

NOTES:

1. ALL SIGNAL RELATED SIGNS SHALL BE REMOVED OR COVERED WHEN THE SIGNAL IS NOT OPERATING.
2. ITEM LOCATIONS ARE APPROXIMATE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONFIRM ANY MEASUREMENTS IN THE FIELD.

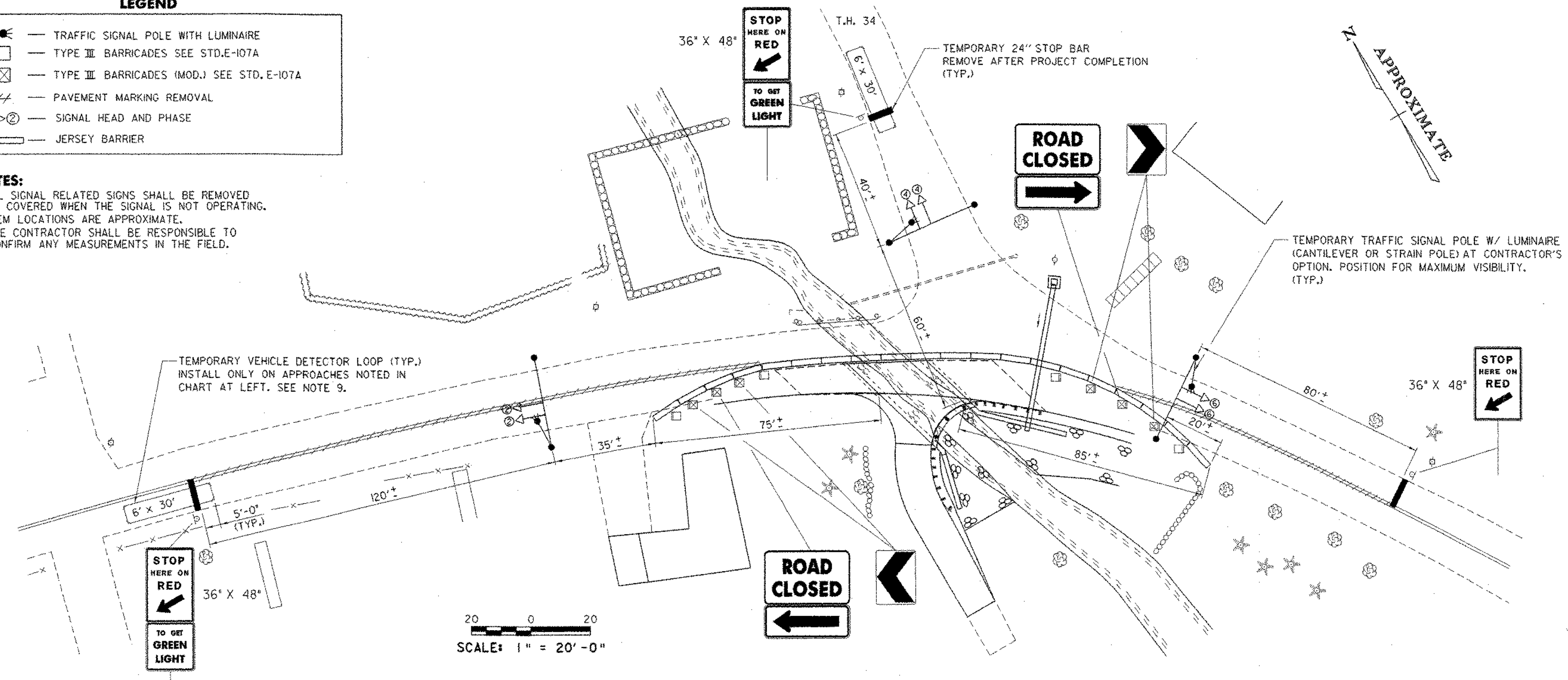
PHASING DIAGRAM AND SPECIAL NOTES FOR EACH LOCATION

PHASE	2		6		4	
MINIMUM	12	4	17	12	4	16
EXTENSION	2				2	
MAXIMUM	16				12	
HEAD 2	G	Y	R	R	R	R
HEAD 6	R	R	R	G	Y	R
HEAD 4	R	R	R	R	R	G

SPECIAL REQUIREMENTS

APPROACH	TEMPORARY VEHICLE DETECTOR	FLASHING BEACON ON ADVANCED WARNING SIGN
2	X	
6		
4	X	

ENTER CHECK MARK IN APPROPRIATE BOX WHEN REQUIRED ON THIS PROJECT



GENERAL TEMPORARY TRAFFIC SIGNAL NOTES

1. DESIGN OF THE SIGNAL SUPPORT(S) AND ANY REQUIRED GUYING IS THE RESPONSIBILITY OF THE CONTRACTOR.
2. SIGNAL TIMING/TIMING ADJUSTMENTS REQUESTED BY THE RESIDENT ENGINEER SHALL BE ACCOMPLISHED WITHIN A 48 HOUR PERIOD AND PAYMENT SHALL BE SUBSIDIARY TO THE TRAFFIC SIGNAL ITEM. THE ALL-RED CLEARANCE INTERVAL IS BASED ON AN ASSUMED SPEED OF 10-20 MPH. THE RESIDENT ENGINEER SHALL MAKE SEVERAL TRIAL RUNS TO DETERMINE THE PROPER ALL-RED CLEARANCE INTERVAL.
3. SIGNAL FACES SHALL CONSIST OF 12" LENSES. (RED, YELLOW, AND GREEN)
4. THE BOTTOM OF THE HOUSING OF A SIGNAL FACE SUSPENDED OVER A ROADWAY SHALL NOT BE LESS THAN 16 1/2 FEET NOR MORE THAN 19 FEET ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY. THE BOTTOM OF A SIGNAL FACE NOT MOUNTED OVER A ROADWAY, SHALL NOT BE LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE GROUND. CAUTION SHOULD BE USED TO INSURE COMPLIANCE WITH THE HEIGHT REQUIREMENTS IN THE EVENT THE NEW APPROACH GRADES DIFFER SIGNIFICANTLY FROM THE OLD ROAD GRADE.
5. SIGNAL FACES FOR ANY ONE APPROACH SHALL NOT BE LESS THAN 8 FEET APART MEASURED HORIZONTALLY BETWEEN CENTER OF FACES.
6. SIGNAL HEADS MAY BE HUNG ON A SPAN WIRE OR ON A CANTILEVER MAST ARM. AT LEAST ONE SIGNAL HEAD SHALL BE UNMISTAKABLY IN LINE WITH THE CENTER OF APPROACHING TRAFFIC AT ALL TIMES. THE SECOND SIGNAL HEAD MAY BE POST MOUNTED, LOCATED AT A DISTANCE NO GREATER THAN 14 1/2 FEET FROM THE CENTER OF THE APPROACH LANE WHEN THE STOP BAR IS 40 FEET FROM THE SIGNAL HEAD. CONSULT THE M.U.T.C.D. FOR ADDITIONAL INFORMATION CONCERNING SIGNAL PLACEMENT.
7. SIGNAL HEAD PLACEMENT IS CRITICAL. HEADS SHALL BE ADJUSTED TO REFLECT LANE LOCATION CHANGES.
8. THE SIGNAL SYSTEM SHALL CONSIST OF POLES, SIGNS AND POSTS, WARNING SIGN, LUMINAIRES, FLASHING BEACONS, AND SIGNAL EQUIPMENT TO PROVIDE FOR AN ADEQUATE DESIGN. IT ALSO INCLUDES PERMITS AND COST ASSOCIATED WITH PROVIDING ELECTRICAL POWER.
9. THE CONTRACTOR SHALL PROVIDE AN ACTUATED CONTROLLER. THE APPROACHES NOTED SHALL HAVE A TEMPORARY VEHICLE DETECTOR. THE TYPE OF DETECTION SHALL BE AT THE OPTION OF THE CONTRACTOR. LOOPS ARE SHOWN FOR PLACEMENT PURPOSES ONLY. THE CONTROLLER, DETECTOR AND ALL OTHER SIGNAL EQUIPMENT SHALL MEET OR EXCEED ALL NEMA STANDARDS.
10. WHEN USED, VEHICLE DETECTOR LOOPS SHALL BE 6' X 30' FOR PRESENCE DETECTION AT THE STOP BAR WITH THE NEAR PORTION LOCATED 5 FEET BEYOND THE STOP BAR.
11. ON SEMI-ACTUATED SIGNAL, PARTICULARLY WITH LONG BRIDGES, THE CONTROLLER SHOULD BE LOCATED ON THE SAME SIDE OF THE BRIDGE AS THE DETECTOR.
12. INTERVAL TIMING SHOWN IN SECONDS.
13. INTERCONNECT BETWEEN SIGNAL POLES BY WHATEVER MEANS POSSIBLE OR CONVENIENT TO PROVIDE FOR A SAFE INSTALLATION.
14. PLACE TEMPORARY POLES BEHIND GUARDRAIL WHERE POSSIBLE.
15. POLES SUPPORTING SPAN WIRES AND/OR MAST ARMS SHALL BE ADEQUATELY BRACED OR GUYED AND SHALL NOT BE PLACED SO AS TO CREATE A HAZARD TO THE TRAVELLING PUBLIC.
16. ALL TEMPORARY SIGNAL EQUIPMENT, SIGNS, ETC., SHALL BELONG TO THE CONTRACTOR AT THE END OF THE PROJECT AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL, INCLUDING ANY TEMPORARY PAVEMENT MARKINGS, UTILITY POLES, WIRES, ETC.
17. A 250 WATT MER/150 WATT HPS LUMINAIRE AND MAST ARM SHALL BE PROVIDED ON A POLE ON EACH APPROACH AT A MOUNTING HEIGHT OF 30' ABOVE ROADWAY CENTERLINE. THE INTENT IS TO LIGHT UP THE AREA AROUND THE SIGNAL HEADS AND STOP BAR FOR INCREASED VISIBILITY. THE RESIDENT ENGINEER SHALL DETERMINE THE ADEQUACY OF THE LIGHTING AND DIRECT CHANGES IF THE LIGHTING IS INSUFFICIENT.
18. STOP BARS SHALL BE LOCATED A MINIMUM OF 40' AND A MAXIMUM OF 120' FROM THE NEAREST SIGNAL HEAD.
19. PAYMENT FOR THE VEHICLE DETECTORS SHALL BE FOR EACH UNIT INSTALLED.
20. SIGNS AND POSTS AS SHOWN ON THIS SHEET AND NOTED BELOW ARE SUBSIDIARY TO THE TRAFFIC CONTROL SIGNAL ITEMS ('STOP HERE ON RED', 'SIGNAL AHEAD', 'NO PASSING ZONE', AND 'TO GET GREEN LIGHT', ETC.) THE TEMPORARY STOP BARS SHOULD BE PAID UNDER THE TEMPORARY 24' STOP BAR ITEM.
21. SEE STD. E-140 FOR 'STOP HERE ON RED' SIGN DETAIL AND E-101 FOR 'SIGNAL AHEAD' SYMBOL SIGN. SEE STANDARD E-121 FOR SIGN PLACEMENT. SEE STANDARD E-171A AND E-172 FOR ADDITIONAL INFORMATION ON SIGNALS AND DETECTORS.
22. A 'SIGNAL AHEAD' SIGN SHALL BE PLACED AT LEAST 500' FROM THE SIGNAL OR AT A POSITION TO BE DETERMINED BY THE ENGINEER.
23. THE 'NO PASSING' SIGN SHALL BE USED TO PREVENT PASSING FOR 750' IN ADVANCE OF THE STOP BAR. THE SIGN SHALL BE PER STANDARD E-102.
24. ALL ELECTRICAL WORK SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND STATE INSPECTOR.
25. TWO WAY TRAFFIC SHALL BE MAINTAINED ON THE DETOUR WHENEVER POSSIBLE. DURING TWO WAY TRAFFIC, THE SIGNALS SHALL BE SET ON FLASHING YELLOW.
26. APPROACH WIDTHS SHALL BE AS DETAILED IN SECTION 528.04(b)2 TO MINIMIZE VEHICLE DELAY.
27. TRAFFIC CONTROL WARNING SIGNS SHALL BE PROVIDED ON EACH APPROACH PER STANDARD E-107. ADDITIONAL PROJECT CONSTRUCTION SIGNS SHALL BE INSTALLED AS REQUIRED BY THE RESIDENT ENGINEER PER STANDARD E-100, E-101, E-102 & E-102A. PAYMENT FOR THESE SIGNS, THE REFLECTORIZED PLASTIC DRUMS, ETC. SHALL BE PAID AS A PART OF THE 'MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS' ITEM OR THE 'TRAFFIC CONTROL' ITEM.
28. THE 'TO GET GREEN LIGHT' SIGN IS TO BE USED ONLY ON APPROACHES WITH VEHICLE DETECTORS.
29. IF BRIDGE WORK REQUIRES LANE CLOSURE ON A ROADWAY UNDERNEATH THE BRIDGE, REFER TO STD. E-110 FOR TRAFFIC CONTROL DETAILS. PAYMENT SUBSIDIARY TO 'TRAFFIC CONTROL' OR 'MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS' AS IS APPROPRIATE.
30. IN SITUATIONS WHERE EXISTING PASSING ZONES EXTEND THROUGH THE AREA BETWEEN THE STOP BAR AND THE 'NO PASSING ZONE' SIGN, THEN TEMPORARY DOUBLE YELLOW LINES SHALL BE INSTALLED FROM THE STOP BAR TO THE 'NO PASSING ZONE' SIGN. THESE MARKINGS SHALL BE PAID UNDER THE 'TEMPORARY 4' YELLOW LINE' ITEM.
31. TEMPORARY TRAFFIC BARRIER SHOULD BE SUBSTITUTED FOR THE CHANNELIZING DEVICES SHOWN WHEN ANY OF THE FOLLOWING ARE MET:
A.) THE BRIDGE DECK IS REMOVED
B.) THE BRIDGE RAIL IS REMOVED, OR
C.) IN THE JUDGEMENT OF THE RESIDENT ENGINEER TEMPORARY BARRIER IS NEEDED.
32. WHEN TEMPORARY BARRIER IS USED, BARRIER ENDS FACING ONCOMING TRAFFIC SHALL BE TAPERED BEYOND THE CLEAR ZONE, OR PROTECTED WITH AN APPROVED END TREATMENT DESIGNED FOR THE 85TH PERCENTILE SPEED OR THE POSTED SPEED LIMIT OF THE ROADWAY.
33. PAYMENT FOR TEMPORARY BARRIER USED SHALL BE MADE UNDER THE APPROPRIATE ITEM.

PHASE ONE LAYOUT ONE-WAY ROADWAY

PROJECT NAME: ROCKINGHAM	FILE NAME: 90c053\structures\sc053p.cpl	PLOT DATE: 20-MAR-2003
PROJECT NUMBER: TH2 - 9103	PROJECT MANAGER: R.R. WHITCOMB	DRAWN BY: G. ROY
	DESIGNED BY: G. ROY	CHECKED BY: R. WHITCOMB
		SHEET 9 OF 38

STANDARDS REQUIRED:
E-100, E-101, E-102, E-102A, E-106, E-107, E-107A, E-110, E-121, E-140, E-170, E-171A, E-171B, E-171C, E-172, E-175