

22-SEP-2020 10:28
 S:\Shared\Division One Resurfacing & Retreatment Plans\2020-2021\Resurfacing\DA00472-Bertie North NC 305 & Secondary_Hertford NC II & Secondary\Design Files\DA00472_Dladd.sht
 \$\$\$USERNAME\$\$\$

CONTRACT: DA00472 **WBS NO.: 2021CPT.01.01.10081.1, ETC.**

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

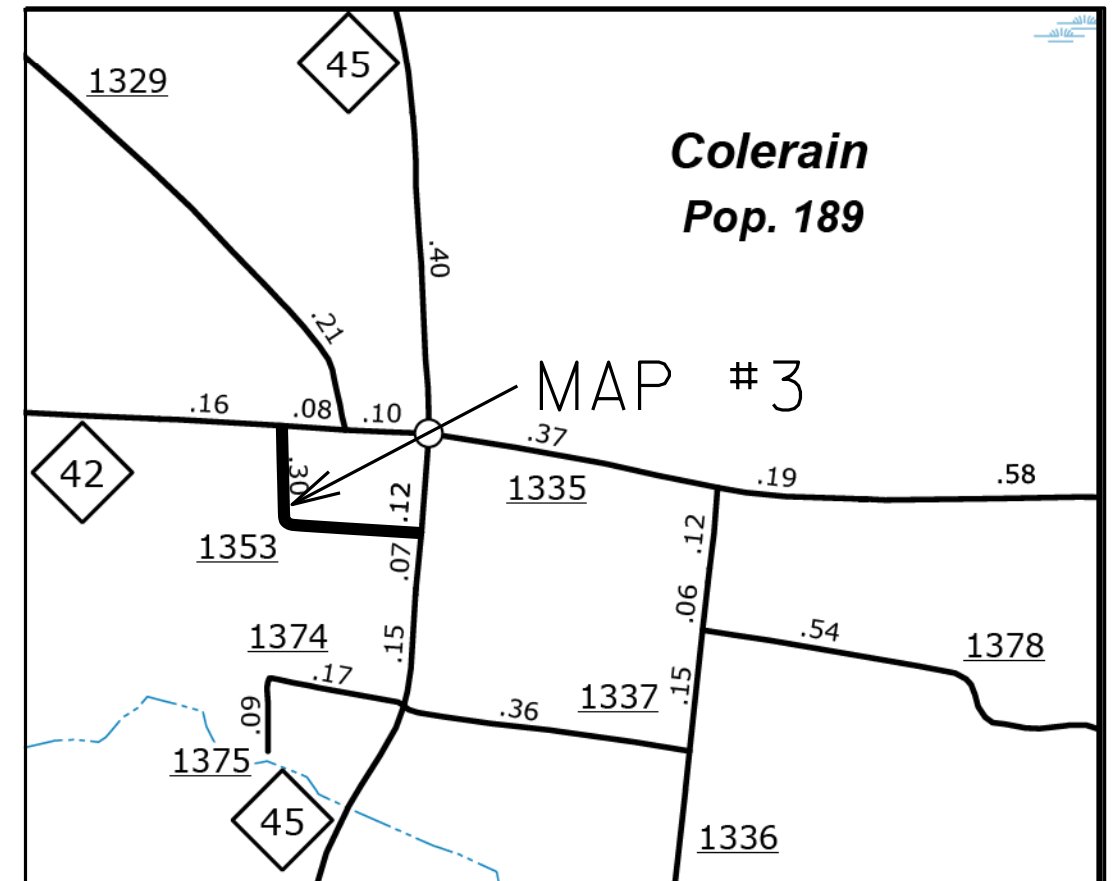
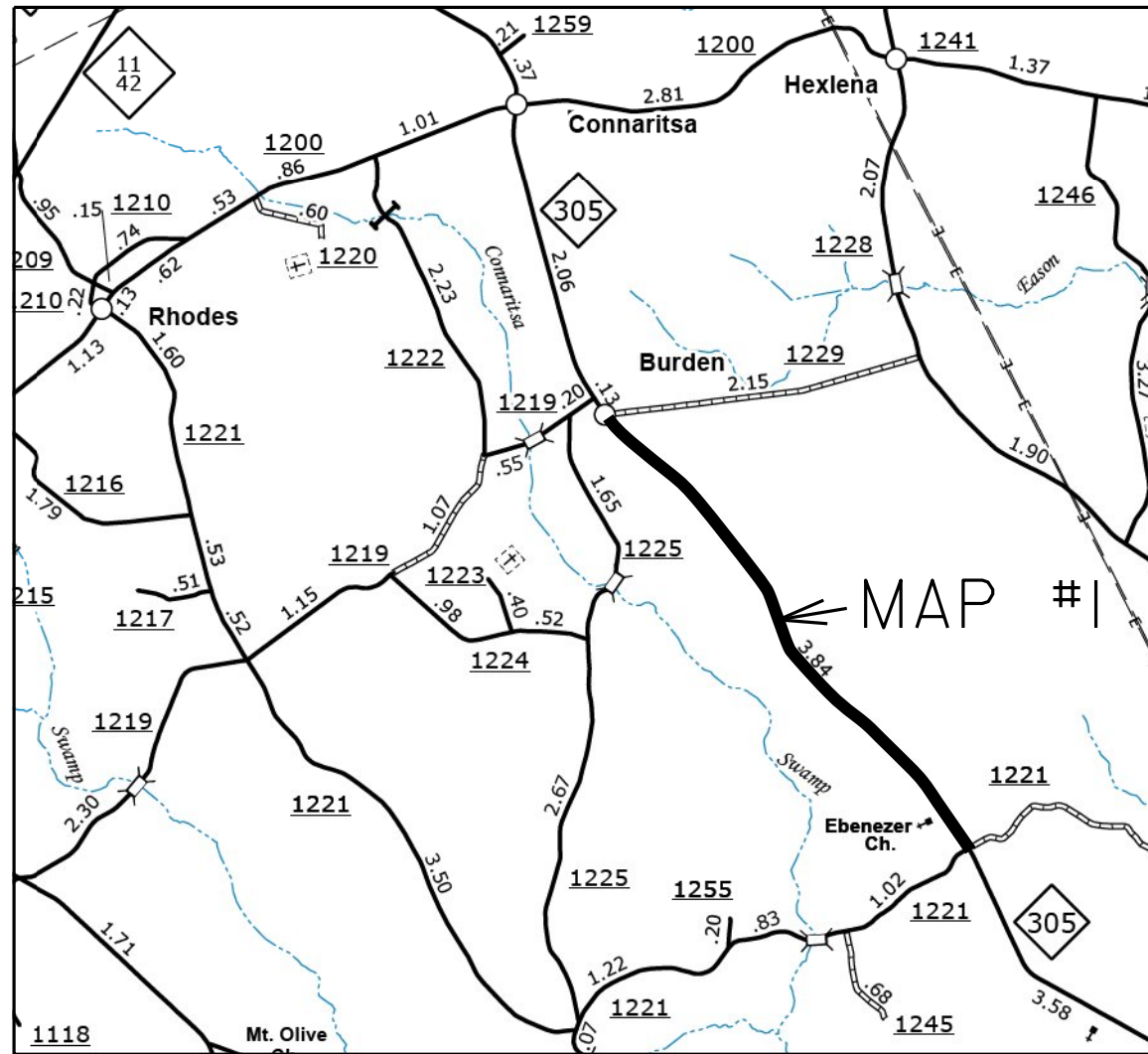
BERTIE COUNTY

| | | |
|-----------------------|-----------------------------|-------------|
| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. |
| N.C. | 2021CPT.01.01.10081.1, ETC. | 1 |
| STATE PROJ. NO. | | DESCRIPTION |
| 2021CPT.01.01.10081.1 | | PE, CONST |
| 2021CPT.01.01.20081.1 | | PE, CONST |

LOCATION: MAP #1 NC 305 FROM SR 1219 TO SR 1221

MAP #3 SR 1353 (ACADEMY ST.) FROM NC 42 TO NC 45

TYPE OF WORK: MILLING & RESURFACING



GRAPHIC SCALES

NTS

PROJECT LENGTH

MAP #1 = 3.97 MILES
 MAP #3 = 0.29 MILES

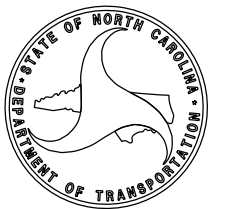
Prepared in the Office of:
DIVISION OF HIGHWAYS
 113 Airport Dr., Edenton NC, 27944

2018 STANDARD SPECIFICATIONS

W. B. HOBBS, PE
 DIVISION PROJECT TEAM LEAD

CHRIS SLACHTA
 DIVISION PROPOSAL ENGINEER

S. P. FENWICK, PLS
 DIVISION DESIGN ENGINEER



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CONTRACT: DA00472 WBS #: 2021CPT.01.01.10081.1, ETC.

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HERTFORD COUNTY

| | | |
|-----------------------|-----------------------------|-------------|
| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. |
| N.C. | 2021CPT.01.01.10081.1, ETC | 2 |
| STATE PROJ. NO. | | DESCRIPTION |
| 2021CPT.01.01.10461.1 | | PE, CONST |
| 2021CPT.01.01.20461.1 | | PE, CONST |

LOCATION: MAP #2 NC 11 FROM BERTIE COUNTY LINE TO SR 1108

MAP #4 SR 1137 (LIVERMAN MILL RD.) FROM SR 1142 TO SR 1139

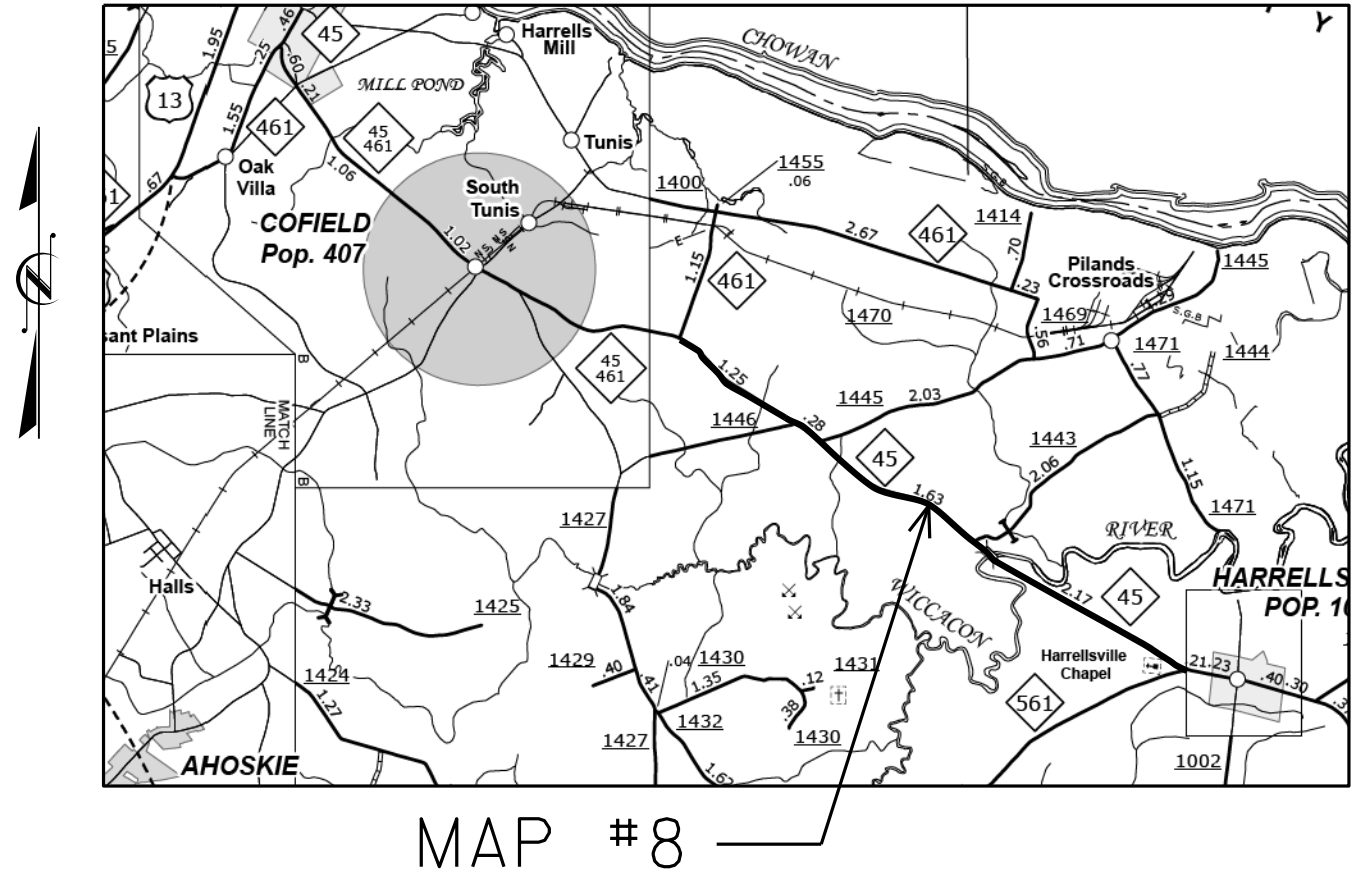
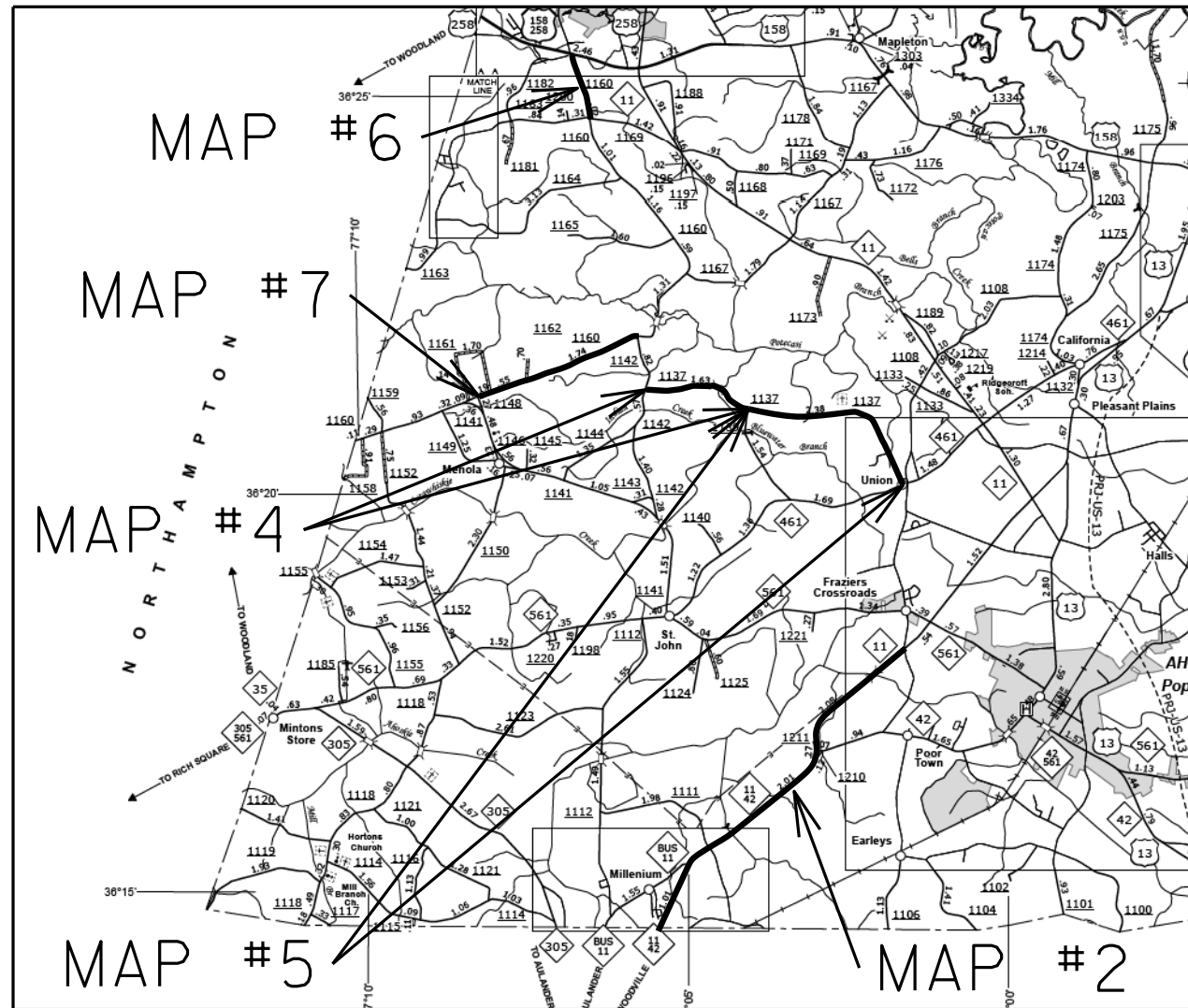
MAP #5 SR 1137 (LIVERMAN MILL RD.) FROM SR 1139 TO NC 461

MAP #6 SR 1160 (BENTHALL BRIDGE RD.) FROM SR 1169 TO US 158 BYPASS

MAP #7 SR 1160 (BENTHALL BRIDGE RD.) FROM SR 1142 TO SR 1141

MAP #8 NC 45 FROM NC 561 TO NC 461

TYPE OF WORK: GUARDRAIL REPLACEMENT, AST (DOUBLE SEAL), CONCRETE PAVEMENT JOINT REPAIR, MILLING & RESURFACING



GRAPHIC SCALES

NTS

PROJECT LENGTH

- MAP #2 = 5.55 MILES
- MAP #4 = 1.46 MILES
- MAP #5 = 2.88 MILES
- MAP #6 = 0.91 MILES
- MAP #7 = 2.70 MILES
- MAP #8 = 5.23 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS

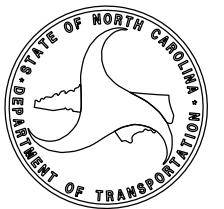
113 Airport Dr., Edenton NC, 27944

2018 STANDARD SPECIFICATIONS

W. B. HOBBS, PE
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DIVISION DESIGN ENGINEER



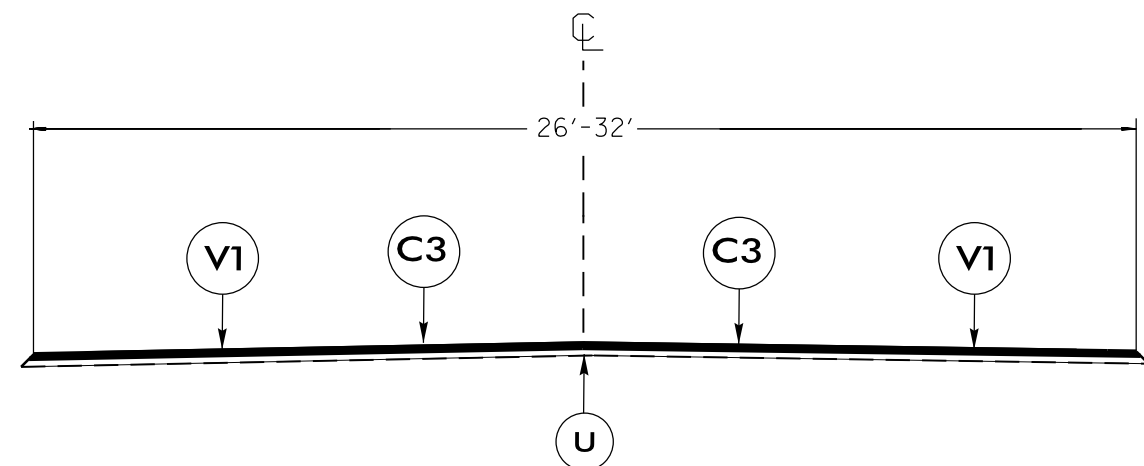
PAVEMENT SCHEDULE

| | |
|----|-----------------------------------------------------------------------------------------------------------------|
| C2 | EXISTING ASPHALT CONCRETE SURFACE COURSE |
| C3 | PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. |
| D1 | PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD. |
| D2 | PROP. APPROX. 2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD. |
| N2 | PROPOSED SELF-ADHESIVE PAVEMENT INTERLAYER. |
| R1 | EXISTING CONCRETE ROADBED. |
| T | EARTH MATERIAL. |
| U | EXISTING PAVEMENT. |
| V1 | MILLING ASPHALT PAVEMENT. 1.5" IN DEPTH. |

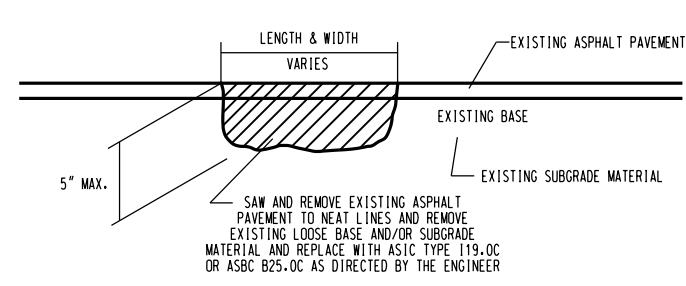
NOTES:

- *ALL PAVED S.R. ROADS TO BE RESURFACED TO THE ENDS OF THE RADII., OR AS DIRECTED BY THE ENGINEER
- *EDGES, PAVEMENT WIDENING, INTERSECTIONS, AND BRIDGE FLARES ARE INCLUDED IN THE SUMMARY OF QUANTITIES
- *PLACE PROPOSED SELF-ADHESIVE PAVEMENT INTERLAYER AND CONCRETE INTERMEDIATE COURSE TYPE I19.0C ON MAP 2, SEE DETAIL 2.

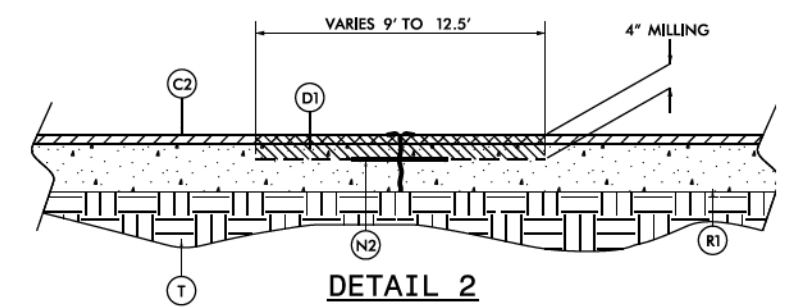
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|-------------------------------------------------------------|-------------------------|
| PROJECT REFERENCE NO. 2021CPT.01.01.10081.1, ETC. | SHEET NO. 3-A |
|-------------------------------------------------------------|-------------------------|



TYPICAL SECTION NO. 2
USE WITH: MAPS 2 & 8



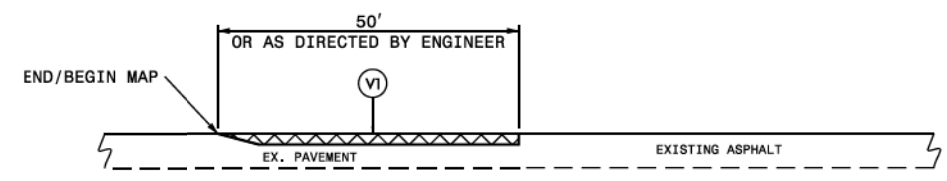
*NOTE: EDGES OF PATCHED AREA ARE TO BE CLEANED OF ALL DEBRIS AND COATED WITH AN APPROVED TACK MATERIAL BEFORE PLACING ASPHALT.
FULL DEPTH PATCHING 0-5"



DETAIL 2
JOINT REPAIR DETAIL

NOTE:

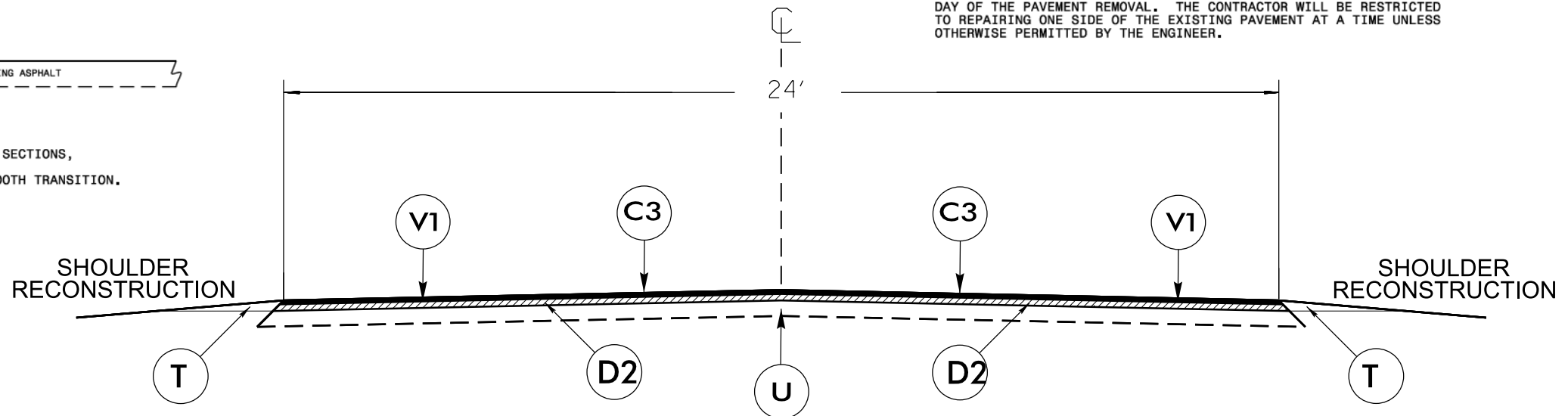
1. SAW CUT 4.5' TO 6.25' ON BOTH SIDES OF CRACK.
2. REMOVE EXISTING PAVEMENT STRUCTURE TO A DEPTH OF 4 INCHES.
3. SCHEDULE OPERATIONS SO ALL AREAS WHERE PAVEMENT HAS BEEN REMOVED WILL BE REPAIRED AND ALL LANES OF TRAFFIC RESTORED ON THE SAME DAY OF THE PAVEMENT REMOVAL. THE CONTRACTOR WILL BE RESTRICTED TO REPAIRING ONE SIDE OF THE EXISTING PAVEMENT AT A TIME UNLESS OTHERWISE PERMITTED BY THE ENGINEER.



DETAIL 1
MAIN LINE MILLING

NOTE:

1. INCLUDES INCIDENTAL MILLING AT THE ENDS OF MAIL LINE SECTIONS, OR AS DIRECTED BY THE ENGINEER.
2. PAVE TO THE END OF THE MILLED SURFACE TO CREATE A SMOOTH TRANSITION.



TYPICAL SECTION NO. 1
USE WITH: MAP 1

NTS

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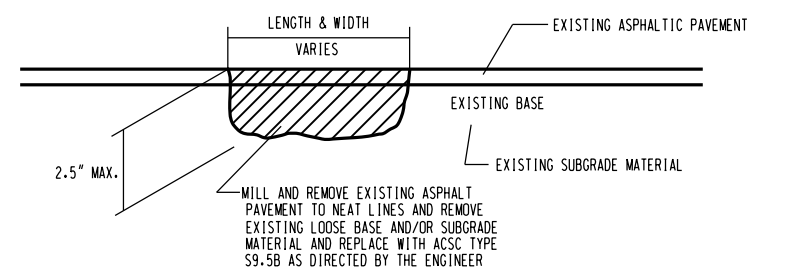
PAVEMENT SCHEDULE

| | |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C1 | PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. |
| F | ASPHALT SURFACE TREATMENT (DOUBLE SEAL) AT AN APPLICATION RATE TO BE DETERMINED BY FIELD CONDITIONS IN ACCORDANCE WITH PROJECT SPECIAL PROVISIONS (SEE NOTES) |
| T ₋ | EARTH MATERIAL. |
| U | EXISTING PAVEMENT. |
| V1 | MILLING ASPHALT PAVEMENT. 1.5" IN DEPTH. |

NOTES:

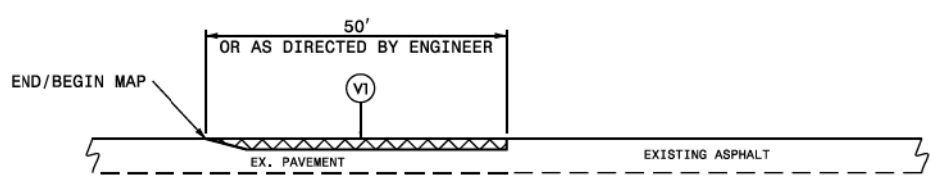
| | |
|-----------------------------|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| 2021CPT.01.01.10081.1, ETC. | 3-B |

- *ALL PAVED S.R. ROADS TO BE RESURFACED TO THE ENDS OF THE RADII., OR AS DIRECTED BY THE ENGINEER
- *EDGES, PAVEMENT WIDENING, INTERSECTIONS, AND BRIDGE FLARES ARE INCLUDED IN THE SUMMARY OF QUANTITIES
- *ASPHALT SURFACE TREATMENT (DOUBLE SEAL) CONSISTS OF TWO LAYERS OF TREATMENT:
 - BOTTOM LAYER CONSISTS OF EMULSIFIED ASPHALT, GRADE CRS-2L AT A RATE OF APPROX. 0.30 + GAL/SY AND A LAYER OF 78M AGGREGATE AT A RATE OF APPROX. 18 + LBS/SY.
 - TOP LAYER CONSISTS OF EMULSIFIED ASPHALT, GRADE CRS-2L AT A RATE OF APPROX. 0.25 + GAL/SY AND A LAYER OF 5/16" LIGHTWEIGHT AGGREGATE AT A RATE OF APPROX. 9+ LBS/SY.
- *ASPHALT SURFACE TREATMENT SHALL BE ALLOWED TO SET UP FOR A MINIMUM OF 10 DAYS BEFORE ANY OTHER WORK CAN BE PERFORMED. ASPHALT SURFACE TREATMENT SHALL BE THOROUGHLY BROOMED TO REMOVE EXCESS AGGREGATE, PRIOR TO FINAL SURFACE LAYER BEING INSTALLED.



*NOTE: EDGES OF PATCHED AREA ARE TO BE CLEANED OF ALL DEBRIS AND COATED WITH AN APPROVED TACK MATERIAL BEFORE PLACING ASPHALT.

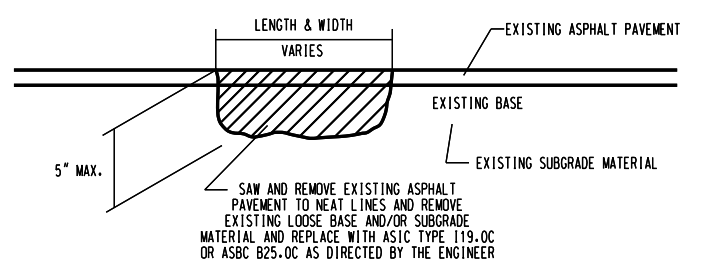
MILL PATCHING, 0-2.5"



DETAIL 1

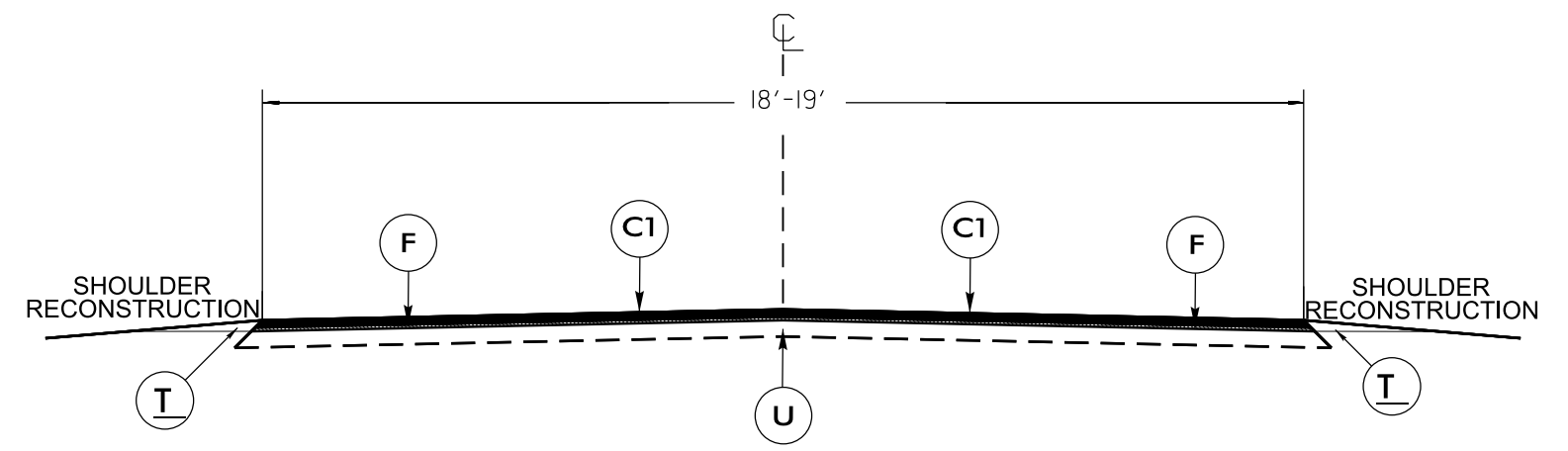
MAIN LINE MILLING

- NOTE:**
1. INCLUDES INCIDENTAL MILLING AT THE ENDS OF MAIN LINE SECTIONS, OR AS DIRECTED BY THE ENGINEER.
 2. PAVE TO THE END OF THE MILLED SURFACE TO CREATE A SMOOTH TRANSITION.

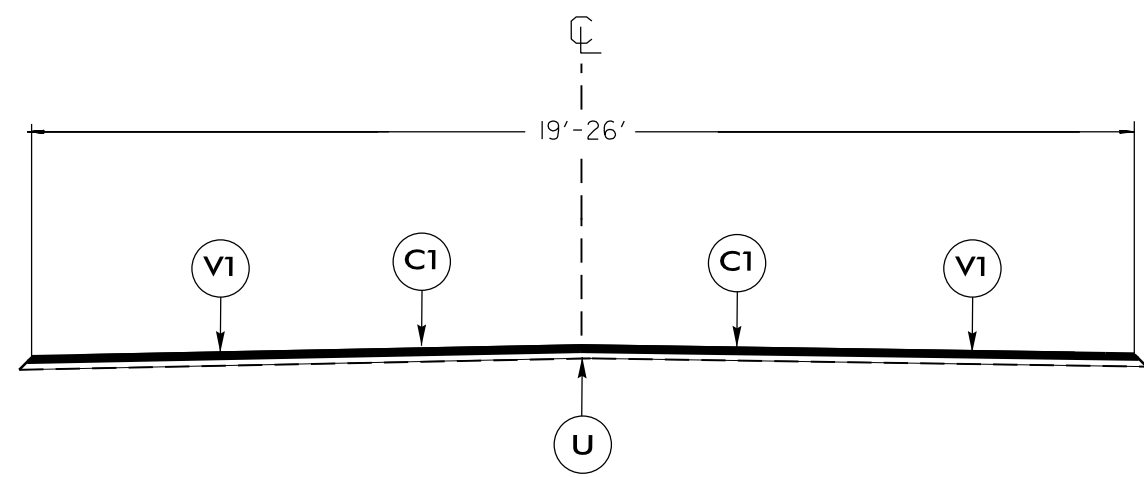


*NOTE: EDGES OF PATCHED AREA ARE TO BE CLEANED OF ALL DEBRIS AND COATED WITH AN APPROVED TACK MATERIAL BEFORE PLACING ASPHALT.

FULL DEPTH PATCHING 0-5"



TYPICAL SECTION NO. 4
USE WITH: MAPS 4 & 7



TYPICAL SECTION NO. 3
USE WITH: MAPS 3, 5 & 6

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NTS

SUMMARY OF QUANTITIES

| PROJECT NO | COUNTY | MAP NO | ROUTE | DESCRIPTION | TYP NO | LANES | LANE TYPE | FINAL SURFACE TESTING REQUIRED | WARM MIX ASPHALT REQUIRED | MATERIALS TRANSFER VEHICLE RERQUIRED | LENGTH | WIDTH | MOBILIZATION | BORROW EXCAVATION | INCIDENTAL STONE BASE | SHOULDER RECONSTRUCTION | 1 1/2" MILLING | INCIDENTAL MILLING | ASPHALT CONCRETE INTERMEDIATE COURSE, 119.0C | ASPHALT CONCRETE SURFACE COURSE, 59.5B | ASPHALT CONCRETE SURFACE COURSE, 59.5C | ASPHALT FOR PLANT MIX | ASPHALT SURFACE TREATMENT (DOUBLE SEAL) | EMULSION FOR ASPHALT SURFACE TREATMENT | GENERIC PAVING ITEM (FULL DEPTH PATCHING, 0-5") | GENERIC PAVING ITEM (MILL PATCHING, 0-2.5") | GENERIC PAVING ITEM (JOINT REPAIR) | GENERIC PAVING ITEM (SELF ADHESIVE PAVEMENT INTERLAYER) | 2'-6" CURB & GUTTER | STEEL BEAM GUARDRAIL | GUARDRAIL END UNITS, TYPE TL-3 | GUARDRAIL ANCHOR UNIT, TYPE B-83 | REMOVE EXISTING GUARDRAIL | |
|-----------------------|----------|--------|----------------------------|---------------------------|--------|-------|-----------|--------------------------------|---------------------------|--------------------------------------|--------|-------|--------------|-------------------|-----------------------|-------------------------|----------------|--------------------|----------------------------------------------|----------------------------------------|----------------------------------------|-----------------------|-----------------------------------------|----------------------------------------|-------------------------------------------------|---------------------------------------------|------------------------------------|---------------------------------------------------------|---------------------|----------------------|--------------------------------|----------------------------------|---------------------------|----|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | MI |
| 2021CPT.01.01.10081.1 | Bertie | 1 | NC 305 (BERTIE NORTH) | FORM SR 1219 TO SR 1221 | 1 | 2 | 2WU | NO | NO | YES | 3.97 | 24 | * | | 79 | 7.94 | 55,898 | 1,387 | 8,035 | | 4,906 | 680 | | | | | | | | | | | | |
| 2021CPT.01.01.10461.1 | Hertford | 2 | NC 11 | FROM BERTIE CO TO SR 1108 | 2 | 2 | 2WU | NO | NO | YES | 5.55 | 32 | * | | 111 | | 104,192 | 8,677 | | 9,643 | 579 | | | | | 360 | 2,240 | | 1,505 | 16 | 4 | 2,405 | | |
| 2021CPT.01.01.20081.1 | Bertie | 3 | SR 1353 ACADEMY ST | NC 42 TO NC 45 | 3 | 2 | 2WU | NO | NO | NO | 0.29 | 26 | * | | | | 4,424 | 329 | | 394 | 26 | | | 54 | | | 170 | | | | | | | |
| 2021CPT.01.01.20461.1 | Hertford | 4 | SR 1137 LIVERMAN MILL RD | SR 1142 TO SR 1139 | 4 | 2 | 2WU | NO | NO | NO | 1.46 | 19 | * | 292 | 20 | 2.92 | | | | 1,442 | 97 | 16,274 | 9,764 | 52 | 32 | | | | | | | | | |
| 2021CPT.01.01.20461.1 | Hertford | 5 | SR 1137 LIVERMAN MILL RD | SR 1139 TO NC 461 | 3 | 2 | 2WU | NO | NO | NO | 2.88 | 19 | * | | 58 | | 32,102 | 462 | | 2,745 | 184 | | | 31 | 15 | | | | | | | | | |
| 2021CPT.01.01.20461.1 | Hertford | 6 | SR 1160 BENTHALL BRIDGE RD | SR 1169 TO US 158 BYPASS | 3 | 2 | 2WU | NO | NO | NO | 0.91 | 21 | * | | 18 | | 11,211 | 670 | | 991 | 66 | | | | | | | | | | | | | |
| 2021CPT.01.01.20461.1 | Hertford | 7 | SR 1160 BENTHALL BRIDGE RD | SR 1142 TO SR 1141 | 4 | 2 | 2WU | NO | NO | NO | 2.70 | 18 | * | 540 | 20 | 5.40 | | | | 2,440 | 163 | 28,512 | 17,107 | 211 | 31 | | | | | | | | | |
| 2021CPT.01.01.10461.1 | Hertford | 8 | NC 45 | NC 561 TO NC 461 | 2 | 2 | 2WU | NO | NO | YES | 5.23 | 26 | * | | 105 | | 79,775 | 8,500 | | | 7,028 | 422 | | | | | | 1,575 | 4 | 4 | 1,875 | | | |
| GRAND TOTAL | | | | | | | | | | | 22.99 | | 1 | 832 | 411 | 16.26 | 287,602 | 20,474 | 8,035 | 8,012 | 21,577 | 2,217 | 44,786 | 26,871 | 1,082 | 78 | 360 | 2,240 | 170 | 3,080 | 20 | 8 | 4,280 | |

| PROJECT NO | COUNTY | MAP NO | ROUTE | DESCRIPTION | TYP NO | LANES | LANE TYPE | FINAL SURFACE TESTING REQUIRED | WARM MIX ASPHALT REQUIRED | MATERIALS TRANSFER VEHICLE RERQUIRED | LENGTH | WIDTH | WORK ZONE ADV/GEN WARNING SIGNING | TEMPORARY TRAFFIC CONTROL | GENERIC PAVEMENT MARKING ITEM (HOT SPRAYED THERMO LINES, 4" 50 MILS WHITE) | GENERIC PAVEMENT MARKING ITEM (HOT SPRAYED THERMO LINES, 4" 50 MILS YELLOW) | THERMO PAVEMENT MARKING SYMBOL, LEFT ARROW 90 MILS | THERMO PAVEMENT MARKING SYMBOL, RIGHT ARROW 90 MILS | THERMO PAVEMENT MARKING LINES, 6" 90 MILS (WHITE) | THERMO PAVEMENT MARKING LINES, 6" 90 MILS (YELLOW) | 4" WHITE PAINT | 4" YELLOW PAINT | PAINT PAVEMNT MARKING SYMBOL (LT ARROW) | PAINT PAVEMNT MARKING SYMBOL (RT ARROW) | GENERIC PAVEMENT MARKING ITEM (NON-CAST IRON SLOWABLE PAVEMENT MARKER) | TEMPORARY SILT FENCE | MATTING FOR EROSION CONTROL | COIR FIBER WATTLE | SEEDING & MULCHING | RESPONSE FOR EROSION CONTROL | | |
|-----------------------|----------|--------|----------------------------|---------------------------|--------|-------|-----------|--------------------------------|---------------------------|--------------------------------------|--------|-------|-----------------------------------|---------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------|----------------------------------------------------|-----------------------------------------------------|---------------------------------------------------|----------------------------------------------------|----------------|-----------------|-----------------------------------------|-----------------------------------------|------------------------------------------------------------------------|----------------------|-----------------------------|-------------------|--------------------|------------------------------|----|----|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | MI | FT |
| 2021CPT.01.01.10081.1 | Bertie | 1 | NC 305 (BERTIE NORTH) | FORM SR 1219 TO SR 1221 | 1 | 2 | 2WU | NO | NO | YES | 3.97 | 24 | 118 | * | | | | | | | 42,717 | 31,442 | 85,434 | 62,884 | 262 | 100 | 10 | 20 | 3.97 | 3 | | |
| 2021CPT.01.01.10461.1 | Hertford | 2 | NC 11 | FROM BERTIE CO TO SR 1108 | 2 | 2 | 2WU | NO | NO | YES | 5.55 | 32 | 166 | * | | | | | | | 4 | 6 | 59,718 | 43,956 | 119,436 | 87,912 | 4 | 6 | 367 | 1,405 | 25 | 50 |
| 2021CPT.01.01.20081.1 | Bertie | 3 | SR 1353 ACADEMY ST | NC 42 TO NC 45 | 3 | 2 | 2WU | NO | NO | NO | 0.29 | 26 | | * | | | | | | | | | | | | | | | | | | |
| 2021CPT.01.01.20461.1 | Hertford | 4 | SR 1137 LIVERMAN MILL RD | SR 1142 TO SR 1139 | 4 | 2 | 2WU | NO | NO | NO | 1.46 | 19 | | * | 15,418 | 9,636 | | | | | 15,418 | 9,636 | | | | 100 | 10 | 20 | 1.50 | 1 | | |
| 2021CPT.01.01.20461.1 | Hertford | 5 | SR 1137 LIVERMAN MILL RD | SR 1139 TO NC 461 | 3 | 2 | 2WU | NO | NO | NO | 2.88 | 19 | 102 | * | 30,413 | 19,008 | | | | | 30,413 | 19,008 | | | | | | | | | | |
| 2021CPT.01.01.20461.1 | Hertford | 6 | SR 1160 BENTHALL BRIDGE RD | SR 1169 TO US 158 BYPASS | 3 | 2 | 2WU | NO | NO | NO | 0.91 | 21 | | * | 9,610 | 6,006 | | | | | 9,610 | 6,006 | | | | | | | | | | |
| 2021CPT.01.01.20461.1 | Hertford | 7 | SR 1160 BENTHALL BRIDGE RD | SR 1142 TO SR 1141 | 4 | 2 | 2WU | NO | NO | NO | 2.70 | 18 | 102 | * | 28512 | 17820 | | | | | 28,512 | 17,820 | | | | 100 | 10 | | 2.70 | 2 | | |
| 2021CPT.01.01.10461.1 | Hertford | 8 | NC 45 | NC 561 TO NC 461 | 2 | 2 | 2WU | NO | NO | YES | 5.23 | 26 | 504 | | | | | | | | 56,275 | 41,422 | 112,550 | 82,843 | 329 | 1,000 | 20 | 50 | 0.27 | 2 | | |
| GRAND TOTAL | | | | | | | | | | | 22.99 | | 992 | 1 | 83,953 | 52,470 | 4 | 6 | 158,710 | 116,820 | 401,373 | 286,109 | 4 | 6 | 958 | 2,705 | 75 | 140 | 8.44 | 10 | | |
| GRAND TOTAL | | | | | | | | | | | | | | | 136,423 | | 10 | | 275,530 | | 687,482 | | 10 | | | | | | | | | |

6/16/2022
 22-SEP-2020 10:05
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COMPUTED BY: SPF DATE: 2/4/2020
 CHECKED BY: DATE:

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL
 TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
 FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL
 W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL
 G = GATING IMPACT ATTENUATOR TYPE 350
 NG = NON-GATING IMPACT ATTENUATOR TYPE 350

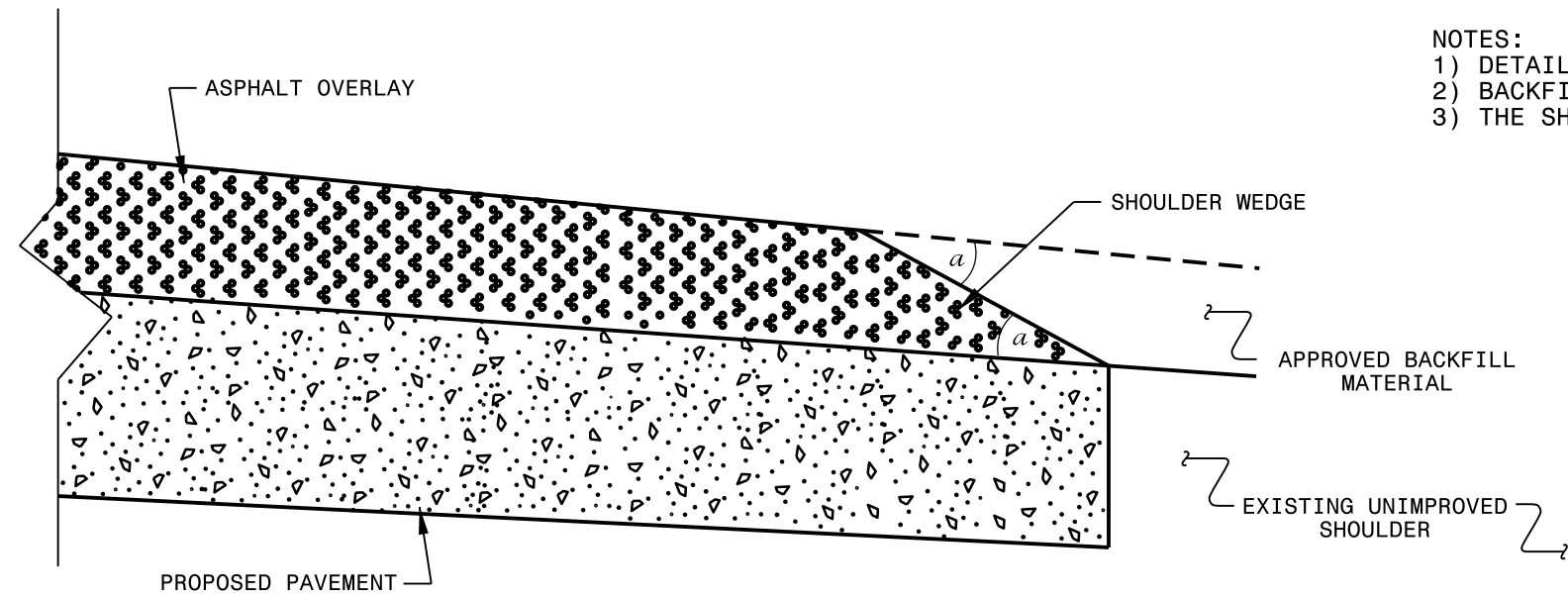
STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. 2021CPT.01.01.0081, ETC.
 SHEET NO. 5

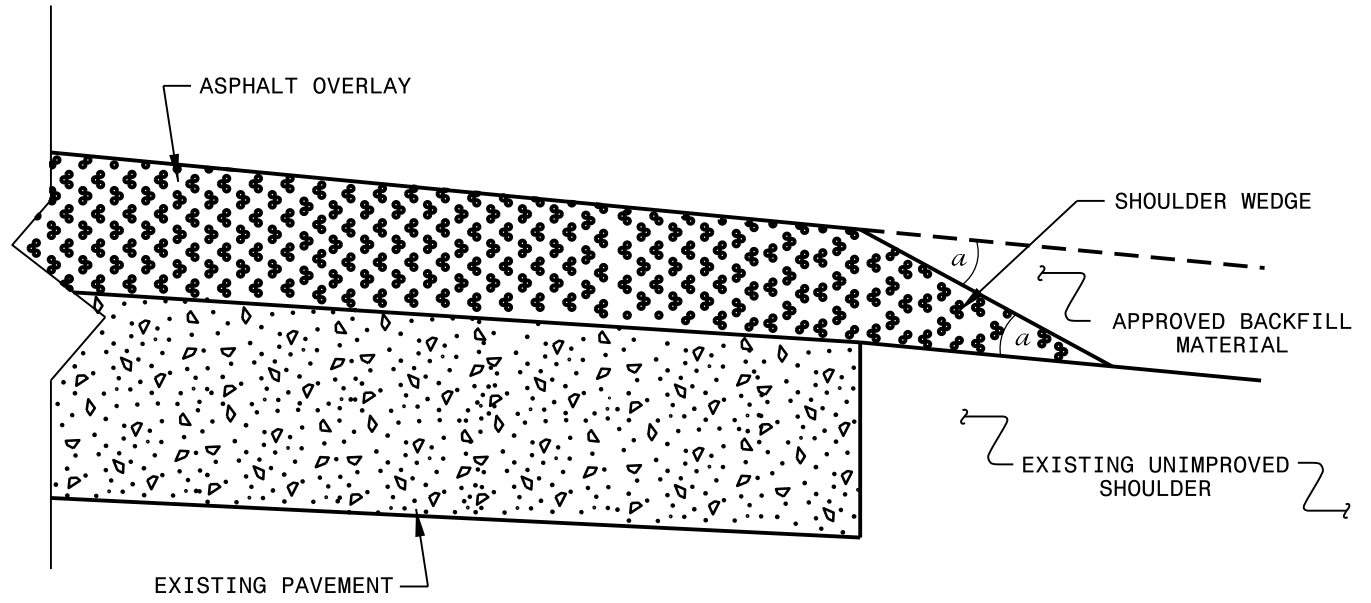
GUARDRAIL SUMMARY

| SURVEY LINE | BEG. STA. | END STA. | LOCATION | LENGTH | | | WARRANT POINT | | "N" DIST. FROM E.O.L. | TOTAL SHOULDER WIDTH | FLARE LENGTH | | W | | ANCHORS | | | | | | | | IMPACT ATTENUATOR TYPE 350 | | | REMOVE EXISTING GUARDRAIL | REMARKS | | |
|----------------------------------------|-----------|------------|----------|----------|----------------|-----------------|-----------------|-----------------|--------------------------------|----------------------------|-----------------|-----------------|--------------|------|---------|--|--|--|--|--|--|--|----------------------------|--|-----------|---------------------------------|-------------------------------------------------------|----------------|----|
| | | | | STRAIGHT | SHOP CURVED | DOUBLE FACED | APPROACH END | TRAILING END | | | APPROACH END | TRAILING END | GREU TL-3 | B-83 | | | | | | | | | | | PERMITTED | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | NO. | | | G | NG |
| MATCH EXISTING FOR HORIZONTAL LOCATION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MAP #2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -E- | 25+92 | 27+96 | RT | 204 | | | | | | | | | | | | | | | | | | | | | | 204 | STA. 10+00.00 AT CL NC 11 & INTERSECT BERTIE CO. LINE | | |
| -E- | 26+63 | 28+68 | LT | 205 | | | | | | | | | | | | | | | | | | | | | | 205 | OVER BOX CULVERT | | |
| -E- | 94+99 | 97+52 | RT | 253 | | | | | | | | | | | | | | | | | | | | | | 253 | OVER TURKEY CREEK | | |
| -E- | 94+99 | 97+52 | LT | 253 | | | | | | | | | | | | | | | | | | | | | | 253 | OVER TURKEY CREEK | | |
| -E- | 227+54 | 231+56 | RT | 402 | | | | | | | | | | | | | | | | | | | | | | 402 | OVER KNEE BRANCH | | |
| -E- | 229+00 | 233+02 | LT | 402 | | | | | | | | | | | | | | | | | | | | | | 402 | OVER KNEE BRANCH | | |
| -E- | 265+20 | 267+24 | RT | 204 | | | | | | | | | | | | | | | | | | | | | | 204 | BRIDGE OVER AHOSKIE CREEK | | |
| -E- | 265+26 | 266+70 | LT | 144 | | | | | | | | | | | | | | | | | | | | | | 144 | BRIDGE OVER AHOSKIE CREEK | | |
| -E- | 268+62 | 270+03 | RT | 141 | | | | | | | | | | | | | | | | | | | | | | 141 | BRIDGE OVER AHOSKIE CREEK | | |
| -E- | 268+13 | 270+10 | LT | 197 | | | | | | | | | | | | | | | | | | | | | | 197 | BRIDGE OVER AHOSKIE CREEK | | |
| MAP #8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -E- | 62+30 | 69+76 | RT | 746 | | | | | | | | | | | | | | | | | | | | | | 746 | STA. 0+00.00 AT CL INTERSECT NC 45 & NC 561 | | |
| -E- | 101+38 | 102+73 | LT | 135 | | | | | | | | | | | | | | | | | | | | | | 135 | BRIDGE OVER WICCACON RIVER | | |
| -E- | 102+43 | 109+72 | RT | 729 | | | | | | | | | | | | | | | | | | | | | | 729 | BRIDGE OVER WICCACON RIVER | | |
| -E- | 107+18 | 109+83 | LT | 265 | | | | | | | | | | | | | | | | | | | | | | 265 | BRIDGE OVER WICCACON RIVER | | |
| SUB-TOTAL | | | | 4280 | | | | | | | | | | | | | | | | | | | | | | | | | |
| LESS ANCHOR DEDUCTIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | GREU TL-3 | 20 @ 50.0' | = | -1000.0' | | | | | | | | | | | | | | | | | | | | | | | | | |
| | B-83 | 8 @ 25.0' | = | -200.0' | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL | | | | 3080 | | | | | | | | | | | | | | | | | | | | | | | 4280 | PROJECT TOTALS | |

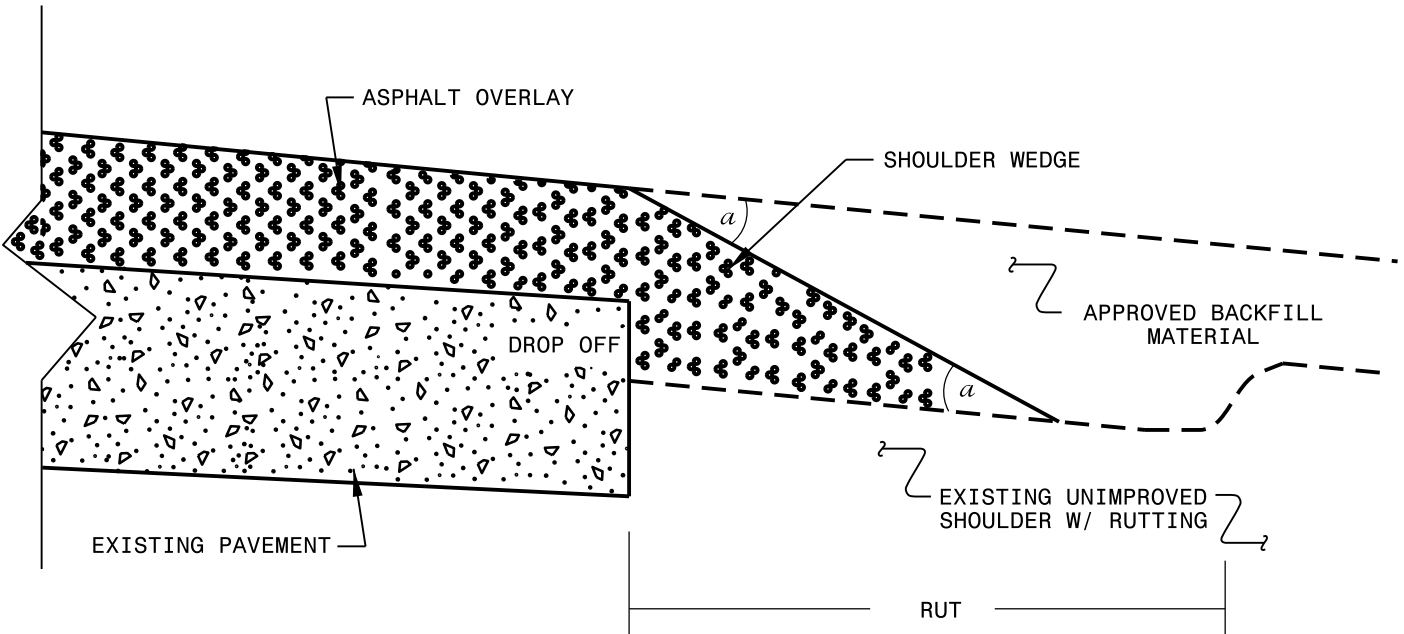
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
 - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



SHOULDER WEDGE DETAIL
 (Resurfacing Projects w/ Widening or
 with Existing Paved Shoulder having no dropoffs)



SHOULDER WEDGE DETAIL
 (Resurfacing Projects w/ NO Widening)



SHOULDER WEDGE DETAIL
 (Resurfacing Adjacent to
 Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

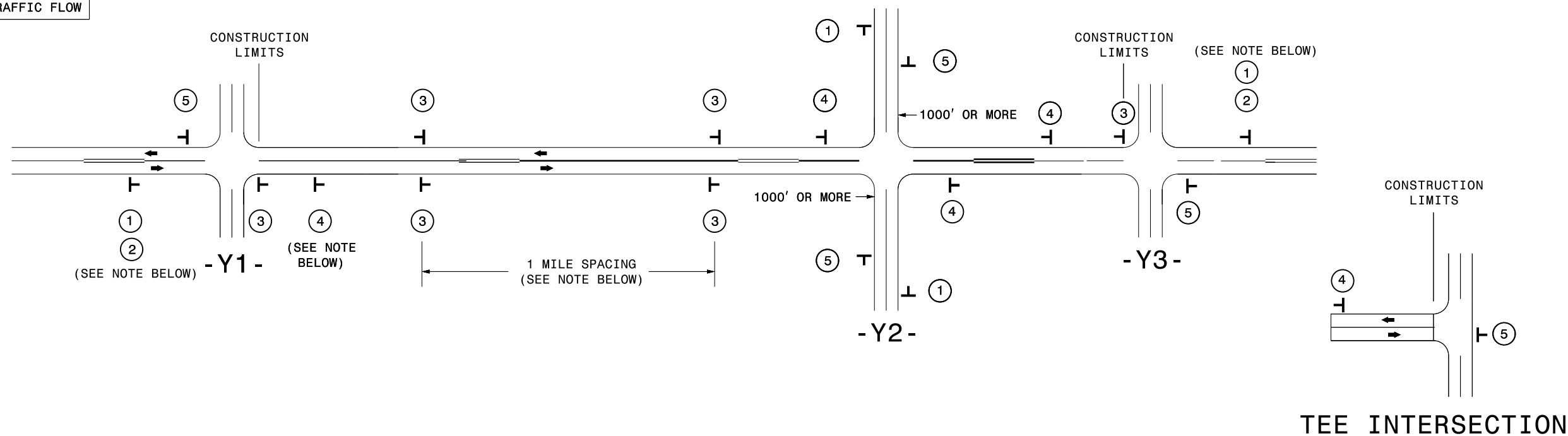
| | |
|----------------------------------------------------------|------------------|
| CONTRACT STANDARDS AND DEVELOPMENT UNIT | |
| Office 919-707-6950 | FAX 919-250-4119 |
| SHOULDER WEDGE DETAILS | |
| ORIGINAL BY: T.SPELL | DATE: 7-19-11 |
| MODIFIED BY: | DATE: 10/16/12 |
| CHECKED BY: | DATE: |
| FILE SPEC.: s:\usr\details\stand\shoulderwedgedetail.dgn | |

SIGNING FOR RESURFACING PROJECTS

LEGEND

┃ STATIONARY SIGN

← DIRECTION OF TRAFFIC FLOW



MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

| | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SIGNING NOTES AND PLACEMENT PER DIRECTION | ① | | PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE. | <p>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</p> <ol style="list-style-type: none"> LESS THAN 1000' OF RESURFACING ALONG -Y- LINE SUBDIVISION ROADS DEAD END ROADS <p>WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, PORTABLE ADVANCE WARNING SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <small>W20-1 48" X 48"</small> </div> <div style="text-align: center;"> <small>W20-7 A 48" X 48"</small> </div> </div> <p>PLACED 500' IN ADVANCE OF FLAGGER.</p> |
| | ② | | #2 SIGN ONLY USED WHEN CONSTRUCTION LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER. (NO FRACTIONAL OR DECIMAL NUMBERS) | |
| | ③ | | <ul style="list-style-type: none"> PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER. AT TEE INTERSECTIONS INSTALL INITIALLY 1/2 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER. | |
| | ④ | | <ul style="list-style-type: none"> THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS. INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE. FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS, TREAT AS A SINGLE UNIT AND INSTALL WITHIN 500' OF EACH APPROACH. A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN. FOR TEE INTERSECTIONS, INSTALL WITHIN 500' +/- OF THE INTERSECTION ALONG -L- LINE. | |
| | ⑤ | | PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION. | |
| <p>THE ABOVE SIGNS ARE ALL THAT ARE REQUIRED FOR A CONTRACTOR TO BEGIN A RESURFACING CONTRACT. ANY ADDITIONAL SIGNS REQUESTED BY NCDOT DIVISIONS SHALL BE INSTALLED WITHIN 7 BUSINESS DAYS OF THE START OF CONTRACT WORK.</p> | | | | |
| <p>FOR RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, NO STATIONARY SIGNS ARE REQUIRED. USE PORTABLE "ROAD UNDER CONSTRUCTION" OR "ROAD WORK AHEAD" SIGNS IN LIEU OF STATIONARY ADVANCE WARNINGS SIGNS.</p> | | | | |


MAPS LESS THAN 2 MILES





ADVANCE WARNING SIGNS FOR RURAL AND SUBURBAN 2-LANE ROADWAY RESURFACING

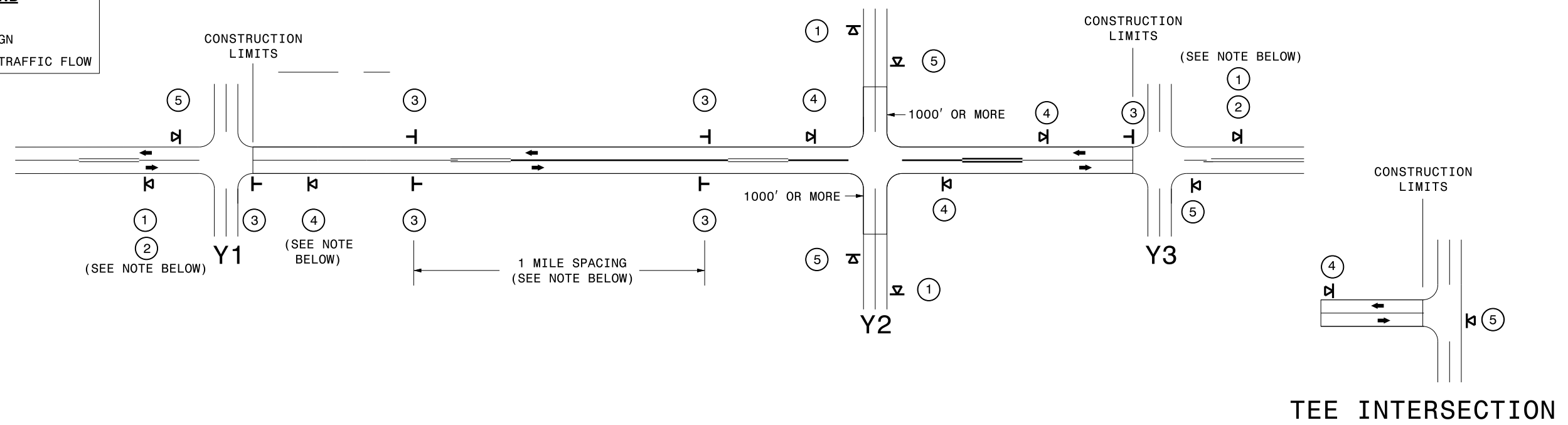
SIGNING FOR ASPHALT SURFACE TREATMENT






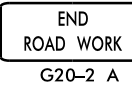
LEGEND

 PORTABLE SIGN

 STATIONARY SIGN

 DIRECTION OF TRAFFIC FLOW

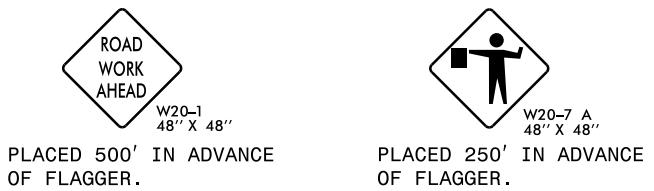


| | | | |
|--------------------------------------------------|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SIGNING NOTES AND PLACEMENT PER DIRECTION | ① |  | <ul style="list-style-type: none"> - PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE. |
| | ② |  | <ul style="list-style-type: none"> - SIGN #2 ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO THE NEAREST WHOLE NUMBER. DO NOT USE FRACTIONAL OR DECIMAL NUMBERS. |
| | ③ |   | <ul style="list-style-type: none"> - ALTERNATE THE FOLLOWING TWO SIGNS: - STARTING WITH "LOOSE GRAVEL" (W8-7) FOLLOWED BY "UNMARKED PAVEMENT". - PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART THEREAFTER. - AT TEE INTERSECTIONS INSTALL INITIALLY 0.5 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER. |
| | ④ |  | <ul style="list-style-type: none"> - THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS. - INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE. - FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS, TREAT AS A SINGLE UNIT AND INSTALL WITHIN 500' OF EACH APPROACH. - A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN. |
| | ⑤ |  | <ul style="list-style-type: none"> - PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION. |

STATIONARY SIGNING NOT REQUIRED FOR THE FOLLOWING -Y- LINE CONDITIONS:

- 1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE
- 2) SUBDIVISION ROADS
- 3) DEAD END ROADS

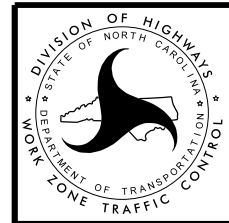
WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, PORTABLE ADVANCE WARNING SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.



THE ABOVE SIGNS ARE ALL THAT ARE REQUIRED FOR A CONTRACTOR TO BEGIN A RESURFACING CONTRACT. ANY ADDITIONAL SIGNS REQUESTED BY NCDOT DIVISIONS SHALL BE INSTALLED WITHIN 7 BUSINESS DAYS OF THE START OF CONTRACT WORK.

MAPS LESS THAN 2 MILES

FOR AST RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, USE A STATIONARY "LOOSE GRAVEL" SIGN AT THE BEGINNING CONSTRUCTION LIMIT FOLLOWED BY AN "UNMARKED PAVEMENT" SIGN MIDWAY THROUGH AND AN "END ROAD WORK" SIGN AT THE END CONSTRUCTION LIMIT.



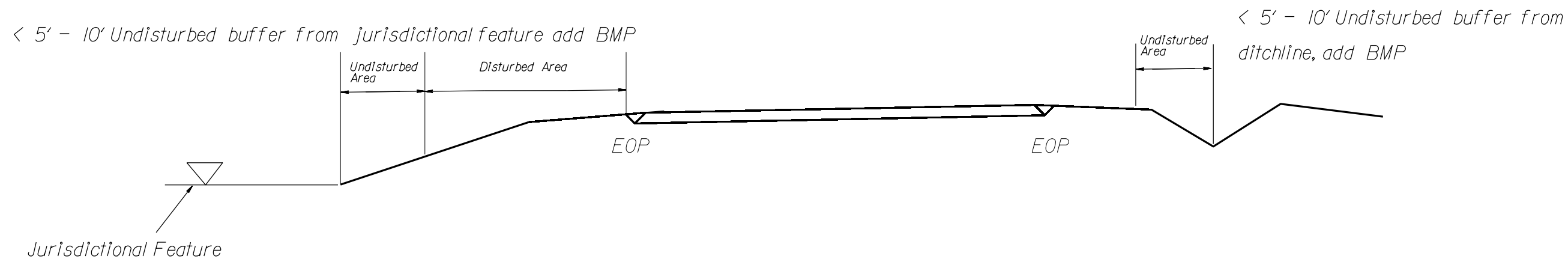
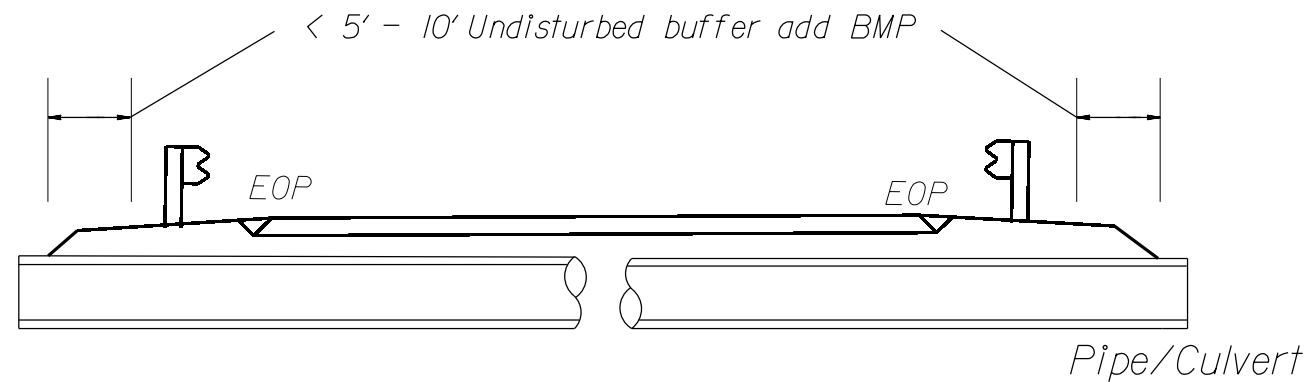
ADVANCE WARNING SIGNS FOR 2-LANE ROADWAY ASPHALT SURFACE TREATMENT

05-AUG-2020 10:26 S:\Shoreline\Division One Resurfacing & Retreatment Plans\2020-2021Resurfacing\DA00472-Berthie North NC 305 & Secondary_Herford NC II & Secondary\Design Files\DA00472_Diddc.sh8.dgn

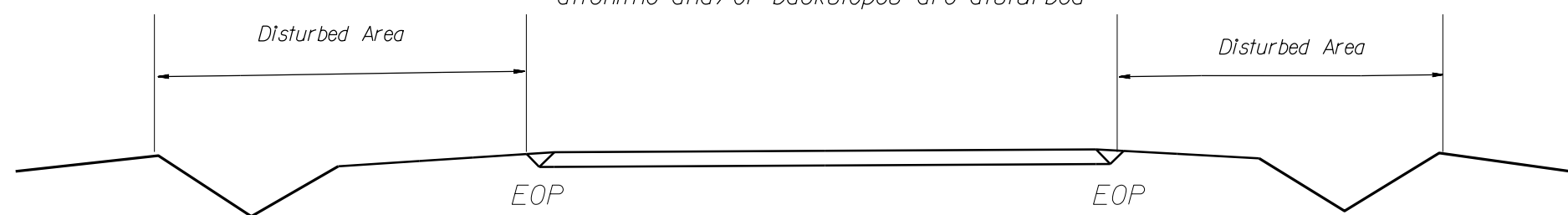
NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle or Silt Fence

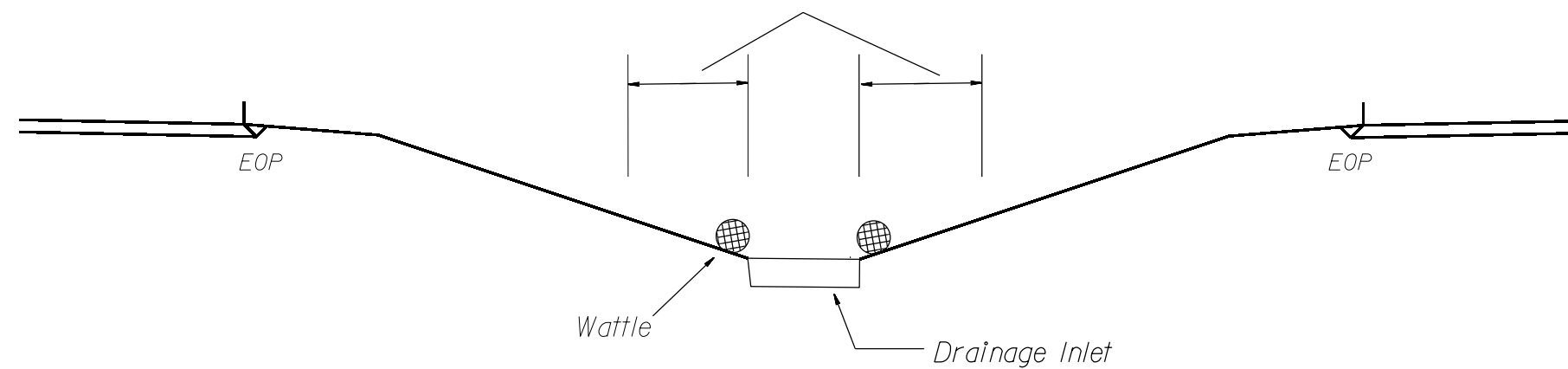
EROSION CONTROL DETAIL



Use BMP's if shoulders and/or frontslopes and/or ditchline and/or backslopes are disturbed



< 5' - 10' Undisturbed buffer from inlet, add wattle



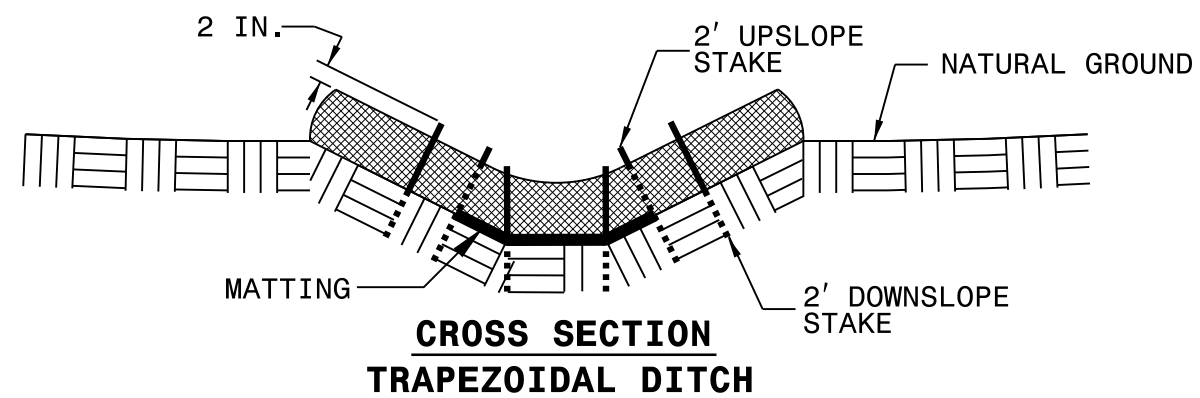
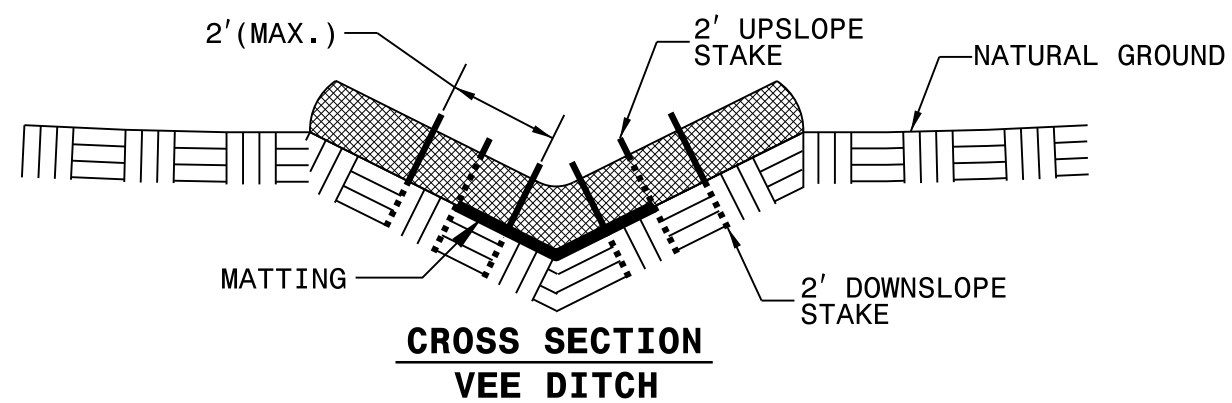
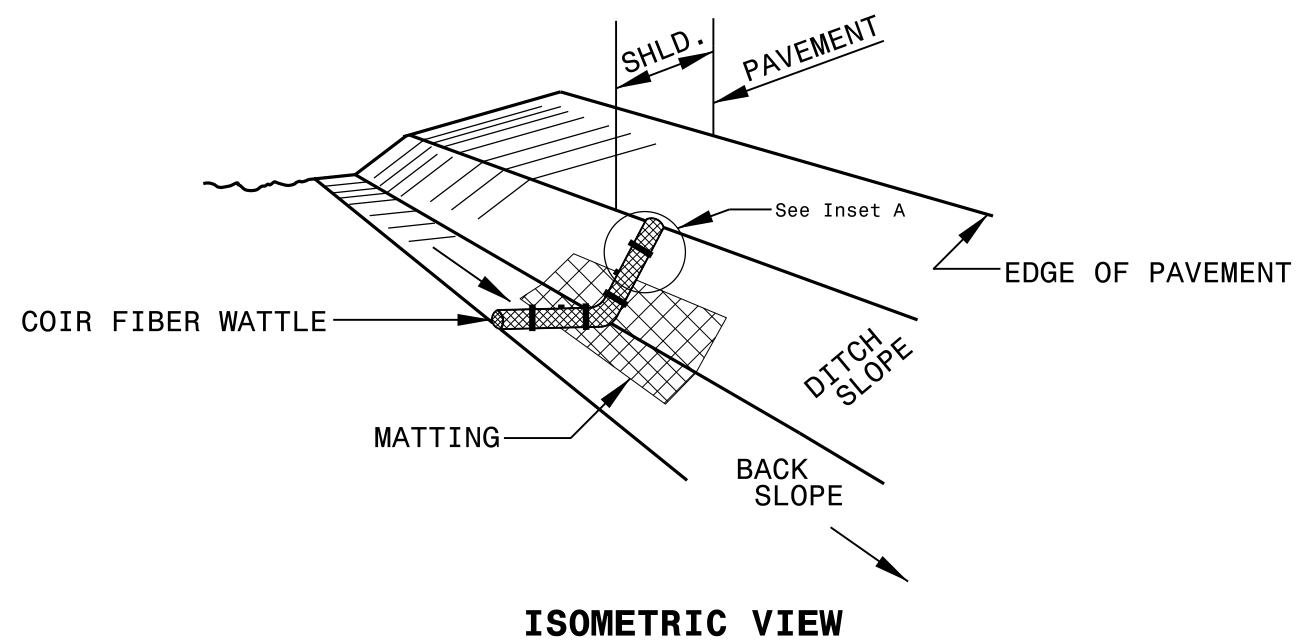
NOT TO SCALE

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

| <i>SITE DESCRIPTION</i> | <i>STABILIZATION TIME</i> | <i>TIMEFRAME EXCEPTIONS</i> |
|----------------------------------------------|---------------------------|----------------------------------------------------------------------------------------|
| PERIMETER DIKES, SWALES, DITCHES AND SLOPES | 7 DAYS | NONE |
| HIGH QUALITY WATER (HQW) ZONES | 7 DAYS | NONE |
| SLOPES STEEPER THAN 3:1 | 7 DAYS | IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED. |
| SLOPES 3:1 OR FLATTER | 14 DAYS | 7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH. |
| ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1 | 14 DAYS | NONE, EXCEPT FOR PERIMETERS AND HQW ZONES. |

COIR FIBER WATTLE DETAIL



- NOTES:
- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.
 - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
 - ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
 - INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
 - PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
 - INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
 - INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

