



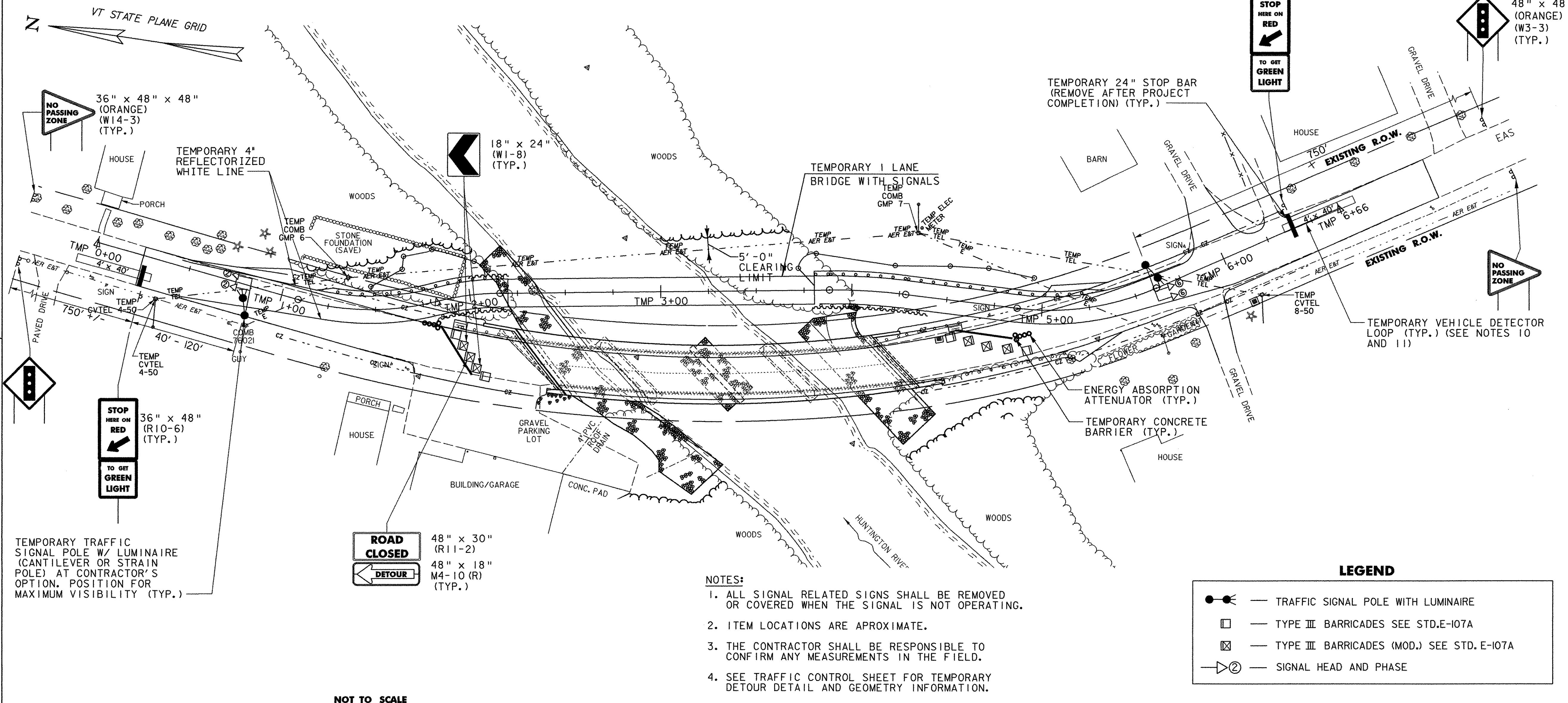
WHITE REFL. BACKGROUND MATERIALS: PER STD. E-142

**PHASING DIAGRAM**

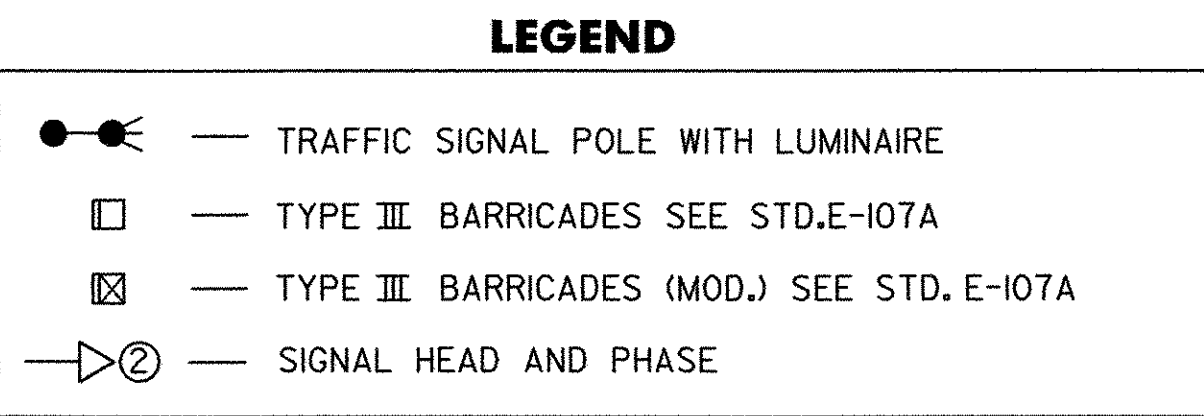
PHASE	2			6		
	G	Y	R	G	Y	R
MINIMUM	8	4	25	8	4	25
EXTENSION	2			2		
MAXIMUM	12			12		
HEAD 2	G	Y	R	R	R	R
HEAD 6	R	R	R	G	Y	R

**SPECIAL REQUIREMENTS**

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



- 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.
  4. SEE TRAFFIC CONTROL SHEET FOR TEMPORARY DETOUR DETAIL AND GEOMETRY INFORMATION.



**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 INCIDENTAL 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. 2000 MILLENNIUM EDITION 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, LUMINARIES, 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 4' X 40' FOR PRESENCE DETECTION AT THE STOP BAR WITH THE NEAR PORTION LOCATED 5 FEET BEYOND THE STOP BAR. VEHICLE DETECTOR LOOPS SHALL BE CAPABLE OF DETECTING MOTORCYCLES.
11. INTERVAL TIMING SHOWN IN SECONDS.
12. INSTALL WIRING BETWEEN SIGNAL POLES BY WHATEVER MEANS POSSIBLE OR CONVENIENT TO PROVIDE FOR A SAFE INSTALLATION. ATTACHMENT TO UTILITY POLES TO BE COORDINATED BY THE CONTRACTOR WITH UTILITY COMPANY.
13. PLACE TEMPORARY POLES BEHIND GUARDRAIL WHERE POSSIBLE.
14. 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.
15. ALL TEMPORARY SIGNAL EQUIPMENT, SIGNS, TYPE III BARRICADES, ETC., SHALL BELONG TO THE CONTRACTOR AT THE END OF THE PROJECT AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR REMOVAL, INCLUDING ANY TEMPORARY PAVEMENT MARKINGS, UTILITY POLES, WIRES, ETC.
16. 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.
17. STOP BARS SHALL BE LOCATED A MINIMUM OF 40' AND A MAXIMUM OF 120' FROM THE NEAREST SIGNAL HEAD.
18. PAYMENT FOR THE VEHICLE DETECTORS SHALL BE FOR EACH UNIT INSTALLED.
19. TYPE III BARRICADES, REFLECTORIZED PLASTIC DRUMS, SIGNS AND POSTS AS SHOWN ON THIS SHEET AND NOTED BELOW ARE INCIDENTAL TO THE TRAFFIC CONTROL SIGNAL ITEMS ('STOP HERE ON RED', 'SIGNAL AHEAD', 'NO PASSING ZONE', 'NO TURN ON RED', AND 'TO GET GREEN LIGHT', ETC.). THE TEMPORARY STOP BARS WILL BE PAID FOR UNDER THE TEMPORARY 24" STOP BAR ITEM.
20. THE 'NO PASSING' SIGN SHALL BE USED TO PREVENT PASSING FOR 750' IN ADVANCE OF THE STOP BAR. THE SIGNAL SHALL BE PER STANDARD E-102.
21. SEE STD. E-140 FOR 'STOP HERE ON RED' SIGN DETAIL, E-101 FOR 'SIGNAL AHEAD' SYMBOL SIGN AND CHEVRON SYMBOL SIGN. SEE STANDARD E-102A FOR 'ROAD CLOSED' SIGN. SEE STANDARD E-121 FOR SIGN PLACEMENT. SEE STANDARD E-171A AND E-172 FOR ADDITIONAL INFORMATION ON SIGNALS AND DETECTORS.
22. ALL ELECTRICAL WORK SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND STATE INSPECTOR.
23. ALL STOP SIGNS AND ANY TRAFFIC SIGNS MADE IRRELEVANT DUE TO THE TEMPORARY SIGNAL SHALL BE COVERED WITH A NON TRANSLUCENT WEATHER RESISTANT MATERIAL. THESE SIGNS SHOULD ONLY BE COVERED DURING THE OPERATION OF THE TEMPORARY SIGNAL OR AT THE DISCRETION OF THE ENGINEER. THE COSTS OF COVERING AND UNCOVERING THESE SIGNS SHALL BE INCLUDED IN THE TRAFFIC CONTROL SIGNAL ITEM.
24. CONSTRUCTION APPROACH SIGNS SHALL BE PROVIDED ON EACH APPROACH PER STANDARD E-107. ADDITIONAL CONSTRUCTION APPROACH SIGNS SHALL BE INSTALLED AS REQUIRED BY THE RESIDENT ENGINEER PER STANDARD E-100, E-101, E-102 & E-102A. PAYMENT FOR THESE SIGNS SHALL BE PAID FOR AS PART OF THE 'TRAFFIC CONTROL' ITEM.
25. PAYMENT FOR THE TEMPORARY BARRIER USED SHALL BE MADE UNDER THE APPROPRIATE ITEM.
26. WHEN A TEMPORARY BARRIER IS USED, A BARRIER ENDING 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.

<b>STDS. REQUIRED</b>	<b>E-100, E-101, E-102, E-102A, E-106, E-107, E-107A, E-110, E-121, E-140, E-142, E-170, E-171A, E-171B, E-171C, E-172, E-175</b>
PROJECT NAME:	HUNTINGTON
PROJECT NUMBER:	BRO 1445 (29)
FILE NAME:	...\\Cadd\Trans\201302ts2.dgn
PROJECT LEADER:	M. CHENETTE
DESIGNED BY:	D. ALTERI
<b>TRAFFIC SIGNAL PLAN</b>	
PLLOT DATE:	1/30/2006
DRAWN BY:	J. OAKMAN
CHECKED BY:	D. ALTERI
SHEET	22 OF 63

