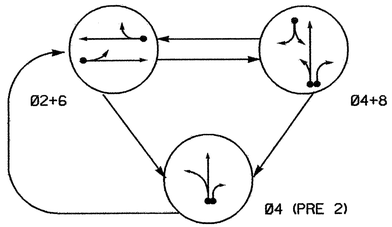
| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| I-2102 | Sig.2 |

## PHASING DIAGRAM




**PHASING DIAGRAM DETECTION LEGEND**

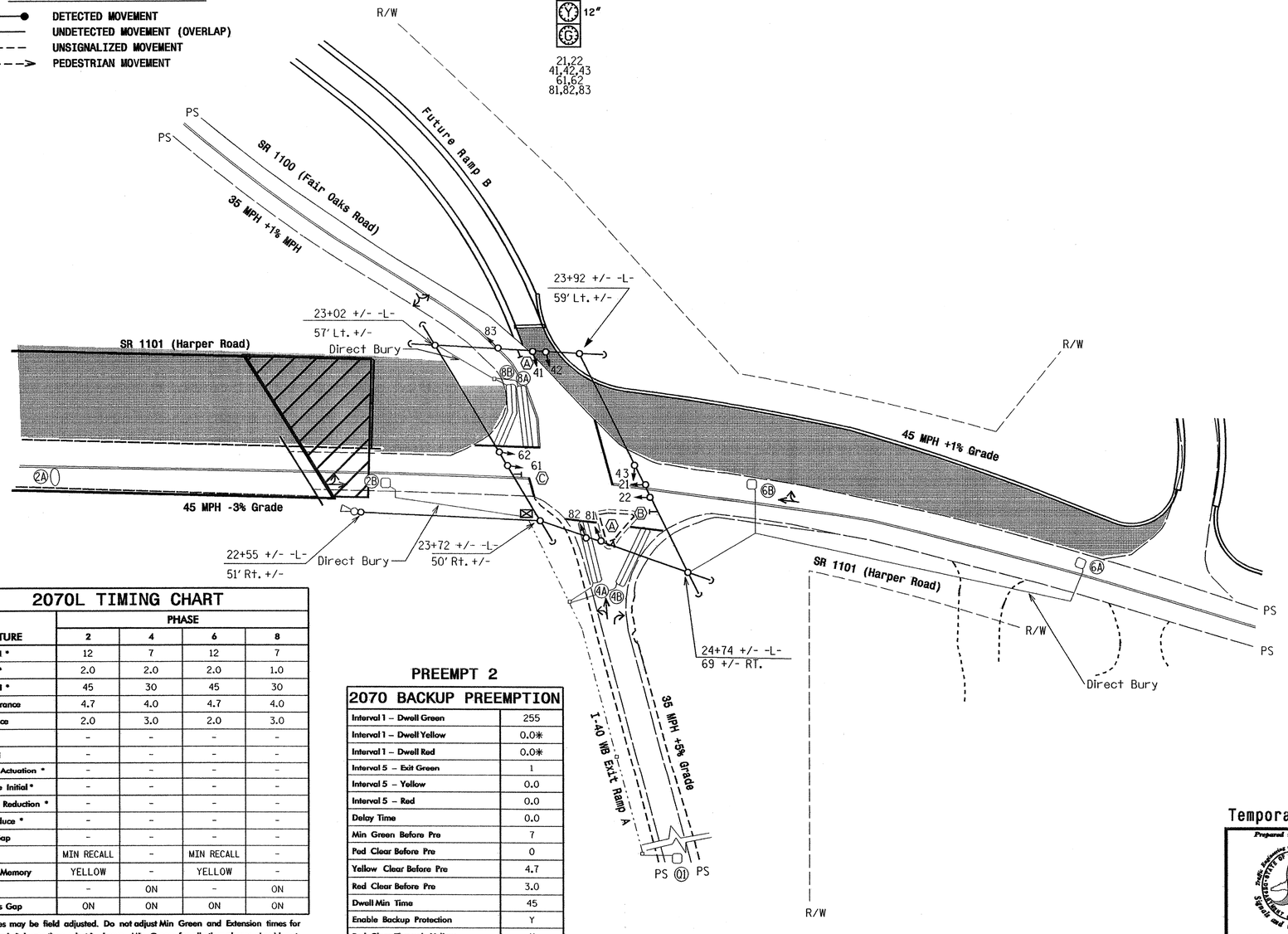
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

| TABLE OF OPERATION | | | | |
|---|---|---|---|---|
| SIGNAL FACE | PHASE Ø2+6 | PHASE Ø4+8 | PHASE PRE 2 | PHASE FLASH |
| 21,22 | G | R | R | Y |
| 41,42,43 | R | G | G | R |
| 61,62 | G | R | R | Y |
| 81,82,83 | R | G | R | R |

## SIGNAL FACE I.D.

Denotes L.E.D.

21,22
41,42,43
61,62
81,82,83




## 2070L TIMING CHART

| FEATURE | PHASE 2 | PHASE 4 | PHASE 6 | PHASE 8 |
|---|---|---|---|---|
| Min Green 1 * | 12 | 7 | 12 | 7 |
| Extension 1 * | 2.0 | 2.0 | 2.0 | 1.0 |
| Max Green 1 * | 45 | 30 | 45 | 30 |
| Yellow Clearance | 4.7 | 4.0 | 4.7 | 4.0 |
| Red Clearance | 2.0 | 3.0 | 2.0 | 3.0 |
| Walk 1 * | - | - | - | - |
| Don't Walk 1 | - | - | - | - |
| Seconds Per Actuation * | - | - | - | - |
| Max Variable Initial * | - | - | - | - |
| Time Before Reduction * | - | - | - | - |
| Time To Reduce * | - | - | - | - |
| Minimum Gap | - | - | - | - |
| Recall Mode | MIN RECALL | - | MIN RECALL | - |
| Vehicle Call Memory | YELLOW | - | YELLOW | - |
| Dual Entry | - | ON | - | ON |
| Simultaneous Gap | ON | ON | ON | ON |

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

## PREEMPT 2

| 2070 BACKUP PREEMPTION | |
|---|---|
| Interval 1 – Dwell Green | 255 |
| Interval 1 – Dwell Yellow | 0.0* |
| Interval 1 – Dwell Red | 0.0* |
| Interval 5 – Exit Green | 1 |
| Interval 5 – Yellow | 0.0 |
| Interval 5 – Red | 0.0 |
| Delay Time | 0.0 |
| Min Green Before Pre | 7 |
| Ped Clear Before Pre | 0 |
| Yellow Clear Before Pre | 4.7 |
| Red Clear Before Pre | 3.0 |
| Dwell Min Time | 45 |
| Enable Backup Protection | Y |
| Ped Clear Through Yellow | N |

*Clearance time defaults to time used for phase during normal operation.

## 2070L LOOP & DETECTOR INSTALLATION

| INDUCTIVE LOOPS | | | | | DETECTOR PROGRAMMING | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LOOP | SIZE (FT) | TURNS | DISTANCE FROM STOPBAR (FT) | NEW LOOP | PHASE | CALLING | EXTENSION | FULL TIME DELAY | SYSTEM LOOP | STRETCH TIME | DELAY TIME | QUEUE MAX OCCUPANCY TIME | QUEUE GAP RESET TIME | PREEMPT INDEX FOR QUEUE | NEW CAND |
| 2A | * | * | 300 | * | 2 | Y | Y | - | - | 1.8 | - | - | - | - | Y |
| 2B | 6X6 | 4 | 90 | Y | 2 | Y | Y | - | - | - | - | - | - | - | Y |
| 4A | 6X40 | 2-4-2 | 0 | Y | 4 | Y | Y | - | - | - | - | - | - | - | Y |
| 4B | 6X40 | 2-4-2 | 0 | Y | 4 | Y | Y | - | - | - | 15 | - | - | - | Y |
| 6A | 6x6 | 5 | 300 | Y | 6 | Y | Y | - | - | 1.8 | - | - | - | - | Y |
| 6B | 6x6 | 4 | 90 | Y | 6 | Y | Y | - | - | - | - | - | - | - | Y |
| 8A | 6x40 | 2-4-2 | 0 | Y | 8 | Y | Y | - | - | - | 3 | - | - | - | Y |
| 8B | 6X40 | 2-4-2 | 0 | Y | 8 | Y | Y | - | - | - | 15 | - | - | - | Y |
| ** Q1 | 6X6 | 5 | 400 | Y | PRE 2 | - | - | - | - | - | - | 5 | 0.1 | 2 | Y |

* Microwave Detection Zone
** See note 4

**2 Phase**
**Fully Actuated with Backup Preemption**
**Isolated**

## NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2002 and "Standard Specifications for Roads and Structures" dated January 2002.
2. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
3. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
4. Program controller to initiate backup preemption upon activation of queue backup loops.
5. Set all detector units to presence mode.

| PLAN QUANTITIES | |
|---|---|
| Pay Item | Feet |
| Signal Cable | 770 |
| Messenger Cable | 600 |
| Lead-in Cable | 1440 |

## LEGEND

| PROPOSED | | EXISTING |
|---|---|---|
| | Traffic Signal Head | |
| | Modified Signal Head | N/A |
| | Sign | |
| | Pedestrian Signal Head With Push Button & Sign | |
| | Signal Pole with Guy | |
| | Signal Pole with Sidewalk Guy | |
| | Inductive Loop Detector | |
| | Controller & Cabinet | |
| | Junction Box | |
| | 2-in Underground Conduit | |
| N/A | Right of Way | |
| | Directional Arrow | |
| | Pavement Marking Arrow | |
| | Microwave Detection Zone | |
| | Microwave Detector | |
| | Construction Zone | |
| A | "LEFT TURN YIELD ON GREEN" Sign (R10-12) | A |
| B | No Right Turn Sign (R3-1) | B |
| C | No Left Turn Sign (R3-2) | C |

Temporary Signal 1 - TCP Phase I

Prepared in the Offices of:
Traffic Engineering and Safety Systems Branch
North Carolina Department of Transportation
Signal and Geometrics Section
122 N. McDowell St., Raleigh, NC 27603

SCALE 0 40 1"=40'

**SR 1101 (Harper Road)**
**At**
**I-40 WB Exit Ramp A and**
**SR 1100 (Fair Oaks Road)**

Division 9 Forsyth County Clemmons

PLAN DATE: April 2004 REVIEWED BY: J. P. Galloway
PREPARED BY: C.J. Collins REVIEWED BY:

| REVISIONS | INIT. | DATE |
|---|---|---|
| | | |

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 24393 ENGINEER TIMOTHY J. WILLIAMS

SIGNATURE 7/1/04 DATE

SIG. INVENTORY NO. 09-0763 T1

01-JUL-2004 11:55
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cjcollins