



CALL NO. 102

CONTRACT ID. 191227

MCCRACKEN COUNTY

FED/STATE PROJECT NUMBER STP 3015 (028)

DESCRIPTION US 45

WORK TYPE ASPHALT PAVEMENT & ROADWAY REHAB

PRIMARY COMPLETION DATE 12/1/2019

LETTING DATE: July 26,2019

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME July 26,2019. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT TIME.

NO PLANS ASSOCIATED WITH THIS PROJECT.

DBE CERTIFICATION REQUIRED - 6%

REQUIRED BID PROPOSAL GUARANTY: Not less than 5% of the total bid.

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PART I
SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 01

CONTRACT ID - 191227

STP 3015 (028)

COUNTY - MCCRACKEN

PCN - DE07300451927

STP 3015 (028)

US 45 (MP 10.343) ADDRESS PAVEMENT CONDITION OF AC PAVEMENT (MP 10.802), A DISTANCE OF 0.46 MILES.ASPHALT PAVEMENT & ROADWAY REHAB SYP NO. 01-20019.00.
GEOGRAPHIC COORDINATES LATITUDE 37:04:36.00 LONGITUDE 80:38:00.00

COMPLETION DATE(S):

COMPLETED BY 12/01/2019

APPLIES TO ENTIRE CONTRACT

CONTRACT NOTES

PROPOSAL ADDENDA

All addenda to this proposal must be applied when calculating bid and certified in the bid packet submitted to the Kentucky Department of Highways. Failure to use the correct and most recent addenda may result in the bid being rejected.

BID SUBMITTAL

Bidder must use the Department's electronic bidding software. The Bidder must download the bid file located on the Bid Express website (www.bidx.com) to prepare a bid packet for submission to the Department. The bidder must submit electronically using Bid Express.

JOINT VENTURE BIDDING

Joint venture bidding is permissible. All companies in the joint venture must be prequalified in one of the work types in the Qualifications for Bidders for the project. The bidders must get a vendor ID for the joint venture from the Division of Construction Procurement and register the joint venture as a bidder on the project. Also, the joint venture must obtain a digital ID from Bid Express to submit a bid. A joint bid bond of 5% may be submitted for both companies or each company may submit a separate bond of 5%.

UNDERGROUND FACILITY DAMAGE PROTECTION

The contractor shall make every effort to protect underground facilities from damage as prescribed in the Underground Facility Damage Protection Act of 1994, Kentucky Revised Statute KRS 367.4901 to 367.4917. It is the contractor's responsibility to determine and take steps necessary to be in compliance with federal and state damage prevention directives. When prescribed in said directives, the contractor shall submit Excavation Locate Requests to the Kentucky Contact Center (KY811) via web ticket entry. The submission of this request does not relieve the contractor from the responsibility of contacting non-member facility owners, whom shall be contacted through their individual Protection Notification Center. Non-compliance with these directives can result in the enforcement of penalties.

REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY

Pursuant to KRS 176.085(1)(b), an agency, department, office, or political subdivision of the Commonwealth of Kentucky shall not award a state contract to a person that is a foreign entity required by [KRS 14A.9-010](#) to obtain a certificate of authority to transact business in the Commonwealth ("certificate") from the Secretary of State under [KRS 14A.9-030](#) unless the person produces the certificate within fourteen (14) days of the bid or proposal opening. If the foreign entity is not required to obtain a certificate as provided in [KRS 14A.9-010](#), the foreign entity should identify the applicable exception. Foreign entity is defined within [KRS 14A.1-070](#).

For all foreign entities required to obtain a certificate of authority to transact business in the Commonwealth, if a copy of the certificate is not received by the contracting agency within the time frame identified above, the foreign entity's solicitation response shall be deemed non-responsive or the awarded contract shall be cancelled.

Businesses can register with the Secretary of State at <https://secure.kentucky.gov/sos/ftbr/welcome.aspx>.

SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT

Questions about projects during the advertisement should be submitted in writing to the Division of Construction Procurement. This may be done by fax (502) 564-7299 or email to kytc.projectquestions@ky.gov. The Department will attempt to answer all submitted questions. The Department reserves the right not to answer if the question is not pertinent or does not aid in clarifying the project intent.

The deadline for posting answers will be 3:00 pm Eastern Daylight Time, the day preceding the Letting. Questions may be submitted until this deadline with the understanding that the later a question is submitted, the less likely an answer will be able to be provided.

The questions and answers will be posted for each Letting under the heading "Questions & Answers" on the Construction Procurement website (www.transportation.ky.gov/contract). The answers provided shall be considered part of this Special Note and, in case of a discrepancy, will govern over all other bidding documents.

HARDWOOD REMOVAL RESTRICTIONS

The US Department of Agriculture has imposed a quarantine in Kentucky and several surrounding states, to prevent the spread of an invasive insect, the emerald ash borer. Hardwood cut in conjunction with the project may not be removed from the state. Chipping or burning on site is the preferred method of disposal.

INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES

Identification of excess material sites and borrow sites shall be the responsibility of the Contractor. The Contractor shall be responsible for compliance with all applicable state and federal laws and may wish to consult with the US Fish and Wildlife Service to seek protection under Section 10 of the Endangered Species Act for these activities.

ACCESS TO RECORDS

The contractor, as defined in KRS 45A.030 (9) agrees that the contracting agency, the Finance and Administration Cabinet, the Auditor of Public Accounts, and the Legislative Research Commission, or their duly authorized representatives, shall have access to any books, documents, papers, records, or other evidence, which are directly pertinent to this contract for the purpose of financial audit or program review. Records and other prequalification information confidentially

disclosed as part of the bid process shall not be deemed as directly pertinent to the contract and shall be exempt from disclosure as provided in KRS 61.878(1)(c). The contractor also recognizes that any books, documents, papers, records, or other evidence, received during a financial audit or program review shall be subject to the Kentucky Open Records Act, KRS 61.870 to 61.884.

In the event of a dispute between the contractor and the contracting agency, Attorney General, or the Auditor of Public Accounts over documents that are eligible for production and review, the Finance and Administration Cabinet shall review the dispute and issue a determination, in accordance with Secretary's Order 11-004.

April 30, 2018

FEDERAL CONTRACT NOTES

The Kentucky Department of Highways, in accordance with the Regulations of the United States Department of Transportation 23 CFR 635.112 (h), hereby notifies all bidders that failure by a bidder to comply with all applicable sections of the current Kentucky Standard Specifications, including, but not limited to the following, may result in a bid not being considered responsive and thus not eligible to be considered for award:

102.02 Current Capacity Rating 102.10 Delivery of Proposals
102.8 Irregular Proposals 102.14 Disqualification of Bidders
102.9 Proposal Guaranty

CIVIL RIGHTS ACT OF 1964

The Kentucky Department of Highways, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252) and the Regulations of the Federal Department of Transportation (49 C.F.R., Part 21), issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that the contract entered into pursuant to this advertisement will be awarded to the lowest responsible bidder without discrimination on the ground of race, color, or national origin.

NOTICE TO ALL BIDDERS

To report bid rigging activities call: 1-800-424-9071.

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m. eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

SECOND TIER SUBCONTRACTS

Second Tier subcontracts on federally assisted projects shall be permitted. However, in the case of DBE's, second tier subcontracts will only be permitted where the other subcontractor is also a DBE. All second tier subcontracts shall have the consent of both the Contractor and the Engineer.

DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

It is the policy of the Kentucky Transportation Cabinet (“the Cabinet”) that Disadvantaged Business Enterprises (“DBE”) shall have the opportunity to participate in the performance of highway construction projects financed in whole or in part by Federal Funds in order to create a level playing field for all businesses who wish to contract with the Cabinet. To that end, the Cabinet will comply with the regulations found in 49 CFR Part 26, and the definitions and requirements contained therein shall be adopted as if set out verbatim herein.

The Cabinet, contractors, subcontractors, and sub-recipients shall not discriminate on the basis of race, color, national origin, or sex in the performance of work performed pursuant to Cabinet contracts. The contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of federally assisted highway construction projects. The contractor will include this provision in all its subcontracts and supply agreements pertaining to contracts with the Cabinet.

Failure by the contractor to carry out these requirements is a material breach of its contract with the Cabinet, which may result in the termination of the contract or such other remedy as the Cabinet deems necessary.

DBE GOAL

The Disadvantaged Business Enterprise (DBE) goal established for this contract, as listed on the front page of the proposal, is the percentage of the total value of the contract.

The contractor shall exercise all necessary and reasonable steps to ensure that Disadvantaged Business Enterprises participate in a least the percent of the contract as set forth above as goals for this contract.

OBLIGATION OF CONTRACTORS

Each contractor prequalified to perform work on Cabinet projects shall designate and make known to the Cabinet a liaison officer who is assigned the responsibility of effectively administering and promoting an active program for utilization of DBEs.

If a formal goal has not been designated for the contract, all contractors are encouraged to consider DBEs for subcontract work as well as for the supply of material and services needed to perform this work.

Contractors are encouraged to use the services of banks owned and controlled by minorities and women.

CERTIFICATION OF CONTRACT GOAL

Contractors shall include the following certification in bids for projects for which a DBE goal has been established. BIDS SUBMITTED WHICH DO NOT INCLUDE CERTIFICATION OF DBE PARTICIPATION WILL NOT BE ACCEPTED. These bids will not be considered for award by the Cabinet and they will be returned to the bidder.

“The bidder certifies that it has secured participation by Disadvantaged Business Enterprises (“DBE”) in the amount of ____ percent of the total value of this contract and that the DBE participation is in compliance with the requirements of 49 CFR 26 and the policies of the Kentucky Transportation Cabinet pertaining to the DBE Program.”

The certification statement is located in the electronic bid file. All contractors must certify their DBE participation on that page. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted.

DBE PARTICIPATION PLAN

Lowest responsive bidders must submit the *DBE Plan/ Subcontractor Request*, form TC 14-35 DBE, within **5** days of the letting. This is necessary before the Awards Committee will review and make a recommendation. **The project will not be considered for award prior to submission and approval of the apparent low bidder’s DBE Plan/Subcontractor Request.**

The DBE Participation Plan shall include the following:

- 1 Name and address of DBE Subcontractor(s) and/or supplier(s) intended to be used in the proposed project;
- 2 Description of the work each is to perform including the work item , unit, quantity, unit price and total amount of the work to be performed by the individual DBE. The Project Code Number (PCN), Category Number, and the Project Line Number can be found in the “material listing” on the Construction Procurement website under the specific letting;
- 3 The dollar value of each proposed DBE subcontract and the percentage of total project contract value this represents. DBE participation may be counted as follows; a) If DBE suppliers and manufactures assume actual and contractual responsibility, the dollar value of materials to be furnished will be counted toward the goal as follows:
 - The entire expenditure paid to a DBE manufacturer;
 - 60 percent of expenditures to DBE suppliers that are not manufacturers provided the supplier is a regular dealer in the product involved. A regular dealer must be engaged in, as its principal business and in its own name, the sale of products to the public, maintain an inventory and own and operate distribution equipment; and
 - The amount of fees or commissions charged by the DBE firms for a bona fide service, such as professional, technical, consultant, or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials, supplies, delivery of materials and supplies or for furnishing bonds, or insurance, providing such fees or commissions are determined to be reasonable and customary.

- b) The dollar value of services provided by DBEs such as quality control testing, equipment repair and maintenance, engineering, staking, etc.;
 - c) The dollar value of joint ventures. DBE credit for joint ventures will be limited to the dollar amount of the work actually performed by the DBE in the joint venture;
- 4 Written and signed documentation of the bidder's commitment to use a DBE contractor whose participation is being utilized to meet the DBE goal; and
- 5 Written and signed confirmation from the DBE that it is participating in the contract as provided in the prime contractor's commitment.

UPON AWARD AND BEFORE A WORK ORDER WILL BE ISSUED

Contractors must submit the signed subcontract between the contractor and the DBE contractor, the DBE's certificate of insurance, and an affidavit for bidders, offerors, and contractors from the DBE to the Division of Construction Procurement. The affidavit can be found on the Construction Procurement website. If the DBE is a supplier of materials for the project, a signed purchase order and an affidavit for bidders, offerors, and contractors must be submitted to the Division of Construction Procurement.

Changes to DBE Participation Plans must be approved by the Cabinet. The Cabinet may consider extenuating circumstances including, but not limited to, changes in the nature or scope of the project, the inability or unwillingness of a DBE to perform the work in accordance with the bid, and/or other circumstances beyond the control of the prime contractor.

CONSIDERATION OF GOOD FAITH EFFORTS REQUESTS

If the DBE participation submitted in the bid by the apparent lowest responsive bidder does not meet or exceed the DBE contract goal, the apparent lowest responsive bidder must submit a Good Faith Effort Package to satisfy the Cabinet that sufficient good faith efforts were made to meet the contract goals prior to submission of the bid. Efforts to increase the goal after bid submission will not be considered in justifying the good faith effort, unless the contractor can show that the proposed DBE was solicited prior to the letting date. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted. One complete set and nine (9) copies of this information must be received in the office of the Division of Contract Procurement no later than 12:00 noon of the tenth calendar day after receipt of notification that they are the apparent low bidder.

Where the information submitted includes repetitious solicitation letters it will be acceptable to submit a sample representative letter along with a distribution list of the firms solicited. Documentation of DBE quotations shall be a part of the good faith effort submittal as necessary to demonstrate compliance with the factors listed below which the Cabinet considers in judging good faith efforts. This documentation may include written subcontractors' quotations, telephone log notations of verbal quotations, or other types of quotation documentation.

The Good Faith Effort Package shall include, but may not be limited to information showing evidence of the following:

- 1 Whether the bidder attended any pre-bid meetings that were scheduled by the Cabinet to inform DBEs of subcontracting opportunities;
- 2 Whether the bidder provided solicitations through all reasonable and available means;
- 3 Whether the bidder provided written notice to all DBEs listed in the DBE directory at the time of the letting who are prequalified in the areas of work that the bidder will be subcontracting;
- 4 Whether the bidder followed up initial solicitations of interest by contacting DBEs to determine with certainty whether they were interested. If a reasonable amount of DBEs within the targeted districts do not provide an intent to quote or no DBEs are prequalified in the subcontracted areas, the bidder must notify the DBE Liaison in the Office of Minority Affairs to give notification of the bidder's inability to get DBE quotes;
- 5 Whether the bidder selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise perform these work items with its own forces;
- 6 Whether the bidder provided interested DBEs with adequate and timely information about the plans, specifications, and requirements of the contract;
- 7 Whether the bidder negotiated in good faith with interested DBEs not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached;
- 8 Whether quotations were received from interested DBE firms but were rejected as unacceptable without sound reasons why the quotations were considered unacceptable. The fact that the DBE firm's quotation for the work is not the lowest quotation received will not in itself be considered as a sound reason for rejecting the quotation as unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a DBE quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy DBE goals;
- 9 Whether the bidder specifically negotiated with subcontractors to assume part of the responsibility to meet the contract DBE goal when the work to be subcontracted includes potential DBE participation;
- 10 Whether the bidder made any efforts and/or offered assistance to interested DBEs in obtaining the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal; and
- 11 Any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include DBE participation.

FAILURE TO MEET GOOD FAITH REQUIREMENT

Where the apparent lowest responsive bidder fails to submit sufficient participation by DBE firms to meet the contract goal and upon a determination by the Good Faith Committee based upon the information submitted that the apparent lowest responsive bidder failed to make sufficient reasonable efforts to meet the contract goal, the bidder will be offered the opportunity to meet in person for administrative reconsideration. The bidder will be notified of the Committee's decision within 24 hours of its decision. The bidder will have 24 hours to request reconsideration of the Committee's decision. The reconsideration meeting will be held within two days of the receipt of a request by the bidder for reconsideration.

The request for reconsideration will be heard by the Office of the Secretary. The bidder will have the opportunity to present written documentation or argument concerning the issue of whether it met the goal or made an adequate good faith effort. The bidder will receive a written decision on the reconsideration explaining the basis for the finding that the bidder did or did not meet the goal or made adequate Good Faith efforts to do so.

The result of the reconsideration process is not administratively appealable to the Cabinet or to the United States Department of Transportation.

The Cabinet reserves the right to award the contract to the next lowest responsive bidder or to rebid the contract in the event that the contract is not awarded to the low bidder as the result of a failure to meet the good faith requirement.

SANCTIONS FOR FAILURE TO MEET DBE REQUIREMENTS OF THE PROJECT

Failure by the prime contractor to fulfill the DBE requirements of a project under contract or to demonstrate good faith efforts to meet the goal constitutes a breach of contract. When this occurs, the Cabinet will hold the prime contractor accountable, as would be the case with all other contract provisions. Therefore, the contractor's failure to carry out the DBE contract requirements shall constitute a breach of contract and as such the Cabinet reserves the right to exercise all administrative remedies at its disposal including, but not limited to the following:

- Disallow credit toward the DBE goal;
- Withholding progress payments;
- Withholding payment to the prime in an amount equal to the unmet portion of the contract goal; and/or
- Termination of the contract.

PROMPT PAYMENT

The prime contractor will be required to pay the DBE within seven (7) working days after he or she has received payment from the Kentucky Transportation Cabinet for work performed or materials furnished.

CONTRACTOR REPORTING

All contractors must keep detailed records and provide reports to the Cabinet on their progress in meeting the DBE requirement on any highway contract. These records may include, but shall not be limited to payroll, lease agreements, cancelled payroll checks, executed subcontracting agreements, etc. Prime contractors will be required to complete and submit a signed and notarized affidavit (TC 18-7) and copies of checks for any monies paid to each DBE subcontractor or supplier utilized to meet a DBE goal. **These documents must be submitted within 10 days of being paid by the Cabinet.**

Payment information that needs to be reported includes date the payment is sent to the DBE, check number, Contract ID, amount of payment and the check date. Before Final Payment is made on this contract, the Prime Contractor will certify that all payments were made to the DBE subcontractor and/or DBE suppliers.

The Prime Contractor should supply the payment information at the time the DBE is compensated for their work. Form to use is located at:

<http://transportation.ky.gov/Construction/Pages/Subcontracts.aspx>

The prime contractor should notify the KYTC Office of Civil Rights and Small Business Development seven (7) days prior to DBE contractors commencing work on the project. The contact is Melvin Byne and the telephone number is (502) 564-3601.

Photocopied payments and completed, signed and notarized affidavit must be submitted by the Prime Contractor to:

- Office of Civil Rights and Small Business Development
- 6th Floor West 200 Mero Street
- Frankfort, KY 40622

DEFAULT OR DECERTIFICATION OF THE DBE

If the DBE subcontractor or supplier is decertified or defaults in the performance of its work, and the overall goal cannot be credited for the uncompleted work, the prime contractor may utilize a substitute DBE or elect to fulfill the DBE goal with another DBE on a different work item. If after exerting good faith effort in accordance with the Cabinet's Good Faith Effort policies and procedures, the prime contractor is unable to replace the DBE, then the unmet portion of the goal may be waived at the discretion of the Cabinet.

1/27/2017

LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – CARGO PREFERENCE ACT (CPA).

(REV 12-17-15) (1-16)

SECTION 7 is expanded by the following new Article:

102.10 **Cargo Preference Act – Use of United States-flag vessels.**

Pursuant to Title 46CFR Part 381, the Contractor agrees

- To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

- To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph 1 of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

- To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

EXPEDITE PROJECT WORK ORDER

The Contractor may request that the Department expedite the work order for this project to allow for maximization of time to complete the work. In order for the Department to accomplish this task, the Contractor may be required to “hand carry” all required project documentation to facilitate the process. Immediately UPON NOTIFICATION OF AWARD OF THE CONTRACT, deliver required project documentation to:

Division of Construction Procurement
200 Mero St.
Frankfort, KY 40602

ASPHALT MIXTURE

Unless otherwise noted, the Department estimates the rate of application for all asphalt mixtures to be 110 lbs/sy per inch of depth.

DGA BASE

Unless otherwise noted, the Department estimates the rate of application for DGA Base to be 115 lbs/sy per inch of depth.

DGA BASE FOR SHOULDERS

Unless otherwise noted, the Department estimates the rate of application for DGA Base for Shoulders to be 115 lbs/sy per inch of depth. The Department will not measure necessary grading and/or shaping of existing shoulders prior to placing of DGA Base, but shall be incidental to the Contract unit price per ton for DGA Base.

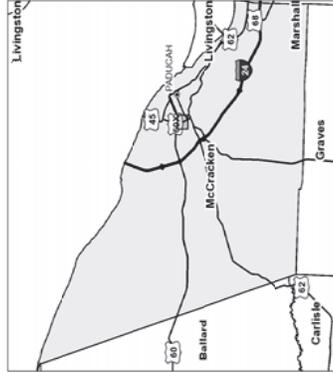
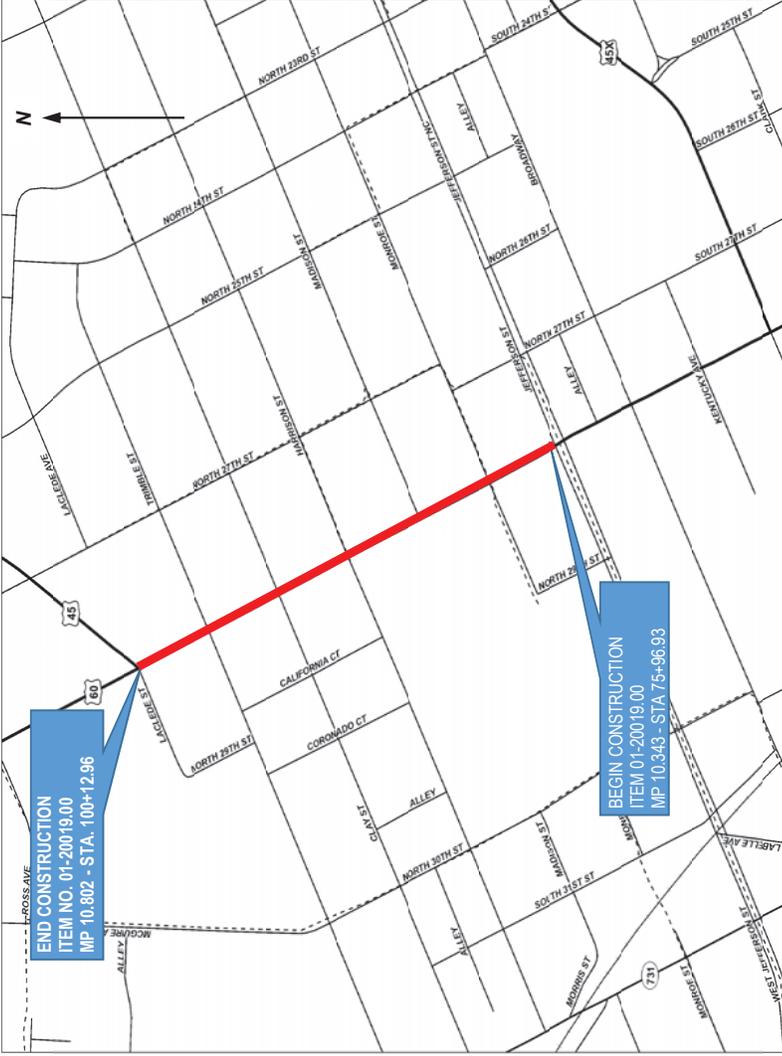
Accept payment at the Contract unit price per ton as full compensation for all labor, materials, equipment, and incidentals for grading and/or shaping of existing shoulders and furnishing, placing, and compacting the DGA Base.

INCIDENTAL SURFACING

The Department has included in the quantities of asphalt mixtures established in the proposal estimated quantities required for resurfacing or surfacing mailbox turnouts, farm field entrances, residential and commercial entrances, curve widening, ramp gores and tapers, and road and street approaches, as applicable. Pave these areas to the limits as shown on Standard Drawing RPM-110-06 or as directed by the Engineer. In the event signal detectors are present in the intersecting streets or roads, pave the crossroads to the right of way limit or back of the signal detector, whichever is the farthest back of the mainline. Surface or resurface these areas as directed by the Engineer. The Department will not measure placing and compacting for separate payment but shall be incidental to the Contract unit price for the asphalt mixtures.

OPTION A

Be advised that the Department will accept compaction of asphalt mixtures furnished for driving lanes and ramps, at 1 inch (25mm) or greater, on this project according to OPTION A in accordance with Section 402 and Section 403 of the current Standard Specifications. The Department will require joint cores as described in Section 402.03.02 for surface mixtures only. The Department will accept compaction of all other asphalt mixtures according to OPTION B.



NOT TO SCALE

COUNTY(S) McCracken

ITEM NO(S). 01-20019.00

PROJECT NO(S). STP 3015 (028) FD52 073 0045 010-011

LETTING DATE: July 26, 2019

RECOMMENDED BY: _____ DATE: _____
KYTC Project Manager

PLAN APPROVED BY: _____ DATE: _____
State Highway Engineer

FHWA APPROVED BY: _____ DATE: _____

**STANDARD DRAWINGS
US 45 - MCCRACKEN COUNTY
PAGE 1 OF 1**

APPLICABLE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD DRAWINGS - CURRENT EDITIONS:

TTD-120	DOUBLE FINES ZONE SIGNS
TTS-135	MOBILE OPERATION FOR DURABLE STRIPING CASE IV

APPLICABLE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD DRAWING SEPIAS (ATTACHED):

011	PAVEMENT MARKER ARRANGEMENTS TWO-WAY, LEFT TURN LANE
042	TYPICAL MARKINGS FOR TURN LANES
043	TYPICAL MARKINGS FOR TURN LANES
044	TYPICAL MARKINGS AT SIGNALIZED INTERSECTIONS
060	CURB AND GUTTER, CURBS AND VALLEY GUTTER

REFERENCES
US 45 - MCCRACKEN CO.
PAGE 1 OF 1

1. KENTUCKY TRANSPORTATION CABINET, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.
2. FHWA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) - CURRENT EDITION WITH REVISIONS.
3. APPLICABLE KENTUCKY DEPARTMENT OF HIGHWAYS SUPPLEMENT SPECIFICATIONS (ATTACHED):
 - SPCL. NOTE PORTABLE CHANGEABLE MESSAGE SIGNS
 - SPCL. NOTE BARCODE LABEL ON PERMANENT SIGNS
 - SPCL. NOTE ASPHALT MILLING AND TEXTURING
 - SPCL. NOTE TYPICAL SECTION DIMENSIONS
 - SPCL. NOTE BEFORE YOU DIG
 - SPCL. NOTE FIXED COMPLETION DATE AND LIQUIDATED DAMAGES
 - SPCL. NOTE PAVER MOUNTED TEMPERATURE PROFILES
 - SPCL. NOTE INTELLIGENT COMPACTION OF ASPHALT MIXTURES
 - SPCL. NOTE HMA ELECTRONIC DELIVERY MANAGEMENT SYSTEM
 - SPCL. NOTE FIBER REINFORCEMENT FOR ASPHALT
 - SPCL. NOTE FULL DEPTH RECLAMATION WITH CEMENT
 - SPCL. NOTE SPRAY APPLIED THERMOPLASTIC PAVEMENT MARKING MATERIALS
 - SPCL. NOTE NON-TRACKING TACK COAT

GENERAL SUMMARY						
US 45 - MCCRACKEN COUNTY - ITEM NO. 1-20019.00						
BID CODE	ITEM	UNIT	NOTE	QUANTITIES		
				US 45		
00001	DGA	TON		1,221		
00190	LEVELING AND WEDGING PG64-22	TON		94		
00214	CL3 ASPH BASE 1.00D PG64-22	TON		1,076		
00324	CL3 ASPH SURF 0.50B PG64-22	TON		1,473		
00358	ASPHALT CURING SEAL	TON		6.5		
01791	ADJUST MANHOLE LID TO GRADE	EACH		4		
01810	STANDARD CURB AND GUTTER	LF		4,163		
01812	REMOVE CURB AND GUTTER	LF	7	4,163		
02014	BARRICADE-TYPE III	EACH		7		
02058	REMOVE PCC PAVEMENT	SY	2	243		
02091	REMOVE PAVEMENT	SY	6	475		
02101	CEM CONC ENT PAVEMENT - 8 IN	SY		475		
02200	ROADWAY EXCAVATION	CUYD	10	1,557		
02542	CEMENT	TON		9.8		
02562	TEMPORARY SIGNS	SF	3	500		
02569	DEMobilIZATION	LS		1		
02585	EDGE KEY	LF		167		
02650	MAINTAIN AND CONTROL TRAFFIC	LS		1		
02671	PORTABLE CHANGEABLE MESSAGE SIGN	EACH	3	8		
02676	MOBILIZATION FOR MILL & TEXT	LS		1		
02677	ASPHALT MILLING & TEXTURING	TON	12	1,642		
02702	SAND FOR BLOTTER	TON		16.3		
02721	REMOVE CONCRETE SIDEWALK	SY	8	72		
02726	STAKING	LS		1		
02775	ARROW PANEL	EACH	3	2		
04953	TEMP RELOCATION OF SIGNAL HEAD	EACH	3	8		
05990	SODDING	SY		4,696		
06406	SBM ALUM SHEET SIGNS .080 IN	SF	9	18		
06410	STEEL POST TYPE 1	LF	9	60		
06510	PAVE STRIPING - TEMP PAINT - 4 IN	LF	3	7,260		
06549	PAVE STRIPING-TEMP REM TAPE-B	LF	3	500		
06550	PAVE STRIPING-TEMP REM TAPE-W	LF	3	4,840		
06551	PAVE STRIPING-TEMP REM TAPE-Y	LF	3	4,840		
06566	PAVE MARKING - THERMO X-WALK - 12 IN	LF		293		
06568	PAVE MARKING - THERMO STOP BAR - 24 IN	LF		234		
06574	PAVE MARKING - THERMO CURV ARROW	EACH		24		
06575	PAVE MARKING - THERMO COMB ARROW	EACH		4		
20071EC	JOINT ADHESIVE	LF		7,245		

GENERAL SUMMARY							
US 45 - MCCRACKEN COUNTY - ITEM NO. 1-20019.00							
BID CODE	ITEM	UNIT	NOTE	QUANTITIES			
				US 45			
20099ES842	PAVE MARK TEMP PAINT STOP BAR	LF	3	33			
20194ED	REMOVE & RESET TRAFFIC SIGN	EACH		25			
20430ED	SAW CUT	LF	11	627			
20757ED	PAVEMENT REPAIR	SY	4	42			
20782NS714	PAVE MARKING THERMO - BIKE	EACH		36			
20870ND	REMOVE AND RESET HISTORIC MARKERS	EACH		1			
20904ED	RECONSTRUCT CURB BOX INLET	EACH	5	13			
24386EC	PAVE MARKING THERMO - BIKE LANE ARROW	EACH		36			
24489EC	INLAID PAVEMENT MARKER	EACH		101			
24631EC	BARCODE SIGN INVENTORY	EACH		6			
24781EC	INTELLIGENT COMPACTION FOR ASPHALT	TON		2,549			
24785EC	FIBER REINFORCEMENT FOR HMA	TON		2,549			
24891EC	PAVE MOUNTED INFRARED TEMP EQUIPMENT	SF		179,216			
24936EC	FULL DEPTH RECLAMATION WITH CEMENT	SY		6,522			
24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	TON		2.7			
24986EC	HMA ELECTRONIC MGMT SYSTEM	LS		1			
24995EC	PAVE STRIPING - SPRAY THERMO - 6 IN W	LF		4,557			
24996EC	PAVE STRIPING - SPRAY THERMO - 6 IN Y	LF		4,980			

NOTES:

1. Quantities from all other summary sheets have been carried over and included in this General Summary Sheet.
2. For areas where concrete patches shall be removed. Any saw cutting needed shall be incidental to the removal.
3. For maintenance of traffic.
4. Areas needing repair will be as directed by the Engineer.
5. This is reconstruction of top portion of existing curb box inlets as needed for proposed grade elevations.
6. This is removal of existing concrete entrance pavement as needed for construction of new entrances. Sawcut of existing entrance pavement is incidental to this bid item.
7. This is removal of existing curb and gutter for construction of new standard curb and gutter.
8. Saw cut of existing sidewalk is incidental to this bid item.
9. This is for proposed bike lane signing.
10. Roadway excavation quantity does not include full depth reclamation shown on the cross sections.
11. See plans for locations of saw cuts, which shall be as directed by Engineer.
12. This includes 567 tons for milling of asphalt above existing concrete pavement as needed for 2" surface course. It also includes 1,075 tons for milling of approximately 3" of asphalt in the full depth reclamation areas.

PAVING AREAS						
US 45 - MCCRACKEN COUNTY - ITEM NO. 1-20019.00						
BID CODE	ITEM	NOTE	DEPTH (inches)	SQUARE YARDS		
				US 45		
00001	DGA	1	6.00	227		
00001	DGA		9.00	1,898		
00001	DGA	3	4.00	698		
00190	LEVELING AND WEDGING PG64-22	2	1.25	1,374		
00214	CL3 ASPH BASE 1.00D PG64-22		3.00	6,522		
00324	CL3 ASPH SURF 0.50B PG64-22		2.00	13,391		
00358	ASPHALT CURING SEAL		----	6,522		
02101	CEM CONC ENT PAVEMENT - 8 INCH		----	475		
02542	CEMENT		----	6,522		
02677	ASPHALT MILLING AND TEXTURING		1.50	6,869		
02677	ASPHALT MILLING AND TEXTURING		3.00	6,514		
02702	SAND FOR BLOTTER		----	6,522		
24781EC	INTELLIGENT COMPACTION FOR ASPHALT		3.00	6,522		
24781EC	INTELLIGENT COMPACTION FOR ASPHALT		2.00	13,391		
24785EC	FIBER REINFORCEMENT FOR HMA		----	19,913		
24891EC	PAVE MOUNTED INFRARED TEMP EQUIPMENT		----	19,913		
24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING		----	6,522		
24936EC	FULL DEPTH RECLAMATION WITH CEMENT		----	6,522		

NOTES:

1. For areas where concrete patches are removed.
2. For areas that experience scabbing after pavement is milled, and for any settlement of pavement and base failure repairs. It is assumed to be 20% of area being milled above the existing concrete pavement.
3. Includes 223 sq. yds. for maintaining access to properties and temporary parking areas.

PAVING SUMMARY							
US 45 - MCCRACKEN COUNTY - ITEM NO. 1-20019.00							
ITEM CODE	ITEM	NOTES	UNIT	US 45			
00001	DGA	1	TON	1,221			
00190	LEVELING AND WEDGING PG64-22	2,8	TON	94			
00214	CL3 ASPH BASE 1.00D PG64-22	2	TON	1,076			
00324	CL3 ASPH SURF 0.50B PG64-22	2	TON	1,473			
00358	ASPHALT CURING SEAL	3	TON	6.5			
02101	CEM CONC ENT PAVEMENT - 8 INCH		SY	475			
02542	CEMENT	4	TON	9.8			
02677	ASPHALT MILLING AND TEXTURING		TON	1,642			
02702	SAND FOR BLOTTER	6	TON	16.3			
20071EC	JOINT ADHESIVE		LF	7,245			
24781EC	INTELLIGENT COMPACTION FOR ASPHALT	2	TON	2,549			
24785EC	FIBER REINFORCEMENT FOR HMA	2	TON	2,549			
24891EC	PAVE MOUNTED INFRARED TEMP EQUIPMENT		SF	179,216			
24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	5	TON	2.7			
24936EC	FULL DEPTH RECLAMATION WITH CEMENT		SY	6,522			

NOTES:

1. Estimated at 115 lbs. per sq. yd. per inch of depth.
2. Estimated at 110 lbs. per sq. yd. per inch of depth.
3. Estimated at 2 lbs per sq. yd.
4. Estimated at 3 lbs per sq. yd.
5. Estimated at 0.84 lbs. per sq. yd.
6. Estimated at 5 lbs. per sq. yd.
7. Quantities are carried over and included in General Summary.
8. For areas that experience scabbing after pavement is milled, and for any settlement of pavement failure repairs.

GENERAL NOTES
US 45 – MCCRACKEN COUNTY
PAGE 1 OF 4

1. GENERAL

Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, current editions, Supplemental Specifications, any applicable Special Provisions, and applicable Standard and Sepia Drawings, except as hereafter specified. Article references are to the Standard Specifications. Furnish all materials, labor, equipment, and incidentals for the following work:

- (1) Maintain and Control Traffic;
- (2) Removal of Existing Curb and Gutter and Construction of New Curb and Gutter;
- (3) Removal of Existing Concrete Entrance Pavement and Construction of New Concrete Entrances;
- (4) Removal of Existing PCC Pavement Patches;
- (5) Removal of Existing Concrete Sidewalk;
- (6) Reconstruction of Top Phase of Existing Curb Box Inlets;
- (7) Earthwork and Grading as Shown on Cross Sections;
- (8) Sodding of All Disturbed Areas Between Curb and Existing Sidewalk;
- (9) Striping and Inlaid Pavement Markers;
- (10) Signing for New Bike Lane;
- (11) Asphalt Pavement Milling and Texturing;
- (12) Full Depth Pavement Reclamation with Cement;
- (13) Asphalt Surface at locations listed and/or as directed by the Engineer; and
- (14) All other work shown in the plans and specified as part of this contract.

2. MATERIALS

Except as specified in these notes or on the drawings, all materials will be according to the Standard Specifications and applicable Special Provisions and Special Notes. The Department will sample and test all materials according to Department's Sampling Manual and the Contractor will have the materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing, unless otherwise specified in these notes.

A. Maintain and Control Traffic

See Traffic Control Plan.

B. Dense Graded Aggregate

Crushed Stone Base may not be furnished in lieu of DGA.

C. Pavement Markings - 6-inch

Use Extruded Thermoplastic Marking.

3. CONSTRUCTION METHODS

A. Maintain and Control Traffic

See Traffic Control Plan and Standard Specifications.

B. Site Preparation

Be responsible for all site preparation. This item will include removal of all obstructions or any other items; disposal of materials; sweeping and removal of debris; temporary erosion and pollution control; and all incidentals. Site preparation will be only as approved or directed by the Engineer. Other than the bid items listed, no direct payment will be made for site preparation, but will be incidental to the other items of work.

C. Disposal of Waste

Dispose of all cuttings, debris, and other waste off the right-of-way at approved sites obtained by the Contractor at no additional cost to the Department. The Contractor will be responsible for

GENERAL NOTES
US 45 – MCCRACKEN COUNTY
PAGE 2 OF 4

obtaining any necessary permits for this work. No separate payment will be made for the disposal of waste and debris from the project or obtaining the necessary permits but will be incidental to the other items of the work.

D. Final Dressing, Clean Up, and Sodding

After all work is completed, completely remove all debris from the job site, which is incidental to other items in the contract. All disturbed areas between the curb and sidewalk shall be sodded.

E. On-Site Inspection

Each Contractor submitting a bid for this work will make a thorough inspection of the site prior to submitting a bid and will thoroughly familiarize himself with existing conditions so that the work can be expeditiously performed after a contract is awarded. Submission of a bid will be considered evidence of this inspection having been made. Any claims resulting from site conditions will not be honored by the Department.

F. Caution

Information shown on the drawings and in this proposal and the types and quantities of work listed are not to be taken as an accurate or complete evaluation of the material and conditions to be encountered during construction. The bidder must draw his own conclusions as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation if the conditions encountered are not in accordance with the information above.

4. UTILITIES

The utilities shown on the plans have not been surveyed and are shown in their approximate location. Not all utilities are shown. See Special Note for Before You Dig.

A. Water

Paducah Water has plans for replacement of the watermain throughout the project area. A draft of those plans is provided in this proposal. These plans also show existing utilities that may or may not have been surveyed. These are for information only. That project is expected to begin in the summer of 2019. The Contractor for this project is expected to coordinate their work with the contractor doing the watermain project. This coordination, which shall be incidental to overall construction, will include identification of water meters, water valves, fire hydrants, etc. that may be impacted by the proposed grading behind the new curb and gutter. Paducah Water will be responsible for any adjustments to their facilities that need to be made to accommodate the proposed grading behind the new curb and gutter. The Department's Engineer will coordinate this coordination.

B. Sewer

There is combination sanitary / storm sewer in the project area. This facility is part of the original construction of US 45. Record roadway plans, showing this sewer line, are provided with this proposal. These are for information only. Using the record plans and aerial photography, the sewer line, manholes, and curb box inlets are shown, approximately, on the plans and cross sections.

The Paducah McCracken County Joint Sewer Agency plans to line the portion of the sewer that is in the limits of the proposed pavement construction. This work, is being coordinated by the Department, and is scheduled to be done in the summer of 2019. The Contractor for this project is expected to coordinate their work with the contractor doing the sewer project. This coordination shall be incidental to overall construction. The lining of the sewer must be complete before the Contractor will be allowed to do any construction work above the sewer, as directed by the Engineer.

GENERAL NOTES
US 45 – MCCRACKEN COUNTY
PAGE 3 OF 4

There are existing curb box inlets for this sewer that will be impacted by construction of the new curb and gutter that is a few inches higher than the existing. The top portion of the curb box inlet shall be reconstructed, as approved by the Engineer, to accommodate the elevation of the new curb and gutter. This work shall be paid for with the bid item "RECONSTRUCT CURB BOX INLET".

There are existing manholes for this sewer that will be impacted by construction of the pavement. These shall be adjusted, as approved by the Engineer, to accommodate the elevation of the new pavement. This work shall be paid for with the bid item "ADJUST MANHOLE LID TO GRADE".

C. Underground Electric, Telephone, and Cable

Underground electric and cable lines are not known to exist in area between existing curb and sidewalk. There may be a few locations where there is underground telephone. Once they are marked, then they should be avoided as directed by the Engineer.

D. Gas

There is a gas line in the project area. Once it is marked, then the Engineer should be advised of any potential impacts to valves that are impacted by the proposed grading. The Engineer will coordinate with the gas company any adjustments that need to be made.

5. MISCELLANEOUS

A. Typical Sections

The dimensions shown on the typical sections for pavement and thickness are nominal or typical dimensions. The actual dimensions to be constructed may be varied to fit existing conditions as directed or approved by the Engineer. It is not intended that existing pavement be widened unless specified in the Proposal.

B. Low Wires

The Contractor is advised that locations of low wires exist all along US 45. These should be avoided. If any are impacted, it will be the Contractor's responsibility to contact the affected utility and cover any costs associated with the impact.

C. Signs and Light Poles

Any signs and any light poles that are damaged during construction are to be replaced at the Contractor's expense. As needed, existing signs along US 45 may be removed for construction of the new curb and gutter and grading of the area behind the curb. These shall then be reset as directed by the Engineer. This will be paid for with the bid item "REMOVE AND RESET TRAFFIC SIGN". Existing light poles are not to be disturbed.

D. Compaction

The Department will accept the compaction of asphalt mixtures furnished at one inch or greater on this project by Option A in accordance with subsections 402 and 403 of the Standard Specifications.

E. Repair of Hazardous Pavement

The Contractor shall be responsible for the repair of any pavement in the travelled lanes that becomes detrimental or hazardous to the travelling public during construction. Areas needing repair will be at the discretion of the Engineer.

F. Tree Cutting

No tree cutting is allowed nor should it be necessary.

GENERAL NOTES
US 45 – MCCRACKEN COUNTY
PAGE 4 OF 4

G. Pavement Repairs

A quantity has been included in the General Summary for pavement repairs. The Engineer will determine the actual locations that will be repaired based upon the condition of the pavement at the time the repairs are accomplished. The Engineer shall determine the extent of the repairs.

H. Joint Adhesive

Apply "Joint Adhesive" in accordance with "Special Note for Joint Adhesive". Additionally, apply the adhesive immediately prior to paving the adjoining lane. Re-apply the "Joint Adhesive" when paving is not completed within 48 hours prior to paving. No additional payment will be considered for the re-application of the joint adhesive.

I. Traffic on Milled Surface

Allowing traffic to travel on milled surface is not allowed unless approved by the Engineer.

J. Removal of Existing Curb and Gutter

Mechanical breakers shall not be used for removal of existing curb and gutter.

K. Existing Sidewalk

Existing sidewalk that is to be left in place shall not be disturbed. The Contractor shall be responsible for repair of any sidewalk damaged during construction.

L. Final Signalization

The Department will be responsible for the installation of the final signalization at Jefferson Street and Laclede Street. The Contractor will be expected to coordinate their work with the work being done by the Department. This coordination is incidental to overall construction of the project.

M. Survey Elevations

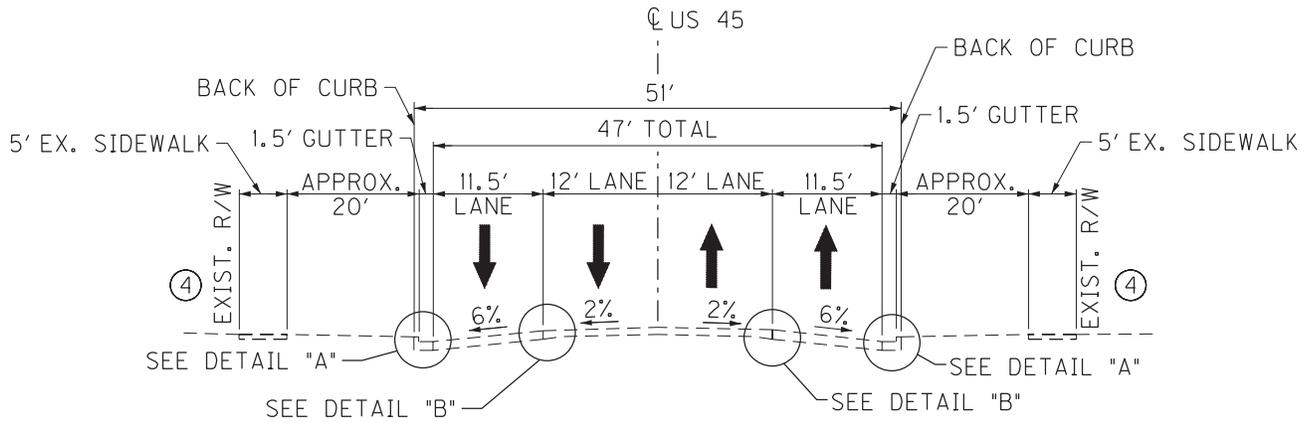
The Contractor is required to provide the Engineer survey elevations of the gutter line of the new curb and gutter at a minimum of 25-foot intervals. The Engineer must approve the as-built grades of the new curb and gutter before construction of the pavement can begin. This surveying work will be included in the required work for "STAKING" and paid lump sum as "STAKING". If the grades of the new curb and gutter are not in accordance with the grades shown on the cross sections, then the Contractor will be required to reconstruct the curb and gutter as directed by the Engineer and at no additional expense to the Department.

N. Inlaid Pavement Markers

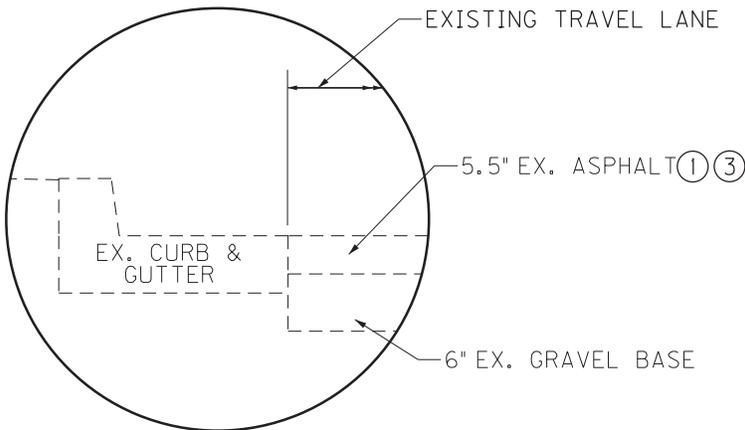
Contrary to Section 712.03.04 Location and Spacing, Inlaid Pavement Markers shall be offset a minimum of 3 inches from longitudinal pavement joints.

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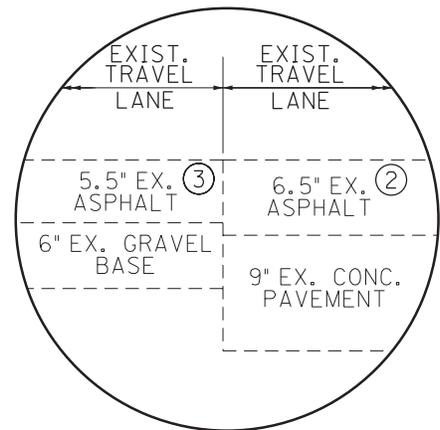
EXISTING TYPICAL SECTIONS



NORMAL CUT/FILL SECTION



DETAIL "A"
NOT TO SCALE



DETAIL "B"
NOT TO SCALE

NOTES

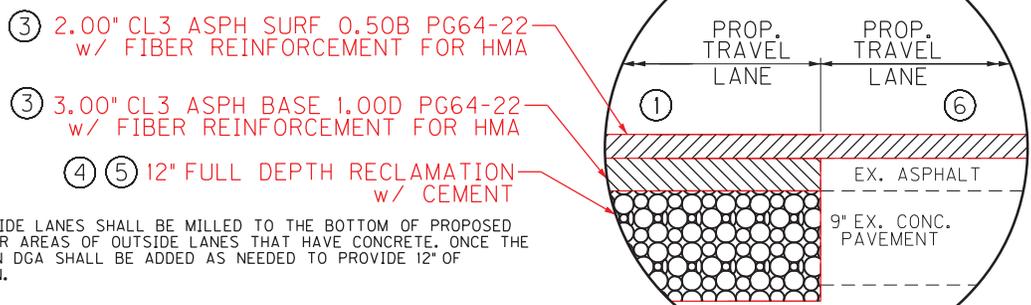
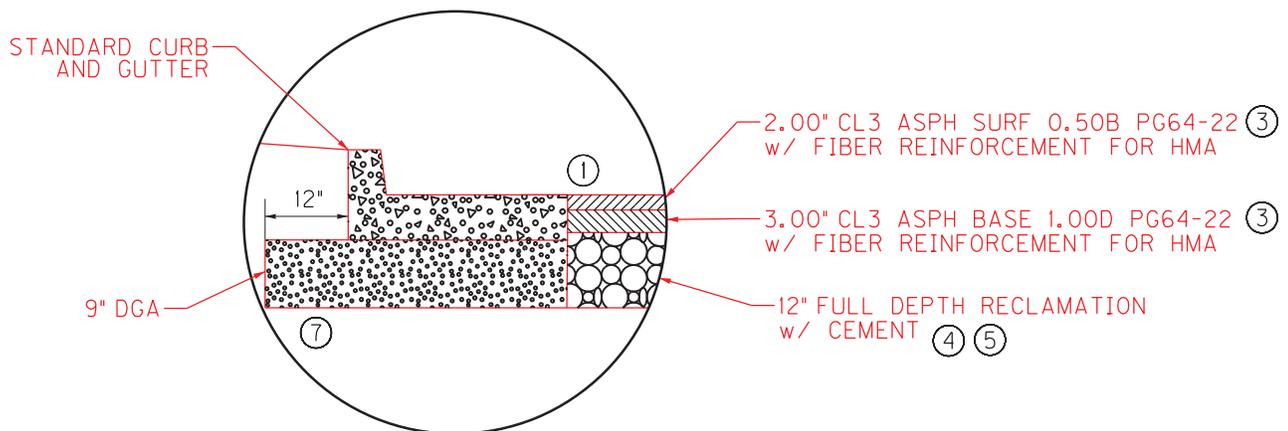
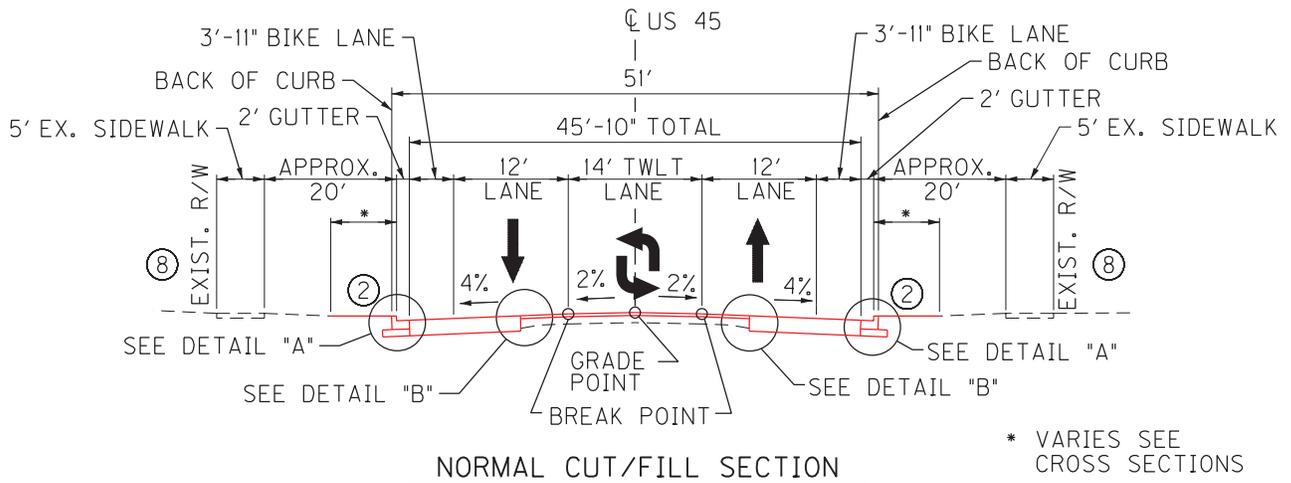
- ① THERE ARE AREAS OF THE OUTSIDE TRAVEL LANES WHERE THE ASPHALT HAS BEEN REMOVED AND CONCRETE PLACED BACK. SEE PLANS. THICKNESS OF CONCRETE POSSIBLY VARIES FROM 10" TO 11". REINFORCEMENT OF CONCRETE IS UNKNOWN.
- ② DEPTH OF EXISTING PAVEMENT HAS BEEN DETERMINED BY GROUND PENETRATING RADAR.
- ③ EXISTING ASPHALT ON OUTSIDE TRAVEL LANES VARIES 5.5" TO 11". THIS IS BASED ON LIMITED PAVEMENT CORE INFORMATION.
- ④ BACK OF SIDEWALK IS THE EXISTING RIGHT OF WAY.

NOT TO SCALE

TYPICAL SECTIONS

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PROPOSED TYPICAL SECTIONS



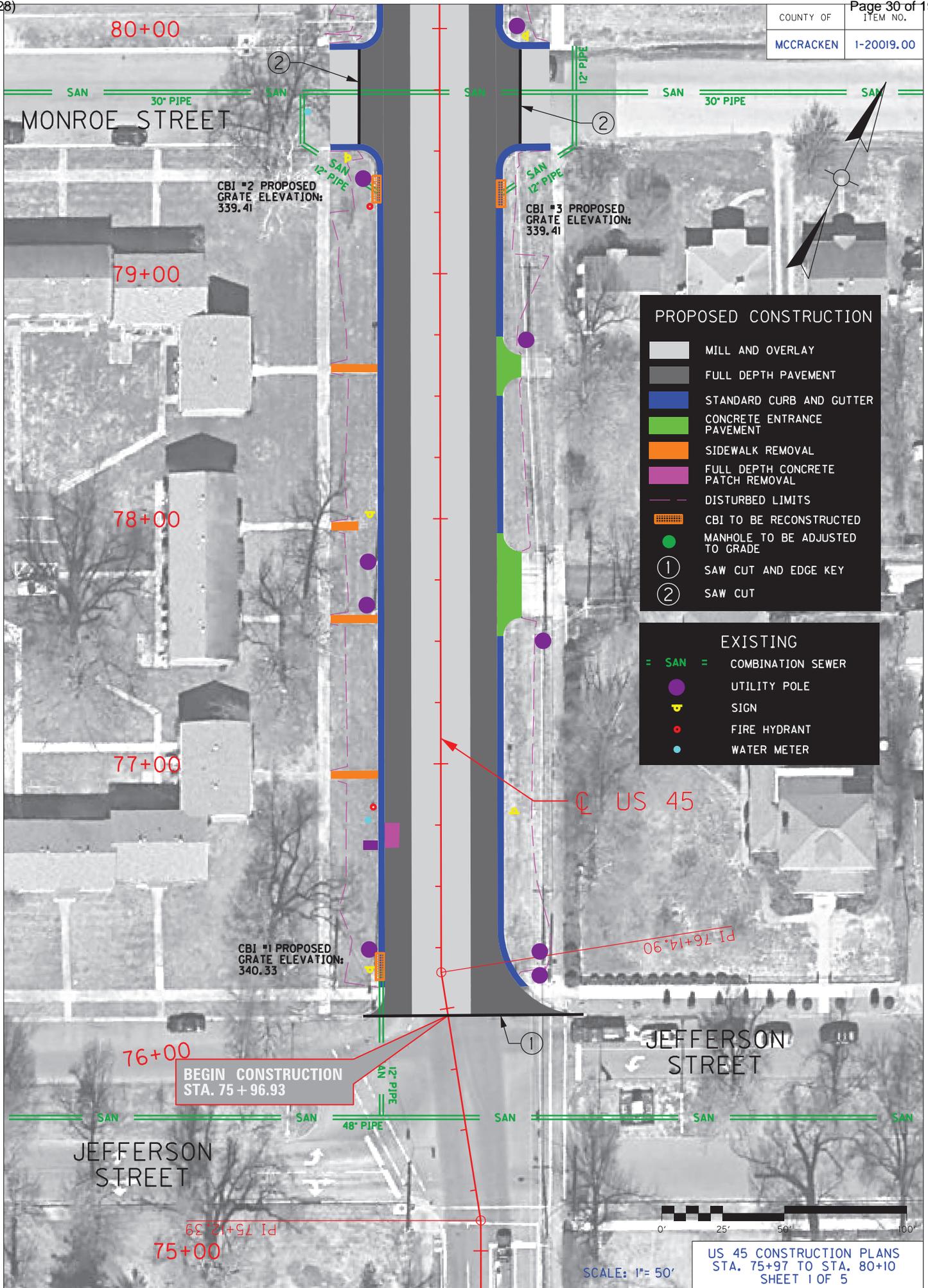
NOTES

- ① EXISTING ASPHALT IN OUTSIDE LANES SHALL BE MILLED TO THE BOTTOM OF PROPOSED BASE. SEE PLAN SHEETS FOR AREAS OF OUTSIDE LANES THAT HAVE CONCRETE. ONCE THE CONCRETE IS REMOVED THEN DGA SHALL BE ADDED AS NEEDED TO PROVIDE 12" OF MATERIAL FOR RECLAMATION.
- ② DISTURBED AREA BETWEEN BACK OF CURB AND EXISTING SIDEWALK TO BE SODDED.
- ③ ADD FIBERS IN ACCORDANCE WITH THE SPECIAL NOTE FOR FIBER REINFORCEMENT.
- ④ STABILIZE THE TOP 12 INCHES (MM) OF THE REMAINING ASPHALT/DGA/SOIL AFTER MILLING TO THE REQUIRED DEPTH. USE PORTLAND CEMENT IN ACCORDANCE WITH SECTION 208 OF THE STANDARD SPECIFICATIONS. USE SELECTED SOILS, WITH A MINIMUM CBR VALUE OF 2, FOR THIS PURPOSE. THE PORTLAND CEMENT CONTENT IS 6 PERCENT BY WEIGHT, AND THE ESTIMATED PLAN QUANTITY USES AN AVERAGE DRY DENSITY OF 106 LBS/CUBIC FEET. HOWEVER, ADJUST THE QUANTITY AFTER CONSTRUCTING THE ROADBED AND SUBMITTING THE SAMPLES FOR TESTING. THIS TAKES APPROXIMATELY TWO WEEKS.
- ⑤ AFTER FINAL FINISHING OF FULL DEPTH RECLAMATION ASPHALT CURING SEAL SHALL BE APPLIED AT A RATE OF 2 LBS PER SQUARE YARD.
- ⑥ EXISTING ASPHALT OVER EXISTING CONCRETE TO BE MILLED AS NEEDED TO PROVIDE MINIMUM OF 2" ASPHALT SURFACE TO PROPOSED GRADES SHOWN ON CROSS SECTIONS.
- ⑦ BACK OF CURB WILL BE WITHIN 12" OF EXISTING UTILITY POLES OR FIRE HYDRANTS. THE LENGTH OF THE DGA BASE WILL NEED TO BE ADJUSTED AS REQUIRED.
- ⑧ BACK OF SIDEWALK IS THE EXISTING AND PROPOSED RIGHT OF WAY.

NOT TO SCALE

TYPICAL SECTIONS

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PROPOSED CONSTRUCTION

- MILL AND OVERLAY
- FULL DEPTH PAVEMENT
- STANDARD CURB AND GUTTER
- CONCRETE ENTRANCE PAVEMENT
- SIDEWALK REMOVAL
- FULL DEPTH CONCRETE PATCH REMOVAL
- DISTURBED LIMITS
- CBI TO BE RECONSTRUCTED
- MANHOLE TO BE ADJUSTED TO GRADE
- ① SAW CUT AND EDGE KEY
- ② SAW CUT

EXISTING

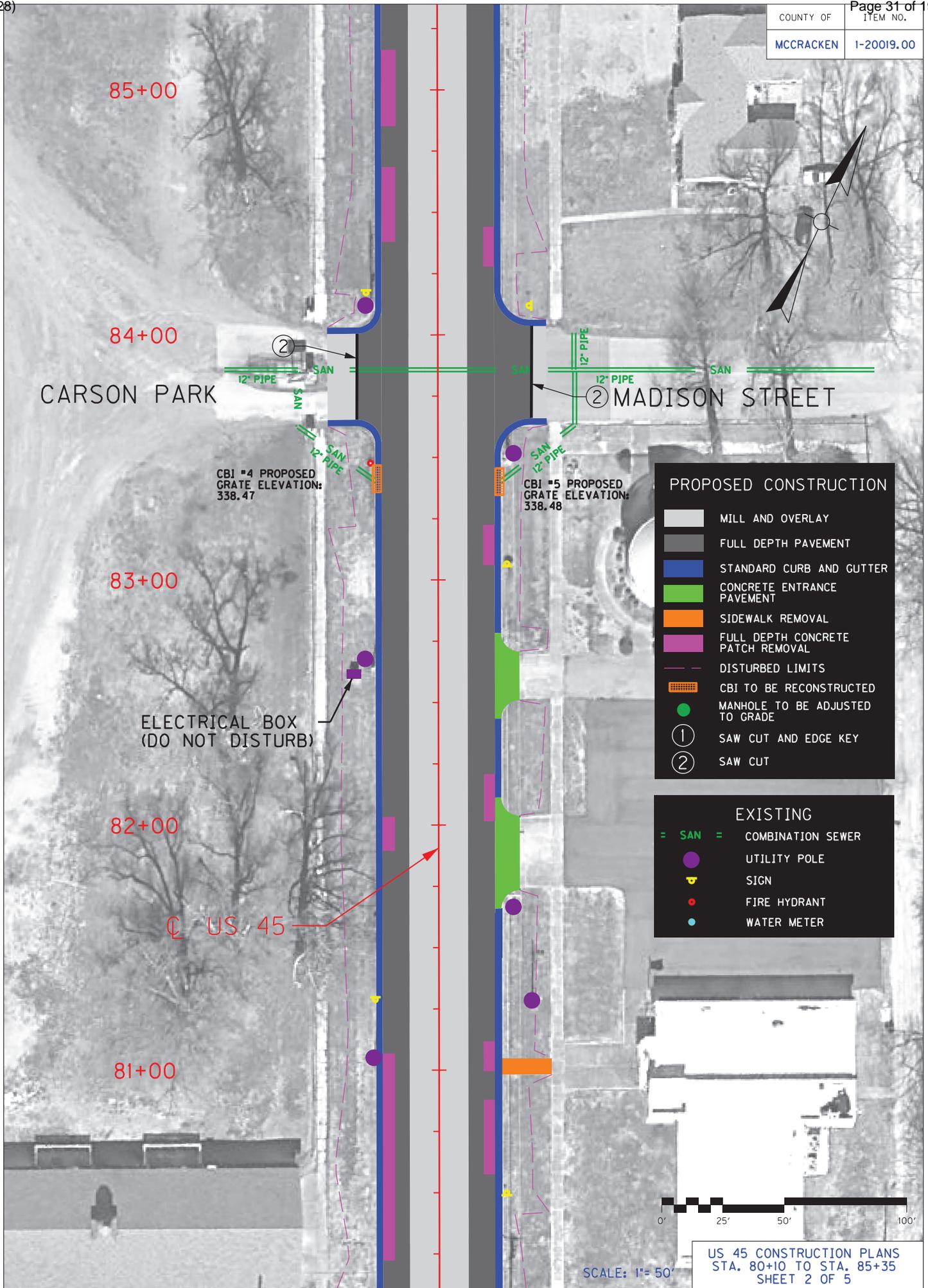
- SAN = COMBINATION SEWER
- UTILITY POLE
- SIGN
- FIRE HYDRANT
- WATER METER

**BEGIN CONSTRUCTION
STA. 75 + 96.93**



US 45 CONSTRUCTION PLANS
STA. 75+97 TO STA. 80+10
SHEET 1 OF 5

COUNTY OF	ITEM NO.
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85+00

84+00

CARSON PARK

83+00

ELECTRICAL BOX
(DO NOT DISTURB)

82+00

US 45

81+00

MADISON STREET

CBI #4 PROPOSED
GRATE ELEVATION:
338.47

CBI #5 PROPOSED
GRATE ELEVATION:
338.48

PROPOSED CONSTRUCTION

- MILL AND OVERLAY
- FULL DEPTH PAVEMENT
- STANDARD CURB AND GUTTER
- CONCRETE ENTRANCE PAVEMENT
- SIDEWALK REMOVAL
- FULL DEPTH CONCRETE PATCH REMOVAL
- DISTURBED LIMITS
- CBI TO BE RECONSTRUCTED
- MANHOLE TO BE ADJUSTED TO GRADE
- ① SAW CUT AND EDGE KEY
- ② SAW CUT

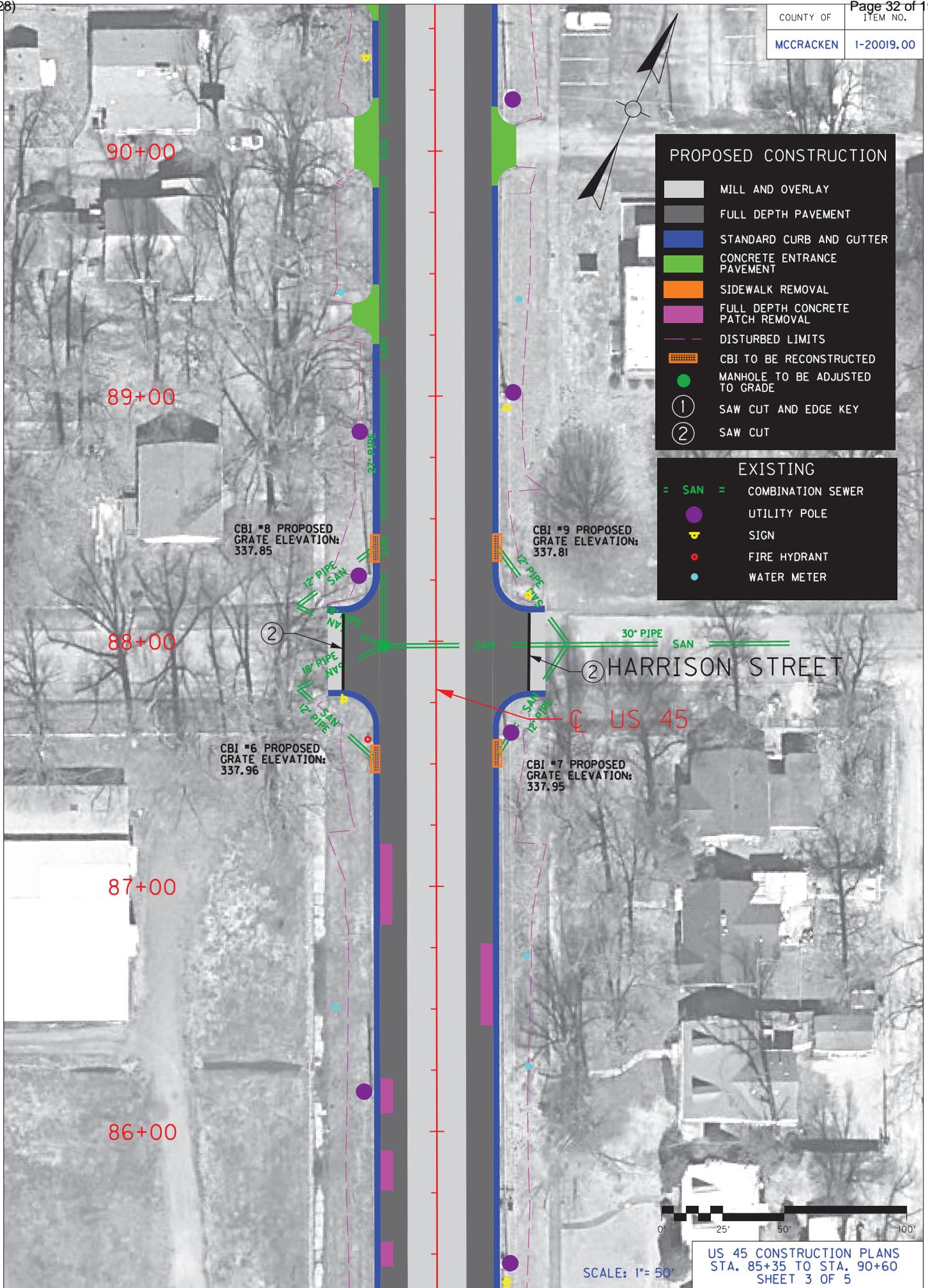
EXISTING

- = SAN = COMBINATION SEWER
- UTILITY POLE
- SIGN
- FIRE HYDRANT
- WATER METER



SCALE: 1" = 50'
US 45 CONSTRUCTION PLANS
STA. 80+10 TO STA. 85+35
SHEET 2 OF 5

COUNTY OF	ITEM NO.
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PROPOSED CONSTRUCTION

- MILL AND OVERLAY
- FULL DEPTH PAVEMENT
- STANDARD CURB AND GUTTER
- CONCRETE ENTRANCE PAVEMENT
- SIDEWALK REMOVAL
- FULL DEPTH CONCRETE PATCH REMOVAL
- DISTURBED LIMITS
- CBI TO BE RECONSTRUCTED
- MANHOLE TO BE ADJUSTED TO GRADE
- SAW CUT AND EDGE KEY
- SAW CUT

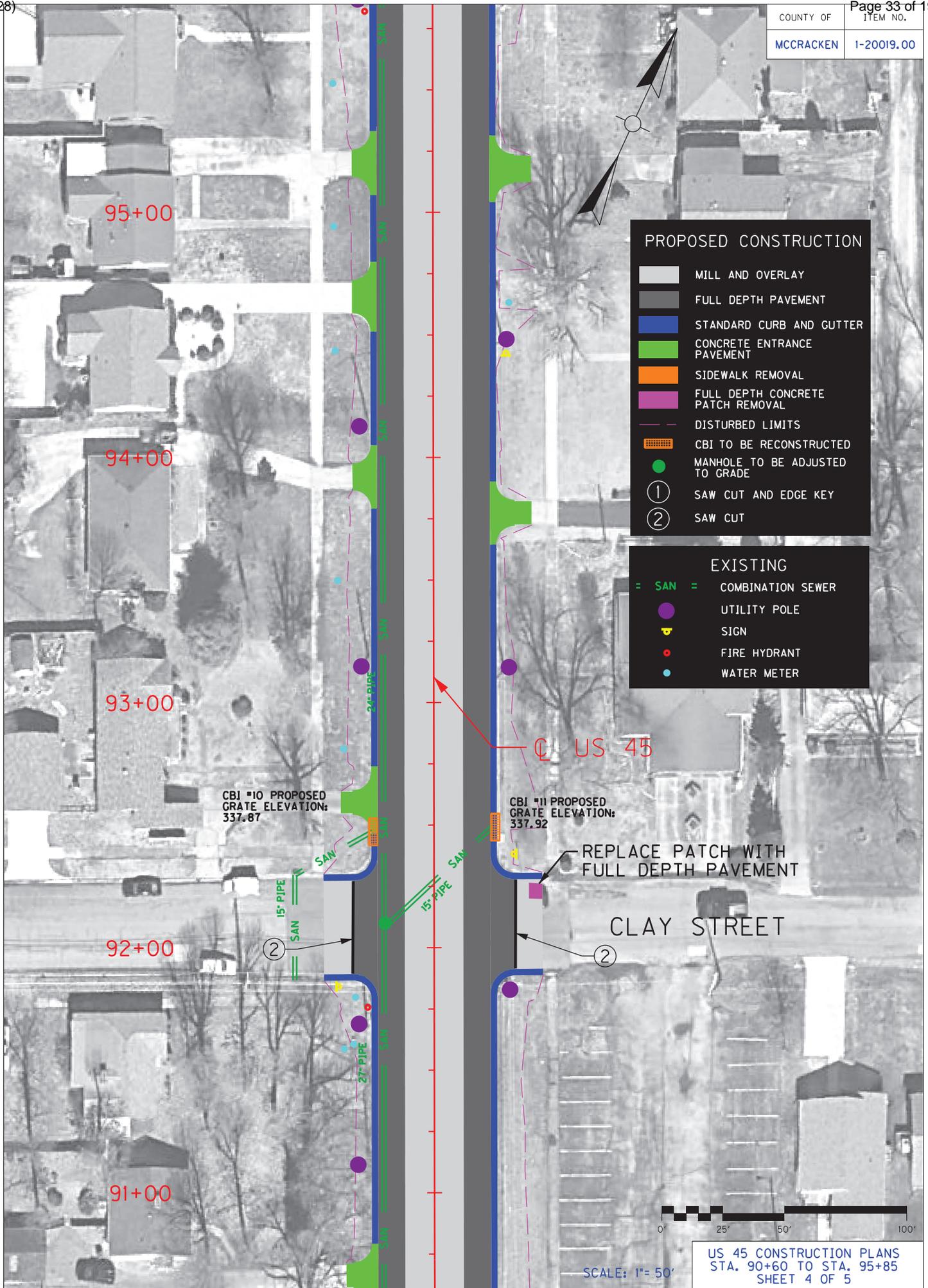
EXISTING

- SAN = COMBINATION SEWER
- UTILITY POLE
- SIGN
- FIRE HYDRANT
- WATER METER



SCALE: 1" = 50'
US 45 CONSTRUCTION PLANS
STA. 85+35 TO STA. 90+60
SHEET 3 OF 5

COUNTY OF	ITEM NO.
MCCRACKEN	I-20019.00



PROPOSED CONSTRUCTION

- MILL AND OVERLAY
- FULL DEPTH PAVEMENT
- STANDARD CURB AND GUTTER
- CONCRETE ENTRANCE PAVEMENT
- SIDEWALK REMOVAL
- FULL DEPTH CONCRETE PATCH REMOVAL
- DISTURBED LIMITS
- CBI TO BE RECONSTRUCTED
- MANHOLE TO BE ADJUSTED TO GRADE
- ① SAW CUT AND EDGE KEY
- ② SAW CUT

- EXISTING**
- SAN = COMBINATION SEWER
 - UTILITY POLE
 - SIGN
 - FIRE HYDRANT
 - WATER METER

CBI #10 PROPOSED
GRATE ELEVATION:
337.87

CBI #11 PROPOSED
GRATE ELEVATION:
337.92

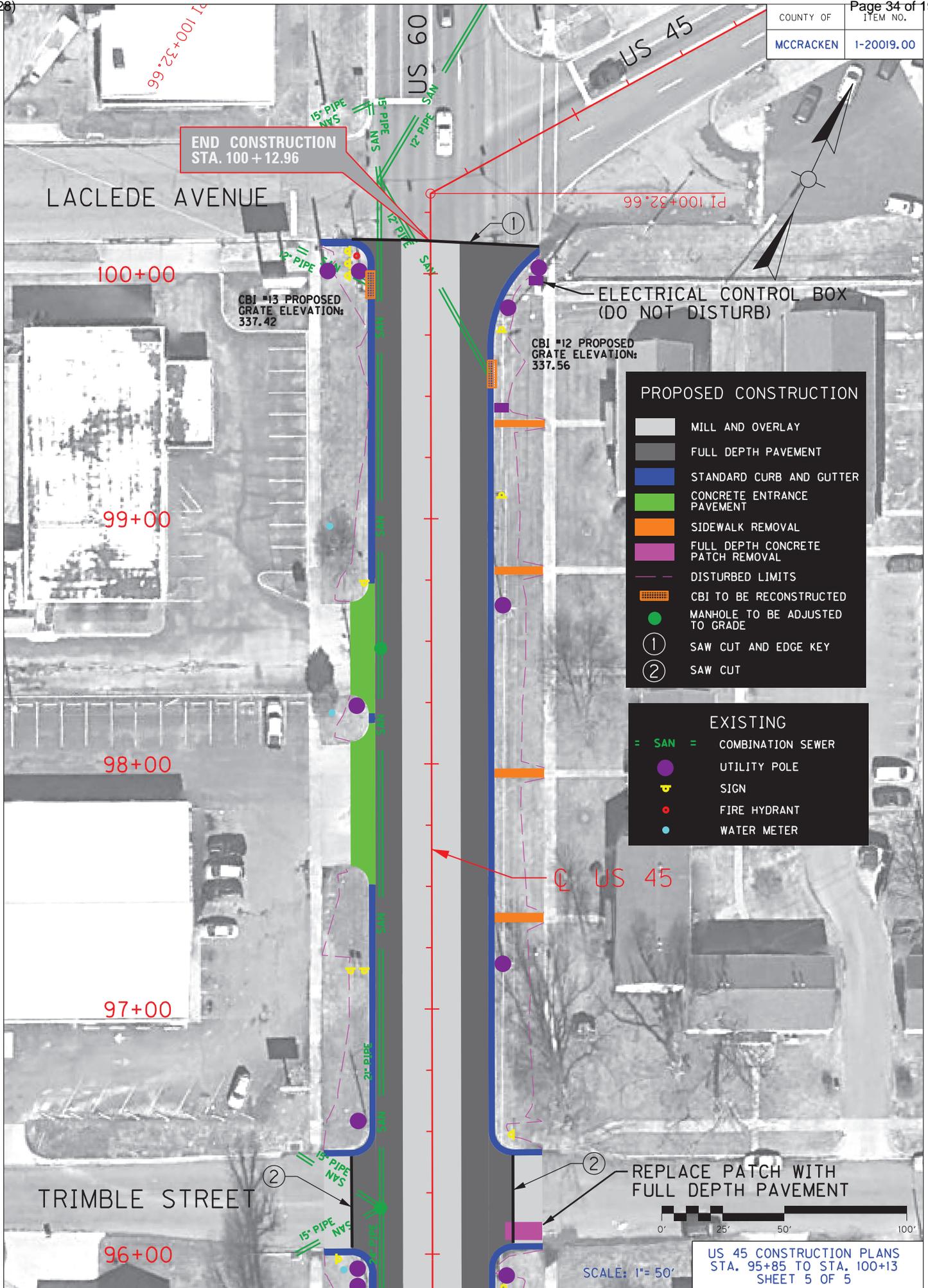
REPLACE PATCH WITH
FULL DEPTH PAVEMENT

CLAY STREET

SCALE: 1" = 50'

US 45 CONSTRUCTION PLANS
STA. 90+60 TO STA. 95+85
SHEET 4 OF 5

COUNTY OF	ITEM NO.
MCCRACKEN	I-20019.00



END CONSTRUCTION
STA. 100 + 12.96

LACLEDE AVENUE

100+00

99+00

98+00

97+00

96+00

CBI #13 PROPOSED
GRATE ELEVATION:
337.42

CBI #12 PROPOSED
GRATE ELEVATION:
337.56

ELECTRICAL CONTROL BOX
(DO NOT DISTURB)

PROPOSED CONSTRUCTION

- MILL AND OVERLAY
- FULL DEPTH PAVEMENT
- STANDARD CURB AND GUTTER
- CONCRETE ENTRANCE PAVEMENT
- SIDEWALK REMOVAL
- FULL DEPTH CONCRETE PATCH REMOVAL
- DISTURBED LIMITS
- CBI TO BE RECONSTRUCTED
- MANHOLE TO BE ADJUSTED TO GRADE
- ① SAW CUT AND EDGE KEY
- ② SAW CUT

EXISTING

- SAN = COMBINATION SEWER
- UTILITY POLE
- SIGN
- FIRE HYDRANT
- WATER METER

Q US 45

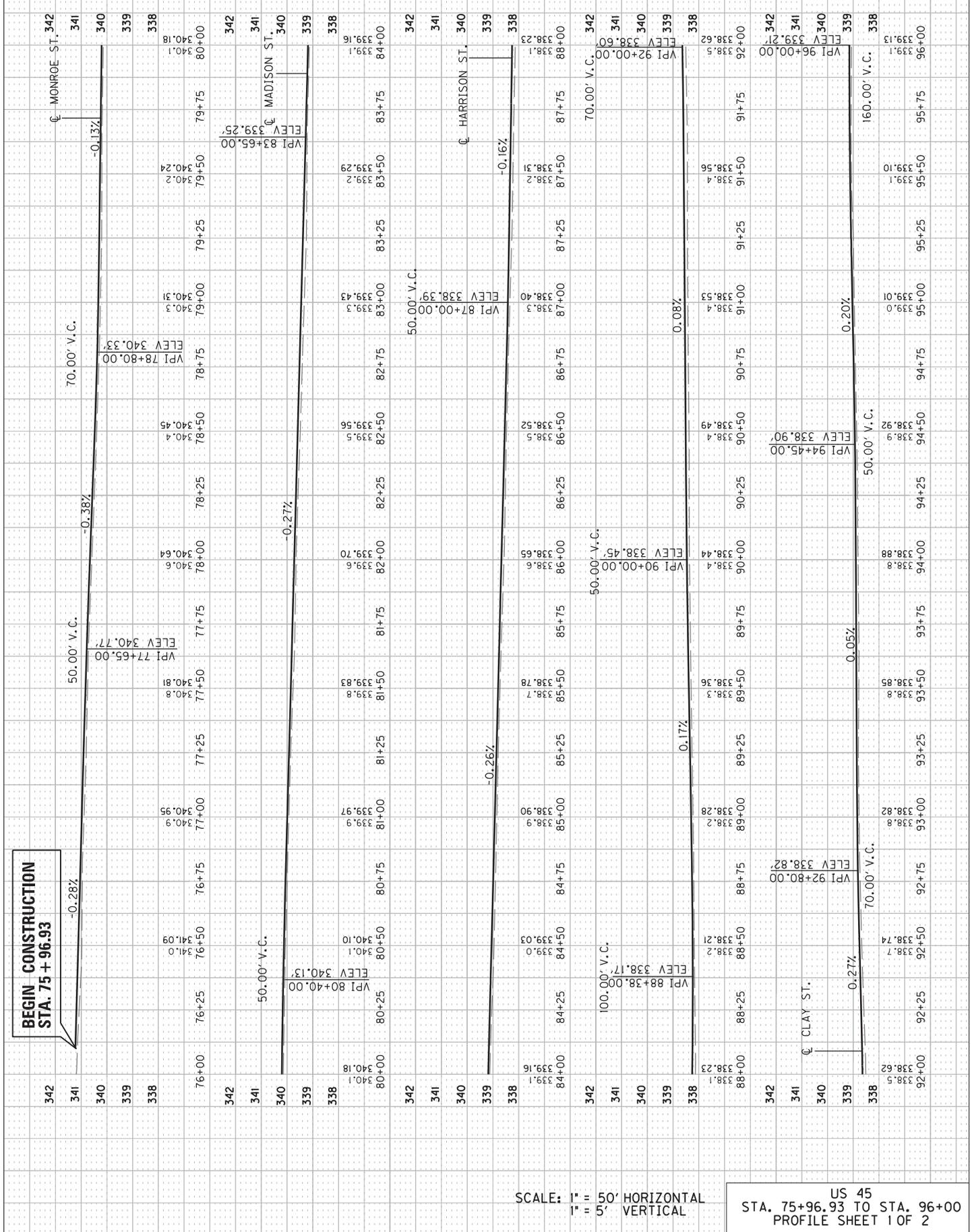
REPLACE PATCH WITH
FULL DEPTH PAVEMENT



SCALE: 1" = 50'

US 45 CONSTRUCTION PLANS
STA. 95+85 TO STA. 100+13
SHEET 5 OF 5

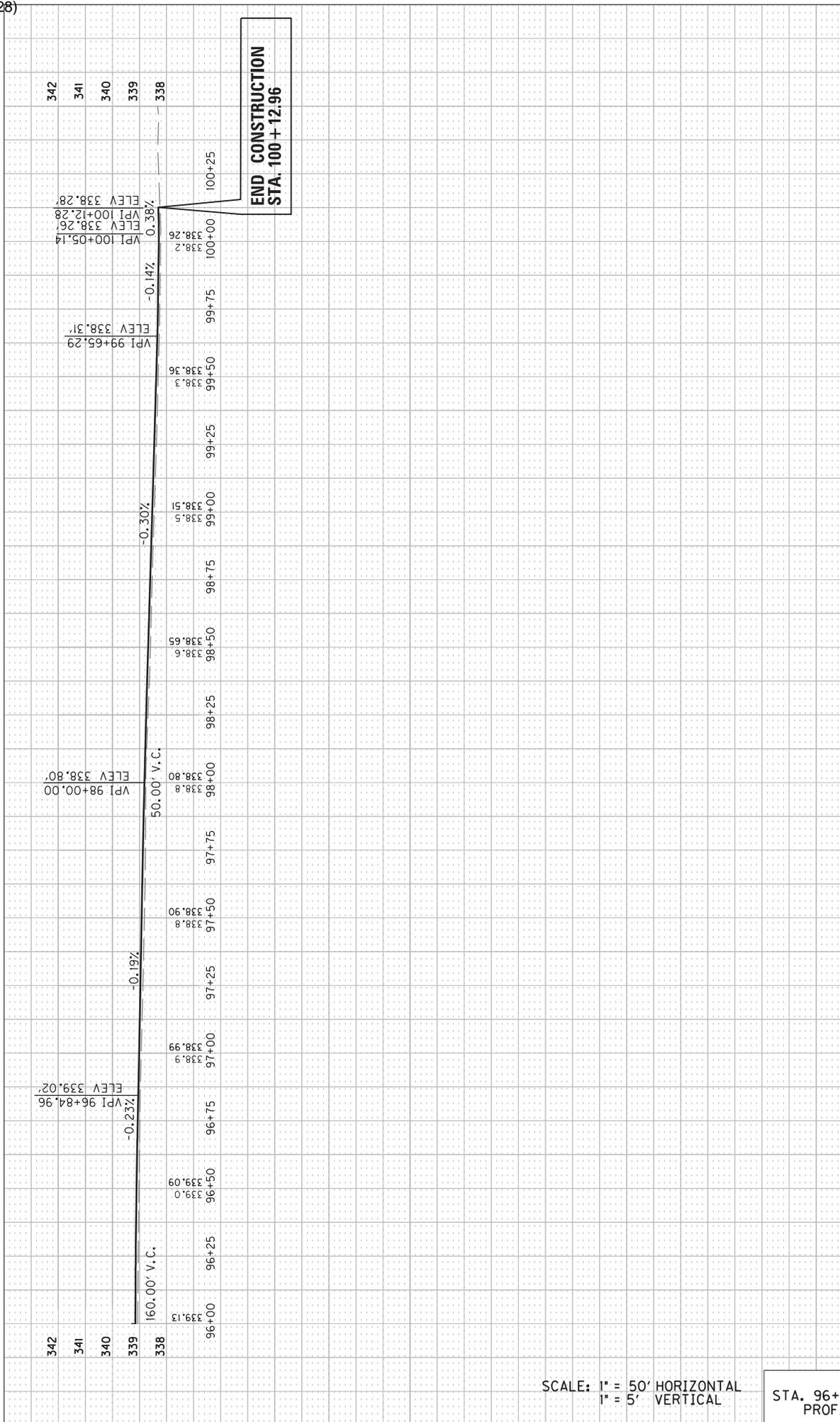
COUNTY OF	MCCRACKEN
ITEM NO.	I-20019.00



SCALE: 1" = 50' HORIZONTAL
1" = 5' VERTICAL

US 45
STA. 75+96.93 TO STA. 96+00
PROFILE SHEET 1 OF 2

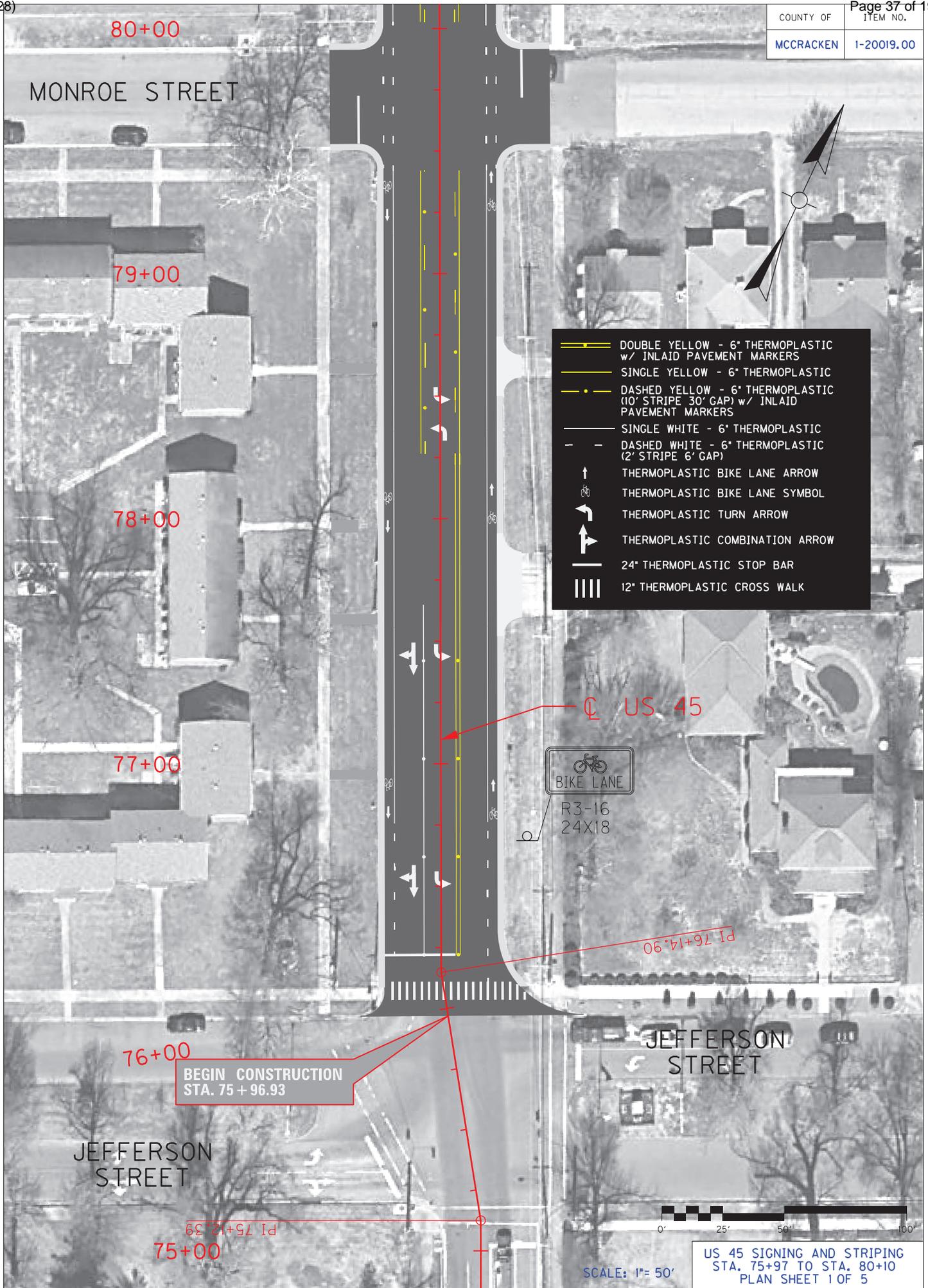
COUNTY OF	ITEM NO.
MCCRACKEN	1-20019.00



SCALE: 1" = 50' HORIZONTAL
1" = 5' VERTICAL

US 45
STA. 96+00 TO STA. 100+12.96
PROFILE SHEET 2 OF 2

COUNTY OF	ITEM NO.
MCCRACKEN	I-20019.00



80+00

MONROE STREET

79+00

78+00

77+00

76+00

JEFFERSON STREET

75+00

- DOUBLE YELLOW - 6" THERMOPLASTIC w/ INLAID PAVEMENT MARKERS
- SINGLE YELLOW - 6" THERMOPLASTIC
- DASHED YELLOW - 6" THERMOPLASTIC (10' STRIPE 30' GAP) w/ INLAID PAVEMENT MARKERS
- SINGLE WHITE - 6" THERMOPLASTIC
- DASHED WHITE - 6" THERMOPLASTIC (2' STRIPE 6' GAP)
- THERMOPLASTIC BIKE LANE ARROW
- THERMOPLASTIC BIKE LANE SYMBOL
- THERMOPLASTIC TURN ARROW
- THERMOPLASTIC COMBINATION ARROW
- 24" THERMOPLASTIC STOP BAR
- 12" THERMOPLASTIC CROSS WALK

Q US 45

BIKE LANE

R3-16
24X18

PI 76+14.90

BEGIN CONSTRUCTION
STA. 75 + 96.93

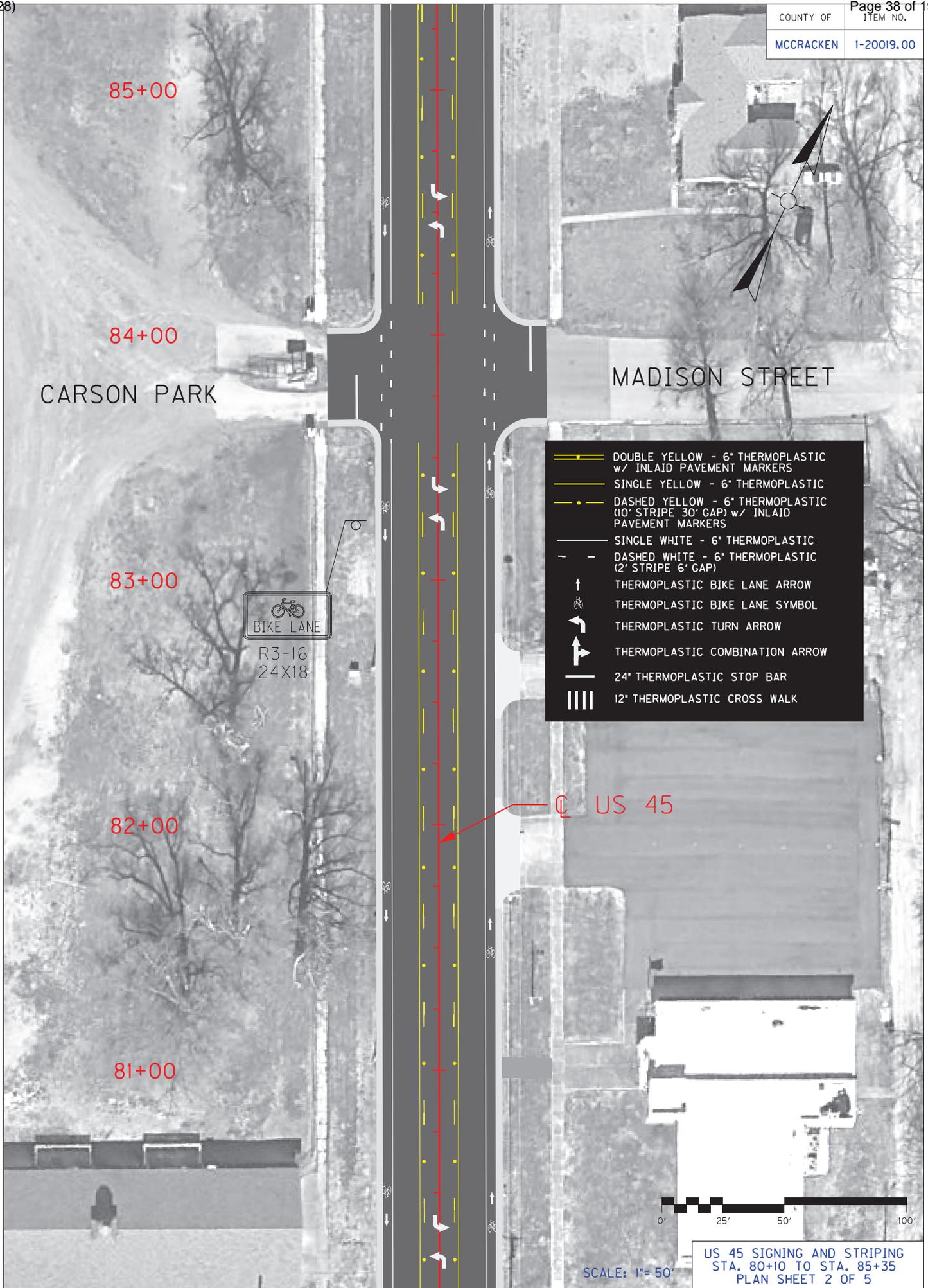
PI 75+12.59



SCALE: 1" = 50'

US 45 SIGNING AND STRIPING
STA. 75+97 TO STA. 80+10
PLAN SHEET 1 OF 5

COUNTY OF	ITEM NO.
MCCRACKEN	I-20019.00



85+00

84+00

CARSON PARK

MADISON STREET

83+00

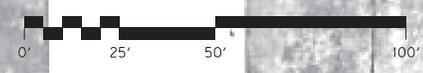
BIKE LANE
R3-16
24X18

82+00

81+00

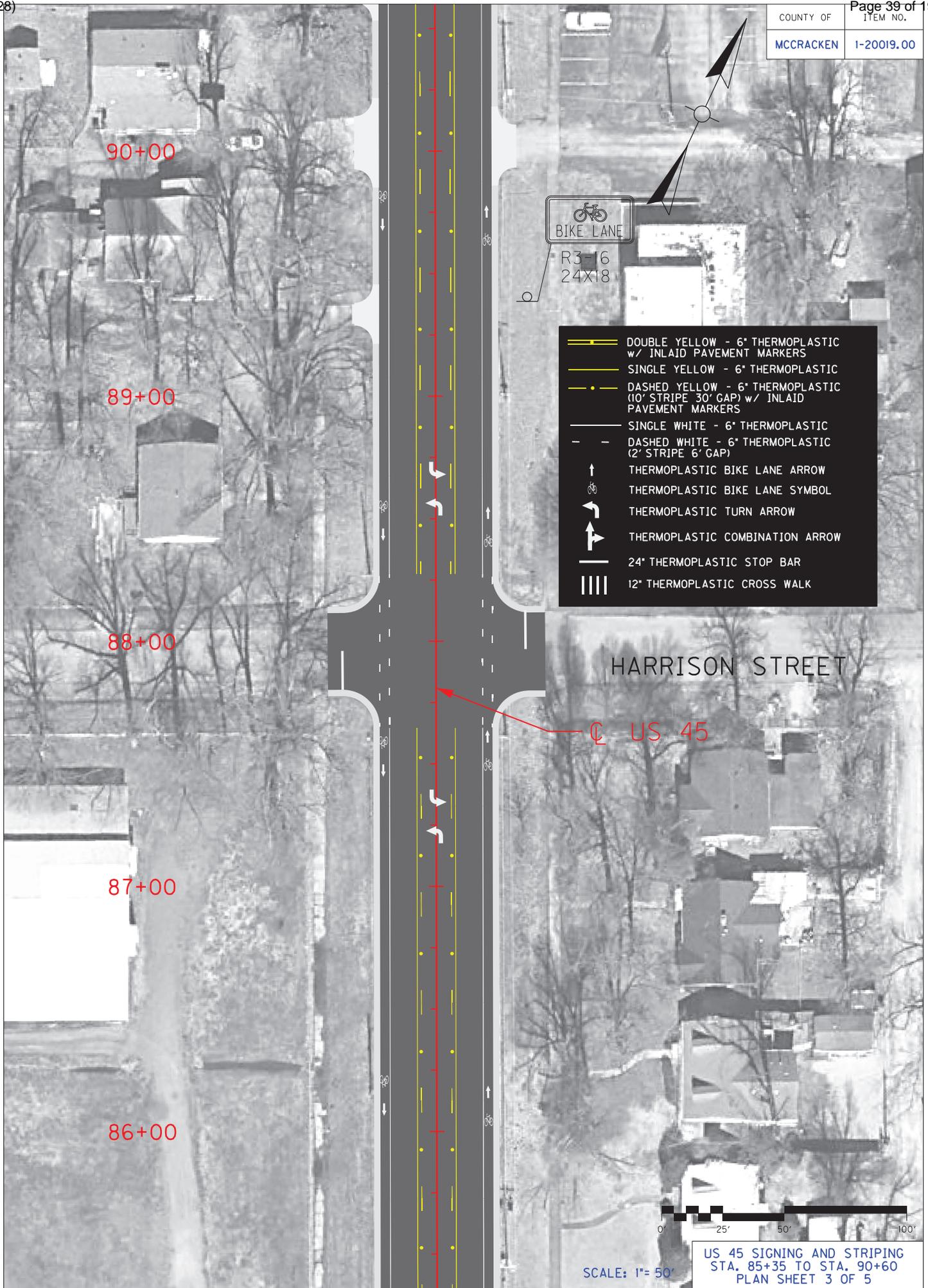
- DOUBLE YELLOW - 6" THERMOPLASTIC w/ INLAID PAVEMENT MARKERS
- SINGLE YELLOW - 6" THERMOPLASTIC
- DASHED YELLOW - 6" THERMOPLASTIC (10' STRIPE 30" GAP) w/ INLAID PAVEMENT MARKERS
- SINGLE WHITE - 6" THERMOPLASTIC
- DASHED WHITE - 6" THERMOPLASTIC (2' STRIPE 6" GAP)
- THERMOPLASTIC BIKE LANE ARROW
- THERMOPLASTIC BIKE LANE SYMBOL
- THERMOPLASTIC TURN ARROW
- THERMOPLASTIC COMBINATION ARROW
- 24" THERMOPLASTIC STOP BAR
- 12" THERMOPLASTIC CROSS WALK

CL US 45



SCALE: 1" = 50'
US 45 SIGNING AND STRIPING
STA. 80+10 TO STA. 85+35
PLAN SHEET 2 OF 5

COUNTY OF	ITEM NO.
MCCRACKEN	I-20019.00



BIKE LANE

R3-16
24X18

- DOUBLE YELLOW - 6" THERMOPLASTIC w/ INLAID PAVEMENT MARKERS
- SINGLE YELLOW - 6" THERMOPLASTIC
- DASHED YELLOW - 6" THERMOPLASTIC (10' STRIPE 30' GAP) w/ INLAID PAVEMENT MARKERS
- SINGLE WHITE - 6" THERMOPLASTIC
- DASHED WHITE - 6" THERMOPLASTIC (2' STRIPE 6' GAP)
- THERMOPLASTIC BIKE LANE ARROW
- THERMOPLASTIC BIKE LANE SYMBOL
- THERMOPLASTIC TURN ARROW
- THERMOPLASTIC COMBINATION ARROW
- 24" THERMOPLASTIC STOP BAR
- 12" THERMOPLASTIC CROSS WALK

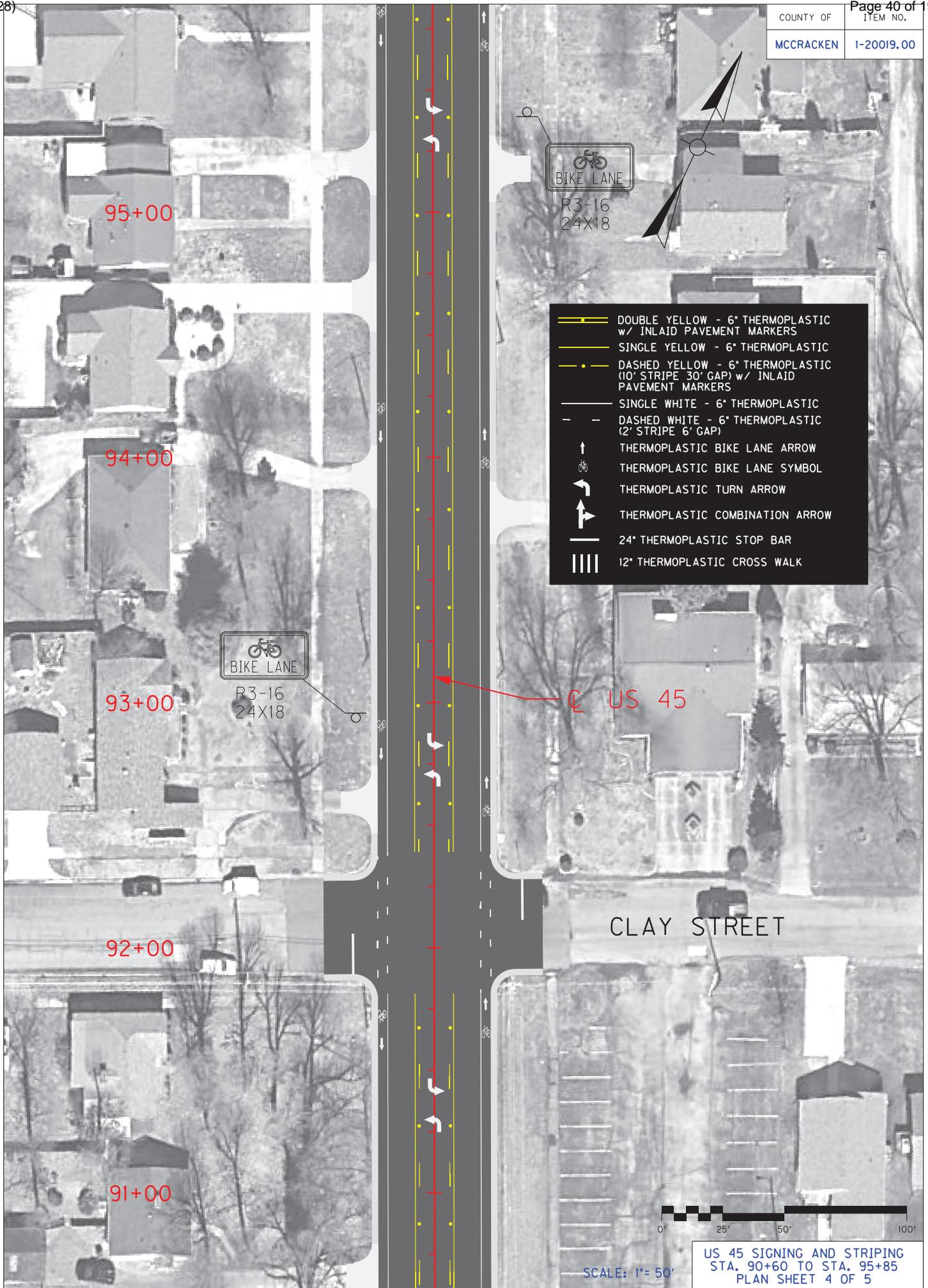
HARRISON STREET

US 45



SCALE: 1"= 50'
US 45 SIGNING AND STRIPING
STA. 85+35 TO STA. 90+60
PLAN SHEET 3 OF 5

COUNTY OF	ITEM NO.
MCCRACKEN	I-20019.00



95+00

94+00

93+00

92+00

91+00

BIKE LANE

R3-16
24X18

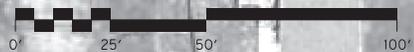
BIKE LANE

R3-16
24X18

US 45

CLAY STREET

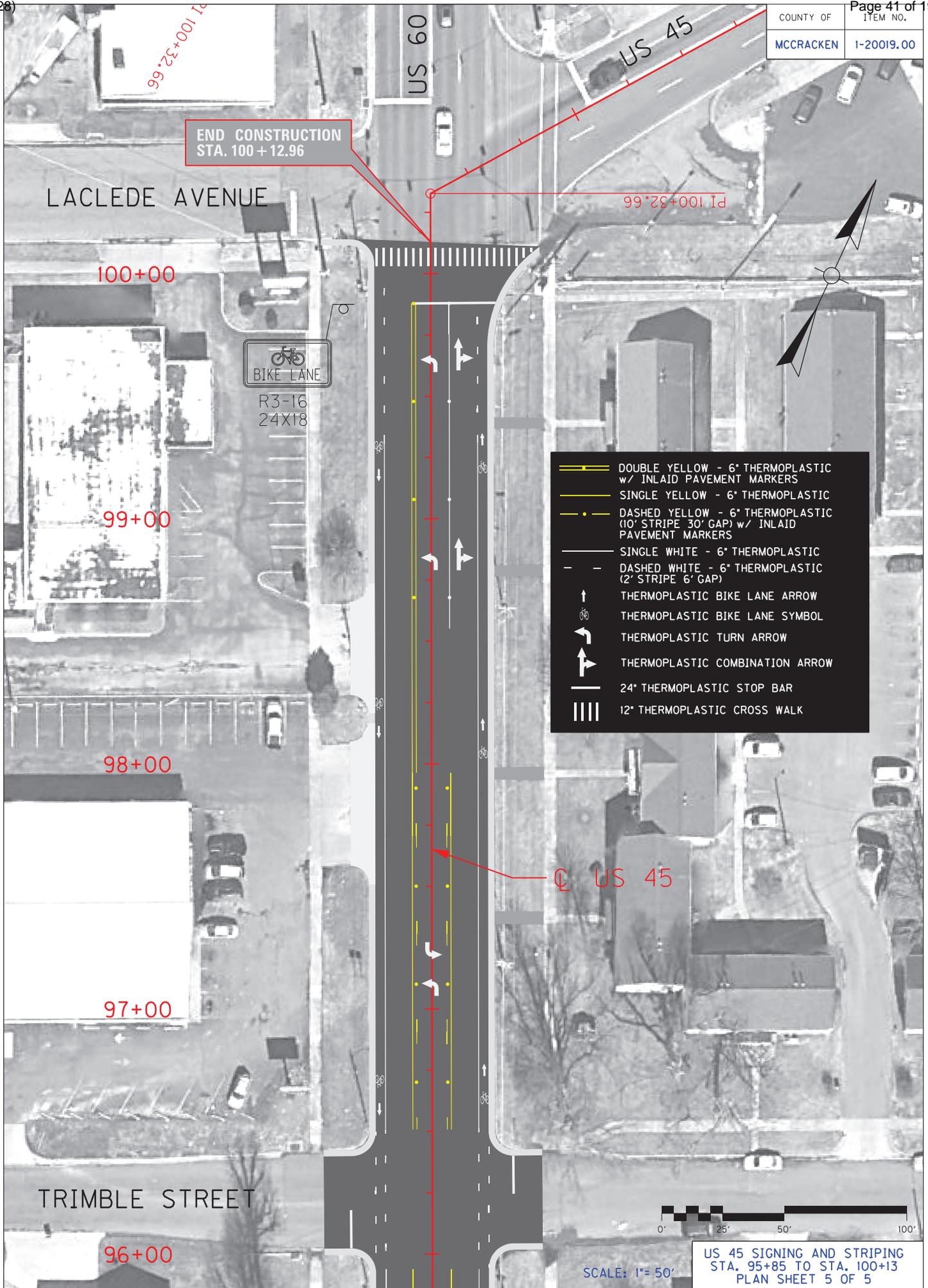
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- SINGLE YELLOW - 6" THERMOPLASTIC
- DASHED YELLOW - 6" THERMOPLASTIC (10' STRIPE 30' GAP) w/ INLAID PAVEMENT MARKERS
- SINGLE WHITE - 6" THERMOPLASTIC
- DASHED WHITE - 6" THERMOPLASTIC (2' STRIPE 6' GAP)
- THERMOPLASTIC BIKE LANE ARROW
- THERMOPLASTIC BIKE LANE SYMBOL
- THERMOPLASTIC TURN ARROW
- THERMOPLASTIC COMBINATION ARROW
- 24" THERMOPLASTIC STOP BAR
- 12" THERMOPLASTIC CROSS WALK



SCALE: 1" = 50'

US 45 SIGNING AND STRIPING
STA. 90+60 TO STA. 95+85
PLAN SHEET 4 OF 5

COUNTY OF	ITEM NO.
MCCRACKEN	I-20019.00



END CONSTRUCTION
STA. 100 + 12.96

LACLEDE AVENUE

100+00

BIKE LANE
R3-16
24X18

99+00

98+00

97+00

TRIMBLE STREET

96+00

- DOUBLE YELLOW - 6" THERMOPLASTIC w/ INLAID PAVEMENT MARKERS
- SINGLE YELLOW - 6" THERMOPLASTIC
- DASHED YELLOW - 6" THERMOPLASTIC (10' STRIPE 30' GAP) w/ INLAID PAVEMENT MARKERS
- SINGLE WHITE - 6" THERMOPLASTIC
- DASHED WHITE - 6" THERMOPLASTIC (2' STRIPE 6' GAP)
- THERMOPLASTIC BIKE LANE ARROW
- THERMOPLASTIC BIKE LANE SYMBOL
- THERMOPLASTIC TURN ARROW
- THERMOPLASTIC COMBINATION ARROW
- 24" THERMOPLASTIC STOP BAR
- 12" THERMOPLASTIC CROSS WALK

Q US 45

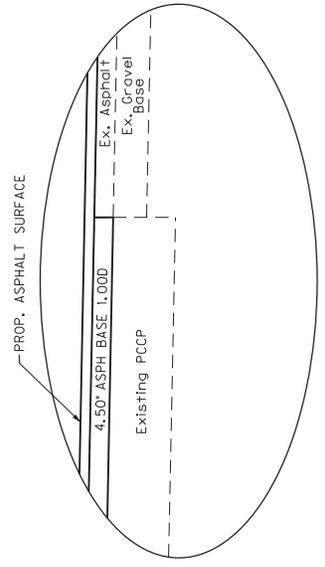
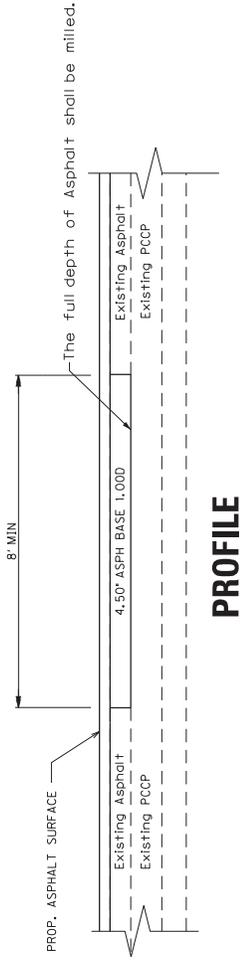


SCALE: 1" = 50'

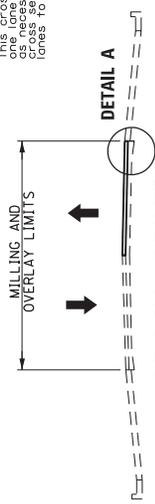
US 45 SIGNING AND STRIPING
STA. 95+85 TO STA. 100+13
PLAN SHEET 5 OF 5

COUNTY OF	ITEM NO.
MCCRACKEN	I-20019.00

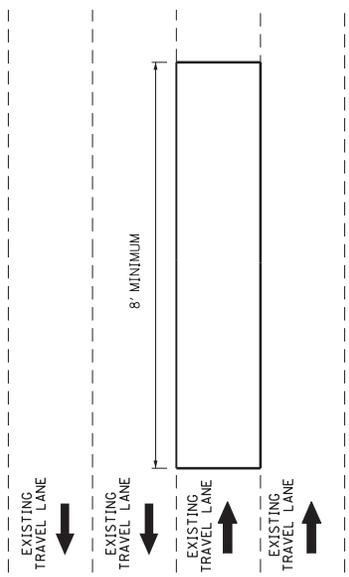
PAVEMENT REPAIR DETAIL



This cross section assumes the contractor will be milled and replaced plus one additional inch of depth. The contractor shall indicate the cross section and number of inches to be repaired.



CROSS SECTION



PLAN VIEW

NOTES

1. Caution: Existing concrete pavement may exist below the asphalt pavement. This shall be sawcut for removal.
2. Pavement repairs shall be performed at locations selected by and as directed by the Engineer. The Engineer will assess, select, and mark areas for treatment. The full depth of the existing pavement shall be removed and replaced. The Engineer shall determine the extent of the repair. The contractor shall be responsible for the cost of the repair. The contractor shall be responsible for the top lift of base or may decide a Base Failure Repair is more appropriate.
3. Complete pavement repair operations in one continuous operation or protect with barrier wall. Do not leave an unprotected hole with no workers present. If barrier wall must be used for pavement repairs, it will be considered incidental to other items of work and not be considered for payment.
4. Before resurfacing, open repaired area to traffic for a minimum of 14 days. Monitor pavement for settlement during this 14+ days and repair by leveling and wedging, as approved by the Engineer, until placement of final surface course.
5. (NOTE NOT USED)
6. Perform typical mill and inlay operations with resurfacing items subject to payment as part of the resurfacing operation.
7. Asphalt base courses shall be CL3 ASPH BASE P664-22 1.000 w/ fiber reinforcement for HMA.

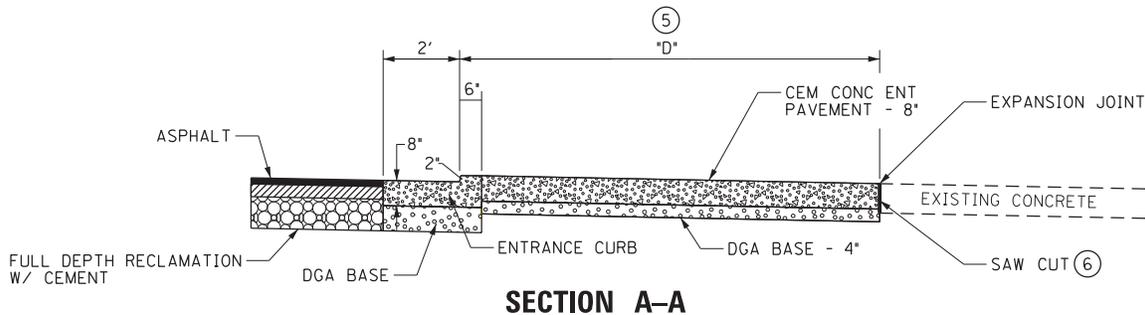
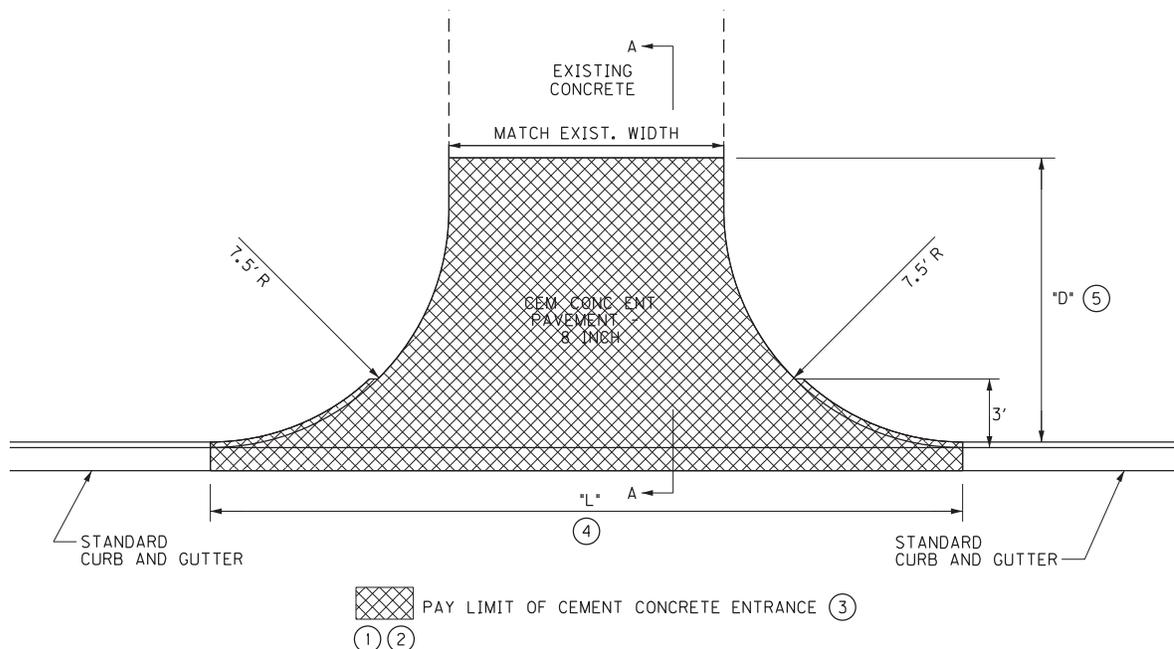
* QUANTITIES TO BID
20757ED PAVEMENT REPAIR SO. YD.

The bid item 20757ED PAVEMENT REPAIR shall include all materials and work to complete the repair as directed by the Engineer. This includes saw cuts of pavement, removal of pavement, and asphalt courses.

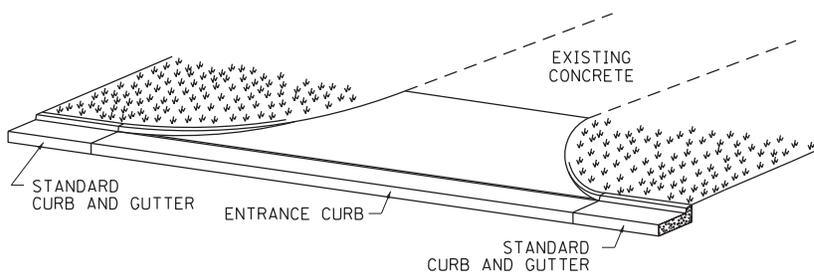
NOT TO SCALE

COUNTY OF	ITEM NO.
MCCRACKEN	1-20019.00

CONCRETE ENTRANCE DETAIL



SECTION A-A



FRONT ISOMETRIC VIEW

NOTES:

- ① CLASS "A" CONCRETE OR CEMENT CONCRETE PAVEMENT CONCRETE SHALL BE USED IN THE ENTRANCE PAVEMENT.
- ② THE ENTRANCE PAVEMENT SHALL RECEIVE A BROOM FINISH.
- ③ THE CONTRACT UNIT PRICE BID PER SQUARE YARD FOR CEM CONC ENT PAVEMENT - 8 INCH (CODE NO. 02101) SHALL INCLUDE CLASS "A" CONCRETE AND ALL INCIDENTALS NECESSARY TO COMPLETE THE WORK. DGA BASE SHALL BE A SEPARATE BID ITEM.
- ④ WHEN "L" IS GREATER THAN "D" A SAWS AND SEALED JOINT, 1 1/2" DEEP AND 1/4" WIDE, SHALL BE REQUIRED AT THE CENTER OF "L".
- ⑤ LENGTH "D" VARIES. SEE CROSS SECTIONS AND/OR AS DIRECTED BY THE ENGINEER.
- ⑥ SAW CUT OF EXISTING PAVEMENT IS INCIDENTAL.

NOT TO SCALE

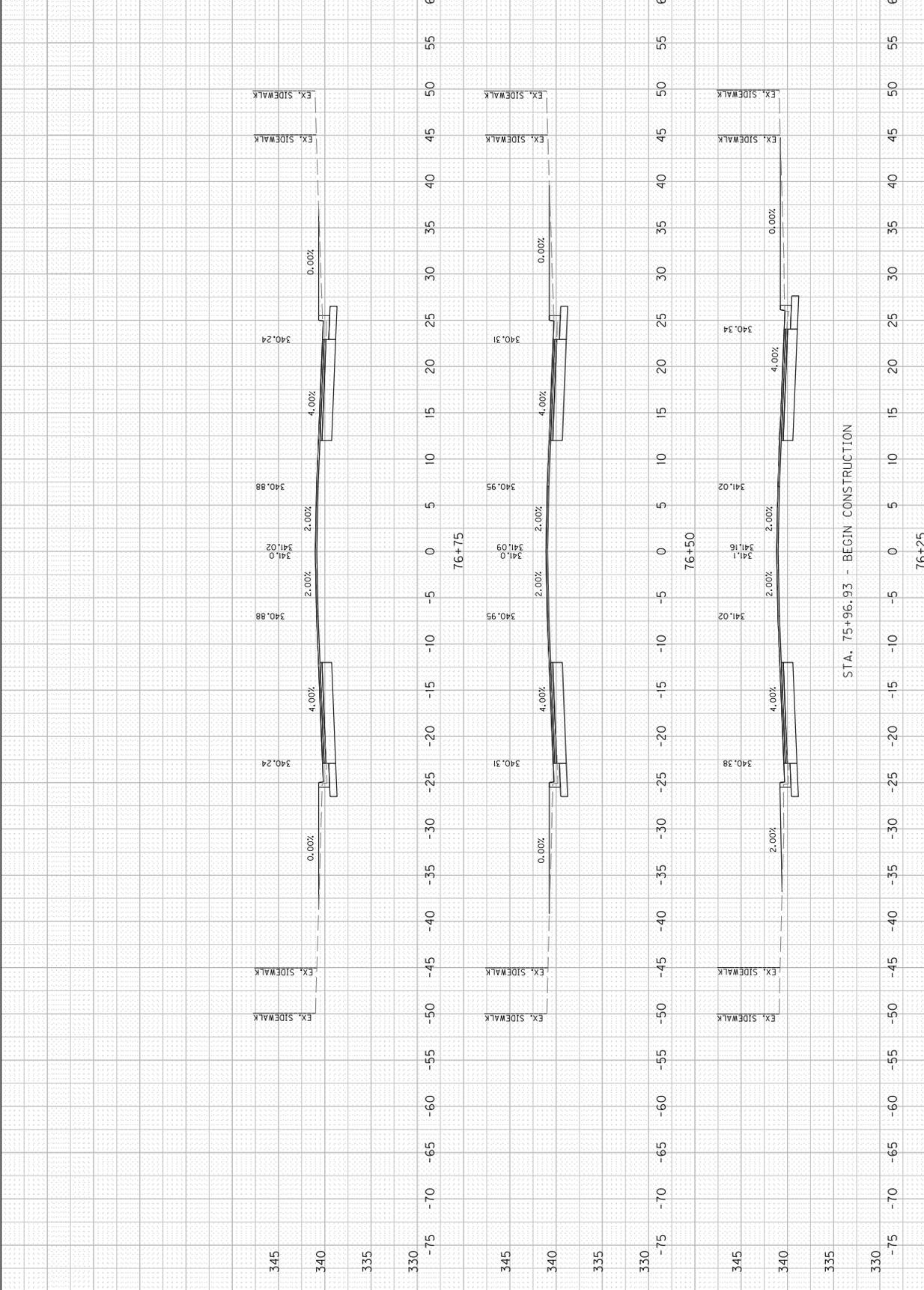
CONCRETE ENTRANCE DETAIL

**CONTROL AND GEOMETRIC DATA SHEET
 US 45 - MCCRACKEN COUNTY
 PAGE 1 OF 1**

VERTICAL AND HORIZONTAL CONTROL POINTS						
POINT	DESCRIPTION	STATION AND OFFSET		STATE PLANE COORDINATES		ELEVATION
				NORTHING	EASTING	
101	#4 REBAR w/ CAP	US 45 STA. 95+81.90	38.16' RT.	3565491.47	4079813.84	338.83
102	#4 REBAR w/ CAP	US 45 STA. 86+88.28	38.18' LT.	3564649.35	4080122.43	338.39
103	#4 REBAR w/ CAP	US 45 STA. 80+20.06	38.99' RT.	3564076.40	4080474.85	339.93
104	#4 REBAR w/ CAP	US 45 STA. 78+96.76	36.53' LT.	3563932.73	4080458.53	340.20
201	#4 REBAR w/ CAP	US 45 STA. 94+95.17	29.85' LT.	3565384.12	4079788.87	338.80

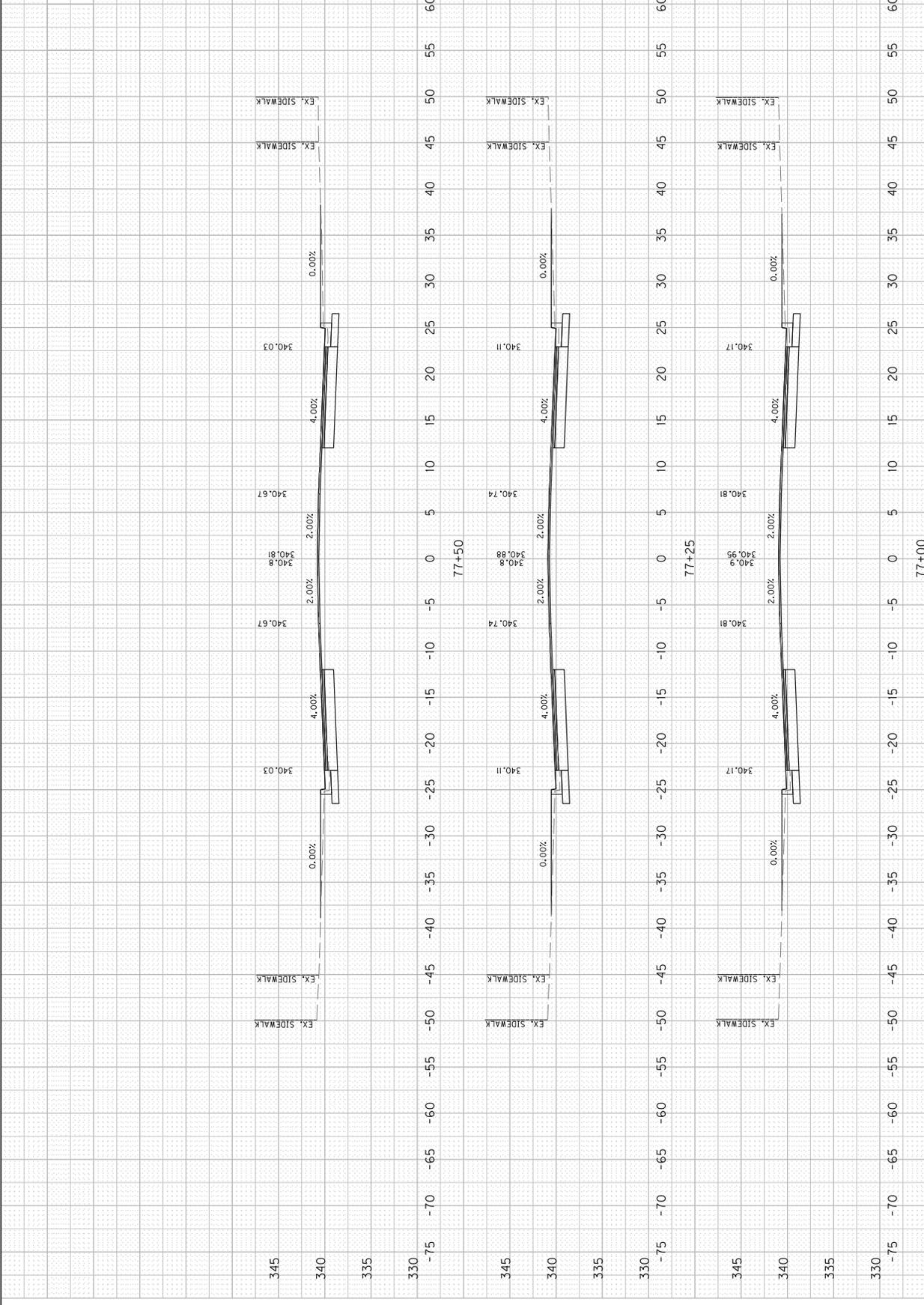
US 45 GEOMETRIC COORDINATE DATA			
STATION		STATE PLANE COORDINATES	
		NORTHING	EASTING
POB	72+60.09	3563378.98	4080774.52
PI	75+12.39	3563607.70	4080668.04
PI	76+14.90	3563692.74	4080610.79
PI	100+32.66	3565883.84	4079588.71
POE	106+07.43	3566346.39	4079929.90

COUNTY OF MCCRACKEN	ITEM NO. I-20019.00	SHEET NO. XI
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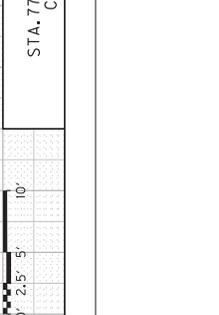


US 45
STA. 76+25 TO STA. 76+75
CROSS SECTIONS

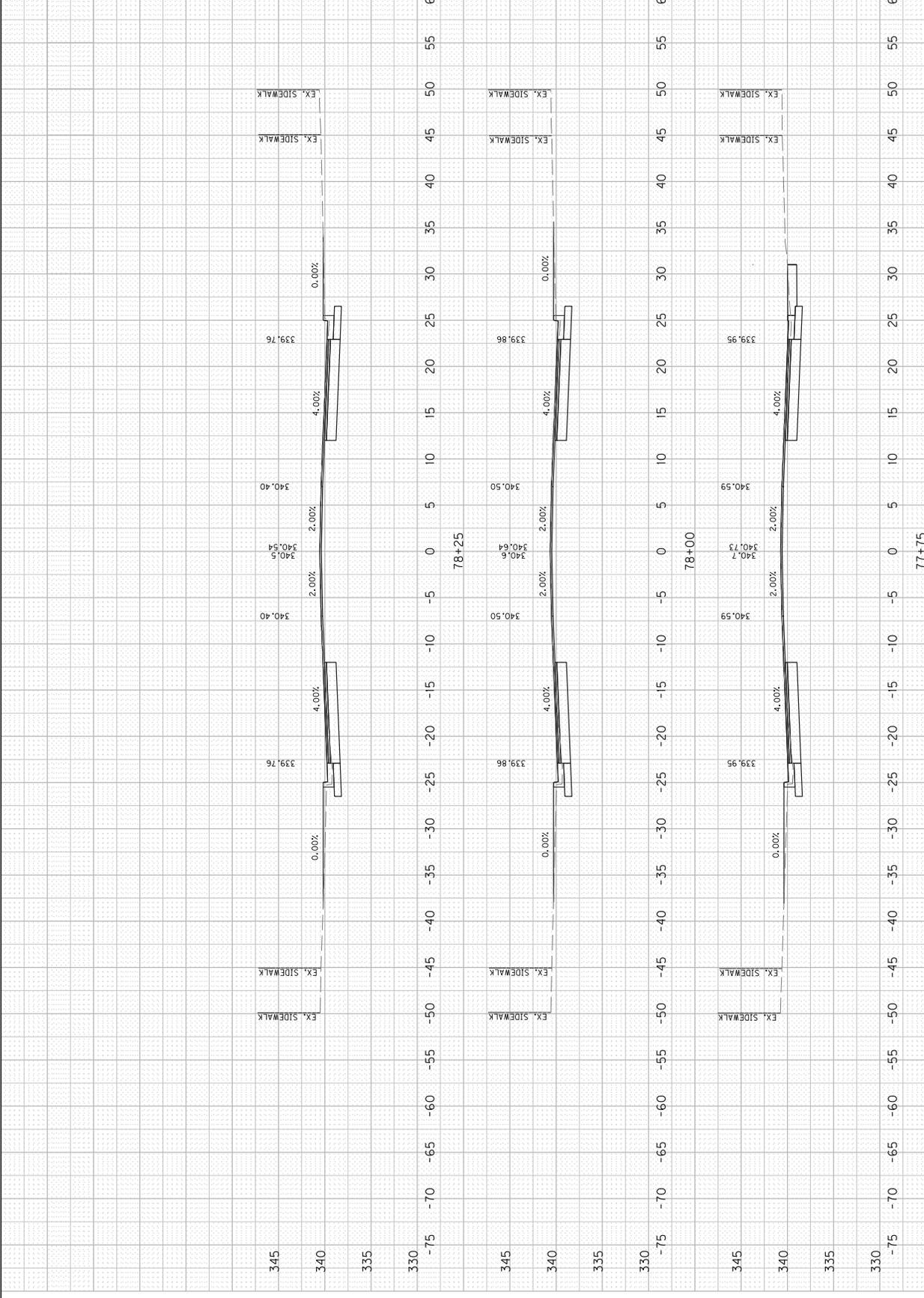
COUNTY OF	ITEM NO.	SHEET NO.
MCCRACKEN	I-20019.00	X2



US 45
STA. 77+00 TO STA. 77+50
CROSS SECTIONS



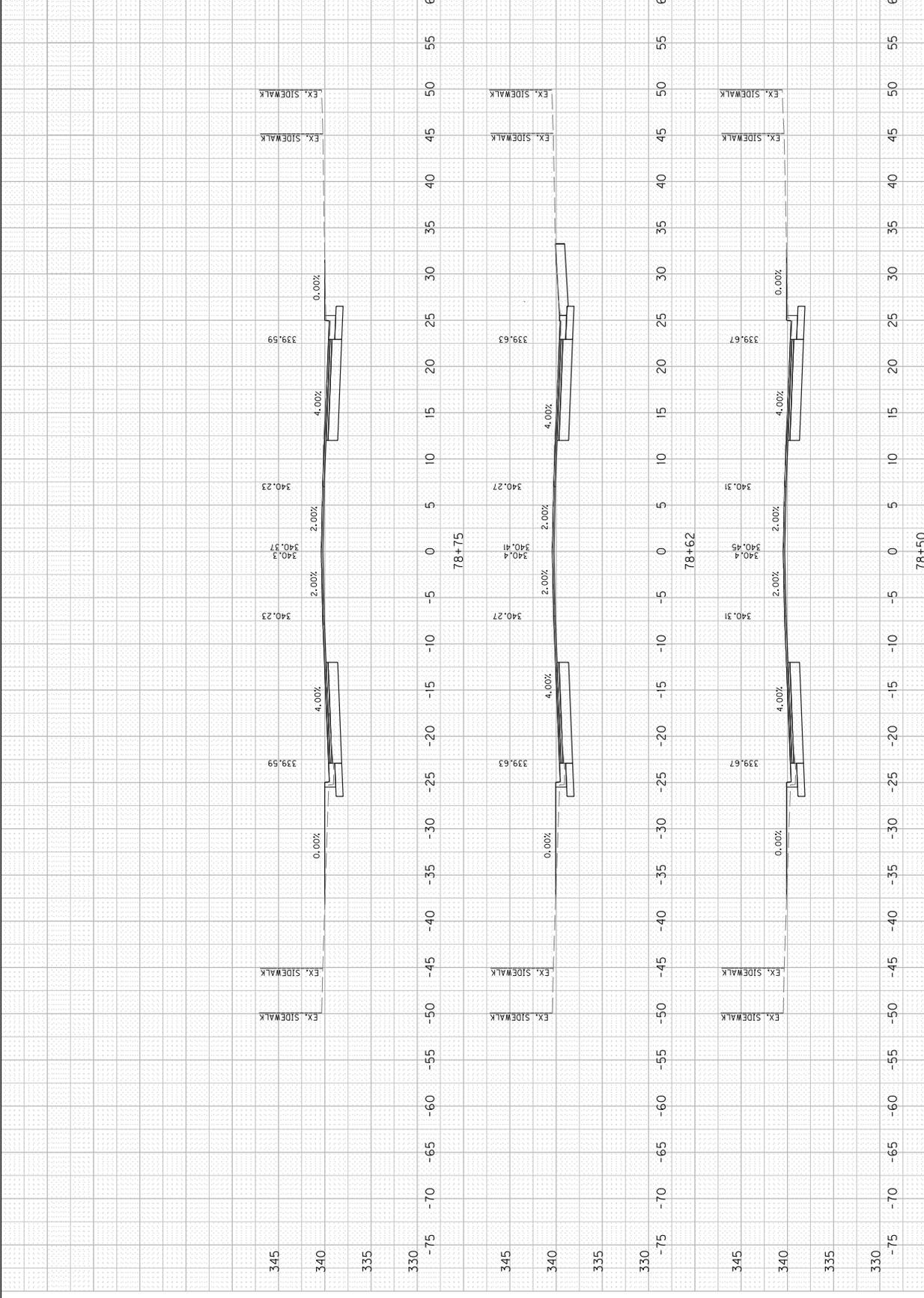
COUNTY OF	ITEM NO.	SHEET NO.
MCCRACKEN	I-20019.00	X3



US 45
STA. 77+75 TO STA. 78+25
CROSS SECTIONS

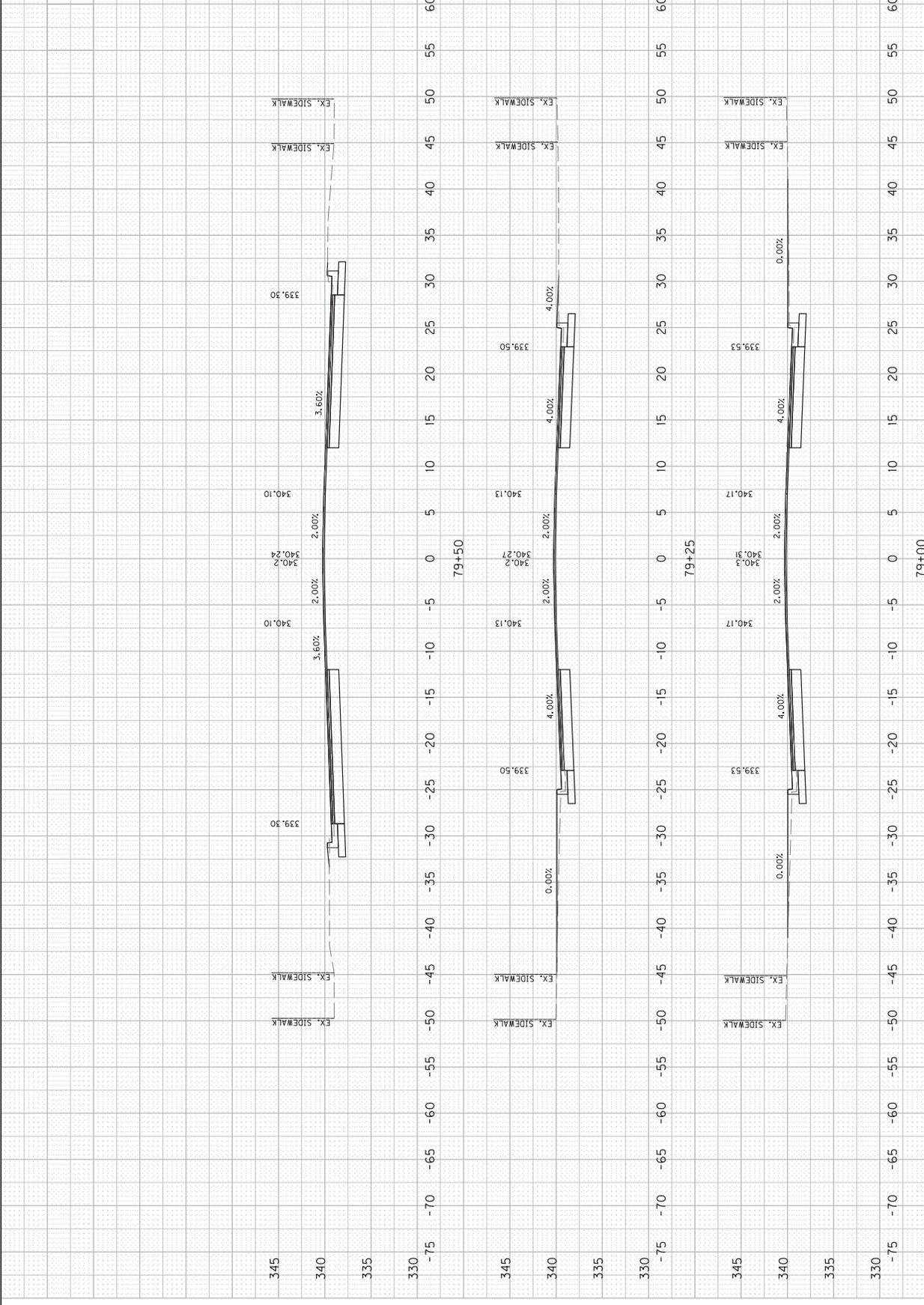


COUNTY OF	ITEM NO.	SHEET NO.
MCCRACKEN	I-20019.00	34



US 45
STA. 78+50 TO STA. 78+75
CROSS SECTIONS

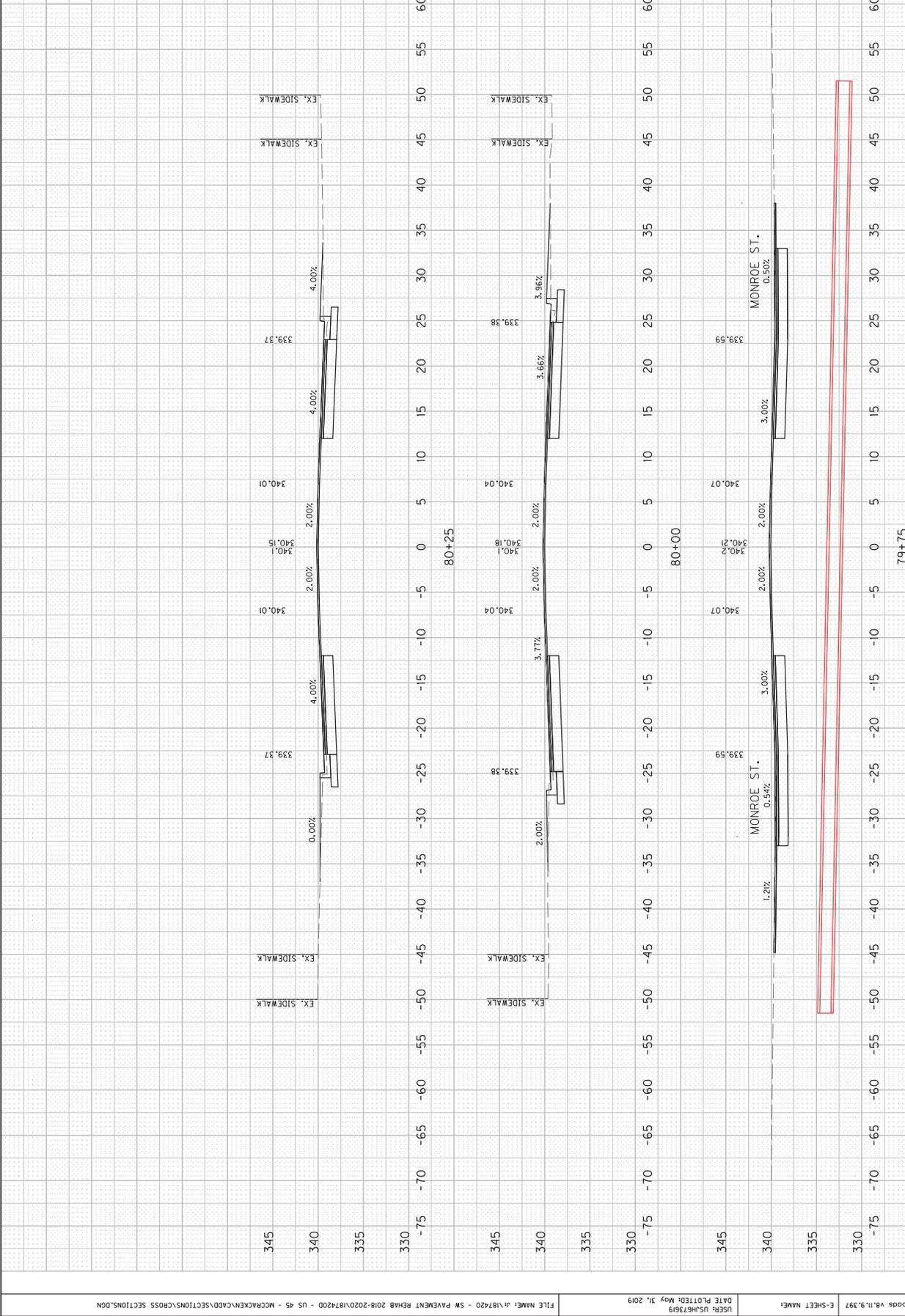
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MCCRACKEN	I-20019.00	35



US 45
STA. 79+00 TO STA. 79+50
CROSS SECTIONS



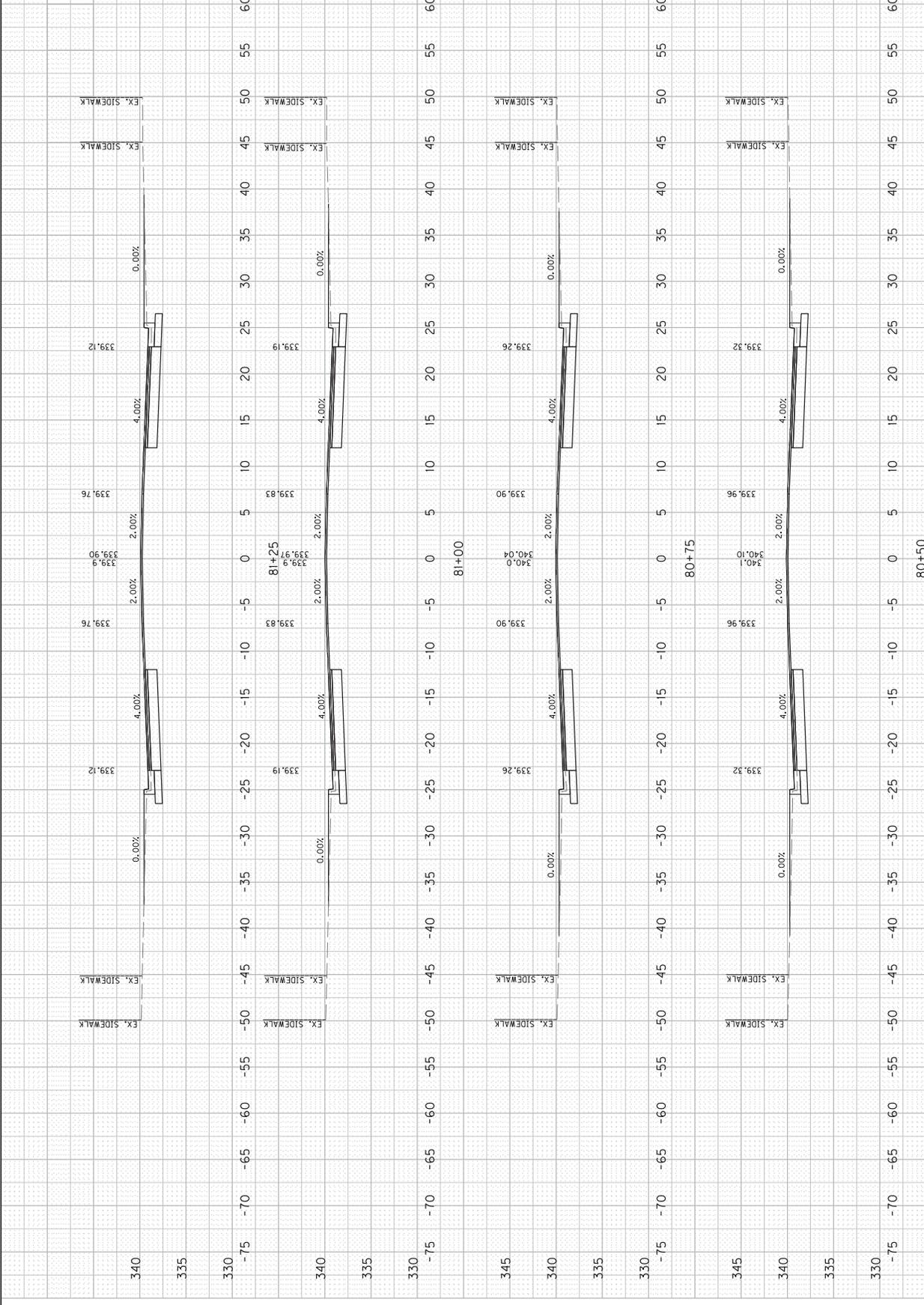
COUNTY OF	ITEM NO.	SHEET NO.
MCCRACKEN	I-20019.00	36



US 45
STA. 79+75 TO STA. 80+25
CROSS SECTIONS

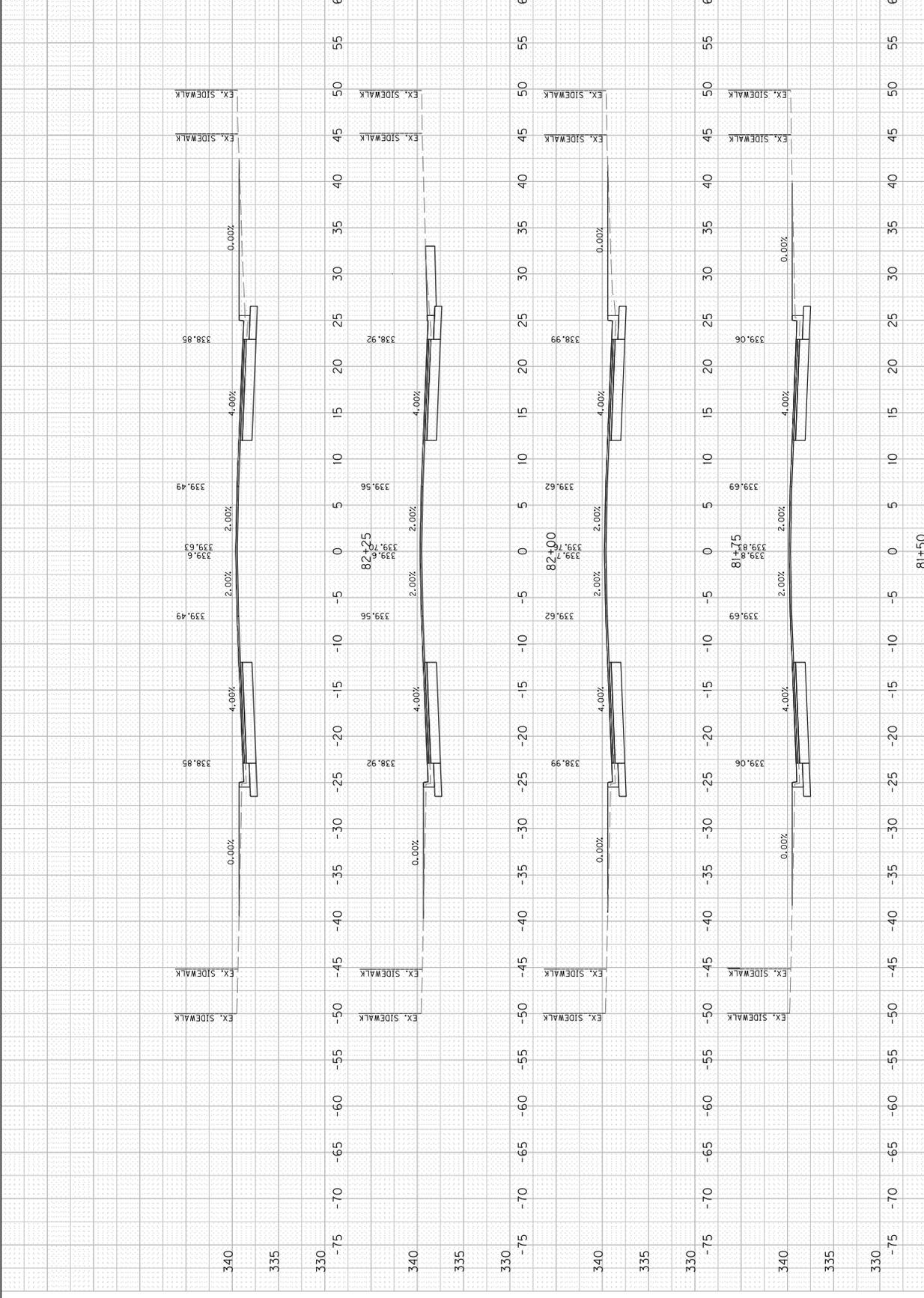
DATE PLOTTED: May 31, 2019
USFR US#673619
E-SHEET NAME: 811.9.397
Power InRoads v8.11.9.397

COUNTY OF	ITEM NO.	SHEET NO.
MCCRACKEN	I-20019.00	X7



US 45
STA. 80+50 TO STA. 81+25
CROSS SECTIONS

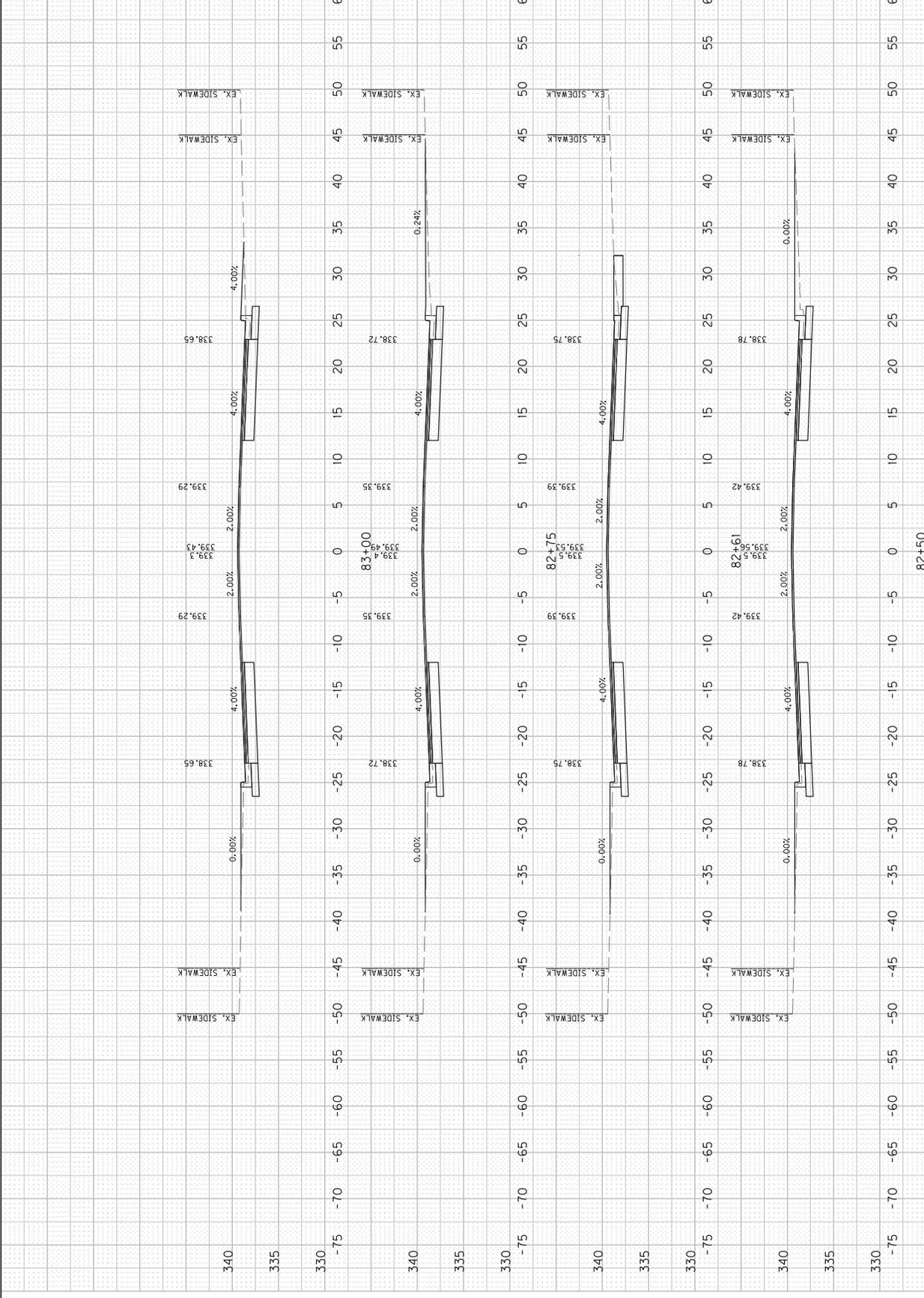
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MCCRACKEN	I-20019.00	38



US 45
STA. 81+50 TO STA. 82+25
CROSS SECTIONS



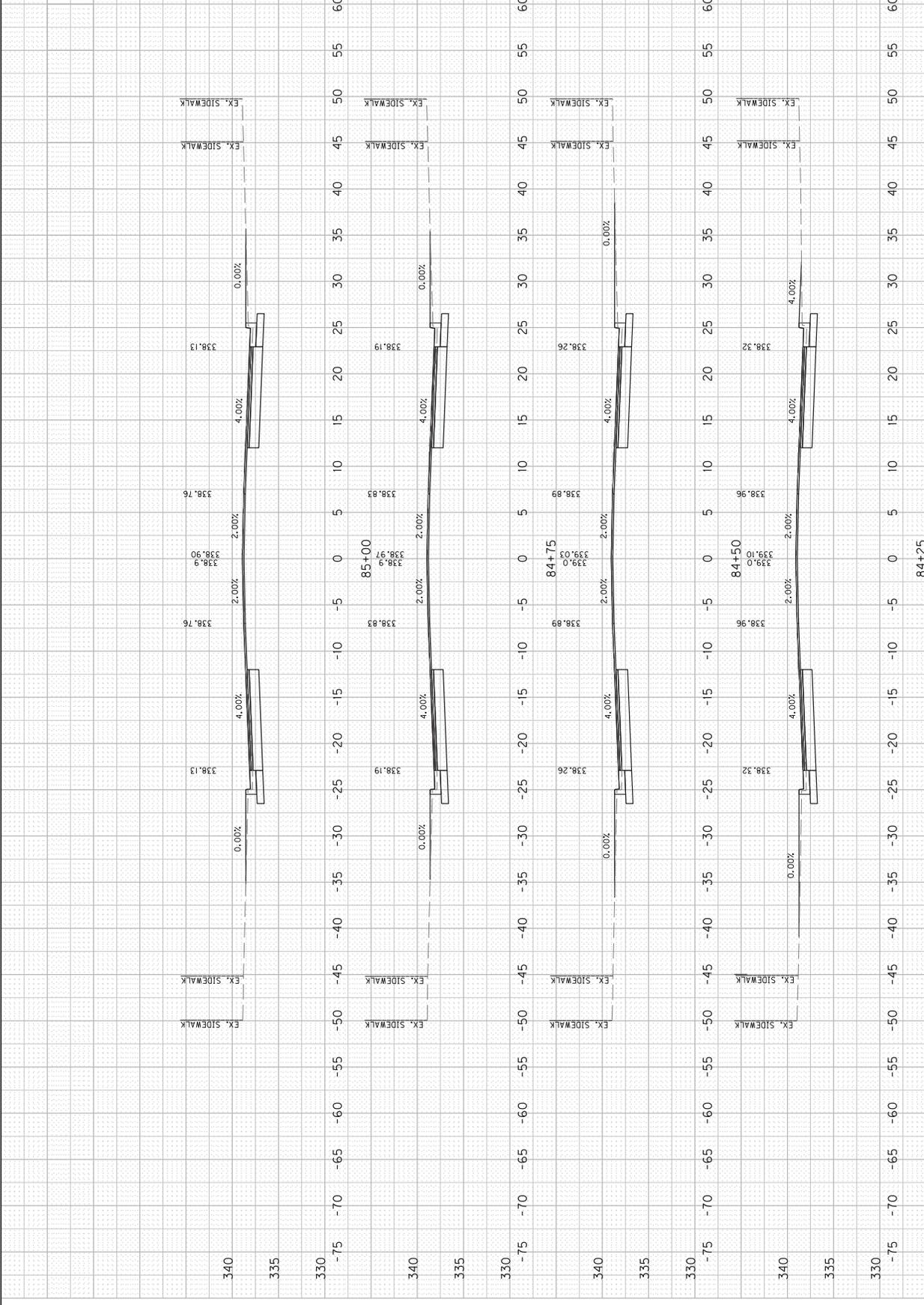
COUNTY OF	ITEM NO.	SHEET NO.
MCCRACKEN	I-20019.00	19



US 45
STA. 82+50 TO STA. 83+00
CROSS SECTIONS



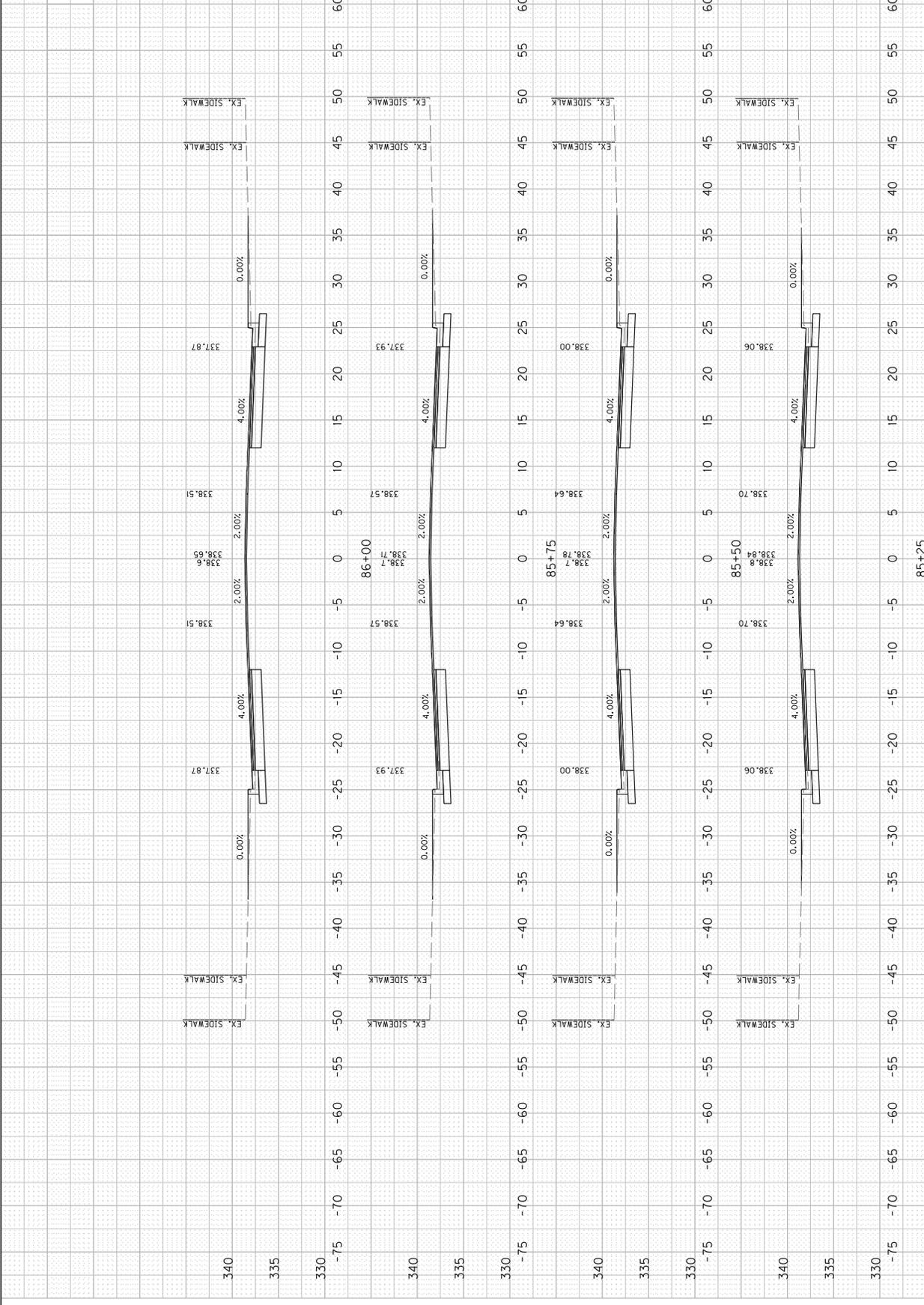
COUNTY OF MCCRACKEN	ITEM NO. I-20019.00	SHEET NO. XII
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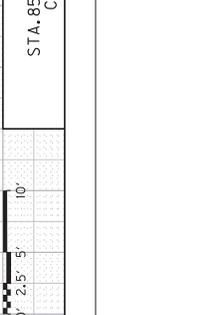
US 45
STA. 84+25 TO STA. 85+00
CROSS SECTIONS



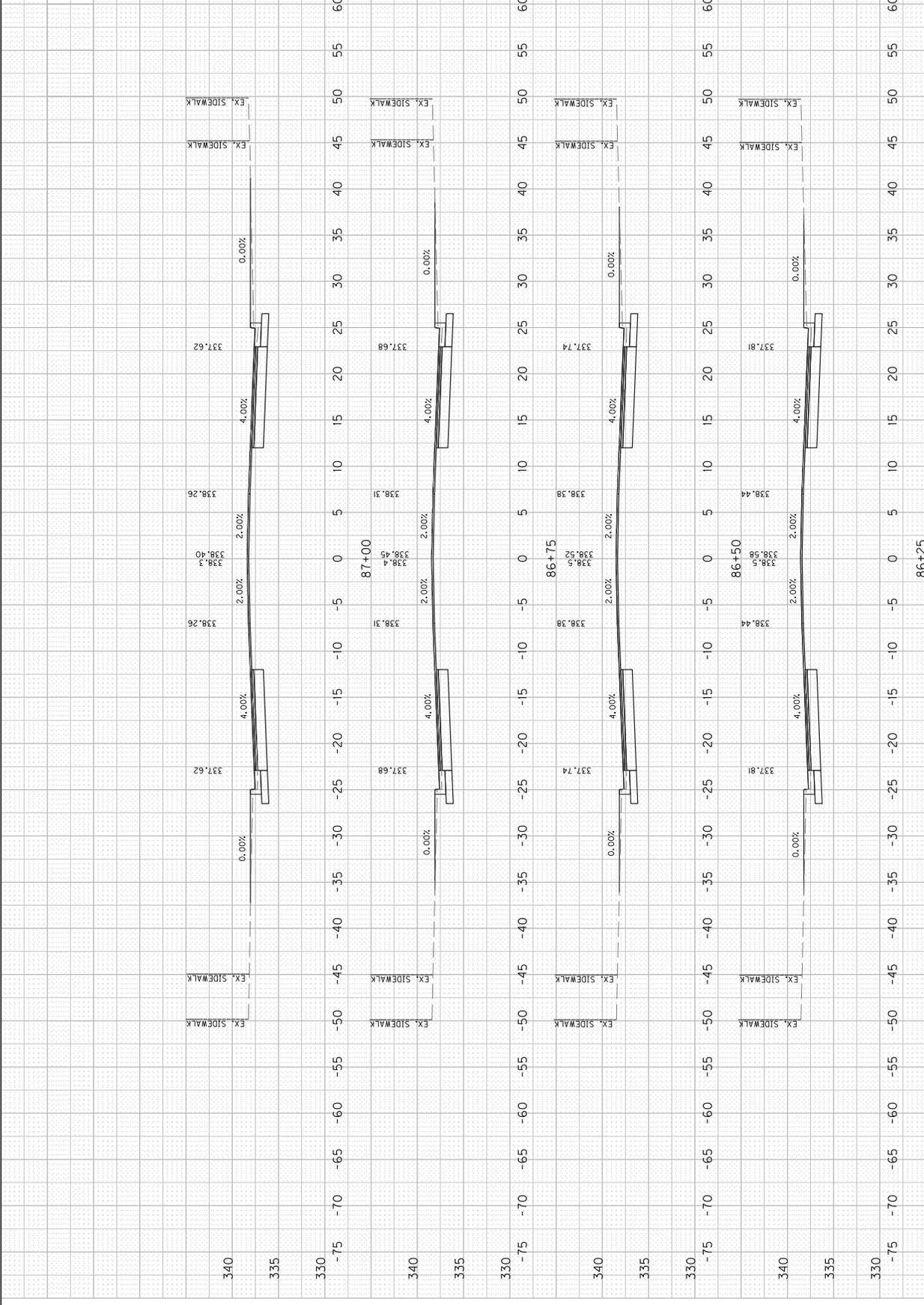
COUNTY OF MCCRACKEN	ITEM NO. I-20019.00	SHEET NO. X12
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US 45
STA. 85+25 TO STA. 86+00
CROSS SECTIONS



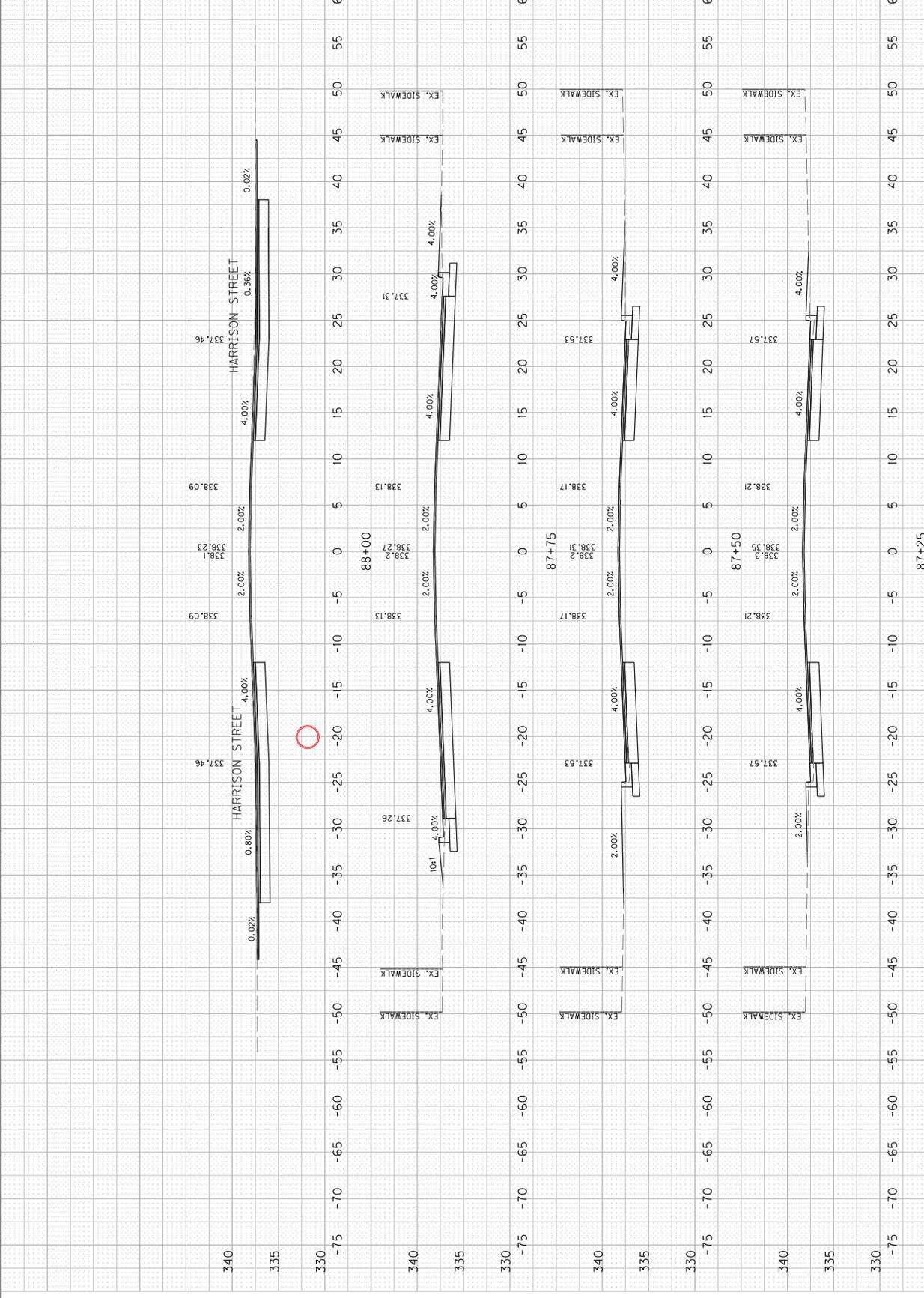
COUNTY OF MCCRACKEN	ITEM NO. I-20019.00	SHEET NO. X13
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US 45
STA. 86+25 TO STA. 87+00
CROSS SECTIONS



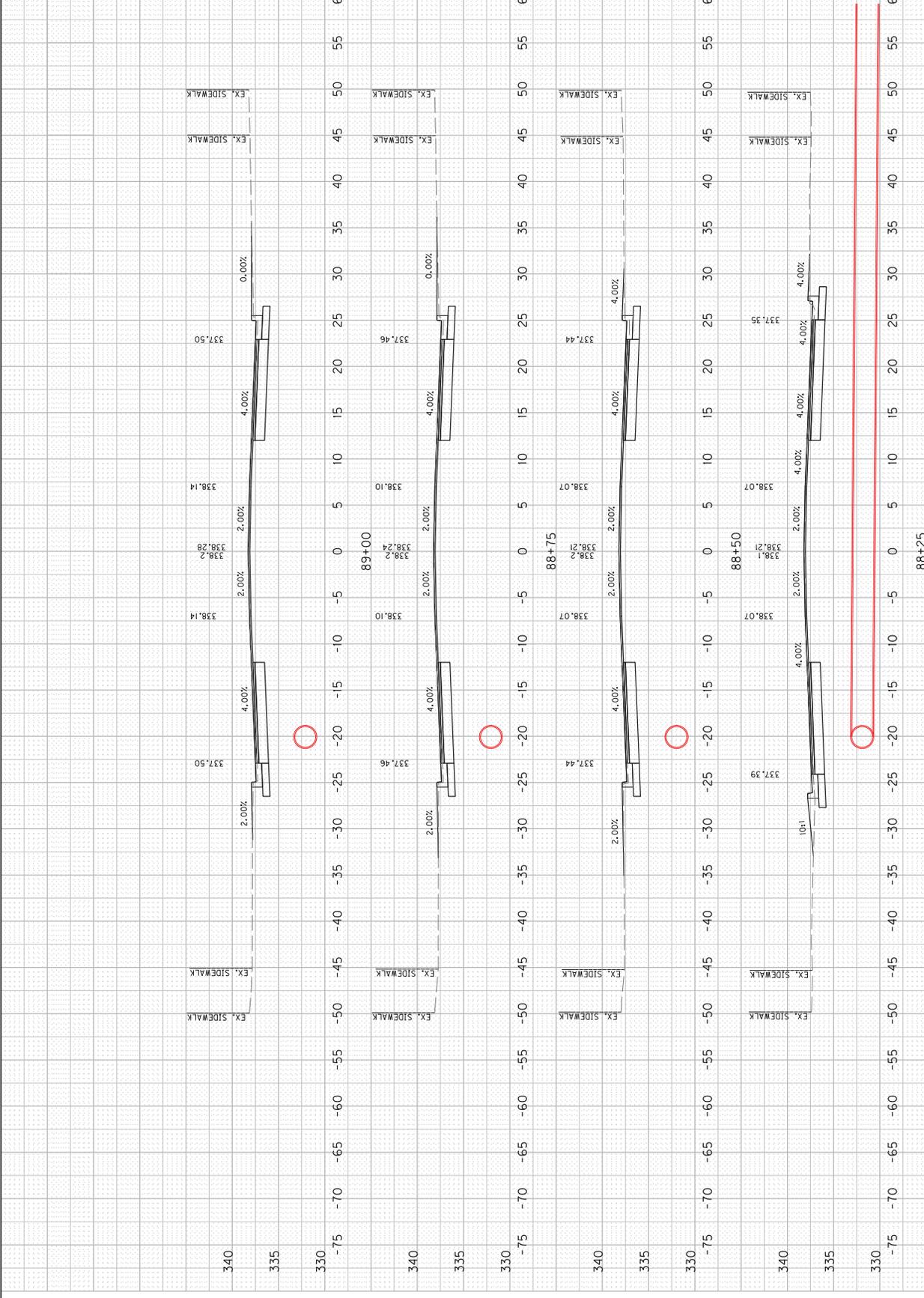
COUNTY OF	ITEM NO.	SHEET NO.
MCCRACKEN	I-20019.00	X14



US 45
STA. 87+25 TO STA. 88+00
CROSS SECTIONS

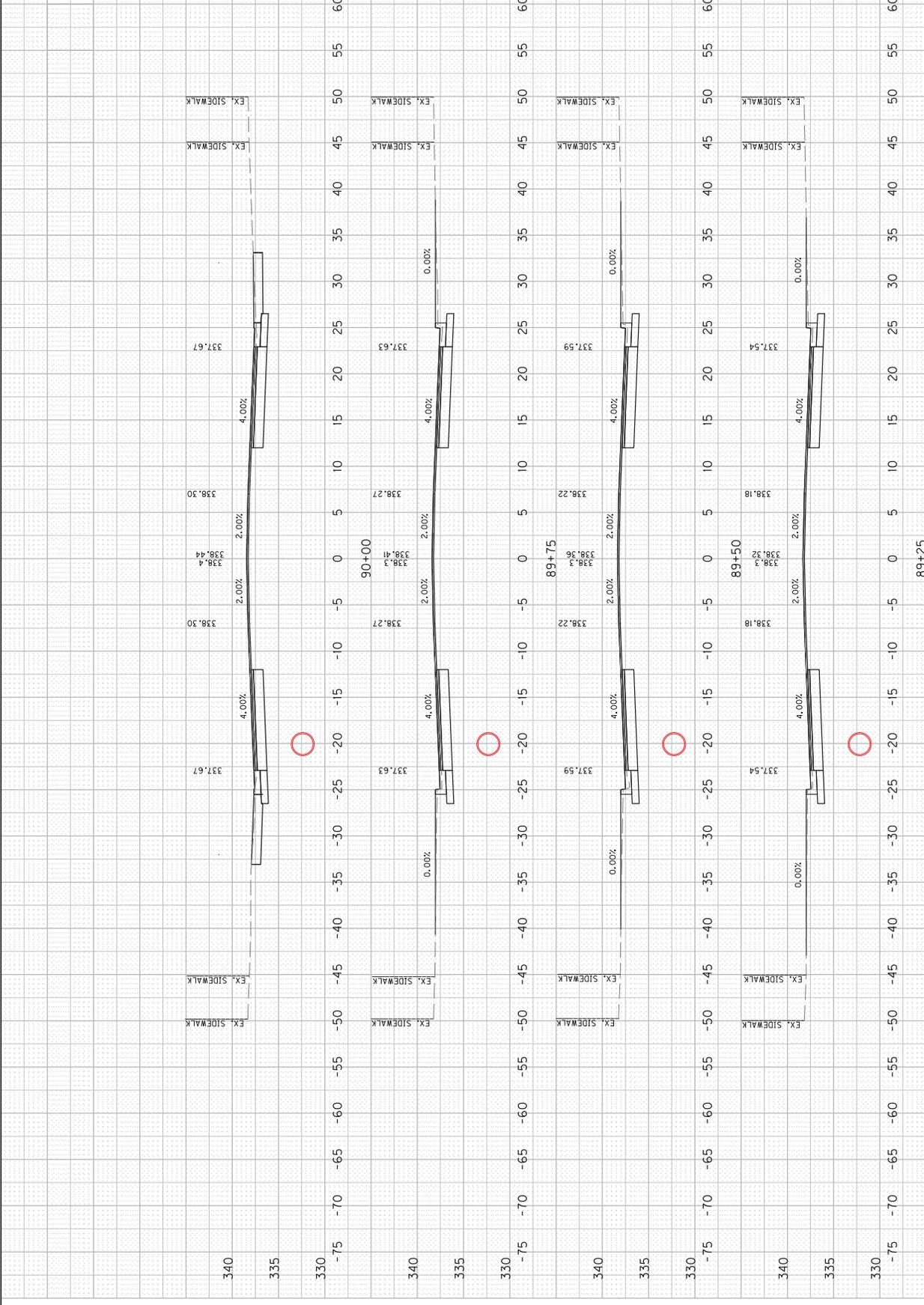


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MCCRACKEN	I-20019.00	X15



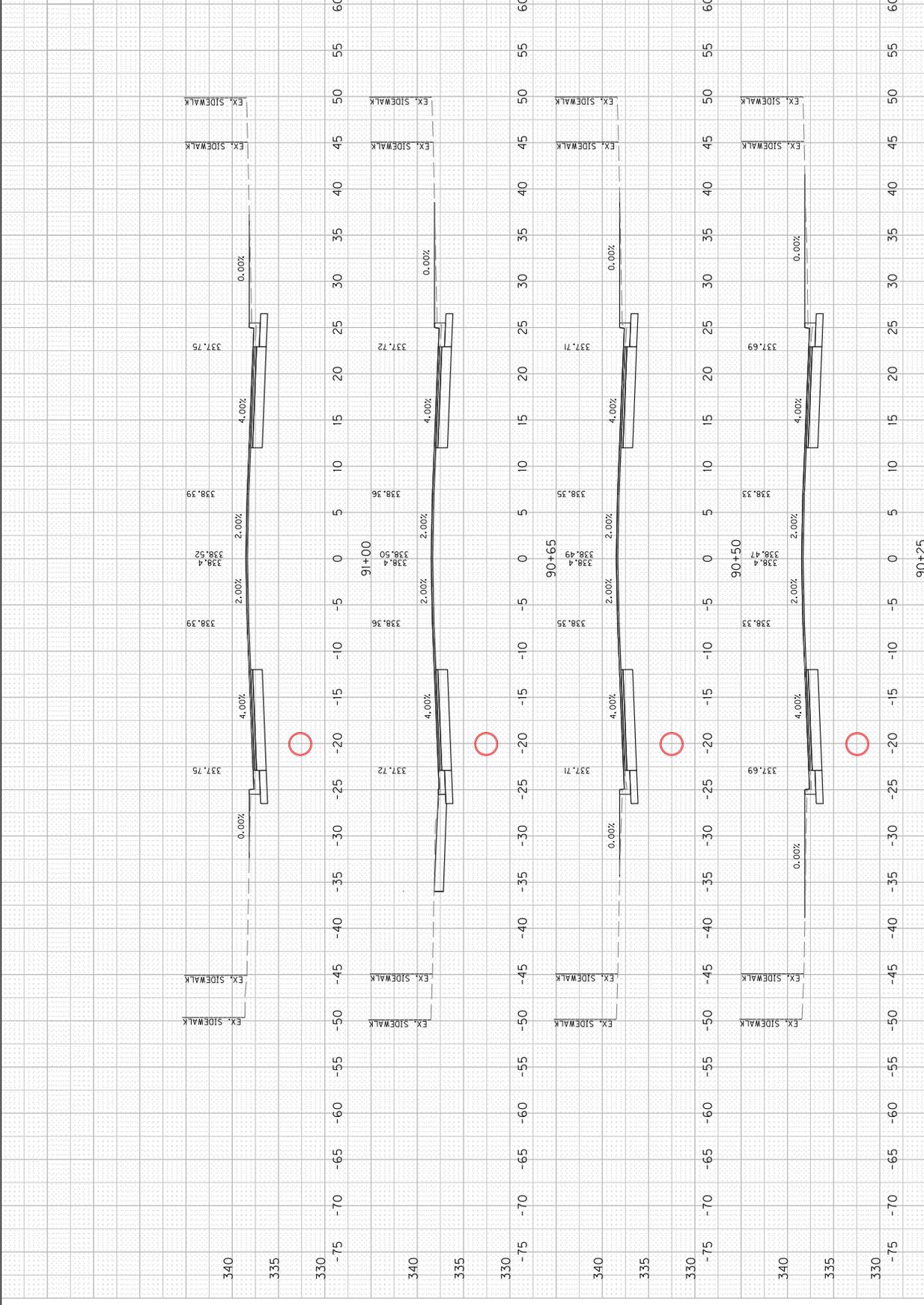
US 45
STA. 88+25 TO STA. 89+00
CROSS SECTIONS

COUNTY OF MCCRACKEN	ITEM NO. I-20019.00	SHEET NO. X16
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US 45
STA. 89+25 TO STA. 90+00
CROSS SECTIONS

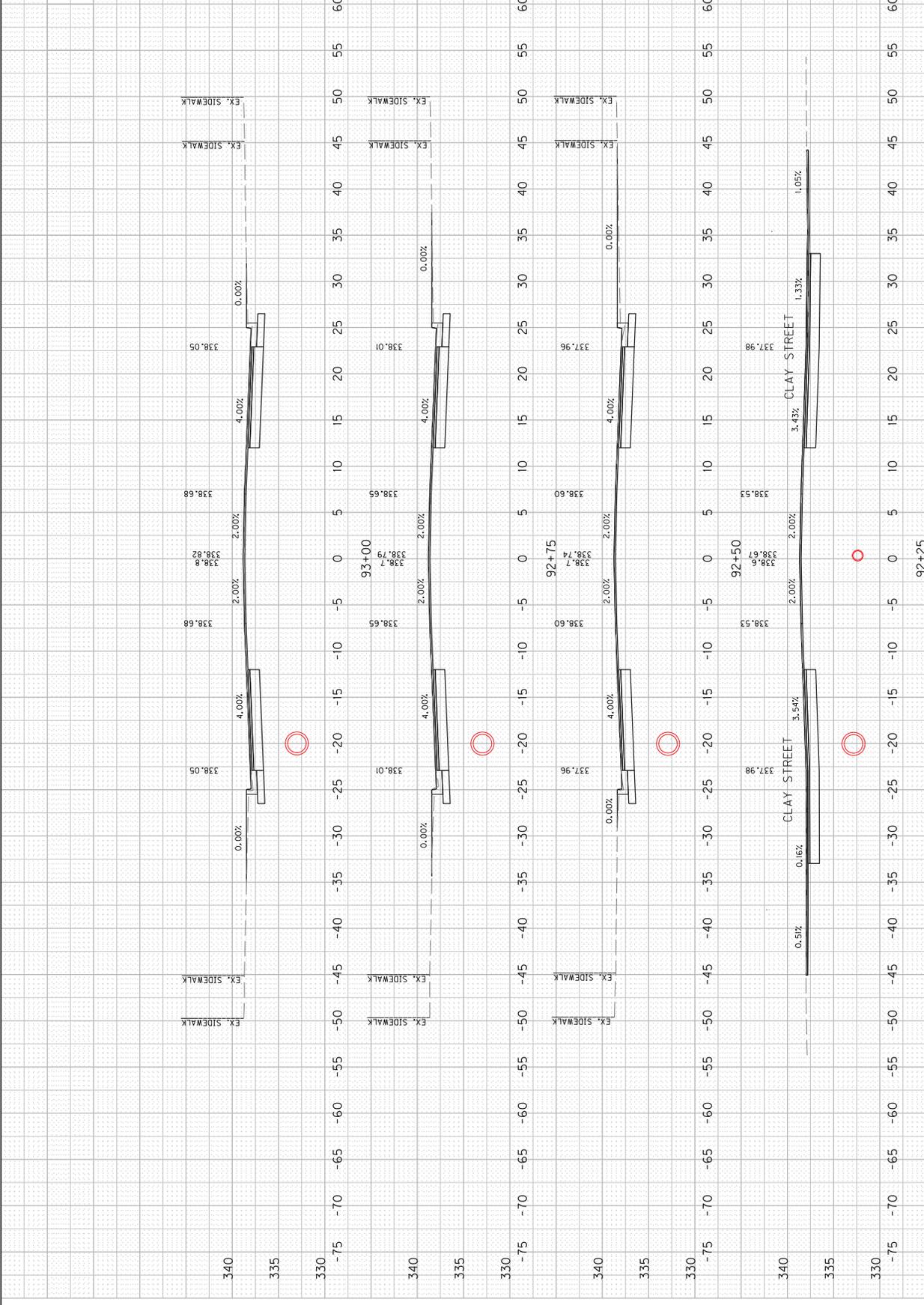
COUNTY OF	ITEM NO.	SHEET NO.
MCCRACKEN	I-20019.00	X17



US 45
STA. 90+25 TO STA. 91+00
CROSS SECTIONS



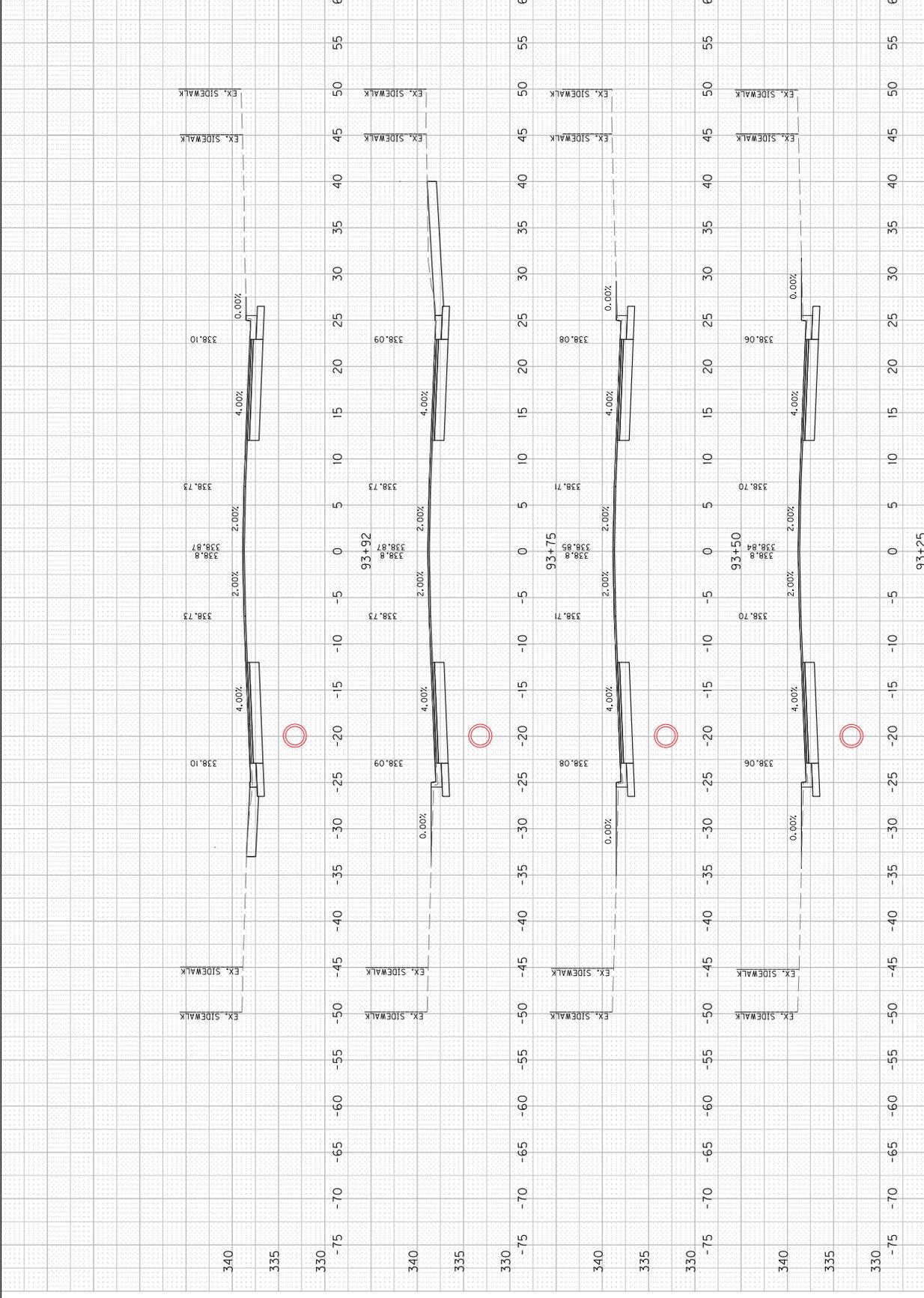
COUNTY OF MCCRACKEN	ITEM NO. I-20019.00	SHEET NO. X19
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US 45
STA. 92+25 TO STA. 93+00
CROSS SECTIONS



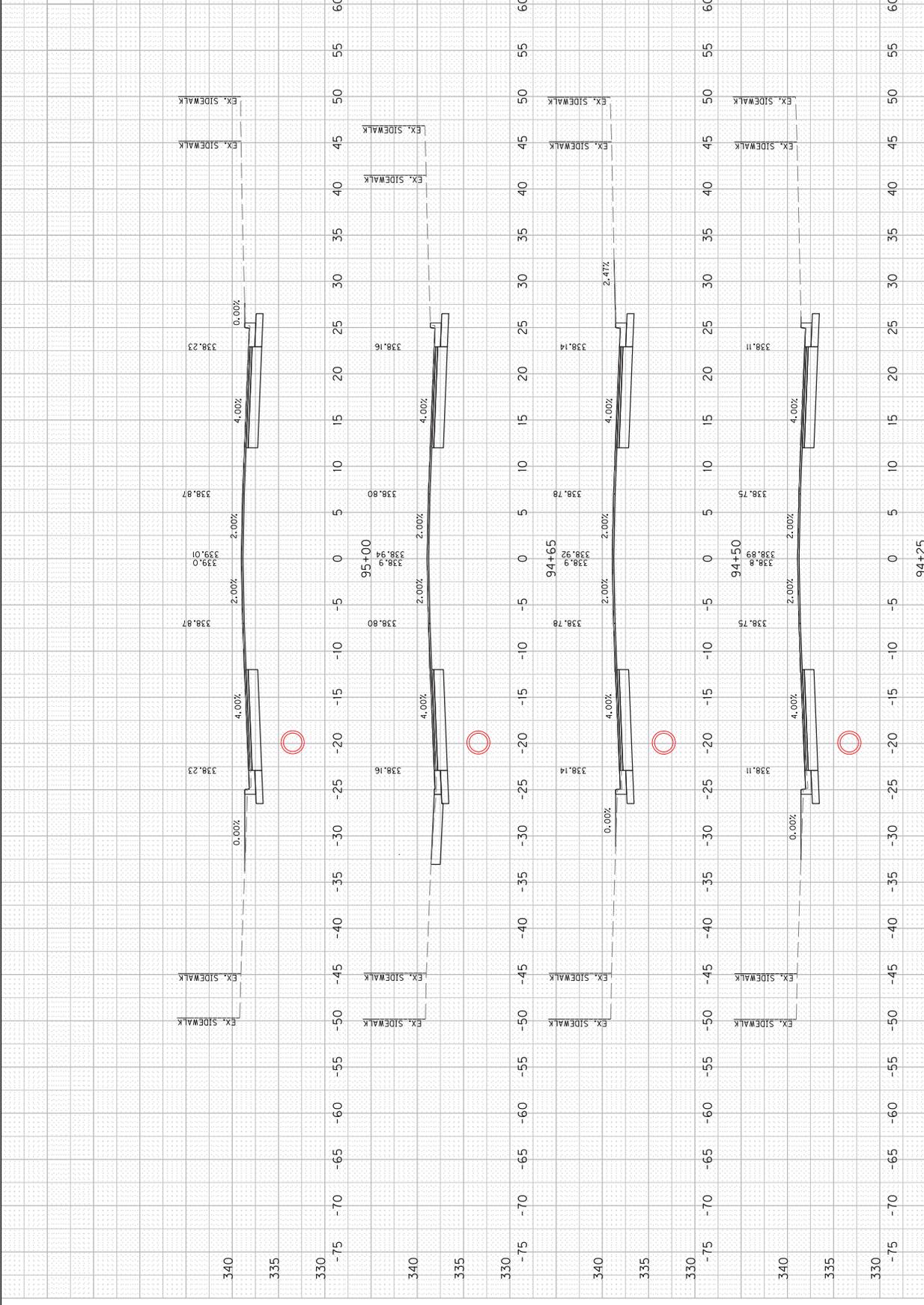
COUNTY OF	ITEM NO.	SHEET NO.
MCCRACKEN	I-20019.00	X20



US 45
STA. 93+25 TO STA. 93+92
CROSS SECTIONS

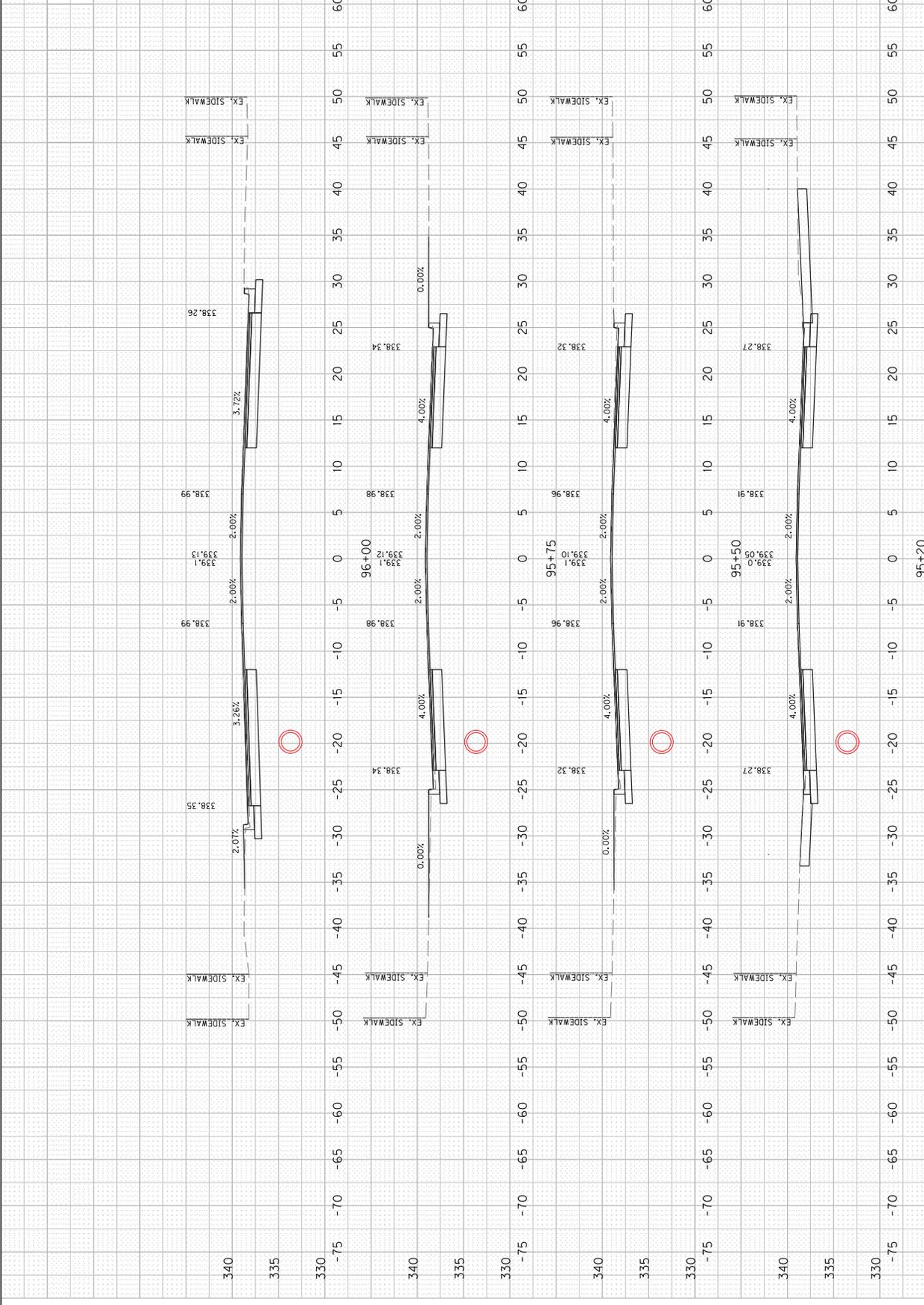


COUNTY OF	ITEM NO.	SHEET NO.
MCCRACKEN	I-20019.00	X21



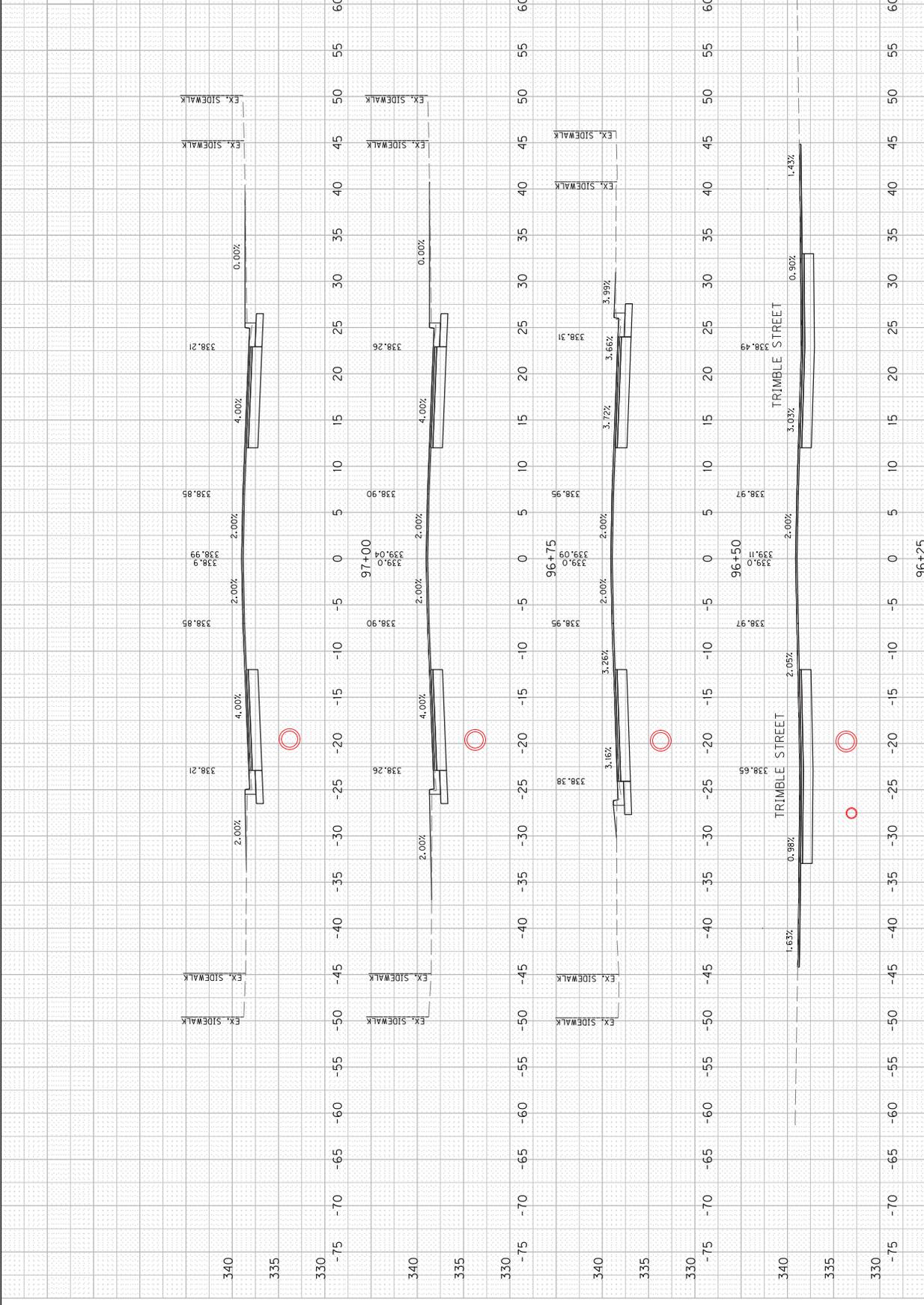
US 45
STA. 94+25 TO STA. 95+00
CROSS SECTIONS

COUNTY OF	ITEM NO.	SHEET NO.
MCCRACKEN	I-20019.00	X22



US 45
STA. 95+20 TO STA. 96+00
CROSS SECTIONS

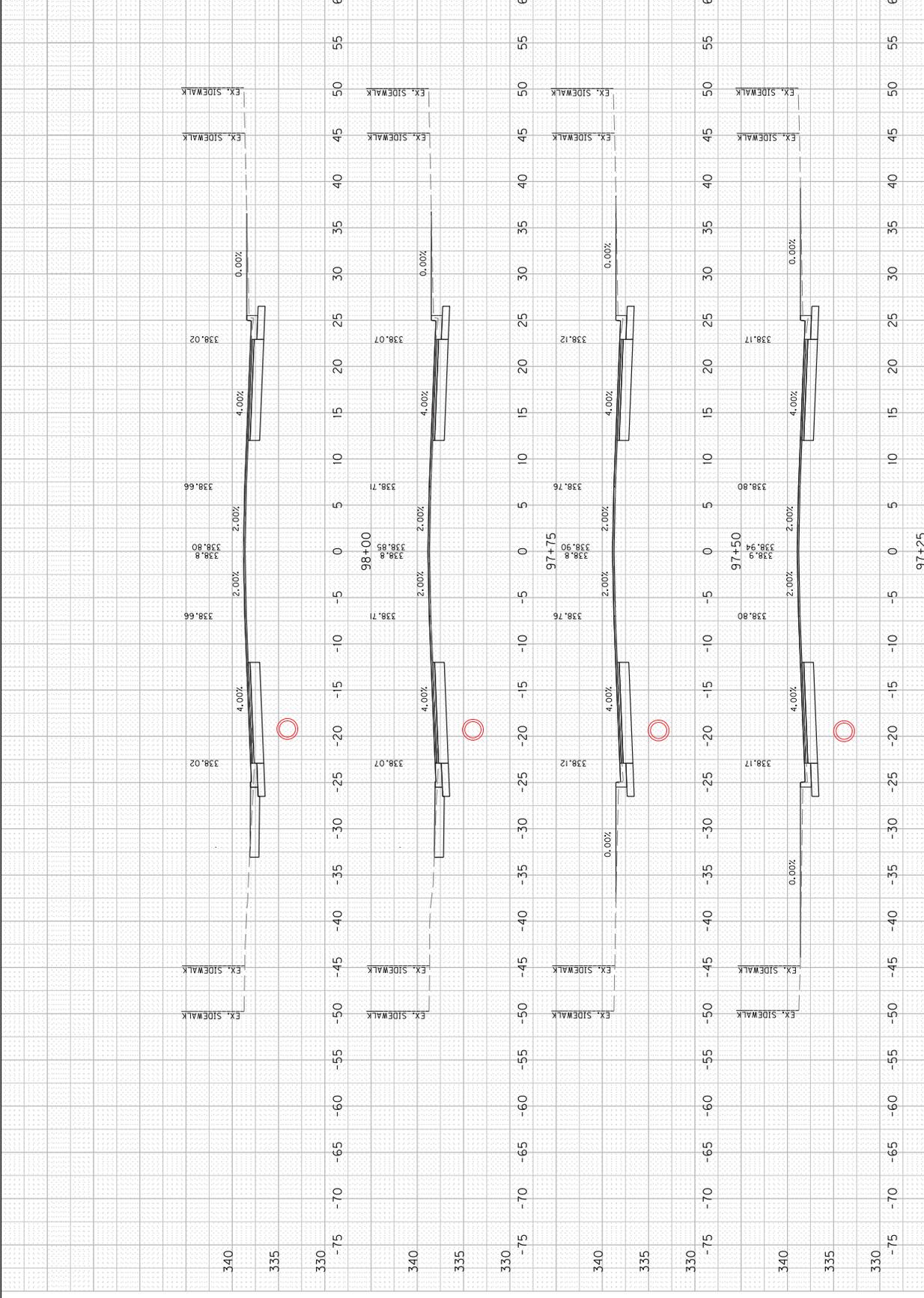
COUNTY OF	ITEM NO.	SHEET NO.
MCCRACKEN	I-20019.00	X23



US 45
STA. 96+25 TO STA. 97+00
CROSS SECTIONS



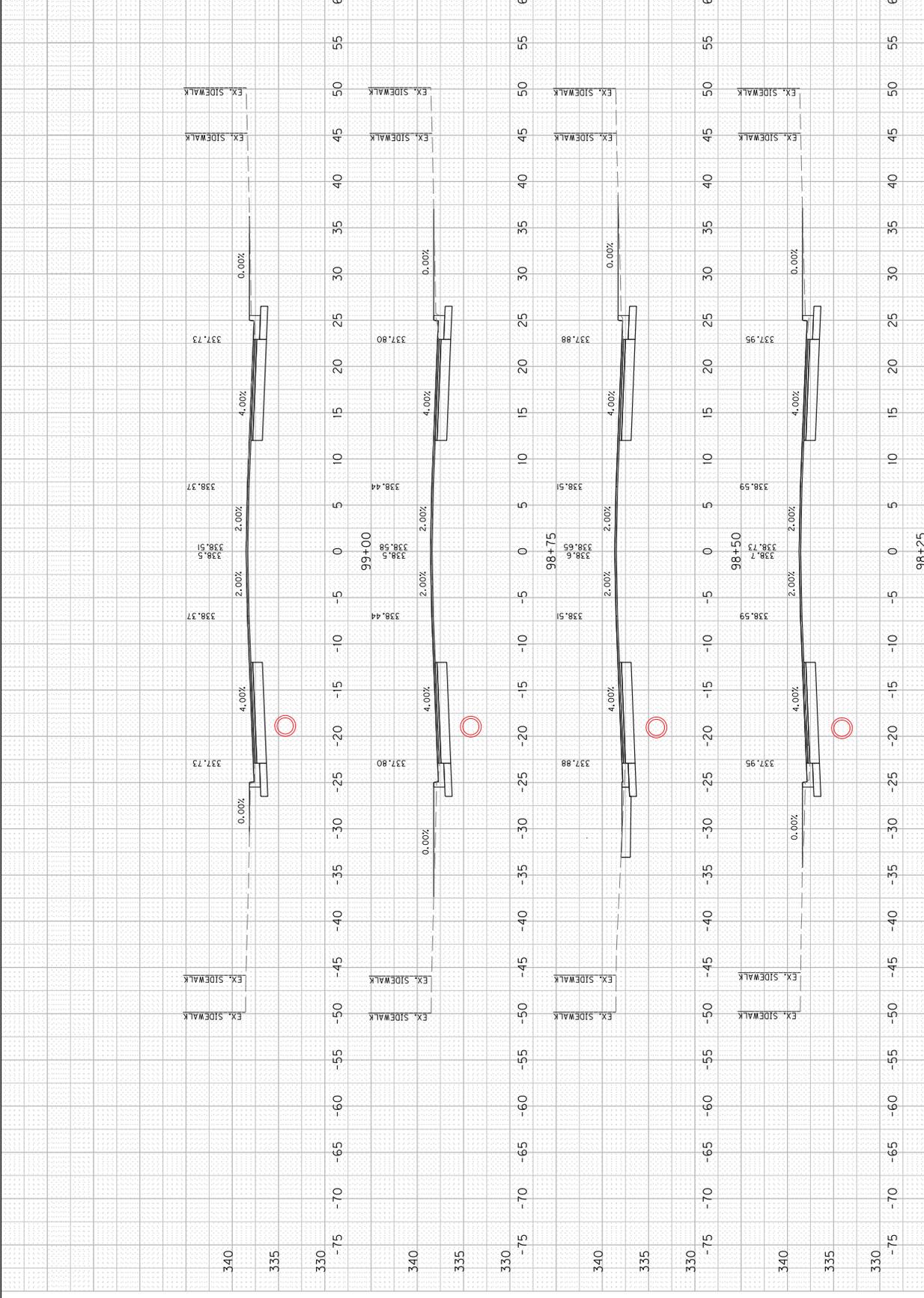
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MCCRACKEN	I-20019.00	X24



US 45
STA. 97+25 TO STA. 98+00
CROSS SECTIONS

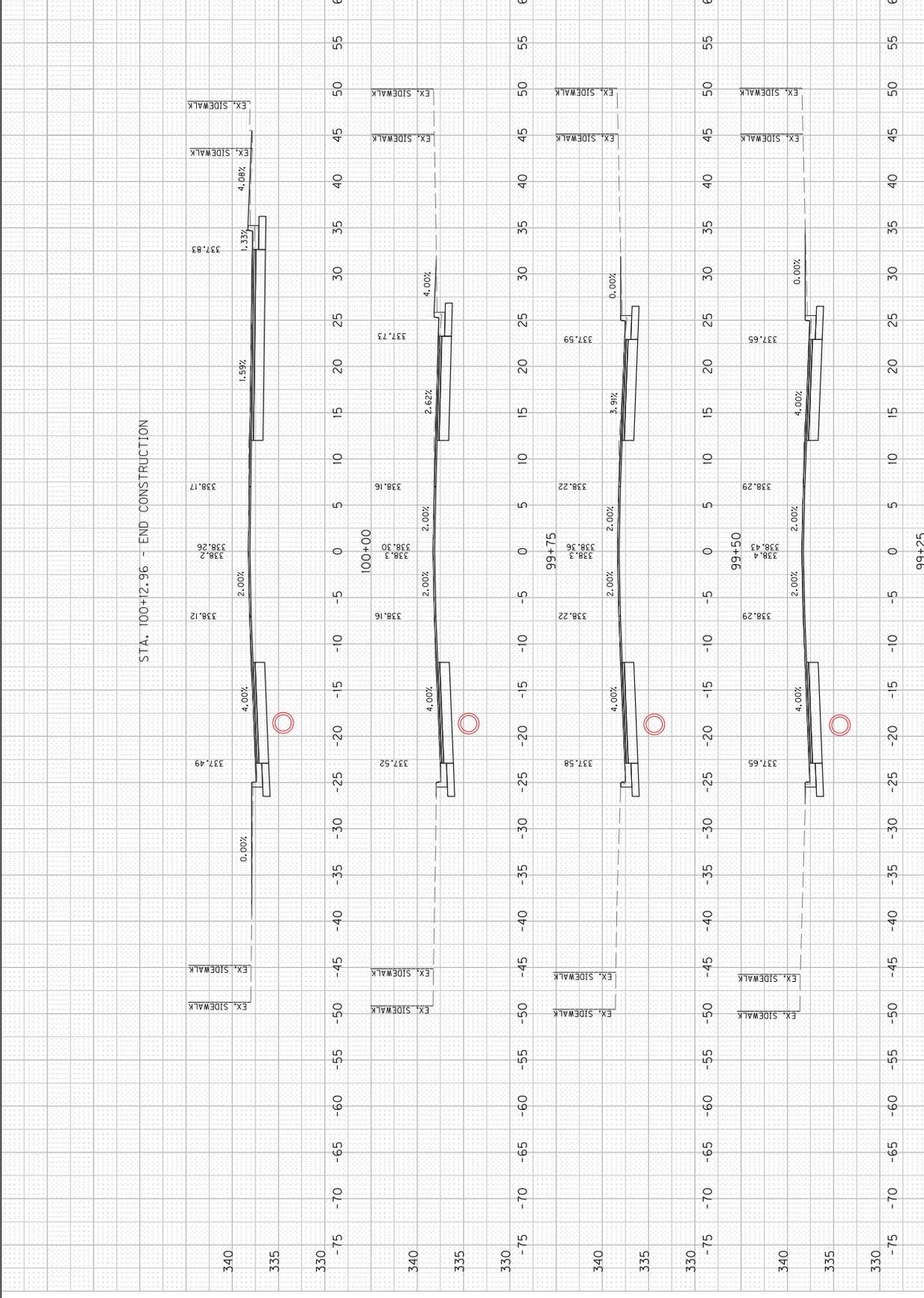


COUNTY OF MCCRACKEN	ITEM NO. I-20019.00	SHEET NO. X25
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US 45
STA. 98+25 TO STA. 99+00
CROSS SECTIONS

COUNTY OF MCCRACKEN	ITEM NO. I-20019.00	SHEET NO. X26
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US 45
STA. 99+25 TO STA. 100+00
CROSS SECTIONS



Earthwork Summary

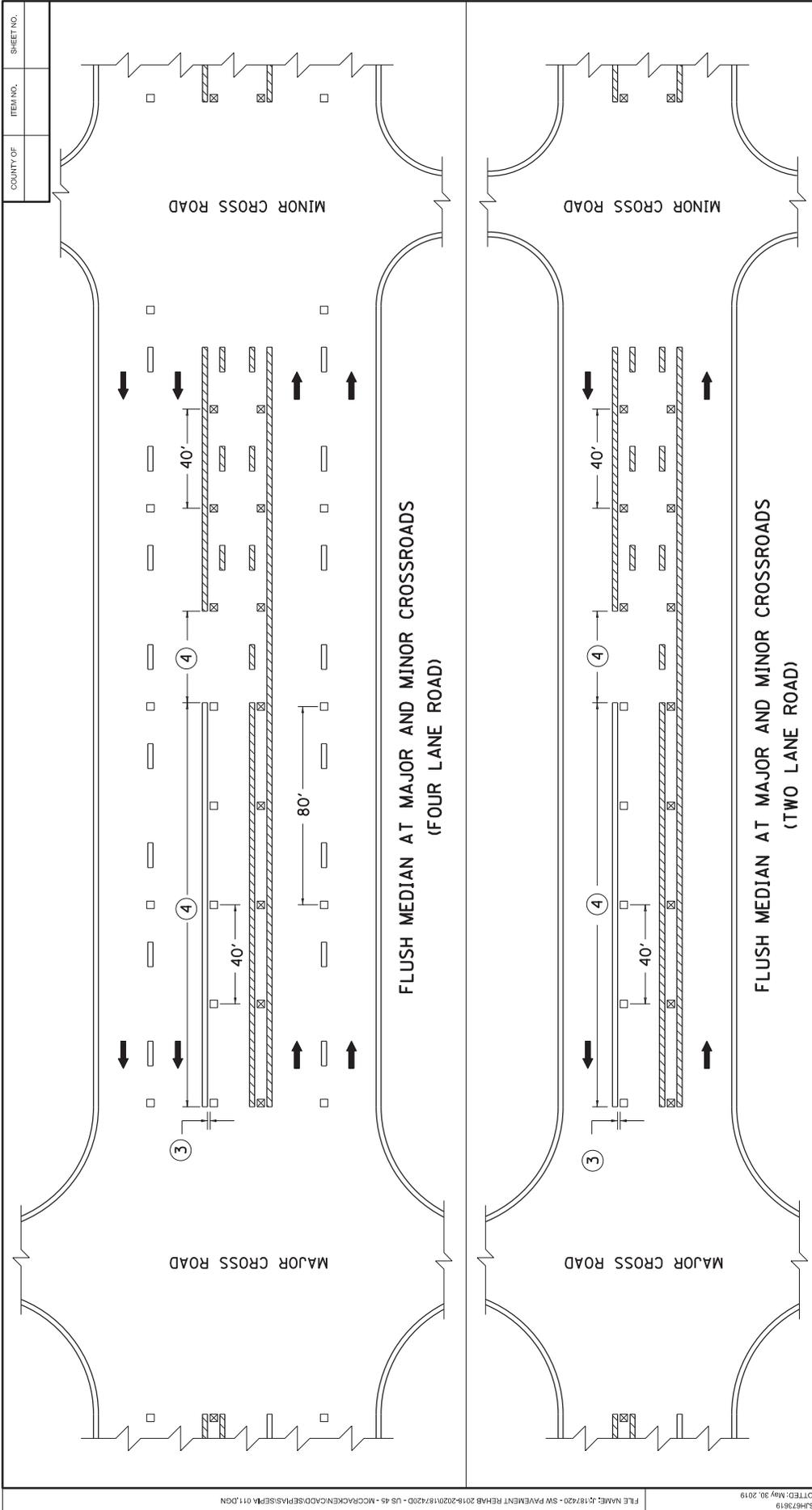
McCracken County - US 45 - Item No. 1-20019.00

Station	Excavation		Embankment	
	Area (SF)	Volume (CY)	Area (SF)	Volume (CY)
76+25.00	16.28	0.00	7.45	0.00
76+50.00	13.01	13.56	6.08	6.26
76+75.00	13.93	12.47	4.94	5.10
77+00.00	14.64	13.23	4.53	4.38
77+25.00	14.79	13.62	4.96	4.40
77+50.00	15.32	13.94	4.91	4.57
77+75.00	20.43	16.55	2.62	3.49
78+00.00	16.25	16.98	3.42	2.80
78+25.00	16.48	15.15	3.60	3.25
78+50.00	16.45	15.25	3.25	3.17
78+61.95	23.91	8.93	2.71	1.32
78+75.00	16.32	9.72	3.25	1.44
79+00.00	15.65	14.80	5.05	3.84
79+25.00	14.36	13.90	4.19	4.28
79+50.00	20.64	16.20	0.27	2.06
79+75.00	11.80	15.02	0.66	0.43
80+00.00	19.75	14.61	3.71	2.02
80+25.00	16.09	16.59	3.10	3.15
80+50.00	15.48	14.62	4.16	3.36
80+75.00	15.57	14.38	4.10	3.82
81+00.00	15.49	14.38	3.61	3.57
81+25.00	16.20	14.67	3.80	3.43
81+50.00	16.00	14.91	4.17	3.69
81+75.00	15.22	14.45	7.10	5.22
82+00.00	21.46	16.98	1.99	4.21
82+25.00	14.95	16.86	7.27	4.29
82+50.00	14.55	13.66	8.23	7.18
82+61.48	18.25	6.97	2.14	2.20
82+75.00	12.89	7.80	6.87	2.26
83+00.00	12.34	11.68	4.21	5.13
83+25.00	11.89	11.22	3.95	3.78
83+50.00	13.87	11.92	4.66	3.99
83+75.00	12.31	12.12	1.94	3.05
84+00.00	23.27	16.48	0.00	0.90
84+25.00	15.92	18.14	3.23	1.50
84+50.00	15.55	14.57	3.44	3.09
84+75.00	16.13	14.67	2.53	2.76
85+00.00	16.04	14.90	2.54	2.34
85+25.00	16.54	15.08	2.61	2.38
85+50.00	15.09	14.64	3.18	2.68
85+75.00	15.34	14.09	3.47	3.08
86+00.00	15.35	14.21	3.11	3.04
86+25.00	14.86	13.98	3.12	2.88
86+50.00	14.85	13.75	3.31	2.98
86+75.00	15.72	14.15	3.36	3.09
87+00.00	15.30	14.36	4.13	3.47
87+25.00	13.96	13.55	2.55	3.10
87+50.00	12.03	12.03	4.56	3.29
87+75.00	19.56	14.62	3.12	3.56
88+00.00	13.06	15.10	0.33	1.60

Earthwork Summary

McCracken County - US 45 - Item No. 1-20019.00

Station	Excavation		Embankment	
	Area (SF)	Volume (CY)	Area (SF)	Volume (CY)
88+25.00	16.89	13.87	2.82	1.46
88+50.00	16.84	15.62	1.34	1.93
88+75.00	17.57	15.93	1.80	1.46
89+00.00	17.10	16.05	1.48	1.52
89+25.00	16.58	15.59	2.39	1.79
89+50.00	15.72	14.95	3.29	2.63
89+75.00	15.51	14.46	3.24	3.02
90+00.00	28.35	20.30	0.00	1.50
90+25.00	15.40	20.26	4.37	2.02
90+50.00	15.83	14.46	3.13	3.47
90+65.00	26.37	11.72	1.82	1.37
91+00.00	17.54	28.46	2.03	2.50
91+25.00	17.76	16.35	2.00	1.87
91+50.00	18.02	16.57	1.45	1.60
91+75.00	17.72	16.55	1.61	1.42
92+00.00	9.36	12.53	1.68	1.52
92+25.00	10.07	8.99	1.64	1.54
92+50.00	19.65	13.76	3.29	2.28
92+75.00	19.11	17.95	1.85	2.38
93+00.00	18.52	17.43	1.42	1.51
93+25.00	19.21	17.47	1.33	1.28
93+50.00	19.60	17.97	1.37	1.25
93+75.00	36.67	26.05	1.16	1.17
93+92.00	27.18	20.10	0.07	0.39
94+25.00	22.58	30.41	0.89	0.59
94+50.00	21.43	20.38	0.52	0.65
94+65.00	28.60	13.90	0.00	0.15
95+00.00	19.61	31.24	1.30	0.84
95+20.00	43.48	23.37	0.00	0.48
95+50.00	22.48	36.64	1.15	0.64
95+75.00	20.46	19.88	1.67	1.31
96+00.00	21.69	19.51	0.49	1.00
96+25.00	11.29	15.27	1.14	0.75
96+50.00	17.72	13.43	1.05	1.02
96+75.00	17.53	16.32	3.07	1.91
97+00.00	16.79	15.89	2.61	2.63
97+25.00	15.32	14.87	4.00	3.06
97+50.00	14.36	13.74	3.39	3.42
97+75.00	20.43	16.11	1.32	2.18
98+00.00	21.14	19.25	1.41	1.26
98+25.00	14.91	16.69	3.27	2.17
98+50.00	21.24	16.74	2.23	2.55
98+75.00	16.95	17.68	3.22	2.52
99+00.00	18.44	16.39	1.32	2.10
99+25.00	20.00	17.80	1.11	1.13
99+50.00	23.64	20.21	0.50	0.75
99+75.00	21.97	21.12	0.97	0.68
100+00.00	24.05	21.31	2.37	1.55
Grand Total:		1556.93		239.02



~ NOTES ~

1. MARKERS INSTALLED AT DOUBLE YELLOW CENTERLINES SHALL BE PLACED BETWEEN THE TWO LINES.
2. MARKERS INSTALLED ALONG LANE LINES OR DASHED YELLOW CENTERLINES SHALL BE PLACED BETWEEN AND IN LINE WITH THE SKIPS.
3. MARKERS INSTALLED ALONG EDGE LINES SHALL BE PLACED SO THAT THE NEAR EDGE OF THE CASTING/GROOVE IS NO MORE THAN 1" FROM THE NEAR EDGE OF THE LINE.
4. LENGTH TO BE DETERMINED ON A PROJECT BY PROJECT BASIS.
5. MARKERS SHALL NOT BE INSTALLED ON TOP OF THE PAVEMENT JOINT. OFFSET MARKERS A MINIMUM OF 2" FROM THE PAVEMENT JOINT. ENSURE THAT THE FINISHED LINE OF MARKERS IS STRAIGHT WITH MINIMAL LATERAL DEVIATION. MARKERS MAY BE ELIMINATED OR PLACEMENT ADJUSTED AT THE DISCRETION OF THE ENGINEER.

EACH
EACH

BID ITEMS AND UNIT TO BID
PAVEMENT MARKER TYPE V (B-W/R, B-Y/R, BY, MW, MY)
INLAID PAVEMENT MARKER

LEGEND

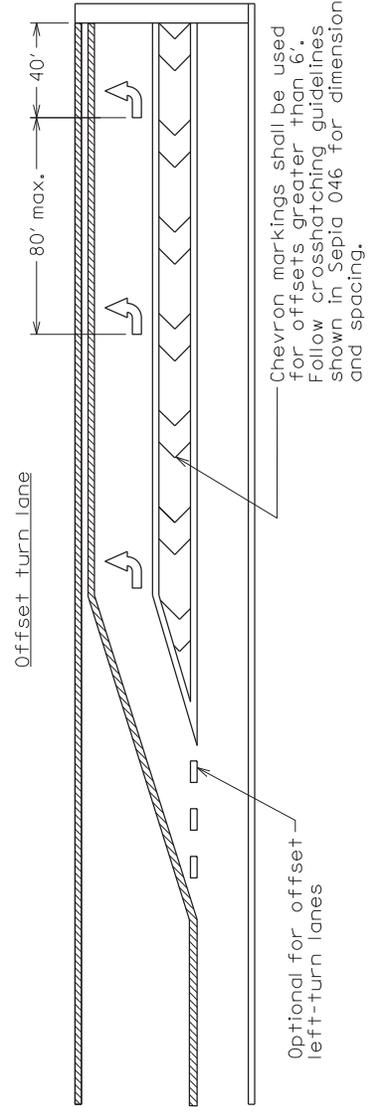
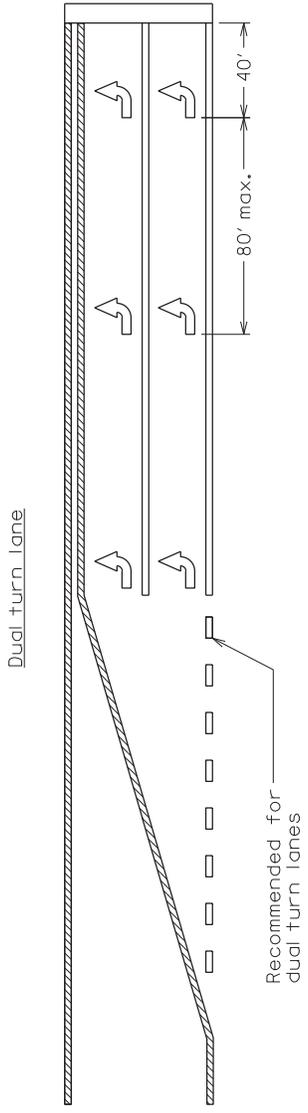
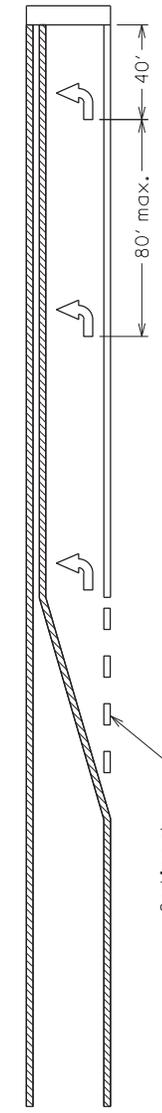
- ☒ BI-DIRECTIONAL (YELLOW)
- MONO-DIRECTIONAL (WHITE)
- ▨ MARKINGS (YELLOW)
- ▭ MARKINGS (WHITE)

DRAWING NOT TO SCALE

KENTUCKY DEPARTMENT OF HIGHWAYS	PAVEMENT MARKER ARRANGEMENTS TWO-WAY, LEFT TURN LANE
SUBMITTED: <i>R. Goff</i>	DATE: 1-30-17
	011

USER: USJSH67819 DATE PLOTTED: May 30, 2019 FILE NAME: J:\17420 - SW PAVEMENT REHAB 2015-2020\187420D - US 45 - MCCRACKEN\CADD\SEPARS\PL 011.DGN
 PowerRoads v8.11.9.287 E-SHEET NAME:

COUNTY OF	ITEM NO.	SHEET NO.

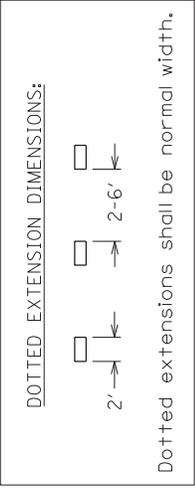


STRIPING NOTES:

- ARROWS SHALL BE USED IN ANY EXCLUSIVE TURN LANES.
- IN A SINGLE TURN LANE, DOTTED WHITE LANE LINE EXTENSIONS MAY BE USED THROUGH THE TAPER OF THE TURN LANE.
- IF USED, DOTTED WHITE LANE LINE EXTENSIONS SHALL BE NORMAL WIDTH, AND SHOULD BE 2' LONG, WITH A GAP OF 2-6' BETWEEN EACH LINE.
- IN DUAL TURN LANES, DOTTED WHITE LANE LINE EXTENSIONS SHOULD BE USED THROUGH THE TAPER OF THE TURN LANE. BOTH SOLID LINES FORMING THE TURN LANES SHALL BEGIN AT THE DOWNSTREAM END OF THE TAPER.

ARROW SPACING NOTES:

- IN SINGLE-DIRECTION TURN LANES, ARROWS SHOULD BE SPACED AS FOLLOWS:
- AT LEAST TWO ARROWS SHOULD BE USED IN EACH TURN LANE. HOWEVER, IF A TURN LANE IS LESS THAN 80' IN LENGTH, THE DOWNSTREAM ARROW MAY BE ELIMINATED.
- THE FIRST UPSTREAM ARROW SHALL BE PLACED AT THE BEGINNING OF THE SOLID LINE FOR THE TURN LANE.
- THE LAST DOWNSTREAM ARROW SHOULD BE PLACED 40' FROM THE STOP BAR.
- ANY ADDITIONAL ARROWS SHOULD BE EVENLY SPACED. SPACING SHOULD NOT EXCEED 80'.
- ARROW SPACING AND NUMBER OF ARROWS MAY VARY BASED ON SITE CONDITIONS.



Page 1 of 2

KENTUCKY DEPARTMENT OF HIGHWAYS

TYPICAL MARKINGS FOR TURN LANES

SUBMITTED: *R. Gibson Wolf* DATE: 11-30-18 042

DRAWING NOT TO SCALE

LEGEND

MARKINGS	WHITE
	YELLOW

Chevron markings shall be used for offsets greater than 6'. Follow crosshatching guidelines shown in Sepia 046 for dimensions and spacing.

COUNTY OF	ITEM NO.	SHEET NO.

LANE DROP MARKINGS NOTES:

IN SITUATIONS WHERE A THROUGH LANE BECOMES A MANDATORY TURN LANE, THE FOLLOWING GUIDELINES APPLY:
 -A WIDE SOLID LINE SHOULD EXTEND BACK A MINIMUM OF 200' FROM THE STOP BAR.
 -A WIDE, DOTTED LINE SHALL EXTEND FROM THE END OF THE SOLID LINE BACK A MINIMUM OF THE DISTANCE SHOWN IN THE CHART (A). THESE LINES SHALL BE 3' LONG, WITH A SPACE OF 9' BETWEEN LINES.
 -ALTERNATING ARROWS AND "ONLY" WORD MESSAGES SHALL BE USED, WITH THE FIRST AND LAST MARKING BEING AN ARROW.
 -ALTERNATING ARROWS AND "ONLY" WORD MESSAGES SHOULD BE SPACED EVENLY, FOLLOWING GUIDELINES FOR ARROW SPACING. THESE SYMBOLS SHALL EXTEND BACK AT LEAST TO THE END OF THE SOLID STRIPE, BUT MAY BE EXTENDED BACK FARTHER IF ADDITIONAL GUIDANCE IS NEEDED.

TWO-WAY LEFT-TURN LANE NOTES:

IN A TWO-WAY LEFT-TURN LANE, THE FOLLOWING GUIDELINES APPLY:
 -ONE SET OF ARROWS SHOULD BE PLACED AT OR NEAR THE BEGINNING OF THE TWO-WAY LEFT-TURN LANE.
 -ADDITIONAL SETS OF ARROWS SHOULD BE PLACED THROUGHOUT THE TWO-WAY LEFT-TURN LANE IF LEFT TURN MOVEMENTS ARE EXPECTED. THEY SHOULD BE SPACED NO LESS THAN 300' AND NO MORE THAN 1/2 MILE.
 -THE SPACING BETWEEN EACH ARROW IN A SINGLE ARROW SET SHOULD BE 16 FEET.
 -TWO-WAY LEFT-TURN LANES SHALL TERMINATE IN A DEDICATED LEFT-TURN LANE AT A SIGNALIZED INTERSECTION. THEY MAY TERMINATE IN A DEDICATED LEFT-TURN LANE AT OTHER LOCATIONS IF DEEMED NECESSARY.
 -CONTACT TRAFFIC ENGINEER FOR RECOMMENDED DISTANCE FOR LEFT TURN STORAGE AT INTERSECTIONS.
 -REFER TO THE TRAFFIC OPERATIONS GUIDANCE MANUAL SECTION TO-504 FOR MORE GUIDANCE ON TWO-WAY LEFT-TURN LANES.

Page 2 of 2

KENTUCKY
DEPARTMENT OF HIGHWAYS

TYPICAL MARKINGS FOR TURN LANES

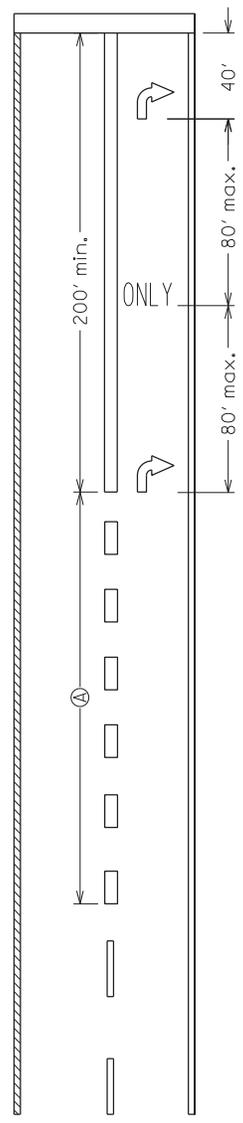
SUBMITTED: *R. Gibson Wolf* DATE: 4-22-19 **043**

DRAWING NOT TO SCALE

LEGEND

	WHITE
	YELLOW

Lane drop scenario



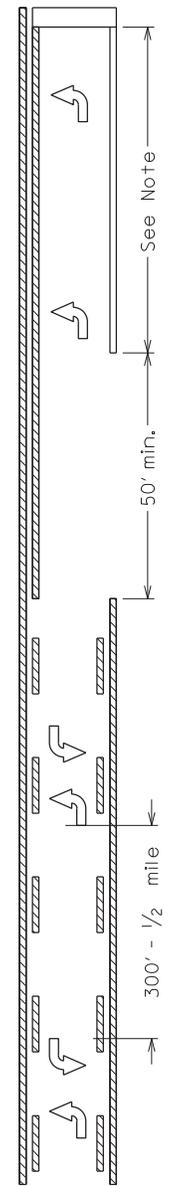
Speed Limit	(A)
25	125'
35	245'
45	540'
55	660'
65	780'

WIDE DOTTED LANE LINE DIMENSIONS:

3' → → 9' →

Dotted lane lines shall be twice the normal width in lane drop scenarios.

Two-way left-turn lane

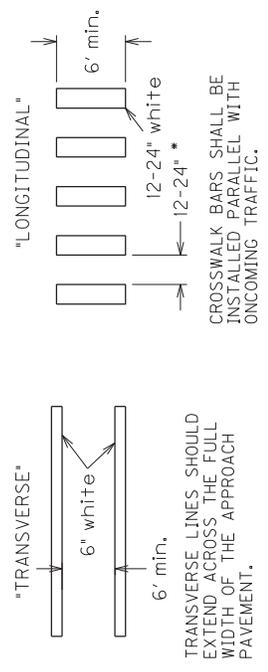


TWTL ARROW DETAILS:

The diagram shows a close-up of arrow details. The spacing between arrows is 16'.

COUNTY OF	ITEM NO.	SHEET NO.
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CROSSWALK DETAIL



CROSSWALK BARS SHALL BE INSTALLED PARALLEL WITH ONCOMING TRAFFIC.

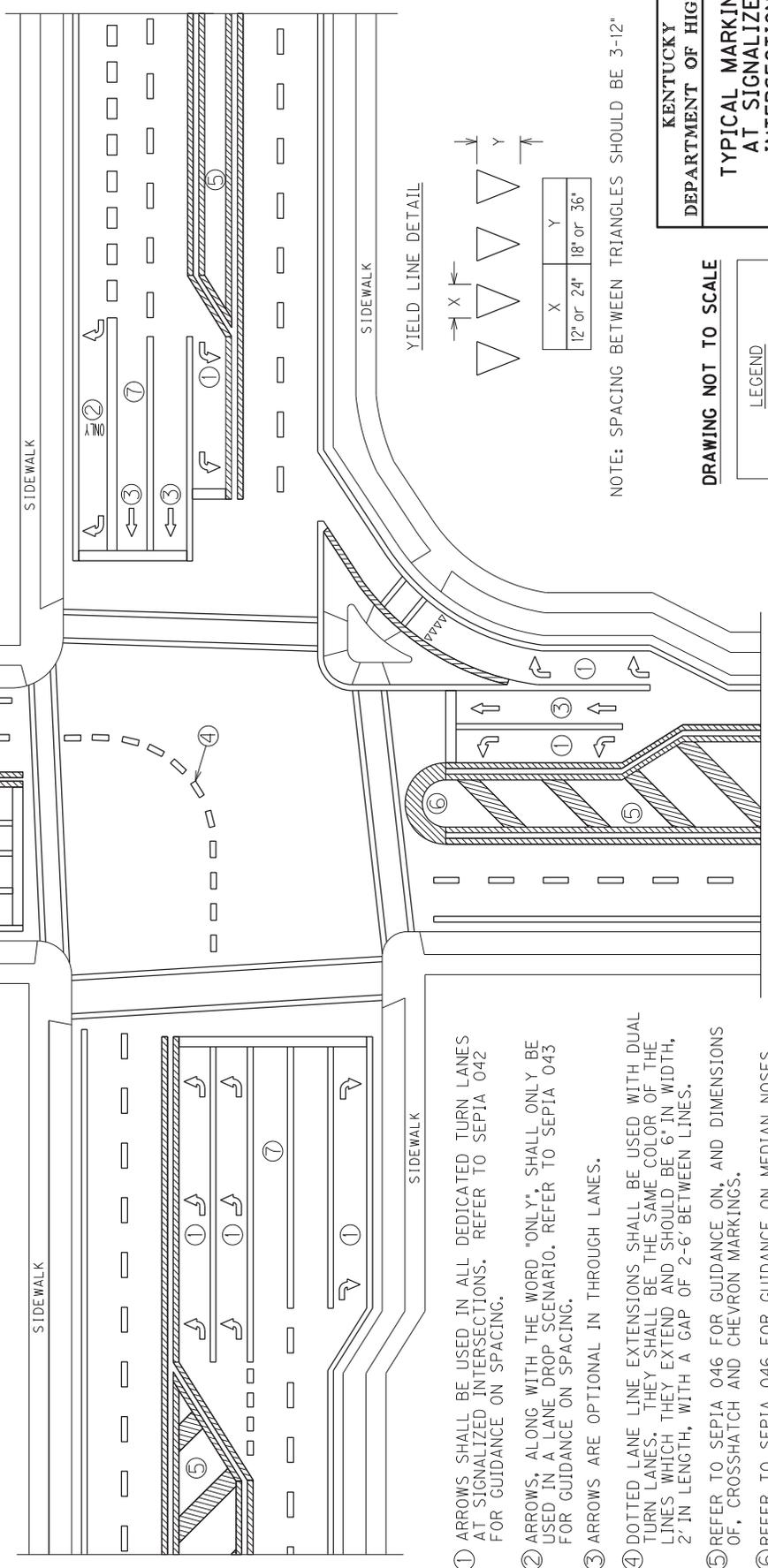
*SPACING OF BARS SHOULD BE MODIFIED SO AS TO AVOID TIRE PATHS OF APPROACHING VEHICLES.

TRANSVERSE LINES SHOULD EXTEND ACROSS THE FULL WIDTH OF THE APPROACH PAVEMENT.

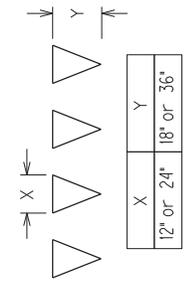
TRANSVERSE LINES MAY BE COMBINED WITH LONGITUDINAL LINES TO FORM A "LADDER-STYLE" CROSSWALK.

STOP LINE NOTES

1. STOP LINES SHALL BE 24" WHITE AND SHALL EXTEND ACROSS ALL APPROACH LANES.
2. STOP LINES SHOULD BE PLACED A MINIMUM OF 4' IN ADVANCE OF THE NEAREST EDGE OF A MARKED CROSSWALK. IN THE ABSENCE OF A MARKED CROSSWALK, STOP LINES SHOULD BE PLACED NO MORE THAN 50' OR NO LESS THAN 4' FROM THE NEAREST EDGE OF THE INTERSECTING ROADWAY.
3. STOP LINES IN LEFT TURN LANES MAY BE PULLED BACK SO AS NOT TO INTERFERE WITH THE WHEEL PATH OF TURNING VEHICLES.



YIELD LINE DETAIL



NOTE: SPACING BETWEEN TRIANGLES SHOULD BE 3-12'

DRAWING NOT TO SCALE

LEGEND

MARKINGS	WHITE
	YELLOW

KENTUCKY
DEPARTMENT OF HIGHWAYS

TYPICAL MARKINGS
AT SIGNALIZED
INTERSECTIONS

SUBMITTED *R. Offroy* DATE 11-30-18
0447

- ① ARROWS SHALL BE USED IN ALL DEDICATED TURN LANES AT SIGNALIZED INTERSECTIONS. REFER TO SEPIA 042 FOR GUIDANCE ON SPACING.
- ② ARROWS, ALONG WITH THE WORD "ONLY", SHALL ONLY BE USED IN A LANE DROP SCENARIO. REFER TO SEPIA 043 FOR GUIDANCE ON SPACING.
- ③ ARROWS ARE OPTIONAL IN THROUGH LANES.
- ④ DOTTED LANE LINE EXTENSIONS SHALL BE USED WITH DUAL TURN LANES. THEY SHALL BE THE SAME COLOR OF THE LINES WHICH THEY EXTEND AND SHOULD BE 6" IN WIDTH, 2' IN LENGTH, WITH A GAP OF 2-6" BETWEEN LINES.
- ⑤ REFER TO SEPIA 046 FOR GUIDANCE ON, AND DIMENSIONS OF, CROSSHATCH AND CHEVRON MARKINGS.
- ⑥ REFER TO SEPIA 046 FOR GUIDANCE ON MEDIAN NOSSES.
- ⑦ SOLID LINE SEPARATING THROUGH LANES SHOULD EXTEND BACK A MINIMUM OF 50' FROM THE STOP BAR.

*NOTE: OTHER THAN LONGITUDINAL STRIPING, ALL MARKINGS SHOWN ON THIS DRAWING SHOULD BE THERMOPLASTIC.

<p>STANDARD CURB & GUTTER ENTRANCE CURB</p>	<p>LIP CURB & GUTTER</p>	<p>ISLAND CURB & GUTTER</p>	<p>STANDARD HEADER CURB TYPE 1 EXISTING PAVEMENT</p>	<p>STANDARD HEADER CURB TYPE 2 NEW CONSTRUCTION</p>	<p>STANDARD HEADER CURB TYPE 2 NEW CONSTRUCTION</p>	<p>STANDARD HEADER CURB TYPE 2 NEW CONSTRUCTION</p>
<p>BARRIER CURB & GUTTER</p>	<p>LIP INTEGRAL CURB CONST. JOINT NOT PERMITTED</p>	<p>ISLAND INTEGRAL CURB CONST. JOINT NOT PERMITTED</p>	<p>BARRIER HEADER CURB CONST. JOINT REOD. NO. 4 BAR 2'-9" LONG AT 2'-6" O.C. 1" MIN.</p>	<p>ISLAND HEADER CURB TYPE 1 EXISTING PAVEMENT</p>	<p>ISLAND HEADER CURB TYPE 2 NEW CONSTRUCTION</p>	
<p>BARRIER INTEGRAL CURB CONST. JOINT REOD. NO. 4 BAR 2'-9" LONG AT 2'-6" O.C. 1" MIN.</p>	<p>STANDARD INTEGRAL CURB CONST. JOINT REOD. NO. 4 BAR 2'-3" LONG AT 2'-6" O.C. 1" MIN.</p>	<p>STANDARD INTEGRAL CURB CONST. JOINT REOD. NO. 4 BAR 2'-3" LONG AT 2'-6" O.C. 1" MIN.</p>	<p>STANDARD INTEGRAL CURB CONST. JOINT REOD. NO. 4 BAR 2'-3" LONG AT 2'-6" O.C. 1" MIN.</p>	<p>STANDARD INTEGRAL CURB CONST. JOINT REOD. NO. 4 BAR 2'-3" LONG AT 2'-6" O.C. 1" MIN.</p>	<p>STANDARD INTEGRAL CURB CONST. JOINT REOD. NO. 4 BAR 2'-3" LONG AT 2'-6" O.C. 1" MIN.</p>	

~ NOTES ~

- ALL INTEGRAL CURBS SHOWING REINFORCING STEEL SHALL BE CAST SEPARATELY FROM THE PAVEMENT AND THE REINFORCEMENT SHALL CONSIST SOLELY OF NO. 4 BARS AS DETAILED ON THIS DRAWING. ON CONSTRUCTION CARE SHOULD BE TAKEN SO THAT NO REINFORCEMENT BARS ARE CLOSER THAN 3" TO THE CENTER OF THE SAWED TRANSVERSE JOINT.
- THE CONTRACTOR HAS THE OPTION OF CONSTRUCTING THE STANDARD INTEGRAL CURB AS DETAILED IN EITHER ① OR ②. IF ② IS CHOSEN A LONGITUDINAL CONSTRUCTION JOINT SHALL BE REQUIRED AND THE REMAINING PAVEMENT AND CURB SHALL BE CONSTRUCTED MONOLITHIC WITHOUT A HORIZONTAL CONSTRUCTION JOINT AND ACCOMPANYING REINFORCING STEEL.

KENTUCKY
DEPARTMENT OF HIGHWAYS
CURB AND GUTTER,
CURBS AND
VALLEY GUTTER

ASPHALT WEDGE CURB
PAVED SHOULDER
GUARDRAIL POST

VALLEY GUTTER

BID ITEM AND UNIT TO BID
(CURB TYPE)

NO. 4 BAR 2'-9" LONG AT 2'-6" O.C.

NO. 4 BAR 2'-3" LONG AT 2'-6" O.C.

ASPH. SURFACE
VAR. ASPH. BASE
D. G. A. BASE

ASPH. SURFACE
VAR. ASPH. BASE
D. G. A. BASE

ASPH. SURFACE
VAR. ASPH. BASE
D. G. A. BASE

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SHEET NO.	SI
ITEM NO.	I-20019.00
COUNTY OF	MCCRACKEN

SIGNING SPECIFICATION NOTES

GROUND-MOUNTED SIGN SUPPORTS

CONCRETE BASES (CONTINUED)

WHERE THE REMOVAL OF OVERHEAD STRUCTURE CONCRETE BASE IS CALLED FOR, THE BASE IS TO BE REMOVED TO A MINIMUM OF ONE FOOT (1') BELOW THE GROUND LINE, BACKFILLED TO EXISTING GROUND LINE, AND THE DISTURBED AREAS RESEDED.

WHERE THE REMOVAL OF BEAM SIGN SUPPORTS IS CALLED FOR, THE BEAM AND ANY CONCRETE PROJECTING ABOVE THE GROUND LINE ARE TO BE CUT OFF A MINIMUM OF ONE FOOT (1') BELOW EXISTING GROUND LINE OR THE ENTIRE BEAM AND CONCRETE BASE ARE TO BE REMOVED COMPLETELY AND BACKFILLED TO EXISTING GROUND LINE.

GENERAL:

ALL SIGNS SHALL BE POSITIONED AS SHOWN ON THE POSITIONING DETAIL SHEET. ALL BEAMS AND POSTS SHALL BE OF SUFFICIENT LENGTHS TO EXTEND FROM THE TOP OF THE SIGN TO THE REQUIRED BASE EMBEDMENT. EXISTING T-BEAMS ON WHICH SHEETING SIGNS ARE ATTACHED SHALL BE REMOVED AND REPLACED WITH TYPE I OR TYPE II POSTS, UNLESS THEY ARE LOCATED BEHIND GUARDRAIL.

BEAMS:

ALL BEAMS SHALL BE EITHER TYPE "A" STANDARD BEAM INSTALLATION OR TYPE "C" BREAKAWAY SIGN POST SUPPORT SYSTEMS INSTALLATION. TYPE "A" BEAMS ARE SHOWN ON THE POSITIONING DETAIL SHEET. TYPE "C" BEAMS ARE SHOWN ON THE POSITIONING DETAIL SHEET. TYPE "A" BEAMS SHALL BE USED FOR ALL BEAMS EXCEPT WHERE SHOWN OTHERWISE ON THE POSITIONING DETAIL SHEET. ONLY BREAKAWAY TYPE "C" BEAM SUPPORT SYSTEMS ON THE DEPARTMENT'S LIST OF APPROVED MATERIALS SHALL BE USED. THE TYPE AND SIZE OF BEAM TO BE USED SHALL BE INDICATED FOR EACH PANEL SIGN ON THE SIGN DETAIL SHEETS. BEAM LENGTHS INCLUDED IN THESE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS AT EACH SIGN LOCATION AND CROSS SECTIONS SHALL BE DEVELOPED TO VERIFY BEAM LENGTHS, WITH ANY DISCREPANCIES BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.

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MISCELLANEOUS

THE COST FOR REMOVING EXISTING PANEL SIGNS SHALL BE INCIDENTAL TO THE COST OF THE PROJECT.

ON SHEETING SIGNS WHERE THERE ARE MORE THAN ONE SIGN ASSEMBLY MOUNTED BESIDE EACH OTHER, THE POSTS SHALL BE SPACED TO PROVIDE APPROXIMATELY SIX INCHES (6") OF SPACING BETWEEN SIGNS.

CLEARING AND GRUBBING, AND TREE TRIMMING, WHEN REQUIRED FOR CONSTRUCTION OR VISIBILITY OF SIGNS, SHALL BE INCIDENTAL TO THE CONTRACT.

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STEEPLEPOSTS:

TYPE I AND II STEEL POSTS IN SOIL SHALL BE DRIVEN 32" TO 34" BELOW THE GROUND LINE AS SHOWN. HOWEVER, IF SOIL ROCK IS ENCOUNTERED, THE CONTRACTOR SHALL DRILL HOLES OF THE REQUIRED DEPTH INTO THE ROCK AND BACKFILL WITH SAND. THEREAFTER, THE POSTS SHALL BE INCIDENTAL TO STEEL POST, AND SOIL STABILIZERS WILL NOT BE REQUIRED.

ANY AREA DISTURBED SHALL BE SIDE GRADED TO THE EXISTING SLOPES AND RESEDED AS DIRECTED BY THE ENGINEER. AT NO ADDITIONAL COST TO THE DEPARTMENT.

REMOVE AND DO NOT REPLACE THE WHITE ON BLUE GENERAL SERVICES SIGNS AT THE EXIT RAMP TERMINALS, EMERGENCY STOPPING ONLY SIGNS, AND THE ROUTE MARKER THAT IS LOCATED INSIDE THE INTERCHANGE PAST THE EXIT GORE AREA.

INSTALLATION OF ADVISORY EXIT AND RAMP SPEED SIGNS (W3-2 AND W3-3) SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

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MILEPOST MARKERS AND ENHANCED REFERENCE MARKERS

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FOR THE LOUISVILLE AREA, FINAL LOCATION OF ENHANCED REFERENCE LOCATION SIGNS SHALL BE VERIFIED BY THE MUTCD REPRESENTATIVE OF TRIMARC AT LEAST TWO WEEKS IN ADVANCE OF BEGINNING WORK ON THIS ITEM.

90 WEST MAIN STREET
LOUISVILLE, KY 40202
502-587-6824
210-307-1456

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ALL CONCRETE BASES SHALL BE OF CLASS "A" CONCRETE FOR SIGNS AND SHALL BE AS SHOWN ELSEWHERE IN THESE PLANS.

EXCAVATION NECESSARY TO CONSTRUCT BASES AND FOOTINGS IS INCIDENTAL TO THE COST OF CLASS "A" CONCRETE FOR SIGNS.

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ALL HARDWARE

ALL HARDWARE FOR THE ASSEMBLY OF PANEL SIGNS AND THE ATTACHMENT OF THESE SIGNS TO THEIR SUPPORTS SHALL BE AS RECOMMENDED BY THE PANEL MANUFACTURER. PLACEMENT OF POST CLIP SHALL BE AS SHOWN ON THE SIGNING MISCELLANEOUS DETAIL SHEET.

ALL HARDWARE

ALL HARDWARE FOR THE ERECTION OF SHEETING SIGNS SHALL BE CADMIUM PLATED STEEL IN ACCORDANCE WITH ASTM B-776 AND ASTM A-307.

LETTERS, SYMBOLS, AND BORDERS

LETTERS, SYMBOLS, AND BORDERS SHALL BE AFFIXED WITH A 10PP RIVET WITH A MINIMUM DIAMETER OF 3/16 INCH, AND THE LENGTH SHALL BE AS NECESSARY TO PROPERLY APPLY COPY IN A WORKMANLIKE MANNER.

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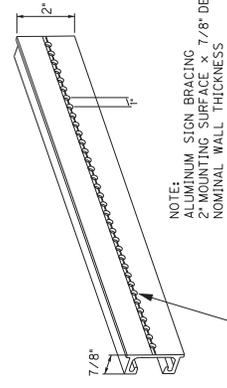
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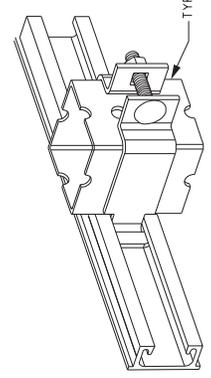
US 45
SIGNING SPECIFICATION SHEET

COUNTY OF	ITEM NO.	SHEET NO.
MCCRACKEN	I-20019.00	52

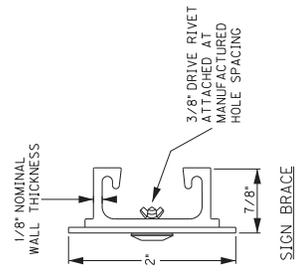
FOR ATTACHMENT OF SIGNS
LESS THAN 72" IN WIDTH
USING MANUFACTURED 3/8" HOLES
ACCORDING TO 2004 STANDARD
HIGHWAY SIGNS BLANK
STANDARDS
POS 7-1 THRU 7-6



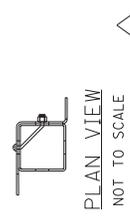
NOTE:
ALUMINUM SIGN BRACING
2" MOUNTING SURFACE x 7/8" DEPTH x 1/8"
NOMINAL WALL THICKNESS
6061-T6 ALUMINUM ALLOY, PUNCHED WITH
3/8" DIAMETER HOLES ON 1" CENTERS FOR
ATTACHMENT OF SIGN SUBSTRATE
USING 3/8" DRIVE RIVETS



SQUARE POST CLAMP & BRACE
TYPE I SQUARE POST



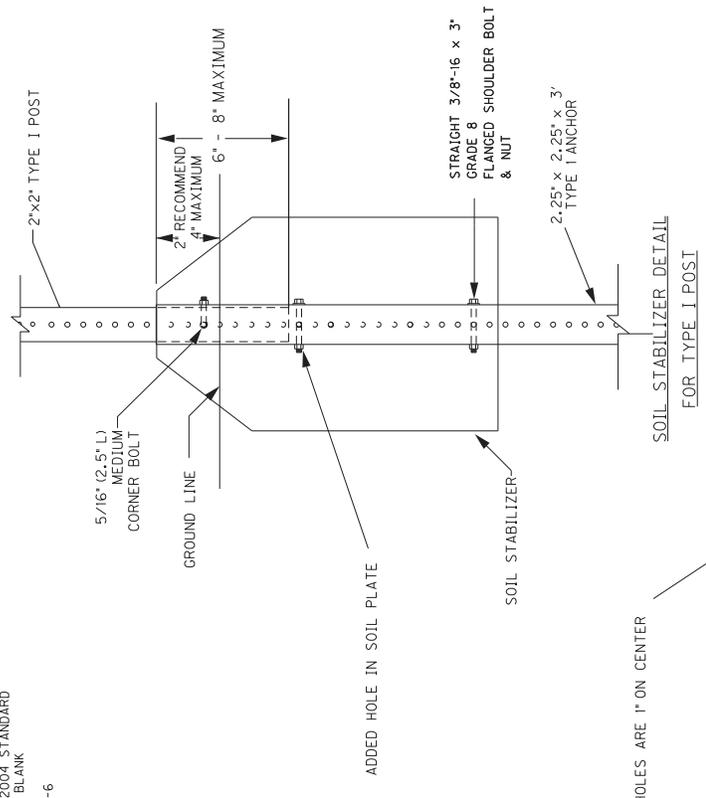
SIGN BRACE



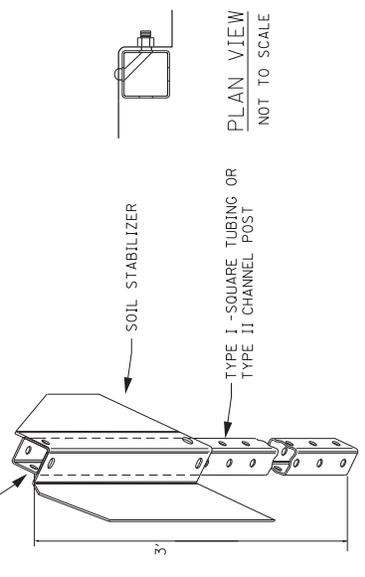
PLAN VIEW
NOT TO SCALE

FOR SIGN INSTALLATIONS
NOT EMBEDDED IN CONCRETE,
INSTALL SOIL STABILIZING PLATE
ON BACKSIDE OF POST FROM
TRAFFIC FLOW

TYPE I
SQUARE TUBING POST
WITH SOIL STABILIZER



SOIL STABILIZER DETAIL
FOR TYPE I POST



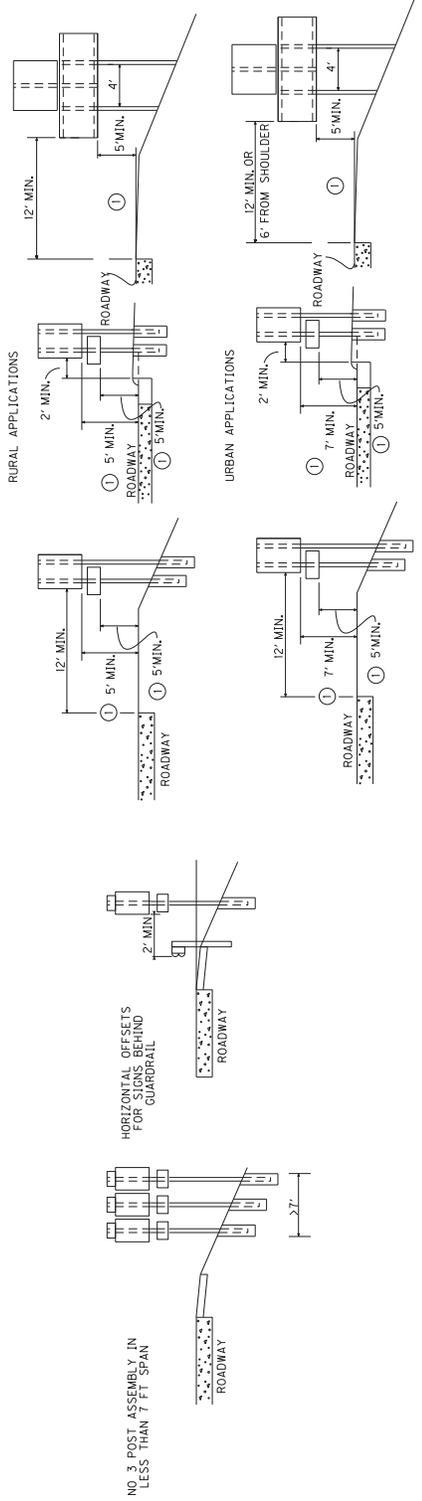
PLAN VIEW
NOT TO SCALE

SOIL STABILIZER DETAIL
NOT TO SCALE

US 45
SIGNING DETAIL SHEET

COUNTY OF	ITEM NO.	SHEET NO.
MCCRACKEN	I-20019.00	53

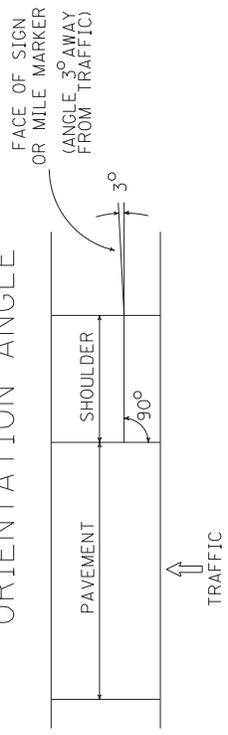
SHEETING SIGNS



NOTE: SHOULD A SIGN BE LOCATED AT A POINT WHERE GUARDRAIL IS CALLED FOR OR EXISTING, ALL SIGN SUPPORTS SHALL BE PLACED BEHIND THE GUARDRAIL AND LATERAL OFFSET SHALL BE MEASURED FROM THE GUARDRAIL.

① NOT TO EXCEED 8' IN URBAN AREAS AND 6' IN RURAL AREAS UNLESS SPECIFIED BY THE ENGINEER

ORIENTATION ANGLE



NOT TO SCALE

US 45
SIGNING DETAIL SHEET

**TRAFFIC CONTROL PLAN
US 45 – MCCRACKEN
PAGE 1 OF 4**

TRAFFIC CONTROL GENERAL

Except as provided herein, maintain and control traffic in accordance with the Standard Specifications and the Standard Drawings, current editions. Except for the roadway and traffic control bid items listed, all items of work necessary to maintain and control traffic will be paid at the lump sum bid price to "MAINTAIN AND CONTROL TRAFFIC".

Contrary to Section 106.01, traffic control devices used on this project may be new or used in like-new condition at the beginning of the work and maintained in like-new condition until completion of the work. Traffic Control Devices will conform to current MUTCD.

Reduce the speed limit in work area to 25 miles per hour and establish double fines for work zone speeding violations. Notify the Engineer a minimum of 12 hours prior to using the double fine signs. At the beginning of the work zone, the "WARNING FINE DOUBLED IN WORK ZONE" signs will be mounted. At the end of the work zone, the "END DOUBLE FINE" sign will be mounted as well. Payment for the signs will be at the unit bid price for signs erected. Any relocation or covering of signs will be incidental to "MAINTAIN AND CONTROL TRAFFIC".

Night work may be required on this project. Work schedule shall be coordinated with any on-going construction. Obtain approval from the Engineer for the method of lighting prior to its use.

PROJECT PHASING AND CONSTRUCTION PROCEDURES

The Contractor shall maintain an 11-foot lane in each direction.

All removal of existing striping shall be by water blasting, unless otherwise directed by the Engineer, and this work shall be considered incidental to "MAINTAIN AND CONTROL TRAFFIC".

For the streets intersecting US 45 that are being closed to access, there shall be advance warning "ROAD CLOSED TO THRU TRAFFIC" signing placed on those streets as directed by the Engineer. The signs that are moved to the opposite side for Phase 2 shall be paid for only once.

Existing arrow pavement markings north of Laclede Avenue shall be blacked out as directed by the Engineer using black removable tape.

The Contractor must notify the Engineer at least fourteen (14) days prior to beginning construction for each phase of construction.

PHASE 1

Existing southbound lanes shall be closed. Existing northbound lanes shall be converted to 2-lane traffic as shown in the traffic control plans. Type III Barricades shall be erected at the locations shown. Signal heads at the Jefferson Street and Laclede Street intersections shall be relocated as directed by the Engineer. If needed, the Engineer will modify the phasing of the signals. Complete construction left of centerline.

PHASE 2

Existing northbound lanes used in Phase 1 for 2-lane traffic shall be closed. The 2-lane traffic shall be shifted over to the pavement constructed in Phase 1. Type III Barricades erected in Phase 1 shall be moved to the locations shown in the traffic control plans. Signal heads at the Jefferson Street and Laclede Street intersections shall be relocated as directed by the Engineer. If needed, the Engineer will modify the phasing of the signals. Complete construction right of centerline.

**TRAFFIC CONTROL PLAN
US 45 – MCCRACKEN
PAGE 2 OF 4**

PHASE 3

Complete final striping and pavement marking. Shift traffic as needed and approved by the Engineer to complete this work.

ACCESS TO RESIDENTIAL PROPERTIES AND BUSINESSES

Residential and business properties with entrances along US 45 shall be maintained as shown on the Traffic Control Plans. At least fourteen (14) days prior to the Phase 1 and Phase 2 construction phases, the Contractor's Traffic Coordinator, along with the Engineer, shall contact and meet with each property or business owner that will have their access impacted by the construction and explain to them what they can expect and give them an estimate of how long the access will be impacted.

The Traffic Control Plans indicate that some of the entrances or accesses do not need to be maintained. In those cases, there are optional ways from the side streets to access the property.

The Traffic Control Plans indicate that some of the properties need to have their access maintained. The Contractor shall construct temporary pavement consisting of 4" of DGA as needed to provide access and, also, as needed to provide an area of parking in the area between the curb and existing sidewalk. The temporary access and parking shall be approved by the Engineer. Construction of the DGA will be paid for, but removal of the DGA shall be incidental to "MAINTAIN AND CONTROL TRAFFIC".

ACCESS TO CARSON PARK

The entrance to Carson Park off US 45 can be closed during construction of Phase 1. At least fourteen (14) days prior to the Phase 1 construction, and closure of the entrance, the Contractor's Traffic Coordinator, along with the Engineer, shall contact and meet with Tony Masing of McCracken County. His phone number is 270-556-6105 and his e-mail address is tmasing@mccrackenky.com.

SIGNS

Additional traffic control signs in addition to signing detailed in the MUTCD may be required by the Engineer. Signage for reduced speed limits and double fine work zones shall be furnished, relocated, and maintained by the Contractor.

Contrary to Section 112, individual signs will be measured only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. Replacements for damaged signs or signs directed to be replaced by the Engineer due to poor legibility or reflectivity will not be measured for payment.

FLASHING ARROWS

Flashing arrows, if requested by the Engineer, will be paid for once, no matter how many times they are moved or relocated. The Department WILL NOT take possession of the flashing arrows upon completion of the work.

PORTABLE CHANGEABLE MESSAGE SIGNS

Provide portable changeable message signs in advance of the project at locations to be determined by the Engineer. A message sign may also be required at the beginning and end of the project and/or at point(s) throughout the project. The messages required to be provided will be designated by the Engineer. The portable changeable message signs will be in operation

**TRAFFIC CONTROL PLAN
US 45 – MCCRACKEN
PAGE 3 OF 4**

always. In the event of damage or mechanical/electrical failure, the Contractor will repair or replace the Portable Changeable Message Sign immediately. Portable Changeable Message Signs will be paid for once, no matter how many times they are moved or relocated. The Department WILL NOT take possession of the signs upon completion of the work.

BARRELS

Barrels that are used will be incidental to "MAINTAIN AND CONTROL TRAFFIC". Damaged barrels or those in poor condition or reflectivity, as determined by the Engineer, shall be replaced and will not be measured for payment.

PAVEMENT MARKINGS

Place temporary and permanent striping in accordance with Section 112 and Section 714, except that:

1. Temporary striping shall be 4" in width and permanent striping shall be 6" in width;
2. If the Contractor's operations or phasing requires temporary markings which must be subsequently removed from the ultimate pavement, an approved removable lane tape shall be used and shall be paid as PAVE STRIPING - TEMP REM TAPE - W and PAVE STRIPING - TEMP REM TAPE - Y;
3. Edge lines will be required as shown in the traffic control plans;
4. Existing, temporary, or permanent striping will be in place before a lane is opened to traffic;
5. Place permanent striping on pavement within the project limits as shown on the striping plan; and
6. Permanent striping shall be Extruded Thermoplastic Marking.

BARRICADES

Barricades used for channelization or delineation will be incidental to "MAINTAIN AND CONTROL TRAFFIC". Barricades as shown on the Traffic Control Plans will be bid as each according to Section 112.04.04. Individual barricades will be measured only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. Replacements for damaged barricades or barricades directed to be replaced by the Engineer due to poor legibility or reflectivity will not be measured for payment.

PAVEMENT EDGE DROP-OFFS

Pavement edge drop-offs shall be protected with grabber delineator cones, vertical panels, or barricades.

A pavement edge between opposing directions of traffic or lanes that traffic is expected to cross shall not have an elevation difference greater than 1 ½". Place warning signs (MUTCD W8-11 or W8-9A) in advance of and at 1500' intervals throughout the drop-off area. Dual posting on both sides of the traveled way shall be required.

TRAFFIC COORDINATOR

The Contractor shall designate an employee to be Traffic Coordinator. The designated Traffic Coordinator must be certified by an agency qualified for training in this area. The Traffic Coordinator will inspect the project maintenance of traffic once every two hours during the Contractor's operations. The Traffic Coordinator will report all incidents throughout the work

**TRAFFIC CONTROL PLAN
US 45 – MCCRACKEN
PAGE 4 OF 4**

zone to the Engineer on the project. The Contractor will furnish the name and telephone number where the Traffic Coordinator can be contacted always.

COORDINATION OF WORK

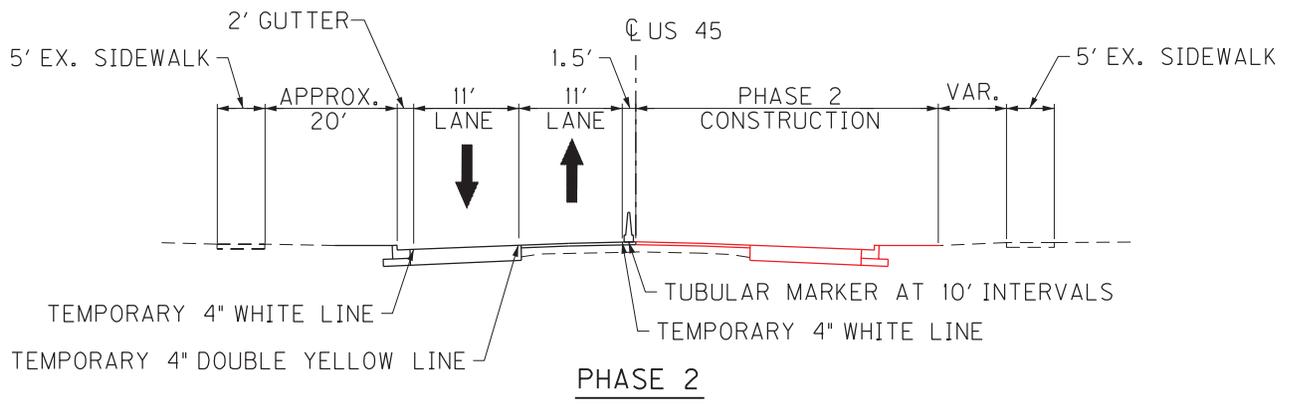
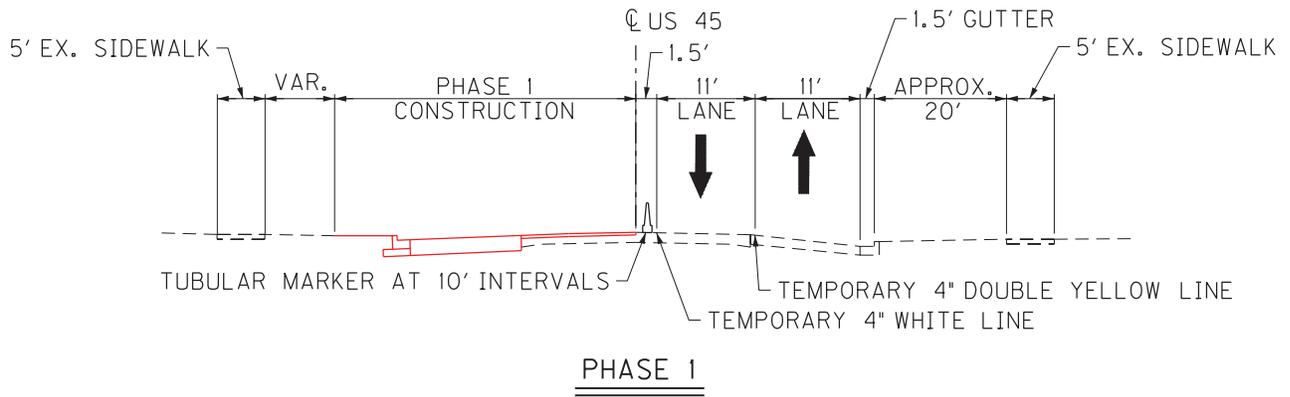
The Contractor is advised that other projects may be in progress within or in the near vicinity of this project. The traffic control of those projects may affect this project and the traffic control of this project may affect those projects. The Contractor will coordinate the work on this project with the work of the other Contractors. In case of conflict, the Engineer will determine the relative priority to give to work phasing.

CONTRACTOR'S AND CONTRACTOR'S EMPLOYEES' VEHICLES

Contractor's equipment and the Contractor's employee's vehicles shall not be parked on side streets or in any of the parking lots. They shall be maintained within the existing right of way of US 45 and/or as approved by the Engineer.

COUNTY OF	ITEM NO.
MCCRACKEN	1-20019.00

TRAFFIC CONTROL PLANS TYPICAL SECTIONS



NOT TO SCALE

TRAFFIC CONTROL PLANS

COUNTY OF	ITEM NO.
MCCRACKEN	I-20019.00



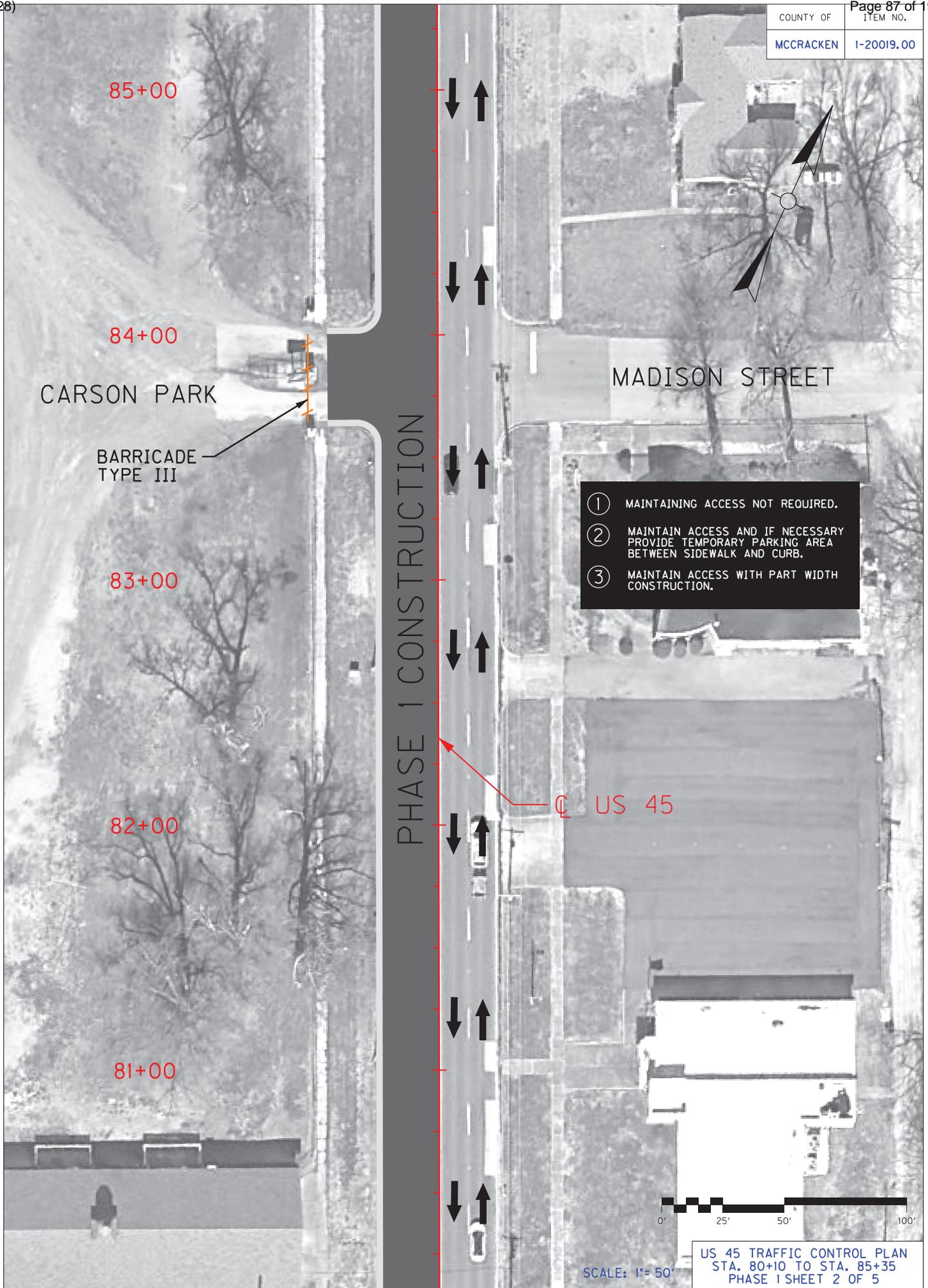
- ① MAINTAINING ACCESS NOT REQUIRED.
- ② MAINTAIN ACCESS AND IF NECESSARY PROVIDE TEMPORARY PARKING AREA BETWEEN SIDEWALK AND CURB.
- ③ MAINTAIN ACCESS WITH PART WIDTH CONSTRUCTION.

BEGIN CONSTRUCTION
STA. 75 + 96.93

US 45 TRAFFIC CONTROL PLANS
STA. 75+97 TO STA. 80+10
PHASE 1 SHEET 1 OF 5

SCALE: 1" = 50'

COUNTY OF	ITEM NO.
MCCRACKEN	1-20019.00



85+00

84+00

CARSON PARK

BARRICADE
TYPE III

83+00

82+00

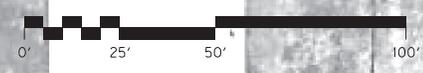
81+00

PHASE 1 CONSTRUCTION

MADISON STREET

- ① MAINTAINING ACCESS NOT REQUIRED.
- ② MAINTAIN ACCESS AND IF NECESSARY PROVIDE TEMPORARY PARKING AREA BETWEEN SIDEWALK AND CURB.
- ③ MAINTAIN ACCESS WITH PART WIDTH CONSTRUCTION.

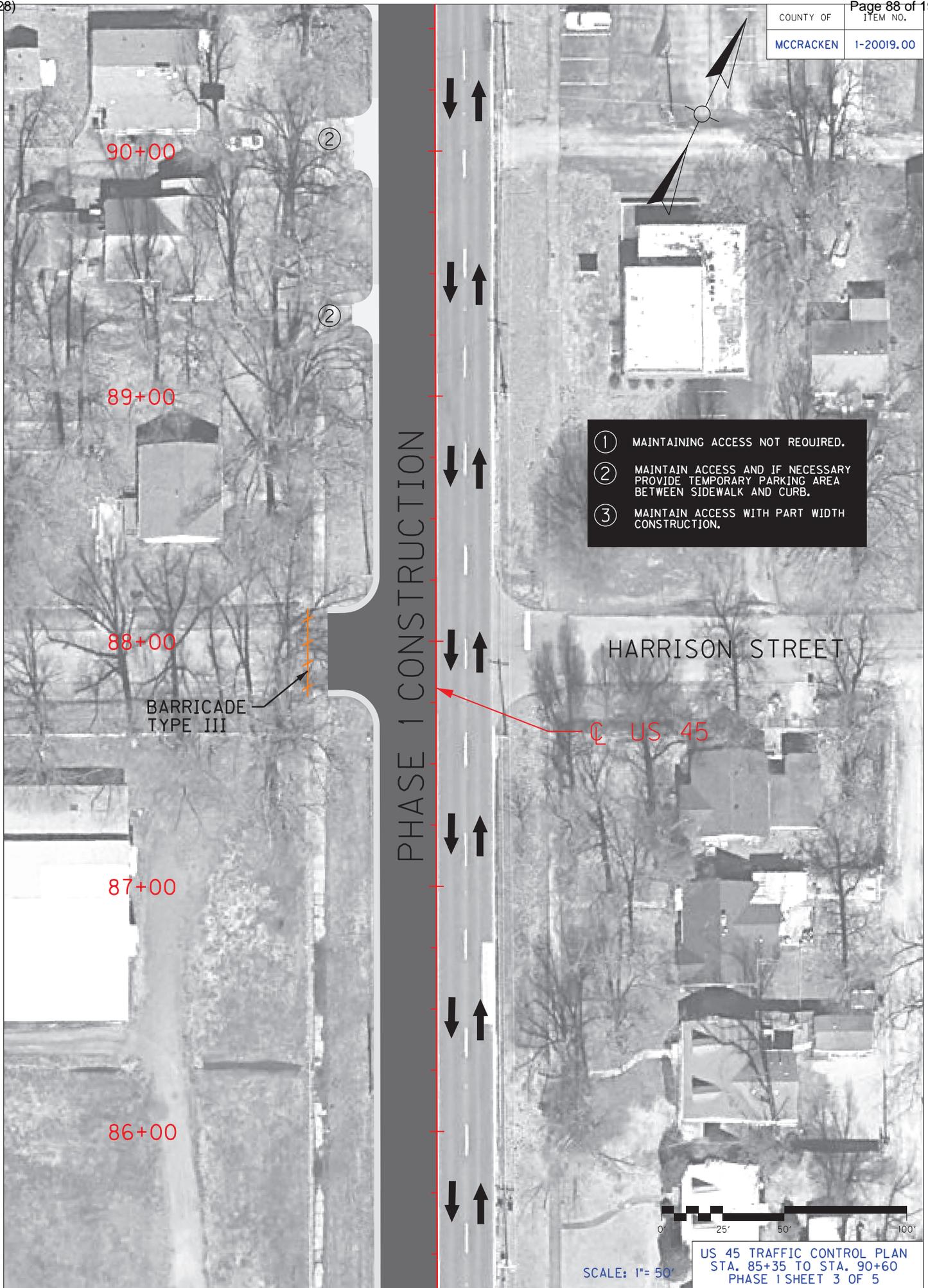
US 45



SCALE: 1" = 50'

US 45 TRAFFIC CONTROL PLAN
STA. 80+10 TO STA. 85+35
PHASE 1 SHEET 2 OF 5

COUNTY OF	ITEM NO.
MCCRACKEN	1-20019.00



- ① MAINTAINING ACCESS NOT REQUIRED.
- ② MAINTAIN ACCESS AND IF NECESSARY PROVIDE TEMPORARY PARKING AREA BETWEEN SIDEWALK AND CURB.
- ③ MAINTAIN ACCESS WITH PART WIDTH CONSTRUCTION.

HARRISON STREET

US 45

PHASE 1 CONSTRUCTION

BARRICADE TYPE III



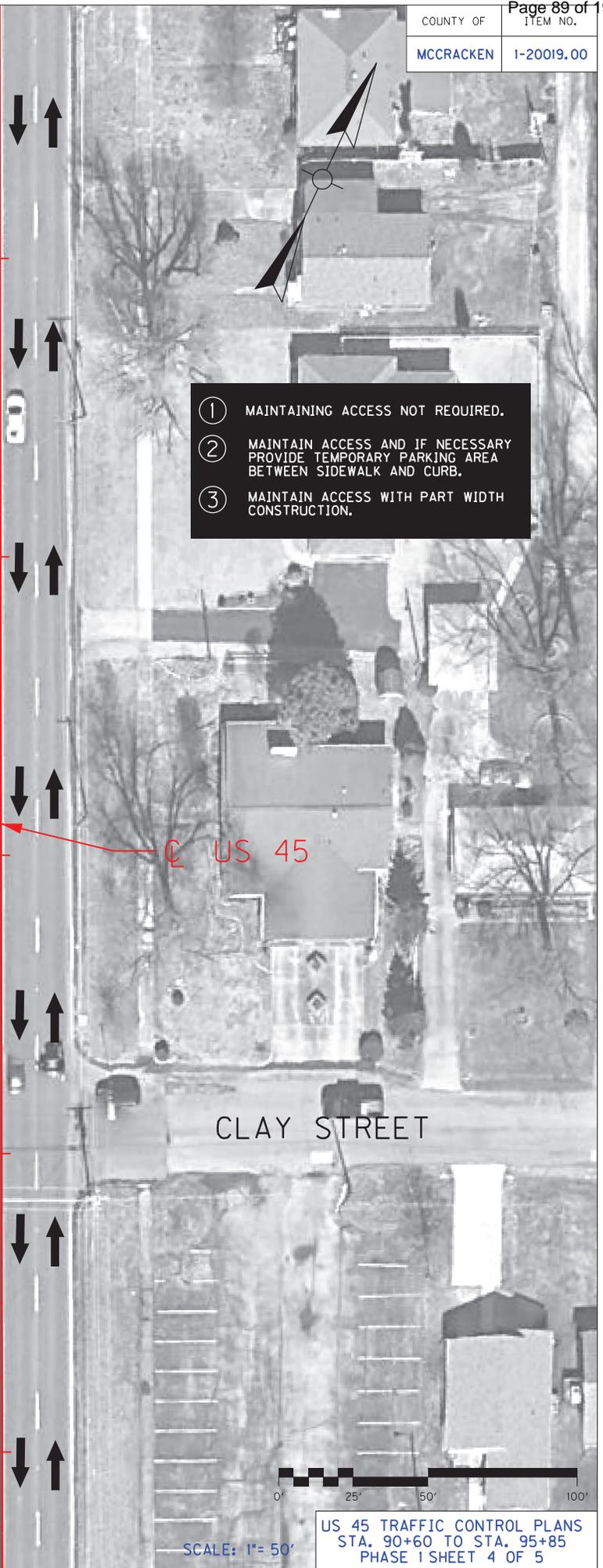
SCALE: 1"= 50'

US 45 TRAFFIC CONTROL PLAN
STA. 85+35 TO STA. 90+60
PHASE I SHEET 3 OF 5

COUNTY OF	ITEM NO.
MCCRACKEN	I-20019.00

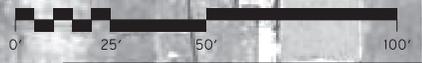


PHASE 1 CONSTRUCTION



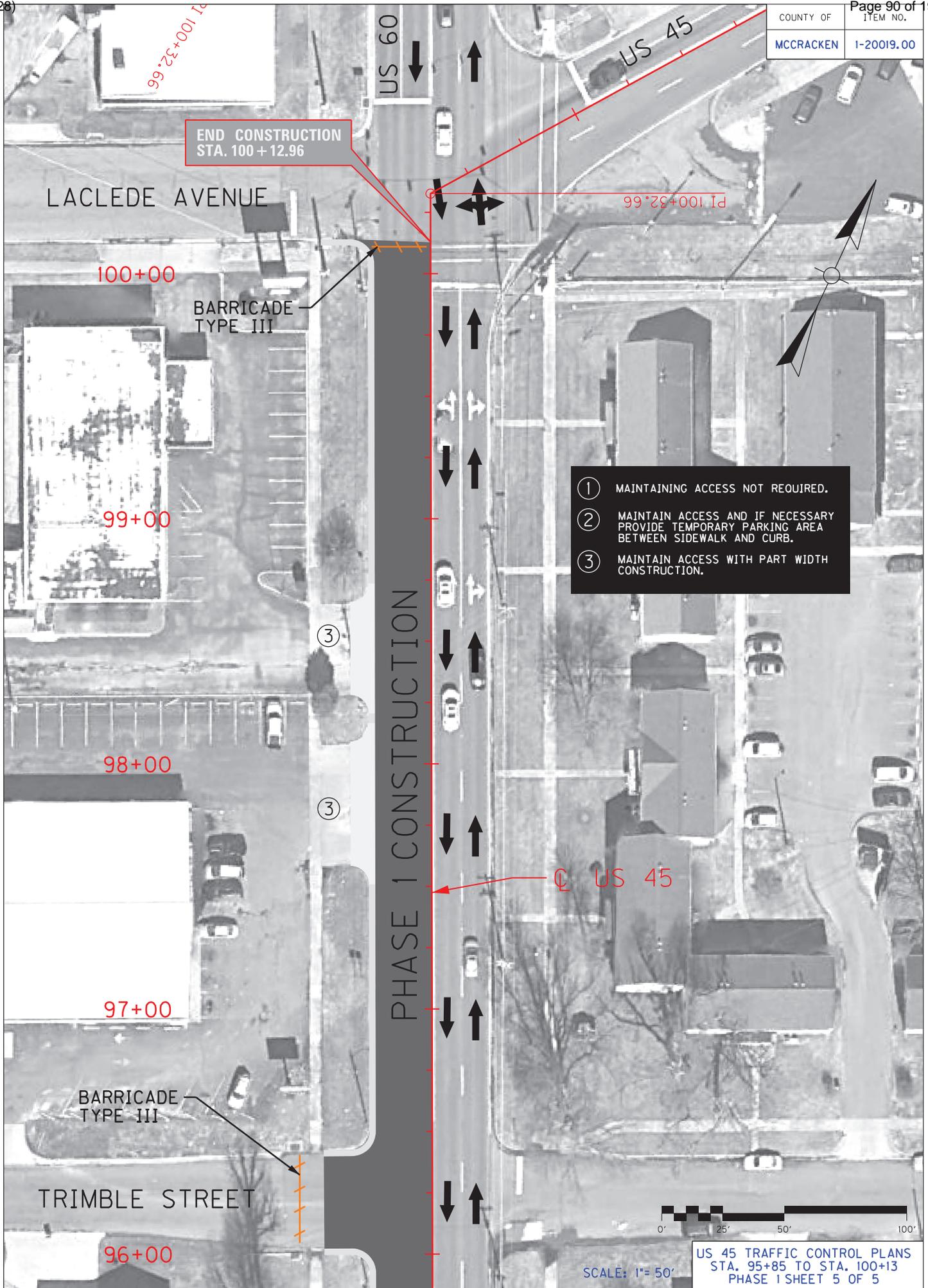
- ① MAINTAINING ACCESS NOT REQUIRED.
- ② MAINTAIN ACCESS AND IF NECESSARY PROVIDE TEMPORARY PARKING AREA BETWEEN SIDEWALK AND CURB.
- ③ MAINTAIN ACCESS WITH PART WIDTH CONSTRUCTION.

BARRICADE
TYPE III



SCALE: 1" = 50'
US 45 TRAFFIC CONTROL PLANS
STA. 90+60 TO STA. 95+85
PHASE I SHEET 4 OF 5

COUNTY OF	ITEM NO.
MCCRACKEN	I-20019.00



END CONSTRUCTION
STA. 100 + 12.96

LACLEDE AVENUE

100+00

BARRICADE
TYPE III

99+00

98+00

97+00

BARRICADE
TYPE III

TRIMBLE STREET

96+00

PHASE 1 CONSTRUCTION

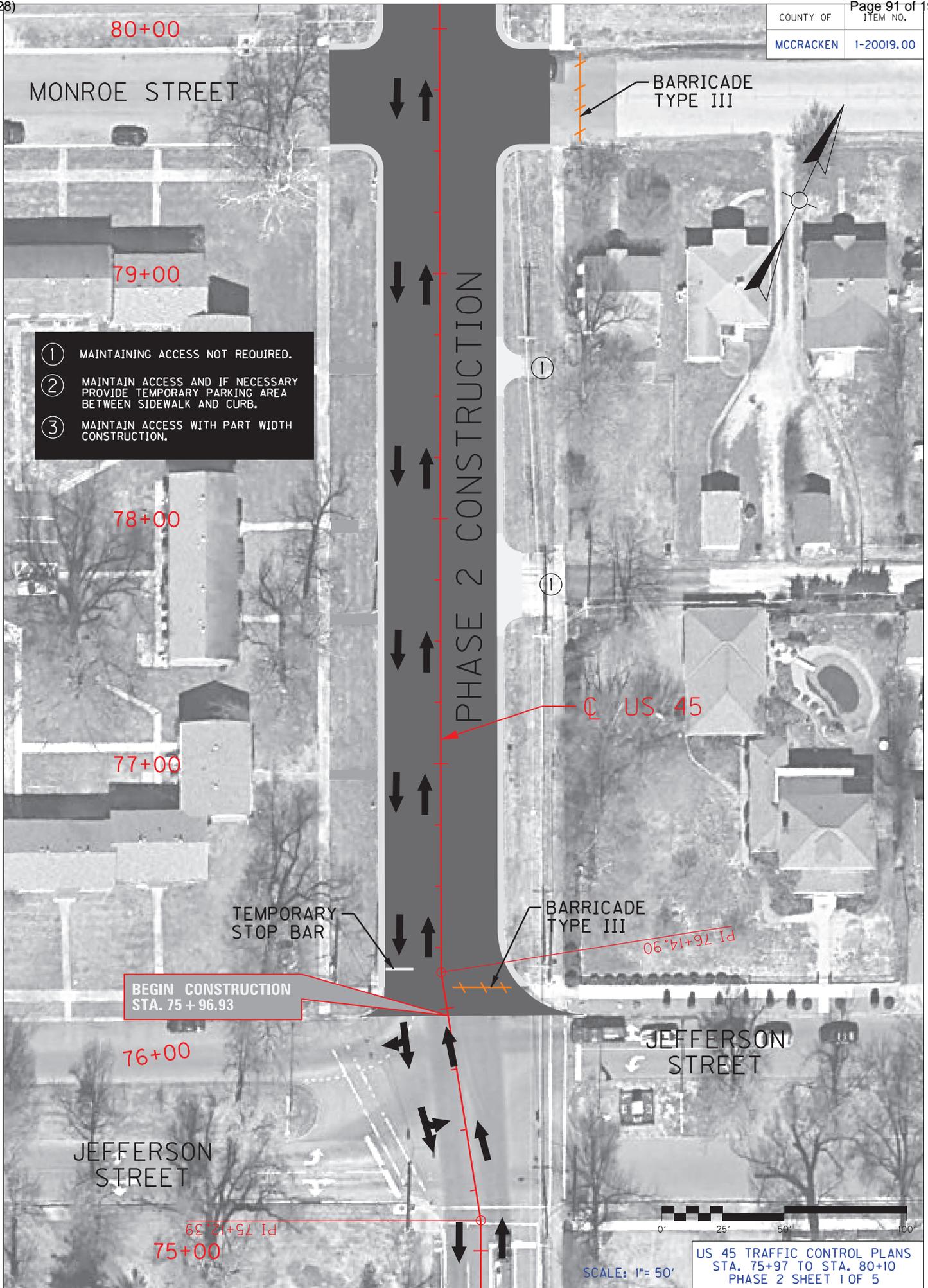
- ① MAINTAINING ACCESS NOT REQUIRED.
- ② MAINTAIN ACCESS AND IF NECESSARY PROVIDE TEMPORARY PARKING AREA BETWEEN SIDEWALK AND CURB.
- ③ MAINTAIN ACCESS WITH PART WIDTH CONSTRUCTION.



SCALE: 1" = 50'

US 45 TRAFFIC CONTROL PLANS
STA. 95+85 TO STA. 100+13
PHASE I SHEET 5 OF 5

COUNTY OF	ITEM NO.
MCCRACKEN	I-20019.00



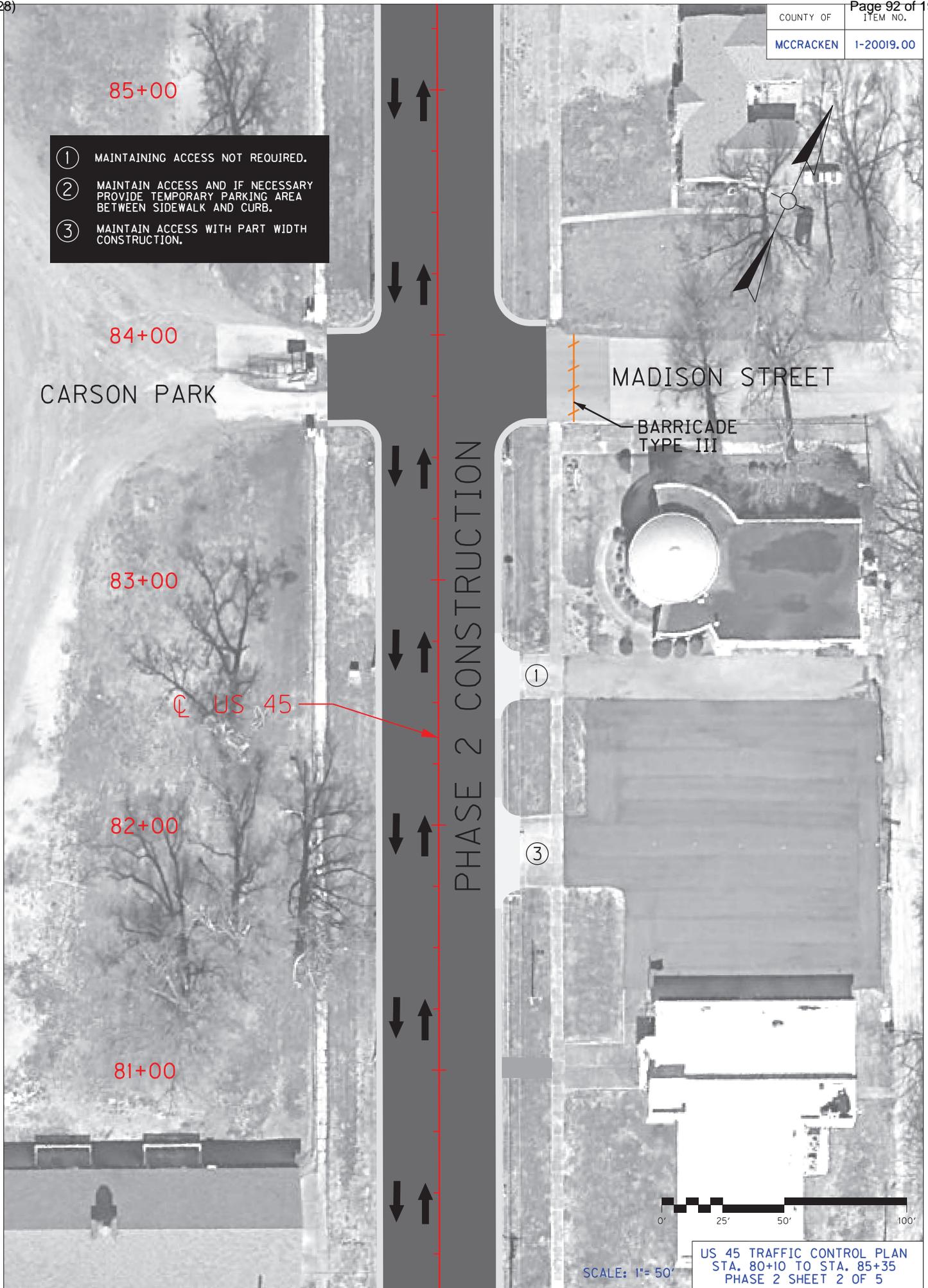
- ① MAINTAINING ACCESS NOT REQUIRED.
- ② MAINTAIN ACCESS AND IF NECESSARY PROVIDE TEMPORARY PARKING AREA BETWEEN SIDEWALK AND CURB.
- ③ MAINTAIN ACCESS WITH PART WIDTH CONSTRUCTION.

BEGIN CONSTRUCTION
STA. 75 + 96.93

US 45 TRAFFIC CONTROL PLANS
STA. 75+97 TO STA. 80+10
PHASE 2 SHEET 1 OF 5

SCALE: 1" = 50'

COUNTY OF	ITEM NO.
MCCRACKEN	I-20019.00



- ① MAINTAINING ACCESS NOT REQUIRED.
- ② MAINTAIN ACCESS AND IF NECESSARY PROVIDE TEMPORARY PARKING AREA BETWEEN SIDEWALK AND CURB.
- ③ MAINTAIN ACCESS WITH PART WIDTH CONSTRUCTION.

85+00

84+00

CARSON PARK

83+00

US 45

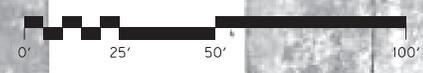
82+00

81+00

MADISON STREET

BARRICADE
TYPE III

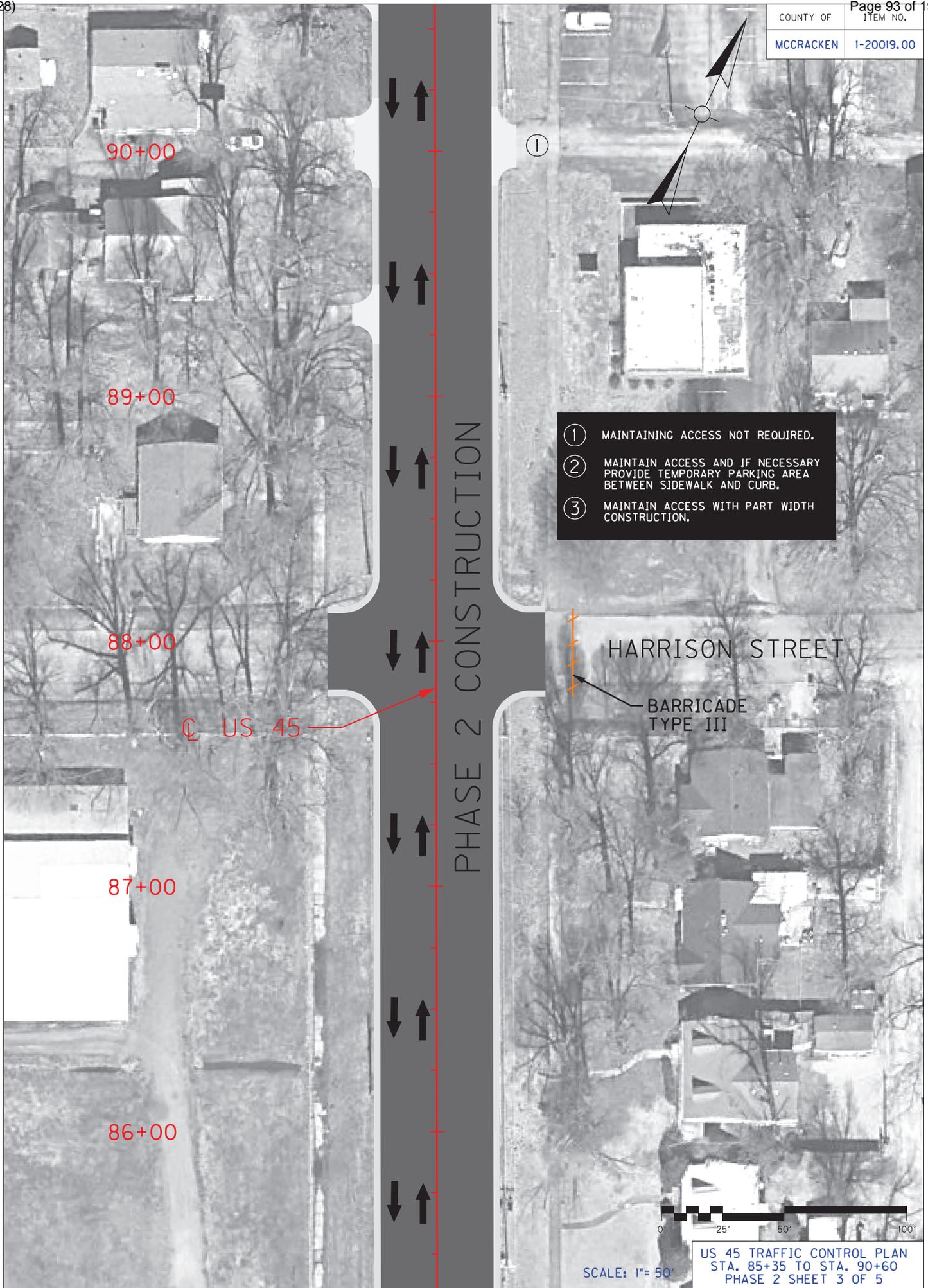
PHASE 2 CONSTRUCTION



SCALE: 1" = 50'

US 45 TRAFFIC CONTROL PLAN
STA. 80+10 TO STA. 85+35
PHASE 2 SHEET 2 OF 5

COUNTY OF	ITEM NO.
MCCRACKEN	I-20019.00



90+00

89+00

88+00

US 45

87+00

86+00

PHASE 2 CONSTRUCTION

HARRISON STREET

BARRICADE
TYPE III

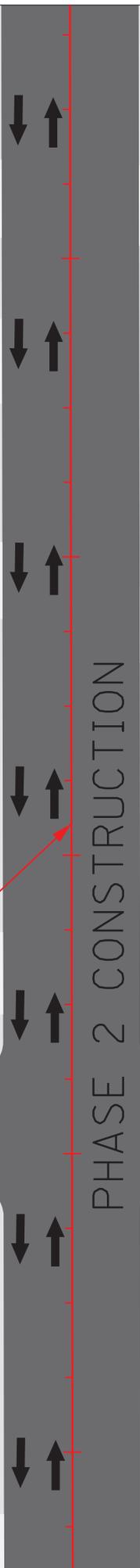
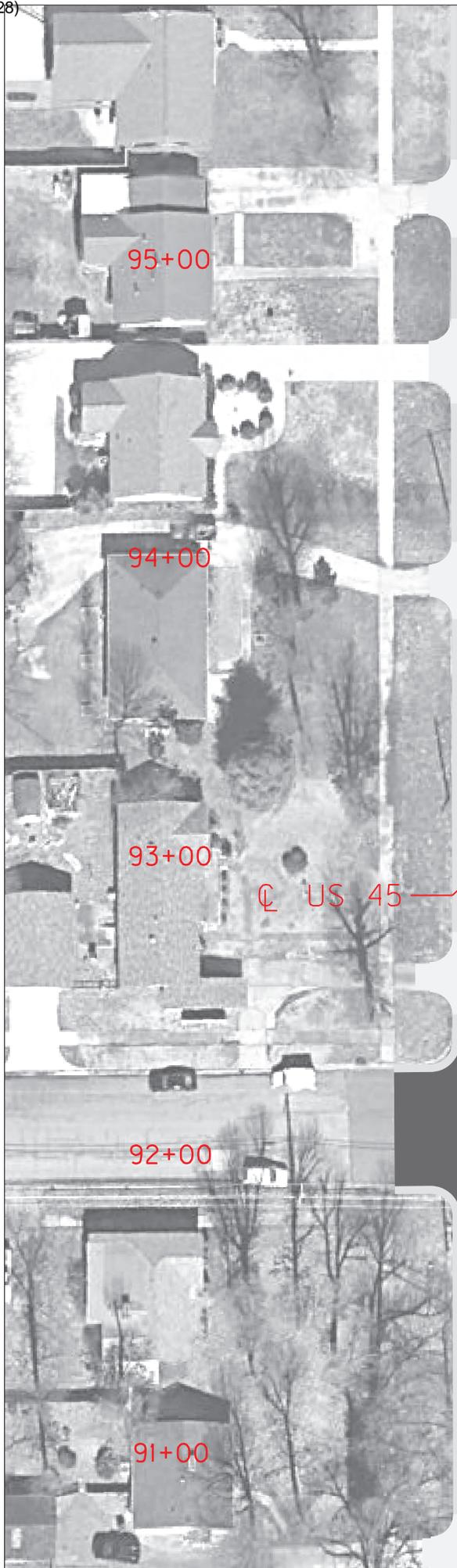
- ① MAINTAINING ACCESS NOT REQUIRED.
- ② MAINTAIN ACCESS AND IF NECESSARY PROVIDE TEMPORARY PARKING AREA BETWEEN SIDEWALK AND CURB.
- ③ MAINTAIN ACCESS WITH PART WIDTH CONSTRUCTION.



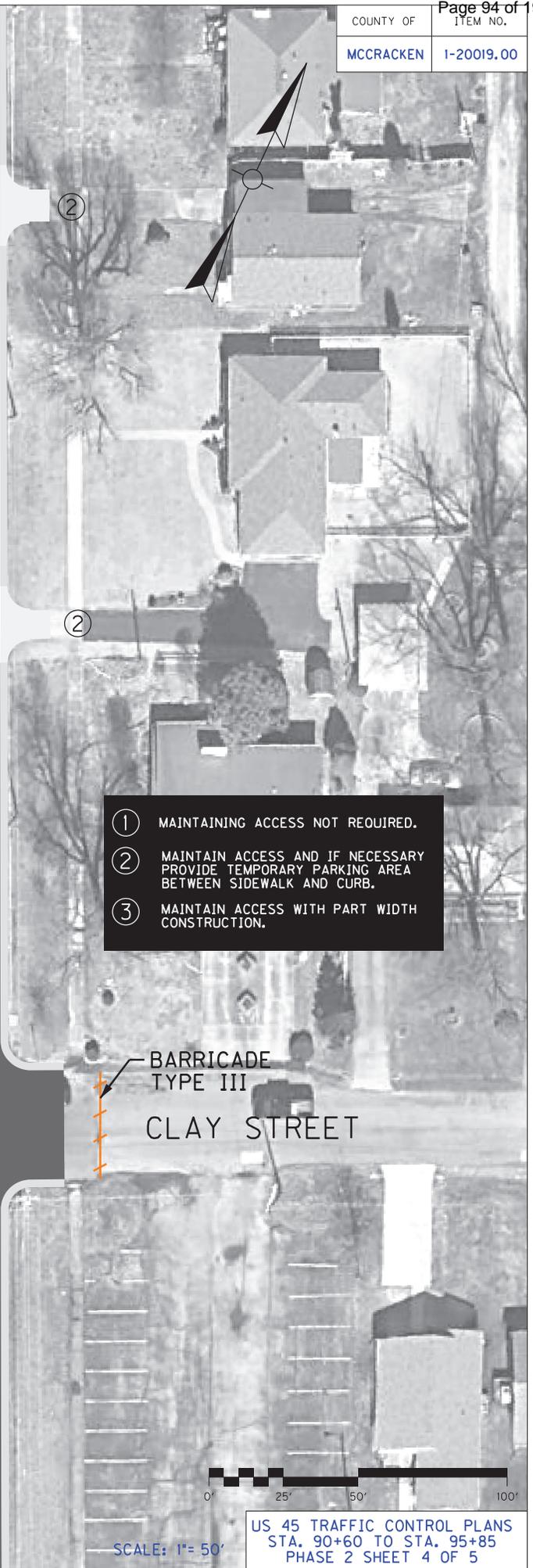
SCALE: 1" = 50'

US 45 TRAFFIC CONTROL PLAN
STA. 85+35 TO STA. 90+60
PHASE 2 SHEET 3 OF 5

COUNTY OF	ITEM NO.
MCCRACKEN	I-20019.00

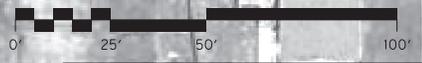


PHASE 2 CONSTRUCTION

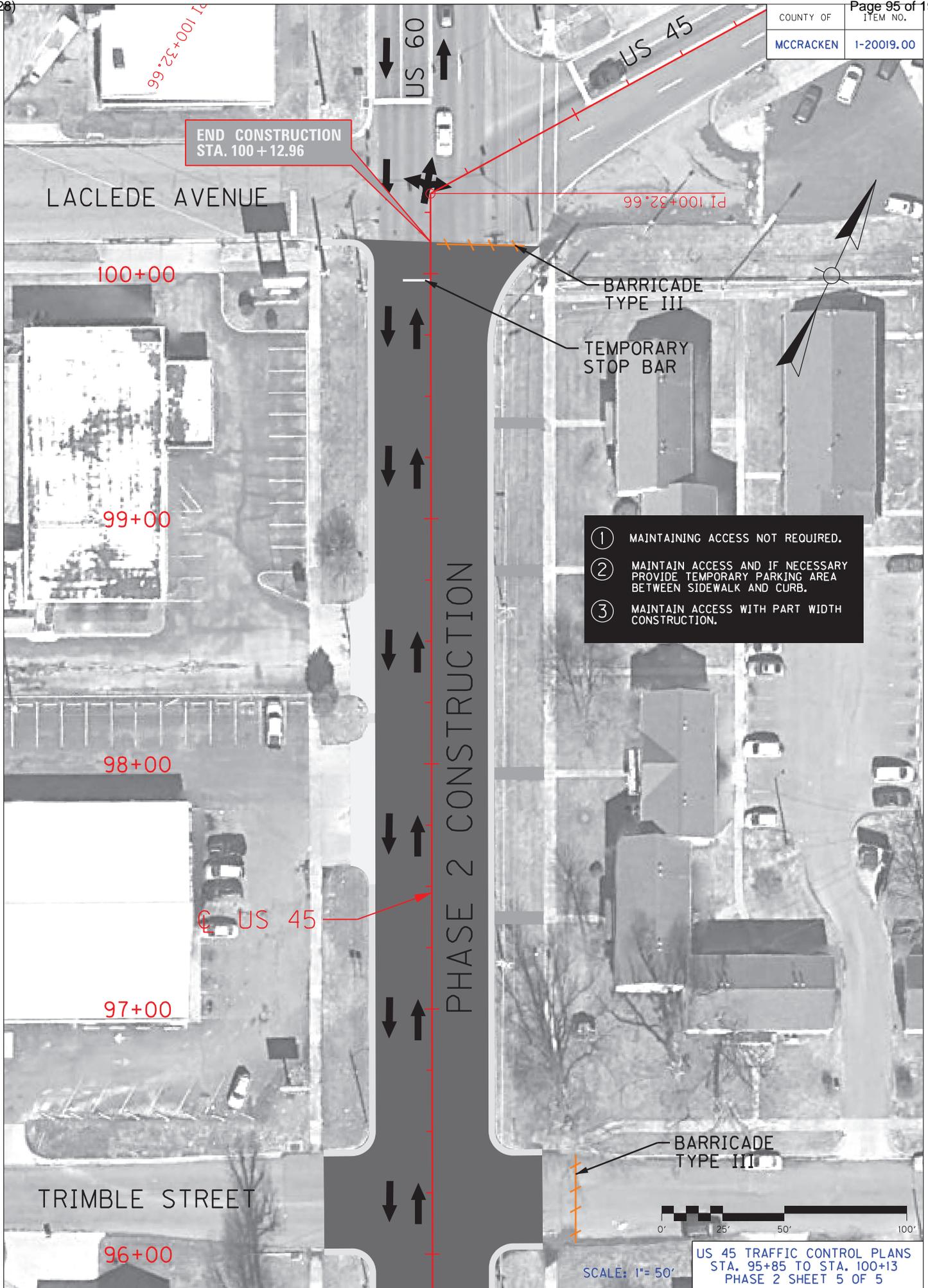


- ① MAINTAINING ACCESS NOT REQUIRED.
- ② MAINTAIN ACCESS AND IF NECESSARY PROVIDE TEMPORARY PARKING AREA BETWEEN SIDEWALK AND CURB.
- ③ MAINTAIN ACCESS WITH PART WIDTH CONSTRUCTION.

BARRICADE
TYPE III
CLAY STREET



COUNTY OF	ITEM NO.
MCCRACKEN	I-20019.00



END CONSTRUCTION
STA. 100 + 12.96

LACLEDE AVENUE

100+00

99+00

98+00

97+00

96+00

US 60

US 45

PI 100+32.66

BARRICADE
TYPE III

TEMPORARY
STOP BAR

- ① MAINTAINING ACCESS NOT REQUIRED.
- ② MAINTAIN ACCESS AND IF NECESSARY PROVIDE TEMPORARY PARKING AREA BETWEEN SIDEWALK AND CURB.
- ③ MAINTAIN ACCESS WITH PART WIDTH CONSTRUCTION.

PHASE 2 CONSTRUCTION

US 45

BARRICADE
TYPE III



SCALE: 1" = 50'

US 45 TRAFFIC CONTROL PLANS
STA. 95+85 TO STA. 100+13
PHASE 2 SHEET 5 OF 5

US 45 - MCCRACKEN CO.
SPECIAL NOTES

**SPECIAL NOTE FOR
ASPHALT MILLING AND TEXTURING**

Begin paving operations immediately after the commencement of the asphalt milling operation. Continue paving operations continuously until completed. Do not allow public traffic to drive on the milled surface. If paving operations are not begun within this time period, liquidated damages will be assessed at the rate prescribed by Section 108.09 of the current Standard Specifications until such time as paving operations are begun.

Removal of the existing pavement markers prior to the milling operation is considered incidental to the bid item "Asphalt Pavement Milling and Texturing".

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS

The dimensions shown on the typical sections for pavement and shoulder widths are nominal or typical dimensions. The actual dimensions to be constructed or diamond ground may be varied to fit existing conditions as directed or approved by the Engineer. It is not intended that existing pavement or shoulders be widened unless specified elsewhere in the Proposal.

SPECIAL NOTE FOR BEFORE YOU DIG

The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

Special Note for Fixed Completion Date And Liquidated Damages

This project will have a fixed completion date of **December 01, 2019** for completion of all work associated with this project.

Liquidated damages per the Standard Specifications will be charged for each calendar day for any work completed after December 01, 2019.

Contrary to Section 108.09 of the Standard Specifications, Liquidated Damages per the Standard Specifications will be charged during the months of December through March for all work that is not completed.

SPECIAL NOTE FOR HMA ELECTRONIC DELIVERY MANAGEMENT SYSTEM (HMA e-Ticketing)

This Special Note will apply when indicated on the plans or in the proposal. Section references herein are to the Department's Standard Specifications for Road and Bridge Construction current edition.

1.0 DESCRIPTION. Incorporate a GPS Fleet Management System for all HMA delivered to the project in order to monitor, track, and report loads of HMA during the construction processes from the point of measurement and loading to the point of incorporation to the project.

2.0 MATERIALS AND EQUIPMENT. Submit to the Engineer for approval, no fewer than 30 days prior to HMA placement activities, a GPS fleet management system supplier that can provide a qualified representative for on-site technical assistance during the initial setup, pre-construction verifications, and data management and processing as needed during the Project to maintain equipment.

Provide operator settings, user manuals, training videos, and required viewing/export software for review. Provide equipment that will meet the following:

1. A wireless fleet management or GPS device that is capable of tracking all delivery trucks (both company-owned and third-party) must be installed on all trucks and equipment (dump trucks, belly dumps, side-load dumps, transfer vehicles, pavers, or any other trucks/vehicles) used to transfer and incorporate HMA into the project. KYTC personnel shall have the ability to access Real Time monitoring through the use of a mobile device such as an iPad, smartphone, etc.
2. The fleet management system shall be fully integrated with the Contractor's Load Read-Out scale system at the HMA plant site.
3. The fleet management system shall have the ability to measure and track vehicles and their contents (weights and material types) continuously from the plant site to the project site. The system shall have internal battery backup capabilities due to loss of power, and have the ability to store data if GPS connectivity is lost and transmit that same data when unit re-establishes connectivity. To be considered continuous, no two data points shall be more than 60 seconds apart unless the vehicle is stopped. Duration of stop time for any reason shall be recorded.

3.0 CONSTRUCTION. Provide the Engineer with the manufacturer's specifications and all required documentation for data access at the pre-construction conference.

A. Construction Requirements

1. Install and operate equipment in accordance with the manufacturer's specifications.
2. Verify the GPS is working within the requirements of this Special Note.

B. Data Deliverables

Provide to the Engineer a means in which to gather report summaries by way of iOS apps, web pages, or any other method at the disposal of the Engineer. The Engineer may request data at any time during paving operations.

US 45 - MCCRACKEN CO.
SPECIAL NOTES

1. Real-time Continuous Data Items

Provide the Engineer access to a GIS map-based data viewer which displays the following information in real-time with a web-based system compatible with iOS and Windows environments.

- Each Truck
 - UniqueTruck ID
 - Truck status
 - Time At Source
 - Time At Destination
 - Time At Paver
 - Time At Scale
 - Time to and from plant/job
 - Time Stopped with Engine Running
 - Time of last transmission
 - Location (Latitude and Longitude in decimal degrees to nearest 0.0000001) every 60 seconds
 - Description of Material being transported (i.e. asphalt base, asphalt surface)
 - Mix Design Number
 - Net Weight of material being transported to the nearest 0.01 ton
 - Running Daily Total of Net Weight of material being transported to nearest 0.01 ton.
 - Project Number
- Scale Location
- Project Location
- Point of Delivery (i.e. paver)

2. Daily Summary

The following summary information shall be provided to the Engineer electronically within 4 hours of beginning operations on the next working day

- For each Material
 - List of Individual Loads
 - Contractor Name
 - Project Number
 - Unique Truck ID
 - Net Weight For Payment (nearest 0.01 tons)
 - Date
 - Mix Temperature at Time of Loading, Fahrenheit (to be key entered by plant)
 - Time Loaded
 - Time Unloaded
 - Delivery Location (Latitude/Longitude in decimal degrees to nearest 0.0000001)
- For each Bid Item
 - Total Quantity for Payment (nearest 0.01 tons)

4.0 MEASUREMENT. The Department will measure the HMA electronic delivery management system as a lump sum item.

US 45 - MCCRACKEN CO.
SPECIAL NOTES

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

1. Payment is full compensation for all work associated with providing all required equipment, training, and documentation.
2. Delays due to GPS satellite reception of signals or equipment breakdowns will not be considered justification for contract modifications or contract extensions.
3. Payment will be full compensation for costs related to providing the GPS system, including all equipped pavers and transfer vehicles, integration with plant load-out systems, and any software required for the construction and reporting process. All quality control procedures including the GPS systems representative's technical support and on-site training shall be included in the Contract lump sum price.

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24986EC	HMA ELECTRONIC DELIVERY MANAGEMENT SYSTEM	LS

December 5, 2018

SPECIAL NOTE FOR FIBER REINFORCEMENT OF ASPHALT

PART 1 – GENERAL

1.1 DESCRIPTION

This Section includes specifications for furnishing all materials, equipment, labor, and incidentals for mixing aramid fiber reinforcements to hot mix asphalt.

1.2 DEFINITIONS

- A. HMA- hot mix asphalt, without aramid fiber.
- B. WMA- warm mix asphalt, without aramid fiber.
- C. Reinforced HMA - hot mix asphalt including aramid fibers properly proportioned, uniformly mixed and coated with asphalt.
- D. Aramid fiber - pure aramid fiber meeting the material properties of this specification, without additive materials.
- E. Delivery material(s) - the material(s) combined with the pure aramid fiber to facilitate Aramid fiber and HMA/WMA proportioning, uniform mixing with the HMA/WMA, and asphalt coating of the aramid fibers.
- F. Aramid product - the aramid supplier’s mixture of pure aramid fiber and delivery material(s).
- G. Manufacturer - the company that produces the aramid fiber from raw materials.
- H. Supplier - the company that offers an aramid product.

PART 2 – PRODUCT

2.1 MATERIALS

Meet the following aramid fiber properties.

Property	Measure	Standard
Material	Aramid	ASTM D276
Form	Monofilament fibers	Manufacturer Certification
Length	0.75-1.50 inches (+/- 10%)	Manufacturer Cert.
Specific Gravity	1.44	ASTM D276
Minimum Tensile Strength	400,000 psi	ASTM D3379
Maximum Tensile Elongation	1.8 %	ASTM D3379
Degradation Temperature	800 degrees F	ASTM D276
Acid and Alkali Resistance	Inert	Manufacturer Cert.

2.2 SUBMITTALS

Submit the following.

- A. Identify the mixing plant.
- B. Provide a specification sheet from the aramid fiber manufacturer.
- C. Provide the following from the aramid product supplier at least three weeks prior to HMA/WMA production.
 - 1. The supplier’s specified mix rate for the aramid product.
 - 2. Certification that the amount of aramid fiber in the aramid product will be between 2.1 and 4.0

December 5, 2018

ounces of pure aramid fiber for each ton of hot mix asphalt.

3. Evidence showing how many times, if any, the supplier's fiber product has been successfully produced at the asphalt plant to be used for the project.
4. Proven method of introducing the aramid fibers into the hot mix asphalt which will not cause the aramid fibers to become airborne.

2.3 JOB MIX FORMULA

When aramid fiber is required as a mixture ingredient, modification to the job mix formula is not required.

PART 3 – EXECUTION

3.1 CONSTRUCTION REQUIREMENTS

Store aramid product in a dry environment and do not allow them to be in contact with moisture.

Mix 3.0 ounces (+/- 1.0 ounces) of aramid fibers per ton of asphalt. The weight applied is for pure aramid fibers only, weight of any delivery materials is not considered.

Have a fiber supplier's representative on site during the first day of production mixing. This requirement can be waived if fiber supplier and HMA/WMA producer can supply evidence of supplier's brand of fiber product being successfully produced by the HMA/WMA producer. The fiber supplier's representative may be on site for additional days as requested by the Engineer.

Introduce the aramid product as follows:

1. Batch Plant

When a batch type plant is used, add the aramid product dosage to the aggregate in the weigh hopper. This may be done with loose fibers and a fiber metering device, or may be done by using manual dosing equipment. If necessary, increase the batch dry mixing time to ensure the aramid fibers are uniformly distributed prior to the injection of asphalt cement into the mixer.

2. Drum Plant

When a continuous or drier-drum type plant is used, add the aramid product to the RAP material to uniformly disperse with the aggregate and injected asphalt. Use a separate aramid product metering device feed system to proportion by weight of total mix, the required percentage of fiber reinforcement into the mixture. Control the aramid product metering system with a proportioning device to meet the dosing requirements.

When a continuous or drier-drum type plant is used for limited production volumes, the addition of the aramid product may be done by using manual measuring tools or equipment and adding them directly onto the RAP belt or into the RAP opening on the plant. Because this is not an automated process, a written protocol must be supplied by the producer to demonstrate how they will attain the dosage requirement, and documentation must be supplied by the

US 45 - MCCRACKEN CO.
SPECIAL NOTES

December 5, 2018

material manufacturer assuring this method will produce the desired uniform aramid fiber distribution.

Mix the aramid fiber with the aggregate longer, if needed, to allow thorough distribution of aramid fibers at the end of the mixing process and to promote asphalt coating of individual strands of aramid fiber. At the start of any fiber mixing, visually observe the reinforced HMA/WMA at the plant and in first three trucks at the point of discharge and prior to delivery to the job site. Observation shall include using a shovel or other device. Look for proper distribution of aramid fibers and make mixing adjustments if needed.

WMA: Use of a feeder system will be required for both Drum and Batch plants when producing Warm Mix Asphalt to ensure correct distribution and coating of the aramid fibers. This requirement maybe waved if the asphalt producer can demonstrate complete melting of the delivery material and proper incorporation of the aramid fibers into the WMA.

3.2 ACCEPTANCE

Acceptance of the reinforced HMA/WMA will include the following factors:

1. Aramid fiber is properly proportioned based on documentation comparing fiber feed to HMA/WMA mix production. A log of the total amount of aramid fibers applied certified by fiber manufacturer/supplier shall be required daily.
2. By visual inspection at the end of the mixing process, there is no clumping of aramid fiber or aramid delivery product and the aramid fibers are uniformly distributed.
3. All other mixture and density requirement of the asphalt as detailed in the Standard Specifications, current edition, shall apply.

PART 4 - MEASUREMENT AND PAYMENT

The Department will measure the quantity of Fiber Reinforcement for HMA/WMA as ton of asphalt placed with fibers. Each ton of asphalt placed with the aramid fibers according to this special note will be measured and paid for at the contract unit bid price per ton, and shall include full compensation for furnishing all labor, tools, equipment, and incidentals for doing all the work involved in adding the fibers to HMA/WMA.

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24785EC	Fiber Reinforcement for HMA	Tons

SPECIAL NOTE FOR FULL DEPTH RECLAMATION WITH CEMENT

1. GENERAL

1.1. Description. Full-depth reclamation (FDR) with cement, shall consist of pulverizing and mixing existing asphalt pavement and base course material with portland cement, soil, and water to produce a dense, hard, cement treated base. It shall be proportioned, mixed, placed, compacted, and cured in accordance with this specification, and shall conform to the lines and grades shown in the plan.

2. MATERIALS

2.1. Recycled Asphalt Pavement (RAP) and Base Material. Shall consist of the existing asphalt pavement, existing base course material and/or subgrade material. The base course and subgrade material shall not contain roots, topsoil, or any material deleterious to its reaction with cement. The particle distribution of the processed material shall be such that 100% passes a 3-inch sieve, at least 95% passes a 2-inch sieve, at least 55% passes a No. 4 sieve, and maximum 20% passing the 200 sieve.

2.1.1. Mix Design. Remove samples of RAP and base material to the specified depth and perform appropriate testing to establish mix design. Submit mix design to the Engineer for approval one week before the planned start of work. Approval of the mix design by the Engineer is solely for monitoring quality control and in no way releases the Contractor from his responsibilities.

2.1.2. Mix Design Development. Mix Design Development - Samples must be obtained inclusive of the depth to be recycled. Sampled materials must be properly processed and prepared to closely simulate field conditions (use auger cuttings taken from the surface to 2-3 inches below the treatment depth). A Qualified Technical Representative will analyze the samples and provide the following information as part of the mix design to the Engineer:

- Location of core samples.
- Thickness and description of existing pavement and aggregate layers to be reclaimed.
- A selected matrix of soils testing standards (performed on mixed sample, except T208.)
 - Moisture Content AASHTO T265 - Mechanical and Hydrometer
 - Particle Size Analysis of Soils AASHTO T88
 - Liquid Limit AASHTO T89
 - Plastic Limit AASHTO T90
 - Moisture Density AASHTO T99
 - Unconfined Compression AASHTO T208 - To be performed on subgrade soil only if more than 20% of the underlying subgrade is to be included in the portland cement stabilized layer.

2.2. Cement. Shall comply with Section 801 of the KYTC Standard Specifications for Road and Bridge Construction, current edition.

2.3. Water. Shall be free from substances deleterious to the curing of the cement-treated material.

3. EQUIPMENT

3.1. Description. FDR may be constructed with any machine or combination of machines that will produce a satisfactory product meeting the requirements for depth of pulverization, cement and water application, mixing, compacting, finishing, and curing as provided in this specification.

3.2. Mixing Methods. Mixing shall be accomplished in place, using single-shaft or multiple-shaft mixers. Agricultural disks or motor graders are not acceptable mixing equipment.

3.3. Cement Proportioning. Spreading of the cement shall be done with a spreader truck designed to spread dry particulate such as cement to insure a uniform distribution. Spreaders or distributors used shall be able to demonstrate a consistent and accurate application rate, as well as dust control during application. The mechanical cement spreader shall be capable of dispensing a measured quantity of cement +/- 3 lbs per square yard in advance of the pulverizer just prior to each pass of the stabilizing operation. The pulverizer shall abut or slightly overlap (3") previous pass to ensure a continuous homogeneous mass of granular material and cement. Cement spreader does not have to abut or overlap previous pass as long as the calculated quantity of cement is dispersed in front of the pulverizer.

3.4. Application of Water. Water may be applied through the mixer or with water trucks equipped with pressure-spray bars. If using the spray bar system, road base shall be pre-wet to obtain optimum moisture content prior to the dispensing of cement. Do not apply water directly to the roadway before or after cement placement without first pulverizing the roadbed.

3.5. Compaction. Compact the FDR base uniformly to a minimum of 98% of maximum dry density in accordance with ASTM D558 or AASHTO T134 based on a moving average of five consecutive tests with no individual test below 96%. Establish a compaction pattern that will achieve the required density without over compaction.

4. CONSTRUCTION REQUIREMENTS

4.1. General

4.1.1. Preparation. Methods, equipment, tools, and any machinery to be used during construction shall be approved by the Engineer prior to the start of the project. Prior to the actual reclaiming of the roadway, drop inlets or catch basins that might be affected shall be sufficiently barricaded to prevent reclaimed subbase material, silt or runoff from plugging the drainage system.

Sufficient surface drainage must be provided for each stage of construction so that ponding does not occur on the reclaimed sub-base course prior to the placement of bituminous concrete.

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Reclamation shall be accomplished by means of a self-propelled, traveling rotary reclaimer or equivalent machine capable of cutting through existing bituminous concrete pavement to depths of up to 15 inches with one pass. The machine shall be equipped with an adjustable grading blade leaving its path generally smooth for initial compaction. Equipment such as road planers or cold milling machines designed to mill or shred the existing bituminous concrete, rather than crush or fracture it, shall not be allowed.

Existing bituminous concrete pavement and any underlying granular material must be pulverized and mixed so as to form a homogenous mass of reclaimed sub-base material which will bond together when compacted.

In areas where the vertical or horizontal geometry of the proposed roadway is different than that of the existing, the roadway shall be reclaimed in-place and the reclaimed material sub-base placed in windrows or stockpiled while any filling or excavation is performed. When the proposed sub-grade elevation is achieved, the reclaimed sub-base material will be placed back onto the roadway in lifts no greater than five (5) inches in depth before being compacted.

Reshaping using the reclaimed sub-base material should be minimized in order to insure that the roadway has a uniform thickness of reclaimed sub-base material throughout. Unless otherwise specified, when reshaping of the roadway is required, it should be performed utilizing additional sub-base or processed aggregate base.

The reclaimed sub-base material shall be compacted prior to the placement of any additional granular material used (sub-base or processed aggregate base). Subsequent to the compaction of the reclaimed sub-base material, any reshaped material or additional material placed on the roadway should not exceed five (5) inches in depth before being compacted.

A motor grader shall be used for shaping, fine grading, and finishing the surface of the reclaimed material or any other granular materials placed to form the surface prior to paving.

Any surface irregularities which develop during or after the above described work shall be corrected until it is brought to a firm and uniform surface satisfactory to the Engineer.

- 4.1.2. Mixing and Placing.** FDR processing shall not commence when the soil aggregate or sub-grade is frozen, or when the air temperature is below 40°F (4°C). Moisture in the base course material at the time of cement application shall not exceed the quantity that will permit a uniform and intimate mixture of the pulverized asphalt, base material and cement during mixing operations, and shall be within +/-2% of the optimum moisture content for the processed material at start of compaction.

The operation of cement application, mixing, spreading, compacting, and finishing shall be continuous and completed within 2 hours from the start of mixing. Any processed material that has not been compacted and finished shall not be left undisturbed for longer than 30 minutes.

4.1.3. Scarifying. Before cement is applied, initial pulverization or scarification may be required to the full depth of mixing. Scarification or pre-pulverization is a requirement for the following conditions:

- When the processed material is more than 3% above or below optimum moisture content. When the material is below optimum moisture content, water shall be added. The pre-pulverized material shall be sealed and properly drained at the end of the day or if rain is expected.
- For slurry application of cement, initial scarification shall be done to provide a method to uniformly distribute the slurry over the processed material without excessive runoff or ponding

4.2. Application of Cement. The specified quantity of cement shall be applied uniformly in a manner that minimizes dust and is satisfactory to the engineer. If cement is applied as a slurry, the time from first contact of cement with water to application on the soil shall not exceed 60 minutes. The time from cement placement on the soil to start of mixing shall not exceed 30 minutes.

4.3. Mixing. Mixing shall begin as soon as possible after the cement has been spread and shall continue until a uniform mixture is produced. The mixed material shall meet the following gradation conditions:

4.3.1. The final mixture (bituminous surface, granular base, and sub-grade soil) shall be pulverized such that 100% passes the 3-inch sieve, at least 95% passes the 2-in. sieve, and at least 55% passes the No. 4 sieve. Additional material can be added to the top or from the sub-grade to improve the mixture gradation, as long as this material was included in the mixture design.

4.3.2. The final pulverization test shall be made at the conclusion of mixing operations. Mixing shall be continued until the product is uniform in color, meets gradation requirements, and is at the required moisture content throughout. The entire operation of cement spreading, water application, and mixing shall result in a uniform pulverized asphalt, soil, cement, and water mixture for the full design depth and width.

4.4. Compaction. The processed material shall be uniformly compacted to a minimum of 98% of maximum density based on a moving average of five consecutive tests with no individual test below 95%. Field density of compacted material can be determined according to the KYTC standard specifications. Optimum moisture and maximum density shall be determined prior to start of construction and also in the field during construction by a moisture-density test approved by the Engineer.

At the start of compaction, the moisture content shall be within +/-2% of the specified optimum moisture. No section shall be left undisturbed for longer than 30 minutes during

compaction operations. All compaction operations shall be completed within 2 hours from start of mixing.

- 4.5. Finishing.** As compaction nears completion, the surface of the FDR material shall be shaped to the specified lines, grades, and cross sections. If necessary or as required by the engineer, the surface shall be lightly scarified or broom-dragged to remove imprints left by equipment or to prevent compaction planes. Compaction shall then be continued until uniform and adequate density is obtained.

During the finishing process the surface shall be kept moist by means of water spray devices that will not erode the surface. Compaction and finishing shall be done in such a manner as to produce a dense surface free of compaction planes, cracks, ridges, or loose material. All finishing operations shall be completed within 4 hours from start of mixing.

- 4.6. Curing.** Finished portions of the FDR base that are traveled on by equipment used in constructing an adjoining section shall be protected in such a manner as to prevent equipment from marring or damaging completed work.

After completion of final finishing, the surface shall be cured according to section 208.03.06 of the standard specifications.

- 4.7. Traffic.** Completed portions of FDR base can be opened immediately to low-speed local traffic and to construction equipment if a curing seal is used and provided the curing material is not impaired, and provided the FDR base is sufficiently stable to withstand marring or permanent deformation. The section can be opened up to all traffic after the FDR base has received a curing compound or subsequent surface and is sufficiently stable to withstand marring or permanent deformation. If continuous moist curing is employed in lieu of a curing compound or subsequent surfacing within 7 days, the FDR base can be opened to all traffic after the 7-day moist curing period, provided the FDR base has hardened sufficiently to prevent marring or permanent deformation.

- 4.8. Surfacing.** In most cases, allow the FDR to cure for a minimum of two days (48 hours after completing finishing operations) before applying a surface course in order to determine if any isolated soft spots exist. If the Engineer deems the situation warrants faster construction, the surfacing can be placed any time after finishing, as long as the soil-cement is sufficiently stable to support the required construction equipment without marring or permanent distortion of the surface.

- 4.9. Maintenance.** The contractor shall maintain the cement-treated material in good condition until all work is completed and accepted. Maintenance shall include immediate repairs of any defects that may occur. If it is necessary to replace any processed material, the replacement shall be for the full depth, with vertical cuts, using either cement-treated material or concrete. No skin patches will be permitted. Such maintenance shall be done by the contractor at his own expense.

5. INSPECTION AND TESTING

5.1. Description. The contractor shall make such inspections and tests as deemed necessary to ensure the conformance of the work to the contract documents. These inspections and tests may include, but shall not be limited to:

Recycling operations including recycling speed, yield monitoring, monitoring treatment depth, procedures for avoiding recycling and curing in inclement weather, methods to ensure that segregation is minimized, procedures for mix design modification, grading and compacting operations, and cement application procedure.

Density testing of the recycled material will be performed using the nuclear method.

Only those materials, machines, and methods meeting the requirements of the contract documents shall be used unless otherwise approved by the engineer.

All testing of processed material or its individual components, unless otherwise provided specifically in the contract documents, shall be in accordance with the latest applicable ASTM or AASHTO specifications in effect as of the date of advertisement for bids on the project.

6. MEASUREMENT AND PAYMENT

6.1. Measurement.

6.1.1. Full Depth Reclamation. This Department will measure the quantity in square yards of completed and accepted full depth reclamation. The Department will not measure corrective or reconstructed work for payment. The Department will not measure water for payment and will consider it incidental to this item of work.

6.1.2. Asphalt Curing Seal. The Department measure curing seal for payment according to section 208 of the standard specifications.

6.2. Payment. This Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24936EC	Full Depth Reclamation with Cement	Square Yard
02542	Cement	Ton
02702	Sand for Blotter	Ton
00358	Asphalt Curing Seal	Ton

SPECIAL NOTE FOR SPRAY APPLIED THERMOPLASTIC PAVEMENT MARKING MATERIALS

I. DESCRIPTION

Except as provided herein, all work shall be performed in accordance with the Department’s Standard Specifications, Interim Supplemental Specifications, applicable Standard and Sepia Drawings, applicable Special Provisions and Special Notes, current editions. Article references are to the Standard Specifications. This project shall consist of furnishing all labor, equipment, materials and incidentals for the following:

- (1) Spray applied thermoplastic pavement marking materials with reflectorized glass beads for permanent applications

II. MATERIALS

- A. **DROP ON BEADS.** Use beads that will ensure the pavement marking material will meet retroreflectivity requirements. The Department will evaluate the beads as part of the marking system through retroreflectivity readings.
- B. **APPROVAL.** Select materials that conform to the composition and physical characteristic requirements below when evaluated in accordance with AASHTO T-250 or other test methods as cited. The Department will sample and evaluate for approval each lot of thermoplastic material delivered for use per contract prior to installation of the thermoplastic material. Do not allow the installation of thermoplastic material until it has been approved by the Division of Materials. Allow the Department a minimum of 10 working days to evaluate and approve thermoplastic material from the date sampled.
- C. **Composition.** Use a maleic-modified glycerol ester resin (alkyd binder) to formulate the thermoplastic material. Ensure the pigment, pre-mix beads, and filler are uniformly dispersed in the resin. Use material that is free from all dirt and foreign material. Provide independent analysis data and certification for each formulation stating the total concentration of each heavy metal present, the test method used for each determination, and compliance to 40 CFR 261 for leachable heavy metals content.

COMPOSITION		
(Percentage by Weight)		
Component	White	Yellow
Binder, ⁽¹⁾	26.0 min.	26.0 min.
Glass Beads (Premixed)	30 - 40	30 - 40
Titanium Dioxide (Rutile, Type II)	10.0 min.	—
Calcium Carbonate & Inert Fillers ⁽²⁾	42.0 max.	50.0 max.
Heavy Metals Content	Comply with 40 CFR 261	Comply with 40 CFR 261

⁽¹⁾Use a binder that consists of a mixture of synthetic resins, at least one being solid at room temperature, and high boiling point plasticizers. Ensure that at least one-third of the binder composition is solid maleic-modified glycerol ester resin and is not less than 8 percent by weight of the entire material formulation. Do not use alkyd binder that contains petroleum based hydrocarbon resins.

⁽²⁾The manufacturer may choose the amount of calcium carbonate and inert fillers, providing all other requirements of this section are met.

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Spray Applied Thermoplastic
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D. Physical Characteristics. For thermoplastic material heated for 4 hours at 425°F under agitation, conform to the following requirements.

a) **Color.** As determined with a spectrophotometer using D65 illuminant with a 45 degree entrance angle and 0 degree observation angle geometry.

CIELAB Color Coordinates		
	Yellow	White
Daytime Color (CIELAB) Spectrophotometer using illuminant D65 at 45° illumination and 0° viewing with a 2° observer	L* 81.76 a* 19.79 b* 89.89 Maximum allowable variation 6.0ΔE*	L* 93.51 a* -1.01 b* 0.70 Maximum allowable variation 6.0ΔE*
Nighttime Color (CIELAB) Spectrophotometer using illuminant A at 45° illumination and 0° viewing with a 2° observer	L* 86.90 a* 24.80 b* 95.45 Maximum allowable variation 6.0ΔE*	L* 93.45 a* -0.79 b* 0.43 Maximum allowable variation 6.0ΔE*

b) **Set Time.** Use material that, when applied at a temperature range of 375 ± 25 °F and thickness of 60 ± 10 mils, sets to bear traffic in not more than 2 minutes when the air and road surface temperature is approximately ≥ 50 ± 3 °F, and not more than 10 minutes when the air and road surface temperature is approximately < 50 ± 3 °F.

c) **Softening Point.** Ensure that the thermoplastic material has a softening point of 180 ± 15 °F.

d) **Bond Strength.** Ensure that the bond strength of the thermoplastic material to concrete exceeds 180 psi.

e) **Cracking Resistance at Low Temperature.** Ensure that the thermoplastic material shows no cracks when observed from a distance exceeding one foot.

f) **Impact Resistance.** Ensure the impact resistance of the thermoplastic material is a minimum of 50 inch-pounds.

g) **Flash Point.** Use thermoplastic material that has a flash point not less than 475 °F.

E. PACKAGING. Package thermoplastic material in suitable 50 pound containers to which the material shall not adhere during shipment or storage. Include a label stating that the thermoplastic material is to be maintained with a temperature range of 350 – 400°F during application. Provide the thermoplastic material in granular form.

F. SHELF LIFE. Ensure that the thermoplastic material conforms to this section for a period of one year. Replace any thermoplastic material not conforming to the above requirements.

G. MANUFACTURER’S TESTING. Perform testing in accordance with AASHTO T-250 on a minimum of one composite sample per 10,000 pounds, or portion thereof, per lot of thermoplastic produced.

H. CERTIFICATION. Submit manufacturer’s certification stating conformance to the requirements of this section for each lot of extruded thermoplastic delivered for use on projects. Clearly state the manufacture, formulation identification, product name, color, date of manufacturer, total quantity of lot produced, actual quantity of thermoplastic material represented, sampling method utilized to obtain the samples, and required manufacturer’s testing data for each composite sample tested to represent each lot produced.

III. CONSTRUCTION METHODS

- A. **SURFACE PREPARATION.** Contrary to Section 714.03.02 the removal of existing pavement markings will not be required for installation of thermoplastic markings. The contractor will be required to sweep all pavement surfaces prior to striping and maintain the cleaning operation far enough in advance of the striping operation to prevent any dust from the cleaning operation from mixing with the paint. The sweeper must maintain contact with the roadway. When the Engineer determines abnormal amounts of debris or other material have accumulated beyond the capability of the required sweeping unit which will require shoveling or other means to remove, the Engineer will make arrangements, prior to painting, to have the material removed by the Department.
- B. **INSTALLATION.** Install thermoplastic materials in accordance with Section 714, Durable Pavement Striping, and the following exceptions:
 - Install the thermoplastic materials at a minimum thickness of 60 mils.
 - Ensure the material temperature is maintained between 350 and 400°F.
 - Do not allow the material temperature to exceed 400°F.
- C. **RETROREFLECTIVITY.** The Department will evaluate installed markings in accordance with Section 714.03.06, Proving Period for Durable Markings.

IV. METHOD OF MEASUREMENT

- A. **ACCEPTANCE AND PAYMENT.** The Department will accept spray applied thermoplastic materials based on compliance of the manufacturer's certification and conformance of test results obtained by the Department to the requirements of this special note.

Contrary to Section 714.03.08, Acceptance of Non-Specification Thermoplastic Markings, the Department will not accept non-specification compliant markings. Remove non-specification compliant markings by water blasting. The Department will perform random thickness tests on applied markings to determine compliance to thickness requirements

IV. BASIS OF PAYMENT

The Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24995EC	PAVE STRIPING-SPRAY THERMO-6 IN W	LF
24996EC	PAVE STRIPING-SPRAY THERMO-6 IN Y	LF

The Department will consider payment as full compensation for furnishing all labor, materials, equipment, and incidentals required to construct spray applied thermoplastic pavement markings.

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SPECIAL NOTE FOR NON-TRACKING TACK COAT

1. DESCRIPTION AND USEAGE. This specification covers the requirements and practices for applying a non-tracking tack asphalt coating. Place this material on the existing pavement course, prior to placement of a new asphalt pavement layer. Use when expedited paving is necessary or when asphalt tracking would negatively impact the surrounding area. This material is not suitable for other uses. Ensure material can “break” within 15 minutes under conditions listed in 3.2.

2. MATERIALS, EQUIPMENT, AND PERSONNEL.

2.1 Non-Tracking Tack. Provide material conforming to Subsection 2.1.1.

2.1.1 Provide a tack conforming to the following material requirements:

Property	Specification	Test Procedure
Viscosity, SFS, 77 ° F	20 – 100	AASHTO T 72
Sieve, %	0.3 max.	AASHTO T 59
Asphalt Residue ¹ , %	50 min.	AASHTO T 59
Oil Distillate, %	1.0 max.	AASHTO T 59
Residue Penetration, 77 ° F	20 max.	AASHTO T 49
Original Dynamic Shear (G*/sin δ), 82 ° C	1.0 min.	AASHTO T 315
Softening Point, ° F	149 min.	AASHTO T 53
Solubility, %	97.5 min.	AASHTO T 44

¹ Bring sample to 212 °F over a 10-15 minute period. Maintain 212 °F for 15-20 minutes or until 30-40 mL of water has distilled. Continue distillation as specified in T59.

2.2. Equipment. Provide a distributor truck capable of heating, circulating, and spraying the tack between 170 °F and 180 °F. Do not exceed 180 °F. Circulate the material while heating. As required by the manufacturer, ensure the spray bar is equipped with #1 or #2 ¼” V-slot Etnyre nozzles. Other nozzles are not acceptable. Arrange the nozzles in the following patterns from left to right:

Nozzle number(s)	Activity	Orientation
1	On	Vertical
2	Off	-
3	On	Horizontal
4 & 5	Off	-
6	On	Horizontal
Continue 2 off and 1 on pattern through rest of spray bar system.		

Ensure the bar can be raised to between 14 and 18” from the roadway.

2.3 Personnel. Ensure the tack supplier has provided training to the contractor on the installation procedures for this product. Make a technical representative from the supplier available at the request of the Engineer.

3. CONSTRUCTION.

3.1 Surface Preparation. Prior to the application of the non-tracking tack, ensure the pavement surface is thoroughly dry and free from dust or any other debris that would inhibit adhesion. Clean the surface by scraping, sweeping, and the use of compressed air. Ensure this preparation process occurs shortly before application to prevent the return of debris pavement. If rain is expected within one hour after application, do not apply material. Apply material only when the surface is dry, and no precipitation is expected.

3.2 Non-tracking Tack Application. Ensure the roadway temperature is a minimum of 40 °F and rising during the application of the tack. This material is not suitable for use in colder temperatures. Prior to applying the tack, demonstrate competence in applying the tack according to this note to the satisfaction of the Engineer. Heat the tack in the distributor to between 170 – 180 °F. After initial heating to between 170 – 180 °F, the material may be sprayed between 165 °F and 180 °F. Do not apply outside this temperature range. Apply material at a rate of 0.50 pounds (0.06 gallons) per square yard. Ensure full coverage of the material on the pavement surface. Full coverage of this material is critical. If full coverage is not achieved, material application rate may be increased to ensure full coverage. Do not heat material more than twice in one day.

3.3 Non-tracking Tack Certification. Furnish the tacks certification to the Engineer stating the material conforms to all requirements herein prior to use.

3.4 Sampling and Testing. The Department will require a sample of non-tracking tack be taken from the distributor at a rate of one sample per 15,000 tons of mix. Take two 1 gallon samples of the heated material and forward the sample to the Division of Materials for testing within 7 days. Ensure the product temperature is between 170 and 180 °F at the time of sampling.

4. MEASUREMENT. The Department will measure the quantity of non-tracking tack in tons. The Department will not measure for payment any extra materials, labor, methods, equipment, or construction techniques used to satisfy the requirements of this note. The Department will not measure for payment any trial applications of non-tracking tack, the cleaning of the pavement surface, or furnishing and placing the adhesive. The Department will consider all such items incidental to the non-tracking tack.

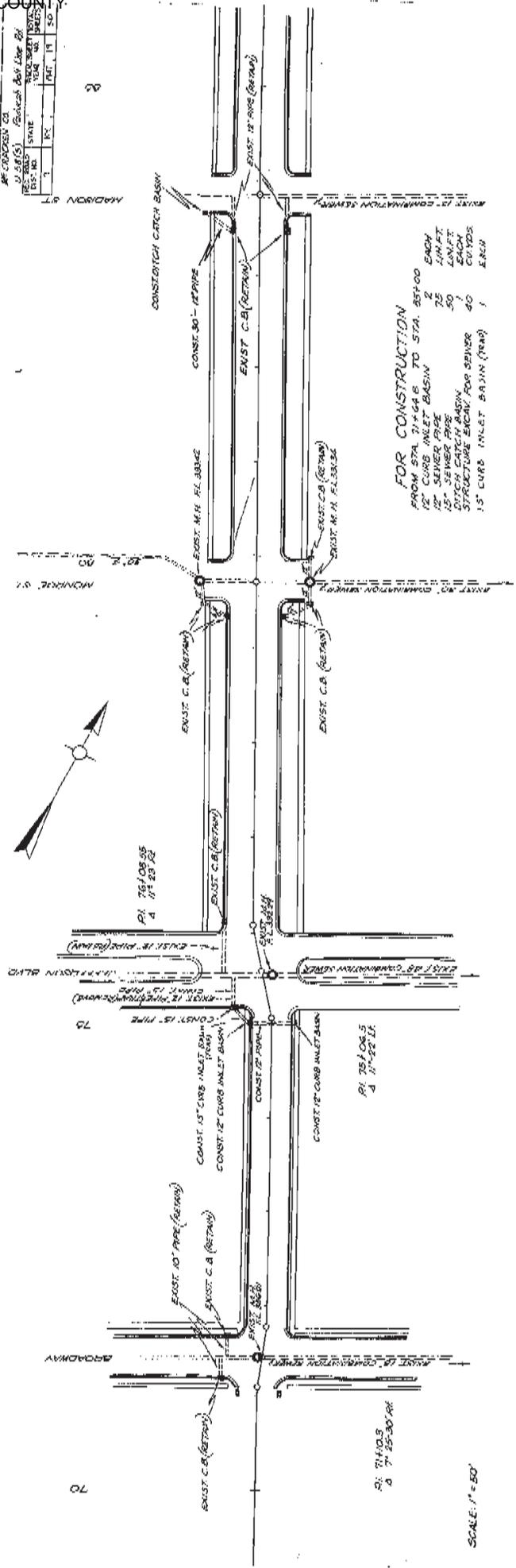
5. PAYMENT. The Department will pay for the non-tracking tack at the Contract unit bid price and apply an adjustment for each manufacturer's lot of material based on the degree of compliance as defined in the following schedule. When a sample fails on two or more tests, the Department may add the deductions, but the total deduction will not exceed 100 percent.

Non-Tracking Tack Price Adjustment Schedule						
Test	Specification	100% Pay	90% Pay	80% Pay	50% Pay	0% Pay
Viscosity, SFS, 77 ° F	20 – 100	19 - 102	17 - 18	15 - 16	14	≤13
			103 - 105	106 - 107	108 - 109	≥ 110
Sieve, %	0.30 max.	≤ 0.40	0.41 - 0.50	0.51 - 0.60	0.61 - 0.70	≥ 0.71
Asphalt Residue, %	50 min.	≥49.0	48.5 – 48.9	48.0 – 48.4	47.5-47.9	≤ 47.4
Oil Distillate, %	1.0 max.	≤1.0	1.1-1.5	1.6 - 1.7	1.8-1.9	>2.0
Residue Penetration, 77 ° F	20 max.	≤ 21	22 - 23	24 - 25	26 - 27	≥ 28
Original Dynamic Shear (G*/sin δ), 82 ° C	1.0 min.	≥0.95	0.92 – 0.94	0.90 – 0.91	0.85 - 0.89	≤ 0.84
Softening Point, ° F	149 min.	≥145	142 - 144	140 - 141	138 - 139	≤ 137
Solubility, %	97.5 min.	≥ 97.0	96.8 – 96.9	96.6 – 96.7	96.4 – 96.5	≤ 96.3

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24970EC	Asphalt Material for Tack Non-Tracking	Ton

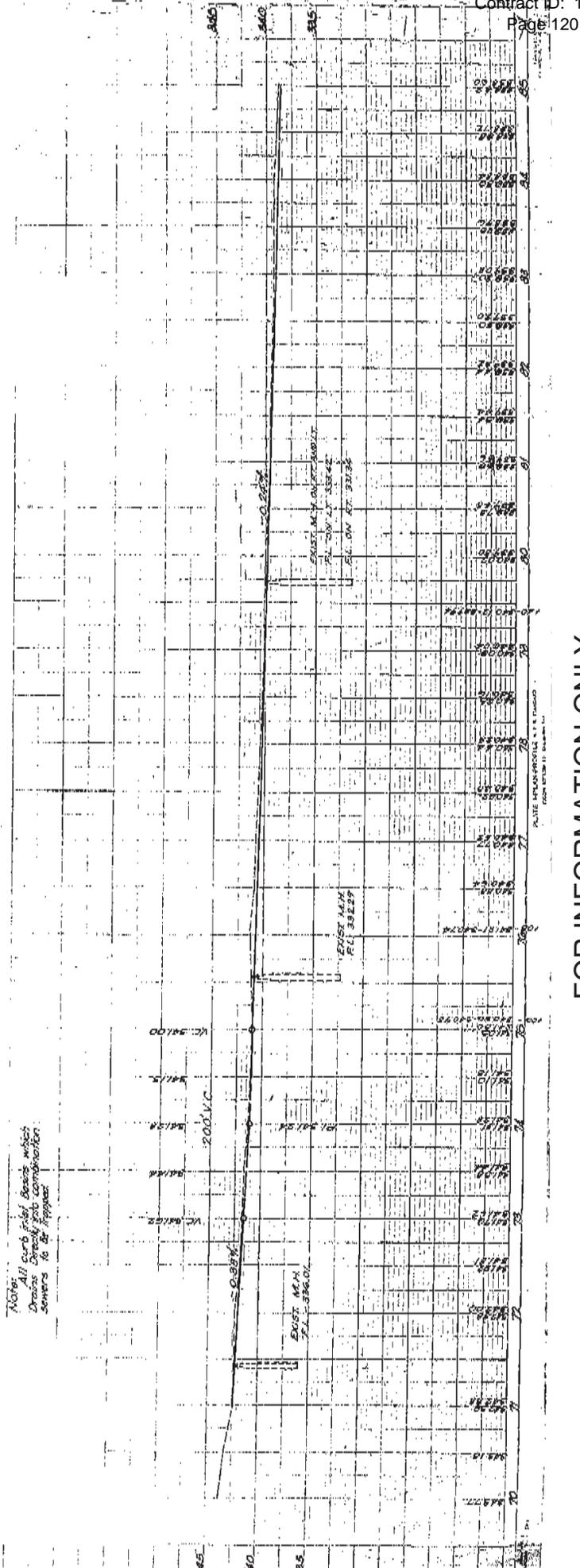
April 30, 2018

PROJECT NO.	STP 3015 (028)
DATE	11/23/12
SCALE	1" = 50'
DESIGNER	...
CHECKER	...
APPROVED	...



FOR CONSTRUCTION
 FROM STA. 71+00 TO STA. 85+00
 12" CURB INLET BASIN
 12" SEWER PIPE
 15" SEWER PIPE
 DITCH CATCH BASIN
 STRUCTURE ENCL. FOR SEWER
 15" CURB INLET BASIN (TRAP)

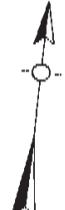
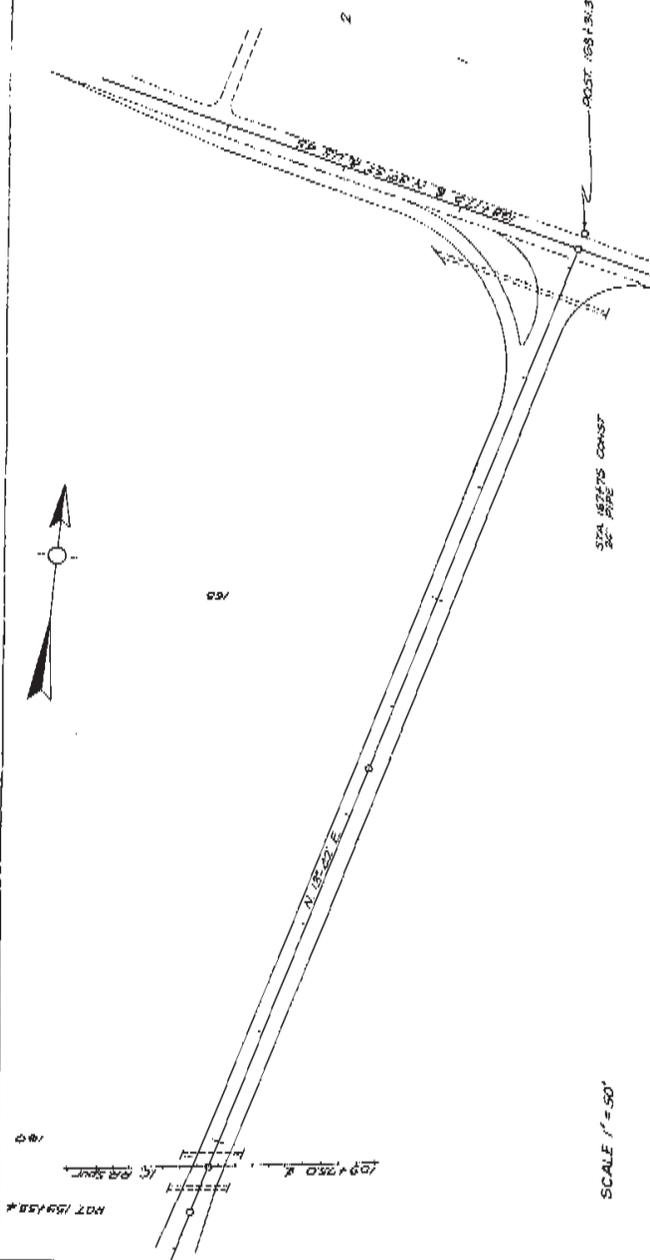
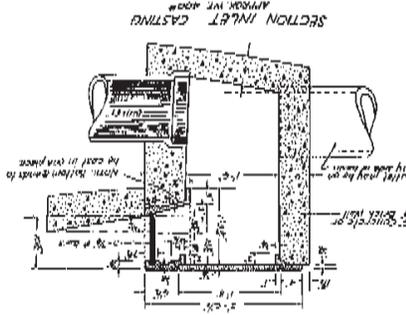
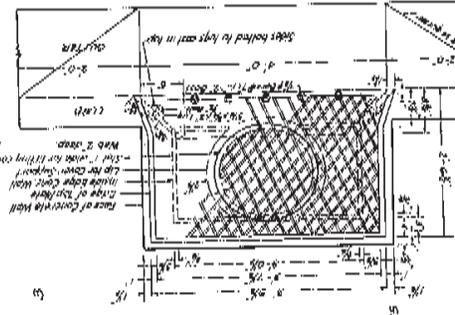
NOTE: All curb inlet basins which drain directly into communication sewers to be approved.



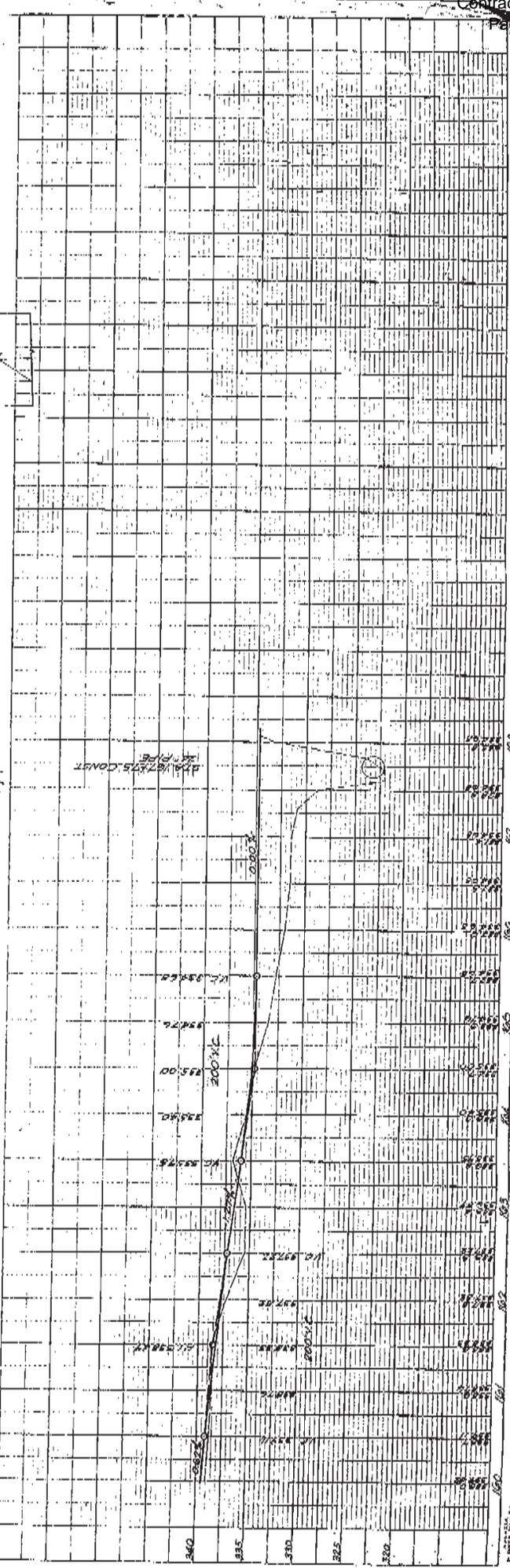
FOR INFORMATION ONLY

NO. CONTRACT	DATE	BY
100	10/15/15	JL
NO. SHEET	TOTAL SHEETS	DATE
1	25	10/15/15
NO. PROJECT	STATE	NO. SHEET
100	MO	25
NO. COUNTY	NO. SHEET	DATE
100	25	10/15/15

RADIUS TYPE CURB INLET BASIN



SCALE 1" = 50'



FOR INFORMATION ONLY

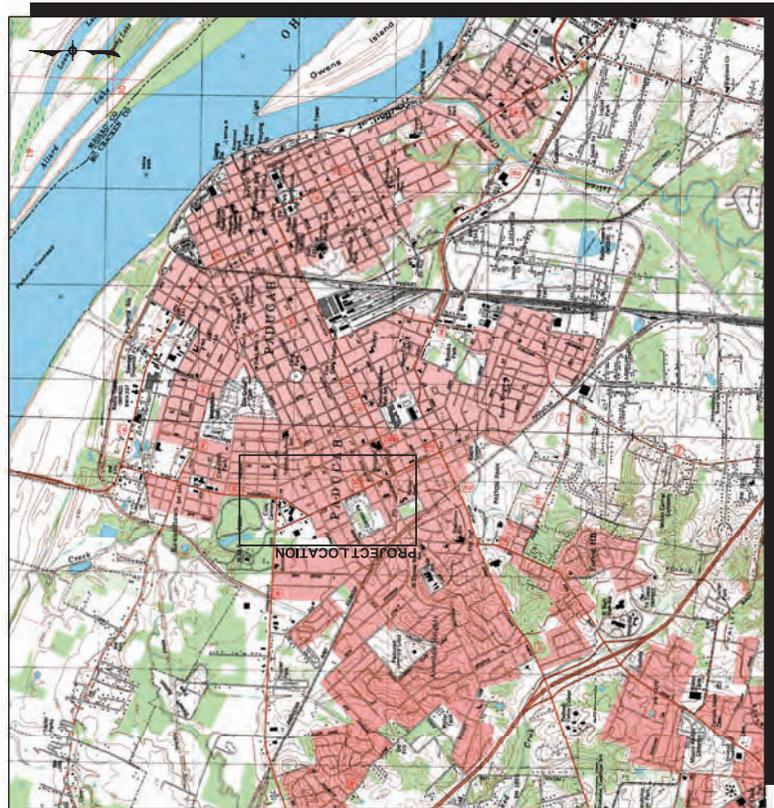
JOE CLIFTON DRIVE WATERMAIN REPLACEMENT



for PADUCAH WATER
Proj. No. 2016-03
PW Bid No.



Proj.No. 15006-7



VICINITY MAP
1"=5000'

PERMIT SUBMITTAL 4/18

DRAFT PLANS - FOR INFORMATION ONLY



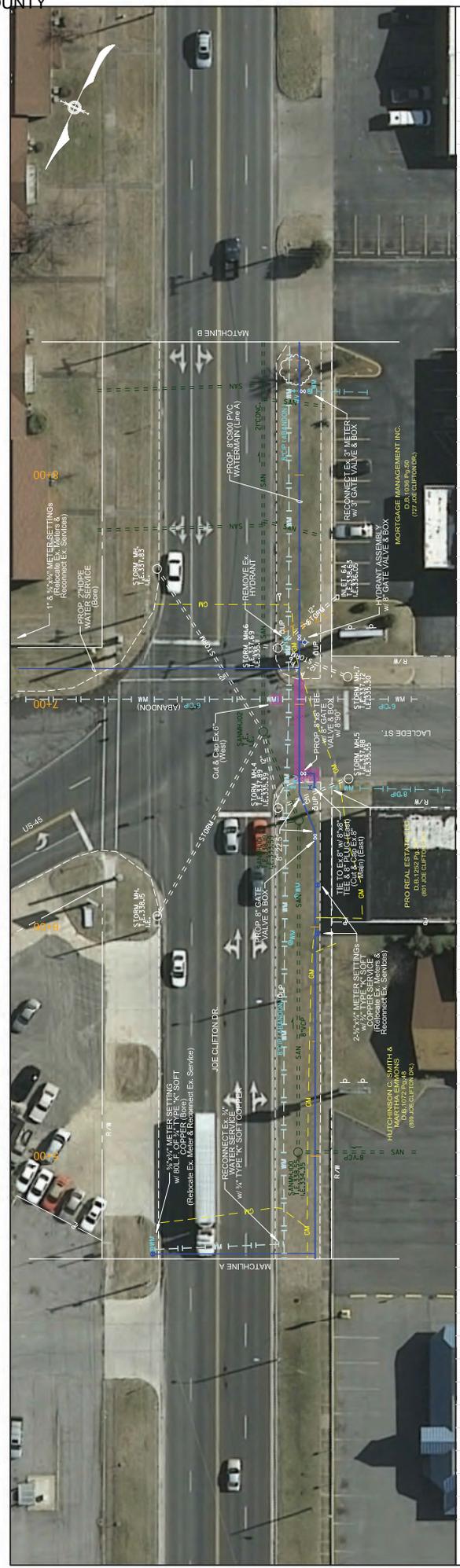
NO.	DATE	DESCRIPTION
3	04/18	PERMIT SUBMITTAL
2	05/16	90% PLANS
1	04/16	PRELIMINARY PLANS
ISSUE	DATE	DESCRIPTION

PROJECT NO.:	100027
DEVELOPER:	CDM
DESIGNER:	ELY
CHECKED BY:	RBF

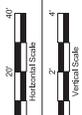
PROJECT ENGINEER:	PROJECT OWNER:
 RIVERCREST ENGINEERING, INC. 7020 U.S. HWY. 68 W. PADUCAH, KY 42003	 180 N. 8th STREET PADUCAH, KY 42003 (271) 442746 Paducah Water

PROJECT:	JOE CLIFTON DRIVE WATERMAIN REPLACEMENT
DRAWING NO.:	2
ISSUES:	WATERMAIN LAYOUT AND PROFILE

DRAFT PLANS - FOR INFORMATION ONLY



3	04/18	PERMIT SUBMITTAL	PROJECT NO. 150067	PROJECT ENGINEER:	PROJECT OWNER:	DATE	DESCRIPTION
2	05/16	80% PLANS	DEIGNED BY: CDM	PROJECT ENGINEER:	PROJECT OWNER:	DATE	DESCRIPTION
1	04/16	PRELIMINARY PLANS	DRAWN BY: ELY	PROJECT ENGINEER:	PROJECT OWNER:	DATE	DESCRIPTION
ISSUE	DATE		CHECKED BY: RBF	PROJECT ENGINEER:	PROJECT OWNER:	DATE	DESCRIPTION



PROJECT NO.	150067
DESIGNED BY	CDM
DRAWN BY	ELY
CHECKED BY	RBF

PROJECT: **JOE CLIFTON DRIVE WATERMAIN REPLACEMENT**
DRAWING NO.: **3**
ISSUES: WATERMAIN LAYOUT AND PROFILE

9+00

8+00

7+00

6+00

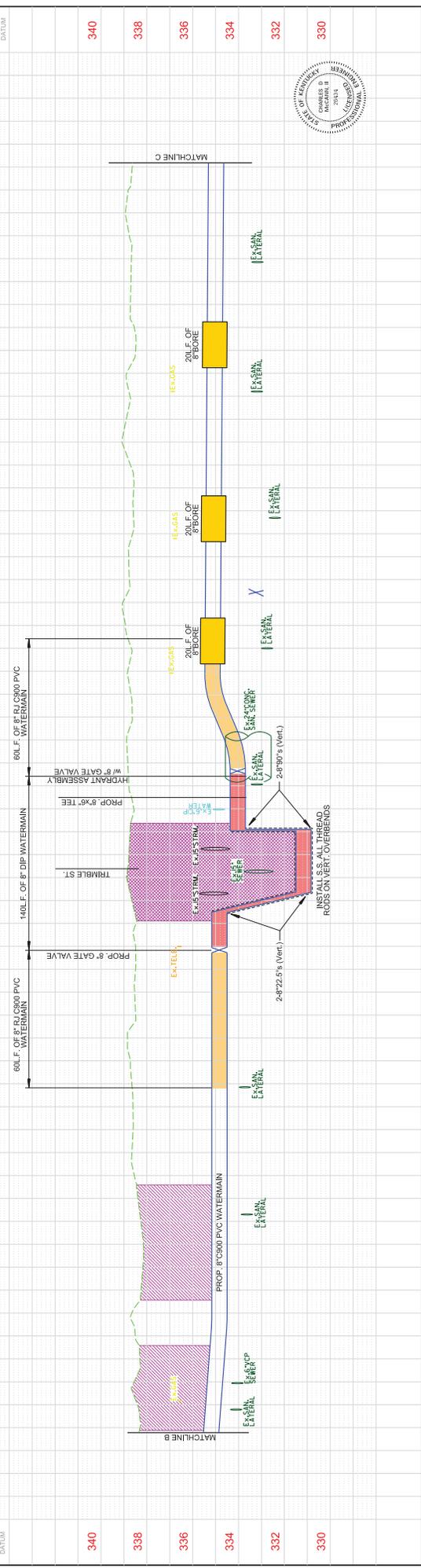
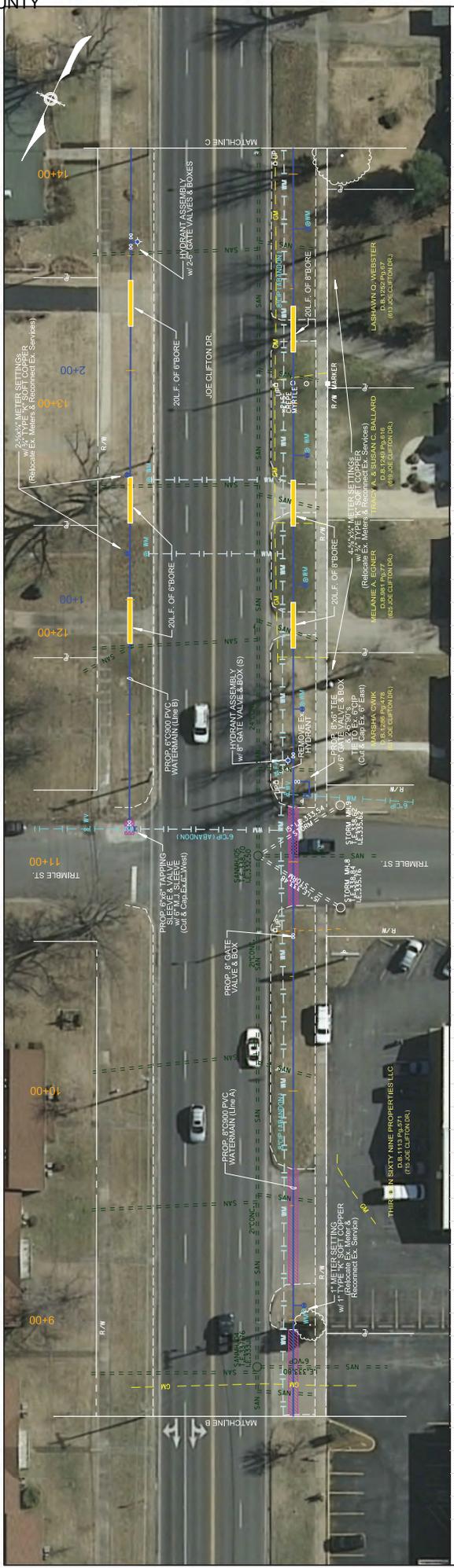
5+00

DATE/TIM

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338
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332
330



DRAFT PLANS - FOR INFORMATION ONLY



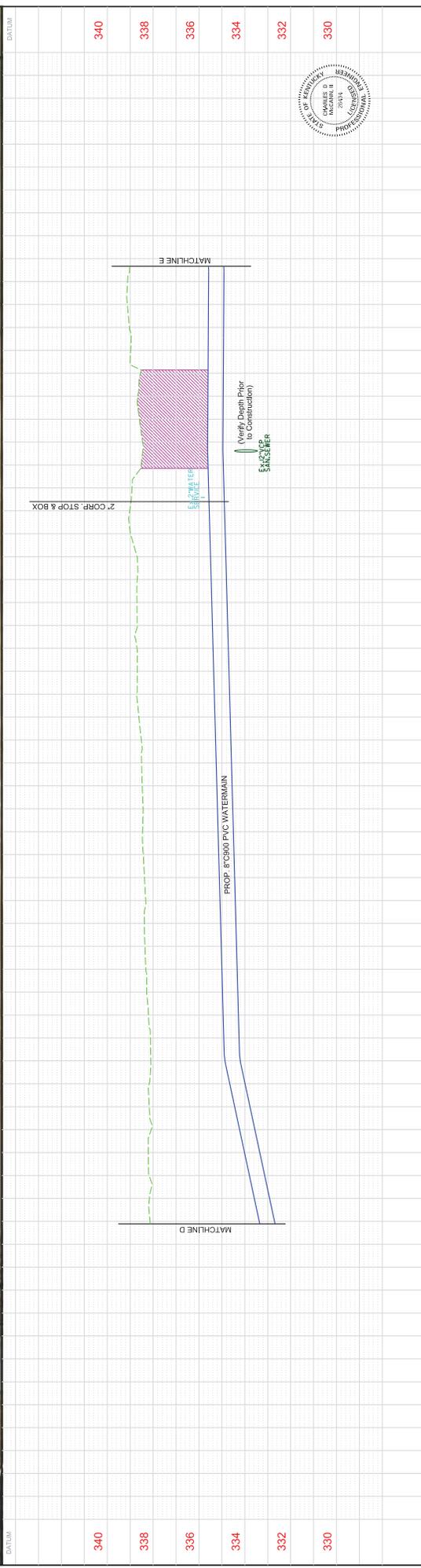
DATE	DESCRIPTION	ISSUED BY	CHECKED BY	DATE
04/18	PERMIT SUBMITTAL	100627		
05/16	50% PLANS	CDM		
04/16	PRELIMINARY PLANS	ELY		

PROJECT NO.:	100627
DESIGNED BY:	CDM
DRAWN BY:	ELY
CHECKED BY:	BBF

PROJECT OWNER:	1800 N. 8th STREET PADUCAH, KY 42002 (270) 442-7146 Paducah Water
PROJECT ENGINEER:	Rivercrest Engineering, Inc. 7020 U.S. HWY. 68 W PADUCAH, KY 42003

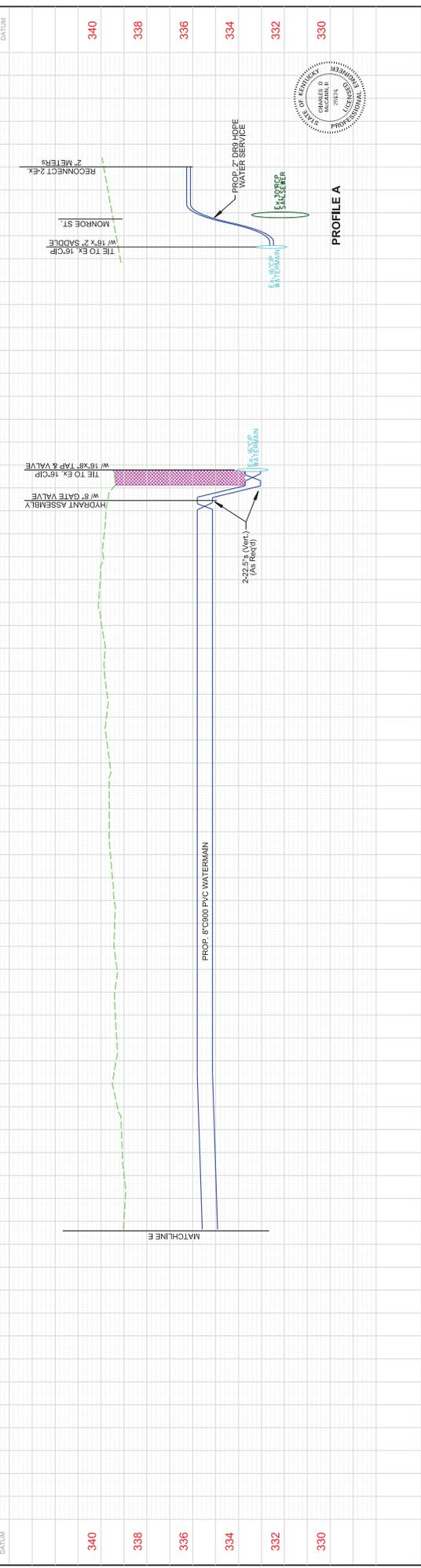
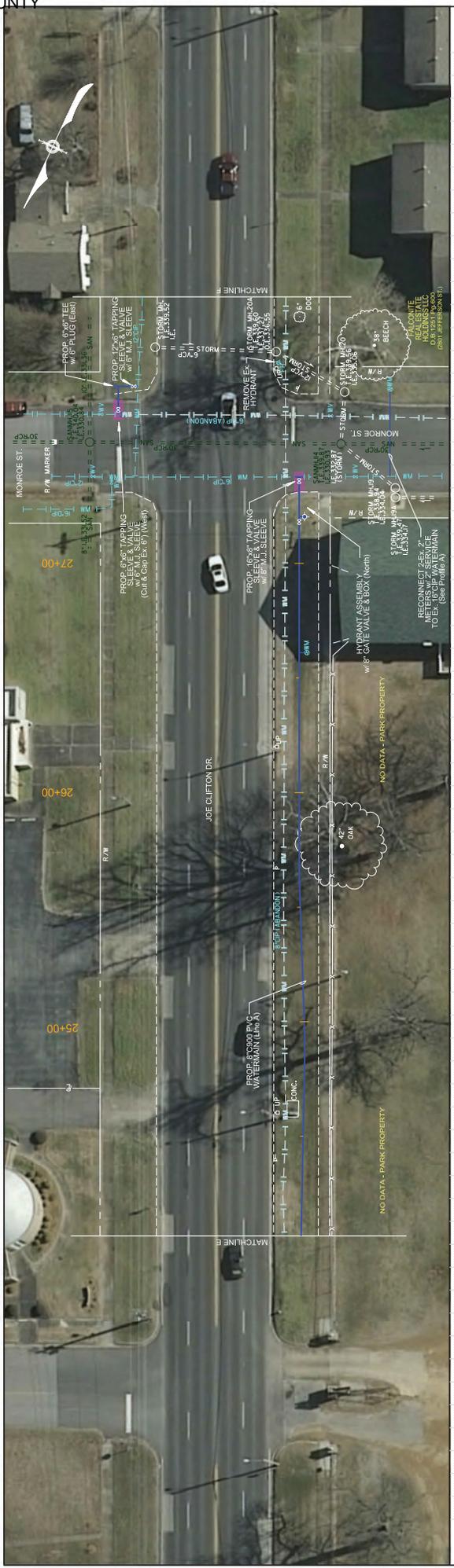
PROJECT:	JOE CLIFTON DRIVE WATERMAIN REPLACEMENT
DRAWING NO.:	4
DRAWING TITLE:	WATERMAIN LAYOUT AND PROFILE

DRAFT PLANS - FOR INFORMATION ONLY



3	04/18	PERMIT SUBMITTAL	PROJECT NO.: 10000-7	PROJECT ENGINEER:	20+00	21+00	22+00	23+00	24+00
2	05/16	50% PLANS	DESIGNED BY: CDM	PROJECT OWNER:	1800 N. 6th STREET PADUCAH, KY 42003 (270) 442-7146  Paducah Water				
1	04/18	PRELIMINARY PLANS	DRAWN BY: ELY	PROJECT ENGINEER:	 Rivercrest Engineering, Inc. 7020 U.S. HWY. 68 W PADUCAH, KY 42003				
ISSUE	DATE	DESCRIPTION	CHECKED BY: BFB	PROJECT ENGINEER:	JOE CLIFTON DRIVE WATERMAIN REPLACEMENT WATERMAIN LAYOUT AND PROFILE				
				DRAWING NO.:	6				

DRAFT PLANS - FOR INFORMATION ONLY

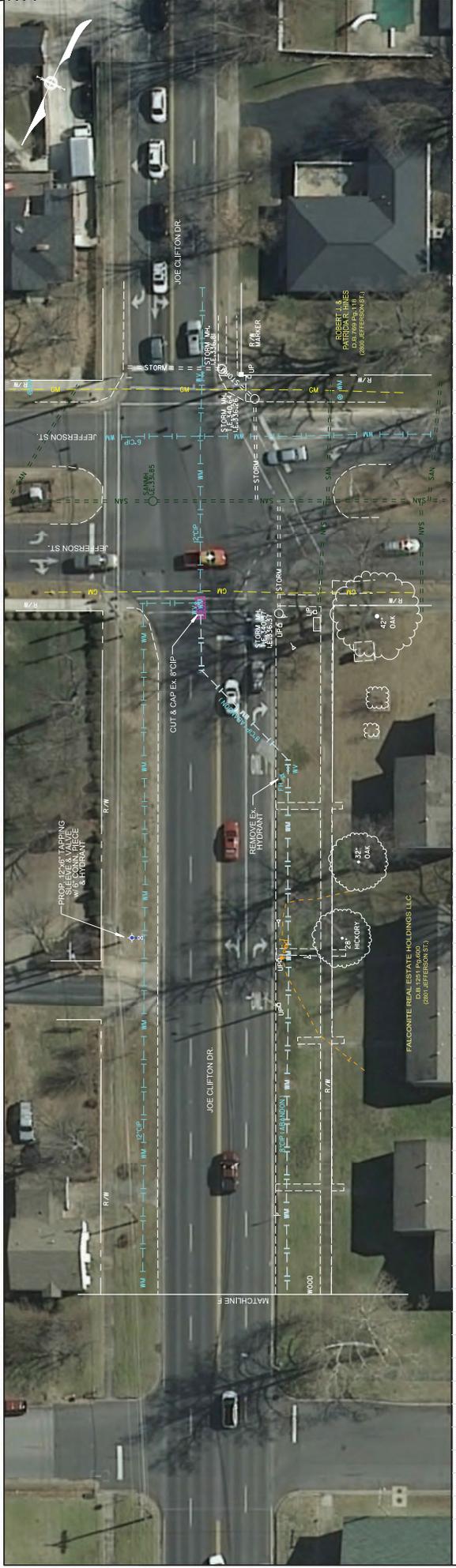


3	04/18	PERMIT SUBMITTAL	PROJECT NO.:	10002-7	24+00	25+00	26+00	27+00	28+00	PROJECT:	JOE CLIFTON DRIVE WATERMAIN REPLACEMENT
2	03/16	SP/PLANS	DESIGNED BY:	CDM						ENGINEER:	 7020 U.S. HWY. 68 W PADUCAH, KY 42003
1	04/16	PRELIMINARY PLANS	DRAWN BY:	ELY						OWNER:	 1800 N. 8th STREET PADUCAH, KY 42003 (270) 442-7146
ISSUE	DATE	DESCRIPTION	CHECKED BY:	BBF						PROJECT ENGINEER:	
										PROJECT OWNER:	

DRAWING NO. **7**
WATERMAIN LAYOUT AND PROFILE



DRAFT PLANS - FOR INFORMATION ONLY



3	04/18	PERMIT SUBMITTAL	PROJECT NO.:	10006-7	40'	 Horizontal Scale	 Vertical Scale	PROJECT OWNER: 180 N. 8th STREET PADUCAH, KY 42003 (270) 462-7146	PROJECT ENGINEER: 7020 U.S. HWY. 68 W PADUCAH, KY 42003	PROJECTS: JOE CLIFTON DRIVE WATERMAIN REPLACEMENT	DRAWING NO.:
2	05/16	80% PLANS	DESIGNED BY:	CDM	8						
1	04/16	PRELIMINARY PLANS	DRAWN BY:	ELY	4			WATERMAIN LAYOUT AND PROFILE			
ISSUE	DATE	DESCRIPTION	CHECKED BY:	BBF							

DRAFT PLANS - FOR INFORMATION ONLY



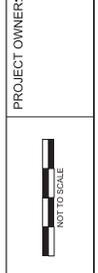
DRAWING NO.:
10

PROJECT: **JOE CLIFTON DRIVE WATERMAIN REPLACEMENT**
DRAWING: **WATER DETAILS**



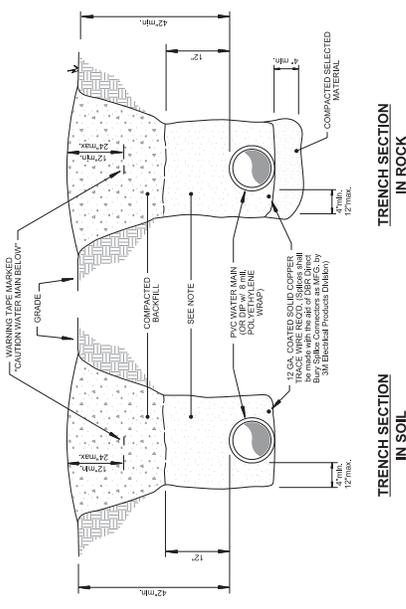
PROJECT ENGINEER:
TW Paducah Water

PROJECT OWNER:
1600 N. 8th STREET
PADUCAH, KY 42003
(270) 442-7946



PRODUCT NO.: 100067
DESIGNED BY: CDM
DRAWN BY: ELY
CHECKED BY: RBF

ISSUE	DATE	DESCRIPTION
3	04/18	PERMIT SUBMITTAL
2	05/16	90% PLANS
1	04/18	PRELIMINARY PLANS

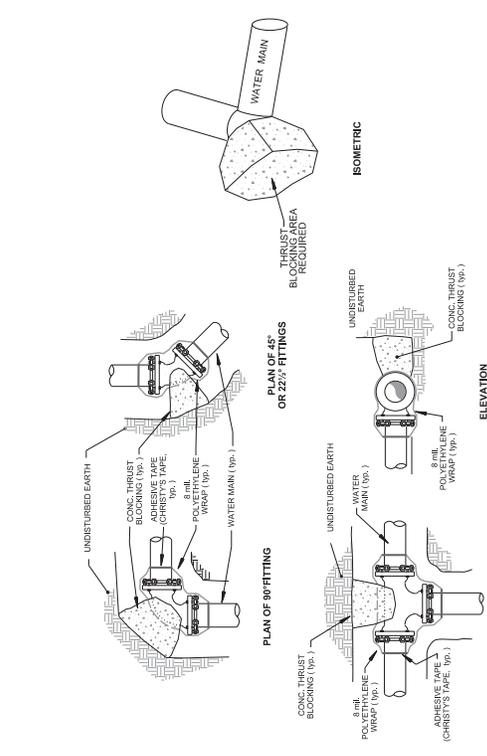


TRENCH SECTION IN SOIL

NOTES:
1. ALL TRENCH BACKFILL SHALL BE PLACED TO A MINIMUM OF 18" ABOVE THE NATURAL BACKFILL. ALL TRENCH BACKFILL SHALL BE A MATERIAL FREE FROM ROCKS GREATER THAN 1/2" IN SIZE. CLASS 500 OR FLOWABLE FILL MATERIAL WHEN AUTOMATIC TAMPERS ARE USED. CARE SHALL BE TAKEN TO PREVENT OVERSAMPLING OF THE BACKFILL.
2. ALL WATER LINE TRENCHES AND ROSE BOTT AREAS SHALL BE MECHANICALLY COMPACTED IN 12" LOOSE LIFTS SPECIFIED COMPACTION PERCENTAGES AS OUTLINED IN SPECIFICATION SECTION 1422.0.
3. ALL TRENCHES SHALL BE MARKED WITH TRACER WIRE AND POLYETHYLENE WRAP DENIAL TO THE UNIT PRICE FOR WATER MAIN.
PVC WATER MAIN DOES NOT REQUIRE POLYETHYLENE WRAP.

TRENCH SECTION IN ROCK

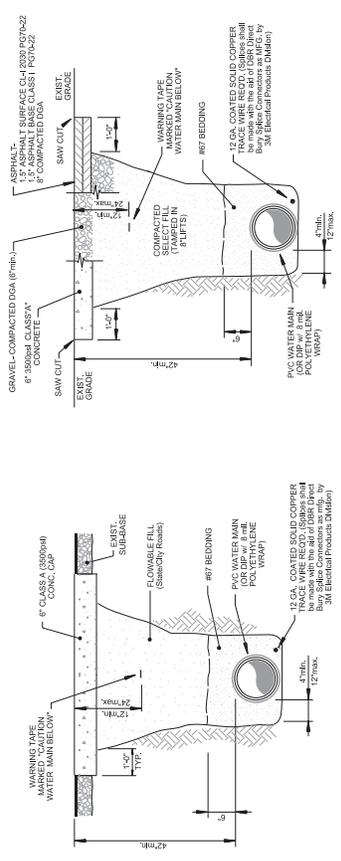
NOTES:
1. ALL TRENCH BACKFILL SHALL BE PLACED TO A MINIMUM OF 18" ABOVE THE NATURAL BACKFILL. ALL TRENCH BACKFILL SHALL BE A MATERIAL FREE FROM ROCKS GREATER THAN 1/2" IN SIZE. CLASS 500 OR FLOWABLE FILL MATERIAL WHEN AUTOMATIC TAMPERS ARE USED. CARE SHALL BE TAKEN TO PREVENT OVERSAMPLING OF THE BACKFILL.
2. ALL WATER LINE TRENCHES AND ROSE BOTT AREAS SHALL BE MECHANICALLY COMPACTED IN 12" LOOSE LIFTS SPECIFIED COMPACTION PERCENTAGES AS OUTLINED IN SPECIFICATION SECTION 1422.0.
3. ALL TRENCHES SHALL BE MARKED WITH TRACER WIRE AND POLYETHYLENE WRAP DENIAL TO THE UNIT PRICE FOR WATER MAIN.
PVC WATER MAIN DOES NOT REQUIRE POLYETHYLENE WRAP.



THRUST BLOCKING

NOTES:
1. ALL THRUST BLOCKING SHALL BE PLACED TO A MINIMUM OF 18" ABOVE THE NATURAL BACKFILL. ALL THRUST BLOCKING SHALL BE A MATERIAL FREE FROM ROCKS GREATER THAN 1/2" IN SIZE. CLASS 500 OR FLOWABLE FILL MATERIAL WHEN AUTOMATIC TAMPERS ARE USED. CARE SHALL BE TAKEN TO PREVENT OVERSAMPLING OF THE BACKFILL.
2. ALL THRUST BLOCKING SHALL BE MARKED WITH TRACER WIRE AND POLYETHYLENE WRAP DENIAL TO THE UNIT PRICE FOR WATER MAIN.
THRUST BLOCKING TO BE KY. CLASS 8" CONCRETE (2500 psi).

PIPE SIZE	22 1/2° FITTING	45° FITTING	90° FITTING	TEES
6"	2 sq. ft.	3 sq. ft.	4 sq. ft.	4 sq. ft.
8"	3 sq. ft.	4 sq. ft.	6 sq. ft.	8 sq. ft.
10"	4 sq. ft.	6 1/2 sq. ft.	12 sq. ft.	12 sq. ft.
12"	5 sq. ft.	9 sq. ft.	16 sq. ft.	16 sq. ft.
16"	8 sq. ft.	16 sq. ft.	29 sq. ft.	29 sq. ft.
18"	12 sq. ft.	20 sq. ft.	35 sq. ft.	35 sq. ft.
20"				
24"				



OPEN CUT ROADWAY TRENCH

NOTE:
PIPE BEDDING, WARNING TAPE, TRACER WIRE, POLYETHYLENE WRAP SHALL BE INSTALLED TO THE UNIT PRICE FOR WATER MAIN.

OPEN CUT DRIVEWAY TRENCH

NOTE:
PIPE BEDDING, WARNING TAPE, TRACER WIRE, POLYETHYLENE WRAP SHALL BE INSTALLED TO THE UNIT PRICE FOR WATER MAIN.

McCracken County
US 45
MP 10.343 to 10.802
Item#: 1-20019.00

Traffic Summary			
US 45 McCracken Co. - Item No. 1-20019			
Traffic Signal Work			
BID CODE	ITEM	UNIT	QUANTITIES
04811	Electrical Junction Box Type B	EACH	2
24900EC	PVC Conduit 1 ¼" Schedule 80	LF	30
04792	Conduit 1 in - Rigid Steel	LF	10
04895	Loop Saw Slot and Fill	LF	516
04830	Loop Wire	LF	1320
04850	Cable No. 14/1 Pair	LF	100
04820	Trenching and Backfilling	LF	30
24963ED	Loop Test	EACH	4

Note: Items have not been carried forward to the General Summary

SPECIAL NOTE FOR INTELLIGENT COMPACTION OF ASPHALT MIXTURES

This Special Note will apply when indicated on the plans or in the proposal. Section references herein are to the Department's Standard Specifications for Road and Bridge Construction current edition.

1.0 DESCRIPTION. Provide and use Intelligent Compaction (IC) Rollers for compaction of all asphalt mixtures.

2.0 MATERIALS AND EQUIPMENT. In addition to the equipment specified in Subsection 403.02, a minimum of one (1) IC roller is to be used on the project at all times, two (2) IC rollers will be required when the paving train consists of three (3) or more rollers. The Contractor is to only use the IC roller(s) for compaction as the breakdown and/or intermediate roller(s). All IC rollers will meet the following minimum characteristics:

1. Are self propelled double-drum vibratory rollers equipped with accelerometers mounted in or about the drum to measure the interactions between the rollers and compacted materials in order to evaluate the applied compactive effort. The IC rollers must have the approval of the Engineer prior to use. Examples of rollers equipped with IC technology can be found at www.IntelligentCompaction.com.
2. Are equipped with non-contact temperature sensors for measuring pavement surface temperatures.
3. The output from the roller is designated as the IC-MV which represents the stiffness of the materials based on the vibration of the roller drums and the resulting response from the underlying materials.
4. Are equipped with integrated on-board documentation systems that are capable of displaying real-time color-coded maps of IC measurement values including the stiffness response values, location of the roller, number of roller passes, machine settings, together with the material temperature, speed and the frequency and amplitude of roller drums. Ensure the display unit is capable of transferring the data by means of a cloud based system.
5. Are equipped with a mounted Global Positioning System GPS radio and receiver either a Real Time Kinematic (RTK-GPS) or Global Navigational Satellite System (GNSS) units that monitor the location and track the number of passes of the rollers. Accuracy of the positioning system is to be a minimum of 12 inches. Data is to be transferred to the Cabinet via a cloud based system within 30 minutes of collection.

3.0 WORK PLAN. Submit to the Engineer an IC Work Plan at the Preconstruction Conference and at least 2 weeks prior to beginning construction. Describe in the work plan the following:

1. Compaction equipment to be used including:
 - Vendor(s)
 - Roller model(s),
 - Roller dimensions and weights,
 - Description of IC measurement system,
 - GPS capabilities,
 - Documentation system,
 - Temperature measurement system, and
 - Software.
2. Roller data collection methods including sampling rates and intervals and data file types.
3. Transfer of data to the Engineer including method, timing, and personnel responsible. At the preconstruction meeting, provide the Cabinet with rights to allow for web access to the data file location. Access to the data is not to be hindered in any way. The Contractor will provide the Cabinet with any vendor specific software, user id, passwords, etc. needed to access the data through this service, cost of this access is incidental to the thermal profile bid item. The Cabinet is to have access to all data as it is being collected. If a third party is used for collecting and distributing the data the Cabinet is to have the same access rights and time as the Contractor.
4. Training plan and schedule for roller operators, project foreman, project surveyors, and Cabinet personnel; including both classroom and field training. Training should be conducted at least 1 week before beginning IC construction. The training is to be performed by a qualified representative(s) from the IC Roller manufacture(s) to be used on the project. This training shall include how to access and use the data from the cloud data source.

4.0 CONSTRUCTION. Do not begin work until the Engineer has approved the IC submittals and the IC equipment.

Follow requirements established in Section 400 for production and placement, materials, equipment, acceptance plans and adjustments except as noted or modified in this Specification. Provide the Engineer at least one day's notice prior to beginning construction or prior to resuming production if operations have been temporarily suspended. Ensure paving equipment complies with all requirements specified in Section 400. The IC roller temperatures will be evaluated by the Department with the data from a Paver Mounted Infrared Temperature Gauge.

A. Pre-Construction Test Section(s) Requirements.

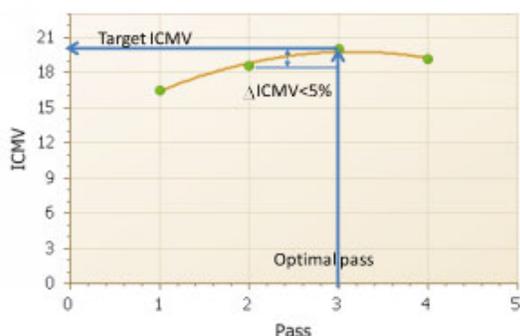
Three to five days prior to the start of production, ensure the proper setup of the GPS, IC roller(s) and the rover(s) by conducting joint GPS correlation and verification testing between the Contractor, GPS representative and IC roller manufacturer using the same datum.

1. Ensure GPS correlation and verification testing includes the following minimum processes:
 - a. Establish the GPS system to be used either one with a base station or one with mobile receivers only. Ensure all components in the system are set to the correct coordinate system; then,
 - b. Verify that the roller and rover are working properly and that there is a connection with the base station; then,
 - c. Record the coordinates of the two edges where the front drum of the roller is in contact with the ground from the on-board, color-coded display; then,
 - d. Mark the locations of the roller drum edges and move the roller, and place the mobile receiver at each mark and record the readings; then,
2. Compare coordinates between the roller and rover receivers. If the coordinates are within 12.0 in. of each other, the comparison is acceptable. If the coordinates are not within 12.0 in., diagnose and perform necessary corrections and repeat the above steps until verification is acceptable.
3. Do not begin work until acceptable GPS correlation and verification has been obtained.
4. The Contractor and the Department should conduct random GPS verification testing during production to ensure data locations are accurate. The recommended rate is once per day with a requirement of at least once per week.
5. All acceptance testing shall be as outlined in Standard Specifications section 400.

B. Construction Test Section(s) Requirements.

Construct test section(s) at location(s) agreed on by the Contractor and the Engineer within the project limits. The test section is required to determine a compaction curve of the asphalt mixtures in relationship to number of roller passes and to the stiffness of mixture while meeting the Department in-place compaction requirements. All rollers and the respective number of passes for each is to be determined via control strip each time a material change, equipment change or when the Engineer deems necessary.

Conduct test section(s) on every lift and every asphalt mixture. Ensure test section quantities of 500 to 1,000 tons of mainline mixtures. Operate IC rollers in the low to medium amplitude range and at the same settings (speed, frequency) throughout the section while minimizing overlapping of the roller, **the settings are to be used throughout the project with no changes**. After each roller pass, the qualified technician from the contractor observed by the Department will use a nondestructive nuclear gauge that has been calibrated to the mixture to estimate the density of the asphalt at 10 locations uniformly spaced throughout the test section within the width of a single roller pass. The density readings and the number of roller passes needed to achieve the specified compaction will be recorded. The estimated target density will be the peak of the average of the nondestructive readings within the desired compaction temperature range for the mixture. The IC roller data in conjunction with the Veda software will create an IC compaction curve for the mixture. The target IC-MV is the point when the increase in the IC-MV of the material between passes is less than 5 percent on the compaction curve. The IC compaction curve is defined as the relationship between the IC-MV and the roller passes. A compaction curve example is as follows:



Subsequent to the determination of the target IC-MV, compact an adjoining > 250 < 500 tons section using same roller settings and the number of estimated roller passes and allow the Department to verify the compaction with the same calibrated nondestructive nuclear gauge following the final roller pass. **The Department will obtain cores at 10 locations (No cores for calibration are to be taken in the surface layer, use non-destructive density results only!!)** uniformly spaced throughout the test section within the width of the single roller. Obtain GPS measurement of the core locations with a GPS rover. Use the Veda software to perform least square linear regression between the core data and IC-MV in order to correlate the production IC-MV values to the Department specified in-place air voids. A sample linear regression curve example is as follows.



C. Construction Requirements.

Use the IC roller on all lifts and types of asphalt within the limits of the project.

Ensure the optimal number of roller passes determined from the test sections has been applied to a minimum coverage of 80% of the individual IC Construction area. Ensure a minimum of 75% of the individual IC Construction area meets the target IC-MV values determined from the test sections.

Do not continue paving operations if IC Construction areas not meeting the IC criteria are produced until they have been investigated by the Department. Obtain the Engineer’s approval to resume paving operations. Non-IC rollers are allowed to be used as the third roller on the project; one of the breakdown or the finish rollers is to be equipped with IC technology.

IC Construction areas are defined as subsections of the project being worked continuously by the Contractor. The magnitude of the IC Construction areas may vary with production but must be at least 750 tons per mixture for evaluation. Partial IC Construction areas of < 750 tons will be included in the previous area evaluation. IC Construction areas may extend over multiple days depending on the operations.

The IC Construction Operations Criteria does not affect the Department’s acceptance processes for the materials or construction operations

5.0 MEASUREMENT. The Department will measure the total tons of asphalt mixtures compacted using the IC roller(s). Compaction is to be performed by a minimum of one (1) IC roller for a two (2) roller operation and a minimum of two (2) IC rollers when three (3) or more rollers are used for compaction. Material compacted by rollers not equipped with properly functioning IC equipment will not be accepted for payment of the bid item asphalt mixtures IC rolled. Use of

non-IC rollers can be accepted on small areas due to equipment malfunctions at the written approval of the Engineer. Paving operations should be suspended for equipment malfunctions that will extend over three days of operation.

Data is to be transferred to the cabinet in usable form no later than 30 minutes after collection. Data is to be transferred via a cloud based system.

6.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

1. Payment is full compensation for all work associated with providing IC equipped rollers, laptop computer, transmission of electronic data files, two copies of IC roller manufacturer software, and training.
2. Delays due to GPS satellite reception of signals to operate the IC equipment or IC roller breakdowns will not be considered justification for contract modifications or contract extensions.
3. Delays in data transfer will result in a reduction payment. Delays over 1 hour after collection are 75% pay, over 90 minutes are 50% pay, over 2 hours are 25% pay.

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24781EC	Intelligent Compaction for Asphalt	Ton

March 14, 2019

SPECIAL NOTE FOR PAVER MOUNTED TEMPERATURE PROFILES

This Special Note will apply when indicated on the plans or in the proposal. Section references herein are to the Department's Standard Specifications for Road and Bridge Construction current edition.

1.0 DESCRIPTION. Provide a paver mounted infrared temperature equipment to continually monitor the temperature of the asphalt mat immediately behind all paver(s) during the placement operations for all mainline pavements (including ramps for Interstates and Parkways) within the project limits. Provide thermal profiles that include material temperature and measurement locations.

2.0 MATERIALS AND EQUIPMENT. In addition to the equipment specified in Subsection 403.02 Utilize a thermal equipment supplier that can provide a qualified representative for on-site technical assistance during the initial setup, pre-construction verification, and data management and processing as needed during the Project to maintain equipment within specifications and requirements.

Provide operator settings, user manuals, required viewing/export software for analysis. Ensure the temperature equipment will meet the following:

- A. A device with one or more infrared sensors that is capable of measuring in at least 1 foot intervals across the paving width, with a minimum width of 12 feet, or extending to the recording limits of the equipment, whichever is greater. A **Maximum of two (2)** brackets are allowed in the influence area under the sensors. A temperature profile must be made on at least 1 foot intervals longitudinally down the road:
- B. Infrared sensor(s):
 1. Measuring from 32°F to 400°F with an accuracy of $\pm 2.0\%$ of the sensor reading.
- C. Ability to measure the following:
 1. The placement distance using a Global Positioning System (GPS) or a Distance Measuring Instrument (DMI) and a Global Positioning System (GPS).
 2. Stationing
- D. GPS: Accuracy ± 4 feet in the X and Y Direction
- E. Latest version of software to collect, display, retain and analyze the mat temperature readings during placement. The software must have the ability to create and analyze:
 1. Full collected width of the thermal profiles,
 2. Paver speed and
 3. Paver stops and duration for the entire Project.
- F. Ability to export data automatically to a remote data server ("the cloud").

At the preconstruction meeting, provide the Cabinet with rights to allow for web access to the data file location. Access to the data is not to be hindered in any way. The Contractor will provide the Cabinet with any vendor specific software, user id, passwords, etc. needed to access the data through this service, cost of this access is incidental to the thermal profile bid item. The Cabinet is to have access to all data as it is being collected. If a third party is used for collecting and distributing the data the Cabinet is to have the same access rights and time as the Contractor.

This web-based software must also provide the Department with the ability to download the raw files and software and to convert them into the correct format.
- G. The thermal profile data files must provide the following data in a neat easy to read table format.
 1. Project information including Road Name and Number, PCN, Beginning and Ending MPs.
 2. IR Bar Manufacturer and Model number
 3. Number of Temperature Sensors (N)
 4. Spacing between sensors and height of sensors above the asphalt mat
 5. Total number of individual records taken each day (DATA BLOCK)
 - a. Date and Time reading taken
 - b. Latitude and Longitude
 - c. Distance paver has moved from last test location
 - d. Direction and speed of the paver
 - e. Surface temperature of each of the sensors

3.0 CONSTRUCTION. Provide the Engineer with all required documentation at the pre-construction conference.

- A. Install and operate equipment in accordance with the manufacturer’s specifications.
- B. Verify that the temperature sensors are within ± 2.0% using an independent temperature device on a material of known temperature. Collect and compare the GPS coordinates from the equipment with an independent measuring device.
 - 1. Ensure the independent survey grade GPS measurement device is calibrated to the correct coordinate system (using a control point), prior to using these coordinates to validate the equipment GPS.
 - 2. The comparison is considered acceptable if the coordinates are within 4 feet of each other in the X and Y direction.
- C. Collect thermal profiles on all mainline pavements during the paving operation and transfer the data to the “cloud” network or if automatic data transmission is not available, transfer the data to the Engineer at the end of daily paving.
- D. Contact the Department immediately when System Failure occurs. Daily Percent Coverage will be considered zero when the repairs are not completed within two (2) working days of System Failure. The start of this two (2) working day period begins the next working day after System Failure.
- E. Evaluate thermal profile segments, every 150 feet, and summarize the segregation of temperature results. Results are to be labeled as Minimal 0°-25°F, Moderate 25.1°-50°F and Severe >50°. Severe readings over 3 consecutive segments or over 4 or more segments in a day warrant investigation on the cause of the differential temperature distribution.

4.0 MEASUREMENT. The Department will measure the total area of the pavement lanes mapped by the infrared scanners. Full payment will be provided for all lanes with greater than 85% coverage. Partial payment will be made for all areas covered from 50% coverage to 85% coverage at the following rate Coverage area percentage X Total bid amount. And area with less than 50% coverage will not be measured for payment.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

- 1. Payment is full compensation for all work associated with providing all required equipment, training, and documentation.
- 2. Delays due to GPS satellite reception of signals or equipment breakdowns will not be considered justification for contract modifications or contract extensions.

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24891EC	Pave Mount Infrared Temp Equipment	Square Foot

March 14, 2019

	KENTUCKY TRANSPORTATION CABINET Department of Highways DIVISION OF RIGHT OF WAY & UTILITIES	TC 62-226 Rev. 01/2016 Page 1 of 1
	RIGHT OF WAY CERTIFICATION	

<input checked="" type="checkbox"/> Original	<input type="checkbox"/> Re-Certification	RIGHT OF WAY CERTIFICATION	
ITEM #	COUNTY	PROJECT # (STATE)	PROJECT # (FEDERAL)
01-20019	MCCRACKEN	FD52 073 0045 010-011	STP 3015 (028)

PROJECT DESCRIPTION

ASPHALT PAVEMENT REHAB. ON US-45 FROM MP 10.33 TO 10.806.

No Additional Right of Way Required

Construction will be within the limits of the existing right of way. The right of way was acquired in accordance to FHWA regulations under the Uniform Relocation Assistance and Real Property Acquisitions Policy Act of 1970, as amended. No additional right of way or relocation assistance were required for this project.

Condition # 1 (Additional Right of Way Required and Cleared)

All necessary right of way, including control of access rights when applicable, have been acquired including legal and physical possession. Trial or appeal of cases may be pending in court but legal possession has been obtained. There may be some improvements remaining on the right-of-way, but all occupants have vacated the lands and improvements, and KYTC has physical possession and the rights to remove, salvage, or demolish all improvements and enter on all land. Just Compensation has been paid or deposited with the court. All relocations have been relocated to decent, safe, and sanitary housing or that KYTC has made available to displaced persons adequate replacement housing in accordance with the provisions of the current FHWA directive.

Condition # 2 (Additional Right of Way Required with Exception)

The right of way has not been fully acquired, the right to occupy and to use all rights-of-way required for the proper execution of the project has been acquired. Some parcels may be pending in court and on other parcels full legal possession has not been obtained, but right of entry has been obtained, the occupants of all lands and improvements have vacated, and KYTC has physical possession and right to remove, salvage, or demolish all improvements. Just Compensation has been paid or deposited with the court for most parcels. Just Compensation for all pending parcels will be paid or deposited with the court prior to AWARD of construction contract

Condition # 3 (Additional Right of Way Required with Exception)

The acquisition or right of occupancy and use of a few remaining parcels are not complete and/or some parcels still have occupants. All remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. KYTC is hereby requesting authorization to advertise this project for bids and to proceed with bid letting even though the necessary right of way will not be fully acquired, and/or some occupants will not be relocated, and/or the just compensation will not be paid or deposited with the court for some parcels until after bid letting. KYTC will fully meet all the requirements outlined in 23 CFR 635.309(c)(3) and 49 CFR 24.102(j) and will expedite completion of all acquisitions, relocations, and full payments after bid letting and prior to AWARD of the construction contract or force account construction.

Total Number of Parcels on Project	EXCEPTION (S) Parcel #	ANTICIPATED DATE OF POSSESSION WITH EXPLANATION
Number of Parcels That Have Been Acquired		
Signed Deed		
Condemnation		
Signed ROE		

Notes/ Comments (Use Additional Sheet if necessary)

LPA RW Project Manager		Right of Way Supervisor	
Printed Name		Printed Name	Greg L. Morgan Digitally signed by Greg L. Morgan
Signature		Signature	Date: 2019.05.22 07:55:14
Date		Date	-05'00'
Right of Way Director		FHWA	
Printed Name		Printed Name	No Signature Required
Signature	 2019.05.23	Signature	as per FHWA-KYTC
Date	15:26:39 -05'00'	Date	Current Stewardship Agreement

UTILITIES AND RAIL CERTIFICATION NOTE

McCRACKEN COUNTY, STP 3015 (028)
FD52 073 0045 010-011
JOE CLIFTON DRIVE (US 45)/ASPHALT PAVEMENT REHAB.
ITEM # 1-20019.00

Utility coordination efforts conducted by the project sponsor have determined that no significant utility relocation work is required to complete the project. Any work pertaining to these utility facilities is defined in the bid package and is to be carried out as instructed by the Kentucky Transportation Cabinet. The contractor will be responsible for any coordination or adjustments that are discussed or quantified in the proposal.

Special Notes:

Paducah Water has a separate project to upgrade existing lines on the west side of US 45. This project will involve tie-ins to meters on both sides, as well as a mainline tie-in under existing US 45 near Jefferson Street. Their contractor is scheduled to begin work on July 8th, and complete within 90 days. Please coordinate your work with Paducah Water and their contractor.

Paducah-McCracken Joint Sewer Agency (JSA) will be slip-lining and rehabbing some main lines toward the north end of the project, to protect their facilities where depth is a concern. JSA will video inspect their lines and laterals, before and after roadway construction, to check for damages from construction processes. Any damages to their facilities will be the contractor's responsibility. Please coordinate your work with JSA.

THE FOLLOWING RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

No Rail Involved **Minimal Rail Involved (See Below)** **Rail Involved (See Below)**

UNDERGROUND FACILITY DAMAGE PROTECTION – BEFORE YOU DIG

The contractor shall make every effort to protect underground facilities from damage as prescribed in the Underground Facility Damage Protection Act of 1994, Kentucky Revised Statute KRS 367.4901 to 367.4917. It is the contractor's responsibility to determine and take steps necessary to be in compliance with federal and state damage prevention directives. The contractor is instructed to contact KY 811 for the location of existing underground utilities. Contact shall be made a minimum of two (2) and no more than ten (10) business days prior to excavation.

The contractor shall submit Excavation Locate Requests to the Kentucky Contact Center (KY 811) via web ticket entry. The submission of this request does not relieve the contractor from the responsibility of contacting non-member facility owners, whom are to be contacted through their individual Protection Notification Center. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area. Non-compliance with these directives can result in the enforcement of penalties.

UTILITIES AND RAIL CERTIFICATION NOTE

McCRACKEN COUNTY, STP 3015 (028)
FD52 073 0045 010-011
JOE CLIFTON DRIVE (US 45)/ASPHALT PAVEMENT REHAB.
ITEM # 1-20019.00

SPECIAL CAUTION NOTE – PROTECTION OF UTILITIES

The contractor will be responsible for contacting all utility facility owners on the subject project to coordinate his activities. The contractor will coordinate his activities to minimize and, where possible, avoid conflicts with utility facilities. Due to the nature of the work proposed, it is unlikely to conflict with the existing utilities beyond minor facility adjustments. Where conflicts with utility facilities are unavoidable, the contractor will coordinate any necessary relocation work with the facility owner and Resident Engineer. The

Kentucky Transportation Cabinet maintains the right to remove or alter portions of this contract if a utility conflict occurs.

The utility facilities as noted in the previous section(s) have been determined using data garnered by varied means and with varying degrees of accuracy: from the facility owners, a result of S.U.E., field inspections, and/or reviews of record drawings. The facilities defined may not be inclusive of all utilities in the project scope and are not Level A quality, unless specified as such. It is the contractor’s responsibility to verify all utilities and their respective locations before excavating.

Please Note: The information presented in this Utility Note is informational in nature and the information contained herein is not guaranteed.

AREA UTILITIES CONTACT LIST

<u>Utility Company/Agency</u>	<u>Contact Name</u>	<u>Contact Information</u>
Paducah Water	Jason Petersen	270-442-2746
JSA	John Hodges	270-575-0056
Paducah Power	Rick Windhorst	270-575-4000
Atmos Energy	Eddie Tucker	270-556-2290
AT&T	Alan Shelby	270-444-5048
Comcast	Steve Parmley	270-243-4137

PART II
SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

Any reference in the plans or proposal to previous editions of the *Standard Specifications for Road and Bridge Construction* and *Standard Drawings* are superseded by *Standard Specifications for Road and Bridge Construction, Edition of 2019* and *Standard Drawings, Edition of 2016*.

SUPPLEMENTAL SPECIFICATIONS

The contractor shall use the Supplemental Specifications that are effective at the time of letting.
The Supplemental Specifications can be found at the following link:

<http://transportation.ky.gov/Construction/Pages/Kentucky-Standard-Specifications.aspx>

SPECIAL NOTE FOR PORTABLE CHANGEABLE MESSAGE SIGNS

This Special Note will apply when indicated on the plans or in the proposal.

1.0 DESCRIPTION. Furnish, install, operate, and maintain variable message signs at the locations shown on the plans or designated by the Engineer. Remove and retain possession of variable message signs when they are no longer needed on the project.

2.0 MATERIALS.

2.1 General. Use LED Variable Message Signs Class I, II, or III, as appropriate, from the Department's List of Approved Materials.

Unclassified signs may be submitted for approval by the Engineer. The Engineer may require a daytime and nighttime demonstration. The Engineer will make a final decision within 30 days after all required information is received.

2.2 Sign and Controls. All signs must:

- 1) Provide 3-line messages with each line being 8 characters long and at least 18 inches tall. Each character comprises 35 pixels.
- 2) Provide at least 40 preprogrammed messages available for use at any time. Provide for quick and easy change of the displayed message; editing of the message; and additions of new messages.
- 3) Provide a controller consisting of:
 - a) Keyboard or keypad.
 - b) Readout that mimics the actual sign display. (When LCD or LCD type readout is used, include backlighting and heating or otherwise arrange for viewing in cold temperatures.)
 - c) Non-volatile memory or suitable memory with battery backup for storing pre-programmed messages.
 - d) Logic circuitry to control the sequence of messages and flash rate.
- 4) Provide a serial interface that is capable of supporting complete remote control ability through land line and cellular telephone operation. Include communication software capable of immediately updating the message, providing complete sign status, and allowing message library queries and updates.
- 5) Allow a single person easily to raise the sign to a satisfactory height above the pavement during use, and lower the sign during travel.
- 6) Be Highway Orange on all exterior surfaces of the trailer, supports, and controller cabinet.
- 7) Provide operation in ambient temperatures from -30 to + 120 degrees Fahrenheit during snow, rain and other inclement weather.
- 8) Provide the driver board as part of a module. All modules are interchangeable, and have plug and socket arrangements for disconnection and reconnection. Printed circuit boards associated with driver boards have a conformable coating to protect against moisture.
- 9) Provide a sign case sealed against rain, snow, dust, insects, etc. The lens is UV stabilized clear plastic (polycarbonate, acrylic, or other approved material) angled to prevent glare.
- 10) Provide a flat black UV protected coating on the sign hardware, character PCB, and appropriate lens areas.
- 11) Provide a photocell control to provide automatic dimming.

- 12) Allow an on-off flashing sequence at an adjustable rate.
- 13) Provide a sight to aim the message.
- 14) Provide a LED display color of approximately 590 nm amber.
- 15) Provide a controller that is password protected.
- 16) Provide a security device that prevents unauthorized individuals from accessing the controller.
- 17) Provide the following 3-line messages preprogrammed and available for use when the sign unit begins operation:

/KEEP/RIGHT/=>=>=>/	/MIN/SPEED/**MPH/
/KEEP/LEFT/<<<</	/ICY/BRIDGE/AHEAD/ /ONE
/LOOSE/GRAVEL/AHEAD/	LANE/BRIDGE/AHEAD/
/RD WORK/NEXT/**MILES/	/ROUGH/ROAD/AHEAD/
/TWO WAY/TRAFFIC/AHEAD/	/MERGING/TRAFFIC/AHEAD/
/PAINT/CREW/AHEAD/	/NEXT/**/MILES/
/REDUCE/SPEED/**MPH/	/HEAVY/TRAFFIC/AHEAD/
/BRIDGE/WORK/**0 FT/	/SPEED/LIMIT/**MPH/
/MAX/SPEED/**MPH/	/BUMP/AHEAD/
/SURVEY/PARTY/AHEAD/	/TWO/WAY/TRAFFIC/

*Insert numerals as directed by the Engineer.
Add other messages during the project when required by the Engineer.

2.3 Power.

- 1) Design solar panels to yield 10 percent or greater additional charge than sign consumption. Provide direct wiring for operation of the sign or arrow board from an external power source to provide energy backup for 21 days without sunlight and an on-board system charger with the ability to recharge completely discharged batteries in 24 hours.

3.0 CONSTRUCTION. Furnish and operate the variable message signs as designated on the plans or by the Engineer. Ensure the bottom of the message panel is a minimum of 7 feet above the roadway in urban areas and 5 feet above in rural areas when operating. Use Class I, II, or III signs on roads with a speed limit less than 55 mph. Use Class I or II signs on roads with speed limits 55 mph or greater.

Maintain the sign in proper working order, including repair of any damage done by others, until completion of the project. When the sign becomes inoperative, immediately repair or replace the sign. Repetitive problems with the same unit will be cause for rejection and replacement.

Use only project related messages and messages directed by the Engineer, unnecessary messages lessen the impact of the sign. Ensure the message is displayed in either one or 2 phases with each phase having no more than 3 lines of text. When no message is needed, but it is necessary to know if the sign is operable, flash only a pixel.

When the sign is not needed, move it outside the clear zone or where the Engineer directs. Variable Message Signs are the property of the Contractor and shall be removed from the project when no longer needed. The Department will not assume ownership of these signs.

4.0 MEASUREMENT. The final quantity of Variable Message Sign will be

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the actual number of individual signs acceptably furnished and operated during the project. The Department will not measure signs replaced due to damage or rejection.

5.0 PAYMENT. The Department will pay for the Variable Message Signs at the unit price each. The Department will not pay for signs replaced due to damage or rejection. Payment is full compensation for furnishing all materials, labor, equipment, and service necessary to, operate, move, repair, and maintain or replace the variable message signs. The Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02671	Portable Changeable Message Sign	Each

Effective June 15, 2012

SPECIAL NOTE FOR BARCODE LABEL ON PERMANENT SIGNS

1.0 DESCRIPTION. Install barcode label on sheeting signs. Section references herein are to the Department’s Standard Specifications for Road and Bridge Construction, current edition.

2.0 MATERIALS. The Department will provide the Contractor with a 2 inch x 1 inch foil barcode label for each permanent sheeting sign. A unique number will be assigned to each barcode label.

The Contractor shall contact the Operations and Pavement Management Branch in the Division of Maintenance at (502) 564-4556 to obtain the barcode labels.

3.0 CONSTRUCTION. Apply foil barcode label in the lower right quadrant of the sign back. Signs where the bottom edge is not parallel to the ground, the lowest corner of the sign shall serve as the location to place the barcode label. The barcode label shall be placed no less than one-inch and no more than three inches from any edge of the sign. The barcode must be placed so that the sign post does not cover the barcode label.

Barcodes shall be applied in an indoor setting with a minimum air temperature of 50°F or higher. Prior to application of the barcode label, the back of the sign must be clean and free of dust, oil, etc. If the sign is not clean, an alcohol swab shall be used to clean the area. The area must be allowed to dry prior to placement of the barcode label.

Data for each sign shall include the barcode number, MUTCD reference number, sheeting manufacturer, sheeting type, manufacture date, color of primary reflective surface, installation date, latitude and longitude using the North American Datum of 1983 (NAD83) or the State Plane Coordinates using an x and y ordinate of the installed location.

Data should be provided electronically on the TC 71-229 Sign Details Information and TC 71-230 Sign Assembly Information forms. The Contractor may choose to present the data in a different format provided that the information submitted to the Department is equivalent to the information required on the Department TC forms. The forms must be submitted in electronic format regardless of which type of form is used. The Department will not accept PDF or handwritten forms. These completed forms must be submitted to the Department prior to final inspection of the signs. The Department will not issue formal acceptance for the project until the TC 71-229 and TC-230 electronic forms are completed for all signs and sign assemblies on the project.

4.0 MEASUREMENT. The Department will measure all work required for the installation of the barcode label and all work associated with completion and submission of the sign inventory data (TC 71-229 and TC 71-230).

The installation of the permanent sign will be measured in accordance to Section 715.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

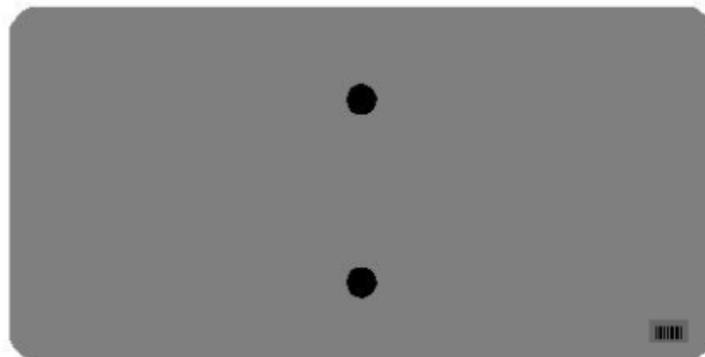
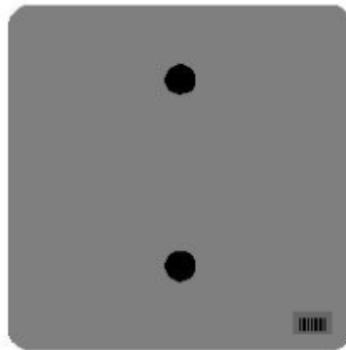
<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24631EC	Barcode Sign Inventory	Each

The Department will not make payment for this item until all barcodes are installed and sign inventory is complete on every permanent sign installed on the project. The Department will make payment for installation of the permanent sign in accordance to Section 715. The Department will consider payment as full compensation for all work required under this special note.

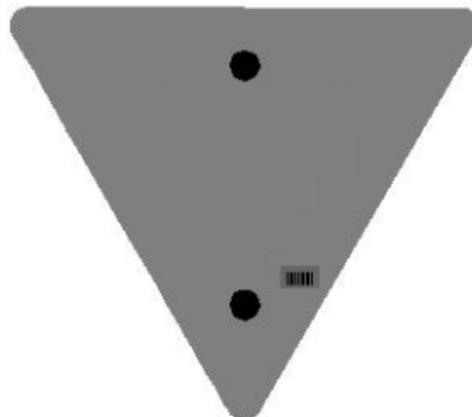
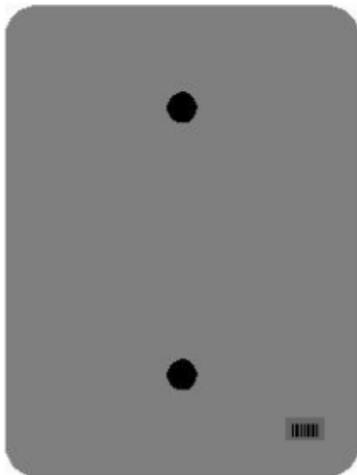
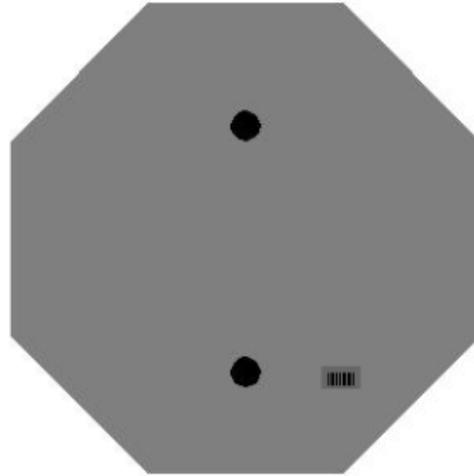
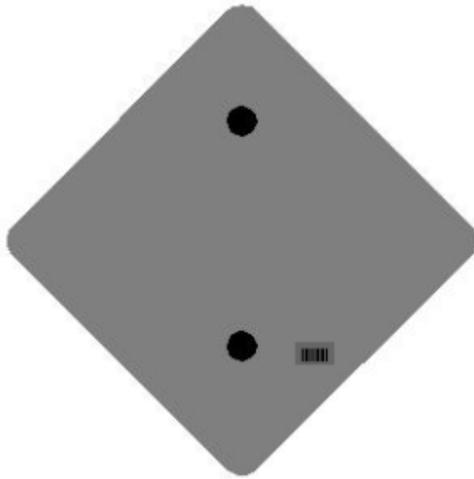
One Sign Post



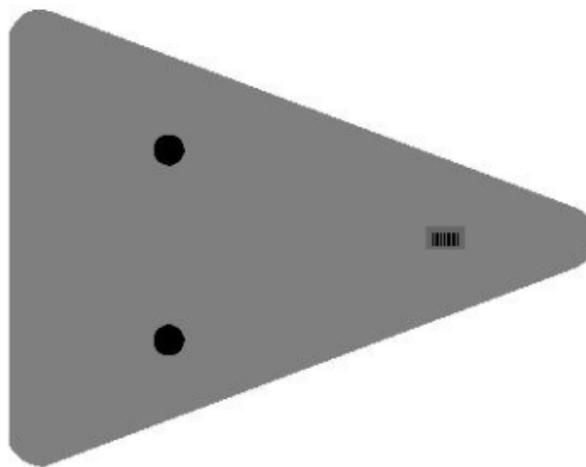
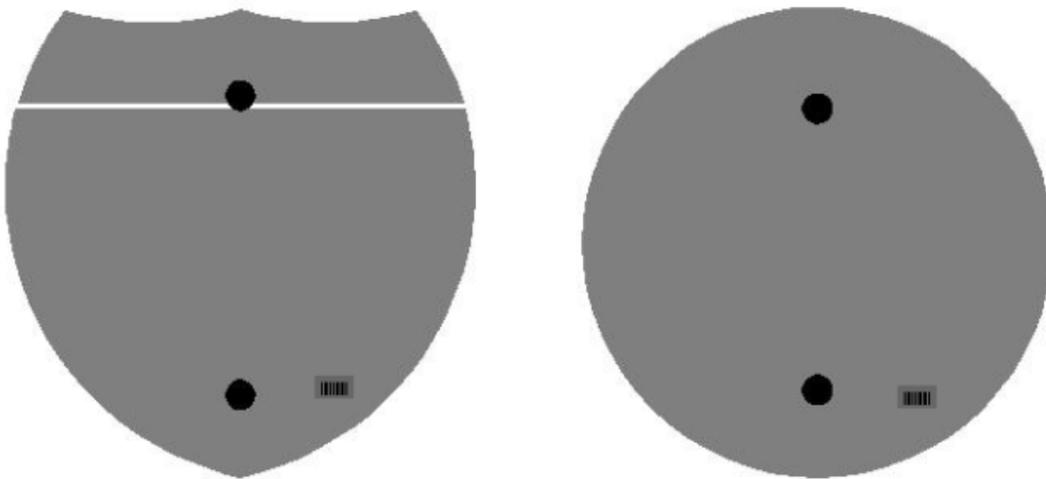
↑
2" Wide Post



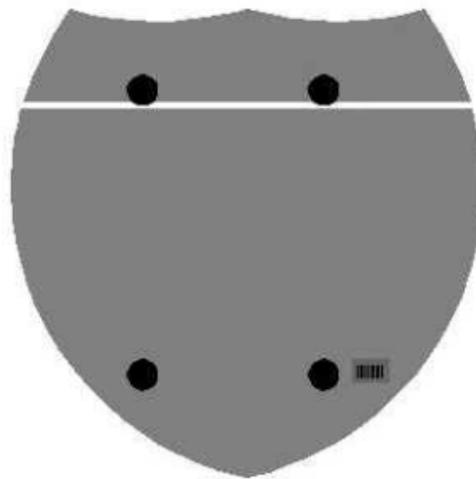
One Sign Post



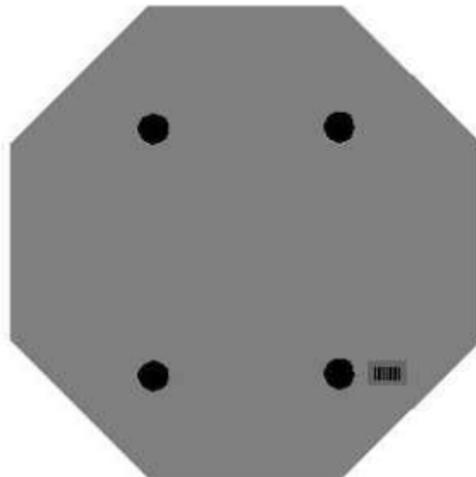
One Sign Post



Double Sign Post



Interstate
Shield

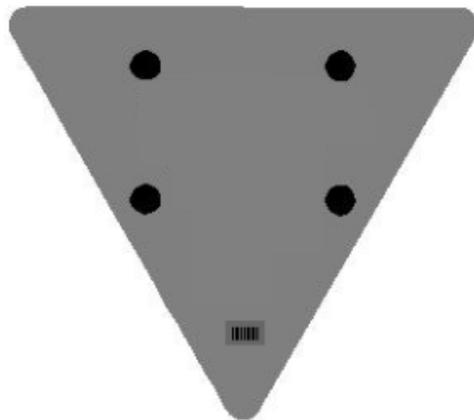


48" Stop

2 Post Signs



↑
2" Wide Post



PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

FHWA-1273 -- Revised May 1, 2012

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

- (i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (ii) The classification is utilized in the area by the construction industry; and
- (iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-

Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly

rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

**KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS**

**EMPLOYMENT REQUIREMENTS
RELATING TO
NONDISCRIMINATION OF EMPLOYEES
(APPLICABLE TO FEDERAL-AID SYSTEM CONTRACTS)**

**AN ACT OF THE KENTUCKY GENERAL ASSEMBLY
TO PREVENT DISCRIMINATION IN EMPLOYMENT**

**KRS CHAPTER 344
EFFECTIVE JUNE 16, 1972**

The contract on this project, in accordance with KRS Chapter 344, provides that during the performance of this contract, the contractor agrees as follows:

1. The contractor shall not fail or refuse to hire, or shall not discharge any individual, or otherwise discriminate against an individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, national origin, sex, disability or age (forty and above); or limit, segregate, or classify his employees in any way which would deprive or tend to deprive an individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, national origin, sex, disability or age forty (40) and over. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2. The contractor shall not print or publish or cause to be printed or published a notice or advertisement relating to employment by such an employer or membership in or any classification or referral for employment by the employment agency, indicating any preference, limitation, specification, or discrimination, based on race, color, religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, except that such a notice or advertisement may indicate a preference, limitation, or specification based on religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, when religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, is a bona fide occupational qualification for employment.

3. If the contractor is in control of apprenticeship or other training or retraining, including on-the-job training programs, he shall not discriminate against an individual because of his race, color, religion, national origin, sex, disability or age forty (40) and over, in admission to, or employment in any program established to provide apprenticeship or other training.

4. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for non-compliance.

Revised: January 25, 2017

Standard Title VI/Non-Discrimination Assurances

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, **Federal Highway Administration**, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor’s obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the **Federal Highway Administration** to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the **Federal Highway Administration**, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor’s noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the **Federal Highway Administration** may determine to be appropriate, including, but not limited to:
 - a. withholding payments to the contractor under the contract until the contractor complies; and/or
 - b. cancelling, terminating, or suspending a contract, in whole or in part.
6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the **Federal Highway Administration** may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

Standard Title VI/Non-Discrimination Statutes and Authorities

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21;
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq.*), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 -- 12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 *et seq.*)

EXECUTIVE BRANCH CODE OF ETHICS

In the 1992 regular legislative session, the General Assembly passed and Governor Brereton Jones signed Senate Bill 63 (codified as KRS 11A), the Executive Branch Code of Ethics, which states, in part:

KRS 11A.040 (7) provides:

No present or former public servant shall, within six (6) months following termination of his office or employment, accept employment, compensation, or other economic benefit from any person or business that contracts or does business with, or is regulated by, the state in matters in which he was directly involved during the last thirty-six (36) months of his tenure. This provision shall not prohibit an individual from returning to the same business, firm, occupation, or profession in which he was involved prior to taking office or beginning his term of employment, or for which he received, prior to his state employment, a professional degree or license, provided that, for a period of six (6) months, he personally refrains from working on any matter in which he was directly involved during the last thirty-six (36) months of his tenure in state government. This subsection shall not prohibit the performance of ministerial functions, including but not limited to filing tax returns, filing applications for permits or licenses, or filing incorporation papers, nor shall it prohibit the former officer or public servant from receiving public funds disbursed through entitlement programs.

KRS 11A.040 (9) states:

A former public servant shall not represent a person or business before a state agency in a matter in which the former public servant was directly involved during the last thirty-six (36) months of his tenure, for a period of one (1) year after the latter of:

- a) The date of leaving office or termination of employment; or
- b) The date the term of office expires to which the public servant was elected.

This law is intended to promote public confidence in the integrity of state government and to declare as public policy the idea that state employees should view their work as a public trust and not as a way to obtain private benefits.

If you have worked for the executive branch of state government within the past six months, you may be subject to the law's prohibitions. The law's applicability may be different if you hold elected office or are contemplating representation of another before a state agency.

Also, if you are affiliated with a firm which does business with the state and which employs former state executive-branch employees, you should be aware that the law may apply to them.

In case of doubt, the law permits you to request an advisory opinion from the Executive Branch Ethics Commission, 3 Fountain Place, Frankfort, Kentucky 40601; telephone (502) 564-7954.

Revised: January 27, 2017

General Decision Number: KY190040 05/17/2019 KY40

Superseded General Decision Number: KY20180102

State: Kentucky

Construction Type: Highway

Counties: Allen, Ballard, Butler, Caldwell, Calloway, Carlisle, Christian, Crittenden, Daviess, Edmonson, Fulton, Graves, Hancock, Henderson, Hickman, Hopkins, Livingston, Logan, Lyon, Marshall, McCracken, McLean, Muhlenberg, Ohio, Simpson, Todd, Trigg, Union, Warren and Webster Counties in Kentucky.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/04/2019
1	02/01/2019
2	02/15/2019
3	05/17/2019

BRIN0004-002 06/01/2017

BALLARD, BUTLER, CALDWELL, CARLISLE, CRITTENDEN, DAVIESS, EDMONSON, FULTON, GRAVES, HANCOCK, HENDERSON, HICKMAN, HOPKINS, LIVINGSTON, LYON, MARSHALL, MCCRACKEN, MCLEAN,

MUHLENBERG, OHIO, UNION, and WEBSTER COUNTIES

	Rates	Fringes
BRICKLAYER		
Ballard, Caldwell, Carlisle, Crittenden, Fulton, Graves, Hickman, Livingston, Lyon, Marshall, and McCracken Counties.....	\$ 30.50	15.16
Butler, Edmonson, Hopkins, Muhlenberg, and Ohio Counties.....	\$ 26.80	12.38
Daviess, Hancock, Henderson, McLean, Union, and Webster Counties.....	\$ 30.00	15.16

 BRTN0004-005 06/01/2017

ALLEN, CALLOWAY, CHRISTIAN, LOGAN, SIMPSON, TODD, TRIGG, and
 WARREN COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 26.80	12.38

 CARP0357-002 04/01/2016

	Rates	Fringes
CARPENTER.....	\$ 27.70	17.03
Diver.....	\$ 41.93	17.03
PILEDRIVERMAN.....	\$ 27.95	17.03

 ELEC0369-006 05/30/2018

BUTLER, EDMONSON, LOGAN, TODD & WARREN COUNTIES:

	Rates	Fringes
ELECTRICIAN.....	\$ 31.66	17.01

 ELEC0429-001 06/01/2018

ALLEN & SIMPSON COUNTIES:

	Rates	Fringes
ELECTRICIAN.....	\$ 26.77	12.94

 ELEC0816-002 05/28/2018

BALLARD, CALDWELL, CALLOWAY, CARLISLE, CHRISTIAN, CRITTENDEN,
 FULTON (Except a 5 mile radius of City Hall in Fulton), GRAVES,
 HICKMAN, LIVINGSTON, LYON, MARSHALL, MCCRACKEN & TRIGG COUNTIES:

	Rates	Fringes
ELECTRICIAN.....	\$ 32.87	25.5%+7.05

Cable spicers receive \$.25 per hour additional.

 ELEC1701-003 06/01/2018

DAVIESS, HANCOCK, HENDERSON, HOPKINS, MCLEAN, MUHLENBERG, OHIO,
 UNION & WEBSTER COUNTIES:

	Rates	Fringes
ELECTRICIAN.....	\$ 31.04	15.74

Cable spicers receive \$.25 per hour additional.

 ELEC1925-002 01/01/2019

FULTON COUNTY (Up to a 5 mile radius of City Hall in Fulton):

	Rates	Fringes
CABLE SPLICER.....	\$ 25.80	12.16
ELECTRICIAN.....	\$ 25.20	13.74

 ENGI0181-017 07/01/2017

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1.....	\$ 31.95	15.15
GROUP 2.....	\$ 29.09	15.15
GROUP 3.....	\$ 29.54	15.15
GROUP 4.....	\$ 28.77	15.15

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - A-Frame Winch Truck; Auto Patrol; Backfiller; Batcher Plant; Bituminous Paver; Bituminous Transfer Machine; Boom Cat; Bulldozer; Mechanic; Cableway; Carry-All Scoop; Carry Deck Crane; Central Compressor Plant; Cherry Picker; Clamshell; Concrete Mixer (21 cu. ft. or Over); Concrete Paver; Truck-Mounted Concrete Pump; Core Drill; Crane; Crusher Plant; Derrick; Derrick Boat; Ditching & Trenching Machine; Dragline; Dredge Operator; Dredge Engineer; Elevating Grader & Loaders; Grade-All; Gurries; Heavy Equipment Robotics Operator/Mechanic; High Lift; Hoe-Type Machine; Hoist (Two or More Drums); Hoisting Engine (Two or More Drums); Horizontal Directional Drill Operator; Hydrocrane; Hyster; KeCal Loader; LeTourneau; Locomotive; Mechanic; Mechanically Operated Laser Screed; Mechanic Welder; Mucking Machine; Motor Scraper; Orangepeel Bucket; Overhead Crane; Piledriver; Power Blade; Pumpcrete; Push Dozer; Rock Spreader, attached to equipment; Rotary Drill; Roller (Bituminous); Rough Terrain Crane; Scarifier; Scoopmobile; Shovel; Side Boom; Subgrader; Tailboom; Telescoping Type Forklift; Tow or Push Boat; Tower Crane (French, German & other types); Tractor Shovel; Truck

BUTLER COUNTY (Townships of Aberdeen, Bancock, Casey, Dexterville, Dunbar, Elfie, Gilstrap, Huntsville, Logansport, Monford, Morgantown, Provo, Rochester, South Hill & Welchs Creek);
 CALDWELL COUNTY (Northeastern third, including the Township of Creswell);
 CHRISTIAN COUNTY (Northern third, including the Townships of Apex, Crofton, Kelly, Mannington & Wynns);
 CRITTENDEN COUNTY (Northeastern half, including the Townships of Grove, Mattoon, Repton, Shady Grove & Tribune);
 MUHLENBERG COUNTY (Townships of Bavier, Beech Creek Junction, Benton, Brennen, Browder, Central City, Cleaton, Depoy, Drakesboro, Eunis, Graham, Hillside, Luzerne, Lynn City, Martwick, McNary, Millport, Moorman, Nelson, Paradise, Powderly, South Carrollton, Tarina & Weir)

	Rates	Fringes
Ironworkers:.....	\$ 28.66	22.435

IRON0492-003 05/01/2018		

ALLEN, LOGAN, SIMPSON, TODD & WARREN COUNTIES
 BUTLER COUNTY (Southern third, including the Townships of Boston, Berrys Lick, Dimple, Jetson, Quality, Sharer, Sugar Grove & Woodbury);
 CHRISTIAN COUNTY (Eastern two-thirds, including the Townships of Bennettstown, Casky, Herndon, Hopkinsville, Howell, Masonville, Pembroke & Thompsonville);
 EDMONSON COUNTY (Southern fourth, including the Townships of Chalybeate & Rocky Hill);
 MUHLENBERG COUNTY (Southern eighth, including the Townships of Dunnior, Penrod & Rosewood)

	Rates	Fringes
Ironworkers:.....	\$ 26.11	14.02

IRON0782-006 05/01/2018		

BALLARD, CALLOWAY, CARLISLE, FULTON, GRAVES, HICKMAN, LIVINGSTON, LYON, MARSHALL, MCCRACKEN & TRIGG COUNTIES
 CALDWELL COUNTY (Southwestern two-thirds, including the Townships of Cedar Bluff, Cider, Claxton, Cobb, Crowtown, Dulaney, Farmersville, Fredonia, McGowan, Otter Pond & Princeton);
 CHRISTIAN COUNTY (Western third, Excluding the Townships of Apex, Crofton, Kelly, Mannington, Wynns, Bennettstown, Casky, Herndon, Hopkinsville, Howell, Masonville, Pembroke & Thompsonville);
 CRITTENDEN COUNTY (Southwestern half, including the Townships of Crayne, Dycusburg, Frances, Marion, Mexico, Midway, Sheridan & Told)

	Rates	Fringes
Ironworkers:		

Projects with a total
 contract cost of
 \$20,000,000.00 or above.....\$ 28.79 24.17
 All Other Work.....\$ 27.20 22.75

LABO0189-005 07/01/2018

BALLARD, CALLOWAY, CARLISLE, FULTON, GRAVES, HICKMAN,
 LIVINGSTON, LYON, MARSHALL & MCCRACKEN COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 23.07	14.21
GROUP 2.....	\$ 23.32	14.21
GROUP 3.....	\$ 23.37	14.21
GROUP 4.....	\$ 23.97	14.21

LABORER CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushhammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Blaster; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

LABO0189-006 07/01/2018

ALLEN, BUTLER, CALDWELL, CHRISTIAN, DAVIESS, EDMONSON, HANCOCK,
 HOPKINS, LOGAN, MCLEAN, MUHLENBERG, OHIO, SIMPSON, TODD, TRIGG
 & WARREN COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 23.07	14.21
GROUP 2.....	\$ 23.32	14.21
GROUP 3.....	\$ 23.37	14.21
GROUP 4.....	\$ 23.97	14.21

LABORER CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushhammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Blaster; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

 LABO0561-001 07/01/2018

CRITTENDEN, HENDERSON, UNION & WEBSTER COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 22.71	15.00
GROUP 2.....	\$ 22.96	15.00
GROUP 3.....	\$ 23.01	15.00
GROUP 4.....	\$ 23.61	15.00

LABORER CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushhammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Blaster; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

 PAIN0032-002 09/01/2018

BALLARD COUNTY

	Rates	Fringes
Painters:		
Bridges.....	\$ 33.56	16.13
All Other Work.....	\$ 31.86	16.13
Spray, Blast, Steam, High & Hazardous (Including Lead		

Abatement) and All Epoxy - \$1.00 Premium

 PAIN0118-003 06/01/2014

EDMONSON COUNTY:

	Rates	Fringes
Painters:		
Brush & Roller.....	\$ 18.50	11.97
Spray, Sandblast, Power Tools, Waterblast & Steam Cleaning.....	\$ 19.50	11.97

 PAIN0156-006 04/01/2015

DAVIESS, HANCOCK, HENDERSON, MCLEAN, OHIO, UNION & WEBSTER
 COUNTIES

	Rates	Fringes
Painters:		
BRIDGES		
GROUP 1.....	\$ 27.60	12.85
GROUP 2.....	\$ 27.85	12.85
GROUP 3.....	\$ 28.60	12.85
GROUP 4.....	\$ 29.60	12.85
ALL OTHER WORK:		
GROUP 1.....	\$ 26.45	12.85
GROUP 2.....	\$ 26.70	12.85
GROUP 3.....	\$ 27.45	12.85
GROUP 4.....	\$ 28.45	12.85

PAINTER CLASSIFICATIONS

GROUP 1 - Brush & Roller

GROUP 2 - Plasterers

GROUP 3 - Spray; Sandblast; Power Tools; Waterblast;
 Steamcleaning; Brush & Roller of Mastics, Creosotes, Kwinch
 Koate & Coal Tar Epoxy

GROUP 4 - Spray of Mastics, Creosotes, Kwinch Koate & Coal
 Tar Epoxy

 PAIN0500-002 06/01/2018

CALDWELL, CALLOWAY, CARLISLE, CHRISTIAN, CRITTENDEN, FULTON,
 GRAVES, HICKMAN, HOPKINS, LIVINGSTON, LYON, MARSHALL, MCCRACKEN
 & TRIGG COUNTIES:

	Rates	Fringes
Painters:		
Bridges.....	\$ 27.75	13.60

All Other Work.....\$ 21.50 13.60

Waterblasting units with 3500 PSI and above - \$.50 premium
Spraypainting and all abrasive blasting - \$1.00 premium
Work 40 ft. and above ground level - \$1.00 premium

PLUM0184-002 07/01/2018

BALLARD, CALDWELL, CALLOWAY, CARLISLE, CHRISTIAN, CRITTENDEN,
FULTON, GRAVES, HICKMAN, LIVINGSTON, LYON, MARSHALL, MCCRACKEN
and TRIGG COUNTIES

	Rates	Fringes
Plumber; Steamfitter.....	\$ 35.06	18.18

PLUM0502-004 08/01/2018

ALLEN, BUTLER, EDMONSON, SIMPSON & WARREN

	Rates	Fringes
Plumber; Steamfitter.....	\$ 34.62	20.78

PLUM0633-002 07/01/2017

DAVIESS, HANCOCK, HENDERSON, HOPKINS, LOGAN, MCLEAN,
MUHLENBERG, OHIO, TODD, UNION & WEBSTER COUNTIES:

	Rates	Fringes
PLUMBER/PIPEFITTER.....	\$ 31.47	16.80

* TEAM0089-003 04/01/2019

ALLEN, BUTLER, EDMONSON, LOGAN, SIMPSON & WARREN COUNTIES

	Rates	Fringes
Truck drivers:		
Zone 1:		
Group 1.....	\$ 20.82	21.96
Group 2.....	\$ 21.00	21.96
Group 3.....	\$ 21.08	21.96
Group 4.....	\$ 21.10	21.96

GROUP 1 - Greaser; Tire Changer

GROUP 2 - Truck Mechanic; Single Axle Dump; Flat Bed; All
Terrain Vehicles when used to haul materials; Semi Trailer
or Pole Trailer when used to pull building materials and
equipment; Tandem Axle Dump; Driver of Distributors

GROUP 3 - Mixer All Types

GROUP 4 - Winch and A-Frame when used in transporting
materials; Ross Carrier; Fork Lift when used to transport

building materials; Driver on Pavement Breaker; Euclid and Other Heavy Earth Moving Equipment; Low Boy; Articulator Cat; Five Axle Vehicle

 * TEAM0215-003 04/01/2019

DAVISS, HANCOCK, HENDERSON, HOPKINS, MCLEAN, MUHLENBERG, OHIO & WEBSTER COUNTIES

	Rates	Fringes
TRUCK DRIVER		
Group 1.....	\$ 22.45	21.96
Group 2.....	\$ 22.68	21.96
Group 3.....	\$ 22.75	21.96
Group 4.....	\$ 22.76	21.96

GROUP 1: Greaser, Tire Changer

GROUP 2: Truck Mechanic

GROUP 3: Single Axle Dump; Flat Bed; All Terrain Vehicle when used to haul materials; Semi Trailer or Pole Trailer when used to pull building materials and equipment; Tandem Axle Dump; Driver of Distributors; Mixer All Types

GROUP 4: Euclid and other heavy earth moving equipment; Low Boy; Articulator Cat; 5 Axle Vehicle; Winch and A- Frame when used in transporting materials; Ross Carrier; Fork Lift when used to transport building materials; Driver on Pavement Breaker

 * TEAM0236-001 04/01/2019

BALLARD, CALDWELL, CALLOWAY, CARLISLE, CHRISTIAN, CRITTENDEN, FULTON, GRAVES, HICKMAN, LIVINGSTON, LYON, MARSHALL, MCCRACKEN, TODD & TRIGG COUNTIES

	Rates	Fringes
TRUCK DRIVER		
Group 1.....	\$ 20.82	21.96
Group 2.....	\$ 21.00	21.96
Group 3.....	\$ 21.00	21.96
Group 4.....	\$ 20.10	21.96
Group 5.....	\$ 21.08	21.96

GROUP 1: Greaser, Tire Changer

GROUP 2: Truck Mechanic

GROUP 3: Single Axle Dump; Flat Bed; All Terrain Vehicle when used to haul materials; Semi Trailer or Pole Trailer when used to pull building materials and equipment; Tandem Axle Dump; Drivers of Distributors

GROUP 4: Euclid and other heavy earth moving equipment; Low Boy; Articulator Cat; Five Axle Vehicle; Winch and A-Frame when used in transporting materials; Ross Carrier

GROUP 5: Mixer All Types

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.
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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number,

005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

Fringe benefit amounts are applicable for all hours worked except when otherwise noted.

No laborer, workman or mechanic shall be paid at a rate less than that of a Journeyman except those classified as bona fide apprentices.

Apprentices or trainees shall be permitted to work as such subject to Administrative Regulations adopted by the Commissioner of Workplace Standards. Copies of these regulations will be furnished upon request from any interested person.

Before using apprentices on the job the contractor shall present to the Contracting Officer written evidence of registration of such employees in a program of a State apprenticeship and training agency approved and recognized by the U. S. Bureau of Apprenticeship and Training. In the absence of such a State agency, the contractor shall submit evidence of approval and registration by the U. S. Bureau of Apprenticeship and Training.

The contractor shall submit to the Contracting Officer, written evidence of the established apprenticeship-journeyman ratios and wage rates in the project area, which will be the basis for establishing such ratios and rates for the project under the applicable contract provisions.

TO: EMPLOYERS/EMPLOYEES

PREVAILING WAGE SCHEDULE:

The wages indicated on this wage schedule are the least permitted to be paid for the occupations indicated. When an employee works in more than one classification, the employer must record the number of hours worked in each classification at the prescribed hourly base rate.

OVERTIME:

Overtime is to be paid to an employee at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty (40) hours in such workweek. Wage violations or questions should be directed to the designated Engineer or the undersigned.

Director
Division of Construction Procurement
Frankfort, Kentucky 40622
502-564-3500

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY
(Executive Order 11246)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

GOALS FOR MINORITY PARTICIPATION IN EACH TRADE	GOALS FOR FEMALE PARTICIPATION IN EACH TRADE
5.2%	6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4, 3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of \$10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed. The notification shall be mailed to:

**Evelyn Teague, Regional Director
Office of Federal Contract Compliance Programs
61 Forsyth Street, SW, Suite 7B75
Atlanta, Georgia 30303-8609**

4. As used in this Notice, and in the contract resulting from this solicitation, the "**covered area**" is McCracken County.

PART IV
INSURANCE

Refer to
Kentucky Standard Specifications for Road and Bridge Construction,
current edition

PART V
BID ITEMS

PROPOSAL BID ITEMS

191227

Page 1 of 2

Report Date 7/2/19

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	1,221.00	TON		\$	
0020	00190		LEVELING & WEDGING PG64-22	94.00	TON		\$	
0030	00214		CL3 ASPH BASE 1.00D PG64-22	1,076.00	TON		\$	
0040	00324		CL3 ASPH SURF 0.50B PG64-22	1,473.00	TON		\$	
0050	00358		ASPHALT CURING SEAL	6.50	TON		\$	
0060	02101		CEM CONC ENT PAVEMENT-8 IN	475.00	SQYD		\$	
0070	02542		CEMENT	9.80	TON		\$	
0080	02677		ASPHALT PAVE MILLING & TEXTURING	1,642.00	TON		\$	
0090	02702		SAND FOR BLOTTER	16.30	TON		\$	
0100	20071EC		JOINT ADHESIVE	7,245.00	LF		\$	
0110	24781EC		INTELLIGENT COMPACTION FOR ASPHALT	2,549.00	TON		\$	
0120	24785EC		FIBER REINFORCEMENT FOR HMA	2,549.00	TON		\$	
0130	24891EC		PAVE MOUNT INFRARED TEMP EQUIPMENT	179,216.00	SF		\$	
0140	24936EC		FULL DEPTH RECLAMATION WITH CEMENT	6,522.00	SQYD		\$	
0150	24970EC		ASPHALT MATERIAL FOR TACK NON-TRACKING	2.70	TON		\$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0160	01791		ADJUST MANHOLE FRAME TO GRADE	4.00	EACH		\$	
0170	01810		STANDARD CURB AND GUTTER	4,163.00	LF		\$	
0180	01812		REMOVE CURB AND GUTTER	4,163.00	LF		\$	
0190	02014		BARRICADE-TYPE III	7.00	EACH		\$	
0200	02058		REMOVE PCC PAVEMENT	243.00	SQYD		\$	
0210	02091		REMOVE PAVEMENT	475.00	SQYD		\$	
0220	02200		ROADWAY EXCAVATION	1,557.00	CUYD		\$	
0230	02562		TEMPORARY SIGNS	500.00	SQFT		\$	
0240	02585		EDGE KEY	167.00	LF		\$	
0250	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		\$	
0260	02671		PORTABLE CHANGEABLE MESSAGE SIGN	8.00	EACH		\$	
0270	02676		MOBILIZATION FOR MILL & TEXT	1.00	LS		\$	
0280	02721		REMOVE CONCRETE SIDEWALK	72.00	SQYD		\$	
0290	02726		STAKING	1.00	LS		\$	
0300	02775		ARROW PANEL	2.00	EACH		\$	
0310	04953		TEMP RELOCATION OF SIGNAL HEAD	8.00	EACH		\$	
0320	05990		SODDING	4,696.00	SQYD		\$	
0330	06406		SBM ALUM SHEET SIGNS .080 IN	18.00	SQFT		\$	
0340	06410		STEEL POST TYPE 1	60.00	LF		\$	
0350	06510		PAVE STRIPING-TEMP PAINT-4 IN	7,260.00	LF		\$	
0360	06549		PAVE STRIPING-TEMP REM TAPE-B	500.00	LF		\$	
0370	06550		PAVE STRIPING-TEMP REM TAPE-W	4,840.00	LF		\$	
0380	06551		PAVE STRIPING-TEMP REM TAPE-Y	4,840.00	LF		\$	
0390	06566		PAVE MARKING-THERMO X-WALK-12 IN	293.00	LF		\$	
0400	06568		PAVE MARKING-THERMO STOP BAR-24IN	234.00	LF		\$	
0410	06574		PAVE MARKING-THERMO CURV ARROW	24.00	EACH		\$	

PROPOSAL BID ITEMS

191227

Page 2 of 2

Report Date 7/2/19

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0420	06575		PAVE MARKING-THERMO COMB ARROW	4.00	EACH		\$	
0430	20099ES842		PAVE MARK TEMP PAINT STOP BAR	33.00	LF		\$	
0440	20194ED		REMOVE & RESET TRAFFIC SIGN	25.00	EACH		\$	
0450	20430ED		SAW CUT	627.00	LF		\$	
0460	20757ED		PAVEMENT REPAIR	42.00	SQYD		\$	
0470	20782NS714		PAVE MARKING THERMO-BIKE	36.00	EACH		\$	
0480	20870ND		REMOVE AND RESET HISTORIC MARKERS	1.00	EACH		\$	
0490	20904ED		RECONSTRUCT CURB BOX INLET	13.00	EACH		\$	
0500	24386EC		PAVE MARKING THERMO-BIKE LANE ARROW	36.00	EACH		\$	
0510	24489EC		INLAID PAVEMENT MARKER	101.00	EACH		\$	
0520	24631EC		BARCODE SIGN INVENTORY	6.00	EACH		\$	
0530	24986EC		HMA ELECTRONIC DELIVERY MGMT SYSTEM	1.00	L S		\$	
0540	24995EC		PAVE STRIPING-SPRAY THERMO-6 IN W	4,557.00	LF		\$	
0550	24996EC		PAVE STRIPING-SPRAY THERMO-6 IN Y	4,980.00	LF		\$	

Section: 0003 - SIGNALIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0560	04792		CONDUIT-1 IN	10.00	LF		\$	
0570	04811		ELECTRICAL JUNCTION BOX TYPE B	2.00	EACH		\$	
0580	04820		TRENCHING AND BACKFILLING	30.00	LF		\$	
0590	04830		LOOP WIRE	1,320.00	LF		\$	
0600	04850		CABLE-NO. 14/1 PAIR	100.00	LF		\$	
0610	04895		LOOP SAW SLOT AND FILL	516.00	LF		\$	
0620	24900EC		PVC CONDUIT-1 1/4 IN-SCHEDULE 80	30.00	LF		\$	
0630	24963ED		LOOP TEST	4.00	EACH		\$	

Section: 0004 - DEMOBILIZATION &/OR MOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0640	02569		DEMOBILIZATION	1.00	LS		\$	