CALL NO. 115

CONTRACT ID. 251112

ROCKCASTLE COUNTY

FED/STATE PROJECT NUMBER STP 1501(134)

DESCRIPTION US 150 (150)

WORK TYPE ASPHALT SURFACE WITH GUARDRAIL

PRIMARY COMPLETION DATE 7/31/2026

LETTING DATE: August 21,2025

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME August 21,2025. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT TIME.

NO PLANS ASSOCIATED WITH THIS PROJECT.

DBE CERTIFICATION REQUIRED - 12.50%

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

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PART I

SCOPE OF WORK

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.

INCIDENTAL SURFACING

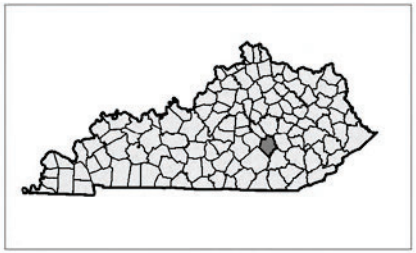
The Department has included in the quantities of asphalt mixtures established in the proposal estimated quantities required for resurfacing or surfacing mailbox turnouts, farm field entrances, residential and commercial entrances, curve widening, ramp gores and tapers, and road and street approaches, 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.

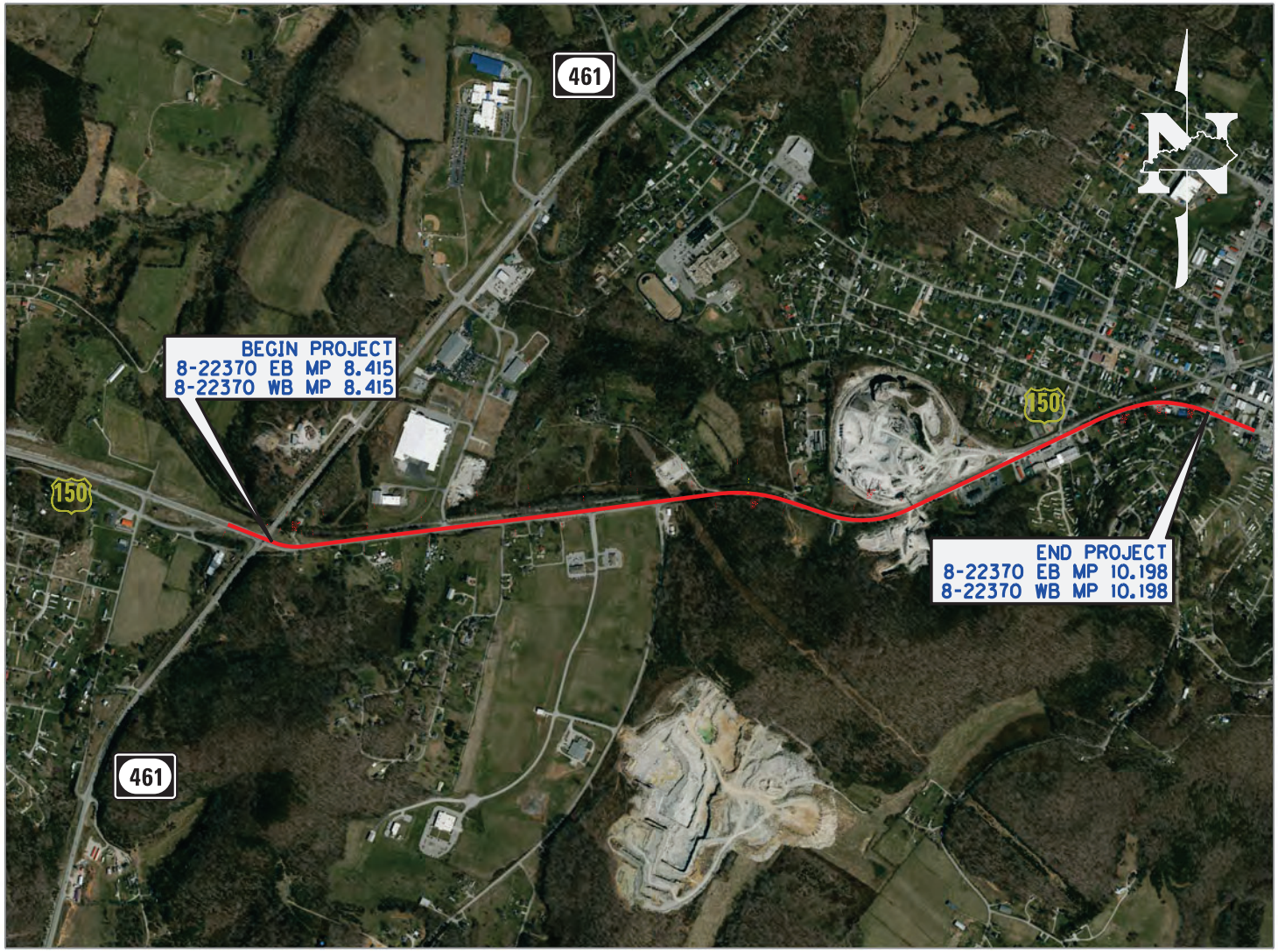
ASPHALT PAVEMENT RIDE QUALITY CATEGORY B

The Department will apply Pavement Rideability Requirements on this project in accordance with Section 410, Category B.

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.





PROJECT NO. FD52 102 0150 008-011 / STP 1501(134) AADT: 8,213
ITEM NO.: 8-22370 LETTING DATE: 08/21/25
RECOMMENDED BY: ROSS MILLS P.E. DATE:
PLAN APPROVED BY: DATE:
FHWA APPROVED BY: DATE:

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

NOT TO SCALE

8-22370 PAVEMENT REHABILITATION
ROCKCASTLE COUNTY

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REFERENCES

1. Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Edition of 2019 with Supplemental Specifications, as applicable.

2. FHWA Manual on Uniform Traffic Control Devices (MUTCD) – 11th Edition w/Revisions

3. Kentucky Department of Highways Standard Drawings, 2020 edition, as applicable:

- RBI-001-12-TYPICAL GUARDRAIL INSTALLATIONS
- RBI-002-07-TYPICAL GUARDRAIL INSTALLATIONS
- RBI-004-06-INSTALLATION OF GUARDRAIL END TREATMENT TYPE 1
- RBR-001-13-STEEL BEAM GUARDRAIL (W-BEAM)
- RBR-005-11-GUARDRAIL COMPONENTS
- RBR-010-06-GUARDRAIL TERMINAL SECTIONS
- RBR-015-06-STEEL GUARDRAIL POSTS
- RBR-055-01-DELINEATORS FOR GUARDRAIL
- RDB-013-07-DROP BOX INLET TYPE 13 (DETAIL SHEET)
- RDB-014-06-DROP BOX INLET TYPE 13 AND TYPE 16 (FRAME & GRATE DETAILS)
- RDB-015-04-DROP BOX INLET TYPE 13 (DETAIL & BAR CHART FOR LID)
- RDB-016-03-DROP BOX INLET TYPE 13 (PIPE CHAMBER - GRADE CONDITION)
- RDB-018-04-DROP BOX INLET TYPE 13 (ADDITIONAL STEEL - RISER)
- RDB-019-04-DROP BOX INLET TYPE 13 (ADDITIONAL STEEL - CHAMBER)
- RDB-101-05-GRATES FOR SLOPED BOX OUTLET TYPE 1
- RDI-001-10-CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS (12” – 24” PIPE)
- RDI-011-03- 15” – 60” PIPE)
- RDI-020-10-PIPE BEDDING FOR CULVERTS, ENTRANCE, AND STORM SEWER PIPE
- RDI-021-01-PIPE BEDDING FOR CULVERTS, ENTRANCE, AND STORM SEWER, REINFORCED CONC. PIPE
- RDI-025-06-PIPE BEDDING, TRENCH CONDITION
- RDI-026-01-PIPE BEDDING, TRENCH CONDITION, REINFORCED CONC. PIPE
- RDI-120-04- COMBINATIONS
- RDX-001-06-JUNCTION BOX
- RDX-002-04-JUNCTION BOX (DIMENSIONS AND QUANTITIES)
- RDX-160-06-SECURITY DEVICES FOR FRAMES, GRATES AND LIDS
- RDX-210-03-TEMPORARY SILT FENCE
- RDX-225-01-SILT TRAP - TYPE B
- RGX-001-06-MISCELLANEOUS STANDARDS
- RPM-110-07-APPROACHES, ENTRANCES, AND MAIL BOX TURNOUT
- TPM-203-TYPICAL MARKINGS AT SIGNALIZED INTERSECTIONS
- TPM-204-TYPICAL MARKINGS FOR GORE AREAS
- TPM-205-TYPICAL MARKINGS FOR ISLANDS AND MEDIANS
- TPM-206-TYPICAL MARKINGS FOR TURN LANES PAGE 1
- TPR-100-CENTERLINE RUMBLE STRIPS
- TPR-125-SHOULDER RUMBLE STRIP DETAILS TWO LANE ROADWAYS
- TTC-100-05-LANE CLOSURE TWO-LANE HIGHWAY
- TTD-125-03-PAVEMENT CONDITION WARNING SIGNS
- TTS-100-02-MOBILE OPERATION FOR PAINT STRIPING CASE I
- TTS-105-02-MOBILE OPERATION FOR PAINT STRIPING CASE II
- TTS-130-02-MOBILE OPERATION FOR DURABLE STRIPING CASE III
- TTS-135-02-MOBILE OPERATION FOR DURABLE STRIPING CASE IV

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Sepias:

- Sepia 21-COATINGS, LININGS AND PAVINGS FOR NON-STRUCTURAL PLATE PIPE
- Sepia 25-SILT TRAP - TYPE C
- Sepia 027-CENTERLINE RUMBLE STRIPS 6 INCH STRIPING
- Sepia 028-EDGELINE RUMBLE STRIPS PLACEMENT DETAILS
- Sepia 029-EDGELINE RUMBLE STRIP DETAILS TWO LANE ROADWAYS
- Sepia 029N-EDGELINE RUMBLE STRIP DETAILS TWO LANE ROADWAYS NOTES
- Sepia 032-PAVEMENT STRIPING DETAILS FOR TWO LANE TWO WAY ROADWAYS
- Sepia 034 – GUARDRAIL END TREAMENT TYPE 1
- S-TTD-120-03-HIGHER FINES ZONE SIGNS
- S-TTD-130-SPEED ZONE SIGNING FOR WORK ZONES

4. **Special Notes and Provisions**

- Special Note for Before You Dig
- Special Note for Typical Section Dimensions
- Special Note for Fixed Completion Date and Liquidated Damages
- Special Note for Barcodes on Permanent Signs 2019
- Special Note for Waste and Borrow Sites (1-296)
- Special Note for Paver Mounted Temperature Profiles (1-3062)
- Special Note for Non-Tracking Tack Coat (1-3090)
- Special Note for Recycled Asphalt Pavement (Rap) Stockpile Management (1-3097)
- Special Note for Traffic Loop Signal Detectors
- Special Note for Geocomposite Reinforcement for Asphalt
- Special Note for Asphalt Milling and Texturing
- Special Note for Ribbon Thermo Striping Application
- Special Note for Portable Changeable Message Sign (2-3-01)
- Special Notes Applicable to Project (1-201)
- Special Note for Asphalt Mixture (1-132)
- Special Note for Category B Ride Quality (1-158)
- Special Note for Compaction Option A (1-160)
- Special Note for Project Questions During Advertisement
- Special Note for Longitudinal Joint Adhesive
- Special Note for Standard Drawings (2-750)
- Special Note for Maintain and Control Traffic
- Special Note for Guardrail Delivery Sheet Verification
- Special Note for Electronic Delivery Management System (E-Ticketing)

GENERAL NOTES

US 150

REHABILITATION PROJECT

ROCKCASTLE COUNTY

ITEM NO. 8-22370

I. GENERAL

Perform all work in accordance with the Department's 2019 Standard Specifications and current editions of the Supplemental Specifications, Special Provisions, and Standard Drawings except as specified in these notes or elsewhere in this proposal. Article references are to the Standard Specifications.

All existing mile markers within the project limits have been shown on the plan sheets. These can be used to relate the mile points shown in the summaries to their location in the field.

II. 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 the 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 Maintenance of Traffic Plan.

B. PAVEMENT STRIPING. Use Pave Striping-Thermo-6” for permanent striping on asphalt surfaces. All crosshatch markings are to be Thermo Plastic. Use Pave Striping-Thermo-24” for stop bars.

C. EROSION CONTROL BLANKET. Erosion Control Blanket is to be placed on any disturbed areas in the roadway side slopes, or other areas disturbed where work is required in the proposal.

III. CONSTRUCTION METHODS

A. MAINTAIN AND CONTROL TRAFFIC. See Maintenance of Traffic Plan.

B. SITE PREPARATION. Be responsible for all site preparation. This item shall include, but is not limited to, clearing and grubbing, excavation and backfilling, embankments, removal of obstructions or any other items, and disposal of materials. All site preparation shall be only as approved or directed by the Engineer. Except for the bid items listed, site preparation will not be measured for payment but shall be incidental to the other items of work.

C. MILLING After milling, where milling is called for in the Proposal, correct settlement over pipe and culverts and remove de-bonded or flaking courses. Removal of inlaid pavement markers shall be incidental to the Milling bid item. No Milled surface will be left over the winter shutdown period.

D. GUARDRAIL POSTS All guardrail posts shall be 7ft.

E. 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 obtaining any necessary permits for this work. Temporary openings in the right-of-way fence for direct access to waste sites off the right-of-way or for access to other public roads will not be allowed. 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.

F. FINAL DRESSING, CLEANUP, AND SEEDING. After all work is completed, completely remove all debris from the job site. Perform Final Dressing Class A on all disturbed areas. Sow all disturbed earthen areas with the seed mixtures specified by the Engineer or place Erosion Control blanket on the areas if directed to do so by the Engineer.

G. PAVEMENT STRIPING AND PAVEMENT MARKERS. Permanent striping will be in accordance with Section 714, except that:

(1) Striping will be 6” in width and 24” for stop bars.
(2) Permanent or Temporary Striping will be in place before a lane is opened to traffic.
(3) Permanent striping on asphalt surfaces will be Pave Striping-Thermo-6”
(4) Permanent striping where edgeline or centerline rumble strips are constructed shall be Ribbon Thermo Striping (see special note).
(5) Existing pavement marker removal shall be incidental to the Asphalt Pave Milling and Texturing Bid Item.

H. ON SITE INSPECTION. Each Contractor submitting a bid for this work shall make a thorough inspection of the site prior to submitting a bid and shall be thoroughly familiarized 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. The Department will not honor any claims resulting from site conditions.

I. PROPERTY DAMAGE. The Contractor shall be responsible for all damage to public and/or private property resulting from the Contractor’s work. Restore all disturbed features in like kind materials and design to the existing or proposed grades, as applicable, at no additional cost to the Department.

J. 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 conclusion as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and will not consider any claim for additional compensation if the conditions encountered are not in accordance with the information shown.

K. UTILITY CLEARANCE. Do not disturb existing overhead or underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require that utilities be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities. The Contractor shall be responsible for repairing all utility damage that occurs as a result of his operations at no additional cost to the Department.

IV. METHOD OF MEASUREMENT

Except as specified in these notes, or elsewhere in the drawings or this proposal, the method of measurement will be in accordance with the Standard Specifications.

A. MAINTAIN AND CONTROL TRAFFIC. See Maintenance of Traffic Plan.

B. SITE PREPARATION. Other than the bid items listed, the Department will not measure Site Preparation for payment but shall be incidental to other items of work.

C. PERMANENT STRIPING.

(1) Pave Striping-Thermo 6” and Pave Marking-Thermo Stop Bar-24 Inch are measured per linear foot.
(2) Curved Arrows will be measured as each.
(3) Thermo Plastic Crosshatch markings shall be measured as Square Feet.

V. BASIS OF PAYMENT

Except as specified in these notes, or elsewhere in the drawings or this proposal, basis of payment will be in accordance with the Standard Specifications. No direct payment will be made other than for the bid items listed. All other items required to complete the construction will be incidental to the bid items listed. Existing signs damaged by the Contractor will be replaced by the Contractor at the Contractor’s expense.

A. MAINTAIN AND CONTROL TRAFFIC. See Maintenance Of Traffic Plan.

B. SITE PREPARATION. Other than the bid items listed, no direct payment will be allowed for site preparation, but will be incidental to the other items of work.

NOTES APPLICABLE TO PROJECT

US 150

REHABILITATION PROJECT

ROCKCASTLE COUNTY

ITEM NO. 8-22370

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1. The dimensions shown on the typical section for pavement and shoulder widths 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 or shoulders be widened except where specified in the Proposal.

2. The Contractor is to be advised that low wires and underground utilities may exist throughout the project. The following locations are approximate:

   - Overhead wires:
     - M.P. 8.416
     - M.P. 8.455
     - M.P. 8.772
     - M.P. 8.859
     - M.P. 9.129
     - M.P. 9.145
     - M.P. 9.215
     - M.P. 9.451
     - M.P. 9.479
     - M.P. 9.506
     - M.P. 9.546
     - M.P. 9.593
     - M.P. 9.705
     - M.P. 9.795
     - M.P. 9.826
     - M.P. 9.833
     - M.P. 9.917
     - M.P. 9.926
     - M.P. 9.298
     - M.P. 10.005
     - M.P. 10.040

   CAUTION: Other locations may exist. These and all utilities should be avoided on this project. If any utility is impacted, it will be the Contractor's responsibility to contact the affected utility and cover any costs associated with the impact.

3. Any roadway signs that are damaged during construction are to be replaced at the Contractor's expense.

4. Hill Blocks View Signs (W7-6) & Supplementary Advisory Speed Signs (W13-1P) 35 MPH are to be constructed at the following mile points:

   - M.P. 9.112 RT
   - M.P. 9.559 LT

   Or as Directed by the Engineer.

5. Speed Limit signs shown on the plans at mile points: 9.506 RT, 9.506 LT, 10.040 RT, and 10.079 LT are shown for information only.

6. Type 3 object markers (OM-3R) shall be constructed in the following locations:
    - M.P. 9.673 RT
    - M.P. 9.807 RT
    - M.P. 9.830 RT
    - M.P. 9.834 RT

7. Stop Signs (R1-1) shall be constructed in the following locations:
    - M.P. 8.732 LT
    - M.P. 8.894 RT
    - M.P. 9.376 LT

8. A Traffic Signal Loop Detector will be constructed at the left turn lane of US 150 onto KY 461. US 150 M.P. 8.414.

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

10. Pavement rideability requirements, in accordance with section 410 of the Standard Specifications, shall apply on this project. Category B Shall apply for the length of the project.

11. The Department will accept the compaction of asphalt mixtures furnished for the driving lanes at one inch or greater on this project by Option A according to subsections 402 and 403 of the Standard Specifications, current edition. The Department will accept the compaction of all other mixtures by Option B.

12. This project will include a Mill and Inlay of 1.5” of CL3 Asphalt Surface 0.38B PG 64-22 between M.P. 8.415 and M.P. 10.198. See Typical Sections for limits.

13. This project includes locations to apply “chip and seal” to existing unpaved shoulders. The chip and seal locations shown in the plans are:

    - US 150 RT M.P. 8.415 to M.P. 8.477
    - US 150 LT M.P. 8.476 to M.P. 8.523
    - US 150 RT M.P. 8.913 to M.P. 9.004
    - US 150 RT M.P. 9.018 to M.P. 9.127
    - US 150 RT M.P. 9.597 to M.P. 9.662
    - US 150 LT M.P. 9.921 to M.P. 10.158

    Additional material may be required to reshape existing eroded shoulder. Millings are to be used for this purpose as directed by the Engineer. Placement and forming of material to reshape existing shoulders will be incidental to Asphalt Seal Coat and Asphalt Seal Aggregate.

14. Paved Shoulders shall be inlaid with the same pavement as Driving lanes, CL3 Asphalt Surface 0.38B PG 64-22.

15. This project includes areas of Pavement Repair, see Typical Sections for detail, at the following locations:

    - M.P. 9.111 to M.P. 9.130 RT
    - M.P 9.446 to M.P. 9.474 LT

16. Guardrail along the project shall be removed and new guardrail constructed with 7 foot posts, at the following locations:

    - M.P. 8.467 to M.P. 8.525 RT
    - M.P. 8.912 to M.P. 9.003 RT
    - M.P. 9.016 to M.P. 9.106 RT
    - M.P. 9.960 to M.P. 10.172 LT

17. Guardrail end treatments shall be removed and replaced with the reconstructed guardrail at the following locations:

    - Terminal End Section No.1 – M.P. 8.467 RT
    - Guardrail End Treatment Type 1 – M.P. 8.525 RT
    - Guardrail End Treatment Type 1 – M.P. 8.912 RT
    - Guardrail End Treatment Type 1 – M.P. 9.106 RT
    - Guardrail End Treatment Type 1 – M.P. 9.960 LT
    - Terminal End Section No.1 – M.P. 10.172 LT

18. Ditch repair with crushed aggregate, geotextile fabric, and perforated pipe as detailed in the Typical Sections shall be constructed at the following locations:

    - M.P. 9.131 to M.P. 9.244 LT

19. Existing Culvert Headwall will be replaced with a Junction Box and Sloped box Inlet-Outlet Type 1 at RT M.P. 9.810.

20. Repair Curb Box Inlet RT of M.P. 9.888. At this location the curb box has been damaged. The contractor shall repair the curb box inlet by removing existing concrete to expose the existing steel and form and place Concrete Class A. Work will be bid as CURB BOX INLET TYPE A MOD.

21. The contractor shall remove the top phase and cap existing drop box inlet and construct a Drop box Inlet Type 1 LT of M.P. 9.896. Removal of the top phase shall be bid as REMOVE DROP BOX INLET.

22. Centerline rumble strips will be constructed at the following locations:

    - M.P. 8.415 to M.P. 9.519

    Striping application at centerline rumble strips will follow Special Note for Ribbon Thermo Striping Application.

23. Edgeline rumble strips will be constructed at the following locations:

    - M.P. 8.415 to M.P. 9.519 LT & RT

    Striping application at edgeline rumble strips will follow Special Note for Ribbon Thermo Striping Application.

24. Ditching will be required at the following location:

    - M.P. 10.037 to M.P. 10.066 RT

    Note: There is approximately 35 LF of pipe within the ditching limits.

25. Clean existing pipe of silt and debris at the following location:

    - M.P. 9.832 LT (also remove railroad ties from pipe)
    - M.P. 10.035 RT

26. Raise the existing supplementary signal head 6 FT at M.P. 8.415 LT.

27. Place new 24 inch thermoplastic stop bar at the following locations:

    - M.P. 8.849 RT - intersection of U.S. 150 and Countryside Circle
    - M.P. 8.894 RT – intersection of U. S. 150 and Westview Rd
    - M.P. 9.379 LT – intersection of U.S. 150 and Old Somerset Rd

28. Remove and relocate traffic signal ahead warning sign from M.P. 9.965 to M.P. 10.064.

29. 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. Repairs will be undertaken by the Contractor using “Levelling and Wedging” and shall be paid for at this bid item. All work required to maintain traffic to undertake the repairs shall be incidental to “Maintain and Control Traffic” bid item.

30. The intent of this project is to reconstruct the pavement to its existing grade and cross-slope. The Contractor is to use extreme care to ensure that cross slopes of pavements are not altered from the original cross slope of driving lanes. The Engineer reserves the right to direct the Contractor to monitor cross slopes to restore crown in tangent sections, and/or restore original design cross slope in curves. All work required by this note shall be incidental to the “Staking” Bid Item.

31. The Contractor is advised that the planned locations of work established by mile points are referenced from the existing reference markers.

GENERAL SUMMARY

ITEM	DESCRIPTION	UNIT	TOTAL PROJECT
0071	CRUSHED AGGREGATE SIZE NO 57 ③	TON	57
0078	CRUSHED AGGREGATE SIZE NO 2 ③	TON	113
190	LEVELING & WEDGING PG64-22 ⑩	TON	15
1000	PERFORATED PIPE-4 IN ③	LF	600
1987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	EACH	36
2159	TEMP DITCH	LF	4,707
2160	CLEAN TEMP DITCH	LF	2,345
2237	DITCHING	LF	150
2242	WATER (FOR DUST CONTROL) ②	MGAL	357
2562	TEMPORARY SIGNS ①	SQFT	114
2569	DEMOBILIZATION	LS	1
2603	FABRIC-GEOTEXTILE CLASS 2	SQYD	200
2650	MAINTAIN & CONTROL TRAFFIC	LS	1
2671	PORTABLE CHANGEABLE MESSAGE SIGN ⑧	EACH	2
2697	EDGELINE RUMBLE STRIPS	LF	11,692
2701	TEMP SILT FENCE	LF	4,707
2704	SILT TRAP TYPE B	EACH	2
2705	SILT TRAP TYPE C	EACH	2
2707	CLEAN SILT TRAP TYPE B	EACH	2
2708	CLEAN SILT TRAP TYPE C	EACH	2
2726	STAKING	LS	1
5950	EROSION CONTROL BLANKET	SQYD	40
5952	TEMP MULCH	SQYD	162
5953	TEMP SEEDING AND PROTECTION	SQYD	121
5985	SEEDING AND PROTECTION	SQYD	242
5963	INITIAL FERTILIZER ⑥	TON	0.1
5964	MAINTENANCE FERTILIZER ⑦	TON	0.1
5992	AGRICULTURAL LIMESTONE ④	TON	0.2
6511	PAVE STRIPING-TEMP PAINT-6 IN	LF	84,160
6542	PAVE STRIPING-THERMO-6 IN W	LF	19,464
6543	PAVE STRIPING-THERMO-6 IN Y	LF	22,616
6568	PAVE MARKING-THERMO STOP BAR-24IN	LF	85
6569	PAVE MARKING-THERMO CROSS-HATCH	SQFT	6,451
6574	PAVE MARKING-THERMO CURV ARROW	EACH	19
20099ES842	PAVE MARK TEMP PAINT STOP BAR	LF	44
20100ES842	PAVE MARK TEMP PAINT LINE ARROW	EACH	19
20191ED	OBJECT MARKER TYPE 3	EACH	4
20418ED	REMOVE & RELOCATE SIGNS	EACH	1
20458ES403	CENTERLINE RUMBLE STRIPS	LF	6,459
21659NN	RELOCATE SIGNAL HEAD ⑨	EACH	1
24543EC	CLEAN (PIPE) ⑤	LF	100
24631EC	BARCODE SIGN INVENTORY	EACH	11

NOTES:

① *TEMPORARY SIGNING SHALL FOLLOW KYTC STANDARD DRAWINGS AND/OR MUTCD AS REQUIRED*

② *FOR CONTAINING DUST CAUSED BY MAINTAINING TRAFFIC ONLY (200MGAL/MILE)*

③ *FOR 600 LF OF DITCH REPAIR AS SHOWN IN DITCH REPAIR DETAIL*

④ *ESTIMATED AT 3 TONS PER ACRE DISTURBED*

⑤ *M.P. 9.832 LT & M.P. 10.035 RT*

⑥ *ESTIMATED AT 300 LB PER ACRE DISTURBED AND CONTAINS A MINIMUM OF 100 LBS OF NITROGEN, 100 LBS OF PHOSPHATE AND 100 LBS OF POTASH PER ACRE.*

⑦ *ESTIMATED AT 11.51LB PER 1000 SQFT DISTURBED*

⑧ *SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.*

⑨ *RAISE SUPPLEMENTARY SIGNAL HEAD ON THE EXISTING METAL SIGNAL POLE.*

⑩ *TO BE USED AS DIRECTED BY THE ENGINEER*

GENERAL SUMMARY

ITEM	DESCRIPTION	UNIT	TOTAL PROJECT
	BROUGHT FORWARD FROM PAVEMENT SUMMARY SHEET		
100	ASPHALT SEAL AGGREGATE	TON	53
103	ASPHALT SEAL COAT	TON	6.4
214	CL3 ASPH BASE 1.00D PG64-22	TON	61
388	CL3 ASPH SURF 0.38B PG64-22	TON	2,765
2676	MOBILIZATION FOR MILL & TEXT	LS	1
2677	ASPHALT PAVE MILLING & TEXTURING	TON	2,826
20071EC	JOINT ADHESIVE	LF	12,006
24891EC	PAVE MOUNT INFRARED TEMP EQUIPMENT	SF	301,617
24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	TON	12
25010EC	GEOCOMPOSITE REINFORCEMENT FOR ASPHALT	SQYD	247
	BROUGHT FORWARD FROM DRAINAGE SUMMARY SHEET		
522	STORM SEWER PIPE-18 IN	LF	8
1310	REMOVE PIPE	LF	4
1433	SLOPED BOX OUTLET TYPE 1-18 IN	EACH	1
1459	CURB BOX INLET TYPE A MOD	EACH	1
1559	DROP BOX INLET TYPE 13G	EACH	1
1584	CAP DROP BOX INLET	EACH	1
1585	REMOVE DROP BOX INLET (TOP PHASE ONLY)	EACH	1
1650	JUNCTION BOX	EACH	1
2625	REMOVE HEADWALL	EACH	1
	CARRIED OVER FROM GUARDRAIL SUMMARY SHEET		
2360	GUARDRAIL TERMINAL SECTION NO 1	EACH	2
2367	GUARDRAIL END TREATMENT TYPE 1	EACH	4
2381	REMOVE GUARDRAIL	LF	2,275
2396	REMOVE GUARDRAIL END TREATMENT	EACH	4
21802EN	G/R STEEL W BEAM-S FACE (7FT POST)	LF	2,275
	BROUGHT FORWARD FROM SIGN SHEETING SUMMARY		
6406	SBM ALUM SHEET SIGNS .080 IN	SQFT	47.75
6411	STEEL POST TYPE 2	LF	133
	BROUGHT FORWARD FROM TRAFFIC SIGNAL LOOP SUMMARY		
4792	CONDUIT-1 IN	LF	10
4811	ELECTRICAL JUNCTION BOX TYPE B	EACH	1
4820	TRENCHING AND BACKFILLING	LF	60
4830	LOOP WIRE	LF	350
4850	CABLE-NO. 14/1 PAIR	LF	225
4895	LOOP SAW SLOT AND FILL	LF	150
24900EC	PVC CONDUIT-1 1/4 IN-SCHEDULE 80	LF	50
24963ED	LOOP TEST	EACH	1

PAVING SUMMARY

ITEM CODE	ITEM		UNIT		US 150	UNPAVED SHOULDERS	PAVEMENT REPAIR					TOTAL PROJECT
100	ASPHALT SEAL AGGREGATE	(7)	TON			53						53
103	ASPHALT SEAL COAT	(6)	TON			6.4						6.4
214	CL3 ASPH BASE 1.00D PG64-22	(1)	TON				61					61
388	CL3 ASPH SURF 0.38B PG64-22	(1)	TON		2,765							2,765
2676	MOBILIZATION FOR MILL & TEXT		LS		1							1
2677	ASPHALT PAVE MILLING AND TEXTURING	(1)	TON		2,826							2,826
20071EC	JOINT ADHESIVE	(3)	LF		12,006							12,006
24891EC	PAVE MOUNT INFRARED TEMP EQUIPMENT	(4)	SF		301,617							301,617
24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	(2)	TON		12		0					12
25010EC	GEOCOMPOSITE REINFORCEMENT FOR ASPHALT		SQYD				247					247

NOTES:

(1) *Estimated at 110 pounds per square yard per inch depth.*

(2) *Estimated at 0.70 pounds per square yard. See Special Note for Non-Tracking Tack Coat*

(3) *See Special Note for Longitudinal Pavement Joint Adhesive*

(4) *See Special Note for Paver Mounted Temperature Profiles*

5 *Material Transfer Vehicle is to be used when placing apshalt material or as directed by the Engineer.*

(6) *Estimated at 2.4 LBS/SQYD with two coats for complete application*

(7) *Estimated at 20 LBS/SQYD with two coats for complete application*

8 *All quantities carried forward to the General Summary Sheet.*

PAVING AREAS

ITEM		US 150	UNPAVED SHOULDERS	PAVEMENT REPAIR						TOTAL PROJECT
	SQUARE YARDS									
ASPHALT SEAL AGGREGATE			2,648							2,648
ASPHALT SEAL COAT			2,648							2,648
4.5" CL3 ASPH BASE 1.00D PG64-22				247						247
1.5" CL3 ASPH SURF 0.38B PG64-22		33,513								33,513
1.5"ASPHALT PAVE MILLING AND TEXTURING		33,513								33,513
4.5"ASPHALT PAVE MILLING AND TEXTURING				247						247
PAVE MOUNT INFRARED TEMP EQUIPMENT (1)		301,617								301,617
ASPHALT MATERIAL FOR TACK NON-TRACKING		33,513								33,513
GEOCOMPOSITE REINFORCEMENT FOR ASPHALT				247						247

(1) *Quantities in SF*

DRAINAGE SUMMARY

STORM SEWER SUMMARY

Plan Sheet No.	M.P.		STORM SEWER				CULVERT PIPE					REMOVE PIPE	SLOPED BOX OUTLET TYPE 1-18 IN	CURB BOX INLET TYPE A MOD (3)	DROP BOX INLET TY 13G	CAP DROP BOX INLET	JUNCTION BOX	REMOVE DROP BOX INLET (TOP PHASE ONLY) (2)	REMOVE HEADWALL						REMARKS
			18 INCH																						
Item Code			00522									01310	1433	1459	1559	1584	1650	1585	02625						
Unit to Bid			LF									LF	EACH	EACH	EACH	EACH	EACH	EACH	EACH						
US 150																									
(SEE PIPE SHEET)	9.810	RT	4				-	-	-	-	-	4	1		-	-	1	-	1	-	-	-	-	-	-
							-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-
(SEE PIPE SHEET)	9.888	RT					-	-	-	-	-		-	1				-	-	-	-	-	-	-	-
	9.896	LT	4				-	-	-	-	-		-		1	1		1	-	-	-	-	-	-	-
							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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SHEET TOTALS			8	0	0	0	0	0	0	0	0	4	1	1	1	1	1	1	1	0	0	0	0	0	0

NOTES:
1. ALL QUANTITIES CARRIED FORWARD TO THE GENERAL SUMMARY
2. REMOVE DROP BOX INLET SHALL BE USED FOR THE REMOVAL OF THE TOP PHASE ONLY PRIOR TO CAPPING
3. CURB BOX INLET TYPE A MOD SHALL BE USED TO REPAIR A CURB BOX INLET THROAT.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

TEAM KENTUCKY TRANSPORTATION CABINET

ITEM NO. 8-22370.00
COUNTY OF ROCKCASTLE
SHEET NO. DRAINAGE SUMMARY SHEET

GUARDRAIL SUMMARY

ITEM			GUARDRAIL TERMINAL SECTION NO 1	GUARDRAIL END TREATMENT TYPE 1	REMOVE GUARDRAIL	REMOVE GUARDRAIL END TREATMENT	G/R STEEL W BEAM S FACE (7FT POST)						REMARKS
ITEM CODE			2360	2367	2381	2396	21802EN	-	-	-	-	-	-	
UNIT TO BE ON			EACH	LF	EACH	EACH	EACH	-	-	-	-	-	-	
M.P. BEGIN	M.P. END	LOCATION												
8.467		KY 150 RT	1			1								
8.467	8.525	KY 150 RT			275		275	-	-	-	-	-	-	
8.525	-	KY 150 RT		1				-	-	-	-	-	-	
8.912	-	KY 150 RT		1		1		-	-	-	-	-	-	
8.912	9.003	KY 150 RT			450		450	-	-	-	-	-	-	
9.016	9.106	KY 150 RT			450		450	-	-	-	-	-	-	
9.106		KY 150 RT		1		1		-	-	-	-	-	-	
9.960		KY 150 LT		1		1		-	-	-	-	-	-	
9.960	10.172	KY 150 LT			1,100		1,100	-	-	-	-	-	-	
10.172	-	KY 150 LT	1					-	-	-	-	-	-	
-	-	-						-	-	-	-	-	-	
-		-						-	-	-	-	-	-	
-	-	-						-	-	-	-	-	-	
-	-	-						-	-	-	-	-	-	
TOTALS			**2**	**4**	**2,275**	**4**	**2,275**	**-**	**-**	**-**	**-**	**-**		

NOTE:
1. NOTE: ALL TOTALS CARRIED FORWARD TO THE GENERAL SUMMARY
2. TRANSITION GUARDRAIL PER RBR-018

US 150 PAVEMENT REHABILITATION
M.P. 8.420 TO M.P. 10.198

SHEETING SIGN SCHEDULE

M.P.	SIGN REFERENCE	DIMENSION	SIGN AREA (SFT)	TYPE 2 POST LENGTH (LF)
US 150 RT 9.112	W7–6	30IN X 30IN	6.25	24
US 150 RT 9.112	W13–1P	18IN X 18IN	2.25	—
US 150 LT 9.559	W7–6	30IN X 30IN	6.25	24
US 150 LT 9.559	W13–1P	18IN X 18IN	2.25	—
US 150 RT 9.673	OM3–R	12IN X 36IN	3.00	10
US 150 RT 9.807	OM3–R	12IN X 36IN	3.00	10
US 150 RT 9.830	OM3–R	12IN X 36IN	3.00	10
US 150 RT 9.834	OM3–R	12IN X 36IN	3.00	10
US 150 RT 8.732	R1–1	30IN X 30IN	6.25	15
US 150 RT 8.732	R1–1	30IN X 30IN	6.25	15
US 150 LT 9.376	R1–1	30IN X 30IN	6.25	15
PROJECT TOTAL			47.75 SFT	133 LF

NOTES:

1. ALL SHEETING SIGNS TO BE GAUGE 0.080 INCH ALUMINUM

2. ALL QUANTITIES CARRIED FORWARD TO THE GENERAL SUMMARY SHEET

3. SEE SIGNING TYPICAL DETAILS FOR PLACEMENT AND MOUNTING HEIGHTS.

4. THE EDGE OF THE OBJECT MARKER, OM3–R, THAT IS CLOSEST TO THE ROAD USER SHOULD BE INSTALLED IN LINE WITH THE CLOSEST EDGE OF THE OBSTRUCTION

5. SIGN SHEETING SHALL CONFORM TO SECTION 830 OF KENTUCKY*S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (CURRENT EDITION), AND THESE PLANS. ONLY SHEETING ON THE DEPARTMENTS LIST OF APPROVED MATERIALS SHALL BE USED. ALL RETROREFLECTIVE MATERIALS SHALL BE FABRICATED AND ASSEMBLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND/OR RECOMMENDATIONS.

6. PERMANENT SIGNS AND SIGN COMPONENTS SHALL BE FABRICATED USING TYPE XI SHEETING.

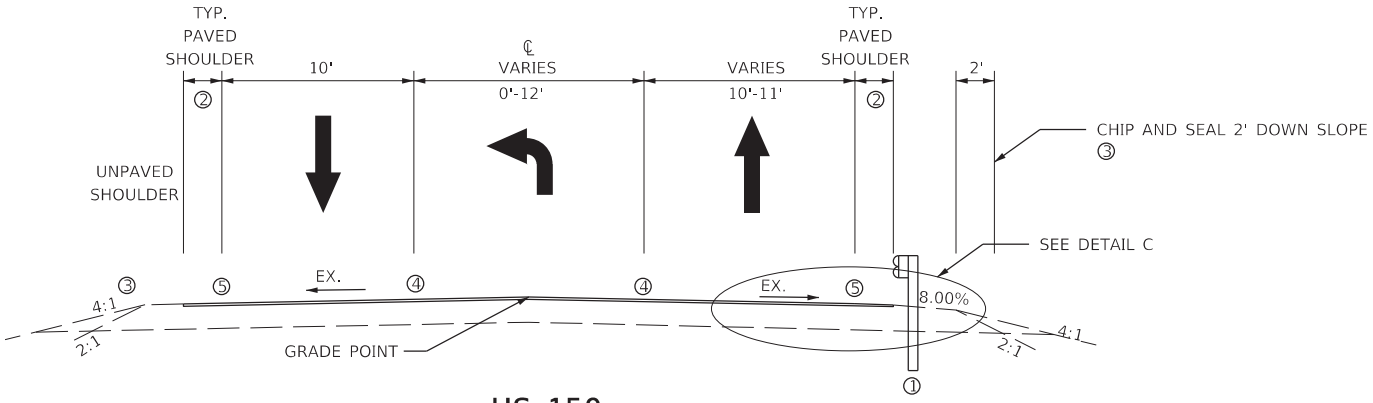
7. THE FOLLOWING SIGNS SHALL BE FABRICATED USING TYPE XI FLUORESCENT YELLOW SHEETING:
   - HORIZONTAL ALIGNMENT SIGNS AND PLAQUES
   - ALL ADVISORY SPEED PLAQUES

8. TYPE II POST SHALL BE STANDARD INSTALLATION IN SOIL WITH A SOIL STABILIZER. ALL STEEL POSTS SHALL MEET THE REQUIREMENTS OF SECTION 832 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

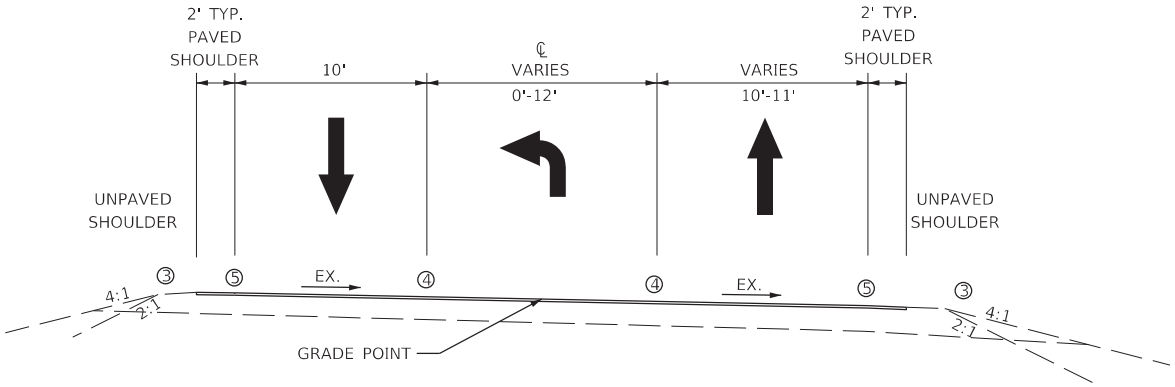
9. TYPE II STEEL POSTS IN SOIL SHALL BE DRIVEN 32" TO 34" BELOW THE GROUND LINE, HOWEVER, IF SOLID ROCK IS ENCOUNTERED, THE CONTRACTOR SHALL DRILL HOLES OF THE REQUIRED DEPTH INTO THE ROCK AND BACKFILL WITH CONCRETE. THE COST SHALL BE INCIDENTAL TO STEEL POST, AND SOIL STABILIZERS WILL NOT BE REQUIRED.

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

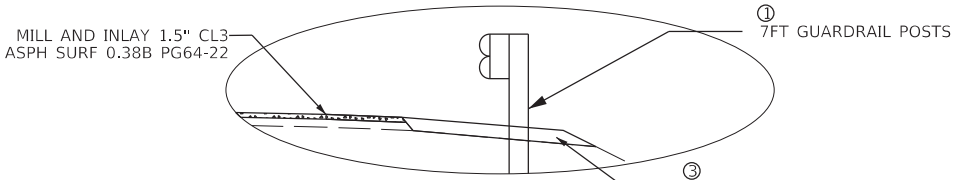
TYPICAL SECTIONS



US 150
M.P. 8.420 TO M.P. 8.489
M.P. 8.585 TO M.P. 9.122



SUPERELEVATED SECTION
US 150



DETAIL C

NOTES

① ALL GUARDRAIL WILL BE INSTALLED WITH EXTRA LENGTH, 7 FOOT, GUARDRAIL POSTS.

② APPROX. SHOULDER WIDTHS:
2' PAVED SHOULDER
LT: M.P. 8.749 - M.P. 8.821
LT: M.P. 8.886 - M.P. 9.117

4' PAVED SHOULDER
LT: M.P. 8.240 - M.P. 8.489
LT: M.P. 8.585 - M.P. 8.737
LT: M.P. 8.821 - M.P. 8.886
RT: M.P. 9.015 - M.P. 9.124

5' PAVED SHOULDER
RT: M.P. 8.420 - M.P. 8.489
RT: M.P. 8.585 - M.P. 8.909

③ WHERE CALLED FOR IN PLANS, CHIP SEAL IS TO BE PLACED FROM THE EDGE OF THE OUTSIDE PAVED SHOULDER TO A POINT 2' DOWN THE DITCH OR FILL SLOPE (OR AS DIRECTED BY THE ENGINEER). CHIP SEAL SHALL CONSIST OF TWO APPLICATIONS OF ASPHALT SEAL COAT (APPLIED AT THE RATE OF 2.4 LB/SQYD) AND ASPHALT SEAL AGGREGATE (APPLIED AT THE RATE OF 20 LB/SQYD)

④ PLACE JOINT ADHESIVE

⑤ CONSTRUCT EDGELINE RUMBLE STRIPS WHERE POSTED SPEED LIMIT IS 55 MPH

6 CONSTRUCT CENTERLINE RUMBLE STRIPS WHERE POSTED SPEED LIMIT IS 55 MPH

7 NON-TRACKING TACK APPLIED TO MILLED SURFACE AT THE RATE OF 0.70 LB/SY PRIOR TO FINAL SURFACE.

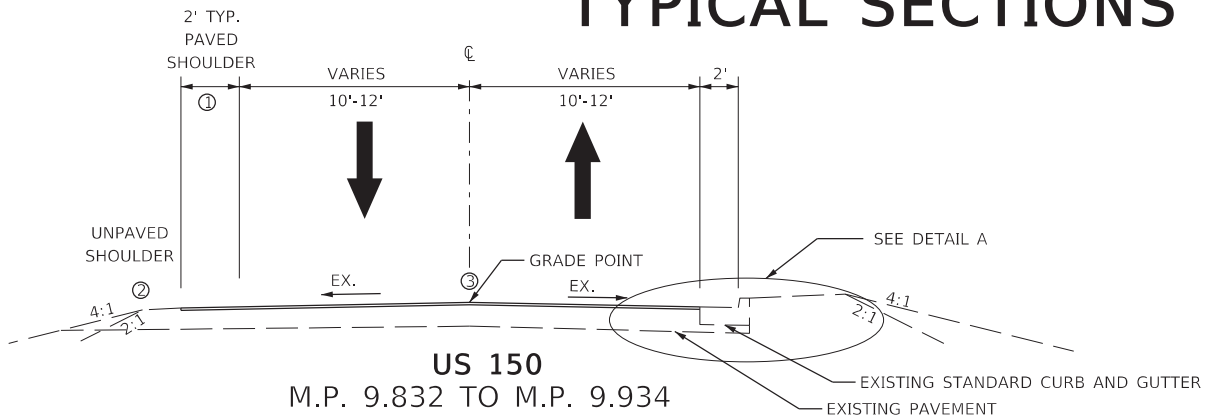
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

TYPICAL SECTIONS 1 OF 2

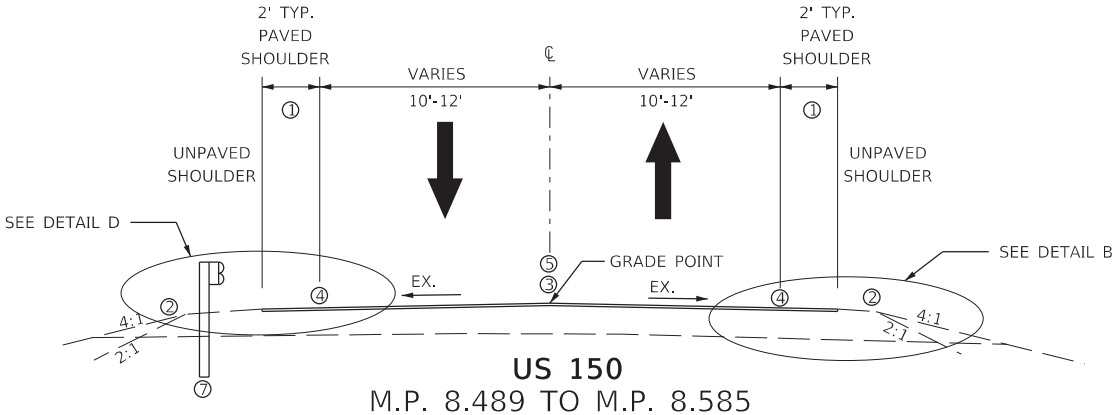
N.T.S

ITEM NO.	COUNTY OF
8-22370	ROCKCASTLE

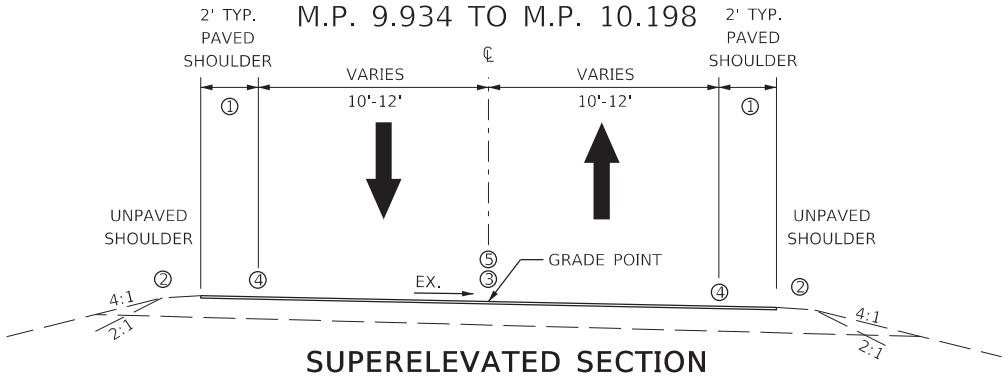
TYPICAL SECTIONS



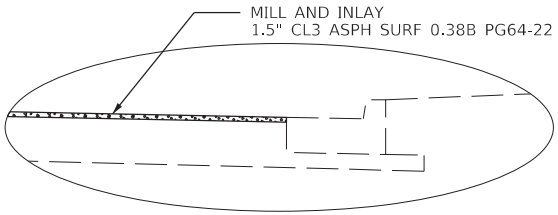
US 150
M.P. 9.832 TO M.P. 9.934



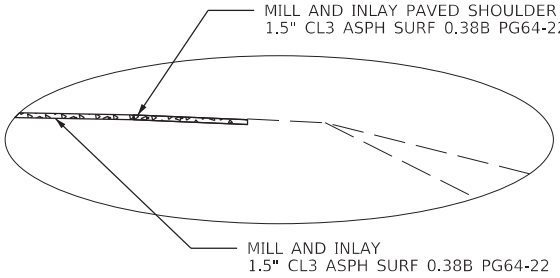
US 150
M.P. 8.489 TO M.P. 8.585
M.P. 9.122 TO M.P. 9.832
M.P. 9.934 TO M.P. 10.198



SUPERELEVATED SECTION



DETAIL A



DETAIL B

NOTES:

① SHOULDER WIDTH TYPICAL:

3' PAVED SHOULDER
LT: M.P. 9.922 - M.P. 10.133
RT: M.P. 9.597 - M.P. 9.785

4' PAVED SHOULDER
LT: M.P. 8.489 - M.P. 8.585
LT: M.P. 9.278 - M.P. 9.375
LT: M.P. 9.618 - M.P. 9.805
RT: M.P. 9.139 - M.P. 9.156

5' PAVED SHOULDER
RT: M.P. 8.489 - M.P.8.585

② WHERE CALLED FOR IN PLANS, CHIP SEAL IS TO BE PLACED FROM THE EDGE OF THE OUTSIDE PAVED SHOULDER TO A POINT 2' DOWN THE DITCH OR FILL SLOPE (OR AS DIRECTED BY THE ENGINEER). CHIP SEAL SHALL CONSIST OF TWO APPLICATIONS OF ASPHALT SEAL COAT (APPLIED AT THE RATE OF 2.4 LB/SQYD) AND ASPHALT SEAL AGGREGATE (APPLIED AT THE RATE OF 20 LB/SQYD)

③ PLACE JOINT ADHESIVE

④ CONSTRUCT EDGELINE RUMBLE STRIPS WHERE POSTED SPEED LIMIT IS 55 MPH

⑤ CONSTRUCT CENTERLINE RUMBLE STRIPS WHERE POSTED SPEED LIMIT IS 55 MPH

6 NON-TRACKING TACK APPLIED TO MILLED SURFACE AT THE RATE OF 0.70 LB/SY PRIOR TO FINAL SURFACE.

⑦ ALL GUARDRAIL WILL BE INSTALLED WITH EXTRA LENGTH, 7 FOOT, GUARDRAIL POSTS.

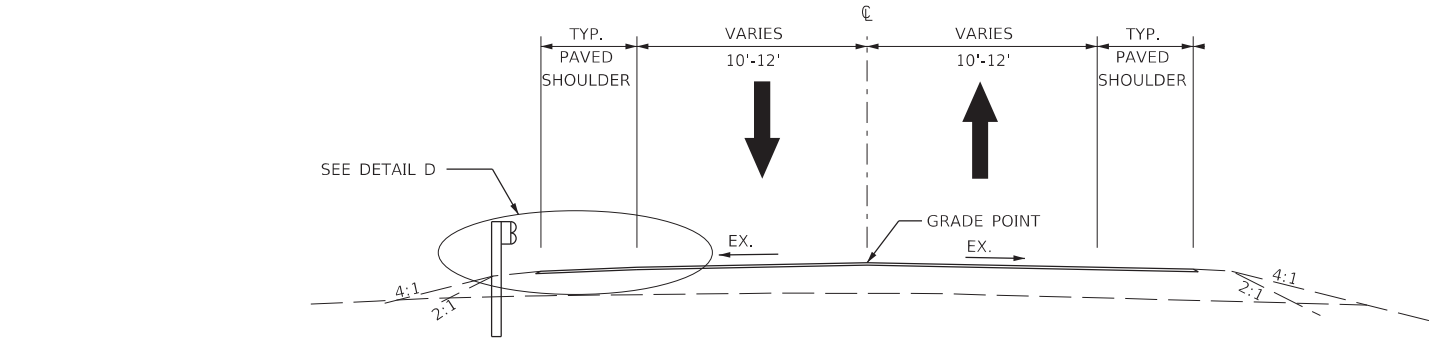
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

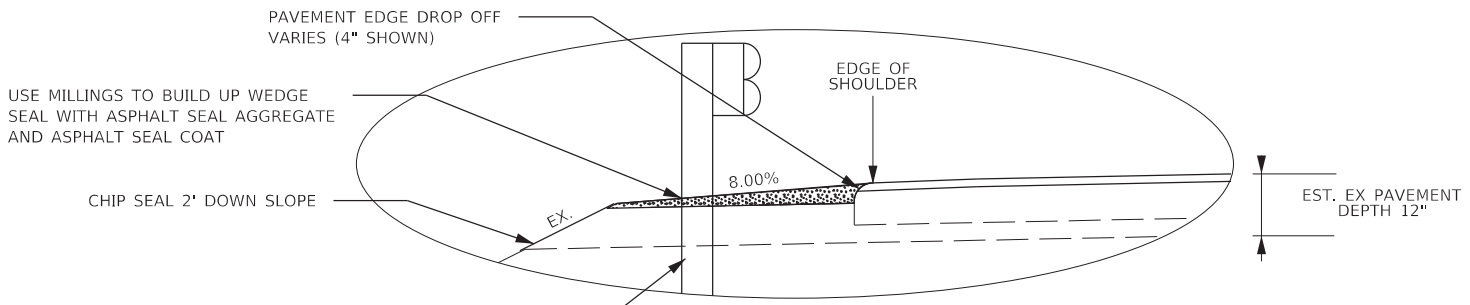
TYPICAL SECTIONS 2 OF 2

N.T.S

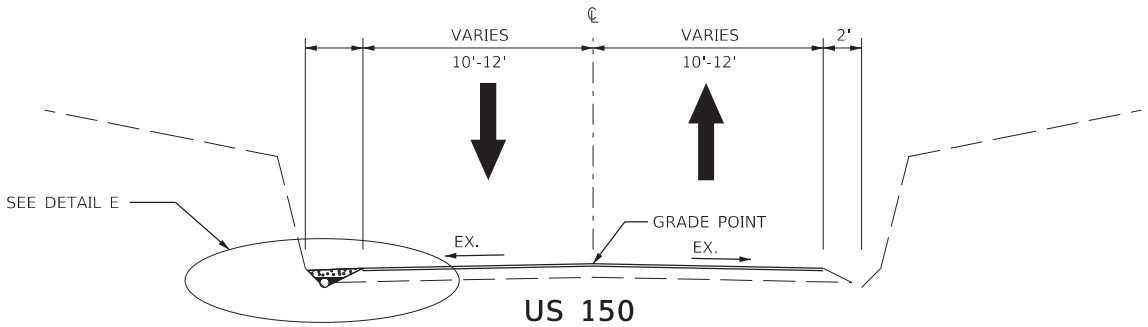
ITEM NO.	COUNTY OF
8-22370	ROCKCASTLE

OpenRoads Designer v10.12.02.4 USER: cweller
FILE NAME: J:\12404_US 150 ROCKCASTLE CO REHAB\50 - PLAN SHEETS\10 - ROADWAY\10 - TYPICAL SECTIONS\TYPICALS.DGN

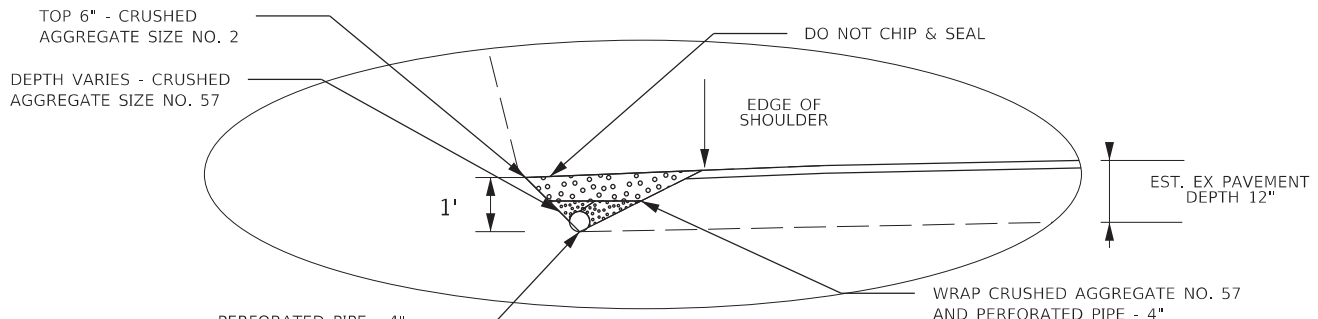




DETAIL D



US 150
M.P. 9.131 TO M.P. 9.244



DETAIL E

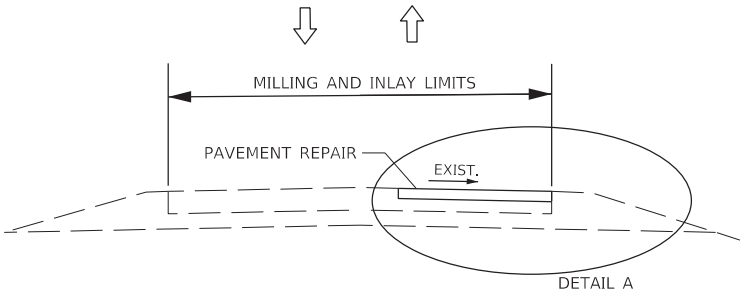
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

PAVEMENT EDGE DROP OFF AND DITCH DETAIL

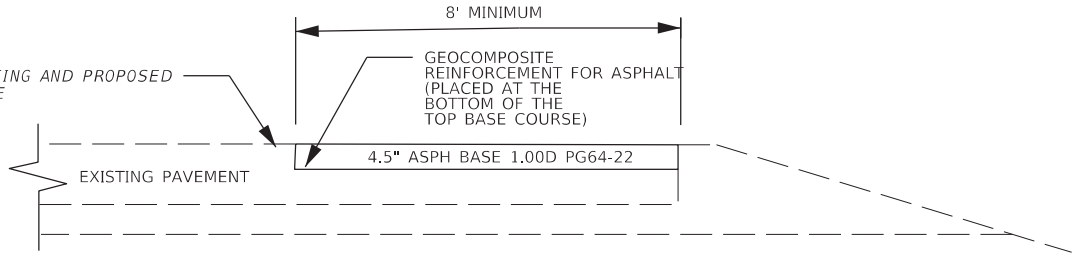
N.T.S.

ITEM NO.	COUNTY OF
8-22370	ROCKCASTLE

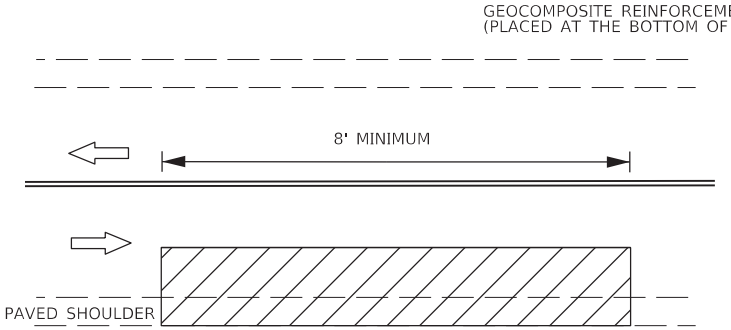
PAVEMENT REPAIR DETAIL



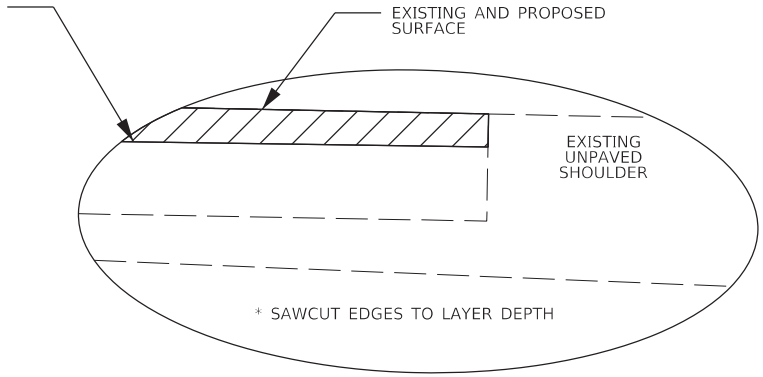
CROSS SECTION



PROFILE



PLAN VIEW



DETAIL A

NOTES

1. CAUTION: EXISTING CONCRETE PAVEMENT MAY EXIST BELOW ASPHALT PAVEMENT.

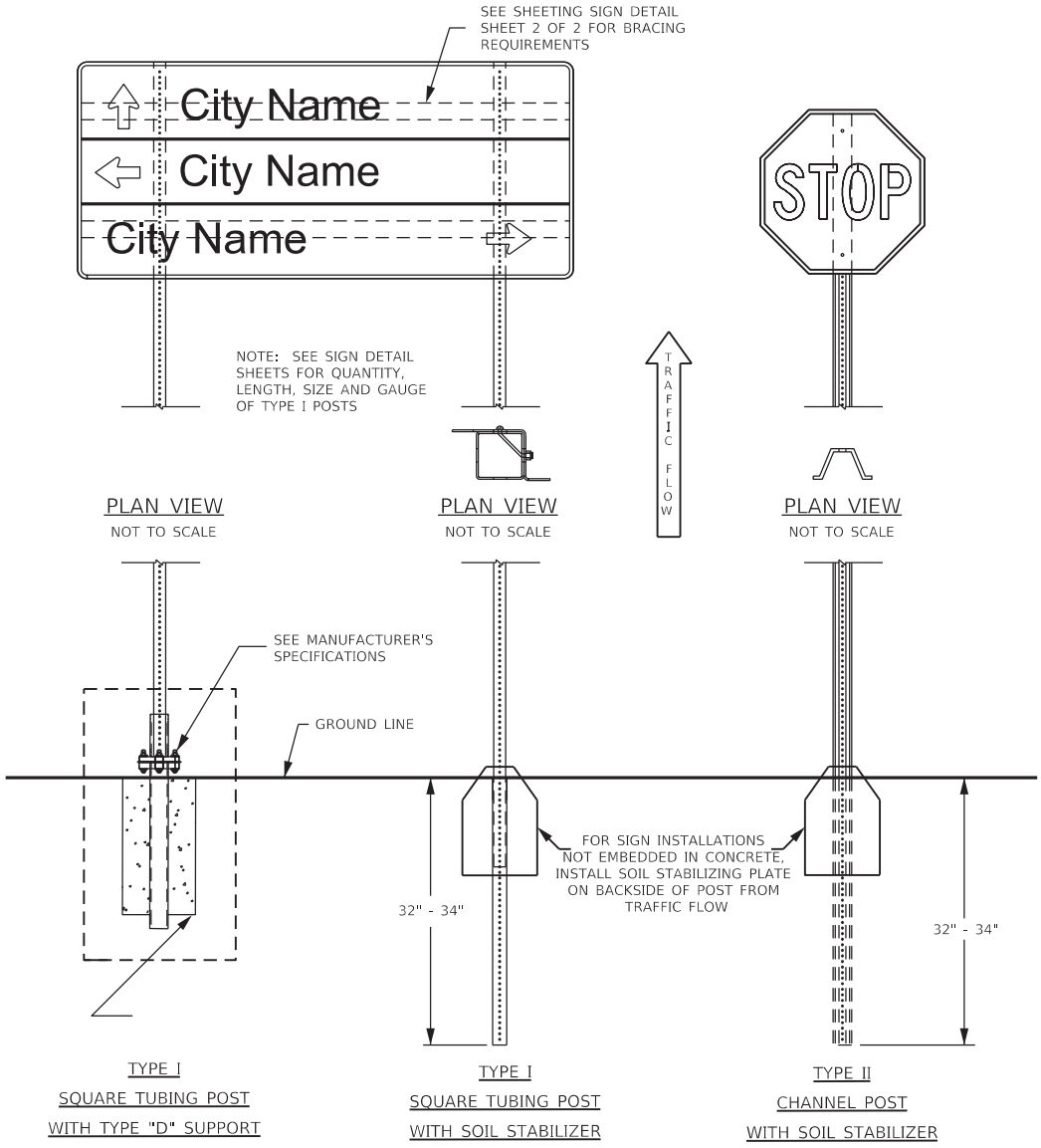
2. PAVEMENT REPAIRS SHALL BE PERFORMED AT LOCATIONS SELECTED BY AND AS DIRECTED BY THE ENGINEER. THE ENGINEER WILL ASSESS, SELECT, AND MARK AREAS FOR TREATMENT. HALF OF THE FULL LANE WIDTH WILL BE REMOVED AND REPLACED.

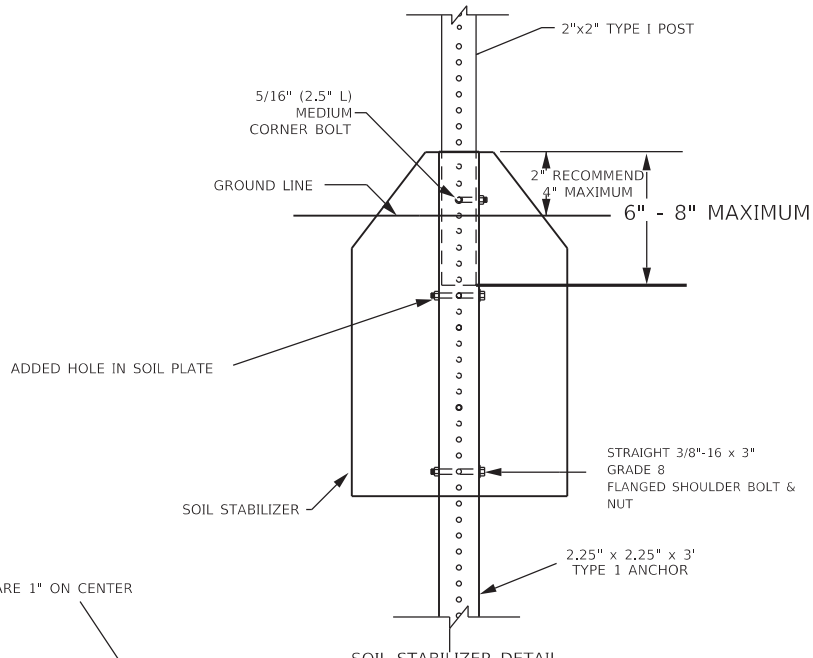
3. COMPLETE PAVEMENT REPAIR OPERATIONS IN ONE CONTINUOUS OPERATION OR PROTECT WITH BARRIER WALL. DO NOT LEAVE AN UNPROTECTED HOLE WITH NO WORKERS PRESENT. IF BARRIER WALL MUST BE USED FOR PAVEMENT REPAIRS, IT WILL BE CONSIDERED INCIDENTAL TO OTHER ITEMS OF WORK AND NOT BE CONSIDERED FOR PAYMENT.

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.

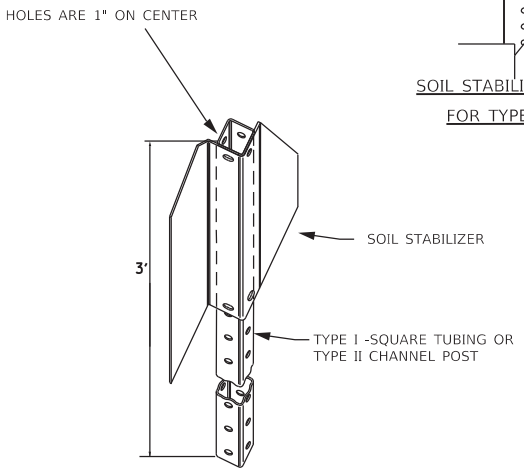
5. PERFORM TYPICAL MILL AND INLAY OPERATIONS WITH RESURFACING ITEMS SUBJECT TO PAYMENT AS PART OF THE RESURFACING OPERATION.

NOT TO SCALE

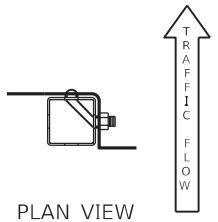




SOIL STABILIZER DETAIL
FOR TYPE I POST



SOIL STABILIZER DETAIL



PLAN VIEW
NOT TO SCALE

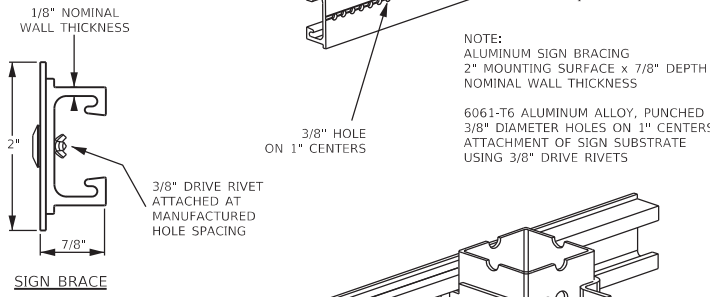
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

SIGNING TYPICAL DETAIL SHEET 1 OF 3

ITEM NO.	COUNTY OF
8-22370	ROCKCASTLE

OpenRoads Designer v10.12.02.4
USER: cweller
FILE NAME: J:\12404_US 150 ROCKCASTLE CO REHAB\50 - PLAN SHEETS\10 - ROADWAY\50 - DETAIL SHEETS\30 - OTHER\SIGNING TYPICALS.DGN

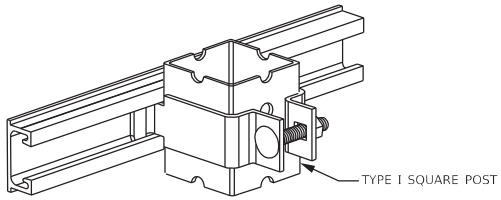
FOR ATTACHMENT OF SIGNS
LESS THAN 72" IN WIDTH
USING MANUFACTURED 3/8" HOLES
ACCORDING TO 2004 STANDARD
HIGHWAY SIGNS BLANK STANDARDS
PGS 7-1 THRU 7-6



SIGN BRACE

NOTE:
ALUMINUM SIGN BRACING
2" MOUNTING SURFACE x 7/8" DEPTH x 1/8"
NOMINAL WALL THICKNESS

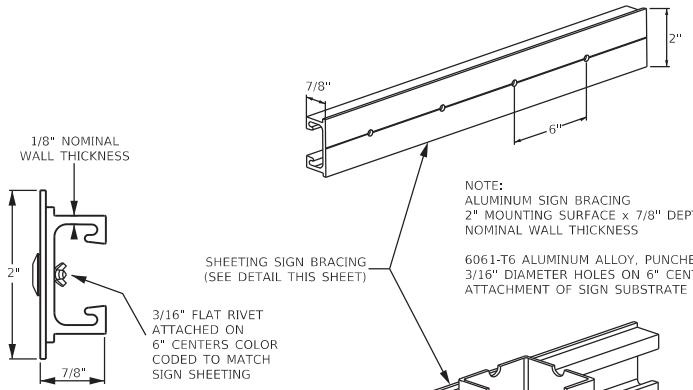
6061-T6 ALUMINUM ALLOY, PUNCHED WITH
3/8" DIAMETER HOLES ON 1" CENTERS FOR
ATTACHMENT OF SIGN SUBSTRATE
USING 3/8" DRIVE RIVETS



SQUARE POST CLAMP & BRACE

FOR ATTACHMENT OF SIGNS
GREATER THAN, OR EQUAL TO, 72"
IN WIDTH.

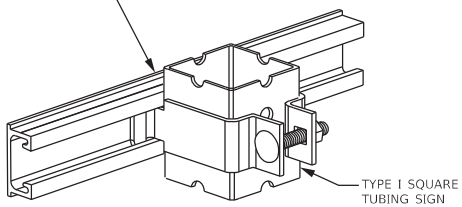
RIVETS SHALL BE COLOR CODED TO
MATCH SHEETING IN ORDER TO
MINIMIZE GLARE FROM RIVETS



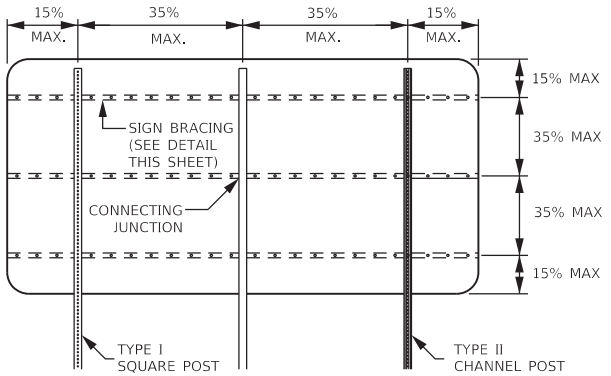
SIGN BRACE

NOTE:
ALUMINUM SIGN BRACING
2" MOUNTING SURFACE x 7/8" DEPTH x 1/8"
NOMINAL WALL THICKNESS

6061-T6 ALUMINUM ALLOY, PUNCHED WITH
3/16" DIAMETER HOLES ON 6" CENTERS FOR
ATTACHMENT OF SIGN SUBSTRATE USING RIVETS



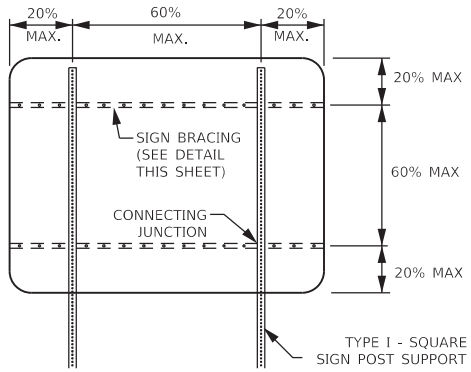
SQUARE POST CLAMP & BRACE



3 POST - BRACING DIAGRAM

NOTE:
1. MAXIMUM AREA
PER CONNECTING
JUNCTION = 16 SQ. FT.

2. BRACING SHOULD NOT BE
SPLICED WITHIN 6" OF A BRACE
TO POST JUNCTION.



2 POST - BRACING DIAGRAM

NOTE:
USE OF SIGN BRACING NOT SHOWN ON THIS SHEET MAY BE PERMITTED
BY PROJECT ENGINEER AND/OR DISTRICT TRAFFIC ENGINEER.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

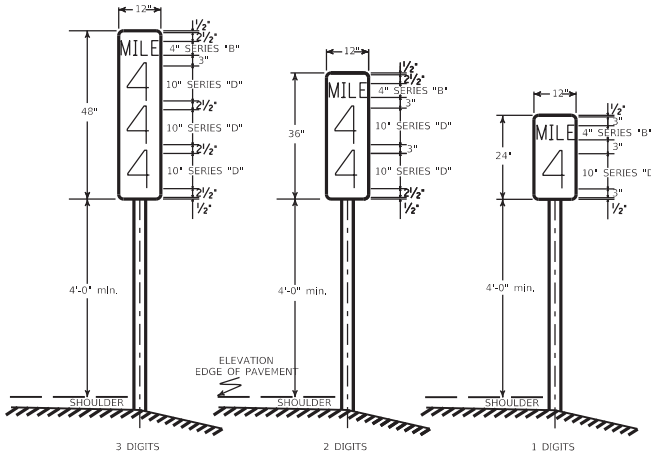
SIGNING TYPICAL DETAIL SHEET 2 OF 3

N.T.S

ITEM NO. 8-22370
COUNTY OF ROCKCASTLE

OpenRoads Designer v10.12.02.4
USER: cweller
FILE NAME: J:\12404_US 150 ROCKCASTLE CO REHAB\50 - PLAN SHEETS\10 - ROADWAY\50 - DETAIL SHEETS\30 - OTHER\SIGNING TYPICALS.DGN

MILEPOST MARKERS



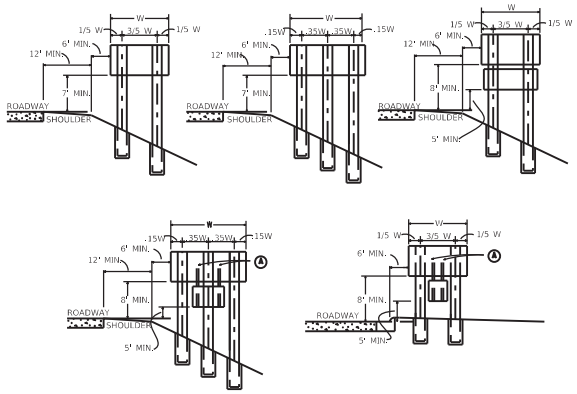
TYPICAL SIGN PANEL DIMENSIONS AND MILEPOST LOCATIONS

MILE POST NUMBER	STATION NUMBER * ____ BOUND LANE (S)

MILE POST NUMBER	STATION NUMBER * ____ BOUND LANE (S)

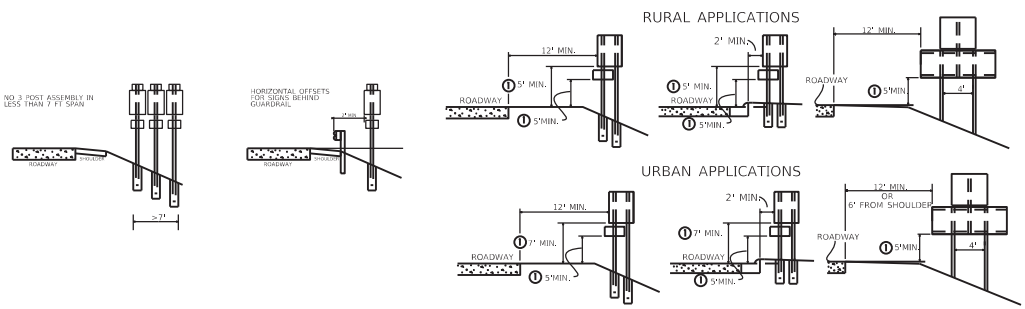
NOTE: STATION NUMBERS ARE GIVEN FOR NOTED DIRECTION OF TRAVEL ONLY. CORRESPONDING MILEPOST MARKERS FOR OTHER DIRECTION SHOULD BE PLACED DIRECTLY OPPOSITE THOSE FOR WHICH STATION NUMBERS ARE GIVEN.

PANEL SIGNS



Ⓐ ATTACHMENT OF SECONDARY SIGN TO MAJOR SIGN IS TO BE MADE WITH TWO (2) 3" X 3" X " ANGLES OF SUFFICIENT LENGTH TO EXTEND FROM THE LOWER EDGE OF THE SECONDARY SIGN TO AT LEAST THREE FEET UP THE BACK OF THE MAJOR SIGN. A MINIMUM OF ONE POST CLIP PER FOOT SHALL BE USED IN ATTACHING EXTRUSIONS TO EACH ANGLE.

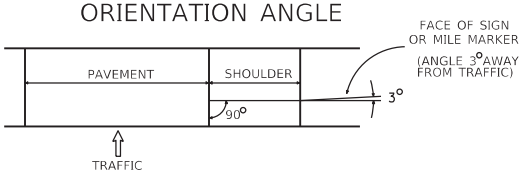
SHEETING SIGNS



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



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY TRANSPORTATION CABINET

SIGNING TYPICAL DETAIL SHEET 3 OF 3

ITEM NO.	COUNTY OF
8-22370	ROCKCASTLE

TRAFFIC CONTROL PLAN

U.S. 150

REHABILITATION PROJECT

ROCKCASTLE COUNTY

ITEM NO. 8-22370

TRAFFIC CONTROL GENERAL

Except as provided herein, “Maintain and Control Traffic” shall be in accordance with the KYTC Standard Specifications and the KYTC Standard Drawings, current editions. Except for the roadway and traffic control bid items included in the project, all items of work necessary to maintain and control traffic will be paid at the lump sum bid price to "Maintain and Control Traffic". All lane closures used on the Project shall be in compliance with the appropriate Standard Drawings and the Manual on Uniform Traffic Control Devices (MUTCD), current edition.

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 areas and establish higher fines for work zone speeding violations throughout the project during the area is under construction.

The extent of these areas within the project limits will be restricted to the proximity of actual work areas as determined by the Engineer. Notify the Engineer a minimum of 12 hours prior to using the higher fine signs. At the beginning of the work zone, the “BEGIN HIGHER FINES ZONE” signs will be dual mounted. At the end of the work zone, the “END WORK ZONE SPEED LIMIT” signs will be dual mounted as well. Remove or cover the signs when the highway work zone does not have workers present for more than a two-hour period. Payment for the signs will be at the unit bid price for temporary signs. Any relocation or covering of the signs will be incidental to “Maintain and Control Traffic”.

The Contractor shall maintain traffic with a minimum of 10 foot lanes.

PROJECT PHASING & CONSTRUCTION PROCEDURES

This project has a fixed completion date. See the special note for Fixed Completion Date and Liquidated Damages.

Note that short term lane closures are required for the project. Sign, stripe, barrel, and taper according to the current versions of the MUTCD and StandardDrawings.

Lane closures will not be allowed on any of the holidays shown in Section 101.03 of the current KYTC Standard Specifications for Road and Bridge Construction. The Engineer may restrict closures

for additional days before or after these holidays or for other special local events.

When a lane closure is allowed, implement the following procedures:

- Maintain traffic as specified in the phasing notes and MOT typical sections.

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

All work in the following Phases must be completed the following restrictions unless prior approval is given by the Engineer:

- 2 lanes of traffic shall be maintained eastbound and westbound on U.S. 150 from 3 pm to 9 am between M.P. 8.415 to M.P 9.140 (KY 2549).
- U.S. 150 shall not be closed and bi-directional traffic must be maintained at all times.
- 2 lanes of traffic shall be maintained eastbound and westbound on U.S. 150 from 6am to 10pm between M.P. 9.140 (KY 2549) to M.P. 10.198 (KY 1249).

PHASE 1 (DURING DAY 9AM – 3PM)

The Contractor shall obtain approval from the Engineer prior to beginning the following work:

Undertake Pavement Repairs and Drainage Structure modifications.

Traffic will be returned to run on the Pavement Repair areas for 14 calendar days before Mill and Inlay operations are undertaken.

Work undertaking during this phase will be constructed under traffic with flaggers.

PHASE 2 (DURING DAY 9AM – 3PM Unless otherwise noted)

The Contractor shall obtain approval from the Engineer prior to beginning the following work:

For the extents of the project 1.5” of milling existing pavement and 1.5” of CL3 ASPH SURF 0.38B PG 64-22 will be placed. The extent of this project will be constructed under traffic with flaggers.

a. Mill and Inlay construction will be undertaken in segments in which traffic will run on the milled surface for no longer than 14 calendar days. Paving will begin at a maximum of 7 calendar days after milling.

b. Temporary striping must be placed before reopening to traffic.

c. Night work (10pm-6am) will be required between M.P. 9.140 (KY 2549) to M.P. 10.198 (KY 1249) to reduce impacts on the commercial area.

d. Lanes shall be reopened to traffic at the end of each construction day (or night).

PHASE 3 (DURING DAY 9AM – 3PM)

After Milling and Inlay work is completed undertake graded shoulder repair and place chip seal. Remove existing and install new guardrail and end treatments.

After all other work is completed, or when approved by the Engineer, place permanent striping and complete rumble strips. Mobile operations may be utilized.

LANE CLOSURES

Limit the lengths of lane closures to only that needed for actual operations in accordance with the phasing specified herein, or as directed by the Engineer. Contrary to section 112, lane closures will **NOT** be measured for payment, but are considered incidental to "Maintain and Control Traffic".

SIGNS

Additional traffic control signs in addition to normal lane closure signing detailed on the Standard Drawings may be required by the Engineer. Additional signs needed for lane closures may include, but are not limited to, dual mounted LEFT/RIGHT LANE CLOSED 1 MILE and SLOWED/STOPPED TRAFFIC AHEAD. Signage for reduced speed limits and higher fine work zones will 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.

PORTABLE CHANGEABLE MESSAGE SIGNS

Provide portable changeable message signs (PCMS) in advance of and within the Project at locations to be determined by the Engineer. The PCMS will be in operation at all times. In the event of damage or mechanical/electrical failure, the contractor will repair or replace the PCMS immediately. PCMS 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.

PAVEMENT MARKINGS

If lane closures are in place during nighttime hours, remove or cover the lenses of raised pavement markers that do not conform to the traffic control scheme in use, or as directed by the Engineer. Replace or uncover lenses before a closed lane is reopened to traffic. No direct payment will be made for removing and replacing or covering and uncovering the lenses, but this

work will be incidental to "Maintain and Control Traffic," lump sum.

Any striping removal (temporary or permanent) shall be removed by water blasting. Water blasting and removal of temporary tape will be considered incidental to the “Maintain and Control Traffic” bid item.
Temporary striping will be paid for by the appropriate bid item shown in the General Summary. Place temporary striping in accordance with Section 112, except that:

1. Temporary markings will be 6" in width.
2. If the contractor's operations or phasing requires temporary markings which must be subsequently removed from the ultimate pavement or existing surface pavement, an approved removable lane tape will be used.
3. Edge lines will be required for temporary striping at lane closures lasting longer than 3 days.
4. Existing, temporary, or permanent striping will be in place before a lane is opened to traffic.

PAVEMENT EDGE DROP-OFFS

No vertical drop-off, two inches or greater, should occur between adjacent lanes where traffic is expected to cross in a lane-change maneuver.

- Less than two inches – no protection required

Note: Warning signs (MUTCD – Uneven Lane, W8-11) should be placed in advanced of and at 1500 feet intervals, or as directed by the Engineer, throughout the drop-off area, Dual posting on both sides of the traveled way shall be required.

- Two to four inches – plastic drums or vertical panels should be used in accordance with the MUTCD and Kentucky Standard Drawings. Place Type III Barricades at the beginning of the lane or shoulder closures, an place additional Type III Barricades spaced at 2,500 feet, or as directed by the Engineer, during the time the lane closure is in place.

- Greater than four inches – Channelizing devices should be used in accordance with the MUTCD, Kentucky Standard Drawings and these notes. A 5 foot buffer between the edge of the travel lane and the drop-off should be provided with channelization devices. A positive separation is needed when the buffer cannot be achieved. In lieu of positive separation, a pavement wedge may be constructed with compacted cuttings from milling, DGA, or asphalt mixture with a 3:1 or flatter slope when workers are not present. When the drop-off is greater than 4 inches and within 10 feet of the traveled lane, positive separation should be considered. Place Type III Barricades at the beginning of the lane or shoulder closures, and place additional Type III Barricades spaced at 2,500 feet, or as directed by the Engineer, during the time lane closure is in place, except when positive separation is in use. When concrete barriers are used, special reflective devices or steady-burn lights should be used for overnight installations.

TRAFFIC COORDINATOR

Be advised this project is not considered a significant project pursuant to section 112.03.12.

Designate an employee to be Traffic Coordinator. The designated Traffic Coordinator must be certified in accordance with the Department's 2019 Standard Specifications Sec. 112.03.12. The Traffic Coordinator will inspect the project maintenance of traffic once per shift as specification, including weekends, during the Contractor's operations and at any time a lane closure is in place. The Traffic Coordinator will report all incidents throughout the work zone to the Engineer on the project. The Contractor will furnish the name and telephone number where the Traffic Coordinator can be contacted at all times.

During any period when work is undertaken in the vicinity of a signalized intersection, the Traffic Coordinator will arrange for personnel to be present on the project at all times to inspect the traffic control and maintain the signing and devices and ensure business access and traffic operation is maintained. The personnel will have access on the project to a radio or telephone to be used in case of emergencies or accidents.

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 on the various projects.

CONTRACTORS VEHICLES

Contractors vehicles shall enter and leave the work zone in the direction of travel that is being worked on. All contractor vehicles must be contained within the work zone.

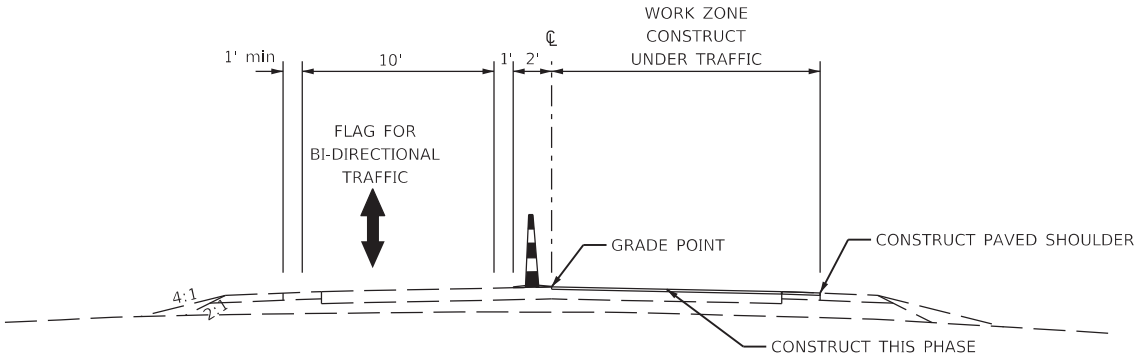
PUBLIC NOTIFICATION

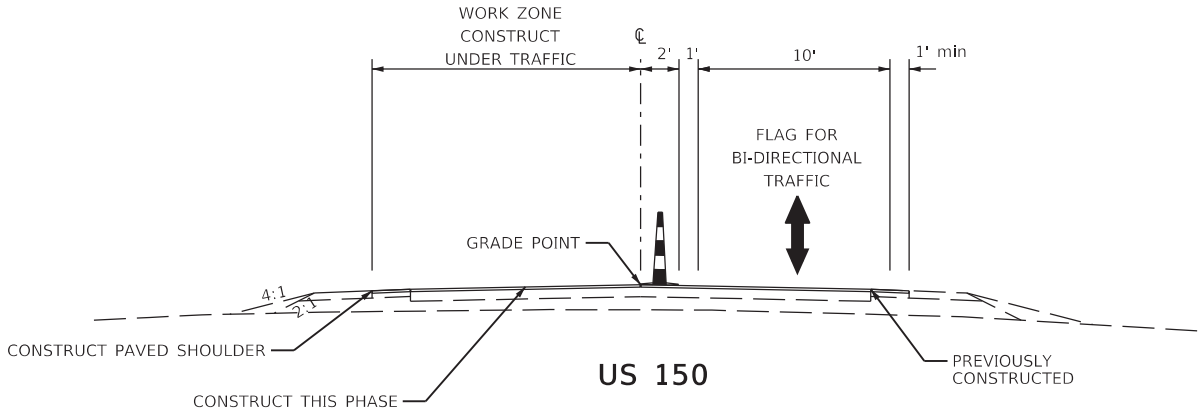
The Contractor shall develop a weekly paving schedule for Traffic Phases 2 and shall notify the adjacent businesses in the commercial area and quarry in writing of the date, duration and hours works could impact their business operations. The Contractor shall maintain a mailing schedule and log and submit it to the Engineer weekly. This work will be incidental to the Maintenance of Traffic bid item.

The Contractor shall coordinate with businesses to ensure access is maintained to allow businesses to receive deliveries and maintain operation. Paving Schedules for night work should be developed to ensure access is maintained to businesses that operate for 24 hours.

TYPICAL SECTIONS

PHASE 2





FOOTNOTES:

1. PRIOR TO SHIFTING TRAFFIC ONTO SHOULDERS. FILL RUMBLE STRIPS WITH LEVELING AND WEDGING.

2. TRAFFIC CONTROL DEVICES ARE TO BE MOVED ALONG WITH THE MILLING AND INLAY OPERATIONS TO MINIMIZE IMPACTS TO TRAFFIC

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

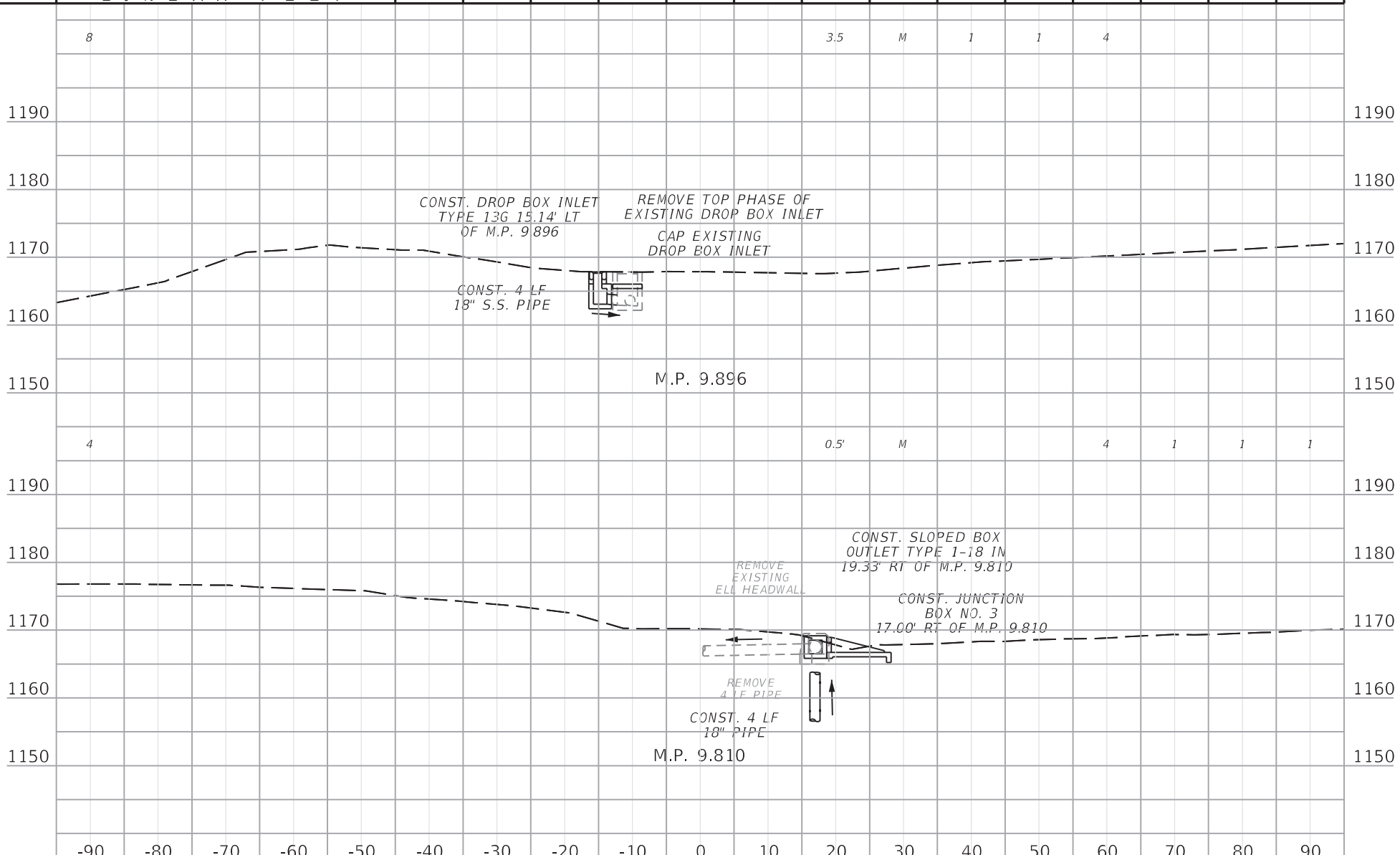
MOT TYPICAL 1 OF 1

N.T.S

ITEM NO.	COUNTY OF
8-22370	ROCKCASTLE

PIPE DRAINAGE SHEET 1 OF 1

STORM SEWER PIPE	MAX COVER HEIGHT	DESIGN pH LEVEL	DROP BOX INLET TY. 13G	CAP DROP BOX INLET	REMOVE PIPE	REMOVE HEADWALL	SLOPED BOX OUTLET TYPE 1 18 IN	JUNCTION BOX
18 INCH (LINEAR FEET)	FEET		EACH	EACH	LF	EACH	EACH	EACH
8	3.5	M	1	1	4			
4	0.5'	M			4	1	1	1



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY TRANSPORTATION CABINET

US 150 PIPE SECTION
1 OF 1

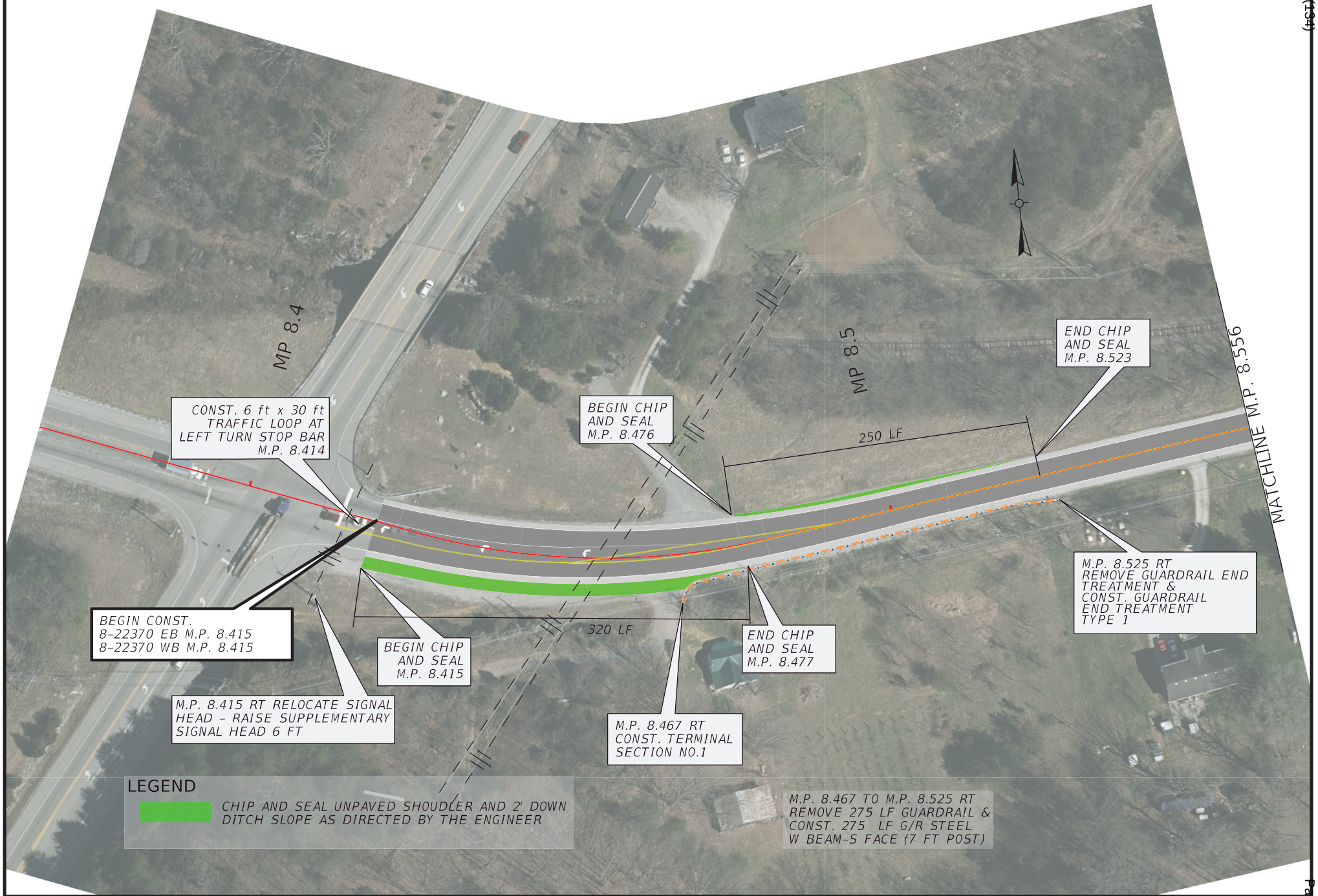
HORIZONTAL SCALE
SCALE: 1" = 20'

0' 20' 40' 80'

M.P. 9.810 to
M.P. 9.896

ITEM NO. 8-22370
COUNTY OF ROCKCASTLE

OpenRoads Designer v10.12.02.4
USER: cweller
FILE NAME: J:\12404_US 150 ROCKCASTLE CO REHAB\50 - PLAN SHEETS\10 - ROADWAY\90 - PIPE SECTIONS\PIPESHEETS.DGN



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY TRANSPORTATION CABINET

PLAN SHEET: US 150

0' 100' 200' 400'
HORIZONTAL SCALE: 1"=100'

ITEM NO. 8-22370
COUNTY OF ROCKCASTLE
SHEET NO. 1 OF 10

OpenRoads Designer v10.12.02.4 USER: cweller
FILE NAME: J:\12404_US 150 ROCKCASTLE CO REHAB\50 - PLAN SHEETS\10 - ROADWAY\30 - PLANS AND PROFILES\PLAN SHEETS 1=100.DGN

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

PLAN SHEET:
US 150

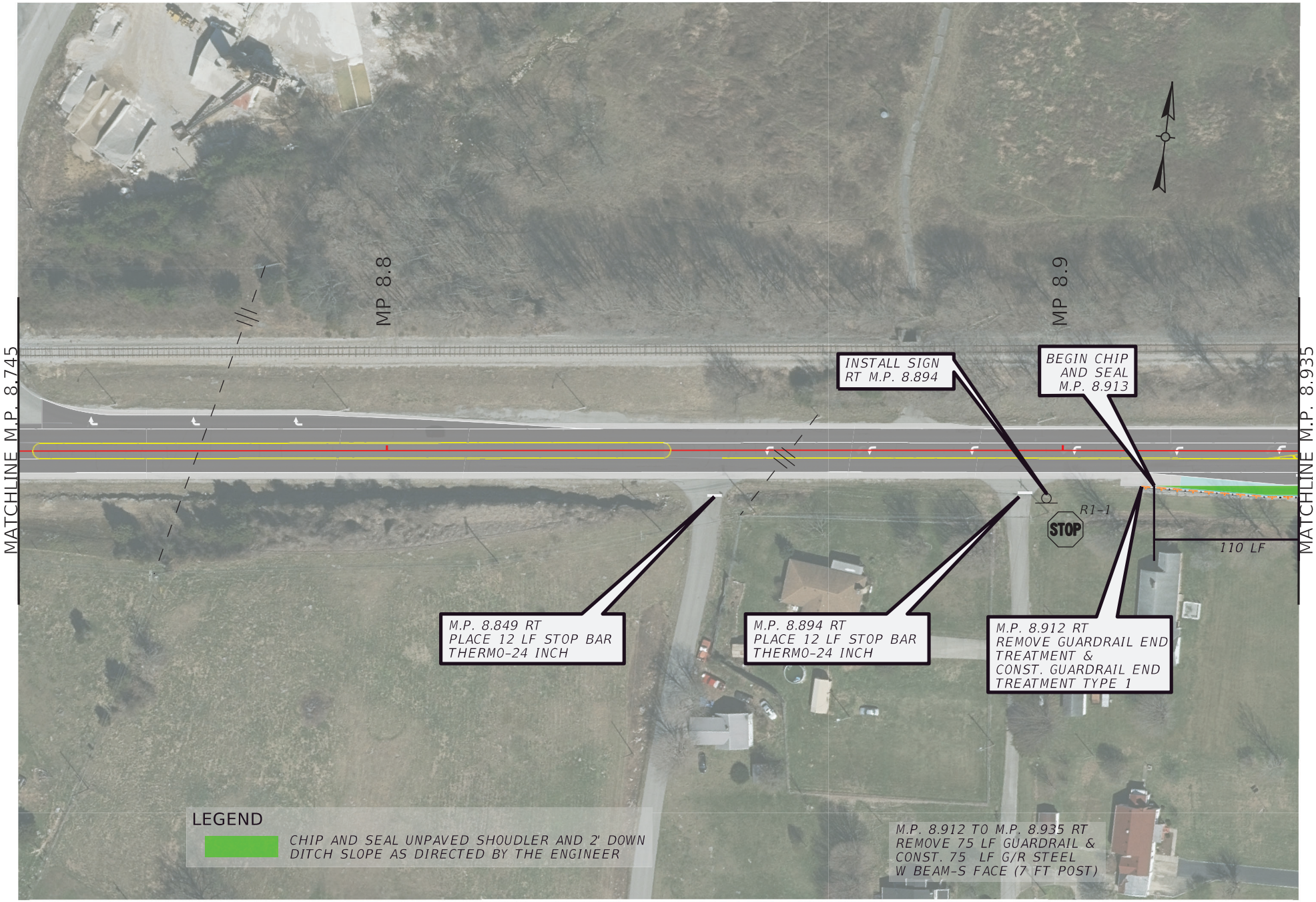
0' 100' 200' 400'
HORIZONTAL SCALE: 1"=100'

ITEM NO. 8-22370
COUNTY OF ROCKCASTLE
SHEET NO. 2 OF 10

OpenRoads Designer v10.12.02.4
USER: mlawson
FILE NAME: J:\12404_US 150 ROCKCASTLE CO REHAB\50 - PLAN SHEETS\10 - ROADWAY\30 - PLANS AND PROFILES\PLAN SHEETS 1=100.DGN

ROCKCASTLE COUNTY
STP-1501(134)

Contract ID: 251112
Page 37 of 113



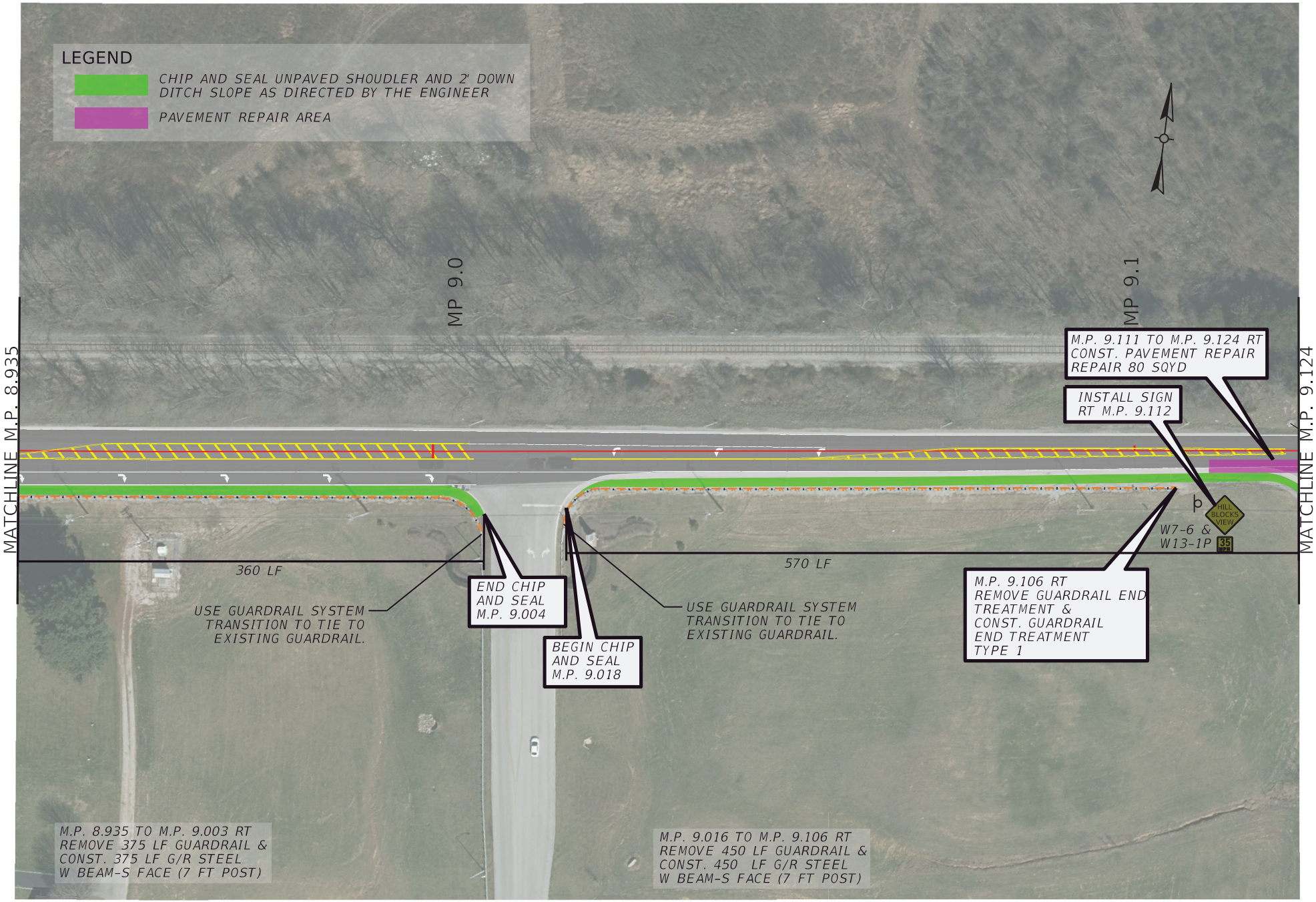
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY TRANSPORTATION CABINET

PLAN SHEET: US 150

0' 100' 200' 400'
HORIZONTAL SCALE: 1" = 100'

ITEM NO. 8-22370
COUNTY OF ROCKCASTLE
SHEET NO. 3 OF 10

OpenRoads Designer v10.12.02.4
USER: mlawson
FILE NAME: J:\12404_US 150 ROCKCASTLE CO REHAB\50 - PLAN SHEETS\10 - ROADWAY\30 - PLANS AND PROFILES\PLAN SHEETS 1=100.DGN



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY TRANSPORTATION CABINET

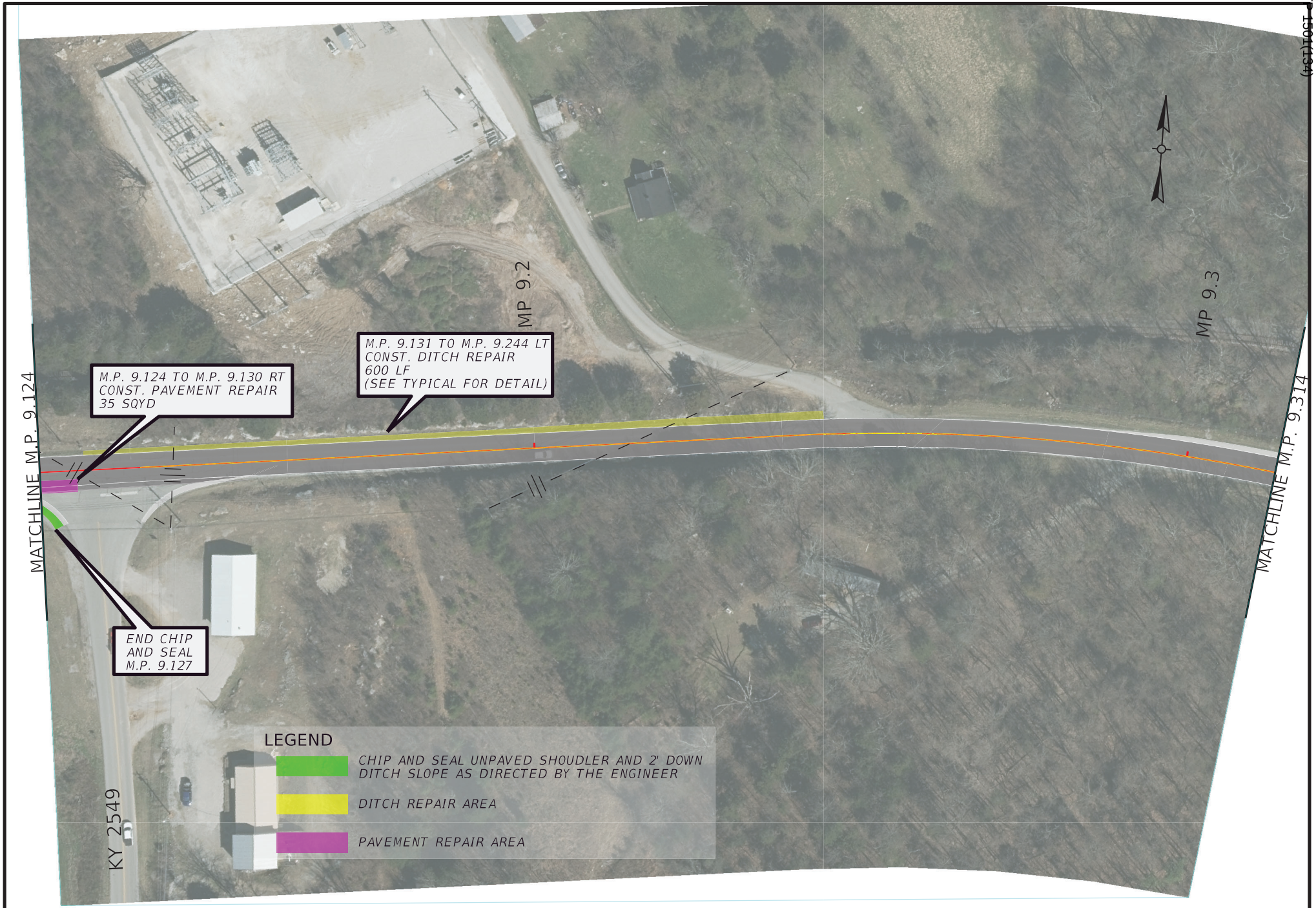
PLAN SHEET: US 150

0' 100' 200' 400'
HORIZONTAL SCALE: 1" = 100'

ITEM NO.	COUNTY OF
8-22370	ROCKCASTLE

SHEET NO. 4 OF 10

OpenRoads Designer v10.12.02.4 USER: mlawson
FILE NAME: J:\12404_US 150 ROCKCASTLE CO REHAB\50 - PLAN SHEETS\10 - ROADWAY\30 - PLANS AND PROFILES\PLAN SHEETS 1=100.DGN



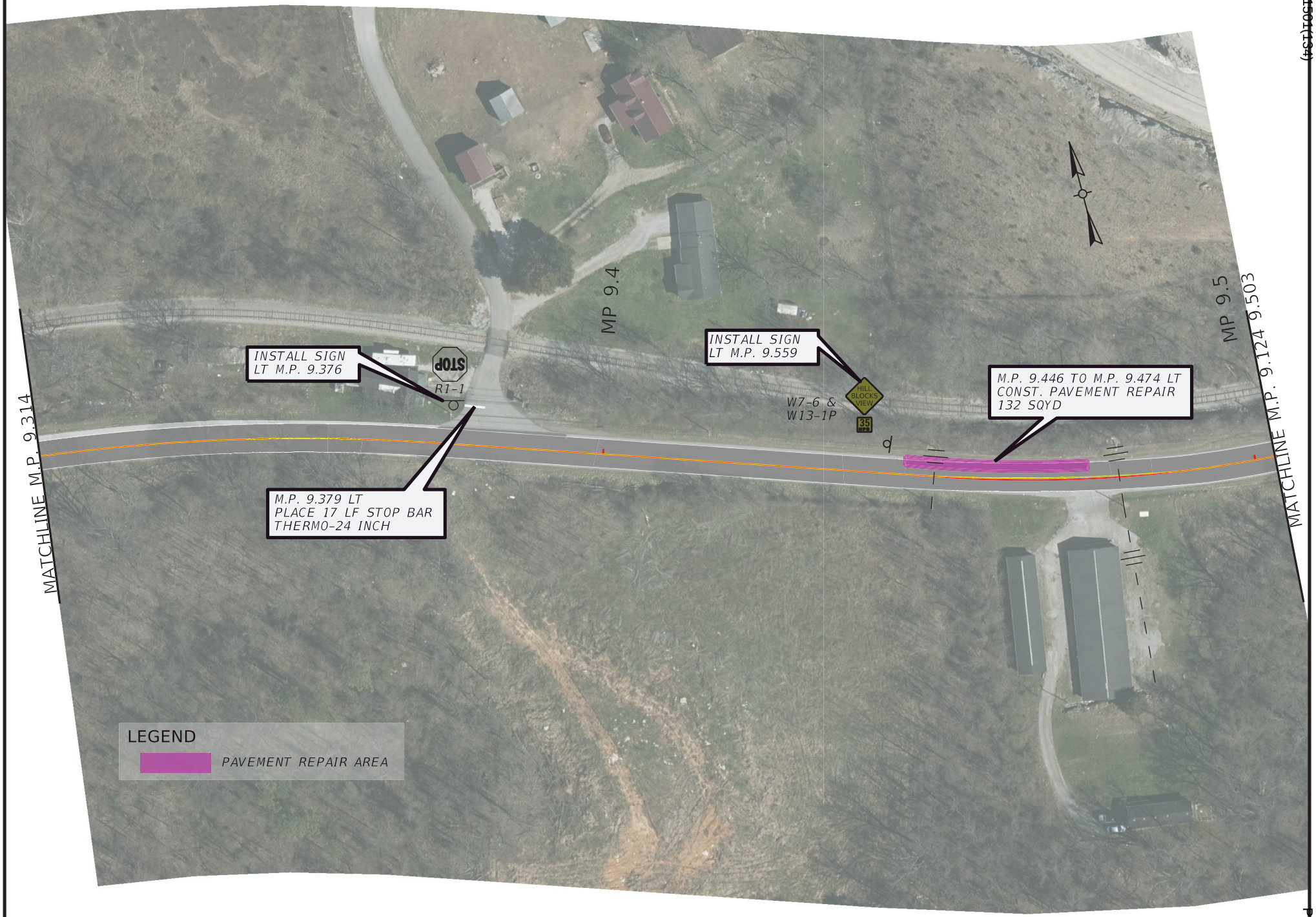
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

PLAN SHEET: US 150

0' 100' 200' 400'
HORIZONTAL SCALE: 1" = 100'

ITEM NO. 8-22370
COUNTY OF ROCKCASTLE
SHEET NO. 5 OF 10

OpenRoads Designer v10.12.02.4 USER: mlawson
FILE NAME: J:\12404_US 150 ROCKCASTLE CO REHAB\50 - PLAN SHEETS\10 - ROADWAY\30 - PLANS AND PROFILES\PLAN SHEETS 1=100.DGN



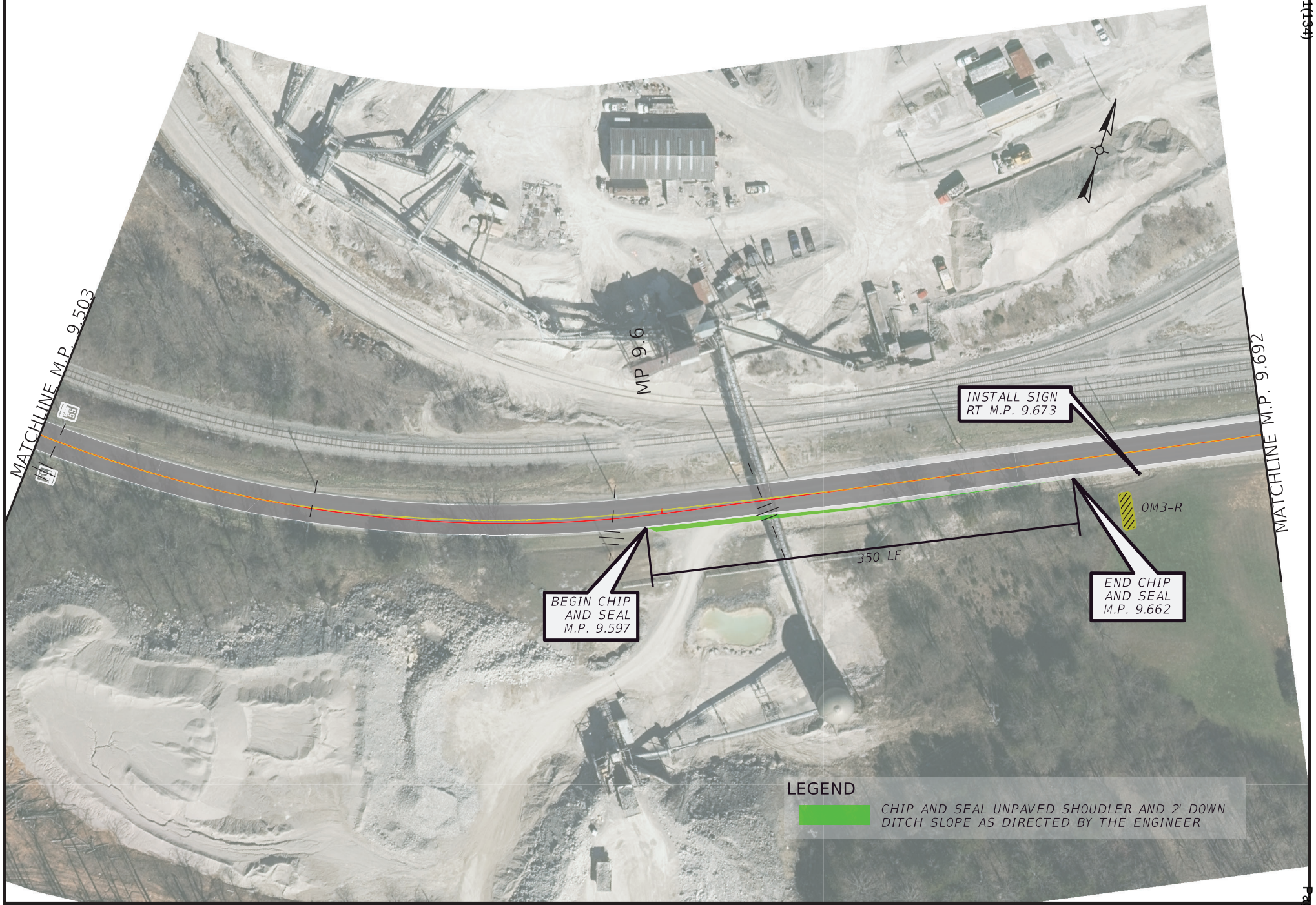
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY TRANSPORTATION CABINET

PLAN SHEET:
US 150

0' 100' 200' 400'
HORIZONTAL SCALE: 1" = 100'

ITEM NO. 8-22370
COUNTY OF ROCKCASTLE
SHEET NO. 6 OF 10

OpenRoads Designer v10.12.02.4
USER: cweller
FILE NAME: J:\12404_US 150 ROCKCASTLE CO REHAB\50 - PLAN SHEETS\10 - ROADWAY\30 - PLANS AND PROFILES\PLAN SHEETS 1=100.DGN



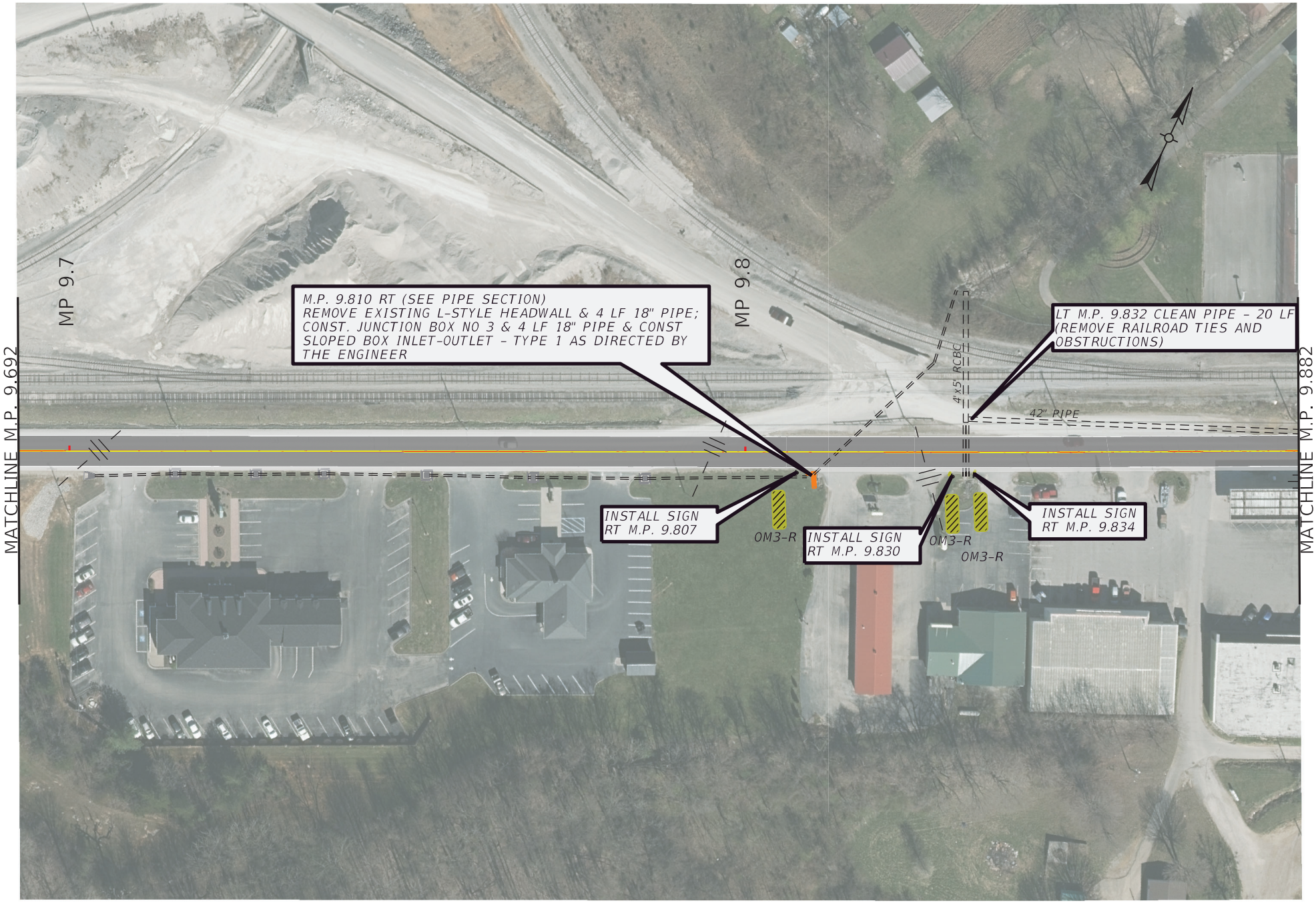
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

PLAN SHEET:
US 150

0' 100' 200' 400'
HORIZONTAL SCALE: 1" = 100'

ITEM NO. 8-22370
COUNTY OF ROCKCASTLE
SHEET NO. 7 OF 10

OpenRoads Designer v10.12.02.4
USER: mlawson
FILE NAME: J:\12404_US 150 ROCKCASTLE CO REHAB\50 - PLAN SHEETS\10 - ROADWAY\30 - PLANS AND PROFILES\PLAN SHEETS 1=100.DGN



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

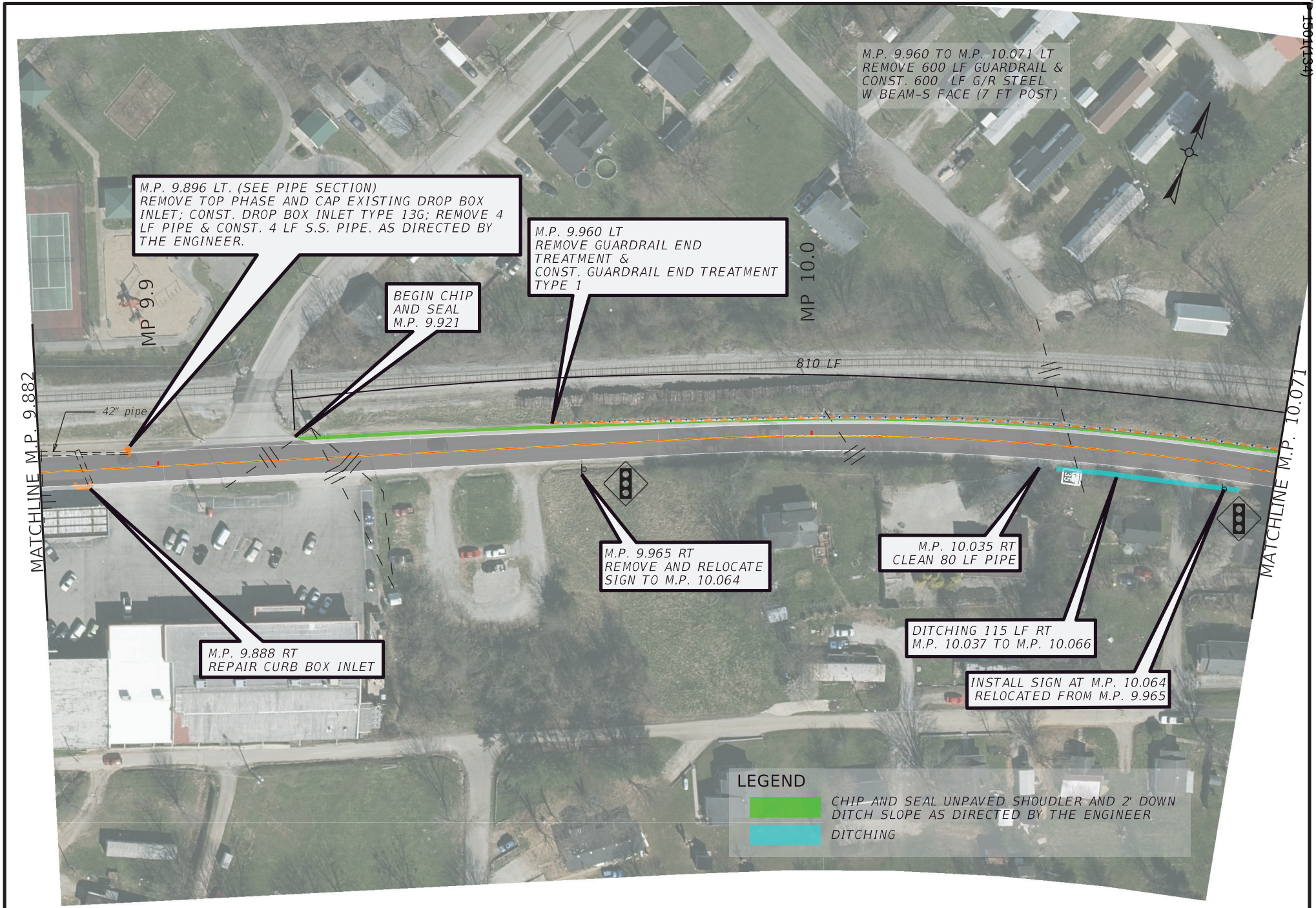
PLAN SHEET:
US 150

0' 100' 200' 400'
HORIZONTAL SCALE: 1" = 100'

ITEM NO.	COUNTY OF
8-22370	ROCKCASTLE

SHEET NO.
8 OF 10

OpenRoads Designer v10.12.02.4 USER: cweller
FILE NAME: J:\12404_US 150 ROCKCASTLE CO REHAB\50 - PLAN SHEETS\10 - ROADWAY\30 - PLANS AND PROFILES\PLAN SHEETS 1=100.DGN



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

PLAN SHEET: US 150

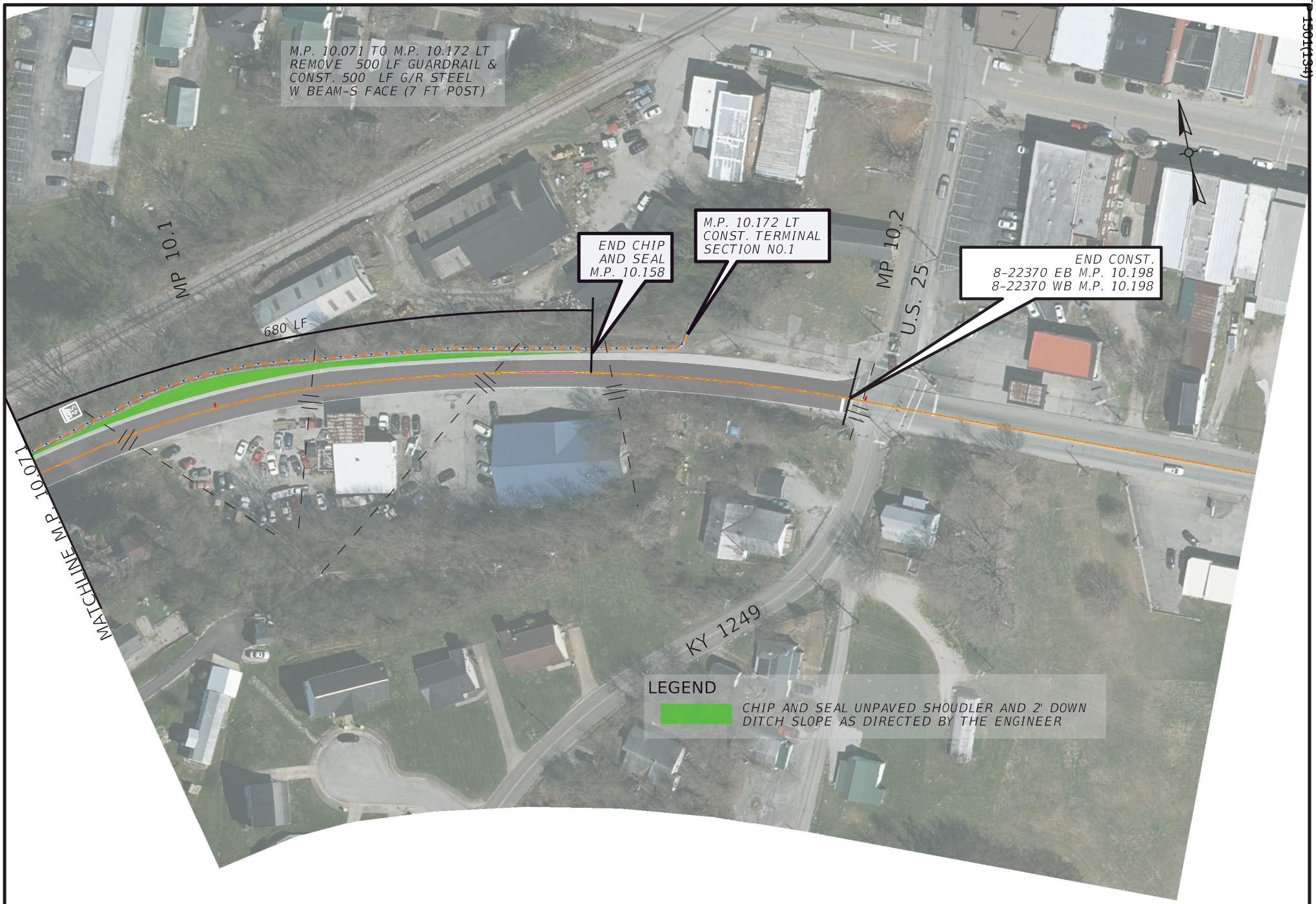
0' 100' 200' 400'
HORIZONTAL SCALE: 1" = 100'

ITEM NO. 8-22370
COUNTY OF ROCKCASTLE
SHEET NO. 9 OF 10

OpenRoads Designer v10.12.02.4 USER: mlawson
FILE NAME: J:\12404_US 150 ROCKCASTLE CO REHAB\50 - PLAN SHEETS\10 - ROADWAY\30 - PLANS AND PROFILES\PLAN SHEETS 1=100.DGN

ROCKCASTLE COUNTY
STP-1501(134)

Contract ID: 251112
Page 44 of 113



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

PLAN SHEET:
US 150

0' 100' 200' 400'
HORIZONTAL SCALE: 1" = 100'

ITEM NO.	COUNTY OF
8-22370	ROCKCASTLE

SHEET NO.
10 OF 10

OpenRoads Designer v10.12.02.4 USER: mlawson
FILE NAME: J:\12404_US 150 ROCKCASTLE CO REHAB\50 - PLAN SHEETS\10 - ROADWAY\30 - PLANS AND PROFILES\PLAN SHEETS 1=100.DGN

CULVERT PIPE

PIPE MATERIAL	pH RANGE ③					
	(ACID) L (< 5)		M (5 - 9) ④		(BASE) H (> 9)	
	COATING	PAVING	COATING	PAVING	COATING	PAVING
ALUMINUM-COATED TYPE 2 STEEL	-	-	HB	I	-	-
ALUMINUM ALLOY	B	I	HB	I	B	I
REINFORCED CONCRETE	-	EP	-	-	-	EP
PLASTIC	-	-	-	-	-	-

HB - HALF ASPHALT COATED
B - FULLY ASPHALT COATED
P - POLYMERIC COATED (PRECOATED GALVANIZED)
EP - EXTRA PROTECTION
I - PAVED INVERT
AL - ALUMINUM ALLOY
AZ - ALUMINUM-COATED TYPE 2 STEEL

LEGEND

STORM SEWER AND ENTRANCE PIPE

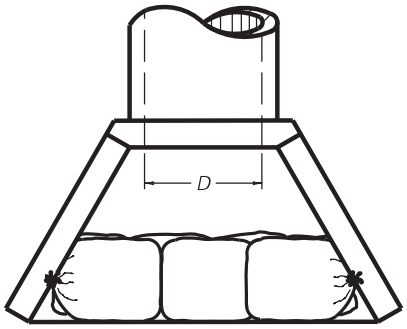
PIPE MATERIAL	pH RANGE					
	(ACID) L (< 5)		M (5 - 9)		(BASE) H (> 9)	
	COATING	PAVING	COATING	PAVING	COATING	PAVING
ALUMINUM-COATED TYPE 2 STEEL	B	-	AZ	-	B	-
ALUMINUM ALLOY	AL	-	AL	-	AL	-
STEEL GALVANIZED	P	-	P	-	P	-
REINFORCED CONCRETE	-	-	-	-	-	-
PLASTIC	-	-	-	-	-	-

~ NOTES ~

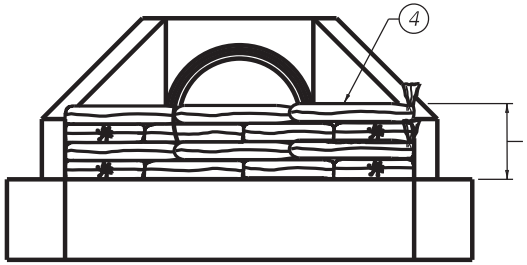
1. EXCEPTIONS FOR STORM SEWERS:
   a. ANNULAR CORRUGATED PIPE > 24" DIA. SHALL BE FULLY LINED.
   b. HELICAL CORRUGATED PIPE > 24" DIA. SHALL BE FULLY LINED.
   c. HELICAL CORRUGATED PIPE < 24" DIA. SHALL NOT REQUIRE COATING, PAVING, OR LINING.
   d. SPIRAL RIB PIPE SHALL NOT REQUIRE COATING, PAVED INVERT, OR LINING.
2. EXCEPTIONS FOR ENTRANCE PIPE:
   a. COATINGS REQUIRED FOR LOW pH LEVELS.
   b. ENTRANCE PIPE GREATER THAN 30" DIA. SHALL BE CULVERT PIPE.

③ L = LOW pH RANGE (ACID)
M = MEDIUM pH RANGE
H = HIGH pH RANGE (BASE)

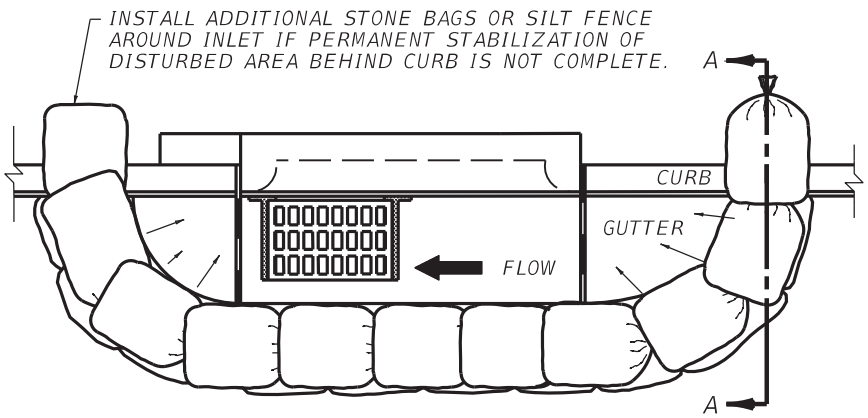
④ EXPECTATIONS FOR CULVERT PIPE:
   a. ALUMINUM COATED TYPE 2 STEEL IS ONLY PERMITTED IN pH RANGES OF 5 TO 9.



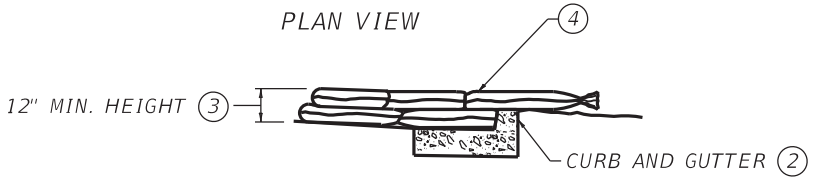
PLAN VIEW



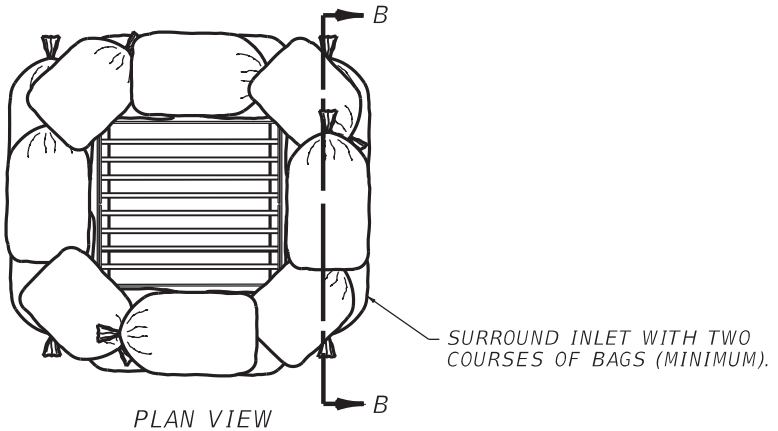
FRONT ELEVATION



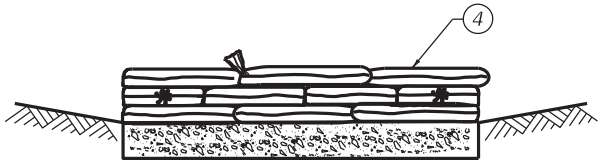
PLAN VIEW



SECTION A~A



PLAN VIEW



SECTION B~B

~ NOTES ~

BID ITEMS AND UNIT TO BID:

SILT TRAP TYPE C	EACH
CLEAN SILT TRAP TYPE C	EACH

1. SILT TRAP TYPE C SHALL INCLUDE GEOTEXTILE FABRIC BAGS, NO. 57 STONE, LABOR AND ALL INCIDENTALS NECESSARY FOR ONE COMPLETE INSTALLATION.
2. INLET PROTECTION IS SUITABLE FOR USE IN BOTH PAVED AND UNPAVED AREAS.
3. THE HEIGHT REQUIREMENT IS WAIVED IN CASES WHERE IT WILL CREATE AN UNACCEPTABLE PONDING SITUTATION ON THE PAVEMENT OR ON AN ADJACENT PROPERTY.
4. INTERWEAVE BAG ENDS TO FILL GAPS BETWEEN BAGS.
5. CONSTRUCT 18" X 30" BAGS OF NON-WOVEN CLASS 1 OR 2 GEOTEXTILE FABRIC CONFORMING TO SECTION 843 OF THE STANDARD SPECIFICATIONS. DOUBLE STITCH BAG SEAMS WITH 1 LB. POLYESTER THREAD. ATTACH ONE (1) TIE STRING TO EACH BAG. BAG OPENING SHALL BE ON 18" SIDE.
6. FILL BAGS WITH NO. 57 STONE BETWEEN ½ TO ⅔ FULL (50 LB TO 60 LB).
7. SILT TRAP TYPE C SHALL NOT BE USED IN BLUE LINE STREAMS.

SUBMITTED W. T. Sapan DIVISION DIRECTOR 05-08-2023 DATE

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY TRANSPORTATION CABINET

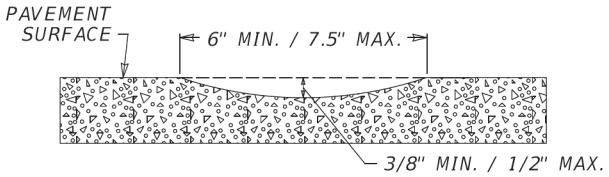
SEPIA 025
SILT TRAP TYPE C

N.T.S.

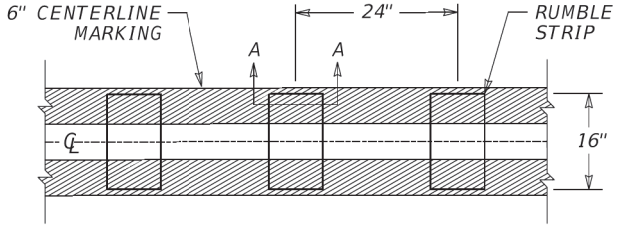
ITEM NO. 8-22370
COUNTY OF ROCKCASTLE
SHEET NO. --

OpenRoads Designer v10.12.02.4 USER: cweller
FILE NAME: J:\12404_US 150 ROCKCASTLE CO REHAB\50 - PLAN SHEETS\10 - ROADWAY\50 - DETAIL SHEETS\40 - SEPIAS\SEPIA025_PROPOSAL.DGN

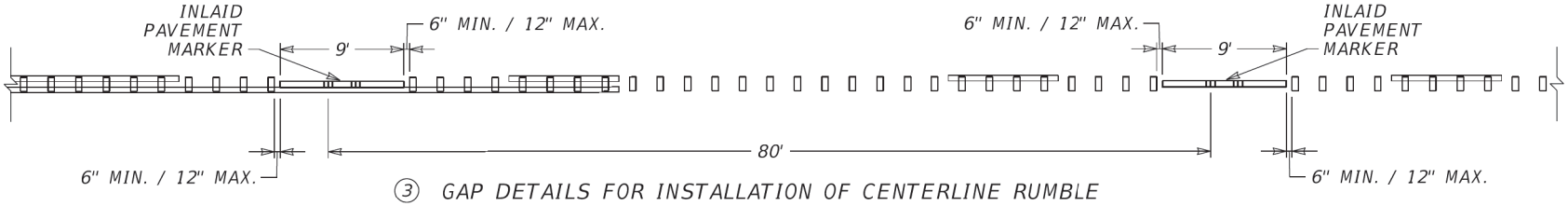
PLAN VIEW



SECTION A-A



DETAIL "A"



③ GAP DETAILS FOR INSTALLATION OF CENTERLINE RUMBLE STRIPS IN CONJUNCTION WITH INLAID PAVEMENT MARKERS

DRAWING NOT TO SCALE

USE WITH CUR. STD. DWGS.
TPR-100, TPR-120, AND
TPR-125

~ NOTES ~

1. DISTANCES SHOWN ARE APPROXIMATE. MAINTAIN RUMBLE STRIP DIMENSIONS AND SPACING AS MUCH AS POSSIBLE.
2. CENTERLINE RUMBLE STRIPS SHALL BE INSTALLED IN LINE WITH THE CENTER OF THE ROADWAY AS MUCH AS POSSIBLE.
③ FOR ROADWAYS WHERE BOTH INLAID PAVEMENT MARKERS AND CENTERLINE RUMBLE STRIPS ARE TO BE INSTALLED, DISCONTINUE THE CENTERLINE RUMBLE STRIPS 6" MIN. / 12" MAX. BEFORE AND AFTER THE GROOVE FOR EACH INLAID PAVEMENT MARKER. INSTALL AS MANY RUMBLE STRIPS AS POSSIBLE BETWEEN ADJACENT PAVEMENT MARKERS WHILE MAINTAINING THE 24" CYCLE.
4. DO NOT INSTALL CENTERLINE RUMBLE STRIPS IN AREAS INDICATED ON TPR-100.
5. CENTERLINE RUMBLE STRIPS SHOULD BE OMITTED WHERE THE POSTED SPEED LIMIT IS 45 MPH OR LESS, OR WHERE LANE WIDTHS ARE LESS THAN 11 FT.

BID ITEM AND UNIT TO BID	
CENTERLINE RUMBLE STRIPS	LF

SUBMITTED _____ DIVISION DIRECTOR

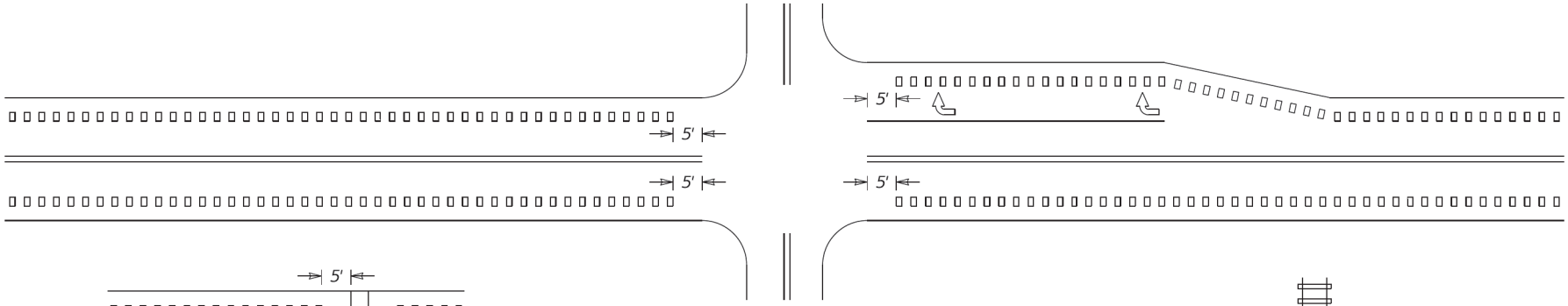
08-21-2023 DATE

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY TRANSPORTATION CABINET

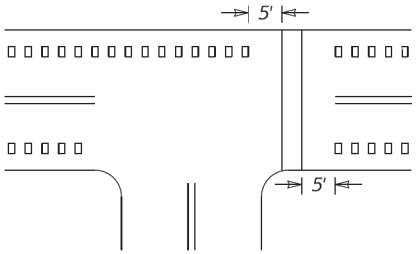
SEPIA 027
CENTERLINE RUMBLE STRIPS 6 INCH STRIPING

N.T.S.

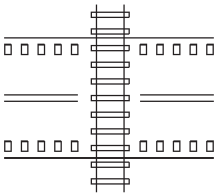
ITEM NO. 8-22370
COUNTY OF ROCKCASTLE
SHEET NO. --



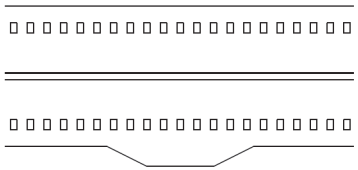
INTERSECTIONS WITH OR WITHOUT (1)
RIGHT TURN LANES



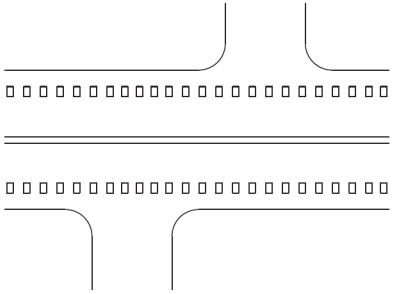
MARKED CROSSWALK (2)



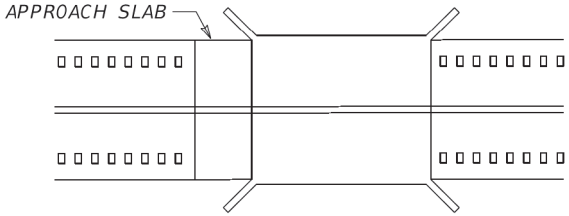
HIGHWAY-RAIL GRADE CROSSINGS (3)



MAILBOX TURNOUTS (6)



DRIVEWAYS/MINOR
COMMERCIAL ENTRANCES (5)



BRIDGE DECK/APPROACH SLAB (4)

~ NOTES ~

(1) EDGELINE RUMBLE STRIPS SHALL BE OMITTED THROUGH MAJOR INTERSECTIONS WITH, OR WITHOUT, RIGHT-TURN LANES. OMIT EDGELINE RUMBLE STRIPS APPROXIMATELY 5' IN ADVANCE OF THE AREA WHERE EDGELINE PAVEMENT MARKINGS HAVE BEEN OMITTED (NORMALLY WHERE THE SIDE STREET RADIUS INTERSECTS THE MAINLINE).

(2) EDGELINE RUMBLE STRIPS SHALL NOT BE INSTALLED THROUGH MARKED CROSSWALKS. OMIT EDGELINE RUMBLE STRIPS APPROXIMATELY 5 FT IN ADVANCE OF MARKED CROSSWALKS.

(3) EDGELINE RUMBLE STRIPS SHALL NOT BE INSTALLED ACROSS HIGHWAY-RAIL GRADE CROSSINGS.

(4) EDGELINE RUMBLE STRIPS SHALL NOT BE INSTALLED ON BRIDGE DECKS OR APPROACH SLABS.

(5) EDGELINE RUMBLE STRIPS SHALL BE INSTALLED THROUGH DRIVEWAYS & MINOR COMMERCIAL ENTRANCES.

(6) EDGELINE RUMBLE STRIPS SHALL BE INSTALLED THROUGH MAILBOX TURNOUTS.

7. EDGELINE RUMBLE STRIPS SHOULD BE OMITTED WHERE THE POSTED SPEED LIMIT IS 45 MPH OR LESS.

DRAWING NOT TO SCALE

USE WITH CUR. STD. DWGS.
TPR-120, TPR-125, AND
TPR-130

BID ITEMS AND UNIT TO BID

EDGELINE RUMBLE STRIPS	LF

SUBMITTED _____ DIVISION DIRECTOR 08-21-2023 DATE

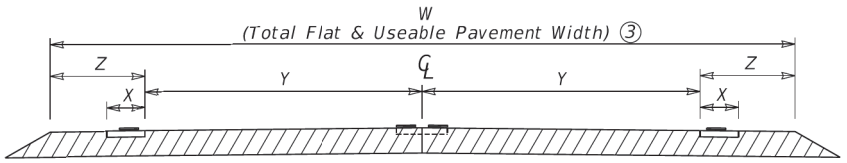
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY TRANSPORTATION CABINET

SEPIA 028
EDGELINE RUMBLE STRIPS PLACEMENT DETAILS

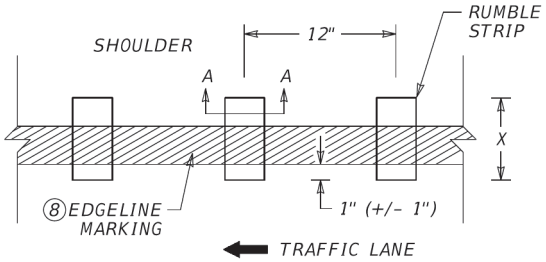
N.T.S.

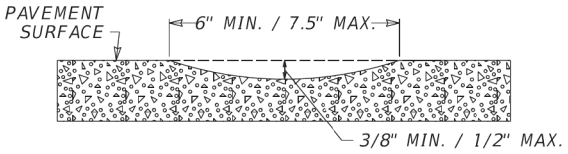
ITEM NO. 8-22370
COUNTY OF ROCKCASTLE
SHEET NO. --

PAVEMENT WIDTH (W) ③	TYPES OF RUMBLE STRIPS TO INSTALL	LANE WIDTH (Y) ⑤	SHOULDER WIDTH (Z) ⑥	LENGTH OF EDGELINE RUMBLE (X) ⑦
20'	④ OPTIONAL: EDGELINE RUMBLE STRIPS	9'	1'	8"
21'		9.5'	1'	8"
22'	STANDARD: INSTALL ONLY EDGELINE RUMBLE STRIPS	10'	1'	8"
23'		10'	1.5'	8"
24'		10.5'	1.5'	8"
25'	STANDARD: INSTALL BOTH EDGELINE AND CENTERLINE RUMBLE STRIPS	11'	1.5'	8"
26'		11'	2'	8"
27'		11'	2.5'	8"
28'		11'	3'	8"
29'		11'	3.5'	8"
30'		11'	4'	8"
31'		11'	4.5'	8"
32'		11'	5'	8"
33'		11'	5.5'	8"
34'		11'	6'	8"
35'		11.5'	6'	8"
36'		12'	6'	8"
37'		12'	6.5'	12"
38'		12'	7'	12"
39'		12'	7.5'	12"
>=40'		12'	>=8'	16"

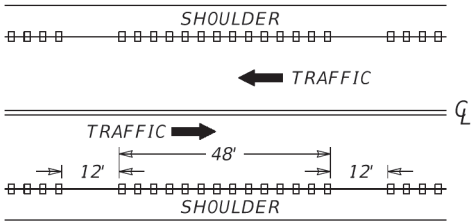


PAVEMENT CROSS-SECTION





SECTION A-A



BICYCLE GAPS ⑨

~ NOTES ~

SEE CURRENT STANDARD DRAWING NUMBER TPR-120N FOR ALL NOTES.

APPLICATION OF THE TABLE ABOVE: THE TOTAL PAVEMENT WIDTH (W) IS THE STARTING POINT IN USING THE TABLE. THE TOTAL PAVEMENT WIDTH (W) IS THE TOTAL PAVEMENT THAT IS FLAT AND USEABLE FOR DRIVING. WHEN MEASURING THE TOTAL PAVEMENT WIDTH (W) DO NOT INCLUDE THE WIDTH OF ANY PAVEMENT THAT IS NOT FLAT AND USEABLE FOR DRIVING, SUCH AS PAVEMENT WEDGES. ONCE THE TOTAL PAVEMENT WIDTH (W) IS DETERMINED, USE THIS VALUE AND THE TABLE ABOVE TO DETERMINE THE TYPE(S) OF RUMBLE STRIPS TO INSTALL AND THE RECOMMENDED LANE WIDTH (Y) AND SHOULDER WIDTH (Z).

BID ITEM AND UNIT TO BID

EDGELINE RUMBLE STRIPS	LF
CENTERLINE RUMBLE STRIPS	LF

DRAWING NOT TO SCALE

USE WITH CUR. STD. DWGS. TPR-100, TPR-105, TPR-110, TPR-115 AND TPR-120N

SUBMITTED _____ 08-21-2023
DIVISION DIRECTOR — DATE

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

SEPIA 029
EDGELINE RUMBLE STRIP DETAILS TWO LANE ROADWAYS

N.T.S.

ITEM NO. 8-22370
COUNTY OF ROCKCASTLE
SHEET NO. --

OpenRoads Designer v10.12.02.4 USER: cweller
FILE NAME: J:\12404_US 150 ROCKCASTLE CO REHAB\50 - PLAN SHEETS\10 - ROADWAY\50 - DETAIL SHEETS\40 - SEPIAS\SEPIA029_PROPOSAL.DGN

~ NOTES ~

1. EDGELINE RUMBLE STRIPS, AND CENTERLINE RUMBLE STRIPS WHEN APPLICABLE, SHOULD BE INSTALLED TO CREATE THE LANE WIDTHS (Y) AND SHOULDER WIDTHS (Z) SHOWN IN THE TABLE ON TPR-120 UNLESS THERE IS A REASON THAT SUPPORTS A CHANGE IN DIMENSION. FOR EXAMPLE, IF THE EXISTING LANE WIDTH IS NARROWER THAN THE LANE WIDTH PROPOSED ON TPR-120 AND THE EXISTING SHOULDER PAVEMENT DEPTH IS NOT SUITABLE TO BE CONVERTED INTO A PORTION OF THE PROPOSED LANE WIDTH, THEN THE EXISTING LANE AND SHOULDER WIDTHS SHOULD BE USED INSTEAD OF THE LANE AND SHOULDER WIDTHS PROPOSED ON TPR-120

2. THE DIMENSIONS SHOWN IN THE TABLE ON TPR-120 ARE APPROXIMATE. MAINTAIN RUMBLE STRIP DIMENSIONS AND SPACING AS MUCH AS POSSIBLE. IF THE TYPICAL SECTION SHOWS A LANE WIDTH (Y) AND/OR SHOULDER WIDTH (Z) THAT DIFFERS FROM THE WIDTHS LISTED ON TPR-120, THE ENGINEER SHALL DETERMINE THE LANE WIDTH (Y) AND/OR SHOULDER WIDTH (Z) AT THE TIME OF CONSTRUCTION.
   NOTE: CENTERLINE RUMBLE STRIPS SHOULD BE OMITTED IF THE DECISION IS TO INSTALL A LANE WIDTH (Y) THAT IS LESS THAN 11 FT.

(3) PAVEMENT WIDTH (W) IS THE TOTAL WIDTH OF PAVEMENT THAT IS FLAT AND USEABLE FOR DRIVING. WHEN MEASURING THE PAVEMENT WIDTH (W), DO NOT INCLUDE THE WIDTH OF ANY PAVEMENT THAT IS NOT FLAT AND USEABLE, SUCH AS PAVEMENT WEDGES.

(4) ON TWO LANE, TWO WAY ROADWAYS THAT HAVE A TOTAL PAVEMENT WIDTH (W) OF 20 FT OR GREATER, BUT LESS THAN 22 FT, EDGELINE RUMBLE STRIPS ARE AN OPTIONAL APPLICATION. CONTACT THE TRAFFIC SAFETY BRANCH IN THE DIVISION OF TRAFFIC OPERATIONS FOR GUIDANCE WHEN CONSIDERING THE INSTALLATION OF EDGELINE RUMBLE STRIPS ALONG ROADWAYS WITH A TOTAL PAVEMENT WIDTH (W) THAT IS 20 FT OR GREATER, BUT LESS THAN 22 FT.

(5) THE LANE WIDTH (Y) IS TO BE MEASURED FROM THE CENTER OF THE ROAD TO THE LANE SIDE EDGE OF THE EDGELINE RUMBLE STRIP.

(6) THE PAVED SHOULDER WIDTH (Z) IS TO BE MEASURED FROM THE LANE SIDE EDGE OF THE EDGELINE RUMBLE STRIP TO THE OUTSIDE EDGE OF FLAT & USEABLE PAVEMENT.

(7) THE RUMBLE LENGTH (X) MAY BE MODIFIED AS DIRECTED BY THE ENGINEER.

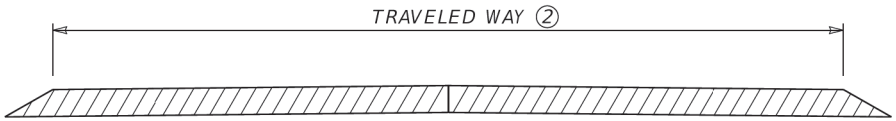
(8) PLACE THE EDGELINE MARKING SO THAT THE LANE SIDE EDGE OF THE MARKING GENERALLY FOLLOWS THE LANE SIDE EDGE OF THE RUMBLE STRIP. THE TARGET IS FOR THE LANE SIDE EDGE OF THE MARKING TO BE 1" BEYOND THE LANE SIDE EDGE OF THE RUMBLE STRIP WITH AN ACCEPTABLE VARIANCE OF +/- 1". ON NON-STATE PRIMARY ROUTES WITH LESS THAN 1000 ADT, THE EDGELINE MARKING MAY BE OMITTED, LEAVING THE RUMBLE STRIP AS THE ONLY COMPONENT INSTALLED.

(9) ALL EDGELINE RUMBLE STRIPS ALONG SHOULDERS THAT ARE 3 FT OR WIDER SHALL INCLUDE BICYCLE GAPS AS DETAILED.

10. RUMBLE STRIPS SHOULD TYPICALLY BE OMITTED WHERE THE POSTED SPEED LIMIT IS 45 MPH OR LESS.

BID ITEM AND UNIT TO BID	
EDGELINE RUMBLE STRIPS	LF
CENTERLINE RUMBLE STRIPS	LF

SUBMITTED _____ 08-21-2023
DIVISION DIRECTOR — DATE



TWO LANE ROADWAY
PAVEMENT CROSS-SECTION

TRAVELED WAY (2)	TYPE OF PAVEMENT STRIPING	NON-STATE PRIMARY ROUTES				STATE PRIMARY ROUTES	
		< 1000 ADT		>= 1000 ADT		ANY ADT	
		WIDTH	MATERIAL	WIDTH	MATERIAL	WIDTH	MATERIAL*
< 16' (4)	EDGELINE STRIPES ONLY	4"	PAINT	4"	PAINT	6"	THERMO (ASPHALT) TYPE I TAPE (CONCRETE)
16' TO < 20'	EDGELINE STRIPES ONLY OR CENTERLINE STRIPE ONLY	4"	PAINT	4"	PAINT	6"	THERMO (ASPHALT) TYPE I TAPE (CONCRETE)
>=20' (3)	CENTERLINE AND EDGELINE STRIPES	4" (5)	PAINT	6"	PAINT	6"	THERMO (ASPHALT) TYPE I TAPE (CONCRETE)

*OTHER DURABLE NON-WATERBORNE MARKINGS MAY BE USED WITH APPROVAL FROM THE DIVISION OF TRAFFIC OPERATIONS.

~ NOTES ~

1. INSTALL PAVEMENT STRIPING ON TWO LANE, TWO WAY ROADWAYS AS DETAILED IN THE ABOVE TABLE AND IN ACCORDANCE WITH THE PAVEMENT MARKINGS AND DELINEATION CHAPTER OF THE TRAFFIC OPERATIONS GUIDANCE MANUAL. CONTACT THE DIVISION OF TRAFFIC OPERATIONS FOR ADDITIONAL GUIDANCE IF NECESSARY.

(2) THE TRAVELED WAY IS THE PORTION OF ROADWAY FOR THE MOVEMENT OF VEHICLES, EXCLUSIVE OF THE SHOULDERS.

(3) ON TWO LANE, TWO WAY ROADWAYS THAT HAVE A TOTAL PAVEMENT WIDTH (W) THAT IS 20 FT OR GREATER, BUT LESS THAN 22 FT, EDGELINE RUMBLE STRIPS ARE AN OPTIONAL APPLICATION. THE DIVISION OF TRAFFIC OPERATIONS IS AVAILABLE TO ASSIST WITH THE DETERMINATION OF WHETHER OR NOT TO INSTALL EDGELINE RUMBLE STRIPS ON PAVEMENT WIDTHS LESS THAN 22 FT.

ON TWO LANE, TWO WAY ROADWAYS THAT HAVE A TOTAL PAVEMENT WIDTH (W) THAT IS 22 FT OR GREATER, INSTALL PAVEMENT STRIPING AS DETAILED IN THE ABOVE TABLE AND IN CONJUNCTION WITH THE RUMBLE STRIPS AS DETAILED ON TPR-120 AND TPR-120N.

(4) EDGELINES MAY BE OMITTED FROM ROADWAYS WITH A TRAVELED WAY WIDTH LESS THAN 16 FEET WITH THE APPROVAL OF THE DIVISION OF TRAFFIC OPERATIONS.

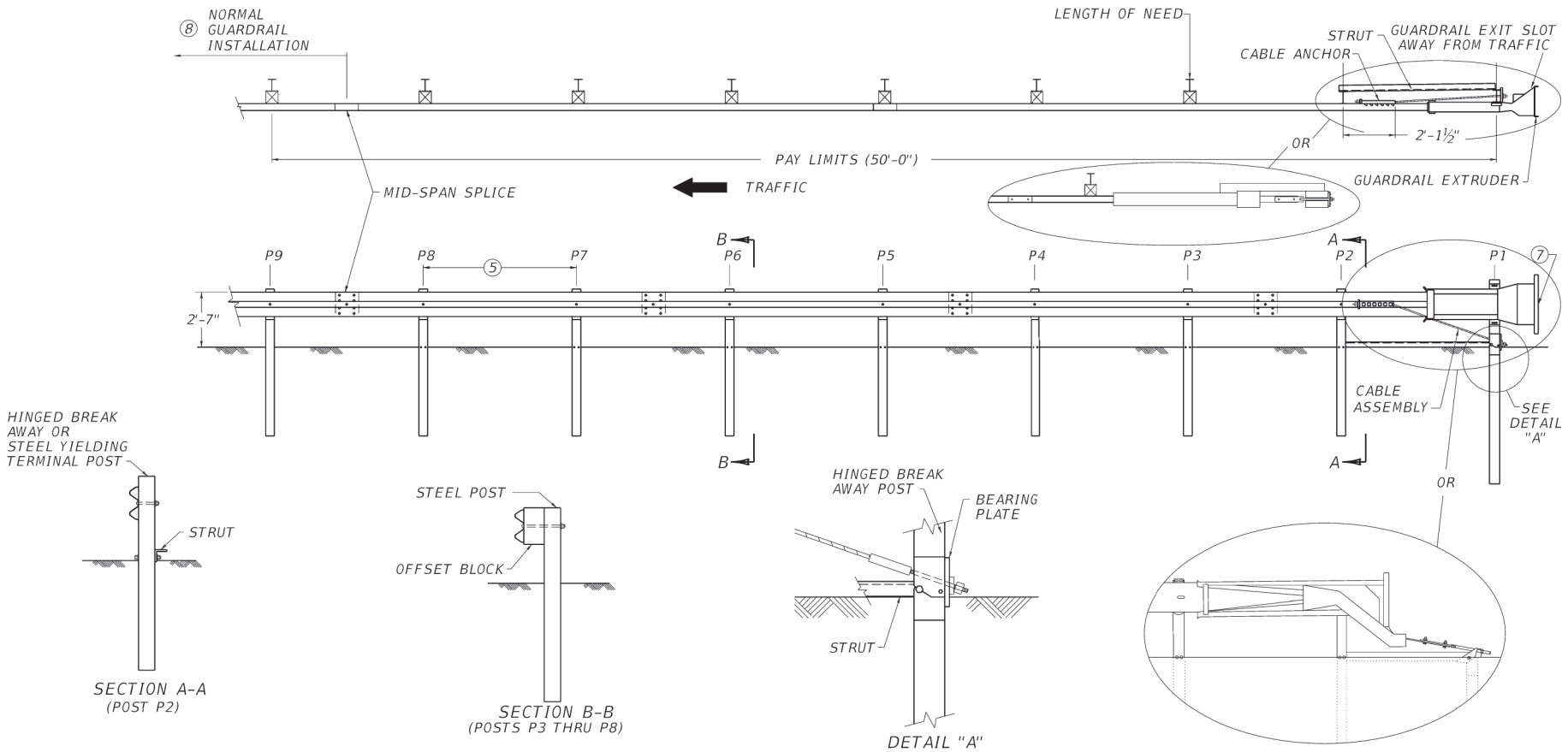
(5) EDGELINES MAY BE OMITTED ON NON-STATE PRIMARY ROUTES WITH A TRAVELED WAY WIDTH GREATER THAN OR EQUAL TO 20 FEET AND AN ADT LESS THAN 1,000.

6. EDGELINES MAY BE OMITTED, BASED ON ENGINEERING JUDGMENT, IN AREAS WHERE THE PAVEMENT EDGE IS DELINEATED BY PHYSICAL OBJECTS SUCH AS CURBS, PARKING SPACES, OR OTHER MARKINGS. EDGELINES SHOULD BE INSTALLED ON ROADWAYS WITH CURB AND GUTTER IF THE POSTED SPEED LIMIT IS 45 MPH OR GREATER.

DRAWING NOT TO SCALE

USE WITH CUR. STD. DWGS.
TPR-120 & TPR-120N

SUBMITTED _____ 09/28/2023
DIVISION DIRECTOR DATE



~ NOTES ~

1. GUARDRAIL END TREATMENT TYPE 1 SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH, AND INCLUDES POSTS, RAIL ELEMENTS, GUARDRAIL EXTRUDER AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION AS DETAILED.
2. PERMISSIBLE ALTERNATES FOR GUARDRAIL END TREATMENT TYPE 1 ARE PATENTED ITEMS: SOFT-STOP MANUACTURED BY VALTIR OF DALLAS, TEXAS OR MSKT MANUFACTURED BY ROAD SYSTEMS INC. OF BIG SPRINGS, TEXAS.
3. THE MANUFACTURER SHALL FURNISH TWO (2) SETS OF SHOP PLANS TO THE CONTRACTOR WITH EACH INSTALLATION.
4. THE COMPLETED INSTALLATION SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE MANUFACTURER (SEE SHOP DRAWINGS).

⑤ POSTS P1 THROUGH P9 ARE SPACED 6'-3" ON CENTER.

6. INTENDED USE: AREAS WITH ADEQUATE VEHICLE RECOVERY ZONE BEHIND END TREATMENT.

⑦ OBJECT MARKER TYPE 3 (SEE CURRENT MUTCD MANUAL FOR DETAILS).

⑧ FOR MAINTENANCE AND REPAIR PROJECTS, USE "GUARDRAIL SYSTEM TRANSITION" (RBR-018) TO TRANSITION BACK TO 27" OR 29" GUARDRAIL HEIGHT, IF ONLY THE TERMINAL IS PROPOSED TO BE REPLACED.

BID ITEM AND UNIT TO BID:

GUARDRAIL END TREATMENT TYPE 1	EACH
OBJECT MARKER TY 3	EACH

USE WITH CUR. STD. DWG.
RBR-018

SUBMITTED W. T. Sapan 05-03-2024
DIVISION DIRECTOR DATE

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY TRANSPORTATION CABINET

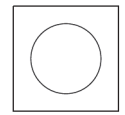
SEPIA 034
GUARDRAIL END TREAMENT TYPE 1

N.T.S.

ITEM NO. 8-22370
COUNTY OF ROCKCASTLE
SHEET NO. --

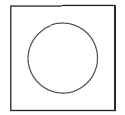
R2-10

R2-11



8" (MIN.) FY

S4-4P



8" (MIN.) FY

APPLICATION

IN ACCORDANCE WITH KRS 189.2327, IN ORDER FOR HIGHER FINES TO BE ESTABLISHED IN A HIGHWAY WORK ZONE, SIGNS INFORMING DRIVERS OF THE WORK ZONE AND THAT FINES ARE HIGHER MUST BE DISPLAYED AND AT LEAST ONE (1) BONA FIDE WORKER MUST BE PRESENT.

THE ENGINEER MAY DETERMINE WHETHER TO ESTABLISH A HIGHER FINES ZONE WITHIN A HIGHWAY WORK ZONE BASED ON ENGINEERING JUDGMENT.

~ NOTES ~

1. THE BEGIN AND END HIGHER FINES ZONE SIGNS SHALL BE 36" X 48" FOR FREEWAYS AND EXPRESSWAYS AND 24" X 30" FOR OTHER ROADWAYS. "WHEN FLASHING" PLAQUES SHALL BE 36" X 18" FOR FREEWAYS EXPRESSWAYS AND 24" X 12" FOR OTHER ROADWAYS.
2. SIGNS SHALL HAVE A WHITE BACKGROUND WITH A BLACK LEGEND AND SHALL BE MOUNTED AT ELEVATIONS AND OFFSETS PRESCRIBED IN THE MUTCD.
3. USE ENGINEERING JUDGMENT WHEN DETERMINING THE LIMITS OF HIGHER FINES ZONES. FOR SHORT LENGTH PROJECTS WHERE WORK WILL OCCUR THROUGHOUT THE PROJECT LIMITS, LOCATE "BEGIN HIGHER FINES ZONE" SIGN ASSEMBLY BETWEEN THE LAST ADVANCE WARNING SIGN AND THE BEGINNING OF THE ACTIVITY AREA AND LOCATE THE "END HIGHER FINES ZONE" SIGN 250' IN ADVANCE OF THE "END ROAD WORK" SIGN. FOR LONG LENGTH PROJECTS WHERE WORK WILL NOT OCCUR THROUGHOUT THE PROJECT LIMITS, CONSIDER PLACING SIGNS ONLY IN AREAS WHERE ACTIVITY IS OCCURRING.
4. SIGNS SHALL BE DUAL-MOUNTED ON MULTI-LANE HIGHWAYS WHERE MEDIAN IS WIDE ENOUGH TO MAINTAIN LATERAL CLEARANCES AS PRESCRIBED IN THE MUTCD. WHERE CONSTRUCTION ONLY AFFECTS ONE DIRECTION OF A DIVIDED HIGHWAY WITH A BARRIER OR WIDE MEDIAN, SIGNS SHALL NOT BE ERECTED FOR OPPOSING DIRECTION.
5. ADDITIONAL SIGNS MAY BE REQUIRED FOR LONG HIGHWAY WORK ZONES OR WHERE RAMPS OR INTERSECTING STREETS JUNCTION WITHIN THE PROJECT LIMITS.
6. "BEGIN HIGHER FINES ZONE" SIGN ASSEMBLIES MAY INCLUDE A "WHEN FLASHING" PLAQUE AND FLASHING BEACONS. BEACONS SHALL BE YELLOW, AT LEAST 8" IN DIAMETER, AND MOUNTED HORIZONTALLY NEAR THE TOP OF THE SIGN ASSEMBLY. BEACONS SHALL FLASH ALTERNATELY AND CONFORM TO PART 4S OF THE MUTCD.
7. HIGHER FINES ZONES SIGNS SHALL BE COVERED IF A BONA FIDE WORKER WILL NOT BE PRESENT FOR A SIGNIFICANT PERIOD OF TIME. IN SUCH CASES, ASSEMBLIES WITH FLASHING BEACONS SHALL BE TURNED OFF.

BID ITEM	UNIT TO BID
TEMPORARY SIGNS	SQFT

W3-5

W3-5b
⑦

8" (MIN.) FY
G20-5aP
R2-1
S4-4P
8" (MIN.) FY

Option A

G20-5aP
R2-1

Option B

R2-12

SIGN	BACKGROUND COLOR	MIN. SIZE	
		CONVENTIONAL ROAD	EXPRESSWAY/ FREEWAY
W3-5	FLUORESCENT ORANGE	36" x 36"	48" x 48"
W3-5b	FLUORESCENT ORANGE	36" x 36"	48" x 48"
G20-5aP	FLUORESCENT ORANGE	24" x 18"	36" x 24"
R2-1	WHITE	24" x 30"	36" x 48"
R2-12	WHITE	24" x 36"	36" x 54"
S4-4P	WHITE	24" x 10"	36" x 18"

~ NOTES ~

1. REDUCED SPEED LIMITS SHOULD BE USED ONLY IN SPECIFIC PORTIONS OF THE WORK ZONE WHERE CONDITIONS OR RESTRICTIVE FEATURES ARE PRESENT. LOWERING THE REGULATORY SPEED LIMIT SHOULD BE AVOIDED AS MUCH AS PRACTICAL BECAUSE DRIVERS REDUCE THEIR SPEEDS ONLY IF THEY CLEARLY PERCEIVE A NEED TO DO SO.
2. SPEED LIMIT MAY BE REDUCED BY 15 MPH WITHOUT A TRAFFIC ENGINEERING INVESTIGATION ON HIGHWAYS WHERE THE NORMAL POSTED SPEED LIMIT IS 70 MPH. THE SPEED LIMIT MAY BE REDUCED BY 10 MPH WITHOUT A TRAFFIC ENGINEERING INVESTIGATION ON OTHER HIGHWAYS. LARGER SPEED REDUCTIONS REQUIRE A TRAFFIC ENGINEERING INVESTIGATION AND APPROVAL OF THE SECRETARY OF TRANSPORTATION.
3. A REDUCED SPEED LIMIT AHEAD (W3-5) SIGN SHALL BE INSTALLED IN ADVANCE OF A WORK ZONE WITH A TEMPORARY WORK ZONE SPEED LIMIT. SIGNS SHALL BE DUAL-MOUNTED ON MULTI-LANE HIGHWAYS WHERE MEDIAN IS WIDE ENOUGH TO MAINTAIN LATERAL CLEARANCES AS PRESCRIBED IN THE MUTCD. THE SPEED LIMIT DISPLAYED ON THE SIGN SHALL MATCH THE DESIRED SPEED LIMIT THROUGH THE WORK ZONE.
4. IF THE END OF THE REDUCED SPEED ZONE DOES NOT COINCIDE WITH THE "END ROAD WORK" SIGN, AN "END WORK ZONE SPEED LIMIT" (R2-12) SIGN SHOULD BE INSTALLED AT THE END OF THE REDUCED SPEED ZONE.
5. SPEED LIMIT ASSEMBLIES MAY INCLUDE A "WHEN FLASHING" PLAQUE AND FLASHING BEACONS. BEACONS SHALL BE YELLOW, AT LEAST EIGHT (8) INCHES IN DIAMETER, AND MOUNTED VERTICALLY. BEACONS SHALL FLASH ALTERNATELY AND CONFORM TO PART 4S OF THE MUTCD.
6. IF A SPEED LIMIT IS TO APPLY TO THE ENTIRE LENGTH OF THE WORK ZONE, THE REDUCED SPEED LIMIT AHEAD (W3-5) SIGN SHOULD BE INSTALLED BETWEEN THE FIRST AND SECOND ADVANCE WARNING SIGN, AND THE SPEED LIMIT (R2-1) SIGN OR FLASHER ASSEMBLY SHOULD BE INSTALLED BETWEEN THE SECOND AND THIRD ADVANCE WARNING SIGN. IF A SPEED LIMIT ONLY APPLIES TO A SHORT SECTION OF A LONGER WORK ZONE, THE W3-5 SIGN SHOULD BE MOUNTED APPROXIMATELY 500 FEET IN ADVANCE OF THE SPEED LIMIT SIGN ASSEMBLY AND NO CLOSER THAN 250 FEET TO ANY OTHER SIGNS.

⑦ A "VARIABLE SPEED ZONE AHEAD" (W3-5b) SIGN SHOULD ONLY BE USED INSTEAD OF A REDUCED SPEED LIMIT AHEAD (W3-5) SIGN IF THE ENGINEER HAS APPROVED THE USE OF VARIABLE WORK ZONE SPEED LIMITS, I.E. WHEN THE WORK ZONE SPEED LIMIT IS VARIED BY TIME OF DAY OR AS CONDITIONS CHANGE. VARIABLE WORK ZONE SPEED LIMITS WILL BE SIGNED WITH SPEED LIMIT ASSEMBLIES UTILIZING FLASHING BEACONS OR SPEED LIMIT SIGNS WITH A CHANGEABLE MESSAGE DISPLAY.

BID ITEM	UNIT TO BID
TEMPORARY SIGNS	SQFT

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

S-TTD-130
SPEED ZONE SIGNING FOR WORK ZONES

N.T.S.

ITEM NO. 8-22370
COUNTY OF ROCKCASTLE
SHEET NO. --

SPECIAL NOTE FOR BEFORE YOU DIG

US 150 Pavement Rehabilitation Project
Rockcastle County
Item No. 8-22370

Call 811 toll free a minimum of two and no more than ten business days prior to excavation for information on the location of existing under-ground utilities which subscribe to the before-u-dig (BUD) service. Coordinate excavation with all utility owners, including those who do not subscribe to BUD.

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS

US 150

Rehabilitation Project

Rockcastle County

Item No. 8-22307

The dimensions shown on the typical sections for pavement and shoulder widths 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 or shoulders be widened unless specified elsewhere in the Proposal.

Special Note for Fixed Completion Date And Liquidated Damages

US 150 Pavement Rehabilitation Project
Rockcastle County
Item No. 8-22370

This project will have a fixed completion date of **July 31st, 2026** 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 **July 31st, 2026**.

Liquidated damages will be assessed as per Section 108.09 of the latest edition of the Standard Specifications for Road and Bridge Construction.

Liquidated damages will be assessed in the amount of $1,000 per every fifteen (15) minutes for the first hour and then $2,500 for each additional hour, or fraction thereof, when a lane closure remains in place during a prohibited period specified in the Traffic Control Notes of this Proposal.

SPECIAL NOTE FOR TRAFFIC SIGNAL LOOP DETECTORS

1.0 DESCRIPTION. Be advised that there are existing traffic signal loop detectors within the construction limits of this project. Except as specified herein, perform traffic signal loop replacement in accordance with the Department's Standard/Supplemental Specifications, Special Provisions, Special Notes, and Standard/Sepia Drawings, current editions and as directed by the Engineer. Article references are to the Standard Specifications. Furnish all materials, labor, equipment, and incidentals for replacement of traffic signal loop installation(s) and all other work specified as part of this contract.

1.1 Pre-bid Requirements. Conform to Subsection 723.03.17

2.0 MATERIALS. Except as specified herein, furnish materials in accordance with Subsection 732.02 and Section 835. Provide for materials to be sampled and tested in accordance with the Department's Sampling Manual. Make 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 this Special Note.

2.1 Maintain and Control Traffic. See Traffic Control Plan.

2.2 Sand. Furnish natural sand meeting the requirements of Subsection 804.04.01.

2.3 Seeding. Furnish Seed Mix Type I.

2.4 Loop Saw Slot and Fill. Furnish loop sealant, backer rod, and non-shrink grout according to the Saw Slot Detail.

2.5 Junction Boxes. Furnish junction box type B, #57 aggregate, and geotextile filter type IV according to junction box detail.

2.6 Cable No. 14/1 Pair (Lead-in). Furnish cable that is specified in Section 835. Cable shall be ran splice free. This shall include splice kits to connect to the loop wire.

2.7 Conduit. Furnish and install appropriate conduit from transitions to the roadway, junction boxes and poles. See details below.

3.0 CONSTRUCTION. Except as specified herein, install and test Traffic Signal Loop Detectors in accordance with Section 723 and the drawings.

3.1 Testing. Conform to Subsection 723.03.17 (A)

3.2 Coordination. Conform to Subsection723.03.17 (B)

3.3 Connection. Conform to Subsection 723.03.17 (C)

3.4 Maintain and Control Traffic. See Traffic Control Plan.

3.5 Milling. Conform to Subsection 723.03.17 (F)

3.6 Loop Saw Slot and Fill. Conform to Subsection 723.03.13 (A).

3.7 Backfilling and Disturbed Areas. Conform to Subsection 723.03.11.

3.8 Removal. Conform to Subsection 723.03.16.

3.9 Property/Roadway Damage. Conform to Subsection 723.03.17 (J).

3.10 Right-of-Way Limits. Conform to Subsection 723.03.17 (K).

3.11 Utility Clearance. Conform to Subsection 716.03.01.

3.12 Control. Obtain the Engineer's approval of all designs required to be furnished by the Contractor prior to incorporation into the work. The Department reserves the right to permit other contractors, state forces, public utility companies, and others to do work during the construction within the limits of, or adjacent to, the project. Conduct operations and cooperate with such other parties so that interference with each other's work will be reduced to a minimum. The Contractor agrees to make no claims against the Department for additional compensation due to delays or other conditions created by the operations of such other parties. Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to, the project, the Engineer will decide as to the respective rights of the various parties involved in order to ensure the completion of the work in general harmony and in a satisfactory manner, and the Engineer's decision shall be final and binding upon the Contractor.

3.13 Bore and Jack. Conform to Subsection 723.03.06 (I).

3.14 Open Cut Roadway. Conform to Subsection 723.03.06 (I).

4.0 MEASUREMENT. See Subsection 723.04 for bid item notes. Additional bid items include the following:

4.1 Loop Test. The Department will measure the quantity as each individual unit loop tested. The Department will not measure disconnection, reconnection, traffic control, re-splicing per specifications, before and after testing per note above, and any associated hardware for payment and will consider them incidental to this item of work.

4.2 Remove Signal Equipment. The department will measure the quantity by each. The department will not measure backfilling and the disposal or transportation of equipment and materials associated with any structural or electrical component of the signal system including, but not limited to pole bases, poles, junction boxes, cabinets, and wood poles for payment and will consider them incidental to this item of work.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities of listed items according to Subsection 723.05 in addition to the following:

Code	Pay Item	Pay Unit
Conduit 1"	4792	Linear Foot
PVC Conduit – 1 ¼ inch – sch 80	24900EC	Linear Foot

Traffic Signal Loop Detectors
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PVC Conduit – 2 inch – sch 80	24901EC	Linear Foot
Conduit 2”	4795	Linear Foot
Electrical Junction Box type B	4811	Each
Loop Test	24963ED	Each
Trenching and Backfilling	4820	Linear Foot
Loop Wire	4830	Linear Foot
Cable-No. 14/1 Pair	4850	Linear Foot[1]
Loop Saw Slot and Fill	4895	Linear Foot[1]
Bore and Jack Conduit	21543EN	Linear Foot[3]
Open Cut Roadway	4821	Linear Foot[3]
Remove Signal Equipment	24955ED	Each

The Department will consider payment as full compensation for all work required under these notes and the Standard Specifications.

Contrary to section 723:
SUBSECTION: 03.13 Loop Installation.
REVISION: Replace first sentence note with the following:
twist unshielded loop wire (IMSA 51-7) with 3 to 5 turns from the start of homerun to the inside conduit, junction box, cabinet, or pole. Twist unshielded loop wires (IMSA 51-7) with 3 to 5 turns per foot from the start of the homerun to the junction box, cabinet, or pole. Slot can be widened to .5" to .625" to help with the installation of the twisted wire.

Traffic Signal Loop Detectors
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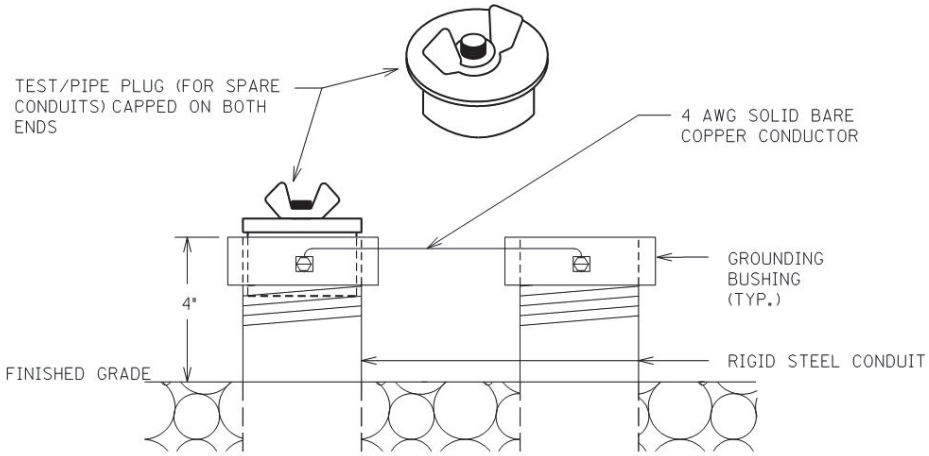
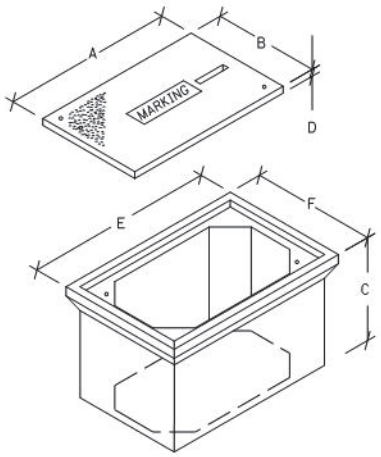


TEST/PIPE PLUG(FOR SPARE CONDUITS) AND GROUNDING DETAIL

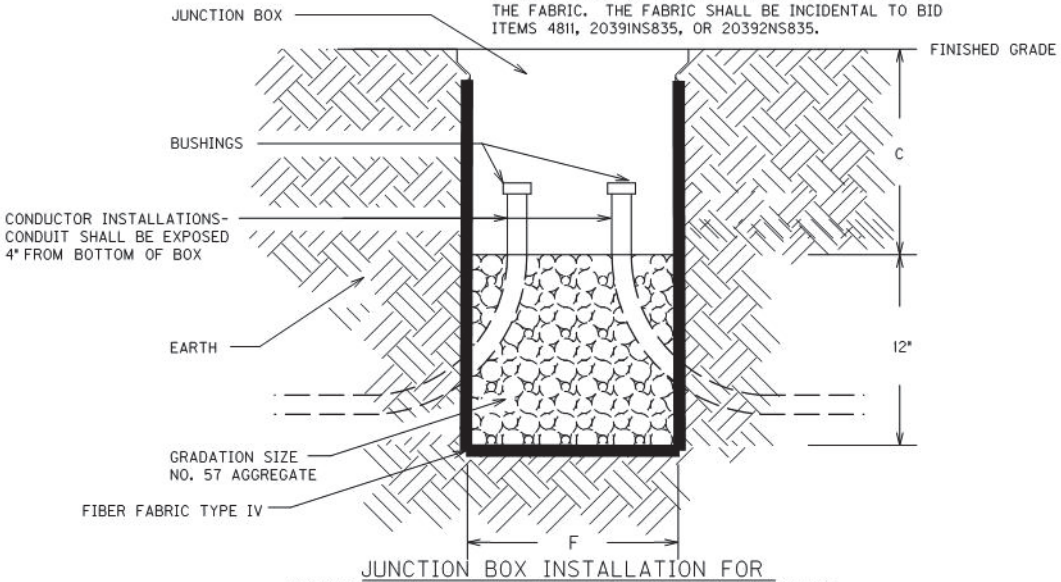
Traffic Signal Loop Detectors
Page 5 of 9



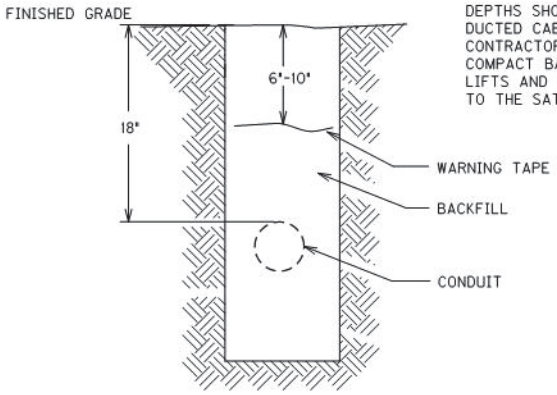
JUNCTION BOX DIMENSIONS (NOMINAL)						
	A	B	C	D	E	F
TYPE A	23"	14"	27"	2"	25"	15"
TYPE B	18"	11"	12"	1¾" *	20"	13"
TYPE C	36"	24"	30"	3"	38"	26"

* MINIMUM
NOTE: STACKABLE BOXES ARE PERMITTED

BEFORE THE INSTALLATION OF THE #57 AGGREGATE AND JUNCTION BOX, THE CONTRACTOR SHALL INSTALL GEOTEXTILE FILTER FABRIC TYPE IV IN THE HOLE. THE FABRIC SHALL EXTEND TO JUST BELOW THE LIP OF THE JUNCTION BOX AND SHALL BE CONTINUOUSLY ADHERED TO THE EXTERIOR OF THE BOX WITH ADHESIVE. ANY LOCATIONS WHERE CONDUITS ENTER THE BOX, THE FABRIC SHALL BE "X CUT" ONLY AS MUCH AS NECESSARY TO ALLOW PASSAGE OF EACH INDIVIDUAL CONDUIT THROUGH THE FABRIC. THE FABRIC SHALL BE INCIDENTAL TO BID ITEMS 4811, 2039INS835, OR 20392NS835.



JUNCTION BOX INSTALLATION FOR
CONVENTIONAL LIGHTING OR TRAFFIC SIGNALS



DEPTHS SHOWN FOR CONDUIT AND DUCTED CABLE ARE MINIMUMS. CONTRACTOR SHALL PLACE AND COMPACT BACKFILL IN 9" MAXIMUM LIFTS AND RETORE DISTURBED AREA TO THE SATISFACTION OF THE ENGINEER.

CONDUIT AND WARNING TAPE TRENCH

Traffic Signal Loop Detectors
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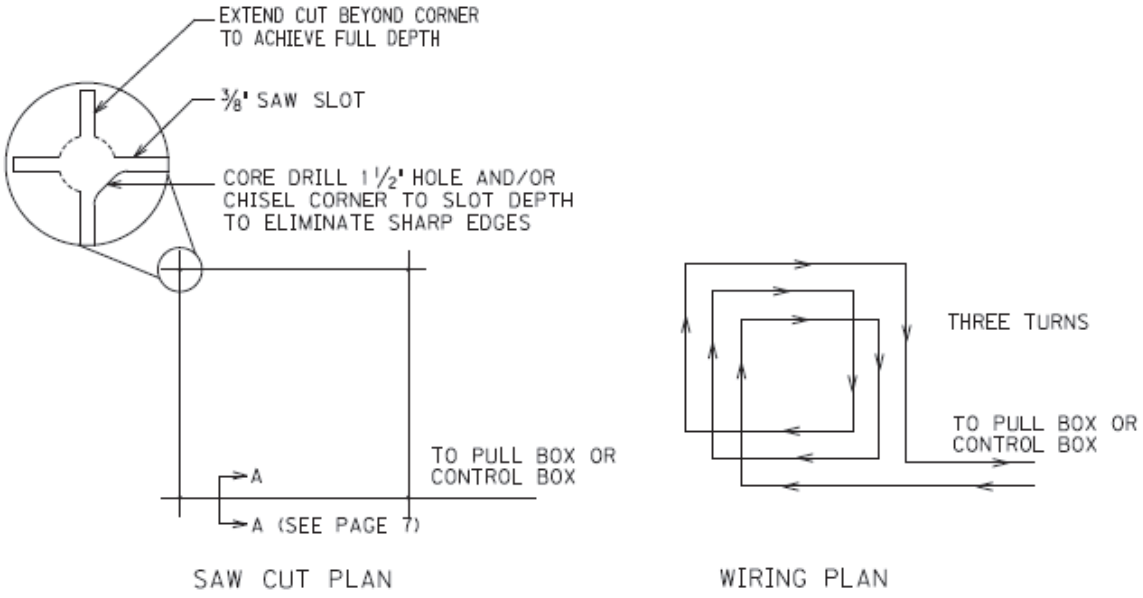
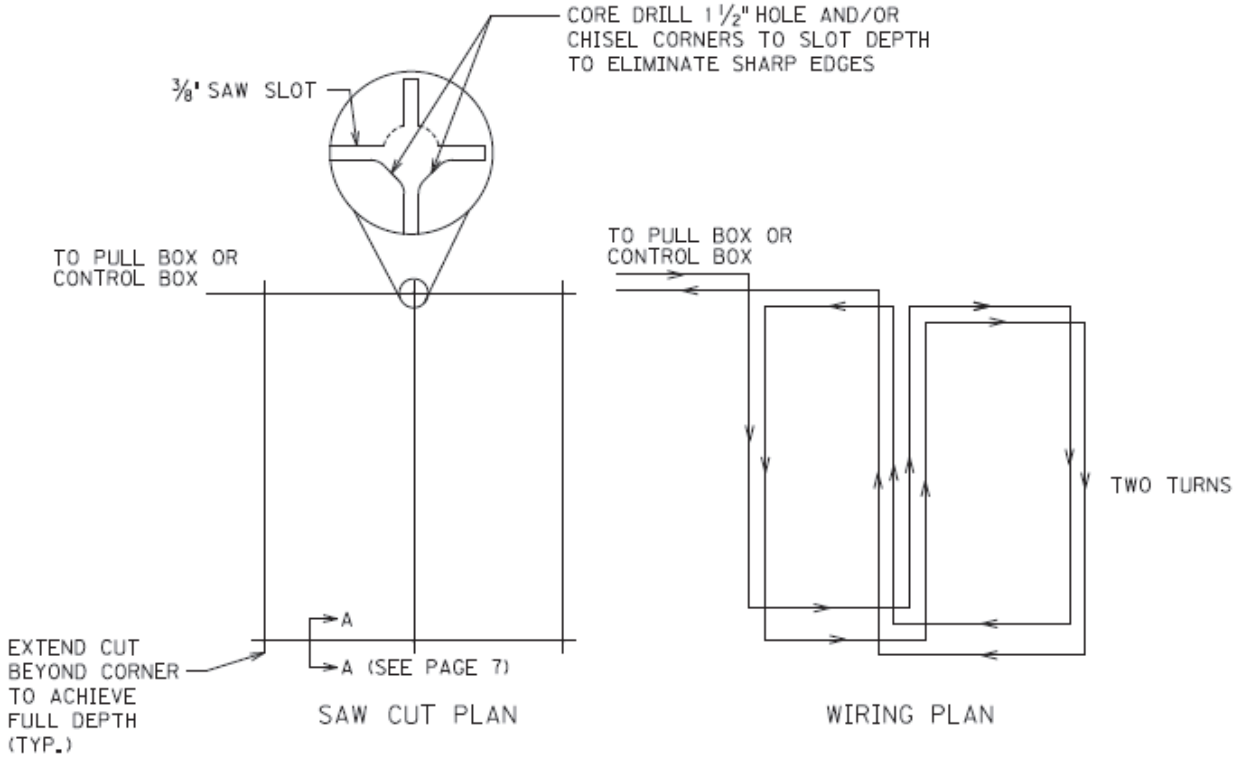


6'X6' LOOP



6'X30' QUADRAPOLE LOOP

Traffic Signal Loop Detectors
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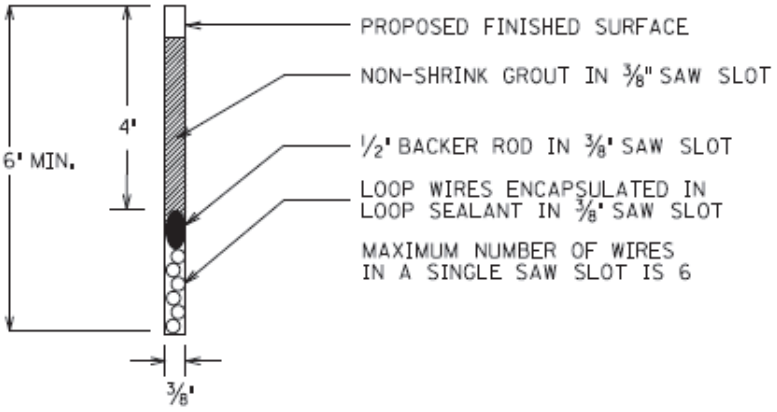
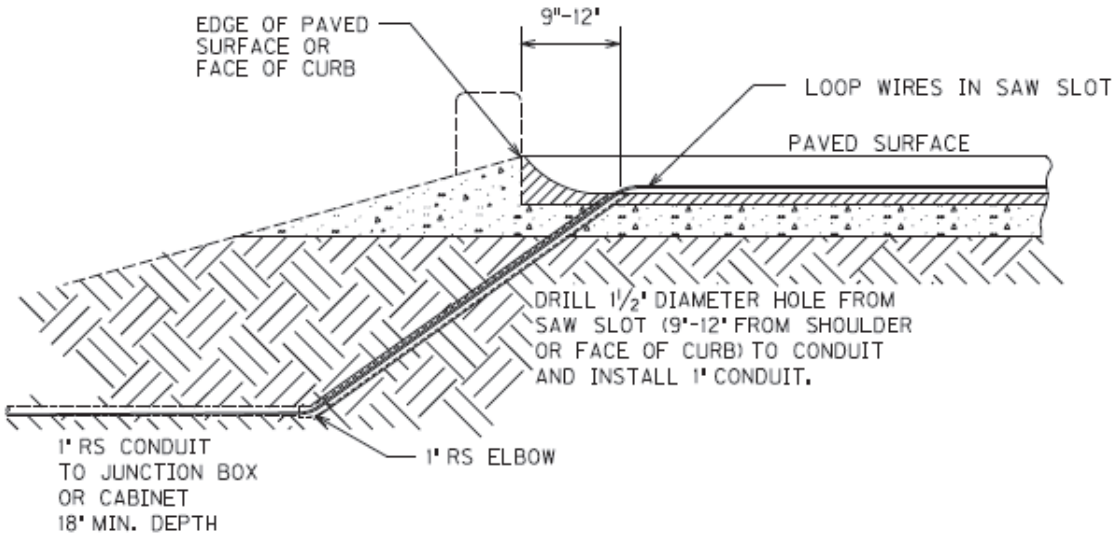
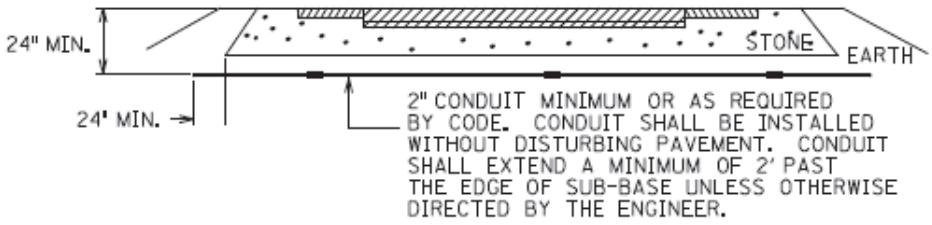


SECTION A-A (SAW SLOT DETAIL)



SAW SLOT EDGE OF PAVEMENT TRANSITION



CONDUIT UNDER EXISTING PAVEMENT DETAIL

Traffic Signal Loop Detectors
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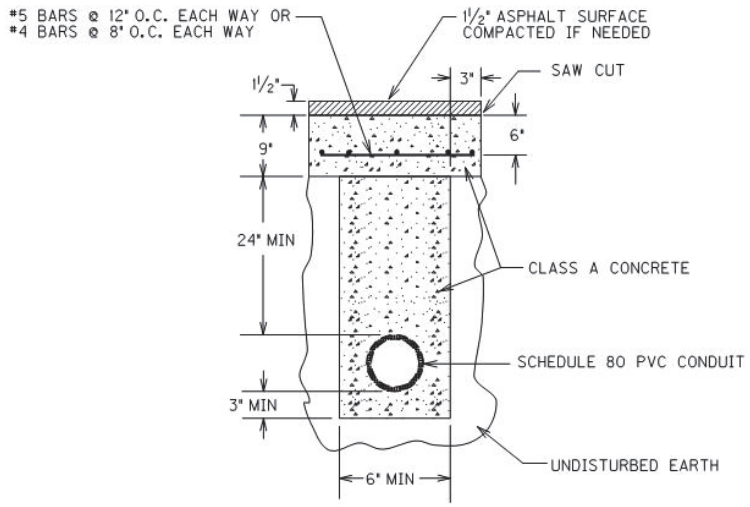
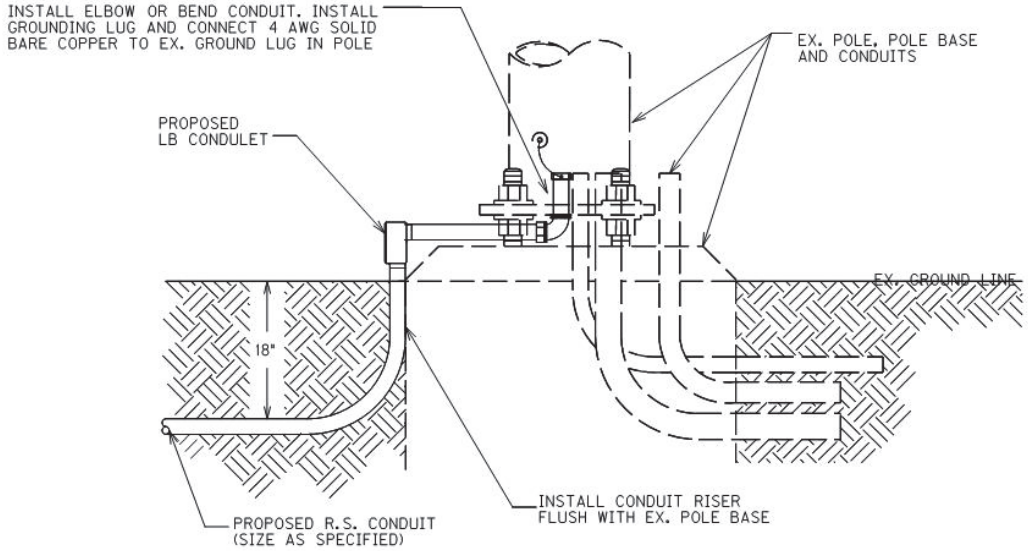


OPEN CUT PAVEMENT DETAIL



CONDUIT INSTALLATION IN EX. POLE BASE

Traffic Signal Loop Detectors
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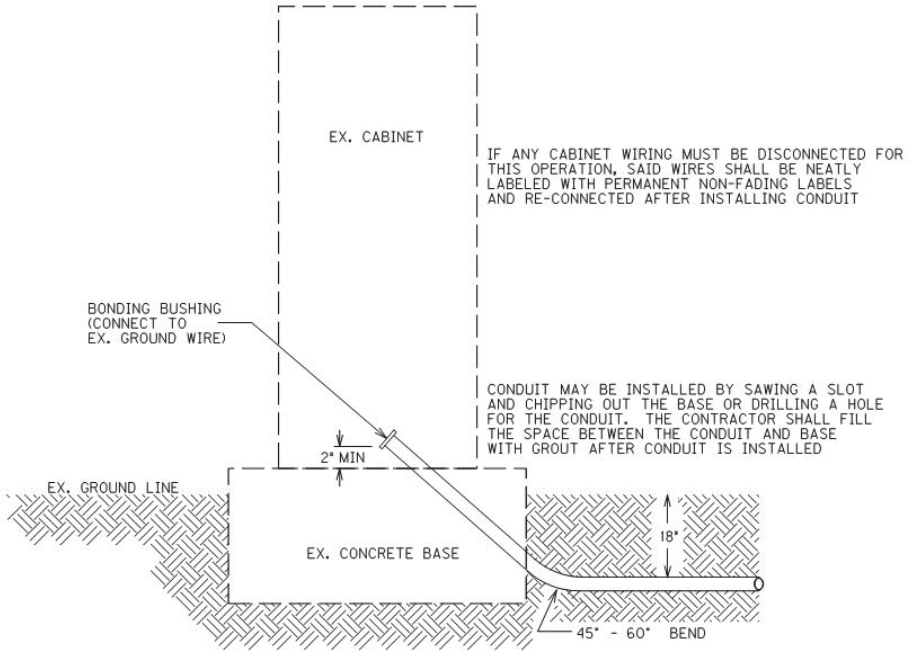

CONDUIT INSTALLATION IN EX. CABINET BASE

TRAFFIC LOOP SUMMARY

8-22370.00 US 150 Pavement Rehab

LOOP SUMMARY FOR ASPHALT PAVEMENT

INTERSECTION	SAW, SLOT AND FILL LF	LOOP WIRE LF	CONDUIT 1 INCH LF	PVC CONDUIT 1 1/4 INCH LF	CABLE NO. 14 LF	JUNCTION TYPE B EA	Trenching and Backfilling LF	Loop Test EA	NOTES
BID ITEM	4895	4830	4792	24900EC	4850	4811	4820	24963ED	
KY 461									
East eg	150	350	10	50	225	1	60	1	(1) 6 ft x 30 ft oop Stop Bar (eft Turn)
Total	150	350	10	50	225	1	60	1	

July 19, 2019

SPECIAL NOTE FOR GEOCOMPOSITE REINFORCEMENT FOR ASPHALT

This Special Note will apply where indicated on the plans or in the proposal. Section references herein are to the Department's 2019 Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. This specification covers geocomposites used as an interlayer in asphalt pavements.

2.0 MATERIALS AND EQUIPMENT.

2.1 Geocomposite. The geocomposite shall consist of a geogrid component with a non-woven geotextile (paving fabric) backing. Furnish fiberglass-reinforced or polyester geogrid coated with an elastomeric polymer. Ensure the geogrid forms a stable network such that the ribs, filaments, or yarns retain their dimensional stability, including selvages. Furnish geogrid with a non-woven paving fabric backing composed of long chain synthetic polymers that are 95 percent by weight polyolefins or polyesters.

A) Physical Requirements. Furnish the specified geogrid type conforming to the Physical Requirements Table and ASTM D 4759. Ensure that each geogrid shipment is accompanied by a manufacturer's certification listing minimum average roll specification values (MARV) of each lot number for those properties listed in the table below. Furnish geogrid with a non-woven geotextile backing that conforms to AASHTO M288 Type II paving fabric with the exception of mass per unit area. Products that meet all Type II requirements except mass per unit area will be acceptable.

PROPERTY	TEST METHOD	SPECIFICATION
Geogrid Tensile Strength, lb/in (min.)	ASTM D6637 Test Method A	560
Geogrid Elongation, % (max.)	ASTM D6637	< 3
Melting Point of Paving Fabric Component, °F (min.)	ASTM D 276	320
Grid Size, inch (min/max)	Calipered	0.5/1.25

B) Packaging, Shipment, and Storage. Ensure that each roll is labeled with the manufacturer's name, product type, style number, lot number, roll number, manufactured date, roll dimensions, chemical composition, and applicable physical properties. Protect the geocomposite from direct sunlight, ultraviolet rays, flames, aggressive chemicals, mud, dirt, dust, and debris during all periods of shipment and storage. Keep geocomposite dry until installation, and do not store directly on the ground.

July 19, 2019

2.2 Asphalt Distributor. Conform to 406.02.05.

2.3 Rolling Equipment. Use pneumatic-tired rollers that weigh at least 12 tons and have 7 to 9 tires capable of inflation pressures up to 125 psi. Maintain an inflation pressure in all tires within $\pm$ 5 psi of the manufacturer's recommended pressure. Arrange the tires so that the gap between the tires of the front axle is covered by the tires of the rear axle. Mount wheels to provide equal contact pressure under each wheel. Use a tire tread that is satisfactory to the Engineer. Maintain tire size and inflation pressure such that the contact pressure is at least 80 psi.

3.0 CONSTRUCTION.

3.1 Geocomposite Representative. Ensure that a representative of the geocomposite manufacturer is on the project when work begins, and remains on call as the project progresses, to advise the Engineer.

3.2 Weather Restrictions. Do not place the geocomposite when weather conditions, in the opinion of the Engineer, are not suitable. Ensure the air and pavement temperatures are sufficient to allow the tack coat to hold the geocomposite in place. Specifically, ensure the temperature is at least 50 °F and rising.

3.3 Surface Preparation. Perform any needed base repairs and repair all potholes, cracks greater the 1/4 inch, and any badly damaged or rough pavement, which may require milling or placement of leveling, course. Ensure the surface is dry, clean, dust-free, and between 40 and 140 °F. Unless the geocomposite is precoated with an adhesive, apply tack according to the manufacturer's recommendations. This tack coat will not be measured for payment and will be considered incidental to the geocomposite. Distributor truck must be calibrated to supply the tack at the manufacturer's recommended rate before the job begins and this calibration is to be witnessed by the representative of the geocomposite manufacturer on the project. No work to install the geocomposite shall take place unless a representative from the geocomposite manufacture is on site.

3.4 Geocomposite Placement. Place the geocomposite while the tack coat is still tacky/broken. Keep the material flat and wrinkle free throughout the installation. Roll the geocomposite until the adhesive is activated or the geocomposite is seated in the tack coat. Clean the roller with an asphalt release agent. Brooming may be required. On sharp curves, cut the edges and fold the geocomposite over in the direction of the placement of the asphalt overlay. Overlap side joints by one to 2 inches. Overlap all end-of-roll joints by 3 to 6 inches. Ensure that the overlaps are shingled in the direction of paving.

3.5 Asphalt Placement. Place the asphalt overlay at a minimum 2-inch compacted thickness. Pave over the geocomposite on the same day of its placement. Except for paving equipment and vehicles, allow no traffic on the grid. Do not place tack coat on top of the interlayer grid.

3.6 Geocomposite Repair. Repair any visible distress that occurs due to movement of the geocomposite immediately after rolling. For small areas, remove the asphalt

July 19, 2019

mixture from the affected area; replace the geocomposite in its original position, and replace, level, and compact the asphalt mixture. Cut the geocomposite if necessary for it to lie flat.

3.7 Sampling and Testing. The Department will sample the geocomposite at the project site according to ASTM D 4354 and KM 64-113 at a frequency the Engineer determines. The Department will test the geocomposite for all properties possible given the testing equipment availability. When the Department determines that an individual sample fails to meet any specification requirement, the Department will reject that roll and sample two additional rolls from the same lot. When the Department determines that either of these two additional samples fails to comply with any part of the specification, the Department will reject the entire quantity of rolls represented by that sample.

4.0 MEASUREMENT. The Department will measure the quantity of geocomposite in square yards. The Department will not measure geocomposite when the contract indicates that the geocomposite are incidental to the work being performed or when no separate bid item for geocomposite is listed in the proposal. The Department will not measure providing the geocomposite manufacturer's representative for payment and will consider it incidental to the geocomposite. Tack coat, applied per the geocomposite manufacturer's recommendations, will not be paid and will be considered incidental to the geocomposite.

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

Code	Pay Item	Pay Unit
25010EC	Geocomposite Reinforcement for Asphalt	Square Yard

Special Note for Asphalt illing and exturing

US 150 Rehabilitation Project
Rockcastle County
Item No. 8-22370

Limit public running on the milled surface to 1 calendar days for each paving segment.

Removal of the existing pavement markers prior to the milling operation is considered incidental to the bid item sphalt Pavement illing and Texturing .

Pavement illings will be used to grade and form unpaved shoulders before chip and seal as directed by the engineer.

The Contractor shall deliver 00 tons of millings to the Rockcastle aintenance acility, 29 aintenance Road, ount ernon, 0 5 .

The Contractor will take possession and disposed of any additional millings.

Special Note for Ribbon Thermo Striping Application

US 150 Pavement Rehabilitation Project

Item No. 8-22370

Contrary to Section 714.02.05 of the Standard Specifications for Road and Bridge Construction, application of 6 in and 12 in white and yellow “long line” thermoplastic striping will be required to be by ribbon-extrusion gun at all locations that are to be applied over the milled rumble strips in lieu of an extrusion die application. Also, ribbon-extrusion gun application may be used for all other 6 inch and 12 inch white and yellow “long line” thermoplastic striping on the project in lieu of an extrusion die application.

SPECIAL PROVISION FOR WASTE AND BORROW SITES

Obtain U.S. Army Corps of Engineer's approval before utilizing a waste or borrow site that involves "Waters of the United States". The Corps of Engineers defines "Waters of the United States" as perennial or intermittent streams, ponds or wetlands. The Corps of Engineers also considers ephemeral streams, typically dry except during rainfall but having a defined drainage channel, to be jurisdictional waters. Direct questions concerning any potential impacts to "Waters of the United States" to the attention of the appropriate District Office for the Corps of Engineers for a determination prior to disturbance. Be responsible for any fees associated with obtaining approval for waste and borrow sites from the U.S. Army Corps of Engineer or other appropriate regulatory agencies.

1-296 Waste & Borrow Sites
01/02/2012

Rev 9/2021

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 ± 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 Driving Lanes 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.

Code	Pay Item	Pay Unit
24891EC	PAVE MOUNT INFRARED TEMP EQUIPMENT	SQFT

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	0 - 30	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. Provide the correct nozzles that is recommend by the producer to ensure proper coverage of tack is obtained. 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 on to the 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. Placement of non-tracking tack is not permitted from October 1st to May 15th. When applying material, ensure the roadway temperature is a minimum of 40˚F and rising. Prior to application, 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 the initial heating, 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 minimum rate of 0.70 pounds (0.08 gallons) per square yard. Ensure full coverage of the material on the pavement surface. Full coverage of this material is critical. Increase material application rate if needed to achieve full coverage. Schedule the work so that, at the end of the day's production, all non-tracking tack is covered with the asphalt mixture. If for some reason the non-tracking tack cannot be covered by an asphalt mixture, ensure the non-tracking tack material is clean and reapply the non-tracking tack prior to placing the asphalt mixture. Do not heat material more than twice in one day.

3.3 Non-tracking Tack Certification. Furnish the tack 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 non-tracking tack. 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. Non-tracking tack will not be permitted for use from October 1st to May 15th. During this timeframe, the department will allow the use of an approved asphalt emulsion in lieu of a non-tracking tack product but will not adjust the unit bid price of the material. 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 - 18 103 - 105	15 - 16 106 - 107	14 108 - 109	≤13 ≥ 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.	30 max.	≤ 31	32 - 33	34 - 35	36 - 37	≥ 38
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, º 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

Code	Pay Item	Pay Unit
24970EC	Asphalt Material for Tack Non-Tracking	Ton

Revised: May 23, 2022

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

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 an e-Ticketing Delivery Software for weighed asphalt material delivered to the project to report loads and provide daily running totals of weighed asphalt material for pay items and incidental work during the construction processes from the point of measurement and loading to the point of incorporation to the project.

2.0 MATERIALS AND EQUIPMENT. Contractor shall supply material data in JavaScript Object Notation (JSON) documents to the KYTC e-Ticketing Delivery Software (KYTC e-Ticketing Portal) via Application Programming Interface (API) or direct connection. Test and verify that ticket data can be shared from the original source no fewer than 30 days prior to material placement activities. An e-Ticketing Delivery Software supplier 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 material data delivery capabilities. Virtual meetings may be hosted in lieu of on-site meetings when deemed appropriate by the Engineer.

Provide e-Ticketing Delivery Software that will meet the following:

1. The e-Ticketing Delivery Software shall be fully integrated with the Contractor's Load Read-Out scale system at the material source location.

2. The e-Ticketing Delivery Software shall provide real-time delivery to KYTC e-Ticketing Portal.

3. Transmit any updates to the ticket data within 5 minutes of a change.

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 software in accordance with the manufacturer's specifications.

2. Verify that all pertinent information is provided by the software 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 the project.

1. Asphalt Material

a. **Real-time Continuous Data Items**

Provide the Engineer access to JSON documents capable of being transmitted through the KYTC's e-Ticketing Portal that displays the following information in real-time with a web-based system compatible with iOS and Windows environments.

- Each Truck
  - Supplier Name
  - Supplier Address
  - Supplier Phone
  - Plant location
  - Date
  - Time at source
  - Project Location

- Contract ID#
- Carrier Name
- Unique Truck ID
- Description of Material
- Mix Design Number
- Gross, Tare and Net Weight
- Weighmaster

4.0 MEASUREMENT. The Department will not measure the electronic delivery management system.

5.0 PAYMENT. The Department will not measure this work for payment and will consider all items contained in this note to be incidental to the asphalt mixtures on the project, as applicable.

May 5, 2025

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

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 an e-Ticketing Delivery Software for weighed aggregate material delivered to the project to report loads and provide daily running totals of weighed aggregate material for pay items and incidental work during the construction processes from the point of measurement and loading to the point of incorporation to the project.

2.0 MATERIALS AND EQUIPMENT. Contractor shall supply material data in JavaScript Object Notation (JSON) documents to the KYTC e-Ticketing Delivery Software (KYTC e-Ticketing Portal) via Application Programming Interface (API) or direct connection. Test and verify that ticket data can be shared from the original source no fewer than 30 days prior to material placement activities. An e-Ticketing Delivery Software supplier 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 material data delivery capabilities. Virtual meetings may be hosted in lieu of on-site meetings when deemed appropriate by the Engineer.

Provide e-Ticketing Delivery Software that will meet the following:

1. The e-Ticketing Delivery Software shall be fully integrated with the Contractor's Load Read-Out scale system at the material source location.

2. The e-Ticketing Delivery Software shall provide real-time delivery to KYTC e-Ticketing Portal.

3. Transmit any updates to the ticket data within 5 minutes of a change.

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 software in accordance with the manufacturer's specifications.

2. Verify that all pertinent information is provided by the software 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 the project.

1. Aggregate Material

a. **Real-time Continuous Data Items**

Provide the Engineer access to JSON documents capable of being transmitted through the KYTC's e-Ticketing Portal that displays the following information in real-time with a web-based system compatible with iOS and Windows environments.

- Each Truck
  - Supplier Name
  - Supplier Address
  - Supplier Phone
  - Plant location
  - Date
  - Time at source
  - Project Location

- Contract ID#
- Carrier Name
- Unique Truck ID
- Description of Material
- Load Number
- Gross, Tare and Net Weight
- Weighmaster

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

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. Payment will be full compensation for costs related to providing the e-Ticketing Delivery Software, including integration with plant load-out systems, and report viewing/exporting process. All quality control procedures including the software representative's technical support and on-site training shall be included in the Contract lump sum price.

Code	Pay Item	Pay Unit
26248EC	ELECTRONIC DELIVERY MGMT SYSTEM-AGG	LS

May 5, 2025

SPECIAL NOTE FOR RECYCLED ASPHALT PAVEMENT (RAP) STOCKPILE MANAGEMENT

I. GENERAL

The use of reclaimed asphalt pavement (RAP) from Department projects or other approved sources in hot mix asphalt (HMA) or warm mix asphalt (WMA) shall be subject to stockpile management and handling of material as described in this section.

The Department approves RAP on a stockpile basis, following the process set forth in this method. The contractor's responsibilities in the process are as follows:

- To obtain the Department's approval of all RAP prior to its use on a Department project and to deliver test data and samples as required
- To monitor and preserve the quality and uniformity of the approved material during storage and handling, adding no unapproved material to the existing stockpile
- To comply with the Department's requirements regarding replenishment of approved stockpiles

The Department will approve RAP based on its composition and variability in gradation and asphalt content, and on visual inspections of the stockpile, which the Department may conduct at its discretion. The Department may withdraw approval of a stockpile if the requirements of this specification are not followed in good faith.

The Maximum Percentage Allowed in a mix design will be based on these criteria and on the category of RAP source, as defined in this document.

II. APPROVAL PROCESS

Qualified asphalt producers (listed in List of Approved Materials-Asphalt Mixing Plants) may submit requests for RAP stockpile approval to the Asphalt Branch, Division of Materials, in the Annual Certification for Previously Approved Asphalt Mixing Plants and Related Equipment. The requester shall provide test results as prescribed in Part IID. The Division of Materials may, at their discretion, collect samples or inspect a RAP stockpile consistent with Section IIE.

Upon completion of the review of testing results and, if applicable, visual inspection, the Division of Materials, Asphalt Branch will approve or disapprove the material by letter and will assign a Stockpile Identification Number for each approved RAP stockpile. Note: The contractor's average gradation and asphalt content, as listed in the approval letter, shall be the gradation used in subsequent mix designs. The approval letter will state the applicable limits on the use of the material in mix designs and will summarize the Department's findings, listing the average gradation and asphalt content from the contractor's tests and the corresponding values found by the Department. Where the Maximum Percentage Allowed is low due to variability, the contractor may elect to improve the uniformity of the material by further processing and may again sample, test, and request approval for the material.

No material shall be added to a stockpile after it has been approved, except as provided in Parts V, VI, and VII below.

IIA. RAP Quality Management Plan

For a contractor to receive approval to use RAP on any department project, a RAP Quality Management Plan must first be approved by the department. The RAP Quality Management Plan shall be submitted to the

Division of Materials annually for approval as part of the Contractor's Quality Control Plan/Checklist. The Quality Management Plan is required to demonstrate how the Contractor will provide consistency and quality of material utilized in all asphalt mixes produced for use on Department projects. The Quality Management Plan shall include:

- Unprocessed RAP Stockpiles
  - Designation of stockpile(s) as single or multiple source
  - Designation of stockpile(s) as classified or unclassified
  - Designation of stockpile(s) as captive or continuously replenishing
  - Plan for how stockpile(s) is built (layers, slope, etc.)
  - Plan to minimize stockpile(s) contamination
- Processing and Crushing
  - Equipment used to feed screener or crusher
  - Excavation process based on equipment type
- Processing Millings
  - Single Project or Source
    - Screening, Fractionation, or Crushing plan
  - Multiple Source
    - Process to achieve uniform material from stockpile
    - Screening, Fractionation, or Crushing plan
- Processed RAP Stockpiles
  - Minimization of segregation
  - Minimization of moisture

IIB. RAP Stockpile Placement

All processed RAP stockpiles shall be placed on a sloped, paved surface. The requirement for a paved surface may be waived by the Cabinet if the Contractor's RAP Quality Management Plan demonstrates effective material handling that will minimize deleterious material from beneath the processed stockpile entering the plant. *No processed stockpile will be placed directly on grass or dirt.*

IIC. Stockpile Identification Signs

RAP stockpiles shall be identified with posted signs displaying the gradation of material in the stockpile (course, intermediate, or fine). These signs shall be made of weatherproof material and shall be highly visible. Numerals shall be easily readable from outside the stockpile area. If a stockpile exists in two or more parts, each part must have its own sign.

IID. Standard Approval Procedure

The Contractor shall obtain random samples representative of the entire stockpile and shall have each sample tested for gradation and asphalt content according to KM 64-426, KM 64-427, and AASHTO T308. The material samples must be in its final condition after all crushing and screening. At least one sample shall be obtained for each 1,000 tons of processed RAP, with a minimum of five samples per stockpile. Sampling shall be performed according to the method prescribed for asphalt mix aggregates in the Department's Materials Field Testing and Sampling Manual and KM 64-601. The minimum sampling size (after quartering) for tests of RAP samples is 1,500 g. except for samples containing particles more than one inch in diameter, for which the minimum is 2,000 g.

To request approval of a RAP stockpile, submit the following documents to the Division of Materials. It is the requester's responsibility to correctly address, label, and deliver these submittals:

• Submit request for approval at beginning of the paving season as part of the Annual Certification for Previously Approved Asphalt Mixing Plants and Related Equipment.

• If requesting approval after paving season begins, submit memo, including stockpile portion of the inspection list for Annual Certification for Previously Approved Asphalt Mixing Plants and Related Equipment, to Division of Materials.

• Reports of the tests prescribed above using the Stockpile <INSERT NAME> document.

• A drawing of the plant site showing the location of the stockpile to be approved *and all other stockpiles on the premises*

Mail, deliver or email the request form, with test reports and site drawing, to:

Kentucky Transportation Cabinet
Division of Materials
ATTN: Asphalt Branch Manager
1227 Wilkinson Boulevard
Frankfort, Kentucky 40601

Robert.Semones@ky.gov

IIE. Tests and inspections by the Department

The Department shall have the right to observe the collection of samples, or to perform the sampling and testing as a verification of contractor submittal. As a condition of approval, the Department may at any time inspect and sample RAP stockpiles for which approval has been requested and may perform additional quality control tests to determine the consistency and quality of the material.

The approval letter issued by the Department will include any results of verification testing performed by the Cabinet. The approved contractor results should be used by mix design technicians in the design calculations.

III. RAP STOCKPILE TIERED MANAGEMENT AND EFFECTIVE BINDER CONTENT

The stockpile management and approval requirements will be tiered based on the maximum cold feed percentages as defined in this section and Table 1. below.

Table 1. Tiered Testing Requirements

Mix Type	0-≤12%	12-≤20%	20-≤35%
Surface	Tier 1	Tier 2	Tier 3
Base	Tier 1	Tier 2	Tier 3

NOTE: All asphalt mixes and binder selection will be subject to Section 409 of the current Standard Specifications.

The following requirements will apply based on the percentage of RAP in the mix.

Tier 1

Tier 1 mixes (less than or equal to 12% RAP) will be subject to the requirements of sections IIA, IIB, and IIC.

Tier 2

Tier 2 mixes (12% to less than 20% RAP) will be subject to the requirements of Section II in its entirety and Table 2 requirements.

Tier 3

Tier 3 Asphalt Base mixes with 20% to less than 35% RAP, Tier 3 Asphalt Surface mixes with 20% to less than 30% RAP will be subject to Section II in its entirety and Table 2 requirements.

IV. MAXIMUM PERCENTAGE OF RAP ALLOWED

The Maximum Percent of RAP allowed in mix designs shall be the lowest percentage determined by the gradation and asphalt content of the RAP, as established under the criteria below, and requirements listed in Section III.

Limits according to range in gradation and bitumen content

The Maximum Percent of RAP Allowed, based on gradation and asphalt content, shall be determined by the Department using the standard deviation of these values. This standard deviation will be calculated using data provided by the contractor from at least five samples. While the contractor is required to provide the data from these tested samples, the Department retains the discretion to perform its own sampling and testing to support or verify its findings. An apparent outlier shall not be considered in determining these ranges. Where one result appears to be unrepresentative of the whole, two or more additional samples shall be tested. The outlying value of all tests shall then be excluded from the range. The maximum percentage of RAP allowable shall be the lowest percentage determined according to Table 2 below.

Table 2. Maximum Percent RAP According to Variability in Test Results

	Standard Deviation as calculated above:		
Surface			
% asphalt content	< 0.4	< 0.5	
% passing No. 200 sieve	< 1.25	< 1.5	
% passing Median Sieve	< 4.0	< 5.0	
	Allowable RAP Cold Feed %		
	Tier 3 - 20%-30%	Tier 2 - 12%-20%	Tier 1 - 0%-12%
Base			
% asphalt content	< 0.5	< 0.75	
% passing No. 200 sieve	< 1.5	< 2.25	
% passing Median sieve	< 5.0	< 7.0	
	Allowable RAP Cold Feed %		
	Tier 3 - 20%-35%	Tier 2 - 12%-20%	Tier 1 - 0%-12%

NOTE: These allowances notwithstanding, the Contractor is required to maintain the mixture within the Mixture Control Tolerances of Kentucky Method 443.
The percentage allowable in mix designs shall be limited to meet the design criteria for viscosity established in the Standard Specifications.

V. GENERAL STOCKPILE REQUIREMENTS AND REPLENISHMENT

V.A. Single Pavement Source

Early approval of material from a single pavement source. When a new stockpile is to consist entirely of millings removed from a single existing pavement, the stockpile may be approved based on samples taken during the milling and processing operations, prior to completion of milling. The initial stockpile may be approved as either a new stockpile or a new stockpile in continual replenishment status.

For continual replenishment status, samples shall be taken from the processed stockpile after it reaches 1,000 tons. A total of five initial samples, plus one additional sample for every 1,000 tons, is required. As prescribed in Part II above, the contractor shall test all samples and deliver the test results, together with a letter request for approval in Continual Replenishment status, to the address indicated. The stockpile shall be subject to initial approval as prescribed above in Part II. Once approved, it may be replenished without further approvals as provided in Part VII below.

V.B. Heterogeneous or contaminated material

Asphalt pavement millings containing traffic detection loops, raised pavement markers, or other debris must be separated and excluded before stockpiling RAP for approval for use in KYTC asphaltic concrete mixtures.

No material other than RAP from an approved stockpile shall be included in mixtures for State projects. The following materials are specifically excluded:

• Material contaminated with foreign matter such as liquids, soil, concrete, or debris

• Plant waste, especially waste containing abnormal concentrations of bitumen, drum build-up, or material from spills or plant clean-up operations

The following materials shall not be added to or placed in proximity to an approved stockpile but may be accumulated in a separate stockpile and submitted for approval according to Part III:

- Production mixtures returned to the plant for any reason.
- Mis-proportioned mixtures, especially those generated at start-up.

VI. REPLENISHMENT OF STOCKPILES

An approved RAP stockpile may be replenished with Department approval, provided the replenishment material meets all necessary requirements for approval and maintains uniformity in gradation and asphalt content as outlined in this document.

VI.A. Procedure and approval criteria

The procedure for requesting approval of a stockpile replenishment, that is not in continual replenishment status, shall be the same as for approval of an original stockpile, and the material for the replenishment shall meet all criteria for approval as a new stockpile. RAP proposed for replenishment shall be sampled and tested by the Contractor for gradation and asphalt cement as prescribed in Section II above. The Laboratory shall

review these results and provide approval for use in Department asphalt mix designs, according to Table 2 above.

VI.B. Effect of replenishment on existing approved mix designs

Replenishment of a stockpile may render certain mix designs invalid, depending on the percent RAP allowed in the design and on the difference in average properties between the old and new stockpiles. A replenished stockpile may be used as the RAP ingredient in an existing approved design provided that:

1. The Maximum Percent Allowed for the replenishment stockpile equals or exceeds the percent RAP called for in the mix design. In no case may the Maximum Percent Allowed be exceeded.

However, if a mix design calls for up to 5.0 percent more than the Maximum Percent Allowed for the replenishment, the *design* may be adjusted, with approval, to use the lower percent allowed, provided that the production mixture continues to meet all acceptance criteria. For example, a design which calls for 20 percent RAP may be adjusted and produced with 15 percent if it continues to meet for acceptance.

VII. CONTINUAL REPLENISHMENT WITHOUT RE-APPROVAL

At the request of the contractor, a previously approved stockpile may be placed in Continual Replenishment Status and may be replenished any number of times without re-approval provided that:

1. Replenishment is within six months of the last stockpile addition.
2. The contractor shall continue to monitor and test the materials added to the stockpile and shall forward these results to the Division of Materials for every 1,000 tons of RAP added to the stockpile.
3. The contractor must certify that replenishment materials are free of contaminants.
4. The Department shall be notified by letter to the Director of the Division of Materials that the stockpile is being replenished on a continual basis.
5. The RAP Maximum Percent Allowed for continual replenishment shall be limited by Sections III and IV.

Note: Upon request, one 20-pound sample bag of RAP for each Continual Replenishment Stockpile shall be submitted to the Division of Materials for petrographic analysis every 12 months.

The Department may inspect, sample, and test such stockpiles at its discretion and may, upon determining that the stockpile is unsuitable, withdraw approval of the material and all mix designs which include it. Approval of the stockpile may be withdrawn at any time based upon extreme or erratic ingredient proportions, unsuitable ingredients, or poor performance, as determined by the Division of Materials, Asphalt Branch. The Department will conduct periodic comparison testing on the opposite quarters of samples submitted by the Contractor for special replenishment approval category. The approval of the stockpile may be withdrawn if

erroneous information was found on the contractor's testing and/or improper sampling procedures were involved after a thorough investigation.

VIII. DEPLETION OF STOCKPILE AND EXPIRATION OF APPROVAL

When a stockpile has been fully depleted, the Contractor may replenish it within 24 months after the date of depletion; a depleted stockpile not replenished after 24 months will be removed from the approved list and may not be replenished.

Approval of a stockpile may be withdrawn if, in the finding of the Division of Materials, Asphalt Branch, the total amount of material used in new mixtures equals the total tonnage of the original stockpile plus all approved replenishments. Six years from the original approval of a stockpile or from its most recent replenishment, a stockpile shall be presumed to be depleted, and its approval shall expire. This shall apply to all stockpiles, regardless of status or history of use.

IX. RECORDS

The Contractor shall maintain records at the plant site on all RAP stockpiles. These records shall be available for inspection by representatives of the Department and shall include the following:

- All test results.
- The Department's approval letter for each stockpile and replenishment, together with the Contractor's requests for approval and all data submitted therewith.
- A current drawing of all stockpile locations at the plant site, including unapproved stockpiles, showing stockpile numbers of all stockpiles approved for State work.

X. RELOCATION OF STOCKPILE

If material from an approved RAP stockpile is to be moved to another location, the contractor shall seek approval from the Department prior to its further use on State projects. A letter request shall be submitted to the Division of Materials indicating the current stockpile location, the total quantity of material to be moved, and the amount, if any, to remain in the current location. The Division of Materials will issue an approval letter applicable to the new location.

June 18, 2025

SPECIAL NOTE FOR DOUBLE ASPHALT SEAL COAT

Use RS-2 or RS-2C asphalt material that is compatible with the seal aggregate. Apply the first course of asphalt seal coat at the rate of 3.2 lbs/sy of asphalt and 30 lbs/sy of size #78 seal coat aggregate. Apply the second course at 2.8 lbs/sy of asphaltt and 20 lbs/sy of size #9M seal coat aggregate. The Engineer may adjust the rate of application as conditions warrant. Use caution in applying liquid asphalt material to avoid over spray getting on curbs, gutter, barrier walls, bridges, guardrail, and other roadway appurtenances.

The Department will not measure any surface preparation required prior to applying the asphalt seal coat, but shall be incidental to “Asphalt Material for Asphalt Seal Coat”.

1-3215 Double Asphalt Seal Coat
01/02/2012

TEAM KENTUCKY TRANSPORTATION CABINET

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

☒ **Original** ☐ **Re-Certification** — **RIGHT OF WAY CERTIFICATION**

ITEM #	COUNTY	PROJECT # (STATE)	PROJECT # (FEDERAL)
08-22370	Rockcastle	FD52 102 0150 008-011	STP 1501 (134)

PROJECT DESCRIPTION

Pavement Rehab mill and fill on US 150 from MP 008-011

☒ **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	0	EXCEPTION (S) Parcel #	ANTICIPATED DATE OF POSSESSION WITH EXPLANATION
Number of Parcels That Have Been Acquired			
Signed Deed			
Condemnation			
Signed ROE			

Notes/ Comments (Text is limited. Use additional sheet if necessary.)

LPA RW Project Manager		Right of Way Supervisor	
Printed Name		Printed Name	Joe Gossage
Signature		Signature	Joseph Gossage
Date		Date	6/25/25

Right of Way Director		FHWA	
Printed Name		Printed Name	
Signature	2025.06.25 13:12:29 -04'00'	Signature	
Date		Date	

UTILITIES AND RAIL CERTIFICATION NOTE

Rockcastle County
STP 1501(134)
FD52 102 0150 008-011
Mile point: 8.403 TO 10.205
ADDRESS CONDITION OF US-150 FROM MILEPOINT 8.403 TO MILEPOINT 10.205 (2024CCR)
ITEM NUMBER: 08-22370.00

PROJECT NOTES ON UTILITIES

For all projects under 2000 Linear feet which require a normal excavation locate request pursuant to KRS 367.4901-4917, the awarded contractor shall field mark the proposed excavation or construction boundaries of the project (also called white lining) using the procedure set forth in KRS 367.4909(9)(k). For all projects over 2000 linear feet, which are defined as a "Large Project" in KRS 367.4903(18), the awarded contractor shall initially mark the first 2000 linear feet minimally of proposed excavation or construction boundaries of the project to be worked using the procedure set forth in KRS 367.4909(9)(k). This temporary field locating of the project excavation boundary shall take place prior to submitting an excavation location request to the underground utility protection Kentucky Contact Center. For large projects, the awarded contractor shall work with the impacted utilities to determine when additional white lining of the remainder of the project site will take place. This provision shall not alter or relieve the awarded contractor from complying with requirements of KRS 367.4905 to 367.4917 in their entirety.

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

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

UTILITIES AND RAIL CERTIFICATION NOTE

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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.

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.

Utility coordination efforts 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.

UTILITIES AND RAIL CERTIFICATION NOTE

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NOTE: DO NOT DISTURB THE FOLLOWING FACILITIES LOCATED WITHIN THE PROJECT DISTURB LIMITS

Spectrum Mid-America LLC – Communication

City of Mt. Vernon – Water

Jackson Energy – Electric

Kentucky Utilities – Electric

Rockcastle County Board of Education – Communication

Windstream Holdings – Communication

Western Rockcastle Water Association – Water

The Contractor is fully responsible for protection of all utilities listed above

THE FOLLOWING FACILITY OWNERS ARE RELOCATING/ADJUSTING THEIR FACILITIES WITHIN THE PROJECT LIMITS AND WILL BE COMPLETE PRIOR TO CONSTRUCTION

UTILITIES AND RAIL CERTIFICATION NOTE

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Not Applicable

THE FOLLOWING FACILITY OWNERS HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE OWNER OR THEIR SUBCONTRACTOR AND IS TO BE COORDINATED WITH THE ROAD CONTRACT

Not Applicable

THE FOLLOWING FACILITY OWNERS HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE ROAD CONTRACTOR AS INCLUDED IN THIS CONTRACT

Not Applicable

UTILITIES AND RAIL CERTIFICATION NOTE

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RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

☒ **No Rail Involvement** ☐ **Rail Involved** ☐ **Rail Adjacent**

AREA FACILITY OWNER CONTACT LIST

Facility Owner	Address	Contact Name	Phone	Email
City of Mt. Vernon - Water	PO Box 1465 Mt. Vernon KY 40456	Frank Baker	6062563437	Mtvernonh20@yahoo.com
Jackson Energy Cooperative - Electric	115 Jackson Energy Lane McKee KY 40447	Seth Jones	6068722333	sethjones@jacksonenergy.com
Kentucky Utilities – Electric	820 W. Broadway	Caroline Justice	5026273708	Caroline.Justice@lge-ku.com

UTILITIES AND RAIL CERTIFICATION NOTE

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	Louisville KY 40202			
Rockcastle County Board of Education – Communication	245 Richmond Street Mt. Vernon KY 40456	Trent Clark	6062562125	Trent.clark@rockcastle.kyschools.us
Windstream Holdings II, LLC - Communications	130 West New Circle Road Lexington KY 40505	Mark Ware	6063296195	Mark.ware@windstream.com
Western Rockcastle Water Association – Water	371 Duster Way Mt. Vernon KY 40456	Paula DeBorde	6062568283	pdeborde@windstream.net
Spectrum Mid-America LLC - Communication	5026 South Highway 27 Somerset KY 42501	Casey Short	8596264817	casey.short@charter.com

Form Revised 6/24/16

UTILITIES AND RAIL CERTIFICATION NOTE

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Form Revised 6/24/16

GUARDRAIL DELIVERY VERIFICATION SHEET

Contract Id: _____ **Contractor: _____**

Section Engineer: _____ **District & County: _____**

DESCRIPTION	UNIT	QTY LEAVING PROJECT	QTY RECEIVED@BB YARD
GUARDRAIL (Includes End treatments & crash cushions)	LF	_____	_____
STEEL POSTS	EACH	_____	_____
STEEL BLOCKS	EACH	_____	_____
WOOD OFFSET BLOCKS	EACH	_____	_____
BACK UP PLATES	EACH	_____	_____
CRASH CUSHION	EACH	_____	_____
NUTS, BOLTS, WASHERS	BAG/BCKT	_____	_____
DAMAGED RAIL TO MAINT. FACILITY	LF	_____	_____
DAMAGED POSTS TO MAINT. FACILITY	EACH	_____	_____

****Required Signatures before Leaving Project Site***

Printed Section Engineer's Representative_____ & Date_____

Signature Section Engineer's Representative_____& Date_____

Printed Contractor's Representative_____& Date_____

Signature Contractor's Representative_____& Date_____

****Required Signatures after Arrival at Bailey Bridge Yard (All material on truck must be counted & the quantity received column completed before signatures)***

Printed Bailey Bridge Yard Representative_____ & Date_____

Signature Bailey Bridge Yard Representative_____& Date_____

Printed Contractor's Representative_____& Date_____

Signature Contractor's Representative_____& Date_____

**Payment for the bid item remove guardrail will be based upon the quantities shown in the Bailey Bridge Yard received column. Payment will not be made for guardrail removal until the guardrail verification sheets are electronically submitted to the Section Engineer by the Bailey Bridge Yard Representative.

Completed Form Submitted to Section Engineer Date: _____ By: _____

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

1I

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.

1I

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

Code	Pay Item	Pay Unit
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).

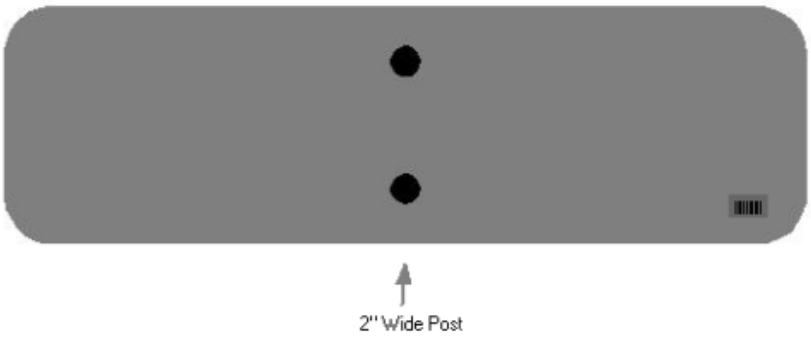
The installation of the permanent sign will be measured in accordance to Section 715.

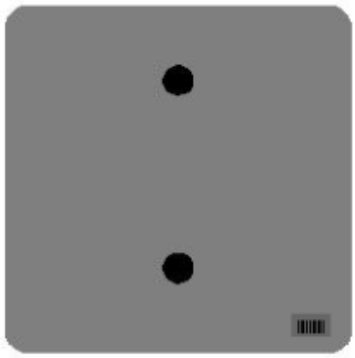
5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
24631EC	Barcode Sign Inventory	Each

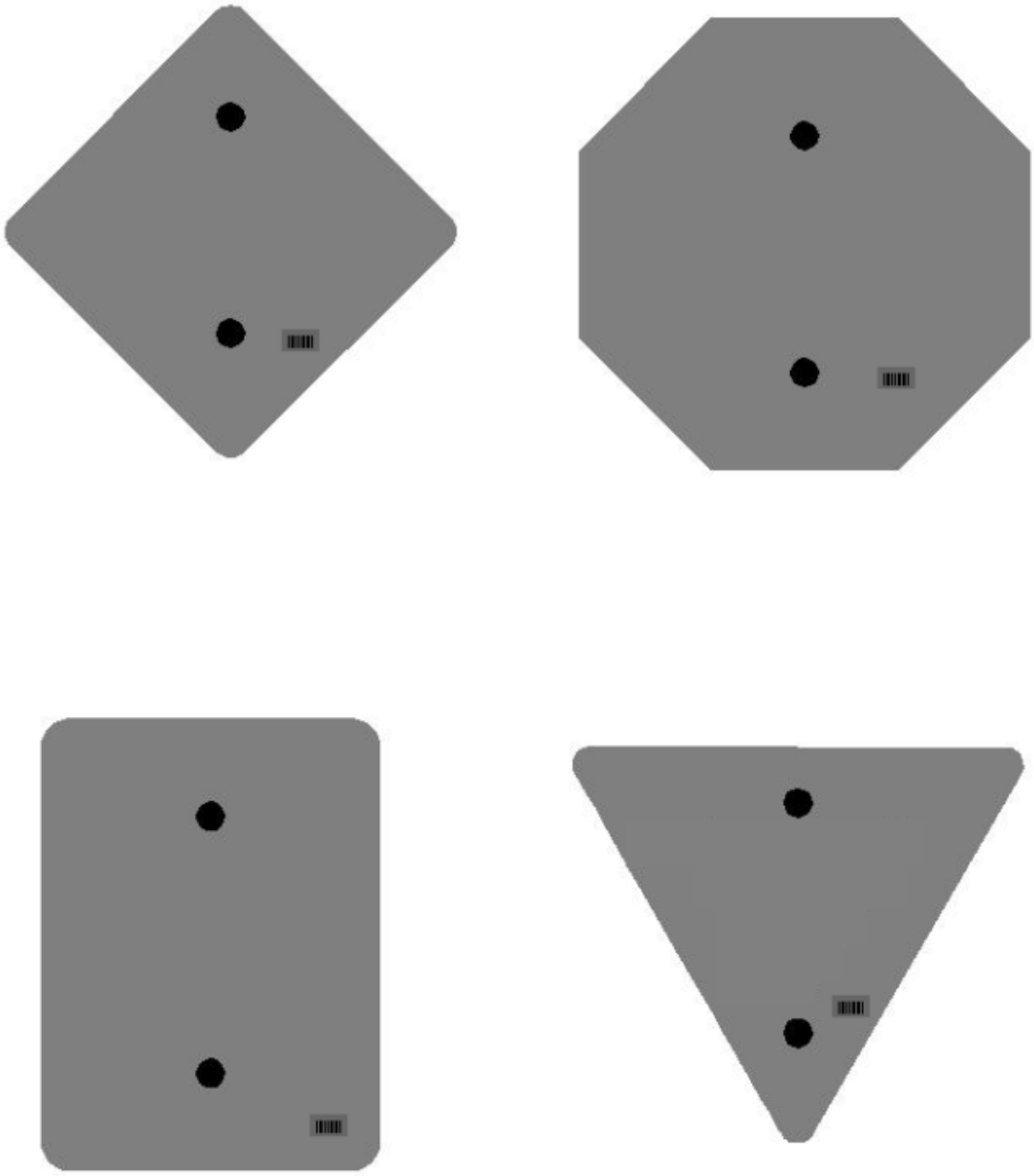
The Department will not make payment for this item until all barcodes are installed and sign inventory is complete on every permanent sign installed on the project. The Department will make payment for installation of the permanent sign in accordance to Section 715. The Department will consider payment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

One Sign Post

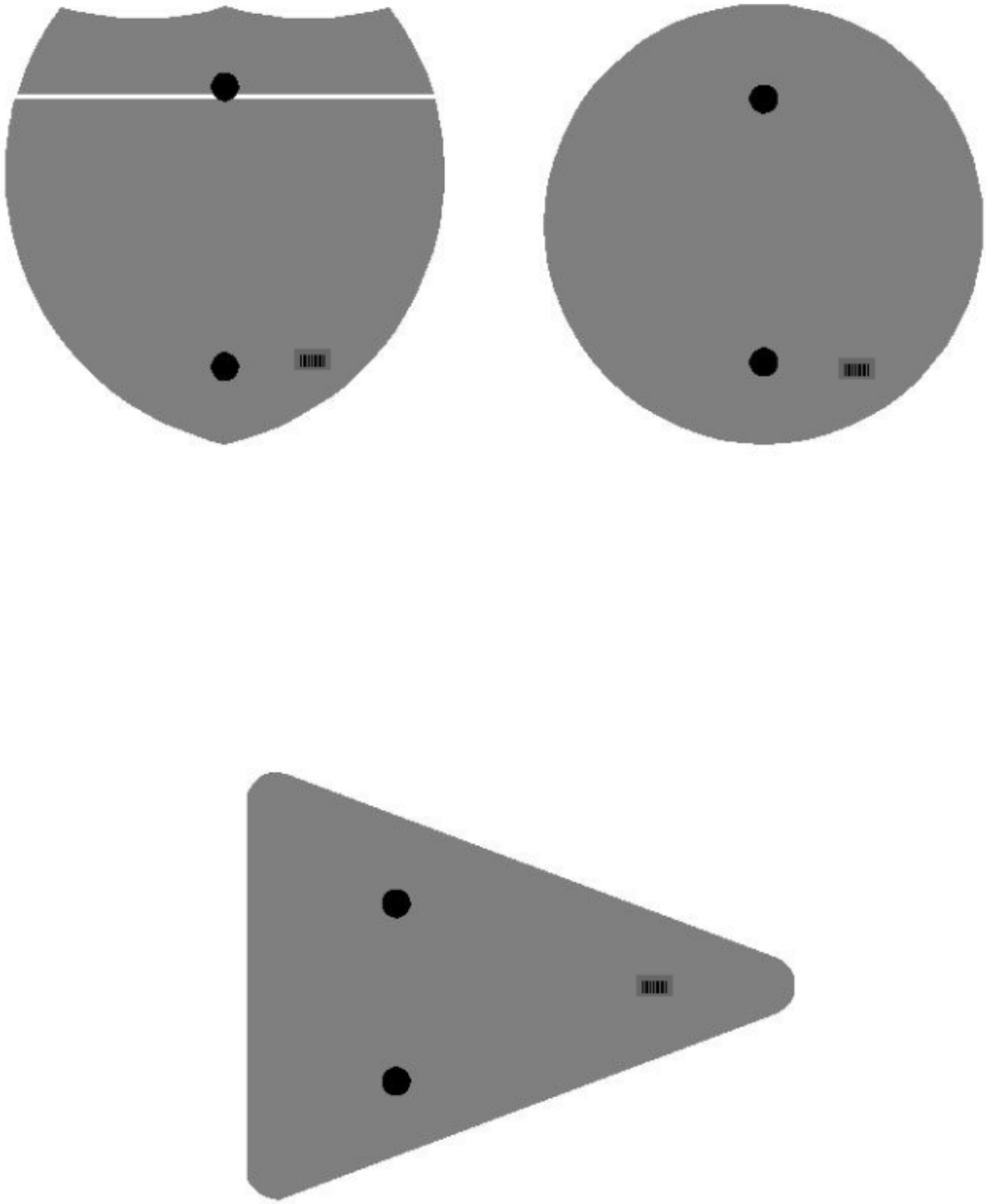




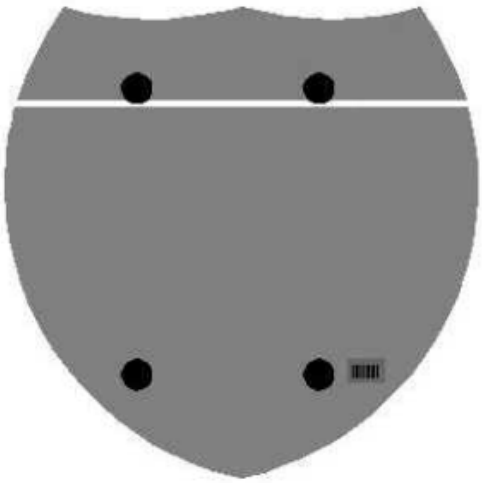
One Sign Post



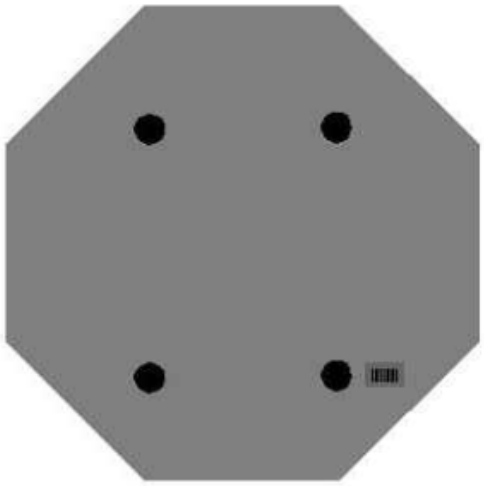
One Sign Post



Double Sign Post

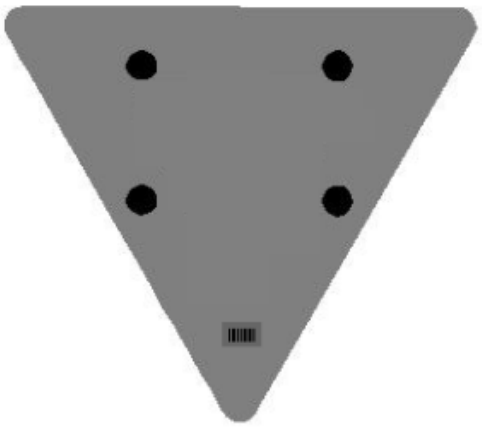


Interstate
Shield



48" Stop

2 Post Signs



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SPECIAL NOTE FOR LONGITUDINAL PAVEMENT JOINT ADHESIVE

1. DESCRIPTION. This specification covers the requirements and practices for applying an asphalt adhesive material to the longitudinal joint of the surface course of an asphalt pavement. Apply the adhesive to the face of longitudinal joint between driving lanes for the first lane paved. Then, place and compact the adjacent lane against the treated face to produce a strong, durable, waterproof longitudinal joint.

2. MATERIALS, EQUIPMENT, AND PERSONNEL.

2.1 Joint Adhesive. Provide material conforming to Subsection 2.1.1.

2.1.1 Provide an adhesive conforming to the following requirements:

Property	Specification	Test Procedure
Viscosity, 400 ° F (Pa·s)	4.0 – 10.0	ASTM D 4402
Cone Penetration, 77 ° F	60 – 100	ASTM D 5329
Flow, 140 ° F (mm)	5.0 max.	ASTM D 5329
Resilience, 77 ° F (%)	30 min.	ASTM D 5329
Ductility, 77 ° F (cm)	30.0 min.	ASTM D 113
Ductility, 39 ° F (cm)	30.0 min.	ASTM D 113
Tensile Adhesion, 77 ° F (%)	500 min.	ASTM D 5329, Type II
Softening Point, ° F	171 min.	AASHTO T 53
Asphalt Compatibility	Pass	ASTM D 5329

Ensure the temperature of the pavement joint adhesive is between 380 and 410 °F when the material is extruded in a 0.125-inch-thick band over the entire face of the longitudinal joint.

2.2. Equipment.

2.2.1 Melter Kettle. Provide an oil-jacketed, double-boiler, melter kettle equipped with any needed agitation and recirculating systems.

2.2.2 Applicator System. Provide a pressure-feed-wand applicator system with an applicator shoe attached.

2.3 Personnel. Ensure a technical representative from the manufacturer of the pavement joint adhesive is present during the initial construction activities and available upon the request of the Engineer.

3. CONSTRUCTION.

3.1 Surface Preparation. Prior to the application of the pavement joint adhesive, ensure the face of the longitudinal joint is thoroughly dry and free from dust or any other debris that would inhibit adhesion. Clean the joint face by the use of compressed air.

Ensure this preparation process occurs shortly before application to prevent the return of debris on the joint face.

3.2 Pavement Joint Adhesive Application. Ensure the ambient temperature is a minimum of 40 ^{o} F during the application of the pavement joint adhesive. Prior to applying the adhesive, demonstrate competence in applying the adhesive according to this note to the satisfaction of the Engineer. Heat the adhesive in the melter kettle to the specified temperature range. Pump the adhesive from the melter kettle through the wand onto the vertical face of the cold joint. Apply the adhesive in a continuous band over the entire face of the longitudinal joint. Do not use excessive material in either thickness or location. Ensure the edge of the extruded adhesive material is flush with the surface of the pavement. Then, place and compact the adjacent lane against the joint face. Remove any excessive material extruded from the joint after compaction (a small line of material may remain).

3.3 Pavement Joint Adhesive Certification. Furnish the joint adhesive's 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 random sample of pavement joint adhesive from each manufacturer's lot of material. Extrude two 5 lb. samples of the heated material and forward the sample to the Division of Materials for testing. Reynolds oven bags, turkey size, placed inside small cardboard boxes or cement cylinder molds have been found suitable. Ensure the product temperature is 400°F or below at the time of sampling.

4. MEASUREMENT. The Department will measure the quantity of Pavement Joint Adhesive in linear feet. 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 Pavement Joint Adhesive, the cleaning of the joint face, or furnishing and placing the adhesive. The Department will consider all such items incidental to the Pavement Joint Adhesive.

5. PAYMENT. The Department will pay for the Pavement Joint Adhesive 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.

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Pavement Joint Adhesive Price Adjustment Schedule						
Test	Specification	100% Pay	90% Pay	80% Pay	50% Pay	0% Pay
Joint Adhesive Referenced in Subsection 2.1.1						
Viscosity, 400 ° F (Pa•s)			3.0-3.4	2.5-2.9	2.0-2.4	≤1.9
ASTM D 3236	4.0-10.0	3.5-10.5	10.6-11.0	11.1-11.5	11.6-12.0	≥ 12.1
Cone Penetration, 77 ° F			54-56	51-53	48-50	≤ 47
ASTM D 5329	60-100	57-103	104-106	107-109	110-112	≥ 113
Flow, 140 ° F (mm) ASTM D 5329	≤ 5.0	≤ 5.5	5.6-6.0	6.1-6.5	6.6-7.0	≥ 7.1
Resilience, 77 ° F (%) ASTM D 5329	≥ 30	≥ 28	26-27	24-25	22-23	≤ 21
Tensile Adhesion, 77 ° F (%) ASTM D 5329	≥ 500	≥ 490	480-489	470-479	460-469	≤ 459
Softening Point, ° F AASHTO T 53	≥ 171	≥ 169	166-168	163-165	160-162	≤ 159
Ductility, 77 ° F (cm) ASTM D 113	≥ 30.0	≥ 29.0	28.0-28.9	27.0-27.9	26.0-26.9	≤ 25.9
Ductility, 39 ° F (cm) ASTM D 113	≥ 30.0	≥ 29.0	28.0-28.9	27.0-27.9	26.0-26.9	≤ 25.9

Code	Pay Item	Pay Unit
20071EC	Joint Adhesive	Linear Foot

May 7, 2014