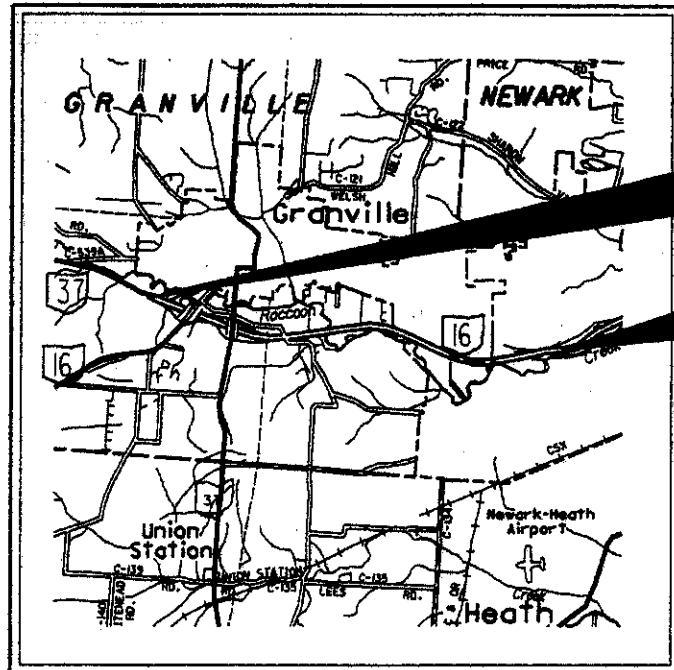


LIC-37/16-15.61/14.26
990400
DIST. 05
05-26-99
PID # 19777



LOCATION MAP

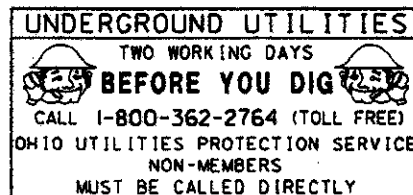


PORTION TO BE IMPROVED
STATE & FEDERAL ROUTES
OTHER ROADS

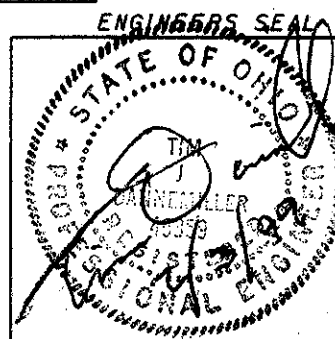
DESIGN DESIGNATION	S.R. 37	S.R. 16
CURRENT ADT (1999)	11,850	21,750
DESIGN YEAR ADT (2009)	14,220	26,100
DESIGN HOURLY VOLUME (2009)	1,422	2,610
DIRECTIONAL DISTRIBUTION	EQUAL	EQUAL
TRUCKS (24 HOUR B&C)	8%	7%
DESIGN SPEED	60 MPH	60 MPH
LEGAL SPEED	55 MPH	55 MPH

DESIGN FUNCTIONAL CLASSIFICATION - RURAL EXPRESSWAY RURAL EXPRESSWAY

DESIGN EXCEPTIONS NONE



PLAN PREPARED BY:
DISTRICT NO. 5
OHIO DEPARTMENT OF
TRANSPORTATION



BEGIN PROJECT
STA. 66+50
S.L.M. 15.61 (S.R. 37)

END PROJECT
STA. 13+60 W.B.
S.L.M. 17.93

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

LIC-37-15.61
LIC-16-14.26

GRANVILLE & NEWARK TOWNSHIPS
CITY OF NEWARK
VILLAGE OF GRANVILLE
LICKING COUNTY

INDEX OF SHEETS:

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S.R. 16 AND GRANVILLE ROAD INTERCHANGE	10
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TRAFFIC CONTROL SHEETS	16-18

PROJECT DESCRIPTION

THIS PROJECT SHALL CONSIST OF THE PLANING OF 1 1/2" OF THE EXISTING ASPHALT CONCRETE SURFACE COURSE, ONE FOOT BEYOND THE EXISTING EDGE OF PAVEMENT, AND THE PLACING OF 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1H ON THE PLANED AREAS. WORK SHALL BE SUSPENDED THROUGH THE CONCRETE PAVEMENT AT THE CHERRY VALLEY INTERSECTION AND THE FIVE OVERPASS BRIDGES.

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE REVISED CODE OF OHIO.

1997 SPECIFICATIONS

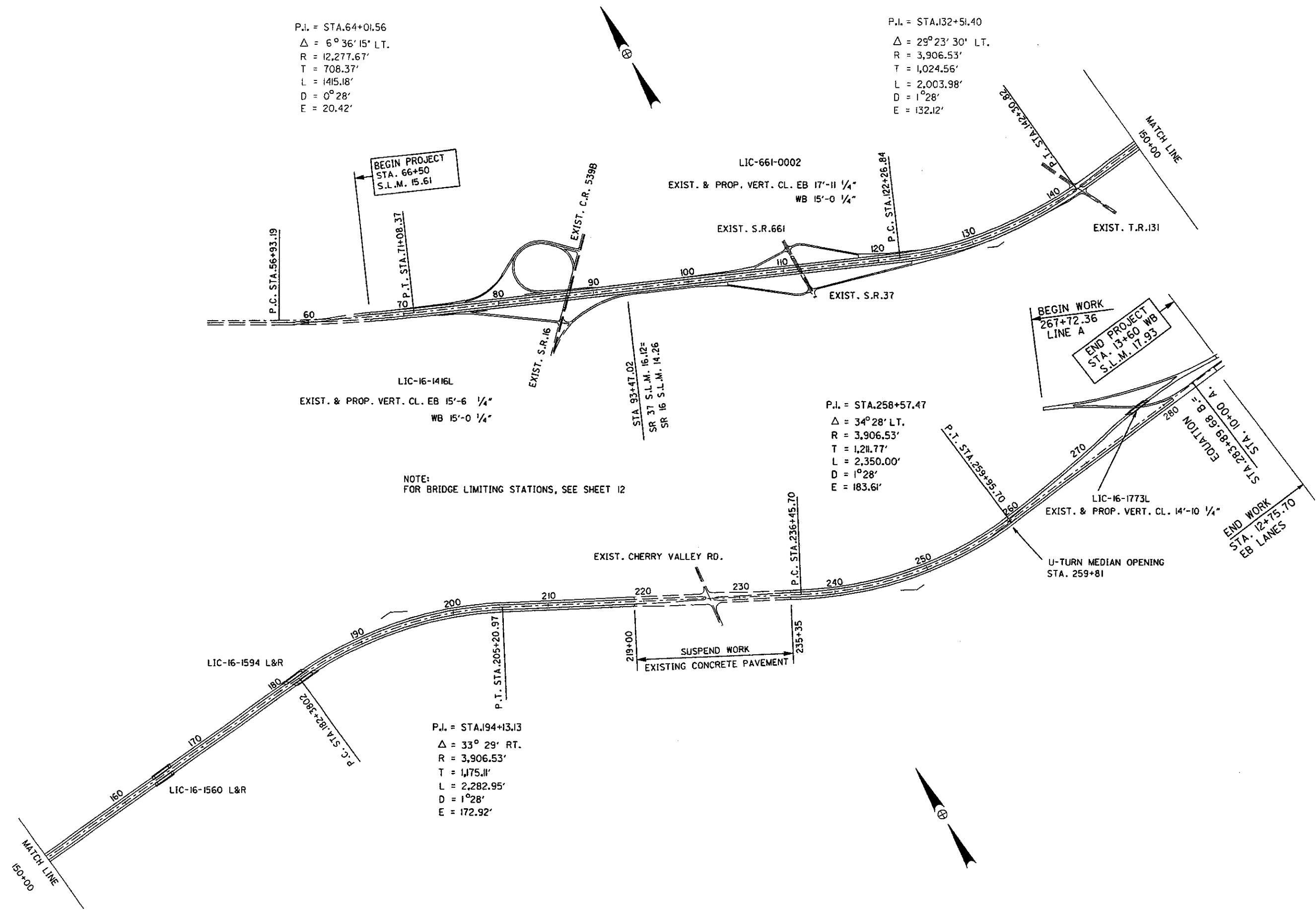
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

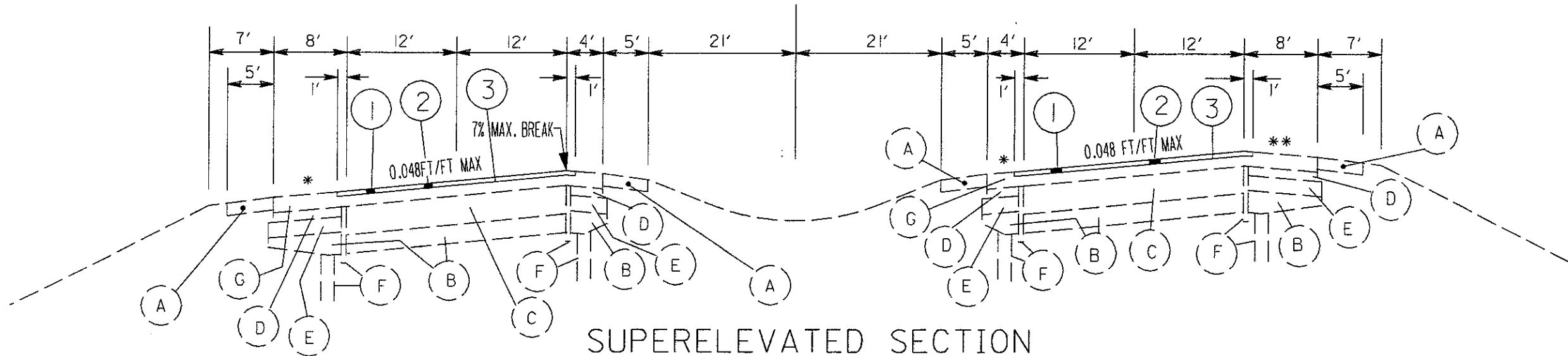
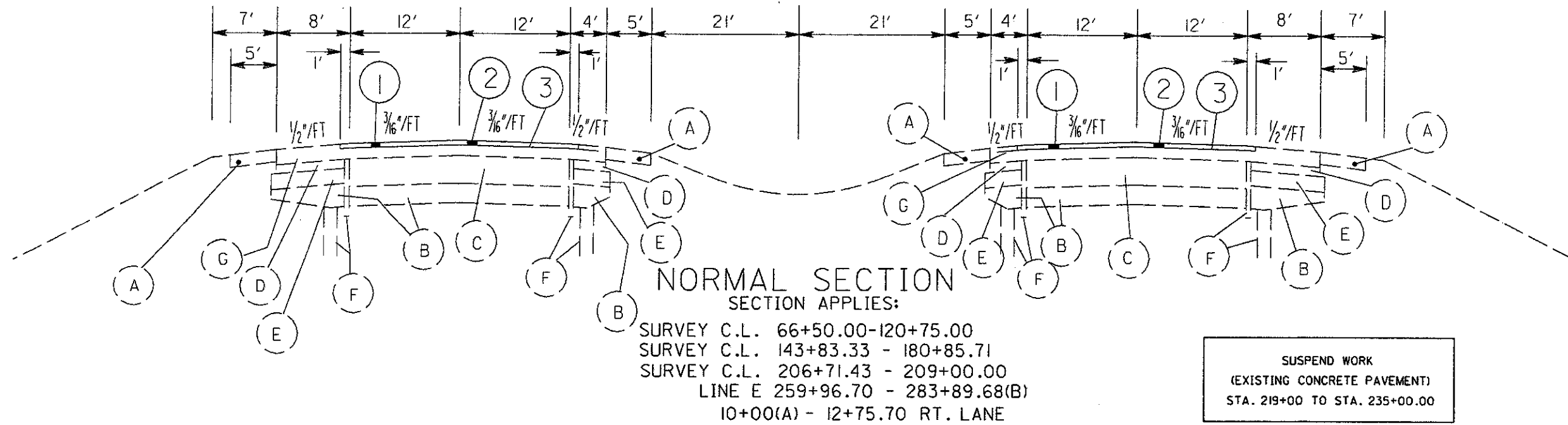
STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS
BP-3.1	2-21-92	MT-99.20	4-29-88			
TC-35.10	8-29-84	MT-105.10	7-1-92			
TC-65.10	7-7-95	MT-105.11	7-1-92			
TC-65.11	7-7-95					
TC-65.12	7-7-95					
TC-71.10	9-10-91					
TC-72.20	2-26-82					
MT-95.30	10-10-88					
MT-98.12	6-24-93					
MT-98.13	6-24-93					
MT-98.14	6-24-93					
MT-98.15	6-24-93					
MT-98.16	6-24-93					

APPROVED Michael D. Cope /see
DATE 2/3/99 DISTRICT DEPUTY DIRECTOR

APPROVED Gordon Proctor /pl.
DATE 3-1-99 DIRECTOR, DEPARTMENT OF
TRANSPORTATION



TYPICAL SECTIONS



EXISTING LEGEND

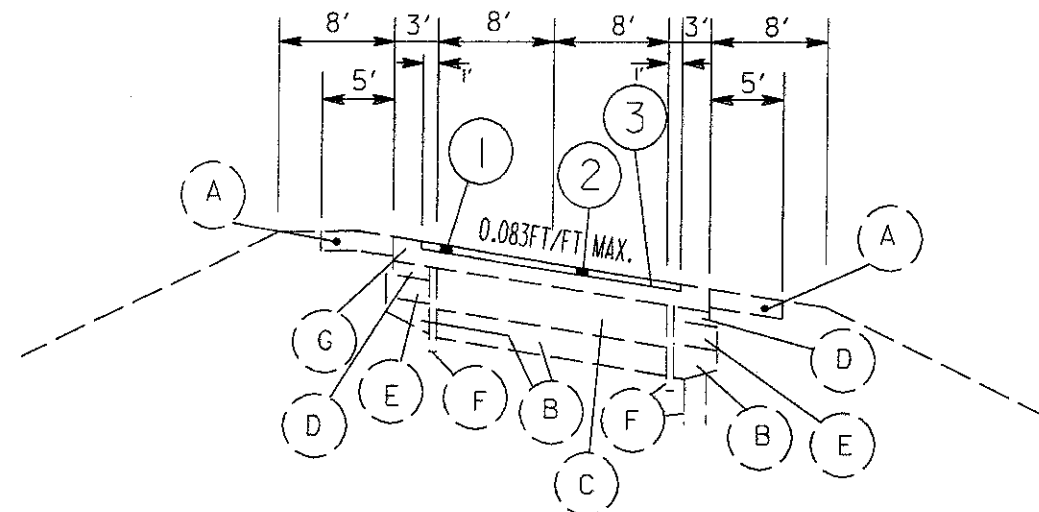
- (A) EXIST. 4" COMPACTED AGGR.
- (B) EXIST. SUBBASE
- (C) EXIST. 9" REINFORCED CONC. PAVT.
- (D) EXIST. 3" ASPH. CONC.
- (E) EXIST. 5" STABILIZED CRUSHED AGGR.
- (F) EXIST. UNDERDRAIN
- (G) EXIST. 5" ASPH. CONC.

- * 1/2" / FT OR PAVT. SLOPE IF GREATER
- ** VARIES 1/2" / FT TO 1/8" / FT
- * FEATHER PLANING 1/4" DEEPER IN THIS AREA TO RETAIN THE CURB HEIGHT.

PROPOSED LEGEND

MARK	ITEM	DESCRIPTION
①	254	PAVEMENT PLANING, BITUMINOUS (1 1/2")
②	446	1 1/2" ASPHALT CONCRETE SURFACE COURSE , TYPE IH
③	407	TACK COAT

TYPICAL SECTIONS

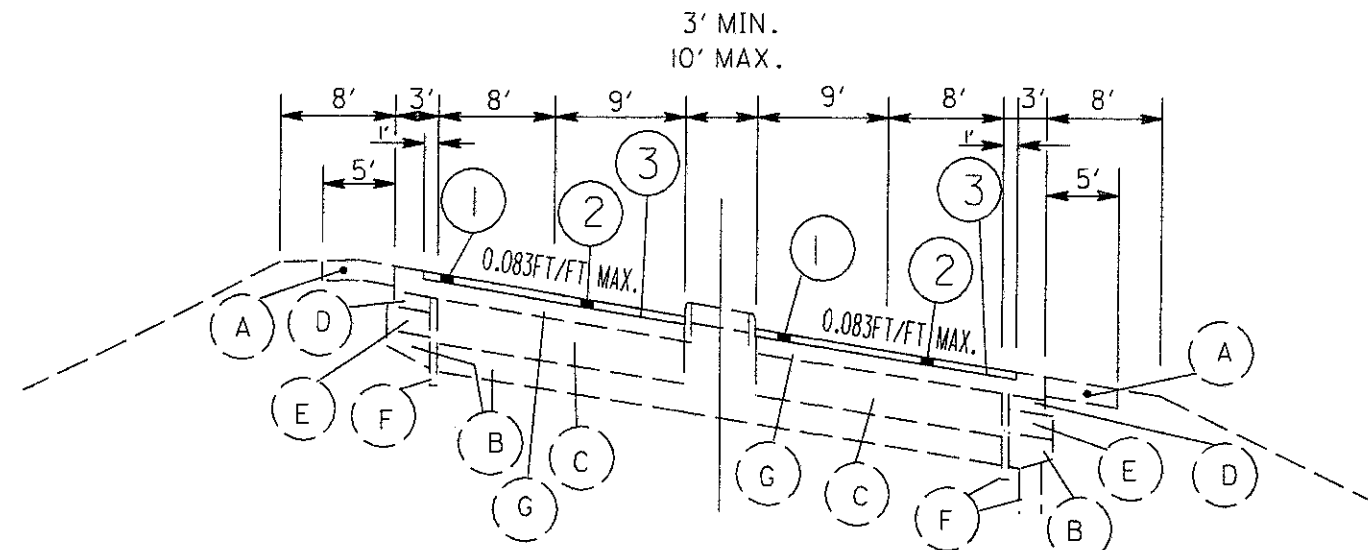


RAMP TYPICAL
SECTION APPLIES:
RAMP A 75+14.94 - 83+25
RAMP B 79+54 - 87+00
RAMP BB 87+86.51 - 92+37.15
RAMP C 73+73.37 - 86+42.91
RAMP DD VARIABLE
RAMP D 83+09.71 - 95+08.92
RAMP E 104+40 - 111+20.13
RAMP F 110+86.32 - 121+00
RAMP G 100+70 - 112+44.6
RAMP H 112+18.72 - 127+75.21
LINE A 270+86.55 - 283+55
LINE B 271+74.11 - 283+89.68

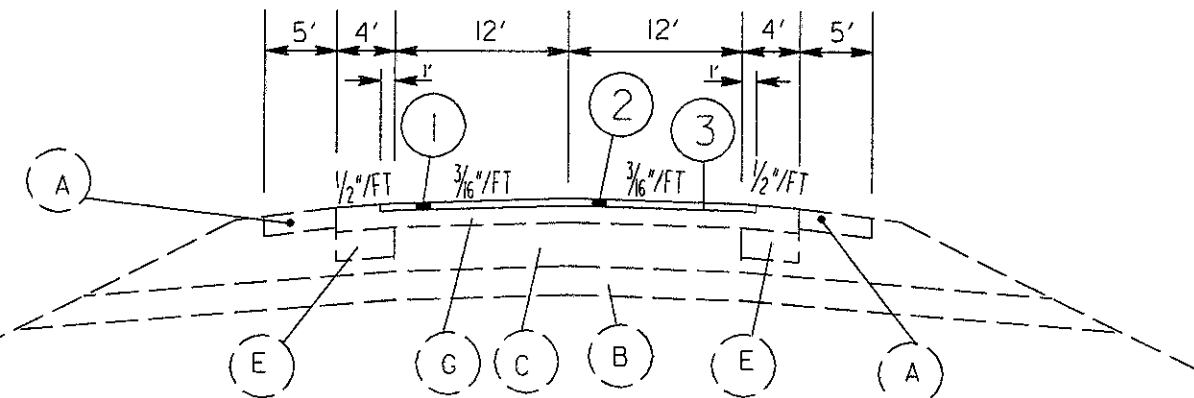
EXISTING LEGEND

- (A) EXIST. 4" COMPACTED AGGR.
- (B) EXIST. SUBBASE
- (C) EXIST. 9" REINFORCED CONC. PAVT.
- (D) EXIST. 3" ASPH. CONC.
- (E) EXIST. 5" STABILIZED CRUSHED AGGR.
- (F) EXIST. UNDERDRAIN
- (G) EXIST. 5" ASPH. CONC.

* 1/2" / FT OR PAVT. SLOPE IF GREATER
* * VARIES 1/2" / FT TO 1/8" / FT
* FEATHER PLANING 1 1/4" DEEPER IN THIS AREA TO RETAIN THE CURB HEIGHT.



RAMP TYPICAL
SECTION APPLIES:
RAMP A 83+25 - 84+51.5
RAMP B 78+41.17 - 79+54
RAMP A-B 84+51.5 - 91+03.63



TYPICAL SECTION S.R. 16, LINE A-B, A AND B
SECTION APPLIES:

741+54 - 747+29.81 S.R. 16
749+75.89 - 754+65 S.R. 16
LINE A-B 267+72.36 GRANVILLE RD. - 271+74.11 LINE B
- 270+86.55 LINE A

PROPOSED LEGEND

MARK	ITEM	DESCRIPTION
(1)	254	PAVEMENT PLANING, BITUMINOUS (1 1/2")
(2)	446	1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1H
(3)	407	TACK COAT

WORK LIMITS

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

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.

PROFILE AND ALIGNMENT FOR RESURFACING PROJECTS

THE PROPOSED PAVEMENT RESURFACING SHALL FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. THE PROPOSED ASPHALT CONCRETE OVERLAY SHALL HAVE A UNIFORM THICKNESS OF 1/2" INCHES AS SHOWN ON THE TYPICAL SECTIONS. CONSTRUCTION PLANS, SHOWING THE ORIGINAL ALIGNMENT AND PROFILE, ARE AVAILABLE FOR INSPECTION AT THE DISTRICT 5 OFFICE.

LIC-161-11.13 346 (61)
LIC-16-(14.30)(18.51)

LIC-37-15.61 594 (89)
LIC-16-14.26

ITEM 614 MAINTAINING TRAFFIC:

TRAFFIC SHALL BE MAINTAINED AS PER THE DETAIL SHEETS AND SPECIFICATIONS AND AS OUTLINED IN THE CONSTRUCTION AND MAINTENANCE OPERATIONS SECTIONS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST REVISION. IN ADDITION, THE FOLLOWING REQUIREMENTS SHALL APPLY:

THE CONTRACTOR SHALL SUBMIT, IN WRITING A SCHEDULE OF OPERATIONS TO THE DISTRICT DEPUTY DIRECTOR AND RECEIVE APPROVAL BEFORE WORK IS STARTED ON THE PROJECT.

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

FOR SAFETY PURPOSES NO EQUIPMENT OR MATERIAL SHALL BE PARKED OR STORED WITHIN THIRTY (30) FEET FROM THE EDGE OF THE PAVEMENT OF THE TRAVELING LANES.

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES. THE LENGTH AND DURATION OF RESTRICTED TRAFFIC ZONES SHALL BE KEPT TO A MINIMUM CONSISTENT WITH THE SPECIFICATION REQUIREMENTS FOR PROTECTION OF COMPLETED COURSES AND AS OUTLINED IN THE SEQUENCE OF OPERATIONS.

TRAFFIC SHALL NOT BE EXPOSED TO PAVEMENT DROP OFFS.

PAYMENT FOR ALL OF THE ABOVE, EXCEPT AS NOTED SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC.

SEQUENCE OF OPERATIONS:

PHASE 1: BEGIN PROJECT TO END PROJECT

- (1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE DRIVING LANE AND MAINTAIN TRAFFIC IN THE PASSING LANE.
- (2) PLANE DRIVING LANE AS DETAILED. WORK IN THE DRIVING LANE MAY BE SUSPENDED, AT THE DIRECTION OF THE ENGINEER, IN ORDER TO MAINTAIN TRAFFIC TO RAMPS AND T.R. 131. AFTER COMPLETION OF STEP 3 AND THE TEMPORARY FEATHERS CONSTRUCTED, THE CONTRACTOR SHALL ADJUST TRAFFIC AND COMPLETE ALL WORK IN THE DRIVING LANE.
- (3) IMMEDIATELY CONSTRUCT ITEM 446 SURFACE COURSE FOR DRIVING LANES. COMPLETE ALL OTHER RELATED WORK AS PER TYPICAL SECTION.
- (4) REMOVE TRAFFIC CONTROL DEVICES FOR CLOSING DRIVING LANE.

PHASE 2: BEGIN PROJECT TO END PROJECT

- (1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE PASSING LANE, AND MAINTAIN TRAFFIC IN THE DRIVING LANE.
- (2) PLANE PASSING LANE AS DETAILED.
- (3) IMMEDIATELY CONSTRUCT ITEM 446 SURFACE COURSE FOR PASSING LANES. COMPLETE ALL OTHER RELATED WORK AS PER TYPICAL SECTION.
- (4) REMOVE TRAFFIC CONTROL DEVICES FOR CLOSING PASSING LANE.

NOTE:

RAMPS:

RAMPS SHALL BE CLOSED ONLY DURING TIMES OF PLANING AND PAVING OF RAMPS AND SHALL BE MAINTAINED AT ALL OTHER TIMES. CLOSURE OF RAMPS SHALL NOT BE FOR MORE THAN 3 HOURS PER RAMP AND SHALL BE SUBJECT TO LIQUIDATED DAMAGES \$2,000.00 PER HOUR FOR ANY TIME OVER THAT PAYABLE TO THE OHIO DEPARTMENT OF TRANSPORTATION. TRAFFIC CONTROL SHALL BE MAINTAINED DURING CLOSURES BY USE OF PORTABLE CHANGEABLE MESSAGE SIGNS, AS DIRECTED BY THE ENGINEER.

GENERAL:

IT IS THE INTENT OF THIS SEQUENCE OF OPERATIONS TO PROVIDE A WORK AREA FOR THE CONTRACTOR WHILE ALSO MAINTAINING TRAFFIC IN A MANNER WHICH IS SAFE FOR THE TRAVELING PUBLIC. (SEE WORK ZONE RESTRICTIONS AND LANE CLOSURES SHEET 6.

ALTERNATE METHODS:

IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS ARE FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED, IN WRITING, BY THE DIRECTOR.

ALL TEMPORARY AND PERMANENT PAVEMENT MARKINGS SHALL BE IN PLACE BEFORE ANY PAVEMENT IS OPENED TO TRAFFIC.

MATERIALS SUPPLIED BY THE DEPARTMENT

ALL MATERIALS ARE TO BE CONTRACTOR FURNISHED, EXCEPT THAT THE DEPARTMENT SHALL SUPPLY RPM MATERIALS IN THE QUANTITIES SHOWN HEREIN TO THE CONTRACTOR. PAY ITEMS FOR THE DEPARTMENT SUPPLIED MATERIALS SHALL BE INDICATED AS "INSTALLATION ONLY". THE QUANTITY AND TYPE OF DEPARTMENT SUPPLIED MATERIALS ARE SHOWN ON SHEET 16 OF THIS PLAN.

THE CONTRACTOR SHALL PICK UP THE DEPARTMENT SUPPLIED RPM MATERIALS AT THE DIRECTION OF THE PROJECT ENGINEER.

FOR SOME PROJECTS HAVING QUANTITIES OF LESS THAN 20 RPMs THE CONTRACTOR MAY PICK UP RPM MATERIALS AT THE DISTRICT OFFICES. QUANTITIES OVER 20 RPMs WILL BE PICKED UP AT THE RECYCLER'S WAREHOUSE OR AS ARRANGED WITH THE DISTRICT. THE CONTRACTOR SHALL PICK UP DEPARTMENT SUPPLIED RPM MATERIALS AT THE SPECIFIED LOCATIONS FOR TRANSPORT TO THE WORK SITE OR TO THE CONTRACTOR'S STORAGE FACILITY. THE RECYCLED RAISED PAVEMENT MARKER AUTHORIZATION FORM IS TO BE SIGNED BY THE DISTRICT CONSTRUCTION ENGINEER PRIOR TO THE 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 THE 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 CASTING RECEIVED BY THE CONTRACTOR WHICH WERE NOT INSTALLED AND WERE NOT RETURNED TO THE DEPARTMENT.

LOADING OF MATERIALS SUPPLIED BY THE DEPARTMENT AT THE RECYCLER'S WAREHOUSE

TRUCKS SHALL HAVE A LOADING HEIGHT OF 48 INCHES AND BE ABLE TO BACK UP FLUSH TO THE LOADING DOCK. TRUCKS SHALL NOT HAVE ANY OBSTRUCTIONS OR PROTRUSIONS THAT PREVENT THE LOADING BY A STANDARD FORKLIFT OR LIFT TRUCK.

SEMI TRUCKS OR 20 FOOT COMMERCIAL TRUCKS ARE THE MOST APPROPRIATE TRUCKS FOR LOADS IN EXCESS OF 4 PALLETS (ONE PALLET = 21 BOXES = 2100 LBS.). STAKE BODY TRUCKS ARE APPROPRIATE TO LOAD LESS THAN 4 PALLETS, PROVIDED THE TRUCK IS RATED FOR THE 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 BY THE RECYCLER'S WAREHOUSE.

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

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 REPACK OR PACKED IN THE BOXES IN THE SAME STYLE AND QUANTITY AS ORIGINALLY RECEIVED FROM THE DEPARTMENT. CASTING STYLES SHALL NOT BE MIXED WITHIN ANY ONE CONTAINER.

THE CONTRACTOR SHALL CLEARLY MARK ON THE OUTSIDE OF EACH CONTAINER THE COLOR OF THE PRISMATIC RETRO-REFLECTOR, THE STYLE OF CASTING. BOXES SHALL BE PLACED ON SKIDS OR PALLETS IN THE SAME STYLE (LOW PROFILE OR CONVENTIONAL, REFLECTORIZED OR NON REFLECTORIZED) AND NO MORE THAN 420 RPMs (OR 21 BOXES) ON ONE SKID.

ONLY USE THE BOXES SUPPLIED BY THE RAISED PAVEMENT MARKER RECYCLER. BOXES MUST BE MARKED WITH THE RECYCLER'S PART OR CATALOG NUMBER AND THE PROJECT NUMBER. THE RECYCLER'S CATALOG OR PART NUMBERS MAY BE OBTAINED FROM THE OFFICE OF TRAFFIC ENGINEERING IN COLUMBUS, OHIO OR FROM THE RECYCLER. BOXES NOT MARKED WITH THE PROPER RECYCLER'S CATALOG OR PART NUMBERS, AND THE DEPARTMENT'S PROJECT NUMBER WILL NOT BE ACCEPTED AT THE RECYCLER'S WAREHOUSE. NON PERFORMED MATERIALS WILL BE RETURNED TO THE LOCATION AS SPECIFIED BY THE DISTRICT CONSTRUCTION ENGINEER WITHIN 30 DAYS OF THE COMPLETION OF THE PROJECT.

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

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

ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC

A QUANTITY OF ITEM 404 BITUMINOUS CONCRETE, FOR MAINTAINING TRAFFIC HAS BEEN INCLUDED IN THE PLANS FOR MAINTAINING TRAFFIC. THIS ITEM SHALL BE USED TO CONSTRUCT TEMPORARY FEATHERS AT LOCATIONS DESIGNATED BY THE PROJECT ENGINEER AND TO REPAIR BERM USED IN MAINTAINING TRAFFIC. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN TRAFFIC FOR THE ENTIRE LENGTH OF THE PROJECT. THE COST OF REMOVALS, MATERIAL, LABOR, EQUIPMENT AND TRAFFIC CONTROL TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 404 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC. THE FOLLOWING QUANTITY IS INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE PROJECT ENGINEER.

ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC

60 CU. YD.

GENERAL NOTES

LIC-37-15.61
LIC-16-14.26

5
18

ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE (WHEN NO LONGER NEEDED) A CHANGEABLE MESSAGE SIGN, ON SITE, FOR THE DURATION OF THE PROJECT. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR. THE LIST CURRENTLY CONTAINS CLASS III AND II UNITS WITHIN MINIMUM LEGIBILITY DISTANCES OF 650' AND 850' RESPECTIVELY.

EACH SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO DIM THE SIGN DURING DARKNESS AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLE-SHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY.

THE LOCATIONS FOR THOSE UNITS SHALL BE AS DIRECTED BY THE PROJECT ENGINEER. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE PROJECT ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE PROJECT ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS WILL BE OFF, FACING AWAY FROM ALL TRAFFIC AND SHALL DISPLAY ONE OR MORE HIGH INTENSITY YELLOW REFLECTIVE SHEETING SURFACES OF A 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLE-SHOOT THE UNIT AND TO REVISE MESSAGES IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PREPROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PREPROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ONBOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED, BUT NORMALLY, NOT MORE THAN TWO-MESSAGE PHASES SHOULD BE EMPLOYED, ALTHOUGH THREE-PHASES MAY BE USED IN UNUSUAL CONDITIONS. THE PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST ONCE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 614.03 (C) THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC AND THE ENTIRE COST TO CONTROL TRAFFIC ACCRUED BY THE DEPARTMENT WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE TO THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24 HOURS PER DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PROJECT.

THE REQUIREMENT TO FURNISH, INSTALL, MAINTAIN, AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES AS OUTLINED IN 104.04.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE BID FOR ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN, SIGN-MONTH AND SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE, AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

THIS PROJECT SHALL REQUIRE 4 (FOUR) ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN.

THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO PERFORM THE WORK AS DESCRIBED ABOVE.

ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 4 SIGN-MONTH

WORK RESTRICTIONS AND LANE CLOSURES

NO WORK SHALL BEGIN BEFORE JULY 6, 1999. ALL WORK SHALL BE COMPLETED ON OR BEFORE JULY 31, 1999. AT LEAST ONE LANE OF TRAFFIC SHALL BE MAINTAINED EASTBOUND AND WESTBOUND AT ALL TIMES. NO WORK SHALL BE PERFORMED AND THERE WILL BE NO LANE RESTRICTIONS BETWEEN THE HOURS OF 5:00 AM TO 8:00 PM SUNDAY THRU THURSDAY, 5:00 AM TO 10:00 PM FRIDAY AND 6:00 AM TO 10:00 PM SATURDAY. NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

MEMORIAL DAY, FOURTH OF JULY, LABOR DAY, THANKSGIVING
THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY 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 12:00N MONDAY
MONDAY	12:00N FRIDAY THROUGH 12:00N TUESDAY
TUESDAY	12:00N MONDAY THROUGH 12:00N WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 12:00N THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 12:00N MONDAY
FRIDAY	12:00N THURSDAY THROUGH 12:00N MONDAY
SATURDAY	12:00N FRIDAY THROUGH 12:00N MONDAY

AREAS THAT ARE PLANED SHALL NOT BE OPENED TO TRAFFIC. ALL PLANED AREAS MUST BE INLAID WITH PROPOSED COURSE OF ITEM 446 ASPHALT CONCRETE PRIOR TO BEING OPENED TO TRAFFIC. OVERNIGHT CLOSURES MUST MEET SPECIFICATIONS AS OUTLINED IN THE CONSTRUCTION AND MAINTENANCE OPERATIONS SECTION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. PLANED AREAS SHALL BE PAVED WITH ITEM 446 ASPHALT CONCRETE SURFACE COURSE, TYPE 1H. ROADWAY SHALL NOT BE OPENED TO TRAFFIC WITHOUT EITHER THE PERMANENT OR TEMPORARY MARKINGS IN PLACE.

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 EXCEPT AS FOLLOWS.

LANE CLOSURES BEFORE THE ALLOWABLE TIME AND/OR FAILURE TO REOPEN ALL LANES TO TRAFFIC AS DESIGNATED IN THE PLANS SHALL RESULT IN A LIQUIDATION OF DAMAGES CLAIM PAYABLE TO THE OHIO DEPARTMENT OF TRANSPORTATION AT A RATE OF \$1500.00 PER HOUR UNTIL CONDITION IS CORRECTED FOR EACH INFRACTION.

EACH INFRACTION OVER ONE HOUR IS TO BE ROUNDED UP TO THE NEXT HOUR.

ITEM 614, TEMPORARY PAVEMENT MARKINGS

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED TO BE USED AS DIRECTED BY THE ENGINEER TO MAINTAIN TRAFFIC DURING CONSTRUCTION.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO PERFORM THE WORK AS DESCRIBED ABOVE.

ITEM 614, TEMPORARY LANE LINE, CLASS II	8.19 MILE
ITEM 614, TEMPORARY EDGE LINE, CLASS I	50.98 MILE

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR

IN ADDITION TO THE REQUIREMENTS OF ITEM 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (O.M.U.T.C.D.), A UNIFORMED LAW ENFORCEMENT OFFICER AND OFFICIAL PATROL CAR WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.

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

INFORMATION REGARDING ARRANGEMENTS AND PAYMENTS BY THE CONTRACTOR FOR THE L.E.O. MAY BE OBTAINED BY CONTACTING THE OHIO HIGHWAY PATROL, 660 EAST MAIN STREET, COLUMBUS, OHIO, (614-466-2300). IF AFTER CONTACTING THE OHIO HIGHWAY PATROL, IT IS DETERMINED THAT THEY CANNOT SUPPLY THE L.E.O., THEN AN AUTHORIZED MUNICIPAL OR COUNTY POLICE OFFICER EQUIPPED WITH A MARKED AND FLASHER-LIGHT EQUIPPED OFFICIAL POLICE OR PATROL CAR, SHALL BE PROVIDED.

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

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR 100 HOURS

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

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

FLOODLIGHTING

FLOODLIGHTING FOR THE WORK SITE FOR OPERATIONS DURING NIGHT TIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE HIGHWAYS. TO INSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS. THE CONTRACTOR SHALL SUBMIT A COPY OF THEIR FLOODLIGHTING PLACEMENT PLAN TO THE DISTRICT OFFICE FOR APPROVAL BY THE AREA ENGINEER BEFORE ANY WORK IS TO COMMENCE. THE COST OF FLOODLIGHTING WILL BE INCLUDED IN THE LUMP SUM COST OF ITEM 614 MAINTAINING TRAFFIC.

ITEM 254, PATCHING PLANED SURFACE

A QUANTITY OF SURFACE PATCHING HAS BEEN INCLUDED IN THE PLAN TO REPLACE UNSOUND PAVEMENT RESULTING FROM PLANING. THE ENGINEER WILL DETERMINE WHERE THIS WORK WILL BE PERFORMED. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 254, PATCHING PLANED SURFACE 8,000 SQ. YD.

LO1614GHI.DGN 1/31/99

GENERAL NOTES

LIC-37-15.61
LIC-16-14.26

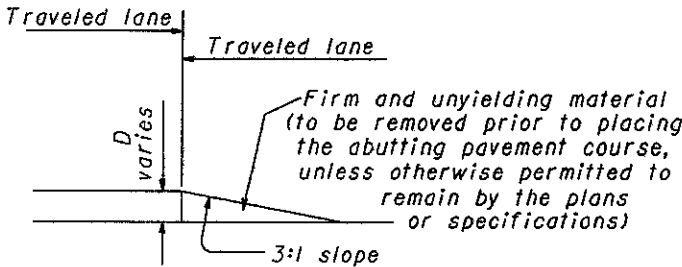
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18

GENERAL NOTES

1. It is intended that this drawing be used for treatment of drop-offs that develop during construction operations, and that are not otherwise provided for in the construction plans. Where the plans do not provide specific items for labor, equipment, or materials to implement the drop-off treatments specified hereon, they shall be included for payment in the lump sum bid for Item 614 - Maintaining Traffic.
2. While the need for certain advisory signing is noted hereon, it is not intended that this be indicative of all signing that may be required to advise or warn motorists, and 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 Standard Construction Drawing MC-9.2 and Item 622.
6. When drums are specified for a dropoff 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-171 (Uneven Lanes) and OWP-171 signs are required, they shall be placed 750' 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 dropoff condition extends more than one-half mile, additional signs should be erected at intervals of one mile or less.
8. For locations, such as at ramps, lane shifts, lane closures, etc., where traffic is required to negotiate any 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', drums may be placed on the opposite level from that of traffic provided the dropoff depth does not exceed 5" and approval is granted by the Project Engineer.
10. Pavement Repairs (or similar work):
- a. Lengths greater than 60 feet - utilize appropriate treatment from Condition I.
 - b. Lengths of 60 feet or less - repairs shall be effected in accordance with 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 Condition I only.
2. OW-171 and OWP-171 signs required.

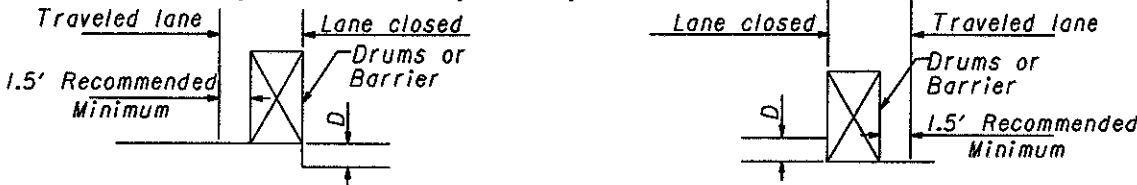


CONDITION I
DROPOFFS BETWEEN TRAVELED LANES

1. These treatments are to be used for resurfacing, pavement planing, excavation, etc. between or within traveled lanes.

D (In.)	Treatment
≤ 1 1/2	Erect OW-171 and OWP-171 signs.
> 1 1/2 - 3	1) Lane closure utilizing drums* as shown below OR 2) Optional Wedge Treatment
> 3 - 5	Lane closure utilizing drums as shown below.
> 5	Lane closure utilizing portable concrete barrier as shown below.

*Cones may be used for daytime only conditions.

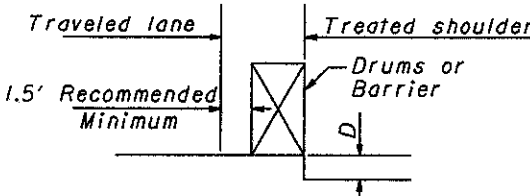


CONDITION II
DROPOFFS WITHIN GRADED SHOULDER AREA

1. The treatments indicated below are for use in conjunction with resurfacing, planing, or excavations within the graded shoulder area.
2. 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 aggregates, asphaltic materials, or concrete). For the purposes herein, its maximum width shall be considered to be twelve (12) feet.

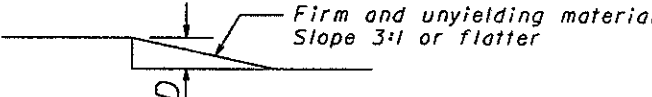
D (In.)	Treatment
≤ 1 1/2	1) If edgelines are present, no treatment necessary OR 2) Erect OW-171 and OWP-171 signs.
> 1 1/2 - 5	1) If min. lane width requirements can be met, maintain lanes utilizing drums as shown below OR 2) If min. lane width requirements cannot be met, close adjacent lane utilizing drums OR 3) Optional Shoulder Treatment.
> 5 - 12 Daylight only	If min. lane width requirements can be met, maintain lanes utilizing drums as shown below.
> 5 - 24	1) If min. lane width requirements can be met, maintain lanes utilizing portable concrete barrier as shown below. OR 2) If min. lane width requirements cannot be met, close adjacent lane utilizing drums.
> 24	Lane closure utilizing portable concrete barrier as shown below.

*Minimum lane widths shall be 10' 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 401.15 is required.
2. OW-151 signs required.

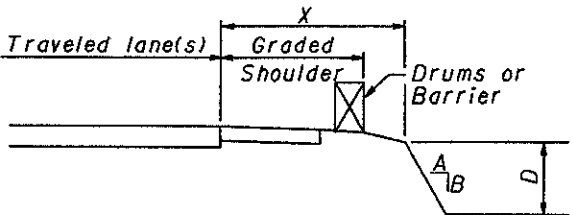


CONDITION III
DROPOFFS BEYOND GRADED SHOULDER OR BACK OF CURB

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" in height.
 - b. Curbs are 6" or greater in height and the legal speed is greater than 40 mph.

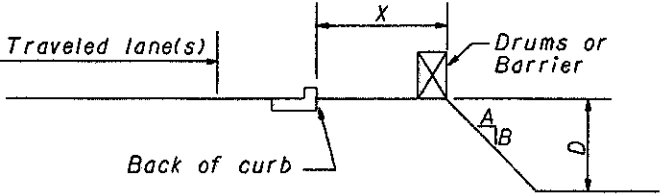


X (Ft.)	D (In.)	A/B	Treatment Required	
			Day	Night
0-4	Any	Any	(a)	(a)
4-30	Any	3:1 or Flatter	None	None
4-12	< 3	Steeper than 3:1	None	None
4-12	> 3 - < 12	Steeper than 3:1	Drums	Drums
4-12	> 12	Steeper than 3:1	Drums	Barrier
> 12 - 20	< 12	Steeper than 3:1	None	None
> 12 - 20	> 12 - < 24	Steeper than 3:1	Drums	Drums
> 12 - 20	> 24	Steeper than 3:1	Drums	Barrier
> 20 - 30	< 24	Steeper than 3:1	None	Drums
> 20 - 30	> 24	Steeper than 3:1	Drums	Barrier
> 30	Any	Any	None	None

(a) Use treatment specified under Condition II.

CHART B

- USE FOR: Curbed facilities, where the curb is 6" or greater in height and the legal speed is 40 mph or less.



X (Ft.)	D (In.)	A/B	Treatment Required	
			Day	Night
0-10	< 12	Any	None	Drums
0-10	> 12	Any	Drums	Drums
> 10	Any	Any	None	None

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN

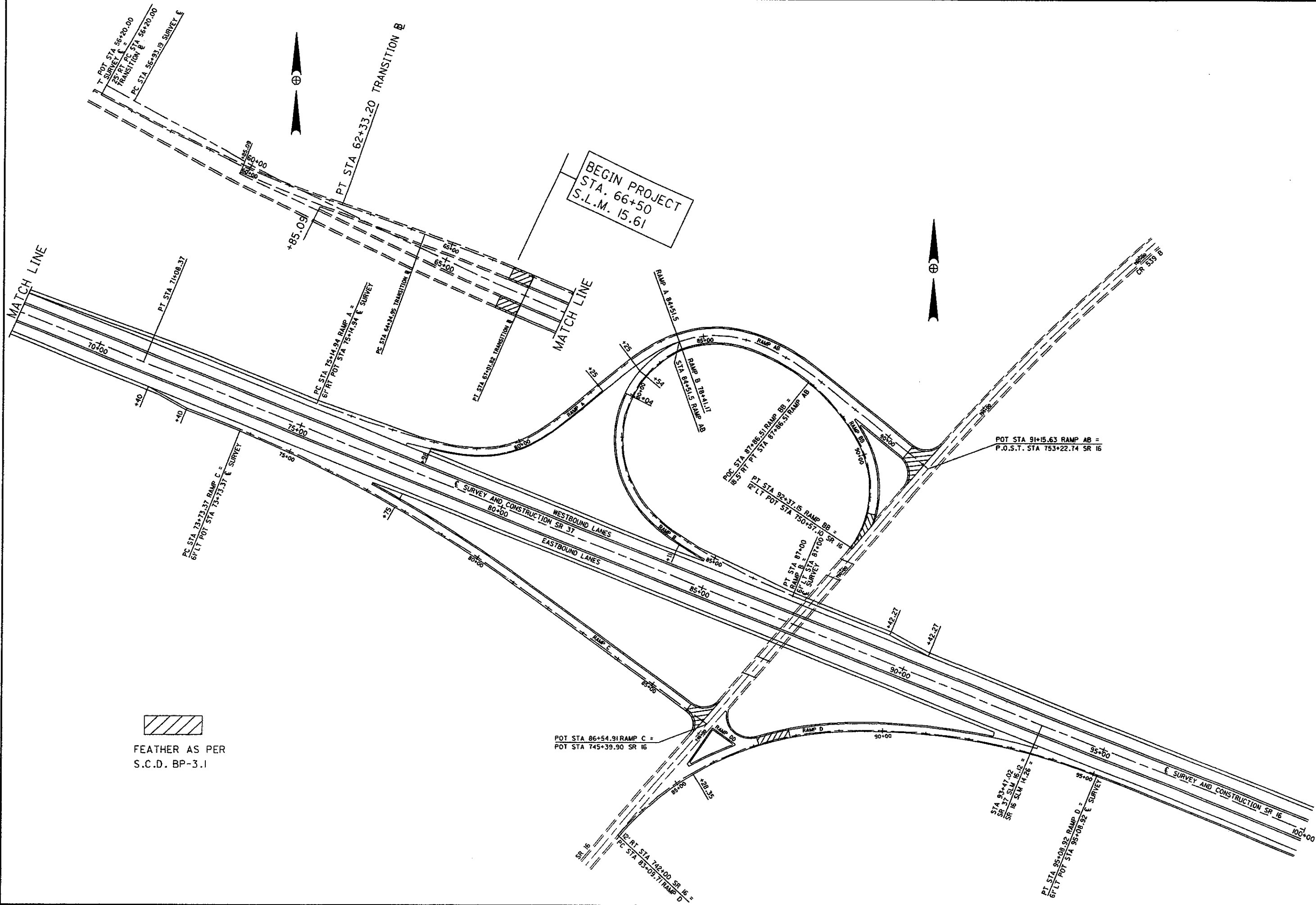
DROPOFFS IN
WORK ZONES

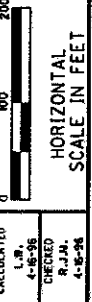
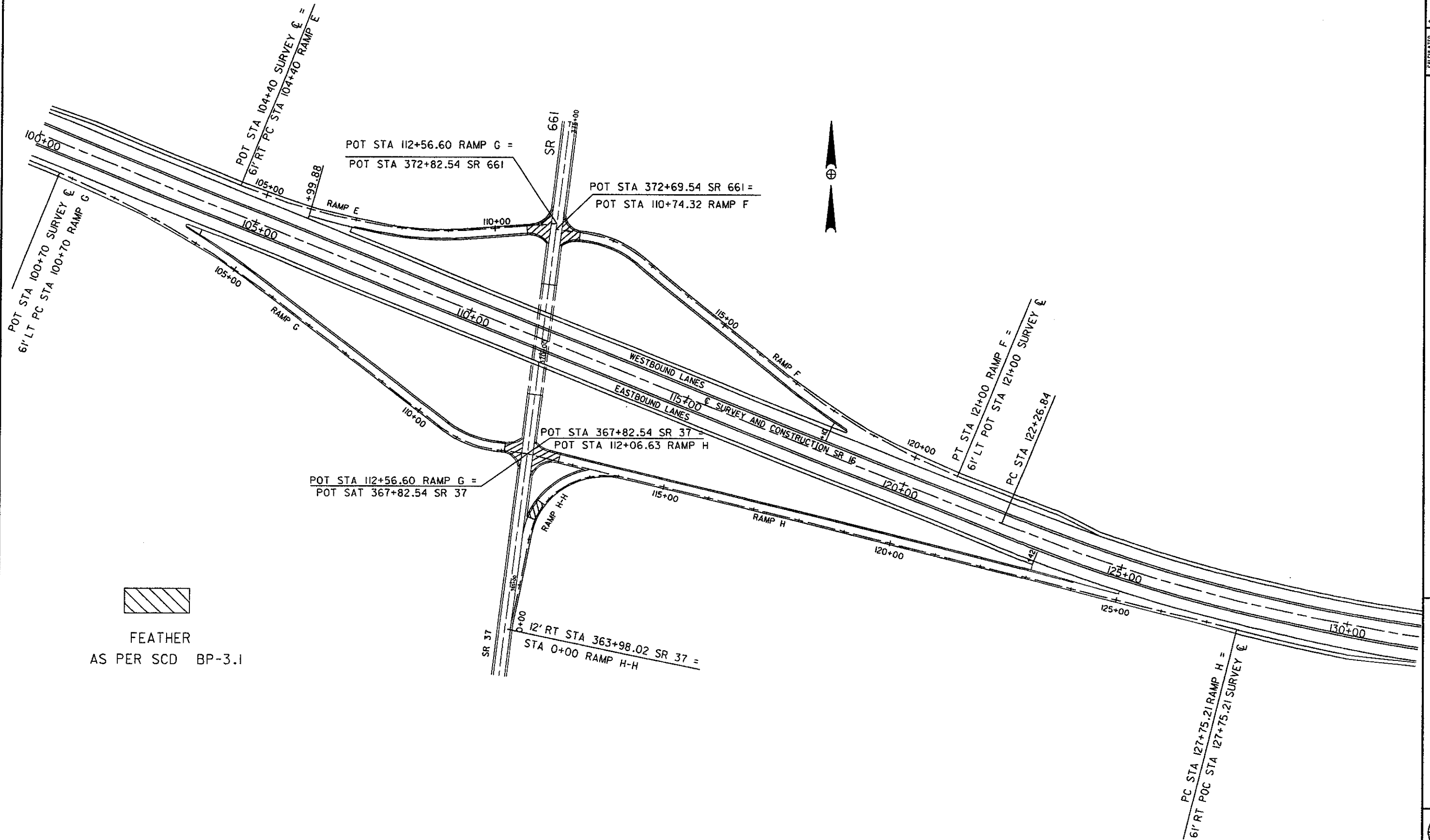
DESIGNED DRAWN TRACED CHECKED REVIEWED DATE REVISED

DROPOFFS IN WORK ZONES

LIC-37-15.61
LIC-16-14.26

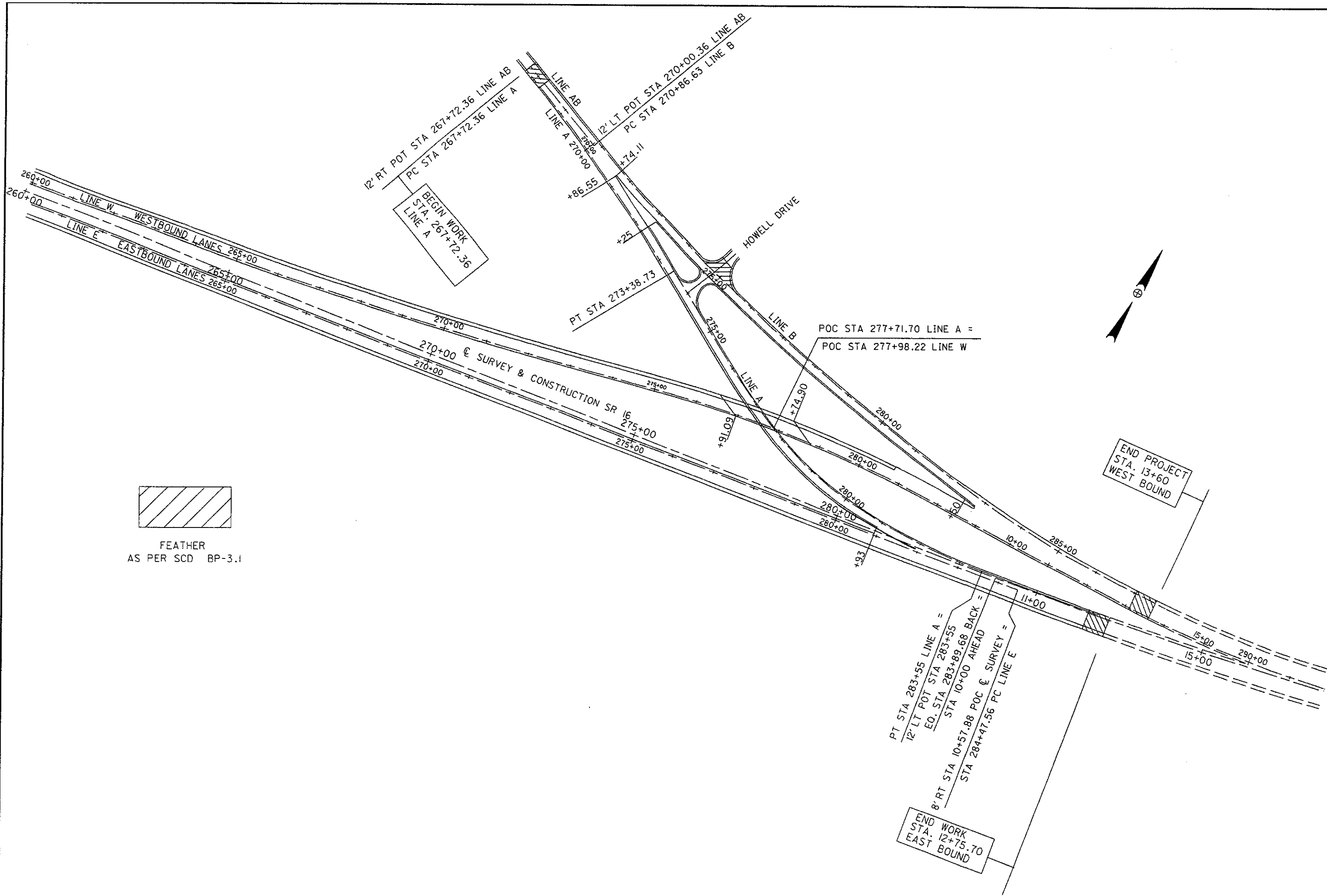
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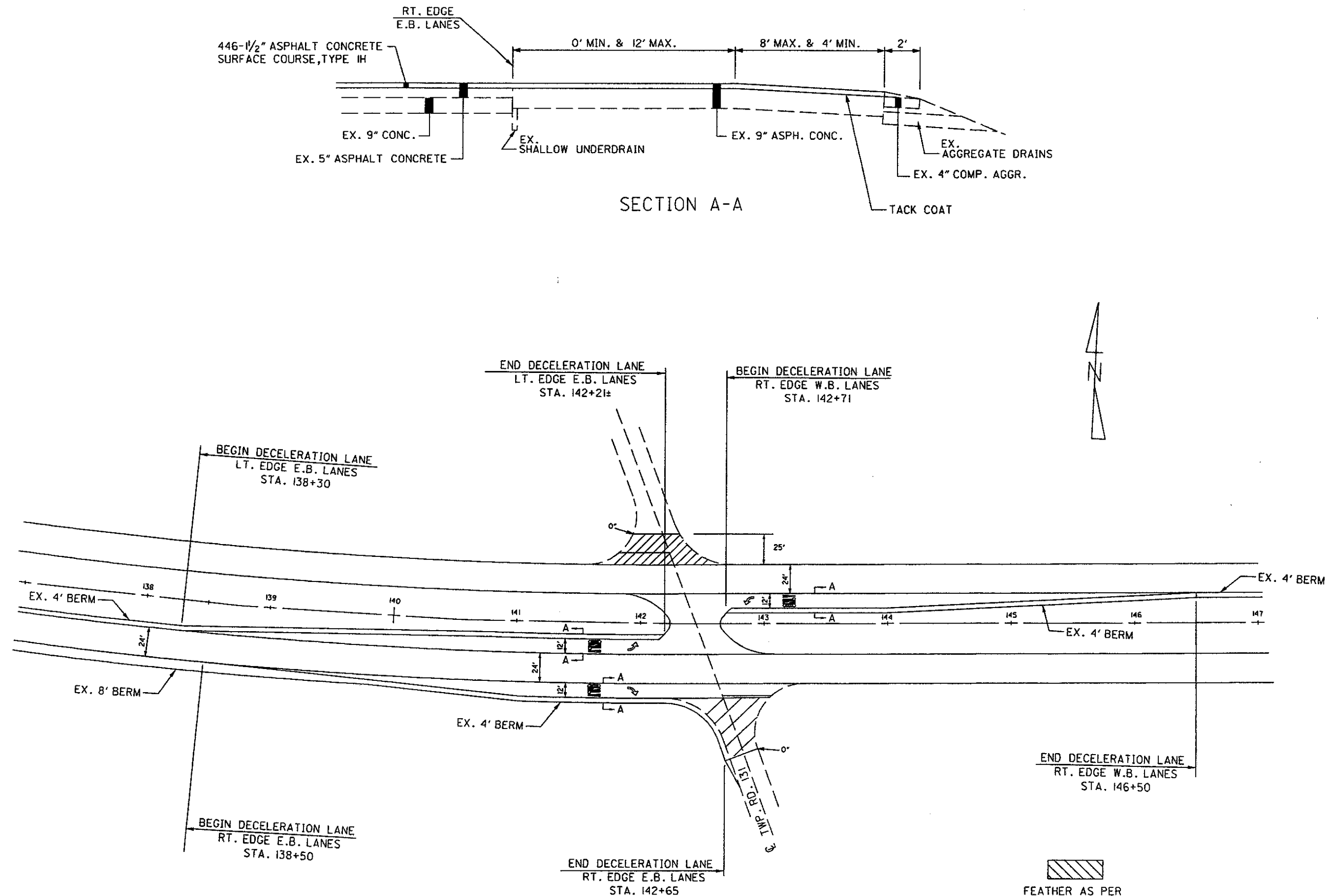




S.R. 37 AND S.R. 16 INTERCHANGE

LIC-37-15.61
LIC-16-14.26



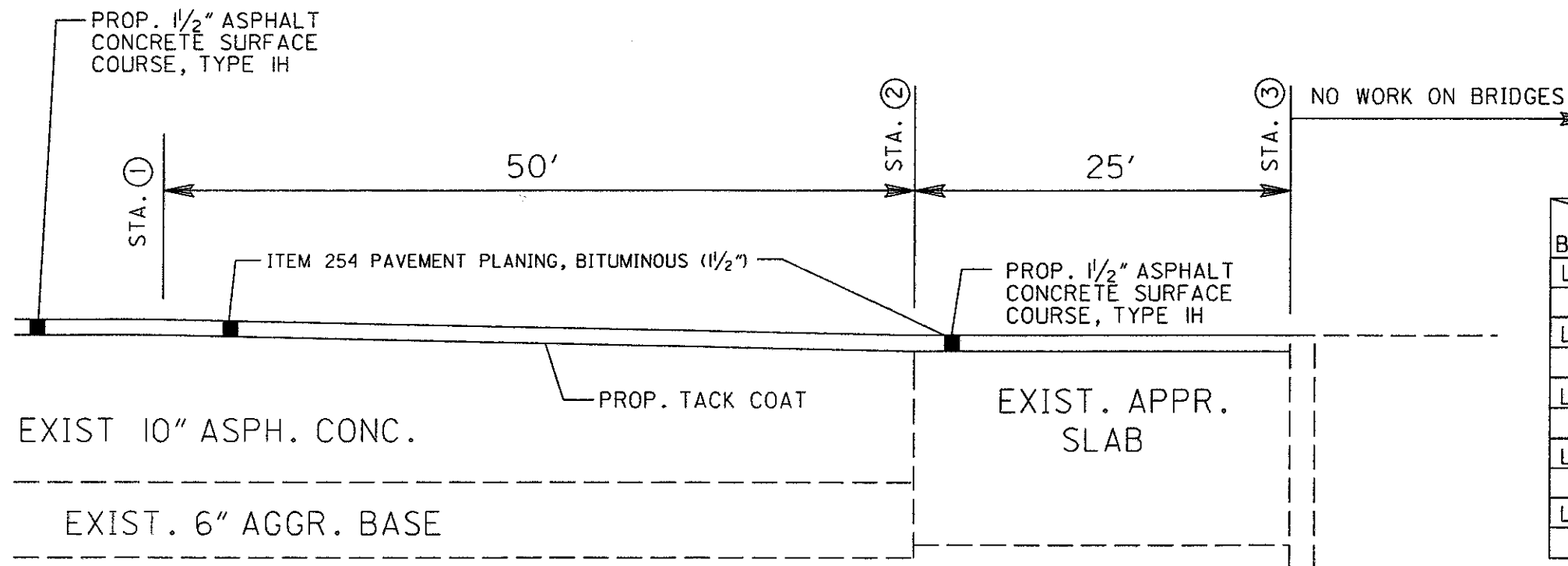
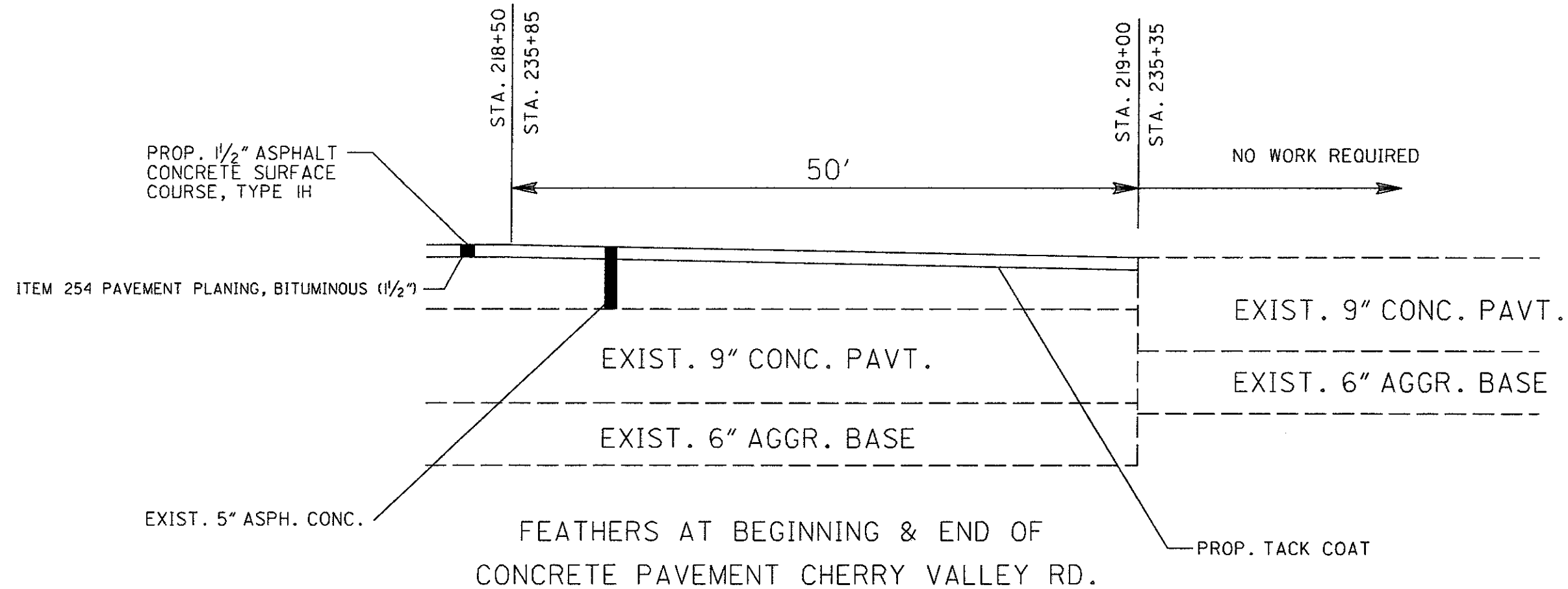


INTERSECTION S.R. 16 & TWP. RD. 131

CALCULATED
J.C.
1-29-99
CHECKED
J.S.
1-31-99

INTERSECTION DETAIL S.R. 16 & TWP. RD. 131

LIC-37-15.61
LIC-16-14.26



STA. BRIDGE NO.	①	②	③
LIC-16-1560 R	163+23.99	163+73.99	163+98.99
	166+49.68	165+99.68	165+74.68
LIC-16-1560 L	163+39.75	163+89.75	164+14.75
	166+65.35	166+15.35	165+90.35
LIC-16-1594 R	181+15.21	181+65.21	181+90.21
	184+48.54	183+98.54	183+73.54
LIC-16-1594 L	180+48.73	180+98.73	181+23.73
	183+78.66	183+28.66	183+03.66
LIC-16-1773 L	276+16.09	276+66.09	276+91.09
	279+49.90	278+99.90	278+74.90

FEATHERS AT OVERPASS BRIDGES

STATION EASTBOUND									STATION									
		WIDTH PAVT.	LENGTH	PAVT. AREA	446 ASPH. CONC. SURFACE COURSE TYPE 1H (1 1/2")		254 PAVEMENT PLANING BITUMINOUS (1 1/2")	407 TACK COAT @ 0.075 GAL./S.Y.			WIDTH PAVT.	LENGTH	PAVT. AREA	446 ASPH. CONC. SURFACE COURSE TYPE 1H (1 1/2")		254 PAVEMENT PLANING BITUMINOUS (1 1/2")	407 TACK COAT @ 0.075 GAL./S.Y.	
FROM	TO	FT.	FT.	SQ. YD.	CU. YD.		SQ. YD.	GAL.	FROM	TO	FT.	FT.	SQ. YD.	CU. YD.		SQ. YD.	GAL.	
66+50	67+00	26	50.00	144.4	6.0		144.4	10.8	LINE A									
67+00	163+23.99	26	9623.99	27802.6	1158.4		27802.6	2085.2	267+72.36	268+22.36	19 AVG	50.00	105.6	4.4		105.6	7.9	
163+23.99	163+73.99	26	50.00	144.4	6.0		144.4	10.8	268+22.36	270+86.55	19 AVG	264.19	557.7	23.2		557.7	41.8	
163+73.99	163+98.99	26	25.00	72.2	3.0		72.2	5.4	270+86.55	271+86.55	19 AVG	100.00	211.1	8.8		211.1	15.8	
163+98.99	165+74.68	BRIDGE LIMITS (NO WORK REQUIRED)								271+86.55	274+49	18	262.45	524.9	21.9		524.9	39.4
165+74.68	165+99.68	26	25.00	72.2	3.0		72.2	5.4	274+49	275+24	18	75.00	150.0	6.3		150.0	11.3	
165+99.68	166+49.68	26	50.00	144.4	6.0		144.4	10.8	275+24	279+36	18	412.00	824.0	34.3		824.0	61.8	
166+49.68	181+15.21	26	1465.53	4233.8	176.4		4233.8	317.5	279+36	280+11	18	75.00	150.0	6.3		150.0	11.3	
181+15.21	181+65.21	26	50.00	144.4	6.0		144.4	10.8	280+11	280+95.12	16 AVG	84.12	149.5	6.2		149.5	11.2	
181+65.21	181+90.21	26	25.00	72.2	3.0		72.2	5.4	280+95.12	281+95.12	16 AVG	100.00	177.8	7.4		177.8	13.3	
181+90.21	183+73.54	BRIDGE LIMITS (NO WORK REQUIRED)								281+95.12	283+55	17.5	159.88	310.9	13.0		310.9	23.3
183+73.54	183+98.54	26	25.00	72.2	3.0		72.2	5.4	283+55	283+89.68B	14	34.68	53.9	2.2		53.9	4.0	
183+98.54	184+48.54	26	50.00	144.4	6.0		144.4	10.8										
184+48.54	218+50	26	3401.46	9826.4	409.4		9826.4	737.0	TR 131 TURNING LANES									
218+50	219+00	26	50.00	144.4	6.0		144.4	10.8	138+50	141+00	7 AVG	250.00	194.4	8.1		194.4	14.6	
219+00	235+35	CHERRY VALLEY								141+00	142+18.50	14	118.50	184.3	7.7		184.3	13.8
235+35	235+85	26	50.00	144.4	6.0		144.4	10.8	142+18.50	9+15	VAR		48.0	2.0		48.0	3.6	
235+85	283+89.68 B	26	4804.68	13880.2	578.3		13880.2	1041.0	APPR RT				233.0	9.7		233.0	17.5	
10+00A	12+25.70	38	225.70	953.0	119.1		953.0	71.5	CROSSOVER				356.0	14.8		356.0	26.7	
12+25.70	12+75.70	38	50.00	211.1	8.8		211.1	15.8										
71+40	72+40	7 AVG	100.00	77.8	3.2		77.8	5.8	138+30	140+80	7 AVG	250.00	194.4	8.1		194.4	14.6	
72+40	73+73.37	14	133.37	207.5	8.6		207.5	15.6	140+80	141+81	14	101.00	157.1	6.5		157.1	11.8	
RAMP C									141+81	142+21	VAR		33.0	1.4		33.0	2.5	
73+73.37	77+35.18	24.5 AVG	361.81	984.9	41.0		984.9	73.9										
77+35.18	78+35.18	18 AVG	100.00	200.0	8.3		200.0	15.0	RAMP H-H									
78+35.18	85+92.91	18	757.73	1515.5	63.1		1515.5	113.7	2+10	2+60	18	50.00	100.0	4.2		100.0	7.5	
85+92.91	86+42.91	18	50.00	100.0	4.2		100.0	7.5	2+60	4+10	18	150.00	300.0	12.5		300.0	22.5	
EXTRA AREA	FOR RADII	VAR		10.6	0.4		10.6	0.8	4+10	4+65	9 AVG	55.00	55.0	2.3		55.0	4.1	
77+37.11	78+37.11	10 AVG	100.00	111.1	4.6		111.1	8.3										
RAMP D																		
87+00	87+75	18	75.00	150.0	6.3		150.0	11.3										
87+75	91+44	18	369.00	738.0	30.8		738.0	55.4										
91+44	92+44	17 AVG	100.00	188.9	7.9		188.9	14.2										
92+44	93+49	17 AVG	105.00	198.3	8.3		198.3	14.9										
93+49	95+08.92	18 AVG	159.92	319.8	13.3		319.8	24.0										
95+08.92	100+70.00	14	561.08	872.8	36.4		872.8	65.5										
RAMP G																		
100+70.00	103+64.93	24.5 AVG	294.93	802.9	33.5		802.9	60.2										
103+64.93	104+64.93	18 AVG	100.00	200.0	8.3		200.0	15.0										
104+64.93	111+94.60	18	729.67	1459.3	60.8		1459.3	109.4										
111+94.60	112+44.60	18	50.00	100.0	4.2		100.0	7.5										
EXTRA AREA	FOR RADII	VAR		11.0	0.5		11.0	0.8										
RAMP H																		
112+18.63	112+68.72	18	50.09	100.2	4.2		100.2	7.5										
EXTRA AREA	FOR RADII	VAR		14.0	0.6		14.0	1.1										
112+68.72	123+08.53	18	1039.81	2079.6	86.7		2079.6	156.0										
123+08.53	124+08.53	17 AVG	100.00	188.9	7.9		188.9	14.2										
124+08.53	125+08.53	17 AVG	100.00	188.9	7.9		188.9	14.2										
125+08.53	127+75.21	17.5 AVG	266.68	518.5	21.6		518.5	38.9										
127+75.21	130+11.63	14	236.42	367.8	15.3		367.8	27.6	TOTALS FROM LEFT TABLE					3002.0		70146.3	5246.8	
130+11.63	133+11.63	7 AVG	300.00	233.3	9.7		233.3	17.5	TOTALS THIS TABLE					211.3		5070.6	380.3	
									TOTALS CARRIED TO GENERAL SUMMARY					3213.3		75216.9	5627.1	

PAVEMENT SUBSUMMARY

LIC-37-15.61
LIC-16-14.26

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STATION WESTBOUND		WIDTH PAVT.	LENGTH	PAVT. AREA	446	254	407	STATION	WIDTH PAVT.	LENGTH	PAVT. AREA	446	254	407	CALCULATED J.M.C. 12-7-99	CHECKED J.S. 1-29-99
					ASPH. CONC. SURFACE COURSE TYPE 1H (1 1/2")		TACK COAT @ 0.075 GAL./S.Y.					ASPH. CONC. SURFACE COURSE TYPE 1H (1 1/2")		TACK COAT @ 0.075 GAL./S.Y.		
FROM	TO	FT.	FT.	SQ. YD.	CU. YD.	SQ. YD.	GAL.	FROM	TO	FT.	FT.	SQ. YD.	CU. YD.	SQ. YD.	GAL.	PAVEMENT SUBSUMMARY
66+50	67+00	26	50.00	144.4	6.0	144.4	10.8	83+42.27	83+69.47	10	27.20	30.2	1.3	30.2	2.3	
67+00	163+39.75	26	9639.75	27848.2	1160.3	27848.2	2088.6	83+69.47	84+42.27	10 AVG	72.80	80.9	3.4	80.9	6.1	PAVEMENT SUBSUMMARY
163+39.75	163+89.75	26	50.00	144.4	6.0	144.4	10.8	87+00	89+42.27	14	242.27	376.9	15.7	376.9	28.3	
163+89.75	164+14.75	26	25.00	72.2	3.0	72.2	5.4	89+42.27	90+42.27	7 AVG	100.00	77.8	3.2	77.8	5.8	PAVEMENT SUBSUMMARY
164+14.75	165+90.35	BRIDGE LIMITS (NO WORK REQUIRED)														
165+90.35	166+15.35	26	25.00	72.2	3.0	72.2	5.4	RAMP E								PAVEMENT SUBSUMMARY
166+15.35	166+65.35	26	50.00	144.4	6.0	144.4	10.8	104+40	105+99.88	17.5 AVG	159.88	310.9	13.0	310.9	23.3	
166+65.35	180+48.73	26	1383.38	3996.4	166.5	3996.4	299.7	105+99.88	106+99.88	16 AVG	100.00	177.8	7.4	177.8	13.3	PAVEMENT SUBSUMMARY
180+48.73	180+98.73	26	50.00	144.4	6.0	144.4	10.8	106+99.88	107+99.88	16 AVG	100.00	177.8	7.4	177.8	13.3	
180+98.73	181+23.73	26	25.00	72.2	3.0	72.2	5.4	107+99.88	110+70.13	18	270.25	540.5	22.5	540.5	40.5	PAVEMENT SUBSUMMARY
181+23.73	183+03.66	BRIDGE LIMITS (NO WORK REQUIRED)						110+70.13	111+20.13	18	50.00	100.0	4.2	100.0	7.5	
183+03.66	183+28.66	26	25.00	72.2	3.0	72.2	5.4	EXTRA AREA	FOR RADII			131.0	5.5	131.0	9.8	PAVEMENT SUBSUMMARY
183+28.66	183+78.66	26	50.00	144.4	6.0	144.4	10.8									
183+78.66	218+50	26	3471.34	10028.3	417.8	10028.3	752.1	RAMP F								PAVEMENT SUBSUMMARY
218+50	219+00	26	50.00	144.4	6.0	144.4	10.8	EXTRA AREA	FOR RADII			98.0	4.1	98.0	7.4	
219+00	235+35	CHERRY VALLEY						110+86.32	111+36.32	18	50.00	100.0	4.2	100.0	7.5	PAVEMENT SUBSUMMARY
235+35	235+85	26	50.00	144.4	6.0	144.4	10.8	111+36.32	117+45	18	608.68	1217.4	50.7	1217.4	91.3	
235+85	276+16.09	26	4031.09	11645.4	485.2	11645.4	873.4	117+45	118+45	18 AVG	100.00	200.0	8.3	200.0	15.0	PAVEMENT SUBSUMMARY
276+16.09	276+66.09	26	50.00	144.4	6.0	144.4	10.8	118+45	121+00	24.5 AVG	255.00	694.2	28.9	694.2	52.1	
276+66.09	276+91.09	26	25.00	72.2	3.0	72.2	5.4	121+00	123+45	14	245.00	381.1	15.9	381.1	28.5	PAVEMENT SUBSUMMARY
276+91.09	278+74.90	BRIDGE LIMITS (NO WORK REQUIRED)						123+45	124+45	7 AVG	100.00	77.8	3.2	77.8	5.8	
278+74.90	278+99.90	26	25.00	72.2	3.0	72.2	5.4	117+42.28	118+42.28	10 AVG	100.00	111.1	4.6	111.1	8.3	PAVEMENT SUBSUMMARY
278+99.90	279+49.90	26	50.00	144.4	6.0	144.4	10.8									
279+49.90	283+89.68B	26	439.78	1270.5	52.9	1270.5	95.3	LINE A-B								PAVEMENT SUBSUMMARY
10+00A	12+73	26	273.00	788.7	32.9	788.7	59.2	267+72.36	268+22.36	14	50.00	77.8	3.2	77.8	5.8	
12+73	13+10	38	37.00	156.2	6.5	156.2	11.7	268+22.36	270+00.36	14	178.00	276.9	11.5	276.9	20.8	PAVEMENT SUBSUMMARY
13+10	13+60	38	50.00	211.1	8.8	211.1	15.8									
								LINE B								PAVEMENT SUBSUMMARY
RAMP A								270+86.63	271+74.11	14 AVG	87.48	136.1	5.7	136.1	10.2	
69+00	72+00	7 AVG	300.00	233.3	9.7	233.3	17.5	271+74.11	273+14.11	16 AVG	140.00	248.9	10.4	248.9	18.7	PAVEMENT SUBSUMMARY
72+00	75+14.94	14	314.94	489.9	20.4	489.9	36.7	273+14.11	281+97.31	18	883.20	1766.4	73.6	1766.4	132.5	
75+14.94	77+00	18.5	185.06	380.4	15.9	380.4	28.5	281+97.31	282+97.31	18 AVG	100.00	200.0	8.3	200.0	15.0	PAVEMENT SUBSUMMARY
77+00	78+00	17 AVG	100.00	188.9	7.9	188.9	14.2	282+97.31	283+89.68B	25.5	92.37	261.7	10.9	261.7	19.6	
78+00	79+00	17 AVG	100.00	188.9	7.9	188.9	14.2	10+00A	12+10.32	25.5	210.32	595.9	24.8	595.9	44.7	PAVEMENT SUBSUMMARY
79+00	82+25	18	325.00	650.0	27.1	650.0	48.8	12+10.32	13+60	14	149.68	232.8	9.7	232.8	17.5	
82+25	84+51.5	19	226.50	478.2	19.9	478.2	35.9									PAVEMENT SUBSUMMARY
RAMP A-B																PAVEMENT SUBSUMMARY
84+51.50	90+70	36	618.50	2474.0	103.1	2474.0	185.6	TR 131	TURNING LANE							
90+70	91+03.63	39	33.63	145.7	6.1	145.7	10.9	142+71	143+00	VAR		24.0	1.0	24.0	1.8	PAVEMENT SUBSUMMARY
EXTRA AREA	FOR RADII			81.0	3.4	81.0	6.1	143+00	144+00	14	100.00	155.6	6.5	155.6	11.7	
								144+00	146+50	7 AVG	250.00	194.4	8.1	194.4	14.6	PAVEMENT SUBSUMMARY
RAMP B-B								APPR LT		VAR		173.0	7.2	173.0	13.0	
87+86.51	89+26.61	12 AVG	140.10	186.8	7.8	186.8	14.0									PAVEMENT SUBSUMMARY
89+26.61	91+25	17 AVG	198.39	374.7	15.6	374.7	28.1									
91+25	91+48.25	16	23.25	41.3	1.7	41.3	3.1									PAVEMENT SUBSUMMARY
91+48.25	92+37.15	10 AVG	88.9	98.8	4.1	98.8	7.4									
																PAVEMENT SUBSUMMARY
RAMP B																
78+41.1	79+54	18	112.90	225.8	9.4	225.8	16.9									PAVEMENT SUBSUMMARY
79+54	80+04	18.5 AVG	50.00	102.8	4.3	102.8	7.8									
80+04	83+45	18	341.00	682.0	28.4	682.0	51.2									PAVEMENT SUBSUMMARY
83+45	83+69.47	17.25 AVG	24.47	46.9	2.0	46.9	3.5									
83+69.47	84+45	18.25 AVG	75.53	153.2	6.4	153.2	11.5	TOTALS FROM LEFT TABLE				2729.8		67349.8	4913.8	PAVEMENT SUBSUMMARY
84+45	85+69.47	27.75 AVG	124.47	383.8	16.0	383.8	28.8	TOTALS THIS TABLE				384.4		9226.9	692.0	
85+69.47	87+00	16.25 AVG	130.53	235.7	9.8	235.7	17.7	TOTALS CARRIED TO GENERAL SUMMARY				3,114.2		76,576.7	5,605.8	PAVEMENT SUBSUMMARY

[illegible]

ITEM 644 THERMOPLASTIC														
LOCATION	STATION TO STATION Q SURVEY & CONST. S.R. 37 & S.R. 16		LANE	EDGE LINE (WHITE)	EDGE LINE (YELLOW)	LANE LINE	CENTER LINE (DOUBLE YELLOW)	CHANNELIZING LINE	STOP LINE 24"	TRANSVERSE LINE (WHITE)	LANE ARROW (RIGHT)	LANE ARROW (THROUGH)	LANE ARROW (LEFT)	WORD ON PAVEMENT, 96 IN. "ONLY"
				MILE	MILE	MILE	MILE	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	EACH	EACH
	EASTBOUND													
MAINLINE	66+50	219+00	RT	2.89	2.89	2.89								
	235+35	283+89.688	RT	0.92	0.92	0.92								
	10+00A	12+75.70	RT	0.05	0.05	0.05								
RAMP C	71+40	86+60	RT	0.29										
	77+75	86+60	RT	0.17	0.17									
	73+95	75+87				0.04								
	75+87	77+77					380		150		1			
	86+33							35						
RAMP D	87+00	92+62			0.11									
	92+62	95+00					238							
	87+00	95+08.92		0.15										
	95+00	102+25				0.14								
RAMP G	100+70	112+56.60		0.22										
	102+25	104+00					350		115					
	104+00	112+56.60			0.16									
	112+35							30			1			
RAMP H	112+06.63	127+75.21		0.30										
	112+06.63	123+42			0.22									
	123+42	126+30					288							
	126+30	129+00				0.05								
TR 131	140+99.50 RT	142+18.50 RT						119						
	140+80 LT	142+00 LT						120						
	141+48 RT													1
	141+88 RT													
	141+51 LT													1
ON TR 131	141+91 LT											1		
									45					
LINE AB	267+72.36	270+00.36	LT	0.04										
	267+72.36	270+86.55					0.06							
LINE A	267+72.36	280+90		0.25										
	270+86.55	283+55			0.24									
	280+90	282+70						180						
	10+00A	12+00				0.04								
SUBTOTALS				5.28	4.76	4.13	0.06	1675	110	265	1	2	1	2

SUBTOTALS CARRIED TO SHEET 17

ITEM 644 THERMOPLASTIC														
LOCATION	STATION TO STATION Q SURVEY & CONST. S.R. 16		LANE	EDGE LINE (WHITE)	EDGE LINE (YELLOW)	LANE LINE	CENTER LINE (DOUBLE YELLOW)	CHANNELIZING LINE	STOP LINE 24"	TRANSVERSE LINE (WHITE)	LANE ARROW (RIGHT)	LANE ARROW (THROUGH)	LANE ARROW (LEFT)	WORD ON PAVEMENT, 96 IN. "ONLY"
				MILE	MILE	MILE	MILE	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	EACH	EACH
MAINLINE	WESTBOUND													
	66+50	219+00	LT	2.89	2.89	2.89								
	235+35	283+89.68B	LT	0.92	0.92	0.92								
	10+00A	13+60	LT	0.07	0.07	0.07								
RAMP A	76+05	76+75				0.01								
	76+75	77+98						123						
	75+14.94	84+51.50		0.18										
	77+98	84+51.50			0.12									
RAMP AB	90+00													
	84+51.50	90+93.03	LT		0.12							1		
	84+51.50	90+93.03	RT		0.12									
	84+51.50	91+03.63		0.12										
	84+51.5	87+86.51		0.06										
	90+93							24						
RAMP B	78+41.17	84+11			0.11									
	78+41.17	87+00		0.16										
	84+11	85+86						350		145				
	85+86	87+64				0.03								
RAMP BB	89+26.61	91+48.25			0.04									
	87+86.51	92+37.15		0.09										
	90+50											1		
RAMP E	104+40	111+20.13		0.13										
	106+96	111+20.13			0.08									
	103+07	105+15				0.04								
	105+15	106+96						181						
RAMP F	110+96.32	118+10			0.14									
	110+96.32	121+00		0.19										
	118+10	120+20						420		147				
	120+20	121+82				0.03								
	110+96								35					
TR 131	143+00 RT	144+00 RT						100 RT						
	143+10 RT												1	
	143+41													1
ON TR 131									45					
LINE B	271+74.11	282+50			0.20									
	270+86.63	283+89.68B		0.25										
	282+50	10+35.32						350		125				
	10+00A	14+23		0.08										
	10+35.32	14+23				0.07								
HOWELL	DRIVE	CROSSOVER		0.03			0.01		20/30					
HOWELL	DRIVE								25					
SUB TOTALS SHEET 16				5.28	4.76	4.13	0.06	1675	110	265	1	2	1	2
SUB TOTALS THIS SHEET				5.17	4.81	4.06	0.01	1524	179	417	0	2	1	1
SUB TOTALS				10.45	9.57						1	4	2	
TOTALS CARRIED TO GENERAL SUMMARY				20.02		8.19	0.07	3199	289	682	7			3

LOCATION	STATION TO STATION EASTBOUND		621				SPACING C/C FEET
			I-WAY WHITE	2-WAY WHITE/ RED	I-WAY YELLOW	2-WAY YELLOW/ RED	
			EACH	EACH	EACH	EACH	
MAINLINE	66+50	219+00		191			80
	235+35	283+89.68B		61			80
	10+00A	12+75.70		3			80
RAMP C	75+87	77+77		10			40
	77+75	86+60				11	80
RAMP D	92+62	95+00		6			40
	87+00	92+62				7	80
RAMP G	102+25	104+00		9			40
	104+00	112+56.60				11	80
RAMP H	123+42	126+30		7			40
	112+06.63	123+42				14	80
TR 131	140+99.50 RT	142+18.50 RT		3			40
	140+80 LT	142+00 LT		3			40
LINE A	280+90	282+70		5			40
	270+86.55	283+55				16	80
TOTALS (CARRIED TO NEXT TABLE)				298		59	

LOCATION	STATION TO STATION WESTBOUND		621				SPACING C/C FEET
			I-WAY WHITE	2-WAY WHITE/ RED	I-WAY YELLOW	2-WAY YELLOW/ RED	
			EACH	EACH	EACH	EACH	
MAINLINE	66+50	219+00		191			80
	235+35	283+89.68B		61			80
	10+00A	13+60		5			80
RAMP A	76+75	77+98		3			40
	77+98	84+51.50				8	80
RAMP AB	84+51.50 LT	90+93.03 LT				8	80
	84+51.50 RT	90+93.03 RT				8	80
RAMP B	84+11	85+56		9			40
	78+41.17	84+11				7	80
RAMP BB	89+26.61	91+48.25				3	80
RAMP E	105+15	106+96		5			40
	106+96	111+20.13				5	80
RAMP F	118+10	120+20		5			40
	101+96.32	118+10				9	80
TR 131	143+00 RT	144+00 RT		3			80
LINE B	282+50	10+35.32		9			40
	271+74.1	282+50				14	80
TOTALS (THIS TABLE)				291		62	
TOTALS (TABLE LT.)				298		59	
TOTALS				589		121	
RAISED PAVEMENT MARKER, INSTALLATION ONLY (EACH)			710				

TOTAL CARRIED TO GENERAL SUMMARY:

ITEM 202 RAISED PAVEMENT MARKERS REMOVED FOR STORAGE 710 EACH
TOTAL CARRIED TO GENERAL SUMMARY: