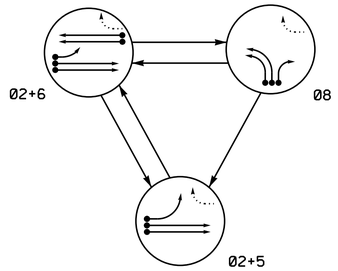
DocuSign Envelope ID: 199DFD23-A899-420C-9818-0BA056D062A6

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| I-5714 / U-5114 | Sig. 15.0 |

# 3 Phase
# Fully Actuated
# Gilead Road Closed Loop System

## PHASING DIAGRAM




PHASING DIAGRAM DETECTION LEGEND

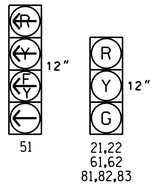
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

## TABLE OF OPERATION

| SIGNAL FACE | PHASE 02+5 | PHASE 02+6 | PHASE 08 | PHASE FLASH |
|---|---|---|---|---|
| 21,22 | G | G | R | Y |
| 51 | ~~—~~ | ~~F Y~~ | ~~R~~ | ~~Y~~ |
| 61,62 | R | G | R | Y |
| 81,82,83 | R | R | G | R |

## SIGNAL FACE I.D.

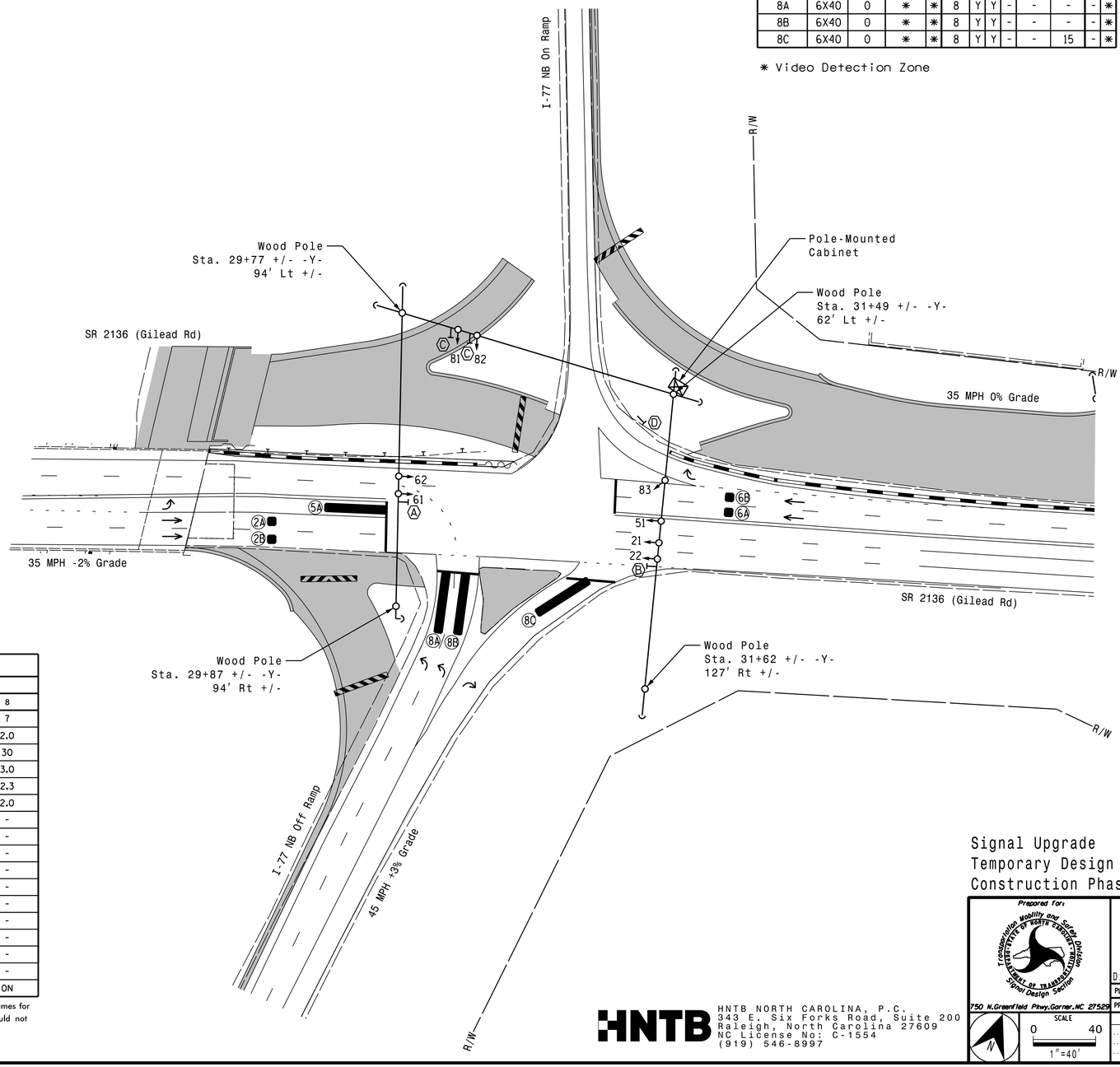
All Heads L.E.D.




## OASIS 2070E LOOP & DETECTOR INSTALLATION CHART

| INDUCTIVE LOOPS | | | | | DETECTOR PROGRAMMING | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| LOOP | SIZE (FT) | DISTANCE FROM STOPBAR (FT) | TURNS | NEW LOOP | PHASE | CALLING | EXTENSION | FULL TIME DELAY | STRETCH TIME | DELAY TIME | SYSTEM LOOP | NEW CARD |
| 2A | 6X6 | 70 | * | * | 2 | Y | Y | - | - | - | - | * |
| 2B | 6X6 | 70 | * | * | 2 | Y | Y | - | - | - | - | * |
| 5A | 6X40 | 0 | * | * | 5 | Y | Y | - | - | 15 | - | * |
| | | | | | 2 | Y | Y | - | - | - | - | * |
| 6A | 6X6 | 70 | * | * | 6 | Y | Y | - | - | - | - | * |
| 6B | 6X6 | 70 | * | * | 6 | Y | Y | - | - | - | - | * |
| 8A | 6X40 | 0 | * | * | 8 | Y | Y | - | - | - | - | * |
| 8B | 6X40 | 0 | * | * | 8 | Y | Y | - | - | - | - | * |
| 8C | 6X40 | 0 | * | * | 8 | Y | Y | - | - | 15 | - | * |

* Video Detection Zone




## OASIS 2070E TIMING CHART

| FEATURE | PHASE 2 | PHASE 5 | PHASE 6 | PHASE 8 |
|---|---|---|---|---|
| Min Green 1 * | 10 | 7 | 10 | 7 |
| Extension 1 * | 3.0 | 2.0 | 3.0 | 2.0 |
| Max Green 1 * | 60 | 25 | 60 | 30 |
| Yellow Clearance | 4.0 | 3.0 | 4.0 | 3.0 |
| Red Clearance | 3.0 | 3.6 | 3.0 | 2.3 |
| Red Revert | 2.0 | 2.0 | 2.0 | 2.0 |
| 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 | - | - | - | - |
| 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.

## 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 5 may be lagged.
4. Set all detector units to presence mode.
5. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
6. Incorporate Video Detection system for vehicle detection.
7. Provide the Engineer with the Manufacturer's approved Video Detection locations and mounting heights to obtain detection zones as shown.
8. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
9. Closed loop system data: Controller Asset #1619

## 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 | |
| | Video Detection Zone | |
| | Directional Drill | N/A |
| | Wheelchair Ramp | |
| | Construction Zone | N/A |
| | Construction Barrier | N/A |
| Ⓐ | No U-Turn/No Left Turn Sign (R3-18) | Ⓐ |
| Ⓑ | No Right Turn Sign (R3-1) | Ⓑ |
| Ⓒ | Left Arrow "ONLY" Sign (R3-5L) | Ⓒ |
| Ⓓ | "YIELD" Sign (R1-2) | Ⓓ |

Signal Upgrade
Temporary Design 1
Construction Phase I

**DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED**

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Prepared for: Transportation Mobility and Safety Division, Department of Transportation, State of North Carolina, Signal Design Section
750 N.Greenfield Pkwy.Garner,NC 27529

SCALE 0 40 1"=40'

SR 2136 (Gilead Road)
at
I-77 NB Ramps

Division 10 Mecklenburg Co. Huntersville

PLAN DATE: December 2017 REVIEWED BY: A.D. Klinksiek
PREPARED BY: A.H. Thornburg REVIEWED BY: N.R. Simmons

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

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031464 ENGINEER NATASHA R. SIMMONS

DocuSigned by: Natasha R. Simmons 4/23/2018
SIGNATURE DATE

SIG. INVENTORY NO. 10-1619 T1