

LOCATION MAP

PART	COUNTY	ROUTE	SECTIONS	PROJECT TERMINI		NET LENGTH miles	CITY	VILLAGE
				BEGIN	END			
A	MEDINA	SR 57	3.24-3.49	3.24	7.016	3.776		
A	MEDINA	SR 57	3.49	7.064	9.90	2.836		
A	MEDINA	SR 57	3.49	10.21	10.89	0.68		
B	MEDINA	SR 94	11.18	11.325	12.88	1.555		
B	MEDINA	SR 94	11.18	13.386	15.61	2.224		

PROJECT EARTH DISTURBED AREA - N/A (MAINTENANCE PROJECT)
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA - N/A (MAINTENANCE PROJECT)
 NOTICE OF INTENT EARTH DISTURBED AREA - N/A (MAINTENANCE PROJECT)

MED - 57 - 3.24

INDEX OF SHEETS:

- 1 - TITLE SHEET
- 2 - DESIGN DESIGNATIONS
- 3 - STRAIGHT LINE DIAGRAM
- 4 - PAVEMENT TYPICAL SECTIONS
- 5-7 - GENERAL NOTES
- 8-9 - GENERAL SUMMARY
- 10 - PAVEMENT DATA
- 11 - SHOULDER DATA
- 12 - MAILBOX FACILITIES
- 13 - DROP OFF IN WORK ZONE DETAILS
- 14-15 - GUARDRAIL GENERAL NOTES
- 16 - GUARDRAIL ESTIMATED QUANTITIES
- 17-32 - GUARDRAIL DETAILS
- 33 - PAVEMENT MARKING DATA
- 34-36 - STRUCTURE SUMMARY
- 37-40 - STRUCTURE GENERAL NOTES
- 41 - BRIDGE TREATMENT
- 42 - STRUCTURE (MED-57-0324B)
- 43 - STRUCTURE (MED-57-0271)
- 44-45 - STRUCTURE (MED-57-0322)
- 46 - STRUCTURE (MED-57-0400)
- 47-52 - STRUCTURE (MED-57-0652)
- 53 - STRUCTURE (MED-94-1377)
- 54-58 - STRUCTURE (MED-94-1516)

PROJECT DESCRIPTION:

THIS PROJECT WILL INCLUDE PAVEMENT PLANING, PAVEMENT REPAIR, RESURFACING WITH ASPHALT CONCRETE, ADJUSTMENT OF CASTINGS WHERE NECESSARY, GUARDRAIL RECONSTRUCTION, PAVEMENT MARKINGS, AND VARIOUS STRUCTURE WORK AS DETAILED IN THE PLANS.

CONVERSION OF METRIC STANDARD DRAWINGS

THE METRIC STANDARD DRAWINGS REFERENCED IN THIS PLAN SHALL BE CONVERTED TO ENGLISH UNITS USING THE SI (METRIC) TO ENGLISH CONVERSION FACTORS PROVIDED IN SECTION 109.02 OF THE 2002 CMS. CONVERSIONS SHALL BE APPROXIMATELY PRECISE AND SHALL REFLECT STANDARD INDUSTRY ENGLISH VALUES WHERE SUITABLE.

2002 SPECIFICATIONS

THE STANDARD 2002 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 NOT REQUIRE THE CLOSING OF THE HIGHWAY AND PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS INDICATED IN THE PLAN AND PROPOSAL.

4-14-04
APPROVED DATE

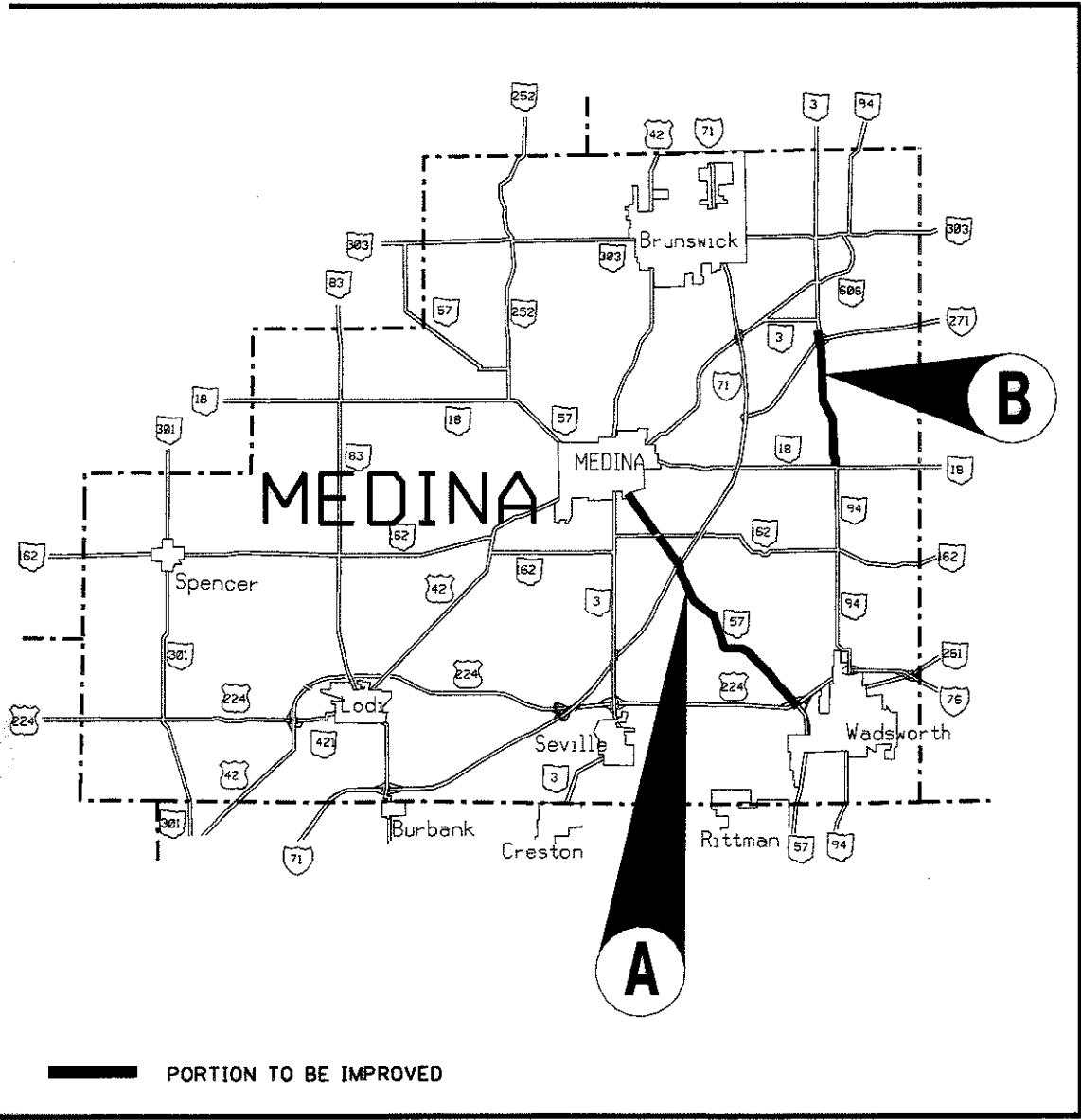
Thomas M. O'Leary
DISTRICT DEPUTY DIRECTOR OF TRANSPORTATION

5-7-04
APPROVED DATE

Gordon Paster
DIRECTOR, DEPARTMENT OF TRANSPORTATION

FOR DESIGN DESIGNATIONS, SEE SHEET 2

STANDARD CONSTRUCTION DRAWINGS								SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	7-28-00	TBR-91	7-19-02	TC-41.20	1-19-01	MT-35.10	4-20-01	832	2-12-03
BP-4.1	7-28-00			TC-65.10	10-19-01	MT-95.30	4-19-02	833	2-12-03
				TC-65.12	10-19-01	MT-96.10	4-19-02	841	4-19-02
GR-1.1	4-18-03			TC-71.10	4-19-02	MT-96.20	4-19-02	843	4-18-03
GR-2.1	1-16-04			TC-73.10	1-19-01	MT-96.25	4-20-01	864	7-11-00
GR-3.3	4-18-03	DM-1.1	7-18-03	TC-82.10	4-19-02	MT-97.10	4-19-02	908	4-18-03
GR-3.4	4-18-03	DM-1.4	7-19-02			MT-97.12	4-19-02		
GR-4.2	10-17-03	DM-4.3	7-19-02			MT-99.20M	1-30-95		
GR-5.1	4-18-03	DM-4.4	7-19-02			MT-101.20	10-18-02		
GR-5.2	1-16-04					MT-105.10	10-18-02		
GR-5.3	1-16-04					MT-105.11	10-18-02		



MED - SR 57/94-3.24/Various
 040461 PID - 77002
 Dist 3 8/11/2004

LATITUDE: N41°02'00" LONGITUDE: W81°45'41"

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 	STRUCTURAL ENGINEER'S SEAL
SIGNED: <i>Michael J. Schafraath</i> DATE: 4/14/04	SIGNED: <i>David C. Mollenshott</i> DATE: 4/14/04



DESIGN FILE: I:\projects\77002\file.dgn
 WORKSTATION: jfinch DATE: 4/14/2004

FEDERAL PROJECT NO. E040(815)
 PID NO. 77002
 CONSTRUCTION PROJECT NO.
 RAILROAD INVOLVEMENT NONE
 MED - 57 - 3.24
 58

PART A - SR 57
DESIGN DESIGNATION (ENGLISH UNITS)

S.L.M.	3.24-3.84	3.84-5.70	5.70-6.55	6.55-10.02	10.02-10.89
CURRENT ADT (2004)	7000	7000	7000	7000	8400
DESIGN YEAR ADT (2016)	7970	7970	7970	7970	10540
DESIGN HOURLY VOLUME (2016)	797	797	797	797	1054
DIRECTIONAL DISTRIBUTION	55%	55%	55%	55%	55%
TRUCKS (24 HOUR B&C)	6%	6%	6%	6%	7%
DESIGN SPEED	50 MPH	55 MPH	45 MPH	55 MPH	55 MPH
LEGAL SPEED	50 MPH	55 MPH	45 MPH	55 MPH	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:					
	RURAL MAJOR COLLECTOR (SLM 3.24-10.02)		RURAL MINOR ARTERIAL (SLM 10.02-10.89)		
NHS PROJECT	NO	NO	NO	NO	NO

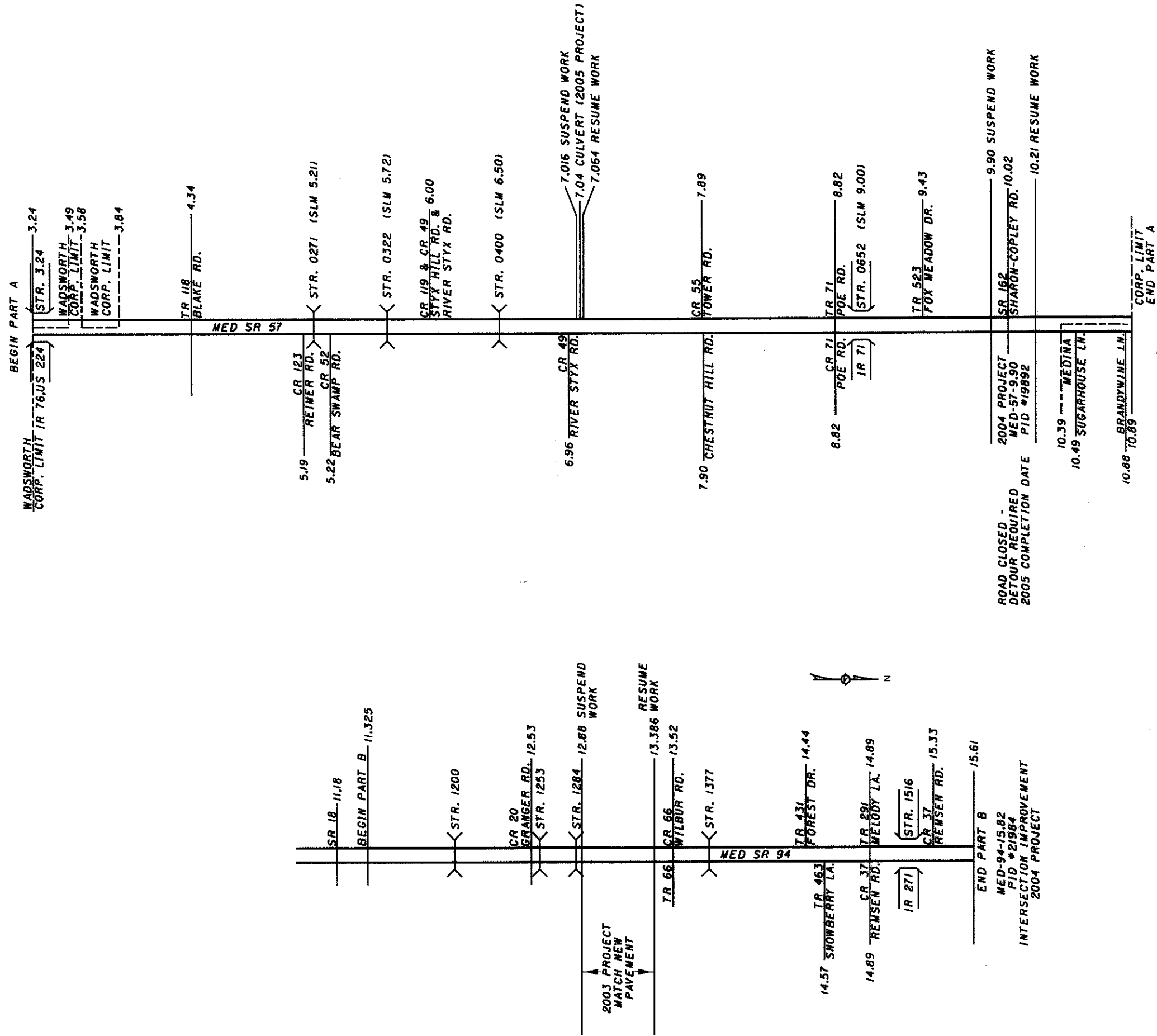
DESIGN FOR 3R STANDARDS

PART B - SR 94
DESIGN DESIGNATION (ENGLISH UNITS)

S.L.M.	11.325-15.16	15.16-15.33	15.33-15.61
CURRENT ADT (2004)	6760	12350	8760
DESIGN YEAR ADT (2016)	8170	16840	10770
DESIGN HOURLY VOLUME (2016)	817	1516	969
DIRECTIONAL DISTRIBUTION	60%	55%	55%
TRUCKS (24 HOUR B&C)	6%	7%	8%
DESIGN SPEED	55 MPH	55 MPH	55 MPH
LEGAL SPEED	55 MPH	55 MPH	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:			
	RURAL MAJOR COLLECTOR (SLM 11.325-15.61)		
NHS PROJECT	NO	NO	NO

DESIGN EXCEPTIONS

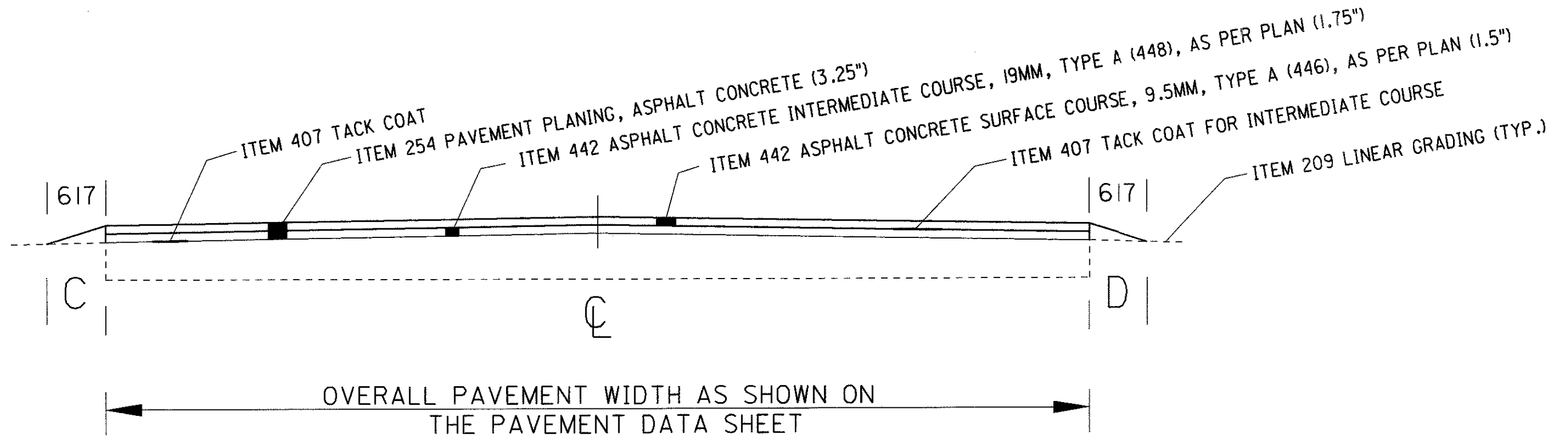
DESIGN FEATURE		APPROVAL DATE
GRADED SHOULDER WIDTH	SR 94	4/04/02
LANE WIDTH	SR 94	4/04/02



NOTE: STRUCTURE NUMBERS DO NOT MATCH THE FIELD S.L.M.S FOR "PART A" (SR 57) ONLY. THE CORRECT S.L.M.S AND THE CURRENT STRUCTURE NUMBERS ARE SHOWN ON THIS SHEET.

NOTE: BASED ON UTILITY COMPANY RESPONSE, UTILITY MAPS ARE AVAILABLE FROM THE DISTRICT OFFICE.

TYPICAL I
S.R. 57 & SR 94



PAVEMENT CORES:

S.R. 57	S.L.M. 4.07	N.B. LANE	11" ASPHALT
S.R. 57	S.L.M. 4.07	SHOULDER	5.5" ASPHALT
S.R. 57	S.L.M. 4.94	N.B. LANE	12.5" ASPHALT
S.R. 57	S.L.M. 5.83	N.B. LANE	8" ASPHALT
S.R. 57	S.L.M. 7.20	N.B. LANE	11.5" ASPHALT
S.R. 57	S.L.M. 7.95	N.B. LANE	7" ASPHALT
S.R. 57	S.L.M. 7.95	SHOULDER	8.5" ASPHALT
S.R. 57	S.L.M. 9.29	N.B. LANE	14.75" ASPHALT
S.R. 57	S.L.M. 10.25	N.B. LANE	11.25" ASPHALT
S.R. 94	S.L.M. 11.89	N.B. LANE	7±" ASPHALT
S.R. 94	S.L.M. 11.89	SHOULDER	5.5" ASPHALT
S.R. 94	S.L.M. 12.57	N.B. LANE	7±" ASPHALT
S.R. 94	S.L.M. 14.10	N.B. LANE	8.5±" ASPHALT AND 7.25" CONCRETE
S.R. 94	S.L.M. 14.10	SHOULDER	7.5±" ASPHALT
S.R. 94	S.L.M. 15.00	N.B. LANE	12.75" ASPHALT

NOTE:
PAVEMENT PLANING TO BE THE SAME
THICKNESS AS THE PROPOSED INTERMEDIATE
AND SURFACE COURSES, UNLESS STATED
DIFFERENT OVER STRUCTURES. SEE SHEETS 41
AND 54 FOR NOTES ON PLANING OVER STRUCTURES.

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.

PROGRESSION OF WORK

GUARDRAIL SHALL BE REMOVED PRIOR TO ANY EMBANKMENT WORK AT THE GUARDRAIL RUN. GUARDRAIL WORK SHALL BE DONE AFTER RESURFACING AND BERM WORK SO AS TO ESTABLISH PROPER GRADES FROM WHICH TO CONSTRUCT THE RAIL.

PAVEMENT CONTROL

AN AUTOMATIC SCREED CONTROL, HAVING A 20FT. MINIMUM SKI-ARM, SHALL BE USED FOR PLACING THE INTERMEDIATE COURSE AND SURFACE COURSE ON EXISTING PAVEMENT WIDTHS OF 20 FT. 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. THEY 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 THE BUTT JOINT IS LEFT OPEN. THESE SIGNS SHALL BE PAID FOR UNDER THE LUMP SUM ITEM FOR ITEM 614 MAINTAINING TRAFFIC.

COORDINATION OF WORK BETWEEN CONTRACTORS

THE CONTRACTOR SHOULD BE AWARE THAT THERE WILL BE OTHER WORK BEING PERFORMED BY SEPARATE CONTRACTS WITHIN OR IN THE VICINITY OF THE WORK LIMITS OF THIS PROJECT AND 105.08 COOPERATION BETWEEN CONTRACTORS IS REQUIRED.

MED-57-9.90 PID 19892 IS AN INTERSECTION PROJECT WITH MAJOR RECONSTRUCTION AND IS SCHEDULED TO BEGIN WORK IN THE 2004 CONSTRUCTION SEASON. SR 57 WILL BE CLOSED AND THE TRAFFIC DETOURED. UNDER THEIR CONTRACT, SR 57 CANNOT BE CLOSED UNTIL JUNE 5th, 2004, AND THE COMPLETION DATE IS JUNE 30th, 2005. THE CONTRACTOR'S CONSTRUCTION SCHEDULE FOR THAT PROJECT IS NOT KNOWN AT THIS TIME.

MED-18-16.03 PID 4082 WILL INCLUDE WIDENING SR 94 FOR TURN LANES, BOTH NORTH AND SOUTH OF SR 18. TRAFFIC IS MAINTAINED.

MED-94-15.82 PID 21984 IS SCHEDULED TO BEGIN WORK IN THE 2004 CONSTRUCTION SEASON. CERTAIN LEGS OF THE INTERSECTION AT SR 3 MAY BE CLOSED AT TIMES.

THERE WILL BE A CULVERT REPLACEMENT, MED-57-7.04 IN CONSTRUCTION YEAR 2005. NO START OR COMPLETION DATES ARE SET FOR THIS PROJECT YET.

COORDINATION OF WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.

UTILITIES

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

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS. THE OHIO DEPARTMENT 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.

TELEPHONE: VERIZON.
6223 NORWALK RD.
MEDINA, OHIO 44256
(330) 723-9580

GAS: COLUMBIA GAS OF OHIO INC.
7080 FRY RD.
MIDDLEBURG HEIGHTS, OHIO 44130
(440) 891-2428

DOMINION EAST OHIO
1000 WEST WILBETH RD.
AKRON, OHIO 44314
(330) 798-7104

ELECTRIC: OHIO EDISON CO.
6326 LAKE AVE.
ELYRIA, OHIO 44035
(440) 326-3231

CITY OF WADSWORTH
120 MAPLE ST.
WADSWORTH, OHIO 44281
(330) 334-1581

WATER: CITY OF MEDINA
120 NORTH ELMWOOD ST.
MEDINA, OHIO 44256
(330) 725-8861

MEDINA COUNTY SANITARY ENG.
791 WEST SMITH RD.
MEDINA, OHIO 44256
(330) 723-9575

MEDINA COUNTY ENGINEER
791 WEST SMITH RD.
MEDINA, OHIO 44256
(330) 723-3641

CABLE: ARMSTRONG UTILITIES
1141 LAFAYETTE ROAD
MEDINA, OHIO 44256
(330) 722-3141

TIME-WARNER CABLE
1575 LEXINGTON AVENUE
MANSFIELD, OHIO 44901
(419) 756-6091 EXT. 5109

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 2 FT. 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 105.01, 107.07 & 614.02A.

PROFILE AND ALIGNMENT

THE PROPOSED PAVEMENT RESURFACING SHALL FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT.

703.05 AGGREGATE FOR ASPHALT CONCRETE (INTERMEDIATE AND SURFACE COURSES)

REMOVE THE PHRASE "THAT WILL BE EXPOSED TO TRAFFIC OVER THE WINTER MONTHS" FROM ITEMS b. AND c. OF C. GENERAL REQUIREMENTS FOR COURSE AND FINE AGGREGATE OF 703.05 (PAGE 767 OF THE 2002 CONSTRUCTION AND MATERIAL SPECIFICATIONS).

COORDINATION OF ASPHALT PLANING/PAVING OPERATIONS WITH LOOP DETECTOR REPLACEMENT

DURING THE COURSE OF THE CONTRACT IT MAY BE NECESSARY FOR THE CONTRACTOR TO REPLACE THE EXISTING LOOP DETECTORS. THE INTENT IS TO REPLACE LOOP DETECTORS DAMAGED OR REMOVED BY ASPHALT PLANING OPERATIONS PRIOR TO RESURFACING COURSES. THE INTERSECTION INVOLVED IS AS FOLLOWS:

NORTH SIDE OF RAMP ON SR 57 AND I 76 5'x5' 5'x5'

PAYMENT FOR ALL THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH OF ITEM 632 DETECTOR LOOP.

DESIGN FILE: i:\projects\77002\gennotes.dgn
WORKSTATION: jfinch DATE: 4/15/2004

ITEM 202. RPM REMOVED AND DISPOSED

ALL RAISED PAVEMENT MARKERS REMOVED SHALL BE PERFORMED AS PER CMS 202.10. THE CONTRACTOR SHALL DISPOSE OF ALL RPM CASTINGS ON THE PROJECT ACCORDING TO CMS 105.17. PAYMENT SHALL INCLUDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO PERFORM THE WORK AND SHALL BE PAID FOR AT THE CONTRACT PRICE EACH FOR ITEM 202, RPM REMOVED AND DISPOSED.

ITEM 209. LINEAR GRADING

THE CONTRACTOR IS REQUIRED TO PERFORM LINEAR GRADING ON THE GRADED SHOULDER IN AREAS WHERE THE GRADED SHOULDER IS AT A HIGHER ELEVATION THAN THE ADJACENT PAVEMENT. A 10:1 SLOPE SHALL BE ESTABLISHED, OR AS DIRECTED BY THE ENGINEER, WHEN PERFORMING ITEM 209 LINEAR GRADING. ALL LABOR AND EQUIPMENT NECESSARY TO PERFORM THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID PER MILE FOR ITEM 209 LINEAR GRADING.

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. PAVEMENT REPAIR SHALL BE PERFORMED AFTER PAVEMENT PLANING. 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 2 INCHES TO 12 INCHES). THE MATERIALS SO REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH 105.16 AND 105.17.

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 ASPHALT MATERIAL (SIDES AND BOTTOM) AT AN APPLICATION RATE OF 0.25 GAL. PER SQ. YD. ALL COMPACTION SHALL BE ACHIEVED BY MECHANICAL METHODS TO THE SATISFACTION OF THE ENGINEER. MAXIMUM LIFT THICKNESS SHALL BE 3 INCHES.

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 YARD, (BY TICKET WEIGHT CONVERSION), OF ITEM 253, PAVEMENT REPAIR.

PART A	500 CU. YD.
PART B	350 CU. YD.

ITEM 254 PATCHING PLANED SURFACE

AN ESTIMATED QUANTITY OF ITEM 254, PATCHING PLANED SURFACE HAS BEEN SET UP TO BE USED AS DIRECTED BY THE ENGINEER AS DESCRIBED IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS MANUAL 254.04. PATCHING DEPTH IS 0 TO 2 IN.

ITEM 254. PAVEMENT PLANING, ASPHALT CONCRETE

THE INTENT OF THE PLANING IS TO MILL 3.25 INCHES MINIMUM DEPTH AT THE CENTERLINE AND/OR EDGE OF PAVEMENT AND 1/4 INCH MINIMUM DEPTH IN BOTTOM OF WHEEL RUTS. THE PAVEMENT SLOPE MAY VARY BETWEEN 3/16 INCH AND 3/8 INCH PER FOOT, CONTINUOUS FOR PAVEMENT WIDTH. THE MILLING DEPTH SHALL BE CONTROLLED FROM THE CENTER LINE OR EDGE OF PAVEMENT, TO PRODUCE THE LEAST AMOUNT OF MILLING IN CONFORMANCE WITH ABOVE LIMITS. FIELD WORK NECESSARY FOR PROPER CONTROL WITHIN PLAN INTENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

AN AUTOMATIC MILLING HEAD PROFILE CONTROL HAVING A MINIMUM 30 FT. SKI-ARM SHALL BE USED DURING PLANING OPERATION.

ABOVE CONDITIONS DO NOT APPLY TO PLANING PERFORMED IN AREAS AS DIRECTED BY THE ENGINEER TO ELIMINATE ADVERSE SURFACE DISTORTION, OR TO PROVIDE A SATISFACTORY GRADE AT CASTINGS. THESE AREAS INCLUDE MATERIAL DISPLACED BY RUTTING OR SHOVING ASPHALT. SURFACE PATCHES, CONCRETE PATCHING, TRANSVERSE BUMPS, PAVEMENT AT RAILROADS, CASTINGS, ETC. PLANING OF THESE AREAS SHALL BE PERFORMED THROUGHOUT THE PROJECT PRIOR TO PAVING. AREAS TO BE PLANED WILL BE DESIGNATED BY THE ENGINEER.

THE PROGRESSION OF THE PLANING SHALL PROCEED IN SUCH A MANNER THAT NORMAL TRAFFIC WILL NOT BE REQUIRED TO RUN OVER THE PLANED ROADWAY SURFACE MORE THAN FOURTEEN (14) CALENDAR DAYS. THE 14 CALENDAR DAYS SHALL BE CONSIDERED AN INTERIM COMPLETION DATE (SECTION 108) AND FOR EACH CALENDAR DAY BEYOND THE 14 DAYS THAT THE ROADWAY REMAINS EXPOSED TO THE PLANED SURFACE, THE CONTRACTOR WILL BE ASSESSED LIQUIDATED DAMAGES AS PER 108.07.

PLANED AREAS WHICH CREATE A LONGITUDINAL JOINT BETWEEN TRAVELED LANES SHALL BE COMPLETED IN SUCH A MANNER SO AS TO REMOVE THE JOINT BEFORE THE END OF EACH DAY'S WORK. BEFORE THIS JOINT IS EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL ERECT OW-171 SIGNS (UNEVEN PAVEMENT). THESE SIGNS SHALL REMAIN ONLY WHEN THE CONDITION EXISTS.

**ITEM 407. TACK COAT
ITEM 407. TACK COAT FOR INTERMEDIATE COURSE**

AS PER 407.06 THE APPLICATION RATES SHALL BE 0.08 GAL. PER SQ. YD. PRIOR TO THE LEVELING COURSE AND SHALL BE 0.03 GAL PER SQ. YD. PRIOR TO THE SURFACE COURSE 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 RE-COATED PRIOR TO PLACING ASPHALT CONCRETE. ALL COST AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER GALLON FOR ITEM 407, TACK COAT AND ITEM 407 TACK COAT FOR INTERMEDIATE COURSE.

ITEM 442. ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446). AS PER PLAN

ALL LONGITUDINAL PAVEMENT JOINTS SHALL BE CLOSED BEFORE THE END OF EACH WORK DAY. BEFORE THE JOINT IS EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL ERECT OWP-171 (UNEVEN PAVEMENT) SIGNS. THESE SIGNS SHALL ONLY REMAIN WHILE THE CONDITION EXISTS.

ALL OPEN TRANSVERSE JOINTS SHALL BE TAPERED TO MEET EXISTING PAVEMENT BEFORE INTRODUCING TRAFFIC.

IN ADDITION TO SECTION 401.14 AND STANDARD DRAWING BP-3.1 TRANSVERSE, FEATHERED, OR BUTT JOINTS SHALL BE SEALED WITH A 6 INCH WIDE BAND OF ASPHALT CEMENT ACROSS THE TOP SURFACE. THE LONGITUDINAL BUTT JOINT SHALL BE SEALED WITH ASPHALT CEMENT ON THE VERTICAL FACE AND 6 INCHES WIDE ON THE PLANED SURFACE BEFORE PAVING.

CARE SHALL BE TAKEN TO MATCH EXISTING PAVEMENT ELEVATIONS AT EXISTING PAVED BERMS, DRIVES, INTERSECTIONS, ETC. THE COST OF THIS WORK AND THE PLACEMENT OF THE "UNEVEN PAVEMENT" SIGNS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

ALL REQUIREMENTS OF 442 PREVIOUSLY STATED APPLY EXCEPT AS FOLLOWS. FOR Ndes USE 50 GYRATIONS, FOR Nmax USE 75 GYRATIONS. MINIMUM PG BINDER CONTENT IS 6.0 PERCENT. USE A PG 64-22 BINDER. MAXIMUM RECLAIMED ASPHALT CONCRETE PAVEMENT IS 20 PERCENT.

ITEM 442. ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448). AS PER PLAN

THIS ITEM SHALL BE USED FOR CORRECTION OF CROWN, PROFILE AND ANY OTHER IRREGULARITIES. THE AVERAGE THICKNESS SHALL BE 1.75".

BEFORE THE LONGITUDINAL JOINT IS EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL ERECT OWP-171 (UNEVEN PAVEMENT) SIGNS. THESE SIGNS SHALL ONLY REMAIN WHILE THE CONDITION EXISTS.

ALL OPEN TRANSVERSE JOINTS SHALL BE TAPERED TO MEET EXISTING PAVEMENT BEFORE INTRODUCING TRAFFIC. A "BUMP" SIGN (OW-62) SHALL BE ERECTED ON EACH SIDE OF TRANSVERSE JOINTS LEFT OPEN OVER NIGHT, INCLUDING A SPEED ADVISORY SIGN, AS DIRECTED BY THE ENGINEER. THESE SIGNS SHALL BE REMOVED IMMEDIATELY AFTER JOINT HAS BEEN CLOSED. PLACEMENT OF SIGNS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

ALL REQUIREMENTS OF 442 PREVIOUSLY STATED APPLY EXCEPT AS FOLLOWS. FOR Ndes USE 50 GYRATIONS, FOR Nmax USE 75 GYRATIONS. USE A PG 64-22 BINDER. MAXIMUM RECLAIMED ASPHALT CONCRETE PAVEMENT IS 20 PERCENT.

ITEM 604. CASTINGS ADJUSTED TO GRADE

ANY UNIT OF THIS ITEM MAY BE NON-PERFORMED 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 ENGINEER'S APPROVAL BEFORE USING.

UNDER ITEM 604.03, ADJUSTMENT 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 MATERIALS REQUIRED TO SATISFACTORILY ADJUST CASTINGS WITHOUT FRAMES.

PART B - ITEM 604 MONUMENT BOX ADJUSTED TO GRADE
2 EACH

DESIGN FILE: i:\projects\77002\gennotes.dgn
WORKSTATION: jfinch DATE: 4/15/2004

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.

PART A - SR 57

- WORK ZONE MARKING SIGN: (OW-167-36) NO EDGE LINE = 20 EACH
- WORK ZONE MARKING SIGN: (R-33-24) DO NOT PASS = 27 EACH
- WORK ZONE MARKING SIGN: PASS WITH CARE = 13 EACH
- TOTAL = 60 EACH

PART B - SR 94

- WORK ZONE MARKING SIGN: (OW-167-36) NO EDGE LINE = 16 EACH
- WORK ZONE MARKING SIGN: (R-33-24) DO NOT PASS = 22 EACH
- WORK ZONE MARKING SIGN: PASS WITH CARE = 7 EACH
- TOTAL = 45 EACH

ITEM 614. ASPHALT 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 PLANNED SURFACE AT BUTT JOINTS AND OTHER LOCATIONS THAT RESULT IN A DROP-OFF IN EXCESS OF 1.5 INCHES, AS DIRECTED BY THE ENGINEER. THIS QUANTITY SHALL ALSO BE USED AT PLANNED SURFACES WHERE A TEMPORARY ASPHALT WEDGE IS NEEDED AROUND CASTINGS, AS DIRECTED BY THE ENGINEER.

200 CU. YD. ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC

ITEM 617. COMPACTED AGGREGATE, TYPE A, AS PER PLAN

THIS ITEM OF WORK SHALL CONFORM TO ITEM 617 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS BOOK WITH EXCEPTION OF 617.02 (MATERIALS).

THE MATERIAL ON THIS PROJECT SHALL BE THE ASPHALT CONCRETE GRINDINGS RESULTING FROM ITEM 254. THE GRINDINGS USED FOR THIS WORK ARE TO BE PLACED AND COMPACTED AS DESCRIBED IN 617.05 WITH SPECIAL CARE TO CREATE PROPER COMPACTION. 100% OF THIS MATERIAL SHALL PASS A 1.5 INCH SIEVE AS JUDGED BY THE ENGINEER. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO MEET THE TYPICAL SECTIONS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER.

PAYMENT FOR ALL THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER CU. YD. OF ITEM 617 COMPACTED AGGREGATE, TYPE A, AS PER PLAN.

ITEM 619. FIELD OFFICE, TYPE B

THE FIELD OFFICE IS NEEDED ONLY IN THE 2004 CONSTRUCTION SEASON.

BRIDGE LOCATION MARKER SIGN

THE BRIDGE LOCATION MARKER SIGN INDICATES THE COUNTY, THE ROUTE, AND THE STRAIGHT LINE MILEAGE OF THE STRUCTURE. THE CONTRACTOR SHALL REMOVE THE EXISTING BRIDGE LOCATION MARKER SIGNS AND REERECT THE SIGNS IN KIND. IF THERE ARE ANY QUESTIONS ON THE LOCATION, PLEASE CONTACT THE DISTRICT BRIDGE ENGINEER.

ALL COSTS, INCLUDING THE SIGN REMOVAL, SIGN RE-ERECTION, POST REMOVAL, AND POST INSTALLATION SHALL BE INCLUDED IN THE FOLLOWING PAY ITEMS:

- ITEM 630 GROUND MOUNTED SUPPORT, NO.2, POST 75 FT.
- ITEM 630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION 10 EACH

MAINTENANCE OF TRAFFIC

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES EXCEPT AS OUTLINED IN THE TIME LIMITS, SEQUENCING WORK AND LIQUIDATED DAMAGES NOTE. FLAGGING WILL BE REQUIRED FOR MOST OF THE WORK AND A SIGNALIZED CLOSURE IS REQUIRED FOR STRUCTURE MED-57-0652.

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 PLANS.

TIME LIMITS, SEQUENCING WORK & LIQUIDATED DAMAGES

GENERAL: THE INTENT OF THE LIMITATIONS BELOW IS TO GET THE PAVEMENT WORK DONE BEFORE WINTER. WE ITEMIZED THE CRITICAL ITEMS WITH CORRESPONDING TIME LIMITS. IT IS RECOMMENDED THAT THE CONTRACTOR WORK ON SR 94 PAVING AND THE BRIDGE WORK ON MED- 57-0652 FIRST IN ORDER TO MEET THE TIME LIMITS LISTED BELOW:

A. ALL PLANING, RESURFACING, PAVEMENT STRIPING, RPM'S, GRADING, AND BERMING WORK SHALL BE PERFORMED BY OCTOBER 31, 2004. OCTOBER 31, 2004 SHALL BE CONSIDERED AN INTERIM COMPLETION DATE. UNLESS SAFETY MAY BE OF CONCERN FOR THE GUARDRAIL WORK (AS DETERMINED BY THE ENGINEER), THE GUARDRAIL WORK NEED ONLY BE COMPLETED BY THE PROJECT COMPLETION DATE.

B. ALL OF THE STRUCTURE WORK FOR STRUCTURE MED-57-0652 (SR 57 OVER I-71), SHALL BE LIMITED TO A TOTAL OF 35 CALENDAR DAYS FOR THE SIGNALIZED CLOSURE. THIS BRIDGE WORK MUST BE COMPLETED BEFORE PAVING SR 57 WITHIN 800 FEET (MIN.) OF THE STRUCTURE IN ORDER TO MATCH UP THE SURFACES OF THE DECK AND ASPHALT. THE 35 CALENDAR DAYS, AS WELL AS HAVING THE BRIDGE WORK COMPLETED BEFORE STARTING THE SURFACE PAVING WORK ON SR 57, SHALL BE CONSIDERED AN INTERIM COMPLETION DATE. SEE PLAN SHEET 52 FOR ADDITIONAL NOTES AND DETAILS.

C. THE REMAINING STRUCTURES MAY BE COMPLETED IN 2004 OR BY THE PROJECT COMPLETION DATE.

D. NO LANE CLOSURES ALLOWED BETWEEN NOVEMBER 15, 2004 AND APRIL 3, 2005. NOVEMBER 15, 2004 SHALL BE CONSIDERED TO CONSTITUTE AN INTERIM COMPLETION DATE.

E. THE INTERMEDIATE COURSE SHALL BE PLACED WITHIN 3 CALENDAR DAYS AFTER THE PLANING AND REPAIR WORK HAVE BEEN COMPLETED.

FAILURE OF THE CONTRACTOR TO MEET EACH OR ANY ONE OF THE REQUIREMENTS SPECIFIED ABOVE, LIQUIDATED DAMAGES WILL BE ASSESSED PER CMS 108.07.

MAINTAINING DRIVEWAY ACCESS

IN ORDER TO MAINTAIN DRIVEWAY ACCESS AT ALL TIMES, THE CONTRACTOR IS TO USE THE ASPHALT GRINDINGS FOR THE "WEDGES". THESE "WEDGES" ARE TO BE PLACED WHEN THE PLANING REMOVES MORE THAN 1-1/2 INCHES OF PAVEMENT IN A PASS. ESTIMATED QUANTITIES HAVE BEEN PROVIDED FOR ITEM 617 COMPACTED AGGREGATE, TYPE A, AS PER PLAN TO MAINTAIN DRIVEWAYS FOR EACH PHASE OF CONSTRUCTION AS DIRECTED BY THE ENGINEER:

ITEM 617 COMPACTED AGGREGATE, TYPE A, AS PER PLAN 70 CU YD

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.

GENERAL SUMMARY

SHEET NUMBER											ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	REF. SHEET
5	6	7	10	11	12	16	33									
															ROADWAY	
						LUMP					201	11000	LUMP		CLEARING AND GRUBBING	
						1925					202	38000	1925	FT	GUARDRAIL REMOVED	
						1519					202	38200	1519	FT	GUARDRAIL REMOVED FOR REUSE	
						39					202	42000	39	EACH	ANCHOR ASSEMBLY REMOVED, TYPE A	
						1					202	42040	1	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T	
						1150					203	20001	1150	CU YD	EMBANKMENT, AS PER PLAN	14
						8219					209	15060	8219	FT	RESHAPING UNDER GUARDRAIL	
				22.14							209	60500	22.14	MILE	LINEAR GRADING	
					60						209	80000	60	EACH	GRADING MAILBOX APPROACHES	
2											604	39500	2	EACH	MONUMENT BOX ADJUSTED TO GRADE	
						1950					606	13000	1950	FT	GUARDRAIL, TYPE 5	
						1343.75					606	16500	1343.75	FT	GUARDRAIL REBUILT, TYPE 5	
						24					606	18500	24	EACH	GUARDRAIL POST, 9 FEET	
						2					606	22000	2	EACH	ANCHOR ASSEMBLY, TYPE B-98	
						28					606	22010	28	EACH	ANCHOR ASSEMBLY, TYPE E-98	
						5					606	26500	5	EACH	ANCHOR ASSEMBLY, TYPE T	
						8					606	35120	8	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 3	
						4					606	35140	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4	
						1587.5					606	98000	1587.5	FT	GUARDRAIL, MISC.: ADJUST HEIGHT, EXISTING TYPE 5 GUARDRAIL	14
											SPECIAL	69050100	1	EACH	MAILBOX SUPPORT SYSTEM, SINGLE	12
											SPECIAL	69050200	4	EACH	MAILBOX SUPPORT SYSTEM, DOUBLE	12
															DRAINAGE	
						115					603	04900	115	FT	12" CONDUIT, TYPE D	
						10					603	07900	10	FT	18" CONDUIT, TYPE D	
															PAVEMENT	
	850										253	02000	850	CU YD	PAVEMENT REPAIR	
			179388								254	01000	179388	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE	
			8970								254	01600	8970	SQ YD	PATCHING PLANED SURFACE	
			14753								407	10000	14753	GALLON	TACK COAT	
			5533								407	14000	5533	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
					10997						408	10000	10997	GALLON	PRIME COAT	
			7683								442	00201	7683	CU YD	ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN	6
			8964								442	20201	8964	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448), AS PER PLAN	6
					954	120					617	10101	1074	CU YD	COMPACTED AGGREGATE, TYPE A, AS PER PLAN	7
					27491						617	20000	27491	SQ YD	SHOULDER PREPARATION	

CALC BY: JFF
CHKD BY: MIS

GENERAL SUMMARY

MED-57-3.24

GENERAL SUMMARY

SHEET NUMBER													ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	REF. SHEET
5	6	7	10	11	12	16	33											
													MAINTENANCE OF TRAFFIC					
		105											614	12460	105	EACH	WORK ZONE MARKING SIGN	
		200											614	13000	200	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
													614	21500	33.99	MILE	WORK ZONE CENTER LINE, CLASS II, 642 PAINT	
													614	23200	1095	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT	
													TRAFFIC CONTROL					
													924	54000	924	EACH	RPM REMOVED <i>AND DISPOSED</i>	6
													621	00100	924	EACH	RPM	
						160							626	00100	160	EACH	BARRIER REFLECTOR, TYPE A	
		75											630	02100	75	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
		10											630	85100	10	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
2													632	26500	2	EACH	DETECTOR LOOP	
													642	00102	22.24	MILE	EDGE LINE, TYPE 2	
													642	00302	11.33	MILE	CENTER LINE, TYPE 2	
													644	00400	365	FT	CHANNELIZING LINE	
													644	00500	446	FT	STOP LINE	
													644	00700	669	FT	TRANSVERSE LINE	
													644	01110	1	EACH	SCHOOL SYMBOL MARKING, 96"	
													644	01300	6	EACH	LANE ARROW	
													644	01410	5	EACH	WORD ON PAVEMENT, 96"	
													STRUCTURES					
													BRIDGE NO. MED-57-0324B (SLM) SFN 5201950					
													SEE STRUCTURE SUMMARY ON SHEET NO. 34					
													BRIDGE NO. MED-57-0271 (SLM) SFN 5201918					
													SEE STRUCTURE SUMMARY ON SHEET NO. 34					
													BRIDGE NO. MED-57-0322 (SLM) SFN 5201934					
													SEE STRUCTURE SUMMARY ON SHEET NO. 34					
													BRIDGE NO. MED-57-0400 (SLM) SFN 5201977					
													SEE STRUCTURE SUMMARY ON SHEET NO. 34					
													BRIDGE NO. MED-57-0652 (SLM) SFN 5202043					
													SEE STRUCTURE SUMMARY ON SHEET NO. 35					
													BRIDGE NO. MED-94-1377 (SLM) SFN 5205719					
													SEE STRUCTURE SUMMARY ON SHEET NO. 36					
													BRIDGE NO. MED-94-1516 (SLM) SFN 5205735					
													SEE STRUCTURE SUMMARY ON SHEET NO. 36					
													614	11000	LUMP		MAINTAINING TRAFFIC	
													619	16010	3	MONTH	FIELD OFFICE, TYPE B	
													624	10000	LUMP		MOBILIZATION	

CALC BY: JPF
CHKD BY: MJS

GENERAL SUMMARY

MED-57-3.24

SEE BRIDGE TREATMENT SHEET #41 FOR PLANING AND PAVING DETAILS AT THE STRUCTURES.

* - FOR TYPICALS, SEE SHEET 4

NOTE: USE BUTT JOINTS THROUGHOUT THE PROJECT

PART	ROUTE	LOG POINT TO LOG POINT		LENGTH		WIDTH FEET AVG.	* TYPICAL	EXISTING PAVEMENT TYPE	PAVEMENT AREA SQ YD	254		407 TACK COAT FOR INTERMEDIATE COURSE @ 0.03 GAL/SY GALLON	407 TACK COAT @ 0.08 GAL/SY GALLON	442		442								
				MILE	FEET					PAVEMENT PLANING, ASPHALT CONCRETE SQ YD	PATCHING PLANED SURFACE SQ YD			ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448), AS PER PLAN		ASPHALT CONCRETE SURFACE COURSE, 9.5MM, TYPE A (446), AS PER PLAN								
														THICK AVG. INCH	CU YD	THICK AVG. INCH	CU YD							
A	SR 57	3.24	3.49	0.25	1320	34.0	1	404	4987	249	150	399	1.75	242	1.5	208								
A	SR 57	3.49	3.58	0.09	475.2	28.0	1	404	1478	74	44	118	1.75	72	1.5	62								
A	SR 57	3.58	3.84	0.26	1372.8	29.0	1	404	4423	221	133	354	1.75	215	1.5	184								
A	SR 57	3.84	7.016	3.18	16769.3	28.0	1	404	52171	2609	1565	4174	1.75	2536	1.5	2174								
A	SR 57	7.064	9.90	2.84	14974.1	28.0	1	404	46586	2329	1398	3727	1.75	2265	1.5	1941								
A	SR 57	10.21	10.39	0.18	950.4	29.0	1	404	3062	153	92	245	1.75	149	1.5	128								
A	SR 57	10.39	10.63	0.24	1267.2	40.0	1	404	5632	282	169	451	1.75	274	1.5	235								
A	SR 57	10.63	10.89	0.26	1372.8	29.0	1	404	4423	221	133	354	1.75	215	1.5	184								
EXTRA AREA FOR INTERS., DRIVES, + M.B.									3158	650	33	95	253	1.75	154	1.5	132							
SUB-TOTAL SR 57				7.29	38502				125920	123412	6171	3779	10075		6122	5248								
B	SR 94	11.325	12.88	1.56	8210.4	25.0	1	404	22807	1140	684	1825	1.75	1109	1.5	950								
B	SR 94	13.386	15.61	2.22	11742.7	25.0	1	404	32619	1631	979	2610	1.75	1586	1.5	1359								
EXTRA AREA FOR INTERS., DRIVES, + M.B.									3034	550	28	91	243	1.75	147	1.5	126							
SUB-TOTAL SR 94				3.78	19953				58460	55976	2799	1754	4678		2842	2435								
TOTALS				11.07	58455				184380	179388	8970	5533	14753		8964	7683								

CALC BY: JPF
CHK'D BY: MJS

PAVEMENT DATA

MED-57-3.24

* - FOR TYPICALS, SEE SHEET 4

PART	ROUTE	LOG POINT TO LOG POINT		LENGTH		* TYPICAL	PAVED SHOULDER PROPOSED WIDTH FEET (AVG.)		209				AGGREGATE SHOULDER PROPOSED WIDTH FEET (AVG.)		AGGREGATE SHOULDER AREA	617		617		408	
							A	B	LINEAR GRADING				C	D		SHOULDER PREPARATION	COMPACTED AGGREGATE, TYPE A, AS PER PLAN	PRIME COAT			
							MILE	FEET	MILE					SQ YD		SQ YD	CU YD		GALLON		
A	SR 57	3.24	3.49	0.25	1320	1			0.50					2.0	2.0	587	587	20		235	
A	SR 57	3.49	3.58	0.09	475.2	1			0.18					2.0	2.0	211	211	7		84	
A	SR 57	3.58	3.84	0.26	1372.8	1			0.52					2.0	2.0	610	610	21		244	
A	SR 57	3.84	7.016	3.18	16769.3	1			6.35					2.0	2.0	7453	7453	259		2981	
A	SR 57	7.064	9.90	2.84	14974.1	1			5.67					2.0	2.0	6655	6655	231		2662	
A	SR 57	10.21	10.39	0.18	950.4	1			0.36					2.0	2.0	422	422	15		169	
A	SR 57	10.39	10.63	0.24	1267.2	1			0.48					2.0	2.0	563	563	20		225	
A	SR 57	10.63	10.89	0.26	1372.8	1			0.52					2.0	2.0	610	610	21		244	
EXTRA AREA FOR UNPAVED DRIVES																900	900	31		360	
SUB-TOTAL SR 57				7.29	38501.8				14.58								18011	625		7204	
B	SR 94	11.325	12.88	1.56	8210.4	1			3.11					2.0	2.0	3649	3649	127		1460	
B	SR 94	13.386	15.61	2.22	11742.7	1			4.45					2.0	2.0	5219	5219	181		2088	
EXTRA AREA FOR UNPAVED DRIVES																	612	612	21		245
SUB-TOTAL SR 94				3.78	19953.1				7.56								9480	329		3793	
TOTALS				11.07	58455				22.14								27491	954		10997	

CALC BY: JPF
CHKD BY: MJS

SHOULDER DATA

MED-57-3.24

ITEM SPECIAL MAILBOX SUPPORT SYSTEM

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 ACCOMMODATE THE COMPLETE INSTALLATION. SUPPORT HARDWARE SHALL ACCOMMODATE 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 4 IN. x 4 IN. (S4S) OR 4 1/2 IN. DIAMETER ROUND, AND CONFORM TO 710.14. STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2 IN. 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 3 FT. CENTERS AND THE TURNOUT LENGTHENED TO ACCOMMODATE 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 - S.R. 57 6.11 SLM = 1 EACH

ITEM SPECIAL-MAILBOX SUPPORT SYSTEM, DOUBLE
PART A - S.R. 57 3.39 SLM = 2 EACH
PART A - S.R. 57 6.10 SLM = 2 EACH

MAILBOXES

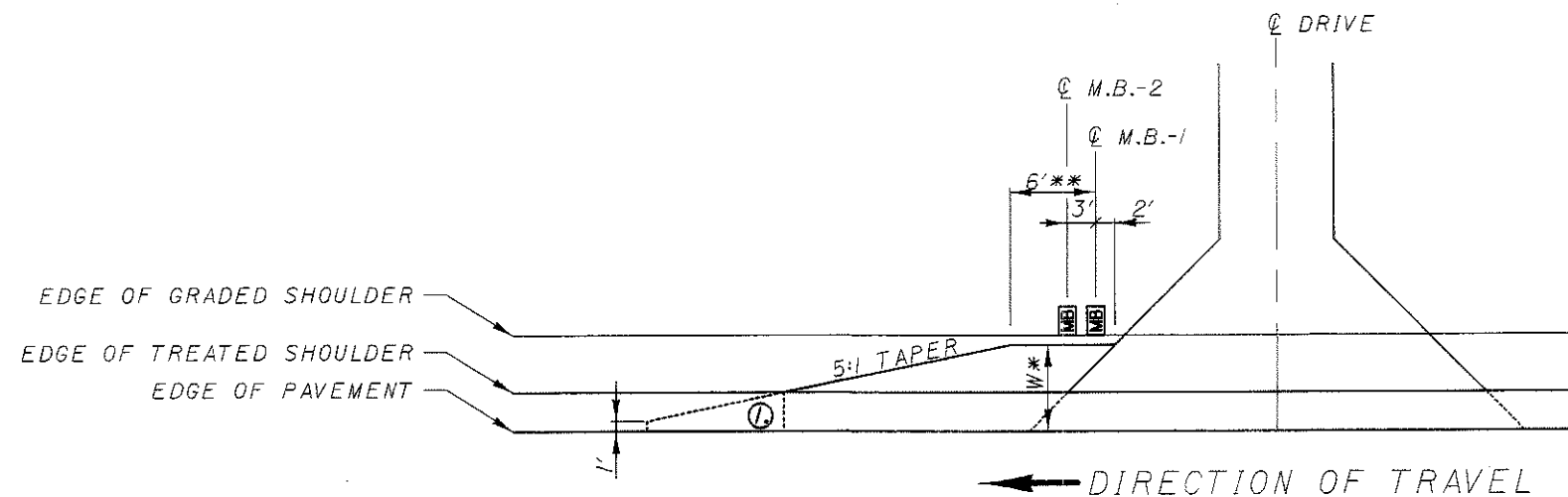
THE MAILBOX APPROACHES SHALL BE PAVED WITH 1.75 IN. OF ITEM 442 INTERMEDIATE COURSE. USE 1.5 IN. OF ITEM 442 SURFACE COURSE. THEY SHALL CONFORM AS MUCH AS PRACTICAL TO STANDARD DRAWING BP-4.1 OR AS DIRECTED BY THE ENGINEER.

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 COMPACTED AGGREGATE, TYPE A, AS PER PLAN 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 209 - GRADING MAILBOX APPROACHES:
PART A - S.R. 57 = 45 EACH
PART B - S.R. 94 = 15 EACH

ITEM 617 - COMPACTED AGGREGATE, TYPE A, AS PER PLAN
PART A - S.R. 57 = 90 CU YD
PART B - S.R. 94 = 30 CU YD

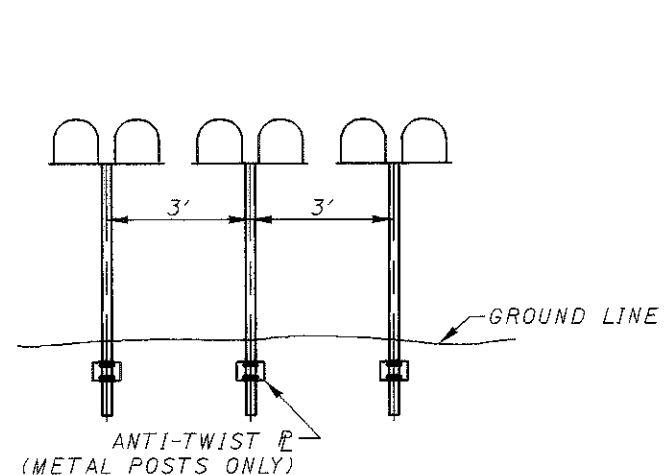
FOR DETAILS NOT SHOWN SEE STANDARD DRAWING BP-4.1



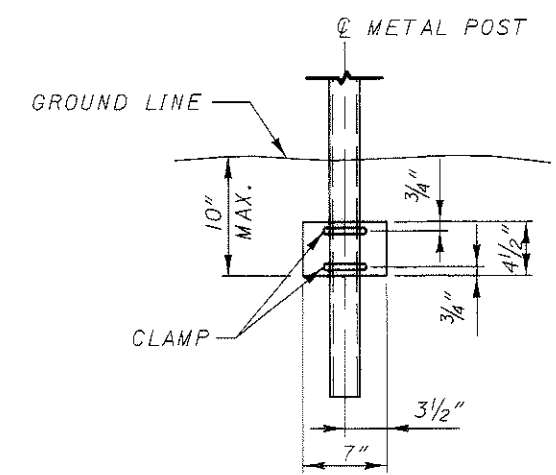
① END MAILBOX TURNOUT AT EDGE OF TREATED SHOULDER OR 1' WHICH EVER IS GREATER.

* WHERE MAILBOX POSTS ARE BEHIND GUARDRAIL, TURNOUT WIDTH SHALL EXTEND TO FACE OF GUARDRAIL. WHERE NO GUARDRAIL IS REQUIRED, TURNOUT WIDTH SHALL BE 6 FT. MINIMUM, EXCEPT WHERE FIELD CONDITIONS WILL NOT PERMIT.

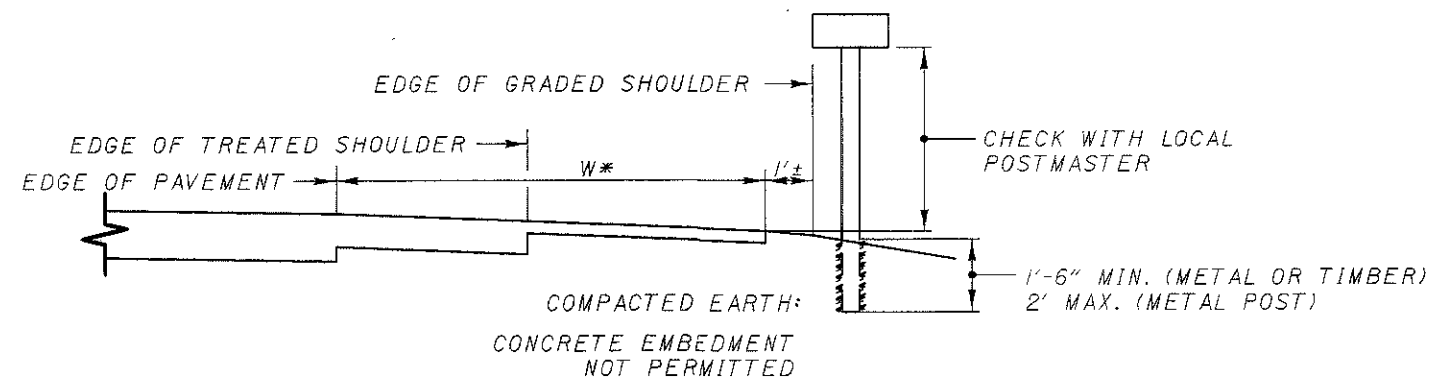
** 6' FOR SINGLE MAILBOX SUPPORT, ADD 3 FT. FOR EACH ADDITIONAL MAILBOX



GROUP MAILBOX INSTALLATION



ANTI-TWIST PLATE



CROSS SECTION / ELEVATION VIEW

DESIGN FILE: i:\projects\77002\mailbox.dgn
WORKSTATION: jfinch
DATE: 04/06/04

GENERAL NOTES

- IT IS INTENDED THAT THIS DRAWING BE USED FOR TREATMENT OF DROP-OFFS THAT DEVELOP DURING CONSTRUCTION OPERATIONS, AND THAT ARE NOT OTHERWISE PROVIDED FOR IN THE CONSTRUCTION PLANS. THE SUGGESTED TREATMENTS ARE INTENDED FOR HIGH VOLUME PROJECTS THAT WILL LAST AT LEAST SEVEN DAYS AND HAVE AN ACTIVE WORK ZONE 1 MILE (1.6 KM) OR LESS IN LENGTH. FOR GUIDANCE ON THE USE OF THIS SHEET, SEE L&D MANUAL VOLUME ONE, SECTION 500. WHERE THE PLANS DO NOT PROVIDE SPECIFIC ITEMS FOR LABOR, EQUIPMENT, OR MATERIALS TO IMPLEMENT THE DROP-OFF TREATMENTS SPECIFIED HEREON, THEY SHALL BE INCLUDED FOR PAYMENT IN THE LUMP SUM BID FOR ITEM 614-MAINTAINING TRAFFIC.
- WHILE THE NEED FOR CERTAIN ADVISORY SIGNING IS NOTED HEREON, IT IS NOT INTENDED THAT THIS BE INDICATIVE OF ALL SIGNING THAT MAY BE REQUIRED TO ADVISE OR WARN MOTORISTS. ALL REQUIREMENTS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) MUST BE FULFILLED.
- IN URBAN OR OTHERWISE HEAVILY DEVELOPED AREAS WHERE PEDESTRIANS AND/OR BICYCLISTS MAY BE PRESENT IN SIGNIFICANT NUMBERS, ADDITIONAL SIGNING AND PROTECTIVE MEASURES OTHER THAN THOSE SHOWN HEREON MAY BE REQUIRED.
- THE DROP-OFF TREATMENT SELECTED FOR USE AT ANY GIVEN LOCATION SHALL BE AS APPROPRIATE FOR THE PREVAILING CONDITIONS AT THE SITE.
- WHERE CONCRETE BARRIER IS SPECIFIED, IT SHALL BE IN ACCORDANCE WITH SCD RM-4.2 AND ITEM 622.
- WHEN DRUMS ARE SPECIFIED FOR A DROP-OFF CONDITION, A MINIMUM NUMBER OF FOUR DRUMS SHALL BE USED. SPACING SHALL BE AS INDICATED IN THE PLANS OR AS SPECIFIED IN THE OMUTCD.
- WHEN OW-151 (LOW SHOULDER) SIGNS OR OW-155 (SHOULDER DROP-OFF) SIGNS OR OW-171 (UNEVEN LANES) SIGNS ARE REQUIRED, THEY SHALL BE PLACED 750' (250 M) IN ADVANCE OF THE CONDITION, ON ALL INTERSECTING ENTRANCE RAMP WITHIN THE LIMITS OF THE CONDITION AND IMMEDIATELY BEYOND ALL INTERSECTING ROADWAYS WITHIN THE LIMITS OF THE CONDITION. WHEN THE DROP-OFF CONDITION EXTENDS MORE THAN 0.5 MILE (800M), ADDITIONAL SIGNS SHOULD BE ERRECTED AT INTERVALS OF 1.0 MILE (1600 M) OR LESS.
- FOR LOCATIONS, SUCH AS AT RAMP, LANE SHIFTS, LANE CLOSURES, ETC., WHERE TRAFFIC IS REQUIRED TO NEGOTIATE A DIFFERENCE IN ELEVATION BETWEEN PAVEMENTS, A 3:1 SLOPE TREATMENT SIMILAR TO THE OPTIONAL WEDGE TREATMENT SHALL BE PROVIDED.
- PORTABLE CONCRETE BARRIER SHALL BE PLACED ON THE SAME LEVEL AS THE TRAFFIC SURFACE AND SHALL NOT ENCR OACH ON LANE WIDTH(S) DESIGNATED AS THE MINIMUM REQUIRED FOR TRAFFIC USE. WHERE DRUMS ARE USED, AND THEIR PRESENCE WOULD REDUCE TRAVELED LANE WIDTHS TO LESS THAN 10' (3.0M), DRUMS MAY BE PLACED ON THE OPPOSITE LEVEL FROM THAT OF TRAFFIC PROVIDED THE DROP-OFF DEPTH DOES NOT EXCEED 5" (125) AND APPROVAL IS GRANTED BY THE PROJECT ENGINEER.
- PAVEMENT REPAIRS (OR SIMILAR WORK):
 - LENGTHS GREATER THAN 60' (18 M) - UTILIZE APPROPRIATE TREATMENT FROM CONDITION I.
 - LENGTHS OF 60' (18 M) OR LESS - REPAIRS SHALL BE EFFECTED IN ACCORDANCE WITH CMS 255.08. DRUMS MAY BE USED AS A SEPARATOR ADJACENT TO THE TRAVELED LANE.

OPTIONAL WEDGE TREATMENT (MILLING OR RESURFACING)

- THIS TREATMENT MAY BE USED WHEN PERMITTED FOR CONDITION I ONLY.
- OW-171 SIGN REQUIRED



FIRM AND UNYIELDING MATERIAL (TO BE REMOVED PRIOR TO PLACING THE ABUTTING PAVEMENT COURSE, UNLESS OTHERWISE PERMITTED TO REMAIN BY THE PLANS OR SPECIFICATIONS).

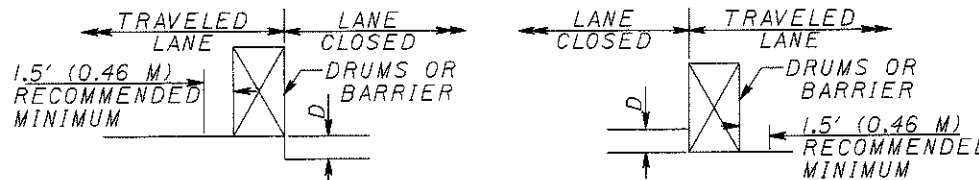
CONDITION I

DROP-OFFS BETWEEN TRAVELED LANES

- THESE TREATMENTS ARE TO BE USED FOR RESURFACING, PAVEMENT PLANING, EXCAVATION, ETC. BETWEEN OR WITHIN TRAVELED LANES.

D	TREATMENT
≤1 1/2" (≤40)	ERECT OW-171 SIGN
>1 1/2"-3" (40-75)	1. LANE CLOSURE UTILIZING DRUMS* AS SHOWN BELOW OR 2. OPTIONAL WEDGE TREATMENT
>3"-5" (>75-125)	LANE CLOSURE UTILIZING DRUMS AS SHOWN BELOW
>5" (>125)	LANE CLOSURE UTILIZING PORTABLE CONCRETE BARRIER AS SHOWN BELOW

* CONES MAY BE USED FOR DAYTIME ONLY CONDITIONS



CONDITION II

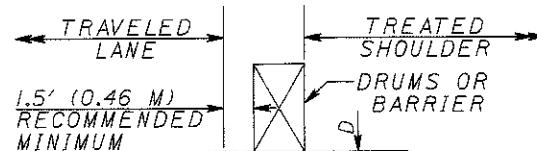
DROP-OFFS WITHIN GRADED SHOULDER AREA

THE TREATMENTS INDICATED BELOW ARE FOR USE IN CONJUNCTION WITH RESURFACING, PLANING, OR EXCAVATIONS WITHIN THE GRADED SHOULDER AREA.

THE GRADED SHOULDER AREA IS THAT FLAT OR GRADUALLY SLOPING AREA BETWEEN THE EDGE OF A NORMALLY TRAVELED LANE AND THE MORE STEEPLY SLOPING DITCH FORESLOPE OR EMBANKMENT SLOPE. ITS SURFACE MAY BE SOIL OR TURF, AND/OR IT MAY BE INCLUSIVE OF A "TREATED" AREA (IMPROVED WITH MAXIMUM WIDTH SHALL BE CONSIDERED TO BE 12' (3.6 M)).

D	TREATMENT
≤1 1/2" (≤40)	ERECT OW-155 SIGNS
>1 1/2"-5" (>40-125)	1. IF MINIMUM LANE WIDTH* REQUIREMENTS CAN BE MET, MAINTAIN LANES UTILIZING DRUMS AS SHOWN BELOW OR 2. IF MINIMUM LANE WIDTH* REQUIREMENTS CANNOT BE MET, CLOSE ADJACENT LANE UTILIZING DRUMS OR 3. OPTIONAL SHOULDER TREATMENT
>5"-12" (>125-305) DAYLIGHT ONLY	IF MINIMUM LANE WIDTH* REQUIREMENTS CAN BE MET, MAINTAIN LANES UTILIZING DRUMS AS SHOWN BELOW.
>5"-24" (>125-610)	1. IF MINIMUM LANE WIDTH* REQUIREMENTS CAN BE MET, MAINTAIN LANES UTILIZING PORTABLE CONCRETE BARRIER AS SHOWN BELOW. OR 2. IF MINIMUM LANE WIDTH* REQUIREMENTS CANNOT BE MET, CLOSE ADJACENT LANE UTILIZING DRUMS.
>5"-24" (>125-610)	LANE CLOSURE UTILIZING PORTABLE CONCRETE BARRIER AS SHOWN BELOW

*MINIMUM LANE WIDTHS SHALL BE 10' (3.0 M) UNLESS OTHERWISE SPECIFIED IN THE PLANS.



OPTIONAL SHOULDER TREATMENT

- THIS TREATMENT MAY NOT BE USED WITHIN A BITUMINOUS SHOULDER WHERE A HOT LONGITUDINAL JOINT PER CMS 401.15 IS REQUIRED.
- OW-151 SIGNS REQUIRED.



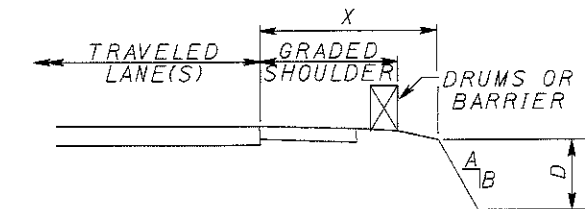
CONDITION III

DROP-OFFS BEYOND GRADED SHOULDER OR BACK OF CURB

- SEE NOTE 2 UNDER CONDITION II.
- USE CHART A OR B BELOW, AS APPLICABLE.

CHART A

USE FOR: 1. UNCURBED FACILITIES.
2. CURBED FACILITIES, WHERE:
A. CURBS ARE LESS THAN 6" (150) IN HEIGHT.
B. CURBS ARE 6" (150) OR GREATER IN HEIGHT AND THE LEGAL SPEED IS GREATER THAN 40 MPH (70 KM/H)

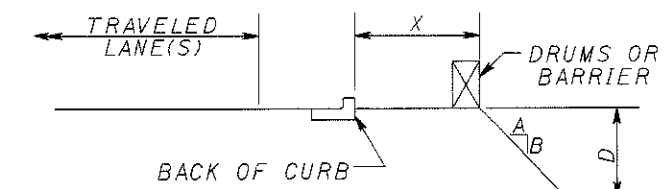


X	D	A/B	Treatment Required	
			Day	Night
0-4' (0-1.2 M)	ANY	ANY	(A)	(A)
4'-30' (1.2 M-9.1 M)	ANY	3:1 OR FLATTER	NONE	NONE
4'-12' (1.2 M-3.6 M)	≤3" (≤75)	STEEPER THAN 3:1	NONE	NONE
4'-12' (1.2 M-3.6 M)	>3"-<12" (>75-<305)	STEEPER THAN 3:1	DRUMS	DRUMS
4'-12' (1.2 M-3.6 M)	>12" (>305)	STEEPER THAN 3:1	DRUMS	BARRIER
>12'-20' (>3.6 M-6.1 M)	>12" (>305)	STEEPER THAN 3:1	NONE	NONE
>12'-20' (>3.6 M-6.1 M)	>12"-<24" (>305-<610)	STEEPER THAN 3:1	DRUMS	DRUMS
>12'-20' (>3.6 M-6.1 M)	>24" (>610)	STEEPER THAN 3:1	DRUMS	BARRIER
>20'-30' (>6.1 M-9.1 M)	<24" (<610)	STEEPER THAN 3:1	NONE	NONE
>20'-30' (>6.1 M-9.1 M)	>24" (>610)	STEEPER THAN 3:1	DRUMS	BARRIER
>30' (>9.1 M)	ANY	ANY	NONE	NONE

(A) USE TREATMENT SPECIFIED UNDER CONDITION II

CHART B

USE FOR: CURBED FACILITIES, WHERE THE CURB IS 6" (150) OR GREATER IN HEIGHT AND THE LEGAL SPEED IS 40 MPH (70 KM/H) OR LESS.



X	D	A/B	TREATMENT REQUIRED	
			DAY	NIGHT
0-10' (0-3.0 M)	<12" (<305)	ANY	NONE	DRUMS
0-10' (0-3.0 M)	>12" (>305)	ANY	DRUMS	DRUMS
>10' (>3.0 M)	ANY	ANY	NONE	NONE

NOTE: ALL METRIC DIMENSIONS (IN BRACKETS ()) ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

CONNECTING GUARDRAIL TO EXISTING RAIL

IN LOCATIONS WHERE TYPE 5 GUARDRAIL, TERMINAL ASSEMBLIES, ETC. ARE TO BE CONNECTED TO EXISTING RAIL SOME MODIFICATIONS MAY BE REQUIRED, INCLUDING EXTRA POSTS, DRILLING HOLES AND POSSIBLY PARTIAL SECTIONS OF ADDITIONAL RAIL ELEMENTS. THE COST OF THIS ADDITIONAL WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR TYPE 5 GUARDRAIL. IF ADDITIONAL PORTIONS OF RAIL ELEMENT ARE USED THE LINEAL MEASUREMENT OF THIS ADDITIONAL PORTION SHALL BE ADDED FOR PAYMENT.

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-I.I. 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.

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 201 - CLEARING AND GRUBBING

USE THIS ITEM AT THE LOCATIONS INDICATED IN THE PLANS AND AT LOCATIONS DIRECTED BY THE ENGINEER. THIS WORK SHALL CONSIST OF CLEARING ALL TREES AND STUMPS UNDER 12" IN SIZE 10' FROM THE FACE OF GUARDRAIL, BUT NOT THE VEGETATION. STUMPS CAN BE LEFT FLUSH WITH THE GROUND LEVEL. DISPOSE OF ALL MATERIAL ACCORDING TO 105.16 AND 105.17. ALL ABOVE WORK SHALL BE PAID FOR AS ITEM 201, LUMP, CLEARING AND GRUBBING.

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 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 SHALL BE LIMITED TO EIGHT (8) INCHES IN THICKNESS. THE METHOD OF COMPACTION AND EQUIPMENT USED SHALL BE SUFFICIENT TO PROVIDE A MINIMUM OF 60 PERCENT RELATIVE COMPACTION.

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 YARDS MEASURED BY LOOSE VOLUME IN THE CARRIER AT THE WORK SITE, IN LIEU OF THE REQUIREMENTS OF 203.09, AND PAYMENT FOR ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT UNIT BID PRICE PER CUBIC YARD 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 209 - RESHAPING UNDER GUARDRAIL:

THIS ITEM SHALL BE USED AT LOCATIONS INDICATED IN THE PLANS.

THIS WORK SHALL BE COMPLETED AS PER CMS 209.05 AND AS DESCRIBED HEREIN, AND SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER.

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

EXCESS MATERIAL RESULTING SHALL BE USED ELSEWHERE FOR THIS ITEM IF SO DIRECTED OR DISPOSED OF PROPERLY. 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 ABOVE WORK SHALL BE PAID FOR PER FT. WITH ITEM 209, RESHAPING UNDER GUARDRAIL, WITH THE EXCEPTION OF ANY EXTRA MATERIAL REQUIRED TO MEET THE SLOPE REQUIREMENTS WHICH SHALL BE PAID BY ITEM 203 - EMBANKMENT, AS PER PLAN.

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.I SO AS TO OBTAIN THE STANDARD 27.75 IN. 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.

THE EXISTING TYPE "E" ANCHOR ASSEMBLIES THAT ARE TO REMAIN SHALL BE ADJUSTED AS DESCRIBED ABOVE. THE EXTRUDER SHALL ALSO BE ADJUSTED ON THE FIRST POST TO MATCH THE NEW RAIL HEIGHT. ALL WORK REQUIRED TO ADJUST EXISTING "E" ANCHORS SHALL BE INCLUDED IN THIS ITEM FOR PAYMENT.

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

ITEM 606 - GUARDRAIL POST, 9 FOOT

PAYMENT FOR ITEM 606 - GUARDRAIL POST, 9 FEET SHALL INCLUDE COSTS OVER AND ABOVE THE PRICE BID FOR ITEM 606 - GUARDRAIL, TYPE 5 FOR UTILIZING 9 FOOT GUARDRAIL POSTS IN PLACE OF NORMAL LENGTH (6 FEET) POSTS AT LOCATIONS SPECIFIED IN THE PLAN OR AS DIRECTED BY THE ENGINEER. 9 FOOT GUARDRAIL POSTS SHALL BE INSTALLED WITH A MINIMUM EMBEDMENT DEPTH OF 5'-5".

THIS ITEM SHALL ALSO 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-I.I, AND THE ABOVE NOTE.

ITEM 606 - ANCHOR ASSEMBLY, TYPE B-98

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

1) THE SRT-350, GUARDRAIL END TERMINAL AS MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330.545.4373).

THE LENGTH OF THE SRT-350 SYSTEM IS CONSIDERED TO BE 37'-6" (11.43 m), INCLUSIVE OF THREE 12'-6" (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. DATE	ODOT APPROVAL DATE
SS444 SS444M	SRT-350 (12.5, 8 Post) Slotted Rail Terminal Post Layout and Erection Details	7/12/99 Rev. 1 7/12/99	08/27/99
SS425M	Slotted Rail Terminal SRT-350 Post Layout and Erection Details (12.5, 9 Post)	6/21/97 Rev. 1	03/6/98

2) THE FLEAT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 2516 MALLORY LANE, STOW, OHIO, 44224 (TELEPHONE: 330.346.0721).

THE LENGTH OF THE FLEAT-350 IS CONSIDERED TO BE 37'-6" (11.43 m), INCLUSIVE OF THREE 12'-6" (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. DATE	ODOT APPROVAL DATE
FLT-M	Flared Energy Absorbing Terminal (FLEAT-350) Assembly	04/16/98	07/31/98

REFER TO THE MANUFACTURER'S INSTRUCTION REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES (100mm) ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27 3/4 INCHES (706mm) FROM THE EDGE OF THE SHOULDER.

ON SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES NOT PROJECT MORE THAN 4 INCHES (100mm) ABOVE THE GROUND LINE.

THE FACE OF THE TYPE B-98 IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19: APPROXIMATELY 36 IN. WIDE x 12 IN. HIGH (915 mm W x 305 mm H) FOR THE SRT-350 AND 14 IN. WIDE x 20 IN. HIGH (350 mm W x 500 mm H) FOR THE FLEAT-350.

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

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 TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50 FEET (15.24 m), INCLUSIVE OF TWO 25 FOOT (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. DATE	ODOT APPROVAL DATE
SS265M	SRT-350 (12.5, 8 Post) Slotted Rail Terminal Post Layout and Erection Details	6/20/97	3/6/98
SSI42	Slotted Rail Terminal SRT-350 Post Layout and Erection Details (12.5, 9 Post)	4/12/00	7/31/00
SSI41	ET-2000 PLUS PLAN, ELEVATION & SECTION 25'-0" RAIL, HBA POSTS 1-4	2/29/00	7/31/00
SSI58	ET-2000 PLUS 50'-0" WITH 12'-6" PANELS & HBA POSTS 1-4 PLAN, ELEVATION & SECTION	5/22/00	7/31/00

2) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 2516 MALLORY LANE, STOW, OHIO 44224 (TELEPHONE: 330-346-0721)

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50'-0" (15.24 m), INCLUSIVE OF FOUR 12'-6" (3.81m) 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. DATE	ODOT APPROVAL DATE
SKT-4M	FOUNDATION TUBES SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4	12/11/97	3/6/98

THE FACE OF THE TYPE E-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18" x 18" (450mm X 450mm).

THE CONTRACTOR MAY USE A SALVAGED EXTRUDER WHEN ASSEMBLING THE ITEM 606 ANCHOR ASSEMBLY, TYPE E-98. ALL WELDS ON THE EXTERIOR OF THE SALVAGED EXTRUDER SHALL NOT BE DAMAGED AND THE FEEDER SHUTE SHALL NOT BE BENT.

REFER TO THE MANUFACTURER'S INSTRUCTION REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES (100mm) ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27 3/4 INCHES (706mm) FROM THE EDGE OF THE SHOULDER.

ON SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES NOT PROJECT MORE THAN 4 INCHES (100mm) ABOVE THE GROUND LINE.

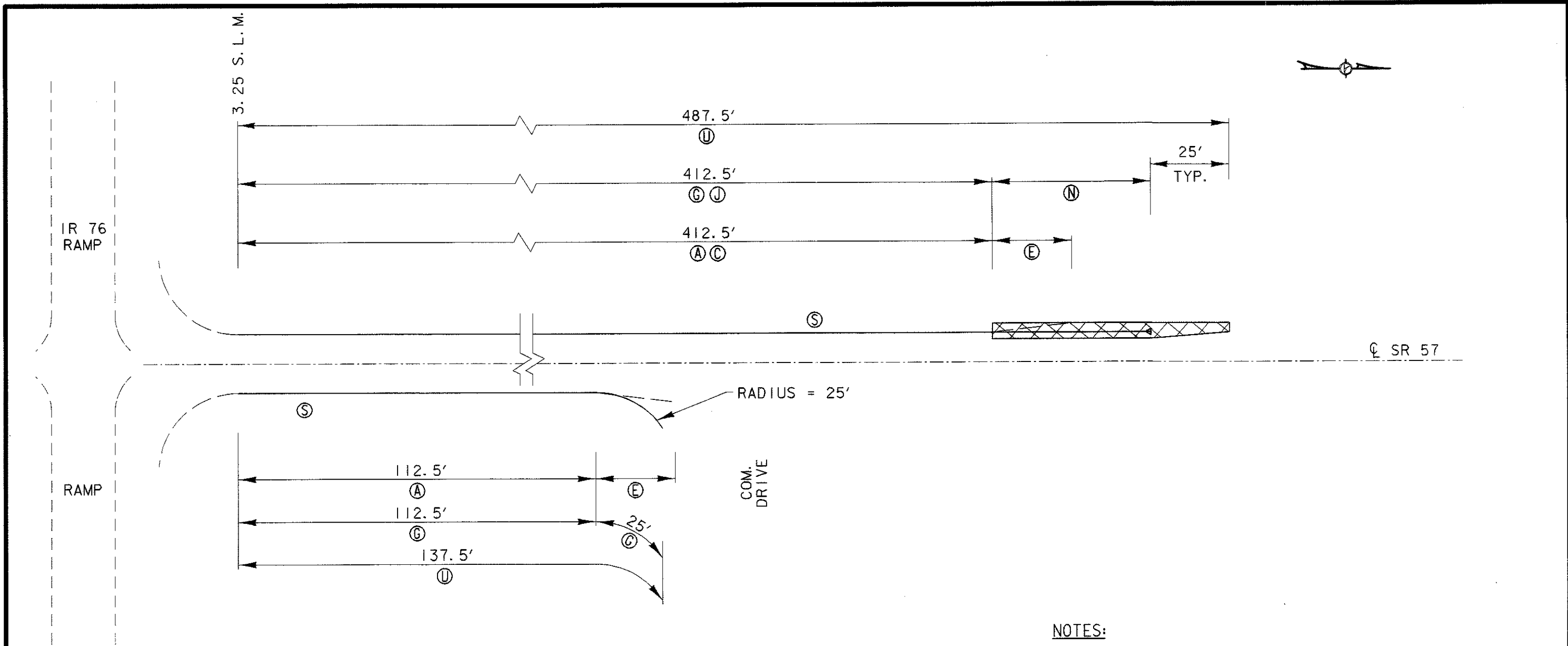
PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE,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

DESIGN FILE: i:\projects\77002\grdnotes.dgn
WORKSTATION: jfinch
DATE: 04/06/04

DATE: 04/06/04

WORKSTATION: jfinch

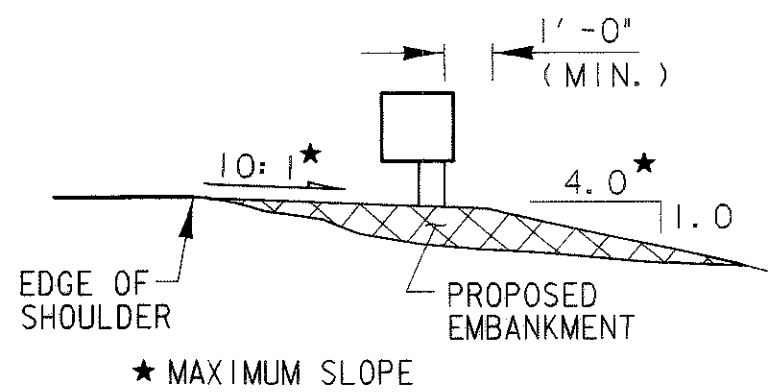
DESIGN FILE: I:\projects\77002\gdrail.dgn



- NOTES:**
1. ALL QUANTITIES CARRIED TO GUARDRAIL ESTIMATED QUANTITIES, SHEET 16.
 2. REPLACE 3 BAD PANELS ON THE LEFT SIDE.
 3. THE CONTRACTOR IS RESPONSIBLE TO NOTE THE EXISTING TYPE A ANCHOR ASSEMBLY LOCATION AS A REFERENCE FOR THE LAYOUT OF THE PROPOSED GUARDRAIL.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT.	37.5	112.5	150
Ⓒ	202	GUARDRAIL REMOVED FOR REUSE	FT.	375		375
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	1	1	2
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT.	487.5	137.5	625
Ⓖ	606	GUARDRAIL, TYPE 5	FT.	37.5	137.5	175
Ⓝ	606	GUARDRAIL REBUILT, TYPE 5	FT.	375		375
Ⓝ	606	ANCHOR ASSEMBLY, TYPE E-98	EACH	1		1
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	6	3	9

TYPICAL SECTION "E-98"



DESIGN AGENT
DISTRICT THREE
PRODUCTION DEPARTMENT

DATE
REVIEWED
STRUCTURAL FILE NUMBER

DRAWN
JPF
REVISED

DESIGNED
BAD
CHECKED

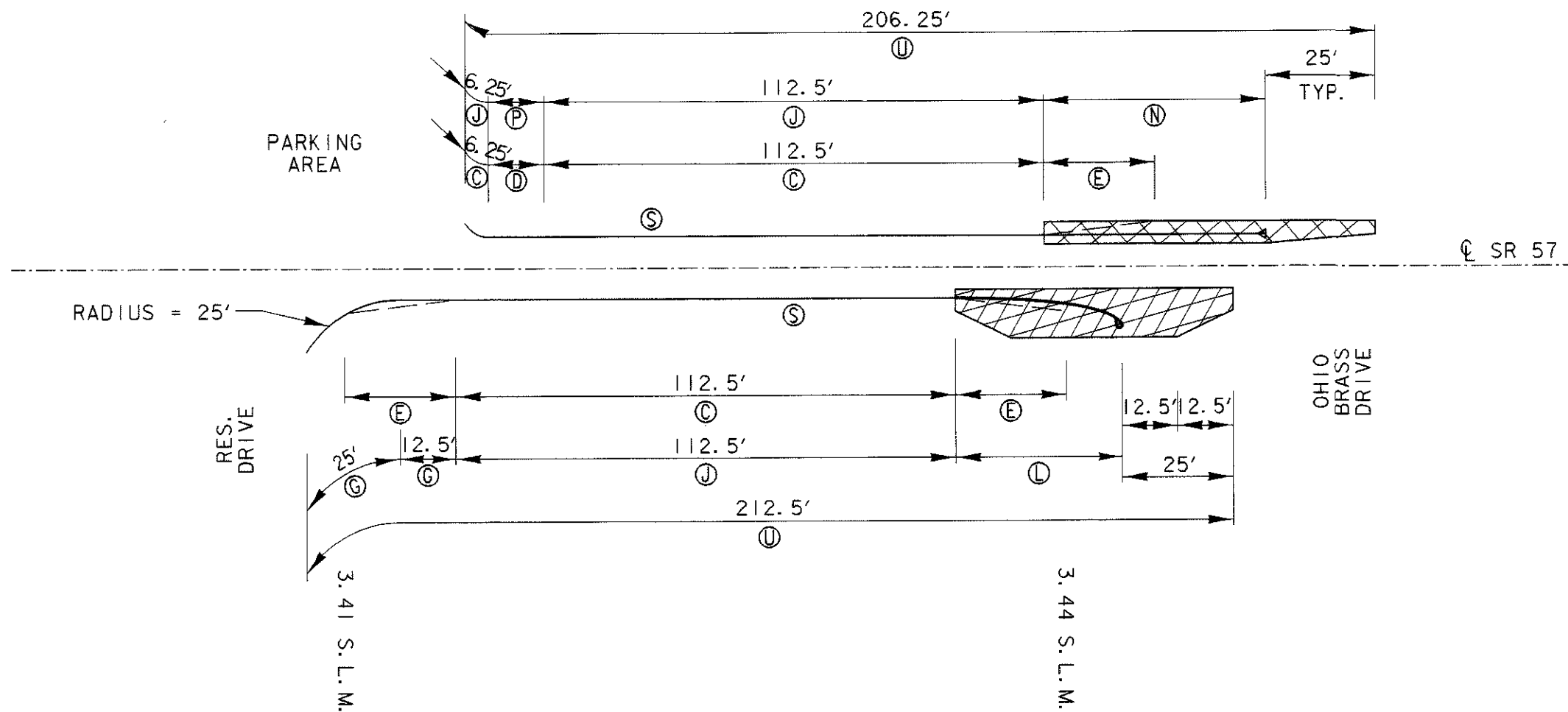
GUARDRAIL DETAIL
MED-57-3.25 S.L.M.

MED-57-3.24

DATE: 04/06/04

WORKSTATION: jfinch

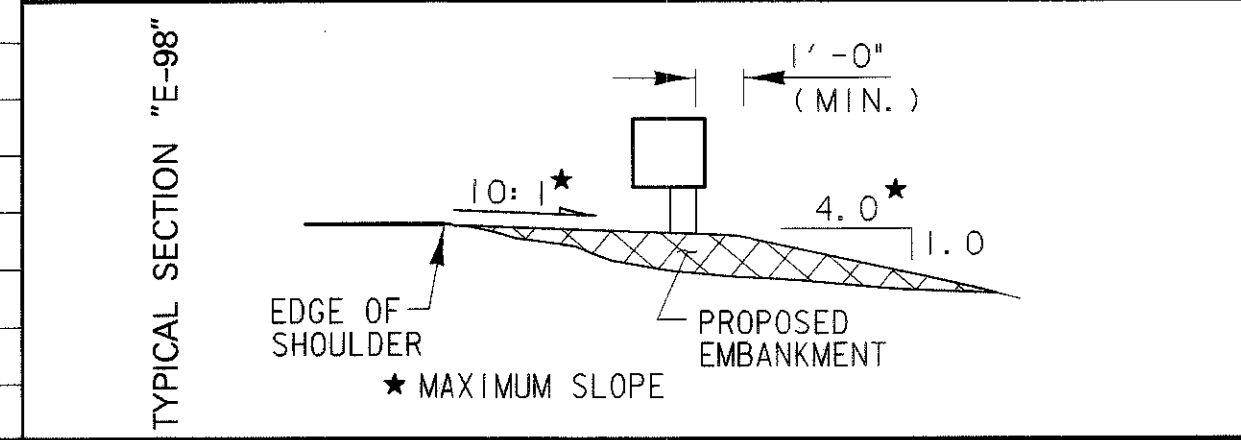
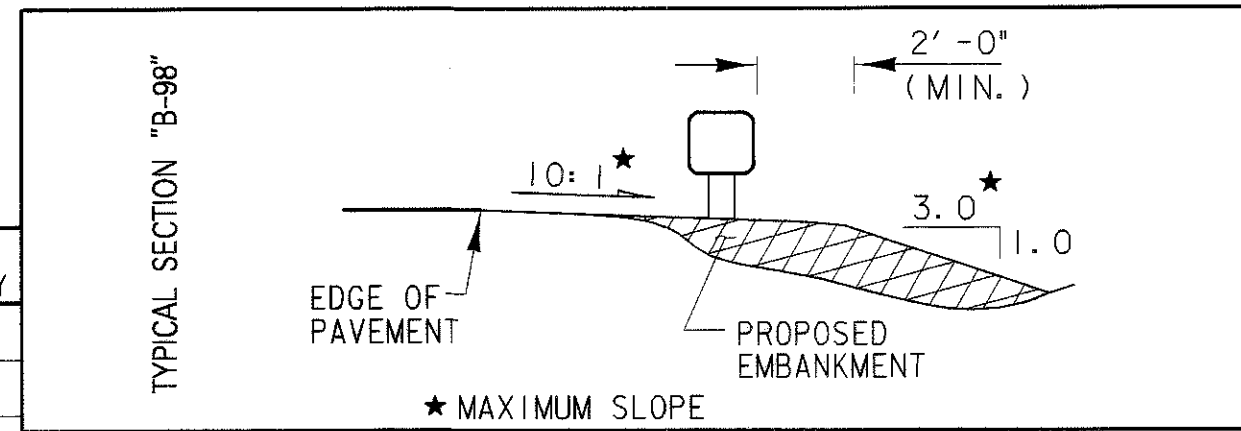
DESIGN FILE: i:\projects\77002\grdrail.dgn



NOTES:

1. ALL QUANTITIES CARRIED TO GUARDRAIL ESTIMATED QUANTITIES, SHEET 16.
2. GRADE EMBANKMENT AS PER TYPICAL SECTION "E-98" AND "B-98" FOR THE ENTIRE LENGTH OF THE ANCHOR ASSEMBLY, TYPE E-98 AND TYPE B-98 AND THE 25 FT. GRADING BEYOND THE GUARDRAIL RUN.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓒ	202	GUARDRAIL REMOVED FOR REUSE	FT	118.75	112.5	231.25
Ⓓ	202	ANCHOR ASSEMBLY REMOVED, TYPE T	EACH	1		1
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	1	2	3
	203	EMBANKMENT, AS PER PLAN	CU YD	20	30	50
Ⓚ	209	RESHAPING UNDER GUARDRAIL	FT	206.25	212.5	418.75
Ⓒ	606	GUARDRAIL, TYPE 5	FT		37.5	37.5
Ⓙ	606	GUARDRAIL REBUILT, TYPE 5	FT	118.75	112.5	231.25
Ⓛ	606	ANCHOR ASSEMBLY, TYPE B-98	EACH		1	1
Ⓝ	606	ANCHOR ASSEMBLY, TYPE E-98	EACH	1		1
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	3	3	6



DESIGN AGENCY
DISTRICT THREE
PRODUCTION DEPARTMENT

DATE
REVIEWED
DRAWN
JPF
DESIGNED
BAD
CHECKED

GUARDRAIL DETAIL
MED-57-3.41 S.L.M.

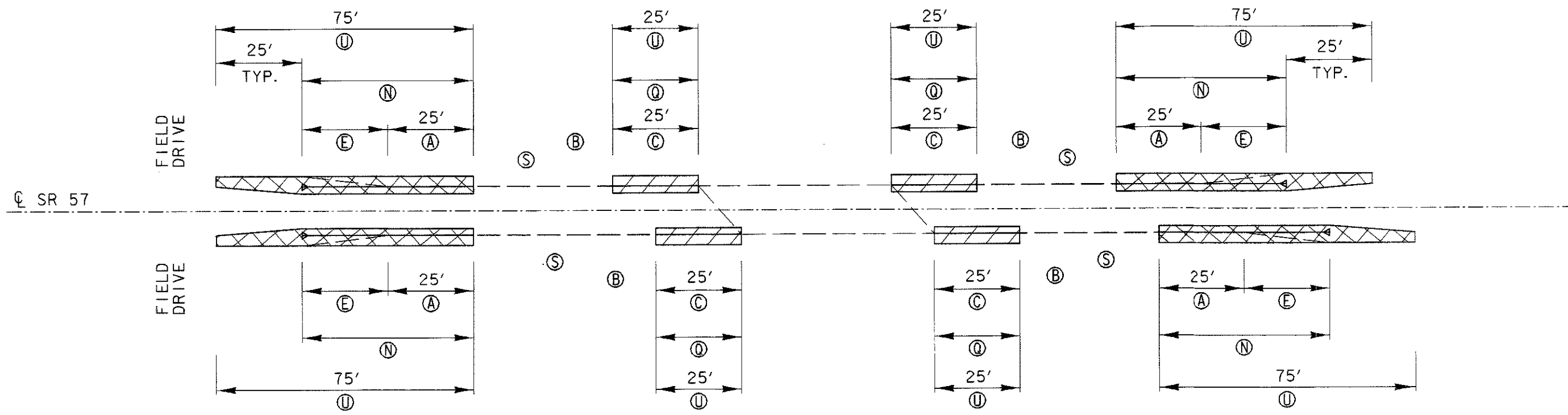
MED-57-3.24

18
58

DATE: 04/06/04

WORKSTATION: jfinch

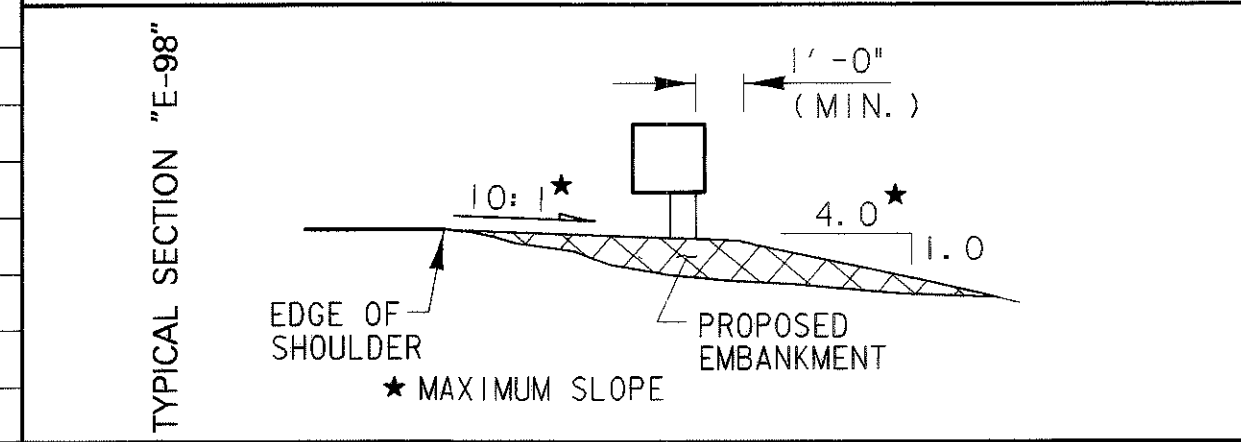
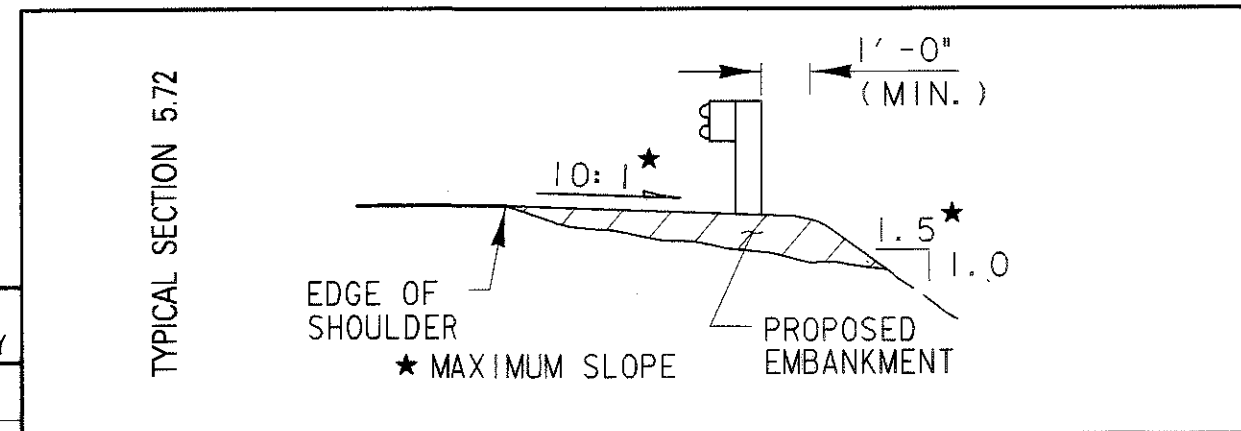
DESIGN FILE: i:\projects\77002\grd\rail.dgn



NOTES:

1. ALL QUANTITIES CARRIED TO GUARDRAIL ESTIMATED QUANTITIES, SHEET 16.
2. GRADE EMBANKMENT AS PER TYPICAL SECTION "E-98" FOR THE ENTIRE LENGTH OF THE ANCHOR ASSEMBLY, TYPE E-98 AND THE 25 FT. GRADING BEYOND THE GUARDRAIL RUN.
3. SEE SHEET 14 FOR CLEARING AND GRUBBING NOTE.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
ⓑ	201	CLEARING AND GRUBBING	LUMP	LUMP	LUMP	LUMP
Ⓐ	202	GUARDRAIL REMOVED	FT	50	50	100
Ⓒ	202	GUARDRAIL REMOVED FOR REUSE	FT	50	50	100
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2	2	4
Ⓧ	203	EMBANKMENT, AS PER PLAN	CU YD	50	50	100
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT	200	200	400
Ⓝ	606	ANCHOR ASSEMBLY, TYPE E-98	EACH	2	2	4
Ⓠ	606	BRIDGE TERMINAL ASSEMBLY, TYPE 4	EACH	2	2	4
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	5	6	11



DESIGN AGENCY
DISTRICT THREE
PRODUCTION DEPARTMENT

DATE
REVIEWED
DRAWN
DESIGNED

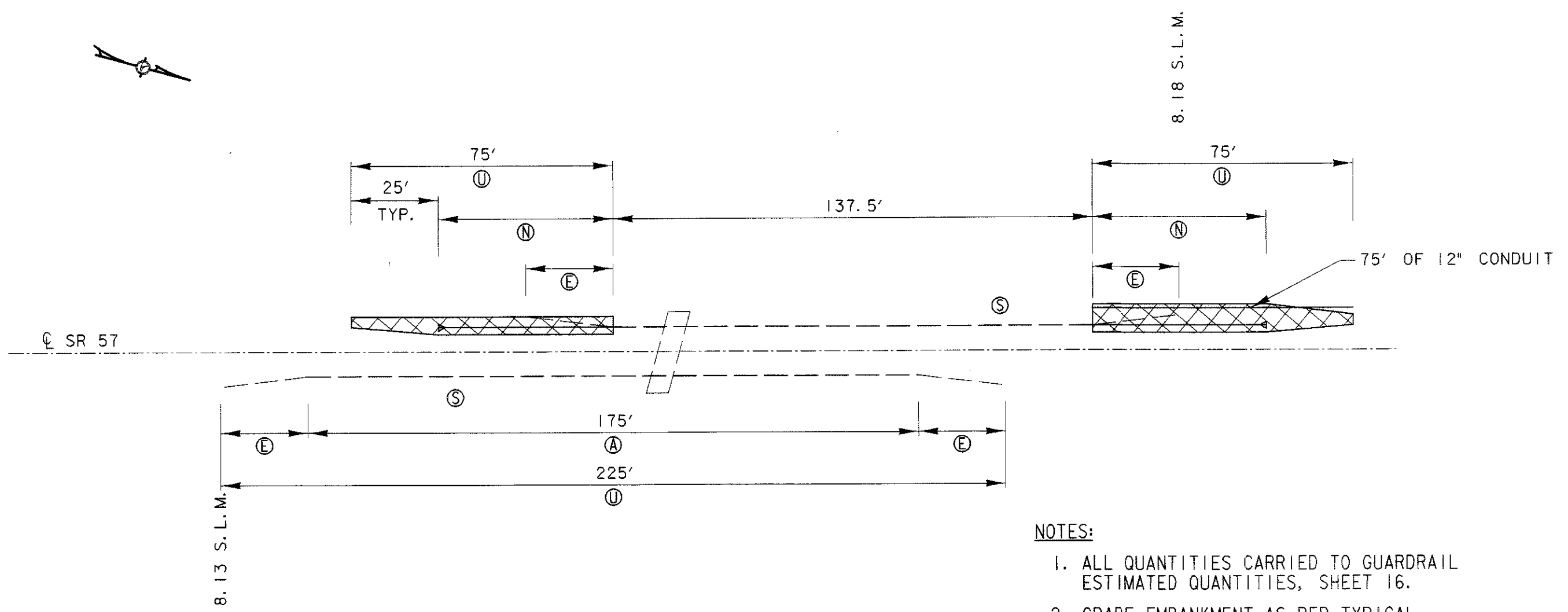
GUARDRAIL DETAIL
MED-57-0322 5.72 S.L.M.

MED-57-3.24

DATE: 04/06/04

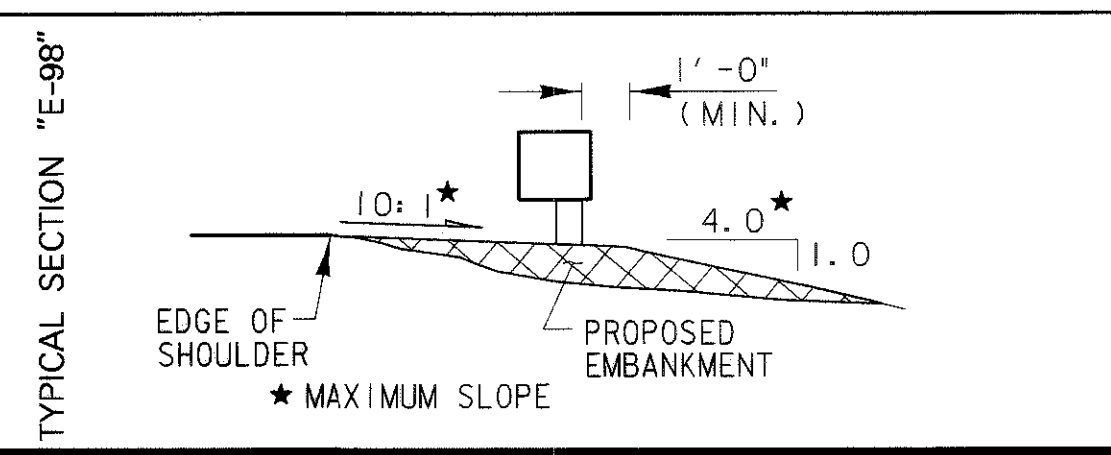
WORKSTATION: jfinch

DESIGN FILE: i:\projects\77002\grd\grd\rail.dgn



- NOTES:**
1. ALL QUANTITIES CARRIED TO GUARDRAIL ESTIMATED QUANTITIES, SHEET 16.
 2. GRADE EMBANKMENT AS PER TYPICAL SECTION "E-98" FOR THE ENTIRE LENGTH OF THE ANCHOR ASSEMBLY, TYPE E-98 AND THE 25 FT. GRADING BEYOND THE GUARDRAIL RUN.
 3. REMOVE RIGHT SIDE GUARDRAIL, THEN GRADE EMBANKMENT TO MATCH EXISTING GROUND SLOPE.
 4. THE PROPOSED CONDUIT IS TO BE PLACED IN THE EXISTING DITCH LINE.
 5. THE CONTRACTOR IS RESPONSIBLE TO NOTE THE EXISTING TYPE A ANCHOR ASSEMBLY LOCATION AS A REFERENCE FOR THE LAYOUT OF THE PROPOSED GUARDRAIL.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
(A)	202	GUARDRAIL REMOVED	FT		175	175
(E)	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2	2	4
(X)	203	EMBANKMENT, AS PER PLAN	CU YD	25	50	75
(U)	209	RESHAPING UNDER GUARDRAIL	FT	150	225	375
	603	12" CONDUIT, TYPE D	FT	75		75
(N)	606	ANCHOR ASSEMBLY, TYPE E-98	EACH	2		2
(S)	626	BARRIER REFLECTOR, TYPE A	EACH	4		4

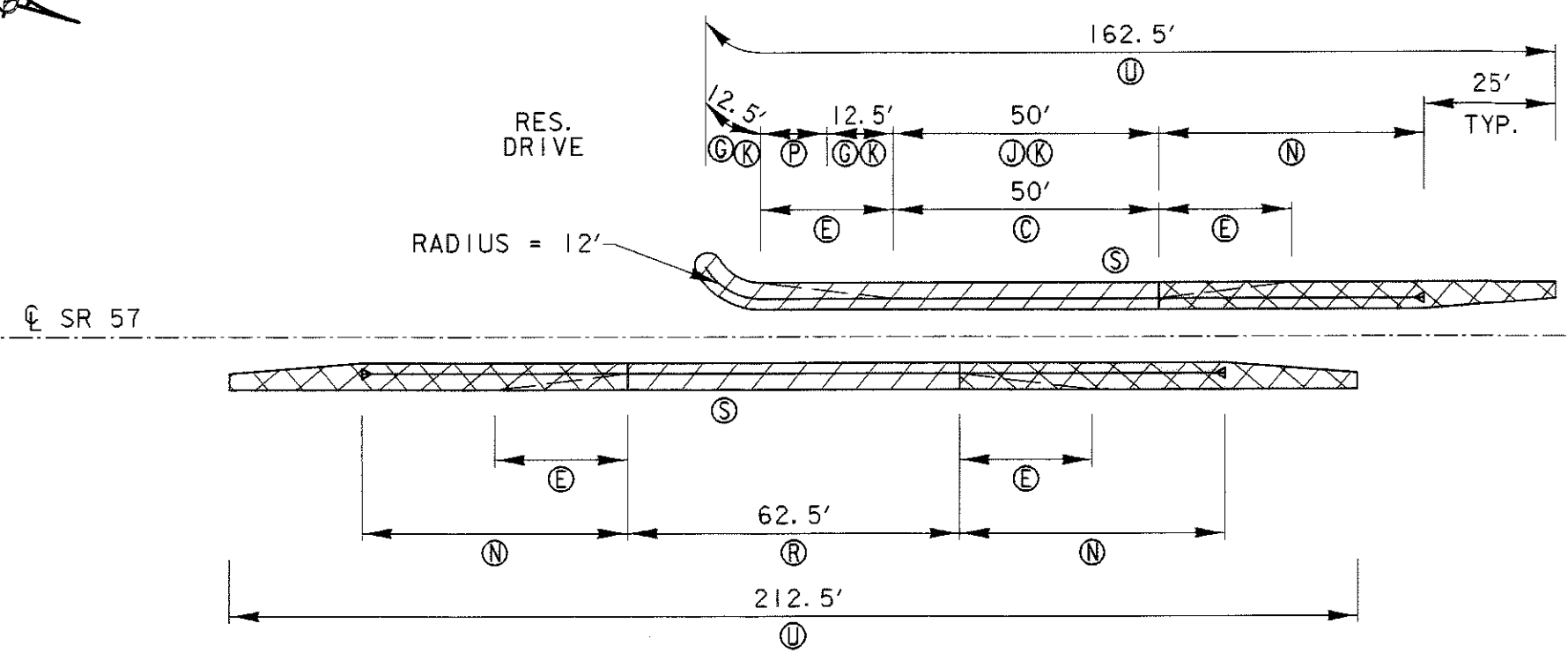


DESIGN AGENCY: DISTRICT THREE PRODUCTION DEPARTMENT
 DATE: _____ REVIEWED: _____ STRUCTURAL FILE NUMBER: _____
 DRAWN: JPF CHECKED: _____
 DESIGNED: BAD
 GUARDRAIL DETAIL
 MED-57-8.13 S.L.M.
 MED-57-3.24
 20/58

DATE: 04/06/04

WORKSTATION: jfinch

DESIGN FILE: I:\projects\77002\grd\grd\grd\grd.dgn

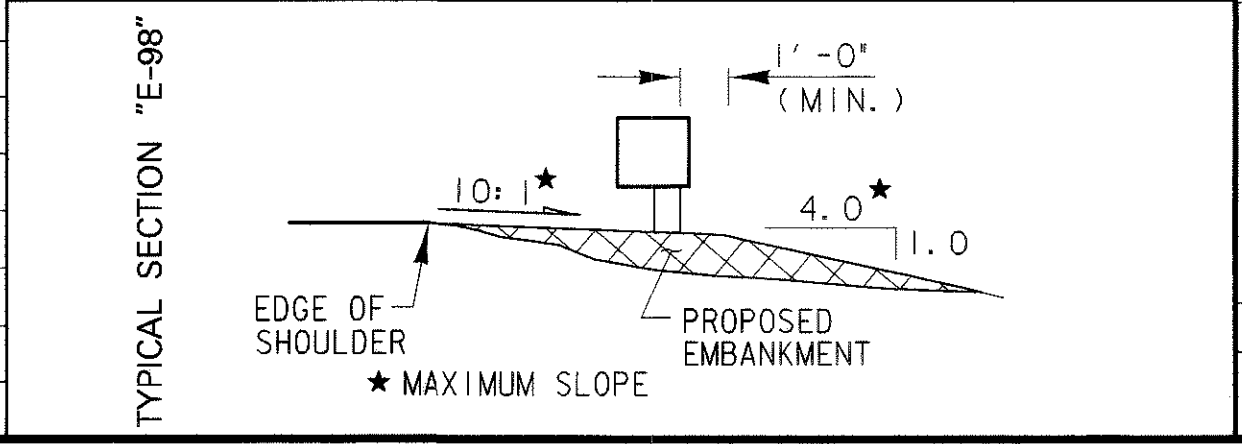
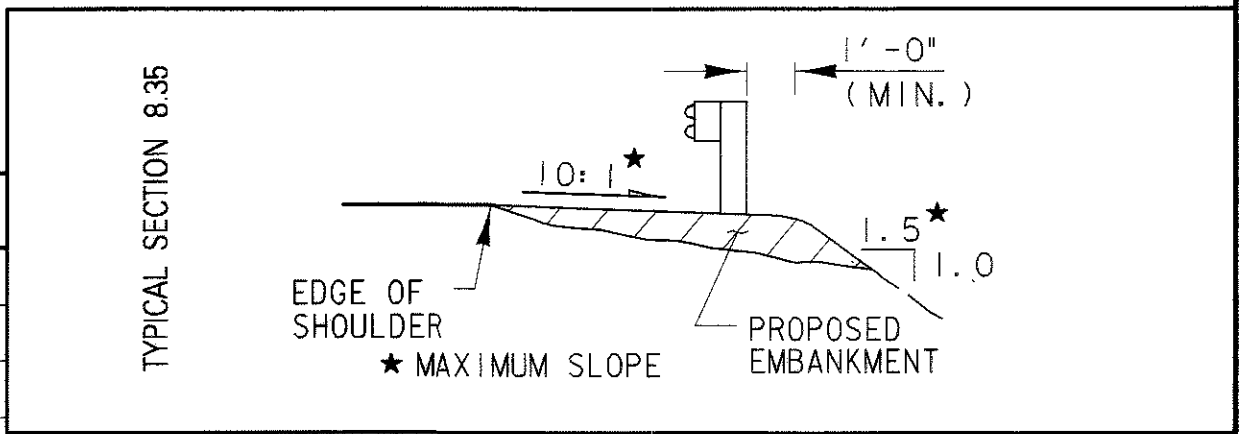


NOTES:

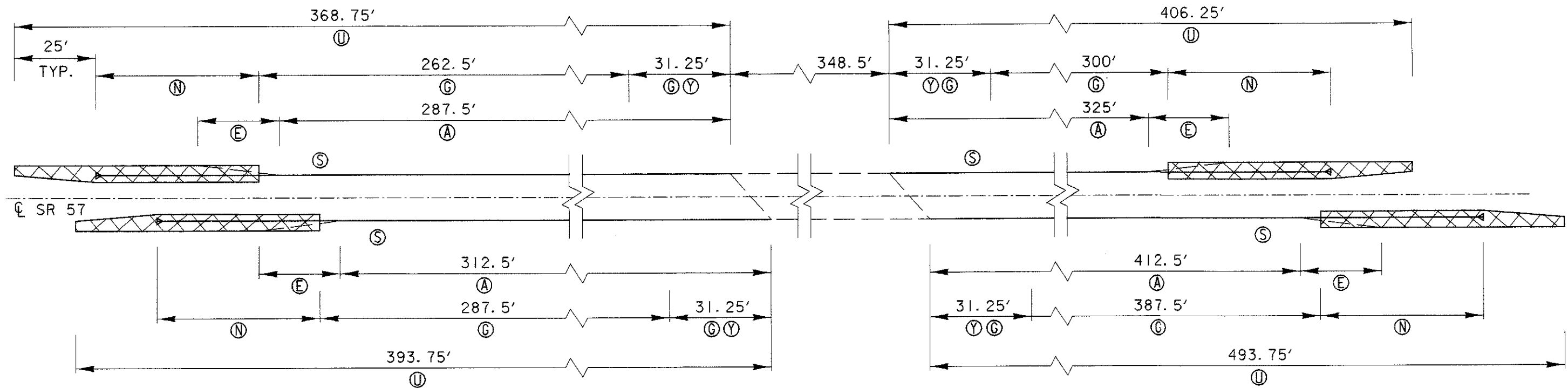
1. ALL QUANTITIES CARRIED TO GUARDRAIL ESTIMATED QUANTITIES, SHEET 16.
2. GRADE EMBANKMENT AS PER TYPICAL SECTION "E-98" FOR THE ENTIRE LENGTH OF THE ANCHOR ASSEMBLY, TYPE E-98 AND THE 25 FT. GRADING BEYOND THE GUARDRAIL RUN.
3. THE CONTRACTOR IS RESPONSIBLE TO NOTE THE EXISTING TYPE A ANCHOR ASSEMBLY LOCATION AS A REFERENCE FOR THE LAYOUT OF THE PROPOSED GUARDRAIL.

8.35 S. L. M.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
ⓐ	202	GUARDRAIL REMOVED FOR REUSE	FT	50		50
ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2	2	4
▨▨	203	EMBANKMENT, AS PER PLAN	CU YD	140	55	195
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT	162.5	212.5	375
Ⓒ	606	GUARDRAIL, TYPE 5	FT	25		25
Ⓝ	606	GUARDRAIL REBUILT, TYPE 5	FT	50		50
Ⓚ	606	GUARDRAIL POST, 9-FOOT	EACH	11		11
Ⓝ	606	ANCHOR ASSEMBLY, TYPE E-98	EACH	1	2	3
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	EACH	1		1
Ⓡ	606	GUARDRAIL, MISC.: ADJUST HEIGHT, EXISTING TYPE 5 GUARDRAIL	FT		62.5	62.5
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	3	3	6



DESIGN AGENCY: DISTRICT THREE PRODUCTION DEPARTMENT
 DATE: _____
 DRAWN/REVIEWED: JPF
 STRUCTURAL FILE NUMBER: _____
 DESIGNED: BAD
 CHECKED: _____
 GUARDRAIL DETAIL
 MED-57-8.35 S.L.M.
 MED-57-3.24
 21/58

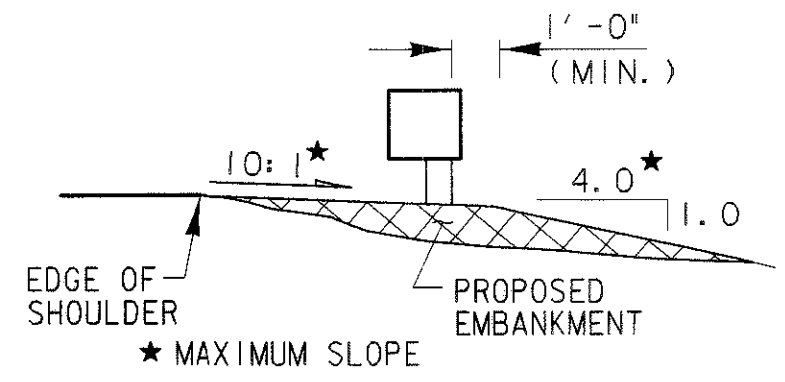


NOTES:

1. ALL QUANTITIES CARRIED TO GUARDRAIL ESTIMATED QUANTITIES, SHEET 16.
2. GRADE EMBANKMENT AS PER TYPICAL SECTION "E-98" FOR THE ENTIRE LENGTH OF THE ANCHOR ASSEMBLY, TYPE E-98 AND THE 25 FT. GRADING BEYOND THE GUARDRAIL RUN.
3. NEW GUARDRAIL SHALL ATTACH TO NEW THRIE BEAM ON THE STRUCTURE AS SHOWN ON TBR-91.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
(A)	202	GUARDRAIL REMOVED	FT	612.5	725	1337.5
(E)	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2	2	4
(X)	203	EMBANKMENT, AS PER PLAN	CU YD	40	40	80
(U)	209	RESHAPING UNDER GUARDRAIL	FT	775	887.5	1662.5
(G)	606	GUARDRAIL, TYPE 5	FT	625	737.5	1362.5
(N)	606	ANCHOR ASSEMBLY, TYPE E-98	EACH	2	2	4
(Y)	606	BRIDGE TERMINAL ASSEMBLY, TYPE 3	EACH	2	2	4
(S)	626	BARRIER REFLECTOR, TYPE A	EACH	12	13	25

TYPICAL SECTION "E-98"



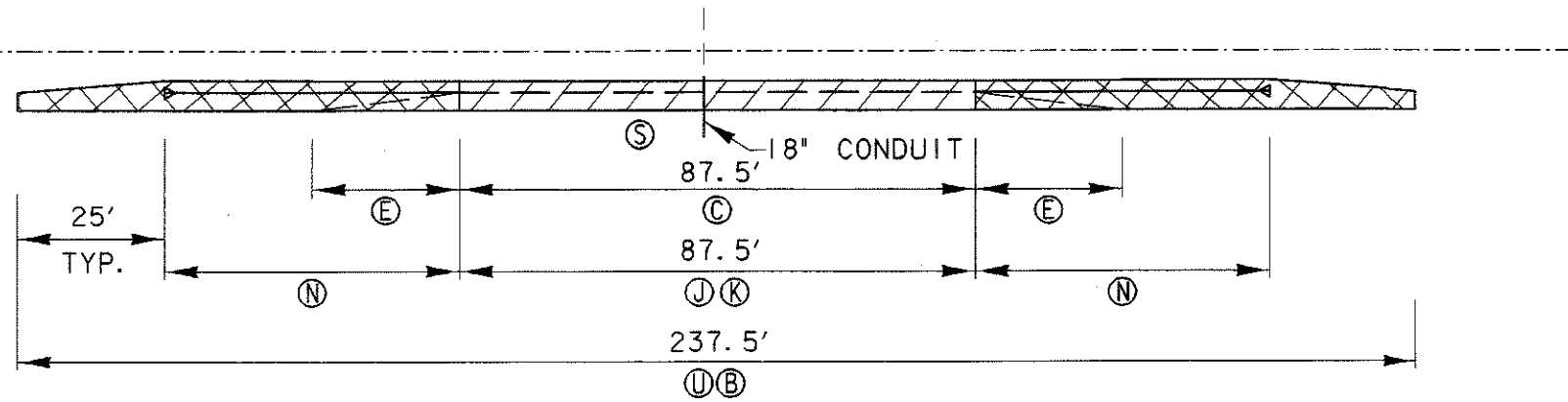
DATE: 04/06/04

WORKSTATION: jfinch

DESIGN FILE: i:\projects\77002\grd\drail.dgn



SR 57



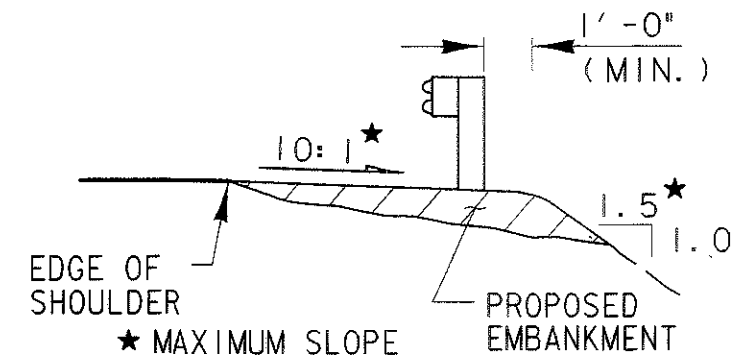
9.51 S.L.M.

NOTES:

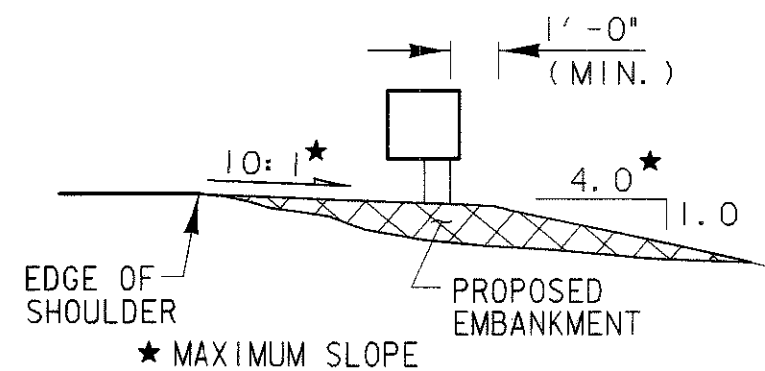
1. ALL QUANTITIES CARRIED TO GUARDRAIL ESTIMATED QUANTITIES, SHEET 16.
2. GRADE EMBANKMENT AS PER TYPICAL SECTION "E-98" FOR THE ENTIRE LENGTH OF THE ANCHOR ASSEMBLY, TYPE E-98 AND THE 25 FT. GRADING BEYOND THE GUARDRAIL RUN.
3. THE CONTRACTOR IS RESPONSIBLE TO NOTE THE EXISTING TYPE A ANCHOR ASSEMBLY LOCATION AS A REFERENCE FOR THE LAYOUT OF THE PROPOSED GUARDRAIL.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
ⓑ	201	CLEARING AND GRUBBING	LUMP		LUMP	LUMP
ⓒ	202	GUARDRAIL REMOVED FOR REUSE	FT		87.5	87.5
ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH		2	2
	203	EMBANKMENT, AS PER PLAN	CU YD		100	100
ⓓ	209	RESHAPING UNDER GUARDRAIL	FT		237.5	237.5
	603	18" CONDUIT, TYPE D	FT		10	10
ⓙ	606	GUARDRAIL REBUILT, TYPE 5	FT		87.5	87.5
Ⓚ	606	GUARDRAIL POST, 9-FOOT	EACH		13	13
Ⓝ	606	ANCHOR ASSEMBLY, TYPE E-98	EACH		2	2
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH		3	3

TYPICAL SECTION 9.51



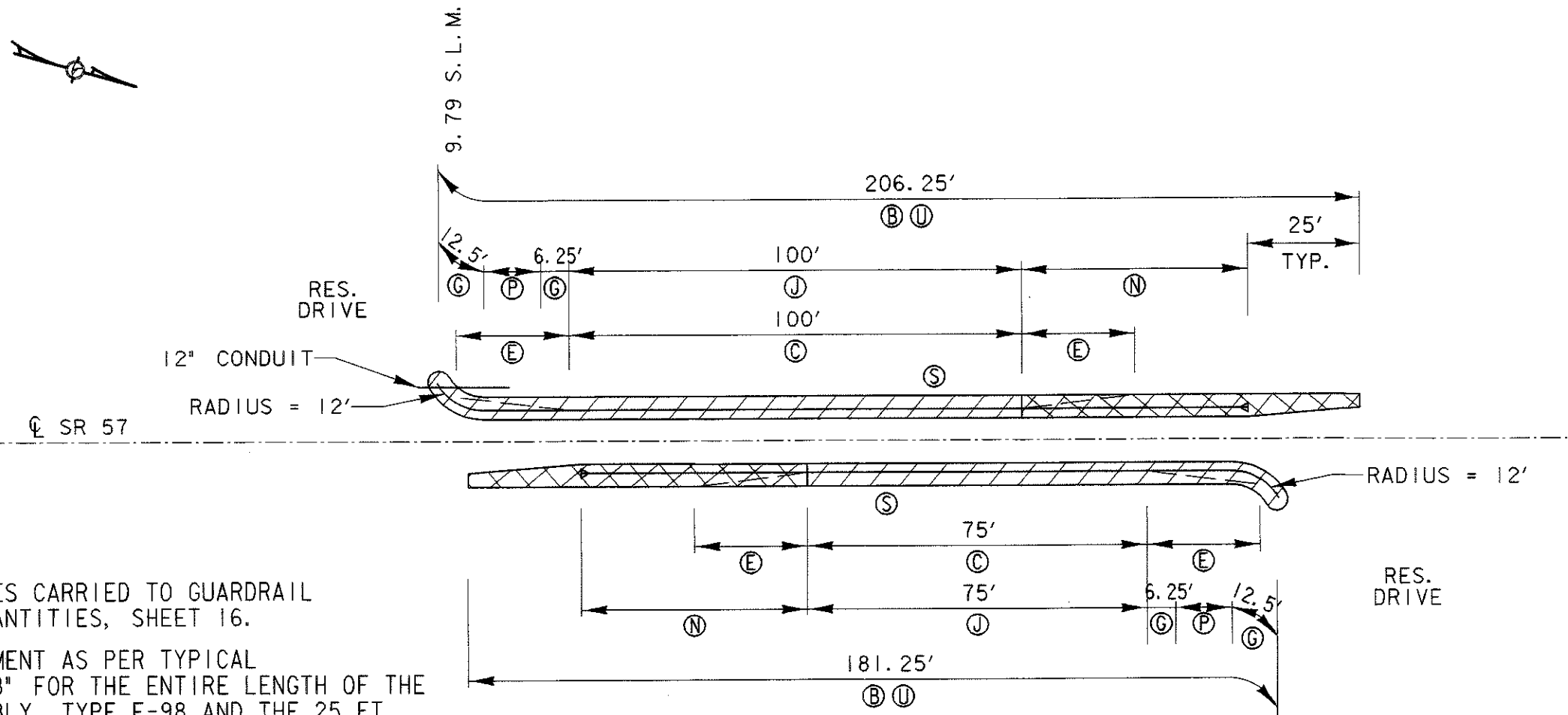
TYPICAL SECTION "E-98"



DATE: 04/06/04

WORKSTATION: jfinch

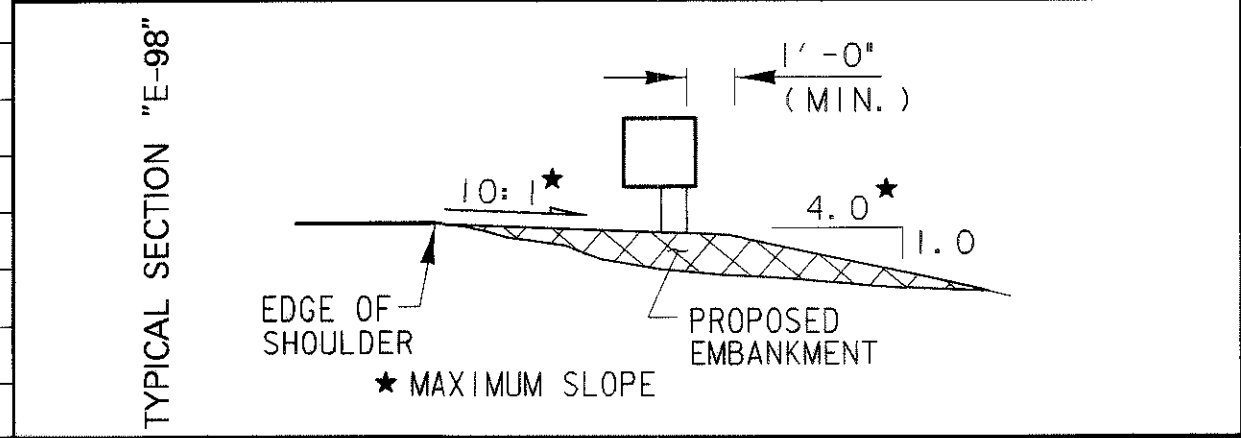
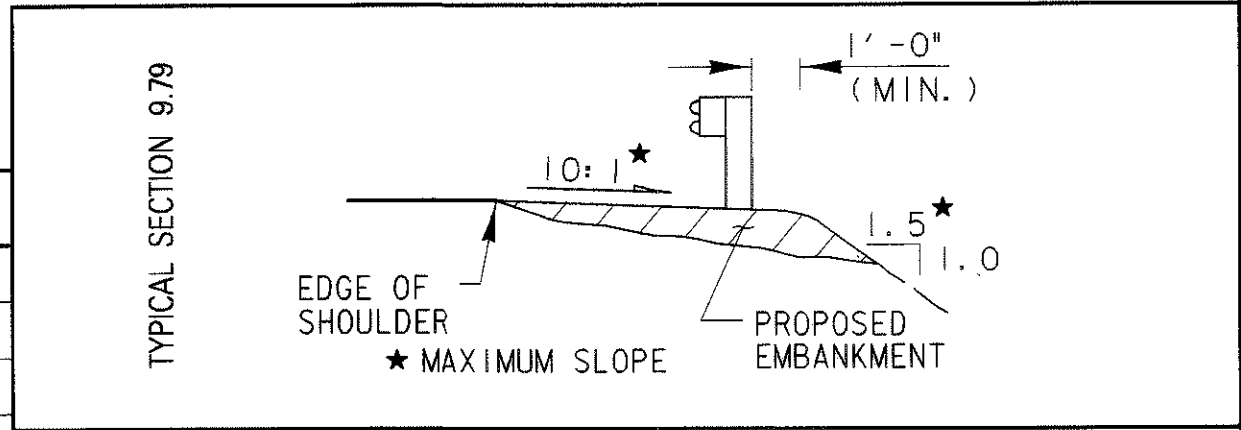
DESIGN FILE: i:\projects\77002\grdtrail.dgn



NOTES:

1. ALL QUANTITIES CARRIED TO GUARDRAIL ESTIMATED QUANTITIES, SHEET 16.
2. GRADE EMBANKMENT AS PER TYPICAL SECTION "E-98" FOR THE ENTIRE LENGTH OF THE ANCHOR ASSEMBLY, TYPE E-98 AND THE 25 FT. GRADING BEYOND THE GUARDRAIL RUN.
3. THE CONTRACTOR IS RESPONSIBLE TO NOTE THE EXISTING TYPE A ANCHOR ASSEMBLY LOCATION AS A REFERENCE FOR THE LAYOUT OF THE PROPOSED GUARDRAIL.
4. THE PROPOSED CONDUIT IS TO BE PLACED IN THE EXISTING DITCH LINE.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
(B)	201	CLEARING AND GRUBBING	LUMP			LUMP
(C)	202	GUARDRAIL REMOVED FOR REUSE	FT	100	75	175
(E)	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2	2	4
	203	EMBANKMENT, AS PER PLAN	CU YD	60	40	100
(U)	209	RESHAPING UNDER GUARDRAIL	FT	206.25	181.25	387.5
	603	12" CONDUIT, TYPE D	FT	20		20
(G)	606	GUARDRAIL, TYPE 5	FT	18.75	18.75	37.5
(J)	606	GUARDRAIL REBUILT, TYPE 5	FT	100	75	175
(N)	606	ANCHOR ASSEMBLY, TYPE E-98	EACH	1	1	2
(P)	606	ANCHOR ASSEMBLY, TYPE T	EACH	1	1	2
(S)	626	BARRIER REFLECTOR, TYPE A	EACH	3	3	6



DESIGN AGENCY
DISTRICT THREE
PRODUCTION DEPARTMENT

DATE
REVIEWED
STRUCTURAL FILE NUMBER

DRAWN
JPF
REVISOR

DESIGNED
BAD
CHECKED

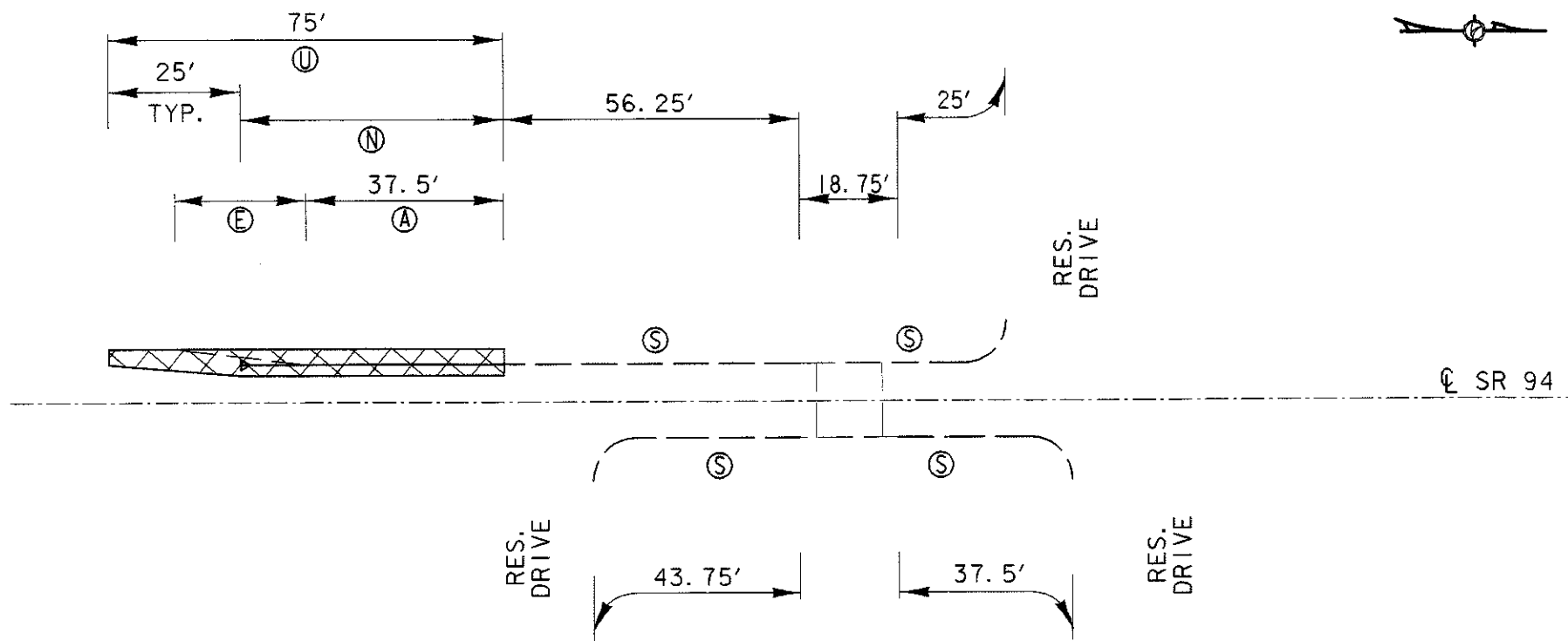
GUARDRAIL DETAIL
MED-57-9.79 S.L.M.

MED-57-3.24

DATE: 04/06/04

WORKSTATION: jfinch

DESIGN FILE: I:\projects\77002\guardrail.dgn

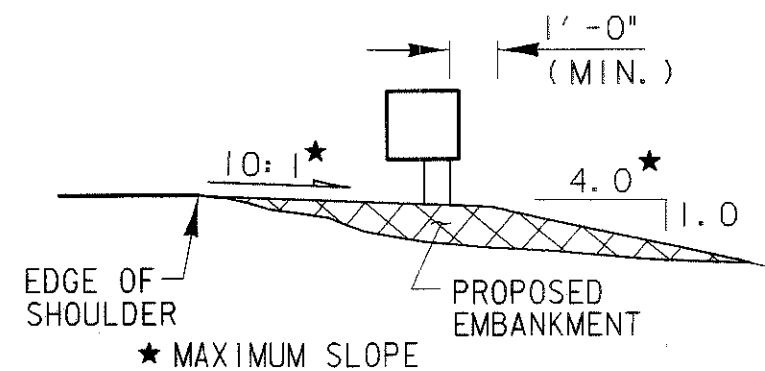


NOTES:

1. ALL QUANTITIES CARRIED TO GUARDRAIL ESTIMATED QUANTITIES, SHEET 16.
2. GRADE EMBANKMENT AS PER TYPICAL SECTION "E-98" FOR THE ENTIRE LENGTH OF THE ANCHOR ASSEMBLY, TYPE E-98 AND THE 25 FT. GRADING BEYOND THE GUARDRAIL RUN.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT	37.5		37.5
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	1		1
⊠	203	EMBANKMENT, AS PER PLAN	CU YD	20		20
⓪	209	RESHAPING UNDER GUARDRAIL	FT	75		75
Ⓝ	606	ANCHOR ASSEMBLY, TYPE E-98	EACH	1		1
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	3	2	5

TYPICAL SECTION "E-98"



DESIGN AGENCY
DISTRICT THREE
PRODUCTION DEPARTMENT

DATE
REVIEWED
STRUCTURAL FILE NUMBER

DRAWN
JPF
REVISOR

DESIGNED
BAD
CHECKED

GUARDRAIL DETAIL
MED-94-1200 S.L.M.

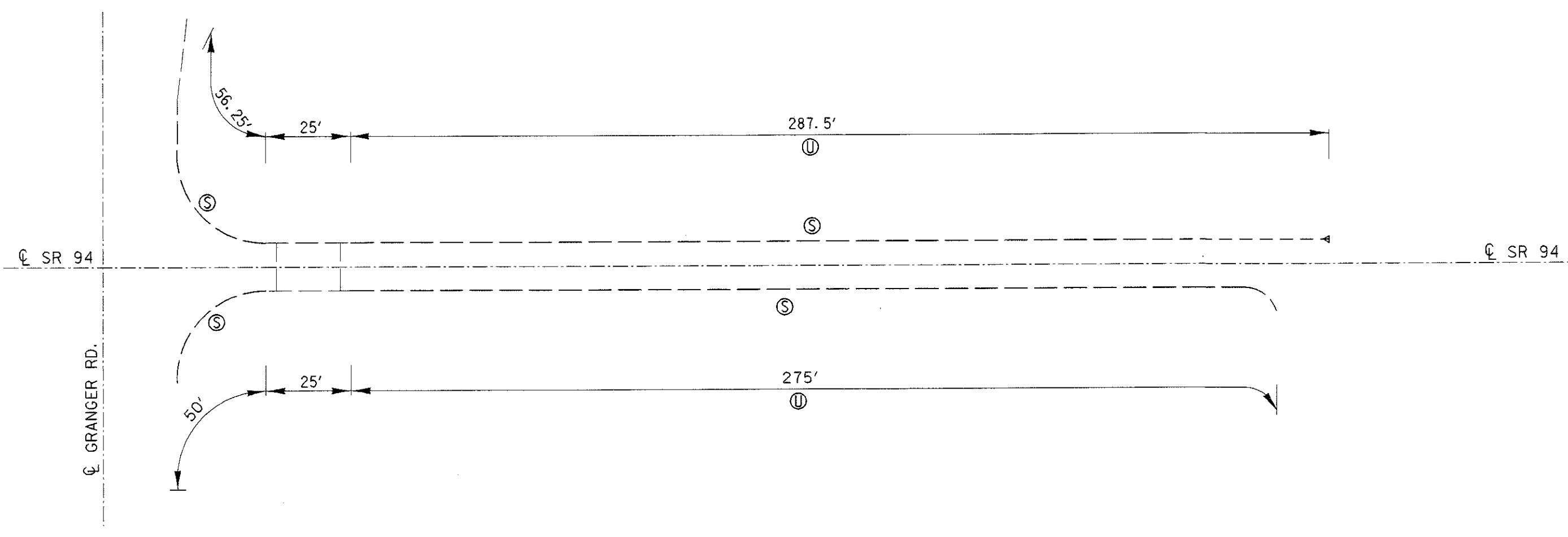
MED-57-3.24

25
58

DATE: 04/06/04

WORKSTATION: jfinch

DESIGN FILE: I:\projects\77002\grd\grd\grd\grd.dgn



NOTES:

- 1. ALL QUANTITIES CARRIED TO GUARDRAIL ESTIMATED QUANTITIES, SHEET 16.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
①	209	RESHAPING UNDER GUARDRAIL	FT	287.5	275	562.5
⑤	626	BARRIER REFLECTOR, TYPE A	EACH	5	5	10

DESIGNER AGENCY
DISTRICT THREE
PRODUCTION DEPARTMENT

DATE
REVIEWED
STRUCTURAL FILE NUMBER

DRAWN
JPF
REVISOR

DESIGNED
BAD
CHECKED

GUARDRAIL DETAIL
MED-94-1253 S.L.M.

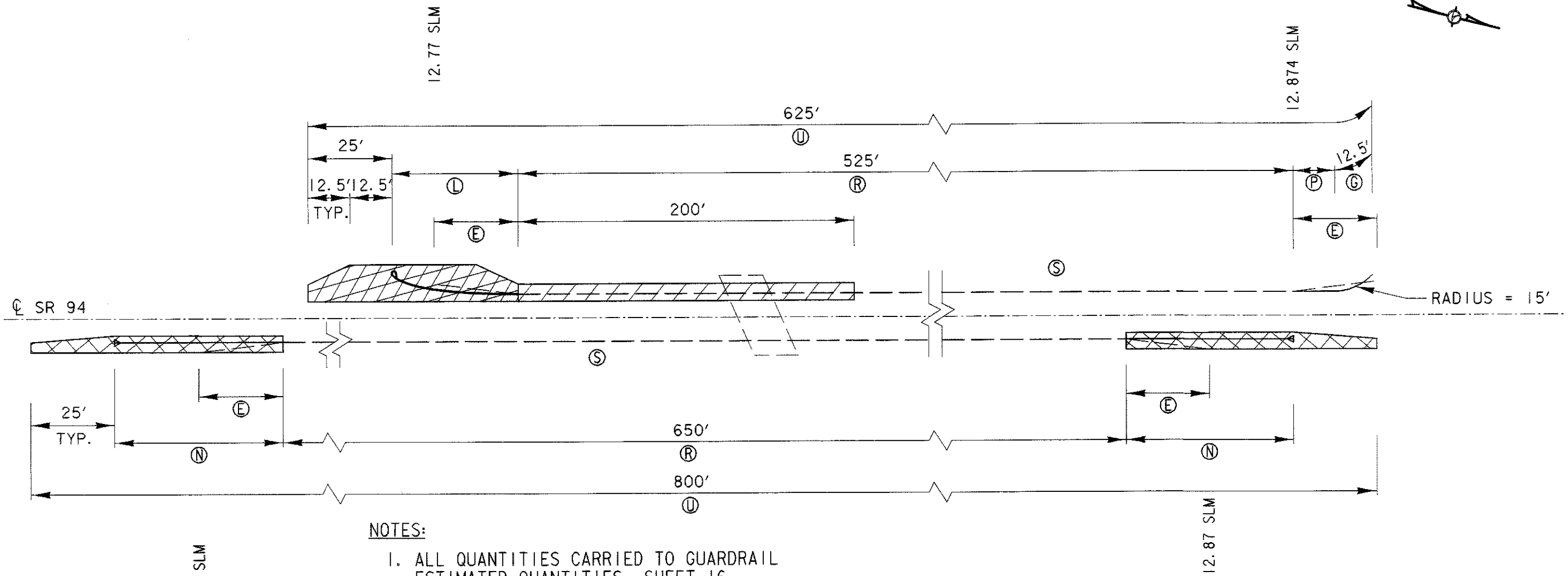
MED-57-3.24

26
58

DATE: 04/06/04

WORKSTATION: jfinch

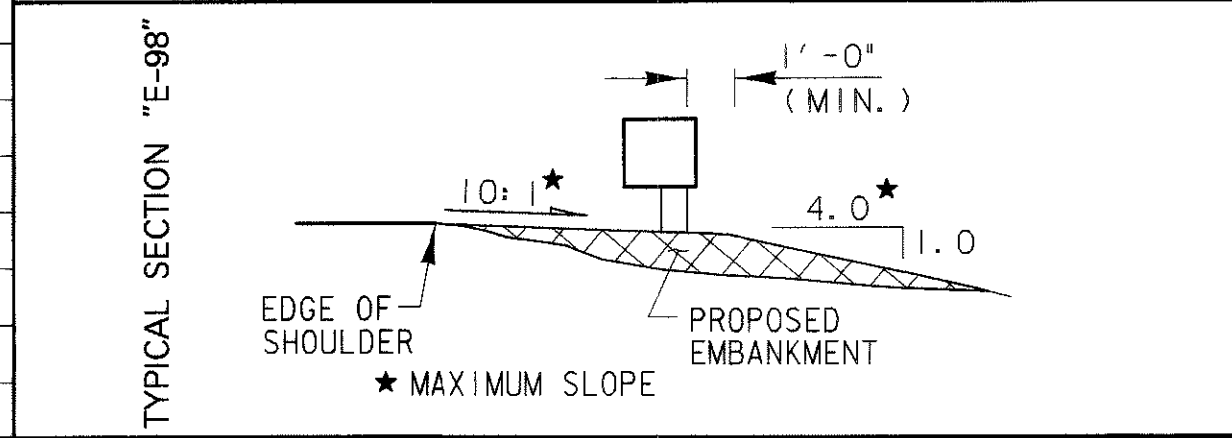
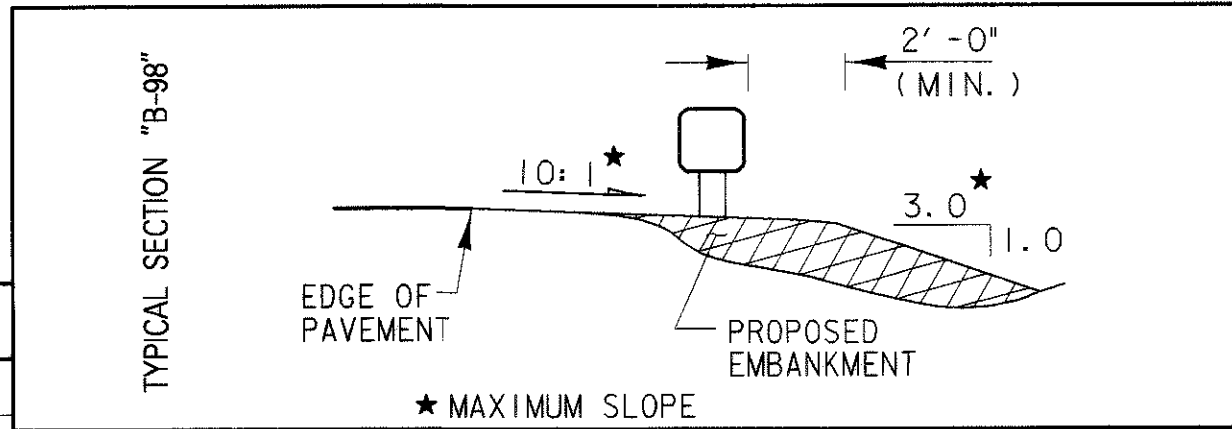
DESIGN FILE: i:\projects\77002\guardrail.dgn



NOTES:

1. ALL QUANTITIES CARRIED TO GUARDRAIL ESTIMATED QUANTITIES, SHEET 16.
2. GRADE EMBANKMENT AS PER TYPICAL SECTION "E-98" AND "B-98" FOR THE ENTIRE LENGTH OF THE ANCHOR ASSEMBLY, TYPE E-98 AND TYPE B-98 AND THE 25 FT. GRADING BEYOND THE GUARDRAIL RUN.
3. GRADE THE 200' AREA ON THE LEFT SIDE AS SHOWN ON OTHER GUARDRAIL SHEETS PER THE TYPICAL SECTIONS FOR NORMAL GUARDRAIL.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2	2	4
▨	203	EMBANKMENT, AS PER PLAN	CU YD	110	40	150
⓪	209	RESHAPING UNDER GUARDRAIL	FT	625	800	1425
Ⓒ	606	GUARDRAIL, TYPE 5	FT	12.5		12.5
Ⓕ	606	ANCHOR ASSEMBLY, TYPE B-98	EACH	1		1
Ⓝ	606	ANCHOR ASSEMBLY, TYPE E-98	EACH		2	2
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	EACH	1		1
Ⓡ	606	GUARDRAIL, MISC.: ADJUST HEIGHT, EXISTING TYPE 5 GUARDRAIL	FT	525	650	1175
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	7	8	15



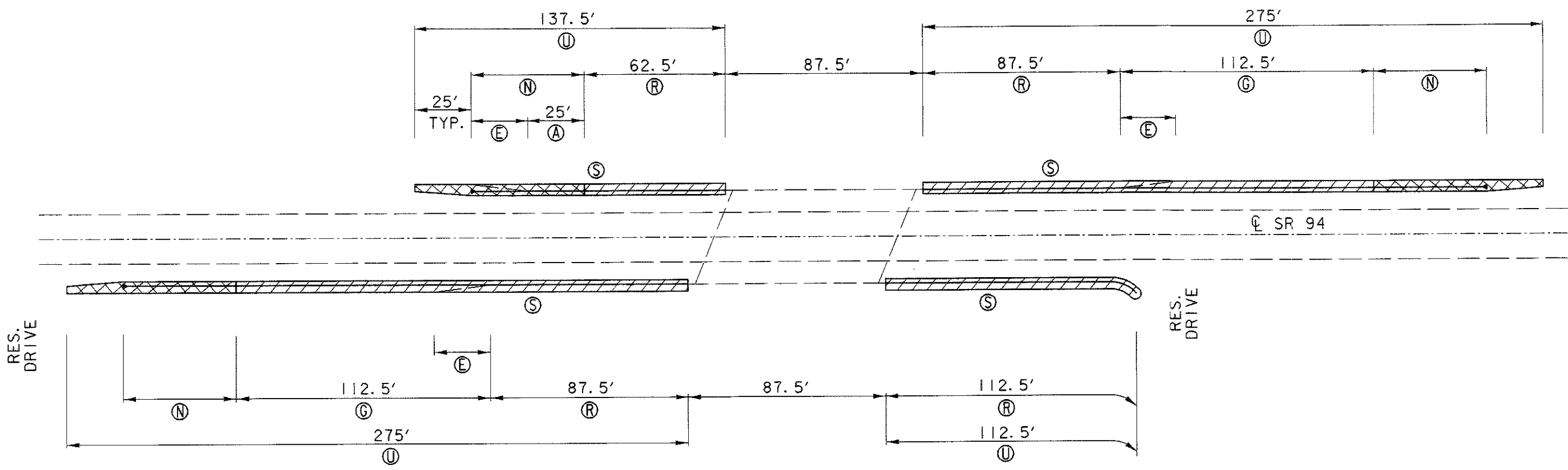
DESIGN AGENCY
DISTRICT THREE
PRODUCTION DEPARTMENT

DATE
REVIEWED
DRAWN
DESIGNED

GUARDRAIL DETAIL
MED-94-1284 S.L.M.

MED-57-3.24

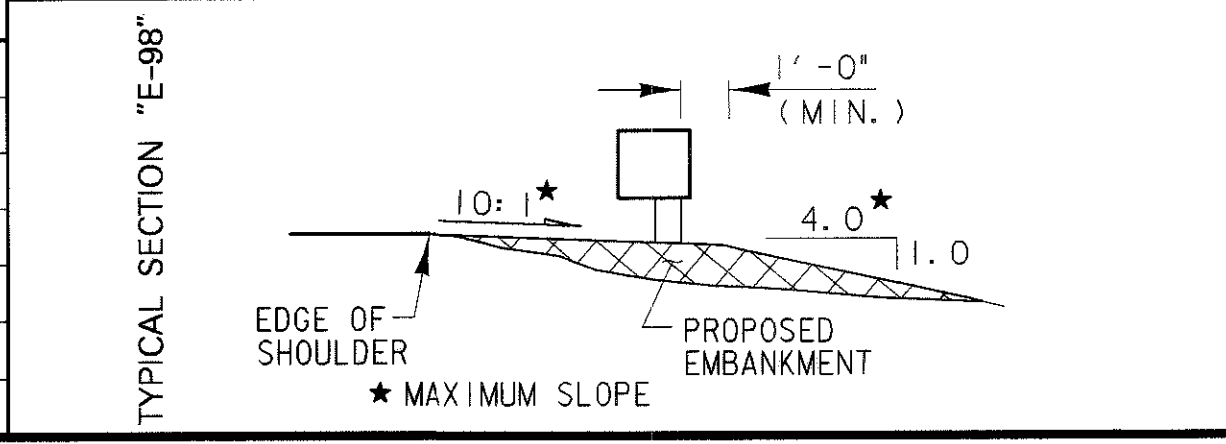
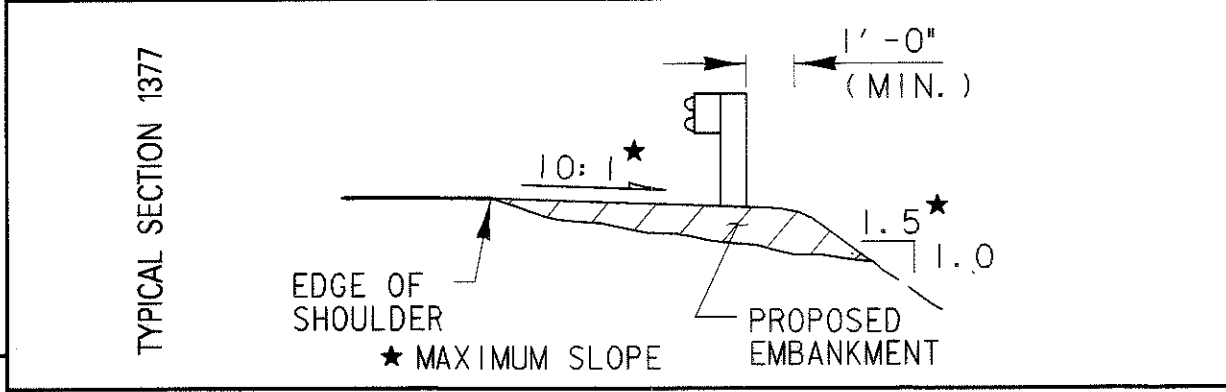
27
58



NOTES:

1. ALL QUANTITIES CARRIED TO GUARDRAIL ESTIMATED QUANTITIES, SHEET 16.
2. GRADE EMBANKMENT AS PER TYPICAL SECTION "E-98" FOR THE ENTIRE LENGTH OF THE ANCHOR ASSEMBLY, TYPE E-98 AND THE 25 FT. GRADING BEYOND THE GUARDRAIL RUN.

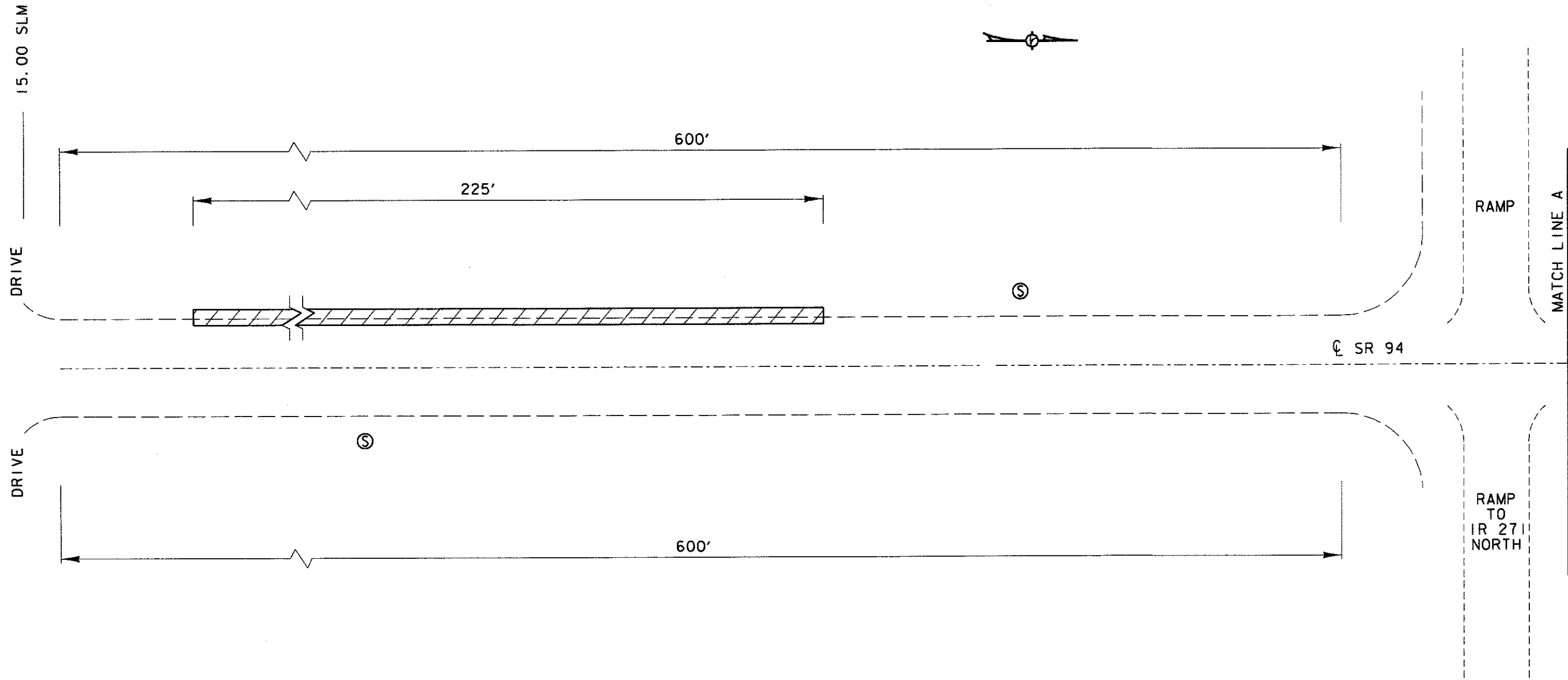
LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2	1	3
▨	203	EMBANKMENT, AS PER PLAN	CU YD	80	70	150
⓪	209	RESHAPING UNDER GUARDRAIL	FT	412.5	387.5	800
Ⓒ	606	GUARDRAIL, TYPE 5	FT	112.5	112.5	225
Ⓝ	606	ANCHOR ASSEMBLY, TYPE E-98	EACH	2	1	3
Ⓡ	606	GUARDRAIL, MISC.: ADJUST HEIGHT, EXISTING TYPE 5 GUARDRAIL	FT	150	200	350
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	7	6	13



DATE: 04/13/04

WORKSTATION: cvanhorn

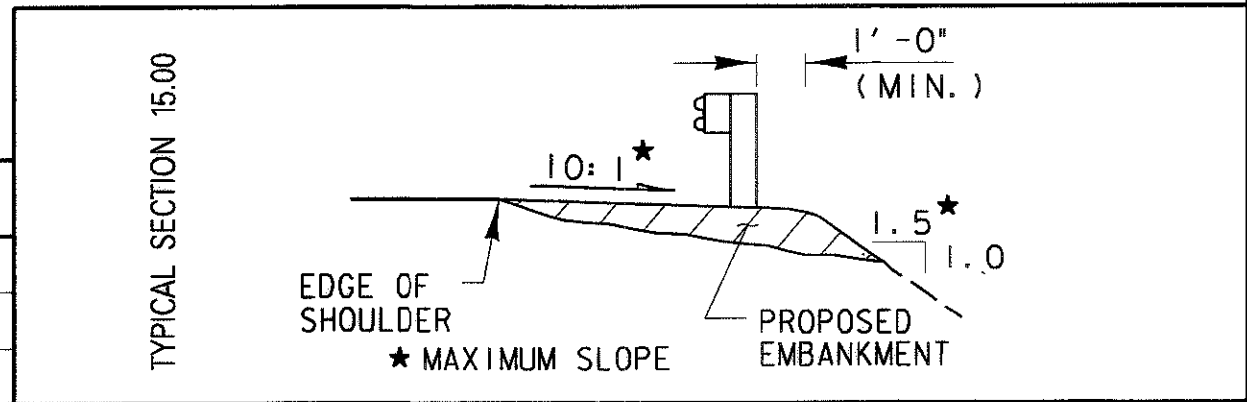
DESIGN FILE: I:\projects\77002\grd\rail.dgn



NOTES:

1. ALL QUANTITIES CARRIED TO GUARDRAIL ESTIMATED QUANTITIES, SHEET 16.
2. EMBANKMENT, AS PER PLAN IS TO BE USED TO FILL IN WASHOUT AREA'S AND LOW SPOTS.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
	203	EMBANKMENT, AS PER PLAN	CU YD	60		60
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	7	7	14

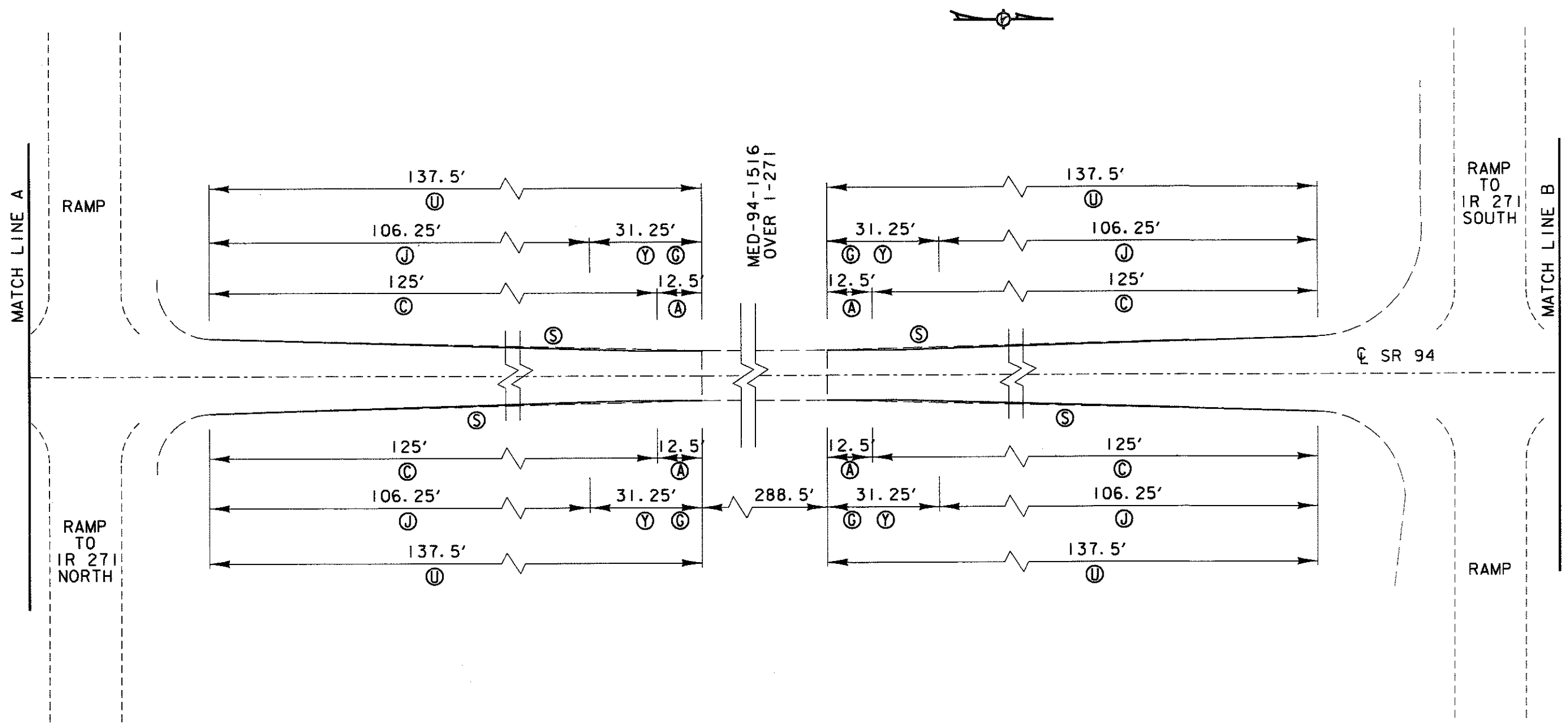


DESIGNED BAD	CHECKED	DRAWN JPF	REVISED	REVIEWED	DATE	DESIGN AGENCY DISTRICT THREE PRODUCTION DEPARTMENT
GUARDRAIL DETAIL MED-94-15.00 S.L.M.						
MED-57-3.24						
29 58						

DATE: 04/13/04

WORKSTATION: cvanhorn

DESIGN FILE: i:\projects\77002\grd\rail.dgn



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT	25	25	50
Ⓒ	202	GUARDRAIL REMOVED FOR REUSE	FT	250	250	500
Ⓓ	209	RESHAPING UNDER GUARDRAIL	FT	275	275	550
Ⓔ	606	GUARDRAIL, TYPE 5	FT	25	25	50
Ⓙ	606	GUARDRAIL REBUILT, TYPE 5	FT	212.5	212.5	425
Ⓨ	606	BRIDGE TERMINAL ASSEMBLY, TYPE 3	EACH	2	2	4
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	7	7	14

NOTES:

1. ALL QUANTITIES CARRIED TO GUARDRAIL ESTIMATED QUANTITIES, SHEET 16.
2. THE CONTRACTOR SHALL START TO TAPER THE TYPE 3 BRIDGE TERMINAL ASSEMBLY ON THE LAST 2 POSTS IN ORDER TO MEET THE EXISTING GUARDRAIL RADIUS AT THE RAMPS.
3. NEW GUARDRAIL SHALL ATTACH TO THE NEW THRIE BEAM ON THE STRUCTURE AS SHOWN ON TBR-91.

DESIGN AGENCY
DISTRICT THREE
PRODUCTION DEPARTMENT

DATE
REVIEWED
STRUCTURAL FILE NUMBER
DRAWN
JPF
REVISED

DESIGNED
BAD
CHECKED

GUARDRAIL DETAIL
MED-94-1516 S.L.M.

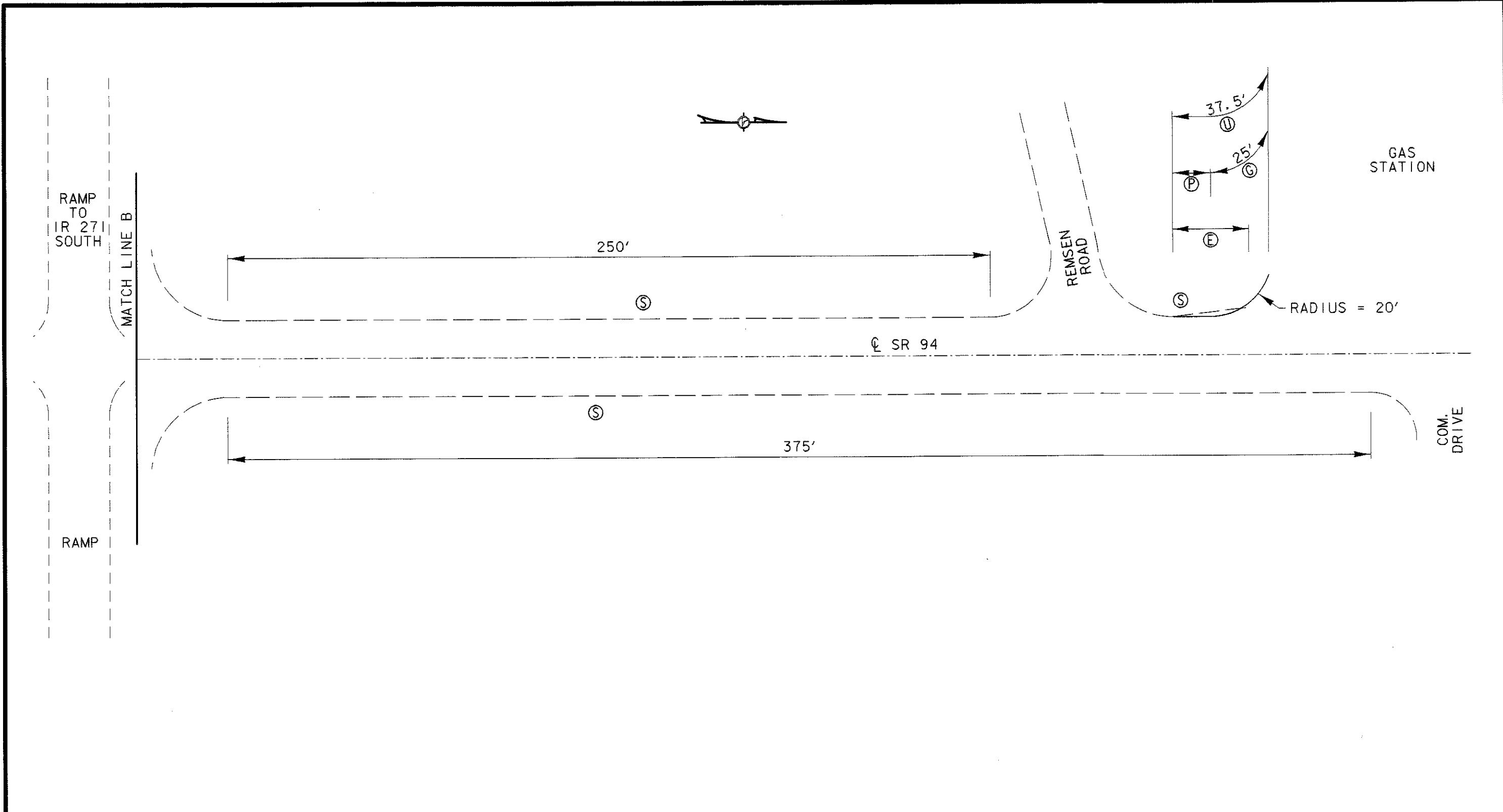
MED-57-3.24

30
58

DATE: 04/06/04

WORKSTATION: jfinch

DESIGN FILE: i:\projects\77002\grd\drail.dgn



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
E	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	1		1
U	209	RESHAPING UNDER GUARDRAIL	FT	37.5		37.5
G	606	GUARDRAIL, TYPE 5	FT	25		25
P	606	ANCHOR ASSEMBLY, TYPE T	EACH	1		1
S	626	BARRIER REFLECTOR, TYPE A	EACH	5	5	10

NOTES:
 1. ALL QUANTITIES CARRIED TO GUARDRAIL ESTIMATED QUANTITIES, SHEET 16.

GUARDRAIL DETAIL
 MED-94-15.19 S.L.M.

MED-57-3.24

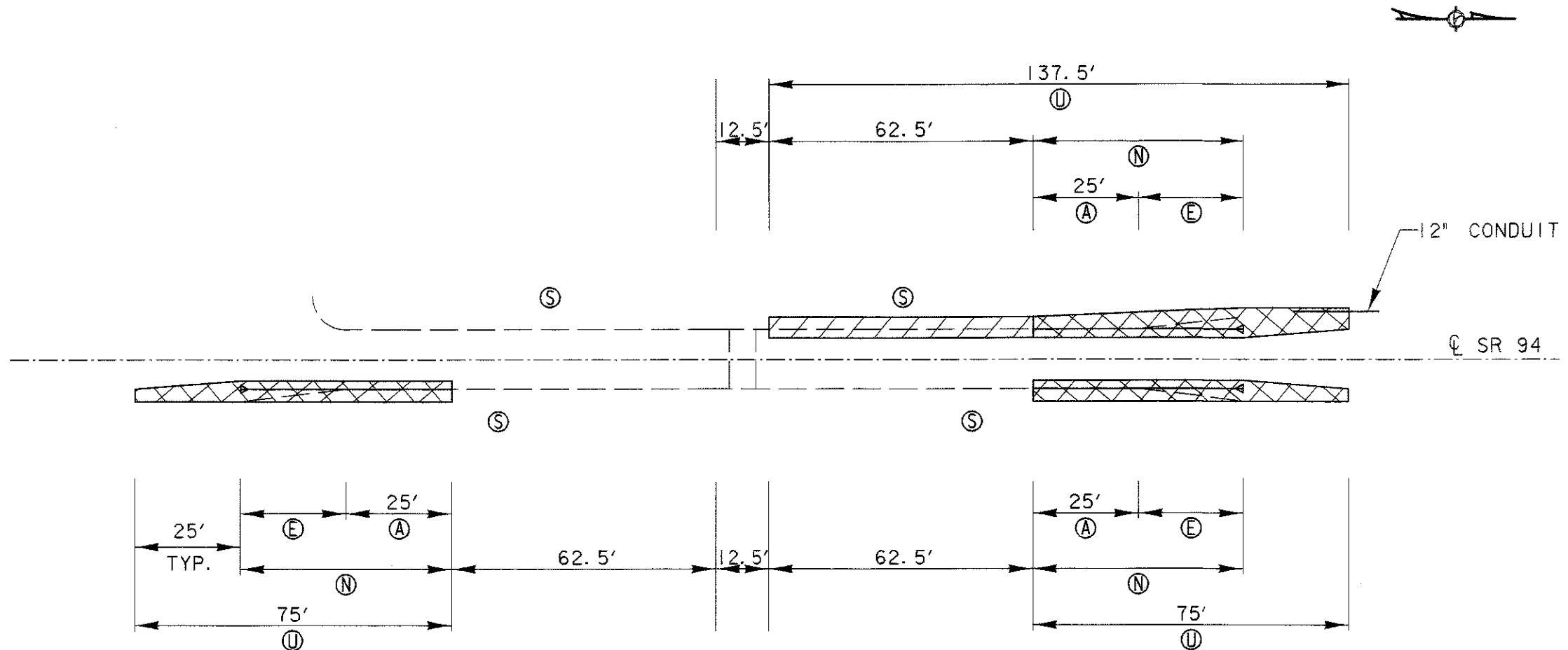
DESIGNED BAD <small>CHECKED</small>	DRAWN JPF <small>REVISED</small>	REVIEWED <small>STRUCTURAL FILE NUMBER</small>	DATE
DESIGN AGENCY DISTRICT THREE PRODUCTION DEPARTMENT			

31
58

DATE: 04/06/04

WORKSTATION: jfinch

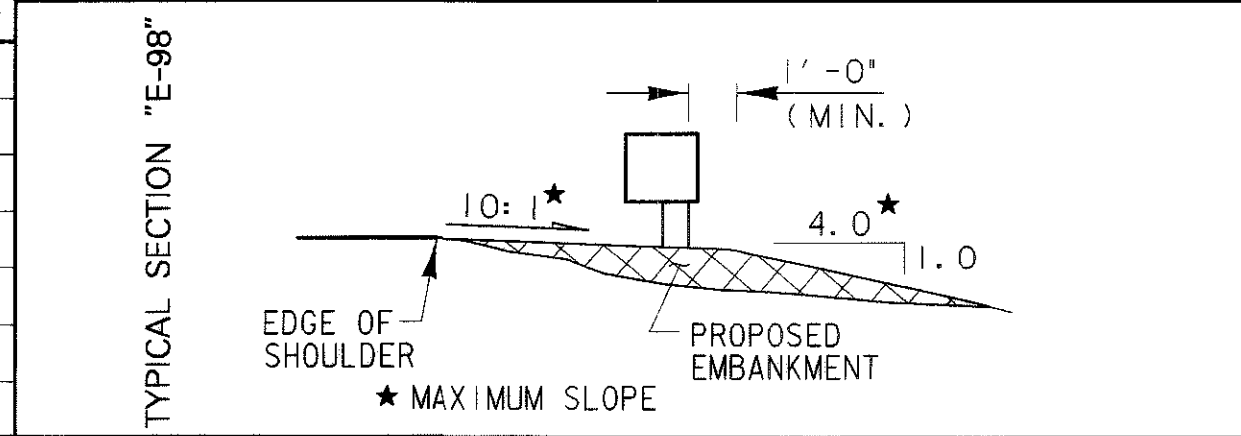
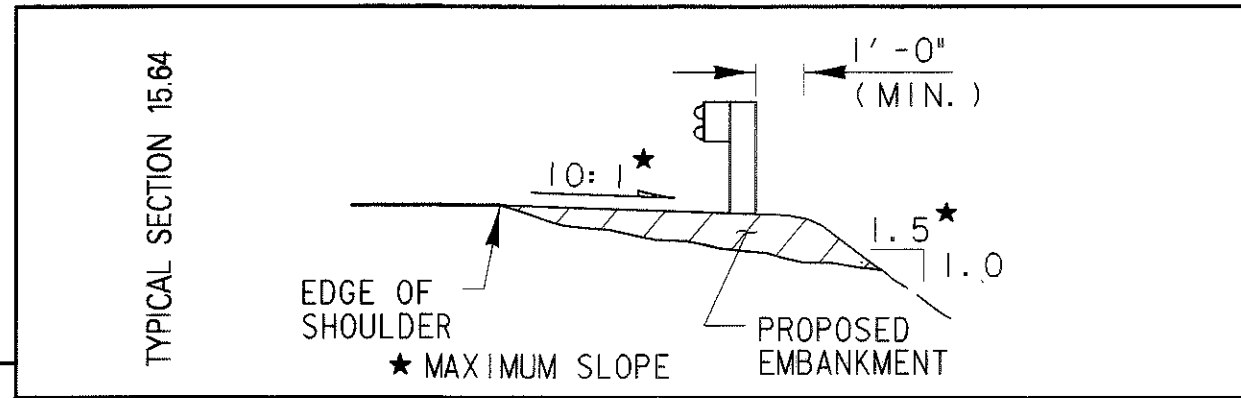
DESIGN FILE: I:\projects\77002\grd\grd\grd\grd.dgn



NOTES:

1. ALL QUANTITIES CARRIED TO GUARDRAIL ESTIMATED QUANTITIES, SHEET 16.
2. THE PROPOSED CONDUIT IS TO BE PLACED IN THE EXISTING DITCH LINE.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
(A)	202	GUARDRAIL REMOVED	FT	25	50	75
(E)	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	1	2	3
	203	EMBANKMENT, AS PER PLAN	CU YD	40	30	70
(U)	209	RESHAPING UNDER GUARDRAIL	FT	137.5	150	287.5
	603	12" CONDUIT, TYPE D	FT	20		20
(N)	606	ANCHOR ASSEMBLY, TYPE E-98	EACH	1	2	3
(S)	626	BARRIER REFLECTOR, TYPE A	EACH	3	6	9



DESIGN AGENCY
DISTRICT THREE
PRODUCTION DEPARTMENT

DATE
REVIEWED
STRUCTURAL FILE NUMBER

DRAWN
JPF
REVISOR

DESIGNED
BAD
CHECKED

GUARDRAIL DETAIL
MED-94-15.64 S.L.M.

MED-57-3.24

32
58

AUXILIARY & LONG LINE MARKINGS

PART	ROUTE	FROM		TO		202		642, TYPE 2				644												SPECIAL	614				
		SLM	DESCRIPTION	SLM	DESCRIPTION	RPM REMOVED	LANE WIDTH	EDGE LINE		CENTER LINE		AUXILIARY MARKINGS (740.04)												AIR SPEED ZONE MARKING	WORK ZONE CENTER LINE, CLASS II, 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT			
								HIGHWAY MILES	TOTAL (PAY QUANTITY)	SOLID LINE EQUIVALENT	TOTAL (PAY QUANTITY)	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	TRANSVERSE LINE	RAILROAD SYMBOL MARKING	SCHOOL SYMBOL MARKING		PARKING LOT STALL MARKING	LANE ARROW							WORD ON PAVEMENT "ONLY"		HANDICAP SYMBOL MARKING
		8 IN	24 IN	12 IN	24 IN	EACH	EACH	FT	FT	FT	FT	EACH	EACH	FT	LEFT	RIGHT	THRU	COMBINATION		72 IN	96 IN	EACH	EACH	EACH	MI	FT			
A	SR 57	3.24	IR 76, US 224	9.90	SUSPEND WORK	493	11	6.66	13.32		11.19	6.66		281													19.98		
A	SR 57	10.21	RESUME WORK	10.89	MEDINA CORP. LIMIT	73	11	0.68	1.36		1.20	0.85	365	42			551						2	2	1	1	5	2.55	1095
B	SR 94	11.325	NORTH OF SR 18	12.88	SUSPEND WORK	211	11	1.555	3.11		2.23	1.56		28													4.68		
B	SR 94	13.386	RESUME WORK	15.61	END PART B	147	11	2.224	4.45		3.06	2.26		95		118											6.78		
TOTAL						924			22.24		11.33		365	446			669		1	2	2	1	1	5		33.99	1095		

RAISED PAVEMENT MARKERS

PART	COUNTY	ROUTE	LOCATION		DETAIL	621				REMARKS	DETAIL DESCRIPTION			
			SLM SECTION			RPM	PRISMATIC RETRO-REFLECTOR TYPES							
			FROM	TO			ONE - WAY	TWO - WAY						
						EACH	WHITE	YELLOW/YELLOW	WHITE/RED	YELLOW/RED				
A	MEDINA	SR 57	3.24	4.56	GAP	87		87				CONTINUOUS ROUTE TREATMENT	1	MULTILANE UNDIVIDED TYPICAL SPACING
A	MEDINA	SR 57	4.56	5.17	15	28		28				CURVE	2	TAPERED ACCEL LANE
A	MEDINA	SR 57	5.17	5.84	GAP	44		44				CONTINUOUS ROUTE TREATMENT	3	DECELERATION LANE
A	MEDINA	SR 57	5.84	6.16	6	54	32	22				STOP APPROACHES @ RIVER STYX ROAD	4	PARALLEL ACCEL LANE
A	MEDINA	SR 57	6.16	6.54	15	58		58				CURVE	5	MULTILANE DIVIDED/ EXPRESSWAY
A	MEDINA	SR 57	6.54	9.90	GAP	222		222				CONTINUOUS ROUTE TREATMENT	6	STOP APPROACH
A	MEDINA	SR 57	10.21	10.89	GAP	73		73				CONTINUOUS ROUTE TREATMENT	7	1 LANE APPR. W/ TURN LANE
SUB-TOTAL						566	32	534					8	THROUGH APPROACH
B	MEDINA	SR 94	11.325	12.67	GAP	90		90				CONTINUOUS ROUTE TREATMENT	9	2 LANE APPR. W/ TURN LANE
B	MEDINA	SR 94	12.67	12.88	16	121		121				SERIES OF CURVES @ 20 FT. SPACING	10	4 LANE DIVIDED TO 2 LANE TRANSITION
B	MEDINA	SR 94	13.386	15.61	GAP	147		147				CONTINUOUS ROUTE TREATMENT	11	4 LANE UNDIVIDED TO 2 LANE TRANSITION
SUB-TOTAL						358		358					12	TWO LANE NARROW BRIDGE
TOTAL						924	32	892					13	TWO WAY LEFT TURN LANE
TOTAL						924	32	892					14	ONE LANE BRIDGE
TOTAL						924	32	892					15	HORIZONTAL CURVE
TOTAL						924	32	892					16	HORIZONTAL CURVE ALT.
TOTAL						924	32	892					17	STOP APPROACH ALT.
TOTAL						924	32	892					GAP	CENTER LINE AT 80 FT TYP

DESIGN FILE: \$\$\$\$\$\$.DCNFILESPECIFICATIONS\$\$\$\$\$\$
 WORKSTATION: \$TERMINAL\$ DATE: \$\$\$\$\$DATE\$\$\$\$\$\$

CALCULATED JPF
 CHECKED MJS
 PAVEMENT MARKING DATA
 MED-57-3.24
 33/58

BRIDGE NUMBER MED-57-0324B SFN 5201950

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION
841	10000	1012	SQ YD	TREATING OF CONCRETE SURFACES WITH SRS

BRIDGE NUMBER MED-57-0271 SFN 5201918

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION
864	10100	41	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

BRIDGE NUMBER MED-57-0322 SFN 5201934

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION
SPECIAL	51631300	84	FT	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

BRIDGE NUMBER MED-57-0400 SFN 5201977

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION
601	34100	24	CU YD	ROCK CHANNEL PROTECTION, TYPE B WITHOUT FILTER
864	10100	20	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

DESIGN FILE: I:\projects\77002\Struct\strsum.dgn
 WORKSTATION: dmoflens DATE: 04/06/04

DESIGN AGENCY
DISTRICT THREE

DATE
 4-04
 REVIEWED
 RDN
 STRUCTURAL FILE NUMBER

DESIGNED
 DCM
 CHECKED
 CAL
 DIMM
 DCM
 REVISED

STRUCTURE SUMMARY

MED-57-3.24

BRIDGE NUMBER MED-57-0652 SFN 5202043

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION
202	11300	1	CU YD	PORTIONS OF STRUCTURE REMOVED (BACKWALL)
202	11300	1	CU YD	PORTIONS OF STRUCTURE REMOVED (BEAM SEAT)
202	11300	19	CU YD	PORTIONS OF STRUCTURE REMOVED (CURB)
509	10000	20	POUND	EPOXY COATED REINFORCING STEEL
511	34401	19	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN (CURB)
511	45701	1	CU YD	CLASS C CONCRETE, ABUTMENT, AS PER PLAN (BEAM SEAT)
511	71100	1	CU YD	CONCRETE, MISC.: BACKWALL REPAIR
SPECIAL	51273500	2	SQ YD	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN
516	45305	1	EACH	REFURBISH BEARING DEVICE, AS PER PLAN
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN
517	72750	766.17	FT	RAILING (THRIE BEAM RETROFIT)
SPECIAL	51912510	7	SQ YD	PATCHING CONCRETE BRIDGE DECK
614	12800	828	EACH	WORK ZONE RAISED PAVEMENT MARKER
614	13202	12	EACH	BARRIER REFLECTOR, TYPE A2
614	13302	18	EACH	BARRIER REFLECTOR, TYPE B2
614	21000	.06	MILE	WORK ZONE CENTER LINE, CLASS I
614	22000	.04	MILE	WORK ZONE EDGE LINE, CLASS I
614	26000	24	FT	WORK ZONE STOP LINE, CLASS I
615	10000	LUMP		ROADS FOR MAINTAINING TRAFFIC
615	25001	94	SQ YD	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN

DESIGN FILE: I:\projects\77002\struct\strsum.dgn
 WORKSTATION: dmallens DATE: 04/06/04

DESIGN AGENCY
 DISTRICT THREE

REVIEWED
 RDN 4-04
 STRUCTURAL FILE NUMBER

DESIGNED
 DCM
 CHECKED
 CAL

STRUCTURE SUMMARY

MED-57-3.24

35
 58

BRIDGE NUMBER MED-94-1377 SFN 5205719

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION
841	10000	356	SQ YD	TREATING OF CONCRETE SURFACES WITH SRS
864	10100	55	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

BRIDGE NUMBER MED-94-1516 SFN 5205735

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION
202	11301	.5	CU YD	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (PARAPET)
SPECIAL	51631300	62	FT	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
517	72750	619.72	FT	RAILING (THRIE BEAM RETROFIT)
843	50000	16	SQ FT	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR
864	10100	291	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

DESIGN FILE: I:\Projects\77002\Struct\strsum.dgn
 WORKSTATION: dmoliens DATE: 04/06/04

DESIGNED DCM	DRAWN DCM	REVIEWED RDN	DATE 4-04	DISTRICT THREE		
CHECKED CAL	REVISED	STRUCTURAL FILE NUMBER				
STRUCTURE SUMMARY						
MED-57-3.24						
<table border="1" style="margin: auto;"> <tr> <td style="text-align: center;">36</td> </tr> <tr> <td style="text-align: center;">58</td> </tr> </table>				36	58	
36						
58						

STRUCTURE GENERAL NOTES

REFERENCES SHALL BE MADE TO STANDARD DRAWINGS:

BP-3.1	DATED	7/28/00
TBR-91	DATED	7/19/02
MT-35.10	DATED	4/20/01
MT-95.30	DATED	4/19/02
MT-96.10	DATED	4/19/02
MT-96.20	DATED	4/19/02
MT-96.25	DATED	4/20/01
MT-97.10	DATED	4/19/02
MT-101.20	DATED	10/18/02
MT-105.10	DATED	10/18/02
MT-105.11	DATED	10/18/02

AND TO SUPPLEMENTAL SPECIFICATIONS:

841	DATED	4/19/02
843	DATED	4/18/03
864	DATED	7/11/00

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES AND FROM FIELD OBSERVATION AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURES 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 BRIDGES 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 STRUCTURES 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, 2002 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 STANDARD DRAWING BP-3.1 FOR REQUIRED TOLERANCES.

STRUCTURE PROTECTION:

THE EXPANSION JOINT SEAL AT THE ENDS OF BRIDGES SHALL BE PROTECTED FROM ALL SEALERS. NO SEALERS SHALL BE ALLOWED TO COME INTO CONTACT WITH THE EXPANSION JOINT SEAL. IF ANY SEALER COMES INTO CONTACT WITH THE EXPANSION JOINT SEAL THE CONTRACTOR SHALL REPLACE THE EXPANSION JOINT TO THE SATISFACTION OF THE ENGINEER AT NO COST TO THE STATE.

ITEM 202- PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (PARAPET):

THIS ITEM SHALL BE USED TO REMOVE A PORTION OF THE PARAPET ON THE WINGWALLS AS DETAILED IN THE PLAN. THE PARAPET SHALL BE REMOVED BY SAW CUTTING.

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

ITEM 511- CLASS C CONCRETE, ABUTMENT, AS PER PLAN (BEAM SEAT)

ITEM 511- CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN (CURB)

THE COARSE AGGREGATE SHALL BE LIMESTONE.

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

ITEM 511 - CONCRETE MISC.: BACKWALL REPAIR

THIS ITEM SHALL BE USED AT LOCATIONS INDICATED IN THE PLAN.

THE CONCRETE SHALL BE CLASS FS AND MEET THE REQUIREMENTS OF CMS 499 EXCEPT THAT A NON CALCIUM CHLORIDE ACCELERATING ADMIXTURE AND LIMESTONE FOR THE COARSE AGGREGATE SHALL BE USED.

ALL EXISTING SURFACES TO WHICH THE CONCRETE IS TO BOND SHALL BE CLEANED BY ABRASIVE BLASTING. THESE SURFACES SHALL BE MADE FREE OF SPALLS, LAITANCE, AND OTHER CONTAMINANTS DETRIMENTAL TO ACHIEVING AN ADEQUATE BOND.

TYPE A WATERPROOFING (CMS 512) SHALL BE APPLIED BETWEEN THE PROPOSED CONCRETE AND THE EXISTING APPROACH SLAB.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER CUBIC YARD FOR ITEM 511- CONCRETE MISC.: BACKWALL REPAIR WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

STRUCTURE GENERAL NOTES

ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

GENERAL:

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMITTAL REQUIREMENTS:

AN OHIO REGISTERED ENGINEER SHALL PREPARE, SEAL AND DATE PLANS FOR A JACKING SYSTEM, INCLUDING ANY TEMPORARY OR PERMANENT SUPPORTS, SUFFICIENT TO PERFORM THE WORK DESCRIBED IN THE PLANS. SUBMIT THREE SETS OF THESE PLANS TO THE DIRECTOR FOR APPROVAL AT LEAST THIRTY (30) DAYS BEFORE ACTUAL WORK IS TO BEGIN.

JACKING SUBMITTALS SHALL INCLUDE AT LEAST THE FOLLOWING:

1. THE SIGNATURE AND NUMBER, OR PROFESSIONAL SEAL, OF THE OHIO REGISTERED PROFESSIONAL ENGINEER WHO PREPARED THE SUBMITTAL.
2. CALCULATIONS AND ANALYSES OF THE STRUCTURE TO DETERMINE AND DEFINE THE ACTUAL LOADING APPLIED AT THE JACKING POINTS.
3. A DRAWING SHOWING THE PHYSICAL AND DIMENSIONAL POSITION OF THE JACKS WITH RESPECT TO THE STRUCTURE INCLUDING CLEARANCES AND CENTER OF LIFT.
4. A SCHEMATIC LAYOUT OF JACKS, CHECK VALVES, PUMPS WITH 3 WAY RETRACTOR VALVE, PRESSURE GAGES, FLOW CONTROL VALVES, ETC. IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. ALL JACKS FOR EACH ABUTMENT OR PIER SHALL BE CONNECTED TOGETHER. ALL JACKS AT EACH ABUTMENT OR PIER SHALL BE THE SAME SIZE.
5. ANALYSIS AND CALCULATIONS OF THE STRESSES INDUCED OR CREATED IN THE STRUCTURE AND ANY TEMPORARY OR PERMANENT SUPPORTS. DESIGN CALCULATIONS FOR ANY TEMPORARY OR PERMANENT SUPPORTS.
6. PHYSICAL DIMENSIONS, MATERIALS, AND FABRICATION DETAILS OF ANY TEMPORARY OR PERMANENT SUPPORTS. HORIZONTAL AND VERTICAL MOVEMENT RESTRAINT SHALL BE PROVIDED.
7. A STEP BY STEP PROCEDURE DETAILING ALL STEPS IN THE JACKING OPERATION.
8. METHOD OF ATTACHMENT TO STRUCTURAL MEMBERS. WELDING TO TENSION AREAS WILL NOT BE PERMITTED.

JACKING SYSTEM REQUIREMENTS:

THE ENTIRE SYSTEM INCLUDING JACKS SHALL HAVE 20% MORE CAPACITY THAN REQUIRED BASED ON CALCULATED LOADS. FOR LIFTS GREATER THAN 1 INCH [25 MM], JACKS SHALL HAVE LOCKING NUTS TO POSITIVELY LOCK AND SUPPORT THE STRUCTURE DURING THE LIFT. JACKS SHALL HAVE A SWIVEL LOAD CAP, A DOMED PISTON HEAD OR SOME OTHER DEVICE TO PROTECT AGAINST THE EFFECTS OF SIDE LOAD ON THE JACK. DO NOT USE JACKS ALONE TO SUPPORT LOADS EXCEPT DURING THE ACTUAL JACKING OPERATION. USE TEMPORARY SUPPORTS, BLOCKING OR OTHER METHODS APPROVED BY THE DIRECTOR. DO NOT USE SINGLE ACTING RAMS WITH NO OVER-TRAVEL PROTECTION SYSTEM. HAVE SPARE EQUIPMENT AVAILABLE ON SITE IN ORDER TO PROCEED WITH THE JACKING IN THE EVENT OF BREAKDOWN. PROVIDE A LIST OF SPARE EQUIPMENT TO THE ENGINEER.

JACKING OPERATION REQUIREMENTS:

AT A MINIMUM, A JACKING OPERATION SHALL LIFT ALL BEAMS AT ANY ONE ABUTMENT OR PIER SIMULTANEOUSLY. THE ONLY EXCEPTION IS THE SITUATION WHERE THE WORK INVOLVES REPLACING OR REHABILITATING INDIVIDUAL BEARINGS; NO PERMANENT SHIMMING IS REQUIRED AND THE HEIGHT OF THE LIFT SHALL NOT EXCEED $\frac{1}{4}$ INCH [6 MM]. THE MAXIMUM DIFFERENTIAL JACKING HEIGHT BETWEEN ANY ADJACENT ABUTMENTS OR PIERS SHALL BE 1 INCH [25 MM] OR LESS. IF THIS 1 INCH LIMIT IS TO BE EXCEEDED, PROVIDE CALCULATIONS SHOWING THAT THE SUPERSTRUCTURE COMPONENTS WILL NOT BE TEMPORARILY STRESSED BEYOND ALLOWABLE STRESSES AND THAT NO PERMANENT STRESSES WILL BE INDUCED IN THE COMPONENTS AFTER THEY OBTAIN THEIR FINAL POSITION. IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH ODOT'S PROPOSAL NOTE "CONCRETE REPAIR BY EPOXY INJECTION". THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

BASIS OF PAYMENT: THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 516 - REFURBISH BEARING DEVICES, AS PER PLAN

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS AS WELL AS THEIR CLEANING AND PAINTING. INCLUDED SHALL BE THE DISASSEMBLY OF THE BEARINGS, HAND TOOL CLEANING (GRINDING IF NECESSARY), PAINTING ACCORDING TO ITEM 514, REPLACEMENT OF ANY DAMAGED SHEET LEAD WITH PREFORMED BEARING PADS (711.21), INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT, REALIGNMENT OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS AND REWELDING SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 60°F [15°C], AND REASSEMBLY OF THE BEARINGS. ASSURE ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING". AT NO ADDITIONAL COST TO THE STATE, THE CONTRACTOR MAY INSTALL NEW BEARINGS OF THE SAME TYPE AS THE EXISTING IN PLACE OF REFURBISHING THE BEARINGS. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516 - REFURBISH BEARING DEVICES, AS PER PLAN.

STRUCTURE GENERAL NOTES

ITEM 615-PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN:

THIS ITEM SHALL BE AS CMS 615, EXCEPT THAT THE PAVEMENT SHALL BE LEFT IN PLACE.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER SQUARE YARD FOR ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK. ALL EARTHWORK RELATED ITEMS SHALL BE INCLUDED IN ITEM 615 LUMP ROADS FOR MAINTAINING TRAFFIC.

ITEM 841 - TREATING OF CONCRETE SURFACES WITH SRS:

THIS ITEM SHALL BE USED AT LOCATIONS INDICATED IN THE PLAN.

SEE THE SUPPLEMENTAL SPECIFICATIONS FOR APPLICATION RATES, MATERIALS REQUIRED, AND APPLICATION PROCEDURES.

THIS TREATMENT CONSISTS OF TWO (2) SEPARATE APPLICATIONS.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER SQUARE YARD FOR ITEM 841 - TREATING OF CONCRETE SURFACES WITH SRS, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE TWO SEPARATE APPLICATION WORK.

ITEM SPECIAL - TREATING CONCRETE BRIDGE DECKS WITH GRAVITY-FED RESIN:

THIS ITEM SHALL CONSIST OF FURNISHING THE NECESSARY LABOR, MATERIALS AND EQUIPMENT NEEDED FOR SURFACE PREPARATION, MIXING AND PLACING THE SEAL ONTO THE CONSTRUCTION JOINT FORMED ALONG NEW PATCHES. THE JOINT SEAL SHALL BE AS PER PROPOSAL NOTE "TREATING CONCRETE BRIDGE DECKS WITH GRAVITY-FED RESIN".

THE SEAL SHALL BE APPLIED 2 INCHES ON EACH SIDE OF THE JOINT.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER SQUARE YARD FOR ITEM SPECIAL-TREATING CONCRETE BRIDGE DECKS WITH GRAVITY-FED RESIN WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECK

A. DESCRIPTION

THIS ITEM SHALL CONSIST OF FURNISHING THE NECESSARY LABOR, MATERIALS AND EQUIPMENT TO REPAIR THE EXISTING CONCRETE ON THE BRIDGE DECK AND APPROACH SLABS INCLUDING THE REMOVAL OF LOOSE AND UNSOUND CONCRETE, BITUMINOUS PATCHES, CONCRETE PATCHES, SURFACE PREPARATION, SAW CUTTING, AND THE STRENGTH TESTING OF ALL THE PATCHES AS DIRECTED BY THE ENGINEER.

B. REMOVAL OF UNSOUND CONCRETE

THE ENGINEER SHALL VISUALLY INSPECT THE EXISTING CONCRETE ON THE BRIDGE DECK AND APPROACH SLABS AND OUTLINE THE AREAS TO BE REMOVED.

THE PERIMETER OF THE REMOVAL AREAS SHALL BE SAWED TO A DEPTH OF 1 INCH TO PRODUCE A VERTICAL OR SLIGHTLY UNDERCUT FACE. AT EACH CORNER OF THE PATCH THE SAW CUTS SHALL COME TOGETHER WITHOUT ANY OVERCUTTING WITH THE SAW. THE CORNERS SHALL BE CHIPPED DOWN TO THE SAW MARKS. ADDITIONAL SAW CUTS MAY BE REQUIRED TO FACILITATE REMOVAL WITHOUT ANY OVERCUTTING. COOLING WATER FROM WET SAWING AND DUST FROM SAWING SHALL BE IMMEDIATELY REMOVED FROM THE EXPOSED PATCH HOLES BEFORE ANY DRYING CAN OCCUR.

UN SOUND CONCRETE INCLUDING ALL PATCHES OTHER THAN SOUND PORTLAND CEMENT CONCRETE, AND ALL OBVIOUSLY LOOSE AND DISINTEGRATED CONCRETE SHALL BE REMOVED. THE UNSOUND CONCRETE MAY BE REMOVED BY CHIPPING OR HAND DRESSING. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NORMAL 35 POUND CLASS AND SHALL BE OPERATED AT AN ANGLE LESS THAN 45 DEGREES MEASURED FROM THE SURFACE OF THE DECK. CONCRETE SHALL BE REMOVED IN A MANNER THAT PREVENTS CUTTING, ELONGATING OR DAMAGING REINFORCING STEEL. WHERE THE BOND BETWEEN THE CONCRETE AND A REINFORCING BAR HAS BEEN DESTROYED, OR WHERE MORE THAN ONE HALF OF THE PERIPHERY OF SUCH A BAR HAS BEEN EXPOSED, THE ADJACENT CONCRETE SHALL BE REMOVED TO A DEPTH THAT WILL PROVIDE A MINIMUM 3 /4 INCH CLEARANCE AROUND THE BAR EXCEPT WHERE OTHER REINFORCING BARS MAKE THIS IMPRACTICABLE. REINFORCEMENT WHICH HAS BECOME LOOSE SHALL BE ADEQUATELY SUPPORTED AND TIED BACK INTO PLACE. ALL REMOVED ASPHALT AND CONCRETE SHALL BE DISPOSED OF PROPERLY OUTSIDE THE RIGHT OF WAY.

STRUCTURE GENERAL NOTES

C. SURFACE PREPARATION

CLEANING SHALL CLOSELY PRECEDE APPLICATION OF THE PATCHING MATERIAL. THE EXPOSED REINFORCING STEEL SHALL BE THOROUGHLY CLEANED BY ABRASIVE BLASTING (SILICA SAND SHALL NOT BE USED) FOLLOWED BY AN AIR BLAST. IT MAY BE NECESSARY TO USE HAND TOOLS TO REMOVE SCALE FROM THE REINFORCING STEEL.

CONTAMINATION OF THE AREA TO BE PATCHED BY CONSTRUCTION EQUIPMENT OR FROM ANY OTHER SOURCE SHALL BE PREVENTED BY PLACEMENT OF A CLEAN 4 MIL POLYETHYLENE SHEET (OR ANY OTHER COVERING AS APPROVED BY THE ENGINEER) ON THE SURFACE OF THE DECK FOLLOWING THE AIR BLAST CLEANING.

WHERE REINFORCING STEEL IS EXPOSED, THE CONTRACTOR SHALL PROVIDE ADEQUATE SUPPORTS FOR THE CONCRETE MIXER SO THAT REINFORCING STEEL AND ITS BOND WITH THE CONCRETE WILL NOT BE DAMAGED BY THE WEIGHT AND MOVEMENT OF THE MIXER, OR SHALL PROVIDE MEANS TO CONVEY CONCRETE FROM THE MIXER TO THE PATCH LOCATIONS.

D. MATERIALS, PLACING, AND CURING

THE BRIDGE DECK OR OVERLAY SHALL BE PATCHED WITH CLASS FS CONCRETE WHICH SHALL MEET THE REQUIREMENTS OF CMS 499.05 EXCEPT THAT A NON CALCIUM CHLORIDE ACCELERATING ADMIXTURE AND LIMESTONE FOR COARSE AGGREGATE SHALL BE USED.

E. PLACING

THE PATCHING MATERIAL SHALL BE PLACED, CONSOLIDATED AND FINISHED TO THE EXISTING GRADE AND ELEVATION. PATCHES GREATER THAN 50 SQUARE FEET IN AREA SHALL HAVE TEMPORARY BULKHEADS INSTALLED TO FACILITATE PLACEMENT AND FINISHING. THE TEMPORARY BULKHEADS SHALL GO AS DEEP AS THE PATCH AND BE PULLED PRIOR TO THE CONCRETE SETTING. PATCHES EXCEEDING 50 SQUARE FEET SHALL BE STRUCK OFF WITH A SCREED. SMALLER PATCHES THAT ARE UNDER 10 FEET IN LENGTH SHALL BE SCREED LONGITUDINALLY. FOR PATCHES OVER 10 FEET IN LENGTH, THE SCREED SHALL BE PLACED PERPENDICULAR TO THE BRIDGE CENTERLINE.

THE CONTRACTOR SHALL TEST THE SURFACE OF THE PLASTIC CONCRETE FOR TRUENESS AND FOR BEING FLUSH WITH THE EDGES OF THE ADJACENT SURFACES BY USE OF A 10 FOOT STRAIGHTEDGE. FOR PATCHES 10 FEET OR LESS IN LENGTH, THE STRAIGHTEDGE SHALL BE DONE BY PLACING THE STRAIGHTEDGE PARALLEL TO THE BRIDGE CENTERLINE WITH ENDS RESTING ON THE EXISTING WEARING SURFACE AND DRAWING THE STRAIGHTEDGE ACROSS THE PATCH. ANY HIGH OR LOW AREAS EXCEEDING 1/8 INCH IN 10 FEET SHALL BE CORRECTED. IF ANY CORRECTIONS ARE MADE, THE SURFACE SHALL BE RECHECKED.

F. FINISHING

AFTER THE PATCHES HAVE BEEN CONSOLIDATED AND FINISHED, THEY SHALL BE TEXTURED IN ACCORDANCE TO SECTION 451.09 OF THE CMS.

G. INSPECTION, SOUNDING, AND REPAIR OF CONCRETE PATCHES

AFTER CURING AND BEFORE FINAL ACCEPTANCE, ALL PATCHED AREAS SHALL BE INSPECTED AND SOUNDED. ALL DELAMINATED AREAS SHALL BE REMOVED AND REPATCHED ACCORDING TO THIS NOTE.

ALL CRACKS IN BONDED PATCHES SHALL BE SEALED WITH AN APPROVED HIGH MOLECULAR WEIGHT METHACRYLATE SEALER ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS AND THE HMWM SUPPLEMENTAL SPECIFICATIONS.

ALL REPLACEMENT OF REJECTED AREAS AND SEALING OF CRACKS IN NEW BONDED PATCHES WILL BE THE REPONSIBILITY OF THE CONTRACTOR AND INCLUDED IN THE UNIT BID PRICE FOR THIS ITEM.

H. METHOD OF MEASUREMENT

THE QUANTITY SHALL BE THE ACTUAL AREA IN SQUARE YARDS OF THE EXPOSED SURFACE OF ALL PATCHES, IRRESPECTIVE OF THE DEPTH OF THE PATCH, COMPLETE, IN PLACE AND ACCEPTED.

I. BASIS OF PAYMENT

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID FOR:

ITEM	UNIT	DESCRIPTION
SPECIAL	SQUARE YARD	PATCHING CONCRETE BRIDGE DECK

DESIGN AGENCY
DISTRICT THREE

DATE
4-04
REVIEWED
RDN
STRUCTURAL FILE NUMBER

DRAWN
DCM
REVISED
DCM
CHECKED
CAL

STRUCTURE GENERAL NOTES

MED-57-3.24

40
58

DESIGN FILE: i:\projects\77002\Struct\br-treat.dgn
 WORKSTATION: dmollens DATE: 04/06/04

BRIDGE DECK DATA									ROADWAY DATA		
PART	COUNTY, ROUTE, BRIDGE NO.	LOCATION	STRUCTURE TYPE	LENGTH (BRIDGE DECK)	WIDTH	BRIDGE DECK AREA	SKEW	EXISTING WEARING SURFACE	EXISTING PAVEMENT WIDTH	EXISTING APPROACH SLAB WIDTH	EXISTING APPROACH SLAB LENGTH
				LIN.FT.	LIN.FT.	SQ.YD.			LIN.FT.	LIN.FT.	LIN.FT.
A	+ MED-57-0324B (SLM=3.24)	OVER I-76	4- SPAN STEEL BEAM	207±	44	1012	3.56° R.F.	CONCRETE	44	44	25
A	++ MED-57-0271 (SLM=5.21)	OVER LEATHERMAN CREEK	3-SIDED CULVERT				25° L.F.	ASPHALT	28		
A	+++ MED-57-0322 (SLM=5.72)	OVER RIVER STYX	SINGLE- SPAN PRESTRESSED BEAM	48.0	40	214	18° L.F.	ASPHALT	28	40	20
A	*** MED-57-0400 (SLM=6.50)	OVER DITCH	4-SIDED BOX				25° R.F.	ASPHALT	28		
A	* MED-57-0652 (SLM=9.00)	OVER I-71	4- SPAN STEEL BEAM	348.5±	30	1162	37.3° R.F.	CONCRETE	28	34.33	25
B	** MED-94-1200 (SLM=12.00)	OVER TRIB. TO GRANGER DITCH	4-SIDED BOX				0°	ASPHALT	25		
B	** MED-94-1253 (SLM=12.53)	OVER BRANCH OF GRANGER DITCH	4-SIDED BOX				0°	ASPHALT	25		
B	** MED-94-1284 (SLM=12.84)	OVER TRIB. TO GRANGER DITCH	CONCRETE PIPE				66° R.F.	ASPHALT	25		
B	* MED-94-1377 (SLM=13.77)	OVER DITCH	3- SPAN CONCRETE SLAB	77.44	41.33	356	22° L.F.	CONCRETE	25	40.0	15
B	**** MED-94-1516 (SLM=15.16)	OVER I-271	4- SPAN STEEL BEAM	288.5±	30	962	14°-52'-05" RF	CONCRETE	25	32.58	25

+ BUTT JOINT AT THE APPROACH SLABS. OMIT RESURFACING ON THE BRIDGE DECK AND APPROACH SLABS.
 (SEE DETAILS IN THE PLAN FOR STRUCTURE WORK. SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES)

++ PLANE 3/4" DEEP TO A POINT 30' FROM THE CENTERLINE OF THE CULVERT. PLANE 1 1/2" DEEP FOR 60' FULL WIDTH AND THEN START PLANING 3/4" DEEP.
 BUTT JOINT INTERMEDIATE COURSE 30' FROM THE CENTERLINE OF THE CULVERT. PAVE THE 60' LONG AREA OVER THE CULVERT FULL WIDTH WITH SURFACE COURSE ONLY.
 (SEE DETAILS IN THE PLAN FOR STRUCTURE WORK. SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES)

+++ PLANE 3/4" DEEP TO THE APPROACH SLAB. PLANE OVER APPROACH SLABS AND BRIDGE DECK 1 1/2" DEEP. PLANE 3/4" DEEP AFTER APPROACH SLAB.
 BUTT JOINT INTERMEDIATE COURSE AT THE APPROACH SLABS. PAVE OVER APPROACH SLABS AND BRIDGE DECK WITH SURFACE COURSE ONLY.
 (SEE DETAILS IN THE PLAN FOR STRUCTURE WORK. SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES)

* BUTT JOINT AT BRIDGE DECK. OMIT RESURFACING ON THE BRIDGE DECK. (SEE DETAILS IN THE PLAN FOR STRUCTURE WORK.
 SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES)

** PLANE AND PAVE OVER STRUCTURE (NO STRUCTURE WORK). (SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES)

*** PLANE AND PAVE OVER STRUCTURE (SEE DETAILS IN PLAN FOR STRUCTURE WORK). (SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES)

**** SEE SHEET 54 FOR PLANING AND PAVING DETAILS (SEE DETAILS IN THE PLAN FOR STRUCTURE WORK. SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES)

DESIGN AGENCY
 DISTRICT THREE

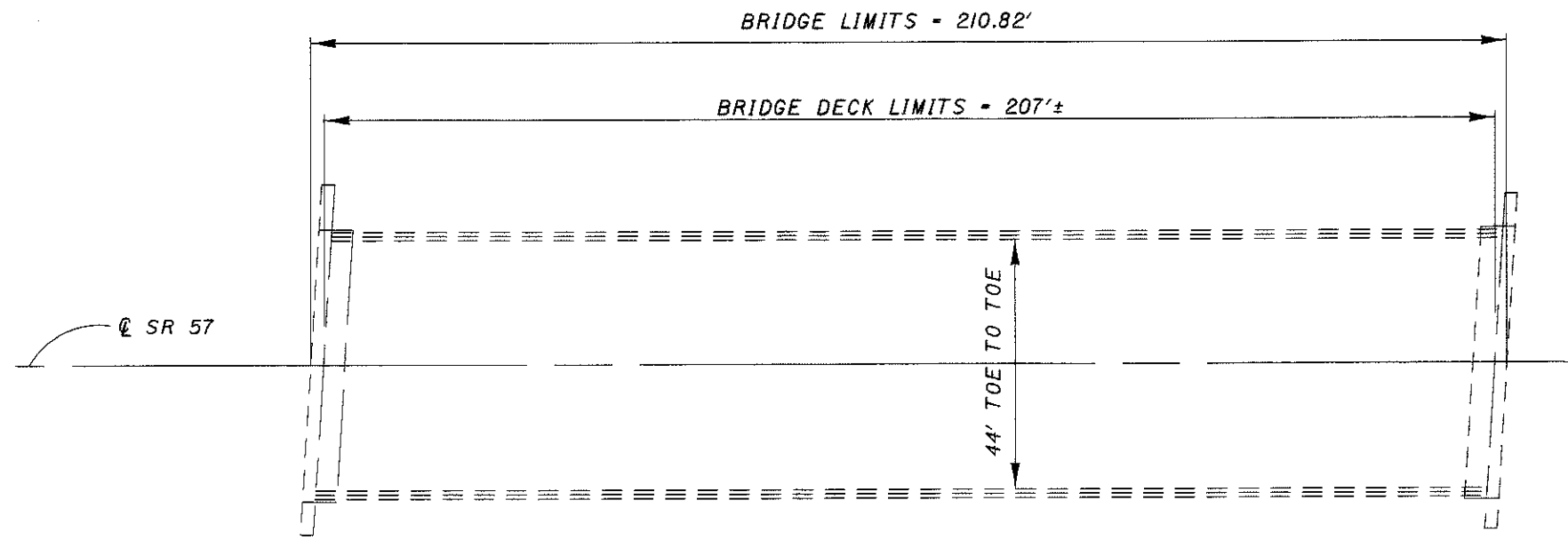
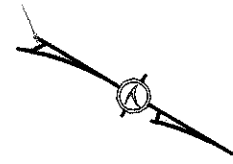
DATE
 4-04
 REVIEWED
 RDN
 STRUCTURAL FILE NUMBER

DRAWN
 DCM
 REVISION
 CAL

BRIDGE TREATMENT

MED-57-3.24

41
 58



PLAN VIEW

NOTES:

1) THE ENTIRE BRIDGE DECK SHALL BE SEALED USING ITEM 841 - TREATING OF CONCRETE SURFACES WITH SRS.

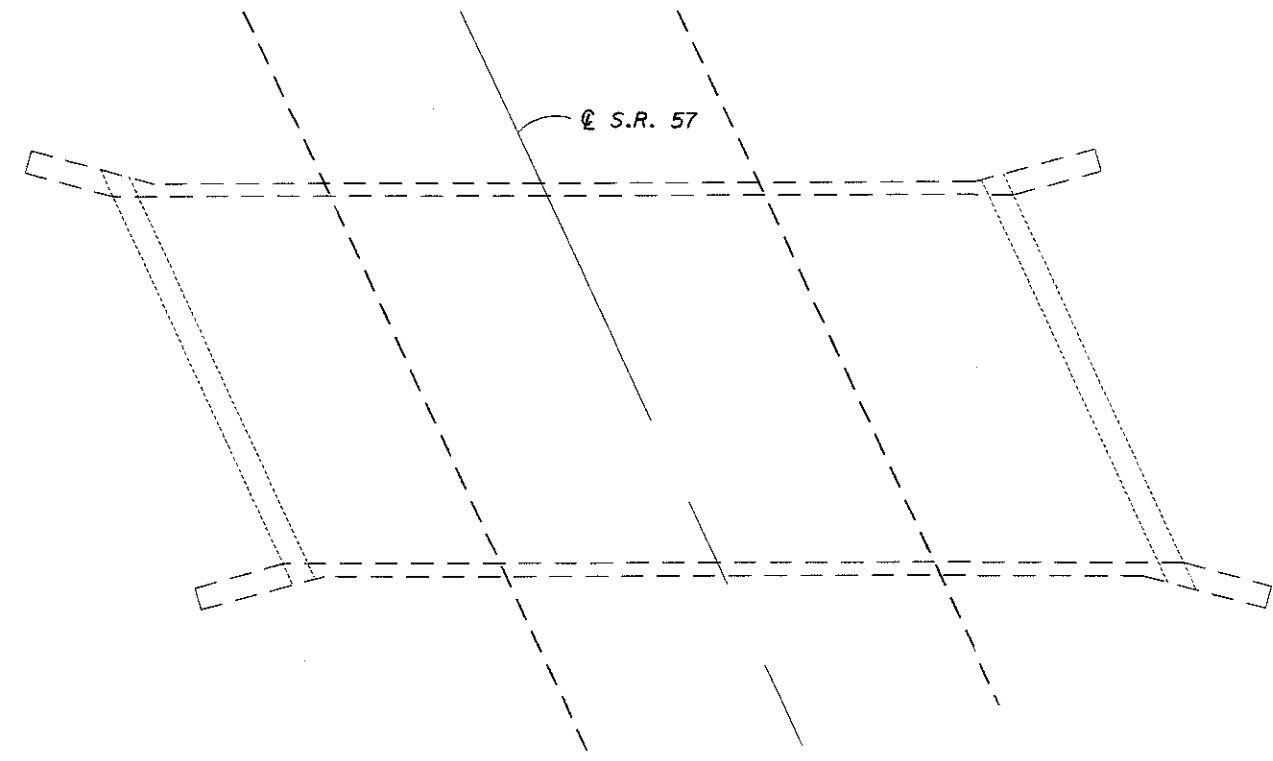
ITEM	QUANTITY	UNIT	DESCRIPTION
841	1012	SQ YD	TREATING OF CONCRETE SURFACES WITH SRS

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 34

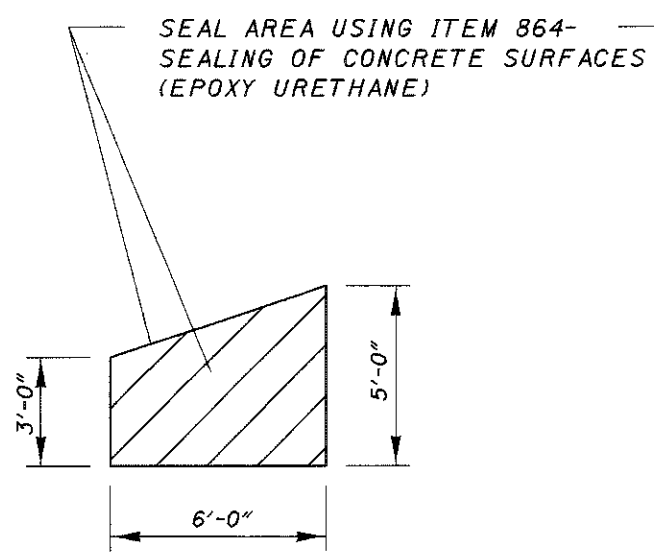
DESIGN FILE: I:\projects\77002\Struct\detail\detail.dgn
 WORKSTATION: dmollens DATE: 04/06/04

DESIGNED		DRAWN		REVIEWED		DATE		DESIGN AGENCY	
DCM	CAL	DCM	REVIS	RDN	5201950	4-04	DISTRICT THREE		
P L A N		V I E W		BRIDGE NO. MED-57-0324B (SLM-3.24)		OVER 1-76			
MED-57-3.24									
42		58							

DESIGN FILE: it:\projects\77002\Struct\detail.dgn
 WORKSTATION: dm/llens DATE: 04/06/04

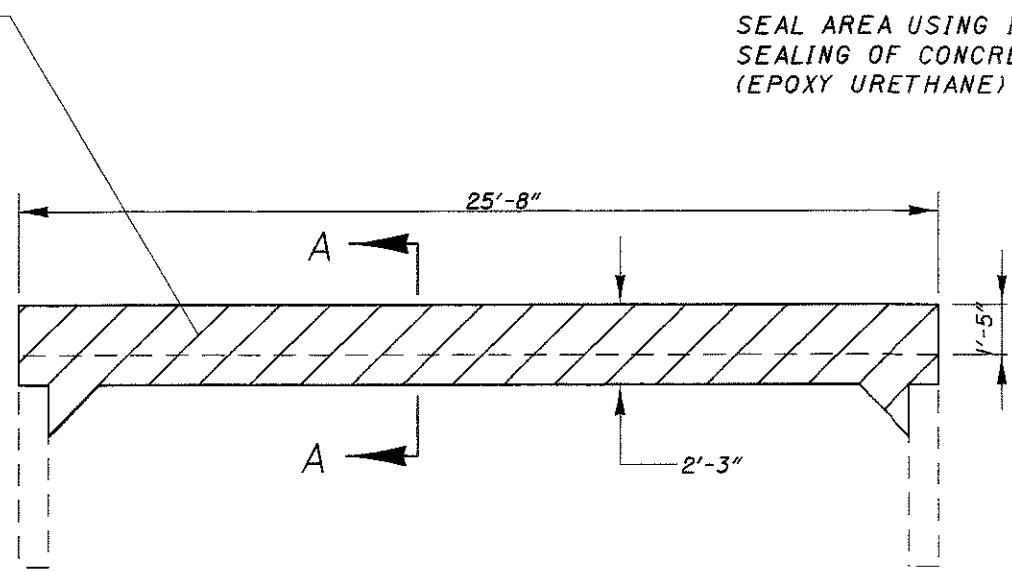


PLAN VIEW

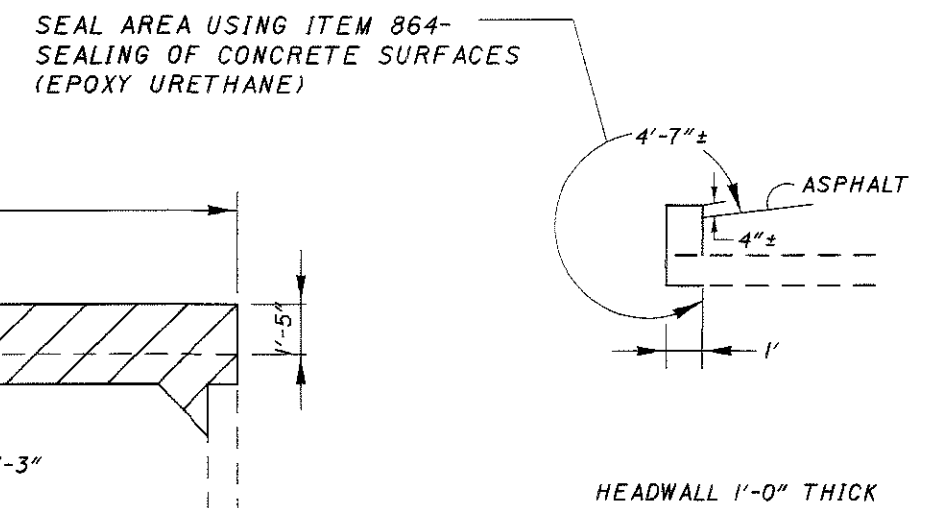


WINGWALL 1'-6" THICK

WINGWALL ELEVATION



HEADWALL ELEVATION



HEADWALL 1'-0" THICK

SECTION A-A

ITEM	QUANTITY	UNIT	DESCRIPTION
864	41	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY URETHANE)

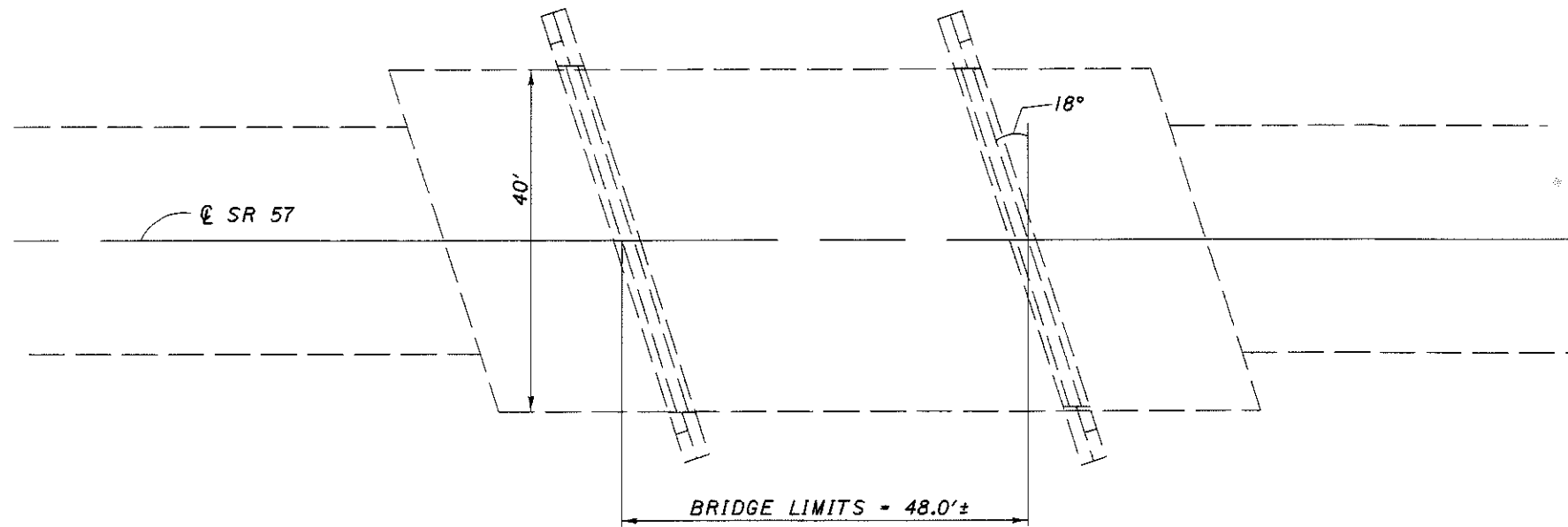
NOTES:

- 1) GUARDRAIL NOT SHOWN.
- 2) SEAL WINGWALLS, HEADWALLS AND 1' BACK UNDER TOP OF CULVERT WITH ITEM 864- SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 34

DESIGN AGENCY: DISTRICT THREE
 DATE: 4-04
 REVIEWED: RDN
 STRUCTURE FILE NUMBER: 5201918
 DRAWN: JPF
 CHECKED: C.A.L.
 DESIGNED: JPF
 HEADWALL SEALING
 MED-57-0271 (SLW-5.21)
 OVER LEATHERMAN CREEK
 MED-57-3.24
 43
 58

DESIGN FILE: i:\projects\77002\Struct\detail.dgn
 WORKSTATION: DATE: 04/06/04



PLAN VIEW

ITEM	QUANTITY	UNIT	DESCRIPTION
SPECIAL	84	FT	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

NOTE:

- 1.) GUARDRAIL AND BRIDGE RAIL NOT SHOWN.
- 2.) PLACE A POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM AT EACH ABUTMENT. SEE SHEET 45 FOR DETAILS.

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 34

DESIGN AGENCY
 DISTRICT THREE

DATE	4-04
REVIEWED	RDN
STRUCTURE FILE NUMBER	5201934
DRAWN	JPF
DESIGNED	JPF
CHECKED	CAL

PLAN VIEW
 MED-57-0322 (S.L.M. - 5.72)
 OVER RIVER STYX

MED-57-3.24

44
 58

GENERAL NOTES AND DETAILS FOR POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

DESIGNED	DATE	CALCULATED
M.A.M.	REVISED	DCM
DRWN	10-20-96	CHEKED
M.A.M.	10-17-03	CAL

ITEM SPECIAL - POLYMER-MODIFIED ASPHALT EXPANSION JOINT SYSTEM

THIS ITEM WILL BE USED TO SEAL THE EXPANSION/CONTRACTION JOINTS AS PER THESE DETAILS AND THE MANUFACTURER'S REQUIREMENTS USING A POLYMER-MODIFIED ASPHALT SYSTEM. THE PRIME CONTRACTOR WILL OBTAIN THE SERVICES OF ONE OF THE FOLLOWING APPROVED APPLICATORS WHO WILL FURNISH AND INSTALL THE NEW BRIDGE EXPANSION JOINT SYSTEM AFTER ALL PAVING ON THE AFFECTED BRIDGE(S) HAS BEEN COMPLETED.

PAVETECH INTERNATIONAL 4660 DUKE DRIVE SUITE 390 WASON, OHIO 45040 TEL: (513) 770-3122	LINEAR DYNAMICS, INC. 79 MONTGOMERY ST. MONTGOMERY, PA 17752 TEL: (1570) 547-1621	WATSON-BOWMAN ACME 95 PINEVIEW DR. AMHERST, NY 14228 TEL (716) 691-7566 OR TEL (800) 253-9226
--	--	---

MATERIALS:

BRIDGING PLATE:

MILD STEEL 1/8" OR 1/4" THICK PLATE, 8" WIDE OR 18 GAUGE ALUMINUM, 8" WIDE.

BINDER:

TYPE: POLYMER MODIFIED ASPHALT
 SOFTENING POINT: 180 DEGREES F. MIN.
 FLOW: 3 mm. MAX. AT 140 DEGREES F.
 PENETRATION: 9 mm. MAX. AT 77 DEGREES F.
 1 mm. MIN AT 0 DEGREES F.
 ASTM D 3407
 DUCTILITY: 40 cm. MIN. ASTM D 113
 RESILIENCE: 60% MIN. AT 77 DEGREES F.
 TENSILE ADHESION: 700% MIN.
 SPECIFIC GRAVITY: 1.10 ± 0.05
 POURING TEMP: 350 - 390 DEGREES F.

AGGREGATE:

TYPE: CRUSHED, DOUBLE WASHED, AND DRIED GRANITE OR BASALT

GRADATION

THE GRADATION OF THE AGGREGATE VARIES BY MANUFACTURER AND WILL BE AS PER THE MANUFACTURER'S RECOMMENDATIONS FOR THE SYSTEM BEING USED ON THIS PROJECT.

BACKER ROD:

THE BACKER SHALL BE A CLOSED CELL FOAM EXPANSION JOINT FILLER CAPABLE OF WITHSTANDING THE PLACEMENT TEMPERATURE OF THE POLYMER MODIFIED ASPHALT.

NOTE: PRIOR TO PLACEMENT OF ANY PORTION OF THE JOINT SYSTEM, THE PROJECT ENGINEER MUST HAVE CERTIFIED TEST DATA MEETING ALL THE MINIMUM REQUIREMENTS OF ALL THE MATERIALS OF THE JOINT SYSTEM.

INSTALLATION PROCEDURES:

SAWING AND SURFACE PREPARATION:

AFTER ALL PAVING OPERATIONS ARE COMPLETE, THE OVERLAY IS TO BE TRANSVERSELY SAW CUT FULL DEPTH NO LESS THAN TWO INCHES DEEP (20" CENTERED OVER JOINT OPENING, UNLESS OTHERWISE NOTED). REMOVE ALL MATERIAL, INCLUDING WATER-PROOFING MATERIAL, BETWEEN SAW CUTS. THOROUGHLY CLEAN AND DRY EXPOSED CONCRETE, STEEL, AND CUT SURFACES USING COMPRESSED AIR AND A HOT COMPRESSED AIR (HCA) LANCE. THE LANCE MUST PRODUCE A FLAME RETARDED AIR STREAM TEMPERATURE OF 3000 DEGREES F. AT A VELOCITY OF 3,000 FEET PER

SECOND WITH 15 PSIG CHAMBER PRESSURE. IF THERE IS AN INTERRUPTION DUE TO WEATHER OR OTHER CAUSES, THE OPERATION WILL BE REPEATED WITH THE HCA LANCE IMMEDIATELY BEFORE THE BINDER COAT OPERATION. ALSO, 6 INCHES OF THE ROAD SURFACE ON EITHER SIDE OF THE JOINT WILL BE DRIED SO THAT A SUITABLE SURFACE FOR BITUMEN ADHESION IS OBTAINED.

SEALING OF EXPANSION JOINT: (PRE-STRESSED BOX OR CONCRETE SLAB)

THE EXPANSION JOINT GAP IS TO BE SEALED AND A BRIDGING PLATE CENTERED ALONG IT. A VERY NARROW GAP WILL BE SEALED BY POURING HOT BINDER INTO THE GAP. GAPS OF 1/8" OR MORE WILL FIRST BE FILLED WITH AN APPROPRIATELY SIZED BACKER ROD. THE BACKER ROD WILL BE INSTALLED SO THAT IT IS BETWEEN 1/8" AND 1-1/8" BELOW THE TOP OF THE EXISTING GAP. THE GAP WILL THEN BE FILLED WITH BINDER.

BOND BREAKER:

SPREAD BINDER OVER SURFACE AREA WHERE THE METAL BRIDGING PLATE WILL BE PLACED. CENTER THE BRIDGING PLATE OVER THE EXISTING JOINT AND BED INTO THE HOT BINDER. BUTT JOINT THE BRIDGING PLATES TO ACCOMMODATE THE ENTIRE JOINT LENGTH. SPIKE HOLES WILL BE DRILLED AT 1 FOOT INTERVALS ALONG THE LONGITUDINAL CENTERLINE OF THE PLATES. SECURE BRIDGING PLATE WITH NAILS OR SPIKES. SEAL BUTT JOINTS WITH HOT BINDER AND ALLOW BINDER TO SETUP BEFORE NEXT OPERATION. WHEN ALUMINUM BRIDGING PLATES ARE USED, ONLY THE BINDER IS REQUIRED TO SECURE THE INDIVIDUAL PLATES.

BINDER COAT:

SEAL ALL PREPARED, EXPOSED SURFACES OF THE JOINT WITH BINDER. POUR THE HOT BINDER OVER THE FLOOR AREA OF THE JOINT AND SPREAD TO COAT ALL EXPOSED SURFACES. THE BINDER WILL BE A MINIMUM OF 1/32" THICK ON THE BOTTOM OF THE JOINT CAVITY, WITH POOLS OF GREATER THICKNESS WHERE SURFACE IRREGULARITIES EXIST. THE BINDER APPLICATION TEMPERATURE WILL BE BETWEEN 350 AND 390 DEGREES F. THE BINDER WILL NOT BE ALLOWED TO BE HEATED ABOVE 410 DEGREES F. NOR ALLOWED TO EXCEED 390 DEGREES F. FOR MORE THAN 1 HOUR. A DOUBLE JACKETED OIL MELTER WILL BE USED TO HEAT THE BINDER. THE MELTER WILL BE EQUIPPED WITH A CONTINUOUS AGITATION SYSTEM, TEMPERATURE CONTROLS, AND A CALIBRATED THERMOMETER. ALSO A SYSTEM FOR ACCURATELY MEASURING THE WEIGHTS OF THE BINDER AND THE AGGREGATE WILL BE REQUIRED.

BUILD-UP OF JOINT LAYERS:

AGGREGATE PREPARATION:

HEAT THE AGGREGATE TO A TEMPERATURE OF 275 TO 325 DEGREES F., WITH A SUITABLE ROTATING DRUM WITH ATTACHED HEAT SOURCE OR A HOT COMPRESSED AIR LANCE, TO REMOVE DUST AND MOISTURE.

AGGREGATE PROPORTION AND LAYER THICKNESS:

MIX THE AGGREGATE WITH THE BINDER SUCH THAT THE MINIMUM AGGREGATE CONTENT BY WEIGHT WILL BE 68%. THE HEATED AGGREGATE AND BINDER WILL BE COMBINED IN LAYERS, UNLESS PATENTED INSTALLATION REQUIRES DIFFERENTLY, NOT LESS THAN 3/4 OF AN INCH NOR EXCEEDING 2-1/2 INCHES. THE THICKNESS OF EACH LAYER CAN BE VARIED WITHIN THESE LIMITS, TO ACHIEVE THE REQUIRED JOINT THICKNESS (MIN. 2 INCHES). THE OBJECTIVE IS TO COAT EACH STONE AND FILL THE VOIDS WHILE AVOIDING AN EXCESS OF BINDER. THIS WILL ACHIEVE THE MAXIMUM CONTENT OF STONE CONSISTENT WITH ALL STONES BEING COATED WITH BINDER. RAKE THE MIXTURE TO MIX AND LEVEL.

THE TOP LAYER THICKNESS WILL VARY BETWEEN 1/2 INCH AND ONE (1) INCH. IN PREPARING THE TOP LAYER, THE RATIO OF AGGREGATE TO BINDER WILL BE APPROXIMATELY 6:1 BY WEIGHT. OVERFILL THE TOP LAYER AND COMPACT TO THE LEVEL OF THE ADJACENT SURFACES USING A ROLLER OR VIBRATORY PLATE COMPACTOR. IMMEDIATELY AFTER COMPLETION OF THE COMPACTION, POUR SUFFICIENT BINDER OVER THE JOINT TO FILL THE SURFACE VOIDS AND COAT THE SURFACE STONE. DUST THE FINISHED JOINT WITH A FINE, DRY AGGREGATE TO PREVENT TACKINESS.

MAINTENANCE OF TRAFFIC:

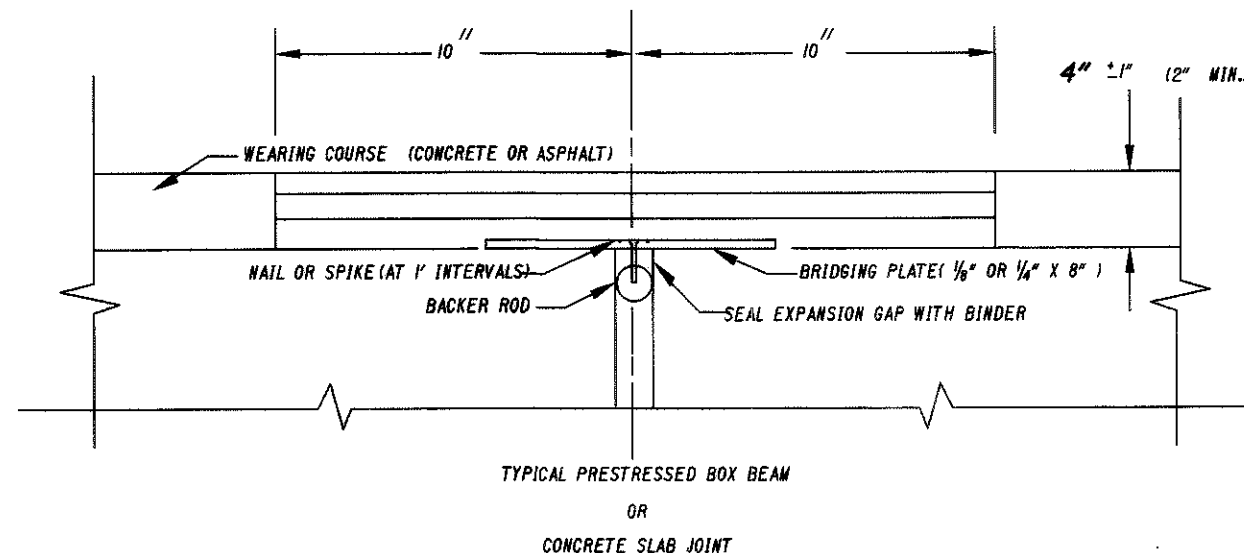
IF NECESSARY TO FACILITATE TRAFFIC MAINTENANCE, THE JOINT WILL BE INSTALLED IN TWO (2) HALF-WIDTH PHASES. DURING PHASE 1 APPROXIMATELY HALF OF THE TOTAL JOINT WILL BE INSTALLED. DURING PHASE 2, A MINIMUM OF TWO (2) INCHES OF THE PHASE 1 JOINT WILL BE REMOVED, AT OR NEAR THE CENTERLINE, WITH THE REMAINDER OF THE JOINT INSTALLED. IN ALL CASES, OPERATIONS WILL BE SCHEDULED SO THAT ALL LANES CAN BE OPEN TO TRAFFIC DURING ALL NON-WORKING HOURS.

TESTING:

CERTIFICATION WILL BE SUPPLIED FOR EACH PROJECT SHOWING BINDER COMPLIANCE WITH REQUIRED PROPERTIES. A ONE QUART SAMPLE OF BINDER WILL BE RETRIEVED FROM EACH BRIDGE FOR FURTHER TESTING BY THE O.D.O.T OFFICE OF MATERIALS MANAGEMENT.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT:

THE DEPARTMENT WILL MEASURE THE JOINT BY THE NUMBER OF FEET AND WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS : ITEM SPECIAL, FEET, POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM.



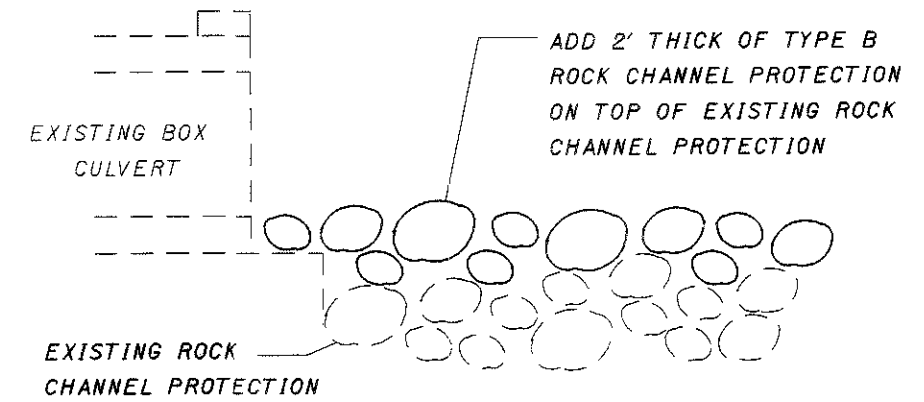
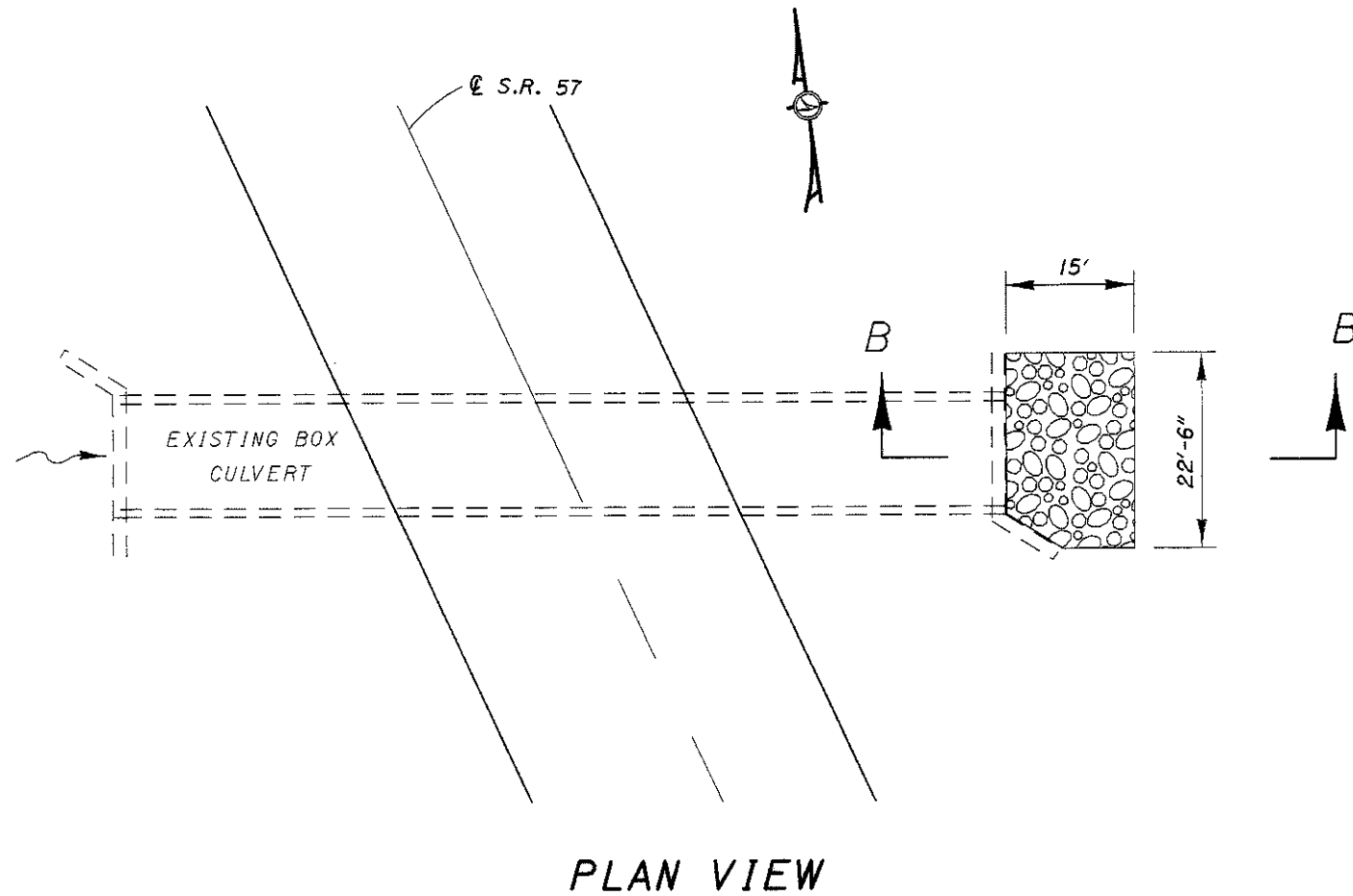
MED-57-0322 SFN 5201934			
ITEM	DESCRIPTION	UNIT	QUANTITY
SPECIAL	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	FT	84

QUANTITY CARRIED TO SHEET NO. 44

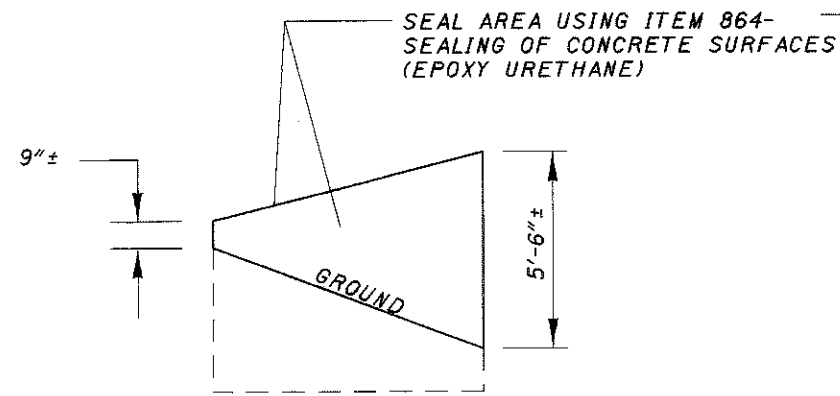
POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
 MED-57-0322 (S;LM-5.72) OVER RIVER STYX

MED-57-3.24
 45
 58

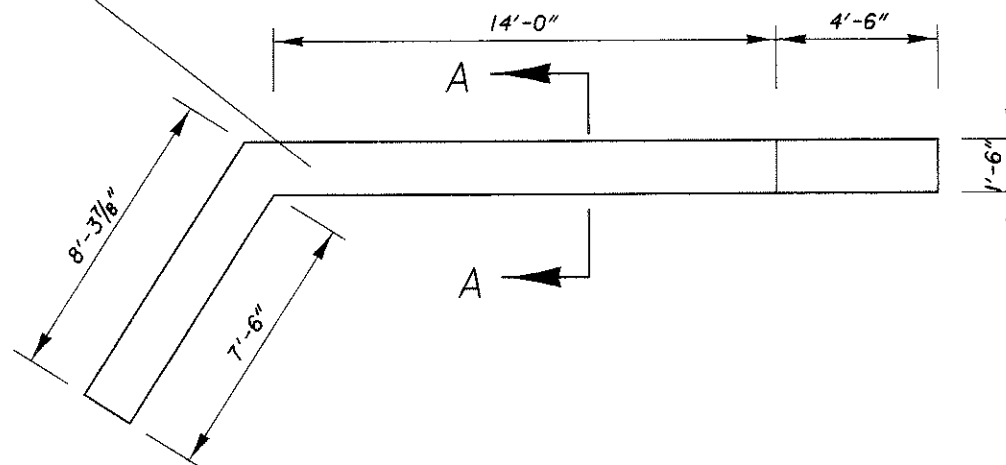
DESIGN FILE: i:\projects\77002\Struct\detail.dgn
 WORKSTATION: dmoltens DATE: 04/06/04



SECTION B-B

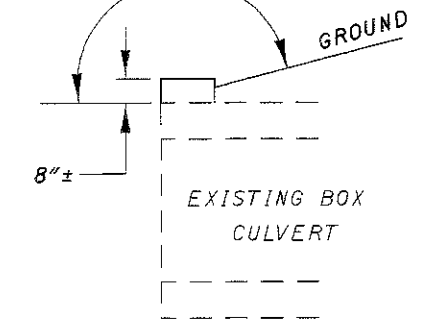


TYPICAL WINGWALL ELEVATION



TYPICAL HEADWALL PLAN

SEAL AREA USING ITEM 864-
 SEALING OF CONCRETE SURFACES
 (EPOXY URETHANE)



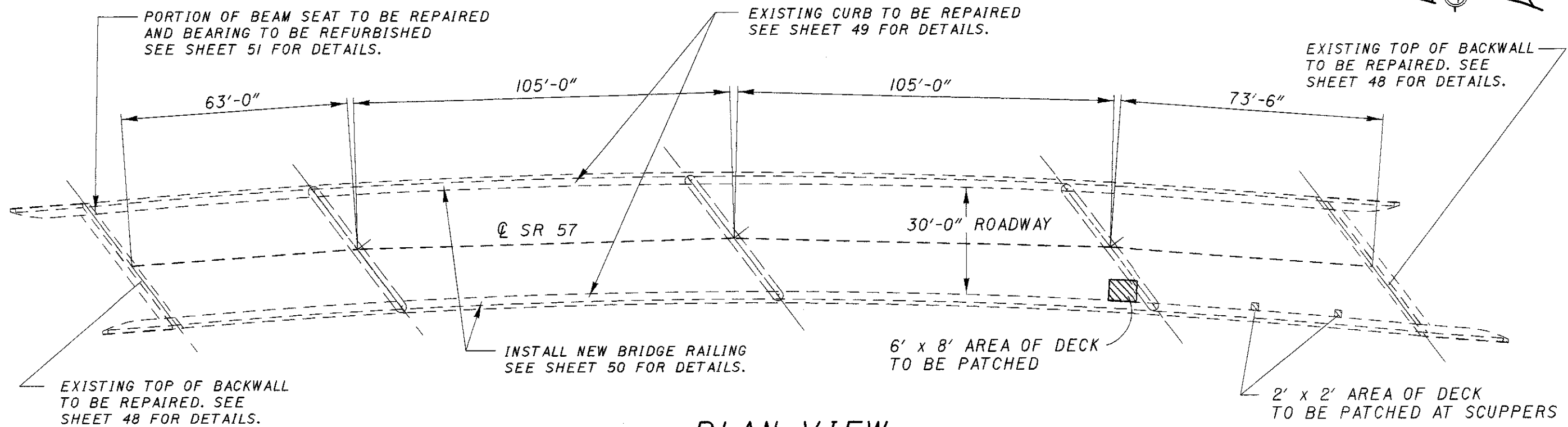
SECTION A-A

NOTES:

- 1) SEAL HEADWALLS AND WINGWALLS.
- 2) ADD ROCK CHANNEL PROTECTION AT OUTLET

ITEM	QUANTITY	UNIT	DESCRIPTION
601	24	CU YD	ROCK CHANNEL PROTECTION, TYPE B WITHOUT FILTER
864	20	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY URETHANE)

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 34



PLAN VIEW

BRIDGE DECK LENGTH=348.5'±

EXISTING PARAPET LENGTH (RIGHTSIDE=384.38'±
(LEFTSIDE=390.21'±)

ITEM	QUANTITY	UNIT	DESCRIPTION
202	1	CU YD	PORTIONS OF STRUCTURE REMOVED (BACKWALL)
202	1	CU YD	PORTIONS OF STRUCTURE REMOVED (BEAM SEAT)
202	19	CU YD	PORTIONS OF STRUCTURE REMOVED (CURB)
509	20	POUND	EPOXY COATED REINFORCING STEEL
511	19	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN (CURB)
511	1	CU YD	CLASS C CONCRETE, ABUTMENT, AS PER PLAN (BEAM SEAT)
511	1	CU YD	CONCRETE MISC.: BACKWALL REPAIR
SPECIAL	2	SQ YD	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN
516	1	EACH	REFURBISH BEARING DEVICE, AS PER PLAN
516	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN
517	766.17	FT	RAILING (THRIE BEAM RETROFIT)
SPECIAL	7	SQ YD	PATCHING CONCRETE BRIDGE DECK

- NOTES:**
- 1) EXISTING APPROACH GUARDRAIL NOT SHOWN.
 - 2) REPAIR EXISTING CURBS. SEE SHEET 49 FOR DETAILS.
 - 3) REPAIR FORWARD ABUTMENT BEAM SEAT. SEE SHEET 51 FOR DETAILS.
 - 4) REPAIR PORTIONS OF TOP OF BACKWALLS. SEE SHEET 48 FOR DETAILS.
 - 5) PATCH BRIDGE DECK WITH ITEM SPECIAL-PATCHING CONCRETE BRIDGE DECK
 - 6) SEAL EDGES OF NEW DECK PATCHES WITH ITEM SPECIAL-TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN.
 - 7) INSTALL NEW BRIDGE RAILING AS PER DETAILS ON SHEET 50.

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 35.

DESIGN FILE: i:\projects\77002\Struct\detail.dgn
WORKSTATION: dmo\hens DATE: 04/06/04

DESIGN AGENCY: DISTRICT THREE

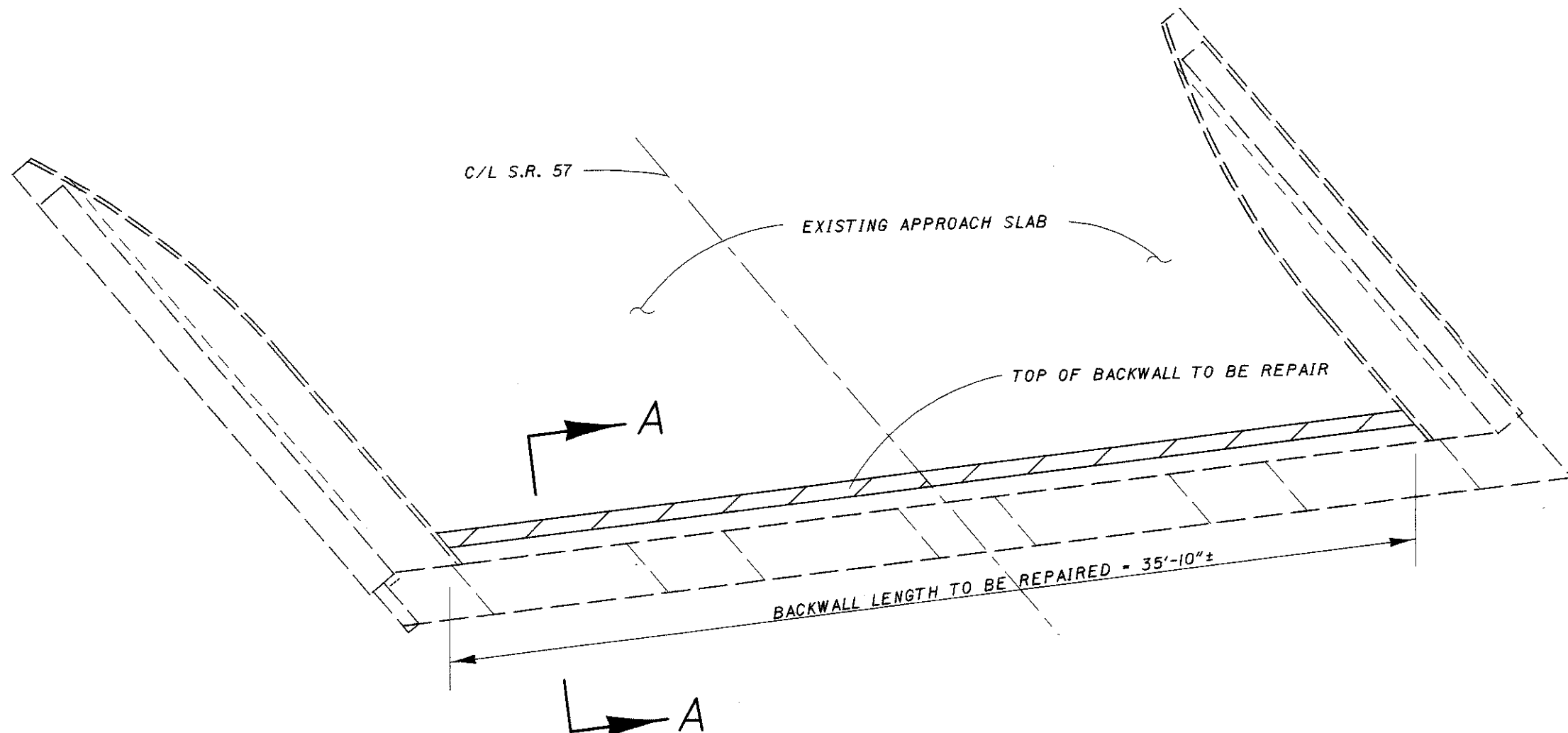
REVIEWED	DATE	RDN	4-04
DRAWN	DCM	STRUCTURE FILE NUMBER	5202043
DESIGNED	DCM	CHECKED	CAL

PLAN VIEW
MED-57-0652 (SLM-9.00)
OVER 1-71

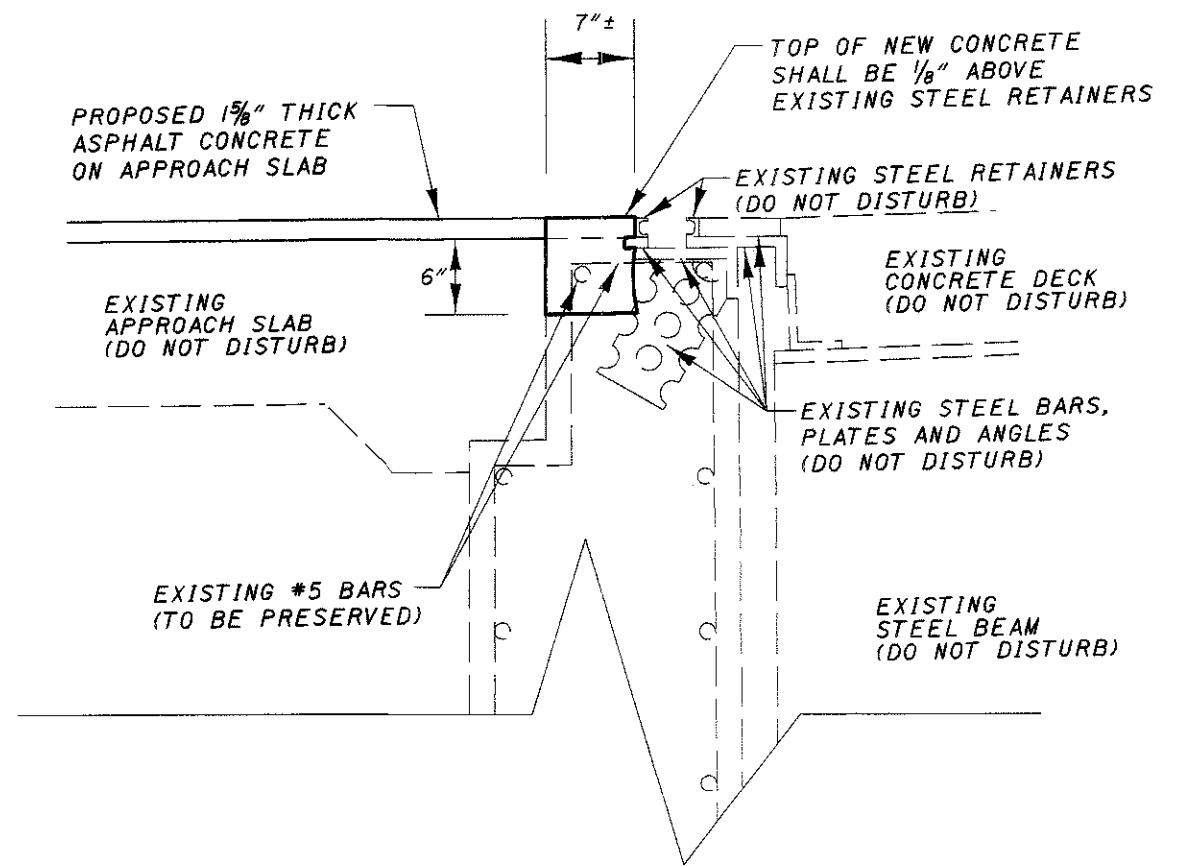
MED-57-3.24

47
58

DESIGN FILE: I:\projects\77002\Struct\detail.dgn
 WORKSTATION: dmollens DATE: 04/06/04



TYPICAL ABUTMENT
 PLAN VIEW



SECTION A- A

ITEM	QUANTITY	UNIT	DESCRIPTION
202	1	CU YD	PORTIONS OF STRUCTURE REMOVED (BACKWALL)
511	1	CU YD	CONCRETE MISC.: BACKWALL REPAIR

ALL QUANTITIES CARRIED TO SHEET NO. 47

DESIGN AGENCY
 DISTRICT THREE
 PRODUCTION

DATE
 4-04

REVIEWED
 RDN

STRUCTURE FILE NUMBER
 5202043

DESIGNED
 DCM

CHECKED
 CAL

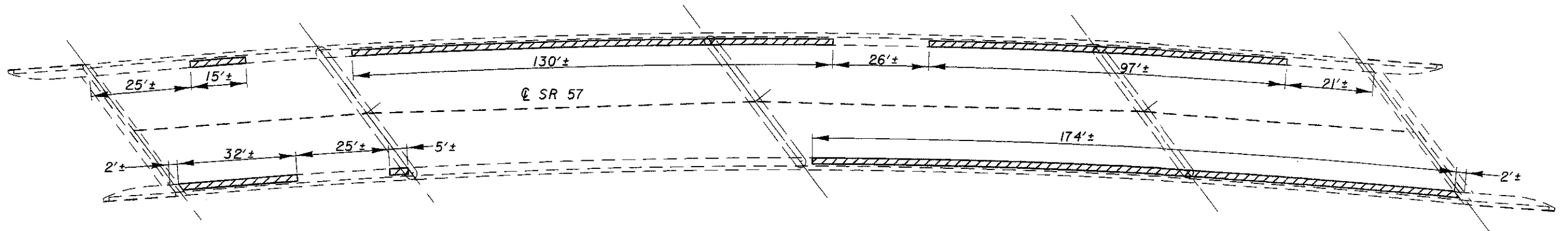
DRAWN
 DCM

REVISED
 REVISED

BACKWALL REPAIR DETAIL
 MED-57-0652 (SLM-9.00)
 OVER 1-71

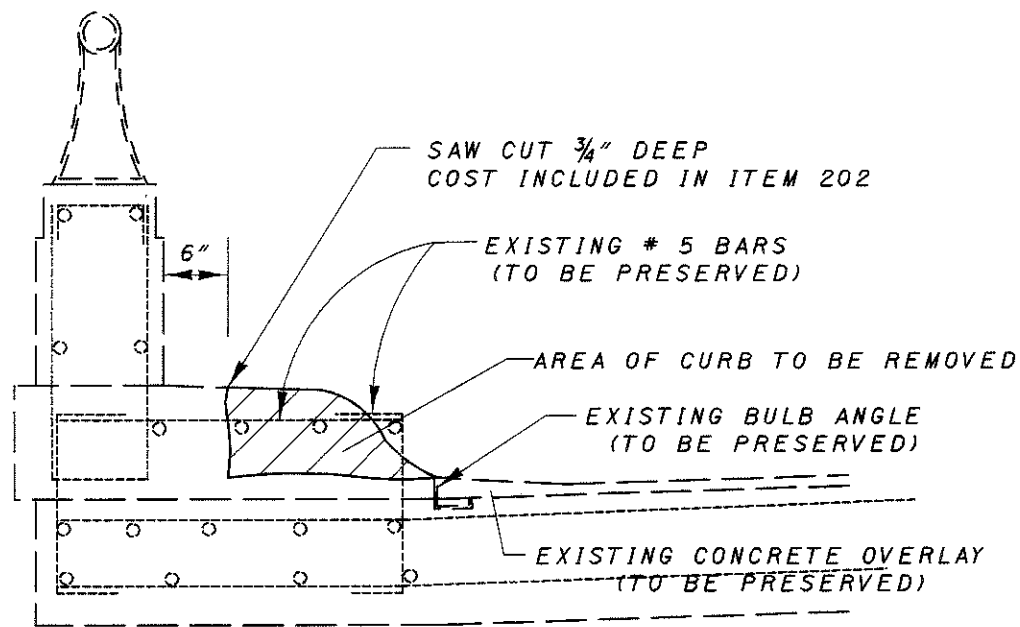
MED-57-3.24

48
 58

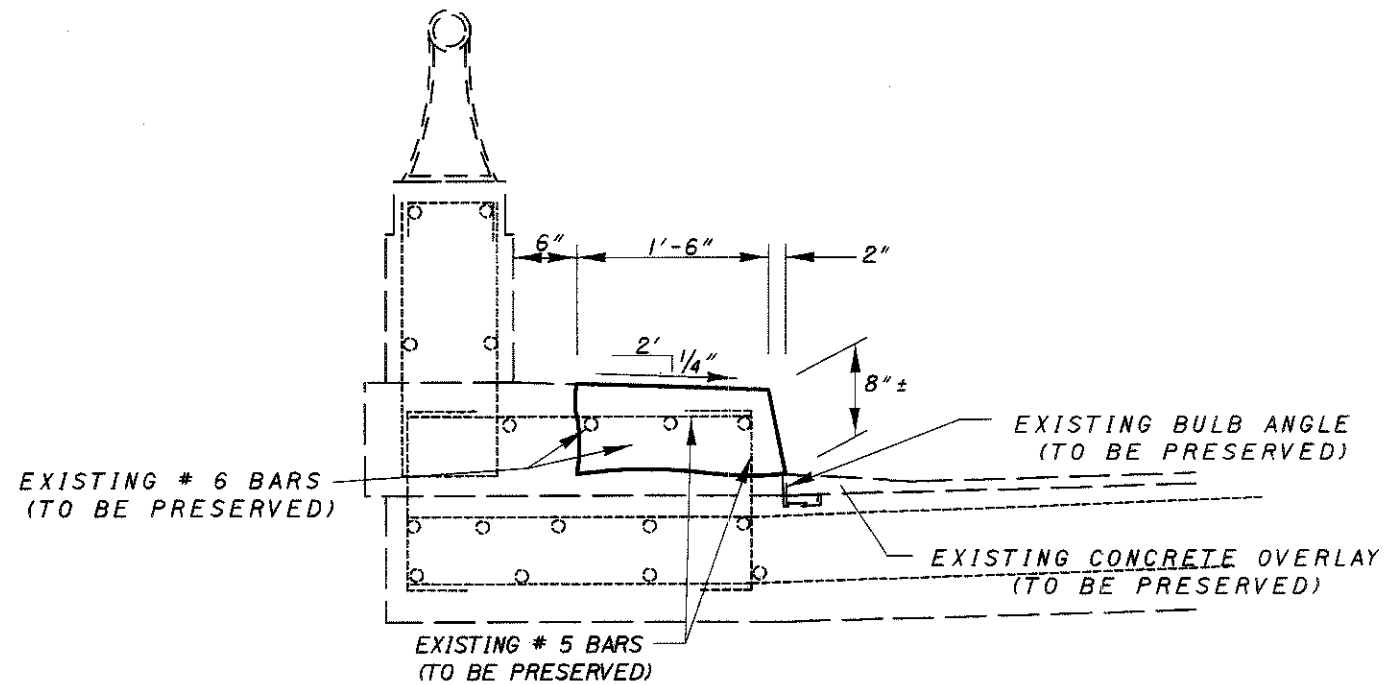


PLAN VIEW

AREA OF CURB TO BE REPAIRED



TYPICAL EXISTING CURB SECTION



TYPICAL PROPOSED CURB SECTION

ITEM	QUANTITY	UNIT	DESCRIPTION
202	19	CU YD	PORTIONS OF STRUCTURE REMOVED (CURB)
511	19	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN (CURB)

NOTES:

1) EXISTING APPROACH GUARDRAIL NOT SHOWN.

DESIGN FILE: I:\projects\77002\Struct\detail.dgn
WORKSTATION: dmoheens DATE: 04/06/04

DESIGN AGENCY
DISTRICT THREE

DATE 4-04
REVISED RDN
STRUCTURE FILE NUMBER 5202043

DRAWN DCM
REVISED
DESIGNED DCM
CHECKED CAL

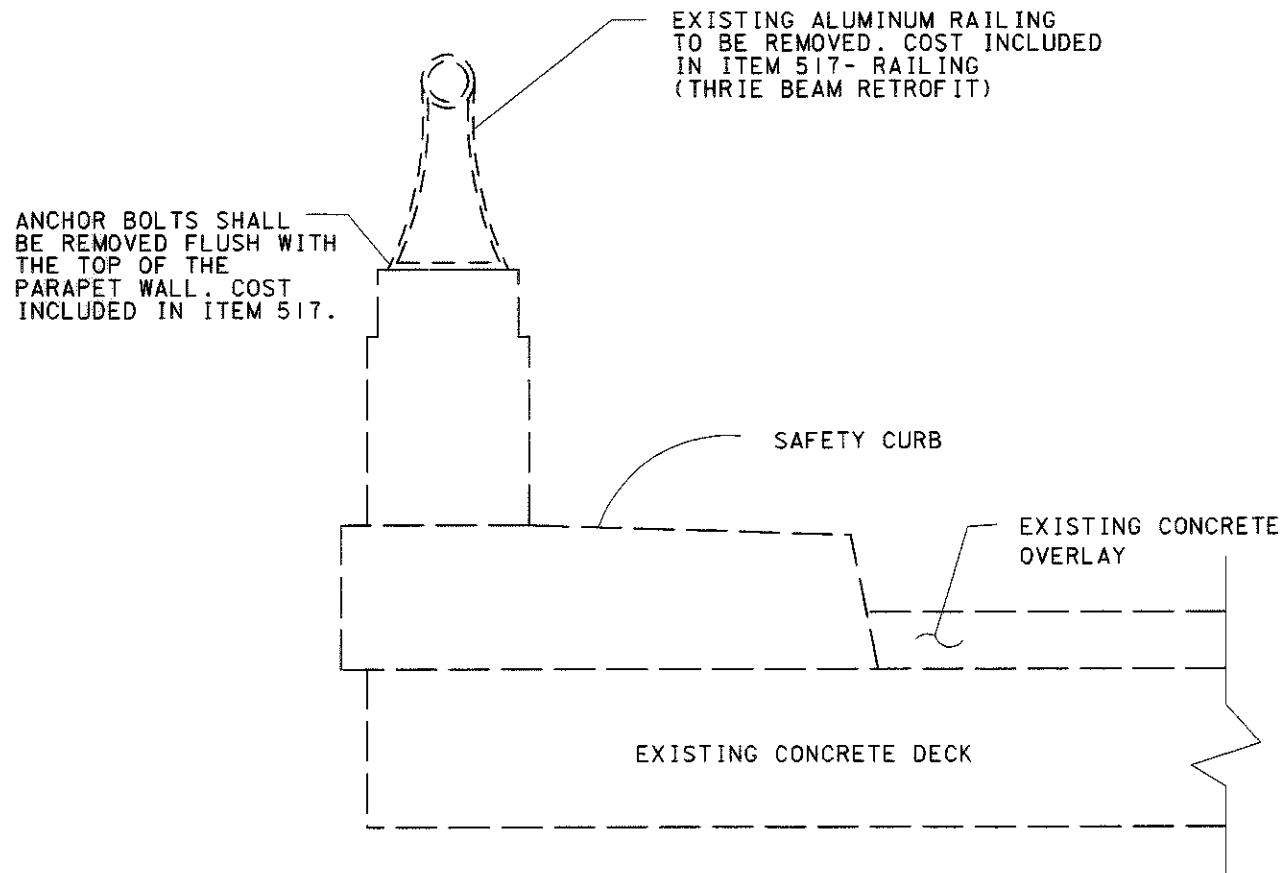
CURB REPAIR
MED-57-0652 (SLM-9.00)
OVER 1-71

MED-57-3.24

49
58

ALL QUANTITIES CARRIED TO SHEET NO. 47

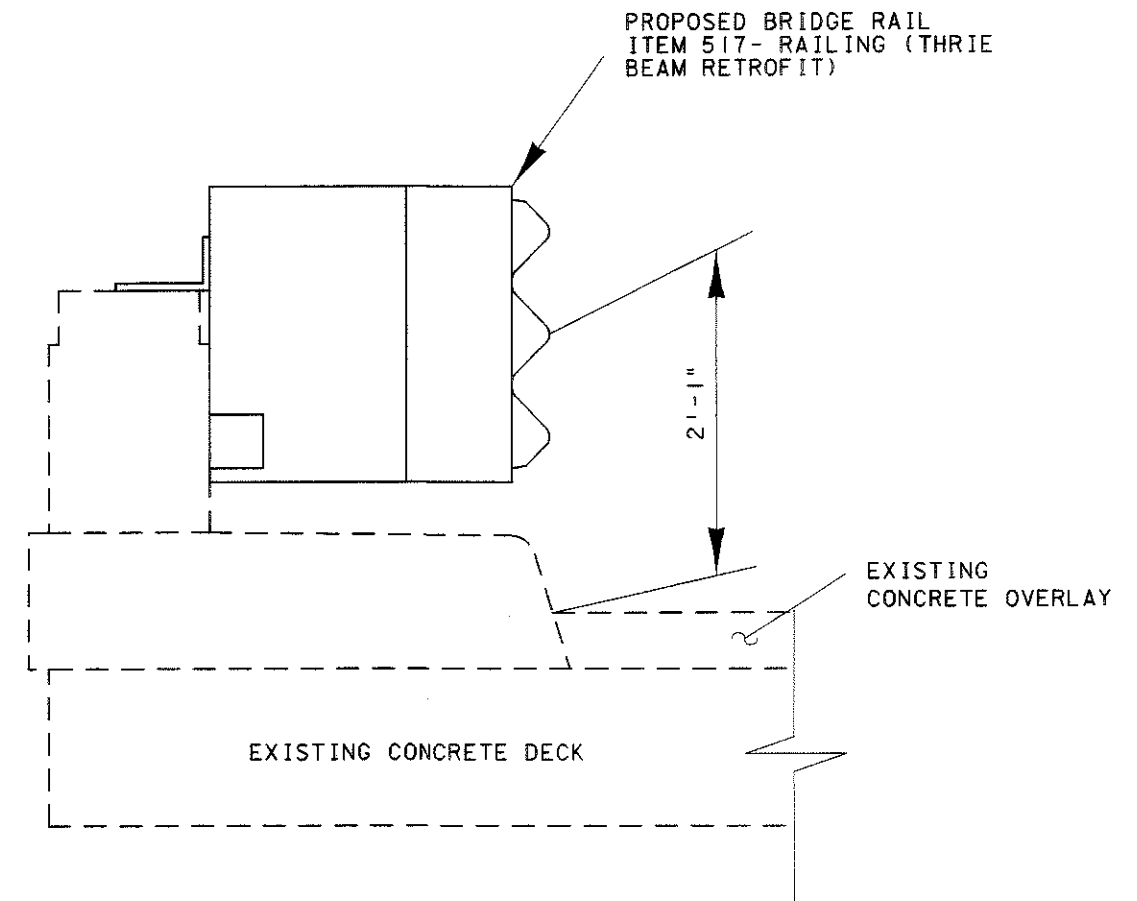
DESIGN FILE: I:\projects\17002\struct\detail\dgn
 WORKSTATION: dmellens DATE: 04/06/04



EXISTING TYPICAL SECTION OF 2'-2" SAFETY CURB

ITEM	QUANTITY	UNIT	DESCRIPTION
517	766.17	FT	RAILING (THRIE BEAM RETROFIT)

ALL QUANTITIES CARRIED TO SHEET NO. 47



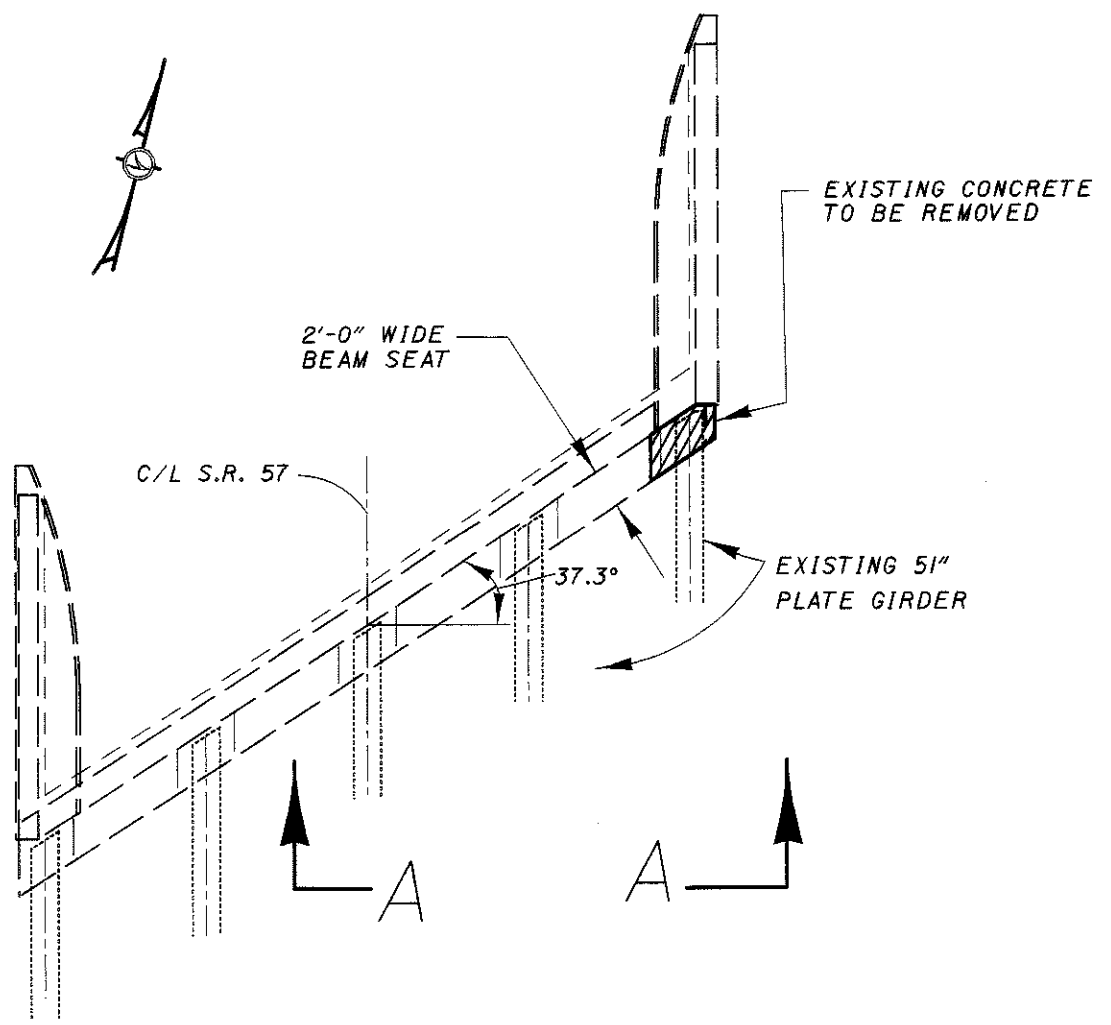
PROPOSED TYPICAL SECTION OF 2'-2" SAFETY CURB

EXISTING PARAPET LENGTH (RIGHTSIDE=384.38'±
 (LEFTSIDE=390.21'±)

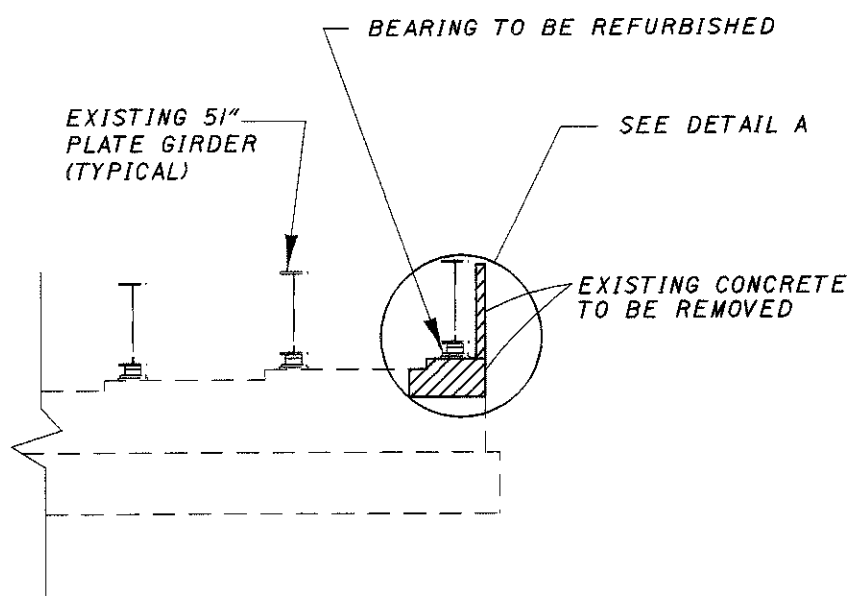
NOTES:

- 1) FOR ADDITIONAL DETAILS ON PROPOSED BRIDGE RAILING SEE STANDARD DRAWING TBR-91

DESIGN FILE: i:\projects\77002\Struct\detail.dgn
 WORKSTATION: dmollens DATE: 04/06/04



PLAN VIEW
 FORWARD ABUTMENT



SECTION A-A

CONCRETE TO BE REMOVED

REINFORCING TABLE				
MARK	NUMBER	LENGTH	WEIGHT (LBS)	TYPE
A501	4	1'-4"	6	STRAIGHT
A502	2	6'-6"	14	STRAIGHT
TOTAL			20	

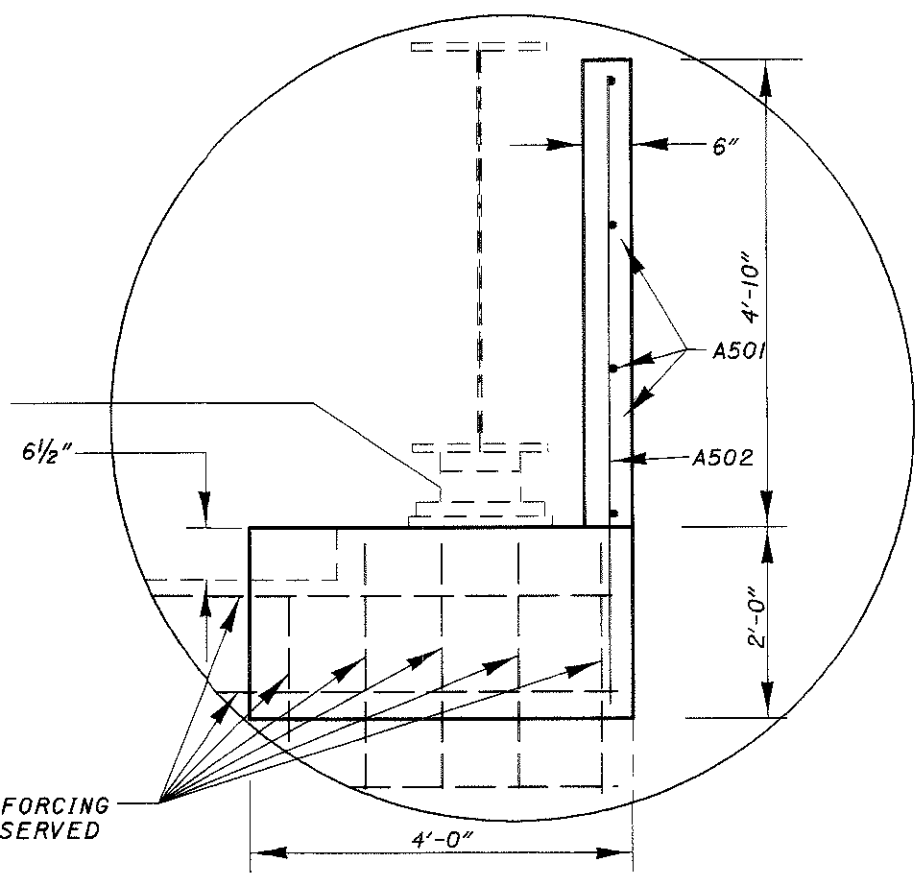
NOTE:

1) EXISTING FENCE IS ATTACHED TO ABUTMENT CONCRETE THAT IS BEING REMOVED. INSTALL ANCHORS IN NEW CONCRETE FOR FENCE ATTACHMENT. COST FOR ANCHORS, DETACHING AND ATTACHING FENCE ARE INCLUDED IN ITEM 511

ITEM	QUANTITY	UNIT	DESCRIPTION
202	1	CU YD	PORTIONS OF STRUCTURE REMOVED (BEAM SEAT)
509	20	POUND	EPOXY COATED REINFORCING STEEL
511	1	CU YD	CLASS C CONCRETE, ABUTMENT, AS PER PLAN (BEAM SEAT)
516	1	EACH	REFURBISH BEARING DEVICE, AS PER PLAN
516	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

ALL QUANTITIES CARRIED TO SHEET NO. 47

BEARING TO BE REFURBISHED



DETAIL A

DESIGN AREA
 DISTRICT THREE
 PRODUCTION

DATE 4-04
 RDN
 STRUCTURE FILE NUMBER 5202043

OWNER DCN
 CHECKED CAL

BEAM SEAT REPAIR DETAIL
 MED-57-0652 (SLM-9.00)
 OVER 1-71

MED-57-3.24

51
 58

SIGNAL TIMING

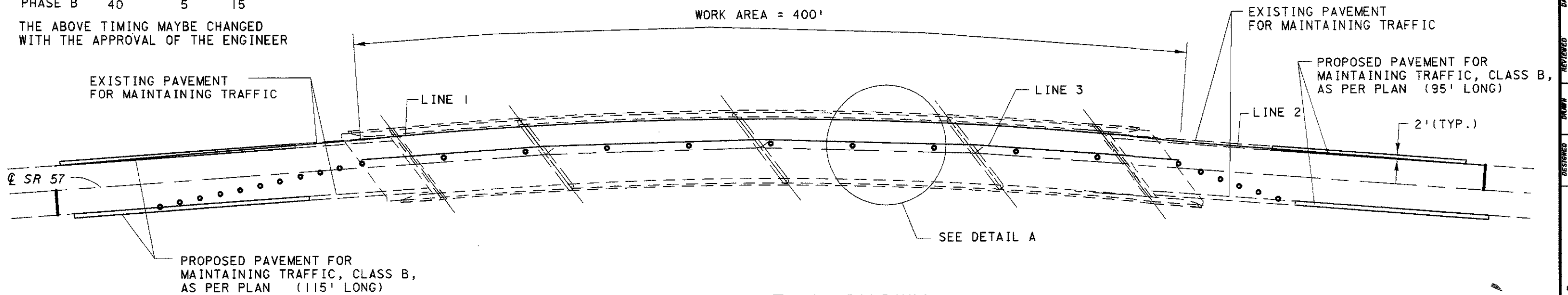
A TWO PHASE CONTROLLER WITH CABINET CAPABLE OF BEING SET WITH THE FOLLOWING SPLITS SHALL BE FURNISHED

CYCLE LENGTH: 120 SECONDS

	GREEN	AMBER	RED
PHASE A	40	5	15
PHASE B	40	5	15

THE ABOVE TIMING MAYBE CHANGED WITH THE APPROVAL OF THE ENGINEER

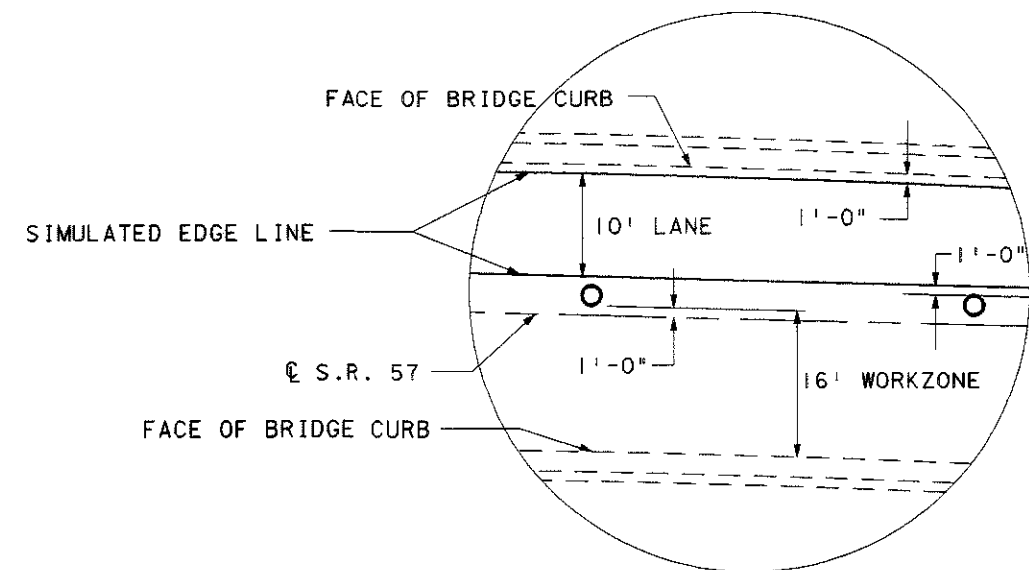
FOR DETAILS NOT SHOWN SEE STANDARD DRAWINGS
MT-96.10, MT-96.20, MT-96.25, MT-101.20



PHASE A SHOWN
PHASE B SIMILAR

WORK ZONE RAISED PAVEMENT MARKERS (TYPE A)				
	SPACING	QTY. (WHITE)	QTY. (YELLOW)	
PHASE A	LINE 1 = 550'	5'-0"	111	111
	LINE 2 = 150'	5'-0"	30	
	LINE 3 = 400'	5'-0"	81	81
PHASE B	LINE 1 = 550'	5'-0"	111	111
	LINE 2 = 150'	5'-0"	30	
	LINE 3 = 400'	5'-0"	81	81
	TOTAL		444	384

ITEM	QUANTITY	UNIT	DESCRIPTION
614	828	EACH	WORK ZONE RAISED PAVEMENT MARKER
614	12	EACH	BARRIER REFLECTOR, TYPE A2
614	18	EACH	BARRIER REFLECTOR, TYPE B2
614	0.06	MILE	WORK ZONE CENTER LINE, CLASS 1 (SOLID DOUBLE)
614	0.04	MILE	WORK ZONE EDGE LINE, CLASS 1 (WHITE)
614	24	FT	WORK ZONE STOP LINE, CLASS 1
615	LUMP		ROADS FOR MAINTAINING TRAFFIC
615	94	SQ YD	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN



DETAIL A

NOTES:

- 1) THE EXISTING GUARDRAIL IS NOT SHOWN IN THE PLAN VIEW

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET NO. 35

DESIGN FILE: I:\projects\77002\Struct\strmot.dgn
WORKSTATION: dmollens DATE: 04/06/04

DESIGN AGENCY
DISTRICT THREE

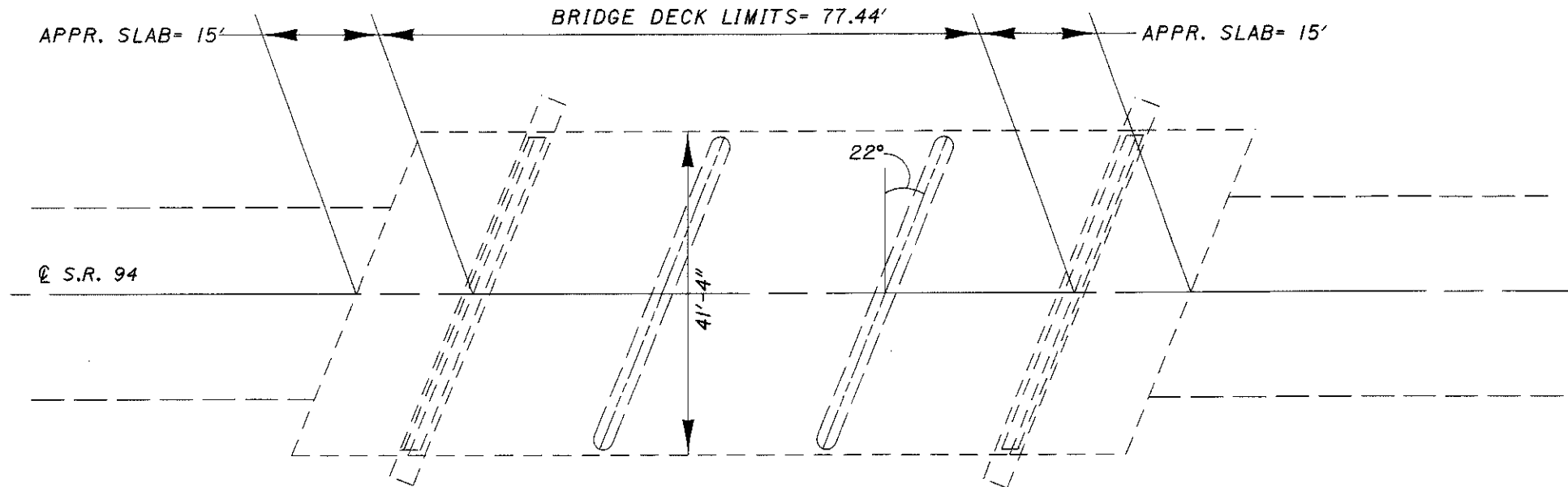
DATE
4-04
REVIEWED
RDN
STRUCTURAL FILE NUMBER
5202043

DRAWN
DCM
CHECKED
DCM
CAL

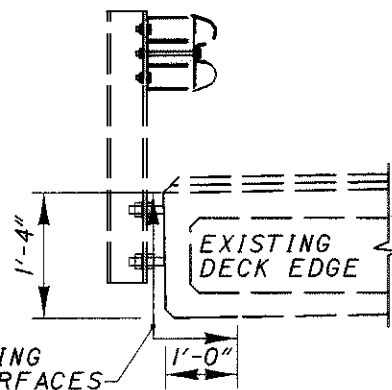
MAINTENANCE OF TRAFFIC
MED-57-0652 (S.L.M.-9.00)
OVER I-71

MED-57-3.24

52
58

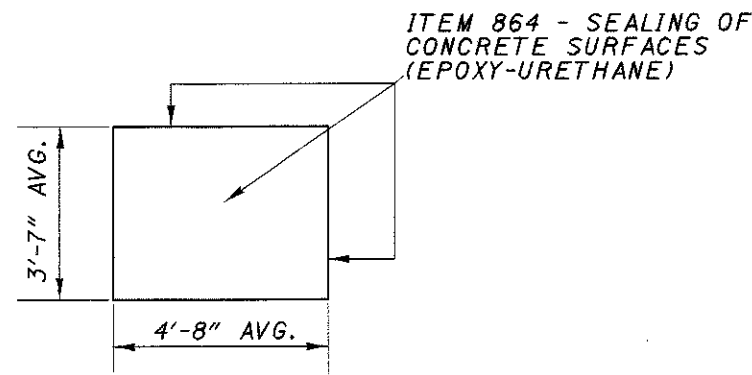


PLAN VIEW



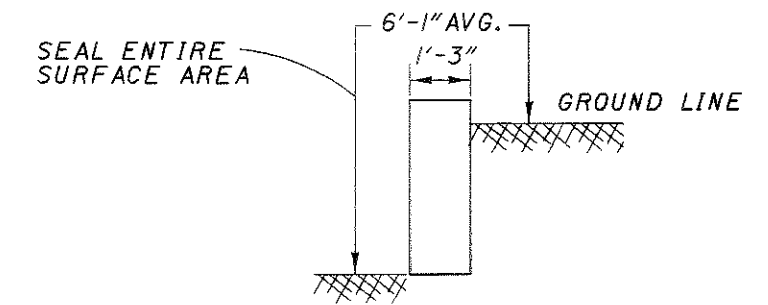
ITEM 864 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

TYPICAL BEAM VIEW



ITEM 864 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

TYPICAL WINGWALL VIEW



WINGWALL SIDE VIEW

NOTES:

- 1) THE DECK SHALL BE SEALED USING ITEM 841 - TREATING OF CONCRETE SURFACES WITH SRS.
- 2) THE WINGWALLS AND DECK EDGE SHALL BE SEALED USING ITEM 864 - SEALING OF CONCRETE SURFACES (EPOXY URETHANE)

ITEM	QUANTITY	UNIT	DESCRIPTION
841	356	SQ YD	TREATING OF CONCRETE SURFACES WITH SRS
864	55	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 36

DESIGN FILE: i:\projects\77002\Struct\detail.dgn
 WORKSTATION: dmollens DATE: 04/06/04

DISTRICT THREE

DATE 4-04
 RDN
 STRUCTURE FILE NUMBER 5205719

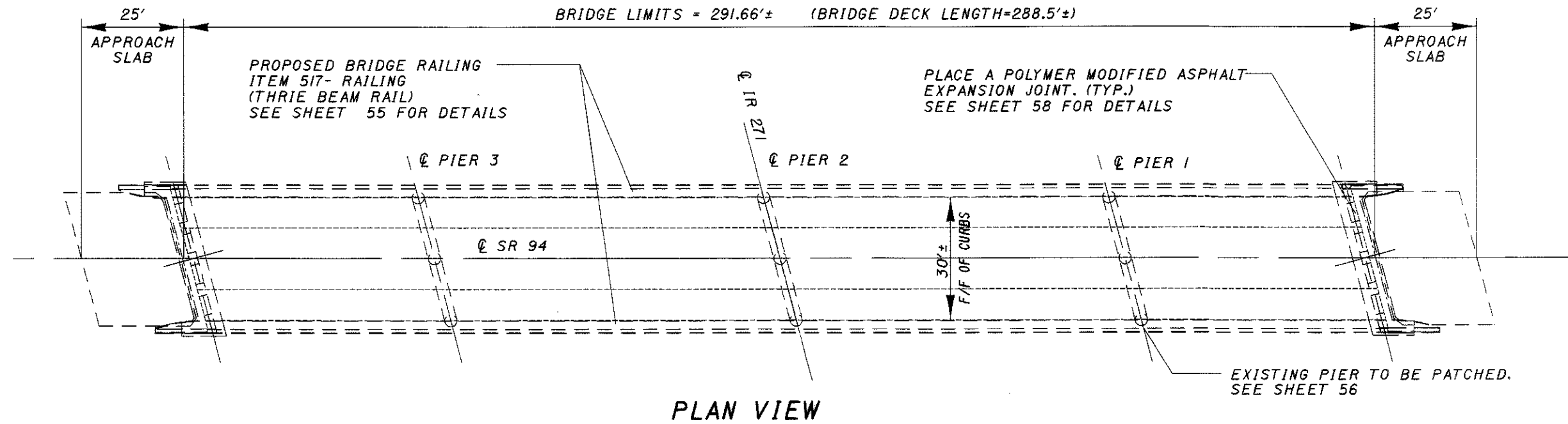
DESIGNED JPF
 CHECKED CAL

PLAN VIEW
 MED-94-1377 (SLM-13.77)
 OVER DITCH

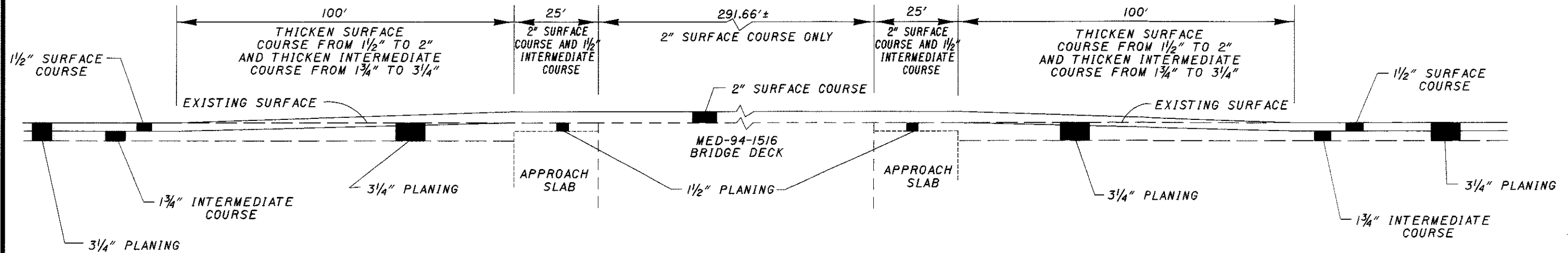
MED-57-3.24

53
 58

DESIGN FILE: I:\projects\77002\Struct\detail.dgn
 WORKSTATION: dmollens DATE: 04/06/04



PLAN VIEW



ASPHALT PLANING AND PAVING DETAIL
 (SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES)

ITEM	QUANTITY	UNIT	DESCRIPTION
202	.5	CU YD	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (PARAPET)
517	619.72	FT	RAILING (THRIE BEAM RETROFIT)
SPECIAL	62	FT	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
843	16	SQ FT	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR
864	291	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

EXISTING PARAPET LENGTH = 314.07'±

NOTES:

- 1) THE EXISTING APPROACH GUARDRAIL IS NOT SHOWN IN THE PLAN VIEW
- 2) SEE SHEET 55 FOR BRIDGE RAILING DETAILS.
- 3) SEE SHEETS 56 FOR PIER PATCHING DETAILS.
- 4) THE AREAS NOTED ON SHEET 57 SHALL BE SEALED USING ITEM 864- SEALING OF CONCRETE SURFACES (EPOXY- URETHANE)
- 5) SEE SHEETS 58 FOR POLYMER MODIFED EXPANSION JOINT DETAILS.

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 36

DESIGN AGENCY
 DISTRICT THREE

DATE
 4-04

REVIEWED
 RDN 4-04
 STRUCTURAL FILE NUMBER
 5205735

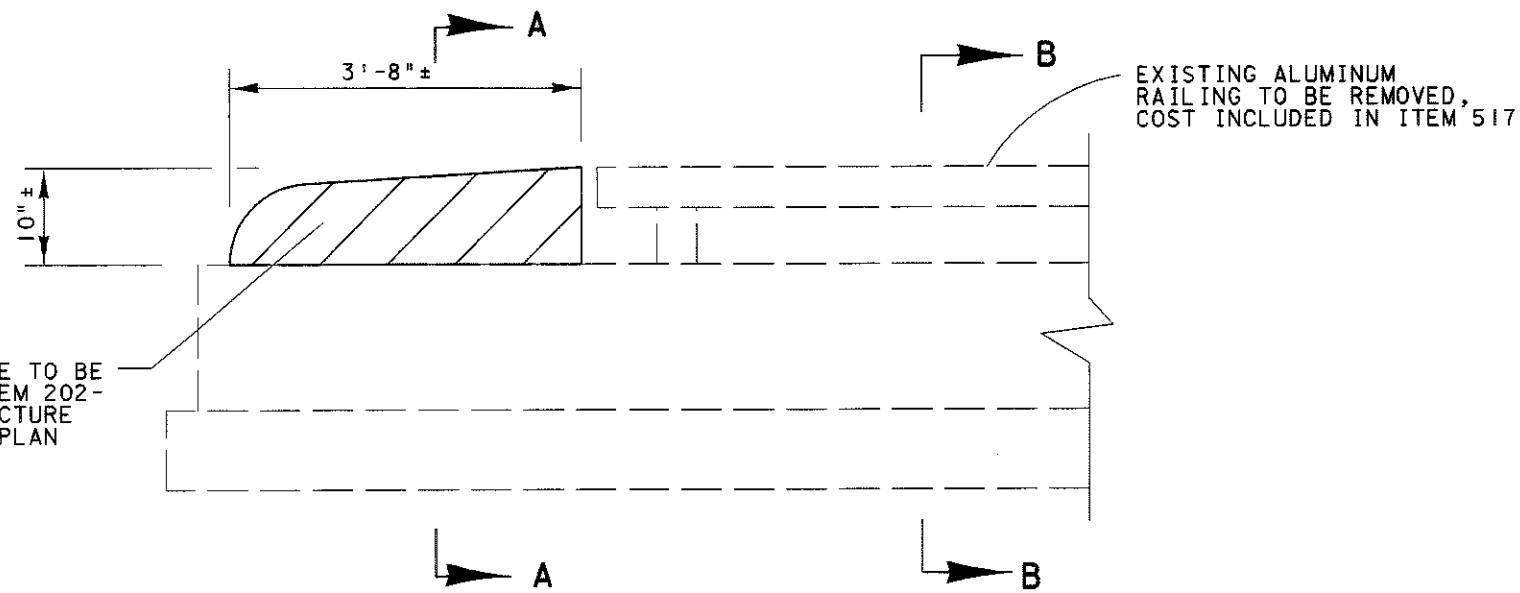
DESIGNED
 DCM
 CHECKED
 CAL

PLAN VIEW
 MED-94-1516 (SLM-15.16)
 OVER I-271

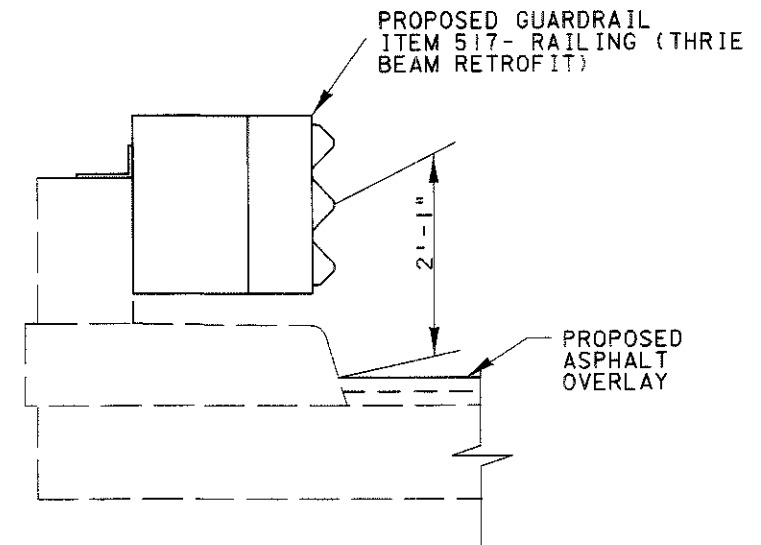
MED-57-3.24

54
 58

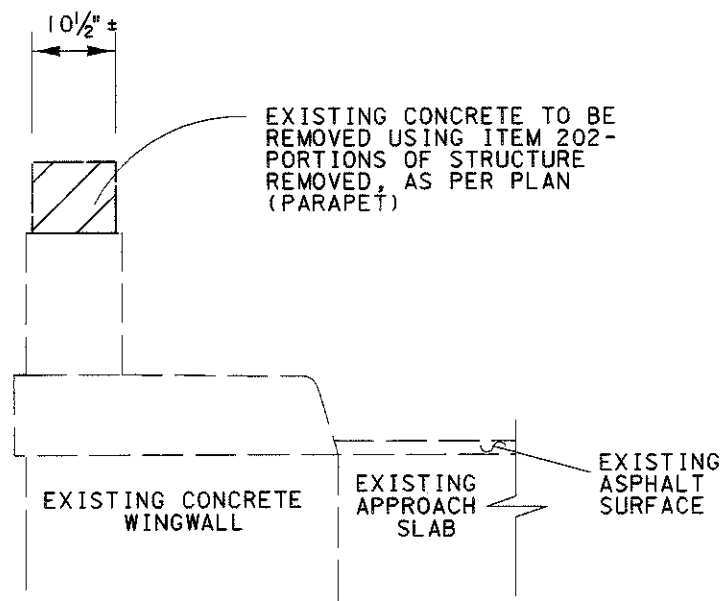
DESIGN FILE: I:\projects\77002\Struct\detail\deta1.dgn
 WORKSTATION: dmilene DATE: 01/06/04



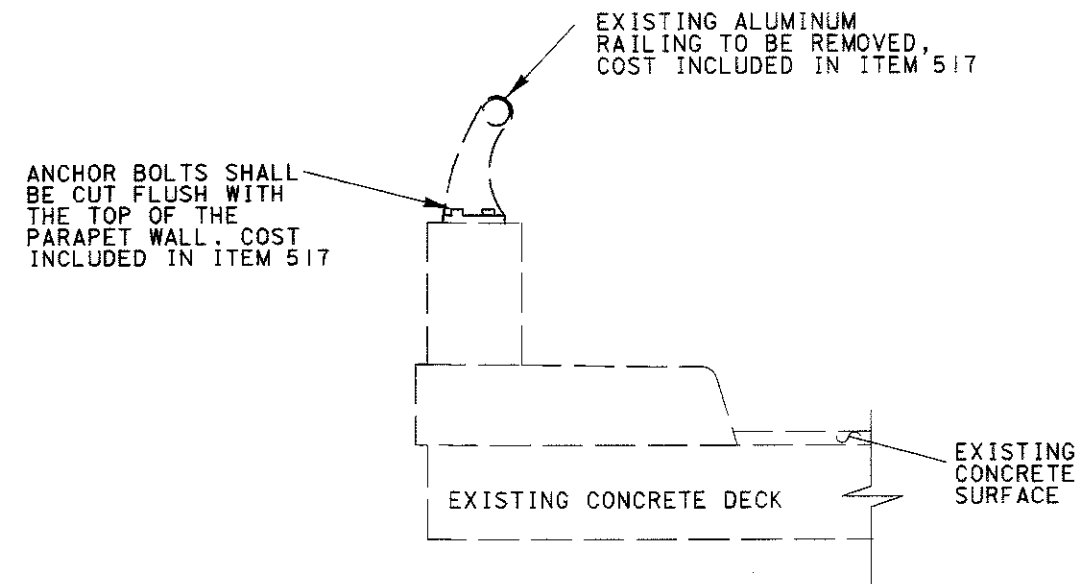
TYPICAL ELEVATION VIEW OF PARAPET ON WINGWALL



PROPOSED SECTION A-A & B-B



EXISTING SECTION A-A



EXISTING SECTION B-B

ITEM	QUANTITY	UNIT	DESCRIPTION
202	.5	CU YD	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (PARAPET)
517	619.72	FT	RAILING (THRIE BEAM RETROFIT)

NOTES:

1) FOR ADDITIONAL DETAILS ON PROPOSED BRIDGE RAILING SEE STANDARD DRAWING TBR-91

ALL QUANTITIES CARRIED TO SHEET 54.

DESIGN AREA
 DISTRICT THREE

DATE 4-04
 REVIEWED RDN
 STRUCTURAL FILE NUMBER 5205735

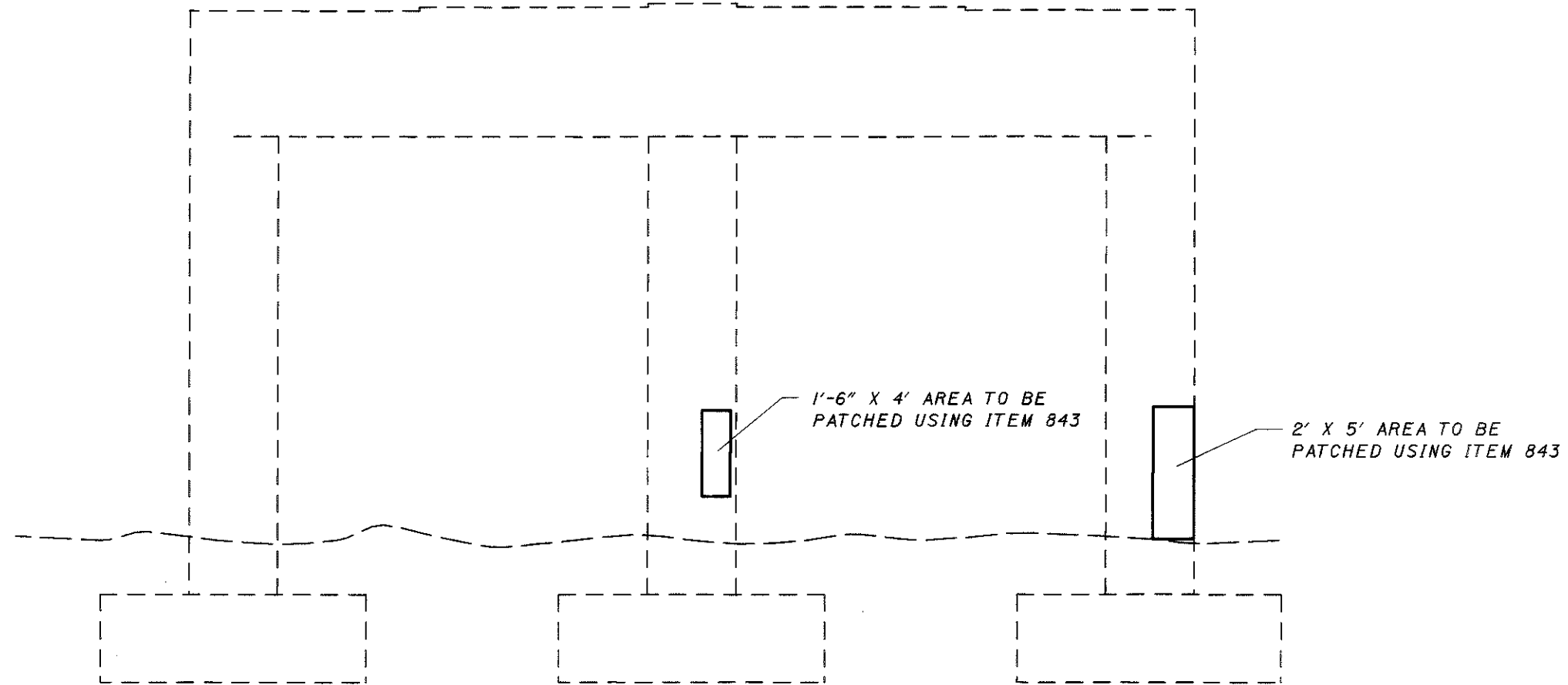
DRAWN DCM
 CHECKED CAL

RAILING (THRIE BEAM RETROFIT)
 MED-94-1516 (SLM-15.16)
 OVER I-271

MED-57-3.24

55
 58

DESIGN FILE: I:\projects\77002\Struct\detail.dgn
 WORKSTATION: dmollens DATE: 04/06/04

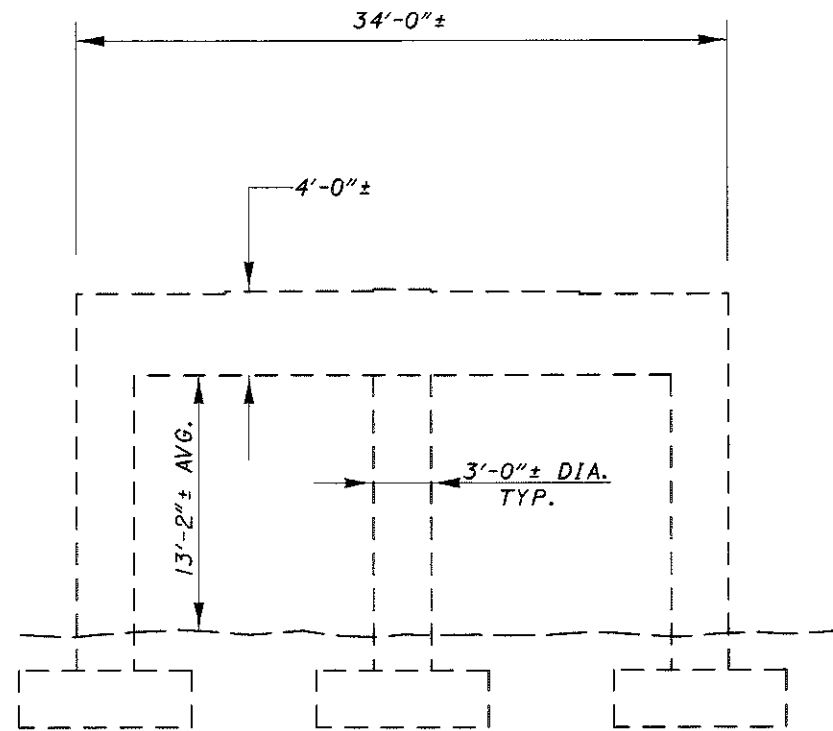


PIER 1 ELEVATION (LOOKING SOUTH)
 (CONCRETE BARRIER NOT SHOWN)

ITEM	QUANTITY	UNIT	DESCRIPTION
843	16	SQ FT	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR

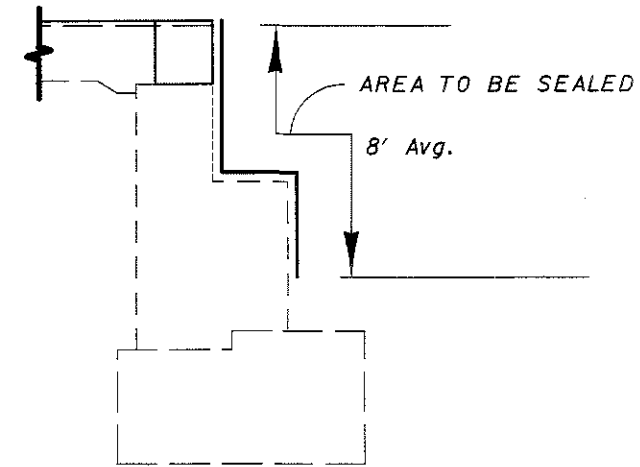
ALL QUANTITIES CARRIED SHEET NO. 54

DESIGNED RPT		DRAWN RPT		REGISTERED RDN	DATE 4-04	DISTRICT THREE PRODUCTION
CHECKED CAL		REVISED		STRUCTURE FILE NUMBER 52057.35		
PIER PATCHING DETAILS						MED-94-1516 (SLM-15.16) OVER 1-271
MED-57-3.24						
56						58
58						



PIER WIDTH=3'-0"±

TYPICAL PIER ELEVATION



ABUTMENT WIDTH = 37'±

TYPICAL ABUTMENT SECTION

NOTES:

- 1) SEAL PIER COLUMNS, BOTTOM AND SIDE OF PIER CAPS
- 2) SEAL ABUTMENT SEATS AND BACKWALLS

ITEM	QUANTITY	UNIT	DESCRIPTION
864	291	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ALL QUANTITIES CARRIED SHEET NO. 54

DESIGN FILE: I:\projects\77002\Struct\detail.dgn
 WORKSTATION: dmollens DATE: 04/06/04

DESIGN AGENCY
 DISTRICT THREE
 PRODUCTION

REVISED
 RDN 4-04
 STRUCTURE FILE NUMBER
 5205735

DESIGNED
 RPT
 CHECKED
 CAL

CONCRETE SEALING DETAILS
 MED-94-1516 (SLM-15.16)
 OVER I-271

MED-57-3.24

57
 58

GENERAL NOTES AND DETAILS FOR POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

DESIGNED: MAM
 DRAWN: MAM
 CALCULATED: DCM
 CHECKED: CAL
 DATE REVISED: 10-28-96
 DATE: 10-17-03
POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
MED-94-1516 (SLM-15.16) OVER I-271
MED-57-3.24
 58
 58

ITEM SPECIAL - POLYMER-MODIFIED ASPHALT EXPANSION JOINT SYSTEM

THIS ITEM WILL BE USED TO SEAL THE EXPANSION/CONTRACTION JOINTS AS PER THESE DETAILS AND THE MANUFACTURER'S REQUIREMENTS USING A POLYMER-MODIFIED ASPHALT SYSTEM. THE PRIME CONTRACTOR WILL OBTAIN THE SERVICES OF ONE OF THE FOLLOWING APPROVED APPLICATORS WHO WILL FURNISH AND INSTALL THE NEW BRIDGE EXPANSION JOINT SYSTEM AFTER ALL PAVING ON THE AFFECTED BRIDGE(S) HAS BEEN COMPLETED.

PAVETECH INTERNATIONAL 4660 DUKE DRIVE SUITE 390 NASON, OHIO 45040 TEL: (513) 770-3122	LINEAR DYNAMICS, INC. 79 MONTGOMERY ST. MONTGOMERY, PA 17752 TEL: (570) 547-1621	WATSON-BOWMAN ACME 95 PINEVIEW DR. AMHERST, NY 14228 TEL (716) 691-7566 OR TEL (800) 253-9226
---	--	--

MATERIALS:

BRIDGING PLATE:

MILD STEEL 1/8" OR 1/4" THICK PLATE, 8" WIDE OR 18 GAUGE ALUMINUM, 8" WIDE.

BINDER:

TYPE: POLYMER MODIFIED ASPHALT
 SOFTENING POINT: 180 DEGREES F. MIN.
 FLOW: 3 mm. MAX. AT 140 DEGREES F.
 PENETRATION: 9 mm. MAX. AT 77 DEGREES F.
 1 mm. MIN AT 0 DEGREES F.
 ASTM D 3407
 DUCTILITY: 40 cm. MIN. ASTM D 113
 RESILIENCE: 60% MIN. AT 77 DEGREES F.
 TENSILE ADHESION: 700% MIN.
 SPECIFIC GRAVITY: 1.10 * 0.05
 POURING TEMP: 350 - 390 DEGREES F.

AGGREGATE:

TYPE: CRUSHED, DOUBLE WASHED, AND DRIED GRANITE OR BASALT

GRADATION

THE GRADATION OF THE AGGREGATE VARIES BY MANUFACTURER AND WILL BE AS PER THE MANUFACTURER'S RECOMMENDATIONS FOR THE SYSTEM BEING USED ON THIS PROJECT.

BACKER ROD:

THE BACKER SHALL BE A CLOSED CELL FOAM EXPANSION JOINT FILLER CAPABLE OF WITHSTANDING THE PLACEMENT TEMPERATURE OF THE POLYMER MODIFIED ASPHALT.

NOTE: PRIOR TO PLACEMENT OF ANY PORTION OF THE JOINT SYSTEM, THE PROJECT ENGINEER MUST HAVE CERTIFIED TEST DATA MEETING ALL THE MINIMUM REQUIREMENTS OF ALL THE MATERIALS OF THE JOINT SYSTEM.

INSTALLATION PROCEDURES:

SAWING AND SURFACE PREPARATION:

AFTER ALL PAVING OPERATIONS ARE COMPLETE, THE OVERLAY IS TO BE TRANSVERSELY SAW CUT FULL DEPTH NO LESS THAN TWO INCHES DEEP (20" CENTERED OVER JOINT OPENING, UNLESS OTHERWISE NOTED). REMOVE ALL MATERIAL, INCLUDING WATER-PROOFING MATERIAL, BETWEEN SAW CUTS. THOROUGHLY CLEAN AND DRY EXPOSED CONCRETE, STEEL, AND CUT SURFACES USING COMPRESSED AIR AND A HOT COMPRESSED AIR (HCA) LANCE. THE LANCE MUST PRODUCE A FLAME RETARDED AIR STREAM TEMPERATURE OF 3000 DEGREES F. AT A VELOCITY OF 3,000 FEET PER

SECOND WITH 15 PSIG CHAMBER PRESSURE. IF THERE IS AN INTERRUPTION DUE TO WEATHER OR OTHER CAUSES, THE OPERATION WILL BE REPEATED WITH THE HCA LANCE IMMEDIATELY BEFORE THE BINDER COAT OPERATION. ALSO, 6 INCHES OF THE ROAD SURFACE ON EITHER SIDE OF THE JOINT WILL BE DRIED SO THAT A SUITABLE SURFACE FOR BITUMEN ADHESION IS OBTAINED.

SEALING OF EXPANSION JOINT: (PRE-STRESSED BOX OR CONCRETE SLAB)

THE EXPANSION JOINT GAP IS TO BE SEALED AND A BRIDGING PLATE CENTERED ALONG IT. A VERY NARROW GAP WILL BE SEALED BY POURING HOT BINDER INTO THE GAP. GAPS OF 1/8" OR MORE WILL FIRST BE FILLED WITH AN APPROPRIATELY SIZED BACKER ROD. THE BACKER ROD WILL BE INSTALLED SO THAT IT IS BETWEEN 1/8" AND 1-1/8" BELOW THE TOP OF THE EXISTING GAP. THE GAP WILL THEN BE FILLED WITH BINDER.

BOND BREAKER:

SPREAD BINDER OVER SURFACE AREA WHERE THE METAL BRIDGING PLATE WILL BE PLACED. CENTER THE BRIDGING PLATE OVER THE EXISTING JOINT AND BED INTO THE HOT BINDER. BUTT JOINT THE BRIDGING PLATES TO ACCOMMODATE THE ENTIRE JOINT LENGTH. SPIKE HOLES WILL BE DRILLED AT 1 FOOT INTERVALS ALONG THE LONGITUDINAL CENTERLINE OF THE PLATES. SECURE BRIDGING PLATE WITH NAILS OR SPIKES. SEAL BUTT JOINTS WITH HOT BINDER AND ALLOW BINDER TO SETUP BEFORE NEXT OPERATION. WHEN ALUMINUM BRIDGING PLATES ARE USED, ONLY THE BINDER IS REQUIRED TO SECURE THE INDIVIDUAL PLATES.

BINDER COAT:

SEAL ALL PREPARED, EXPOSED SURFACES OF THE JOINT WITH BINDER. POUR THE HOT BINDER OVER THE FLOOR AREA OF THE JOINT AND SPREAD TO COAT ALL EXPOSED SURFACES. THE BINDER WILL BE A MINIMUM OF 1/2" THICK ON THE BOTTOM OF THE JOINT CAVITY, WITH POOLS OF GREATER THICKNESS WHERE SURFACE IRREGULARITIES EXIST. THE BINDER APPLICATION TEMPERATURE WILL BE BETWEEN 350 AND 390 DEGREES F. THE BINDER WILL NOT BE ALLOWED TO BE HEATED ABOVE 410 DEGREES F. NOR ALLOWED TO EXCEED 390 DEGREES F. FOR MORE THAN 1 HOUR. A DOUBLE JACKETED OIL MELTER WILL BE USED TO HEAT THE BINDER. THE MELTER WILL BE EQUIPPED WITH A CONTINUOUS AGITATION SYSTEM, TEMPERATURE CONTROLS, AND A CALIBRATED THERMOMETER. ALSO A SYSTEM FOR ACCURATELY MEASURING THE WEIGHTS OF THE BINDER AND THE AGGREGATE WILL BE REQUIRED.

BUILD-UP OF JOINT LAYERS:

AGGREGATE PREPARATION:

HEAT THE AGGREGATE TO A TEMPERATURE OF 275 TO 325 DEGREES F., WITH A SUITABLE ROTATING DRUM WITH ATTACHED HEAT SOURCE OR A HOT COMPRESSED AIR LANCE, TO REMOVE DUST AND MOISTURE.

AGGREGATE PROPORTION AND LAYER THICKNESS:

MIX THE AGGREGATE WITH THE BINDER SUCH THAT THE MINIMUM AGGREGATE CONTENT BY WEIGHT WILL BE 68%. THE HEATED AGGREGATE AND BINDER WILL BE COMBINED IN LAYERS, UNLESS PATENTED INSTALLATION REQUIRES DIFFERENTLY, NOT LESS THAN 3/4 OF AN INCH NOR EXCEEDING 2-1/2 INCHES. THE THICKNESS OF EACH LAYER CAN BE VARIED WITHIN THESE LIMITS, TO ACHIEVE THE REQUIRED JOINT THICKNESS (MIN. 2 INCHES). THE OBJECTIVE IS TO COAT EACH STONE AND FILL THE VOIDS WHILE AVOIDING AN EXCESS OF BINDER. THIS WILL ACHIEVE THE MAXIMUM CONTENT OF STONE CONSISTENT WITH ALL STONES BEING COATED WITH BINDER. RAKE THE MIXTURE TO MIX AND LEVEL.

THE TOP LAYER THICKNESS WILL VARY BETWEEN 1/2 INCH AND ONE (1) INCH. IN PREPARING THE TOP LAYER, THE RATIO OF AGGREGATE TO BINDER WILL BE APPROXIMATELY 6:1 BY WEIGHT. OVERFILL THE TOP LAYER AND COMPACT TO THE LEVEL OF THE ADJACENT SURFACES USING A ROLLER OR VIBRATORY PLATE COMPACTOR. IMMEDIATELY AFTER COMPLETION OF THE COMPACTION, POUR SUFFICIENT BINDER OVER THE JOINT TO FILL THE SURFACE VOIDS AND COAT THE SURFACE STONE. DUST THE FINISHED JOINT WITH A FINE, DRY AGGREGATE TO PREVENT TACKINESS.

MAINTENANCE OF TRAFFIC:

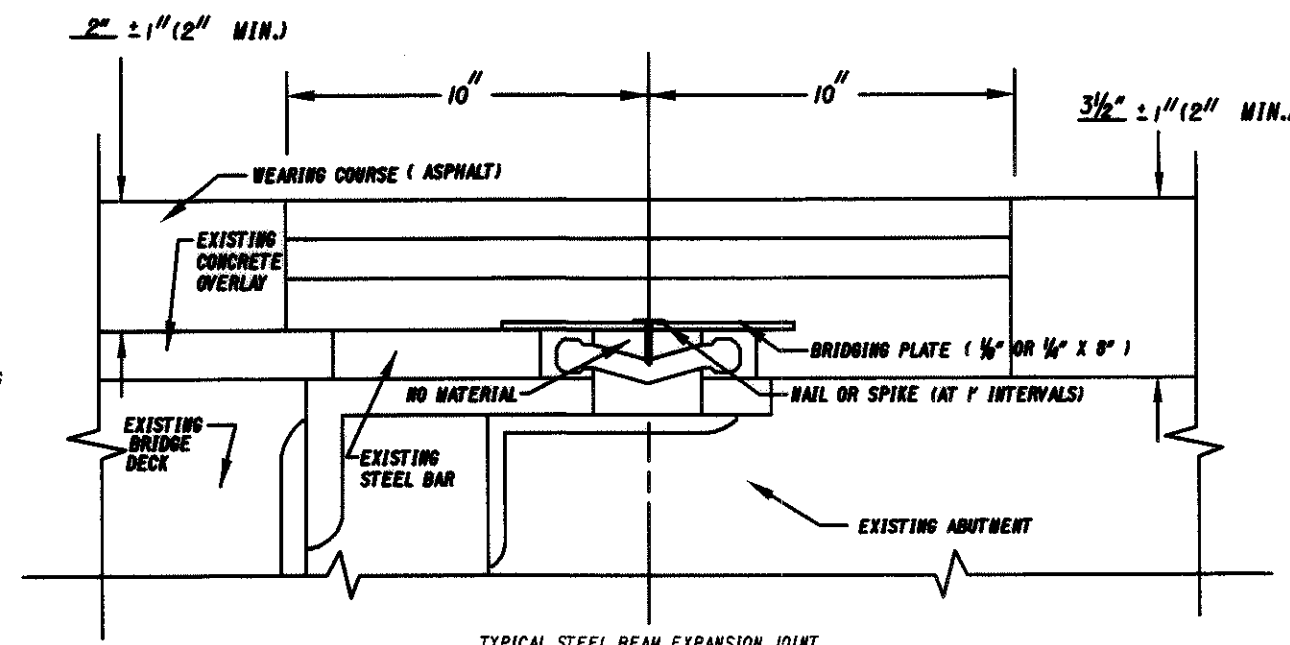
IF NECESSARY TO FACILITATE TRAFFIC MAINTENANCE, THE JOINT WILL BE INSTALLED IN TWO (2) HALF-WIDTH PHASES. DURING PHASE 1 APPROXIMATELY HALF OF THE TOTAL JOINT WILL BE INSTALLED. DURING PHASE 2, A MINIMUM OF TWO (2) INCHES OF THE PHASE 1 JOINT WILL BE REMOVED, AT OR NEAR THE CENTERLINE, WITH THE REMAINDER OF THE JOINT INSTALLED. IN ALL CASES, OPERATIONS WILL BE SCHEDULED SO THAT ALL LANES CAN BE OPEN TO TRAFFIC DURING ALL NON-WORKING HOURS.

TESTING:

CERTIFICATION WILL BE SUPPLIED FOR EACH PROJECT SHOWING BINDER COMPLIANCE WITH REQUIRED PROPERTIES. A ONE QUART SAMPLE OF BINDER WILL BE RETRIEVED FROM EACH BRIDGE FOR FURTHER TESTING BY THE O.D.O.T OFFICE OF MATERIALS MANAGEMENT.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT:

THE DEPARTMENT WILL MEASURE THE JOINT BY THE NUMBER OF FEET AND WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS : ITEM SPECIAL, FEET, POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM.



MED-94-1516 SFN 5205735			
ITEM	DESCRIPTION	UNIT	QUANTITY
SPECIAL	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	FT	62

QUANTITY CARRIED TO SHEET NO. 54