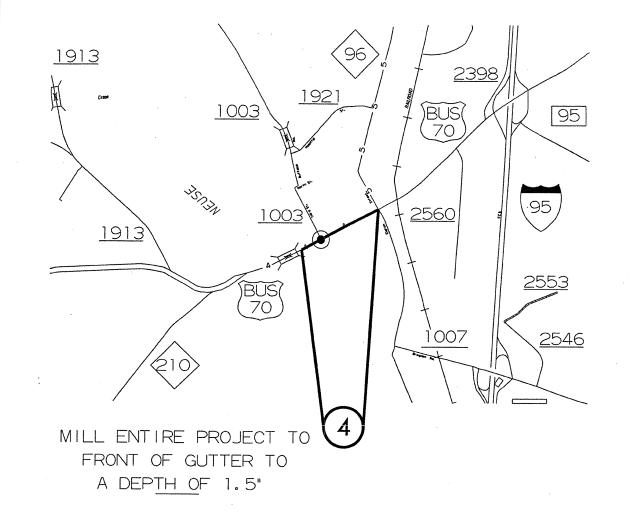
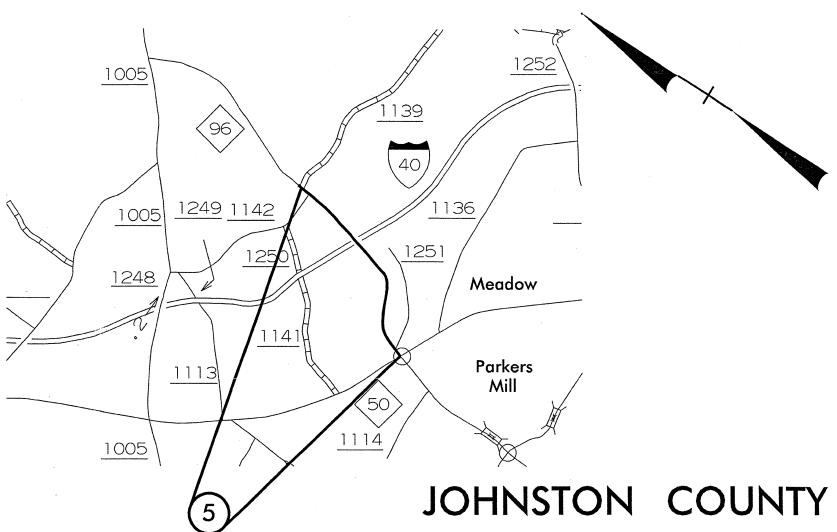
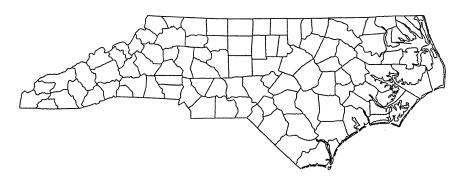


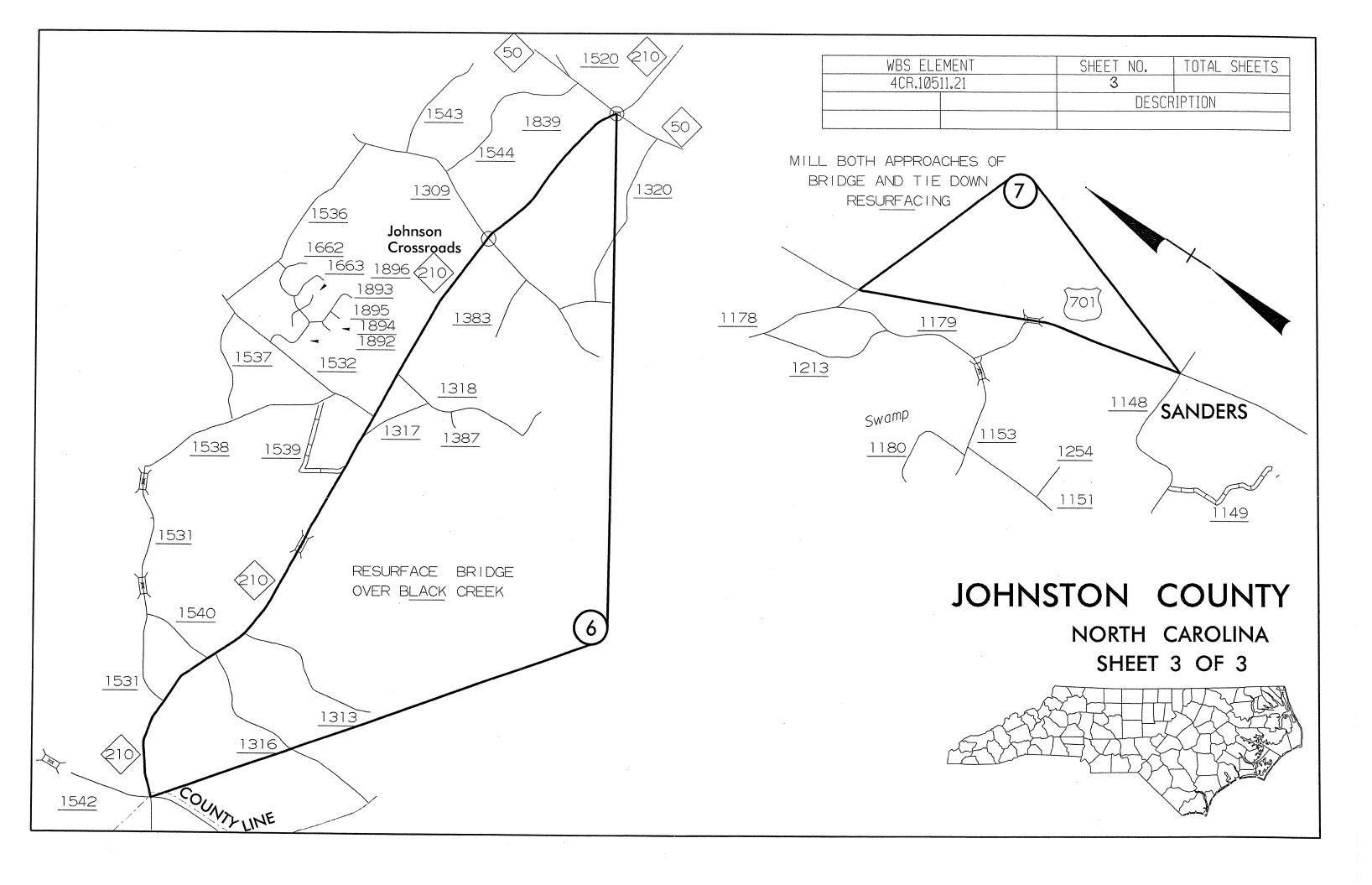
| WBS ELEMENT | SHEET NO. | TOTAL SHEETS |
|--------------|-----------|--------------|
| 4CR.10511.21 | 2 | |
| | DESCF | RIPTION |
| | | |

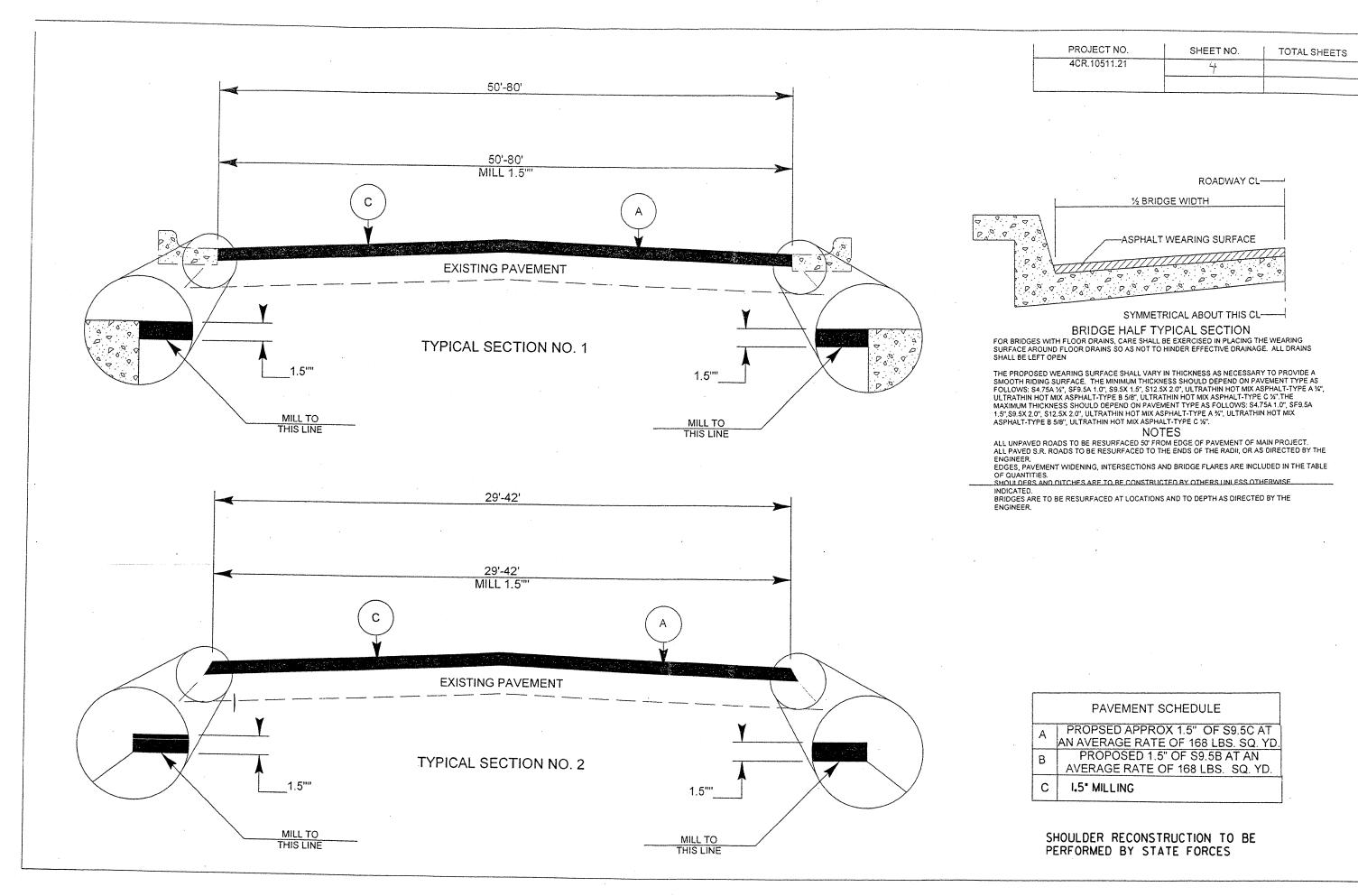


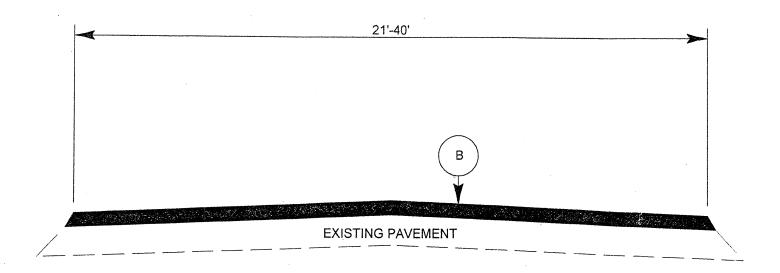


NORTH CAROLINA SHEET 2 OF 3









TYPICAL SECTION NO. 3

| PROJECT NO. | SHEET NO. | TOTAL SHEETS |
|--------------|-----------|--------------|
| 4CR.10511.21 | 5 | |
| | | |

PAVEMENT SCHEDULE

- PROPSED APPROX 1.5" OF S9.5C AT AN AVERAGE RATE OF 168 LBS. SQ. YD. PROPOSED 1.5" OF S9.5B AT AN AVERAGE RATE OF 168 LBS. SQ. YD.

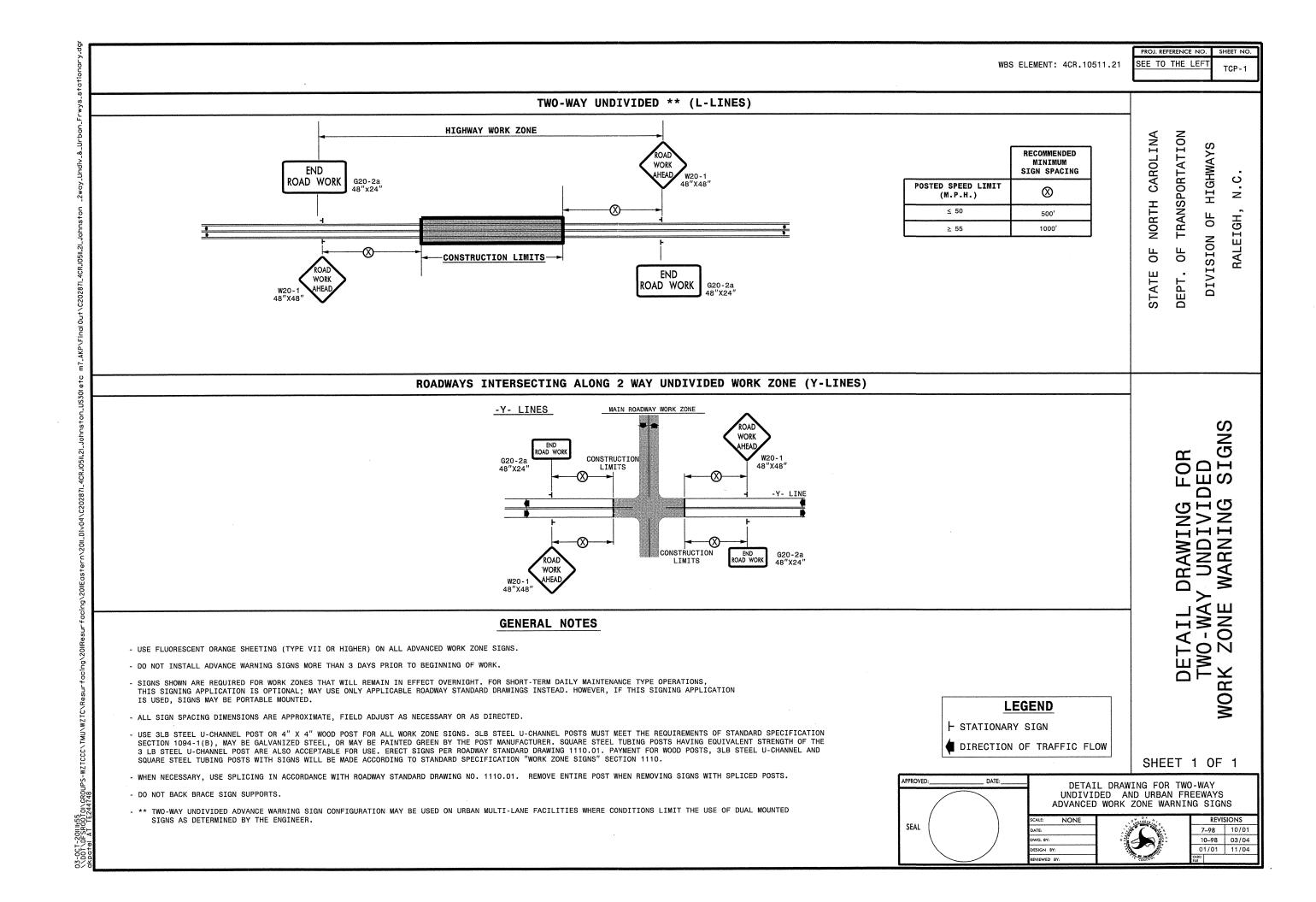
| PROJECT NO. | SHEET NO. | TOTAL NO. |
|--------------|-----------|-----------|
| 4CR.10511.21 | 6 | |

SUMMARY OF QUANTITIES

| PROJECT | COUNTY | MAP | ROUTE | DESCRIPTION | ТҮР | FINAL SURFACE TESTING REQUIRED | LENGTH | WIDTH | 1.5" MILLING | INCIDENTAL MILLING | SURFACE COURSE, S9.5B | SURFACE COURSE, S9.5C | ASPHALT BINDER FOR PLANT MIX | ADJ. OF MANHOLES | ADJ. OF METER OR VALVE BOX |
|---|----------|-------|------------------------|--|-----|--------------------------------------|------------------------|-------|---|-----------------------|--------------------------|--------------------------|------------------------------------|---------------------|-------------------------------|
| NO | | NO | | | NO | | MI | FT | SY | SY | TONS | TONS | TONS | EA | EA |
| 4CR.10511.21 | Johnston | 1 | US 301 N CHURCH STREET | POINT PAST NC 222 - WILSON CL. | 1 | NO | 0.586 | 60 | 25,407 | | | 2,099 | 124 | 12 | 6 |
| 4CR.10511.21 | Johnston | 2 | US 301 BRIGHTLEAF | S SIDE OF E WELLONS INTERSECTION - JOINT PAST NORTH STREET | 1 | NO | 1.334 | 55 | 46,912 | | | 4,089 | 241 | 24 | 19 |
| 4CR.10511.21 | Johnston | 3 | US 301 BRIGHTLEAF | S SIDE OF E WELLONS INTERSECTION - JOINT AT I-95 BRIDGE | 2 | NO | 3.7 | 29 | 50,943 | | | 6,519 | 385 | 13 | |
| 4CR.10511.21 | | 4 | US 70B MARKET STREET | JOINT BEFORE US 301 - BEGINNING OF FRONT STREET INTERSECTION | 1 | NO | 0.57 | 50.5 | 16,901 | | | 1,437 | 85 | 22 | 3 |
| 4CR.10511.21 | | 5 | NC 96 | NC50 JOINT- PAINT LINE PAST SR 1139 | 3 | NO | 1.273 | 21 | , in the second | | 2,025 | • | 122 | | |
| 4CR.10511.21 | Johnston | 6 | NC 210 | HARNETT COUNTY LINE - START OF NC 50 INTERSECTION | 3 | NO | 6.403 | 24.5 | | | 8,845 | | 531 | | |
| 4CR.10511.21 | <u> </u> | 7 | US 701 | JOINT AT SR 1178 TO SR 1148 | 3 | NO | 2.517 16.383 | 27 | 140,163 | 20 20 | 3,455 14,325 | 14,144 | 207 1,695 | 71 | 28 |
| TOTAL FOR PROJ NO. 4CR.10511.21 16.383 140,163 20 14,325 14,144 1,695 71 28 | | | | | | | | | | | | | | | |
| | GR | AND T | OTAL | | | | 16.383 | | 140,163 | 20 | 14,325 | 14,144 | 1,695 | 71 | 28 |

THERMOPLASTIC AND PAINT QUANTITIES

| | | | | | | | 481500 | 0000-Е | 4835000000-E | 484000000-N | 484500000-N | | | | | |
|--------------|---|---|------------------------|---|--------|-------|-----------|----------|--------------|-------------|-------------|-----------|----------------|----------|----------------|--|
| PROJECT | COUNTY | МАР | ROUTE | DESCRIPTION | LENGTH | WIDTH | 6" YELLOW | 6" WHITE | 24" WHITE | PAINT MSG | PAINT LT | PAINT STR | PAINT STR & RT | PAINT RT | PAINT STR & LT | |
| | | | | | | | PAINT | PAINT | PAINT | SCHOOL | ARROW | ARROW | ARROW | ARROW | ARROW | |
| NO | | NO | | | | | LF | LF | LF | EA | EA | EA | EA | EA | EA | |
| 4CR.10511.21 | Johnston | 1 | US 301 N CHURCH STREET | POINT PAST NC 222 - WILSON CL. | 0.586 | 60 | 12,376 | 12,376 | 36 | | 17 | 2 | 2 | | | |
| 4CR.10511.21 | Johnston | 2 | US 301 BRIGHTLEAF | S SIDE OF E WELLONS INTERSECTION - JOINT PAST NORTH STREET | 1.334 | 55 | 28,174 | 15,154 | 360 | | 46 | 21 | 17 | 5 | 3 | |
| 4CR.10511.21 | | | US 301 BRIGHTLEAF | S SIDE OF E WELLONS INTERSECTION - JOINT AT I-95 BRIDGE | 3.7 | 29 | 42,176 | 57,276 | 36 | | 102 | | 1 | 1 | | |
| 4CR.10311.21 | 3011131011 | - | 03 301 BRIGHTELAI | JOINT AT 1-33 BRIDGE | 3.7 | 23 | 72,170 | 37,270 | 1 30 | | 102 | | | | | |
| 4CR.10511.21 | Johnston | 4 | US 70B MARKET STREET | JOINT BEFORE US 301 - BEGINNING OF FRONT STREET INTERSECTION | 0.57 | 50.5 | 6,024 | 12,494 | 240 | | 6 | 13 | 22 | 3 | 12 | |
| 4CR.10511.21 | | | NC 96 | NC50 JOINT- PAINT LINE PAST SR 1139 | 1.273 | 21 | 16,804 | 18,554 | 100 | 12 | 7 | | | 4 | | |
| 4CR.10511.21 | | | NC 210 | HARNETT COUNTY LINE - START OF NC 50 INTERSECTION | 6.403 | 24.5 | 84,520 | 75,296 | 96 | | 20 | 1 | 4 | 2 | | |
| 4CR.10511.21 | | } | US 701 | JOINT AT SR 1178 TO SR 1148 | 2.517 | 27 | 26,580 | 26,580 | | | | | | | | |
| | *************************************** | *************************************** | ACD 10511 31 | | 16.383 | | 216,654 | 217,730 | 868 | 12 | 198 | 37 | 46 | 15 | 15 | |
| 10 | TOTAL FOR PROJ NO. 4CR.10511.21 | | | | | 434 | ,384 | | | 311 | | | | | | |
| | | | | | | | · | T | | r | | | т | | | |
| | GR | AND T | OTAL | | 16.383 | | 216,654 | 217,730 | 868 | 12 | 198 | 37 | 46 | 15 | 15 | |
| | | | | | 434 | ,384 | | | 311 | | | | | | | |

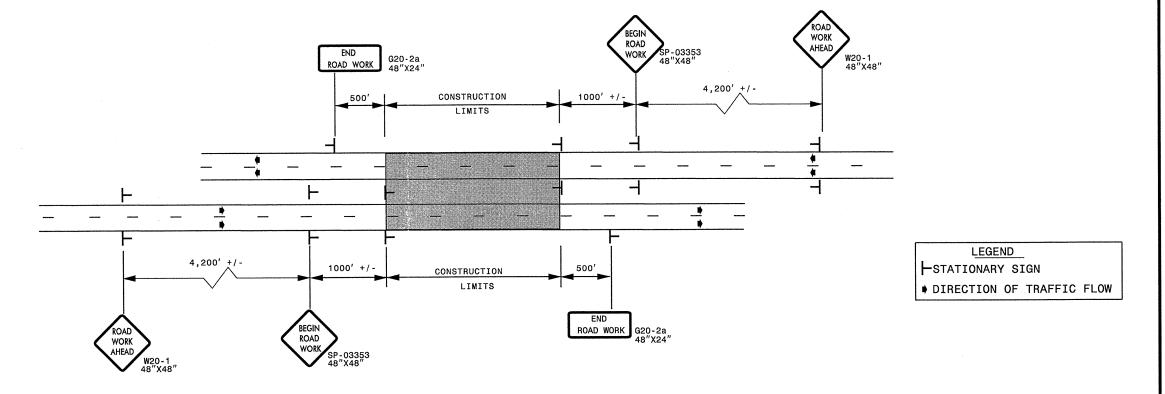


ADVANCED WORK ZONE WARNING SIGNING FOR FREEWAYS (4 LANES OR GREATER) WBS ELEMENT: 4CR.10511.2

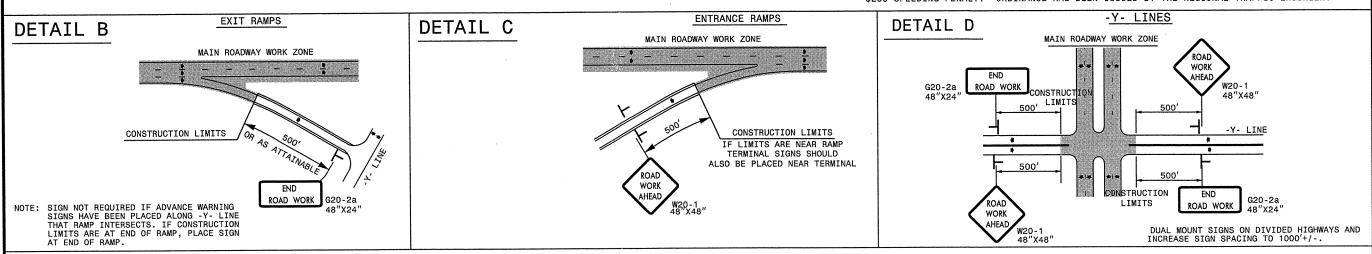
PROJ. REFERENCE NO. SHEET NO.

1.21 SEE TO THE LEFT
TCP-2

DETAIL A

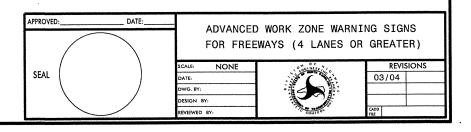


* USE THE "\$250 SPEEDING PENALTY" SIGN, SPEED LIMIT SIGN, AND ORANGE PANEL; ONLY WHEN A "\$250 SPEEDING PENALTY" ORDINANCE HAS BEEN ISSUED BY THE REGIONAL TRAFFIC ENGINEER.



GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.



GENERAL NOTES

- (1) THE FOLLOWING OPTIONS MAY BE USED FOR ADVANCE WARNING SIGNS:
 - A. TRUCK MOUNTED SIGNS
 - B. TRUCK MOUNTED CHANGEABLE MESSAGE SIGN (CMS)
 - C. GROUND MOUNTED ADVANCE WARNING SIGNS (MUST CIRCLE TO PICK UP SIGNS)
 - D. GROUND MOUNTED CHANGEABLE MESSAGE SIGN (CMS)
 (MUST USE CIRCLE TO PICK UP SIGNS)
- (2) ALL ADVANCE WARNING SIGNS MUST BE 48" X 48" WITH FLUORESCENT ORANGE TYPE VII, VIII OR IX SHEETING. IF SPACE LIMITATIONS ON SHOULDER PROHIBIT A 48" X 48" SIGN, A SMALLER SIGN CAN BE USED WITH APPROVAL FROM ENGINEER.
- (3) SIGNS ON VEHICLES SHOULD BE MOUNTED A MINIMUM OF ONE (1) FOOT FROM THE GROUND AND SHOULD NOT BLOCK THE MOTORIST'S SIGHT OF THE FLASHING ARROW PANEL AND/OR LIGHTBAR.
- (4) GROUND MOUNTED ADVANCED WARNING SIGNS SHOULD BE MOUNTED A MINIMUM OF ONE (1) FOOT FROM THE GROUND TO BOTTOM OF SIGN.
- (5) SIGN SPACING SHOULD BE ADJUSTED FOR HORIZONTAL AND VERTICAL CURVES, ETC. TO IMPROVE SIGHT DISTANCES.
- (6) ADDITIONAL VEHICLES SHOULD BE USED IN WORK CARAVAN TO FACILITATE DRYING OF PAVEMENT MARKING MATERIAL (TMIA'S ARE OPTIONAL ON THESE ADDITIONAL VEHICLES). HOWEVER, THE FIRST VEHICLE MOTORISTS SEE IN THE TRAVEL LANE SHALL HAVE A TMIA.

- (7) ADJUST DISTANCE AS NEEDED TO PREVENT MOTORISTS FROM ENTERING SPACE BETWEEN THE APPLICATION AND PROTECTION VEHICLE. DISTANCE CAN BE LENGTHENED TO ACCOMODATE SIGHT DISTANCE NEEDS.
- (8) ROUND UP MILEAGE TO NEXT WHOLE MILE. WORK ZONE SHOULD NOT EXCEED FIVE (5) MILES IN LENGTH.
- (9) RADIO COMMUNICATION BETWEEN VEHICLES IS REQUIRED.
- (10) USE OF A LIGHT BAR ON ALL VEHICLES IS PREFERRED, BUT A ROTATING BEACON MAY BE USED INSTEAD.
- (11) IF WORK IS PERFORMED AT NIGHT, THE WORK AREA MUST BE ILLUMINATED WITH MACHINE AND/OR TOWER LIGHTS AS APPROVED BY THE ENGINEER.
- (12) ALL TRAFFIC CONTROL DEVICES WILL BE CONSIDERED INCIDENTAL TO THE PAY ITEMS FOR PAVEMENT MARKING AND MARKERS.
- (13) INFORMATIONAL SIGNS SHOULD BE ACTIVITY SPECIFIC, i.e.
 "PAINT CREW IN ROAD". SIGNS MAY BE RECTANGULAR OR DIAMOND SHAPE.
 SIGN SIZE SHOULD BE BASED ON THE MOTORIST ABILITY TO RECOGNIZE
 SIGN WHEN TRAVELING FIVE (5) MILES ABOVE POSTED SPEED LIMIT.
- (14) IF A LEAD VEHICLE IS ADDED TO OPERATION, IT SHOULD HAVE THE SAME ADVANCE WARNING SIGNS AS THE APPLICATION VEHICLE SHOWN BELOW.

LEGEND

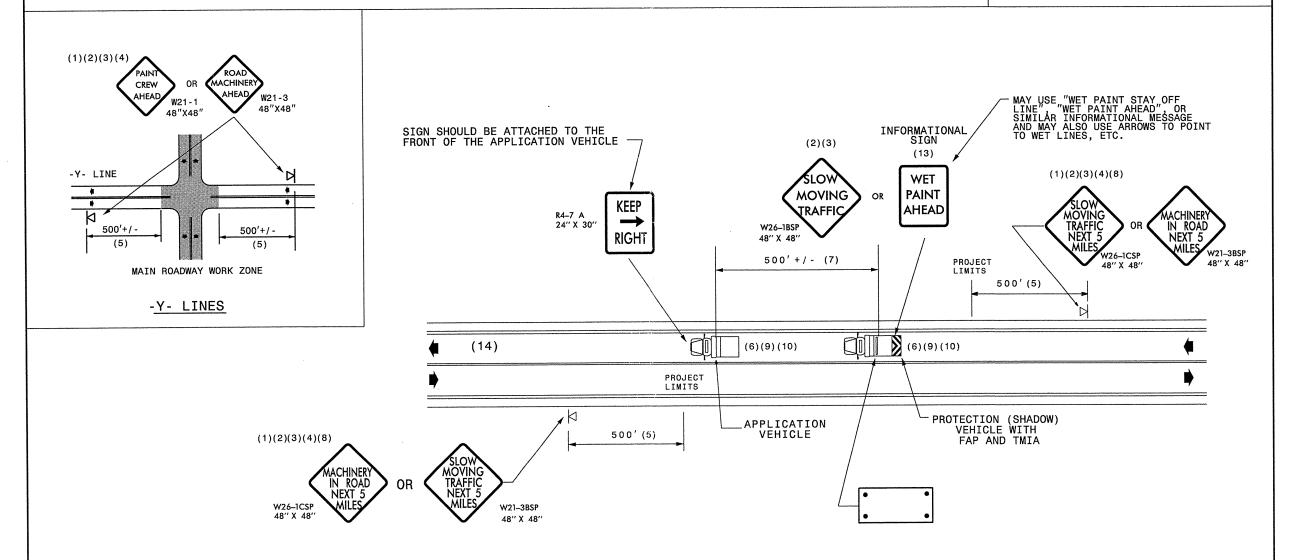
PORTABLE SIGN. SIGNS MUST BE NCHRP-350 AND NCDOT APPROVED.

DIRECTION OF TRAFFIC FLOW

APPLICATION VEHICLE WITH LIGHT BAR

PROTECTION VEHICLE WITH TRUCK MOUNTED IMPACT ATTENUATOR (TMIA) AND LIGHT BAR (SEE ROADWAY STANDARD NO. 1165.01). TMIA MUST BE NCHRP-350 TEST LEVEL 3 (60+MPH) APPROVED.

FLASHING ARROW PANEL,
TYPE "B" (60"X30" MIN.),
"CAUTION MODE"



MOVING OPERATION CARAVAN

(OPERATIONS TRAVELING 3 MPH OR FASTER)
PLACING PAVEMENT MARKING OR MARKERS
ON TWO-LANE TWO-WAY ROADWAYS

DRAWING NUMBER 6
IMPLEMENTATION DATE: 07/01/97

REVISED: 11/03/04

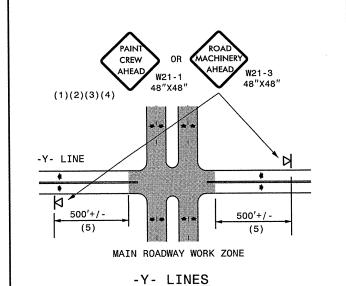
GENERAL NOTES

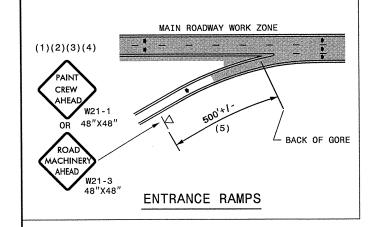
- (1) THE FOLLOWING OPTIONS MAY BE USED FOR ADVANCE WARNING SIGNS:
 - A. TRUCK MOUNTED SIGNS
 - B. TRUCK MOUNTED CHANGEABLE MESSAGE SIGN (CMS)
 - C. GROUND MOUNTED ADVANCE WARNING SIGNS (MUST CIRCLE TO PICK UP SIGNS)
 - D. GROUND MOUNTED CHANGEABLE MESSAGE SIGN (CMS) (MUST USE CIRCLE TO PICK UP SIGNS)
- (2) ALL ADVANCE WARNING SIGNS MUST BE 48" X 48" WITH FLUORESCENT ORANGE TYPE VII, VIII OR IX SHEETING. IF SPACE LIMITATIONS ON SHOULDER PROHIBIT A 48" X 48" SIGN, A SMALLER SIGN CAN BE USED WITH APPROVAL FROM ENGINEER.
- (3) SIGNS ON VEHICLES SHOULD BE MOUNTED A MINIMUM OF ONE (1) FOOT FROM THE GROUND AND SHOULD NOT BLOCK THE MOTORIST'S SIGHT OF THE FLASHING ARROW PANEL AND/OR LIGHTBAR.
- (4) GROUND MOUNTED ADVANCED WARNING SIGNS SHOULD BE MOUNTED A MINIMUM OF FIVE (5) FEET FROM THE GROUND TO BOTTOM OF SIGN.
- (5) SIGN SPACING SHOULD BE ADJUSTED FOR HORIZONTAL AND VERTICAL CURVES, ETC. TO IMPROVE SIGHT DISTANCES.

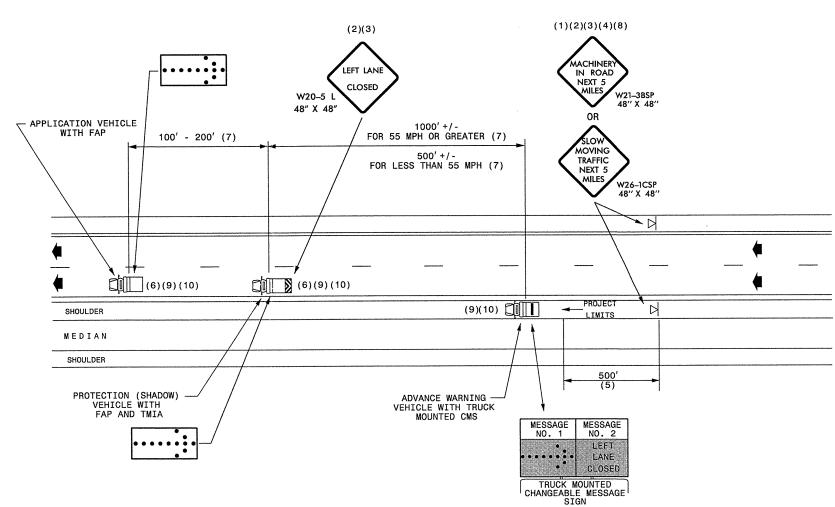
- (6) ADDITIONAL VEHICLES SHOULD BE USED IN WORK CARAVAN TO FACILITATE DRYING OF PAVEMENT MARKING MATERIAL (TMIA'S ARE OPTIONAL ON THESE ADDITIONAL VEHICLES). HOWEVER, THE FIRST VEHICLE MOTORISTS SEE IN THE TRAVEL LANE SHALL HAVE A TMIA.
- (7) ADJUST DISTANCE AS NEEDED TO PREVENT MOTORISTS FROM ENTERING SPACE BETWEEN THE APPLICATION AND PROTECTION VEHICLE. DISTANCE CAN BE LENGTHENED TO ACCOMODATE SIGHT DISTANCE NEEDS.
- (8) ROUND UP MILEAGE TO NEXT WHOLE MILE. WORK ZONE SHOULD NOT EXCEED FIVE (5) MILES IN LENGTH.
- (9) RADIO COMMUNICATION BETWEEN VEHICLES IS REQUIRED.
- (10) USE OF A LIGHT BAR ON ALL VEHICLES IS PREFERRED, BUT A ROTATING BEACON MAY BE USED INSTEAD.
- (11) IF WORK IS PERFORMED AT NIGHT, THE WORK AREA MUST BE ILLUMINATED WITH MACHINE AND/OR TOWER LIGHTS AS APPROVED BY THE ENGINEER.
- (12) ALL TRAFFIC CONTROL DEVICES WILL BE CONSIDERED INCIDENTAL TO THE PAY ITEMS FOR PAVEMENT MARKING AND MARKERS.

LEGEND

- PORTABLE SIGN. SIGNS MUST BE NCHRP-350 AND NCDOT APPROVED.
 - DIRECTION OF TRAFFIC FLOW
- APPLICATION VEHICLE WITH LIGHT BAR
- PROTECTION VEHICLE WITH TRUCK
 MOUNTED IMPACT ATTENUATOR (TMIA)
 AND LIGHT BAR (SEE ROADWAY
 STANDARD NO. 1165.01). TMIA MUST
 BE NCHRP-350 TEST LEVEL 3 (60+MPH)
- ADVANCE WARNING VEHICLE WITH TRUCK MOUNTED CHANGEBLE MESSAGE SIGN (CMS) AND LIGHT BAR. MESSAGE SIGN LETTER HEIGHT SHOULD BE A MINIMUM OF 10 INCHES.
- FLASHING ARROW PANEL,
 TYPE "B" (60"X30" MIN.),
 APPROPRIATE DIRECTION INDICATED
 - CHANGEABLE MESSAGE SIGN







MOVING OPERATION CARAVAN

(OPERATIONS TRAVELING 3 MPH OR FASTER)
PLACING PAVEMENT MARKING OR MARKERS
ON NON-INTERSTATE MULTILANE DIVIDED ROADWAYS

DRAWING NUMBER 7
IMPLEMENTATION DATE: 07/01/97
REVISED: 11/03/04