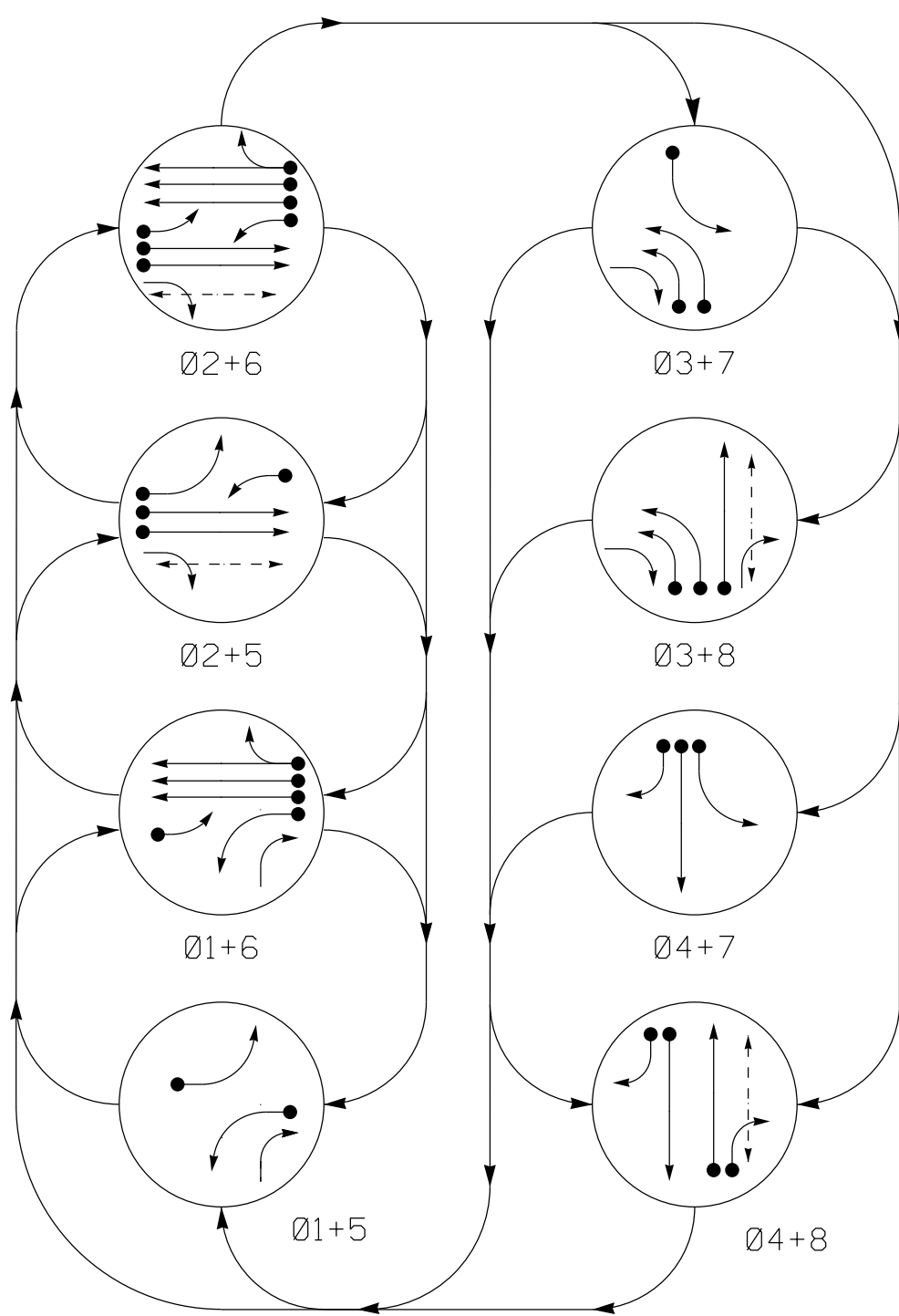
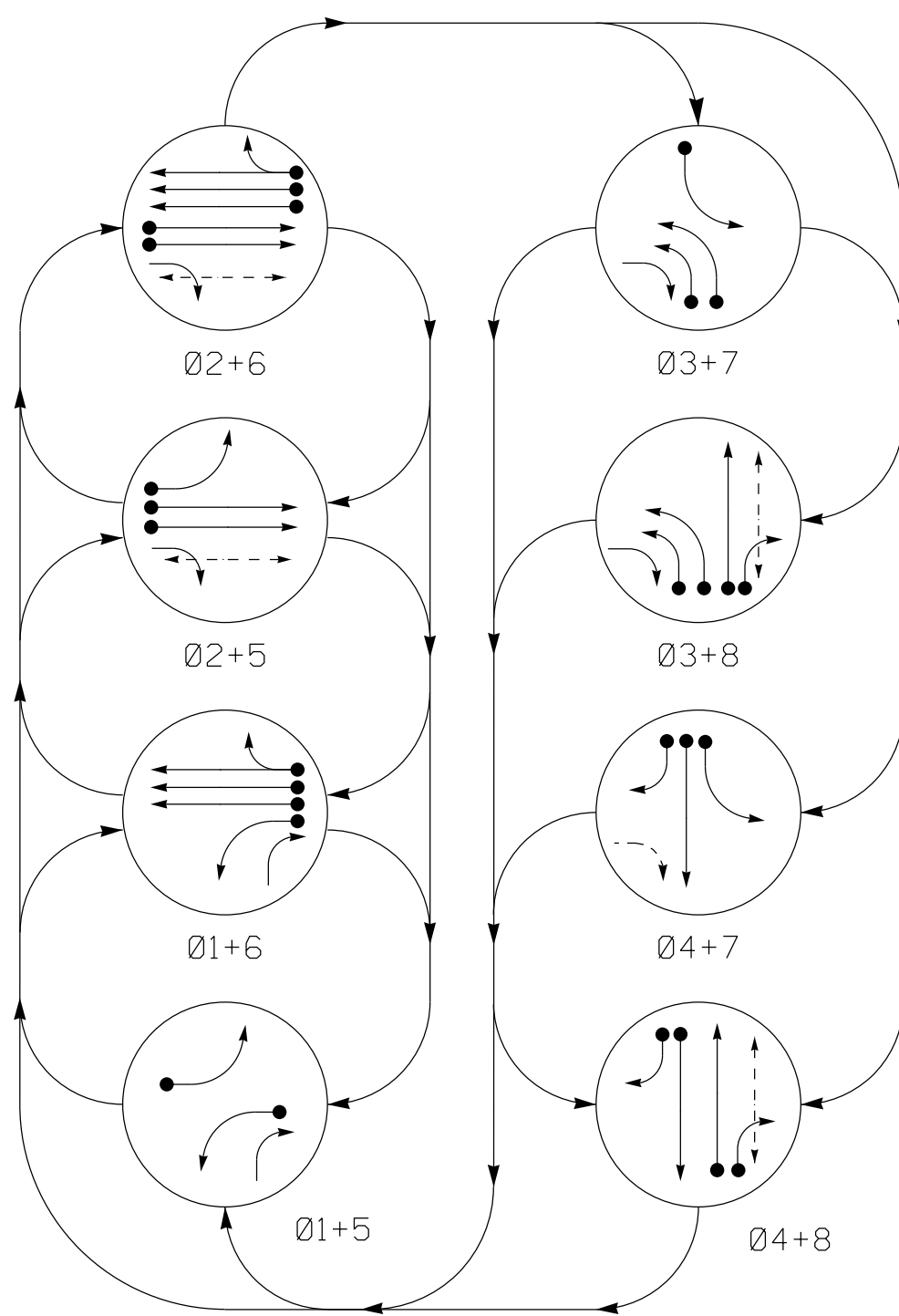


DEFAULT PHASING DIAGRAM



ALTERNATE PHASING DIAGRAM



ALTERNATE PHASING TABLE OF OPERATION

| SIGNAL FACE | PHASE | | | | | | | |
|-------------|-------|------|------|------|------|------|----------|----------|
| | Ø1+5 | Ø2+5 | Ø3+5 | Ø3+7 | Ø4+7 | Ø4+8 | P21, P22 | P81, P82 |
| 11 | ← | ← | ← | ← | ← | ← | ← | ← |
| 21, 22 | R | R | G | G | R | R | R | Y |
| 23 | R | R | ← | ← | ← | ← | ← | ← |
| 31, 32 | ← | ← | ← | ← | ← | ← | ← | ← |
| 41, 42 | R | R | R | R | R | G | G | R |
| 51 | ← | ← | ← | ← | ← | ← | ← | ← |
| 61, 62 | R | G | R | G | R | R | R | Y |
| 71 | ← | ← | ← | ← | ← | ← | ← | ← |
| 81, 82 | R | R | R | R | R | G | R | G |
| 83 | ← | ← | ← | ← | ← | ← | ← | ← |
| P21, P22 | DW | DW | W | W | DW | DW | DW | DRK |
| P81, P82 | DW | DW | DW | DW | W | DW | W | DRK |

W - Walk
DW - Don't Walk
DRK - Dark

OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

| LOOP | SIZE (FT) | DISTANCE FROM STOPBAR (FT) | TURNS | NEW LOOP | DETECTOR PROGRAMMING | | | | | | | |
|------|-----------|----------------------------|-------|----------|----------------------|---------|-----------|-----------------|--------------|------------|-------------|----------|
| | | | | | PHASE | CALLING | EXTENSION | FULL TIME DELAY | STRETCH TIME | DELAY TIME | SYSTEM LOOP | NEW CARD |
| 1A | 6x40 | 0 | 2-4-2 | Y | 1 | Y | Y | - | - | *15 | - | - |
| 1B | 6x40 | 0 | 2-4-2 | Y | 6** | Y | Y | - | - | 3 | - | - |
| 2A | 6x6 | 300 | 6 | Y | 2 | Y | Y | - | - | 15 | - | - |
| 2B | 6x6 | 300 | 6 | Y | 2 | Y | Y | - | - | - | - | - |
| 3A | 6x40 | 0 | 2-4-2 | Y | 3 | Y | Y | - | - | 3 | - | - |
| 3B | 6x40 | 0 | 2-4-2 | Y | 3 | Y | Y | - | - | - | - | - |
| 4A | 6x40 | 0 | 2-4-2 | Y | 4 | Y | Y | - | - | - | - | - |
| 4B | 6x40 | +5 | 2-4-2 | Y | 4 | Y | Y | - | - | 15 | - | - |
| 5A | 6x40 | 0 | 2-4-2 | Y | 5 | Y | Y | - | - | *15 | - | - |
| 6A | 6x6 | 300 | 5 | Y | 6 | Y | Y | - | - | 3 | - | - |
| 6B | 6x6 | 300 | 5 | Y | 6 | Y | Y | - | - | - | - | - |
| 7A | 6x40 | 0 | 2-4-2 | Y | 7 | Y | Y | - | - | 3 | - | - |
| 8A | 6x40 | 0 | 2-4-2 | Y | 8 | Y | Y | - | - | - | - | - |

* Reduce Delay during Alternative Phasing Operation to 3 secs.
** Disable Phase 2/6 Call for Loops 1A, and 5A During Alternative Phasing Operation.

8 Phase Fully Actuated Wilmington Signal System NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or phase 5 may be lagged.
- Phase 3 and/or phase 7 may be lagged.
- Set all detector units to presence mode.
- The Division Traffic Engineer will determine the hours of use for each phasing plan.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing Don't Walk time only.
- Maximum times shown in timing charts are for free-run operation only. Coordinated signal system timing values supersede these values.
- Signal system data: Controller Asset #0076

PHASING DIAGRAM DETECTION LEGEND

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

DEFAULT TABLE OF OPERATION

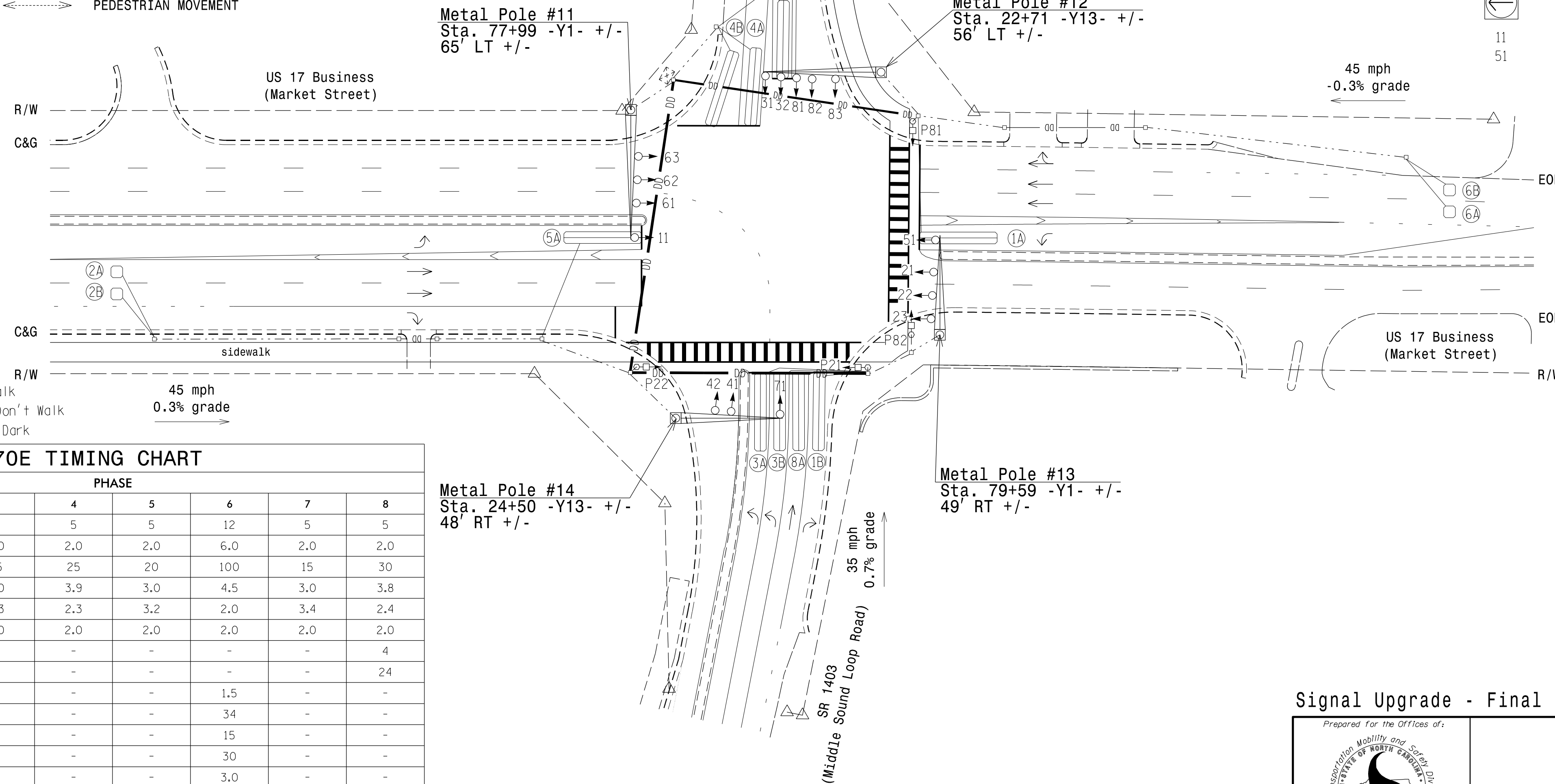
| SIGNAL FACE | PHASE | | | | | | | |
|-------------|-------|------|------|------|------|------|----------|----------|
| | Ø1+5 | Ø2+5 | Ø3+5 | Ø3+7 | Ø4+7 | Ø4+8 | P21, P22 | P81, P82 |
| 11 | ← | ← | ← | ← | ← | ← | ← | ← |
| 21, 22 | R | R | G | G | R | R | R | Y |
| 23 | R | R | ← | ← | ← | ← | ← | ← |
| 31, 32 | ← | ← | ← | ← | ← | ← | ← | ← |
| 41, 42 | R | R | R | R | R | G | G | R |
| 51 | ← | ← | ← | ← | ← | ← | ← | ← |
| 61, 62 | R | G | R | G | R | R | R | Y |
| 71 | ← | ← | ← | ← | ← | ← | ← | ← |
| 81, 82 | R | R | R | R | R | G | R | G |
| 83 | ← | ← | ← | ← | ← | ← | ← | ← |
| P21, P22 | DW | DW | W | W | DW | DW | DW | DRK |
| P81, P82 | DW | DW | DW | DW | W | DW | W | DRK |

W - Walk
DW - Don't Walk
DRK - Dark

OASIS 2070E TIMING CHART

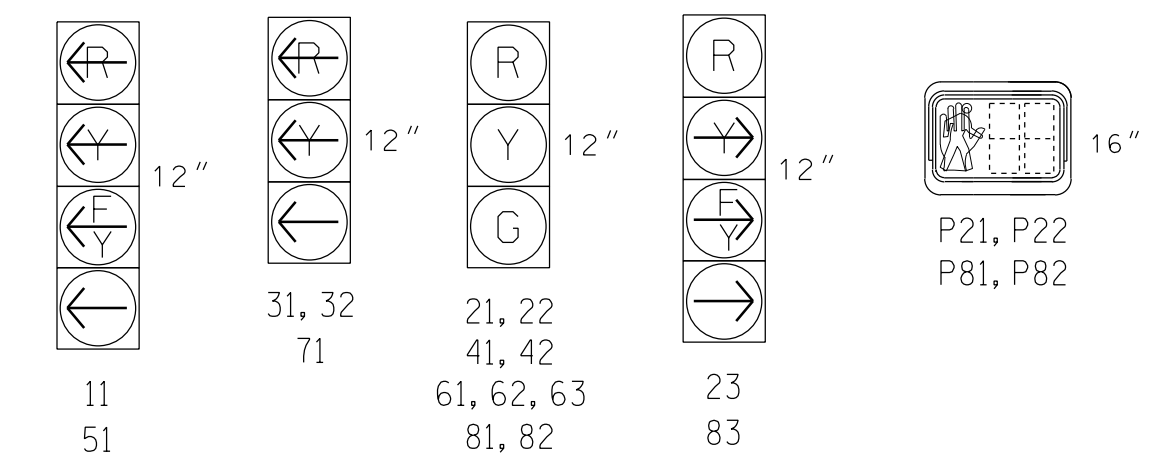
| FEATURE | PHASE | | | | | | | |
|------------------------|-------|------------|-----|-----|------------|-----|-----|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Min Green 1* | 5 | 12 | 5 | 5 | 5 | 12 | 5 | 5 |
| Extension 1* | 2.0 | 6.0 | 2.0 | 2.0 | 2.0 | 6.0 | 2.0 | 2.0 |
| Max Green 1* | 20 | 100 | 25 | 25 | 20 | 100 | 15 | 30 |
| Yellow Clearance | 3.0 | 4.5 | 3.0 | 3.9 | 3.0 | 4.5 | 3.0 | 3.8 |
| Red Clearance | 3.4 | 2.0 | 3.3 | 2.3 | 3.2 | 2.0 | 3.4 | 2.4 |
| Red Revert | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Walk 1* | - | 4 | - | - | - | - | - | 4 |
| Don't Walk 1 | - | 25 | - | - | - | - | - | 24 |
| Seconds Per Actuation* | - | 1.5 | - | - | 1.5 | - | - | - |
| Max Variable Initial* | - | 34 | - | - | 34 | - | - | - |
| Time Before Reduction* | - | 15 | - | - | 15 | - | - | - |
| Time To Reduce* | - | 30 | - | - | 30 | - | - | - |
| Minimum Gap | - | 3.0 | - | - | 3.0 | - | - | - |
| Recall Mode | - | MIN RECALL | - | - | MIN RECALL | - | - | - |
| Vehicle Call Memory | - | YELLOW | - | - | YELLOW | - | - | - |
| Dual Entry | - | - | - | - | - | - | - | - |
| Simultaneous Gap | ON | ON | ON | ON | 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.



SIGNAL FACE I.D.

All Heads L.E.D.



LEGEND

- PROPOSED:**
 - Traffic Signal Head
 - Modified Signal Head
 - Type II Signal Pedestal
 - 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
 - Directional Drill
 - Right of Way
 - Directional Arrow
 - Metal Pole with Mastarm
- EXISTING:**
 - N/A
 - N/A
 - N/A
 - N/A
 - N/A

Signal Upgrade - Final Design

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

| | | | |
|--------------------------|---|---|------|
| | US 17 Business (Market Street) at SR 1403 (Middle Sound Loop Road) | | SEAL |
| | Division 03 New Hanover County | | SEAL |
| PLAN DATE: April 2017 | | REVIEWED BY: MB Toth | |
| PREPARED BY: LD Stouchko | | REVIEWED BY: | |
| REVISIONS | | INIT. | DATE |
| | | DocuSigned by: Melissa B. Toth, License No. 025892 Date: 6/15/2017 Sig. Inventory No. 03-0076 | |

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