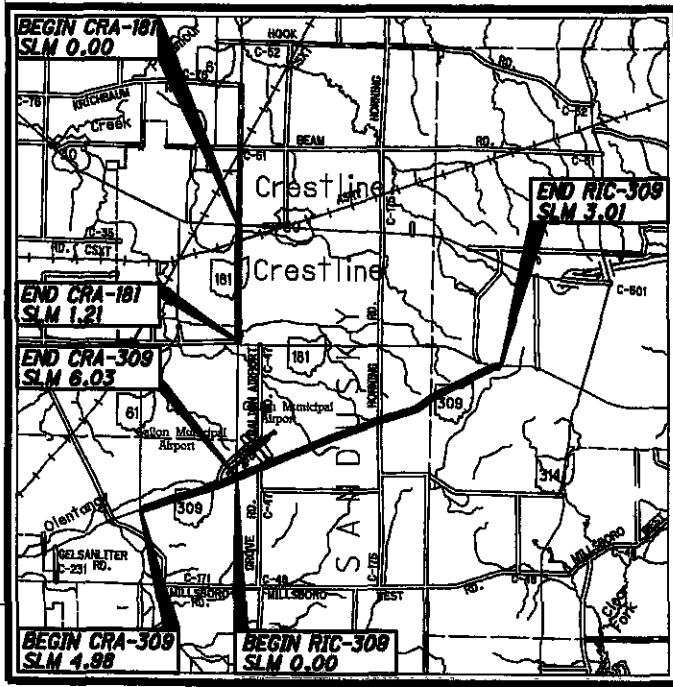


STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

CRA - 309 - 4.98
RIC - 309 - 0.00
CRA - 181 - 0.00

CITY OF GALION
CITY OF CRESTLINE
SANDUSKY TOWNSHIP
SPRINGFIELD TOWNSHIP
JACKSON TOWNSHIP



LOCATION MAP

LATITUDE: 40°44'58" LONGITUDE: 82°43'36"

SCALE IN MILES



PORTION TO BE IMPROVED	
INTERSTATE & DIVIDED HIGHWAY	
UNDIVIDED STATE & FEDERAL ROUTES	
OTHER ROADS	

DESIGN DESIGNATION

CURRENT ADT (2007), CRA-309-4.98/6.03	7,780
CURRENT ADT (2007), RIC-309-0.00/2.97	7,380
CURRENT ADT (2007), RIC-309-2.97/3.01	9,470
CURRENT ADT (2007), CRA-181-0.00/0.16	2,350
CURRENT ADT (2007), CRA-181-0.16/1.21	1,220
DESIGN YEAR ADT (2019), CRA-309-4.98/6.03	8,670
DESIGN YEAR ADT (2019), RIC-309-0.00/2.97	8,040
DESIGN YEAR ADT (2019), RIC-309-2.97/3.01	11,140
DESIGN YEAR ADT (2019), CRA-181-0.00/0.16	2,630
DESIGN YEAR ADT (2019), CRA-181-0.16/1.21	1,500
DHV (2019), CRA-309-4.98/6.03	880
DHV (2019), RIC-309-0.00/2.97	770
DHV (2019), RIC-309-2.97/3.01	1,160
DHV (2019), CRA-181-0.00/0.16	290
DHV (2019), CRA-181-0.16/1.21	170
DIRECTIONAL DISTRIBUTION, CRA-309-4.98/6.03	.60
DIRECTIONAL DISTRIBUTION, RIC-309-0.00/2.97	.55
DIRECTIONAL DISTRIBUTION, RIC-309-2.97/3.01	.56
DIRECTIONAL DISTRIBUTION, CRA-181-0.00/1.21	.60
TRUCKS (24 HOUR B&C), CRA-309-4.98/6.03	.06
TRUCKS (24 HOUR B&C), RIC-309-0.00/3.01	.07
TRUCKS (24 HOUR B&C), CRA-181-0.00/0.16	.02
TRUCKS (24 HOUR B&C), CRA-181-0.16/1.21	.01
DESIGN/LEGAL SPEED, CRA-309-4.98/5.05	50 MPH
DESIGN/LEGAL SPEED, CRA-309-5.05/6.03	55 MPH
DESIGN/LEGAL SPEED, RIC-309-0.00/2.97	55 MPH
DESIGN/LEGAL SPEED, RIC-309-2.97/3.01	50 MPH
DESIGN/LEGAL SPEED, CRA-181-0.00/0.16	35 MPH
DESIGN/LEGAL SPEED, CRA-181-0.16/1.21	50 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
CRA-309-4.98 TO 6.03, URBAN PRINCIPAL ARTERIAL	
RIC-309-0.00 TO 0.27, URBAN PRINCIPAL ARTERIAL	
RIC-309-0.27 TO 3.01, RURAL MINOR ARTERIAL	
CRA-181-0.00 TO 1.01, URBAN COLLECTOR	
CRA-181-1.01 TO 1.21, RURAL MAJOR COLLECTOR	
NHS PROJECT	NO

INDEX OF SHEETS:

TITLE SHEET	1	GUARDRAIL DETAILS	14-17
STRAIGHT LINE DIAGRAM	2	CURB RAMPS	18-21
GENERAL NOTES	3-5	PAVEMENT MARKING/RPM DATA	22-23
DROP-OFFS IN WORK ZONES	6	STRUCTURE GENERAL NOTES	24
MAILBOX FACILITIES	7	STRUCTURE MOT	25
GENERAL SUMMARY	8-9	NOT USED	26
PAVEMENT/SHOULDER DATA	10-10A	STRUCTURE SUMMARY	27
TYPICAL SECTIONS	11	BRIDGE TREATMENT	28
GUARDRAIL GENERAL NOTES	12	CRA-181-0010 (SFN 1703366)	29-30
ROADWAY SUB-SUMMARY	13		

PROJECT DESCRIPTION

THIS PROJECT WILL INCLUDE PAVEMENT PLANING, PAVEMENT REPAIR, CHIP SEAL, RESURFACING WITH ASPHALT CONCRETE, GUARDRAIL, CURB RAMPS, PAVEMENT MARKINGS, AND MINOR BRIDGE REHABILITATION/MAINTENANCE WORK. THE PROJECT LENGTH IS 5.27 MILES.

PROJECT EARTH DISTURBED AREA:	N/A ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	N/A ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A ACRES

2005 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.

CONVERSION OF METRIC STANDARD DRAWINGS

THE METRIC STANDARD DRAWINGS REFERENCED IN THIS PLAN SHALL BE CONVERTED TO ENGLISH UNITS USING THE SI (METRIC) TO ENGLISH CONVERSIONS FACTORS PROVIDED IN SECTION 109.02 OF THE 2005 CMS. CONVERSIONS SHALL BE APPROXIMATELY PRECISE AND SHALL REFLECT STANDARD INDUSTRY ENGLISH VALUES WHERE SUITABLE.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DE-TOURS WILL BE PROVIDED AS INDICATED ON SHEET 25.

APPROVED DATE 11-21-06 DISTRICT DEPUTY DIRECTOR

APPROVED DATE 1-5-07 DIRECTOR, DEPARTMENT OF TRANSPORTATION

UNDERGROUND UTILITIES
CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

CALL
1-800-362-2764
(TOLL FREE)

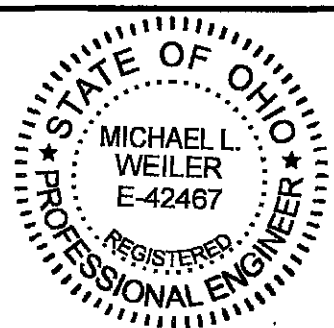
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE
SERVICE CALL: 1-800-929-0988

PLAN PREPARED BY:

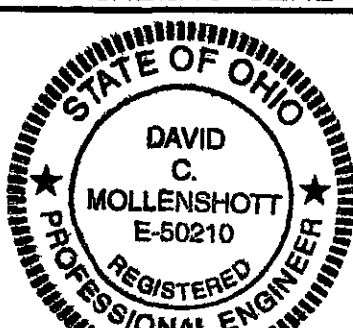


ROADWAY/PAVEMENT
ENGINEERS SEAL:



SIGNED: DATE: 11/21/06

STRUCTURE/CULVERT
ENGINEERS SEAL:



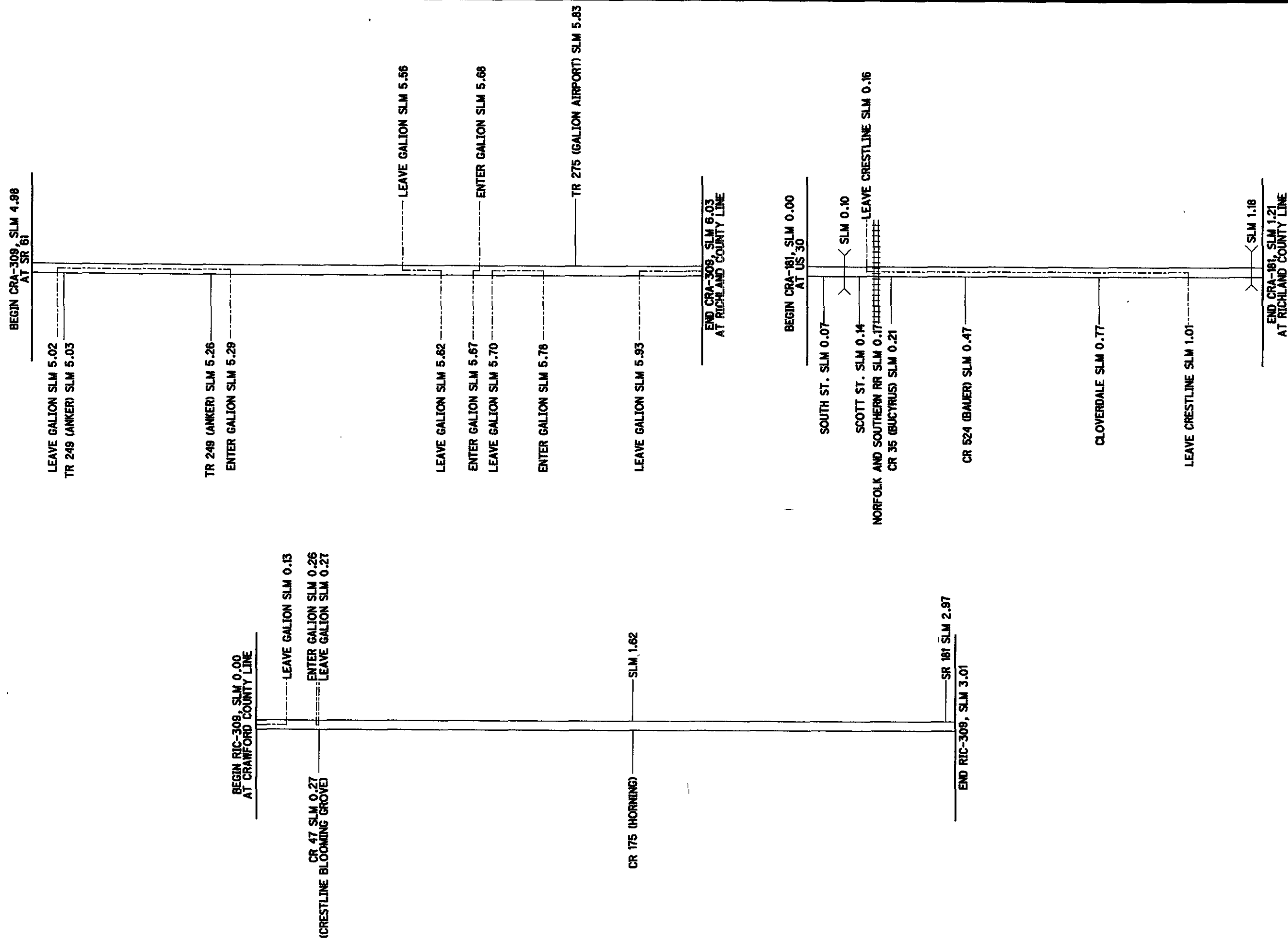
SIGNED: DATE: 11/21/06

STANDARD CONSTRUCTION DRAWINGS			SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	7/18/04	MT-97.12	8/05/08	800 01/18/07
BP-4.1	7/18/04	MT-99.20m	1/30/05	832 04/25/06
BP-5.1	7/28/00	MT-101.00	9/20/06	848 04/15/05
		MT-105.10	10/18/02	
DM-4.3	7/18/02	MT-105.11	10/18/02	
DM-4.4	7/18/02			
		TC-41.20	1/18/01	
GR-1.1	7/18/04	TC-42.20	7/18/04	
GR-2.1	1/18/04	TC-65.10	1/21/06	
GR-3.4	1/20/06	TC-66.11	1/21/06	
GR-4.1	4/18/03	TC-71.10	1/21/06	
GR-4.2	4/18/05	TC-73.10	1/18/01	
		TC-82.10	4/18/02	
RM-1.1	4/21/06			
		MT-97.10	8/05/08	

SPECIAL PROVISIONS

FEDERAL PROJECT NO. E032(095)
PID NO. 25679
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT
NORFOLK SOUTHERN
CRA-309-4.98
RIC-309-0.00
CRA-181-0.00
1/30

DESIGN FILE: I:\projects\25679\676957\256796TG001.dgn
WORKSTATION: sdeer
DATE: 10/31/2006
CRA - SR 309/181 - 4.98/0.00/0.00
070140 PID - 25679
Dist 3 3/16/2007



CRA-309-4.98
RIC-309-0.00
CRA-181-0.00

STRAIGHT LINE DIAGRAM

DATE PLOTTED
TDJ
MAJS

GENERAL

UTILITIES

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

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.

ELECTRIC
AMERICAN MUNICIPAL ELECTRIC
2600 AIRPORT DRIVE
COLUMBUS, OHIO 43219
614-337-6222

ELECTRIC
CITY OF GALION
700 PIMROSE ST.
GALION, OHIO 44833
419-468-5520

ELECTRIC
AMERICAN ELECTRIC POWER
301 CLEVELAND AVE. SW
CANTON, OHIO 44701
330-438-7718

ELECTRIC
OHIO EDISON COMPANY
1717 ASHLAND RD.
MANSFIELD, OHIO 44905
419-521-6178

GAS
COLUMBIA GAS OF OHIO
7080 FRY RD.
MIDDLEBURG HTS., OHIO 44130
440-891-2428

GAS
COLUMBIA GAS TRANSMISSION
2385 COTTER RD.
MANSFIELD, OHIO 44903
419-521-2846

ELECTRIC
DEL-CO WATER INC.
4940 SR 229
MARENGO, OHIO 43334
419-253-8003

GAS
GATHERCO INC.
5775 DRESSLER RD. N.W.
N. CANTON, OHIO 44720
330-498-9553

TELEPHONE
ATELL
776 HOPEWELL DR.
HEATH, OHIO 43056
740-349-8912

COMMUNICATIONS
SPRINT FIBER
11815 HIGHWAY DR., SUITE 400
CINCINNATI, OHIO 45241
513-459-5761

TELEPHONE
SPRINT
P.O. BOX 3555
MANSFIELD, OHIO 44907
419-755-7135

TELEPHONE
VERIZON
1534 SR 511 SOUTH
ASHLAND, OHIO 44805
419-282-6551

WATER
CITY OF GALION
6374 HORSFORD RD.
GALION, OHIO 44833
419-468-5010

CABLE T.V.
TIME WARNER CABLE
1575 LEXINGTON AVE.
MANSFIELD, OHIO 44901
419-756-6091

RICHLAND COUNTY ENGINEER
77 N. MULBERRY ST.
MANSFIELD, OHIO 44903
419-774-5591

CITY OF MANSFIELD
30 N. DIAMOND ST.
MANSFIELD, OHIO 44902
419-755-9702

VILLAGE OF ONTARIO
555 STUMBO RD, BOX 166
ONTARIO, OHIO 44862
419-529-3723

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

EXTREME CAUTION SHOULD BE EXERCISED IN AREAS WITH UTILITIES. SECTIONS 105.07 AND 107.16 OF THE DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS 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.

WORK LIMITS

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

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.

GENERAL

RAILROAD CROSSING INFORMATION

OWNER OF RAILROAD: NORFOLK SOUTHERN
TYPE OF LINE: PUBLIC
CROSSING: AT-GRADE
NO. OF TRACKS: 2

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

PASSENGER TRAINS/DAY: 0 @ MILES PER HOUR
FREIGHT TRAINS/DAY: 20 @ 30 MILES PER HOUR
HAZARDOUS MATERIAL:

THE IDENTIFICATION OF THE CROSSING KNOWN AS:
RR MILE POST: 0188.07
AARDOT NO.: 502689W

LOCAL CONTACT PERSON FOR FLAGGING:
REFER TO THE SPECIAL CLAUSES IN THE PROPOSAL.

THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL INSUFFICIENT/MISSING DATA.

ROADWAY

ITEM 209 - LINEAR GRADING

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

LOCAL AIRPORT

THE FEDERAL AVIATION ADMINISTRATION HAS DETERMINED THERE IS NO HAZARD TO AIR NAVIGATION IN RELATION TO THE GALION MUNICIPAL AIRPORT NEXT TO SR 309 IN RICHLAND COUNTY, BASED ON THE HEIGHT OF PAVING EQUIPMENT/DUMP TRUCKS. THE AERONAUTICAL STUDY NO'S ARE 2006-AGL-3430-OE AND 2006-AGL-3431-OE.

BASED ON THIS EVALUATION, MARKING AND LIGHTING ARE NOT NECESSARY FOR AVIATION SAFETY. THIS DETERMINATION DOES NOT INCLUDE TEMPORARY CONSTRUCTION EQUIPMENT SUCH AS CRANES. EQUIPMENT WHICH HAS A HEIGHT GREATER THAN THE PAVING EQUIPMENT/DUMP TRUCKS REQUIRE A SEPARATE NOTICE TO THE FAA.

THE ADDRESS OF THE GALION MUNICIPAL AIRPORT IS:
8240 SR 309
GALION, OHIO 44833.

LES SPRING IS THE MANAGER - TELEPHONE: (419) 468-8487

DRAINAGE

ITEM 604 - CASTINGS ADJUSTED TO GRADE

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

UNDER ITEM 604.03, ADJUSTMENT TO GRADE, PARAGRAPH (1), THE CASTING TO BE ADJUSTED MAY OR MAY NOT HAVE AN EXISTING FRAME. THE WORK SHALL CONSIST OF ADJUSTING THE EXISTING CASTING OR GRATE TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR IS REMINDED TO FIELD CHECK ALL ADJUSTMENT TO GRADE ITEMS PRIOR TO BIDDING, AS NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR LABOR AND MATERIALS REQUIRED TO SATISFACTORILY ADJUST CASTINGS WITHOUT FRAMES.

PAVEMENT

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. CORING HAS BEEN PERFORMED TO HELP DETERMINE THE COMPONENTS THAT MAY BE ENCOUNTERED DURING THIS ITEM OF WORK.

THE ENGINEER SHALL DESIGNATE THE LOCATIONS AND LIMITS OF THE AREAS TO BE REPAIRED. PAVEMENT REPAIR SHALL BE PERFORMED AFTER PAVEMENT PLANING AND BEFORE PLACEMENT OF THE INTERMEDIATE AND SURFACE COURSE. THE REPAIR AREAS SHALL BE SAW CUT AND EXCAVATED TO PROVIDE STRAIGHT AND VERTICAL SURFACES AROUND THE PERIMETER OF THE REPAIR AREA. PAVEMENT PLANING MAY BE USED AS AN ALTERNATIVE TO SAW CUTTING AND EXCAVATING WHILE PROVIDING STRAIGHT AND VERTICAL SURFACES AROUND THE PERIMETER OF THE REPAIR AREA AND PROVIDING A CONSISTANT DEPTH THROUGHOUT THE REPAIR AREA TO ENSURE PROPER COMPACTION. THE PAVEMENT SHALL BE REMOVED WITHIN THE DESIGNATED AREAS BY METHODS WHICH WILL NOT DAMAGE ADJACENT PAVEMENT. THE DEPTH OF REMOVAL SHALL BE SUFFICIENT TO REMOVE ALL DETERIORATED PAVEMENT WITH A MAXIMUM DEPTH OF 11.00", BASED ON THE PAVEMENT DESIGN AND AN AVERAGE DEPTH OF 5.50". THE MATERIALS REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH 105.16 AND 105.17.

THE CONTRACTOR SHALL BE CAPABLE OF PERFORMING PAVEMENT REPAIRS 2 FEET WIDE.

AFTER REMOVAL OF THE PAVEMENT, IF THE ENGINEER DETERMINES THE SUBBASE OR SUBGRADE HAS FAILED OR IS "PUMPING", THE ENGINEER SHALL DIRECT THE CONTRACTOR TO EXCAVATE THE UNSTABLE MATERIAL AND REPLACE IT WITH ITEM 304 AGGREGATE BASE. THE MAXIMUM DEPTH OF THE EXISTING SUBBASE OR SUBGRADE REMOVED SHALL BE DETERMINED BY THE ENGINEER. ITEM 304 AGGREGATE BASE SHALL HAVE A MAXIMUM 4" LIFT. THE GRADE SHALL BE SLOPED SUCH THAT ANY WATER WILL DRAIN TO THE EXISTING UNDERDRAIN OR DITCH. ALL COMPACTION SHALL BE ACHIEVED BY MECHANICAL METHODS TO THE SATISFACTION OF THE ENGINEER. THE MATERIALS REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH 105.16 AND 105.17.

AGGREGATE DRAINS OR UNDERDRAINS MAY BE NEEDED AS DIRECTED BY THE ENGINEER.

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. ITEM 301 CAN BE USED WHEN THE DEPTH OF THE REPAIR IS BETWEEN 3" AND 12" WITH A MAXIMUM PAVEMENT LIFT OF 6". ITEM 448 TYPE 2 CAN BE USED WHEN THE DEPTH OF THE REPAIR IS BETWEEN 0" AND 5" WITH A MAXIMUM PAVEMENT LIFT OF 3". ALL EXISTING PAVEMENT AREAS WHICH WILL BE IN CONTACT WITH THE PAVEMENT REPAIR SHALL BE COATED WITH PG GRADE LIQUID ASPHALT (SIDES AND BOTTOM) AT AN APPLICATION RATE OF 0.25 GAL. PER SQ. YD. ALL COMPACTION SHALL BE ACHIEVED BY MECHANICAL METHODS TO THE SATISFACTION OF THE ENGINEER.

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

CRA 309 (CITY - GALION)	45 CU. YD.
RIC 309 (CITY - GALION)	5 CU. YD.
(RURAL)	143 CU. YD.
CRA 181 (CITY - CRESTLINE)	85 CU. YD.
(RURAL)	9 CU. YD.

THE FOLLOWING ITEMS LISTED BELOW ARE ADDITIONAL ITEMS NOT INCLUDED IN ITEM 253. THESE ITEMS SHALL BE USED FOR THE REPAIR AND/OR REPLACEMENT OF DAMAGED SUBBASE/SUBGRADE EXPOSED DURING THE PROCESS OF ITEM 253 PAVEMENT REPAIR WORK INCLUDED IN THIS PLAN.

ITEM 203 EXCAVATION
ITEM 204 SUBGRADE COMPACTION
ITEM 304 AGGREGATE BASE
ITEM 605 6" UNCLASSIFIED PIPE UNDERDRAINS
ITEM 605 AGGREGATE DRAINS

ITEM 407 - TACK COAT ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE

AS PER 407.06 THE APPLICATION RATES SHALL BE 0.08 GAL. PER SQ. YD. PRIOR TO THE INTERMEDIATE COURSE AND SHALL BE 0.03 GAL PER SQ. YD. PRIOR TO THE SURFACE COURSE FOR ESTIMATING PURPOSES ONLY. THE RATE OF APPLICATION SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. A COMPLETE PAVEMENT SURFACE COVERAGE SHALL BE REQUIRED. AREAS OF TACK STRIPPED BY CONSTRUCTION EQUIPMENT OR TRAFFIC SHALL BE RE-COATED PRIOR TO PLACING ASPHALT CONCRETE. ALL COST AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER GALLON FOR ITEM 407, TACK COAT AND ITEM 407 TACK COAT FOR INTERMEDIATE COURSE.

PAVEMENT

ITEM 254 - PATCHING PLANED SURFACE

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

PROGRESSION OF WORK

- 1) WHEN REPLACING, ADJUSTING, OR RECONSTRUCTING, GUARDRAIL SHALL BE REMOVED PRIOR TO ANY EMBANKMENT WORK AT THE GUARDRAIL RUN.
- 2) GUARDRAIL WORK SHALL BE DONE AFTER RESURFACING AND BERM WORK SO AS TO ESTABLISH PROPER GRADES FROM WHICH TO CONSTRUCT THE RAIL.
- 3) CURB RAMPS SHALL BE PERFORMED AFTER ALL PAVEMENT WORK IS COMPLETE.

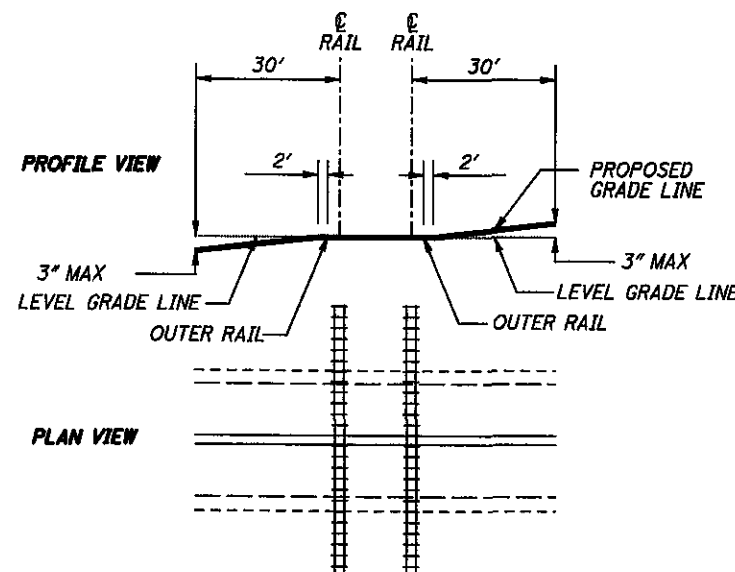
RAILROAD CROSSINGS

PRIOR TO ANY WORK AT RAILROAD CROSSINGS THE CONTRACTOR SHALL CONTACT THE AFFECTED RAILROAD AUTHORITY AS TO MAKE THEM AWARE OF THE PROGRESS AND SCHEDULE OF WORK. THE CONTRACTOR SHALL COOPERATE WITH THE RAILROAD SO AS TO ELIMINATE ANY SAFETY CONCERNS. FLAGGING MAY BE REQUIRED BY THE RAILROAD. REFER TO RAILROAD SPECIAL CLAUSES IN THE PROPOSAL FOR ADDITIONAL INSURANCE REQUIREMENTS WHILE WORKING ON OR AROUND RAILROAD PROPERTY.

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

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

GENERAL RAILROAD CROSSING DETAIL



ALL COSTS ASSOCIATED TO ACHIEVE THE FINAL PROFILE, REPRESENTED IN THE STANDARD DIAGRAM SHOWN ABOVE, SHALL BE INCLUDED IN THE COST OF ITEM 442 ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5 MM, TYPE A (448), AS PER PLAN.

PAVEMENT

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (448), AS PER PLAN

ALL LONGITUDINAL PAVEMENT JOINTS SHALL BE CLOSED BEFORE THE END OF EACH WORK DAY. BEFORE THE JOINT IS EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL ERECT W8-11-36 (UNEVEN LANES) SIGNS. THESE SIGNS SHALL ONLY REMAIN WHILE THE CONDITION EXISTS. PLACEMENT OF THESE SIGNS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

IN ADDITION TO SECTION 401.14 AND STANDARD DRAWING BP-3.1, TRANSVERSE, FEATHERED OR BUTT JOINTS SHALL BE SEALED WITH A 6 INCH WIDE BAND OF ASPHALT CEMENT ACROSS THE TOP SURFACE. THE LONGITUDINAL JOINT SHALL BE SEALED WITH ASPHALT CEMENT ON THE VERTICAL FACE AND 6 INCHES WIDE FROM THE VERTICAL FACE ALONG THE INTERMEDIATE COURSE SURFACE BEFORE PAVING. THE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

ALL OPEN TRANSVERSE JOINTS SHALL BE TAPERED TO MEET EXISTING PAVEMENT BEFORE INTRODUCING TRAFFIC. A "BUMP" SIGN (W8-1-36) 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 ITEM 614 MAINTAINING TRAFFIC.

THE CONTRACTOR SHALL ENSURE TO MATCH THE PROPOSED PAVEMENT TREATMENT TO EXISTING PAVED BERMS, DRIVES, INTERSECTIONS, ETC. ELEVATIONS WITH A FLUSH BUTT JOINT.

REQUIREMENTS OF 442 APPLY EXCEPT AS FOLLOWS:
MIX DESIGN: FOR Ndes USE 50 GYRATIONS, FOR Nmax USE 75 GYRATIONS. MINIMUM TOTAL PG BINDER CONTENT IS 6.0 PERCENT. USE A PG 64-22 BINDER. MAXIMUM RECLAIMED ASPHALT CONCRETE PAVEMENT IS 20 PERCENT. QUALITY CONTROL: DO NOT PERFORM Nmax IN QUALITY CONTROL TESTING. DO NOT TAKE EXTRA ASPHALT BINDER SAMPLES AS OUTLINED IN CMS 442.05.

ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5 MM, TYPE A (448), AS PER PLAN

THIS ITEM SHALL BE USED FOR CORRECTION OF CROWN, PROFILE AND ANY OTHER IRREGULARITIES.

BEFORE THE LONGITUDINAL JOINT IS EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL ERECT W8-11-36 (UNEVEN LANES) SIGNS. THESE SIGNS SHALL ONLY REMAIN WHILE THE CONDITION EXISTS. PLACEMENT OF THESE SIGNS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

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

REQUIREMENTS OF 442 APPLY EXCEPT AS FOLLOWS:
MIX DESIGN: FOR Ndes USE 50 GYRATIONS, FOR Nmax USE 75 GYRATIONS. MINIMUM TOTAL PG BINDER CONTENT IS 6.0 PERCENT. USE A PG 64-22 BINDER. MAXIMUM RECLAIMED ASPHALT CONCRETE PAVEMENT IS 20 PERCENT. QUALITY CONTROL: DO NOT PERFORM Nmax IN QUALITY CONTROL TESTING. DO NOT TAKE EXTRA ASPHALT BINDER SAMPLES AS OUTLINED IN CMS 442.05.

INTERSECTIONS AND DRIVES

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

EXISTING AGGREGATE DRIVES SHALL BE PAVED WITH AN APRON THE WIDTH OF THE 617 BERM OR 2 FT. MINIMUM. THE SLOPE OF THIS APRON SHALL BE THE SAME AS THE ADJACENT PAVEMENT SLOPE OR AS DIRECTED BY THE ENGINEER. ITEM 617 AGGREGATE SHALL BE PLACED ADJACENT TO THIS APRON TO PROVIDE A SMOOTH TRANSITION FROM THE APRON TO THE EXISTING DRIVE, (WIDTH OF THIS 617 APPLICATION MAY VARY) AS DIRECTED BY THE ENGINEER. AN ADDITIONAL QUANTITY HAS BEEN ESTIMATED TO COMPLETE THIS WORK AND IS SHOWN ON THE "SHOULDER DATA" SHEET.

ANY HAZARD OR UNSAFE CONDITION RESULTING FROM THE ABOVE WORK MUST BE CORRECTED IMMEDIATELY, AS DIRECTED BY THE ENGINEER. THE CONTRACTOR IS REMINDED OF SECTIONS 105.01, 107.07 & 614.02A OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

PAVEMENT

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (448) (DRIVEWAYS)

THIS ITEM OF WORK SHALL BE USED AT THE LOCATIONS OF PAVED DRIVEWAYS. FOR THE SURFACE COURSE, THE CONTRACTOR SHALL PAVE THE ENTRANCE OF THE EXISTING PAVED DRIVEWAYS WITH ITEM 442, ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (448) (DRIVEWAYS).

ESTIMATED QUANTITIES ARE SHOWN ON THE PAVEMENT DATA SHEET.

ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN

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

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

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

PAVEMENT CORING INFORMATION

EB LANE ONLY

CO/ROUTE/SLM	DEPTH & MATERIAL	WHEEL TRACK/SHOULDER (LT, RT, OR SHLD)
CRA-309-5.00	13.00" ASPHALT	(LT)
CRA-309-6.00	18.75" ASPHALT	(LT)
CRA-309-6.00	10.50" ASPHALT	(RT)

RIC-309-1.00	12.00" ASPHALT	(LT)
RIC-309-1.00	12.00" ASPHALT	(RT)
RIC-309-2.00	18.00" ASPHALT	(LT)
RIC-309-2.00	6.00" ASPHALT	(RT)
RIC-309-3.00	16.50" ASPHALT	(LT)
RIC-309-3.00	16.00" ASPHALT	(RT)

ITEM 422 SINGLE CHIP SEAL WITH POLYMER BINDER, AS PER PLAN

THE REQUIREMENTS OF ALL LANGUAGE IN CMS 422 APPLIES EXCEPT AS MODIFIED AS FOLLOWS:

IN CMS 422.03 EQUIPMENT, PARAGRAPH 2, REPLACE WITH: USE EQUIPMENT FOR POLYMER BINDER DISTRIBUTION CONFORMING TO 407.03. IN ADDITION ENSURE THAT IT HAS A COMPUTERIZED RATE CONTROL THAT AUTOMATICALLY ADJUSTS THE POLYMER BINDER PUMP TO THE UNIT GROUND SPEED AND HAS A GAUGE OR METER IN PLAIN VIEW FOR READING GALLONS. USE APPROPRIATE SPRAY NOZZLES FOR THE MATERIAL AND RATE SPECIFIED.

IN CMS 422.07 POLYMER BINDER APPLICATION, ADD TO FIRST PARAGRAPH: REHEAT THE POLYMER BINDER AT A RATE OF NO MORE THAN 25°F PER HOUR, WHEN POLYMER BINDER IS ALLOWED TO COOL BELOW 150°F.

TO CMS 422.09 CONSTRUCTION OPERATION, ADD: THE CONTRACTOR IS RESPONSIBLE FOR CLAIMS OF DAMAGE TO VEHICLES UNTIL THE PAVEMENT AND SHOULDERS RECEIVE A FINAL SWEEPING IMMEDIATELY BEFORE PLACEMENT OF THE OVERLYING ASPHALT CONCRETE COURSE.

THE CONTRACTOR IS REQUIRED TO HAVE A 7 DAY WAITING PERIOD BETWEEN THE TIME THE INTERLAYER CHIP SEAL IS PLACED AND THE OVERLYING ASPHALT CONCRETE COURSE IS PLACED.

TRAFFIC CONTROL

ITEM 621 - RPM, AS PER PLAN

MATERIALS SUPPLIED BY THE DEPARTMENT

ALL MATERIALS ARE TO BE CONTRACTOR FURNISHED, EXCEPT THAT THE DEPARTMENT SHALL SUPPLY RPM MATERIALS (CASTINGS AND REFLECTORS) IN THE QUANTITIES SHOWN HEREIN TO THE CONTRACTOR. THE ABOVE WORK INCLUDING ALL LABOR, MATERIALS, AND EQUIPMENT TO INSTALL THE DEPARTMENT SUPPLIED RPM MATERIALS SHALL BE PAID FOR UNDER ITEM 621 RPM, AS PER PLAN.

AT THE PRE-CONSTRUCTION CONFERENCE AN AUTHORIZATION FOR PICK UP FORM WILL BE FURNISHED BY THE DISTRICT CONSTRUCTION ADMINISTRATOR. THE CONTRACTOR SHALL PICK UP DEPARTMENT SUPPLIED RPM MATERIALS AT THE DISTRICT THREE HEADQUARTERS IN ASHLAND, OHIO 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. BOXES NOT MARKED WITH THE PROPER RECYCLER'S CATALOG OR PART NUMBERS, AND THE DEPARTMENT'S PROJECT NUMBER WILL NOT BE ACCEPTED.

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

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.

MAINTENANCE OF TRAFFIC

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.

ITEM 614. MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF THE WEEK	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY-WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA-WIDE.

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

BUTT JOINTS

BUTT JOINTS SHALL NOT BE CUT AND LEFT OPEN TO TRAFFIC. THEY SHALL BE FILLED IN WITH A TEMPORARY ASPHALT CONCRETE WEDGE OF SUFFICIENT LENGTH, AS DIRECTED BY THE ENGINEER.

CONSTRUCTION "BUMP" (W8-1-36) AND "ADVISORY SPEED" (W13-1-24) SIGNS SHALL BE ERRECTED AND MAINTAINED DURING THE PERIOD THE BUTT JOINT IS LEFT OPEN. THESE SIGNS SHALL BE PAID FOR UNDER THE LUMP SUM ITEM FOR ITEM 614 MAINTAINING TRAFFIC.

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 1.5 INCHES, 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. BEFORE THE ASPHALT CONCRETE RESURFACING IS PLACED, THE TEMPORARY WEDGE SHALL BE REMOVED AND THE COST SHALL BE CONSIDERED INCIDENTAL TO ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC.

ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC 50 CU YD

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.

WORK ZONE MARKING SIGN: (W8-H13-36) NO EDGE LINE	= 28 EACH
WORK ZONE MARKING SIGN: (R4-1-24) DO NOT PASS	= 22 EACH
WORK ZONE MARKING SIGN: (R4-2-24) PASS WITH CARE	= 21 EACH
TOTAL	= 71 EACH

GENERAL NOTES

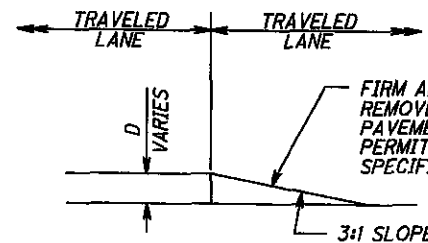
CRA-309-4.98
RIC-309-0.00
CRA-181-0.00

GENERAL NOTES

- IT IS INTENDED THAT THIS DRAWING BE USED FOR TREATMENT OF DROP-OFFS THAT DEVELOP DURING CONSTRUCTION OPERATIONS, AND THAT ARE NOT OTHERWISE PROVIDED FOR IN THE CONSTRUCTION PLANS. THE SUGGESTED TREATMENTS ARE INTENDED FOR HIGH VOLUME PROJECTS THAT WILL LAST AT LEAST SEVEN DAYS AND HAVE AN ACTIVE WORK ZONE 1 MILE (1.6 KM) OR LESS IN LENGTH. FOR GUIDANCE ON THE USE OF THIS SHEET, SEE THE TRAFFIC ENGINEERING MANUAL. WHERE THE PLANS DO NOT PROVIDE SPECIFIC ITEMS FOR LABOR, EQUIPMENT, OR MATERIALS TO IMPLEMENT THE DROP-OFF TREATMENTS SPECIFIED HEREON, THEY SHALL BE INCLUDED FOR PAYMENT IN THE LUMP SUM BID FOR ITEM 614-MAINTAINING TRAFFIC.
- WHILE THE NEED FOR CERTAIN ADVISORY SIGNING IS NOTED HEREON, IT IS NOT INTENDED THAT THIS BE INDICATIVE OF ALL SIGNING THAT MAY BE REQUIRED TO ADVISE OR WARN MOTORISTS. ALL REQUIREMENTS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) MUST BE FULFILLED.
- IN URBAN OR OTHERWISE HEAVILY DEVELOPED AREAS WHERE PEDESTRIANS AND/OR BICYCLISTS MAY BE PRESENT IN SIGNIFICANT NUMBERS, ADDITIONAL SIGNING AND PROTECTIVE MEASURES OTHER THAN THOSE SHOWN HEREON MAY BE REQUIRED.
- THE DROP-OFF TREATMENT SELECTED FOR USE AT ANY GIVEN LOCATION SHALL BE AS APPROPRIATE FOR THE PREVAILING CONDITIONS AT THE SITE.
- WHERE CONCRETE BARRIER IS SPECIFIED, IT SHALL BE IN ACCORDANCE WITH SCD RM-4.2 AND ITEM 622.
- WHEN DRUMS ARE SPECIFIED FOR A DROP-OFF CONDITION, A MINIMUM NUMBER OF FOUR DRUMS SHALL BE USED. SPACING SHALL BE AS INDICATED IN THE PLANS OR AS SPECIFIED IN THE OMUTCD.
- WHEN W8-9 (LOW SHOULDER) SIGNS OR W8-9A (SHOULDER DROP-OFF) SIGNS OR W8-1871 (UNEVEN LANES) SIGNS ARE REQUIRED, THEY SHALL BE PLACED 750' (230 M) IN ADVANCE OF THE CONDITION, ON ALL INTERSECTING ENTRANCE RAMPS WITHIN THE LIMITS OF THE CONDITION AND IMMEDIATELY BEYOND ALL INTERSECTING ROADWAYS WITHIN THE LIMITS OF THE CONDITION. WHEN THE DROP-OFF CONDITION EXTENDS MORE THAN 0.5 MILE (800M), ADDITIONAL SIGNS SHOULD BE ERECTED AT INTERVALS OF 1.0 MILE (1600 M) OR LESS.
- FOR LOCATIONS, SUCH AS AT RAMPS, LANE SHIFTS, LANE CLOSURES, ETC., WHERE TRAFFIC IS REQUIRED TO NEGOTIATE A DIFFERENCE IN ELEVATION BETWEEN PAVEMENTS, A 3:1 SLOPE TREATMENT SIMILAR TO THE OPTIONAL WEDGE TREATMENT SHALL BE PROVIDED.
- PORTABLE CONCRETE BARRIER SHALL BE PLACED ON THE SAME LEVEL AS THE TRAFFIC SURFACE AND SHALL NOT ENCR OACH ON LANE WIDTH(S) DESIGNATED AS THE MINIMUM REQUIRED FOR TRAFFIC USE. WHERE DRUMS ARE USED, AND THEIR PRESENCE WOULD REDUCE TRAVELED LANE WIDTHS TO LESS THAN 10' (3.0M), DRUMS MAY BE PLACED ON THE OPPOSITE LEVEL FROM THAT OF TRAFFIC PROVIDED THE DROP-OFF DEPTH DOES NOT EXCEED 5" (125) AND APPROVAL IS GRANTED BY THE PROJECT ENGINEER.
- PAVEMENT REPAIRS (OR SIMILAR WORK):
 - LENGTHS GREATER THAN 60' (18 M) - UTILIZE APPROPRIATE TREATMENT FROM CONDITION I.
 - LENGTHS OF 60' (18 M) OR LESS - REPAIRS SHALL BE EFFECTED IN ACCORDANCE WITH CMS 255.08. DRUMS MAY BE USED AS A SEPARATOR ADJACENT TO THE TRAVELED LANE.

**OPTIONAL WEDGE TREATMENT
(MILLING OR RESURFACING)**

- THIS TREATMENT MAY BE USED WHEN PERMITTED FOR CONDITION I ONLY.
- W8-9A SIGN REQUIRED



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

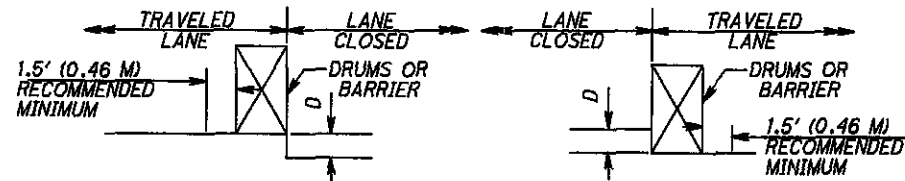
CONDITION I

DROP-OFFS BETWEEN TRAVELED LANES

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

D	TREATMENT
≤ 1/2" (<40)	ERECT W8-11 SIGN
> 1/2" - 3" (40-75)	1. LANE CLOSURE UTILIZING DRUMS* AS SHOWN BELOW OR 2. OPTIONAL WEDGE TREATMENT
> 3" - 5" (>75-125)	LANE CLOSURE UTILIZING DRUMS AS SHOWN BELOW
> 5" (>125)	LANE CLOSURE UTILIZING PORTABLE CONCRETE BARRIER AS SHOWN BELOW

* CONES MAY BE USED FOR DAYTIME ONLY CONDITIONS



CONDITION II

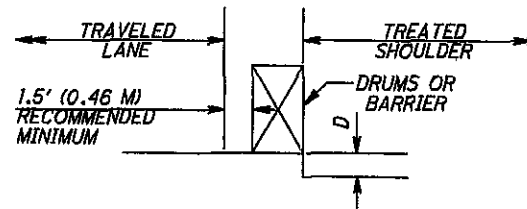
DROP-OFFS WITHIN GRADED SHOULDER AREA

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

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

D	TREATMENT
≤ 1/2" (<40)	ERECT W8-9A SIGNS
> 1/2" - 5" (>40-125)	1. IF MINIMUM LANE WIDTH* REQUIREMENTS CAN BE MET, MAINTAIN LANES UTILIZING DRUMS AS SHOWN BELOW OR 2. IF MINIMUM LANE WIDTH* REQUIREMENTS CANNOT BE MET, CLOSE ADJACENT LANE UTILIZING DRUMS OR 3. OPTIONAL SHOULDER TREATMENT
> 5" - 12" (>125-305) DAYLIGHT ONLY	IF MINIMUM LANE WIDTH* REQUIREMENTS CAN BE MET, MAINTAIN LANES UTILIZING DRUMS AS SHOWN BELOW.
> 5" - 24" (>125-610)	1. IF MINIMUM LANE WIDTH* REQUIREMENTS CAN BE MET, MAINTAIN LANES UTILIZING PORTABLE CONCRETE BARRIER AS SHOWN BELOW. OR 2. IF MINIMUM LANE WIDTH* REQUIREMENTS CANNOT BE MET, CLOSE ADJACENT LANE UTILIZING DRUMS.
> 5" - 24" (>125-610)	LANE CLOSURE UTILIZING PORTABLE CONCRETE BARRIER AS SHOWN BELOW

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



OPTIONAL SHOULDER TREATMENT

- THIS TREATMENT MAY NOT BE USED WITHIN A BITUMINOUS SHOULDER WHERE A HOT LONGITUDINAL JOINT PER CMS 401.15 IS REQUIRED.
- W8-9 SIGNS REQUIRED.



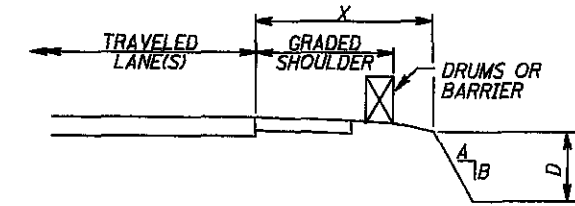
CONDITION III

DROP-OFFS BEYOND GRADED SHOULDER OR BACK OF CURB

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

CHART A

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

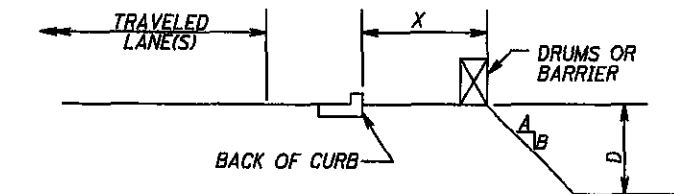


X	D	A/B	Treatment Required	
			Day	Night
0-4' (0-1.2 M)	ANY	ANY	(A)	(A)
4'-30' (1.2 M-9.1 M)	ANY	3:1 OR FLATTER	NONE	NONE
4'-12' (1.2 M-3.6 M)	≤ 3" (<75)	STEEPER THAN 3:1	NONE	NONE
4'-12' (1.2 M-3.6 M)	> 3" - < 12" (>75-305)	STEEPER THAN 3:1	DRUMS	DRUMS
4'-12' (1.2 M-3.6 M)	> 12" (>305)	STEEPER THAN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

(A) USE TREATMENT SPECIFIED UNDER CONDITION II

CHART B

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



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

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

ITEM SPECIAL. MAILBOX SUPPORT SYSTEM

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

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

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

WOOD POSTS SHALL BE NOMINAL 4 IN. x 4 IN. (S4S) OR 4 1/2 IN. DIAMETER ROUND, AND CONFORM TO 710.14. STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2 IN. I.D., AND CONFORM TO AASHTO M 181.

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

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

GROUP MAILBOX SUPPORTS SHALL BE PLACED ON 3 FT. CENTERS AND THE TURNOUT LENGTHENED TO ACCOMMODATE THE GROUPING.

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

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

ITEM SPECIAL-MAILBOX SUPPORT SYSTEM, SINGLE	
CRA-309	1 EACH
RIC-309	4 EACH
CRA-181	1 EACH

MAILBOX APPROACHES

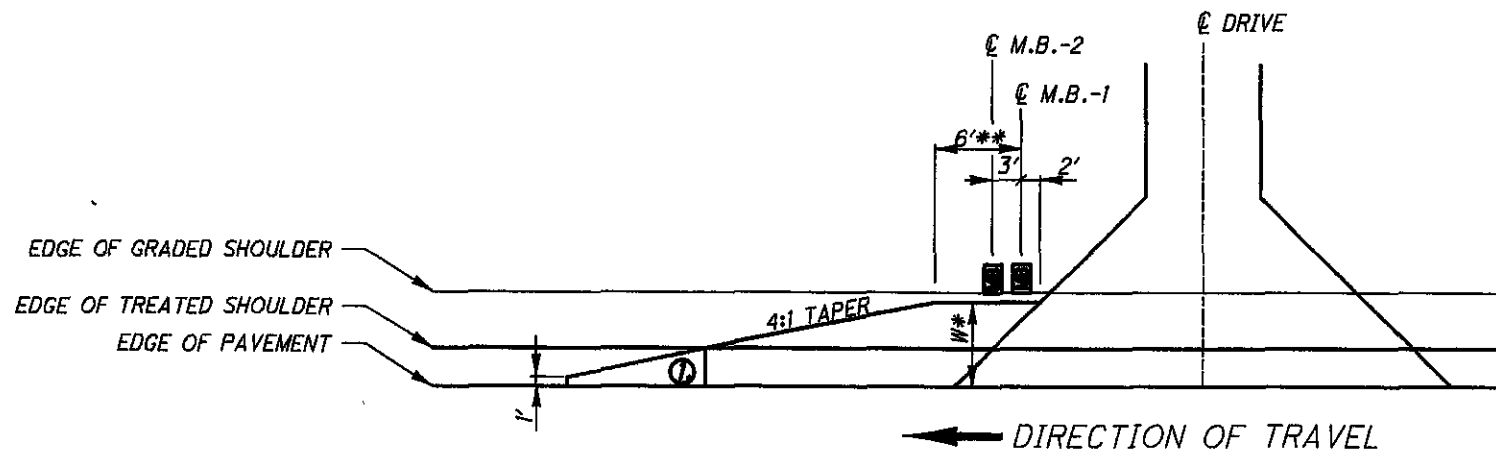
THE MAILBOX APPROACHES SHALL BE PAVED WITH 1.00" ITEM 442 INTERMEDIATE COURSE AND 1.25" ITEM 442 SURFACE COURSE. THEY SHALL CONFORM AS MUCH AS PRACTICAL TO STANDARD DRAWING BP-4.1 OR AS DIRECTED BY THE ENGINEER.

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

ITEM 209 - GRADING MAILBOX APPROACHES:	
CRA-309	5 EACH
RIC-309	41 EACH
CRA-181	7 EACH

ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN	
CRA-309	10 CU YD
RIC-309	82 CU YD
CRA-181	14 CU YD

FOR DETAILS NOT SHOWN SEE STANDARD DRAWING BP-4.1



LOCATIONS OF MAILBOX SUPPORT SYSTEM TO BE REPLACED

LOCATIONS OF MAILBOX SUPPORT SYSTEM TO BE REPLACED ADDRESSES

CRA-309: 7908 SR 309	SLM 5.25, LT.
RIC-309: 5264 SR 309	SLM 1.04, RT.
5230 SR 309	SLM 1.14, RT.
4565 SR 309	SLM 2.66, LT.
4540 SR 309	SLM 2.76, LT.
CRA-181: 797 SR 181	SLM 0.83, LT.

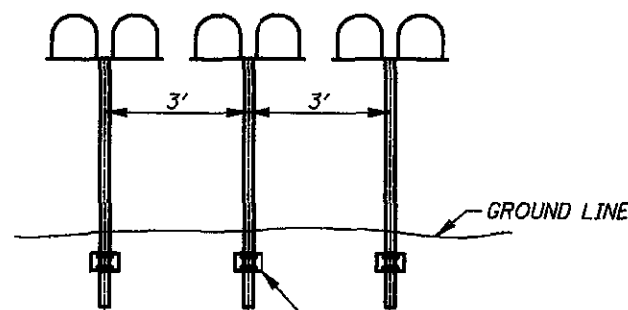
① END MAILBOX TURNOUT AT EDGE OF TREATED SHOULDER OR 1' WHICH EVER IS GREATER.

W* NOTES

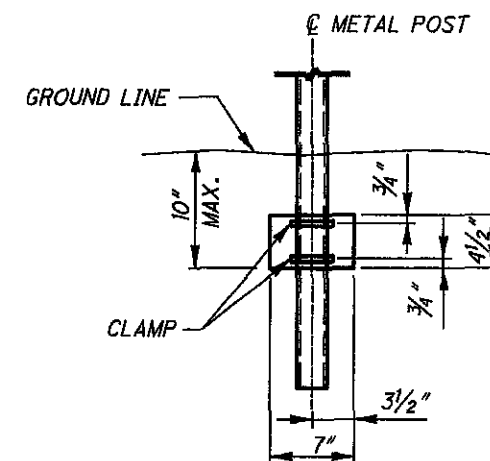
- 1) WHERE EXISTING STANDARD MAILBOX POSTS ARE BEHIND GUARDRAIL AND ARE TO REMAIN IN PLACE, TURNOUT WIDTH SHALL EXTEND TO FACE OF GUARDRAIL.
- 2) WHERE NO GUARDRAIL IS REQUIRED, TURNOUT WIDTH SHALL EXTEND TO FACE OF EXISTING STANDARD MAILBOX WITH MAILBOX REMAINING IN PLACE.
- 3) IF THE MAILBOX SUPPORT IS SPECIFIED TO BE REMOVED AND REERECTED OR REPLACED, WHERE GUARDRAIL IS REQUIRED, TURNOUT WIDTH SHALL EXTEND TO FACE OF GUARDRAIL AND MAILBOX SHALL BE INSTALLED BEHIND THE GUARDRAIL.
- 4) IF THE MAILBOX SUPPORT IS SPECIFIED TO BE REMOVED AND REERECTED OR REPLACED, WHERE NO GUARDRAIL IS REQUIRED, TURNOUT WIDTH SHALL BE 6 FT. MINIMUM, EXCEPT WHERE FIELD CONDITIONS WILL NOT PERMIT.

**** NOTE**

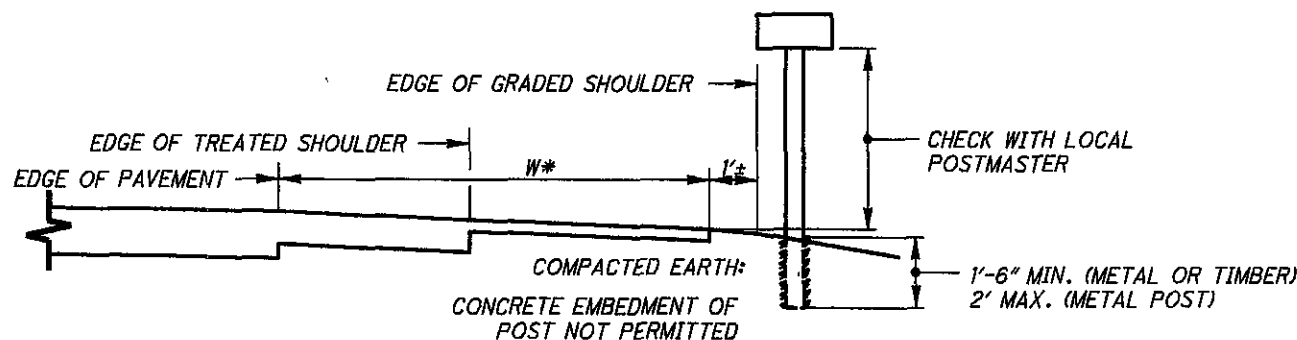
- 1) 6' FOR SINGLE MAILBOX SUPPORT, ADD 3 FT. FOR EACH ADDITIONAL MAILBOX.



GROUP MAILBOX INSTALLATION



ANTI-TWIST PLATE



CROSS SECTION / ELEVATION VIEW

CRA-309-4.98
RIC-309-0.00
CRA-181-0.00

100% GALION		100% CRESTLINE		80% FED-20% GALION		80% FED-20% CRESTLINE				80% FED-20% STATE				GENERAL SUMMARY					ITEM		TOTAL	UNIT	DESCRIPTION	REF. SHT.																						
3	3	7	10A	23	7	10A	13	23	3	7	10A	13	23	GALION	100% CRESTLINE	20% GALION	20% CRESTLINE	20% STATE	ITEM	EXT																										
																									ROADWAY																					
																			202	30001	270	SQ FT	WALK REMOVED, AS PER PLAN	21																						
																			202	32000	26	FT	CURB REMOVED																							
																			202	32500	32	FT	CURB AND GUTTER REMOVED																							
												162.50							202	38000	162.50	FT	GUARDRAIL REMOVED																							
												187.50							202	38200	187.50	FT	GUARDRAIL REMOVED FOR REUSE																							
																			202	42000	7	EACH	ANCHOR ASSEMBLY REMOVED, TYPE A																							
																			202	54000	395	EACH	RAISED PAVEMENT MARKER REMOVED																							
																			203	20001	20	CU YD	EMBANKMENT, AS PER PLAN	12																						
																			209	15000	11.74	STATION	RESHAPING UNDER GUARDRAIL																							
					1.62														209	60500	10.54	MILE	LINEAR GRADING																							
																			209	80000	53	EACH	GRADING MAILBOX APPROACHES																							
																			606	13000	162.50	FT	GUARDRAIL, TYPE 5																							
																			606	13030	150.00	FT	GUARDRAIL, TYPE 5, USING 9 FOOT POSTS																							
																			606	16500	187.50	FT	GUARDRAIL REBUILT, TYPE 5																							
																			606	22010	5	EACH	ANCHOR ASSEMBLY, TYPE E-98																							
																			606	26600	2	EACH	ANCHOR ASSEMBLY, TYPE T																							
																			606	35140	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4																							
																			606	98000	337.50	FT	GUARDRAIL, MISC., ADJUST HEIGHT, EXISTING GUARDRAIL, TYPE 5																							
																			608	52001	270	SQ FT	CURB RAMP, AS PER PLAN	21																						
																			609	12000	32	FT	COMBINATION CURB AND GUTTER, TYPE 2																							
																			609	14000	26	FT	CURB, TYPE 2-A																							
																			SPECIAL	69050100	6	EACH	MAILBOX SUPPORT SYSTEM, SINGLE																							
																									DRAINAGE																					
																					604	34500	1	EACH	MANHOLE ADJUSTED TO GRADE																					
																									PAVEMENT																					
50	85													50	85																															
																						253	02000	287	CU YD	PAVEMENT REPAIR																				
																						407	10000	7,055	GALLON	TACK COAT																				
																						407	14000	2,086	GALLON	TACK COAT FOR INTERMEDIATE COURSE																				
																						408	10000	5,179	GALLON	PRIME COAT																				
																						422	10001	18,394	SQ YD	SINGLE CHIP SEAL WITH POLYMER BINDER, AS PER PLAN	4																			
																						442	00201	3,051	CU YD	ASPHALT CONCRETE SURFACE COURSE, 9 5 MM, TYPE A (446), AS PER PLAN	4																			
																						442	10510	15	CU YD	ASPHALT CONCRETE SURFACE COURSE, 9 5MM, TYPE A (448) (DRIVEWAYS)																				
																						442	20101	1,929	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, 9 5 MM, TYPE A (446), AS PER PLAN	4																			
																						617	10101	827	CU YD	COMPACTED AGGREGATE, AS PER PLAN	4																			
																						617	20000	12,944	SQ YD	SHOULDER PREPARATION																				

GENERAL SUMMARY

80% FED-20% GALION				80% FED-20% CRESTLINE					80% FED-20% STATE					80% FED-20% GALION	80% FED-20% CRESTLINE	80% FED-20% STATE	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	REF. SHT.
5	7	10	23	5	7	10	13	23	3	5	7	10	13	23								
TRAFFIC CONTROL																						
							6						28	417		621	00101	417	EACH	RPM, AS PER PLAN	5	
							7						7			626	00100	34	EACH	BARRIER REFLECTOR, TYPE A		
							1						1			630	02100	14	FT	GROUND MOUNTED SUPPORT, NO. 2 POST		
							1						1			630	85100	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION		
							1						1			630	86002	2	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL		
			1 62					1.17						7 75	1 62	642	00102	10.54	MILE	EDGE LINE, TYPE 2		
			0 48					0.16						4 63	0 48	642	00302	5.27	MILE	CENTER LINE, TYPE 2		
														2 17		644	00500	217	FT	STOP LINE		
														2		644	01000	2	EACH	RAILROAD SYMBOL MARKING		
			20												20	644	00600	20	FT	STOP LINE		
BASE BID ITEMS FED/GALION (AA1)																						
ALTERNATE BID FED/GALION (AA2)																						
BASE BID FED/CRESTLINE (AB1)																						
							112							112		644	00500	112	FT	STOP LINE		
							332							332		644	00600	332	FT	CROSSWALK LINE		
ALTERNATE BID FED/CRESTLINE (AB2)																						
														112		642	00502	112	FT	STOP LINE, TYPE 2		
														332		642	00602	332	FT	CROSSWALK LINE, TYPE 2		
MAINTENANCE OF TRAFFIC																						
8				3					60					8	3	614	12460	71	EACH	WORK ZONE MARKING SIGN		
11				8					31					11	8	614	13000	50	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC		
			0 96				0.48						10 31	0 96	614	21100	11.75	MILE	WORK ZONE CENTER LINE, CLASS I, 642 PAINT			
							48						94	48	614	26200	142	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT			
STRUCTURES																						
																				CRA-181-0010 (SFN 1703366)	27	
GENERAL SUMMARY																						
																614	11000	LUMP		MAINTAINING TRAFFIC		
																619	16010	3	MONTH	FIELD OFFICE, TYPE B		
																624	10000	LUMP		MOBILIZATION		

GENERAL SUMMARY

CRA-309-4.98
RIC-309-0.00 CRA-181-0.00

* - FOR TYPICALS, SEE SHEET 11

FUNDING PARTICIPATION FC = 80% FED / 20% CRESTLINE FG = 80% FED / 20% GALLON FS = 80% FED / 20% STATE	COUNTY-ROUTE	LOG POINT TO LOG POINT STRAIGHT LINE MILEAGE		LENGTH		WIDTH FEET AVG	* T Y P I C A L	PAVEMENT AREA SQ YD	407		422	442		442		442		604		AGGREGATE SHOULDER PROPOSED WIDTH		AGGREGATE SHOULDER AREA SQ YD	209 LINEAR GRADING MILE	408 PRIME COAT @ 0.40 GAL/SY GALLON	617		617 SHOULDER PREPARATION SQ YD	CALC BY TDJ	CHKD BY MJS											
				MILE	FEET				TACK COAT @ 0.08 GAL/SY GALLON	TACK COAT FOR INTERM. COURSE @ 0.03 GAL/SY GALLON	SINGLE CHIP SEAL WITH POLYMER BINDER, AS PER PLAN SQ YD	ASPHALT CONCRETE SURFACE COURSE, 9.5MM, TYPE A (446), AS PER PLAN INCH CU YD		ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5MM, TYPE A (448), AS PER PLAN INCH CU YD		ASPHALT CONCRETE SURFACE COURSE, 9.5MM, TYPE A (448) (DRIVEWAYS) INCH CU YD		MANHOLE ADJUSTED TO GRADE EACH		SL	SR				COMPACTED AGGREGATE, AS PER PLAN 2 INCHES AVG THICKNESS CU YD															
FG	CRA-309	4.98	5.02	0.04	211.2	29.5	1	692	55	21		1.25	24	1.00	19					2.0	2.0	94	0.08	38	5	94														
FG	CRA-309	5.02	5.05	0.03	158.4	14.75	1	260	21	8		1.25	9	1.00	7					2.0		35	0.03	14	2	35														
FS	CRA-309	5.02	5.05	0.03	158.4	14.75	1	260	21	8		1.25	9	1.00	7					2.0		35	0.03	14	2	35														
FG	CRA-309	5.05	5.29	0.24	1267.2	14.25	1	2,006	160	60		1.25	70	1.00	56					2.0		282	0.24	113	16	282														
FS	CRA-309	5.05	5.29	0.24	1267.2	14.25	1	2,006	160	60		1.25	70	1.00	56					2.0		282	0.24	113	16	282														
FG	CRA-309	5.29	5.56	0.27	1425.6	28.5	1	4,514	361	135		1.25	157	1.00	125					2.0	2.0	634	0.54	253	35	634														
FS	CRA-309	5.56	5.62	0.06	316.8	14.25	1	502	40	15		1.25	17	1.00	14					2.0		70	0.06	28	4	70														
FG	CRA-309	5.56	5.62	0.06	316.8	14.25	1	502	40	15		1.25	17	1.00	14					2.0		70	0.06	28	4	70														
FS	CRA-309	5.62	5.67	0.05	264	28.5	1	836	67	25		1.25	29	1.00	23					2.0	2.0	117	0.10	47	7	117														
FS	CRA-309	5.67	5.68	0.01	52.8	14.25	1	84	7	3		1.25	3	1.00	2					2.0		12	0.01	5	1	12														
FG	CRA-309	5.67	5.68	0.01	52.8	14.25	1	84	7	3		1.25	3	1.00	2					2.0		12	0.01	5	1	12														
FG	CRA-309	5.68	5.70	0.02	105.6	28.5	1	334	27	10		1.25	12	1.00	9					2.0	2.0	47	0.04	19	3	47														
FG	CRA-309	5.70	5.78	0.08	422.4	14.25	1	669	54	20		1.25	23	1.00	19					2.0		94	0.08	38	5	94														
FS	CRA-309	5.70	5.78	0.08	422.4	14.25	1	669	54	20		1.25	23	1.00	19					2.0		94	0.08	38	5	94														
FG	CRA-309	5.78	5.93	0.15	792	28.5	1	2,508	201	75		1.25	87	1.00	70					2.0	2.0	352	0.30	141	20	352														
FS	CRA-309	5.93	6.03	0.10	528	14.25	1	836	67	25		1.25	29	1.00	23					2.0		117	0.10	47	7	117														
FG	CRA-309	5.93	6.03	0.10	528	14.25	1	836	67	25		1.25	29	1.00	23					2.0		117	0.10	47	7	117														
EXTRA AREA FOR INTERSECTIONS & MAILBOXES								278	22	8		1.25	10	1.00	8																									
EXTRA AREA FOR PAVED & UNPAVED DRIVES								36	0						2.25	2							102		41	6	102													
TOTAL QUANTITY FOR FED / GALION FUNDING SPLIT									1,015	380			441		352		2		0					1,839	1.48	737	104	1,839												
TOTAL QUANTITY FOR FED / STATE FUNDING SPLIT									416	156			180		144		0		0							727	0.62	292	42	727										
TOTAL FOR CRA-309									1,431	536			621		496		2		0					2,10	1,029	146	2,566													
FG	RIC-309	0.00	0.13	0.13	686.4	14.25	1	1,087	87	33		1.25	38	1.00	30					2.0		153	0.13	61	8	153														
FS	RIC-309	0.00	0.13	0.13	686.4	14.25	1	1,087	87	33		1.25	38	1.00	30					2.0		153	0.13	61	8	153														
FS	RIC-309	0.13	0.26	0.13	686.4	28.5	1	2,174	174	65		1.25	75	1.00	60					2.0	2.0	305	0.26	122	17	305														
FG	RIC-309	0.26	0.27	0.01	52.8	14.25	1	84	7	3		1.25	3	1.00	2					2.0		12	0.01	5	1	12														
FS	RIC-309	0.26	0.27	0.01	52.8	14.25	1	84	7	3		1.25	3	1.00	2					2.0		12	0.01	5	1	12														
FS	RIC-309	0.27	3.01	2.74	14467.2	28.5	1	45,813	3,665	1,374		1.25	1,591	1.00	1,273					2.0	2.0	6,430	5.48	2,572	357	6,430														
EXTRA AREA FOR INTERSECTIONS & MAILBOXES								1,310	105	39		1.25	45	1.00	36																									
EXTRA AREA FOR PAVED & UNPAVED DRIVES								144	12						2.25	9									378		151	21	378											
TOTAL QUANTITY FOR FED / GALION FUNDING SPLIT									94	36			41		32		0									165	0.14	66	9	165										
TOTAL QUANTITY FOR FED / STATE FUNDING SPLIT									4,050	1,514			1,752		1,401		9										7,278	5.88	2,911	404	7,278									
TOTAL FOR RIC-309									4,144	1,550			1,793		1,433		9									8.02	2,977	413	7,443											

PAVEMENT & SHOULDER DATA

CRA-309-4.98
RIC-309-0.00 CRA-181-0.00

CONTINUED ON NEXT SHEET

CONTINUED ON NEXT SHEET

CONTINUED ON NEXT SHEET

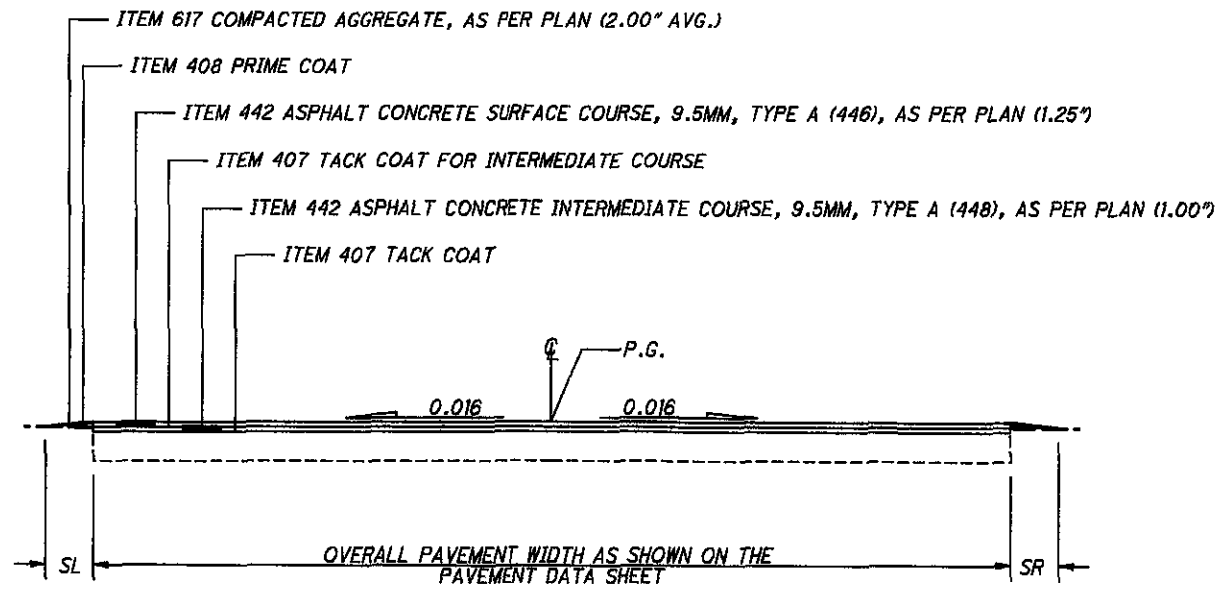
* - FOR TYPICALS, SEE SHEET 11

FUNDING PARTICIPATION FC = 80% FED / 20% CRESTLINE FG = 80% FED / 20% GALLON FS = 80% FED / 20% STATE	COUNTY-ROUTE	LOG POINT TO LOG POINT		LENGTH		WIDTH FEET AVG	* T Y P I C A L	PAVEMENT AREA SQ YD	407		422		442		442		604		AGGREGATE SHOULDER PROPOSED WIDTH		AGGREGATE SHOULDER AREA SQ YD	209	408	617		617
				MILE	FEET				TACK COAT @ 0.08 GAL/SY	TACK COAT FOR INTERM COURSE @ 0.03 GAL/SY	SINGLE CHIP SEAL WITH POLYMER BINDER, AS PER PLAN	ASPHALT CONCRETE SURFACE COURSE, 9.5MM, TYPE A (446), AS PER PLAN		ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5MM, TYPE A (448), AS PER PLAN		ASPHALT CONCRETE SURFACE COURSE, 9.5MM, TYPE A (448), AS PER PLAN (DRIVEWAYS)		MANHOLE ADJUSTED TO GRADE	SL	SR		LINEAR GRADING	PRIME COAT @ 0.40 GAL/SY	COMPACTED AGGREGATE, AS PER PLAN	SHOULDER PREPARATION	
				STRAIGHT LINE MILEAGE					GALLON	GALLON	SQ YD	INCH	CU YD	INCH	CU YD	INCH	CU YD	EACH	FT	FT		MILE	GALLON	CU YD	SQ YD	
FS	CRA-181	0 00	0 16	0 16	844.8	25.0	2	2,347	188		2,347	1 25	81				1	2 0	2 0	375	0 32	150	21	375		
FS	CRA-181	0 16	1 01	0 85	4488	12 5	2	6,233	499		6,233	1 25	216					2 0		997	0 85	399	55	997		
FC	CRA-181	0 16	1 01	0 85	4488	12 5	2	6,233	499		6,233	1 25	216					2 0		997	0 85	399	55	997		
FS	CRA-181	1 01	1 15	0 14	739 2	25 0	2	2,053	164		2,053	1 25	71					2 0	2 0	329	0 28	131	18	329		
FS	CRA-181	1 15	1 21	0 06	316 8	27 0	2	950	76		950	1 25	33					2 0	2 0	141	0 12	56	8	141		
EXTRA AREA FOR INTERSECTIONS & MAILBOXES								578	46		578	1 25	20													
EXTRA AREA FOR PAVED & UNPAVED DRIVES								102	8						1 25	4						96		38	5	96
TOTAL QUANTITY FOR FED / CRESTLINE FUNDING SPLIT									499	0	6,233		216	0	0	0						997	0 85	399	55	997
TOTAL QUANTITY FOR FED / STATE FUNDING SPLIT									981	0	12,161		421	0	4	1						1,938	1 57	774	107	1,938
TOTAL FOR CRA-181									1,480	0	18,394		637	0	4	1					2,935	2 42	1,173	162	2,935	
FC	PROJECT TOTAL QUANTITY FOR FED / CRESTLINE FUNDING SPLIT								499	0	6,233		216	0	0	0					997	0 85	399	55	997	
FG	PROJECT TOTAL QUANTITY FOR FED / GALLON FUNDING SPLIT								1,109	416	0		482	384	2	0					2,004	1 62	803	113	2,004	
FS	PROJECT TOTAL QUANTITY FOR FED / STATE FUNDING SPLIT								5,447	1,670	12,161		2,353	1,545	13	1					9,943	8 07	3,977	553	9,943	
PROJECT TOTALS				2.08					7,055	2,086	18,394		3,051	1,929	15	1				12,944	10.54	5,179	721	12,944		

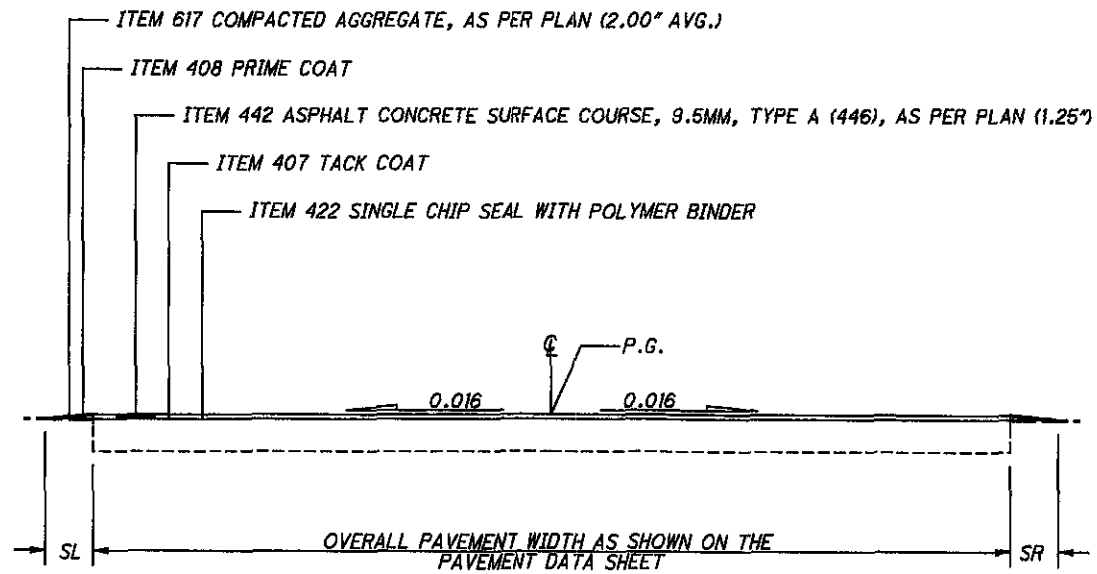
PAVEMENT & SHOULDER DATA

CRA-309-4.98
RIC-309-0.00 CRA-181-0.00

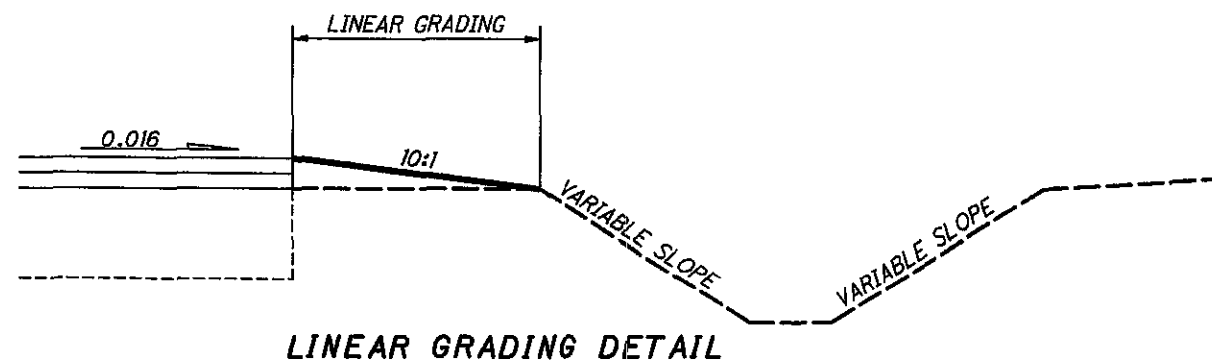
CALC BY
TDJ
CHKD BY
MJS



TYPICAL 1



TYPICAL 2



LINEAR GRADING DETAIL

CONNECTING GUARDRAIL TO EXISTING RAIL

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

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

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

GUARDRAIL REPAIR AND/OR REPLACEMENT

THE FOLLOWING ITEMS LISTED BELOW SHALL BE USED FOR THE REPAIR AND/OR REPLACEMENT OF DAMAGED GUARDRAIL NOTICED DURING THE COMPLETION OF OTHER WORK INCLUDED IN THIS PLAN. THE ABOVE WORK SHALL BE COMPLETED AS DIRECTED BY THE ENGINEER.

- ITEM 202, GUARDRAIL REMOVED
- ITEM 202, ANCHOR ASSEMBLY REMOVED, TYPE E
- ITEM 606, GUARDRAIL, TYPE 5
- ITEM 606, ANCHOR ASSEMBLY, TYPE E-98
- ITEM 209 RESHAPING UNDER GUARDRAIL

BRIDGE LOCATION MARKER SIGN

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

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

- ITEM 630 GROUND MOUNTED SUPPORT, NO. 2. POST 14 FT
- ITEM 630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION 2 EACH
- ITEM 630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL 2 EACH
- QUANTITIES CARRIED TO ROADWAY SUB-SUMMARY, SHEET 13

ITEM 209 - RESHAPING UNDER GUARDRAIL

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

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

THE AREA IN FRONT OF THE GUARDRAIL SHALL BE GRADED AND RESHAPED TO PROVIDE AN AREA THAT HAS A SLOPE OF 10:1 MINIMUM (12:1 MAXIMUM).

EXCESS MATERIAL RESULTING SHALL BE USED ELSEWHERE FOR THIS ITEM IF SO DIRECTED OR DISPOSED OF PROPERLY. IF EXTRA MATERIAL IS REQUIRED IT SHALL BE PAID FOR WITH ITEM 203 - EMBANKMENT, AS PER PLAN. THIS WORK SHALL NOT BE STARTED UNTIL AFTER THE RESURFACING AND BERM WORK HAS BEEN COMPLETED.

THE ABOVE WORK SHALL BE PAID FOR PER STATION WITH ITEM 209, RESHAPING UNDER GUARDRAIL, WITH THE EXCEPTION OF ANY EXTRA MATERIAL REQUIRED TO MEET THE SLOPE REQUIREMENTS WHICH SHALL BE PAID BY ITEM 203 - EMBANKMENT, AS PER PLAN.

ITEM 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 606 - ANCHOR ASSEMBLY, TYPE E-98

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

1) THE ET-2000 (1997) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE ST., GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50 FEET (15.24 m), INCLUSIVE OF TWO 25 FOOT (7.62 m) LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS265M	ET-2000 (1997) PLAN, ELEVATION AND SECTIONS	6/20/97	3/8/98
SS142	ET2000 PLUS 50'-0" PLAN, ELEVATION AND SECTION 25'-0" RAIL, SLEEVE W/PL POSTS 1-4	4/12/00	7/31/00
SS141	ET-2000 PLUS PLAN, ELEVATION & SECTION 25'-0" RAIL, HBA POSTS 1-4	2/29/00	7/31/00
SS158	ET-2000 PLUS 50'-0" WITH 12'-6" PANELS & HBA POSTS 1-4 PLAN, ELEVATION & SECTION	5/22/00	7/31/00

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

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50'-0" (15.24 m), INCLUSIVE OF FOUR 12'-6" (3.81m) LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SKT-4M	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES	12/11/97	3/6/98

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

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

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

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

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

ITEM 203 - EMBANKMENT, AS PER PLAN

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

AREAS WHERE EMBANKMENT MATERIALS ARE TO BE PLACED SHALL BE SCALPED. THE REQUIREMENTS FOR BENCHING SHALL BE WAIVED. THE DEPTH OF LAYERS IN WHICH THE EMBANKMENTS ARE PLACED SHALL BE LIMITED TO EIGHT (8) INCHES IN THICKNESS. THE METHOD OF COMPACTION AND EQUIPMENT USED SHALL BE SUFFICIENT TO PROVIDE A MINIMUM OF 80 PERCENT RELATIVE COMPACTION.

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

THE METHOD OF MEASUREMENT FOR EMBANKMENT MATERIAL SHALL BE THE NUMBER OF CUBIC YARDS MEASURED BY LOOSE VOLUME IN THE CARRIER AT THE WORK SITE, IN LIEU OF THE REQUIREMENTS OF 203.09, AND PAYMENT FOR ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT UNIT BID PRICE PER CUBIC YARD FOR ITEM 203 - EMBANKMENT, AS PER PLAN AND SHALL INCLUDE ALL WORK DESCRIBED ABOVE.

ITEM 606 - GUARDRAIL REBUILT, TYPE 5

THIS ITEM SHALL BE USED WHEN GUARDRAIL REQUIRES REPAIRS IN WHICH THE RAIL ELEMENT IS REUSABLE. ALSO, THIS ITEM WILL BE USED TO RE-ALIGN GUARDRAIL RUNS, AS DIRECTED BY THE ENGINEER.

PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT, AS DESCRIBED IN 606.05 AND TO INCLUDE REMOVAL AND REPLACEMENT OF ANY AND ALL DAMAGED MATERIAL, (REUSING THE RAIL ELEMENT), INCLUDING REPLACEMENT OF ANY MATERIALS DAMAGED DURING DISMANTLING OR ANY MATERIALS WHICH MAY HAVE DETERIORATED TO THE POINT THEY CANNOT BE REUSED.

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

WHERE DESIGNATED ON THE PLAN, THE EXISTING GUARDRAIL, TYPE 5 SHALL BE RAISED OR LOWERED ON THE EXISTING WOOD POSTS AS PER STANDARD DRAWING GR-2.1 SO AS TO OBTAIN THE STANDARD 27.75 IN. HEIGHT. THE RAIL SHALL BE REATTACHED TO THE POSTS USING NEW POST BOLTS. FOR RAIL THAT REQUIRES BEING LOWERED THE POSTS SHALL BE CUT OR TRIMMED AND THE TOPS SHALL BE TREATED.

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

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

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

DESIGN FILE: i:\projects\25679\25679GR_GN.dgn
WORKSTATION: sdeer
DATE: 10/23/2006

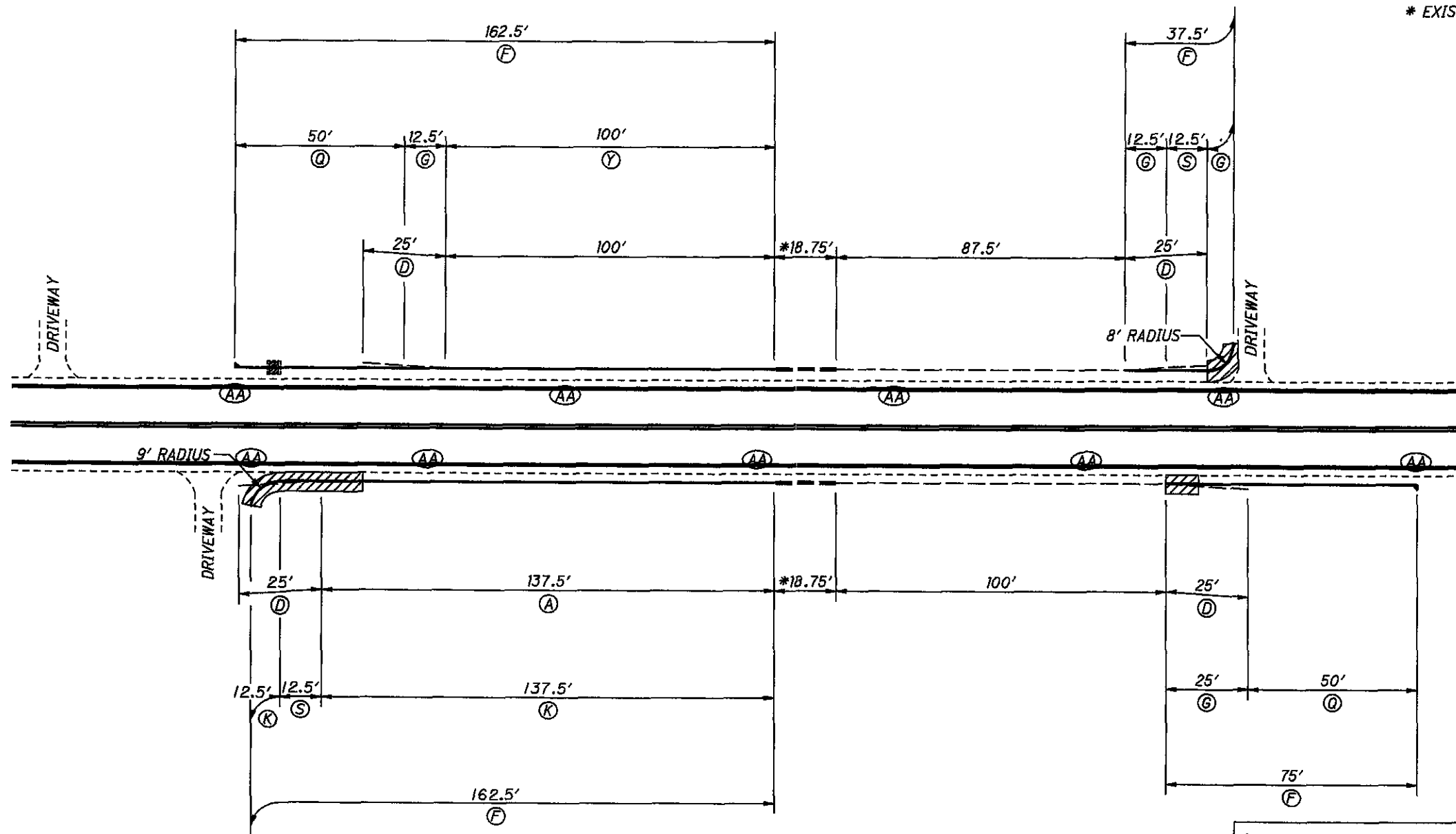
SHEET	COUNTY-ROUTE-SECTION	ITEM																							CALCD	TOT	CHECKED	M/S				
		202	202	202	202	202	202	203	209	606	606	606	606	606	606	606	606	608	609	609	626	630	630	630								
WALK REMOVED, AS PER PLAN	CURB REMOVED	CURB AND GETTER REMOVED	GUARDRAIL REMOVED	GUARDRAIL REMOVED FOR REUSE	ANCHOR ASSEMBLY REMOVED, TYPE A	EMBANKMENT, AS PER PLAN	RESHAPING UNDER GUARDRAIL	GUARDRAIL, TYPE 5	GUARDRAIL, TYPE 5, USING 9 FOOT POSTS	GUARDRAIL REBUILT, TYPE 5	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY, TYPE 4	GUARDRAIL, MISC.: ADJUST HEIGHT, EXISTING GUARDRAIL, TYPE 5	CURB RAMP, AS PER PLAN	COMBINATION CURB AND GUTTER	CURB, TYPE 2A	BARRIER REFLECTOR, TYPE A	GROUND MOUNTED SUPPORT, NO 2 POST	REMOVAL OF GROUND MOUNTED SIGN AND REEJECTION	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL											
SQ FT	FT	FT	FT	FT	EACH	CU YD	STATION	FT	FT	FT	EACH	EACH	EACH	FT	FT	FT	FT	EACH	FT	EACH	EACH	FT	EACH	EACH								
12																																
14	RIC-309-0.85				137.5			4	12	4.38	62.5	150		2	2		100															
15	RIC-309-3.18				25			3	8	4.98	100			3			237.5															
16	CRA-181-0.10									0.50																						
17	CRA-181-1.18									1.88			187.5																			
21		270	26	32															270	32	26											

TOTAL		270	26	32	162.50	187.50	7.0	20	11.74	162.50	150.00	187.50	5	2	4	337.50	270	32	26	34	14	2	2									
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ROADWAY SUB-SUMMARY

CRA-309-4.98 RIC-309-0.00
CRA-181-0.00

DESIGN FILE: i:\projects\25679\25679CR001.dgn
 WORKSTATION: sdeer DATE: 10/23/2006



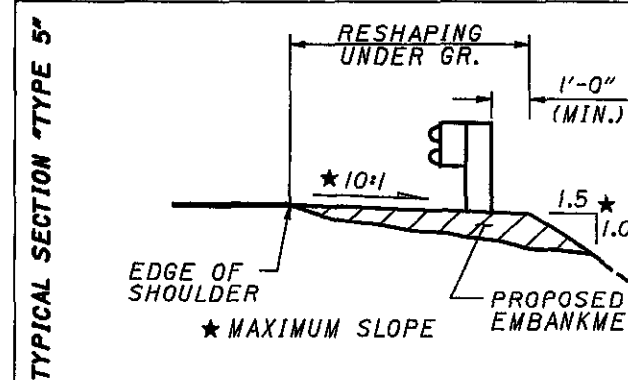
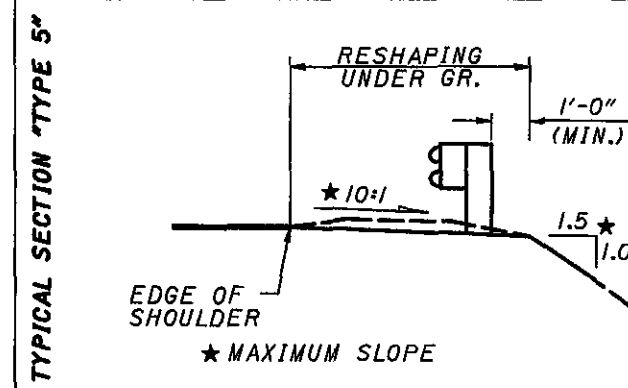
* EXISTING GUARDRAIL, TYPE 5, LONG-SPAN



GUARDRAIL DETAILS
 RIC-309-0.85

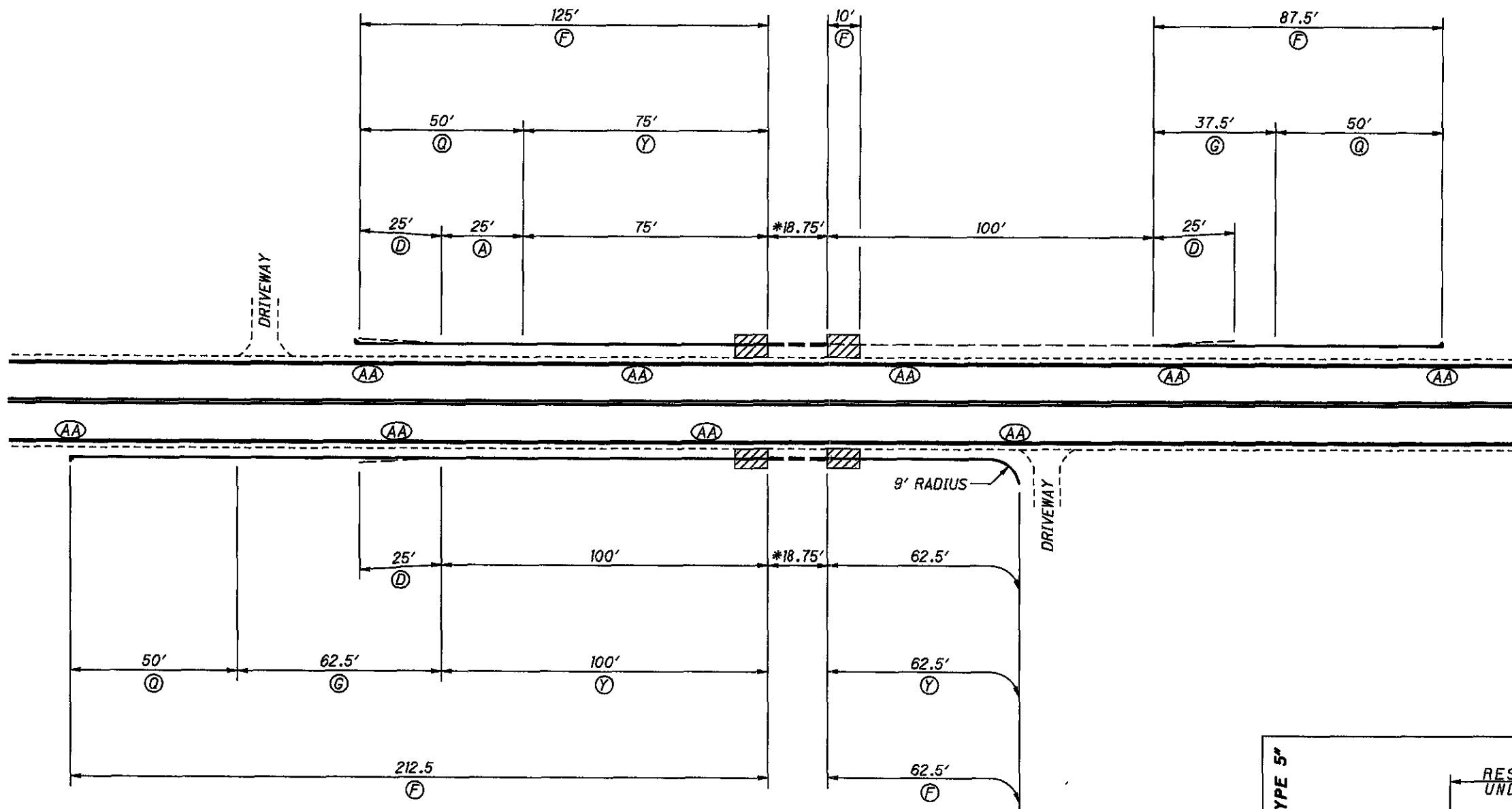
LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT		137.5	137.5
Ⓓ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2	2	4
▨	203	EMBANKMENT, AS PER PLAN	CU YD	9	3	12
Ⓕ	209	RESHAPING UNDER GUARDRAIL	STATION	2	2.38	4.38
Ⓒ	606	GUARDRAIL, TYPE 5	FT	37.5	25	62.5
Ⓚ	606	GUARDRAIL, TYPE 5, USING 9 FOOT POSTS	FT		150	150
Ⓔ	606	ANCHOR ASSEMBLY, TYPE E-98	EACH	1	1	2
Ⓢ	606	ANCHOR ASSEMBLY, TYPE T	EACH	1	1	2
Ⓨ	606	GUARDRAIL, MISC.: ADJUST HEIGHT, EXISTING GUARDRAIL, TYPE 5	FT	100		100
ⒶⒶ	626	BARRIER REFLECTOR, TYPE A	EACH	4	5	9

ALL QUANTITIES CARRIED TO ROADWAY SUB-SUMMARY, SHEET 13



CRA-309-4.98
 RIC-309-0.00
 CRA-181-0.00

* EXISTING GUARDRAIL, TYPE 5, LONG-SPAN

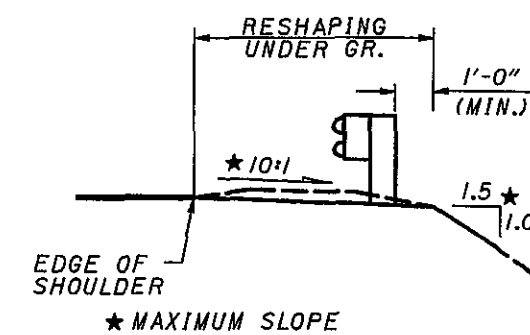


GUARDRAIL DETAILS
RIC-309-3.18

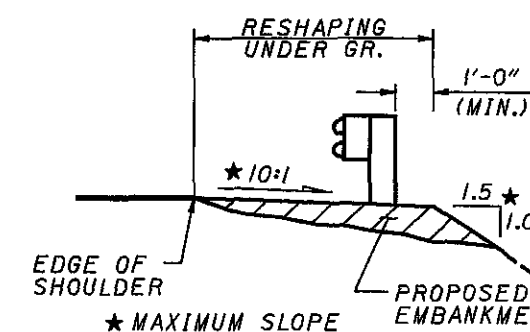
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WORKSTATION: sdeer DATE: 10/23/2006

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT	25		25
Ⓓ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2	1	3
	203	EMBANKMENT, AS PER PLAN	CU YD	4	4	8
Ⓕ	209	RESHAPING UNDER GUARDRAIL	STATION	2.23	2.75	4.98
Ⓒ	606	GUARDRAIL, TYPE 5	FT	37.5	62.5	100
Ⓔ	606	ANCHOR ASSEMBLY, TYPE E-98	EACH	2	1	3
Ⓝ	606	GUARDRAIL, MISC.: ADJUST HEIGHT, EXISTING GUARDRAIL, TYPE 5	FT	75	162.5	237.5
AA	626	BARRIER REFLECTOR, TYPE A	EACH	5	4	9

TYPICAL SECTION "TYPE 5"

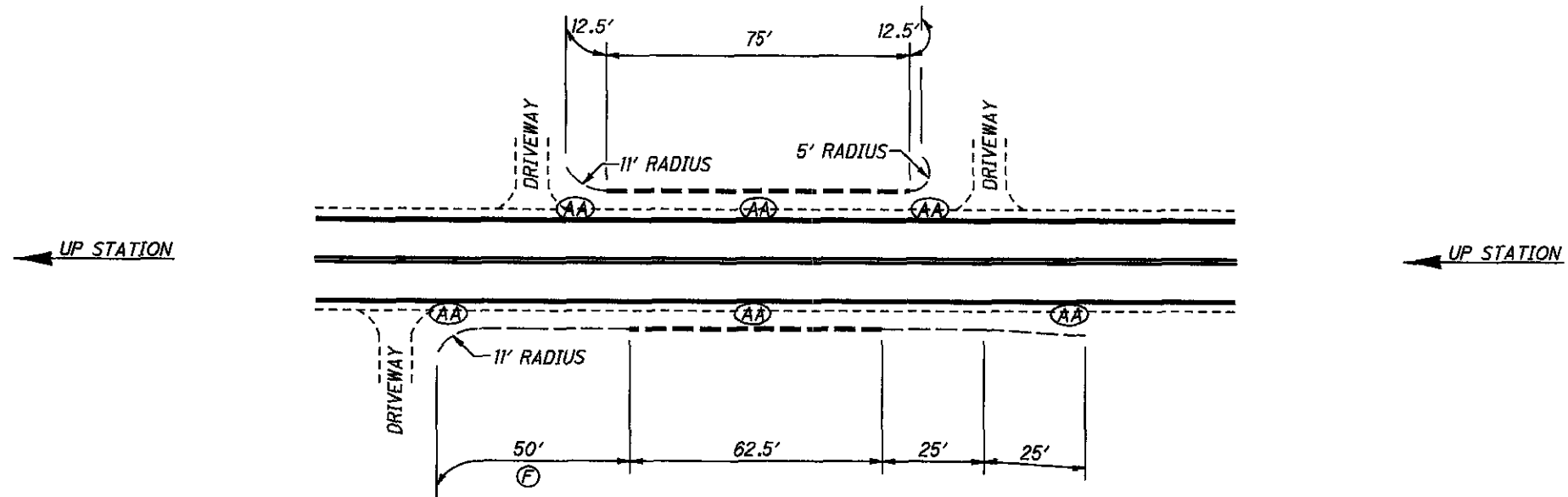


TYPICAL SECTION "TYPE 5"



CRA-309-4.98
RIC-309-0.00
CRA-181-0.00

DESIGN FILE: I:\projects\25679\25679GR003.dgn
 WORKSTATION: sdeer DATE: 10/23/2006



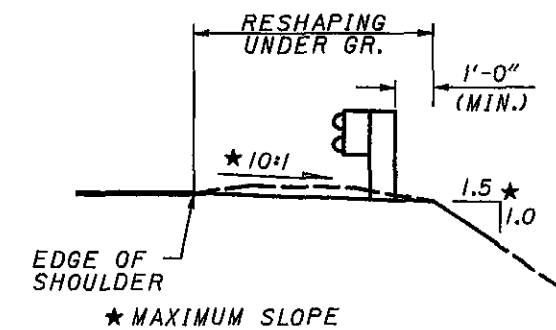
NOTES

1) ITEM 630, REMOVAL OF GROUND MOUNTED SIGN AND REERECTION (BRIDGE LOCATION MARKER SIGN) SHALL BE PERFORMED AT THIS LOCATION. SIGN SHALL NOT BE CONNECTED TO GUARDRAIL POSTS. SEE GUARDRAIL GENERAL NOTES FOR FURTHER DETAILS.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
ⓕ	209	RESHAPING UNDER GUARDRAIL	STATION	0.50		0.50
ⒶⒶ	626	BARRIER REFLECTOR, TYPE A	EACH	3	3	6

ALL QUANTITIES CARRIED TO ROADWAY SUB-SUMMARY, SHEET 13

TYPICAL SECTION "TYPE 5"




 HORIZONTAL SCALE IN FEET
 0 10 20
 TDJ
 MJS

GUARDRAIL DETAILS
 CRA-181-0.10

CRA-309-4.98
 RIC-309-0.00
 CRA-181-0.00

* EXISTING GUARDRAIL WITH TUBULAR BACKUP



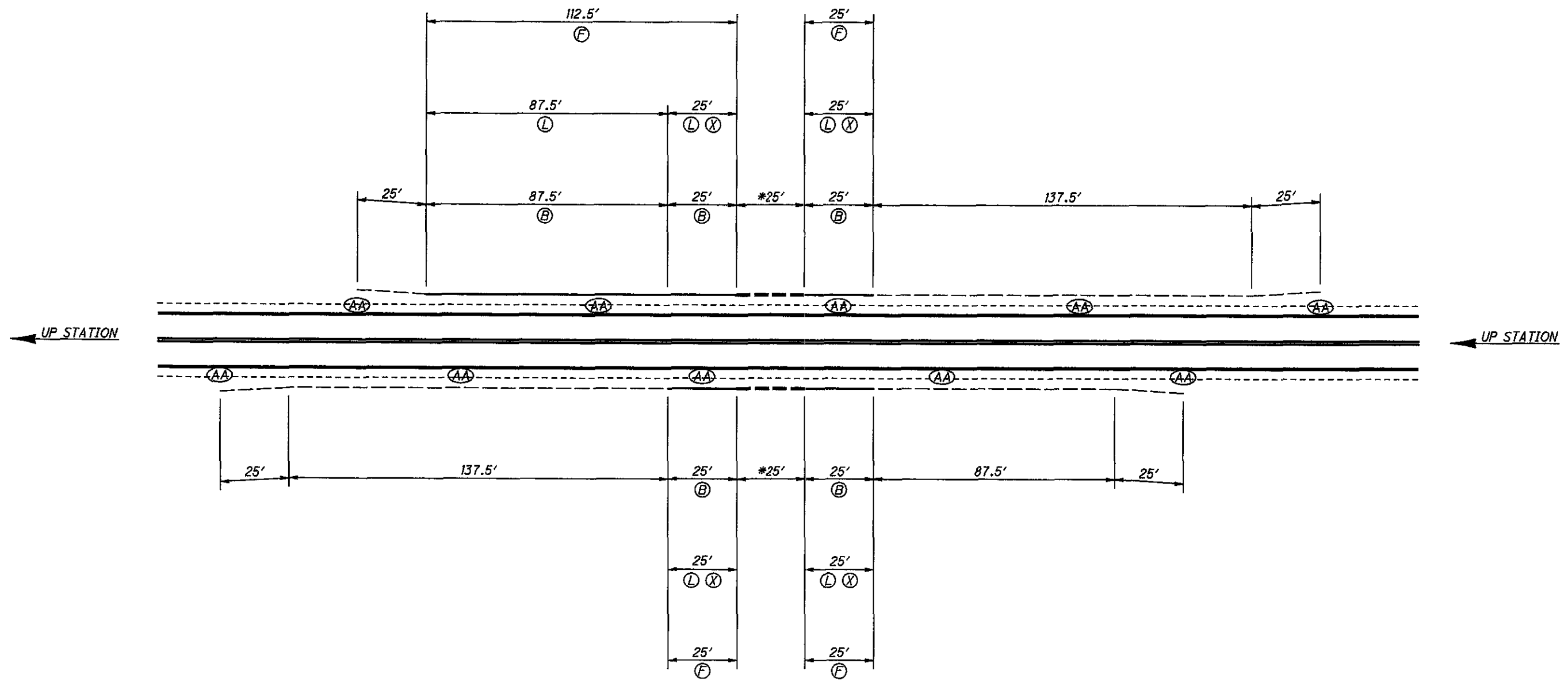
HORIZONTAL SCALE IN FEET

TDJ
MJS

GUARDRAIL DETAILS
CRA-181-1.18

CRA-309-4.98
RIC-309-0.00
CRA-181-0.00

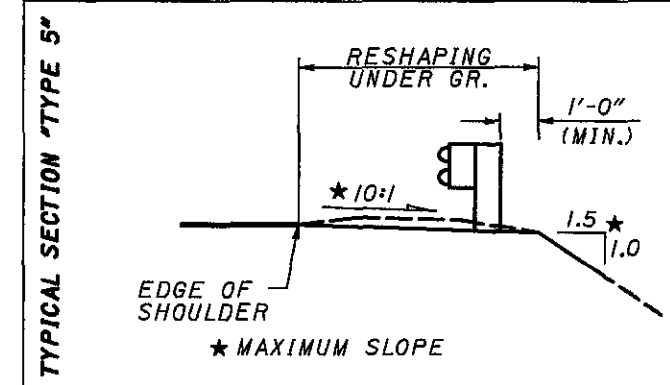
17
30



NOTES

1) ITEM 630, REMOVAL OF GROUND MOUNTED SIGN AND REERECTION (BRIDGE LOCATION MARKER SIGN) SHALL BE PERFORMED AT THIS LOCATION. SIGN SHALL NOT BE CONNECTED TO GUARDRAIL POSTS. SEE GUARDRAIL GENERAL NOTES FOR FURTHER DETAILS.

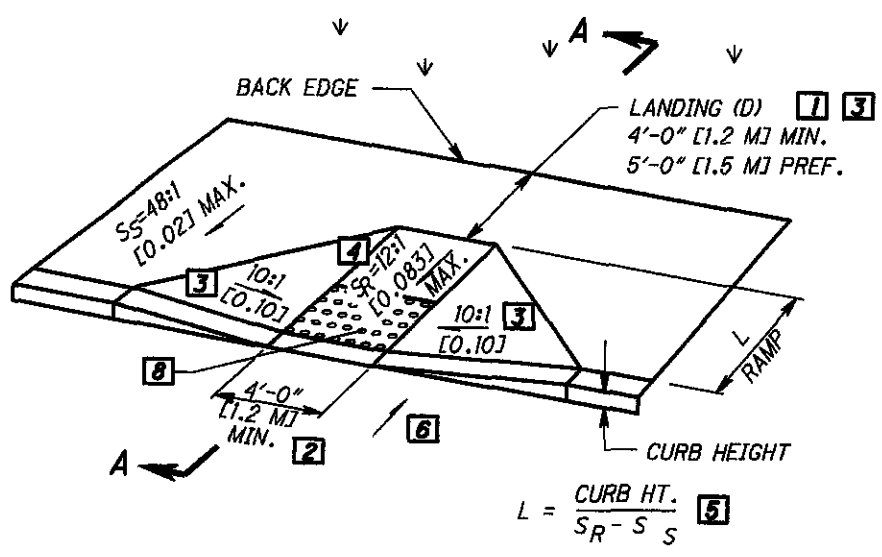
LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
ⓑ	202	GUARDRAIL REMOVED FOR REUSE	FT	50	137.5	187.5
ⓕ	209	RESHAPING UNDER GUARDRAIL	STATION	0.50	1.38	1.88
Ⓛ	606	GUARDRAIL REBUILT, TYPE 5	FT	50	137.5	187.5
ⓧ	606	BRIDGE TERMINAL ASSEMBLY, TYPE 4	EACH	2	2	4
ⒶⒶ	626	BARRIER REFLECTOR, TYPE A	EACH	5	5	10



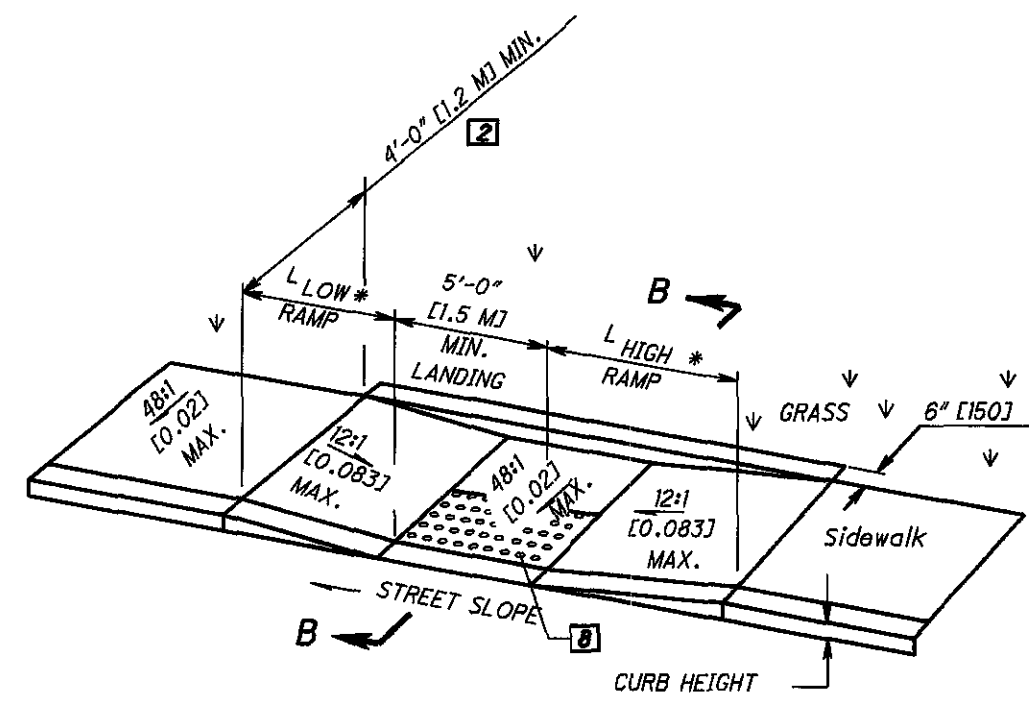
DESIGN FILE: I:\projects\25679\25679GRO04.dgn
WORKSTATION: sdeer
DATE: 10/23/2006

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]

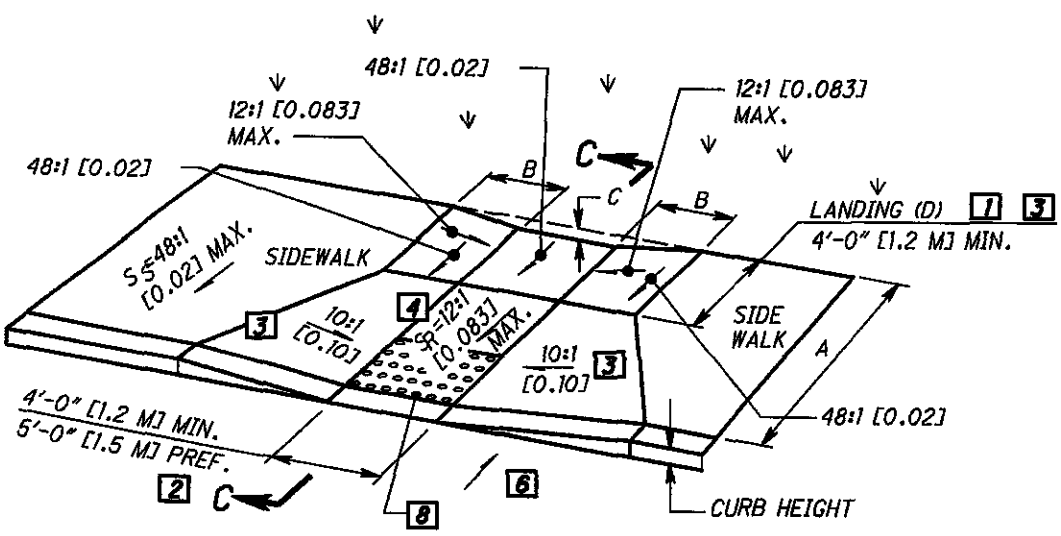
* MEASURED ALONG THE BACK OF A 6" [150] HIGH CURB.



SEE SHT. 3/3 FOR SECTION A-A
PERPENDICULAR CURB RAMP DETAIL



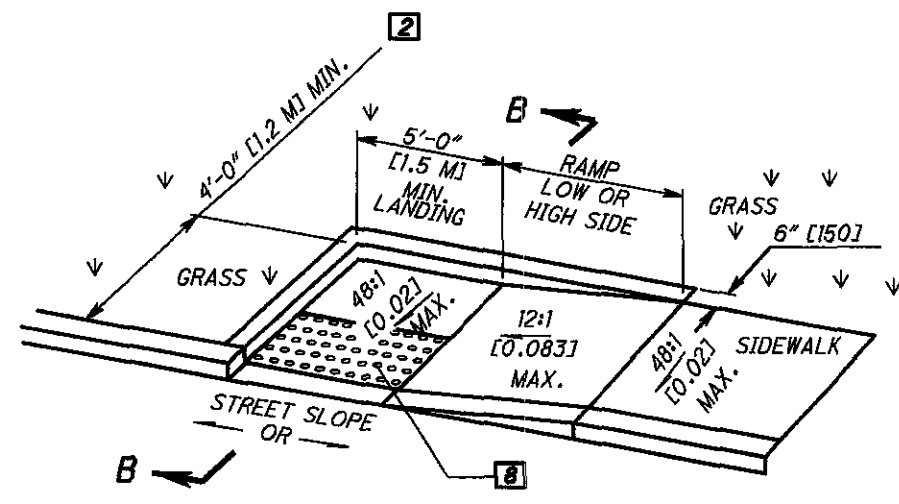
SEE SHT. 3/3 FOR SECTION B-B
PARALLEL CURB RAMP DETAIL (DOUBLE)



SEE SHT. 3/3 FOR SECTION C-C
COMBINED CURB RAMP DETAIL

$B = C / 0.083$

$C = [\text{CURB HT.} + A(S)] \cdot S [(A-D)S + D(0.02)]$



SEE SHT. 3/3 FOR SECTION B-B
PARALLEL CURB RAMP DETAIL (SINGLE)

$L_{HIGH} = \frac{\text{CURB HT.}}{0.083 - \text{STREET SLOPE}}$ [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].

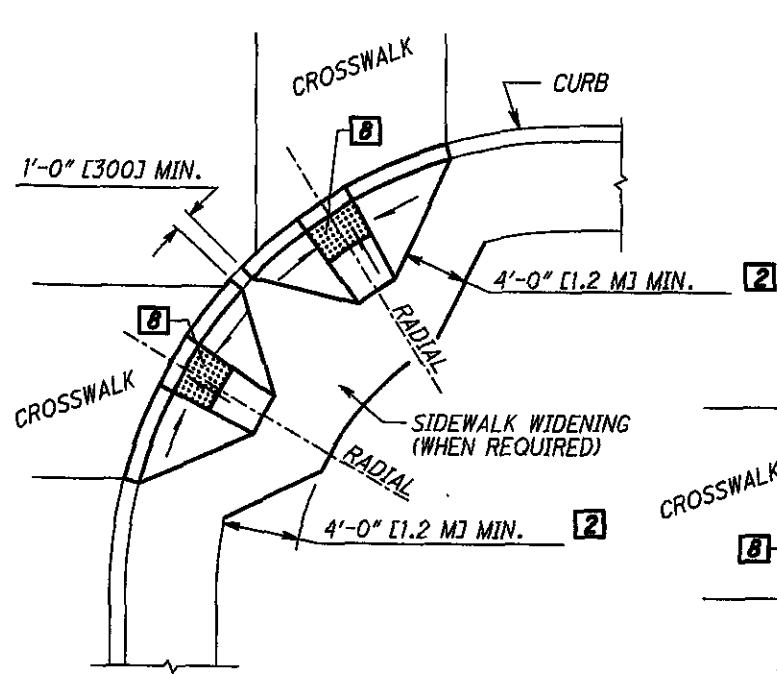
FLARED SIDES ARE NOT REQUIRED WHERE THE EDGES OF A CURB RAMP ARE PROTECTED BY LANDSCAPING OR OTHER BARRIERS TO TRAVEL BY WHEEL CHAIR USERS OR PEDESTRIANS ACROSS THE EDGE OF THE CURB RAMP. HOWEVER, IF THE FLARED SIDES ARE USED IN THESE AREAS, THEY MAY BE OF ANY SLOPE.
- [4] THE SLOPE OF THE RAMP TOWARD 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) IS NOT FEASIBLE, IT MAY BE REDUCED AS FOLLOWS:

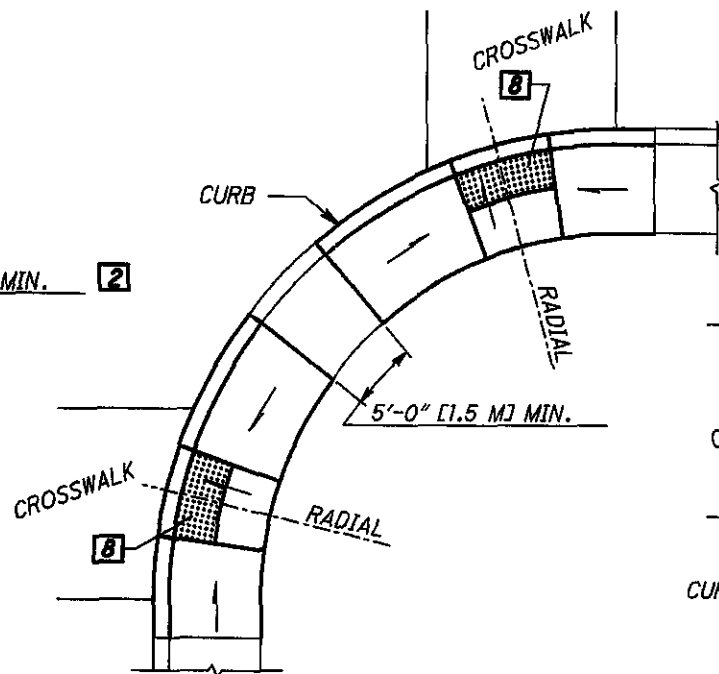
A) 10:1 [0.10] FOR A MAX. RISE OF 6" [150],
B) 8:1 [0.125] FOR A MAX. RISE OF 3" [75],
C) 6:1 [0.167] OVER A MAX. RUN OF 2'-0" [610] FOR HISTORIC AREAS WHERE A FLATTER SLOPE IS NOT FEASIBLE.
- [5] THE MINIMUM LENGTH OF A PERPENDICULAR RAMP IS 6' [2.0 M] FROM THE BACK OF A 6" [150] CURB AND MAY BE INCREASED 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 3/3.

DESIGN FILE: i:\projects\25679\25679GM_C1.dgn
WORKSTATION: sdeer
DATE: 10/23/2006

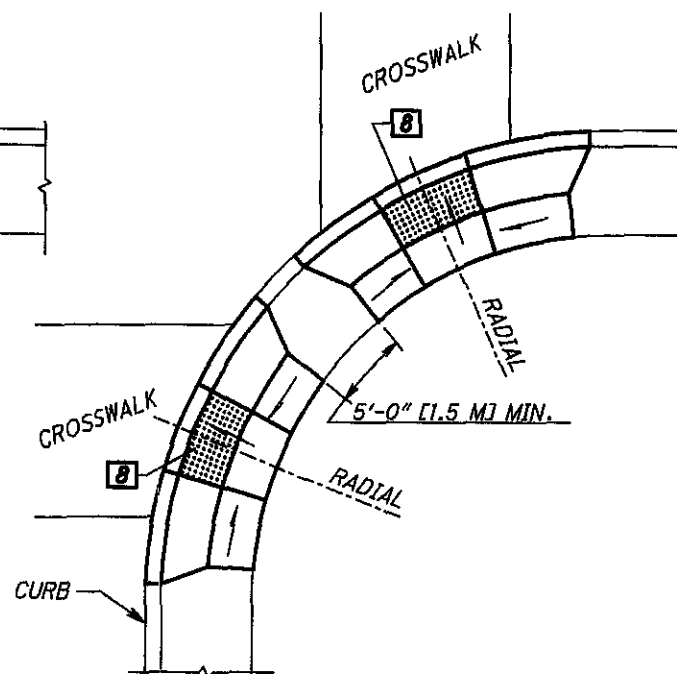
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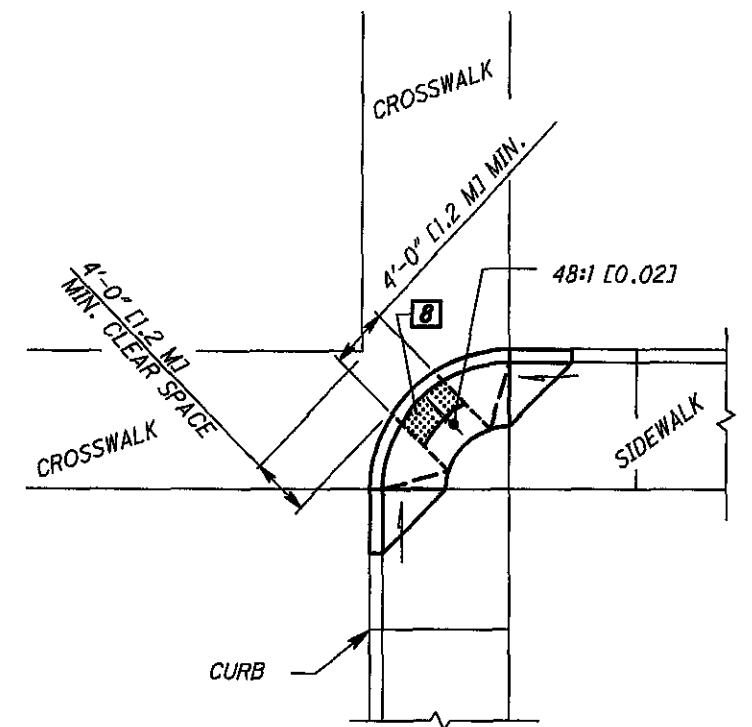
**DESIGN A
 PERPENDICULAR RAMP**



**DESIGN B
 PARALLEL RAMP**



**DESIGN C
 COMBINATION RAMP**



**DESIGN D
 DIAGONAL RAMP**

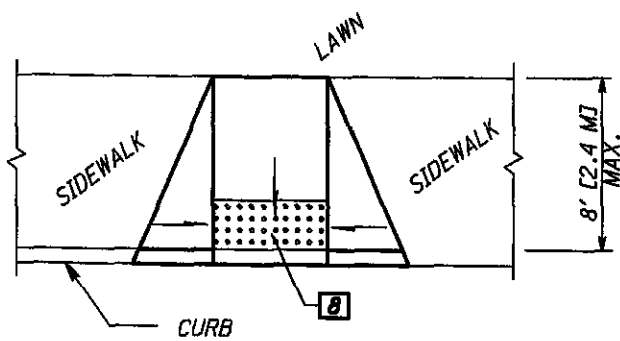
USE IN EXISTING WALKS ONLY AND WHEN SITE CONSTRAINTS PROHIBIT OTHER DESIGNS. THE DIAGONAL RAMP MAY BE PERPENDICULAR, PARALLEL OR COMBINATION.

AVOID USING WHERE CURB RADII ARE LESS THAN 20'-0" [6.0 M].

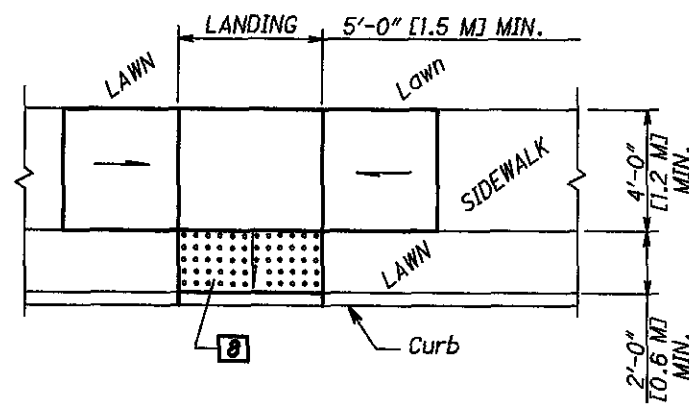
CORNER CURB RAMP DESIGNS

(SEE CURB RAMP DETAILS ON SHT. 1/3 FOR ADDITIONAL REQUIREMENTS.)

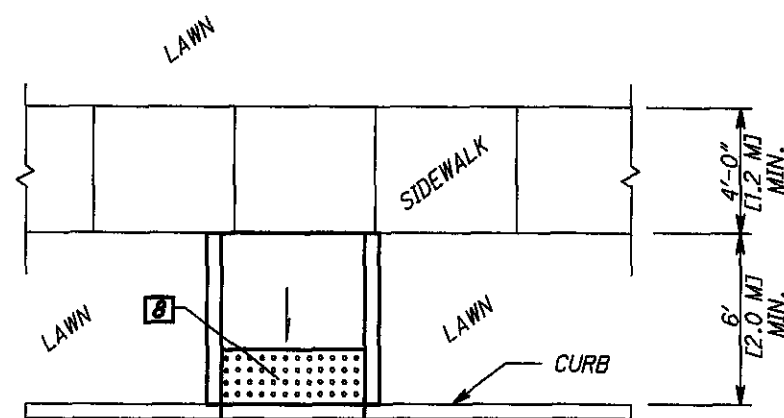
FOR LEGEND, SEE SHEET 1/3.



**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.)

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 1, 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 PAVES, 4"X8"X2-1/4", CLEAR RED (RUSTIC)
#30.

2) HANOVER ARCHITECTURAL PRODUCTS,
240 BENDER RD., HANOVER, PA. 17331, (717) 637-0500
DETECTABLE WARNING PAVES, 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 PAVES,
4"X8"X2-1/4", RED BLEND.

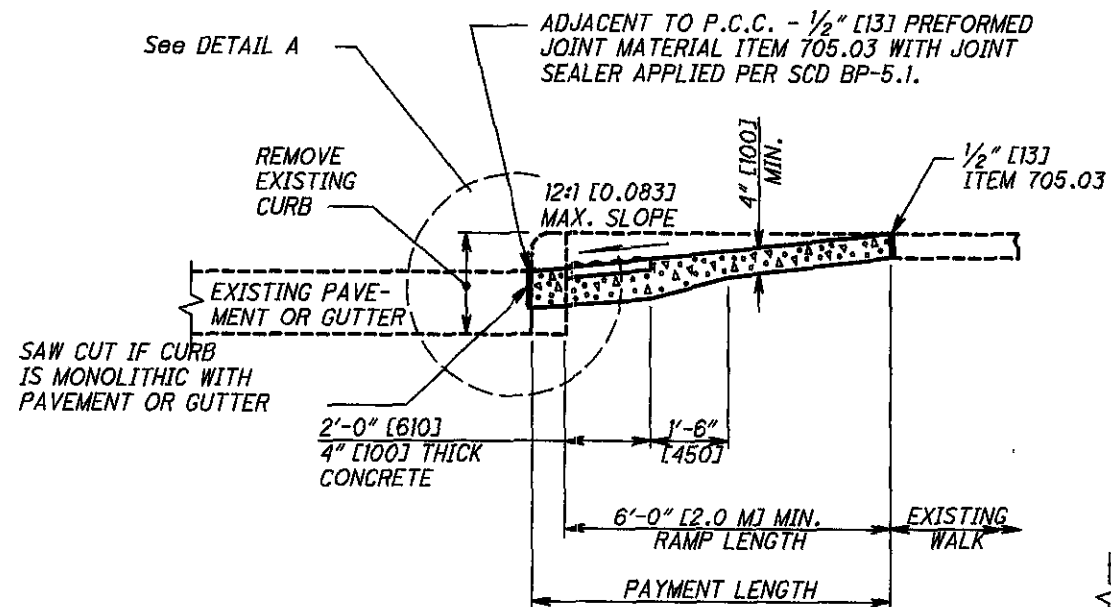
PAVERS WILL LAID ON TOP OF A 4" [100] UNREINFORCED CONCRETE BASE. SETTING BED AND JOINTS TO BE MORTARED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTION, OR WITH A MAXIMUM 1/2" [13] THICK BED OF LATEX MODIFIED CEMENT MORTAR. MORTAR JOINTS TO A WIDTH NOT GREATER THAN 3/32" [4] AND NOT LESS THAN 1/16" [1.5]. 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.

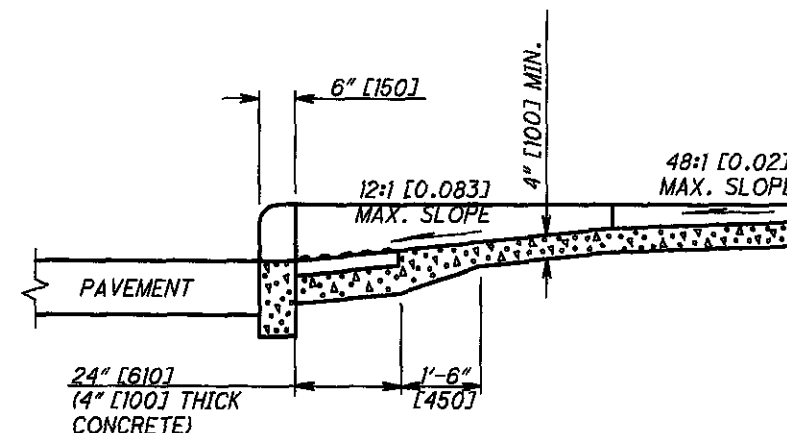
THE SURFACE OF ANY TWO ADJACENT UNITS SHOULD NOT DIFFER BY MORE THAN 1/8" [3] IN HEIGHT. BRICKS SHALL BE PLACED IN A RUNNING BOND PATTERN. FACE OF ALL BRICK SHALL BE CLEAN OF CEMENT AND PROTECTED SO AS TO AVOID CHIPPING DURING CONSTRUCTION.

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.

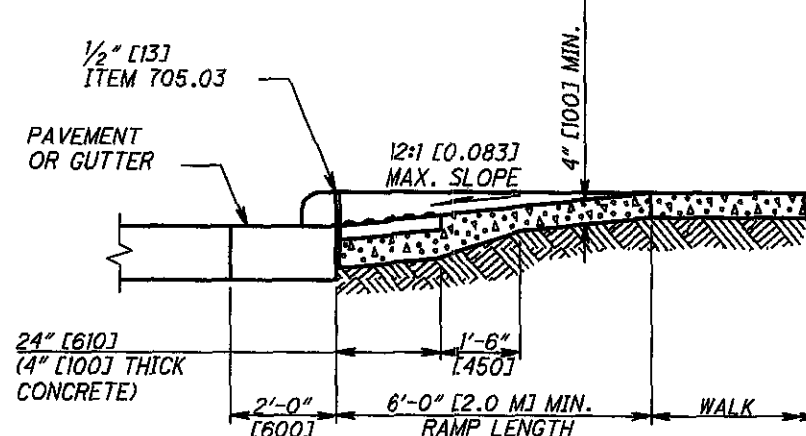
PAYMENT: WALK AND CURB, ITEMS 608 AND 609, SHALL BE MEASURED THROUGH THE CURB RAMP AREA PAID FOR UNDER THEIR RESPECTIVE ITEMS. ITEM 608 - CURB RAMP, AS PER PLAN, EACH CONSTRUCTED IN NEW CURB AND WALK SHALL INCLUDE THE COST OF ANY ADDITIONAL MATERIALS AND INSTALLATION (INCLUDING TRUNCATED DOMES), GRADING, 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.



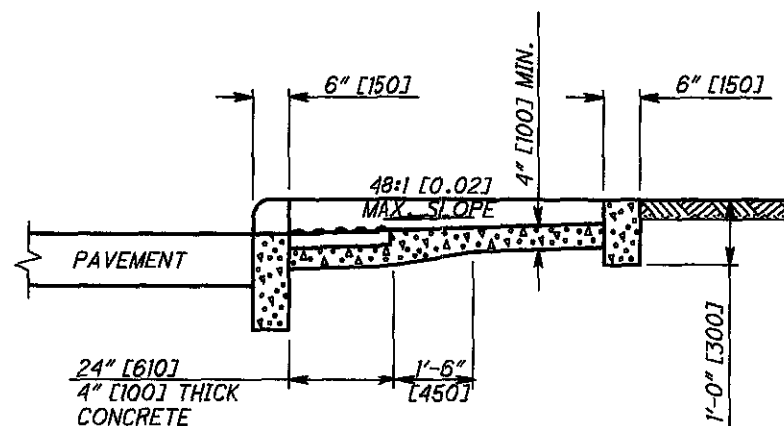
**SECTION A-A
EXISTING WALK DETAIL**
SEE SHEET 1 OF 3.



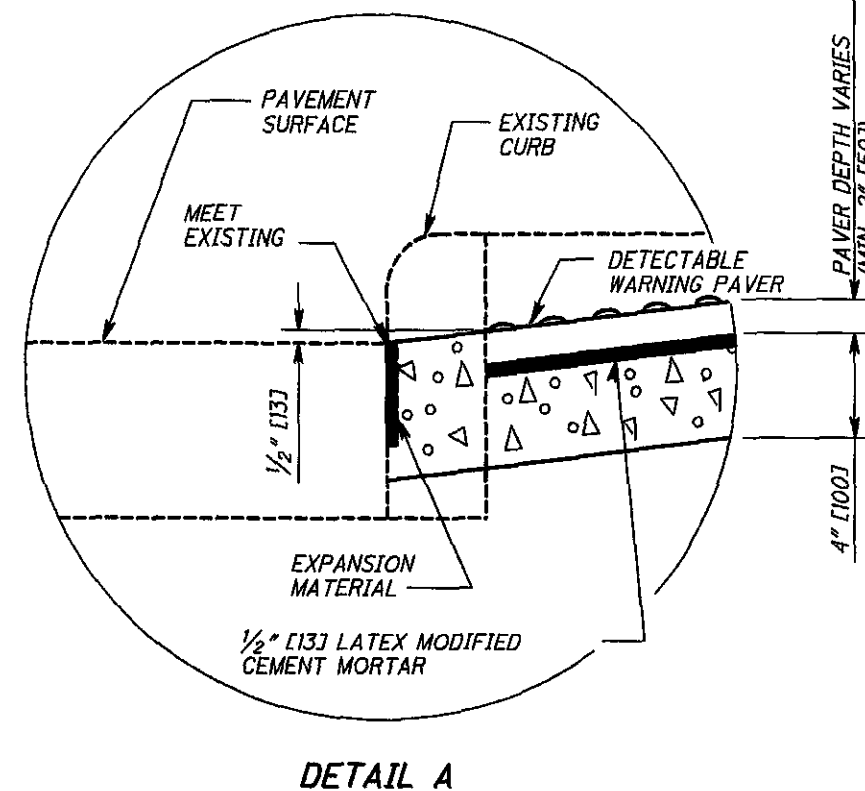
SECTION C-C
SEE SHEET 1 OF 3.



**SECTION A-A
NORMAL DETAIL**
SEE SHEET 1 OF 3.
(GUTTER SHOWN)



SECTION B-B
SEE SHEET 1 OF 3.



DETAIL A

DESIGN FILE: I:\projects\25679\25679GM_C3.dgn
WORKSTATION: sdeer
DATE: 10/23/2006

ITEM 608. CURB RAMP, AS PER PLAN

ITEM 608, CURB RAMP, AS PER PLAN IS INTENDED TO REPLACE THE EXISTING WALK, PAVEMENT, EMBANKMENT, CURB, STEPS, AND CURB RAMPS WITH CURB RAMPS WITH TRUNCATED DOMES. PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE IMPROVEMENT EXCEPT WALK REMOVED WILL BE PAID FOR SEPARATELY. THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED. SEE SHEETS 18-20 FOR ADDITIONAL DETAILS ON CURB RAMPS WITH TRUNCATED DOMES.

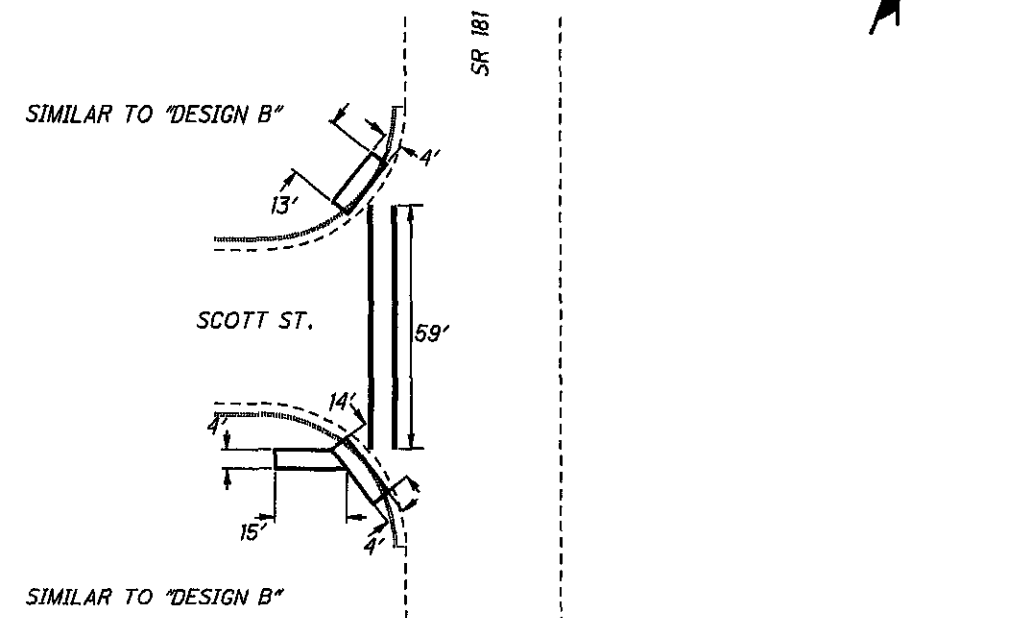
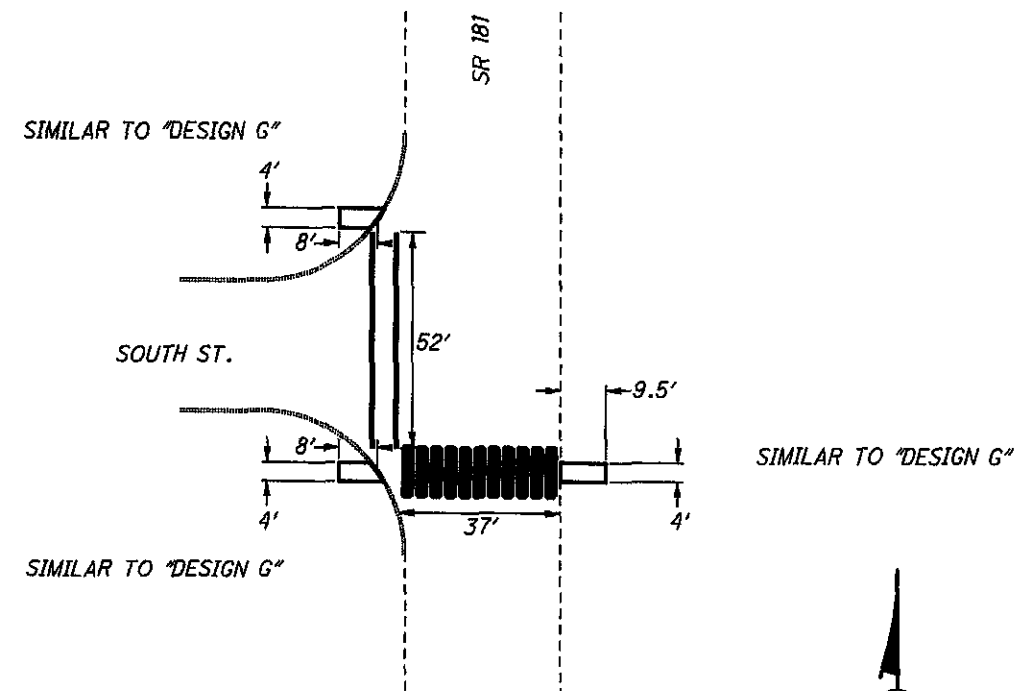
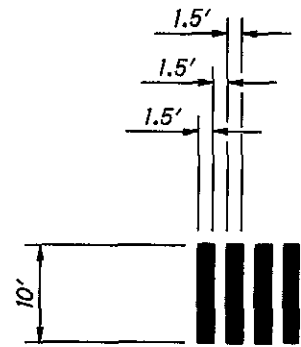
"DESIGN D - DIAGONAL RAMPS" ARE DISCOURAGED FOR NEW CONSTRUCTION AND EXISTING DIAGONAL RAMPS SHOULD BE RETROFITTED WITH TWO PERPENDICULAR RAMPS, WHEN PRACTICABLE.

ITEM 202. WALK REMOVED, AS PER PLAN

ITEM 202, WALK REMOVED IS INTENDED TO REMOVE THE EXISTING WALK, CURB, EMBANKMENT, STEPS, PAVEMENT, AND CURB RAMPS WHILE REPLACING THESE AREAS WITH CURB RAMPS WITH TRUNCATED DOMES. PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO REMOVE THE ABOVE LISTED ITEMS.

INTERSECTION CROSSWALK MARKING DETAIL

THE MARKING DETAIL SHOWN BELOW SHALL ONLY BE APPLIED TO THE INTERSECTIONS SHOWN TO IMPROVE DRIVER AWARENESS OF THE PEDESTRIAN CROSSINGS.



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
SOUTH	202	WALK REMOVED, AS PER PLAN	SQ FT	38	64	102
SCOTT	202	WALK REMOVED, AS PER PLAN	SQ FT		168	168
				TOTAL	270	

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
SOUTH	202	CURB REMOVED	FT		26	26
				TOTAL	26	

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
SCOTT	202	CURB AND GUTTER REMOVED	FT		32	32
				TOTAL	32	

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
SOUTH	608	CURB RAMP, AS PER PLAN	SQ FT	38	64	102
SCOTT	608	CURB RAMP, AS PER PLAN	SQ FT		168	168
				TOTAL	270	

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
SOUTH	609	CURB, TYPE 2-A	FT		26	26
				TOTAL	26	

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
SCOTT	609	COMBINATION CURB AND GUTTER, TYPE 2	FT		32	32
				TOTAL	32	

QUANTITIES CARRIED TO ROADWAY SUB-SUMMARY, SHEET 13.

CURB RAMP DETAILS
 CITY OF CRESTLINE

CRA-309-4.98
 RIC-309-0.00
 RIC-181-0.00

DESIGN FILE: i:\projects\25679\25679GM_C4.dgn
 WORKSTATION: sdeer

FUNDING PARTICIPATION FC=80% FED /20% CRESTLINE FG=80% FED /20% GALION FS=80% FED /20% STATE	COUNTY-ROUTE	SLM		HIGHWAY MILES	614				642, TYPE 2				644														SPECIAL						
		FROM	TO		MILE	WORK ZONE LANE LINE, CLASS I, 642 PAINT	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	EDGE LINE		CENTER LINE		AUXILIARY MARKINGS (740.04)																			
										TOTAL (PAY QUANTITY) (WHITE)	TOTAL (PAY QUANTITY) (YELLOW)	LANE LINE	SOLID LINE EQUIVALENT	TOTAL (PAY QUANTITY)	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	TRANSVERSE/ DIAGONAL LINE (WHITE)	TRANSVERSE/ DIAGONAL LINE (YELLOW)	ISLAND MARKING	RAILROAD SYMBOL MARKING	SCHOOL SYMBOL MARKING		PARKING LOT STALL MARKING	LANE ARROW			WORD ON PAVEMENT "ONLY"		HANDICAP SYMBOL MARKING	AIR SPEED ZONE MARKING		
																						72 INCH	96 INCH		LEFT	RIGHT		THROUGH	COMBINATION			72 INCH	96 INCH
FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT						
FG	CRA-309	4.98	5.02	0.04		0.08			0.08		0.080	0.04																					
FG	CRA-309	5.02	5.29	0.27					0.27																								
FS	CRA-309	5.02	5.29	0.27		0.54			0.27		0.333	0.27		40																			
FG	CRA-309	5.29	5.56	0.27		0.54			0.54		0.177	0.27																					
FS	CRA-309	5.56	5.62	0.06		0.12			0.06		0.075	0.06																					
FG	CRA-309	5.56	5.62	0.06					0.06																								
FS	CRA-309	5.62	5.67	0.05		0.1			0.10		0.070	0.05																					
FS	CRA-309	5.67	5.68	0.01		0.02			0.01		0.012	0.01																					
FG	CRA-309	5.67	5.68	0.01					0.01																								
FG	CRA-309	5.68	5.70	0.02		0.04			0.04		0.025	0.02																					
FG	CRA-309	5.70	5.78	0.08					0.08																								
FS	CRA-309	5.70	5.78	0.08		0.16			0.08		0.100	0.08																					
FG	CRA-309	5.78	5.93	0.15		0.3			0.30		0.205	0.15		20																			
FG	CRA-309	5.93	6.03	0.10					0.10																								
FS	CRA-309	5.93	6.03	0.10		0.2			0.10		0.018	0.10																					
TOTAL QUANTITY FOR FED / STATE FUNDING SPLIT						1.14			0.62		0.61	0.57		40																			
TOTAL QUANTITY FOR FED / GALION FUNDING SPLIT						0.96			1.48		0.49	0.48		20																			
SUBTOTAL						2.10			2.10		1.10	1.05		60																			

QUANTITIES CARRIED TO SHEET 23

FUNDING PARTICIPATION FC=80% FED /20% CRESTLINE FG=80% FED /20% GALION FS=80% FED /20% STATE	COUNTY	SLM		DETAIL	202		621		PRISMATIC RETRO-REFLECTOR TYPES				REMARKS	DETAIL	DESCRIPTION			
		FROM	TO		RAISED PAVEMENT MARKER REMOVED	RPM, AS PER PLAN	ONE-WAY											
							WHITE	YELLOW / YELLOW	WHITE / RED	YELLOW / RED	BLUE / BLUE							
												WHITE				YELLOW / YELLOW	WHITE / RED	YELLOW / RED
FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH							
FS	CRA-309	4.98	6.03	8,18,GAP	70	84									THRU APPROACH @ SR 61 (EAST APPROACH), CONTINUOUS ROUTE TREATMENT	1	MULTILANE UNDIVIDED TYPICAL SPACING	
SUBTOTAL CRA-309					70	84										2	TAPERED ACCEL. LANE	
																3	DECELERATION LANE	
																4	PARALLEL ACCEL LANE	
																5	MULTILANE DIVIDED/EXPRESSWAY	
																6	STOP APPROACH	
																7	2 LANE APPR. WITH TURN LANE	
																8	THROUGH APPROACH	
																9	3 LANE APPR. WITH TURN LANE	
																10	3 LANE DIVIDED TO 2 LANE TRANSITION	
																11	3 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.	
																18	FIRE HYDRANT	
																GAP	CENTER LINE AT 80 FT. TYP.	
NOTES																		
1) SEE PAVEMENT MARKING DETAIL SHEET SUPPLIED AT THE PRECONSTRUCTION MEETING																		
2) THE LANES SHALL BE STRIPED AT 12' WIDTHS																		
3) WORK ZONE STOP LINES SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS SR 314 US 30 MIDDLETOWN RD																		
4) WORK ZONE CENTER LINE SHALL BE PLACED AFTER EACH & EVERY DIRECTIONAL APPLICATION OF THE CHIP SEAL																		
SHEET TOTAL					70	84												
QUANTITIES CARRIED TO SHEET 23																		

PAVEMENT MARKING / RPM SUB-SUMMARY
CRA-309-4.98
RIC-309-0.00
CRA-
22
30

FUNDING PARTICIPATION FC=80% FED /20% CRESTLINE FG=80% FED /20% GALION FS=80% FED /20% STATE	COUNTY-ROUTE	SLM		HIGHWAY MILES	614				642, TYPE 2					644													SPECIAL					
					WORK ZONE LANE LINE, CLASS I, 642 PAINT	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	EDGE LINE		CENTER LINE			AUXILIARY MARKINGS (740.04)																		
									TOTAL (PAY QUANTITY) (WHITE)	TOTAL (PAY QUANTITY) (YELLOW)	LANE LINE	SOLID LINE EQUIVALENT	TOTAL (PAY QUANTITY)	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	TRANSVERSE/ DIAGONAL LINE (WHITE)	TRANSVERSE/ DIAGONAL LINE (YELLOW)	ISLAND MARKING	RAILROAD SYMBOL MARKING	SCHOOL SYMBOL MARKING		PARKING LOT STALL MARKING	LANE ARROW				WORD ON PAVEMENT "ONLY"		DOTTED LINE, 4"	HANDICAP SYMBOL MARKING	AIR SPEED ZONE MARKING
																					72 INCH	96 INCH		LEFT	RIGHT	THROUGH		COMBINATION	72 INCH			
FROM	TO	MILE	MILE	MILE	FT	FT	MILE	MILE	MILE	MILE	MILE	FT	FT	FT	FT	FT	SQ FT	EACH	EACH	FT	EACH	EACH	FT	EACH	EACH							
FG	RIC-309	0.00	0.13	0.13					0.13																							
FS	RIC-309	0.00	0.13	0.13		0.26			0.13																							
FS	RIC-309	0.13	0.26	0.13		0.26			0.26																							
FG	RIC-309	0.26	0.27	0.01					0.01																							
FS	RIC-309	0.26	0.27	0.01		0.02	36		0.01																							
FS	RIC-309	0.27	3.01	2.74		5.48			5.48					148																		
FC	CRA-181	0.00	0.16	0.16		0.48	48		0.32					45	332																	
FS	CRA-181	0.16	1.01	0.85		2.55	58		0.85											2												
FC	CRA-181	0.16	1.01	0.85					0.85					67																		
FS	CRA-181	1.01	1.21	0.20		0.60			0.40					29																		
TOTAL QUANTITY FOR FED / STATE FUNDING SPLIT						9.17		94	7.13				4.69	4.06	177						2											
TOTAL QUANTITY FOR FED./ GALION FUNDING SPLIT									0.14																							
TOTAL QUANTITY FOR FED./ CRESTLINE FUNDING SPLIT						0.48		48	1.17				0.32	0.16	112	332																
SHEET TOTAL						9.65		142	8.44				5.01	4.22	289	332					2											
QUANTITIES FROM SHEET 22																																
TOTAL QUANTITY FOR FED./ STATE FUNDING SPLIT						1.14			0.62				0.61	0.57	40																	
TOTAL QUANTITY FOR FED./ GALION FUNDING SPLIT						0.96			1.48				0.49	0.48	20																	
PROJECT TOTAL						11.75		142	10.54				6.11	5.27	349	332					2											

FUNDING PARTICIPATION FC=80% FED /20% CRESTLINE FG=80% FED /20% GALION FS=80% FED /20% STATE	COUNTY	SLM		DETAIL	202		621		PRISMATIC RETRO-REFLECTOR TYPES				REMARKS	DETAIL	DESCRIPTION	
					RAISED PAVEMENT MARKER REMOVED	RPM, AS PER PLAN	ONE- WAY	TWO-WAY			GAP					
								WHITE	YELLOW / YELLOW	WHITE / RED		YELLOW / RED				BLUE / BLUE
FROM	TO	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH					
FS	RIC-309	0.00	1.71	18,GAP	114	114									CONTINUOUS ROUTE TREATMENT	
FS	RIC-309	1.71	2.32	15	78	78									2 CURVES	
FS	RIC-309	2.32	2.80	GAP	32	32									CONTINUOUS ROUTE TREATMENT	
FS	RIC-309	2.80	3.01	8	15	15									THRU APPROACH @ SR 181	
SUBTOTAL RIC-309					239	242			239			3				
FS	CRA-181	0.16	1.21	6,18	86	91	16	70							STOP APPROACH @ MDDLETOWN RD. (CR 77)	
SUBTOTAL CRA-181					86	91	16	70				5				
SHEET TOTAL					325	333	325	309	325			8				
QUANTITIES FROM SHEET 22					70	84		70				14				
PROJECT TOTAL					395	417	395	379	395			22				

- 1 MULTILANE UNDIVIDED TYPICAL SPACING
 - 2 TAPERED ACCEL LANE
 - 3 DECELERATION LANE
 - 4 PARALLEL ACCEL LANE
 - 5 MULTILANE DIVIDED/EXPRESSWAY
 - 6 STOP APPROACH
 - 7 2 LANE APPR. WITH TURN LANE
 - 8 THROUGH APPROACH
 - 9 3 LANE APPR. WITH TURN LANE
 - 10 3 LANE DIVIDED TO 2 LANE TRANSITION
 - 11 3 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.
 - 18 FIRE HYDRANT
 - GAP CENTER LINE AT 80 FT TYP.
- NOTES**
- 1) SEE PAVEMENT MARKING DETAIL SHEET SUPPLIED AT THE PRECONSTRUCTION MEETING
 - 2) THE LANES SHALL BE STRIPED AT 12' WIDTHS
 - 3) WORK ZONE STOP LINES SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS
SR 314
US 30
MIDDLETOWN RD.
 - 4) WORK ZONE CENTER LINE SHALL BE PLACED AFTER EACH & EVERY DIRECTIONAL APPLICATION OF THE CHIP SEAL

CALC BY TDJ
 CRD BY MJB
 PAVEMENT MARKING / RPM SUB-SUMMARY
 CRA-309-4.98
 RIC-309-0.00 CRA-181-0.00
 23
 30

REFERENCES SHALL BE MADE TO THE FOLLOWING STANDARD DRAWINGS:

BP-3.1 DATED 7/16/04
MT-101.60 DATED 9/20/06

ADD TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

848 DATED 4/15/05

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002, INCLUDING THE 2003 AND 2004 SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN DATA:

CONCRETE CLASS C - $f'c = 4,000 \text{ psi}$ (SUBSTRUCTURE)
DECK PROTECTION METHOD - MICRO SILICA MODIFIED OVERLAY
SEE GENERAL SUMMARY AND DETAILS

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 OBSERVATIONS 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 AND 105.02.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURES. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

EXISTING PLANS:

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.

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; SPECIFICALLY, THE CONTRACTOR SHALL PROVIDE A 600:1 TAPER RATE FOR PLANING OPERATIONS.

ITEM 516 - JOINT SEALER:

THE JOINT SEALER SHALL MEET ASTM D 6690, TYPE II, AS PER CMS 705.04.

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

ITEM 511 - CLASS C CONCRETE, ABUTMENT, AS PER PLAN:

THE COARSE AGGREGATE SHALL BE LIMESTONE.

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

ITEM 202. PORTIONS OF STRUCTURE REMOVED:

THIS ITEM SHALL BE USED TO REMOVE PORTIONS OF THE WINGWALLS, ABUTMENT BACKWALLS, AND APPROACH SLABS, AS INDICATED IN THE PLAN. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NORMAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

CUT LINE CONSTRUCTION JOINT PREPARATION:

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

SUBSTRUCTURE CONCRETE REMOVAL:

SUBSTRUCTURE CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

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

THE COARSE AGGREGATE SHALL BE LIMESTONE.

THE SURFACE FINISH REQUIREMENTS SHALL BE AS PER CMS 511.19 AND 511.20 IN LIEU OF THAT WHICH IS SPECIFIED IN 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:

THE COARSE AGGREGATE SHALL BE LIMESTONE.

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

ITEM 848 - EXISTING CONCRETE OVERLAY REMOVED, AS PER PLAN (1 1/2" NOMINAL THICKNESS):

THIS ITEM SHALL BE USED TO REMOVE THE EXISTING OVERLAY AS PER DETAILS IN THE PLAN.

THE EXISTING OVERLAY SHALL BE SAW CUT 1 1/2" DEEP AT A DISTANCE OF 1'-6" FROM EACH DECK EDGE.

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 512 - TREATING CONCRETE BRIDGE DECKS WITH GRAVITY-FED RESIN:

THIS ITEM SHALL CONSIST OF FURNISHING THE NECESSARY LABOR, MATERIALS AND EQUIPMENT NEEDED FOR SURFACE PREPARATION, MIXING AND PLACING THE SEAL ONTO THE CONSTRUCTION JOINT FORMED ALONG EDGES OF THE NEW OVERLAY.

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

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER SQUARE YARD FOR ITEM 512 - TREATING CONCRETE BRIDGE DECKS WITH GRAVITY-FED RESIN WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

DESIGN FILE I:\projects\25679\st\loc\25679BRGN001.dgn
WORKSTATION: dmoflens DATE: 10/31/2006

DISTRICT THREE
OFFICE OF PRODUCTION
DATE 6/06
REVISIONS
ACH
D/JV
D/JV
DCN
STRUCTURE GENERAL NOTES
CRA-309-4.98
RIC-309-0.00
CRA-181-0.00
24
30

ITEM 614 - MAINTAINING TRAFFIC:

DETOUR LIMITATION AND INTERIM COMPLETION DATE:

TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED TWENTY-ONE (21) CONSECUTIVE CALENDAR DAYS, THROUGH TRAFFIC WILL BE DETOURED AS SHOWN ON THIS SHEET.

STRUCTURE CRA-181-0010 SHALL NOT BE CLOSED TO TRAFFIC UNTIL AFTER JUNE 15, 2007.

THE CONTRACTOR SHALL NOTIFY THE O.D.O.T. DISTRICT THREE ROADWAY SERVICES MANAGER, IN WRITING, A MINIMUM OF FOURTEEN (14) DAYS IN ADVANCE OF THE DATE THE 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 AT THE APPROXIMATE WORK LIMITS OF THE PROJECT, AND THE ADVANCE WARNING SIGNS AS SHOWN ON STANDARD CONSTRUCTION DRAWING MT-101.60.

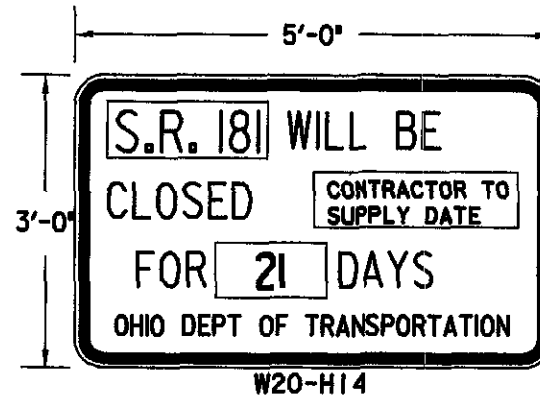
THE TWENTY-ONE (21) CONSECUTIVE CALENDAR DAYS SHALL BE CONSIDERED AS AN INTERIM COMPLETION DATE (SECTION 108) AND FOR EACH CALENDAR DAY BEYOND THE TWENTY-ONE (21) DAYS THAT THE ROADWAY REMAINS CLOSED TO TRAFFIC, THE CONTRACTOR WILL BE ASSESSED LIQUIDATED DAMAGES, AS PER SECTION 108.07 OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

ACCESS TO ADJACENT PROPERTIES SHALL BE MAINTAINED AT ALL TIMES AS PER 614.02 (a).

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 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 ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

NOTICE OF CLOSURE SIGNS:

THESE SIGNS 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 LOCATED IN THE FIELD SO AS NOT TO INTERFERE WITH ANY PERMANENT SIGNS. ON THIS PROJECT THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC AND SHALL INCLUDE FURNISHING, ERECTING, MAINTAINING AND REMOVING THE SIGNS INCLUDING SUPPORTS.

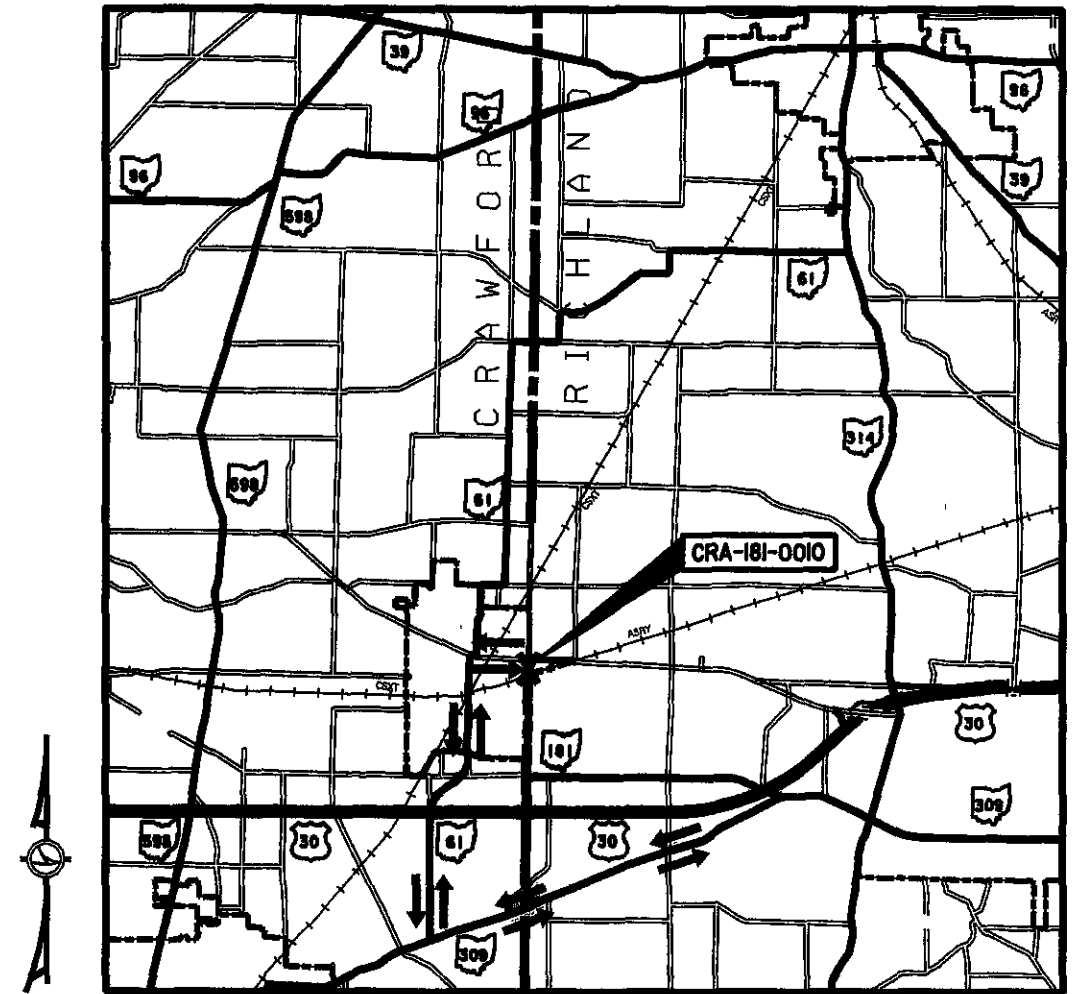


MAINTENANCE OF LOCAL DETOUR ROUTE:

A LOCAL DETOUR ROUTE, OTHER THAN THE OFFICIAL SIGNED ODOT DETOUR ROUTE, AS NOTED ON THIS SHEET, WILL BE SELECTED BY AGREEMENT BETWEEN ODOT AND LOCAL GOVERNMENT 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 DETOUR 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 DESIGNATED LOCAL DETOUR ROUTE IS TO BE REVIEWED AND REPAIRED PRIOR TO THE ASPHALT CONTRACTOR OR SUBCONTRACTOR LEAVING THE PROJECT.

PAYMENT FOR THE WORK NECESSARY TO REPAIR THESE LOCAL ROADS WILL BE PERFORMED BY EITHER CHANGE ORDER OR FORCE ACCOUNT.



STATE DETOUR MAP

- MAP LEGEND**
- X - PROJECT LOCATION
 - ⇄ - OFFICIAL STATE SIGNED DETOUR



DESIGN FILE: i:\projects\25679\struct\25679BRGN001.dgn
WORKSTATION: dmlens DATE: 11/8/2006

DISTRICT THREE
OFFICE OF PRODUCTION

DATE 6/06
ACH
D/JV
DCM

STRUCTURE MAINTENANCE OF TRAFFIC
NOTES AND DETOUR MAP

CRA-309-4.98
RIC-309-0.00
CRA-181-0.00

STRUCTURE CRA-181-0010 (SFN 1703366)

ITEM	ITEM EXT.	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
202	11300	3.1	CU YD	PORTIONS OF STRUCTURE REMOVED	
511	45701	3.2	SQ YD	CLASS C CONCRETE, ABUTMENT, AS PER PLAN	24
512	10100	38	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
512	73500	4	SQ YD	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN	
516	31000	80	FT	JOINT SEALER	24
848	10001	196	SQ YD	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2 1/2" THICK)	24
848	20000	196	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION	
848	30001	6	CU YD	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN	24
848	50000	6	SQ YD	HAND CHIPPING	
848	50100	LUMP		TEST SLAB	
848	50200	1	CU YD	FULL-DEPTH REPAIR	
848	50320	196	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (1 1/2" NOMINAL THICKNESS)	
848	50340	10	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY	

DESIGN FILE: i:\projects\25679\Struct\25679BRG001.dgn
 WORKSTATION: dmollens DATE: 10/31/2006

DESIGN AGENCY
 DISTRICT 3
 OFFICE OF PRODUCTION

DATE	6/06
REVISED	ACH
DRAWN	GTS
DESIGNED	DJV
CHECKED	DCM

STRUCTURE SUMMARY

CRA-309-4.98
 RIC-309-0.00
 CRA-181-0.00

BRIDGE DECK DATA

ROADWAY DATA

PART	COUNTY, ROUTE, BRIDGE NO.	LOCATION	STRUCTURE TYPE	LENGTH	WIDTH	BRIDGE	SKEW	EXISTING WEARING SURFACE	EXISTING	EXISTING	EXISTING
				(BRIDGE DECK)		DECK			PAVEMENT	APPROACH SLAB	APPROACH SLAB
				FT.	FT.	SQ.YD.			FT.	FT.	FT.
	●● CRA-181-0010	BRANCH OVER PARAMOUR CREEK	THREE SPAN CONCRETE SLAB	53'-6"	36'	214	15°	CONCRETE	25'	20'	25'
	● CRA-181-0118	OVER COYER RUN	THREE SIDED CONCRETE ARCH				0°	ASPHALT	27'		

- PAVE OVER STRUCTURE (NO STRUCTURE WORK). (SEE ROADWAY PLANS FOR PAVING QUANTITIES).
- PLANE 1/2" AND PAVE 100 FT. ON BOTH APPROACHES AND BUTT JOINT AT BRIDGE DECK. OMIT RESURFACING ON BRIDGE DECK. (SEE DETAILS IN PLAN FOR STRUCTURE WORK). (SEE ROADWAY PLANS FOR PAVING QUANTITIES).
 CRA-181-0010 ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE: 556 SQUARE YARDS (CARRIED TO GENERAL SUMMARY SHEET)

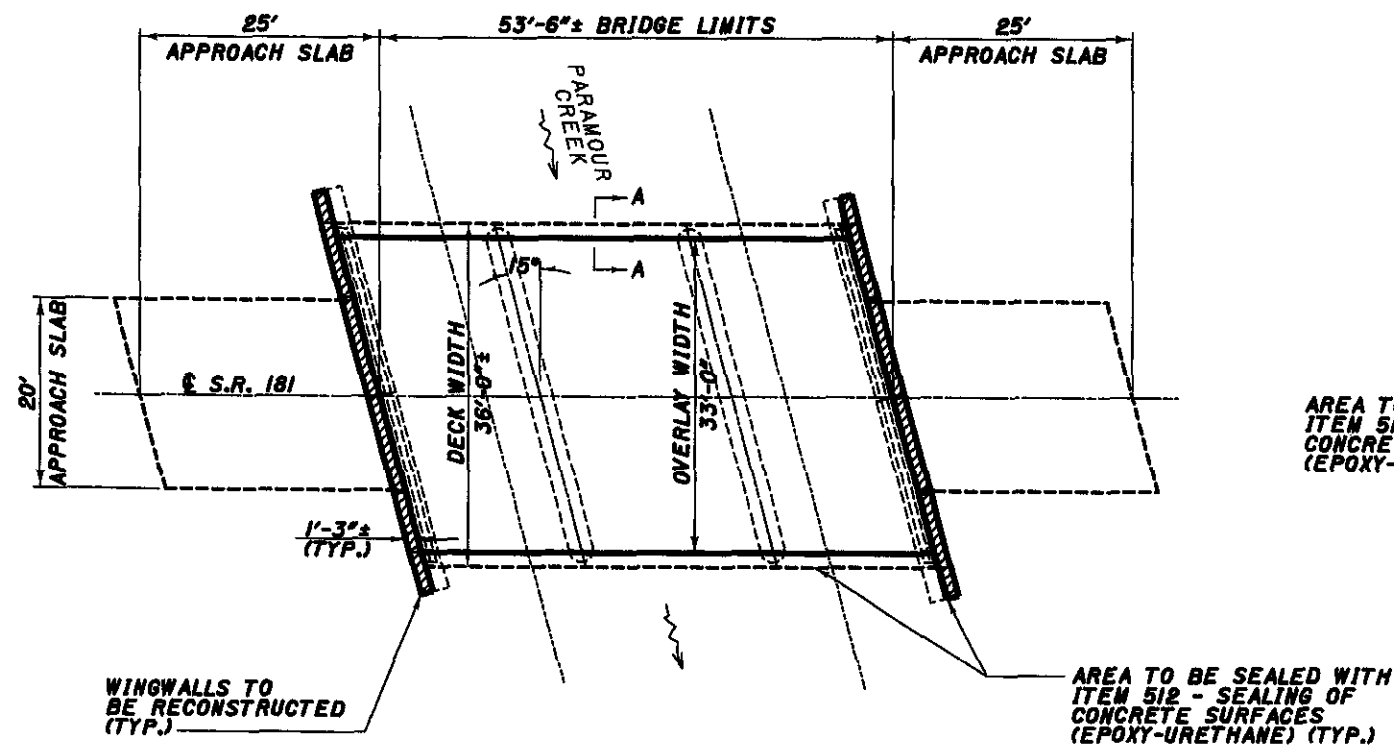
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 WORKSTATION: dmal/ens DATE: 10/31/2006

BRIDGE TREATMENT

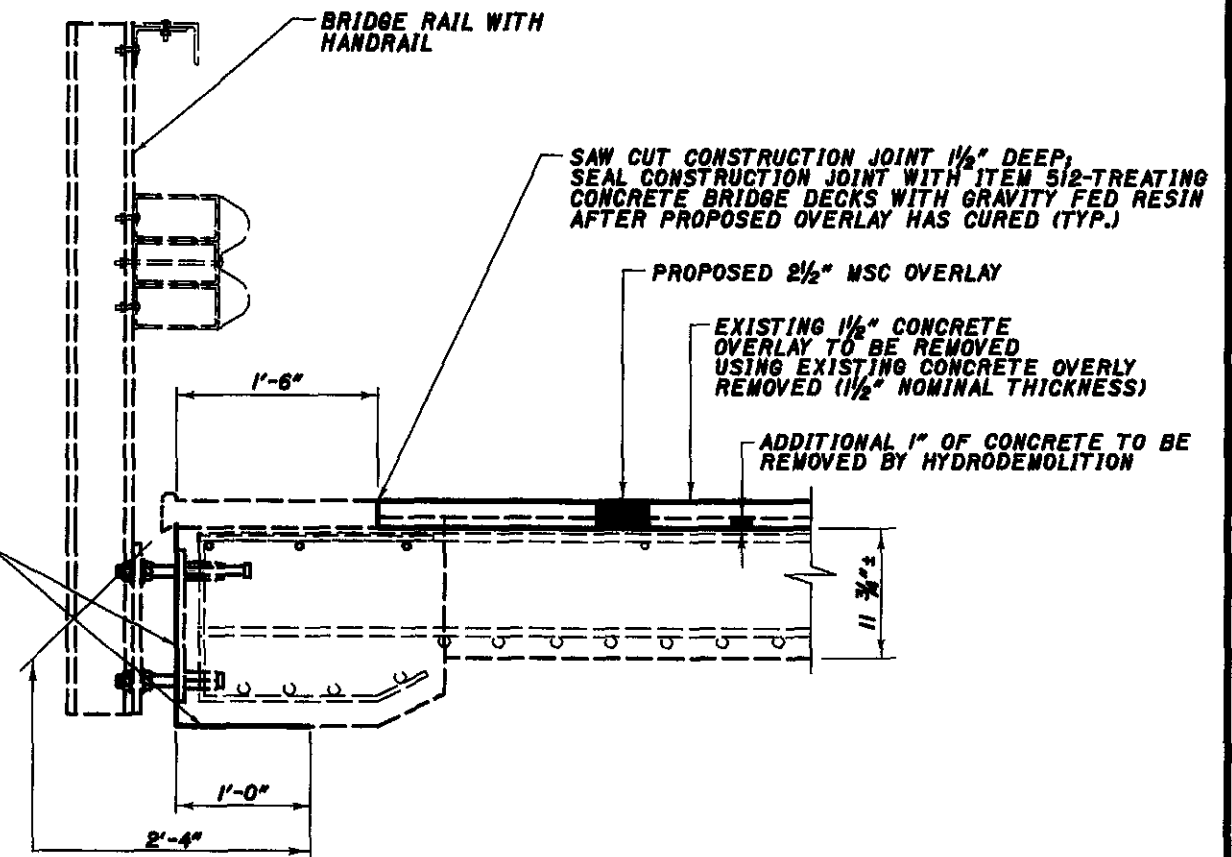
DISTRICT 3
 OFFICE OF PRODUCTION
 6/06
 GTS
 DNY
 DCN

CRA-309-4.98
 RIC-309-0.00
 CRA-181-0.00





PLAN VIEW



(LENGTH OF DECK = 53'-6"±)
CONCRETE OVERLAY AND DECK EDGE SEALING SECTION A-A

ITEM	QUANTITY	UNIT	DESCRIPTION
512	28	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	4	SQ YD	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN
848	196	SQ YD	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2 1/2" THICK)
848	196	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION
848	6	CU YD	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN
848	6	SQ YD	HAND CHIPPING
848	LUMP		TEST SLAB
848	1	CU YD	FULL-DEPTH REPAIR
848	196	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (1 1/2" NOMINAL THICKNESS)
848	10	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY

NOTES:

- 1) THE PROPOSED OVERLAY ELEVATION SHALL MATCH THE EXISTING BRIDGE DECK ELEVATION.
- 2) SAW CUT EXISTING DECK 1/2" DEEP AND 1'-6" FROM DECK EDGES, AS DETAILED ABOVE, COST INCLUDED IN ITEM 848-EXISTING CONCRETE OVERLAY REMOVED (1 1/2" NOMINAL THICKNESS).
- 3) SEAL BRIDGE DECK EDGE AND 1'-0" UNDER DECK AS DETAILED WITH ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).
- 4) FOR WINGWALL AND ABUTMENT RECONSTRUCTION AND SEALING DETAILS, SEE SHEET 2/2.
- 5) THE APPROACH GUARDRAIL AND BRIDGE RAIL NOT SHOWN.

QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET

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WORKSTATION: dmollens DATE: 10/31/2006

DISTRICT 3
OFFICE OF PRODUCTION

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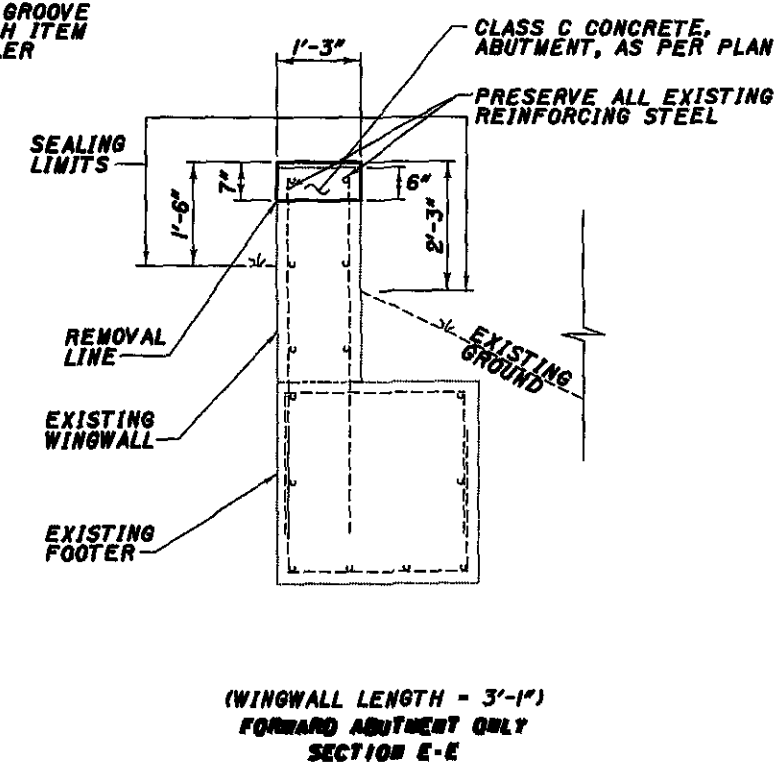
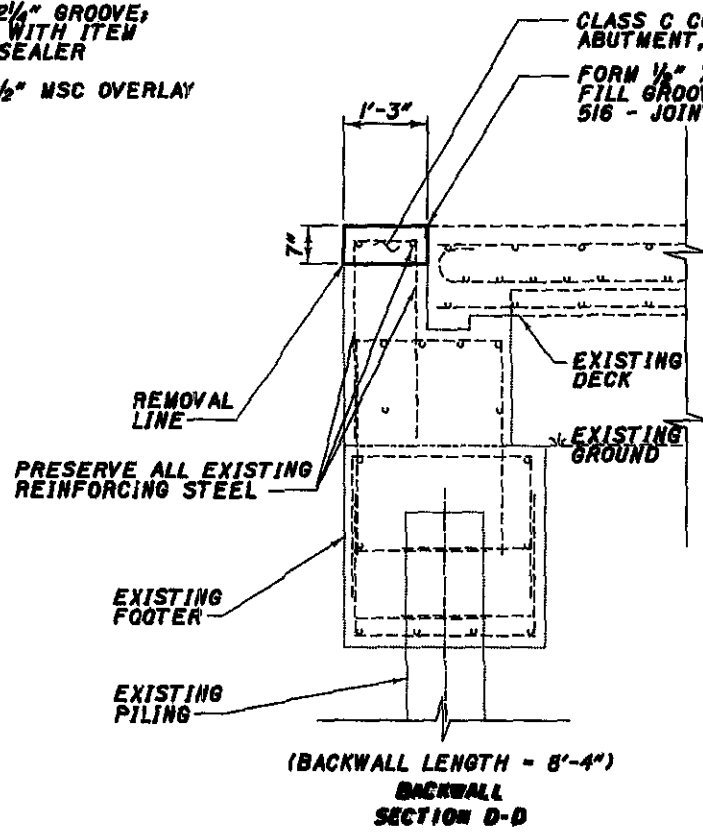
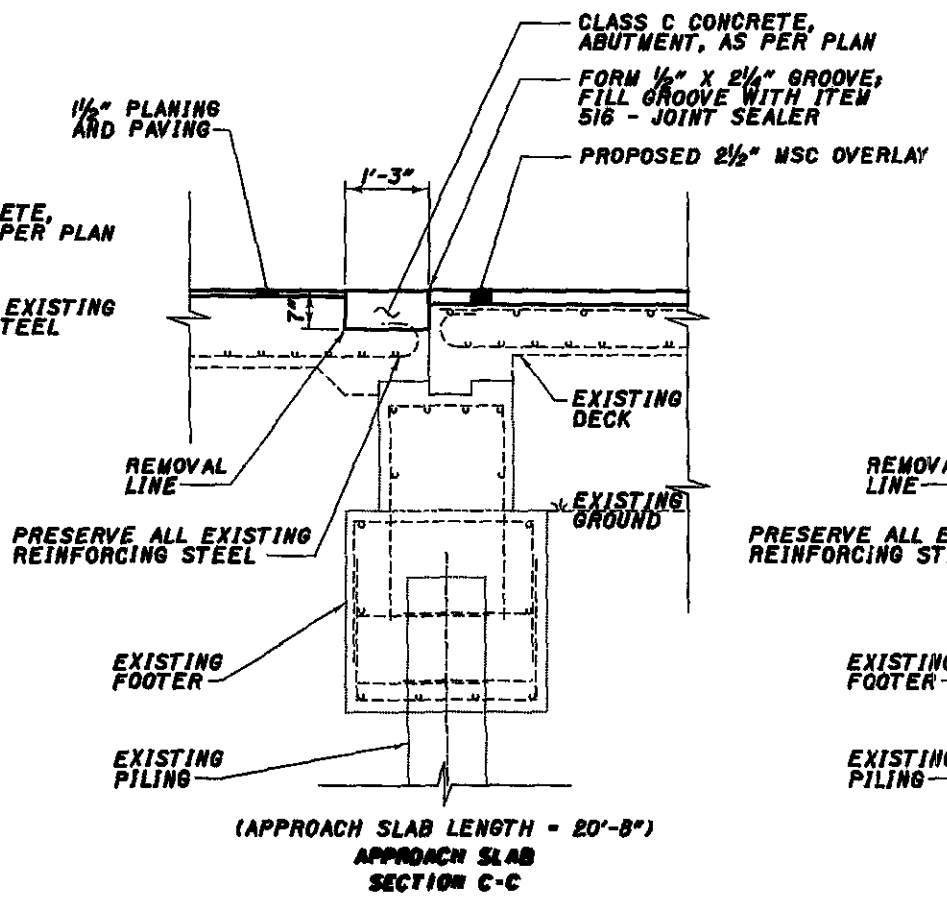
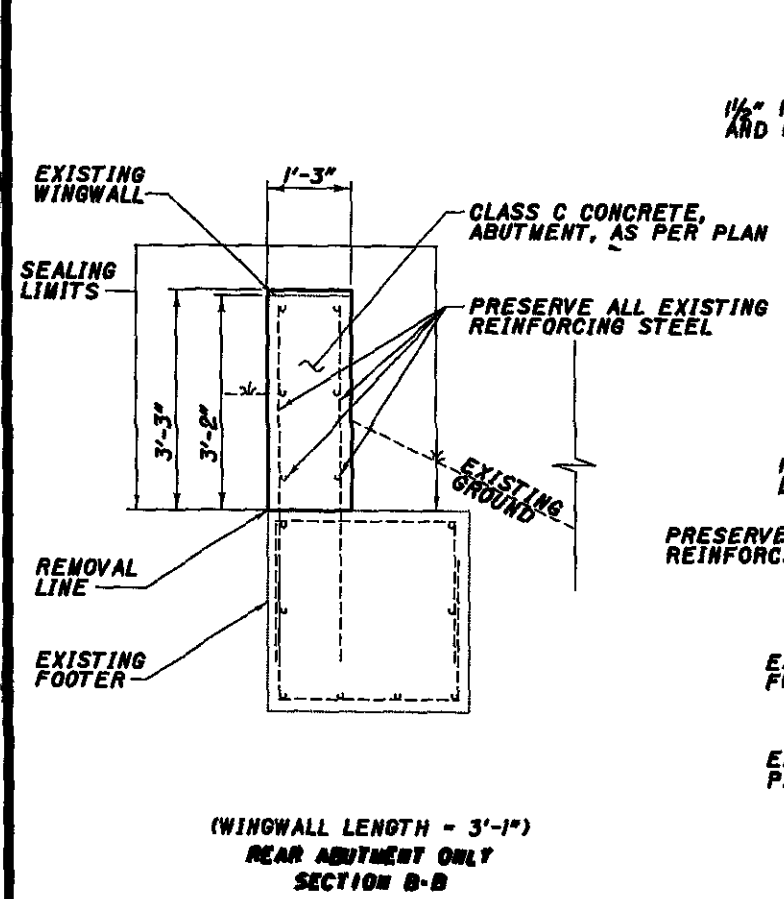
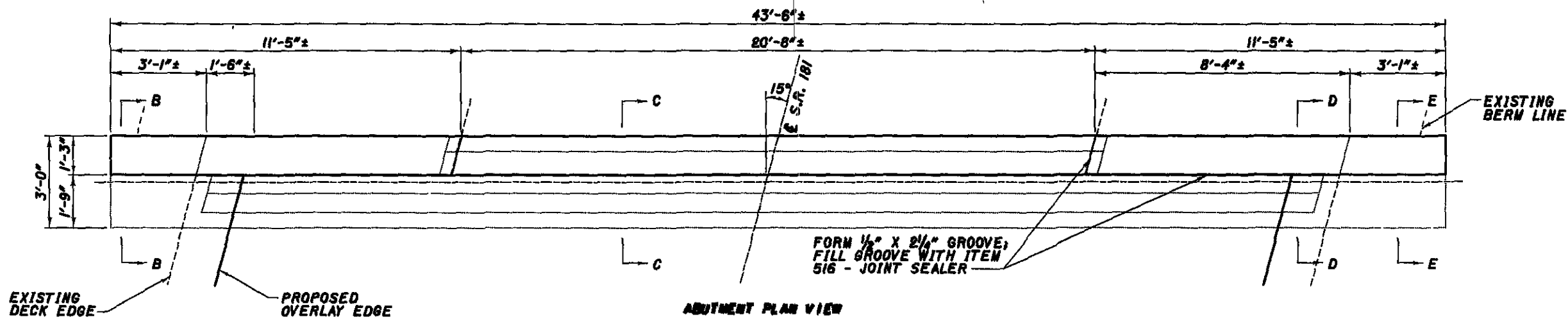
DJV
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PLAN VIEW
CRA-181-000
OVER PARAMOUR CREEK

CRA-309-4.98
RIC-309-0.00
CRA-181-0.00

1 / 2

29
30



ITEM	QUANTITY	UNIT	DESCRIPTION
202	3.1	CU YD	PORTIONS OF STRUCTURE REMOVED
511	3.2	CU YD	CLASS C CONCRETE, ABUTMENT, AS PER PLAN
512	10	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
516	80	FT	JOINT SEALER

- NOTES:
- 1) SEAL ALL EXPOSED AREAS OF THE WINGWALLS WITH ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).
 - 2) FOR CONCRETE OVERLAY AND DECK EDGE SEALING DETAILS, SEE SHEET 1/2.
 - 3) THE APPROACH GUARDRAIL AND BRIDGE RAIL NOT SHOWN.

QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET

DESIGN FILE: I:\projects\256795\Structure\CRA\BLD_0010\256795P001.dgn
 WORKSTATION: dmollens DATE: 10/31/2006

DISTRICT 3
 OFFICE OF PRODUCTION
 ACH 6/06
 DJV
 DCN
 1703366
 ABUTMENT DETAILS
 CRA-181-000
 OVER PARADISE CREEK
 CRA-309-4.96
 RIC-309-0.00
 CRA-181-0.00
 2/2
 30
 30