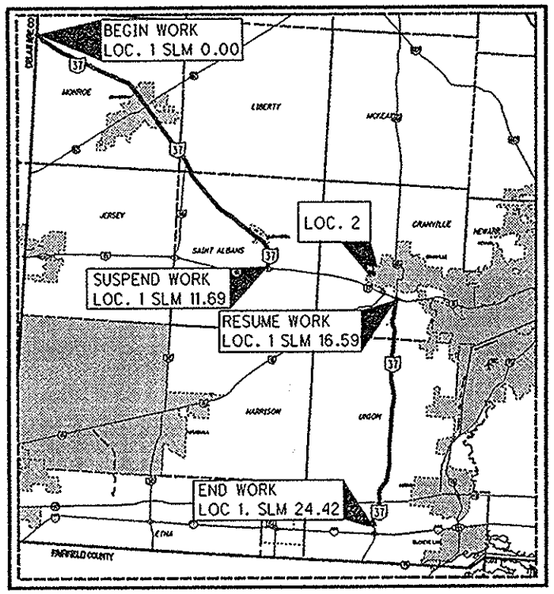


LOCATION MAP

LATITUDE: 40° 04' 24" LONGITUDE: 82° 36' 01"

PORTION TO BE IMPROVED .....

DESIGN DESIGNATION	LOCATION 1		LOCATION 2
	0.00-11.69	16.59-24.42	0.00-0.19
Functional Classification	RMA	RMC	OTHER
Opening Year ADT (2014)	9,300	12,000	8,200
Design Year ADT (2026)	12,000	14,000	9,500
Design Hourly Volume (2026)	1,200	1,700	950
Directional Distribution	53%	53%	53%
Trucks (24 Hour B&C)	5%	6%	7%
Design Speed	55mph	55mph	45mph
Legal Speed	55mph	55mph	45mph

RMA = RURAL MINOR ARTERIAL
RMC = RURAL MAJOR COLLECTOR

DESIGN EXCEPTIONS: NONE

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: 1-800-925-0988

PLAN PREPARED BY:
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 5 PLANNING & ENGINEERING

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

LIC-37-(0.00)(16.59)
LIC-161-0.00

VILLAGE OF JOHNSTOWN
VILLAGE OF ALEXANDRIA

MONROE, LIBERTY, ST. ALBANS
GRANVILLE AND UNION TOWNSHIPS

LICKING COUNTY

INDEX OF SHEETS:

PROJECT DESCRIPTION:

ASPHALT CONCRETE RESURFACING AND RELATED WORK ON S.R. 37 , S.R. 16 1 IN LICKING COUNTY

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)

LOCATION	COUNTY	ROUTE	BEGIN SLM	END SLM	LENGTH MILES	CITY/VILLAGE
1	LIC	37	0.00	24.42	*19.30	JOHNSTOWN, ALEXANDRIA
2	LIC	161	0.00	0.19	0.19	

*SUSPEND WORK SLM 4.54, RESUME WORK SLM 4.76 - DEDUCT 0.22 MILE
*SUSPEND WORK SLM 11.69, RESUME WORK SLM 16.59 - DEDUCT 4.90 MILE

2013 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 PANS AND ESTIMATES.

ENGINEER'S SEAL
STATE OF OHIO
DOUGLAS N. MORGAN
E-63839
REGISTERED PROFESSIONAL ENGINEER

SIGNED: Douglas N. Morgan
DATE: 10-4-2013

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	4-20-12	TC-65.10	4-20-12	800	10-18-13
BP-4.1	7-19-13	TC-65.11	4-20-12	832	10-18-13
		TC-71.10	10-19-12		
		TC-73.10	4-20-12		
MT-97.10	7-19-13	TC-82.10	10-18-13		
MT-97.12	7-19-13				
MT-99.20	7-19-13				
MT-101.90	7-19-13			SPECIAL PROVISIONS	
MT-105.10	7-19-13				

APPROVED: J. W. Rolf
DATE 10/7/13 DISTRICT DEPUTY DIRECTOR

APPROVED: Jerry Wray
DATE 11-27-13 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E080(430)
PID NO. 83111
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT COLUMBUS & OHIO RIVER RAILROAD COMPANY
LIC-37-(0.00)(16.59)
LIC-161-0.00
1/34

LIC - SR-37-(0.00)(16.59); LIC-161-0.0
140080 PID - 83111 Co
Dist 5 2/6/2014 con

Contract Proposal Available @ www.
contracts.dot.state.oh.us/home

P:\LIC\37\Design\Roadway\Plan Sheets\General\037_MTS_001.dgn 04-OCT-2013 10:19AM dmorgan

CALCULATED LME CHECKED DNM

GENERAL NOTES

UTILITIES

THERE ARE NO UNDERGROUND UTILITIES SHOWN ON THIS PLAN. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UNDERGROUND UTILITIES THAT EXIST UNDER OR ADJACENT TO THE WORK AREA.

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.

NOTIFICATION OF ROAD CLOSURE OR RESTRICTION

THE CONTRACTOR WILL ADVISE THE PROJECT ENGINEER A MINIMUM OF TWENTY ONE (21) DAYS PRIOR TO THE FOLLOWING: THE START OF CONSTRUCTION ACTIVITIES, LANE RESTRICTIONS, LANE CLOSURES, AND OR ROAD CLOSURES. THE PROJECT ENGINEER WILL FORWARD THIS INFORMATION TO THE FOLLOWING:

DISTRICT PUBLIC INFORMATION OFFICER (PIO) BY FAX AT (614) 887-4510 OR EMAIL AT D05.PIO@DOT.STATE.OH.US

DISTRICT PERMIT SECTION BY FAX AT (614) 887-4525 OR EMAIL AT BRIAN.BOSCH@DOT.STATE.OH.US

CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY FAX AT (614) 728-4099 OR EMAIL AT HAULING.PERMITS@DOT.STATE.OH.US

THE PIO WILL, IN TURN, NOTIFY THE PUBLIC, THE LOCAL EMERGENCY SERVICES, AFFECTED SCHOOLS AND BUSINESSES, AND ANY OTHER IMPACTED LOCAL PUBLIC AGENCY OF ANY OF THE ABOVE MENTIONED ITEMS, VIA MEDIA SOURCES.

PAVEMENT MARKING

STOP LINES, CROSSWALK LINES, CHANNELIZING LINES, ETC., SHOWN IN THE PLANS ARE TAKEN FROM EXISTING MARKINGS. THE CONTRACTOR SHALL DOCUMENT ALL OF THE EXISTING PAVEMENT MARKING LOCATIONS THAT WILL BE REMOVED/OBLITERATED DURING THIS PROJECT. THE CONTRACTOR SHALL PLACE NEW PAVEMENT MARKINGS AT THE LOCATION OF THE EXISTING MARKINGS UNLESS OTHERWISE DIRECTED BY THE ENGINEER. DOCUMENTATION OF PAVEMENT MARKING SHALL BE SUPPLIED TO THE ENGINEER BEFORE COMMENCEMENT OF ANY OPERATION WHICH WILL REMOVE/OBLITERATE MARKINGS. THE METHOD OF DOCUMENTATION SHALL BE APPROVED BY THE ENGINEER IN ORDER TO PROVIDE AN ACCEPTABLE TOLERANCE BETWEEN THE EXISTING AND PROPOSED PAVMENT MARKINGS.

ITEM 209 PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN

PREPARE THE SHOULDER FOR PAVING A CONSISTENT SAFETY EDGE IN BOTH THICKNESS AND WIDTH.

PRIOR TO PAVING THE SAFETY EDGE, GRADE AN AREA 10 INCHES WIDE, BEGINNING AT THE EDGE OF THE PAVED ROADWAY, TO PROVIDE A LEVEL SURFACE FREE OF VEGETATION FOR CONSTRUCTION OF THE SAFETY EDGE. IF NECESSARY, EXCAVATE THE GRADED AREA TO THE DEPTH NECESSARY TO CONSTRUCT THE SAFETY EDGE. COMPACT THE GRADED SHOULDER ACCORDING TO 617.05, OR AS DIRECTED BY THE ENGINEER.

ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE

DEPTH OF PLANING ON S.R. 37 VARIES BETWEEN 1.25" AND 2.25" AND SHALL BE AS SHOWN ON THE ASPHALT CONCRETE DATA SHEET. PLANING SHALL BE FULL WIDTH OF PAVEMENT, INCLUDING PAVED SHOULDERS. THE ROADWAY SHALL BE PLANED SUCH THAT POSITIVE DRAINAGE IS CREATED FROM THE CENTER LINE TO THE EDGE OF PAVEMENT IN TANGENT SECTIONS AND SHALL FOLLOW EXISTING SUPERELEVATIONS WHERE APPLICABLE. ALL REQUIREMENTS OF ITEM 254 SHALL APPLY.

ITEM 407 TACK COAT

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.075 GALLONS PER SQUARE YARD FOR ESTIMATING PURPOSES ONLY.

ITEM 407 TACK COAT FOR INTERMEDIATE COURSE

THE RATE OF APPLICATION OF THE 407 TACK COAT FOR INTERMEDIATE COURSE SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.05 GALLONS PER SQUARE YARD FOR ESTIMATING PURPOSES ONLY.

ITEM 408 PRIME COAT, AS PER PLAN

THE CONTRACTOR SHALL APPLY ONE COAT OF MC-70 (AS PER SECTION 702) AT A RATE OF 0.40 GALLON PER SQUARE YARD TO THE COMPLETED AGGREGATE SHOULDER (ITEM 617) AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE A SHIELD TO PREVENT THE SPRAYING OR DRIFTING OF LIQUID BITUMINOUS MATERIAL ONTO THE EDGE OF PAVEMENT OR EDGE LINE. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO 107.10 OF THE SPECIFICATIONS.

THE FOLLOWING QUANTITIES OF PRIME COAT, AS PER PLAN HAVE BEEN CARRIED TO THE SUB-SUMMARIES AND SHALL INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT TO PERFORM THE ABOVE MENTIONED WORK.

ITEM 408 PRIME COAT, AS PER PLAN
LOCATION 1 –42,372 SQ.YD. X 0.40 GAL./SQ. YD. = 16,949 GAL
LOCATION 2 – 315 SQ. YD. X 0.40 GAL./SQ. YD. = 126 GAL

ITEM 617 COMPACTED AGGREGATE, AS PER PLAN

ALL AGGREGATE SHALL BE 100% CRUSHED LIMESTONE. ALL QUALITY REQUIREMENTS EXCEPT SHALE SHALL BE WAIVED. OTHER GRADATION REQUIREMENTS SHALL BE AS SPECIFIED EXCEPT THE PLASTICITY INDEX SHALL BE WAIVED. IF SO PERMITTED, THE CONTRACTOR MAY USE RECYCLED ASPHALT CONCRETE PAVEMENT (RACP MEETING REQUIREMENTS OF 617.02) IN LIEU OF CRUSHED LIMESTONE.

ITEM 621 RAISED PAVEMENT MARKER REMOVED

RPM REMOVAL SHALL NOT OCCUR SOONER THAN 10 DAYS PRIOR TO RESURFACING OF THE ROADWAY. ALL RPM'S REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

ITEM 253 PAVEMENT REPAIR

AN ESTIMATED QUANTITY FOR PAVEMENT REPAIR HAS BEEN INCLUDED IN THE PLAN TO BE USED AS DIRECTED BY THE ENGINEER. REPAIRS SHALL TAKE PLACE PRIOR TO THE PLANING OPERATION. THE INTENT OF THIS OPERATION IS TO REPAIR THOSE AREAS OF PAVEMENT WHICH HAVE COMPLETELY FAILED (PUMPING OF SUB-BASE MATERIAL) AND NOT TO CORRECT SURFACE IRREGULARITIES. DEPTH OF EXCAVATION SHALL BE 7". THE MINIMUM WIDTH SHALL BE 4 FT. AFTER EXCAVATION HAS BEEN COMPLETED, THE FACE OF THE REPAIR SHALL BE COATED WITH 407 TACK COAT. REPLACEMENT MATERIAL WILL BE 7" OF ITEM 301 ASPHALT CONCRETE BASE, PG64-22 (PLACED AND COMPACTED IN TWO LIFTS).

REPAIR QUANTITIES MAY BE USED ON THE MAINLINE PAVEMENT OR ON PAVED SHOULDERS. ALL EXCAVATION, MATERIALS, LABOR, EQUIPMENT, TOOLS, TRAFFIC CONTROL AND INCIDENTALS NEEDED TO COMPLETE THE WORK DESCRIBED ABOVE SHALL BE PAID FOR UNDER ITEM 253 PAVEMENT REPAIR.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE SUB-SUMMARIES FOR THE ABOVE DESCRIBED PURPOSE.

ITEM 253 PAVEMENT REPAIR
LOCATION 1 – 50 CU.YD.

ITEM 516 2" DEEP JOINT SEALER, AS PER PLAN

THE CONTRACTOR SHALL PLACE A 1" X 2.0" DEEP BEAD OF JOINT SEALER (AS PER 705.04) AT THE LOCATIONS SHOWN IN PLANS. THE CONTRACTOR SHALL SAW CUT A CHANNEL FOR THE JOINT SEALER. THE COST FOR SAW CUTTING THE CHANNEL FOR THE JOINT SEALER SHALL BE INCLUDED FOR PAYMENT WITH ITEM 516, 2" DEEP JOINT SEALER, AS PER PLAN.

ITEM 614, WORK ZONE MARKING SIGN

IN ACCORDANCE WITH CMS SECTION 614.04, THE QUANTITIES OF WORK ZONE MARKING SIGN HAVE BEEN CARRIED TO THE SUB-SUMMARIES TO BE USED AS DIRECTED BY THE ENGINEER.

W8-H12a (NO EDGE LINES): LOCATION 1 - 26 EACH , LOCATION 2 – 2 EACH
R4-1 (DO NOT PASS): LOCATION 1- 54 EACH, LOCATION 2 – 2 EACH
R4-2 (PASS WITH CARE): LOCATION 1 -52 EACH

ITEM 614, WORK ZONE MARKING SIGN

LOCATION 1 – 132 EACH
LOCATION 2 – 4 EACH

IN ADDITION, THE CONTRACTOR SHALL ERECT A "GROOVED PAVEMENT" SIGN 250 FEET IN ADVANCE OF ANY SECTION OF ROADWAY WHERE TRAFFIC MUST TRAVEL ON A PLANED SURFACE. ENSURE THESE SIGNS ARE IN PLACE BEFORE OPENING THE ROADWAY TO TRAFFIC. ERECT THESE SIGNS AT INTERSECTIONS OF THROUGH ROUTES TO WARN TRAFFIC OF THIS SURFACE CONDITION. "GROOVED PAVEMENT" SIGNS SHALL BE INCLUDED FOR PAYMENT WITH THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC AS PER CMS SECTION 614.055.

COOPERATION BETWEEN CONTRACTORS

THE STATE OF OHIO ALONG WITH THE VILLAGE OF GRANVILLE WILL HAVE CONTRACTED A PROJECT: ***LIC-CR 539BU-0.26, PID 92794***, WHICH MAY BE CONSTRUCTED CONCURRENTLY WITH THIS PROJECT. IT IS IMPERATIVE THAT THE CONTRACTORS COOPERATE FULLY WITH EACH OTHER AS OUTLINED IN SECTION 105.08 OF THE CMS. ALL MAINTENANCE OF TRAFFIC SHALL BE COORDINATED BETWEEN PROJECTS AND NOT CONFLICT WITH ONE ANOTHER.

LIC-37-(0.00)(16.59)
LIC-161-0.00

ITEM 407, TACK COAT, TRACKLESS TACK, INTERMEDIATE AND SURFACE COURSES

DESCRIPTION: *THIS WORK CONSISTS OF PREPARING AND TREATING A PAVED SURFACE WITH A TRACKLESS TACK ASPHALT EMULSION.*

ALTERNATE PRODUCTS TO BE USED MUST BE ON FILE WITH THE NEW PRODUCT ENGINEER AT THE TIME OF THE ADVERSTISEMENT DATE OF THE PROJECT PLANS. PLEASE CONTACT BRAD YOUNG, ODOT NEW PRODUCT ENGINEER, 614-351-2882.

THIS WORK IS CONSIDERED AN EXPERIMENTAL CONSTRUCTION FEATURE FOR EVALUATION OF PRODUCTS THAT ARE ON FILE WITH THE NEW PRODUCT ENGINEER.

MEET ALL REQUIREMENTS OF ODOT 407 TACK COAT IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS REQUIRED BY THE CONTRACT, EXCEPT AS NOTED BELOW.

A MANUFACTURER'S REPRESENTATIVE MUST BE AT THE PROJECT SITE DURING THE FIRST TWO DAYS OF APPLICATION OF TRACKLESS TACK.

MATERIAL: *IF USING BLACKLIDGE TRACKLESS TACK THE MATERIAL WILL CONFORM TO THE FOLLOWING TYPICAL PHYSICAL PROPERTIES:*

PARAMETER	TEST METHOD	MIN.	MAX.
SAYBOLT FUROL VISCOSITY, SFS @ 25°C	AASHTO T59	15	100
STORAGE STABILITY, 24 HRS, %	AASHTO T59	--	1
STORAGE STABILITY, 5 DAYS, %	AASHTO T59	--	5
RESIDUE BY DISTILLATION, %	AASHTO T59	50	--
OIL DISTILLATE, %	AASHTO T59	--	1
SIEVE TEST, %	AASHTO T59	--	0.30
TEST ON RESIDUE			
PENETRATION, @ 25°C,	AASHTO T49	--	20
SOFTENING POINT RANGE DEG C	AASHTO T53	65	--
SOLUBILITY, %	AASHTO T44	97.5	--
ORIGINAL BINDER DSR@82°C G*/SIN δ,10 RAD/SEC	AASHTO T315	1.00	--

FOR TRACKLESS TACK OTHER THAN BLACKLIDGE TRACKLESS TACK, THE MATERIAL WILL CONFORM TO THE PHYSICAL PROPERTIES SUPPLIED BY THE NEW PRODUCT ENGINEER FOR THE TESTS LISTED BELOW:

PARAMETER	TEST METHOD
SAYBOLT FUROL VISCOSITY, SFS @ 25°C	AASHTO T59
STORAGE STABILITY, 24 HRS, %	AASHTO T59
STORAGE STABILITY, 5 DAYS, %	AASHTO T59
RESIDUE BY DISTILLATION, %	AASHTO T59
OIL DISTILLATE, %	AASHTO T59
SIEVE TEST, %	AASHTO T59
TEST ON RESIDUE	
PENETRATION, @ 25°C,	AASHTO T49
SOFTENING POINT RANGE DEG C	AASHTO T53
SOLUBILITY, %	AASHTO T44
ORIGINAL BINDER DSR@82°C G*/SIN δ,10 RAD/SEC	AASHTO T315

NOTE: TRACKLESS TACK SHOULD NOT CONTAIN FILLER SUCH AS CLAY, ETC.

ITEM 407, TACK COAT, TRACKLESS TACK, INTERMEDIATE AND SURFACE COURSES (con't.)

ACCEPTANCE AND SAMPLING OF MATERIALS: *FOR ALL TRACKLESS TACK SUPPLY CERTIFIED TEST DATA FROM AN INDEPENDENT LABORATORY TO THE ENGINEER AND TO THE DISTRICT LABORATORY SHOWING THE TRACKLESS TACK SUPPLIED WAS TESTED FOR AND MEETS THE PROPERTIES SUPPLIED BY THE NEW PRODUCT ENGINEER.*

DURING CONSTRUCTION, ODOT PERSONNEL WILL SAMPLE AND SUPPLY TO THE DISTRICT TEST LAB A MINIMUM OF 2 QUARTS OF TRACKLESS TACK SAMPLED FROM THE DISTRIBUTOR ON THE FIRST DAY OF APPLICATION. CLEARLY MARK ON THE SAMPLES THE MANUFACTURER'S NAME, PROJECT NUMBER, AND THE WORDS "TRACKLESS TACK".

ADDITIONAL SAMPLING OF BLACKLIDGE TRACKLESS TACK WILL FOLLOW THE REQUIREMENTS OF ITEM 407. FOR ALTERNATE TRACKLESS TACK MATERIAL, 2 QUARTS OF MATERIAL WILL BE SAMPLED EACH DAY THE MATERIAL IS USED.

EQUIPMENT: *SEE MANUFACTURER'S REPRESENTATIVE FOR CORRECT DISTRIBUTOR SETTINGS. THOROUGHLY CLEAN ALL EQUIPMENT IF PREVIOUSLY USED MATERIAL CHARGE IS DIFFERENT THAN THE PROPOSED MATERIAL.*

APPLICATION OF ASPHALT MATERIAL: *UNIFORMLY APPLY THE TRACKLESS TACK WITH A DISTRIBUTOR. IF TRACKLESS TACK IS STORED FOR AN EXTENDED PERIOD OF TIME, PRIOR TO APPLICATION, AGITATE OR GENTLY CIRCULATE THE MATERIAL.*

ENSURE ALL NOZZLES AND SPRAY PATTERNS ARE IDENTICAL TO ONE ANOTHER ALONG THE DISTRIBUTOR SPRAY BAR. PLACE THE ANGLE OF THE NOZZLE AT A 15 TO 30 DEGREE ANGLE TO THE SPRAY BAR AXIS TO MAXIMIZE OVERLAP OR AS RECOMMENDED BY THE NOZZLE MANUFACTURER. CONTACT THE MANUFACTURER'S REPRESENTATIVE FOR REQUIRED SPRAY NOZZLE SIZE AND DISTRIBUTOR AND NOZZLE SETTINGS.

APPLY AT A RATE OF 0.04 TO 0.1 GALLONS PER SQUARE YARD. DO NOT DILUTE TRACLESS TACK. RECOMMENDED APPLICATION TEMPERATURE IS 160°F TO 180°F. DO NOT EXCEED 180°F. THE ENGINEER AND MANUFACTURER'S REPRESENTATIVE WILL APPROVE THE QUANTITY, RATE OF APPLICATION, TEMPERATURE, DISTRIBUTOR SETTINGS, AND AREAS TO BE TREATED BEFORE APPLICATION OF THE TRACKLESS TACK COAT. THE ENGINEER WILL DETERMINE THE ACTUAL APPLICATION IN GALLONS PER SQUARE YARD BY A CHECK ON THE PROJECT.

PERFORMANCE OF TRACKLESS TACK: *FOR ANY TRACKLESS TACK USED SUPPLY DATA FOR SHEAR AND TENSILE BOND STRENGTH ACCORDING TO METHODS DESCRIBED IN VIRGINIA TRANSPORTATION RESEARCH COUNCIL REPORT VTRC 09-R21. RANDOMLY TAKE 6-4 INCH DIAMETER CORES FROM THE PROJECT AND PERFORM 3 SHEAR AND 3 TENSILE BOND STRENGTH TESTS. BE SURE CORES TAKEN INCLUDE BOTH AN ASPHALT LAYER ABOVE AND ASPHALT LAYER BELOW THE TRACKLESS TACK LAYER.*

DETERMINE THE TIME TO SET FOR THE MATERIAL TO BECOME TRACKLESS. THE ENGINEER WILL REPORT ANY ISSUES WITH EXCESSIVE TIME TO SET, OR AFTER SET ISSUES WITH STICKINESS, OR PICKUP OF THE TACK TO THE DET AND NEW PRODUCT ENGINEER, BRAD YOUNG 614-351-2882.

IF THE CERTIFIED TEST DATA FAILS TO MEET THE LAB TESTING CRITERIA, OR FIELD SAMPLES FAIL TO MEET THE LAB TEST CRITERIA, OR THE TRACKLESS TACK FAILS TO PERFORM SATISFACTORILY IN THE FIELD, AS NOTED ABOVE, THE CONTRACTOR WILL BE REQUIRED TO REPLACE AND SUPPLY BLACKLIDGE TRACKLESS TACK FOR THE REMAINDER OF THE PROJECT AT NO COST TO THE DEPARTMENT.
ANY FAILING EXPERIMENTAL TRACKLESS TACK PRODUCT WILL BE REMOVED FROM THE NEW PRODUCT ENGINEER'S LIST.

ITEM 407, TACK COAT, TRACKLESS TACK, INTERMEDIATE AND SURFACE COURSES (con't.)

IN THE EVENT THE PRODUCT FAILS TO PERFORM TO THE SATISFACTION OF THE DEPARTMENT, THE MANUFACTURER MAY PERFORM THE FOLLOWING ITEMS IN ORDER TO BE CONSIDERED FOR FUTURE EXPERIMENTAL CONSTRUCTION FEATURE PROJECTS:

1. SUBMIT IN WRITING TO THE DEPARTMENT THE REASON(S) WHY PRODUCT FAILED TO PERFORM AND DETAIL CHANGES THAT WILL BE MADE TO ELIMINATE THE CAUSE(S) OF FAILURE, AND

2. PROPOSE CHANGES TO THE PRODUCT'S SPECIFICATIONS, AND

3. SUBMIT SAMPLES OF THE REDEVELOPED PRODUCT TO THE LABORATORY FOR TESTING TO THE NEW SPECIFICATIONS, AND

4. DEMONSTRATE TO THE DEPARTMENT SUCCESSFUL USE OF THE MATERIAL ON AT LEAST ONE NON-ODOT PROJECT.

WHEN THE ABOVE ITEMS ARE COMPLETED TO THE DEPARTMENT'S SATISFACTION, THE REDEVELOPED AND FIELD TESTED PRODUCT MAY BE PUT BACK ON FILE WITH THE NEW PRODUCT ENGINEER AND EVALUATED ON FUTURE ODOT PROJECTS USING THE EXPERIMENTAL CONSTRUCTION FEATURE PROCESS.

RESIDENTIAL AND COMMERCIAL DRIVES

AN ESTIMATED QUANTITY OF ITEM 448 ASPHALT CONCRETE, HAS BEEN INCLUDED IN THE PLAN TO BE USED AS DIRECTED BY THE ENGINEER TO PAVE APPROACH AREAS TO EXISTING DRIVEWAYS. PAVING SHALL EXTEND AN AVERAGE OF 4' INTO THE DRIVEWAY (MEASURED FROM THE EDGE OF PAVEMENT OR PAVED SHOULDER IF PRESENT), WITH THE MAXIMUM DISTANCE TO BE DIRECTED BY THE ENGINEER, IN ORDER TO PROVIDE A SMOOTH TRANSITION AND/OR ELIMINATE SHORT DISTANCES OF UNDESIRABLE PROFILE. ABRUPT CHANGES IN DRIVEWAY PROFILE ARE NOT PERMITTED.

FIELD DRIVES AND OIL WELL DRIVES SHALL NOT BE PAVED. GRAVEL DRIVES SHALL BE PAVED BACK AN AVERAGE OF 4' INTO THE DRIVE-WAY UNLESS OTHERWISE DIRECTED BY THE ENGINEER. CONCRETE AND ASPHALT DRIVES SHALL HAVE BUTT JOINTS OR AS SHORT AN ASPHALT TAPER AS POSSIBLE (AVERAGE OF 4') AS DIRECTED BY THE ENGINEER SO AS TO PROVIDE A SMOOTH TRANSITION. GRAVEL DRIVES WITH ASPHALT APRONS SHALL ALSO HAVE BUTT JOINTS OR AS SHORT AN ASPHALT TAPER AS POSSIBLE (AVERAGE OF 4') BUT ONLY IF THE EXISTING ASPHALT APRON IS IN AN ACCEPTABLE CONDITION TO BE PAVED OVER AS DIRECTED BY THE ENGINEER. IF THE ASPHALT APRON CANNOT BE PAVED OVER (FOR EXAMPLE, BROKEN INTO SMALL PIECES) AS DETERMINED BY THE ENGINEER, IT SHALL BE REMOVED BEFORE BEING PAVED BACK 4' INTO THE DRIVEWAY. ALL GRADING, PRIME OR TACK COAT, MATERIALS, LABOR, EQUIPMENT TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE DRIVES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEMS LISTED BELOW.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE SUB-SUMMARY FOR THE ABOVE DESCRIBED PURPOSE.

ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M
LOCATION 1 – 104 CU.YD.

ITEM 202 WEARING COURSE REMOVED
LOCATION 1 – 2,500 SQ.YD.

CALCULATED LME CHECKED DNM

GENERAL NOTES

LIC-37-(0.00)(16.59)
LIC-161-0.00

SAFETY EDGE PLAN NOTE

IN ADDITION TO THE REQUIREMENTS OF 401.12, ATTACH A DEVICE TO THE SCREED OF THE PAVER THAT CONFINES THE MATERIAL AT THE END GATE AND EXTRUDES THE ASPHALT MATERIAL IN SUCH A WAY THAT RESULTS IN A CAMPACTED WEDGE SHAPE PAVEMENT EDGE OF APPROXIMATELY 30 DEGREES (NOT STEEPER THAN 40 DEGREES). ENSURE THE DEVICE MAINTAINS CONTACT WITH THE EXISTING SURFACE, AND ALLOW FOR AUTOMATIC TRANSITION TO CROSS ROADS, DRIVEWAYS AND OBSTRUCTIONS. DO NOT USE CONVENTIONAL SINGLE PLATE STRIKE OFF.

CONSTRUCTION OF SAFETY EDGE CAN BE OMITTED AT LOCATIONS WHERE EXISTING WIDTH OF GRADED SHOULDER OR BERM IS LESS THAN 12". PROJECTS WITH VARYING CONDITIONS SHOULD USE SAFETY EDGE WHERE POSSIBLE. PLAN PREPARATION HAS MADE EVERY REASONABLE ATTEMPT TO IDENTIFY POSSIBLE SAFETY EDGE LOCATIONS.

USE THE TRANS TECH SHOULDER WEDGE MAKER, THE CARLSON SAFETY EDGE END GATE, THE ADVANT-EDGER, THE TROXLER SAFETSLOPE OR A SIMILAR APPROVED-EQUAL DEVICE THAT PRODUCES THE SAME WEDGE CONSOLIDATION RESULTS. CONTACT INFORMATION FOR THESE WEDGE SHAPE COMPACTION DEVICES IS THE FOLLOWING:

TransTech Systems, Inc.
1594 State Street
Schenectady, NY 12304
1-800-724-6306
www.transtechsys.com

Advant-Edge Paving Equipment, LLC.
P.O. Box 9163
Niskayuna, NY 12309-0163
518-280-6090
www.advantaedgepaving.com

Carlson Safety Edge End Gate
18425 50th Avenue East
Tacoma, WA 98446
253-875-8000

Troxler Electronics Laboratories, Inc.
3008 E. Cornwallis Rd.
Research Triangle Park, NC 27709
1-877-TROXLER
www.troxlerlabs.com

IF ELECTING TO USE A SIMILAR DEVICE, PROVIDE PROOF THAT THE DEVICE HAS BEEN USED ON PREVIOUS PROJECTS WITH ACCEPTABLE RESULTS OR CONSTRUCT A TEST SECTION PRIOR TO THE BEGINNING OF WORK AND DEMONSTRATE WEDGE COMPACTION TO THE SATISFACTION OF THE ENGINEER. SHORT SECTIONS OF HANDWORK WILL BE ALLOWED WHEN NECESSARY FOR TRANSITIONS AND TUENOUTRS OR OTHERWISE AUTHORIZED BY THE ENGINEER.

IN ADDITION TO THE REQUIREMENTS OF 401.16, MAKE THE FIRST ROLLER PASS 8 TO 12 INCHES (200 TO 300 mm) AWAY FROM TAPERED EDGE. DO NOT ROLL THE TAPER.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE SUB-SUMMARIES TO PROVIDE EXTRA ASPHALT FOR CONSTRUCTION OF THE SAFETY EDGE:

ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M
LOCATION 1 – 268 CU.YD.
LOCATION 2 – 3 CU. YD.

DROPOFFS IN WORK ZONES

DROPOFFS THAT DEVELOP DURING CONSTRUCTION OPERATIONS AND THAT ARE NOT OTHERWISE PROVIDED FOR IN THE PLANS SHALL BE TREATED AS SHOWN ON STANDARD DRAWING MT-101.90. WHERE THE PLANS DO NOT PROVIDE SPECIFIC ITEMS FOR LABOR, EQUIPMENT, OR MATERIALS TO IMPLEMENT THE DROP-OFF TREATMENTS SPECIFIED, THEY SHALL BE INCLUDED FOR PAYMENT IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.

MAIL BOX TURN OUTS

A QUANTITY OF ASPHALT CONCRETE HAS BEEN PROVIDED IN THE PLAN TO COVER MAIL BOX TURN-OUTS. TURN-OUTS SHALL BE PAVED AS SHOWN IN THE DETAIL IN DRAWING BP-4.1. ANY EXTRA GRADING OF THE SHOULDERS, PRIME OR TACK COAT, MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE MAIL BOX TURN OUTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEMS LISTED BELOW.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE SUB-SUMMARIES FOR THE ABOVE PURPOSES.

ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22
LOCATION 1 - 26 CU.YD.

ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M
LOCATION 1 – 73 CU.YD.

ITEM 202 WEARING COURSE REMOVED
LOCATION 1 – 1,920 SQ.YD.

ITEM 614 MAINTAINING TRAFFIC

A MINIMUM OF 1 LANE OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON SR 37 AND SR 16I BY USE OF THE EXISTING PAVEMENT AND STANDARD DRAWING MT-97.12.

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.

AT NO TIME SHALL TRAFFIC BE MAINTAINED ON THE PLANED SURFACE, AT LEAST ONE COURSE OF ASPHALT CONCRETE SHALL BE IN PLACE BEFORE OPENING TO TRAFFIC.

ONLY ITEM 614 WORK ZONE CENTER LINE, CLASS II HAS BEEN ITEMIZED IN THE PLAN. ALL OTHER WORK ZONE PAVEMENT MARKINGS NECESSARY SHALL BE INCLUDED IN THE LUMP SUM BID FOR MAINTAINING TRAFFIC.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT, IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

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

BUTT JOINT

A BUTT JOINT WILL BE REQUIRED AT LOCATIONS SPECIFIED BELOW AND AT THE EXTRA AREAS WITH WEARING COURSE REMOVED.

BUTT JOINTS SHALL BE AS PER STANDARD CONSTRUCTION DRAWING BP-3.1 UNLESS OTHERWISE SHOWN IN THE PLANS.

MINIMUM LENGTH FOR ASPHALT WEDGE AT BUTT JOINTS SHALL BE 10'.

LOCATION	ROUTE	DESCRIPTION	S.L.M.	ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC CU. YD.
1	S.R. 37	BEGIN WORK	0.00	0.6
1	S.R. 37	BRIDGE: LIC-37-0379	3.79	1.2
1	S.R. 37	SUPEND WORK	4.54	1.1
1	S.R.37	RESUME WORK	4.76	1.1
1	S.R. 37	BRIDGE: LIC-37-1104	11.04	2.1
1	S.R. 37	SUPEND WORK	11.69	1.9
1	S.R. 37	RESUME WORK	16.59	1.1
1	S.R. 37	RR CROSSING	19.39	2.2
1	S.R. 37	END WORK	24.42	1.6
1	S.R. 37	**TOTAL**		**12.9**
2	S.R. 16I	BEGIN WORK	0.00	1.0
2	S.R. 16I	BRIDGE: LIC-16-1416L	0.10	2.0
2	S.R. 16I	END WORK	0.19	1.0
2	S.R. 16I	**TOTAL**		**4.0**

THE GRINDING FOR BUTT JOINTS SHALL BE INCLUDED WITH ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE

ITEM 611 CATCH BASIN/ MANHOLE/ INLET ADJUSTED TO GRADE
ITEM 638 VALVE BOX ADJUSTED TO GRADE

THESE ITEMS SHALL BE USED TO ADJUST CATCH BASINS, MANHOLES, INLETS AND WATER VALVE BOXES LOCATED THROUGHOUT THE PROJECT LIMITS AS DIRECTED BY THE ENGINEER. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK DESCRIBED SHALL BE INCLUDED FOR PAYMENT WITH THE ITEMS LISTED BELOW.

ANY GAS VALVE BOXES AND TELEPHONE COMPANY MANHOLES ON THIS PROJECT SHALL BE ADJUSTED TO GRADE BY THE RESPECTIVE OWNERS.

LOCATION 1:

ITEM 611 – CATCH BASIN ADJUSTED TO GRADE – 5 EACH

ITEM 611 –INLET ADJUSTED TO GRADE – 16 EACH

ITEM 611 – MANHOLE ADJUSTED TO GRADE – 11 EACH

ITEM 638 – VALVE BOX ADJUSTED TO GRADE – 9 EACH

CALCULATED LME CHECKED DNM

GENERAL NOTES

LIC-37-(0.00)(16.59)
LIC-16I-0.00

4
34

ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, TWO CHANGEABLE MESSAGE SIGNS, ON SITE, FOR THE DURATION OF THE PROJECT. THE SIGNS SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR (OFFICE OF MATERIALS MANAGEMENT). THE APPROVED LIST OF PORTABLE CHANGEABLE MESSAGE SIGNS CAN BE FOUND ON THE ODOT WEBSITE BY CLICKING ON THE SERVICES MENU, THEN LICKING ON MATERIALS MANAGEMENT. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 650 FT. AND 475 FT., 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 TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHOULD BE DELINEATED ON A PERMANENT BASIS BY AFFIXING RETROREFLECTIVE MATERIAL, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEET(S) OF THE PLAN. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC, AND SHALL DISPLAY ONE OR MORE TYPE G YELLOW RETROREFLECTIVE SHEETING SURFACES OF 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 TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 2 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED 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 PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD 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. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

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 CMS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN ANOFFICIAL 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

ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN (cont'd)

DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC.

THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

A TOTAL OF 2 PCMS SHALL BE REQUIRED FOR THIS PROJECT.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO SUB-SUMMARY:

ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN
LOCATION 1 - 4 SIGN MNTH

ITEM 209 LINEAR GRADING

IN ORDER TO PROVIDE POSITIVE DRAINAGE FROM THE ROADWAY SURFACE TO THE SHOULDER BREAK, THE EXISTING ROADWAY SHOULDERS SHALL BE GRADED AND SHAPED USING A GRADER OF ADEQUATE SIZE TO PERFORM THE WORK TO THE SATISFACTION OF THE ENGINEER.

ALL EXCESS MATERIAL REMAINING AROUND GUARDRAIL AND OTHER AREAS AFTER THE GRADER WORK IS COMPLETED AND NOT DISPOSED OF ON THE SITE, SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. ALL EQUIPMENT, LABOR, OR INCIDENTALS REQUIRED TO COMPLETE THIS ITEM SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID FOR ITEM 209 LINEAR GRADING.

THIS WORK MAY BE INTERMITTENT AND SPREAD THROUGHOUT THE PROJECT LIMITS, AS DIRECTED BY THE ENGINEER. THE CONTRACTOR WILL ONLY BE PAID FOR INTERSECTIONS AND GAPS IF THEY ARE WITHIN THE LIMITS OF A SECTION MARKED BY THE ENGINEER FOR GRADING.

ALL LINEAR GRADING WORK SHALL BE DONE BEFORE PLACING THE ASPHALT SURFACE COURSE

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE SUB-SUMMARIES FOR THE ABOVE PURPOSES.

ITEM 209 LINEAR GRADING
LOCATION 1 – 39.18 MILE
LOCATION 2 – 0.27 MILE

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOWWILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH ANOFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE, (CONT'D)

- DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

IN ADDITION TO THE REQUIREMENT OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

- FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP). IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

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

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

LEOS (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) FOR ASSISTANCE.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE SUB-SUMMARIES.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE
LOCATION 1 – 100 HOURS

CALCULATED LME
CHECKED DNM

GENERAL NOTES

LIC-37-(0.00)(16.59)
LIC-161-0.00

ITEM 632 DETECTOR LOOP, AS PER PLAN

ALL STOP LINE INDUCTANCE DETECTOR LOOPS SHALL BE THE POWER HEAD CONFIGURATION SHOWN ON TC-82.10. THE WIDTH SHALL BE AS SPECIFIED ON TC-82.10 AND THE LENGTH SHALL BE AS CURRENTLY CALLED FOR IN THE PLANS. THE STOP LINE DETECTOR LOOPS SHALL NOT BE WIRED TO ANY OTHER LOOPS AND SHALL HAVE ITS OWN DETECTOR CHANNEL. ALL STOP LINE DETECTION SHALL BE TESTED FOR A BICYCLE TARGETAND ALL DILEMMA DETECTION ZONES SHALL BE TESTED FOR A MOTORCYCLE TARGET.

ALL DILEMMA ZONE INDUCTANCE DETECTOR LOOPS CALLED FOR IN THE PLANS SHALL BE THE ANGULAR DESIGN DETECTION (ADD) LOOP AS SHOWN ON TC-82.10. DIMENSIONS SHALL BE AS SPECIFIED ON TC-82.10.

ALL DETECTOR LOOPS SHALL BE CUT INTO THE PLANED SURFACE OR THE PROPOSED INTERMEDIATE COURSE AT A DEPTH OF 4" FROM THE PROPOSED SURFACE ELEVATION. THE CONTRACTOR SHALL TEST ALL LEAD-IN CABLES PRIOR TO MAKING THE FINAL SPLICE. PLACEMENT SHALL BE AS PER SPECIFICATION 632.10. FINAL LOCATIONS, SIZE AND ORIENTATION SHALL BE PROVIDED TO THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.

THE MODE, LENGTH AND LOCATION OF ALL OF THE LOOPS IN LOCATION 1 WILL BE PROVIDED TO THE CONTRACTOR BY BRIAN BOSCH, DISTRICT 5 TRAFFIC ENGINEER. THE CONTRACTOR SHALL CONTACT BRIAN BOSCH, P.E., AT 740-323-5182, TO ARRANGE A MEETING. AT THIS MEETING, BRIAN BOSCH, P.E. WILL PROVIDE THE NECESSARY DETECTOR LOOP INFORMATION TO THE CONTRACTOR FOR INSTALLATION.

ALL MATERIALS, LABOR, TOOLS, EQUIPMENT, TRAFFIC CONTROL AND INCIDENTALS NECESSARY TO PERFORM THE WORK DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 632, DETECTOR LOOP, AS PER PLAN.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE SUB-SUMMARY FOR THE ABOVE PURPOSES.

ITEM 632 DETECTOR LOOP, AS PER PLAN
LOCATION 1 – 4 EACH

INTERSECTION S.R. 37 & U.S. 40
2 POWERHEAD (ON U.S. 40), 2 DILEMMA (ON S.R. 37)

ITEM 653, TOPSOIL FURNISHED AND PLACED, AS PER PLAN

THIS ITEM SHALL CONSIST OF FURNISHING AND PLACING TOPSOIL ADJACENT TO CURB RAMPS, SIDEWALKS, CURBS AND THROUGHOUT THE PROJECT LIMITS AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE REQUIRED TO SEED AND MULCH THE TOPSOIL AS PER 659 OF THE 2013 CMS.

PAYMENT FOR ITEM 653, TOPSOIL FURNISHED AND PLACED, AS PER PLAN, SHALL BE AT THE CONTRACT UNIT PRICE PER CUBIC YARD OF TOPSOIL FURNISHED AND PLACED, INCLUDING ALL OF THE LABOR, MATERIALS AND EQUIPMENT NEEDED TO COMPLETE THE WORK.

ITEM 653, TOPSOIL FURNISHED AND PLACED, AS PER PLAN

LOCATION 1 – 5 CU. YD.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS AT CURB RAMPS, SIDEWALKS AND CURB OR AS DIRECTED BY THE ENGINEER:

ITEM 659, SEEDING AND MULCHING

LOCATION 1 - 400 SQ. YD.

ITEM 659, REPAIR SEEDING AND MULCHING
(5% OF THE PERMANENT SEEDING AREA)

LOCATION 1 - 20 SQ. YD.
0.05 x 400 = 20

ITEM 659, INTER-SEEDING
(5% OF THE PERMANENT SEEDING AREA)

LOCATION 1 – 20 SQ. YD.
0.05 x 400 = 20

ITEM 659, COMMERCIAL FERTILIZER
(ONE TON PER 7,410 SQ. YD. OF THE PERMANENT SEEDED AREA)

LOCATION 1 – 0.11 TON
2 x (400 ÷ 7,410) = 0.11

ITEM 659, LIME
(PERMANENT SEEDED AREA)

LOCATION 1 – 0.08 ACRE
400 SQ. YD. x 9 SQ. FT./SQ.YD. ÷ 43,560 SQ. FT./ACRE = 0.08 ACRE

ITEM 659, WATER
(0.0027 M. GAL. PER SQ. YD. OF THE PERMANENT SEEDED AREA)

LOCATION 1 – 4 M. GAL.
3 x (400 x 0.0027) = 3.24

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.

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT, SHALL EXCEED A HEIGHT OF 35 FT. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT FORM 7460-1 TO THE FAA. A COPY OF THE SUBMISSION AND TWO COPIES OF FORM 7460-1 SHALL BE FORWARDED TO THE ODOT OFFICE OF AVIATION. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

EXPRESS PROCESSING CENTER
THE FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGIONAL OFFICE
AIR TRAFFIC AIRSPACE BRANCH ASW-520
2601 MEACHAN BLVD.
FORT WORTH, TX 76137-4298

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF AVIATION
2829 WEST DUBLIN-GRANVILLE ROAD
COLUMBUS, OHIO 43235
614-387-2346

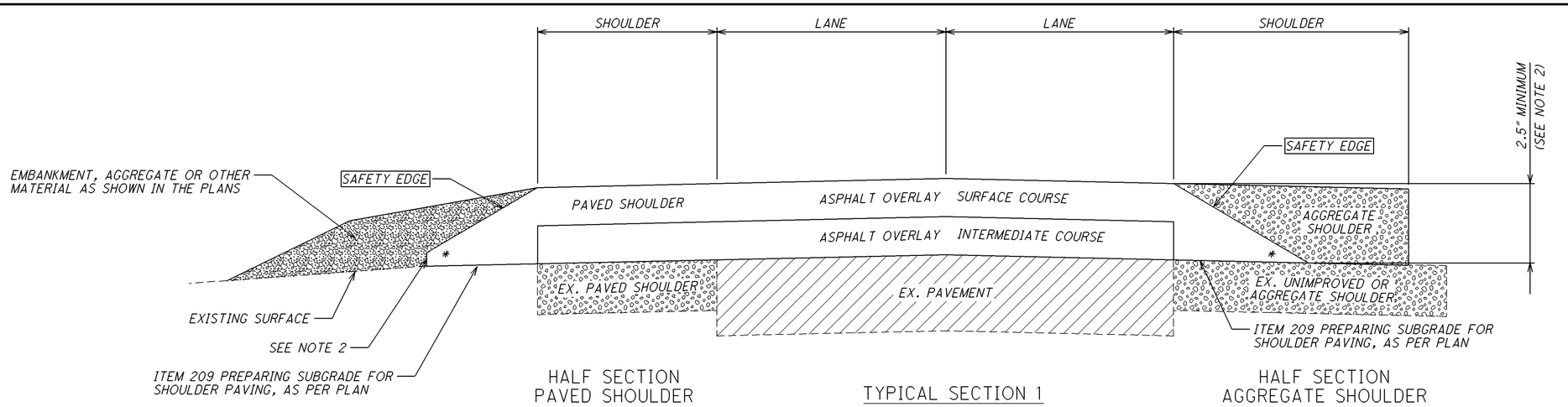
CALCULATED LME CHECKED DNM

GENERAL NOTES

LIC-37-(0.00)(16.59)
LIC-161-0.00

6
34

P:\LIC\83111\Design\Roadway\Plan_Sheets\General\L037_MGN_005.dgn 07-OCT-2013 7:29AM dmorgan

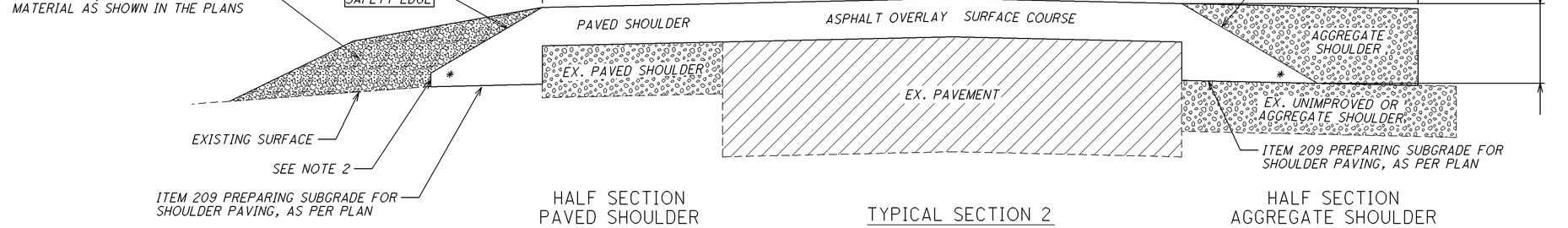


HALF SECTION
PAVED SHOULDER

TYPICAL SECTION 1

N.T.S.

HALF SECTION
AGGREGATE SHOULDER



HALF SECTION
PAVED SHOULDER

TYPICAL SECTION 2

N.T.S.

HALF SECTION
AGGREGATE SHOULDER

NOTES:

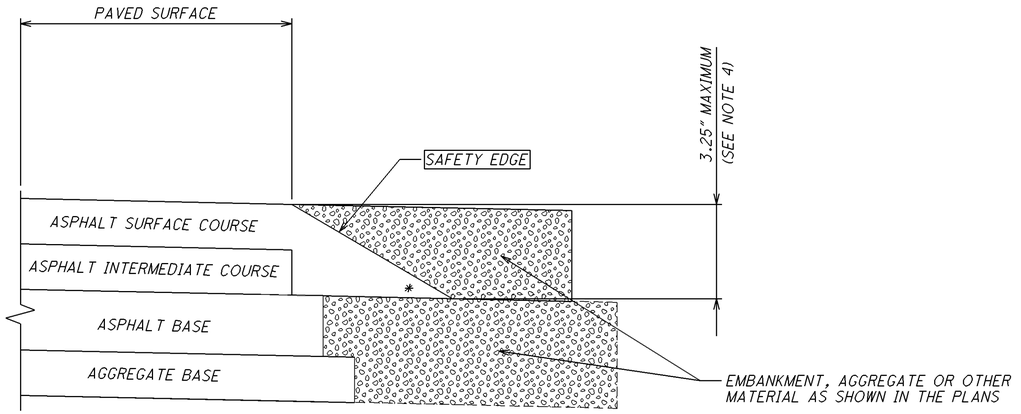
1.) SAFETY EDGES ARE REQUIRED AT THE OUTSIDE EDGES OF THE PAVED ROADWAY (EDGE OF TRAVEL LANE OR EDGE OF PAVED SHOULDER).

2.) CONSTRUCT THE SAFETY EDGE THE FULL ASPHALT CONCRETE OVERLAY THICKNESS OR 2.5" (63MM) WHICHEVER IS GREATER, NOT TO EXCEED THE MAXIMUM SAFETY EDGE THICKNESS OF 6" (150MM). CONSTRUCT A NEAR-VERTICAL FACE BELOW THE SAFETY EDGE FOR THICKNESS GREATER THAN 6" (150 MM).

3.) BLADE AND SHAPE EXISTING SHOULDER MATERIAL TO FORM A UNIFORM SURFACE UNDER THE SAFETY EDGE PRIOR TO PLACEMENT OF THE ASPHALT CONCRETE OVERLAY.

4.) FOR NEW PAVEMENT CONSTRUCT THE SAFETY EDGE THE FULL THICKNESS OF THE SURFACE AND INTERMEDIATE COURSES, NOT TO EXCEED 3.25" (82 MM).

* 40° MAX



HALF SECTION
NEW CONSTRUCTION

TYPICAL SECTION 3

N.T.S.

CALCULATED

CHECKED

SAFETY EDGE DETAIL

LIC-37-(0.00)(16.59)
LIC-161-0.00

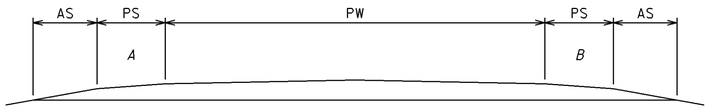
7
34

NOTE:

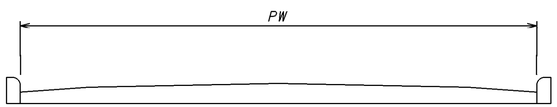
THE PAVEMENT WIDTHS SHOWN IN THE "PAVEMENT DATA" TABLE ON SHEET 9 ARE THE WIDTHS WHICH HAVE BEEN DETERMINED TO HAVE SUFFICIENT ROADWAY BASE FOR PAVING. IF ACTUAL ROADWAY WIDTHS DIFFER, THE ROADWAY SHALL BE PAVED ONLY THE WIDTH SHOWN IN THE AFOREMENTIONED TABLE. IF THE EXISTING ROADWAY IS WIDER THAN THAT WHICH IS SHOWN IN THE TABLE, PAVING SHALL BE CENTERED ABOUT THE FULL WIDTH OF THE ROADWAY AND ANY EXCESS EXISTING PAVEMENT ON THE EDGES SHALL BE COVERED WITH ITEM 617 COMPACTED AGGREGATE. PAVING IN CURBED ROADWAY SECTIONS SHALL BE FROM CURB TO CURB.

PW = PAVEMENT WIDTH
PS = PAVED SHOULDER
AS = AGGREGATE SHOULDER

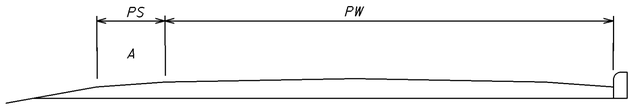
TYPICAL 1



TYPICAL 2

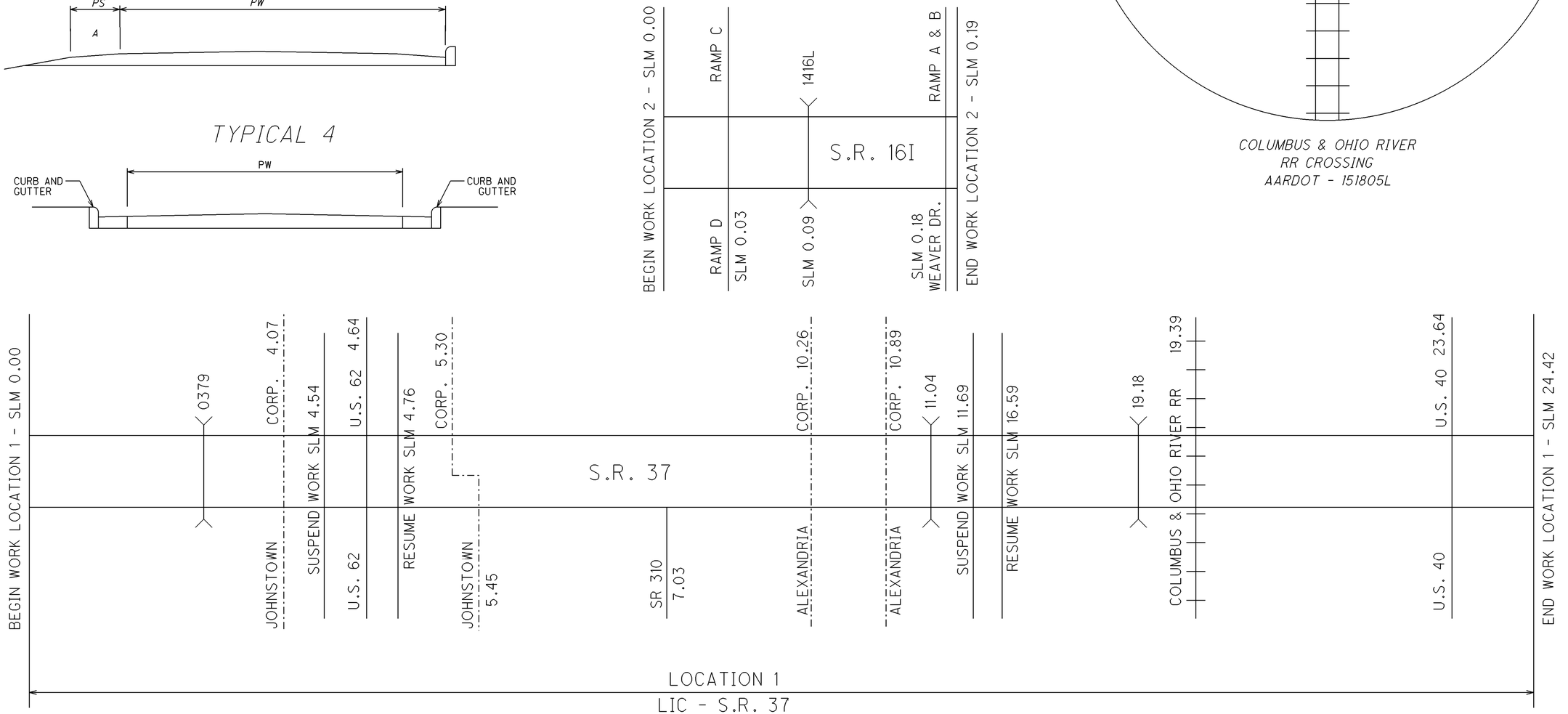


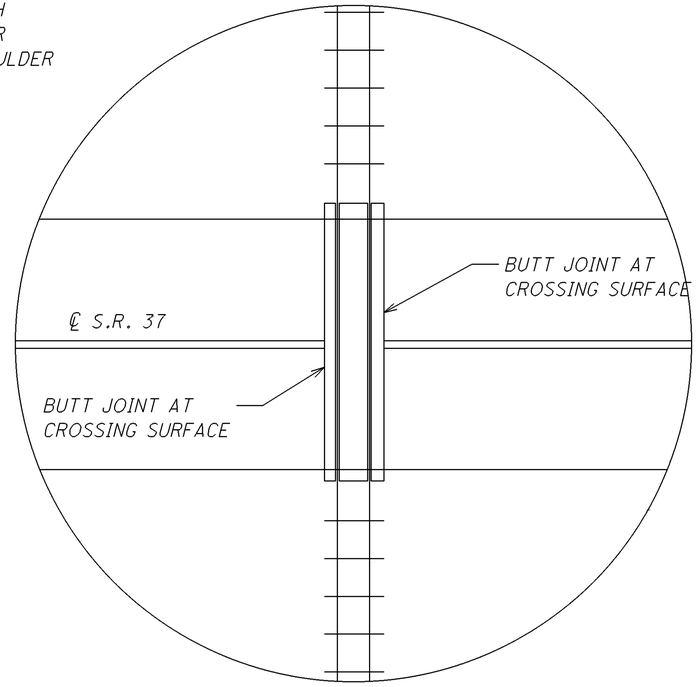
TYPICAL 3



TYPICAL 4

STRAIGHT LINE DIAGRAMS





COLUMBUS & OHIO RIVER
RR CROSSING
AARDOT - 151805L

CALCULATED LME
CHECKED DNM

ASPHALT CONCRETE DATA

LIC-37-(0.00)(16.59)
LIC-161-0.00

8
34

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SEE SHEET 8 FOR STRAIGHT LINE DIAGRAM AND TYPICALS

PAVEMENT DATA

LOCATION	COUNTY	ROUTE	BEGIN LOG POINT SLM	END LOG POINT SLM	LENGTH		PAVEMENT WIDTH (FEET)	TYPICAL	EXISTING PAVEMENT TYPE	PAVEMENT AREA	254		407				448 ASPHALT CONCRETE				614
					MILES	LIN. FT.					DEPTH OF PAVEMENT PLANING	PAVEMENT PLANING, ASPHALT CONCRETE	TACK COAT, TRACKLESS TACK, INTERMEDIATE COURSE @ 0.075 GAL./S.Y.	TACK COAT, TRACKLESS TACK, SURFACE COURSE @ 0.05 GAL./S.Y.	TACK COAT @ 0.075 GAL./S.Y.	TACK COAT FOR INTERMEDIATE COURSE@ 0.05 GAL./S.Y.	THICKNESS	INTERMEDIATE COURSE, TYPE 1, PG 64-22	THICKNESS	SURFACE COURSE, TYPE 1, PG 70-22M	WORK ZONE CENTER LINE, CLASS II
										SQ. YD.	INCHES	SQ. YD.	GAL.	GAL.	GAL.	GAL.	INCHES	CU. YD.	INCHES	CU. YD.	MILE
1	LIC	S.R. 37	0.00	2.03	2.03	10,718.4	20.0	1	448	23,818.7	1.50	23,818.7			1,786.5				1.50	992.5	2.03
1	LIC	S.R. 37	2.03	2.07	0.04	211.2	32.0	1	448	750.9	1.50	750.9			56.4				1.50	31.3	0.04
1	LIC	S.R. 37	2.07	2.09	0.02	105.6	26.0 AVG	1	448	305.1	1.50	305.1			22.9				1.50	12.8	0.02
1	LIC	S.R. 37	2.09	3.58	1.49	7,867.2	20.0	1	448	17,482.7	1.50	17,482.7			1,311.3				1.50	728.5	1.49
1	LIC	S.R. 37	3.58	3.81	0.23	1,214.4	24.0	1	448	3,238.4	1.50	3,238.4			242.9				1.50	135.0	0.23
1	LIC	S.R. 37	3.81	4.10	0.29	1,531.2	24.0	1	448	4,083.2	1.50	4,083.2	306.3						1.50	170.2	0.29
1	LIC	S.R. 37	4.10	4.12	0.02	105.6	27.0 AVG	1	448	316.8	1.50	316.8	23.8						1.50	13.2	0.02
1	LIC	S.R. 37	4.12	4.18	0.06	316.8	32.0	1	448	1,126.4	1.50	1,126.4	84.5						1.50	47.0	0.06
1	LIC	S.R. 37	4.18	4.20	0.02	105.6	27.0 AVG	1	448	316.8	1.50	316.8	23.8						1.50	13.2	0.02
1	LIC	S.R. 37	4.20	4.31	0.11	580.8	24.0	1	448	1,548.8	1.50	1,548.8	116.2						1.50	64.6	0.22
1	LIC	S.R. 37	4.31	4.54	0.23	1,214.4	30.0	2	448	4,048.0	2.25	4,048.0	303.6	202.4			1.00	112.5	1.25	140.6	0.46
1	LIC	S.R. 37	4.76	5.07	0.31	1,636.8	30.0	2	448	5,456.0	2.25	5,456.0	409.2	272.8			1.00	151.6	1.25	189.5	0.62
1	LIC	S.R. 37	5.07	5.19	0.12	633.6	24.0	3	448	1,689.6	2.25	1,689.6	126.8	84.5			1.00	47.0	1.25	58.7	0.24
1	LIC	S.R. 37	5.19	5.45	0.26	1,372.8	24.0	1	448	3,660.8	1.50	3,660.8	274.6	183.1			1.00	101.7	1.25	127.2	0.52
1	LIC	S.R. 37	5.45	10.00	4.55	24,024.0	24.0	1	448	64,064.0	1.50	64,064.0			4,804.8	3,203.2	1.00	1,779.6	1.25	2,224.5	9.10
1	LIC	S.R. 37	10.00	10.23	0.23	1,214.4	24.0	1	448	3,238.4	1.50	3,238.4	242.9	162.0			1.00	90.0	1.25	112.5	0.46
1	LIC	S.R. 37	10.23	10.54	0.31	1,636.8	26.0	4	448	4,728.5	2.25	4,728.5	354.7	236.5			1.00	131.4	1.25	164.2	0.62
1	LIC	S.R. 37	10.54	10.66	0.12	633.6	40.0	2	448	2,816.0	2.25	2,816.0	211.2	140.8			1.00	78.3	1.25	97.8	0.24
1	LIC	S.R. 37	10.66	10.72	0.06	316.8	26.0	2	448	915.2	2.25	915.2	68.7	45.8			1.00	25.5	1.25	31.8	0.12
1	LIC	S.R. 37	10.72	10.74	0.02	105.6	33.0 AVG	2	448	387.2	2.25	387.2	29.1	19.4			1.00	10.8	1.25	13.5	0.04
1	LIC	S.R. 37	10.74	10.78	0.04	211.2	40.0	2	448	938.7	2.25	938.7	70.5	47.0			1.00	26.1	1.25	32.6	0.08
1	LIC	S.R. 37	10.78	10.86	0.08	422.4	33.0 AVG	1	448	1,548.8	1.50	1,548.8	116.2	77.5			1.00	43.1	1.25	53.8	0.16
1	LIC	S.R. 37	10.86	11.00	0.14	739.2	24.0	1	448	1,971.2	1.50	1,971.2	147.9	98.6			1.00	54.8	1.25	68.5	0.28
1	LIC	S.R. 37	11.00	11.60	0.60	3,168.0	24.0	1	448	8,448.0	1.50	8,448.0			633.6	422.4	1.00	234.7	1.25	293.4	1.20
1	LIC	S.R. 37	11.60	11.64	0.04	211.2	24.0	1	448	563.2	1.50	563.2			42.3	28.2	1.00	15.7	1.25	19.6	0.08
1	LIC	S.R. 37	11.64	11.69	0.05	264.0	28.0 AVG	1	448	821.3	1.50	821.3			61.6	41.1	1.00	22.9	1.25	28.6	0.10
SUSPEND WORK SLM 11.69, RESUME WORK SLM 16.59																					
1	LIC	S.R. 37	16.59	16.90	0.31	1,636.8	22.0	1	448	4,001.1	1.25	4,001.1			300.1	200.1	1.00	111.2	1.25	139.0	0.62
1	LIC	S.R. 37	16.90	16.91	0.01	50.0	29.0 AVG	1	448	161.1	1.25	161.1			12.1	8.1	1.00	4.5	1.25	5.6	0.02
1	LIC	S.R. 37	16.91	16.95	0.04	211.2	36.0	1	448	844.8	1.25	844.8			63.4	42.3	1.00	23.5	1.25	29.4	0.08
1	LIC	S.R. 37	16.95	17.20	0.25	1,320.0	22.0	1	448	3,226.7	1.25	3,226.7			242.1	161.4	1.00	89.7	1.25	112.1	0.50
1	LIC	S.R. 37	17.20	17.29	0.09	475.2	29.0 AVG	1	448	1,531.2	1.25	1,531.2			114.9	76.6	1.00	42.6	1.25	53.2	0.18
1	LIC	S.R. 37	17.29	17.35	0.06	316.8	36.0	1	448	1,267.2	1.25	1,267.2			95.1	63.4	1.00	35.2	1.25	44.0	0.12
1	LIC	S.R. 37	17.35	17.43	0.08	422.4	29.0 AVG	1	448	1,361.1	1.25	1,361.1			102.1	68.1	1.00	37.9	1.25	47.3	0.16
1	LIC	S.R. 37	17.43	23.64	6.21	32,788.8	22.0	1	448	80,150.4	1.25	80,150.4			6,011.3	4,007.6	1.00	2,226.4	1.25	2,783.0	12.42
1	LIC	S.R. 37	23.64	23.79	0.15	792.0	24.0	1	448	2,112.0	1.25	2,112.0			158.4	105.6	1.00	58.7	1.25	73.4	0.30
1	LIC	S.R. 37	23.79	23.87	0.08	422.4	30.0 AVG	1	448	1,408.0	1.25	1,408.0			105.6	70.4	1.00	39.2	1.25	48.9	0.16
1	LIC	S.R. 37	23.87	23.95	0.08	422.4	36.0	1	448	1,689.6	1.25	1,689.6			126.8	84.5	1.00	47.0	1.25	58.7	0.16
1	LIC	S.R. 37	23.95	24.03	0.08	422.4	36.0 AVG	1	448	1,689.6	1.25	1,689.6			126.8	84.5	1.00	47.0	1.25	58.7	0.16
1	LIC	S.R. 37	24.03	24.35	0.32	1,689.6	24.0	1	448	4,505.6	1.25	4,505.6			338.0	225.3	1.00	125.2	1.25	156.5	0.64
1	LIC	S.R. 37	24.35	24.42	0.07	330.0	30.0 AVG	1	448	1,100.0	1.25	1,100.0			82.5	55.0	1.00	30.6	1.25	38.2	0.14
BRIDGE DEDUCTIONS										(1,288.0)		(1,288.0)			(96.6)	(64.4)	1.00	(35.8)	1.25	(44.8)	(0.13)
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)												**262,043.1**	**2,910.0**	**1,570.4**	**16,744.9**	**8,883.4**		**5,808.6**		**9,468.3**	**34.27**
2	LIC	S.R. 161	0.00	0.19	0.19	1,003.2	24.0	1	448	2,675.2	2.25	2,675.2			200.7	133.8	1.00	74.4	1.25	92.9	0.38
BRIDGE DEDUCTIONS										(786.9)		(786.9)			(59.1)	(39.4)	1.00	(21.9)	1.25	(27.4)	(0.11)
LOCATION 2 TOTALS (CARRIED TO SUB-SUMMARY)												**1,888.3**			**141.6**	**94.4**		**52.5**		**65.5**	**0.27**

CALCULATED LME
CHECKED DNM

ASPHALT CONCRETE DATA

LIC-37-(0.00)(16.59)
LIC-161-0.00

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SEE SHEET 8 FOR STRAIGHT LINE DIAGRAM AND TYPICALS

SHOULDER DATA

LOCATION	COUNTY	ROUTE	BEGIN LOG POINT SLM	END LOG POINT SLM	LENGTH		TYPICAL	PROPOSED WIDTH (FT.)		SHOULDER AREA	209	254		407				448 ASPHALT CONCRETE				617		618
					MILES	LIN. FT.		A	B		PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	DEPTH OF PAVEMENT PLANING	PAVEMENT PLANING, ASPHALT CONCRETE	TACK COAT, TRACKLESS TACK, INTERMEDIATE COURSE @ 0.075 GAL./S.Y.	TACK COAT, TRACKLESS TACK, SURFACE COURSE @ 0.05 GAL./S.Y.	TACK COAT @ 0.075 GAL./S.Y.	TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL./S.Y.	SURFACE COURSE, TYPE 1, PG 70-22M THICKNESS	INTERMEDIATE COURSE, TYPE 2, PG 64-22	SURFACE COURSE, TYPE 1, PG 70-22M THICKNESS	SURFACE COURSE, TYPE 1, PG 70-22M	THICKNESS	COMPACTED AGGREGATE, AS PER PLAN (2' WIDTH)	EDGE LINE, RUMBLE STRIPES (ASPHALT CONCRETE)
										SQ. YD.	MILE	INCHES	SQ. YD.	GAL.	GAL.	GAL.	GAL.	INCHES	CU. YD.	INCHES	CU. YD.	INCHES	CU. YD.	MILE
1	LIC	S.R. 37	0.00	3.58	3.58	18902.4	1	2	2	8,401.1	7.16	1.50	8,401.1			630.1				1.50	350.1	2.00	466.8	
1	LIC	S.R. 37	2.03	2.09	0.06	316.8	1	3	2	176.0	0.12	1.50	176.0			13.2				1.50	7.4	2.00	7.9	
1	LIC	S.R. 37	2.09	3.58	1.49	7867.2	1	2	2	3,496.5	2.98	1.50	3,496.5			262.3				1.50	145.7	2.00	194.3	
1	LIC	S.R. 37	3.58	3.81	0.23	1214.4	1	2	2	539.7	0.46	1.50	539.7			40.5				1.50	22.5	2.00	30.0	
1	LIC	S.R. 37	3.81	4.07	0.26	1372.8	1	2	2	610.1	0.52	1.50	610.1	45.8						1.50	25.5	2.00	33.9	
1	LIC	S.R. 37	4.07	4.10	0.03	158.4	1	2	2	70.4	0.06	1.50	70.4	5.3						1.50	3.0	2.00	4.0	
1	LIC	S.R. 37	4.10	4.20	0.10	528.0	1	1	1	117.3	0.20	1.50	117.3	8.8						1.50	4.9	2.00	13.1	
1	LIC	S.R. 37	4.20	4.26	0.06	316.8	1	2	8	352.0	0.12	1.50	352.0	26.4						1.50	14.7	2.00	7.9	
1	LIC	S.R. 37	4.26	4.31	0.05	264.0	1	2	2	117.3	0.10	1.50	117.3	8.8						1.50	4.9	2.00	6.6	
1	LIC	S.R. 37	5.07	5.19	0.12	633.6	3	2		140.8		2.25	140.8	10.6	7.1			1.00	4.0	1.25	4.9	2.00	15.7	
1	LIC	S.R. 37	5.19	5.45	0.26	1372.8	1	2	2	610.1	0.52	1.50	610.1	45.8	30.6			1.00	17.0	1.25	21.2	2.00	33.9	
1	LIC	S.R. 37	5.45	10.00	4.55	24024.0	1	4	4	21,354.7	9.10	1.50	21,354.7			1,601.7	1,067.8	1.00	593.2	1.25	741.5	2.00	593.2	9.10
1	LIC	S.R. 37	10.00	10.23	0.23	1214.4	1	4	4	1,079.5	0.46	1.50	1,079.5	81.0	54.0			1.00	30.0	1.25	37.5	2.00	30.0	0.46
1	LIC	S.R. 37	10.78	10.86	0.08	422.4	1	4	4	375.5	0.16	1.50	375.5	28.2	18.8			1.00	10.5	1.25	13.1	2.00	10.5	
1	LIC	S.R. 37	10.86	11.00	0.14	739.2	1	2	2	328.5	0.28	1.50	328.5	24.7	16.5			1.00	9.2	1.25	11.5	2.00	18.3	
1	LIC	S.R. 37	11.00	11.60	0.60	3168.0	1	2	2	1,408.0	1.20	1.50	1,408.0			105.6	70.4	1.00	39.2	1.25	48.9	2.00	78.3	
1	LIC	S.R. 37	11.60	11.69	0.09	475.2	1	10	10	1,056.0	0.18	1.50	1,056.0			79.2	52.8	1.00	29.4	1.25	36.7	2.00	11.8	
SUSPEND WORK SLM 11.69, RESUME WORK SLM 16.59																								
1	LIC	S.R. 37	16.59	16.90	0.31	1636.8	1	3	3	1,091.2	0.62	1.25	1,091.2			81.9	54.6	1.00	30.4	1.25	37.9	2.00	40.5	0.62
1	LIC	S.R. 37	16.90	16.96	0.06	316.8	1	3	6	316.8	0.12	1.25	316.8			23.8	15.9	1.00	8.8	1.25	11.0	2.00	7.9	0.12
1	LIC	S.R. 37	16.96	17.20	0.24	1267.2	1	3	3	844.8	0.48	1.25	844.8			63.4	42.3	1.00	23.5	1.25	29.4	2.00	31.3	0.48
1	LIC	S.R. 37	17.20	17.43	0.23	1214.4	1	4 AVG	4 AVG	1,079.5	0.46	1.25	1,079.5			81.0	54.0	1.00	30.0	1.25	37.5	2.00	30.0	0.46
1	LIC	S.R. 37	17.43	23.64	6.21	32788.8	1	3	3	21,859.2	12.42	1.25	21,859.2			1,639.5	1,093.0	1.00	607.2	1.25	759.0	2.00	809.6	12.42
1	LIC	S.R. 37	23.64	23.79	0.15	792.0	1	2	2	352.0	0.30	1.25	352.0			26.4	17.6	1.00	9.8	1.25	12.3	2.00	19.6	0.30
1	LIC	S.R. 37	23.79	23.94	0.15	792.0	1	5	5	880.0	0.30	1.25	880.0			66.0	44.0	1.00	24.5	1.25	30.6	2.00	19.6	0.30
1	LIC	S.R. 37	23.94	24.03	0.09	475.2	1	2	5	369.6	0.18	1.25	369.6			27.8	18.5	1.00	10.3	1.25	12.9	2.00	11.8	0.18
1	LIC	S.R. 37	24.03	24.35	0.32	1689.6	1	2	2	750.9	0.64	1.25	750.9			56.4	37.6	1.00	20.9	1.25	26.1	2.00	41.8	0.64
1	LIC	S.R. 37	24.35	24.42	0.07	369.6	1	5 AVG	5 AVG	410.7	0.14	1.25	410.7			30.9	20.6	1.00	11.5	1.25	14.3	2.00	9.2	0.14
BRIDGE DEDUCTIONS										(295.6)	(0.10)		(295.6)			(22.2)	(14.8)	1.00	(8.3)	1.25	(10.3)	2.00	(6.6)	(0.06)
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)											**39.18**		**67,892.6**	**285.4**	**127.0**	**4,807.5**	**2,574.3**		**1,501.1**		**2,454.7**		**2,570.9**	**25.16**
2	LIC	S.R. 16 I	0.00	0.19	0.19	1003.2	1	4	4	891.7	0.38	2.25	891.7			66.9	44.6	1.00	24.8	1.25	31.0	2.00	24.8	
BRIDGE DEDUCTIONS										(262.3)	(0.11)		(262.3)			(19.7)	(13.2)	1.00	(7.3)	1.25	(9.2)	2.00	(7.7)	
LOCATION 2 TOTALS (CARRIED TO SUB-SUMMARY)											**0.27**		**629.4**			**47.2**	**31.4**		**17.5**		**21.8**		**17.1**	

CALCULATED LME
CHECKED DNM

PAVED SHOULDER DATA

LIC-37-(0.00)(16.59)
LIC-161-0.00

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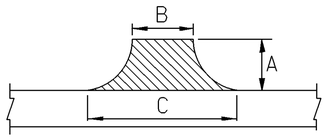


$$AREA = \left[A \frac{(B + C)}{2} \right] / 9$$

EXTRA AREAS

LOCATION	COUNTY	ROUTE	SIDE	DESCRIPTION	INTERSECTIONS DETAIL DIMENSION A FT.	B FT.	C FT.	AREA SQ. YD.	202 WEARING COURSE REMOVED SQ. YD.	407 TACK COAT, TRACKLESS TACK, SURFACE COURSE GAL.	407 TACK COAT, TRACKLESS TACK, INTERMEDIATE COURSE GAL.	448 ASPHALT CONCRETE THICKNESS IN.	INTERMEDIATE COURSE, TYPE 1, PG 64-22 CU. YD.	THICKNESS IN.	SURFACE COURSE, TYPE 1, PG 64-22 CU. YD.
1	LIC	S.R. 37	LT	COUNTY LINE RD - CR 51	50	24	86	305.6	305.6	23.0				1.25	10.7
1	LIC	S.R. 37	RT	COUNTY LINE RD - CR 51	50	22	84	294.5	294.5	22.1				1.25	10.3
1	LIC	S.R. 37	LT	DOWNING RD N.W. - TR 45	30	17	56	121.7	121.7	9.2				1.25	4.3
1	LIC	S.R. 37	LT	CLOVER VALLEY RD - CR 26	35	21	76	188.7	188.7	14.2				1.25	6.6
1	LIC	S.R. 37	RT	CLOVER VALLEY RD - CR 26	35	24	65	173.1	173.1	13.0				1.25	6.1
1	LIC	S.R. 37	RT	GREENE NILL RD N.W. - TR 59	30	16	34	83.4	83.4	6.3				1.25	2.9
1	LIC	S.R. 37	LT	CROTON RD - CR 3	85	23	139	765.0	765.0	57.4				1.25	26.6
1	LIC	S.R. 37	RT	MC CRAKEN DRIVE	20	19	48	74.5	74.5	5.6				1.25	2.6
1	LIC	S.R. 37	RT	PERSHING DRIVE	20	21	46	74.5	74.5	5.6				1.25	2.6
1	LIC	S.R. 37	LT	DEVELOPMENT DRIVE	10	48	115	90.6	90.6	6.8				1.25	3.2
1	LIC	S.R. 37	RT	EDWARDS STREET	20	29	38	74.5	74.5	5.6				1.25	2.6
1	LIC	S.R. 37	LT	MAPLE STREET	16	18	36	48.0	48.0	3.6				1.25	1.7
1	LIC	S.R. 37	RT	MAPLE STREET	18	25	45	70.0	70.0	5.3				1.25	2.5
				SUSPEND WORK SLM 4.54-SLM 4.76											
1	LIC	S.R. 37	LT	COLLEGE STREET	15	22	40	51.7	51.7	3.9				1.25	1.8
1	LIC	S.R. 37	RT	COLLEGE STREET	15	23	37	50.0	50.0	3.8				1.25	1.8
1	LIC	S.R. 37	LT	JERSEY STREET	16	22	39	54.3	54.3	4.1				1.25	1.9
1	LIC	S.R. 37	RT	JERSEY STREET	16	22	45	59.6	59.6	4.5				1.25	2.1
1	LIC	S.R. 37	LT	DOUGLAS STREET	25	18	47	90.3	90.3	6.8				1.25	3.2
1	LIC	S.R. 37	RT	DOUGLAS STREET	18	23	35	58.0	58.0	4.4				1.25	2.1
1	LIC	S.R. 37	RT	SCHOOL DRIVE	25	23	65	122.3	122.3	9.2				1.25	4.3
1	LIC	S.R. 37	RT	SCHOOL DRIVE	20	19	47	73.4	73.4	5.6				1.25	2.6
1	LIC	S.R. 37	LT	CONCORD RD N.W. - TR 18	75	19	105	516.7	516.7	38.8				1.25	18.0
1	LIC	S.R. 37	RT	CASWELL RD - TR 29	40	24	86	244.5	244.5	18.4				1.25	8.5
1	LIC	S.R. 37	LT	WINDY HOLLOW RD - TR 96	26	18	34	75.2	75.2	5.7				1.25	2.7
1	LIC	S.R. 37	LT	WINDY HOLLOW RD - TR 96	33	17	40	104.5	104.5	7.9				1.25	3.7
1	LIC	S.R. 37	RT	SR 310	50	22	110	366.7	366.7	27.6				1.25	12.8
1	LIC	S.R. 37	RT	SR 310	21	22	47	80.5	80.5	6.1				1.25	2.8
1	LIC	S.R. 37	LT	SADIE THOMAS RD - TR 117	35	23	75	190.6	190.6	14.3				1.25	6.7
1	LIC	S.R. 37	RT	SADIE THOMAS RD - TR 117	35	17	64	157.5	157.5	11.9				1.25	5.5
1	LIC	S.R. 37	RT	DERRINGER COURT	24	18	57	100.0	100.0	7.5				1.25	3.5
1	LIC	S.R. 37	LT	CASTLE RD N.W. - TR 164	42	27	108	315.0	315.0	23.7				1.25	11.0
1	LIC	S.R. 37	RT	DUNCAN PLAINS RD - TR 133	35	27	82	212.0	212.0	15.9				1.25	7.4
1	LIC	S.R. 37	RT	JERSEY MILL RD - CR 91	43	23	90	270.0	270.0	20.3				1.25	9.4
1	LIC	S.R. 37	LT	NORTHRIDGE RD - CR 21	37	30	79	224.1	224.1	16.9				1.25	7.8
1	LIC	S.R. 37	RT	BEECHWOOD DRIVE	21	12	26	44.4	44.4	3.4				1.25	1.6
1	LIC	S.R. 37	LT	MAPLE ALLEY	16	20	37	50.7	50.7	3.9				1.25	1.8
1	LIC	S.R. 37	LT	ALLEY	12	15	15	20.0	20.0	1.5				1.25	0.7
1	LIC	S.R. 37	RT	ALLEY	14	13	27	31.2	31.2	2.4				1.25	1.1
LOCATION 1 TOTALS (CARRIED TO NEXT SHEET)									5,927.3	446.2					207.5

CALCULATED LME CHECKED DNM

EXTRA AREA DATA

LIC-37-(0.00)(16.59)
LIC-161-0.00

11
34

CALCULATED LME CHECKED DNM

FOR DETAIL SHOWING DIMENSIONS A, B & C SEE SHEET 11

EXTRA AREAS

LOCATION	COUNTY	ROUTE	SIDE	DESCRIPTION	INTERSECTIONS DETAIL DIMENSION A	INTERSECTIONS DETAIL DIMENSION B	INTERSECTIONS DETAIL DIMENSION C	AREA	202 WEARING COURSE REMOVED	407 TACK COAT, TRACKLESS TACK, SURFACE COURSE @ 0.75 GAL./SQ. YD.	407 TACK COAT, TRACKLESS TACK, INTERMEDIATE COURSE @ 0.075 GAL./ SQ. YD.	448 ASPHALT CONCRETE THICKNESS	448 INTERMEDIATE COURSE, TYPE 1, PG 64-22	448 THICKNESS	448 SURFACE COURSE, TYPE 1, PG 64-22	448 SURFACE COURSE, TYPE 1, PG 70-22M
					FT.	FT.	FT.	SQ. YD.	SQ. YD.	GAL.	GAL.	IN.	CU. YD.	IN.	CU. YD.	CU. YD.
LOCATION 1 TOTALS (FROM PREVIOUS SHEET)									**5927.3**	**446.2**					**207.5**	
1	LIC	S.R. 37	LT	ALLEY	12	12	20	21.4	21.4	1.7				1.25	0.8	
1	LIC	S.R. 37	LT	S. LIBERTY STREET	20	32	52	93.4	93.4	7.1				1.25	3.3	
1	LIC	S.R. 37	RT	PARK STREET	26	26	45	102.6	102.6	7.7				1.25	3.6	
1	LIC	S.R. 37	RT	ALLEY	12	14	19	22.0	22.0	1.7				1.25	0.8	
1	LIC	S.R. 37	RT	ALLEY	14	13	22	27.3	27.3	2.1				1.25	1.0	
1	LIC	S.R. 37	RT	ALLEY	18	12	24	36.0	36.0	2.7				1.25	1.3	
1	LIC	S.R. 37	LT	MALLARD DRIVE	18	15	24	39.0	39.0	3.0				1.25	1.4	
1	LIC	S.R. 37	RT	MALLARD DRIVE	18	16	22	38.0	38.0	2.9				1.25	1.4	
1	LIC	S.R. 37	RT	ALLEY	12	14	19	22.0	22.0	1.7				1.25	0.8	
1	LIC	S.R. 37	LT	ALLEY	12	14	19	22.0	22.0	1.7				1.25	0.8	
1	LIC	S.R. 37	RT	ALLEY	12	14	19	22.0	22.0	1.7				1.25	0.8	
1	LIC	S.R. 37	LT	ALLEY	12	14	19	22.0	22.0	1.7				1.25	0.8	
1	LIC	S.R. 37	RT	ALLEY	12	14	19	22.0	22.0	1.7				1.25	0.8	
1	LIC	S.R. 37	LT	ALLEY	12	14	19	22.0	22.0	1.7				1.25	0.8	
1	LIC	S.R. 37	LT	GRANVILLE STREET	27	14	47	91.5	91.5	6.9	6.9	1.00	2.6	1.25		3.2
1	LIC	S.R. 37	LT	GRANVILLE STREET	15	52	98	125.0	125.0	9.4	9.4	1.00	3.5	1.25		4.4
1	LIC	S.R. 37	LT	THARP RD	40	22	90	248.9	248.9	18.7				1.25	8.7	
1	LIC	S.R. 37	LT.	SR 16 ON RAMP	186	25		516.7	516.7	38.8				1.25	18.0	
1	LIC	S.R. 37	RT.	ROSEVIEW DR.	25	30	56	119.5	119.5	9.0				1.25	4.2	
1	LIC	S.R. 37	RT.	TWP. RD. 142 (SILVER ST.)	45	19	79	245.0	245.0	18.4				1.25	8.6	
1	LIC	S.R. 37	LT.	TWP. RD. 132 (JAMES RD.)	40	23	85	240.0	240.0	18.0				1.25	8.4	
1	LIC	S.R. 37	LT.	OLD FARM ROAD	25	28	69	134.8	134.8	10.2				1.25	4.7	
1	LIC	S.R. 37	LT.	CR 135 (UNION STATION)	65	19	105	447.8	447.8	33.6				1.25	15.6	
1	LIC	S.R. 37	RT.	CR 139 (HAYES RD.)	60	19	84	343.4	343.4	25.8				1.25	12.0	
1	LIC	S.R. 37	RT.	TWP. RD. 138 (DEEDS RD.)	45	20	90	275.0	275.0	20.7				1.25	9.6	
1	LIC	S.R. 37	RT.	CR 34 (BLACKS RD)	65	23	104	458.7	458.7	34.5				1.25	16.0	
1	LIC	S.R. 37	LT.	TWP. RD. 34 (BLACKS RD.)	45	20	82	255.0	255.0	19.2				1.25	8.9	
1	LIC	S.R. 37	LT.	SQUIRE LANE	35	18	68	167.3	167.3	12.6				1.25	5.9	
1	LIC	S.R. 37	LT.	TWP. RD. 35 (BEAVER RUN RD.)	50	24	128	422.3	422.3	31.7				1.25	14.7	
1	LIC	S.R. 37	RT.	TWP. RD. 35 (BEAVER RUN RD.)	45	16	75	227.5	227.5	17.1				1.25	7.9	
1	LIC	S.R. 37	LT.	TWP. RD. 30 A	30	19	70	148.4	148.4	11.2				1.25	5.2	
1	LIC	S.R. 37	RT.	TWP. RD. 30 (REFUGEE RD.)	50	20	90	305.6	305.6	23.0				1.25	10.7	
1	LIC	S.R. 37	LT.	TWP. RD. 30 (REFUGEE RD.)	45	21	92	282.5	282.5	21.2				1.25	9.9	
1	LIC	S.R. 37	LT.	CAROLINE DR.	23	17	52	88.2	88.2	6.7				1.25	3.1	
1	LIC	S.R. 37	RT.	USR 40	50	28	120	411.2	411.2	30.9				1.25	14.3	
1	LIC	S.R. 37	LT.	USR 40	50	28	120	411.2	411.2	30.9				1.25	14.3	
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)									**12,404.5**	**933.8**	**16.3**		**6.1**		**426.6**	**7.6**
2	LIC	S.R. 16 I	LT.	WEAVER DR.	54	22	100	366.0	366.0	27.5				1.25	12.8	
LOCATION 2 TOTALS (CARRIED TO SUB-SUMMARY)									**366.0**	**27.5**					**12.8**	

EXTRA AREA DATA

LIC-37-(0.00)(16.59)
LIC-16I-0.00

CALCULATED LME | CHECKED DNM

BRIDGE TREATMENT

LOCATION 1

DETAIL (1) LIC-37-0379: BUTT JOINT AT APPROACH SLABS
DETAIL (2) LIC-37-1104: BUTT JOINT AT APPROACH SLABS
DETAIL (3) LIC-37-1918: REMOVE ASPHALT, WATERPROOF, PLACE 2.5"-4" ASPHALT CONCRETE

LOCATION 2

DETAIL (4) LIC-16-1416L: BUTT JOINT AT BRIDGE DECK, MILL AND RESURFACE APPROACH SLABS

DEDUCTIONS = PAVEMENT/SHOULDER WIDTHS X (BRIDGE LENGTH + APPROACH SLABS)

BRIDGE DATA

LOCATION	COUNTY, ROUTE, BRIDGE NO.	LENGTH (BRIDGE LIMITS)	WIDTH	AREA	APPROACH SLAB LENGTH	APPROACH SLAB WIDTH	APPROACH SLAB AREA (INCLUDES BOTH APPROACH SLABS)	DETAILS (SHEET 14)	MAINLINE DEDUCTIONS (CARRIED TO SHEET 8)	SHOULDER DEDUCTIONS (CARRIED TO SHEET 10)	202	407		448				512	516
											WEARING COURSE REMOVED	TACK COAT @ 0.075 GAL/SQ.YD.	TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL/SQ.YD.	THICKNESS	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22	THICKNESS	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M	TYPE 3 WATERPROOFING	2" DEEP JOINT SEALER, AS PER PLAN
		LIN. FT.	LIN. FT.	SQ. YD.	LIN. FT.	LIN. FT.	SQ. YD.		SQ.YD.	SQ.YD.	SQ.YD.	GALLON	GALLON	INCHES	CU.YD.	INCHES	CU.YD.	SQ.YD.	FEET
1	LIC-37-0379	120.0	40.0	533.4	25.0	40.0	222.2	1	453.3	75.6									56.0
1	LIC-37-1104	133.0	44.0	650.3	25.0	44.0	244.4	2	488.0	81.3									88.0
1	LIC-37-1918	106.0	40.0	471.2	25.0	40.0	222.2	3	346.7	138.7	693.4	52.1	34.7	2.0 AVG	32.4	1.25	24.1	472.0	160.0
	BRIDGE DEDUCTIONS								1,288.0	295.6									
	LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)										**693.4**	**52.1**	**34.7**		**32.4**		**24.1**	**472.0**	**304.0**
2	LIC-16-1416L	245.1	33.5	912.4	25.0	32.0	177.8	4	786.9	262.3	177.8	13.4	8.9	1.00	5.0	1.25	6.2		64.0
	LOCATION 2 TOTALS (CARRIED TO SUB-SUMMARY)										**177.8**	**13.4**	**8.9**		**5.0**		**6.2**		**64.0**

BRIDGE DECK TREATMENT DATA

LIC-37-(0.00)(16.59)
LIC-16I-0.00

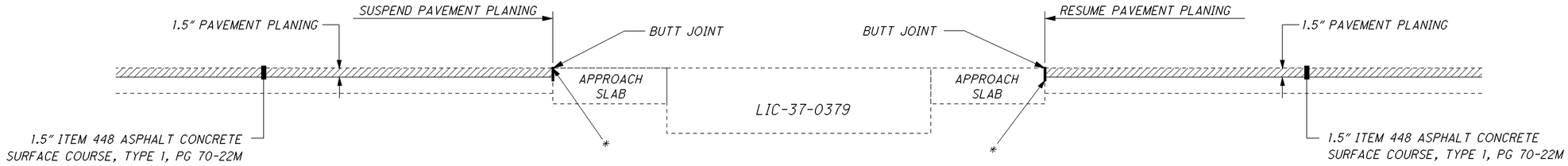
13
34

CALCULATED LME | CHECKED DNM

BRIDGE DECK TREATMENT DATA

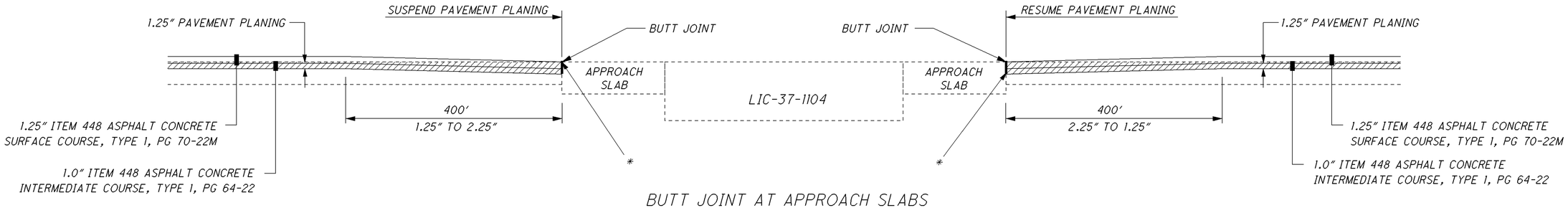
LIC-37-(0.00)(16.59)
LIC-161-0.00

DETAIL 1



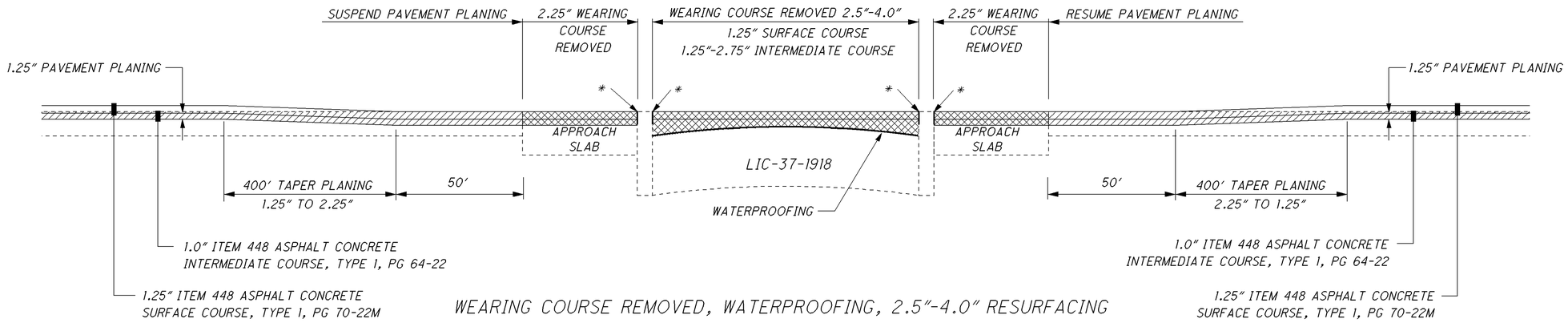
BUTT JOINT AT APPROACH SLABS

DETAIL 2



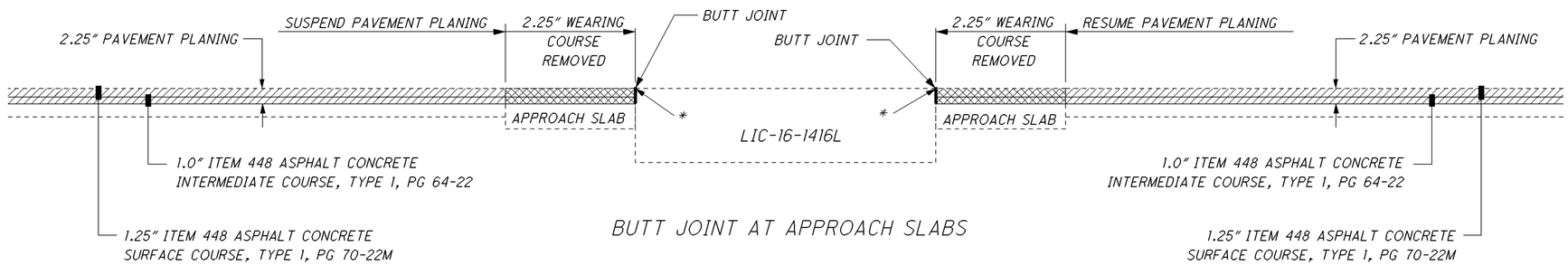
BUTT JOINT AT APPROACH SLABS

DETAIL 3



WEARING COURSE REMOVED, WATERPROOFING, 2.5"-4.0" RESURFACING

DETAIL 4



BUTT JOINT AT APPROACH SLABS

ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE

ITEM 202 WEARING COURSE REMOVED

* 2.0" DEEP JOINT SEALER, AS PER PLAN

DETAILS NOT TO SCALE

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CURB RAMP CALCULATIONS

REFERENCE NO.	SHEET NO.	LOCATION	SIDE	202				608			690 SPECIAL-MISC.:				609		COMMENTS
				PAVEMENT REMOVED	WALK REMOVED	CURB REMOVED	CURB & GUTTER REMOVED	4" CONCRETE WALK, (CURB RAMP AREA)	4" CONCRETE WALK, (EXTRA WALK AREA)	8" CONCRETE WALK	DETECTABLE WARNING	TYPE A1	TYPE A2	TYPE B2	CURB, TYPE 6	COMBINATION CURB & GUTTER, TYPE 2	
			CL/LT./RT.	SQ. YD.	SQ. FT.	FT.	FT.	SQ. FT.	SQ. FT.	SQ. FT.	SQ. FT.	EACH	EACH	EACH	FT.	FT.	
		S.R. 37 -JOHNSTOWN															
1-CR	16	EDWARDS RD.	RT		18			10			8						INSTALL DETECTABLE WARNING, NO RAMP REQUIRED
2-CR	16	EDWARDS RD.	RT	3				16			8						INSTALL DETECTABLE WARNING, NO RAMP REQUIRED
3-CR	16	MAPLE ST.	LT		52			19	25		8						INSTALL DETECTABLE WARNING, NO RAMP REQUIRED
4-CR	16	MAPLE ST.	LT		93			33	52		8						INSTALL DETECTABLE WARNING, NO RAMP REQUIRED
5-CR	17	COLLEGE ST.	LT		23			15			8						INSTALL DETECTABLE WARNING, NO RAMP REQUIRED
6-CR	17	COLLEGE ST.	RT		96	16		10	80		8				16		INSTALL DETECTABLE WARNING, NO RAMP REQUIRED
7-CR	17	COLLEGE ST.	LT		84	6		50	36				1		20		
8-CR	17	COLLEGE ST.	RT		85	22		36	41				1		40		
9-CR	17	ON S.R. 37 BEFORE JERSEY ST.	LT			6		50					1		6		
10-CR	17	JERSEY ST.	LT		192	5		144	48				1	1	51		
11-CR	17	JERSEY ST.	RT			6		54					1		6		
12-CR	17	ON S.R. 37 BEFORE JERSEY ST.	RT		94		30	45	32				1		14	30	
13-CR	17	JERSEY ST.	LT		104	5		40	32				1		27		
14-CR	17	JERSEY ST.	RT		78	10	8	37	16		8				10	8	INSTALL DETECTABLE WARNING, NO RAMP REQUIRED
15-CR	18	DOUGLAS ST.	LT		90			61	35				1				
16-CR	18	DOUGLAS ST.	RT		28			8	12		8						INSTALL DETECTABLE WARNING, NO RAMP REQUIRED
		S.R. 37 -ALEXANDRIA															
17-CR	19	NORTH RIDGE RD.	LT		20			25					1		6		
18-CR	19	BEECHWOOD DR.	RT		64			32	24		8						INSTALL DETECTABLE WARNING, NO RAMP REQUIRED
19-CR	19	BEECHWOOD DR.	RT		20			12			8						INSTALL DETECTABLE WARNING, NO RAMP REQUIRED
20-CR	19	MAPLE DR.	LT		20			12			8						INSTALL DETECTABLE WARNING, NO RAMP REQUIRED
21-CR	19	MAPLE DR.	LT	5	60			8	44	36	16						INSTALL DETECTABLE WARNINGS, NO RAMPS REQUIRE
22-CR	19	ACROSS FROM MAPLE DR.	RT		24		6	30					1			6	
23-CR	20	LIBERTY ST.	LT		84			84			16						INSTALL DETECTABLE WARNINGS, NO RAMPS REQUIRE
24-CR	20	LIBERTY ST.	RT		264	32		76	185			1	1		45		
25-CR	20	LIBERTY ST.	LT	6	69	16		57	55		8		1		39		ONE DETECTABLE WARNING (NO RAMP) & ONE RAMP
26-CR	20	LIBERTY ST.	RT		142	22		108	13		8		1		41		ONE DETECTABLE WARNING (NO RAMP) & ONE RAMP
SUB-TOTALS								1,072	730								
TOTALS (CARRIED TO LOCATION 1 SUB-SUMMARY)				14	1,804	146	44	1,802		36	136	1	13	1	321	44	

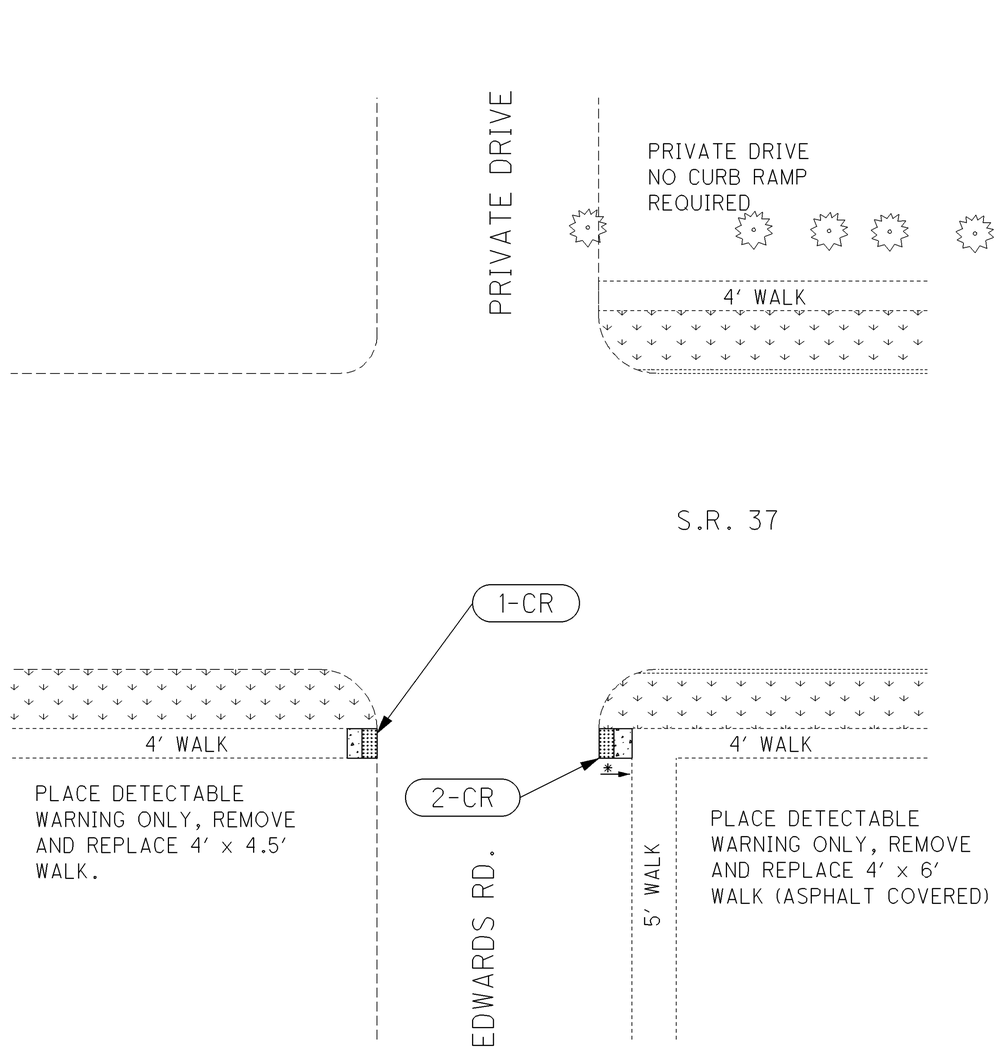
CALCULATED LME
CHECKED DNM

CURB RAMP SUB-SUMMARY

LIC-37-(0.00)(16.59)
LIC-161-0.00

15
34

SEE SHEET 15 FOR CURB RAMP/WALK QUANTITES



* 12:1 MAX.

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DRAWING NOT TO SCALE

CALCULATED LME CHECKED DNM

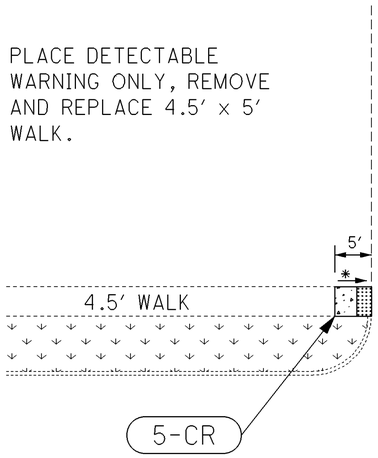
CURB RAMP PLAN SHEET
S.R. 37 JOHNSTOWN

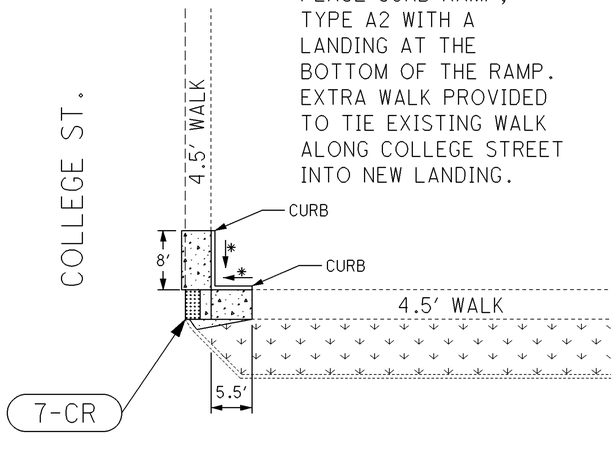
LIC-37-(0.00)(16.59)
LIC-161-0.00

16
34

SEE SHEET 15 FOR CURB RAMP/WALK QUANTITES

PLACE DETECTABLE WARNING ONLY, REMOVE AND REPLACE 4.5′ x 5′ WALK.

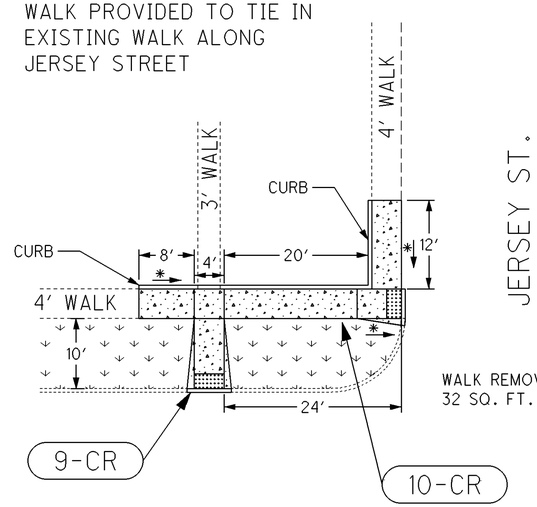




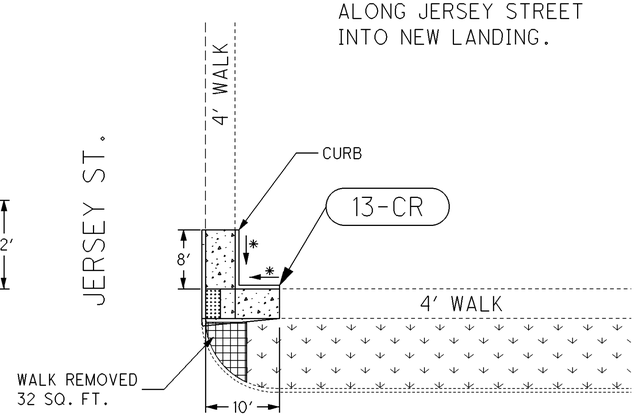
PLACE CURB RAMP, TYPE A2 WITH A LANDING AT THE BOTTOM OF THE RAMP. EXTRA WALK PROVIDED TO TIE EXISTING WALK ALONG COLLEGE STREET INTO NEW LANDING.

S.R. 37

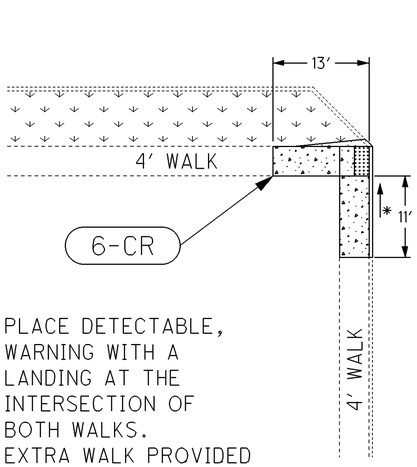
USE A CURB RAMP, TYPE B2 TO LOWER WALK 8 INCHES. CREATE STEP AT END OF 3′ WALK WITH A 4′ LANDING. PLACE CURB RAMP, TYPE A2 FROM LANDING TO S.R. 37 AND TO JERSEY STREET. EXTRA WALK PROVIDED TO TIE IN EXISTING WALK ALONG JERSEY STREET



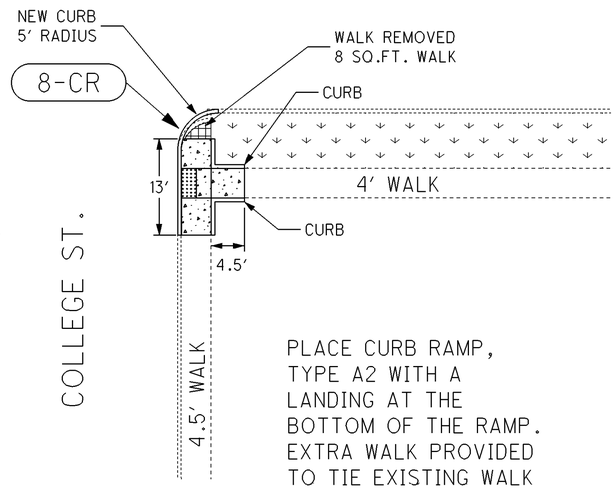
PLACE CURB RAMP, TYPE A2 WITH A LANDING AT THE BOTTOM OF THE RAMP. EXTRA WALK PROVIDED TO TIE EXISTING WALK ALONG JERSEY STREET INTO NEW LANDING.



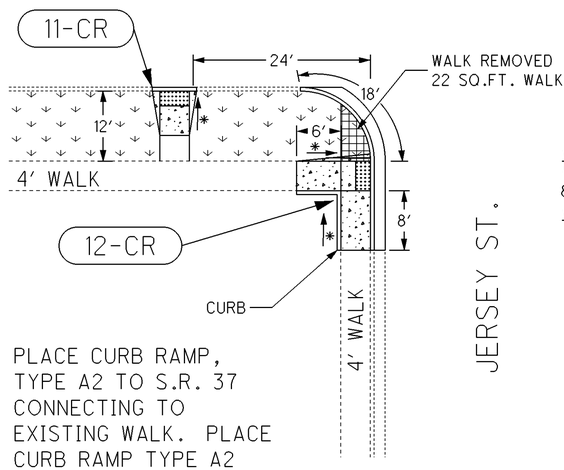
S.R. 37



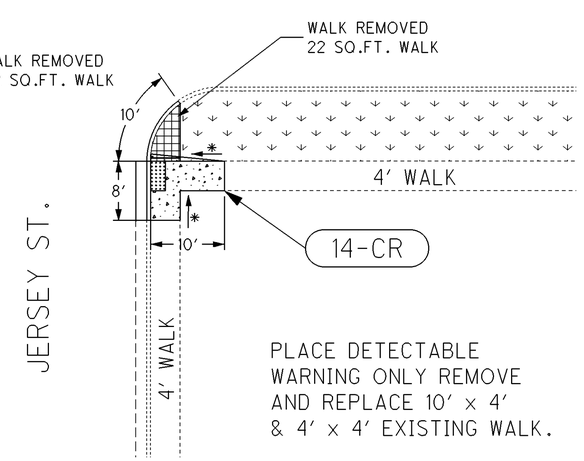
PLACE DETECTABLE, WARNING WITH A LANDING AT THE INTERSECTION OF BOTH WALKS. EXTRA WALK PROVIDED TO TIE EXISTING WALKS INTO NEW LANDING.



PLACE CURB RAMP, TYPE A2 WITH A LANDING AT THE BOTTOM OF THE RAMP. EXTRA WALK PROVIDED TO TIE EXISTING WALK ALONG COLLEGE STREET INTO NEW LANDING AND TO PROVIDE WALK IN FRONT OF POST OFFICE BOX.



PLACE CURB RAMP, TYPE A2 TO S.R. 37 CONNECTING TO EXISTING WALK. PLACE CURB RAMP TYPE A2 AT JERSEY STREET. EXTRA WALK PROVIDED TO TIE EXISTING WALK ALONG JERSERY STREET TO CURB RAMP.



PLACE DETECTABLE WARNING ONLY REMOVE AND REPLACE 10′ x 4′ & 4′ x 4′ EXISTING WALK.

* 12:1 MAX.

CALCULATED LME
CHECKED DNM

DRAWING NOT TO SCALE

CURB RAMP PLAN SHEET
S.R. 37 JOHNSTOWN

LIC-37-(0.00)(16.59)
LIC-161-0.00

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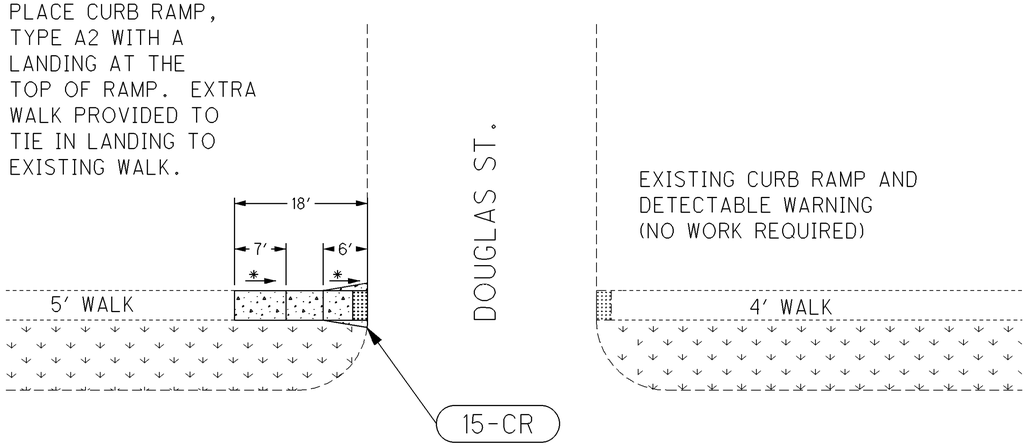
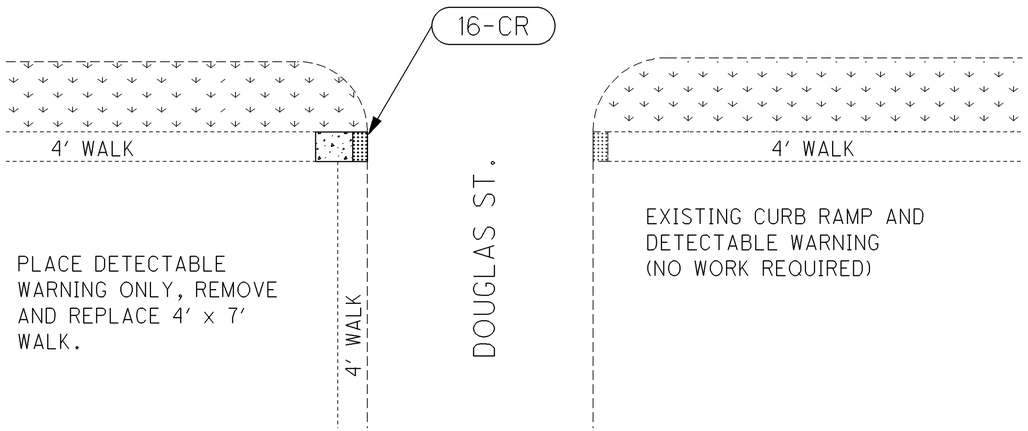
SEE SHEET 15 FOR CURB RAMP/WALK QUANTITES



S.R. 37



* 12:1 MAX.

DRAWING NOT TO SCALE

CALCULATED LME CHECKED DNM

CURB RAMP PLAN SHEET
S.R. 37 JOHNSTOWN

LIC-37-(0.00)(16.59)
LIC-16I-0.00

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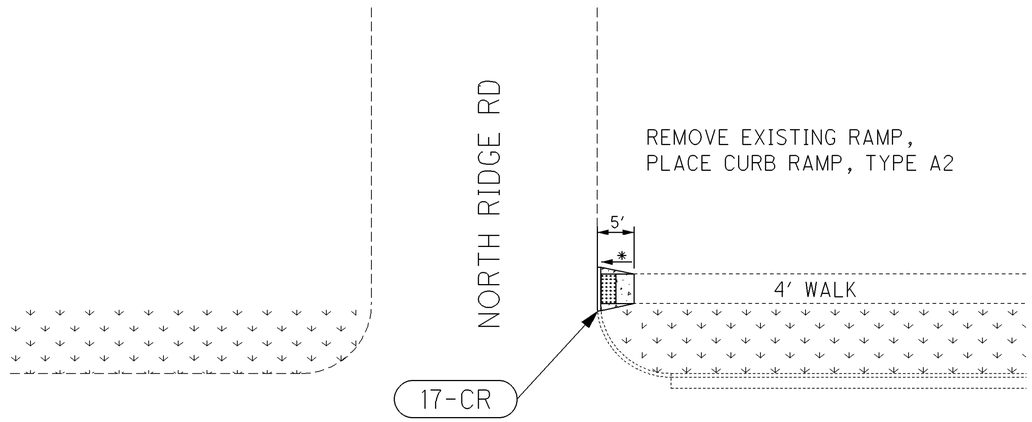
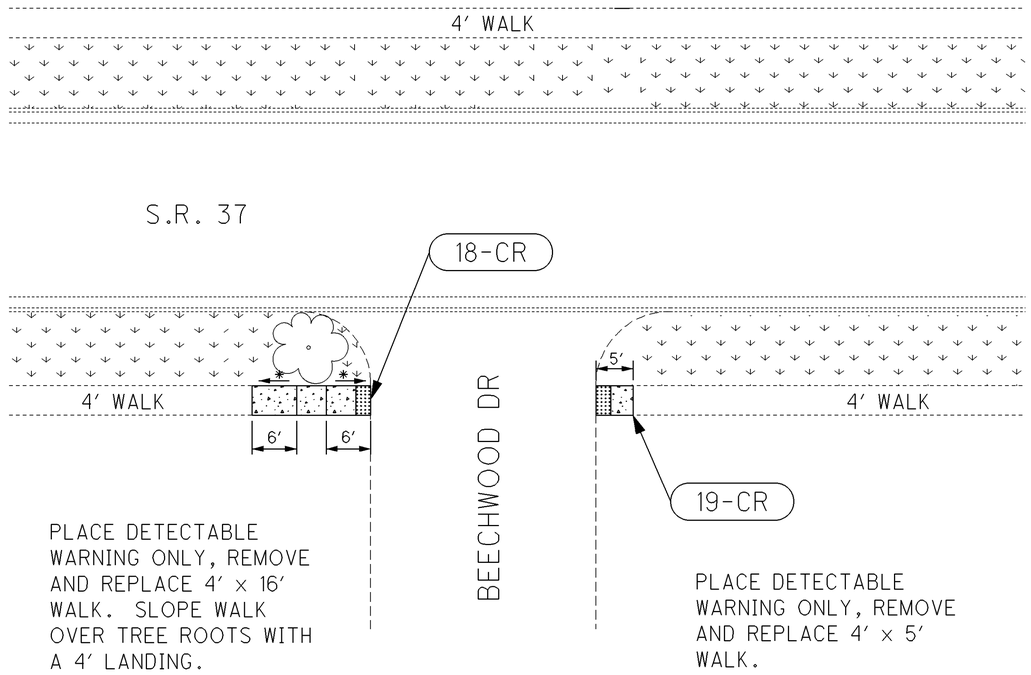
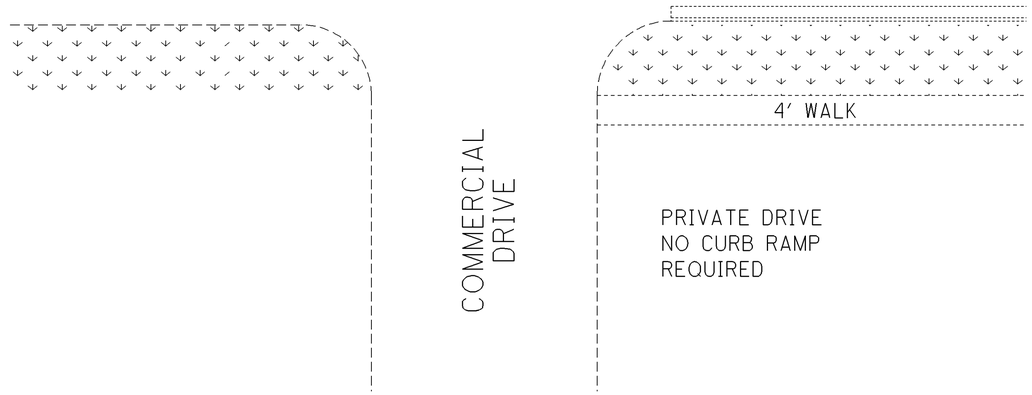
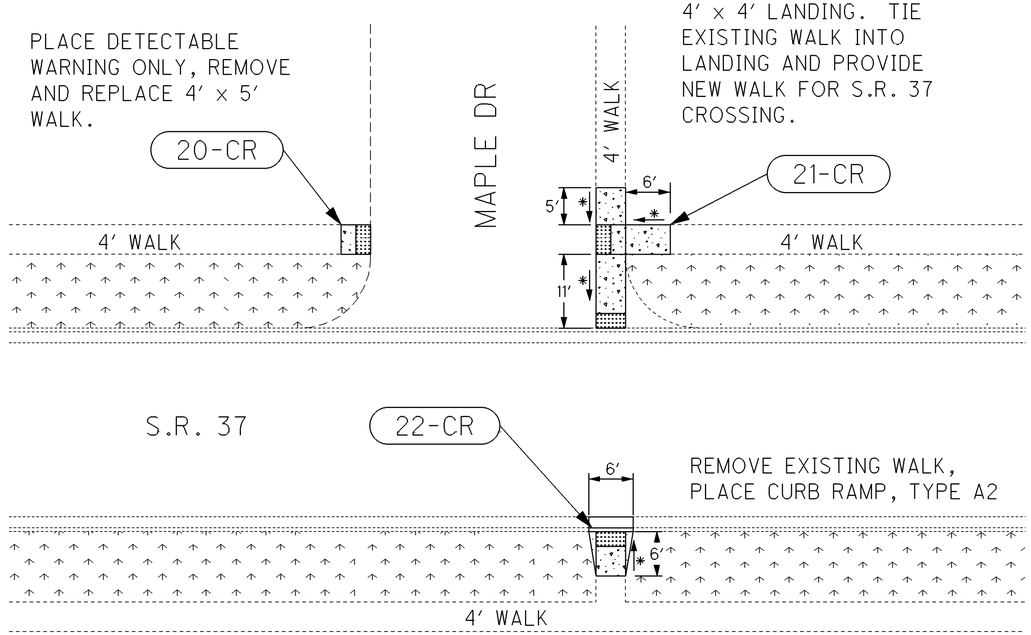
SEE SHEET 15 FOR CURB RAMP/WALK QUANTITES









* 12:1 MAX.

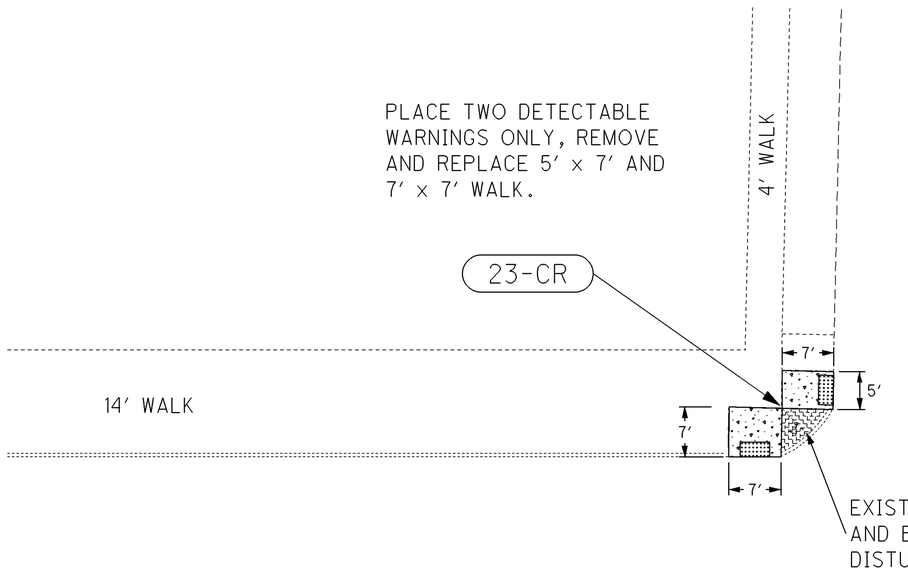
DRAWING NOT TO SCALE

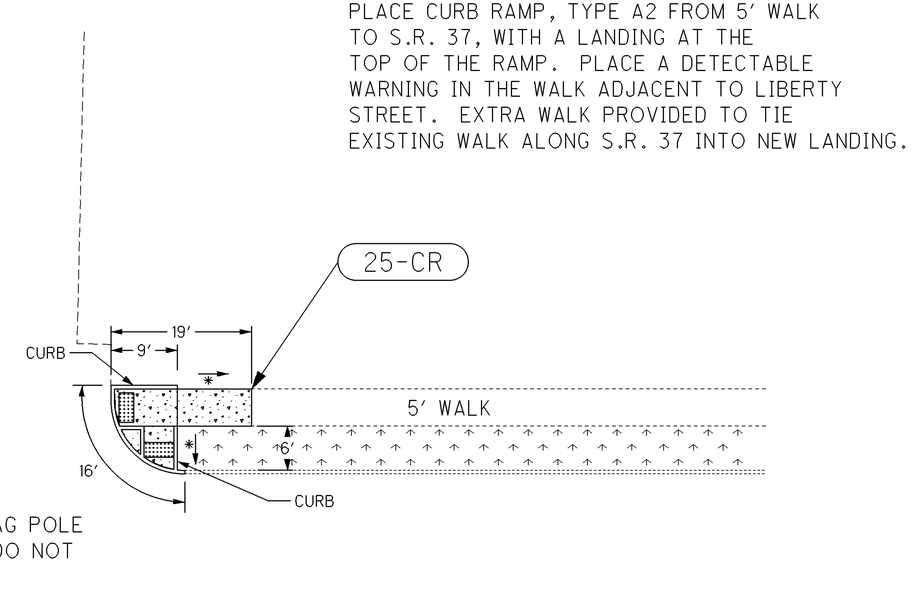
CALCULATED LME CHECKED DNM

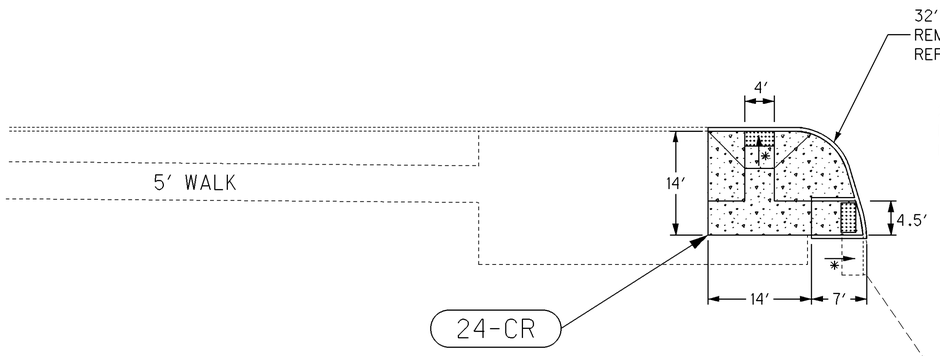
CURB RAMP PLAN SHEET
S.R. 37 ALEXANDRIA

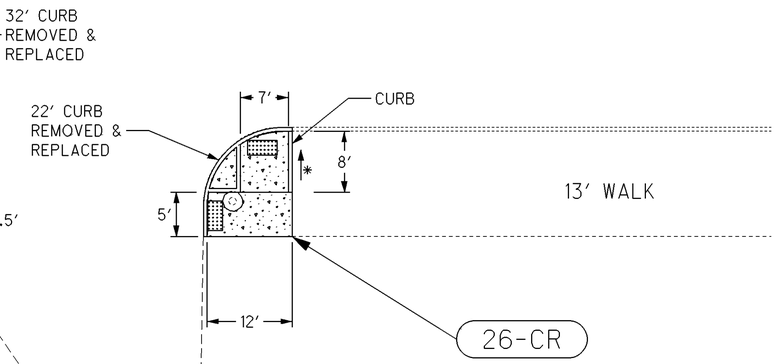
LIC-37-(0.00)(16.59)
LIC-161-0.00

SEE SHEET 15 FOR CURB RAMP/WALK QUANTITES









DRAWING NOT TO SCALE

CALCULATED LME CHECKED DNM

CURB RAMP PLAN SHEET
S.R. 37 ALEXANDRIA

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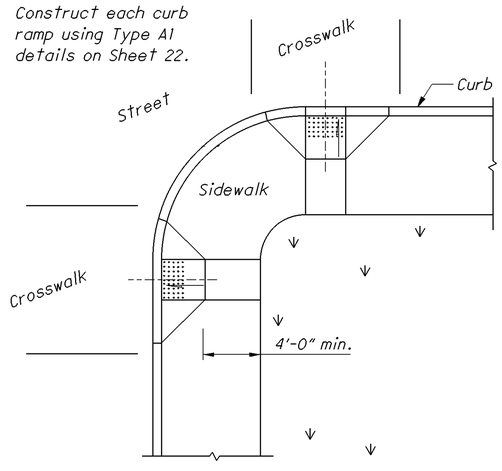
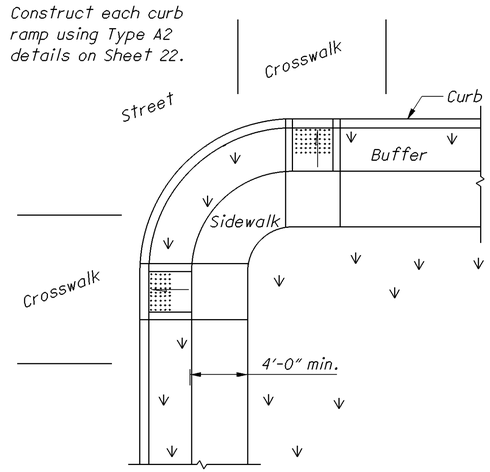
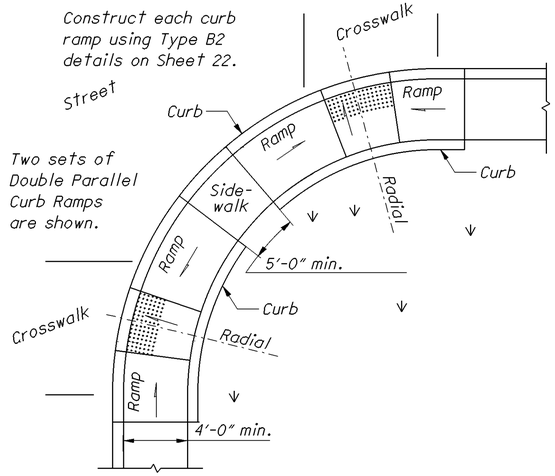


Use curb ramps with flared sides at locations with wide sidewalks.



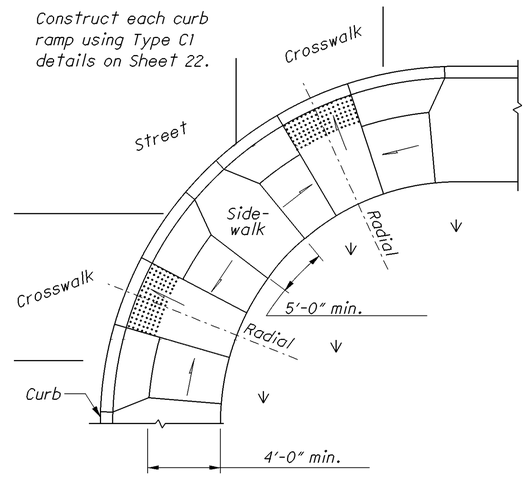
Use curb ramps with returned curbs where buffer is wide enough to accommodate ramp slope.

PERPENDICULAR CURB RAMPS



Place on streets having wide turning radius and where sidewalks are narrow.

PARALLEL CURB RAMPS



Curb ramp placement where streets have wide turning radius, and sufficient sidewalks width.

COMBINATION CURB RAMPS

NOTES

GENERAL: *This drawing shows curb ramp types details and placement examples for curb ramp construction, including the installation of detectable warnings.*

Curb ramp types are shown on Sheet 22 and include Perpendicular, Parallel, and Combined types as specified to be constructed in the locations shown in the project plans.

The contractor may adjust the placement of curb ramps if existing field conditions warrant with the approval of the Engineer.

Excavate, form, place, finish, and cure according to 608.03.A, 608.03.B, 608.03.C, and 608.03.E.

DETECTABLE WARNINGS: *Install Detectable Warnings on each curb ramp with approved materials, as shown on Sheet 23. Install these proprietary products as per manufacturer's written instructions.*

DRAINAGE: *Contractor is to ensure the base of each constructed curb ramp allows for proper drainage, without exceeding allowable cross slope or ramp slopes. Vertical change in level exceeding ⅛" between the 1) pavement and gutter, and 2) gutter and ramp, are not allowed.*

JOINTS: *Provide expansion joints in the curb ramp as extensions of walk joints and consistent with Item 608.03 requirements for a new concrete walk. Provide a ½" Item 705.03 expansion joint filler around the edge of ramps built in existing concrete walks. Lines shown on this drawing indicate the ramp edges and slope changes, and do not necessarily indicate joint lines.*

METHOD OF MEASUREMENT: *The Department will measure Curb Ramps by the number of each completed curb ramp. The Department will measure Detectable Warnings in existing curb ramps and at grade crossings by the number of square feet completed.*

Concrete Walk and Curb, Item 608 and 609, will be measured through out the curb ramp area and paid for under their respective Items.

METHOD OF PAYMENT: *New Curb Ramps constructed in new or existing Walk are paid for under Item 690 Special Misc.: Curb Ramp, Type __ (A1, A2, B1, B2, B3, C1, C2, or D) each, and includes the cost of any additional materials and installation (including detectable warnings), grading, forming and finishing.*

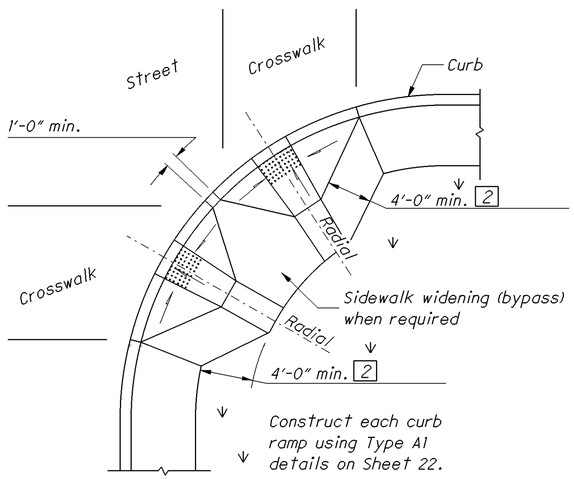
Detectable Warnings constructed in existing curb ramps or for at-grade crossing locations are paid for under Item 690-Special Misc.: Detectable Warning (Sq. Ft.) and is full compensation for excavation, backfill, base course material, reinforcing steel, expansion joint materials, and any incidentals required to complete the installation as specified. The work to cast the tiles in place will also require removal of existing pavement or sidewalk (Item 202) to the nearest joint, or if no joint exists, a minimum of 4 feet.

Removal of existing curb, pavement, walk (or existing curb ramps) are paid under Item 202.

LEGEND

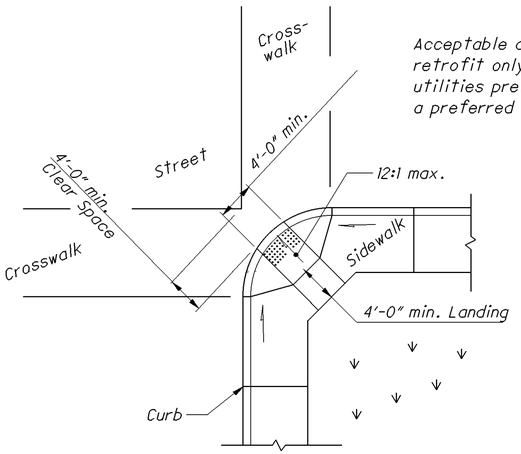
[2] *May be reduced to 3'-4" in existing sidewalks to better fit the walk configuration or where site conditions are restricted by narrow walks, pole foundations, drainage inlets, etc. The width may be tapered.*

Acceptable design on corners with wide turning radius where user is able to maneuver within crosswalk limits so as not to encroach into adjacent traveled lanes.



PERPENDICULAR RAMPS

Acceptable design for retrofit only where utilities prevent using a preferred layout.



Use this design only for existing walks, and when site constraints prohibit other designs. The diagonal Type D ramp may be constructed as either a Perpendicular, Parallel or Combination curb ramp type. Avoid using where curb radii are less than 20'-0".

DIAGONAL RAMP (Type D)

ACCEPTABLE CONSTRUCTION PLACEMENT

CALCULATED JLS CHECKED DNM

CURB RAMP AND DETECTABLE WARNING DETAILS

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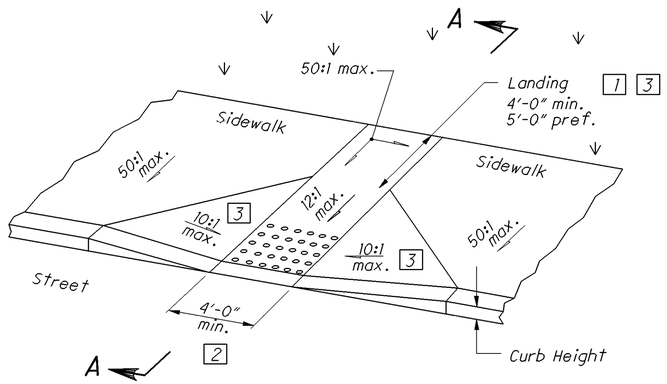
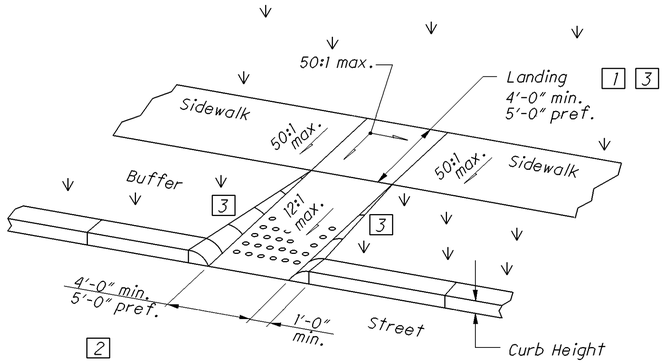
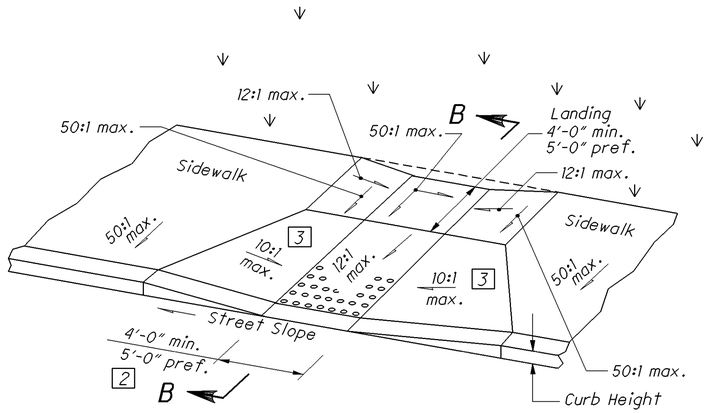


Type A1 (Perpendicular with flared sides)

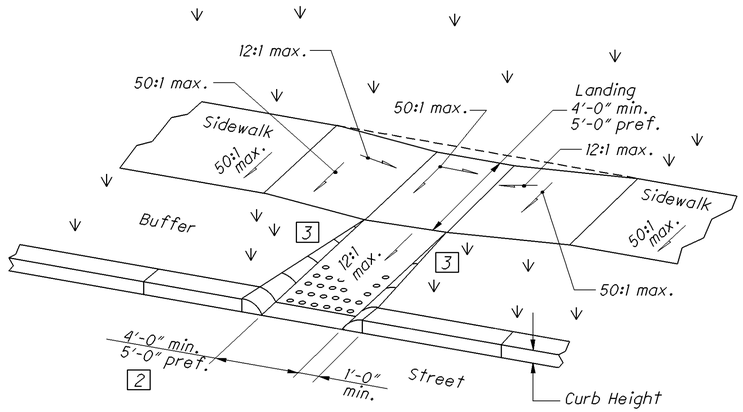


Type A2 (Perpendicular with returned curb)

PERPENDICULAR CURB RAMP DETAILS

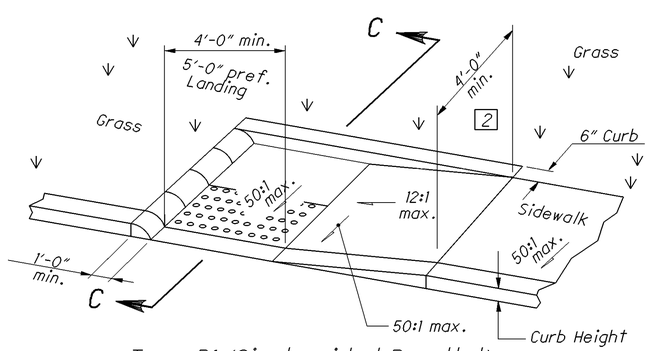


Type C1 (Combined with flared sides)

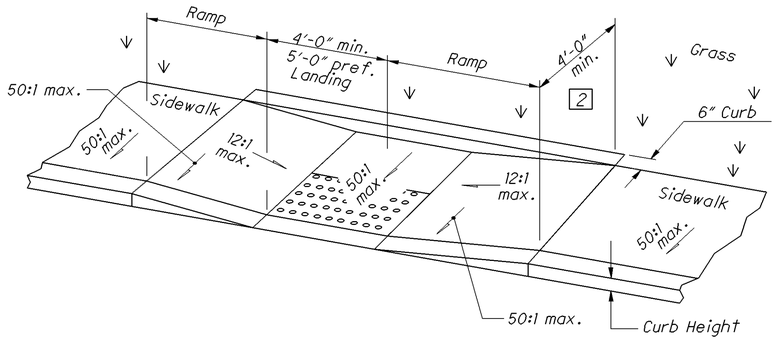


Type C2 (Combined with returned curb)

COMBINED CURB RAMP DETAILS



Type B1 (Single sided Parallel)



Type B2 (Double sided Parallel)

PARALLEL CURB RAMP DETAILS

NOTES

The running slope of the ramp is preferred to be 12:1 or flatter. In existing sidewalks, where the maximum ramp slope is not feasible due to site constraints (e.g. utility poles or vaults, right-of-way limits) it may be reduced as follows:

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

To prevent chasing the grade indefinately, the transition from exisiting sidewalk to the curb ramp area is not required to exceed 15 feet in length.

While ramps may be skewed to the crosswalk, the entire lower landing area must fall within the cross walk that the ramp serves and cannot be located in the traveled lane of opposing traffic.

The counter slope of the gutter or street at the foot of a curb ramp, landing, or blended transitions shall be 20:1 ot flatter.

The bottom edge of the ramp shall change planes perpendicular to the landing.

The edge of the curb shall be flush with the edge of the adjacent pavement and gutter and surface slopes that meet grade breaks shall also be flush.

Ramp landings shall be 4' min. x 4' min. with a 50:1 or flatter cross slope and running slope, unless otherwise shown.

LEGEND

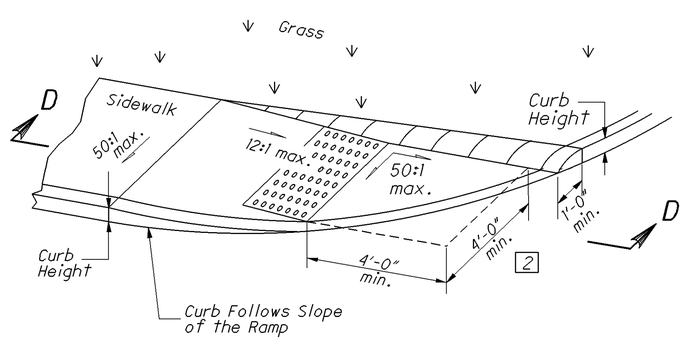
1 Dimension may be reduced to 3'-0" in existing sidewalks if the landing is unconstrained along the back edge.

2 May be reduced to 3'-4" 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" the flared sides shall have a maximum slope of 12:1.

Flared sides are not required where the edges of a curb ramp are protected by landscaping or other barriers to travel by wheelchair 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.

See Sheet 23 for Sections.



Type B3 (Single sided Parallel)

CALCULATED LME CHECKED DNM

DETECTABLE WARNING DETAILS

CURB RAMP AND DE

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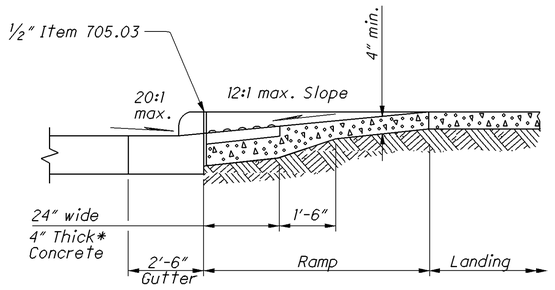
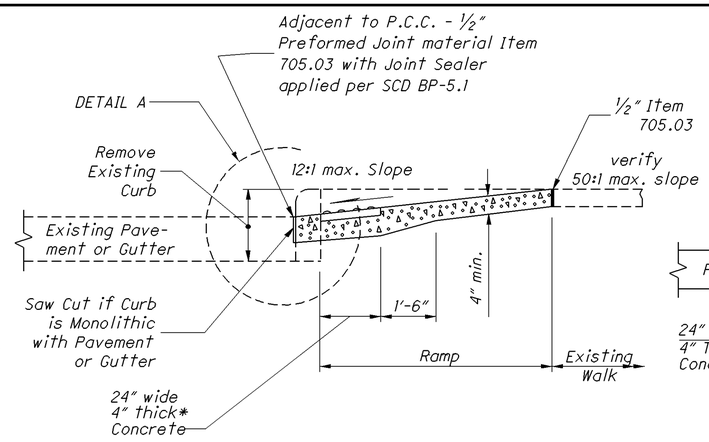
LIC-161-0.00



New gutter shown.

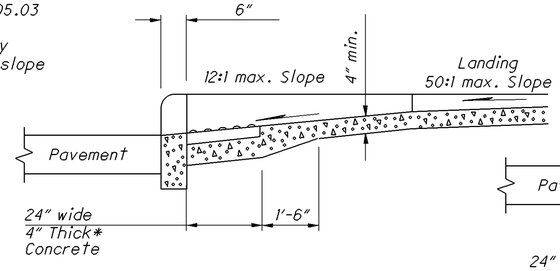
SECTION A-A NORMAL DETAIL

See Sheet 22.



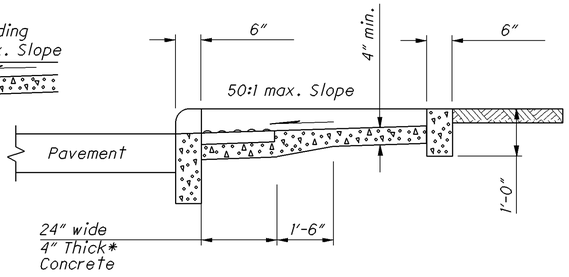
SECTION A-A EXISTING WALK DETAIL

See Sheet 22.



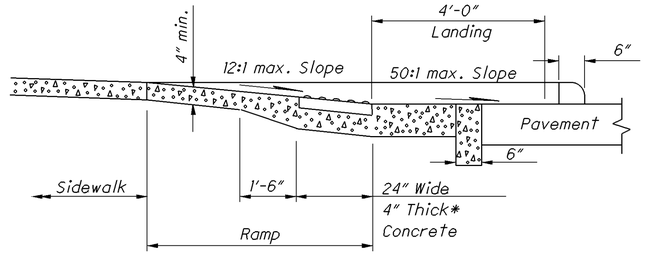
SECTION B-B

See Sheet 22.



SECTION C-C

See Sheet 22.



SECTION D-D

See Sheet 22.

*Where possible, pour ramp area integral with the curb, otherwise use 6" thick walk.

DETECTABLE WARNINGS NOTES

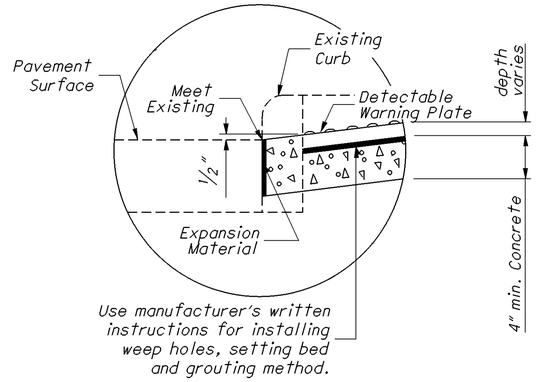
GENERAL: Detectable Warnings are a distinctive surface pattern of truncated domes which are detectable by cane or underfoot to alert people with vision impairments of their approach to streets and hazardous drop-offs.

PLACEMENT: Detectable warnings are to be installed at any location where pedestrians might cross paths with vehicular traffic lanes, such as the base of curb ramps or at blended curbs. A 24" strip of domes is to be installed for the full width of the ramp or walk. Typical street corner placement locations are shown on Sheet 21.

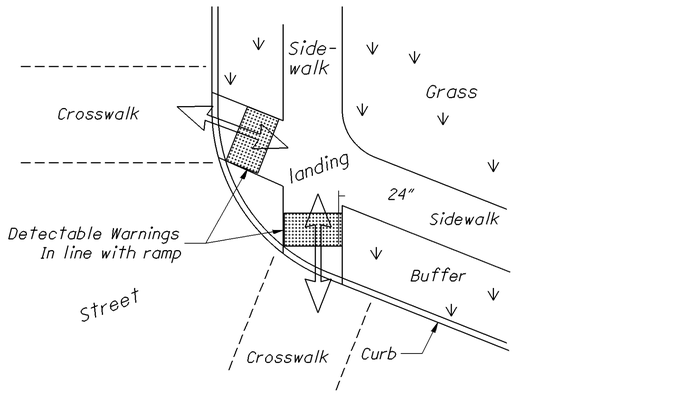
The depth of concrete underneath detectable warning products shall be a minimum of 4". See DETAIL A.

ALIGNMENT: Truncated domes should be aligned with the primary direction of the ramp as shown on the DETECTABLE WARNING ALIGNMENT Detail. Normally the detectable warnings should be flush with the back of the curb, but in skewed conditions at least one corner of the 24" strip should be adjacent to the back of curb. For non-standard layouts, detectable warning materials may have to be mitered and placed segmentally.

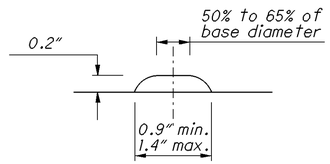
PRODUCTS & COLORS: Color of the detectable warnings should contrast with surrounding concrete walk and ramp. Black is not an acceptable color. Approved products and guidance on color may be found on the Office of Roadway Engineering Service's Detectable Warnings Approved List. Install products as per manufacturer's printed instructions.



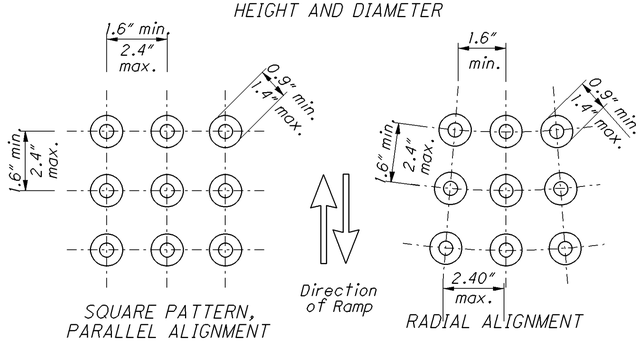
DETAIL A



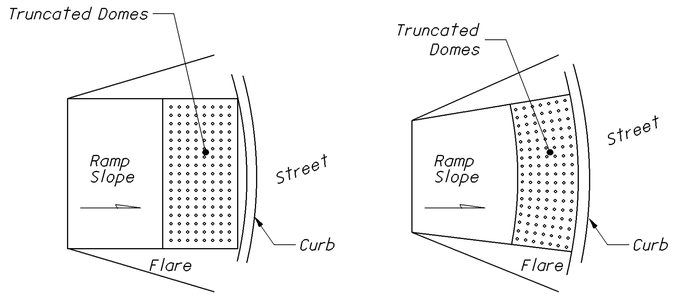
DETECTABLE WARNING ALIGNMENT



HEIGHT AND DIAMETER



TRUNCATED DOMES DETAILS

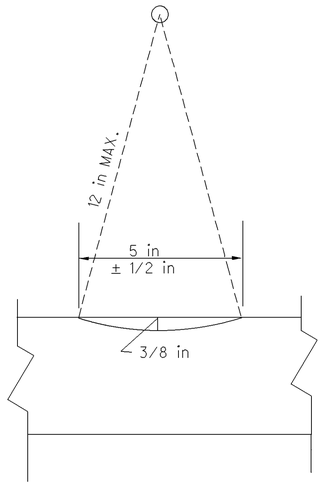


DOME ALIGNMENT ON RADIUSED CURB

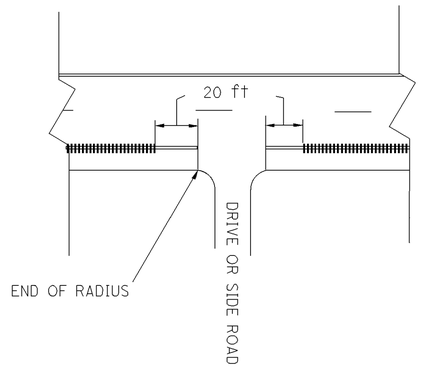
CURB RAMP AND DETECTABLE WARNING DETAILS

CALCULATED JLS
CHECKED DNM

LIC-37-(0.00)(16.59)
LIC-16I-0.00



PROFILE



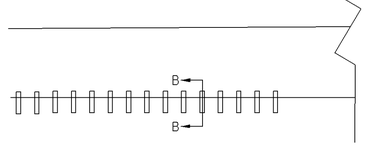
SIDE ROAD AND DRIVE RUMBLE STRIPE INSTALLATION DETAILS

NOTES

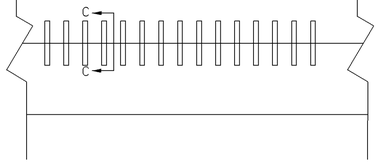
1. Rumble stripes shall be interrupted for driveways and intersections.
2. Rumble stripes shall be paid for in accordance with Item 618.
3. Rumble stripes shall be installed on a 62 foot cycle, i.e. 50 feet rumble stripes followed by a 12 foot gap.
4. Apply final pavement markings after rumble stripes are completed.
5. Location of the construction joint shall be verified in the field.

SHOULDER WIDTH	A
2-5 ft	6 in
5 ft-1 in - 8 ft	10 in
≥ 8 ft- 1 in	16 in

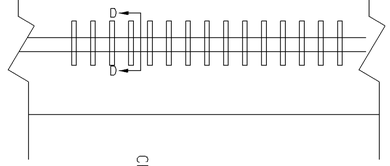
EDGE LINE



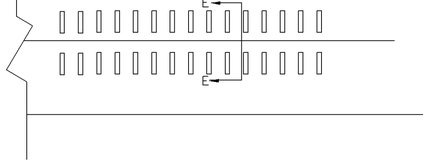
SINGLE CENTER LINE OR LANE LINE

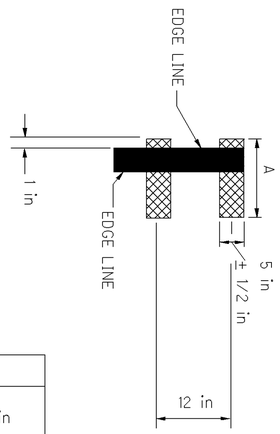


DOUBLE CENTER LINE

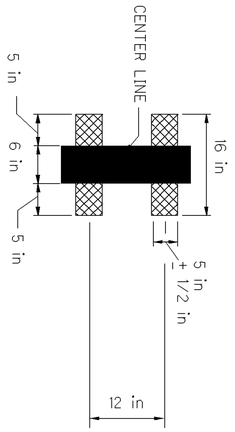


CONCRETE JOINT LINE

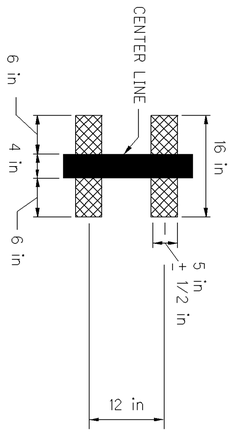




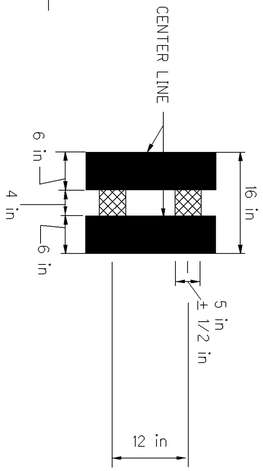
SECTION B-B
EDGE LINE RUMBLE STRIPE



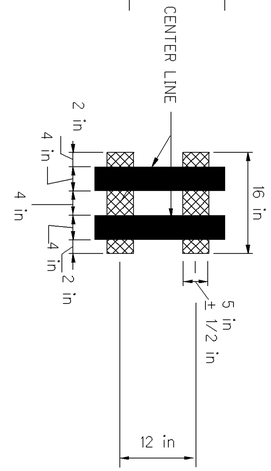
SECTION C-C
6" CENTER LINE OR LANE LINE
RUMBLE STRIPE



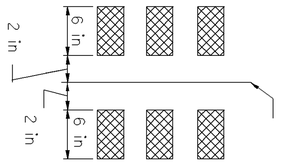
SECTION C-C
4" CENTER LINE OR LANE LINE
RUMBLE STRIPE



SECTION D-D
6" CENTER LINE RUMBLE STRIPE



SECTION D-D
4" CENTER LINE RUMBLE STRIPE



SECTION E-E
PORTLAND CEMENT CONCRETE
JOINT CENTER LINE RUMBLE STRIPE

OFFICE OF TRAFFIC ENGINEERING

DESIGNED	REVIEWED
	LAM
REVISION DATE	CHECKED
4/20/12	
PIS NUMBER	
206410	

PLAN INSERT SHEET

RUMBLE STRIPES

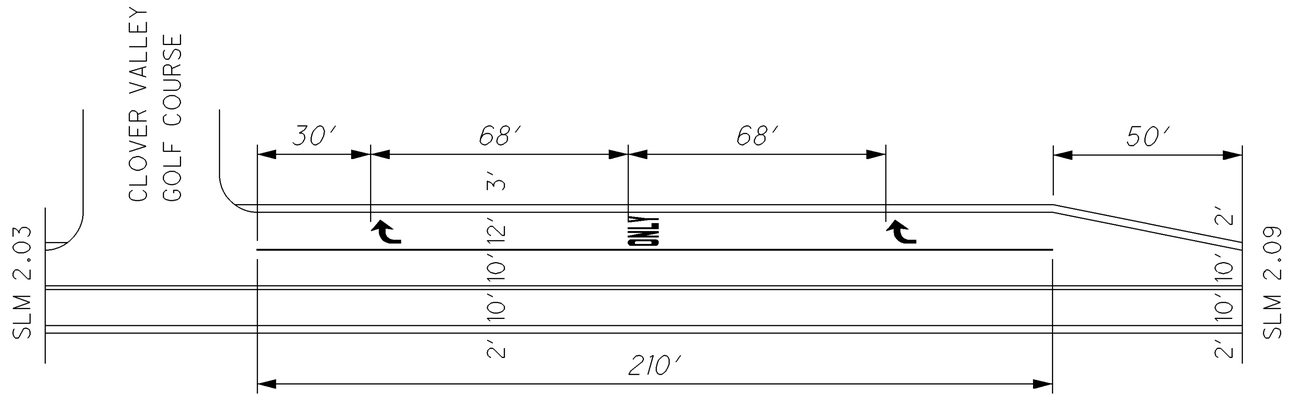
LIC-37-(0.00)(16.59)
LIC-161-0.00

1 / 1

24
34

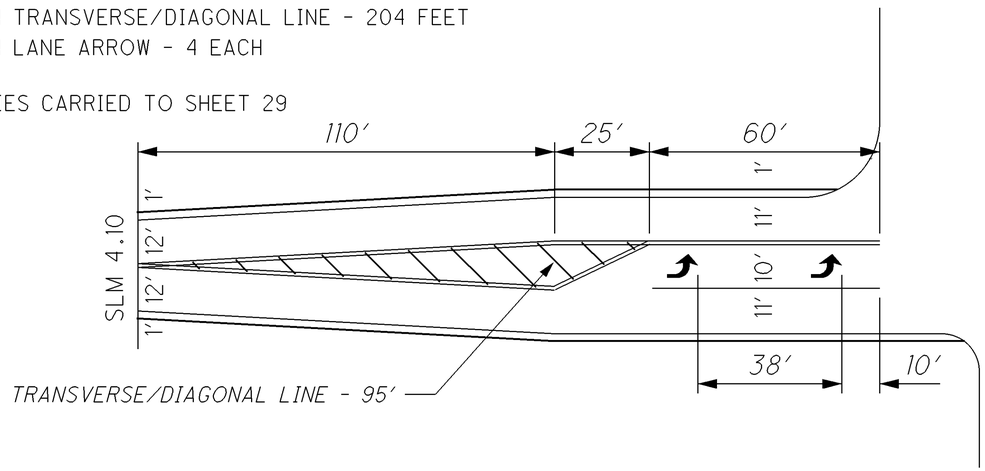
ITEM 644 CHANNELIZING LINE - 210 FEET
ITEM 644 LANE ARROW - 2 EACH
ITEM 644 WORD ON PAVEMENT, 96" - 1 EACH

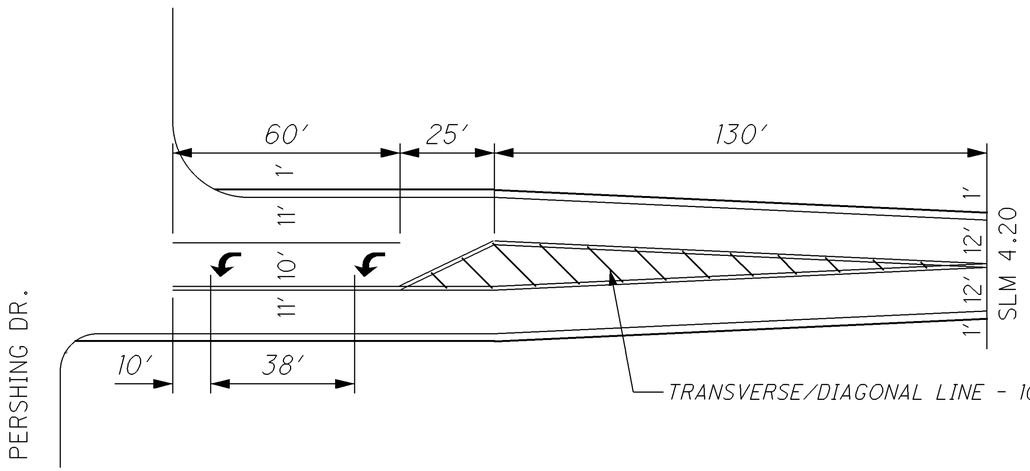
QUANTITIES CARRIED TO SHEET 29



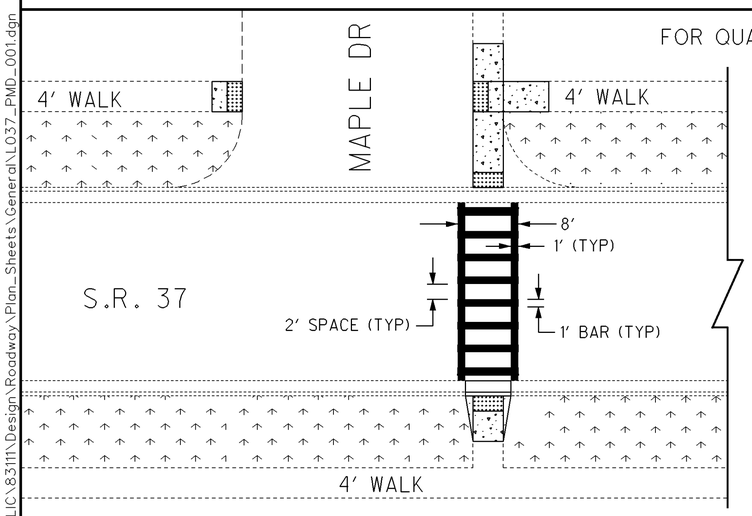
ITEM 644 CHANNELIZING LINE - 120 FEET
ITEM 644 TRANSVERSE/DIAGONAL LINE - 204 FEET
ITEM 644 LANE ARROW - 4 EACH

QUANTITIES CARRIED TO SHEET 29





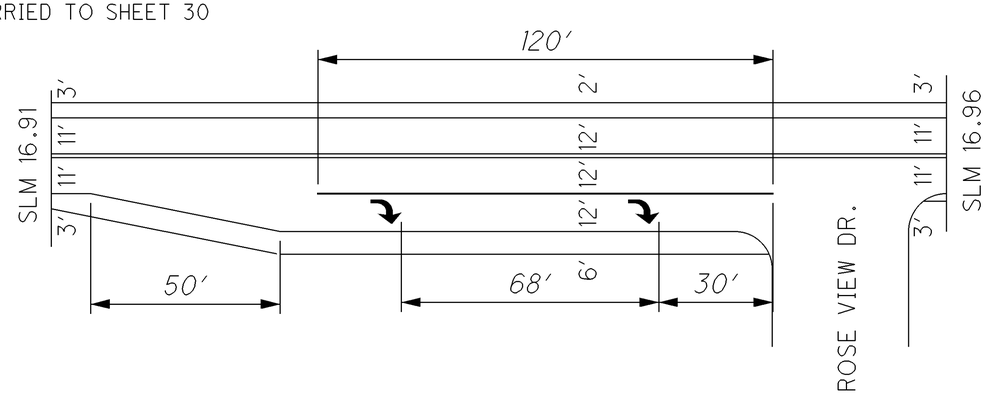
FOR QUANTITIES, SEE SHEET 30



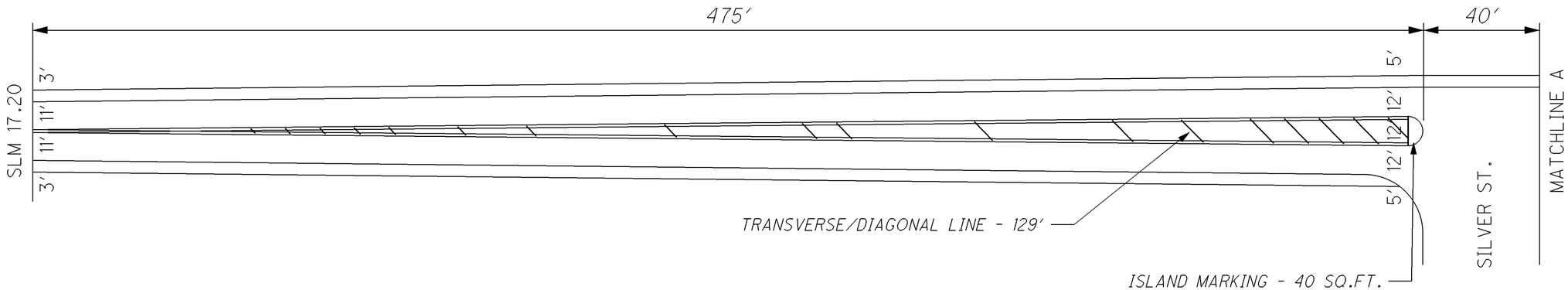
DETAIL OF NEW CROSSWALK AT MAPLE DRIVE IN ALEXANDRIA.

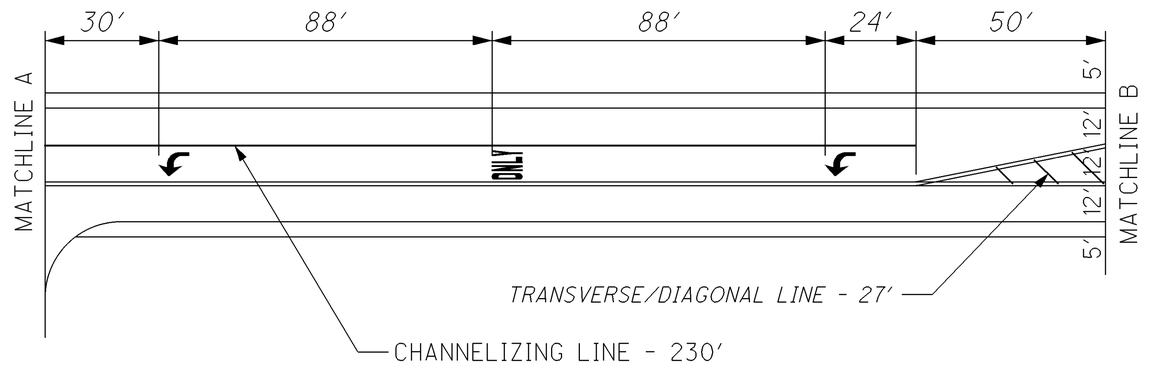
ITEM 644 CHANNELIZING LINE - 120 FEET
ITEM 644 LANE ARROW - 2 EACH

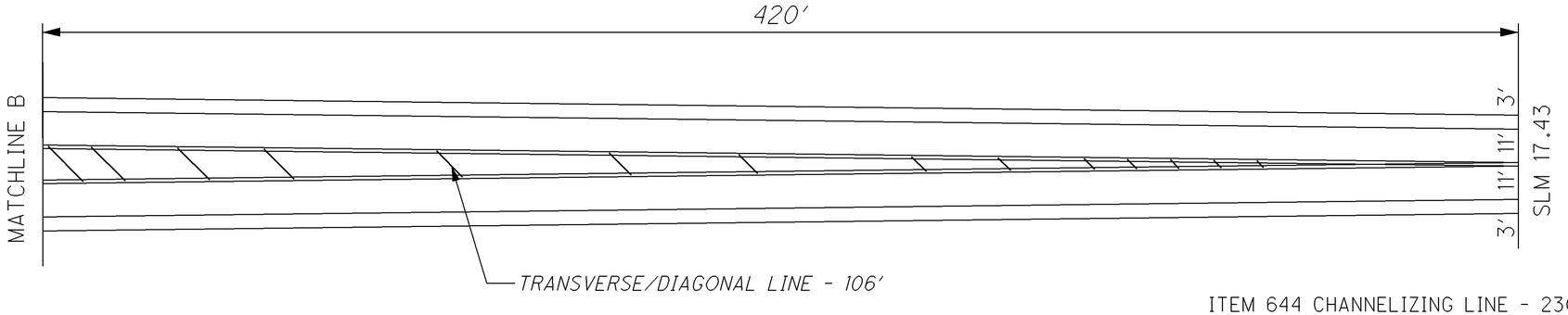
QUANTITIES CARRIED TO SHEET 30



HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED LME
CHECKED DNM







ITEM 644 CHANNELIZING LINE - 230 FEET
ITEM 644 TRANSVERSE/DIAGONAL LINE - 262 FEET
ITEM 644 ISLAND MARKING - 40 SQ.FT.
ITEM 644 LANE ARROW - 2 EACH
ITEM 644 WORD ON PAVEMENT, 96″ - 1 EACH

QUANTITIES CARRIED TO SHEET 30

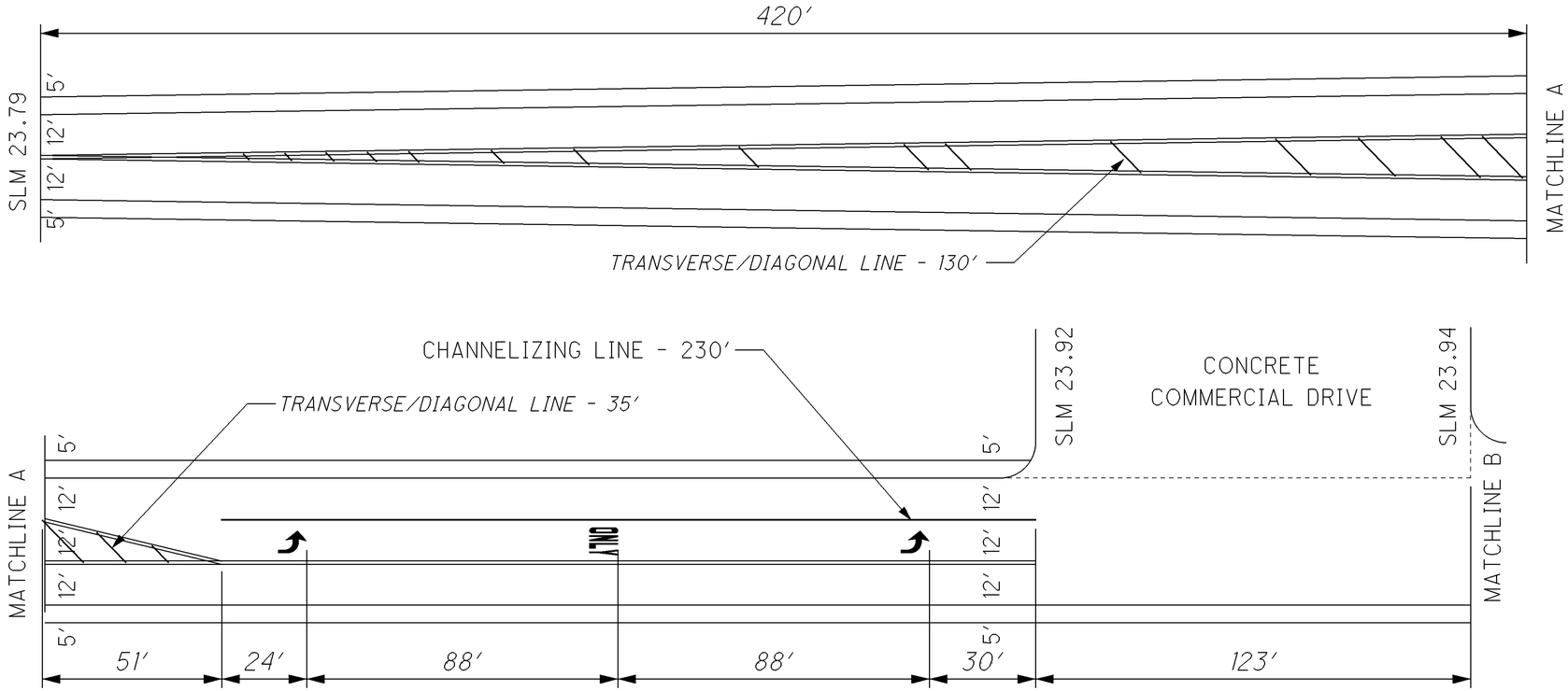
HORIZONTAL SCALE IN FEET
0 10 20 40

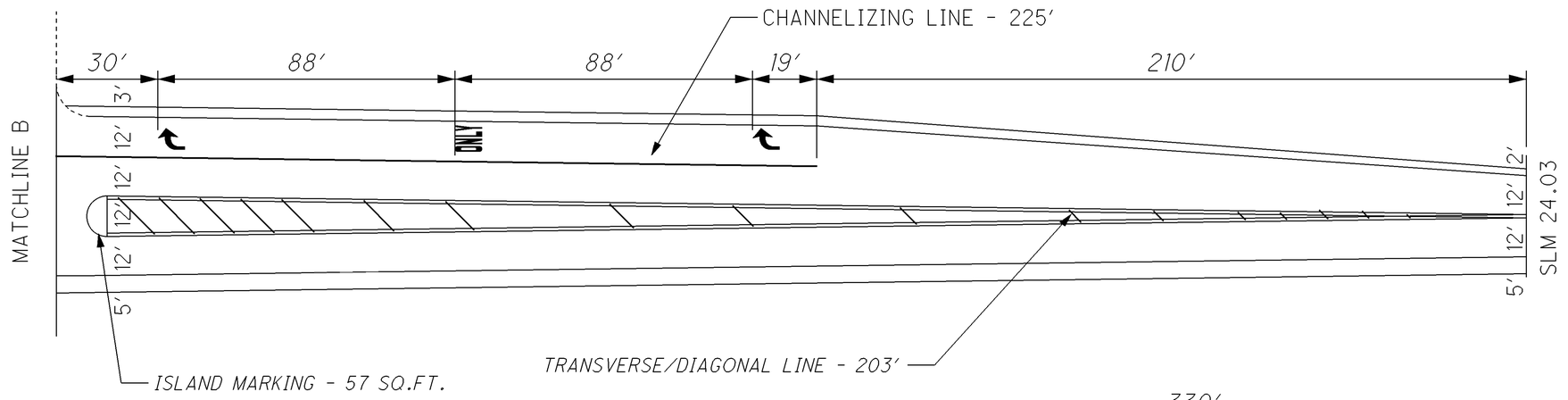
CALCULATED LME
CHECKED DNM

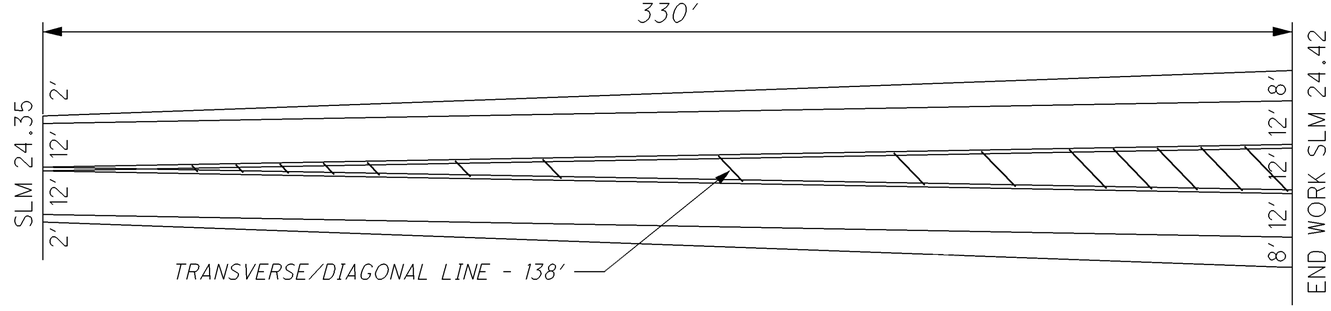
S.R. 37
PAVEMENT MARKING DETAIL

LIC-37-(0.00)(16.59)
LIC-161-0.00

26
34







ITEM 644 CHANNELIZING LINE - 455 FEET
ITEM 644 TRANSVERSE/DIAGONAL LINE - 506 FEET
ITEM 644 ISLAND MARKING - 57 SQ.FT.
ITEM 644 LANE ARROW - 4 EACH
ITEM 644 WORD ON PAVEMENT, 96″ - 2 EACH

QUANTITIES CARRIED TO SHEET 30

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED LME
CHECKED DNM

S.R. 37
PAVEMENT MARKING DETAIL

LIC-37-(0.00)(16.59)
LIC-161-0.00

27
34

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ITEM 648 EDGE LINE

LOCATION	COUNTY	ROUTE	S.L.M.		TOTAL LENGTH (MILES)	INFORMATION ONLY			TOTAL EDGE LINE MILES	REMARKS
						WHITE EDGE LINE QUANTITIES				
			FROM	TO		TOTAL MILES	HIGHWAY MILES	RAMP MILES		
1	LIC	S.R. 37	0.00	4.31	4.31	8.62	8.62		8.62	
1	LIC	S.R. 37	5.07	5.19	0.12	0.12	0.12		0.12	LEFT ONLY
1	LIC	S.R. 37	5.19	10.23	5.04	10.08	10.08		10.08	
1	LIC	S.R. 37	10.72	10.78	0.06	0.06	0.06		0.06	RIGHT ONLY
1	LIC	S.R. 37	10.78	11.69	0.91	1.82	1.82		1.82	
1	LIC	S.R. 37	16.59	24.42	7.83	15.66	15.66		15.66	
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)									**36.36**	
2	LIC	S.R. 16 I	0.00	0.19	0.19	0.38	0.38		0.38	REPLACE EDGE LINES ON WEAVER DR.
LOCATION 2 TOTALS (CARRIED TO SUB-SUMMARY)									**0.38**	

ITEM 648 CENTER LINE

LOCATION	COUNTY	ROUTE	S.L.M.		TOTAL LENGTH (MILES)	INFORMATION ONLY		TOTAL CENTER LINE MILES	REMARKS
						CENTER LINE QUANTITIES			
			FROM	TO		TOTAL MILES	EQUIVALENT SOLID LINE		
1	LIC	S.R. 37	0.00	11.69	11.69	11.69	12.048	11.69	
1	LIC	S.R. 37	16.59	24.42	7.83	7.83	11.199	7.83	
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)								**19.52**	
2	LIC	S.R. 16 I	0.00	0.19	0.19	0.19	0.380	0.19	
LOCATION 2 TOTALS (CARRIED TO SUB-SUMMARY)								**0.19**	

CALCULATED LME
CHECKED DNM

PAVEMENT MARKING DATA (EDGE/CENTER LINE)

LIC-37-(0.00)(16.59)
LOC-16I-0.00

ITEM 644 AUXILARY MARKING

LOCATION	COUNTY	ROUTE	DESCRIPTION	SIDE	SLM	TRANSEVERSE/ DIANGONAL LINES (24")		STOP LINE (24")	12" CROSSWALK LINE	WORD ON PAVEMENT		SCHOOL SYMBOL MARKING		LANE ARROWS		8" CHANNELIZING LINE	RAILROAD SYMBOL MARKING	REMARKS
										ONLY				TURN				
						WHITE	YELLOW			72"	96"	72"	96"	LT.	RT.			
						FT.	FT.	FT.	FT.	EACH	EACH	EACH	EACH	EACH	EACH	FEET	EACH	
1	LIC	S.R. 37	COUNTY LINE RD - CR 51	LT				37										PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	COUNTY LINE RD - CR 51	RT				40										PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	DOWNING RD NW - TR 45	LT				17										PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	SR 37 AT CLOVER VALLEY GOLF COURSE								1				2	210		SEE DETAIL ON SHEET 25
1	LIC	S.R. 37	CLOVER VALLEY RD - CR 26	LT				23										PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	CLOVER VALLEY RD - CR 26	RT				25										PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	GREEN MILL RD NW - TR 59	RT				21										PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	CROTON RD - CR 3	LT				55										PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	MC CRACKEN DR	RT				18										PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	PERSHING DR	RT				16										PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	ON SR 37 AT PERSHING DR.				204							4		120		SEE DETAIL ON SHEET 25
1	LIC	S.R. 37	S.R. 37 SHOULDER	RT			515											IN FRONT OF NORTHVIEW SENIOR LIVING CENTER
1	LIC	S.R. 37	ON SR 37 BEFORE EDWARDS ST						60			1						PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	EDWARDS ST	RT					62									PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	ON SR 37 AFTER EDWARDS ST						60									PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	ON SR 37 SLM 4.44															PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	ON SR 37 BEFORE MAPLE ST						62									PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	MAPLE ST	LT					44									PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	MAPLE ST	RT					50									PLACE AT EXISTING LOCATION
SUSPEND WORK SLM 4.54, RESUME WORK SLM 4.76																		
1	LIC	S.R. 37	COLLEGE ST	LT					44									PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	COLLEGE ST	RT					46									PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	ON SR 37 @ SLM 4.94									1						PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	ON SR 37 BEFORE JERSEY ST						74									PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	JERSEY ST	LT					44									PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	JERSEY ST	RT					44									PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	ON SR 37 AFTER JERSEY ST						72									PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	DOUGLAS ST	LT				15										PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	DOUGLAS ST	RT					46									PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	ON SR 37 @ SLM 5.08									1						PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	ON SR 37 @ SLM 5.17									1						PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	SCHOOL DR	RT				28										PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	ON SR 37 @ SLM 5.28									1						PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	CONCORD R NW - TR 18	LT				23										PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	TR 29					35										PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	WINDY HOLLOW RD - TR 96	LT				21										PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	WINDY HOLLOW RD - TR 96	LT				14										PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	SR 310					31										PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	SR 310					17										PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	SADIE THOMAS RD - TR 117	LT				16										PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	SADIE THOMAS RD - TR 117	RT				15										PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	DERRINGER CT	RT				19										PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	CASTLE RD NW - TR 164	LT				25										PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	DUNCAN PLAINS RD - TR 33	RT				23										PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	JERSEY MILL RD - CR 91	RT				22										PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	NORTHRIDGE RD - CR 21	LT				32										PLACE AT EXISTING LOCATION
			SUB-TOTALS				719											
LOCATION 1 TOTALS (CARRIED TO NEXT SHEET)						719		588	708		1	5		4	2	330		

CALCULATED LME CHECKED DNM

PAVEMENT MARKING DATA (AUXILARY MARKING DATA)

LIC-37-(0.00)(16.59)
LOC-16I-0.00

29
34

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ITEM 644 AUXILARY MARKING

LOCATION	COUNTY	ROUTE	DESCRIPTION	SIDE	SLM	TRANSEVERSE/ DIANGONAL LINES (24")		STOP LINE (24")	12" CROSSWALK LINE	WORD ON PAVEMENT ONLY		SCHOOL SYMBOL MARKING		LANE ARROWS TURN		8" CHANNELIZING LINE	ISLAND MARKING	RAILROAD SYMBOL MARKING	PARKING LOT STALL MARKING	REMARKS
						WHITE	YELLOW			72"	96"	72"	96"	LT.	RT.					
						FT.	FT.	FT.	FT.	EACH	EACH	EACH	EACH	EACH	EACH	FEET	SQ. FT.	EACH	FT.	
LOCATION 1 TOTALS (CARRIED FROM PREVIOUS SHEET)							719	588	708		1	5		4	2	330				
1	LIC	S.R. 37	ON S.R. 37 BEFORE BEECHWOOD DR									1								PLACE 100' PRIOR TO SCHOOL ZONE
1	LIC	S.R. 37	BEECHWOOD DR	RT					24											PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	MAPLE DR	LT					40											PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	ON SR 37 AFTER MAPLE DR						96											SEE DETAIL ON SHEET 25
1	LIC	S.R. 37	ALLEY	LT					30											PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	ALLEY (PARK ENTRANCE)	RT					26											PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	ALLEY	LT					24											PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	ON S.R. 37 BEFORE ALLEY									1								PLACE 100' PRIOR TO SCHOOL ZONE
1	LIC	S.R. 37	ON SR 37 BEFORE S LIBERTY					13	84											PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	S LIBERTY	LT				16	64											PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	PARK ST	RT				13	66											PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	ON SR 37 AFTER S LIBERTY					15	84											PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	PARKING STALLS IN ALEXANDRIA																878	YELLOW AND WHITE, MATCH EXISTING
1	LIC	S.R. 37	ALLEY						28											PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	ALLEY	RT					26											PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	ALLEY	RT					24											PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	MALLARD DR	RT					30											PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	MALLARD DR	LT					32											PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	GRANVILLE ST	RT				12												PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	GRANVILLE ST	LT				18												PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	THARP RD	LT				21												PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	AT SR 161				84													PLACE AT EXISTING LOCATION
SUSPEND WORK SLM 11.69, RESUME WORK SLM 16.59																				
1	LIC	S.R. 37	ROSEVIEW DR.	RT.				18												PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	ON SR 37 AT ROSEVIEW DR.												2	120				SEE DETAIL ON SHEET 25
1	LIC	S.R. 37	SILVER STREET - TR 142	RT.				26												PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	ON SR 37 AT SILVER STREET				262				1			2		230	40			SEE DETAIL ON SHEET 26
1	LIC	S.R. 37	JAMES RD - TR 132	LT.				23												PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	OLD FARM ROAD	LT.				20												PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	UNION STATION - CR 135	LT.				21												PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	HAYES RD - CR 139	RT.				18												PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	ON SR 37	CL														2		PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	DEEDS RD - TR 138	RT.				17												PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	BLACKS RD - CR 34	RT.				21												PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	BLACKS RD - TR 34	LT.				17												PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	SQUIRE LANE	LT.				22												PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	BEAVER RUN RD - TR 35	LT.				27												PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	BEAVER RUN RD - TR 35	RT.				17												PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	TWP. RD. 30 A	LT.				17												PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	REFUGEE RD - TR 30	RT.				30												PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	REFUGEE RD - TR 30	LT.				30												PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	CAROLINE DR.	LT.				13												PLACE AT EXISTING LOCATION
1	LIC	S.R. 37 EB	AT USR 40	CL				17												PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	USR 40	RT.				12												PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	USR 40	LT.				18												PLACE AT EXISTING LOCATION
1	LIC	S.R. 37 WB	AT USR 40	CL				17												PLACE AT EXISTING LOCATION
1	LIC	S.R. 37	ON SR 37 AT COMMERCIAL DRIVE				506				2			2	2	455	57			SEE DETAIL ON SHEET 27
			SUB-TOTALS				1,571							8	6					
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)						1,571		1,097	1,386		4	7		14		1,135	97	2	878	
2	LIC	S.R. 16 I	WEAVER DR.	LT.				18												PLACE AT EXISTING LOCATION
LOCATION 2 TOTALS (CARRIED TO SUB-SUMMARY)								18												

CALCULATED LME CHECKED DNM

PAVEMENT MARKING DATA (AUXILARY MARKING DATA)

LIC-37-(0.00)(16.59)
LIC-161-0.00

30
34

DETAIL	SEE STD. DWG. TC-65.11
1	TAPERED ACCELERATION LANE
2	DECELERATION LANE
3	MULTILANE DIVIDED/ CONTROLLED ACCESS

DETAIL	SEE STD. DWG. TC-65.11
4	4 LANE DIVIDED TO 2 LANE TRANSITION
5	4 LANE UNDIVIDED TO 2 LANE TRANSITION
6	ONE LANE BRIDGE
7	STOP APPROACH
8	THRU APPROACH
9	TWO WAY LEFT TURN LANE

DETAIL	SEE STD. DWG. TC-65.11
10	APPROACH W/LT. TURN LANE
11	HORIZONTAL CURVE 40'
12	HORIZONTAL CURVE ALT.
GAP	CENTERLINE AT 80' TYP.

LOCATION	COUNTY	ROUTE	BEGIN LOG POINT SLM	END LOG POINT SLM	LENGTH		DETAIL	621		PRISMATIC RETRO-REFLECTOR COLORS					REMARKS
								RAISED PAVEMENT MARKER REMOVED	RPM	INFORMATION ONLY					
										ONE-WAY		TWO-WAY			
					MILES	LIN.FT.		EACH	EACH	WHITE	YELLOW	YELLOW / YELLOW	WHITE / RED	YELLOW / RED	
1	LIC	S.R. 37	0.00	0.26	0.26	1,373	GAP	17	17			17			START AT FRANKLIN COUNTY LINE
1	LIC	S.R. 37	0.26	0.30	0.04	211	11	5	5			5			PC 0.26 PT 0.30 L=211' DEG 6
1	LIC	S.R. 37	0.30	4.07	3.77	19,906	GAP	249	249			249			SUSPEND AT JOHNSTOWN CORP.
1	LIC	S.R. 37	5.45	10.26	4.81	25,397	GAP	317	317			317			RESUME AT JOHNS. CORP., SUSPEND AT ALEX. CORP.
1	LIC	S.R. 37	10.89	11.69	0.80	4,224	GAP	53	53			53			RESUME AT ALEXANDRIA CORP.
1	LIC	S.R. 37	16.59	23.31	6.72	35,482	GAP	444	444			444			
1	LIC	S.R. 37	23.31	23.43	0.12	634	12 / 7	52	52	32		20			PC 23.40 PT 23.43 L=158' DEG 14, STOP AT U.S. 40
1	LIC	S.R. 37	23.43	23.52	0.09	475	11	12	12			12			PC 23.43 PT 23.45 L=106' DEG 9
1	LIC	S.R. 37	23.52	23.81	0.29	1,531	GAP	19	19			19			
1	LIC	S.R. 37	23.81	23.87	0.06	317	11	8	8			8			PC 23.81 PT 23.87 L=317' DEG 6
1	LIC	S.R. 37	23.87	24.06	0.19	1,003	GAP	13	13			13			
1	LIC	S.R. 37	24.06	24.14	0.08	422	11	11	11			11			PC 24.06 PT 24.14 L=422' DEG 6
1	LIC	S.R. 37	24.14	24.31	0.17	898	GAP	11	11			11			
1	LIC	S.R. 37	24.31	24.34	0.03	158	11	4	4			4			PC 24.31 PT 24.34 L=158' DEG 9
1	LIC	S.R. 37	24.34	24.42	0.08	422	GAP	5	5			5			END AT CONCRETE PAVEMENT AT I.R. 70 INTERCHANGE
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)								**1,220**	**1,220**						
2	LIC	S.R. 16 I	0.00	0.19	0.19	1,003	GAP	5	4			4			ONE EXTRA RPM IN SHOULDER NOT TO BE REPLACED
LOCATION 2 TOTALS (CARRIED TO SUB-SUMMARY)								**5**	**4**						

CALCULATED LME
CHECKED DNM

RAISED PAVEMENT MARKER DATA

LIC-37-(0.00)(16.59)
LOC-16I-0.00

SHEET NUMBERS												ITEM	ITEM EXT.	GRAND TOTALS	UNIT	DESCRIPTION
2	3	4	5	9	10	12	13	15	34A							
								14				202	23000	14	SQ YD	PAVEMENT REMOVED
	2,500	1,920				12,405	694					202	23500	17,519	SQ YD	WEARING COURSE REMOVED
								1,804				202	30000	1,804	SQ FT	WALK REMOVED
								146	2,046			202	32000	2,192	FT	CURB REMOVED
								44				202	32500	44	FT	CURB AND GUTTER REMOVED
									2			202	58300	2	EACH	CATCH BASIN OR INLET REMOVED
									9			203	10000	9	CU YD	EXCAVATION
			39.18									209	60500	39.18	MILE	LINEAR GRADING
					39.18							209	72051	39.18	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN
50												253	01000	50	CU YD	PAVEMENT REPAIR
				262,044	67,893							254	01000	329,937	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE
				16,745	4,808		53					407	10000	21,606	GALLON	TACK COAT
				8,884	2,575		35					407	14000	11,494	GALLON	TACK COAT FOR INTERMEDIATE COURSE
				2,910	286	934						407	20000	4,130	GALLON	SPECIAL - TACK COAT, TRACKLESS TACK, INTERMEDIATE COURSE
				1,571	127	17						407	20100	1,715	GALLON	SPECIAL - TACK COAT, TRACKLESS TACK, SURFACE COURSE
16,949												408	10001	16,949	GALLON	PRIME COAT, AS PER PLAN
		26		5,809	1,502	7	33					448	46020	7,377	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22
	104	341		9,469	2,455	8	25					448	46904	12,402	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M
						427						448	47020	427	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
							472					512	33010	472	SQ YD	TYPE 3 WATERPROOFING
							304					516	31011	304	FT	2" DEEP JOINT SEALER, AS PER PLAN
								1,802				608	10000	1,802	SQ FT	4" CONCRETE WALK
								36				608	15000	36	SQ FT	8" CONCRETE WALK
								44				609	12000	44	FT	COMBINATION CURB AND GUTTER, TYPE 2
								321				609	26000	321	FT	CURB, TYPE 6
									2,046			609	26001	2,046	FT	CURB, TYPE 6, AS PER PLAN
									2			611	98371	2	EACH	CATCH BASIN, NO. 6, AS PER PLAN
		5										611	98630	5	EACH	CATCH BASIN ADJUSTED TO GRADE
		16										611	99150	16	EACH	INLET ADJUSTED TO GRADE
		11										611	99654	11	EACH	MANHOLE ADJUSTED TO GRADE
			100									614	11110	100	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE
132												614	12460	132	EACH	WORK ZONE MARKING SIGN
		13										614	13000	13	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
			4									614	18601	4	SIGN MNTH	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN
				34.27								614	21400	34.27	MILE	WORK ZONE CENTER LINE, CLASS II

CALCULATED LME CHECKED DNM

LOCATION 1 SUB-SUMMARY

LIC-37-(0.00)(16.59)
LIC-16I-0.00

32
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SHEET NUMBERS												ITEM	ITEM EXT.	GRAND TOTALS	UNIT	DESCRIPTION
4	6	10	15	28	30	31	34A									
		2,571										617	10101	2,571	CU YD	COMPACTED AGGREGATE, AS PER PLAN
		25.16										618	41000	25.16	MILE	EDGE LINE, RUMBLE STRIPE (ASPHALT CONCRETE)
						1,220						621	00100	1,220	EACH	RPM
						1,220						621	54000	1,220	EACH	RAISED PAVEMENT MARKER REMOVED
	4											632	26501	4	EACH	DETECTOR LOOP, AS PER PLAN
9												638	53500	9	EACH	VALVE BOX ADJUSTED TO GRADE
					1,135							644	00400	1,135	FT	CHANNELIZING LINE, 8"
					1,097							644	00500	1,097	FT	STOP LINE
					1,386							644	00600	1,386	FT	CROSSWALK LINE
					1,571							644	00700	1,571	FT	TRANSVERSE/DIAGONAL LINE
					97							644	00900	97	SQ FT	ISLAND MARKING
					2							644	01000	2	EACH	RAILROAD SYMBOL MARKING
					7							644	01100	7	EACH	SCHOOL SYMBOL MARKING, 72"
					878							644	01200	878	FT	PARKING LOT STALL MARKING
					14							644	01300	14	EACH	LANE ARROW
					4							644	01410	4	EACH	WORD ON PAVEMENT, 96"
				36.36								648	00100	36.36	MILE	EDGE LINE, 4"
				19.52								648	00300	19.52	MILE	CENTER LINE
	5						56					653	10001	61	CU YD	TOPSOIL FURNISHED AND PLACED, AS PER PLAN
	400						861					659	00500	1,261	SQ YD	SEEDING AND MULCHING, CLASS 1
	20											659	14000	20	SQ YD	REPAIR SEEDING AND MULCHING
	20											659	15000	20	SQ YD	INTER-SEEDING
	0.11						0.23					659	20000	0.34	TON	COMMERCIAL FERTILIZER
	0.08						0.18					659	31000	0.26	ACRE	LIME
	4						7					659	35000	11	M GAL	WATER
			1									690	98000	1	EACH	SPECIAL - MISC.: CURB RAMPS, TYPE A1
			13									690	98000	13	EACH	SPECIAL - MISC.: CURB RAMPS, TYPE A2
			1									690	98000	1	EACH	SPECIAL - MISC.: CURB RAMPS, TYPE B2
			136									690	98200	136	SQ FT	SPECIAL - MISC.: DETECTABLE WARNING

CALCULATED LME CHECKED DNM

LOCATION 1 SUB-SUMMARY

LIC-37-(0.00)(16.59)
LIC-161-0.00

32A
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SHEET NUMBERS												ITEM	ITEM EXT.	GRAND TOTALS	UNIT	DESCRIPTION
2	4	5	9	10	12	13	28	30	31							
					366	178						202	23500	544	SQ YD	WEARING COURSE REMOVED
		0.27										209	60500	0.27	MILE	LINEAR GRADING
				0.27								209	72051	0.27	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN
			1,889	630								254	01000	2,519	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE
			142	48		14						407	10000	204	GALLON	TACK COAT
			95	32		9						407	14000	136	GALLON	TACK COAT FOR INTERMEDIATE COURSE
					28							407	20100	28	GALLON	SPECIAL - TACK COAT, TRACKLESS TACK, SURFACE COURSE
126												408	10001	126	GALLON	PRIME COAT, AS PER PLAN
			53	18		5						448	46020	76	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22
	3		66	22		7						448	46904	98	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M
					13							448	47020	13	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
						64						516	31011	64	FT	2" DEEP JOINT SEALER, AS PER PLAN
4												614	12460	4	EACH	WORK ZONE MARKING SIGN
	4											614	13000	4	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
			0.27									614	21400	0.27	MILE	WORK ZONE CENTER LINE, CLASS II
				18								617	10101	18	CU YD	COMPACTED AGGREGATE, AS PER PLAN
									4			621	00100	4	EACH	RPM
									5			621	54000	5	EACH	RAISED PAVEMENT MARKER REMOVED
								18				644	00500	18	FT	STOP LINE
							0.38					648	00100	0.38	MILE	EDGE LINE, 4"
							0.19					648	00300	0.19	MILE	CENTER LINE

CALCULATED LME CHECKED DNM

LOCATION 2 SUB-SUMMARY

LIC-37-(0.00)(16.59)
LIC-161-0.00

32B
34

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LOCATION TOTALS			PARTICIPATION CODE			ITEM	ITEM EXT.	GRAND TOTALS	UNIT	DESCRIPTION	SEE SHEET
LOCATION 1	LOCATION 2		"01/STR/PV"	"02/STR/OT"							
14			14			202	23000	14	SQ YD	PAVEMENT REMOVED	
17,519	544		18,063			202	23500	18,063	SQ YD	WEARING COURSE REMOVED	
1,804			1,804			202	30000	1,804	SQ FT	WALK REMOVED	
2,192			2,192			202	32000	2,192	FT	CURB REMOVED	
44			44			202	32500	44	FT	CURB AND GUTTER REMOVED	
2			2			202	58300	2	EACH	CATCH BASIN OR INLET REMOVED	
9			9			203	10000	9	CU YD	EXCAVATION	
39.18	0.27		39.45			209	60500	39.45	MILE	LINEAR GRADING	
39.18	0.27		39.45			209	72051	39.45	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	2
50			50			253	02000	50	CU YD	PAVEMENT REPAIR	
329,937	2,519		332,456			254	01000	332,456	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE	
21,606	204		21,810			407	10000	21,810	GALLON	TACK COAT	
11,494	136		11,630			407	14000	11,630	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
4,130			4,130			407	20000	4,130	GALLON	SPECIAL - TACK COAT, TRACKLESS TACK, INTERMEDIATE COURSE	
1,715	28		1,743			407	20100	1,743	GALLON	SPECIAL - TACK COAT, TRACKLESS TACK, SURFACE COURSE	
16,949	126		17,075			408	10001	17,075	GALLON	PRIME COAT, AS PER PLAN	2
7,377	76		7,453			448	46020	7,453	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22	
12,402	98		12,500			448	46904	12,500	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M	
427	13		440			448	47020	440	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22	
472			472			512	33010	472	SQ YD	TYPE 3 WATERPROOFING	
304	64		368			516	31011	368	FT	2" DEEP JOINT SEALER, AS PER PLAN	2
1,802			1,802			608	10000	1,802	SQ FT	4" CONCRETE WALK	
36			36			608	15000	36	SQ FT	8" CONCRETE WALK	
44			44			609	12000	44	FT	COMBINATION CURB AND GUTTER, TYPE 2	
321			321			609	26000	321	FT	CURB, TYPE 6	
2,046			2,046			609	26001	2,046	FT	CURB, TYPE 6, AS PER PLAN	34A
2			2			611	98371	2	EACH	CATCH BASIN, NO. 6, AS PER PLAN	34A
5			5			611	98630	5	EACH	CATCH BASIN ADJUSTED TO GRADE	
16			16			611	99150	16	EACH	INLET ADJUSTED TO GRADE	
11			11			611	99654	11	EACH	MANHOLE ADJUSTED TO GRADE	
100			100			614	11110	100	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
132	4		136			614	12460	136	EACH	WORK ZONE MARKING SIGN	
13	4		17			614	13000	17	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
4			4			614	18601	4	SIGN MNTH	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	5
34.27	0.27			34.54		614	21400	34.54	MILE	WORK ZONE CENTER LINE, CLASS II	

CALCULATED LME CHECKED DNM

GENERAL SUMMARY

LIC-37-(0.00)(16.59)
LIC-161-0.00

33
34

LOCATION TOTALS			PARTICIPATION CODE			ITEM	ITEM EXT.	GRAND TOTALS	UNIT	DESCRIPTION	SEE SHEET
LOCATION 1	LOCATION 2		"01/STR/PV"	"02/STR/OT"							
2,571	18		2,589			617	10101	2,589.00	CU YD	COMPACTED AGGREGATE, AS PER PLAN	2
25.16			25.16			618	41000	25.16	MILE	EDGE LINE, RUMBLE STRIPE (ASPHALT CONCRETE)	
1,220	4			1,224		621	00100	1,224	EACH	RPM	
1,220	5			1,225		621	54000	1,225	EACH	RAISED PAVEMENT MARKER REMOVED	
4			4			632	26501	4	EACH	DETECTOR LOOP, AS PER PLAN	6
9			9			638	53500	9	EACH	VALVE BOX ADJUSTED TO GRADE	
1,135				1,135		644	00400	1,135	FT	CHANNELIZING LINE, 8"	
1,097	18			1,115		644	00500	1,115	FT	STOP LINE	
1,386				1,386		644	00600	1,386	FT	CROSSWALK LINE	
1,571				1,571		644	00700	1,571	FT	TRANSVERSE/DIAGONAL LINE	
97				97		644	00900	97	SQ FT	ISLAND MARKING	
2				2		644	01000	2	EACH	RAILROAD SYMBOL MARKING	
7				7		644	01100	7	EACH	SCHOOL SYMBOL MARKING, 72"	
878				878		644	01200	878	FT	PARKING LOT STALL MARKING	
14				14		644	01300	14	EACH	LANE ARROW	
4				4		644	01410	4	EACH	WORD ON PAVEMENT, 96"	
36.36	0.38			36.74		648	00100	36.74	MILE	EDGE LINE, 4"	
19.52	0.19			19.71		648	00300	19.71	MILE	CENTER LINE	
61			61			653	10001	61	CU YD	TOPSOIL FURNISHED AND PLACED, AS PER PLAN	6
1,261			1,261			659	00500	1,261	SQ YD	SEEDING AND MULCHING, CLASS 1	
20			20			659	14000	20	SQ YD	REPAIR SEEDING AND MULCHING	
20			20			659	15000	20	SQ YD	INTER-SEEDING	
0.34			0.34			659	20000	0.34	TON	COMMERCIAL FERTILIZER	
0.26			0.26			659	31000	0.26	ACRE	LIME	
11			11			659	35000	11	M GAL	WATER	
1			1			690	98000	1	EACH	SPECIAL - MISC.: CURB RAMPS, TYPE A1	
13			13			690	98000	13	EACH	SPECIAL - MISC.: CURB RAMPS, TYPE A2	
1			1			690	98000	1	EACH	SPECIAL - MISC.: CURB RAMPS, TYPE B2	
136			136			690	98200	136	SQ FT	SPECIAL - MISC.: DETECTABLE WARNING	
						103	05000	LUMP		PREMIUM FOR CONTRACT PERFORMANCE BOND AND FOR PAYMENT BOND	
						614	11000	LUMP		MAINTAINING TRAFFIC	
						619	16000	2	MONTH	FIELD OFFICE, TYPE A	
						623	10000	LUMP		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
						624	10000	LUMP		MOBILIZATION	

CALCULATED LME
CHECKED DNM

GENERAL SUMMARY

LIC-37-(0.00)(16.59)
LIC-161-0.00

UTILITIES

THE IDENTITY AND LOCATION OF THE EXISTING UNDERGROUND UTILITY FACILITIES KNOWN LOCATED IN THE CONSTRUCTION AREA WITHIN THE VILLAGE OF JOHNSTOWN HAVE BEEN SHOWN ON THE PLANS AS ACCURATELY AS PROVIDED BY THE OWNER OF THE UTILITY. ODOT ASSUMES NO RESPONSIBILITY AS TO THE ACCURACY OR THE DEPTHS OF THE UNDERGROUND FACILITIES SHOWN ON THE PLANS.

LOCATION, SUPPORT, PROTECTION AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL EXPOSE AND VERIFY THE LOCATION OF ANY UTILITIES WITHIN THE LIMITS OF THE PROPOSED CONDUIT PATH, PRIOR TO STARTING ANY EXCAVATION. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS ITEMS.

THE CONTRACTOR SHALL CAUSE NOTICE GIVEN TO THE OHIO UTILITIES PROTECTION SERVICE (PHONE 800-362-2764) AND TO THE OWNERS OF THE UTILITY FACILITIES SHOWN ON THE PLAN WHO ARE NOT MEMBERS OF A REGISTERED UNDERGROUND PROTECTION SERVICE IN ACCORDANCE WITH SECTION 153.64 OF THE REVISED CODE. THE ABOVE-MENTIONED NOTICE SHALL BE GIVEN AT LEAST TWO (2) DAYS PRIOR TO THE START OF CONSTRUCTION.

WHEN UNKNOWN OR INCORRECTLY LOCATED UNDERGROUND UTILITIES ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.

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

ELECTRIC:
AMERICAN ELECTRIC POWER
850 TECH CENTER DRIVE
GAHANNA, OH 43230
PHONE: 614-883-6831

ELECTRIC:
LICKING RURAL
ELECTRIFICATION, INC.
THE ENERGY COOPERATIVE
1500 GRANVILLE ROAD
P.O. BOX 4970
NEWARK, OH 43058
PHONE: 1-800-255-6815

GAS:
COLUMBIA GAS OF OHIO
920 WEST GOODALE BLVD.
COLUMBUS, OH 43212
PHONE: 614-460-2169

TELEPHONE:
UNITED TELEPHONE COMPANY
OF OHIO DBA CENTURYLINK
441 WEST BROAD STREET
PATASKALA, OH 43062
PHONE: 740-927-8282

CABLE TELEVISION:
TIME WARNER CABLE
1266 DUBLIN ROAD
COLUMBUS, OH 43215
PHONE: 614-481-5263

SANITARY:
VILLAGE OF JOHNSTOWN
UTILITIES DEPARTMENT
599 SOUTH MAIN STREET
P.O. BOX 457
JOHNSTOWN, OH 43031
PHONE: 740-967-7201

STORM:
VILLAGE OF JOHNSTOWN
STREET DEPARTMENT
599 SOUTH MAIN STREET
P.O. BOX 457
JOHNSTOWN, OH 43031
PHONE: 740-967-3177

WATER:
VILLAGE OF JOHNSTOWN
UTILITIES DEPARTMENT
599 SOUTH MAIN STREET
P.O. BOX 457
JOHNSTOWN, OH 43031
PHONE: 740-967-4746

ITEM 609, CURB, TYPE 6, AS PER PLAN

IN AREAS OF CURB REMOVAL AND/OR REPLACEMENT ADJACENT TO THE EXISTING ROADWAY, THE CONTRACTOR SHALL SAW CUT THE PAVEMENT TO PROVIDE A NEAT JOINT, AS DESCRIBED IN 202.05.

LOW STRENGTH MORTAR SHALL BE USED TO BACKFILL VOIDS CREATED BETWEEN PROPOSED CURB AND EXISTING ROADWAY. LOW STRENGTH MORTAR SHALL BE CONSTRUCTED TO ELEVATION 2¼ INCHES BELOW THE FINISH GRADE OF THE PROPOSED ASPHALT OVERLAY.

ALL OF THE MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS INCLUDING THE SAW CUT AND LOW STRENGTH MORTAR NECESSARY TO COMPLETE THE WORK DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 609, CURB, TYPE 6, AS PER PLAN.

SEEDING AND MULCHING

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

ITEM 659, SEEDING AND MULCHING, CLASS 1
(FROM SHEET 34L) = 861 SQ YD.

ITEM 659, COMMERCIAL FERTILIZER 0.23 TON
(ONE TON PER 7,410 SQ. YD. OF PERMANENT SEEDED AREA)
2 x (861 / 7,410) = 0.232

ITEM 659 LIME 0.18 ACRES
(PERMANENT SEEDED AREA)
861 SQ. YD. x 9 SQ. FT./SQ. YD. / 43,560 SQ. FT./ACRE = 0.18

ITEM 659, WATER 7 M . GAL.
(0.0027 M. GAL. PER SQ. YD. OF THE PERMANENT SEEDED AREA)
3 x (861 x 0.0027) = 6.97

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.

LOCAL ACCESS

MAINTAIN INGRESS AND EGRESS TO ALL PROPERTIES AFFECTED BY THIS IMPROVEMENT AT ALL TIMES. ANY COSTS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC (INCLUDED IN THE GENERAL SUMMARY, SHEET 34), AND SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO MAINTAIN LOCAL ACCESS TO PROPERTIES. THE CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNERS AT ALL TIMES.

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 611 CONDUIT ITEMS.

ITEM 611, CATCH BASIN, NO. 6, AS PER PLAN

THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTIALS REQUIRED TO INSTALL CATCH BASIN, NO. 6, AS IDENTIFIED IN THE PLANS.

PRIOR TO BEGINING WORK, THE CONTRACTOR SHALL INSPECT AND SURVEY CONDUIT SIZES, MATERIALS, AND ELEVATIONS AND INSTALL A CATCH BASIN, NO. 6 TO MATCH EXISTING ELEVATIONS. EXISTING CONDUIT SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. THE WORK SHALL BE DONE IN ACCORDANCE WITH ITEM 611.

IN AREAS OF CATCH BASIN REMOVAL THE CONTRACTOR SHALL SAW CUT THE PAVEMENT TO PROVIDE A NEAT JOINT, AS DESCRIBED IN 202.05.

LOW STRENGTH MORTAR SHALL BE USED TO BACKFILL THE AREA BETWEEN PROPOSED CATCH BASIN, NO. 6, AS PER PLAN AND EXISTING ROADWAY. LOW STRENGTH MORTAR SHALL BE CONSTRUCTED TO ELEVATION 2¼ INCHES BELOW THE FINISH GRADE OF THE PROPOSED ASPHALT OVERLAY.

PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, MATERIAL, EQUIPMENT, AND INCIDENTIALS TO COMPLETE THE WORK.

BENCHMARKS AND CONTROL POINTS
HORIZONTAL DATUM-NAD 83(2011), OHIO STATE PLANE, SOUTH ZONE, GRID VERTICAL DATUM-NAVD 88, GEOID 12A

POINT	NORTH (Y)	EAST (X)	ELEV.	STATION	OFFSET	DESCRIPTION
BM 1	783898.8350	1917276.8390	1161.423	252+82.24	21.94' RT.	X ON TELEPHONE MANHOLE RIM
BM 2	783595.2230	1917497.2200	1163.663	256+57.40	24.86' RT.	SQUARE CUT ON USPS MAILBOX BASE
BM 3	783386.2856	1917715.9113	1165.723	259+55.37	27.07' LT.	SQUARE CUT ON SIDEWALK
CP 10	784066.3640	1917203.6110	1159.752	251+03.96	18.59' LT.	BRASS PLUG IN SIDEWALK
CP 11	783821.9130	1917386.2580	1163.504	254+09.11	20.44' LT.	5/8" X 30" REBAR W/PUNCH MARK
CP 12	783634.5590	1917472.9470	1163.178	256+11.34	21.04' RT.	5/8" X 30" REBAR W/PUNCH MARK
CP 13	783472.4070	1917595.8720	1164.106	258+14.80	18.39' RT.	5/8" X 30" REBAR W/PUNCH MARK
CP 14	783219.1440	1917833.0990	1163.049	261+59.44	22.14' LT.	5/8" X 30" REBAR W/PUNCH MARK

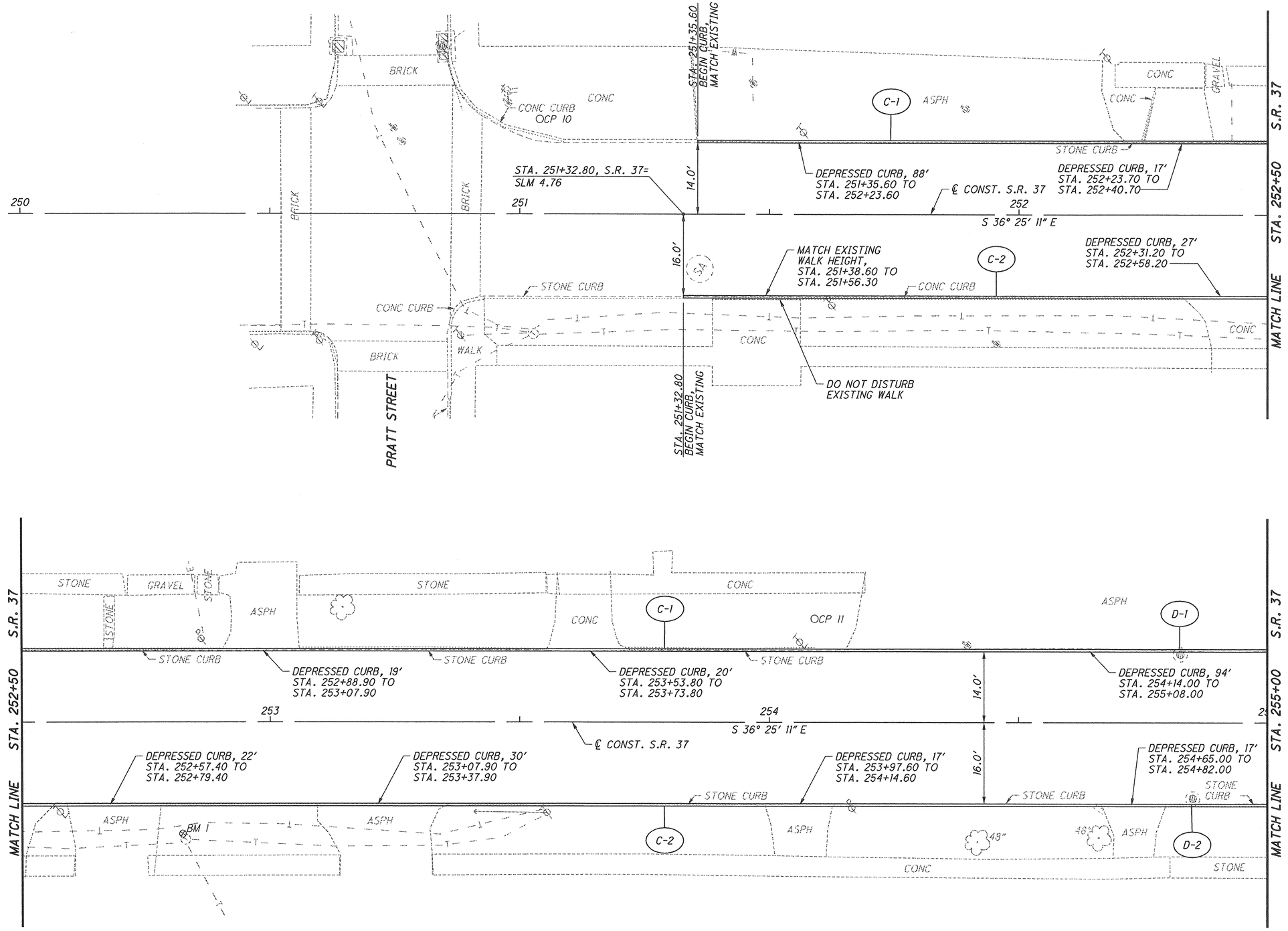
REF NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	202 CURB REMOVED	202 CATCH BASIN OR INLET REMOVED	203 EXCAVATION	609 CURB, TYPE 6, AS PER PLAN	611 CATCH BASIN, NO. 6, AS PER PLAN	653 TOPSOIL FURNISHED AND PLACED, AS PER PLAN	659 SEEDING AND MULCHING, CLASS 1		
					FT	EACH	CY	FT	EACH	CY	SY		
C-1	34B-34C	251+35.60	256+25.50	LT	496			496					
C-2	34B-34C	251+32.80	256+25.10	RT	496			496					
C-3	34C-34D	256+48.60	261+58.80	LT	512			512					
C-4	34C-34D	256+53.00	261+58.80	RT	506			506					
C-5	34D	261+64.80	261+87.80	LT	28			28					
C-6	34D	261+64.80	261+73.15	RT	8			8					
-	34L	-	-	-			9			56	861		
D-1	34B	254+82.43		LT		1			1				
D-2	34B	254+84.92		RT		1			1				
TOTALS					2,046	2	9	2,046	2	56	861		

CALCULATED MME
CHECKED ADW

GENERAL NOTES

LIC-37-(0.00)(16.59)
LIC-161-0.00

34A
34



NOTES

1. FOR QUANTITIES SEE SHEET 34A.
2. STATIONING GIVEN FOR DEPRESSED CURB INCLUDES 18" TRANSITION FROM STANDARD CURB TO DROP CURB ON EITHER SIDE OF DRIVEWAY.

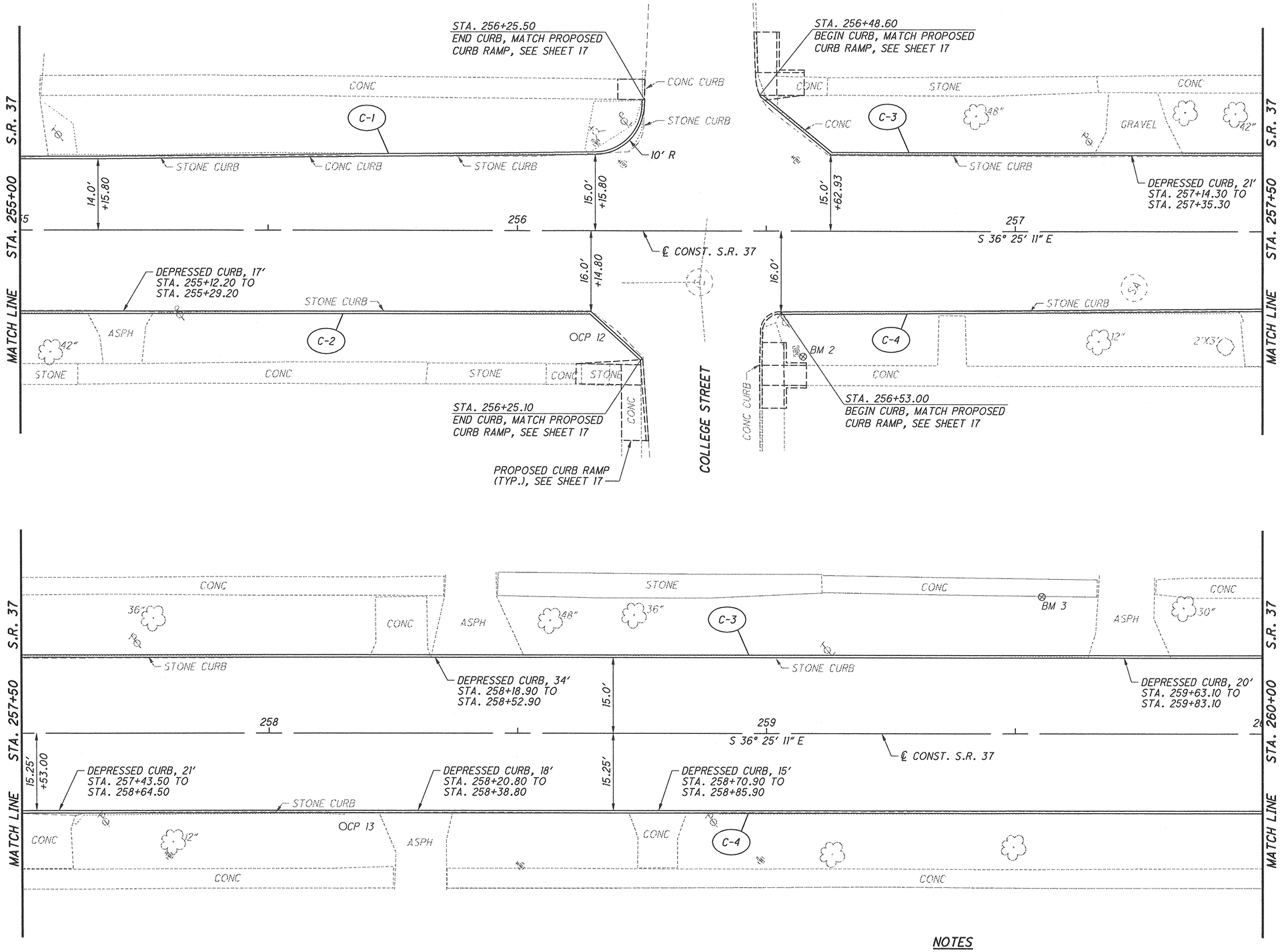
HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED MME
CHECKED ADW

PLAN
STA. 250+00.00 TO STA. 255+00.00

LIC-37-(0.00)(16.59)
LIC-161-0.00

34B
34



NOTES

1. FOR QUANTITIES SEE SHEET 34A.
2. STATIONING GIVEN FOR DEPRESSED CURB INCLUDES 18" TRANSITION FROM STANDARD CURB TO DROP CURB ON EITHER SIDE OF DRIVEWAY.

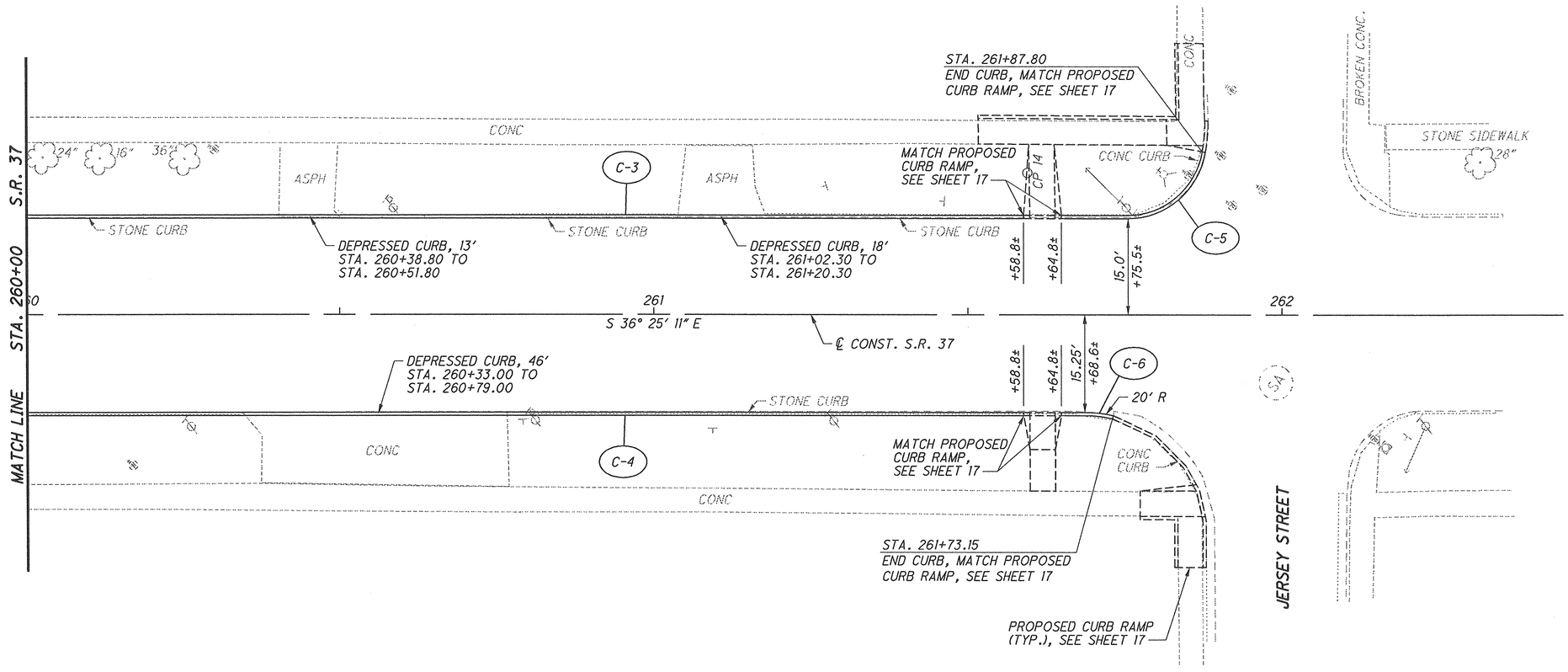
HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED MME
CHECKED ADW

PLAN S.R. 37
STA. 255+00.00 TO STA. 260+00.00

LIC-37-(0.00)(16.59)
LIC-161-0.00

34C
34



NOTES

1. FOR QUANTITIES SEE SHEET 34A.
2. STATIONING GIVEN FOR DEPRESSED CURB INCLUDES 18" TRANSITION FROM STANDARD CURB TO DROP CURB ON EITHER SIDE OF DRIVEWAY.

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED MME
CHECKED ADW

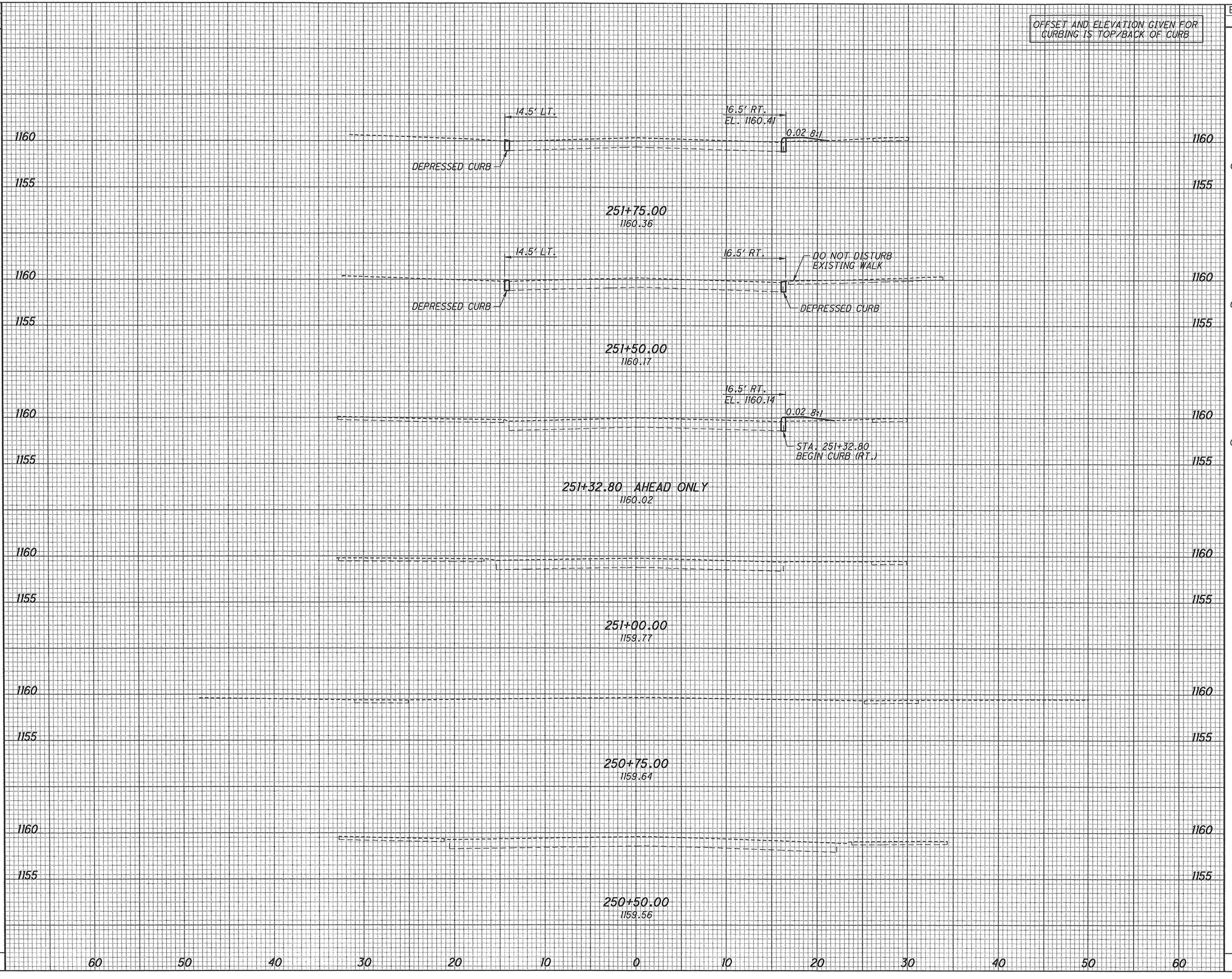
PLAN S.R. 37
STA. 260+00.00 TO STA. 262+50.00

LIC-37-(0.00)(16.59)
LIC-161-0.00

34D
34

SEEDING	
END WIDTH	SQ. YDS.
4.6	6.4
0.0	5.2
5.4	11.6

OFFSET AND ELEVATION GIVEN FOR CURBING IS TOP/BACK OF CURB



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.0	1.3		
		0.0	0.6
0.0	0.0		
		0.0	0.6
0.0	1.8		
		0.0	1.2

CALCULATED MME
CHECKED ADW

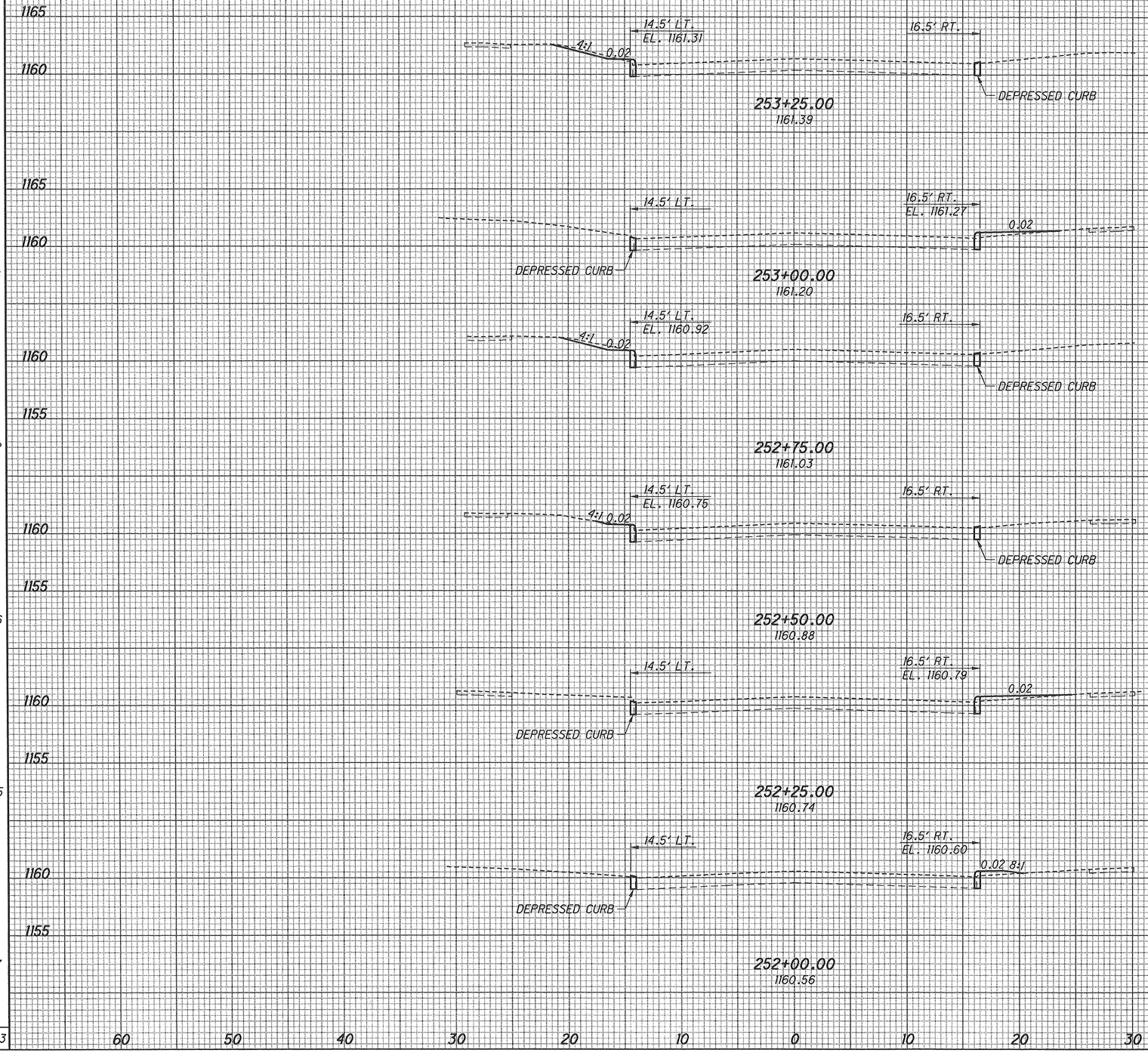
CROSS SECTIONS S.R. 37
STA. 250+50.00 TO STA. 251+75.00

LIC-37-(0.00)(16.59)
LIC-161-0.00

34E
34

SEEDING END WIDTH	SEEDING SQ. YDS.
7.2	19.7
7.0	18.6
6.4	13.2
3.1	15.6
8.1	16.5
3.8	11.7
	95.3

OFFSET AND ELEVATION GIVEN FOR CURBING IS TOP/BACK OF CURB



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1.0	0.1		
		0.5	0.7
0.0	1.5		
		0.6	0.7
1.2	0.0		
		0.6	0.0
0.2	0.0		
		0.1	0.8
0.0	1.8		
		0.0	1.3
0.0	1.0		
		0.0	1.1
		1.8	4.6

CALCULATED MME
CHECKED ADW

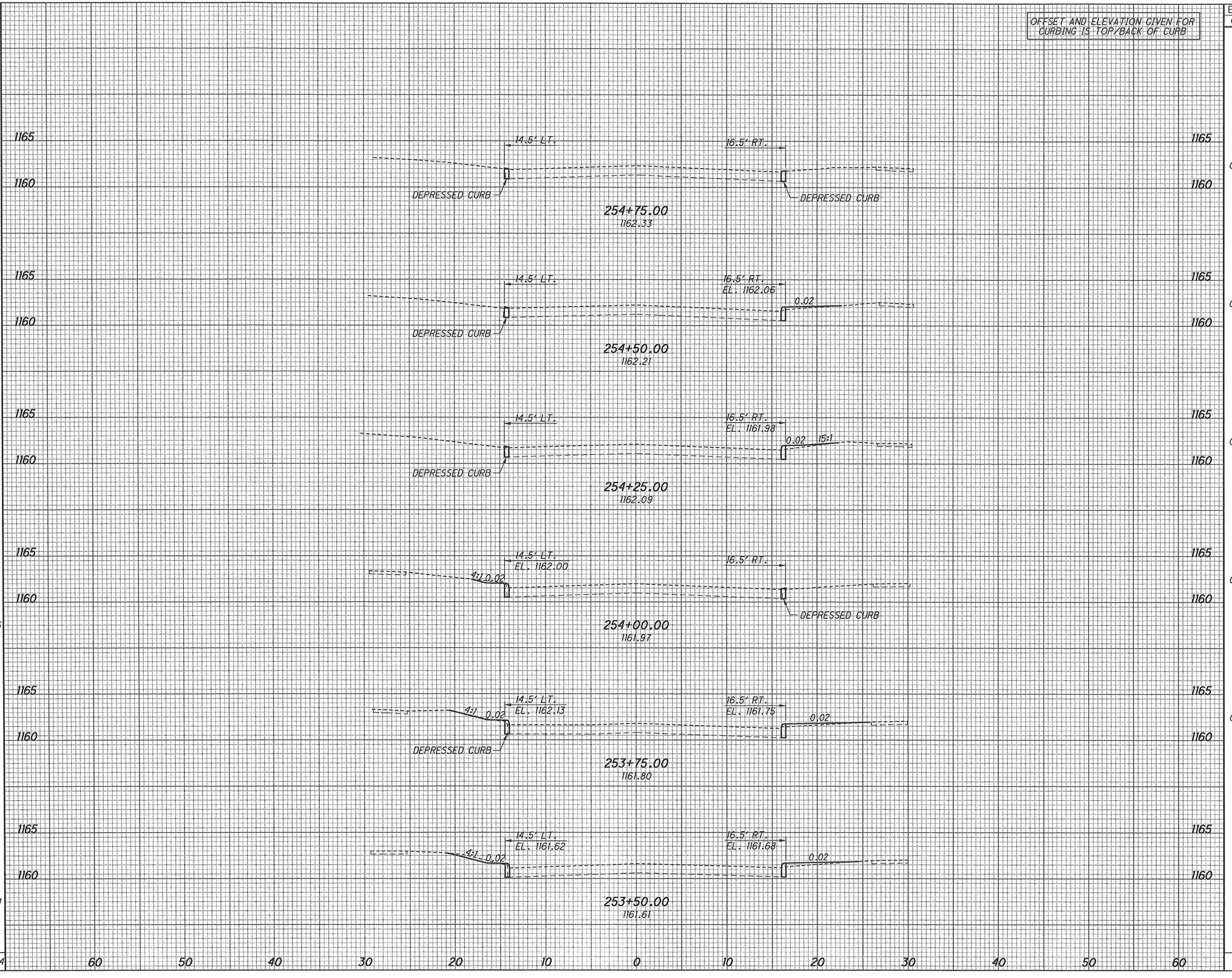
CROSS SECTIONS S.R. 37
STA. 252+00.00 TO STA. 253+25.00

LIC-37-(0.00)(16.59)
LIC-161-0.00

34F
34

OFFSET AND ELEVATION GIVEN FOR CURBING IS TOP/BACK OF CURB

SEEDING END WIDTH	SEEDING SQ. YDS.	
0.0	8.5	254+75.00 1162.33
6.1	16.5	254+50.00 1162.21
5.8	13.1	254+25.00 1162.09
3.6	26.5	254+00.00 1161.97
15.5	41.7	253+75.00 1161.80
14.5	30.1	253+50.00 1161.61
	136.4	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0.0	0.0		
		0.0	0.4
0.0	0.9		
		0.0	0.9
0.0	1.0		
		0.2	0.5
0.5	0.0		
		0.4	0.7
0.3	1.6		
		0.6	1.5
1.1	1.7		
		1.0	0.8
		2.2	4.8

CALCULATED MME
CHECKED ADW

CROSS SECTIONS S.R. 37
STA. 253+50.00 TO STA. 254+75.00

LIC-37-(0.00)(16.59)
LIC-161-0.00

34G
34

OFFSET AND ELEVATION GIVEN FOR CURBING IS TOP/BACK OF CURB

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
3.2	18.6	3.7	1.1	3.6	1.6
10.2	28.8	0.1	2.4	0.0	2.3
10.5	37.4	0.0	2.5	0.0	2.6
16.4	33.2	0.0	3.2	0.0	2.0
7.5	12.9	0.0	1.1	0.0	0.6
1.8	2.5	0.0	0.2	0.0	0.1
	133.4			3.6	9.2

22.4' LT.
EL. 1163.56
0.02
LOW STRENGTH MORTAR BACKFILL AND ASPHALT OVERLAY AS PER ITEM 609, CURB, TYPE 6, AS PER PLAN
256+25.00 BACK ONLY
1163.25

15.3' LT.
EL. 1163.12
4:1
0.02
16.5' RT.
EL. 1163.26
0.02
8:1
256+00.00
1163.34

16.1' LT.
EL. 1163.01
0.02
16.5' RT.
EL. 1163.06
0.02
8:1
255+75.00
1163.10

14.8' LT.
EL. 1162.88
0.02
16.5' RT.
EL. 1162.79
0.02
8:1
255+50.00
1162.87

14.6' LT.
EL. 1162.67
0.02
16.5' RT.
DEPRESSED CURB
255+25.00
1162.65

14.5' LT.
DEPRESSED CURB
16.5' RT.
EL. 1162.31
0.02
255+00.00
1162.46

1165 1160

60 50 40 30 20 10 0 10 20 30 40 50 60

CALCULATED MME
CHECKED ADW

CROSS SECTIONS S.R. 37
STA. 255+00.00 TO STA. 256+25.00

LIC-37-(0.00)(16.59)
LIC-161-0.00

34H
34

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OFFSET AND ELEVATION GIVEN FOR CURBING IS TOP/BACK OF CURB

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
14.2		0.0	3.1		
	28.1			0.0	1.9
6.0		0.0	1.0		
	15.7			0.0	1.2
5.3		0.0	1.6		
	24.3			0.0	1.9
12.2		0.0	2.5		
	35.7			0.0	2.2
13.5		0.0	2.3		
	18.8			0.0	1.1
0.0		0.0	0.0		
	122.6			0.0	8.3

257+75.00
1163.98
15.5' LT. EL. 1163.90
0.02
15.75' RT. EL. 1163.92
0.02 8:1

257+50.00
1163.89
15.5' LT. EL. 1163.83
0.02
15.8' RT.
DEPRESSED CURB

257+25.00
1163.82
15.5' LT.
DEPRESSED CURB
16.0' RT. EL. 1163.74
0.02 8:1

257+00.00
1163.76
15.5' LT. EL. 1163.65
0.02
16.1' RT. EL. 1163.65
0.02 12:1

256+75.00
1163.69
15.5' LT. EL. 1163.60
0.02
16.3' RT. EL. 1163.53
0.02

256+50.00 AHEAD ONLY
1163.62

1165
1160

60 50 40 30 20 10 0 10 20 30 40 50 60

CALCULATED MME
CHECKED ADW

CROSS SECTIONS S.R. 37
STA. 256+50.00 TO STA. 257+75.00

LIC-37-(0.00)(16.59)
LIC-161-0.00

341
34

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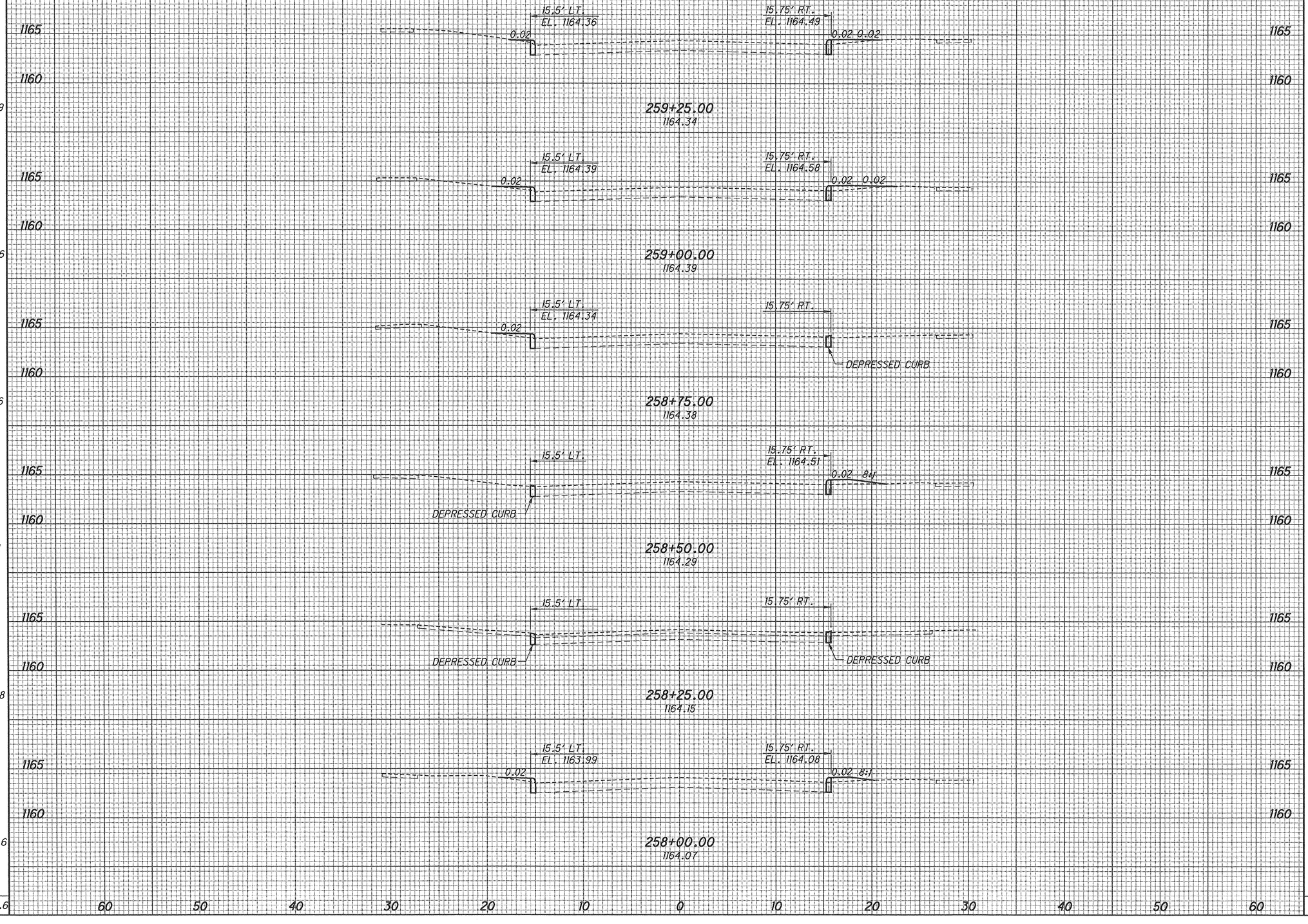
OFFSET AND ELEVATION GIVEN FOR CURBING IS TOP/BACK OF CURB

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
7.1		0.0	1.5		
	24.9			0.0	1.9
10.8		0.0	2.5		
	20.6			0.0	1.5
4.0		0.0	0.8		
	13.6			0.0	1.3
5.8		0.0	1.9		
	8.1			0.0	0.9
0.0		0.0	0.0		
	10.8			0.0	0.9
7.8		0.0	1.9		
	30.6			0.0	2.3
	108.6			0.0	8.8



CALCULATED MME
CHECKED ADW

CROSS SECTIONS S.R. 37
STA. 258+00.00 TO STA. 259+25.00

LIC-37-(0.00)(16.59)
LIC-161-0.00

34J
34

OFFSET AND ELEVATION GIVEN FOR CURBING IS TOP/BACK OF CURB

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2.1	2.9	0.0	0.4	0.0	0.2
0.0	19.2	0.0	0.0	0.2	1.0
13.8	41.3	0.4	2.2	0.5	2.0
15.9	34.2	0.6	2.1	0.3	2.1
8.7	28.3	0.0	2.4	0.0	2.1
11.7	26.1	0.1	2.1	0.0	1.7
	152.0			1.0	9.1

260+75.00
1162.81
15.5' LT.
15.75' RT.
0.02
DEPRESSED CURB

260+50.00
1163.13
15.5' LT
15.75' RT.
DEPRESSED CURB
DEPRESSED CURB

260+25.00
1163.42
15.5' LT.
EL. 1163.42
15.75' RT.
EL. 1163.43
3:1
0.02
0.02
0.02

260+00.00
1163.70
15.5' LT
EL. 1163.75
15.75' RT.
EL. 1163.73
4:1
0.02
0.02
0.02

259+75.00
1163.97
15.5' LT
15.75' RT.
EL. 1164.02
0.02
DEPRESSED CURB

259+50.00
1164.21
15.5' LT
EL. 1164.27
15.75' RT.
EL. 1164.28
4:1
0.02
0.02
0.02

1165
1160
60 50 40 30 20 10 0 10 20 30 40 50 60

CALCULATED MME
CHECKED ADW

CROSS SECTIONS S.R. 37
STA. 259+50.00 TO STA. 260+75.00

LIC-37-(0.00)(16.59)
LIC-161-0.00

34K
34

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OFFSET AND ELEVATION GIVEN FOR CURBING IS TOP/BACK OF CURB

SEEDING TOTAL

SHEET	SEEDING
34E	11.6
34F	95.3
34G	136.4
34H	133.4
34I	122.6
34J	108.6
34K	152.0
34L	100.8
TOTAL	860.7

TOTAL CARRIED TO SHEET 34A

ITEM 659, SEEDING AND MULCHING CLASS I = 861 SY

EARTHWORK TOTALS

SHEET	CUT	FILL
34E	0.0	1.2
34F	1.8	4.6
34G	2.2	4.8
34H	3.6	9.2
34I	0.0	8.3
34J	0.0	8.8
34K	1.0	9.1
34L	0.0	9.1
TOTAL	8.6	55.1

TOTAL CARRIED TO SHEET 34A

ITEM 203, EXCAVATION = 9 CY

ITEM 653, TOPSOIL FURNISHED AND PLACED, AS PER PLAN = 56 CY

262+25.00
1161.17

262+00.00 BACK ONLY
1161.41

15.5' LT
EL. 1161.87
0.02

261+75.00
1161.69

15.5' LT
EL. 1162.10
0.02

15.75' RT.
EL. 1162.06
0.02 8:1

261+50.00
1161.99

15.5' LT
EL. 1162.34
0.02

15.75' RT.
EL. 1162.37
0.02 15:1

261+25.00
1162.27

15.5' LT
EL. 1162.57
0.02

15.75' RT.
EL. 1162.58
0.02 0.02

261+00.00
1162.54

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0.0	4.3	0.0	0.0	0.0	0.6
3.1	17.1	0.0	1.2	0.0	1.8
9.2	25.0	0.0	2.7	0.0	2.3
8.8	31.8	0.0	2.3	0.0	2.6
14.1	22.5	0.0	3.4	0.0	1.8
	100.8			0.0	9.1

CALCULATED MME
CHECKED ADW

CROSS SECTIONS S.R. 37
STA. 261+00.00 TO STA. 262+25.00

LIC-37-(0.00)(16.59)
LIC-161-0.00

34L
34