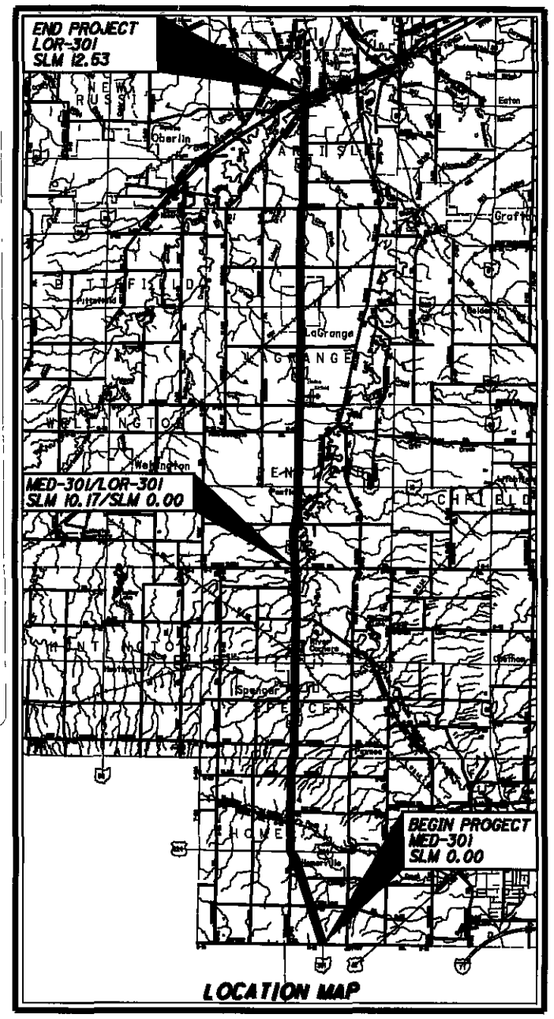
MED - SR 301-0.00/0.00/5.48 - Part 1 &
060237 PID - 23581
Dist 3 5/17/2006



LATITUDE: 041°08'10" LONGITUDE: 082°07'22"

SCALE IN MILES
0 2 4 6 8

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

MED-301-0.00
LOR-301-0.00 - PART 1

(FOR PART 2, SEE MED-301-5.48)

HOMER TOWNSHIP
SPENCER TOWNSHIP
PENFIELD TOWNSHIP
LAGRANGE TOWNSHIP
CARLISLE TOWNSHIP

INDEX OF SHEETS:

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

PROJECT DESCRIPTION

THIS PROJECT WILL INCLUDE PAVEMENT PLANING, PAVEMENT REPAIR, RESURFACING WITH ASPHALT CONCRETE, ADJUSTMENT OF CASTINGS WHERE NECESSARY, GUARDRAIL, PAVEMENT MARKINGS, MINOR BRIDGE REHABILITATION, CULVERT REPLACEMENT, AND NEW TRAFFIC SIGNAL INSTALLATION.

PROJECT EARTH DISTURBED AREA: N/A ACRES
ESTIMATED CONTRACTOR EARTH DISTRUBED 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.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AS NOTED ON SHEET 63, AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON THE PLANS.

APPROVED Thomas M. Eberle
DATE 2-16-06 DISTRICT DEPUTY DIRECTOR

APPROVED Gordon Proctor
DATE 3/22/06 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

ROADWAY PART I, ENGINEERS SEAL:	SIGNAL PART I, ENGINEERS SEAL:	STRUCTURE/CULVERT PART I, ENGINEERS SEAL:
STATE OF OHIO MICHAEL JOSEPH SCHAFF 57644 REGISTERED PROFESSIONAL ENGINEER	STATE OF OHIO RICHARD JAMES RONEY E-50593 REGISTERED PROFESSIONAL ENGINEER	STATE OF OHIO DAVID C. MOLLENSHOTT E-50210 REGISTERED PROFESSIONAL ENGINEER
SIGNED: Michael J Schaff	SIGNED: Richard J. Roney	SIGNED: David C. Mollenshott
DATE: 2/16/06	DATE: 2-16-06	DATE: 2/16/06

STANDARD CONSTRUCTION DRAWINGS (FOR PART 1 & 2)

BP-3.1	7/18/04	GR-3.3	1/20/06	GSD-1-96	7/19/02	MT-96.20	4/19/02	TC-65.10	1/21/05	800	01-20-06
BP-4.1	7/18/04	GR-3.4	4/18/03	RB-1-65	2/2/59	MT-96.25	4/20/01	TC-65.11	1/21/05	832	04-17-04
		GR-3.6	1/18/04	TBR-81	7/19/02	MT-97.10	4/19/02	TC-71.10	1/21/05	833	02-12-03
CB-1.1	7/15/05	GR-4.1	4/18/03	TST-1-89	10/17/03	MT-97.12	4/19/02	TC-73.10	1/19/01	848	04-15-05
CB-1.2	7/15/05	GR-5.3	1/18/04			MT-99.20m	1/30/96	TC-81.10	5/01/00	872	10-30-03
CB-4.2	7/19/02			HL-10.11	1/18/04	MT-101.20	10/18/02	TC-82.10	4/19/02		
		HW-1.1	1/21/05	HL-10.12	1/21/05	MT-101.60	10/18/02	TC-83.10	5/01/00		
DM-1.1	10/21/05	HW-2.1	1/20/06	HL-20.11	4/19/02	MT-105.10	10/18/02	TC-83.20	1/18/04		
DM-1.4	1/21/05	HW-2.2	7/15/05	HL-30.11	1/21/05	MT-105.11	10/18/02	TC-84.20	5/01/00		
DM-4.3	7/19/02			HL-30.21	4/19/02	MT-120.00	3/01/00	TC-84.21	3/06/00		
DM-4.4	7/19/02	RM-1.1	1/20/06	HL-30.22	1/21/05			TC-85.20	5/01/00		
		RM-3.1	4/18/03			TC-22.10	1/19/01				
GR-1.1	7/18/04	RM-4.2	4/18/03	MT-35.10	4/20/01	TC-41.20	1/19/01				
GR-2.1	1/18/04			MT-95.30	7/18/04	TC-42.20	7/19/04				
GR-3.1	4/18/03	DS-1-92	7/18/03	MT-95.61	4/19/02	TC-52.10	4/20/01				
GR-3.2	4/18/03	EXJ-4-97	7/19/02	MT-96.10	4/19/02	TC-52.20	4/20/01				

SUPPLEMENTAL SPECIFICATIONS (FOR PART 1 & 2)

800	01-20-06
832	04-17-04
833	02-12-03
848	04-15-05
872	10-30-03

SPECIAL PROVISIONS (FOR PART 1 & 2)

NWP#3	6-13-05

PLAN PREPARED BY:
DISTRICT THREE PRODUCTION DEPARTMENT

FEDERAL PROJECT NO.	PID NO.	CONSTRUCTION PROJECT NO.	RAILROAD INVOLVEMENT
E034(150)	23581		NONE

MED-301-0.00
LOR-301-0.00
1
114

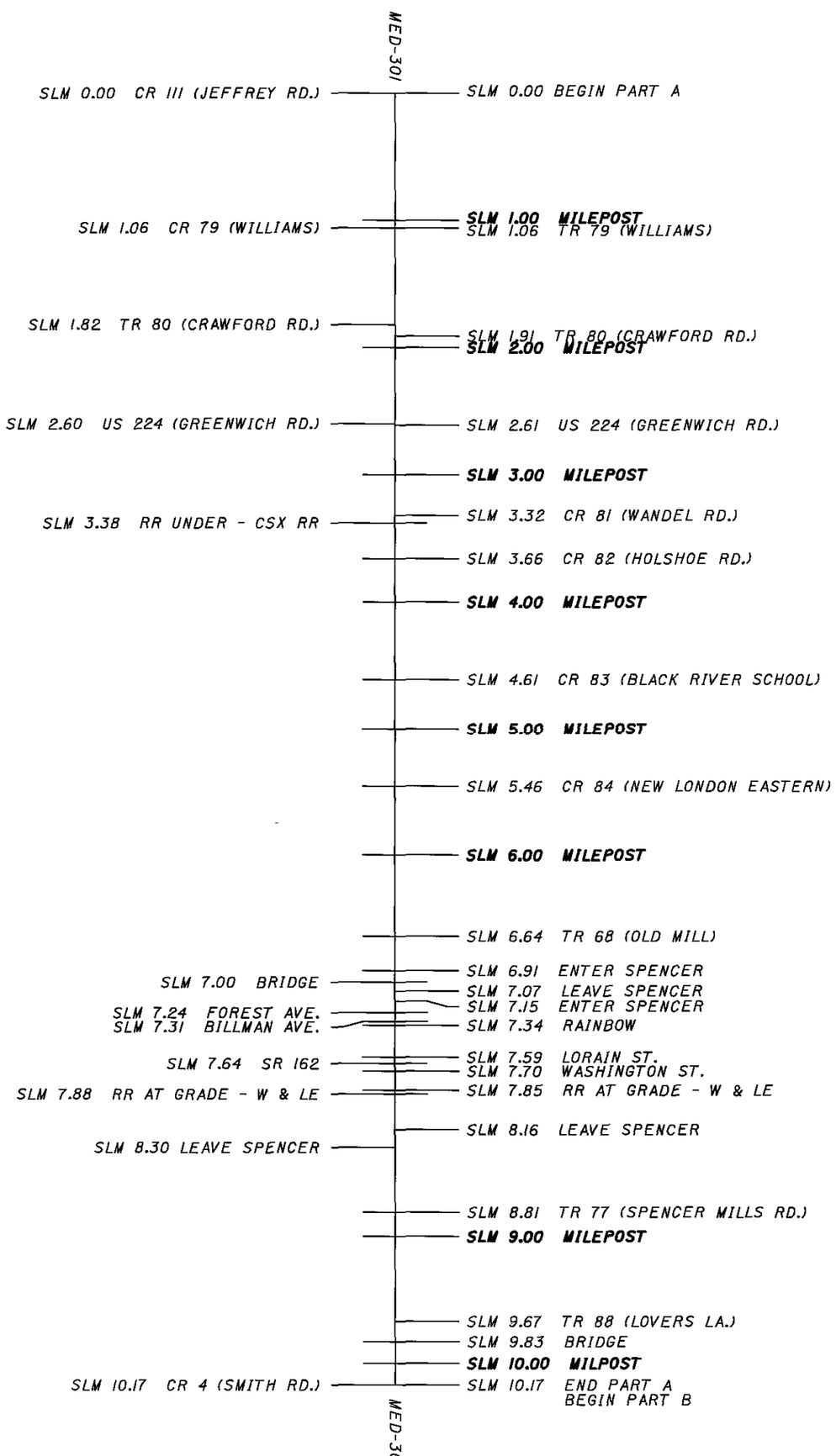
DESIGN FILE: I:\projects\23581\23581GT001.dgn
WORKSTATION: sdeer DATE: 2/16/2006

DESIGN FILE: I:\projects\2358I\2358IGB001.dgn
WORKSTATION: sdeer DATE: 2/15/2006

MEDINA COUNTY (PART A)

SR 301

CURRENT ADT (2006) 2960
DESIGN YEAR ADT (2018) 3520
DESIGN HOURLY VOLUME (2018) 352
DIRECTIONAL DISTRIBUTION 55%
TRUCKS (24 HOUR B&C) 9.00%
DESIGN SPEED/LEGAL SPEED
SLM 0.00 TO 6.91 55 MPH
SLM 6.91 TO 8.30 35 MPH
SLM 8.30 TO 10.17 55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:
RURAL MAJOR COLLECTOR
NHS PROJECT NO



LORAIN COUNTY (PART B)

SR 301

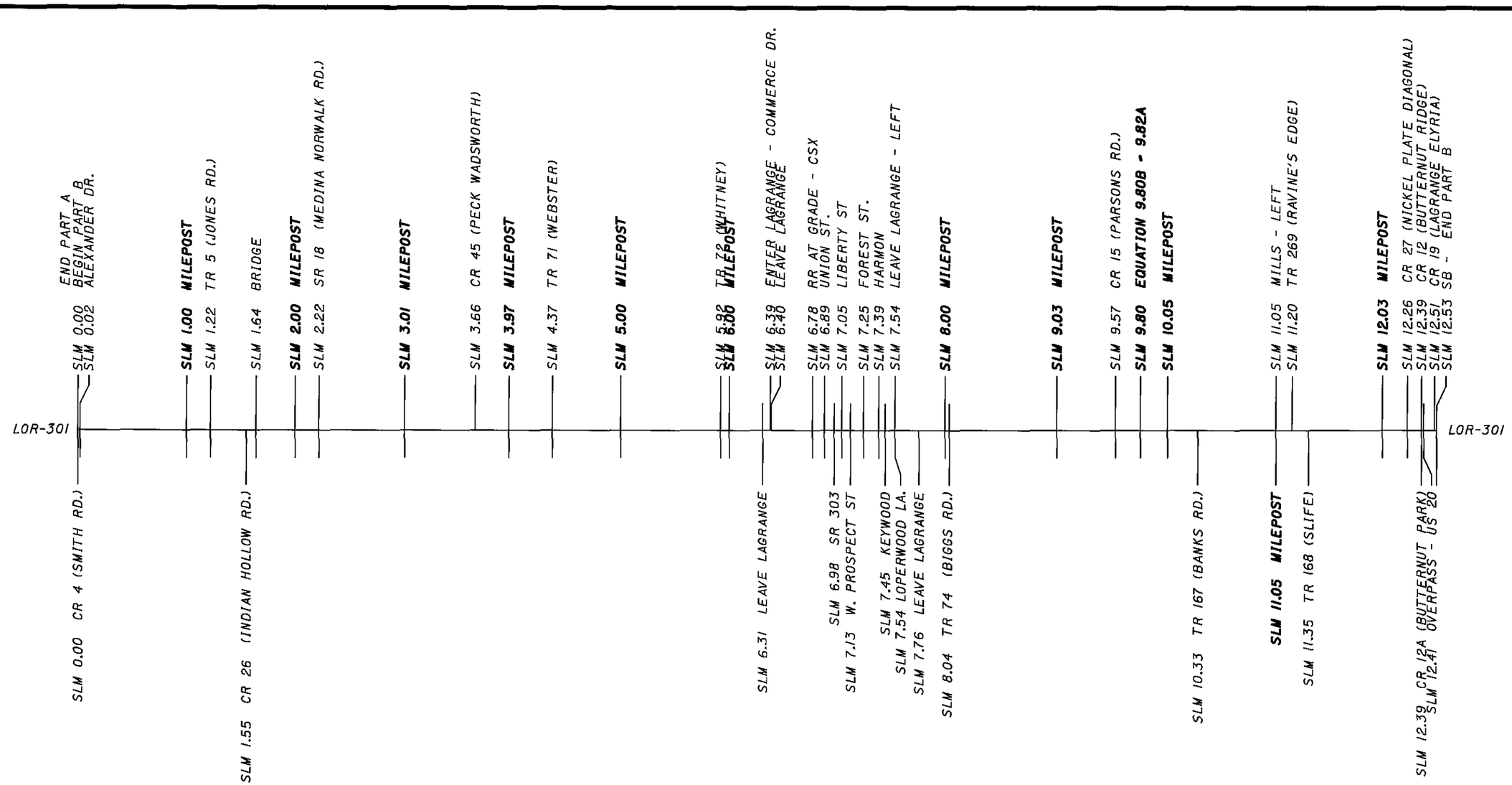
CURRENT ADT (2006) 2960
DESIGN YEAR ADT (2018) 3520
DESIGN HOURLY VOLUME (2018) 352
DIRECTIONAL DISTRIBUTION 55%
TRUCKS (24 HOUR B&C) 9.00%
DESIGN SPEED/LEGAL SPEED
SLM 0.00 TO 6.46 55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:
RURAL MAJOR COLLECTOR
NHS PROJECT NO

MED-301-0.00
LOR-301-0.00

STRAIGHT LINE DIAGRAM MED-301

CALCULATED SJD
CHECKED MJS

STRAIGHT LINE DIAGRAM LOR-301



LORAIN COUNTY (PART B)

SR 301

CURRENT ADT (2006)	9230
DESIGN YEAR ADT (2018)	12280
DESIGN HOURLY VOLUME (2018)	1228
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	6.00%
DESIGN SPEED/LEGAL SPEED	
SLM 6.46 TO 6.91	55 MPH
SLM 6.91 TO 7.76	35 MPH
SLM 7.76 TO 11.35	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION: RURAL MAJOR COLLECTOR	
NHS PROJECT	NO

LORAIN COUNTY (PART B)

SR 301

CURRENT ADT (2006)	9230
DESIGN YEAR ADT (2018)	12280
DESIGN HOURLY VOLUME (2018)	1228
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	6.00%
DESIGN SPEED/LEGAL SPEED	
SLM 11.35 TO 12.26	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION: URBAN COLLECTOR	
NHS PROJECT	NO

LORAIN COUNTY (PART B)

SR 301

CURRENT ADT (2006)	12760
DESIGN YEAR ADT (2018)	16430
DESIGN HOURLY VOLUME (2018)	1478
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	6.00%
DESIGN SPEED/LEGAL SPEED	
SLM 12.26 TO 12.52	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION: URBAN COLLECTOR	
NHS PROJECT	NO

LORAIN COUNTY (PART B)

SR 301

CURRENT ADT (2006)	5210
DESIGN YEAR ADT (2018)	7020
DESIGN HOURLY VOLUME (2018)	702
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	5.50%
DESIGN SPEED/LEGAL SPEED	
SLM 12.52 TO 12.53 SB	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION: URBAN COLLECTOR	
NHS PROJECT	NO

DESIGNED SJD
DRAWN MJS

MED-301-0.00
LOR-301-0.00

13
14

DESIGN FILE: I:\projects\2358\2358IGB001.dgn
WORKSTATION: sdeer DATE: 2/15/2006

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.

CITY OF ELYRIA
JOHN HART
328 BROAD ST.
ELYRIA, OHIO 44035
440-322-5464

LORAIN COUNTY ENGINEER
KENNETH CARNEY
247 HADAWAY ST.
ELYRIA, OHIO 44035
440-329-5586

VILLAGE OF SPENCER
MAYOR THOMAS RAMEY
PO BOX 336
SPENCER, OHIO 44275
330-648-2907

ELECTRIC
OHIO EDISON COMPANY
6326 LAKE AVE.
ELYRIA, OHIO 44035
440-326-3231

GAS
COLUMBIA GAS OF OHIO
1120 WEST 4TH ST.
MANSFIELD, OHIO 44901
419-528-1137

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

GAS
SUNOCO PIPELINE LP
525 FRITZTOWN RD
SINKING SPRING, PA 19608
610-670-3279

TELEPHONE
AT&T
5980 - I WILCOX PL.
DUBLIN, OHIO 43016
614-760-8320

TELEPHONE
QWEST
1860 LINCOLN ST, SUITE 200
DENVER, COLORADO 80295
303-837-3926

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

VILLAGE OF LAGRANGE
MAYOR KIM STRAUS
355 S. CENTER ST., BOX 597
LAGRANGE, OHIO 44050
216-355-5555

MEDINA COUNTY ENGINEER
MIKE SALAY
791 WEST SMITH RD
MEDINA, OHIO 44256
330-723-9561

ELECTRIC
LORAIN MEDINA RURAL ELE
PO BOX 158 RD
WELLINGTON, OHIO 44090
800-222-5673

OIL
BUCKEYE OIL PIPELINE CO
5002 BUCKEYE RD. BX 368
EMMAUS, PENN. 18049

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

GAS
GATHERCO INC.
5772 DRESSLER RD NW
NORTH CANTON, OHIO 4472
330-498-9553

TELEPHONE
ALLTEL
1135 TR 1875
ASHLAND, OHIO 44805
419-289-7491

TELEPHONE
MCI TELECOMMUNICATIONS
120 RAVINE ST.
AKRON, OHIO 44303
330-253-8267

TELEPHONE
VERIZON
6223 NORWALK RD
MEDINA, OHIO 44256
330-722-9580

CABLE
COMCAST
576 TERNES ST.
ELYRIA, OHIO 44035
440-926-3230

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

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.

GENERAL

RAILROAD CROSSING INFORMATION

OWNER OF RAILROAD: CSX TRANSPORTATION, INC.
TYPE OF LINE: PUBLIC
CROSSING: RR UNDER
NO. OF TRACKS: 2

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

PASSENGER TRAINS/DAY: 0 @ N/A MILES PER HOUR
FREIGHT TRAINS/DAY: 40 @ 60 MILES PER HOUR
HAZARDOUS MATERIAL: YES

THE IDENTIFICATION OF THE CROSSING KNOWN AS:
RR MILE POST: BG-0171.51
AARDOT NO.: 142081U

LOCAL CONTACT PERSON FOR FLAGGING:

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

RAILROAD CROSSING INFORMATION

OWNER OF RAILROAD: WHEELING & LAKE ERIE RAILWAY
TYPE OF LINE: PUBLIC
CROSSING: AT-GRADE
NO. OF TRACKS: 1

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

PASSENGER TRAINS/DAY: 0 @ N/A MILES PER HOUR
FREIGHT TRAINS/DAY: 8 @ 40 MILES PER HOUR
HAZARDOUS MATERIAL: YES

THE IDENTIFICATION OF THE CROSSING KNOWN AS:
RR MILE POST: 0123.75
AARDOT NO.: 002045N

LOCAL CONTACT PERSON FOR FLAGGING:
HEIDI KAISER (330) 767-7229 - 48 HRS IN ADVANCE

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

RAILROAD CROSSING INFORMATION

OWNER OF RAILROAD: WHEELING & LAKE ERIE RAIL
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 @ N/A MILES PER HOUR
FREIGHT TRAINS/DAY: 10 @ 40 MILES PER HOUR
HAZARDOUS MATERIAL: YES

THE IDENTIFICATION OF THE CROSSING KNOWN AS:
RR MILE POST: 0093.51
AARDOT NO.: 473577R

LOCAL CONTACT PERSON FOR FLAGGING:
HEIDI KAISER (330) 767-7229 - 48 HRS. IN ADVANCE

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

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: CSX TRANSPORTATION, INC.
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 @ N/A MILES PER HOUR
FREIGHT TRAINS/DAY: 40 @ 60 MILES PER HOUR
HAZARDOUS MATERIAL: YES

THE IDENTIFICATION OF THE CROSSING KNOWN AS:
RR MILE POST: QI-29.65
AARDOT NO.: 518520U

LOCAL CONTACT PERSON FOR FLAGGING:

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

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. THE CONTRACTOR IS RESPONSIBLE FOR PAYING THE RAILROAD FOR ALL FLAGGING COSTS. REFER TO RAILROAD LIABILITY INSURANCE PROPOSAL NOTE.

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.

ALL COSTS ASSOCIATED WITH THIS PAY ITEM SHALL BE INCLUDED IN THE LUMP SUM BID PRICE OF ITEM 614 MAINTAINING TRAFFIC.

ELEVATION DATUM

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

PROGRESSION OF WORK

1) WIDENING AT SMITH RD. SHALL BE DONE PRIOR TO PLANING AND PAVING OPERATIONS.
2) DEEP PLANING SHALL BE PERFORMED AFTER PLANING AND PRIOR TO THE PLACEMENT OF THE INTERMEDIATE COURSE.
3) REPLACE ALL BOX CULVERTS PRIOR TO PLACING INTERMEDIATE COURSE AT EACH CULVERT LOCATION.
4) WHEN REPLACING, ADJUSTING, OR RECONSTRUCTING, GUARDRAIL SHALL BE REMOVED PRIOR TO ANY EMBANKMENT WORK AT THE GUARDRAIL RUN.
5) GUARDRAIL WORK SHALL BE DONE AFTER WIDENING, RESURFACING, AND BERM WORK SO AS TO ESTABLISH PROPER GRADES FROM WHICH TO CONSTRUCT THE RAIL.

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.

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.

CALCULATED SJD
CHECKED MJS

ROADWAY GENERAL NOTES

MED-301-0.00
LOR-301-0.00

4
14

DESIGN FILE: i:\projects\2358\2358IGN001.dgn
WORKSTATION: sdeer
DATE: 2/15/2006

GENERAL

COORDINATION OF WORK BETWEEN CONTRACTORS

THE CONTRACTOR SHOULD BE AWARE THAT THERE MAY BE OTHER WORK BEING PERFORMED BY A SEPARATE CONTRACT. LOR-303-0.00 IS A RESURFACING PROJECT WITH CULVERT REPLACEMENT AND STRUCTURE MAINTENANCE IS SCHEDULED TO BEGIN WORK IN THE 2006 CONSTRUCTION SEASON. COORDINATION OF WORK IS THE RESPONSIBILITY OF THE CONTRACTORS. CURB RAMP WORK WITHIN THE VILLAGE OF LAGRANGE CIRCLE SHALL BE PREFORMED AFTER ALL RESURFACING OPERATIONS ARE COMPLETE ALONG SR 303.

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.

ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE

THE INTENT OF THE PLANING IS TO MILL THE SPECIFIED DEPTH AT THE CENTER OF PAVEMENT (SEE SHEETS 15-16 FOR DEPTHS). THE PAVEMENT SLOPE SHALL BE 0.0156, CONTINUOUS BETWEEN THE CROWN AND THE PROPOSED EDGELINE/SHOULDER (SEE TYPICAL SECTIONS FOR FURTHER DETAILS). THE MILLING DEPTH SHALL BE CONTROLLED FROM THE CENTER OF PAVEMENT IN CONFORMANCE WITH ABOVE GUIDELINES.

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

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

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

THE PROGRESSION OF THE PLANING SHALL PROCEED IN SUCH A MANNER THAT NORMAL TRAFFIC WILL NOT BE REQUIRED TO RUN OVER THE PLANED ROADWAY SURFACE MORE THAN FOURTEEN (14) CALENDAR DAYS. THE 14 CALENDAR DAYS SHALL BE CONSIDERED AN INTERIM COMPLETION DATE (SECTION 108) AND FOR EACH CALENDAR DAY BEYOND THE 14 DAYS THAT THE ROADWAY REMAINS EXPOSED TO THE PLANED SURFACE, THE CONTRACTOR WILL BE ASSESSED LIQUIDATED DAMAGES AS PER 108.07. PLANED AREAS WHICH CREATE A LONGITUDINAL JOINT BETWEEN TRAVELED LANES SHALL BE COMPLETED IN SUCH A MANNER SO AS TO REMOVE THE JOINT BEFORE THE END OF EACH DAY'S WORK. BEFORE THIS JOINT IS EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL ERECT OW-171 SIGNS (UNEVEN PAVEMENT). THESE SIGNS SHALL REMAIN ONLY WHEN THE CONDITION EXISTS. ALL COSTS ASSOCIATED WITH THE ABOVE WORK SHALL BE INCLUDED IN LUMP SUM ITEM 614 MAINTAINING TRAFFIC.

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 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/OR 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. 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 *", BASED ON THE PAVEMENT DESIGN AND AN AVERAGE DEPTH OF 4". 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.

PART A, MAXIMUM DEPTH * - 7.00" 597 CU. YD.
PART B, SLM 0.00 - 6.46, MAXIMUM DEPTH * - 7.00", 671 CU. YD.
SLM 6.46 - 12.41, MAXIMUM DEPTH * - 10.50"

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

PAVEMENT

ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE (CURBED SECTION)

THE INTENT OF THE PLANING IS TO MILL THE SPECIFIED DEPTH ALONG THE CURB CONTINGENT ON THE FOLLOWING. THE PAVEMENT SLOPE SHALL BE 0.0156, CONTINUOUS BETWEEN THE CROWN AND THE PROPOSED EDGELINE/ SHOULDER (SEE TYPICAL SECTIONS FOR FURTHER DETAILS). THE MILLING DEPTH SHALL BE CONTROLLED FROM THE CURB, TO PRODUCE THE CORRECT CROSS SLOPE IN CONFORMANCE WITH THE ABOVE GUIDELINES. THE ROADWAY HAS BEEN CORED FOR THE EXISTING DEPTH OF THE ASPHALT, AND THE CONTRACTOR SHALL BASE THE MAXIMUM AMOUNT OF ASPHALT MATERIAL THAT MAY BE MILLED OUT OF THE ROADWAY IN ORDER TO CORRECT THE TRANSVERSE SLOPE OF THE CROSS SECTION FROM THE "PAVEMENT CORING INFORMATION". FIELD WORK NECESSARY FOR PROPER CONTROL WITHIN PLAN INTENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

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

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

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

THE PROGRESSION OF THE PLANING SHALL PROCEED IN SUCH A MANNER THAT NORMAL TRAFFIC WILL NOT BE REQUIRED TO RUN OVER THE PLANED ROADWAY SURFACE MORE THAN SEVEN (7) CALENDAR DAYS. THE 7 CALENDAR DAYS SHALL BE CONSIDERED AN INTERIM COMPLETION DATE (SECTION 108) AND FOR EACH CALENDAR DAY BEYOND THE 7 DAYS THAT THE ROADWAY REMAINS EXPOSED TO THE PLANED SURFACE, THE CONTRACTOR WILL BE ASSESSED LIQUIDATED DAMAGES AS PER 108.07. PLANED AREAS WHICH CREATE A LONGITUDINAL JOINT BETWEEN TRAVELED LANES SHALL BE COMPLETED IN SUCH A MANNER SO AS TO REMOVE THE JOINT BEFORE THE END OF EACH DAY'S WORK. BEFORE THIS JOINT IS EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL ERECT OW-171 SIGNS (UNEVEN PAVEMENT). THESE SIGNS SHALL REMAIN ONLY WHEN THE CONDITION EXISTS. ALL COSTS ASSOCIATED WITH THE ABOVE WORK SHALL BE INCLUDED IN LUMP SUM ITEM 614 MAINTAINING TRAFFIC.

ITEM 442, ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5MM, 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.

DESIGNED SJD
DRAWN MJS

ROADWAY GENERAL NOTES

MED-301-0.00
LOR-301-0.00

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14

DESIGN FILE: i:\projects\23581\23581GN001.dgn
WORKSTATION: sdeer DATE: 2/15/2006

PAVEMENT

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

ALL LONGITUDINAL PAVEMENT JOINTS SHALL BE CLOSED BEFORE THE END OF EACH WORK DAY. BEFORE THE JOINT IS EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL ERECT 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 BUTT JOINT SHALL BE SEALED WITH ASPHALT CEMENT ON THE VERTICAL FACE AND 6 INCHES WIDE FROM THE VERTICAL FACE ALONG THE PLANED 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.

CARE SHALL BE TAKEN TO MATCH EXISTING PAVEMENT ELEVATIONS AT EXISTING PAVED BERMS, DRIVES, INTERSECTIONS, ETC.

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

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

ITEM 301 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN

ON THIS PROJECT 301 COARSE AGGREGATE WILL HAVE A TWO FACE CRUSH COUNT OF 75% PER ASTM D 5821. MAXIMUM RECLAIMED ASPHALT CONCRETE PAVEMENT WILL BE 20%. ENSURE THAT A MINIMUM OF 50% OF THE VIRGIN FINE AGGREGATE USED IN THE 301 IS SAND MANUFACTURED FROM STONE OR AIR COOLED SLAG.

WHERE 301 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN MATERIAL MEETS EXISTING ASPHALT OR CONCRETE PAVEMENT, PG GRADE LIQUID ASPHALT SHALL BE USED TO COAT THE VERTICAL FACE.

ALL COSTS TO BE INCLUDED IN ITEM 301 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN.

PAVEMENT

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 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.

ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE (DEEP PLANING)

THE INTENT OF THE PLANING IS TO MILL 4.00 INCHES (AFTER THE 2.00" PLANING OF THE ENTIRE WIDTH OF THE ROADWAY), MAXIMUM DEPTH, AT THE EDGE OF SHOULDER. THE PLANING OPERATION SHALL BE CONTINUOUS FROM THE EDGE OF SHOULDER, MEASURED TRANSVERSELY OUT, A DISTANCE OF 4 FEET (SEE TYPICAL SECTIONS FOR FURTHER DETAILS). THE MILLING DEPTH SHALL BE CONTROLLED FROM THE EXISTING PAVEMENT IN CONFORMANCE WITH ABOVE GUIDELINES.

THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE OFF THE PAVEMENT SURFACE AND INTO ALL CATCH BASINS, INLETS, AND DITCHES.

THE PROGRESSION OF THE PLANING SHALL PROCEED IN SUCH A MANNER IN WHICH THE ROADWAY SHALL BE RESTORED, AT A MINIMUM, TO ITS ORIGINAL PROFILE.

PLANED AREAS WHICH CREATE A LONGITUDINAL JOINT SHALL BE COMPLETED IN SUCH A MANNER SO AS TO REMOVE THE JOINT BEFORE THE END OF EACH DAY'S WORK.

AREAS OF REPLACEMENT SHALL BE AT THE DISCRETION OF THE PROJECT ENGINEER. ESTIMATED WORK BETWEEN SLM 3.50 AND SLM 6.90.

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE
(6.9-3.5)*(5280')*(2 SIDES)*(50% TO BE REPLACED)*(4')/9 = 8019 SQ. YD.

ITEM 301 - ASPHALT CONCRETE BASE, PG64-22
(6.9-3.5)*(5280')*(2 SIDES)*(50% TO BE REPLACED)*(4')*(4/12)/27 = 891 CU. YD.

ITEM 407 - TACK COAT
(6.9-3.5)*(5280')*(2 SIDES)*(50% TO BE REPLACED)*(4')/9 * 0.08 = 642 GALLONS.

ALL QUANTITIES ARE SHOWN ON THE PAVEMENT DATA SHEET.

PAVEMENT

PAVEMENT CORING INFORMATION

CO/ROUTE/SLM	DEPTH/MATERIAL	WHEEL TRACK/SHOULDER (LT, RT, OR SHLD)
EASTBOUND LANE ONLY		
MED-301-0.15	14.00" ASPHALT	(LT)
MED-301-0.75	6.25" ASPHALT	(SHLD)
MED-301-0.75	11.00" ASPHALT	(RT)
MED-301-1.25	14.00" ASPHALT	(LT)
MED-301-1.75	8.00" ASPHALT	(SHLD)
MED-301-1.75	15.00" ASPHALT	(RT)
MED-301-2.25	14.75" ASPHALT	(LT)
MED-301-2.88	4.00" ASPHALT, 8.00" CONCRETE	(SHLD)
MED-301-2.88	10.50" ASPHALT	(RT)
MED-301-3.25	10.25" ASPHALT	(LT)
MED-301-3.68	5.75" ASPHALT	(SHLD)
MED-301-3.68	10.25" ASPHALT	(RT)
MED-301-4.25	9.00" ASPHALT, 9.00" CONCRETE	(LT)
MED-301-5.25	11.50" ASPHALT	(RT)
MED-301-5.25	6.00" ASPHALT	(SHLD)
MED-301-5.75	9.75" ASPHALT, 5.25" CONCRETE	(LT)
MED-301-6.25	8.50" ASPHALT	(SHLD)
MED-301-6.25	11.50" ASPHALT, 6.00" CONCRETE	(RT)
MED-301-6.70	10.75" ASPHALT, 5.50" CONCRETE	(LT)
MED-301-7.25	3.25" ASPHALT	(SHLD)
MED-301-7.25	16.50" ASPHALT	(RT)
MED-301-7.68	5.50" ASPHALT, 7.00" CONCRETE	(LT)
MED-301-8.25	3.00" ASPHALT, 9.00" CONCRETE	(SHLD)
MED-301-8.25	9.75" ASPHALT, 8.00" CONCRETE	(RT)
MED-301-8.75	12.75" ASPHALT, 7.00" CONCRETE	(LT)
MED-301-9.25	9.50" ASPHALT	(SHLD)
MED-301-9.25	11.00" ASPHALT	(RT)
MED-301-9.75	10.25" ASPHALT, 6.50" CONCRETE	(LT)
MED-301-10.17	12.75" ASPHALT	(LT)
MED-301-10.17	12.75" ASPHALT	(SHLD)
MED-301-10.17	14.00" ASPHALT	(RT)
LOR-301-1.00	11.00" ASPHALT	(RT)
LOR-301-1.00	11.00" ASPHALT	(LT)
LOR-301-1.00	6.50" ASPHALT	(SHLD)
LOR-301-2.00	11.00" ASPHALT	(RT)
LOR-301-2.00	10.00" ASPHALT	(LT)
LOR-301-3.00	9.00" ASPHALT	(LT)
LOR-301-3.00	8.50" ASPHALT	(RT)
LOR-301-4.00	11.00" ASPHALT	(RT)
LOR-301-4.00	10.50" ASPHALT	(LT)
LOR-301-5.00	11.00" ASPHALT	(RT)
LOR-301-5.00	9.75" ASPHALT	(SHLD)
LOR-301-6.00	13.00" ASPHALT	(LT)
LOR-301-6.00	11.00" ASPHALT	(LT)
LOR-301-7.00	15.00" ASPHALT	(LT)
LOR-301-7.00	12.00" ASPHALT	(RT)
LOR-301-8.00	12.00" ASPHALT	(LT)
LOR-301-8.00	15.00" ASPHALT	(RT)
LOR-301-9.00	8.50" ASPHALT	(LT)
LOR-301-9.00	9.00" ASPHALT	(RT)
LOR-301-9.75	14.50" ASPHALT	(LT)
LOR-301-9.75	14.00" ASPHALT	(RT)
LOR-301-11.00	13.25" ASPHALT	(LT)
LOR-301-11.00	11.00" ASPHALT	(RT)
LOR-301-12.00	12.00" ASPHALT	(LT)
LOR-301-12.00	12.00" ASPHALT	(RT)

PAVING AT RAILROAD CROSSING

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

DESIGNED SJD
DRAWN MJS

ROADWAY GENERAL NOTES

MED-301-0.00
LOR-301-0.00

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14

DESIGN FILE: i:\projects\2358\2358IGN001.dgn
WORKSTATION: sdeer
DATE: 2/15/2006

PAVEMENT

ITEM SPECIAL - REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS

THIS WORK CONSISTS OF PLACEMENT OF A SELF ADHESIVE GLASS FIBER MESH OVER JOINTS AND CRACKS DESIGNATED IN THE PLAN AFTER PLACEMENT OF THE INTERMEDIATE COURSE AND PRIOR TO PLACEMENT OF THE SURFACE COURSE.

FURNISH GLASGRID KNITTED GLASS FIBER STRAND MESH MEETING THE FOLLOWING PROPERTIES:

PROPERTIES	GLASGRID NO. 0230
MATERIAL WIDTH	2.5 FT.
MATERIAL - SELF ADHESIVE FIBERGLASS STRAND COATED WITH ELASTROMERIC POLYMER PER ASTM 4963	20% MIN DRY PICKUP
TENSILE STRENGTH PER G.R.I. GG 1-87 WIDTH	1120 LBS/IN
LENGTH	560 LBS/IN
ELONGATION AT BREAK (MIN)	< 5%
MELTING POINT (MIN) ASTM D276	> 425° F
MASS/UNIT AREA (MIN) ASTM D5261-92	16 OZ/SQ. YD.
GRID PATTERN	0.5 IN x 0.5 IN

BEFORE INSTALLATION, SUBMIT A LETTER TO THE PROJECT WITH A STATEMENT CERTIFYING MATERIAL RECEIVED MEETS THE ABOVE PROPERTIES. SUBMIT TO THE PROJECT ACTUAL DATED (SALES FLYER DATA NOT ACCEPTABLE) TEST DATA WITH THE CERTIFICATION LETTER.

PERFORM ALL REQUIRED REPAIRS PRIOR TO PLACING MESH.

WHEN THE MESH IS TO BE APPLIED ON THE INTERMEDIATE COURSE, MARK THE CRACK LOCATIONS AS DESIGNATED IN THE PLAN.

ENSURE ALL AREAS WHERE MESH IS TO BE PLACED ARE FREE OF ALL DIRT AND OTHER LOOSE MATERIALS BY SWEEPING OR OTHER APPROVED METHOD. PLACE THE MESH ON A PAVEMENT SURFACE THAT IS BETWEEN 40°F AND 140°F. ALLOW FOR THE TACK COAT TO CURE BEFORE PLACING MESH.

PLACE MESH UNDER TENSION TO PREVENT RIPPLING. REMOVE RIPPLES BY PULLING, OR IF NECESSARY (IN CURVES FOR EX.) BY CUTTING AND FLATTENING THE MESH. OVERLAP TRANSVERSE JOINTS OF THE MESH 3 TO 6 INCHES. OVERLAP LONGITUDINAL JOINTS OF THE MESH BY 1 INCH MINIMUM. ROLL THE MESH SURFACE 2 PASSES WITH A RUBBER COATED DRUM ROLLER, RUBBER TIRED ROLLER OR OTHER METHOD ACCEPTABLE TO THE MANUFACTURER. CLEAN RUBBER TIRE ROLLER IF BUILDUP ON THE RUBBER SURFACE INTERFERES WITH MESH PLACEMENT. DO NOT USE A STEEL DRUM ROLLER.

PLACED MESH WILL HANDLE SPEED CONTROLLED EMERGENCY OR CONSTRUCTION TRAFFIC BUT DAMAGED SECTIONS MUST BE REMOVED AND/OR REPAIRED. DO NOT ALLOW MUD OR OTHER MATERIAL TO COLLECT ON THE MESH PRIOR TO ASPHALT CONCRETE PLACEMENT. COVER MESH WITH ASPHALT CONCRETE THE SAME DAY UNLESS WEATHER BECOMES UNSUITABLE.

THE DEPARTMENT WILL MEASURE MESH PLACEMENT BY THE SQ YD OF JOINT OR CRACK COVERED. MESH OVERLAP WILL NOT BE MEASURED.

THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES, COMPLETED IN PLACE, AT THE CONTRACT PRICES, AS DESCRIBED ABOVE.

PAVEMENT

PROFILE CORRECTION AT STRUCTURES

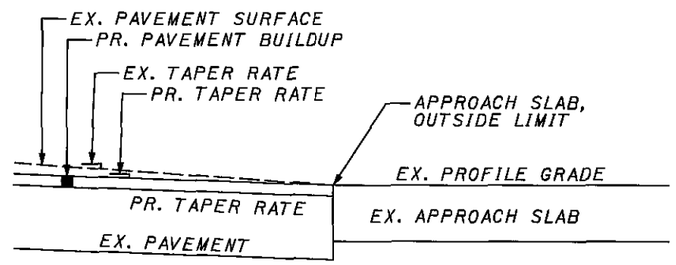
THE CONTRACTOR SHALL CORRECT THE PAVEMENT PROFILE WITH THE RESURFACING OPERATIONS WHILE ENSURING A SMOOTH TRANSITION FROM THE PROPOSED TREATMENT ON THE APPROACH SLABS (OUTSIDE LIMITS) TO THE PROPOSED ROADWAY PAVEMENT BUILDUP.

THE MINIMUM DISTANCE BETWEEN CONSECUTIVE GRADE BREAKS IS:
100' WHERE SPEED IS 50 MPH OR GREATER.
50' WHERE SPEED IS LESS THAN 50 MPH.

THE FOLLOWING ARE TAPER RATES, BASED ON THE EXISTING PROFILE GRADE OF THE ROADWAY, WHICH SHALL BE MET TO ENSURE THE SMOOTH TRANSISTION .

SPEED	TAPER RATE
25	55:1
30	80:1
35	110:1
40	140:1
45	190:1
50	230:1
55	250:1
60	340:1
65	340:1
70	400:1

THE ABOVE WORK INCLUDING ALL LABOR, EQUIPMENT AND MATERIAL NEEDED TO PERFORM THE WORK, SHALL BE CONSIDERED INCIDENTAL TO THE RESURFACING OPERATIONS.



MAINTENANCE OF TRAFFIC

ITEM 614, WORK ZONE MARKING SIGN

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

WORK ZONE MARKING SIGN: (W8-H13-36) NO EDGE LINE - 85 EACH

WORK ZONE MARKING SIGN: (R4-1-24) DO NOT PASS - 55 EACH

WORK ZONE MARKING SIGN: (R4-2-24) PASS WITH CARE - 53 EACH

TOTAL - 193 EACH

MAINTENANCE OF TRAFFIC

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 ERECTED AND MAINTAINED DURING THE PERIOD THE BUTT JOINT IS LEFT OPEN. THESE SIGNS SHALL BE PAID FOR UNDER THE LUMP SUM ITEM FOR ITEM 614 MAINTAINING TRAFFIC.

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.

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, 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 200 CU YD

CALCULATED SJD
DRAWN MJS

ROADWAY GENERAL NOTES

MED-301-0.00
LOR-301-0.00

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DESIGN FILE: I:\projects\2358\2358GN001.dgn
WORKSTATION: sdeer
DATE: 2/15/2006

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.

TRAFFIC CONTROL

ITEM 621 RPM, AS PER PLAN (CONTINUED)

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.

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. EXCESS MATERIAL RESULTING SHALL BE USED ELSEWHERE FOR THIS ITEM IF SO DIRECTED OR DISPOSED OF PROPERLY.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.

EXCESS MATERIAL RESULTING SHALL BE USED ELSEWHERE FOR THIS ITEM IF SO DIRECTED OR DISPOSED OF PROPERLY.

ITEM 604 - MONUMENTS

MONUMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS AS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN WITHIN THE PLAN AND PROVIDED AT THE PRECONSTRUCTION MEETING.

ITEM 604 - CASTINGS ADJUSTED TO GRADE
ITEM 638 - VALVE BOX 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 (I), 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.

ADJUST VALVE BOXES TO GRADE AS PER ITEM 638.18 IN THE CMS.

ROADWAY

LOCAL AIRPORT

THE FEDERAL AVIATION ADMINISTRATION HAS DETERMINED THERE IS NO HAZARD TO AIR NAVIGATION IN RELATION TO THE HARLAN AIRFIELD NEXT TO SR 301 IN MEDINA COUNTY, BASED ON THE HEIGHT OF PAVING EQUIPMENT/DUMP TRUCKS. THE AERONAUTICAL STUDY NO'S ARE 2005-AGL-7353-OE AND 2005-AGL-7354-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 HARLAN AIRFIELD IS:
19173 ROUTE 301
LAGRANGE, OHIO 44050.

DALE HARLAN IS THE MANAGER - TELEPHONE: (440) 355-6491

CALCULATED SJD
DESIGNED MJS

ROADWAY GENERAL NOTES

MED-301-0.00
LOR-301-0.00

8
114

DESIGN FILE: I:\projects\23581\2358IGN001.dgn
WORKSTATION: sdeer
DATE: 2/15/2006

GENERAL NOTES

1. IT IS INTENDED THAT THIS DRAWING BE USED FOR TREATMENT OF DROP-OFFS THAT DEVELOP DURING CONSTRUCTION OPERATONS, 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 HERON, THEY SHALL BE INCLUDED FOR PAYMENT IN THE LUMP SUM BID FOR ITEM 614-MAINTAINING TRAFFIC.

2. WHILE THE NEED FOR CERTAIN ADVISORY SIGNING IS NOTED HERON, 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.

3. 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.

4. THE DROP-OFF TREATMENT SELECTED FOR USE AT ANY GIVEN LOCATION SHALL BE AS APPROPRIATE FOR THE PREVAILING CONDITIONS AT THE SITE.

5. WHERE CONCRETE BARRIER IS SPECIFIED, IT SHALL BE IN ACCORDANCE WITH SCD RM-4.2 AND ITEM 622.

6. 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.

7. WHEN OW-151 (LOW SHOULDER) SIGNS OR OW-155 (SHOULDER DROP-OFF) SIGNS OR OW-171 (UNEVEN LANES) SIGNS ARE REQUIRED, THEY SHALL BE PLACED 750' (250 M) IN ADVANCE OF THE CONDITION, ON ALL INTERSECTING ENTRANCE 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.

8. 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.

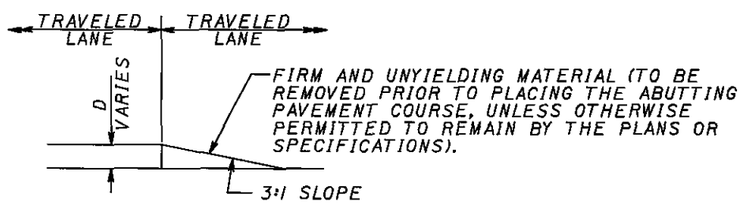
9. PORTABLE CONCRETE BARRIER SHALL BE PLACED ON THE SAME LEVEL AS THE TRAFFIC SURFACE AND SHALL NOT ENCROACH ON LANE WIDTH(S) DESIGNATED AS THE MINIMUM REQUIRED FOR TRAFFIC USE. WHERE DRUMS ARE USED, AND THEIR PRESENCE WOULD REDUCE TRAVELED LANE WIDTHS TO LESS THAN 10' (3.0M), DRUMS MAY BE PLACED ON 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.

10. PAVEMENT REPAIRS (OR SIMILAR WORK):
    A. LENGTHS GREATER THAN 60' (18 M) - UTILIZE APPROPRIATE TREATMENT FROM CONDITION I.
    B. 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)

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



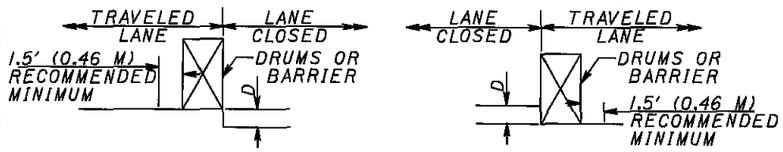
CONDITION I

DROP-OFFS BETWEEN TRAVELED LANES

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

D	TREATMENT
≤1½" (≤40)	ERECT OW-171 SIGN
>1½"-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

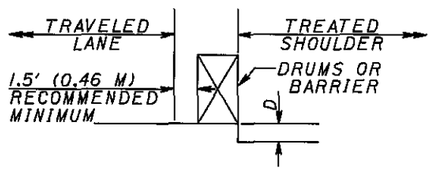
DROP-OFFS WITHIN GRADED SHOULDER AREA

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).

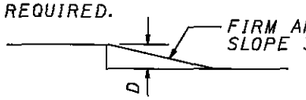
D	TREATMENT
≤1½" (≤40)	ERECT OW-155 SIGNS
>1½"-5" (>40-125)	1. IF MINIMUM LANE WIDTH* REQUIREMENTS CAN BE MET, MAINTAIN LANES UTILZING DRUMS AS SHOWN BELOW OR 2. IF MINIMUM LANE WIDTH* REQUIREMENTS CANNOT BE MET, CLOSE ADJACENT LANE UTILIZING DRUMS OR 3. OPTIONAL SHOULDER TREATMENT
>5"-12" (>125-305) 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

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



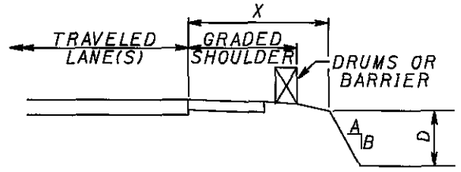
CONDITION III

DROP-OFFS BEYOND GRADED SHOULDER OR BACK OF CURB

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

CHART A

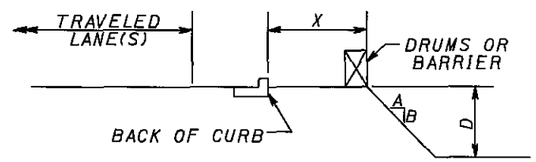
USE FOR: 1. UNCURBED FACILITIES.
2. CURBED FACILITIES, WHERE:
   A. CURBS ARE LESS THAN 6" (150) IN HEIGHT.
   B. CURBS ARE 6" (150) OR GREATER IN HEIGHT AND THE LEGAL SPEED IS GREATER THAN 40 MPH (70 KM/H)



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.

08-07-01

DROP-OFFS IN WORK ZONES

OFFICE OF TRAFFIC ENGINEERING

MED-301-0.00
LOR-301-0.00

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DESIGN FILE: I:\projects\2358\2358IGN001.dgn
WORKSTATION: sdeer
DATE: 2/15/2006

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 ACCOMODATE THE COMPLETE INSTALLATION. SUPPORT HARDWARE SHALL ACCOMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO MAILBOXES MAY BE MOUNTED ON A SINGLE POST. [HARDWARE SHALL BE COMMERCIAL GRADE GALVANIZED STEEL.]

WOOD POSTS SHALL BE NOMINAL 4 IN. x 4 IN. (S4S) OR 4½IN. DIAMETER ROUND, AND CONFORM TO 710.14. STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2 IN. I.D., AND CONFORM TO AASHTO M 181.

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

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

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

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

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

ITEM SPECIAL-MAILBOX SUPPORT SYSTEM, SINGLE	
PART A - S.R. 301	15 EACH
PART B - S.R. 301	24 EACH
ITEM SPECIAL-MAILBOX SUPPORT SYSTEM, DOUBLE	
PART A - S.R. 301	0 EACH
PART B - S.R. 301	2 EACH

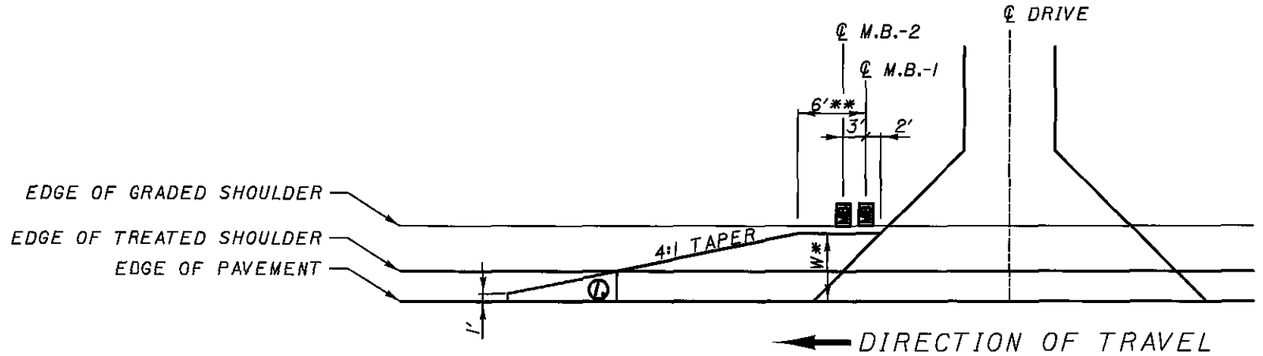
MAILBOX APPROACHES

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

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

ITEM 209 - GRADING MAILBOX APPROACHES:	
PART A - S.R. 301	93 EACH
PART B - S.R. 301	231 EACH
ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN	
PART A - S.R. 301	186 CU YD
PART B - S.R. 301	462 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

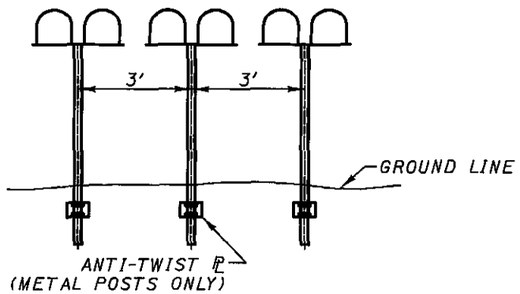
PART A
5360 - NORTH OF SPENCER
5431 - NORTH OF SPENCER
5989 - NORTH OF SPENCER
412 - SOUTH OF SPENCER
6650 - SOUTH OF SPENCER
6780 - SOUTH OF SPENCER
6854 - SOUTH OF SPENCER
7372 - SOUTH OF SPENCER
7506 - SOUTH OF SPENCER
7680 - SOUTH OF SPENCER
7788 - SOUTH OF SPENCER
7833 - SOUTH OF SPENCER
7901 - SOUTH OF SPENCER
8025 - SOUTH OF SPENCER
8429 - SOUTH OF SPENCER

PART B
13900 - SOUTH OF US20
14135 - SOUTH OF US20
14219 - SOUTH OF US20
14623 - SOUTH OF US20
14662 - SOUTH OF US20
14762 - SOUTH OF US20
14773 - SOUTH OF US20
14802 - SOUTH OF US20
15011 - SOUTH OF US20
15186 - SOUTH OF US20
15456 - SOUTH OF US20
15917 - SOUTH OF US20
16206 - SOUTH OF US20
17703 - SOUTH OF LAGRANGE
17925 - SOUTH OF LAGRANGE
17970 - SOUTH OF LAGRANGE
18364 - SOUTH OF LAGRANGE
18513 - SOUTH OF LAGRANGE
18791 - SOUTH OF LAGRANGE
19951 - SOUTH OF LAGRANGE
20984 - SOUTH OF LAGRANGE
21195 - SOUTH OF LAGRANGE
22101 - SOUTH OF SR 18
22692 - SOUTH OF SR 18
23399 - SOUTH OF SR 18
23811 - SOUTH OF SR 18

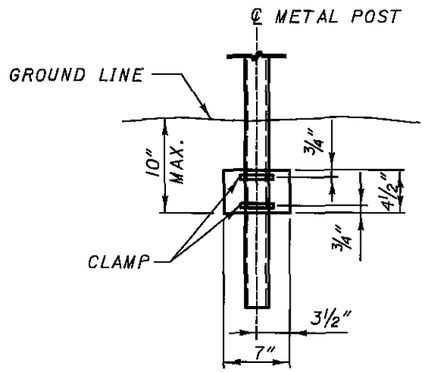
① END MAILBOX TURNOUT AT EDGE OF TREATED SHOULDER OR 1' WHICH EVER IS GREATER.

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 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 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.

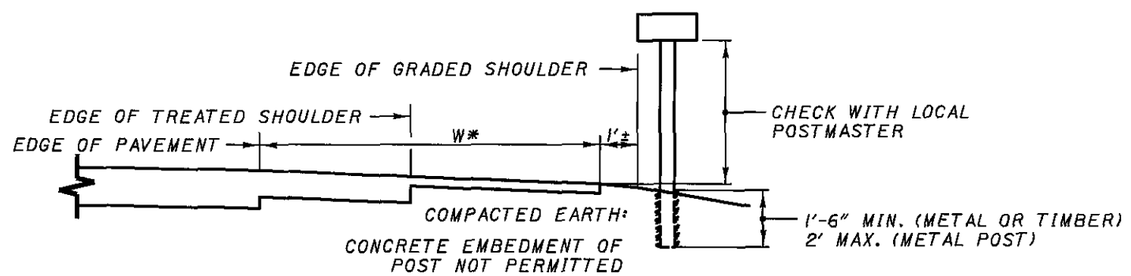
** NOTE
1) 6' FOR SINGLE MAILBOX SUPPORT, ADD 3 FT. FOR EACH ADDITIONAL MAILBOX.



GROUP MAILBOX INSTALLATION



ANTI-TWIST PLATE



CROSS SECTION / ELEVATION VIEW

DESIGN FILE: I:\projects\2358\2358IGM001.dgn DATE: 2/15/2006
WORKSTATION: sdeer

CHECKED SJD DESIGNED MJS

MAILBOX FACILITIES

MED-301-0.00
LOR-301-0.00

10
14

SHEET NUMBER												ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	REF. SHEET
10	13	14	18	40	42		44	62	64	65	111						
																ROADWAY	
												201	11000	LUMP		CLEARING AND GRUBBING	
									66			202	23000	66	SQ YD	PAVEMENT REMOVED	
				851	1,617							202	30001	2,468	SQ FT	WALK REMOVED, AS PER PLAN	40,42
									170			202	35100	170	FT	PIPE REMOVED, 24" AND UNDER	
			3,162.5									202	38000	3,162 5	FT	GUARDRAIL REMOVED	
			16									202	42000	16	EACH	ANCHOR ASSEMBLY REMOVED, TYPE A	
			1									202	42040	1	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T	
			1									202	42620	1	EACH	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E-98	
							1,290					202	54000	1,290	EACH	RAISED PAVEMENT MARKER REMOVED	
			92						325			203	10000	417	CU YD	EXCAVATION	
									391			203	20000	391	CU YD	EMBANKMENT	
			896									203	20001	896	CU YD	EMBANKMENT, AS PER PLAN	29
			249						529			204	10000	778	SQ YD	SUBGRADE COMPACTION	
			56.13									209	15000	56.13	STATION	RESHAPING UNDER GUARDRAIL	
		43 06										209	60500	43.06	MILE	LINEAR GRADING	
324												209	80000	324	EACH	GRADING MAILBOX APPROACHES	
											2	604	38500	2	EACH	MONUMENT ASSEMBLY	
	22											604	39500	22	EACH	MONUMENT BOX ADJUSTED TO GRADE	
			3,600									606	13000	3,600	FT	GUARDRAIL, TYPE 5	
			2									606	22010	2	EACH	ANCHOR ASSEMBLY, TYPE E-98	
			14									606	25000	14	EACH	ANCHOR ASSEMBLY, TYPE A	
			4									606	26500	4	EACH	ANCHOR ASSEMBLY, TYPE T	
			1									606	28050	1	EACH	ANCHOR ASSEMBLY REBUILT, TYPE E-98	
			4									606	32160	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE TST	
			2									606	35000	2	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1	
			2									606	35100	2	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 2	
			4									606	35120	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 3	
			10									606	35140	10	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4	
				851	1,577							608	52001	2,428	SQ FT	CURB RAMP, AS PER PLAN	40,42
39												SPECIAL	69050100	39	EACH	MAILBOX SUPPORT SYSTEM, SINGLE	10
2												SPECIAL	69050200	2	EACH	MAILBOX SUPPORT SYSTEM, DOUBLE	10
								232				659	00300	232	CU YD	**EROSION CONTROL** TOPSOIL	
								2,089				659	10000	2,089	SQ YD	SEEDING AND MULCHING	
								0.28				659	20000	0.28	TON	COMMERCIAL FERTILIZER	
								11				659	35000	11	M GAL	WATER	
										1		832	10000	1	EACH	STORM WATER POLLUTION PLAN	
										5000		832	30000	5,000	EACH	EROSION CONTROL	
									0.46			602	20000	0.46	CU YD	**DRAINAGE** CONCRETE MASONRY	
									104			603	04900	104	FT	12" CONDUIT, TYPE D	
									43			603	06100	43	FT	15" CONDUIT, TYPE C	
									201			603	10600	201	FT	24" CONDUIT, TYPE C	
									3			604	04900	3	EACH	CATCH BASIN, NO. 2-3	
	48											604	09000	48	EACH	CATCH BASIN ADJUSTED TO GRADE	
	2											604	09500	2	EACH	CATCH BASIN RECONSTRUCTED TO GRADE	
									1			604	10100	1	EACH	INLET, SIDE DITCH	
	41											604	34500	41	EACH	MANHOLE ADJUSTED TO GRADE	
																WATERWORKS	
	27											638	10800	27	EACH	VALVE BOX ADJUSTED TO GRADE	

CALCD | SJD
CHECKED | MJS

GENERAL SUMMARY

MED-301-0.00
LOR-301-0.00

SHEET NUMBER											ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	REF. SHEET
5	7	10	13	14	18	44	54	57	64							
															PAVEMENT	
					269						252	01500	269	FT	FULL DEPTH PAVEMENT SAWING	
1268											253	02000	1,268	CU YD	PAVEMENT REPAIR	
			1,314								254	01000	1,314	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE (1.50")	
			315,872								254	01000	315,872	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE (2.00")	
			40,336								254	01000	40,336	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE (2.25")	
			8,019								254	01000	8,019	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE (4.00" - DEEP PLANING)	
			3,563								254	01600	3,563	SQ YD	PATCHING PLANED SURFACE	
			891		54				37		301	46001	982	CU YD	ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN	6
					35				137		304	20000	172	CU YD	AGGREGATE BASE	
			29,371						11		407	10000	29,382	GALLON	TACK COAT	
			642								407	10000	642	GALLON	TACK COAT (FOR DEEP PLANING)	
			10,975								407	14000	10,975	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
				21286							408	10000	21,286	GALLON	PRIME COAT	
			12,816						24		442	00201	12,840	CU YD	ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN	6
			10,206						11		442	20101	10,217	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5 MM, TYPE A (448), AS PER PLAN	5
		648		1479							617	10101	2,127	CU YD	COMPACTED AGGREGATE, AS PER PLAN	6
				53213							617	20000	53,213	SQ YD	SHOULDER PREPARATION	
					90						SPECIAL	69012050	90	SQ YD	REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS	7
															MAINTENANCE OF TRAFFIC	
	193										614	12460	193	EACH	WORK ZONE MARKING SIGN	
	200										614	13000	200	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
						67.83					614	21500	67.83	MILE	WORK ZONE CENTERLINE, CLASS II, 642 PAINT	
						246					614	26200	246	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
															TRAFFIC CONTROL	
						1,324					621	00101	1,324	EACH	RPM, AS PER PLAN	8
					135						626	00100	135	EACH	BARRIER REFLECTOR, TYPE A	
					5						626	00200	5	EACH	BARRIER REFLECTOR, TYPE B	
					216				51		630	02100	267	FT	GROUND MOUNTED SUPPORT, NO 2 POST	
							47	76			630	03100	123	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
							41	41	1		630	80100	83	SQ FT	SIGN, FLAT SHEET	
							2.0	2			630	84900	4	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
					16				3		630	85100	19	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
					16			2	3		630	86002	21	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
							5.0	5			630	97700	10	EACH	SIGNING, MISC.: SIGN DATA COLLECTION	
						45.96					642	00102	45.96	MILE	EDGE LINE, TYPE 2	
						22.73					642	00302	22.73	MILE	CENTER LINE, TYPE 2	
						587					642	00402	587	FT	CHANNELIZING LINE, TYPE 2	
						88					642	00502	88	FT	STOP LINE, TYPE 2	
						663					642	00702	663	FT	TRANSVERSE/DIAGONAL LINE, TYPE 2	
						141					642	00902	141	SQ FT	ISLAND MARKING, TYPE 2	
						8					642	01302	8	EACH	LANE ARROW, TYPE 2	
						2					642	01412	2	EACH	WORD ON PAVEMENT, 96", TYPE 2	
						67					642	30000	67	FT	REMOVAL OF PAVEMENT MARKING	
						1,776					644	00500	1,776	FT	STOP LINE	
						2,570					644	00600	2,570	FT	CROSSWALK LINE	
						6					644	01000	6	EACH	RAILROAD SYMBOL MARKING	
						2					644	01110	2	EACH	SCHOOL SYMBOL MARKING, 96"	
						1,715					644	01200	1,715	FT	PARKING LOT STALL MARKING	
															TRAFFIC SIGNALS	
							100	100			603	00400	200	FT	4" CONDUIT, TYPE E	
							610	455			625	25302	1,065	FT	CONDUIT, 1-1/2", 725.05	
							385	382			625	25402	767	FT	CONDUIT, 2", 725.05	
							105	53			625	25502	158	FT	CONDUIT, 3", 725.05	
							197	114			625	25901	311	FT	CONDUIT JACKED OR DRILLED UNDER PAVEMENT, 2" AS PER PLAN	46

CALC'D S.J.D.
CHECKED M.J.S.

GENERAL SUMMARY

MED-301-0.00
LOR-301-0.00

SHEET NUMBER									ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	REF. SHEET
7		18	43	44		54	57							
													TRAFFIC SIGNALS (CONT'D)	
						50			625	25901	50	FT	CONDUIT JACKED OR DRILLED UNDER PAVEMENT, 3" AS PER PLAN	46
						1100	994		625	29001	2,094	FT	TRENCH, AS PER PLAN	46
						12	10		625	30701	22	EACH	PULL BOX, 725.08, 18", AS PER PLAN	46
						1	1		625	30707	2	EACH	PULL BOX, 725 08, 24", AS PER PLAN	46
						3	3		625	32001	6	EACH	GROUND ROD, AS PER PLAN	46
						4	4		632	00301	8	EACH	VEHICULAR SIGNAL HEAD, 3 SECTION, 12" LENS, 1-WAY, AS PER PLAN	48
						1	1		632	01101	2	EACH	VEHICULAR SIGNAL HEAD, 3 SECTION, 12" LENS, 2-WAY, AS PER PLAN	48
						5	5		632	25001	10	EACH	COVERING OF VEHICULAR SIGNAL HEAD, AS PER PLAN	48
						4	6		632	26500	10	EACH	DETECTOR LOOP	
			8			2			632	26501	10	EACH	DETECTOR LOOP, AS PER PLAN	43
						6	6		632	27009	12	EACH	LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN	47
						1	1		632	28201	2	EACH	DISCONNECT SWITCH WITH ENCLOSURE, AS PER PLAN	47
						132	149		632	29901	281	FT	MESSENGER WIRE, 7 STRAND, 1/4" DIAMETER WITH ACCESSORIES, AS PER PLAN	48
						132	149		632	30200	281	FT	MESSENGER WIRE, 7 STRAND, 3/8" DIAMETER WITH ACCESSORIES	
						302	375		632	40500	677	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
						121	139		632	40700	260	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
						514	441		632	62803	955	FT	INTERCONNECT CABLE, INTEGRAL MESSENGER WIRE TYPE, 6 PAIR, NO 19 AWG, SOLID, REA (PE-38), AS PER PLAN	47
						2	2		632	64001	4	EACH	STRAIN POLE FOUNDATION, AS PER PLAN	48
						1367	1658		632	65300	3,025	FT	LOOP DETECTOR LEAD-IN CABLE, 2 CONDUCTOR, NO 14 AWG	
						41	36		632	68200	77	FT	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG	
						35	35		632	68300	70	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG	
						1029	838		632	69800	1,867	FT	SERVICE CABLE, 3 CONDUCTOR, NO. 6 AWG	
						1			632	70001	1	EACH	POWER SERVICE, AS PER PLAN	47
						1			632	70400	1	EACH	CONDUIT RISER, 2" DIAMETER	
						1	1		632	83001	2	EACH	STRAIN POLE, TYPE TC-81 10, DESIGN 10, AS PER PLAN	49
						1	1		632	89300	2	EACH	WOOD POLE, CLASS 5, 35'	
						1	1		632	89400	2	EACH	DOWN GUY	
						1	1		632	90400	2	EACH	SIGNALIZATION, MISC.: STRAIN POLE EXTENSION WITH 30' LIMINAIRE ARM	
						1	1		632	90400	2	EACH	SIGNALIZATION, MISC.: STRAIN POLE, TYPE TC-81.10, INSTALLATION ONLY	
						1	1		632	90400	2	EACH	SIGNALIZATION, MISC : VIDEO DETECTION CAMERA	
						1	1		632	90400	2	EACH	SIGNALIZATION, MISC.: VIDEO DETECTION SYSTEM CABINET HARDWARE	
						1	1		633	01581	2	EACH	CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS1, AS PER PLAN	49
						1			633	39000	1	EACH	CONTROLLER, MASTER, TRAFFIC RESPONSIVE	
						1	1		633	67101	2	EACH	CABINET FOUNDATION, AS PER PLAN	49
						3	2		633	67201	5	EACH	CONTROLLER WORK PAD, AS PER PLAN	49
													STRUCTURES (20' AND UNDER)	
													STRUCTURE MED-301-0677 (SFN 5207495)	75
													STRUCTURE MED-301-0624 (SFN 5207509)	80
													STRUCTURE LOR-301-0015 (SFN 4706331)	81
													STRUCTURE LOR-301-0894 (SFN 4706390)	82
													STRUCTURE LOR-301-0919 (SFN 4706439)	82
													STRUCTURES (OVER 20')	
													STRUCTURE MED-301-0337 (SFN 5207444)	79
													STRUCTURE MED-301-0701 (SFN 5207533)	80
													STRUCTURE LOR-301-0164 (SFN 4706366)	81
													STRUCTURE LOR-301-1241 (SFN 4706609)	82
									614	11000	LUMP		MAINTAINING TRAFFIC	
									619	16010	15	MONTH	FIELD OFFICE, TYPE B	
									623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	12A
									624	10000	LUMP		MOBILIZATION	114

CALC'D
SJD
CHECKED
MJS

GENERAL SUMMARY

MED-301-0.00
LOR-301-0.00

* - FOR TYPICAL SECTIONS, SEE SHEETS 15-17

CALC BY: SJD

CHKD BY: MJS

PART	ROUTE	LOG POINT TO LOG POINT (STRAIGHT LINE MILEAGE)		LENGTH MILE	LENGTH FEET	WIDTH FEET AVG	* TYPICAL	PAVEMENT AREA SQ YD	254 PAVEMENT PLANING, ASPHALT CONCRETE (2.00") SQ YD	254 PAVEMENT PLANING, ASPHALT CONCRETE (2.25") SQ.YD	254 PAVEMENT PLANING, ASPHALT CONCRETE (1.50") SQ.YD	254 PAVEMENT PLANING, ASPHALT CONCRETE (4.00" - DEEP PLANING - 3' WIDE) SQ.YD	254 PATCHING PLANED SURFACE SQ.YD	301 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN INCH	301 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN CU.YD	407 TACK COAT @ 0.08 GAL/SY (FOR DEEP PLANING) GALLON	407 TACK COAT @ 0.08 GAL/SY GALLON	407 TACK COAT FOR INTERM. COURSE @ 0.03 GAL/SY GALLON	442 ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN INCH	442 ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN CU YD.	442 ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5 MM, TYPE A (448), AS PER PLAN INCH	442 ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5 MM, TYPE A (448), AS PER PLAN CU.YD.	604 CATCH BASIN ADJUSTED TO GRADE EACH	604 CATCH BASIN RECONSTRUCTED TO GRADE EACH	604 MANHOLE ADJUSTED TO GRADE EACH	604 MONUMENT BOX ADJUSTED TO GRADE EACH	638 VALVE BOX ADJUSTED TO GRADE EACH
A	SR 301	0.00	2.60	2.60	13728	25.0	1	38,133	38,133				381				3,051	1,144	1.25	1,324	1.00	1,059					
A	SR 301	2.61	2.67	0.06	316.8	25.0	2	880		880			9				70	26	1.25	31	1.00	24		1			
A	SR 301	2.67	2.84	0.17	897.6	25.0	1	2,493	2,493				25				199	75	1.25	87	1.00	69	1	1			
A	SR 301	2.84	3.50	0.66	3484.8	25.5	1	9,874	9,874				99				790	296	1.25	343	1.00	274					
A	SR 301	3.50	6.90	3.40	17952	25.5	1, 6	50,864	50,864			8,019	509	4.00	891	642	4,069	1,526	1.25	1,766	1.00	1,413					
A	SR 301	6.90	7.24	0.34	1795.2	25.5	1	5,086	5,086				51				407	153	1.25	177	1.00	141					
A	SR 301	7.24	7.60	0.36	1900.8	30.0	3	6,336		6,336			63				507	190	1.25	220	1.00	176	20		7		
A	SR 301	7.60	7.63	0.03	158.4	41.0	3	722		722			7				58	22	1.25	25	1.00	20					
A	SR 301	7.63	7.66	0.03	158.4	57.0	3	1,003		1,003			10				80	30	1.25	35	1.00	28					
A	SR 301	7.66	7.70	0.04	211.2	50.0	3	1,173		1,173			12				94	35	1.25	41	1.00	33	2		1		
A	SR 301	7.70	8.18	0.48	2534.4	31.5	3	8,870		8,870			89				710	266	1.25	308	1.00	246	20		8		
A	SR 301	8.18	10.17	1.99	10507.2	24.0	1	28,019	28,019				280				2,242	841	1.25	973	1.00	778					
A	EXTRA AREA FOR INTERS., DRIVES, + MAILBOXES							5054	1700				17				404	152	1.25	175	1.00	140					
A	EXTRA AREA FOR UNPAVED DRIVES																										
					SUBTOTAL PART A			158,507	136,169	18,984	0	8,019	1,552		891	642	12,681	4,756		5,505		4,401	43	2	16	7	12
B	SR 301	0.00	2.22	2.22	11721.6	28.0	1	36,467	36,467				365				2,917	1,094	1.25	1,266	1.00	1,013					
B	SR 301	2.22	6.31	4.09	21595.2	27.5	1	65,985	65,985				660				5,279	1,980	1.25	2,291	1.00	1,833					
B	SR 301	6.31	6.72	0.41	2164.8	27.5	4	6,615		6,615			66				529	198	1.25	230	1.00	184			6		
B	SR 301	6.72	6.76	0.04	211.2	27.5	5	645		645			6				52	19	1.25	22	1.00	18	1		1		
B	SR 301	6.76	6.91	0.15	792	27.0	4	2,376		2,376			24				190	71	1.25	83	1.00	66	4		4		
B	SR 301	6.91	6.94	0.03	158.4	28.0	5	493		493			5				39	15	1.25	17	1.00	14					
B	SR 301	6.94	6.98	0.04	211.2	35.0	5	ROUND ABOUT WILL BE PAVED WITH THE LOR-303-0.00 PROJECT (PID 25662)																			
B	SR 301	6.98	7.00	0.02	105.6	44.5	5	522		522			5				42	16	1.25	18	1.00	15					
B	SR 301	7.00	7.76	0.76	4012.8	24.0	4	10,701		10,701			107				856	321	1.25	372	1.00	297			8		
B	SR 301	7.76	9.80	2.04	10771.2	28.0	1	33,510	33,510				335				2,681	1,005	1.25	1,164	1.00	931			0		
B	SR 301	9.82	12.46	2.64	13939.2	28.0	1	43,366	43,366				434				3,469	1,301	1.25	1,506	1.00	1,205			6		
B	SR 301	12.46 NB	12.50 SB	0.14	739.2	**	7	1,314			1,314						105		1.5	55							
B	EXTRA AREA FOR INTERS , DRIVES, + MAILBOXES							8258	2000				20				661	248	1.25	287	1.00	229					
B	EXTRA AREA FOR UNPAVED DRIVES																										
** - CONCRETE PAVEMENT, SHOULDER PLANING AND PAVING ONLY																											
					SUBTOTAL PART B			210,252	181,328	21,352	1,314	0	2,027		0	0	16,820	6,268		7,311		5,805	5	0	25	15	15
					TOTALS			368,759	317,497	40,336	1,314	8,019	3,579		891	642	29,501	11,024		12,816		10,206	48	2	41	22	27

PAVEMENT DATA

MED-301-0.00
LOR-301-0.00

* - FOR TYPICAL SECTIONS, SEE SHEETS 15-17

CALC BY SJD

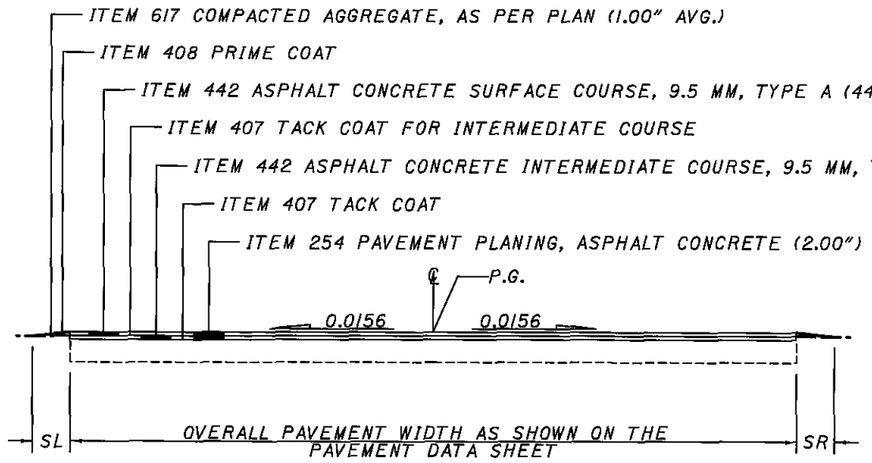
CHKD BY MJS

PART	ROUTE	LOG POINT TO LOG POINT STRAIGHT LINE MILEAGE		LENGTH MILE	LENGTH FEET	WIDTH FEET AVG	* TYPICAL	PROPOSED SHOULDER WIDTH SL FT	PROPOSED SHOULDER WIDTH SR FT	AGGREGATE SHOULDER AREA SQ YD	209 LINEAR GRADING MILE	408 PRIME COAT @ 0 40 GAL/SY GALLON	617 COMPACTED AGGREGATE, AS PER PLAN 1 INCHES AVG THICKNESS CU YD	617 SHOULDER PREPARATION SQ YD
A	SR 301	0 00	2 60	2 60	13728	25 0	1	2 0	2.0	6,101	5 20	2,441	169	6,101
A	SR 301	2.61	2 67	0 06	316 8	25.0	2		2.0	70	0 12	28	2	70
A	SR 301	2 67	2 84	0 17	897 6	25 0	1	2.0	2.0	399	0 34	160	11	399
A	SR 301	2.84	3 50	0.66	3484 8	25.5	1	2.0	2 0	1,549	1 32	620	43	1,549
A	SR 301	3 50	6.90	3 40	17952	25 5	6	2.0	2 0	7,979	6 80	3,191	222	7,979
A	SR 301	6 90	7 24	0 34	1795 2	25 5	1	2 0	2.0	798	0.68	319	22	798
A	SR 301	7 24	7 60	0 36	1900.8	30 0	3							
A	SR 301	7 60	7 63	0.03	158 4	41 0	3							
A	SR 301	7 63	7 66	0 03	158.4	57 0	3							
A	SR 301	7 66	7.70	0.04	211 2	50.0	3							
A	SR 301	7.70	8 18	0 48	2534 4	31.5	3							
A	SR 301	8 18	10 17	1 99	10507.2	24 0	1	2 0	2 0	4,670	3.98	1,868	130	4,670
A	EXTRA AREA FOR INTERS , DRIVES, + MAILBOXES													
A	EXTRA AREA FOR UNPAVED DRIVES									1164		466	32	1164
B	SR 301	0 00	2 22	2 22	11721 6	28.0	1	2 0	2.0	5,210	4.44	2,084	145	5,210
B	SR 301	2 22	6 31	4 09	21595 2	27.5	1	2 0	2 0	9,598	8 18	3,839	267	9,598
B	SR 301	6 31	6 72	0 41	2164 8	27 5	4	2 0	2 0	962	0 82	385	27	962
B	SR 301	6 72	6.76	0.04	211 2	27 5	5							
B	SR 301	6.76	6 91	0 15	792	27.0	4	2 0	2 0	352	0 30	141	10	352
B	SR 301	6 91	6 94	0 03	158 4	28 0	5							
B	SR 301	6 94	6 98	0 04	211 2	35 0	5							
B	SR 301	6 98	7.00	0.02	105 6	44 5	5							
B	SR 301	7 00	7 76	0.76	4012.8	24.0	4	2 0	2 0	1,783	1 52	713	50	1,783
B	SR 301	7 76	9 80	2 04	10771.2	28 0	1	2 0	2.0	4,787	4 08	1,915	133	4,787
B	SR 302	9.82	12.46	2.64	13939 2	28.0	1	2.0	2.0	6,195	5.28	2,478	172	6,195
B	SR 301	12.46 NB	12 50 SB	0 14	739.2	**	7							
B	EXTRA AREA FOR INTERS., DRIVES, + MAILBOXES													
B	EXTRA AREA FOR UNPAVED DRIVES									1596		638	44	1596
	TOTALS			22.74	120067						43.06	21,286	1,479	53,213

** - CONCRETE PAVEMENT, SHOULDER PLANING AND PAVING ONLY

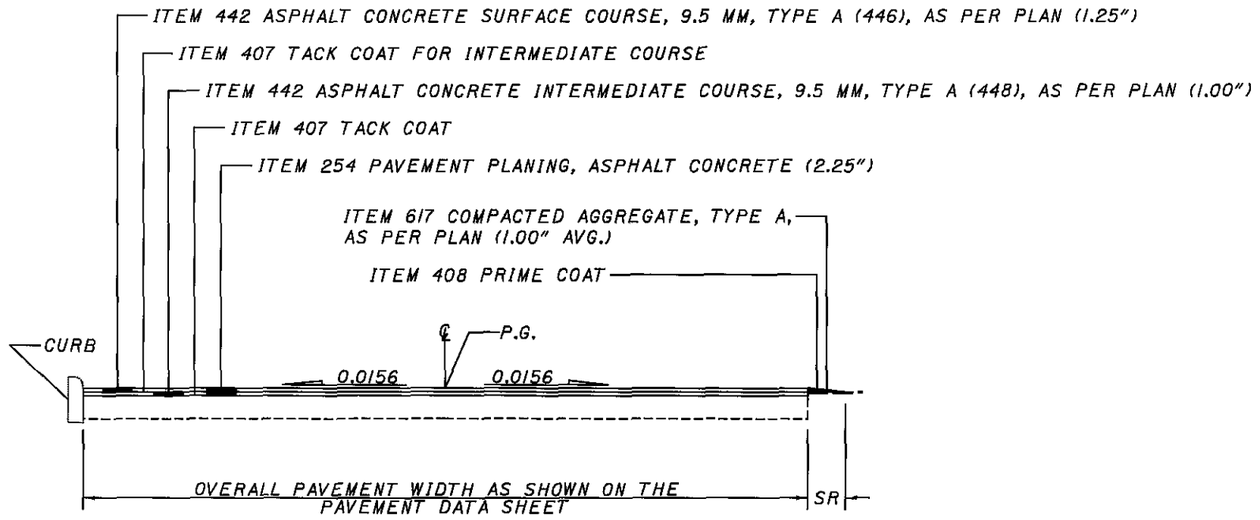
SHOULDER DATA

MED-301-0.00
LOR-301-0.00



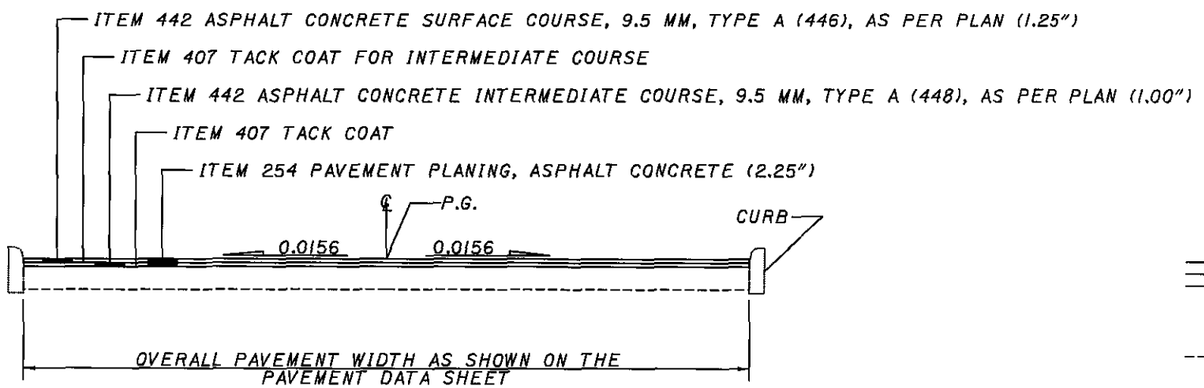
TYPICAL 1

MED - SLM 0.00 TO 2.60
MED - SLM 2.67 TO 7.24
MED - SLM 8.18 TO 10.17
LOR - SLM 0.00 TO 6.31
LOR - SLM 7.76 TO 12.46



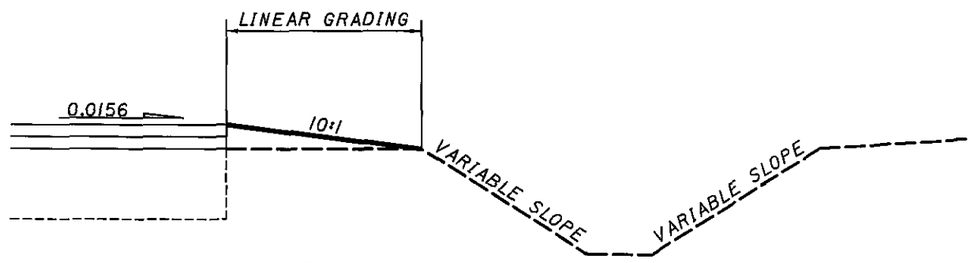
TYPICAL 2

MED - SLM 2.61 TO 2.67



TYPICAL 3

MED - SLM 7.24 TO 8.18



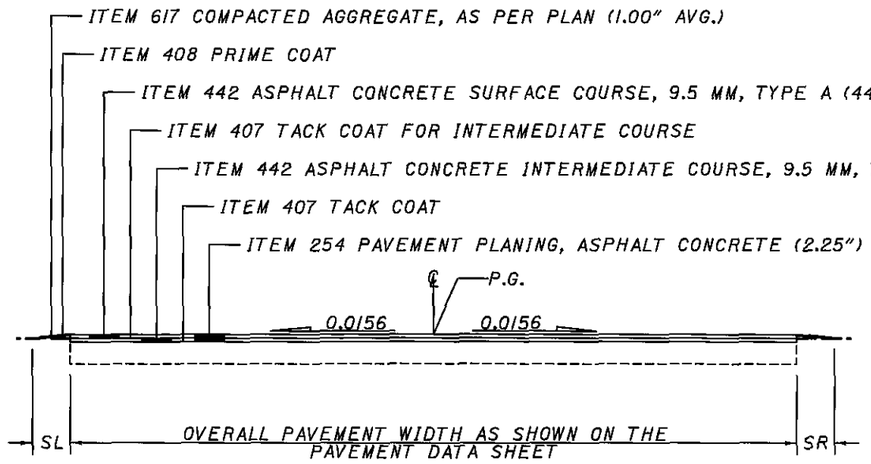
LINEAR GRADING DETAIL

TYPICAL SECTIONS

MED-301-0.00
LOR-301-0.00

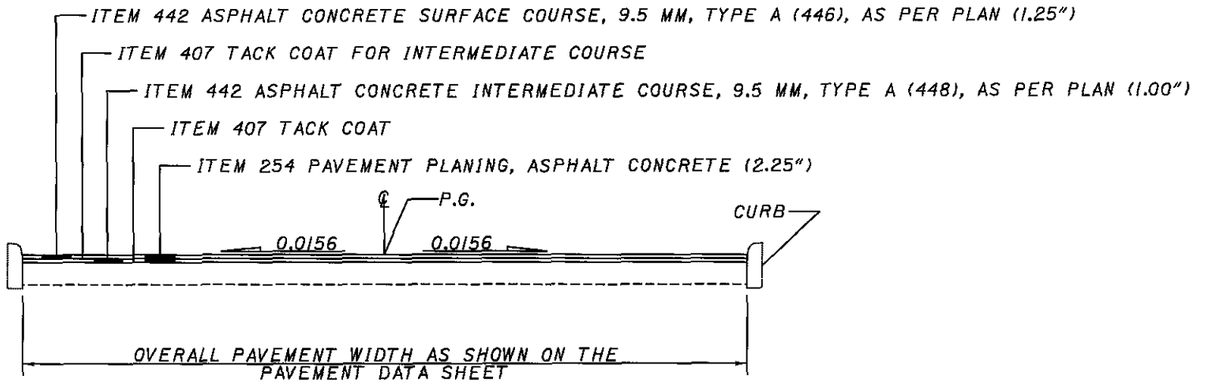
15
114

DESIGN FILE: i:\projects\23581\23581GY001.dgn
WORKSTATION: sdeer
DATE: 2/15/2006



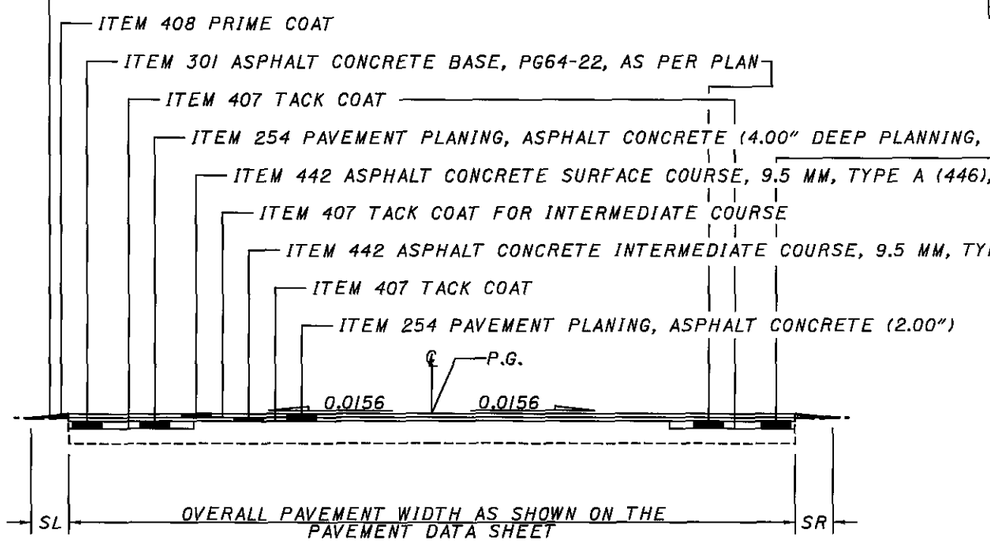
TYPICAL 4

LOR - SLM 6.31 TO 6.72
LOR - SLM 6.76 TO 6.91
LOR - SLM 7.00 TO 7.76



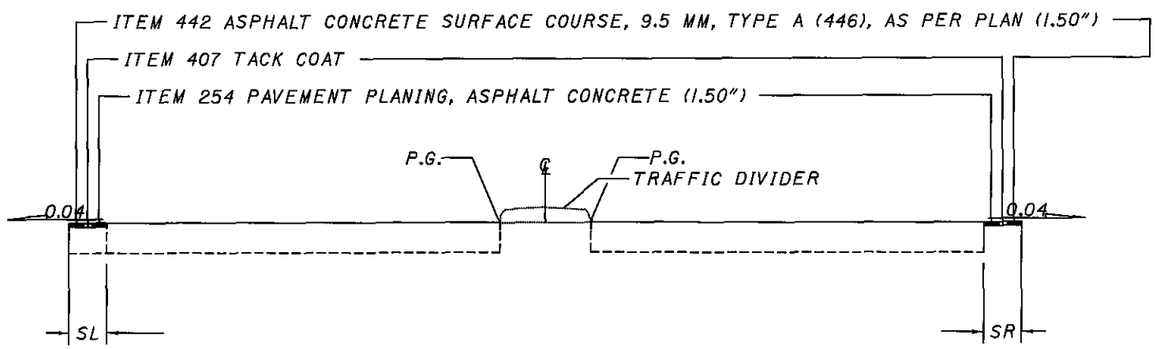
TYPICAL 5

LOR - SLM 6.72 TO 6.76
LOR - SLM 6.91 TO 6.94
LOR - SLM 6.98 TO 7.00



TYPICAL 6

MED - SLM 3.50 TO 6.90



TYPICAL TREATMENT FOR BOTH SIDES

TYPICAL 7

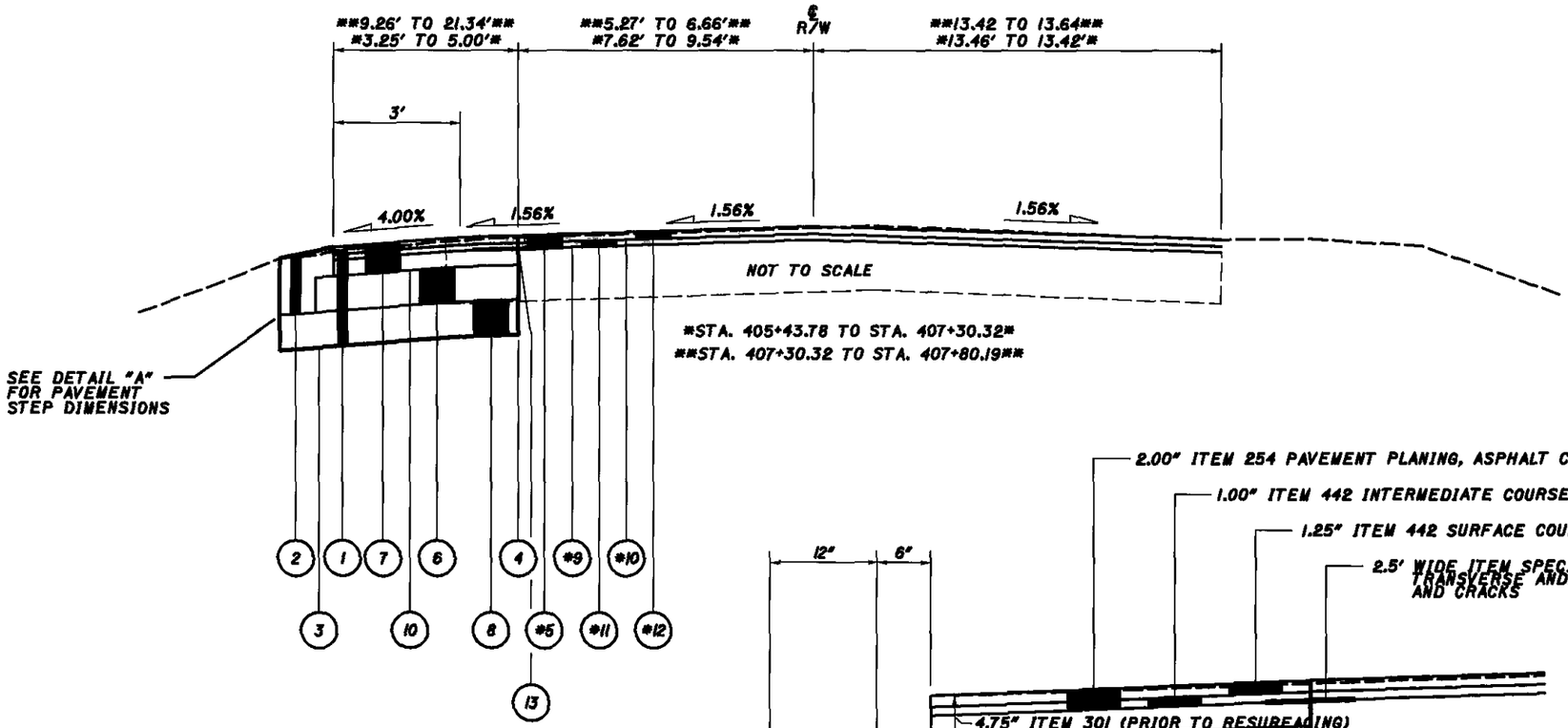
LOR - SLM 12.39 NB TO 12.53 SB

TYPICAL SECTIONS

MED-301-0.00
LOR-301-0.00

16
114

DESIGN FILE: I:\projects\2358\2358IGY001.dgn
WORKSTATION: sdeer
DATE: 2/15/2006



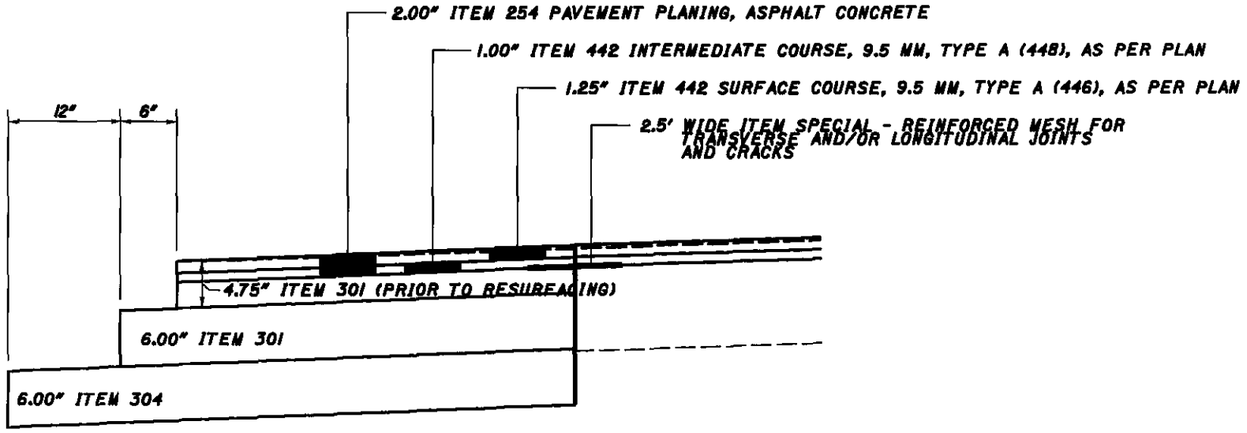
NOTES
1) ITEM 301 SHALL BE CONSTRUCTED UP TO THE EXISTING PAVEMENT SURFACE PRIOR TO FULL WIDTH PLANING. AFTER THE FULL WIDTH PLANING OPERATION AND PRIOR TO PLACING ITEM 442 ASPHALT CONCRETE INTERMEDIATE COURSE, ITEM SPECIAL REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS SHALL BE PLACED ON THE FULL DEPTH PAVEMENT WIDENING JOINT.

2) SEE PLAN & PROFILE AND CROSS SECTION SHEETS FOR FURTHER DETAILS.

3) ITEM 252 FULL DEPTH PAVEMENT SAWING WILL SAW CUT INTO EXISTING FLEXIBLE PAVEMENT.

4) ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE SHALL CORRECT THE PAVEMENT CROSS SLOPE AS SHOWN ABOVE.

5) THE CONTRACTOR SHALL COMPLETE THE WIDENING AT LEAST TWO WEEKS PRIOR TO RESURFACING THIS AREA.



NOT TO SCALE

DETAIL "A"

(1) ITEM 203 EXCAVATION

(2) ITEM 203 EMBANKMENT, AS PER PLAN

(3) ITEM 204 SUBGRADE COMPACTION

(4) ITEM 252 FULL DEPTH PAVEMENT SAWING

(5) 2.00" ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE

(6) 6.00" ITEM 301 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN

(7) 4.75" ITEM 301 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN

(8) 6.00" ITEM 304 AGGREGATE BASE

(9) ITEM 407 TACK COAT

(10) ITEM 407 TACK COAT FOR INTERMEDIATE COURSE

(11) 1.00" ITEM 442 ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5 MM, TYPE A (448), AS PER PLAN

(12) 1.25" ITEM 442 ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN

(13) 2.5' WIDE ITEM SPECIAL REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS

* - QUANTITIES PAID FOR ON THE PAVEMENT DATA SHEET, SHEET 13.

TYPICAL SECTION AT SMITH RD.
MEDINA COUNTY - STA. 405+43.78 TO STA. 407+80.19

CALCULATED S/D
CHECKED M/S

MED-301-0.00
LOR-301-0.00

17
114

DESIGN FILE: i:\projects\2358\2358IGY001.dgn
WORKSTATION: sdeer
DATE: 2/15/2006

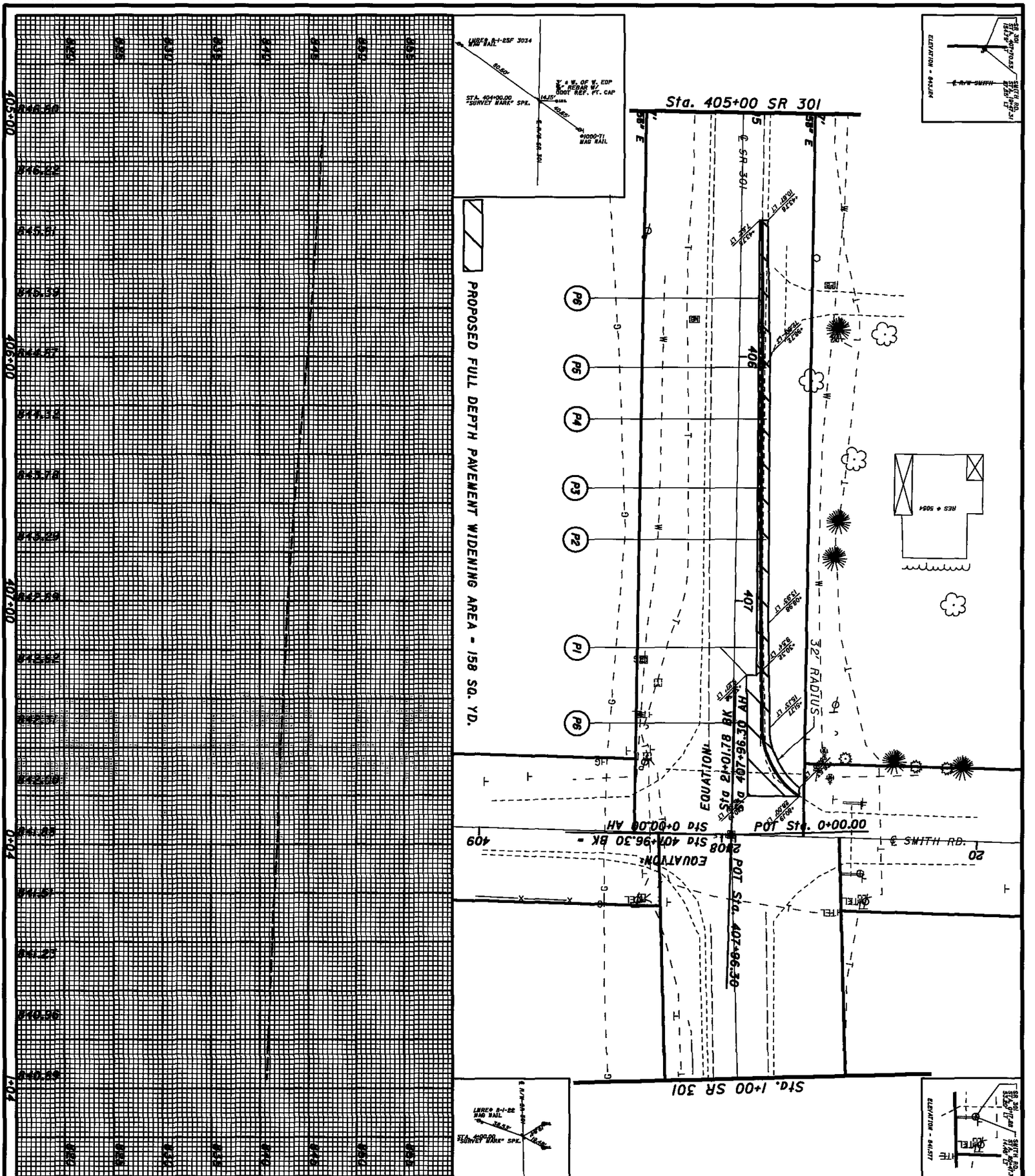
SHEET	ITEM 202 GUARDRAIL REMOVED FT	202 ANCHOR ASSEMBLY REMOVED, TYPE A EACH	202 ANCHOR ASSEMBLY REMOVED, TYPE T EACH	202 ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E-98 EACH		203 EXCAVATION CU YD	203 EMBANKMENT, AS PER PLAN CU YD	204 SUBGRADE COMPACTION SQ YD	209 RESHAPING UNDER GUARDRAIL STATION	252 FULL DEPTH PAVEMENT SAWING FT	301 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN CU YD	304 AGGREGATE BASE CU YD		606 GUARDRAIL, TYPE 5 FT	606 ANCHOR ASSEMBLY, TYPE A EACH	606 ANCHOR ASSEMBLY, TYPE T EACH	606 ANCHOR ASSEMBLY, TYPE E-98 EACH	606 ANCHOR ASSEMBLY REBUILT, TYPE E-98 EACH	606 BRIDGE TERMINAL ASSEMBLY, TYPE TST EACH	606 BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	606 BRIDGE TERMINAL ASSEMBLY, TYPE 2 EACH	606 BRIDGE TERMINAL ASSEMBLY, TYPE 3 EACH	606 BRIDGE TERMINAL ASSEMBLY, TYPE 4 EACH		626 BARRIER REFLECTOR, TYPE A EACH	626 BARRIER REFLECTOR, TYPE B EACH		630 GROUND MOUNTED SUPPORT, NO. 2 POST FT	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH	SPECIAL REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS SQ YD
MEDINA																														
19								249		269	54	35																		90
23						92	19																							
25	1,400 00	3					795		15.50					1,462.50	3	1						4			26			54	4	4	
26	250 00	3							5.00					425.00	3										10			54	4	4	
27	175 00	2							4 63					200.00	1				4					4	10			54	4	4	
28	100 00						38		1.00					100 00										4	9			54	4	4	
SUB-TOTAL	**1,925.00**	**8**				**92**	**852**	**249**	**26.13**	**269**	**54**	**35**		**2,187.50**	**7**	**1**			**4**			**4**	**8**	**55**			**216**	**16**	**16**	**90**	
LORAIN																														
29		1							0.75					50.00	1										8						
30																									13						
31	175 00	4							2.50					150.00	4									2	8						
32		1							5.81					137.50		1	2								11						
33				1					0 75					25.00				1							7						
34																									8						
35							44		8.94																12						
36	1,062.50	2	1						11.25					1,050.00	2	2				2	2				13	5					
SUB-TOTAL	**1237.50**	**8**	**1**	**1**			**44**		**30.00**					**1412.50**	**7**	**3**	**2**	**1**		**2**	**2**		**2**		**80**	**5**					
TOTAL	**3,162.50**	**16**	**1**	**1**		**92**	**896**	**249**	**56.13**	**269**	**54**	**35**		**3,600.00**	**14**	**4**	**2**	**1**	**4**	**2**	**2**	**4**	**10**		**135**	**5**		**216**	**16**	**16**	**90**

CALCD SJD
CHECKED MJS

ROADWAY SUB-SUMMARY

MED-301-0.00
LOR-301-0.00

DESIGN FILE: I:\projects\23581\2358IGP002.dgn
WORKSTATION: sdeer DATE: 2/15/2006



REF NO.	STATION FROM	STATION TO	SIDE		204 SUBGRADE COMPACTION	252 FULL DEPTH PAVEMENT SAWING	301 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN	304 AGGREGATE BASE	407 TACK COAT FOR INTERM. COURSE	SPECIAL REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL CRACKS				
					SQ YD	FT	CU YD	CU YD	GALLON	SQ YD				
P1	405+43.78	407+80.19	LT.			269								
P2	405+43.78	407+80.19	LT.		249									
P3	405+43.78	407+80.19	LT.					35						
P4	405+43.78	407+80.19	LT.				54							
P5	405+43.78	407+80.19	LT.						171					
P6	405+43.78	407+80.19	LT.							90				
TOTALS CARRIED TO ROADWAY SUB-SUMMARY					249	269	54	35	171	90				

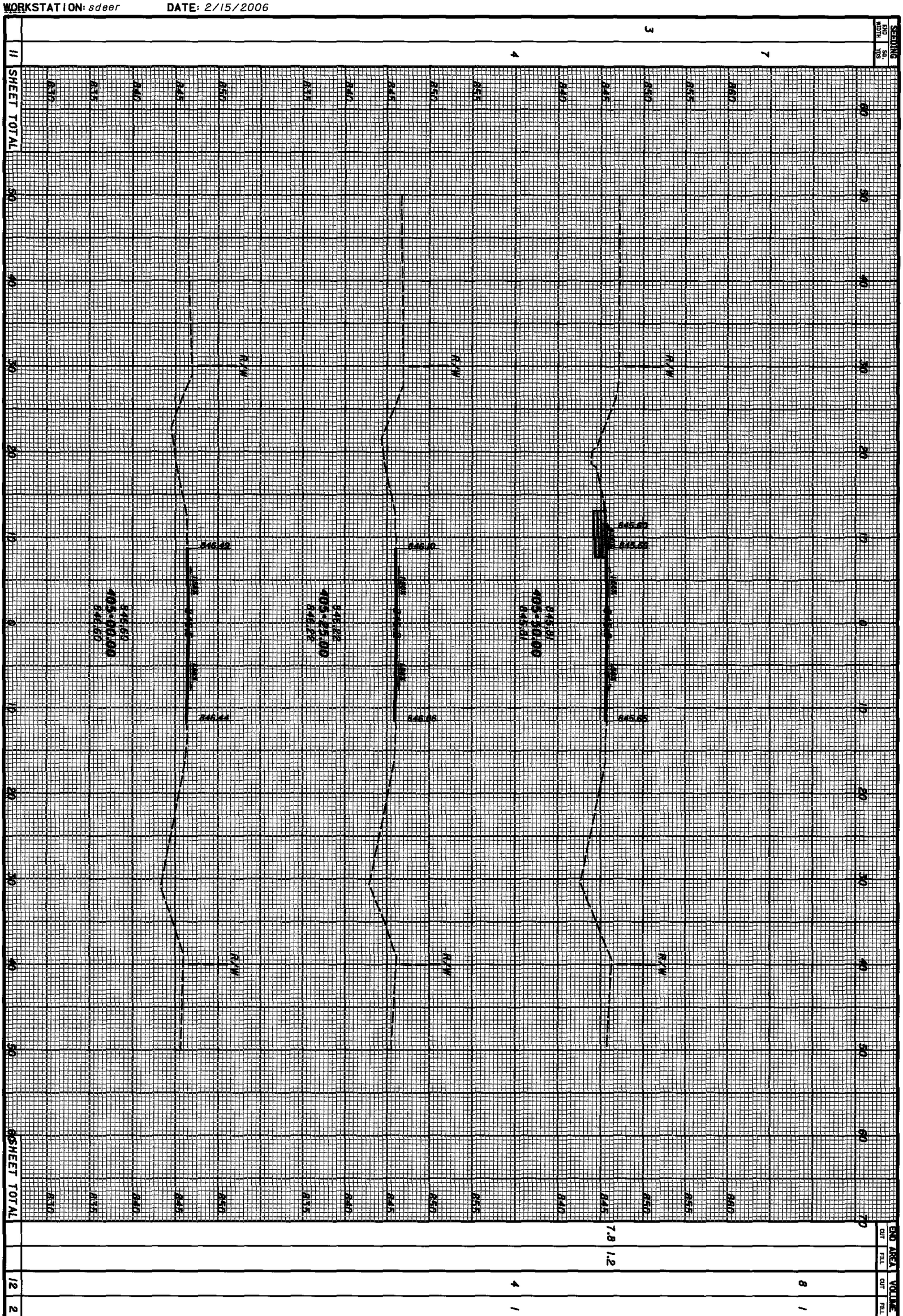
MED-301-0.00
LOR-301-0.00

PLAN AND PROFILE - SMITH RD.
STA. 405+00 TO STA. 2+00

CALCULATED SJD
CHECKED MJS

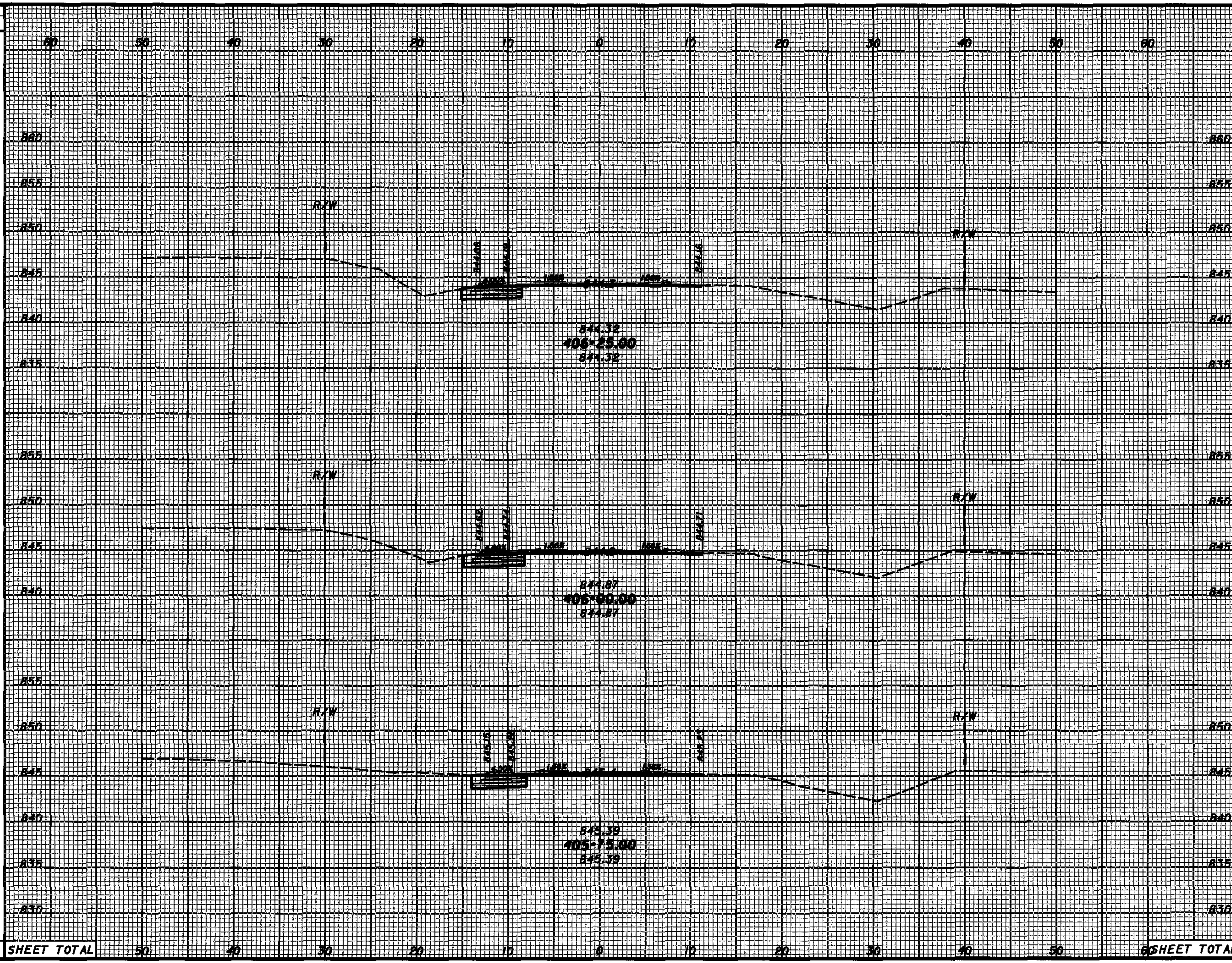
HORIZONTAL SCALE IN FEET
0 10 20 40

DESIGN FILE: I:\projects\2358I\2358IGX001.dgn
WORKSTATION: sdeer DATE: 2/15/2006



20 / 114	MED-301-0.00 LOR-301-0.00	CROSS SECTIONS STA. 405+00 TO STA. 405+50

CALCULATED SJD
CHECKED MJS



SEEDING END WIDTH	SEEDING SQ. YDS.
	6
2	
	6
2	
	6
2	
SHEET TOTAL	18

STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			8	1
406+25.00	9.1	1.0		
			8	1
406+00.00	9.0	1.1		
			8	1
405+75.00	8.4	1.3		
SHEET TOTAL			24	3

CALCULATED SJD
CHECKED MJS

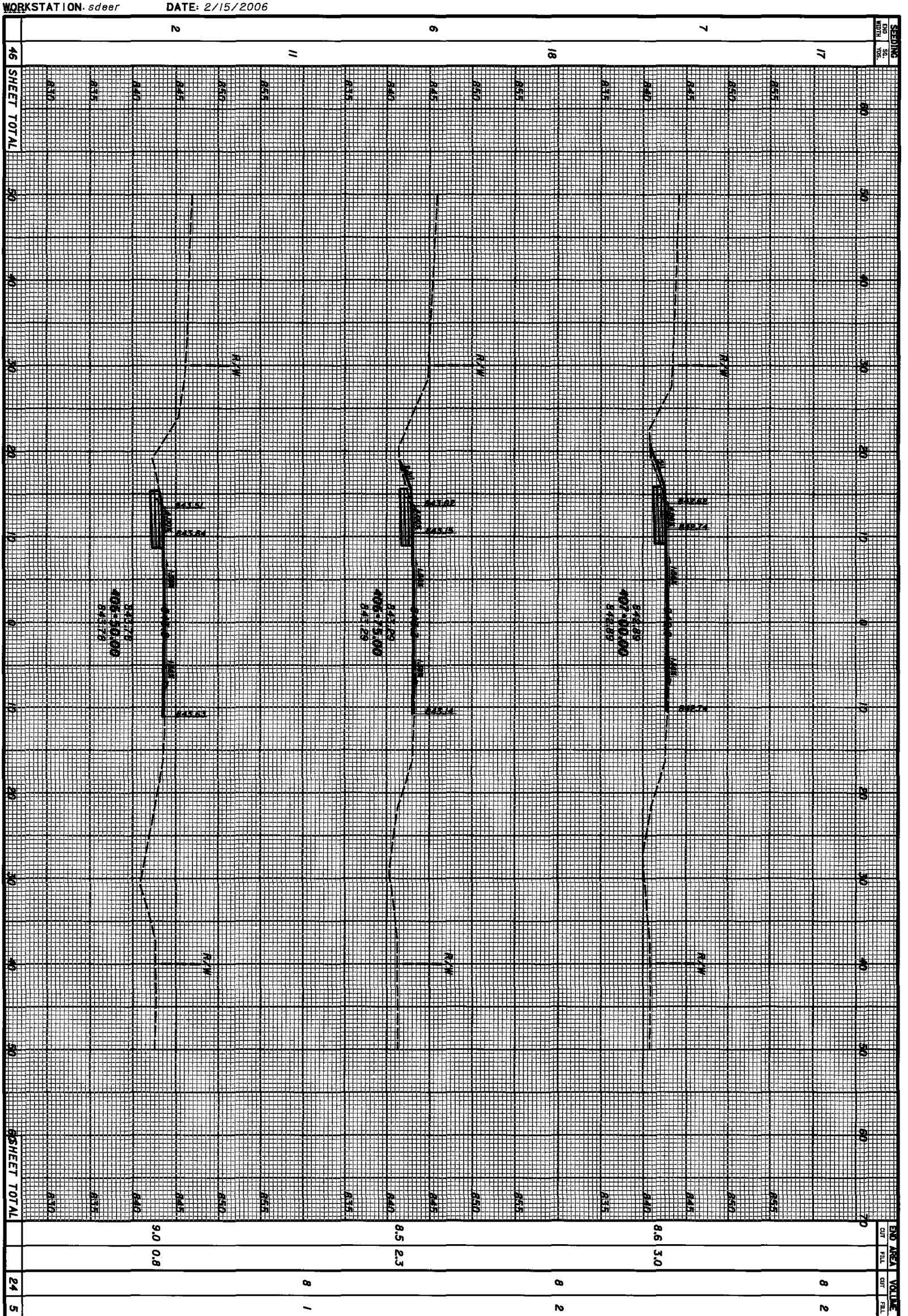
CROSS SECTIONS
STA. 405+75 TO STA. 406+25

MED-301-0.00
LOR-301-0.00

21/114

DESIGN FILE: I:\projects\2358\2358IGX001.dgn
DATE: 2/15/2006
WORKSTATION: sdeer

DESIGN FILE: I:\projects\23581\2358IGX001.dgn
WORKSTATION: sdeer DATE: 2/15/2006



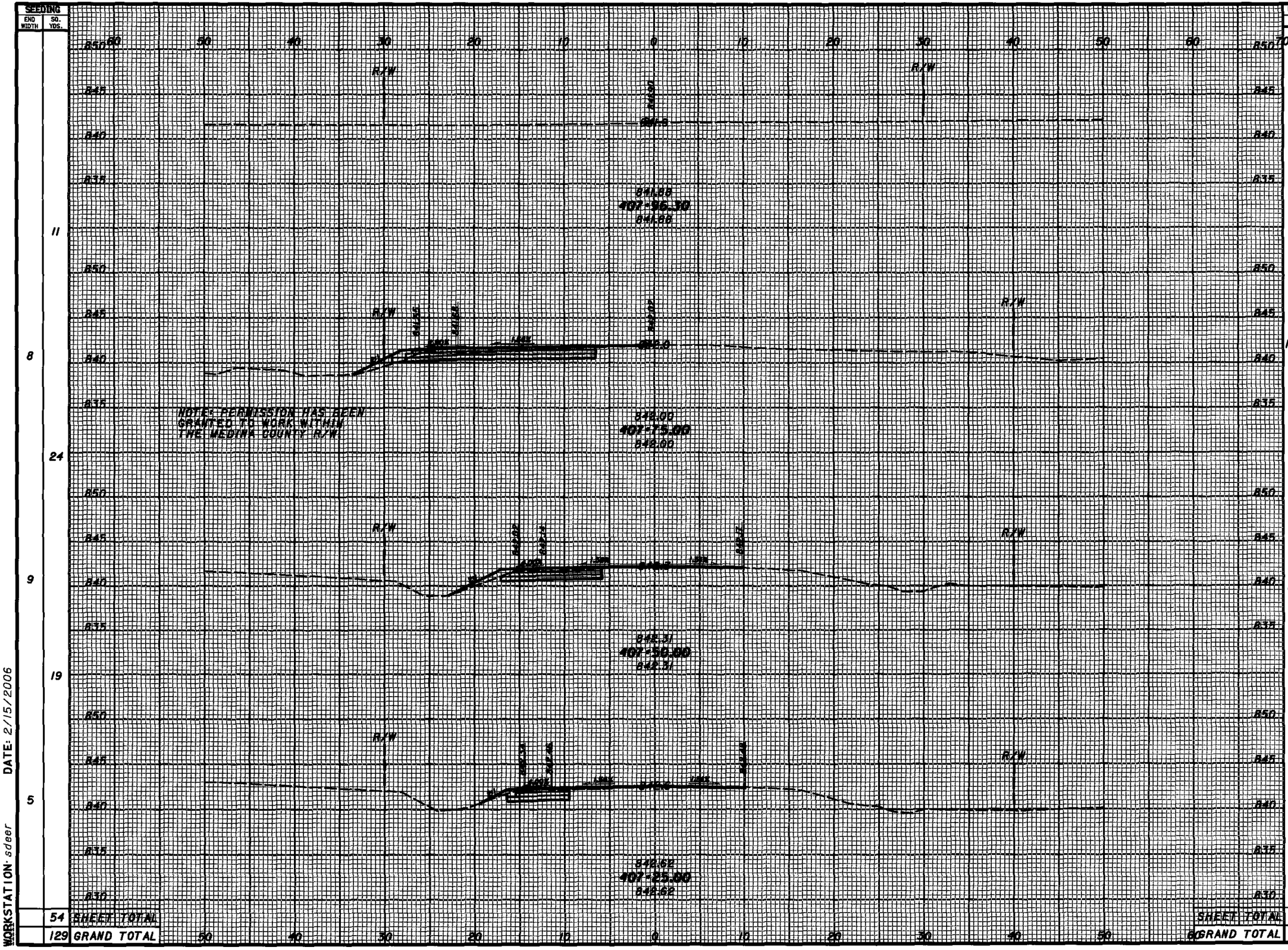
MED-301-0.00
LOR-301-0.00

CROSS SECTIONS
STA. 406+50 TO STA. 407+00

CALCULATED SJD
CHECKED MJS

22
114

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	11			8	2
8		19.8	4.0		
	24			15	4
9		11.7	3.5		
	19			9	3
5		8.0	1.8		
	54			32	9
	129			92	19



DESIGN FILE: I:\projects\23581\23581GX001.dgn
WORKSTATION: sdeer
DATE: 2/15/2006

DESIGNED SJD
DRAWN MJS

CROSS SECTIONS
STA. 407+25 TO STA. 407+96.30

MED-301-0.00
LOR-301-0.00

23
114

ITEM 202 - ANCHOR ASSEMBLY REMOVED, TYPE A

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

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

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

ITEM 203 - EMBANKMENT, AS PER PLAN

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

AREAS WHERE EMBANKMENT MATERIALS ARE TO BE PLACED SHALL BE SCALPED. THE REQUIREMENTS FOR BENCHING SHALL BE WAIVED. THE DEPTH OF LAYERS IN WHICH THE EMBANKMENTS ARE PLACED SHALL BE LIMITED TO EIGHT (8) INCHES IN THICKNESS. THE METHOD OF COMPACTION AND EQUIPMENT USED SHALL BE SUFFICIENT TO PROVIDE A MINIMUM OF 60 PERCENT RELATIVE COMPACTION.

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

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

ITEM 209 - RESHAPING UNDER GUARDRAIL

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

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

THE AREA IN FRONT OF THE GUARDRAIL TO THE BREAK POINT OF THE FORESLOPE BEHIND THE GUARDRAIL SHALL BE GRADED AND RESHAPED TO PROVIDE AN AREA THAT HAS A SLOPE OF 10:1 MAX. (12:1 MIN.).

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.

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 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 A
ITEM 606, GUARDRAIL, TYPE 5
ITEM 606, ANCHOR ASSEMBLY, TYPE A
ITEM 209 RESHAPING UNDER GUARDRAIL

GUARDRAIL REPLACEMENT

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

LOCATIONS OF GUARDRAIL

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

ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98

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

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

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

DWG. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS265M	ET-2000 (1997) PLAN, ELEVATION AND SECTIONS	6/20/97	3/6/98
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 27¾ 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.

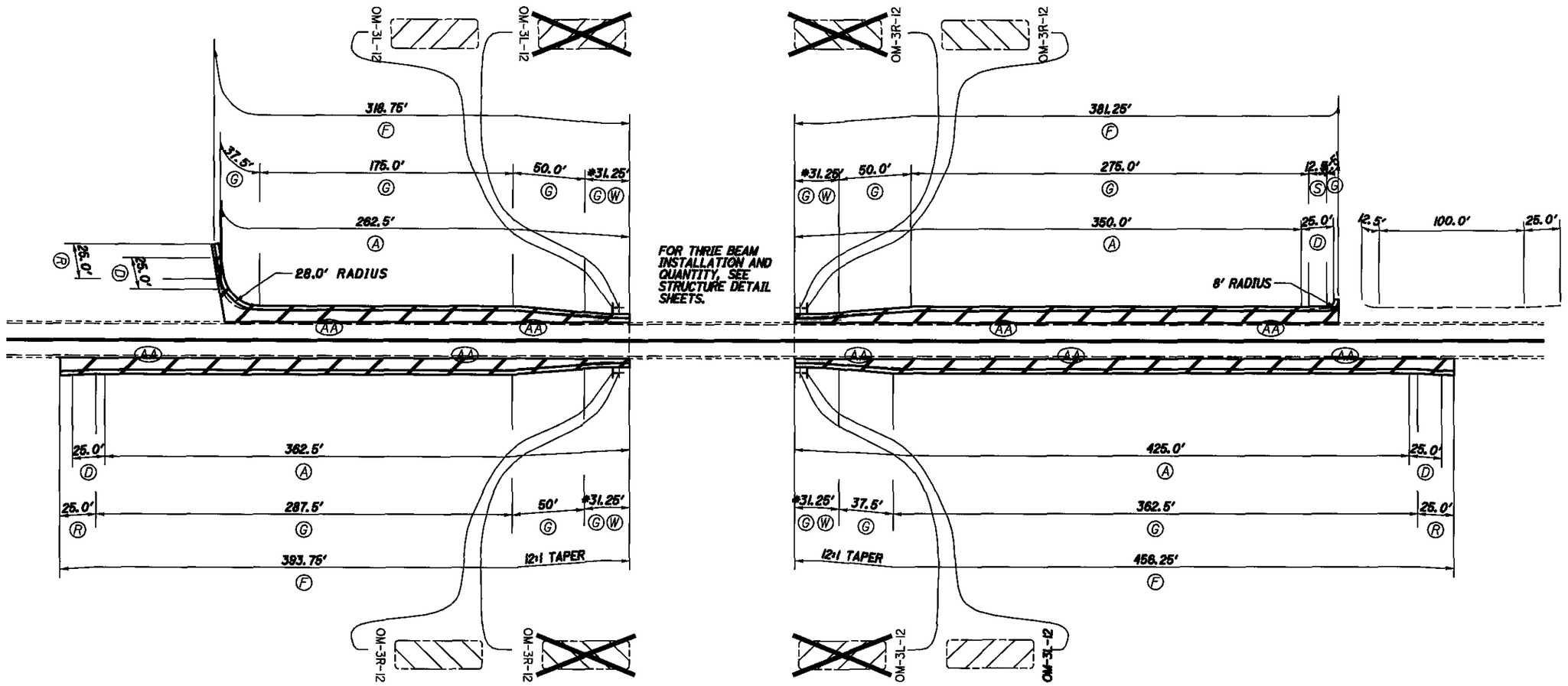
PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE,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

CALCULATED S/D
CHECKED MJS

GUARDRAIL GENERAL NOTES

MED-301-0.00
LOR-301-0.00

DESIGN FILE: I:\projects\2358\2358IGRGNI.dgn
WORKSTATION: sdeer
DATE: 2/15/2006

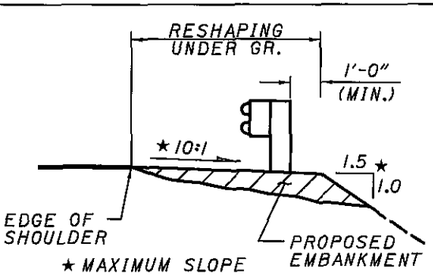


LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT	612.5	787.5	1400
Ⓓ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	1	2	3
▨	203	EMBANKMENT, AS PER PLAN	CU YD	336	459	795
Ⓕ	209	RESHAPING UNDER GUARDRAIL	STATION	7.00	8.50	15.50
Ⓖ	606	GUARDRAIL, TYPE 5	FT	662.5	800	1462.5
Ⓡ	606	ANCHOR ASSEMBLY, TYPE A	EACH	1	2	3
Ⓢ	606	ANCHOR ASSEMBLY, TYPE T	EACH	1		1
Ⓦ	606	BRIDGE TERMINAL ASSEMBLY, TYPE 3	EACH	2	2	4
Ⓐⓐ	626	BARRIER REFLECTOR, TYPE A (INCLUDING THRIE BEAM INSTALLATION)	EACH	14	12	26
	630	GROUND MOUNTED SUPPORT, NO. 2 POST	FT	27	27	54
	630	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	EACH	2	2	4
	630	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	EACH	2	2	4

NOTES

1) # - THE GUARDRAIL TAPER SHALL BEGIN AT POST #6 ON THE BTA, SEE SCD GR-3.3 FOR FURTHER DETAILS.
2) PROPOSED SIGN PLACEMENT SHALL NOT CONNECT TO ANY PART OF THE GUARDRAIL.

TYPICAL SECTION "TYPE 5"



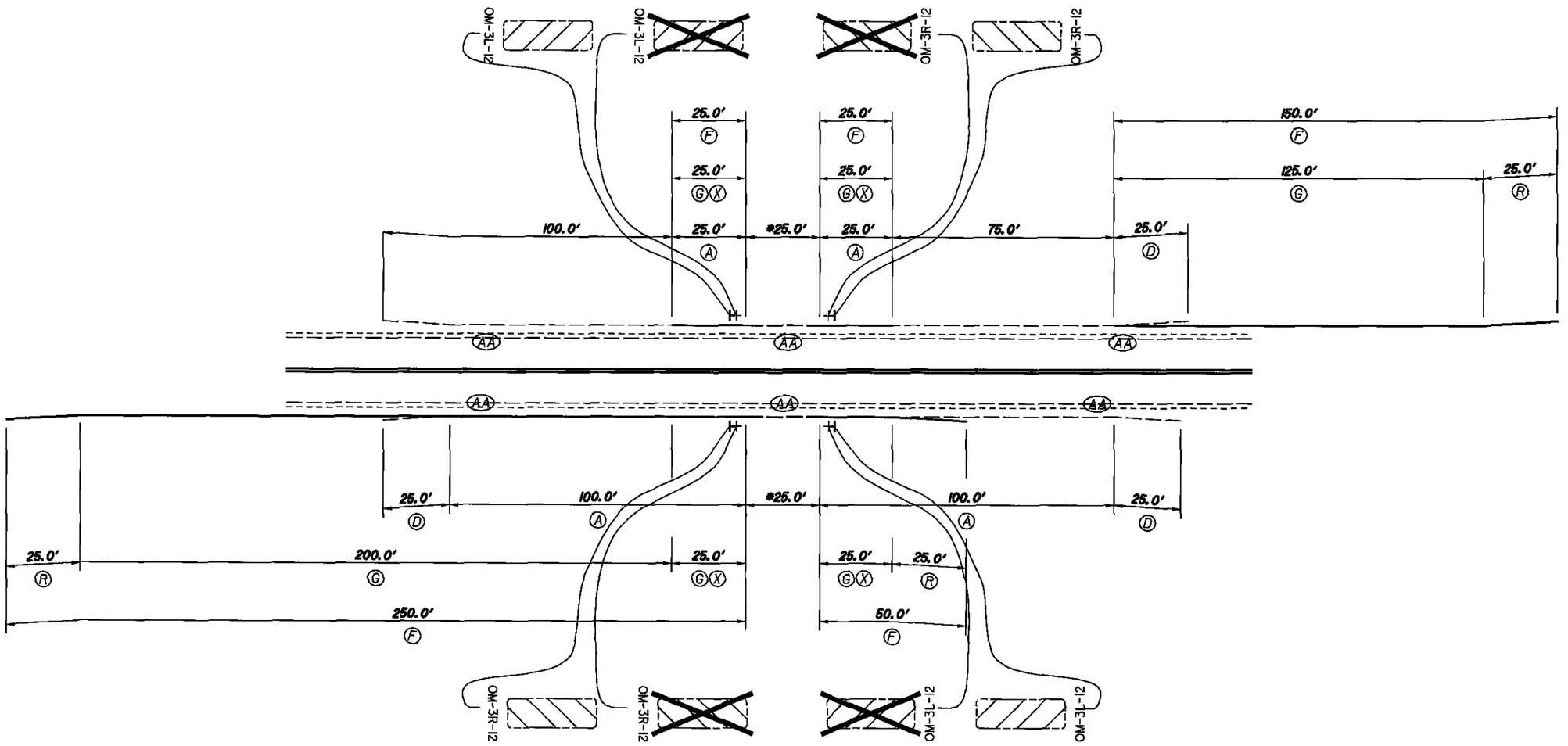
HORIZONTAL SCALE IN FEET
0 20 40 60
CALCULATED SJD
CHECKED MJS

GUARDRAIL DETAIL
MED-301-3.37

MED-301-0.00
LOR-301-0.00

25
114

DESIGN FILE: I:\projects\23581\23581GRail.dgn
WORKSTATION: sdeer
DATE: 2/15/2006

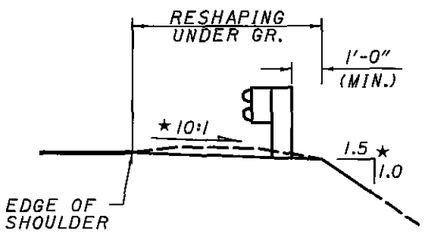


LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT	50	200	250
Ⓓ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	1	2	3
Ⓕ	209	RESHAPING UNDER GUARDRAIL	STATION	2.00	3.00	5.00
Ⓖ	606	GUARDRAIL, TYPE 5	FT	175	250	425
Ⓡ	606	ANCHOR ASSEMBLY, TYPE A	EACH	1	2	3
Ⓧ	606	BRIDGE TERMINAL ASSEMBLY, TYPE 4	EACH	2	2	4
AA	626	BARRIER REFLECTOR, TYPE A	EACH	5	5	10
	630	GROUND MOUNTED SUPPORT, NO. 2 POST	FT	27	27	54
	630	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	EACH	2	2	4
	630	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	EACH	2	2	4

NOTES

1) * - EXISTING GUARDRAIL WITH TUBULAR BACKUP.
2) PROPOSED SIGN PLACEMENT SHALL NOT CONNECT TO ANY PART OF THE GUARDRAIL.

TYPICAL SECTION "TYPE 5"



HORIZONTAL SCALE IN FEET
0 10 20 40

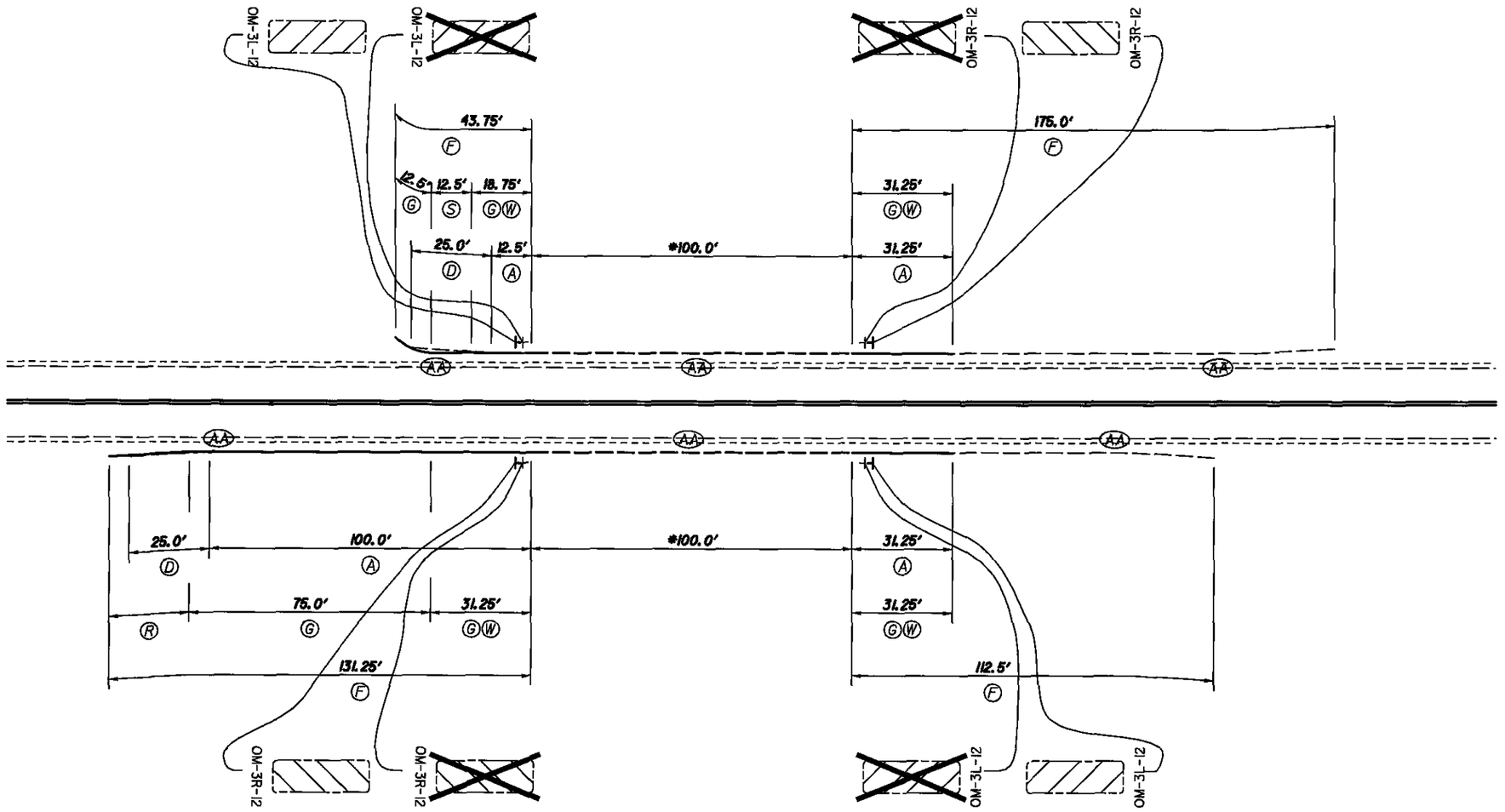
CALCULATED SJD
CHECKED MJS

GUARDRAIL DETAIL
MED-301-6.24

MED-301-0.00
LOR-301-0.00

26
114

DESIGN FILE: I:\projects\23581\23581GRail.dgn
WORKSTATION: sdeer
DATE: 2/15/2006

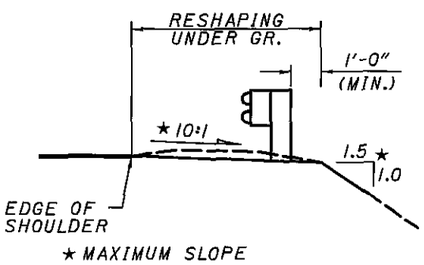


LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT	43.75	131.25	175
Ⓓ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	1	1	2
Ⓕ	209	RESHAPING UNDER GUARDRAIL	STATION	2.1875	2.4375	4.625
Ⓖ	606	GUARDRAIL, TYPE 5	FT	62.5	137.5	200
Ⓡ	606	ANCHOR ASSEMBLY, TYPE A	EACH		1	1
Ⓦ	606	BRIDGE TERMINAL ASSEMBLY, TYPE TST	EACH	2	2	4
ⒶⒶ	626	BARRIER REFLECTOR, TYPE A	EACH	5	5	10
	630	GROUND MOUNTED SUPPORT, NO. 2 POST	FT	27	27	54
	630	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	EACH	2	2	4
	630	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	EACH	2	2	4

NOTES

1) * - EXISTING GUARDRAIL WITH TUBULAR BACKUP.
2) PROPOSED SIGN PLACEMENT SHALL NOT CONNECT TO ANY PART OF THE GUARDRAIL.

TYPICAL SECTION "TYPE 5"



HORIZONTAL SCALE IN FEET
0 10 20 40

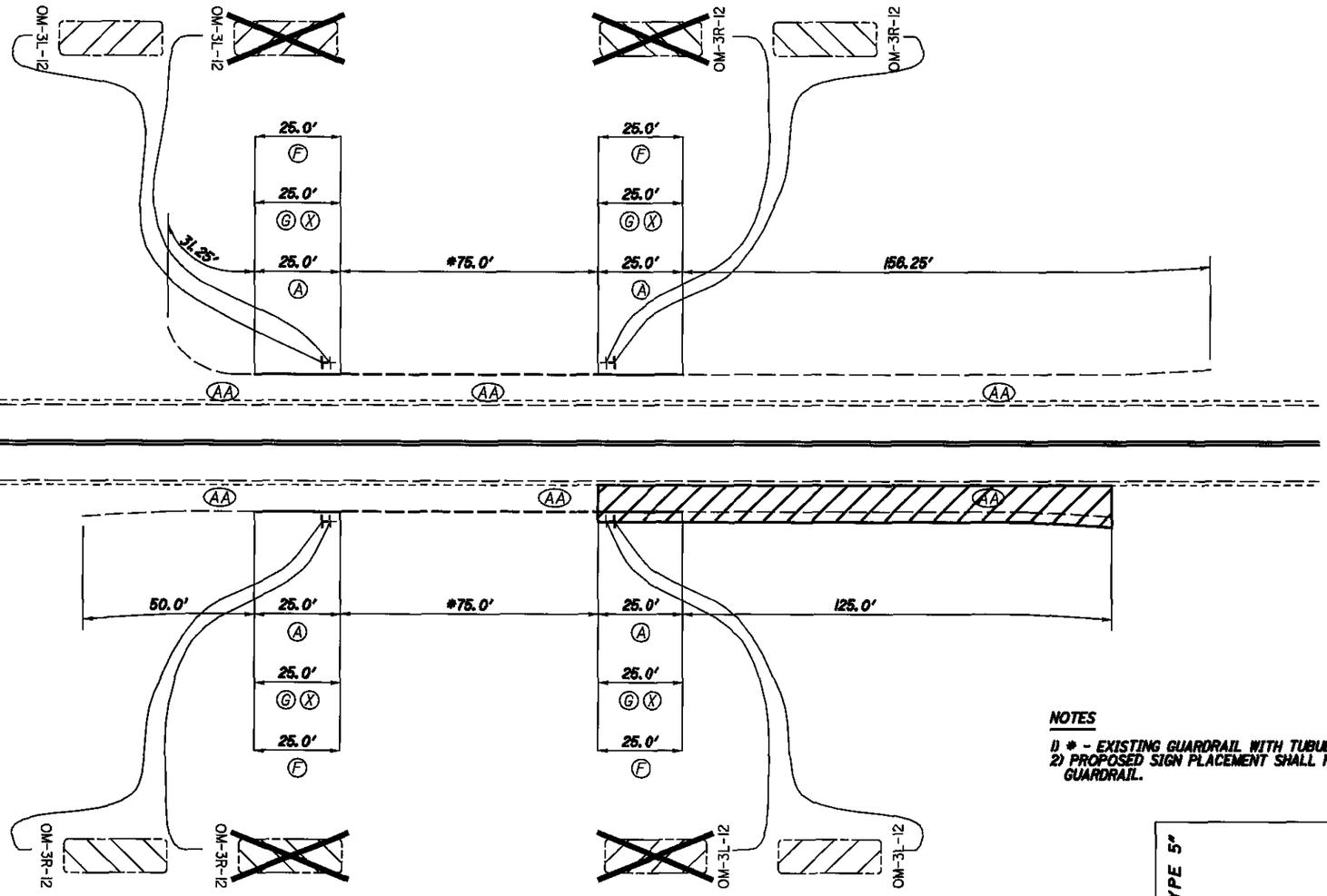
CALCULATED SJD
CHECKED MJS

GUARDRAIL DETAIL
MED-301-7.01

MED-301-0.00
LOR-301-0.00

27
114

DESIGN FILE: I:\projects\23581\23581GRail.dgn
WORKSTATION: sdeer
DATE: 2/15/2006

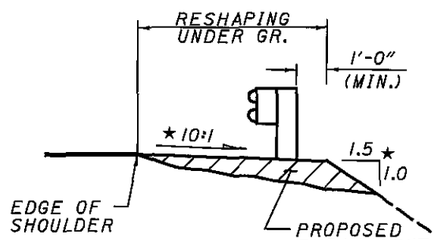


NOTES

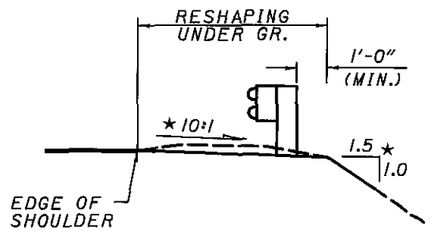
1) # - EXISTING GUARDRAIL WITH TUBULAR BACKUP.
2) PROPOSED SIGN PLACEMENT SHALL NOT CONNECT TO ANY PART OF THE GUARDRAIL.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT	50	50	100
▨	203	EMBANKMENT, AS PER PLAN	CU YD		38	38
Ⓕ	209	RESHAPING UNDER GUARDRAIL	STATION	0.50	0.50	1.00
Ⓖ	606	GUARDRAIL, TYPE 5	FT	50	50	100
Ⓧ	606	BRIDGE TERMINAL ASSEMBLY, TYPE 4	EACH	2	2	4
Ⓐⓐ	626	BARRIER REFLECTOR, TYPE A	EACH	5	4	9
	630	GROUND MOUNTED SUPPORT, NO. 2 POST	FT	27	27	54
	630	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	EACH	2	2	4
	630	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	EACH	2	2	4

TYPICAL SECTION "TYPE 5"



TYPICAL SECTION "TYPE 5"



HORIZONTAL SCALE IN FEET
0 10 20 40

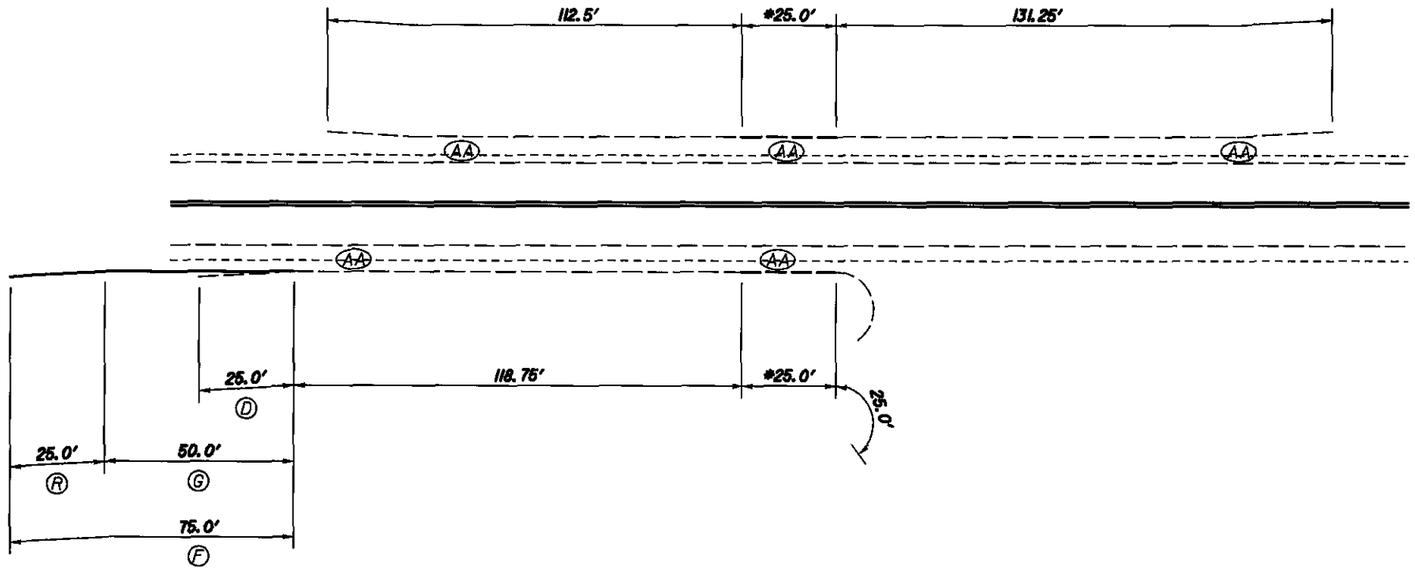
CALCULATED SJD
CHECKED MJS

GUARDRAIL DETAIL
MED-301-9.88

MED-301-0.00
LOR-301-0.00

28
114

DESIGN FILE: I:\projects\23581\23581GRail.dgn
WORKSTATION: sdeer
DATE: 2/15/2006

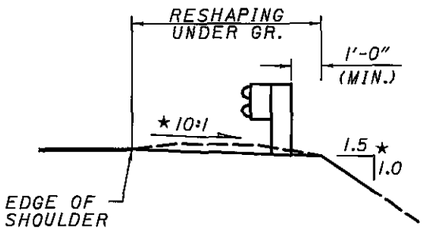


LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
(D)	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH		1	1
(F)	209	RESHAPING UNDER GUARDRAIL	STATION		0.75	0.75
(G)	606	GUARDRAIL, TYPE 5	FT		50	50
(R)	606	ANCHOR ASSEMBLY, TYPE A	EACH		1	1
(AA)	626	BARRIER REFLECTOR, TYPE A	EACH	4	4	8

NOTES

D * - EXISTING GUARDRAIL WITH TUBULAR BACKUP.

TYPICAL SECTION "TYPE 5"



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SJD
CHECKED MJS

GUARDRAIL DETAIL
LOR-301-0.15

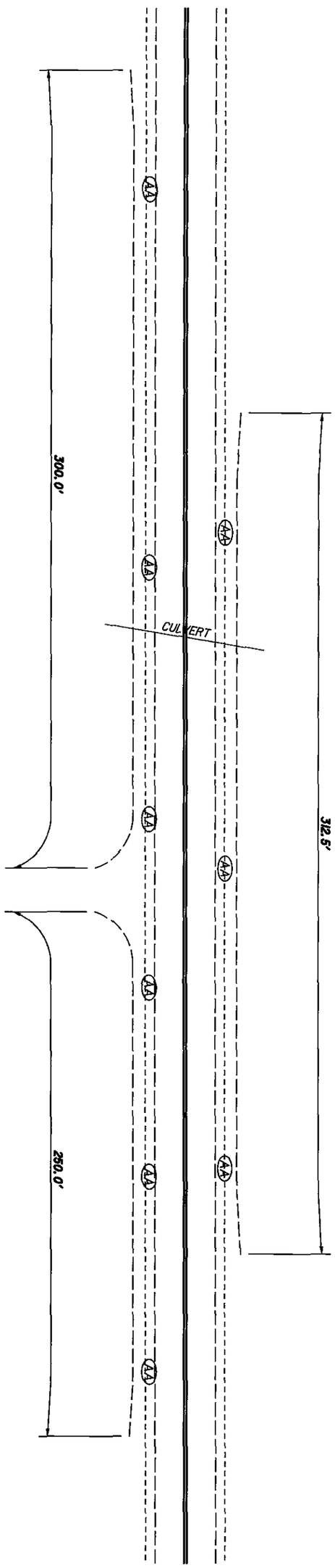
MED-301-0.00
LOR-301-0.00

29
114

DESIGN FILE: I:\projects\23581\23581GRail.dgn
WORKSTATION: sdeer
DATE: 2/15/2006

DESIGN FILE: I:\projects\23581\23581GRail.dgn
WORKSTATION: sdeer DATE: 2/15/2006

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		
				LEFT	RIGHT	TOTAL
(AA)	626	BARRIER REFLECTOR, TYPE A	EACH	5	8	13

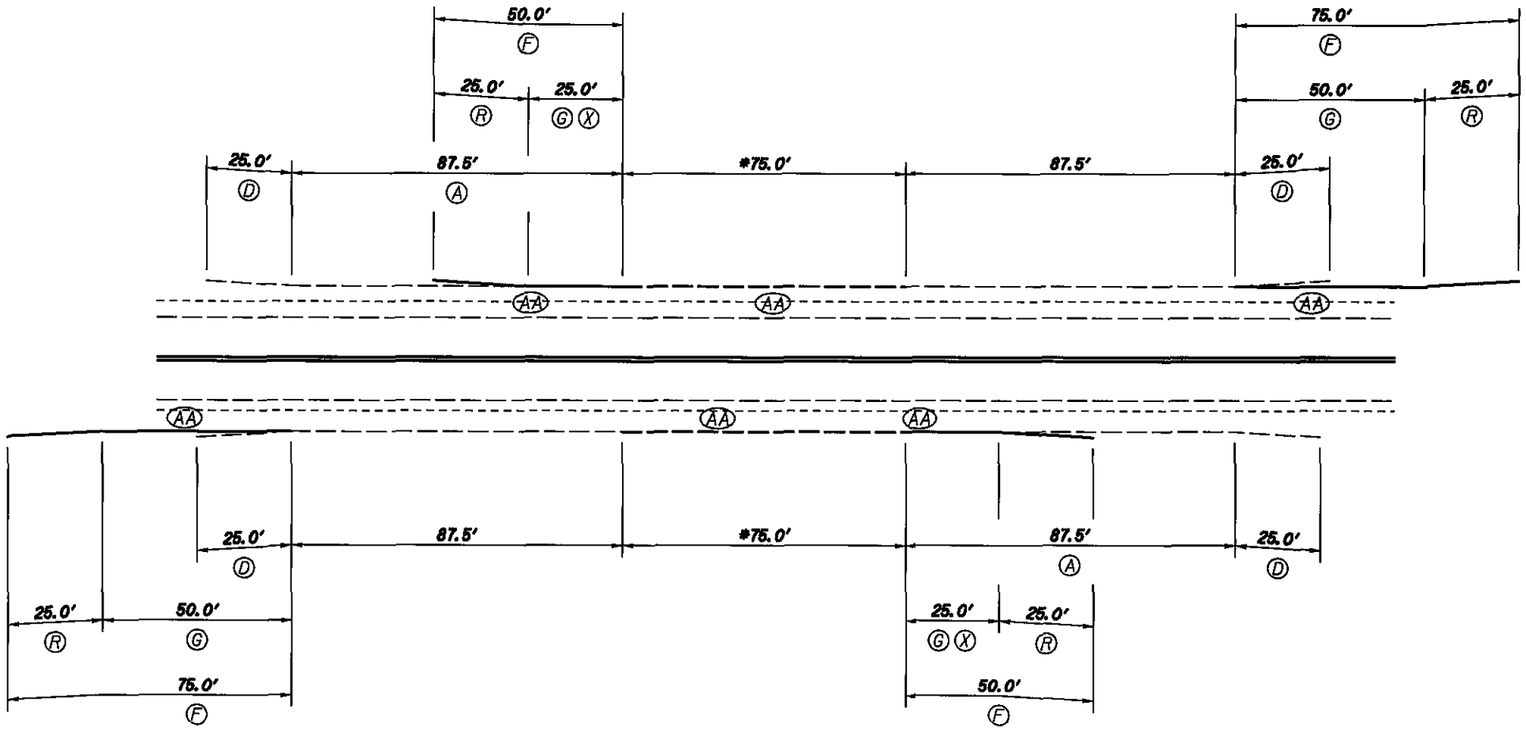


MED-301-0.00
LOR-301-0.00

GUARDRAIL DETAIL
LOR-301-0.99

CALCULATED SJD
CHECKED MJS

HORIZONTAL SCALE IN FEET

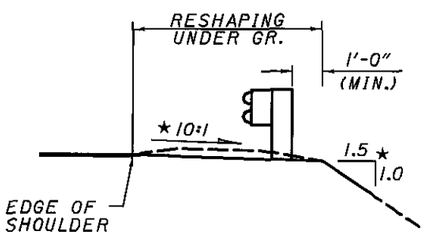


LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT	87.5	87.5	175
Ⓓ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2	2	4
Ⓕ	209	RESHAPING UNDER GUARDRAIL	STATION	1.25	1.25	2.50
Ⓖ	606	GUARDRAIL, TYPE 5	FT	75	75	150
Ⓡ	606	ANCHOR ASSEMBLY, TYPE A	EACH	2	2	4
Ⓧ	606	BRIDGE TERMINAL ASSEMBLY, TYPE 4	EACH	1	1	2
ⒶⒶ	626	BARRIER REFLECTOR, TYPE A	EACH	4	4	8

NOTES

1) # - EXISTING GUARDRAIL WITH TUBULAR BACKUP.

TYPICAL SECTION "TYPE 5"



DESIGN FILE: I:\projects\23581\23581GRail.dgn
WORKSTATION: sdeer
DATE: 2/15/2006

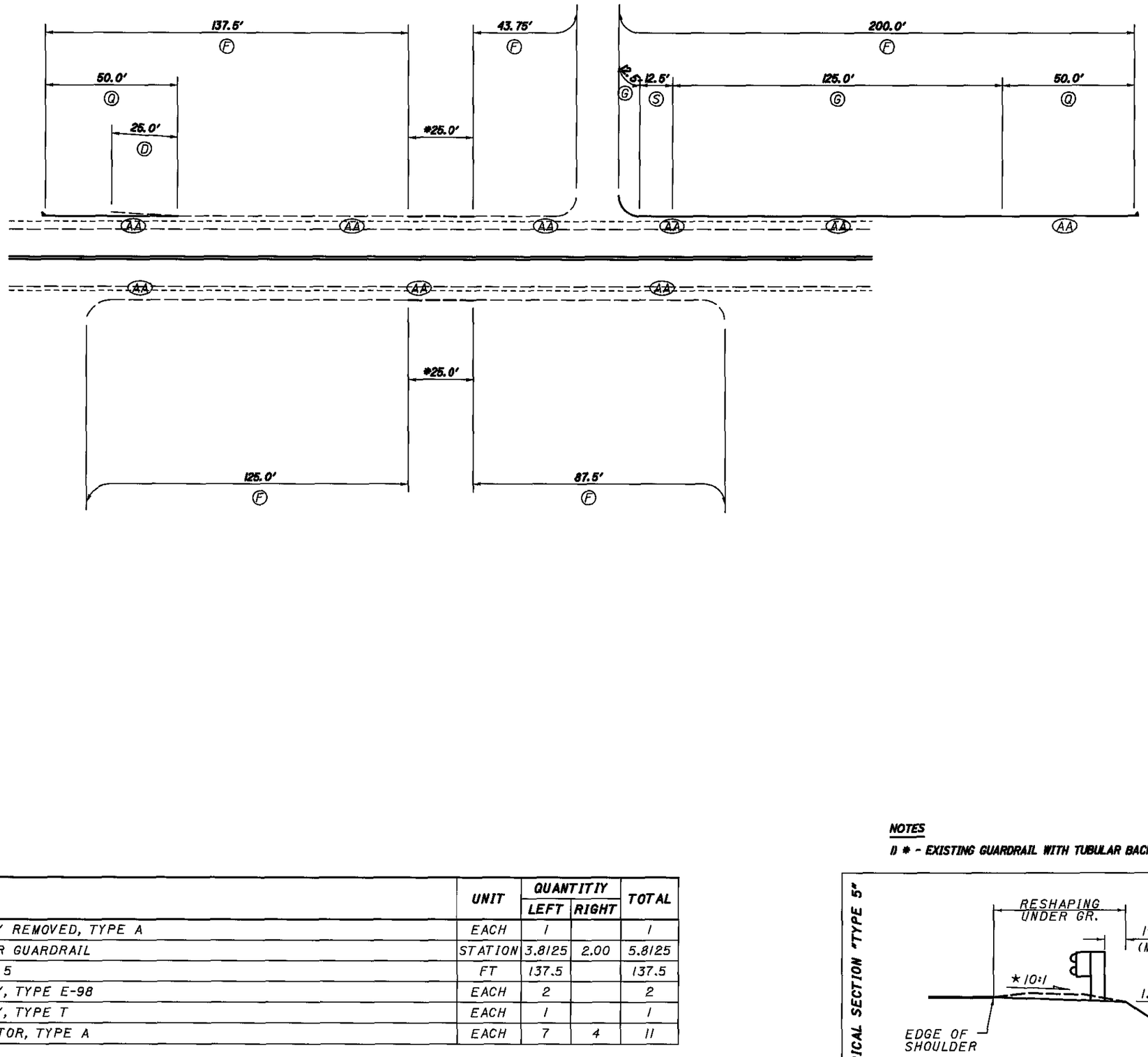
CALCULATED S.J.D.
CHECKED M.J.S.

HORIZONTAL SCALE IN FEET
0 10 20 40

GUARDRAIL DETAIL
LOR-301-1.64

MED-301-0.00
LOR-301-0.00

31
114

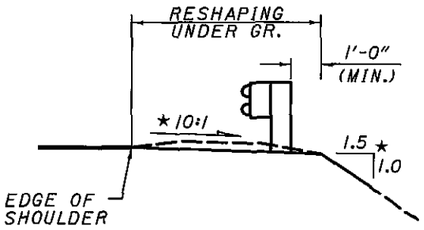


LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
(D)	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	1		1
(F)	209	RESHAPING UNDER GUARDRAIL	STATION	3.8125	2.00	5.8125
(G)	606	GUARDRAIL, TYPE 5	FT	137.5		137.5
(Q)	606	ANCHOR ASSEMBLY, TYPE E-98	EACH	2		2
(S)	606	ANCHOR ASSEMBLY, TYPE T	EACH	1		1
(AA)	626	BARRIER REFLECTOR, TYPE A	EACH	7	4	11

NOTES

D # - EXISTING GUARDRAIL WITH TUBULAR BACKUP.

TYPICAL SECTION "TYPE 5"



HORIZONTAL SCALE IN FEET
0 10 20 40

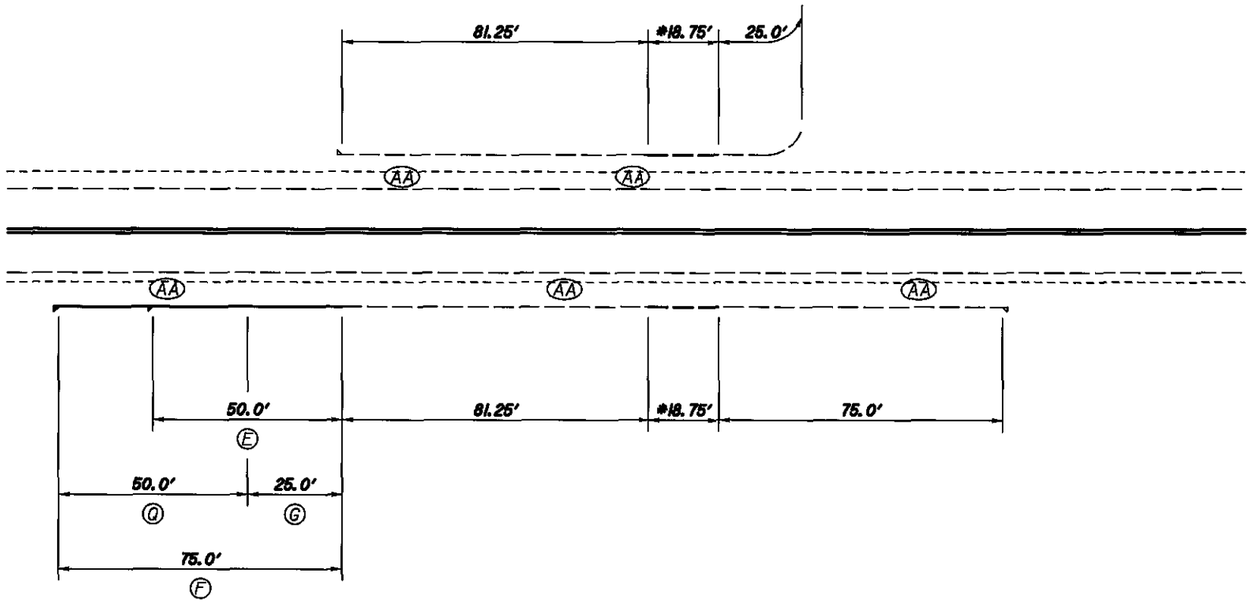
CALCULATED SJD
CHECKED MJS

GUARDRAIL DETAIL
LOR-301-8.94

MED-301-0.00
LOR-301-0.00

32
114

DESIGN FILE: I:\projects\23581\23581GRail.dgn
WORKSTATION: sdeer
DATE: 2/15/2006

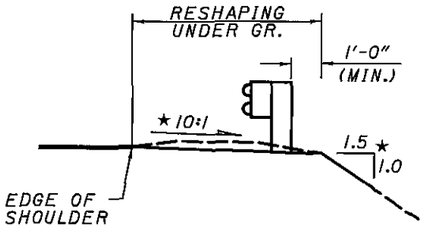


LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
(E)	202	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E-98	EACH		1	1
(F)	209	RESHAPING UNDER GUARDRAIL	STATION		0.75	0.75
(G)	606	GUARDRAIL, TYPE 5	FT		25	25
(Q)	606	ANCHOR ASSEMBLY REBUILT, TYPE E-98	EACH		1	1
(AA)	626	BARRIER REFLECTOR, TYPE A	EACH	3	4	7

NOTES

1) # - EXISTING GUARDRAIL WITH TUBULAR BACKUP.

TYPICAL SECTION "TYPE 5"



HORIZONTAL SCALE IN FEET
0 10 20 40

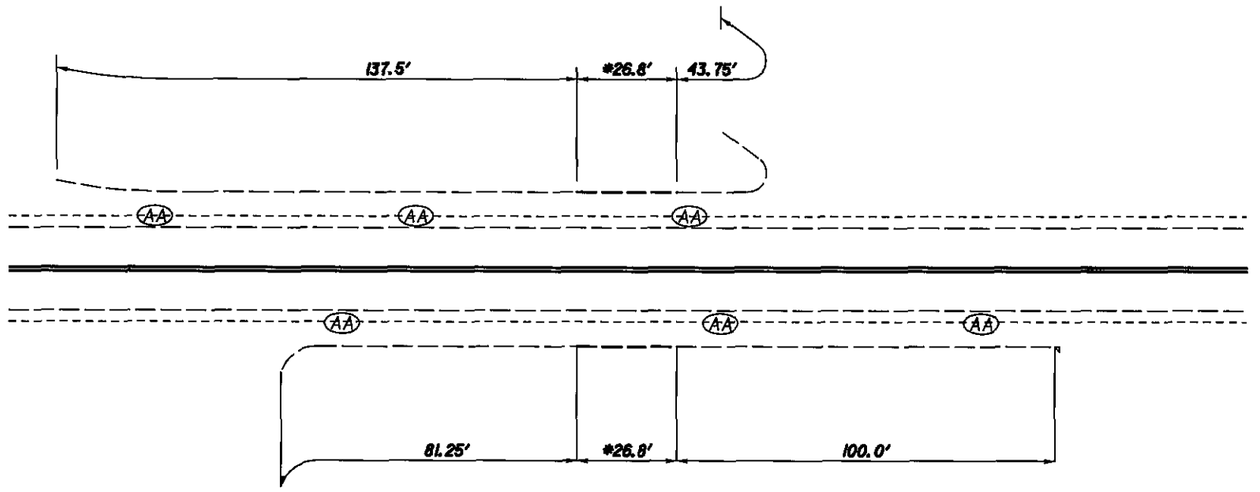
CALCULATED SJD
CHECKED MJS

GUARDRAIL DETAIL
LOR-301-9.19

MED-301-0.00
LOR-301-0.00

33
114

DESIGN FILE: I:\projects\23581\23581GRdll.dgn
WORKSTATION: sdeer
DATE: 2/15/2006



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
(AA)	626	BARRIER REFLECTOR, TYPE A	EACH	4	4	8

NOTES

D # - EXISTING TST RAILING.

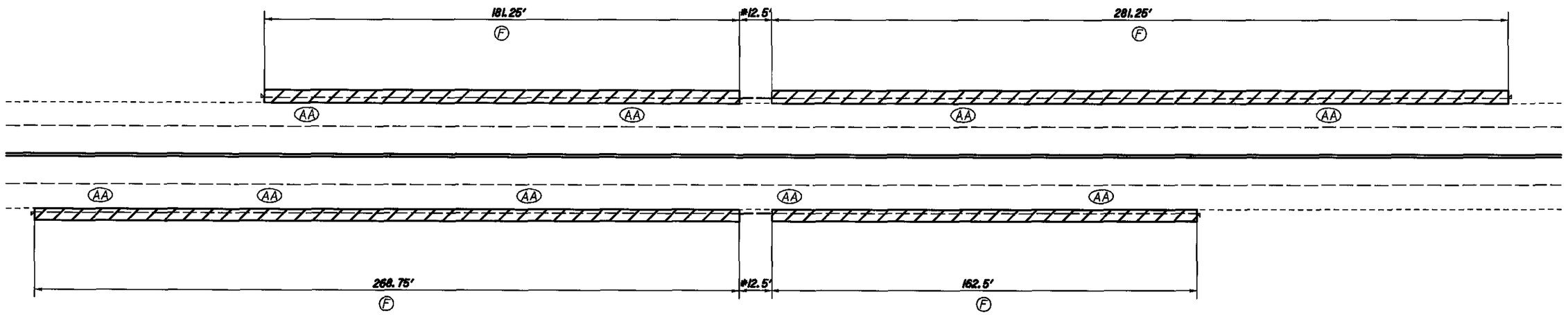
DESIGN FILE: I:\projects\23581\23581GRail.dgn
WORKSTATION: sdeer DATE: 2/15/2006

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SJD
CHECKED MJS

GUARDRAIL DETAIL
LOR-301-9.67

MED-301-0.00
LOR-301-0.00

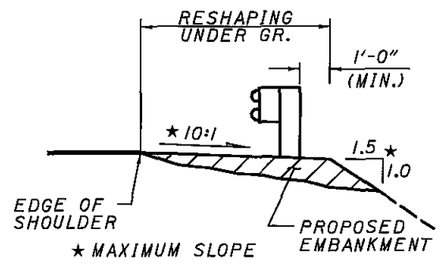


LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
	203	EMBANKMENT, AS PER PLAN	CU YD	21	23	44
(F)	209	RESHAPING UNDER GUARDRAIL	STATION	4.625	4.3125	8.9375
(AA)	626	BARRIER REFLECTOR, TYPE A	EACH	6	6	12

NOTES

1) # - EXISTING GUARDRAIL WITH TUBULAR BACKUP.

TYPICAL SECTION "TYPE 5"



HORIZONTAL SCALE IN FEET
0 10 20 40

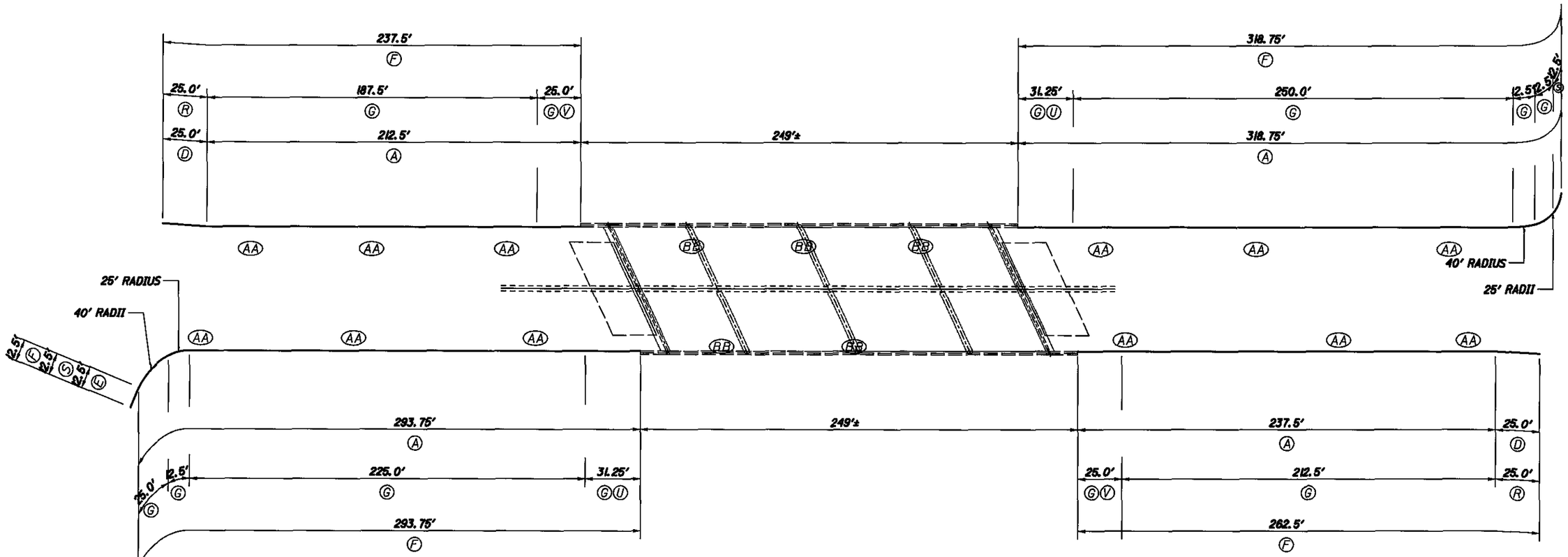
CALCULATED SJD
DRAWN MJS

GUARDRAIL DETAIL
LOR-301-10.96

MED-301-0.00
LOR-301-0.00

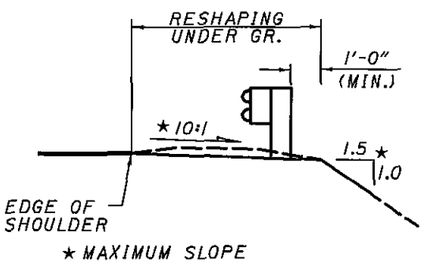
35
114

DESIGN FILE: I:\projects\23581\23581GRail.dgn
WORKSTATION: sdeer
DATE: 2/15/2006



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT	531.25	531.25	1062.5
Ⓓ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	1	1	2
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE T	EACH		1	1
Ⓕ	209	RESHAPING UNDER GUARDRAIL	STATION	5.5625	5.6875	11.25
Ⓖ	606	GUARDRAIL, TYPE 5	FT	518.75	531.25	1050
Ⓡ	606	ANCHOR ASSEMBLY, TYPE A	EACH	1	1	2
Ⓢ	606	ANCHOR ASSEMBLY, TYPE T	EACH	1	1	2
Ⓤ	606	BRIDGE TERMINAL ASSEMBLY, TYPE 1	EACH	1	1	2
Ⓥ	606	BRIDGE TERMINAL ASSEMBLY, TYPE 2	EACH	1	1	2
AA	626	BARRIER REFLECTOR, TYPE A	EACH	7	6	13
BB	626	BARRIER REFLECTOR, TYPE B	EACH	2	3	5

TYPICAL SECTION "TYPE 5"



HORIZONTAL SCALE IN FEET
0 15 30 60
CALCULATED SJD
CHECKED MJS

GUARDRAIL DETAIL
LOR-301-12.41

MED-301-0.00
LOR-301-0.00

36
114

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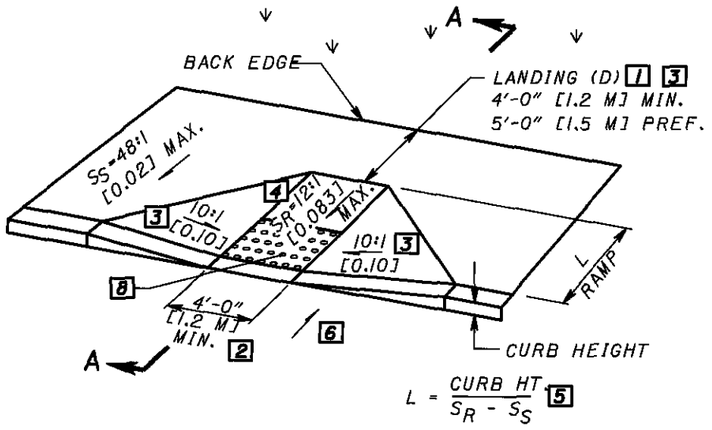
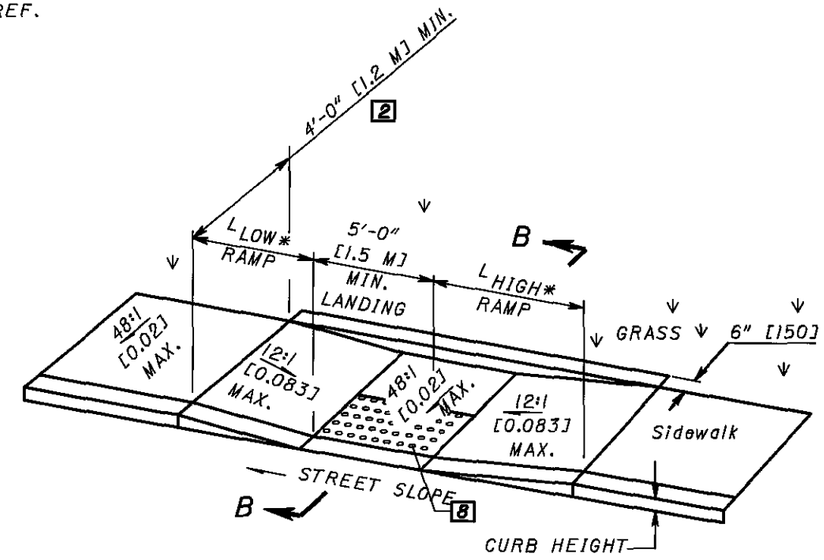
WORKSTATION: sdeer
DATE: 2/15/2006



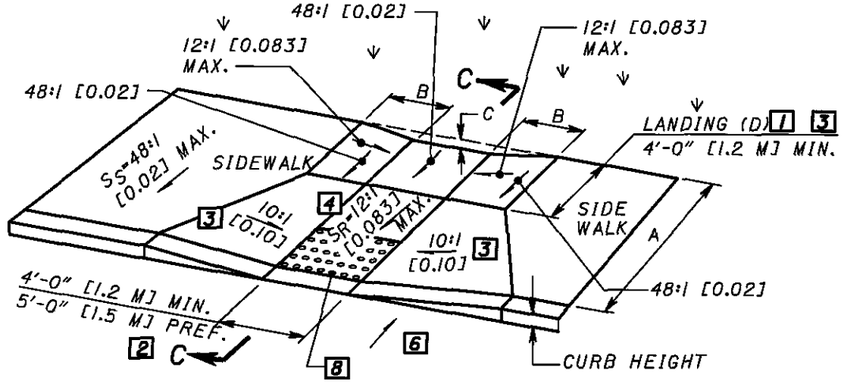
SEE SHT. 3/3 FOR SECTION A-A

PERPENDICULAR CURB RAMP DETAIL



SEE SHT. 3/3 FOR SECTION B-B

PARALLEL CURB RAMP DETAIL (DOUBLE)

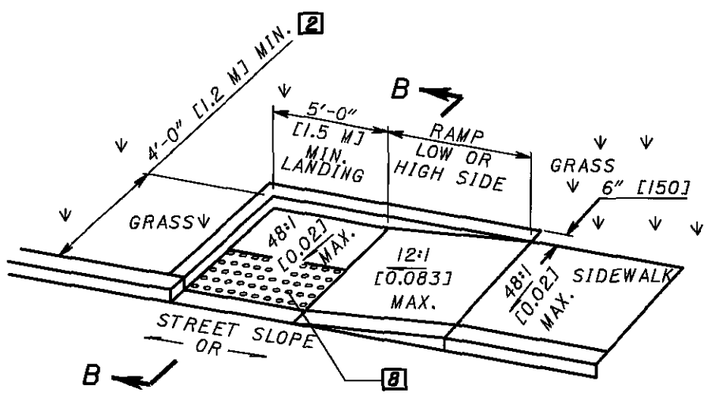


SEE SHT. 3/3 FOR SECTION C-C

COMBINED CURB RAMP DETAIL

$B = C / 0.083$

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



SEE SHT. 3/3 FOR SECTION B-B

PARALLEL CURB RAMP DETAIL (SINGLE)

STREET SLOPE	RAMP LENGTH • 1"/FT [0.083]	
	$L_{LOW\ SIDE}$ *	$L_{HIGH\ SIDE}$ *
0.01	5'-5" [1.6 m]	6'-10" [2.1 m]
0.02	4'-10" [1.5 m]	7'-11" [2.4 m]
0.03	4'-5" [1.3 m]	9'-5" [2.9 m]
0.04	4'-1" [1.2 m]	11'-8" [3.6 m]
0.05	3'-9" [1.1 m]	15'-2" [4.6 m]

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

$$L_{HIGH} = \frac{\text{CURB HT.}}{0.083 - \text{STREET SLOPE}}$$ 7

$$L_{LOW} = \frac{\text{CURB HT.}}{0.083 + \text{STREET SLOPE}}$$ 7

LEGEND

1 MAY BE REDUCED TO 3'-0" [915] IN EXISTING SIDEWALKS IF THE LANDING IS UNCONSTRAINED ALONG THE BACK EDGE.

2 MAY BE REDUCED TO 3'-4" [1.02 M] IN EXISTING SIDEWALKS TO BETTER FIT THE WALK CONFIGURATION OR WHERE SITE CONDITIONS ARE RESTRICTED BY NARROW WALKS, POLE FOUNDATIONS, DRAINAGE INLETS, ETC. THE WIDTH MAY BE TAPERED.

3 WHERE LANDING WIDTH (D) HAS BEEN REDUCED TO 3'-0" [915] THE FLARED SIDES SHALL HAVE A MAXIMUM SLOPE OF 12:1 [0.083].

FLARED SIDES ARE NOT REQUIRED WHERE THE EDGES OF A CURB RAMP ARE PROTECTED BY LANDSCAPING OR OTHER BARRIERS TO TRAVEL BY WHEEL CHAIR USERS OR PEDESTRIANS ACROSS THE EDGE OF THE CURB RAMP. HOWEVER, IF THE FLARED SIDES ARE USED IN THESE AREAS, THEY MAY BE OF ANY SLOPE.

4 THE SLOPE OF THE RAMP TOWARD THE CURB IS PREFERRED TO BE 12:1 [0.083] OR FLATTER RELATED TO THE HORIZONTAL, BUT THE MAXIMUM SLOPE SHALL BE 12:1 [0.083] RELATIVE TO THE EXISTING OR PROPOSED WALK SLOPE.

IN EXISTING SIDEWALKS, WHERE THE MAXIMUM RAMP SLOPE (S) 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.

7-12-02

CURB RAMPS WITH TRUNCATED DOMES

MED-301-0.00
LOR-301-0.00

1 / 3

37 / 14

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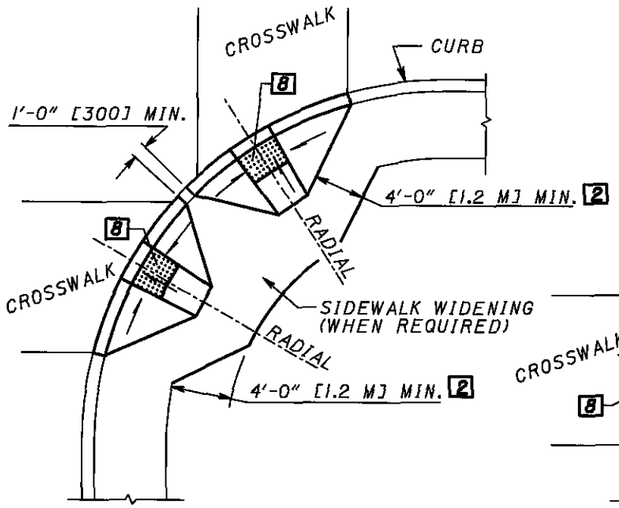
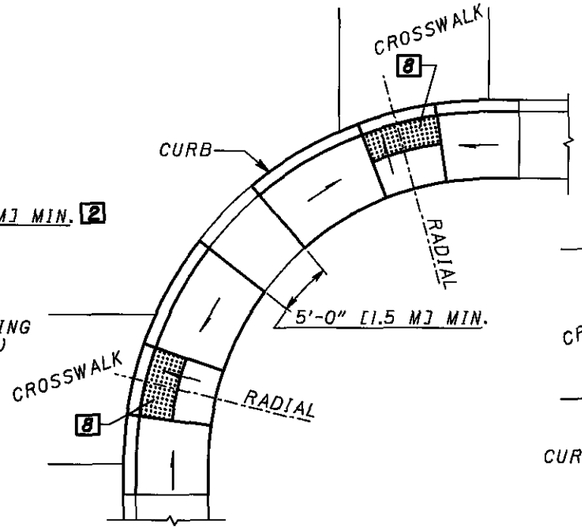
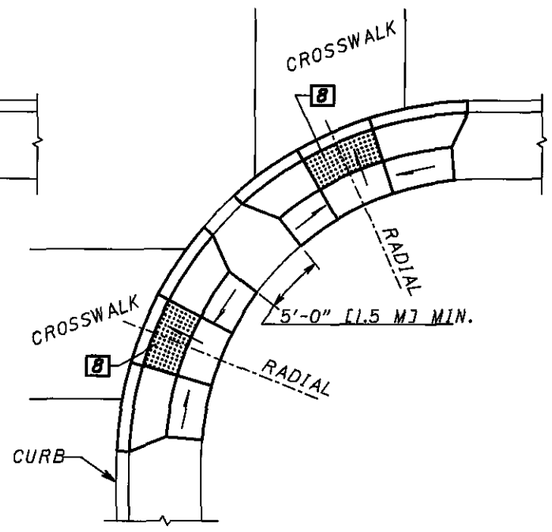
WORKSTATION: sdeer
DATE: 2/15/2006



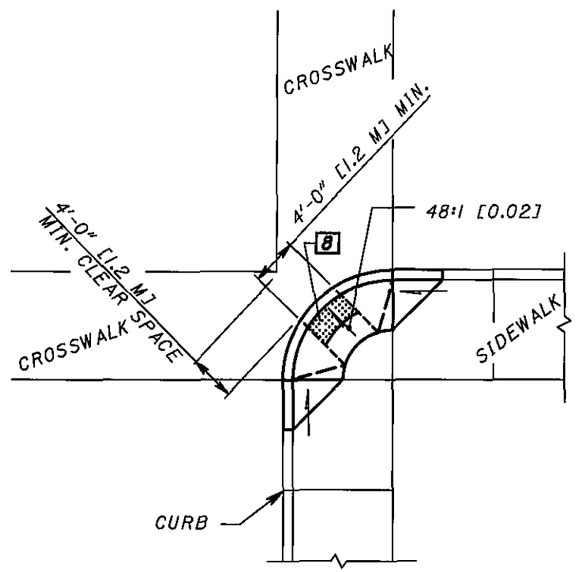
DESIGN A
PERPENDICULAR RAMP



DESIGN B
PARALLEL RAMP



DESIGN C
COMBINATION RAMP



DESIGN D
DIAGONAL RAMP

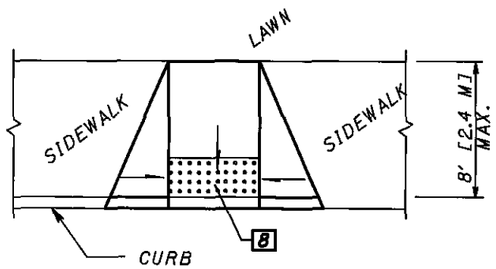
USE IN EXISTING WALKS ONLY AND WHEN SITE CONSTRAINTS PROHIBIT OTHER DESIGNS. THE DIAGONAL RAMP MAY BE PERPENDCULAR, PARALLEL OR COMBINATION.

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

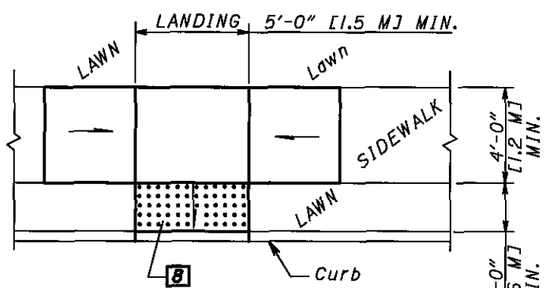
CORNER CURB RAMP DESIGNS

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

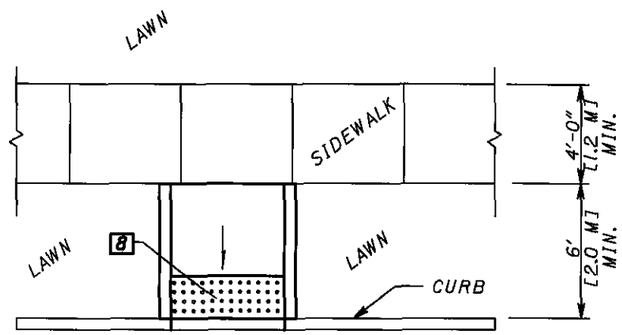
FOR LEGEND, SEE SHEET 1/3.



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.)

DESIGN FILE: I:\projects\23581\23581GMCRa.dgn
WORKSTATION: sdeer DATE: 2/15/2006

7-12-02

CURB RAMPS WITH TRUNCATED DOMES

MED-301-0.00
LOR-301-0.00

2/3

38
14

NOTES

SURFACE TEXTURE: TEXTURE OF CONCRETE SURFACES SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE RAMP SLOPES AND SHALL BE ROUGHER THAN ADJACENT WALK.

TRUNCATED DOMES: INSTALL DETECTABLE WARNINGS (TRUNCATED DOMES) FOR A DISTANCE OF 24" [610] FROM THE BACK OF THE CURB FOR THE ENTIRE WIDTH OF THE RAMP OPENING AS SHOWN ON DETAILS ON SHEET 1.

PAVERS WILL MEET ASTM C 902 CLASS SX, TYPE I, OR C 936, OR C 1272 TYPE R.

ACCEPTABLE MANUFACTURERS AND PRODUCTS ARE:

1) WHITACRE-GREER FIREPROOFING COMPANY, 1400 S. MAHONING AVE, ALLIANCE, OH, 44601, (800) WG PAVER ADA PAVER, 4"X8"X2-1/4", CLEAR RED (RUSTIC) #30.

2) HANOVER ARCHITECTURAL PRODUCTS, 240 BENDER RD., HANOVER, PA. 17331, (717) 637-0500 DETECTABLE WARNING PAVER, 12"X12"X2", OR 24"X24"X2", RED OR QUARRY RED.

3) ENDICOTT CLAY PRODUCTS, PO BOX 17, FAIRBURY, NE, 68352, (402) 729-5804 HANDICAP DETECTABLE WARNING PAVER, 4"X8"X2-1/4", RED BLEND.

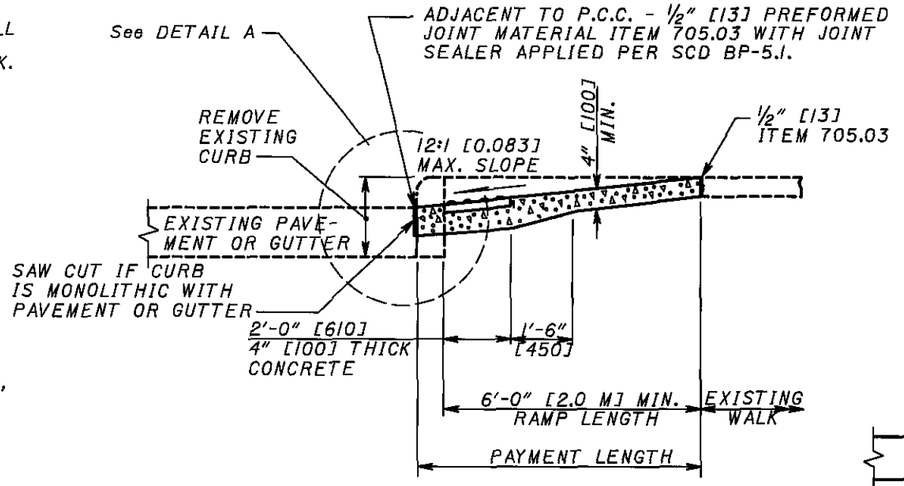
PAVERS WILL LAID ON TOP OF A 4" [100] UNREINFORCED CONCRETE BASE. SETTING BED AND JOINTS TO BE MORTARED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTION, OR WITH A MAXIMUM 1/2" [13] THICK BED OF LATEX MODIFIED CEMENT MORTAR. MORTAR JOINTS TO A WIDTH NOT GREATER THAN 5/32" [4] AND NOT LESS THAN 1/16" [1.5]. PAVERS SHALL NOT BE DIRECTLY TOUCHING EACH OTHER UNLESS THEY HAVE SPACING BARS.

MORTARED JOINTS ARE TO BE FLUSH WITH TOP SURFACE AND STRUCK SO AS TO GIVE A SMOOTH SURFACE. PAVERS SHALL BE LAID SUCH THAT JOINTS ARE LEVEL WITH ADJOINING JOINTS SO AS TO PROVIDE A SMOOTH TRANSITION FROM BRICK TO BRICK AND BRICK TO CONCRETE SURFACE.

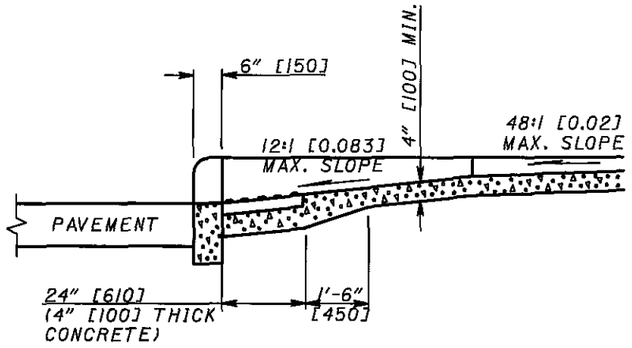
THE SURFACE OF ANY TWO ADJACENT UNITS SHOULD NOT DIFFER BY MORE THAN 1/8" [3] IN HEIGHT. BRICKS SHALL BE PLACED IN A RUNNING BOND PATTERN. FACE OF ALL BRICK SHALL BE CLEAN OF CEMENT AND PROTECTED SO AS TO AVOID CHIPPING DURING CONSTRUCTION.

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.

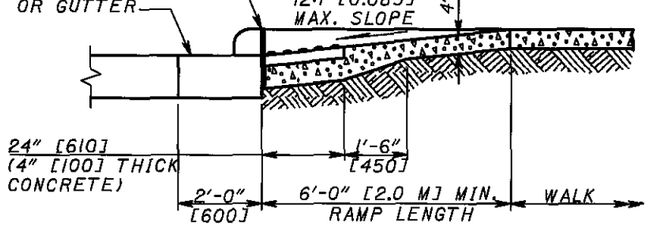
PAYMENT: WALK AND CURB, ITEMS 608 AND 609, SHALL BE MEASURED THROUGH THE CURB RAMP AREA PAID FOR UNDER THEIR RESPECTIVE ITEMS. ITEM 608 - CURB RAMP, AS PER PLAN, EACH CONSTRUCTED IN NEW CURB AND WALK SHALL INCLUDE THE COST OF ANY ADDITIONAL MATERIALS AND INSTALLATION (INCLUDING TRUNCATED DOMES), GRADING,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



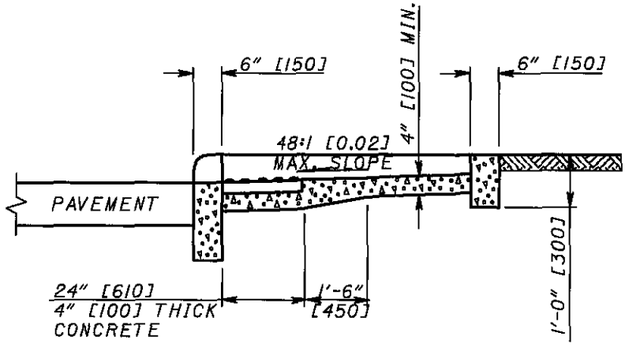
SECTION A-A
EXISTING WALK DETAIL
SEE SHEET 1 OF 3.



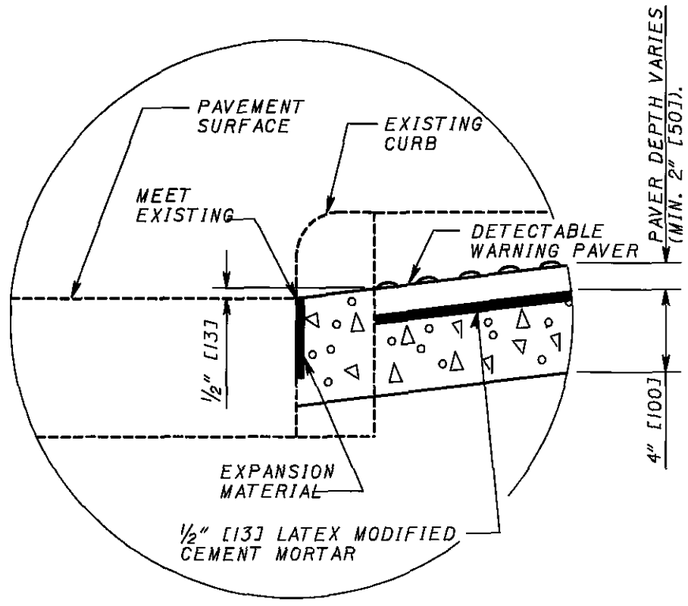
SECTION C-C
SEE SHEET 1 OF 3.



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



SECTION B-B
SEE SHEET 1 OF 3.



DETAIL A

7-12-02

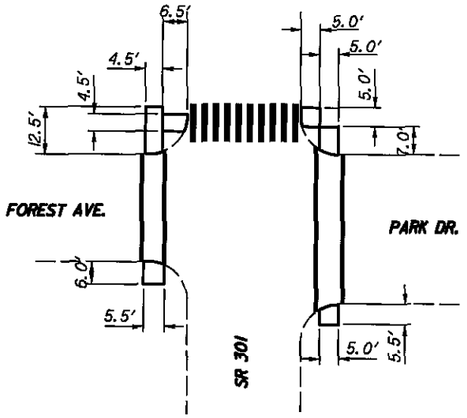
CURB RAMPS WITH TRUNCATED DOMES

MED-301-0.00
LOR-301-0.00

3 / 3

39 / 114

DESIGN FILE: I:\projects\23581\23581GMCRa.dgn
WORKSTATION: sdeer
DATE: 2/15/2006



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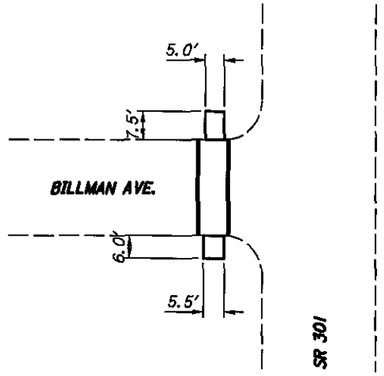

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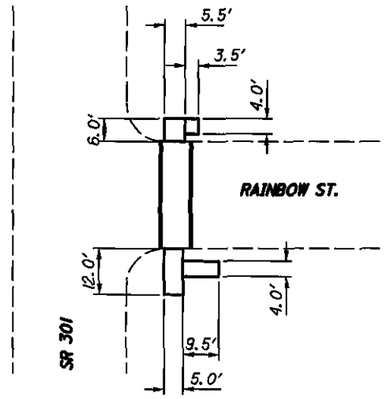

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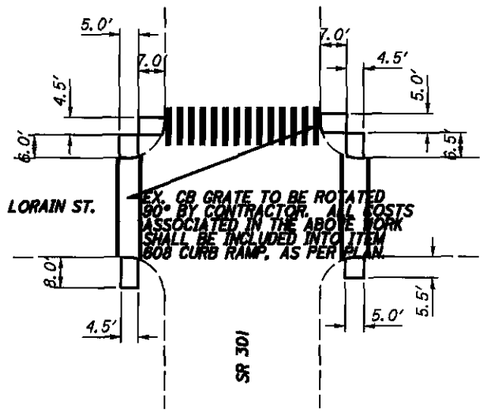

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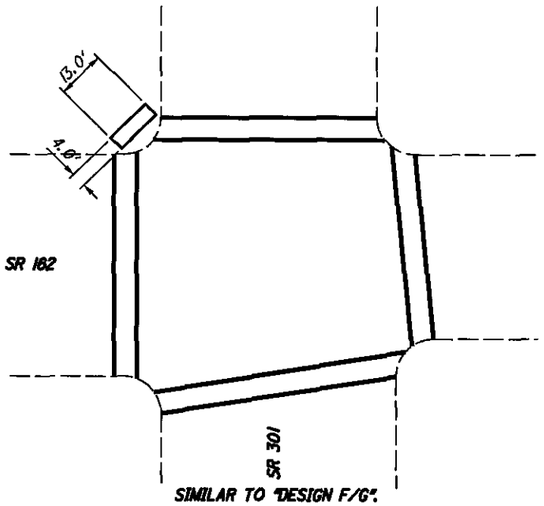

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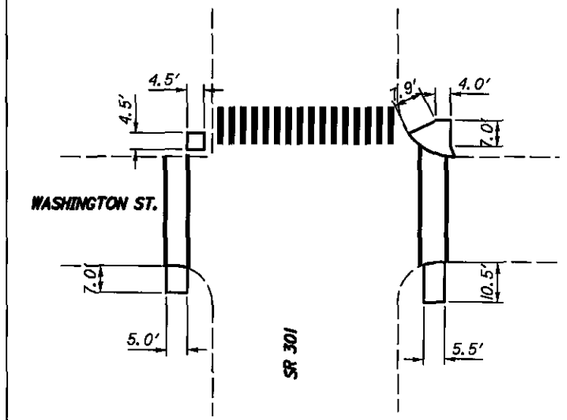


SIMILAR TO "DESIGN F/G".

ITEM 608, CURB RAMP, AS PER PLAN

ITEM 608, CURB RAMP, AS PER PLAN IS INTENDED TO REPLACE THE EXISTING WALK, PAVEMENT, STEPS, EMBANKMENT, CURB, AND CURB RAMPS WITH CURB RAMPS WITH TRUNCATED DOMES AND SIDEWALK. ANY ADDITIONAL AREA DISTURBED BY THE CONTRACTOR SHALL BE RESTORED TO ITS ORIGINAL CONDITION OR TO THE SATISFACTION OF THE PROJECT ENGINEER. PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE IMPROVEMENT WALK REMOVED, AS PER PLAN WILL BE PAID FOR SEPARATELY. THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED. SEE SHEETS 37-39 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, AS PER PLAN IS INTENDED TO REMOVE THE EXISTING WALK, CURB, EMBANKMENT, STEPS, PAVEMENT, BRICK, AND CURB RAMPS REPLACING THESE AREAS WITH CURB RAMPS WITH TRUNCATED DOMES. PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO REMOVE THE SIDEWALK.

SIDEWALK

SIDEWALK DESIGN SHALL FOLLOW THE ODOT LOCATION AND DESIGN MANUAL, VOLUME I, SECTION 306.2.5.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
FOREST	202	WALK REMOVED, AS PER PLAN	SQ FT	118.5	87.5	206
BILLMAN	202	WALK REMOVED, AS PER PLAN	SQ FT	70.5		70.5
RAINBOW	202	WALK REMOVED, AS PER PLAN	SQ FT		145	145
LORAIN	202	WALK REMOVED, AS PER PLAN	SQ FT	97.5	91.8	189.3
SR 162	202	WALK REMOVED, AS PER PLAN	SQ FT	52		52
WASHINGTON	202	WALK REMOVED, AS PER PLAN	SQ FT	55	133	188
					TOTAL	851

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
FOREST	608	CURB RAMP, AS PER PLAN	SQ FT	118.5	87.5	206
BILLMAN	608	CURB RAMP, AS PER PLAN	SQ FT	70.5		70.5
RAINBOW	608	CURB RAMP, AS PER PLAN	SQ FT		145	145
LORAIN	608	CURB RAMP, AS PER PLAN	SQ FT	97.5	91.8	189.3
SR 162	608	CURB RAMP, AS PER PLAN	SQ FT	52		52
WASHINGTON	608	CURB RAMP, AS PER PLAN	SQ FT	55	133	188
					TOTAL	851

CALCULATED S.J.D
CHECKED M.J.S

CURB RAMPS - SPENCER

MED-301-0.00
LOR-301-0.00

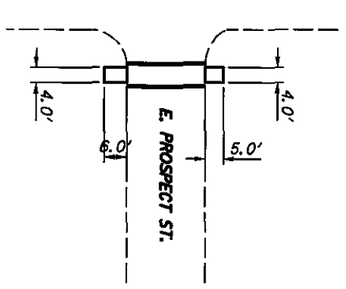
40
114

DESIGN FILE: i:\projects\23581\23581GMCRa.dgn
WORKSTATION: sdeer
DATE: 2/15/2006

DESIGN FILE: I:\projects\23581\23581GMCRa.dgn
WORKSTATION: sdeer DATE: 2/15/2006

SIMILAR TO "DESIGN F/G".

SR 301



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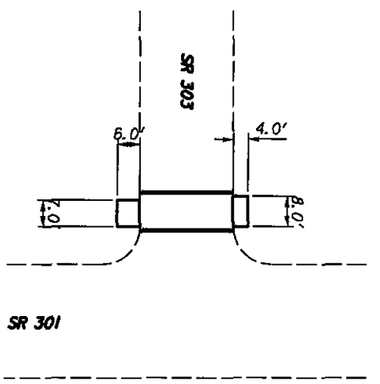

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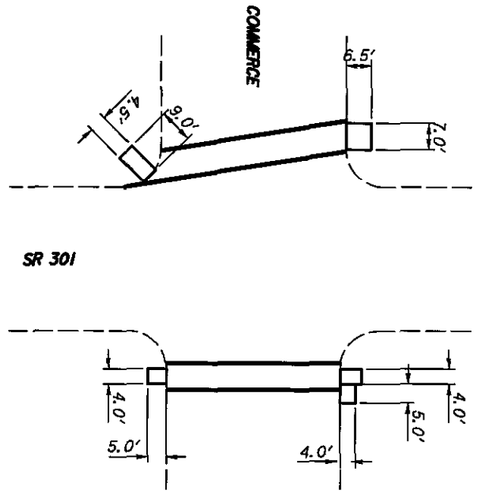

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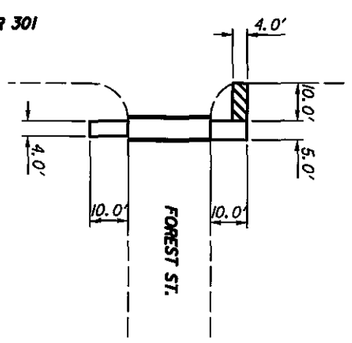

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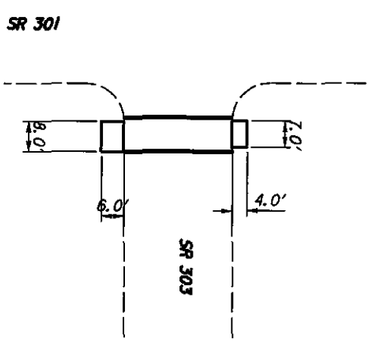

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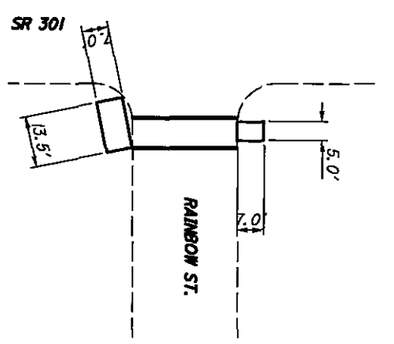
SR 301



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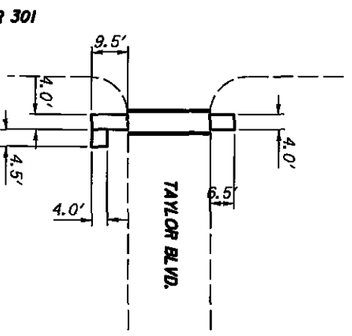

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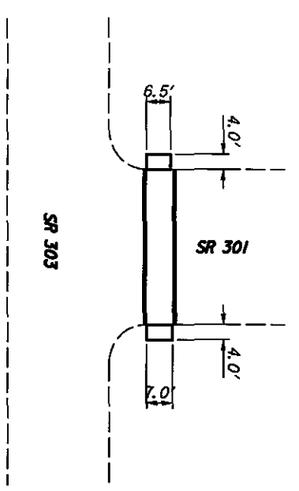

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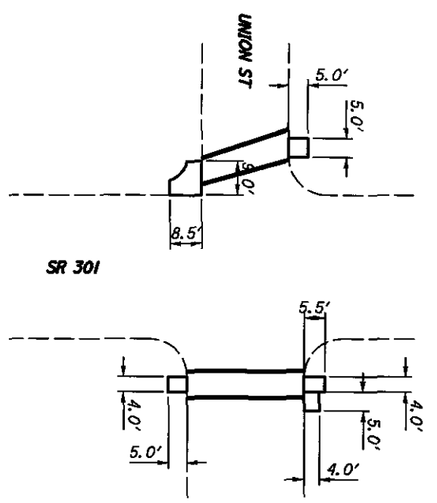

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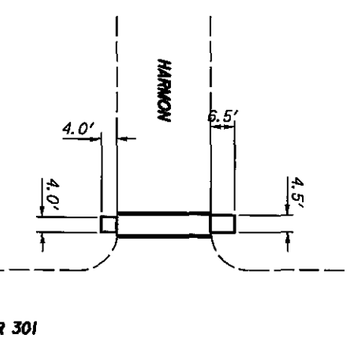
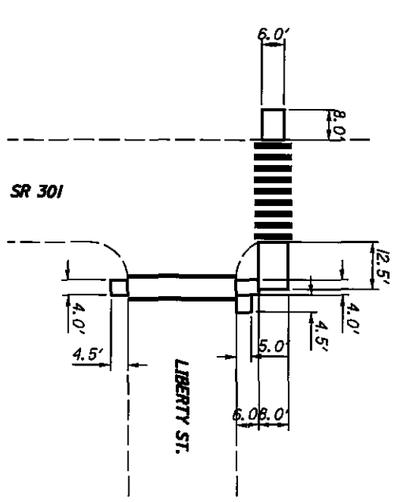


SIMILAR TO "DESIGN F/G".



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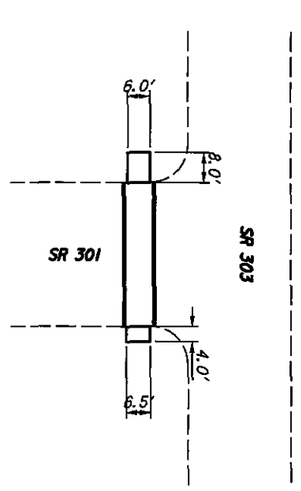
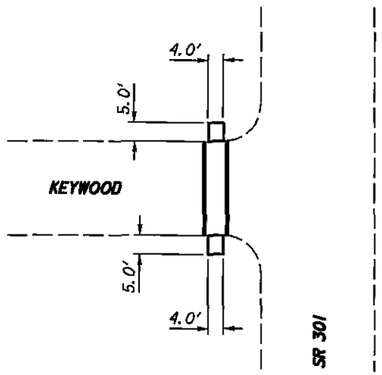


▨ - SIDEWALK TO BE REMOVED WITH NO REPLACEMENT.

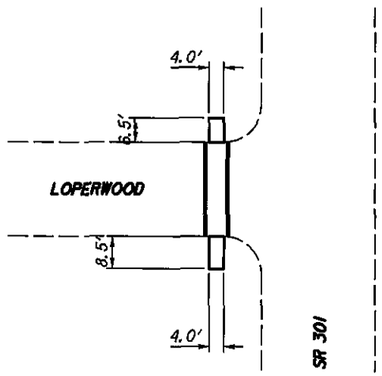
MED-301-0.00
LOR-301-0.00

CURB RAMPS - LAGRANGE

CALCULATED SJD
CHECKED MJS



SIMILAR TO "DESIGN F/G".



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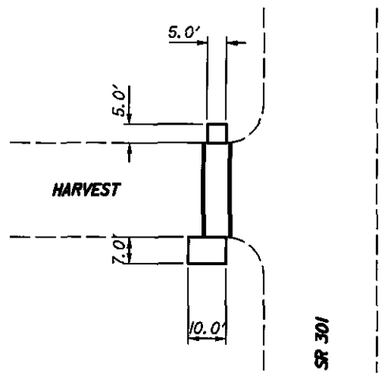

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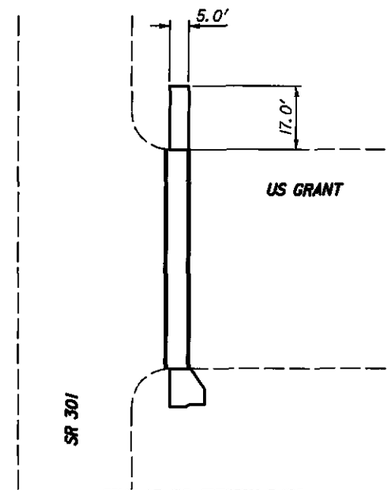


SIMILAR TO "DESIGN F/G".

ITEM 202, WALK REMOVED, AS PER PLAN

ITEM 202, WALK REMOVED, AS PER PLAN IS INTENDED TO REMOVE THE EXISTING WALK, CURB, EMBANKMENT, STEPS, PAVEMENT, BRICK, AND CURB RAMPS REPLACING THESE AREAS WITH CURB RAMPS WITH TRUNCATED DOMES. PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO REMOVE THE SIDEWALK.

ITEM 608, CURB RAMP, AS PER PLAN

ITEM 608, CURB RAMP, AS PER PLAN IS INTENDED TO REPLACE THE EXISTING WALK, PAVEMENT, STEPS, EMBANKMENT, CURB, AND CURB RAMPS WITH CURB RAMPS WITH TRUNCATED DOMES AND SIDEWALK. ANY ADDITIONAL AREA DISTURBED BY THE CONTRACTOR SHALL BE RESTORED TO ITS ORIGINAL CONDITION OR TO THE SATISFACTION OF THE PROJECT ENGINEER. PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE IMPROVEMENT WALK REMOVED, AS PER PLAN WILL BE PAID FOR SEPARATELY. THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED. SEE SHEETS 37-39 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.

SIDEWALK

SIDEWALK DESIGN SHALL FOLLOW THE ODOT LOCATION AND DESIGN MANUAL, VOLUME I, SECTION 306.2.5.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
COMMERCE	202	WALK REMOVED, AS PER PLAN	SQ FT	86	60	146
RAINBOW	202	WALK REMOVED, AS PER PLAN	SQ FT		129.5	129.5
UNION	202	WALK REMOVED, AS PER PLAN	SQ FT	101.5	62	163.5
SR 303	202	WALK REMOVED, AS PER PLAN	SQ FT	48	26	74
SR 301	202	WALK REMOVED, AS PER PLAN	SQ FT	74		74
SR 301	202	WALK REMOVED, AS PER PLAN	SQ FT		103	103
SR 303	202	WALK REMOVED, AS PER PLAN	SQ FT	26	28	54
LIBERTY	202	WALK REMOVED, AS PER PLAN	SQ FT	48	164.5	212.5
PROSPECT	202	WALK REMOVED, AS PER PLAN	SQ FT		44	44
FOREST	202	WALK REMOVED, AS PER PLAN	SQ FT		130	130
TAYLOR	202	WALK REMOVED, AS PER PLAN	SQ FT		82	82
HARMON	202	WALK REMOVED, AS PER PLAN	SQ FT		45.3	45.3
KEYWOOD	202	WALK REMOVED, AS PER PLAN	SQ FT	40		40
LOPERWOOD	202	WALK REMOVED, AS PER PLAN	SQ FT	60		60
HARVEST	202	WALK REMOVED, AS PER PLAN	SQ FT	95		95
US GRANT	202	WALK REMOVED, AS PER PLAN	SQ FT		164	164
					TOTAL	1617

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
COMMERCE	608	CURB RAMP, AS PER PLAN	SQ FT	86	60	146
RAINBOW	608	CURB RAMP, AS PER PLAN	SQ FT		129.5	129.5
UNION	608	CURB RAMP, AS PER PLAN	SQ FT	101.5	62	163.5
SR 303	608	CURB RAMP, AS PER PLAN	SQ FT	48	26	74
SR 301	608	CURB RAMP, AS PER PLAN	SQ FT	74		74
SR 301	608	CURB RAMP, AS PER PLAN	SQ FT		103	103
SR 303	608	CURB RAMP, AS PER PLAN	SQ FT	26	28	54
LIBERTY	608	CURB RAMP, AS PER PLAN	SQ FT	48	164.5	212.5
PROSPECT	608	CURB RAMP, AS PER PLAN	SQ FT		44	44
FOREST	608	CURB RAMP, AS PER PLAN	SQ FT		90	90
TAYLOR	608	CURB RAMP, AS PER PLAN	SQ FT		82	82
HARMON	608	CURB RAMP, AS PER PLAN	SQ FT		45.3	45.3
KEYWOOD	608	CURB RAMP, AS PER PLAN	SQ FT	40		40
LOPERWOOD	608	CURB RAMP, AS PER PLAN	SQ FT	60		60
HARVEST	608	CURB RAMP, AS PER PLAN	SQ FT	95		95
US GRANT	608	CURB RAMP, AS PER PLAN	SQ FT		164	164
					TOTAL	1577

CALCULATED S/D
CHECKED M/S

CURB RAMPS - LAGRANGE

CURB

MED-301-0.00
LOR-301-0.00

42
114

DESIGN FILE: I:\projects\23581\23581GMCRa.dgn
WORKSTATION: sdeer
DATE: 2/15/2006

ITEM 632, DETECTOR LOOP, AS PER PLAN

AN ESTIMATED QUANTITY OF 632 DETECTOR LOOP, AS PER PLAN HAS BEEN PROVIDED WHEN WIRE IS CUT, BROKEN OR DESTROYED DUE TO PAVEMENT PLANING, PAVEMENT REPAIR OR BUTT JOINT OPERATIONS. IT IS IMPERATIVE THAT REPLACEMENT OF LOOP DETECTORS BE INSTALLED AND FULLY FUNCTIONAL IN THE SHORTEST POSSIBLE TIME. THE CONTRACTOR SHALL HAVE REPLACEMENT LOOP DETECTORS INSTALLED AND FULLY FUNCTIONAL WITHIN 7 CALENDAR DAYS OF DESTRUCTION OF THE ORIGINAL LOOP.

FAILURE TO COMPLY WITH THE ABOVE STATED REQUIREMENTS WILL RESULT IN THE ASSESSMENT OF LIQUIDATED DAMAGES ACCORDING TO SECTION 108.07 OF THE CMS FOR EACH CALENDAR DAY BEYOND THE SPECIFIED LIMIT.

THE NEW LOOP DETECTORS SHALL BE PLACED AFTER THE PLANING AND PAVEMENT REPAIR OPERATIONS ARE COMPLETED WITHIN THE LOOP DETECTOR AREAS. THE LOOP DETECTORS SHALL NOT BE CUT INTO THE SURFACE COURSE.

NEW LOOP DETECTORS SHALL BE PLACED AT THE SAME LOCATIONS AND BE THE SAME SIZE AND TYPE AS THE EXISTING, OR AS DIRECTED BY THE ENGINEER. THE LOOP DETECTOR WIRE SHALL BE REPLACED TO THE PULL BOX OR POLE, WHICHEVER IS APPLICABLE, UNDER ITEM 632 AND TC-82.10.

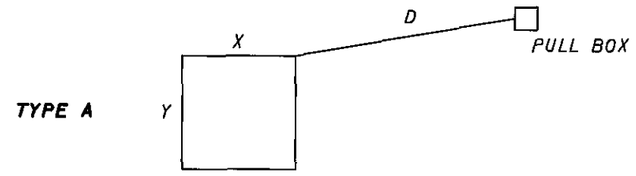
THIS WORK SHALL INCLUDE THE POURED EPOXY INSULATED SPLICE(S) REQUIRED TO CONNECT THE LOOP DETECTOR WIRE TO EXISTING LEAD-IN CABLE AT THE PULL BOX OR POLE. THE SPLICES SHALL BE IN ACCORDANCE WITH SECTION 725.15 OF THE CMS. PAYMENT SHALL BE MADE PER EACH LOOP DETECTOR CONNECTED TO THE LEAD-IN CABLE.

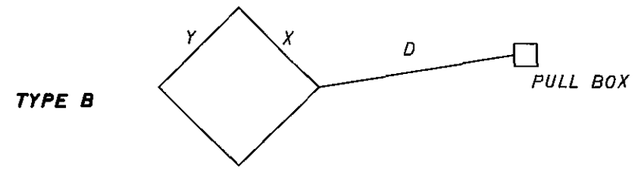
THE CONTRACTOR WILL BE PROVIDED WITH DETAILED PLANS AT THE PRE CONSTRUCTION MEETING SHOWING DETECTOR LOOP PLACEMENTS. A TABLE SHOWING DIMENSIONS AND LOCATIONS IS PROVIDED BELOW FOR THE PURPOSE OF ESTIMATING.

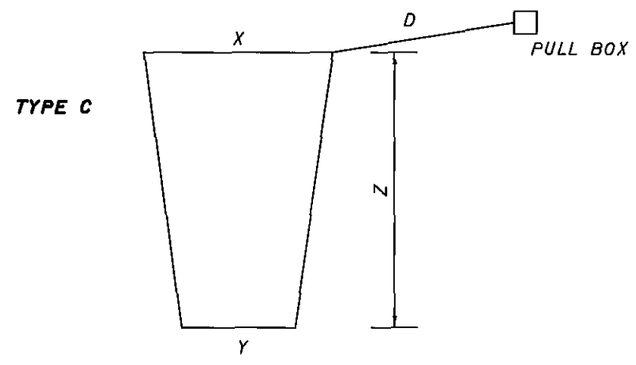
PAYMENT FOR ALL THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH OF ITEM 632 DETECTOR LOOP, AS PER PLAN.

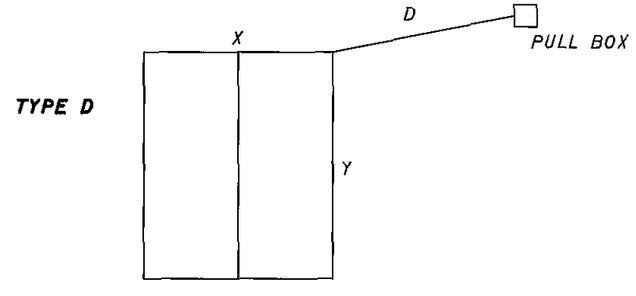
THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

ITEM 632 DETECTOR LOOP, AS PER PLAN 8 EACH









THE INTERSECTIONS INVOLVED ARE AS FOLLOWS:

ROUTE	STA.	LOCATION	TYPE	DIMENSION			
				D	X	Y	Z
SR 301	45+77	SR 301 AND SR 18	B	40	6	6	
SR 301	47+07	SR 301 AND SR 18	B	30	6	6	
SR 301	49+53	SR 301 AND SR 18	A	25	6	30	
SR 301	49+68	SR 301 AND SR 18	C	15	8	6	12
SR 301	50+32	SR 301 AND SR 18	C	15	8	6	12
SR 301	50+47	SR 301 AND SR 18	A	15	6	30	
SR 301	52+93	SR 301 AND SR 18	B	20	6	6	
SR 301	54+23	SR 301 AND SR 18	B	20	6	6	

SEE LOOP DETECTOR DETAIL SHEET SUPPLIED AT THE PRECONSTRUCTION MEETING.

CALCULATED S/D
CHECKED MJS

LOOP DETECTOR NOTES & DETAILS

MED-301-0.00
LOR-301-0.00

43
114

DESIGN FILE: I:\projects\2358\2358ICM001.dgn
WORKSTATION: sdeer
DATE: 2/15/2006

AUXILIARY & LONG LINE MARKINGS

CALC BY: GJD
CHKD BY: MJS

PART	SHEET #	COUNTY	STATION / SLM FROM	STATION / SLM TO	HIGHWAY MILES	614 WORK ZONE LANE LINE, CLASS I, 642 PAINT	614 WORK ZONE CENTER LINE, CLASS II, 642 PAINT	614 WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT	614 WORK ZONE STOP LINE, CLASS I, 642 PAINT	642, TYPE 2 EDGE LINE TOTAL (PAY QUANTITY) (WHITE)	642, TYPE 2 EDGE LINE TOTAL (PAY QUANTITY) (YELLOW)	642, TYPE 2 LANE LINE	642, TYPE 2 CENTER LINE SOLID LINE EQUIVALENT	642, TYPE 2 CENTER LINE TOTAL (PAY QUANTITY)	642, TYPE 2 AUXILIARY MARKINGS CHANNELIZING LINE 8"	STOP LINE 24"	TRANSVERSE/ DIAGONAL LINE (WHITE) 24"	TRANSVERSE/ DIAGONAL LINE (YELLOW) 24"	ISLAND MARKING	LANE ARROW LEFT	LANE ARROW RIGHT	LANE ARROW THROUGH	LANE ARROW COMBINATION	WORD ON PAVEMENT "ONLY" 72 INCH	WORD ON PAVEMENT "ONLY" 96 INCH	642 REMOVAL OF PAVEMENT MARKING	644 AUXILIARY MARKINGS (740.04) PARKING LOT STALL MARKING	STOP LINE 24"	CROSSWALK LINE 12"	RAILROAD SYMBOL MARKING	SCHOOL SYMBOL MARKING 72 INCH	SCHOOL SYMBOL MARKING 96 INCH	PARKING LOT STALL MARKING
						MILE	MILE	FT	FT	MILE	MILE	MILE	MILE	MILE	FT	FT	FT	FT	SQ FT	EACH				EACH		FT	FT	FT	FT	EACH	EACH		FT
SR 301																																	
A		MEDINA	0.00	10.17	10.17		30.51		246	20.34			10.70	10.17												1,642	714	1,152	4			1,642
A		MEDINA			EXTRA LENGTH FOR INTERSECTING SIDE ROADS								0.26	0 13																		
B		LORAIN	0.00	9.80	9.80		29.40			19.60			7.69	9.80												73	701	1,418	2			73
B		LORAIN	9.80	9.82	**STATION EQUATION**																												
B		LORAIN	9.82	12.46	2.64		7 92			5 28			1 76	2.64													289				2	
B	45	LORAIN	12.46 NB	12.55 SB						0.45	0.29		0.24	0.12	587	88	382	281	141	7	1			2	67		72					
B		LORAIN			EXTRA LENGTH FOR INTERSECTING SIDE ROADS								0.30	0.15																		
			SUBTOTAL PART A		10.17		30.51		246	20.34			10.70	10.17												1,642	714	1,152	4			1,642
			SUBTOTAL PART B		12.44		37.32			25.33	0.29		9.69	12.56	587	88	382	281	141	7	1			2	67	73	1,062	1,418	2		2	73
				TOTAL	22.61		67.83		246	45.67	0.29		20.39	22.73	587	88	382	281	141	7	1			2	67	1,715	1,776	2,570	6		2	1,715

RAISED PAVEMENT MARKERS

PART	COUNTY	STATION/SLM FROM	STATION/SLM TO	DETAIL	202 RAISED PAVEMENT MARKER REMOVED	621 RPM, AS PER PLAN	PRISMATIC RETRO-REFLECTOR TYPES ONE-WAY WHITE	TWO-WAY YELLOW / YELLOW	TWO-WAY WHITE / RED	TWO-WAY YELLOW / RED	TWO-WAY BLUE / BLUE	REMARKS
					EACH	EACH	EACH					
A	MEDINA	0.00	2.40	GAP	156	156		156				CENTERLINE @ 80 FT. TYPICAL
A	MEDINA	2 40	2 60	6	27	27	16	11				STOP APPROACHES @ US 224 (S. APPR.)
A	MEDINA	2.61	2.80	6	27	27	16	11				STOP APPROACHES @ US 224 (N. APPR.)
A	MEDINA	2 80	6.91	GAP, 18	268	271		268			3	CENTERLINE @ 80 FT. TYPICAL, FIRE HYDRANT
A	MEDINA	6.91	8.18	18		15					15	FIRE HYDRANT
A	MEDINA	8.18	10.22	GAP	132	132		132				CENTERLINE @ 80 FT. TYPICAL
B	LORAIN	0.00	1.16	GAP	67	67		67				CENTERLINE @ 80' SPACINGS
B	LORAIN	1.16	1.59	15	65	65		65				HORIZONTAL CURVE
B	LORAIN	1.59	2.02	GAP	34	34		34				TYPICAL 80 FT. SPACINGS
B	LORAIN	2.02	2.42	6	54	54	32	22				STOP APPROACH
B	LORAIN	2.42	4.15	GAP	113	113		113				CENTERLINE @ 80' SPACINGS
B	LORAIN	4.15	4.48	15	42	42		42				HORIZONTAL CURVE
B	LORAIN	4.48	6.46	GAP	129	131		129			2	CENTERLINE @ 80' SPACINGS, FIRE HYDRANT
B	LORAIN	6.46	7.54	18		12					12	FIRE HYDRANT
B	LORAIN	7.54	12 22	GAP	308	310		308			2	CENTERLINE @ 80' SPACINGS, FIRE HYDRANT
B	LORAIN	12 22	12.41	11	50	50	26	24				4 LANE UNDIVIDED TO 2 LANE TRANSITION
		SUBTOTAL PART A			478	496	32	446			18	
		SUBTOTAL PART B			812	828	32	780			16	
			TOTAL		1,290	1,324	64	1,226			34	

DETAIL	DESCRIPTION
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	4 LANE UNDIVIDED TO 2 LANE TRANSITION
12	TWO LNAE 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.

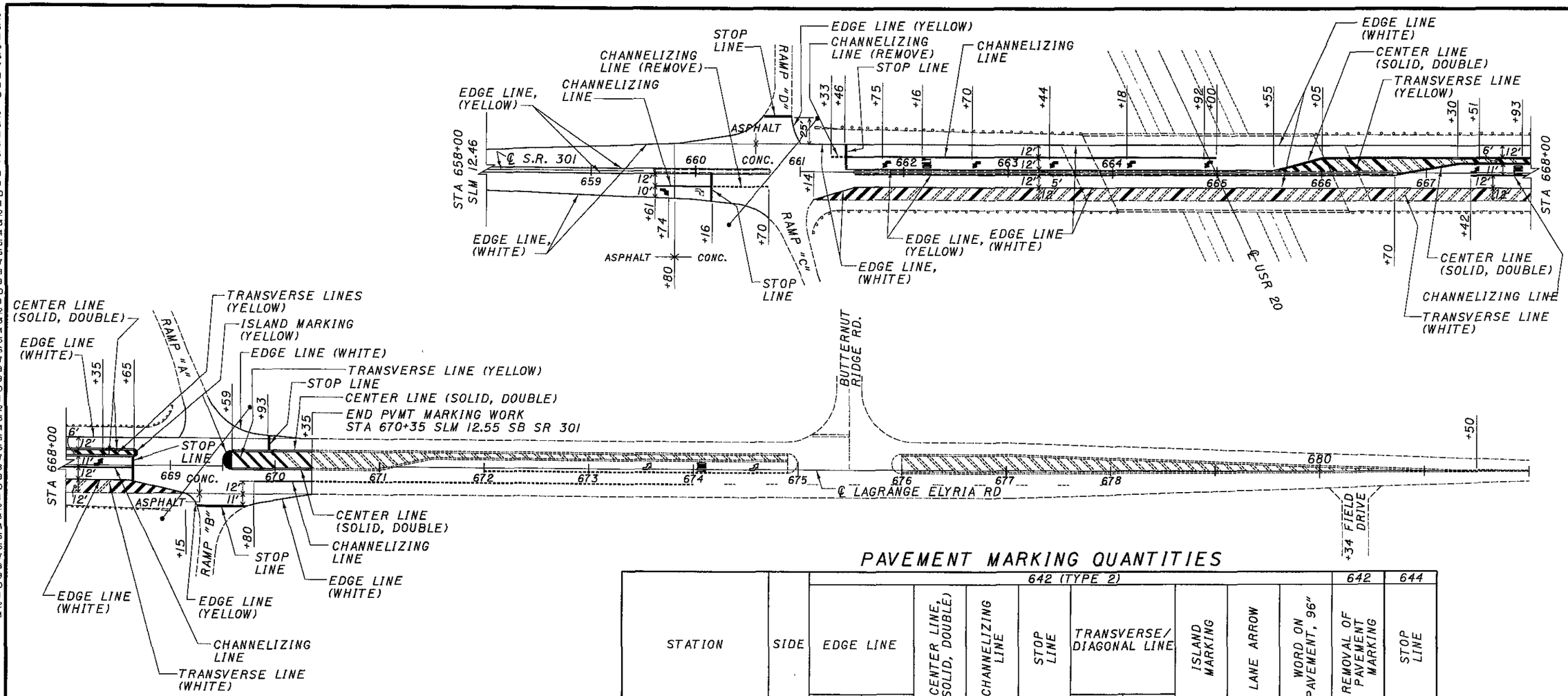
2) STOP BARS SHALL BE INSTALLED AT EVERY INTERSECTION AND SIDE ROAD.

3) CROSSWALKS SHALL BE INSTALLED AT EVERY CURB RAMP LOCATION ON AND ALONG SR 301.

4) DOUBLE SOLID CENTER LINE SHALL BE STRIPED ALONG ALL INTERSECTING SIDE ROADS A DISTANCE OF 20'.

PAVEMENT MARKING / RPM SUB-SUMMARY

MED-301-0.00
LOR-301-0.00



PAVEMENT MARKING QUANTITIES

STATION FROM	STATION TO	SIDE	642 (TYPE 2) EDGE LINE WHITE FOOT/MILE	642 (TYPE 2) EDGE LINE YELLOW FOOT/MILE	CENTER LINE, (SOLID, DOUBLE) FT/MILE	CHANNELIZING LINE FOOT	STOP LINE FOOT	TRANSVERSE/ DIAGONAL LINE WHITE FOOT	TRANSVERSE/ DIAGONAL LINE YELLOW FOOT	ISLAND MARKING SQ.FT.	LANE ARROW EACH	WORD ON PAVEMENT, 96" EACH	642 REMOVAL OF PAVEMENT MARKING FOOT	644 STOP LINE FOOT
658+00	659+61	LT&RT	322	322										
659+61	660+16	LT&RT	110	110		55	26				1			
660+16	660+65	LT	51	51										
660+65	661+00	LT		31										26
660+16	660+70	RT	60	54									54	
661+00	661+46	LT	46				24						13	
661+14	661+46	RT	32					14						
661+46	665+00	LT&RT	708	708		354		170			5	1		
665+00	665+55	LT&RT	110	110				17						
665+55	666+70	LT&RT	230	115	115			51	81					
666+70	667+42	LT&RT	144		144			17	13					
667+42	668+65	LT&RT	246		246	123	23	85	60	14	2	1		
668+65	669+15	LT&RT	128					28						
669+15	669+80	RT	7	16	21									46
669+80	670+35	RT	56		55	55								
669+38	669+59	LT	35							127				
669+59	670+35	LT	78		76		15		127					
TOTALS (TO SHEET 44)			2363 / 0.45	1517 / 0.29	657 / 0.12	587	88	382	281	141	8	2	67	72

DESIGN FILE I:\projects\2358I\Signal\PM30I.DGN
WORKSTATION eellison DATE 2/13/2006

CALCULATED RJR CHECKED

SHEET S.R. 301 & LAGRANGE ELYRIA RD

PAVEMENT MARKING SHEET

MED-301-0.00
LOR-301-0.00

PERSONNEL

THE CONTRACTOR SHALL ASSIGN A FULL-TIME SUPERVISOR FOR THIS PROJECT WHO SHALL COMPLY AT ALL TIMES TO THE PLAN REQUIREMENTS AND SPECIFICATIONS AS INTERPRETED AND INSTRUCTED BY THE ENGINEER. THE CONTRACTOR SHALL NOT CHANGE A SUPERVISOR ASSIGNED TO A PROJECT WITHOUT WRITTEN NOTICE. IT IS UNDERSTOOD THAT THE CONTRACTOR IS RESPONSIBLE TO THE DEPARTMENT OF TRANSPORTATION FOR THE MANNER OF PERFORMING THE WORK.

ALL CONTROLLER WORK AS DEFINED BELOW IN ITEMS 1 THRU 4 SHALL BE PERFORMED BY AN IMSA LEVEL TWO CERTIFIED TECHNICIAN.

1) BACK PANEL WIRING TERMINATIONS
2) PROGRAMMING
3) TURN ON
4) TROUBLESHOOTING

THE COMPLEMENT OF THE CONTRACTOR'S CREW SHALL BE ONE (1) APPRENTICE FOR EVERY THREE OR MORE JOURNEYMAN ELECTRICIANS, WIREMEN, OR LINEMEN UNLESS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE CERTIFICATION BY THE STATE DEPARTMENT OF INDUSTRIAL RELATIONS THAT EACH JOURNEYMAN WIREMEN HAS SUCCESSFULLY COMPLETED HIS/HER APPRENTICE TRAINING.

THE CONTRACTOR SHALL ALSO HAVE A FOREMAN ASSIGNED TO EACH CREW PERFORMING WORK FOR THIS PROJECT. A FOREMAN SHALL BE PRESENT AT ALL TIMES WHEN WORK IS PERFORMED BY THE CREW. EACH FOREMAN SHALL BE AN IMSA LEVEL ONE CERTIFIED TECHNICIAN. PRIOR VERBAL NOTICE SHALL BE PROVIDED TO THE ENGINEER BY THE CONTRACTOR IN ORDER TO REPLACE A CREW FOREMAN.

IN ADDITION, CRAFTS PEOPLE PERFORMING WORK AS DEFINED BELOW IN ITEMS 1 THRU 7 SHALL BE PERFORMED BY AN IMSA LEVEL ONE CERTIFIED TECHNICIAN.

1) CABLE SPLICES
2) SIGNAL HEAD INSTALLATIONS
3) CABLE AND WIRE INSTALLATIONS
4) POWER SERVICE INSTALLATIONS
5) GROUND ROD TESTING
6) CABLE INSULATION TESTING
7) FIELD WIRING TERMINATIONS

THE CONTRACTOR SHALL PRESENT TO THE ENGINEER, PRIOR TO THE COMMENCEMENT OF WORK, THE IMSA LEVEL ONE AND TWO CERTIFICATION PAPERS FOR ALL SIGNAL TECHNICIANS WORKING ON THIS PROJECT.

THE CONTRACTOR SHALL AT ALL TIMES PROVIDE SUFFICIENT WORK FORCE OF PERSONNEL, QUALIFIED IN THE OPINION OF THE ENGINEER, TO PERFORM THE WORK REQUIRED UNDER THIS CONTRACT. THIS REQUIREMENT IS IN ADDITION TO SATISFYING THE REQUIREMENTS OF SECTION *108.05* OF THE CMS MANUAL.

THE FOREMAN'S UTILITY WORK TRUCK SHALL BE EQUIPPED WITH A CELLULAR PHONE THE CELLULAR PHONE NUMBER SHALL BE PROVIDED TO THE PROJECT ENGINEER AND THE DISTRICT 3 TRAFFIC DEPARTMENT.

SIGNAL INSPECTION

FOLLOWING COMPLETION OF THE SIGNAL WORK, THE CONTRACTOR SHALL REQUEST APPROVAL FROM THE ODOT PROJECT MANAGER TO PLACE THE SIGNAL IN FLASH MODE. AFTER RECEIVING APPROVAL, THE CONTRACTOR SHALL PLACE THE SIGNAL IN FLASH OPERATION FOR A PERIOD OF SEVEN (7) DAYS. ODOT DISTRICT 3 WILL CONDUCT AN OPERATIONAL AND ELECTRICAL INSPECTION OF THE TRAFFIC SIGNAL DURING THE SEVEN (7) DAY FLASH PERIOD. ANY DEFICIENCIES OF AN OPERATIONALLY CRITICAL NATURE SHALL BE CORRECTED BY THE CONTRACTOR PRIOR TO PLACING THE SIGNAL IN "STOP-AND-GO" OPERATION.

AFTER THE SEVEN (7) DAY FLASH PERIOD, AND WITH APPROVAL OF THE ODOT PROJECT MANAGER, THE CONTRACTOR SHALL PLACE THE TRAFFIC SIGNAL IN "STOP-AND-GO" OPERATION. THE SIGNAL SHALL THEN BE SUBJECT TO A TEN (10) DAY BURN TEST PER CMS *633.06.*

WORKING DRAWINGS

THE REQUIREMENTS OF ITEM *625.06, 632.04, AND 633.04* OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS ARE HEREBY MODIFIED TO REQUIRE TWO (2) SETS OF SHOP DRAWINGS, CATALOG CUTS, SPECIFICATIONS, PHOTOMETRIC DATA, BROCHURES, DATA SHEETS AND WIRING DIAGRAMS FOR REVIEW AND APPROVAL, AS REQUIRED BY THE DIRECTOR, OF APPARATUS AND EQUIPMENT TO BE FURNISHED. THESE DOCUMENTS ARE TO BE PROVIDED TO THE DISTRICT THREE CONSTRUCTION ENGINEER, 906 NORTH CLARK STREET, ASHLAND, OHIO 44805 FOR APPROVAL BEFORE THE ITEMS ARE FURNISHED.

UNDERDRAINS FOR PULL BOXES

REFERENCE IS MADE TO STANDARD DRAWING HL-30.11 FOR DETAILS OF DRAINING PULL BOXES. UNDERDRAINS FOR PULL BOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 20 FEET. PAYMENT FOR UNDERDRAINS WILL BE MADE AT THE CONTRACT UNIT PRICE PER LINEAR FOOT FOR ITEM 603, 4" CONDUIT, TYPE E.

ITEM 625 – PULL BOX, 725.08, (BY SIZE), AS PER PLAN

THIS ITEM SHALL BE PER CMS *625.11 AND 725.08.* COVER SCREWS SHALL BE ¼" STAINLESS STEEL WITH SLOTTED HEADS. COVERS SHALL BE GALVANIZED AND HAVE A TEXTURED SURFACE FOR SLIP RESISTANCE.

PAYMENT WILL BE MADE AT CONTRACT UNIT PRICE PER LINEAR FOOT.

ITEM 625 - PULL BOX REMOVED AND REPLACED, AS PER PLAN

THIS ITEM OF WORK SHALL REQUIRE THE CAREFUL REMOVAL OF AN EXISTING DAMAGED OR NON-STANDARD PULL BOX, AND THE INSTALLATION OF A NEW CONTRACTOR FURNISHED CONCRETE PULL BOX, *725.08*, 18". EXTREME CARE SHOULD BE EXERCISED BY THE CONTRACTOR IN THE EXCAVATION AND REMOVAL OF THE EXISTING PULL BOX SO AS NOT TO DAMAGE THE EXISTING CONDUIT(S). THE CONTRACTOR SHALL INSTALL (AT CONTRACT BID PRICES) ANY EXTENSION(S) TO THE EXISTING CONDUIT(S) IF NECESSARY, TO INSURE PROPER ORIENTATION IN THE NEW PULL BOX THE EXTENSION(S) SHALL BE COMPATIBLE WITH THE EXISTING CONDUIT SIZE AND TYPE.

PAYMENT FOR THIS ITEM WILL INCLUDE ALL LABOR, MATERIAL, AND EQUIPMENT REQUIRED TO PERFORM THE ITEM OF WORK AS DESCRIBED ABOVE. BASIS OF PAYMENT WILL BE AT THE CONTRACT BID PRICE PER EACH.

ITEM 625 – CONDUIT JACKED OR DRILLED UNDER PAVEMENT, AS PER PLAN

THIS ITEM SHALL BE PER CMS *625.14* WHEN JACKED. DIRECTIONAL BORED CONDUIT SHALL BE PER CMS *725.05* SCHEDULE 80.

PAYMENT WILL BE MADE AT CONTRACT UNIT PRICE PER LINEAR FOOT.

ITEM 625 - TRENCH, AS PER PLAN

THIS ITEM SHALL CONSIST OF EXCAVATING THE TRENCH TO A DEPTH OF THIRTY (30) INCHES, BACKFILLING, AND RESTORING THE AREA. IDENTIFYING TAPE SHALL BE USED TO IDENTIFY WHERE UNDERGROUND CABLE HAS BEEN INSTALLED.

THE IDENTIFYING TAPE SHALL BE AN INERT MATERIAL, APPROXIMATELY SIX (6) INCHES WIDE, COMPOSED OF POLYETHYLENE PLASTIC HIGHLY RESISTANT TO ALKALIS, ACID OR OTHER CHEMICAL COMPOUNDS LIKELY TO BE ENCOUNTERED IN SOILS. THE TAPE SHALL BE SUPPLIED IN CONTINUOUS ROLLS WITH THE IDENTIFYING LETTERING REPEATED CONTINUOUSLY THE FULL LENGTH OF THE TAPE THE TAPE SHALL BE ALLEN SYSTEMS, TERRA TAPE, TECTA TAPE OR EQUAL APPROVED BY THE ENGINEER.

THE TAPE SHALL BE BURIED IN THE ELECTRIC LINE TRENCH WITH ONE STRIP PLACED NO LESS THAN TWO (2) INCHES OR MORE THAN TWELVE (12) INCHES BELOW THE FINAL FINISHED GRADE OF THE TRENCH. THE TAPE SHALL BE PLACED WITH THE PRINTED SIDE UP AND SHALL BE ESSENTIALLY PARALLEL WITH THE FINAL GRADE.

PAYMENT WILL BE MADE AT CONTRACT UNIT PRICE PER LINEAR FOOT.

ITEM 625 - GROUND ROD, AS PER PLAN

THIS ITEM SHALL CONSIST OF FURNISHING AND DRIVING A ONE (1) INCH BY TEN (10) FOOT GROUND ROD BELOW GRADE ADJACENT TO THE CONTROLLER HOUSING. ALSO INCLUDED IS THE FURNISHING AND RUNNING OF A CONTINUOUS UNBROKEN SEVEN (7) STRAND # 4 COPPER WIRE FROM THE TOP OF THE GROUND ROD AND ATTACHING IT TO THE GROUND LUG IN THE DISCONNECT SWITCH PER NEC GROUND ROD RESISTANCE SHALL BE TEN (10) ohms MAXIMUM.

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

ITEM 630 - SIGNING, MISC.: SIGN DATA COLLECTION:

THIS ITEM OF WORK SHALL CONSIST OF COLLECTING AND RECORDING INFORMATION FOR ANY WORK INVOLVING PERMANENT SIGNING INCLUDING SIGN REMOVAL, SIGN RELOCATION OR NEW SIGN INSTALLATION ON THIS PROJECT. DISTRICT THREE HAS A SIGN INVENTORY SYSTEM IN OPERATION. WORK PERFORMED ON EXISTING SIGNS AND INSTALLATION OF NEW SIGNS WILL AFFECT THE ACCURACY OF THE INVENTORY. ALL EXISTING SIGNS HAVE A BAR CODE STICKER. THE BAR CODE STICKER NUMBER FOR ANY SIGNS REMOVED ON THE PROJECT SHALL BE RECORDED COMPLETELY AND ACCURATELY SO THEY CAN BE REMOVED FROM THE INVENTORY. THE BAR CODE STICKER NUMBER FOR ANY SIGNS THAT ARE NEW OR RELOCATED SHALL ALSO BE RECORDED COMPLETELY AND

ACCURATELY NEW SIGNS REQUIRE NEW BAR CODE STICKERS THAT WILL BE SUPPLIED TO THE CONTRACTOR AT THE PRECONSTRUCTION MEETING. ANY STICKERS NOT USED ARE TO BE RETURNED TO ODOT D03 TRAFFIC DEPARTMENT.

THE INFORMATION SHALL BE COLLECTED FROM ALL SIGNS REMOVED, RELOCATED OR INSTALLED ON THE PROJECT AND RECORDED COMPLETELY AND ACCURATELY BY A PERSON FAMILIAR WITH SIGNING TERMINOLOGY THE INFORMATION REQUIRED APPEARS ON A FORM, WHICH WILL BE SUPPLIED, TO THE CONTRACTOR AT THE PRECONSTRUCTION MEETING. ALL SECTIONS OF THE FORM SHALL BE COMPLETED FROM THE INFORMATION COLLECTED FOR EACH SIGN NOTE THAT THE STRAIGHT LINE MILEAGE LOG POINT OF THE SIGN REMOVAL, RELOCATION OR INSTALLATION IS TO BE PROVIDED. PROJECT STATIONING IS NOT ACCEPTABLE. AFTER THE FORM IS COMPLETED, IT SHALL BE RETURNED TO ODOT DISTRICT 3 TRAFFIC DEPARTMENT. A COPY OF THIS FORM IS AVAILABLE UPON REQUEST FOR THE CONTRACTOR TO REVIEW FOR BIDDING PURPOSES. FOR A COPY OF THIS FORM PLEASE CALL 1-419-207-7045 - ROADWAY SERVICES MANAGER.

PAYMENT FOR THE LABOR, MATERIALS AND EQUIPMENT NECESSARY TO PERFORM THE ABOVE WORK WHICH INCLUDES COLLECTION OF INFORMATION, COMPLETION OF THE FORMS SUPPLIED TO THE CONTRACTOR, INSTALLATION OF BAR CODE STICKERS, MEASURING OF THE SIGNS AND ANY OTHER WORK IN ORDER TO COMPLETE THE FORM SHALL BE INCLUDED IN THE COST OF ITEM 630 - SIGNING, MISC.: SIGN DATA COLLECTION PER EACH

ITEM 632 - INTERCONNECT CABLE, INTEGRAL MESSENGER WIRE TYPE, 6 PAIR, NO. 19 AWG, SOLID, REA (PE-38), AS PER PLAN

THIS CABLE SHALL BE AS PER SPECIFICATION 632 AND SHALL BE OF SOLID COPPER WIRE. TO AVOID UNNECESSARY SPLICES, THE LENGTH OF THE CABLE FROM AN AERIAL LOCATION THROUGH A POLE OR CONDUIT TO A PULL BOX OR CONTROLLER HOUSING SHALL BE THE SAME CABLE, MINUS THE INTEGRAL MESSENGER WIRE

THE INTEGRAL MESSENGER WIRE THAT SUPPORTS THE INTERCONNECT CABLE SHALL BE CUT AWAY AND REMOVED BEFORE THE CABLE IS PULLED THROUGH A POLE OR CONDUIT. EXTREME CARE SHOULD BE USED IN CUTTING AWAY THIS LENGTH OF INTEGRAL MESSENGER WIRE SO AS NOT TO DAMAGE OR NICK THE INSULATION OF THE INTERCONNECT CABLE. A SPECIAL SPLITTING TOOL FOR FIGURE "8" WIRE SHALL BE USED AND SUPPLIED BY THE CONTRACTOR TO DO THIS WORK ANY DAMAGE DONE TO THE INSULATION SHALL REQUIRE THE WHOLE LENGTH OF INTERCONNECT CABLE TO BE REPLACED.

ATTACHMENTS OF INTERCONNECT CABLE AT WOOD POLES SHALL BE MADE BY USE OF 3-BOLT CLAMPS. STRANDVICE MESSENGER CONNECTIONS SHALL NOT BE PERMITTED. THE CABLE HANGER SHALL BE MADE OF GALVANIZED STEEL AND INCLUDE A GALVANIZED STEEL J-HOOK AS SHOWN ON SCD TC-84 20. THE CABLE HANGER SUPPLIED SHALL BE AS PER ONE OF THE FOLLOWING MANUFACTURERE'S:

1) JOSLYN MFG. AND SUPPLY CO.
   2 N. RIVERSIDE PLAZA
   CHICAGO, IL 60606
   PHONE· 800-4-JOSLYN
   MODEL NO. J2235

2) A B. CHANCE CO.
   210 N. ALLEN ST
   CENTRALIA, MISSOURI
   PHONE: 573-682-8414
   MODEL NO 7902L FOR CORNERS AND ANGLES*
   MODEL NO 7903 FOR STRAIGHT RUNS*
   *SHALL ALSO INCLUDE A GALVANIZED STEEL J-HOOK

3) COOPER POWER SYSTEMS, INC.
   C/O LEIDY ENGINEERING SALES, INC.
   127 S. MAIN ST
   NORTH CANTON, OH 44720
   PHONE: 330-497-9585
   MODEL NO. DJ1H2

PAYMENT FOR REMOVING THIS LENGTH OF INTEGRAL MESSENGER WIRE SHALL BE INCIDENTAL TO THIS ITEM. PAYMENT WILL INCLUDE ALL NECESSARY LABOR, MISCELLANEOUS HARDWARE AND EQUIPMENT REQUIRED TO PROVIDE FOR THIS ITEM OF WORK IN ACCORDANCE WITH SPECIFICATION 632.

BASIS OF PAYMENT FOR ITEM 632, INTERCONNECT CABLE, INTEGRAL MESSENGER WIRE TYPE, 6 PAIR, NO. 19 AWG, SOLID, REA (PE-38), AS PER PLAN SHALL BE AT CONTRACT BID PER LINEAR FOOT.

ITEM 632 - POWER SERVICE, AS PER PLAN

POWER SERVICE SHALL BE AS PER CMS *632.24* AND STANDARD CONSTRUCTION DRAWING TC-83 10. POWER SERVICE SHALL ALSO INCLUDE THE FOLLOWING:

1) DISCONNECT SWITCH ENCLOSURES FURNISHED IN ACCORDANCE WITH ITEM 632, POWER SERVICE, AS PER PLAN, SHALL INCLUDE A PADLOCK EQUAL TO WILSON BOHANNON 660, WITH LOCK BODY AND SHACKLE OF BRONZE OR BRASS AND KEYING SHALL BE TO THE STATE MASTER. ALL CONDUIT AND FITTINGS SHALL BE GALVANIZED STEEL AS PER CMS *725.04*. CONDUIT RISERS SHALL BE 1-1/2" MINIMUM DIAMETER.

2) THE CONTRACTOR SHALL BE RESPONSIBLE FOR REQUESTING AND SCHEDULING ANY INSPECTIONS THE POWER COMPANY MAY REQUIRE FOR THE POWER SERVICE HOOKUP THE CONTRACTOR SHALL BE REPONSIBLE FOR CONTACTING THE POWER COMPANY FOR ELECTRICAL SERVICE CONNECTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR SPLICE POWER CABLES INTO THE POWER COMPANY'S CIRCUITS THE VOLTAGE SUPPLIED SHALL BE NOMINALLY 120 VOLTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND PAYING OF ALL FEES RELATING TO THE POWER SERVICE CONNECTION. THE CONTRACTOR SHALL PAY ALL POWER CHARGES UNTIL THE SIGNAL IS ACCEPTED BY THE MAINTAING ANGENCY.

3) THE POWER SERVICE SHALL INCLUDE A BYPASS STYLE METER BASE SOCKET. THE METER BASE SHALL BE 100 AMP MINIMUM AND INCLUDE A BYPASS SWITCH AND 1-1/2" HUB AT THE TOP OF THE METER BASE. THE METER BASE SOCKET SHALL BE AS MANUFACTURED BY LANDIS & GYR. MODEL # 40204-01, MILBANK U7487-RL-TG-KK, SQUARE D MODEL UHTRS101B, OR APPROVED EQUAL BY THE ENGINEER.

IN ADDITION TO THE REQUIREMENTS OF THIS NOTE, PAYMENT WILL INCLUDE ALL NECESSARY LABOR, MICELLANEOUS HARDWARE AND EQUIPMENT REQUIRED TO PROVIDE FOR THIS ITEM OF WORK IN ACCORDANCE WITH SPECIFICATION 632. PAYMENT WILL BE AT THE CONTRACT UNIT PRICE PER EACH.

POWER SUPPLY FOR TRAFFIC SIGNALS

ELECTRICAL SERVICE SHALL BE OBTAINED FROM OHIO EDISON CO. (FIRST ENERGY) AT THE LOCATIONS SHOWN IN THE PLAN POWER SUPPLIED SHALL BE 120 VOLTS. CONTACT PERSON AT OHIO EDISON IS:

MATTHEW J. STIKA
ASSOCIATE ENGINEER
PHONE: 440-326-3228
EMAIL: stikam@firstenergycorp.com

ITEM 632 – DISCONNECT SWITCH WITH ENCLOSURE, AS PER PLAN

DISCONNECT SWITCH WITH ENCLOSURE SHALL BE AS PER CMS *632.24* AND STANDARD CONSTRUCTION DRAWING TC-83 10. THE DISCONNECT SWITCH ENCLOSURE SHALL ALSO INCLUDE A PADLOCK EQUAL TO WILSON BOHANNON 660, WITH LOCK BODY AND SHACKLE OF BRONZE OR BRASS AND KEYING SHALL BE TO THE STATE MASTER. ALL CONDUIT AND FITTINGS SHALL BE GALVANIZED STEEL AS PER CMS *725.04*. CONDUIT RISERS SHALL BE 1-1/2" MINIMUM DIAMETER.

BASIS OF PAYMENT FOR ITEM 632, DISCONNECT SWITCH WITH ENCLOSURE, AS PER PLAN SHALL BE AT CONTRACT BID PER LINEAR FOOT AND INCLUDE ALL LABOR, MATERIAL, RISER, CONDUIT, AND FITTINGS DESCRIBED IN THIS NOTE.

TRAFFIC CONTROL SYSTEM GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 90 DAYS FOLLOWING COMPLETION OF THE 10-DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATION, THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATION, MAKE REPAIRS, AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY. EQUIPMENT, MATERIAL, AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR

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

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

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

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

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

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

2) THE UNIT SHALL BE SELF TUNING

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

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

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

ITEM 632 - STRAIN POLE FOUNDATION, AS PER PLAN

THIS ITEM CONSISTS OF INSTALLING A FOUNDATION, PLACED ACCORDING TO CMS *632.14*, AND SHALL INCLUDE REINFORCING STEEL, ANCHOR BOLTS, CONDUIT ELLS AS SHOWN IN THE PLAN, AND ONE (1) TWO (2) INCH CAPPED CONDUIT ELL FOR FUTURE USE. ANCHOR BOLTS SHALL BE FURNISHED BY THE STATE WHEN THE STRAIN POLE IS DESIGNATED AS "INSTALLATION ONLY".

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

ITEM 632 - SIGNALIZATION, MISC.; STRAIN POLE, TYPE TC-81.10, INSTALLATION ONLY, AS PER PLAN

THIS ITEM SHALL CONSIST OF ERECTING SIGNAL STRAIN POLES FURNISHED BY THE DEPARTMENT. THE POLES WITH ANCHOR BOLTS WILL BE AVAILABLE FOR PICKUP BY THE CONTRACTOR AT THE DISTRICT TRAFFIC STORAGE YARD LISTED BELOW DURING DEPARTMENT WORKING HOURS, MONDAY THRU FRIDAY, 7:30 AM TO 3:30 PM, EXCEPT HOLIDAYS.

ODOT, DISTRICT 3
906 N. CLARK ST.
ASHLAND, OHIO 44805
PHONE: 419-207-7184
CONTACT: DOUG HICKEY

THE STRAIN POLE SHALL BE OF SIZE DESIGNATED IN THE PLAN AND CAN BE OF ANY COMBINATION OF DESIGN NO. 1 THRU 10.

THE CONTRACTOR SHALL NOTIFY THE CONTACT PERSON AT LEAST THREE (3) WORKING DAYS PRIOR TO THE INTENDED PICKUP DATE. THE CONTRACTOR SHALL INDICATE THE PROJECT MATERIALS TO BE PICKED UP (QUANTITIES, SIZES OF POLES AND/OR ANCHOR BOLTS), AND THE TIME HE DESIRES TO ARRIVE AT THE STORAGE YARD

REASONABLE ADJUSTMENTS IN DESIRED PICKUP TIME OR DATE TO SUIT BOTH PARTIES MAY BE EXPECTED THE CONTRACTOR AND ODOT REPRESENTATIVE SHALL INSPECT THE POLES TO DETERMINE CONDITION.

THE CONTRACTOR SHALL, WITH HIS FORCES AND EQUIPMENT, LOAD THE POLES, ANCHOR BOLTS, AND MISCELLANEOUS HARDWARE AND TRANSPORT THESE ITEMS TO THE PROPOSED CONSTRUCTION SITE. THE CONTRACTOR SHALL EXECUTE AN ITEMIZED MATERIAL USE TICKET WHICH SHALL ALSO INDICATE ANY FLAWS EXISTING PRIOR TO LOADING (THE ODOT REPRESENTATIVE WILL DISTRIBUTE COPIES OF THE TICKET TO THE DISTRICT ROADWAY SERVICES MANAGER, DISTRICT AUDITOR, CONTRACTOR AND PROJECT ENGINEER.) UPON DELIVERY TO THE PROJECT, A RECEIVING TICKET (MR541) WILL BE FILLED OUT AND THE POLES WILL BE INSPECTED. ANY DAMAGE DISCOVERED, BEYOND THAT DESCRIBED ON THE MATERIAL USE TICKET PREPARED AT THE STORAGE YARD, WILL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AT NO COST TO THE PROJECT. A POLE THAT IS BENT, DENTED, OR OTHERWISE EXTENSIVELY DAMAGED SHALL BE REJECTED BY THE ENGINEER AND THE CONTRACTOR SHALL AT THE DIRECTION OF THE STATE EITHER FURNISH AND ERECT A REPLACEMENT POLE AS PART OF THIS PAY ITEM OR ERECT A REPLACEMENT POLE FURNISHED BY ODOT AND PAY THE COST OF THE ADDITIONAL POLE PLUS A HANDLING CHARGE.

EACH POLE PROVIDED WILL BE ACCORDING TO STANDARD DRAWING TC-81.10 MODIFIED TO INCLUDE THE FOLLOWING:

1) A HANDHOLE ALIGNED BETWEEN TWO ADJACENT ANCHOR BOLTS

2) A 3 INCH THREADED BLIND HALF COUPLING FOR CONTROL CABINET LOCATED 90° TO THE RIGHT OF THE HANDHOLD AND CENTERED 9 INCHES ABOVE THE BASE, WITH GALVANIZED PLUG.

3) A 2-INCH THREADED BLIND HALF COUPLING FOR WIRING CENTERED 12 INCHES FROM THE TOP AND OPPOSITE THE HANDHOLD WITH GALVANIZED PLUG.

4) ONE SPAN WIRE CLAMP.

5) A SET OF FOUR ANCHOR BOLTS, WITH TWO NUTS, ONE FLAT WASHER AND ONE LOCK WASHER FOR EACH BOLT.

THE CONTRACTOR SHALL PROVIDE ALL NECESSARY ATTACHMENTS OR CONNECTIONS TO THE POLES. ADDITIONAL WIRING HOLES IN THE POLE SHALL BE DRILLED, REAMED OR HOLE SAWED. FLAME CUTTING (OXYACETYLENE OR ELECTRICAL ARC) WILL NOT BE ACCEPTED. ALL CUT EDGES OR OTHER DEFECTS IN THE ZINC COATING SHALL BE CLEANED AND COVERED WITH TWO COATS OF ZINC-RICH REPAIR PAINT. BRACKETS AND APPURTENANCES SHALL BE SECURELY ATTACHED WITH STAINLESS STEEL BANDS OR STAINLESS STEEL SCREWS OF SUFFICIENT SIZE FOR THE INTENDED LOADING. THE CONTRACTOR SHALL FURNISH AND INSTALL, UNDER THIS ITEM, ALL CONDUIT, FITTINGS, WIRE ENTRANCES AND CONDUIT ELLS (WIRING AND GROUNDING) FOR FOUNDATIONS.

THE REQUIREMENTS OF CMS *630.06* FOR THREADED FASTENERS, ANCHOR BOLTS, ANCHOR BOLT NUTS, AND ANAEROBIC ADHESIVE SHALL APPLY.

THIS ITEM OF WORK SHALL BE MEASURED AS EACH COMPLETE SIGNAL POLE IN PLACE IN ESSENTIALLY A VERTICAL POSITION UNDER FULL PLAN LOADING. ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PICKUP, TRANSPORT, STORE, ERECT, ADJUST AND REPAIR THE SIGNAL SUPPORT AND ANCHOR BOLTS SHALL BE INCLUDED FOR PAYMENT IN THE BID ITEM.

ITEM 632 – COVERING OF VEHICULAR SIGNAL HEADS, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS *632.25*, EACH VEHICULAR SIGNAL HEADS SHALL BE COVERED IMMEDIATELY FOLLOWING INSTALLATION AND REMAIN COVERED UNTIL ENERGIZED. THE COVERING MATERIAL SHALL BE LARGE ENOUGH TO COVER THE FRONT AND BOTH SIDES OF THE VEHICULAR SIGNAL HEAD. THE COVERING MATERIAL SHALL BE A CANVAS OR SIMILAR DURABLE MATERIAL. USE OF POLYETHELENE TRASH BAGS AS A COVERING MATERIAL SHALL NOT BE PERMITTED.

ITEM 632 – VEHICULAR SIGNAL HEAD (BY TYPE), AS PER PLAN

VEHICULAR SIGNAL HEADS USED ON THIS PROJECT SHALL BE ALUMINUM WITH LED SIGNAL LAMPS. SIGNAL HEAD HANGERS SHALL BE TRI-STUD DESIGN WITH SERRATED RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING. THE HANGERS SHALL BE AS MANUFACTURED BY PELCO PRODUCTS, INC. (PART NO. SE-0523 AND SE-0531) OR APPROVED EQUAL. THREADED PIPE STYLE HANGERS SHALL NOT BE PERMITTED. THE SIGNAL HEAD HANGER SHALL INCLUDE A STAINLESS STEEL BUSHING IN THE PIN HOLE.

ADJUSTABLE SIGNAL HANGERS WITH TRI-STUD ATTACHMENT WILL BE PERMITTED AS NEEDED TO PROVIDE PROPER SIGNAL HEAD CLEARANCE. DROP PIPES WITH THREADED ENDS SHALL NOT BE USED ON THIS PROJECT.

TWO-WAY SIGNAL HEADS SHALL HAVE A RIGID LOWER SPREADER BAR AS MANUFACTURED BY PELCO PRODUCTS, INC. (PART NO. SE-5060) OR APPROVED EQUAL.

ALL VEHICULAR SIGNAL HEADS SHALL INCLUDE ABS BACKPLATES. THE BACKPLATE SHALL SURROUND THE TOP, BOTTOM, AND BOTH SIDES OF THE SIGNAL HEAD. THE BORDER WIDTH SHALL BE 5". THE BACKPLATES SHALL BE ATTACHED TO THE SIGNAL HEAD USING STAINLESS STEEL SCREWS

THE LAMPS SHALL BE LIGHT EMITTING DIODE (LED) EXTENDED VIEW TRAFFIC SIGNAL LAMP UNITS AND MEET THE LATEST REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 872.

PAYMENT FOR ITEM 632 - VEHICULAR SIGNAL HEAD (BY TYPE), AS PER PLAN, WILL BE MADE AT THE CONTRACT UNIT PRICE PER EACH.

ITEM 632 – MESSENGER WIRE, 7-STRAND, ¼" DIAMETER WITH ACCESSORIES, AS PER PLAN

THIS ITEM CONSISTS OF INSTALLING A ¼" MESSENGER WIRE FOR THE PURPOSE OF TETHERING THE VEHICULAR SIGNAL HEADS AND SPANWIRE MOUNTED SIGNS AS SHOWN IN THE TYPICAL SIGNAL ELEVATION DETAIL ON SHEET NO. 51. HARDWARE USED TO

CONNECT THE SIGNAL HEADS AND SIGNS TO THE TETHER WIRE SHALL BE BREAKAWAY DESIGN. SPREADER BARS USED AT THE BOTTOM OF 2-WAY SIGNAL HEADS SHALL BE PER PELCO PART NO. SE-5060, "TWO-WAY SINGLE STUD LOWER ARM ASSEMBLY" OR APPROVED EQUAL THE TETHER WIRE SHALL BE ATTACHED TO THE STRAIN POLE BY USE OF A POLE CLAMP OR BY WRAPPING AS PER SCD TC-84.20

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, TOOLS, EQUIPMENT, AND OTHER INCIDENTALS NECESSARY FOR THE INSTALLATION OF THE TETHER WIRE. PAYMENT FOR THIS ITEM WILL BE MADE AT THE CONTRACT UNIT PRICE PER LINEAR FOOT.

ITEM 632 - SIGNALIZATION, MISC.: STRAIN POLE EXTENSION WITH LUMINAIRE ARM, AS PER PLAN

THIS ITEM OF WORK SHALL INCLUDE THE FURNISHING AND INSTALLATION OF A 5' STEEL STRAIN POLE EXTENSION THAT WILL FIT OVER AND CONNECT TO THE TOP OF ITEM 632, STRAIN POLE, TYPE TC-81.10, DESIGN 10, 32', AS PER PLAN. ALSO INCLUDED IS A 30' LONG LUMINAIRE ARM THAT SHALL BE CONNECTED TO THE POLE EXTENSION BRACKET PLATES AS PER STANDARD CONSTRUCTION DRAWING HL-10.12. THE LUMINAIRE ARM SHALL BE A TRUSS HIGH RISE DESIGN PER STANDARD CONSTRUCTION DRAWING HL-10.11 AND HAVE A MINIMUM UPSWEEP OF 6.5'. INCLUDED SHALL BE ALL MATERIALS, HARDWARE, EQUIPMENT, LABOR, AND INCIDENTALS NECESSARY TO EXTEND THE DESIGN 10 STRAIN POLE AS DETAILED ON SHEET NO 52 IN THIS PLAN

PAYMENT SHALL BE AT THE UNIT PRICE BID PER EACH FOR ITEM 632 SIGNALIZATION, MISC.: STRAIN POLE EXTENSION WITH LUMINAIRE ARM, AS PER PLAN

ITEM 632 – STRAIN POLE, TYPE TC-81.10, DESIGN 10, AS PER PLAN

THIS ITEM OF WORK SHALL INCLUDE THE FURNISHING AND INSTALLATION OF A STEEL STRAIN POLE, 32', AS PER STANDARD CONSTRUCTION DRAWING TC-81.10 WITH A BLIND HALF COUPLING LOCATED 2 FEET FROM THE TOP OF THE POLE. OPPOSITE THE BLIND HALF COUPLING SHALL BE A 3"X5" HANDHOLE WITH COVER. THE POLE SHALL BE DESIGNED TO ACCEPT A 5' POLE EXTENSION AND LUMINAIRE ARM AS DESCRIBED IN THESE PLANS. THE POLE SHALL CONFORM TO THE REQUIREMENTS OF CMS *632.16* AND *730.02* THRU *730.08* AND DETAIL SHEET NO. 52 IN THIS PLAN.

PAYMENT SHALL BE AT THE UNIT PRICE BID PER EACH FOR ITEM 632, STRAIN POLE, DESIGN 10, AS PER PLAN.

ITEM 632 – SIGNALIZATION MISC.: VIDEO DETECTION SYSTEM CABINET HARDWARE

THIS ITEM CONSISTS OF INSTALLING VIDEO DETECTION HARDWARE INSIDE A TRAFFIC SIGNAL CONTROLLER CABINET. THE HARDWARE WILL BE USED AS PART OF THE VIDEO DETECTION SYSTEM IN LIEU OF A CONVENTIONAL VEHICLE DETECTOR LOOP INSTALLATION. THE VIDEO DETECTION SYSTEM CABINET HARDWARE SHALL INCLUDE AN INTERFACE PANEL, WIRING, AND ANY OTHER ADDITIONAL HARDWARE, EQUIPMENT, AND MATERIALS REQUIRED TO OPERATE THE SYSTEM. THE VIDEO DETECTION CAMERA SHALL BE PAID BY SEPARATE PAY ITEM. THE COMPLETE SYSTEM SHALL BE CAPABLE OF A MINIMUM OF 8 DETECTION ZONES PER INTERSECTION APPROACH AND BE ABLE TO OPERATE A MINIMUM OF 4 CAMERAS. THE SYSTEM SHALL HAVE A MINIMUM TWO-YEAR WARRANTY.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND OTHER INCIDENTALS NECESSARY FOR EACH VIDEO DETECTION SYSTEM CABINET HARDWARE, IN PLACE, ALL CONNECTIONS MADE AND WIRING COMPLETED, TESTED, AND ACCEPTED. THIS ITEM WILL BE PAID AT THE CONTRACT UNIT PRICE PER EACH.

ITEM 632 – SIGNALIZATION MISC.: VIDEO DETECTION CAMERA

THIS ITEM CONSISTS OF INSTALLING A VIDEO DETECTION CAMERA FOR USE IN A VIDEO DETECTION SYSTEM IN LIEU OF CONVENTIONAL VEHICLE DETECTOR LOOP INSTALLATION. THE CAMERA SHALL INCLUDE A ZOOM AND/OR WIDE ANGLE LENS AND BE CAPABLE OF COLOR IMAGING. THE CAMERA SHALL INCLUDE INSTALLATION OF CABLE OF SUFFICIENT LENGTH FOR CONNECTION BETWEEN THE CAMERA AND INTERFACE PANEL INSIDE THE CONTROLLER CABINET. THE CABINET HARDWARE INCLUDING INTERFACE PANEL SHALL BE PAID BY SEPARATE PAY ITEM. THE SYSTEM SHALL HAVE A MINIMUM TWO-YEAR WARRANTY.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, MOUNTING HARDWARE, AND OTHER INCIDENTALS NECESSARY FOR EACH VIDEO DETECTION CAMERA, IN PLACE, ALL CONNECTIONS MADE AND WIRING COMPLETED, TESTED, AND ACCEPTED. THIS ITEM WILL BE PAID AT THE CONTRACT UNIT PRICE PER EACH.

ITEM 633 CONTROLLER, MISC.; BATTERY BACKUP SYSTEM WITHOUT ENCLOSURE

THIS ITEM OF WORK SHALL INCLUDE THE FURNISHING AND INSTALLATION OF A BATTERY BACKUP SYSTEM TO POWER THE TRAFFIC SIGNAL SYSTEM DURING POWER OUTAGES. THE SYSTEM SHALL BE CAPABLE OF OPERATING THE TRAFFIC SIGNAL A MINIMUM OF 4 HOURS ON BATTERY POWER.

THE SYSTEM SHALL INCLUDE A MINIMUM 1100W UPS, 4 – 105 AHr BATTERIES, TRANSFER SWITCH, AND BATTERY HEATER MATS. THE COMPLETE SYSTEM SHALL FIT INSIDE THE PROPOSED GROUND MOUNTED CONTROLLER CABINET AND CABINET EXTENSION.

PAYMENT SHALL BE AT THE UNIT PRICE BID PER EACH FOR ITEM 633, CONTROLLER MISC.; BATTERY BACKUP SYSTEM WITHOUT ENCLOSURE.

ITEM 633 - CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS1, AS PER PLAN

THE CONTROLLER SHALL BE TS-2 TYPE 2 WITH DOWNWARD COMPATABILITY WITH NEMA TS-1 AND BE MANUFACTURED BY ECONOLITE. THE CONTROLLER AND CABINET SHALL HAVE THE CAPABILITY OF OPERATING WITH A MINIMUM OF 8 ACTUATED PHASES. THE OVERLAP PROGRAMMING SHALL BE BY USE OF AN INTERCHANGEABLE PLUG-IN PRINTED CIRCUIT BOARD ASSEMBLY AS DIRECTED IN TS-1-1989. IF THE CONTROLLER DOES NOT HAVE A SOCKET FOR THE INTERCHANGEABLE PLUG-IN PRINTED CIRCUIT BOARD ASSEMBLY, THE BOARD SHALL STILL BE PROVIDED SEPARATELY. THE CABINET SHALL BE WIRED SO THAT CONTROLLER PIN CONNECTIONS ASSOCIATED WITH A GIVEN PHASE NUMBER SHALL MATCH THE PHASE NUMBER ASSIGNED TO THE SPECIFIED TRAFFIC MOVEMENT AS SHOWN ON THE PLANS. THE CONTROLLER CABINET SHALL BE KEYED TO THE STATE MASTER.

CONTROLLER CABINET SIZE SHALL COMPLY TO THE REQUIREMENTS OF NEMA TS-1 SECTION 14 BUT SHALL BE A MINIMUM SIZE OF 57" HIGH X 30" WIDE X 17" DEEP, SM DESIGNATION. THE CONTROLLER CABINET DOOR HANDLE, DOOR HINGE AND HINGE BOLTS SHALL BE STAINLESS STEEL. THE CABINET SHALL INCLUDE A GENERATOR POWER PANEL AS SHOWN IN THE PLAN INSERT SHEET NO 53. GROUND MOUNTED CONTROLLER CABINETS SHALL INCLUDE A MINIMU 12" HIGH CABINET EXTENSION.

THE CONTROLLER SHALL HAVE INTERNAL TIME BASE COORDINATION AND PROVIDE DATA UPLOAD AND DOWNLOAD CAPABILITY. ALL CONTROLLER MEMORIES SHALL BE INVOLITILE AND SHALL NOT REQUIRE BATTERIES OR OTHER SOURCES OF ENERGY TO RETIAN DATA WHILE POWER IS REMOVED FROM THE CONTROLLER.

PRINTED BOARD BACK PANELS OF THE CONTROLLER CABINET SHALL NOT BE ACCEPTABLE. SOLDERED CONNECTIONS WILL BE PERMITTED FOR WIRING ON THE BACKSIDE OF THE BACK PANEL THE CONTROLLER CABINET SHALL HAVE DETECTOR CALL BUTTONS FOR ALL PHASES INCLUDING PED MOVEMENTS, CABINET LIGHT WITH SWITCH AND AUTO FLASH SWITCH ON THE INSIDE CABINET DOOR

THE CONFLICT MONITOR SHALL BE CAPABLE OF 12-CHANNEL OPERATION AND EXTENDED MONITORING (IN ACCORDANCE WITH CMS *733.03 SECTION A "TYPE TS-1" PART 2C)* IN ADDITION TO NEMA REQUIREMENTS. THE MONITOR SHALL HAVE THE CAPABILITY OF MONITORING EACH LOAD SWITCH SEPARATELY, AS SHOWN IN THE LOAD SWITCH HOOKUP DIAGRAM IN THE PLANS THE DESIGN OF THE MONITOR SHALL USE MICROPROCESSOR ARCHITECTURE AND LIQUID CRYSTAL DISPLAYS. THE MONITOR SHALL INDICATE THE EXACT LOAD SWITCH CHANNEL IN WHICH THE FAILURE OCCURRED. THE CONFLICT MONITOR SHALL HAVE AN EVENT LOGGING MEMORY AND SHALL BE CAPABLE OF UPLOADING REPORTS OF EVENTS OR USER SETTINGS VIA CLOSED LOOP HOST CONTROLLER. A MINIMUM OF 9 EVENTS SHALL BE LOGGED. EXAMPLE OF EVENTS INCLUDE· POWER OUTAGES, CONFLICTS, CONTROLLER VOLTAGE MONITOR, ETC... EVENTS SHALL BE DISPLAYED ON THE CONFLICT MONITOR'S LIQUID CRYTAL DISPLAY WHEN INTERROGATED

THE LOAD SWITCHES SHALL PROVIDE INPUT AND OUTPUT INDICATIONS.

PAYMENT FOR THIS ITEM 633, CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS1, AS PER PLAN, WILL BE AT THE CONTRACT PRICE BID PER EACH COMPLETE AND IN PLACE INCLUDING ALL CONNECTIONS TESTED AND ACCEPTED.

ITEM 633 – CABINET FOUNDATION, AS PER PLAN

CONTROLLER CABINET FOUNDATIONS SHALL BE PER CMS *633.10* AND SCD TC-83.20 TYPE 2 FOUNDATION.

BASIS OF PAYMENT WILL BE AT CONTRACT BID PRICE PER EACH

ITEM 633 – CONTROLLER WORKPAD, AS PER PLAN

CONTROLLER WORKPADS SHALL BE PER CMS *633.11*. WORKPADS FOR GROUND MOUNTED CONTROLLERS SHALL BE PER SCD TC-83.20 TYPE 2 FOUNDATION. WORKPADS FOR POLE MOUNTED CONTROLLERS AND POWER SERVICE SHALL BE PER SCD TC-83.10 NOTE NO. 10.

BASIS OF PAYMENT WILL BE AT CONTRACT BID PRICE PER EACH.

MAINTAINING TRAFFIC FOR SIGNAL/FLASHER INSTALLATIONS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE NEW TRAFFIC SIGNALS FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

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

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

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

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

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

WHERE THE CONTRACTOR HAS FAILED TO OR CANNOT RESPOND TO AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION AT THE LOCATIONS INDICATED AS HIS RESPONSIBILITY IN THE PLANS WITHIN PERIODS AS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF CMS *105.15*. ANY SUBSEQUENT BILLINGS TO THE STATE OR POLICE SERVICES AND MAINTENANCE SERVICES BY STATE FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE TO THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF CMS *105.15*.

WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED 6 HOURS AND SHALL NOT INCLUDE THE HOURS OF 7 AM TO 9 AM AND 3 PM TO 6 PM OR OTHER HOURS AS DIRECTED BY THE ENGINEER. ANY SIGNALIZED INTERSECTION, WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBE ABOVE, SHALL BE PROTECTED BY OFF DUTY LAW ENFORCEMENT OFFICERS.

ANY INSTALLED VEHICULAR TRAFFIC SIGNAL HEAD WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN THE GENERAL NOTE IN THIS PLAN.

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

MAINTAINING TRAFFIC

THE INTENT IS TO PERFORM THE REQUIRED WORK WITH THE LEAST INCONVENIENCE TO, AND THE MAXIMUM SAFETY TO, THE CONTRACTOR AND THE TRAVELING PUBLIC.

PROCEDURES FOR MAINTAINING TRAFFIC SHALL BE IN COMPLIANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND STANDARD CONSTRUCTION DRAWINGS SHOWN ON THE TITLE SHEET OF THIS PLAN. WORK ON OR BEYOND THE SHOULDER SHALL BE IN ACCORDANCE WITH FIGURES 6H-1, 6H-3, AND 6H-4 OF THE OMUTCD. FLAGGING PROCEDURES SHALL BE IN ACCORDANCE WITH FIGUIRE 6E-1 OF THE OMUTCD.

PROCEDURES FOR MAINTAINING TRAFFIC FOR NEW SIGNAL ACTIVATIONS SHALL BE PERFORMED AS SHOWN ON STANDARD DRAWING MT-120.00 EXCEPT FOR THE FOLLOWING:

1) THE CONTRACTOR SHALL INSTALL FLAGS ON THE SIDE ROAD "SIGNAL AHEAD" WARNING SIGN(S).

2) STOP SIGNS SHALL BE REMOVED IMMEDIATELY PRIOR TO ACTIVATING THE NEW SIGNAL TO STOP-AND-GO OPERATION. FLAGGERS SHALL CONTROL TRAFFIC DURING THE STOP SIGN REMOVAL. ALL TRAFFIC SHALL BE STOPPED BY FLAGGERS WHEN THE NEW SIGNAL IS ACTIVATED TO STOP-AND-GO. TRAFFIC SHALL REMAIN STOPPED UNTIL THE SIGNAL HAS COMPLETED ONE FULL CYCLE AND DETERMINATION HAS BEEN MADE BY THE ENGINEER THAT THE SIGNAL OPERATION IS SATISFACTORY. AT THIS POINT FLAGGERS CAN OPEN THE INTERSECTION TO TRAFFIC.

THE CONTRACTOR SHALL MAINTAIN TRAFFIC AT ALL TIMES IN ACCORDANCE WITH THE REQUIREMENTS OF ITEM 614. TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, EXCEPT AS NOTED HEREIN.

THE CONTRACTOR WILL BE REQUIRED TO PROVIDE, ERECT, AND MAINTAIN IN PROPER POSITION, CLEAN, LEGIBLE DEVICES IN GOOD WORKING CONDITION AND SUBSEQUENTLY REMOVE ALL LIGHTS, SIGNS, BARRICADES, CONES, AND ALL OTHER TRAFFIC CONTROL DEVICES NECESSARY FOR THE MAINTENANCE OF TRAFFIC.

PLACEMENT OF ALL TRAFFIC CONTROL DEVICES SHALL START AND PROCEED IN THE DIRECTION OF THE FLOW OF TRAFFIC. REMOVAL OF TRAFFIC CONTROL DEVICES SHALL START AT THE END OF THE CONSTRUCTION AREA AND PROCEED TOWARD THE ONCOMING TRAFFIC. THE CONTRACTOR SHALL PROVIDE FOR INSTALLATION OF ALL NECESSARY TRAFFIC CONTROL DEVICES BEFORE BEGINNING WORK AND THEIR IMMEDIATE REMOVAL AS SOON AS WORK IS SUSPENDED OR COMPLETED. ADVANCE WARNING SIGNS MAY BE COVERED FROM VIEW OF TRAFFIC WHEN THEY ARE NOT APPLICABLE, AS DETERMINED BY THE ENGINEER.

LANE CLOSURES (TAPERS AND TRANSITIONS) MAY BE ACCOMPLISHED BY THE USE OF TRAFFIC CONES, WITH A 28" MINIMUM HEIGHT. WITH THE APPROVAL OF THE ENGINEER, CONES MAY BE USED FOR SHORT TIME CLOSURES. THE CONES SHALL BE SPACED CENTER TO CENTER FROM THE BEGINNING OF THE FIRST LANE CLOSURE THROUGH THE WORK AREA(S) AS PER THE TABLE ON THE STANDARD DRAWINGS. REFLECTORIZED BARRICADES OR DRUMS MAY BE USED IN LIEU OF TRAFFIC CONES, IF DESIRED.

LANE CLOSURES (TAPERS AND TRANSITIONS) SHALL BE ACCOMPLISHED BY THE USE OF REFLECTORIZED BARRICADES OR DRUMS IN AREAS WHERE AN OVERNIGHT CLOSURE(S) IS REQUIRED. THE DEVICES SHALL BE SPACED CENTER TO CENTER FROM THE BEGINNING OF THE FIRST LANE CLOSURE THROUGH THE WORK AREA(S) AS PER THE STANDARD DRAWINGS.

AN INTERSECTION MAY BE CLOSED WITH FLAGGERS FOR A SHORT DURATION (MAXIMUM OF 10 MINUTES EACH) TO ERECT THE SPAN WIRES. TRAFFIC MAY NOT BE STOPPED AT AN INTERSECTION OR FOR A LANE OR BERM CLOSURE BETWEEN THE HOURS OF 7:00 AM TO 9:00 AM AND 3:00 PM TO 6:00 PM MONDAY THROUGH FRIDAY OR OTHER HOURS AS DIRECTED BY ENGINEER TRAFFIC SHALL NOT BE STOPPED ON ANY ROAD FROM 12:00 NOON THE DAY PRECEDING A HOLIDAY THROUGH 6:00 AM THE DAY AFTER. NO TRAFFIC CLOSURES WILL OCCUR ON SATURDAY OR SUNDAY WITHOUT THE APPROVAL OF THE ENGINEER.

ON TWO-LANE HIGHWAYS, ONE-LANE CLOSURES SHALL BE OPERATED BY USE OF FLAGGERS AND WILL BE REQUIRED WHENEVER TRAFFIC IS RESTRICTED TO LESS THAN THE NORMAL WIDTH OF THE TWO-LANE PAVEMENT AS PER STANDARD CONSTRUCTION DRAWING MT-97.10.

ON THREE-LANE HIGHWAYS, LANE CLOSURES SHALL BE OPERATED AS PER STANDARD DRAWINGS MT-95.60 AND MT-95.61.

A FLASHING ARROW PANEL SHALL BE REQUIRED WHENEVER ANY WORK IS BEING DONE UPON ANY TRAVELED PORTION OF A MULTI-LANE HIGHWAY. SEE STANDARD CONSTRUCTION DRAWING MT-35.10 FOR FLASHING ARROW PANEL SIZE.

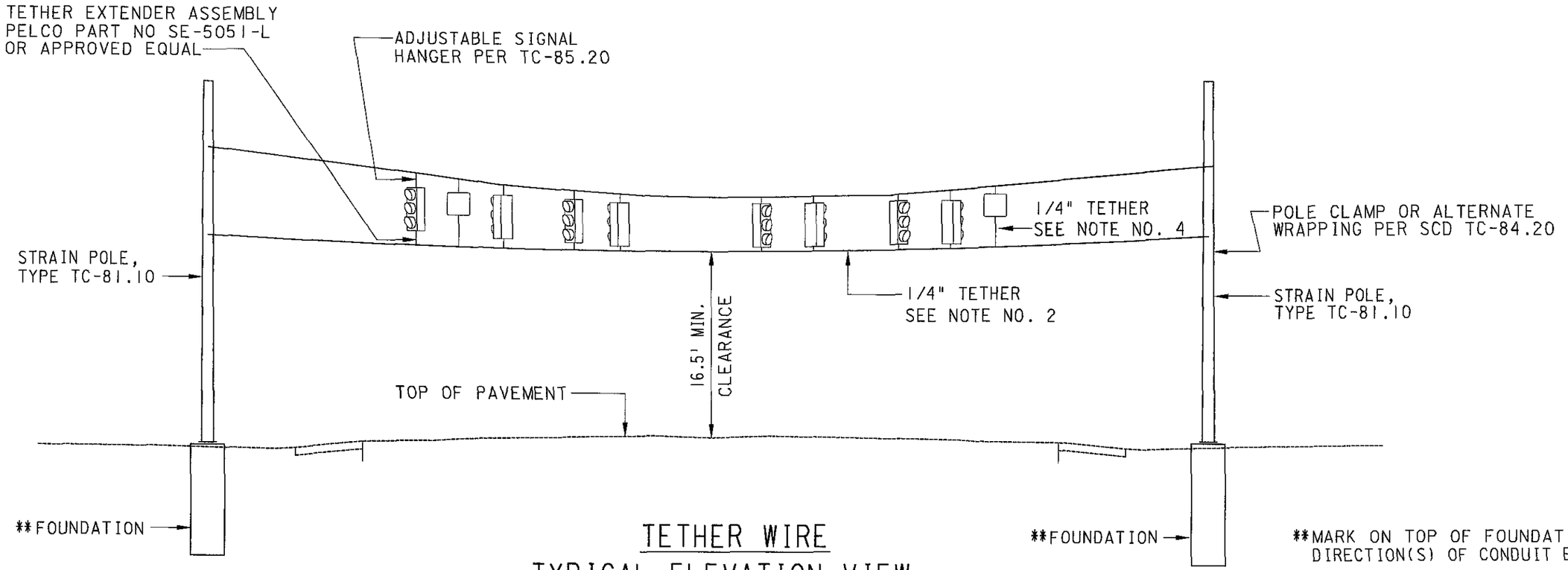
IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AS SET FORTH IN THESE PLANS OR WITH PROVISIONS OF THE OMUTCD, AND SUCH FAILURE RESULTS IN A CONDITION AT THE WORK SITE WHICH IS UNSAFE FOR TRAFFIC, THE ENGINEER SHALL SUSPEND WORK UNTIL THE CONTRACTOR COMPLIES WITH THE NECESSARY REQUIREMENTS.

PAYMENT FOR ALL OF THE ABOVE INCLUDING PROVIDING, ERECTING, MAINTAINING, AND REMOVING, SIGNS BARRICADES, DRUMS CONES AND ALL OTHER TRAFFIC CONTROL DEVICES, SHALL BE INCLUDED IN THE LUMP SUM BID FOR THIS ITEM.

CALC BY
CHK'D BY RJR 10/02

TRAFFIC SIGNAL GENERAL NOTES

MED-301-0.00
LOR-301-0.00



**MARK ON TOP OF FOUNDATION
DIRECTION(S) OF CONDUIT ELLS

TETHER WIRE
TYPICAL ELEVATION VIEW

NOTES:

1) SEE NOTE ON SHEET NO. 48 FOR TETHER WIRE (1/4" MESSENGER WIRE)

2) TETHER WIRE SHALL BE INSTALLED WITH SLIGHT SAG (MAXIMUM 1.5%). DO NOT ABRUPTLY RAISE OR LOWER TETHER AT ATTACHMENT POINTS. USE TETHER EXTENDERS TO FILL GAPS BETWEEN TETHER WIRE AND BOTTOM OF SIGNAL HEADS. SEE NOTE NO. 3 BELOW.

3) SIGNAL HEAD ATTACHMENT TO TETHER WIRE SHALL BE BREAK-A-WAY DESIGN. USE PELCO SINGLE-STUD BREAK-A-WAY TETHER ASSEMBLY PART NO. SE-5058, ADJUSTABLE BREAK-A-WAY TETHER ASSEMBLY PART NO. SE-5017-L, OR APPROVED EQUAL.

4) SPANWIRE MOUNTED SIGNS SHALL BE TETHERED BY SHORT LENGTH OF 1/4" MESSENGER THRU EYE BOLT ATTACHED TO BOTTOM OF SIGN.

REVISED: 7-6-05

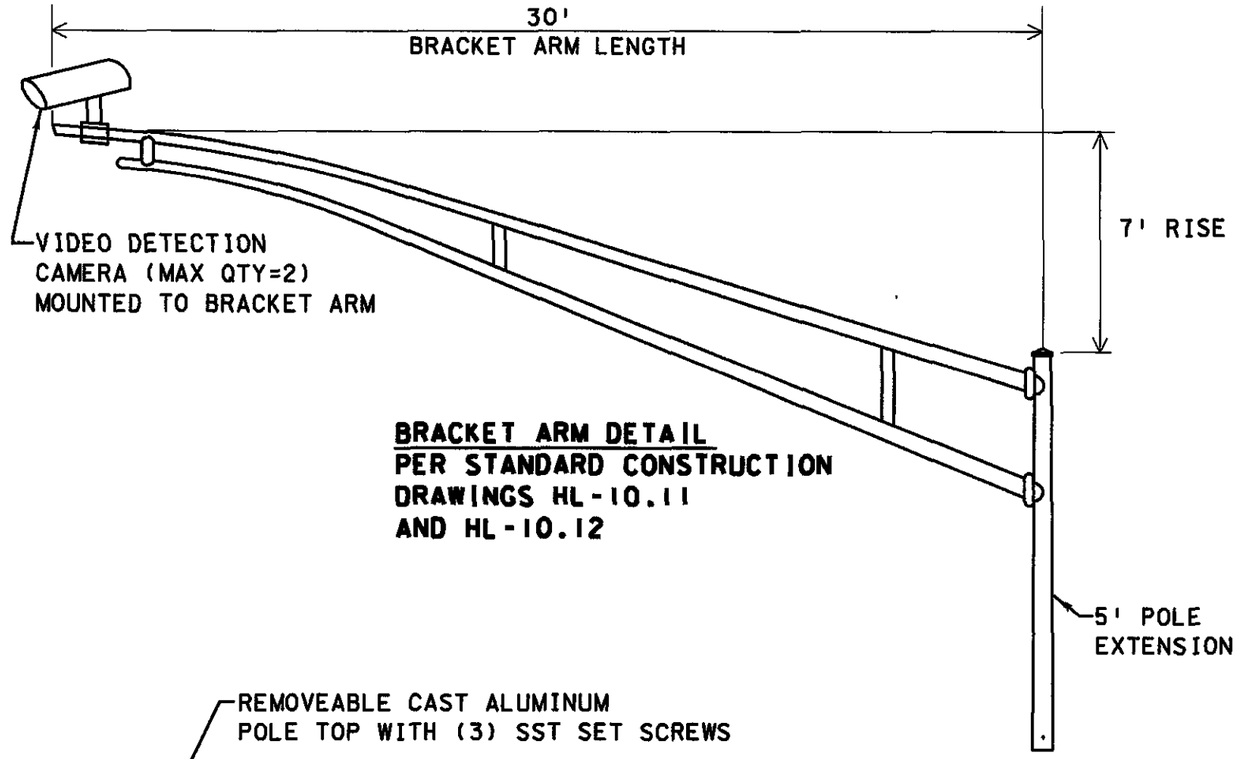
TETHER WIRE DETAIL

MED-301-0.00
LOR-301-0.00

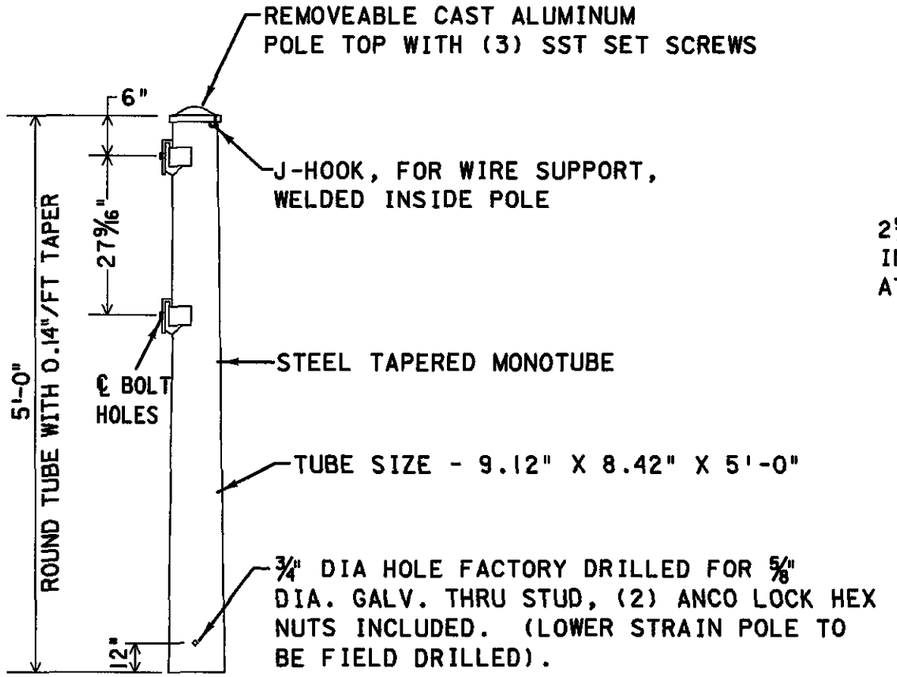
51
114

TETHER DETAIL.DGN

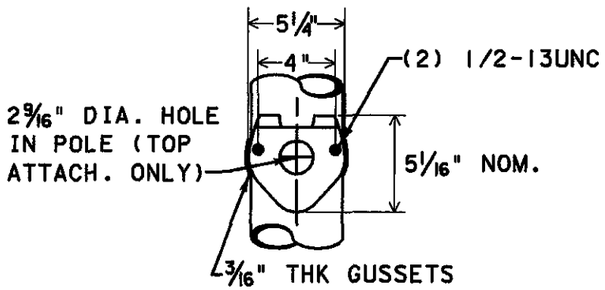
DRAWING NOT TO SCALE

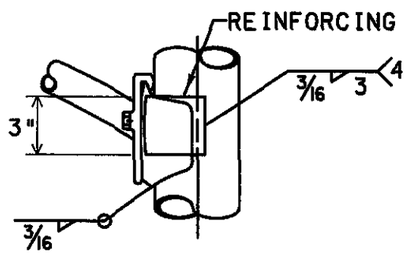


BRACKET ARM DETAIL
PER STANDARD CONSTRUCTION DRAWINGS HL-10.11 AND HL-10.12

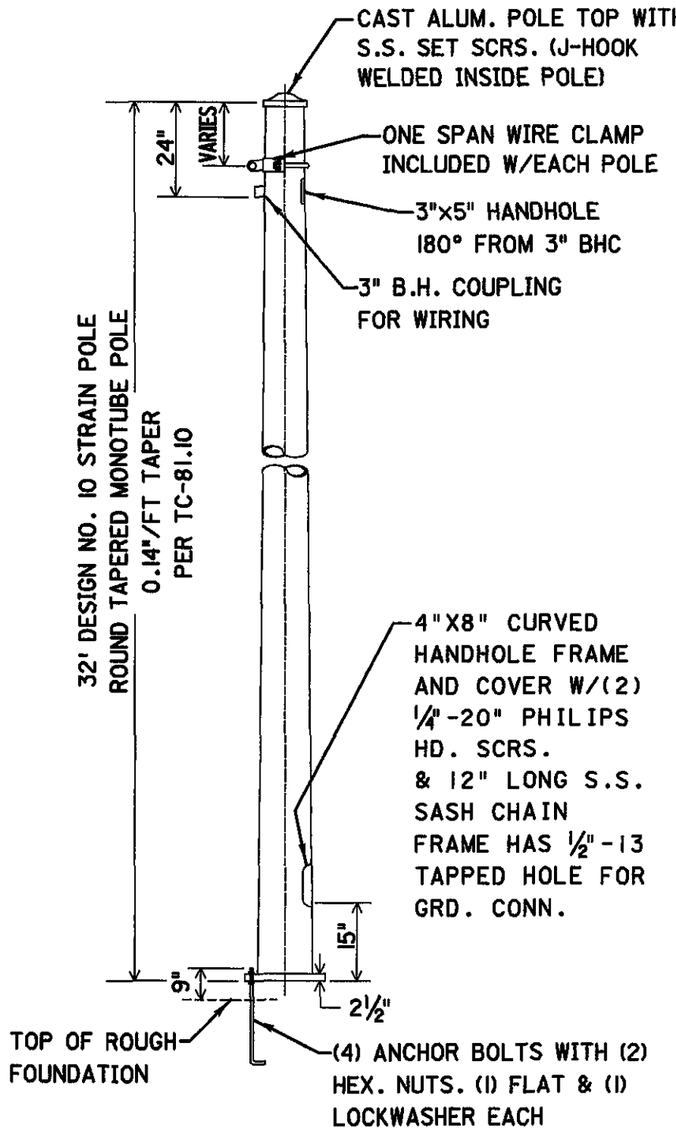


POLE EXTENSION DETAIL
FOR DESIGN NO. 10
STRAIN POLE





TWO BOLT ARM ATTACHMENT
POLE PLATE



STRAIN POLE DETAIL
TC-81.10, DESIGN 10, 32', AS PER PLAN

STRAIN POLE EXTENSION DETAILS WITH LUMINAIRE ARM

MED-301-0.00
LOR-301-0.00

52
14

DESIGN FILE: $$$$$.DGNFILESPECIFICATIONS$$$$$
WORKSTATION: #TERMINAL# DATE: #####DATE#####

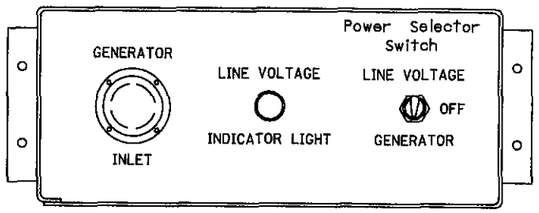
MATERIAL SPECIFICATIONS FOR GENERATOR POWER PANEL EQUIPMENT

GENERATOR INLET --- The inlet shall be 30 amp, 125/250V, locking, four (4) wire grounding and meet the NEMA configuration number L14-30-P 30A 125/250V specification. The inlet shall be a Hubbell catalog #2715.

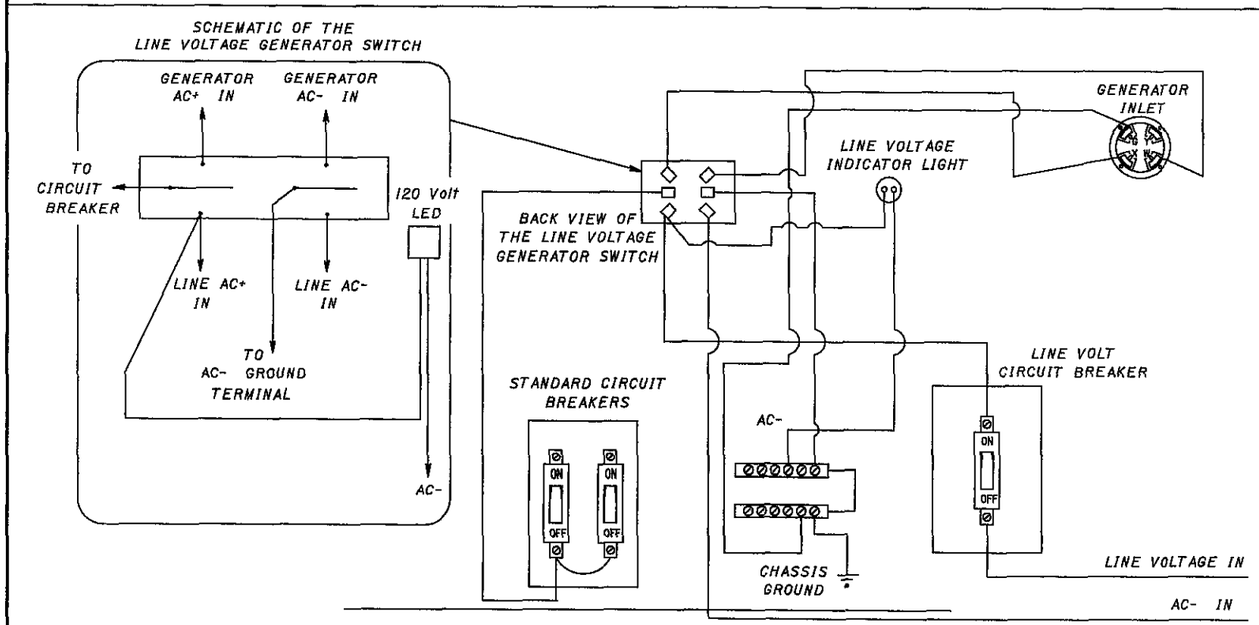
LINE VOLTAGE GENERATOR SWITCH --- The switch shall be 30 amp, 125/250V AC, two (2) pole, three (3) position (On, Off, On). The switch shall be a Hubbell catalog #1388.

LINE VOLTAGE INDICATOR LIGHT --- The indicator light shall be a 125V AC light emitting diode with a red lens.

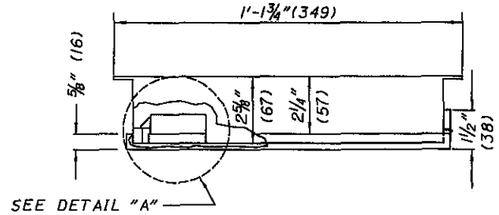
LINE VOLTAGE CIRCUIT BREAKER --- The circuit breaker shall be single pole single throw and a minimum of 30 amps. The amperage shall be increased to accomodate greater loads, if necessary. The gauge of the power cable shall be of proper size per the N.E.C.



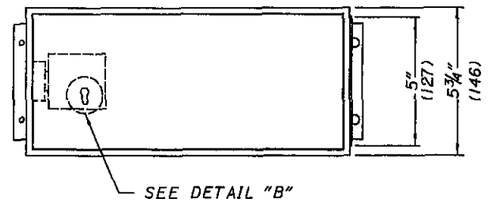
FRONT VIEW OF GENERATOR POWER PANEL



ELECTRICAL HOOKUP DETAIL FOR THE GENERATOR POWER PANEL



TOP VIEW

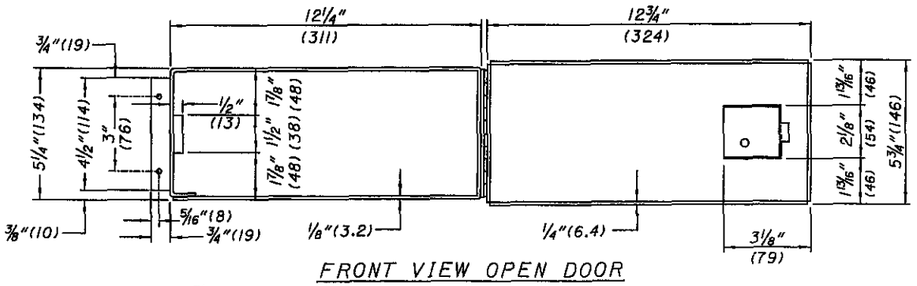


FRONT VIEW CLOSED DOOR

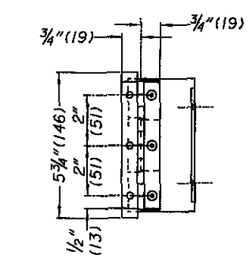
GENERATOR POWER PANEL ENCLOSURE

NOTES:

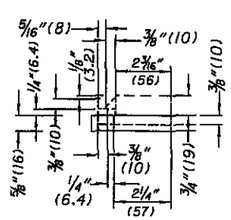
1. The enclosure shall be constructed Of ⅛"(3.2) thick aluminum.
2. The lock shall be the standard police door type, keyed with the standard flasher door skeleton key.
3. The door shall be sealed with a foam rubber gasket to prevent moisture from entering the enclosure.
4. The enclosure shall be mounted onto the outside of the controller cabinet with non-accessible bolts and sealed with a high quality silicon caulk at all surfaces touching the cabinet.
5. The hinge shall be of stainless steel or equivalent corrosive-resistant material.
6. All metric dimensions in parentheses are in millimeters unless otherwise noted.



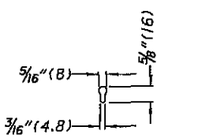
FRONT VIEW OPEN DOOR



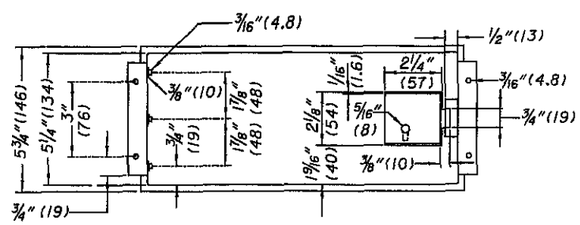
RIGHT SIDE VIEW CLOSED DOOR



DETAIL "A"



DETAIL "B"



BACK VIEW CLOSED DOOR

12-04-00

GENERATOR POWER PANEL

MED-301-0.00
LOR-301-0.00

TRAFFIC SIGNAL QUANTITIES

ITEM	QTY	UNIT	DESCRIPTION
603	100	FT	4" CONDUIT, TYPE E
625	610	FT	CONDUIT, 1-1/2", 725 05
625	385	FT	CONDUIT, 2", 725.05
625	105	FT	CONDUIT, 3", 725 05
625	197	FT	CONDUIT JACKED OR DRILLED UNDER PAVEMENT, 2", AS PER PLAN
625	50	FT	CONDUIT JACKED OR DRILLED UNDER PAVEMENT, 3", AS PER PLAN
625	1100	FT	TRENCH, AS PER PLAN
625	12	EACH	PULL BOX, 725.08, 18", AS PER PLAN
625	1	EACH	PULL BOX, 725 08, 24", AS PER PLAN
625	3	EACH	GROUND ROD, AS PER PLAN
632	4	EACH	VEHICULAR SIGNAL HEAD, 3-SECTION, 12" LENS, 1-WAY, AS PER PLAN
632	1	EACH	VEHICULAR SIGNAL HEAD, 3-SECTION, 12" LENS, 2-WAY, AS PER PLAN
632	5	EACH	COVERING OF VEHICULAR SIGNAL HEAD, AS PER PLAN
632	4	EACH	DETECTOR LOOP
632	2	EACH	DETECTOR LOOP, AS PER PLAN (L-1 & L-2)
632	6	EACH	LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN
632	1	EACH	DISCONNECT SWITCH WITH ENCLOSURE, AS PER PLAN
632	132	FT	MESSENGER WIRE, 7-STRAND, 1/4" DIA W/ ACC , AS PER PLAN
632	132	FT	MESSENGER WIRE, 7-STRAND, 3/8" DIA W/ ACC
632	302	FT	SIGNAL CABLE, 5/C, #14 AWG
632	121	FT	SIGNAL CABLE, 7/C, #14 AWG
632	514	FT	INTERCONNECT CABLE, INTEG MESS WIRE TYPE, 6 PR, #19 AWG, SOLID, REA (PE-38), APP
632	2	EACH	STRAIN POLE FOUNDATION, AS PER PLAN
632	1367	FT	LOOP DETECTOR LEAD-IN CABLE, 2/C, NO. 14 AWG
632	41	FT	POWER CABLE, 2/C, NO. 6 AWG
632	35	FT	POWER CABLE, 3/C, NO 6 AWG
632	1029	FT	SERVICE CABLE, 3/C, NO. 6 AWG
632	1	EACH	POWER SERVICE, AS PER PLAN
632	1	EACH	CONDUIT RISER, 2" DIAMETER
632	1	EACH	STRAIN POLE, TYPE TC-81 10, DESIGN 10, AS PER PLAN
632	1	EACH	WOOD POLE, CLASS 5, 35'
632	1	EACH	DOWN GUY
632	1	EACH	SIGNALIZATION, MISC , STRAIN POLE EXTENSION WITH 30' LUMINAIRE ARM
632	1	EACH	SIGNALIZATION, MISC., STRAIN POLE, TYPE TC-81 10, INSTALLATION ONLY
632	1	EACH	SIGNALIZATION, MISC , VIDEO DETECTION CAMERA
632	1	EACH	SIGNALIZATION, MISC , VIDEO DETECTION SYSTEM CABINET HARDWARE
633	1	EACH	CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS-1, AS PER PLAN
633	1	EACH	CONTROLLER, MASTER, TRAFFIC RESPONSIVE
633	1	EACH	CABINET FOUNDATION, AS PER PLAN
633	3	EACH	CONTROLLER WORKPAD, AS PER PLAN

LOOP DETECTOR CHART

LOOP	SIZE (FEET)	TURNS	MODE	DELAY SEC.	UNIT	PHASE	COMMENTS
L-1	6X8	4	PULSE		1	2	
L-2	6X12	4	PULSE		2	2	
L-3	6X20	4	PRESENCE		3	6	
L-4	10X35	2-4-2	PRESENCE	10*	4	4	
L-5	6X20	3	PRESENCE	10*	5	4	
L-6	6X10	4	PULSE	3*	6	4	
DZ-1	8X8	NA	PULSE		NA	6	DETECTION FIELD AT 254' FROM STOP
DZ-2	8X8	NA	PULSE		NA	6	DETECTION FIELD AT 254' FROM STOP
DZ-3	8X8	NA	PULSE		NA	6	DETECTION FIELD AT 384' FROM STOP

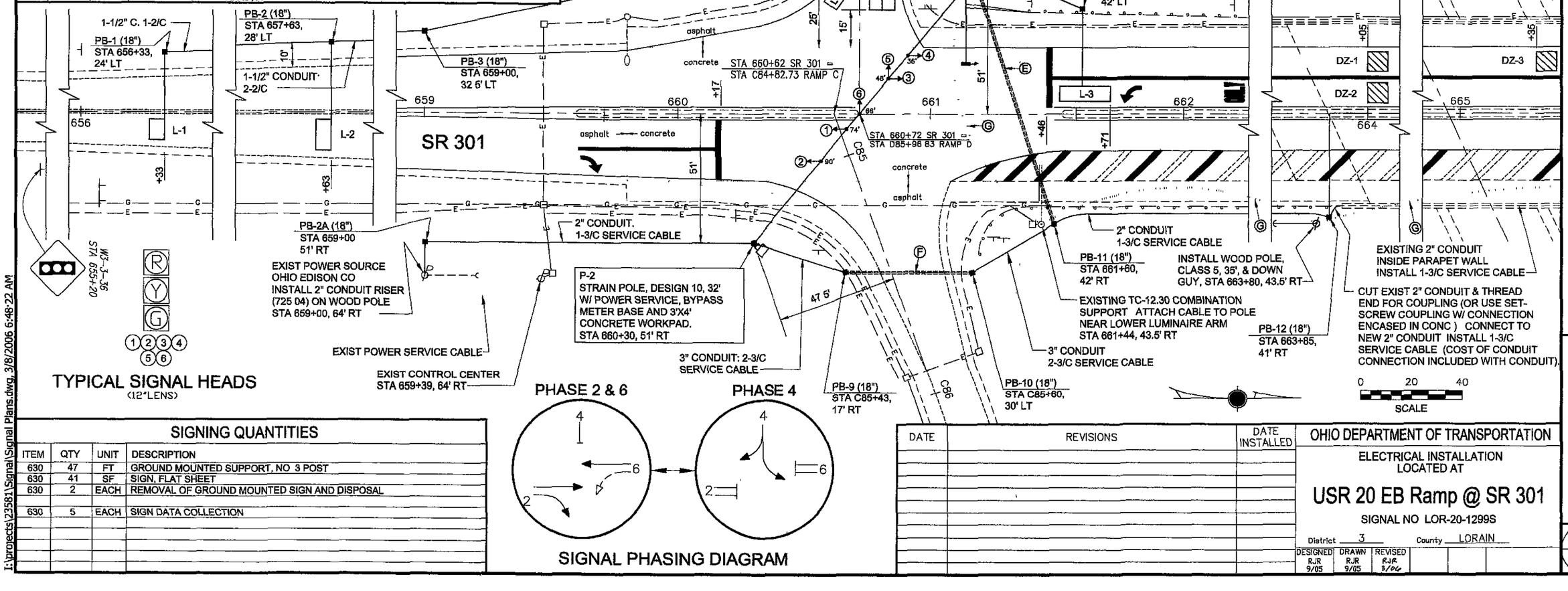
* INHIBIT DELAY DURING ASSOC. PHASE GREEN

NOTES

Ⓐ 3" CONDUIT 2-5/C & 1-7/C SIGNAL CABLE
2" CONDUIT 1-2/C POWER & 1-3/C SERVICE
Ⓑ 3" CONDUIT 2-5/C & 1-7/C SIGNAL CABLE
1-1/2" CONDUIT 1-2/C POWER
Ⓒ 3" CONDUIT 5-2/C LEAD-IN CABLE
Ⓓ 1-1/2" CONDUIT 1-2/C LEAD-IN CABLE
Ⓔ 2" CONDUIT JACKED OR DRILLED.
1-3/C SERVICE CABLE
Ⓕ 3" CONDUIT JACKED OR DRILLED.
2-3/C SERVICE CABLE
Ⓖ INSTALL AERIAL INTERCONNECT CABLE
6-PAIR, NO. 19 AWG (5% MIN SAG)

FLASHER OPERATIONS

RED TO: USR 20 EB RAMP
YELLOW TO: SR 301
SIGNAL NO.: LOR-020-1299S
INSTALLATION DATE: ?
FILE NUMBER: 4480



TYPICAL SIGNAL HEADS
(12"LENS)

SIGNING QUANTITIES

ITEM	QTY	UNIT	DESCRIPTION
630	47	FT	GROUND MOUNTED SUPPORT, NO 3 POST
630	41	SF	SIGN, FLAT SHEET
630	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL
630	5	EACH	SIGN DATA COLLECTION

SIGNAL PHASING DIAGRAM

DATE	REVISIONS	DATE INSTALLED

OHIO DEPARTMENT OF TRANSPORTATION
ELECTRICAL INSTALLATION
LOCATED AT
USR 20 EB Ramp @ SR 301
SIGNAL NO LOR-20-1299S
District 3 County LORAIN

DESIGNED	DRAWN	REVISED
RJR 9/05	RJR 9/05	RJR 3/06

CALC BY RJR 11/05
CHKD. BY EAH 1/06

TRAFFIC SIGNAL PLAN USR 20 EB RAMP @ SR 301

MED-301-0.00
LOR-301-0.00

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114

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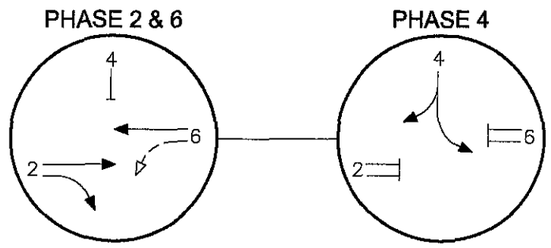
SIGNAL TIMING CHART

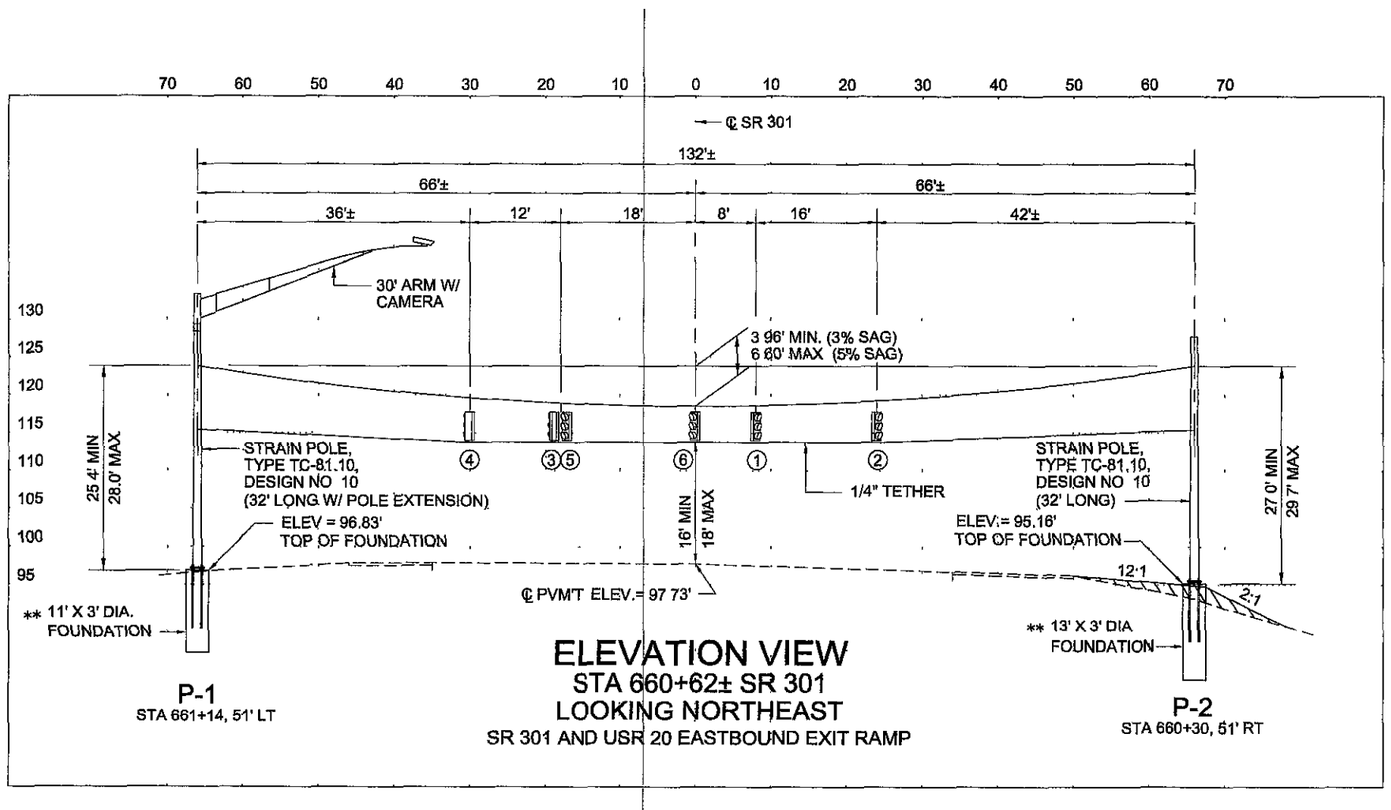
INTERVAL	PHASE							
	1	2	3	4	5	6	7	8
	FUTURE USE	SR 301 NB	NOT USED	RAMP EB	NOT USED	SR 301 SB	NOT USED	NOT USED
MINIMUM GREEN		24		12		24		
PASSAGE		3		3		3		
YELLOW		4 9		4 9		4.9		
ALL RED		1 2		2.5		1 2		
MAXIMUM GREEN		50		40		50		
WALK								
PED CLEAR								
MIN. RECALL		YES		NO		YES		
DET NON-LOCK		NO		YES		NO		
INITIALIZATION		GRN		RED		GRN		

SIGNAL INDICATION CHART

PHASE	SIGNAL HEAD									
	SR 301				USR 20 RAMP					
	NB		SB		EB					
	1	2	3	4	5	6				
2 & 6	G	G	G	G	R	R				
	Y	Y	Y	Y	R	R				
	R	R	R	R	R	R				
4	R	R	R	R	G	G				
	R	R	R	R	Y	Y				
	R	R	R	R	R	R				
FLASH	Y	Y	Y	Y	R	R				



SIGNAL PHASING DIAGRAM



P-1
STA 661+14, 51' LT

P-2
STA 660+30, 51' RT

ELEVATION VIEW
STA 660+62± SR 301
LOOKING NORTHEAST
SR 301 AND USR 20 EASTBOUND EXIT RAMP

** *MARK ON TOP OF CONCRETE FOUNDATION THE DIRECTION CONDUIT ELLS ARE INSTALLED*

0 10 20
SCALE

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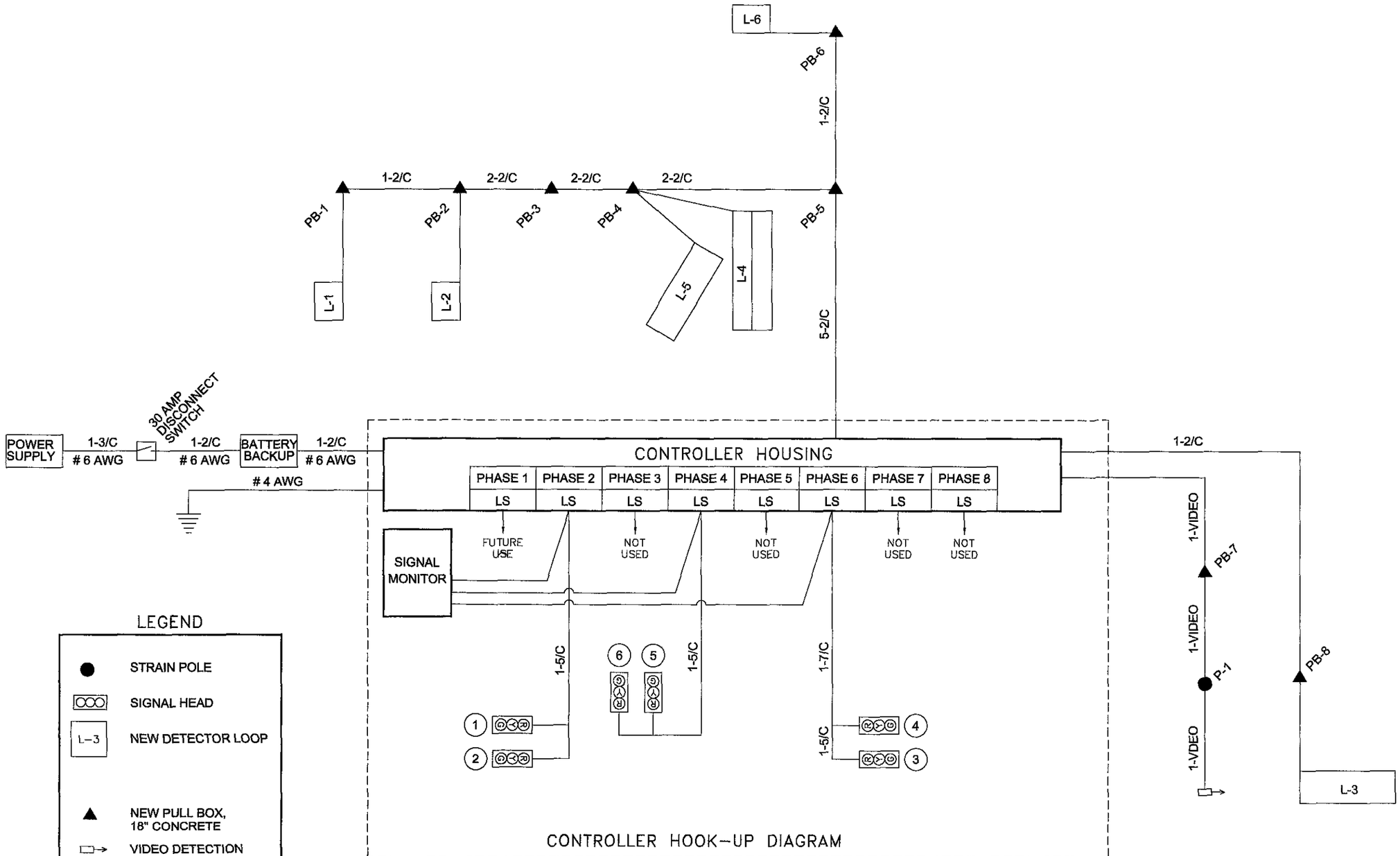
TRAFFIC SIGNAL DETAILS US 20 EB RAMP @ SR 301

MED-301-0.00
LOR-301-0.00



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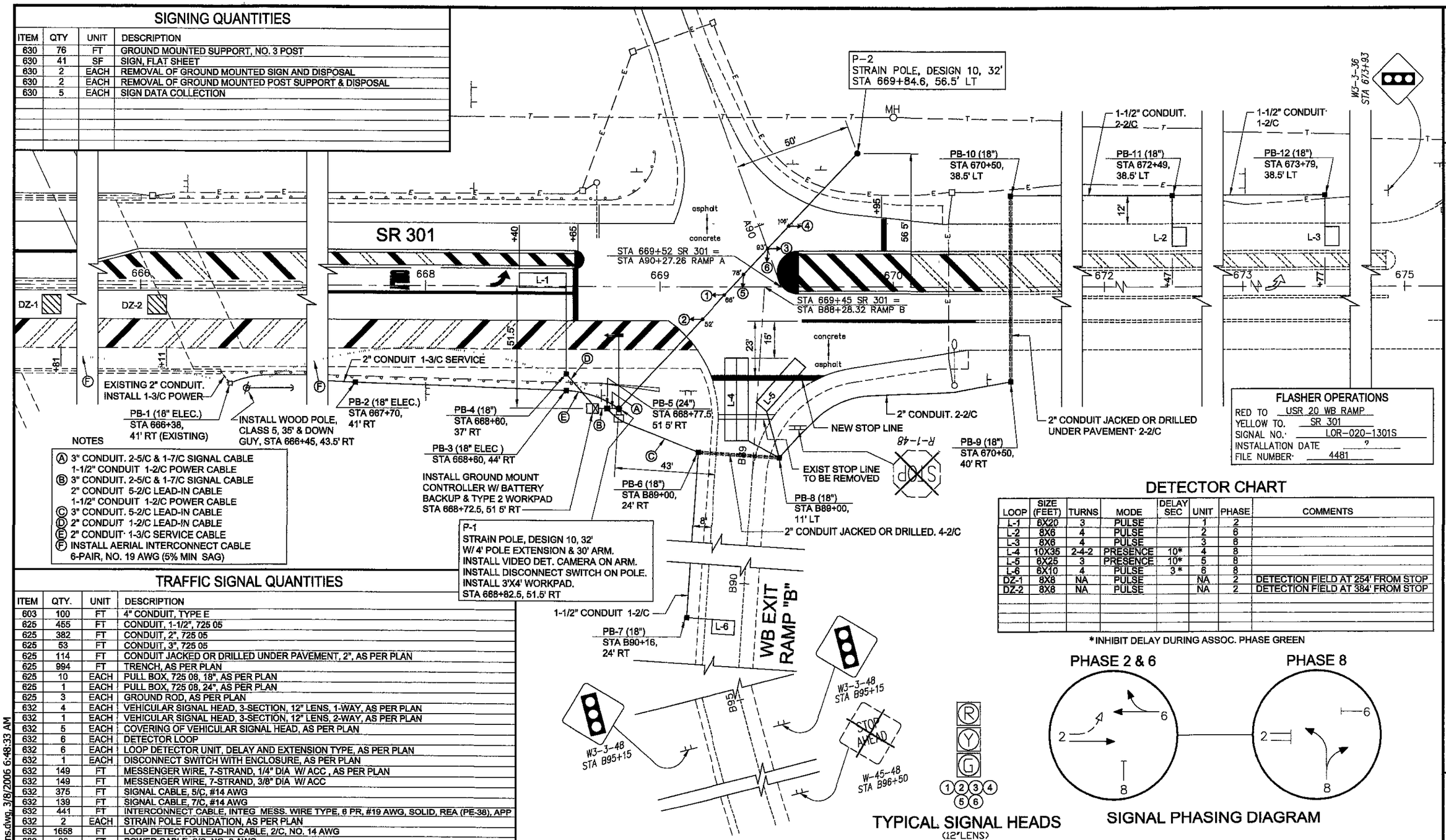
TRAFFIC SIGNAL DETAILS USR 20 EB RAMP @ SR 301

MED-301-0.00
LOR-301-0.00

SIGNING QUANTITIES

ITEM	QTY	UNIT	DESCRIPTION
630	76	FT	GROUND MOUNTED SUPPORT, NO. 3 POST
630	41	SF	SIGN, FLAT SHEET
630	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL
630	2	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT & DISPOSAL
630	5	EACH	SIGN DATA COLLECTION



NOTES

Ⓐ 3" CONDUIT. 2-5/C & 1-7/C SIGNAL CABLE
1-1/2" CONDUIT 1-2/C POWER CABLE
Ⓑ 3" CONDUIT. 2-5/C & 1-7/C SIGNAL CABLE
2" CONDUIT 5-2/C LEAD-IN CABLE
1-1/2" CONDUIT 1-2/C POWER CABLE
Ⓒ 3" CONDUIT. 5-2/C LEAD-IN CABLE
Ⓓ 2" CONDUIT 1-2/C LEAD-IN CABLE
Ⓔ 2" CONDUIT. 1-3/C SERVICE CABLE
Ⓕ INSTALL AERIAL INTERCONNECT CABLE
6-PAIR, NO. 19 AWG (5% MIN SAG)

FLASHER OPERATIONS

RED TO USR 20 WB RAMP
YELLOW TO. SR 301
SIGNAL NO.: LOR-020-1301S
INSTALLATION DATE ?
FILE NUMBER: 4481

DETECTOR CHART

LOOP	SIZE (FEET)	TURNS	MODE	DELAY SEC	UNIT	PHASE	COMMENTS
L-1	6X20	3	PULSE		1	2	
L-2	8X6	4	PULSE		2	6	
L-3	8X6	4	PULSE		3	8	
L-4	10X35	2-4-2	PRESENCE	10*	4	8	
L-5	6X25	3	PRESENCE	10*	5	8	
L-6	6X10	4	PULSE	3*	6	8	
DZ-1	8X8	NA	PULSE		NA	2	DETECTION FIELD AT 254' FROM STOP
DZ-2	8X8	NA	PULSE		NA	2	DETECTION FIELD AT 384' FROM STOP

*INHIBIT DELAY DURING ASSOC. PHASE GREEN

TRAFFIC SIGNAL QUANTITIES

ITEM	QTY.	UNIT	DESCRIPTION
603	100	FT	4" CONDUIT, TYPE E
625	455	FT	CONDUIT, 1-1/2", 725 05
625	382	FT	CONDUIT, 2", 725 05
625	53	FT	CONDUIT, 3", 725 05
625	114	FT	CONDUIT JACKED OR DRILLED UNDER PAVEMENT, 2", AS PER PLAN
625	994	FT	TRENCH, AS PER PLAN
625	10	EACH	PULL BOX, 725 08, 18", AS PER PLAN
625	1	EACH	PULL BOX, 725 08, 24", AS PER PLAN
625	3	EACH	GROUND ROD, AS PER PLAN
632	4	EACH	VEHICULAR SIGNAL HEAD, 3-SECTION, 12" LENS, 1-WAY, AS PER PLAN
632	1	EACH	VEHICULAR SIGNAL HEAD, 3-SECTION, 12" LENS, 2-WAY, AS PER PLAN
632	5	EACH	COVERING OF VEHICULAR SIGNAL HEAD, AS PER PLAN
632	6	EACH	DETECTOR LOOP
632	6	EACH	LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN
632	1	EACH	DISCONNECT SWITCH WITH ENCLOSURE, AS PER PLAN
632	149	FT	MESSENGER WIRE, 7-STRAND, 1/4" DIA W/ ACC , AS PER PLAN
632	149	FT	MESSENGER WIRE, 7-STRAND, 3/8" DIA W/ ACC
632	375	FT	SIGNAL CABLE, 5/C, #14 AWG
632	139	FT	SIGNAL CABLE, 7/C, #14 AWG
632	441	FT	INTERCONNECT CABLE, INTEG MESS. WIRE TYPE, 6 PR, #19 AWG, SOLID, REA (PE-38), APP
632	2	EACH	STRAIN POLE FOUNDATION, AS PER PLAN
632	1658	FT	LOOP DETECTOR LEAD-IN CABLE, 2/C, NO. 14 AWG
632	36	FT	POWER CABLE, 2/C, NO. 6 AWG
632	35	FT	POWER CABLE, 3/C, NO 6 AWG
632	838	FT	SERVICE CABLE, 3/C, NO 6 AWG
632	1	EACH	STRAIN POLE, TYPE TC-81 10, DESIGN 10, AS PER PLAN
632	1	EACH	WOOD POLE, CLASS 5, 35'
632	1	EACH	DOWN GUY
632	1	EACH	SIGNALIZATION, MISC , STRAIN POLE EXTENSION WITH 30' LUMINAIRE ARM
632	1	EACH	SIGNALIZATION, MISC , STRAIN POLE, TYPE TC-81.10, INSTALLATION ONLY
632	1	EACH	SIGNALIZATION, MISC., VIDEO DETECTION CAMERA
632	1	EACH	SIGNALIZATION, MISC , VIDEO DETECTION SYSTEM CABINET HARDWARE
633	1	EACH	CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS-1 AS PER PLAN
633	1	EACH	CABINET FOUNDATION, AS PER PLAN
633	2	EACH	CONTROLLER WORKPAD, AS PER PLAN

TYPICAL SIGNAL HEADS
(12"LENS)

SIGNAL PHASING DIAGRAM

0 20 40
SCALE

DATE	REVISIONS	DATE INSTALLED

OHIO DEPARTMENT OF TRANSPORTATION
ELECTRICAL INSTALLATION
LOCATED AT
USR 20 WB Ramp @ SR 301
SIGNAL NO LOR-20-1301S
District 3 County LORAIN

DESIGNED	DRAWN	REVISED
RJR 9/05	RJR 9/05	RJR 3/06

CALC. BY RJR 11/05
CHKD. BY EAH 1/06

TRAFFIC SIGNAL PLAN USR 20 WB RAMP @ SR 301

MED-301-0.00
LOR-301-0.00

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114

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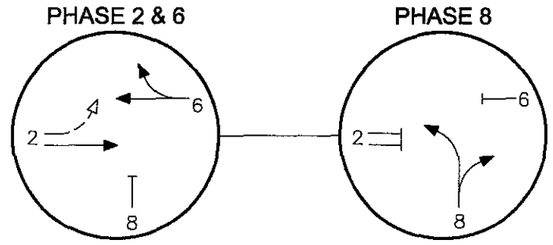
SIGNAL TIMING CHART

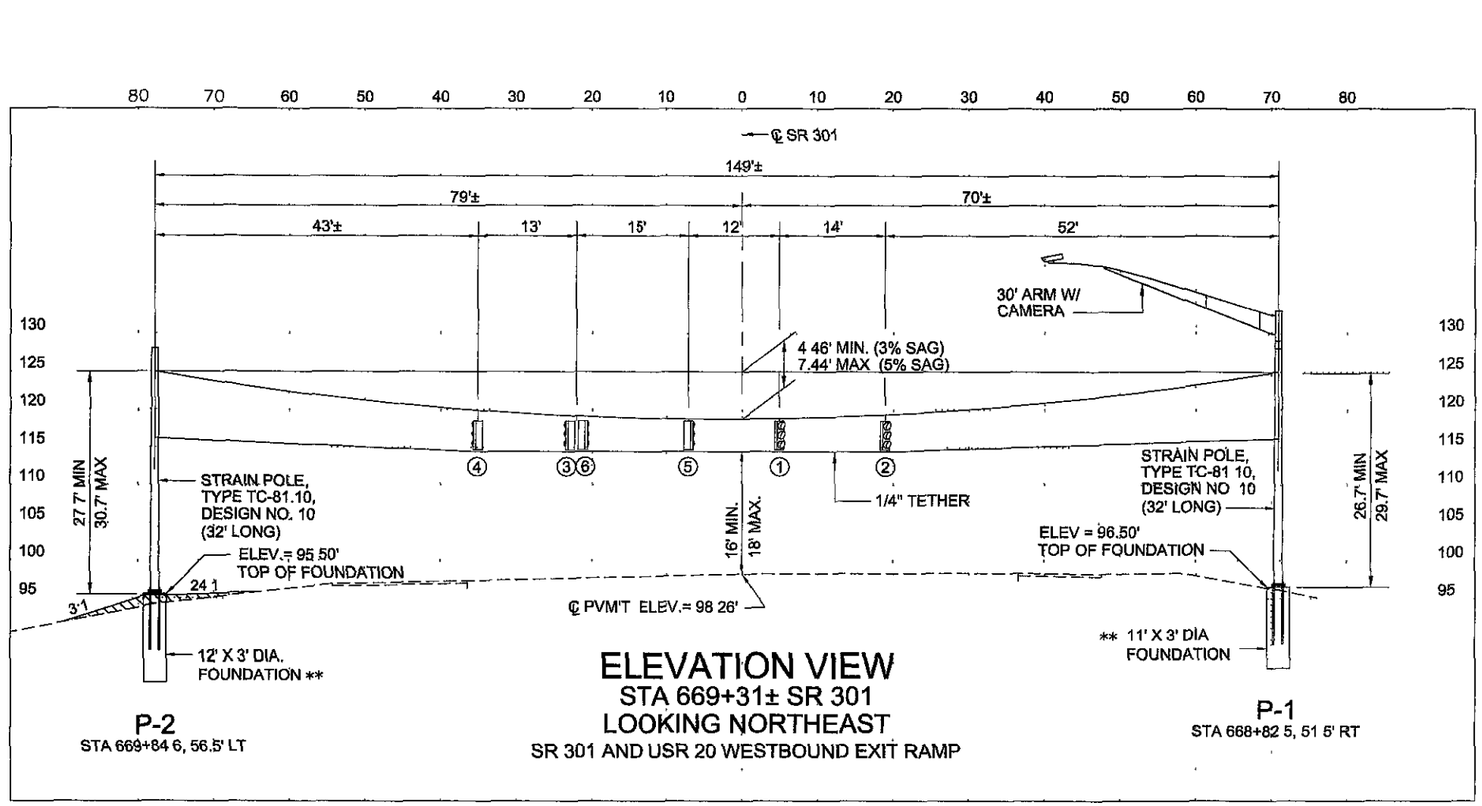
INTERVAL	PHASE							
	1	2	3	4	5	6	7	8
	FUTURE USE	SR 301 NB	NOT USED	NOT USED	NOT USED	SR 301 SB	NOT USED	RAMP WB
MINIMUM GREEN		24				24		12
PASSAGE		3				3		3
YELLOW		4.9				4 9		4 9
ALL RED		1.2				1.2		2.5
MAXIMUM GREEN		50				50		40
WALK								
PED CLEAR								
MIN RECALL		YES				YES		NO
DET. NON-LOCK		NO				NO		YES
INITIALIZATION		GRN				GRN		RED

SIGNAL INDICATION CHART

PHASE	SIGNAL HEAD										
	SR 301				USR 20 RAMP						
	NB		SB		WB						
	1	2	3	4	5	6					
2 & 6	G	G	G	G	R	R					
	Y	Y	Y	Y	R	R					
	R	R	R	R	R	R					
8	R	R	R	R	G	G					
	R	R	R	R	Y	Y					
	R	R	R	R	R	R					
FLASH	Y	Y	Y	Y	R	R					



SIGNAL PHASING DIAGRAM



P-2
STA 669+84 6, 56.5' LT

ELEVATION VIEW
STA 669+31± SR 301
LOOKING NORTHEAST
SR 301 AND USR 20 WESTBOUND EXIT RAMP

P-1
STA 668+82 5, 51 5' RT

** *MARK ON TOP OF CONCRETE FOUNDATION THE DIRECTION CONDUIT ELLS ARE INSTALLED.*

0 10 20
SCALE

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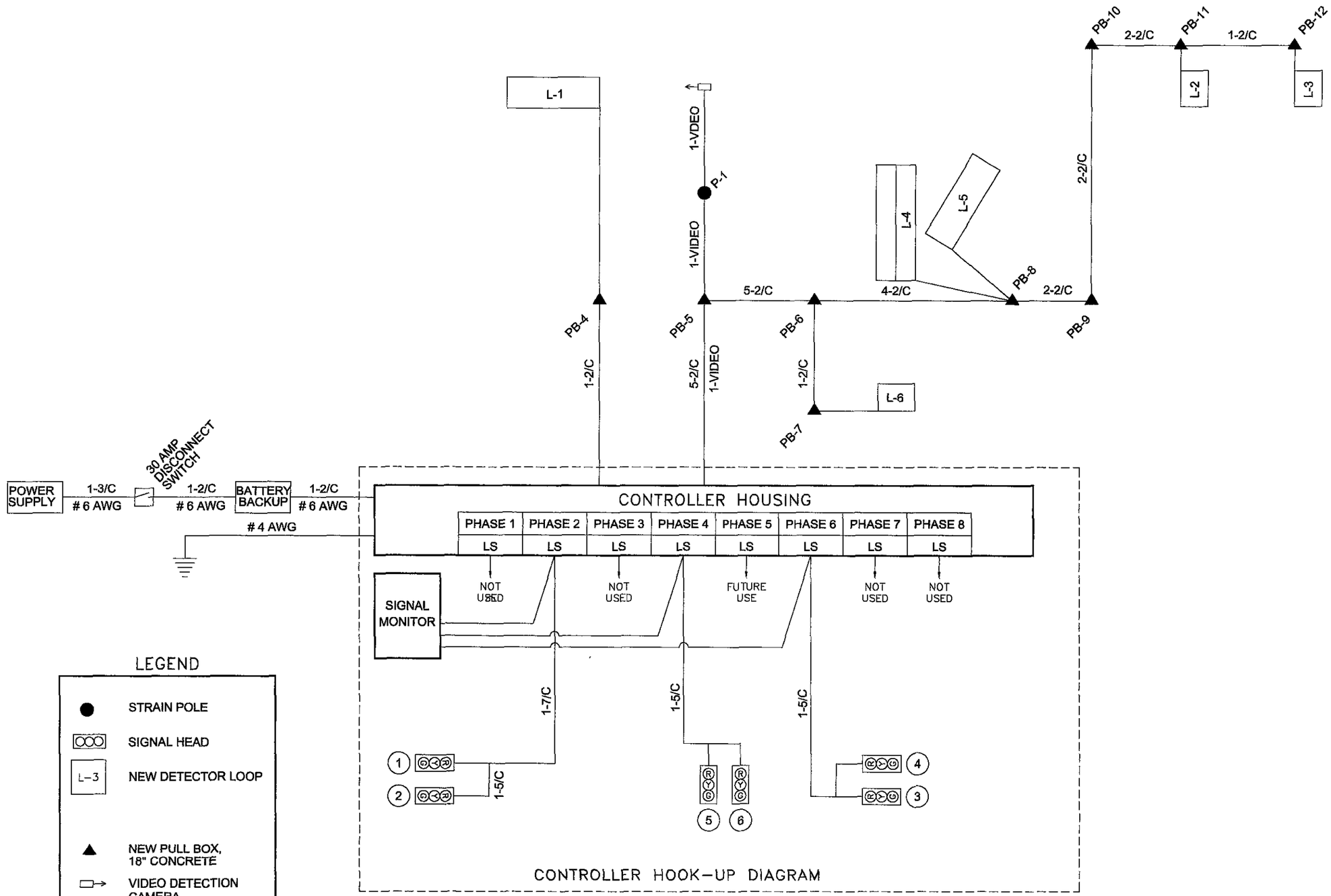
TRAFFIC SIGNAL DETAILS USR 20 WB RAMP @ SR 301

MED-301-0.00
LOR-301-0.00



NOTE: ALL CONDUCTORS ARE # 14 AWG EXCEPT AS NOTED.

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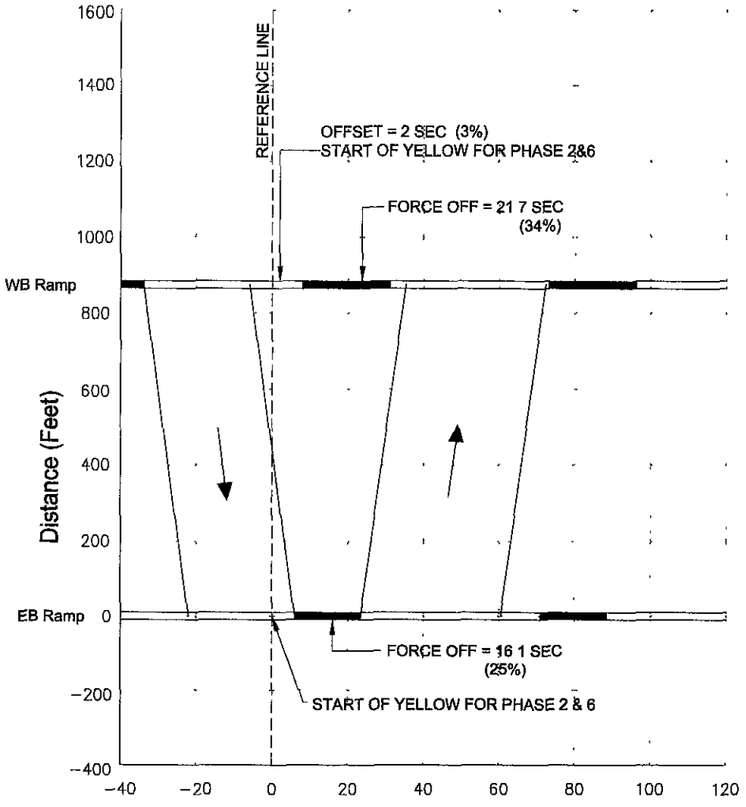
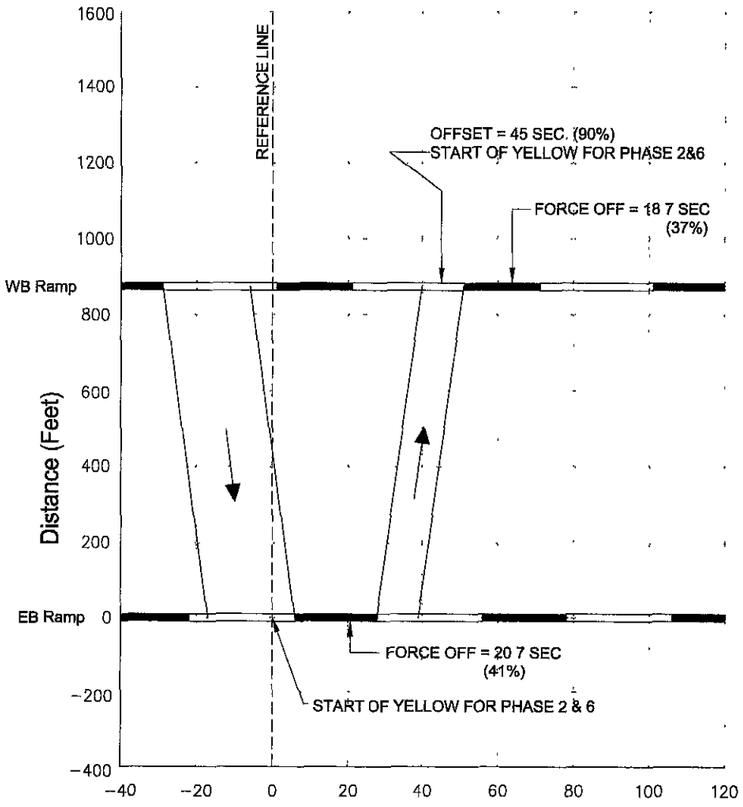
TRAFFIC SIGNAL DETAILS USR 20 WB RAMP @ SR 301

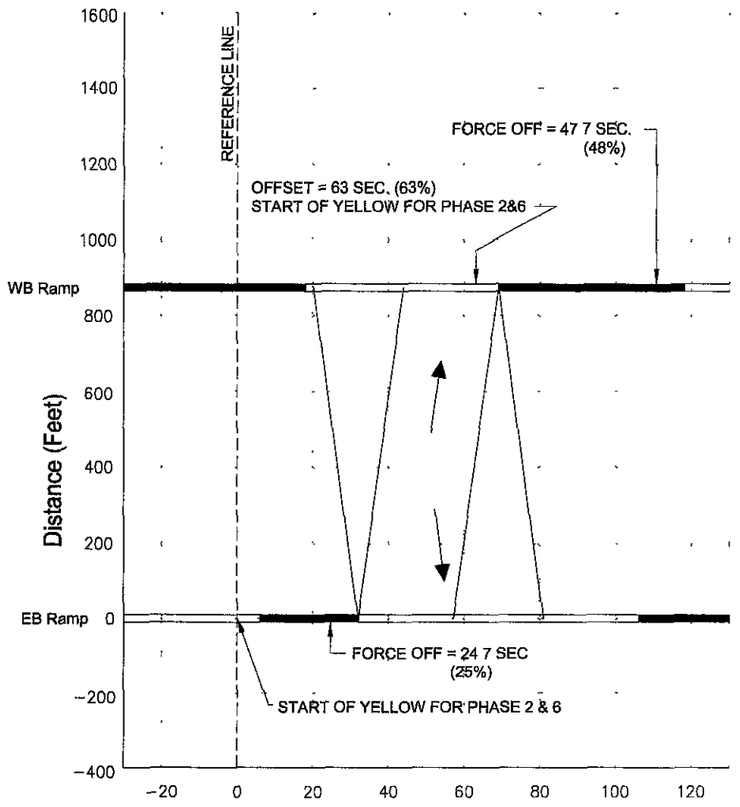
MED-301-0.00
LOR-301-0.00



TIME-SPACE DIAGRAM - AM Peak



TIME-SPACE DIAGRAM - Mid-Day Max Flow



TIME-SPACE DIAGRAM - PM Peak Max Flow

Program No. 1 - AM Peak

6:00 AM to 10:00 AM Monday thru Friday
Cycle = 65 Seconds

SPLIT TIMING

WB Ramp @ SR 301	PHASE							
	1	2	3	4	5	6	7	8
	NOT USED	NB	NOT USED	NOT USED	NOT USED	SB	NOT USED	RAMP WB
SPLIT (SEC)		42.0				42 0		23 0
SPLIT (%)		65				65		35

EB Ramp @ SR 301	PHASE							
	1	2	3	4	5	6	7	8
	NOT USED	NB	NOT USED	RAMP EB	NOT USED	SB	NOT USED	NOT USED
SPLIT (SEC.)		47 6		17 4		47 6		
SPLIT (%)		73		27		73		

Program No. 2 - Mid-Day

10:00 AM to 2:30 PM Monday thru Friday
Cycle = 50 Seconds

SPLIT TIMING

WB Ramp @ SR 301	PHASE							
	1	2	3	4	5	6	7	8
	NOT USED	NB	NOT USED	NOT USED	NOT USED	SB	NOT USED	RAMP WB
SPLIT (SEC.)		30 0				30.0		20.0
SPLIT (%)		60				60		40

EB Ramp @ SR 301	PHASE							
	1	2	3	4	5	6	7	8
	NOT USED	NB	NOT USED	RAMP EB	NOT USED	SB	NOT USED	NOT USED
SPLIT (SEC.)		28 0		22 0		28 0		
SPLIT (%)		56		44		56		

Program No. 3 - PM Peak

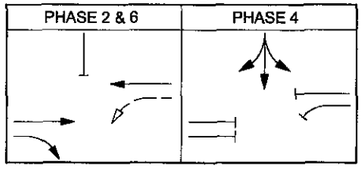
2:30 PM to 8:00 PM Monday thru Friday
Cycle = 100 Seconds

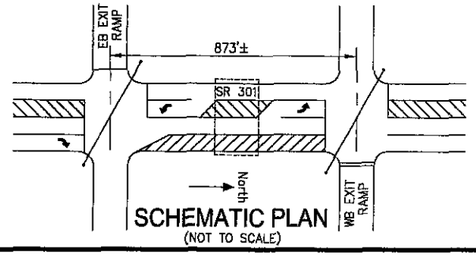
SPLIT TIMING

WB Ramp @ SR 301	PHASE							
	1	2	3	4	5	6	7	8
	NOT USED	NB	NOT USED	NOT USED	NOT USED	SB	NOT USED	RAMP WB
SPLIT (SEC)		51.0				51 0		49 0
SPLIT (%)		51				51		49

EB Ramp @ SR 301	PHASE							
	1	2	3	4	5	6	7	8
	NOT USED	NB	NOT USED	RAMP EB	NOT USED	SB	NOT USED	NOT USED
SPLIT (SEC)		74 0		26 0		74.0		
SPLIT (%)		74		26		74		

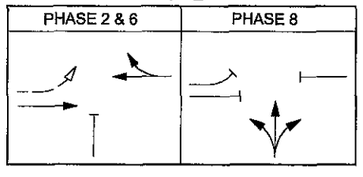
PHASING DIAGRAM
EB Ramp @ SR 301





SCHEMATIC PLAN
(NOT TO SCALE)

PHASING DIAGRAM
WB Ramp @ SR 301



Free Operation

8 PM to Midnight, Monday thru Friday
Midnight to 6:00AM, Monday thru Friday
24 Hours, Saturday & Sunday

CALC BY RJR 12/05
CHKD BY

TRAFFIC SIGNAL COORDINATION DETAILS

MED-301-0.00
LOR-301-0.00

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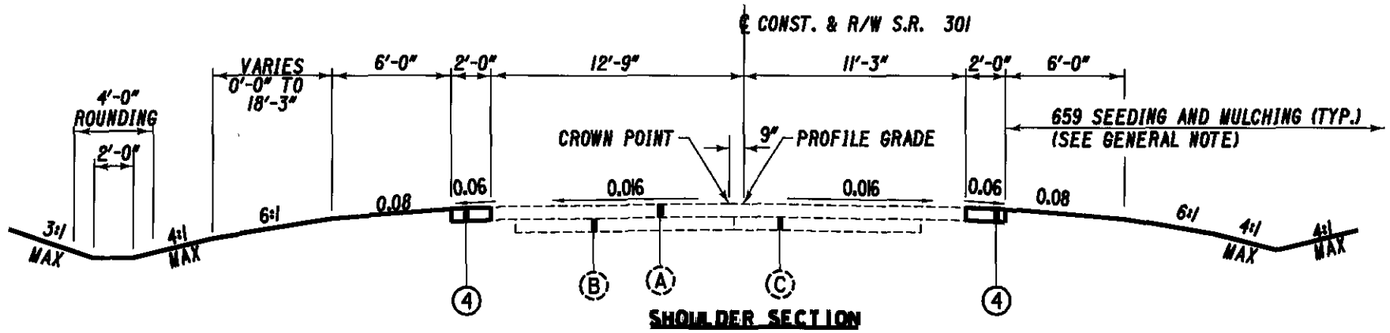
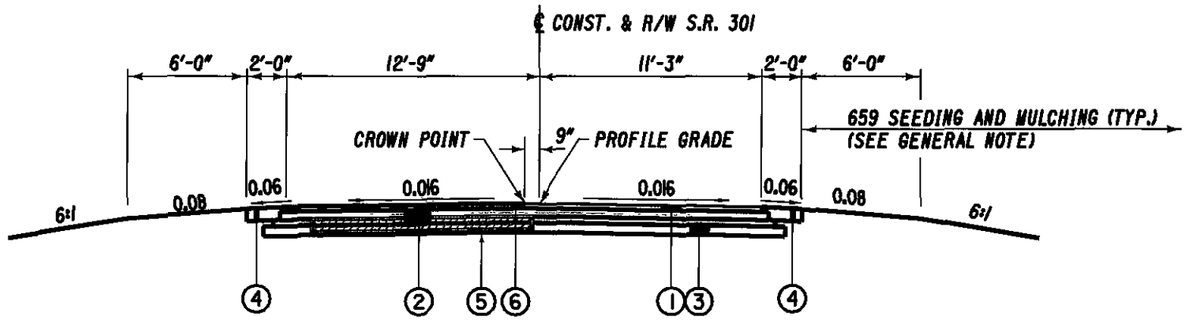


SHOULDER SECTION

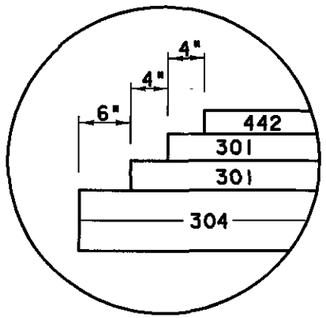
STA. 225+50 TO STA. 227+75 = 225 FT.
STA. 228+25 TO STA. 230+50 = 225 FT.
TOTAL = 450 FT.



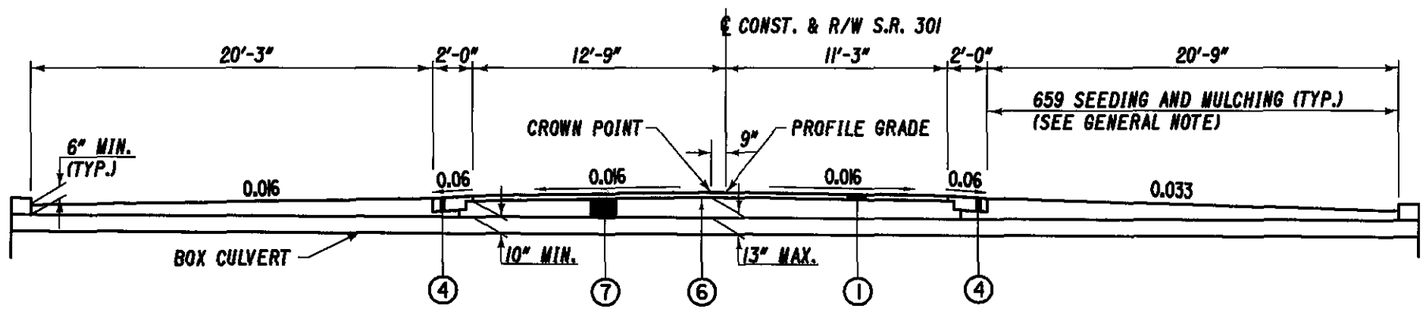
NORMAL SECTION

STA. 227+75 TO STA. 227+94 = 19 FT.
STA. 228+06 TO STA. 228+25 = 19 FT.
TOTAL = 38 FT.

202 PAVEMENT REMOVED



PAVEMENT EDGE STEP DETAIL



NORMAL SECTION OVER CULVERT

STA. 227+94 TO STA. 228+06 = 12 FT.
TOTAL = 12 FT.

PROPOSED LEGEND

(1)	442	3 " ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5MM, TYPE A (448), AS PER PLAN
(2)	301	9" ASPHALT CONCRETE BASE, PG64-22
(3)	304	6" AGGREGATE BASE
(4)	304	8" AGGREGATE BASE
(5)	204	SUBGRADE COMPACTION
(6)	407	TACK COAT (SEE GENERAL NOTE)
(7)	301	VARIABLE ASPHALT CONCRETE BASE, PG64-22 (10" MIN.; 13" MAX.)

EXISTING LEGEND

(A)	11" ASPHALT PAVEMENT
(B)	6" PLAIN CONCRETE
(C)	6" AGGREGATE BASE

NOTES:
ALL INFORMATION ON TYPICAL SECTIONS ARE PRIOR TO RESURFACING. FOR RESURFACING TREATMENT, SEE PART 1 PLANS.

TYPICAL SECTIONS - MED-301-0677

MED-301-0.00
LOR-301-0.00

DESIGN FILE: i:\projects\2358i\Struct\MED301000\typload.dgn
WORKSTATION: sdeer DATE: 2/16/2006

ROUNDING

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

UTILITIES OWNERSHIP

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

TELEPHONE:
VERIZON
6223 NORWALK RD
MEDINA, OH 44256
330-723-1449

POWER:
LORAIN MEDINA RURAL ELECTRIC
PO BOX 158
WELLINGTON, OH 44090
800-222-5673

OHIO EDISON TRANSMISSION
76 SOUTH MAIN ST
AKRON, OH 44308
330-384-5180

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

WATER:
VILLAGE OF SPENCER
P.O. BOX 336
SPENCER, OH 44275
330-648-2203

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.

ELEVATION DATUM

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

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

CLEARING AND GRUBBING

REMOVE ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS	TOTAL
0"-12"	1	0	1
12"-18"	0	0	0
19"-30"	1	0	1
31"-48"	0	0	0
49"-60"	1	0	1
OTHER	2	0	2

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

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

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

REVIEW OF DRAINAGE FACILITIES

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

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

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

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

MONUMENTS

CONSTRUCT MONUMENT ASSEMBLIES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET 111.

SURVEY DISC ON STRUCTURE

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST ONE (1) WEEK IN ADVANCE OF POURING THE CONCRETE FOR COMPLETION OF THE ABUTMENT. THE ENGINEER WILL PROVIDE THE CONTRACTOR ONE (1) SURVEY DISC FOR EACH STRUCTURE (OBTAINED FROM THE DISTRICT SURVEYOR) WHICH THE CONTRACTOR SHALL PLACE IN THE SURFACE OF THE FRESH CONCRETE. THE LOCATION OF THE DISC SHALL BE ON THE HEADWALL AND ON A FLAT, HORIZONTAL SURFACE. THE BENCHMARK SHALL BE ACCESSIBLE TO A SURVEYOR'S ROD WITHOUT ANY OBSTRUCTIONS. COST OF THIS WORK IS CONSIDERED INCIDENTAL TO ITEM 511 BID ITEM.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, TOPSOIL	232	CU. YD.
659, SEEDING AND MULCHING	2089	SQ. YD.
659, COMMERCIAL FERTILIZER	0.28	TON
659, WATER	11	M. GAL.

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

ENVIRONMENTAL COMMITMENTS

1) THIS PROJECT IS WITHIN THE KNOWN SUMMER BREEDING RANGE OF THE FEDERAL ENDANGERED INDIANA BAT. UNAVOIDABLE CUTTING OF TREES DEFINED AS POTENTIAL HABITAT FOR THE INDIANA BAT (I.E. LIVING OR STANDING DEAD TREES OR SNAGS WITH EXFOLIATING, PEELING OR LOOSE BARK, SPLIT TRUNKS AND/OR BRANCHES, OR CAVITIES) WILL BE PERFORMED ONLY BEFORE APRIL 15 OR AFTER SEPTEMBER 15 WHEN THE SPECIES WOULD NOT BE USING SUCH HABITAT. THE ABOVE DETERMINATION OF NO IMPACTS ON FEDERALLY LISTED SPECIES IS IN ACCORDANCE WITH THE LETTER OF AGREEMENT ON ENDANGERED SPECIES COORDINATION SIGNED BY USFWS ON FEBRUARY 4, 1998.

2) THE CULVERT REPLACEMENT MEETS THE CRITERIA FOR A USACE NATIONWIDE PERMIT #3. ALL CONDITIONS IN THE PERMIT SHALL BE ADHERED TO DURING CONSTRUCTION.

3) PLACEMENT OF ROCK CHANNEL PROTECTION, LIMITED TO 25 LINEAR FEET FROM ENDS OF NEW CULVERT.

4) THE SPECIFICATIONS SET FORTH IN THE MOST CURRENT VERSION OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, LOCATION AND DESIGN MANUAL AND STANDARD DRAWINGS WILL BE USED TO ENSURE ADEQUATE EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION.

5) IMPACTS TO THE STREAM WILL BE AVOIDED, MINIMIZED, AND/OR MITIGATED WHERE REASONABLE OR PRACTICABLE.

6) IN-STREAM WORK (THE REPLACEMENT OR REMOVAL OF TEMPORARY AND/OR PERMANENT FILL MATERIALS BELOW ORDINARY HIGH WATER MARK) WILL BE LIMITED TO WHERE PRACTICABLE AND ONLY CLEAN NON-ERODIBLE MATERIAL WILL BE USED FOR TEMPORARY CONSTRUCTION ACCESS FILLS. TEMPORARY FILLS WILL BE CONSTRUCTED SO AS TO ALLOW FOR FISH PASSAGE AND WILL NOT BACK UP WATER. TEMPORARILY PLACED MATERIALS WILL BE REMOVED AND THE STREAM BOTTOM RESTORED TO NEAR PRECONSTRUCTION CONDITION WHEN THE WORK IS COMPLETED.

6) WRITTEN PERMISSION WILL BE OBTAINED FOR ANY IN-STREAM BLASTING FROM THE CHIEF OF ODNR'S DIVISION OF WILDLIFE IN ACCORDANCE WITH OHIO REVISED CODE SECTION 1533.58.

ITEM 407 - TACK COAT

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. FOR ESTIMATING PURPOSES ONLY, THE PLAN QUANTITY INDICATE AN AVERAGE RATE OF:

407, TACK COAT	0.08 GAL./SY.

DESIGN FILE: I:\projects\2358\Struct\2358IGN001.dgn
WORKSTATION: sdeer DATE: 2/16/2006

CALCULATED HYH
CHECKED DCW

GENERAL NOTES - MED-301-0677

MED-301-0.00
LOR-301-0.00

ITEM 614 - MAINTAINING TRAFFIC

DETOUR LIMITATION AND INTERIM COMPLETION DATE:

FOR STRUCTURE MED-301-0677, TWO WAY TRAFFICSHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEEDTHIRTY (30) CONSECUTIVE CALENDAR DAYS. THROUGHTRAFFIC WILL BE DETOURED AS SHOWN ON THIS SHEET.

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.

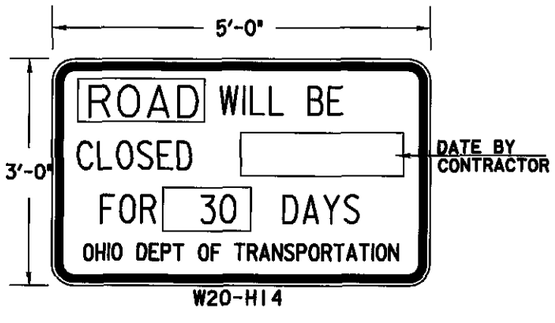
THE THIRTY (30) CONSECUTIVE CALENDAR DAYS SHALL BE CONSIDERED AS AN INTERIM COMPLETION DATE (SECTION 108) AND FOR EACH CALENDAR DAY BEYOND THE THIRTY (30) CONSECUTIVE CALENDAR DAYS THAT THE ROADWAY REMAINS CLOSED TO TRAFFIC, THE CONTRACTOR WILL BE ASSESSED LIQUIDATED DAMAGES, AS PER SECTION 108.07 OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

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

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

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 ERECTING 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.



W20-H14

PROJECT DETOUR LIMITATIONS

THE ROADWAY SHALL NOT BE CLOSED TO TRAFFIC FOR THE REMOVAL OR MODIFICATION OF THE EXISTING STRUCTURE OR CONDUIT UNTIL PRECAST STRUCTURE MATERIAL (EG.: BOX CULVERTS, ETC.) NECESSARY TO PLACE THE ROADWAY BACK INTO SERVICE HAVE BEEN TESTED, APPROVED AND ARE READY FOR DELIVERY TO THE PROJECT SITE.

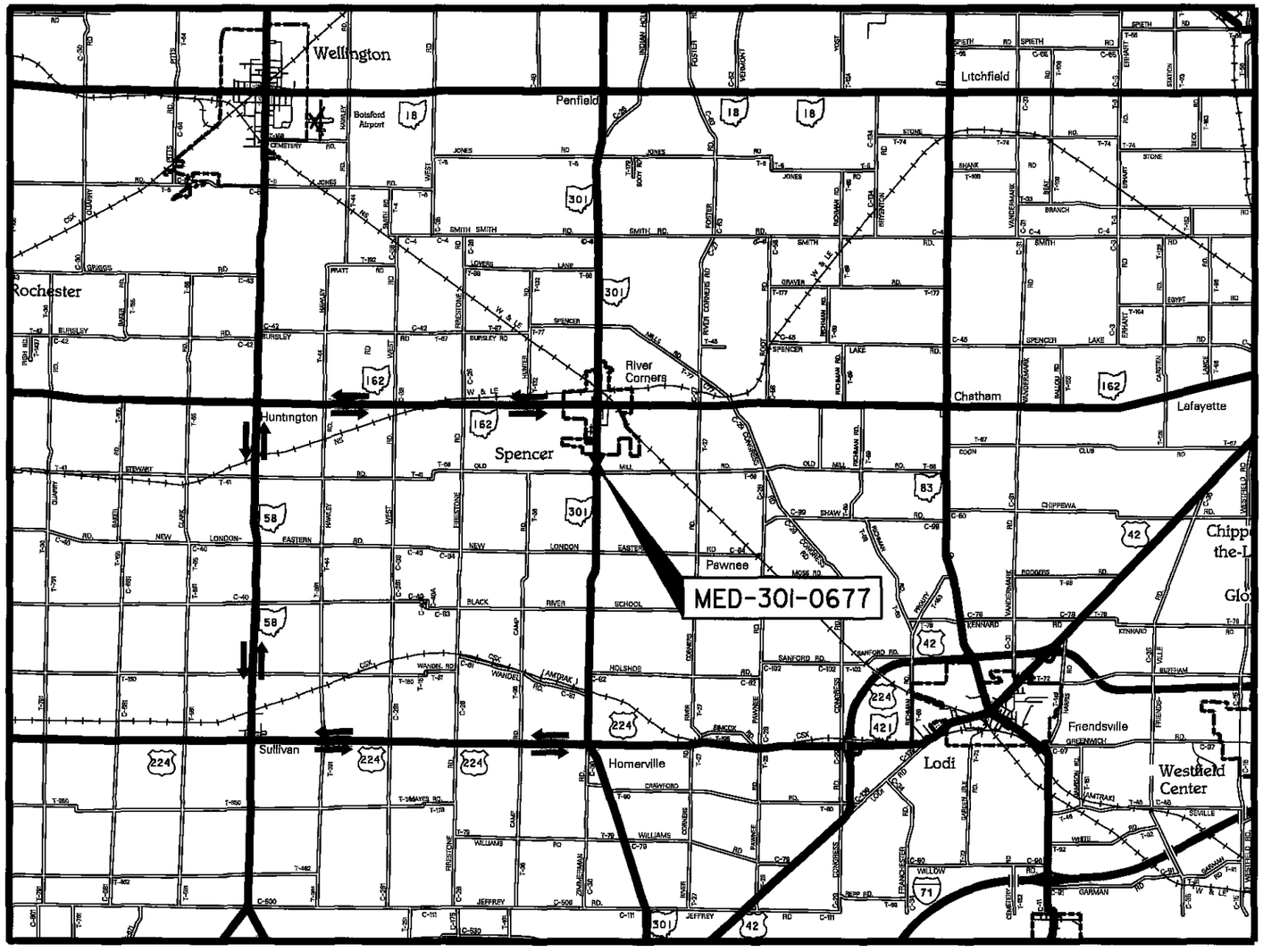
SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES IN ACCORDANCE WITH 108.07 OF THE CMS.

MAINTENANCE OF LOCAL DETOUR ROUTE

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

DURING THE TIME THAT TRAFFIC IS DETOURED, THE CONTRACTOR SHALL MAINTAIN THIS ROUTE IN A CONDITION WHICH IS REASONABLY SMOOTH AND FREE FROM HOLES, RUTS, RIDGES, BUMPS, DUST AND STANDING WATER. ONCE THE DETOUR IS REMOVED AND TRAFFIC RETURNED TO ITS NORMAL PATTERN, THE DESIGNATED LOCAL 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.



LEGEND

X - PROJECT LOCATION

⇄ - OFFICIAL SIGNED DETOUR

SCALE IN MILES 0 1 2 3 4

DETOUR MAP

CALCULATED HYH
CHECKED DCM

NOTES AND DETOUR MAP - MED-301-0677

MAINTAINING TRAFFIC NOTES

MED-301-0.00
LOR-301-0.00

63
114

DESIGN FILE: I:\projects\2358\Struct\2358IGN001.dgn
WORKSTATION: sdeer DATE: 2/16/2006

REF NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	202 PIPE REMOVED 24" AND UNDER FT	202 PAVEMENT REMOVED SQ YD	204 SUBGRADE COMPACTION SQ YD	301 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN CU YD	304 AGGREGATE BASE CU YD	407 TACK COAT GALLON	442 ASPHALT CONCRETE SURFACE COURSE, 9.5MM, TYPE A (448), AS PER PLAN CU YD	442 ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5MM, TYPE A (448), AS PER PLAN CU YD	602 CONCRETE MASONRY CU YD	603 12" CONDUIT, TYPE D FT	603 15" CONDUIT, TYPE C FT	603 24" CONDUIT, TYPE C FT	604 CATCH BASIN, NO. 2-3 EACH	604 INLET, SIDE DITCH EACH	630 SIGN, FLAT SHEET SQ FT	630 GROUND MOUNTED SUPPORT, NO. 2 POST FT	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH
R-1	66	226+06	226+31	LT	26																	
R-2	66	226+50	226+75	LT	25																	
R-3	66	227+66	227+91	LT	25																	
R-4	66-67	228+90	229+20	RT	29																	
R-5	67	229+64	230+00	LT	36																	
R-6	66	227+49	227+78	RT	29																	
A-1	66	226+17		LT			83		14		5											
A-2	66	226+62		LT			82		14		5											
A-3	66	227+79		LT			87		15		5											
A-4	66-67	229+07		RT			92		15		5											
A-5	67	229+75		LT			71		12		4											
CB-1	66	225+93		LT													1					
CB-2	66	226+41		LT													1					
CB-3	66	227+42		LT													1					
CB-4	67	230+00		LT														1				
D-1	66	225+93	226+41	LT												48						
D-2	66	226+41	227+42	LT												101						
D-3	66	227+42	227+93	LT									0.46			52						
D-4	67	230+00	229+50	LT										51								
D-5	66-67	229+37.5	228+84.5	RT										53								
D-6	66	227+49	227+90	RT											43							
S-1	66	226+92		LT																14.5	1	1
S-2	66	227+90		RT															1	10.5		
S-3	67	229+31		LT																13.5	1	1
S-4	67	229+34		RT																12.5	1	1
	66	225+50	227+75	LT/RT					22													
	66	227+75	227+94	LT/RT		25	57	13	11	4		4										
	66	227+94	228+06	LT/RT		16		11	1	3		3										
	66	228+06	228+25	LT/RT		25	57	13	11	4		4										
	66-67	228+25	230+50	LT/RT					22													
TOTALS CARRIED TO GENERAL SUMMARY					170	66	529	37	137	11	24	11	0.46	104	43	201	3	1	1	51	3	3

EARTHWORK AND SEEDING SUBSUMMARY

SHEET NO.	STATION FROM	STATION TO	203 EXCAVATION CU YD	203 EMBANKMENT CU YD			659 SEEDING AND MULCHING SQ YD
68	225+50	226+00	5	10			86
69	226+00	226+50	27	12			161
70	226+50	227+50	28	91			381
71	227+50	228+50	122	156			569
72	228+50	229+50	113	97			603
73	229+50	230+50	30	25			289
TOTALS CARRIED TO GENERAL SUMMARY			325	391			2089

SEEDING AND MULCHING CALCULATIONS

659 COMMERCIAL FERTILIZER
(2089)(9)(1/1000)(30)(1/2000) - 0.28 TON

659 WATER
(2)(2089)(9)(1/1000)(300)(1/1000) - 11 M GAL

659 TOPSOIL
(1111)(2089/1000) - 232 CU YD

NOTE:
SEEDING AND MULCHING QUANTITIES CARRIED TO GENERAL NOTES SHEET 62.

DESIGNED HYH
CHECKED DCM

SUBSUMMARY - MED-301-0677

MED-301-0.00
LOR-301-0.00

64
114

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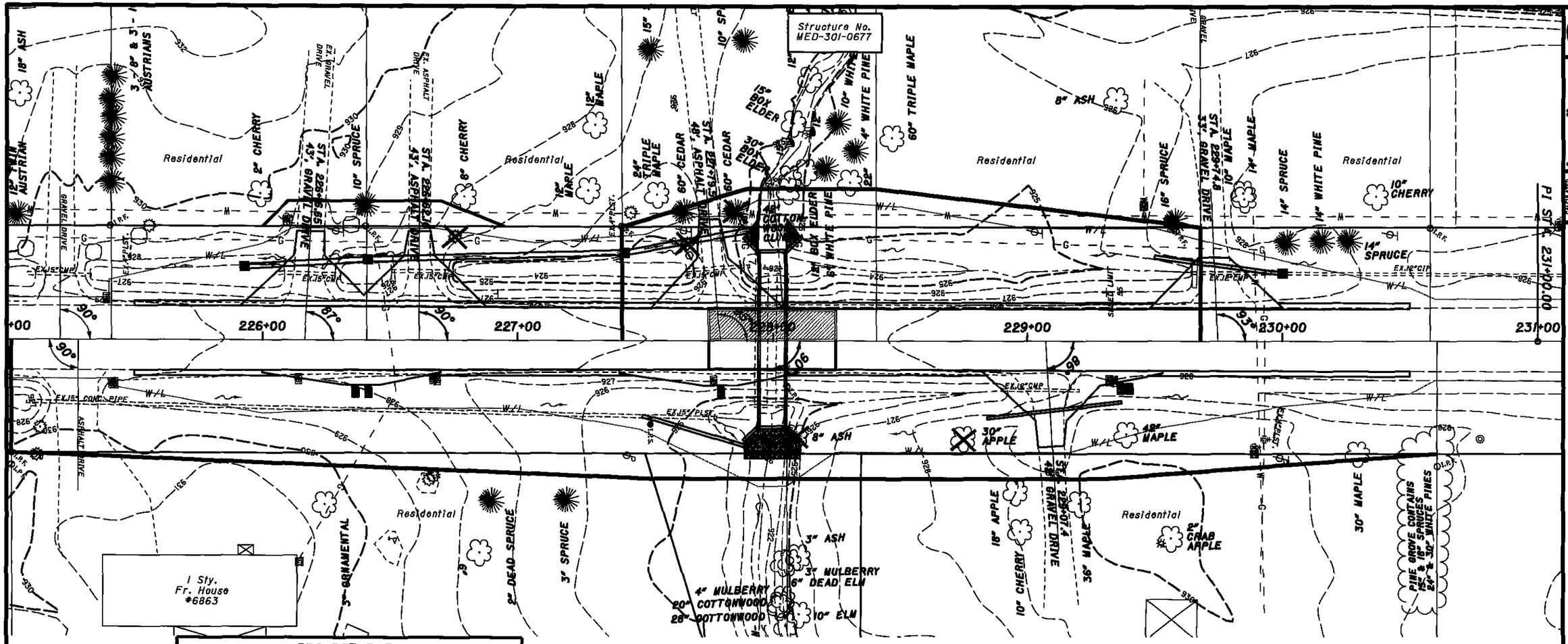
WORKSTATION: sdeer DATE 2/16/2006



PROJECT DATA	
Total Area of Project (Right of Way)	- 1.07 Acres
Project Earth Disturbed Area	- N/A (Maintenance Project)
Contractor Earth Disturbed Area	- N/A
Notice of Intent Earth Disturbed Area	- N/A
Runoff Coefficient for Pre-Construction Site	- 0.66
Runoff Coefficient for Post Construction Site	- 0.61
Impervious Area for Pre-Construction Site	- 0.29 Acres
Impervious Area for Post Construction Site	- 0.36 Acres
Soil and Water Conservation Map -	MEDINA CO. Sht. No. 29
Immediate Receiving Waters -	Branch of Coon Creek
Subsequent Receiving Waters -	East Branch Black River
USGS 7.5 Minute Quadrangle Maps -	Sullivan & Lodi
Approximate Latitude of Center of Project -	N41°-05'-14"
Approximate Longitude of Center of Project -	W82°-07'-25"
Drainage Area	- 358 Acres

NATURE OF WORK

Structure replacement which includes constructing side slopes and ditches and perpetuating all existing drainage items encountered during the previously mentioned operations.

EROSION CONTROL			
ITEM	QUANTITY	UNIT	DESCRIPTION
832	1	EACH	STORM WATER POLLUTION PLAN
832	5000	EACH	EROSION CONTROL
QUANTITIES CARRIED TO GENERAL SUMMARY			

LEGEND

- Rock Channel Protection, Type B, with Filter for permanent erosion control
- Ex. Catch Basin
- Ex. Conduit
- Prop. Conduit 12" and Larger
- Prop. Catch Basin

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WORKSTATION: sdser DATE: 2/16/2006

DESIGNED HYH
DETAILED DJV

PROJECT SITE PLAN - MED-301-0677

MED-301-0.00
LOR-301-0.00

65
114

CB-1	
CB 2-3	
STA. 225+93	
OFFSET 29.0' LT.	
T/G ELEV. = 926.0	
F/L ELEV = 923.25	

CB-2	
CB 2-3	
STA. 226+41	
OFFSET 32.0' LT.	
T/G ELEV. = 926.5	
F/L ELEV = 922.95	

CB-3	
CB 2-3	
STA. 227+42	
OFFSET 35.0' LT.	
T/G ELEV. = 925.0	
F/L ELEV = 922.33	
F/L ELEV. 4" = 923.8	

D-1: 24" CONDUIT, TYPE C	
INLET	OUTLET
STA. 225+93	STA. 226+41
OFFSET 29' LT.	OFFSET 32' LT.
ELEV. = 923.25'	ELEV. = 922.95'

D-2: 24" CONDUIT, TYPE C	
INLET	OUTLET
STA. 226+41	STA. 227+42
OFFSET 32' LT.	OFFSET 35.0' LT.
ELEV. = 922.95'	ELEV. = 922.33'

D-3: 24" CONDUIT, TYPE C	
INLET	OUTLET
STA. 227+42	STA. 227+93
OFFSET 35.0' LT.	OFFSET 44' LT.
ELEV. = 922.33'	ELEV. = 922.0'

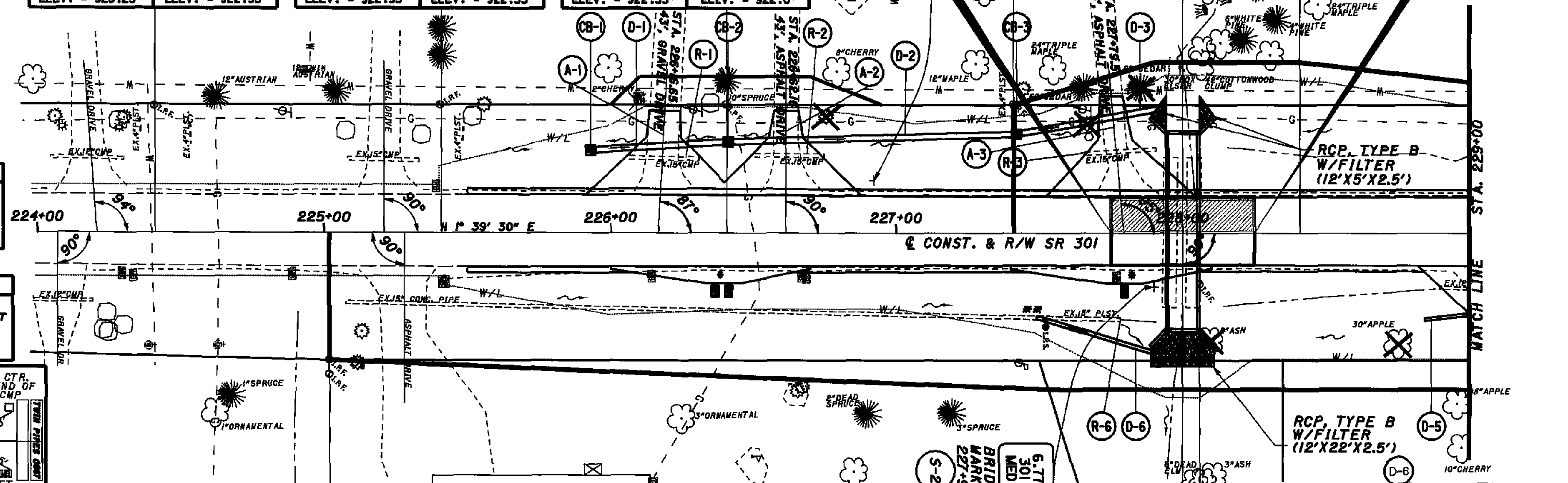
BEGIN FULL DEPTH PAVEMENT
STA. 227+75
S.L.M. 6.77

END FULL DEPTH PAVEMENT
STA. 228+25
S.L.M. 6.77

STRUCTURE NO. 5207495

BENCHMARK

B.M. #2, ELEV. 931.86
X ON N.W. FLANGE BOLT
FIRE HYDRANT
STA. 226+09.52
OFFSET 46.53' LT.

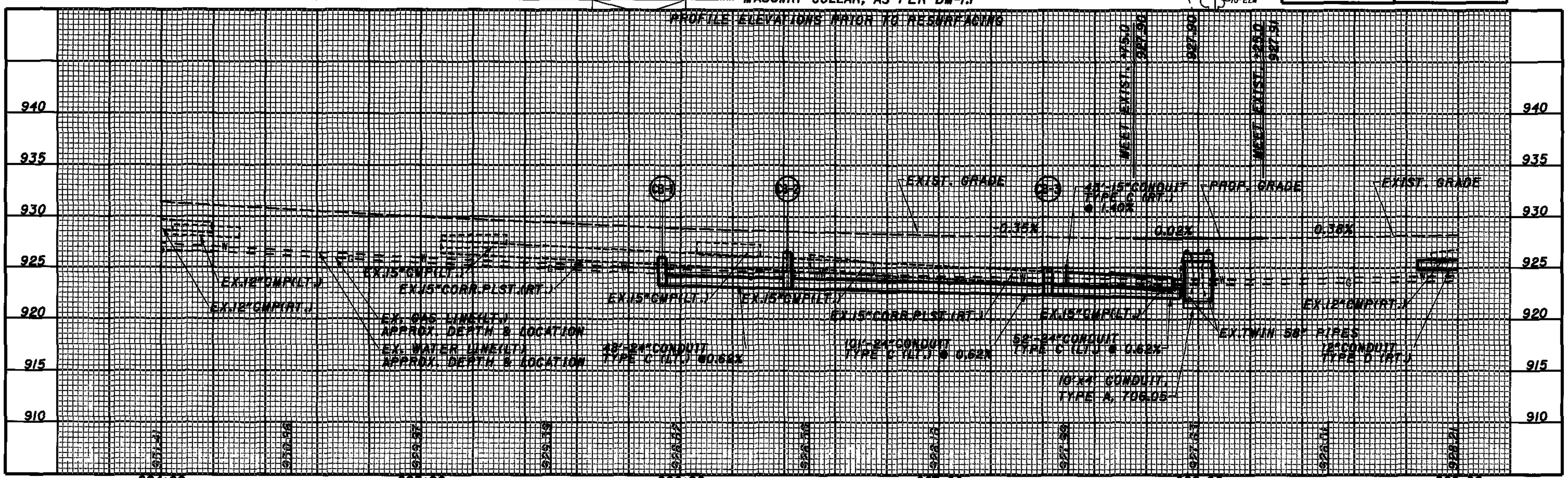


PAVEMENT REMOVED

FOR ROADWAY AND DRAINAGE QUANTITIES, SEE SHEET 64.
FOR GRADING AND DRAINAGE DETAILS, SEE SHEETS 68-73.
FOR STRUCTURE DETAILS AND QUANTITIES, SEE SHEETS 74-78.

* FOR MAILBOX APPROACHES AND SUPPORT POSTS DETAILS AND QUANTITIES, SEE SHEET 10 AND BP-4.1.
** MASONRY COLLAR, AS PER DM-1.1

D-6: 15" CONDUIT, TYPE C	
INLET	OUTLET
STA. 227+49	STA. 227+90
OFFSET 30.1' RT.	OFFSET 42.1' RT.
ELEV. = 923.40'	ELEV. = 922.80'



PLAN AND PROFILE - MED-301-0677
STA. 224+00 TO STA. 229+00

HORIZONTAL SCALE IN FEET

CALCULATED CAL
CHECKED BTR

MED-301-0.00
LOR-301-0.00

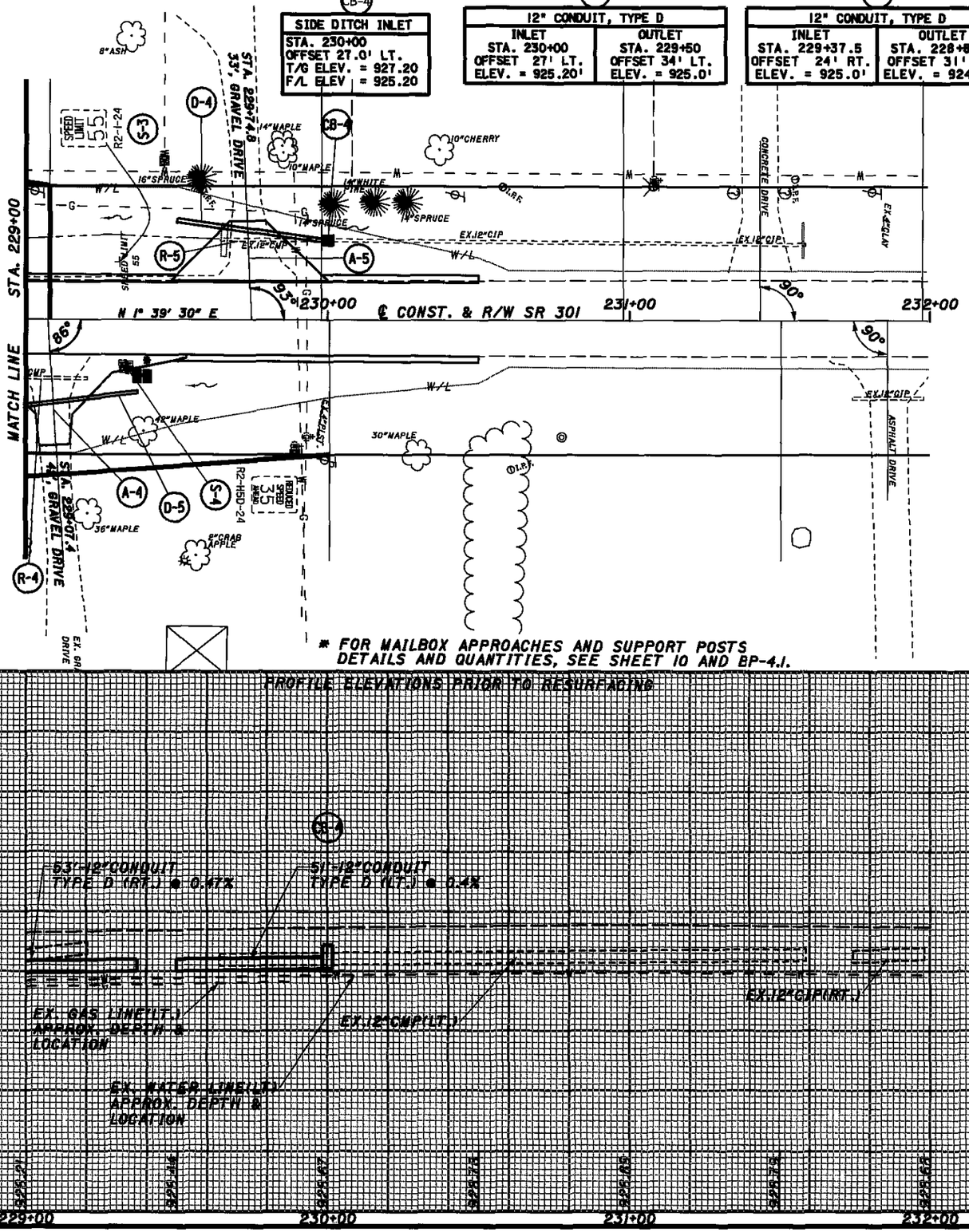
66
114

DESIGN FILE: I:\projects\2358\Struct\MED301000\plproa.dgn
WORKSTATION: sdeer
DATE: 2/16/2006

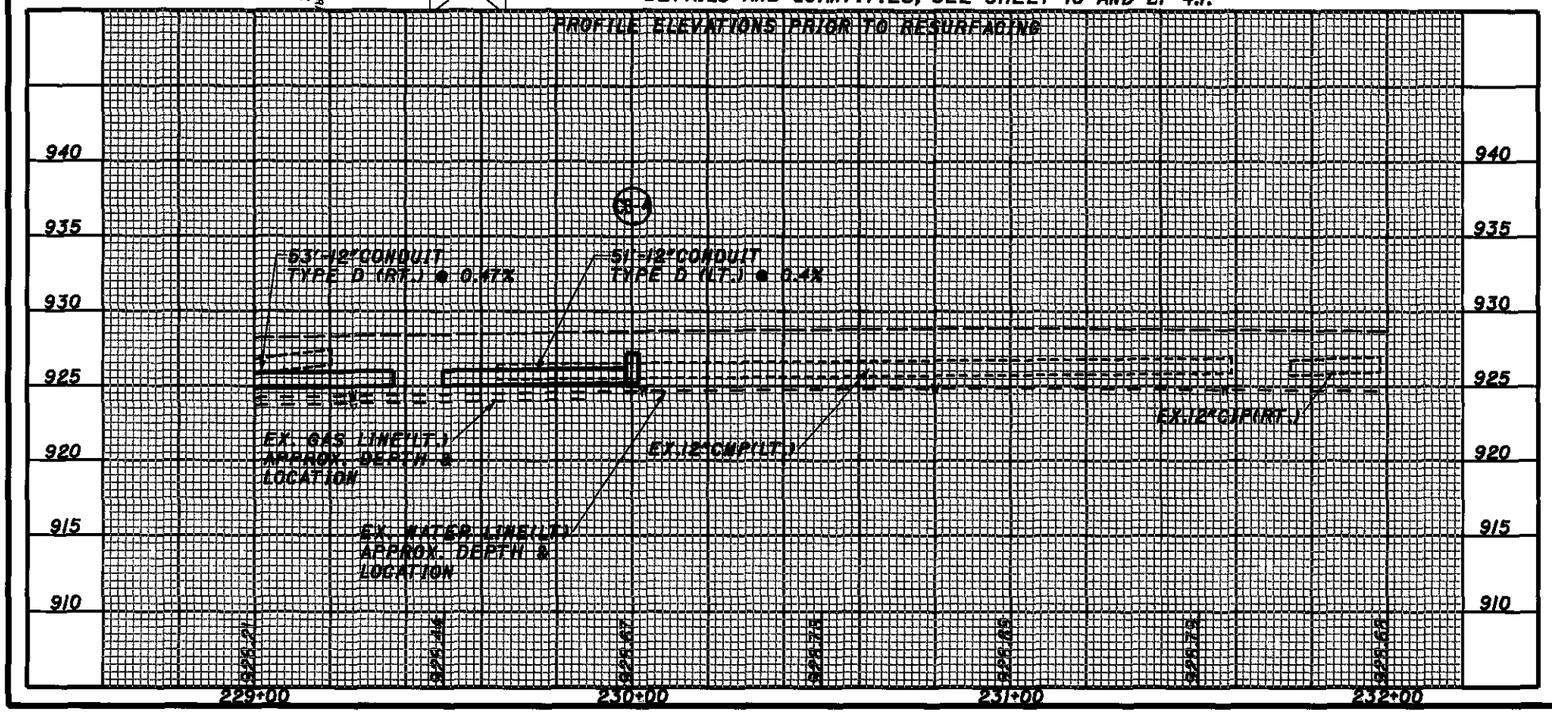
SIDE DITCH INLET
STA. 230+00
OFFSET 27.0' LT.
T/G ELEV. = 927.20
F/L ELEV = 925.20

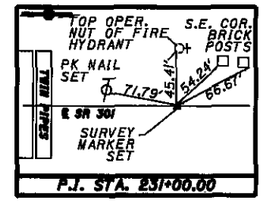
12" CONDUIT, TYPE D	
INLET	OUTLET
STA. 230+00	STA. 229+50
OFFSET 27' LT.	OFFSET 34' LT.
ELEV. = 925.20'	ELEV. = 925.0'

12" CONDUIT, TYPE D	
INLET	OUTLET
STA. 229+37.5	STA. 228+84.5
OFFSET 24' RT.	OFFSET 31' RT.
ELEV. = 925.0'	ELEV. = 924.75'



* FOR MAILBOX APPROACHES AND SUPPORT POSTS DETAILS AND QUANTITIES, SEE SHEET 10 AND BP-4.1.





BENCHMARK
B.M. #1 ELEV. 930.59
X CUT ON FLANGE BOLT
FIRE HYDRANT
STA. 231+06.22
OFFSET 46.97' LT.

FOR ROADWAY AND DRAINAGE QUANTITIES, SEE SHEET 64.
FOR GRADING AND DRAINAGE DETAILS, SEE SHEETS 68-73.
FOR STRUCTURE DETAILS AND QUANTITIES, SEE SHEETS 74-78.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED CAL
CHECKED BTR

PLAN AND PROFILE - MED-301-0677
STA. 229+00 TO STA. 232+00

MED-301-0.00
LOR-301-0.00

67
114

DESIGN FILE: i:\projects\2358\Struct\MED301000\plproolb.dgn
WORKSTATION: sdeer DATE: 2/16/2006

SEEDING END WIDTH	SEEDING SQ. YDS.
3	
31	
	86
0	
	86

60 50 40 30 20 10 ℄ 10 20 30 40 50 60

935 930 925 920 915 940 935 930 925 920 940 935 930 925 920

EX. R/W

6:1 6:1 927.0 24"C EX. GAS LINE EX. WATER LINE

226+00 929.82

6:1 6:1 927.7 EX. 15"PLST. PIPE

925.5 EX. GAS LINE EX. WATER LINE

BEGIN EARTHWORK AND BERM 225+50 929.39

EX. 15"PLST. PIPE

EX. WATER LINE EX. GAS LINE

225+00 928.97

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
5	11		
		5	10
0	0		
		5	10

SHEET TOTAL

SHEET TOTAL

60 50 40 30 20 10 ℄ 10 20 30 40 50 60

DESIGNED HYH
DRAWN BTR

CROSS SECTIONS - MED-301-0677
STA. 225+00 TO STA. 226+00

MED-301-0.00
LOR-301-0.00

68
114

DESIGN FILE: i:\projects\2358\Struct\MED301000\dlxsec.dgn
WORKSTATION: sdeer
DATE: 2/16/2006

SEEDING END WIDTH	SEEDING SQ YDS
27	31
161	161

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
24	2		
27	12		
5	11		
27	12		

DESIGNED BTR
DRAWN HYH
CHECKED

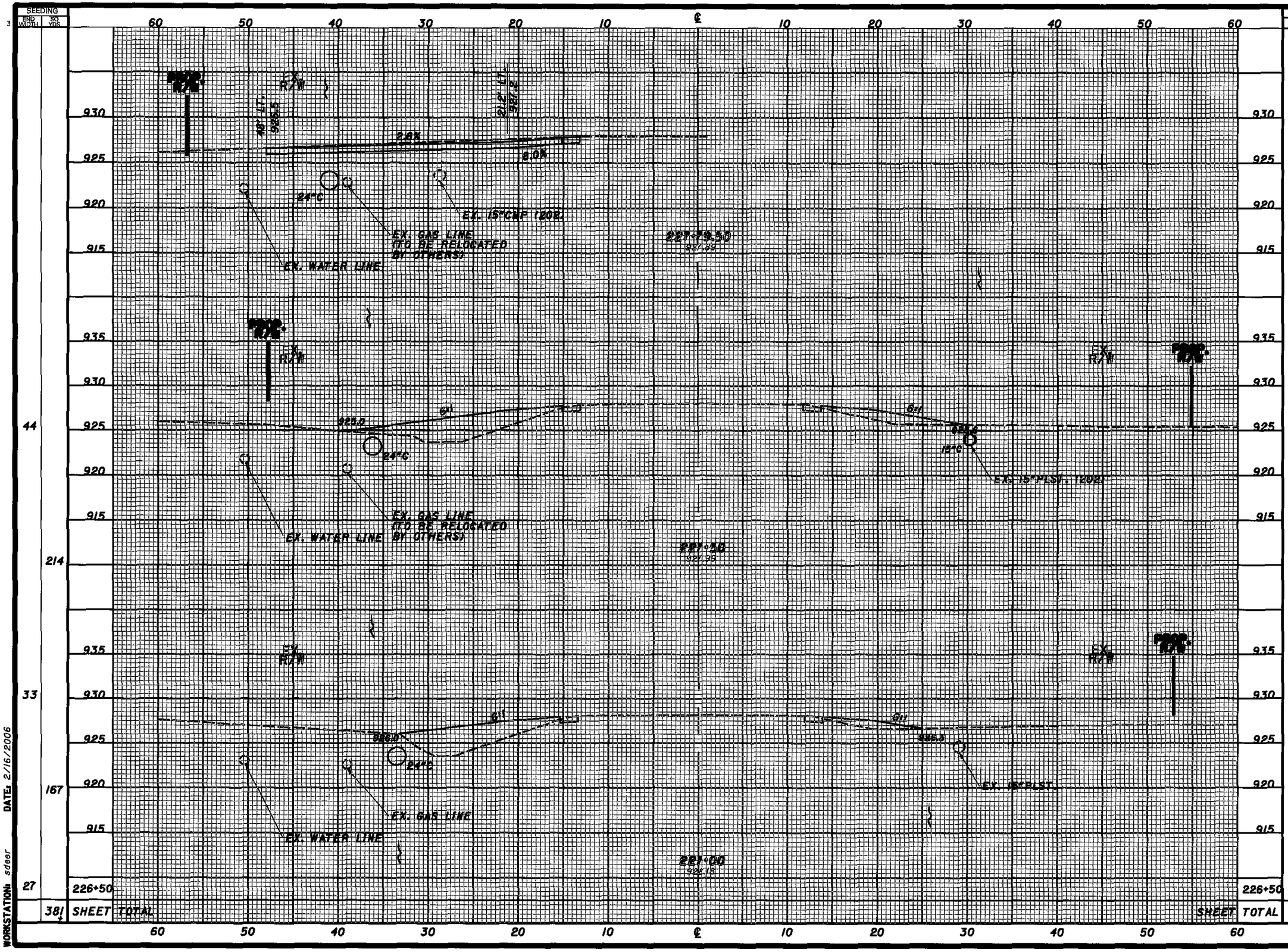
CROSS SECTIONS - MED-301-0677
STA. 226+16.65 TO STA. 226+62.16

MED-301-0.00
LOR-301-0.00

69
114

DESIGN FILE: t:\projects\23581\Struct\MED301000\dlxsec.dgn
WORKSTATION: sdeer
DATE: 2/16/2006

SEEDING			END AREA		VOLUME	
	END WIDTH	SQ YDS	CUT	FILL	CUT	FILL
3						
		44	2	49		
		214	4	83		
		33	2	41		
		167			24	8
		27	24	2		
	381	SHEET TOTAL			28	91



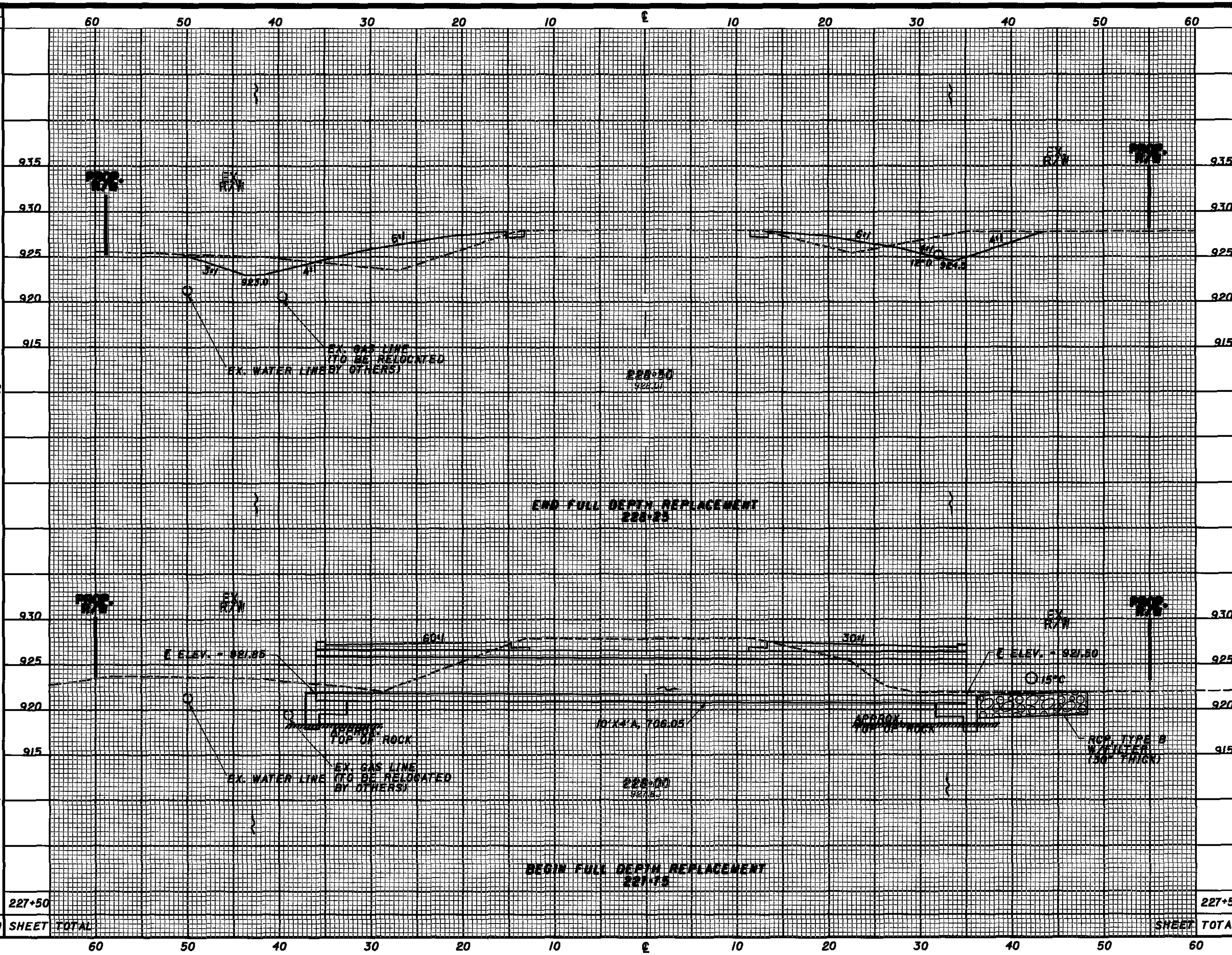
DESIGN FILE: i:\projects\2358\Struct\MED301000\clxsec.dgn
WORKSTATION: sdeer
DATE: 2/16/2006

DESIGNED HYH
DRAWN BTR

CROSS SECTIONS - MED-301-0677
STA. 227+00 TO STA. 227+79.50

MED-301-0.00
LOR-301-0.00

70
114



60 50 40 30 20 10 ℄ 10 20 30 40 50 60
935 930 925 920 915
PROP. R/W
EX. R/W
6:1
3:1
4:1
923.0
12'D
924.3
EX. GAS LINE (TO BE RELOCATED
EX. WATER LINE (BY OTHERS)
228+50
END FULL DEPTH REPLACEMENT 228+25
930 925 920 915
60:1
30:1
℄ ELEV. - 921.85
℄ ELEV. - 921.50
15"C
APPROX. TOP OF ROCK
10'X4'A, 706.05
RCP, TYPE B W/FILTER (30" THICK)
EX. WATER LINE
EX. GAS LINE (TO BE RELOCATED BY OTHERS)
228+00
BEGIN FULL DEPTH REPLACEMENT 227+75
227+50

SEEDING END WIDTH	SEEDING SQ. YDS.	STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
71		228+50	46	45		
	322				81	76
45		228+00	42	37		
	247				41	80
44		227+50	2	49		
	569	SHEET TOTAL			122	156

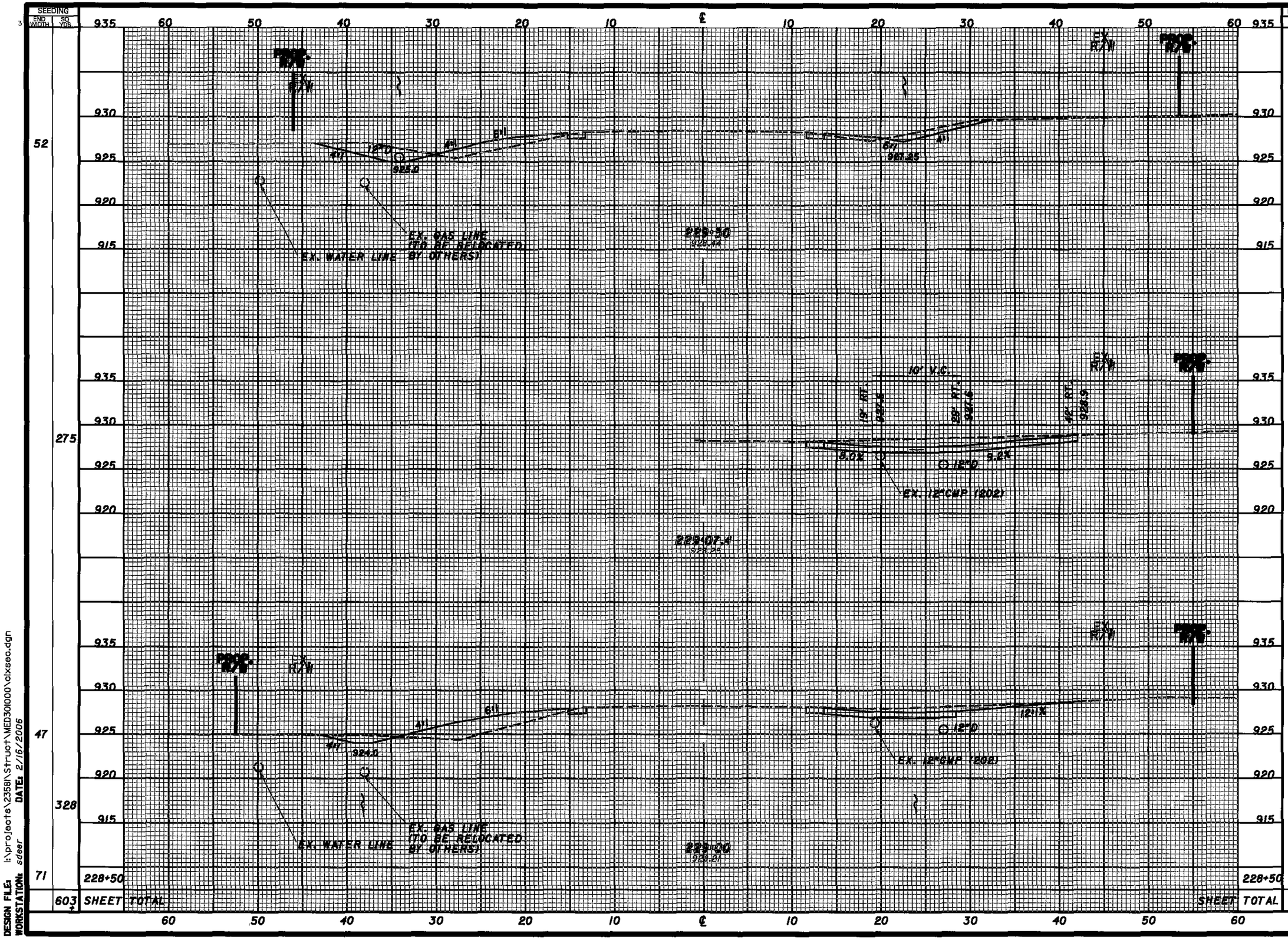
CALCULATED HYH CHECKED BTR

CROSS SECTIONS - MED-301-0677
STA. 227+75 TO STA. 228+50

MED-301-0.00
LOR-301-0.00

DESIGN FILE: I:\projects\2358\Struct\MED301000\clxsec.dgn
WORKSTATION: sdeer DATE: 2/16/2006

SEEDING END WIDTH	SEEDING SQ YDS	STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
52	275	229+50	22	14	45	34
47	328	229+00	27	23	68	63
71		228+50	46	45		
	603	SHEET TOTAL			113	97
		SHEET TOTAL				



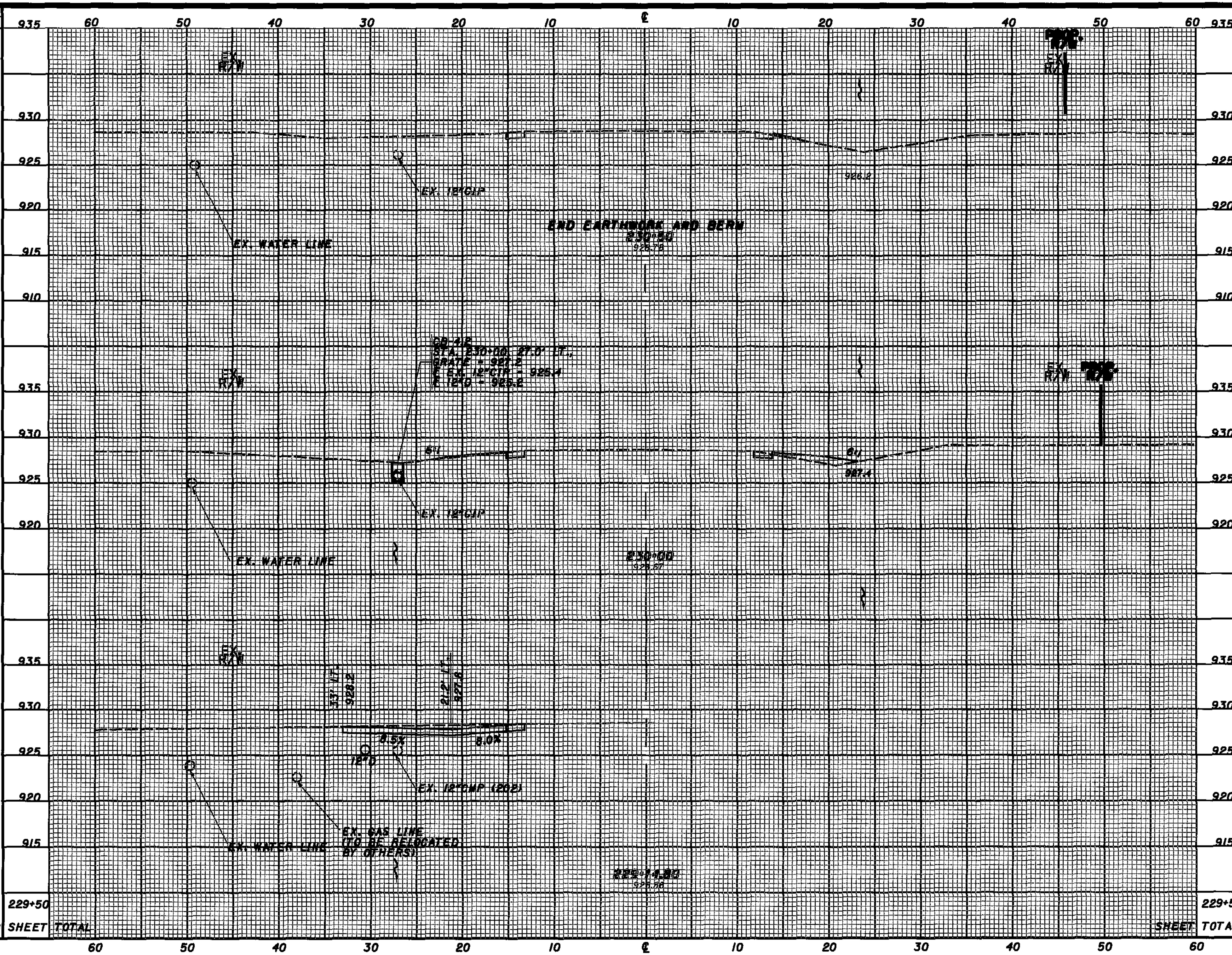
DESIGNED HYH
DRAWN BTR

CROSS SECTIONS - MED-301-0677
STA. 229+00 TO STA. 229+50

MED-301-0.00
LOR-301-0.00

72
114

DESIGN FILE: I:\projects\2358\Struct\MED300000\clxsec.dgn
WORKSTATION: sdeer DATE: 2/16/2006



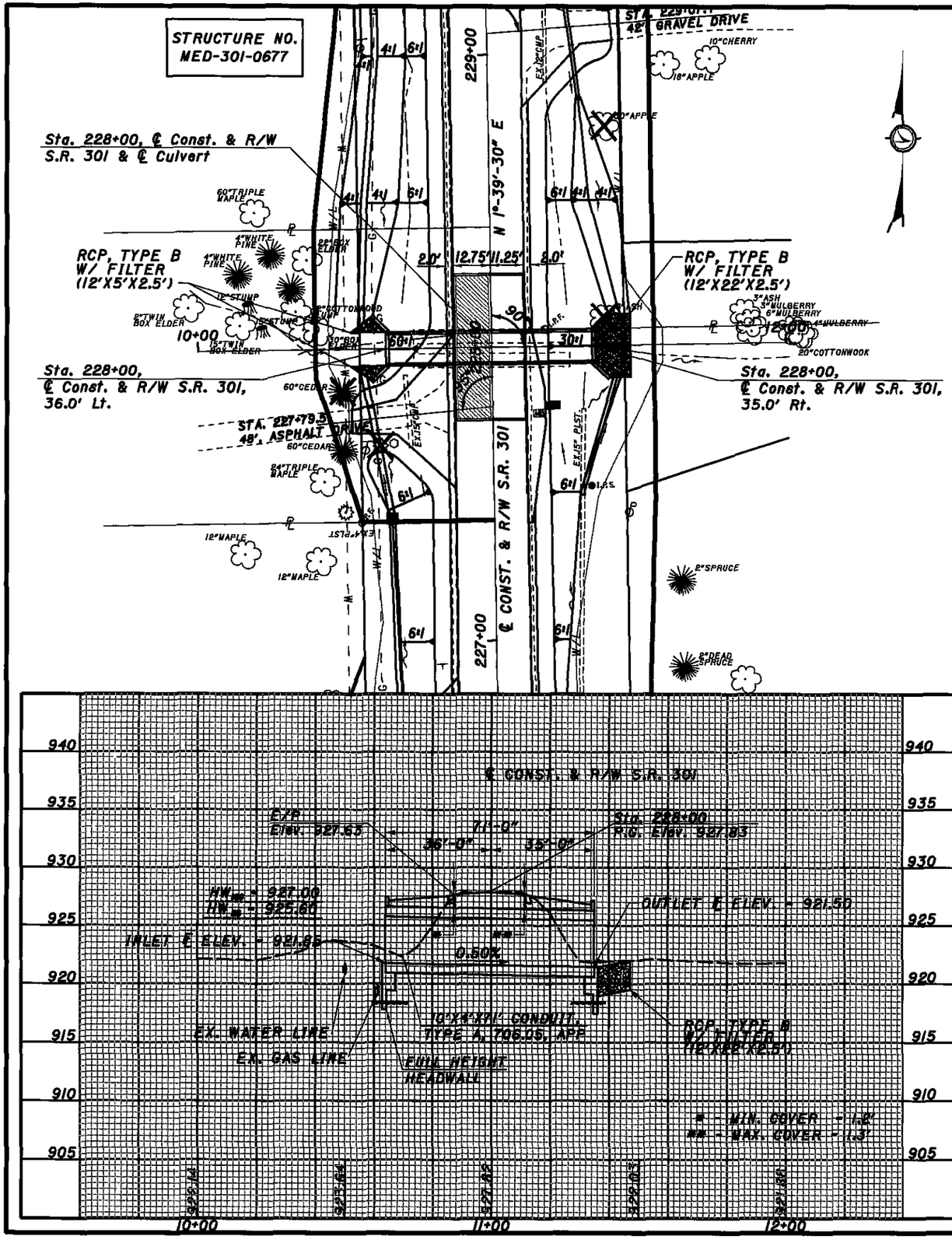
Station	Seeding End Width	Seeding SQ. YDS.	End Area Cut	End Area Fill	Volume Cut	Volume Fill
230+50	0		2	0		
		72			6	6
230+00	26		4	6		
		217			24	19
229+50	52		22	14		
SHEET TOTAL		289			30	25

CALCULATED HYH
CHECKED BTR

CROSS SECTIONS - MED-301-0677
STA. 229+74.80 TO STA. 230+50

MED-301-0.00
LOR-301-0.00

DESIGN FILE: I:\projects\2358\Struct\MED301000\clxsec.dgn
DATE: 2/16/2006
WORKSTATION: sdeer



EXISTING STRUCTURE
TYPE: TWIN 3' X 5' CMP, FLAT BOTTOM PIPES
SPAN: 52'±
ROADWAY: 2-12' LANES, 2'± SHOULDERS
SKEW: NONE
WEARING SURFACE: ASPHALT
APPROACH SLABS: NONE
ALIGNMENT: TANGENT
CONDITION: POOR
DATE BUILT: UNKNOWN

PROPOSED STRUCTURE
TYPE: PRECAST CONCRETE BOX CULVERT WITH REINFORCED CONCRETE WINGWALLS ON SPREAD FOOTINGS
SIZE: 10' SPAN X 4' RISE
LENGTH: 71'-0"
ROADWAY: SEE TYPICAL SECTIONS
SKEW: NONE
LOADING: HS20-44 AND THE ALTERNATE MILITARY LOADING
WEARING SURFACE: ASPHALT
CROWN: 0.016
ALIGNMENT: CURVE
HYDRAULIC DESIGN YEAR FREQUENCY: 25 YR.
SFN: 5207495

NO BUILDINGS, RESIDENCES OR BUSINESS ESTABLISHMENTS LIE IN THE BASE FLOOD PLAIN, AND NO FLOOD HAZARD EXISTS. EXISTING STRUCTURE TO BE REMOVED. ROAD TO BE CLOSED DURING CONSTRUCTION. TRAFFIC TO BE DETOURED AS DETAILED IN THE PLAN.

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

FOR STRUCTURE NOTES AND QUANTITIES, SEE SHEET 2/5.

HYDRAULICS INFORMATION
DRAINAGE AREA = 358 AC.
Est. Q25 = 233 cfs, V25 = 10.6 fps
Est. Q100= 328 cfs, V100 = 11.7 fps

DESIGN AGENCY: DISTRICT THREE
OFFICE OF PRODUCTION

DESIGNED	DRAWN	REVISED	DATE
CAL	CAL	RDW	1/06
CHECKED	REVISED		
DJV			

STRUCTURE FILE NUMBER: 5207495

SITE PLAN
MED-301-0677
BRANCH OF COON CREEK

MED-301-0.00
LOR-301-0.00

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114

DESIGN FILE: i:\projects\2358\Struct\MED301000\plprobl.dgn
WORKSTATION: sdeer DATE: 2/16/2006

GENERAL NOTES

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

DESIGN LOADING:
HS20 AND ALTERNATE MILITARY LOADING

DESIGN DATA: THE FOLLOWING DESIGN DATA IS ASSUMED:

INTERNAL ANGLE OF FRICTION (ϕ) = 30 DEGREES
COEFFICIENT OF FRICTION (*) = 0.30
UNIT WEIGHT OF SOIL = 120 PCF
UNIT WEIGHT OF CONCRETE = 150 PCF
SLOPE OF BACKFILL = 2:1 (TYPE A & B HEADWALLS)
MAXIMUM FOUNDATION BEARING PRESSURE = 2000 P.S.F.

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 PSI (FOOTING, WINGWALL AND FORESLOPE WALL)

REINFORCING STEEL - ASTM A615, A616, OR A617 GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI (ALL REINFORCING SHALL BE EPOXY COATED)

PRECAST CONCRETE: AT THE OPTION OF THE CONTRACTOR, PRECAST FOOTINGS AND WINGWALLS MAY BE USED PROVIDED THEY ARE SIZED TO MEET THE SOIL PARAMETERS AND MEET OR EXCEED THE MATERIAL STRENGTHS SPECIFIED HEREIN. THE CONTRACTOR SHALL SUBMIT DESIGNS AND SHOP DRAWINGS TO THE OFFICE OF STRUCTURAL ENGINEERING FOR APPROVAL.

FORESLOPE WALL ANCHOR DOWELS: ANCHOR PER CMS 510 WITH NONSHRINK, NONMETALLIC GROUT CONFORMING TO CMS 705.20 AND TO A DEPTH SPECIFIED ON SHEET 4/5. PAYMENT FOR DOWEL HOLES, GROUT AND INSTALLATION SHALL BE INCLUDED WITH ITEM 511.

AS AN ALTERNATIVE TO RESIN BONDING, THREADED INSERTS OR NONPROTRUDING MECHANICAL CONNECTORS CAST INTO THE CULVERT BY THE MANUFACTURER MAY BE USED PROVIDED THEY CAN RESIST AN ULTIMATE PULL-OUT STRENGTH OF 12 KIPS AND MAINTAIN A MINIMUM COVER OF 3 INCHES AT THE BOTTOM OF THE CULVERT SLAB. MECHANICAL CONNECTORS MUST PROVIDE AN "L-SHAPED" BAR INSIDE THE CULVERT WITH A MINIMUM HORIZONTAL LENGTH OF 12 INCHES. PAYMENT FOR INSERTS OR MECHANICAL CONNECTORS SHALL BE INCLUDED WITH ITEM 603.

BACKFILL LIMITATION: WHEN THE DESIGN HEIGHT IS GREATER THAN 10 FT, THE BACKFILL BEHIND THE WINGWALLS SHALL NOT BE PLACED HIGHER THAN THE ELEVATION OF THE SOIL ABOVE THE TOE. WHEN THE SOIL ABOVE THE TOE IS AT ITS FINISHED ELEVATION, THE REMAINDER OF THE BACKFILL MAY BE PLACED.

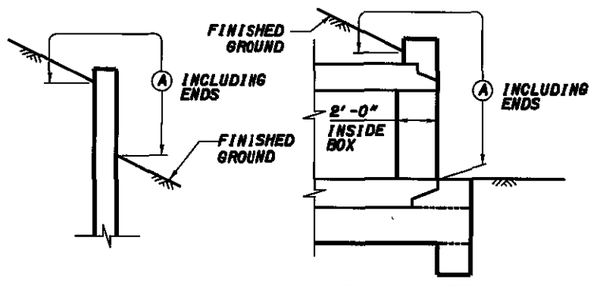
REMOVAL OF EXISTING STRUCTURE:
WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, THE EXISTING STRUCTURE SHALL BE REMOVED UPON RECEIVING PERMISSION FROM THE ENGINEER.

POROUS BACKFILL WITH FILTER FABRIC 1'-6" THICK SHALL BE PLACED BEHIND THE WINGWALLS ONLY AND SHALL EXTEND TO 12" BELOW THE EMBANKMENT SURFACE. GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND REPLACED EXCAVATION ADJACENT TO THE STRUCTURE. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL AND RETURN 6" ABOVE THE TOP ELEVATION OF THE WEEPHOLE.

WEEPHOLES SHALL BE PLACED 6" TO 12" ABOVE THE NORMAL WATER ELEVATION OR GROUND LINE AND SHALL HAVE A MAXIMUM SPACING OF 10'-0". A MINIMUM OF ONE WEEPHOLE SHALL BE PROVIDED PER WINGWALL.

PREFORMED EXPANSION JOINT FILLER: PREFORMED EXPANSION JOINT FILLER (PEJF) CONFORMING TO CMS 705.03, 1 INCH THICK, SHALL BE PLACED ABOVE THE FOOTING BETWEEN THE SIDES OF THE BOX CULVERT AND THE ENDS OF THE WINGWALLS. PAYMENT FOR MATERIALS AND INSTALLATION SHALL BE INCLUDED WITH ITEM 516 - 1" PREFORMED EXPANSION JOINT FILLER.

SEALING OF FORESLOPE WALL AND WINGWALLS: ALL EXPOSED FORESLOPE WALL AND WINGWALL CONCRETE SHALL BE SEALED WITH EPOXY-URETHANE SEALER. THE LIMITS SHALL BE AS SHOWN IN THE DIAGRAMS BELOW. PAYMENT FOR THE EPOXY-URETHANE SEALER SHALL BE PER ITEM 512 - SEALING OF CONCRETE SURFACES.



LIMITS OF ITEM 512-SEALING CONCRETE SURFACES

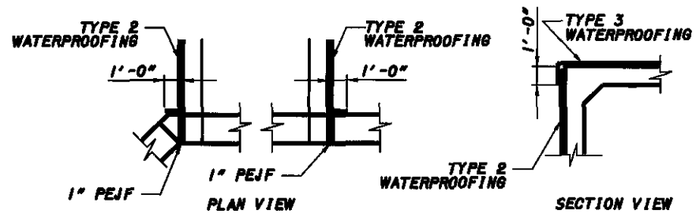
Ⓐ - SEAL ENTIRE CONCRETE SURFACE AREA

ITEM 511-CLASS C CONCRETE, RETAINING WALL OR WINGWALL, AS PER PLAN:
ITEM 511-CLASS C CONCRETE, FOOTING, AS PER PLAN:
ITEM 511-CLASS C CONCRETE, HEADWALL, AS PER PLAN: THE COARSE AGGREGATE FOR THESE ITEMS SHALL BE LIMESTONE.

WATERPROOFING: TYPE 2 WATERPROOFING, PER CMS 512.09 AND 711.25, SHALL EXTEND VERTICALLY DOWN THE ENTIRE SIDES OF THE PRECAST CULVERT SECTIONS FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 2 WATERPROOFING.

IF PAVEMENT IS NOT PLACED DIRECTLY ON TOP OF THE CULVERT, TYPE 2 WATERPROOFING, PER CMS 512.09 AND 711.25 SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND ONE FOOT VERTICALLY DOWN THE SIDES FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 2 WATERPROOFING.

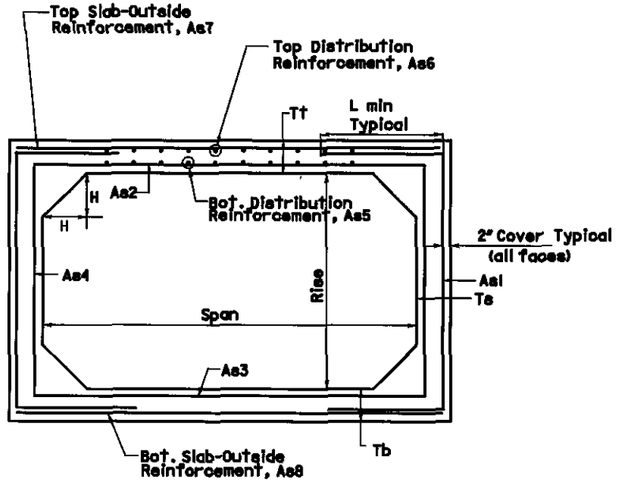
IF PAVEMENT IS TO BE USED DIRECTLY ON TOP OF THE CULVERT, TYPE 3 WATERPROOFING, PER CMS 512.10 AND 711.29 SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND ONE FOOT VERTICALLY DOWN THE SIDES FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 3 WATERPROOFING.



WATERPROOFING DETAILS

BASIS OF PAYMENT: ALL LABOR, EQUIPMENT AND INCIDENTALS REQUIRED TO CONSTRUCT THE FOOTING, CUTOFF WALL, WINGWALLS AND FORESLOPE WALL SHALL BE INCLUDED WITH ITEM 511 - CLASS C CONCRETE (RET-WALL/ WINGWALL- INCLUDING FOOTING). PAYMENT FOR REINFORCING STEEL SHALL BE INCLUDED WITH ITEM 509 - EPOXY COATED REINFORCING STEEL.

ITEM 503-UNCLASSIFIED EXCAVATION (WINGWALL/FOOTING): EXCAVATION LIMITS FOR THE PROPOSED STRUCTURE SHALL BE AS DEFINED IN 503. EXCAVATION OUTSIDE THESE LIMITS NECESSARY TO REMOVE THE EXISTING STRUCTURE OR INSTALL THE PROPOSED STRUCTURE SHALL BE INCLUDED IN ITEM 202-STRUCTURE REMOVED AND ALL NECESSARY 511 ITEMS.



Loading: HS20 & ALT. MILITARY
FWS = 60 psf

Span	10'
Rise	4'
Tt	10"
Tb	10"
Ts	10"
H	10"
As1	0.52
As2	0.59
As3	0.48
As4	0.29
As5	0.29
As6	0.29
As7	0.29
As8	0.29
L min	43"

Notes:

Maximum spacing of the circumferential reinforcing shall be 4".
Minimum yield strength for reinforcing shall be 60 ksi.
Minimum concrete compressive strength shall be 5000 psi.
As min = 0.002 X Gross Section Area

STRUCTURE SUMMARY

ITEM	ITEM EXT	TOTAL	UNIT	DESCRIPTION
202	11000	LUMP		STRUCTURE REMOVED
203	48000	5	CU. YD.	ROCK
503	11100	LUMP		COFFERDAMS, CRIBS, AND SHEETING
503	21300	LUMP		UNCLASSIFIED EXCAVATION (WINGWALL/FOOTING)
509	10000	2850	LB.	EPOXY COATED REINFORCING STEEL
511	46001	7	CU. YD.	CLASS C CONCRETE, RETAINING WALL OR WINGWALL, AS PER PLAN
511	46501	17	CU. YD.	CLASS C CONCRETE, FOOTING, AS PER PLAN
511	46601	1	CU. YD.	CLASS C CONCRETE, HEADWALL, AS PER PLAN
512	10100	24	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	33000	90	SQ. YD.	TYPE 2 WATERPROOFING
512	33010	184	SQ. YD.	TYPE 3 WATERPROOFING
516	13600	26	SQ. FT.	1" PREFORMED EXPANSION JOINT FILLER
518	21230	LUMP		POROUS BACKFILL WITH FILTER FABRIC
601	32100	27	CU. YD.	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER
603	91981	71	FT.	10" X 4" CONDUIT, TYPE A, 706.05, AS PER PLAN
				(COVER VARIES 7" TO 10")

DESIGN FILE: I:\projects\2358\Struct\MED30I000\0677sd.dgn
WORKSTATION: sdeer DATE: 2/16/2006

DESIGN AGENCY
DISTRICT THREE
OFFICE OF PRODUCTION

DESIGNED	DRAWN	REVISED	DATE
CAL	MYH		
CHECKED	REVISED		
DJV			

REVISED	DATE
RDM	1/06

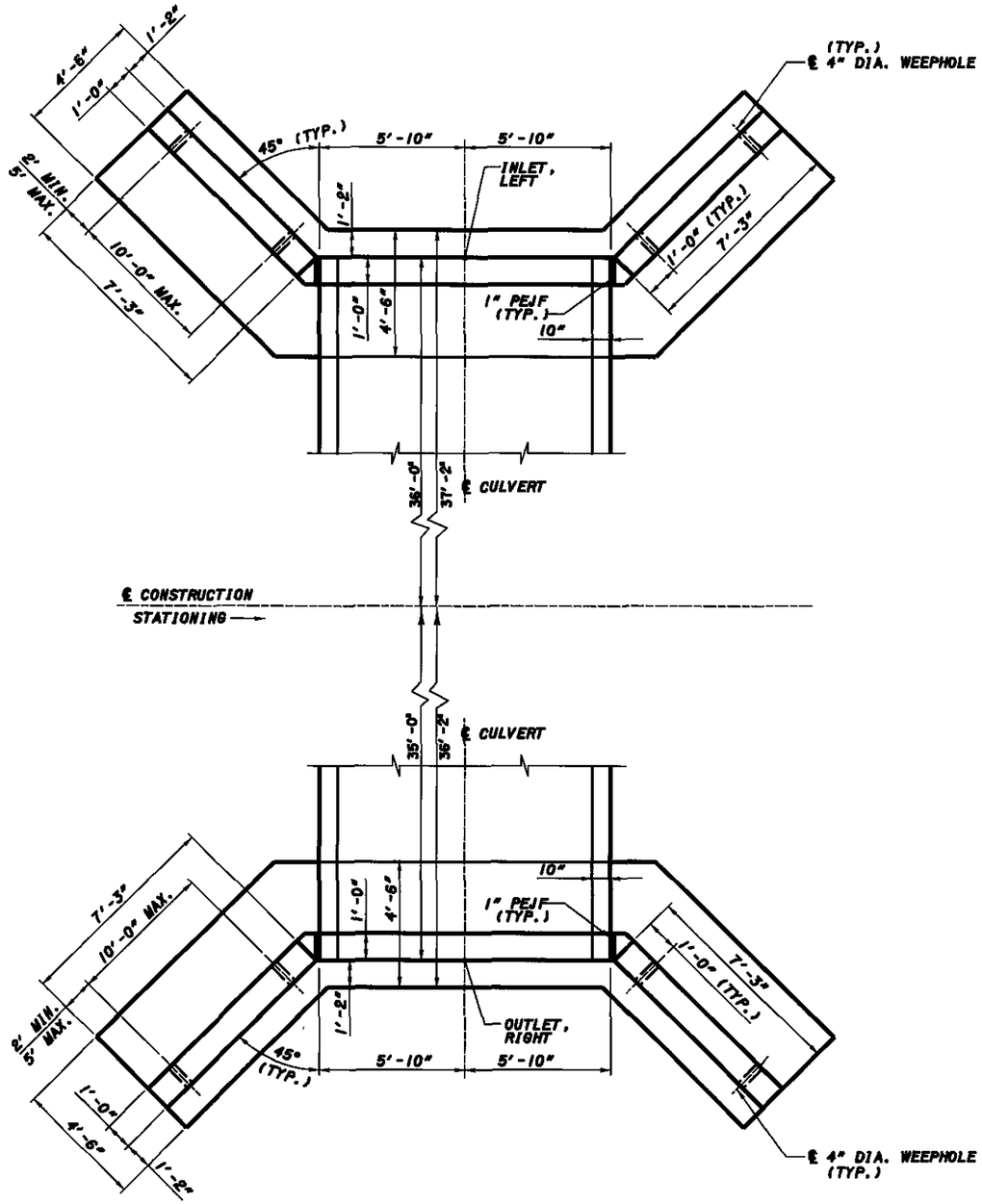
STRUCTURE FILE NUMBER 5207495

STRUCTURE NOTES AND QUANTITIES
MED-301-0677
BRANCH OF COON CREEK

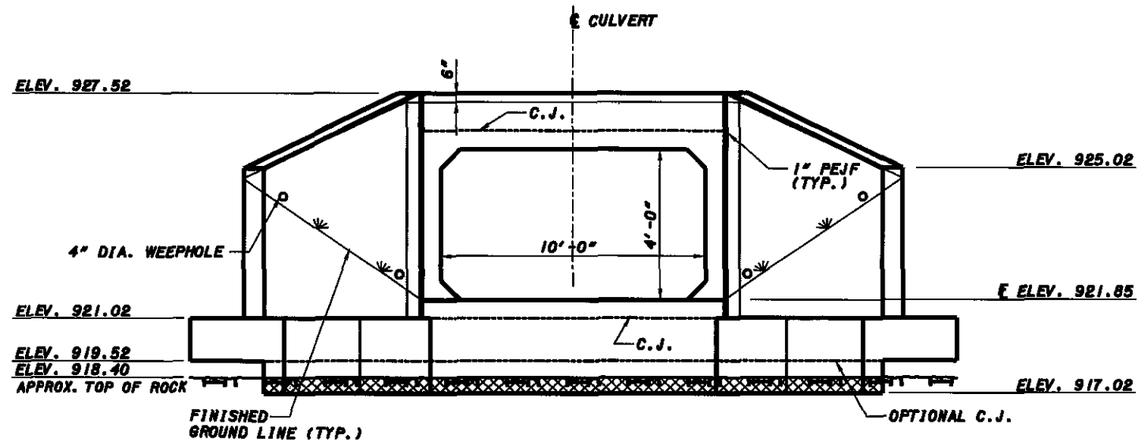
MED-301-0.00
LOR-301-0.00

2 / 5

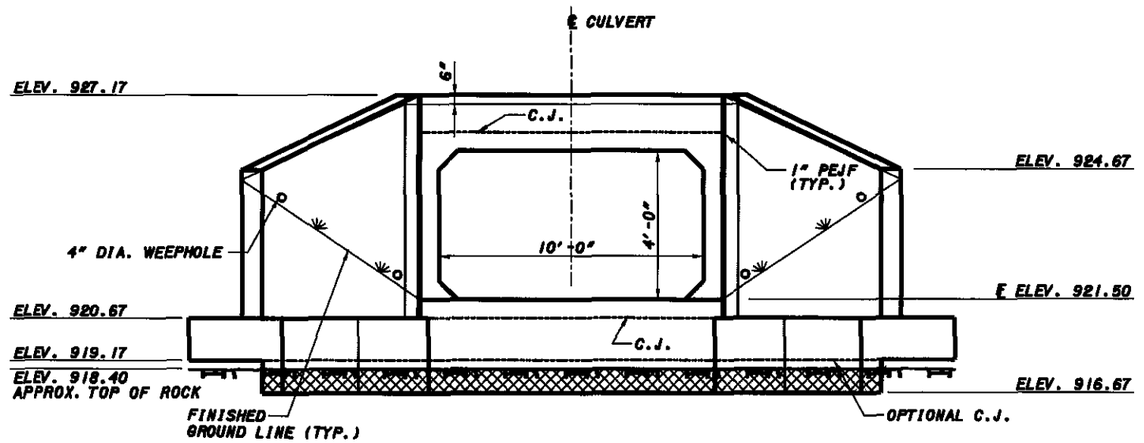
75
114



CULVERT & WINGWALL LAYOUT



INLET ELEVATION



OUTLET ELEVATION

LEGEND:

C.J.	CONSTRUCTION JOINT	PEJF	PREFORMED EXPANSION JOINT FILLER
DIA.	DIAMETER		
MAX.	MAXIMUM	TYP.	TYPICAL
MIN.	MINIMUM		
	ROCK		ROCK EXCAVATION

DESIGN FILE: I:\projects\23581\Struct\MED301000\0677sd.dgn
WORKSTATION: sdeer DATE: 2/16/2006

DESIGN AGENCY: DISTRICT THREE
OFFICE OF PRODUCTION

DESIGNED: CAL | DRAWN: HYH | CHECKED: DJV | REVISED: RDM | DATE: 1/06 | STRUCTURE FILE NUMBER: 5207495

STRUCTURE DETAILS

MED-301-0677
BRANCH OF COON CREEK

MED-301-0.00
LOR-301-0.00

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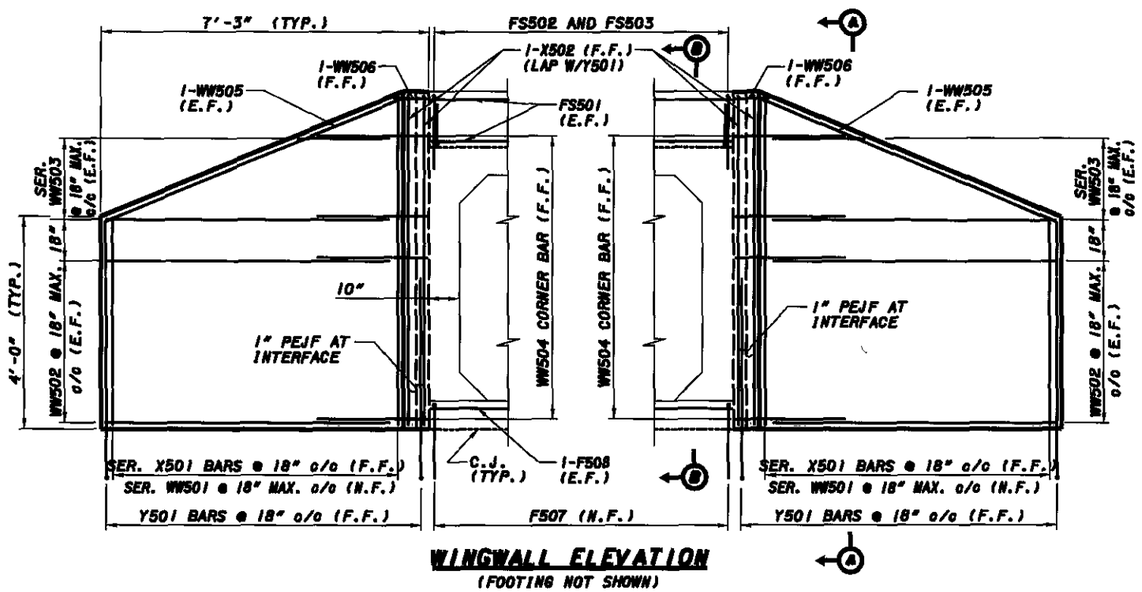
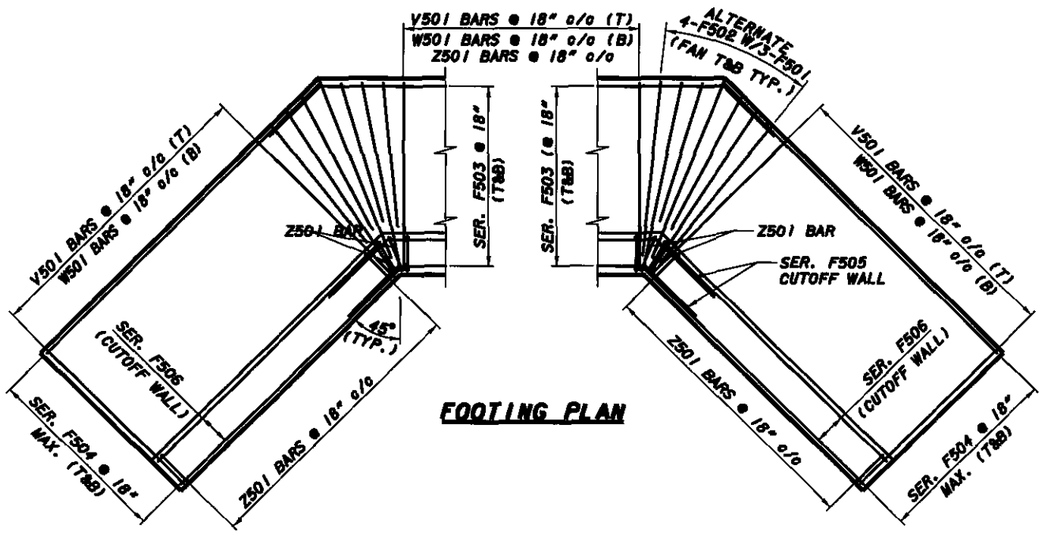
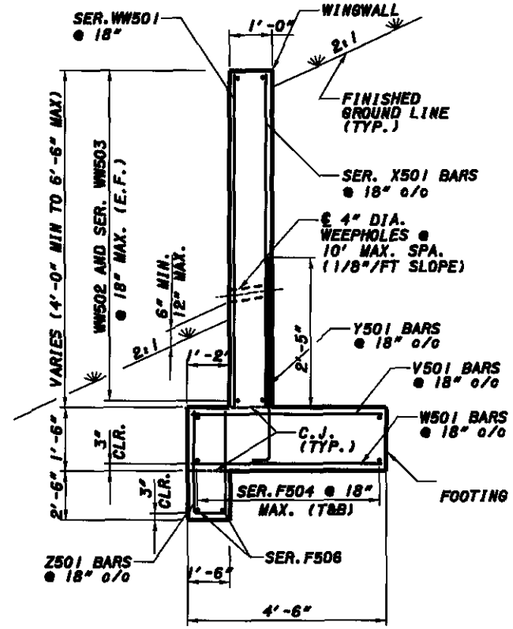


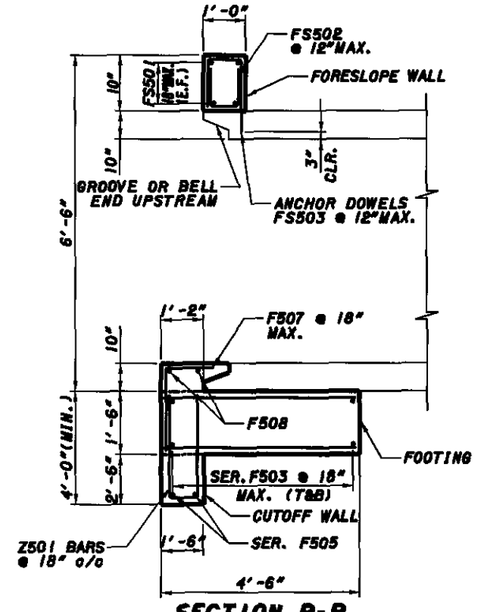
WINGWALL ELEVATION
(FOOTING NOT SHOWN)



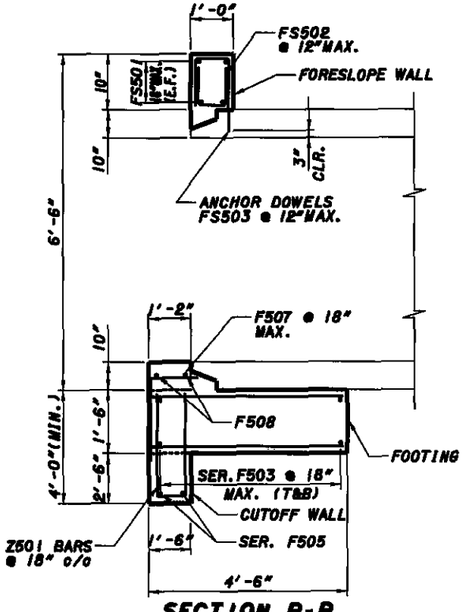
FOOTING PLAN



SECTION A-A
(POROUS BACKFILL NOT SHOWN FOR CLARITY)



SECTION B-B
(CULVERT INLET END SHOWN)



SECTION B-B
(CULVERT OUTLET END SHOWN)

NOTES

1. FOR CULVERT LOCATION PLAN, SEE SHEET 3/5.
2. FOR PRECAST BOX CULVERT DETAILS, SEE SHEET 2/5.
3. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, WW501 IS A NO.5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
4. THE LAP SPLICE LENGTHS USED IN THESE DETAILS ARE AS FOLLOWS: 2'-5" FOR #5 BARS.

LEGEND:

C.J.	CONSTRUCTION JOINT	N.F.	NEAR FACE
CLR.	CLEAR	SER.	SERIES
DIA.	DIAMETER	STR.	STRAIGHT
E.F.	EACH FACE	(T)	TOP
F.F.	FAR FACE	(B)	BOTTOM
MAX.	MAXIMUM	T&B	TOP AND BOTTOM
MIN.	MINIMUM	TYP.	TYPICAL
PEJF	PREFORMED EXPANSION JOINT FILLER	INC.	INCREMENT

DESIGN FILE: I:\projects\2358\Struct\MED301000\0677sd.dgn
WORKSTATION: sdeer DATE: 2/16/2006

DESIGN AGENCY: DISTRICT THREE
OFFICE OF PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
CAL	HYH	RDN	1/06
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DJV		5207495	

STRUCTURE DETAILS
MED-301-0677
BRANCH OF COON CREEK

MED-301-0.00
LOR-301-0.00

4 | 5

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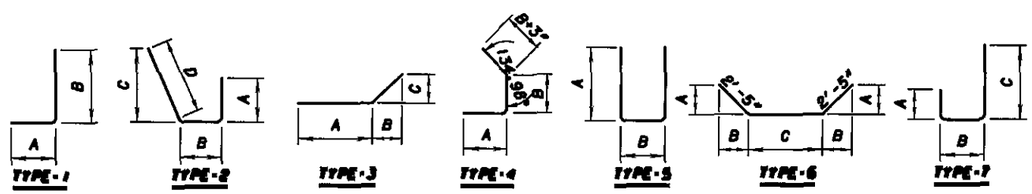
114

TYPE A INLET HEADWALL REINFORCING SCHEDULE

BAR MARK	NUMBER	LENGTH	WEIGHT (LBS)	TYPE	BAR TYPE DIMENSIONS A	B	C	D	INC.
					WINGWALLS				
	2	3'- 10''							
X501	SERIES	TO	64	STR					0'- 6 ''
	of 6	6'- 4''							
X502	4	6'- 4''	27	STR.					
Y501	16	4'- 5''	74	1	0'- 10''	3'- 8''			
	2	3'- 10''							
WW501	SERIES	TO	64	STR.					0'- 6 ''
	of 6	6'- 4''							
WW502	12	6'- 11''	87	STR					
	4	3'- 6''							
WW503	SERIES	TO	44	STR.					3'- 5 ''
	of 2	6'- 11''							
WW504	10	3'- 6''	37	2	0'- 7''	0'- 2 ''	2'- 1/4''	2'- 10 ''	
WW505	4	9'- 9''	41	3	2'- 5''	2'- 4''	6'- 11''		
WW506	2	1'- 1''	3	4	0'- 7''	0'- 2 ''			
					FOOTING & CUTOFF WALL				
V501	21	4'- 2''	92	STR.					
W501	21	4'- 2''	92	STR.					
Z501	25	8'- 2''	213	5	3'- 7''	1'- 2''			
F501	12	3'- 10''	48	STR.					
F502	16	2'- 11''	49	STR.					
	2	15'- 11''					11'- 1/4''		
F503	SERIES	TO	148	6	1'- 9''	1'- 9''	TO		1'- 1 3/4''
	of 4	19'- 5''					14'- 5 1/2''		
	4	6'- 8''							
F504	SERIES	TO	126	STR.					0'- 6 3/4''
	of 4	8'- 4''							
	1	15'- 11''					11'- 1/4''		
F505	SERIES	TO	35	6	1'- 9''	1'- 9''	TO		0'- 11 1/2''
	2	16'- 11''					11'- 11 3/4''		
	2	6'- 8''							
F506	SERIES	TO	29	STR.					0'- 5 ''
	2	7'- 1''							
F507	9	3'- 2''	30	1	1'- 3''	2'- 0''			
F508	2	11'- 4''	24	STR.					
					FORESLOPE WALL				
FS501	4	11'- 4''	48	STR.					
FS502	13	1'- 5''	20	5	0'- 6''	0'- 8''			
FS503	13	2'- 2''	30	7	0'- 6''	0'- 8''	1'- 3''		
		TOTAL	1,425						

TYPE A OUTLET HEADWALL REINFORCING SCHEDULE

BAR MARK	NUMBER	LENGTH	WEIGHT (LBS.)	TYPE	BAR TYPE DIMENSIONS A	B	C	D	INC
					WINGWALLS				
	2	3'- 10''							
X501	SERIES	TO	64	STR.					0'- 6 ''
	of 6	6'- 4''							
X502	4	6'- 4''	27	STR.					
Y501	16	4'- 5''	74	1	0'- 10''	3'- 8''			
	2	3'- 10''							
WW501	SERIES	TO	64	STR					0'- 6 ''
	of 6	6'- 4''							
WW502	12	6'- 11''	87	STR.					
	4	3'- 6''							
WW503	SERIES	TO	44	STR.					3'- 5 ''
	of 2	6'- 11''							
WW504	10	3'- 6''	37	2	0'- 7''	0'- 2 ''	2'- 1/4''	2'- 10 ''	
WW505	4	9'- 9''	41	3	2'- 5''	2'- 4''	6'- 11''		
WW506	2	1'- 1''	3	4	0'- 7''	0'- 2 ''			
					FOOTING & CUTOFF WALL				
V501	21	4'- 2''	92	STR.					
W501	21	4'- 2''	92	STR.					
Z501	25	8'- 2''	213	5	3'- 7''	1'- 2''			
F501	12	3'- 10''	48	STR.					
F502	16	2'- 11''	49	STR.					
	2	15'- 11''					11'- 1/4''		
F503	SERIES	TO	148	6	1'- 9''	1'- 9''	TO		1'- 1 3/4''
	of 4	19'- 5''					14'- 5 1/2''		
	4	6'- 8''							
F504	SERIES	TO	126	STR.					0'- 6 3/4''
	of 4	8'- 4''							
	1	15'- 11''					11'- 1/4''		
F505	SERIES	TO	35	6	1'- 9''	1'- 9''	TO		0'- 11 1/2''
	2	16'- 11''					11'- 11 3/4''		
	2	6'- 8''							
F506	SERIES	TO	29	STR.					0'- 5 ''
	2	7'- 1''							
F507	9	3'- 2''	30	1	1'- 3''	2'- 0''			
F508	2	11'- 4''	24	STR.					
					FORESLOPE WALL				
FS501	4	11'- 4''	48	STR.					
FS502	13	1'- 5''	20	5	0'- 6''	0'- 8''			
FS503	13	2'- 2''	30	7	0'- 6''	0'- 8''	1'- 3''		
		TOTAL	1,425						



DESIGN FILE: i:\projects\23581\Struct\MED301000\0677sd.dgn
WORKSTATION: sdeer DATE: 2/16/2006

DESIGN AGENCY DISTRICT THREE OFFICE OF PRODUCTION

DESIGNED CAL | CHECKED DJV | DRAWN MYH | REVISED | REVIEWED RDN | DATE 1/06 | STRUCTURE FILE NUMBER 5207495

REINFORCING STEEL LIST

MED-301-0677
BRANCH OF COON CREEK

MED-301-0.00
LOR-301-0.00

5 / 5

78 / 114

MED-301-0337 SFN 5207444

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
202	11300	7.6	CU YD	PORTION OF STRUCTURE REMOVED	
202	38501	471.5	FT	BRIDGE RAILING REMOVED, AS PER PLAN	83
202	98100	3	EACH	REMOVAL MISC.: END CROSS FRAME	83
509	10000	150	POUND	EPOXY COATED REINFORCING STEEL	
511	34401	2.5	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN	83
511	45701	3.2	CU YD	CLASS C CONCRETE, ABUTMENT, AS PER PLAN	83
512	10100	138	SQ YD	SEALING OF CONCRETE STRUCTURES (EPOXY-URETHANE)	
513	10201	732	POUND	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	84
513	21000	4	EACH	TRIMMING OF BEAM END	
514	00100	LUMP		SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
514	00200	LUMP		FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
514	00300	LUMP		FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
514	00400	LUMP		FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
514	10000	1	EACH	FINAL INSPECTION REPAIR	
516	11210	67	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL	
516	46200	8	EACH	BEARING DEVICE. ROCKER	
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	84
517	72750	476.7	FT	RAILING (THRIE BEAM RETROFIT)	
518	12700	27	EACH	SCUPPER, VERTICAL EXTENSION	
848	10001	734	SQ YD	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2½" THICK)	84
848	20000	734	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION	
848	30001	20	CU YD	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN	84
848	50000	22	SQ YD	HAND CHIPPING	
848	50100	LUMP		TEST SLAB	
848	50200	1	CU YD	FULL-DEPTH REPAIR	
848	50320	734	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (1½" NOMINAL THICKNESS)	
848	50340	37	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY	

DESIGN FILE i:\projects\2358\Struct\2358lss.dgn
WORKSTATION sdsr DATE 2/16/2006

DISTRICT 3
OFFICE OF PRODUCTION

MARK	02/06
REVISED	RDN
DRAWN	GTS
REVISED	
DESIGNED	GTS
CHECKED	DJV

STRUCTURE SUMMARY

MED-301-0.00
LOR-301-0.00

MED-301-0624 SFN 5207509

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
202	11300	4.11	CU YD	PORTIONS OF STRUCTURE REMOVED	
202	38500	50	FT.	BRIDGE RAILING REMOVED	
509	10000	590	POUND	EPOXY COATED REINFORCING STEEL	
511	34401	4.2	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN	83
511	45701	1.8	CU YD	CLASS C CONCRETE, ABUTMENT, AS PER PLAN	83
512	10100	10	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
516	13200	9	SQ FT	½" PREFORMED EXPANSION JOINT FILLER	
517	70000	50.83	FT.	RAILING (TWIN STEEL TUBE)	
SPECIAL	51822300	43	FT.	STEEL DRIP STRIP	84
848	10001	69	SQ YD	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2½" THICK)	84
848	20000	60	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION	
848	30001	2	CU YD	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN	84
848	50000	2	SQ YD	HAND CHIPPING	
848	50100	LUMP		TEST SLAB	
848	50200	1	CU YD	FULL-DEPTH REPAIR	
848	50300	53	SQ YD	WEARING COURSE REMOVED, ASPHALT	
848	50320	69	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (1½" NOMINAL THICKNESS)	
848	50340	4	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY	

MED-301-0701 SFN 5207533

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
202	11300	23.35	CU YD	PORTIONS OF STRUCTURE REMOVED	
202	38500	187.50	FT.	BRIDGE RAILING REMOVED	
509	10000	4567	POUND	EPOXY COATED REINFORCING STEEL	
511	34401	30	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN	83
511	45701	4.01	CU YD	CLASS C CONCRETE, ABUTMENT, AS PER PLAN	83
512	10100	87	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
516	13200	18	SQ FT	½" PREFORMED EXPANSION JOINT FILLER	
517	70000	181.25	FT.	RAILING (TWIN STEEL TUBE)	
SPECIAL	51822300	212.50	FT.	STEEL DRIP STRIP	84
601	34400	59	CU YD	ROCK CHANNEL PROTECTION, WITH GROUT, TYPE B	
848	10001	312	SQ YD	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2½" THICK)	84
848	20000	312	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION	
848	30001	9	CU YD	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN	84
848	50000	10	SQ YD	HAND CHIPPING	
848	50100	LUMP		TEST SLAB	
848	50200	1	CU YD	FULL-DEPTH REPAIR	
848	50320	312	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (1½" NOMINAL THICKNESS)	
848	50340	16	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY	

DESIGN FILE i:\projects\2358\Struct\2358ss.dgn
WORKSTATION: sdeer DATE 2/16/2006

DISTRICT 3
OFFICE OF PRODUCTION

RDN 02/06
GTS
GTS DJV

STRUCTURE SUMMARY

MED-301-0.00
LOR-301-0.00

LOR-301-0015 SFN 4706331

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
512	10100	12	SQ YD	SEALING OF CONCRETE STRUCTURES (EPOXY-URETHANE)	
512	73500	1	SQ YD	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY-FED RESIN	
614	12800	348	EACH	WORK ZONE RAISED PAVEMENT MARKER	
614	13202	9	EACH	BARRIER REFLECTOR, TYPE A2	
614	21000	.06	MILE	WORK ZONE CENTER LINE, CLASS I (SOLID DOUBLE)	
614	22000	.04	MILE	WORK ZONE EDGE LINE, CLASS I (WHITE)	
614	26000	24	FT.	WORK ZONE STOP LINE, CLASS I	
615	10000	LUMP		ROADS FOR MAINTAINING TRAFFIC	
615	25001	272	SQ.YD.	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN	84
848	10001	68	SQ YD	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2½" THICK)	84
848	20000	68	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION	
848	30001	3	CU YD	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN	84
848	50000	3	SQ YD	HAND CHIPPING	
848	50100	LUMP		TEST SLAB	
848	50200	1	CU YD	FULL-DEPTH REPAIR	
848	50320	68	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (1½" NOMINAL THICKNESS)	
848	50340	4	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY	

LOR-301-0164 SFN 4706366

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
512	10100	83	SQ YD	SEALING OF CONCRETE STRUCTURES (EPOXY-URETHANE)	
512	73500	3	SQ YD	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY-FED RESIN	
614	12800	388	EACH	WORK ZONE RAISED PAVEMENT MARKER	
614	13202	20	EACH	BARRIER REFLECTOR, TYPE A2	
614	21000	.06	MILE	WORK ZONE CENTER LINE, CLASS I (SOLID DOUBLE)	
614	22000	.04	MILE	WORK ZONE EDGE LINE, CLASS I (WHITE)	
614	26000	24	FT.	WORK ZONE STOP LINE, CLASS I	
615	10000	LUMP		ROADS FOR MAINTAINING TRAFFIC	
615	25001	453	SQ.YD.	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN	84
848	10001	296	SQ YD	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2½" THICK)	84
848	20000	296	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION	
848	30001	9	CU YD	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN	84
848	50000	9	SQ YD	HAND CHIPPING	
848	50100	LUMP		TEST SLAB	
848	50200	1	CU YD	FULL-DEPTH REPAIR	
848	50320	296	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (1½" NOMINAL THICKNESS)	
848	50340	15	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY	

DESIGN FILE I:\projects\2358\Struct\2358lss.dgn
WORKSTATION: sdeer DATE 2/16/2006

DISTRICT 3
OFFICE OF PRODUCTION

DATE 02/06
REVISED RDN
APPROVED GTS
DESIGNED GTS
CHECKED DJV

STRUCTURE SUMMARY

MED-301-0.00
LOR-301-0.00

LOR-301-0894 SFN 4706390

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
601	27000	13	CU YD	DUMPED ROCK FILL, TYPE C	

LOR-301-0919 SFN 4706439

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
512	10100	39	SQ YD	SEALING OF CONCRETE STRUCTURES (EPOXY-URETHANE)	
601	26000	6	CU YD	DUMPED ROCK FILL, TYPE B	

LOR-301-1241 SFN 4706609

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
202	11300	15	CU YD	PORTIONS OF STRUCTURE REMOVED	
509	10000	1427	POUND	EPOXY COATED REINFORCING STEEL	
511	34401	15	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN	83
512	10100	675	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
512	10400	1748	SQ YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS	

DESIGN FILE I:\projects\2358\Struct\2358lss.dgn
WORKSTATION sdeer DATE 2/16/2006

DESIGNED GTS
DRAWN GTS
REVIEWED RDN 02/06
APPROVED
DISTRICT 3
OFFICE OF PRODUCTION

STRUCTURE SUMMARY

MED-301-0.00
LOR-301-0.00

REFERENCES SHALL BE MADE TO STANDARD DRAWINGS:

DS-1-92	DATED	7/18/03	EXJ-4-87	DATED	7/19/02
TST-1-99	DATED	10/17/03	GSD-1-96	DATED	7/19/02
BP-3.1	DATED	7/16/04	RB-1-55	DATED	2/02/59
MT-97.10	DATED	4/19/02	TBR-91	DATED	7/19/02
MT-101.60	DATED	10/18/02	MT-96.20	DATED	4/19/02
MT-105.10	DATED	10/18/02	MT-96.25	DATED	4/20/01
MT-105.11	DATED	10/18/02	MT-101.20	DATED	10/18/02

AND TO SUPPLEMENTAL SPECIFICATIONS:

848 DATED 4/15/05

DESIGN DATA

CONCRETE CLASS S - f'c = 4,500 psi SUPERSTRUCTURE
CONCRETE CLASS C - f'c = 4,000 psi SUBSTRUCTURE
REINFORCING STEEL - ASTM A615 OR A996 GRADE 60
MINIMUM Fy = 60,000 psi.
DECK PROTECTION METHOD - EPOXY COATED REINFORCING STEEL

EXISTING STRUCTURE VERIFICATION:

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

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

DESIGN SPECIFICATIONS:

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

PLACING ASPHALT CONCRETE FEATHERING ON APPROACHES TO BRIDGES:

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

CUT LINE CONSTRUCTION JOINT PREPARATION:

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH [25 MM] DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL IN PLACE. 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.

ITEM 202- PORTIONS OF STRUCTURE REMOVED:

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. 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. PERFORM ALL WORK 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 NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

ITEM 202 - BRIDGE RAILING REMOVED, AS PER PLAN:

THIS ITEM SHALL BE USED TO REMOVE THE ALUMIMUM RAIL, AND PARTS OF THE TOP OF THE PARAPETS. THE ANCHOR BOLTS SHALL BE REMOVED 1/4" BELOW TOP OF PARAPET.

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

ITEM 202 REMOVAL MISC.: END CROSS FRAME:

THIS ITEM SHALL BE USED TO REMOVE THE EXISTING END CROSS FRAME AT THE REAR ABUTMENT. THE CROSS FRAMES SHALL BE REMOVED AND AREAS GROUND SMOOTH.

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

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

THE COARSE AGGREGATE SHALL BE LIMESTONE.

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

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

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

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

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER CUBIC YARD FOR ITEM 511- CLASS C CONCRETE, ABUTMENT, AS PER PLAN WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

DESIGN FILE: i:\projects\2358\Struct\strnote.dgn
WORKSTATION: sdeer DATE: 2/16/2006

DESIGN AGENCY: DISTRICT 3
OFFICE OF PRODUCTION

DESIGNED: GTS | DRAWN: GTS | CHECKED: DJV | REVISED:
DATE: 02/06 | REVISED: RDN | STRUCTURE FILE NUMBER:

STRUCTURE GENERAL NOTES

MED-301-0.00
LOR-301-0.00

ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN:

ALL REQUIREMENTS OF 513 APPLY TO SHOP FABRICATED MEMBERS. PERFORM WORK FOR FIELDFABRICATED MEMBERS ACCORDING TO ITEM 513, EXCEPT AS MODIFIED HEREIN. THE DEPARTMENT WILL NOT REQUIRE THE CONTRACTOR PERFORMING FIELD FABRICATION TO BE PRE-QUALIFIED AS SPECIFIED IN SUPPLEMENT 1078. SUBMIT A WRITTEN LETTER OF MATERIAL ACCEPTANCE, 501.06, TO THE ENGINEER. PROVIDE SHOP DRAWINGS ACCORDING TO 513.04 OR SUPPLY THE ENGINEER WITH "AS-BUILT" DRAWINGS MEETING 513.04 AFTER COMPLETION OF FIELD FABRICATION. THE ENGINEER WILL REVIEW THE SUBMITTED DRAWINGS FOR CONCURRENCE WITH THE FINAL AS-BUILT CONDITION. IF NECESSARY, THE ENGINEER MAY CONTACT THE OFFICE OF STRUCTURAL ENGINEERING FOR TECHNICAL ASSISTANCE. IF THE ENGINEER IS SATISFIED WITH THE "AS-BUILT" DRAWINGS AND THE DELIVERED MATERIALS, SUPPLY A COPY OF THE DRAWINGS, STAMPED AND DATED, ALONG WITH MICROFILM, TO THE STRUCTURAL, WELDING AND METALS SECTION OF THE OFFICE OF MATERIAL MANAGEMENT FOR RECORD PURPOSES.

THE FOLLOWING MEMBERS ARE INCLUDED IN THIS ITEM: END CROSS FRAME.

ITEM 513 TRIMMING OF BEAM ENDS:

THE ENDS OF BEAM AT REAR ABUTMENT SHALL BE TRIMMED TO PROVIDE FOR 3" OF CLEARANCE TO THE EXISTING BACKWALL.

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

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

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS. SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05. IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS. THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 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 - MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2½ INCH THICK):

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

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

THIS ITEM SHALL BE USED FOR PAVEMENT WIDENING AS PER DETAILS IN THE PLAN.

THE CONTRACTOR SHALL, UNDER THE DIRECTION OF THE ENGINEER, LOCATE THE EDGES OF THE SOUND PAVEMENT, AND SHALL CUT AND TRIM THE EXISTING PAVEMENT TO A NEAT LINE AS ESTABLISHED BY THE ENGINEER. THE CONTRACTOR SHALL DISPOSE OF PAVEMENT FROM THE TRIMMING OPERATION.

WIDENING SHALL BE DONE ON ONLY ONE SIDE OF THE PAVEMENT AT A TIME.

ALL EXCAVATION, PAVEMENT TRIMMING, FILL MATERIAL AND ANY OTHER INCIDENTAL ITEMS NEEDED SHALL BE INCLUDED IN THIS ITEM. WHEN NO LONGER NEEDED FOR TRAFFIC MAINTENANCE, THE TEMPORARY PAVEMENT SHALL REMAIN IN PLACE. ALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY RAISED PAVEMENT MARKERS SHALL BE REMOVED AS PER 641.10 AND 202.071.

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

ITEM SPECIAL - STEEL DRIP STRIP:

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

SEE STD. DRW. DS-1-92 FOR DETAILS AND NOTES

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

DESIGN FILE: i:\projects\23581\Struct\strnote.dgn
WORKSTATION: sdeer DATE: 2/16/2006

DESIGN AGENCY: DISTRICT 3 OFFICE OF PRODUCTION
DESIGNED: BTS DRAWN: BTS REVISED: RDW DATE: 02/06 STRUCTURE FILE NUMBER
CHECKED: DJV REVISED:

STRUCTURE GENERAL NOTES

MED-301-0.00
LOR-301-0.00

84
114

ITEM 614 - MAINTAINING TRAFFIC:
STRUCTURE LOR-301-0015 & LOR-301-0164

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT THROUGH TRAFFIC ON THESE STRUCTURES SHALL HAVE A SIGNALIZED CLOSURE AS SHOWN ON SHEET NO. 86 FOR A MAXIMUM OF 35 CONSECUTIVE CALENDAR DAYS (TOTAL BOTH PHASES AND BOTH STRUCTURES). THE 35 CONSECUTIVE DAYS SHALL BE CONSIDERED AS AN INTERIM COMPLETION DATE (SECTION 108) AND FOR EACH CALENDAR DAY BEYOND THE 35 CALENDAR DAYS THAT THE HIGHWAY REMAINS IN A SIGNALIZED CLOSURE, THE CONTRACTOR WILL BE ASSESSED LIQUIDATED DAMAGES AS PER 108.07.

LOR-301-0015 AND LOR-301-0164 SHALL BE MAINTAINED AT THE SAME TIME.

NO EQUIPMENT OR MATERIAL SHALL BE LOCATED OTHER THAN BEHIND THE DRUMS.

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

THE SPACING BETWEEN PROPOSED SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS.

MED-301-0337, MED-301-5.48, MED-301-0624, MED-301-0677 & MED-301-0701

DETOUR LIMITATION AND INTERIM COMPLETION DATE:

TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 105 CONSECUTIVE CALENDAR DAYS, THROUGH TRAFFIC WILL BE DETOURED AS SHOWN ON SHEET 86.

FOR STRUCTURE MED-301-0337, TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR PERIOD NOT TO EXCEED 45 CONSECUTIVE CALENDAR DAYS, THROUGH TRAFFIC WILL BE DETOURED AS SHOWN ON SHEET 86. FROM STRUCTURES MED-301-5.48, MED-301-0624, MED-301-06.77 AND MED-301-0701. TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 30 CONSECUTIVE CALENDAR DAYS, THROUGH TRAFFIC WILL BE DETOURED AS SHOWN ON SHEET 86.
STRUCTURE MED-301-0677 AND MED-301-0701 SHALL NOT BE CLOSED AT THE SAME TIME.

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.

THIS ROADWAY SHALL BE OPENED BY OCTOBER 15, 2006. THIS DATE SHALL BE CONSIDERED AS AN INTERIM COMPLETION DATE (SECTION 108) AND FOR EACH CALENDAR DAY BEYOND THE OCTOBER 15, 2006 DATE 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.

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 105 CONSECUTIVE CALENDAR DAYS SHALL BE CONSIDERED AS AN INTERIM COMPLETION DATE (SECTION 108) AND FOR EACH CALENDAR DAY BEYOND THE 105 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 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

DESIGN AGENCY: DISTRICT 3 OFFICE OF PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
GTS	GTS	RDM	02/06

CHECKED: QV REVISED: STRUCTURE FILE NUMBER:

STRUCTURE GENERAL NOTES

MED-301-0.00
LOR-301-0.00

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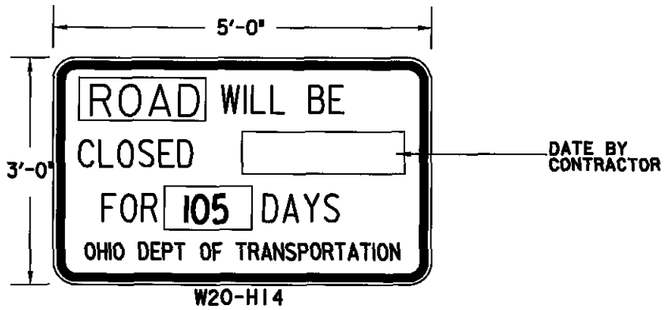
WORKSTATION: sdeer DATE: 2/16/2006

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 ERECTING 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.



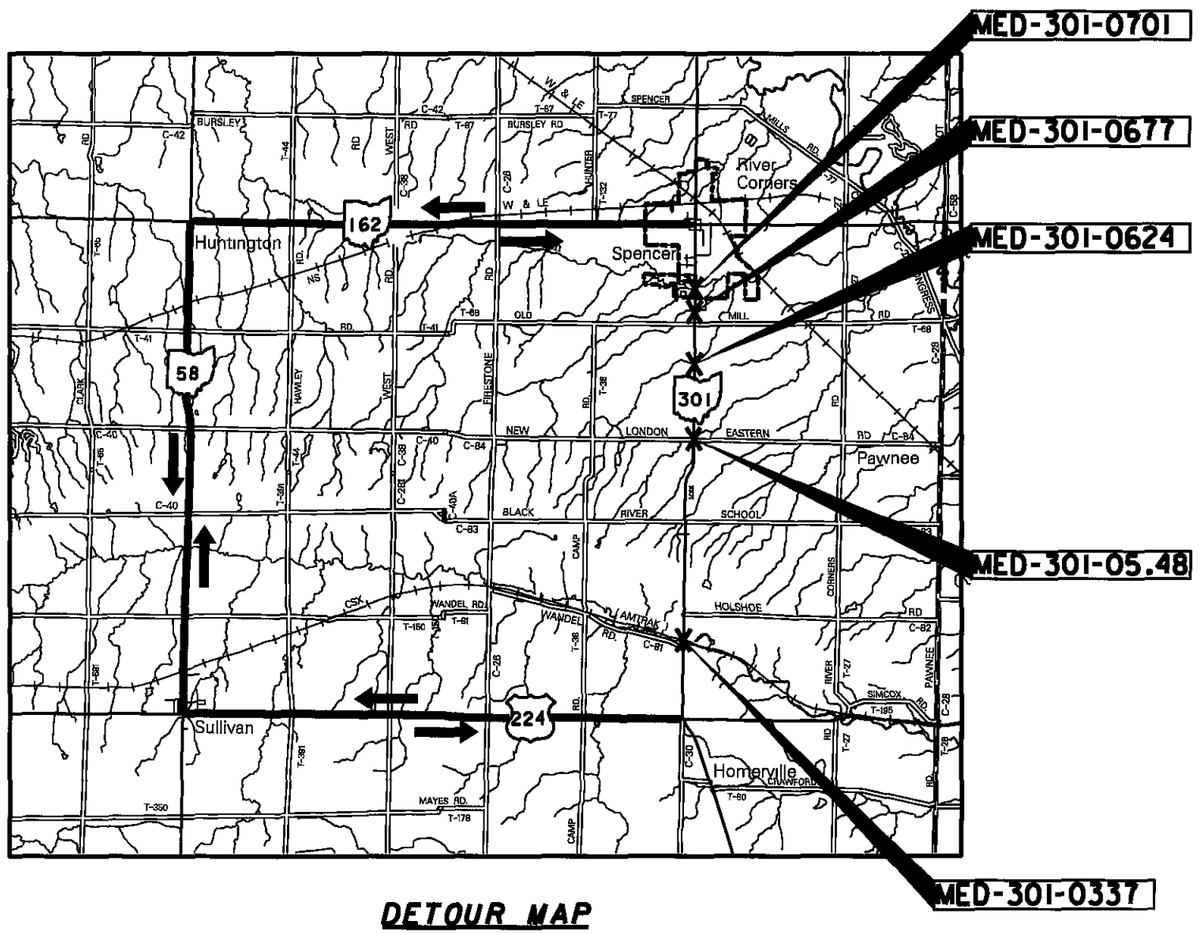
W20-H14

DESIGNATED LOCAL MAINTENANCE ROUTE

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

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



DETOUR MAP

DETOUR ROUTE ⇆

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WORKSTATION: sdeer DATE: 2/16/2006

DESIGN AGENCY: DISTRICT 3 OFFICE OF PRODUCTION
DATE: 02/06
REVIEWED: RDN
STRUCTURE FILE NUMBER:
DRAWN: GTS
REVISED:
DESIGNED: GTS
CHECKED: DJV

MAINTENANCE OF TRAFFIC AND DETOUR MAP

MED-301-0.00
LOR-301-0.00

BRIDGE DECK DATA									ROADWAY DATA		
PART	COUNTY, ROUTE, BRIDGE NO.	LOCATION	STRUCTURE TYPE	LENGTH (BRIDGE DECK)	WIDTH	BRIDGE DECK AREA	SKEW	EXISTING WEARING SURFACE	EXISTING PAVEMENT WIDTH	EXISTING APPROACH SLAB WIDTH	EXISTING APPROACH SLAB LENGTH
				FT.	FT.	SQ. YD.			FT.	FT.	FT.
A	+ MED-301-0110 (SLM=1.10)	OVER SMALL CREEK	3-SIDED CONCRETE SLAB TOP CULVERT	18.5			0°	ASPHALT	20		
A	●MED-301-0337 (SLM=3.37)	OVER BRANCH OF BLACK RIVER AND CSX RAILROAD	4-SPAN STEEL BEAM	238.68	28	743	15°-48°-30° L.F.	CONCRETE	24	20	25
A	++ MED-301-0548 (SLM=5.48)	OVER SMALL STREAM	TWIN CORRUGATED METAL PIPES				20°	ASPHALT	24		
A	●MED-301-0624 (SLM=6.24)	OVER SMALL STREAM	SIMPLE SPAN CONCRETE SLAB	19.0	32.5	69	0°	CONCRETE	24		
A	● MED-301-0701 (SLM=7.01)	OVER COON CREEK	3-SPAN CONCRETE SLAB	86.25	32.5	311	30° R.F.	CONCRETE	20	20	25
A	+ MED-301-0821 (SLM=8.21)	OVER DRAINAGE DITCH	CORRUGATED METAL BOX				32° R.F.	ASPHALT	31		
A	●● MED-301-0988 (SLM=9.88)	OVER RUDD CREEK	3-SPAN CONCRETE SLAB	67.72	40	301	23° R.F.	CONCRETE	26		
B	● LOR-301-0015 (SLM=0.15)	OVER TRIBUTARY OF EAST FORK OF BLACK RIVER	SIMPLE SPAN CONCRETE SLAB	17	36	68	10° L.F.	CONCRETE	24	20	25
B	● LOR-301-0164 (SLM=1.64)	OVER CREEK	2-SPAN CONCRETE SLAB	66.50	40	296	0°	CONCRETE	24	24	20
B	●●●LOR-301-0894 (SLM=8.94)	OVER TRIBUTARY OF KINGS DITCH	3-SIDED CONCRETE SLAB TOP CULVERT				0°	ASPHALT	24		
B	●●●LOR-301-0919 (SLM=9.19)	OVER TRIBUTARY OF KINGS DITCH	PRECAST 4-SIDED CONCRETE BOX				0°	ASPHALT	40		
B	+LOR-301-0980 (SLM=9.67)	OVER KINGS DITCH	3-SIDED CONCRETE SLAB TOP CULVERT				0°	ASPHALT	24		
B	+ LOR-301-1086 (SLM=9.80)	OVER KINGS DITCH	PRECAST 4-SIDED CONCRETE BOX				0°	ASPHALT	40		
B	● LOR-301-1259 (SLM=12.41)	OVER USR 20	3-SPAN STEEL BEAM	221.46	71	1747	25° R.F.	CONCRETE	71	53	25

● PLANE AND PAVE UP TO STRUCTURE, AS PER BP-3.1. SUSPEND PAVING OPERATIONS AT THE STRUCTURE. (SEE DETAILS IN PLAN FOR STRUCTURE WORK. SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES)

●● PLANE AND PAVE UP TO STRUCTURE, AS PER BP-3.1. SUSPEND PAVING OPERATIONS AT THE STRUCTURE. (NO STRUCTURE WORK. SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES)

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

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

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

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DATE 2/16/2006

DISTRICT THREE
OFFICE OF PRODUCTION

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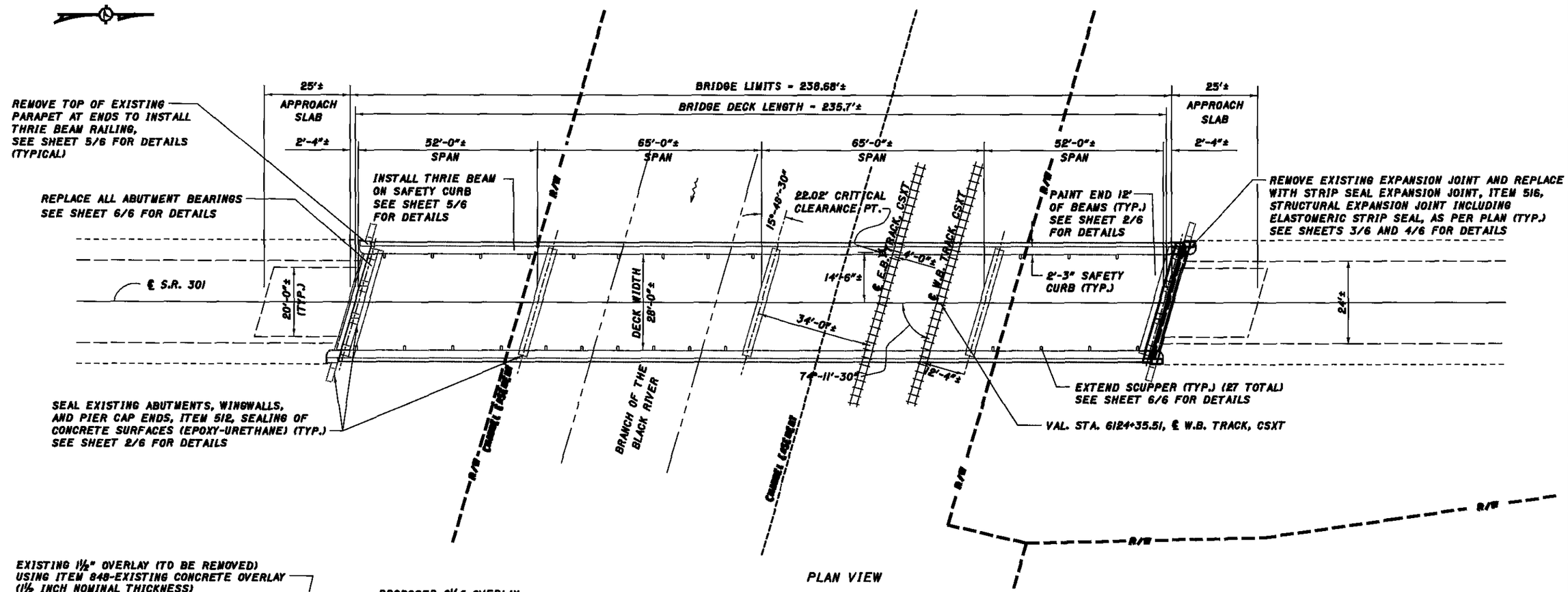
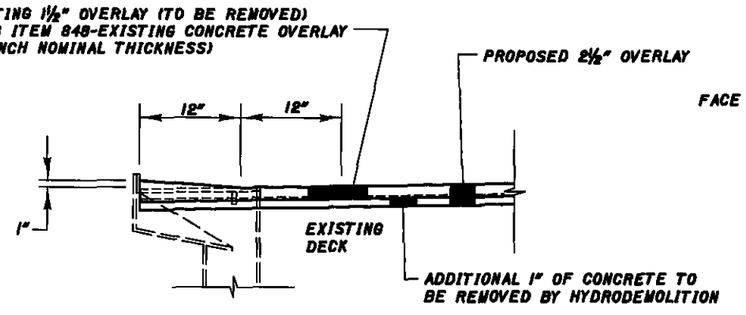
CHECKED	DJW		

BRIDGE TREATMENT SUMMARY

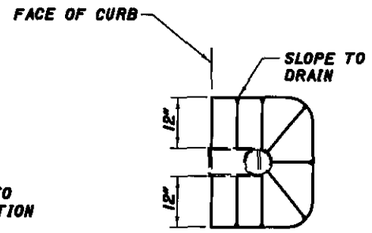
MED-301-0.00
LOR-301-0.00



PLAN VIEW



ELEVATION VIEW AT SCUPPER



PLAN VIEW AT SCUPPER

ITEM	QUANTITY	UNIT	DESCRIPTION
848	734	SQ YD	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2½" THICK)
848	734	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION
848	20	CU YD	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN
848	22	SQ YD	HAND CHIPPING
848	LUMP		TEST SLAB
848	1	CU YD	FULL-DEPTH REPAIR
848	734	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (1½ INCH NOMINAL THICKNESS)
848	37	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY

QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET 79.

NOTES:

1) THE EXISTING APPROACH GUARDRAIL AND BRIDGE RAIL IS NOT SHOWN.
2) THE PROPOSED OVERLAY PROFILE ELEVATIONS SHALL MATCH THE EXISTING BRIDGE DECK PROFILE ELEVATIONS.
3) THE PROPOSED OVERLAY SHALL BE SLOPED TO DRAIN TO THE EXISTING SCUPPERS; HOWEVER, THE EXISTING SCUPPERS SHALL NOT BE DISTURBED.
4) FOR BRIDGE RAILING DETAILS, SEE SHEET 5/6.
5) FOR EXPANSION JOINT DETAILS, SEE SHEET 3/6 AND 4/6.
6) FOR STRUCTURE SEALING DETAILS, SEE SHEET 2/6.
7) FOR PARTIAL STRUCTURE PAINTING AND END CROSS FRAME REPLACEMENT DETAILS, SEE SHEET 2/6.
8) FOR SCUPPER EXTENSION AND BEARING REPLACEMENT DETAILS, SEE SHEET 6/6.

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WORKSTATION sdeer DATE 2/16/2006

DISTRICT THREE
OFFICE OF PRODUCTION

DRAWN DJV | CHECKED DJV | APPROVED DCM | REVISED | DATE 02/06 | STRUCTURE FILE NUMBER 5207444

PLAN VIEW
MED-301-0337
OVER BRANCH OF BLACK RIVER AND CSX RAILROAD

MED-301-0.00
LOR-301-0.00

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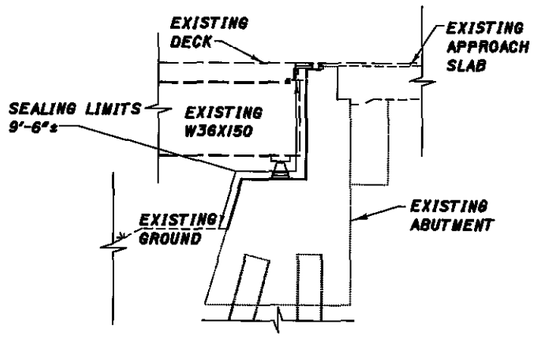
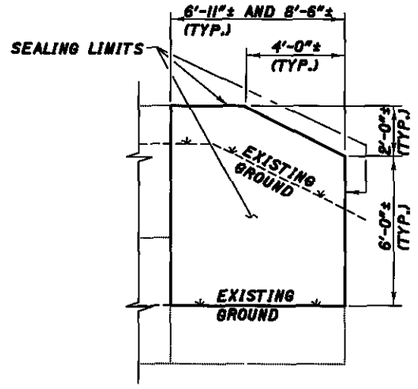
114



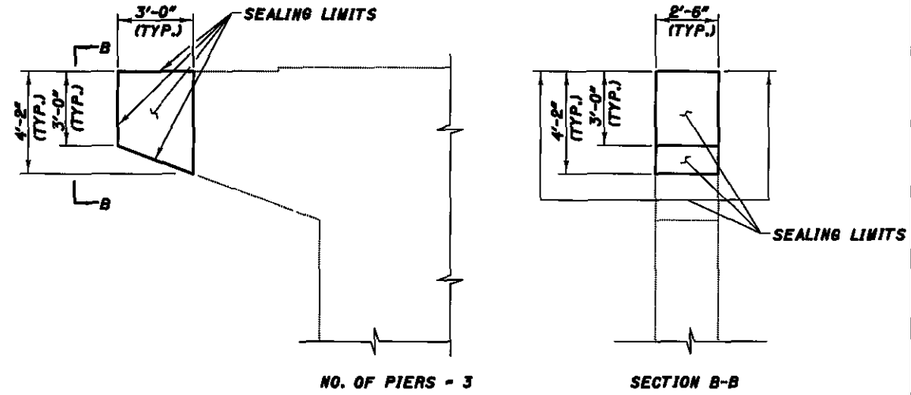
ABUTMENT WIDTH = 32'-1"±

TYPICAL ABUTMENT SEALING



WINGWALL WIDTH = 1'-9"±
REAR RT. AND FWD. LT. WINGWALL LENGTH = 8'-6"±
REAR LT. AND FWD. RT. WINGWALL LENGTH = 6'-11"±

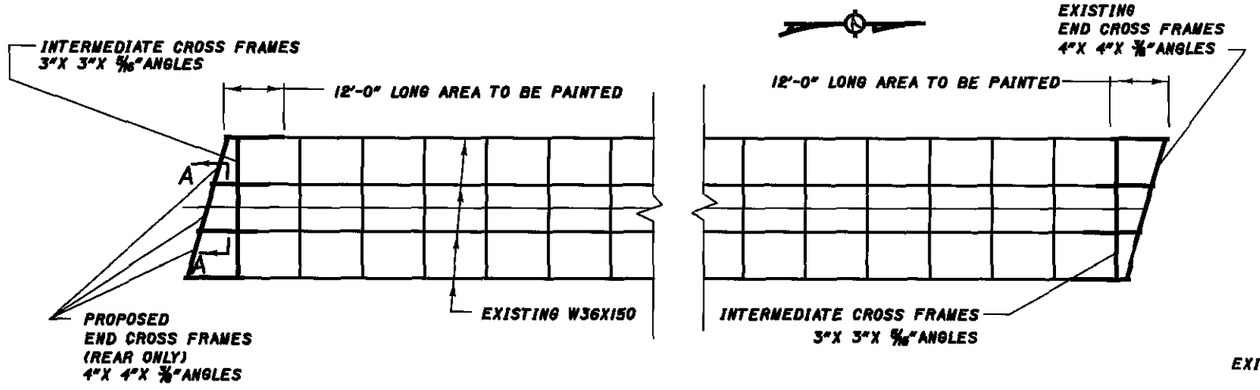
TYPICAL WINGWALL SEALING



NO. OF PIERS = 3

SECTION B-B

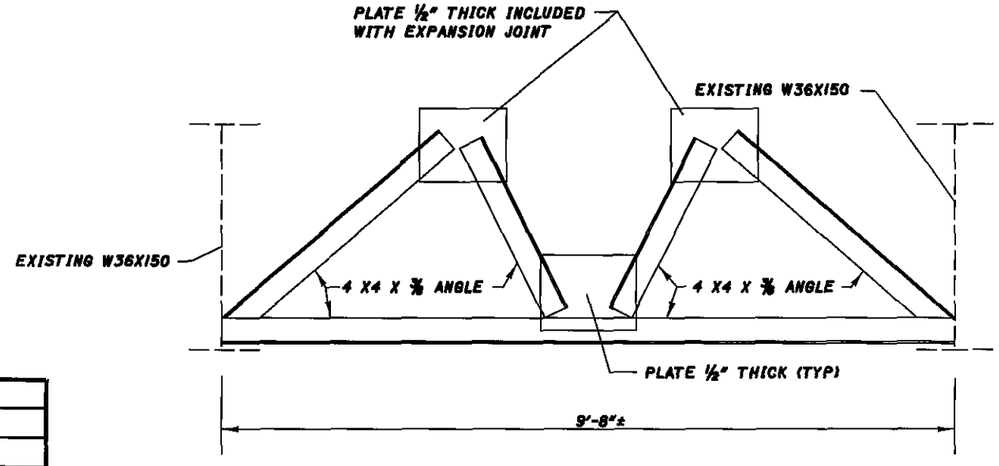
TYPICAL PIER SEALING



PLAN VIEW FOR STRUCTURAL STEEL PAINTING AND END CROSS FRAME REPLACEMENT

ITEM	QUANTITY	UNIT	DESCRIPTION
202	3	EACH	REMOVAL MISC.: END CROSS FRAMES
512	138	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
513	732	POUND	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN
514	LUMP		SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL
514	LUMP		FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT
514	LUMP		FIELD PAINTING OF EXISTING STRUCTURAL STEEL, INTERMEDIATE COAT SYSTEM OZEU
514	LUMP		FIELD PAINTING OF EXISTING STRUCTURAL STEEL, FINISH COAT
514	1	EACH	FINAL INSPECTION REPAIR

QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET 79.



SECTION A-A

SEE STANDARD DRAWING GSD-1-96 FOR DETAILS AND NOTES NOT SHOWN.

NOTES: 1) THE ABUTMENTS, PIER CAP ENDS, AND ALL EXPOSED AREAS OF THE WINGWALLS SHALL BE SEALED WITH ITEM 512.

2) THE STEEL BEAMS AT BOTH ENDS OF THE STRUCTURE FOR 12'-0", INCLUDING BEARING, THE NEW END CROSS FRAMES AT THE REAR ABUTMENT AND THE EXISTING END CROSS FRAMES AT THE FORWARD ABUTMENT AND ONE ROW OF EXISTING INTERMEDIATE CROSS FRAMES, SHALL BE PAINTED USING ITEMS 514.

DESIGN FILE: i:\projects\2358\Struct\MED3010337\med3010337sd.dgn
WORKSTATION sdeer DATE 2/6/2006

DISTRICT THREE
OFFICE OF PRODUCTION

DRAWN DJV | REVISED | DATE 02/06
CHECKED DJV | REVISED RDN | STRUCTURE FILE NUMBER 5207444
DESIGNED DCM | REVISED DJV

SEALING, PAINTING AND END CROSS FRAME REPLACEMENT DETAILS
MED-301-0337
OVER BRANCH OF BLACK RIVER AND CSX RAILROAD

MED-301-0.00
LOR-301-0.00

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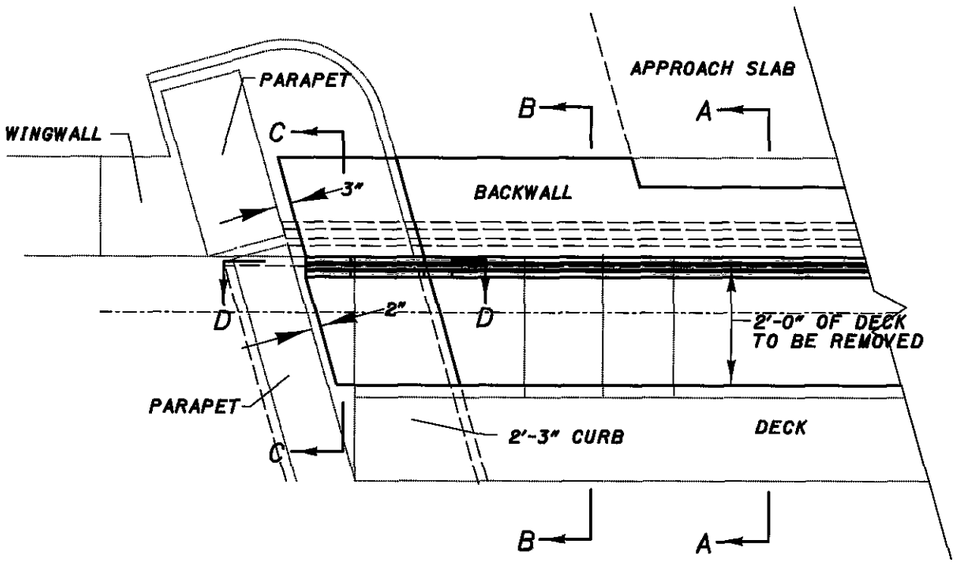
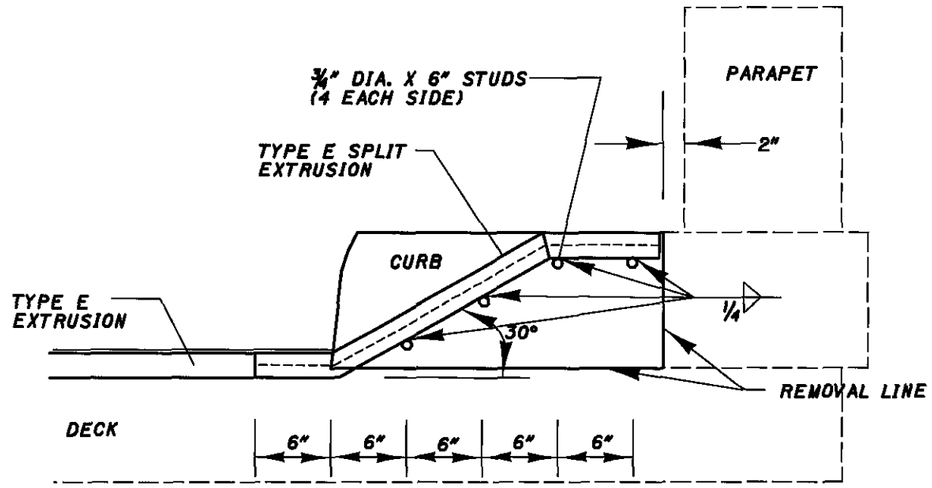


PART PLAN AT ABUTMENT



SECTION D-D

ITEM	QUANTITY	UNIT	DESCRIPTION
202	6.6	CU YD	PORTIONS OF STRUCTURE REMOVED
509	150	POUND	EPOXY COATED REINFORCING STEEL
511	2.5	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN
511	3.2	CU YD	CLASS C CONCRETE, ABUTMENT, AS PER PLAN
516	67	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL

QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET 79.

NOTES:

SEE SHEET 4/6 FOR SECTIONS A-A, B-B, C-C

FOR DETAILS NOT SHOWN SEE STD DRG EXJ-4-87

PRESERVE ALL EXISTING REINFORCING STEEL IN CURB

DESIGN AGENCY: DISTRICT THREE
OFFICE OF PRODUCTION

DESIGNED: DCM | CHECKED: DJV
DRAWN: DCM | REVISED:
REVISED: RDN | DATE: 02/06
STRUCTURE FILE NUMBER: 5207444

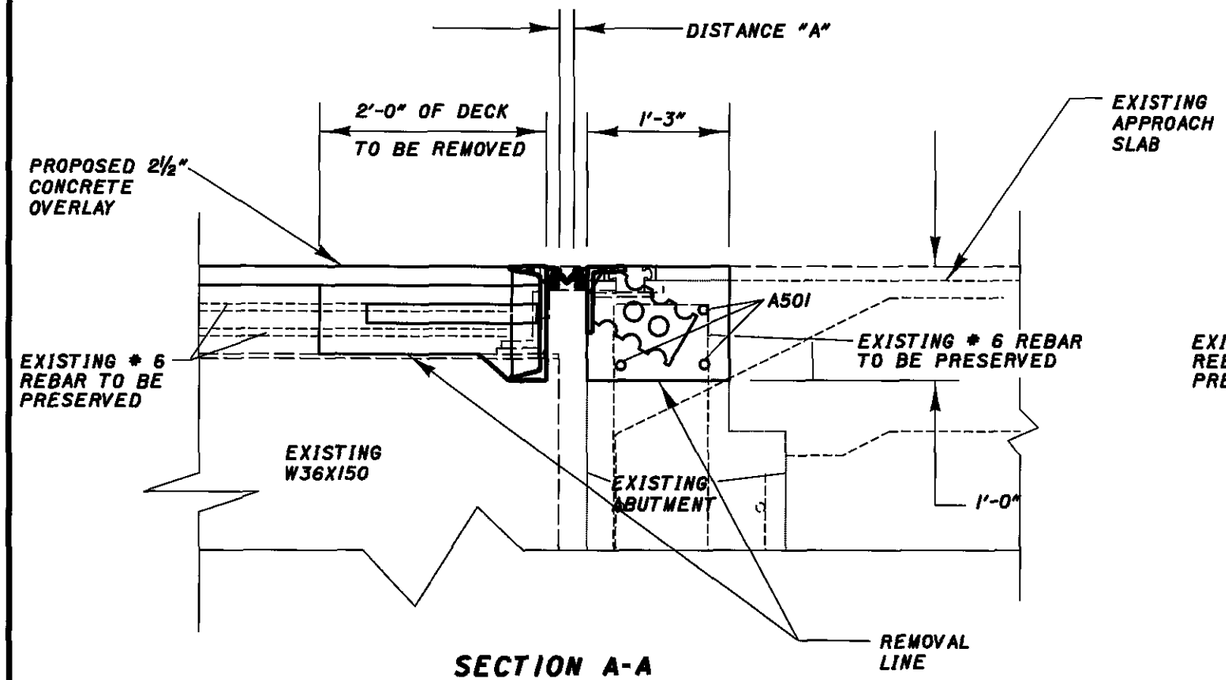
EXPANSION JOINT REPAIR
MED-301-0337
OVER BRANCH OF BLACK RIVER AND CSX RAILROAD

MED-301-0.00
LOR-301-0.00

3 / 6

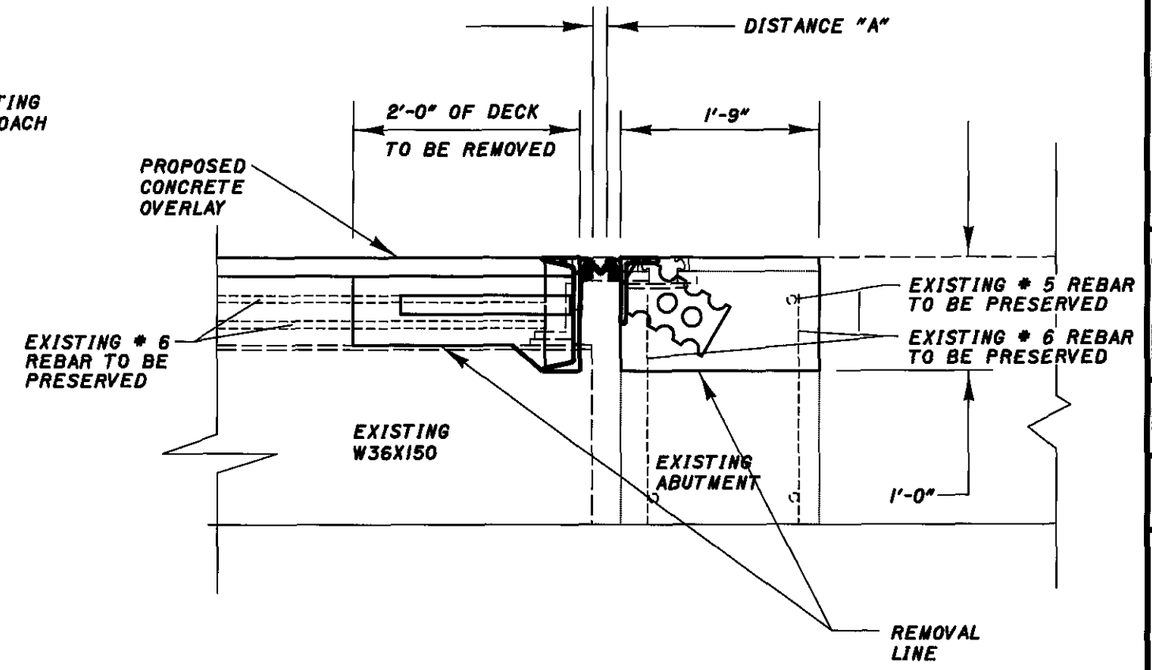
90 / 114

DESIGN FILE: i:\projects\2358\Struct\MED301\0337\med301\0337sd.dgn
WORKSTATION: sdeer
DATE 2/16/2006



SECTION A-A

TOTAL REMOVAL WIDTH PER ABUTMENT = 20'-9"±



SECTION B-B

TOTAL REMOVAL WIDTH PER ABUTMENT = 8'-4"±

FOR DETAILS NOT SHOWN SEE STD DRG EXJ-4-87

MARK	NUMBER	LENGTH	WEIGHT	TYPE
A501	6	20'-9"	120	STRAIGHT
		TOTAL	120	

TEMPERATURE	DIMENSION "A"
30°	1⅞"
40°	1 13/16"
50°	1 11/16"
60°	1⅝"
70°	1½"
80°	—
90°	—

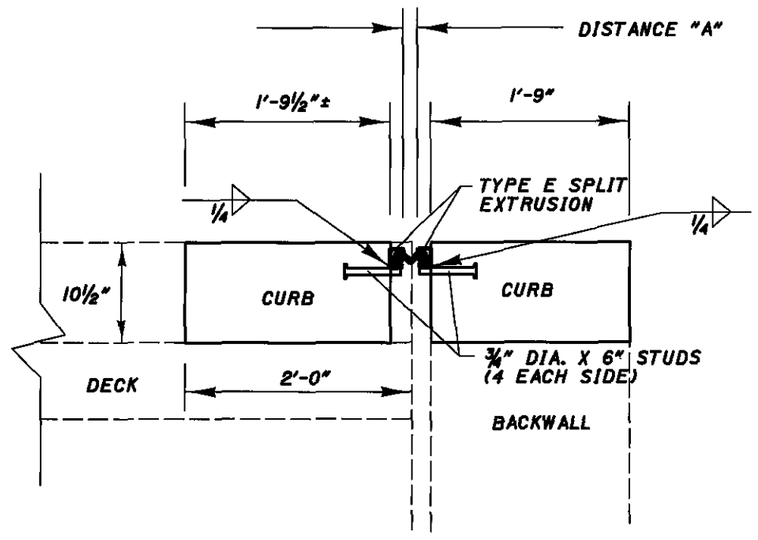
NOTES:

PRESERVE ALL EXISTING REINFORCING STEEL IN DECK

PRESERVE ALL EXISTING REINFORCING STEEL IN CURB

CONCRETE ON DECK SHALL BE CLASS S CONCRETE

CONCRETE IN ABUTMENT SHALL BE CLASS C CONCRETE



SECTION C-C

TOTAL REMOVAL WIDTH PER ABUTMENT = 4'-4"±

DESIGN AGENCY: DISTRICT THREE
OFFICE OF PRODUCTION

DESIGNED DCM | DRAWN DCM | REVISED RDN 02/06 | STRUCTURE FILE NUMBER 5027444 | CHECKED DJV | REVISED

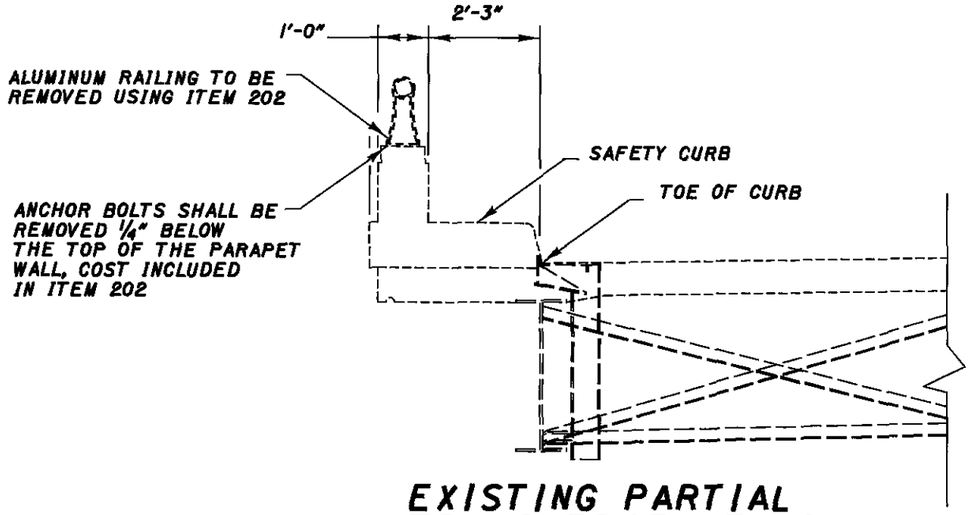
EXPANSION JOINT REPAIR
MED-301-0337
OVER BRANCH OF BLACK RIVER AND CSX RAILROAD

MED-301-0.00
LOR-301-0.00

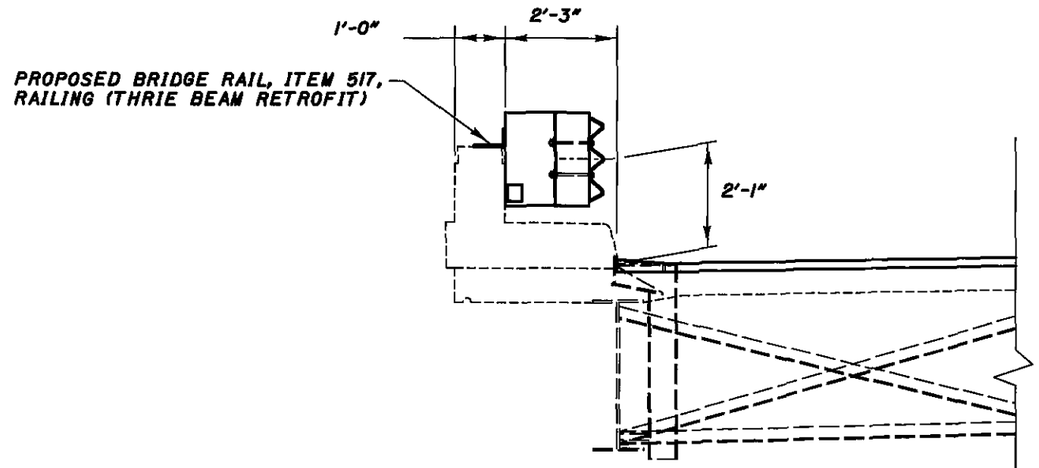
4 / 6

91 / 114

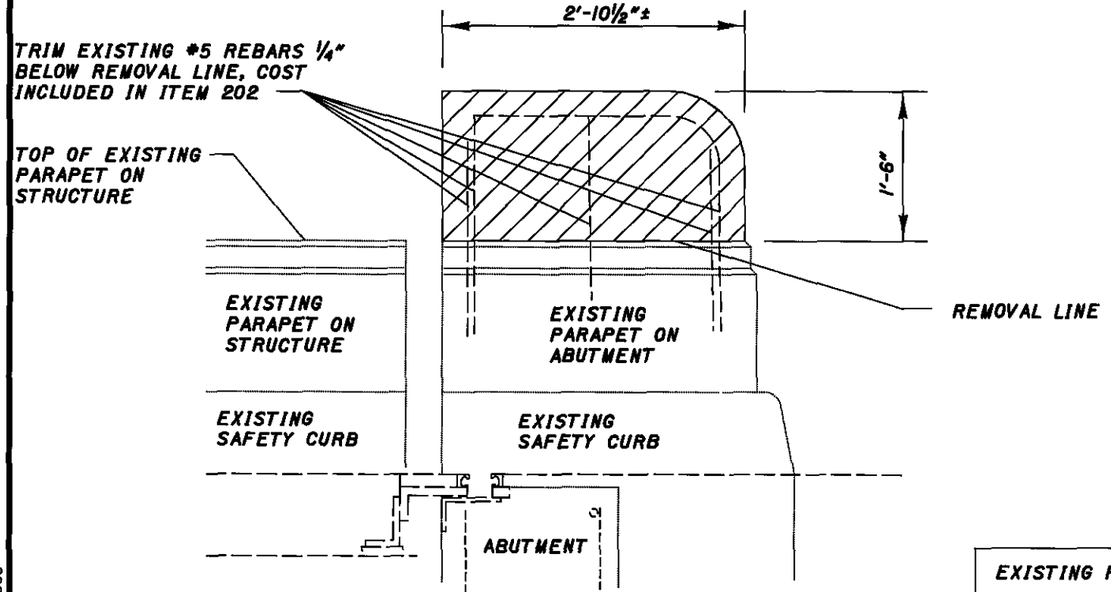
DESIGN FILE: i:\projects\2358\Struct\MED301033\7\med301033\7ed.dgn
WORKSTATION: sdeer
DATE: 2/16/2006



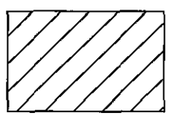
EXISTING PARTIAL TRANSVERSE SECTION



PROPOSED PARTIAL TRANSVERSE SECTION



EXISTING PARTIAL ELEVATION VIEW AT ABUTMENT



AREA OF PARAPET TO BE REMOVED
(ITEM 202-PORTION OF STRUCTURE REMOVED)

EXISTING PARAPET IS 1'-5" THICK

ITEM	QUANTITY	UNIT	DESCRIPTION
202	1	CU YD	PORTIONS OF STRUCTURE REMOVED
202	471.5	FT	BRIDGE RAILING REMOVED, AS PER PLAN
517	476.7	FT	RAILING (THRIE BEAM RETROFIT)

QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET 79.

NOTES:

1) THE ALUMINUM RAILING AND POSTS SHALL BE REMOVED AND THE ANCHOR BOLTS REMOVED 1/4" BELOW THE TOP OF THE PARAPET.

2) REMOVE TOP OF PARAPET ON ABUTMENT.

3) THRIE BEAM RAILING SHALL BE INSTALLED AS PER DETAILS AND NOTES ON STANDARD DRAWING TBR-91

DESIGN FILE i:\projects\2358\Struct\MED301O337\med301O337sd.dgn
WORKSTATION: sdesr DATE 2/16/2006

DISTRICT THREE
OFFICE OF PRODUCTION

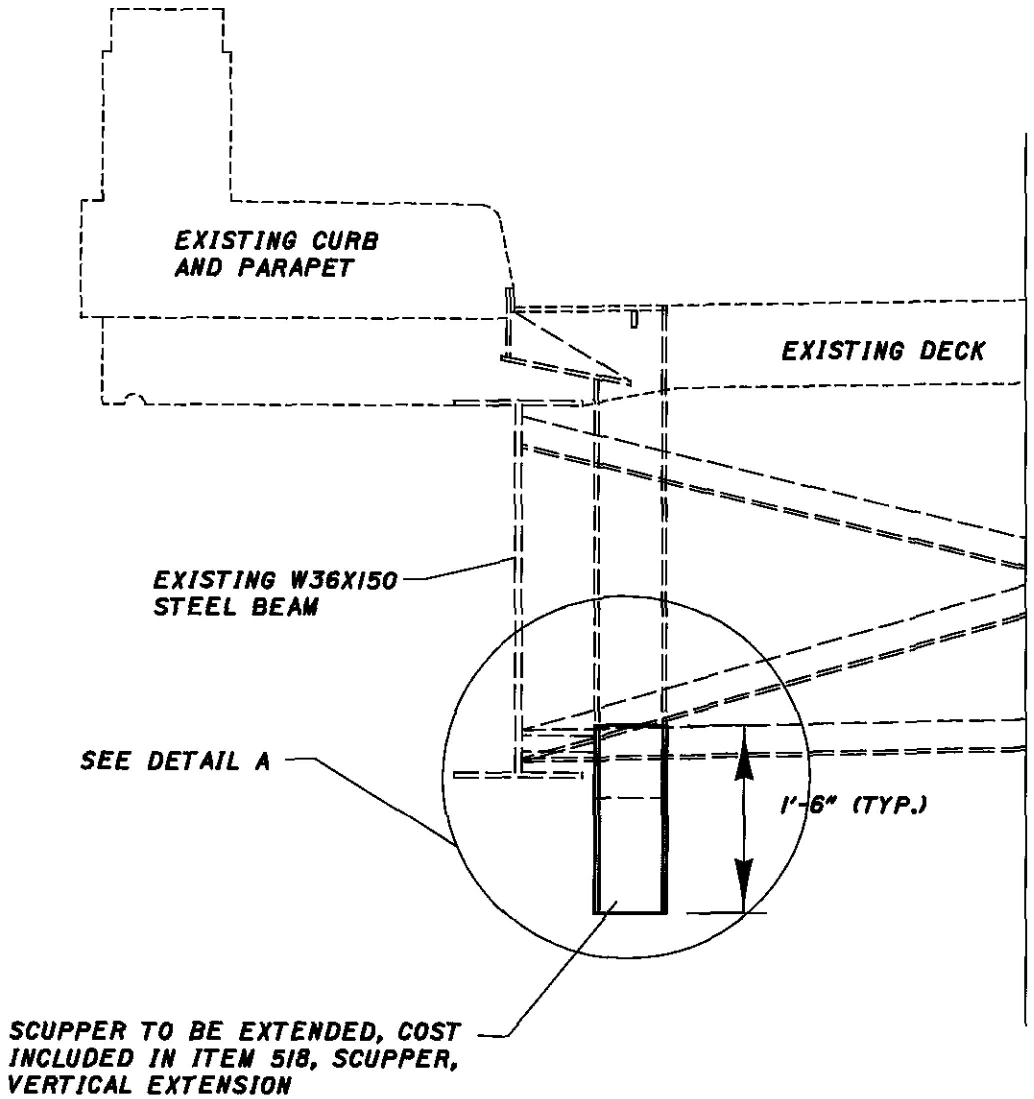
DESIGNED DCM | DRAWN DCM | CHECKED DJV | QUANTITIES | APPROVED RDN | DATE 02/06 | STRUCTURE FILE NUMBER 5207444

BRIDGE RAILING DETAILS
MED-301-0337
OVER BRANCH OF BLACK RIVER AND CSX RAILROAD

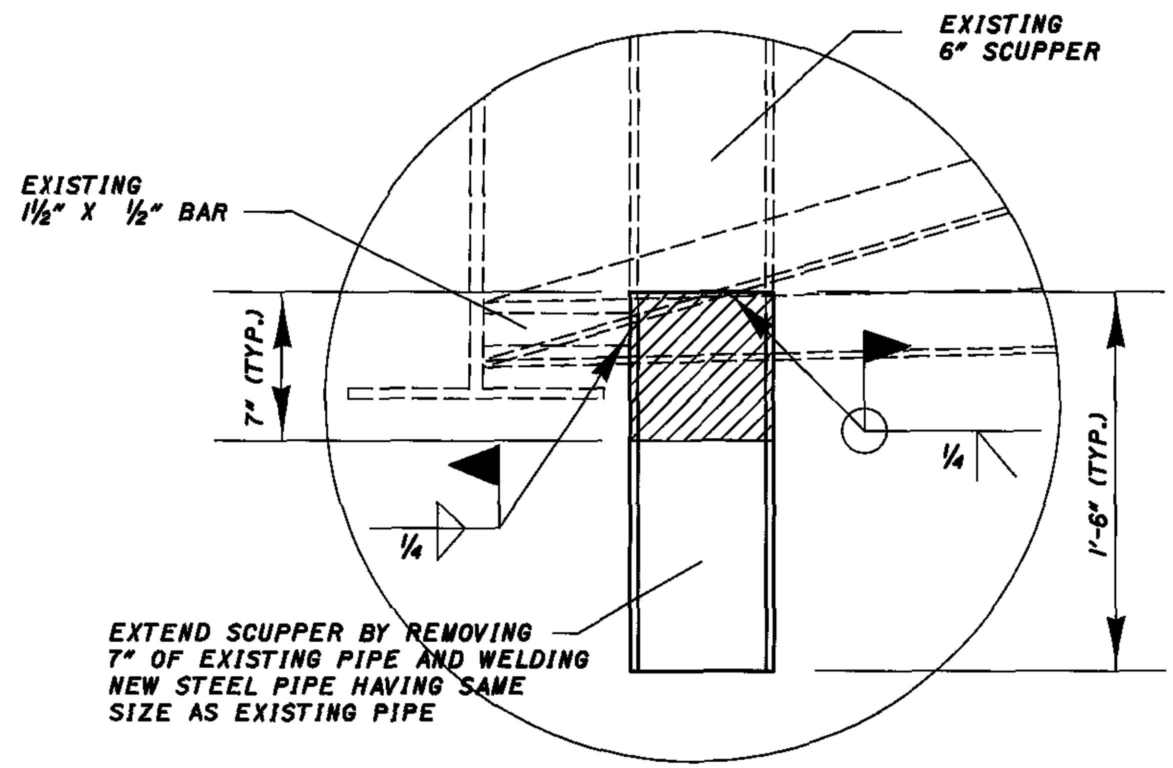
MED-301-0.00
LOR-301-0.00

5 | 6

92
114



TYPICAL SCUPPER EXTENSION



DETAIL A

EXISTING SCUPPER AREA TO BE REMOVED

NOTES:

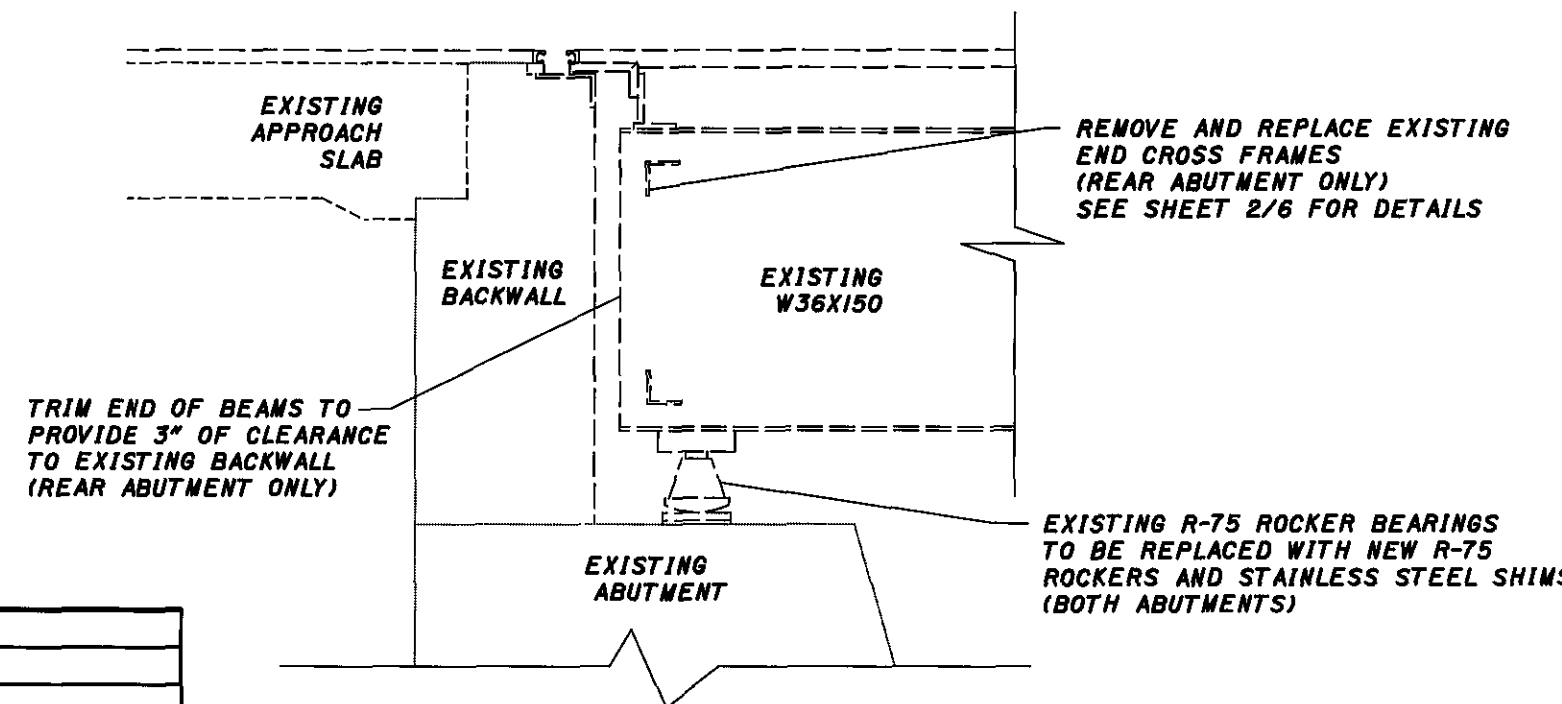
1) SCUPPERS SHALL BE LENGTHENED BY REMOVING 7" OF EXISTING 6" DIA. SCUPPER PIPE AND WELDING 1'-6" OF NEW PIPE AND REATTACHING 1½" X ½" BAR AS PER DETAIL A.

2) ALL EXISTING ABUTMENT ROCKERS SHALL BE REPLACED WITH NEW R-75 ROCKERS. SEE STANDARD DRAWING RB-1-55 FOR DETAILS. ALL SHIMS SHALL BE STAINLESS STEEL, AISI 400 SERIES, AS PER ASTM DESIGNATION A240. THE CENTERLINE OF THE BEARING SHALL BE 1'-0" IN FRONT OF THE FACE OF THE BACKWALL.

3) TRIM END OF BEAMS AT REAR ABUTMENT ONLY TO PROVIDE 3" OF CLEARANCE

ITEM	QUANTITY	UNIT	DESCRIPTION
513	4	EACH	TRIMMING OF BEAM END
516	8	EACH	BEARING DEVICE, ROCKER
516	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN
518	27	EACH	SCUPPER, VERTICAL EXTENSION

QUANTITIES CARRIED TO STRUCTURE SUMMARY 79.



TYPICAL BEARING REPLACEMENT

DISTRICT THREE
OFFICE OF PRODUCTION

RDH 02/06
5207444
DJV
DJV DCM

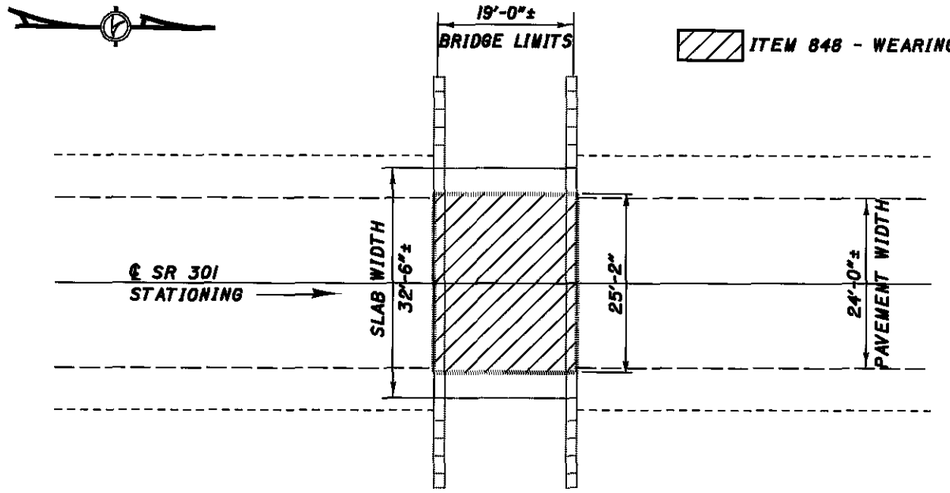
SCUPPER EXTENSION AND BEARING REPLACEMENT
MED-301-0337
OVER BRANCH OF BLACK RIVER AND CSX RAILROAD

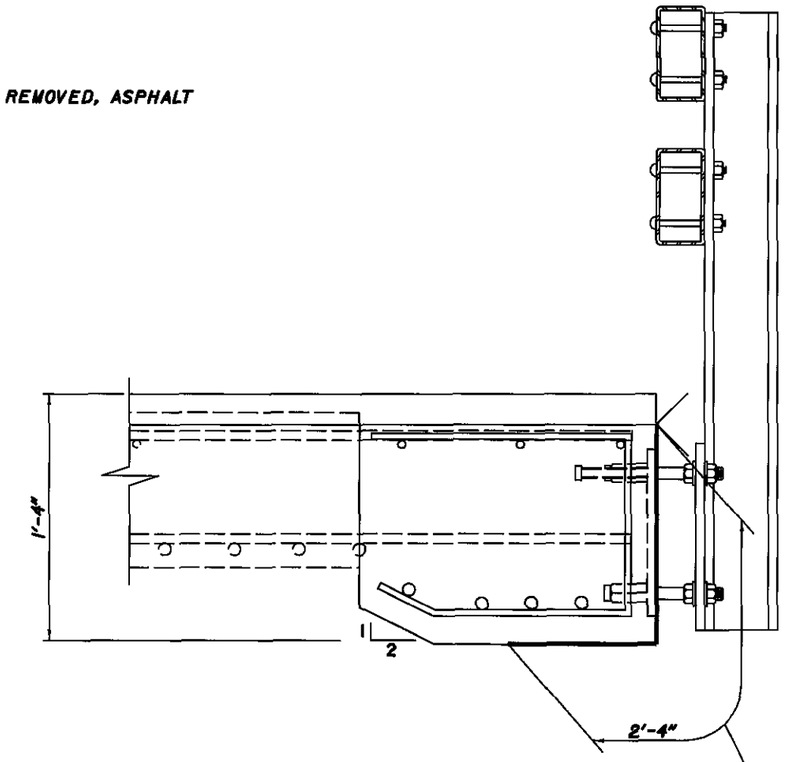
MED-301-0.00
LOR-301-0.00

6/6

93/114

DESIGN FILE: h:\projects\2358\Struct\MED3010337\med3010337sd.dgn
WORKSTATION sdeer DATE 2/16/2006





DECK EDGE SEALING

ITEM	QUANTITY	UNIT	DESCRIPTION
512	10	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
848	69	SQ YD	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2½" THICK)
848	60	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION
848	2	CU YD	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN
848	2	SQ YD	HAND CHIPPING
848	LUMP		TEST SLAB
848	1	CU YD	FULL-DEPTH REPAIR
848	69	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (1½" NOMINAL THICKNESS)
848	4	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY
848	53	SQ YD	WEARING COURSE REMOVED, ASPHALT

QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET 80.

NOTES:

1) THE EXISTING GUARDRAIL IS NOT SHOWN.

2) THE PROPOSED OVERLAY ELEVATION SHALL MATCH THE EXISTING BRIDGE DECK ELEVATION.

3) SEE SHEET 2/3 FOR DECK EDGE REPLACEMENT

4) SEE SHEET 3/3 FOR WING WALL DETAILS.

DESIGN AGENCY: DISTRICT 3
OFFICE OF PRODUCTION

DESIGNED: GTS
DRAWN: GTS
CHECKED: DJV
REVISED:
REVIEWED: RDH
DATE: 02/06
STRUCTURE FILE NUMBER: 5207509

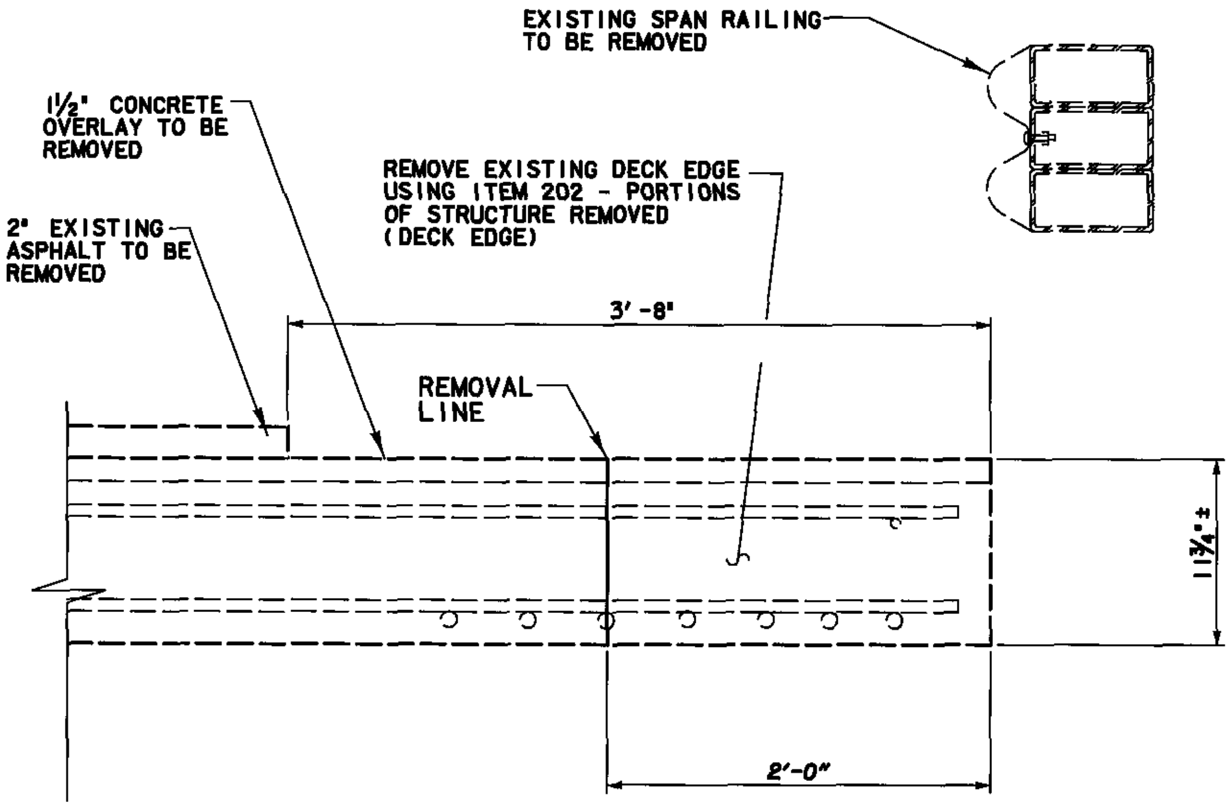
PLAN VIEW
MED-301-0624
OVER SMALL STREAM

MED-301-0.00
LOR-301-0.00

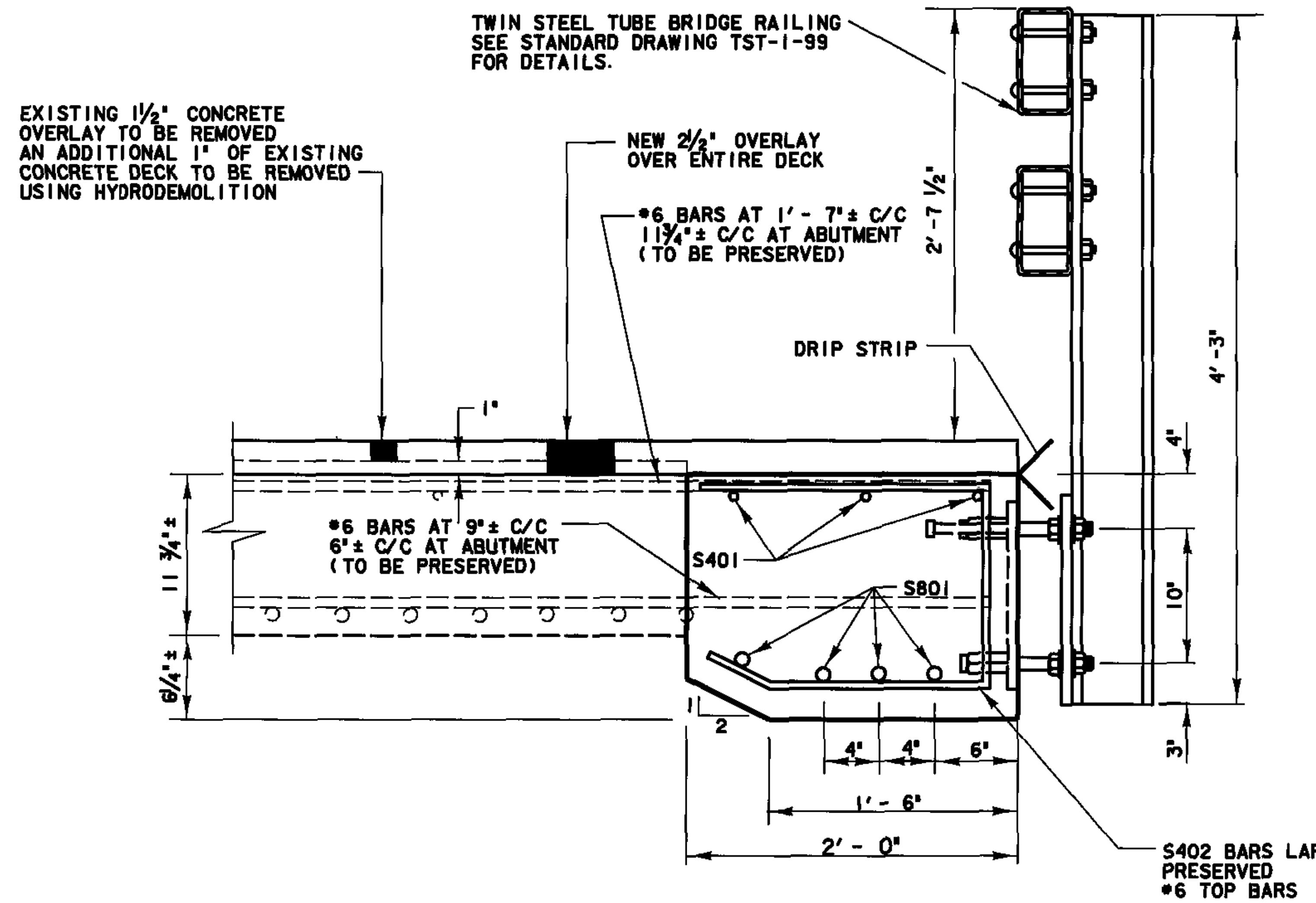
1 | 3

94
114

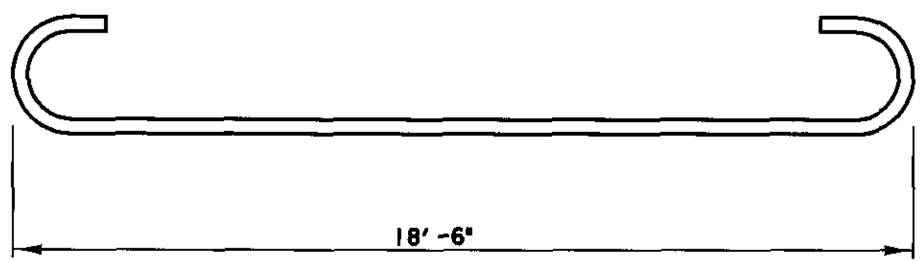
DESIGN FILE: i:\projects\2358\Struct\MED30100624\med30100624ed.dgn
WORKSTATION: sdeer
DATE: 2/16/2006



EXISTING DECK EDGE



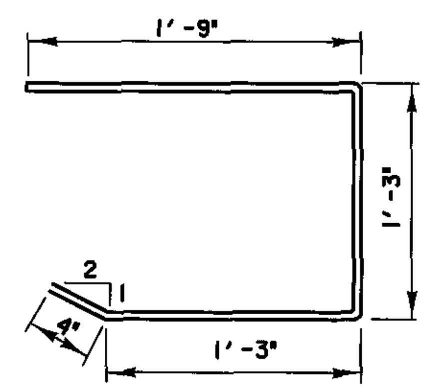
DECK EDGE REPLACEMENT



S801

ITEM	QUANTITY	UNIT	DESCRIPTION
202	2.4	CU YD	PORTIONS OF STRUCTURE REMOVED
202	50	FT	BRIDGE RAILING REMOVED
509	590	POUND	EPOXY COATED REINFORCING STEEL
511	4.2	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN
517	50.83	FT	RAILING (TWIN STEEL TUBE)
SPECIAL	43	FT	STEEL DRIP STRIP

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET 80.



S402

DECK LENGTH = 19-0"
SKEW = 0'

REINFORCING TABLE

MARK	NUMBER	LENGTH	WEIGHT (LBS)	TYPE
S401	6	18'-6"	74	S
S402	28	4'-5"	82	B
S801	8	20'-4"	434	B
		TOTAL	590	

DISTRICT 3
OFFICE OF PRODUCTION

DESIGNED GTS · CHECKED DJV · DRAWN GTS · REVISED RDH · DATE 02/06

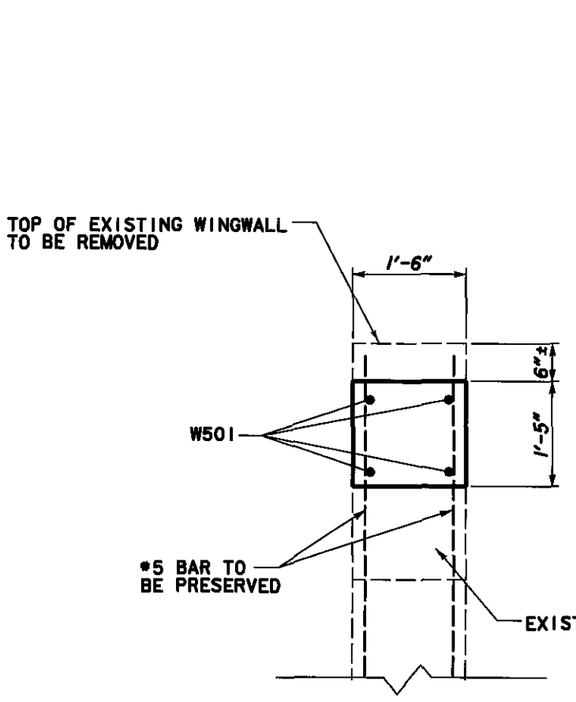
DECK EDGE REPLACEMENT
MED-301-0624
OVER SMALL STREAM

MED-301-0.00
LOR-301-0.00

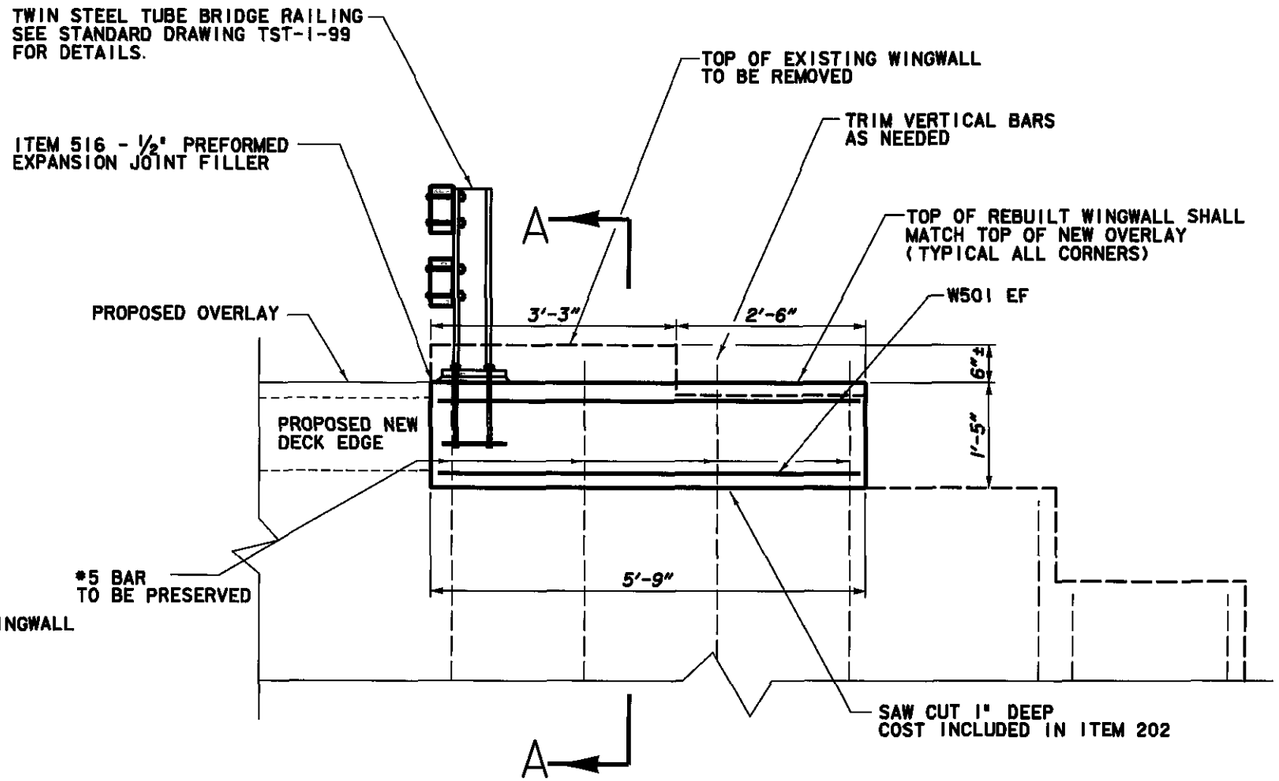
2/3

95/114

DESIGN FILE I:\projects\23581\Struct\MED3010624\med3010624sd.dgn
WORKSTATION: sdeer DATE: 2/16/2006



SECTION A-A



PARTIAL ELEVATION OF WINGWALL

LEGEND

EF = EACH FACE

ITEM	QUANTITY	UNIT	DESCRIPTION
202	2.07	CU YD	PORTIONS OF STRUCTURE REMOVED
509	88	POUND	EPOXY COATED REINFORCING STEEL
511	1.81	CU YD	CLASS C CONCRETE, ABUTMENT, AS PER PLAN
516	9	SQ FT	½" PREFORMED EXPANSION JOINT FILLER

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET 80.

REINFORCING TABLE

MARK	NUMBER	LENGTH	WEIGHT (LBS)	TYPE
W501	16	5'-3"	88	STRAIGHT
		TOTAL	88	

DESIGN FILE i:\projects\2358\Struct\MED301\0624\med301\0624sd.dgn
WORKSTATION sdeer DATE 2/16/2006

DESIGNED GTS
DRAWN GTS
CHECKED DJV
REVIEWED RDH DATE 02/06
APPROVED GTS
STRUCTURAL FILE NUMBER 5207509

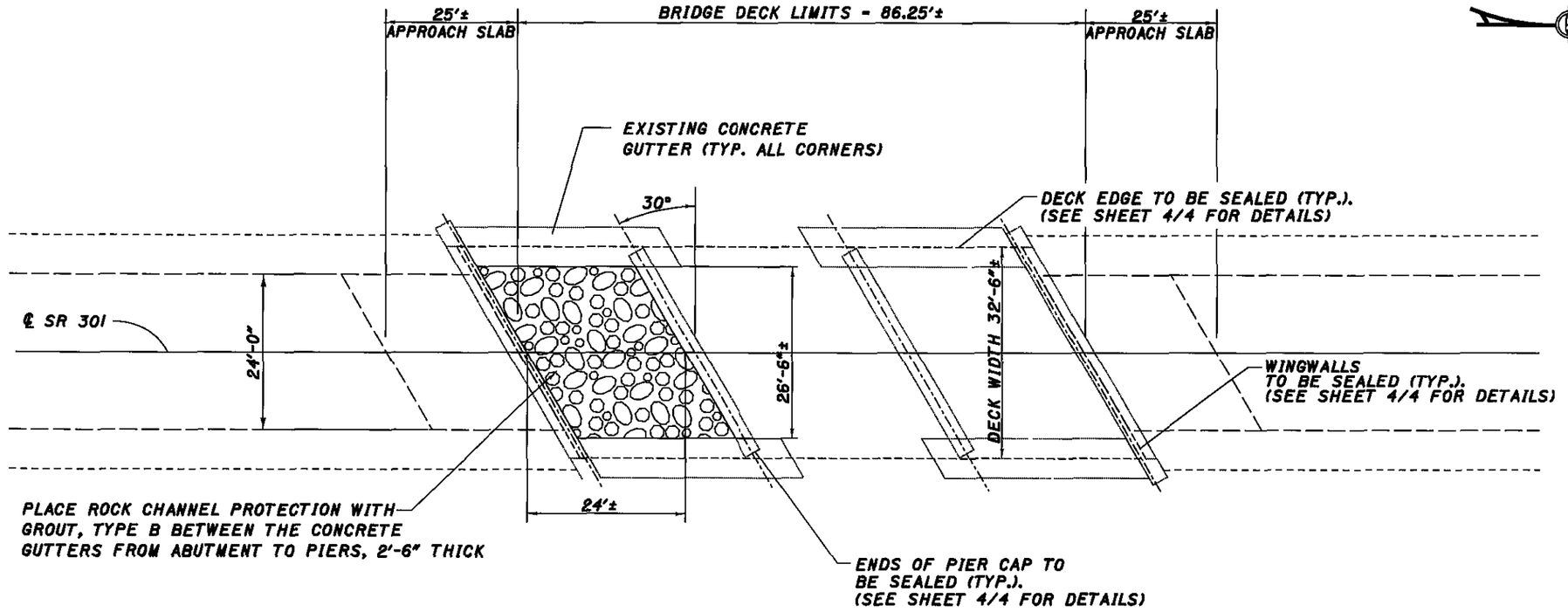
DISTRICT 3
OFFICE OF PRODUCTION

WINGWALL REPLACEMENT
MED-301-0624
OVER SMALL STREAM

MED-301-0.00
LOR-301-0.00

3 / 3

96
114



PLAN VIEW

ITEM	QUANTITY	UNIT	DESCRIPTION
601	59	CU YD	ROCK CHANNEL PROTECTION, WITH GROUT, TYPE B
848	312	SQ YD	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2½" THICK)
848	312	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION
848	9	CU YD	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN
848	10	SQ YD	HAND CHIPPING
848	LUMP		TEST SLAB
848	1	CU YD	FULL-DEPTH REPAIR
848	312	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (1½" NOMINAL THICKNESS)
848	16	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY

QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET 80.

NOTES:

1) THE EXISTING GUARDRAIL IS NOT SHOWN.
2) THE PROPOSED OVERLAY ELEVATION SHALL MATCH THE EXISTING BRIDGE DECK ELEVATION.
3) SEE SHEET 2 /4 FOR DECK EDGE REPLACEMENT.
4) SEE SHEET 3 /4 FOR WING WALL DETAILS
5) SEE SHEET 4/4 FOR SEALING DETAILS.

DESIGN AGENCY: DISTRICT 3 OFFICE OF PRODUCTION
DESIGNED: GTS
DRAWN: GTS
CHECKED: DJV
REVISED
REVISED: RDN
DATE: 02/06
STRUCTURE FILE NUMBER: 5207533

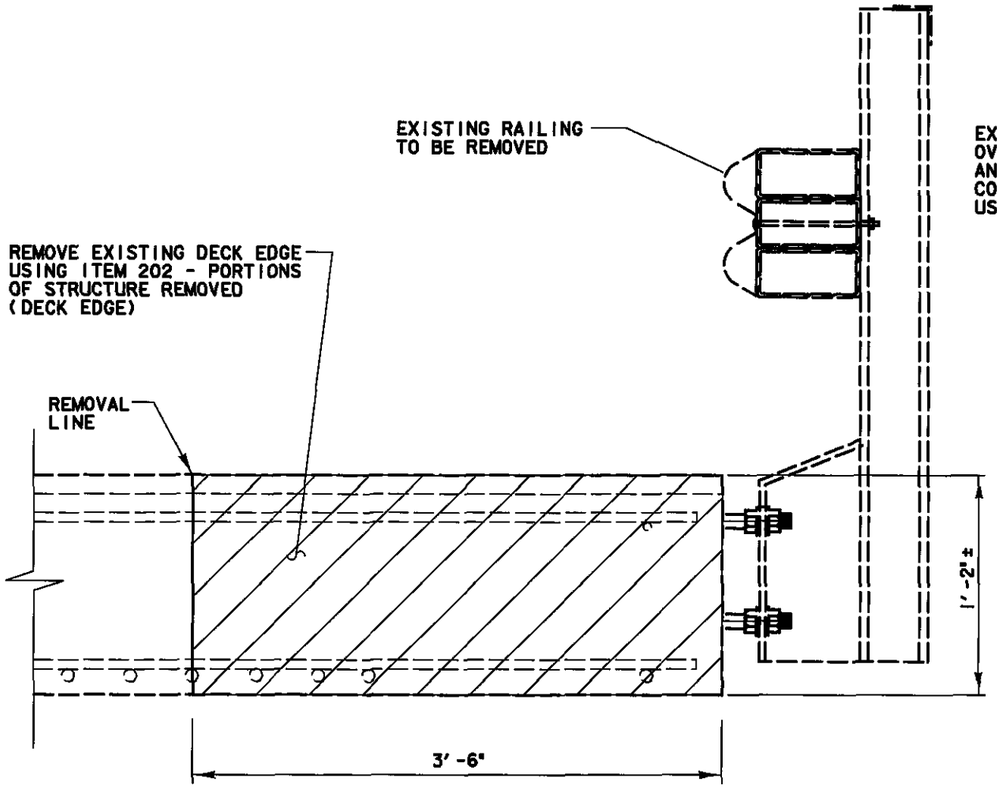
PLAN VIEW
MED-301-07.01
OVER COON CREEK

MED-301-0.00
LOR-301-0.00

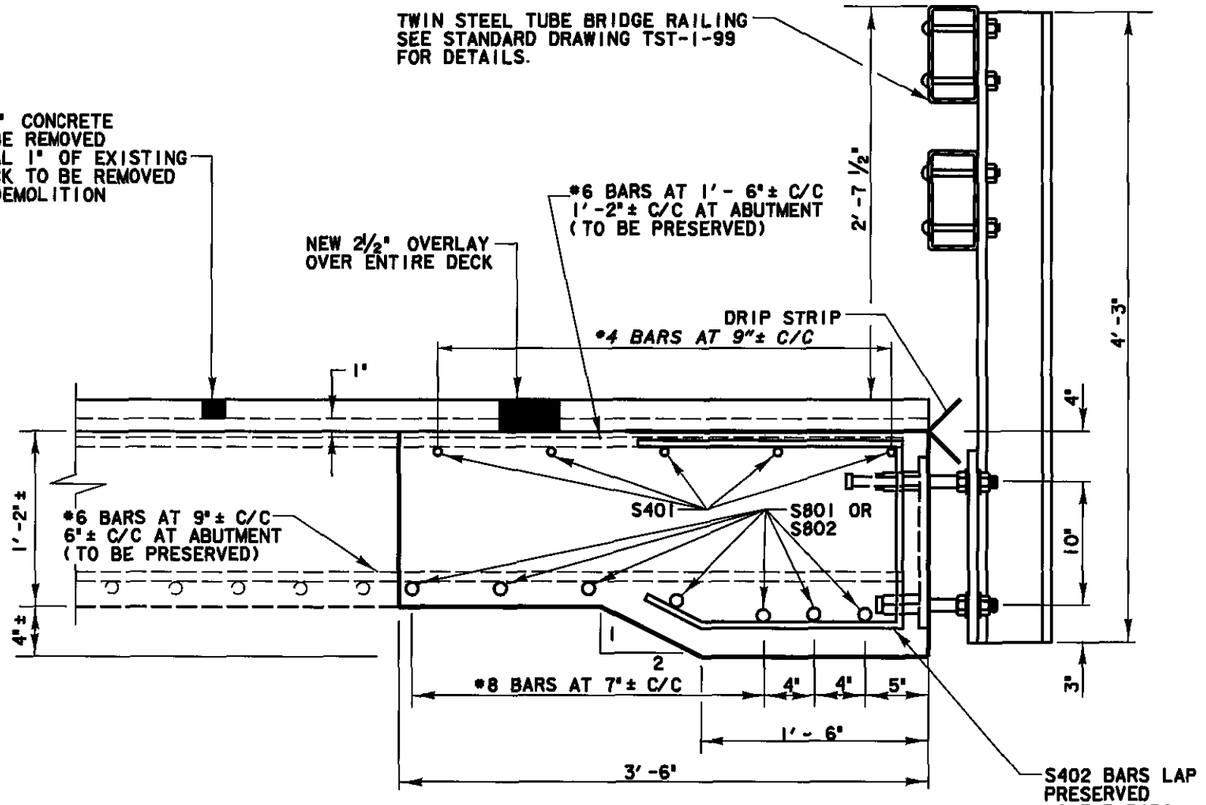
1 / 4

97 / 114

DESIGN FILE: I:\projects\23581\Struct\MED301070\med301070lsd.dgn
WORKSTATION: sdeer
DATE: 2/16/2006



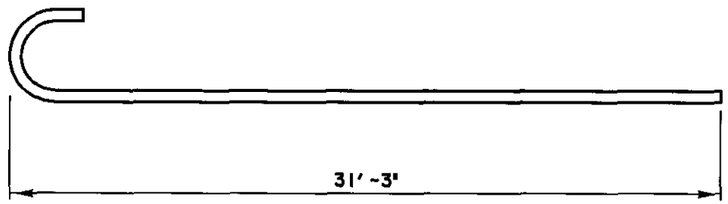
EXISTING DECK EDGE



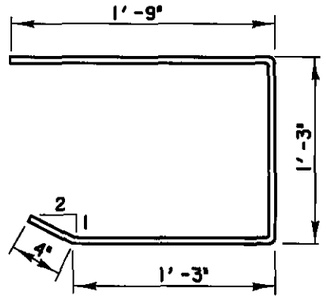
DECK EDGE REPLACEMENT

*4 LAP LENGTH = 2'-0"
*8 LAP LENGTH = 4'-0"

801 BARS AT ABUTMENT ENDS



S801



S402

DECK LENGTH = 86'-3"
SKEW = 30°

ITEM	QUANTITY	UNIT	DESCRIPTION
202	26	CU YD	PORTIONS OF STRUCTURE REMOVED
202	187.5	FT	BRIDGE RAILING REMOVED
509	4265	POUND	EPOXY COATED REINFORCING STEEL
511	30	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN
517	188.1	FT	RAILING (TWIN STEEL TUBE)
SPECIAL	212 5	FT	STEEL DRIP STRIP

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET 80.

REINFORCING TABLE

MARK	NUMBER	LENGTH	WEIGHT (LBS)	TYPE
S401	15	30	361	S
S402	112	4'-5"	331	B
S801	28	32'-2"	2405	B
S802	14	31'-3"	1168	S
		TOTAL	4265	

DESIGN FILE h:\projects\2358\Struct\MED301070\med301070isd.dgn
WORKSTATION sdeer DATE: 2/16/2006

DISTRICT 3
OFFICE OF PRODUCTION

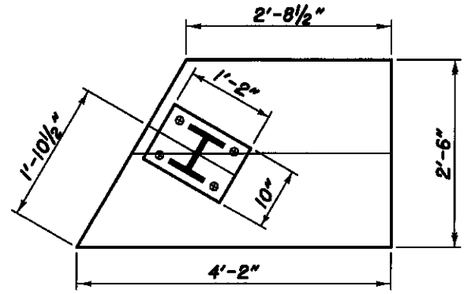
DESIGNED	DRAWN	REVISED	DATE
GTS	GTS	RDH	02/06
CHECKED		STRUCTURAL FILE NUMBER	
DJV		5207533	

DECK EDGE REPLACEMENT
MED-301-0701
OVER COON CREEK

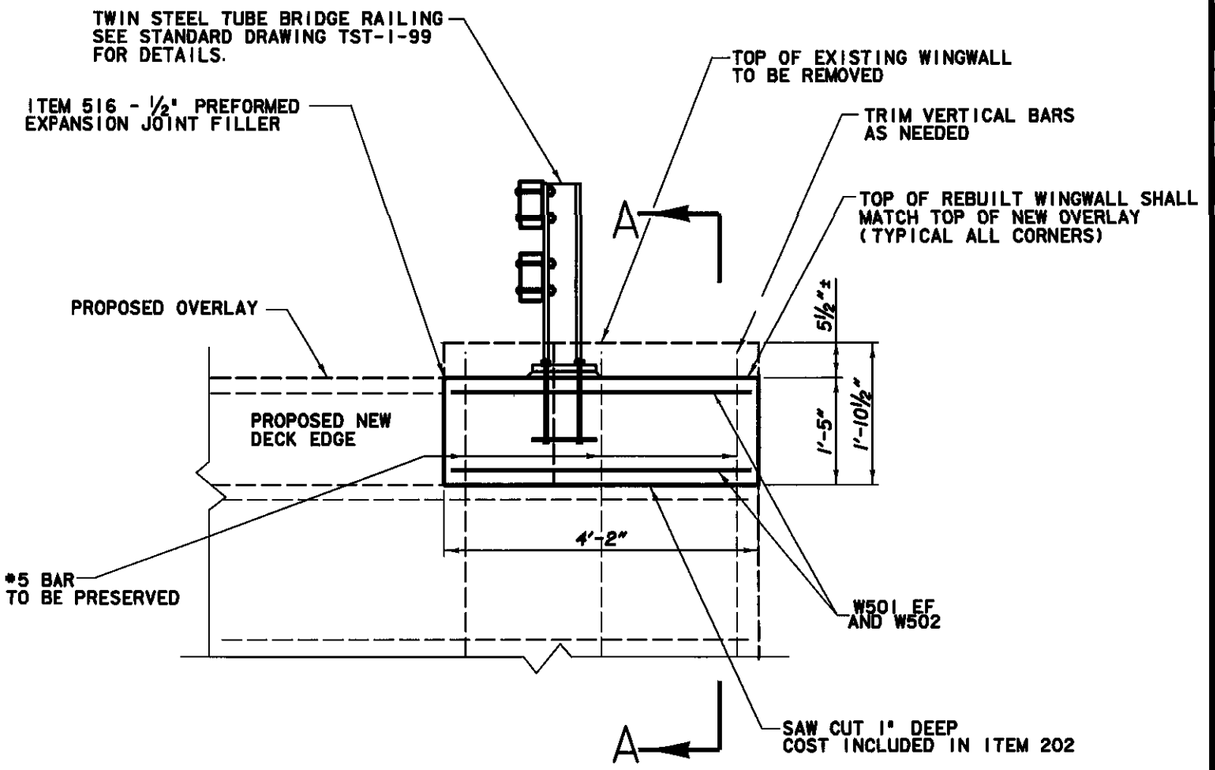
MED-301-0.00
LOR-301-0.00

2 / 4

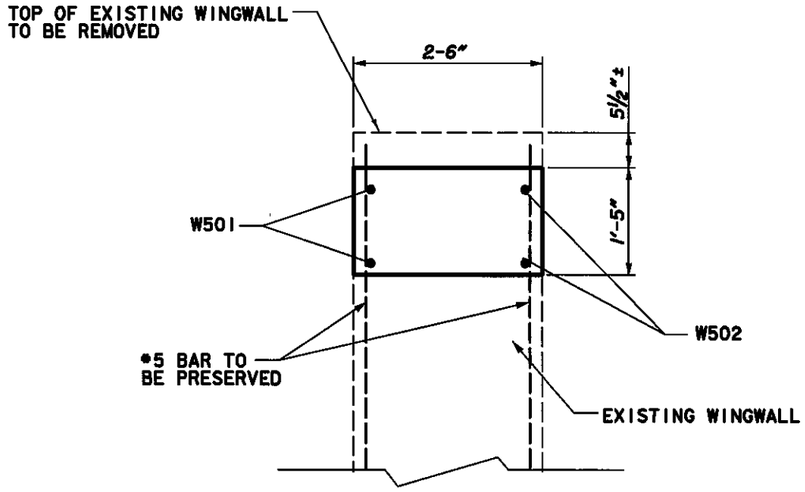
98
114



PARTIAL PLAN VIEW



PARTIAL ELEVATION OF WINGWALL



SECTION A-A

ITEM	QUANTITY	UNIT	DESCRIPTION
202	2.40	CU YD	PORTIONS OF STRUCTURE REMOVED
509	49	POUND	EPOXY COATED REINFORCING STEEL
511	1.81	CU YD	CLASS C CONCRETE, ABUTMENT, AS PER PLAN
516	17	SQ FT	½" PREFORMED EXPANSION JOINT FILLER

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET 80.

LEGEND

EF = EACH FACE

REINFORCING TABLE				
MARK	NUMBER	LENGTH	WEIGHT (LBS)	TYPE
W501	8	3'-8"	31	STRAIGHT
W502	8	2'-2"	18	STRAIGHT
		TOTAL	49	

DESIGN FILE i:\projects\2358\Struct\MED301070\med301070sd.dgn
WORKSTATION: sdeer DATE 2/16/2006

DISTRICT 1
OFFICE OF PRODUCTION

DESIGNED	DRAWN	CHECKED	QUANTITIES
GTS	GTS	DJV	RDW

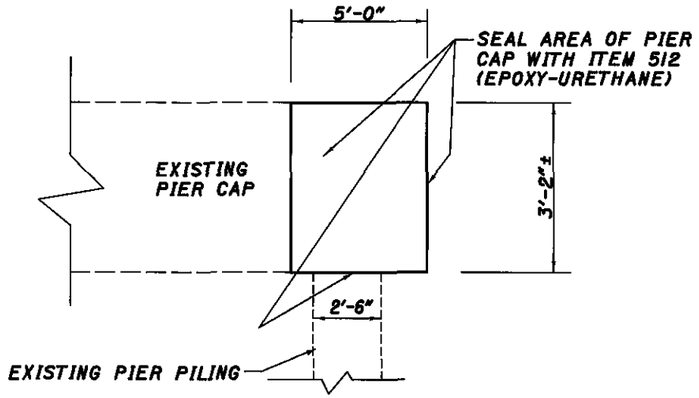
DATE 02/06
STRUCTURAL FILE NUMBER 5207599

WINGWALL REPLACEMENT
MED-301-0.00
OVER COON CREEK

MED-301-0.00
LOR-301-0.00

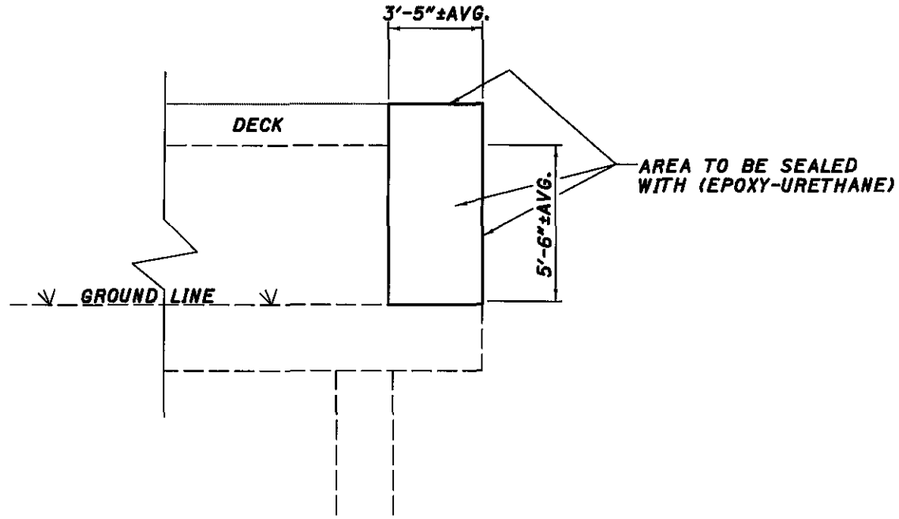
3 / 4

99
114



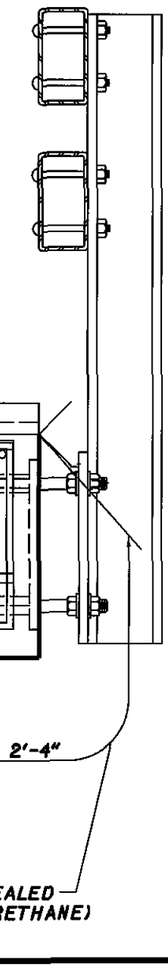
(PIER CAP WIDTH- 1'-6"±)

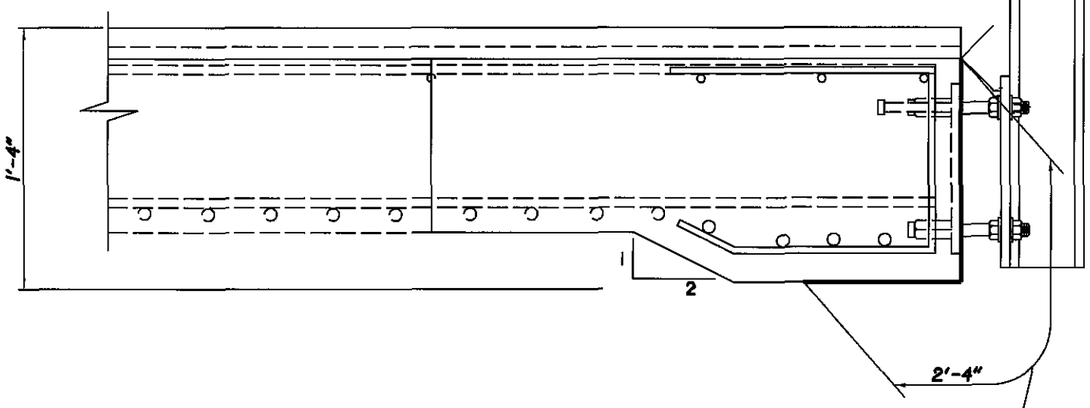
PARTIAL PIER CAP ELEVATION VIEW



(WINGWALL WIDTH- 2'-6"±)

PARTIAL WINGWALL ELEVATION VIEW





(DECK EDGE LENGTH- 86.25')

DECK EDGE SEALING

AREA TO BE SEALED WITH (EPOXY-URETHANE)

ITEM	QUANTITY	UNIT	DESCRIPTION
512	87	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET 80.

DESIGN AGENCY: DISTRICT 3 OFFICE OF PRODUCTION

DATE: 02/06

REVISED: RDN

STRUCTURE FILE NUMBER: 5207533

DRAWN: GTS

REVISED:

DESIGNED: GTS

CHECKED: DJV

PLAN VIEW

MED-301-0701 OVER COON CREEK

MED-301-0.00

LOR-301-0.00

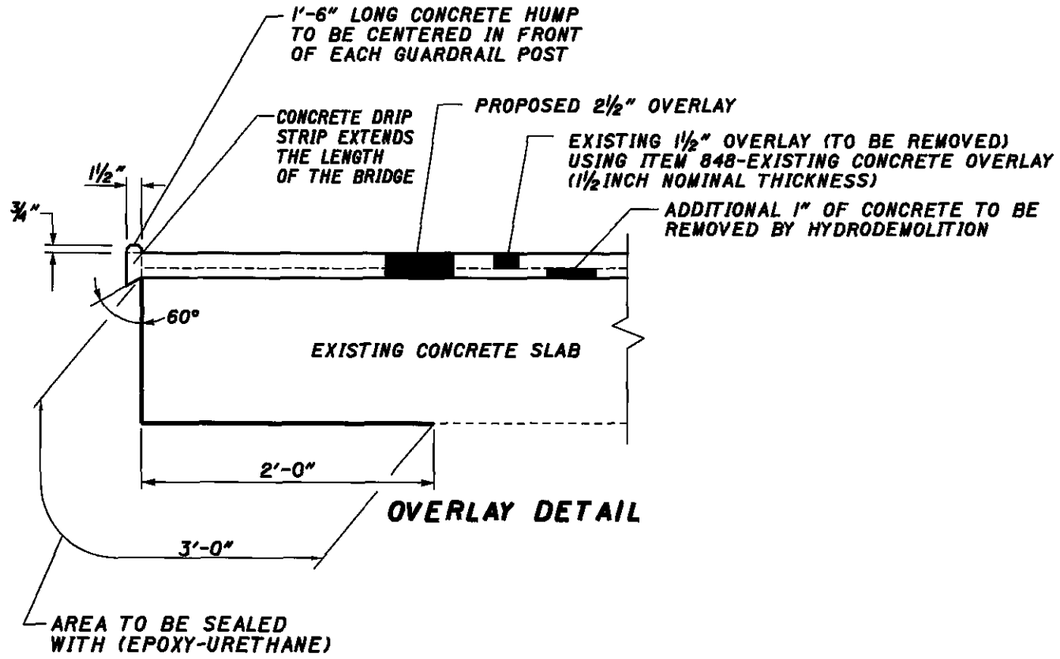
4 | 4

100 | 114

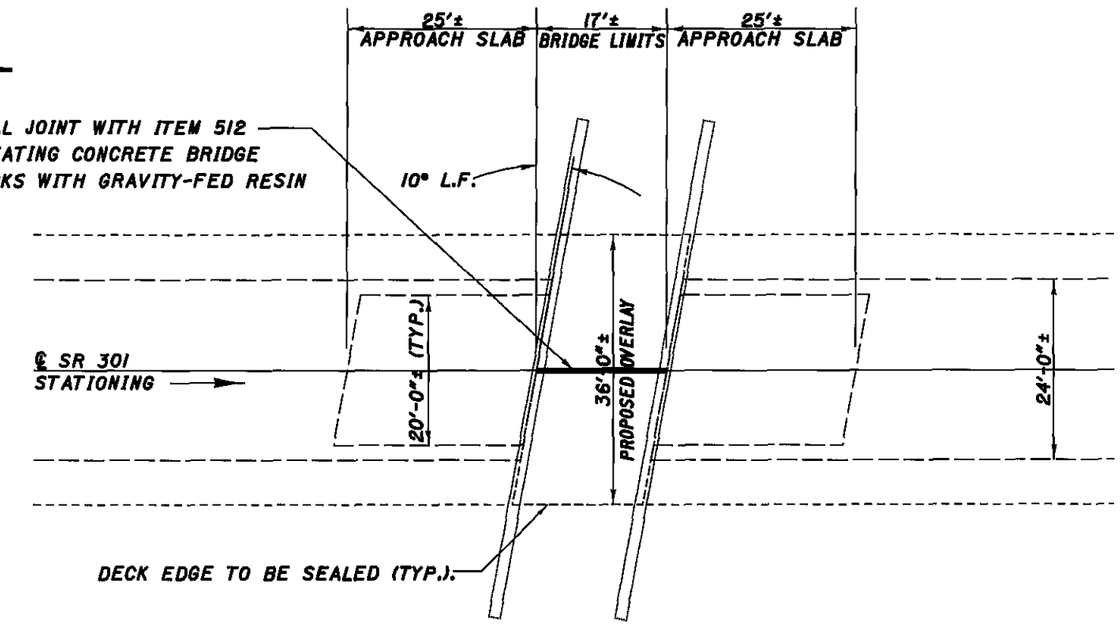
DESIGN FILE: I:\projects\2358\Struct\MED301070\med301070isd.dgn

WORKSTATION: sdeer

DATE: 2/16/2006



OVERLAY DETAIL



ITEM	QUANTITY	UNIT	DESCRIPTION
512	1	SQ YD	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY-FED RESIN
512	12	SQ YD	SEALING OF CONCRETE STRUCTURES (EPOXY-URETHANE)
848	68	SQ YD	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2½" THICK)
848	68	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION
848	2	CU YD	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN
848	3	SQ YD	HAND CHIPPING
848	LUMP		TEST SLAB
848	1	CU YD	FULL-DEPTH REPAIR
848	68	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (1½" NOMINAL THICKNESS)
848	4	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY

QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET 81.

NOTES:

1) THE EXISTING GUARDRAIL IS NOT SHOWN.

2) THE PROPOSED OVERLAY ELEVATION SHALL MATCH THE EXISTING BRIDGE DECK ELEVATION.

3) SEAL OVERLAY JOINT 4" WIDE, 2" ON EACH SIDE OF JOINT USING ITEM 512-TREATING CONCRETE BRIDGE DECKS WITH GRAVITY-FED RESIN

DESIGN AGENCY DISTRICT 3 OFFICE OF PRODUCTION

DATE 02/06

REVISED RDN

STRUCTURE FILE NUMBER 4706331

DESIGNED GTS

DRAWN GTS

CHECKED DJV

PLAN VIEW

LOR-301-0015 OVER BLACK RIVER

MED-301-0.00

LOR-301-0.00

1 / 2

101 / 114

DESIGN FILE: i:\projects\2358\Struct\LOR301\0015\lor301_0015sd.dgn
WORKSTATION: sdeer
DATE: 2/16/2006

SIGNAL TIMING

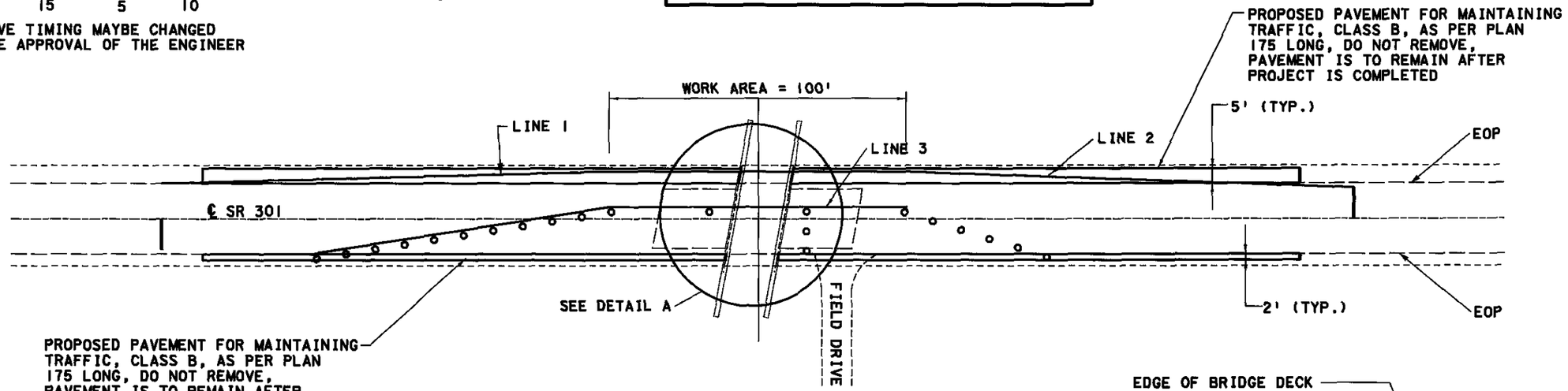
A TWO PHASE CONTROLLER WITH CABINET CAPABLE OF BEING SET WITH THE FOLLOWING SPLITS SHALL BE FURNISHED

CYCLE LENGTH: 60 SECONDS

	GREEN	AMBER	RED
PHASE A	15	5	10
PHASE B	15	5	10

THE ABOVE TIMING MAYBE CHANGED WITH THE APPROVAL OF THE ENGINEER

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

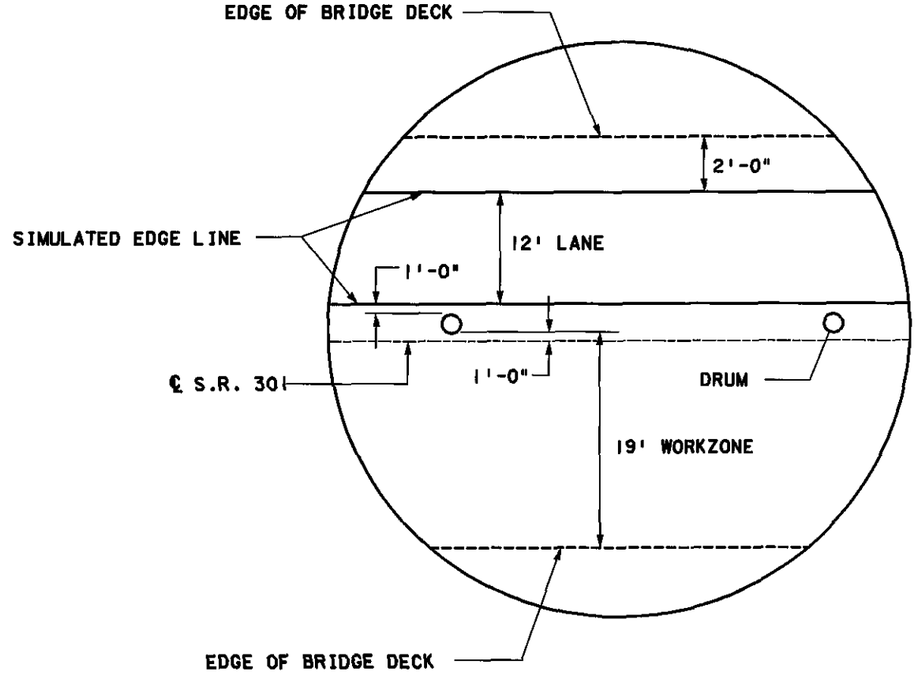


PHASE A SHOWN
PHASE B SIMILAR

WORK ZONE RAISED PAVEMENT MARKERS (TYPE A)				
		SPACING	QTY. (WHITE)	QTY. (YELLOW)
PHASE A	LINE 1= 250'	5'-0"	51	51
	LINE 2= 150'	5'-0"	30	
	LINE 3= 100'	5'-0"	21	21
PHASE B	LINE 1= 250'	5'-0"	51	51
	LINE 2= 150'	5'-0"	30	
	LINE 3= 100'	5'-0"	21	21
		TOTAL	204	144

ITEM	QUANTITY	UNIT	DESCRIPTION
614	348	EACH	WORK ZONE RAISED PAVEMENT MARKER
614	9	EACH	BARRIER REFLECTOR, TYPE A2
614	.06	MILE	WORK ZONE CENTER LINE, CLASS I (SOLID DOUBLE)
614	.04	MILE	WORK ZONE EDGE LINE, CLASS I (WHITE)
614	24	FT.	WORK ZONE STOP LINE, CLASS I
615	LUMP		ROADS FOR MAINTAINING TRAFFIC
615	272	SQ.YD.	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET 81.



DETAIL A

NOTES:

1) THE EXISTING BRIDGE RAILING AND GUARDRAIL ARE NOT SHOWN IN THE PLAN VIEW

DESIGN FILE: h:\projects\23581\Struct\LOR30100IS\MOT.dgn
WORKSTATION edeer DATE: 2/16/2006

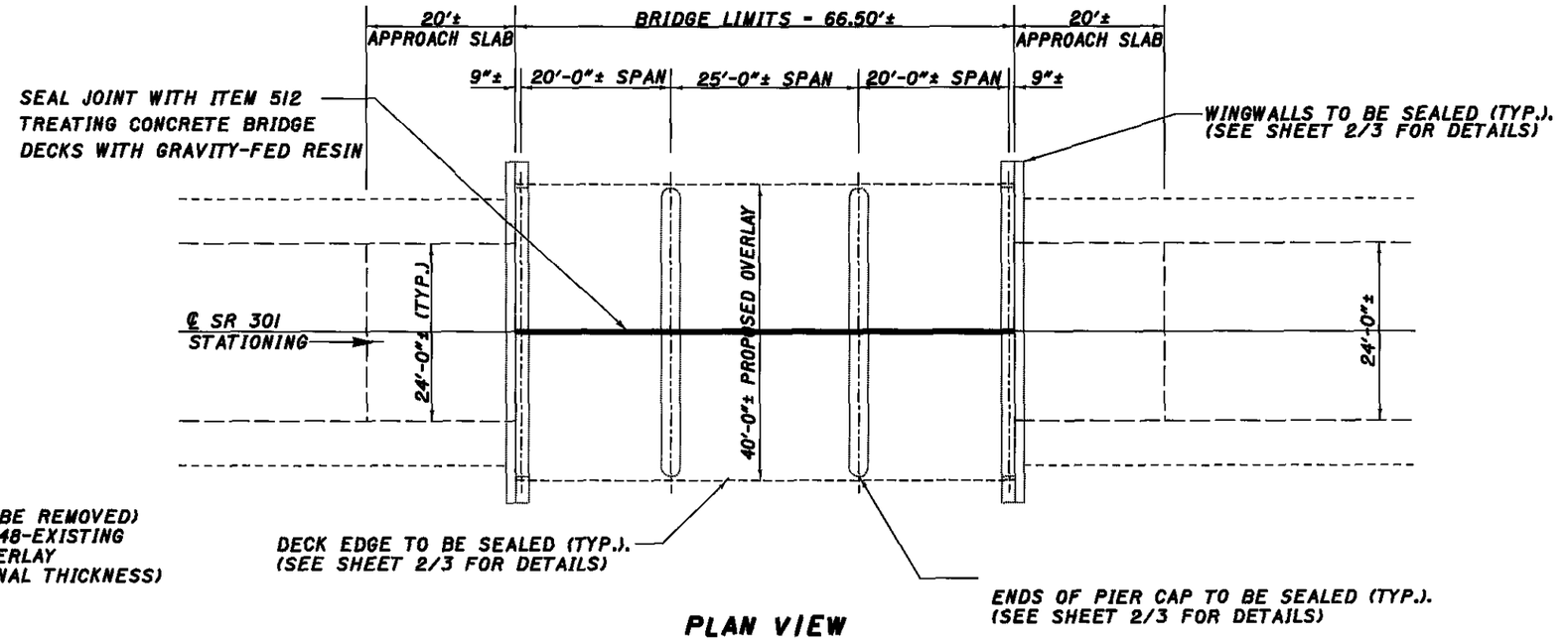
DISTRICT 3
OFFICE OF PRODUCTION
DESIGNED GTS
DRAWN GTS
CHECKED DJV
REVISED RDH 02/06
APPROVED
STRUCTURAL FILE NUMBER 4706331

MAINTENANCE OF TRAFFIC
LOR-301-0.00
OVER BLACK RIVER

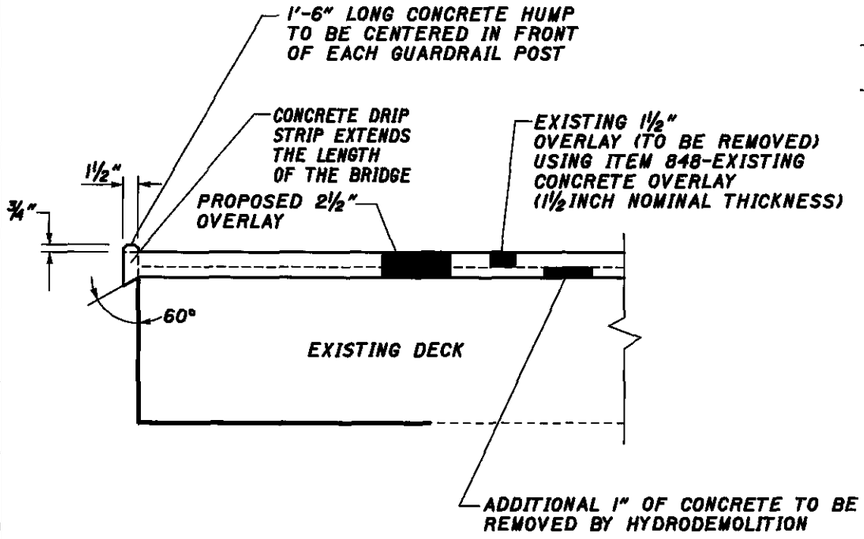
MED-301-0.00
LOR-301-0.00

2 / 2

102
114



PLAN VIEW



OVERLAY DETAIL

ITEM	QUANTITY	UNIT	DESCRIPTION
512	3	SQ YD	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY-FED RESIN
848	296	SQ YD	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2½" THICK)
848	296	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION
848	9	CU YD	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN
848	9	SQ YD	HAND CHIPPING
848	LUMP		TEST SLAB
848	1	CU YD	FULL-DEPTH REPAIR
848	296	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (1½" NOMINAL THICKNESS)
848	15	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY

QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET 81.

NOTES:

1) THE EXISTING GUARDRAIL IS NOT SHOWN.

2) THE PROPOSED OVERLAY ELEVATION SHALL MATCH THE EXISTING BRIDGE DECK ELEVATION.

3) SEAL OVERLAY JOINT 4" WIDE, 2" ON EACH SIDE OF JOINT USING ITEM 512-TREATING CONCRETE BRIDGE DECKS WITH GRAVITY-FED RESIN

DESIGN FILE: i:\projects\2358i\Struct\LOR30i0i64\lor30i0i64sd.dgn
WORKSTATION sdesr DATE 2/16/2006

DISTRICT THREE
OFFICE OF PRODUCTION

DESIGNED	DRAWN	CHECKED	QUANTITIES
GTS	GTS	DJV	

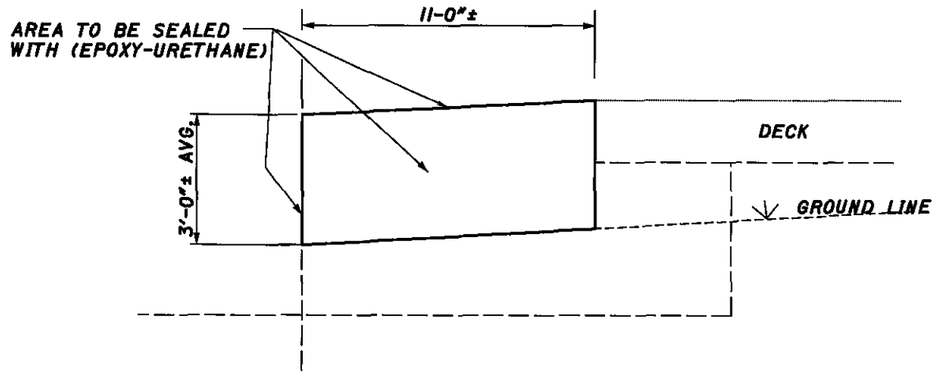
DATE 02/06
REVISED RDH
STRUCTURE FILE NUMBER 4706366

PLAN VIEW
LOR-301-0164
OVER CREEK

MED-301-0.00
LOR-301-0.00

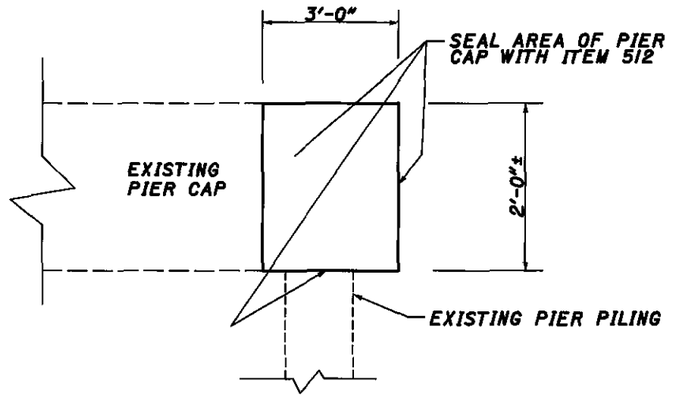
1 / 3

103
114



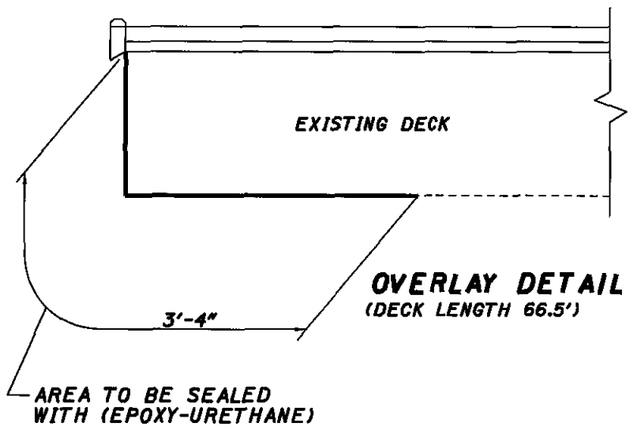
(WINGWALL WIDTH= 1'-3"±)

PARTIAL WINGWALL ELEVATION VIEW



(PIER CAP WIDTH= 2'-6"±)

PARTIAL PIER CAP ELEVATION VIEW



OVERLAY DETAIL
(DECK LENGTH 66.5')

ITEM	QUANTITY	UNIT	DESCRIPTION
512	83	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET 81.

DESIGN FILE: I:\projects\2358\Struct\LOR3010164\lor3010164sd.dgn
WORKSTATION sdesr DATE 2/16/2006

DISTRICT 3
OFFICE OF PRODUCTION

DESIGNED GTS | DRAWN GTS | CHECKED DJV | REVISED RDH 02/06 | STRUCTURE FILE NUMBER 4706366

SEALING DETAILS

LOR-301-0164
OVER CREEK

MED-301-0.00
LOR-301-0.00

2 | 3

104
114

SIGNAL TIMING

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

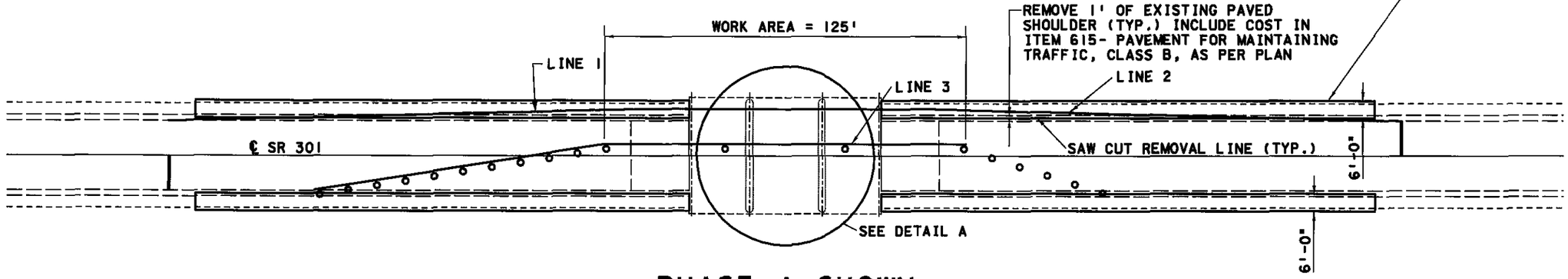
CYCLE LENGTH: 60 SECONDS

	GREEN	AMBER	RED
PHASE A	15	5	10
PHASE B	15	5	10

THE ABOVE TIMING MAYBE CHANGED WITH THE APPROVAL OF THE ENGINEER

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

PROPOSED PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN 170 LONG (TYPICAL ALL CORNERS), DO NOT REMOVE, PAVEMENT IS TO REMAIN AFTER PROJECT IS COMPLETED

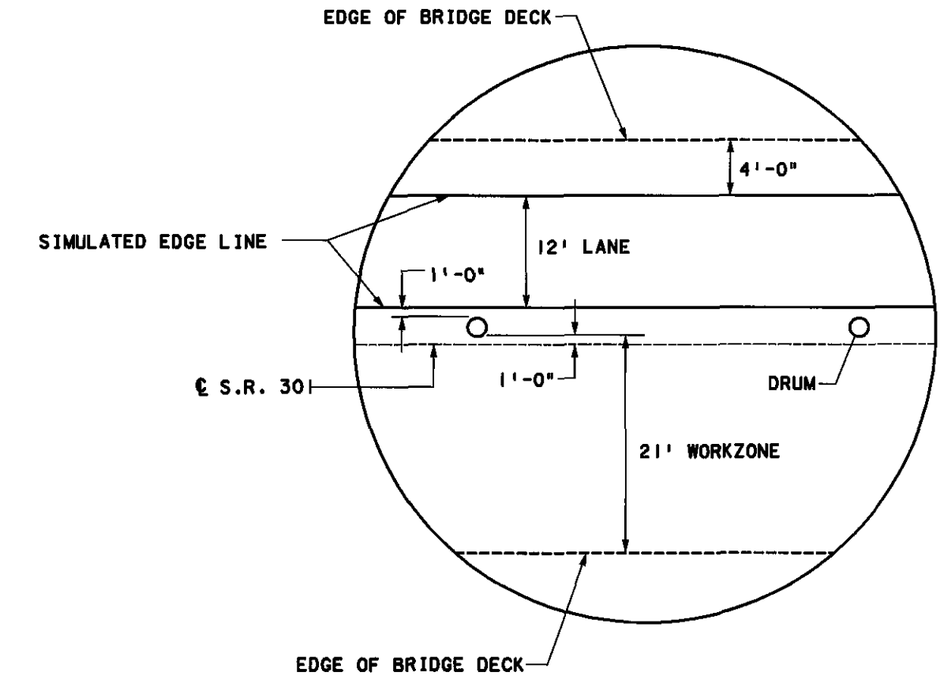


PHASE A SHOWN
PHASE B SIMILAR

WORK ZONE RAISED PAVEMENT MARKERS (TYPE A)				
		SPACING	QTY. (WHITE)	QTY. (YELLOW)
PHASE A	LINE 1= 275'	5'-0"	56	56
	LINE 2= 150'	5'-0"	30	
	LINE 3= 125'	5'-0"	26	26
PHASE B	LINE 1= 275'	5'-0"	56	56
	LINE 2= 150'	5'-0"	30	
	LINE 3= 125'	5'-0"	26	26
		TOTAL	224	164

ITEM	QUANTITY	UNIT	DESCRIPTION
614	388	EACH	WORK ZONE RAISED PAVEMENT MARKER
614	20	EACH	BARRIER REFLECTOR, TYPE A2
614	.06	MILE	WORK ZONE CENTER LINE, CLASS I (SOLID DOUBLE)
614	.04	MILE	WORK ZONE EDGE LINE, CLASS I (WHITE)
614	24	FT.	WORK ZONE STOP LINE, CLASS I
615	LUMP		ROADS FOR MAINTAINING TRAFFIC
615	453	SQ.YD.	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET 81.



DETAIL A

NOTES:

1) THE EXISTING BRIDGE RAILING AND GUARDRAIL ARE NOT SHOWN IN THE PLAN VIEW

DESIGN FILE: I:\projects\2358\Struct\LOR30I0164\MOT.dgn
WORKSTATION: sdeer DATE 2/16/2006

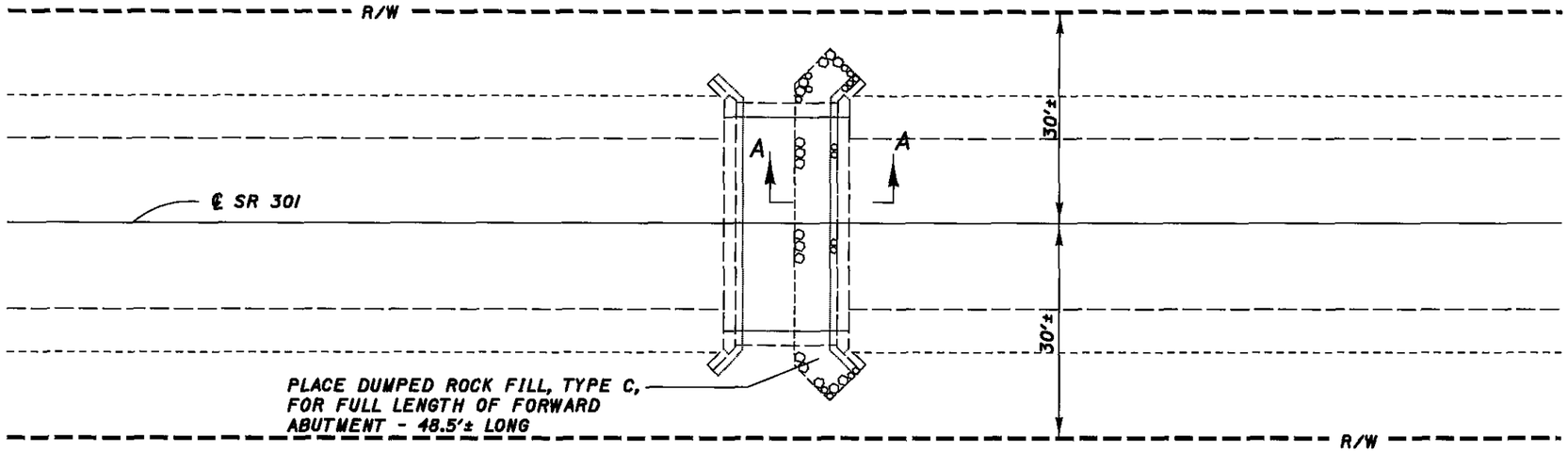
DISTRICT THREE
OFFICE OF PRODUCTION
DESIGNED GTS
DRAWN RDN DATE 02/06
CHECKED GTS
QUANTITIES
CHECKED DJV
PROJECT NUMBER 4706366

MAINTENANCE OF TRAFFIC
LOR-301-0154
OVER CREEK

MED-301-0.00
LOR-301-0.00

3 / 3

105
114



PLAN VIEW

DUMPED ROCK LENGTH - 48.5'± LONG

SECTION A-A

ITEM	QUANTITY	UNIT	DESCRIPTION
601	13	CU YD	DUMPED ROCK FILL, TYPE C

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET 82.

NOTES:

1) GUARDRAIL NOT SHOWN
2) PLACE DUMPED ROCK FILL ALONG ENTIRE LENGTH OF FORWARD ABUTMENT

DESIGN FILE i:\projects\2358\Struct\LOR3010894\lor3010894sd.dgn
WORKSTATION ader DATE 2/16/2006

DISTRICT THREE
OFFICE OF PRODUCTION

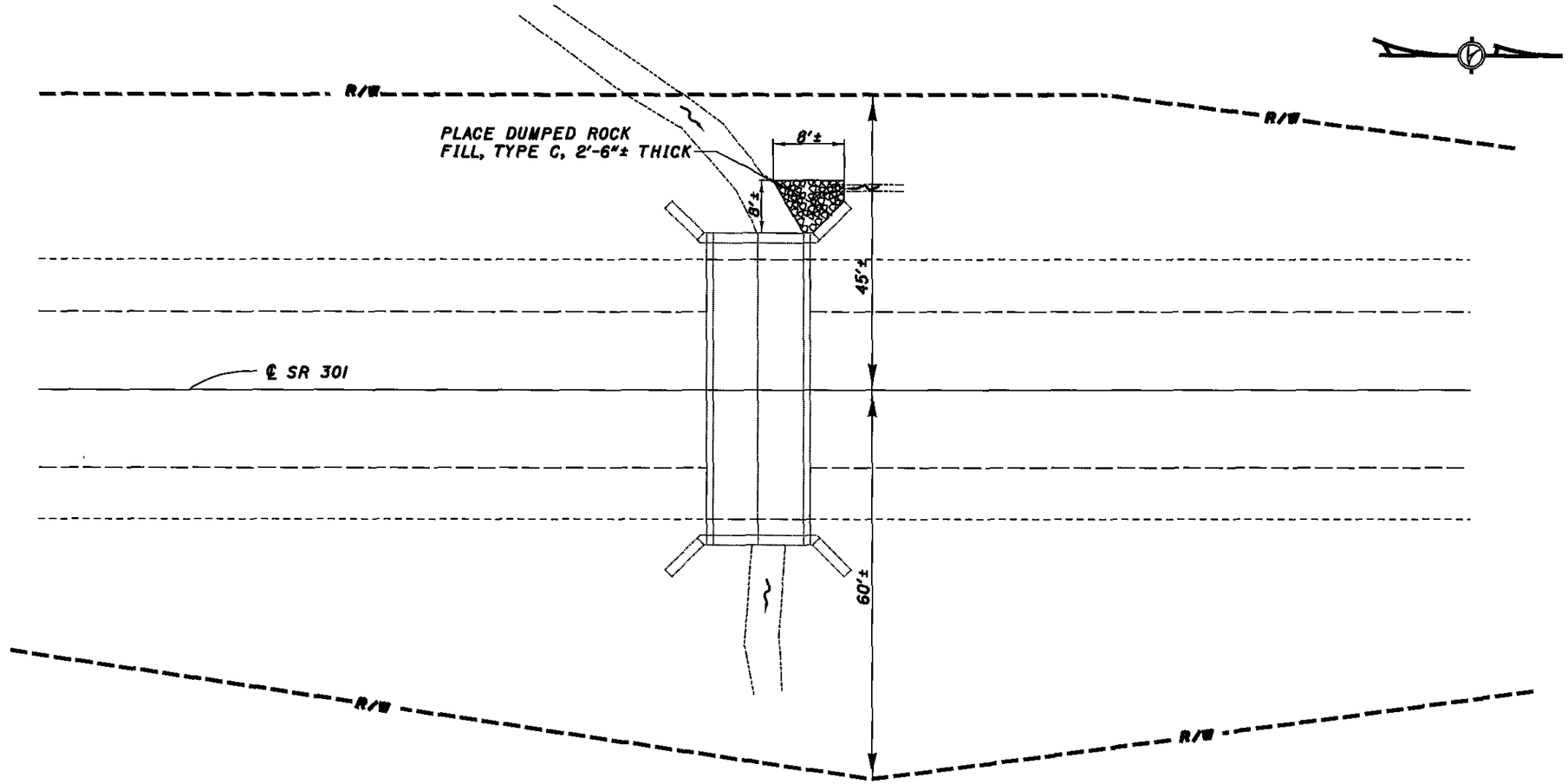
DESIGNED BY GTS
DRAWN BY GTS
CHECKED BY DJV
REVISED BY RDN
DATE 02/06
STRUCTURE FILE NUMBER 4706390

PLAN VIEW
LOR-301-0894
OVER TRIBUTARY OF KINGS DITCH

MED-301-0.00
LOR-301-0.00

1 1

106
114



PLAN VIEW

ITEM	QUANTITY	UNIT	DESCRIPTION
601	6	CU YD	DUMPED ROCK FILL, TYPE C

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET 82.

NOTES:

1) GUARDRAIL NOT SHOWN

2) PLACE DUMPED ROCK FILL, TYPE C AT FORWARD LEFT WINGWALL

3) SEE SHEET 2/2 FOR SEALING DETAILS.

DESIGN FILE I:\projects\2358\Struct\LOR301019\lor301019sd.dgn
WORKSTATION: sdeer DATE 2/16/2006

DISTRICT THREE
OFFICE OF PRODUCTION

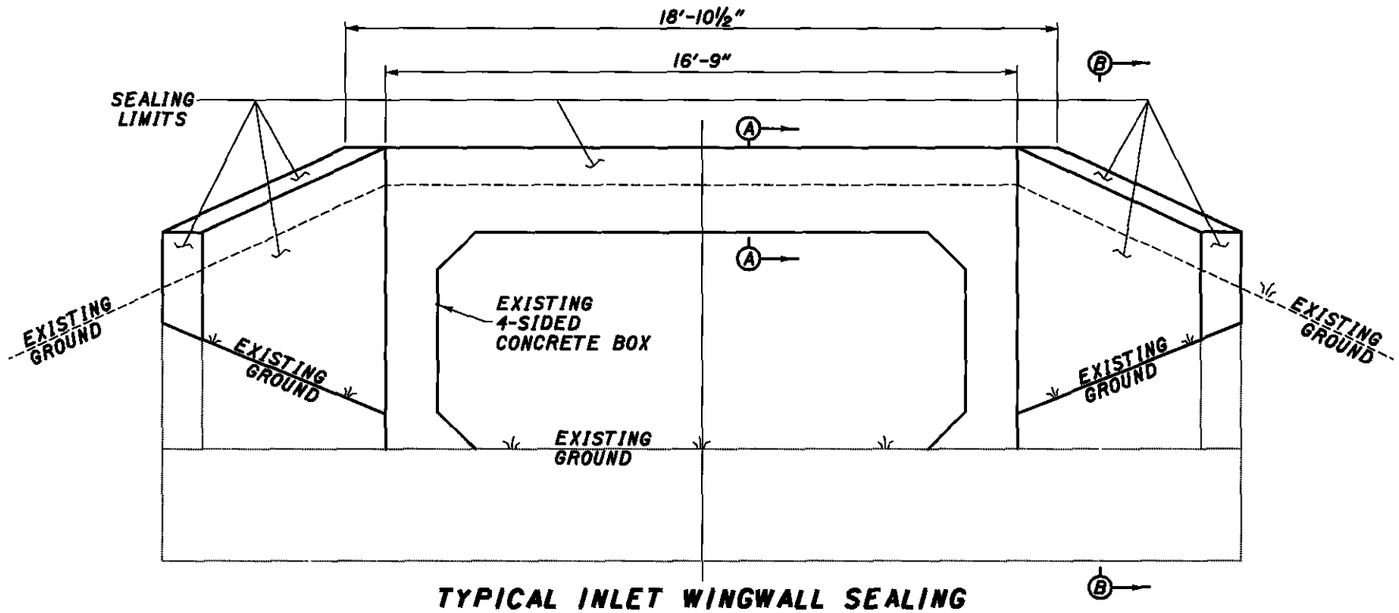
DESIGNED 6TS	DRAWN 6TS	REVISED RDN	DATE 02/06
CHECKED DJV	REVISED	STRUCTURE FILE NUMBER 4706439	

PLAN VIEW
LOR-301-09.19
OVER TRIBUTARY OF KINGS DITCH

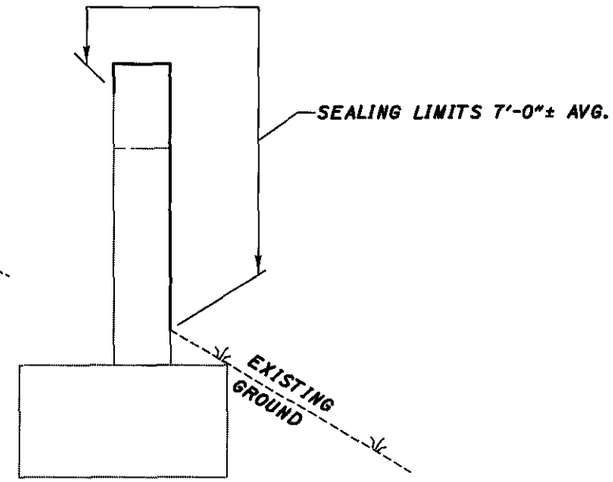
MED-301-0.00
LOR-301-0.00

1 / 2

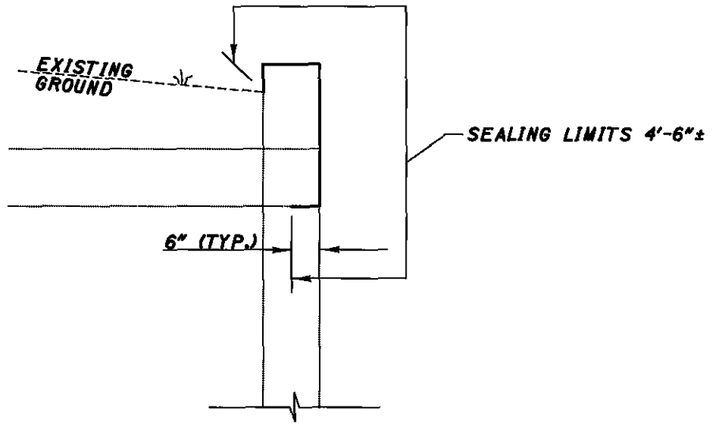
107
114



TYPICAL INLET WINGWALL SEALING



WINGWALL LENGTHS = 7'-0"±
SECTION B-B



SECTION A-A LENGTH = 16'-9"±

ITEM	QUANTITY	UNIT	DESCRIPTION
512	39	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

QUANTITIES CARRIED TO STRUCTURE GENERAL SUMMARY 82.

NOTES: 1) THE HEADWALLS AND ALL EXPOSED AREAS OF THE WINGWALLS SHALL BE SEALED WITH ITEM 512.

2) THE SEALING AREA DETAILS ARE NOT TO SCALE.

DESIGN FILE l:\projects\2358\Struct\LOR3010919\lor3010919sd.dgn
WORKSTATION sdesr DATE 2/16/2006

DISTRICT THREE
OFFICE OF PRODUCTION

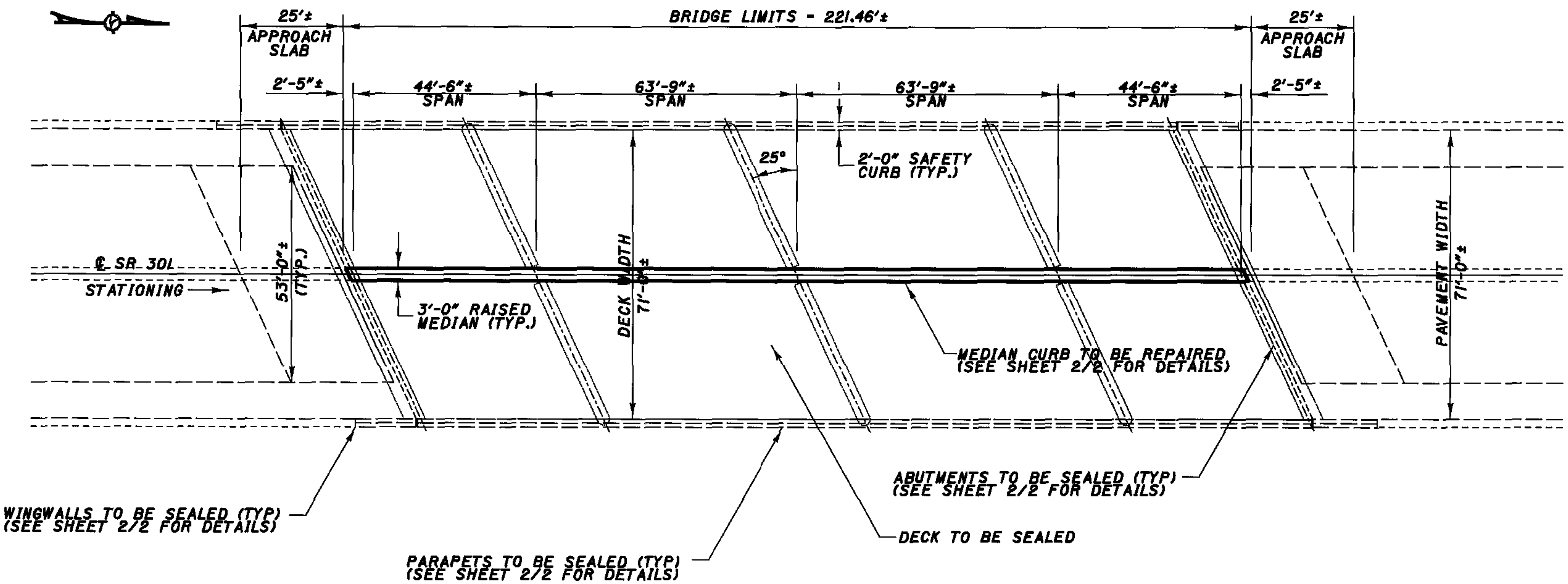
DESIGNED GTS | DRAWN GTS | CHECKED DJV | REVISED RDN 02/06 | STRUCTURE FILE NUMBER 4706439

PLAN VIEW
LOR-301-0919
OVER KINGS DITCH

MED-301-0.00
LOR-301-0.00

2 2

108
114



ITEM	QUANTITY	UNIT	DESCRIPTION
512	1651	SQ YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS

ALL QUANTITIES CARRIED TO GENERAL SUMMARY SHEET 82.

1) SEE SHEET 2/2 FOR SEALING DETAILS.

2) SEE SHEET 2/2 FOR MEDIAN CURB REPAIR.

DESIGN FILE I:\projects\2358\Struct\LOR301I259\lor301I24isd.dgn
WORKSTATION: sdeer DATE 2/16/2006

DESIGN AGENCY DISTRICT THREE OFFICE OF PRODUCTION

DESIGNED GTS | CHECKED DJV | DRAWN GTS | REVIEWED | REVIEWED RDH | DATE 02/06 | STRUCTURE FILE NUMBER 4706609

PLAN VIEW

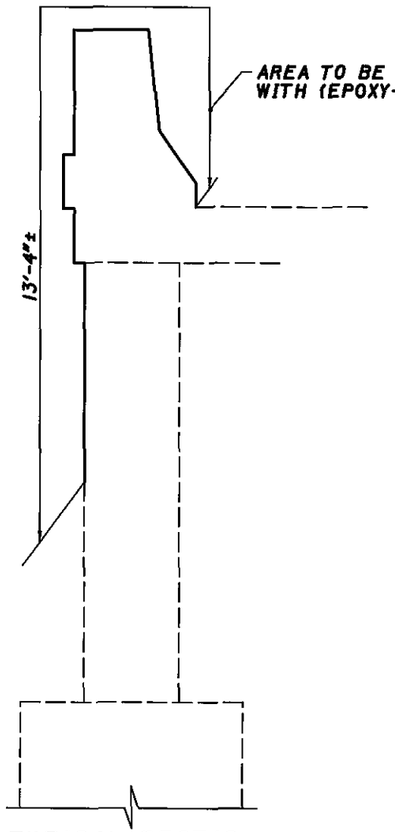
LOR-301-1259 OVER S.R. 20

MED-301-0.00

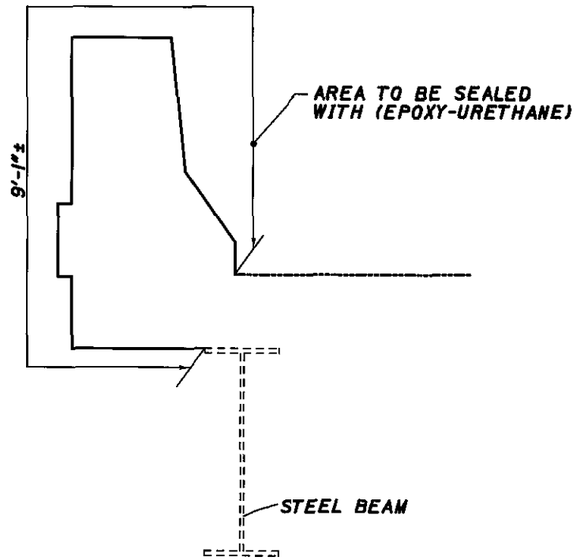
LOR-301-0.00

1 / 2

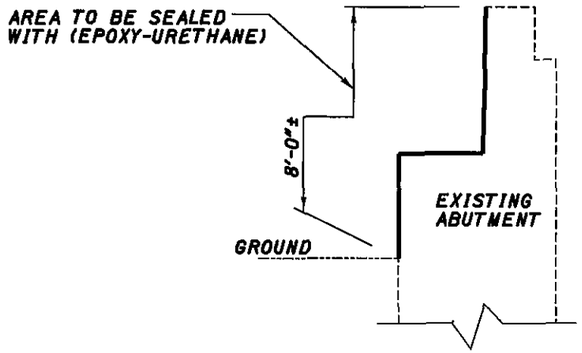
109 / 114



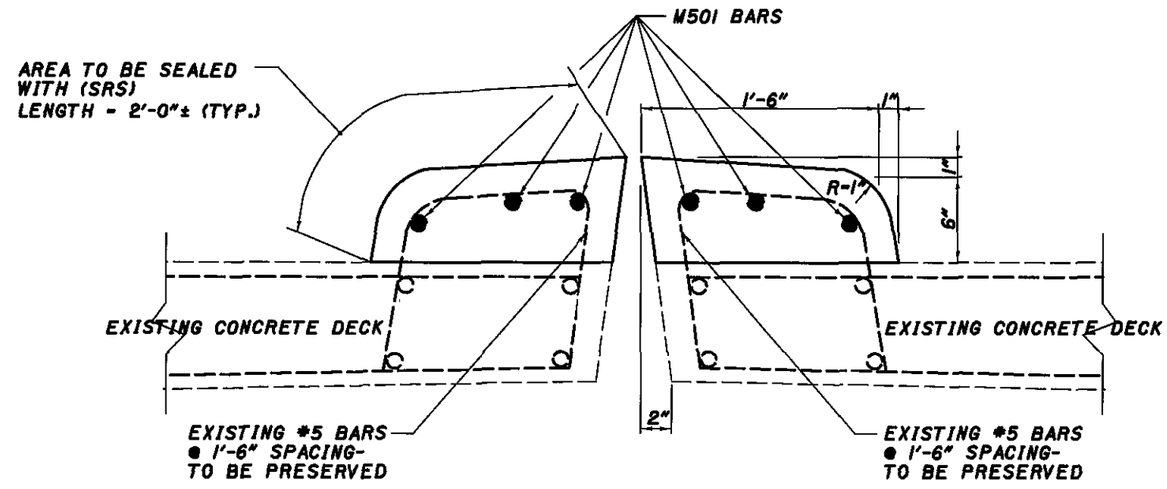
TYPICAL SECTION
AT WINGWALL
LENGTH - 15'-0"± AVG.



TYPICAL SECTION
AT PARAPET
LENGTH - 218'-0"±



TYPICAL SECTION
AT ABUTMENT
(ABUTMENTS ARE 82'-4"± LONG)



TYPICAL SECTION
AT RAISED MEDIAN
LENGTH - 218'-0"±

ITEM	QUANTITY	UNIT	DESCRIPTION
202	15	CU YD	PORTIONS OF STRUCTURE REMOVED
509	1427	POUND	EPOXY COATED REINFORCING STEEL
511	15	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN
512	675	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	97	SQ YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS

ALL QUANTITIES CARRIED TO GENERAL SUMMARY SHEET 82.

REINFORCING TABLE				
MARK	NUMBER	LENGTH	WEIGHT	TYPE
M501	36	38'	1427	STR.
		TOTAL	1427	

DESIGN AGENCY DISTRICT 3
OFFICE OF PRODUCTION

DESIGNED GTS | DRAWN GTS | CHECKED DJV | REVISED | REVIEWED RDN | DATE 02/06 | STRUCTURE FILE NUMBER 4706609

SEALING DETAIL
LOR-301-1259
OVER US 20

MED-301-0.00
LOR-301-0.00

2 / 2

110
114

DESIGN FILE I:\projects\2358\Struct\LOR301l259\lor301l24lsd.dgn
WORKSTATION sdeer DATE 2/16/2006

MED-301-6.77
MEDINA COUNTY
SPENCER TOWNSHIP
LOT 4, SECTION 12
T-2-N, R-1-W

MONUMENT LEGEND

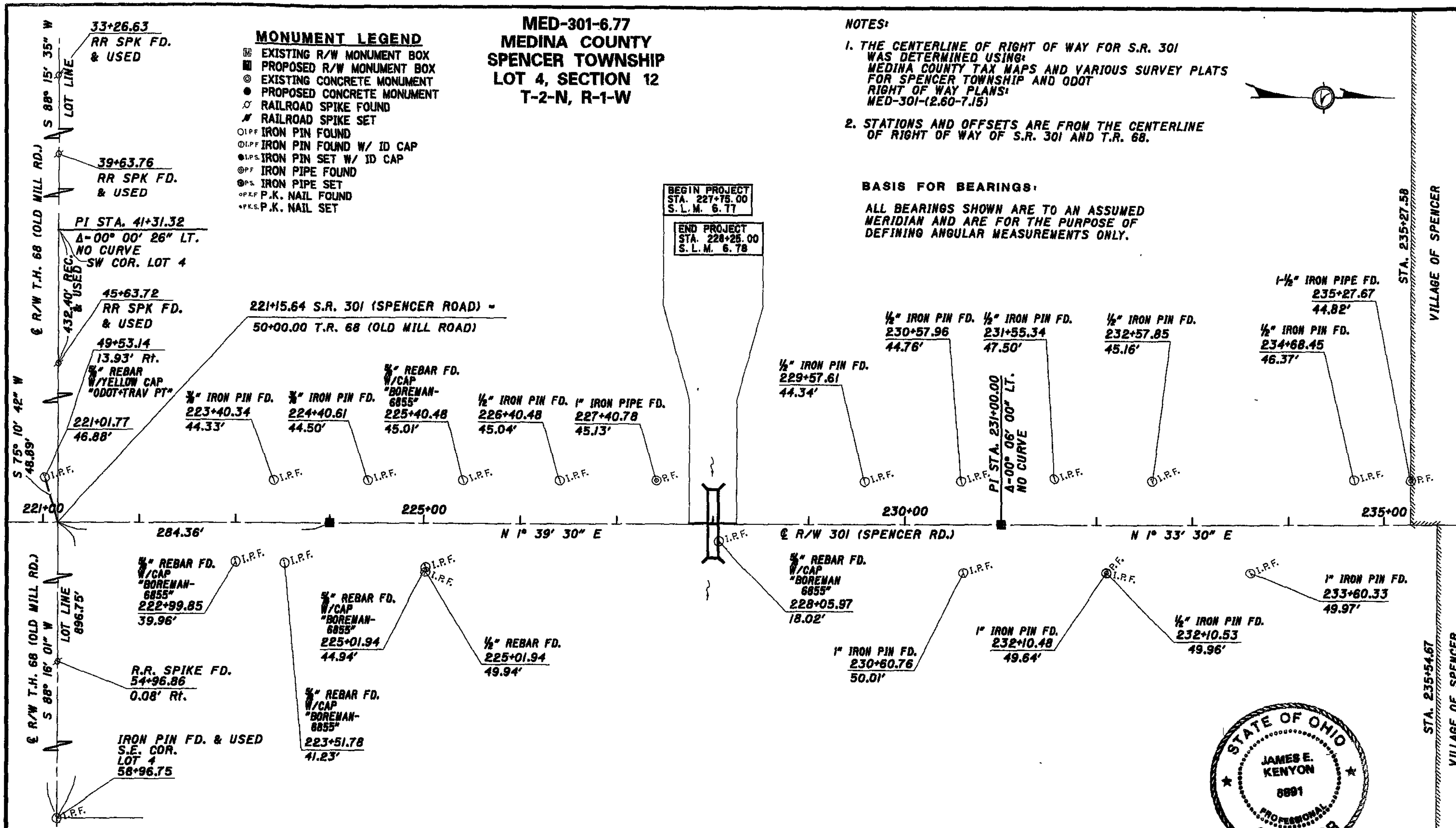
- EXISTING R/W MONUMENT BOX
- PROPOSED R/W MONUMENT BOX
- EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- RAILROAD SPIKE FOUND
- RAILROAD SPIKE SET
- I.P.F. IRON PIN FOUND
- I.P.F. IRON PIN FOUND W/ ID CAP
- I.P.S. IRON PIN SET W/ ID CAP
- P.F. IRON PIPE FOUND
- P.S. IRON PIPE SET
- P.K.F. P.K. NAIL FOUND
- P.K.S. P.K. NAIL SET

NOTES:

1. THE CENTERLINE OF RIGHT OF WAY FOR S.R. 301 WAS DETERMINED USING:
   MEDINA COUNTY TAX MAPS AND VARIOUS SURVEY PLATS FOR SPENCER TOWNSHIP AND ODOT
   RIGHT OF WAY PLANS:
   MED-301-(2.60-7.15)
2. STATIONS AND OFFSETS ARE FROM THE CENTERLINE OF RIGHT OF WAY OF S.R. 301 AND T.R. 68.

BASIS FOR BEARINGS:

ALL BEARINGS SHOWN ARE TO AN ASSUMED MERIDIAN AND ARE FOR THE PURPOSE OF DEFINING ANGULAR MEASUREMENTS ONLY.



MOUMENTS TO BE SET DURING CONSTRUCTION				
STATION	DIST. FROM ℄ OF SURVEY LEFT	DIST. FROM ℄ OF SURVEY RIGHT	℄ MONUMENTS	REFERENCE MONUMENTS
P.O.T. 224+00.00			1	-
P.I. 231+00.00			1	-
TOTAL			2	-

THE PROPOSED RIGHT OF WAY SHALL BE REFERENCED FROM THE CENTERLINE OF RIGHT OF WAY.

ADJUSTABLE CENTERLINE MONUMENTS, REFERENCE MONUMENTS AND RIGHT OF WAY MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM 1.1 (REV. 4-18-03) OF THE OHIO DEPARTMENT OF TRANSPORTATION. THE PLACING OF THE MONUMENTS SHALL BE UNDER THE DIRECTION OF A SURVEYOR REGISTERED IN THE STATE OF OHIO AND ARE TO BE SET, AS SHOWN BY THE HIGHWAY CONTRACTOR AT THE TIME OF CONSTRUCTION. ANY ALTERATIONS, WITH PRIOR APPROVAL OF THE OHIO DEPARTMENT OF TRANSPORTATION, SHALL BE NOTED AND O.D.O.T. SHALL BE NOTIFIED OF THE NEW LOCATIONS.

RECEIVED ______________, 20____
RECORDED ______________, 20____
DOCUMENT NO. ______________
MEDINA COUNTY RECORDER

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE BY THE OHIO DEPARTMENT OF TRANSPORTATION IN 2003.

THE ESTABLISHMENT OF THE PROPERTY LINES AND EXISTING RIGHT OF WAY LINES SHOWN ON THIS PLAN AS OF THIS DATE WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION.

BY James E. Kenyon
JAMES E. KENYON
SURVEYOR NO. 6891 DATE 2-9-2005

SCALE IN FEET 0 25 50 100

PID NO. 23581

CENTERLINE PLAT
MED-301-6.77

LOR-301-0.00

1/1
1/4

111/114

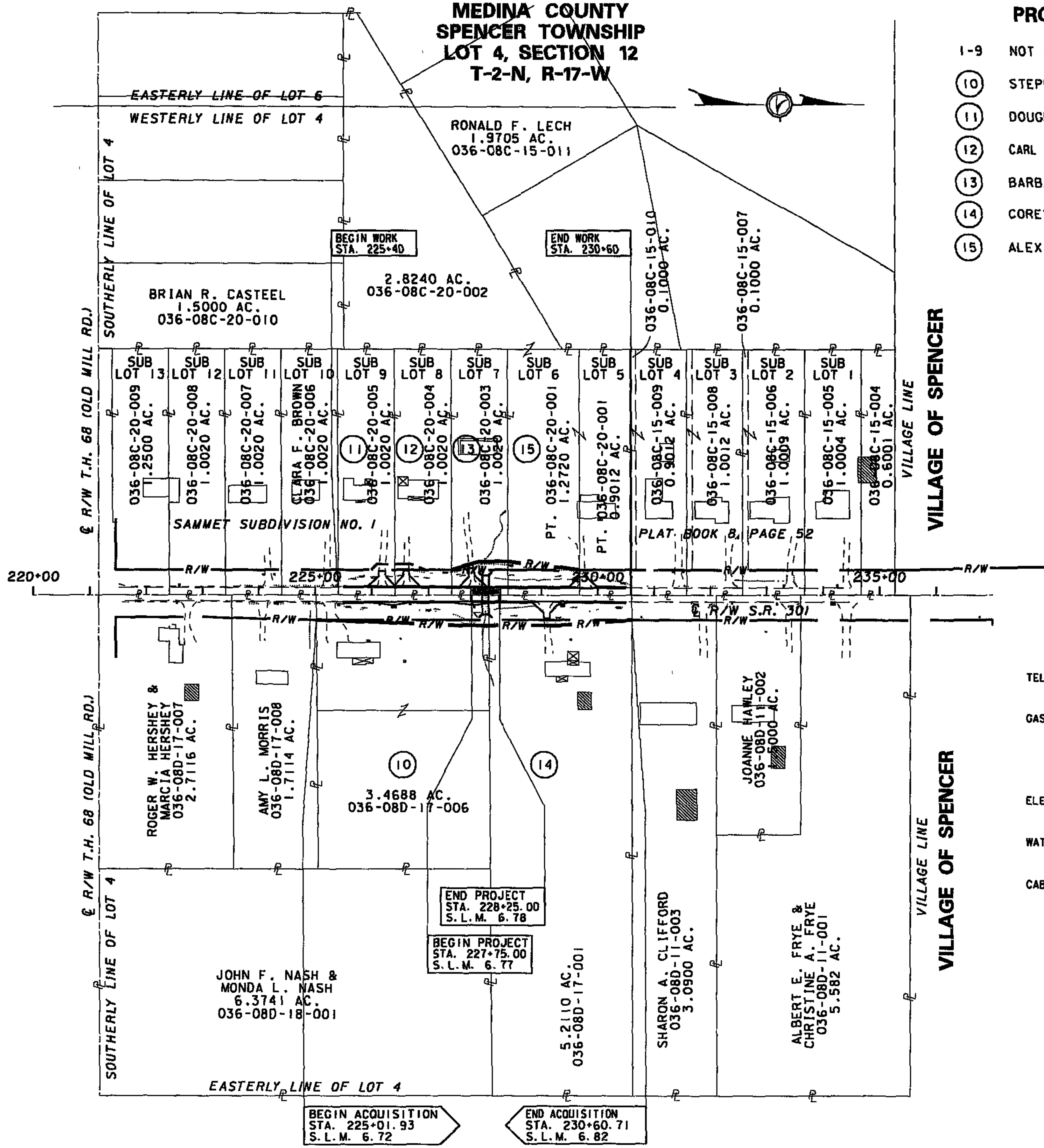
MED-301-6.77
MEDINA COUNTY
SPENCER TOWNSHIP
LOT 4, SECTION 12
T-2-N, R-17-W

CONVENTIONAL SIGNS

- County Line
- Township Line
- Section Line
- Corporation Line — or
- Fence Line (existing) (proposed)
- Center Line
- Trees, Stumps (to be removed)
- Utility Poles: Telephone, Power, Light
- Limited Access (only) LA
- Right of Way (only) R/W
- Limited Access & Right of Way LA-R/W
- Exist. Right of Way R/W
- Temp. Right of Way T ESMT
- Slope Easement SL ESMT
- Utility Easement U ESMT
- Property Line (in existing fence)
- Railroad or
- Guardrail (existing) (proposed)
- Construction Limits

STRUCTURE KEY

- RESIDENTIAL
- COMMERCIAL
- OUT-BUILDING



PROPERTY OWNERS

1-9	NOT USED
(10)	STEPHEN F. ESTVANIC & SALLY A. ESTVANIC
(11)	DOUGLAS W. VIZER & SUSAN D. VIZER
(12)	CARL J. BORLING, SR. & LAURIE A. CORBETT
(13)	BARBARA L. DAVIS & LATTIE T. DAVIS
(14)	COREY W. LEONARD & LAURA R. LEONARD
(15)	ALEX P. SHRANKO & LUANN SHRANKO

UTILITY OWNERS

TELEPHONE:	VERIZON. 6223 NORWALK RD. MEDINA, OHIO 44256
GAS:	COLUMBIA GAS OF OHIO INC. 7080 FRY RD. MIDDLEBURG HEIGHTS, OHIO 44130
	GATHERCO 5772 DRESSLER RD. NW NORTH CANTON, OHIO 44720
ELECTRIC	LORAIN-MEDINA RURAL ELECTRIC P.O. BOX 158 WELLINGTON, OHIO 44090
WATER:	RURAL LORAIN CO. WATER AUTHORITY 42401 SR 303, BOX 567 LAGRANGE, OHIO 44050
CABLE:	TIME WARNER CABLE 1575 LEXINGTON AVE. MANSFIELD, OHIO 44901

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

REV. BY	DATE	DESCRIPTION
PWS	8-23-05	OWNER - PAR. 14
PWS	3-31-05	OWNER'S REC. AREA - PAR. 15
PWS	3-23-05	PROP. R/W - PAR. 15
DATE COMPLETED:		2-9-05

SCALE IN FEET 0 50 100 200

PID NO. 23581

R/W DESIGNER PWS R/W REVIEWER

PROPERTY MAP

MED-301-0.00
LOR-301-0.00

2 / 4

112 / 114

TOTAL NUMBER OF :
6 OWNERSHIPS 0 OWNERSHIPS WITH STRUCTURES INVOLVED
6 PARCELS 0 OWNERSHIPS WITH "P" ITEMS
0 TOTAL TAKES

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

ALL AREAS IN ACRES

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD VOLUME	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
1-9	NOT USED																
10WD	STEPHEN F. ESTVANIC & SALLY A. ESTVANIC	2,4	OR 986	297	036-08D-17-006	3.4688	0.3140	0.3550	0.3140	0.0410	NONE	-	3.1138	STATE	INCLUDES 0.0125 AC. EXIST. CHANNEL EASE.		
11T	DOUGLAS W. VIZER & SUSAN D. VIZER	2,4	OR 544	50	036-08C-20-005	1.0020	0.1034	0.0082	-	0.0082	NONE	0.8986	-		SUBLOT 9 - SAMMET SUBDIVISION NO. 1		
															* (2) ROCKS		
12T	LAURIE A. CORBETT & CARL J. BORLING, SR.	2,4	20040R035294		036-08C-20-004	1.0020	0.1034	0.0095	-	0.0095	NONE	0.8986	-		SUBLOT 8 - SAMMET SUBDIVISION NO. 1		
13WD	BARBARA L. DAVIS & LATTIE T. DAVIS	2,4	20020R044121		036-08C-20-003	1.0020	0.1032	0.1293	0.1032	0.0261	NONE	0.8727	-		SUBLOT 7 - SAMMET SUBDIVISION NO. 1		
															* 4" x 4" WOOD POST		
14WD	COREY W. LEONARD & LAURA R. LEONARD	2,4	20050R027287		036-08D-17-001	5.2110	0.2633	0.3068	0.2633	0.0435	NONE	-	4.9042		INCLUDES 0.0067 AC. EXIST. CHANNEL EASE.		
15WD	ALEX P. SHRANKO & LUANN SHRANKO	2,4	OR 344	819	036-08C-20-001	0.9012	0.0928	-	-	-		0.8084	-		SUBLOT 5 - SAMMET SUBDIVISION NO. 1		
						1.2720	0.1312	0.1531	0.1312	0.0219		1.1189	-		SUBLOT 6- SAMMET SUBDIVISION NO. 1		
	SUB-TOTAL					2.1732	0.2240	0.1531	0.1312	0.0219		1.9273	-				
			OR 382	780	036-08C-20-002	2.8240	-	-	-	-		2.8240	-				
	GRAND TOTAL					4.9972	0.2240	0.1531	0.1312	0.0219		4.7513	-	STATE			

OR = OFFICIAL RECORD

* DENOTES R/W ENCROACHMENT

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME OF THE STATE OF OHIO UNLESS OTHERWISE SHOWN.

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR, UNLESS NOTED OTHERWISE.

NOTE: ALL TEMPORARY PARCELS TO BE OF 12 MONTH DURATION.

REV. BY	DATE	DESCRIPTION
PWS	8-23-05	OWNER - PAR. 14
PWS	3-31-05	OWNER'S REC. AREA - PAR. 15WD
PWS	3-23-05	PROP. R/W - PAR. 15
PWS	3-23-05	DEL. OWNER'S RECS. - PARS. 10, 13, 14
DATE COMPLETED:		2-8-05

FEDERAL PROJECT NO.

PID NO. 23581

STATE JOB NO.

R/W DESIGNER PWS R/W REVIEWER

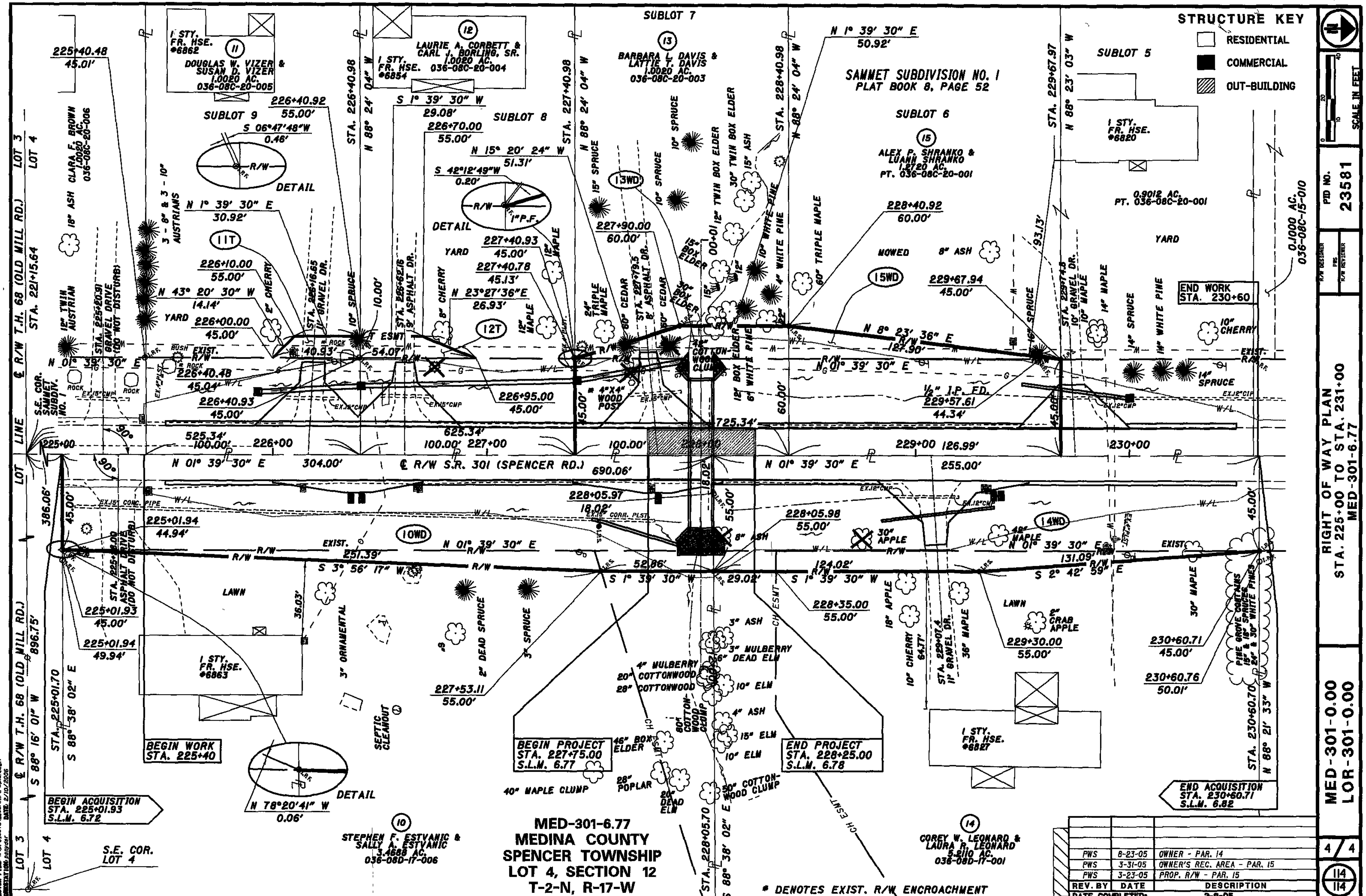
SUMMARY OF ADDITIONAL RIGHT OF WAY

MED-301-0.00
LOR-301-0.00

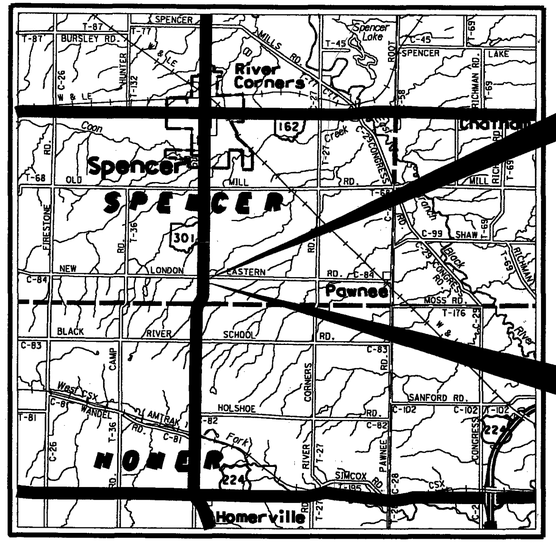
3 / 4

(113)
(114)

DESIGN FILE: h:\projects\2358\dgn\rwsum.dgn
DATE: 2/10/2006



STRUCTURE KEY
RESIDENTIAL
COMMERCIAL
OUT-BUILDING
SAMMET SUBDIVISION NO. 1
PLAT BOOK 8, PAGE 52
SUBLOT 5
SUBLOT 6
SUBLOT 7
SUBLOT 8
SUBLOT 9
DOUGLAS W. VIZER & SUSAN D. VIZER
1.0020 AC.
036-08C-20-005
LAURIE A. CORBETT & CARL J. BORLING, SR.
1.0020 AC.
036-08C-20-004
BARBARA L. DAVIS & LATTIE T. DAVIS
1.0020 AC.
036-08C-20-003
ALEX P. SHRANKO & LUANN SHRANKO
1.2720 AC.
PT. 036-08C-20-001
0.9012 AC.
PT. 036-08C-20-001
0.1000 AC.
036-08C-15-010
CLARA F. BROWN
1.0020 AC.
036-08C-20-006
STEPHEN F. ESTVANIC & SALLY A. ESTVANIC
3.4688 AC.
036-08D-17-006
COREY W. LEONARD & LAURA R. LEONARD
5.8110 AC.
036-08D-17-001
℄ R/W S.R. 301 (SPENCER RD.)
℄ R/W T.H. 68 (OLD MILL RD.)
BEGIN WORK
STA. 225+40
END WORK
STA. 230+60
BEGIN PROJECT
STA. 227+75.00
S.L.M. 6.77
END PROJECT
STA. 228+25.00
S.L.M. 6.78
BEGIN ACQUISITION
STA. 225+01.93
S.L.M. 6.72
END ACQUISITION
STA. 230+60.71
S.L.M. 6.82
S.E. COR. LOT 4
S.E. COR. SAMMET SUBDIV. NO. 1
DETAIL
MED-301-6.77
MEDINA COUNTY
SPENCER TOWNSHIP
LOT 4, SECTION 12
T-2-N, R-17-W
* DENOTES EXIST. R/W ENCROACHMENT
PWS 8-23-05 OWNER - PAR. 14
PWS 3-31-05 OWNER'S REC. AREA - PAR. 15
PWS 3-23-05 PROP. R/W - PAR. 15
REV. BY DATE DESCRIPTION
DATE COMPLETED: 2-9-05
RIGHT OF WAY PLAN
STA. 225+00 TO STA. 231+00
MED-301-6.77
MED-301-0.00
LOR-301-0.00
PID NO. 23581
SCALE IN FEET
4/4
114/114



LOCATION MAP

LATITUDE: N41°04'03" LONGITUDE: W82°07'26"

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED

UNDIVIDED STATE & FEDERAL ROUTES

OTHER ROADS

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

MED-301-5.48
PART 2
(PLAN DEVELOPED UNDER PID 18945)
SPENCER TOWNSHIP
MEDINA COUNTY
FOR PART 1, SEE MED-301-0.00 LOR-301-0.00

INDEX OF SHEETS:

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.

MAINTENANCE OF TRAFFIC ENDORSEMENT

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEET 4.

PROJECT DESCRIPTION

REPLACEMENT OF THE EXISTING DEFICIENT TWIN STEEL PIPE ARCH CULVERTS OVER AN UNNAMED CREEK WITH A REINFORCED CONCRETE BOX CULVERT, AND CHANNEL RELOCATION WITH MINIMAL ROADWAY WORK TO PROVIDE CLEAR ZONE GRADING. THE PROJECT LENGTH IS 50 FEET.

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

DESIGN DESIGNATION

CURRENT ADT (2006)	2640
DESIGN YEAR ADT (2026)	4110
DESIGN HOURLY VOLUME (2026)	411
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	15%
DESIGN SPEED	55 MPH
LEGAL SPEED	55 MPH

DESIGN FUNCTIONAL CLASSIFICATION RURAL MAJOR COLLECTOR

DESIGN EXCEPTIONS

NONE REQUIRED

ODOT REVISIONS:

STATE OF OHIO CHARLES A. LAUGHREY E-62383 REGISTERED PROFESSIONAL ENGINEER

SIGNED: Charles A Laughrey
DATE: 2/14/06

ENGINEERS SEAL:

SIGNED: James E. Pratt
DATE: 2/15/06

UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
CALL 1-800-362-2764 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

PLAN PREPARED BY:
BARR & PREVOST
2800 CORPORATE EXCHANGE DR, SUITE 240
COLUMBUS, OHIO 43213
TEL.: (614) 714-0270 FAX: (614) 714-0322

SPECIAL PROVISIONS		SUPPLEMENTAL SPECIFICATIONS
WATERWAY PERMIT	(SEE PART 1, MED-301-0.00, LOR-301-0.00)	
STANDARD CONSTRUCTION DRAWINGS		
(SEE PART 1, MED-301-0.00, LOR-301-0.00)		(SEE PART 1, MED-301-0.00, LOR-301-0.00)

APPROVED Thomas M. O'Leary/TSF
DATE 3/27/06 DISTRICT DEPUTY DIRECTOR

APPROVED Gordon Proctor
DATE 3-28-06 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E 034(150)

PID NO. 23581

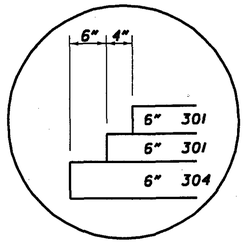
CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT NONE

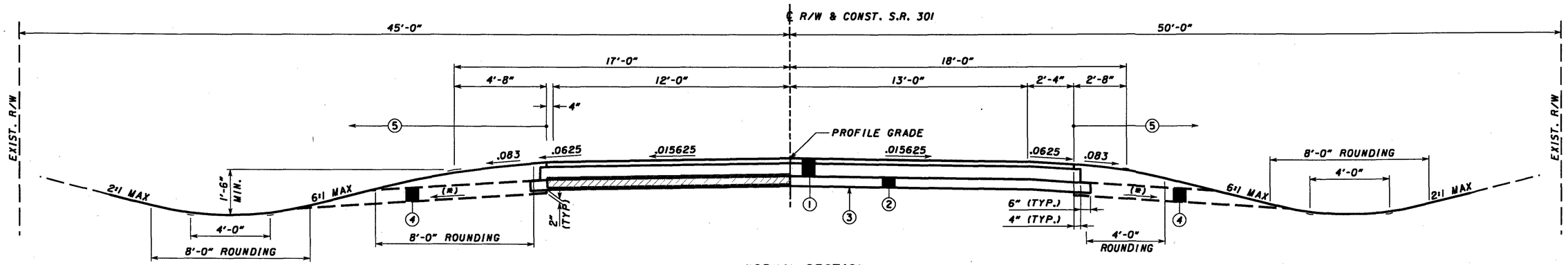
MED-301-5.48

1-23

ODOT REVISIONS:
REVISED PAVEMENT TREATMENT
REVISED TYPICAL SECTION



PAVEMENT EDGE STEP DETAIL



NORMAL SECTION
STA. 289+10.00 TO STA. 289+60.00 = 50.00 LIN. FT
TOTAL = 50.00 LIN. FT

(=) 0.08 DESIRABLE
0.04 MINIMUM

202 PAVEMENT REMOVED

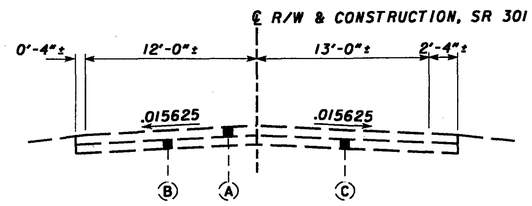
NOTES:
TYPICAL SHOWN IS PRIOR TO RESURFACING
FOR RESURFACING TREATMENT SEE PART I PLANS

PROPOSED LEGEND

1. ITEM 301 -- 12" ASPHALT CONCRETE BASE, PG64-22
2. ITEM 304 -- 6" AGGREGATE BASE
3. ITEM 204 -- SUBGRADE COMPACTION
4. ITEM 605 -- AGGREGATE DRAIN
5. ITEM 659 -- SEEDING AND MULCHING

EXISTING LEGEND

- (A) 10" ASPHALT PAVEMENT
- (B) 6" PLAIN CONCRETE
- (C) 6" AGGREGATE BASE



EXISTING PAVEMENT SECTION
STA. 288+27.50 & STA. 290+42.50

TYPICAL SECTIONS

MED-301-5.48

ROUNDING

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

UTILITIES

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

RURAL LORAIN COUNTY
WATER AUTHORITY
42401 STATE ROUTE 303, P.O. BOX 567
LAGRANGE, OHIO 44050
ATTN.: MR. TIM MAHONEY
(800) 842-1339

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

VERIZON COMMUNICATIONS
6223 NORWALK ROAD
MEDINA, OHIO 44256
(330) 722-9580

MEDINA COUNTY ENGINEER
791 W. SMITH ROAD
MEDINA, OHIO 44256
ATTN.: MR. DAVID MILLER
(330) 723-9561

TIME WARNER CABLE
1655 BRITTAIN ROAD
AKRON, OHIO 44310
(800) 821-7250

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.

CONTINGENCY QUANTITIES

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

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER-OPERATED CONSTRUCTION-TYPE DEVICE SHALL NOT BE OPERATED BETWEEN THE HOURS OF 6:00PM AND 8:00AM. IN ADDITION, ANY SUCH DEVICE SHALL NOT BE OPERATED AT ANY TIME IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON NGVD 1929 DATUM.

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.

MONUMENTS

MONUMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS AS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO. 20.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

UNSUITABLE SOIL CONDITIONS

IF UNSUITABLE FOUNDATION SOILS ARE ENCOUNTERED IN THE AREAS OF THE PROPOSED ROADBED, THEY SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL MEETING THE REQUIREMENTS OF 204.02. THE LOCATIONS AND DIMENSIONS WILL BE AS DETERMINED BY THE ENGINEER.

THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 204 25 CU. YD. EMBANKMENT

ITEM 204 25 CU. YD. EXCAVATION OF SUBGRADE

FARM DRAINS

ALL FARM DRAINS, WHICH ARE ENCOUNTERED DURING CONSTRUCTION, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY, SHALL BE REPLACED WITHIN THE CONSTRUCTION LIMITS BY ITEM 603 CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES, SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY 603 TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION SHALL BE 1 FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL FIELD TILES WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY 603, TYPE E CONDUIT, AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

EROSION CONTROL PADS AND ANIMAL GUARDS SHALL BE PROVIDED AT THE OUTLET END OF ALL FARM DRAINS AS PER STANDARD CONSTRUCTION DRAWING DM-1.1M, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE. PAYMENT FOR THE EROSION CONTROL PADS AND ANIMAL GUARDS AND ANY NECESSARY BENDS OR BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

TREATED SEPTIC CONNECTIONS

TREATED SEPTIC FLOW MAY BE DISCHARGED INTO THE HIGHWAY DRAINAGE SYSTEM PROVIDED THE OWNER HAS ACQUIRED AN OFFICIAL PERMIT FROM THE OHIO DEPARTMENT OF TRANSPORTATION, MEDINA COUNTY OR LOCAL AUTHORITY.

IN EACH CASE WHERE A PERMIT HAS BEEN ISSUED FOR MAKING A TREATED SEPTIC CONNECTION INTO A HIGHWAY DRAINAGE CONDUIT, AN INSPECTION WELL SHALL BE PROVIDED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING DM-3.1M.

PAVEMENT RESTORATION FOR MONUMENT ASSEMBLY

THE FOLLOWING QUANTITIES ARE PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION OF ITEM 604 MONUMENT ASSEMBLIES.

ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 1 CU. YDS.
ITEM 301 ASPHALT CONCRETE BASE, PG64-22 1 CU. YDS.

THE ABOVE QUANTITY IS BASED ON A 6 INCH THICKNESS OF ITEM 301 AND 2 INCHES OF ITEM 448 AND A WIDTH OF TWO FEET AROUND THE PERIMETER OF THE MONUMENT ASSEMBLIES.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, TOPSOIL	162 CU. YD.
659, SOIL ANALYSIS TEST	2 EACH
659, REPAIR SEEDING AND MULCHING	73 SQ. YD.
659, INTER-SEEDING	73 SQ. YD.
659, COMMERCIAL FERTILIZER	0.20 TON
659, LIME	0.31 ACRE
659, WATER	9.0 M. GAL.

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

ENVIRONMENTAL COMMITMENTS

THIS PROJECT IS WITHIN THE KNOWN SUMMER BREEDING RANGE OF THE FEDERAL ENDANGERED INDIANA BAT. UNAVOIDABLE CUTTING OF TREES DEFINED AS POTENTIAL HABITAT FOR THE INDIANA BAT (I.E. LIVING OR STANDING DEAD TREES OR SNAGS WITH EXFOLIATING, PEELING OR LOOSE BARK, SPLIT TRUNKS AND/OR BRANCHES, OR CAVITIES) WILL BE PERFORMED ONLY BEFORE APRIL 15 OR AFTER SEPTEMBER 15 WHEN THE SPECIES WOULD NOT BE USING SUCH HABITAT. THE ABOVE DETERMINATION OF NO IMPACTS ON FEDERALLY LISTED SPECIES IS IN ACCORDANCE WITH THE LETTER OF AGREEMENT ON ENDANGERED SPECIES COORDINATION SIGNED BY USFWS ON FEBRUARY 4, 1998.

THE CULVERT REPLACEMENT MEETS THE CRITERIA FOR A USACE NATIONWIDE PERMIT #3, ALL CONDITIONS IN THE PERMIT SHALL BE ADHERED TO DURING CONSTRUTION.

PLACEMENT OF ROCK CHANNEL PROTECTION, LIMITED TO 25 LINEAR FEET FROM ENDS OF NEW CULVERT.

THE SPECIFICATIONS SET FORTH IN THE MOST CURRENT VERSION OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, LOCATION AND DESIGN MANUAL AND STANDARD DRAWINGS WILL BE USED TO ENSURE ADEQUATE EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION.

IMPACTS TO THE STREAM WILL BE AVOIDED, MINIMIZED, AND/OR MITIGATED WHERE REASONABLE OR PRACTICABLE.

IN-STREAM WORK (THE REPLACEMENT OR REMOVAL OF TEMPORARY AND/OR PERMANENT FILL MATERIALS BELOW ORDINARY HIGH WATER MARK) WILL BE LIMITED TO WHERE PRACTICABLE AND ONLY CLEAN NON-ERODIBLE MATERIAL WILL BE USED FOR TEMPORARY CONSTRUCTION ACCESS FILLS. TEMPORARY FILLS WILL BE CONSTRUCTED SO AS TO ALLOW FOR FISH PASSAGE AND WILL NOT BACK UP WATER. TEMPORARILY PLACED MATERIALS WILL BE REMOVED AND THE STREAM BOTTOM RESTORED TO NEAR PRECONSTRUCTION CONDITION WHEN THE WORK IS COMPLETED.

WRITTEN PERMISSION WILL BE OBTAINED FOR ANY IN-STREAM BLASTING FROM THE CHIEF OF ODNR'S DIVISION OF WILDLIFE IN ACCORDANCE WITH OHIO REVISED CODE SECTION 1533.58.

CALCULATED RJS
CHECKED PF

GENERAL NOTES

ODOT REVISIONS:
FARM DRAINS
TREATED SEPTIC CONNECTIONS

MED-301-5.48

3
23

ITEM 614 - MAINTENANCE OF TRAFFIC

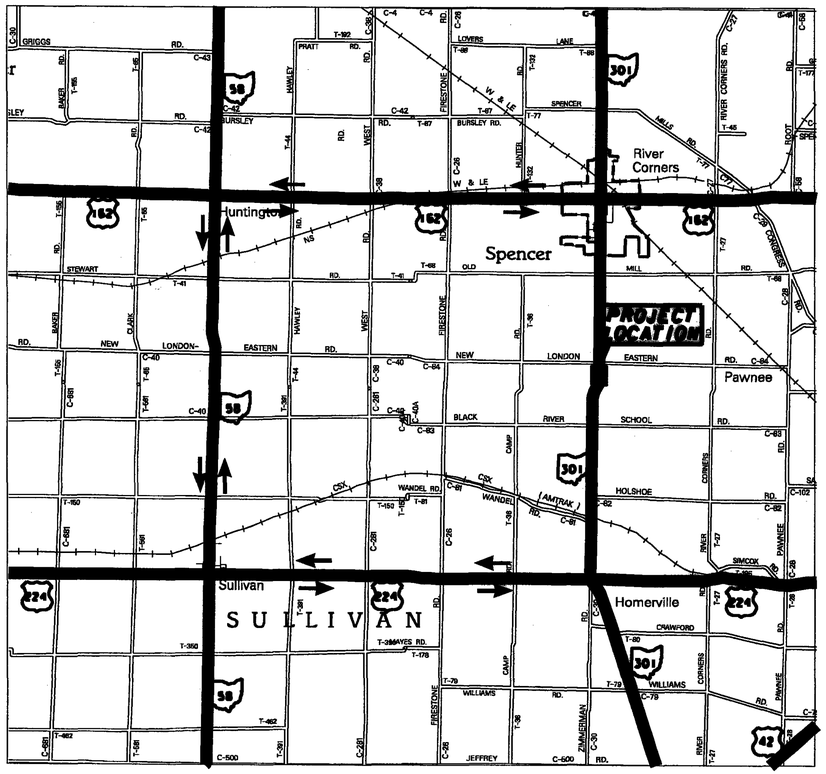
A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION ON SR 301 SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 30 CONSECUTIVE CALENDAR DAYS. WHEN LOCAL TRAFFIC SHALL BE DETOURED AS SHOWN ON THIS SHEET, LIQUIDATED DAMAGES SHALL BE ASSESSED IN ACCORDANCE WITH 108.07 FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48" X 30" "ROAD CLOSED" SIGNS, SIGN SUPPORTS, BARRICADES, GATES, AND LIGHTS, AS DETAILED IN STANDARD CONSTRUCTION DRAWING MT-101.60 AT THE FOLLOWING LOCATIONS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC:

STA. 289+05 LT. AND RT. STA. 289+65 LT. AND RT.
STA. 290+95 RT. AND STA. 291+15 LT.

THE CONTRACTOR SHALL NOTIFY THE DISTRICT WORK ZONE TRAFFIC MANAGER (419-281-0513 EXT. 341) 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.

NOTICE OF CLOSURE SIGNS AS DETAILED ON THIS SHEET SHALL BE ERECTED BY THE CONTRACTOR AT LEAST FOURTEEN (14) DAYS IN ADVANCE OF THE SCHEDULED ROAD CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED AS TO NOT INTERFERE WITH THE VISABILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGNS SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.



DESIGNATED DETOUR MAP
1"=200' SCALE

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

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

616, WATER 5 M. GAL

PROJECT DETOUR LIMITATIONS

THE ROADWAY SHALL NOT BE CLOSED TO TRAFFIC FOR THE REMOVAL OR MODIFICATION OF THE EXISTING STRUCTURE OR CONDUIT UNTIL ALL PRECAST STRUCTURE MATERIALS (EG.: PRECAST BOX CULVERTS, CONDUITS, ETC.) NECESSARY TO PLACE THE ROADWAY BACK INTO SERVICE HAVE BEEN TESTED, APPROVED AND ARE READY FOR DELIVERY TO THE PROJECT SITE.

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

DRIVE PIPE INSTALLATION

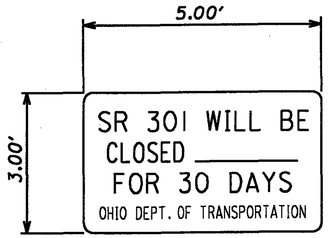
THE 30" DRIVE CULVERT AT STA. 288+97 AND PROPOSED DITCH ON THE RIGHT SIDE OF SR 301 SHALL BE CONSTRUCTED PRIOR TO ANY OTHER CONSTRUCTION WORK. ONCE THEY ARE CONSTRUCTED AND THE EXISTING DRIVE PIPE IS REMOVED, ACCESS TO THIS DRIVE SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

MAINTENANCE OF LOCAL DETOUR ROUTE

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

DURING THE TIME THAT TRAFFIC IS DETOURED, THE CONTRACTOR SHALL MAINTAIN THIS ROUTE IN A CONDITION WHICH IS REASONABLY SMOOTH AND FREE FROM HOLES, RUTS, RIDGES, BUMPS, DUST AND STANDING WATER. ONCE THE DETOUR IS REMOVED AND TRAFFIC RETURNED TO ITS NORMAL PATTERN, THE DESIGNATED LOCAL 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.



W20-H14

CALCULATED PF
CHECKED RJS

DETOUR PLAN AND NOTES

MED-301-5.48

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ODOT REVISIONS:

DUST CONTROL

REMOVED TEMPORARY PAVEMENT MARKINGS

SIGN CODE

DESIGNATED LOCAL MAINTENANCE ROUTE

SHEET NUMBER												ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
3	4	7	8	9	10	11	12	14	15	20	7A						
																ROADWAY	
												201	11000	LUMP		CLEARING AND GRUBBING	
		69										202	23000	69	SQ YD	PAVEMENT REMOVED	
			145									202	35200	145	FT	PIPE REMOVED, OVER 24"	
				15	72	40	57	177	154			203	10000	515	CU YD	EXCAVATION	
				58	155	114	32	17	25			203	20000	401	CU YD	EMBANKMENT	
		329										204	10000	329	SQ YD	SUBGRADE COMPACTION	
25												204	13000	25	CU YD	EXCAVATION OF SUBGRADE	
25												204	20000	25	CU YD	EMBANKMENT	
										2		604	38500	2	EACH	MONUMENT ASSEMBLY	
																EROSION CONTROL	
			105									601	32104	105	CU YD	ROCK CHANNEL PROTECTION, TYPE B WITH FABRIC FILTER	
162												659	00300	162	CU YD	TOPSOIL	
2												659	00100	2	EACH	SOIL ANALYSIS TEST	
				369	462	190	157	186	119			659	10000	1483	SQ YD	SEEDING AND MULCHING	
73												659	14000	73	SQ. YD.	REPAIR SEEDING AND MULCHING	
73												659	15000	73	SQ. YD.	INTER-SEEDING	
0.20												659	20000	0.20	TON	COMMERCIAL FERTILIZER	
0.31												659	31000	0.31	ACRE	LIME	
9.0												659	35000	9.0	M GAL	WATER	
			80									670	00700	80	SQ YD	DITCH EROSION PROTECTION	
											1	832	10000	1	EACH	STORM WATER POLUTION PREVENTION PLAN	
											8000	832	30000	8000	EACH	EROSION CONTROL	
																DRAINAGE	
			.58									602	20000	.58	CU YD	CONCRETE MASONRY	
			56									603	13900	56	FT	30" CONDUIT, TYPE D	
			69									605	31100	69	FT	AGGREGATE DRAIN	

CALCULATED RJS
CHECKED PF

GENERAL SUMMARY

ODOT REVISIONS:
ROADWAY ITEMS
DRAINAGE ITEMS
EROSION CONTROL ITEMS

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SHEET NUMBER												ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
3	4	7	8	9	10	11	12	14	15	20							
																PAVEMENT	
1		52										301	46000	53	CU YD	ASPHALT CONCRETE BASE, PG64-22	
		55										304	20000	55	CU YD	AGGREGATE BASE	
1		9										448	47020	10	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22	
																TRAFFIC CONTROL	
		10.5										630	02100	10.5	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
		1										630	85100	1	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
		1										630	86002	1	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
	5															**FOR STRUCTURES 20' AND UNDER (SEE SHEET 19)**	
																MAINTAINING TRAFFIC	
												616	10000	5	M GAL	WATER	
												614	11000	LUMP		MAINTAINING TRAFFIC	
												623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
												624	10000	LUMP		MOBILIZATION	

ODOT REVISIONS:

MAINTAINING TRAFFIC ITEMS
PAVEMENT ITEMS
TRAFFIC CONTROL ITEMS
DELETED PERFORMANCE BOND ITEM

CALCULATED RJS
CHECKED PF

GENERAL SUMMARY

MED-301-5.48

STATION TO STATION	SIDE	LENGTH (L)	AVERAGE WIDTH (W)	SURFACE AREA (A=LxW/9)	PLANIMETERED AREAS	202 PAVEMENT REMOVED		204 SUBGRADE COMPACTION	301 ASPHALT CONCRETE BASE (T=6")	304 AGGREGATE BASE (T=6")		630 GROUND MOUNTED SUPPORT, NO. 2 POST	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL				
		LIN. FT.	LIN. FT.	SQ. YD.	SQ. YD.	SQ. YD.		SQ. YD.	CU. YD.	CU. YD.		FT.	EACH	EACH				
STA. 288+90.00 TO STA. 289+10.00	LT. & RT.	20.00	25.00	55.56								10.5	1	1				
STA. 289+10.00 TO STA. 289+60.00	LT.	50.00	12.33	68.50		68.50												
STA. 289+10.00 TO STA. 289+60.00	LT. & RT.	50.00	27.67	153.72					25.62									
STA. 289+10.00 TO STA. 289+60.00	LT. & RT.	50.00	28.33	157.39					26.23									
STA. 289+10.00 TO STA. 289+60.00	LT. & RT.	50.00	29.33	162.94						27.16								
STA. 289+10.00 TO STA. 289+60.00	LT. & RT.	50.00	30.67	170.39				170.39										
STA. 289+60.00 TO STA. 289+80.00	LT. & RT.	20.00	25.00	55.56														
TOTALS CARRIED TO GENERAL SUMMARY						69		171	52	28		10.5	1	1				

REFERENCE NO.	STATION TO STATION	SIDE	PLANIMETERED AREAS	601 ROCK CHANNEL PROTECTION, TYPE B WITH FABRIC FILTER (2'-6" THICK)	670 DITCH EROSION PROTECTION		448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (T=2")	304 AGGREGATE BASE (T=6")	204 SUBGRADE COMPACTION
			SQ. FT.	CU. YD.	SQ. YD.		CU. YD.	CU. YD.	SQ. YD.
EC-1	STA. 288+44.15 TO STA. 288+67.22	LT.	722.43		80.27*				
EC-2	STA. 288+67.22 TO STA. 289+21.25	LT.	753.56	69.77*					
EC-3	STA. 289+48.10 TO STA. 289+53.31	RT.	374.84	34.71*					
A-1	STA. 288+97.56	RT.	1116.73				6.89	20.68	124
A-2	STA. 289+63.56	LT.	307.35				1.90	5.69	34
	TOTALS CARRIED TO GEN. SUMMARY						9	27	158

* QUANTITY CARRIED TO SHEET 8.

ODOT REVISIONS:
REVISED PAVEMENT TREATMENT
ITEM 630
EROSION PROTECTION QUANTITIES

CALCULATED RJS
CHECKED PF

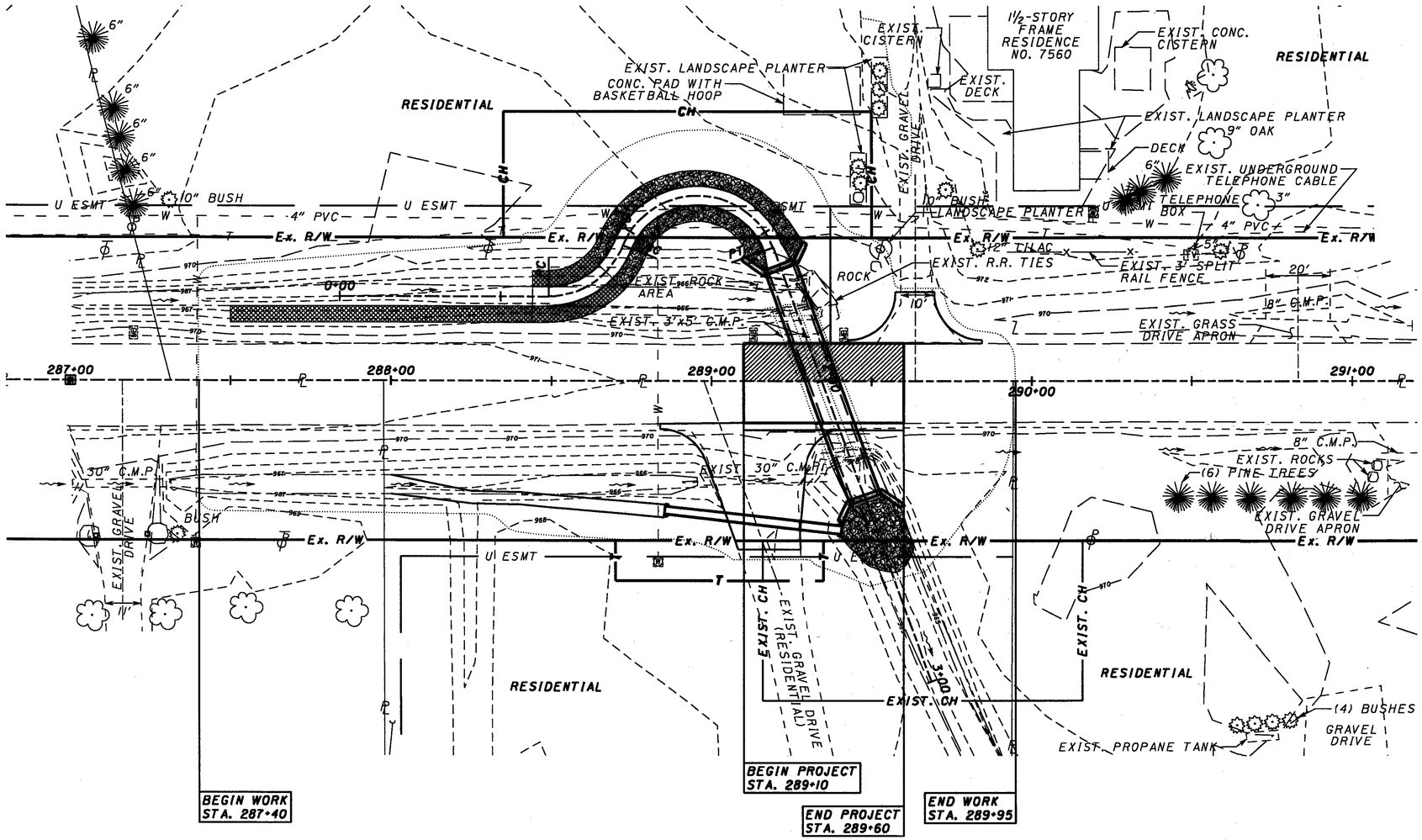
QUANTITY CALCULATIONS

MED-301-5.48

PROJECT DATA			
TOTAL AREA (RIGHT OF WAY):	0.11 ACRES	RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE:	0.61
PROJECT EARTH DISTURBED AREA:	0.43 ACRES	RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE:	0.72
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.13 ACRES	SOIL AND WATER CONSERVATION MAP:	36
NOTICE OF INTENT EARTH DISTURBED AREA:	4.90 ACRES	IMMEDIATE RECEIVING WATERS:	SMALL TRIBUTARY STREAM
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE:	0.03 ACRES	SUBSEQUENT RECEIVING WATER:	EAST BRANCH BLACK RIVER
IMPERVIOUS (PAVED) AREA FOR POST-CONSTRUCTION SITE:	0.06 ACRES		

USGS QUADRANGLE MAP NO. N4100-W8200/7.5
LODI, OHIO
LATITUDE: N41°04'03"*
LONGITUDE: W82°07'26"*

* LATITUDE AND LONGITUDE TO APPROX. CENTER OF PROJECT



LEGEND

DITCH EROSION PROTECTION

ROCK CHANNEL PROTECTION, TYPE B, 2'-6" THICK WITH FABRIC FILTER

ODOT REVISIONS:
LEGEND
EROSION PROTECTION

PROJECT DESCRIPTION

REPLACEMENT OF THE EXISTING DEFICIENT TWIN STEEL PIPE ARCH CULVERTS OVER AN UNNAMED CREEK WITH A REINFORCED CONCRETE BOX CULVERT AND CHANNEL RELOCATION WITH MINIMAL ROADWAY WORK TO PROVIDE CLEAR ZONE GRADING. THE PROJECT LENGTH IS 50 FEET.

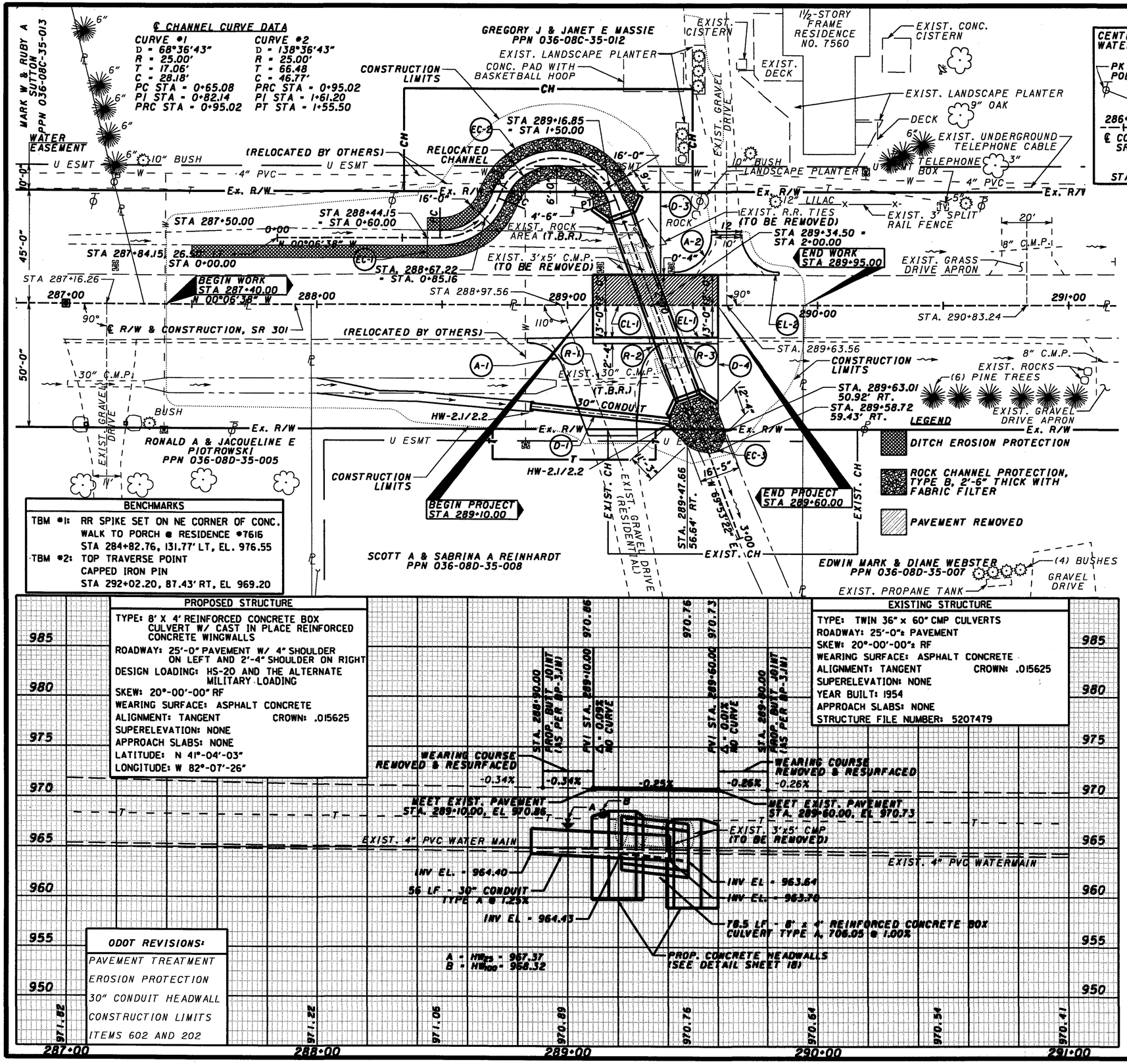
HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED SDT
CHECKED JEP

PROJECT SITE PLAN

MED-301-5.48

7A
23



BENCHMARKS

TBM #1: RR SPIKE SET ON NE CORNER OF CONC. WALK TO PORCH @ RESIDENCE #7616
STA 284+82.76, 131.77' LT, EL. 976.55

TBM #2: TOP TRAVERSE POINT CAPPED IRON PIN
STA 292+02.20, 87.43' RT, EL 969.20

PROPOSED STRUCTURE

TYPE: 8' X 4' REINFORCED CONCRETE BOX CULVERT W/ CAST IN PLACE REINFORCED CONCRETE WINGWALLS
ROADWAY: 25'-0" PAVEMENT W/ 4" SHOULDER ON LEFT AND 2'-4" SHOULDER ON RIGHT
DESIGN LOADING: HS-20 AND THE ALTERNATE MILITARY LOADING
SKEW: 20°-00'-00" RF
WEARING SURFACE: ASPHALT CONCRETE
ALIGNMENT: TANGENT CROWN: .015625
SUPERELEVATION: NONE
APPROACH SLABS: NONE
LATITUDE: N 41°-04'-03"
LONGITUDE: W 82°-07'-26"

EXISTING STRUCTURE

TYPE: TWIN 36" x 60" CMP CULVERTS
ROADWAY: 25'-0": PAVEMENT
SKEW: 20°-00'-00": RF
WEARING SURFACE: ASPHALT CONCRETE
ALIGNMENT: TANGENT CROWN: .015625
SUPERELEVATION: NONE
YEAR BUILT: 1954
APPROACH SLABS: NONE
STRUCTURE FILE NUMBER: 5207479

ODOT REVISIONS:

PAVEMENT TREATMENT
EROSION PROTECTION
30" CONDUIT HEADWALL
CONSTRUCTION LIMITS
ITEMS 602 AND 202

REF NO.	STATION FROM	STATION TO	SIDE	202 PIPE REMOVED, OVER 24" FT.	601 ROCK CHANNEL PROTECTION, TYPE B, WITH FABRIC FILTER CU. YD.	603 30" CONDUIT, TYPE D FT.	602 CONCRETE MASONRY CU. YD.	605 AGGREGATE DRAIN FT.	670 DITCH EROSION PROTECTION SQ. YD.
R-1	288+95.50	289+36.05	RT.	41					
R-2	289+21.26	289+39.88	LT.& RT.	52					
R-3	289+29.15	289+47.85	LT.& RT.	52					
D-1	288+85.44	289+40.62	LT.			56	.58	42	80
D-3		289+37.18	LT.					27	
D-4		289+60	RT.						
EC-1	288+44.15	288+67.22	LT.		69.77				80.27
EC-2	288+67.22	289+21.25	LT.		34.71				
EC-3	289+48.10	289+53.31	RT.						
EL-1	288+80.00	289+90.00	RT.						
EL-2	288+80.00	289+90.00	LT.						
CL-1	288+80.00	289+90.00	℄						
TOTALS CARRIED TO GENERAL SUMMARY				145	105	56	.58	69	80

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED R.JS CHECKED PF

PLAN AND PROFILE
STA. 287+00 TO STA. 291+00

MED-301-5.48

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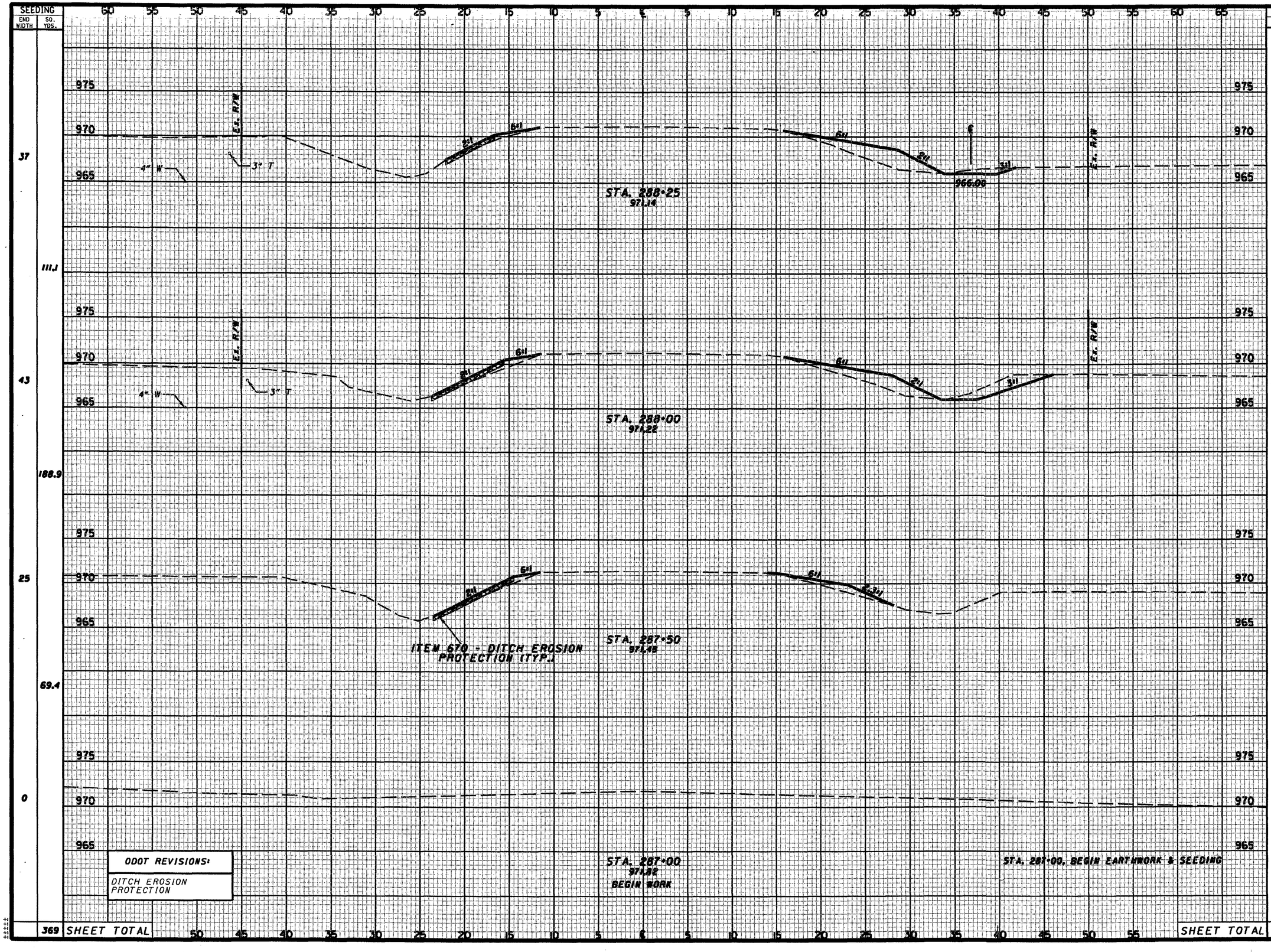
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
37	111.1	2.8	21.1	6.0	19.4
43	188.9	10.1	20.9	9.4	28.9
25	69.4	0	10.3	0	9.5
0		0	0		
	369			15	58

CALCULATED RJS
CHECKED PF

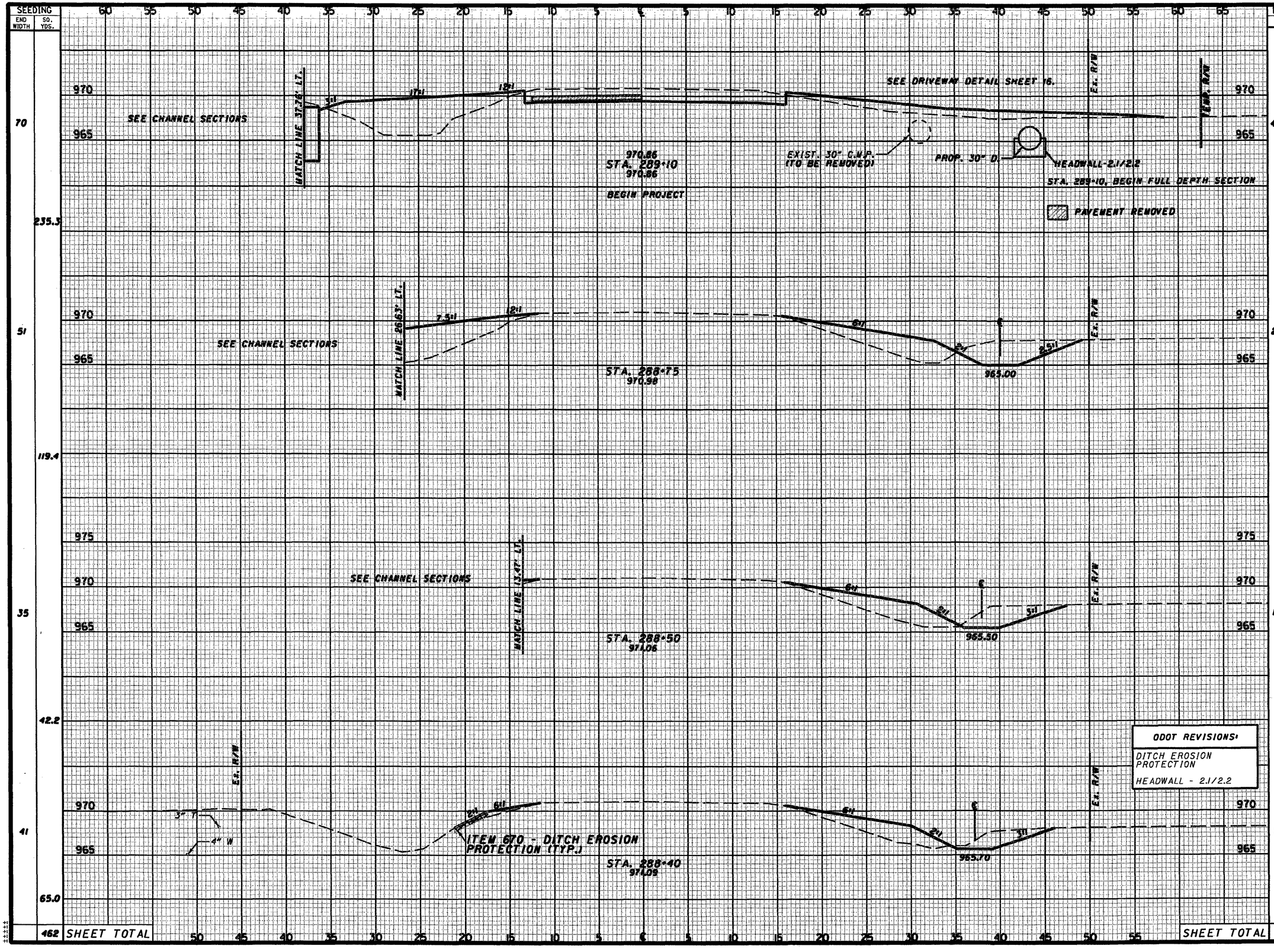


CROSS SECTIONS
STA. 287+00 TO STA. 288+25

MED-301-5.48

9/23

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
70		43.5	81.9		
	235.3			44.1	93.0
51		24.5	61.6		
	119.4			18.8	40.3
35		16.2	25.5		
	42.2			5.1	9.2
41		11.2	24.3		
	65.0			3.9	12.6
	462 SHEET TOTAL			72	155



ODOT REVISIONS:

DITCH EROSION PROTECTION

HEADWALL - 2.1/2.2

CALCULATED RJS

CHECKED PF

CROSS SECTIONS STA. 288+40 TO STA. 289+10

MED-301-5.48

10/23

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
45					
	45.1	55.4	44.5	9.0	26.4
47		0	117.0		
	46.3			6.9	36.1
45		40.9	98.5		
	98.7			24.1	51.6
	190 SHEET TOTAL			40	114

SEEDING: 48' @ COS(20°) = 45 L.F.

SEE CHANNEL SECTIONS

MATCH LINE 40.27' LT.

14:1

7:1

MATCH LINE 36.73' RT.

970.77
STA. 289+43.32 (20° RF SKEW)
970.77

CUT: 58.9 @ COS(20°) = 55.4 S.F.
FILL: 47.4 @ COS(20°) = 44.5 S.F.

SEE CHANNEL SECTIONS

SEEDING: 50' @ COS(20°) = 47 L.F.

SEE CHANNEL SECTIONS

MATCH LINE 38.75' LT.

17:1 NORMAL

12:1 NORMAL

10:1 NORMAL

MATCH LINE 38.75' RT.

ITEM 603 - 8" x 4" CONDUIT, TYPE A, 706.05

970.79
STA. 289+34.50 (20° RF SKEW)
970.79

STA. 289+34.50, ℄ PROP. CULVERT

FILL: 124.5 @ COS(20°) = 117.0 S.F.

SEE CHANNEL SECTIONS

PAVEMENT REMOVED

SEEDING: 48' @ COS(20°) = 45 L.F.

SEE CHANNEL SECTIONS

MATCH LINE 35.66' LT.

10:1

12:1

7:1

MATCH LINE 42.84' RT.

970.82
STA. 289+25.45 (20° RF SKEW)
970.80

CUT: 43.6 @ COS(20°) = 40.9 S.F.
FILL: 104.8 @ COS(20°) = 98.5 S.F.

SEE CHANNEL SECTIONS

ODOT REVISIONS:

SLOPES ON
STA 289+43.32
STA 289+25.45

CALCULATED RJS
CHECKED PF

CROSS SECTIONS
STA. 289+25.45 TO STA. 289+43.32

MED-301-5.48

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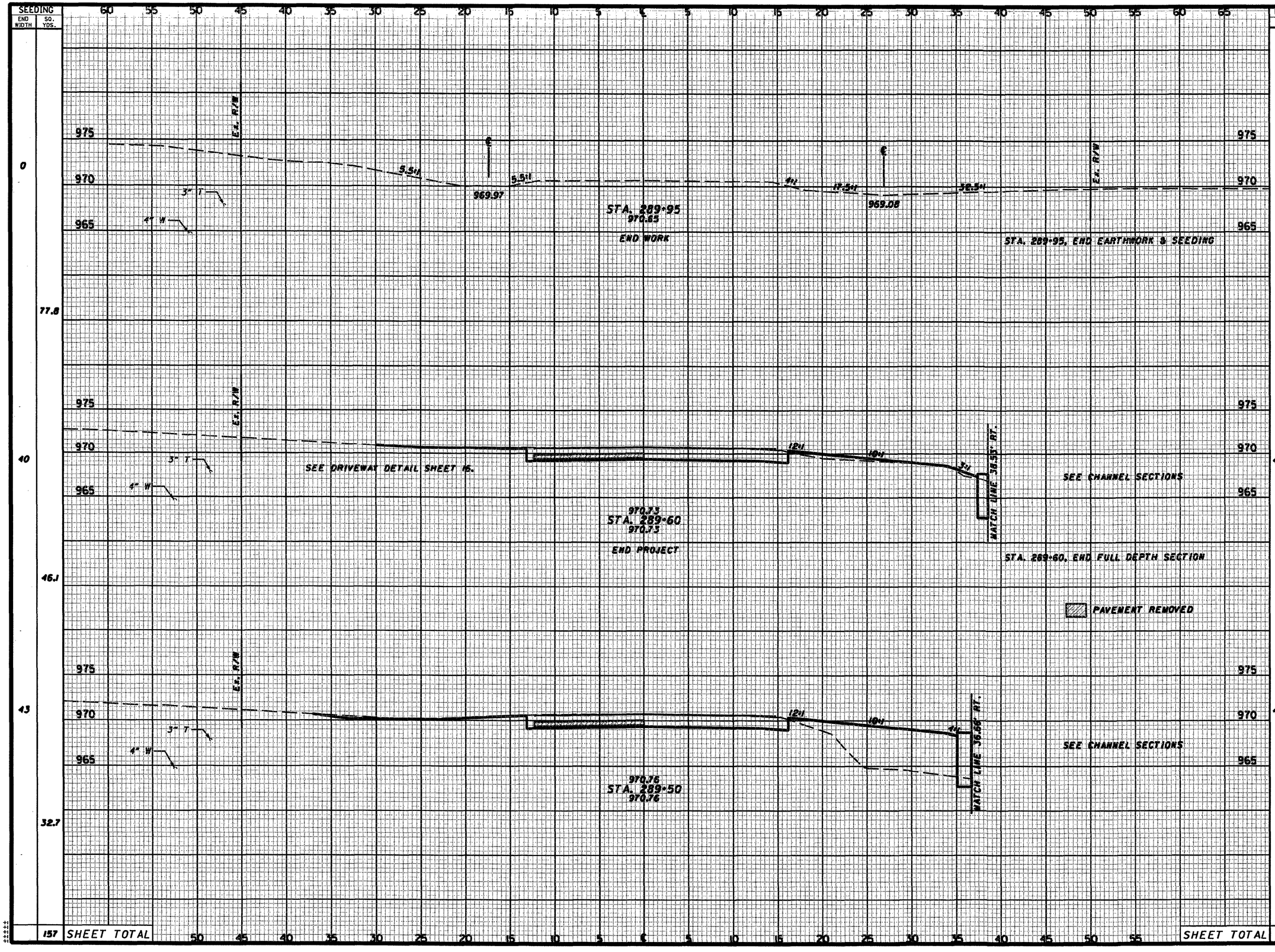
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0		0	0		
	77.8			28.2	3.8
40		43.5	5.9		
	46.1			16.4	14.0
43		45.2	69.6		
	32.7			12.4	14.1
	157 SHEET TOTAL			57	32



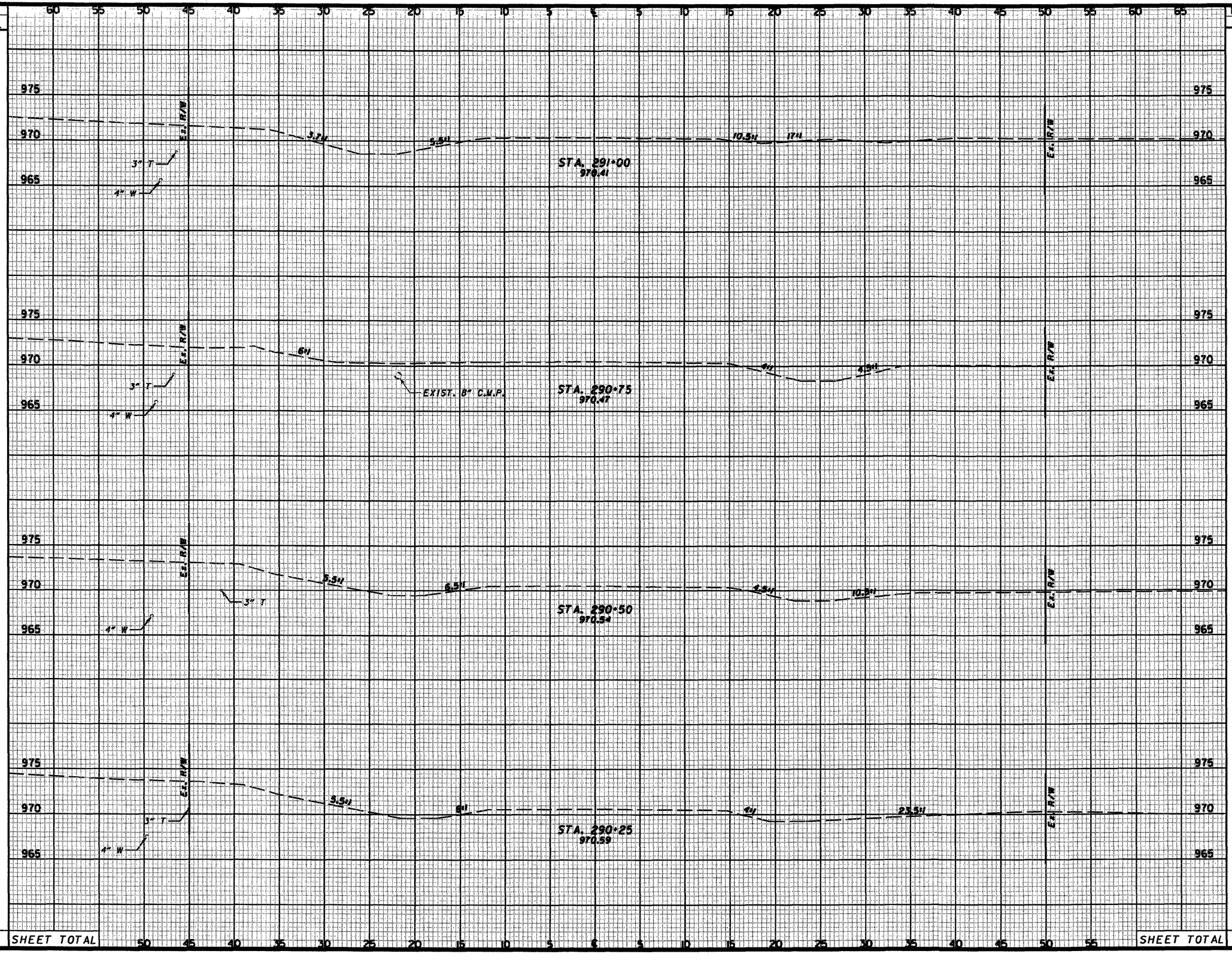
CALCULATED RJS
CHECKED PF

CROSS SECTIONS STA. 289+50 TO STA. 289+95

MED-301-5.48

12/23

SEEDING	
END WIDTH	SQ. YDS.
0	SHEET TOTAL



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		0	0

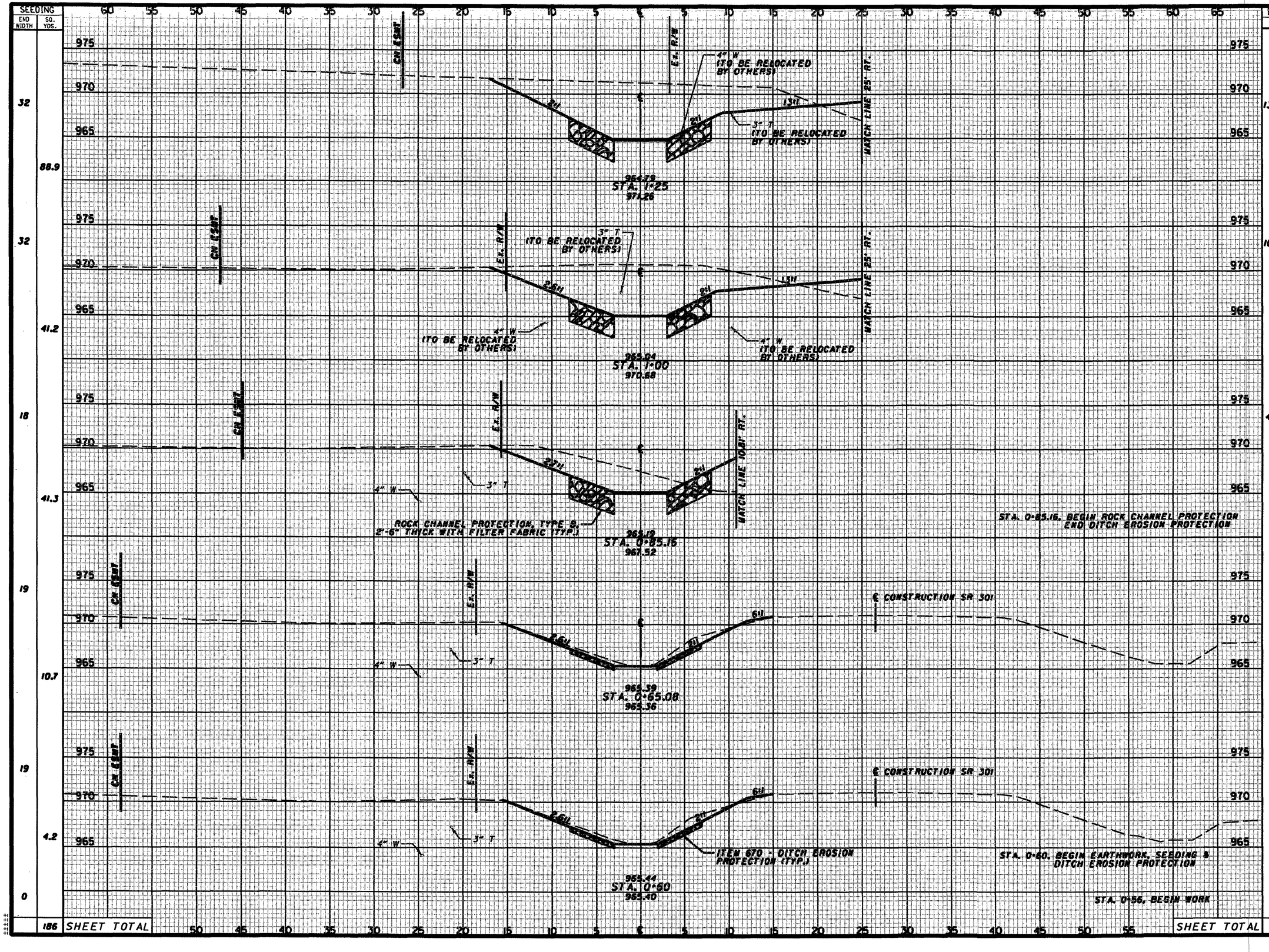
CALCULATED RJS
CHECKED PF

CROSS SECTIONS
STA. 290+25 TO STA. 291+00

MED-301-5.48

13
23

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
32	88.9	136.4	4.9	113.4	5.9
32	41.2	108.6	7.8	41.4	5.4
18	41.3	42.2	12.0	19.1	4.7
19	10.7	9.1	0.7	1.7	0.1
19	4.2	9.1	0.7	0.7	0.1
0		0	0		
186	SHEET TOTAL			177	17



CALCULATED R.J.S.
CHECKED P.F.

CHANNEL SECTIONS STA. 0+60 TO STA. 1+25

MED-301-5.48

14
23

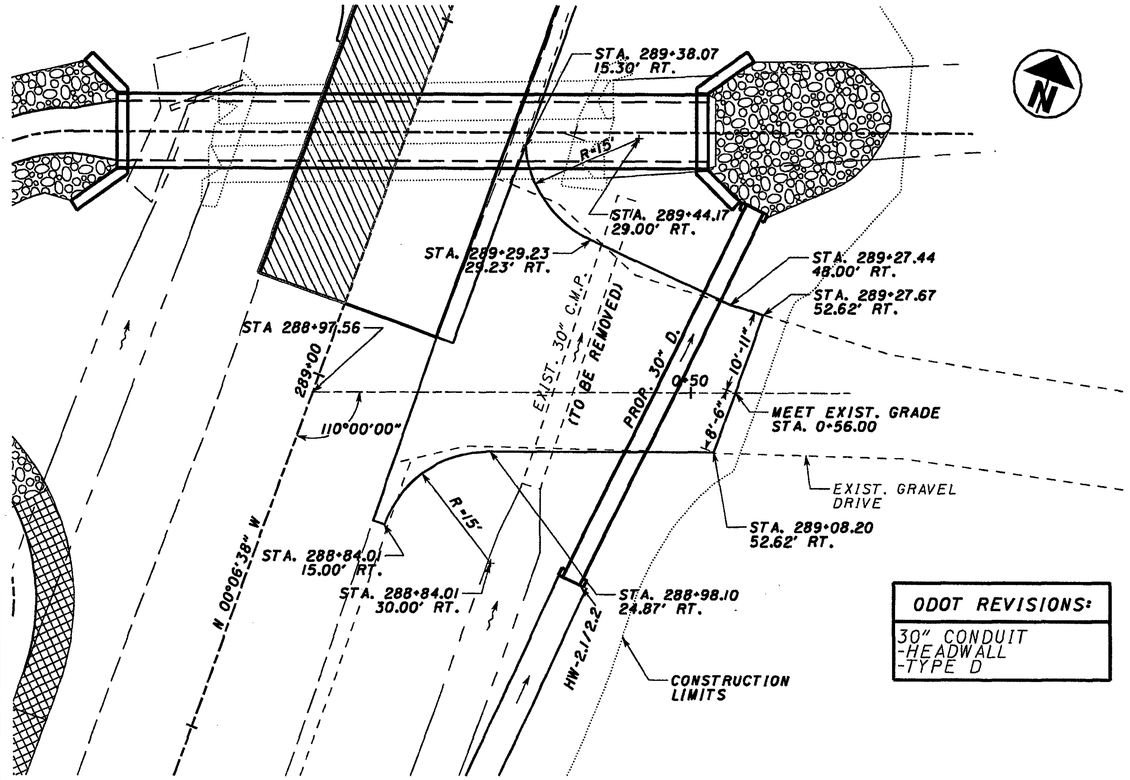
SEEDING END WIDTH	SEEDING SQ. YDS.		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0		STA. 2+58 964.17	0	0		
	0.7	STA. 2+58, END WORK			0.5	0
4			8.3	0		
	9.3	STA. 2+55, END EARTHWORK, SEEDING & ROCK CHANNEL PROTECTION; 963.49 STA. 2+55 964.16			2.3	17.5
7	AHEAD ONLY	PROP. CONCRETE HEADWALL; MATCH LINE 8.25' LT.; MATCH LINE 8.50' RT.; 963.64 STA. 2+39.75 963.71; ITEM 603 - 8'x4' CONDUIT, TYPE A, 706.05 INV. EL. 962.49; STA. 2+39.75, CULVERT OUTLET; AHEAD ONLY	0	61.8		
7	BACK ONLY	MATCH LINE 8.25' LT.; MATCH LINE 8.50' RT.; PROP. CONCRETE HEADWALL; 964.43 STA. 1+61.25 969.65; ITEM 603 - 8'x4' CONDUIT, TYPE A, 706.05 INV. EL. 963.43; STA. 1+61.25, CULVERT INLET; BACK ONLY	13.2	0.8		
	23.1				29.0	1.8
30		3" T (TO BE RELOCATED BY OTHERS); CH ESMT; E.L. R/W; 2:1; 4" W (TO BE RELOCATED BY OTHERS); ROCK CHANNEL PROTECTION, TYPE B, 2'-6" THICK WITH FILTER FABRIC (TYP.); MATCH LINE 25.00' RT.; 964.54 STA. 1+50 971.12	126.2	7.9		
	86.1				121.6	5.9
	119	SHEET TOTAL			154	25

CALCULATED R.JS
CHECKED PF

CHANNEL SECTIONS
STA. 1+50 TO STA. 2+58

MED-301-5.48

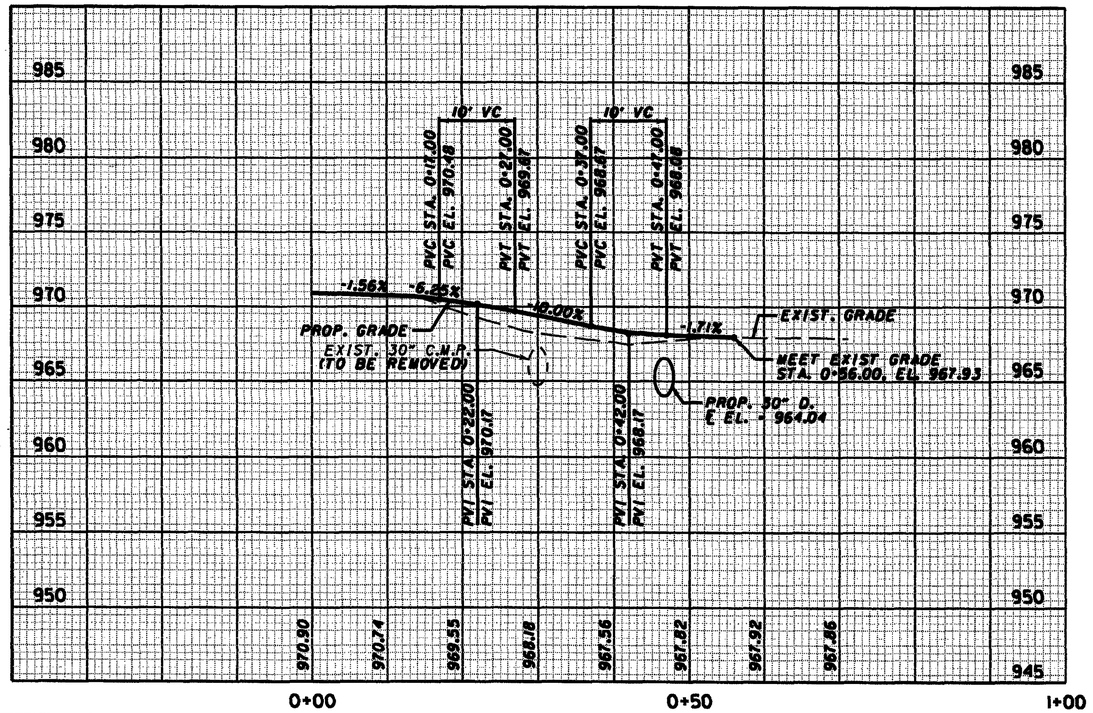
15
23

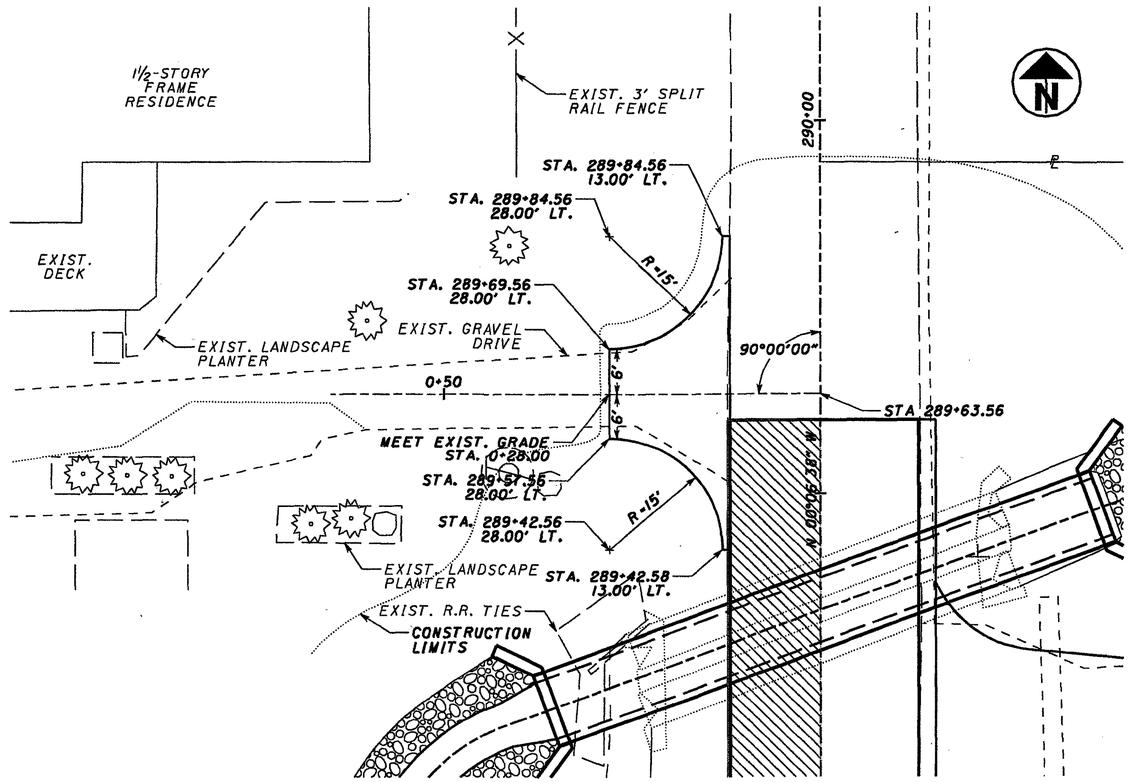


ODOT REVISIONS:
30" CONDUIT -HEADWALL -TYPE D

℄ DRIVE --- STA. 288+97.56 (SR 301)

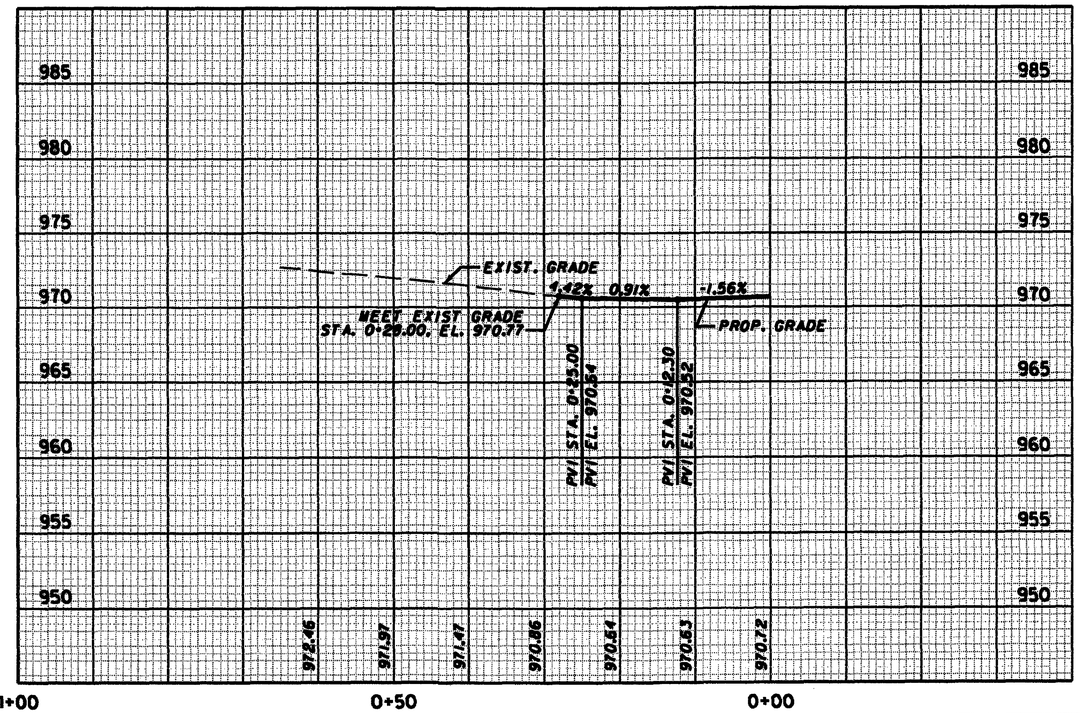
NOTE: FOR DRIVEWAY QUANTITIES SEE SHEET 7.





℄ DRIVE --- STA. 289+63.56 (SR 301)

NOTE: FOR DRIVEWAY QUANTITIES SEE SHEET 7.



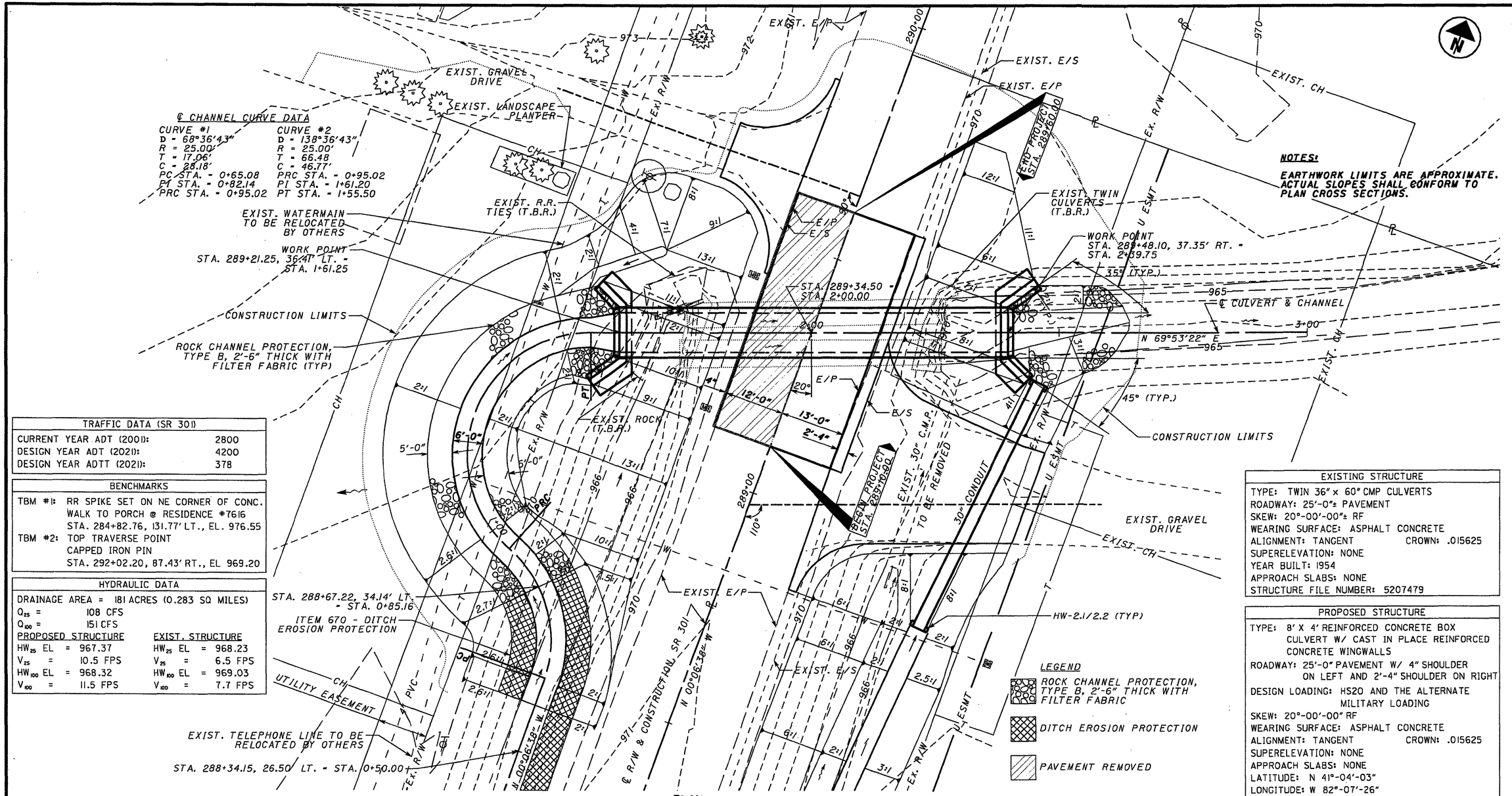
HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED RJS
CHECKED PF

DRIVEWAY DETAILS
S.R. 301 STA. 288+97.56 AND STA. 289+63.56

MED-301-5.48

16
23



PLAN

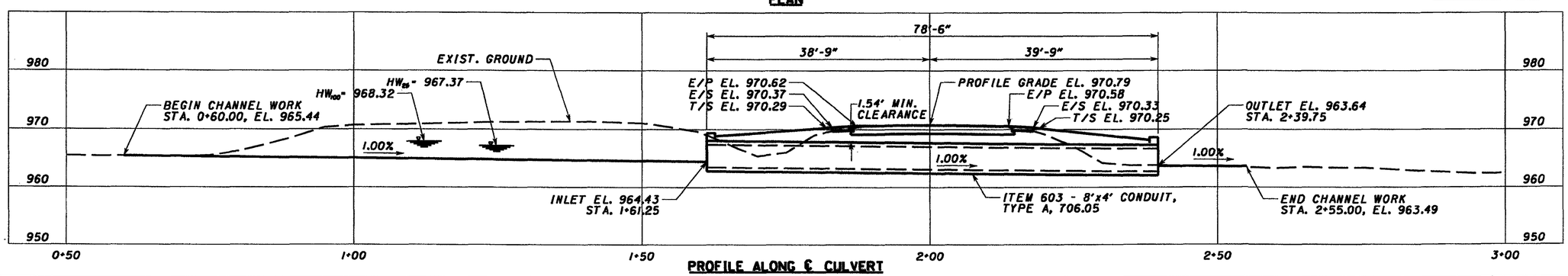
TRAFFIC DATA (SR 301)	
CURRENT YEAR ADT (2001):	2800
DESIGN YEAR ADT (2021):	4200
DESIGN YEAR ADTT (2021):	378

BENCHMARKS	
TBM #1:	RR SPIKE SET ON NE CORNER OF CONC. WALK TO PORCH @ RESIDENCE #7616 STA. 284+82.76, 131.77' LT., EL. 976.55
TBM #2:	TOP TRAVERSE POINT CAPPED IRON PIN STA. 292+02.20, 87.43' RT., EL 969.20

HYDRAULIC DATA			
DRAINAGE AREA = 181 ACRES (0.283 SQ MILES)			
Q_{25} =	108 CFS		
Q_{100} =	151 CFS		
PROPOSED STRUCTURE		EXIST. STRUCTURE	
HW_{25} EL =	967.37	HW_{25} EL =	968.23
V_{25} =	10.5 FPS	V_{25} =	6.5 FPS
HW_{100} EL =	968.32	HW_{100} EL =	969.03
V_{100} =	11.5 FPS	V_{100} =	7.7 FPS

EXISTING STRUCTURE
TYPE: TWIN 36" x 60" CMP CULVERTS
ROADWAY: 25'-0"± PAVEMENT
SKEW: 20°-00'-00"± RF
WEARING SURFACE: ASPHALT CONCRETE
ALIGNMENT: TANGENT CROWN: .015625
SUPERELEVATION: NONE
YEAR BUILT: 1954
APPROACH SLABS: NONE
STRUCTURE FILE NUMBER: 5207479

PROPOSED STRUCTURE
TYPE: 8' X 4' REINFORCED CONCRETE BOX CULVERT W/ CAST IN PLACE REINFORCED CONCRETE WINGWALLS
ROADWAY: 25'-0" PAVEMENT W/ 4" SHOULDER ON LEFT AND 2'-4" SHOULDER ON RIGHT
DESIGN LOADING: HS20 AND THE ALTERNATE MILITARY LOADING
SKEW: 20°-00'-00" RF
WEARING SURFACE: ASPHALT CONCRETE
ALIGNMENT: TANGENT CROWN: .015625
SUPERELEVATION: NONE
APPROACH SLABS: NONE
LATITUDE: N 41°-04'-03"
LONGITUDE: W 82°-07'-26"



PROFILE ALONG ℄ CULVERT

ODOT REVISIONS:
30" CONDUIT HEADWALL
PAVEMENT TREATMENT
EROSION PROTECTION

DESIGN AGENCY
BARR & PREVOST
2800 CORPORATE EXCHANGE DR., STE. 240
COLUMBUS, OH 43231
TEL. (614) 714-0270 FAX. (614) 714-0322

DESIGNED	DRAWN	REVIEWED	DATE
TJP	TJP	PF	11-22-2000
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MJC			

CULVERT PLAN AND PROFILE

MED-301-5.48

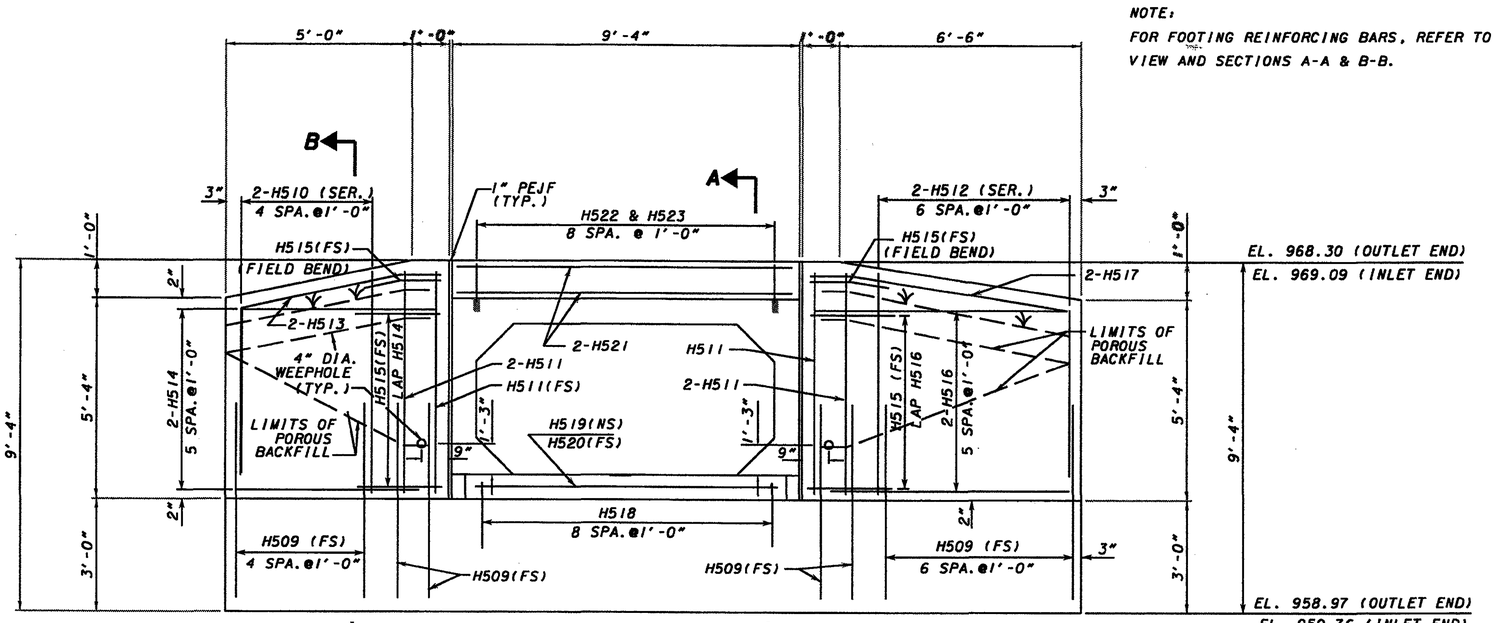
OVER AN UN-NAMED CREEK

MED-301-5.48

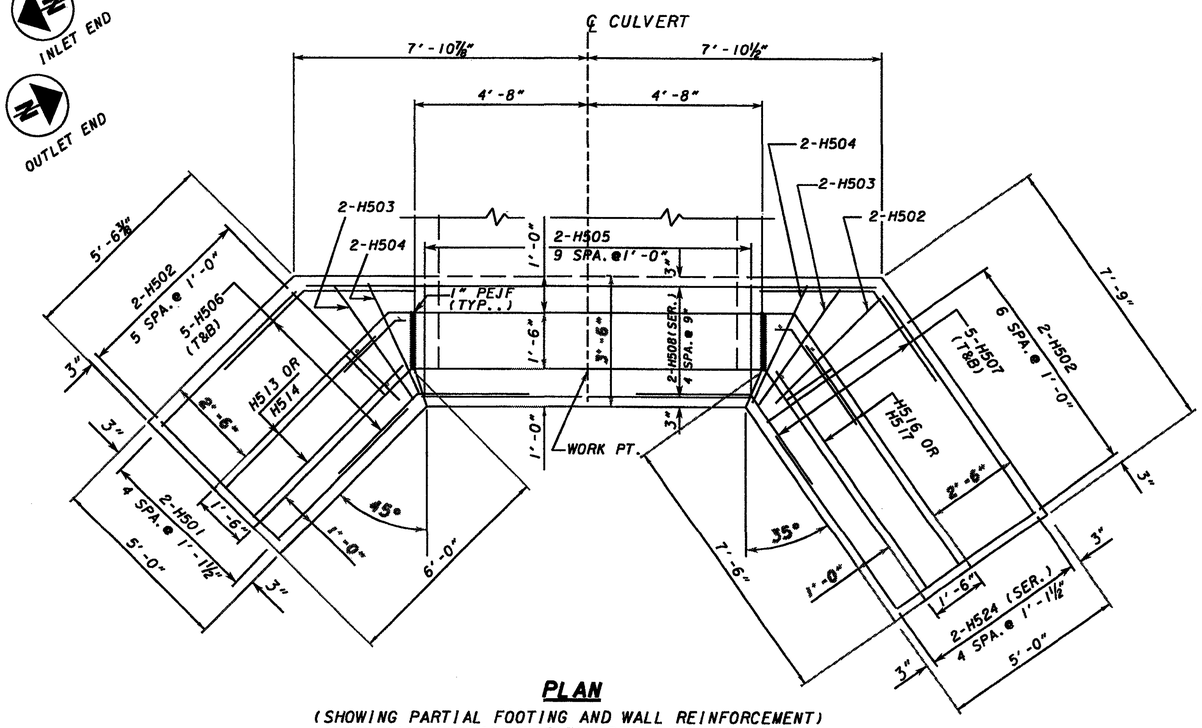
1/3

17/23

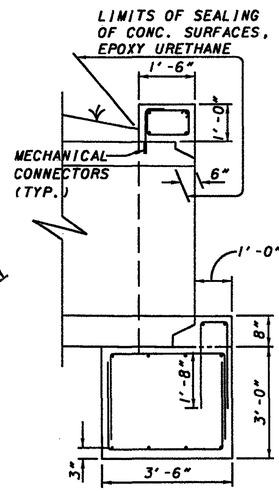
NOTE:
FOR FOOTING REINFORCING BARS, REFER TO PLAN VIEW AND SECTIONS A-A & B-B.



ELEVATION
(DEVELOPED ALONG FRONT FACE OF WINGWALL)

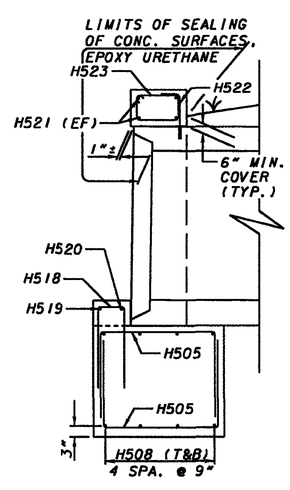


PLAN
(SHOWING PARTIAL FOOTING AND WALL REINFORCEMENT)
(FOR BARS NOT IDENTIFIED, SEE ELEVATION VIEW)



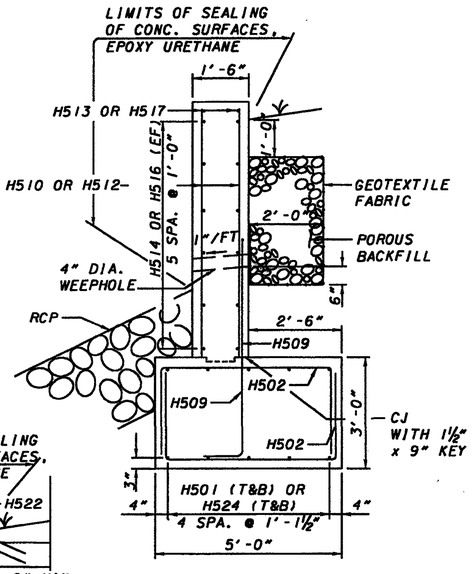
FOR REINFORCEMENT CALLOUTS SEE SECTION A-A @ CULVERT INLET END

SECTION A-A
(CULVERT OUTLET END)



FOR DIMENSIONS OF HEADWALL SEE SECTION A-A @ CULVERT OUTLET END.

SECTION A-A
(CULVERT INLET END)



SECTION B-B

DESIGN AGENCY
BARR & PREVOST
2800 CORPORATE EXCHANGE DR., STE. 240
COLUMBUS, OH 43231
TEL. (614) 714-0270 FAX. (614) 714-0322

DESIGNED	DRAWN	REVIEWED	DATE
KVB	FIB	PF	11/2000
CHECKED	REVISED	STRUCTURE FILE NUMBER	
ASB			

WINGWALL/HEADWALL PLAN & MISC. DETAILS
MED-301-5.48
OVER AN UN-NAMED CREEK

MED-301-5.48

2 / 3

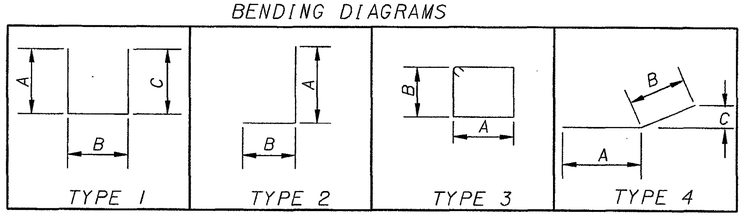
18
23

REINFORCING STEEL LIST

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	INC.
H501	20	5'-2"	108	STR				
H502	56	8'-11"	521	1	2'-4"	4'-6"	2'-4"	
H503	8	8'-2"	68	1	2'-4"	3'-9"	2'-4"	
H504	8	7'-11"	66	1	2'-4"	3'-6"	2'-4"	
H505	40	7'-5"	309	1	2'-4"	3'-0"	2'-4"	
H506	20	5'-11"	123	4	3'-0"	3'-0"	2'-1½"	
H507	20	5'-11"	123	4	3'-0"	3'-0"	1'-9"	
	4	8'-9"						
H508	S.O.	TO	252	STR				1'-8"
	5	15'-4"						
H509	32	6'-3"	209	2	5'-7"	10"		
	4	5'-2"						
H510	S.O.	TO	117	STR				2½"
	5	6'-0"						
H511	12	6'-2"	77	STR				
	4	5'-1"						
H512	S.O.	TO	163	STR				2"
	7	6'-1"						
H513	4	5'-8"	24	4	4'-10"	10"	2"	
H514	24	5'-8"	142	STR				
H515	28	2'-9"	80	4	2'-6"	4"	3"	
H516	24	7'-2"	179	STR				
H517	4	7'-2"	30	4	6'-4"	10"	2"	
H518	18	5'-1"	95	1	2'-4"	8"	2'-4"	
H519	2	8'-4"	17	STR				
H520	2	8'-10"	18	STR				
H521	8	9'-0"	75	STR				
(*)H522	18	1'-6"	28	2	10"	10"		
H523	18	4'-2"	78	3	8"	1'-2"		
	4	6'-4"						
H524	S.O.	TO	141	STR				2½"
	5	7'-2"						
		TOTAL	3043					

* ADJUST VERTICAL LEG AS NECESSARY TO ACCOUNT FOR THE MECHANICAL CONNECTOR.

BENDING DIAGRAMS



NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, S501 IS A NO. 5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE NOTED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED.
2. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
3. "STR" IN THE TYPE COLUMN INDICATES STRAIGHT BARS.
4. S.O. DENOTES SERIES OF.
5. REFER TO C.M.S. SECTION 509.05 FOR STANDARD BEND DIMENSIONS.
6. ALL REINFORCING STEEL CLEARANCES ARE 2" UNLESS OTHERWISE NOTED.

GENERAL NOTES

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002, INCLUDING THE 2003, 2004, 2005 INTERIM SPECIFICATIONS AND THE ODOT BRDIGE DESIGN MANUAL.

DESIGN LOADING:

HS20 AND THE ALTERNATE MILITARY LOADING.

DESIGN STRESSES:

CAST-IN-PLACE STRUCTURES:
CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615, A996
GRADE 60, MINIMUM YIELD STRENGTH (Fy) = 60,000 PSI

PRE-CAST STRUCTURES: FOR BOX CULVERT SEE C.M.S. 603.

FOUNDATION BEARING PRESSURE:

WINGWALL AND CULVERT FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM BEARING PRESSURE OF 0.95 TON PER SQUARE FOOT. THE ALLOWABLE BEARING PRESSURE IS 1.0 TON PER SQUARE FOOT.

SURVEY DISC ON STRUCTURE:

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST ONE (1) WEEK IN ADVANCE OF POURING THE CONCRETE FOR COMPLETION OF THE HEADWALL. THE ENGINEER WILL PROVIDE THE CONTRACTOR ONE (1) SURVEY DISC FOR EACH STRUCTURE (OBTAINED FROM THE DISTRICT SURVEYOR) WHICH THE CONTRACTOR SHALL PLACE IN THE SURFACE OF THE FRESH CONCRETE. THE LOCATION OF THE DISC SHALL BE ON THE HEADWALL AND ON A FLAT, HORIZONTAL SURFACE BEYOND THE EDGE OF DECK AND GUARDRAIL OR PARAPET. THE BENCHMARK SHALL BE ACCESSIBLE TO A SURVEYOR'S ROD WITHOUT ANY OBSTRUCTIONS. COST OF THIS WORK IS CONSIDERED INCIDENTAL TO THE CONCRETE BID ITEM.

ITEM 512- SEALING OF CONCRETE SURFACES:

WHEN ITEM 512- SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) IS SPECIFIED ON THE HEADWALLS OF A PRECAST CONCRETE BOX CULVERT, ANY PRECAST CULVERT SECTIONS BEYOND THE LIMIT OF THE WATERPROOFING SHALL BE SEALED WITH THE SAME SEALING. PAYMENT FOR THE SEALING OF THE PRECAST CONCRETE BOX SURFACES SHALL BE MADE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512- SEALING OF CONCRETE SURFACES (EPOXY-URETHANE). THE COLOR OF THE URETHANE TOP COAT SHALL BE FEDERAL COLOR NO. 37722 (BUFF).

ITEM 512 - TYPE 2 WATERPROOFING

TYPE 2 WATERPROOFING SHALL BE APPLIED ON TOP OF THE PRECAST SECTIONS AND SHALL BE EXTENDED DOWN FULL LENGTH ON EACH VERTICAL FACE. IF INSTALLED IN SECTIONS, THE TOP SHALL OVERLAP THE SIDES 1'-0".

UTILITY LINES:

ALL EXPENSE INVOLVED IN RELOCATION (INSTALLING) THE AFFECTED UTILITY LINES SHALL BE BORNE THE UTILITY(IES). THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

REBAR NOTE:

REBAR DIMENSIONS SHOWN FOR INFORMATION PURPOSES ONLY. IF THE REINFORCING STEEL LIST IS USED, IT SHALL BE VERIFIED BY THE CONTRACTOR. ANY REVISIONS IN THE REINFORCING STEEL LIST SHALL NOT BE A REASON FOR ADJUSTMENT OF THE BID PRICE.

ITEM 518, POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN

THE MATERIAL SHALL BE NO. 57 GRAVEL.

ITEM 603 - 8' X 4' CONDUIT, TYPE A, 706.05, AS PER PLAN:

ALL REQUIREMENTS OF 706.05 SHALL BE MET. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR THE PERTINENT 603 ITEM. THIS ITEM SHALL ALSO INCLUDE PAYMENT FOR MECHANICAL CONNECTORS AS SPECIFIED ON SHEET 2/3.

ITEM 511 - CLASS C CONCRETE, FOOTING, AND HEADWALL, AS PER PLAN

THE AGGREGATE FOR ALL CLASS C CONCRETE PAY ITEMS SHALL CONSIST OF LIMESTONE.

ABBREVIATIONS:

B-BOTTOM
CJ-CONSTRUCTION JOINT
CONC.-CONCRETE
EF-EACH FACE
EL-ELEVATION
EXIST.-EXISTING
F/F-FACE TO FACE
FS-FAR SIDE
G/R-GUARDRAIL
IPF-IRON PIN FOUND
IPS-IRON PIN SET
INC.-INCREMENT
NS-NEAR SIDE
PEJF-PREFORMED EXPANSION JOINT FILLER
PKF-PK FOUND
PKS-PK SET
R/W-RIGHT OF WAY
RCP-ROCK CHANNEL PROTECTION
REINF.-REINFORCED
STA.-STATION
T-TOP
TBM-TEMPORARY BENCH MARK
TBR-TO BE REMOVED
TYP.-TYPICAL

ODOT REVISIONS:

QUANTITIES
ITEM 509 AND 503

NOTE FOR ITEMS
603,511,512,514

REINFORCING STEEL WEIGHTS

COMPUTED BY : KVB DATE : 11/2000
CHECKED BY : ASB DATE : 11/2000

CULVERT SUMMARY

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
503	11100		LUMP	COFFERDAMS, CRIBS, AND SHEETING
503	21300		LUMP	UNCLASSIFIED EXCAVATION
509	10000	3043	POUND	EPOXY COATED REINFORCING STEEL
511	46001	10	CU. YD.	CLASS C CONCRETE, AS PER PLAN
511	46501	24	CU. YD.	CLASS C CONCRETE, FOOTING, AS PER PLAN
511	46601	1	CU. YD.	CLASS C CONCRETE, HEADWALL, AS PER PLAN
512	10100	25	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	33000	170	SQ. YD.	TYPE 2 WATERPROOFING
516	13600	38	SQ. FT.	1" PREFORMED EXPANSION JOINT FILLER
518	21231		LUMP	POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN
603	94801	78.5	FT.	8'X4' CONDUIT, TYPE A, 706.05, AS PER PLAN

DESIGN AGENCY
BARR & PREVOST
2800 CORPORATE EXCHANGE DR., STE. 240
COLUMBUS, OH 43231
TEL.(614) 714-0210 FAX.(614) 714-0322

DESIGNED	DRAWN	REVIEWED	DATE
KVB	FB	PF	11/22/00
CHECKED	REVISED	STRUCTURE FILE NUMBER	
ASB			

GENERAL NOTES, CULVERT SUM. & REINF. STEEL LIST
MED-301-5.48
OVER AN UN-NAMED CREEK

MED-301-5.48

3 / 3

19
23

MED-301-5.48
LOTS 1 & 4, SECTION 11, T-2 NORTH, R-17 WEST
SPENCER TOWNSHIP
MEDINA COUNTY

MONUMENT LEGEND

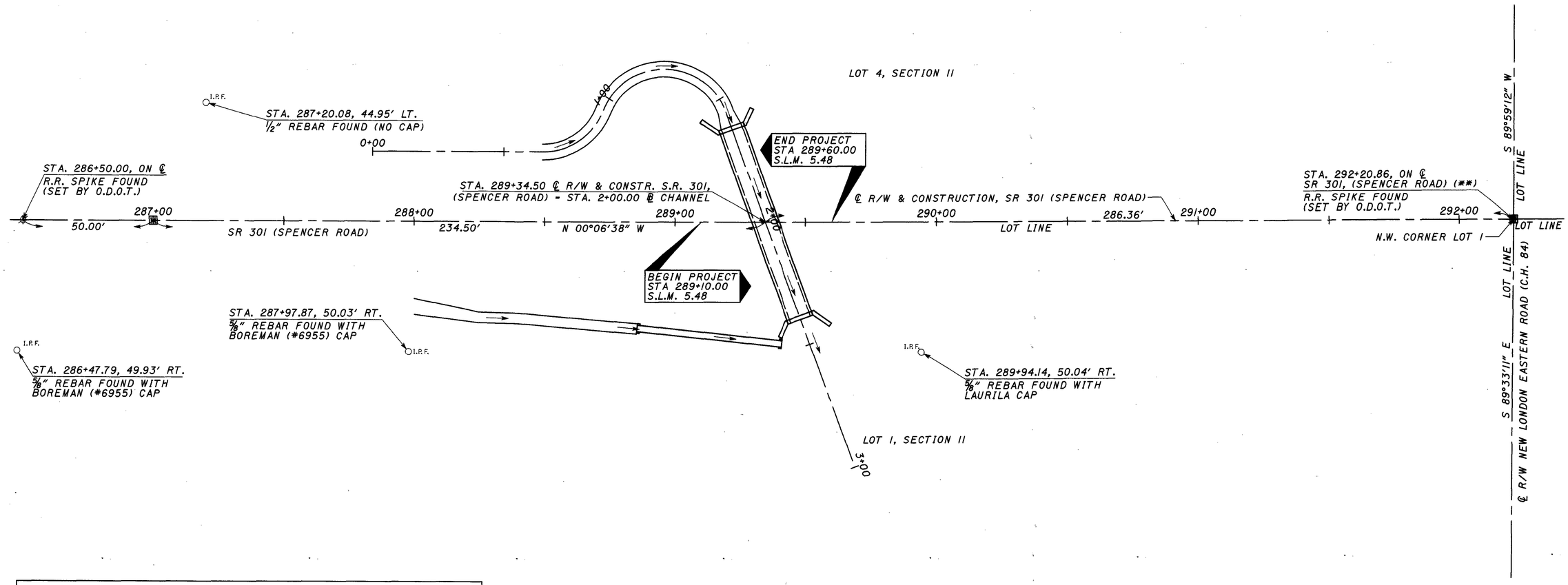
- EXISTING MONUMENT BOX
- PROPOSED ADJUSTABLE MONUMENT ASSEMBLY
- EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- RAILROAD SPIKE FOUND
- RAILROAD SPIKE SET
- I.R.F. IRON PIN FOUND
- I.R.F. IRON PIN FOUND W/ ID CAP
- I.R.S. 3/4" DIA. REINFORCING BAR, 36" LONG, WITH 1 1/2" ALUMINUM CAP STAMPED "ODOT R/W, LONG PS 6505"
- P.F. IRON PIPE FOUND
- P.S. IRON PIPE SET
- P.K.F. P.K. NAIL FOUND
- P.K.S. P.K. NAIL SET

BASIS FOR BEARINGS:

ALL BEARINGS SHOWN ARE FOR PROJECT USE ONLY. THESE BEARINGS ARE TO AN ASSUMED MERIDIAN AND ARE USED TO DELINEATE ANGLES ONLY.

NOTE: THE EXISTING RIGHT-OF-WAY CENTERLINE, WIDTH AND LOCATION WERE DETERMINED USING DOCUMENTATION ON FILE FROM THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 3 OFFICE, ASHLAND, OHIO (R/W PLAN MED-301-2.60).

(**) CORRESPONDS TO ℄ STA. 159+05 IN THE ABOVE REFERENCED R/W PLAN.



MONUMENTS TO BE SET DURING CONSTRUCTION				
STATION	DIST. FROM ℄ OF SURVEY		ADJUSTABLE ℄ MONUMENT	RIGHT-OF-WAY MONUMENTS
	LEFT	RIGHT		
287+00.00	℄		1	
292+20.86	℄		1	
TOTAL			2	

ADJUSTABLE CENTERLINE MONUMENTS, REFERENCE MONUMENTS AND RIGHT OF WAY MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM-1.1 (REV. 4-29-99) OF THE OHIO DEPARTMENT OF TRANSPORTATION. THE PLACING OF THE MONUMENTS SHALL BE UNDER THE DIRECTION OF A SURVEYOR REGISTERED IN THE STATE OF OHIO AND ARE TO BE SET, AS SHOWN BY THE HIGHWAY CONTRACTOR AT THE TIME OF CONSTRUCTION. ANY ALTERATIONS, WITH PRIOR APPROVAL OF THE OHIO DEPARTMENT OF TRANSPORTATION, SHALL BE NOTED AND O.D.O.T. SHALL BE NOTIFIED OF THE NEW LOCATIONS.

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF TRANSPORTATION IN 2000 BY ENGINEERING ASSOCIATES, INC.

THE ESTABLISHMENT OF THE PROPERTY LINES AND EXISTING RIGHT-OF-WAY LINES SHOWN ON THIS PLAN AS OF THIS DATE WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION.

BY William H. Long
WILLIAM H. LONG, P.S.
SURVEYOR NO. 6505 DATE 1/31/01

STATE OF OHIO · WILLIAM H. LONG · 6505 · REGISTERED SURVEYOR

RECEIVED _____, 20__
RECORDED _____, 20__
BOOK _____ PAGE _____

COUNTY RECORDER

N

SCALE IN FEET: 0, 10, 20, 40

PID NO. 18945

R/W DESIGNER RJS
R/W REVIEWER WHL

PLAT
CENTERLINE PLAT

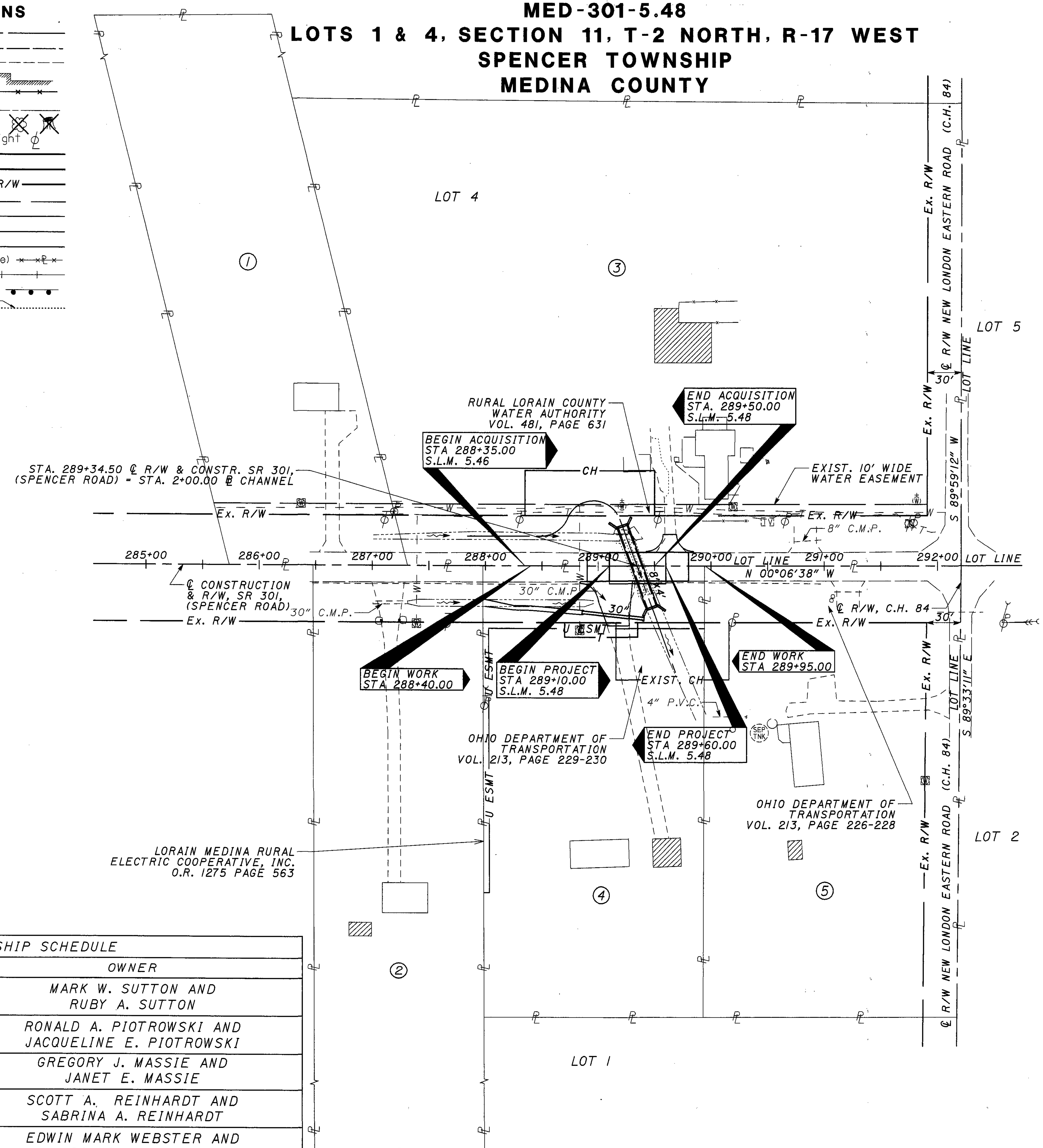
MED-301-5.48

1/1
1/4
20/23

MED-301-5.48
LOTS 1 & 4, SECTION 11, T-2 NORTH, R-17 WEST
SPENCER TOWNSHIP
MEDINA COUNTY

CONVENTIONAL SIGNS

- County Line
- Township Line
- Section Line
- Corporation Line or
- Fence Line (existing) (proposed)
- Center Line
- Trees, Stumps (to be removed)
- Utility Poles: Telephone, Power, Light
- Limited Access (only) LA
- Right of Way (only) R/W
- Limited Access & Right of Way LA-R/W
- Exist. Right of Way Ex. R/W
- Temp. Right of Way T
- Channel Easement CH
- Utility Easement U
- Property Line (in existing fence)
- Railroad or
- Guardrail (existing) (proposed)
- Construction Limits
- Lot Line LOT LINE



STRUCTURE KEY

- RESIDENTIAL
- COMMERCIAL
- OUT-BUILDING

RECORDED EASEMENTS

RIGHT-OF-WAY:	OHIO DEPARTMENT OF TRANSPORTATION PARCELS 1 THRU 5 (D.V. 213, PAGE 226-228)
CHANNEL:	OHIO DEPARTMENT OF TRANSPORTATION PARCELS 4 & 5 (D.V. 213, PAGE 229-230)
WATER:	RURAL LORAIN COUNTY WATER AUTHORITY PARCELS 1 & 3 (O.R. 481, PAGE 631)
ELECTRIC:	LORAIN MEDINA RURAL ELECTRIC COOPERATIVE, INC. PARCEL 4 (D.V. 1275, PAGE 563)

UTILITY OWNERS

WATER:	RURAL LORAIN COUNTY WATER AUTHORITY 42401 STATE ROUTE 303, P.O. BOX 567 LAGRANGE, OHIO 44050 (440) 355-6060
ELECTRIC:	LORAIN MEDINA RURAL ELECTRIC P.O. BOX 158 WELLINGTON, OHIO 44090 (800) 222-5673
TELEPHONE:	VERIZON COMMUNICATIONS 6223 NORWALK ROAD MEDINA, OHIO 44256 (330) 722-9580
CABLE:	ADELPHIA CABLE 1575 LEXINGTON AVENUE P.O. BOX 576 MANSFIELD, OHIO 44901 (419) 756-6091

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

REFERENCE POINT INFORMATION IS CONTAINED IN THE CONSTRUCTION PLAN.

OWNERSHIP SCHEDULE

PARCEL	PARCEL NUMBER	OWNER
1	036-08C-35-013	MARK W. SUTTON AND RUBY A. SUTTON
2	036-08D-35-005	RONALD A. PIOTROWSKI AND JACQUELINE E. PIOTROWSKI
3	036-08C-35-012	GREGORY J. MASSIE AND JANET E. MASSIE
4	036-08D-35-008	SCOTT A. REINHARDT AND SABRINA A. REINHARDT
5	036-08D-35-007	EDWIN MARK WEBSTER AND DIANE WEBSTER

REV. BY	DATE	DESCRIPTION

DATE COMPLETED

SCALE IN FEET 0 25 50 100

PID NO. 18945

R/W DESIGNER RJS
R/W REVIEWER WHL

PROPERTY MAP

MED-301-5.48

2/4

21/23

TOTAL NUMBER OF :

2 OWNERSHIPS
2 PARCELS
0 TOTAL TAKES

0 OWNERSHIPS WITH STRUCTURES INVOLVED
0 OWNERSHIPS WITH "P" ITEMS

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

ALL AREAS IN ACRES

* DENOTES RIGHT OF WAY ENCROACHMENT

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
1	MARK W. SUTTON AND RUBY A. SUTTON	4	O.R. 460	549-550	036-08C-35-013	2.0195								STATE	NO RIGHT-OF-WAY REQUIRED		
2	RONALD A. PIOTROWSKI AND JACQUELINE E. PIOTROWSKI	4	O.R. 949	813-814	036-08D-35-005	3.0277								STATE	NO RIGHT-OF-WAY REQUIRED, * (2) LARGE ROCKS, * (2) DECORATIVE DRIVE POSTS		
3-CH	GREGORY J. MASSIE AND JANET E. MASSIE	4	O.R. 194	908-909	036-08C-35-012	5.0782	0.7617	0.1056	0	0.1056	P	4.3165		STATE	GRADING AND ROCK CHANNEL PROTECTION, * EXISTING SPLIT RAIL FENCE, (2) SHRUBS, TV TOWER, LANDSCAPE PLANTER BED. CONC. BASKETBALL PAD	2001	OR032850
4-T	SCOTT A. REINHARDT AND SABRINA A. REINHARDT	4	O.R. 1272	24	036-08D-35-008	1.7910	0.2255	0.0187	0	0.0187			1.5655	STATE	GRADING AND DRIVEWAY CONSTRUCTION OVERLAPS EXIST. CHANNEL EASEMENT BY 0.0055 ACRES	2002	OR003108
5	EDWIN MARK WEBSTER AND DIANE WEBSTER	4	O.R. 1276	703	036-08D-35-007	2.0668								STATE	NO RIGHT-OF-WAY REQUIRED, * (2) LARGE ROCKS		

O.R. = OFFICIAL RECORD

NOTE: ALL TEMPORARY PARCELS TO BE OF 12 MONTH DURATION.

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

REV. BY	DATE	DESCRIPTION
FIELD REVIEW BY		DATE:
OWNERSHIP VERIFIED BY		DATE:
DATE COMPLETED		

FEDERAL PROJECT NO.

PID NO. 18945

STATE JOB NO. 431720

R/W DESIGNER RJS
R/W REVIEWER WHL

SUMMARY OF ADDITIONAL RIGHT OF WAY

MED-301-5.48

3/4

22/23

MED-301-5.48
LOTS 1 & 4, SECTION 11, T-2 NORTH, R-17 WEST
SPENCER TOWNSHIP
MEDINA COUNTY

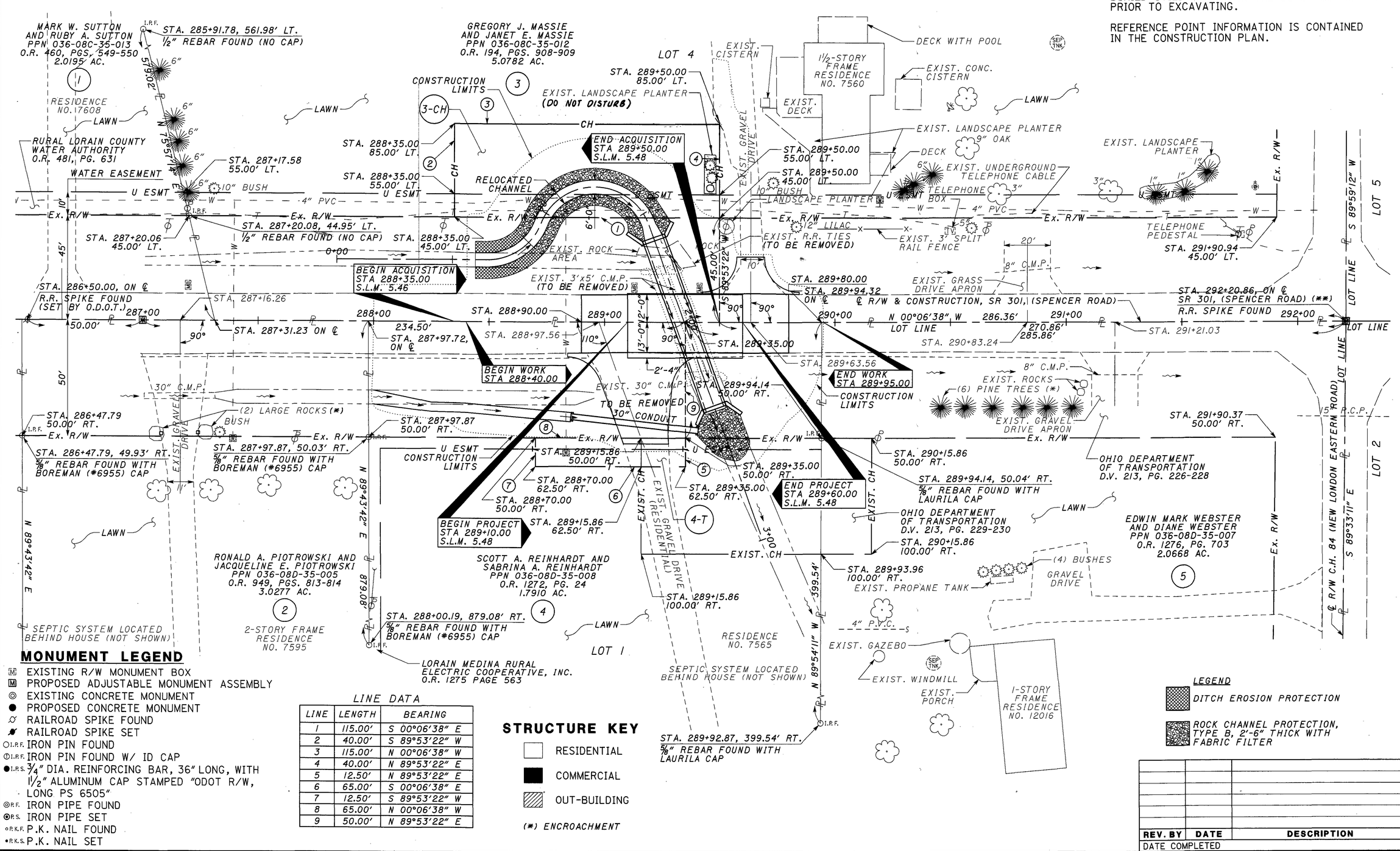
NOTE: THE EXISTING RIGHT-OF-WAY CENTERLINE, WIDTH AND LOCATION WERE DETERMINED USING DOCUMENTATION ON FILE FROM THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 3 OFFICE, ASHLAND, OHIO (R/W PLAN MED-301-2.60).

(**) CORRESPONDS TO ℄ STA. 159+05 IN THE ABOVE REFERENCED R/W PLAN.

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

THE SIZE, DEPTH AND LOCATION OF THE BURIED UTILITIES, SHOWN OR NOT, ARE NOT WARRANTED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE EXACT SIZE, DEPTH AND LOCATION OF ALL BURIED UTILITIES WITHIN THE CONSTRUCTION AREA PRIOR TO EXCAVATING.

REFERENCE POINT INFORMATION IS CONTAINED IN THE CONSTRUCTION PLAN.



MONUMENT LEGEND

- EXISTING R/W MONUMENT BOX
- PROPOSED ADJUSTABLE MONUMENT ASSEMBLY
- EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- RAILROAD SPIKE FOUND
- RAILROAD SPIKE SET
- I.P.F. IRON PIN FOUND
- I.P.F. IRON PIN FOUND W/ ID CAP
- I.P.S. ¾" DIA. REINFORCING BAR, 36" LONG, WITH 1½" ALUMINUM CAP STAMPED "ODOT R/W, LONG PS 6505"
- I.P.F. IRON PIPE FOUND
- I.P.S. IRON PIPE SET
- P.K.F. P.K. NAIL FOUND
- P.K.S. P.K. NAIL SET

LINE DATA

LINE	LENGTH	BEARING
1	115.00'	S 00°06'38" E
2	40.00'	S 89°53'22" W
3	115.00'	N 00°06'38" W
4	40.00'	N 89°53'22" E
5	12.50'	N 89°53'22" E
6	65.00'	S 00°06'38" E
7	12.50'	S 89°53'22" W
8	65.00'	N 00°06'38" W
9	50.00'	N 89°53'22" E

STRUCTURE KEY

- RESIDENTIAL
- COMMERCIAL
- OUT-BUILDING

(*) ENCROACHMENT

LEGEND

- DITCH EROSION PROTECTION
- ROCK CHANNEL PROTECTION, TYPE B, 2'-6" THICK WITH FABRIC FILTER

REV. BY	DATE	DESCRIPTION

DATE COMPLETED