
										14			606	22010	14	EACH	ANCHOR ASSEMBLY, TYPE E-98	
										10			606	26500	10	EACH	ANCHOR ASSEMBLY, TYPE T	
										8			606	35140	8	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4	
										904			SPECIAL	60650000	904	METER	RESHAPING BERM	51
										114.30			606	98000	114.30	METER	GUARDRAIL MISC.: ADJUST HEIGHT, EXISTING TYPE 5 GUARDRAIL	51
													630	97700	1	EACH	SIGNING, MISC.: REMOVE AND REERECT BRIDGE LOCATION MARKER	6A
	18												SPECIAL	69050100	18	EACH	MAILBOX SUPPORT SYSTEM, SINGLE	7
	4												SPECIAL	69050200	4	EACH	MAILBOX SUPPORT SYSTEM, DOUBLE	7
																	EROSION CONTROL	
					8783								870	10000	8783	SQUARE METER	SEEDING AND MULCHING	
					878								870	20000	878.3	KILOGRAM	COMMERCIAL FERTILIZER	
					88								870	35000	87.8	CUBIC METER	WATER	
1800													877	10000	1800	SQUARE METER	TEMPORARY SEEDING AND MULCHING	
38													877	30200	38	METER	TEMPORARY DITCH CHECK FILTER FABRIC FENCE	
60													877	30300	60	METER	TEMPORARY INLET PROTECTION FILTER FABRIC FENCE	

CALC BY: RPT
CHK'D BY: MJS

GENERAL SUMMARY

LOR-83-6.72.7

GENERAL SUMMARY

metric units

SHEET NUMBER 5		7	8	9	14	15	16	42	52	53	62	81	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	REF. SHEET
																	DRAINAGE	
							14.6						603	02000	14.6	METER	200 MM CONDUIT, TYPE C	
							26.4						603	04400	26.4	METER	300 MM CONDUIT, TYPE B	
							293.9		65				603	04900	358.9	METER	300 MM CONDUIT, TYPE D	
							23.8						603	05900	23.8	METER	375 MM CONDUIT, TYPE B	
							38.7						603	07400	38.7	METER	450 MM CONDUIT, TYPE B	
							4						604	01604	4	EACH	CATCH BASIN, NO. 5 WITHOUT APRON	
							4						604	04500	4	EACH	CATCH BASIN, NO. 2-2B	
							2						604	09000	2	EACH	CATCH BASIN ADJUSTED TO GRADE	
301													605	31100	301	METER	AGGREGATE DRAIN	
																	PAVEMENT	
150													253	02000	150	CUBIC METER	PAVEMENT REPAIR	
			270					3905			578		254	01000	4753	SQUARE METER	PAVEMENT PLANING, BITUMINOUS	
				1736	617		48						301	46000	2401	CUBIC METER	BITUMINOUS AGGREGATE BASE, PG64-22	
					650		122		30			23	304	20000	824	CUBIC METER	AGGREGATE BASE	
			29719		2628								407	10000	32347	LITER	TACK COAT	
			6997			1348							407	14000	8345	LITER	TACK COAT FOR INTERMEDIATE COURSE	
				10105		8197							408	10000	18302	LITER	BITUMINOUS PRIME COAT	
			3117			412							446	50000	3529	CUBIC METER	ASPHALT CONCRETE SURFACE COURSE, TYPE 1H	
			1250			271							448	46020	1521	CUBIC METER	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22	
							19						448	48020	19	CUBIC METER	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAYS)	
				6240									617	20000	6240	SQUARE METER	SHOULDER PREPARATION	
		27		559		46							617	98300	632	METRIC TON	SHOULDER RECONDITIONING, MISC.: COMPACTED AGGREGATE	6

CALC BY: RPT
CHK'D BY: MJS

GENERAL SUMMARY

LOR-83-6.727

GENERAL SUMMARY

metric units

SHEET NUMBER 6	53	62			65		74		75		81		ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	REF. SHEET
																	MAINTENANCE OF TRAFFIC	
											16		614	11100	16	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR	
38													614	12460	38	EACH	WORK ZONE MARKING SIGN	
10													614	13000	10	CUBIC METER	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC	
											3.43		614	21000	3.43	KILOMETER	TEMPORARY CENTER LINE, CLASS I	
									20.37				614	21500	20.37	KILOMETER	TEMPORARY CENTER LINE, CLASS II, 642 PAINT	
											3.42		614	22000	3.42	KILOMETER	TEMPORARY EDGE LINE, CLASS I	
									60				614	23000	60	METER	TEMPORARY CHANNELIZING LINE, CLASS I, 642 PAINT	
											22.1		614	26000	22.1	METER	TEMPORARY STOP LINE, CLASS I	
													616	10000		CUBIC METER	WATER	
20													616	20000	20	METRIC TON	CALCIUM CHLORIDE	
1													615	10000	LUMP	LUMP SUM	TEMPORARY ROAD	
											1040		615	35001	1040	SQUARE METER	TEMPORARY PAVEMENT, AS PER PLAN	
																	TRAFFIC CONTROL	
																	SEE ALSO TRAFFIC SIGNAL SUMMARY ON SHEET 69	
									429				621	00222	429	EACH	RAISED PAVEMENT MARKER, LOW PROFILE YELLOW-YELLOW, INSTALLATION ONLY	
									48				621	00226	48	EACH	RAISED PAVEMENT MARKER, LOW PROFILE WHITE, INSTALLATION ONLY	
									17				621	00230	17	EACH	RAISED PAVEMENT MARKER, LOW PROFILE WHITE-RED, INSTALLATION ONLY	
	48												626	00100	48	EACH	BARRIER REFLECTOR, TYPE A	
							36						630	03100	36	METER	GROUND MOUNTED SUPPORT, NO. 3 POST	
							7.5						630	80100	7.5	SQUARE METER	SIGN, FLAT SHEET, TYPE F	
							10						630	84900	10	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
							29						630	85100	29	EACH	REMOVAL OF GROUND MOUNTED SIGN & DISPOSAL	
							2						630	86002	2	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT & DISPOSAL	
									56				644	00500	56	METER	STOP LINE	
									630				644	00700	630	METER	TRANSVERSE LINE	
									2				644	01000	2	EACH	RAILROAD SYMBOL MARKING	
									9				644	01300	9	EACH	LANE ARROW	
									5				644	01410	5	EACH	WORD ON PAVEMENT, 2500 MM, "ONLY"	
									20.37				887	10000	20.37	KILOMETER	EDGE LINE (3 YEAR WARRANTY)	
									10.51				887	14000	10.51	KILOMETER	CENTER LINE (3 YEAR WARRANTY)	
									375				887	16000	375	METER	CHANNELIZING LINE (3 YEAR WARRANTY)	
																	STRUCTURE LOR-83-10976 (SLK) SFN 4704029	
					66								SPECIAL	40963100	66	SQUARE METER	RUBBERIZED SEAL	63
													623	10000	LUMP	LUMP SUM	CONSTRUCTION LAYOUT STAKES	
													SPECIAL	10000300	LUMP	LUMP SUM	PREMIUM ON RAILROADS' PROTECTIVE PUBLIC LIABILITY AND PROPERTY DAMAGE LIABILITY INSURANCE	
													614	11000	LUMP	LUMP SUM	MAINTAINING TRAFFIC	
													624	10000	LUMP	LUMP SUM	MOBILIZATION	
													806	16000	9	MONTH	FIELD OFFICE, TYPE A	
6													SPECIAL	69065010	6	METRIC TON	WORK INVOLVING SOLID WASTE	

CALC BY: RPT
CHK'D BY: MJS

GENERAL SUMMARY

LOR-83-6.727

ROUTINE MAINTENANCE:

BETWEEN THE TIME THAT BIDS ARE TAKEN AND THE START OF CONSTRUCTION, THE MAINTAINING AGENCY MAY ENTER UPON THE PROJECT AND PERFORM ROUTINE MAINTENANCE SUCH AS CRACK SEALING, PATCHING, AND BERM AND SHOULDER REPAIR. THE EFFECTS, IF ANY, OF THE PERFORMANCE OF ROUTINE MAINTENANCE SHALL BE CONSIDERED AS INHERENT IN WORK OF THE CHARACTER PROVIDED FOR IN THE PLAN AND THE RESULTING CONDITIONS SHALL NOT BE CONSIDERED AS DIFFERING MATERIALLY FROM THOSE EXISTING AT THE TIME BIDS WERE TAKEN.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

PROGRESSION OF WORK:

GUARDRAIL WORK SHALL BE DONE AFTER RESURFACING, EMBANKMENT AND BERM WORK SO AS TO ESTABLISH PROPER GRADES FROM WHICH TO CONSTRUCT THE GUARDRAIL.

PAVEMENT CONTROL:

AN AUTOMATIC SCREED CONTROL, HAVING A 6.1m MINIMUM SKI-ARM, SHALL BE USED FOR PLACING THE INTERMEDIATE COURSE AND SURFACE COURSE ON EXISTING PAVEMENT WIDTHS OF 6.1 m AND OVER.

SPECIAL ATTENTION SHALL BE GIVEN TO SUPER-ELEVATED CURVES. THE SUPER-ELEVATION SHALL BE MAINTAINED AND/OR RESTORED, IF NECESSARY, AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE INTO ALL CATCH BASINS AND INLETS.

BUTT JOINTS

BUTT JOINTS SHALL NOT BE CUT AND LEFT OPEN TO TRAFFIC FOR A TIME PERIOD LONGER THAN THREE (3) DAYS. IF CUT IS NOT PAVED WITHIN THREE (3) DAYS, IT SHALL BE FILLED IN WITH A TEMPORARY ASPHALT CONCRETE WEDGE, OF SUFFICIENT LENGTH, AS DIRECTED BY THE ENGINEER.

CONSTRUCTION "BUMP" (OW-62) AND "ADVISORY SPEED" (OW-143) SIGNS SHALL BE ERECTED AND MAINTAINED DURING THE PERIOD THAT THE CUT FOR THE BUTT JOINT IS LEFT OPEN.

INTERSECTIONS AND DRIVES:

RURAL-INTERSECTIONS SHALL BE PAVED TO THE END OF THE RADII OR AS DIRECTED BY THE ENGINEER. (TO PROVIDE A SMOOTH TRANSITION BETWEEN THE TWO HIGHWAYS, AND TO ELIMINATE WATER POCKETS)

URBAN-INTERSECTIONS SHALL BE PAVED TO THE BACK OF CROSSWALKS OR AS DIRECTED BY THE ENGINEER. (TO PROVIDE A SMOOTH TRANSITION BETWEEN THE TWO HIGHWAYS, AND TO ELIMINATE WATER POCKETS)

EXISTING PAVED DRIVES SHALL BE PAVED SO AS TO PROVIDE A SMOOTH TRANSITION BETWEEN THE HIGHWAY AND THE DRIVE, (DISTANCE FROM EDGE OF ROADWAY MAY VARY - AT EACH DRIVE) AS DIRECTED BY THE ENGINEER.

EXISTING AGGREGATE DRIVES SHALL BE PAVED WITH AN APRON THE WIDTH OF THE 617 BERM OR 0.61m MINIMUM. THE SLOPE OF THIS APRON SHALL BE THE SAME AS THE ADJACENT PAVEMENT SLOPE OR AS DIRECTED BY THE ENGINEER. ITEM 617 AGGREGATE SHALL BE PLACED ADJACENT TO THIS APRON TO PROVIDE A SMOOTH TRANSITION FROM THE APRON TO THE EXISTING DRIVE, (WIDTH OF THIS 617 APPLICATION MAY VARY.) AS DIRECTED BY THE ENGINEER. AN ADDITIONAL QUANTITY HAS BEEN ESTIMATED TO COMPLETE THIS WORK AND IS SHOWN ON THE "SHOULDER DATA" SHEET.

ANY HAZARD OR UNSAFE CONDITION RESULTING FROM THE ABOVE WORK MUST BE CORRECTED IMMEDIATELY, AS DIRECTED BY THE ENGINEER. THE CONTRACTOR IS REMINDED OF SECTIONS 104.04, 107.07 & 614.02 (a): PUBLIC CONVENIENCE AND SAFETY.

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE AND BERM WIDENING SHALL BE PREFORMED ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED AT ALL TIMES WITH DRUMS OR BARRICADES.

PLACEMENT OF THE PROPOSED BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND THE EXCAVATION. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL BY THE ENGINEER.

PAVED BERM AND/OR BASE WIDENING

QUANTITIES ARE CALCULATED THROUGH ALL INTERSECTIONS AND DRIVES. ANY PORTION MAY BE NON-PERFORMED IF SO DIRECTED BY THE ENGINEER. THE cubic meter OF ASPHALT CONCRETE SHALL BE PAID BY TICKET WEIGHT CONVERSION, WITHIN A TOLERANCE OF 5%± OF THE REQUIRED CALCULATED WEIGHT PER UNIT OF AREA, AS PER 401.16, ON A DAILY BASIS

UTILITIES:

EXTREME CAUTION SHALL BE EXERCISED IN AREAS WITH UTILITIES. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ALL DAMAGE INFLICTED ON UTILITIES IN THE EXECUTION OF THIS CONTRACT.

THE FOLLOWING IS A LIST OF UTLITIES WHICH MAY BE INVOLVED. THE OHIO DEPT. OF TRANSPORTATION DOES NOT GUARANTEE THE COMPLETENESS OF THIS LIST.

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

BUCKEYE PIPE LINE COMPANY
4911 E. HIGH STREET
MANTUA, OHIO 44255
330-274-2234

RURAL LORAIN COUNTY WATER AUTHORITY
42401 ROUTE 303
P.O. BOX 567
LAGRANGE, OHIO 44050
216-355-5121

GATHERCO OF OHIO
P.O. BOX 101
ORRVILLE, OHIO 44667
800-824-6695

OHIO EDISON COMPANY
6326 LAKE AVENUE
ELYRIA, OHIO 44035
440-324-3207

GTE TELEPHONE OPERATIONS
83 TOWNSEND AVENUE
NORWALK, OHIO 44857
419-744-3605

GRAFTON CABLE COMMUNICATIONS, INC.
993 COMMERCE DRIVE
GRAFTON, OHIO 44044
216-926-3230

COLUMBIA GAS TRANSMISSION CORP.
13292 SMITH RD.
WELLINGTON, OH 44090
440-697-4322

COLUMBIA GAS OF OHIO, INC.
3101 NORTH RIDGE ROAD EAST
LORAIN, OHIO 44055
216-240-6153

AT & T
229 WEST 7TH. STREET
CINCINNATI, OHIO 45202
317-784-2936

ROUNDING:

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

WORK LIMITS:

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

PLACEMENT OF ASPHALT CONCRETE

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES:

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT. IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEM.

RAILROAD CROSSINGS

PRIOR TO ANY WORK AT RAILROAD CROSSINGS THE CONTRACTOR SHALL CONTACT THE AFFECTED RAILROAD AUTHORITY AS TO MAKE THEM AWARE OF THE PROGRESS AND SCHEDULE OF WORK. THE CONTRACTOR SHALL COOPERATE WITH THE RAILROAD SO AS TO ELIMINATE ANY SAFETY CONCERNS.

THE CROWN SHALL BE WORKED OUT OF THE PROPOSED PAVEMENT ON EACH SIDE OF THE RAILROAD CROSSING, BEGINNING 15 METERS FROM THE NEAREST RAIL, BY RAISING THE EDGES OF THE NEW PAVEMENT TO MEET THE PLATFORM ELEVATION.

OMIT AND RESUME RESURFACING AT THE HEADER TIE, AS DIRECTED BY THE ENGINEER.

RAILROAD LIABILITY INSURANCE INFORMATION

OWNER OF RAILROAD: CSX Transportation

THE NUMBER OF TRAINS OPERATING THROUGH THE IMPROVEMENT IS ESTIMATED TO BE:

PASSENGER TRAINS/DAY: None @ N/A MILES PER HOUR
FREIGHT TRAINS/DAY: 13 @ 60 MILES PER HOUR
HAZARDOUS MATERIAL: YES
THE IDENTIFICATION OF THE CROSSING IS KNOWN AS:
RR MILEPOST: 23.06 (Indianopolis LIne LC 60-8105)
AARDOT NO.: 518532N

LOCAL CONTACT PERSON FOR FLAGGING: Ken Downard
(440) 239-3608

REMOVAL OF TREES OR STUMPS:

ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS	TOTAL
0.5m	2	0	2
0.8m	0	0	0
1.2m	0	0	0
1.5m	0	0	0

metric units

CALCULATED RPT CHECKED MNL

PLAN NO.

GENERAL

LOR-83-6.727

4
86

WORKSTATION: mschafra
DATE: 28 JUL 99
DESIGN FILE: i:\projects\16738\dgn\mgnote.dgn

TREE REMOVAL RESTRICTIONS:

THIS PROJECT IS WITHIN THE LIMITS OF THE FEDERAL ENDANGERED INDIANA BAT (MYOTIS SODALIS) AND MAY IMPACT THAT SPECIES HABITAT. TREES OVER 230MM IN DIAMETER WITH LOOSE OR PEELING BARK OR CAVITIES SHALL ONLY BE CUT BETWEEN SEPTEMBER 16 AND APRIL 14.

EVIRONMENTAL COMMITMENTS:

THE CONTRACTOR IS PROHIBITED USE OF WETLAND HABITATS AS STAGING AREAS, EQUIPMENT STORAGE, OR MATERIAL STORAGE.

ELEVATION DATUM:

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

REVIEW OF DRAINAGE FACILITIES:

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEMS AND PERTINENT 604 ITEMS.

ITEM 202 - CATCH BASIN REMOVED:

WHEN DIRECTED BY THE ENGINEER, CASTINGS SHALL BE CAREFULLY REMOVED AND STORED WITHIN THE RIGHT-OF-WAY FOR SALVAGE BY STATE FORCES.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 202 - CATCH BASIN REMOVED.

ITEM 202 - REMOVAL MISC.: DRAINAGE STRUCTURE:

AT THE LOCATION SPECIFIED IN THE PLANS AN OUTFALL DRAINAGE STRUCTURE (SEE FIGURE A) EXISTS. IT SHALL BE REMOVED ENTIRELY AND THE RESULTING WASTE MATERIAL SHALL BE DISPOSED OF PROPERLY.

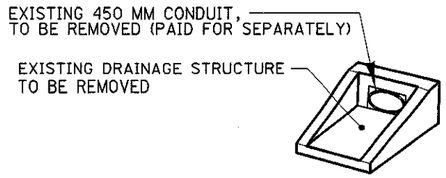


FIGURE A

PAYMENT FOR ALL THE ABOVE SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR ITEM 202- REMOVAL MISC.: DRAINAGE STRUCTURE. THIS ITEM SHALL INCLUDE THE REMOVAL AND DISPOSAL OF ALL MATERIAL FOUND AND FURNISHING OF ALL LABOR, EQUIPMENT AND TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM OF WORK.

ITEM SPECIAL - PIPE CLEANOUT:

THE EXISTING PIPE, AS DESIGNATED IN THE PLANS, SHALL BE CLEANED OUT AS DIRECTED BY THE ENGINEER. THIS WORK SHALL CONSIST OF THE REMOVAL OF ALL FOREIGN MATERIAL FROM THE INSIDE OF THE EXISTING PIPE. THE MATERIAL REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH THE REQUIREMENTS OF 203.05

THE METHOD OF MEASUREMENT SHALL BE THE ACTUAL NUMBER OF METERS OF EXISTING PIPE CLEANED OUT AS DIRECTED BY THE ENGINEER.

THE ACCEPTED QUANTITIES, AS MEASURED ABOVE, SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER METER UNDER ITEM SPECIAL- PIPE CLEANOUT. THIS ITEM SHALL INCLUDE THE REMOVAL AND DISPOSAL OF ALL MATERIAL FOUND IN THE PIPE, AND THE FURNISHING OF ALL LABOR, EQUIPMENT AND TOOLS NECESSARY TO COMPLETE THIS ITEM AS INTENDED.

ITEM 253. PAVEMENT REPAIR:

THIS ITEM OF WORK SHALL CONSIST OF THE REMOVAL OF THE EXISTING PAVEMENT OR PAVED BERM WHICH MAY BE ASPHALT, BRICK, CONCRETE, OR A COMBINATION OF EACH, IN AREAS OF EXISTING PAVEMENT FAILURE.

THE ENGINEER SHALL DESIGNATE THE LOCATIONS AND LIMITS OF THE AREAS TO BE REPAIRED. THE REPAIR AREAS SHALL BE ROUGHLY RECTANGULAR IN SHAPE AND CUT OR SAWED TO A NEAT LINE. THE PAVEMENT SHALL BE REMOVED WITHIN THE DESIGNATED AREAS BY METHODS WHICH WILL NOT DAMAGE THE ADJACENT PAVEMENT. THE DEPTH OF REMOVAL, AS DIRECTED BY THE ENGINEER, SHALL BE SUFFICIENT TO REMOVE ALL DETERIORATED PAVEMENT (ESTIMATED DEPTH MAY VARY FROM 50mm to 305mm). THE MATERIALS SO REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH 203.05.

REPLACEMENT MATERIAL SHALL BE ITEM 301 OR ITEM 448, TYPE 2 MATERIAL AND SHALL BE PLACED AND COMPACTED TO FINISH FLUSH WITH THE ADJACENT PAVEMENT SURFACE. THE REPAIR AREAS SHALL BE PAINTED WITH BITUMINOUS MATERIAL (SIDES AND BOTTOM) AT AN APPLICATION RATE OF 0.36 L/m^2 . ALL COMPACTION SHALL BE ACHIEVED BY MECHANICAL METHODS TO THE SATISFACTION OF THE ENGINEER. MAXIMUM LIFT THICKNESS SHALL BE 76 mm.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THE PAVEMENT REPAIR. THE FOLLOWING ESTIMATED QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER cubic meter, (BY TICKET WEIGHT CONVERSION), OF ITEM 253, PAVEMENT REPAIR.

150 m^3 - PART A

ITEM 254. PAVEMENT PLANING, BITUMINOUS

PLANING IS TO BE PERFORMED AS DIRECTED AND IN AREAS DESIGNATED BY THE ENGINEER. REMOVAL OF EXISTING PAVEMENT SURFACE MAY BE REQUIRED TO ELIMINATE ADVERSE SURFACE DISTORTION, WHICH IN THE JUDGEMENT OF THE ENGINEER, CANNOT BE SATISFACTORILY CORRECTED IN THE PAVING COURSES.

THESE AREAS MAY VARY IN DEPTH, AS DIRECTED BY THE ENGINEER.

THESE AREAS MAY INCLUDE MATERIAL DISPLACED BY RUTTING OR SHOVING, ASPHALT SURFACE PATCHES, CONCRETE PATCHES, TRANSVERSE BUMPS, JOINTS AT STRUCTURES, ADJOINING PAVEMENTS, RAILROADS, ETC.

ITEM 870 - SEEDING AND MULCHING:

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR ITEM 659, SEEDING AND MULCHING, ARE BASED ON THESE LIMITS.

ITEM 203 LINEAR GRADING

THIS WORK SHALL CONSIST OF PREPARING A SUBGRADE FOR THE SHOULDER PAVING BY EXCAVATING THE EXISTING SHOULDER MATERIAL, AS DESCRIBED IN THE "TRENCH FOR WIDENING" NOTE, TO THE DEPTH SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER. THIS OPERATION SHALL INCORPORATE TRIMMING THE EDGE OF THE EXISTING PAVEMENT TO A LINE ESTABLISHED BY THE ENGINEER TO FACILITATE THE WIDENING WITHIN THE OVERALL PAVEMENT WIDTHS SHOWN. COMPACTION SHALL BE CARRIED OUT BY MEANS OF A TRENCH ROLLER, 401.11. AREAS GRADED IN EXCESS OF THE DEPTHS REQUIRED SHALL BE BACKFILLED TO THE DESIRED GRADE USING 617 AGGREGATE AT THE CONTRACTORS EXPENSE. THE EXCAVATED MATERIAL SHALL BE USED TO BACKUP THE SHOULDER WHERE NECESSARY AS DIRECTED BY THE ENGINEER (THIS MATERIAL SHALL BE GRADED AND COMPACTED). THE EXCAVATED MATERIAL NOT REQUIRED FOR BACKUP SHALL BE DISPOSED OF WITHIN FIVE WORK DAYS, OR THE ENGINEER SHALL STOP WORK.

ITEM 605 - AGGREGATE DRAIN:

AGGREGATE DRAINS SHALL BE PLACED AT 15.24 METER INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS, STAGGERED SO THAT EACH DRAIN IS 7.62 METERS FROM THE ADJACENT DRAIN ON THE OPPOSITE SIDE, AND AT 7.62 METER INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS. AN AGGREGATE DRAIN SHALL BE PLACED AT THE LOW POINT OF EACH SAG VERTICAL CURVE.

SR 83

LEFT		RIGHT	
STA. 12+409	4.7 METER	STA. 12+402	4.7 METER
STA. 12+424	4.7 METER	STA. 12+417	4.7 METER
STA. 12+439	4.7 METER	STA. 12+432	4.7 METER
STA. 12+454	4.7 METER	STA. 12+447	4.7 METER
STA. 12+469	4.7 METER	STA. 12+462	4.7 METER
STA. 12+484	4.7 METER	STA. 12+477	4.7 METER
STA. 12+499	4.7 METER	STA. 12+492	4.7 METER
STA. 12+513	4.7 METER	STA. 12+520	4.7 METER
STA. 12+528	4.7 METER	STA. 12+550	4.7 METER
STA. 12+543	4.7 METER	STA. 12+565	4.7 METER
STA. 12+558	4.7 METER	STA. 12+580	4.7 METER
STA. 12+573	4.7 METER	STA. 12+593	4.7 METER
STA. 12+588	4.7 METER	STA. 12+613	4.7 METER
STA. 12+603	4.7 METER	STA. 12+622	4.7 METER
STA. 12+633	4.7 METER	STA. 12+631	4.7 METER
STA. 12+648	4.7 METER	STA. 12+800	4.7 METER
STA. 12+653	4.7 METER	STA. 12+815	4.7 METER
STA. 12+667	4.7 METER	STA. 12+830	4.7 METER
STA. 12+682	4.7 METER	STA. 12+845	4.7 METER
STA. 12+697	4.7 METER	STA. 12+852	4.7 METER
STA. 12+712	4.7 METER	STA. 12+877	4.7 METER
STA. 12+727	4.7 METER	STA. 12+892	4.7 METER
STA. 12+765	4.7 METER	STA. 12+907	4.7 METER
STA. 12+780	4.7 METER	STA. 12+917	4.7 METER
STA. 12+790	4.7 METER	STA. 12+942	4.7 METER
STA. 12+812	4.7 METER	STA. 12+980	4.7 METER
STA. 12+827	4.7 METER	STA. 13+010	4.7 METER
STA. 12+863	4.7 METER	STA. 13+025	4.7 METER
STA. 12+877	4.7 METER	SUB-TOTAL	131.6 METER
STA. 12+899	4.7 METER		
STA. 12+927	4.7 METER		
STA. 12+942	4.7 METER		
STA. 12+957	4.7 METER		
STA. 12+990	4.7 METER		
STA. 13+005	4.7 METER		
STA. 13+030	4.7 METER		
SUB-TOTAL	169.2 METER		

TOTAL QUANTITY CARRIED TO GENERAL SUMMARY 301 METER

metric units

CALCULATED RPT CHECKED MRD

PLAN NO.

GENERAL NOTES

LOR-83-6.727

WORKSTATION: rtrivoli
DATE: 17 NOV 1999
DESIGN FILE: I:\projects\16738\Dgn\mgnote.dgn

ITEM 407, TACK COAT:
ITEM 407, TACK COAT FOR INTERMEDIATE COURSE:

AS PER 407.05 THE APPLICATION RATES SHALL BE: 0.36 l/m^2 PRIOR TO THE LEVELING COURSE (NORMAL RESURFACING), 0.14 l/m^2 PRIOR TO THE SURFACE COURSE(NORMAL RESURFACING), 0.14 l/m^2 PRIOR TO THE INTERMEDIATE COURSE (INTERSECTION WIDENING ONLY) FOR ESTIMATING PURPOSES ONLY.THE RATE OF APPLICATION SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. A COMPLETE PAVEMENT SURFACE COVERAGE SHALL BE REQUIRED. AREAS OF TACK STRIPPED BY CONSTRUCTION EQUIPMENT OR TRAFFIC SHALL BE RECOATED PRIOR TO PLACING ASPHALT CONCRETE. ALL COST AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER LITER FOR ITEM 407, TACK COAT AND ITEM 407, TACK COAT FOR INTERMEDIATE COURSE.

ITEM 604, CASTINGS ADJUSTED TO GRADE:

ANY UNIT OF THIS ITEM MAY BE NONPERFORMED IF SO DIRECTED BY THE ENGINEER AND THE SURFACE SHALL BE FEATHERED TO MEET THE EXISTING CASTING OR INLET IN A MANNER ACCEPTABLE TO THE ENGINEER. ALL ADJUSTING RINGS SHALL HAVE THE ENGINEERS APPROVAL BEFORE USING.

UNDER ITEM 604.03, ADJUSTING TO GRADE, PARAGRAPH (A), THE CASTING TO BE ADJUSTED MAY OR MAY NOT HAVE AN EXISTING FRAME. THE WORK SHALL CONSIST OF ADJUSTING THE EXISTING CASTING OR GRATE TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR IS REMINDED TO FIELD CHECK ALL ADJUSTMENT TO GRADE ITEMS PRIOR TO BIDDING, AS NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR LABOR AND MATERIAL REQUIRED TO SATISFACTORILY ADJUST CASTINGS WITHOUT FRAMES.

ITEM 617, SHOULDER RECONDITIONING, MISC.:
COMPACTED AGGREGATE:

THIS ITEM OF WORK SHALL CONFORM TO ITEM 617 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS BOOK WITH 617.03 (MATERIALS) AND 617.06 (METHOD OF MEASUREMENT) AMMENDED BELOW.

THE MATERIAL ON THIS PROJECT SHALL BE THE BITUMINOUS ASPHALT GRINDINGS RESULTING FROM ITEM 254. THE GRINDINGS USED FOR THIS ITEM SHALL BE PLACED AND COMPACTED AS DESCRIBED IN 617.05 WITH SPECIAL CARE TO CREATE PROPER COMPACTION. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO MEET THE TYPICAL SECTIONS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER. SINCE THE BITUMINOUS ASPHALT GRINDINGS FROM THIS JOB WILL NOT BE A LARGE ENOUGH QUANTITY TO RECONDITION THE AGGREGATE SHOULDERS, THE CONTRACTOR WILL NEED TO SUPPLY THE ADDITIONAL QUANTITY FROM AN APPROVED RAP (RECYCLED ASPHALT PAVEMENT) PILE OR SUPPLY ITEM 617, COMPACTED AGGREGATE, TYPE A AS SPECIFIED IN THE SPECIFICATIONS BOOK.

THE MATERIAL ON THIS PROJECT WILL BE PAID FOR BY THE metric ton. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING THE GROSS, TARE, AND NET WEIGHT OF EACH TRUCK LOAD OF MATERIAL TO THE NEAREST 45 kg IN TRIPLICATE ON PLANT TICKET FORMS APPROVED BY THE DIRECTOR. THE CONTRACTOR SHALL PROVIDE A TARE WEIGHT FOR EACH TRUCK AT THE BEGINNING OF EACH DAY'S OPERATION. ONE COPY OF THE WEIGHT TICKET SHALL ACCOMPANY EACH LOAD DELIVERED TO THE PROJECT AND SHALL BE PRESENTED TO THE ENGINEER.

PAYMENT FOR ALL THE ABOVE SHALL BE INCLUDED IN THE PRICE BID PER metric ton OF ITEM 617, SHOULDER RECONDITIONING, MISC.: COMPACTED AGGREGATE.

MILE MARKER LOCATION:

THE LOCATION OF MILE MARKERS ON THE PLANS ARE APPROXIMATE AND A MORE PRECISE LOCATION WILL BE PROVIDED BY THE DEPARTMENT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST THIRTY (30) DAYS IN ADVANCE OF THE PLANNED DATE OF MILE MARKER INSTALLATION. THE ENGINEER WILL CONTACT THE BUREAU OF TECHNICAL SERVICES WHICH WILL LOCATE THE LONGITUDINAL POSITION OF MILE MARKERS BY MEANS OF A PAINT MARK ON THE PAVEMENT EDGE. ALTERNATE MARKS WILL NOT BE PROVIDED ON DIVIDED HIGHWAYS AND THE CONTRACTOR SHALL SET MARKERS FOR THE OPPOSITE ROADWAY ACROSS FROM THE PROVIDED MARK. ANY EXISTING DELINEATORS FALLING WITHIN 15 m OF A MILE MARKER SHALL BE REMOVED. REMOVAL OF ANY DELINEATORS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN.

SIGN REPLACEMENTS:

WITH RESPECT TO THE REPLACEMENT OF EXISTING SIGNS THE CONTRACTOR SHALL IN NO CASE REMOVE A SIGN UNLESS THE APPLICABLE REPLACEMENT CAN BE ERECTED WITHIN THE SAME WORKING DAY.

ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL:
ITEM 630 - REMOVAL OF GROUND MOUNTED SUPPORT AND DISPOSAL:

SIGNS NO. 12, 18, 19, 26, AND 31 SHALL BE REMOVED AND DISMANTLED SO THAT THERE SHALL BE NO DAMAGE TO THE EXISTING SIGN SUPPORTS. THE EXISTING SIGN SUPPORTS SHALL BE RELOCATED AS SHOWN IN THE PLANS. THE NEW SIGN (ITEM 630 - FLAT SHEET, TYPE F) SHALL BE ERECTED ON THE RELOCATED SIGN SUPPORTS. THE EXISTING SIGN SHALL BE DISPOSED OF PROPERLY.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID FOR THE APPROPRIATE ITEMS, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 201- CLEARING AND GRUBBING, AS PER PLAN:

CLEARING AND GRUBBING SHALL BE PERFORMED IN AREAS AS DIRECTED BY THE ENGINEER TO PROVIDE ADEQUATE CLEAR SIGHT DISTANCE TO SIGNS ERECTED AS PART OF THIS PLAN.

IN ADDITION TO THE REQUIREMENTS OF ITEM 201, ALL VEGETATION MECHANICALLY REMOVED BY CUTTING OR MOWING SHALL HAVE A CUT STUMP HERBICIDE TREATMENT APPLIED TO EACH INDIVIDUAL REMAINING STUMP WITHIN TWO (2) HOURS OF CUTTING. CARE SHALL BE EXERCISED TO APPLY TREATMENT ONLY TO INDIVIDUAL STUMPS SO AS NOT TO HARM OTHER VEGETATION. THE CUT STUMP TREATMENT SHALL BE GARLON 4 OR PATHFINDER II RTU APPLIED IN ACCORDANCE WITH LABEL DIRECTIONS. APPLICATORS OF THE CUT STUMP TREATMENT SHALL BE CURRENTLY LICENSED OHIO COMMERCIAL APPLICATORS IN THE APPROPRIATE CATEGORY. EVIDENCE OF VALID LICENSES SHALL BE PROVIDED TO THE ENGINEER FOR VERIFICATION.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL:

THE FOLLOWING ESTIMATED QUANTITY IS TO BE USED AS PLACED BY THE CONTRACTOR WITH THE ENGINEER'S CONCURRENCE, FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES:

ITEM 877, TEMPORARY DITCH CHECK FILTER FABRIC FENCE	38	METER
ITEM 877, TEMPORARY INLET PROTECTION FILTER FABRIC FENCE	60	METER
ITEM 877, TEMPORARY SEEDING AND MULCHING	1800	SQ M

DUST CONTROL:

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING CONTINGENCY QUANTITY HAS BEEN INCLUDED FOR DUST CONTROL PUPOSES:

ITEM 616, WATER	20	CU. METER
ITEM 616, CALCIUM CHLORIDE	1	METRIC TON

metric units

ITEM 614, BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC:

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO CONSTRUCT A TEMPORARY ASPHALT WEDGE FROM THE EXISTING PAVEMENT TO THE PLANED SURFACE AT BUTT JOINTS AND OTHER LOCATIONS THAT RESULT IN A DROP-OFF IN EXCESS OF 38mm, AS DIRECTED BY THE ENGINEER. THIS QUANTITY SHALL ALSO BE USED AT PLANED SURFACES WHERE A TEMPORARY ASPHALT WEDGE IS NEEDED AROUND CASTINGS, AS DIRECTED BY THE ENGINEER.

10 m^3 ITEM 614, BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC

ITEM 614, WORK ZONE MARKING SIGN:

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR TEMPORARY WORK ZONE MARKING SIGNS PER THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS, 614.04, AND THE APPROPRIATE PROPOSAL NOTE.

WORK ZONE MARKING SIGN: (OW-167-36) NO EDGE LINE	=	14 each	PART A
WORK ZONE MARKING SIGN: (R-33-24) DO NOT PASS	=	10 each	PART A
WORK ZONE MARKING SIGN: (R-34-24) PASS WITH CARE	=	14 each	PART A
TOTAL PART A	=	38 each	

ENVIRONMENTAL PLAN NOTE:

ENVIRONMENTAL STUDIES HAVE SHOWN THAT PETROLEUM-CONTAMINATED SOILS MAY BE ENCOUNTERED WITHIN THE EXCAVATION LIMITS FOR THE WORK DESCRIBED AS PER REFERENCE NUMBERS 25-D, 26-D, 27-D (SHEETS 21/86 AND 37/86). THE CONTRACTOR SHALL MANAGE THIS MATERIAL ACCORDING TO THE FOLLOWING NOTES. THE ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY.

IF THE EXCAVATED MATERIALS WITHIN THE AFOREMENTIONED LIMITS CANNOT BE REUSED ON SITE, THEN THIS MATERIAL SHALL BE PROPERLY TRANSPORTED AND DISPOSED OF IN A LICENSED (BY THE LOCAL HEALTH DEPARTMENT) AND PERMITTED (BY THE OHIO ENVIRONMENTAL PROTECTION AGENCY) SOLID WASTE FACILITY. IF REQUIRED BY THE SOLID WASTE FACILITY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUCTING SAMPLING AND ANALYSIS OF THE EXCAVATED MATERIAL.

THE CONTRACTOR SHALL FURNISH ALL THE LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PROPERLY HANDLE, STORE (IF NECESSARY), TEST (FOR DISPOSAL, IF APPLICABLE), TRANSPORT, AND DISPOSE OF EXCAVATED MATERIALS, INCLUDING ANY REQUIRED PERMITS, APPROVALS, OR FEES WITHIN THE LIMITS IDENTIFIED ABOVE. PAYMENT FOR THIS WORK SHALL BE MADE AT THE CONTRACT PRICE PER METRIC TON. THE BASIS FOR CONVERSION FROM CUBIC METERS TO METRIC TONS IS 2 METRIC TONS/CUBIC METER.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

690M65010 ITEM SPECIAL - WORK INVOLVING SOLID WASTE 6 Mton

RPM General Notes
Materials Supplied by the Department

All materials are to be Contractor furnished, except that the Department shall supply RPM materials in the quantities shown herein to the Contractor. Pay items for the Department supplied materials shall be indicated as "Installation Only". The quantity and type of Department supplied materials are shown on sheet 75 of this plan.

At the Pre-Construction Conference an authorization for pick up form will be furnished by the District Construction Administrator and the Contractor will be informed of the location of the Department Supplied Materials to be picked up.

For some projects having quantities of less than 20 RPMs, the contractor may pick up RPM materials at the District Offices. Quantities over 20 RPMs will be picked up at the Recycler's Warehouse or as arranged with the District. The Contractor shall pick up Department supplied RPM materials at the specified location(s) for transport to the work site or to the Contractor's storage facility. The Recycled Raised Pavement Marker (RPM) Authorization Form is to be signed by the District Construction Engineer prior to pick up of the RPMs. The Contractor shall notify the District and / or the parties listed on the authorization form in writing at least five (5) calendar days prior to pick up of the department supplied materials. The contractor shall store the RPMs without damage or contamination with foreign matter. A deduction in the amount of the actual cost to the Department shall be made for materials damaged by the Contractor or for castings received by the Contractor which were not installed and were not returned to the Department.

Return of Non-performed Raised Pavement Marker Materials Supplied by the Department

Raised Pavement Marker Materials Supplied by the Department, that are non-performed shall be carefully repacked or packed in the boxes in the same style and quantity as originally received from the Department. Casting styles shall not be mixed within any one container. The Contractor shall clearly mark on the outside of each container, the color of the prismatic retro-reflector, the style of casting. Boxes shall be placed on skids or pallets in the same style (Low Profile or Conventional, reflectorised or non reflectorised) and no more than 420 RPMs (or 21 Boxes) on one skid.

Only use the boxes supplied by the Raised Pavement Marker Recycler. Boxes must be marked with the recycler's part or catalog number and the project number. The recycler's catalog or part numbers may be obtained from the Office of Traffic Engineering in Columbus, Ohio or from the recycler. Boxes not marked with the proper recycler's catalog or part numbers, and the department's project number will not be accepted at the recycler's warehouse Non Performed Materials will be returned to the location as specified by the District Construction Engineer within 30 Days of the completion of the project.

The above work including all labor, equipment and material needed to perform the work, shall be considered incidental to the respective pay item.

If the department has to repackage the RPMs correctly, the Contractor will be assessed the actual cost for repackaging the Materials by the Department's Forces.

Loading of Materials Supplied by the Department at the Recycler's Warehouse

Trucks shall have a loading height of 48 inches and be able to back up flush to the loading dock.

Trucks shall not have any obstructions or protrusions that prevent the loading by a standard forklift or lift truck. Semi trucks or 20 foot commercial trucks are the most appropriate trucks for loads in excess of 4 pallets (one pallet = 21 boxes = 2100 lbs).

Stake body trucks are appropriate to load less load and the load can be safely secured for transport by chaining or strapping down as needed.

Pickup trucks are appropriate for loads of approximately one pallet, provided the pickup truck is rated for the load and the load can be safely secured for transport.

Dump trucks, tilt bed trucks, and non commercial moving vans will not be loaded

The warehouse supervisor will refuse to load any truck that is unsafe to load or unsuitable for the load being placed on the truck.

BRIDGE LOCATION MARKER SIGN

THE BRIDGE LOCATION MARKER SIGN INDICATES THE COUNTY, THE ROUTE, AND THE STAIGHT LINE MILEAGE OF THE STRUCTURE. THE CONTRACTOR SHALL REMOVE THE EXISTING BRIDGE LOCATION MARKER SIGNS AND HARDWARE FOR STORAGE. WHEN APPROPRIATE, THE CONTRACTOR SHALL REUSE AND REERECT THE SIGNS IN KIND AS APPROVED BY THE ENGINEER. IF THERE ARE ANY QUESTIONS ON THE LOCATION, PLEASE CONTACT THE DISTRICT BRIDGE ENGINEER.

ALL COSTS TO PROVIDE A COMPLETE INSTALLATION, INCLUDING THE REMOVAL, STORAGE, AND ANY ADDITIONAL HARDWARE, SHALL BE INCLUDED IN ITEM 630, EACH, SIGNING, MISC.: REMOVE AND REERECT BRIDGE LOCATION MARKER.

COMPLETION DATES

ALL OF THE RESURFACING WORK AND ASPHALT PAVEMENT WORK SHALL BE COMPLETED BY OCTOBER 31, 2000. THIS SHALL BE CONSIDERED AN INTERIM COMPLETION DATE AND LIQUIDATED DAMAGES AS PER CMS 108.07 SHALL APPLY. ANY REMAINING WORK SUCH AS THE SIGNAL UPGRADE SHALL BE COMPLETED BY THE COMPLETION DATE OF NOVEMBER 30, 2000.

ITEM SPECIAL, MAILBOX SUPPORT

THIS ITEM OF WORK SHALL CONSIST OF THE REMOVAL OF EXISTING NON-STANDARD MAILBOX SUPPORTS AND FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED HARDWARE IN ACCORDANCE WITH THE DETAILS SHOWN, AND ATTACHING AN OWNER SUPPLIED MAILBOX, AT LOCATIONS DETERMINED BY THE ENGINEER.

IN ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE BOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL SUPPLY ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS AND WASHERS) AS NECESSARY TO ACCOMODATE THE COMPLETE INSTALLATION. SUPPORT HARDWARE SHALL ACCOMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO MAILBOXES MAY BE MOUNTED ON A SINGLE POST. [HARDWARE SHALL BE COMMERCIAL GRADE GALVANIZED STEEL]

WOOD POSTS SHALL BE NOMINAL 100 mm x 100 mm (S4S) OR 115 mm DIAMETER ROUND, AND CONFORM TO 710.14.
STEEL POSTS SHALL BE NOMINAL PIPE SIZE 51 mm I.D., AND CONFORM TO AASHTO M 181.

POSTS SHALL BE SET AS PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WORK WITH THE LOCAL POST MASTER AND NOTIFYING THE PROPERTY OWNERS PRIOR TO WORK.

GROUP MAILBOX SUPPORTS SHALL BE PLACED ON 1.0m CENTERS AND THE TURNOUT LENGTHENED TO ACCOMODATE THE GROUPING.

WHERE GUARDRAIL EXISTS, MAILBOXES AND THEIR SUPPORTS SHALL BE PLACED BEHIND THE GUARDRAIL. SUPPORTS MUST STILL MEET THE BREAKAWAY REQUIREMENTS LISTED ABOVE.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DESCRIBED ABOVE.

ITEM SPECIAL-MAILBOX SUPPORT SYSTEM, SINGLE
PART A = 18 EACH

ITEM SPECIAL-MAILBOX SUPPORT SYSTEM, DOUBLE
PART A = 4 EACH

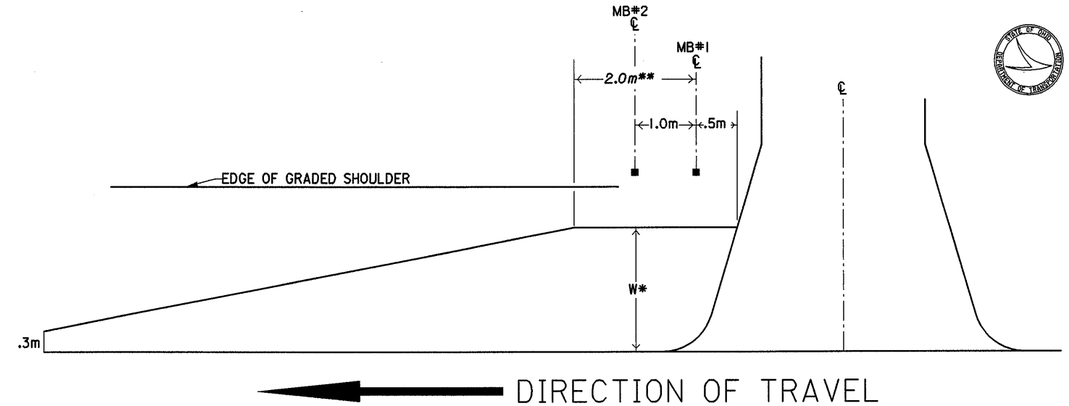
MAILBOXES

EXISTING AGGREGATE MAILBOX APPROACHES SHALL BE PAVED WITH 25mm OF 448 INTERMEDIATE COURSE AND 38mm OF 446 SURFACE COURSE. THEY SHALL CONFORM AS MUCH AS PRACTICAL TO STANDARD DRAWING BP 4.1M OR AS DIRECTED BY THE ENGINEER.

GRADING SHALL BE PERFORMED IN THESE AREAS TO OBTAIN A BASE WHICH WILL ALLOW THE FINISHED GRADE TO BE FLUSH WITH ADJACENT PAVEMENT. A QUANTITY OF ITEM 617 SHOULDER RECONDITIONING, MISC.: COMPACTED AGGREGATE HAS BEEN PROVIDED FOR AREAS WHERE THE SHOULDER IS LOW PRIOR TO GRADING AND/OR LOW AREAS CAUSED BY THE REMOVAL OF UNSUITABLE MATERIAL. QUANTITIES TO PERFORM THIS WORK HAVE BEEN INCLUDED IN THE GENERAL SUMMARY AND ARE ESTIMATED AS FOLLOWS.

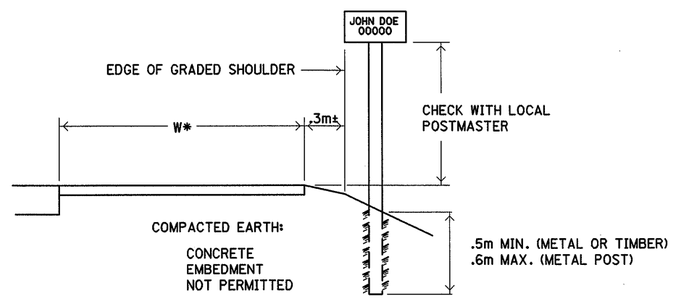
ITEM 203, GRADING MAILBOX APPROACHES:
PART A = 18 EACH

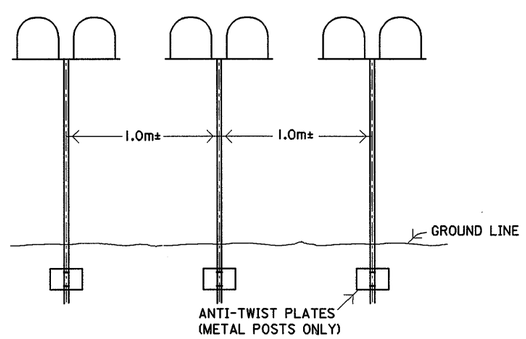
ITEM 617, SHOULDER RECONDITIONING, MISC.: COMPACTED AGGREGATE
27 metric ton



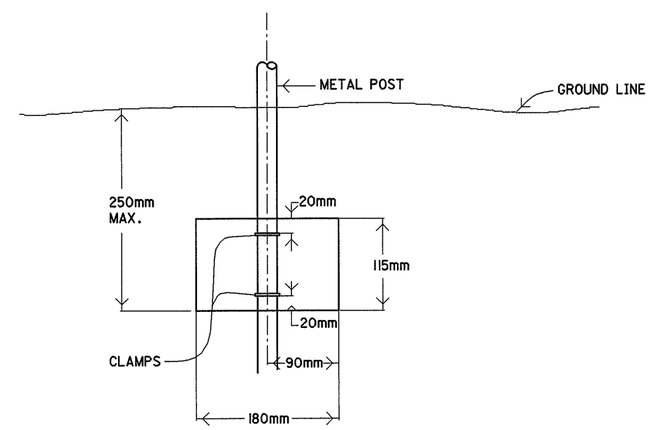
* WHERE MAILBOX POSTS ARE BEHIND GUARDRAIL, TURNOUT SHALL EXTEND TO FACE OF GUARDRAIL. WHERE NO GUARDRAIL IS REQUIRED, TURNOUT WIDTH SHALL BE 1.8m MINIMUM, EXCEPT WHERE FIELD CONDITIONS WILL NOT PERMIT.

** ADD 1.0m FOR EACH ADDITIONAL MAILBOX





GROUP MAILBOX INSTALLATION



ANTI-TWIST PLATE

metric units

calculated RPT
checked

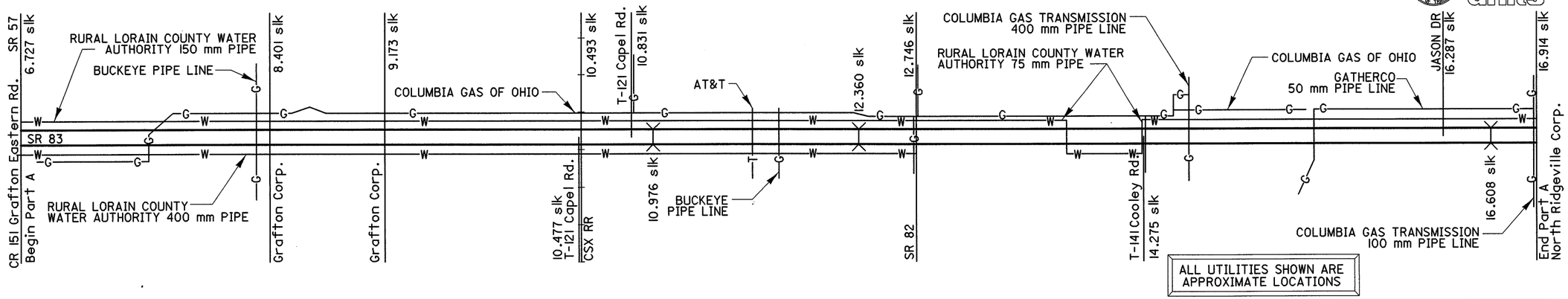
PLAN NO.

MAILBOX FACILITIES

LOR-83-6.727

7
86

DESIGN FILE: i:\projects\16738\dgn\mailbox.dgn WORKSTATION: rtrivoli DATE: 30 DEC 98



* SEE TYPICALS ON "SHOULDER DATA" SHEET ** 0 mm MINIMUM

PAVEMENT DATA

USE BUTT JOINTS THROUGHOUT PROJECT

PART	ROUTE	LOG POINT TO LOG POINT Straight Line kilometer	LENGTH kilometer	LENGTH meter	WIDTH METER AVG.	* TYPICAL	EXISTING TYPE PAVEMENT	PAVEMENT AREA square meter	407 TACK COAT @ 0.36 L/m² liter	448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, PG 64-22 THICK AVG. mm**	448 m³	446 ASPHALT CONCRETE SURFACE COURSE, TYPE IH THICK AVG. mm	446 m³	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.14 L/m² liter	254 PAVEMENT PLANING, BITUMINOUS m²			604 MONUMENT BOX ADJUSTED TO GRADE each	
A	SR 83	6.727-6.854	0.127	127	8.84	-	---	---	0	0		0							
		6.854-7.693	0.839	839	8.84	2	404	7417	2670	0		38	282	0	101				
		7.693-7.821	0.128	128	8.84	1	404	1132	408	25	28	38	43	158					
		7.821-8.004	0.183	183	8.84	2	404	1618	582	0		38	61	0					
		8.004-8.069	0.065	65	8.84	1	404	576	207	25	14	38	22	81					
		8.069-8.446	0.377	377	8.84	2	404	3333	1200	0		38	127	0					
		8.446-8.630	0.184	184	8.84	1	404	1627	586	25	41	38	62	228					
		8.630-9.185	0.555	555	8.84	2	404	4906	1766	0		38	186	0					
		9.185-9.608	0.423	423	9.29	2	404	3930	1415	0		38	149	0					
		9.608-10.207	0.599	599	8.53	1	404	5109	1839	25	128	38	194	715					
		10.207-10.387	0.180	180	8.53	2	404	1535	553	0		38	58	0					
		10.387-10.493	0.106	106	8.53	1	404	904	325	25	23	38	34	127					
		10.493-10.617	0.124	124	8.53	1	404	1058	381	25	26	38	40	148					
		10.617-10.819	0.202	202	8.53	2	404	1723	620	0		38	65	0					
		10.819-10.926	0.107	107	8.53	1	404	913	329	25	23	38	35	128					
		10.926-11.013	0.087	87	8.53	2	404	742	267	0		38	28	0					
		11.013-11.120	0.107	107	8.53	1	404	913	329	25	23	38	35	128					
		11.120-11.984	0.864	864	8.53	2	404	7370	2653	0		38	280	0					
		11.984-12.400	0.416	416	8.53	1	404	3549	1278	25	89	38	135	496					
		12.400-13.100	0.700	700	SEE DETAILS IN PLAN FOR INTERSECTION WIDENING PAVEMENT DATA AND ADDITIONAL WORK.															
		13.100-13.508	0.408	408	8.68	1	404	3615	1301	25	90	38	137	506					
		13.508-16.914	3.406	3406	8.84	1	404	30109	10839	25	753	38	1144	4215	169				
						EXTRA AREA FOR MB, INTERS., & DRIVES		475	171	25	12			67	-				
		TOTAL	10.187	10187				82554	29719		1250		3117	6997	270				

metric units

calculated CMK checked RPT

PLAN NO.

PAVEMENT DATA

LOR-83-6.727

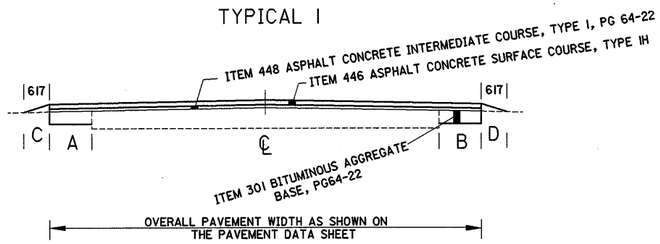
8
86

DATE: 20 JAN 99

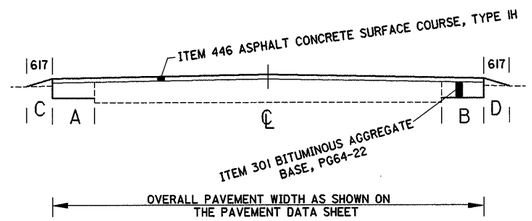
WORKSTATION: rtrivoli

DESIGN FILE: I:\projects\16738\Dgn\pavdata.dgn

TYPICAL 1



TYPICAL 2



SHOULDER DATA

PART	ROUTE	LOG POINT TO LOG POINT Straight Line kilometer	LENGTH kilometer	LENGTH meter	TYPICAL	PAVED SHOULDER PROPOSED WIDTH m (avg.) A	PAVED SHOULDER PROPOSED WIDTH m (avg.) B	PAVED SHOULDER AREA m^2	203 LINEAR GRADING DEPTH mm (avg.)	203 LINEAR GRADING m	301 BITUMINOUS AGGREGATE BASE, PG 64-22 AVG. THICK mm	301 BITUMINOUS AGGREGATE BASE, PG 64-22 m^3		AGGREGATE SHOULDER PROPOSED WIDTH m (avg.) C	AGGREGATE SHOULDER PROPOSED WIDTH m (avg.) D	AGGR. SHOULDER AREA m^2	617 SHOULDER PREPARATION m^2	617 SHOULDER RECONDITIONING MISC.: COMPACTED AGGREGATE 1.78 metric ton / m^3 50mm AVG. THICKNESS metric ton		408 BITUMINOUS PRIME COAT @ 1.8 L/m^2 liter	
A	SR 83	6.727-6.854	0.127	127	-	0	0	0						0	0						
		6.854-7.693	0.839	839	2	0.61	0.61	1024	152	1678	152	156		0.30	0.30	503	503	45		905	
		7.693-7.821	0.128	128	1	0.61	0.61	156	152	256	152	24		0.30	0.30	77	77	7		139	
		7.821-8.004	0.183	183	2	0.61	0.61	223	152	366	152	34		0.30	0.30	110	110	10		198	
		8.004-8.069	0.065	65	1	0.61	0.61	79	152	130	152	12		0.30	0.30	39	39	3		70	
		8.069-8.446	0.377	377	2	0.61	0.61	460	152	754	152	70		0.30	0.30	226	226	20		407	
		8.446-8.630	0.184	184	1	0.61	0.61	224	152	368	152	34		0.30	0.30	110	110	10		198	
		8.630-9.185	0.555	555	2	0.61	0.61	677	152	1110	152	103		0.30	0.30	333	333	30		599	
		9.185-9.608	0.423	423	2	0.61	0.61	516	152	846	152	78		0.30	0.30	254	254	23		457	
		9.608-10.207	0.599	599	1	0.61	0.61	731	152	1198	152	111		0.30	0.30	359	359	32		646	
		10.207-10.387	0.180	180	2	0.61	0.61	220	152	360	152	33		0.30	0.30	108	108	10		194	
		10.387-10.493	0.106	106	1	0.61	0.61	129	152	212	152	20		0.30	0.30	64	64	6		115	
		10.493-10.617	0.124	124	1	0.61	0.61	151	152	248	152	23		0.30	0.30	74	74	7		133	
		10.617-10.819	0.202	202	2	0.61	0.61	246	152	404	152	37		0.30	0.30	121	121	11		218	
		10.819-10.926	0.107	107	1	0.61	0.61	131	152	214	152	20		0.30	0.30	64	64	6		115	
		10.926-11.013	0.087	87	2	0.61	0.61	106	152	174	152	16		0.30	0.30	52	52	5		94	
		11.013-11.120	0.107	107	1	0.61	0.61	131	152	214	152	20		0.30	0.30	64	64	6		115	
		11.120-11.984	0.864	864	2	0.61	0.61	1054	152	1728	152	160		0.30	0.30	518	518	46		932	
		11.984-12.400	0.416	416	1	0.61	0.61	508	152	832	152	77		0.30	0.30	250	250	22		450	
		12.400-13.100	0.700	700	SEE DETAILS IN PLAN FOR INTERSECTION WIDENING SHOULDER DATA AND ADDITIONAL WORK.																
		13.100-13.508	0.408	408	1	0.61	0.61	498	152	816	152	76		0.30	0.30	245	245	22		441	
		13.508-16.914	3.406	3406	1	0.61	0.61	4155	152	6812	152	632		0.30	0.30	2044	2044	182		3679	
															EXTRA AREA FOR UNPAVED DRIVES		625	56			
		TOTAL	10.187	10187				11419		18720		1736					6240	559		10105	

metric units

calculated RPT
checked MK

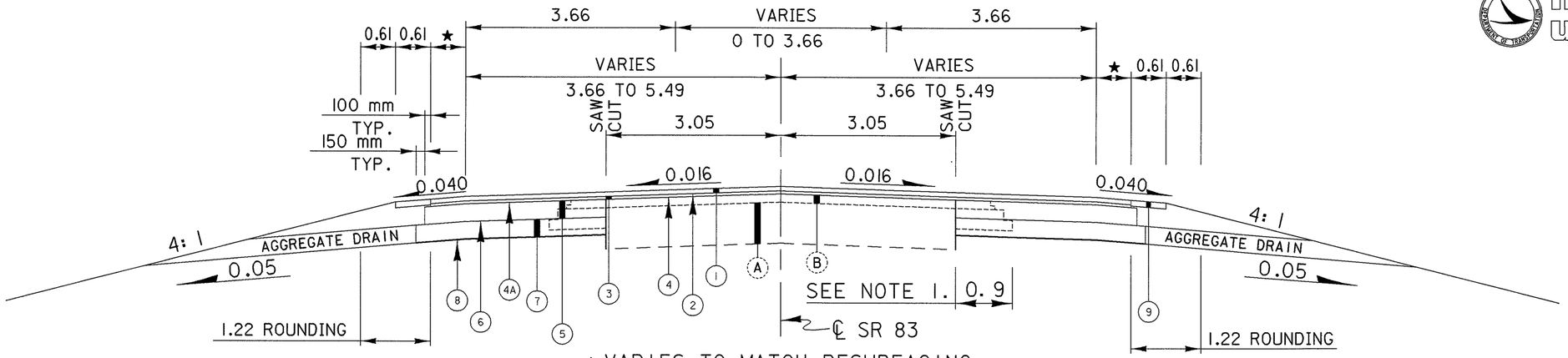
PLAN NO.

SHOULDER DATA

LOR-83-6.727

9
86

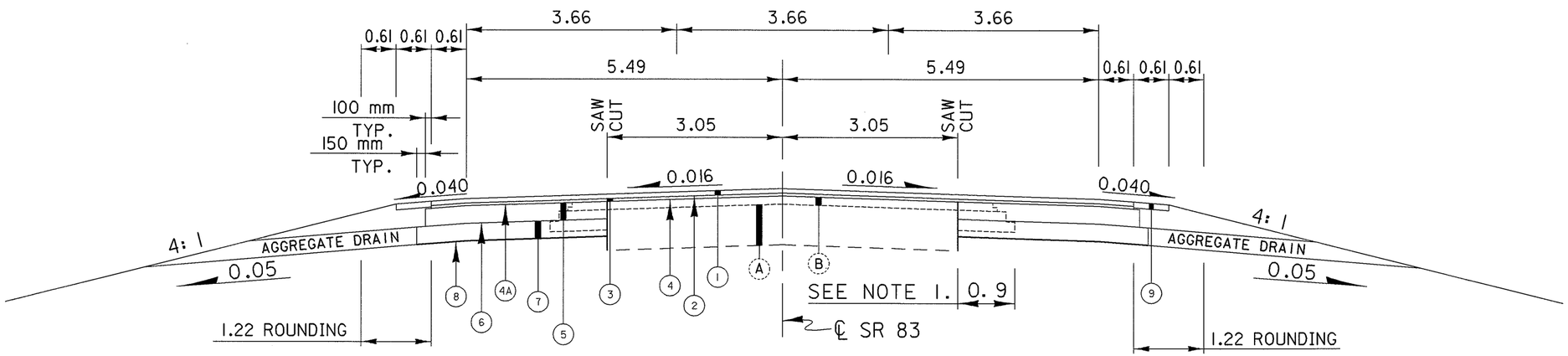
DESIGN FILE: i:\projects\16738\dgn\pavdata.dgn WORKSTATION: ck/ein DATE: 22 DEC 1998



★ VARIES TO MATCH RESURFACING

STA. 12+400.00 TO STA. 12+595.00

MATCH RESURFACING



STA. 12+595.00 TO STA. 12+678.00

(A) 350 mm - EXISTING MACADAM PAVEMENT
(B) 70 mm - EXISTING ASPHALT PAVEMENT
(1) 38 mm - ITEM 446, ASPHALT CONCRETE SURFACE COURSE, TYPE IH
(2) ITEM 407, TACK COAT FOR INTERMEDIATE COURSE @ 0.14 L/m^2
(3) 25 mm - ITEM 448, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22
(4) ITEM 407 - TACK COAT @ 0.36 L/m^2
(4A) ITEM 407 - TACK COAT @ 0.14 L/m^2 (WIDENED AREA ONLY)
(5) 150 mm - ITEM 301, BITUMINOUS AGGREGATE BASE, PG64-22
(6) ITEM 408 - PRIME COAT @ 1.8 L/m^2
(7) 150 mm - ITEM 304, AGGREGATE BASE
(8) ITEM 203 - SUBGRADE COMPACTION
(9) 50 mm - ITEM 617 - SHOULDER RECONDITIONING MISC., COMPACTED AGGREGATE

NOTES:

1. EXISTING PAVEMENT TO BE SALVAGED. THE PAVEMENT EDGES SHALL BE TRIMMED BACK APPROXIMATELY 0.9 meters. PAVEMENT WIDENING QUANTITIES ARE BASED ON 6.10 meters OF SALVAGABLE PAVEMENT.
2. ALL CONSTRUCTION JOINTS SHALL BE PAINTED WITH BITUMINOUS MATERIAL (SIDES) AT AN APPLICATION RATE OF 0.36 L/m^2 .

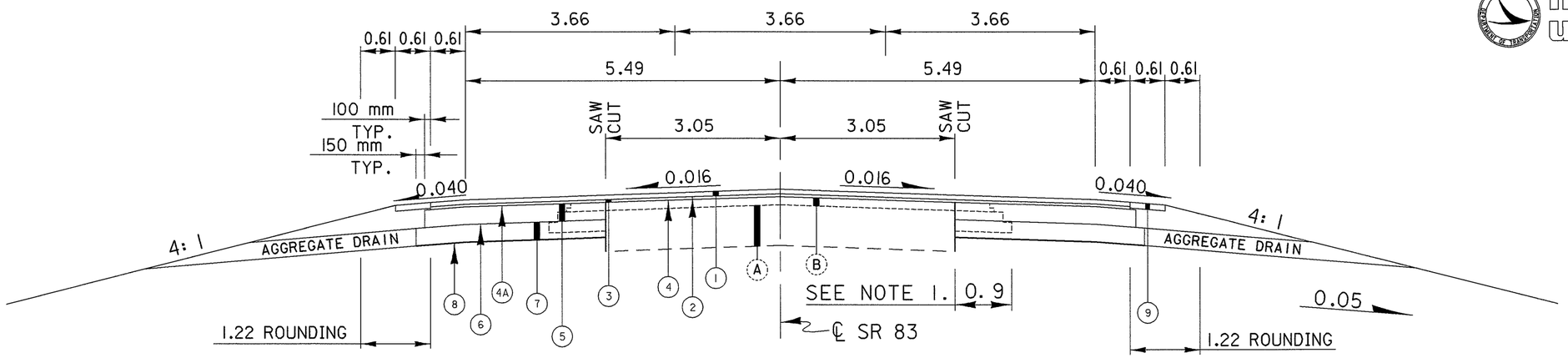
metric units

TYPICAL SECTIONS S.R. 83

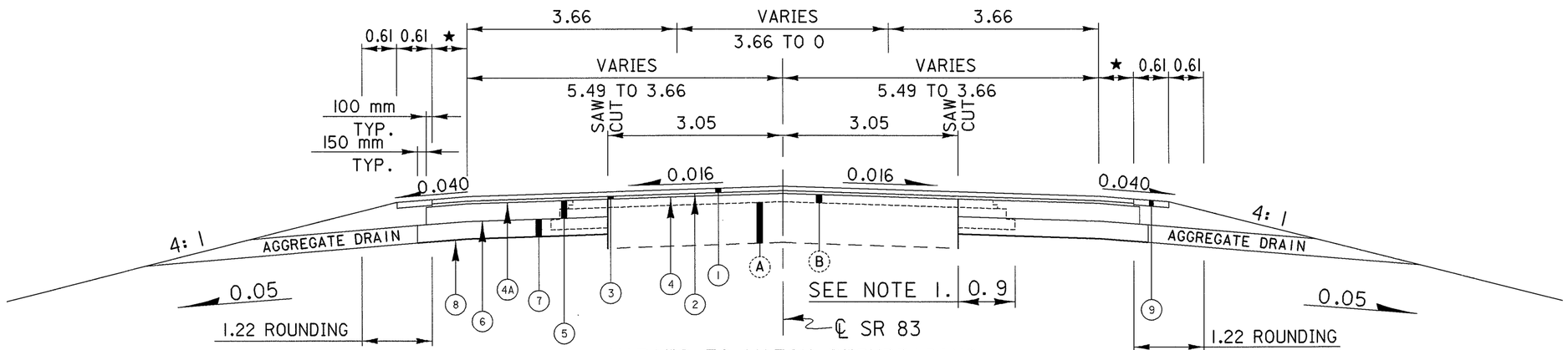
LOR-83-6.727

10
86

DESIGN FILE: i:\projects\16738\Dgn\typsec.dgn
WORKSTATION: rtrivoli DATE: 30 DEC 98



STA. 12+802.00 TO STA. 12+898.00



★ VARIES TO MATCH RESURFACING

STA. 12+898.88 TO STA. 13+100.00
MATCH RESURFACING

(A) 350 mm - EXISTING MACADAM PAVEMENT
(B) 70 mm - EXISTING ASPHALT PAVEMENT
(1) 38 mm - ITEM 446, ASPHALT CONCRETE SURFACE COURSE, TYPE IH
(2) ITEM 407, TACK COAT FOR INTERMEDIATE COURSE @ 0.14 L/m^2
(3) 25 mm - ITEM 448, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22
(4) ITEM 407 - TACK COAT @ 0.36 L/m^2
(4A) ITEM 407 - TACK COAT @ 0.14 L/m^2 (WIDENED AREA ONLY)
(5) 150 mm - ITEM 301, BITUMINOUS AGGREGATE BASE, PG64-22
(6) ITEM 408 - PRIME COAT @ 1.8 L/m^2
(7) 150 mm - ITEM 304, AGGREGATE BASE
(8) ITEM 203 - SUBGRADE COMPACTION
(9) 50 mm - ITEM 617 - SHOULDER RECONDITIONING MISC., COMPACTED AGGREGATE

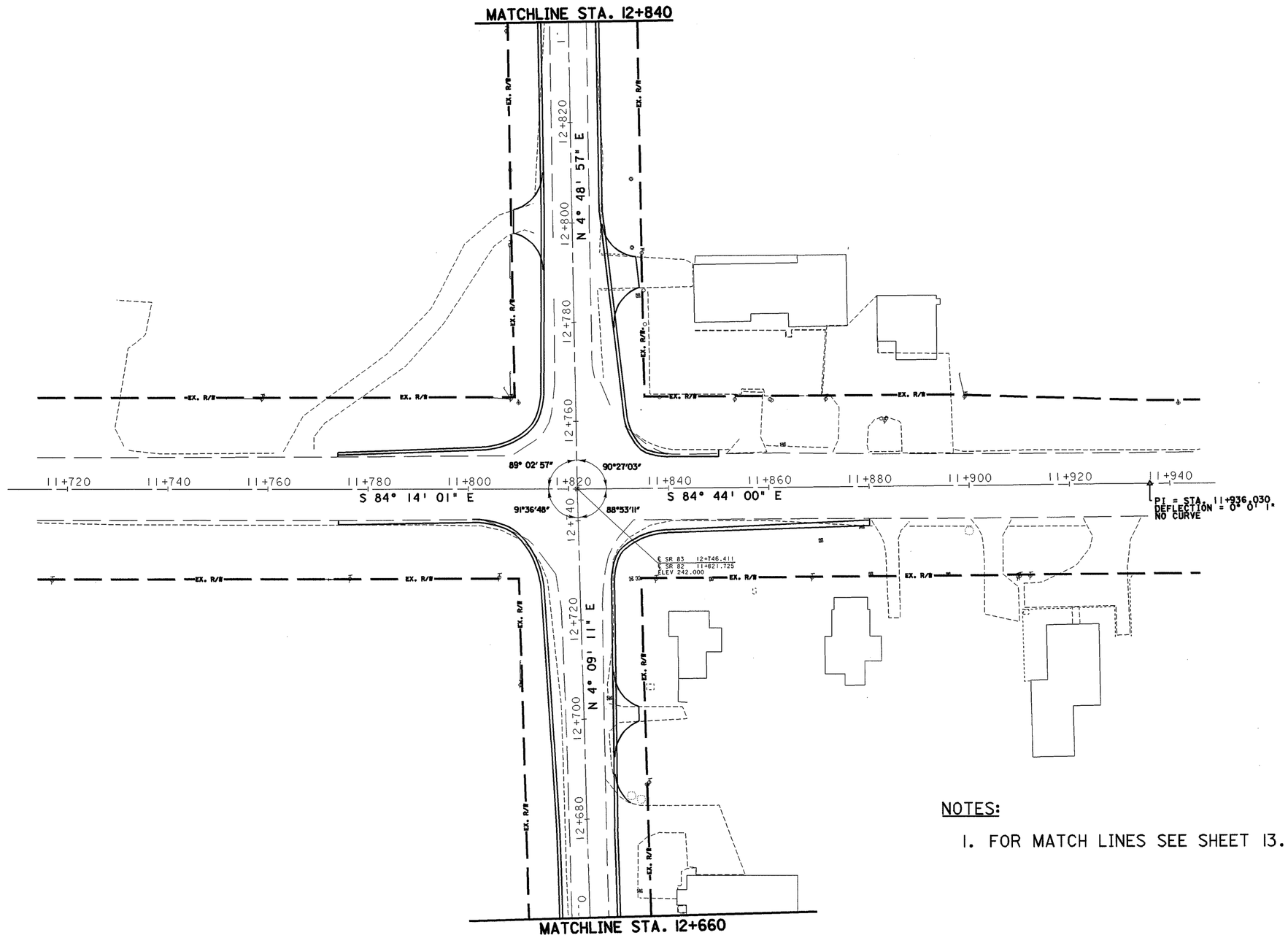
NOTES:

1. EXISTING PAVEMENT TO BE SALVAGED. THE PAVEMENT EDGES SHALL BE TRIMMED BACK APPROXIMATELY 0.9 meters. PAVEMENT WIDENING QUANTITIES ARE BASED ON 6.10 meters OF SALVAGABLE PAVEMENT.
2. ALL CONSTRUCTION JOINTS SHALL BE PAINTED WITH BITUMINOUS MATERIAL (SIDES) AT AN APPLICATION RATE OF 0.36 L/m^2 .

TYPICAL SECTIONS S.R. 83

LOR-83-6.727

DESIGN FILE: I:\projects\16738\Dgn\typsec.dgn
WORKSTATION: rtrivoli DATE: 30 DEC 98



NOTES:

1. FOR MATCH LINES SEE SHEET 13.

metric units

HORIZONTAL SCALE IN METERS

0 4 8 16

CALCULATED RPT

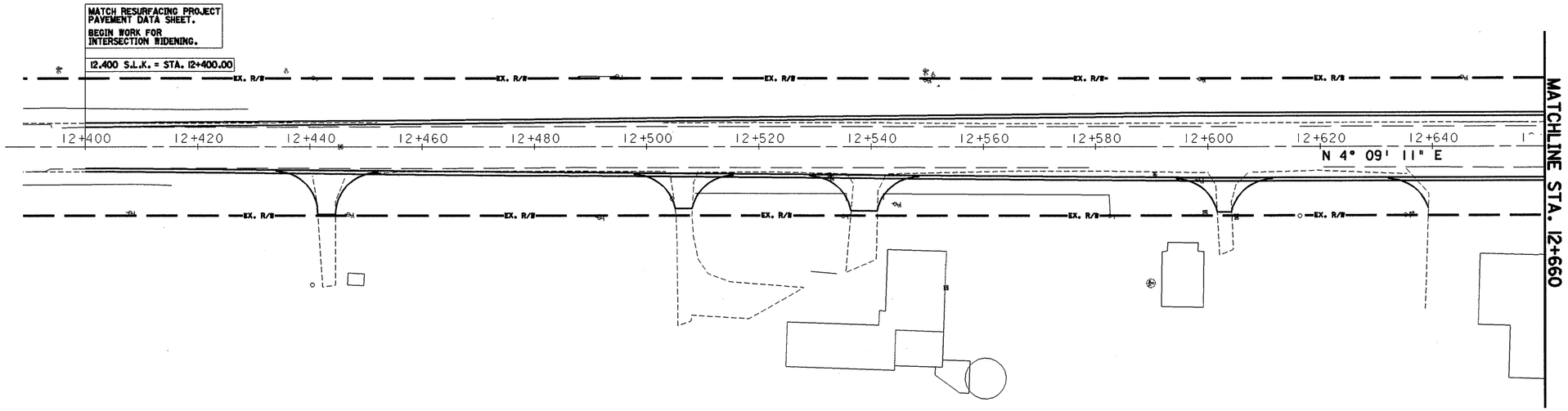
CHECKED

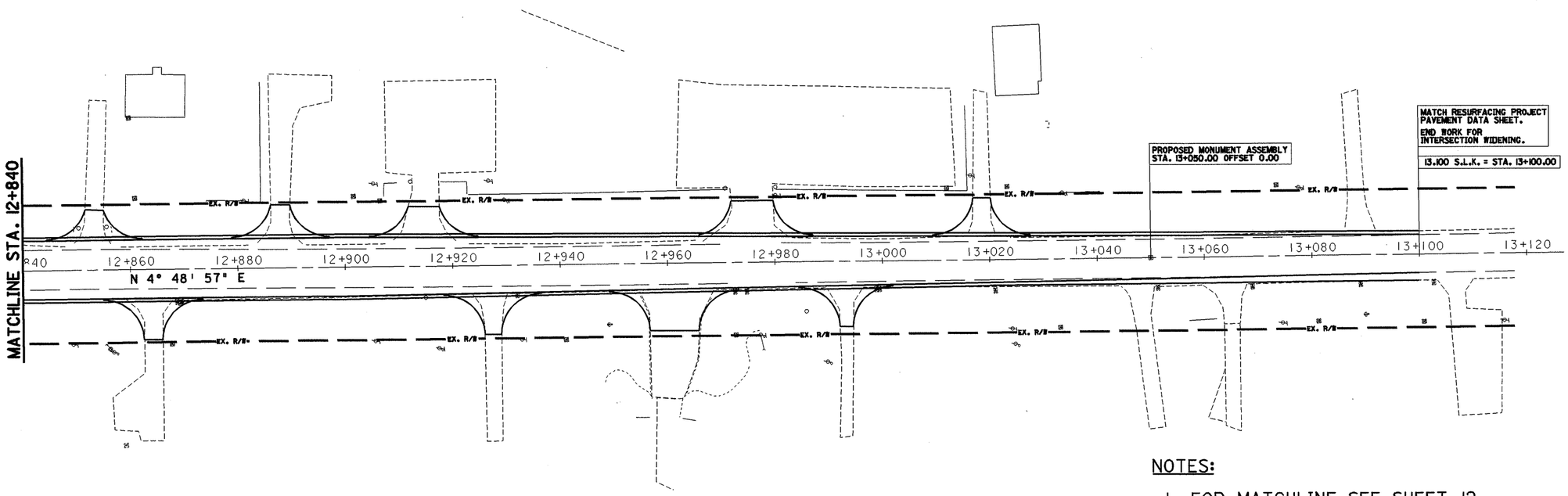
SCHEMATIC PLAN

LOR-83-6.727

12
83

DESIGN FILE: I:\projects\16738\dgn\schem.dgn
WORKSTATION: rtrivoli DATE: 22-DEC-1998





NOTES:

1. FOR MATCHLINE SEE SHEET 12.

metric units

HORIZONTAL SCALE IN METERS

CALCULATED PPT

CHECKED

SCHEMATIC PLAN

LOR-83-6.727

DESIGN FILE: I:\projects\16738\dgn\schem.dgn
WORKSTATION: rtrivoli DATE: 22-DEC-1998

ITEM 203 - EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION

SR 83 CROSS SECTIONS
Sta. 12+380 to Sta. 12+420 Volume = 31 CU. M.
Sta. 12+440 to Sta. 12+500 Volume = 210 CU. M.
Sta. 12+520 to Sta. 12+580 Volume = 164 CU. M.
Sta. 12+600 to Sta. 12+650 Volume = 137 CU. M.
Sta. 12+660 to Sta. 12+700 Volume = 73 CU. M.
Sta. 12+720 to Sta. 12+780 Volume = 73 CU. M.
Sta. 12+800 to Sta. 12+860 Volume = 163 CU. M.
Sta. 12+880 to Sta. 12+940 Volume = 192 CU. M.
Sta. 12+960 to Sta. 13+020 Volume = 98 CU. M.
Sta. 13+040 to Sta. 13+100 Volume = 69 CU. M.

SR 82 CROSS SECTIONS
Sta. 11+720 to Sta. 11+772 Volume = 10 CU. M.
Sta. 11+780 to Sta. 11+810 Volume = 27 CU. M.
Sta. 11+840 to Sta. 11+920 Volume = 39 CU. M.

TOTAL ITEM 203 - EXCAVATION NOT ENCLUDING EMBANKMENT CONSTRUCTION = 1286 CU. M.

ITEM 203 - EMBANKMENT

SR 83 CROSS SECTIONS
Sta. 12+380 to Sta. 12+420 Volume = 10 CU. M.
Sta. 12+440 to Sta. 12+500 Volume = 83 CU. M.
Sta. 12+520 to Sta. 12+580 Volume = 156 CU. M.
Sta. 12+600 to Sta. 12+650 Volume = 150 CU. M.
Sta. 12+660 to Sta. 12+700 Volume = 175 CU. M.
Sta. 12+720 to Sta. 12+780 Volume = 185 CU. M.
Sta. 12+800 to Sta. 12+860 Volume = 175 CU. M.
Sta. 12+880 to Sta. 12+940 Volume = 162 CU. M.
Sta. 12+960 to Sta. 13+020 Volume = 134 CU. M.
Sta. 13+040 to Sta. 13+100 Volume = 46 CU. M.

SR 82 CROSS SECTIONS
Sta. 11+720 to Sta. 11+772 Volume = 93 CU. M.
Sta. 11+780 to Sta. 11+810 Volume = 114 CU. M.
Sta. 11+840 to Sta. 11+920 Volume = 25 CU. M.

TOTAL ITEM 203 - EMBANKMENT = 1508 CU. M.

ITEM 203 - SUBGRADE COMPACTION

Sta. 12+400 SR 83 Lt. to Sta. 11+774 SR 82 Rt. (SW CORNER)
Cadd Measured Area = 1187.1 SQ. M.

Sta. 12+400 SR 83 Rt. to Sta. 11+880 SR 82 Rt. (SE)
Cadd Measured Area = 1323.9 SQ. M.

Sta. 11+774 SR 82 Lt. to 13+100 SR 83 Lt. (NW)
Cadd Measured Area = 1286.7 SQ. M.

Sta. 11+840 SR 82 Lt. to 13+100 SR 83 Rt. (NE)
Cadd Measured Area = 1174.6 SQ. M.

TOTAL ITEM 203 = 4972 SQ. M.

ITEM 301 - BITUMINOUS AGGREGATE BASE, PG64-22

Sta. 12+400 SR 83 Lt. to Sta. 11+774 SR 82 Rt. (SW CORNER)
Cadd Measured Area = 960.4 SQ. M.
Volume = 960.4 SQ. M. * 0.150 M = 144.1 CU. M.

Sta. 12+400 SR 83 Rt. to Sta. 11+880 SR 82 Rt. (SE)
Cadd Measured Area = 1100.2 SQ. M.
Volume = 1100.2 SQ. M. * 0.150 M = 165.0 CU. M.

Sta. 11+774 SR 82 Lt. to 13+100 SR 83 Lt. (NW)
Cadd Measured Area = 1052.7 SQ. M.
Volume = 1052.7 SQ. M. * 0.150 M = 157.9 CU. M.

Sta. 11+840 SR 82 Lt. to 13+100 SR 83 Rt. (NE)
Cadd Measured Area = 1001.5 SQ. M.
Volume = 1001.5 SQ. M. * 0.150 M = 150.2 CU. M.

TOTAL ITEM 301 = 617 CU. M.

ITEM 304 - AGGREGATE BASE

Sta. 12+400 SR 83 Lt. to Sta. 11+774 SR 82 Rt. (SW CORNER)
Cadd Measured Area = 1014.2 SQ. M.
Volume = 1014.2 SQ. M. * 0.150 M = 152.1 CU. M.

Sta. 12+400 SR 83 Rt. to Sta. 11+880 SR 82 Rt. (SE)
Cadd Measured Area = 1150.7 SQ. M.
Volume = 1150.7 SQ. M. * 0.150 M = 172.6 CU. M.

Sta. 11+774 SR 82 Lt. to 13+100 SR 83 Lt. (NW)
Cadd Measured Area = 1111.5 SQ. M.
Volume = 1111.5 SQ. M. * 0.150 M = 166.7 CU. M.

Sta. 11+840 SR 82 Lt. to 13+100 SR 83 Rt. (NE)
Cadd Measured Area = 1053.9 SQ. M.
Volume = 1053.9 SQ. M. * 0.150 M = 158.1 CU. M.

TOTAL ITEM 301 = 650 CU. M.

ITEM 407 - TACK COAT

APPLIED AT 0.36 L/M ^{2}

SR 83 Sta. 12+400 to Sta. 12+730
Cadd Measured Area = 2030.3 SQ. M.
(2030.3) (.36) = 730.9 L.

SR 83 Sta. 12+760 to Sta. 13+100
Cadd Measured Area = 2089.9 SQ. M.
(2089.9) (.36) = 752.4 L.

SR 82 Sta. 11+774 to Sta. 11+800
Cadd Measured Area = 319.6 SQ. M.
(319.6) (.36) = 115.1 L.

SR 82 Sta. 11+840 to Sta. 11+880
Cadd Measured Area = 494.2 SQ. M.
(494.2) (.36) = 177.9 L.

INTERSECTION
SR 82 Sta. 11+800 to Sta. 11+840
SR 83 Sta. 12+730 to Sta. 12+760
Cadd Measured Area = 766.6
(766.6) (.36) = 276.0 L.

SUB-TOTAL ITEM 407 = 2052.3 L (0.36 L/M^2)

APPLIED AT 0.14 L/M ^{2} (WIDENED AREA ONLY)

Sta. 12+400 SR 83 Lt. to Sta. 11+744 SR 82 Rt. (SW CORNER)
Cadd Measured Area = 960.4 SQ. M.
(960.4) (.14) = 134.5 L.

Sta. 12+400 SR 83 Rt. to Sta. 11+880 SR 82 Rt. (SE)
Cadd Measured Area = 1100.2 SQ. M.
(1100.2) (.14) = 154.0 L.

Sta. 11+744 SR 82 Lt. to Sta. 13+100 SR 83 Lt. (NW)
Cadd Measured Area = 1052.7 SQ. M.
(1052.7) (.14) = 147.4 L.

Sta. 11+840 SR 82 Lt. to Sta. 13+100 SR 83 Rt. (NE)
Cadd Measured Area = 1001.5 SQ. M.
(1001.5) (.14) = 140.2 L.

SUB-TOTAL ITEM 407 = 576.1 L (0.14 L/M^2)

TOTAL ITEM 407 = 2628 L

CALCULATED CmK CHECKED

CALCULATIONS

LOR-83-6.727

DESIGN FILE: h:\projects\16738\Dgn\CALC.DGN
WORKSTATION: rtrivoli DATE: 30 DEC 98

ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE

SR 83 Sta. 12+400 to Sta. 12+730
Cadd Measured Area = 3739.5 SQ. M.
(3739.5) (.14) = 523.5 L.

SR 83 Sta. 12+760 to Sta. 13+100
Cadd Measured Area = 3953.4 SQ. M.
(3953.4) (.14) = 553.5 L.

SR 82 Sta. 11+774 to Sta. 11+800
Cadd Measured Area = 383.0 SQ. M.
(383.0) (.14) = 53.6 L.

SR 82 Sta. 11+840 to Sta. 11+880
Cadd Measured Area = 608.6 SQ. M.
(608.6) (.14) = 85.2 L.

INTERSECTION
SR 82 Sta. 11+800 to Sta. 11+840
SR 83 Sta. 12+730 to Sta. 12+760
Cadd Measured Area = 941.0
(941.0) (.14) = 131.7 L.

TOTAL ITEM 407 = 1348 L.

ITEM 408 - BITUMINOUS PRIME COAT

SW CORNER OF INTERSECTION
Sta. 12+400 SR 83 Lt. to Sta. 11+774 SR 82 Rt.
Cadd Measured Area = 1014.2 SQ. M.
[(1014.2) + (.15) (355)] (1.8) = 1921.4 L.

SE CORNER
Sta. 12+400 SR 83 Rt. to Sta. 11+880 SR 82 Rt.
Cadd Measured Area = 1150.7 SQ. M.
[(1150.7) + (.15) (393)] (1.8) = 2177.4 L.

NW CORNER
Sta. 11+774 SR 82 Lt. to Sta. 13+100 SR 83 Lt.
Cadd Measured Area = 1111.5 SQ. M.
[(1111.5) + (.15) (390)] (1.8) = 2106.0 L.

NE CORNER
Sta. 11+840 SR 82 Lt. to Sta. 13+100 SR 83 Rt.
Cadd Measured Area = 1053.9 SQ. M.
[(1053.9) + (.15) (353)] (1.8) = 1992.3 L.

TOTAL ITEM 408 = 8197 L.

ITEM 446 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1H

SR 83 Sta. 12+400 to Sta. 12+730
Cadd Measured Area = 3739.5 SQ. M.
Volume = 3739.5 SQ. M. * .038 M. = 142.1 CU. M.

SR 83 Sta. 12+760 to Sta. 13+100
Cadd Measured Area = 3953.4 SQ. M.
Volume = 3953.4 SQ. M. * .038 M. = 150.2 CU. M.

SR 82 Sta. 11+720 to Sta. 11+800
Cadd Measured Area = 1071.9 SQ. M.
Volume = 1071.9 SQ. M. * .038 M. = 40.7 CU. M.

SR 82 Sta. 11+840 to Sta. 11+920
Cadd Measured Area = 1133.3SQ. M.
Volume = 1133.3 SQ. M. * .038 M. = 43.1 CU. M.

INTERSECTION
SR 82 Sta. 11+800 to Sta. 11+840
SR 83 Sta. 12+730 to Sta. 12+760
Cadd Measured Area = 941.0 SQ. M.
Volume = 941.0 SQ. M. * .038 M. = 35.8 CU. M.

TOTAL ITEM 407 = 412 CU. M.

ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22

SR 83 Sta. 12+400 to Sta.12+730
Cadd Measured Area = 3739.5 SQ. M.
Volume = 3739.5 SQ. M * .025 M. = 93.5 CU. M.

SR 83 Sta. 12+760 to Sta. 13+100
Cadd Measured Area = 3953.4 SQ. M.
Volume = 3953.4 SQ. M. *.025 M. = 98.8 CU. M.

SR 82 Sta. 11+720 to Sta. 11+800
Cadd Measured Area = 1071.9 SQ. M.
Volume = 1071.9 SQ. M. * .025 M. = 26.8 CU. M.

SR 82 Sta. 11+840 to Sta. 11+920
Cadd Measured Area = 1133.3 SQ. M.
Volume = 1133.3 SQ. M. * .025 M. = 28.3 CU. M.

INTERSECTION
SR 82 Sta. 11+800 to Sta. 11+840
SR 83 Sta. 12+730 to Sta. 12+760
Cadd Measured Area = 941.0 SQ. M.
Volume = 941.0 SQ. M. * .025 M. = 23.5 CU. M.

TOTAL ITEM 448 = 271 CU. M.

ITEM 617 - SHOULDER RECONDITIONING MISC., COMPACTED AGGREGATE

Sta. 12+400 to Sta. 12+750
(374.7 + 384.2) M. * .61 M. * .05 M. = 23.1 CU. M.

Sta. 12+750 to Sta. 13+100
(381.0 + 352.0) M. * .61 M. * .05 M. = 22.4 CU. M.

TOTAL ITEM 617 = 46 CU. M.

ITEM 870 - SEEDING AND MULCHING

SR 83 CROSS SECTIONS
Sta. 12+380 to Sta. 12+420 Area = 444 SQ. M.
Sta. 12+440 to Sta. 12+500 Area = 968 SQ. M.
Sta. 12+520 to Sta. 12+580 Area = 981 SQ. M.
Sta. 12+600 to Sta. 12+650 Area = 646 SQ. M.
Sta. 12+660 to Sta. 12+700 Area = 482 SQ. M.
Sta. 12+720 to Sta. 12+780 Area = 476 SQ. M.
Sta. 12+800 to Sta. 12+860 Area = 863 SQ. M.
Sta. 12+880 to Sta. 12+940 Area = 1002 SQ. M.
Sta. 12+960 to Sta. 13+020 Area = 821 SQ. M.
Sta. 13+040 to Sta. 13+100 Area = 810 SQ. M.

SR 82 CROSS SECTIONS
Sta. 11+720 to Sta. 11+772 Area = 367 SQ. M.
Sta. 11+780 to Sta. 11+810 Area = 595 SQ. M.
Sta. 11+840 to Sta. 11+920 Area = 328 SQ. M.

TOTAL ITEM 870 - SEEDING AND MULCHING = 8783 SQ. M.

ITEM 870 - WATER

Area to be watered = 8783 SQ. M.
Application rate 5 m^3 / 1000 m^2

Volume of water = 8783 SQ. M. (5 M^3 / 1000 M^2) (2)
V = 87.8 M^3

TOTAL ITEM 870 - SEEDING AND MULCHING = 88 M^3 .

ITEM 870 - COMMERCIAL FERTILIZER

Area to be watered = 8783 SQ. M.
Application rate 0.1 Kg / 1.0 m^2

Mass of Fert. = 8783 SQ. M. (0.1 Kg / 1.0 M^2)
M = 878.3 Kg

TOTAL ITEM 870 - COMMERCIAL FERTILIZER = 878 Kg.

CALCULATED CmK CHECKED TMW

CALCULATIONS

LOR-83-6.727

DESIGN FILE: I:\projects\16738\Dgn\CALC.DGN
WORKSTATION: rfrivoll DATE: 17 NOV 1999

PLAN AND PROFILE SHEET NO.	ITEM 201 TREE REMOVED, 0.5 METER	202 PIPE REMOVED, 600 MM AND UNDER	202 CATCH BASIN REMOVED	SPECIAL PIPE CLEANOUT	202 REMOVAL MISC.: DRAINAGE STRUCTURE	301 BITUMINOUS AGGREGATE BASE, PG64-22	304 AGGREGATE BASE	448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22 (DRIVEWAYS)	603 200 MM CONDUIT, TYPE C	603 300 MM CONDUIT, TYPE B	603 300 MM CONDUIT, TYPE D	603 375 MM CONDUIT, TYPE B	603 450 MM CONDUIT, TYPE B	604 CATCH BASIN, No. 5 WITHOUT APRON	604 CATCH BASIN, No. 2-2B	604 CATCH BASIN ADJUSTED TO GRADE	604 MONUMENT ASSEMBLY	604 MONUMENT BOX ADJUSTED TO GRADE
	each	meter	each	meter	each	cubic meter	cubic meter	cubic meter	meter	meter	meter	meter	meter	each	each	each	each	each
17																		1
18		72.7					10.7				71.1			1				1
19	2	104.0	1			4.3	11.4	1.7			99.7			2				
20		111.5	1			19.8	8.4	7.9			7.3			1				
21		93.1	3			6.2	15.7	2.5		26.4	29.2				3			1
22		20.9				4.7	20.0	1.9			24.4							
23		50.2				13.2	45.7	5.2			53.7							
24		7.4		16.6			10.4				8.5					2	1	
37		24.2			1				14.6			23.8	38.7		1			
TOTAL	2	484.0	5	16.6	1	48	122	19	14.6	26.4	293.9	23.8	38.7	4	4	2	1	3

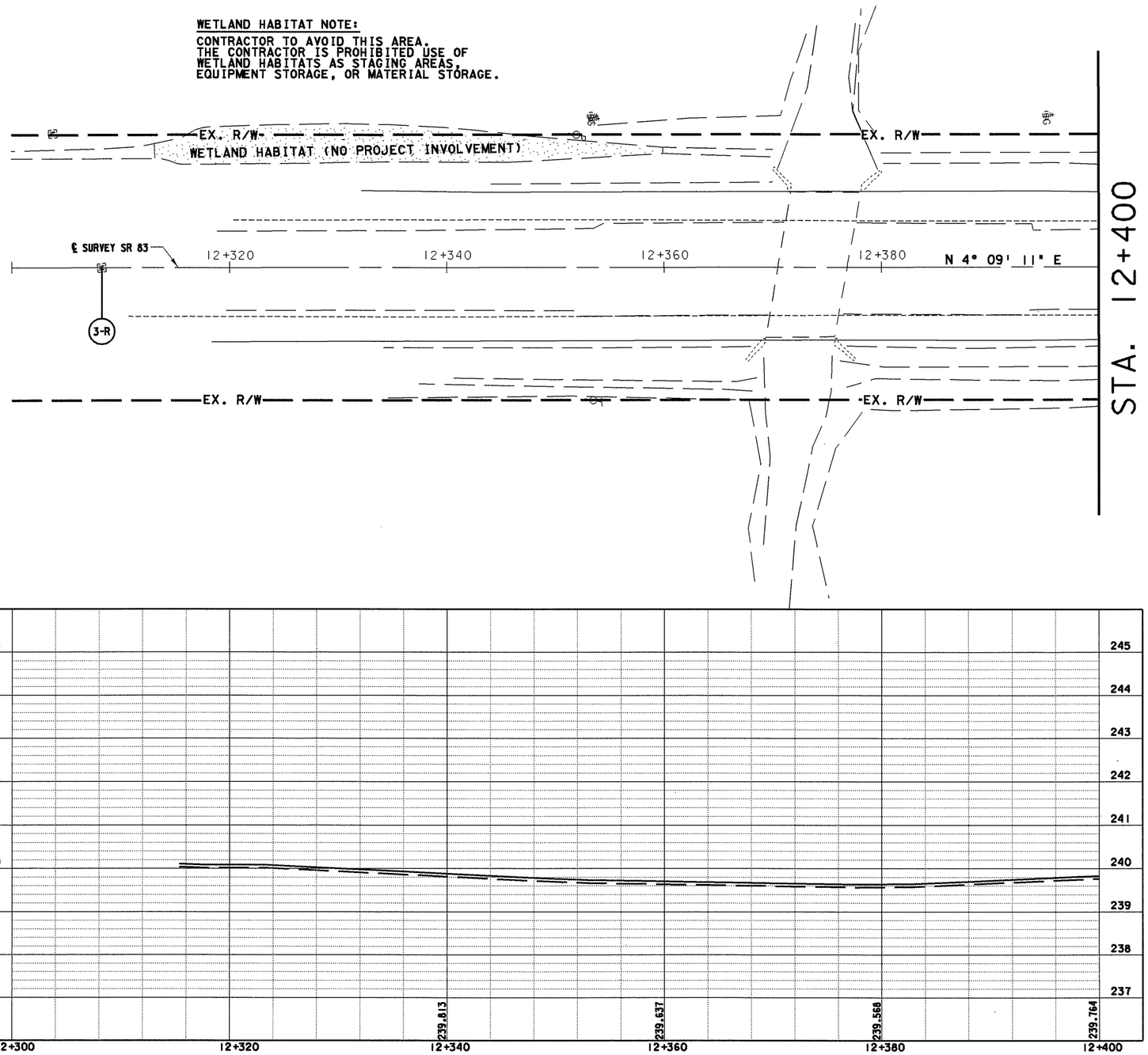
CALC BY _RPT_
CHK'D BY _MJS_

ROADWAY SUB-SUMMARY

LOR-83-6.727

WETLAND HABITAT NOTE:

CONTRACTOR TO AVOID THIS AREA.
THE CONTRACTOR IS PROHIBITED USE OF
WETLAND HABITATS AS STAGING AREAS,
EQUIPMENT STORAGE, OR MATERIAL STORAGE.



ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS

ITEM NO.	STATION FROM	STATION TO	SIDE	604 MONUMENT BOX ADJUSTED TO GRADE EACH	TOTALS
3-R	12+308.3		-	1	1

metric units

HORIZONTAL SCALE IN METERS 0 2 4 6 8

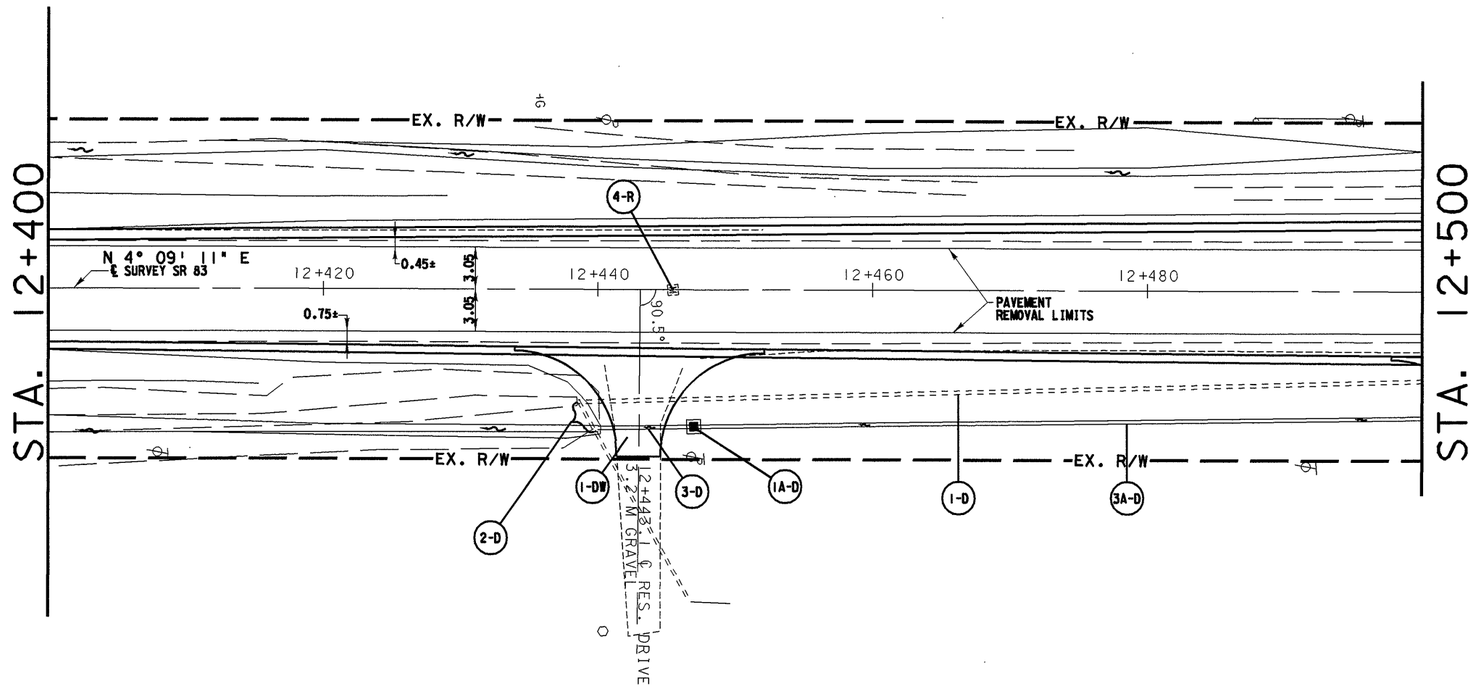
CALCULATED CmK CHECKED RPT

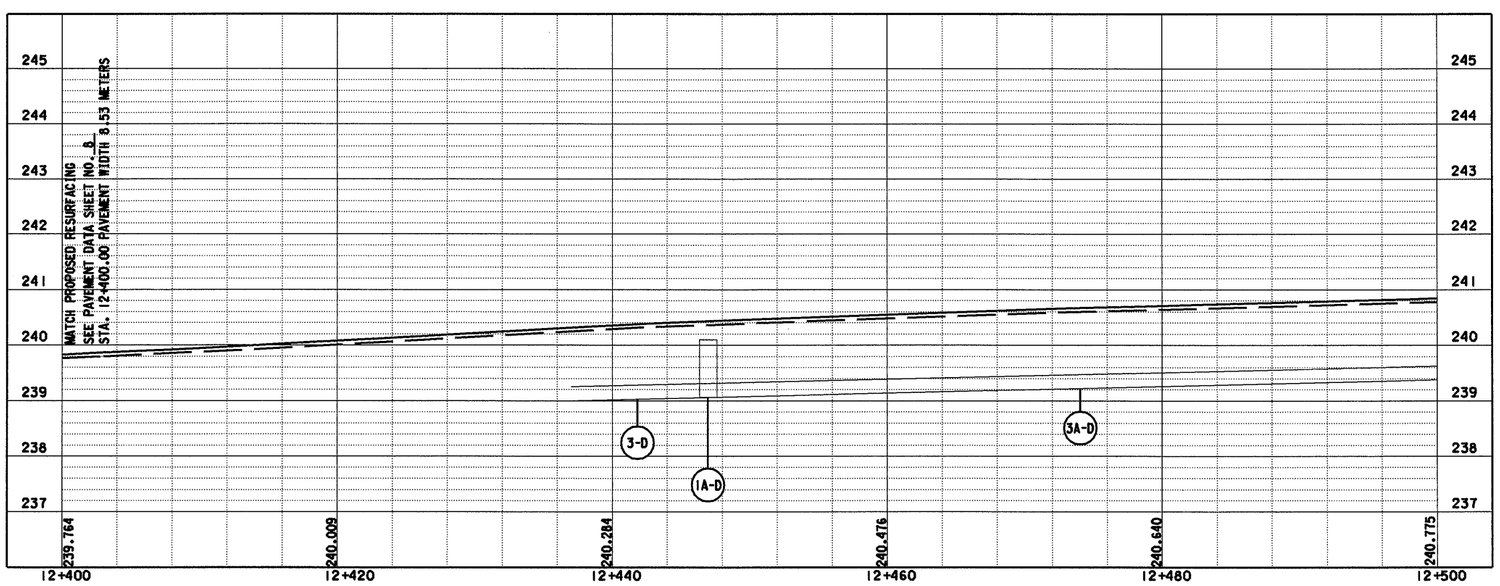
PLAN AND PROFILE S.R. 83
STA. 12+300 TO STA. 12+400

LOR-83-6.727

17/86

DESIGN FILE: I:\projects\16738\dgn\83prof.dgn
WORKSTATION: rtrivoli DATE: 12-FEB-1999





3-D

7.0m - 300mm CONDUIT, TYPE D	
OUTLET	INLET
STA. 12+437.0	STA. 12+447.0
OFFSET 10.0 RT	OFFSET 9.8 RT
ELEV. 239.00	ELEV. 239.06

3A-D

64.1m - 300mm CONDUIT, TYPE D	
OUTLET	INLET
STA. 12+447.0	STA. 12+511.1
OFFSET 9.8 RT	OFFSET 9.0 RT
ELEV. 239.06	ELEV. 239.45

1A-D

CB-5, WITHOUT APRON
STA. 12+477.0
OFFSET 9.8 RT
INV. ELEV. 239.06
T/G 240.10

ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS

ITEM NO.	STATION FROM	STATION TO	SIDE	202 PIPE REMOVED, 600 MM AND UNDER METER	304 AGGREGATE BASE CU.M.	603 300 MM CONDUIT, TYPE D METER	604 CATCH BASIN, NO. 5 WITHOUT APRON EACH	604 MONUMENT BOX ADJUSTED TO GRADE EACH
1-D	12+436.6	12+508.9	RT	70.3				
1A-D	12+477.0		RT				1	
2-D	12+438.6	12+437.0	RT	2.4				
3-D	12+437.0	12+447.0	RT			7.0		
3A-D	12+447.0	12+511.1	RT			64.1		
1-DW	12+443.1		RT		10.7			
4-R	12+445.5		-					1
TOTALS				72.7	10.7	71.1	1	1

metric units

HORIZONTAL SCALE IN METERS

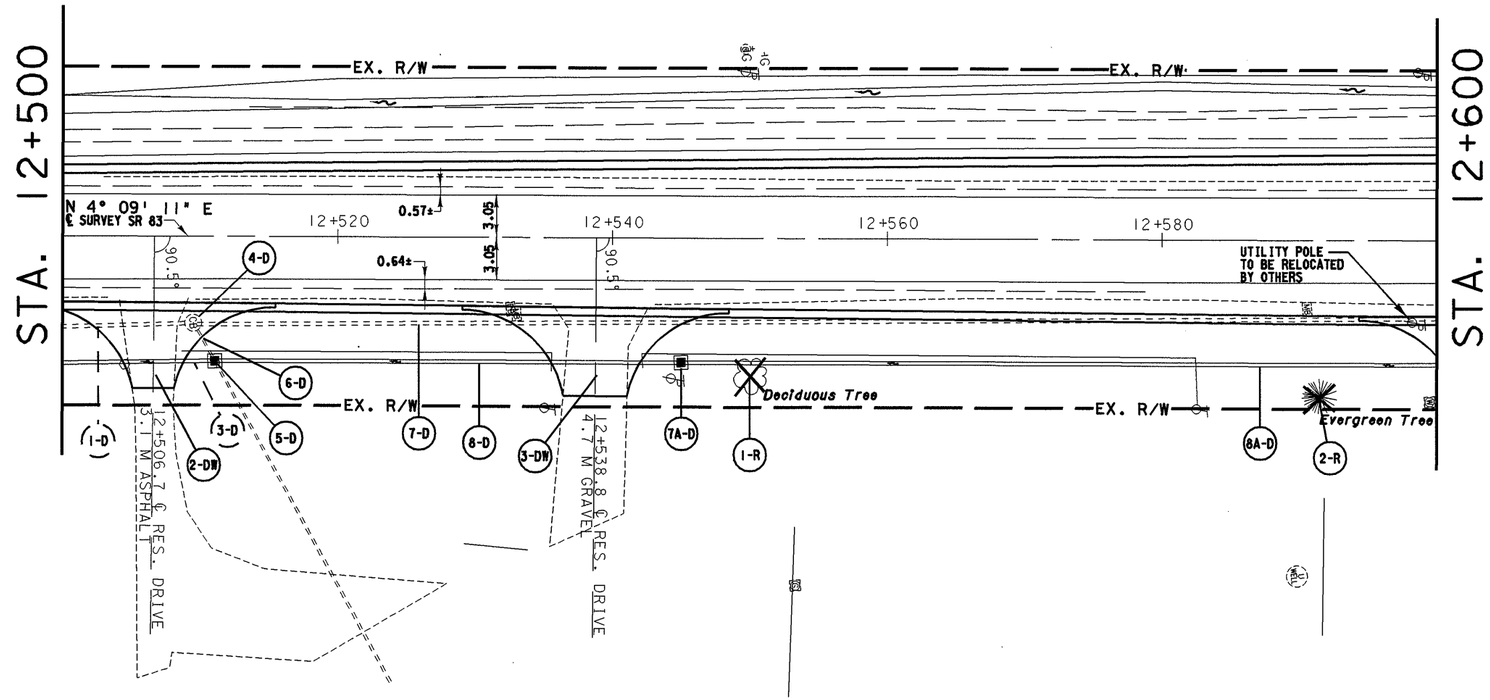
CALCULATED CmK
CHECKED RPT

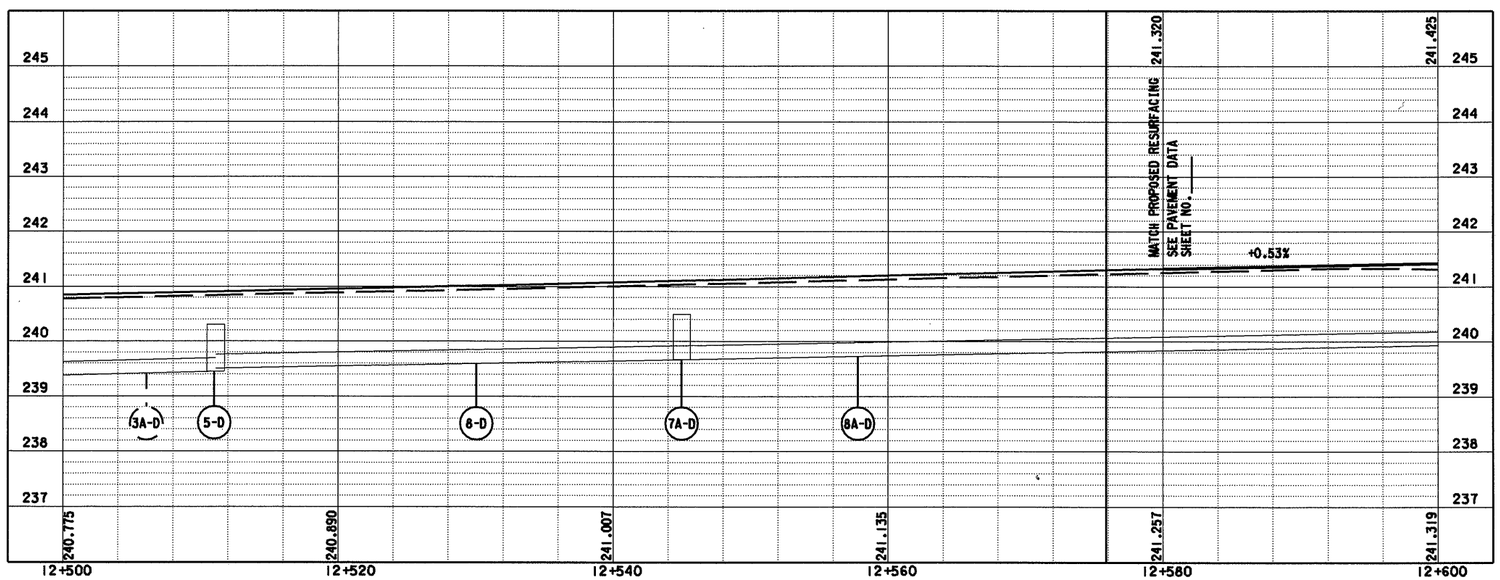
PLAN AND PROFILE S.R. 83
STA. 12+400 TO STA. 12+500

LOR-83-6.727

18
86

DESIGN FILE: i:\projects\16738\Dgn\83prof.dgn
WORKSTATION: rtrivoli
DATE: 30-DEC-1998





8-D

33.9m - 300mm CONDUIT, TYPE D	
OUTLET	INLET
STA. 12+511.1	STA. 12+545.0
OFFSET 9.0 RT	OFFSET 9.0 RT
ELEV. 239.51	ELEV. 239.67

8A-D

65.8m - 300mm CONDUIT, TYPE D	
OUTLET	INLET
STA. 12+545.0	STA. 12+610.8
OFFSET 9.0 RT	OFFSET 9.0 RT
ELEV. 239.67	ELEV. 239.98

5-D
CB-5, WITHOUT APRON
STA. 12+511.1
OFFSET 9.0 RT
INV. ELEV. 239.45
T/G 240.30

7A-D
CB-5, WITHOUT APRON
STA. 12+545.0
OFFSET 9.0 RT
INV. ELEV. 239.67
T/G 240.50

ITEMS INDICATED WITH DASHED REFERENCE BALLOONS ARE TABULATED ON ANOTHER PLAN SHEET.

ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS

ITEM NO.	STATION FROM	STATION TO	SIDE	201 TREE REMOVED, 0.5 METER (EACH)	202 CATCH BASIN REMOVED (EACH)	202 PIPE REMOVED, 600 MM AND UNDER (METER)	301 BITUMINOUS AGGREGATE BASE (CU.M.)	304 AGGREGATE BASE (CU.M.)	448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22 (DRIVEWAYS) (CU.M.)	603 300 MM CONDUIT, TYPE D (METER)	604 CATCH BASIN, NO. 5 WITHOUT APRON (EACH)
4-D	12+509.5		Rt								
5-D	12+511.1		Rt		1						1
6-D	12+509.5	12+511.1	Rt			3.1					
7-D	12+509.5	12+610.8	Rt			100.9					
7A-D	12+545.0		Rt								1
8-D	12+511.1	12+545.0	Rt							33.9	
8A-D	12+545.0	12+610.8	Rt							65.8	
2-DW	12+506.7		Rt				4.3		1.7		
3-DW	12+538.8		Rt					11.4			
1-R	12+550.0		Rt	1							
2-R	12+591.5		Rt	2							
TOTALS				1	1	104.0	4.3	11.4	1.7	99.7	2

metric units

HORIZONTAL SCALE IN METERS

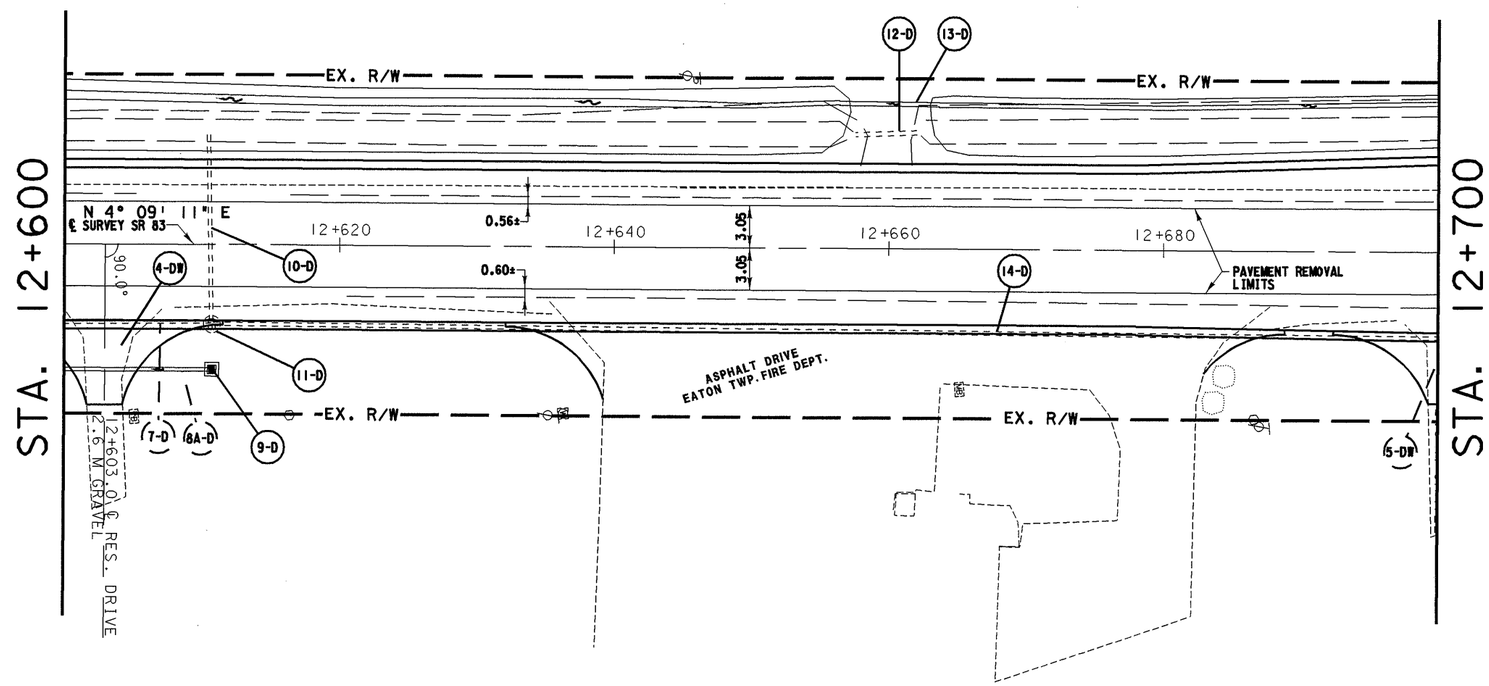
CALCULATED RPT
CHECKED

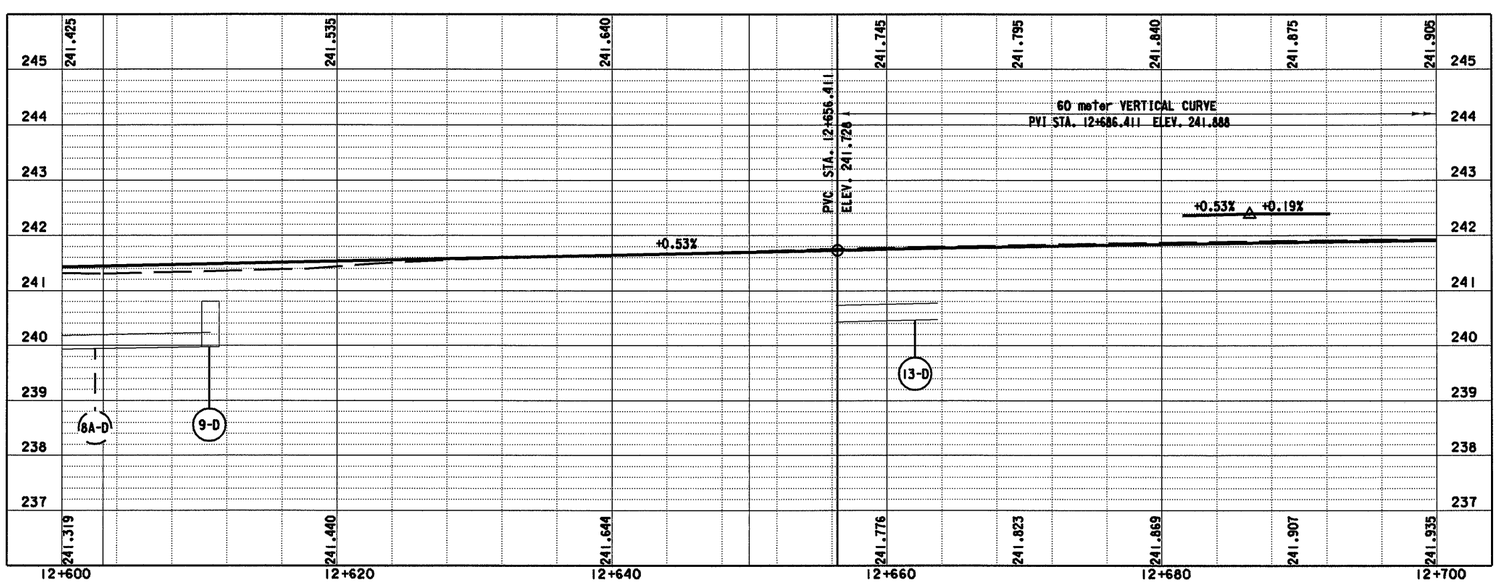
PLAN AND PROFILE S.R. 83
STA. 12+500 TO STA. 12+600

LOR-83-6.727

19
86

DESIGN FILE: i:\projects\16738\dgn\83prof.dgn
WORKSTATION: rrivoli DATE: 30-DEC-1998





9-D

CB-5, WITHOUT APRON
STA. 12+610.8
OFFSET 9.0 RT
INV. ELEV. 239.98
T/G 240.80

13-D

7.3m - 300mm CONDUIT, TYPE D	
OUTLET	INLET
STA. 12+656.3	STA. 12+663.7
OFFSET 10.4 LT	OFFSET 10.4 LT
ELEV. 240.43	ELEV. 240.47

ITEMS INDICATED WITH DASHED REFERENCE BALLOONS ARE TABULATED ON ANOTHER PLAN SHEET.

ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS

ITEM NO.	STATION FROM	STATION TO	SIDE	202 CATCH BASIN REMOVED (EACH)	202 PIPE REMOVED, 600 MM AND UNDER (METER)	301 BITUMINOUS AGGREGATE BASE (CU.M.)	304 AGGREGATE BASE (CU.M.)	448 ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG 64-22 (DRIVEWAY) (CU.M.)	603 300 MM CONDUIT, TYPE D (METER)	604 CATCH BASIN, NO. 5 WITHOUT APRON (EACH)
9-D	12+610.8		Rt		13.4					1
10-D	12+610.6		-							
11-D	12+610.8		Rt	1	4.4					
12-D	12+657.6	12+662.0	Lt						7.3	
13-D	12+656.3	12+663.7	Lt							
14-D	12+610.6	12+704.5	Rt		93.7					
4-DW	12+603.0		Rt			19.8	8.4	7.9		
4A-DW	12+632.1	12+688.8	Rt							
TOTALS				1	111.5	19.8	8.4	7.9	7.3	1

metric units

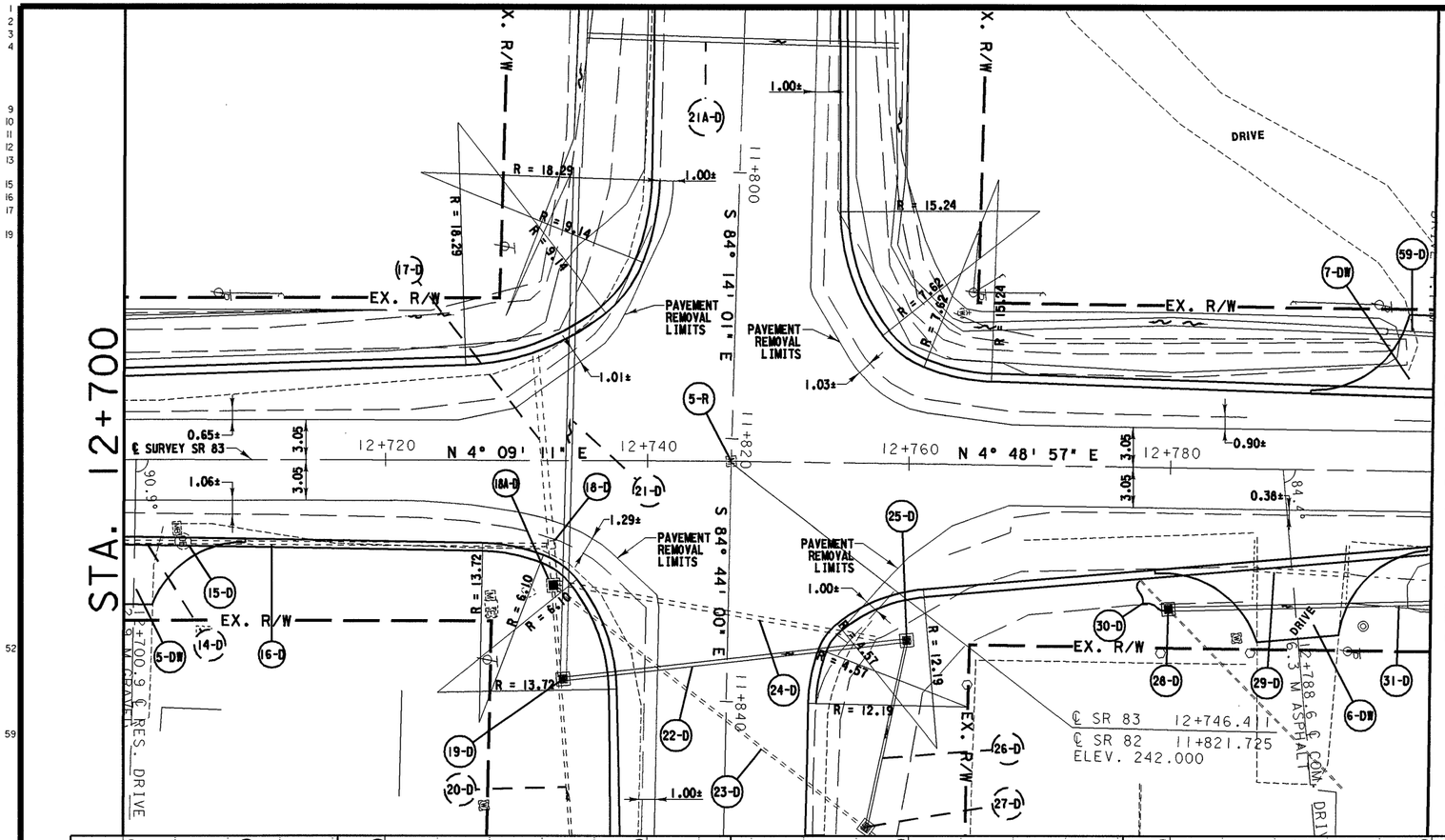
HORIZONTAL SCALE IN METERS

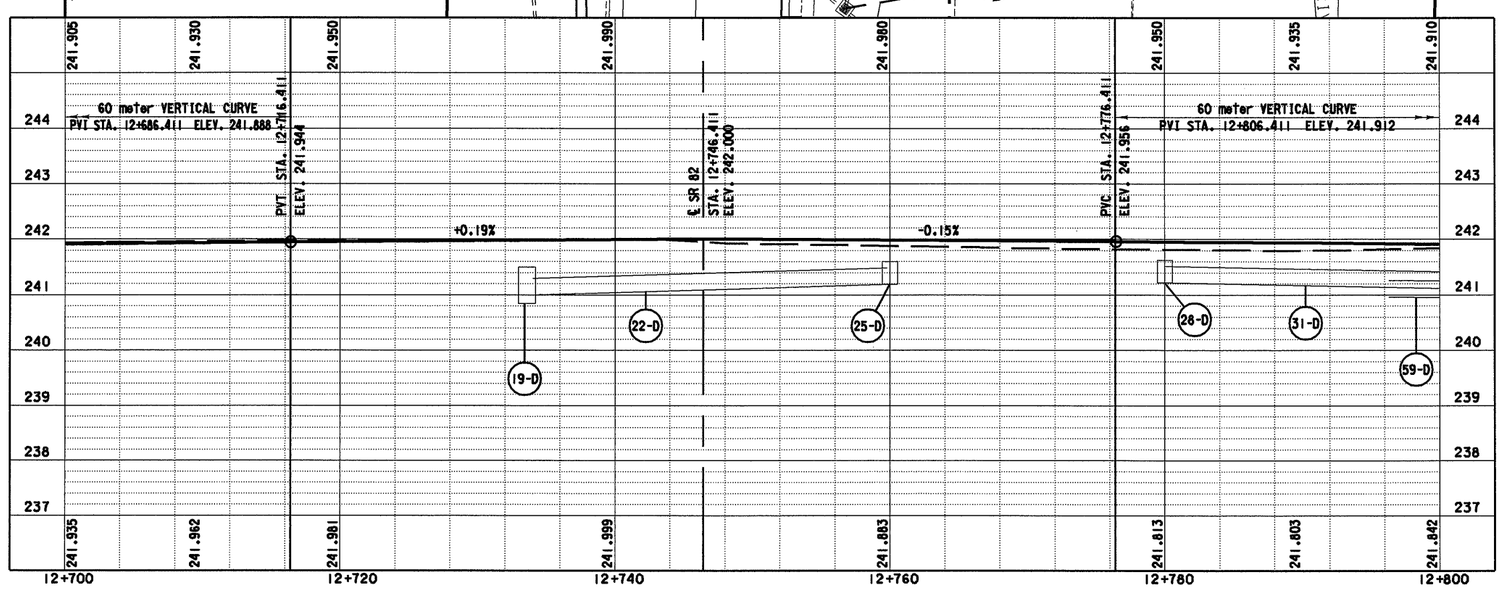
PLAN AND PROFILE S.R. 83
STA. 12+600 TO STA. 12+700

LOR-83-6.727

20/86

DESIGN FILE: t:\projects\16738\Dgn\83prof.dgn
WORKSTATION: rtrivoli DATE: 30-DEC-1998





metric units

HORIZONTAL SCALE IN METERS

CALCULATED RPT
CHECKED

19-D
CB-2-2B
STA. 12+733.6
OFFSET 16.6 RT
INV. ELEV. 240.85
T/G 241.50

25-D
CB-2-2B
STA. 12+760.0
OFFSET 13.4 RT
INV. ELEV. 241.19
T/G 241.60

28-D
CB-2-2B
STA. 12+780.0
OFFSET 10.7 RT
INV. ELEV. 241.22
T/G 241.63

22-D
26.4m - 300mm CONDUIT, TYPE B

OUTLET	INLET
STA. 12+733.6	STA. 12+760.0
OFFSET 16.6 RT	OFFSET 13.5 RT
ELEV. 241.00	ELEV. 241.19

31-D
20.1m - 300mm CONDUIT, TYPE D

INLET	OUTLET
STA. 12+780.0	STA. 12+800.0
OFFSET 10.7 RT	OFFSET 10.0 RT
ELEV. 241.22	ELEV. 241.12

59-D
9.1m - 300mm CONDUIT, TYPE D

INLET	OUTLET
STA. 12+796.3	STA. 12+805.4
OFFSET 10.5 LT	OFFSET 10.0 LT
ELEV. 240.96	ELEV. 240.94

ITEMS INDICATED WITH DASHED REFERENCE BALLOONS ARE TABULATED ON ANOTHER PLAN SHEET.

ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS

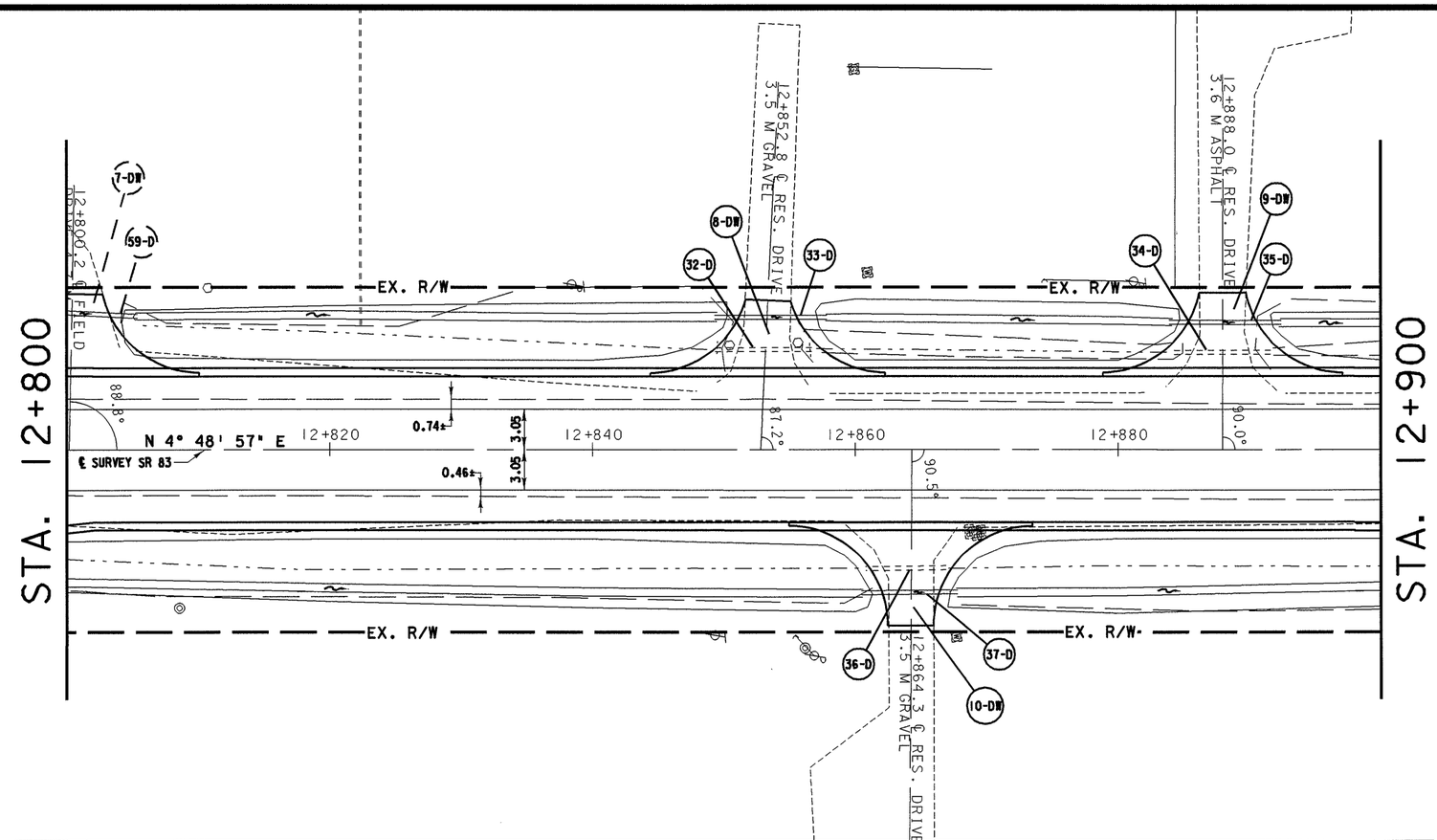
ITEM NO.	STATION FROM	STATION TO	SIDE	202 CATCH BASIN REMOVED (EACH)	202 PIPE REMOVED, 600 MM AND UNDER (METER)	301 BITUMINOUS AGGREGATE BASE (CU.M.)	304 AGGREGATE BASE (CU.M.)	448 ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG 64-22 (DRIVEWAY) (CU.M.)	603 300 MM CONDUIT, TYPE B (METER)	603 300 MM CONDUIT, TYPE D (METER)	604 CATCH BASIN, NO. 2-2B (EACH)	604 MONUMENT BOX ADJUSTED TO GRADE (EACH)
15-D	12+704.5	12+704.5	RT	—								—
16-D	12+704.5	12+732.4	RT		27.9							
18-D	12+732.4		RT	—								
18A-D	12+732.9		RT	—								
19-D	12+733.6		RT								—	
22-D	12+733.6	12+760.0	RT						26.4			
23-D	12+732.9	12+757.1	RT		29.8							
24-D	12+732.9	12+758.0	RT		25.0							
25-D	12+760.0		RT								—	
28-D	12+780.0		RT								—	
29-D	12+786.3	12+793.8	RT		7.4							
30-D	12+777.9	12+780.0	RT		3.0							
31-D	12+780.0	12+800.0	RT							20.1		
59-D	12+796.3	12+805.4	LT							9.1		
5-DW	12+700.9		RT			7.5						
6-DW	12+788.6		RT			6.2		2.5				
7-DW	12+800.2		LT				8.2					
5-R	12+746.4		-	3							3	—
TOTALS				3	93.1	6.2	15.7	2.5	26.4	29.2	3	—

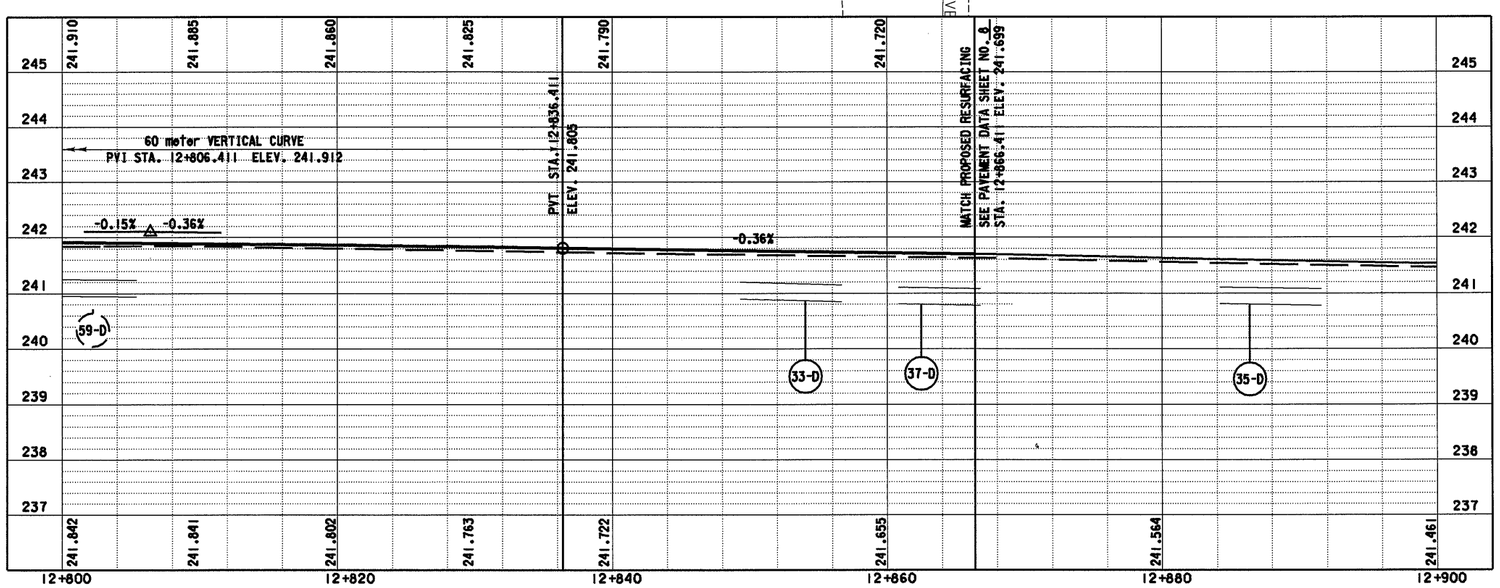
PLAN AND PROFILE S.R. 83
STA. 12+700 TO STA. 12+800

LOR-83-6.727

21/86

DESIGN FILE: i:\projects\16738\Dgn\83prof.dgn
WORKSTATION: rtrivoli
DATE: 30-DEC-1998





33-D

8.53m - 300mm CONDUIT, TYPE D	
INLET	OUTLET
STA. 12+849.3	STA. 12+857.9
OFFSET 9.9 LT	OFFSET 9.9 LT
ELEV. 240.90	ELEV. 240.85

35-D

8.53m - 300mm CONDUIT, TYPE D	
INLET	OUTLET
STA. 12+883.9	STA. 12+892.4
OFFSET 9.6 LT	OFFSET 9.6 LT
ELEV. 240.81	ELEV. 240.78

37-D

7.35m - 300mm CONDUIT, TYPE D	
INLET	OUTLET
STA. 12+860.4	STA. 12+867.8
OFFSET 10.8 RT	OFFSET 10.7 RT
ELEV. 240.64	ELEV. 240.59

ITEMS INDICATED WITH DASHED REFERENCE BALLOONS ARE TABULATED ON ANOTHER PLAN SHEET.

ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS

ITEM NO.	STATION FROM	STATION TO	SIDE	202 PIPE REMOVED, 600 MM AND UNDER METER	301 BITUMINOUS AGGREGATE BASE CU.M.	304 AGGREGATE BASE CU.M.	448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22 (DRIVEWAYS) CU.M.	603 300 MM CONDUIT, TYPE D METER
32-D	12+849.3	12+856.7	LT	7.4				8.5
33-D	12+849.3	12+857.9	LT					
34-D	12+884.2	12+891.6	LT	7.4				8.5
35-D	12+883.9	12+892.4	LT					
36-D	12+860.8	12+866.9	RT	6.1				7.4
37-D	12+860.4	12+867.8	RT					
8-DW	12+852.8		LT			8.8		
9-DW	12+888.0		LT		4.7		1.9	
10-DW	12+864.3		RT			11.2		
TOTALS				20.9	4.7	20.0	1.9	24.4

DESIGN FILE: I:\projects\16738\Dgn\83prof.dgn
WORKSTATION: rtrivoli DATE: 30-DEC-1998

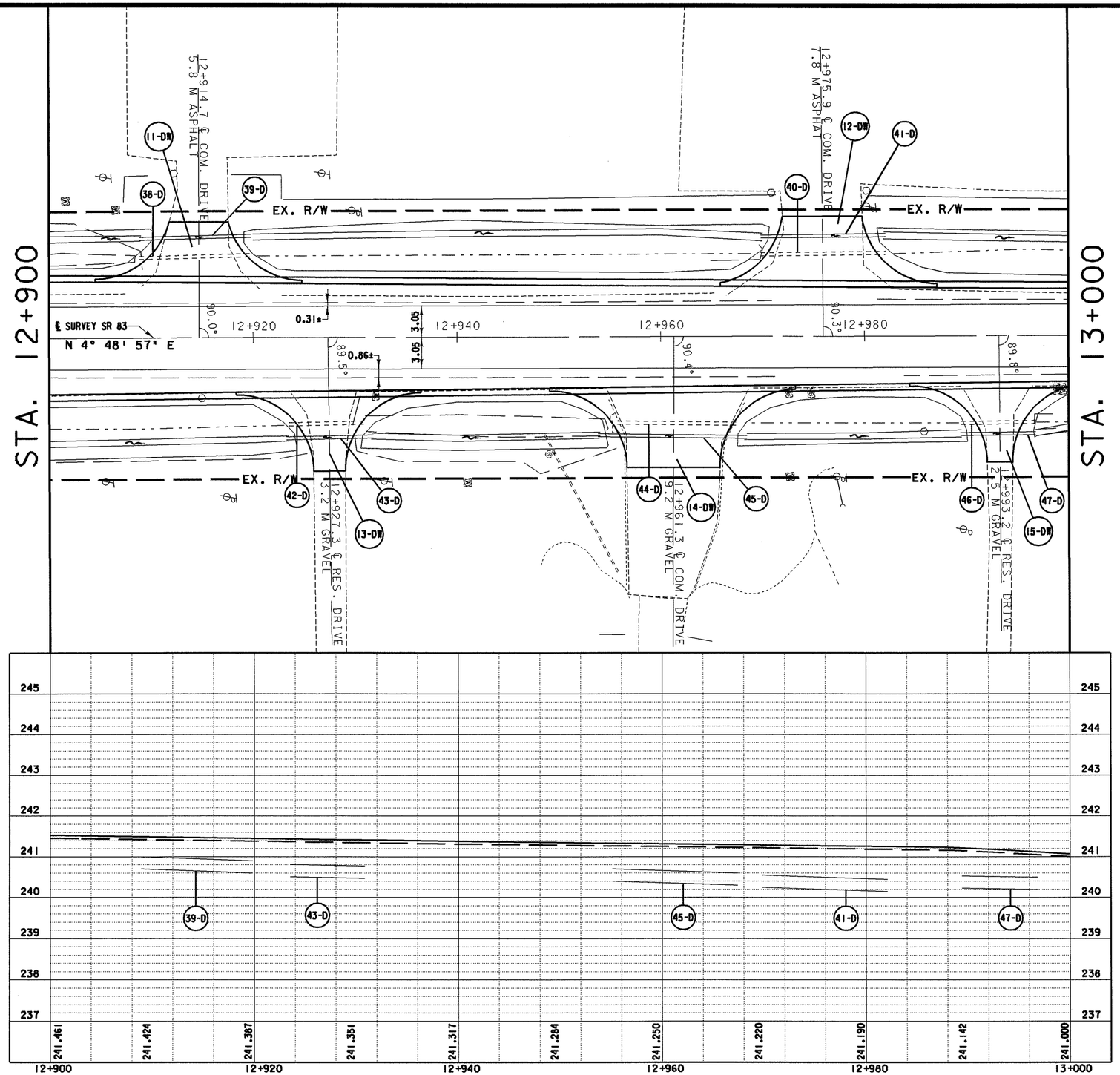
metric units

HORIZONTAL SCALE IN METERS

CALCULATED RPT
CHECKED

PLAN AND PROFILE S.R. 83
STA. 12+800 TO STA. 12+900

LOR-83-6.727



metric units

39-D

10.9m - 300mm CONDUIT, TYPE D	
INLET	OUTLET
STA. 12+908.9	STA. 12+919.8
OFFSET 9.6 LT	OFFSET 9.8 LT
ELEV. 240.70	ELEV. 240.60

41-D

12.3m - 300mm CONDUIT, TYPE D	
INLET	OUTLET
STA. 12+969.8	STA. 12+982.1
OFFSET 9.6 LT	OFFSET 9.7 LT
ELEV. 240.25	ELEV. 240.15

43-D

8.5m - 300mm CONDUIT, TYPE D	
INLET	OUTLET
STA. 12+923.2	STA. 12+931.8
OFFSET 9.8 RT	OFFSET 9.6 RT
ELEV. 240.52	ELEV. 240.47

45-D

14.6m - 300mm CONDUIT, TYPE D	
INLET	OUTLET
STA. 12+953.8	STA. 12+968.4
OFFSET 9.6 RT	OFFSET 9.8 RT
ELEV. 240.40	ELEV. 240.30

47-D

7.4m - 300mm CONDUIT, TYPE D	
INLET	OUTLET
STA. 12+989.4	STA. 12+996.8
OFFSET 9.6 RT	OFFSET 9.5 RT
ELEV. 240.23	ELEV. 240.20

ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS

ITEM NO.	STATION FROM	STATION TO	SIDE	202 PIPE REMOVED, 600 MM AND UNDER	301 BITUMINOUS AGGREGATE BASE	304 AGGREGATE BASE	448 ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG 64-22 (DRIVEWAYS)	603 300 MM CONDUIT, TYPE D
				METER	CU.M.	CU.M.	CU.M.	METER
38-D	12+908.9	12+919.8	LT	10.9				10.9
39-D	12+908.9	12+919.8	LT					
40-D	12+969.8	12+982.1	LT	12.3				12.3
41-D	12+969.8	12+982.1	LT					
42-D	12+923.5	12+930.8	RT	7.4				8.5
43-D	12+923.2	12+931.8	RT					
44-D	12+954.9	12+967.4	RT	12.2				14.6
45-D	12+953.8	12+968.4	RT					
46-D	12+989.4	12+996.8	RT	7.4				7.4
47-D	12+989.4	12+996.8	RT					
11-DW	12+914.7		LT		5.6		2.2	
12-DW	12+975.9		LT		7.6		3.0	
13-DW	12+927.3		RT			10.6		
14-DW	12+961.3		RT			25.5		
15-DW	12+993.2		RT			9.6		
TOTALS				50.2	13.2	45.7	5.2	53.7

CALCULATED CmK
CHECKED RPT

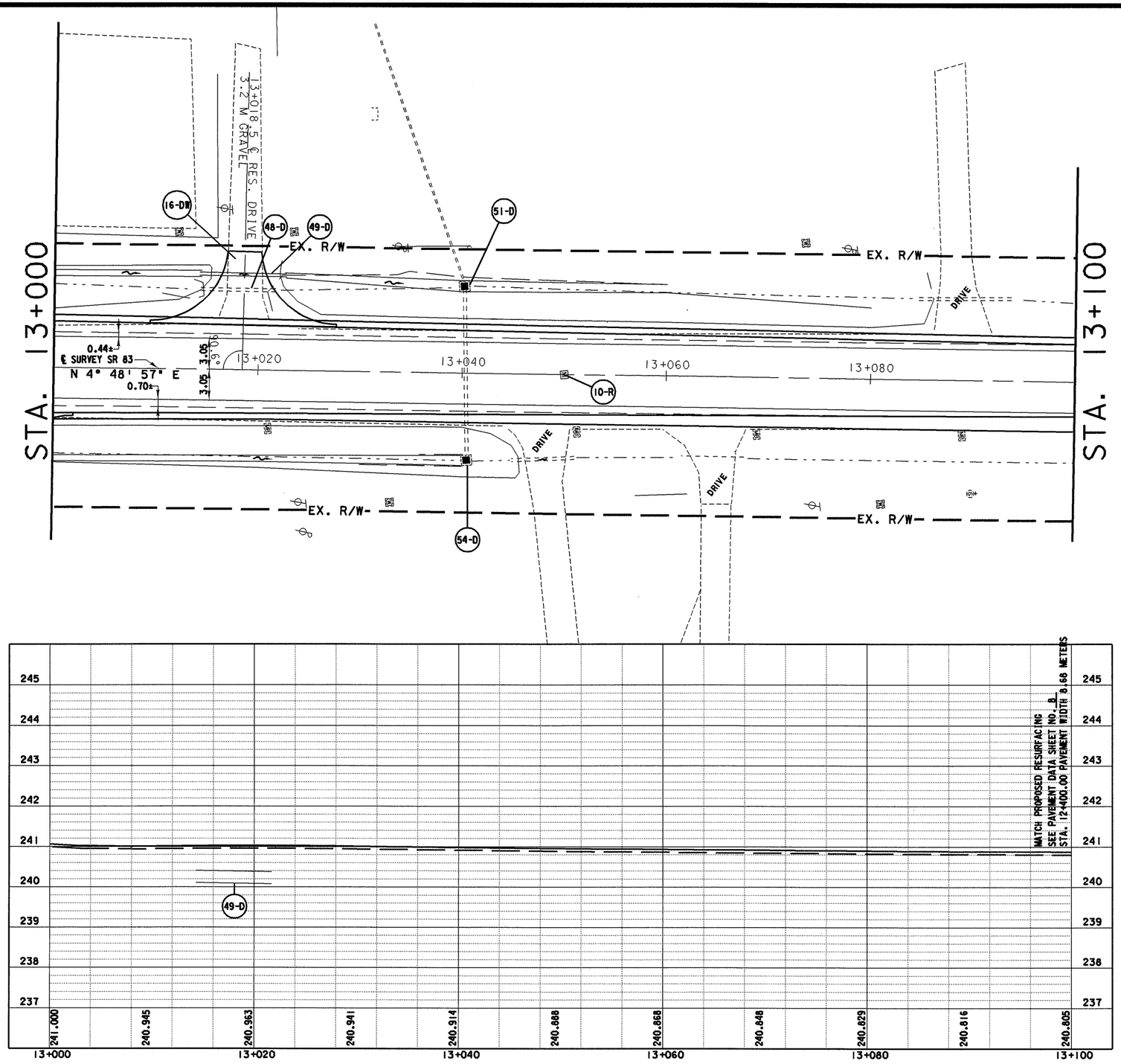
HORIZONTAL SCALE IN METERS

PLAN AND PROFILE S.R. 83
STA. 12+900 TO STA. 13+000

LOR-83-6.727

23/86

DESIGN FILE: i:\projects\16738\Dgn\83prof.dgn
WORKSTATION: rtrivoli
DATE: 30-DEC-1998



metric units

49-D

8.53m - 300mm CONDUIT, TYPE D	
INLET	OUTLET
STA. 13+014.2	STA. 13+022.7
OFFSET 9.4 RT	OFFSET 9.4 RT
ELEV. 240.11	ELEV. 240.08

10-R

STA. 13+050.00
OFFSET 0.00

REFERENCE TIE

PK NAIL W/SHINNER
O.E.Co.
47CT/4A-5

25.661

RR SPIKE W/PUNCH MARK SET
STA 13+100.000

℄ SURVEY SR 83

28.438

20.159

PK NAIL W/SHINNER
TEL. POLE

PK NAIL W/SHINNER
TEL. POLE

ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS

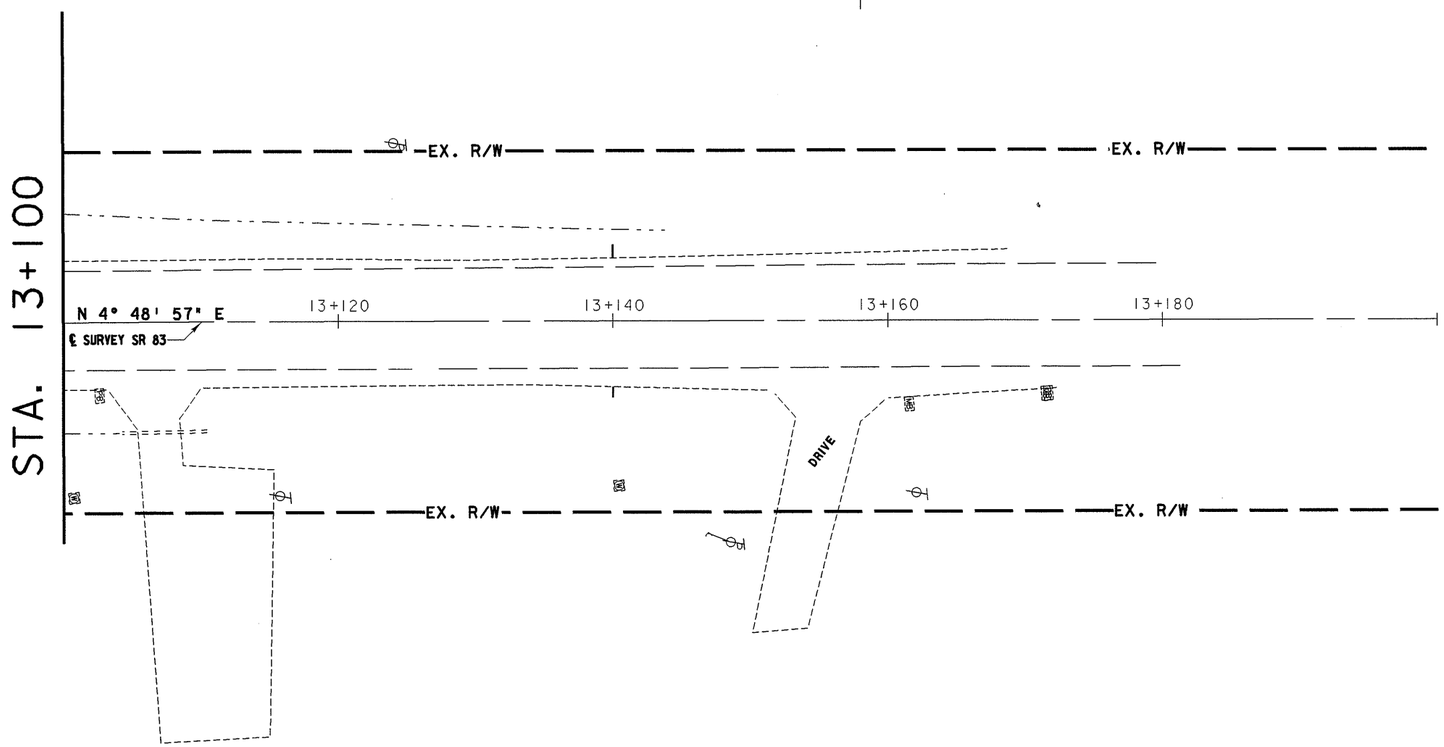
ITEM NO.	STATION FROM	STATION TO	SIDE	202 SPECIAL	304	603	604	604
				METER	CU.M.	METER	EACH	EACH
48-D	13+014.3	13+021.7	Lt	7.4				
49-D	13+014.2	13+022.7	Lt			8.5		
51-D	13+040.1		Lt					1
52-D	13+040.1	13+040.5	-	16.6				
54-D	13+040.5		Rt					1
16-DW	13+018.5		Lt		10.4			
10-R	13+050.0							1
TOTALS				7.4	10.4	8.5	2	1

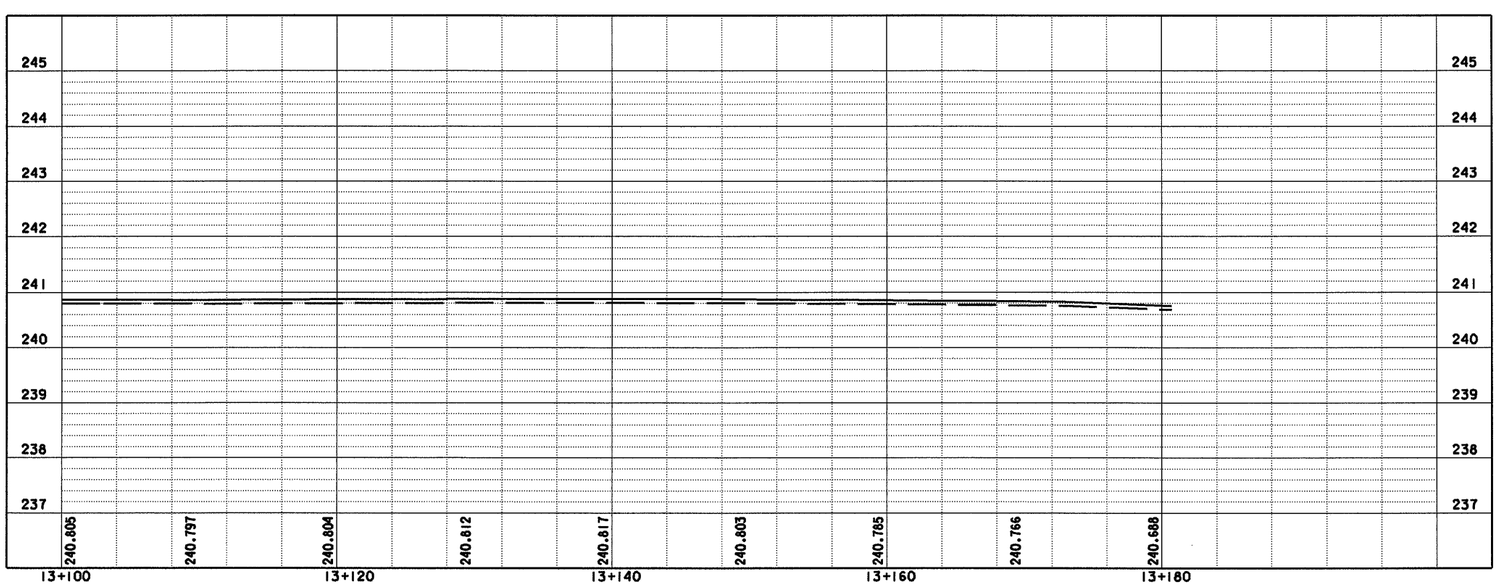
HORIZONTAL SCALE IN METERS
0 2 4 6 8

CALCULATED CmK
CHECKED RPT

PLAN AND PROFILE S.R. 83
STA. 13+000 TO STA. 13+100

LOR-83-6.727





ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS

ITEM NO.	STATION FROM	STATION TO	SIDE	TOTALS

metric units

HORIZONTAL SCALE IN METERS

CALCULATED CmK
CHECKED RPT

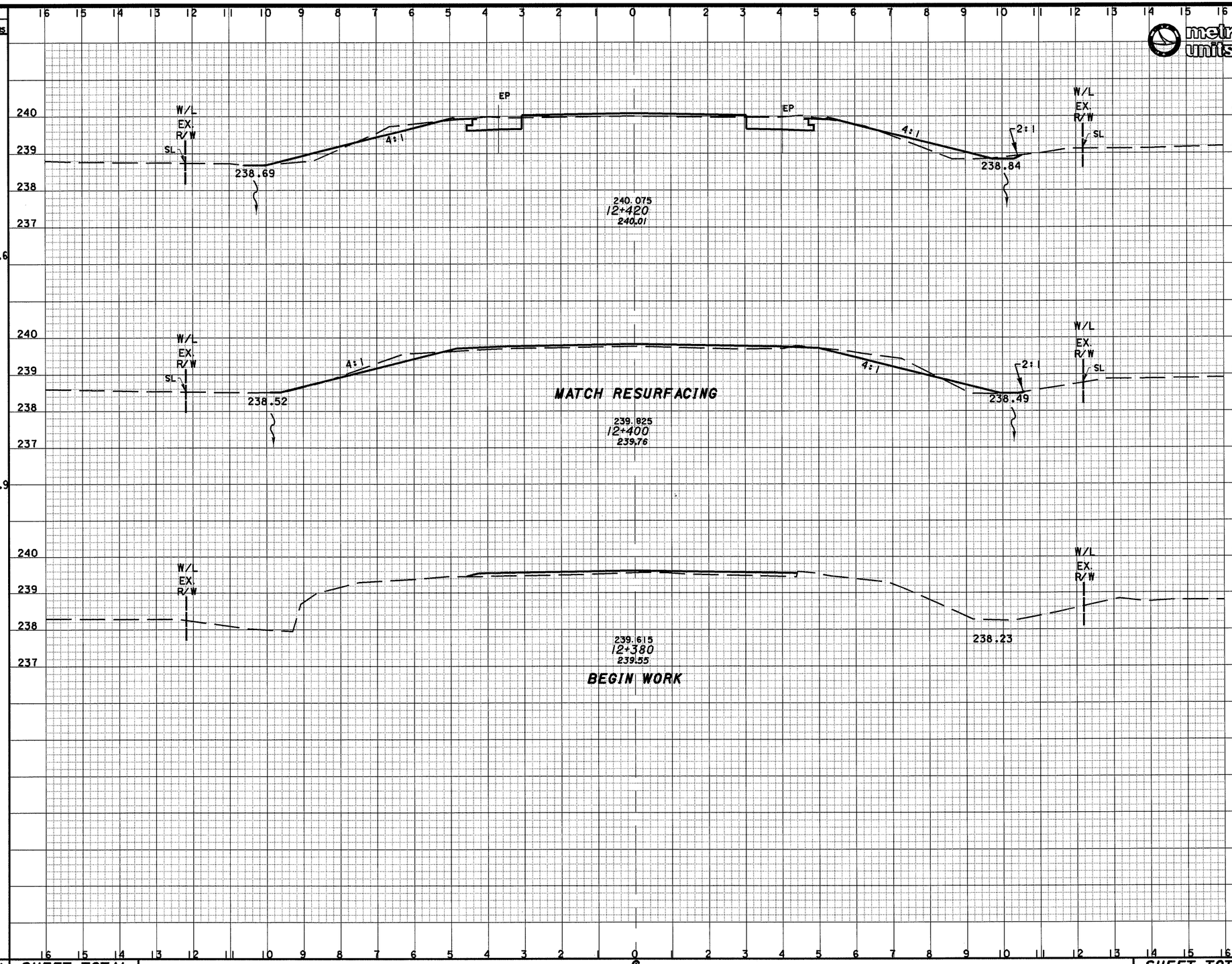
PLAN AND PROFILE S.R. 83
STA. 13+100 TO STA. 13+200

LOR-83-6.727

25/86

DESIGN FILE: I:\projects\16738\Dgn\83prof.dgn
WORKSTATION: rfrivoli DATE: 30-DEC-1998

SEEDING END WIDTH	SEEDING SQ. METERS
14.57	
	294.6
14.89	
	148.9
0	
	444



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1.34	0.65		
		21.8	8.2
0.84	0.17		
		8.4	1.7
0	0		
		31	10

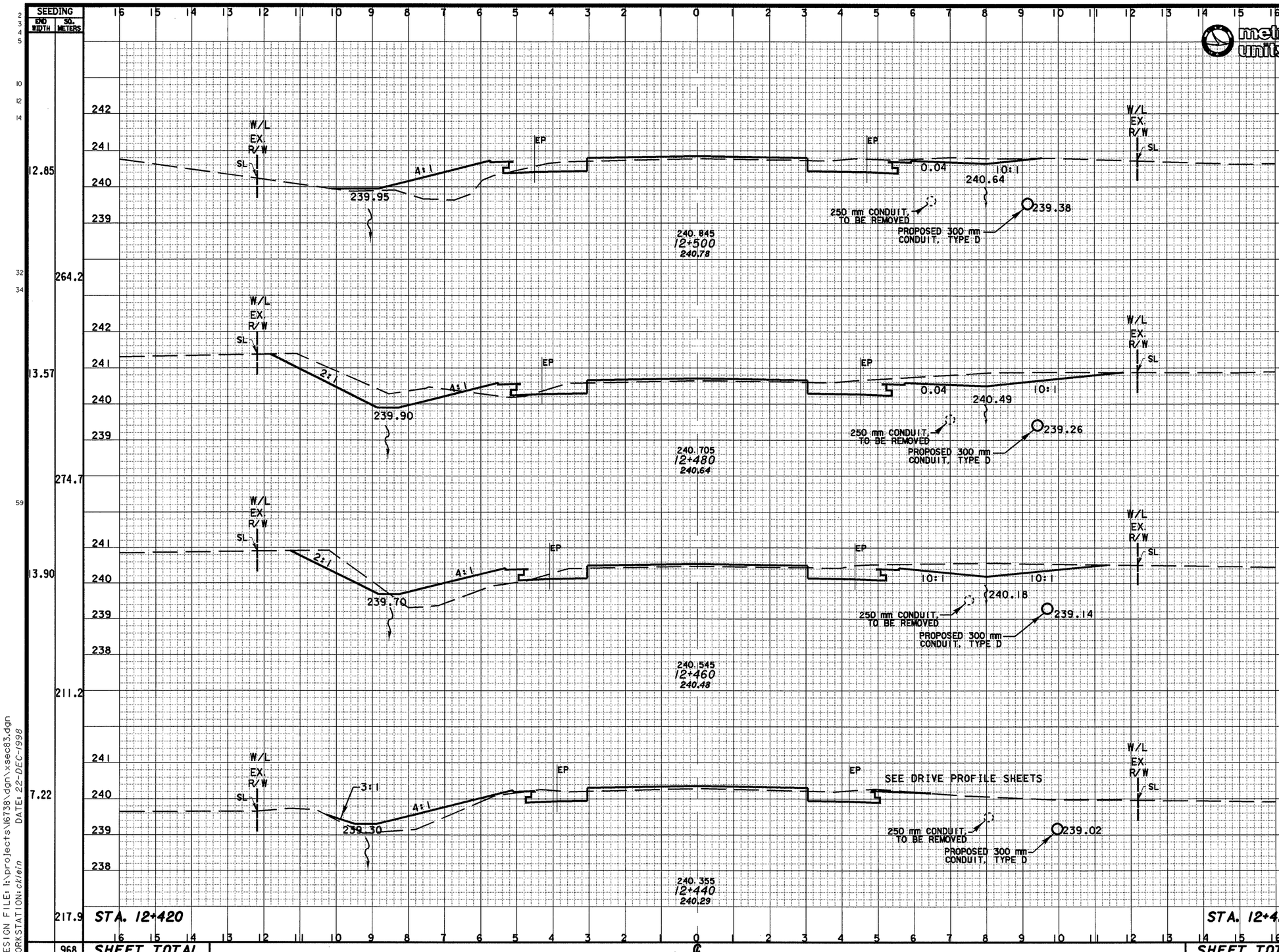
CALCULATED CmK
CHECKED RPT

CROSS SECTIONS S.R. 83
STA. 12+380 TO STA. 12+420

LOR-83-6.727

26/86

DESIGN FILE: I:\projects\16738\dgn\xsec83.dgn
WORKSTATION: cklein
DATE: 22-DEC-1998



SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
12.85	264.2	1.64	1.83	62.9	20.4
13.57	274.7	4.65	0.21	79.1	18.0
13.90	211.2	3.26	1.59	43.5	26.7
7.22	217.9	1.09	1.08	24.3	17.3
	968			210	83

CALCULATED CmK
CHECKED RPT

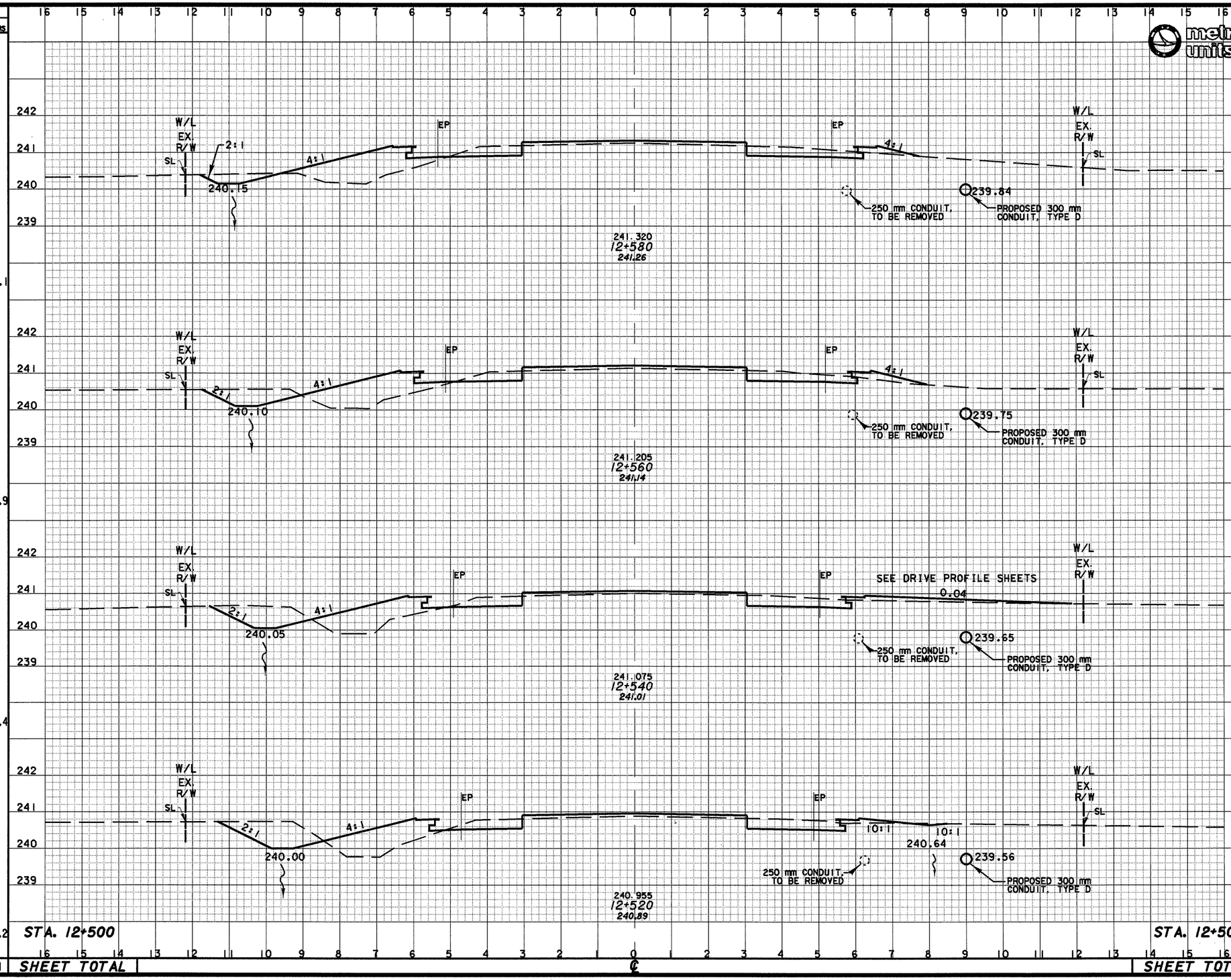
CROSS SECTIONS S.R. 83
STA. 12+440 TO STA. 12+500

LOR-83-6.727

27/86

DESIGN FILE: I:\projects\16738\dgn\xsec83.dgn
WORKSTATION: ckleln
DATE: 22-DEC-1998

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
11.49		1.52	2.24		
	234.1			34.2	44.3
11.92		1.90	2.19		
	182.9			41.6	39.5
6.37		2.26	1.76		
	190.4			47.1	35.6
12.67		2.45	1.80		
	255.2			40.9	36.3
	981 SHEET TOTAL			164	156



CALCULATED CmK
CHECKED PPT

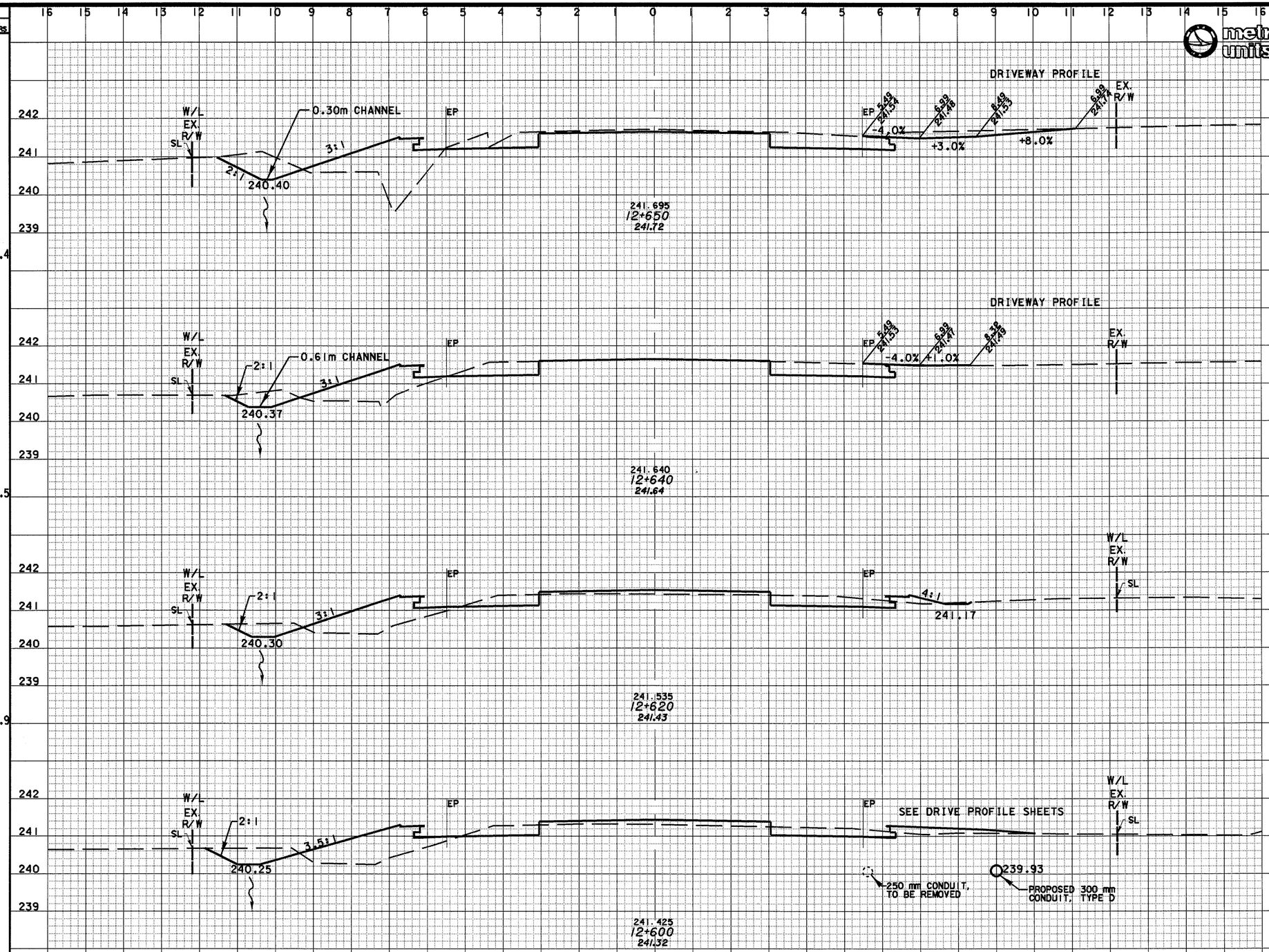
CROSS SECTIONS S.R. 83
STA. 12+520 TO STA. 12+580

LOR-83-6.727

28/86

DESIGN FILE: I:\projects\16738\dgn\xsec83.dgn
WORKSTATION: cklein
DATE: 22-DEC-1998

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
11.31	101.4	2.49	2.97	24.1	23.5
8.97	202.5	2.32	1.73	41.3	37.2
11.28	169.9	1.81	1.99	36.8	43.3
5.71	172.0	1.87	2.34	33.9	45.8
	646			137	150



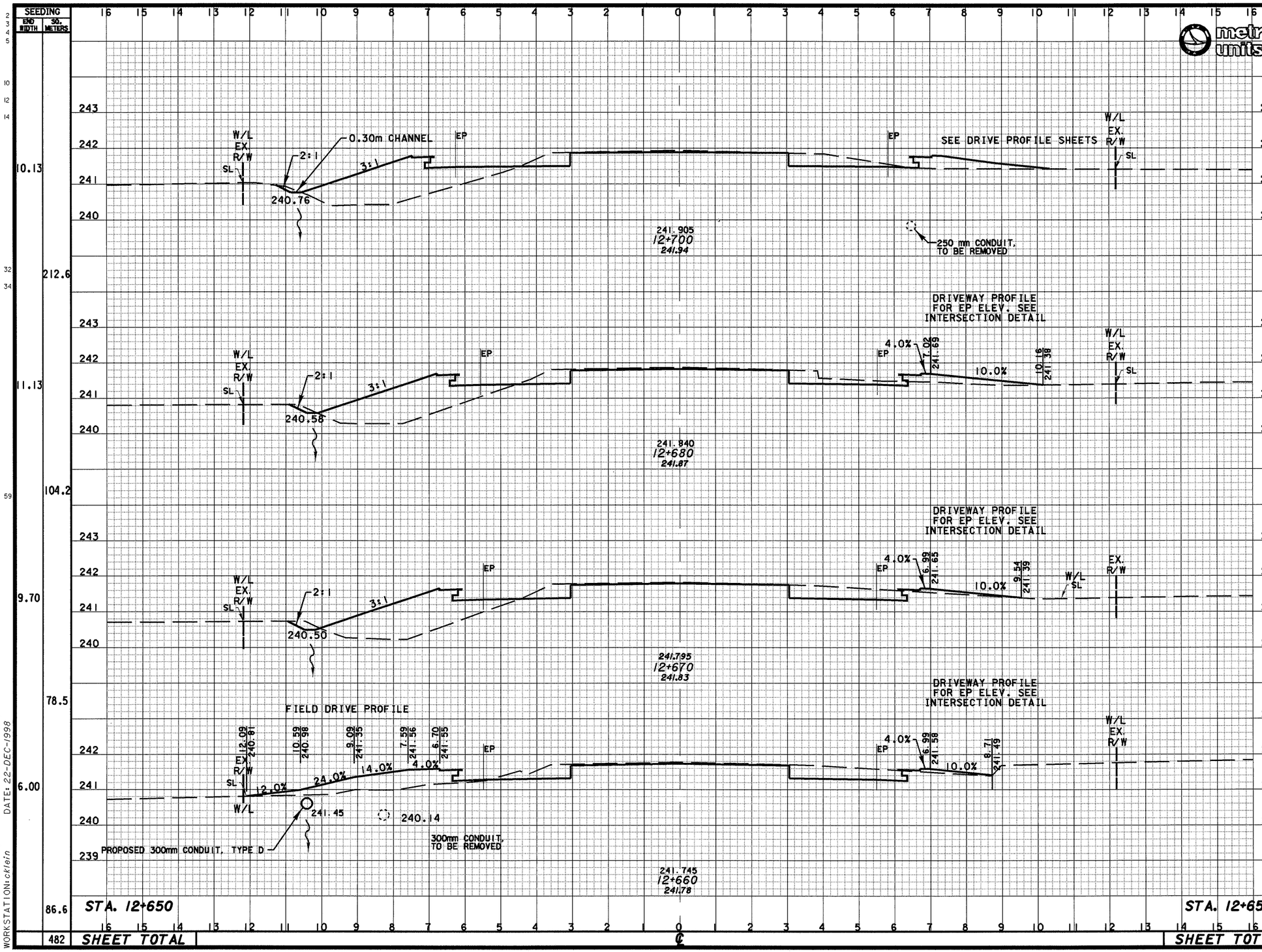
CALCULATED CmK
CHECKED RPT

CROSS SECTIONS S.R. 83
STA. 12+600 TO STA. 12+650

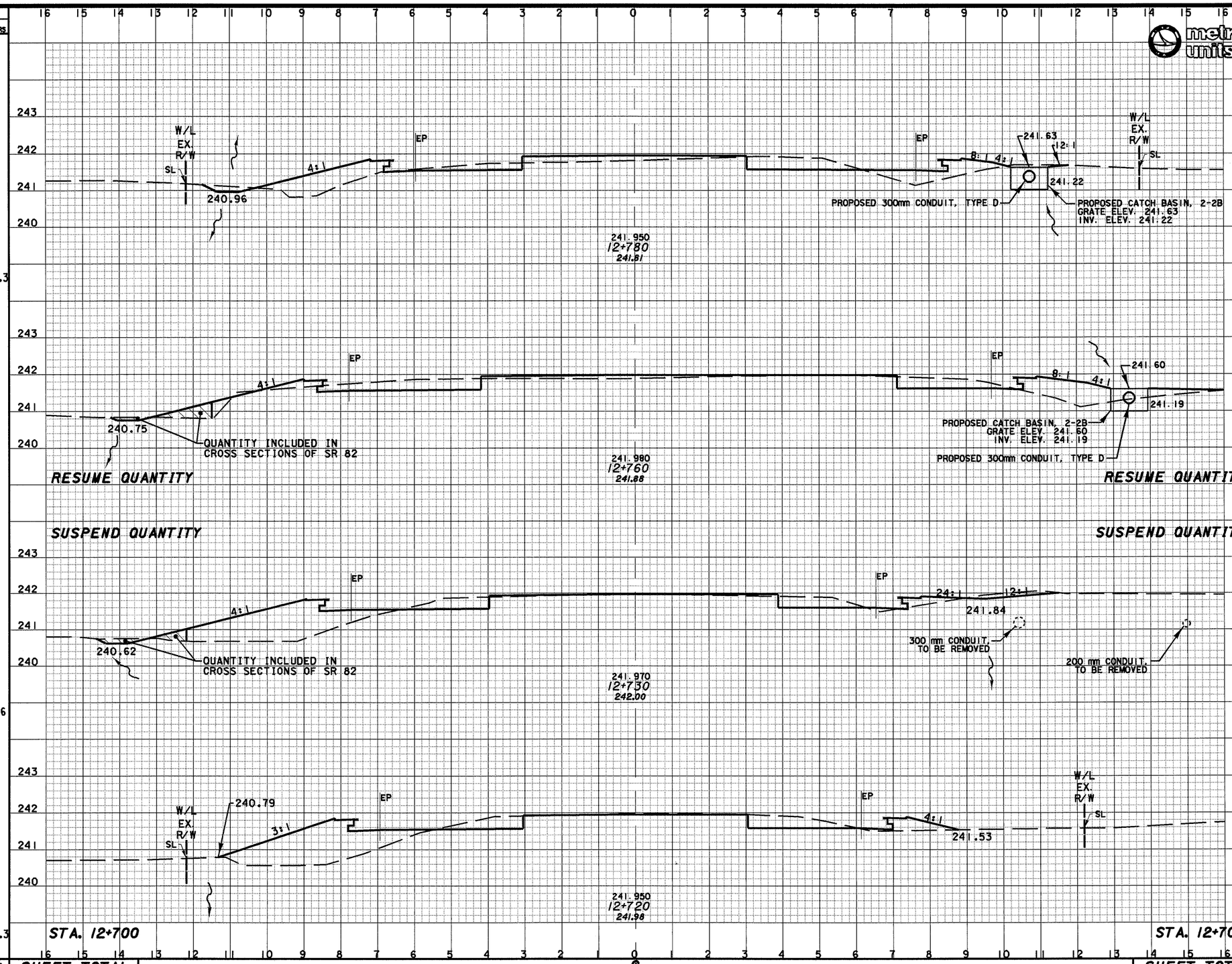
LOR-83-6.727

29/86

DESIGN FILE: I:\projects\16738\dgn\xsec83.dgn
WORKSTATION: cklein
DATE: 22-DEC-1998


SEEDING
END WIDTH
SQ. METERS
10.13
212.6
11.13
104.2
9.70
78.5
6.00
86.6
482
SHEET TOTAL
metric units
W/L
EX. R/W
SL
2:1
3:1
0.30m CHANNEL
EP
240.76
241.905
12+700
241.94
SEE DRIVE PROFILE SHEETS
250 mm CONDUIT, TO BE REMOVED
DRIVEWAY PROFILE FOR EP ELEV. SEE INTERSECTION DETAIL
240.58
241.840
12+680
241.87
4.0%
10.0%
240.50
241.795
12+670
241.83
FIELD DRIVE PROFILE
12.09
240.81
10.59
240.98
9.09
241.35
7.59
241.56
6.70
241.55
12.0%
24.0%
14.0%
4.0%
241.45
240.14
PROPOSED 300mm CONDUIT, TYPE D
300mm CONDUIT, TO BE REMOVED
241.745
12+660
241.78
STA. 12+650
SHEET TOTAL
END AREA
CUT
FILL
VOLUME
CUT
FILL
1.16 4.41
22.6 82.2
1.10 3.81
13.4 37.2
1.57 3.63
16.0 29.0
1.62 2.17
20.6 25.7
73 175
CALCULATED C.m.K
CHECKED RPT
CROSS SECTIONS S.R. 83
STA. 12+660 TO STA. 12+700
LOR-83-6.727
30
86
DESIGN FILE: I:\projects\16738\dgn\xsec83.dgn
WORKSTATION: ckfein
DATE: 22-DEC-1998

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
10.05		1.56	2.45		
	187.3			34.3	59.7
8.68		1.87	2.33		
10.02		1.40	4.08		
	95.6			13.5	40.4
9.10		1.30	3.99		
	192.3			24.6	84.0
476	SHEET TOTAL			73	185



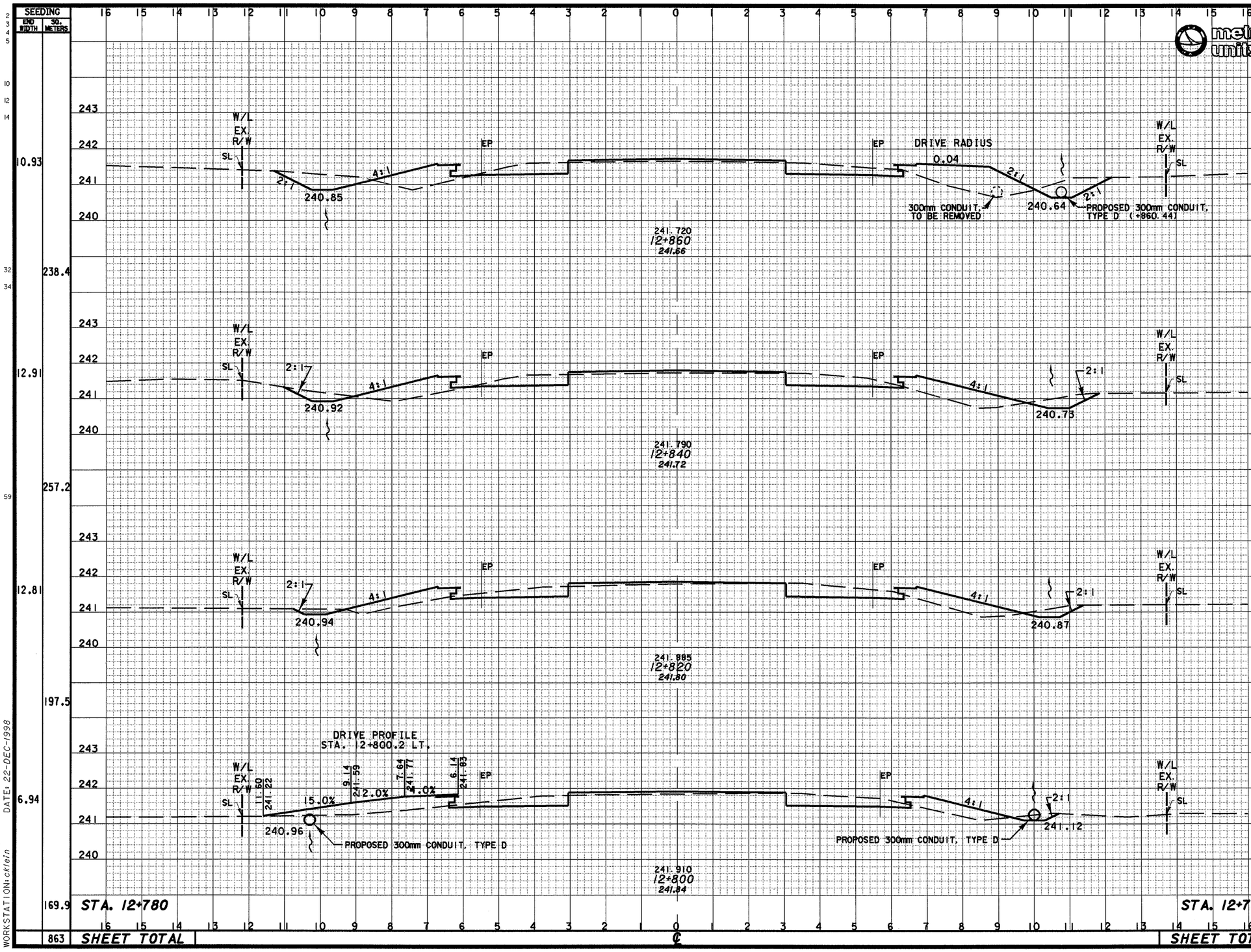
CALCULATED CmK
CHECKED RPT

CROSS SECTIONS S.R. 83
STA. 12+720 TO STA. 12+780

LOR-83-6.727

31/86

DESIGN FILE: I:\projects\16738\dgn\xsec83.dgn
WORKSTATION: ckleln
DATE: 22-DEC-1998



SEEDING END WIDTH	SEEDING 30. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
10.93		2.85	2.79		
	238.4			50.6	50.6
12.91		2.21	2.27		
	257.2			42.5	40.4
12.81		2.04	1.77		
	197.5			37.1	38.3
6.94		1.67	2.06		
	169.9			32.3	45.1
	863			163	175

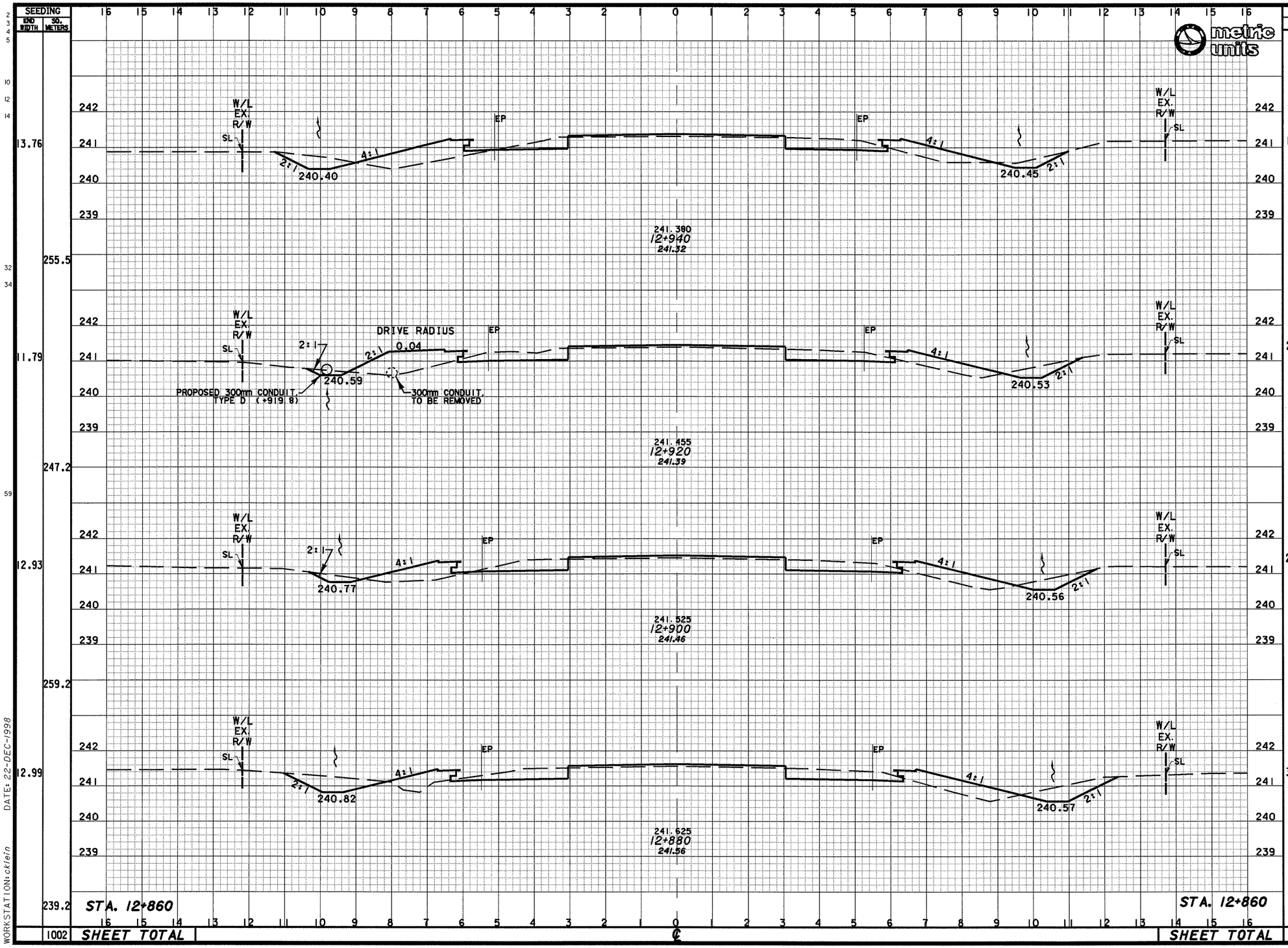
CALCULATED CmK
CHECKED RPT

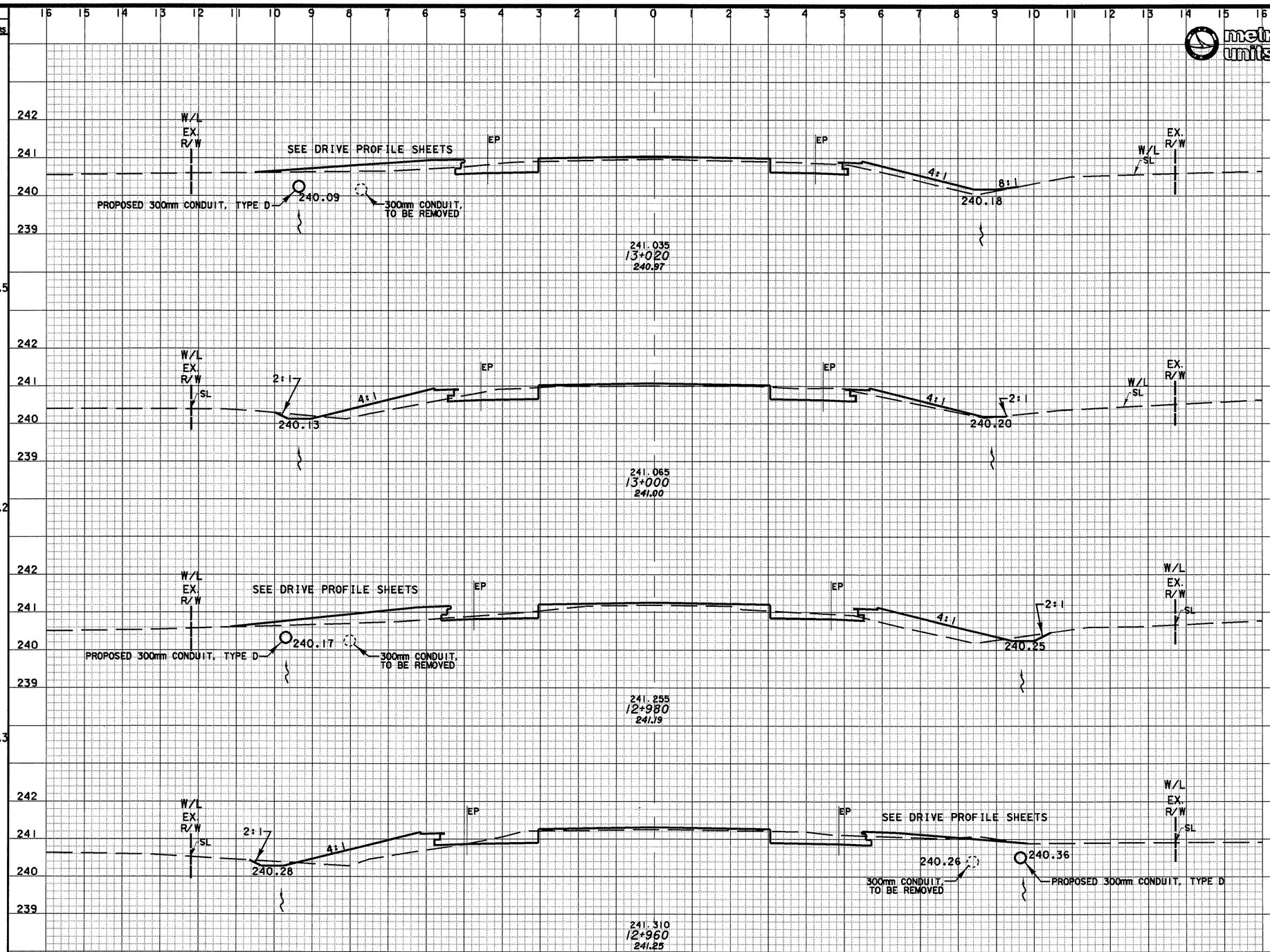
CROSS SECTIONS S.R. 83
STA. 12+800 TO STA. 12+860

LOR-83-6.727

32
86

DESIGN FILE: I:\projects\16738\dgn\xsec83.dgn
WORKSTATION: cklein
DATE: 22-DEC-1998


SEEDING
END WIDTH
SQ. METERS
13.76
255.5
11.79
247.2
12.93
259.2
12.99
239.2
1002
SHEET TOTAL
STA. 12+860
W/L EX. R/W
SL
EP
2:1
4:1
240.40
240.45
241.380
12+940
241.32
DRIVE RADIUS
0.04
240.59
240.53
PROPOSED 300mm CONDUIT, TYPE D (+919.8)
300mm CONDUIT, TO BE REMOVED
241.455
12+920
241.39
240.77
240.56
241.525
12+900
241.46
240.82
240.57
241.625
12+880
241.56
℄
END AREA
CUT
FILL
1.92
2.03
2.01
2.19
2.10
1.81
3.06
1.66
VOLUME
39.3
42.2
41.1
40.0
51.6
34.7
59.1
44.5
192
162
metric units
CALCULATED C.m.K
CHECKED RPT
CROSS SECTIONS S.R. 83
STA. 12+880 TO STA. 12+940
LOR-83-6.727
33
86
DESIGN FILE: I:\projects\16738\dgn\xsec83.dgn
WORKSTATION: cklein
DATE: 22-DEC-1998



SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
7.35					
	272.5	1.06	1.41	23.8	25.6
13.34					
	213.2	1.32	1.15	20.7	34.3
7.98					
	138.3	0.75	2.28	21.6	38.8
5.85					
	196.1	1.26	1.48	31.8	35.1
	821			98	134

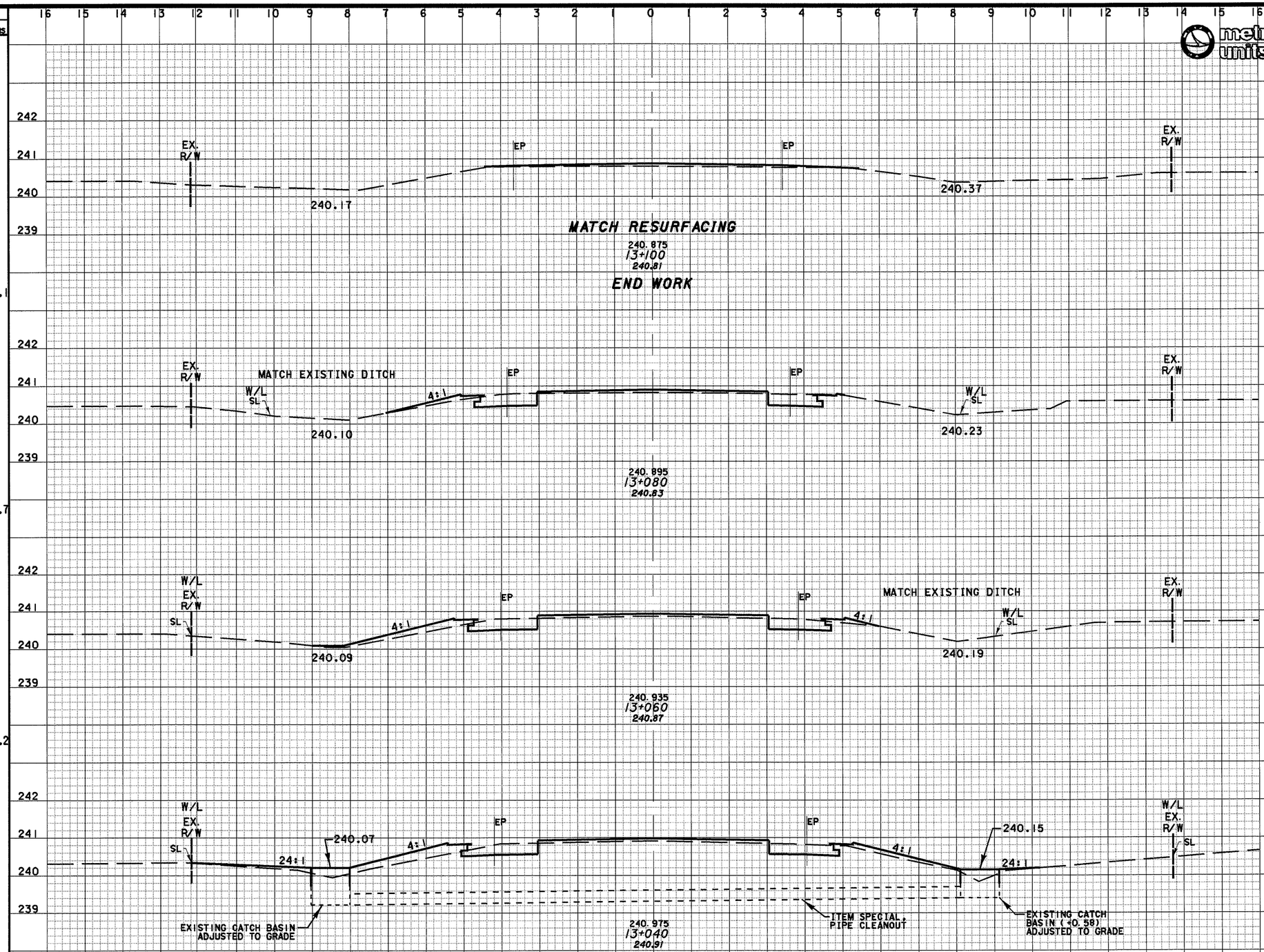
CALCULATED CmK
CHECKED RPT

CROSS SECTIONS S.R. 83
STA. 12+960 TO STA. 13+020

LOR-83-6.727

34/86

DESIGN FILE: I:\projects\16738\dgn\xsec83.dgn
WORKSTATION: cklein
DATE: 22-DEC-1998



SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
4.45		0	0		
	129.1			9.3	1.6
8.46		0.93	0.16		
	195.7			18.7	7.3
11.11		0.94	0.57		
	261.2			19.5	14.1
15.01		1.01	0.84		
	223.6			20.7	22.5
	810 SHEET TOTAL			69	46

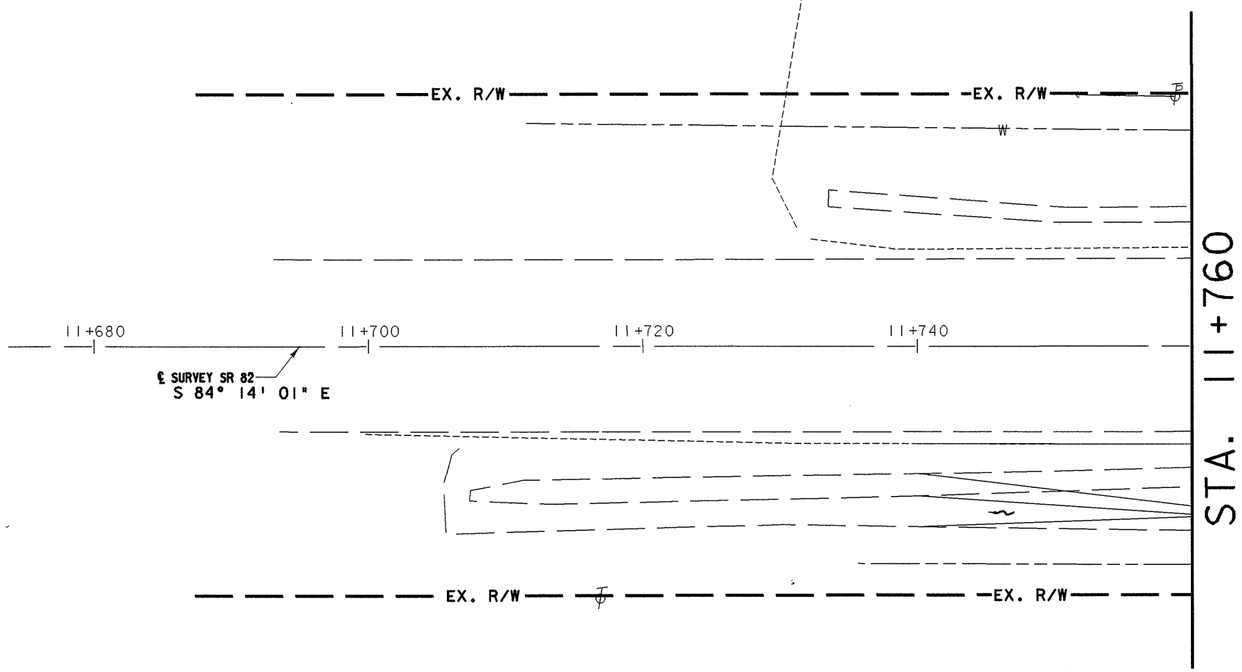
CALCULATED CmK
CHECKED RPT

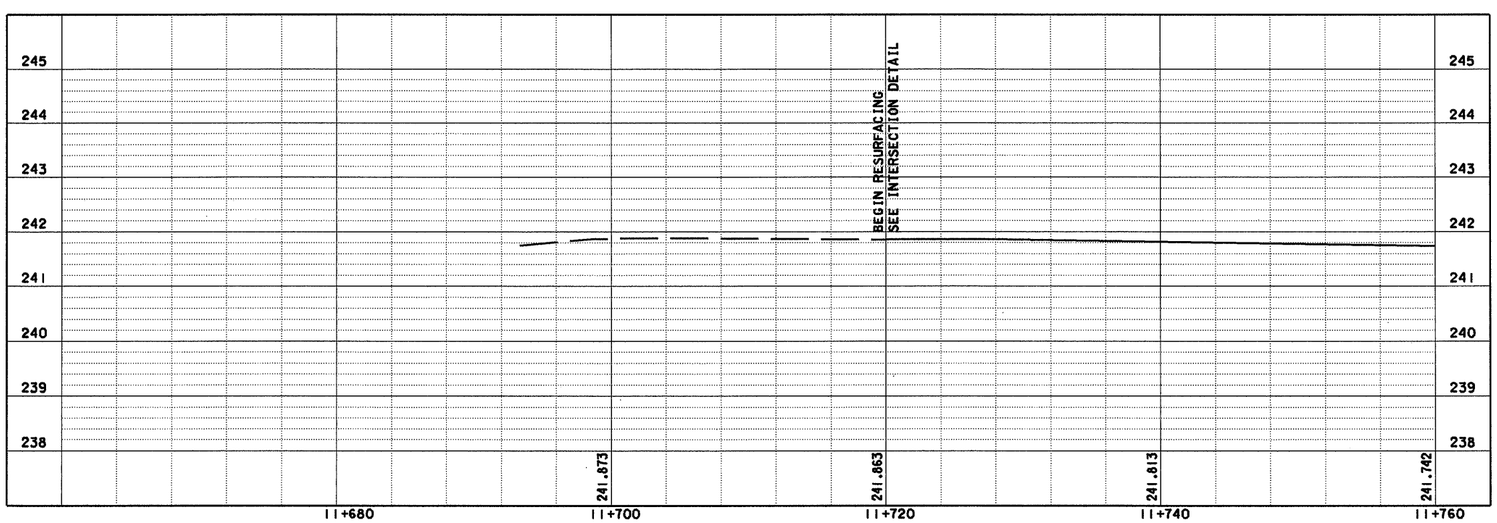
CROSS SECTIONS S.R. 83
STA. 13+040 TO STA. 13+100

LOR-83-6.727

35/86

DESIGN FILE: I:\projects\16738\dgn\xsec83.dgn
WORKSTATION: cklein
DATE: 22-DEC-1998





ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS

ITEM NO.	STATION FROM	STATION TO	SIDE	TOTALS

metric units

HORIZONTAL SCALE IN METERS

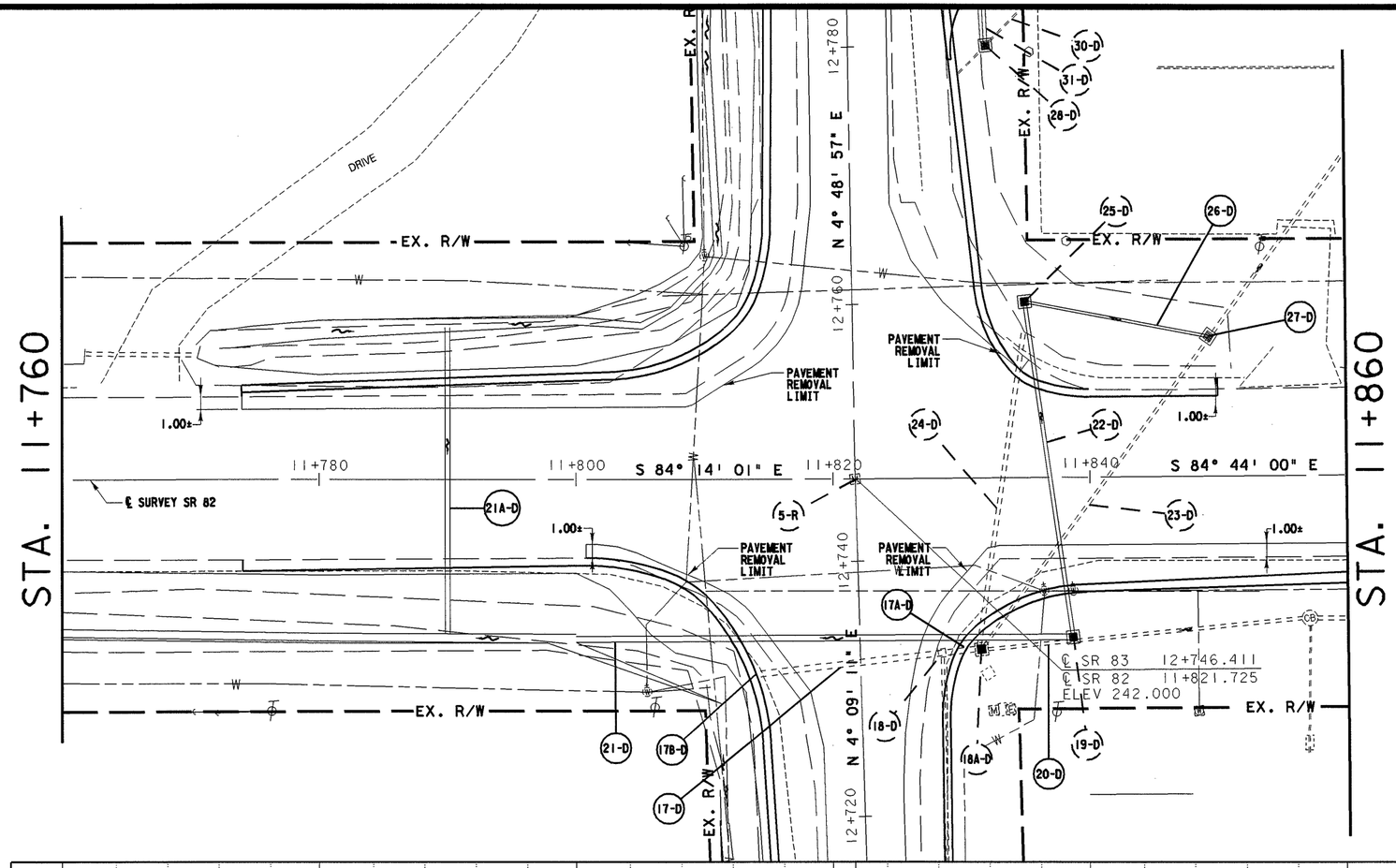
CALCULATED CmK CHECKED RPT

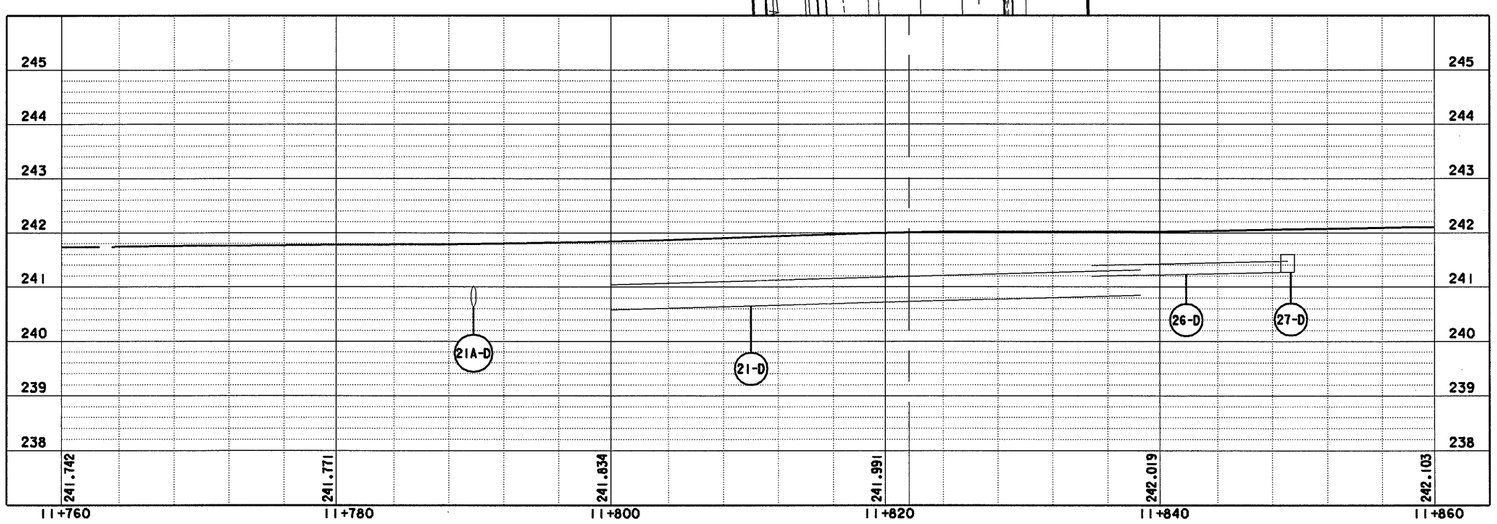
PLAN AND PROFILE S.R. 82
STA. 11+680 TO STA. 11+760

LOR-83-6.727

36/86

DESIGN FILE: i:\projects\16738\Dgn\82prof.dgn
WORKSTATION: rtrivoli DATE: 22-DEC-1998





metric units

HORIZONTAL SCALE IN METERS

CALCULATED CmK
CHECKED RPT

27-D
CB-2-2B
STA. 11+849.3
OFFSET 10.9 LT
INV. ELEV. 241.27
T/G 241.60

21-D
38.7m - 460mm CONDUIT, TYPE B

OUTLET	INLET
STA. 11+800.0	STA. 11+838.6
OFFSET 12.5 RT	OFFSET 12.5 RT
ELEV. 240.58	ELEV. 240.85

21A-D
23.8m - 375mm CONDUIT, TYPE B

INLET	OUTLET
STA. 11+790.0	STA. 11+790.0
OFFSET 11.8 LT	OFFSET 12.0 RT
ELEV. 240.70	ELEV. 240.57

26-D
14.6m - 200mm CONDUIT, TYPE C

OUTLET	INLET
STA. 11+835.0	STA. 11+849.3
OFFSET 13.7 LT	OFFSET 10.9 LT
ELEV. 241.19	ELEV. 241.27

ITEMS INDICATED WITH DASHED REFERENCE BALLOONS ARE TABULATED ON ANOTHER PLAN SHEET.

ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS

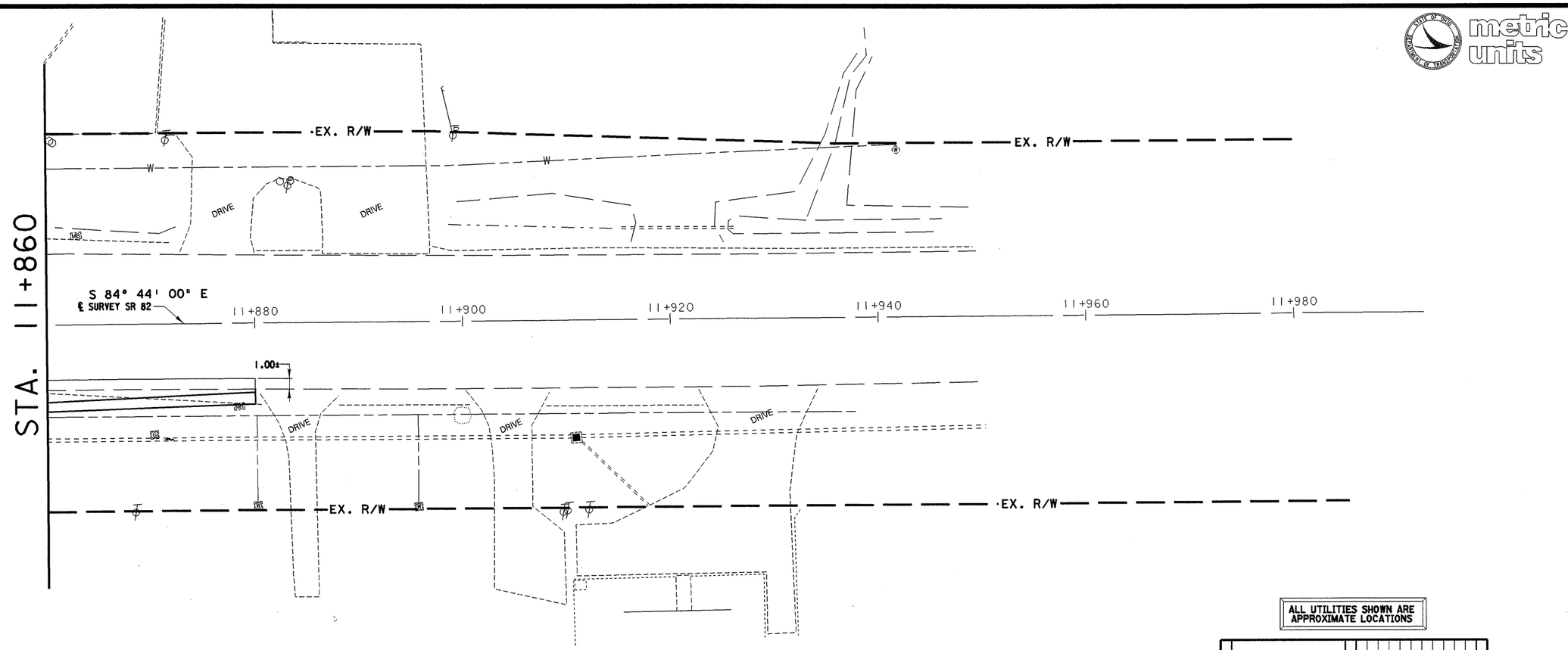
ITEM NO.	STATION FROM	STATION TO	SIDE	202 PIPE REMOVED, 600 MM AND UNDER (METER)	202 REMOVAL MISC.: DRAINAGE STRUCTURE (EACH)	603 200 MM CONDUIT, TYPE C (METER)	603 375 MM CONDUIT, TYPE B (METER)	603 450 MM CONDUIT, TYPE B (METER)	604 CATCH BASIN, NO. 2-2B (EACH)
17-D	11+814.1	11+828.3	Rt	14.0					
17A-D	11+828.3	11+831.4	Rt	3.0					
17B-D	11+814.1		Rt		1				
20-D	11+831.4	11+838.6	Rt	7.2					
21-D	11+800.0	11+838.6	Rt					38.7	
21A-D	11+790.0	11+790.0	-				23.8		
26-D	11+835.0	11+849.3	Lt			14.6			
27-D	11+849.3		Lt						1
TOTALS				24.2	1	14.6	23.8	38.7	1

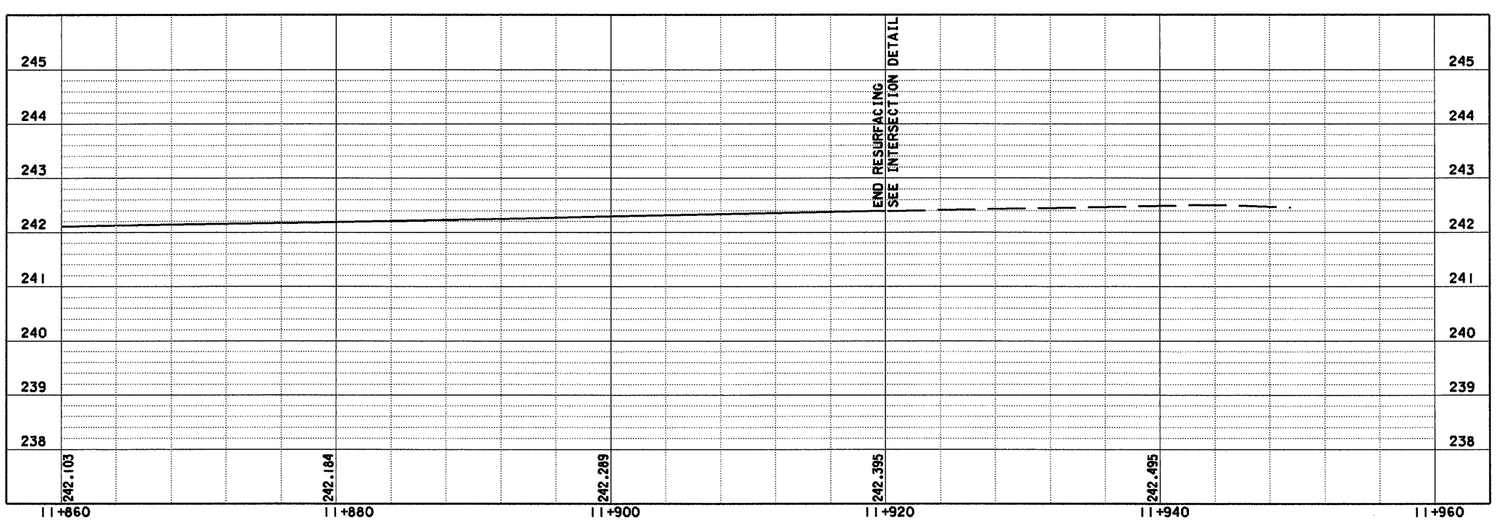
PLAN AND PROFILE S.R. 82
STA. 11+760 TO STA. 11+860

LOR-83-6.727

37
86

DESIGN FILE: I:\projects\16738\dgn\82prof.dgn
WORKSTATION: cklein
DATE: 22-DEC-1998





ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS

ITEM NO.	STATION FROM	STATION TO	SIDE	TOTALS

metric units

HORIZONTAL SCALE IN METERS

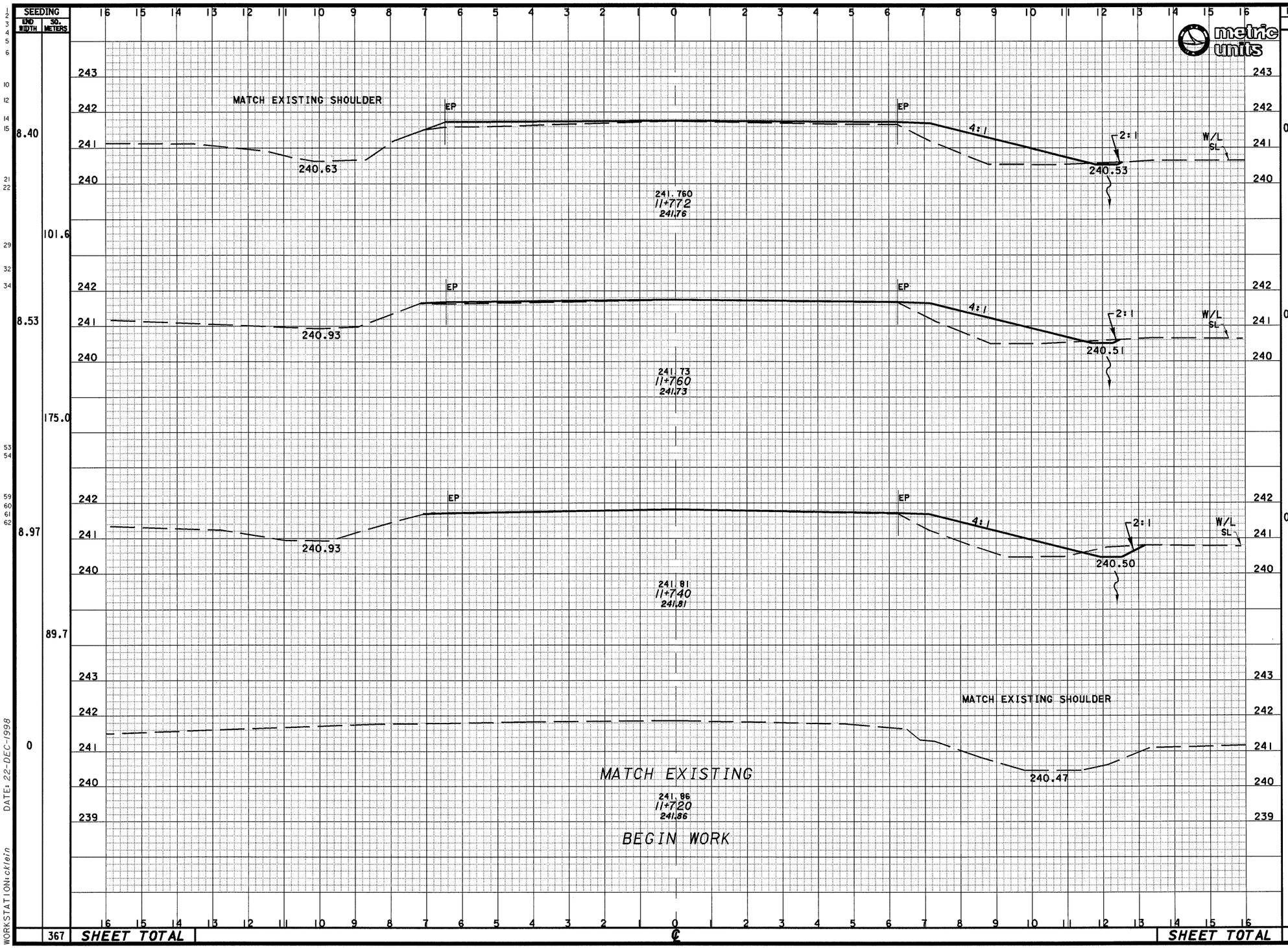
CALCULATED CmK
CHECKED RPT

PLAN AND PROFILE S.R. 82
STA. 11+860 TO STA. 11+960

LOR-83-6.727

38/86

DESIGN FILE: i:\projects\16738\Dgn\82prof.dgn
WORKSTATION: rtrivoli
DATE: 22-DEC-1998



SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
8.40		0.04	2.29		
	101.6			2.4	26.9
8.53		0.06	2.16		
	175.0			3.9	43.7
8.97		0.33	2.21		
	89.7			3.3	22.1
0		0	0		
	367			10	93

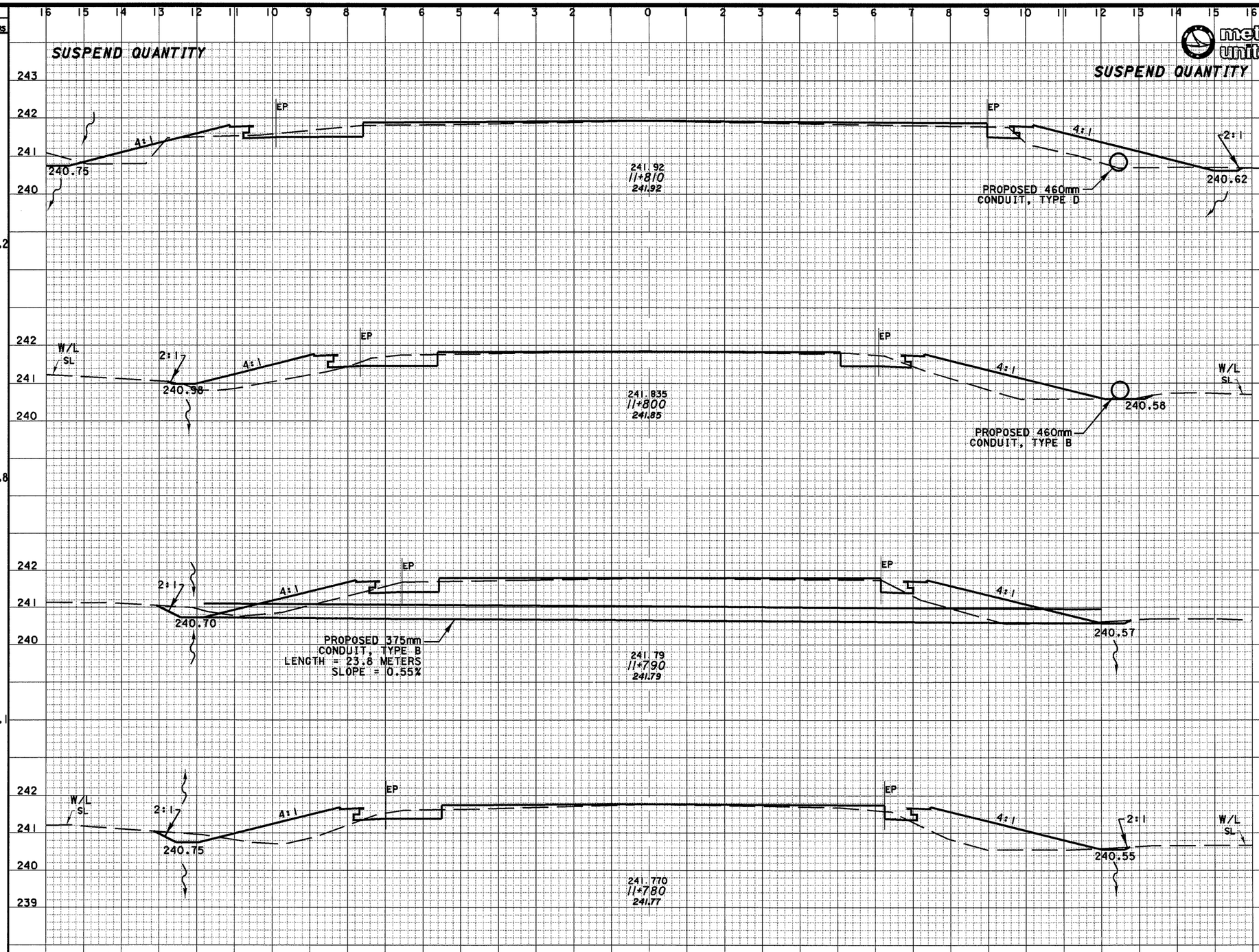
CALCULATED CmK
CHECKED

CROSS SECTIONS S.R. 82
STA. 11+720 TO STA. 11+772

LOR-83-6.727

39/86

DESIGN FILE: I:\projects\16738\dgn\xsec82.dgn
WORKSTATION: ckleinn
DATE: 22-DEC-1998



SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
16.38		0.99	2.44		
	160.2			10.2	29.4
15.66		1.04	3.44		
	172.8			7.15	27.5
18.89		0.39	2.05		
	164.1			5.9	30.7
15.93		0.79	4.09		
	97.3			3.3	25.5
	595			27	114

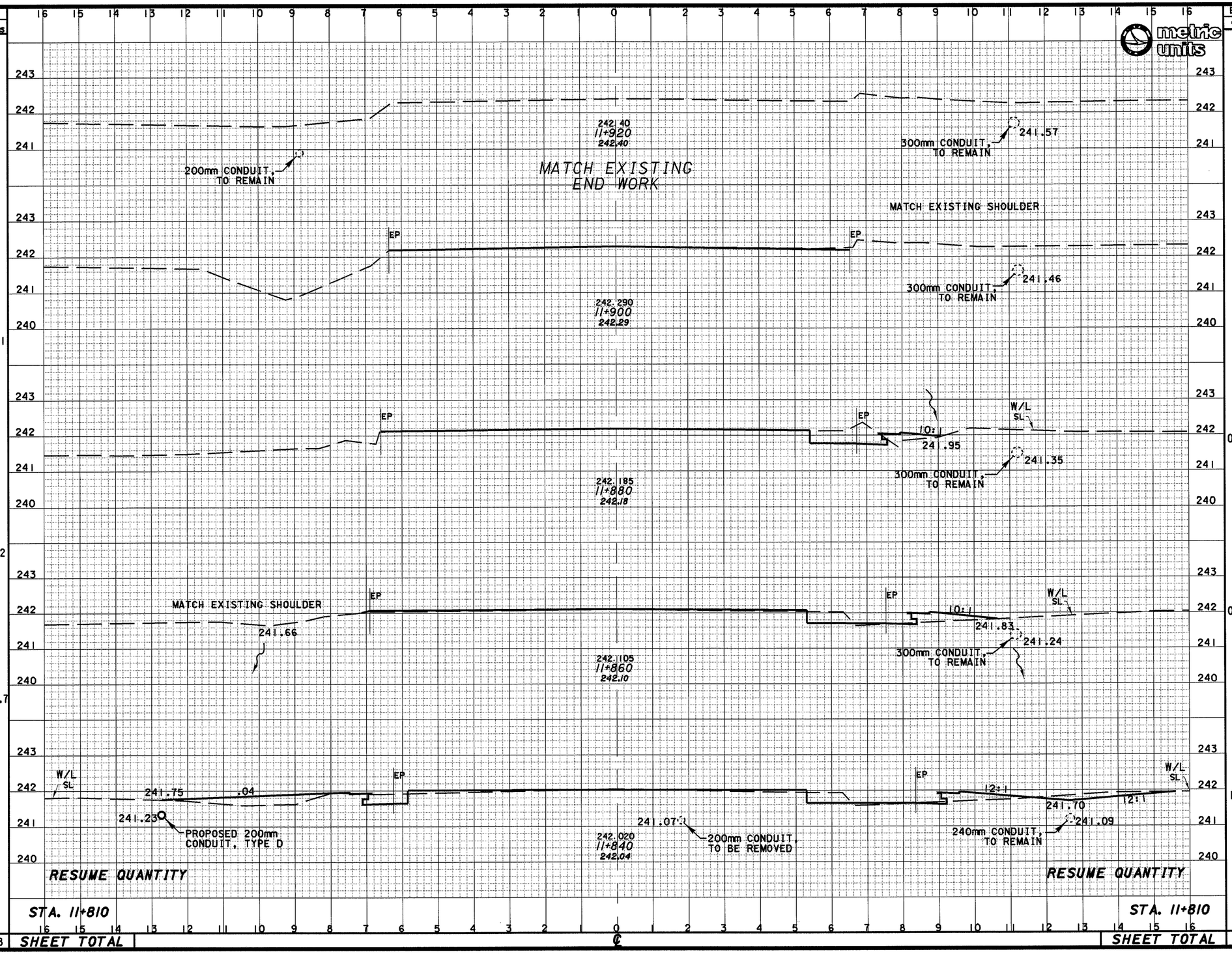
CALCULATED CmK
CHECKED

CROSS SECTIONS S.R. 82
STA. 11+780 TO STA. 11+810

LOR-83-6.727

40/86

DESIGN FILE: I:\projects\16738\dgn\xsec82.dgn
WORKSTATION: cklein
DATE: 22-DEC-1998



SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0		0	0		
	41.1			8.5	2.5
4.11		0.85	0.25		
	90.2			12.5	6.0
4.91		0.40	0.35		
	196.7			17.8	15.7
14.76		1.38	1.22		
	328			39	25

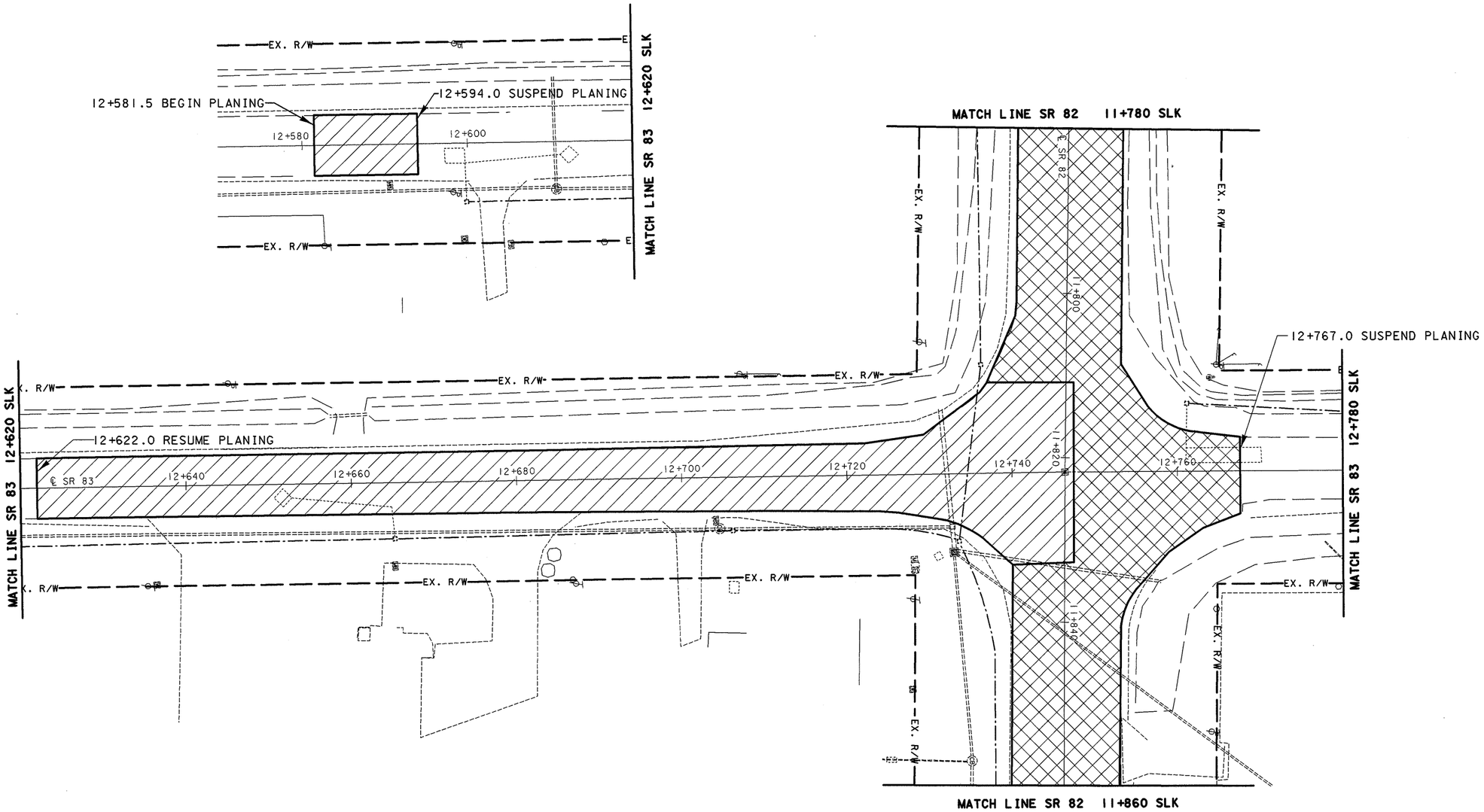
CALCULATED C.m.K.
CHECKED

CROSS SECTIONS S.R. 82
STA. 11+840 TO STA. 11+920

LOR-83-6.727

41
86

DESIGN FILE: i:\projects\16738\dgn\xsec82.dgn
WORKSTATION: cklein
DATE: 22-DEC-1998



ITEM	QUANTITY	UNIT	DESCRIPTION
	2465	square meter	63 mm AVG. DEPTH
	1440	square meter	VARIABLE DEPTH - 0mm MIN TO 105mm MAX
254	3905	square meter	PAVEMENT PLANING. BITUMINOUS

NOTES:

1. FOR MATCH LINES SEE SHEET 43
2. ALL QUANTITIES CARRIED TO SHEETS 2,3,4

metric units

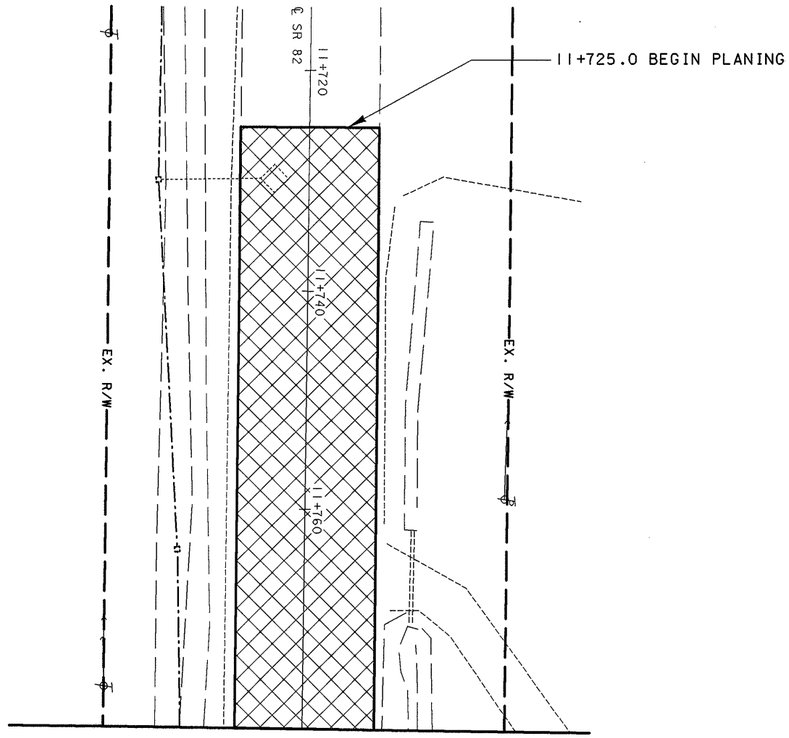
HORIZONTAL SCALE IN METERS

CALCULATED CmK CHECKED mpl

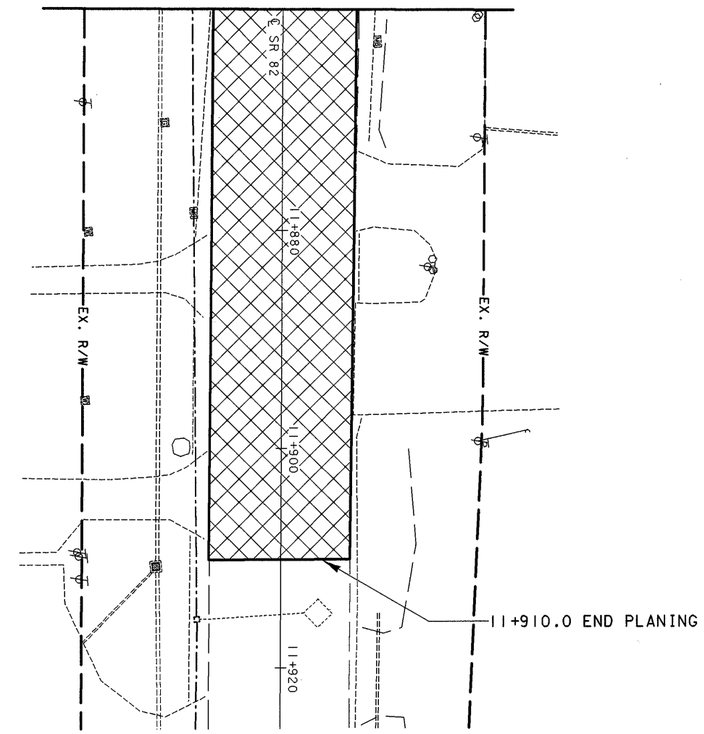
PLANING DETAIL

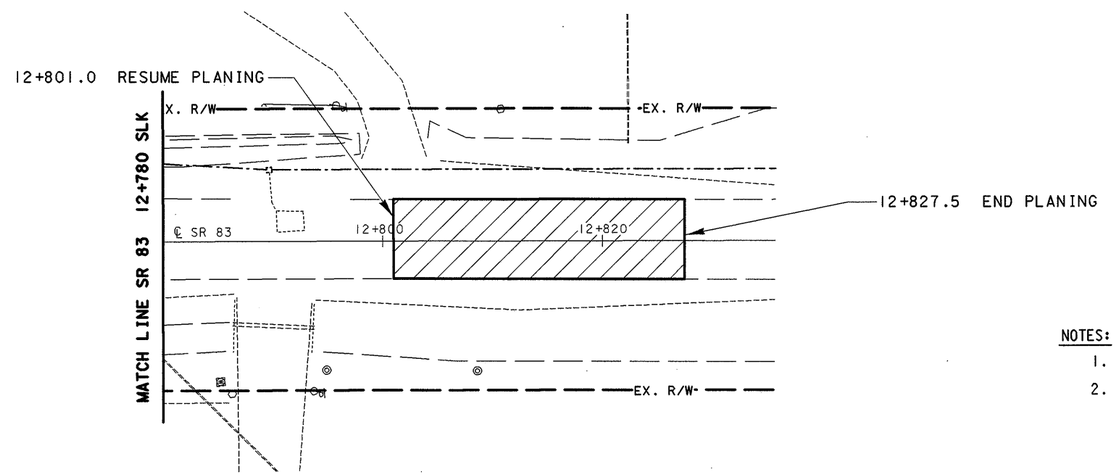
LOR-83-6.727

DESIGN FILE: i:\projects\16738\dgn\planing.dgn
WORKSTATION: ckleln
DATE: 22 DEC 1998



MATCH LINE SR 82 11+780 SLK





NOTES:

1. FOR MATCH LINES SEE SHEET 42
2. ALL QUANTITIES CARRIED TO SHEETS 2,3,4

metric units

HORIZONTAL SCALE IN METERS 0 2 4 8

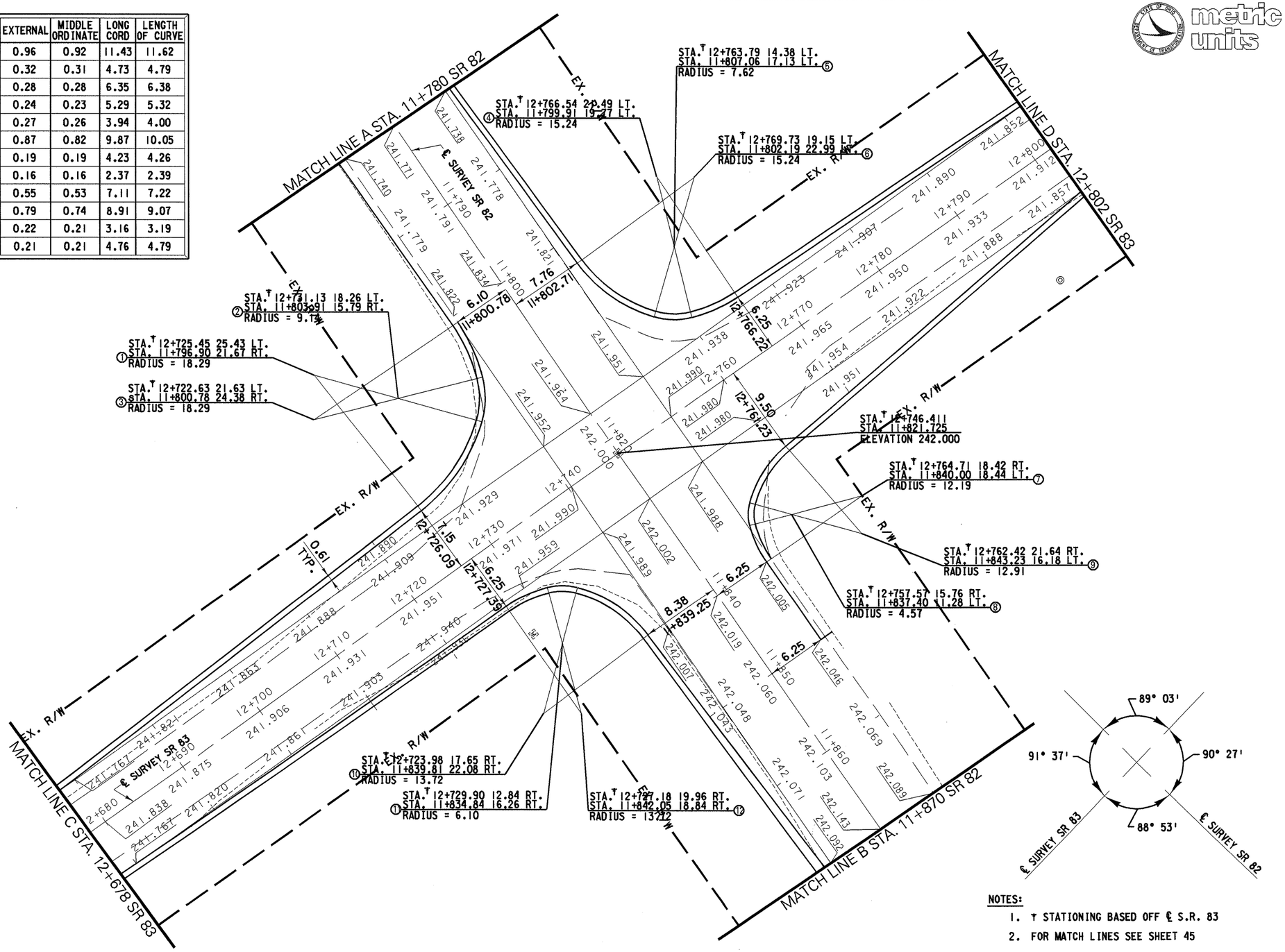
CALCULATED CmK CHECKED MPL

PLANING DETAIL

LOR-83-6.727

DESIGN FILE: I:\projects\16738\dgn\planing.dgn
WORKSTATION: *cklein* DATE: *22 DEC 1998*

CURVE NO.	RADIUS	INTERIOR ANGLE	TANGENT	EXTERNAL	MIDDLE ORDINATE	LONG CORD	LENGTH OF CURVE
1	18.29	36.4°	6.01	0.96	0.92	11.43	11.62
2	9.14	30.0°	2.45	0.32	0.31	4.73	4.79
3	18.29	20.0°	3.23	0.28	0.28	6.35	6.38
4	15.24	20.0°	2.69	0.24	0.23	5.29	5.32
5	7.62	30.0°	2.04	0.27	0.26	3.94	4.00
6	15.24	37.8°	5.21	0.87	0.82	9.87	10.05
7	12.19	20.0°	2.15	0.19	0.19	4.23	4.26
8	4.57	30.0°	1.23	0.16	0.16	2.37	2.39
9	12.19	33.92°	3.72	0.55	0.53	7.11	7.22
10	13.72	37.9°	4.71	0.79	0.74	8.91	9.07
11	6.10	30.0°	1.63	0.22	0.21	3.16	3.19
12	13.72	20.0°	2.42	0.21	0.21	4.76	4.79



NOTES:

1. T STATIONING BASED OFF ℄ S.R. 83
2. FOR MATCH LINES SEE SHEET 45

metric units

HORIZONTAL SCALE IN METERS

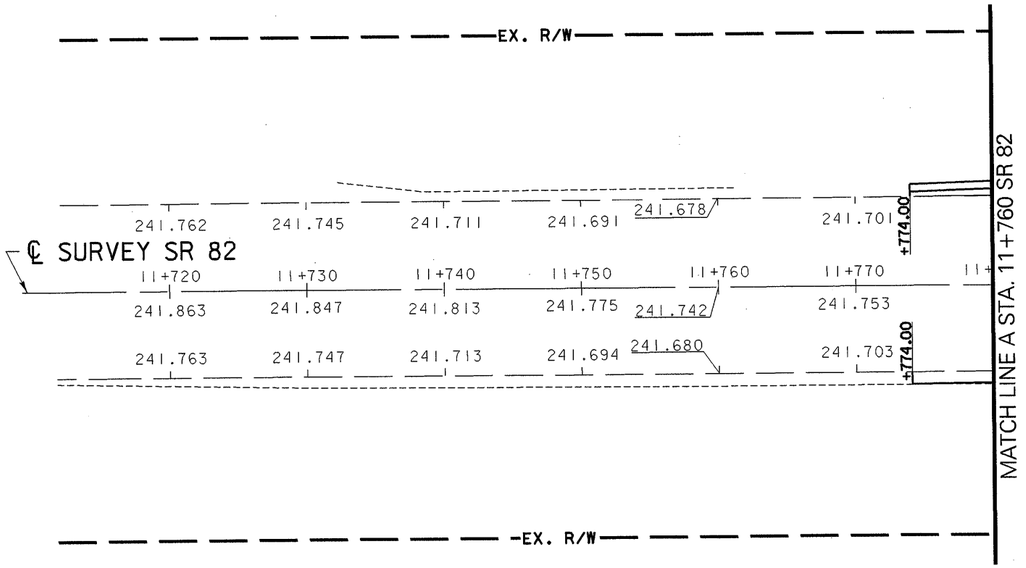
CALCULATED RPT
CHECKED

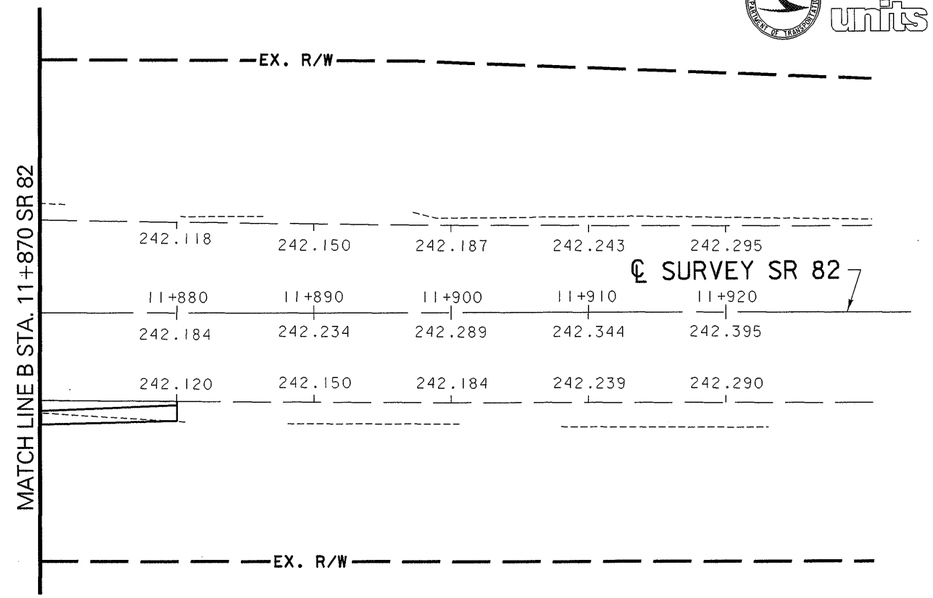
INTERSECTION DETAIL

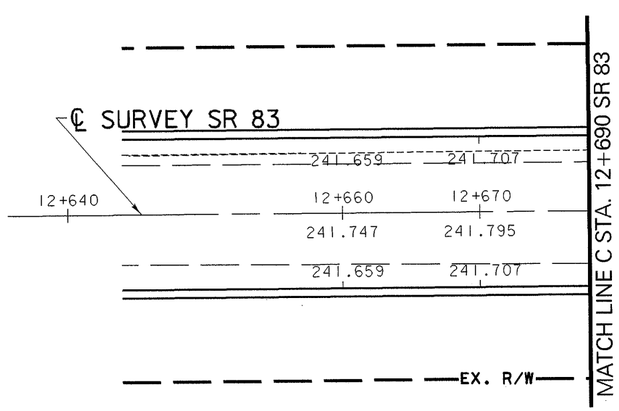
LOR-83-6.727

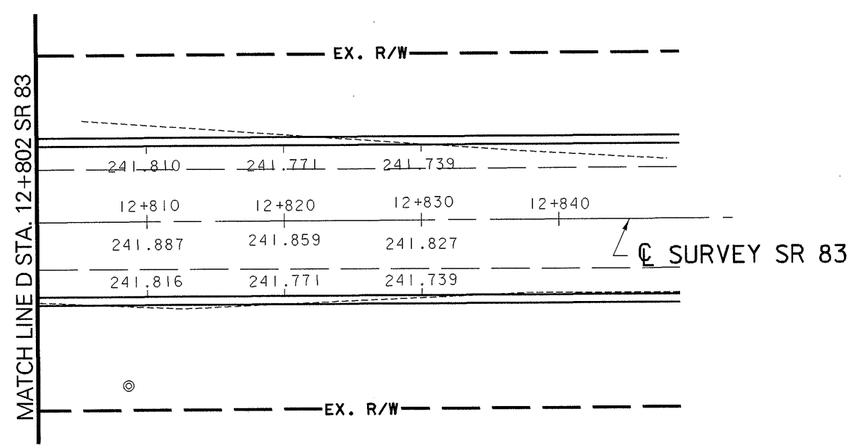
44
86

DESIGN FILE: I:\projects\16738\dgn\Interdet.dgn
WORKSTATION: ckleln
DATE: 22-DEC-1998









NOTES:

1. ⊤ STATIONING BASED OFF ℄ S.R. 83
2. FOR MATCH LINES SEE SHEET 44

metric units

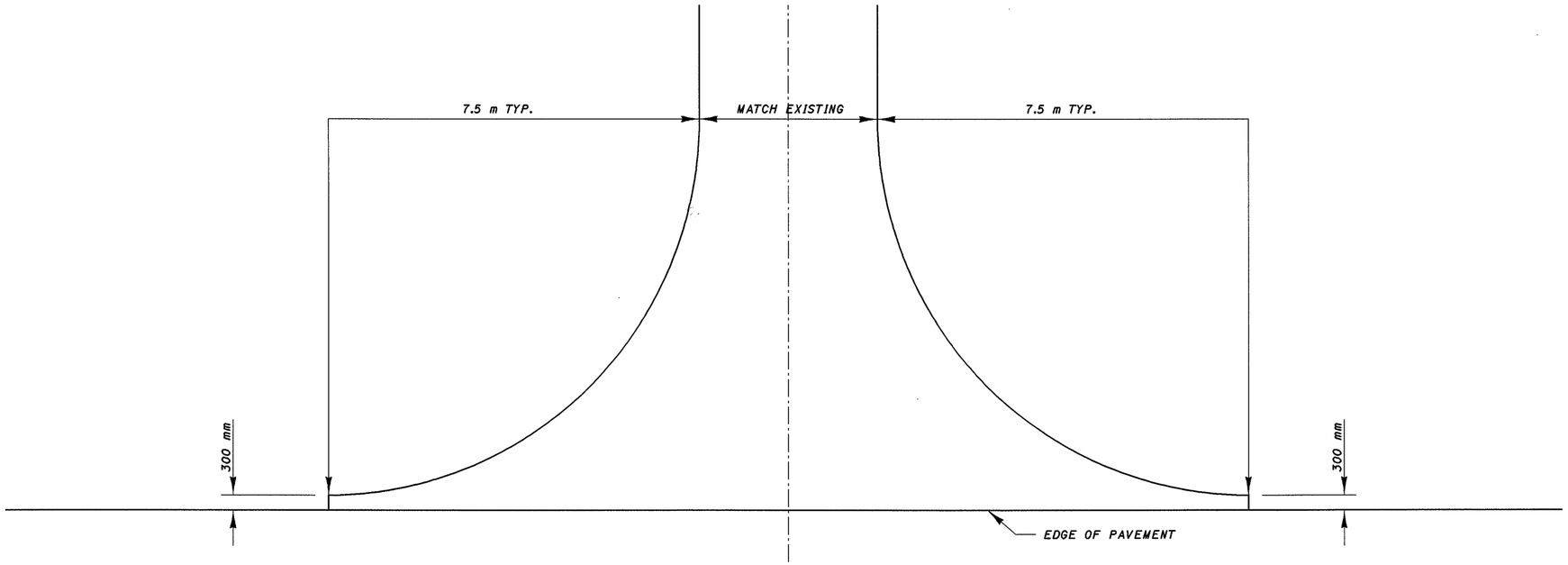
HORIZONTAL SCALE IN METERS

CALCULATED RPT
CHECKED

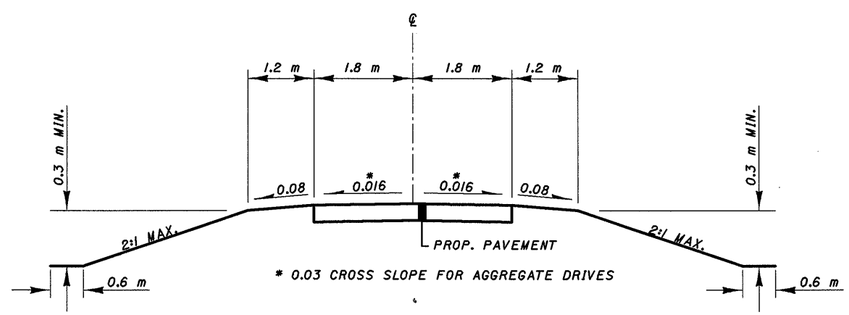
INTERSECTION DETAIL

LOR-83-6.727

DESIGN FILE: i:\projects\16738\dgn\interdet.dgn
WORKSTATION: cklein
DATE: 22-DEC-1998



FOR DETAILS NOT SHOWN, SEE STD. DRAWING BP-4.1 m



* 0.03 CROSS SLOPE FOR AGGREGATE DRIVES

FIELD DRIVE

(A) 304 AGGREGATE BASE 150 mm

RESIDENTIAL DRIVE

(A) 452 PLAIN PORTLAND CEMENT 152 mm

OR

(C) 448 ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG 64-22 (DRIVEWAYS) 38 mm
301 BITUMINOUS AGGREGATE BASE 95mm

OR

(D) 304 AGGREGATE BASE 200 mm

COMMERCIAL DRIVE

(A) 452 PLAIN PORTLAND CEMENT 203 mm

OR

(C) 448 ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG 64-22 (DRIVEWAYS) 32 mm
301 BITUMINOUS AGGREGATE BASE 121 mm

OR

(D) 304 AGGREGATE BASE 250 mm

CALCULATED RPT
CHECKED

DRIVE DETAILS

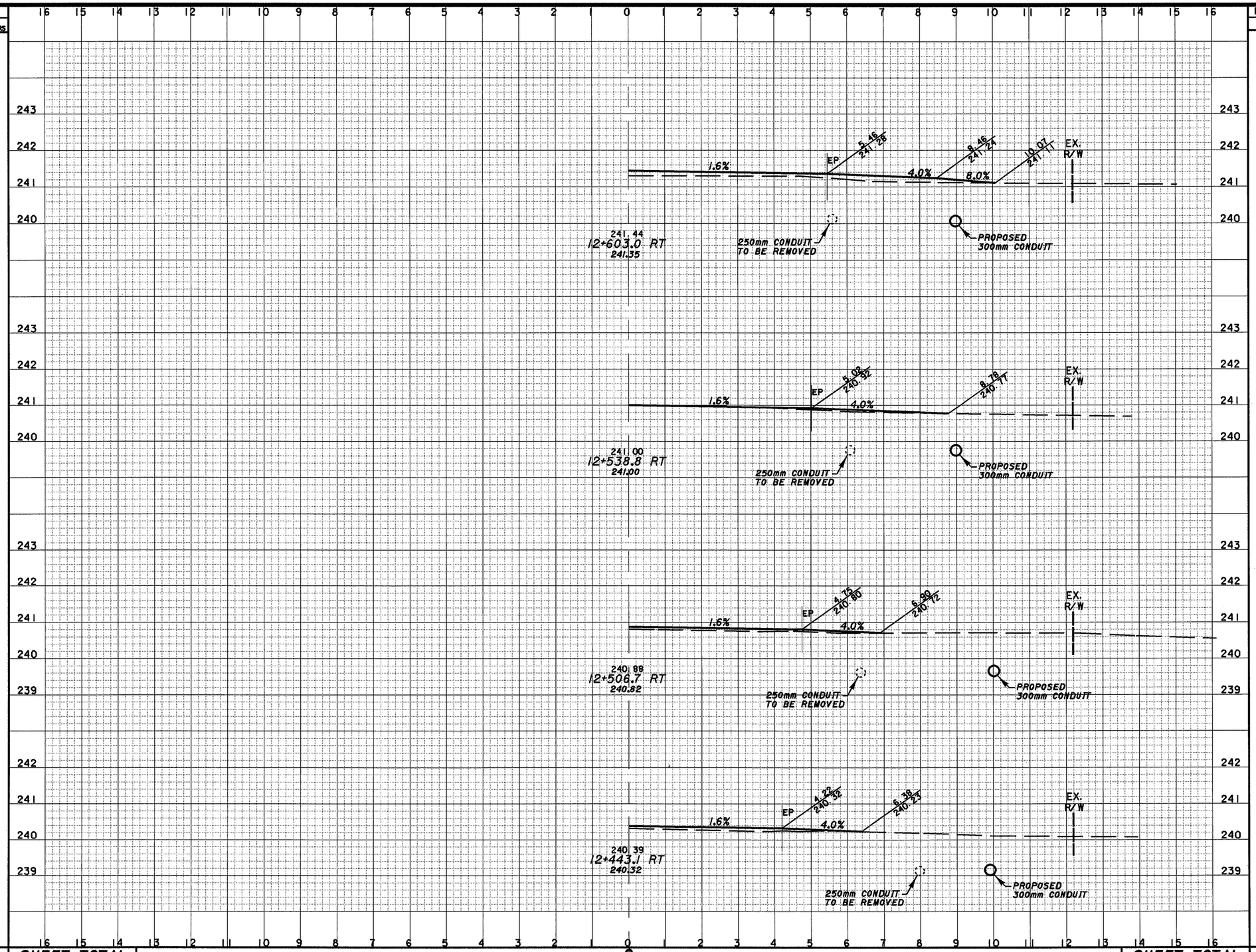
LOR-83-6.727

DESIGN FILE: I:\projects\16738\Dgn\drives.dgn
WORKSTATION: rtrivol/ DATE: 30 DEC 98

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED RPT
CHECKED MM



DRIVE PROFILES S.R. 83

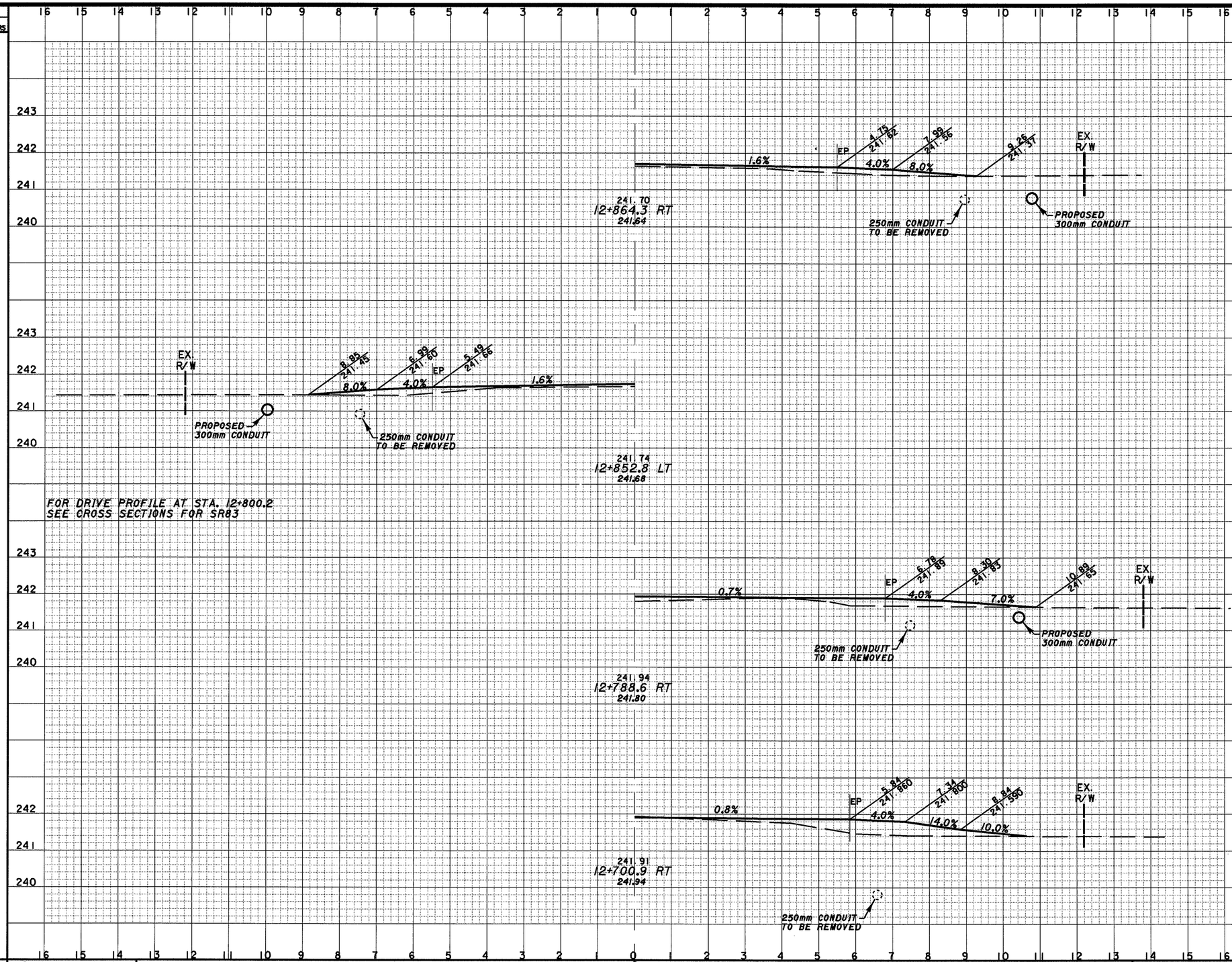
LOR-83-6.727

47/86

DESIGN FILE: i:\projects\16738\dgn\drives.dgn
WORKSTATION: cklein
DATE: 22-DEC-1998

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL



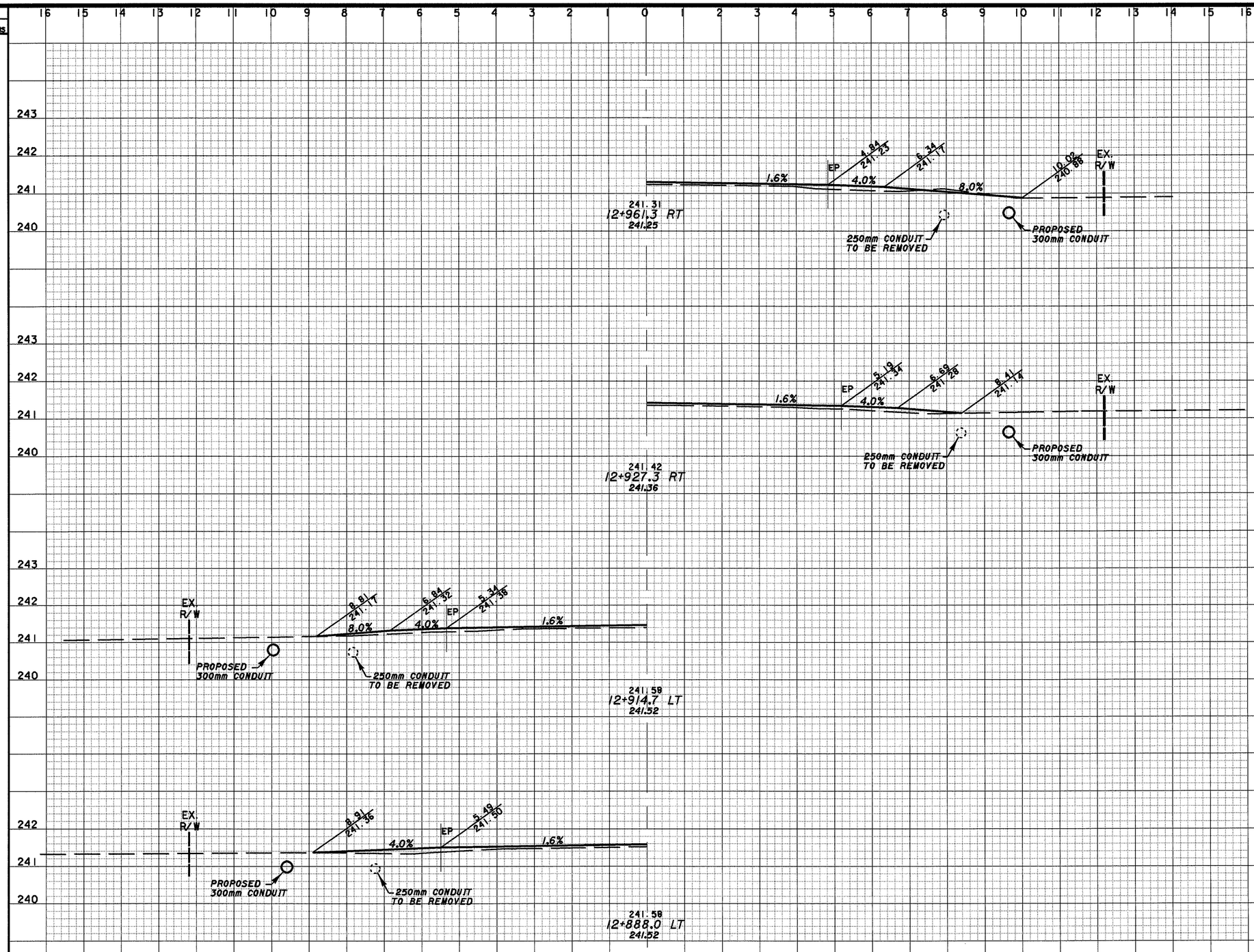
CALCULATED RPT
CHECKED TMK

DRIVE PROFILES S.R. 83

LOR-83-6.727

48
86

DESIGN FILE: i:\projects\16738\dgn\drives.dgn
WORKSTATION: cklein
DATE: 22-DEC-1998



END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED RPT
CHECKED MM

DRIVE PROFILES S.R. 83

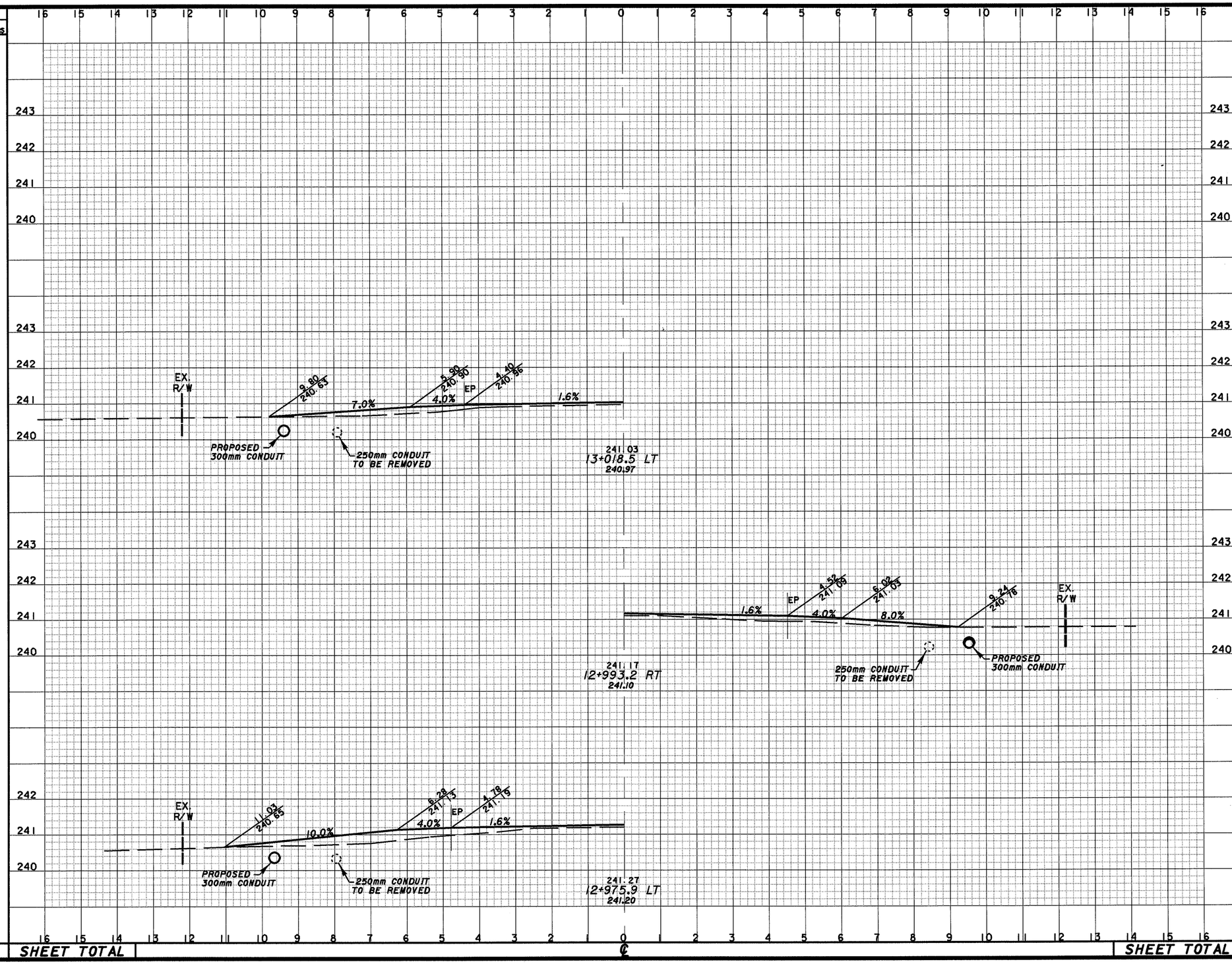
LOR-83-6.727

DESIGN FILE: I:\projects\16738\dgn\drives.dgn
WORKSTATION: ckleln
DATE: 22-DEC-1998

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED RPT
CHECKED 7/12



DRIVE PROFILES S.R. 83

LOR-83-6.727

DESIGN FILE: I:\projects\16738\dgn\drives.dgn
WORKSTATION: ckleln DATE: 22-DEC-1998

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL:

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN ON STANDARD CONSTRUCTION DRAWING GR-1.1M. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

GUARDRAIL REPLACEMENT:

NO HAZARD SHALL BE LEFT UNPROTECTED EXCEPT FOR THE ACTUAL TIME NECESSARY TO REMOVE GUARDRAIL, INSTALL EMBANKMENT, GRADE AND REINSTALL GUARDRAIL IN A CONTINUOUS OPERATION. THE REMOVAL OF ALL GUARDRAIL SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER. NO GUARDRAIL SHALL BE REMOVED UNTIL THE REPLACEMENT MATERIAL IS ON SITE, READY FOR INSTALLATION. FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE DEEMED SUFFICIENT CAUSE TO ORDER WORK SUSPENDED ON THIS PROJECT UNTIL SUCH TIME THAT THE ENGINEER IS ASSURED OF SAID COMPLIANCE.

FIELD DRIVE RELOCATION:

THE CONTRACTOR SHALL CONSTRUCT THE PROPOSED FIELD DRIVE PRIOR TO CLOSING THE EXISTING FIELD DRIVE. AT THESE LOCATIONS THE CONTRACTOR SHALL COMPLETE THE REMOVAL OF THE EXISTING GUARDRAIL AND CONSTRUCTION OF THE PROPOSED GUARDRAIL WITHIN THE SAME WORKING DAY.

LOCATIONS OF GUARDRAIL:

THE GUARDRAIL PROTECTION PROVIDED IN THIS PLAN SHALL BE LOCATED IN THE FIELD TO ASSURE THAT THE INSTALLATION WILL AFFORD THE MAXIMUM PROTECTION FOR TRAFFIC. THIS LOCATION SHALL BE POSITIONED AS FAR AS POSSIBLE FROM THE EDGE OF PAVEMENT WHILE MAINTAINING PROPER GRADE IN FRONT OF GUARDRAIL AS PER STANDARD DRAWINGS AND PLAN DETAILS.

ITEM 202 ANCHOR ASSEMBLY REMOVED, TYPE A:

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE EXISTING TYPE A, ANCHOR ASSEMBLY INCLUDING ALL POSTS, HARDWARE, RAIL ELEMENTS, AND CONCRETE ANCHORS. ALL ITEMS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF.

THE EXISTING CONCRETE ANCHOR AND CONCRETE AT POSTS SHALL BE REMOVED ENTIRELY. ALL HOLES REMAINING AFTER REMOVAL SHALL BE FILLED WITH GRANULAR MATERIAL OR EXCESS MATERIAL RESULTING FROM GUARDRAIL CONSTRUCTION. ALL FILL MATERIAL SHALL BE THOROUGHLY COMPACTED AND LEVELED, AS DIRECTED BY THE ENGINEER.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 202, ANCHOR ASSEMBLY REMOVED, TYPE A.

ITEM 202 BRIDGE RAILING REMOVED, AS PER PLAN:

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE EXISTING BRIDGE RAILING INCLUDING THE RAIL ELEMENTS, TUBULAR BACKUP, ALL POSTS, OTHER HARDWARE, AND CONCRETE ENCASEMENTS. ALL ITEMS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF.

THE EXISTING CONCRETE ENCASED END POSTS SHALL BE REMOVED ENTIRELY. ALL HOLES REMAINING AFTER REMOVAL SHALL BE FILLED WITH GRANULAR MATERIAL OR EXCESS MATERIAL RESULTING FROM GUARDRAIL CONSTRUCTION. ALL FILL MATERIAL SHALL BE THOROUGHLY COMPACTED AND LEVELED, AS DIRECTED BY THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 202, BRIDGE RAILING REMOVED, AS PER PLAN AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 203. EMBANKMENT, AS PER PLAN:

AT SPECIFIED LOCATIONS AND LOCATIONS AS DIRECTED BY THE ENGINEER, EMBANKMENT SHALL BE PLACED AS TO PROVIDE A SUITABLE AREA TO CONSTRUCT GUARDRAIL AND TO PROVIDE FOR THE STRUCTURAL INTEGRITY OF THE ROADWAY SHOULDER.

AREAS WHERE EMBANKMENT MATERIALS ARE TO BE PLACED SHALL BE SCALPED. THE REQUIREMENTS FOR BENCHING SHALL BE WAIVED. THE DEPTH OF LAYERS IN WHICH THE EMBANKMENTS ARE PLACED AND THE METHOD OF COMPACTION SHALL BE DETERMINED BY THE ENGINEER. AFTER THE EMBANKMENT HAS BEEN PLACED, THE AREAS SHALL BE FERTILIZED, SEEDED, MULCHED, AND WATERED AS PER ITEM 659. THE COST SHALL BE INCLUDED IN THIS ITEM FOR PAYMENT. THE METHOD OF MEASUREMENT FOR EMBANKMENT MATERIAL SHALL BE THE NUMBER OF CUBIC METERS MEASURED BY LOOSE VOLUME IN THE CARRIER AT THE WORK SITE, IN LIEU OF THE REQUIREMENTS OF 203.15, AND PAYMENT FOR ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT UNIT BID PRICE PER CUBIC METER FOR ITEM 203 - EMBANKMENT, AS PER PLAN AND SHALL INCLUDE ALL WORK DESCRIBED ABOVE AND AT ALL TIMES BE AS DIRECTED BY THE ENGINEER.

ITEM 606 - GUARDRAIL POST:

THIS ITEM SHALL BE USED IN CONJUNCTION WITH ITEM 606 - GUARDRAIL, MISC.: ADJUST HEIGHT, EXISTING TYPE 5 GUARDRAIL, AND AS DIRECTED BY THE ENGINEER. IT SHALL CONSIST OF REPLACING EXISTING GUARDRAIL POSTS DEEMED BY THE ENGINEER TO BE INSUFFICIENT. THE POSTS SHALL BE OF THE SAME TYPE, SIZE, AND SPACING OF THE EXISTING GUARDRAIL RUN. THEY SHALL BE PLACED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING GR-1.2M.

A QUANTITIY OF 25 POSTS IS INCLUDED IN THE TOTAL ON THE GENERAL SUMMARY SHEET AS A CONTINGENCY.

ITEM 606 GUARDRAIL MISC.: ADJUST HEIGHT, EXISTING TYPE 5 GUARDRAIL:

WHERE DESIGNATED ON THE PLAN, THE EXISTING TYPE 5 GUARDRAIL SHALL BE RAISED OR LOWERED ON THE EXISTING WOOD POSTS AS PER STANDARD DRAWING GR-2.1M SO AS TO OBTAIN THE STANDARD 685mm HEIGHT. THE RAIL SHALL BE REATTACHED TO THE POSTS USING NEW POST BOLTS. FOR RAIL THAT REQUIRES BEING LOWERED THE POSTS SHALL BE CUT OR TRIMMED AND THE TOPS SHALL BE TREATED.

THE RAIL SHALL BE DISMANTLED ONLY TO THE EXTENT NECESSARY TO FIELD BORE NEW BOLT HOLES IN THE WOOD POSTS, AND TO RECONNECT THE RAIL AND BLOCK TO EXISTING POSTS.

THE EXISTING TYPE "A" ANCHOR ASSEMBLIES THAT ARE TO REMAIN SHALL NOT BE ADJUSTED. THE LAST RAIL ELEMENT SHALL BE TRANSITIONED TO MEET THESE ASSEMBLIES.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID ITEM 606, GUARDRAIL MISC.: ADJUST HEIGHT, EXISTING TYPE 5 GUARDRAIL, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

metric units

ITEM 606, ANCHOR ASSEMBLY, TYPE E-98:

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

1) THE ET-2000 (1997) MANUFACTURED BY SYRO, INC., 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330.545.4373).

   THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 15.24 M, INCLUSIVE OF TWO 7.62 M LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

Dwg. #	Drawing Name	Dwg./Rev.	ODOT Approval
SS265M	ET-2000 (1997) PLAN, ELEVATION & SECTIONS	Date 6/20/97	Date 3/6/98

2) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 7631 NEW CASTLE DRIVE, FRANKFORT, IL 60423 (TELEPHONE: 815.464.5917).

   THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 15.24 M, INCLUSIVE OF FOUR 3.81 M LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

Dwg. #	Drawing Name	Dwg./Rev.	ODOT Approval
SKT-4M	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES	Date 12/11/97	Date 3/6/98

A TYPE C DELINEATOR SHALL BE INSTALLED AT THE HEAD OF ALL TYPE E-98 UNITS LOCATED ON THE RIGHT SIDE OF THE THROUGH ROADWAY. A TYPE D DELINEATOR SHALL BE INSTALLED AT THE HEAD OF ALL TYPE E-98 UNITS LOCATED ON THE LEFT SIDE OF THE THROUGH ROADWAY. DELINEATORS SHALL COMPLY WITH STANDARD TRAFFIC DRAWING TC-61.10M.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, DELINEATORS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM SPECIAL - RESHAPING BERM:

BERMS AND SHOULDERS AT LOCATIONS WHERE EXISTING GUARDRAIL IS REMOVED OR WHERE GUARDRAIL IS TO BE BUILT, SHALL BE RESHAPED AS DIRECTED BY THE ENGINEER TO INSURE A SMOOTH SURFACE FREE OF IRREGULARITIES. EXCESS MATERIAL RESULTING SHALL BE USED ELSEWHERE FOR THIS ITEM IF SO DIRECTED OR DISPOSED OF. IF EXTRA MATERIAL IS REQUIRED IT SHALL BE PAID FOR WITH ITEM 203 - EMBANKMENT, AS PER PLAN. THIS WORK SHALL NOT BE STARTED UNTIL AFTER THE RESURFACING AND BERM WORK HAS BEEN COMPLETED.

THE AREA IN FRONT OF THE GUARDRAIL SHALL BE GRADED AND RESHAPED TO PROVIDE AN AREA THAT HAS A SLOPE OF 10:1 MAX.

THE ABOVE WORK SHALL BE PAID FOR WITH ITEM SPECIAL, RESHAPING BERM WITH THE EXCEPTION OF ANY EXTRA MATERIAL REQUIRED TO MEET THE SLOPE REQUIREMENTS WHICH SHALL BE PAID BY ITEM 203 - EMBANKMENT, AS PER PLAN.

GUARDRAIL GENERAL NOTES

WORKSTATION: rtrivoli DATE: 12 FEB 99
DESIGN FILE: I:\projects\16738\Dgn\grnotes.dgn

metric units

PART	LOCATION	202 PIPE REMOVED, 600 MM AND UNDER	202 GUARDRAIL REMOVED	202 GUARDRAIL REMOVED FOR REUSE	202 BRIDGE RAILING REMOVED, AS PER PLAN	202 ANCHOR ASSEMBLY REMOVED, TYPE A	203 EMBANKMENT, AS PER PLAN	304 AGGREGATE BASE	603 300 MM CONDUIT, TYPE D			
		meter	meter	meter	meter	each	cubic meter	cubic meter	meter			
A	LOR-83-08787 s.l.k. LOR-83-0546 s.l.m.	20	64.77		11.43	2	50	15.0	26			
A	LOR-83-10976 s.l.k. LOR-83-0682 s.l.m.	10	36.195	62.865		3	45	7.5	13			
A	LOR-83-12360 s.l.k. LOR-83-0768 s.l.m.		30.48			4	16					
A	LOR-83-13.921 s.l.k. LOR-083-08.65 s.l.m.		45.72		11.43	3	10					
A	LOR-83-15.112 s.l.k. LOR-83-09.39 s.l.m.	20	30.48		7.62	2	54	7.5	26			
A	LOR-83-16608 s.l.k. LOR-83-1032 s.l.m.		34.29	99.06		4	12					
	TOTAL	50	241.935	161.925	30.48	18	187	30.0	65			

CALC BY: CMK
CHK'D BY: RPT

ESTIMATED QUANTITIES

LOR-83-6.727

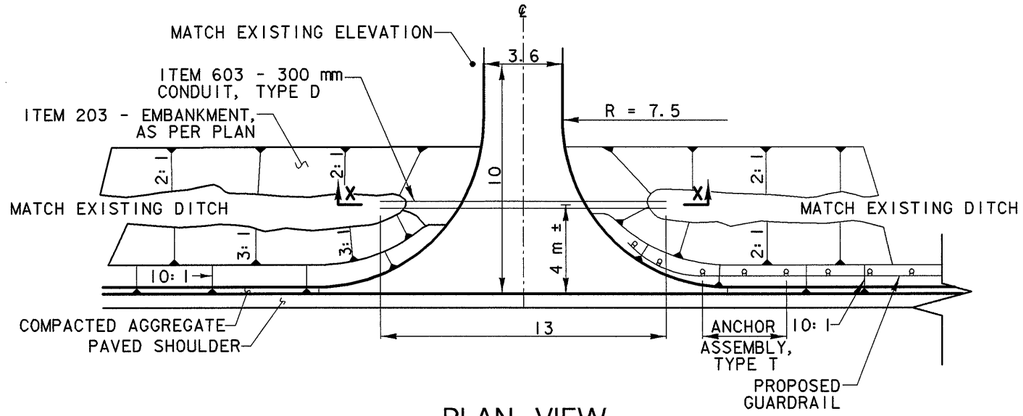
metric units

PART	LOCATION	606 GUARDRAIL, TYPE 5 (meter)	606 GUARDRAIL, TYPE 5 WITH DOUBLE RAILS (meter)	606 GUARDRAIL REBUILT, TYPE 5 (meter)	606 ANCHOR ASSEMBLY, TYPE E-98 (each)	606 ANCHOR ASSEMBLY, TYPE T (each)	606 GUARDRAIL MISC.: ADJUST HEIGHT, EXISTING TYPE 5 GUARDRAIL (meter)	606 BRIDGE TERMINAL ASSEMBLY, TYPE 4 (each)	SPECIAL RESHAPING BERM (meter)	626 BARRIER REFLECTOR, TYPE A (each)		
A	LOR-83-08787 s.l.k. LOR-83-0546 s.l.m.	72.39	22.86		1	3			131	8		
A	LOR-83-10976 s.l.k. LOR-83-0682 s.l.m.	9.525		62.865	3	1		4	149	7		
A	LOR-83-12360 s.l.k. LOR-83-0768 s.l.m.				4		114.3		210	10		
A	LOR-83-13.921 s.l.k. LOR-083-08.65 s.l.m.	57.15	22.86		2	2			135	7		
A	LOR-83-15.112 s.l.k. LOR-83-09.39 s.l.m.	34.29	15.24		1	3			85	6		
A	LOR-83-16608 s.l.k. LOR-83-1032 s.l.m.	19.05		99.06	3	1		4	194	10		
	TOTAL	192.405	60.96	161.925	14	10	114.3	8	904	48		

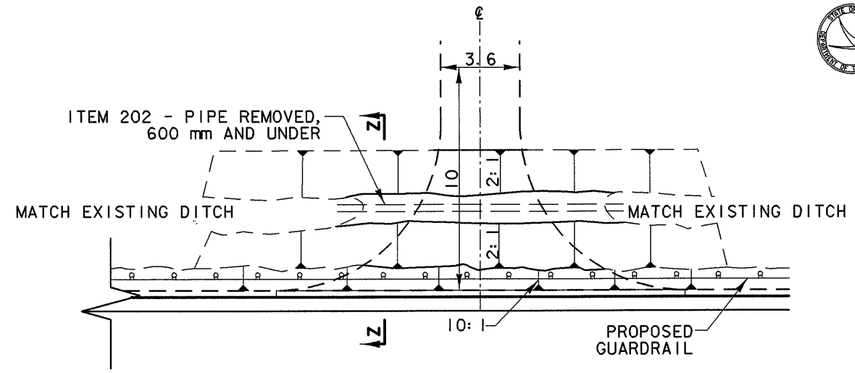
CALC BY: CMK
CHK'D BY: RPT

ESTIMATED QUANTITIES

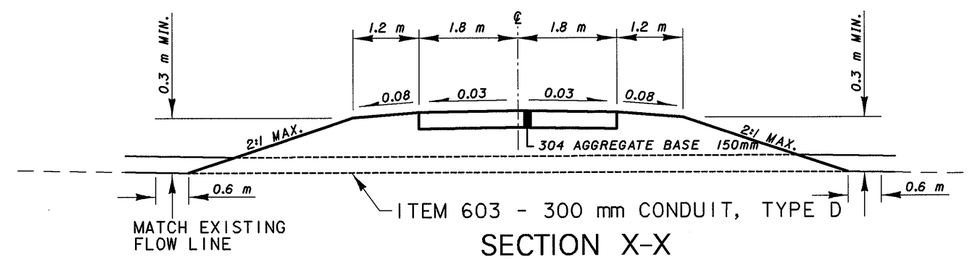
LOR-83-6.727



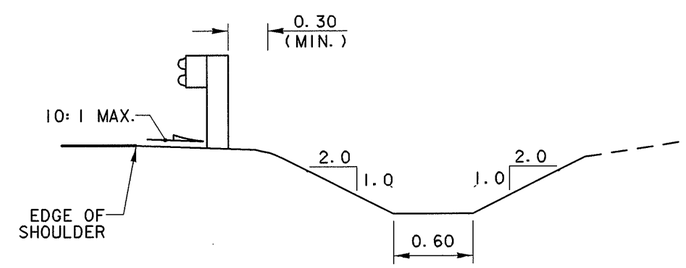
PLAN VIEW
PROPOSED FIELD DRIVE



PLAN VIEW
EXISTING FIELD DRIVE



SECTION X-X



SECTION Z-Z

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITY
	LOR-83-08787 S.L.K. LOR-83-0546 S.L.M.		
202	PIPE REMOVED, 600 mm AND UNDER	meter	20
203	EMBANKMENT, AS PER PLAN	cubic meter	40
304	AGGREGATE BASE	cubic meter	15.0
603	300 mm CONDUIT, TYPE D	meter	26
	LOR-83-10976 S.L.K. LOR-83-0682 S.L.M.		
202	PIPE REMOVED, 600 mm AND UNDER	meter	10
203	EMBANKMENT, AS PER PLAN	cubic meter	30
304	AGGREGATE BASE	cubic meter	7.5
603	300 mm CONDUIT, TYPE D	meter	13
	LOR-83-15.112 S.L.K. LOR-83-09.39 S.L.M.		
202	PIPE REMOVED, 600 mm AND UNDER	meter	20
203	EMBANKMENT, AS PER PLAN	cubic meter	40
304	AGGREGATE BASE	cubic meter	7.5
603	300 mm CONDUIT, TYPE D	meter	26

NOTES:

1. FOR LOCATIONS, SEE SHEETS 56, 57, 60.
2. FOR PAVED SHOULDER AND COMPACTED AGGREGATE SEE SHEET 9.
3. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 52, 53.

ALL DIMENSIONS ARE IN METERS, UNLESS NOTED OTHERWISE

metric units

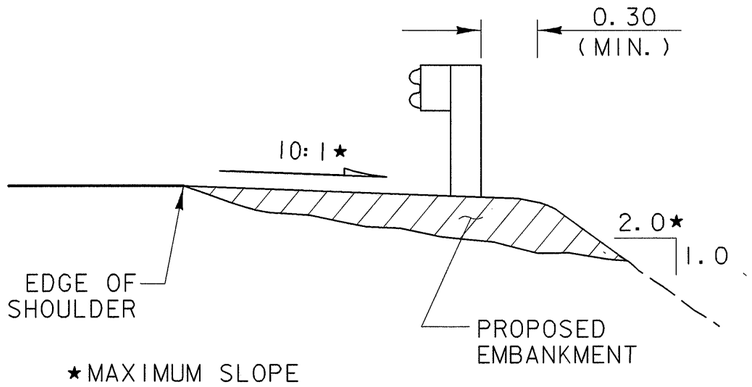
DESIGN AGENCY: DISTRICT THREE PRODUCTION DEPARTMENT

DESIGNED	DRAWN	REVIEWED	DATE
CmK	CmK		
CHECKED	REVISED	STRUCTURAL FILE NUMBER	
RPT			

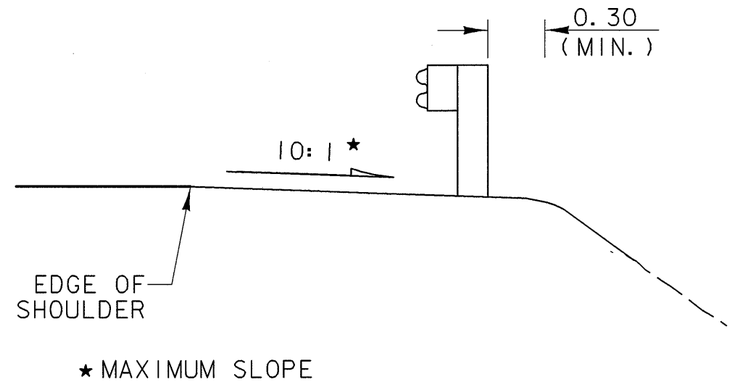
FIELD DRIVE DETAIL

LOR-83-6.727

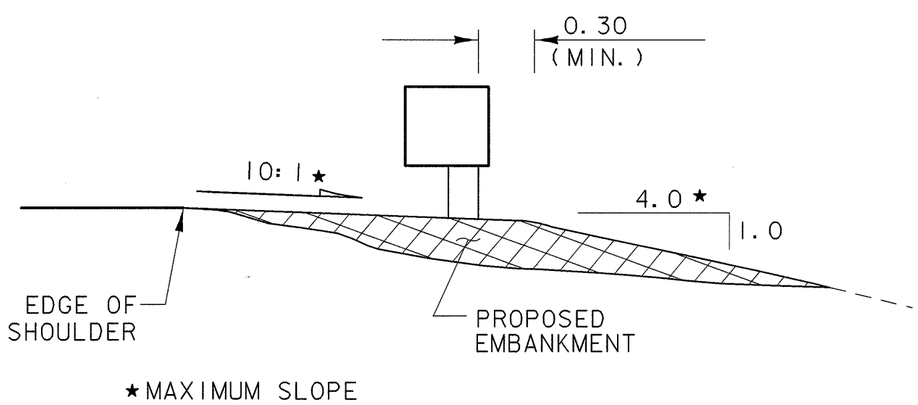
DATE: 30 DEC 98
WORKSTATION: rtrivoli
DESIGN FILE: I:\projects\16738\dgn\grdrail.dgn



TYPICAL SECTION A



TYPICAL SECTION B



TYPICAL SECTION C

NOTES:

1. FOR LOCATIONS OF WORK SEE GUARDRAIL DETAILS, SHEETS 56-61.
2. CONSTRUCT GUARDRAIL AS PER TYPICAL SECTION B, UNLESS OTHERWISE NOTED IN THE PLAN.

ALL DIMENSIONS ARE IN METERS, UNLESS NOTED OTHERWISE

metric units

DESIGN AGENCY: DISTRICT THREE PRODUCTION DEPARTMENT

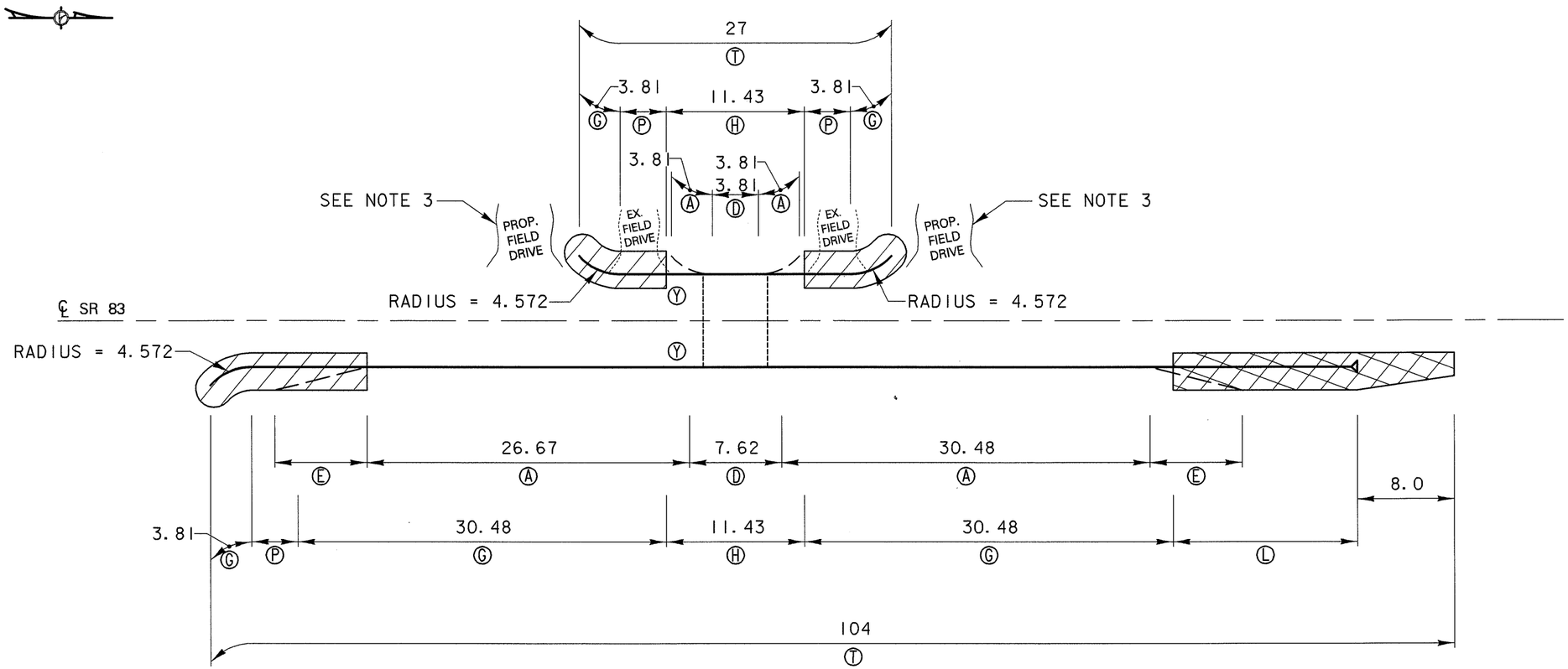
DESIGNED RPT | DRAWN CmK | REVIEWED | DATE

CHECKED CmK | REVISED | STRUCTURAL FILE NUMBER

EMBANKMENT TYPICAL SECTIONS

LOR-83-6.727

DATE: 22 DEC 1998
WORKSTATION: ckleln
DESIGN FILE: i:\projects\16738\dgn\grdrail.dgn



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	meter	7.62	57.15	64.77
Ⓓ	202	BRIDGE RAILING REMOVED, AS PER PLAN	meter	3.81	7.62	11.43
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	each		2	2
	203	EMBANKMENT, AS PER PLAN	cubic meter	2	8	10
Ⓖ	606	GUARDRAIL, TYPE 5	meter	7.62	64.77	72.39
Ⓗ	606	GUARDRAIL, TYPE 5 WITH DOUBLE RAILS	meter	11.43	11.43	22.86
Ⓛ	606	ANCHOR ASSEMBLY, TYPE E-98	each		1	1
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	each	2	1	3
Ⓣ	SPECIAL	RESHAPING BERM	meter	27	104	131
Ⓨ	626	BARRIER REFLECTOR, TYPE A	each	3	5	8

NOTES:

1. CONSTRUCT EMBANKMENT AS PER TYPICAL SECTION C ON SHEET 55 FOR THE ENTIRE LENGTH OF THE ANCHOR ASSEMBLY, TYPE E-98 AND THE 8.0 METER GRADING BEYOND THE GUARDRAIL RUN.
2. CONSTRUCT REMAINING EMBANKMENT AS PER TYPICAL SECTION A, ON SHEET 55.
3. FIELD DRIVE TO BE RELOCATED, SEE DETAILS, SHEET 54.
4. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 52, 53.

ALL DIMENSIONS ARE IN METERS, UNLESS NOTED OTHERWISE

metric units

DESIGN AGENCY: DISTRICT THREE PRODUCTION DEPARTMENT

DESIGNED RPT | DRAWN CmK | REVIEWED | DATE

CHECKED | REVISED | STRUCTURAL FILE NUMBER 4703995

GUARDRAIL DETAIL

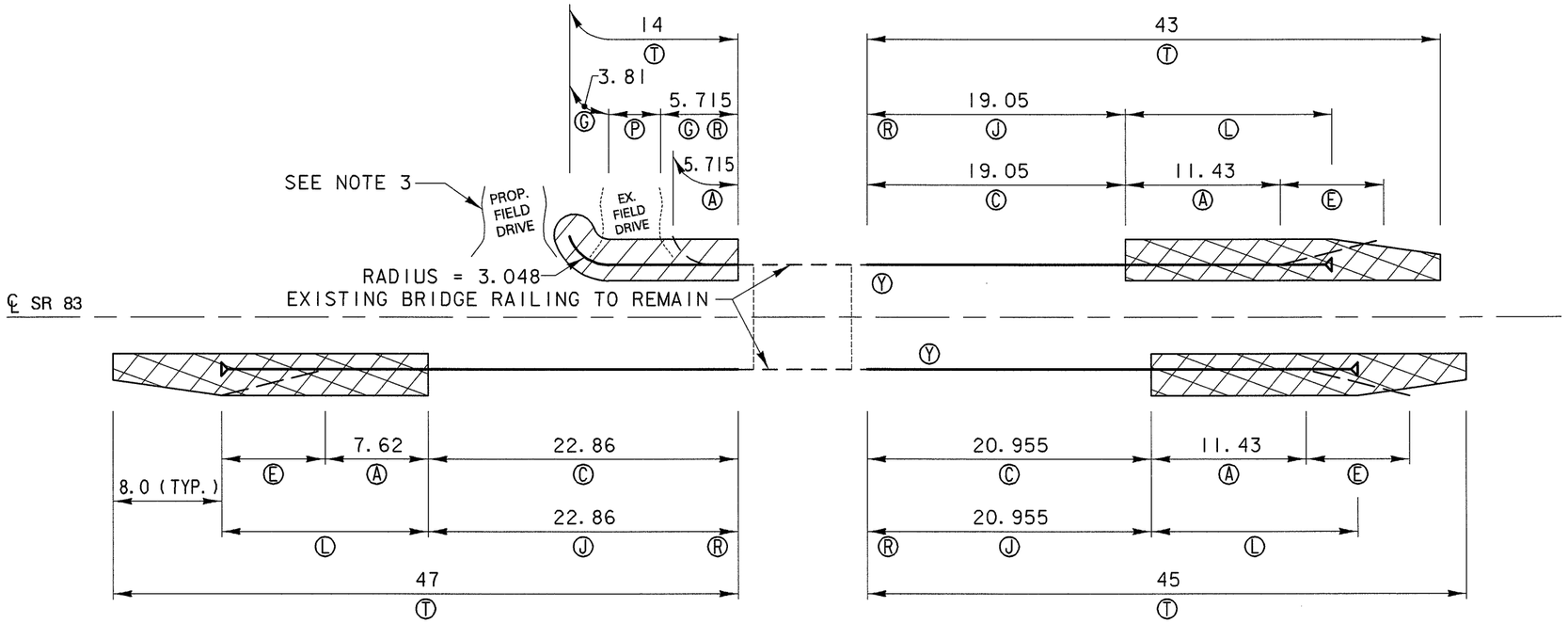
LOR-83-08787 S.L.K. LOR-83-0546 S.L.M.

LOR-83-6.727

DATE: 30 DEC 98

WORKSTATION: rtrivoli

DESIGN FILE: I:\projects\16738\Dgn\gardrail.dgn



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY LEFT	QUANTITY RIGHT	TOTAL QUANTITY
Ⓐ	202	GUARDRAIL REMOVED	meter	17.145	19.05	36.195
Ⓒ	202	GUARDRAIL REMOVED FOR REUSE	meter	19.05	43.815	62.865
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	each	1	2	3
	203	EMBANKMENT, AS PER PLAN	cubic meter	5	10	15
Ⓖ	606	GUARDRAIL, TYPE 5	meter	9.525		9.525
Ⓙ	606	GUARDRAIL REBUILT, TYPE 5	meter	19.05	43.815	62.865
Ⓛ	606	ANCHOR ASSEMBLY, TYPE E-98	each	1	2	3
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	each	1		1
Ⓡ	606	BRIDGE TERMINAL ASSEMBLY, TYPE 4	each	2	2	4
Ⓣ	SPECIAL	RESHAPING BERM	meter	57	92	149
Ⓨ	626	BARRIER REFLECTOR, TYPE A	each	3	4	7

NOTES:

1. CONSTRUCT EMBANKMENT AS PER TYPICAL SECTION C ON SHEET 55 FOR THE ENTIRE LENGTH OF THE ANCHOR ASSEMBLY, TYPE E-98 AND THE 8.0 METER GRADING BEYOND THE GUARDRAIL RUN.
2. CONSTRUCT REMAINING EMBANKMENT AS PER TYPICAL SECTION A, ON SHEET 55.
3. FIELD DRIVE TO BE RELOCATED, SEE DETAILS, SHEET 54.
4. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 52, 53.

ALL DIMENSIONS ARE IN METERS, UNLESS NOTED OTHERWISE

metric units

DESIGN AGENCY: DISTRICT THREE PRODUCTION DEPARTMENT

DESIGNED RPT | DRAWN CmK | REVIEWED | DATE | CHECKED | REVISED | STRUCTURAL FILE NUMBER 4704029

GUARDRAIL DETAIL

LOR-83-10976 S.L.K. LOR-83-0682 S.L.M.

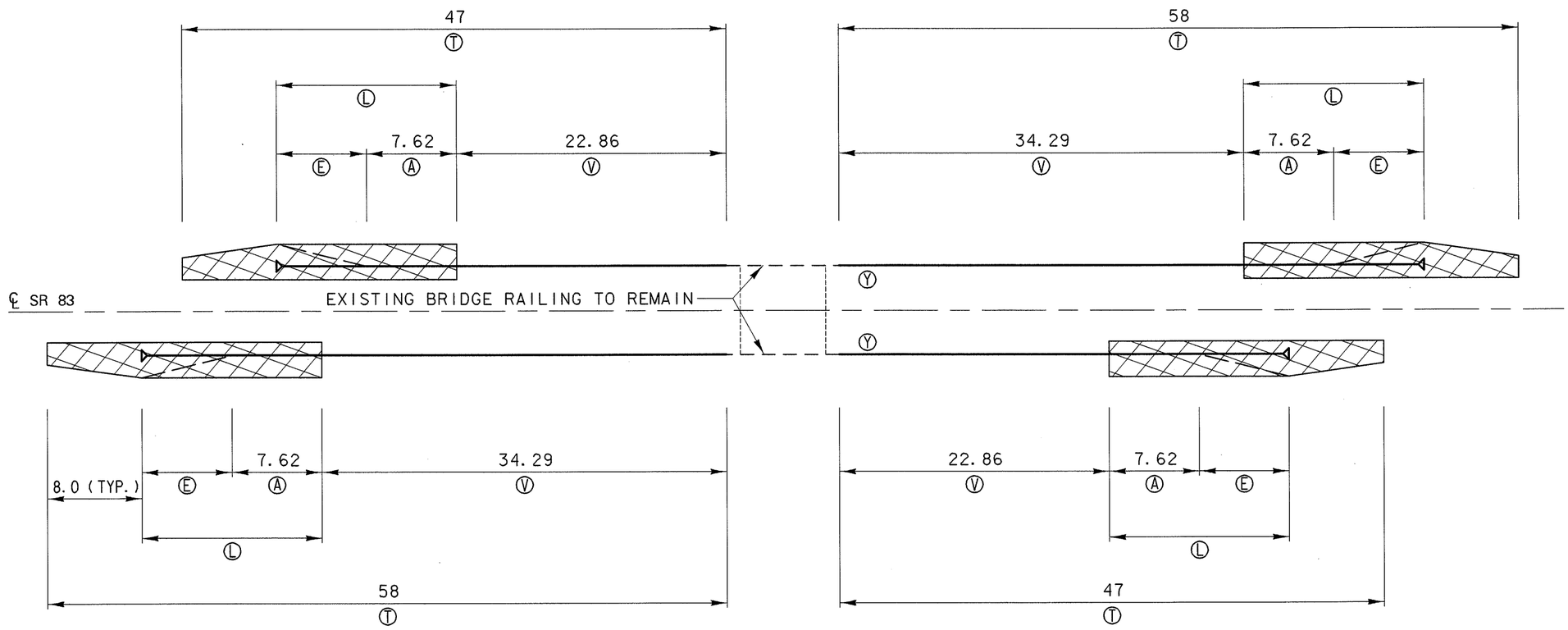
LOR-83-6.727

57/86

DATE: 30 DEC 98

WORKSTATION: rtrivoli

DESIGN FILE: I:\projects\16738\Dgn\grdrail.dgn



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
A	202	GUARDRAIL REMOVED	meter	15.24	15.24	30.48
E	202	ANCHOR ASSEMBLY REMOVED, TYPE A	each	2	2	4
	203	EMBANKMENT, AS PER PLAN	cubic meter	8	8	16
L	606	ANCHOR ASSEMBLY, TYPE E-98	each	2	2	4
T	SPECIAL	RESHAPING BERM	meter	105	105	210
V	606	GUARDRAIL, MISC.: ADJUST HEIGHT, EXISTING TYPE 5 GUARDRAIL	meter	57.15	57.15	114.30
Y	626	BARRIER REFLECTOR, TYPE A	each	5	5	10

NOTES:

1. CONSTRUCT EMBANKMENT AS PER TYPICAL SECTION C, ON SHEET 55.
2. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 52, 53.

ALL DIMENSIONS ARE IN METERS, UNLESS NOTED OTHERWISE

metric units

DESIGN AGENCY
DISTRICT THREE
PRODUCTION DEPARTMENT

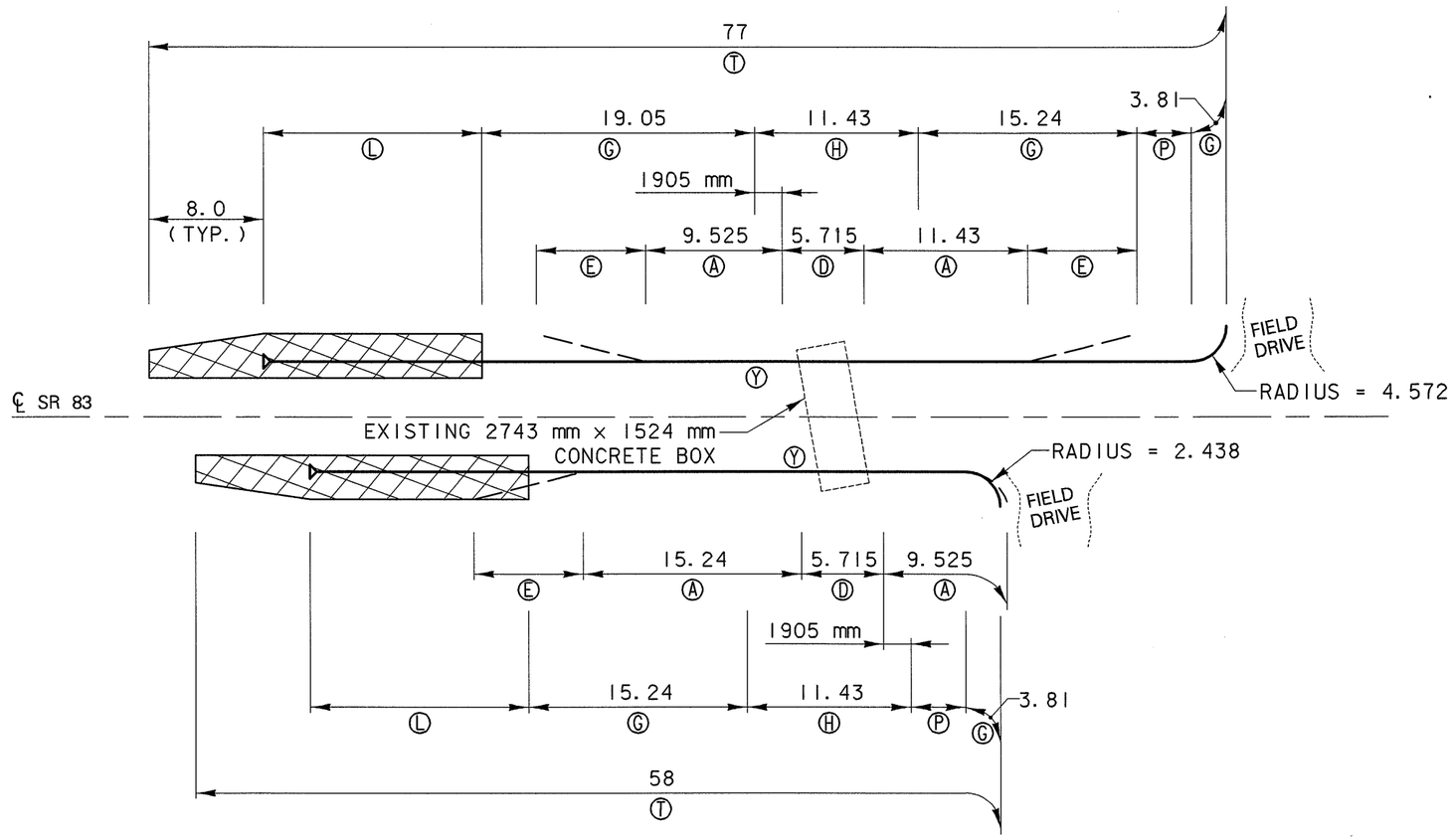
DESIGNED RPT | DRAWN CmK | REVIEWED | DATE
CHECKED | REVISED | STRUCTURAL FILE NUMBER 4704061

GUARDRAIL DETAIL
LOR-83-12360 S.L.K. LOR-83-0768 S.L.M.

LOR-83-6.727

58
86

DATE: 22 DEC 98
WORKSTATION: rrrvoii
DESIGN FILE: i:\projects\lor\36\dgn\grdrail.dgn



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	meter	20.955	24.765	45.72
Ⓓ	202	BRIDGE RAILING REMOVED, AS PER PLAN	meter	5.715	5.715	11.43
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	each	2	1	3
▨	203	EMBANKMENT, AS PER PLAN	cubic meter	5	5	10
Ⓖ	606	GUARDRAIL, TYPE 5	meter	38.10	19.05	57.15
Ⓗ	606	GUARDRAIL, TYPE 5 WITH DOUBLE RAILS	meter	11.43	11.43	22.86
Ⓛ	606	ANCHOR ASSEMBLY, TYPE E-98	each	1	1	2
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	each	1	1	2
Ⓣ	SPECIAL	RESHAPING BERM	meter	77	58	135
Ⓨ	626	BARRIER REFLECTOR, TYPE A	each	4	3	7

NOTES:

1. CONSTRUCT EMBANKMENT AS PER TYPICAL SECTION C, ON SHEET 55.
2. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 52, 53.

ALL DIMENSIONS ARE IN METERS, UNLESS NOTED OTHERWISE

metric units

DESIGN AGENCY
DISTRICT THREE
PRODUCTION DEPARTMENT

REVIEWED DATE
STRUCTURAL FILE NUMBER

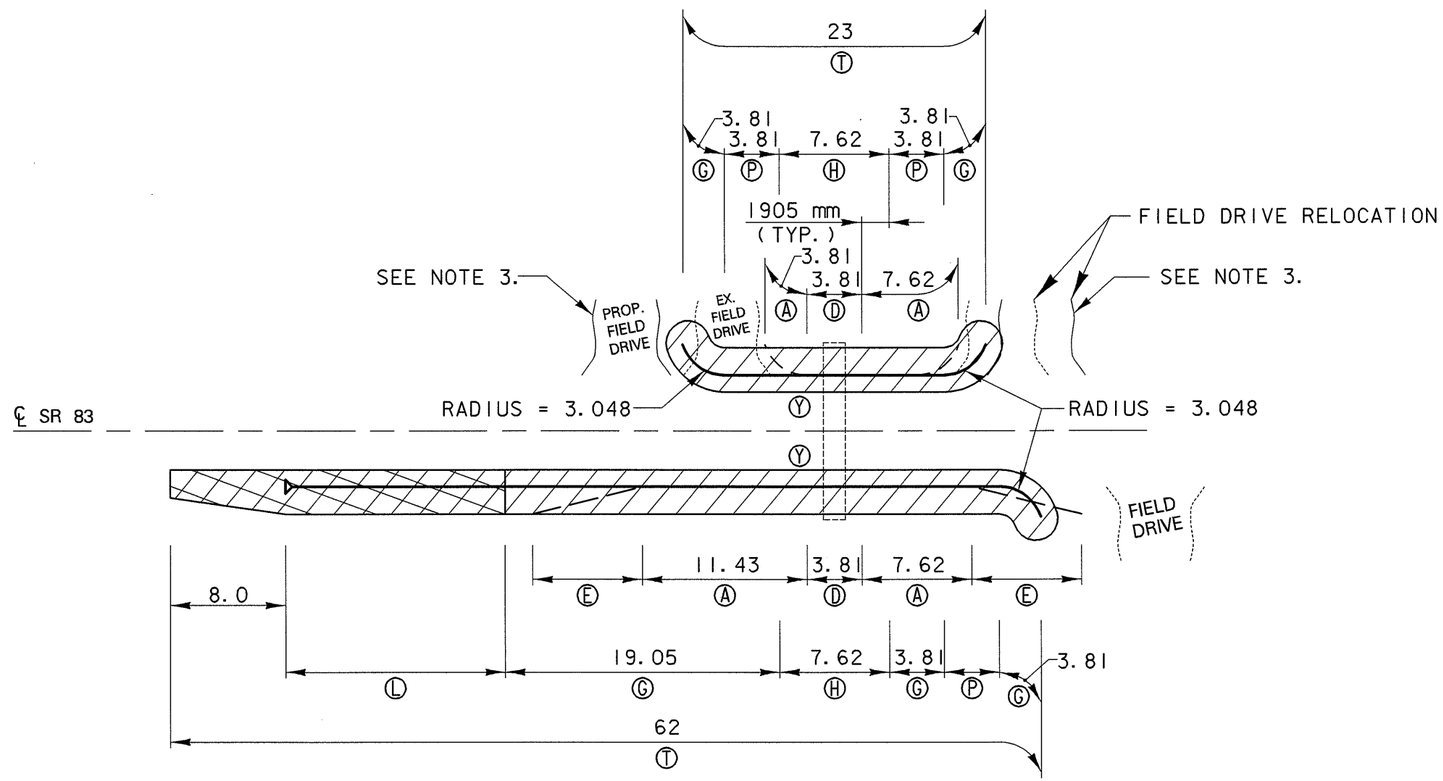
DRAWN CmK
REVISED

DESIGNED RPT
CHECKED

GUARDRAIL DETAIL
LOR-83-13.921 S.L.K. LOR-83-08.65 S.L.M.

LOR-83-6.727

DESIGN FILE: I:\projects\16738\Dgn\grdrail.dgn
WORKSTATION: rtrivoli
DATE: 30 DEC 98



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	meter	11.43	19.05	30.48
Ⓓ	202	BRIDGE RAILING REMOVED, AS PER PLAN	meter	3.81	3.81	7.62
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	each		2	2
	203	EMBANKMENT, AS PER PLAN	cubic meter	5	9	14
Ⓖ	606	GUARDRAIL, TYPE 5	meter	7.62	26.67	34.29
Ⓗ	606	GUARDRAIL, TYPE 5 WITH DOUBLE RAILS	meter	7.62	7.62	15.24
Ⓛ	606	ANCHOR ASSEMBLY, TYPE E-98	each		1	1
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	each	2	1	3
Ⓣ	SPECIAL	RESHAPING BERM	meter	23	62	85
Ⓨ	626	BARRIER REFLECTOR, TYPE A	each	3	3	6

NOTES:

1. CONSTRUCT EMBANKMENT AS PER TYPICAL SECTION C ON SHEET 55 FOR THE ENTIRE LENGTH OF THE ANCHOR ASSEMBLY, TYPE E-98 AND THE 8.0 METER GRADING BEYOND THE GUARDRAIL RUN.
2. CONSTRUCT REMAINING EMBANKMENT AS PER TYPICAL SECTION A, ON SHEET 55.
3. FIELD DRIVE TO BE RELOCATED, SEE DETAILS, SHEET 54.
4. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 52, 53.

ALL DIMENSIONS ARE IN METERS, UNLESS NOTED OTHERWISE

metric units

DESIGN AGENCY: DISTRICT THREE PRODUCTION DEPARTMENT

REVIEWED | DATE | STRUCTURAL FILE NUMBER

DRAWN CmK | REVISED

DESIGNED RPT | CHECKED

GUARDRAIL DETAIL

LOR-83-15.112 S.L.K. LOR-83-09.39 S.L.M.

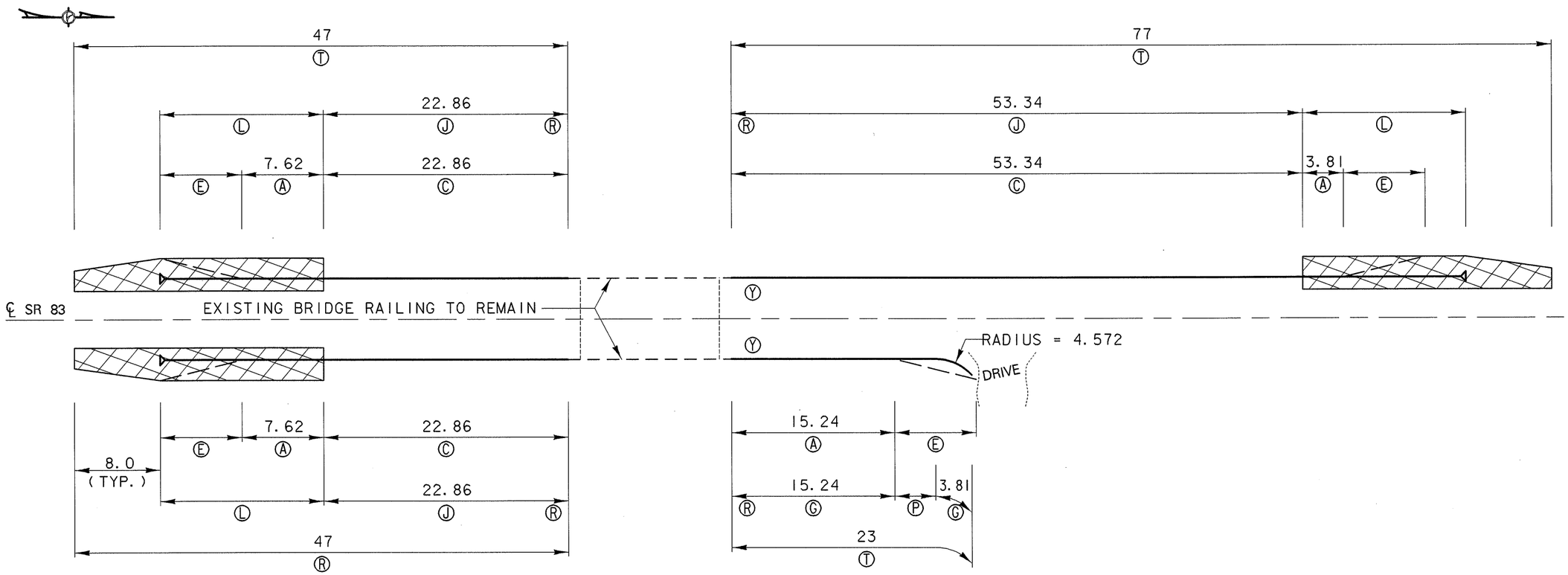
LOR-83-6.727

60/86

DATE: 30 DEC 98

WORKSTATION: rtrivoli

DESIGN FILE: I:\projects\16738\Dgn\grdrail.dgn



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	meter	11.43	22.86	34.29
Ⓒ	202	GUARDRAIL REMOVED FOR REUSE	meter	76.20	22.86	99.06
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	each	2	2	4
	203	EMBANKMENT, AS PER PLAN	cubic meter	8	4	12
Ⓖ	606	GUARDRAIL, TYPE 5	meter		19.05	19.05
Ⓙ	606	GUARDRAIL REBUILT, TYPE 5	meter	76.2	22.86	99.06
Ⓛ	606	ANCHOR ASSEMBLY, TYPE E-98	each	2	1	3
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	each		1	1
Ⓡ	606	BRIDGE TERMINAL ASSEMBLY, TYPE 4	each	2	2	4
Ⓣ	SPECIAL	RESHAPING BERM	meter	124	70	194
Ⓨ	626	BARRIER REFLECTOR, TYPE A	each	6	4	10

NOTES:

1. CONSTRUCT EMBANKMENT AS PER TYPICAL SECTION C, ON SHEET 55.
2. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 52, 53.

ALL DIMENSIONS ARE IN METERS, UNLESS NOTED OTHERWISE

metric units

DESIGN AGENCY: DISTRICT THREE PRODUCTION DEPARTMENT

REVIEWED | DATE

STRUCTURAL FILE NUMBER: 4704088

DRAWN: CmK | REVISED

DESIGNED: RPT | CHECKED: MM

GUARDRAIL DETAIL

LOR-83-16608 S.L.K. LOR-83-1032 S.L.M.

LOR-83-6.727

61/86

DATE: 22 DEC 98

WORKSTATION: rtrivoli

DESIGN FILE: i:\projects\16738\dgn\grdrail.dgn

metric units

BRIDGE DECK DATA								ROADWAY DATA		
PART	COUNTY, ROUTE, BRIDGE NO.	STRUCTURE TYPE	LENGTH (BRIDGE LIMITS)	WIDTH	BRIDGE DECK AREA	SKEW	EXISTING WEARING SURFACE	EXISTING PAVEMENT WIDTH	EXISTING APPROACH SLAB WIDTH	EXISTING APPROACH SLAB LENGTH
			mm	mm	SQ. METER			mm	mm	mm
A	● LOR-83-08787 (SLK) LOR-83-0546 (SLM)	CONCRETE BOX CULVERT	4877			6° R. F.	ASPHALT	8840		
A	●● LOR-83-10976 (SLK) LOR-83-0682 (SLM)	SINGLE SPAN CONCRETE SLAB	7925	8382	66	0°	ASPHALT	8530		
A	● LOR-83-12360 (SLK) LOR-83-0768 (SLM)	CONCRETE BOX CULVERT	7010			10° L. F.	ASPHALT	8680		
A	●●● LOR-83-16608 (SLK) LOR-83-1032 (SLM)	SINGLE SPAN STEEL BEAM	14 131	9804	139	45° L. F.	ASPHALT	8840	6096	6096

● PAVE OVER (NO STRUCTURE WORK. SEE ROADWAY PLANS FOR GUARDRAIL WORK)

●● PLANE 38 mm OF EXISTING ASPHALT ON STRUCTURE AND PLANE 30 m ON BOTH APPROACHES. APPLY RUBBERIZED SEAL OVER STRUCTURE AND PAVE OVER (SEE DETAILS IN THE PLAN FOR STRUCTURE WORK. SEE ROADWAY PLANS FOR GUARDRAIL WORK)

ITEM 254- PAVEMENT PLANING, BITUMINOUS: 578 SQUARE METERS (CARRIED TO GENERAL SUMMARY, SHEET NO. 2, 3, 4)

●●● FEATHER INTERMEDIATE COURSE AT APPROACH SLABS. PAVE OVER APPROACH SLABS AND BRIDGE WITH SURFACE COURSE ONLY (NO STRUCTURE WORK. SEE ROADWAY PLANS FOR GUARDRAIL WORK)

DESIGN AGENCY: DISTRICT THREE
DATE: 8/98 REVIEWED: DLM
STRUCTURAL FILE NUMBER
DRAWN: EJG REVISED
DESIGNED: EJG CHECKED: DPA

BRIDGE TREATMENT

LOR-83-6.727

DESIGN FILE: I:\projects\16738\struct\equan.dgn
WORKSTATION: eglover DATE: 22 DEC 98

metric units

REFERENCES SHALL BE MADE TO STANDARD DRAWINGS:

BP-3.1M DATED 10/28/94
MT-97.10M DATED 4/25/94

AND TO SUPPLEMENTAL SPECIFICATIONS:

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATION AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.02. THE ORIGINAL CONSTRUCTION PLANS OF THE EXISTING BRIDGE ARE AVAILABLE UPON REQUEST AT THE DISTRICT 3 OFFICE OF THE OHIO DEPARTMENT OF TRANSPORTATION, ASHLAND, OHIO.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED ON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996, AND THE ODOT BRIDGE DESIGN MANUAL.

PLACING ASPHALT CONCRETE FEATHERING ON APPROACHES TO BRIDGES:

SPECIAL CARE SHALL BE TAKEN, WHEN PLACING THE ASPHALT CONCRETE FEATHERING TO EFFECT A SMOOTH TRANSITION FROM THE EXISTING APPROACH PAVEMENT TO THE BRIDGE DECK OR APPROACH SLAB. THE CONTRACTOR'S ATTENTION IS CALLED TO SECTION 404.16 OF THE CMS AND TO STANDARD DRAWING BP-3.1M FOR REQUIRED TOLERANCES.

ITEM SPECIAL - RUBBERIZED SEAL:

THIS ITEM SHALL BE USED ON STRUCTURE LOR-83-10976 (S.L.K.).

THE RUBBERIZED SEAL SHALL BE APPLIED OVER THE ENTIRE AREA OF THE BRIDGE DECK AT A RATE OF 3.5 liters / square meter.

THE RUBBERIZED SEAL SHALL BE BITUMINOUS MATERIAL AS PER 702.01 WITH THE ADDITION OF CRUMB RUBBER. THE GRANULATED CRUMB RUBBER SHALL BE 100 PERCENT VULCANIZED AND MEET THE FOLLOWING GRANULATION REQUIREMENTS:

SIEVE SIZE	PERCENT PASSING
2.36 mm	100
2.00 mm	95 - 100
0.60 mm	0 - 10
0.425 mm	0 - 4

THE SIEVES SHALL COMPLY WITH THE REQUIREMENTS OF AASHTO M92 (ASTM E11).

THE GRANULATED RUBBER IRRESPECTIVE OF DIAMETER, SHALL NOT BE GREATER THAN 13 mm IN LENGTH AND CONTAIN NO MORE THAN 2 PERCENT MOISTURE.

THE SPECIFIC GRAVITY OF THE RUBBER MATERIAL SHALL BE 1.15 ± 0.02 AND SHALL BE FREE OF EXCESS FABRIC (0.5 PERCENT BY WEIGHT), WIRE OR OTHER CONTAMINATING MATERIALS, EXCEPT THAT UP TO 4 PERCENT CALCIUM CARBONATE MAY BE INCLUDED TO PREVENT THE RUBBER PARTICLES FROM STICKING TOGETHER.

GRANULATED CRUMB RUBBER SHALL BE ACCEPTED BY CERTIFICATION FROM THE RUBBER SUPPLIER IN ACCORDANCE WITH THE REQUIREMENTS OF 101.061.

ASPHALT-RUBBER MATERIAL MIXING: THE PERCENTAGE OF CRUMB VULCANIZED RUBBER SHALL BE 25 ± 4 PERCENT BY WEIGHT OF THE ASPHALT CEMENT.

(CONTINUED)

DESIGN AGENCY: DISTRICT THREE
DATE: 8/98
REVIEWED: DLM
STRUCTURAL FILE NUMBER
DRAWN: EJG
REVISED
DESIGNED: EJG 7-98
CHECKED: DLA

STRUCTURE GENERAL NOTES

LOR-83-6.727

DESIGN FILE: i:\projects\16738\struct\gnote.dgn
WORKSTATION: eglover DATE: 22 DEC 98

(CONTINUED)

AS AN ALTERNATIVE TO THE ABOVE, THE CRUMB RUBBER MAY BE PREMIXED AS PER ASTM-D-3405.

THE TEMPERATURE OF THE ASPHALT SHALL BE BETWEEN 180 °C AND 220 °C BEFORE ADDITION OF THE CRUMB VULCANIZED RUBBER. THE MATERIALS SHALL BE CAREFULLY COMBINED AND MIXED AND REACTED FOR A PERIOD OF TIME. THE TEMPERATURE OF THE ASPHALT-RUBBER MIXTURE SHALL BE ABOVE 165 °C DURING THE REACTION PERIOD.

IF A JOB DELAY RESULTS AFTER THE FULL REACTION HAS OCCURED, THE ASPHALT RUBBER MATERIAL MAY BE ALLOWED TO COOL AND BE SLOWLY REHEATED TO AN ACCEPTABLE SPRAYING TEMPERATURE JUST PRIOR TO APPLICATION. HOWEVER, BECAUSE OF THE POLYMER REVERSION THAT CAN OCCUR WHEN CRUMB RUBBER IS HELD AT PROLONGED HIGH TEMPERATURES, THE ASPHALT-RUBBER MATERIAL SHALL NOT BE REHEATED TO TEMPERATURES ABOVE 165 °C.

THE ASPHALT-RUBBER MIXING EQUIPMENT SHALL BE A HOT OIL, DOUBLE BOILER TAR KETTLE TYPE WITH MECHANICAL AGITATION CAPABLE OF COMBINING THE ASPHALT AND RUBBER INTO A HOMOGINIZED MIX.

IMMEDIATELY AFTER THE ASPHALT-RUBBER HAS BEEN SPRAYED ON THE BRIDGE, LIMESTONE (703.05 QUALITY) SHALL BE APPLIED AT THE RATE OF 22 kilogram / square meter. WHEN PLACED, THE TEMPERATURE OF THE LIMESTONE SHALL BE ABOVE 135 °C. THE LIMESTONE SHALL BE NO. 8. THE LIMESTONE SHALL BE RELATIVELY DUST FREE.

ROLLERS SHALL BE AS PER 409.05 AND SURFACE PREPARATION AS PER 409.06.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER SQUARE METER FOR ITEM SPECIAL - RUBBERIZED SEAL WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 614 - MAINTAINING TRAFFIC:

TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT DURING WORKING HOURS WHEN ONE LANE MAY BE CLOSED FOR STRUCTURE WORK USING FLAGGERS AS PER STANDARD DRAWING MT-97.10M.

metric units

BRIDGE NUMBER LOR-83-10976 (S.L.K.) LOR-83-0682 (S.L.M.) SFN 4704029

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION
SPECIAL	40963100	66	square meter	RUBBERIZED SEAL

DESIGN AGENCY: DISTRICT THREE

DATE: 8/98 REVISED: DCM STRUCTURAL FILE NUMBER

DRAWN: EJG REVISED

DESIGNED: EJG CHECKED: DCM

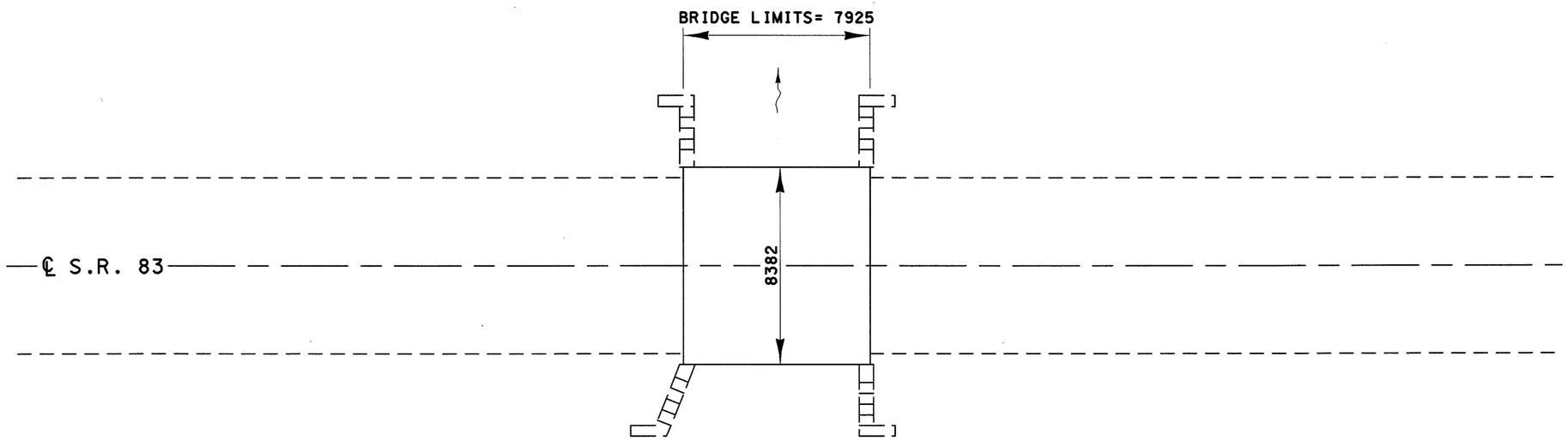
SUMMARY

STRUCTURE SUMMARY

LOR-83-6.727

65/86

DESIGN FILE: I:\projects\16738\struct\equan.dgn
WORKSTATION: eg/over DATE: 22 DEC 98



PLAN VIEW

NOTES:

1) THE EXISTING BRIDGE RAIL AND GUARDRAIL ARE NOT SHOWN. SEE SHEET NO. 57 FOR DETAILS

2) AFTER PLANING (SEE BRIDGE TREATMENT SHEET), RUBBERIZED SEAL SHALL BE APPLIED TO THE ENTIRE BRIDGE DECK BEFORE THE SURFACE COURSE OF ASPHALT IS PLACED

ITEM	QUANTITY	UNIT	DESCRIPTION
SPECIAL	66	square meter	RUBBERIZED SEAL

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 65

ALL DIMENSIONS ARE IN MILLIMETERS, UNLESS NOTED OTHERWISE

DESIGN FILE: I:\projects\16738\struct\misc.dgn
WORKSTATION: eg/over DATE: 22 DEC 98

DESIGN AGENCY: DISTRICT THREE

DESIGNED E.J.G. 7-98 | DRAWN E.J.G. | REVIEWED D.L.M. | DATE 8/98
CHECKED D.P.H. | REVISED | STRUCTURAL FILE NUMBER 4704029

PLAN VIEW

LOR-83-10976 S.L.K. LOR-83-0682 S.L.M.

LOR-83-6.727

UNDER DRAINS FOR PULL BOXES:

REFERENCE IS MADE TO STANDARD DRAWING HL-30.11M FOR DETAILS OF DRAINING PULL BOXES. UNDER DRAINS FOR PULL BOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 6 METERS.

AN ESTIMATED QUANTITY OF 45 METERS OF ITEM 603, 100 mm CONDUIT, TYPE E IS INCLUDED IN THE QUANTITIES FOR THIS PURPOSE.

GUARANTEE:

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF ONE HUNDRED AND TWENTY (120) DAYS FOLLOWING COMPLETION OF THE TEN (10) DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATION, THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY. EQUIPMENT, MATERIAL AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR.

THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS OF THE TRAFFIC CONTROL SYSTEM: CONTROLLERS AND ASSOCIATED EQUIPMENT, DETECTOR UNITS. INTERCONNECTION ITEMS AND MASTER CONTROL EQUIPMENT.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE STATE OF OHIO FOLLOWING ACCEPTANCE OF THE EQUIPMENT.

THE COST OF GUARANTEEING THE TRAFFIC CONTROL SYSTEM WILL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE SYSTEM.

STRAIN POLE FOUNDATION ELEVATIONS:

ELEVATIONS SHOWN IN THE PLANS FOR STRAIN POLE FOUNDATIONS ARE FOR COMPUTATIONAL PURPOSES ONLY. THE ACTUAL ELEVATION OF THE FOUNDATION SHALL BE IN ACCORDANCE WITH TC-21.20M PROVIDED THE EXISTING SLOPE IS LESS THAN 6:1.

AT LOCATIONS WHERE THE EXISTING SLOPE IS 6:1 OR GREATER, THE BURIED DEPTH OF FOUNDATION, AS SHOWN IN STANDARD DRAWING TC-21.20M, SHALL APPLY TO THE LOW SIDE OF THE SLOPE. THE TOP OF THE FOUNDATION SHALL BE SET 50 MILLIMETERS ABOVE THE EXISTING SURFACE ON THE HIGH SIDE OF THE SLOPE. THE ADDITIONAL DEPTH OF FOUNDATION NECESSARY TO MEET THESE REQUIREMENTS SHALL BE ADDED TO THE FORMED TOP.

PAYMENT FOR ADDITIONAL CONCRETE SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR ITEM 632 STRAIN POLE FOUNDATION.

ITEM 632 - REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN:

THE EXISTING TRAFFIC SIGNAL INSTALLATION SHALL BE REMOVED AS INDICATED ON THE PLANS. ITEMS FOR REMOVAL INCLUDE EXISTING STRAIN POLES, FOUNDATIONS, SIGNAL CABLE, LOOP DETECTOR LEAD-IN CABLE, VEHICULAR SIGNAL HEADS, CONTROLLER, CONTROLLER CABINET, ANY SUPPLEMENTAL EQUIPMENT IN THE CABINET, AND OTHER INCIDENTALS REQUIRED AS DIRECTED BY THE ENGINEER.

ALL ITEMS DESIGNATED FOR REMOVAL AND DISPOSAL BY THE DISTRICT TRAFFIC ENGINEER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND DISPOSED OF IN A PROPER MANNER. ALL ITEMS DESIGNATED FOR REMOVAL AND SALVAGE BY THE DISTRICT TRAFFIC ENGINEER SHALL BE DELIVERED TO ODOT DISTRICT 3 YARD, 906 NORTH CLARK STREET, ASHLAND, OHIO 44805 UNLESS DIRECTED OTHERWISE BY THE ENGINEER. THE BID PRICE SHALL INCLUDE BOTH "REMOVAL AND DISPOSAL" AND/OR "REMOVAL AND DELIVERY".

ITEM 632 - LOOP DETECTOR TIE-IN, AS PER PLAN:

THIS WORK SHALL CONSIST OF MAKING CONNECTIONS TO EXISTING LOOP DETECTOR LEAD-IN WIRE WHETHER THAT WIRE IS UNDERGROUND OR AERIAL. INCLUDED IN THIS ITEM IS THE CONNECTOR KIT OR CABLE SPLICE KIT (CONFORMING TO 713.15) THAT MUST BE USED IN MAKING THESE CONNECTIONS.

THIS ITEM IS ONLY NEEDED WHEN A TIE-IN SITUATION EXISTS. WHEN ALL NEW LEAD-IN WIRE IS SPECIFIED IN THE PLAN. THIS ITEM OF WORK IS NOT REQUIRED.

PAYMENT FOR THIS ITEM WILL INCLUDE ALL NECESSARY LABOR, MISCELLANEOUS HARDWARE, AND EQUIPMENT REQUIRED TO PROVIDE FOR THE LOOP DETECTOR TIE-IN AND OPERATION. BASIS OF PAYMENT WILL BE AT CONTRACT BID PRICE PER EACH.

ITEM 632 - VEHICULAR SIGNAL HEAD, 3-SECTION, 300mm LENS, 2-WAY, AS PER PLAN:

ADJUSTABLE SIGNAL HANGERS SHALL BE USED.

SECTION 732.01 OF THE SPECIFICATIONS IS MODIFIED FOR THIS PROJECT AS FOLLOWS:

A) SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF ALUMINUM AND MEET ITE SPECIFICATIONS.

B) GLASS LENSES SHALL BE USED.

C) ENTRANCE FITTINGS SHALL BE OF THE TRI-STUD DESIGN WITH SERRATED RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING.

ITEM 632 - STRAIN POLE, TYPE TC 81.10M, DESIGN 11, AS PER PLAN:

STAIN POLES USED ON THIS PROJECT SHALL BE AS PER SPECIFICATION 632 AND STANDARD CONSTRUCTION DRAWING TC-81.10M WITH EXCEPTION TO THE POLE LENGTH WHICH SHALL BE 10.1 METERS.

ITEM 632 - POWER SERVICE, AS PER PLAN:

DISCONNECT SWITCH ENCLOSURES FURNISHED IN ACCORDANCE WITH ITEM 632, POWER SERVICE, AS PER PLAN, SHALL INCLUDE A PADLOCK EQUAL TO MASTER NO. 4BKA OR 'WILSON BOHANNON 660, WITH LOCK BODY AND SHACKLE OF BRONZE OR BRASS AND KEYING SHALL BE TO THE STATE MASTER. THE METER BASE SHALL BE A BYPASS STYLE METER BASE AS PER THE REQUIREMENTS OF OHIO EDISON CO.

ITEM 625 - POWER SUPPLY FOR TRAFFIC SIGNALS:

ELECTRIC POWER SHALL BE SUPPLIED TO THE TOP OF POLE P2 (AS SHOWN ON THE SIGNAL PLANS) BY OHIO EDISON. POWER SUPPLIED SHALL BE 120 VOLTS 30 AMP.

OHIO EDISON CO.
FAIRLAWN BUILDING No. 1
1910 WEST MARKET STREET
AKRON, OHIO 44313
(330) 384-4840

ITEM 625 - GROUND ROD, AS PER PLAN:

THIS ITEM SHALL CONSIST OF FURNISHING AND DRIVING A 25 MILLIMETER BY 3048 MILLIMETER GROUND ROD BELOW GRADE ADJACENT TO THE CONTROLLER HOUSING. ALSO INCLUDED IS THE FURNISHING AND RUNNING OF A SEVEN (7) STRAND #4 COPPER WIRE FROM THE TOP OF THE GROUND ROD AND ATTACHING IT TO THE NEUTRAL BAR IN THE CONTROLLER CABINET. GROUND ROD RESISTANCE SHALL BE TWENTY-FIVE (25) OHMS MAXIMUM.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE PER EACH.

ITEM 632 - DETECTOR LOOP, AS PER PLAN:

IN ADDITION TO THE REQUIREMENTS OF 632.10, THE CONTRACTOR SHALL PROVIDE A POSITIVE AND EFFECTIVE MEANS FOR REMOVAL OF SOLID RESIDUE RESULTING FROM THE DRY SAW BLADE CUTTING OF LOOP DETECTOR SLOTS IN THE PAVEMENT. THE RESIDUE SHALL BE REMOVED BY VACUUM OR OTHER MEANS BEFORE IT IS BLOWN BY TRAFFIC ACTION OR WIND.

DRILL HOLES FOR LOOP LEAD-IN CONDUIT IN THE PAVEMENT SHALL BE DRILLED AT A 15-DEGREE MINIMUM TO 30-DEGREE MAXIMUM ANGLE WITH THE SURFACE OF THE PAVEMENT. THE HOLES SHALL BE LOCATED AS PER THE FOLLOWING CONDITIONS:

1) PAVEMENT ADJACENT TO PAVED BERMS - WITHIN THE TRAVELED LANE, A MINIMUM OF 24 INCHES FROM THE JOINT BETWEEN THE EDGE OF PAVEMENT AND PAVED BERM

2) INTEGRAL CONCRETE CURB - A MINIMUM OF 24 INCHES FROM THE BACK OF CONCRETE CURB.

3) PAVEMENT ADJACENT TO CONCRETE CURB AND GUTTER - WITHIN THE TRAVELED LANE, A MINIMUM OF 24 INCHES FROM THE JOINT BETWEEN THE PAVEMENT AND THE GUTTER PLATE.

LOOP DETECTOR WIRE TO LEAD-IN CABLE SPLICES WITHIN EPOXY ENCAPSULATED SPLICE ENCLOSURES SHALL BE JOINED BY AN APPROVED CONNECTOR AND SOLDERED.

ITEM 632 - LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN:

IN ADDITION TO THE REQUIREMENTS OF 632 AND 732.07 OR 732.08, LOOP DETECTOR UNITS SHALL HAVE THE FOLLOWING REQUIREMENTS OR FEATURES:

1) THE OUTPUT DEVICE SHALL BE AN ELECTROMECHANICAL RELAY AND ALL CONTACTS SHALL BE INCLUDED IN THE WIRING HARNESS.

2) THE UNIT SHALL BE SELF TUNING.

3) THE UNIT'S ELECTRICAL CONNECTION PLUGS OR WIRING HARNESS SHALL ALLOW READY REPLACEMENT WITH SINGLE CHANNEL AMPLIFIERS AS DESCRIBED IN THE FINAL PARAGRAPH OF 732.07.

IN ADDITION TO THE REQUIREMENTS LISTED ABOVE, THE DETECTOR UNIT SHALL HAVE EASILY ADJUSTABLE TIMERS INCORPORATED IN THE UNIT THAT ARE CAPABLE OF BOTH EXTEND CALL AND DELAY CALL OUTPUTS. THESE ADJUSTMENTS SHALL BE SEPARATE AND CONTROLLABLE BY CALIBRATED SWITCHES OR KNOBS ON THE OUTSIDE OF THE DETECTOR UNIT. THE EXTEND CALL TIMER SHALL BE CAPABLE OF HOLDING THE CALL OF A VEHICLE FOR A PERIOD OF TIME BEGINNING AT THE INSTANT THE VEHICLE LEAVES THE DETECTION AREA. THE DELAY CALL TIMER SHALL BE SUCH THAT IT DOES NOT ISSUE AND OUTPUT UNTIL THE DETECTION ZONE HAS SEEN OCCUPIED FOR A PERIOD OF TIME. THAT HAS BEEN SET ON THE ADJUSTABLE TIMER. WHEN TIMES ARE SET ON BOTH THE DELAY AND EXTEND TIMERS, THE UNIT SHALL BE DESIGNED TO INHIBIT THE EXTEND FUNCTION UNTIL THE DELAY TIME HAS BEEN MET. WHEN THE LOOP BECOMES UNOCCUPIED, THE DELAY OUTPUT IS REMOVED. WHEN THE VEHICLE GAP EXCEEDS THE EXTEND TIME, THE ENTIRE DELAY EXTEND OPERATION BECOMES EFFECTIVELY RESET FOR THE NEXT CYCLE-DELAY TO TIME OUT, ETC.

PAYMENT FOR ITEM 632 - LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS.

ITEM 625 - TRENCH, AS PER PLAN:
ITEM 625 - TRENCH IN PAVED AREA, TYPE A, AS PER PLAN:
ITEM 625 - TRENCH IN PAVED AREA, TYPE B, AS PER PLAN:

THIS ITEM SHALL CONSIST OF EXCAVATING THE TRENCH TO A DEPTH OF 762 MILLIMETERS, BACKFILLING, AND RESTORING THE AREA. IDENTIFYING TAPE SHALL BE USED TO IDENTIFY WHERE UNDERGROUND CABLE HAS BEEN INSTALLED.

THE IDENTIFYING TAPE SHALL BE AN INERT MATERIAL, APPROXIMATELY 152 MILLIMETERS WIDE, COMPOSED OF POLYETHYLENE PLASTICS HIGHLY RESISTANT TO ALKALIS, ACID OR OTHER CHEMICAL COMPOUNDS LIKELY TO BE ENCOUNTERED IN SOILS. THE TAPE SHALL BE RED WITH IDENTIFYING PRINTING "ELECTRIC" IN BLACK LETTERS, ONE SIDE ONLY. THE TAPE SHALL BE SUPPLIED IN CONTINUOUS ROLLS WITH THE IDENTIFYING LETTERING REPEATED CONTINUOUSLY THE FULL LENGTH OF THE TAPE. THE TAPE SHALL BE ALLEN SYSTEMS, TERRA TAPE, TECTA TAPE, OR EQUAL APPROVED BY THE ENGINEER.

THE TAPE SHALL BE BURIED IN THE ELECTRIC LINE TRENCH WITH ONE STRIP PLACED NO LESS THAN 50 MILLIMETERS OR MORE THAN 300 MILLIMETERS BELOW THE FINAL FINISHED GRADE OF THE TRENCH. THE TAPE SHALL, BE PLACED WITH THE PRINTED SIDE UP AND SHALL BE ESSENTIALLY PARALLEL WITH THE FINAL GRADE.

PAYMENT WILL BE MADE AT CONTRACT UNIT PRICE PER METER.

ITEM - 633 CONTROLLER, ACTUATED, 8-PHASE, SOLID STATE DIGITAL MICROPROCESSOR, AS PER PLAN:

THE OVERLAP PROGRAMMING SHALL BE BY USE OF AN INTERCHANGEABLE PLUG IN PRINTED CIRCUIT BOARD ASSEMBLY AS DESCRIBED IN PART 14 OF TS-1 983. IN ADDITION TO NEMA REQUIREMENTS, THE CONFLICT MONITOR SHALL HAVE EXTENDED MONITORING IN ACCORDANCE WITH 733.04 PART 3B. THE MONITOR SHALL ALSO HAVE THE CAPABILITY OF MONITORING EACH LOAD SWITCH SEPARATELY, AS SHOWN IN THE LOAD SWITCH HOOK-UP DIAGRAM. IN ADDITION TO THE REQUIREMENTS OF 733.04 THE CABINET SHALL BE WIRED SO THAT CONTROLLER PIN CONNECTIONS ASSOCIATED WITH A GIVEN PHASE NUMBER SHALL MATCH THE PHASE NUMBER ASSIGNED TO THE SPECIFIED TRAFFIC MOVEMENT AS SHOWN ON THE PLANS. CONTROLLER CABINET SHALL BE KEYED TO THE STATE MASTER. THE CONTROLLER CABINET SIZE SHALL COMPLY TO THE REQUIREMENTS OF NEMA TS-1 SECTION 14. PRINTED CIRCUIT BOARD TYPE BACK PANELS OF THE CONTROLLER CABINET WILL NOT BE ACCEPTABLE. SOLDERED CIRCUIT BOARD TYPE BACK PANELS OF THE CONTROLLER CABINET WILL NOT BE ACCEPTABLE. SOLDERED CONNECTIONS WILL BE PERMITTED FOR WIRING ON THE BACK SIDE OF THE BACK PANEL. ALL CONTROLLER MEMORIES SHALL BE NON-VOLATILE AND SHALL NOT REQUIRE BATTERIES OR OTHER SOURCES OF ENERGY TO RETAIN DATA WHILE POWER IS REMOVED FROM THE CONTROLLER. THE DESIGN OF THE MONITOR SHALL USE MICROPROCESSOR ARCHITECTURE AND LIQUID CRYSTAL DISPLAYS. THE MONITOR SHALL INDICATE THE EXACT LOAD SWITCH CHANNEL IN WHICH THE FAILURE OCCURRED. THE CONFLICT MONITOR SHALL HAVE AN EVENT LOGGING MEMORY. A MINIMUM OF NINE (9) EVENTS SHALL BE LOGGED. EXAMPLES OF EVENTS INCLUDE: POWER OUTAGES, CONFLICTS, CONTROLLER VOLTAGE MONITOR ETC. EVENTS SHALL BE DISPLAYED ON THE CONFLICT MONITORS LIQUID CRYSTAL DISPLAY WHEN INTERROGATED.

PAYMENT FOR ITEM 633 CONTROLLER, ACTUATED, 8-PHASE, SOLID STATE DIGITAL, MICROPROCESSOR AS PER PLAN WILL BE AT THE CONTRACT BID PRICE PER EACH COMPLETE AND IN PLACE INCLUDING ALL CONNECTIONS TESTED AND ACCEPTED.

ITEM - 632 MESSENGER WIRE, 7 STRAND, 6mm DIAMETER WITH ACCESSORIES, AS PER PLAN:

THIS ITEM OF WORK SHALL CONFORM TO ITEM 632 EXCEPT AS NOTED HEREIN. THE TETHER WIRE SHALL BE PLACED IMMEDIATELY AFTER THE SIGNAL HEAD ATTACHMENT TO THE MAIN SUPPORT MESSENGER WIRE.

PAYMENT FOR ITEM 632 MESSENGER WIRE, 7 STRAND, 6mm DIAMETER WITH ACCESSORIES, AS PER PLAN SHALL BE AT THE CONTRACT BID PRICE PER METER AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 614 - MAINTAINING TRAFFIC AT SIGNAL INSTALLATIONS:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL INSTALLATIONS UNDER THE FOLLOWING CONDITIONS:

A. EXISTING SIGNAL INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO REMOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTION) FROM THE TIME HIS OPERATIONS FIRST DISTURBS THE INSTALLATION UNTIL THE INSTALLATION HAS BEEN SUBSEQUENTLY REMOVED AND THE WORK IS ACCEPTED.

B. NEW SIGNAL INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR: THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. HE SHALL PROVIDE ODOT DISTRICT 3 AND THE ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS, SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN 4 HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE, ALL DAMAGED EQUIPMENT EXCEPT POLES AND CONTROL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR'S NOTIFICATION OF THE OUTAGE.

IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED. THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED 8-HOUR PERIOD. THE CONTRACTOR SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. THAT IS, WHERE MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCATION, THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

WHERE OUTAGES ARE THE RESULT OF A VEHICLE ACCIDENT, THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

WHERE THE CONTRACTOR HAS FAILED TO OR CANNOT RESPOND TO AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS AS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15. ANY SUBSEQUENT BILLINGS TO THE STATE OF OHIO FOR POLICE SERVICES AND/OR MAINTENANCE SERVICES BY STATE FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR ON THIS CONTRACT.

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICE ENTIRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO A COOPERATIVE UNDERSTANDING WITH THE LOCAL MAINTAINING AGENCY TO PROVIDE THE MAINTENANCE. THE CONTRACTOR SHALL INFORM THE ENGINEER, IN WRITING, OF THE MAINTENANCE METHOD SELECTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM.

WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED 6 HOURS AND SHALL NOT INCLUDE THE HOURS OF 7 A.M. TO 9:30 A.M. AND 3 P.M. TO 6 P.M., ON WEEKDAYS. ANY SIGNALIZED INTERSECTION, WHERE A TRAFFIC SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED BY OFF-DUTY OHIO STATE POLICE, HIRED BY THE CONTRACTOR.

ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN 632.24.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

metric units

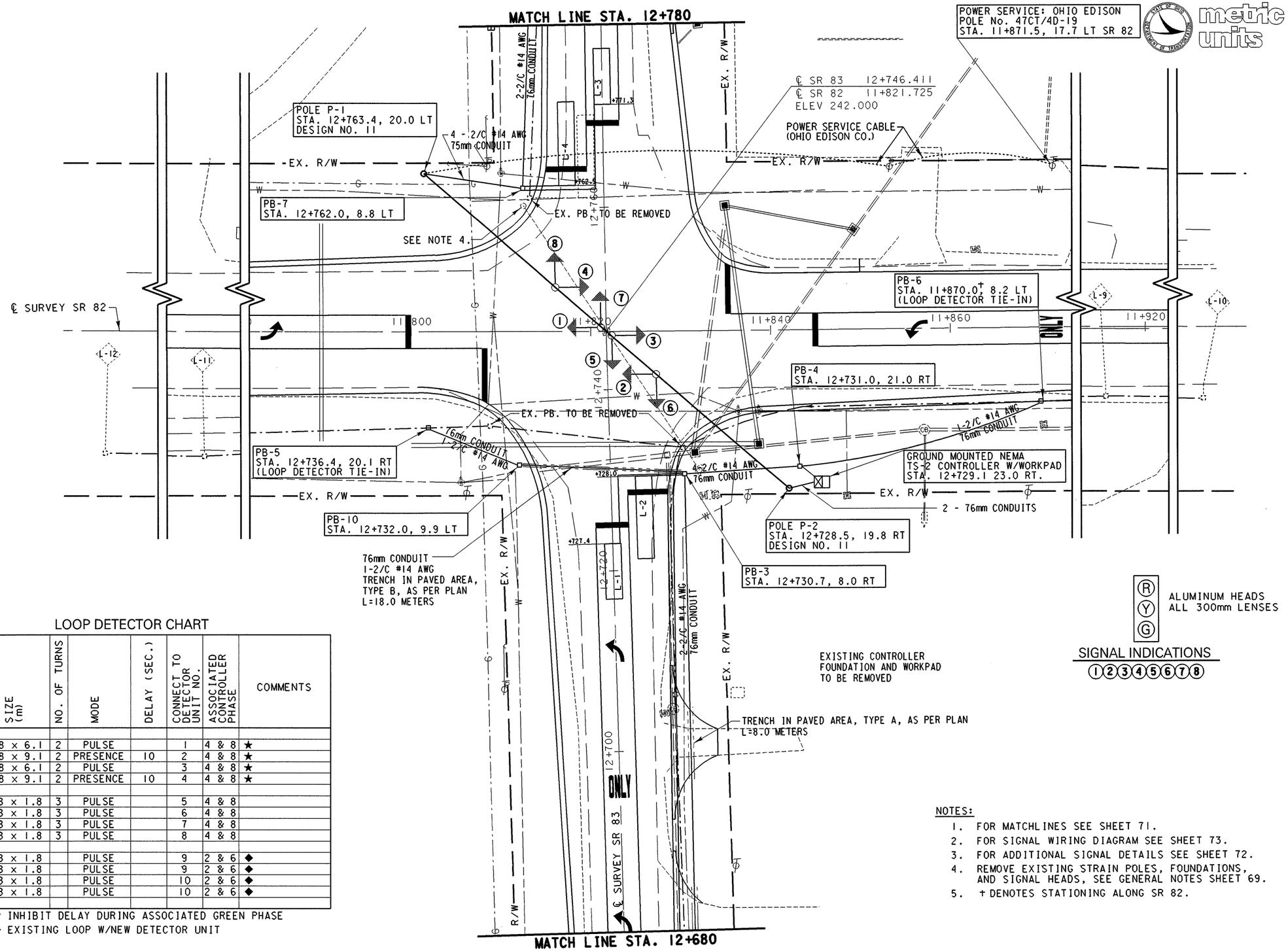
SHEET NUMBER 69	70	71	72	73	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	3	5			202	75300	8	each	PULL BOX REMOVED	
45					603	00400	45	meter	100mm CONDUIT, TYPE E	
					614	11000	LUMP	lump sum	MAINTAINING TRAFFIC	
	153	191			625	25500	344	meter	CONDUIT, 76mm, 713.04	
	127.0	129.9			625	29001	256.9	meter	TRENCH, AS PER PLAN	
	8.0	73.4			625	29501	81.4	meter	TRENCH IN PAVED AREA, TYPE A, AS PER PLAN	
	18.0				625	29601	18.0	meter	TRENCH IN PAVED AREA, TYPE B, AS PER PLAN	
	5	4			625	30700	9	each	PULL BOX, 713.08, 450mm	
	1				625	30706	1	each	PULL BOX, 713.08, 600mm	
	3				625	32001	3	each	GROUND ROD, AS PER PLAN	
	4				632	01101	4	each	VEHICULAR SIGNAL HEAD, 3-SECTION, 300mm LENS, 2-WAY, AS PER PLAN	
	8				632	25000	8	each	COVERING OF VEHICULAR SIGNAL HEAD	
	4	4			632	26501	8	each	DETECTOR LOOP, AS PER PLAN	
	12				632	27009	12	each	LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN	
	2				632	27201	2	each	LOOP DETECTOR, TIE-IN, AS PER PLAN	
			53.3		632	29901	53.3	meter	MESSENGER WIRE, 7 STRAND, 6mm DIAMETER WITH ACCESSORIES, AS PER PLAN	
			53.3		632	30300	53.3	meter	MESSENGER WIRE, 7 STRAND, 11mm DIAMETER WITH ACCESSORIES	
				205	632	40700	205	meter	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
			2		632	64000	2	each	STRAIN POLE FOUNDATION	
	614	276			632	65200	890	meter	LOOP DETECTOR LEAD-IN CABLE	
				5	632	67200	5	meter	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG	
				5	632	69700	5	meter	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG	
	1				632	70001	1	each	POWER SERVICE, AS PER PLAN	
	2				632	83101	2	each	STRAIN POLE, TYPE TC-81.10M, DESIGN 11, AS PER PLAN (10.1 m)	
	1				632	90101	1	each	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	
	1				633	38001	1	each	CONTROLLER, ACTUATED, 8 PHASE, SOILD STATE DIGITAL MICROPROCESSOR, AS PER PLAN	
	1.40				633	70000	1.40	cu. meter	CONCRETE FOR CABINET FOUNDATION, TYPE TC-83.20M, TYPE 2	
	1.04				633	70500	1.04	sq. meter	CONTROLLER WORK PAD, TYPE TC-83.20M, TYPE 2	

CALCULATED RPT
CHECKED MR

TRAFFIC SIGNAL SUMMARY
SR 82 AND SR 83

LOR-83-6.727

DESIGN FILE: I:\projects\16738\Dgn\signal.dgn
WORKSTATION: rtrivoli DATE: 17 NOV 1999



ALUMINUM HEADS
ALL 300mm LENSES

SIGNAL INDICATIONS

(R) (Y) (G)

(1)(2)(3)(4)(5)(6)(7)(8)

LOOP DETECTOR CHART

LOOP	SIZE (m)	NO. OF TURNS	MODE	DELAY (SEC.)	CONNECT TO DETECTOR UNIT NO.	ASSOCIATED CONTROLLER PHASE	COMMENTS
L-1	1.8 x 6.1	2	PULSE		1	4 & 8	★
L-2	1.8 x 9.1	2	PRESENCE	10	2	4 & 8	★
L-3	1.8 x 6.1	2	PULSE		3	4 & 8	★
L-4	1.8 x 9.1	2	PRESENCE	10	4	4 & 8	★
L-5	1.8 x 1.8	3	PULSE		5	4 & 8	
L-6	1.8 x 1.8	3	PULSE		6	4 & 8	
L-7	1.8 x 1.8	3	PULSE		7	4 & 8	
L-8	1.8 x 1.8	3	PULSE		8	4 & 8	
L-9	1.8 x 1.8		PULSE		9	2 & 6	◆
L-10	1.8 x 1.8		PULSE		9	2 & 6	◆
L-11	1.8 x 1.8		PULSE		10	2 & 6	◆
L-12	1.8 x 1.8		PULSE		10	2 & 6	◆

★ INHIBIT DELAY DURING ASSOCIATED GREEN PHASE
◆ EXISTING LOOP W/NEW DETECTOR UNIT

NOTES:

1. FOR MATCHLINES SEE SHEET 71.
2. FOR SIGNAL WIRING DIAGRAM SEE SHEET 73.
3. FOR ADDITIONAL SIGNAL DETAILS SEE SHEET 72.
4. REMOVE EXISTING STRAIN POLES, FOUNDATIONS, AND SIGNAL HEADS, SEE GENERAL NOTES SHEET 69.
5. + DENOTES STATIONING ALONG SR 82.

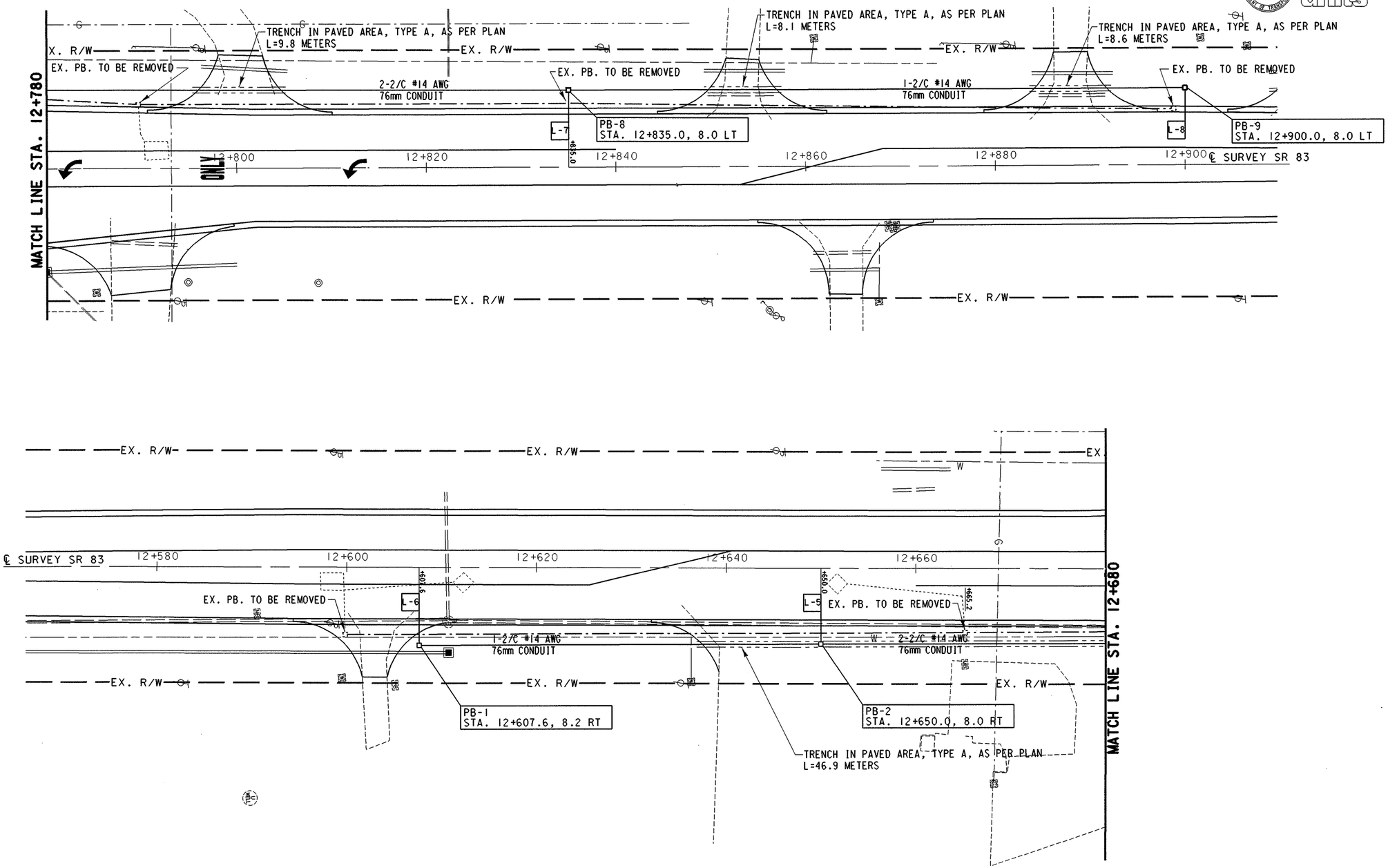
SCALE IN METERS

CALCULATED RPT
CHECKED

TRAFFIC SIGNAL PLAN SR 82 AND SR 83

LOR-83-6.727

DESIGN FILE: i:\projects\16738\dgn\signal.dgn
WORKSTATION: rtrivoli
DATE: 30-DEC-1998



NOTES:

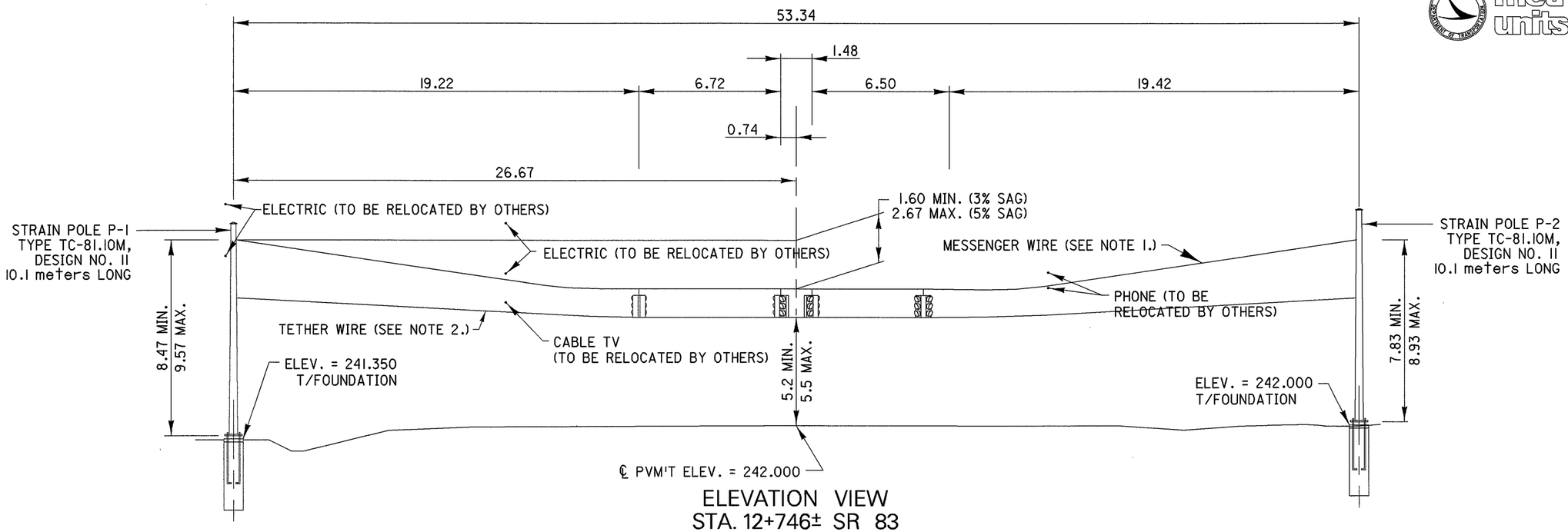
1. FOR MATCHLINES SEE SHEET 70.

CALCULATED RPT
CHECKED

TRAFFIC SIGNAL PLAN
SR 82 AND SR 83

LOR-83-6.727

DESIGN FILE: I:\projects\16738\dgn\signal.dgn
WORKSTATION: rtrivoli
DATE: 30-DEC-1998



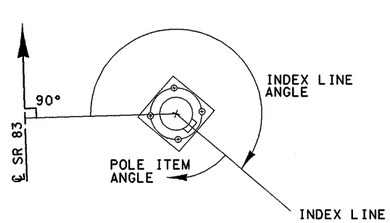
ELEVATION VIEW
STA. 12+746± SR 83
LOOKING NORTHEAST
SR82 AND SR83

SIGNAL TIMING CHART

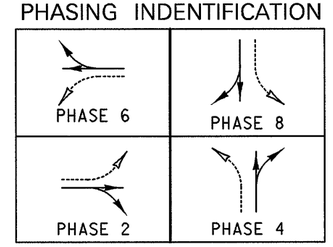
INTERVAL OR FEATURE					
INTERSECTION MOVEMENT		2	6	4	8
MINIMUM GREEN	(SEC.)	15	15	12	12
VEHICLE EXTENSION	(SEC.)	4	4	4	4
YELLOW CHANGE	(SEC.)	5	5	5	5
ALL RED CLEARANCE	(SEC.)	2	2	2	2
MAXIMUM GREEN	(SEC.)	50	50	30	30
WALK	(SEC.)				
PEDESTRIAN CLEARANCE	(SEC.)				
MINIMUM RECALL	(ON/OFF)	ON	ON	OFF	OFF
NON - LOCK	(ON/OFF)	OFF	OFF	ON	ON
DENSITY ACTIVE	(YES/NO)	YES	YES	YES	YES
ADDED INITIAL	(SEC.)	1.5	1.5	2.0	2.0
MAXIMUM INITIAL	(SEC.)	30	30	20	20
TIME TO REDUCE	(SEC.)	15	15	15	15
TIME BEFORE REDUCTION	(SEC.)	15	15	15	15
MINIMUM GAP	(SEC.)	3.0	3.0	3.0	3.0

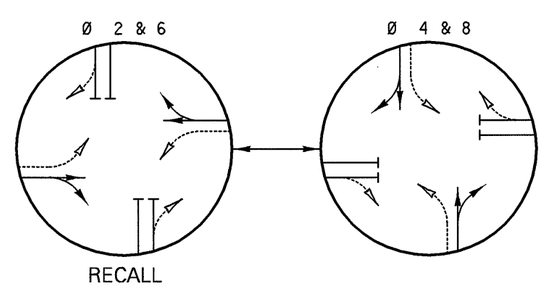
STRAIN POLE TYPE TC - 81.10M

POLE NO.	DESIGN NO.	POLE HEIGHT	INDEX LINE ANGLE	ANGLES (DEG.) FROM INDEX LINE: POWER SERVICE	CABLE ENTRANCE (0.3 m FROM TOP)	51 mm CAPPED CONDUIT (FUTURE USE)
P-1	11	10.1	222°		180°	180°
P-2	11	10.1	222°	315°	180°	180°



PHASING INDENTIFICATION





PHASING DIAGRAM

SIGNAL INDICATION CHART

PHASE	SIGNAL HEAD 1	2	3	4	5	6	7	8
2 & 6	G	G	G	G	R	R	R	R
	Y	Y	Y	Y	R	R	R	R
	R	R	R	R	R	R	R	R
4 & 8	R	R	R	R	G	G	G	G
	R	R	R	R	Y	Y	Y	Y
	R	R	R	R	R	R	R	R
FLASH	Y	Y	Y	Y	R	R	R	R

NOTES:

1. MESSENGER WIRE SHALL BE ITEM 632, MESSENGER WIRE, 7 STRAND, 11mm DIAMETER WITH ACCESSORIES.
2. TETHER WIRE SHALL BE ITEM 632, MESSENGER WIRE, 7 STRAND, 6mm DIAMETER WITH ACCESSORIES, AS PER PLAN.

metric units

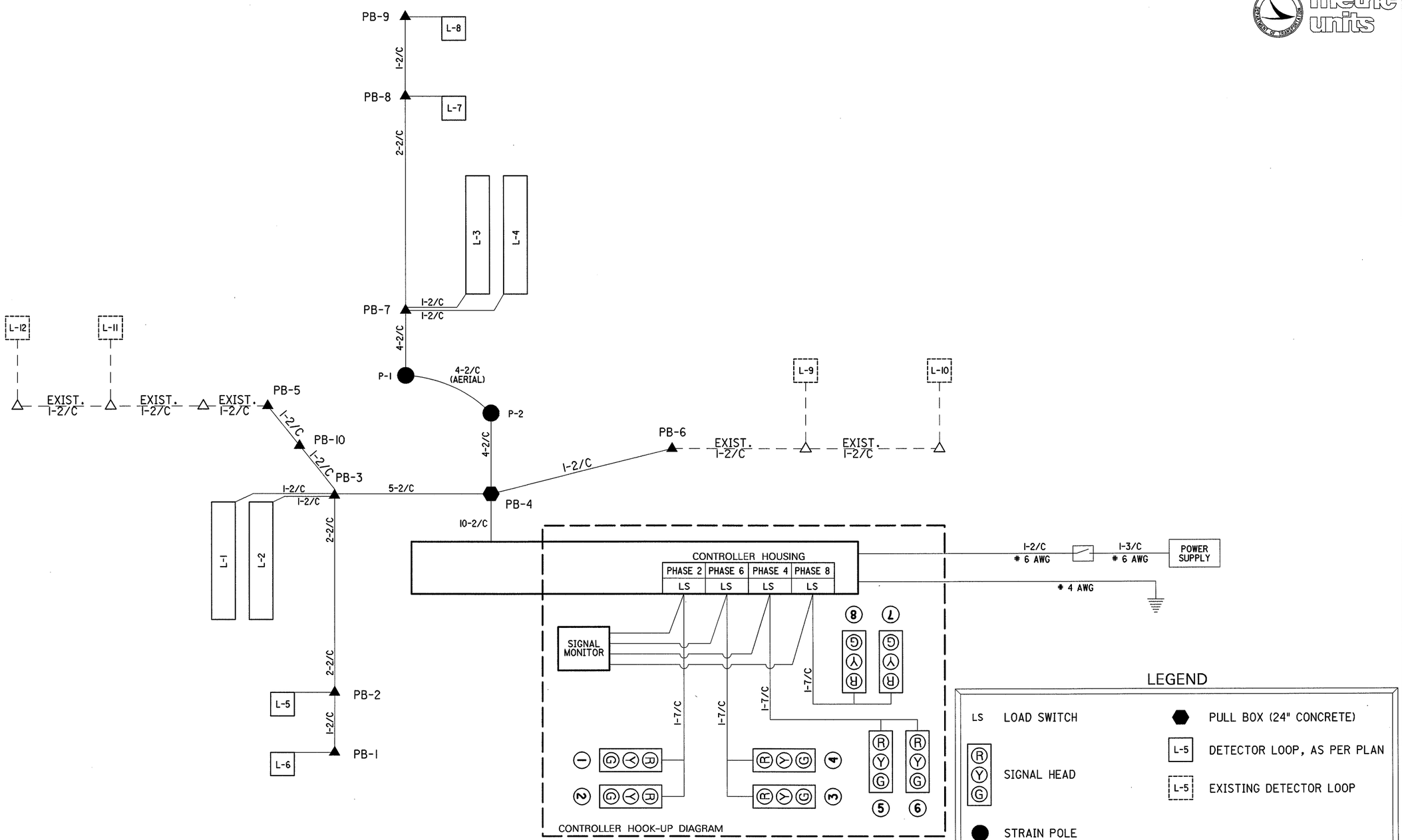
SCALE IN METERS

CALCULATED RPT CHECKED

TRAFFIC SIGNAL DETAILS
SR 82 AND SR 83

LOR-83-6.727

DESIGN FILE: I:\projects\V6738\Dgn\signal.dgn
WORKSTATION: rrrivolf DATE: 07 JAN 99



NOTE: ALL CONDUCTORS ARE #14 AWG EXCEPT AS NOTED

metric units

CALCULATED RPT CHECKED

SR 82 AND SR 83 INTERSECTION
SIGNAL WIRING DIAGRAM

LOR-83-6.727

DESIGN FILE: I:\projects\16738\Dgn\signal.dgn
WORKSTATION: rtrivoli DATE: 07 JAN 99

Plan Sheet Reference No.	Elevation Sheet No.	Sign Number	Location	Station	Code Number	Sign Size (METERS) Width	Sign Size (METERS) Height	630 SIGNS Extrusheet, Type G	630 SIGNS Extrusheet, Type G, As Per Plan	630 SIGNS Flat Sheet, Type F	630 SIGNS Flat Sheet, Type G	630 Removal of Ground Mounted Support and Disposal Post	630 Removal of Ground Mounted Support and Disposal Beam	630 Removal of Ground Mounted Sign and Disposal Minor	630 Removal of Ground Mounted Sign and Disposal Major	630 Removal of Ground Mounted Sign and Rerection	630 GROUND MOUNTED SUPPORTS One-Way No. 3	630 GROUND MOUNTED SUPPORTS No. 2	630 GROUND MOUNTED SUPPORTS No. 3	630 GROUND MOUNTED SUPPORTS No. 4	630 GROUND MOUNTED SUPPORTS Type L Wood Beam	630 GROUND MOUNTED SUPPORTS Type M Wood Beam	630 GROUND MOUNTED SUPPORTS S100 x 11.5 Beam	630 GROUND MOUNTED SUPPORTS W6 x 9 Beam	630 Sign Support Assembly, Bridge Mounted	630 Sign Support Assembly, Pole Mounted	630 Sign Backing Assembly	630 Ground Mounted Beam Support Foundation	630 Breakaway Beam Connection	620 Delineator, Type D, Post Mounted
								SQUARE METER				EACH					METER								EACH	EACH	EACH	EACH	EACH	EACH
76		1	SR 83	12+501 RT	W-47-900	0.900	0.900									1														
76		2	SR 83	12+655 LT	M-38-600	0.600	0.300									1														
					M-2-600-2	0.600	0.600									1														
76		3	SR 83	12+580 RT	M-17-525	0.525	0.375									1														
					M-2-600-2	0.600	0.600									1														
76		4	SR 83	12+620 RT	R-31A-900	0.900	0.750			0.7									3.5 \ 3.5											
76		5	SR 83	12+613 RT	D-1-1800	1.800	0.300			0.5		2		1					4.0 \ 4.0											
					D-1-1800	1.800	0.300			0.5				1																
77		6	SR 83	12+711 LT	R-55-300	0.300	0.450									1														
77		7	SR 83	12+732 LT	M-2-600-2	0.600	0.600									1														
					M-25-525	0.525	0.375									1														
77		8	SR 83	12+732 LT	R-55-300	0.300	0.450									1														
77		9	SR 82	11+805 RT	R-31A-900	0.900	0.750									1														
77		10	SR 82	11+783 LT	R-55-300	0.300	0.450									1														
77		11	SR 82	11+803 LT	R-55-300	0.300	0.450									1														
77		12	SR 82	11+807 LT	M-2-600-2	0.600	0.600			0.4				1																
					M-25-525	0.525	0.375			0.2				1																
77		13	SR 83	12+766 LT	R-31A-900	0.900	0.750			0.7									3.5 \ 3.5											
77		14	SR 83	12+787 LT	R-55-300	0.300	0.450									1														
77		15	SR 83	12+711 RT	R-55-300	0.300	0.450									1														
77		16	SR 83	12+731 RT	R-55-300	0.300	0.450									1														
77		17	SR 83	12+729 RT	R-31A-900	0.900	0.750			0.7									3.5 \ 3.5											
77		18	SR 82	11+835 RT	M-2-600-2	0.600	0.600			0.4				1																
					M-25-525	0.525	0.375			0.2				1																
77		19	SR 82	11+842 RT	W-92-900	0.900	0.900			0.8				1																
77		20	SR 82	11+857 RT	M-39-600	0.600	0.300									1														
					M-2-600-2	0.600	0.600									1														
77		21	SR 83	12+763 RT	M-2-600-2	0.600	0.600									1														
					M-25-525	0.525	0.375									1														
77		22	SR 83	12+765 RT	R-55-300	0.300	0.450									1														
77		23	SR 83	12+786 RT	R-55-300	0.300	0.450									1														
77		24	SR 83	12+801 RT	M-37-600	0.600	0.300									1														
					M-2-600-2	0.600	0.600									1														
78		25	SR 83	12+863 LT	R-31A-900	0.900	0.750			0.7									3.5 \ 3.5											
78		26	SR 83	12+900 LT	D-1-1800	1.800	0.300			0.5				1																
					D-1-1800	1.800	0.300			0.5				1																
78		27	SR 83	12+933 LT	M-17-600	0.600	0.300									1														
					M-2-600-2	0.600	0.600									1														
78		28	SR 83	12+952 LT	N-1-1000	1.000	0.500									1														
78		29	SR 83	12+875 RT	N-45-300	0.300	0.300									1														
78		30	SR 83	12+994 LT	W-47-900	0.900	0.900									1														
79		31	SR 82	12+730 RT	R-31A-900	0.900	0.750			0.7				1																
79		32	SR 82	11+885 LT	R-31A-900	0.900	0.750									1														
SUBTOTALS										7.5		2		10		29			36.0											

CALC BY _CMK_
CHK'D BY _MJS_

SIGN SUB-SUMMARY

LOR-83-6.727

74
86

AUXILIARY & LONG LINE MARKINGS

metric units

PART	ROUTE	FROM S.L.K.	FROM	TO S.L.K.	TO	202 RAISED PAVEMENT MARKER REMOVED FOR STORAGE each	LANE WIDTH m	887 EDGE LINE (3 YEAR WARRANTY) HIGHWAY kilometers km	EDGE LINE TOTAL (PAY QUANT.) km	LANE LINE km	CENTER LINE (3 YEAR WARRANTY) SOLID LINE EQUIVALENT km	CENTER LINE TOTAL (PAY QUANT.) km	CHANNELIZING LINE (3 YEAR WARRANTY) 200mm m	644 AUXILIARY MARKINGS (740.04) STOP LINE 600mm m	CROSSWALK LINE 300mm m	TRANSVERSE LINE 600mm m	RAILROAD SYMBOL MARKING each	SCHOOL SYMBOL MARKING 1800mm each	SCHOOL SYMBOL MARKING 2500mm each	PARKING LOT STALL MARKING m	LANE ARROW TURN LEFT each	LANE ARROW TURN RIGHT each	LANE ARROW THRU each	LANE ARROW COMBINATION each	WORD ON PAVEMENT "ONLY" 1800mm each	WORD ON PAVEMENT "ONLY" 2500mm each	HANDICAP SYMBOL MARKING each	SPECIAL AIR SPEED ZONE MARKING each	614 TEMPORARY CHANNELIZING LINE, CLASS I, 642 PAINT m	TEMPORARY CENTER LINE, CLASS II, 642 PAINT km
A	SR 83	6.727	SR 57	16.914	NORTH RIDGEVILLE S. CORP.	550	3.35	10.187	20.37		4.393	10.51	30	20		245	2				1					1			60	20.37
	SR 83	12.400	Sta. 12+400	13.100	Sta. 13+100								144	17		385					4					2				
	SR 82	11.700	Sta. 11+700	11.940	Sta. 11+940								201	19							4					2				
							TOTAL	10.187	20.37		4.393	10.51	375	56		630	2				9					5			60	20.37

RAISED PAVEMENT MARKERS

PART	ROUTE	s.l.k. SECTION FROM	s.l.k. SECTION TO	DETAIL	RPM	621 RAISED PAVEMENT MARKER, INSTALLATION ONLY each	621 PRISMATIC RETRO REFLECTOR each	621 RAISED PAVEMENT MARKER CASTING, INSTALLATION ONLY each	PRISMATIC RETRO-REFLECTOR TYPES ONE - WAY WHITE	ONE - WAY YELLOW	TWO - WAY YELLOW/YELLOW	TWO - WAY WHITE/RED	TWO - WAY YELLOW/RED	REMARKS
A	SR 83	6.727	7.001	6	27	27			16		11			STOP APPROACH @ SR 57 (N. JCT)
		7.001	12.424	GAP/7	241	241					238	3		CONTINUOUS ROUTE TREATMENT
		12.424	13.068	6	68	68			32		22	14		STOP APPROACH @ SR 82
		13.068	16.914	GAP	158	158					158			CONTINUOUS ROUTE TREATMENT
				TOTAL	494	494			48		429	17		

DETAIL	
1	MULTILANE UNDIVIDED
1	TYPICAL SPACING
2	TAPERED ACCEL LANE
3	DECELERATION LANE
4	PARALLEL ACEL LANE
5	MULTILANE DIVIDED/ EXPRESSWAY
6	STOP APPROACH
7	1 LANE APPR. W/LT. TURN LANE
8	THRU APPROACH
9	2 LANE APPR. W/LT TURN LANE
10	4 LANE DIVIDED TO 2 LANE TRANSITION
11	4 LANE UNDIVIDED TO 2 LANE TRANSITION
12	TWO LANE NARROW BRIDGE
13	TWO WAY LEFT TURN LANE
14	ONE LANE BRIDGE
15	HORIZONTAL CURVE
16	HORIZONTAL CURVE ALT.
17	STOP APPROACH ALT.
GAP	CENTER LINE AT 24 m TYP.

calculated CVH checked MJS

PAVEMENT MARKING INFORMATION

LOR-83-6.727

DESIGN FILE: I:\projects\16738\Dgn\pavemark.dgn
WORKSTATION: mschafra DATE: 29 OCT 1999

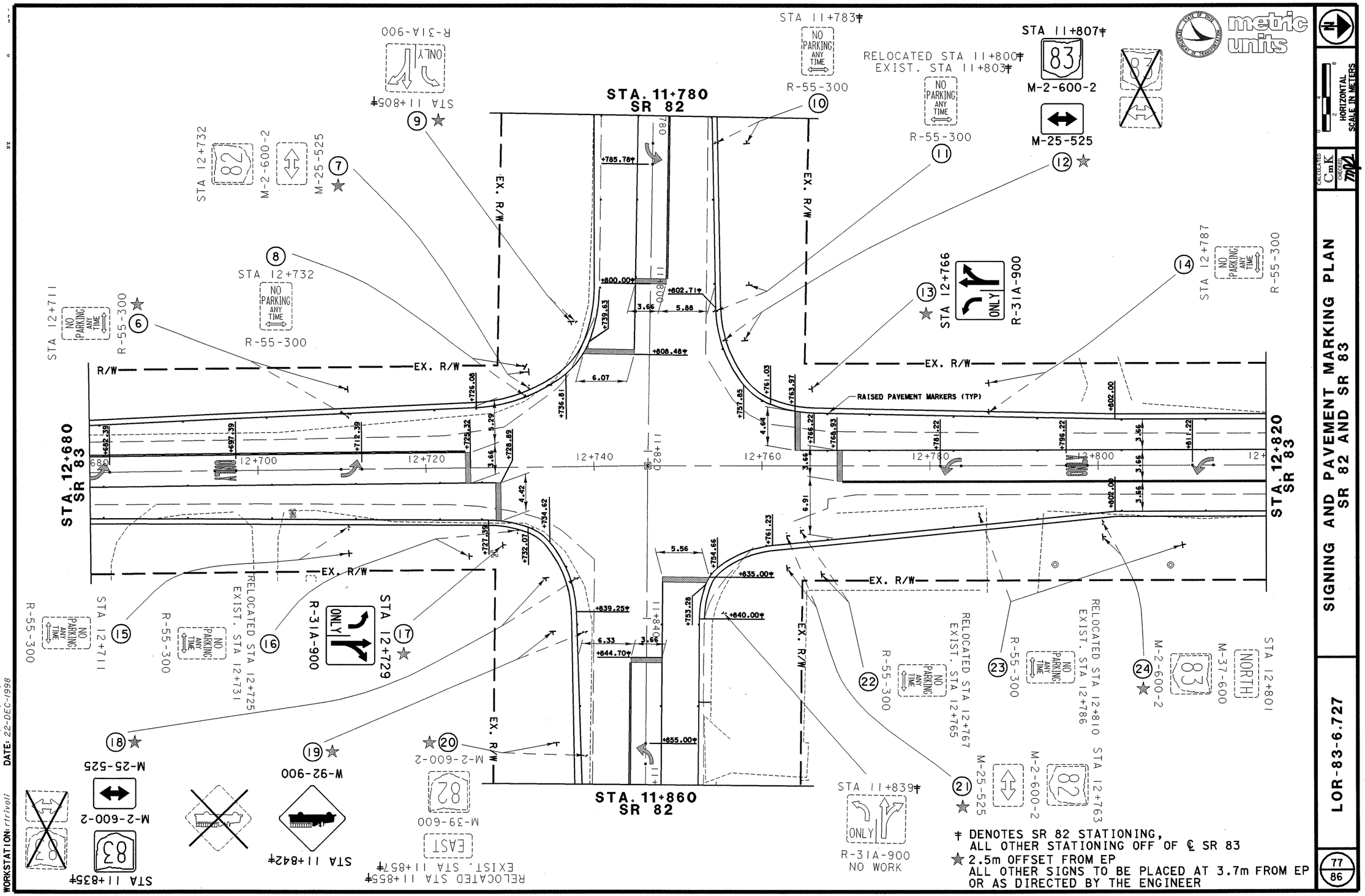
CALCULATED CmK
CHECKED

SIGNING AND PAVEMENT MARKING PLAN
SR 82 AND SR 83

LOR-83-6.727

76
86

DESIGN FILE: I:\projects\16738\dgn\sign.dgn
WORKSTATION: rtrivoli
DATE: 22-DEC-1998



HORIZONTAL SCALE IN METERS

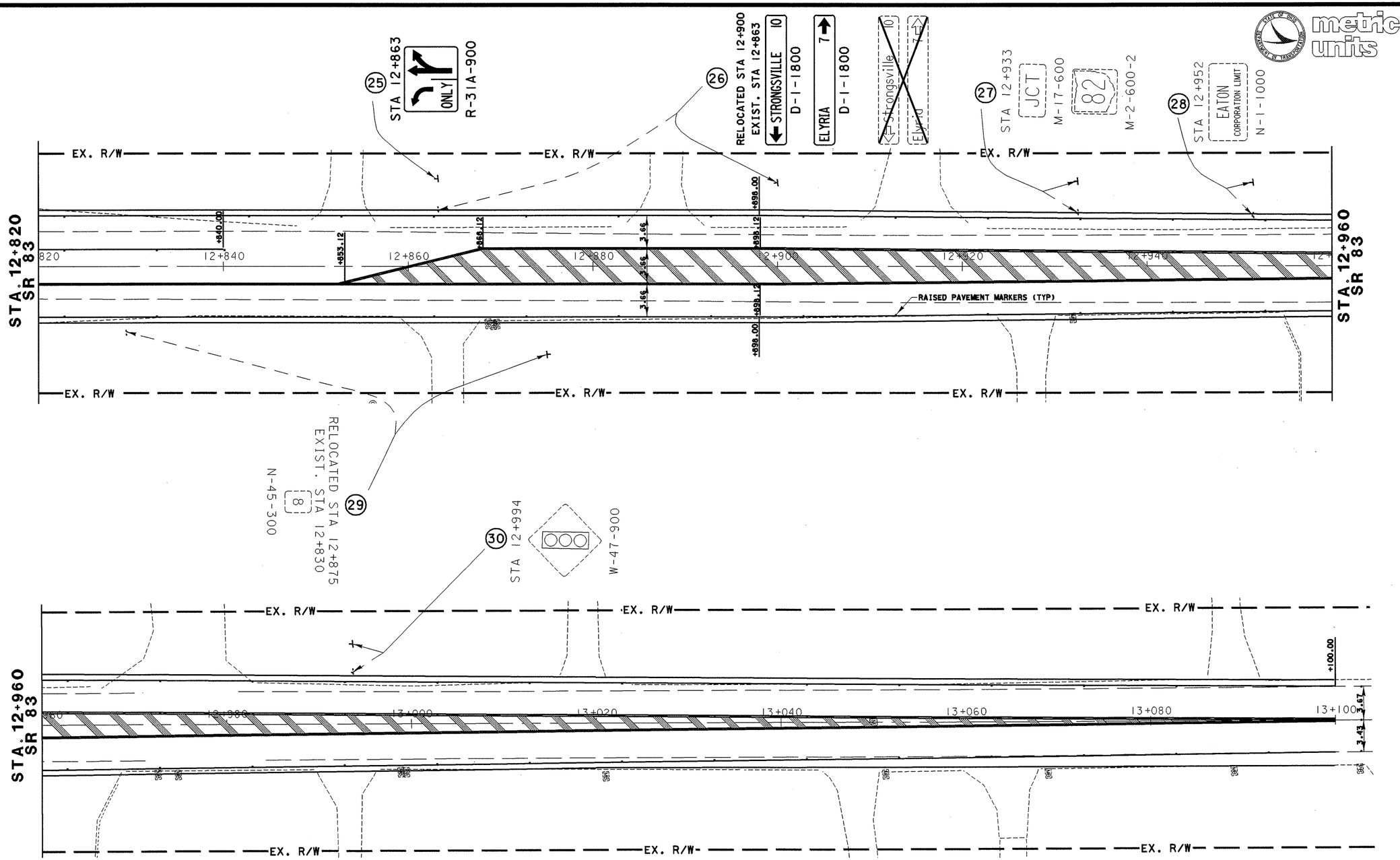
CALCULATED CmK
CHECKED

SIGNING AND PAVEMENT MARKING PLAN
SR 82 AND SR 83

LOR-83-6.727

77/86

DESIGN FILE: i:\projects\16738\dgn\sign.dgn
WORKSTATION: rtrivoli
DATE: 22-DEC-1998



ALL SIGNS TO BE PLACED AT 3.7m FROM EP
OR AS DIRECTED BY THE ENGINEER

HORIZONTAL
SCALE IN METERS

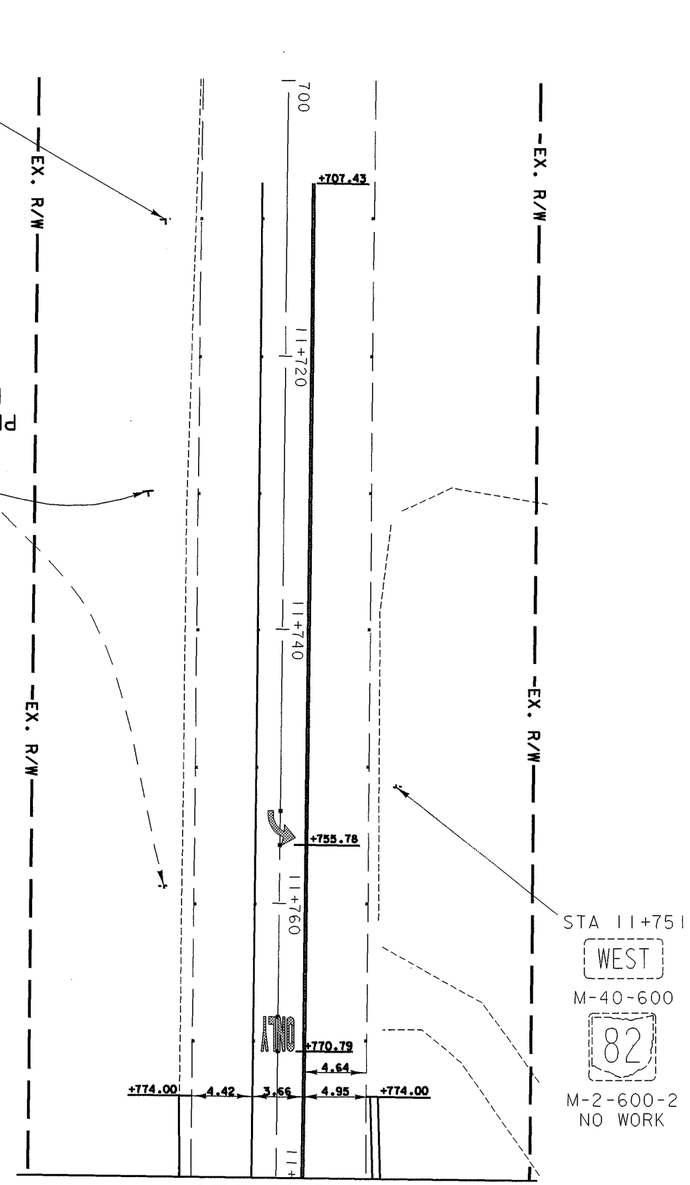
CALCULATED CmK
CHECKED

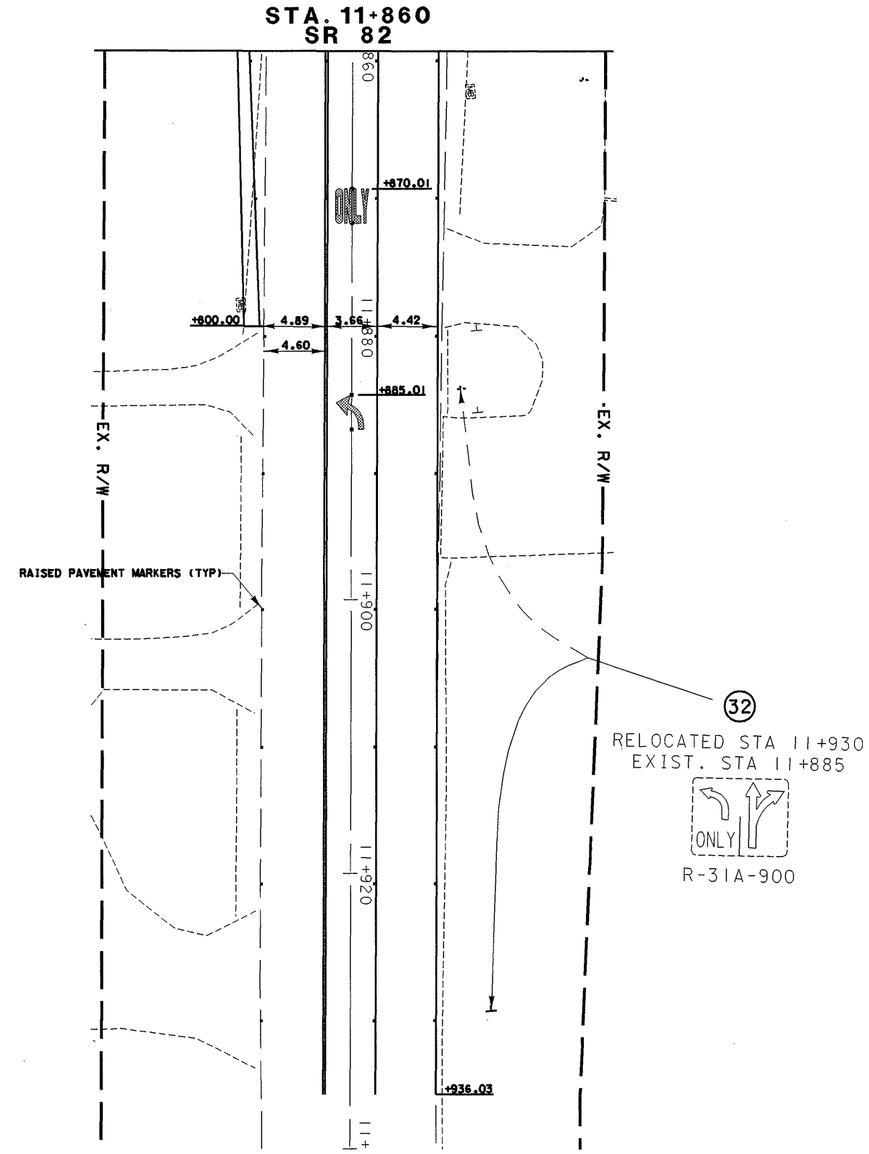
SIGNING AND PAVEMENT MARKING PLAN
SR 82 AND SR 83

LOR-83-6.727

78
86

DESIGN FILE: i:\projects\16738\dgn\sign.dgn
WORKSTATION: rtrivoli DATE: 22-DEC-1998





ALL SIGNS TO BE PLACED AT 3.7m FROM EP
OR AS DIRECTED BY THE ENGINEER

metric units

HORIZONTAL SCALE IN METERS

CALCULATED CmK
CHECKED

SIGNING AND PAVEMENT MARKING PLAN
SR 82 AND SR 83

LOR-83-6.727

79/86

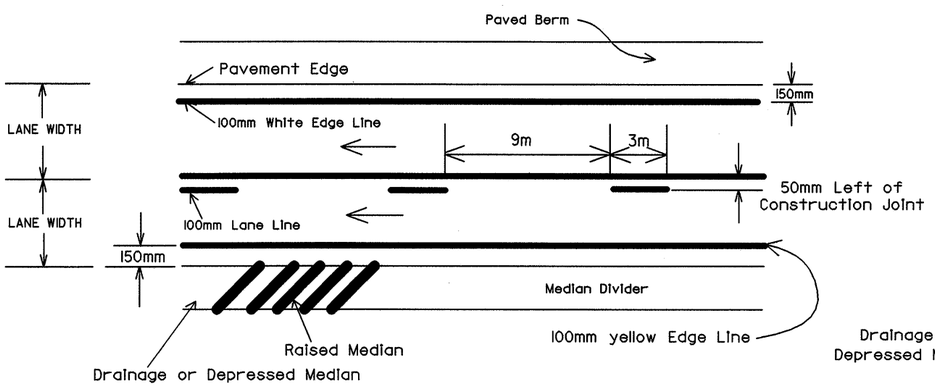
DESIGN FILE: i:\projects\16738\dgn\sign.dgn
WORKSTATION: rtrivoli
DATE: 22-DEC-1998

metric units

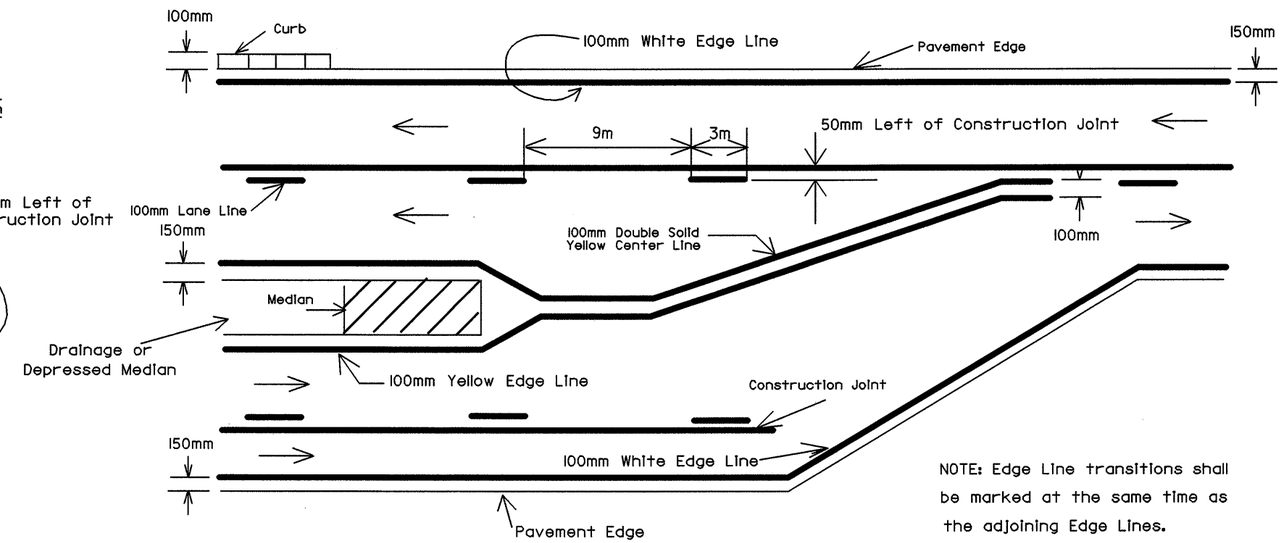
CALCULATED RPT
CHECKED MJS

PAVEMENT MARKING TYPICAL DETAILS

FREEWAY & EXPRESSWAY MAINLINE MARKINGS

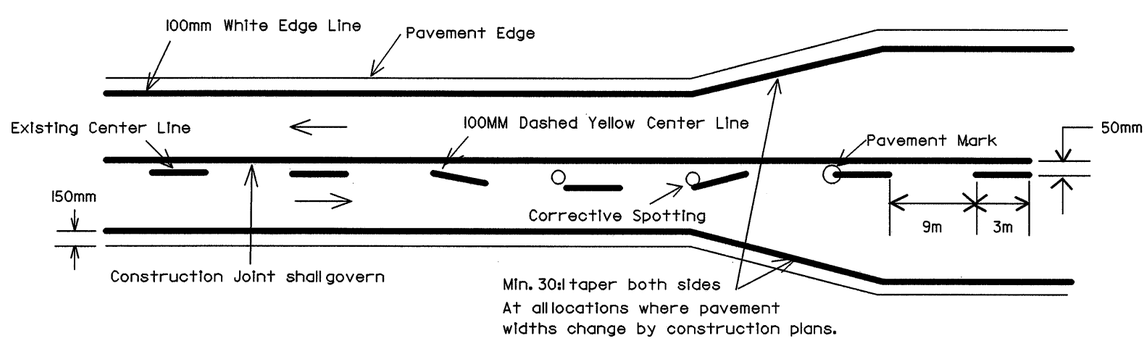


MULTILANE DIVIDED & UNDIVIDED HIGHWAY MARKINGS



NOTE: Edge Line transitions shall be marked at the same time as the adjoining Edge Lines.

TWO LANE MARKINGS



NOTES:

1. The distance from the pavement edge to the nearside edge of the edgeline may be increased with the approval of the Engineer in order to maintain uniform lane width.

2. See TC-72.20M for entrance and exit ramp markings.

3. The cycle length for dashed lines shall be 12 Meters plus or minus 150 mm. The minimum length of dash shall be sufficiently long to maintain a 3:1 ratio between length of gap and length of dash.

LOR-83-6.727

80/86

DESIGN FILE: i:\projects\16738\dgn\pm_typ.dgn
WORKSTATION: rtrivoli DATE: 22 DEC 98

SEQUENCE OF CONSTRUCTION

IT IS THE INTENT OF THE FOLLOWING SEQUENCE OF CONSTRUCTION TO PROVIDE A WORK AREA FOR THE CONTRACTOR WHILE ALSO MAINTAINING TRAFFIC IN A MANNER WHICH IS SAFE FOR THE TRAVELING PUBLIC; THEREFORE, ALL PHASES SHALL HAVE STRICT ADHERENCE.

PHASE ONE

THE CONTRACTOR SHALL ERECT THE NEW TRAFFIC SIGNAL AND HAVE IT OPERATIONAL ON A PRE-TIMED CYCLE PRIOR TO BEGINING THE WORK LISTED HERE.

THE PRE-TIMED SIGNAL SHALL HAVE A 60 SECOND CYCLE LENGTH. THE FOLLOWING TIMING SHALL APPLY:

GREEN 23 SEC.
YELLOW 5 SEC.
ALL RED 2 SEC.

THE CONTRACTOR SHALL REPLACE THE EAST BERM OF SR 83 WITH TEMPORARY PAVEMENT, AS PER PLAN.

THE CONTRACTOR SHALL PERFORM WORK ON THE LEFT SIDE OF SR 83 AND BOTH SIDES OF SR 82 WEST OF THE INTERSECTION, AS DETAILED IN THE PLAN. THIS SHALL INCLUDE PAVEMENT UP TO AND INCLUDING THE INTERMEDIATE COURSE OF ASPHALT CONCRETE, AGGREGATE SHOULDER, SHOULDER, AND DRAINAGE CONSTRUCTION. TRAFFIC SHALL BE MAINTAINED DURING THIS PHASE PER THE DETAILS SHOWN ON SHEETS 82 - 83.

PHASE TWO

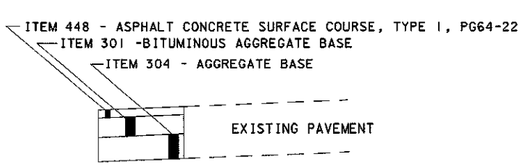
THE CONTRACTOR SHALL PERFORM WORK ON THE RIGHT SIDE OF SR 83 AND BOTH SIDES OF SR 82 EAST OF THE INTERSECTION. THIS SHALL INCLUDE PAVEMENT UP TO AND INCLUDING THE INTERMEDIATE COURSE OF ASPHALT CONCRETE, AGGREGATE SHOULDER, SHOULDER, AND DRAINAGE CONSTRUCTION. TRAFFIC SHALL BE MAINTAINED DURING THIS PHASE PER THE DETAILS SHOWN ON SHEETS 84- 85.

ITEM 446 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1H:

THE ASPHALT CONCRETE SURFACE COURSE SHALL BE APPLIED IN ONE CONTINUOUS PLACEMENT OPERATION. NO TRENCHING SHALL BE PERFORMED AFTER THE PLACEMENT OF THE SURFACE COURSE.

TEMPORARY PAVEMENT, AS PER PLAN

THE TEMPORARY PAVEMENT BUILDUP SHALL BE 32mm - 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22, 150mm - 301 BITUMINOUS AGGREGATE BASE AND 100mm - 304 AGGREGATE BASE. PAYMENT SHALL INCLUDE ANY ADDITIONAL COST OF ITEM 203 EXCAVATION TO PLACE THE TEMPORARY PAVEMENT. THE TEMPORARY PAVEMENT SHALL BE REMOVED UNDER ITEM 203. A QUANTITY OF 295 CUBIC METERS HAS BEEN PROVIDED IN ITEM 203 FOR THIS PURPOSE.



OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 75 MILLIMETERS BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (7.5 METERS OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR

IN ADDITION TO THE REQUIREMENTS OF 614 AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER AND OFFICIAL PATROL CAR WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

DURING A TRAFFIC SIGNAL INSTALLATION

LAW ENFORCEMENT OFFICERS (L.E.O.'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE.

THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES WITH:

THE STATE HIGHWAY PATROL HEADQUARTERS
660 EAST MAIN STREET
COLUMBUS, OHIO 43205
PHONE: (614) 446-2660

LAW ENFORCEMENT OFFICERS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR
16 HOURS

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCMENT AGENCY INVOLVED.

IF CONTRACTORS WISH TO UTILIZE LEO'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, THEY MAY DO SO AT THEIR OWN EXPENSE. PAYMENT FOR THE EXCESS ABOVE THE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614 MAINTAINING TRAFFIC.

ITEM 614 - MAINTAINING TRAFFIC

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, 502 TEMPORARY STRUCTURE, 615 TEMPORARY PAVEMENT, 615 TEMPORARY ROADS, AND TEMPORARY SURFACES USING 410, 614 AND 616.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

MAINTENANCE OF TRAFFIC SUBSUMMARY

SHEET NUMBER	PHASE	203	304	614			615	
		EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	AGGREGATE BASE	TEMPORARY EDGE LINE, CLASS I	TEMPORARY CENTER LINE, CLASS I	TEMPORARY STOP LINE, CLASS I	TEMPORARY PAVEMENT, AS PER PLAN	TEMPORARY ROAD
		CUBIC METER	CUBIC METER	KILOMETER	KILOMETER	METER	SQUARE METER	LUMP
81	1	295						
83	1		22.6	1.76	1.88	11	1040	
85	2			1.66	1.55	11.1		
TOTALS		295	22.6	3.42	3.43	22.1	1040	LUMP

ALL QUANTITIES CARRIED TO GENERAL SUMMARY

metric units

calculated CmK checked MJ

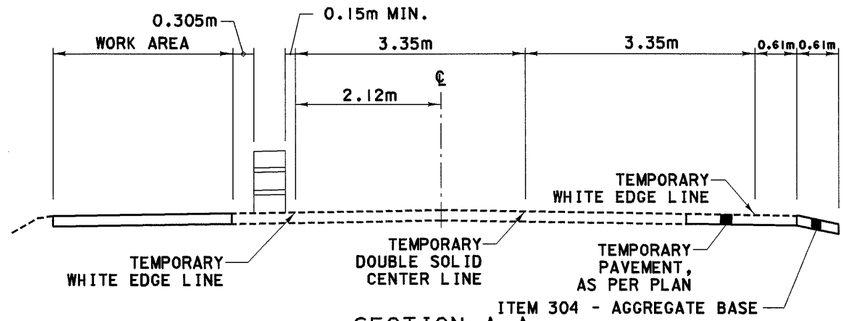
PLAN NO.

MAINTENANCE OF TRAFFIC
GENERAL NOTES AND SUBSUMMARY

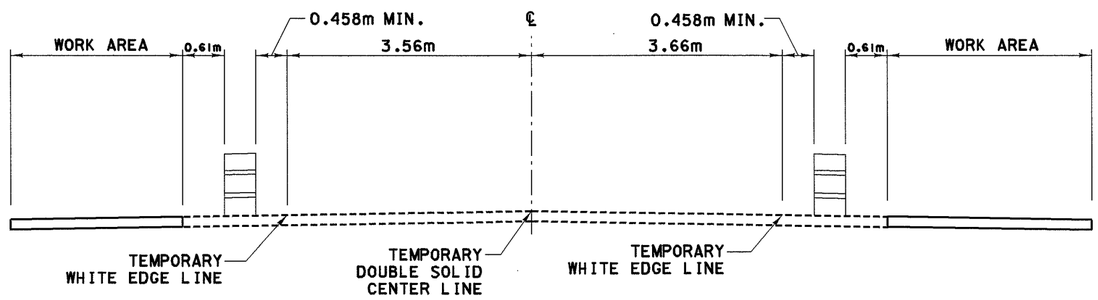
LOR-83-6.727

DESIGN FILE: I:\projects\16738\Dgn\mot.dgn
DATE: 17 NOV 1999
WORKSTATION: rtrivoli

metric units



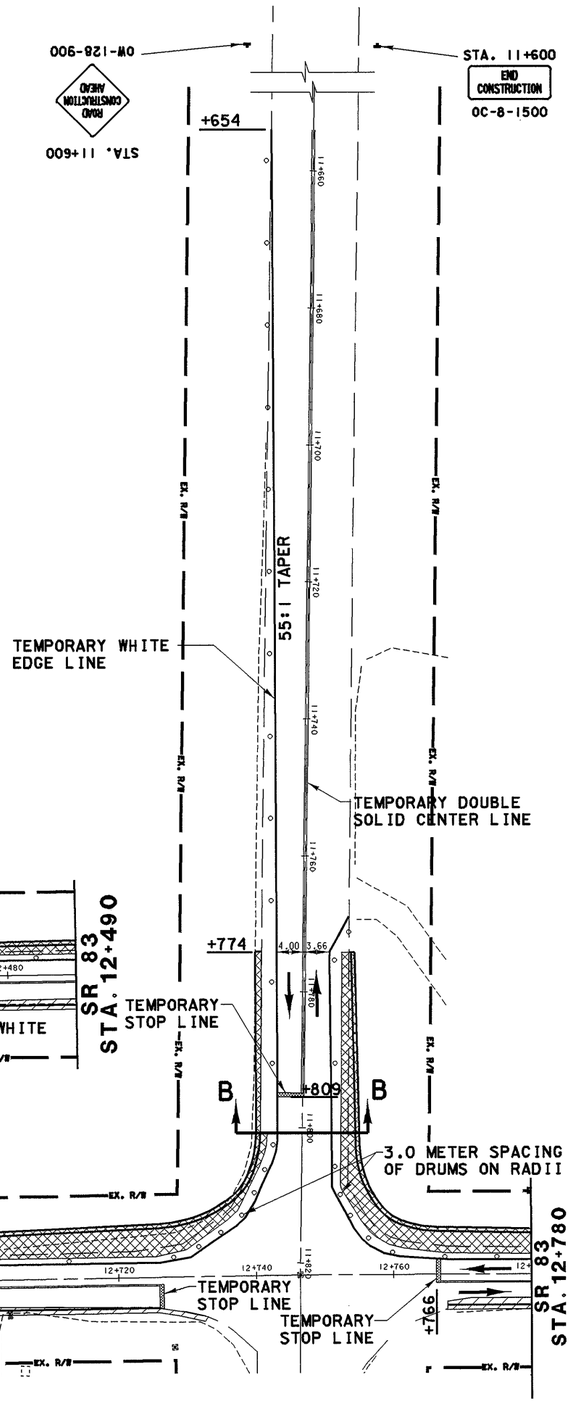
SECTION A-A
STA. 12+400 TO STA. 12+725

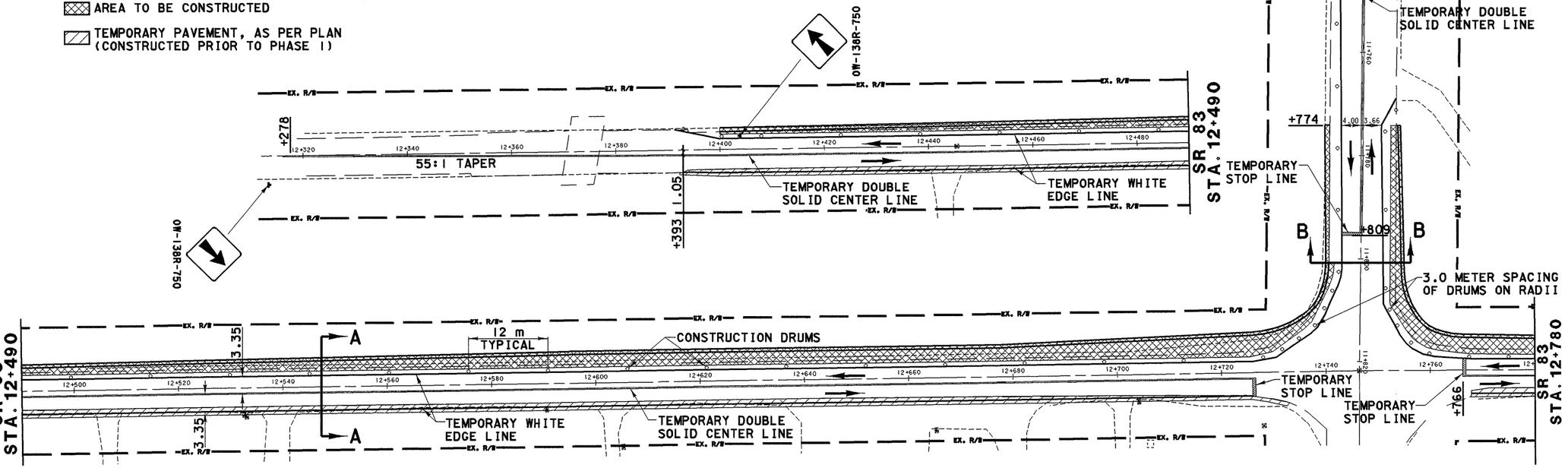


SECTION B-B
SR 82 STA. 11+801

AREA TO BE CONSTRUCTED

TEMPORARY PAVEMENT, AS PER PLAN (CONSTRUCTED PRIOR TO PHASE 1)





HORIZONTAL SCALE IN METERS

CALCULATED CmK
CHECKED

MAINTENANCE OF TRAFFIC PHASE 1

LOR-83-6.727

82
86

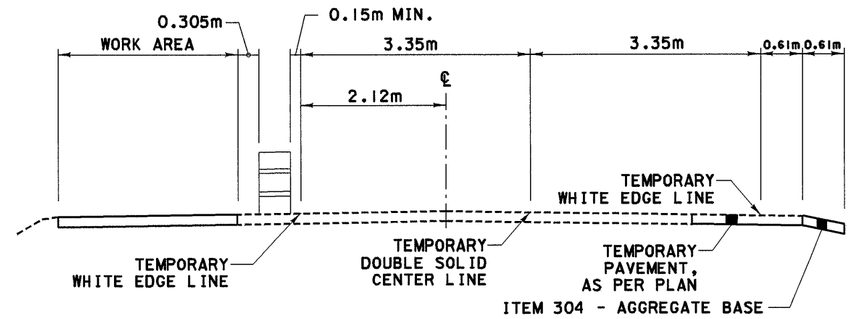
DESIGN FILE: I:\projects\16738\dgn\mot.dgn
WORKSTATION: rtrivoli
DATE: 07-JAN-1999

ESTIMATED QUANTITES
PHASE I

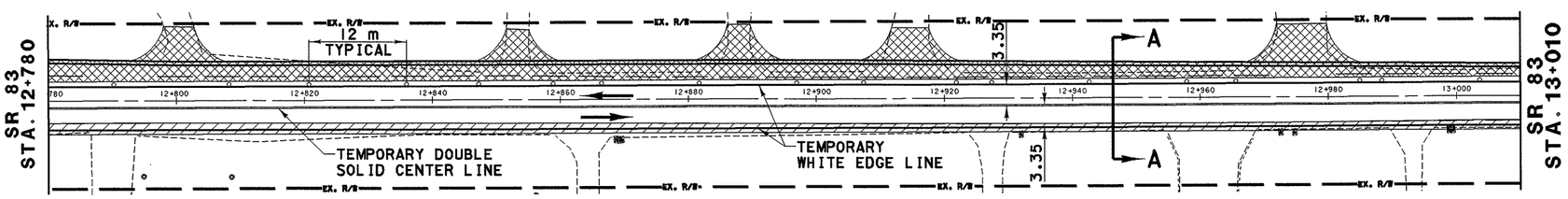
STATION TO STATION	304	614			615
	AGGREGATE BASE	TEMPORARY EDGE LINE, CLASS I	TEMPORARY CENTER LINE, CLASS I	TEMPORARY STOP LINE, CLASS I	TEMPORARY PAVEMENT, AS PER PLAN
	CUBIC METER	METER	METER	METER	SQUARE METER
12+278 TO 12+745	10.3	700	822	3.6	470
12+745 TO 13+212	12.3	867	760	3.5	570
11+654 TO 11+820	0	190	295	3.9	0
PHASE I TOTALS	22.6	1757	1877	11	1040

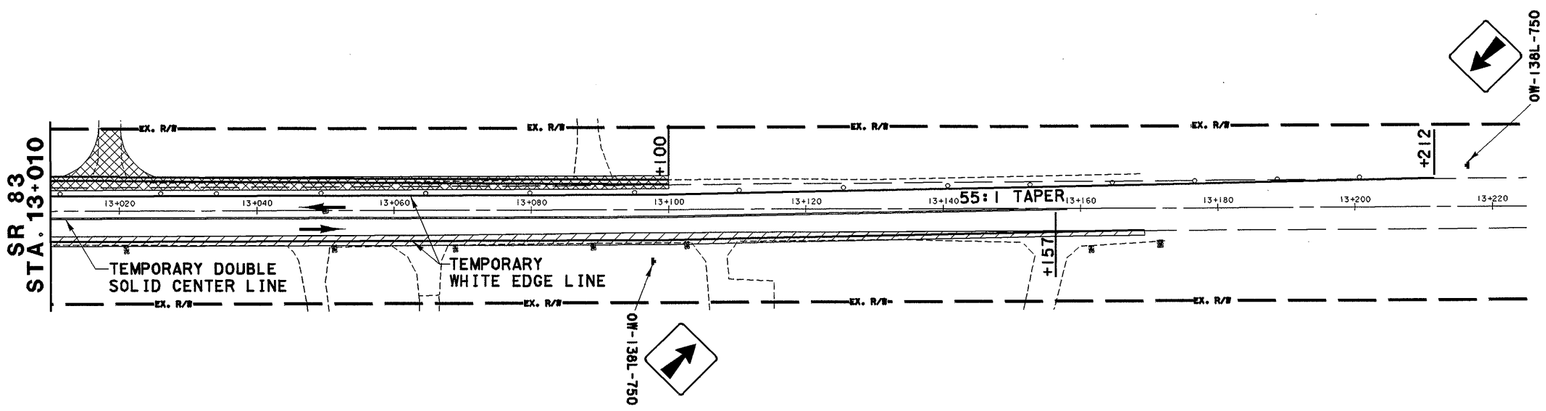
AREA TO BE CONSTRUCTED

TEMPORARY PAVEMENT, AS PER PLAN (CONSTRUCTED PRIOR TO PHASE I)



SECTION A-A
STA. 12+770 TO STA. 13+100





metric units

HORIZONTAL SCALE IN METERS

CALCULATED CmK CHECKED

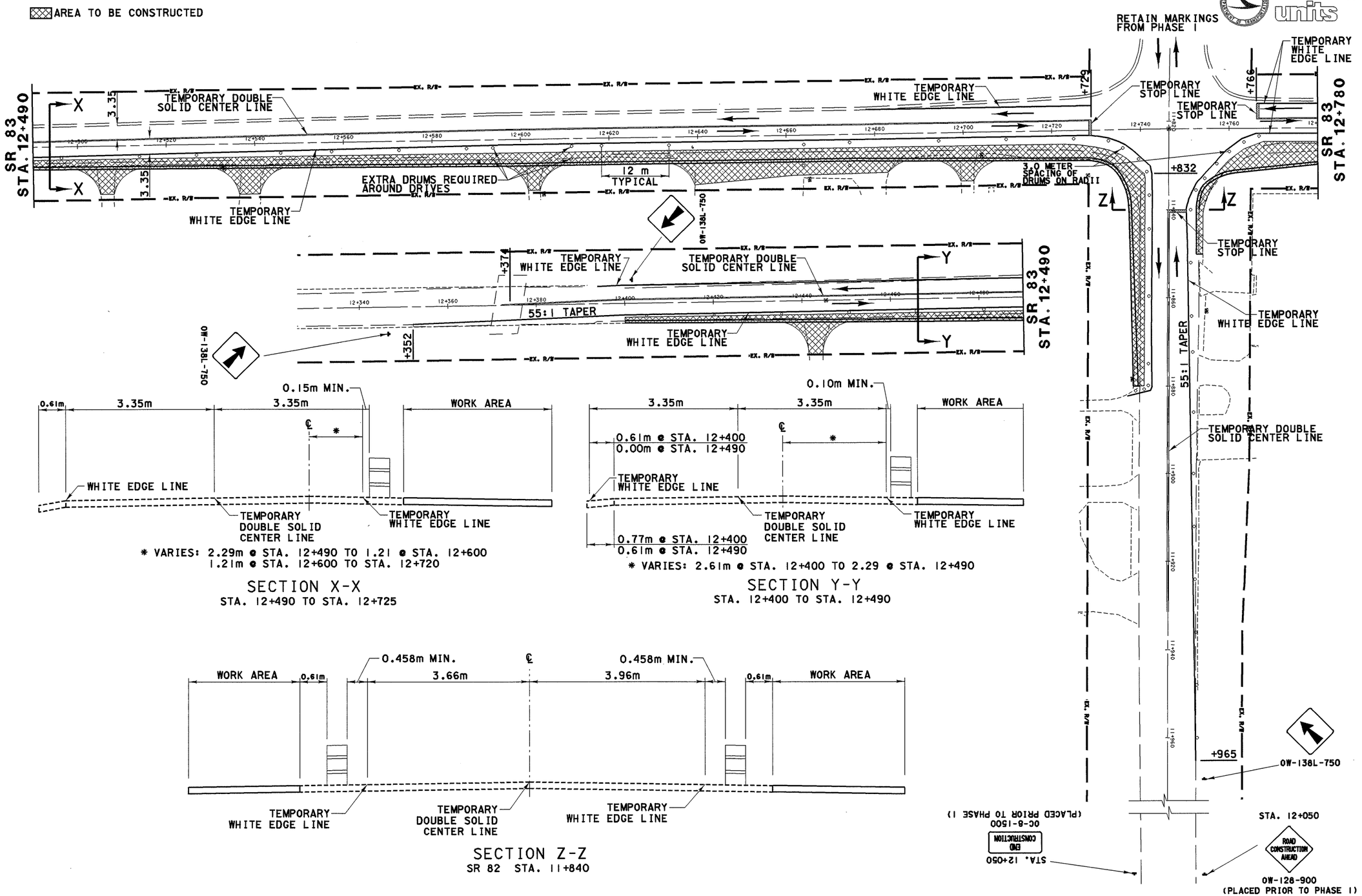
MAINTENANCE OF TRAFFIC
PHASE 1

LOR-83-6.727

83/86

DESIGN FILE: I:\projects\16738\dgn\mot.dgn
WORKSTATION: rtrivoli DATE: 07-JAN-1999

AREA TO BE CONSTRUCTED



metric units

HORIZONTAL SCALE IN METERS

CALCULATED CmK
CHECKED

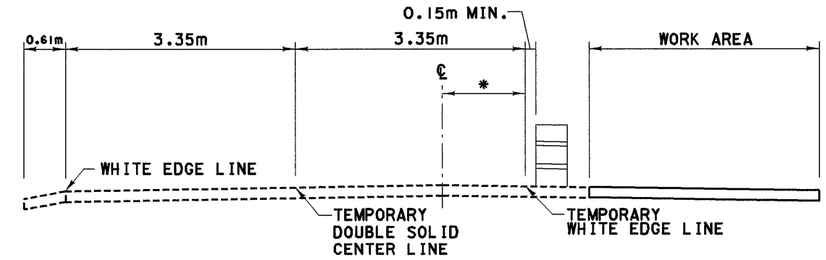
MAINTENANCE OF TRAFFIC PHASE 2

LOR-83-6.727

84
86

DESIGN FILE: I:\projects\16738\dgn\mot.dgn
WORKSTATION: rtrivoli
DATE: 07-JAN-1999

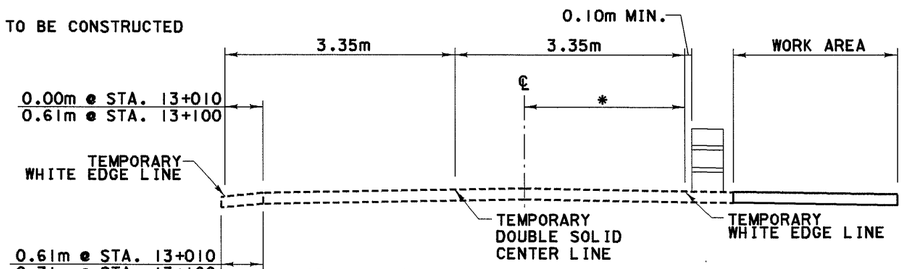
ESTIMATED QUANTITES PHASE 2				
STATION TO STATION	614			
	TEMPORARY EDGE LINE, CLASS I	TEMPORARY CENTER LINE, CLASS I	TEMPORARY STOP LINE, CLASS I	
	METER	METER	METER	
12+352 TO 12+745	730	614	3.5	
12+750 TO 13+121	751	748	3.4	
11+820 TO 11+965	180	183	4.2	
PHASE 2 TOTALS	1661	1545	11.1	



* VARIES: 1.23m @ STA. 12+770 TO STA. 12+900
1.23m @ STA. 12+900 TO 2.25 @ STA. 13+010

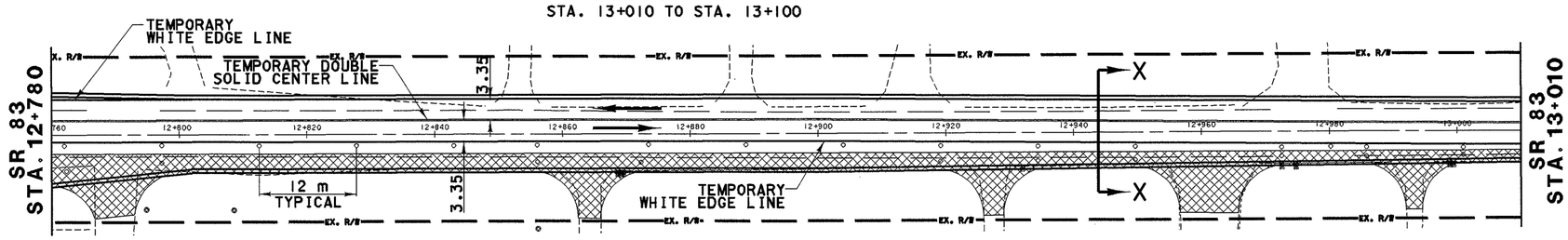
SECTION X-X
STA. 12+770 TO STA. 13+010

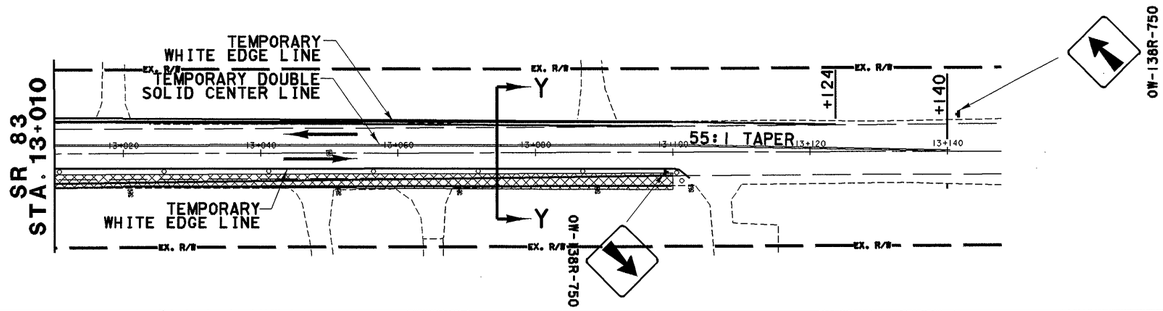
AREA TO BE CONSTRUCTED



* VARIES: 2.25m @ STA. 13+010 TO 2.44 @ STA. 13+100

SECTION Y-Y
STA. 13+010 TO STA. 13+100





metric units

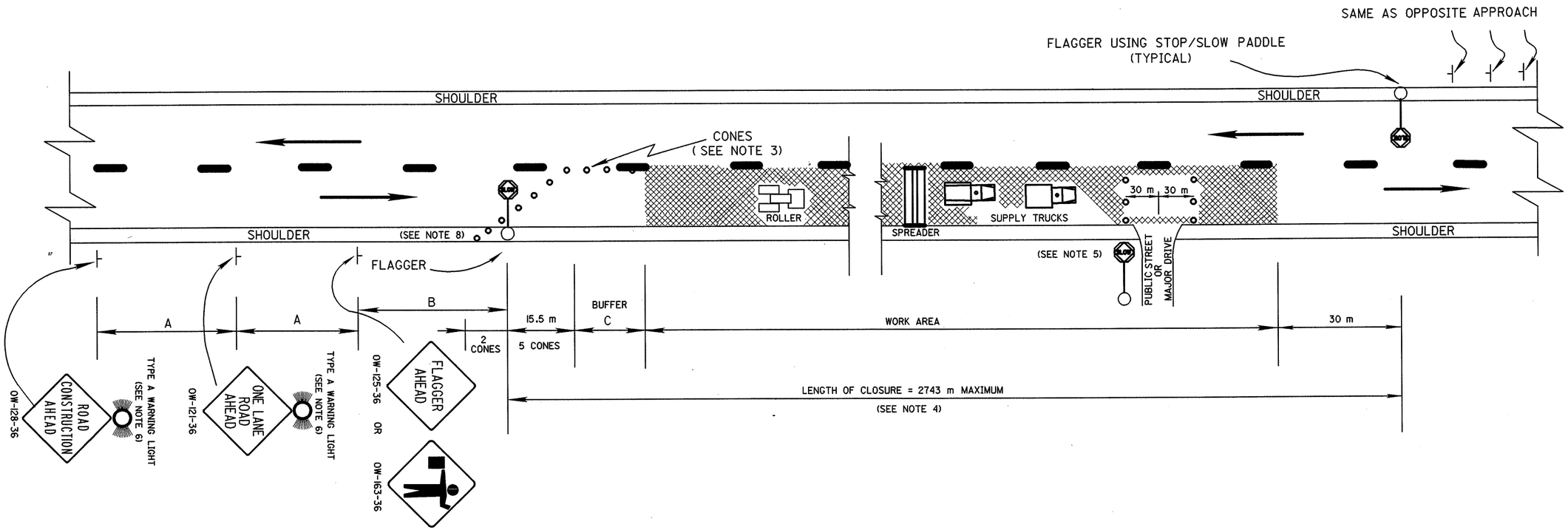
HORIZONTAL SCALE IN METERS

CALCULATED CmK
CHECKED

MAINTENANCE OF TRAFFIC PHASE 2

LOR-83-6.727

DESIGN FILE: I:\projects\16738\dgn\mot.dgn
WORKSTATION: rtrivoli
DATE: 22-FEB-1999



GENERAL NOTES:

1. THE LOCATION OF THE ADVANCE WARNING SIGNS SHOULD BE ADJUSTED TO PROVIDE FOR ADEQUATE SIGHT DISTANCE FOR THE EXISTING VERTICAL AND HORIZONTAL ROADWAY ALIGNMENT.

2. FLAGGERS, ONE FOR EACH DIRECTION, SHALL BE USED TO CONTROL TRAFFIC CONTINUOUSLY FOR AS LONG AS A ONE LANE OPERATION IS IN EFFECT. THE FLAGGERS SHALL BE ABLE TO COMMUNICATE WITH EACH OTHER AT ALL TIMES.

3. CONES ON THE TAPERS SHALL BE SPACED AT 3 m CENTER TO CENTER. CONES IN THE BUFFER SHALL BE SPACED AT 12 m CENTER TO CENTER. CONES SHALL HAVE A MINIMUM HEIGHT OF 0.7 m AND SHALL BE SAFELY STABILIZED TO PREVENT THEM FROM BLOWING OVER. CLOSURES AT NIGHT SHALL USE DRUMS RATHER THAN CONES.

4. IT IS REQUIRED THAT THE LENGTH OF CLOSURE BE KEPT TO A MINIMUM AT ALL TIMES, AS DIRECTED BY THE ENGINEER.

   WHEN THE AMBIENT TEMPERATURE EXCEEDS 27° C, THE ENGINEER MAY INCREASE THE MAXIMUM ALLOWABLE LENGTH OF CLOSURE TO ALLOW FOR SUFFICIENT COOLING OF NEW PAVEMENT.

   THE ENGINEER MAY SHORTEN THE MAXIMUM ALLOWABLE LENGTH OF CLOSURE TO RELIEVE EXCESSIVE TRAFFIC BACKUPS OR TO IMPROVE TRAFFIC OPERATION.

4. CONT. ALL TRAFFIC CONTROL SIGNS, CONES (OR DRUMS), AND THE FLAGGER SHALL BE MOVED FORWARD AS A GROUP BEFORE THE CLOSURE REACHES THE MAXIMUM ALLOWABLE LENGTH. ONLY ONE SIDE OF THE ROAD SHALL BE CLOSED AT ANY TIME.

5. WITHIN THE LENGTH OF CLOSURE, PROVISION SHALL BE MADE TO CONTROL TRAFFIC ENTERING FROM INTERSECTING STREETS AND MAJOR DRIVES AS NECESSARY TO PREVENT WRONG WAY MOVEMENTS AND TO KEEP VEHICLES OFF OF NEW PAVEMENT NOT READY FOR TRAFFIC. AS A MINIMUM, THE CONTRACTOR SHALL:

   A) PROVIDE AN ADDITIONAL FLAGGER AT EVERY PUBLIC STREET INTERSECTION AND MAJOR DRIVEWAY OR -
   B) PLACE A ROW OF 3 CONES ACROSS THE CLOSED LANE APPROXIMATELY 30 m ON EACH SIDE OF THE INTERSECTION OR DRIVEWAY.

   ROWS OF CONES MAY BE MOVED OFF THE ROAD TO ALLOW PASSAGE OF ROLLERS, PAVING SPREADER OR SUPPLY TRUCKS BUT SHALL BE MOVED BACK ONTO THE ROAD WHEN THE ACTIVITY HAS PASSED.

6. THE TYPE A FLASHING WARNING LIGHTS ARE REQUIRED ON THE OW-128 AND THE OW-121 SIGNS WHENEVER A NIGHT LANE CLOSURE IS NECESSARY.

7. ADEQUATE AREA ILLUMINATION OF EACH FLAGGER STATION SHALL BE PROVIDED AT NIGHT BY USING 150 WATT MINIMUM HIGH PRESSURE SODIUM LUMINAIRES OR 250 WATT MINIMUM MERCURY LUMINAIRES. LUMINAIRES SHALL BE LOCATED ADJACENT TO ONE FLAGGER STATION FOR EACH DIRECTION OF TRAFFIC.

8. TWO (2) CONES REQUIRED ON PAVED SHOULDER.

MINIMUM DISTANCE (METERS)	A MINIMUM	B RANGE	C MINIMUM
URBAN	61	61 TO 107	30
RURAL	152	152 TO 305	61

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE C & M SPECIFICATIONS AS WELL AS IN ACCORDANCE WITH PART 7 OF OMUTCD. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS TO PROVIDE THIS METHOD OF TRAFFIC CONTROL SHALL BE INCLUDED IN THE LUMP SUM BID FOR 614 MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

REVISED BY: DATE:

209711M

PLAN INSERT SHEET WCC

metric units

calculated checked

FLAGGER CLOSING 1 LANE OF A 2 LANE HIGHWAY FOR PAVING OPERATIONS

LOR-83-6.737

86
86

DESIGN FILE: i:\projects\16738\dgn\plninst.dgn
WORKSTATION: rtrivoli DATE: 22 DEC 98