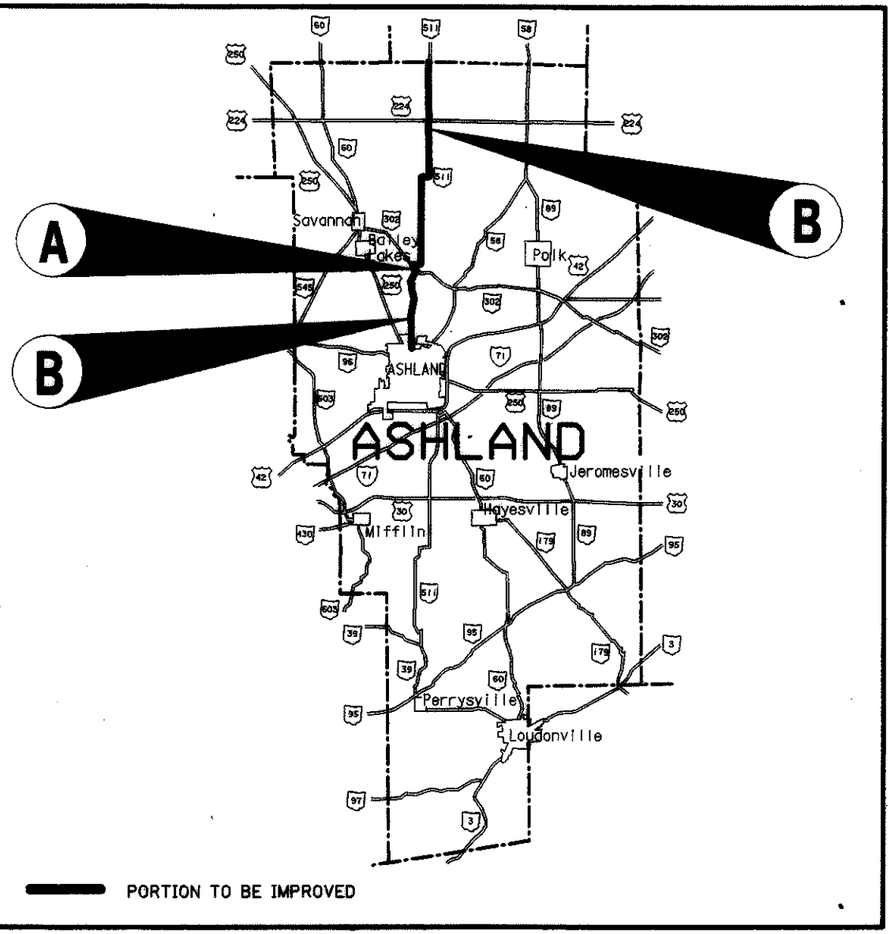
ASD - SR 302 - 10.90/Various
030450 PID - 21923
Dist 3 9/10/2003

OHIO DEPARTMENT OF TRANSPORTATION

LOCATION MAP



LATITUDE: N41°22'03" LONGITUDE: W82°11'35"

N

PART	COUNTY	ROUTE	SECTIONS	PROJECT TERMINI		NET LENGTH miles	CITY	VILLAGE
				BEGIN	END			
A	ASHLAND	SR 302	10.90-11.25	10.90	11.25	0.35		
B	ASHLAND	SR 511	14.70-18.54	14.94	27.90	12.58		

INDEX OF SHEETS:

PROJECT DESCRIPTION: This project will include resurfacing with an intermediate and a surface course of asphalt concrete, pavement repair, pavement planing, adjustment of castings where necessary, pavement markings, guardrail reconstruction, and various other structure work as detailed in the plans.

2002 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AS PER THE DETOUR NOTE ON SHEET 7, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

3-4-3 — APPROVED DATE — DISTRICT DEPUTY DIRECTOR OF TRANSPORTATION

4-1-03 — APPROVED DATE — DIRECTOR, DEPARTMENT OF TRANSPORTATION

DESIGN DESIGNATION (ENGLISH UNITS)				
BEGINNING S.L.M.	SLM 14.94	SLM 18.19	SLM 18.54	SLM 25.35
CURRENT ADT (2004)	2200	1970	1730	1570
DESIGN YEAR ADT (2016)	2890	2390	2320	2200
DESIGN HOURLY VOLUME (2016)	318	263	255	242
DIRECTIONAL DISTRIBUTION	55%	55%	55%	55%
TRUCKS (24 HOUR B&C)	2.5%	4%	5.5%	7%
DESIGN SPEED	55 MPH	55 MPH	55 MPH	55 MPH
LEGAL SPEED	55 MPH	55 MPH	55 MPH	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION: RURAL MAJOR COLLECTOR				
NHS PROJECT	NO	NO	NO	NO

DESIGN EXCEPTIONS: LANE WIDTH, SHOULDER WIDTH & HORIZONTAL ALIGN.-APP'D 4/4/02

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

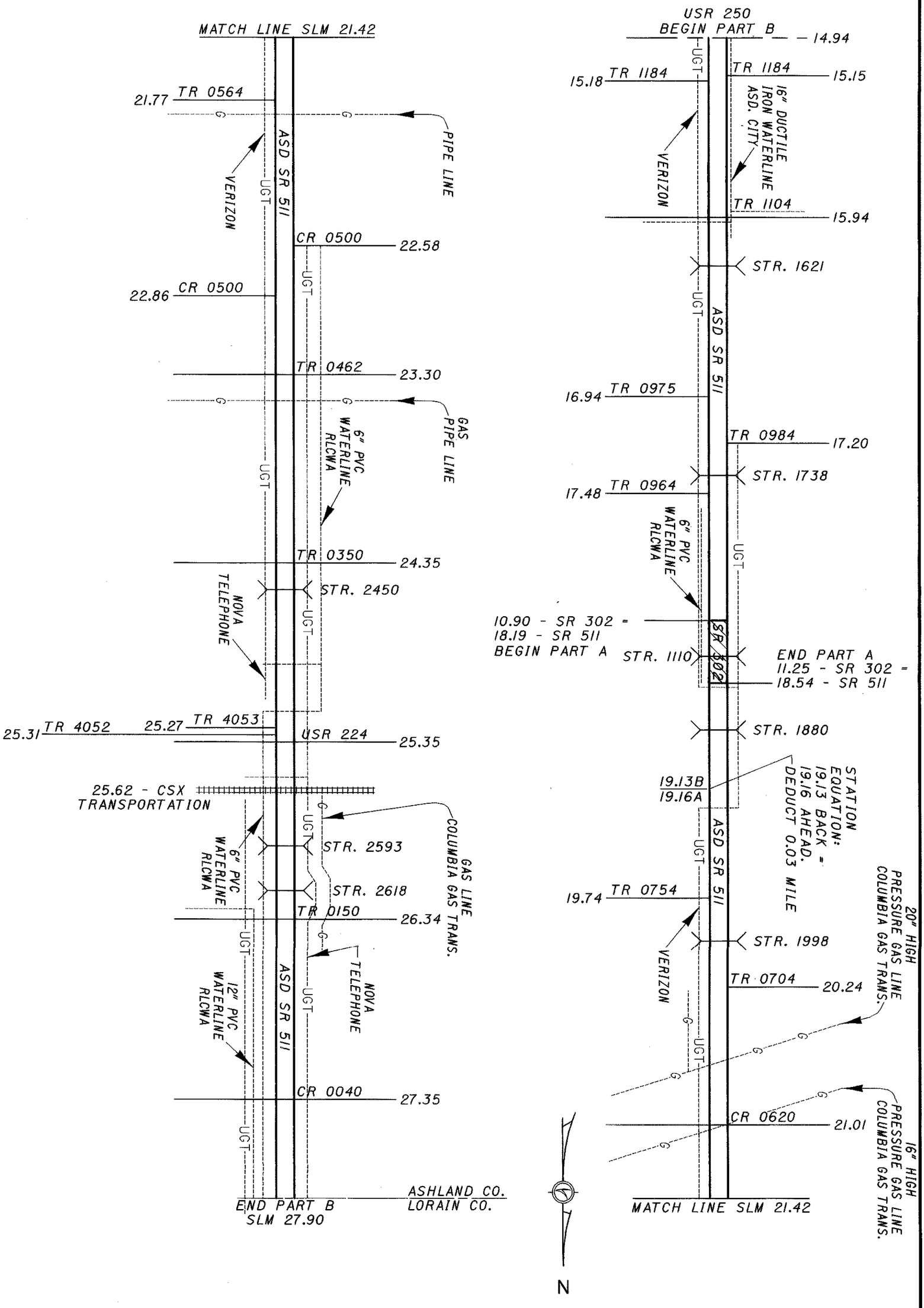
ROADWAY ENGINEER'S SEAL	STRUCTURAL ENGINEER'S SEAL
STATE OF OHIO — BRUCE A. DALTON E-58790 REGISTERED PROFESSIONAL ENGINEER	STATE OF OHIO — DAVID C. MOLLENSHOTT E-50210 REGISTERED PROFESSIONAL ENGINEER
SIGNED: Bruce A. Dalton	SIGNED: David C. Mollenshott
DATE: 3/4/03	DATE: 3/04/03

STANDARD CONSTRUCTION DRAWINGS								SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	7-28-00	DS-1-92	7-19-02	TC-65.10	10-19-01	MT-97.10	4-19-02	802	7-19-02
BP-4.1	7-28-00	TST-1-99	7-19-02	TC-65.11	10-19-01	MT-97.11	4-19-02	832	2-12-03
				TC-65.12	10-19-01	MT-97.12	4-19-02	833	2-12-03
GR-1.1M	10-21-97	CB-1.1	7-19-02	TC-71.10	4-19-02			846	4-19-02.
GR-1.2M	1-03-96			TC-73.10	1-19-01	MT-99.20M	1-30-95	848	2-8-02
GR-1.3M	11-30-94					MT-101.60M	10-18-02	864	7-11-00
GR-2.1M	4-14-98					MT-105.10	10-18-02	871	7-19-02
GR-2.4M	10-21-97	DM-1.1	7-19-02			MT-105.11	10-18-02	908	4-19-02
GR-3.4M	10-21-97	DM-4.3	7-19-02					954	9-9-97
GR-4.1M	10-21-97	DM-4.4	7-19-02						
GR-4.2M	10-21-97								
GR-5.1M	4-21-95								
GR-5.2M	11-30-94								
GR-5.3M	11-30-94								

FEDERAL PROJECT NO. G020(351)
PID NO. 21923
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
ASD-302-10.90
1 / 83

DESIGN FILE: I:\projects\21923\title.dgn
WORKSTATION: jfinch DATE: 03/03/03

DESIGN FILE: I:\projects\21923\straight_line.dgn
WORKSTATION: jfinch DATE: 03/03/03



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STRAIGHT LINE DIAGRAM

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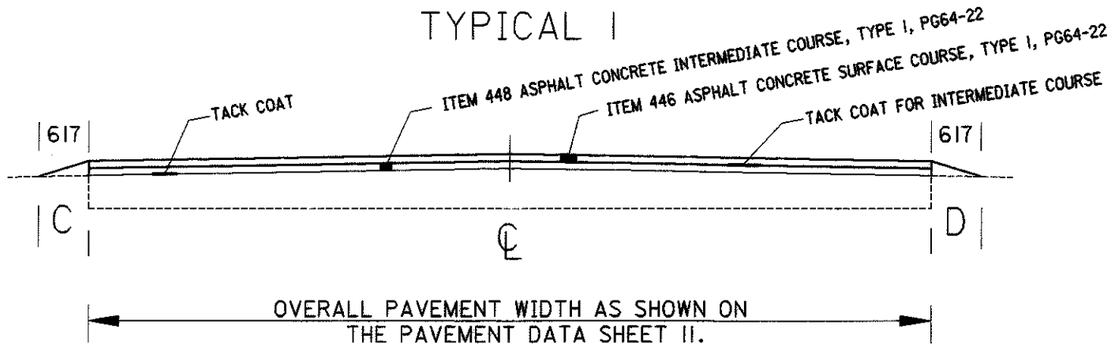
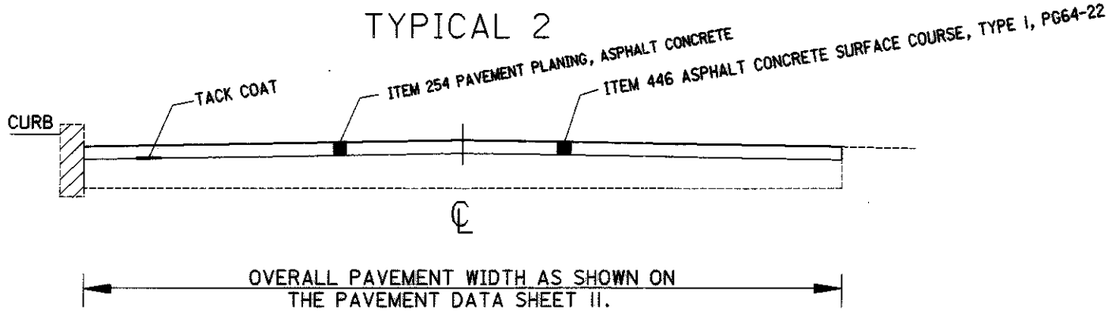
checked

TYPICAL 1



NOTE:
PAVEMENT PLANING TO BE THE SAME
THICKNESS AS THE PROPOSED SURFACE COURSE.

TYPICAL 2



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WORKSTATION: *finch* DATE: *03/03/03*

calculated | checked

PAVEMENT TYPICAL SECTIONS

ASD-302-10.90

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

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: NOVA TELEPHONE COMPANY
P.O. BOX 27
NOVA, OHIO 44859
(419) 652-3571

VERIZON
83 TOWNSEND AVENUE
NORWALK, OHIO 44857
(419) 744-3619

GAS: COLUMBIA GAS OF OHIO
1120 WEST 4th STREET
MANSFIELD, OHIO 44901
(419) 528-1114

COLUMBIA GAS TRANSMISSION
589 NORTH STATE ROAD
MEDINA, OHIO 44256
(330) 721-4163

ELECTRIC: LORAIN-MEDINA RURAL ELECTRIC
P.O. BOX 158 RD
WELLINGTON, OHIO 44090
(800) 222-5673

CABLE: ARMSTRONG UTILITIES
100 EAST SECOND STREET
ASHLAND, OHIO 44805
(419) 289-1343

WATER: CITY OF ASHLAND
206 CLAREMONT AVENUE
ASHLAND, OHIO 44805
(419) 289-8331

RURAL LORAIN COUNTY WATER
42401 SR 303, BOX 567
LAGRANGE, OHIO 44050
(440) 355-6060

THE AFOREMENTIONED UTILITY COMPANIES AND AGENCIES HAVE VARIOUS FACILITIES IN THE AREA THAT WILL REMAIN IN PLACE DURING CONSTRUCTION.

SECTIONS 105.06 AND 107.17 OF THE DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS REQUIRE, AMONG OTHER THINGS, THAT THE CONTRACTOR COOPERATE WITH ALL UTILITIES LOCATED WITHIN THE LIMITS OF THIS CONSTRUCTION PROJECT AND TAKE RESPONSIBILITY FOR THE PROTECTION OF THE UTILITY PROPERTY AND SERVICES.

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.

DESIGN REQUIREMENTS FOR PLANT MIX PAVEMENTS

ON THIS PROJECT, ALL 446 AND 448 MATERIALS SHALL BE DESIGNED FOR MEDIUM TRAFFIC VOLUMES.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ITEM IS TO BE USED FOR DUST CONTROL PURPOSES BY CHANGE ORDER:

ITEM 616 WATER

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 104.04, 107.07 & 614.02 (a): PUBLIC CONVENIENCE AND SAFETY.

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 IN THE PLANS.

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

PAVEMENT CONTROL

AN AUTOMATIC SCREED CONTROL, HAVING A 20 FT. 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.

ITEM 202 WALK REMOVED

AT THE FOLLOWING LOCATION, WALK SHALL BE REMOVED IN ORDER TO INSTALL THE CURB RAMP.

N.W. CORNER OF SR511 AND US 224 52 SQ.FT.

THE REMOVAL OF THE EXISTING WALK SHALL BE PAID FOR UNDER THE UNIT BID PRICE PER SQUARE FOOT OF ITEM 202 WALK REMOVED.

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" to 12"). THE MATERIALS SO REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH 203.05.

REPLACEMENT MATERIAL SHALL BE ITEM 301 OR ITEM 448, TYPE 2 MATERIAL AND SHALL BE PLACED AND COMPACTED TO FINISH FLUSH WITH THE ADJACENT PAVEMENT SURFACE. THE REPAIR AREAS SHALL BE PAINTED WITH BITUMINOUS MATERIAL (SIDES AND BOTTOM) AT AN APPLICATION RATE OF 0.25 GAL/SQ YDS. ALL COMPACTION SHALL BE ACHIEVED BY MECHANICAL METHODS TO THE SATISFACTION OF THE ENGINEER. MAXIMUM LIFT THICKNESS SHALL BE 3".

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

PART A	32 CY
PART B	900 CY

ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE

THIS ITEM OF WORK SHALL BE COMPLETED AT THE LOCATIONS SHOWN IN THE PLANS AND IN AREAS DESIGNATED BY THE ENGINEER. PLANING IS TO BE PERFORMED AS DIRECTED. REMOVAL OF EXISTING PAVEMENT SURFACE MAY BE REQUIRED TO ELIMINATE ADVERSE SURFACE DISTORTION, WHICH IN THE JUDGEMENT OF THE ENGINEER, CANNOT BE SATISFACTORILY CORRECTED IN THE PAVING COURSES.

THESE AREAS MAY VARY IN DEPTH, AS DIRECTED BY THE ENGINEER. THESE AREAS MAY INCLUDE MATERIAL DISPLACED BY RUTTING OR SHOVING, ASPHALT SURFACE PATCHES, CONCRETE PATCHES, TRANSVERSE BUMPS, JOINTS AT STRUCTURES, ADJOINING PAVEMENTS, RAILROADS, ETC.

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

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 TWENTY-ONE (21) CALENDAR DAYS. THE 21 CALENDAR DAYS SHALL BE CONSIDERED AN INTERIM COMPLETION DATE (SECTION 108) AND FOR EACH CALENDAR DAY BEYOND THE 21 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.

CALCULATED/ JPF
CHECKED RPT

GENERAL NOTES

ASD-302-10.90

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WORKSTATION: jfinch DATE: 03/03/03

ITEM 254 PATCHING PLANED SURFACE

AN ESTIMATED QUANTITY OF ITEM 254, PATCHING PLANED SURFACE HAS BEEN SET UP ON SHEET NO. 11 TO BE USED AS DIRECTED BY THE ENGINEER AS DESCRIBED IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS MANUAL 254.05. PATCHING DEPTH IS 0 TO 2 IN.

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

THE RATE OF APPLICATION OF ITEM 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. AREAS OF TACK COAT STRIPPED BY CONSTRUCTION EQUIPMENT SHALL BE RECOATED PRIOR TO PLACING ASPHALT CONCRETE. PLAN AREAS INDICATE AN APPLICATION RATE OF 0.08 GAL. PER SQUARE YARD OF ITEM 407 TACK COAT FOR ESTIMATING PURPOSES ONLY.

PRIOR TO PLACING THE SURFACE COURSE ON THE PROPOSED INTERMEDIATE COURSE, AN ADDITIONAL APPLICATION OF ITEM 407 TACK COAT FOR INTERMEDIATE COURSE IS REQUIRED AT AN AVERAGE RATE OF APPLICATION OF 0.03 GAL. PER SQUARE YARD FOR ESTIMATING PURPOSES ONLY.

ITEM 446, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22

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 COST OF THIS WORK AND THE PLACEMENT OF THE "UNEVEN PAVEMENT" SIGNS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

ITEM 448, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22

THIS ITEM SHALL BE USED FOR CORRECTION OF CROWN, PROFILE AND ANY OTHER IRREGULARITIES. THE AVERAGE THICKNESS SHALL BE 0.75".

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.

ITEM 608 CURB RAMP

AT THE FOLLOWING LOCATION, THE CURB RAMP SHALL BE INSTALLED.

N.W. CORNER OF SR511 AND US 224 — 52 SQ.FT.

ALL MATERIAL, EQUIPMENT, AND LABOR REQUIRED FOR THE INSTALLATION OF THESE CURB RAMPS WITH TRUNCATED DOMES SHALL BE PAID FOR UNDER THE UNIT BID PRICE PER SQUARE FOOT OF ITEM 608 CURB RAMP.

SEE CURB RAMP PLAN INSERT SHEETS 81-83 FOR DETAILS

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 PLANED SURFACE AT BUTT JOINTS AND OTHER LOCATIONS THAT RESULT IN A DROP-OFF IN EXCESS OF 1½in, AS DIRECTED BY THE ENGINEER. THIS QUANTITY SHALL ALSO BE USED AT PLANED SURFACES WHERE A TEMPORARY ASPHALT WEDGE IS NEEDED AROUND CASTINGS, AS DIRECTED BY THE ENGINEER.

50 cu. yd. ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC

ITEM 614, WORK ZONE MARKING SIGN

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

WORK ZONE MARKING SIGN: (OW-167-36) NO EDGE LINE -	2 each
WORK ZONE MARKING SIGN: (R-33-24) DO NOT PASS -	2 each
WORK ZONE MARKING SIGN: (R-34-24) PASS WITH CARE -	0 each
TOTAL PART A -	4 each
WORK ZONE MARKING SIGN: (OW-167-36) NO EDGE LINE -	35 each
WORK ZONE MARKING SIGN: (R-33-24) DO NOT PASS -	51 each
WORK ZONE MARKING SIGN: (R-34-24) PASS WITH CARE -	37 each
TOTAL PART B -	123 each

ITEM 617, SHOULDER RECONDITIONING, MISC.: COMPACTED AGGREGATE

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

THE MATERIAL ON THIS PROJECT SHALL BE THE BITUMINOUS ASPHALT GRINDINGS RESULTING FROM ITEM 254. THE GRINDINGS USED FOR THIS ITEM SHALL BE PLACED AND COMPACTED AS DESCRIBED IN 617.05 WITH SPECIAL CARE TO CREATE PROPER COMPACTION. 100% OF THIS MATERIAL SHALL PASS A 1¼IN. 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.

SINCE THE BITUMINOUS ASPHALT GRINDINGS FROM THIS JOB WILL NOT BE A LARGE ENOUGH QUANTITY TO RECONDITION THE AGGREGATE SHOULDERS, THE CONTRACTOR WILL NEED TO SUPPLY THE ADDITIONAL QUANTITY FROM AN APPROVED RAP (RECYCLED ASPHALT PAVEMENT) PILE OR SUPPLY ITEM 617 COMPACTED AGGREGATE, TYPE A AS SPECIFIED IN THE SPECIFICATIONS BOOK.

THE MATERIAL ON THIS PROJECT WILL BE PAID FOR BY THE TON. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING THE GROSS, TARE, AND NET WEIGHT OF EACH TRUCK LOAD OF MATERIAL TO THE NEAREST 100 LBS. IN TRIPLICATE ON PLANT TICKET FORMS APPROVED BY THE DIRECTOR. THE CONTRACTOR SHALL PROVIDE A TARE WEIGHT FOR EACH TRUCK AT THE BEGINNING OF EACH DAY'S OPERATION. ONE COPY OF THE WEIGHT TICKET SHALL ACCOMPANY EACH LOAD DELIVERED TO THE PROJECT AND SHALL BE PRESENTED TO THE ENGINEER.

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

RAILROAD CROSSINGS

PRIOR TO ANY WORK AT RAILROAD CROSSINGS THE CONTRACTOR SHALL CONTACT THE AFFECTED RAILROAD AUTHORITY AS TO MAKE THEM AWARE OF THE PROGRESS AND SCHEDULE OF WORK. THE CONTRACTOR SHALL COOPERATE WITH THE RAILROAD SO AS TO ADDRESS ANY SAFETY CONCERNS. FLAGGING MAY BE REQUIRED BY THE RAILROAD. THE CONTRACTOR IS RESPONSIBLE FOR PAYING THE RAILROAD FOR ALL FLAGGING COSTS.

THE CROWN SHALL BE WORKED OUT OF THE PROPOSED PAVEMENT ON EACH SIDE OF THE RAILROAD CROSSING, BEGINNING 50 FEET FROM THE NEAREST RAIL, BY RAISING THE EDGES OF THE NEW PAVEMENT TO MEET THE PLATFORM ELEVATION.

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

THE COSTS ASSOCIATED WITH THE REQUIREMENTS ABOVE SHALL BE CONSIDERED INCIDENTAL IN THE COST OF THE LUMP SUM BID ITEM 614 MAINTAINING TRAFFIC.

RAILROAD LIABILITY INSURANCE INFORMATION

OWNER OF RAILROAD: CSX TRANSPORTATION, INC.

TYPE OF LINE: MAINLINE (SR 511)

CROSSING: AT GRADE
PASSENGER TRAINS/DAY: 2
FREIGHT TRAINS/WEEK: 52 @ 60 MILES PER HOUR
HAZARDOUS MATERIAL: YES

THE IDENTIFICATION OF THE CROSSING IS KNOWN AS:
RR MILEPOST: BG 181.08
AARDOT NO.: 142097 R

LOCAL CONTACT PERSON FOR FLAGGING:
D.R. KINNER, ROADMASTER (330) 948-2225

ITEM 604, CATCH BASIN FRAME AND GRATE

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO MODIFY THE EXISTING CATCH BASIN WITH A NEW FRAME AND GRATE AT S.L.M. 25.31 LT.. NEENAH R1792 SERIES OPEN GRATE OR AN APPROVED EQUAL SHALL BE USED TO FIT THE OPENING. PAYMENT FOR ACCEPTED QUANTITY WILL BE MADE AT THE CONTRACT UNIT BID PRICE PER EACH AND SHALL INCLUDE ALL WORK DESCRIBED ABOVE AND AT ALL TIMES BE AS DIRECTED BY THE ENGINEER.

1 EACH ITEM 604, CATCH BASIN FRAME AND GRATE

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).

CALCULATED JPF
CHECKED PPT

GENERAL NOTES

ASD-302-10.90

DESIGN FILE: I:\projects\21923\gnresurf.dgn
WORKSTATION: jfinch DATE: 03/05/03

RPM GENERAL NOTES

Materials Supplied by The Department

ALL MATERIALS ARE TO BE CONTRACTOR FURNISHED, EXCEPT THAT THE DEPARTMENT SHALL SUPPLY RPM MATERIALS IN THE QUANTITIES SHOWN HEREIN TO THE CONTRACTOR. PAY ITEMS FOR THE DEPARTMENT SUPPLIED MATERIALS SHALL BE INDICATED AS "INSTALLATION ONLY".

AT THE PRE-CONSTRUCTION CONFERENCE AN AUTHORIZATION FOR PICK UP FORM WILL BE FURNISHED BY THE DISTRICT CONSTRUCTION ADMINISTRATOR AND THE CONTRACTOR WILL BE INFORMED OF THE LOCATION OF THE DEPARTMENT SUPPLIED MATERIALS TO BE PICKED UP. FOR SOME PROJECTS HAVING QUANTITIES OF LESS THAN 20 RPMS, THE CONTRACTOR MAY PICK UP RPM MATERIALS AT THE DISTRICT OFFICES. QUANTITIES OVER 20 RPMS WILL BE PICKED UP AT THE RECYCLER'S WAREHOUSE OR AS ARRANGED WITH THE DISTRICT. THE CONTRACTOR SHALL PICK UP DEPARTMENT SUPPLIED RPM MATERIALS AT THE SPECIFIED LOCATION(S) FOR TRANSPORT TO THE WORK SITE OR TO THE CONTRACTOR'S STORAGE FACILITY. THE RECYCLED RAISED PAVEMENT MARKER (RPM) AUTHORIZATION FORM IS TO BE SIGNED BY THE DISTRICT CONSTRUCTION ENGINEER PRIOR TO PICK UP OF THE RPMS. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND / OR THE PARTIES LISTED ON THE AUTHORIZATION FORM IN WRITING AT LEAST FIVE (5) CALENDAR DAYS PRIOR TO PICK UP OF THE DEPARTMENT SUPPLIED MATERIALS. THE CONTRACTOR SHALL STORE THE RPMS WITHOUT DAMAGE OR CONTAMINATION WITH FOREIGN MATTER. A DEDUCTION IN THE AMOUNT OF THE ACTUAL COST TO THE DEPARTMENT SHALL BE MADE FOR MATERIALS DAMAGED BY THE CONTRACTOR OR FOR CASTINGS RECEIVED BY THE CONTRACTOR WHICH WERE NOT INSTALLED AND WERE NOT RETURNED TO THE DEPARTMENT.

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

RAISED PAVEMENT MARKER MATERIALS SUPPLIED BY THE DEPARTMENT, THAT ARE NON-PERFORMED SHALL BE CAREFULLY REPACKED OR PACKED IN THE BOXES IN THE SAME STYLE AND QUANTITY AS ORIGINALLY RECEIVED FROM THE DEPARTMENT. CASTING STYLES SHALL NOT BE MIXED WITHIN ANY ONE CONTAINER. THE CONTRACTOR SHALL CLEARLY MARK ON THE OUTSIDE OF EACH CONTAINER, THE COLOR OF THE PRISMATIC RETRO-REFLECTOR, AND THE STYLE OF CASTING. BOXES SHALL BE PLACED ON SKIDS OR PALLETS IN THE SAME STYLE (LOW PROFILE OR CONVENTIONAL, REFLECTORISED OR NON REFLECTORISED) AND NO MORE THAN 420 RPMS (OR 21 BOXES) ON ONE SKID.

ONLY USE THE BOXES SUPPLIED BY THE RAISED PAVEMENT MARKER RECYCLER. BOXES MUST BE MARKED WITH THE RECYCLER'S PART OR CATALOG NUMBER AND THE PROJECT NUMBER. THE RECYCLER'S CATALOG OR PART NUMBERS MAY BE OBTAINED FROM THE OFFICE OF TRAFFIC ENGINEERING IN COLUMBUS, OHIO OR FROM THE RECYCLER. BOXES NOT MARKED WITH THE PROPER RECYCLER'S CATALOG OR PART NUMBERS, AND THE DEPARTMENT'S PROJECT NUMBER WILL NOT BE ACCEPTED AT THE RECYCLER'S WAREHOUSE.

NON PERFORMED MATERIALS WILL BE RETURNED TO THE LOCATION AS SPECIFIED BY THE DISTRICT CONSTRUCTION ENGINEER WITHIN 30 DAYS OF THE COMPLETION OF THE PROJECT.

THE ABOVE WORK INCLUDING ALL LABOR, EQUIPMENT AND MATERIAL NEEDED TO PERFORM THE WORK, SHALL BE CONSIDERED INCIDENTAL TO THE RESPECTIVE PAY ITEM.

IF THE DEPARTMENT HAS TO REPACKAGE THE RPMS CORRECTLY, THE CONTRACTOR WILL BE ASSESSED THE ACTUAL COST FOR REPACKAGING THE MATERIALS BY THE DEPARTMENT'S FORCES.

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

TRUCKS SHALL HAVE A LOADING HEIGHT OF 48 INCHES AND BE ABLE TO BACK UP FLUSH TO THE LOADING DOCK.

TRUCKS SHALL NOT HAVE ANY OBSTRUCTIONS OR PROTRUSIONS THAT PREVENT THE LOADING BY A STANDARD FORKLIFT OR LIFT TRUCK. SEMI TRUCKS OR 20 FOOT COMMERCIAL TRUCKS ARE THE MOST APPROPRIATE TRUCKS FOR LOADS IN EXCESS OF 4 PALLETS (ONE PALLET = 21 BOXES = 2100 LBS).

STAKE BODY TRUCKS ARE APPROPRIATE TO LOAD LESS LOAD AND THE LOAD CAN BE SAFELY SECURED FOR TRANSPORT BY CHAINING OR STRAPPING DOWN AS NEEDED.

PICKUP TRUCKS ARE APPROPRIATE FOR LOADS OF APPROXIMATELY ONE PALLET, PROVIDED THE PICKUP TRUCK IS RATED FOR THE LOAD AND THE LOAD CAN BE SAFELY SECURED FOR TRANSPORT.

DUMP TRUCKS, TILT BED TRUCKS, AND NON COMMERCIAL MOVING VANS WILL NOT BE LOADED.

THE WAREHOUSE SUPERVISOR WILL REFUSE TO LOAD ANY TRUCK THAT IS UNSAFE TO LOAD OR UNSUITABLE FOR THE LOAD BEING PLACED ON THE TRUCK.

CALCULATED JPF CHECKED RPT

GENERAL NOTES

ASD-302-10.90

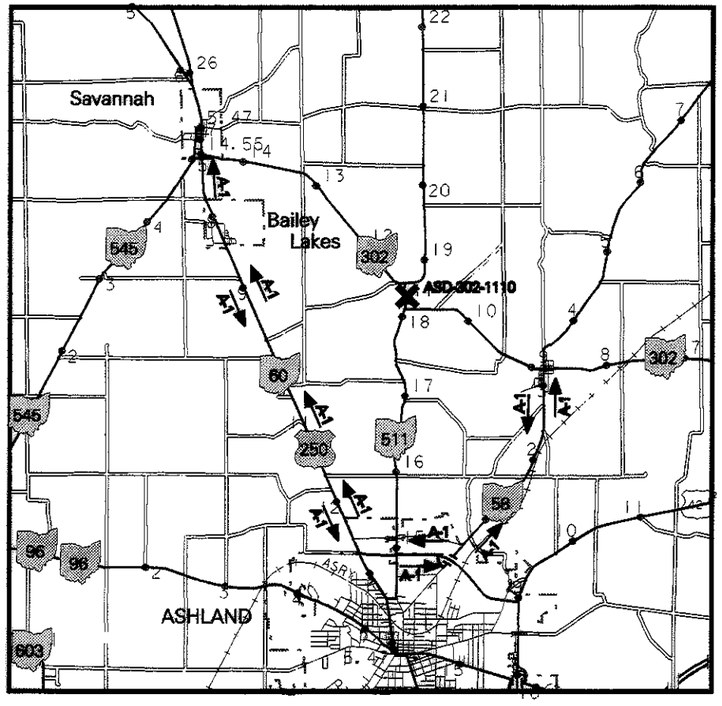
DESIGN FILE: i:\projects\21823\gnrasurf.dgn DATE: 03/03/03
WORKSTATION: jfinch

ITEM 614. MAINTAINING TRAFFIC

TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 60 CALENDAR DAYS FOR STRUCTURES AT ASD-302-1110 AND ASD-511-1880. DETOURS FOR STRUCTURES ASD-511-1998 AND ASD-511 2618 ARE NOT TO EXCEED 30 CALENDAR DAYS. DETOUR 1 FOR PARTS A AND B SHALL BE PERFORMED AT THE SAME TIME.

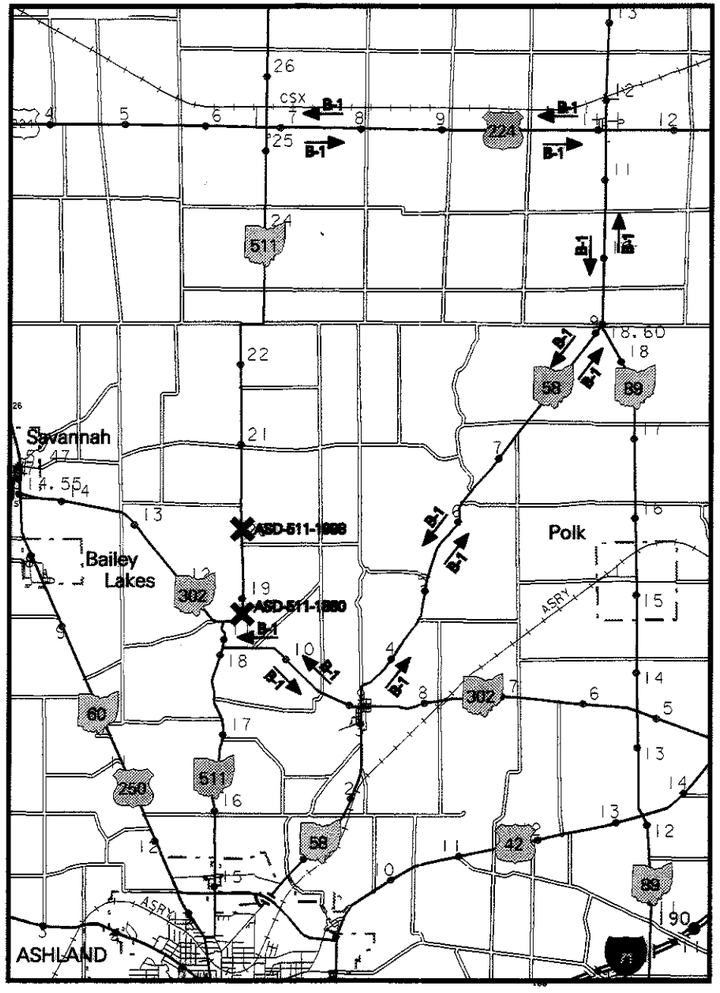
THE 30 AND 60 CONSECUTIVE CALENDAR DAY LIMITS ARE INTERIM COMPLETION DATES AND FOR EACH DAY BEYOND THESE LIMITS THE CONTRACTOR WILL BE ASSESSED LIQUIDATED DAMAGES IN ACCORDANCE WITH 108.07 OF THE CMS.

THE CONTRACTOR SHALL NOTIFY THE DISTRICT 3 WORKZONE TRAFFIC MANAGER, LARRY STORMER, 419-207-7092, IN WRITING A MINIMUM OF FOURTEEN (14) DAYS IN ADVANCE OF THE DATE EACH DETOUR IS NEEDED. THE STATE OF OHIO WILL INSTALL, MAINTAIN AND SUBSEQUENTLY REMOVE THE DETOUR SIGNING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE GATES AND BARRICADES AND ADVANCED WARNING SIGNS AS SHOWN ON STANDARD CONSTRUCTION DRAWING MT-101.60M.



A S.R. 302 DETOUR 1 - PART A

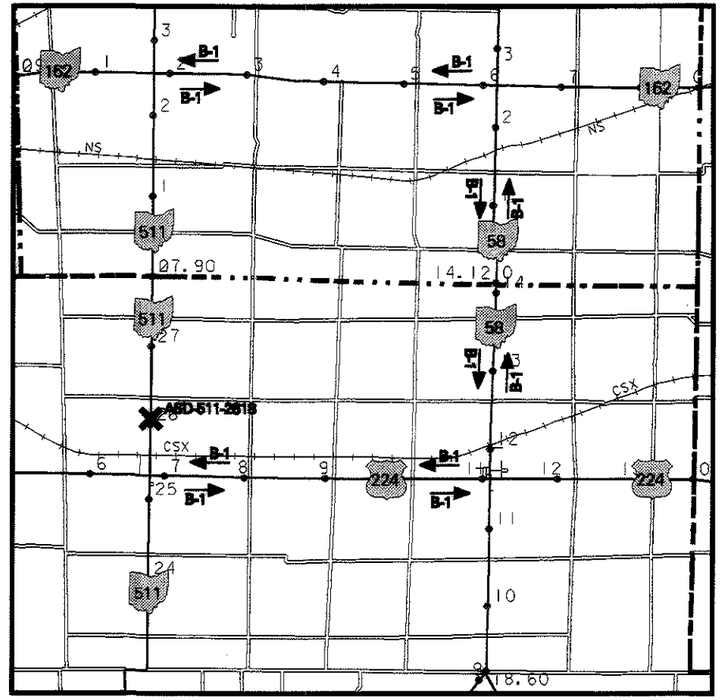
DETOUR - 60 DAYS



B S.R. 511 DETOUR 1 - PART B

DETOUR - 60 DAYS
FOR STRUCTURE ASD-511-1880

DETOUR - 30 DAYS
FOR STRUCTURE ASD-511-1998



B S.R. 511 DETOUR 2 - PART B

DETOUR - 30 DAYS

DRIVEWAY REALIGNMENT LIMITATIONS AT SLM 19.98

FOR THE REALIGNMENT OF THE DRIVEWAY ON THE WEST SIDE OF SR 511 AT APPROXIMATELY SLM 19.98, THE PROPERTY OWNER REQUIRES A 21 DAY ADVANCE NOTICE BEFORE WORK IS TO BEGIN ON THEIR DRIVEWAY. COOPERATION WITH THE PROPERTY OWNER IS REQUIRED FOR THE TIMING OF THIS WORK TOO. THEY HAVE FARM EQUIPMENT THAT USES THIS LONG DRIVEWAY AND ACCESS MUST BE PROVIDED. THE DRIVEWAY MUST BE COMPLETED BEFORE CLOSING THE STRUCTURE AT SLM 19.98. THE TIMING OF THE CLOSURE MUST BE WORKED OUT WITH THE PROPERTY OWNER. WORK SHOWN ON SHEET 63 FOR THIS DRIVE REALIGNMENT.

CALCULATED LS CHECKED BAD

MAINTENANCE OF TRAFFIC GENERAL NOTES

ASD-302-10.90

DESIGN FILE: $$$$$$.DGN FILESPECIFICATIONS $$$$$$
WORKSTATION: #TERMINALB DATE: $$$$$DATE$$$$$

DESIGNATED LOCAL MAINTENANCE ROUTE

A LOCAL MAINTENANCE ROUTE, OTHER THAN THE OFFICIAL SIGNED ODOT DETOUR ROUTE, WILL BE DESIGNATED BY AGREEMENT BETWEEN ODOT AND LOCAL GOVERNMENTAL AGENCIES PRIOR TO THE HIGHWAY CLOSURE.

DURING THE TIME THAT TRAFFIC IS DETOURED, THE CONTRACTOR SHALL MAINTAIN THIS ROUTE IN A CONDITION WHICH IS REASONABLY SMOOTH AND FREE FROM HOLES, RUTS, RIDGES, BUMPS, DUST AND STANDING WATER. ONCE THE DETOUR IS REMOVED AND TRAFFIC RETURNED TO ITS NORMAL PATTERN, THE DESIGNATED LOCAL MAINTENANCE ROUTE SHALL BE RESTORED TO A CONDITION THAT IS EQUIVALENT TO THAT WHICH EXISTED PRIOR TO ITS USE FOR THIS PURPOSE. ALL SUCH WORK SHALL BE PERFORMED WHEN AND AS DIRECTED BY THE ENGINEER.

THE FOLLOWING ITEMS ARE TO BE USED AS DIRECTED BY THE ENGINEER TO MAINTAIN AND SUBSEQUENTLY RESTORE THE DESIGNATED LOCAL MAINTENANCE ROUTE BY CHANGE ORDER.

ITEM 253 PAVEMENT REPAIR

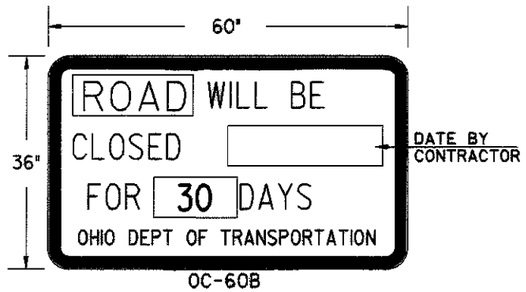
ITEM 407 TACK COAT

ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC

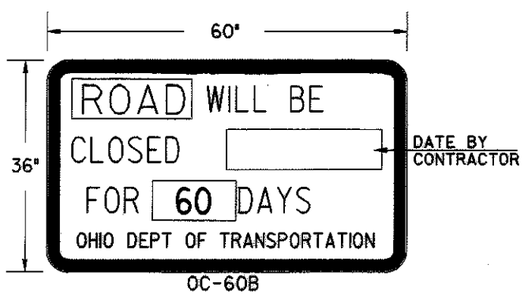
ITEM 617 COMPACTED AGGREGATE, TYPE A

NOTICE OF CLOSURE SIGNS

NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE.



OC-60B



OC-60B

ITEM 614 - MAINTAINING TRAFFIC

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

MAINTAINING TRAFFIC

ALL DRIVEWAY ACCESSES SHALL BE MAINTAINED DURING CONSTRUCTION OF THIS PROJECT. ALL COSTS INVOLVED IN MAINTAINING DRIVEWAY ACCESS SHALL BE INCLUDED IN ITEM 614 MAINTAINING TRAFFIC.

PROJECT DETOUR LIMITATIONS

THE ROADWAY SHALL NOT BE CLOSED TO TRAFFIC FOR REMOVAL OR MODIFICATION OF THE EXISTING CONDUITS UNTIL ALL NEW CONDUITS NECESSARY TO PLACE THE ROADWAY BACK INTO SERVICE HAVE BEEN TESTED, APPROVED AND ARE READY FOR DELIVERY TO THE PROJECT SITE.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES IN ACCORDANCE WITH 108.07 OF THE CMS.

CALCULATED | CHECKED

MAINTENANCE OF TRAFFIC GENERAL NOTES

ASD-302-10.90

DESIGN FILE: I:\projects\21923\detour.dgn
WORKSTATION: jfinch DATE: 03/03/03

GENERAL SUMMARY

SHEET NUMBER													ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	REF. SHEET
4	5		11	13	14	16	17	18		43	49							
																	ROADWAY	
52													202	30000	52	SQ FT	WALK REMOVED	
							55						202	35100	55	FT	PIPE REMOVED, 24" AND UNDER	
							4169						202	38000	4169	FT	GUARDRAIL REMOVED	
							387.5						202	38200	387.5	FT	GUARDRAIL REMOVED FOR REUSE	
							37						202	42000	37	EACH	ANCHOR ASSEMBLY REMOVED, TYPE A	
							37						203	10000	37	CU YD	EXCAVATION	
						500	3301						203	20001	3801	CU YD	EMBANKMENT, AS PER PLAN	16
							11130						209	15060	11130	FT	RESHAPING UNDER GUARDRAIL	
					57								209	80000	57	EACH	GRADING MAILBOX APPROACHES	
								7881.25					606	13000	7881.25	FT	GUARDRAIL, TYPE 5	
								225					606	13020	225	FT	GUARDRAIL, TYPE 5 WITH DOUBLE RAILS	
								387.5					606	16500	387.5	FT	GUARDRAIL REBUILT, TYPE 5	
								222					606	18500	222	EACH	GUARDRAIL POST, 9-FOOT	
								33					606	25000	33	EACH	ANCHOR ASSEMBLY, TYPE A	
								28					606	26500	28	EACH	ANCHOR ASSEMBLY, TYPE T	
								4					606	35124	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 3 (MODIFIED)	
								20					606	35140	20	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4	
	52												608	52001	52	SQ FT	CURB RAMP, AS PER PLAN	83
					6								SPECIAL	69050100	6	EACH	MAILBOX SUPPORT SYSTEM, SINGLE	14
																	EROSION CONTROL	
													832	10000	1	EACH	STORM WATER POLLUTION PREVENTION PLAN	
													832	20000	LUMP		EROSION CONTROL	
																	DRAINAGE	
							318						603	04900	318	FT	12" CONDUIT, TYPE D	
							10						603	10900	10	FT	24" CONDUIT, TYPE D	
								1					604	04500	1	EACH	CATCH BASIN, NO. 2-2B	
			22										604	09000	22	EACH	CATCH BASIN ADJUSTED TO GRADE	
	1												604	09910	1	EACH	CATCH BASIN FRAME AND GRATE	
			1										604	34500	1	EACH	MANHOLE ADJUSTED TO GRADE	
																	PAVEMENT	
932													253	02000	932	CU YD	PAVEMENT REPAIR	
			3977								7623		254	01000	11600	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE	
			397										254	01600	397	SQ YD	PATCHING PLANED SURFACE	
			14961										407	10000	14961	GALLON	TACK COAT	
			5537										407	14000	5537	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
				12439									408	10000	12439	GALLON	PRIME COAT	
			6513										446	47020	6513	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22	
			3844										448	46020	3844	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22	
				31098									617	20000	31098	SQ YD	SHOULDER PREPARATION	
				2917	137								617	98200	3054	TON	SHOULDER RECONDITIONING, MISC.: COMPACTED AGGREGATE	

CALC BY: JPF
CHK'D BY: RPT

GENERAL SUMMARY

ASD-302-10.90

GENERAL SUMMARY

SHEET NUMBER													ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	REF. SHEET
4	5		11	13	14	16	17	18		43	49							
																	MAINTENANCE OF TRAFFIC	
	127												614	12460	127	EACH	WORK ZONE MARKING SIGN	
	50												614	13000	50	CUBIC YARD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
										25.86			614	21500	25.86	MILE	WORK ZONE CENTER LINE, CLASS II, 642 PAINT	
																	TRAFFIC CONTROL	
										1040			202	54100	1040	EACH	RAISED PAVEMENT MARKER REMOVED FOR STORAGE	
										1040			621	00200	1040	EACH	RPM, INSTALLATION ONLY	
								145					626	00100	145	EACH	BARRIER REFLECTOR, TYPE A	
										25.86			642	00102	25.86	MILE	EDGE LINE, TYPE 2	
										12.93			642	00302	12.93	MILE	CENTER LINE, TYPE 2	
										438			644	00500	438	FT	STOP LINE	
										2			644	01000	2	EACH	RAILROAD SYMBOL MARKING	
																	BRIDGE NO. ASD-302-1110 (SLM) SFN 0305383	
																	SEE STRUCTURE SUMMARY ON SHEET NO. 44	
																	BRIDGE NO. ASD-511-1621 (SLM) SFN 0305553	
																	SEE STRUCTURE SUMMARY ON SHEET NO. 44	
																	BRIDGE NO. ASD-511-1738 (SLM) SFN 0305561	
																	SEE STRUCTURE SUMMARY ON SHEET NO. 44	
																	BRIDGE NO. ASD-511-1880 (SLM) SFN 0305618	
																	SEE STRUCTURE SUMMARY ON SHEET NO. 44	
																	BRIDGE NO. ASD-511-1998 (SLM) SFN 0305642	
																	SEE STRUCTURE SUMMARY ON SHEET NO. 45	
																	BRIDGE NO. ASD-511-2450 (SLM) SFN 0305677	
																	SEE STRUCTURE SUMMARY ON SHEET NO. 45	
																	BRIDGE NO. ASD-511-2593 (SLM) SFN 0305693	
																	SEE STRUCTURE SUMMARY ON SHEET NO. 45	
																	BRIDGE NO. ASD-511-2618 (SLM) SFN 0305715	
																	SEE STRUCTURE SUMMARY ON SHEET NO. 45	
													103	05000	LUMP		PREMIUM FOR CONTRACT PERFORMANCE BOND AND FOR PAYMENT BOND	
													614	11000	LUMP		MAINTAINING TRAFFIC	
													623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
													624	10000	LUMP		MOBILIZATION	

CALC BY: JPF
CHK'D BY: RPT

GENERAL SUMMARY

ASD-302-10.90

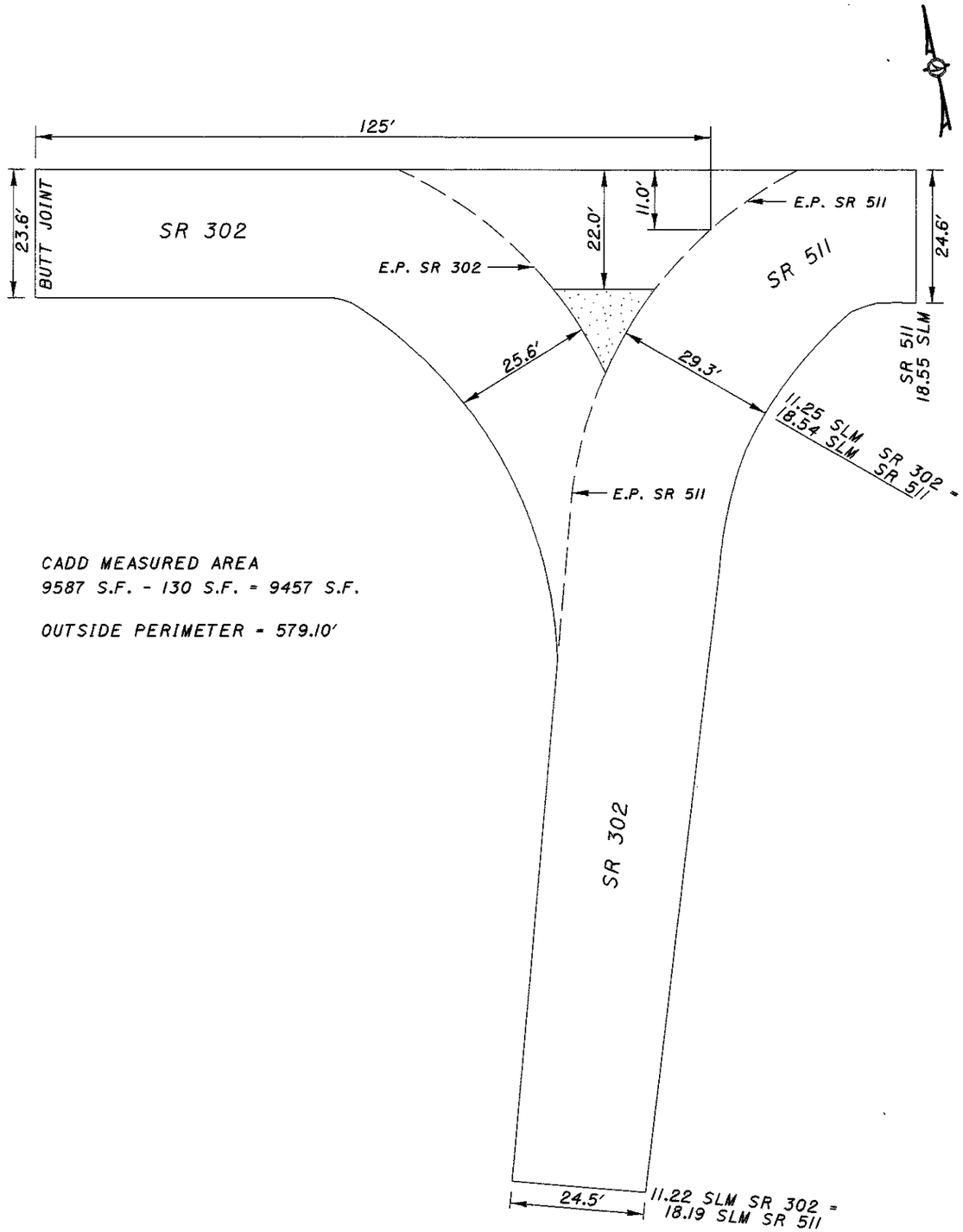
* - FOR TYPICALS, SEE SHEET 3

PART	ROUTE	LOG POINT TO LOG POINT		LENGTH MILE	LENGTH FEET	WIDTH FEET AVG.	* TYPICAL	EXISTING PAVEMENT TYPE	PAVEMENT AREA	407 TACK COAT @ 0.08 GAL/SY	448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1 PG 64-22		446 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22		407 TACK COAT FOR INTERMEDIATE COURSE @ 0.03 GAL/SY	254 PAVEMENT PLANING, ASPHALT CONCRETE	254 PATCHING PLANED SURFACE	604 MANHOLE ADJUSTED TO GRADE	604 CATCH BASIN ADJUSTED TO GRADE
		STRAIGHT LINE MILEAGE							SQUARE YARDS	GALLON	THICK AVG. INCH	CU.YD.	THICK AVG. INCH	CU.YD.	GALLON	SQ.YD	SQ.YD	EACH	EACH
A	SR 302	10.90	11.08	0.18	950.4	25.0	1	404	2640	211	0.75	55	1.25	92	79				
A	SR 302	11.08	11.22	0.14	739.2	25.0	1	404	2053	164	0.75	43	1.25	71	62				
A	SR 302	EXTRA AREA SR302 & SR511		SEE SHEET # 12			1	404	1051	84	0.75	22	1.25	36	32	131	13		
	EXTRA AREA FOR																		
	INTERS., DRIVES, + M.B.								290	23	0.75	6	1.25	10	9	200	20		
B	SR 511	14.94	17.30	2.36	12460.8	24.0	1	404	33229	2658	0.75	692	1.25	1154	997				
B	SR 511	17.30	17.80	0.50	2640	25.0	1	404	7333	587	0.75	153	1.25	255	220				
B	SR 511	17.80	18.19	0.39	2059.2	24.0	1	404	5491	439	0.75	114	1.25	191	165				
B	SR 511	18.55	19.13	0.58	3062.4	24.0	1	404	8166	653	0.75	170	1.25	284	245				
B	SR 511	19.16	25.31	6.15	32472	24.0	1	404	86592	6927	0.75	1804	1.25	3007	2598				
B	SR 511	25.31	25.35	0.04	211.2	41.0	2	404	962	77			1.50	40		962	96		
B	SR 511	25.36	25.39	0.03	158.4	45.5	2	404	801	64			1.50	33		801	80		
B	SR 511	25.39	25.44	0.05	264	25.0	2	404	733	59			1.50	31		733	73		
B	SR 511	25.44	27.90	2.46	12988.8	24.0	1	404	34637	2771	0.75	722	1.25	1203	1039				
	EXTRA AREA FOR																		
	INTERS., DRIVES, + M.B.								3046	244	0.75	63	1.25	106	91	1150	115		
	COUNTED AT VARIOUS LOCATIONS																		
	ON PART B OF THE PROJECT																	1	22
	TOTALS			12.88	68006				187024	14961		3844		6513	5537	3977	397	1	22

CALC BY: JPF
CHK'D BY: RPT

PAVEMENT DATA

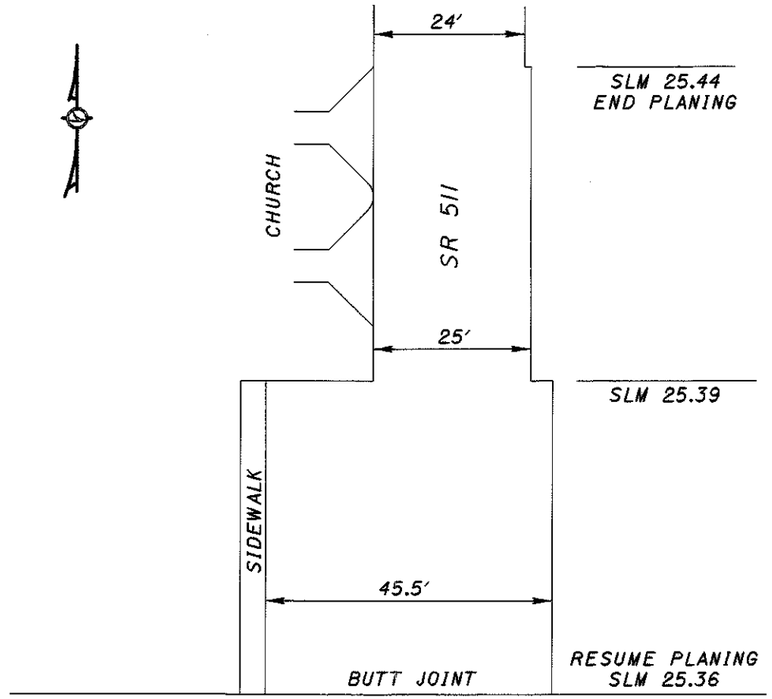
ASD-302-10.90



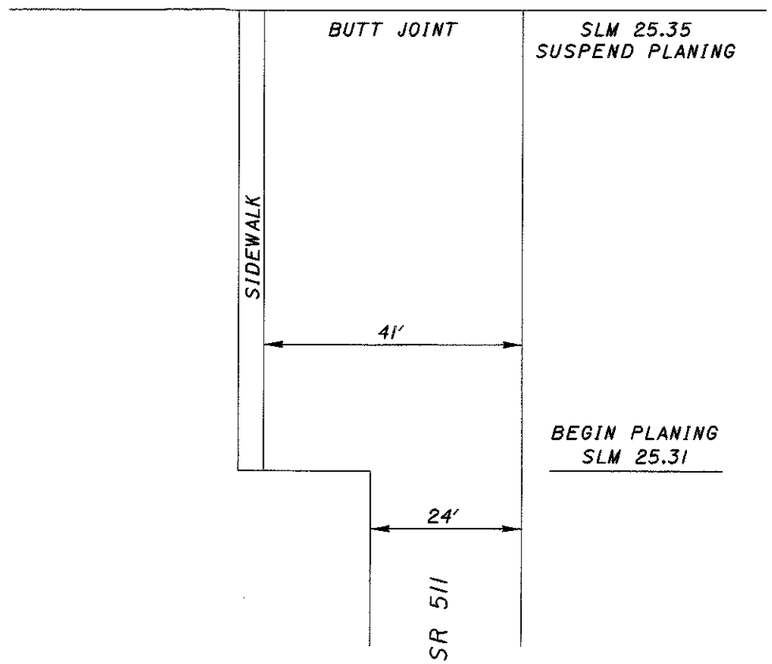
CADD MEASURED AREA
9587 S.F. - 130 S.F. = 9457 S.F.

OUTSIDE PERIMETER = 579.10'

QUANTITIES SHOWN ON PAVEMENT DATA SHEET II.



USR 224



QUANTITIES SHOWN ON PAVEMENT DATA SHEET II.

CALCULATED
CHECKED

EXTRA AREA'S ON SR 302 AND SR 511

ASD-302-10.90

12
83

DESIGN FILE: I:\projects\21923\extraarea.dgn
DATE: 03/04/03

* - FOR TYPICALS, SEE SHEET 3

PART	ROUTE	LOG POINT TO LOG POINT		LENGTH		* TYPICAL	PAVED SHOULDER PROPOSED WIDTH FEET (AVG.)		PAVED SHOULDER AREA							AGGREGATE SHOULDER PROPOSED WIDTH FEET (AVG.)		AGGREGATE SHOULDER AREA	617 SHOULDER PREPARATION	617 SHOULDER RECONDITIONING, MISC: COMPATED AGGREGATE 1.5 TON/CU.YD. 2.25 IN. AVG. THICKNESS			408 PRIME COAT @ 0.40 GAL/SY	
		STRAIGHT LINE MILEAGE		MILE	FEET		A	B	SQUARE YARDS							C	D	SQUARE YARDS	SQ.YD	TON			GALLON	
A	SR 302	10.90	11.08	0.18	950.4	1										2.0	2.0	422	422	40			169	
A	SR 302	11.08	11.22	0.14	739.2	1										2.0	2.0	329	329	31			132	
A	SR 302	EXTRA AREA SR302 & SR511		SEE SHEET # 12		1					5.79						2.0	129	129	12			52	
	EXTRA AREA FOR																							
	INTERS., DRIVES, + M.B.																	18	18	2			7	
B	SR 511	14.94	17.30	2.36	12460.8	1										2.0	2.0	5538	5538	519			2215	
B	SR 511	17.30	17.80	0.50	2640	1										2.0	2.0	1173	1173	110			469	
B	SR 511	17.80	18.19	0.39	2059.2	1										2.0	2.0	915	915	86			366	
B	SR 511	18.55	19.13	0.58	3062.4	1										2.0	2.0	1361	1361	128			544	
B	SR 511	19.16	25.31	6.15	32472	1										2.0	2.0	14432	14432	1353			5773	
B	SR 511	25.44	27.90	2.46	12988.8	1										2.0	2.0	5773	5773	541			2309	
	EXTRA AREA FOR																							
	INTERS., DRIVES, + M.B.																	1008	1008	95			403	
	TOTALS			12.76	67373													31098	31098	2917			12439	

CALC BY: JPF
CHK'D BY: RPT

SHOULDER DATA

ASD-302-10.90

ITEM SPECIAL, MAILBOX SUPPORT

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

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

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

WOOD POSTS SHALL BE NOMINAL 4 IN. x 4 IN. (S4S) OR 4½IN. 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 ACCOMODATE THE GROUPING.

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

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

ITEM SPECIAL-MAILBOX SUPPORT SYSTEM, SINGLE
PART A - S.R. 302 - 2 EACH
PART B - S.R. 511 - 4 EACH

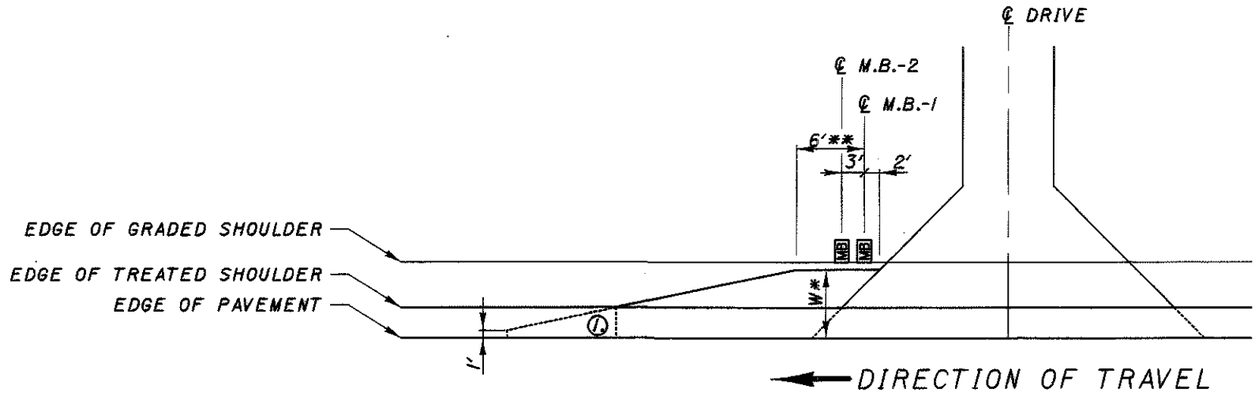
MAILBOXES

THE MAILBOX APPROACHES SHALL BE PAVED WITH ¾IN. OF ITEM 448 INTERMEDIATE COURSE AND 1¼ IN. OF ITEM 446 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 SHOULDER RECONDITIONING, MISC.: COMPACTED AGGREGATE HAS BEEN PROVIDED FOR AREAS WHERE THE SHOULDER IS LOW PRIOR TO GRADING AND/OR LOW AREAS CAUSED BY THE REMOVAL OF UNSUITABLE MATERIAL. QUANTITIES TO PERFORM THIS WORK HAVE BEEN INCLUDED IN THE GENERAL SUMMARY AND ARE ESTIMATED AS FOLLOWS.

ITEM 209 - GRADING MAILBOX APPROACHES:
PART A - S.R. 302 - 2 EACH
PART B - S.R. 511 - 55 EACH

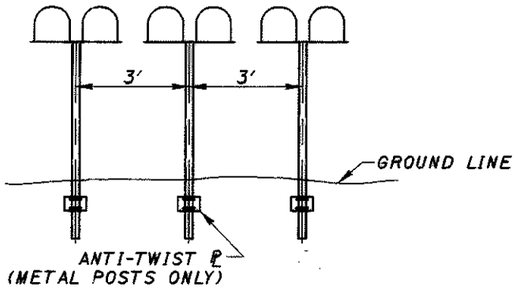
ITEM 617 - SHOULDER RECONDITIONING, MISC.: COMPACTED AGGREGATE
PART A - S.R. 302 - 6 TON
PART B - S.R. 511 - 131 TON



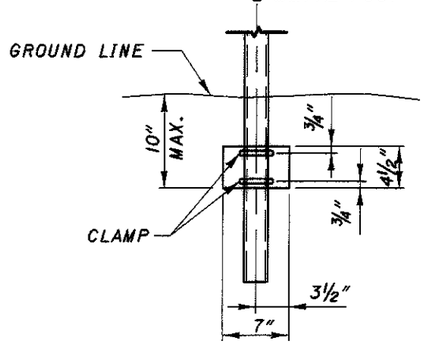
① END MAILBOX TURNOUT AT EDGE OF TREATED SHOULDER OR 1' WHICH EVER IS GREATER.

* 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.

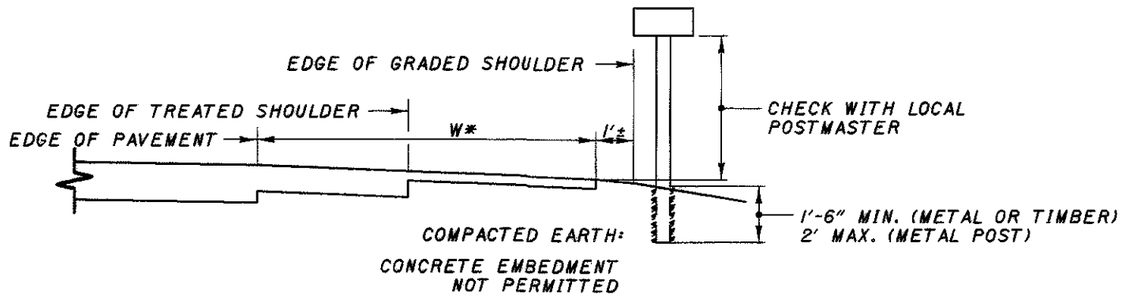
** 6' FOR SINGLE MAILBOX SUPPORT, ADD 3 FT. FOR EACH ADDITIONAL MAILBOX



GROUP MAILBOX INSTALLATION



ANTI-TWIST PLATE



CROSS SECTION / ELEVATION VIEW

CALCULATED JPF CHECKED RPT

MAILBOX FACILITIES

ASD-302-10.90

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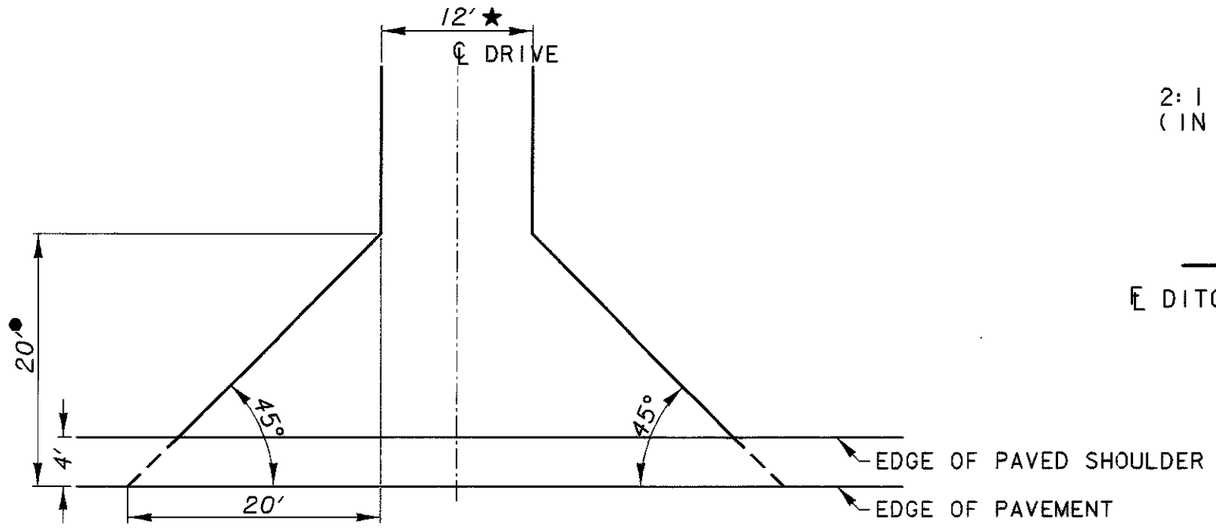
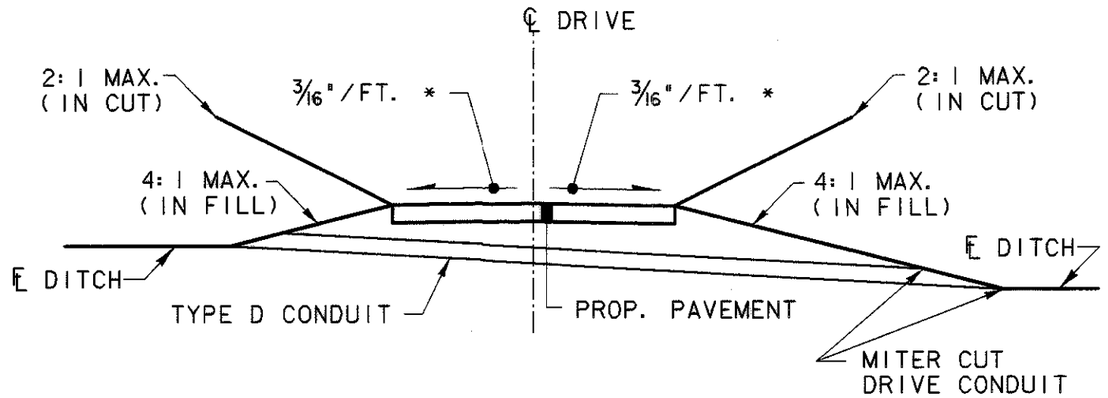
DESIGN FILE: I:\projects\2\923\mailbox.dgn DATE: 03/03/03
WORKSTATION: jfinch



- FOR DETAILS NOT SHOWN, SEE STD. DRAWING BP-4.1
- ★ ACTUAL DIMENSIONS SHOWN ON THE PLANS
- UNLESS NOTED OTHERWISE ON THE PLANS

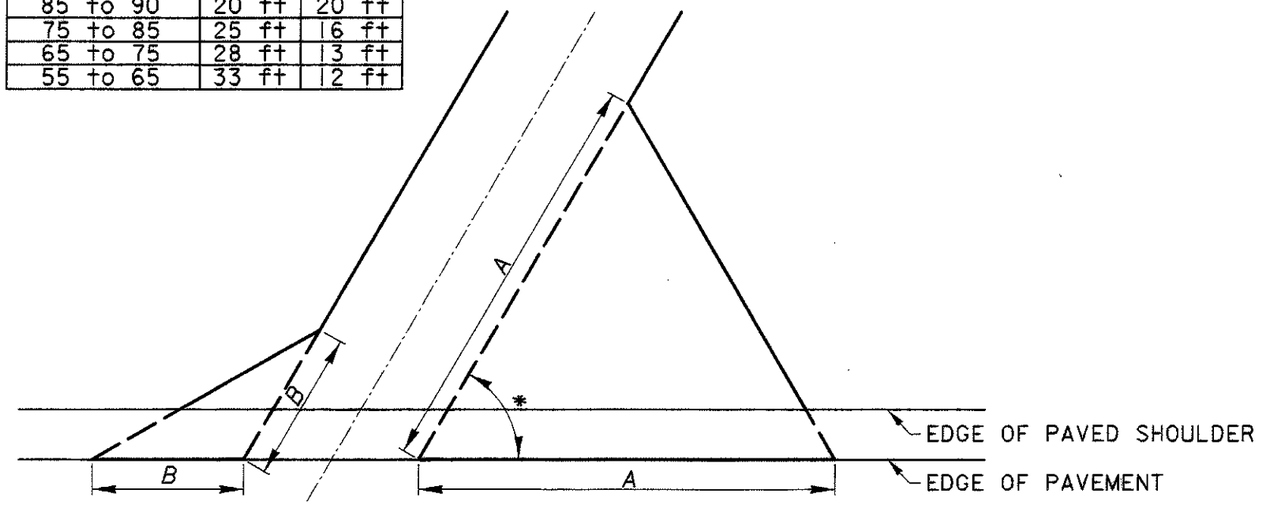
PLAN VIEW



* 3/8"/FT. CROSS SLOPE FOR AGGREGATE DRIVES

TYPICAL SECTION

SKEW ANGLE *	A	B
85 to 90	20 ft	20 ft
75 to 85	25 ft	16 ft
65 to 75	28 ft	13 ft
55 to 65	33 ft	12 ft



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

SKEWED DRIVEWAY

(MATERIAL AS SPECIFIED IN THE PLAN)

COMMERCIAL DRIVE BUILDUP

Ⓐ 8" - ITEM 452, PLAIN CONCRETE PAVEMENT

OR

Ⓑ 1¼" - ITEM 448, ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG 64-22 (DRIVEWAYS)
4¾" - ITEM 301, BITUMINOUS AGGREGATE BASE, PG 64-22

RESIDENTIAL DRIVE BUILDUP

Ⓐ 6" - ITEM 452, PLAIN CONCRETE PAVEMENT

OR

Ⓑ 1½" - ITEM 448, ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG 64-22 (DRIVEWAYS)
3¾" - ITEM 301, BITUMINOUS AGGREGATE BASE, PG 64-22

FIELD DRIVE BUILDUP

Ⓐ 6" - ITEM 304, AGGREGATE BASE

CALCULATED / CHECKED

DRIVE DETAILS

ASD-302-10.90

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DESIGN FILE: I:\projects\21923\drivedet.dgn
DATE: 03/03/03

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

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

GUARDRAIL REPLACEMENT

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

LOCATIONS OF GUARDRAIL

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

ITEM 202 ANCHOR ASSEMBLY REMOVED, TYPE A

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

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

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

ITEM 203, EMBANKMENT, AS PER PLAN

USE THIS ITEM AT THE LOCATIONS INDICATED IN THE PLANS AND AT LOCATIONS DIRECTED BY THE ENGINEER. PLACE EMBANKMENT TO PROVIDE A SUITABLE AREA TO CONSTRUCT GUARDRAIL AND THE STRUCTURAL INTEGRITY OF THE ROADWAY SHOULDER.

SCALP AREAS WHERE EMBANKMENT MATERIALS ARE TO BE PLACED. THE REQUIREMENTS FOR BENCHING MAY BE WAIVED. LIMIT THE DEPTH OF EMBANKMENT LAYERS TO EIGHT (8) INCHES IN THICKNESS. USE A METHOD OF COMPACTION AND EQUIPMENT SUFFICIENT TO PROVIDE 80% OF REQUIRED COMPACTION AS PER CMS TABLE 203.07-1.

AFTER THE EMBANKMENT HAS BEEN PLACED, THE AREAS SHALL BE FERTILIZED, SEEDED, MULCHED, AND WATERED AS PER ITEM 659 AND INCLUDED COST IN THIS ITEM FOR PAYMENT.

THE DEPARTMENT WILL MEASURE EMBANKMENT MATERIAL BY THE NUMBER OF CUBIC YARDS MEASURED BY LOOSE VOLUME IN THE CARRIER AT THE WORK SITE, IN LIEU OF THE REQUIREMENTS OF 203.09. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR THE ABOVE WORK AS ITEM 203, CU. YD., EMBANKMENT, AS PER PLAN.

ITEM 209 - RESHAPING UNDER GUARDRAIL

USE THIS ITEM AT THE LOCATIONS INDICATED IN THE PLANS.

COMPLETE WORK AS PER CMS 209.05, AS DESCRIBED HEREIN, AND AS DIRECTED BY THE ENGINEER.

RESHAPE THE AREA UNDER AND IN FRONT OF THE GUARDRAIL. PROVIDE AN AREA THAT HAS A SLOPE OF 10:1 MAX.

DO NOT START WORK UNTIL THE RESURFACING AND BERM WORK HAVE BEEN COMPLETED.

EXCESS MATERIAL RESULTING CAN BE USED ELSEWHERE FOR THIS ITEM, IF SO DIRECTED, OR SHALL BE DISPOSED OF PROPERLY. IF EXTRA MATERIAL IS REQUIRED, IT WILL BE PAID FOR WITH ITEM 203, EMBANKMENT, AS PER PLAN. A QUANTITY OF 500 CU. YD. OF ITEM 203 EMBANKMENT, AS PER PLAN HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS PURPOSE.

THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR THE ABOVE WORK AS ITEM 209, FT., RESHAPING UNDER GUARDRAIL, WITH THE EXCEPTION OF ANY EXTRA MATERIAL REQUIRED TO MEET THE SLOPE REQUIREMENTS WHICH SHALL BE PAID BY ITEM 203, CU. YD., EMBANKMENT, AS PER PLAN.

ITEM 606 - GUARDRAIL POST

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

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 6.40 FEET.

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-1.2M, AND THE ABOVE NOTE.

DESIGNED JPF CHECKED RPT

GUARDRAIL GENERAL NOTES

ASD-302-10.90

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83

WORKSTATION: jfinch DATE: 03/03/03

DESIGN FILE: i:\projects\21923\grdnotes.dgn

PART	SHEET #	LOCATION	202	202	202	202		203	203		209	603	603
			PIPE REMOVED, 24" AND UNDER	GUARDRAIL REMOVED	GUARDRAIL REMOVED FOR REUSE	ANCHOR ASSEMBLY REMOVED, TYPE A		EXCAVATION	EMBANKMENT, AS PER PLAN		RESHAPING UNDER GUARDRAIL	12" CONDUIT, TYPE D	24" CONDUIT, TYPE D
			FT	FT	FT	EACH		CU YD	CU YD		FT	FT	FT
A	19	ASD - 302 - 10.96		400		2			95		512.5		
A	20	ASD - 302 - 1110		112.5		3					325		
B	21	ASD - 511 -15.49							142		487.5		10
B	22	ASD - 511 -1621		287.5		3			560		743.75		
B	23	ASD - 511 -16.94		175		3			135		356.25		
B	24	ASD - 511 -1738		312.5		4			505		668.75		
B	25	ASD - 511 -17.54		200		2					312.5		
B	26	ASD - 511 -17.59		1187.5		4			361		1412.5		
B	27	ASD - 511 -18.01		325		1			111		400		
B	28	ASD - 511 -1880		350		4			112		850		
B	29	ASD - 511 -19.03			387.5	2			239		575		
B	30	ASD - 511 -19.80							30		150		
B	63	ASD - 511 -1998		193.75		3		16	102		550		
B	31	ASD - 511 -22.62						7	184		493	51	
B	70	ASD - 511 -2593	30					2	159		900	171	
B	75	ASD - 511 -2618	25	350		4		9	156		776	96	
B	34	ASD - 511 -26.78							173		917.5		
B	38	ASD - 511 -27.58		275		2		3	237		700		
		TOTAL	**55**	**4,168.75**	**387.5**	**37**		**37**	**3,301**		**11,130.25**	**318**	**10**

CALC BY: JPF
CHK'D BY: RPT

ESTIMATED QUANTITIES - GUARDRAIL

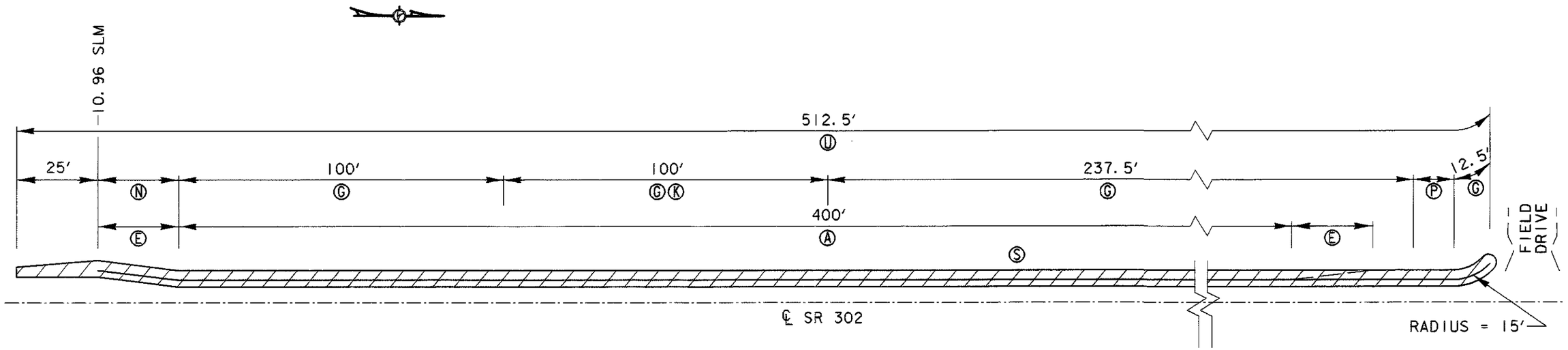
ASD-302-10.90

ESTIMATED QUANTITIES - GUARDRAIL

CALC BY: JPF
CHK'D BY: RPT

PART	SHEET #	LOCATION	604		606	606	606	606	606	606	606	606	626
			CATCH BASIN, NO. 2-2B		GUARDRAIL, TYPE 5	GUARDRAIL, TYPE 5 WITH DOUBLE RAILS	GUARDRAIL REBUILT, TYPE 5	GUARDRAIL POST, 9 FOOT	ANCHOR ASSEMBLY, TYPE A	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY, TYPE 3 (MODIFIED)	BRIDGE TERMINAL ASSEMBLY, TYPE 4	BARRIER REFLECTOR, TYPE A
			EACH		FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH
A	19	ASD - 302 - 10.96			450			15	1	1			6
A	20	ASD - 302 - 1110			237.5				1	3		4	6
B	21	ASD - 511 -15.49			300	25			3	1			6
B	22	ASD - 511 -1621			618.75				2	2			13
B	23	ASD - 511 -16.94			218.75				1	2		4	6
B	24	ASD - 511 -1738			581.25				1	3		4	10
B	25	ASD - 511 -17.54			250				1	3			6
B	26	ASD - 511 -17.59			1250				3	1			15
B	27	ASD - 511 -18.01			337.5			49	1				5
B	28	ASD - 511 -1880			650				4		4		12
B	29	ASD - 511 -19.03			125		387.5	60	1				8
B	30	ASD - 511 -19.80			87.5				1	1			2
B	63	ASD - 511 -1998			343.75			19	3	1		4	7
B	31	ASD - 511 -22.62			287.5	75			1	3			7
B	70	ASD - 511 -2593	1		600	75			1	3			8
B	75	ASD - 511 -2618			637.5				2	2		4	12
B	34	ASD - 511 -26.78			375	50			4				8
B	38	ASD - 511 -27.58			531.25			79	2	2			8
		TOTAL	**1**		**7,881.25**	**225.0**	**387.5**	**222**	**33**	**28**	**4**	**20**	**145**

ASD-302-10.90

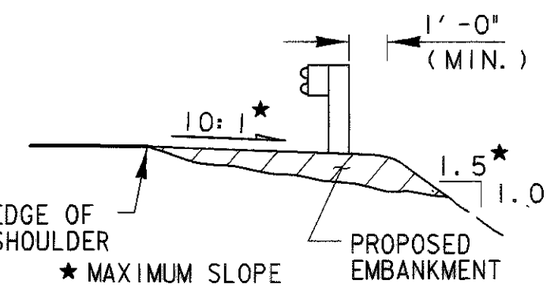


NOTES:

1. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 17, 18.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT	400	0	400
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2	0	2
▱	203	EMBANKMENT, AS PER PLAN	CU YD	95	0	95
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT	512.5	0	512.5
Ⓖ	606	GUARDRAIL, TYPE 5	FT	450	0	450
Ⓚ	606	GUARDRAIL POST, 9 FEET	EACH	15	0	15
Ⓝ	606	ANCHOR ASSEMBLY, TYPE A	EACH	1	0	1
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	EACH	1	0	1
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	6	0	6

TYPICAL SECTION 10.96



DESIGN AGENCY
DISTRICT THREE
PRODUCTION DEPARTMENT

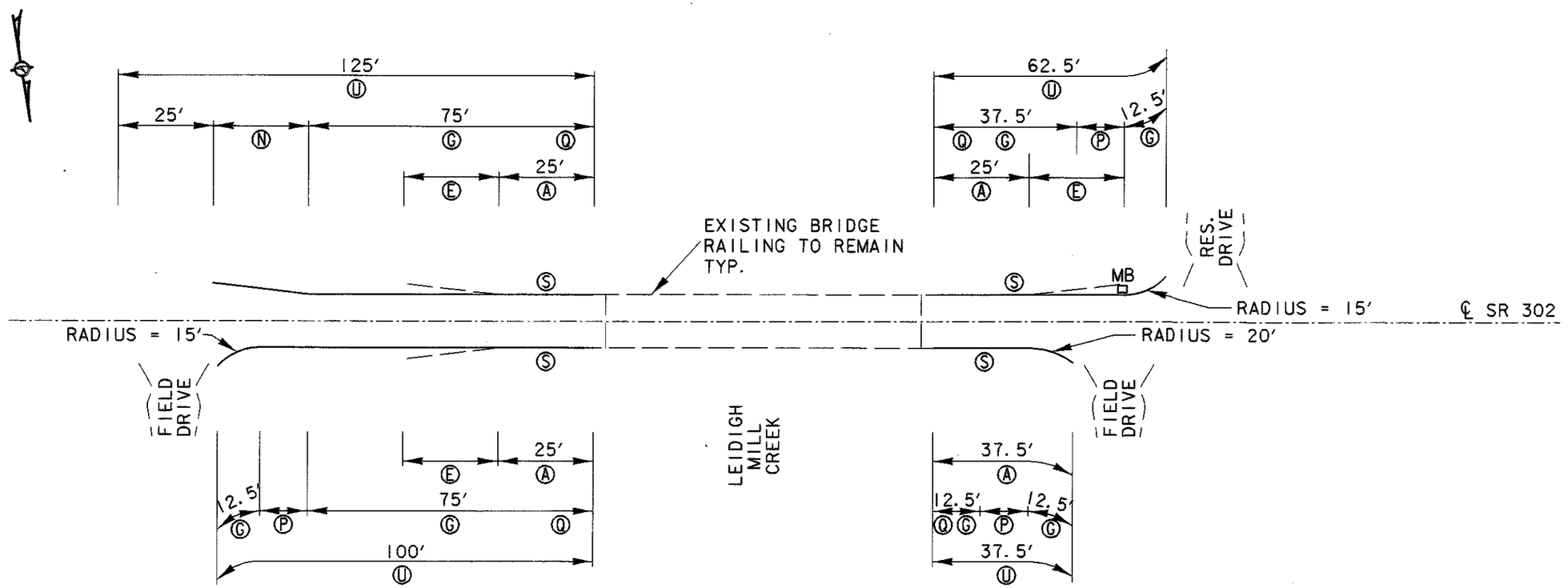
DESIGNED	DRAWN	REVIEWED	DATE
CHECKED	REVISED	STRUCTURAL FILE NUMBER	

GUARDRAIL DETAIL
ASD-302-10.96 S.L.M.

ASD-302-10.90

19
83

DATE: 03/03/03
WORKSTATION: jfinch
DESIGN FILE: i:\projects\21923\grdrail.dgn



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT	50	62.5	112.5
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2	1	3
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT	187.5	137.5	325
Ⓖ	606	GUARDRAIL, TYPE 5	FT	125	112.5	237.5
Ⓝ	606	ANCHOR ASSEMBLY, TYPE A	EACH	1		1
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	EACH	1	2	3
Ⓠ	606	BRIDGE TERMINAL ASSEMBLY, TYPE 4	EACH	2	2	4
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	3	3	6

NOTES:

1. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 17, 18.

DESIGN AGENCY: DISTRICT THREE PRODUCTION DEPARTMENT

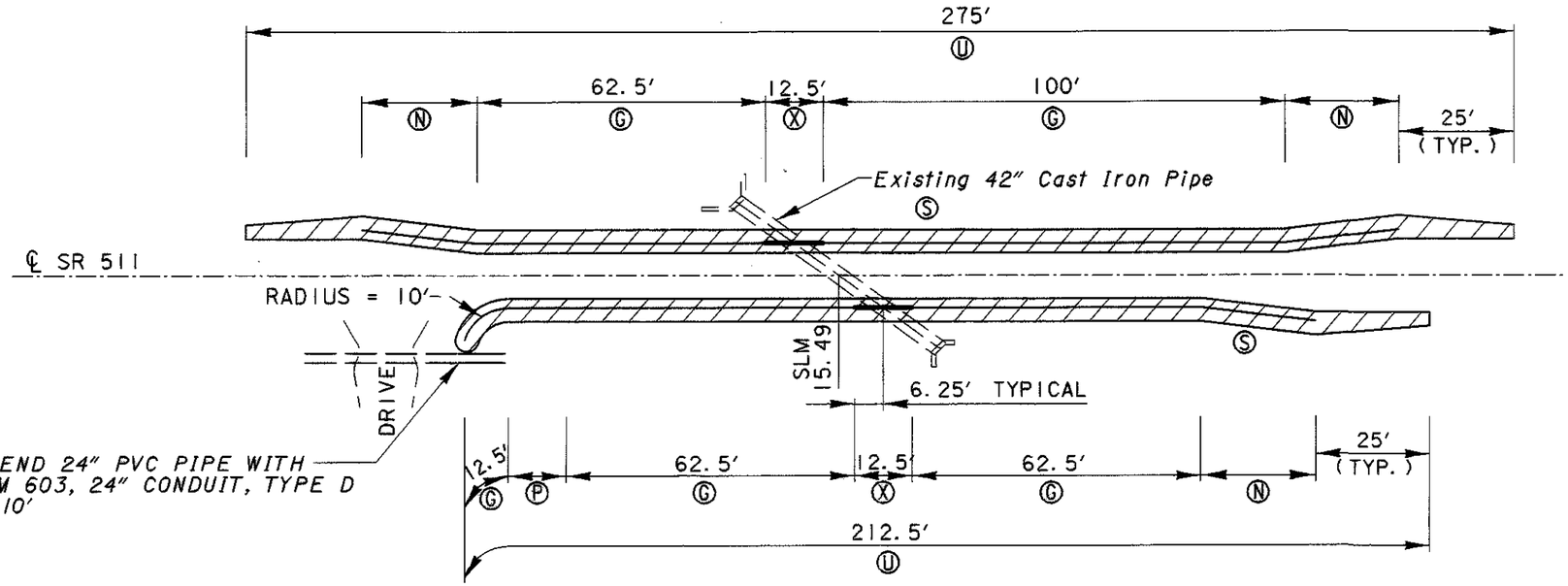
DESIGNED	DRAWN	REVIEWED	DATE
CHECKED	REVISED	STRUCTURAL FILE NUMBER	

GUARDRAIL DETAIL
ASD-302-1110 S.L.M.

ASD-302-10.90

20
83

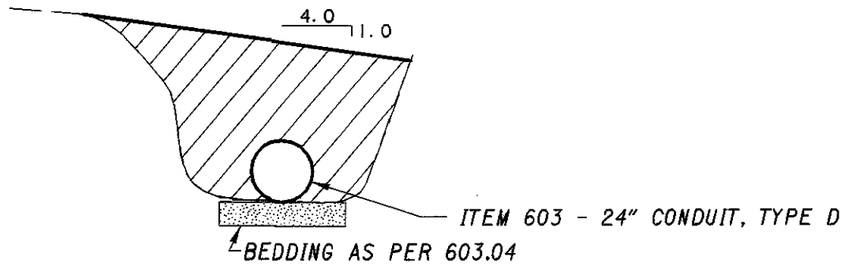
DESIGN FILE: i:\projects\21923\grdrail.dgn
WORKSTATION: jfinch
DATE: 03/03/03



NOTES:

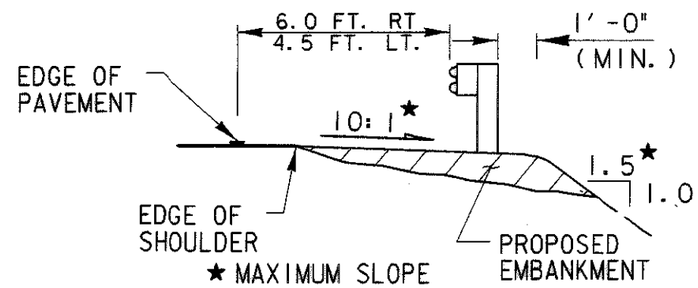
1. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 17, 18.
2. SLOPE CONDUIT, TYPE D TO MATCH THE FLOW LINE OF THE EXISTING DITCH.
3. NO EXISTING GUARDRAIL AT THIS LOCATION.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
▨	203	EMBANKMENT, AS PER PLAN	CU YD	78	64	142
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT	275	212.5	487.5
	603	24" CONDUIT, TYPE D	FT		10.0	10.0
Ⓖ	606	GUARDRAIL, TYPE 5	FT	162.5	137.5	300
Ⓝ	606	ANCHOR ASSEMBLY, TYPE A	EACH	2	1	3
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	EACH		1	1
Ⓧ	606	GUARDRAIL, TYPE 5 WITH DOUBLE RAILS	FT	12.5	12.5	25
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	3	3	6



DRAINAGE SECTION

TYPICAL SECTION 15.49



DESIGN AGENCY: DISTRICT THREE, PRODUCTION DEPARTMENT

DESIGNED	DRAWN	REVIEWED	DATE
CHECKED	REVISED	STRUCTURAL FILE NUMBER	

GUARDRAIL DETAIL
ASD-511-15.49 S.L.M.

ASD-302-10.90

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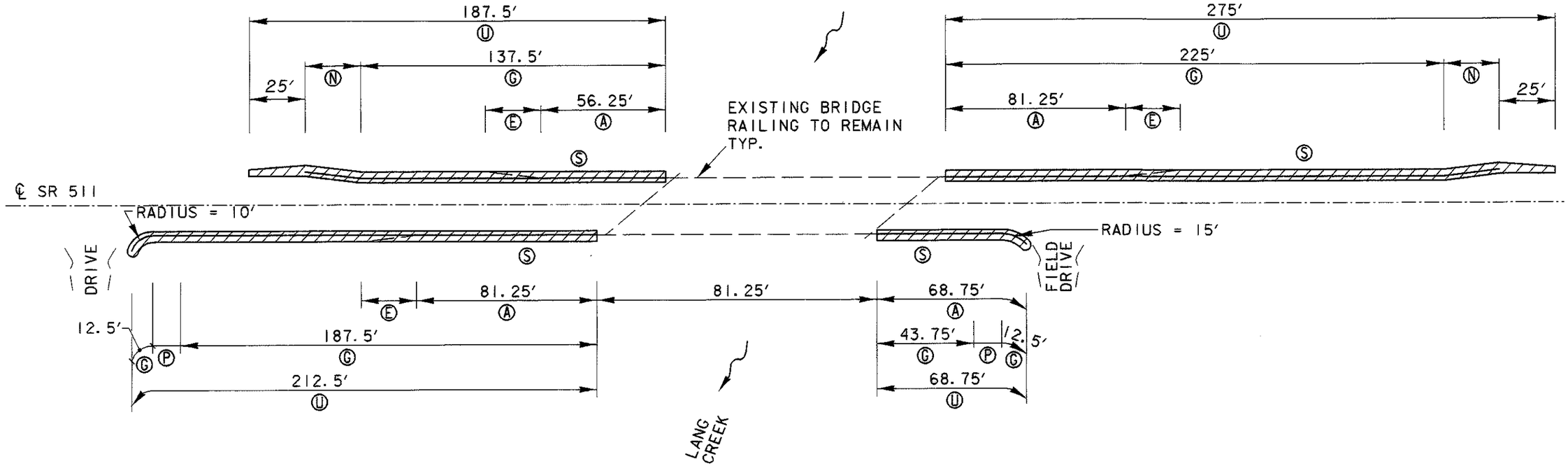
83

DESIGN FILE: i:\projects\21923\grdrail.dgn
WORKSTATION: jfinch
DATE: 03/03/03

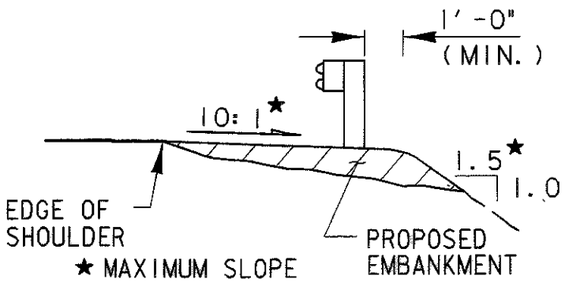


NOTES:

1. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 17, 18.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT	137.5	150	287.5
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2	1	3
▨	203	EMBANKMENT, AS PER PLAN	CU YD	348	212	560
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT	462.5	281.25	743.75
Ⓖ	606	GUARDRAIL, TYPE 5	FT	362.5	256.25	618.75
Ⓝ	606	ANCHOR ASSEMBLY, TYPE A	EACH	2		2
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	EACH		2	2
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	7	6	13

TYPICAL SECTION 1621



DESIGN AGENCY
DISTRICT THREE
PRODUCTION DEPARTMENT

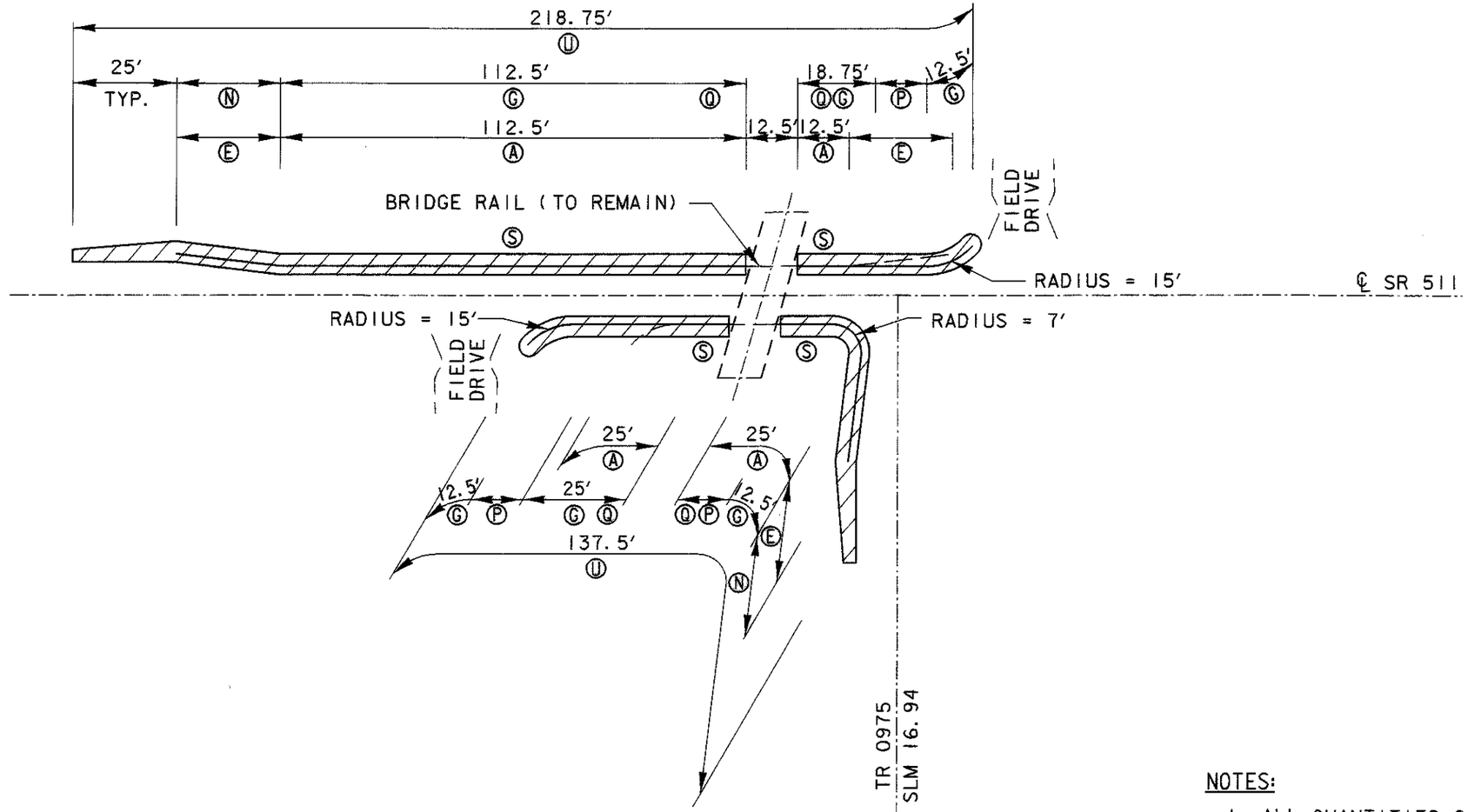
DESIGNED	DRAWN	REVIEWED	DATE	STRUCTURAL FILE NUMBER
bad	JPF			
CHECKED	REVISED			

GUARDRAIL DETAIL
ASD-511-1621 S.L.M.

ASD-302-10.90

22
83

DATE: 03/03/03
WORKSTATION: jfinch
DESIGN FILE: i:\projects\21923\grdrail.dgn

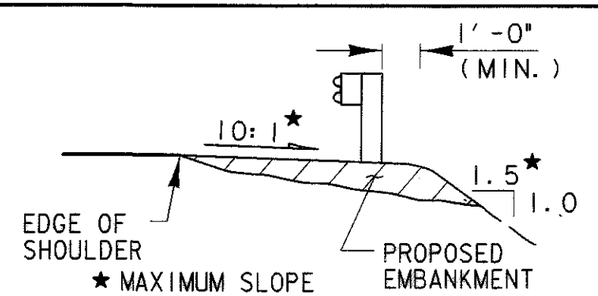


LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT	125	50	175
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2	1	3
▨	203	EMBANKMENT, AS PER PLAN	CU YD	90	45	135
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT	218.75	137.5	356.25
Ⓖ	606	GUARDRAIL, TYPE 5	FT	143.75	75	218.75
Ⓝ	606	ANCHOR ASSEMBLY, TYPE A	EACH	1	1	1
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	EACH	1	1	2
Ⓠ	606	BRIDGE TERMINAL ASSEMBLY, TYPE 4	EACH	2	2	4
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	3	3	6

NOTES:

1. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 17, 18.

TYPICAL SECTION 16.94



DESIGN AGENCY: DISTRICT THREE PRODUCTION DEPARTMENT

DESIGNED	DRAWN	REVIEWED	DATE
bad			
CHECKED	REVISED	STRUCTURAL FILE NUMBER	

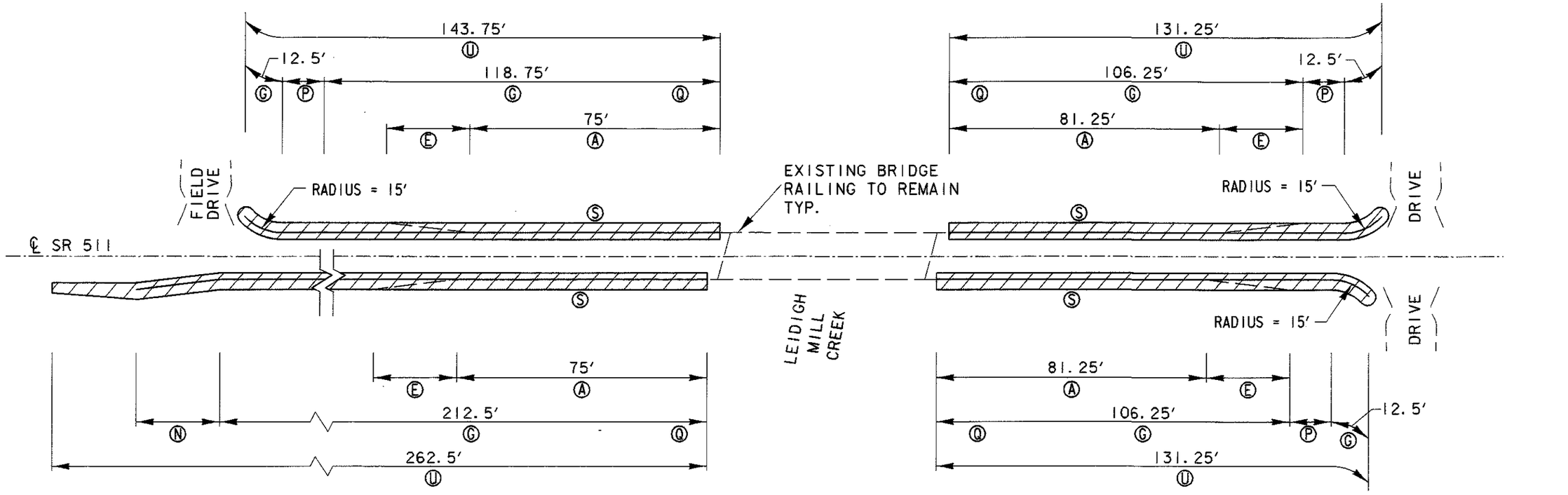
GUARDRAIL DETAIL
ASD-511-16.94 S.L.M.

ASD-302-10.90

23
83

DATE: 03/03/03

DESIGN FILE: i:\projects\21923\grdrail.dgn

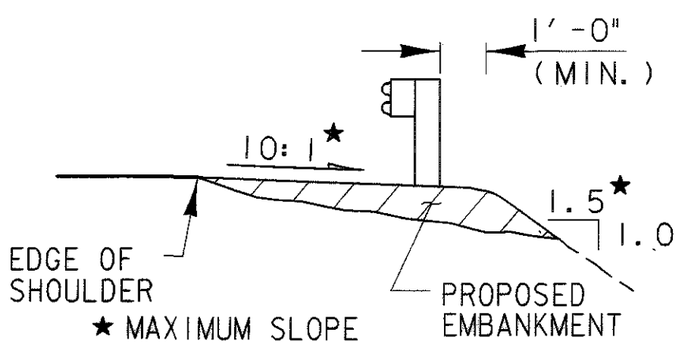


NOTES:

1. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 17, 18.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT	156.25	156.25	312.5
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2	2	4
▨	203	EMBANKMENT, AS PER PLAN	CU YD	298	207	505
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT	275	393.75	668.75
Ⓖ	606	GUARDRAIL, TYPE 5	FT	250	331.25	581.25
Ⓝ	606	ANCHOR ASSEMBLY, TYPE A	EACH		1	1
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	EACH	2	1	3
Ⓠ	606	BRIDGE TERMINAL ASSEMBLY, TYPE 4	EACH	2	2	4
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	5	5	10

TYPICAL SECTION 1738



DESIGN AGENCY: DISTRICT THREE PRODUCTION DEPARTMENT

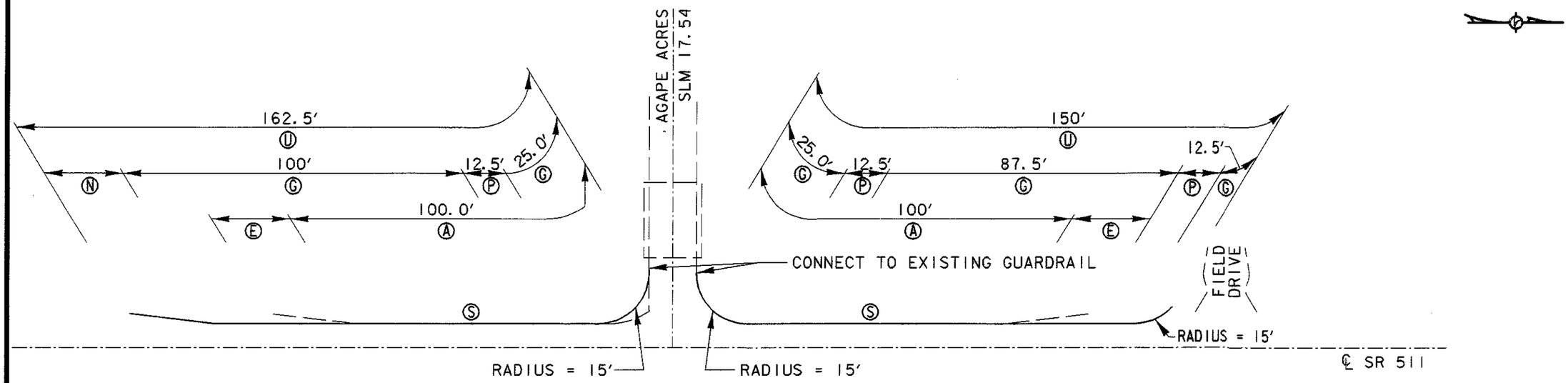
DESIGNED	DRAWN	REVIEWED	DATE
CHECKED	REVISED	STRUCTURAL FILE NUMBER	

GUARDRAIL DETAIL
ASD-511-1738 S.L.M.

ASD-302-10.90

24
83

DESIGN FILE: i:\projects\21923\grdrail.dgn
WORKSTATION: jfinch
DATE: 03/03/03



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT	200		200
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2		2
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT	312.5		312.5
Ⓖ	606	GUARDRAIL, TYPE 5	FT	250		250
Ⓝ	606	ANCHOR ASSEMBLY, TYPE A	EACH	1		1
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	EACH	3		3
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	6		6

NOTES:

1. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 17, 18.

DESIGN AGENCY: DISTRICT THREE PRODUCTION DEPARTMENT

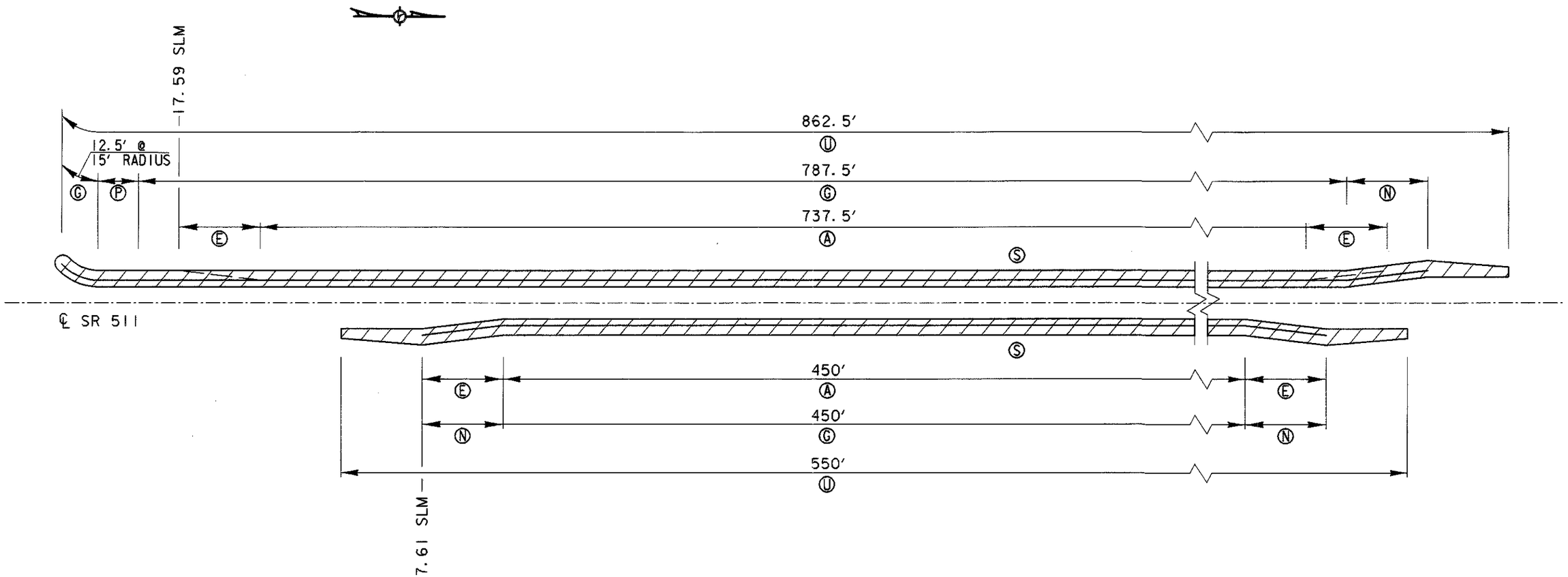
DESIGNED	DRAWN	REVIEWED	DATE
CHECKED	REVISED	STRUCTURAL FILE NUMBER	

GUARDRAIL DETAIL
ASD-511-17.54 S.L.M.

ASD-302-10.90

25
83

DATE: 03/03/03
WORKSTATION: jfinch
DESIGN FILE: i:\projects\21923\grdrail.dgn

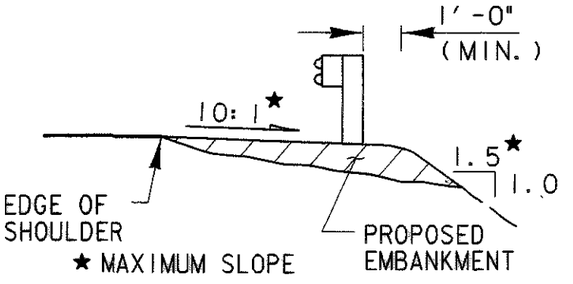


NOTES:

1. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 17, 18.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT	737.5	450	1187.5
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2	2	4
▨	203	EMBANKMENT, AS PER PLAN	CU YD	222	139	361
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT	862.5	550	1412.5
Ⓖ	606	GUARDRAIL, TYPE 5	FT	800	450	1250
Ⓝ	606	ANCHOR ASSEMBLY, TYPE A	EACH	1	2	3
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	EACH	1		1
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	9	6	15

TYPICAL SECTION 17.59



DESIGN AGENCY: DISTRICT THREE PRODUCTION DEPARTMENT

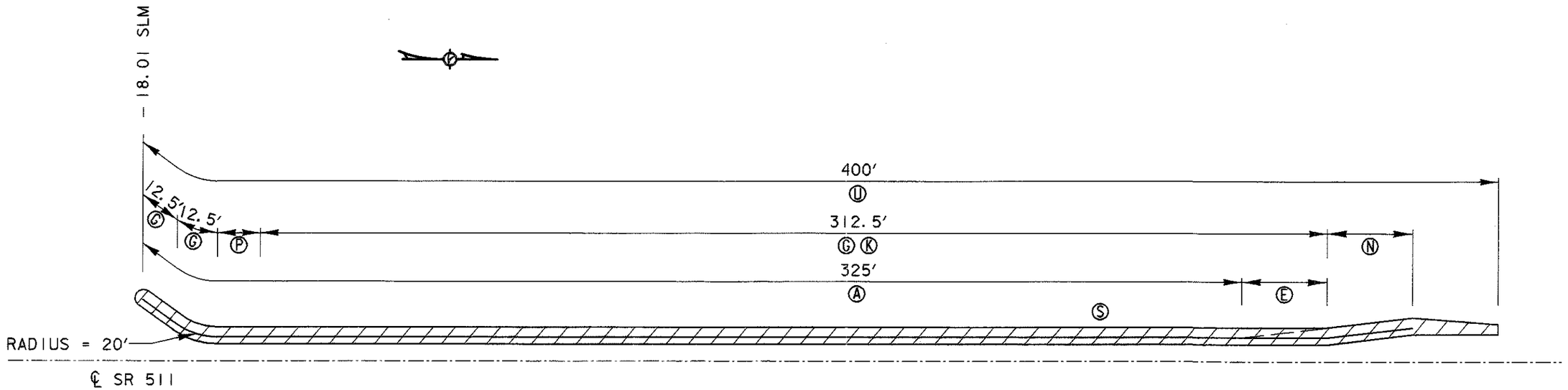
DESIGNED	DRAWN	REVIEWED	DATE
CHECKED	REVISED	STRUCTURAL FILE NUMBER	

GUARDRAIL DETAIL
ASD-511-17.59 S.L.M.

ASD-302-10.90

26
83

DESIGN FILE: i:\projects\21923\grdrail.dgn
WORKSTATION: jfinch
DATE: 03/03/03

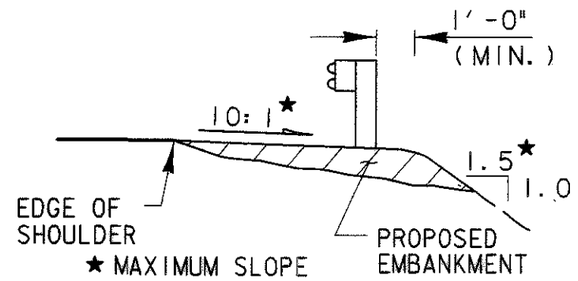


NOTES:

1. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 17, 18.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT	325	0	325
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	1	0	1
▨	203	EMBANKMENT, AS PER PLAN	CU YD	111	0	111
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT	400	0	400
Ⓖ	606	GUARDRAIL, TYPE 5	FT	337.5	0	337.5
Ⓚ	606	GUARDRAIL POST, 9 FEET	EACH	49	0	49
Ⓝ	606	ANCHOR ASSEMBLY, TYPE A	EACH	1	0	1
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	5	0	5

TYPICAL SECTION 18.01



DESIGN AGENCY
DISTRICT THREE
PRODUCTION DEPARTMENT

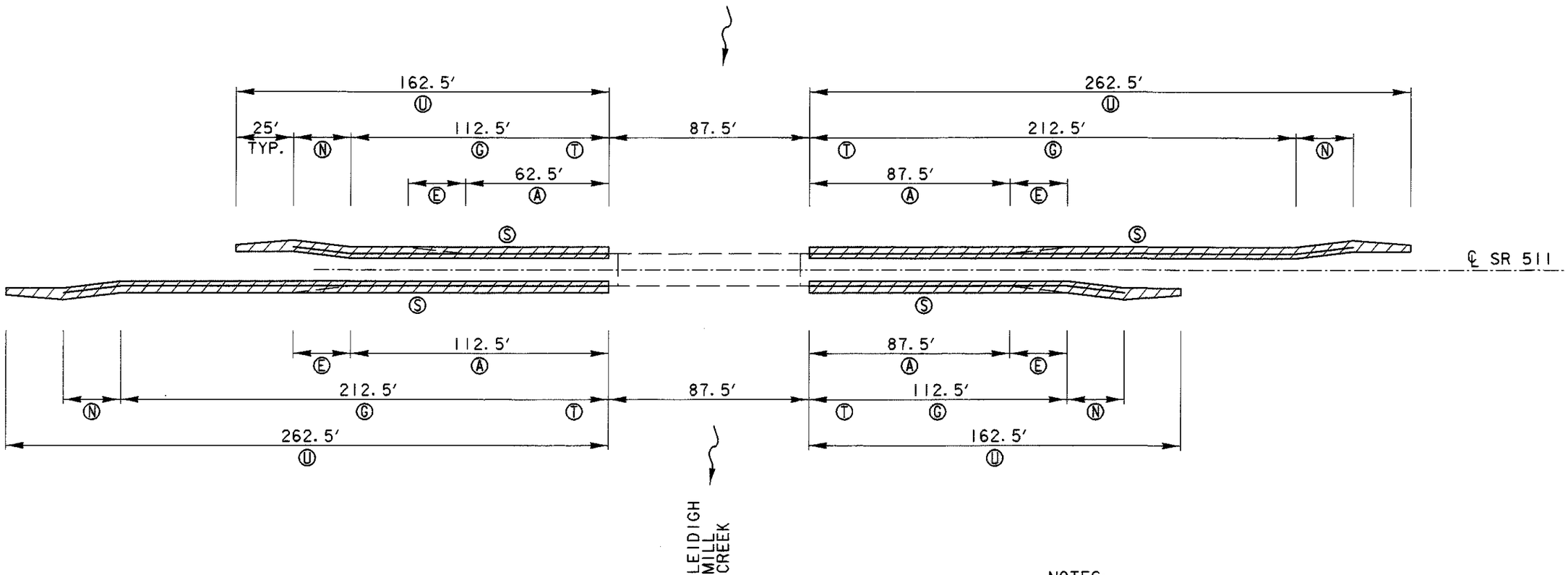
DESIGNED	DRAWN	REVIEWED	DATE
CHECKED	REVISED	STRUCTURAL FILE NUMBER	

GUARDRAIL DETAIL
ASD-511-18.01 S.L.M.

ASD-302-10.90

27
83

DESIGN FILE: i:\projects\21923\grdrail.dgn
WORKSTATION: jfinch
DATE: 03/03/03

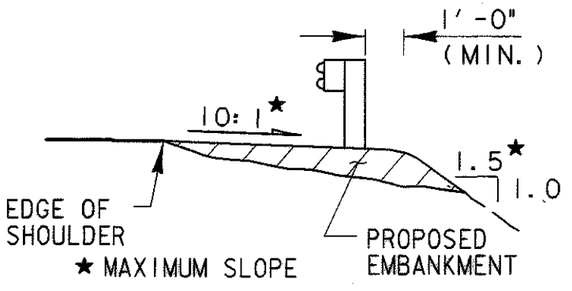


NOTES:

1. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 17, 18.
2. BRIDGE RAIL TO BE REPLACED. SEE SHEET 59 FOR BRIDGE RAIL QUANTITIES.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT	150	200	350
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2	2	4
//////	203	EMBANKMENT, AS PER PLAN	CU YD	56	56	112
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT	425	425	850
Ⓖ	606	GUARDRAIL, TYPE 5	FT	325	325	650
Ⓝ	606	ANCHOR ASSEMBLY, TYPE A	EACH	2	2	4
Ⓣ	606	BRIDGE TERMINAL ASSEMBLY, TYPE 3 (MODIFIED)	EACH	2	2	4
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	6	6	12

TYPICAL SECTION 1880



DESIGN AGENCY: DISTRICT THREE PRODUCTION DEPARTMENT

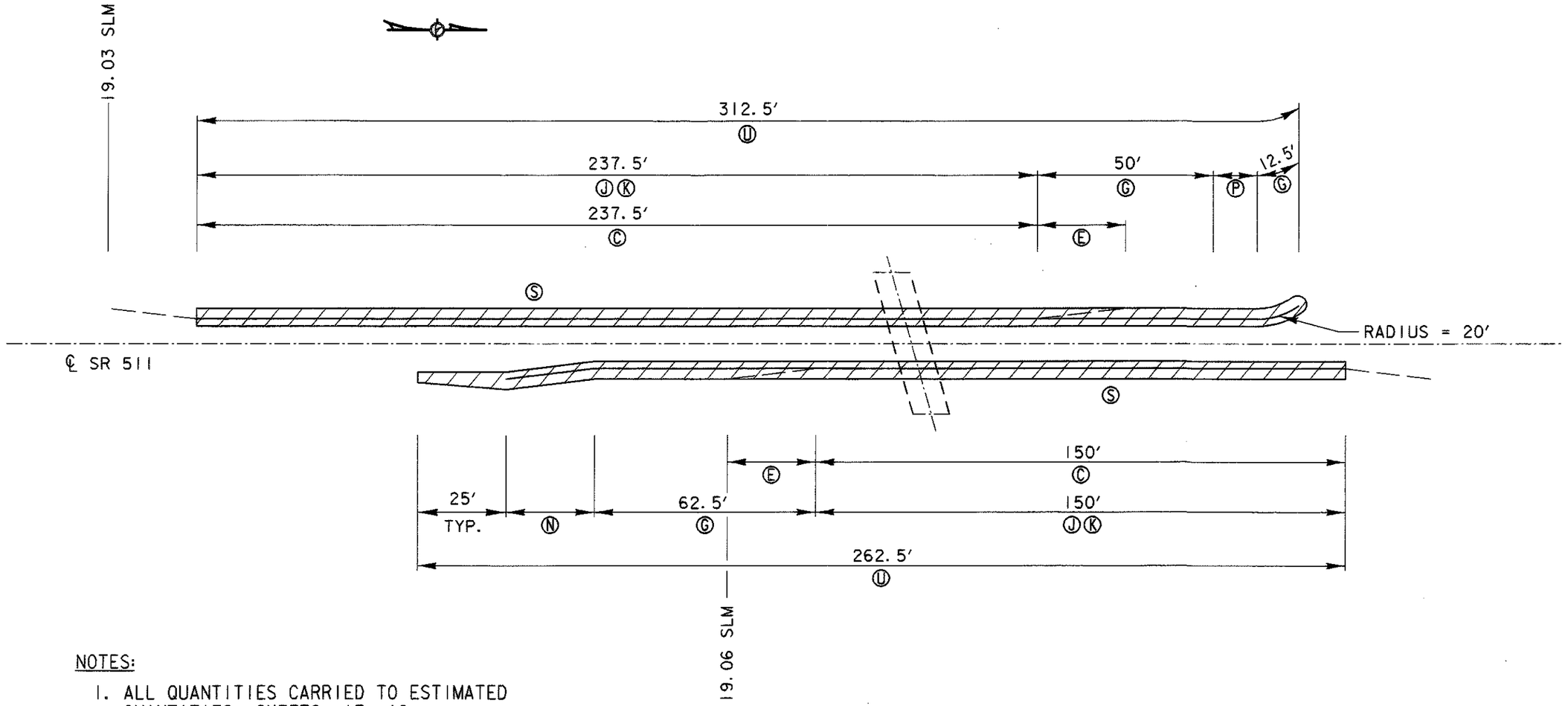
DESIGNED	DRAWN	REVIEWED	DATE	STRUCTURAL FILE NUMBER
CHECKED	REVISED			

GUARDRAIL DETAIL
ASD-511-1880 S.L.M.

ASD-302-10.90

28
83

DESIGN FILE: i:\projects\21923\grdrail.dgn
WORKSTATION: jfinch
DATE: 03/03/03

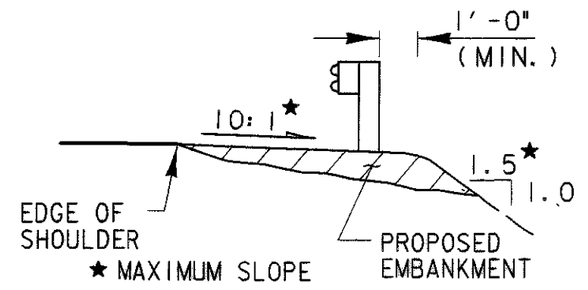


NOTES:

1. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 17, 18.
2. CONNECT TO EXISTING A ANCHORS.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓒ	202	GUARDRAIL REMOVED FOR REUSE	FT	237.5	150	387.5
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	1	1	2
▨	203	EMBANKMENT, AS PER PLAN	CU YD	130	109	239
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT	312.5	262.5	575
Ⓖ	606	GUARDRAIL, TYPE 5	FT	62.5	62.5	125
Ⓙ	606	GUARDRAIL REBUILT, TYPE 5	FT	237.5	150	387.5
Ⓚ	606	GUARDRAIL POST, 9 FOOT	EACH	37	23	60
Ⓝ	606	ANCHOR ASSEMBLY, TYPE A	EACH	0	1	1
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	4	4	8

TYPICAL SECTION 19.03



DESIGN AGENCY
DISTRICT THREE
PRODUCTION DEPARTMENT

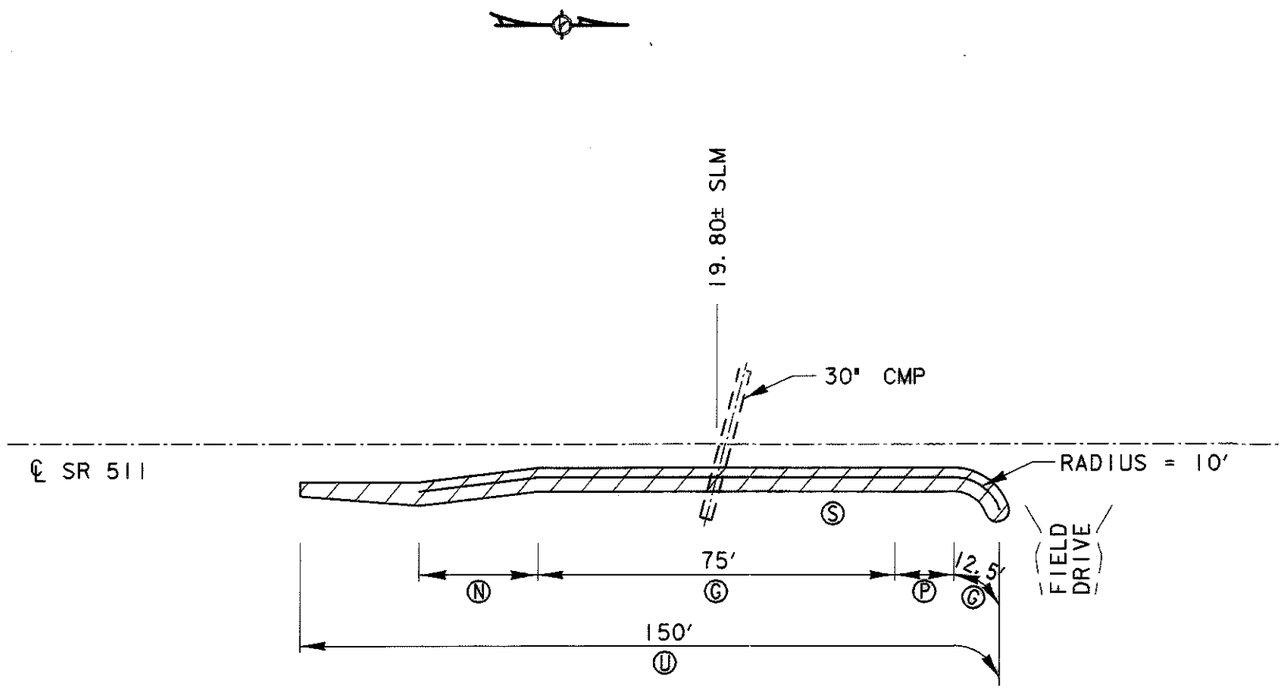
DESIGNED	DRAWN	REVIEWED	DATE
CHECKED	REVISED	STRUCTURAL FILE NUMBER	

GUARDRAIL DETAIL
ASD-511-19.03 S.L.M.

ASD-302-10.90

29
83

DESIGN FILE: i:\projects\21923\grdrail.dgn
WORKSTATION: jfinch
DATE: 03/03/03

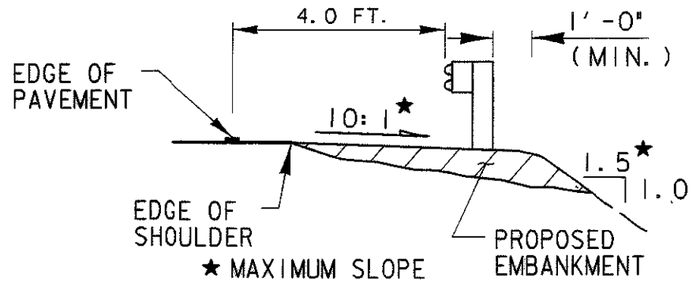


NOTES:

1. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 17, 18.
2. NEW GUARDRAIL LOCATION.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
▨	203	EMBANKMENT, AS PER PLAN	CU YD	0	30	30
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT	0	150	150
Ⓖ	606	GUARDRAIL, TYPE 5	FT	0	87.5	87.5
Ⓝ	606	ANCHOR ASSEMBLY, TYPE A	EACH	0	1	1
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	EACH	0	1	1
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	0	2	2

TYPICAL SECTION 19.80



DESIGN AGENCY
DISTRICT THREE
PRODUCTION DEPARTMENT

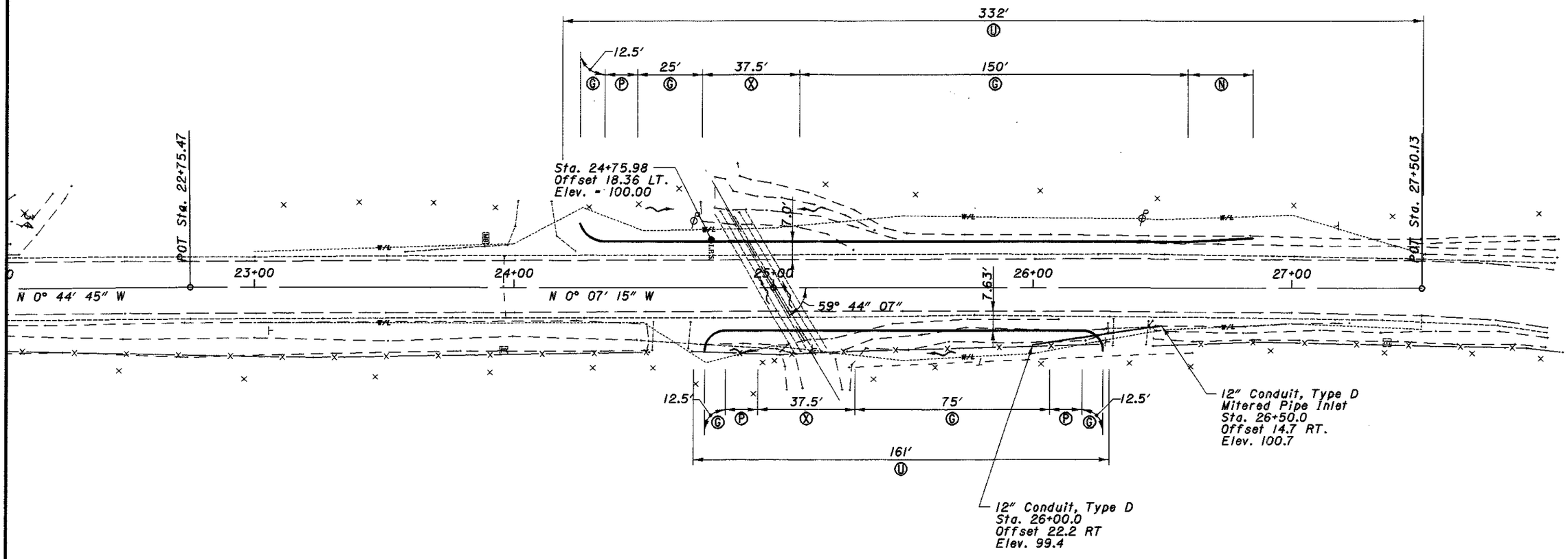
DESIGNED	DRAWN	REVIEWED	DATE
CHECKED	REVISED	STRUCTURAL FILE NUMBER	

GUARDRAIL DETAIL
ASD-511-19.80 S.L.M.

ASD-302-10.90

30
83

DESIGN FILE: i:\projects\21923\grdrail.dgn
WORKSTATION: jfinch
DATE: 03/03/03



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
	203	EXCAVATION	CU. YD.			7
	203	EMBANKMENT, AS PER PLAN	CU. YD.			184
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT.	332	161	493
	603	12" CONDUIT, TYPE D	FT.		51.0	51.0
Ⓖ	606	GUARDRAIL, TYPE 5	FT.	187.5	100.0	287.5
Ⓝ	606	ANCHOR ASSEMBLY, TYPE A	EACH	1		1
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	EACH	1	2	3
Ⓧ	606	GUARDRAIL, TYPE 5 WITH DOUBLE RAILS	FT.	37.5	37.5	75
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	4	3	7

NOTES:

1. GRADE EMBANKMENT AS PER CROSS SECTIONS ON SHEETS 32, 33.
2. NO EXISTING GUARDRAIL AT THIS LOCATION
3. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 17, 18.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED
CHECKED

PLAN VIEW
GUARDRAIL LOCATION S.L.M. 22.62

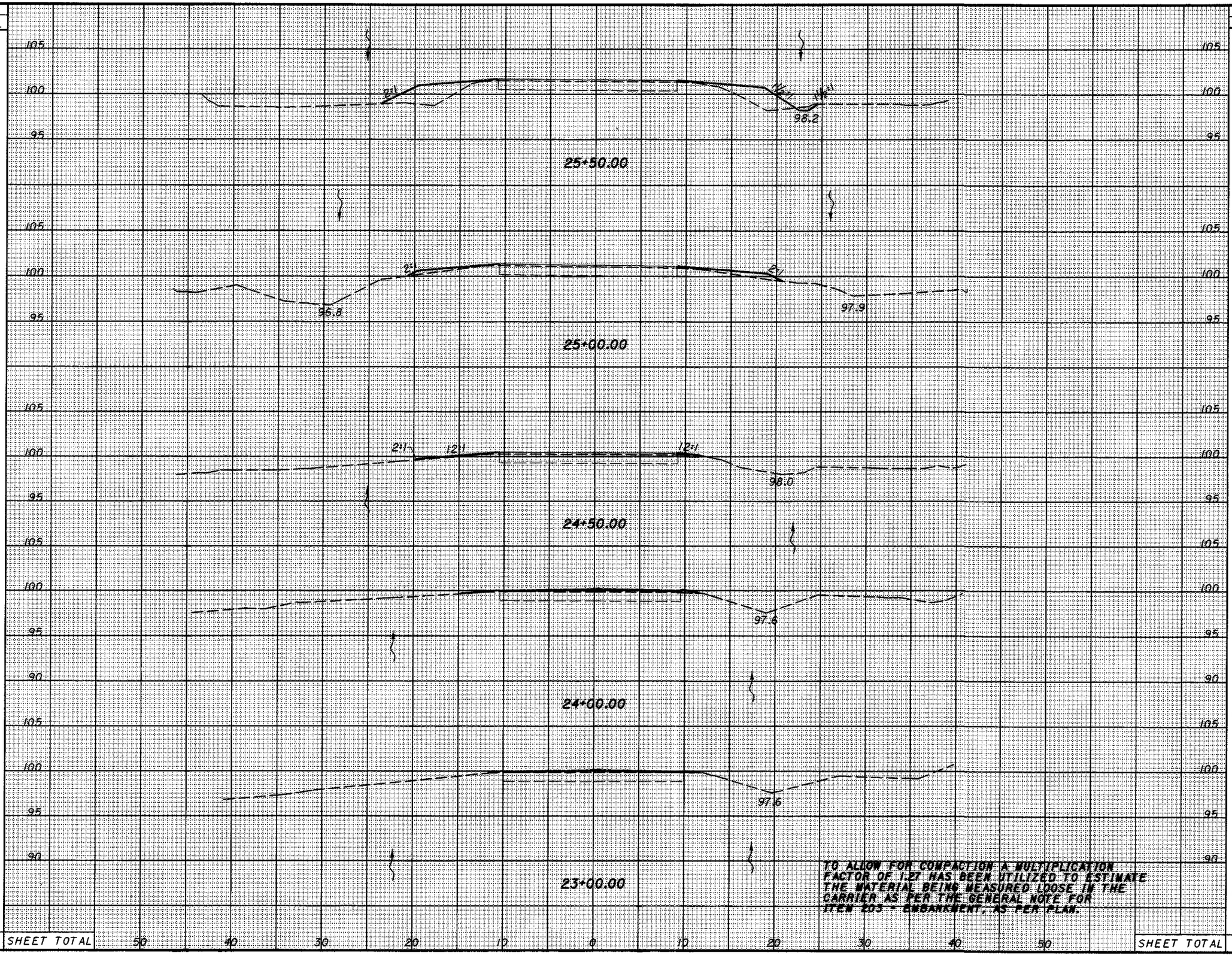
ASD-302-10.90

1 / 3

31 / 83

DESIGN FILE: I:\projects\21923\gr-2262.dgn
WORKSTATION: jfinch
DATE: 03/03/03

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1.0	26.8		
		2	38
0.0	5.7		
		0	8
0.0	1.0		
		0	2
0.0	0.6		
		0	2
0.0	0.3		
		0	0
SHEET TOTAL		1	50

TO ALLOW FOR COMPACTION A MULTIPLICATION FACTOR OF 1.27 HAS BEEN UTILIZED TO ESTIMATE THE MATERIAL BEING MEASURED LOOSE IN THE CARRIER AS PER THE GENERAL NOTE FOR ITEM 203 - EMBANKMENT, AS PER PLAN.

CALCULATED

CHECKED

CROSS SECTIONS - S.L.M. 22.62
STA. 23+00 TO STA. 25+50

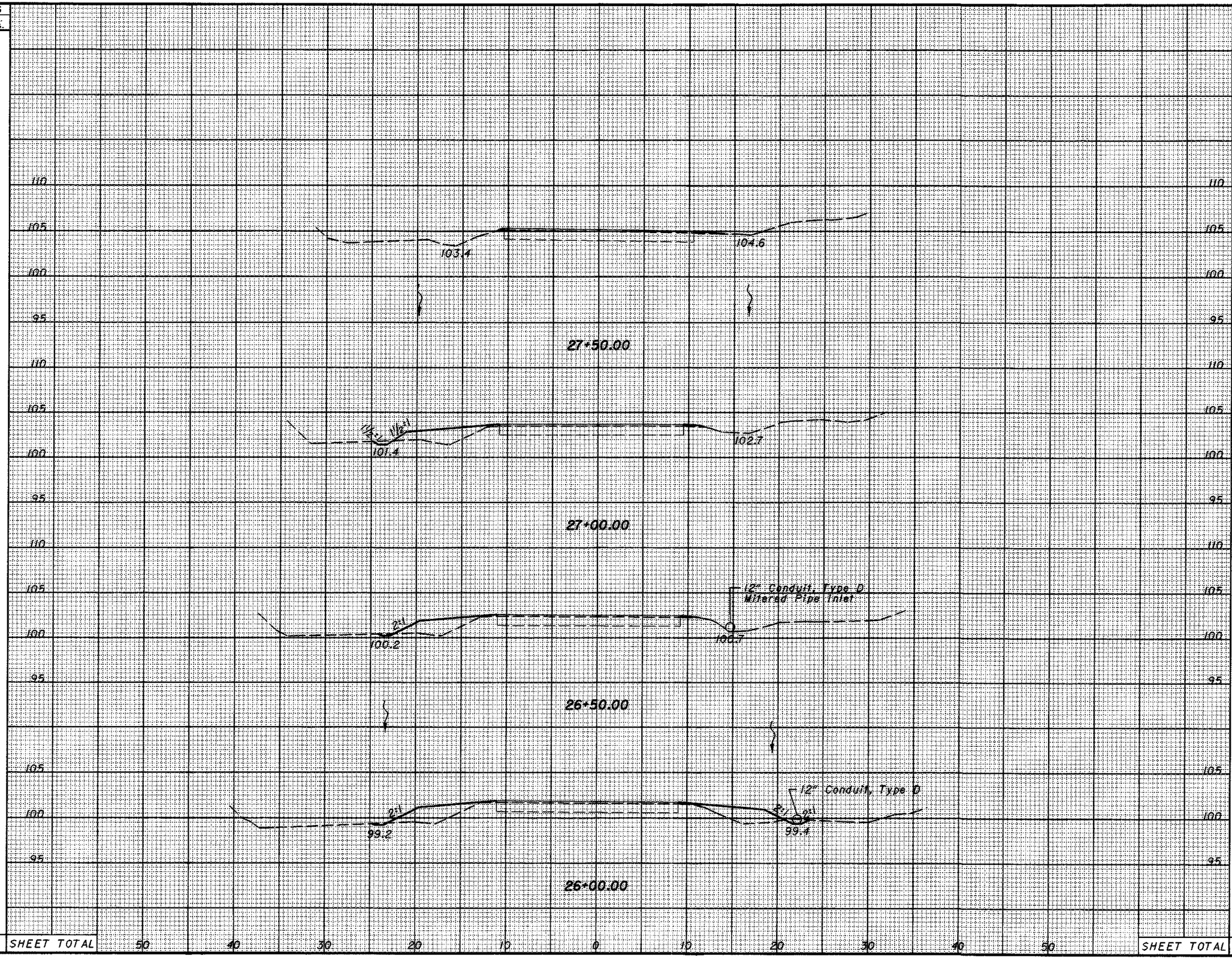
ASD-302-10.90

2 | 3

32
83

DESIGN FILE: I:\projects\2123\grxs2262.dgn
WORKSTATION: jfinch
DATE: 03-MAR-2003

SEEDING			END AREA		VOLUME		
END WIDTH	SQ. YDS.		CUT	FILL	CUT	FILL	
		27+50.00	0.0	0.4			
		27+00.00	0.7	11.7	1	14	
		26+50.00	0.3	10.2	1	26	
		26+00.00	1.3	21.4	1	37	
		SHEET TOTAL			3	57	
					6	134	



DESIGN FILE: i:\projects\21923\grxs2262.dgn
WORKSTATION: jfinch
DATE: 03-MAR-2003

CALCULATED

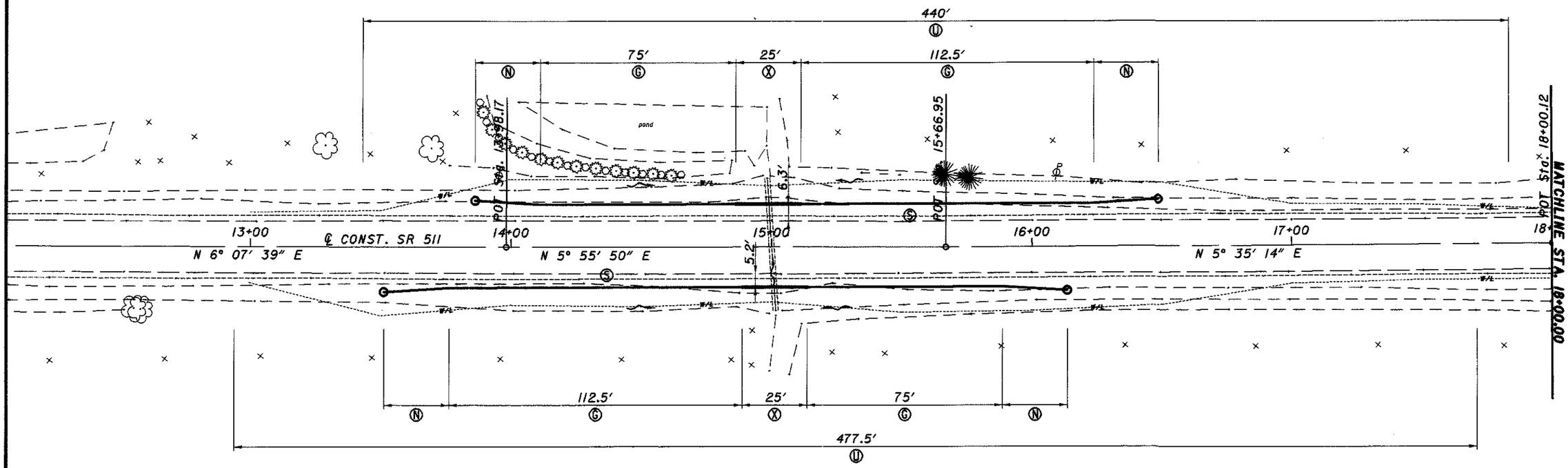
CHECKED

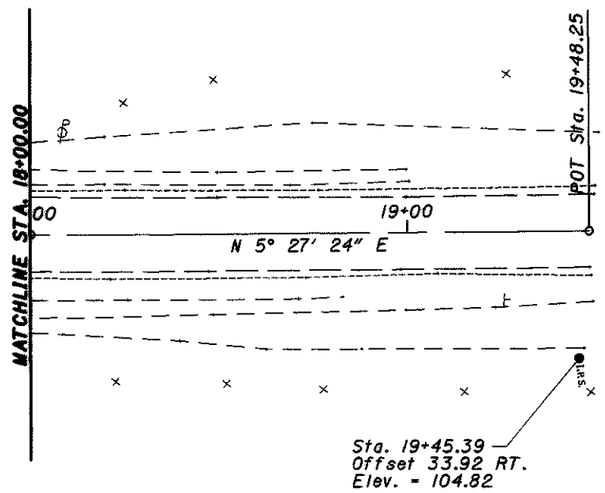
CROSS SECTIONS - S.L.M. 22.62
STA. 26+00 TO STA. 27+50

ASD-302-10.90

3 / 3

33
83





LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
	203	EMBANKMENT, AS PER PLAN	CU. YD.			173
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT.	440	477.5	917.5
Ⓖ	606	GUARDRAIL, TYPE 5	FT.	187.5	187.5	375
Ⓝ	606	ANCHOR ASSEMBLY, TYPE A	EACH	2	2	4
Ⓧ	606	GUARDRAIL, TYPE 5 WITH DOUBLE RAILS	FT.	25	25	50
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	4	4	8

NOTES:

1. GRADE EMBANKMENT AS PER CROSS SECTIONS ON SHEETS 35 - 37.
2. NO EXISTING GUARDRAIL AT THIS LOCATION.
3. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 17, 18.

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED
CHECKED

PLAN VIEW
GUARDRAIL LOCATION S.L.M. 26.78

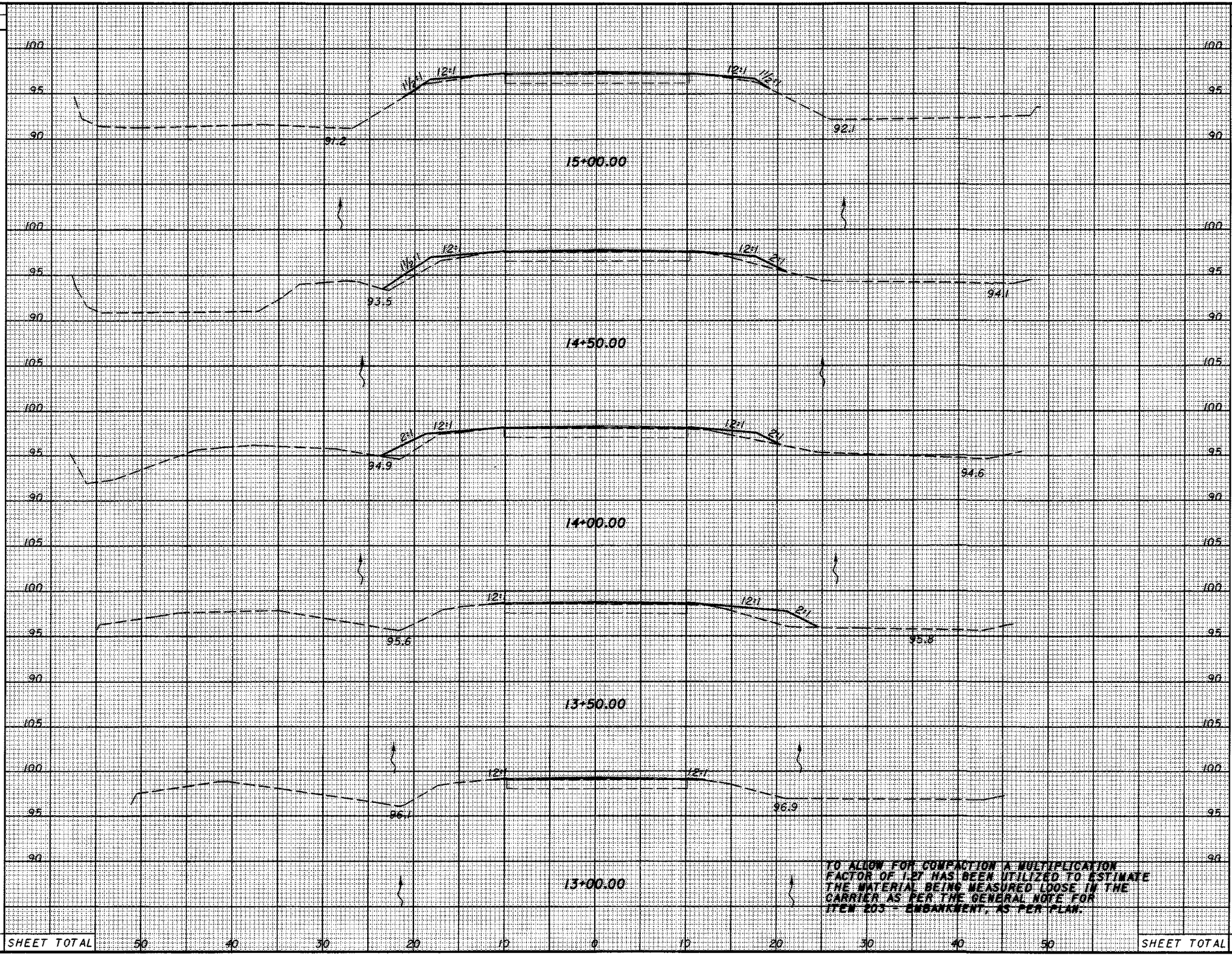
ASD-302-10.90

1 / 4

34
83

DESIGN FILE: I:\projects\21923\gr-2678.dgn
WORKSTATION: jfinch
DATE: 03/03/03

SEEDING	
END WIDTH	SQ. YDS.



TO ALLOW FOR COMPACTION A MULTIPLICATION FACTOR OF 1.27 HAS BEEN UTILIZED TO ESTIMATE THE MATERIAL BEING MEASURED LOOSE IN THE CARRIER AS PER THE GENERAL NOTE FOR ITEM 203 - EMBANKMENT, AS PER PLAN.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.1	2.7	0	15
0.0	9.7	0	24
0.0	10.5	0	25
0.0	10.4	0	12
0.0	0.2	0	0
		0	76

CALCULATED

CHECKED

CROSS SECTIONS - S.L.M. 26.78
STA. 13+00 TO STA. 15+00

ASD-302-10.90

2 / 4

35 / 83

DESIGN FILE: I:\projects\21923\grxs2678.dgn
WORKSTATION: jfinch
DATE: 03-MAR-2003

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL	
						17+00.00
		0.0	0.5			
				0	13	
						16+50.00
		0.0	10.7			
				0	31	
						16+00.00
		0.0	15.6			
				0	33	
						15+50.00
		0.0	12.5			
				0	18	
SHEET TOTAL				0	95	SHEET TOTAL

CALCULATED

CHECKED

CROSS SECTIONS - S.L.M. 26.78
STA. 15+50 TO STA. 17+00

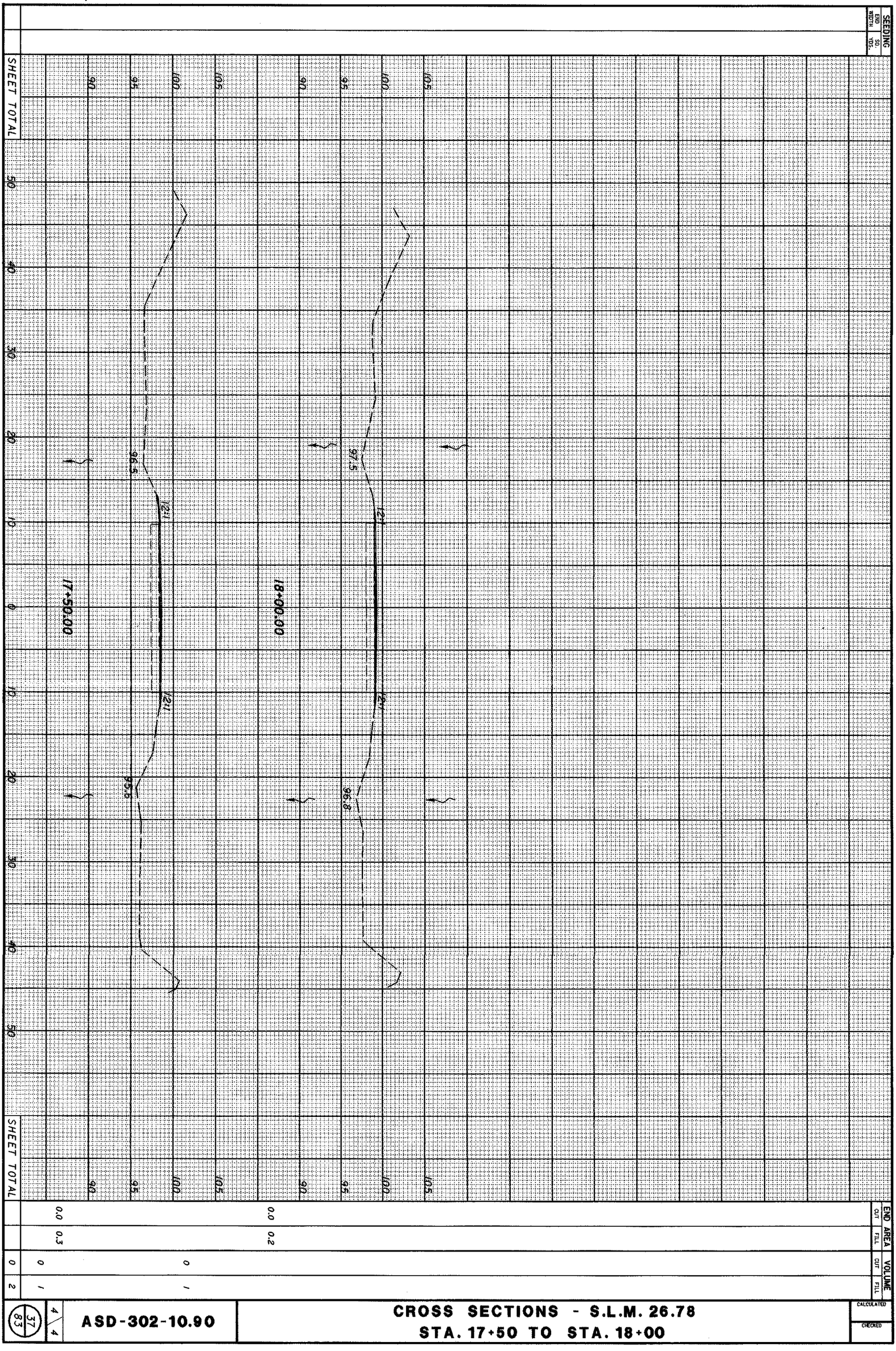
ASD-302-10.90

3 \ 4

36 / 83

DESIGN FILE: i:\projects\21923\grxs2678.dgn
WORKSTATION: jfinch
DATE: 03-MAR-2003

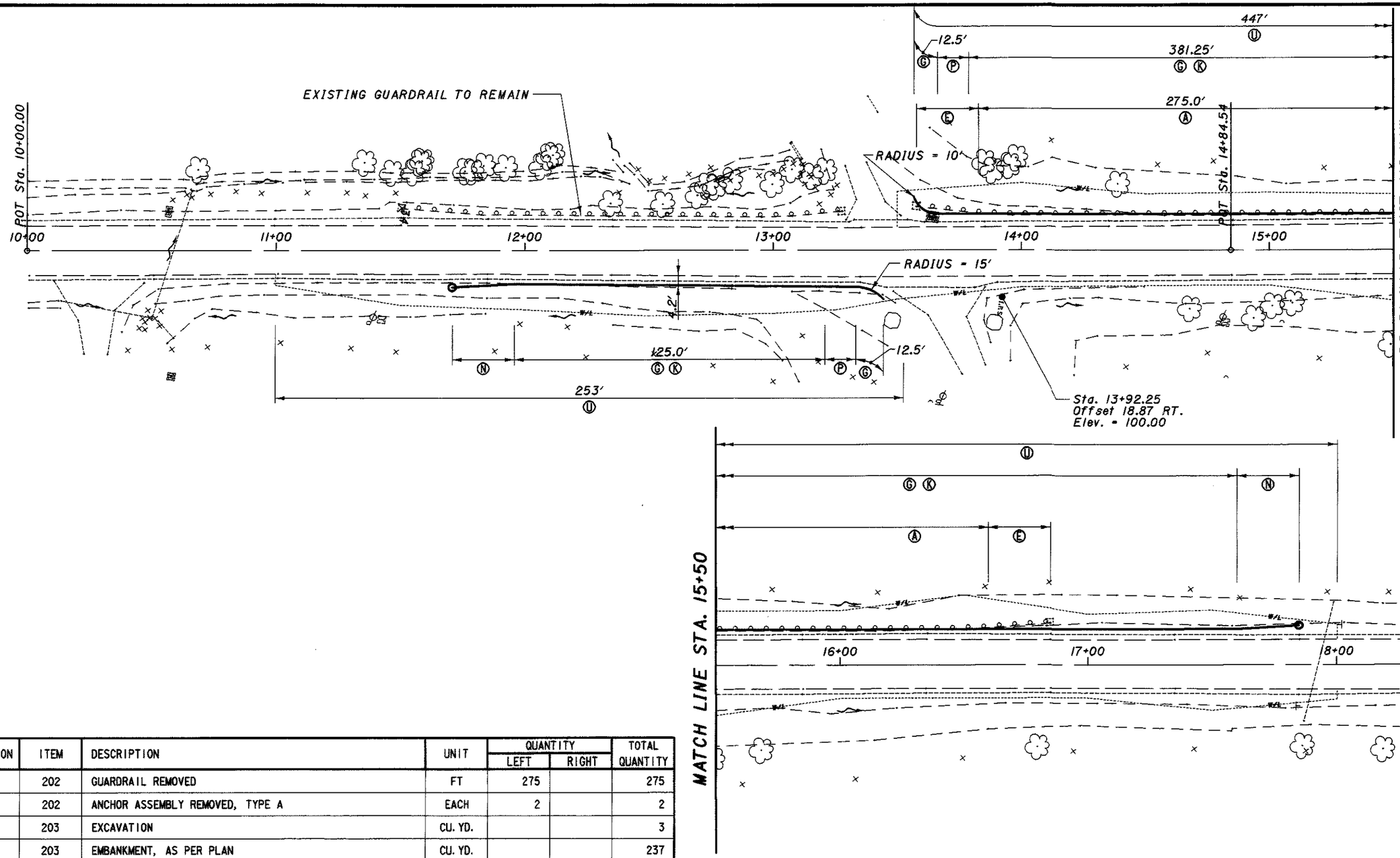
DESIGN FILE: i:\projects\21923\grxs2678.dgn
WORKSTATION: jfinch DATE: 03-MAR-2003



37/83 | 4/4 | ASD-302-10.90

CROSS SECTIONS - S.L.M. 26.78
STA. 17+50 TO STA. 18+00

CALCULATED
CHECKED



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT	275		275
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2		2
	203	EXCAVATION	CU. YD.			3
	203	EMBANKMENT, AS PER PLAN	CU. YD.			237
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT.	447	253	700
Ⓖ	606	GUARDRAIL, TYPE 5	FT.	393.75	137.5	531.25
Ⓚ	606	GUARDRAIL POST, 9 FEET	EACH	60	19	79
Ⓝ	606	ANCHOR ASSEMBLY, TYPE A	EACH	1	1	2
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	EACH	1	1	2
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	5	3	8

NOTES:

1. GRADE EMBANKMENT AS PER CROSS SECTIONS ON SHEETS 39 - 42.
2. NO EXISTING GUARDRAIL ON RIGHT SIDE OF SR 511.
3. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 17, 18.

DESIGN FILE: i:\projects\21923\gr-2758.dgn
DATE: 03/03/03
WORKSTATION:

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED
CHECKED

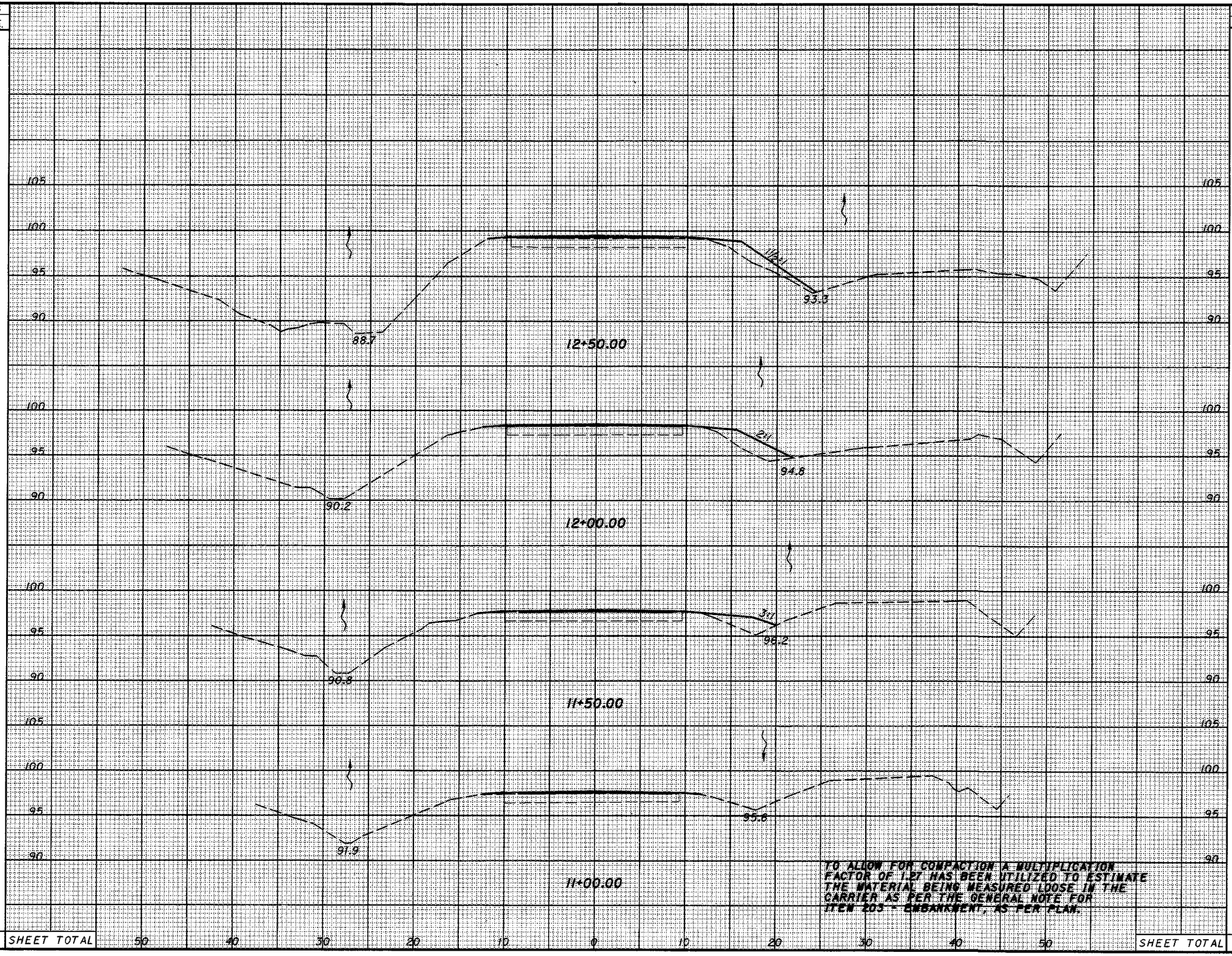
PLAN VIEW
GUARDRAIL LOCATION S.L.M. 27.58

ASD-302-10.90

1 / 5

38
83

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		0.0	10.0		
				0	25
		0.0	11.3		
				0	23
		0.0	7.8		
				0	9
		0.1	0.2		
				0	0
SHEET TOTAL				0	57



TO ALLOW FOR COMPACTION A MULTIPLICATION FACTOR OF 1.27 HAS BEEN UTILIZED TO ESTIMATE THE MATERIAL BEING MEASURED LOOSE IN THE CARRIER AS PER THE GENERAL NOTE FOR ITEM 203 - EMBANKMENT, AS PER PLAN.

CALCULATED

CHECKED

CROSS SECTIONS - S.L.M. 27.58
STA. 11+00 TO STA. 12+50

ASD-302-10.90

2 / 5

39 / 83

DESIGN FILE: i:\projects\21923\grxs2758.dgn
WORKSTATION: jfinch DATE: 03-MAR-2003

SEEDING	
END WIDTH	SQ. YDS.

105
100
95
90

14+50.00
88.0
90.5

14+00.00
88.5
94.1

13+50.00
92.7
93.0

13+25.00
93.8
93.3

13+00.00
88.0
90.4

SHEET TOTAL

50 40 30 20 10 0 10 20 30 40 50

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.0	6.4		
		0	18
0.0	8.9		
		2	12
2.2	1.1		
		1	8
0.1	12.2		
		0	15
0.0	13.7		
		0	28
		3	81

CALCULATED

CHECKED

CROSS SECTIONS - S.L.M. 27.58
STA. 13+00 TO STA. 14+50

ASD-302-10.90

3 / 5

40 / 83

DESIGN FILE: I:\projects\21923\grxs2758.dgn
WORKSTATION: finch
DATE: 03-MAR-2003

SEEDING	
END WIDTH	SQ. YDS.
SHEET TOTAL	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.0	1.6		
		0	14
0.0	19.7		
		0	21
0.0	6.8		
		0	18
0.0	8.4		
		0	19
0.0	8.0		
		0	17
		0	89

CALCULATED

CHECKED

CROSS SECTIONS - S.L.M. 27.58
STA. 15+00 TO STA. 17+00

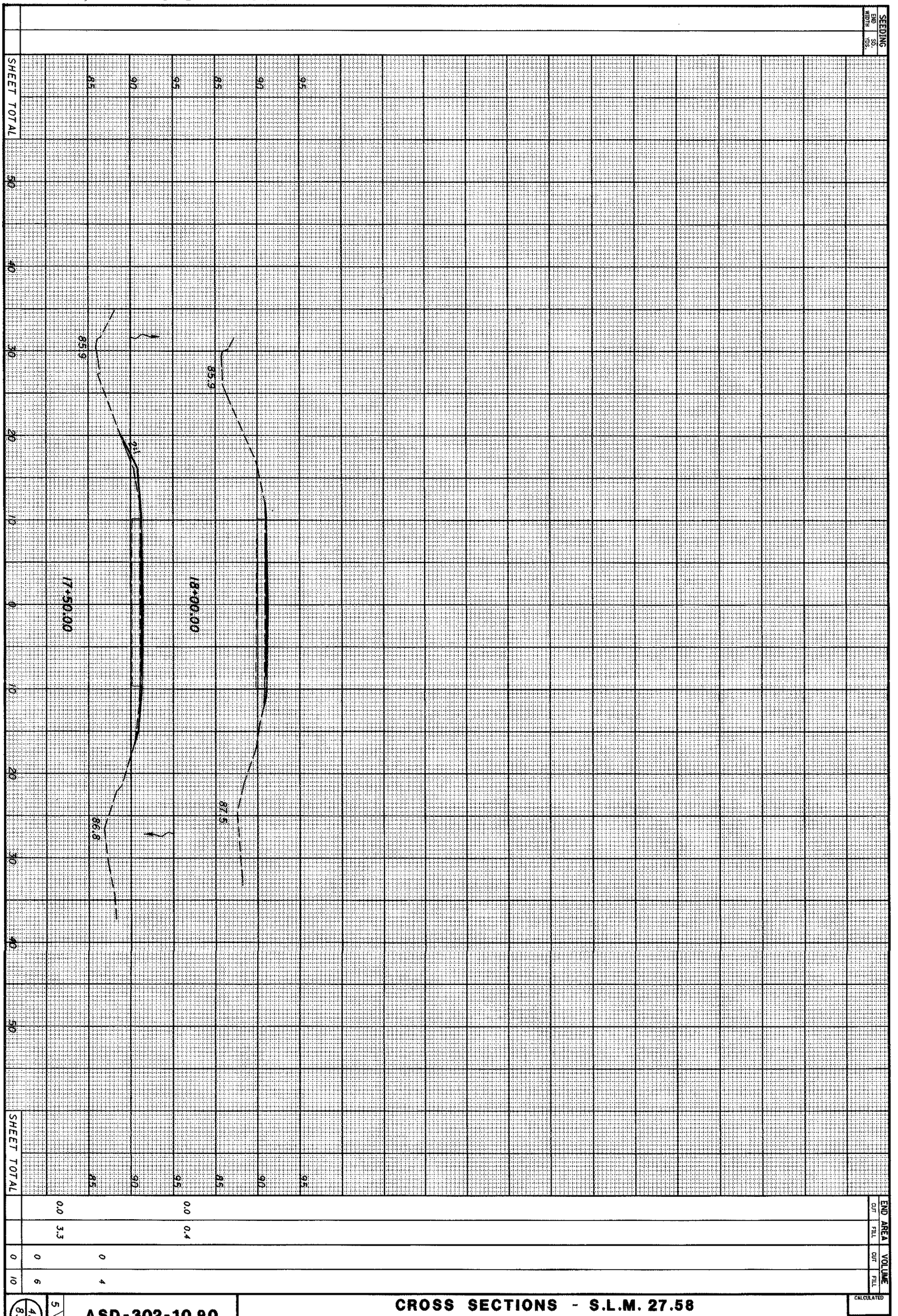
ASD-302-10.90

4 / 5

41 / 83

DESIGN FILE: I:\projects\21923\grxs2758.dgn
WORKSTATION: jfinch DATE: 03-MAR-2003

DESIGN FILE: i:\projects\21923\grxs2758.dgn
WORKSTATION: jfinch DATE: 03-MAR-2003



42/83	5\5	ASD-302-10.90	CROSS SECTIONS - S.L.M. 27.58 STA. 17+50 TO STA. 18+00

CALCULATED
CHECKED

AUXILIARY & LONG LINE MARKINGS

PART	ROUTE	FROM SLM	FROM	TO SLM	TO	202 RAISED PAVEMENT MARKER REMOVED FOR STORAGE each	LANE WIDTH ft	642, TYPE 2 EDGE LINE HIGHWAY Miles mi	EDGE LINE TOTAL (PAY QUANT.) mi	LANE LINE mi	CENTER LINE SOLID LINE EQUIVALENT mi	CENTER LINE TOTAL (PAY QUANT.) mi	644 AUXILIARY MARKINGS (740.04) CHANNELIZING LINE 8 in ft	STOP LINE 24 in ft	CROSSWALK LINE 12 in ft	TRANSVERSE LINE 24 in ft	RAILROAD SYMBOL MARKING each	SCHOOL SYMBOL MARKING 72 in each	SCHOOL SYMBOL MARKING 96 in each	PARKING LOT STALL MARKING ft	LANE ARROW TURN LEFT each	LANE ARROW TURN RIGHT each	LANE ARROW THRU each	LANE ARROW COMBINATION each	WORD ON PAVEMENT "ONLY" 72 in each	WORD ON PAVEMENT "ONLY" 96 in each	HANDICAP SYMBOL MARKING each	614 WORK ZONE CENTER LINE, CLASS II, 642 PAINT mi	WORK ZONE LANE LINE, CLASS II, 642 PAINT mi	WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT ft
A	SR 302	10.90	SR 511/302 THRU APPROACH	11.25	SR 302/511 INTERSECTION	57	11	0.35	0.70		0.70	0.35		51														0.70		
B	SR 511	14.94	US 250 STOP APPROACH	27.90	ASHLAND/LORAIN CO. LINE	983	11	12.58	25.16		18.26	12.58		387			2											25.16		
						1040			25.86			12.93		438			2											25.86		
														SEE PAVEMENT MARKING DETAIL SHEETS SUPPLIED AT THE PRECONSTRUCTION MEETING																	

RAISED PAVEMENT MARKERS

LOCATION PART	COUNTY	ROUTE	SLM SECTION FROM	SLM SECTION TO	DETAIL	621 RPM, INSTALLATION ONLY each	PRISMATIC RETRO-REFLECTOR TYPES ONE - WAY WHITE	TWO - WAY YELLOW/ YELLOW	TWO - WAY WHITE/ RED	TWO - WAY YELLOW/ RED	REMARKS
A	ASHLAND	SR 302	10.90	11.25	8/16	57	0	57			THRU APPROACHES @ SR 511/302 W/REVERSE CURVE
B	ASHLAND	SR 511	14.94	15.15	6	56	32	24			STOP APPROACH @ US 250
↑	↑	↑	15.15	17.29	GAP	141	0	141			CONTINUOUS ROUTE TREATMENT
			17.29	17.85	15	74	0	74			SERIES OF 3-CURVES
			17.85	18.02	GAP	10	0	10			CONTINUOUS ROUTE TREATMENT
			18.02	18.19	8	11	0	11			THRU APPROACH @ SR 302 (SOUTH JUNCT.)
			18.54	18.85	17	37	16	21			STOP APPROACH @ SR 302 (NORTH JUNCTION)
			18.85	22.38	GAP	225	0	225			CONTINUOUS ROUTE TREATMENT
			22.38	22.91	16	75	0	75			2-CURVES @ 20 FT. SPACINGS
			22.91	25.15	GAP	147	0	147			CONTINUOUS ROUTE TREATMENT
↓	↓	↓	25.15	25.55	6	54	32	22			STOP APPROACHES @ US 224
B	ASHLAND	SR 511	25.55	27.90	GAP	153	0	153			CONTINUOUS ROUTE TREATMENT
						1040	80	960			

DETAIL	
1	MULTILANE UNDIVIDED
1	TYPICAL SPACING
2	TAPERED ACCEL LANE
3	DECELERATION LANE
4	PARALLEL ACEL LANE
5	MULTILANE DIVIDED/ EXPRESSWAY
6	STOP APPROACH
7	1 LANE APPR. W/LT. TURN LANE
8	THRU APPROACH
9	2 LANE APPR. W/LT TURN LANE
10	4 LANE DIVIDED TO 2 LANE TRANSITION
11	4 LANE UNDIVIDED TO 2 LANE TRANSITION
12	TWO LANE NARROW BRIDGE
13	TWO WAY LEFT TURN LANE
14	ONE LANE BRIDGE
15	HORIZONTAL CURVE
16	HORIZONTAL CURVE ALT.
17	STOP APPROACH ALT.
GAP	CENTER LINE AT 80 FT. TYP.

calculated JPF
checked RPT

PAVEMENT MARKING INFORMATION

PAVEMENT

ASD-302-10.90

BRIDGE NUMBER ASD-302-1110 SFN 0305383

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION
254	01000	251	SQ. YD.	PAVEMENT PLANING, ASPHALT CONCRETE
446	47020	18	CU. YD.	ASPHALT CONRETE SURFACE COURSE, TYPE 1, PG 64-22
512	33010	251	SQ. YD.	TYPE 3 WATERPROOFING
SPECIAL	51631300	84	FT.	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM (5 IN. THICK)
864	10100	107	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

BRIDGE NUMBER ASD-511-1621 SFN 0305553

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION
509	10000	2885	POUND	EPOXY COATED REINFORCING STEEL
511	43200	9	CU. YD.	CLASS C CONCRETE, PIER
SPECIAL	51273500	437	SQ. YD.	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN
864	10100	170	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

BRIDGE NUMBER ASD-511-1738 SFN 0305561

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION
SPECIAL	51273500	386	SQ. YD.	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN
864	10100	117	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

BRIDGE NUMBER ASD-511-1880 SFN 0305618

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION
202	11300	15	CU YD	PORTIONS OF STRUCTURE REMOVED
202	38500	175	FT	BRIDGE RAILING REMOVED
509	10000	6258	POUND	EPOXY COATED REINFORCING STEEL
511	34401	21	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN
511	43200	12	CU YD	CLASS C CONCRETE, PIER
517	70000	181	FT	RAILING (TWIN STEEL TUBE)
SPECIAL	51822300	77	FT	STEEL DRIP.STRIP
848	10001	318	SQ YD	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2 1/2" THICKNESS)
848	20000	318	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION
848	30001	7	CU YD	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN
848	50000	10	SQ YD	HAND CHIPPING
848	50100	LUMP		TEST SLAB
848	50200	1	CU YD	FULL-DEPTH REPAIR
848	50320	318	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (1 1/4" THICKNESS)
848	50340	48	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY
864	10100	135	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

DESIGN AGENCY
DISTRICT THREE

REVIEWED DATE

DRAWN JPF
REVISED

DESIGN RPT
CHECKED JPF

STRUCTURE SUMMARY

ASD-302-10.90

BRIDGE NUMBER ASD-511-1998 SFN 0305642

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION
202	35100	55	FT	PIPE REMOVED, 24" AND UNDER
304	20000	27	CU YD	AGGREGATE BASE
SPECIAL	51822300	46	FT	STEEL DRIP STRIP
601	34000	185	CU YD	ROCK CHANNEL PROTECTION, TYPE A WITHOUT FILTER
603	07900	75	FT	18" CONDUIT, TYPE D
848	10001	72	SQ YD	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2" THICKNESS)
848	20000	72	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION
848	30001	2	CU YD	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN
848	50000	3	SQ YD	HAND CHIPPING
848	50100	LUMP		TEST SLAB
848	50200	1	CU YD	FULL-DEPTH REPAIR
848	50320	72	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (1" THICKNESS)
848	50340	11	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY
864	10100	108	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

BRIDGE NUMBER ASD-511-2450 SFN 0305677

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION
603	96550	84	FT.	FIELD PAVING OF EXISTING PIPE (11'-5" X 7'-3" CORR. METAL PIPE ARCH)

BRIDGE NUMBER ASD-511-2593 SFN 0305693

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION
509	10000	421	POUND	EPOXY COATED REINFORCING STEEL
510	10000	50	EACH	DOWEL HOLES WITH NONSHRINK NONMETALLIC GROUT
511	46001	3	CU. YD.	CLASS C CONCRETE, AS PER PLAN
864	10100	42	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

BRIDGE NUMBER ASD-511-2618 SFN 0305715

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION
254	01000	163	SQ. YD.	PAVEMENT PLANING, ASPHALT CONCRETE
446	47020	12	CU. YD.	ASPHALT CONRETE SURFACE COURSE, TYPE 1, PG 64-22
512	33010	163	SQ. YD.	TYPE 3 WATERPROOFING
SPECIAL	51631300	68	FT.	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM (4 IN. THICK)
864	10100	48	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

DESIGN AGENCY
DISTRICT THREE

REVIEWED DATE

DRAWN JPF
REVISED

DESIGNED RPT
CHECKED JPF

STRUCTURE SUMMARY

ASD-302-10.90

REFERENCES SHALL BE MADE TO STANDARD DRAWINGS:

BP-3.1	DATED	7/28/00
DS-1-92	DATED	7/19/02
TST-1-99	DATED	7/19/02
GR-1.2M	DATED	1/03/96
MT-97.10	DATED	4/19/02

AND TO SUPPLEMENTAL SPECIFICATIONS:

846	DATED	4/19/02
848	DATED	2/8/02
864	DATED	7/11/00
954	DATED	9/9/97

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.

DESIGN DATA:

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 PSI

CONCRETE CLASS S - COMPRESSIVE STRENGTH 4500 PSI

REINFORCING STEEL - ASTM A615, A616, A617 - GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI

SHAPED STRUCTURAL TUBING - ASTM A 500 GRADE B Fy = 46 KSI

STRUCTURAL STEEL SHAPES AND PLATES - ASTM A 572 Fy = 50 KSI

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 EXISTING EXPANSION JOINTS SHALL BE PROTECTED. NO EPOXY URETHANE OR GRAVITY FED RESIN SHALL BE ALLOWED TO COME INTO CONTACT WITH THE EXPANSION JOINT SEALS. IF ANY OF THE ABOVE COMES INTO CONTACT WITH THE EXPANSION JOINT SEALS, THE CONTRACTOR SHALL REPLACE THE EXPANSION JOINT SEALS TO THE SATISFACTION OF THE STATE, AT NO COST TO THE STATE.

ITEM 614 - MAINTAINING TRAFFIC:

TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT THROUGH TRAFFIC ON STRUCTURE ASD-302-1110, ASD-511-1880, ASD-511-1998, AND ASD-511-2618 WILL BE DETOURED AS SHOWN ON SHEET 7 FOR A MAXIMUM OF 30 AND 60 CONSECUTIVE CALENDAR DAYS. THE 30 AND 60 CONSECUTIVE DAYS SHALL BE CONSIDERED AS INTERIM COMPLETION DATES (SECTION 108) AND FOR EACH CALENDAR DAY BEYOND THE 30 AND 60 CALENDAR DAYS THAT THE HIGHWAY REMAINS CLOSED TO TRAFFIC, THE CONTRACTOR WILL BE ASSESSED THE LIQUIDATED DAMAGES AS PER 108.07.

DETOUR SIGNING WILL BE PROVIDED BY THE STATE OF OHIO. THE CONTRACTOR SHALL NOTIFY THE DISTRICT THREE TRAFFIC ENGINEER IN WRITING A MINIMUM OF FOURTEEN (14) DAYS IN ADVANCE OF WHEN THE DETOUR IS PLACED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE GATES AND BARRICADES AT EACH END OF THE WORK AREA OF THE BRIDGE. SEE STANDARD DRAWING MT-101.60M FOR DETAILS.

FOR ALL OTHER LOCATIONS: TWO WAY TRAFFIC SHLL BE MAINTAINED AT ALL TIMES EXCEPT DURING WORKING HOURS WHEN ONE LANE MAY BE CLOSED USING FLAGGERS PER STANDARD DRAWING MT-97.10.

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

DESIGN AGENCY: DISTRICT THREE

DESIGNED JPF | DRAWN JPF | REVIEWED DCM | DATE 2/03

CHECKED RDN | REVISED | STRUCTURAL FILE NUMBER

STRUCTURE GENERAL NOTES

ASD-302-10.90

46/83

DESIGN FILE: i:\projects\21923\Struct\gnote.dgn
WORKSTATION: jfinch DATE: 03/03/03

ITEM SPECIAL - TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN

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

THIS ITEM SHALL CONSIST OF FURNISHING THE NECESSARY LABOR, MATERIALS, AND EQUIPMENT NEEDED FOR SURFACE PREPARATION, MIXING, AND PLACING THE SEAL ON THE ENTIRE DECK. THE SEAL SHALL BE AS PER PROPOSAL NOTE "TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN".

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 848 - MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2 1/2 INCH THICK):

ITEM 848 - MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2 INCH THICK):

THESE ITEMS SHALL BE USED AT LOCATIONS INDICATED IN THE PLAN.

THE COARSE AGGREGATE SHALL BE LIMESTONE.

THE SURFACE FINISH REQUIREMENTS WILL BE AS PER SUPPLEMENTAL SPECIFICATION 848.

SEE THE SUPPLEMENTAL SPECIFICATION FOR DETAILS.

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

ITEM 848 - MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN:

THESE ITEMS SHALL BE USED AT LOCATIONS INDICATED IN THE PLAN.

THE COARSE AGGREGATE SHALL BE LIMESTONE.

SEE THE SUPPLEMENTAL SPECIFICATION FOR DETAILS.

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

ITEM 509 - REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL

ANY EXISTING REINFORCING BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND WHICH ARE MADE UNUSABLE BY THE CONTRACTOR'S CONCRETE REMOVAL OPERATIONS, SHALL BE REPLACED WITH NEW STEEL AT THE COST OF THE CONTRACTOR. ANY EXISTING REINFORCING STEEL DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW STEEL.

ITEM 511 - CLASS C CONCRETE, AS PER PLAN

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

ITEM 511 - CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN

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

DESIGN AGENCY: DISTRICT THREE

DESIGNED	DRAWN	REVIEWED	DATE
JPF	JPF	DCM	2/03
CHECKED	REVISED		STRUCTURAL FILE NUMBER
RDN			

STRUCTURE GENERAL NOTES

ASD-302-10.90

DESIGN FILE: i:\projects\2023\Struct\gnote.dgn
WORKSTATION: jfinch
DATE: 03/03/03

GENERAL NOTES AND DETAILS FOR POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

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.

D.S. BROWN COMPANY
300 E. CHERRY STREET
N. BALTIMORE, OH 45872
TEL: (419) 257-3561

LINEAR DYNAMICS, INC.
79 Montgomery St.
Montgomery, PA 17752
TEL: (570) 547-1621

Silicone Specialties Inc. (S.S.I)
P.O. Box 50009
Tulsa, OK 74150
TEL: (918) 587-5567 or
(800) 888-8909

Watson Bowman Acme
95 Pineview Dr.
Amherst, NY 14228
TEL: (716) 691-7566 or
(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 ACCOMODATE 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:

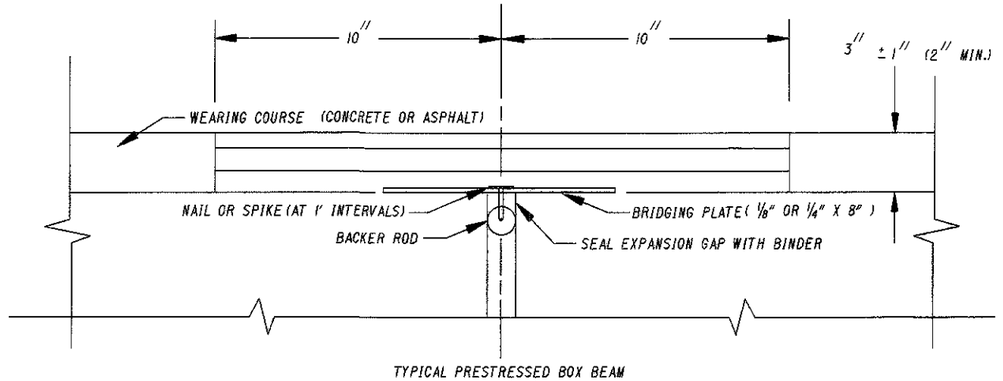
IF NECESSARY TO FACILITATE TRAFFIC MAINTENANCE, THE JOINT WILL BE INSTALLED IN TWO (2) HALF-WIDTH PHASES. DURING PHASE 1 APPROXIMATELY HALF OF THE TOTAL JOINT WILL BE INSTALLED. DURING PHASE 2, A MINIMUM OF TWO (2) INCHES OF THE PHASE 1 JOINT WILL BE REMOVED, AT OR NEAR THE CENTERLINE, WITH THE REMAINDER 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 TESTING LABORATORY.

PAYMENT:

PAYMENT FOR ALL THE ABOVE WILL BE AT THE UNIT PRICE BID PER LINEAR FOOT OF SEALED JOINT IN PLACE FOR ITEM SPECIAL 516 31300, POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM (4-5 INCHES THICK). THIS WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.



TYPICAL PRESTRESSED BOX BEAM
OR
CONCRETE SLAB JOINT

CALCULATED | CHECKED
DATE REVISED 10-28-96
DESIGNED MAM | DRAWN MAM

POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

ASD-302-10.90

BRIDGE DECK DATA								ROADWAY DATA		
PART	COUNTY, ROUTE, BRIDGE NO.	STRUCTURE TYPE	LENGTH (BRIDGE LIMITS)	WIDTH	BRIDGE DECK AREA	SKEW	EXISTING WEARING SURFACE	EXISTING PAVEMENT WIDTH	EXISTING APPROACH SLAB WIDTH	EXISTING APPROACH SLAB LENGTH
			LIN.FT.	LIN.FT.	SQ.YD.			LIN.FT.	LIN.FT.	LIN.FT.
A	* ASD-302-1110	TWIN-SPAN PRESTRESSED BEAM	80.67	28.0	251.0	0°	ASPHALT	25	28	15
B	** ASD-511-1621	3 - SPAN STEEL BEAM	122.9	32.0	437.0	40° LF	CONCRETE	24	20	20
B	*** ASD-511-1738	SINGLE- SPAN STEEL BEAM	62.07	34.0	234.5	15° LF	CONCRETE	25	34	20
B	**** ASD-511-1880	3 - SPAN CONCRETE SLAB	79.54	36.0	318.2	0°	CONCRETE	24	24.09	15
B	+ ASD-511-1998	SINGLE- SPAN CONCRETE SLAB	20.0	32.0	71.1	30° RF	CONCRETE	24	NONE	NONE
B	++ ASD-511-2261	TWIN CORR. METAL ARCH				60° RF	ASPHALT	24	NONE	NONE
B	+++ ASD-511-2450	CORR. METAL PIPE ARCH				0°	ASPHALT	24	NONE	NONE
B	+++ ASD-511-2593	TWIN CONCRETE CULVERTS				0°	ASPHALT	24	NONE	NONE
B	++++ ASD-511-2618	SINGLE- SPAN PRESTRESSED BEAM	43.16	34.0	163.0	0°	ASPHALT	24	34	15

* PLANE BRIDGE DECK, APPROACH SLABS, AND 100 FT. ON BOTH APPROACHES. PLANE AND PAVE EXISTING WIDTH.
(SEE DETAILS IN THE PLAN FOR STRUCTURE WORK. SEE ROADWAY PLANS FOR GUARDRAIL WORK)
ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE: 649 SQUARE YARDS (CARRIED TO GENERAL SUMMARY, SHEET NO. 9)

** PLANE APPROACH SLABS AND 100 FT. ON BOTH APPROACHES. OMIT RESURFACING ON THE BRIDGE DECK.
(SEE DETAILS IN THE PLAN FOR STRUCTURE WORK. SEE ROADWAY PLANS FOR GUARDRAIL WORK)
ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE: 622 SQUARE YARDS (CARRIED TO GENERAL SUMMARY, SHEET NO. 9)

*** PLANE 100 FT. ON BOTH APROACHES. OMIT RESURFACING ON THE BRIDGE DECK, BUTT JOINT AT THE APROACH SLABS
(SEE DETAILS IN THE PLAN FOR STRUCTURE WORK. SEE ROADWAY PLANS FOR GUARDRAIL WORK)
ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE: 556 SQUARE YARDS (CARRIED TO GENERAL SUMMARY, SHEET NO. 9)

**** PLANE APPROACH SLABS AND 100 FT. ON BOTH APPROACHES. OMIT RESURFACING ON THE BRIDGE DECK.
(SEE DETAILS IN THE PLAN FOR STRUCTURE WORK. SEE ROADWAY PLANS FOR GUARDRAIL WORK)
ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE: 614 SQUARE YARDS (CARRIED TO GENERAL SUMMARY, SHEET NO. 9)

\+ PLANE 200 FT. ON BOTH APROACHES. OMIT RESURFACING ON THE BRIDGE DECK
(SEE DETAILS IN THE PLAN FOR STRUCTURE WORK. SEE ROADWAY PLANS FOR GUARDRAIL WORK)
ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE: 1067 SQUARE YARDS (CARRIED TO GENERAL SUMMARY, SHEET NO. 9)

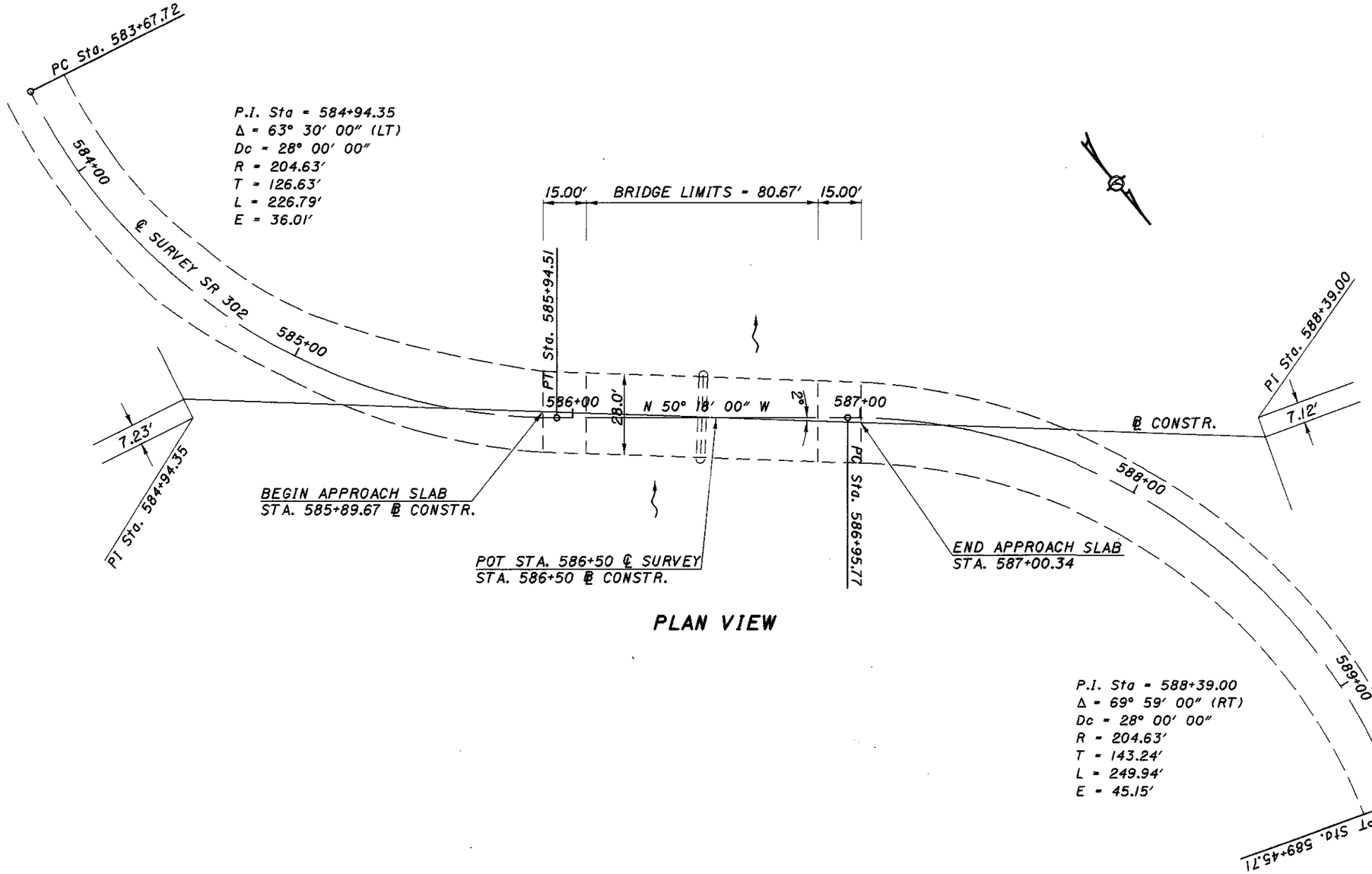
++ PLANE 200' CENTERED ABOUT STRUCTURE. (NO STRUCTURE WORK)
ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE: 1067 SQUARE YARDS (CARRIED TO GENERAL SUMMARY, SHEET NO. 9)

+++ PLANE 200' CENTERED ABOUT STRUCTURE. (SEE DETAILS IN THE PLAN FOR STRUCTURE WORK)
ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE: 2134 SQUARE YARDS (CARRIED TO GENERAL SUMMARY, SHEET NO. 9)

++++ PLANE BRIDGE DECK, APPROACH SLABS, AND 150 FT. ON BOTH APPROACHES. PLANE AND PAVE EXISTING WIDTH.
(SEE DETAILS IN THE PLAN FOR STRUCTURE WORK. SEE ROADWAY PLANS FOR GUARDRAIL WORK)
ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE: 914 SQUARE YARDS (CARRIED TO GENERAL SUMMARY, SHEET NO. 9)

DESIGN AGENCY: DISTRICT THREE
DESIGNED JPF
DRAWN JPF
CHECKED RPT
DATE
REVISED
REVISED
STRUCTURAL FILE NUMBER
BRIDGE TREATMENT
ASD-302-10.90
49
83

DESIGN FILE: i:\projects\21923\Struct\equan.dgn
WORKSTATION: jfinch
DATE: 03/03/03



PLAN VIEW

ITEM	QUANTITY	UNIT	DESCRIPTION
SPECIAL	84	LIN.FT.	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
			(5 INCHES THICK)

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 44

NOTES:

1) FOR POLYMER MODIFIED ASPHALT EXPANSION JOINT DETAILS SEE SHEET 48.

2) EXISTING APPROACH GUARDRAIL AND BRIDGE GUARDRAIL NOT SHOWN, SEE SHEET 20 FOR DETAILS.

DESIGN FILE: i:\projects\21923\Struct\A302ll0.dgn
WORKSTATION: jfinch DATE: 03/03/03

PLAN VIEW
SR 302-1110
OVER LEIDIGH MILL CREEK

DESIGN AGENCY: DISTRICT THREE
DESIGNED RPT | DRAWN JPF | REVISED DCM | DATE 2/03
CHECKED RDN | REVISED | STRUCTURE FILE NUMBER 0305383

ASD-302-10.90

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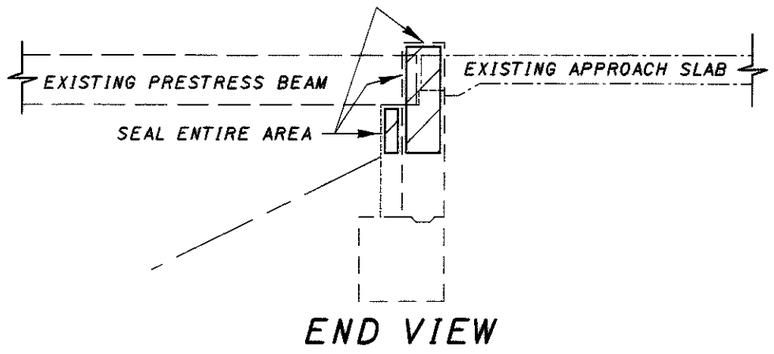
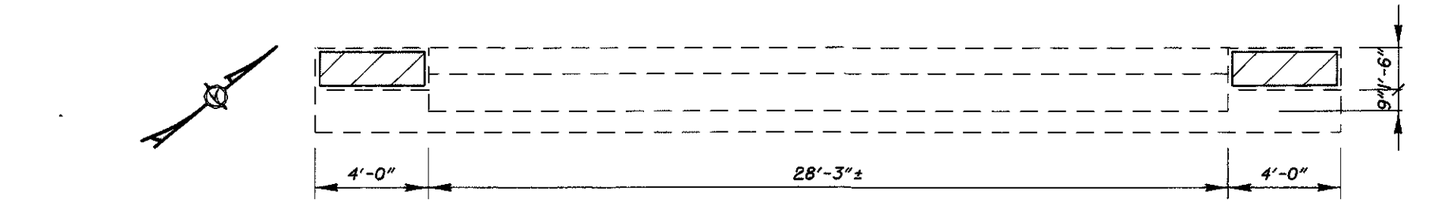
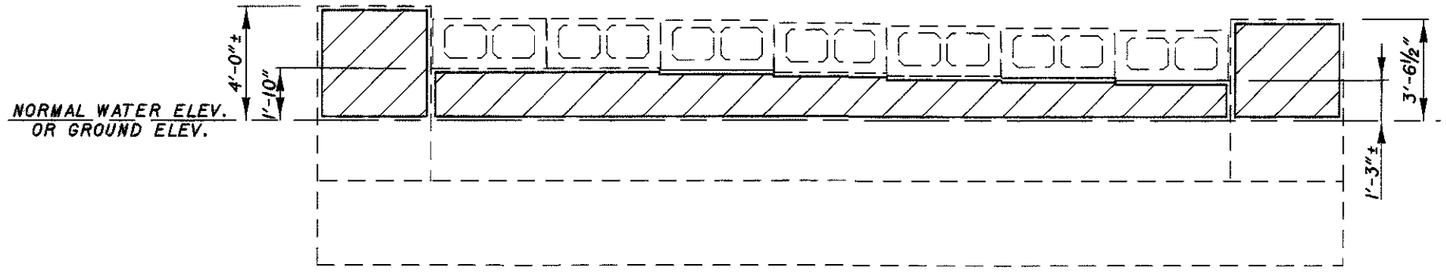


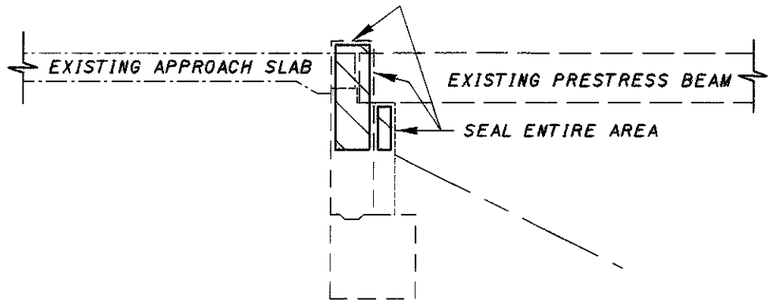
END VIEW



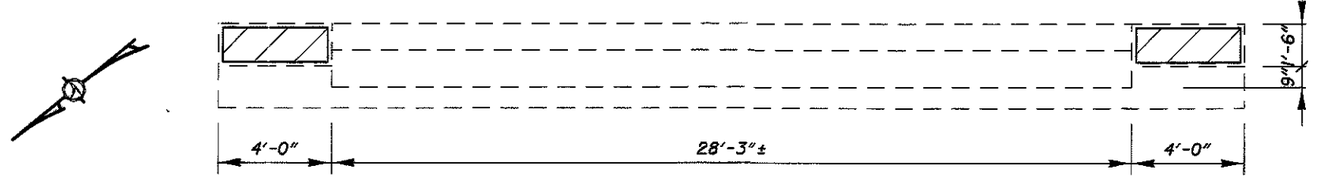
FORWARD ABUTMENT PLAN



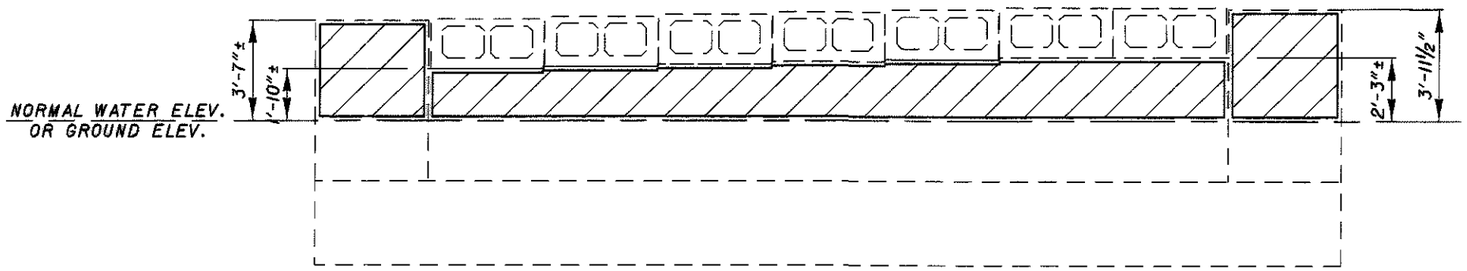
FORWARD ABUTMENT ELEVATION



END VIEW



REAR ABUTMENT PLAN



REAR ABUTMENT ELEVATION

ITEM	QUANTITY	UNIT	DESCRIPTION
864	33	square yard	SEALING OF CONCRETE SURFACES (EPOXY URETHANE)

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 44

NOTES:

1) SEAL FACIA, BEAMS, ABUTMENTS, WINGWALLS, AND PIER.

DESIGN FILE: i:\projects\21923\Struct\A302lll0.dgn
WORKSTATION: jfinch DATE: 03/03/03

DESIGN AGENCY: DISTRICT THREE
DESIGNED RPT | DRAWN JPF | CHECKED RDN | REVISED | REVISED DCM | DATE 2/03
STRUCTURE FILE NUMBER 0305383

ABUTMENT SEALING
ASD-302-1110
OVER LEIDIGH MILL CREEK

ASD-302-10.90

2 / 4

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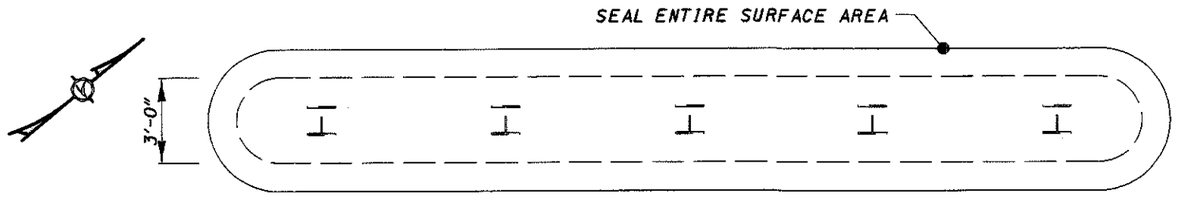
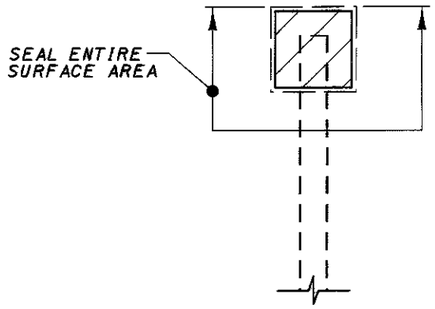
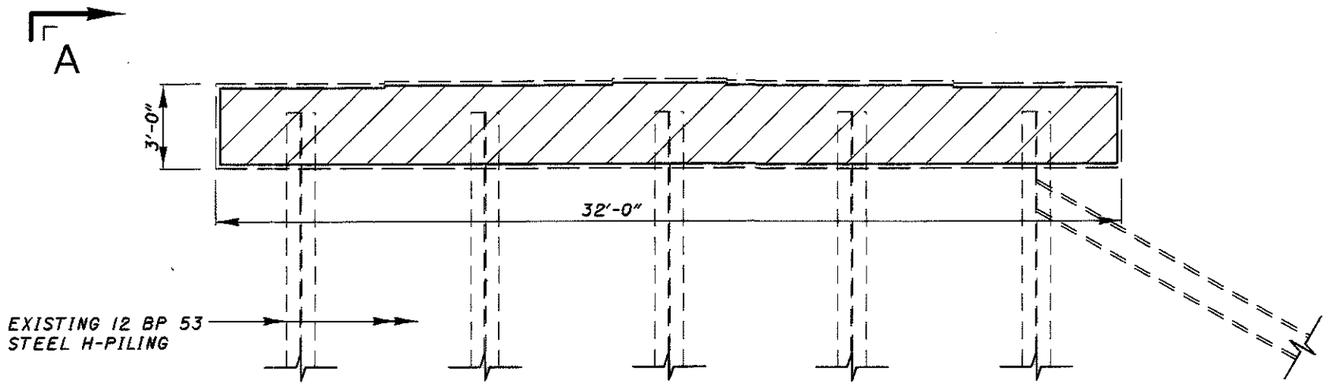


PIER PLAN



VIEW A-A



PIER ELEVATION

ITEM	QUANTITY	UNIT	DESCRIPTION
864	33	square yard	SEALING OF CONCRETE SURFACES (EPOXY URETHANE)

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 44

NOTES:

1) SEAL FACIA, BEAMS, ABUTMENTS, WINGWALLS, AND PIER.

DESIGN FILE: i:\projects\21923\Struct\A302110.dgn
WORKSTATION: jfinch DATE: 03/03/03

DESIGN AGENCY: DISTRICT THREE

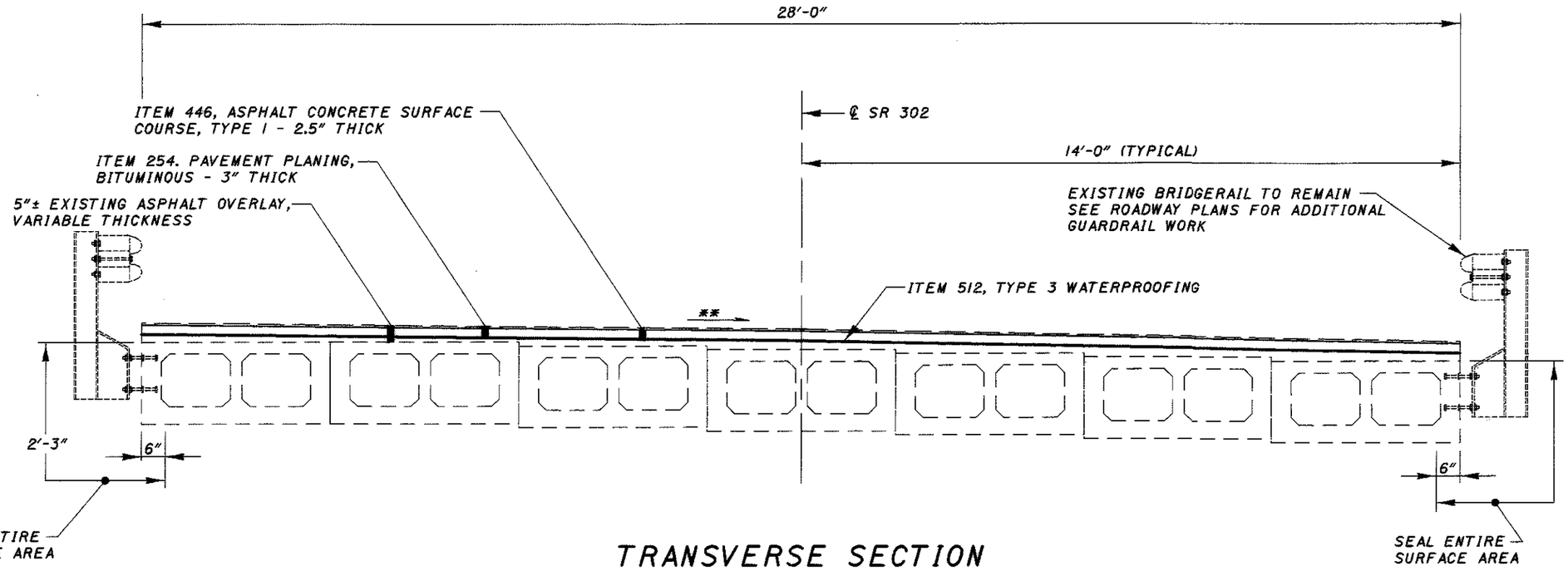
DESIGNED RPT | DRAWN JPF | CHECKED RDN | REVISED DCM 2/03 | REVISED | DATE | STRUCTURE FILE NUMBER 0305383

PIER SEALING
ASD-302-1110
OVER LEIDIGH MILL CREEK

ASD-302-10.90

3 | 4

52
83



TRANSVERSE SECTION

ITEM	QUANTITY	UNIT	DESCRIPTION
254	251	SQ.YD.	PAVEMENT PLANING, ASPHALT CONCRETE ★
446	18	CU.YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22 ★
512	251	SQ.YD.	TYPE 3 WATERPROOFING
864	41	SQ.YD.	SEALING OF CONCRETE SURFACES (EPOXY URETHANE)

★ QUANTITIES FOR BRIDGE DECK ONLY. FOR ROADWAY QUANTITIES, SEE PAVEMENT DATA SHEET.

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 44

NOTES:

1) ** - CROSS SLOPE VARIES DUE TO SUPERELEVATION TRANSISTIONS. MATCH EXISTING.

2) SEAL FACIA BEAMS, ABUTMENTS, WINGWALLS, AND PIER.

DESIGN FILE: i:\projects\21923\Struct\A3021110.dgn
WORKSTATION: jflnah DATE: 03/03/03

DESIGN AGENCY: DISTRICT THREE

DESIGNED RPT | DRAWN JPF | REVISED DCM 2/03 | STRUCTURE FILE NUMBER 0305383

CHECKED RDN | REVISED

TRANSVERSE DECK SECTION
ASD-302-1110
OVER LEIDIGH MILL CREEK

ASD-302-10.90

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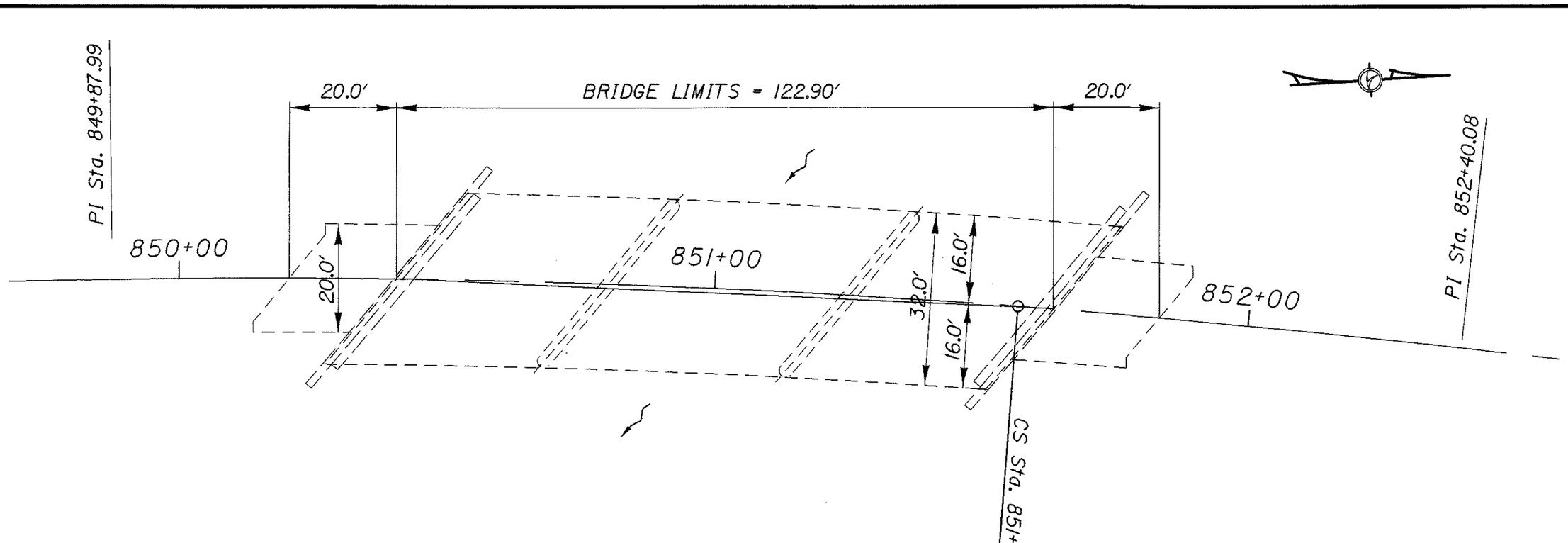

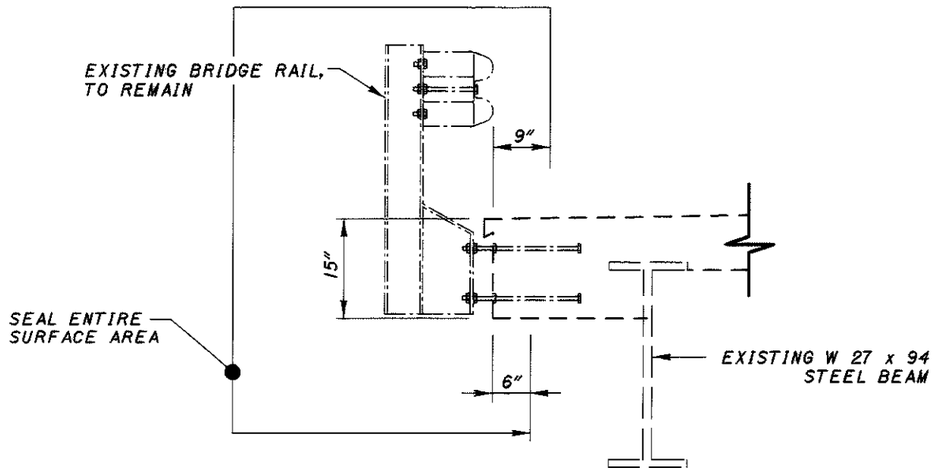

DECK EDGES

ITEM	QUANTITY	UNIT	DESCRIPTION
864	68	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
SPECIAL	437	SQ. YD.	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 44

NOTES:

1) SEAL DECK
2) SEAL DECK EDGE, ABUTMENT SEATS, BACKWALL, PIERS, AND WINGWALLS.
3) EXISTING APPROACH GUARDRAIL AND BRIDGE GUARDRAIL NOT SHOWN, SEE SHEET 22 FOR DETAILS.

DESIGN FILE: i:\projects\2123\Struct\A511162l.dgn
WORKSTATION: jfinch DATE: 03/03/03

DESIGN AGENCY: DISTRICT THREE
DESIGNED RPT | DRAWN JPF | REVIEWED DCM 2/03 | STRUCTURE FILE NUMBER 0305553
CHECKED RDN | REVISED

PLAN VIEW
ASD-511-1621
OVER LANG CREEK

ASD-302-10.90

1 / 3

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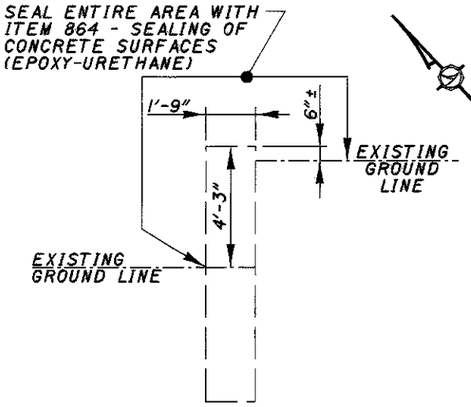
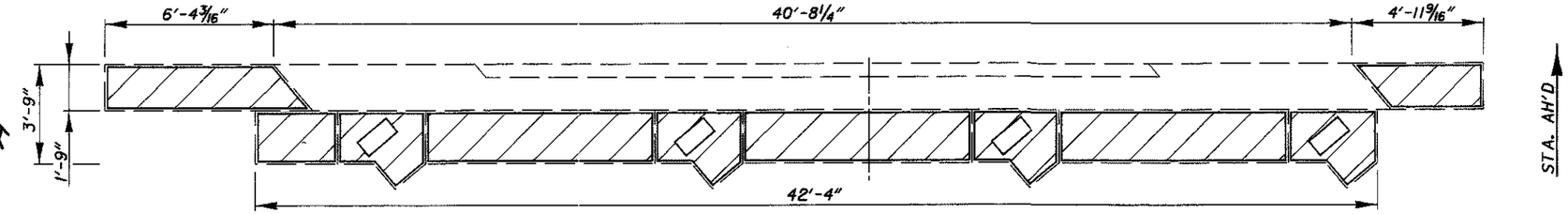
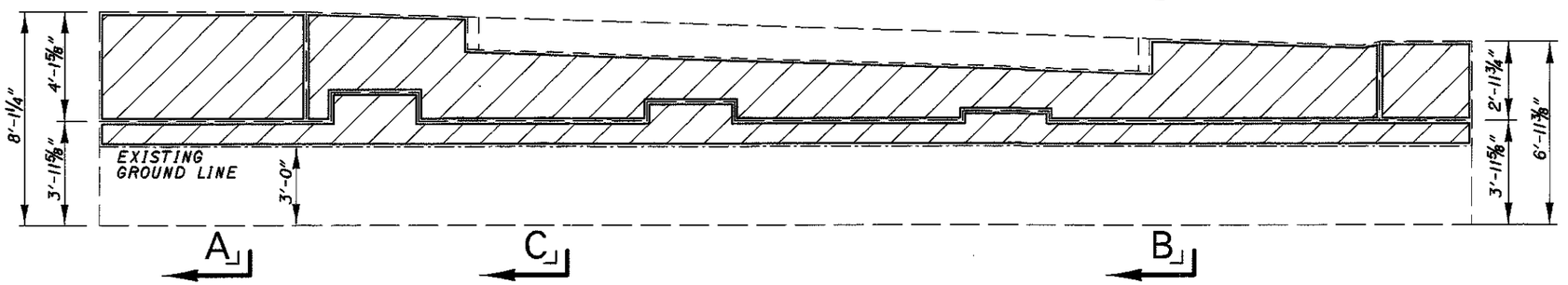


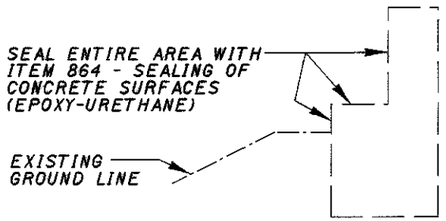
SECTION A-A



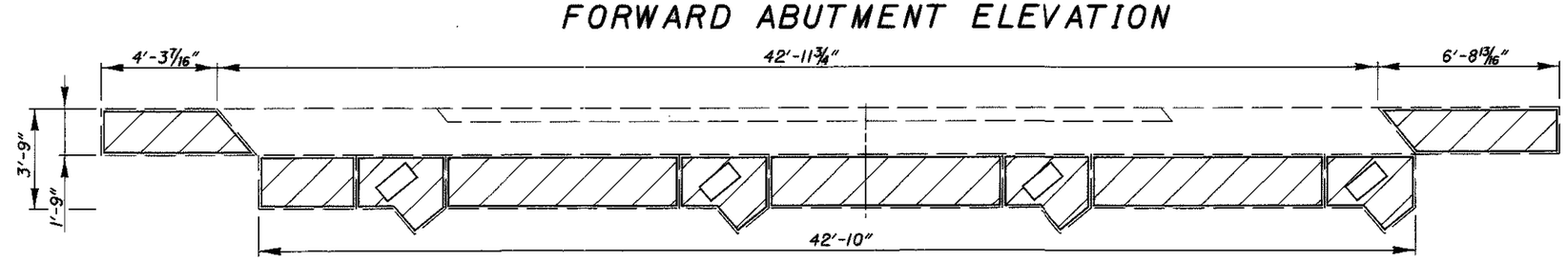
FORWARD ABUTMENT PLAN VIEW



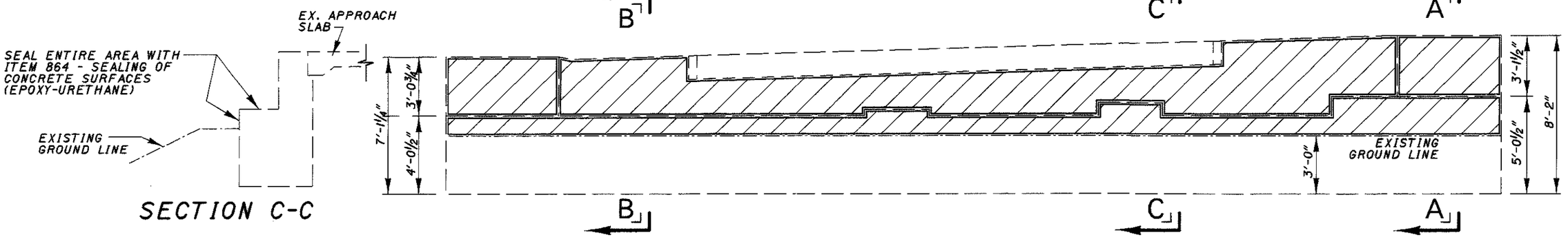
FORWARD ABUTMENT ELEVATION



SECTION B-B



REAR ABUTMENT PLAN VIEW



SECTION C-C

REAR ABUTMENT ELEVATION

ITEM	QUANTITY	UNIT	DESCRIPTION
864	89	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY URETHANE)

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 44

NOTES:

1) SEAL ALL CONCRETE SURFACES AS SHOWN

DESIGN FILE: i:\projects\21923\Struct\A51162i.dgn
WORKSTATION: jfinch
DATE: 03/03/03

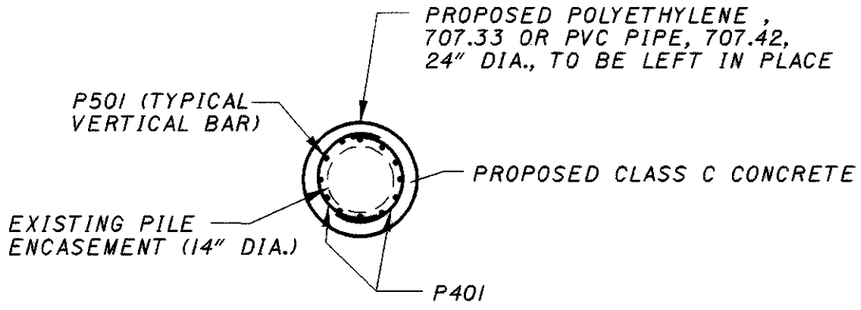
DESIGN AGENCY: DISTRICT THREE
DESIGNED: JPF
DRAWN: JPF
REVISED:
CHECKED: RDN
REVISED: DCM
DATE: 2/03
STRUCTURE FILE NUMBER: 0305553

ABUTMENT SEALING DETAILS
ASD-51I-162I
OVER LANG CREEK

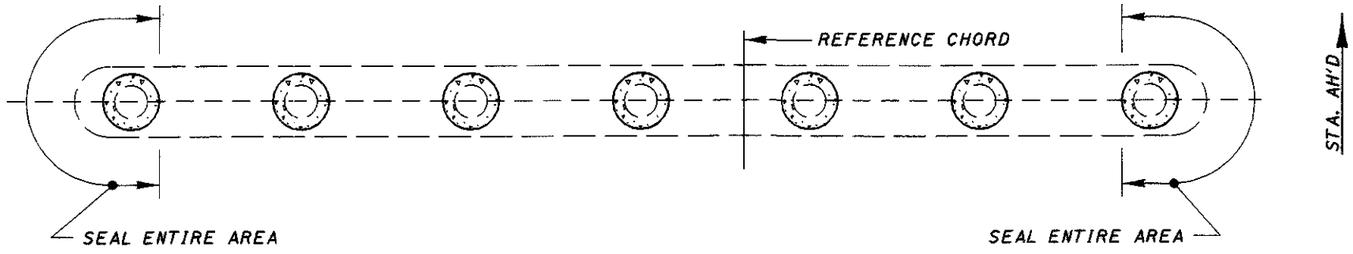
ASD-302-10.90

2 | 3

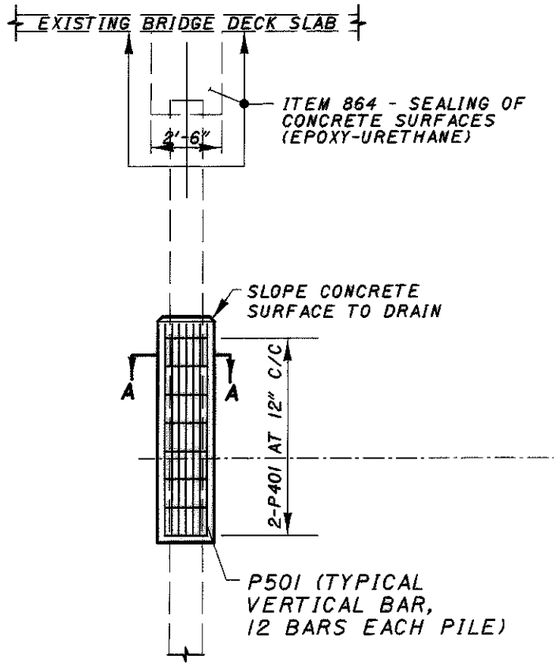
55
83



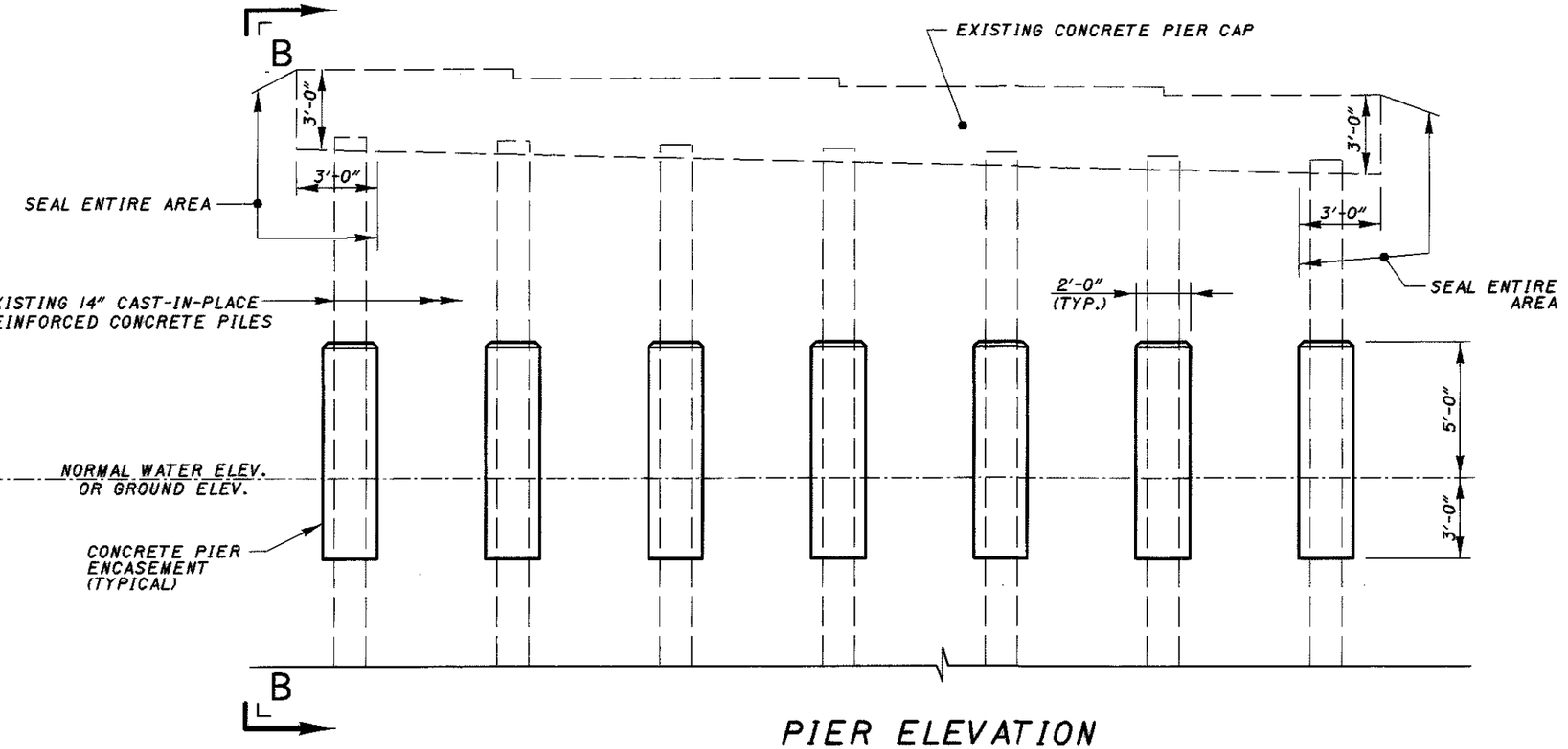
SECTION A-A



PIER PLAN VIEW



VIEW B-B



PIER ELEVATION

ITEM	QUANTITY	UNIT	DESCRIPTION
509	2885	POUND	EPOXY COATED REINFORCING STEEL
511	9	CU. YD.	CLASS C CONCRETE, PIER
864	13	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY URETHANE)

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 44

P401

NOTES:

1) ENCASE ALL PILING (BOTH PIERS)
1) SEAL PIER CAPS AS SHOWN

MARK	LENGTH	SHAPE	NUMBER	WEIGHT
P401	3'-0"	B	784	1571
P501	7'-6"	STR.	168	1314
			TOTAL	2885

DESIGN AGENCY: DISTRICT THREE
DATE: 2/03
REVISED: DCM
STRUCTURE FILE NUMBER: 0305553
DRAWN: JPF
REVISED:
DESIGNED: KPT
CHECKED: RDN

PIER ENCASEMENT
ASD-511-1621
OVER LANG CREEK

ASD-302-10.90

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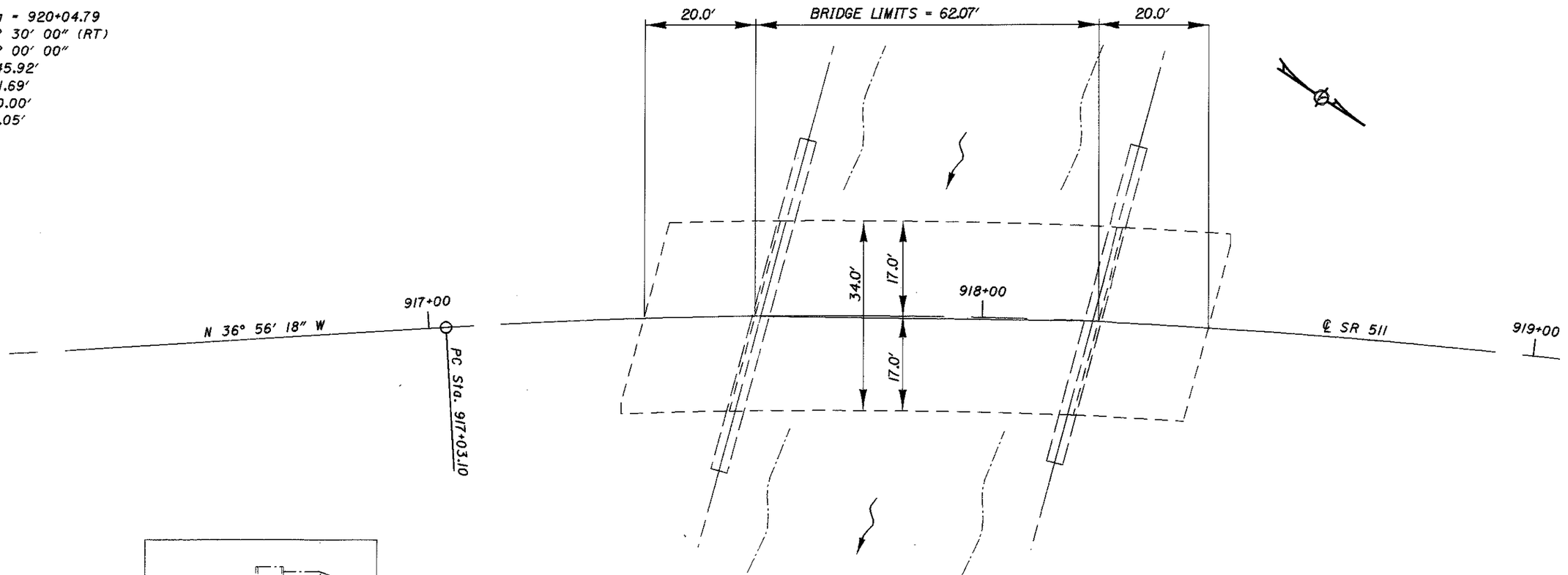
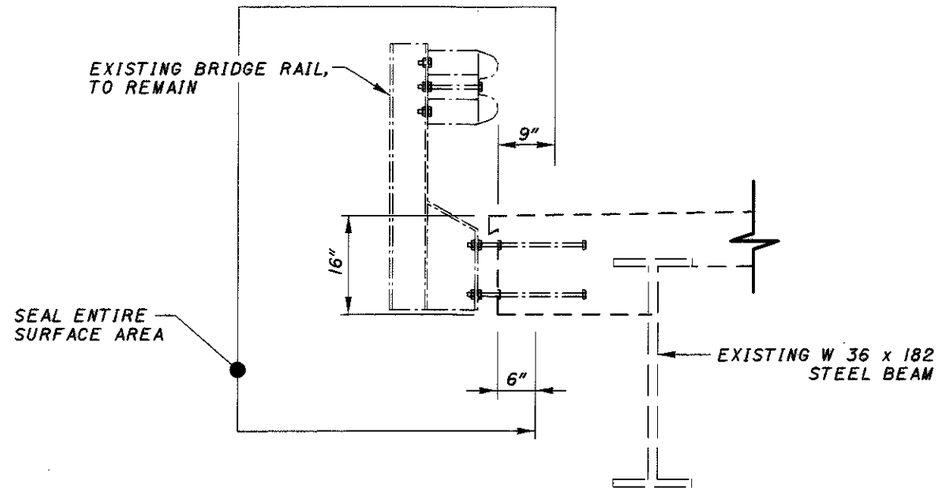
DESIGN FILE: I:\projects\21923\Struct\A511l621.dgn
WORKSTATION: jfinch
DATE: 03/03/03

P.I. Sta = 920+04.79
Δ = 29° 30′ 00″ (RT)
Dc = 5° 00′ 00″
R = 1,145.92′
T = 301.69′
L = 590.00′
E = 39.05′



PLAN VIEW



DECK EDGES

ITEM	QUANTITY	UNIT	DESCRIPTION
864	36	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
SPECIAL	386	SQ. YD.	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 44

NOTES:

1) EXISTING APPROACH GUARDRAIL AND BRIDGE GUARDRAIL NOT SHOWN, SEE SHEET 24 FOR DETAILS.
2) SEAL DECK AND APPROACH SLABS WITH ITEM SPECIAL- TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN
3) SEAL DECK EDGES AND ABUTMENTS - SEE SHEET 58.

DESIGN AGENCY: DISTRICT THREE
DESIGNED: RPT
DRAWN: RPT
CHECKED: RDN
REVISED:
REVISED: DCM
DATE: 2/03
STRUCTURE FILE NUMBER: 0305561

PLAN VIEW
ASD-511-1738
OVER LEIDIGH MILL CREEK

ASD-302-10.90

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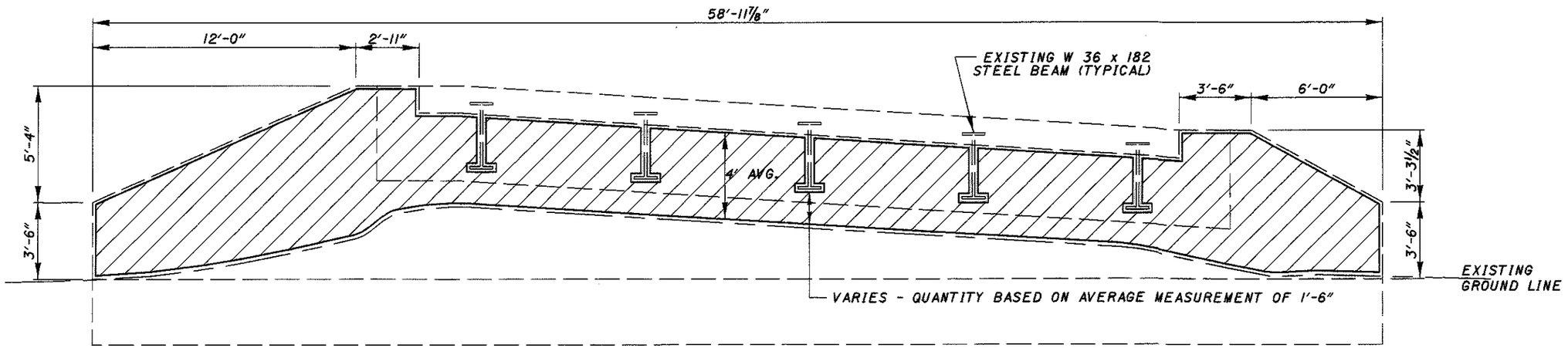
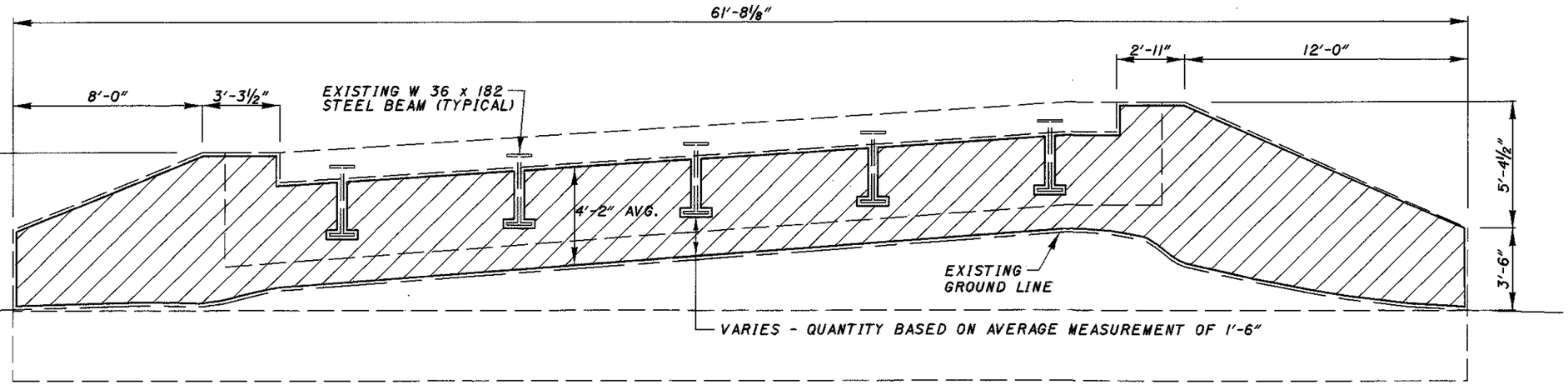
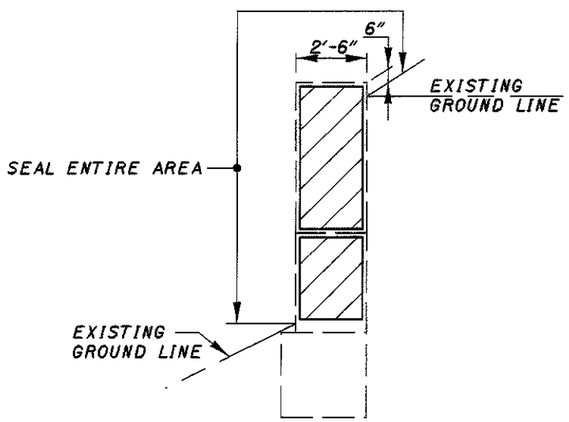
DESIGN FILE: i:\projects\2123\struct\A511738.dgn
WORKSTATION:/rhm
DATE: 03/03/03



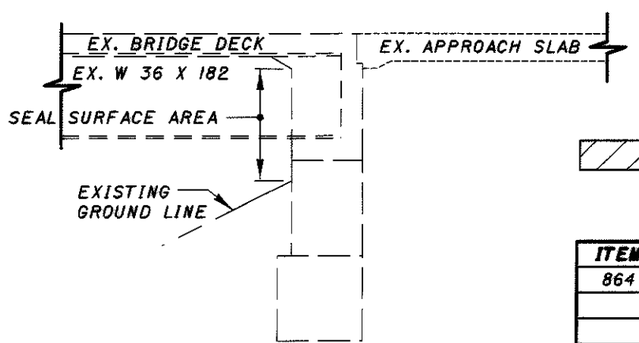
FORWARD ABUTMENT - ELEVATION VIEW



REAR ABUTMENT - ELEVATION VIEW



WINGWALL END VIEW TYPICAL



ABUTMENT SECTION TYPICAL

NOTES:

1) SEAL DECK AND APPROACH SLABS
2) SEAL DECK EDGE, ABUTMENTS, AND WINGWALLS.

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

ITEM	QUANTITY	UNIT	DESCRIPTION
864	81	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 44

DESIGN FILE: i:\projects\21923\Struct\A5111738.dgn
WORKSTATION: jfinch DATE: 03/03/03

DESIGN AGENCY
DISTRICT THREE

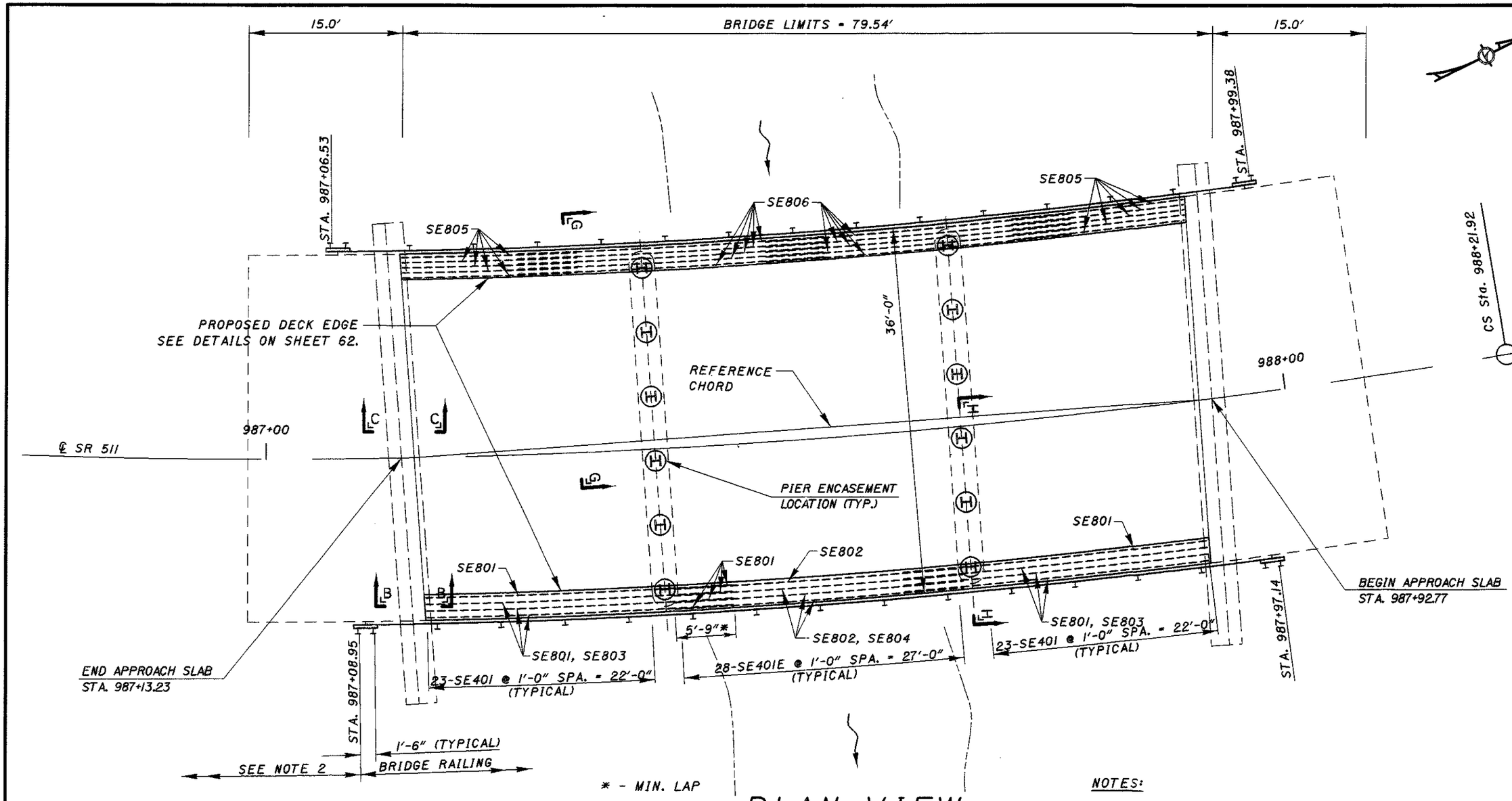
DESIGNED RPT
DRAWN RPT
CHECKED RDN
REVISED
REVIEWED DCM
DATE 2/03
STRUCTURE FILE NUMBER 0305561

ABUTMENT SEALING
ASD-511-1738
OVER LEIDIGH MILL CREEK

ASD-302-10.90

2 2

58
83



* - MIN. LAP

PLAN VIEW

ITEM	QUANTITY	UNIT	DESCRIPTION
202	175	FT.	BRIDGE RAILING REMOVED
517	181	FT.	RAILING (TWIN STEEL TUBE)
848	318	SQ. YD.	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION,AS PER PLAN (2½" THICKNESS)
848	318	SQ. YD.	SURFACE PREPARATION USING HYDRODEMOLITION
848	7	CU. YD.	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS) MATERIAL ONLY, AS PER PLAN
848	10	SQ. YD.	HAND CHIPPING
848	LUMP	LUMP	TEST SLAB
848	1	CU. YD.	FULL-DEPTH REPAIR
848	318	SQ. YD.	EXISTING CONCRETE OVERLAY REMOVED (1¼" THICKNESS)
848	48	SQ. YD.	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 44

NOTES:

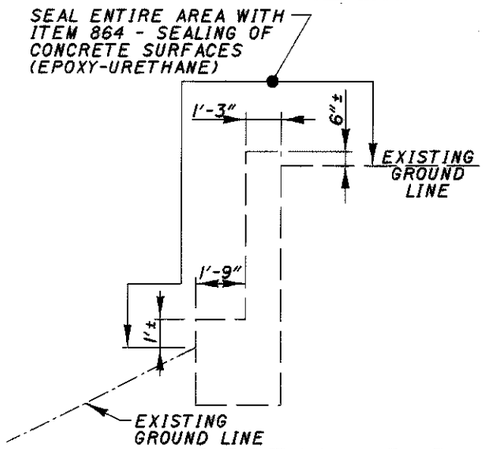
1) THE APPROACH GUARDRAIL IS NOT SHOWN, SEE GUARDRAIL DETAIL SHEET 28.
2) ITEM 606 - GUARDRAIL, TYPE 5 AND ITEM 606 - BRIDGE TERMINAL ASSEMBLY, TYPE 3 (MODIFIED). SEE GUARDRAIL DETAIL SHEET 28.
3) ENCASE ALL PIER PILING, SEE ADDTIONAL DETAILS ON SHEET 61.
4) FOR ADDITIONAL DECK EDGE DETAILS, SECTION G-G AND SECTION H-H, SEE SHEET 62.
5) FOR SECTIONS B-B AND C-C, SEE SHEET 60.

DESIGN FILE: h:\projects\21923\Struct\A5111880.dgn
WORKSTATION: jfinch DATE: 03/03/03

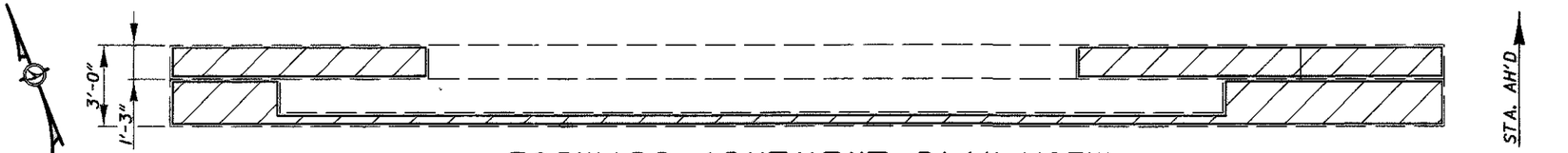
DESIGN AGENCY: DISTRICT THREE
DESIGNED RPT
CHECKED RDN
DRAWN RPT
REVISED
REVISED DCM
DATE 2/03
STRUCTURE FILE NUMBER 0305618

PLAN VIEW
ASD-511-1880
OVER LEIDIGH MILL CREEK

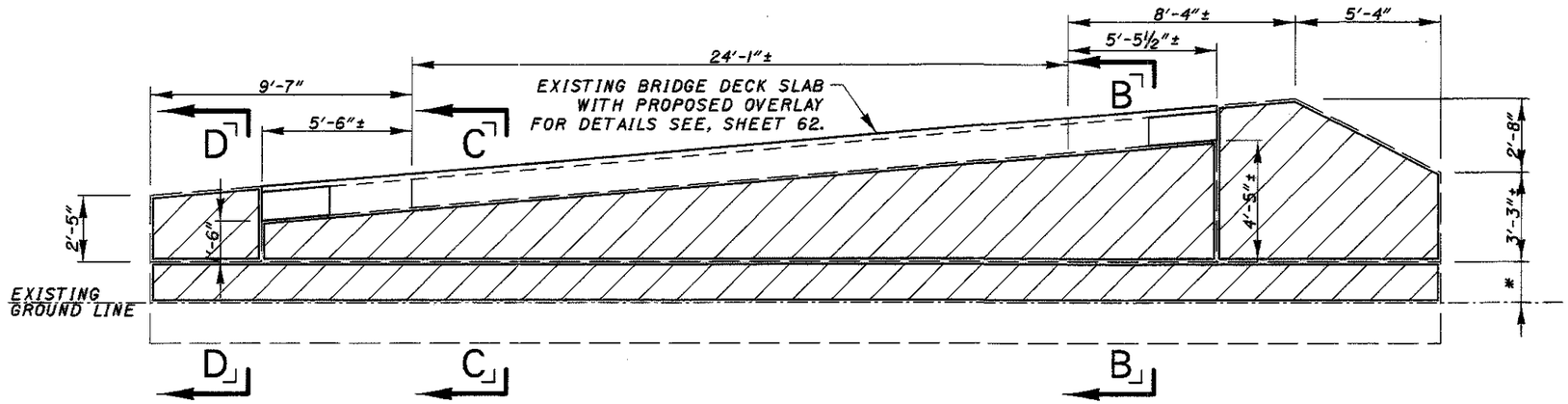
ASD-302-10.90



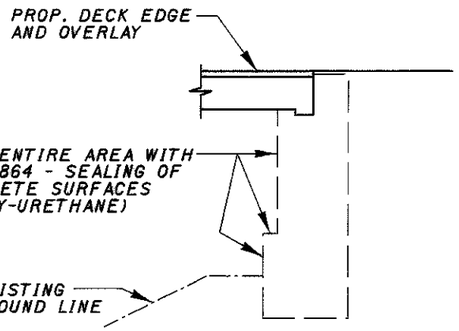
SECTION D-D



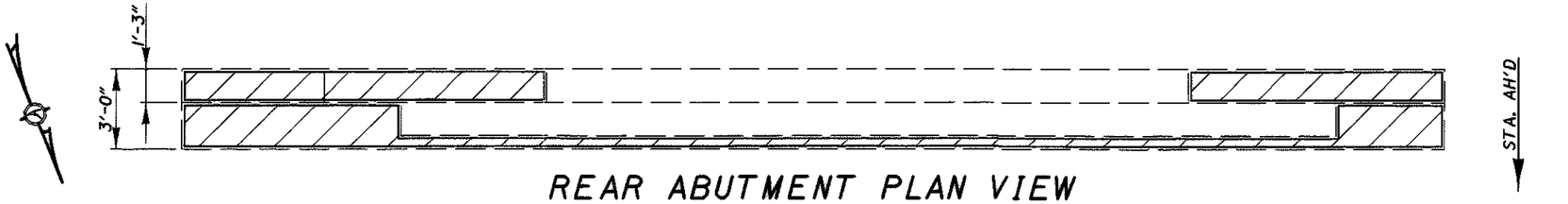
FORWARD ABUTMENT PLAN VIEW



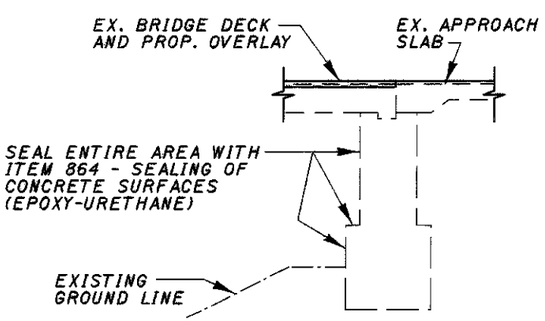
FORWARD ABUTMENT ELEVATION



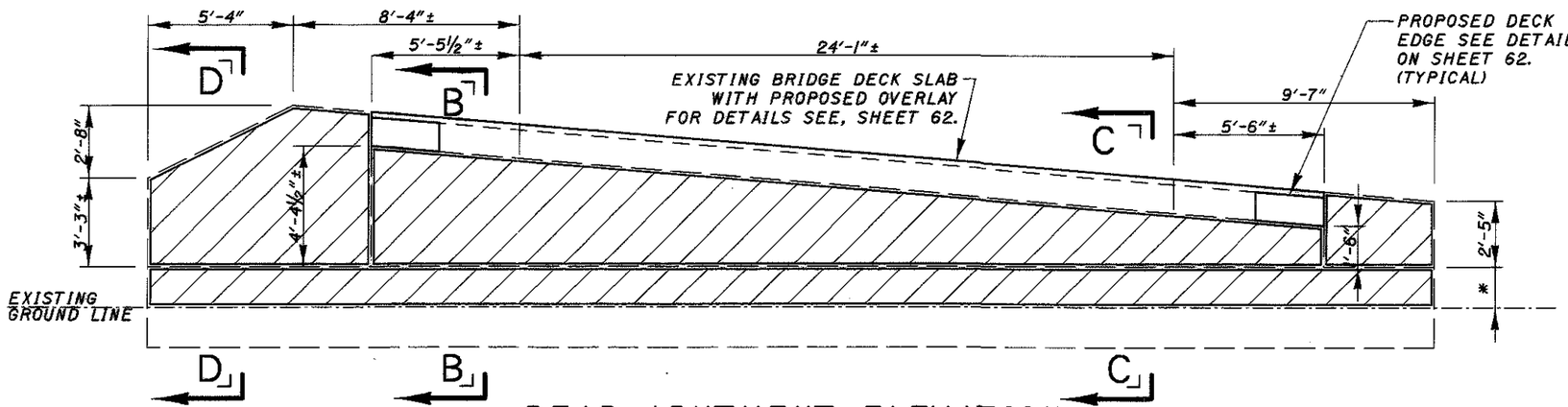
SECTION B-B



REAR ABUTMENT PLAN VIEW



SECTION C-C



REAR ABUTMENT ELEVATION

ITEM	QUANTITY	UNIT	DESCRIPTION
864	58	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 44

NOTES:

1) * - VARIES, ITEM 864 QUANTITY BASED OFF 1'-6"±

AREA TO BE SEALED WITH ITEM 864 SEALING OF CONCRETE SURFACES (EPOXY URETHANE)

DESIGN FILE: I:\projects\2123\Struct\A5111880.dgn
WORKSTATION: jfinch DATE: 03/03/03

DESIGN AGENCY: DISTRICT THREE

DESIGNED	DRAWN	REVIEWED	DATE
RPT	RPT	DCM	2/03
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RDN		0305618	

ABUTMENT SEALING DETAILS
ASD-511-1880
OVER LEIDIGH MILL CREEK

ASD-302-10.90

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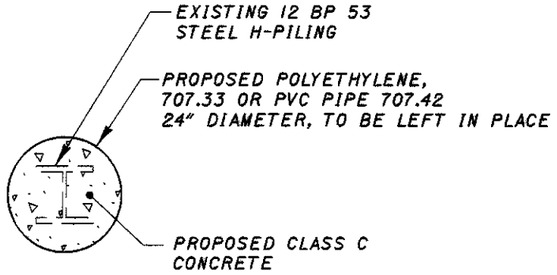
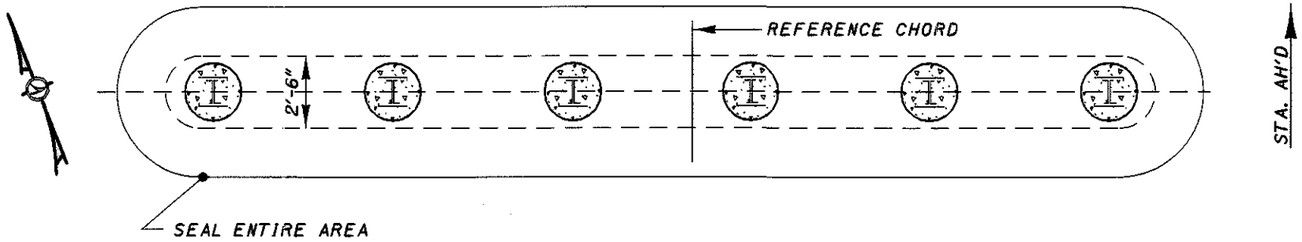
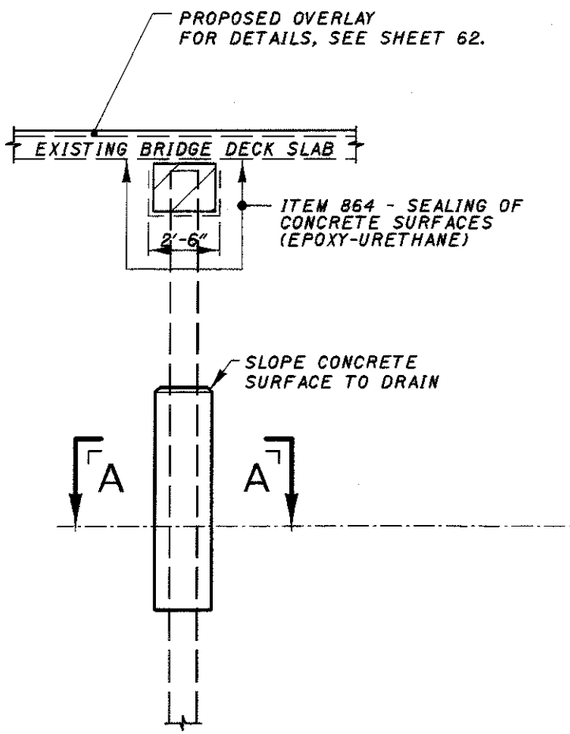


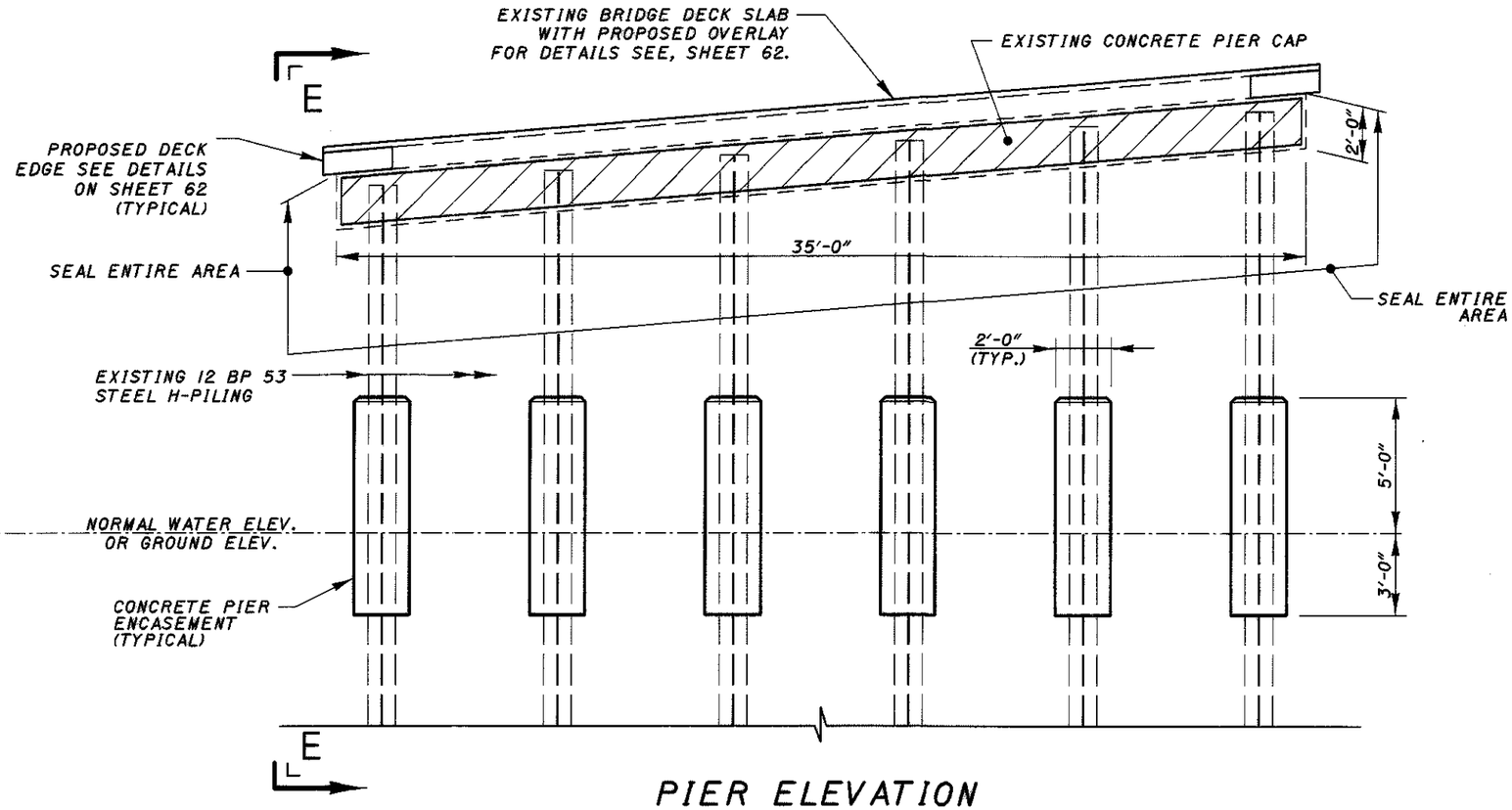
SECTION A-A



PIER PLAN VIEW



VIEW E-E



PIER ELEVATION

ITEM	QUANTITY	UNIT	DESCRIPTION
511	12	CU. YD.	CLASS C CONCRETE, PIER
864	26	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 44

NOTES:

1) ENCASE ALL PILING (BOTH PIERS)

AREA TO BE SEALED WITH ITEM 864 SEALING OF CONCRETE SURFACES (EPOXY URETHANE)

DESIGN FILE: i:\projects\2123\Struct\A511880.dgn
WORKSTATION: jfinah
DATE: 03/03/03

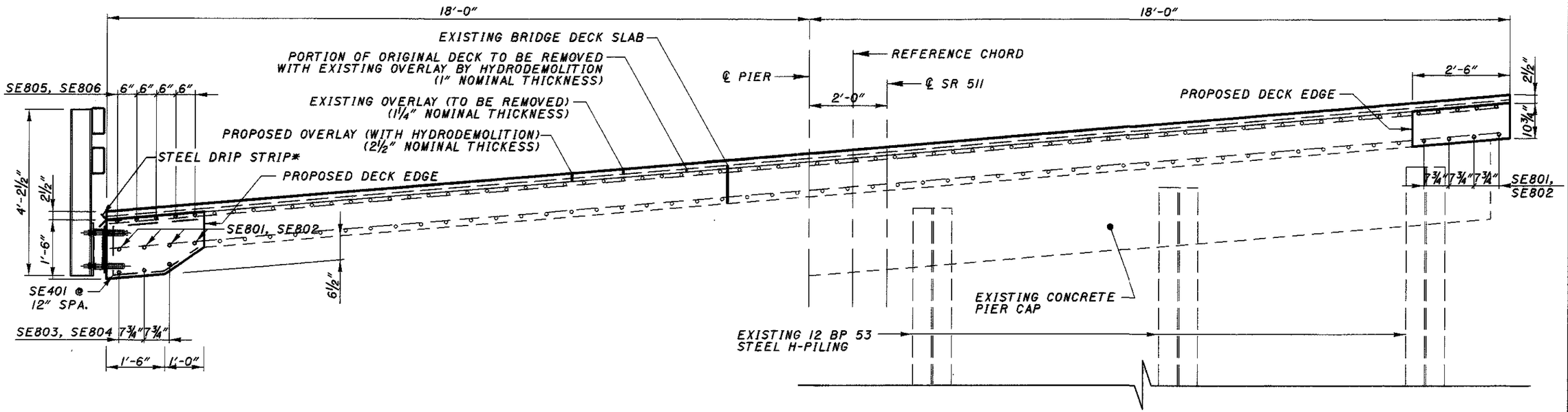
DESIGN AGENCY: DISTRICT THREE
REVIEWED: DCM
DATE: 2/03
STRUCTURE FILE NUMBER: 0305618
DRAWN: RPT
REVISED:
DESIGNED: RPT
CHECKED: RDN

PIER ENCASEMENT
ASD-511-1880
OVER LEIDIGH MILL CREEK

ASD-302-10.90

3 | 4

61 | 83

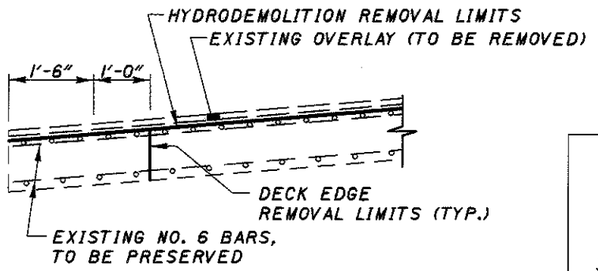


SECTION G-G @ MID-SPAN

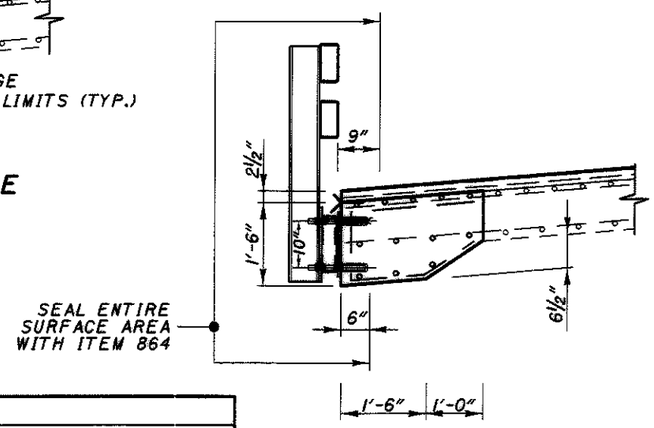
SECTION H-H @ PIER AND @ ABUTMENT FOR DECK EDGE

ITEM 509 - EPOXY COATED REINFORCING STEEL, GRADE 60

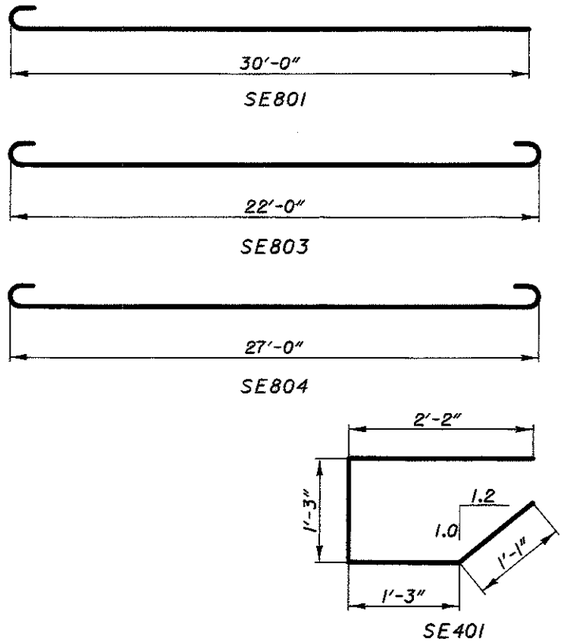
REBAR DATA			QUANTITIES	
MARK	LENGTH	SHAPE	NUMBER	WEIGHT
SE401	5' - 6"	B	148	544
SE801	30' - 11"	B	16	1321
SE802	28' - 4"	S	8	605
SE803	23' - 10"	B	12	764
SE804	29' - 10"	B	6	478
SE805	17' - 8"	S	20	944
SE806	30' - 0"	S	20	1602
			TOTAL	6258



EXISTING DECK EDGE REMOVAL DETAIL



DECK EDGE SEALING DETAIL



ITEM	QUANTITY	UNIT	DESCRIPTION
202	15	CU. YD.	PORTIONS OF STRUCTURE REMOVED
511	21	CU. YD.	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN
509	6258	POUND	EPOXY COATED REINFORCING STEEL
SPECIAL	77	FT.	STEEL DRIP STRIP
864	51	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 44

NOTES:

1) * - PLACE DRIP STRIP ON LOW SIDE OF SUPERELEVATION ONLY.
2) #8 BARS SHALL HAVE A MIN. LAP LENGTH OF 5'-9"

DESIGN AGENCY: DISTRICT THREE

DESIGNED	DRAWN	REVIEWED	DATE
RPT	RPT	DCM	2/03
CHECKED	REVISED		STRUCTURE FILE NUMBER
RDN			0305618

DECK EDGE REPLACEMENT
ASD-511-1880
OVER LEIDIGH MILL CREEK

ASD-302-10.90

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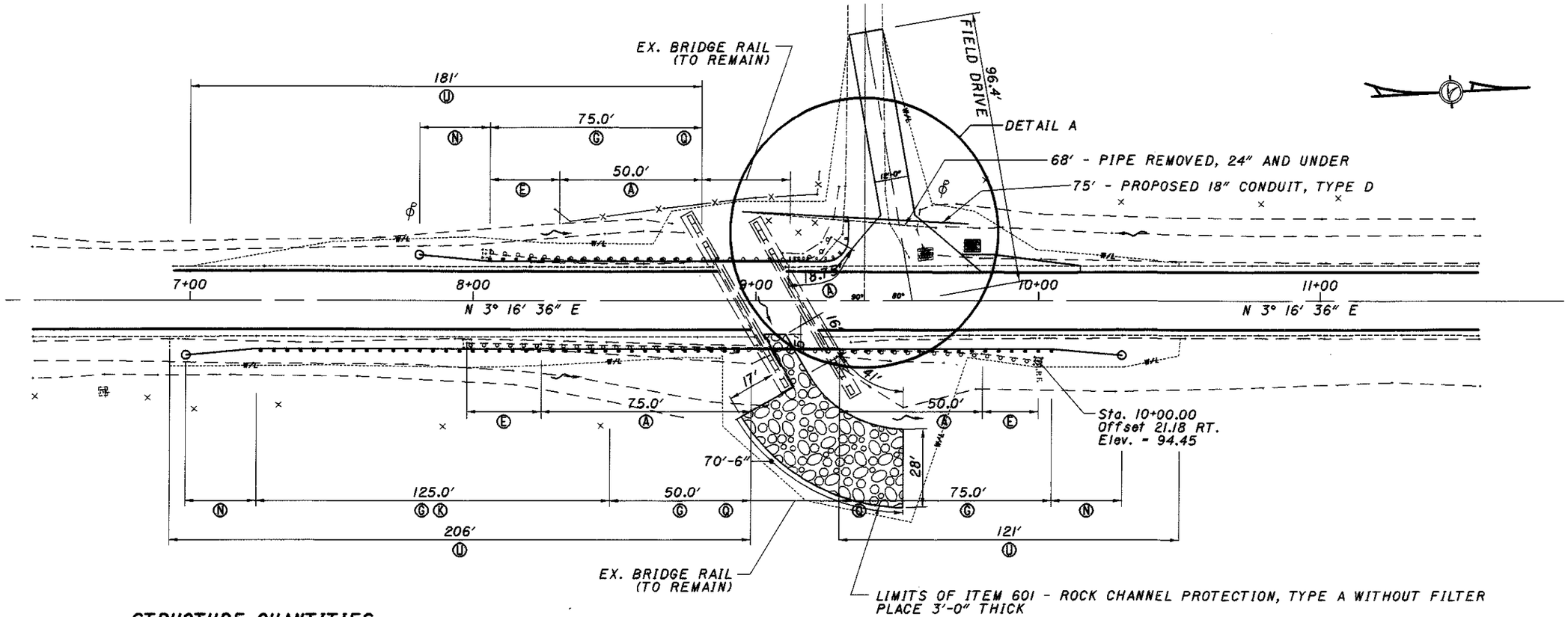
DESIGN FILE: i:\projects\21823\Struct\ASM1880.dgn
WORKSTATION: jfinch
DATE: 03/03/03



PLAN VIEW

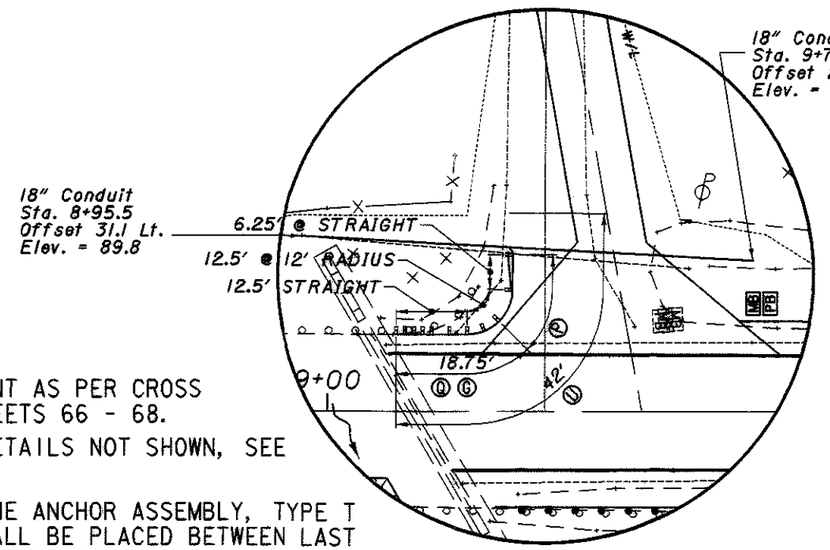
STRUCTURE QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
202	55	FT.	PIPE REMOVED, 24" AND UNDER
304	27	CU. YD.	AGGREGATE BASE
601	185	CU. YD.	ROCK CHANNEL PROTECTION, TYPE A WITHOUT FILTER
603	75	FT.	18" CONDUIT, TYPE D

STRUCTURE QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 45

GUARDRAIL QUANTITIES

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	LIN. FT.	68.75	125	193.75
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	1	2	3
	203	EXCAVATION	CU. YD.			16
	203	EMBANKMENT, AS PER PLAN	CU. YD.			102
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT.	223	327	550
Ⓖ	606	GUARDRAIL, TYPE 5	FT.	93.75	250	343.75
Ⓚ	606	GUARDRAIL POST, 9 FOOT	EACH		19	19
Ⓝ	606	ANCHOR ASSEMBLY, TYPE A	EACH	1	2	3
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	EACH	1		1
Ⓠ	606	BRIDGE TERMINAL ASSEMBLY, TYPE 4	EACH	2	2	4
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	3	4	7



DETAIL A

NOTES:

1. GRADE EMBANKMENT AS PER CROSS SECTIONS ON SHEETS 66 - 68.
2. FOR DRIVEWAY DETAILS NOT SHOWN, SEE SHEET 15.
3. IN DETAIL A, THE ANCHOR ASSEMBLY, TYPE T BRACING ROD SHALL BE PLACED BETWEEN LAST POST ON RADIUS AND FIRST POST ON TANGENT.
4. GUARDRAIL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 17, 18.
5. SEE SHEET 7 FOR DRIVEWAY LIMITATION NOTE.

DESIGN FILE: I:\projects\21923\Struct\A5111998.dgn
WORKSTATION:
DATE: 03/03/03

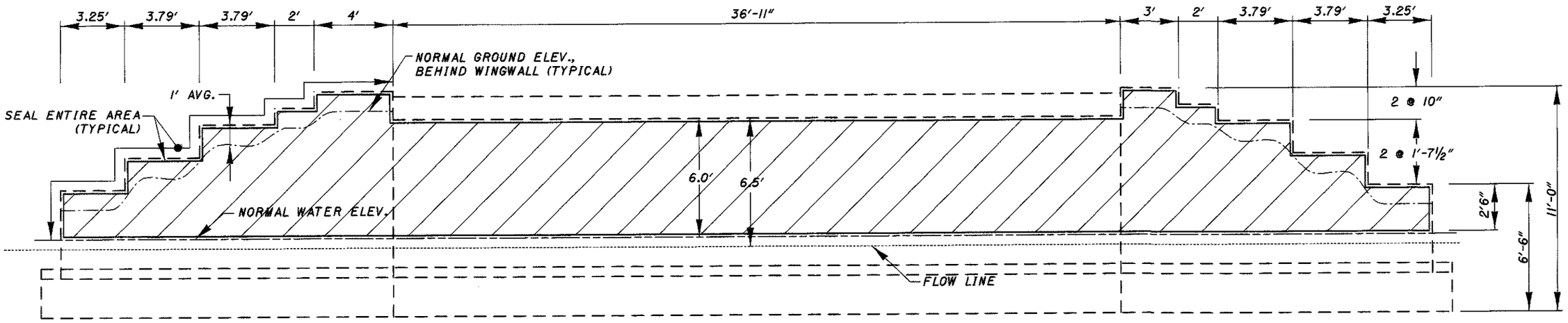
DESIGN AGENCY: DISTRICT THREE
DESIGNED BAD | DRAWN CADD | CHECKED RDN | REVISED DCM | DATE 2/03 | REVISED | STRUCTURE FILE NUMBER 0305642

PLAN VIEW
ASD-511-1998
OVER SMALL CREEK

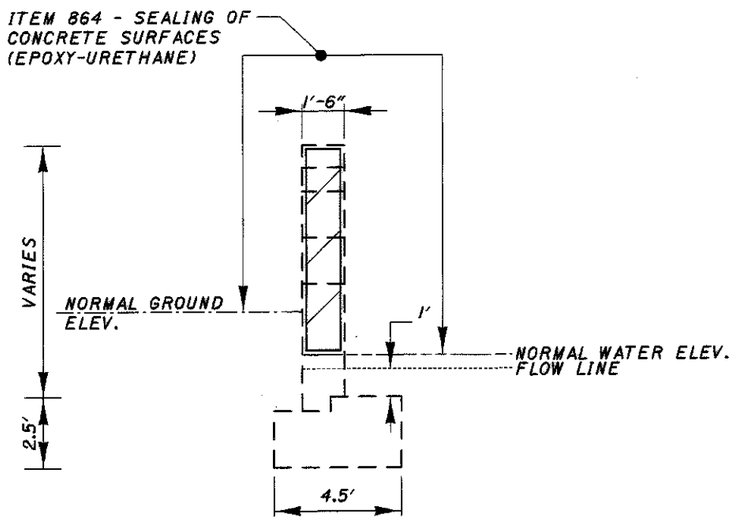
ASD-302-10.90

1 / 6

63 / 83



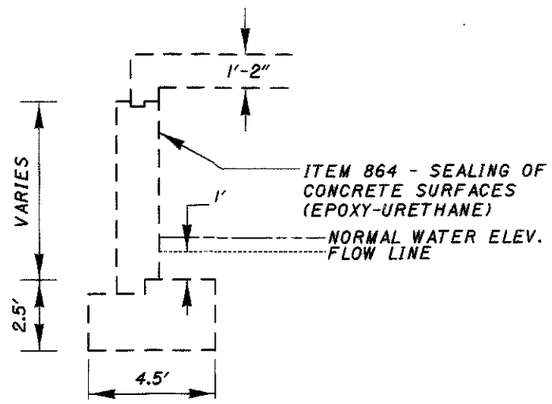
TYPICAL ABUTMENT ELEVATION



WINGWALL VIEW

ITEM	QUANTITY	UNIT	DESCRIPTION
864	96	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 45



ABUTMENT SECTION

NOTES:

1) * - VARIES, ITEM 864 QUANTITY BASED OFF 2'-6"±

DESIGN AGENCY: DISTRICT THREE

DESIGNED RPT | DRAWN JPF | REVISED | CHECKED RDN

DATE 2/03 | REVISED DCM | STRUCTURE FILE NUMBER 0305642

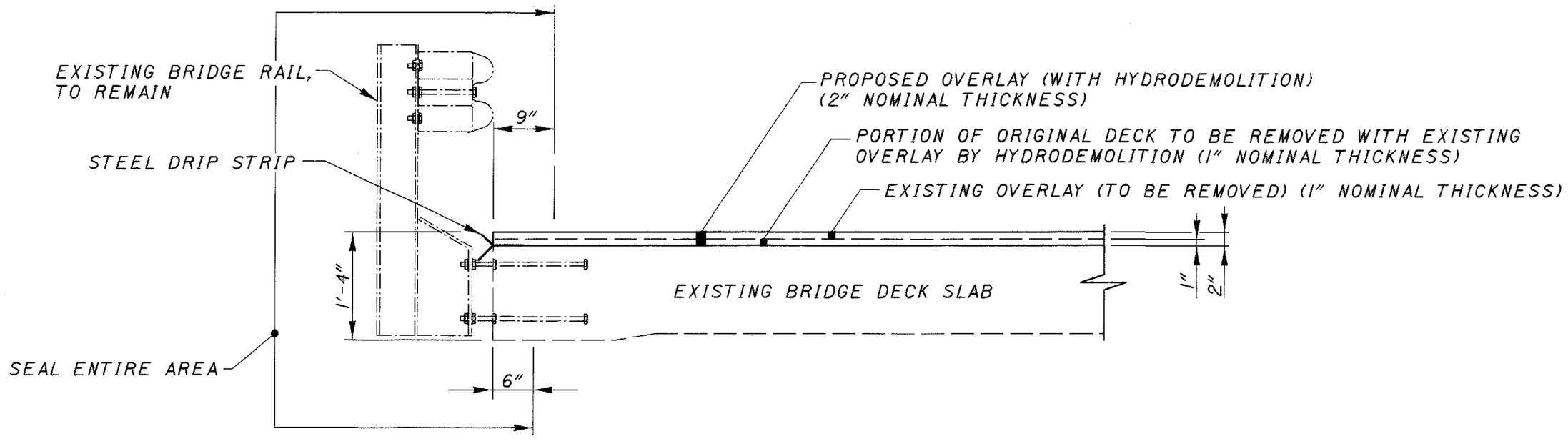
ABUTMENT SEALING DETAILS
ASD-511-1998
OVER SMALL CREEK

ASD-302-10.90

2 / 6

64 / 83

DESIGN FILE: i:\projects\2123\Struct\A5111998.dgn
WORKSTATION: jfinch
DATE: 03/03/03



OVERLAY DETAIL

ITEM	QUANTITY	UNIT	DESCRIPTION
848	72	SQ. YD.	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2" THICKNESS)
848	72	SQ. YD.	SURFACE PREPARATION USING HYDRODEMOLITION
848	2	CU. YD.	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS) MATERIAL ONLY, AS PER PLAN
848	3	SQ. YD.	HAND CHIPPING
848	LUMP	LUMP	TEST SLAB
848	1	CU. YD.	FULL-DEPTH REPAIR
848	72	SQ. YD.	EXISTING CONCRETE OVERLAY REMOVED (1" THICKNESS)
848	11	SQ. YD.	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY
864	12	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY URETHANE)
SPECIAL	46	FT.	STEEL DRIP STRIP

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 45

DESIGN FILE: i:\projects\21923\Struct\A5111998.dgn
WORKSTATION: jfinch DATE: 03/03/03

DESIGN AGENCY: DISTRICT THREE
DESIGNED RPT DRAWN JPF REVISED DCM 2/03 DATE
CHECKED RDN REVISED STRUCTURE FILE NUMBER 0305642

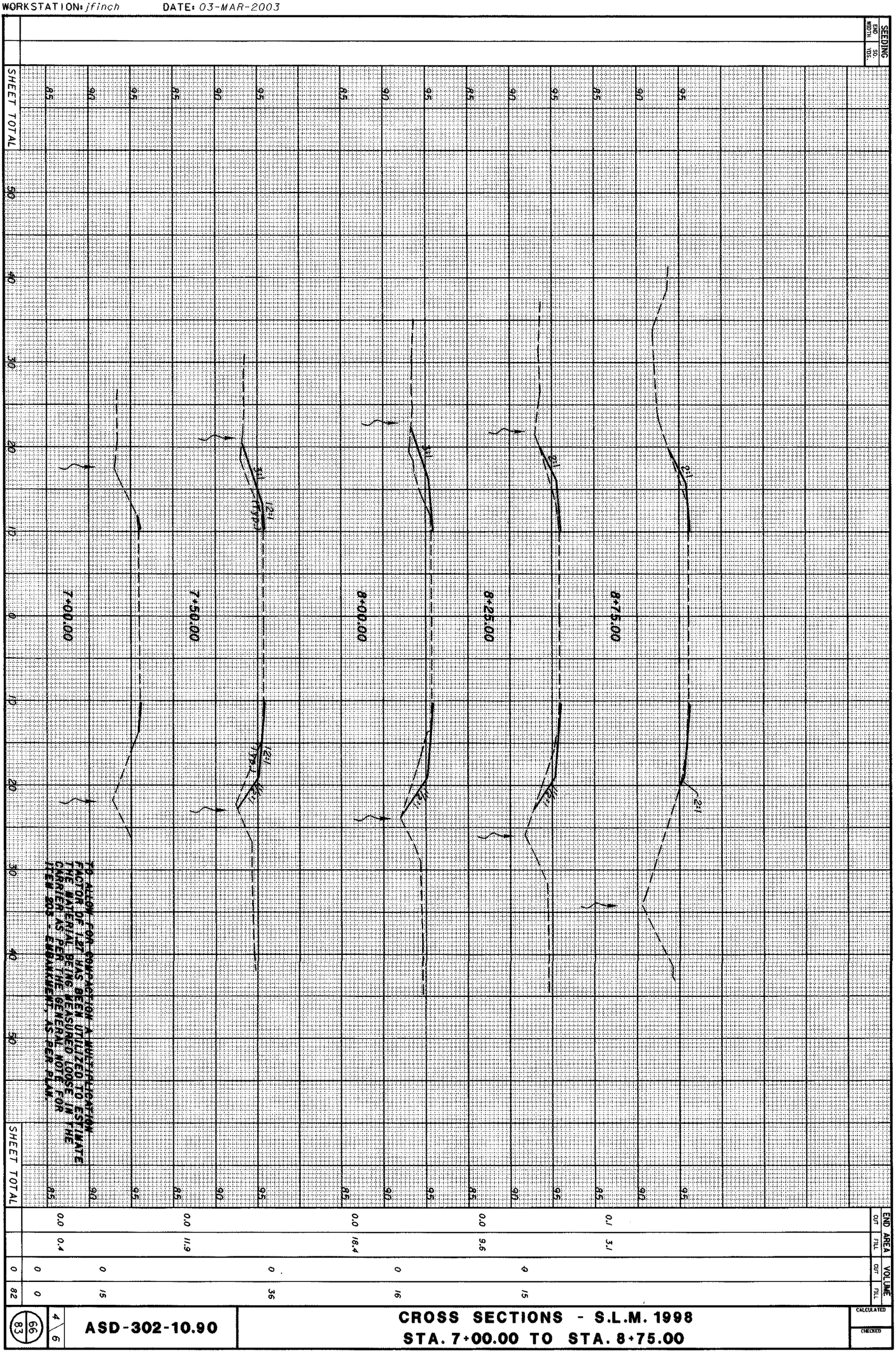
BRIDGE DECK OVERLAY DETAIL
ASD-511-1998
OVER SMALL CREEK

ASD-302-10.90

3 / 6

65 / 83

DESIGN FILE: i:\projects\21923\Struct\grxsl998.dgn
WORKSTATION: jfinch DATE: 03-MAR-2003

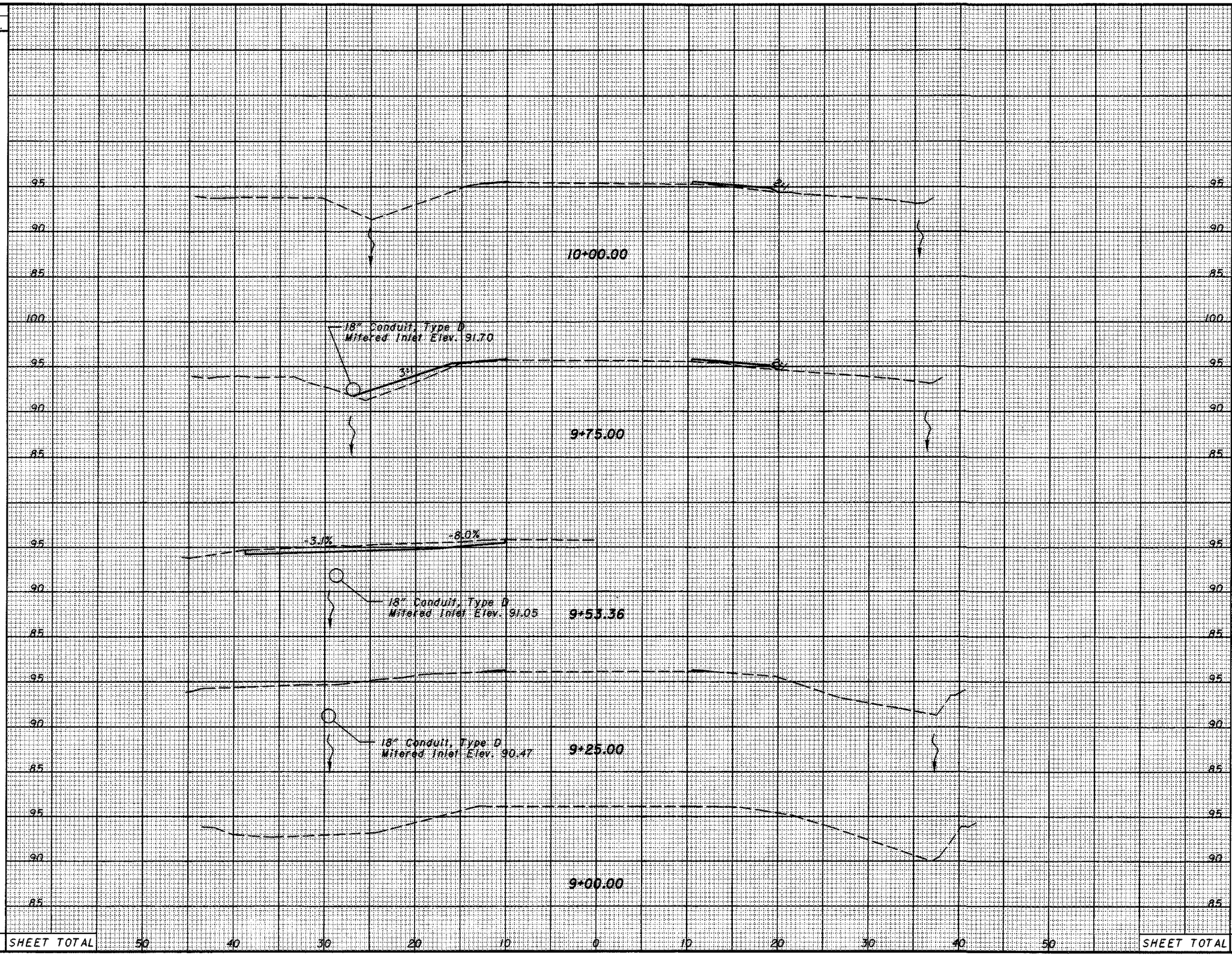


66/83	4\6	ASD-302-10.90

CROSS SECTIONS - S.L.M. 1998
STA. 7+00.00 TO STA. 8+75.00

CALCULATED
CHECKED

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.1	2.1		
		0	7
0.0	10.2		
		7	5
16.6	0.0		
		9	0
0.0	0.4		
		0	4
		16	16

SHEET TOTAL

SHEET TOTAL

CALCULATED

CHECKED

CROSS SECTIONS - S.L.M. 1998
STA. 9+00.00 TO STA. 10+00.00

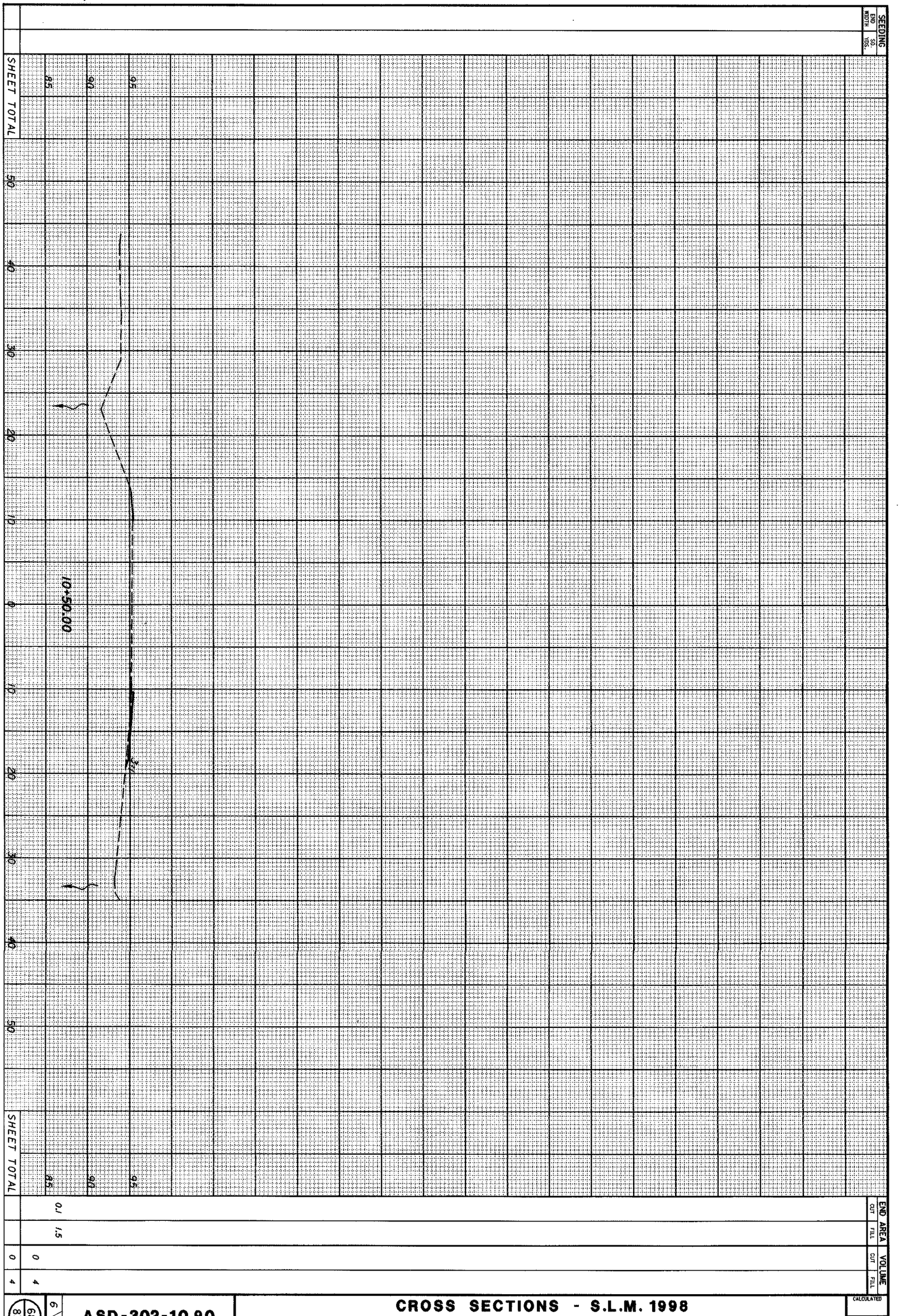
ASD-302-10.90

5 / 6

67 / 83

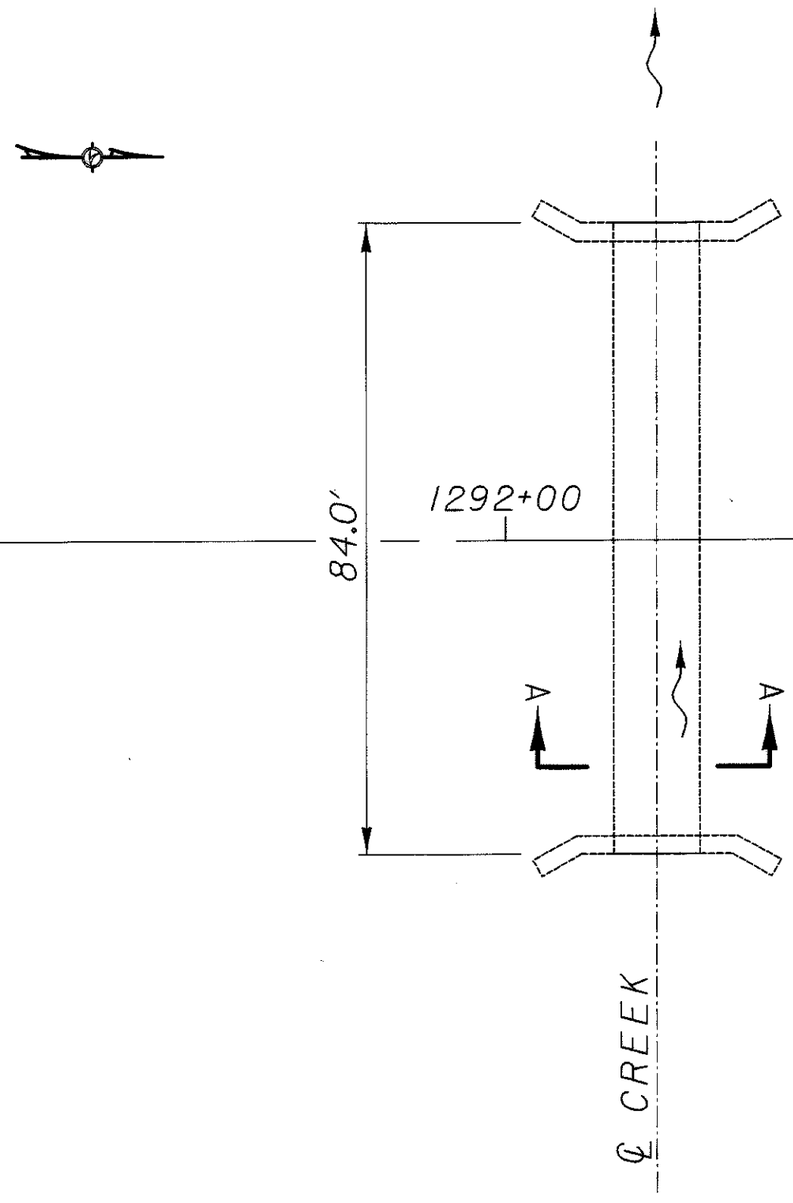
DESIGN FILE: I:\projects\21923\Struct\grxsl998.dgn
WORKSTATION: jfinch DATE: 03-MAR-2003

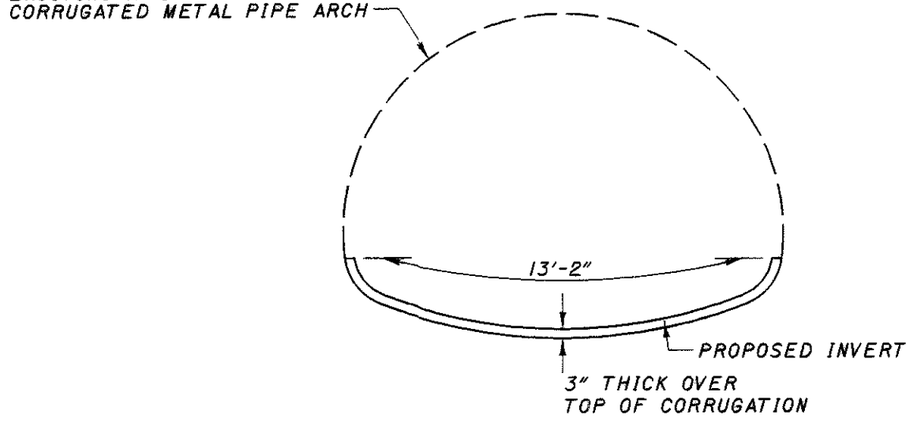
DESIGN FILE: i:\projects\21923\Struct\grxsl998.dgn
WORKSTATION: jfinch DATE: 03-MAR-2003



68/83	6/6	ASD-302-10.90	CROSS SECTIONS - S.L.M. 1998 STA. 10+50.00

CALCULATED
CHECKED





SECTION A-A

ITEM	QUANTITY	UNIT	DESCRIPTION
603	84.0	FT.	FIELD PAVING OF EXISTING PIPE (11'-5" 7'-3" CORR. METAL PIPE ARCH)

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 45

NOTES:

1) PLACE CONCRETE INVERT.
2) SEE ITEM 603.12 FOR REQUIREMENTS
3) STATIONING IS FROM ORIGINAL PLANS.

DESIGN FILE: I:\projects\21923\Struct\ASII2450.dgn
WORKSTATION: jflnah
DATE: 03/03/03

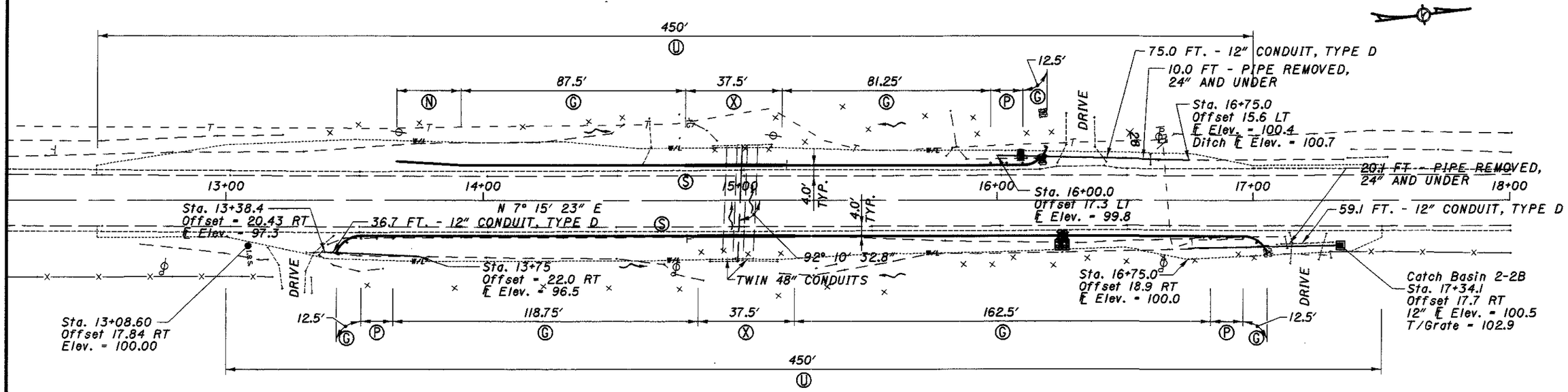
DESIGN AGENCY
DISTRICT THREE

DESIGNED JPF
DRAWN JPF
CHECKED RDN
REVISED DCM 2/03
REVISED
STRUCTURE FILE NUMBER 0305677

PLAN VIEW
ASD-511-2450

ASD-302-10.90

69
83



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
	202	PIPE REMOVED, 24" AND UNDER	FT	10.0	20.1	30.1
	203	EXCAVATION	CU YD			2
	203	EMBANKMENT, AS PER PLAN	CU YD			159
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT	450	450	900
	603	12" CONDUIT, TYPE D	FT	75.0	95.8	170.8
	604	CATCH BASIN, NO. 2-2B	EACH		1	1
Ⓖ	606	GUARDRAIL, TYPE 5	FT	300	300	600
Ⓝ	606	ANCHOR ASSEMBLY, TYPE A	EACH	1		1
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	EACH	1	2	3
Ⓧ	606	GUARDRAIL, TYPE 5 WITH DOUBLE RAILS	FT	37.5	37.5	75
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	3	5	8

NOTES:

1. GRADE EMBANKMENT AS PER CROSS SECTIONS ON SHEETS 72 - 74.
2. FOR DRIVEWAY DETAILS NOT SHOWN, SEE SHEET 15.
3. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 17, 18.

DESIGN AGENCY: DISTRICT THREE

DESIGNED RPT | DRAWN RPT | CHECKED RDN | REVISED | REVISED DCM | DATE 2/03

STRUCTURE FILE NUMBER 0305693

PLAN VIEW

ASD-511-2593
BUCK CREEK

ASD-302-10.90

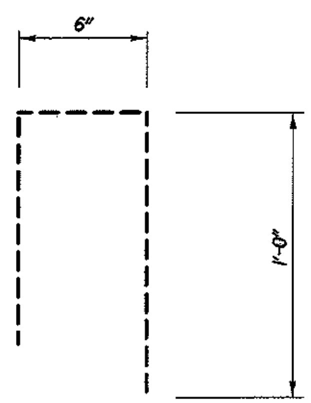
1 / 5

70 / 83

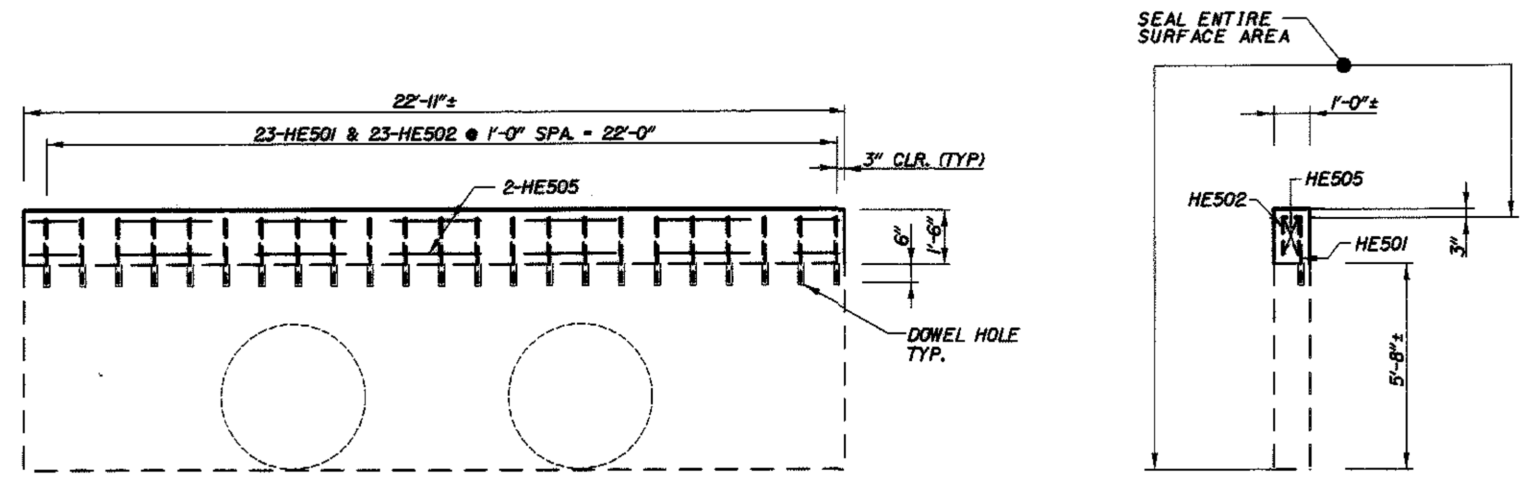
DESIGN FILE: i:\projects\2123\Struct\A5112593.dgn
DATE: 03/03/03
WORKSTATION:

ITEM 509 - EPOXY COATED REINFORCING STEEL, GRADE 60

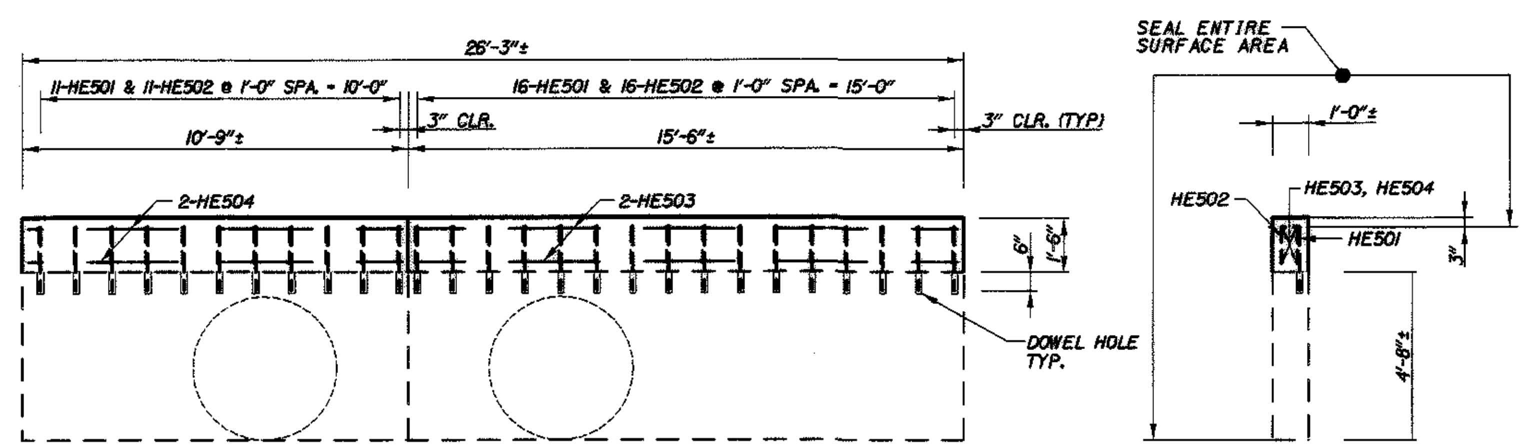
REBAR DATA			QUANTITIES	
MARK	LENGTH	SHAPE	NUMBER	WEIGHT
HE501	1' - 9"	S	50	91
HE502	2' - 6"	B	50	130
HE503	15' -0"	S	4	63
HE504	10' -3"	S	4	43
HE505	22' - 5"	S	4	94
			TOTAL	421



HE502



LT. HEADWALL



RT. HEADWALL

ITEM	QUANTITY	UNIT	DESCRIPTION
509	421	POUND	EPOXY COATED REINFORCING STEEL
510	50	EACH	DOWEL HOLES WITH NONSHINK NONMETALLIC GROUT
511	3	CU. YD.	CLASS C CONCRETE, AS PER PLAN
864	42	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 45

NOTES:

1) EXTEND HEADWALL HEIGHT.
2) SEAL HEADWALLS.

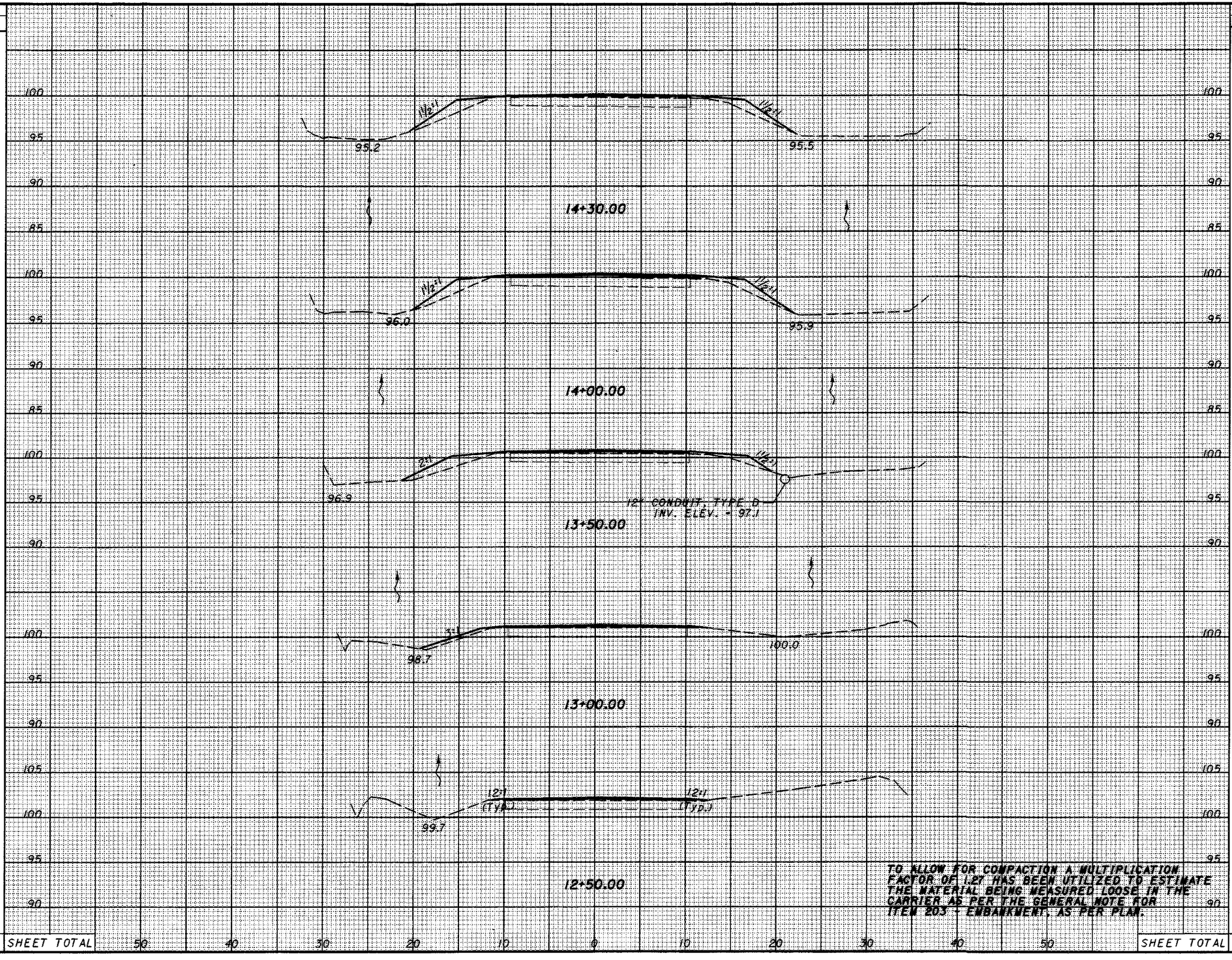
DESIGN FILE: I:\projects\21923\Struct\A5112593.dgn
DATE: 03/03/03

DESIGN AGENCY: DISTRICT THREE
DATE 2/03 | REVIEWED DCW | STRUCTURE FILE NUMBER 0305693
DRAWN RPT | REVISED
DESIGNED RPT | CHECKED RDW

HEADWALL DETAILS
ASD-511-2593
BUCK CREEK

ASD-302-10.90

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.0	12.4	0	17
0.0	12.4	0	28
0.0	11.1	0	16
0.0	2.7	0	4
0.0	0.4	0	0
		0	65

TO ALLOW FOR COMPACTION A MULTIPLICATION FACTOR OF 1.27 HAS BEEN UTILIZED TO ESTIMATE THE MATERIAL BEING MEASURED LOOSE IN THE CARRIER AS PER THE GENERAL NOTE FOR ITEM 203 - EMBANKMENT, AS PER PLAN.

SHEET TOTAL 50 40 30 20 10 0 10 20 30 40 50 SHEET TOTAL

CALCULATED

CHECKED

CROSS SECTIONS 25.93 S.L.M.
STA. 12+50.00 TO STA. 14+30.00

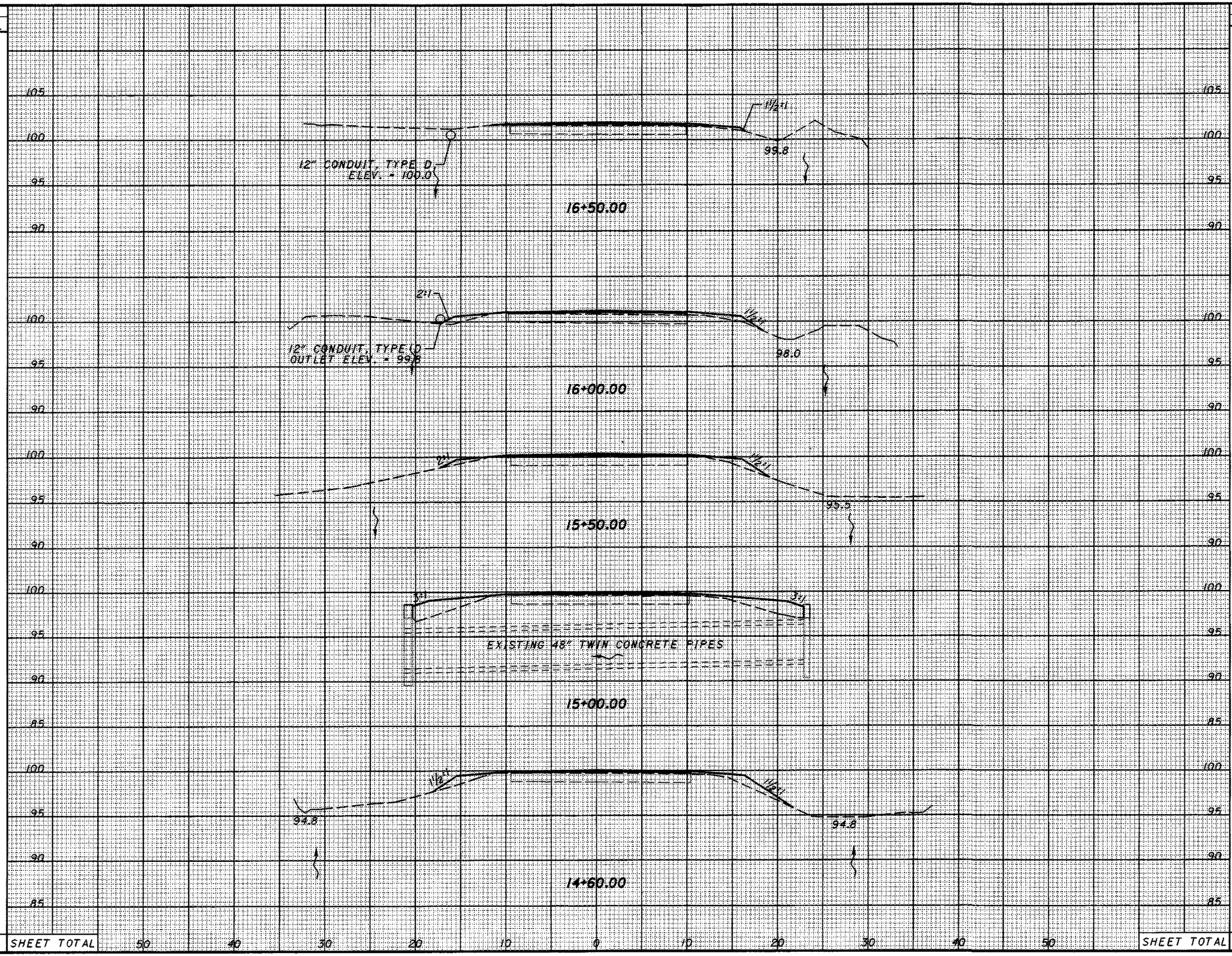
ASD-302-10.90

3 / 5

72 / 83

DESIGN FILE: I:\projects\2123\Struct\grxs2593.dgn
WORKSTATION: jfinch DATE: 03-MAR-2003

SEEDING	
END WIDTH	SD. YDS.



		END AREA		VOLUME		
		CUT	FILL	CUT	FILL	
		0.0	1.4	0	8	
		0.0	5.2	0	12	
		0.0	4.9	0	29	
		0.0	19.7	0	27	
		0.0	8.5	0	15	
SHEET TOTAL				0	91	

CALCULATED

CHECKED

CROSS SECTIONS 25.93 S.L.M.
STA. 14+60.00 TO STA. 16+50.00

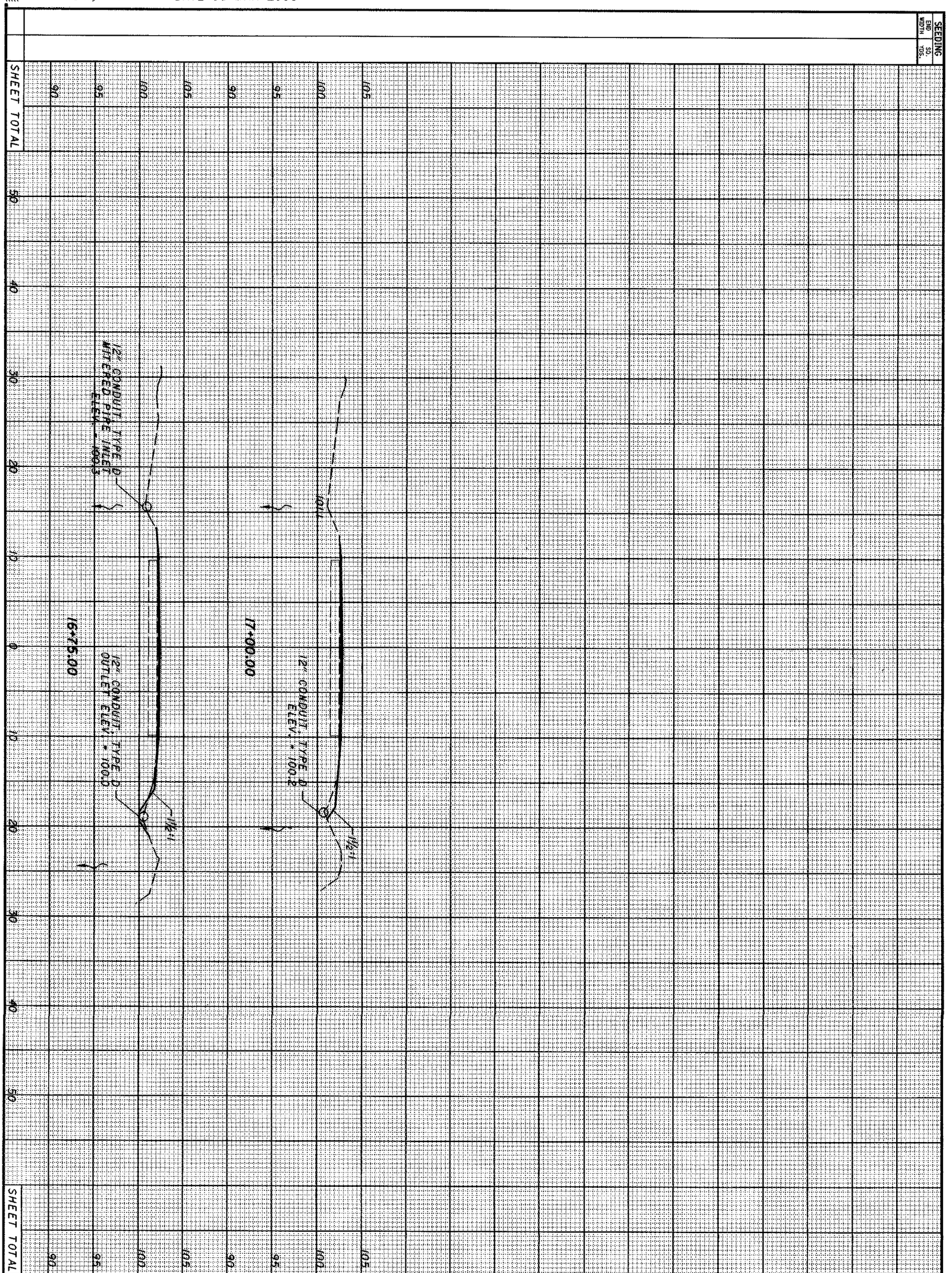
ASD-302-10.90

4 / 5

73
83

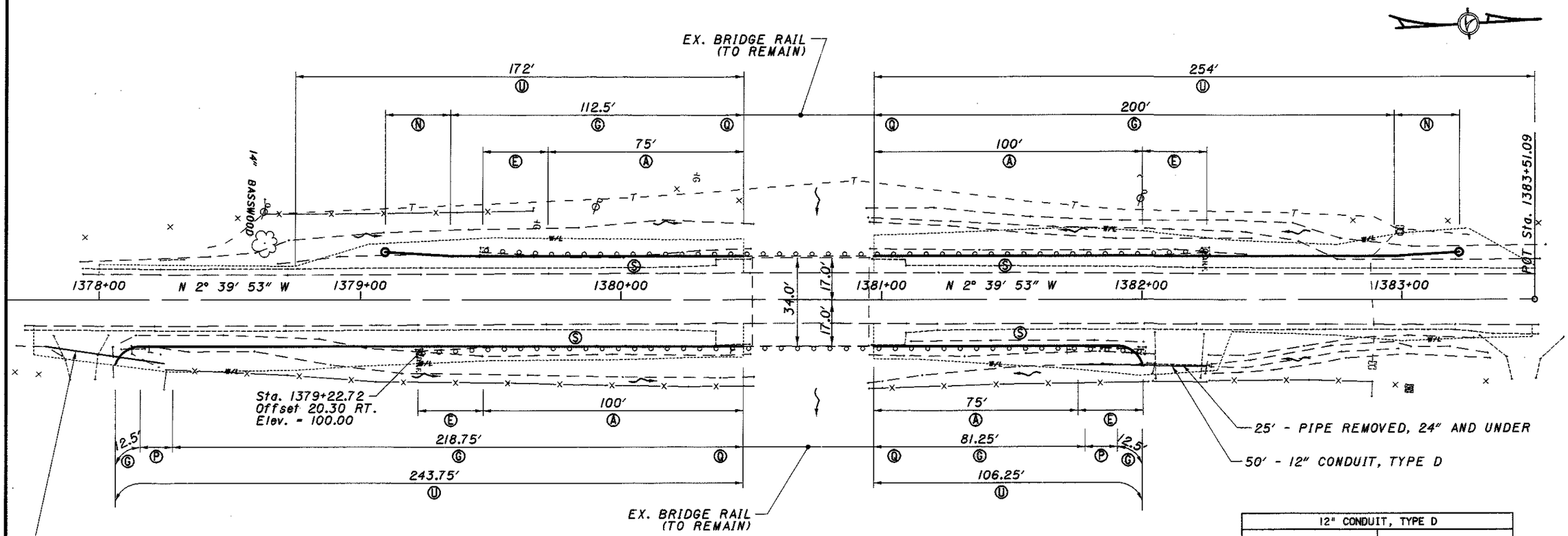
DESIGN FILE: i:\projects\21923\Struct\grxs2593.dgn
WORKSTATION: jfinch
DATE: 03-MAR-2003

DESIGN FILE: i:\projects\21923\Struct\grxs2593.dgn
WORKSTATION: jfinch DATE: 03-MAR-2003



74/83	5/5	ASD-302-10.90	CROSS SECTIONS 25.93 S.L.M. STA. 16+75.00 TO STA. 17+00.00

CALCULATED
CHECKED



12" CONDUIT, TYPE D	
MITERED PIPE INLET STA. 1377+79.63 OFFSET 17.88' RT. INV. ELEV. = 102.53	PIPE OUTLET STA. 1378+25 OFFSET 24.33' RT. INV. ELEV. = 98.52

12" CONDUIT, TYPE D	
PIPE OUTLET STA. 1381+75.0 OFFSET 25.0' RT. INV. ELEV. = 99.3	MITERED PIPE INLET STA. 1382+35.0 OFFSET 25.5' RT. INV. ELEV. = 100.7

PLAN VIEW

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
	202	PIPE REMOVED, 24" AND UNDER	FT.		25	25
Ⓐ	202	GUARDRAIL REMOVED	LIN. FT.	175	175	350
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2	2	4
	203	EXCAVATION	CU. YD.			9
	203	EMBANKMENT, AS PER PLAN	CU. YD.			156
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT.	426	350	776
	603	12" CONDUIT, TYPE D	FT.		96	96
Ⓖ	606	GUARDRAIL, TYPE 5	FT.	312.5	325	637.5
Ⓝ	606	ANCHOR ASSEMBLY, TYPE A	EACH	2		2
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	EACH		2	2
Ⓠ	606	BRIDGE TERMINAL ASSEMBLY, TYPE 4	EACH	2	2	4
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	6	6	12

NOTES:

1. GRADE EMBANKMENT AS PER CROSS SECTIONS ON SHEETS 78 - 80.
2. FOR DRIVEWAY DETAILS NOT SHOWN, SEE SHEET 15.
3. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEETS 17, 18.

DESIGN FILE: I:\projects\21923\Struct\A5II2618.dgn
DATE: 03/03/03
WORKSTATION:

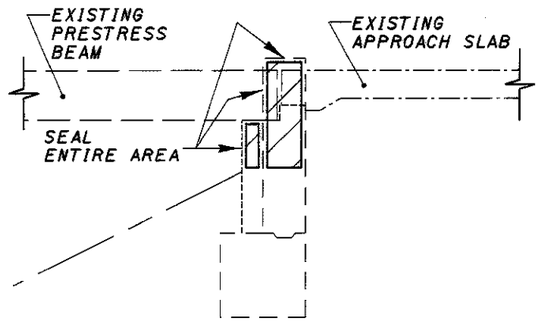
DESIGN AGENCY: DISTRICT THREE
DATE: 2/03
REVISED: DCM
STRUCTURE FILE NUMBER: 0305715
DRAWN: RPT
REVISED:
DESIGNED: BAD
CHECKED: RDN

PLAN VIEW
ASD-5II-2618
OVER BOYD DITCH

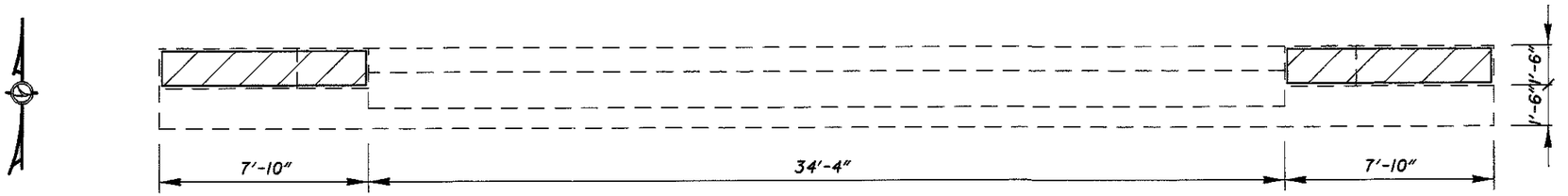
ASD-302-10.90

1 | 6

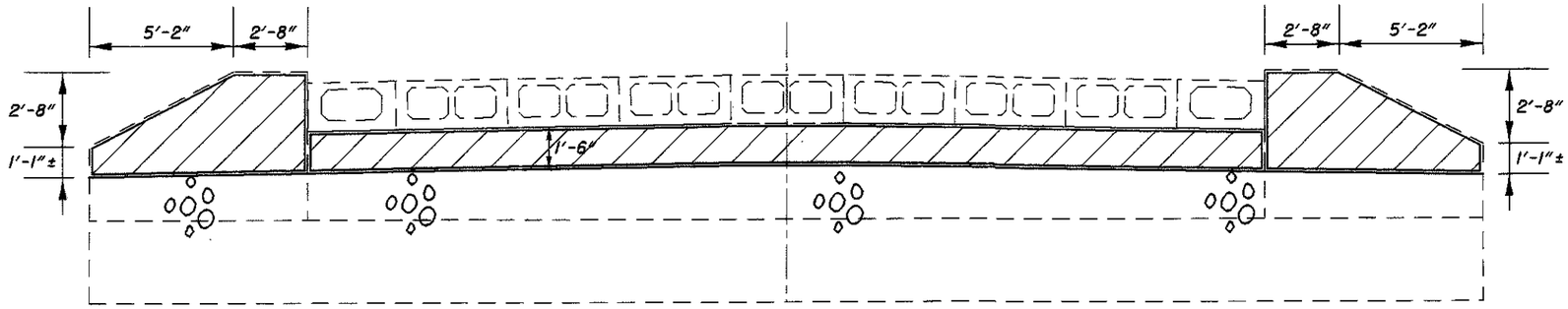
75
83



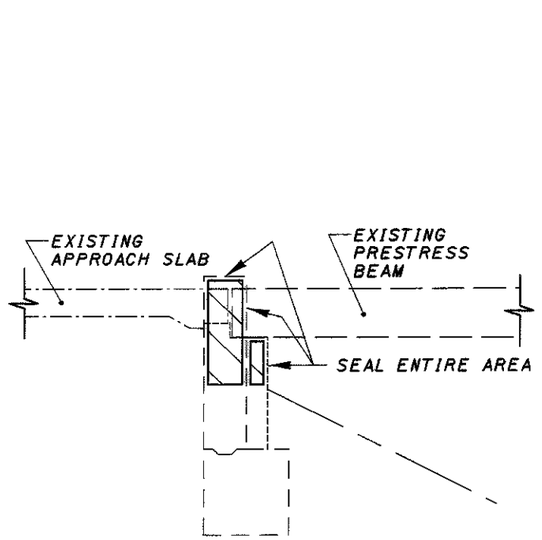
END VIEW



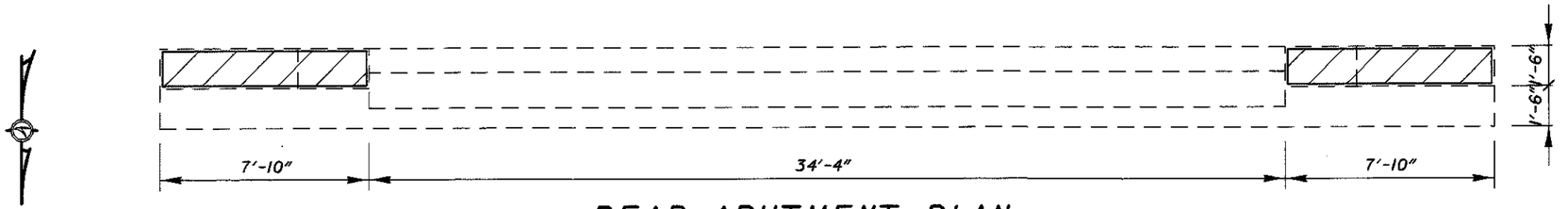
FORWARD ABUTMENT PLAN



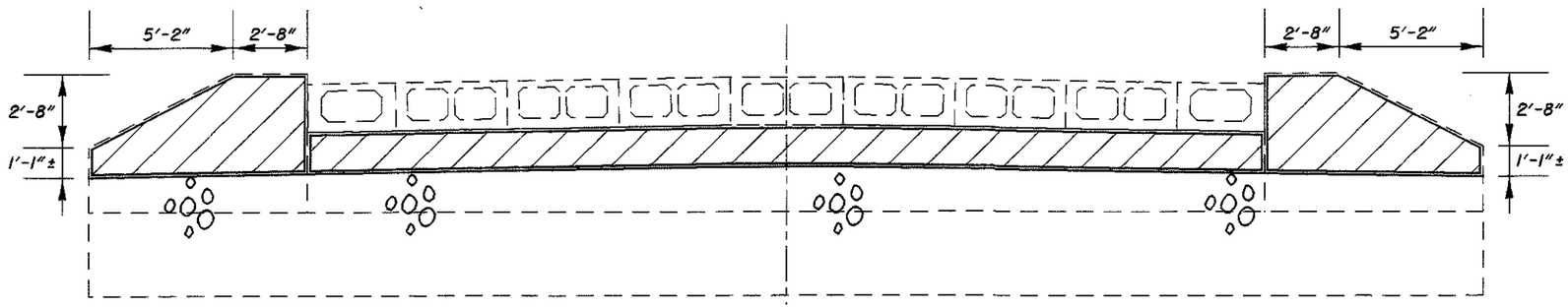
FORWARD ABUTMENT ELEVATION



END VIEW



REAR ABUTMENT PLAN



REAR ABUTMENT ELEVATION

ITEM	QUANTITY	UNIT	DESCRIPTION
864	26	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 45

NOTES:

1) SEAL FACIA BEAMS, ABUTMENTS, AND WINGWALLS.
2) SEE SHEET 77 FOR ADDITIONAL DETAILS.

DESIGN FILE: I:\projects\21923\Struct\A5II2618.dgn
WORKSTATION: jfinah DATE: 03/03/03

DESIGN AGENCY: DISTRICT THREE

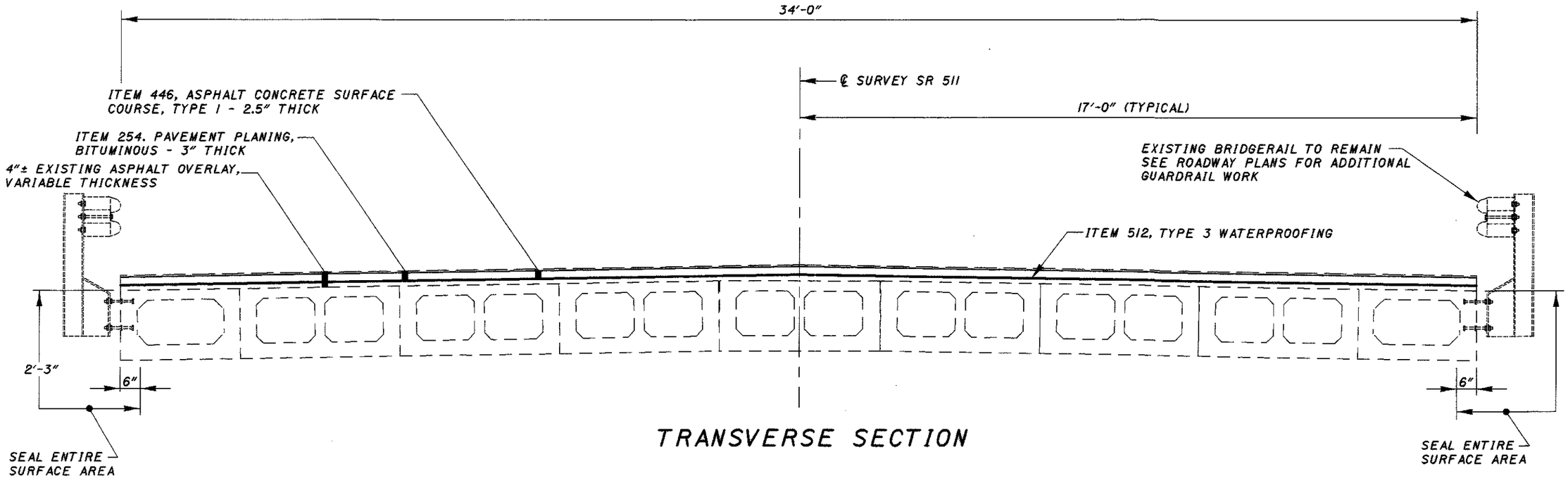
DESIGNED RPT | DRAWN JpF | REVIEWED DCM | DATE 2/03
CHECKED RDN | REVISED | STRUCTURE FILE NUMBER 0305715

ABUTMENT SEALING
ASD-5II-2618
OVER BOYD DITCH

ASD-302-10.90

2 / 6

76
83



TRANSVERSE SECTION

ITEM	QUANTITY	UNIT	DESCRIPTION
254	163	SQ.YD.	PAVEMENT PLANING, ASPHALT CONCRETE ★
446	12	CU.YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22 ★
512	163	SQ.YD.	TYPE 3 WATERPROOFING
SPECIAL	68	FT.	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM (4 INCHES THICK)
864	22	SQ.YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

★ QUANTITIES FOR BRIDGE DECK ONLY. FOR ROADWAY QUANTITIES, SEE PAVEMENT DATA SHEET.

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 45

NOTES:

1) SEAL FACIA BEAMS, ABUTMENTS, AND WINGWALLS.
2) FOR POLYMER MODIFIED ASPHALT EXPANSION JOINT DETAILS SEE SHEET 48.

DESIGN FILE: h:\projects\21923\Struct\A5112618.dgn
WORKSTATION: jfinch DATE: 03/03/03

DESIGN AGENCY: DISTRICT THREE

DESIGNED	DRAWN	REVIEWED	DATE
RPT	JPF	DCM	2/03
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RDN		0305715	

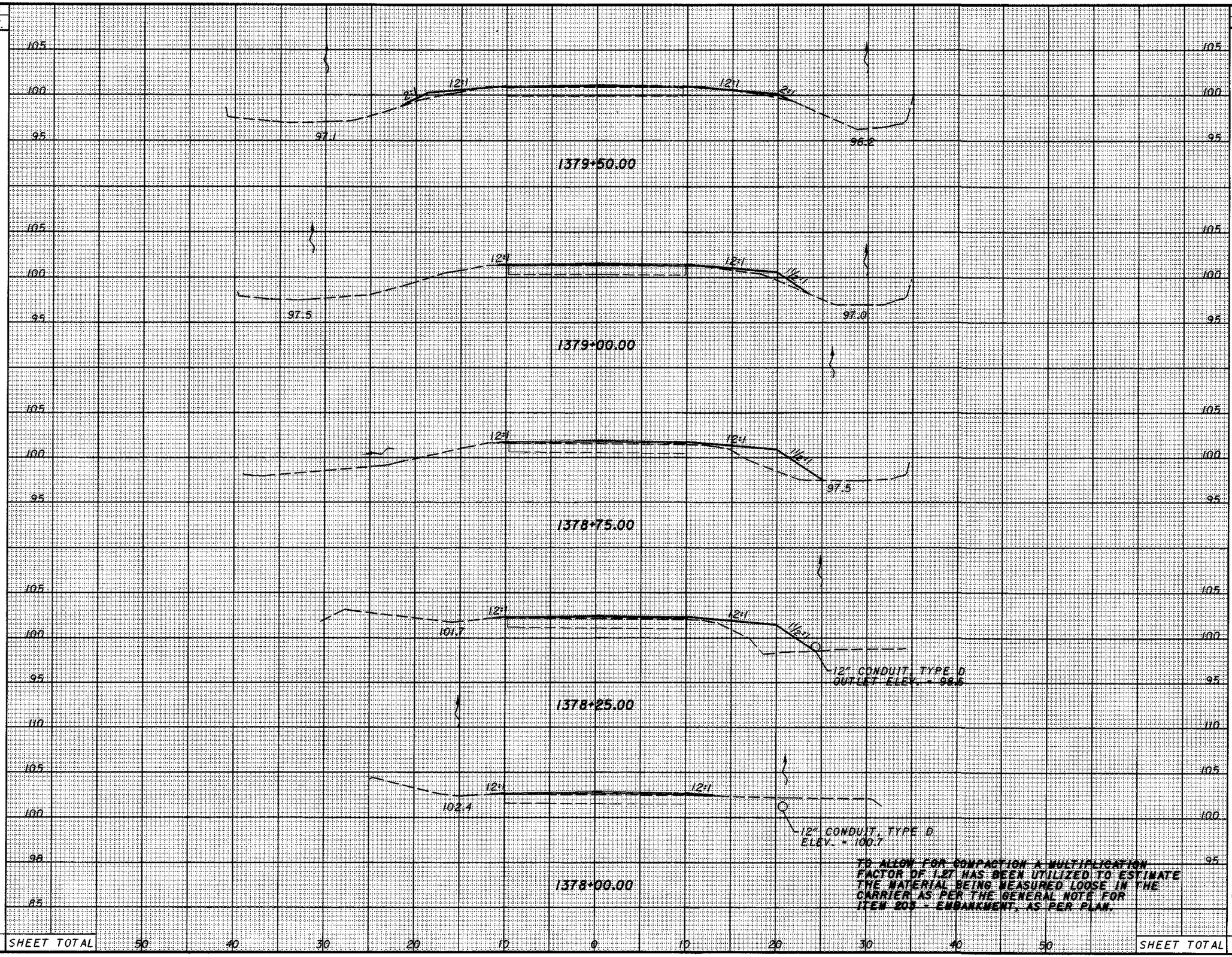
TRANSVERSE DECK SECTION
ASD-511-2618
OVER BOYD DITCH

ASD-302-10.90

3/6

77/83

SEEDING		END AREA		VOLUME		CALCULATED	CHECKED
END WIDTH	SD. YDS.	CUT	FILL	CUT	FILL		
		0.4	3.5	0	9		
		0.0	4.0	0	12		
		0.0	16.4	0	43		
		0.0	19.8	0	12		
		0.0	0.5	0	0		
SHEET TOTAL				0	76		



TO ALLOW FOR CONTRACTION A MULTIPLICATION FACTOR OF 1.27 HAS BEEN UTILIZED TO ESTIMATE THE MATERIAL BEING MEASURED LOOSE IN THE CARRIER AS PER THE GENERAL NOTE FOR ITEM 203 - EMBANKMENT, AS PER PLAN.

CROSS SECTIONS - S.L.M. 2618
STA. 1378+00.00 TO STA. 1379+50.00

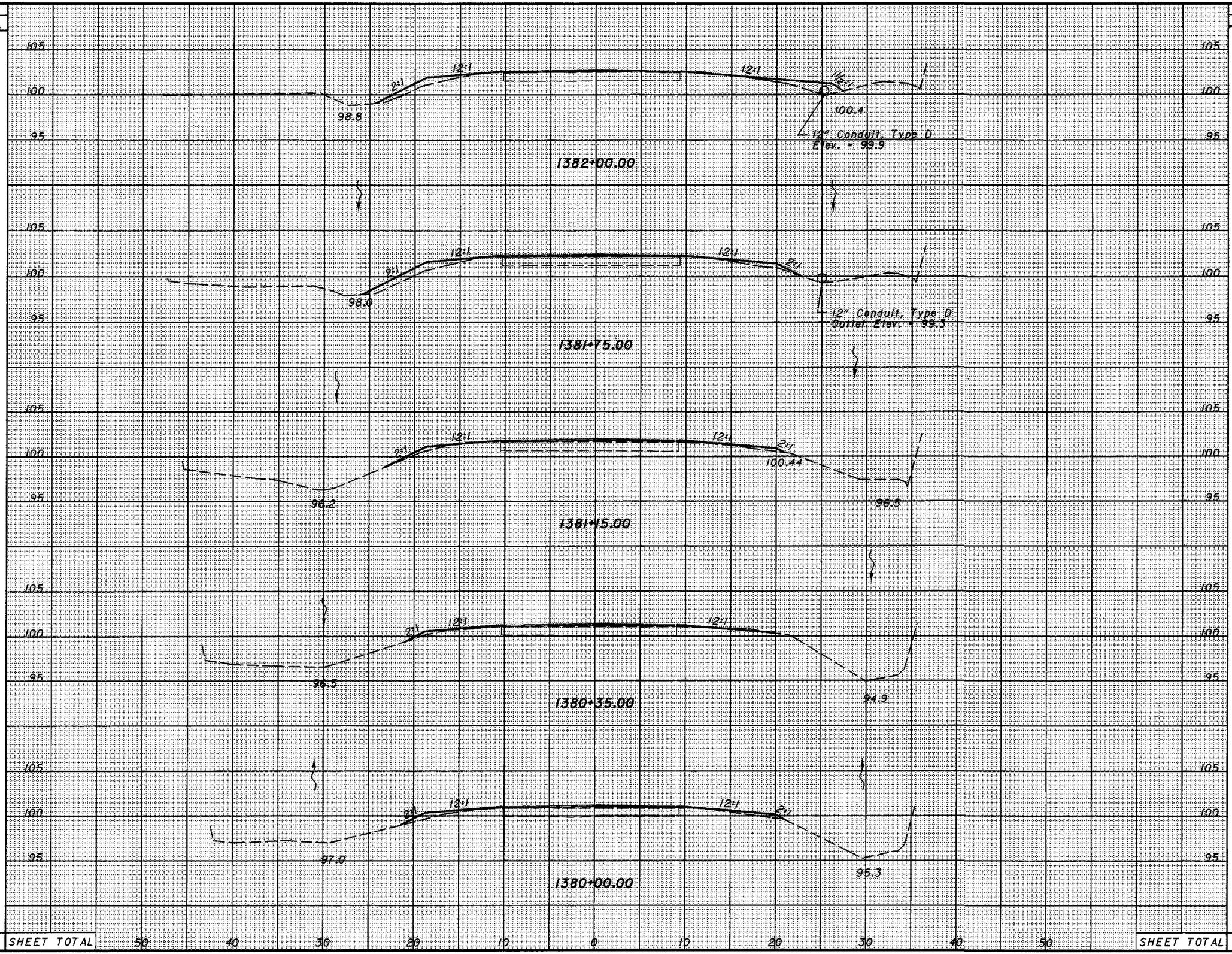
ASD-302-10.90

4 / 6

78 / 83

DESIGN FILE: b:\projects\2923\Struct\grxs2618.dgn
WORKSTATION: jfinch
DATE: 03-MAR-2003

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		0.5	11.0	0	12
		0.1	9.7	0	18
		0.2	3.3	1	9
		0.7	1.7	1	5
		0.1	4.6	0	10
SHEET TOTAL				2	54



CALCULATED

CHECKED

CROSS SECTIONS - S.L.M. 2618
STA. 1380+00.00 TO STA. 1382+00.00

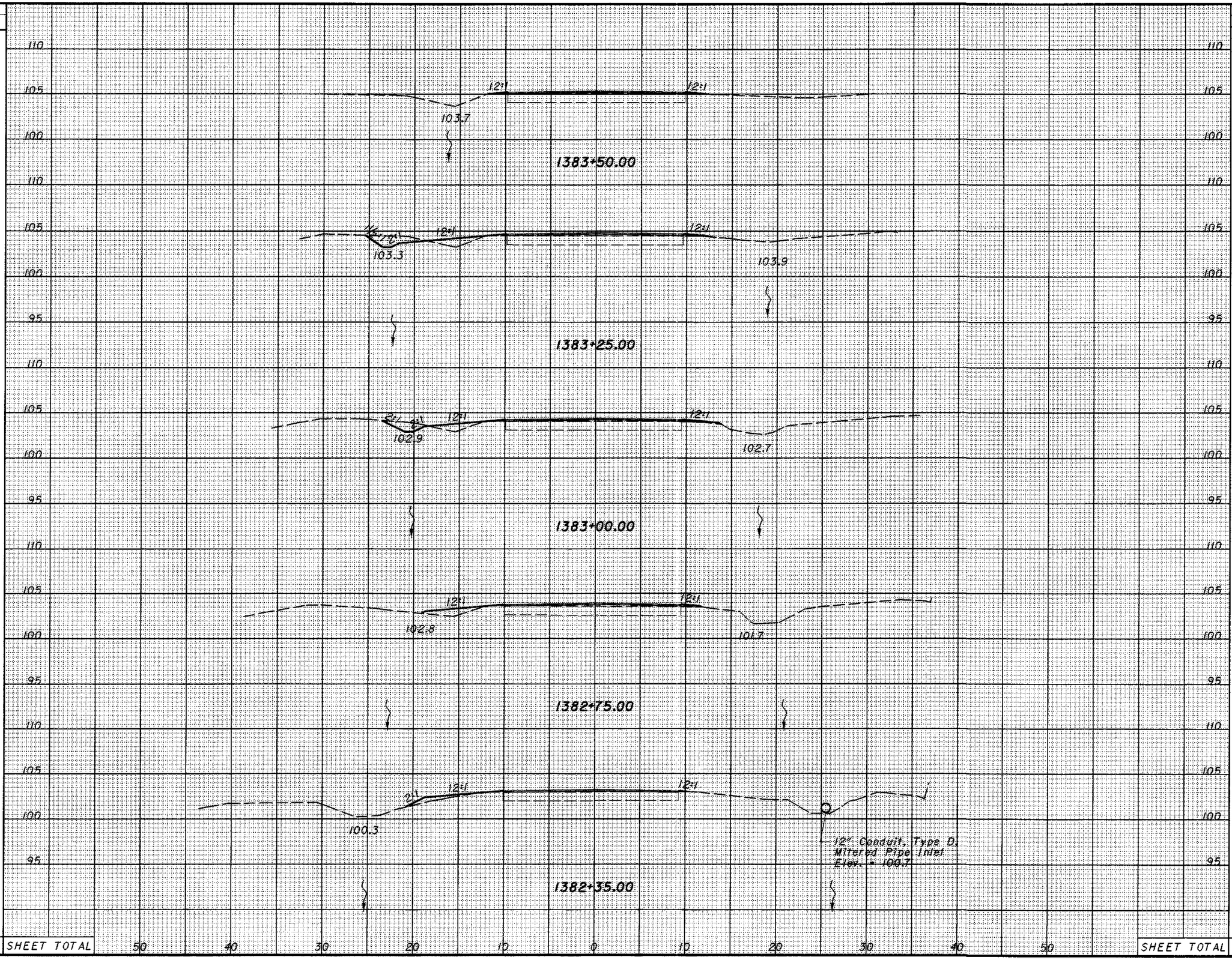
ASD-302-10.90

5 \ 6

79 / 83

DESIGN FILE: i:\projects\21923\struct\grxs2618.dgn
WORKSTATION: *jfinch* DATE: *03-MAR-2003*

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.0	0.3		
		2	2
4.6	3.3		
		4	4
3.2	3.0		
		1	4
0.0	3.4		
		0	5
0.1	2.0		
		0	11
SHEET TOTAL		7	26

CALCULATED

CHECKED

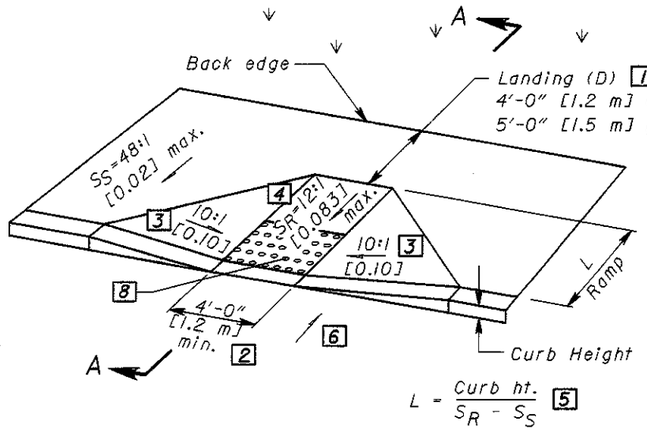
CROSS SECTIONS - S.L.M. 2618
STA. 1382+35.00 TO 1383+50.00

ASD-302-10.90

6 / 6

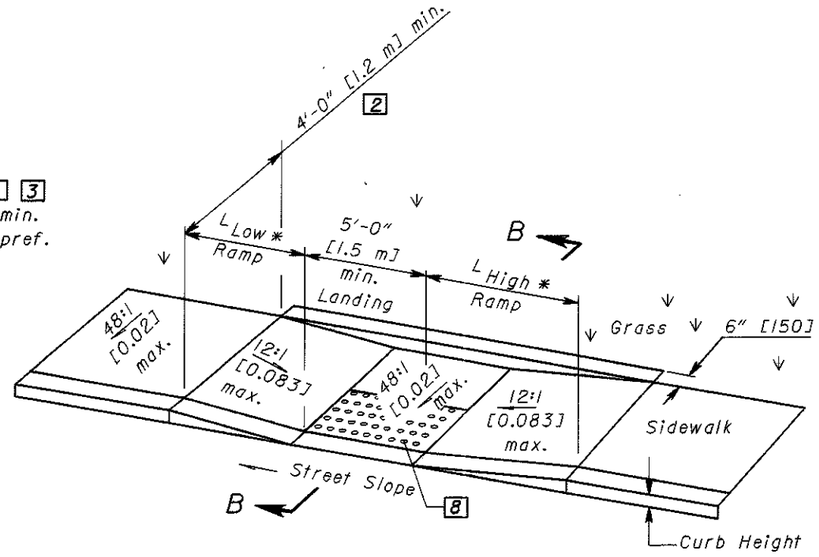
80 / 83

DESIGN FILE: I:\projects\2123\Struct\grxs2618.dgn
WORKSTATION: jfinch DATE: 03-MAR-2003



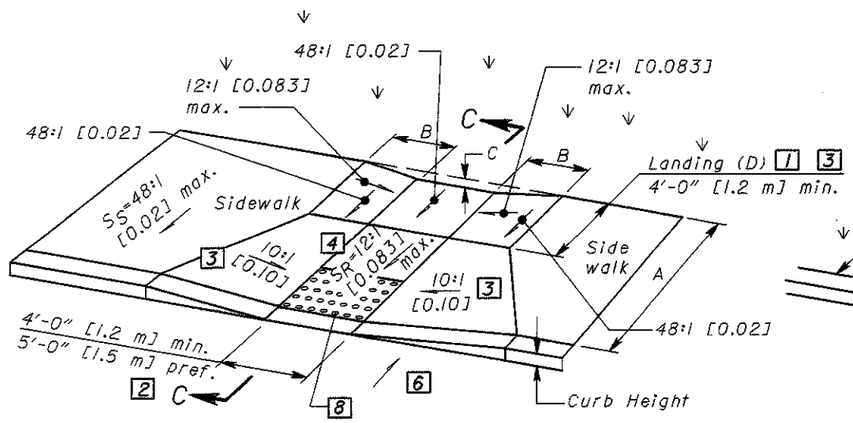
See Sht. 3/3 for SECTION A-A

PERPENDICULAR CURB RAMP DETAIL



See Sht. 3/3 for SECTION B-B

PARALLEL CURB RAMP DETAIL (DOUBLE)

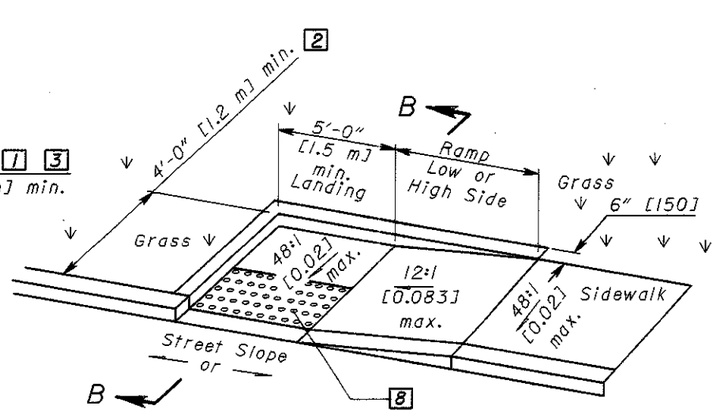


See Sht. 3/3 for SECTION C-C

COMBINED CURB RAMP DETAIL

$B = C / 0.083$

$C = [\text{Curb ht.} + A(S_S)] - [(A-D)S_R + D(0.02)]$



See Sht. 3/3 for SECTION B-B

PARALLEL CURB RAMP DETAIL (SINGLE)

Street Slope	Ramp Length @ 1"/ft [0.083]	
	$L_{LOW\ SIDE}$ *	$L_{HIGH\ SIDE}$ *
0.01	5'-5" [1.6 m]	6'-10" [2.1 m]
0.02	4'-10" [1.5 m]	7'-11" [2.4 m]
0.03	4'-5" [1.3 m]	9'-5" [2.9 m]
0.04	4'-1" [1.2 m]	11'-8" [3.6 m]
0.05	3'-9" [1.1 m]	15'-2" [4.6 m]

* Measured along the back of a 6" [150] high curb.

$$L_{HIGH} = \frac{\text{Curb ht.}}{0.083 - \text{Street Slope}}$$ 7

$$L_{LOW} = \frac{\text{Curb ht.}}{0.083 + \text{Street Slope}}$$ 7

LEGEND

1 May be reduced to 3'-0" [915] in existing sidewalks if the landing is unconstrained along the back edge.

2 May be reduced to 3'-4" [1.02 m] in existing sidewalks to better fit the walk configuration or where site conditions are restricted by narrow walks, pole foundations, drainage inlets, etc. The width may be tapered.

3 Where landing width (D) has been reduced to 3'-0" [915] the flared sides shall have a maximum slope of 12:1 [0.083].

Flared sides are not required where the edges of a curb ramp are protected by landscaping or other barriers to travel by wheel chair users or pedestrians across the edge of the curb ramp. However, if the flared sides are used in these areas, they may be of any slope.

4 The slope of the ramp toward the curb is preferred to be 12:1 [0.083] or flatter related to the horizontal, but the maximum slope shall be 12:1 [0.083] relative to the existing or proposed walk slope.

In existing sidewalks, where the maximum ramp slope (S_R) is not feasible, it may be reduced as follows:

A) 10:1 [0.10] for a max. rise of 6" [150],
B) 8:1 [0.125] for a max. rise of 3" [75],
C) 6:1 [0.167] over a max. run of 2'-0" [610] for historic areas where a flatter slope is not feasible.

5 The minimum length of a perpendicular ramp is 6' [2.0 m] from the back of a 6" [150] curb and may be increased where feasible to obtain a flatter ramp slope or to better blend with the walk configuration.

6 Gutter counter slopes at the foot of perpendicular curb ramps should not exceed 20:1 [0.05] over a distance of 2'-0" [610] from the curb.

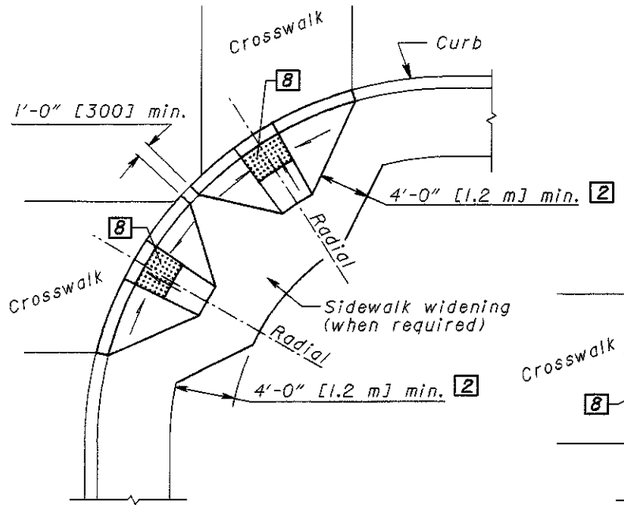
7 Dimensions derived by equation are nominal. Construct ramps to meet required slopes and existing conditions.

8 Detectable Warnings (truncated domes) are to be installed in the location shown. Dimensions of the domes are 24" [610] from the back of the curb by the width of the ramp. See NOTES on sheet 3.

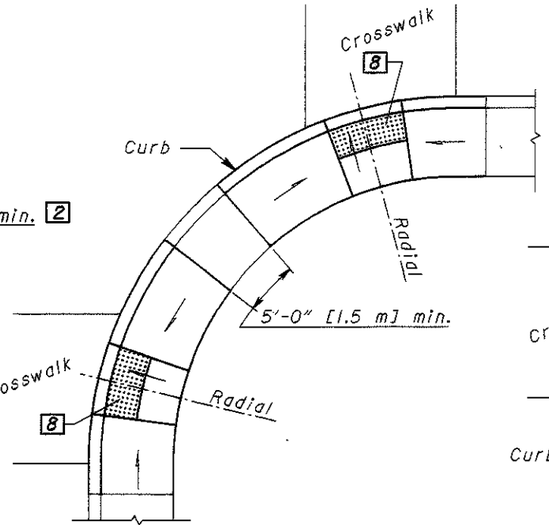
7-12-02

CURB RAMPS WITH TRUNCATED DOMES

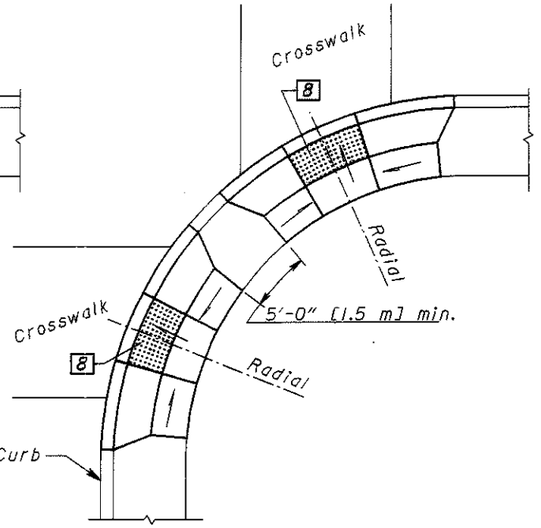
ASD-302-10.90



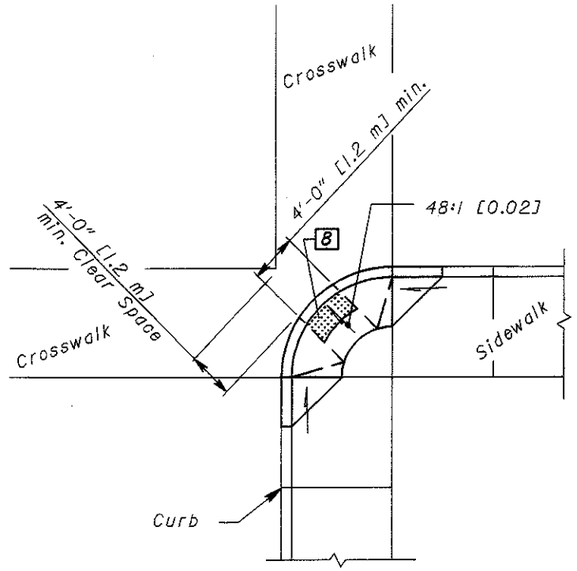
DESIGN A
PERPENDICULAR RAMP



DESIGN B
PARALLEL RAMP



DESIGN C
COMBINATION RAMP



DESIGN D
DIAGONAL RAMP

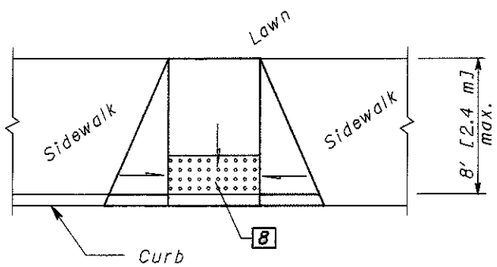
Use in existing walks only and when site constraints prohibit other designs. The diagonal ramp may be perpendcular, parallel or combination.

Avoid using where curb radii are less than 20'-0" [6.0 m].

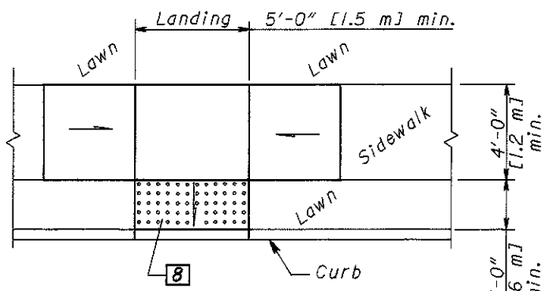
CORNER CURB RAMP DESIGNS

(See Curb Ramp Details on Sht. 1/3 for additional requirements.)

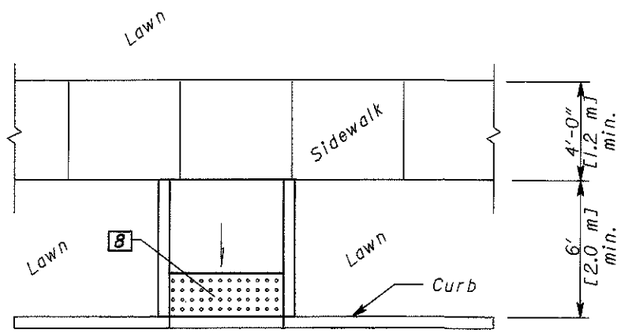
For LEGEND, See sheet 1.



DESIGN E
PERPENDICULAR RAMP



DESIGN F
PARALLEL RAMP



DESIGN G
PERPENDICULAR RAMPS
w/o FLARES

MID BLOCK CURB RAMP DESIGNS

(See Curb Ramp Details on Sht. 1/3 for additional requirements.)

7-12-02

CURB RAMPS WITH TRUNCATED DOMES

ASD-302-10.90

NOTES

SURFACE TEXTURE: Texture of concrete surfaces shall be obtained by coarse brooming transverse to the ramp slopes and shall be rougher than adjacent walk.

TRUNCATED DOMES: Install detectable warnings (truncated domes) for a distance of 24" [610] from the back of the curb for the entire width of the ramp opening as shown on details on Sheet 1.

Pavers will meet ASTM C 902 Class SX, Type I, or C 936, or C 1272 Type R.

Acceptable manufacturers and products are:

1) Whitacre-Greer Fireproofing Company, 1400 S. Mahoning Ave, Alliance, OH, 44601, (800) WG PAVER ADA Paver, 4"x8"x2-1/4", Clear Red (Rustic) #30.

2) Hanover Architectural Products, 240 Bender Rd., Hanover, PA. 17331, (717) 637-0500 Detectable Warning Paver, 12"x12"x2", or 24"x24"x2", Red or Quarry Red.

3) Endicott Clay Products, PO Box 17, Fairbury, NE, 68352, (402) 729-5804 Handicap Detectable Warning Paver, 4"x8"x2-1/4", Red Blend.

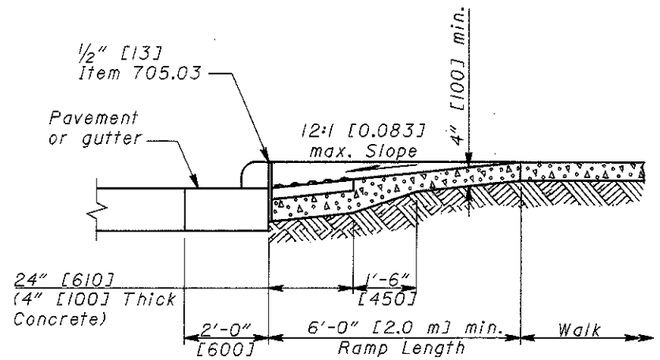
Pavers will laid on top of a 4" [100] unreinforced concrete base. Setting bed and joints to be mortared in accordance with manufacturer's instruction, or with a maximum 1/2" [13] thick bed of latex modified cement mortar. Mortar joints to a width not greater than 5/32" [4] and not less than 1/16" [1.5]. Pavers shall not be directly touching each other unless they have spacing bars.

Mortared joints are to be flush with top surface and struck so as to give a smooth surface. Pavers shall be laid such that joints are level with adjoining joints so as to provide a smooth transition from brick to brick and brick to concrete surface.

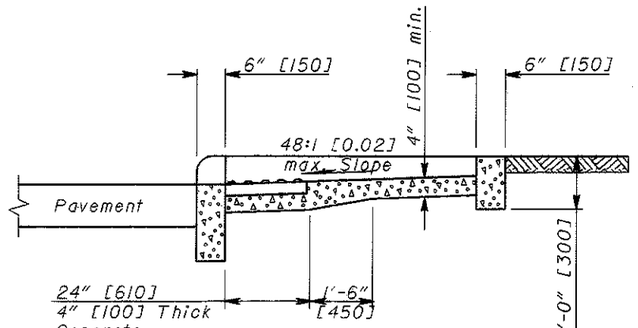
The surface of any two adjacent units should not differ by more than 1/8" [3] in height. Bricks shall be placed in a running bond pattern. Face of all brick shall be clean of cement and protected so as to avoid chipping during constructionn.

EXPANSION JOINTS: shall be provided in the curb ramp as extensions of walk joints and consistent with Item 608.03 requirements for a new concrete walk. A 1/2" [13] Item 705.03 expansion joint filler shall be provided around the edge of ramps built in existing concrete walk. Lines shown on this drawing indicate the ramp edge and slope changes and are not necessarily joint lines.

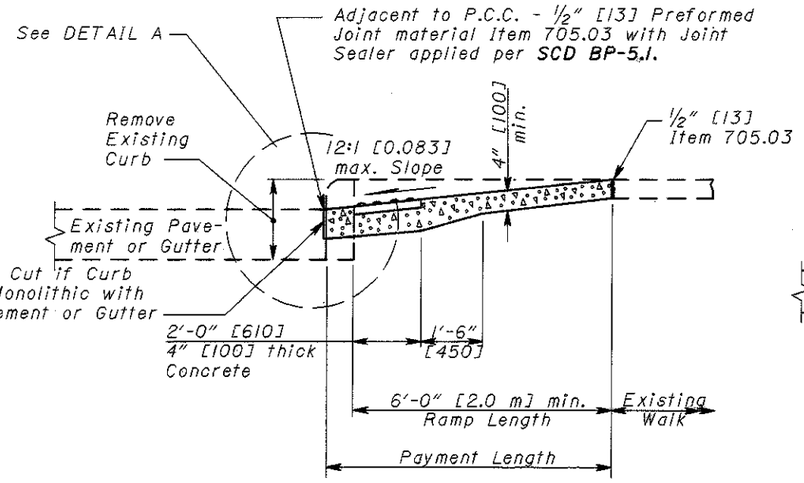
PAYMENT: Walk and curb, Items 608 and 609, shall be measured through the curb ramp area paid for under their respective Items. **Item 608 - Curb Ramp, As Per Plan, Each** constructed in new curb and walk shall include the cost of any additional materials and installation (including truncated domes), grading, forming and finishing. **Item 608 - Curb Ramp, As Per Plan, Square Foot [Meter],** constructed in existing curb and walk shall include the cost of furnishing and installing all materials (including truncated domes), grading, forming, and finishing of the curb and walk of the curb ramp. Removal of existing curb and walk shall be paid for under Item 202.



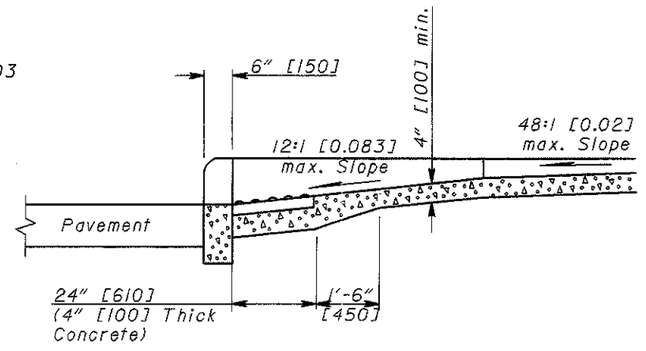
SECTION A-A
NORMAL DETAIL
See Sheet 1 of 3.
(Gutter shown)



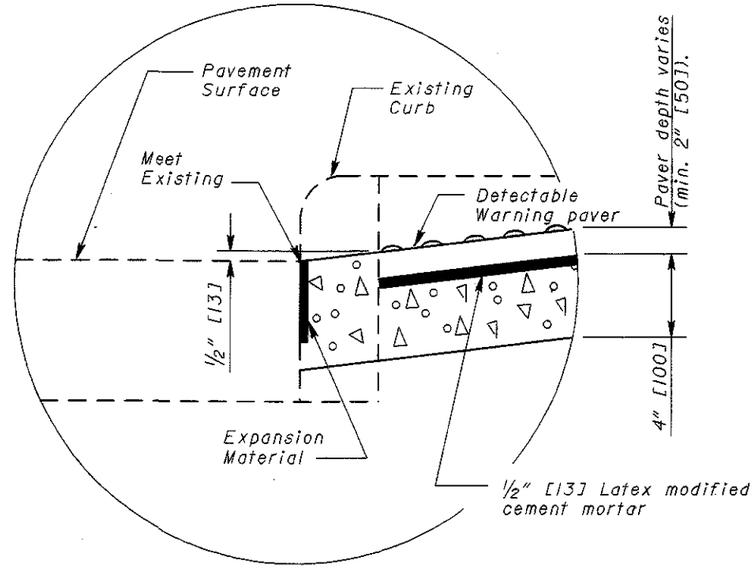
SECTION B-B
See Sheet 1 of 3.



SECTION A-A
EXISTING WALK DETAIL
See Sheet 1 of 3.



SECTION C-C
See Sheet 1 of 3.



DETAIL A

7-12-02

CURB RAMPS WITH TRUNCATED DOMES

ASD-302-10.90