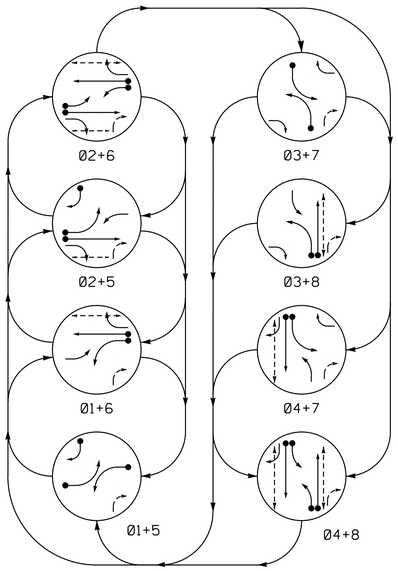
DocuSign Envelope ID: A255E605-24D7-4CFB-B5B8-92120EC542FC

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| R-5725 | Sig-7.0 |

## PHASING DIAGRAM




PHASING DIAGRAM DETECTION LEGEND

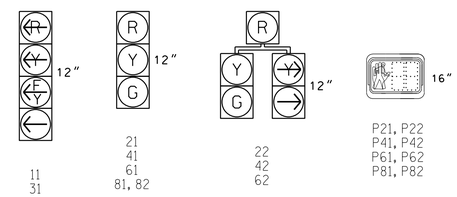
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

## TABLE OF OPERATION

| SIGNAL FACE | PHASE 01+5 | 01+6 | 02+5 | 02+6 | 03+7 | 03+8 | 04+7 | 04+8 | FLASH |
|---|---|---|---|---|---|---|---|---|---|
| 11 | ←● | ← | F Y | F Y | ←R | ←R | ←R | ←R | ←Y |
| 21 | R | R | G | G | R | R | R | R | Y |
| 22 | R | R | G | G | R/→ | R/→ | R | R | Y |
| 31 | ←R | ←R | ←R | ←R | ← | ← | F Y | F Y | ←R |
| 41 | R | R | R | R | R | R | G | G | R |
| 42 | R/→ | R | R/→ | R | R | R | G | G | R |
| 51 | ←● | F Y | ← | F Y | ←R | ←R | ←R | ←R | ←Y |
| 61 | R | G | R | G | R | R | R | R | Y |
| 62 | R | G | R | G | R/→ | R | R/→ | R | Y |
| 71 | ←R | ←R | ←R | ←R | ← | F Y | ← | F Y | ←R |
| 81, 82 | R | R | R | R | R | G | R | G | R |
| P21, P22 | DW | DW | W | W | DW | DW | DW | DW | DRK |
| P41, P42 | DW | DW | DW | DW | DW | DW | W | W | DRK |
| P61, P62 | DW | W | DW | W | DW | DW | DW | DW | DRK |
| P81, P82 | DW | DW | DW | DW | DW | W | DW | W | DRK |

## SIGNAL FACE I.D.

All Heads L.E.D.



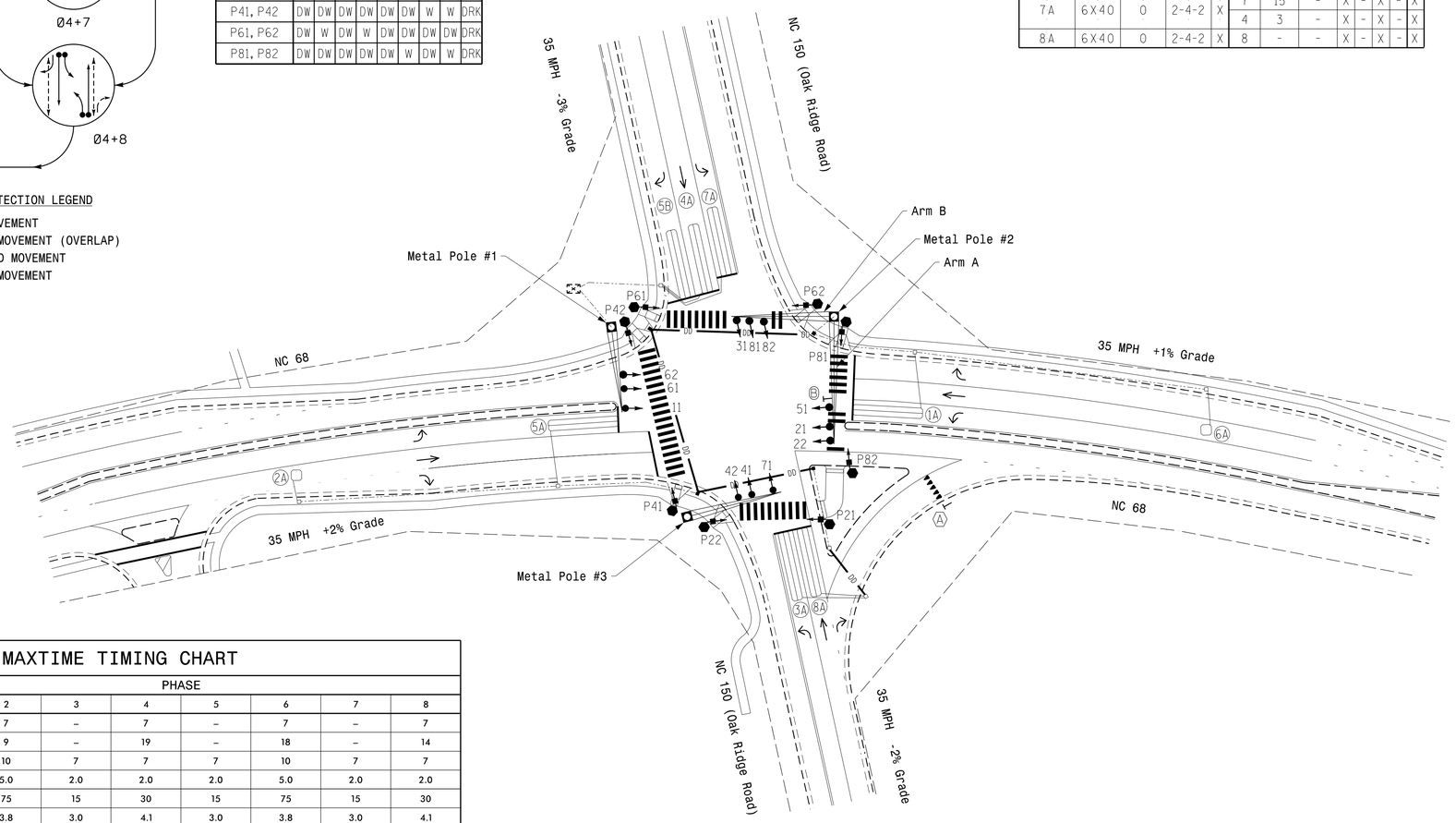

## MAXTIME DETECTOR INSTALLATION CHART

| DETECTOR | | | | | PROGRAMMING | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LOOP | SIZE (FT) | DISTANCE FROM STOPBAR (FT) | TURNS | NEW LOOP | CALL PHASE | DELAY TIME | EXTEND TIME | EXTEND | ADDED INITIAL | CALL | DELAY DURING GREEN | NEW CARD |
| 1A | 6X40 | 0 | 2-4-2 | X | 1 | 15 | - | X | - | X | - | X |
| | | | | | 6 | 3 | - | X | - | X | X | X |
| 2A | 6X6 | 200 | 4 | X | 2 | - | - | X | X | X | - | X |
| 3A | 6X40 | 0 | 2-4-2 | X | 3 | 15 | - | X | - | X | - | X |
| | | | | | 8 | 3 | - | X | - | X | - | X |
| 4A | 6X40 | 0 | 2-4-2 | X | 4 | - | - | X | - | X | - | X |
| 5A | 6X40 | 0 | 2-4-2 | X | 5 | 15 | - | X | - | X | - | X |
| | | | | | 2 | 3 | - | X | - | X | X | X |
| 5B | 6X40 | 0 | 2-4-2 | X | 5 | 15 | - | X | - | X | - | X |
| 6A | 6X6 | 200 | 4 | X | 6 | - | - | X | X | X | - | X |
| 7A | 6X40 | 0 | 2-4-2 | X | 7 | 15 | - | X | - | X | - | X |
| | | | | | 4 | 3 | - | X | - | X | - | X |
| 8A | 6X40 | 0 | 2-4-2 | X | 8 | - | - | X | - | X | - | X |

## 8 Phase Fully Actuated Isolated

## NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 and/or phase 5 may be lagged.
4. Phase 3 and/or phase 7 may be lagged.
5. Set all detector units to presence mode.
6. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
7. Program pedestrian heads to countdown the flashing "Don't Walk" time only.




## 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 | |
| N/A | Directional Drill | DD |
| | Metal Strain Pole | |
| | Type II Signal Pedestal | |
| | Curb Ramp | N/A |
| | "YIELD" Sign (R1-2) | |
| | "U-TURN YIELD TO RIGHT TURN" Sign (R10-16) | |

## MAXTIME TIMING CHART

| FEATURE | PHASE 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Walk * | – | 7 | – | 7 | – | 7 | – | 7 |
| Ped Clear * | – | 9 | – | 19 | – | 18 | – | 14 |
| Min Green | 7 | 10 | 7 | 7 | 7 | 10 | 7 | 7 |
| Passage * | 2.0 | 5.0 | 2.0 | 2.0 | 2.0 | 5.0 | 2.0 | 2.0 |
| Max 1 * | 15 | 75 | 15 | 30 | 15 | 75 | 15 | 30 |
| Yellow Change | 3.0 | 3.8 | 3.0 | 4.1 | 3.0 | 3.8 | 3.0 | 4.1 |
| Red Clear | 3.2 | 2.6 | 3.3 | 2.5 | 3.3 | 2.6 | 3.4 | 2.5 |
| Added Initial * | – | 2.5 | – | – | – | 2.5 | – | – |
| Maximum Initial * | – | 24 | – | – | – | 24 | – | – |
| Time Before Reduction * | – | 15 | – | – | – | 15 | – | – |
| Time To Reduce * | – | 30 | – | – | – | 30 | – | – |
| Minimum Gap | – | 3.0 | – | – | – | 3.0 | – | – |
| Advance Walk | – | – | – | – | – | – | – | – |
| Non Lock Detector | X | – | X | X | X | – | X | X |
| Vehicle Recall | – | MIN RECALL | – | – | – | MIN RECALL | – | – |
| Dual Entry | – | – | – | X | – | – | – | X |

* 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.

Signal Upgrade - Final Design

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared for: Transportation Mobility and Safety Division, Signal Design Section, Department of Transportation, State of North Carolina

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SCALE 0 40 1"=40'

# NC 68 at NC 150 (Oak Ridge Road)

Division 7 Guilford County Oak Ridge

| | | | |
|---|---|---|---|
| PLAN DATE: | April 2023 | REVIEWED BY: | TS Popelka |
| PREPARED BY: | JA Wendt | RKA PROJ. NO.: | 18062 (040) |

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

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 051573 ENGINEER TIMOTHY S. POPELKA

DocuSigned by: Timothy Popelka
SIGNATURE 04/05/2023 DATE

SIG. INVENTORY NO. 07-0883