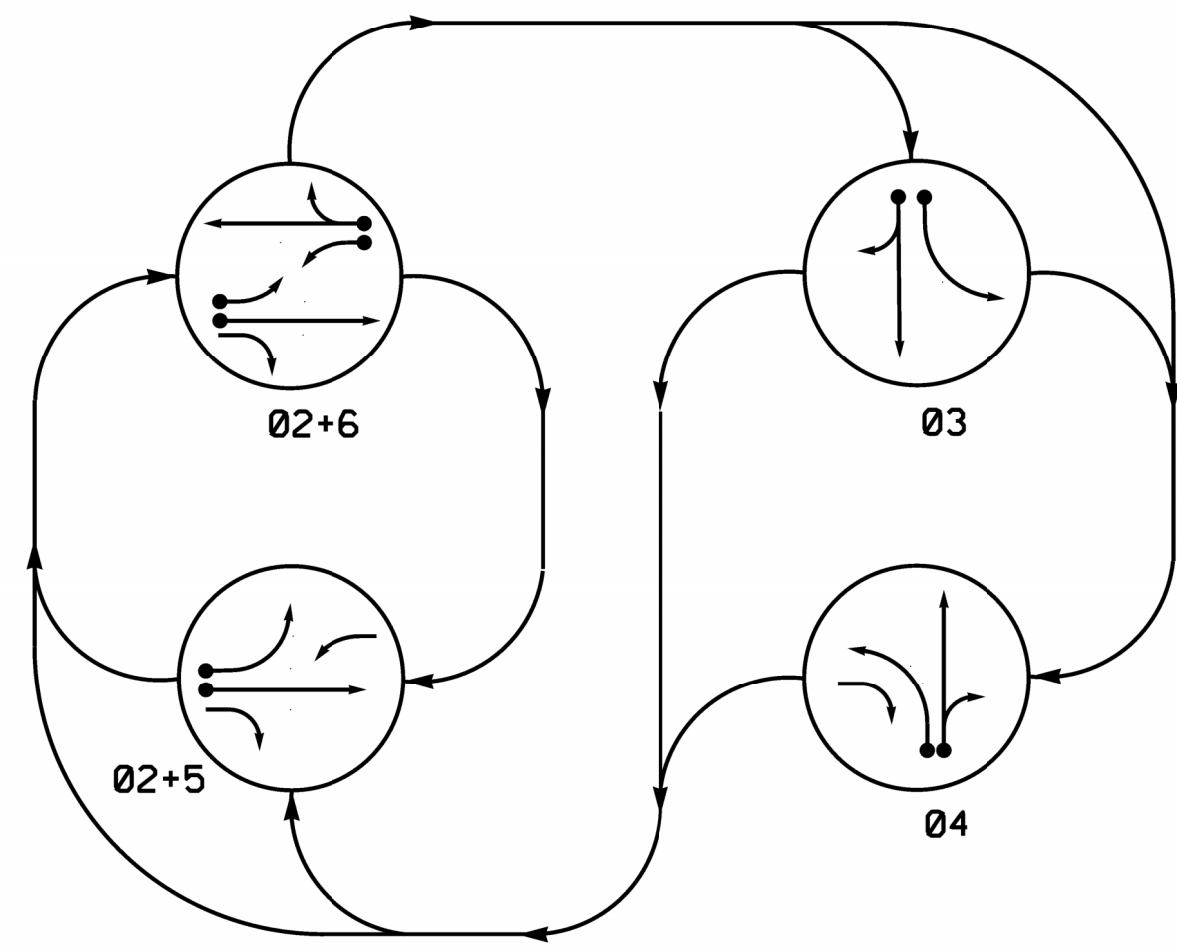


PHASING DIAGRAM



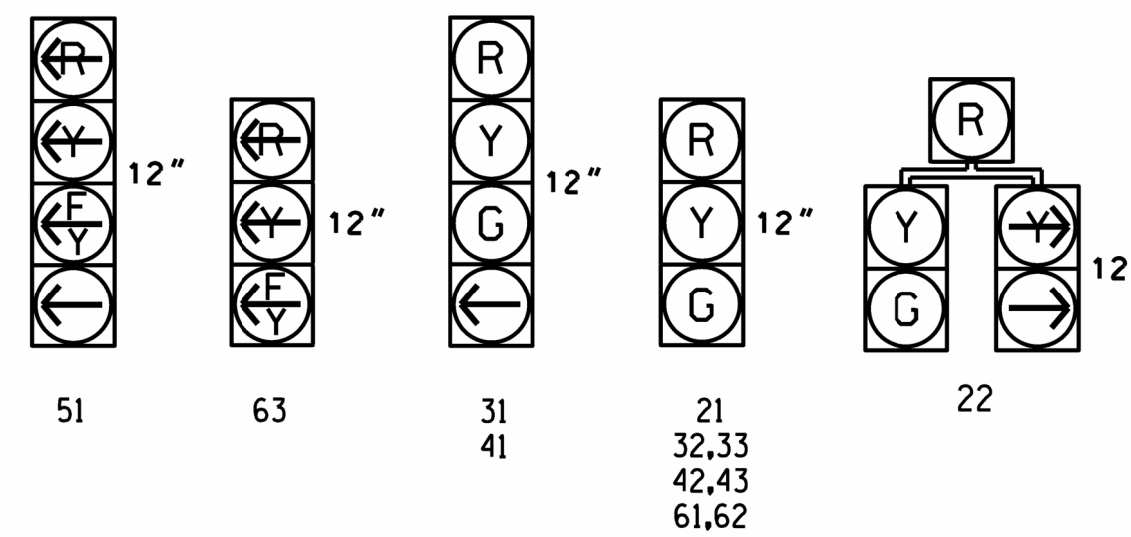
PHASING DIAGRAM DETECTION LEGEND

- ◄●► DETECTED MOVEMENT
- ◄◄◄ UNDETECTED MOVEMENT (OVERLAP)
- ◄--- UNSIGNALIZED MOVEMENT
- ◄--- PEDESTRIAN MOVEMENT

| SIGNAL FACE | PHASE | | | | |
|-------------|-------|-----|-----|-----|------|
| | U+NS | NS | 3 | 4 | U+NS |
| 21 | G | G | R | R | Y |
| 22 | G | G | R | Y | Y |
| 31 | R | R | G | R | R |
| 32,33 | R | R | G | R | R |
| 41 | R | R | R | G | R |
| 42,43 | R | R | R | G | R |
| 51 | --- | --- | --- | --- | --- |
| 61,62 | R | G | R | R | Y |
| 63 | Y | Y | --- | --- | --- |

SIGNAL FACE I.D.

All Heads L.E.D.



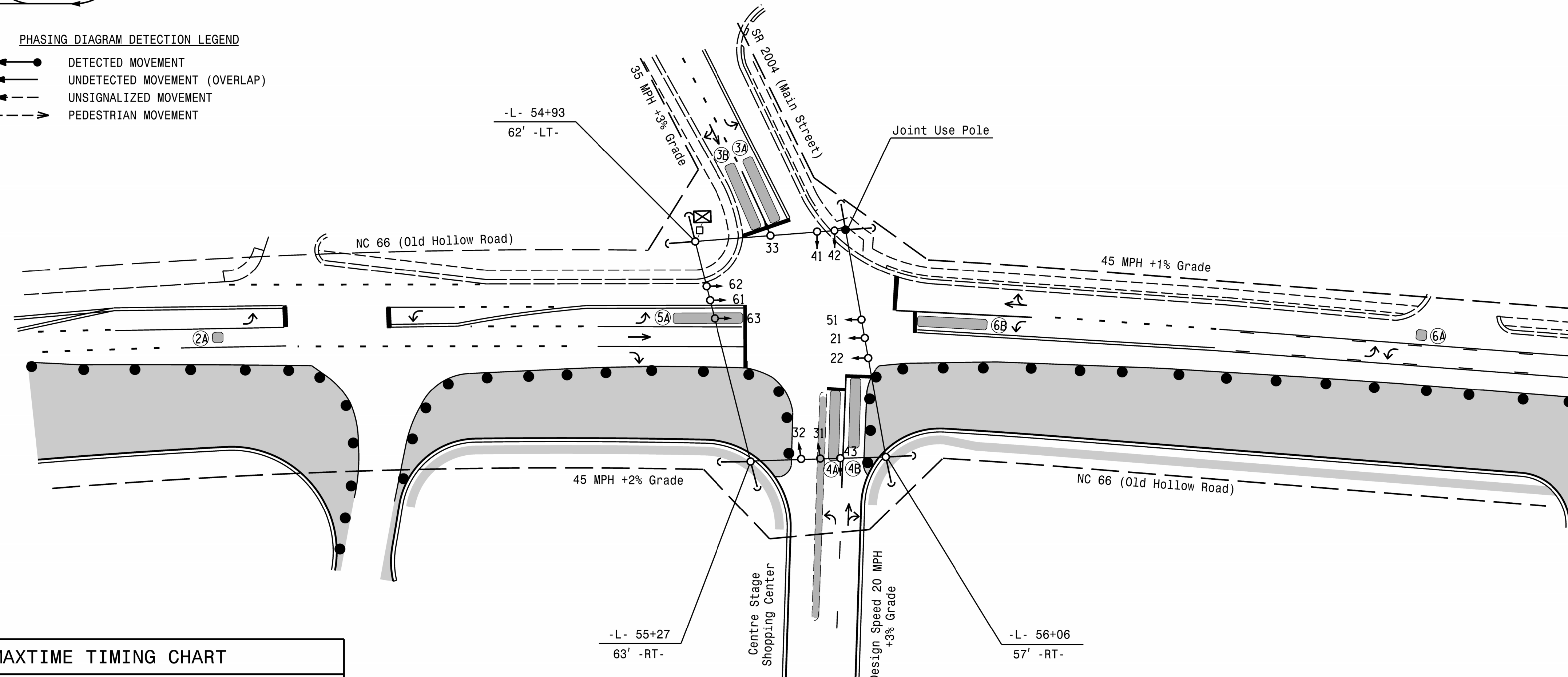
| MAXTIME DETECTOR INSTALLATION CHART | | | | | | | | | | | |
|-------------------------------------|-----------|----------------------------|-------|----------|-------------|------------|-------------|--------|---------------|------|----------|
| DETECTOR | | | | | PROGRAMMING | | | | | | |
| ZONE | SIZE (FT) | DISTANCE FROM STOPBAR (FT) | TURNS | NEW LOOP | CALL PHASE | DELAY TIME | EXTEND TIME | EXTEND | ADDED INITIAL | CALL | NEW CARD |
| 2A * | 6X6 | 300 | * | * | 2 | - | - | X | X | X | * |
| 3A * | 6X40 | 0 | * | * | 3 | 3.0 | - | X | - | X | * |
| 3B * | 6X40 | 0 | * | * | 3 | 10.0 | - | X | - | X | * |
| 4A * | 6X40 | 0 | * | * | 4 | - | - | X | - | X | * |
| 4B * | 6X40 | 0 | * | * | 4 | 10.0 | - | X | - | X | * |
| 5A * | 6X40 | 0 | * | * | 5 | 15.0 | - | X | - | X | * |
| 6A * | 6X6 | 300 | * | * | 2 | 3.0 | - | X | X | X | * |
| 6B * | 6X40 | 0 | * | * | 6 | - | - | X | X | X | * |

* Video Detection Zone

4 Phase Fully Actuated (Isolated)

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 5 may be lagged.
- The order of phase 3 and phase 4 may be reversed.
- Set all detector units to presence mode.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Pavement markings are existing.
- This intersection uses video detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.



MAXTIME TIMING CHART

| FEATURE | PHASE | | | | |
|-------------------------|------------|-----|-----|-----|------------|
| | 2 | 3 | 4 | 5 | 6 |
| Walk * | - | - | - | - | - |
| Ped Clear * | - | - | - | - | - |
| Min Green * | 12 | 7 | 7 | 7 | 12 |
| Passage * | 6.0 | 2.0 | 2.0 | 2.0 | 6.0 |
| Max I * | 50 | 30 | 25 | 20 | 50 |
| Yellow Change | 4.4 | 3.7 | 3.0 | 3.0 | 4.4 |
| Red Clear | 1.3 | 1.9 | 2.3 | 1.8 | 1.3 |
| Added Initial * | 3.0 | - | - | - | 3.0 |
| Maximum Initial * | 34 | - | - | - | 34 |
| Time Before Reduction * | 15 | - | - | - | 15 |
| Time To Reduce * | 40 | - | - | - | 40 |
| Minimum Gap | 3.0 | - | - | - | 3.0 |
| Advance Walk | - | - | - | - | - |
| Non Lock Detector | - | X | X | X | - |
| Vehicle Recall | MIN RECALL | - | - | - | MIN RECALL |
| Dual Entry | - | - | - | - | - |

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

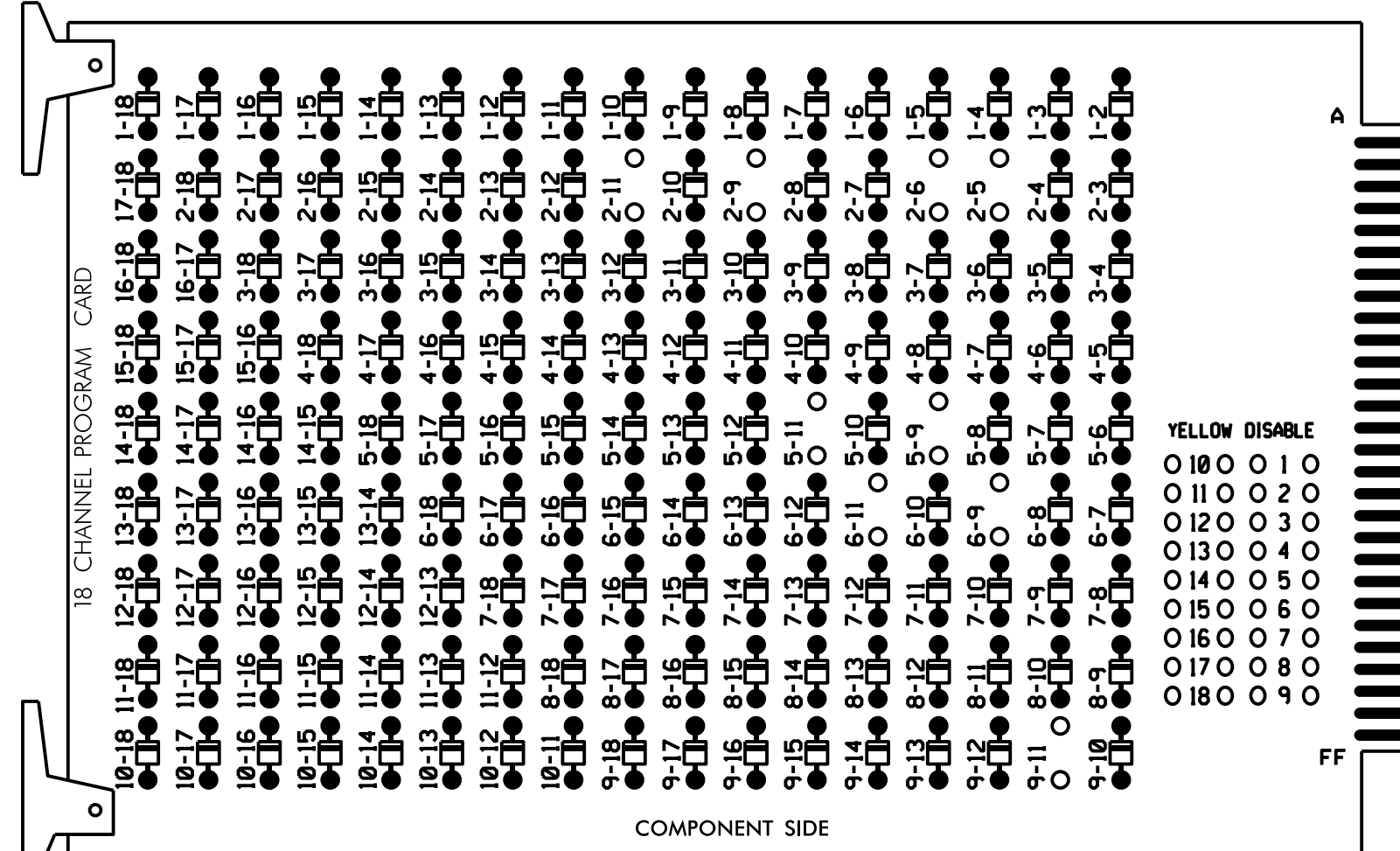
| PROPOSED | | EXISTING | |
|----------|-------------------------------------|----------|-----|
| ○ | Traffic Signal Head | ● | N/A |
| ◐ | Modified Signal Head | ◐ | N/A |
| ⊥ | Sign | ⊥ | N/A |
| ⊥ | Pedestrian Signal Head | ⊥ | N/A |
| ⊥ | Signal Pole with Push Button & Sign | ⊥ | N/A |
| ⊥ | Signal Pole with Guy | ⊥ | N/A |
| ⊥ | Signal Pole with Sidewalk Guy | ⊥ | N/A |
| ▭ | Video Detection Zone | ▭ | N/A |
| ⊠ | Controller & Cabinet | ⊠ | N/A |
| ⊠ | Junction Box | ⊠ | N/A |
| --- | 2-in Underground Conduit | --- | N/A |
| N/A | Right of Way | --- | N/A |
| → | Directional Arrow | → | N/A |
| ▭ | Construction Zone | ▭ | N/A |
| •• | Construction Zone Drums | •• | N/A |

Signal Upgrade - Temporary Design 1(TMP Phase I Step 2)

| | | | | |
|---|--|--|--------------------------------------|--|
| Prepared in the Office of: NC FIRM LICENSE No: P-0339 320 Executive Court Hillsborough, NC 27278 (919) 732-3883 (919) 732-6676 (FAX) | Prepared for the Offices of: 750 N. Greenfield Pkwy, Garner, NC 27529 | NC 66 (Old Hollow Road) at SR 2004 (Main Street) / Centre Stage Shopping Center Division 9 Forsyth County Walkertown | | DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED SEAL Edward W. Sirgany 9/7/2023 DATE |
| | | PLAN DATE: August 2023 PREPARED BY: M Parker SCALE: 0 40 1" = 40' | REVIEWED BY: E Sirgany REVISIONS: | |

18 CHANNEL IP CONFLICT MONITOR PROGRAMMING DETAIL
(remove jumpers and set switches as shown)

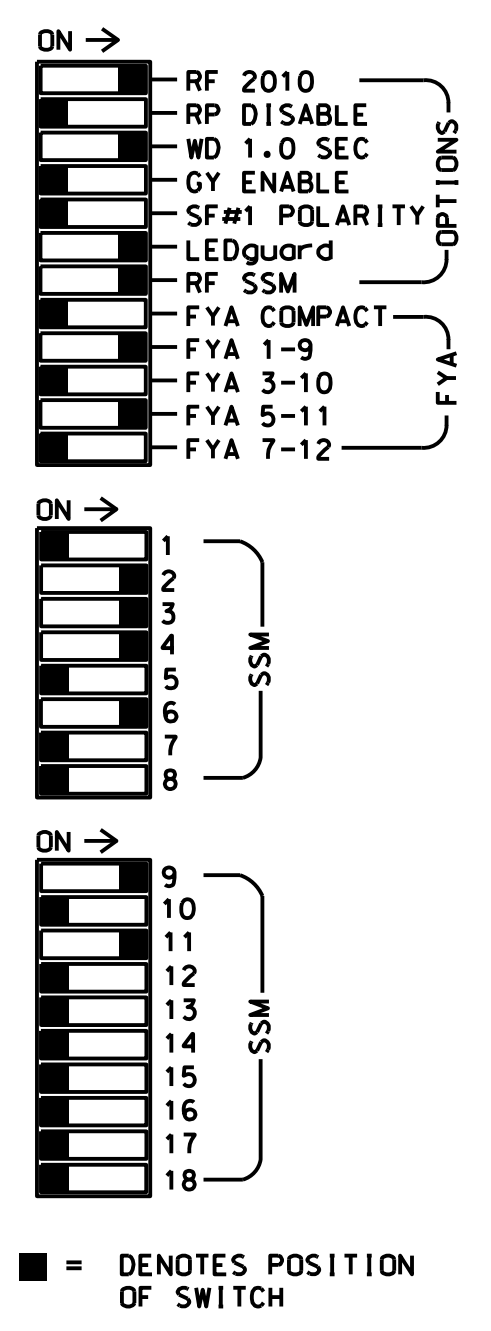
REMOVE DIODE JUMPERS 2-5, 2-6, 2-9, 2-11, 5-9, 5-11, 6-9, 6-11 and 9-11.



REMOVE JUMPERS AS SHOWN

NOTES:

- Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
- Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
- Ensure that Red Enable is active at all times during normal operation.



■ = DENOTES POSITION OF SWITCH

NOTES

- To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans.
- Program controller to start up in phase 2 Green No Walk and 6 Green No Walk.

EQUIPMENT INFORMATION

CONTROLLER.....2070LX
 CABINET.....332 W/AUX
 SOFTWARE.....0-FREE MAXTIME
 CABINET MOUNT.....BASE
 OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE
 LOAD SWITCHES USED.....S2,S4,S5,S7,S8,AUX S1,AUX S4
 PHASES USED.....2,3,4,5,6
 OVERLAP "1".....*
 OVERLAP "2".....NOT USED
 OVERLAP "3".....*
 OVERLAP "4".....NOT USED
 * See overlap programming detail below.

SIGNAL HEAD HOOK-UP CHART

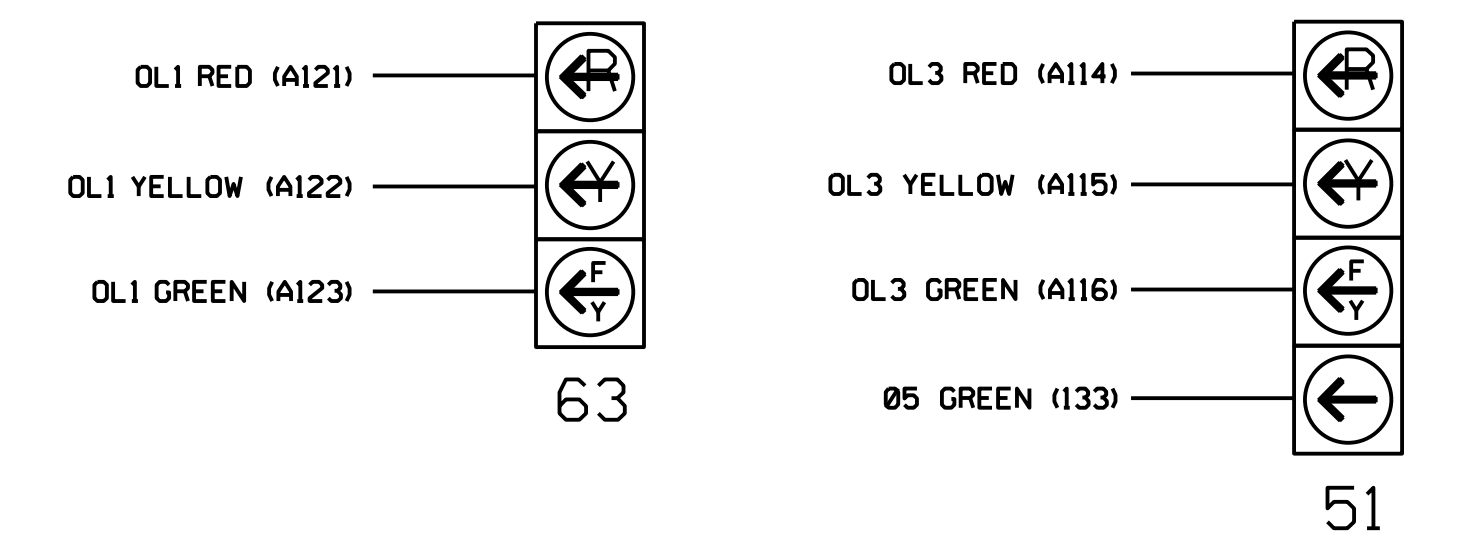
| LOAD SWITCH NO. | S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 | S9 | S10 | S11 | S12 | AUX S1 | AUX S2 | AUX S3 | AUX S4 | AUX S5 | AUX S6 | | |
|-----------------------|----|-------|-------|----------|---------|----------|----|-----|-------|-----|-----|-------|--------|--------|--------|--------|--------|--------|------|------|
| CMU CHANNEL NO. | 1 | 2 | 13 | 3 | 4 | 14 | 5 | 6 | 15 | 7 | 8 | 16 | 9 | 10 | 17 | 11 | 12 | 18 | | |
| PHASE | 1 | 2 | 2 PED | 3 | 4 | 4 PED | 5 | 6 | 6 PED | 7 | 8 | 8 PED | OL1 | OL2 | SPARE | OL3 | OL4 | SPARE | | |
| SIGNAL HEAD NO. | NU | 21,22 | NU | 31 32,33 | 22 | 41 42,43 | NU | 51* | 61,62 | NU | NU | NU | 63* | NU | NU | 51* | NU | NU | | |
| RED | | 128 | | 116 116 | 101 101 | | | | 134 | | | | | | | | | | | |
| YELLOW | | 129 | | 117 117 | 102 102 | | | * | 135 | | | | | | | | | | | |
| GREEN | | 130 | | 118 118 | 103 103 | | | | 136 | | | | | | | | | | | |
| RED ARROW | | | | | | | | | | | | | | | | | | A121 | A114 | |
| YELLOW ARROW | | | | | 102 | | | | | | | | | | | | | | A122 | A115 |
| FLASHING YELLOW ARROW | | | | | | | | | | | | | | | | | | | A123 | A116 |
| GREEN ARROW | | | | 118 | 103 103 | | | | 133 | | | | | | | | | | | |

NU = Not Used

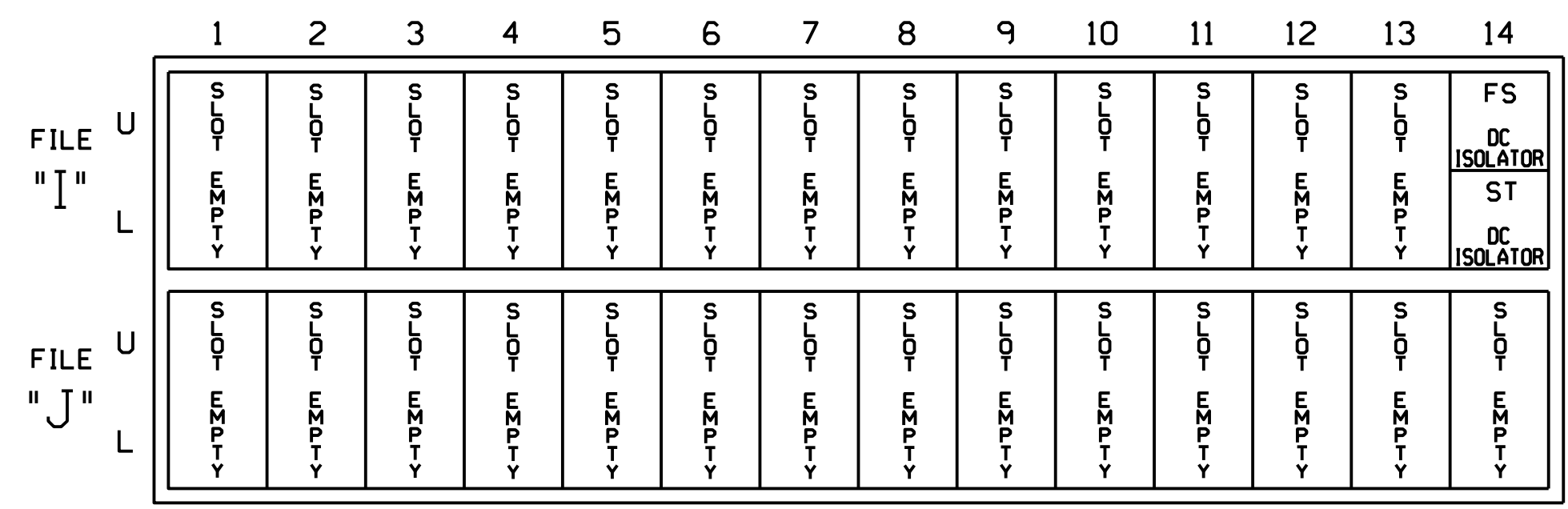
* Denotes install load resistor. See load resistor installation detail this sheet.

* See pictorial of head wiring in detail this sheet.

FYA SIGNAL WIRING DETAIL
(wire signal heads as shown)



INPUT FILE POSITION LAYOUT
(front view)



EX. : 1A, 2A, ETC. = LOOP NO.'S

FS = FLASH SENSE
ST = STOP TIME

OVERLAP PROGRAMMING

Front Panel
Main Menu > Controller > Overlap > Overlap Parameters/Overlap Timings

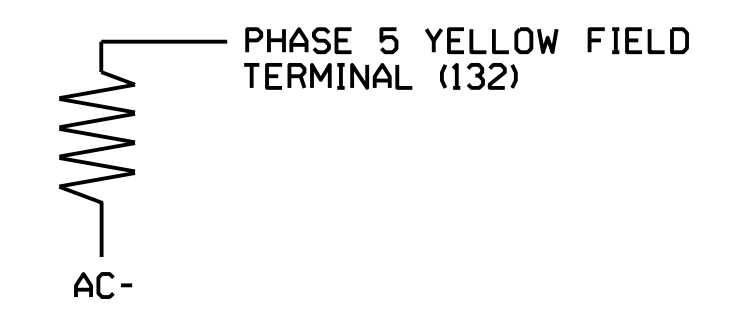
Web Interface
Home > Controller > Overlap Configuration > Overlaps

Overlap Plan 1

| Overlap | 1 | 3 |
|-------------------|-----------------|-----------------|
| Type | FYA 4 - Section | FYA 4 - Section |
| Included Phases | 2 | 6 |
| Modifier Phases | - | 5 |
| Modifier Overlaps | - | - |
| Trail Green | 0 | 0 |
| Trail Yellow | 0.0 | 0.0 |
| Trail Red | 0.0 | 0.0 |

LOAD RESISTOR INSTALLATION DETAIL
(install resistor as shown below)

| ACCEPTABLE VALUES | |
|-------------------|-----------|
| VALUE (ohms) | WATTAGE |
| 1.5K - 1.9K | 25W (min) |
| 2.0K - 3.0K | 10W (min) |



THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 09-0589T1
 DESIGNED: August 2023
 SEALED: 9/7/2023
 REVISED: N/A

SPECIAL DETECTOR NOTE

Install a video detection system for vehicle detection. Perform installation according to manufacturer's directions and NCDOT engineer-approved mounting locations to accomplish the detection scheme shown on the Signal Design Plans.

Electrical Detail - Temporary Design 1

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Office of:

NC FIRM LICENSE No: P-0339
 320 Executive Court
 Hillsborough, NC 27278
 (919) 732-3883
 (919) 732-6676 (FAX)

Prepared For:

750 N. Greenfield Pkwy, Corner, NC 27529

NC 66 (Old Hollow Road)
 at
 SR 2004 (Main Street) /
 Centre Stage Shopping Center
 Division 9 Forsyth County Walkertown

PLAN DATE: August 2023 REVIEWED BY: E. Sirgany
 PREPARED BY: J. Smith REVIEWED BY:

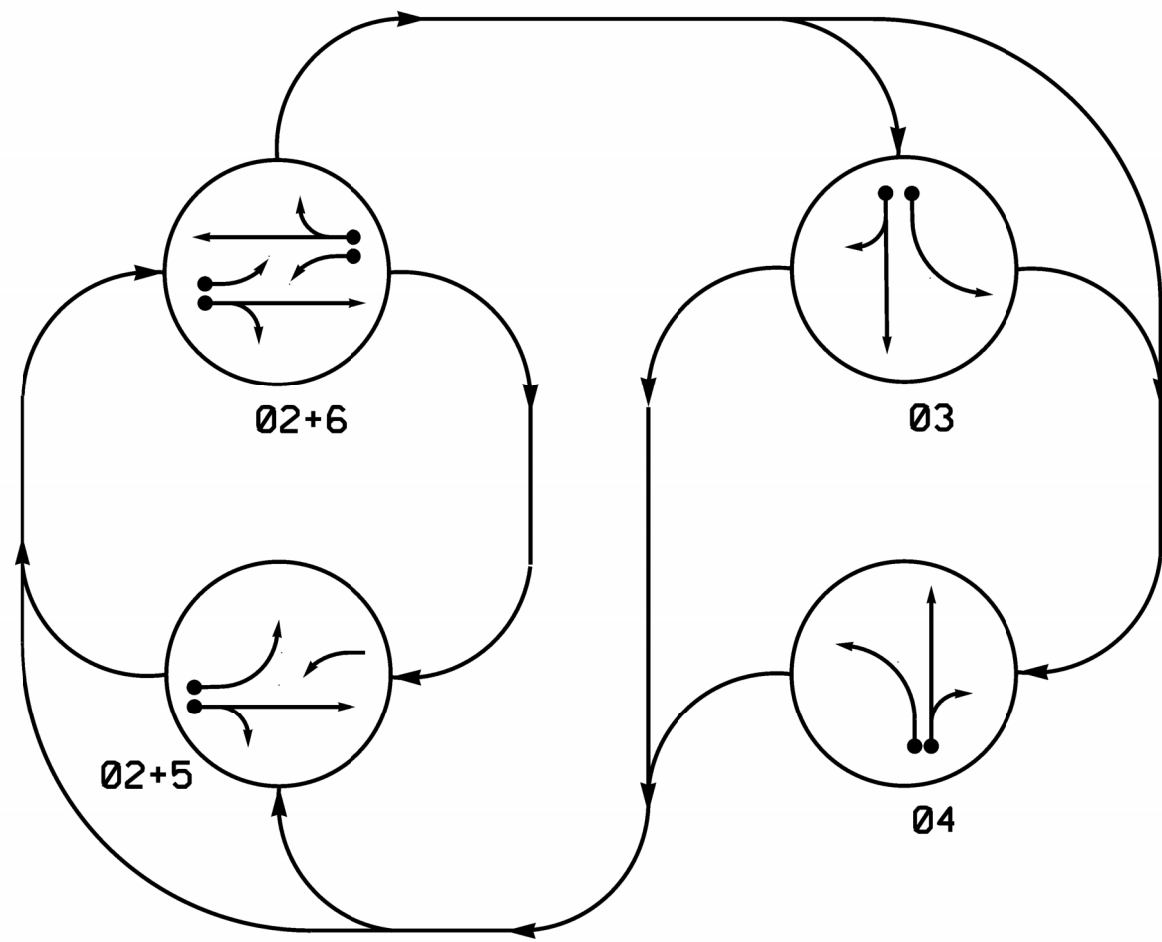
| REVISIONS | INIT. | DATE |
|-----------|-------|------|
| | | |

SEAL

DocuSigned by:
 Edward W. Sirgany 9/7/2023
 DATE

SIG. INVENTORY NO. 09-0589T1

PHASING DIAGRAM

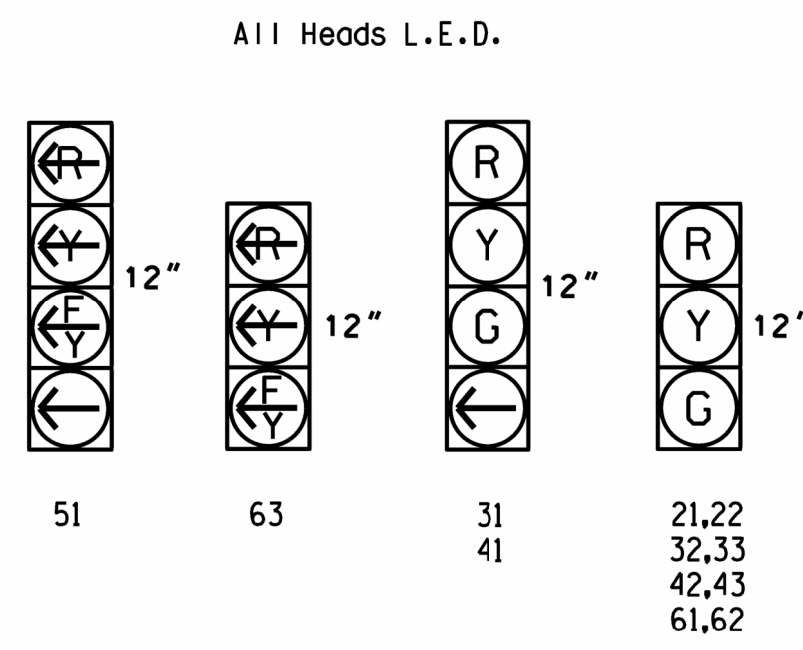


PHASING DIAGRAM DETECTION LEGEND

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

| SIGNAL FACE | PHASE | | | | |
|-------------|-------|------|----|----|-------|
| | 02+5 | 02+6 | 03 | 04 | FLASH |
| 21,22 | G | G | R | R | Y |
| 31 | R | R | G | R | R |
| 32,33 | R | R | G | R | R |
| 41 | R | R | R | G | R |
| 42,43 | R | R | R | G | R |
| 51 | — | F | F | R | Y |
| 61,62 | R | G | R | R | Y |
| 63 | F | F | R | R | Y |

SIGNAL FACE I.D.



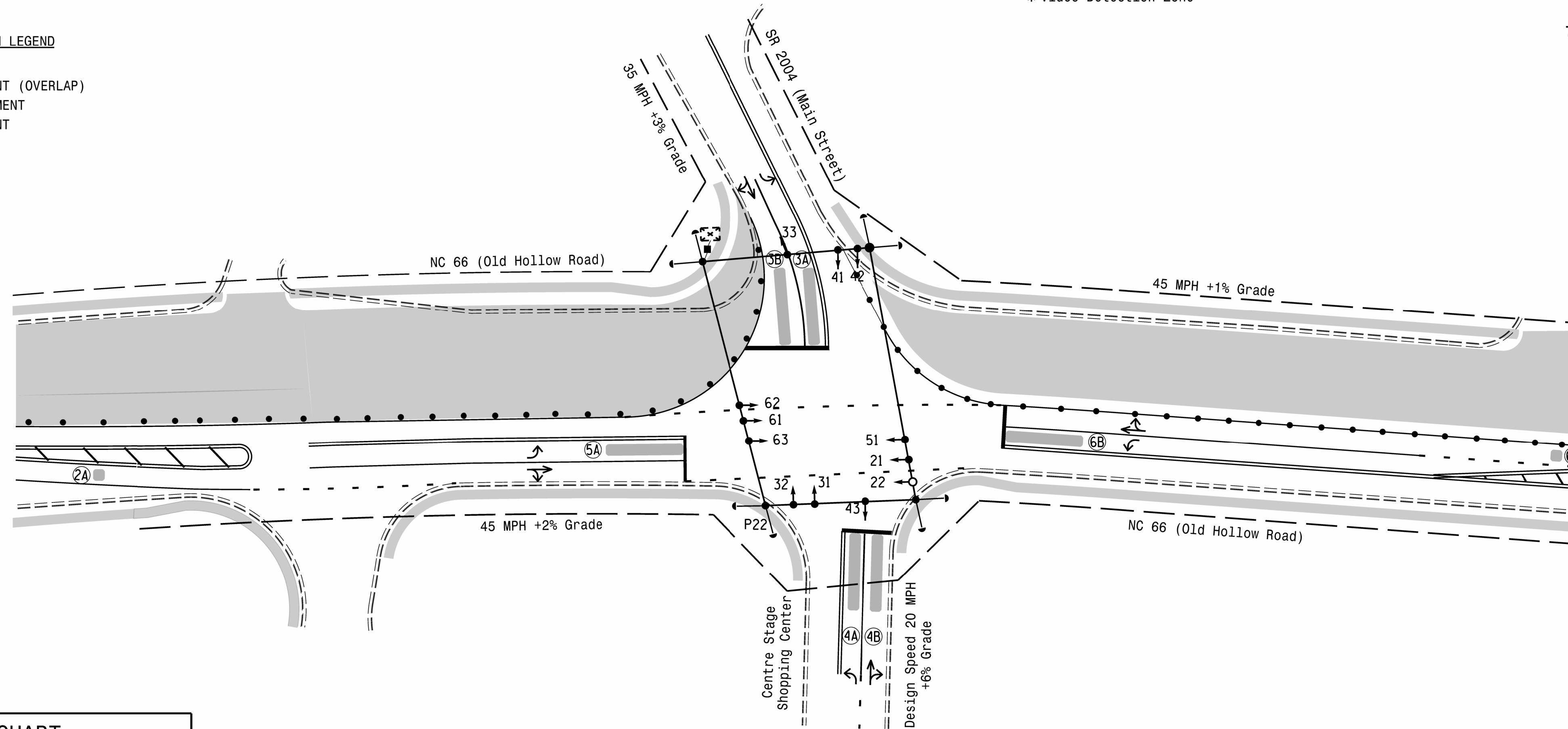
| MAXTIME DETECTOR INSTALLATION CHART | | | | | | | | | | | |
|-------------------------------------|-----------|----------------------------|-------|----------|-------------|------------|-------------|----------------|---------------|-------------------------|----------|
| DETECTOR | | | | | PROGRAMMING | | | | | | |
| ZONE | SIZE (FT) | DISTANCE FROM STOPBAR (FT) | TURNS | NEW LOOP | CALL PHASE | DELAY TIME | EXTEND TIME | EXTEND INITIAL | ADDED INITIAL | CALL DELAY DURING GREEN | NEW CARD |
| 2A * | 6X6 | 300 | * | * | 2 | - | - | X | X | X | * |
| 3A * | 6X40 | 0 | * | * | 3 | 3.0 | - | X | X | X | * |
| 3B * | 6X40 | 0 | * | * | 3 | 10.0 | - | X | X | X | * |
| 4A * | 6X40 | 0 | * | * | 4 | 3.0 | - | X | X | X | * |
| 4B * | 6X40 | 0 | * | * | 4 | 10.0 | - | X | X | X | * |
| 5A * | 6X40 | 0 | * | * | 5 | 15.0 | - | X | X | X | * |
| 6A * | 6X6 | 300 | * | * | 2 | 3.0 | - | X | X | X | * |
| 6B * | 6X40 | 0 | * | * | 6 | 3.0 | - | X | X | X | * |

* Video Detection Zone

4 Phase Fully Actuated (Isolated)

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 5 may be lagged.
- The order of phase 3 and phase 4 may be reversed.
- Set all detector units to presence mode.
- Reposition existing signal heads numbered 21, 31, 32, 51, 61, 62, and 63.
- This intersection uses video detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.



LEGEND

- | PROPOSED | EXISTING |
|----------|----------|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

MAXTIME TIMING CHART

| FEATURE | PHASE | | | | |
|-------------------------|------------|-----|-----|-----|------------|
| | 2 | 3 | 4 | 5 | 6 |
| Walk * | - | - | - | - | - |
| Ped Clear * | - | - | - | - | - |
| Min Green * | 12 | 7 | 7 | 7 | 12 |
| Passage * | 6.0 | 2.0 | 2.0 | 2.0 | 6.0 |
| Max 1 * | 50 | 30 | 25 | 20 | 50 |
| Yellow Change | 4.4 | 3.7 | 3.0 | 3.0 | 4.4 |
| Red Clear | 1.9 | 1.6 | 2.4 | 3.1 | 1.9 |
| Added Initial * | 3.0 | - | - | - | 3.0 |
| Maximum Initial * | 34 | - | - | - | 34 |
| Time Before Reduction * | 15 | - | - | - | 15 |
| Time To Reduce * | 40 | - | - | - | 40 |
| Minimum Gap | 3.0 | - | - | - | 3.0 |
| Advance Walk | - | - | - | - | - |
| Non Lock Detector | - | X | X | X | - |
| Vehicle Recall | MIN RECALL | - | - | - | MIN RECALL |
| Dual Entry | - | - | - | - | - |

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

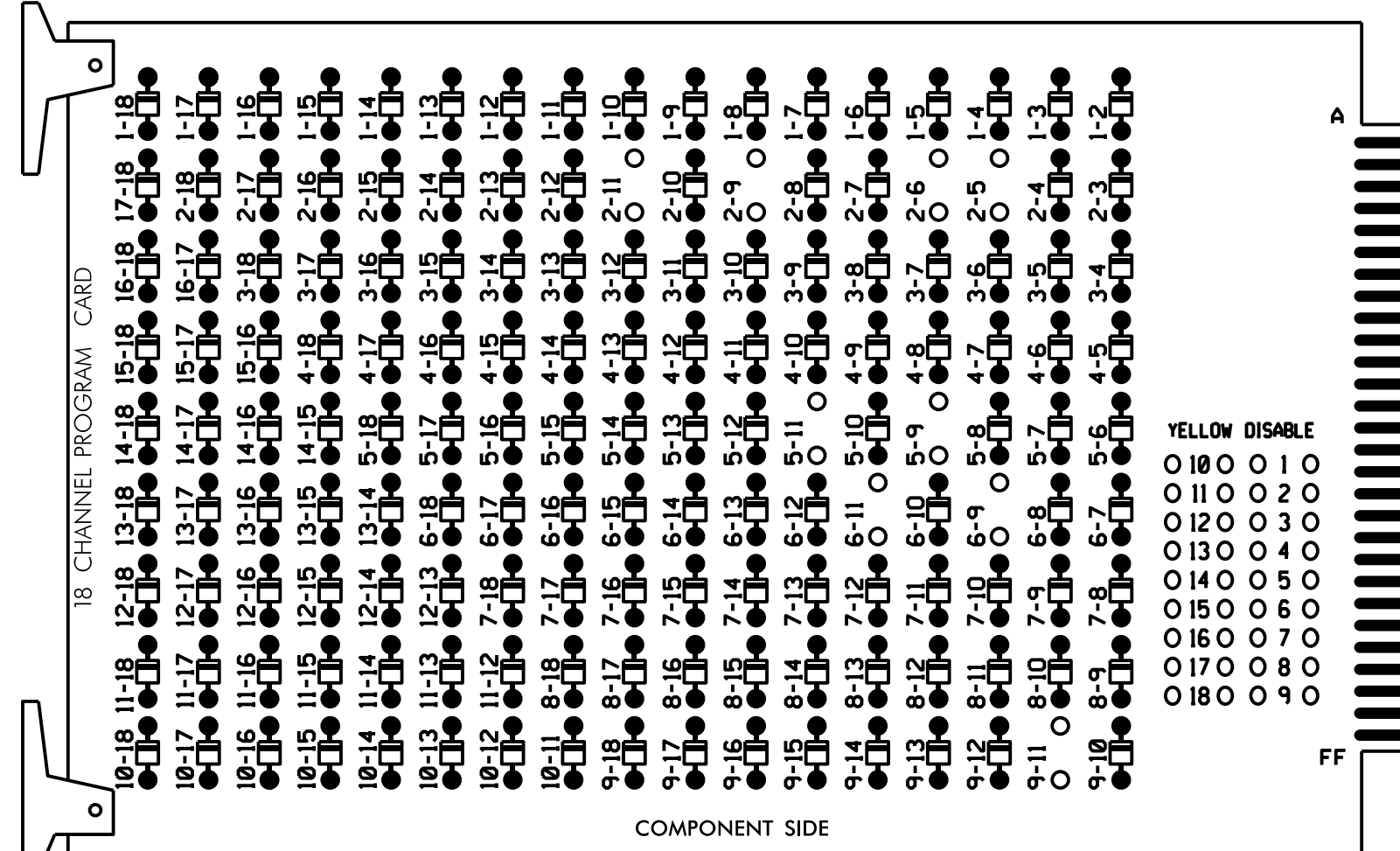
Signal Upgrade - Temporary Design 2 (TMP Phase II - Step 1)

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

| | | | | | |
|---|--|--|--|--|---|
| Prepared in the Office of: NC FIRM LICENSE No: P-0339 320 Executive Court Hillsborough, NC 27278 (919) 732-3883 (919) 732-6676 (FAX) | Prepared For: TRANSPORTATION MOBILITY AND SAFETY DIVISION STATE OF NORTH CAROLINA Signal Design Section 750 N. Greenfield Pkwy, Garner, NC 27525 | NC 66 (Old Hollow Road) at SR 2004 (Main Street) / Centre Stage Shopping Centre Division 9 Forsyth County Walkertown | | SEAL EDWARD W. SIRGAN Y ENGINEER 9/7/2023 DATE SIG. INVENTORY NO. 09-058912 | |
| | | PLAN DATE: August 2023 PREPARED BY: J. Smith REVISIONS: | | | REVIEWED BY: E. Sirgany REVIEWED BY: |
| | | SCALE: 0 40 1" = 40' | | | INIT. DATE |
| | | Document signed by: Edward W. Sirgany DATE: 9/7/2023 | | | |

18 CHANNEL IP CONFLICT MONITOR PROGRAMMING DETAIL
(remove jumpers and set switches as shown)

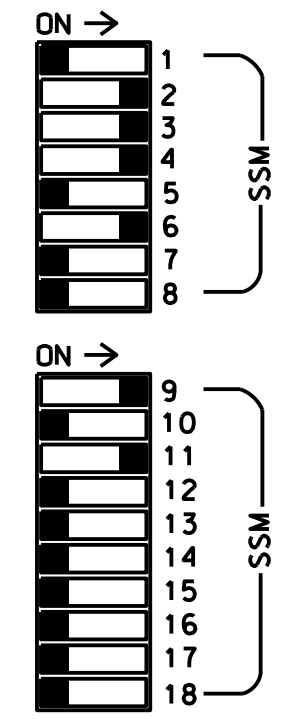
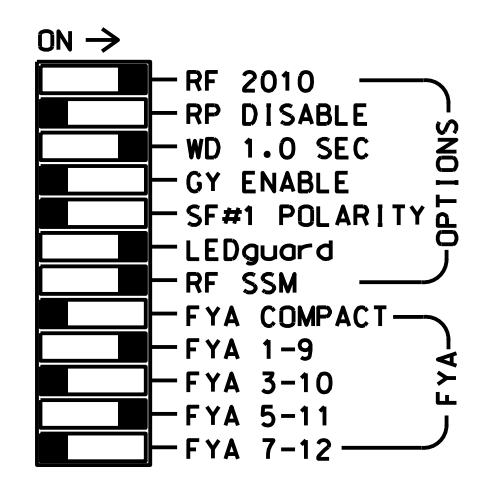
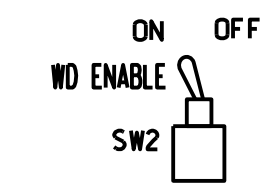
REMOVE DIODE JUMPERS 2-5, 2-6, 2-9, 2-II, 5-9, 5-II, 6-9, 6-II and 9-II.



REMOVE JUMPERS AS SHOWN

NOTES:

- Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
- Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
- Ensure that Red Enable is active at all times during normal operation.



■ = DENOTES POSITION OF SWITCH

NOTES

- To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans.
- Program controller to start up in phase 2 Green No Walk and 6 Green No Walk.

EQUIPMENT INFORMATION

CONTROLLER.....2070LX
 CABINET.....332 W/AUX
 SOFTWARE.....0-FREE MAXTIME
 CABINET MOUNT.....BASE
 OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE
 LOAD SWITCHES USED.....S2,S4,S5,S7,S8,AUX S1,AUX S4
 PHASES USED.....2,3,4,5,6
 OVERLAP "1".....*
 OVERLAP "2".....NOT USED
 OVERLAP "3".....*
 OVERLAP "4".....NOT USED
 * See overlap programming detail below.

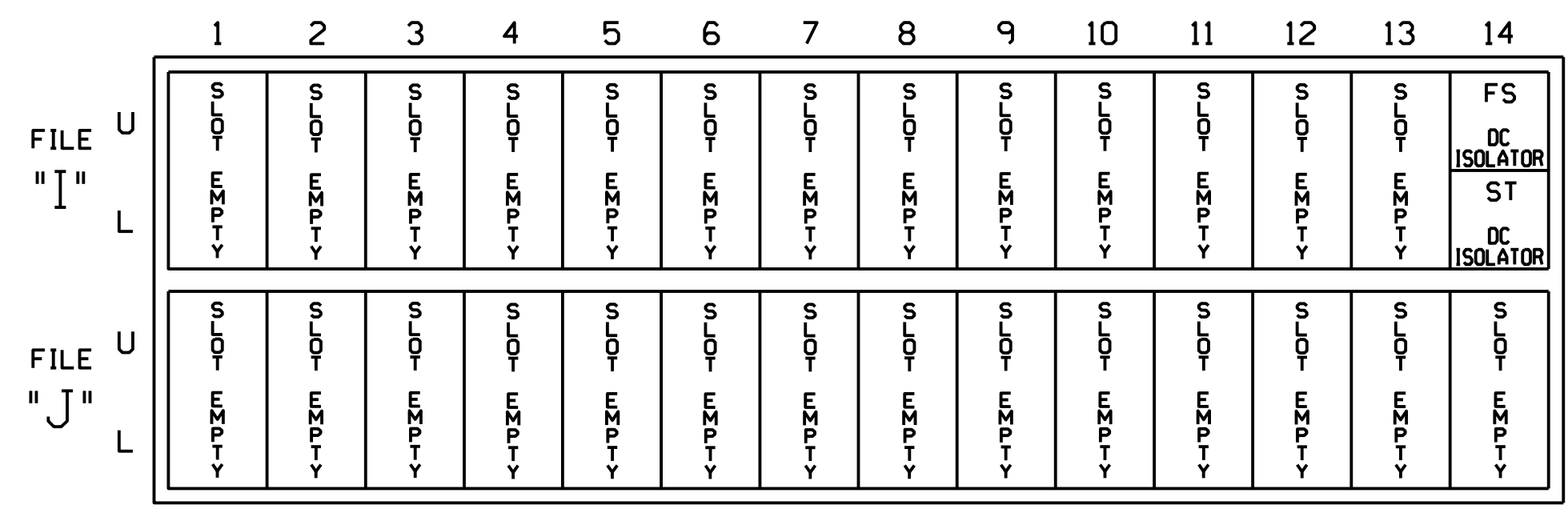
SIGNAL HEAD HOOK-UP CHART

| LOAD SWITCH NO. | S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 | S9 | S10 | S11 | S12 | AUX S1 | AUX S2 | AUX S3 | AUX S4 | AUX S5 | AUX S6 | | |
|-----------------------|----|-------|-------|-----------|-----------|-------|-----|-------|-------|-----|-----|-------|--------|--------|--------|--------|--------|--------|------|------|
| CMU CHANNEL NO. | 1 | 2 | 13 | 3 | 4 | 14 | 5 | 6 | 15 | 7 | 8 | 16 | 9 | 10 | 17 | 11 | 12 | 18 | | |
| PHASE | 1 | 2 | 2 PED | 3 | 4 | 4 PED | 5 | 6 | 6 PED | 7 | 8 | 8 PED | OL1 | OL2 | SPARE | OL3 | OL4 | SPARE | | |
| SIGNAL HEAD NO. | NU | 21,22 | NU | 31, 32,33 | 41, 42,43 | NU | 51* | 61,62 | NU | NU | NU | NU | 63* | NU | NU | 51* | NU | NU | | |
| RED | | 128 | | 116, 116 | 101, 101 | | | | 134 | | | | | | | | | | | |
| YELLOW | | 129 | | 117, 117 | 102, 102 | | * | | 135 | | | | | | | | | | | |
| GREEN | | 130 | | 118, 118 | 103, 103 | | | | 136 | | | | | | | | | | | |
| RED ARROW | | | | | | | | | | | | | | | | | | A121 | A114 | |
| YELLOW ARROW | | | | | | | | | | | | | | | | | | | A122 | A115 |
| FLASHING YELLOW ARROW | | | | | | | | | | | | | | | | | | | A123 | A116 |
| GREEN ARROW | | | | | 118, 103 | | | 133 | | | | | | | | | | | | |

NU = Not Used
 * Denotes install load resistor. See load resistor installation detail this sheet.
 * See pictorial of head wiring in detail this sheet.

INPUT FILE POSITION LAYOUT

(front view)



EX. : 1A, 2A, ETC. = LOOP NO.'S

FS = FLASH SENSE
 ST = STOP TIME

OVERLAP PROGRAMMING

Front Panel
 Main Menu > Controller > Overlap > Overlap Parameters/Overlap Timings

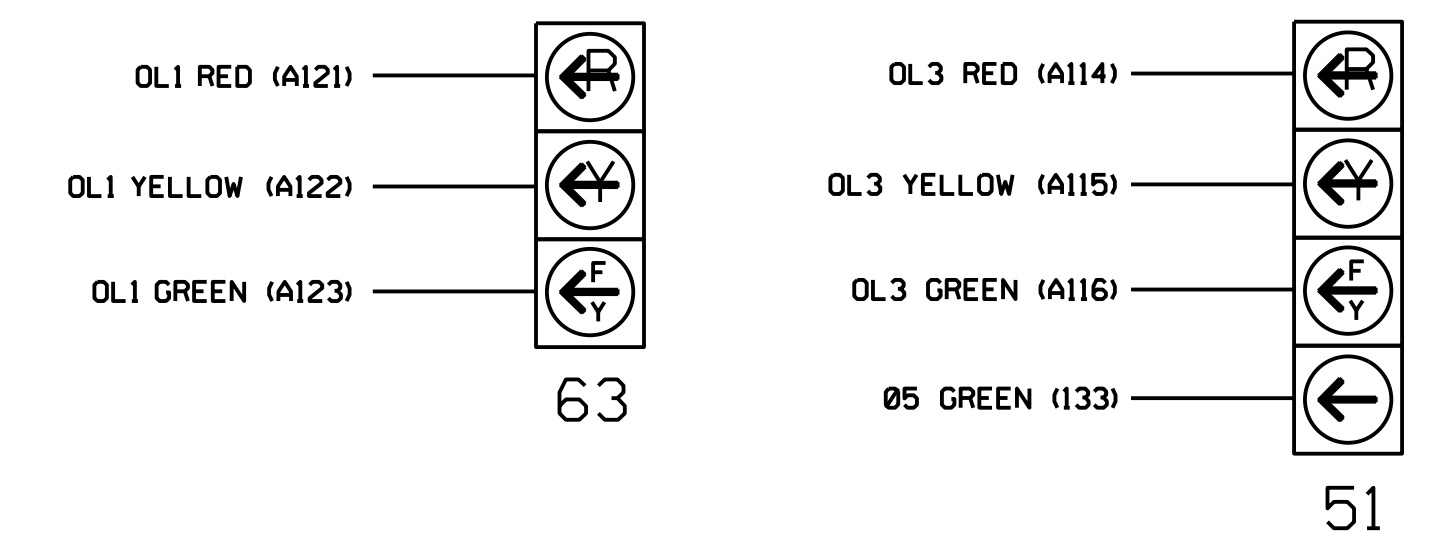
Web Interface
 Home > Controller > Overlap Configuration > Overlaps

Overlap Plan 1

| Overlap | 1 | 3 |
|-------------------|-----------------|-----------------|
| Type | FYA 4 - Section | FYA 4 - Section |
| Included Phases | 2 | 6 |
| Modifier Phases | - | 5 |
| Modifier Overlaps | - | - |
| Trail Green | 0 | 0 |
| Trail Yellow | 0.0 | 0.0 |
| Trail Red | 0.0 | 0.0 |

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)

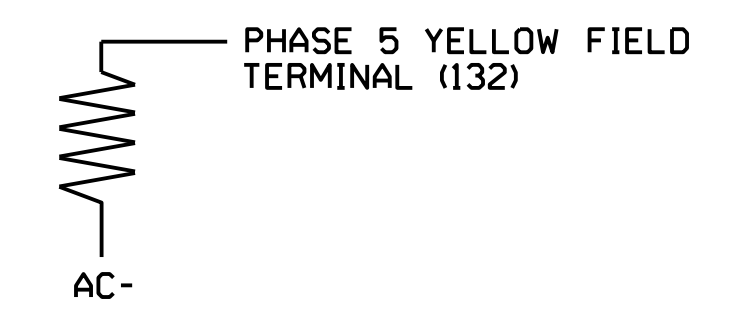


LOAD RESISTOR INSTALLATION DETAIL

(install resistor as shown below)

ACCEPTABLE VALUES

| VALUE (ohms) | WATTAGE |
|--------------|-----------|
| 1.5K - 1.9K | 25W (min) |
| 2.0K - 3.0K | 10W (min) |



SPECIAL DETECTOR NOTE

Install a video detection system for vehicle detection. Perform installation according to manufacturer's directions and NCDOT engineer-approved mounting locations to accomplish the detection scheme shown on the Signal Design Plans.

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 09-0589T2
 DESIGNED: August 2023
 SEALED: 9/7/2023
 REVISED: N/A

Electrical Detail - Temporary Design 2

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Office of:

NC FIRM LICENSE No: P-0339
 320 Executive Court
 Hillsborough, NC 27278
 (919) 732-3883
 (919) 732-6676 (FAX)

Prepared For:

750 N. Greenfield Pkwy, Corner, NC 27529

NC 66 (Old Hollow Road)
 at
 SR 2004 (Main Street) /
 Centre Stage Shopping Center
 Division 9 Forsyth County Walkertown

PLAN DATE: August 2023 REVIEWED BY: E. Sirgany
 PREPARED BY: J. Smith REVIEWED BY:

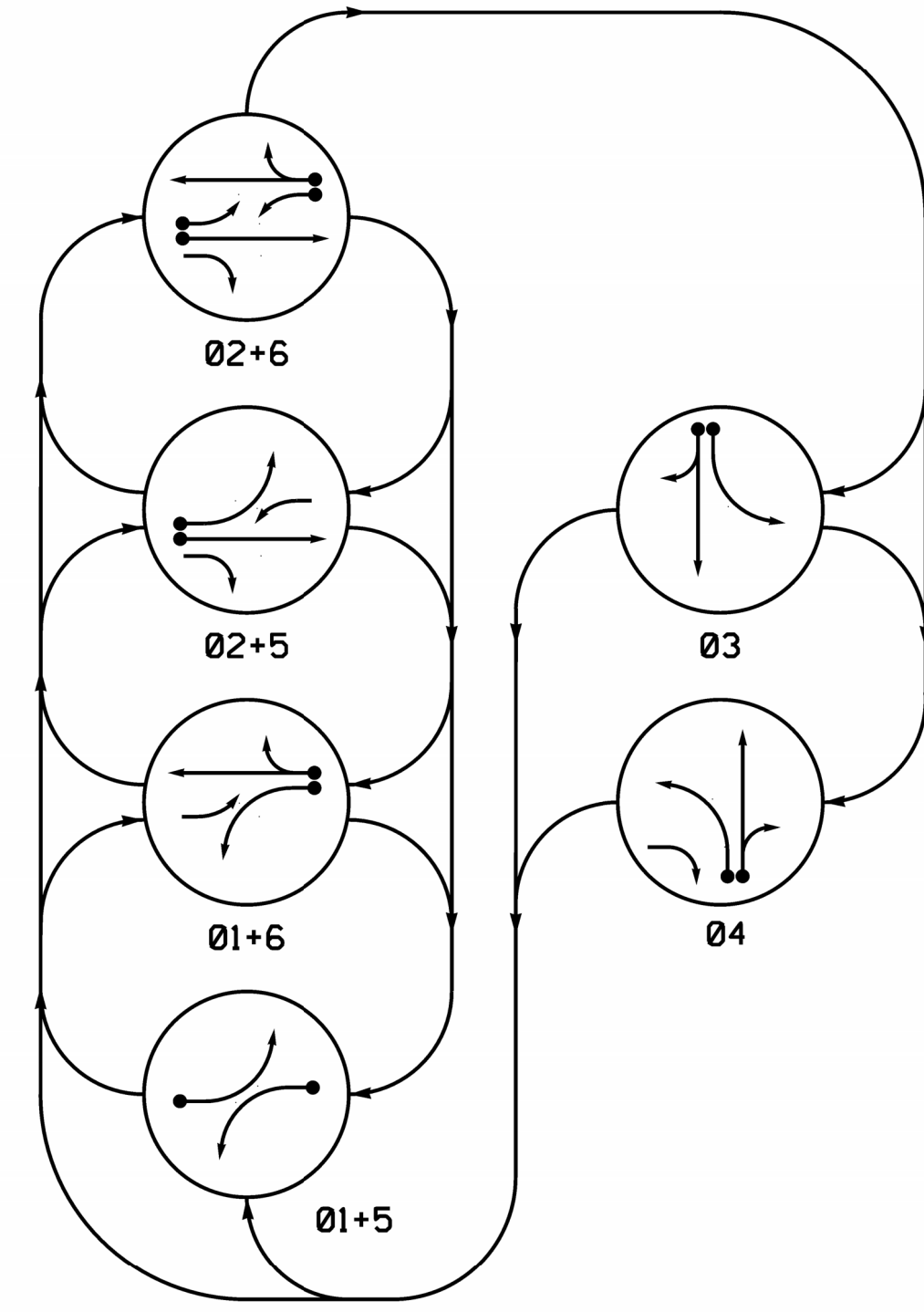
| REVISIONS | INIT. | DATE |
|-----------|-------|------|
| | | |

SEAL

DocuSigned by:
 Edward W Sirgany
 9/7/2023
 DATE

SIG. INVENTORY NO. 09-0589T2

PHASING DIAGRAM

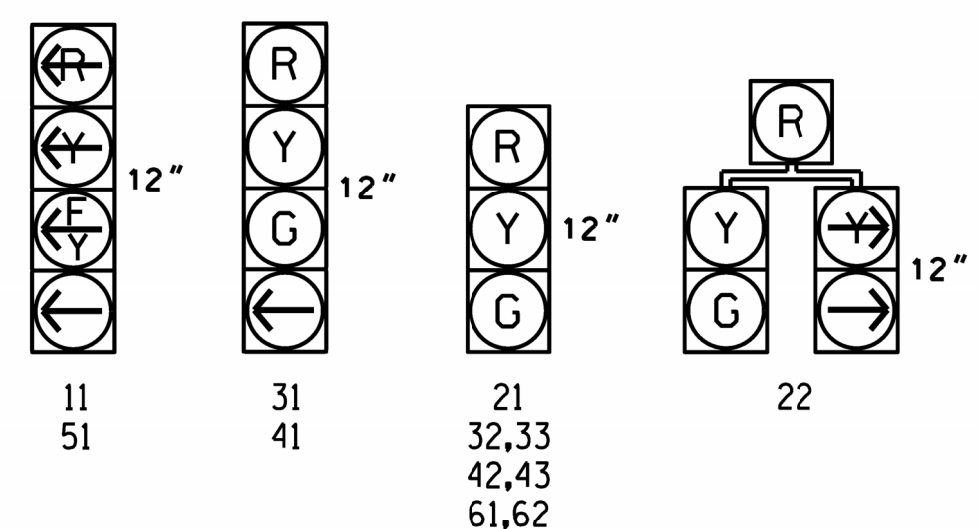


PHASING DIAGRAM DETECTION LEGEND

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

| SIGNAL FACE | PHASE | | | | | |
|-------------|-------|------|------|------|----|----|
| | 01+5 | 01+6 | 02+5 | 02+6 | 03 | 04 |
| 11 | - | - | F | F | R | Y |
| 21 | R | R | G | G | R | Y |
| 22 | R | R | G | G | R | Y |
| 31 | R | R | R | R | G | R |
| 32,33 | R | R | R | R | G | R |
| 41 | R | R | R | R | G | R |
| 42,43 | R | R | R | R | G | R |
| 51 | - | F | - | F | R | Y |
| 61,62 | R | G | R | G | R | Y |

SIGNAL FACE I.D.
All Heads L.E.D.



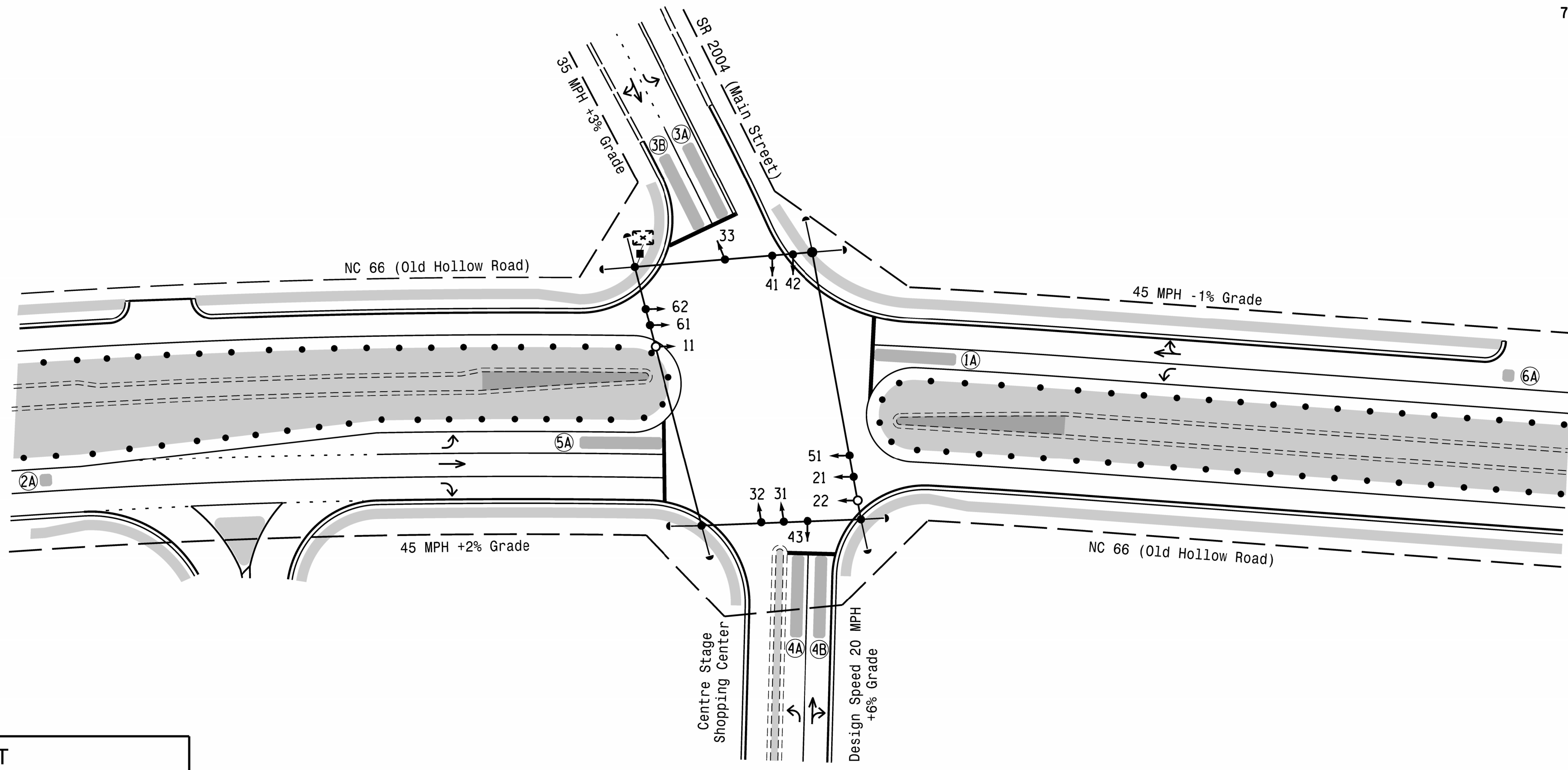
| MAXTIME DETECTOR INSTALLATION CHART | | | | | | | | | | | | |
|-------------------------------------|-----------|----------------------------|-------|----------|-------------|------------|-------------|----------------|---------------|------|--------------------|----------|
| ZONE | SIZE (FT) | DISTANCE FROM STOPBAR (FT) | TURNS | NEW LOOP | PROGRAMMING | | | | | | | |
| | | | | | CALL PHASE | DELAY TIME | EXTEND TIME | EXTEND INITIAL | ADDED INITIAL | CALL | DELAY DURING GREEN | NEW CARD |
| 1A * | 6X40 | 0 | * | * | 1 | 10.0 | - | X | - | X | - | * |
| | | | | | 6 | 3.0 | - | X | - | X | X | * |
| 2A * | 6X6 | 300 | * | * | 2 | - | - | X | X | X | - | * |
| 3A * | 6X40 | 0 | * | * | 3 | 3.0 | - | X | - | X | - | * |
| 3B * | 6X40 | 0 | * | * | 3 | 10.0 | - | X | - | X | - | * |
| 4A * | 6X40 | 0 | * | * | 4 | - | - | X | - | X | - | * |
| 4B * | 6X40 | 0 | * | * | 4 | 10.0 | - | X | - | X | - | * |
| 5A * | 6X40 | 0 | * | * | 5 | 10.0 | - | X | - | X | - | * |
| | | | | | 2 | 3.0 | - | X | - | X | X | * |
| 6A * | 6X6 | 300 | * | * | 6 | - | - | X | X | X | - | * |

* Video Detection Zone

6 Phase Fully Actuated (Isolated)

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or phase 5 may be lagged.
- The order of phase 3 and phase 4 may be reversed.
- Set all detector units to presence mode.
- Reposition existing signal heads numbered 31, 32, 61, and 62.
- This intersection uses video detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.



| FEATURE | PHASE | | | | | |
|-------------------------|-------|------------|-----|-----|-----|------------|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Walk * | - | - | - | - | - | - |
| Ped Clear * | - | - | - | - | - | - |
| Min Green * | 7 | 12 | 7 | 7 | 7 | 12 |
| Passage * | 2.0 | 6.0 | 2.0 | 2.0 | 2.0 | 6.0 |
| Max I * | 20 | 50 | 30 | 25 | 20 | 50 |
| Yellow Change | 3.0 | 4.6 | 3.7 | 3.0 | 3.0 | 4.6 |
| Red Clear | 3.5 | 2.0 | 3.0 | 3.7 | 3.3 | 2.0 |
| Added Initial * | - | 2.5 | - | - | - | 2.5 |
| Maximum Initial * | - | 34 | - | - | - | 34 |
| 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 | - |
| Vehicle Recall | - | MIN RECALL | - | - | - | MIN RECALL |
| Dual Entry | - | - | - | - | - | - |

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

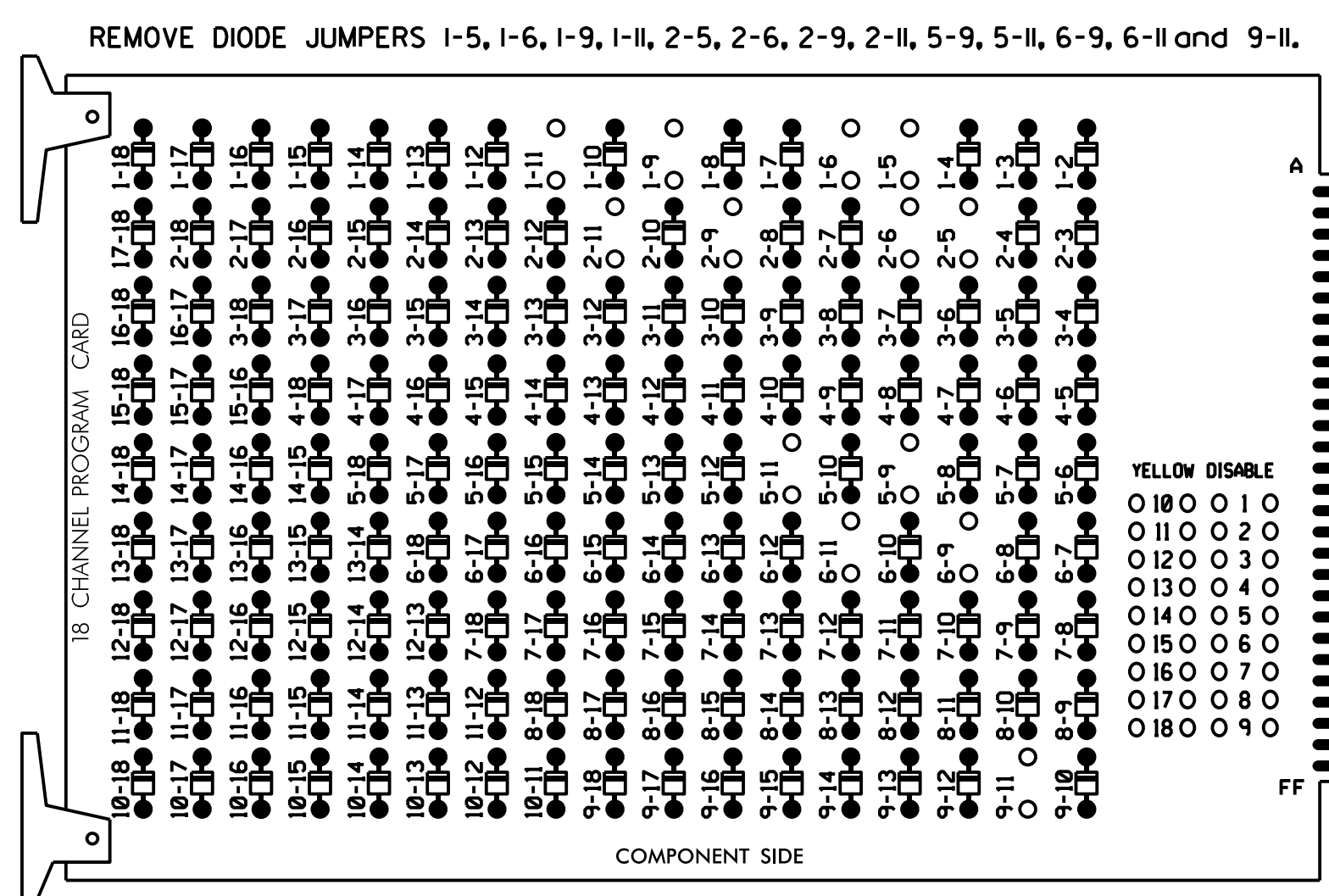
| PROPOSED | | EXISTING | |
|----------|--|----------|--|
| ○ → | Traffic Signal Head | ● → | Traffic Signal Head |
| ○ → | Modified Signal Head | N/A | |
| □ → | Sign | □ → | Sign |
| □ → | Pedestrian Signal Head With Push Button & Sign | □ → | Pedestrian Signal Head With Push Button & Sign |
| ○ → | Signal Pole with Guy | ○ → | Signal Pole with Guy |
| ○ → | Signal Pole with Sidewalk Guy | ○ → | Signal Pole with Sidewalk Guy |
| ■ | Video Detection Zone | ■ | Video Detection Zone |
| □ | Controller & Cabinet Junction Box | □ | Controller & Cabinet Junction Box |
| - - - | 2-in Underground Conduit | - - - | 2-in Underground Conduit |
| N/A | Right of Way | - - - | Right of Way |
| → | Directional Arrow | → | Directional Arrow |
| ■ | Construction Zone | ■ | Construction Zone |
| ● ● | Construction Zone Drums | ● ● | Construction Zone Drums |

Signal Upgrade - Temporary Design 3 (TMP Phase III - Step 1)

| | | | |
|---|--|--|--|
| Prepared in the Office of: NC FIRM LICENSE No: P-0339 320 Executive Court Hillsborough, NC 27278 (919) 732-3883 (919) 732-6676 (FAX) | Prepared For: TRANSPORTATION MOBILITY AND SAFETY DIVISION STATE OF NORTH CAROLINA Signal Design Section 750 N. Greenfield Pkwy, Garner, NC 27529 | NC 66 (Old Hollow Road) at SR 2004 (Main Street) / Centre Stage Shopping Centre Division 9 Forsyth County Walkertown | SEAL ENGINEER EDWARD W. SIRGANY |
| | | PLAN DATE: August 2023 PREPARED BY: J. Smith SCALE: 1"=40' REVISIONS: | REVIEWED BY: E. Sirgany DATE: 9/7/2023 DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED SIG. INVENTORY NO. 09-058913 |

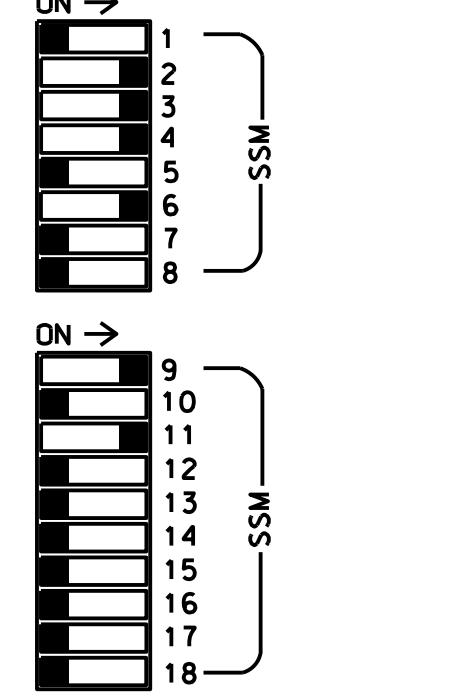
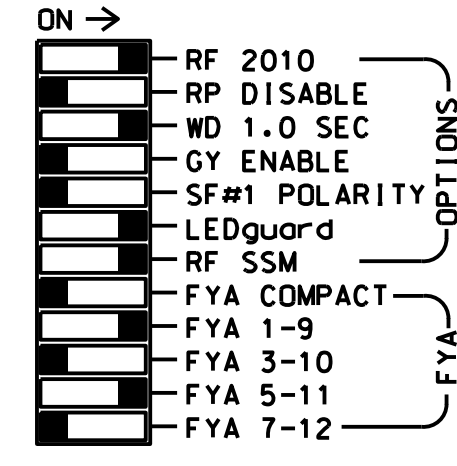
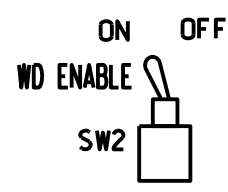
18 CHANNEL IP CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



NOTES:

- Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
- Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
- Ensure that Red Enable is active at all times during normal operation.



NOTES

- To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans.
- Program controller to start up in phase 2 Green No Walk and 6 Green No Walk.

EQUIPMENT INFORMATION

CONTROLLER.....2070LX
 CABINET.....332 W/AUX
 SOFTWARE.....0-FREE MAXTIME
 CABINET MOUNT.....BASE
 OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE
 LOAD SWITCHES USED.....S1,S2,S4,S5,S7,S8,AUX S1,AUX S4
 PHASES USED.....1,2,3,4,5,6
 OVERLAP "1".....*
 OVERLAP "2".....NOT USED
 OVERLAP "3".....*
 OVERLAP "4".....NOT USED
 * See overlap programming detail below.

SIGNAL HEAD HOOK-UP CHART

| LOAD SWITCH NO. | S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 | S9 | S10 | S11 | S12 | AUX S1 | AUX S2 | AUX S3 | AUX S4 | AUX S5 | AUX S6 |
|-----------------------|-----|-------|-------|-----------|----|-----------|----|----|-------|-----|-----|-------|--------|--------|--------|--------|--------|--------|
| CMU CHANNEL NO. | 1 | 2 | 13 | 3 | 4 | 14 | 5 | 6 | 15 | 7 | 8 | 16 | 9 | 10 | 17 | 11 | 12 | 18 |
| PHASE | 1 | 2 | 2 PED | 3 | 4 | 4 PED | 5 | 6 | 6 PED | 7 | 8 | 8 PED | OL1 | OL2 | SPARE | OL3 | OL4 | SPARE |
| SIGNAL HEAD NO. | 11 | 21,22 | NU | 31, 32,33 | 22 | 41, 42,43 | NU | 51 | 61,62 | NU | NU | NU | 11 | NU | NU | 51 | NU | NU |
| RED | 128 | | | 116, 116 | | 101, 101 | | | 134 | | | | | | | | | |
| YELLOW | * | 129 | | 117, 117 | | 102, 102 | | * | 135 | | | | | | | | | |
| GREEN | | 130 | | 118, 118 | | 103, 103 | | | 136 | | | | | | | | | |
| RED ARROW | | | | | | | | | | | | | A121 | | | | A114 | |
| YELLOW ARROW | | | | | | 102 | | | | | | | A122 | | | | A115 | |
| FLASHING YELLOW ARROW | | | | | | | | | | | | | A123 | | | | A116 | |
| GREEN ARROW | 127 | | | 118 | | 103, 103 | | | 133 | | | | | | | | | |

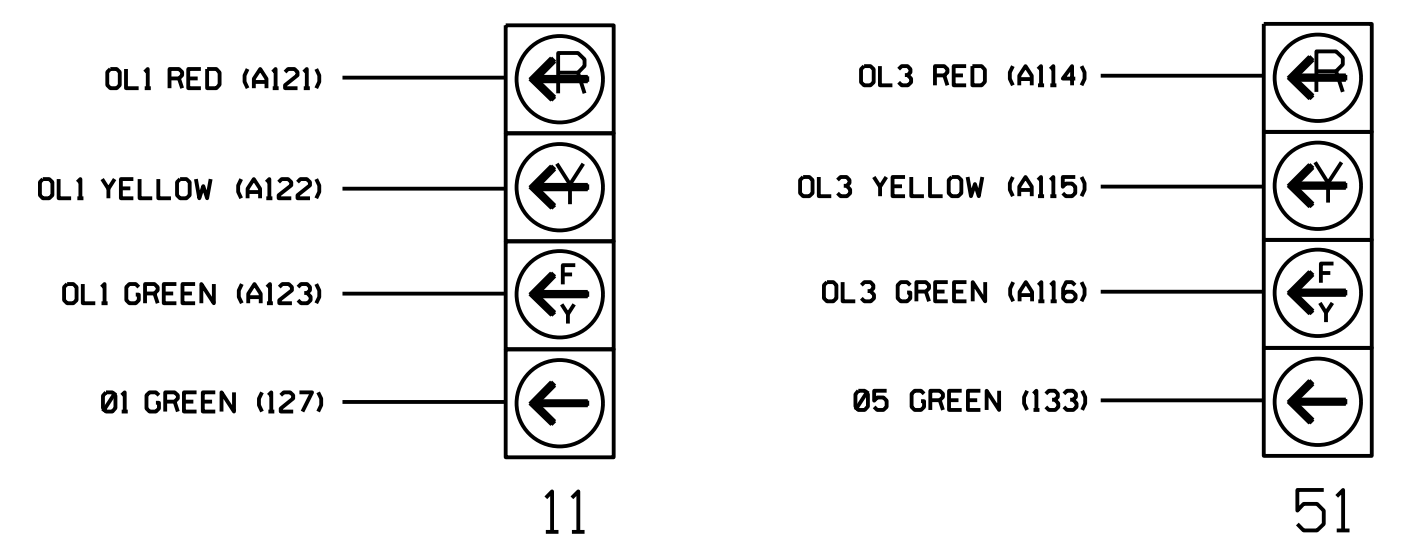
NU = Not Used

* Denotes install load resistor. See load resistor installation detail this sheet.

* See pictorial of head wiring in detail this sheet.

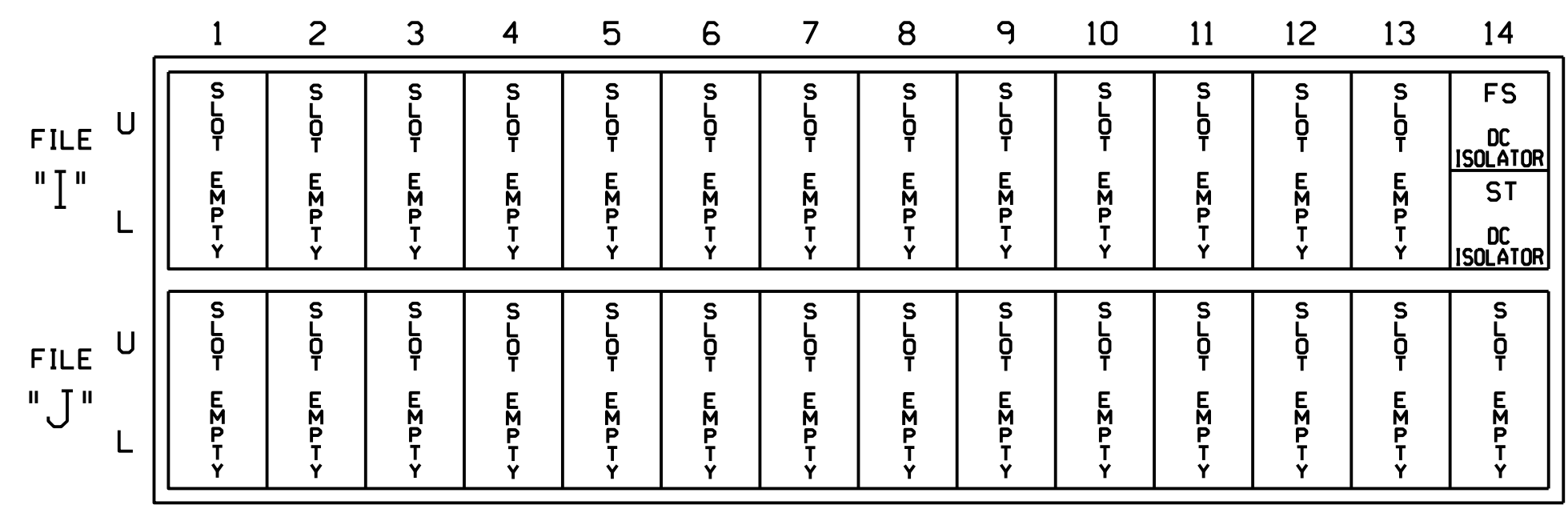
FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



INPUT FILE POSITION LAYOUT

(front view)



OVERLAP PROGRAMMING

Front Panel
Main Menu > Controller > Overlap > Overlap Parameters/Overlap Timings

Web Interface
Home > Controller > Overlap Configuration > Overlaps

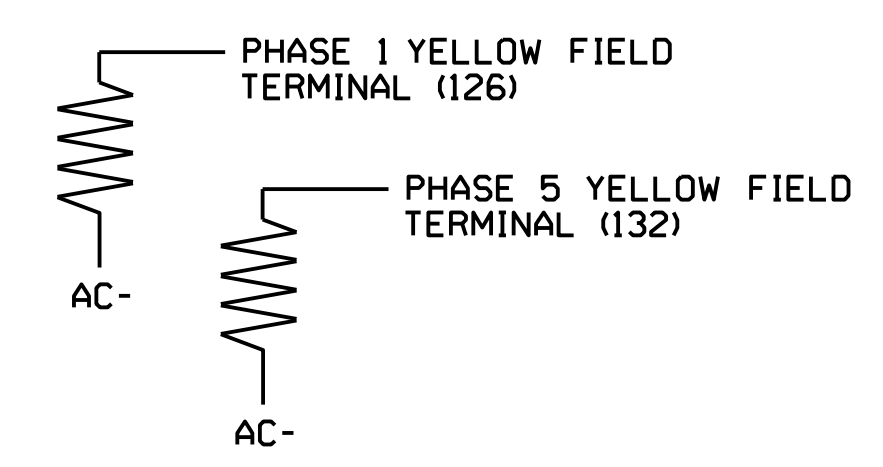
Overlap Plan 1

| Overlap | 1 | 3 |
|-------------------|-----------------|-----------------|
| Type | FYA 4 - Section | FYA 4 - Section |
| Included Phases | 2 | 6 |
| Modifier Phases | 1 | 5 |
| Modifier Overlaps | - | - |
| Trail Green | 0 | 0 |
| Trail Yellow | 0.0 | 0.0 |
| Trail Red | 0.0 | 0.0 |

LOAD RESISTOR INSTALLATION DETAIL

(install resistors as shown below)

| VALUE (ohms) | WATTAGE |
|--------------|-----------|
| 1.5K - 1.9K | 25W (min) |
| 2.0K - 3.0K | 10W (min) |



THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 09-0589T3
 DESIGNED: August 2023
 SEALED: 9/7/2023
 REVISED: N/A

SPECIAL DETECTOR NOTE

Install a video detection system for vehicle detection. Perform installation according to manufacturer's directions and NCDOT engineer-approved mounting locations to accomplish the detection scheme shown on the Signal Design Plans.

Electrical Detail - Temporary Design 3

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Office of:

NC FIRM LICENSE No: P-0339
 320 Executive Court
 Hillsborough, NC 27278
 (919) 732-3883
 (919) 732-6676 (FAX)

Prepared For:

750 N. Greenfield Pkwy, Corner, NC 27529

NC 66 (Old Hollow Road)
 at
 SR 2004 (Main Street) /
 Centre Stage Shopping Center
 Division 9 Forsyth County Walkertown

PLAN DATE: August 2023 REVIEWED BY: E. Sirgany
 PREPARED BY: J. Smith REVIEWED BY:

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

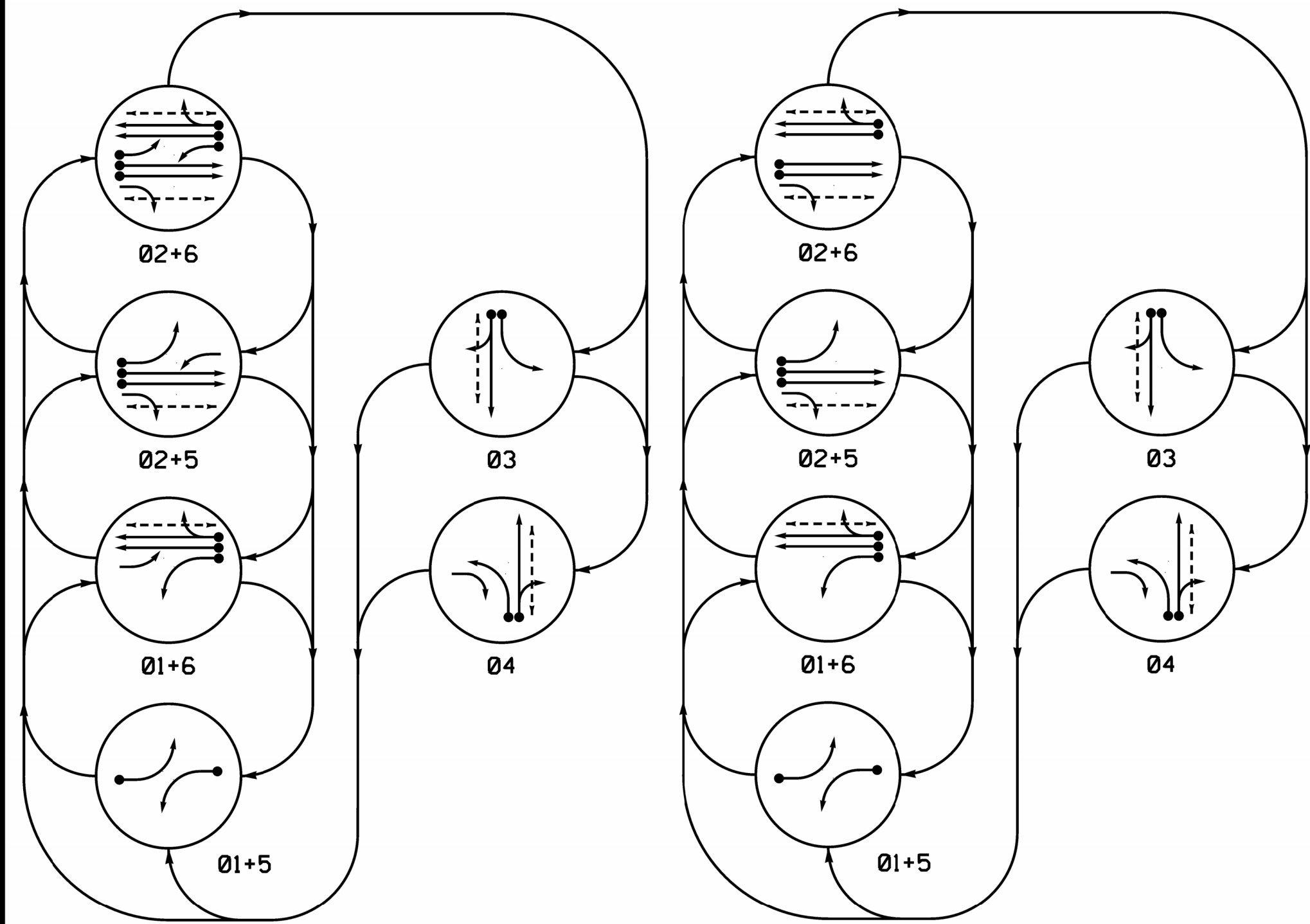
SEAL

DocuSigned by:
 Edward W. Sirgany 9/7/2023
 DATE

SIG. INVENTORY NO. 09-0589T3

DEFAULT PHASING DIAGRAM

ALTERNATE PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

- ← ● → DETECTED MOVEMENT
- ← ○ → UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- ← - - - → PEDESTRIAN MOVEMENT

DEFAULT PHASING TABLE OF OPERATION

| SIGNAL FACE | PHASE | | | | | |
|-------------|-------|------|------|------|----|-------|
| | 01+5 | 01+6 | 02+5 | 02+6 | 03 | FLASH |
| 11 | | | F | F | R | Y |
| 21,22 | R | R | G | G | R | Y |
| 23 | R | R | F | F | R | Y |
| 31 | R | R | R | G | R | R |
| 32,33 | R | R | R | G | R | R |
| 41 | R | R | R | R | G | R |
| 42,43 | R | R | R | R | G | R |
| 51 | F | F | R | R | R | Y |
| 61,62 | R | G | R | G | R | Y |
| P21,P22 | DW | DW | W | DW | DW | DRK |
| P31,P32 | DW | DW | DW | W | DW | DRK |
| P41,P42 | DW | DW | DW | DW | W | DRK |
| P61,P62 | DW | W | DW | W | DW | DRK |

ALTERNATE PHASING TABLE OF OPERATION

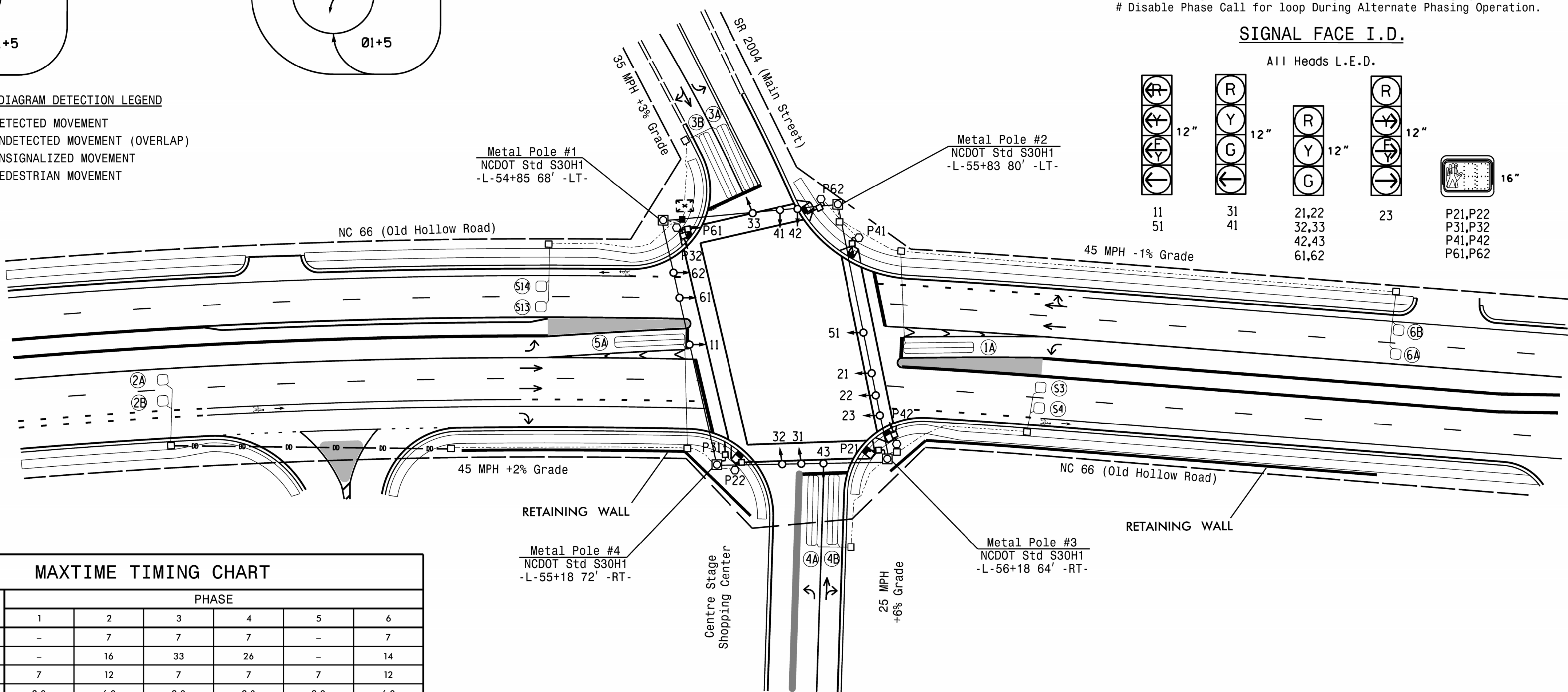
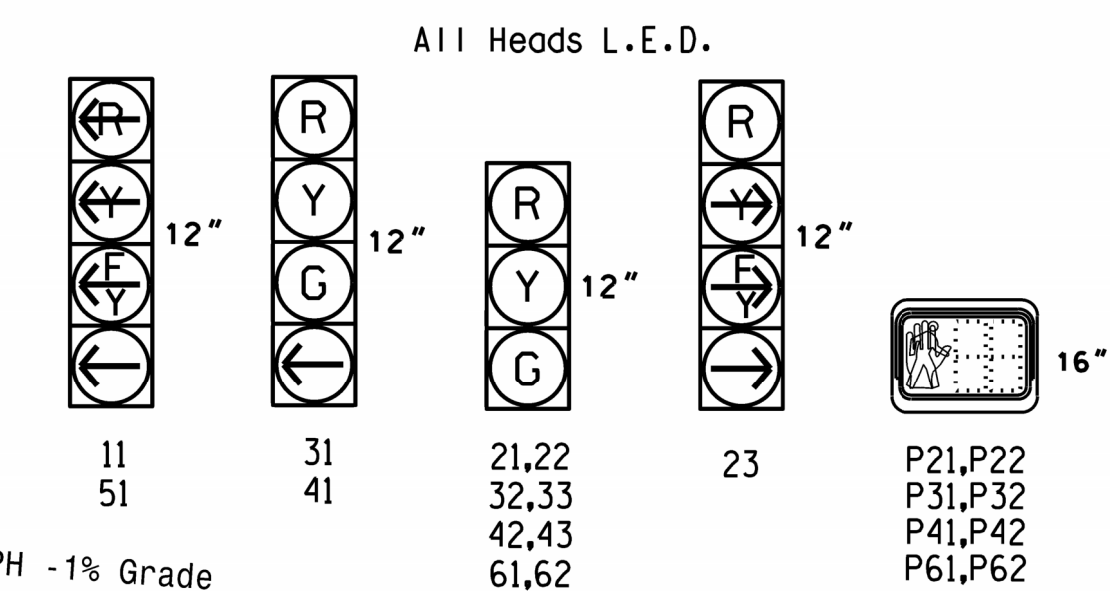
| SIGNAL FACE | PHASE | | | | | |
|-------------|-------|------|------|------|----|-------|
| | 01+5 | 01+6 | 02+5 | 02+6 | 03 | FLASH |
| 11 | | | R | R | R | Y |
| 21,22 | R | R | G | G | R | Y |
| 23 | R | R | F | F | R | Y |
| 31 | R | R | R | R | G | R |
| 32,33 | R | R | R | R | G | R |
| 41 | R | R | R | R | G | R |
| 42,43 | R | R | R | R | G | R |
| 51 | | R | | R | R | Y |
| 61,62 | R | G | R | G | R | Y |
| P21,P22 | DW | DW | W | DW | DW | DRK |
| P31,P32 | DW | DW | DW | W | DW | DRK |
| P41,P42 | DW | DW | DW | DW | W | DRK |
| P61,P62 | DW | W | DW | W | DW | DRK |

MAXTIME DETECTOR INSTALLATION CHART

| LOOP | SIZE (FT) | DISTANCE FROM STOPBAR (FT) | TURNS | NEW LOOP | PROGRAMMING | | | | | | | |
|------|-----------|----------------------------|-------|----------|-------------|------------|-------------|--------|---------------|------|--------------------|----------|
| | | | | | CALL PHASE | DELAY TIME | EXTEND TIME | EXTEND | ADDED INITIAL | CALL | DELAY DURING GREEN | NEW CARD |
| 1A | 6X40 | 0 | 2-4-2 | X | 1 | 15.0* | - | X | - | X | - | X |
| 2A | 6X6 | 300 | 5 | X | 2 | - | - | X | X | X | - | X |
| 2B | 6X6 | 300 | 5 | X | 2 | - | - | X | X | X | - | X |
| 3A | 6X40 | 0 | 2-4-2 | X | 3 | 3.0 | - | X | - | X | - | X |
| 3B | 6X40 | 0 | 2-4-2 | X | 3 | 10.0 | - | X | - | X | - | X |
| 4A | 6X40 | 0 | 2-4-2 | X | 4 | - | - | X | - | X | - | X |
| 4B | 6X40 | 0 | 2-4-2 | X | 4 | 10.0 | - | X | - | X | - | X |
| 5A | 6X40 | 0 | 2-4-2 | X | 5 | 15.0* | - | X | - | X | - | X |
| 6A | 6X6 | 300 | 5 | X | 6 | - | - | X | X | X | - | X |
| 6B | 6X6 | 300 | 5 | X | 6 | - | - | X | X | X | - | X |
| S3 | 6X6 | +200 | 6 | X | - | - | - | - | - | - | - | X |
| S4 | 6X6 | +200 | 6 | X | - | - | - | - | - | - | - | X |
| S13 | 6X6 | +200 | 6 | X | - | - | - | - | - | - | - | X |
| S14 | 6X6 | +200 | 6 | X | - | - | - | - | - | - | - | X |

* Reduce Delay to 3 seconds during Alternate Phasing Operation.
Disable Phase Call for loop During Alternate Phasing Operation.

SIGNAL FACE I.D.



MAXTIME TIMING CHART

| FEATURE | PHASE | | | | | |
|-------------------------|-------|------------|-----|-----|-----|------------|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Walk * | - | 7 | 7 | 7 | - | 7 |
| Ped Clear * | - | 16 | 33 | 26 | - | 14 |
| Min Green * | 7 | 12 | 7 | 7 | 7 | 12 |
| Passage * | 2.0 | 6.0 | 2.0 | 2.0 | 2.0 | 6.0 |
| Max 1 * | 20 | 50 | 30 | 25 | 20 | 50 |
| Yellow Change | 3.0 | 4.6 | 3.7 | 3.0 | 3.0 | 4.6 |
| Red Clear | 3.3 | 1.7 | 2.9 | 3.6 | 2.9 | 1.7 |
| Added Initial * | - | 2.5 | - | - | - | 2.5 |
| Maximum Initial * | - | 34 | - | - | - | 34 |
| Time Before Reduction * | - | 15 | - | - | - | 15 |
| Time To Reduce * | - | 30 | - | - | - | 30 |
| Minimum Gap | - | 3.0 | - | - | - | 3.0 |
| Advance Walk | - | 3 | 3 | 3 | - | 3 |
| Non Lock Detector | X | - | X | X | X | - |
| Vehicle Recall | - | MIN RECALL | - | - | - | MIN RECALL |
| Dual Entry | - | - | - | - | - | - |

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

6 Phase Fully Actuated (Old Hollow Road CLS)
Signal System #: D09-29_Walkertown

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. The order of phase 3 and phase 4 may be reversed.
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.
8. Metal poles, pedestal poles, and pedestrian signal heads shall be black in color. Vehicle signal heads shall be standard yellow in color.
9. The Division Traffic Engineer will determine the hours of use for each phasing plan.
10. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

LEGEND

- | PROPOSED | EXISTING |
|--|---------------------------------------|
| ○ → Traffic Signal Head | ● → N/A |
| ● → Modified Signal Head | - - - Sign |
| □ → Pedestrian Signal Head With Push Button & Sign | ■ → |
| ○ → Metal Strain Pole | ○ → Type II Signal Pedestal |
| ○ → Inductive Loop Detector | □ → Controller & Cabinet Junction Box |
| □ → 2-in Underground Conduit | - - - Directional Drill |
| - - - Directional Drill | N/A |
| N/A | → Right of Way |
| N/A | → Directional Arrow |
| N/A | ▴ Curb Ramp |

Signal Upgrade - Final Design

Prepared in the Office of:

NC FIRM LICENSE No: P-0339
320 Executive Court
Hillsborough, NC 27278
(919) 732-3883
(919) 732-6676 (FAX)

Prepared For:

750 N. Greenfield Pkwy, Garner, NC 27529

NC 66 (Old Hollow Road)
at
SR 204 (Main Street) /
Centre Stage Shopping Center
Division 9 Forsyth County Walkertown

PLAN DATE: August 2023 REVIEWED BY: E. Sirgany
PREPARED BY: M. Parker REVIEWED BY: J. Smith

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL

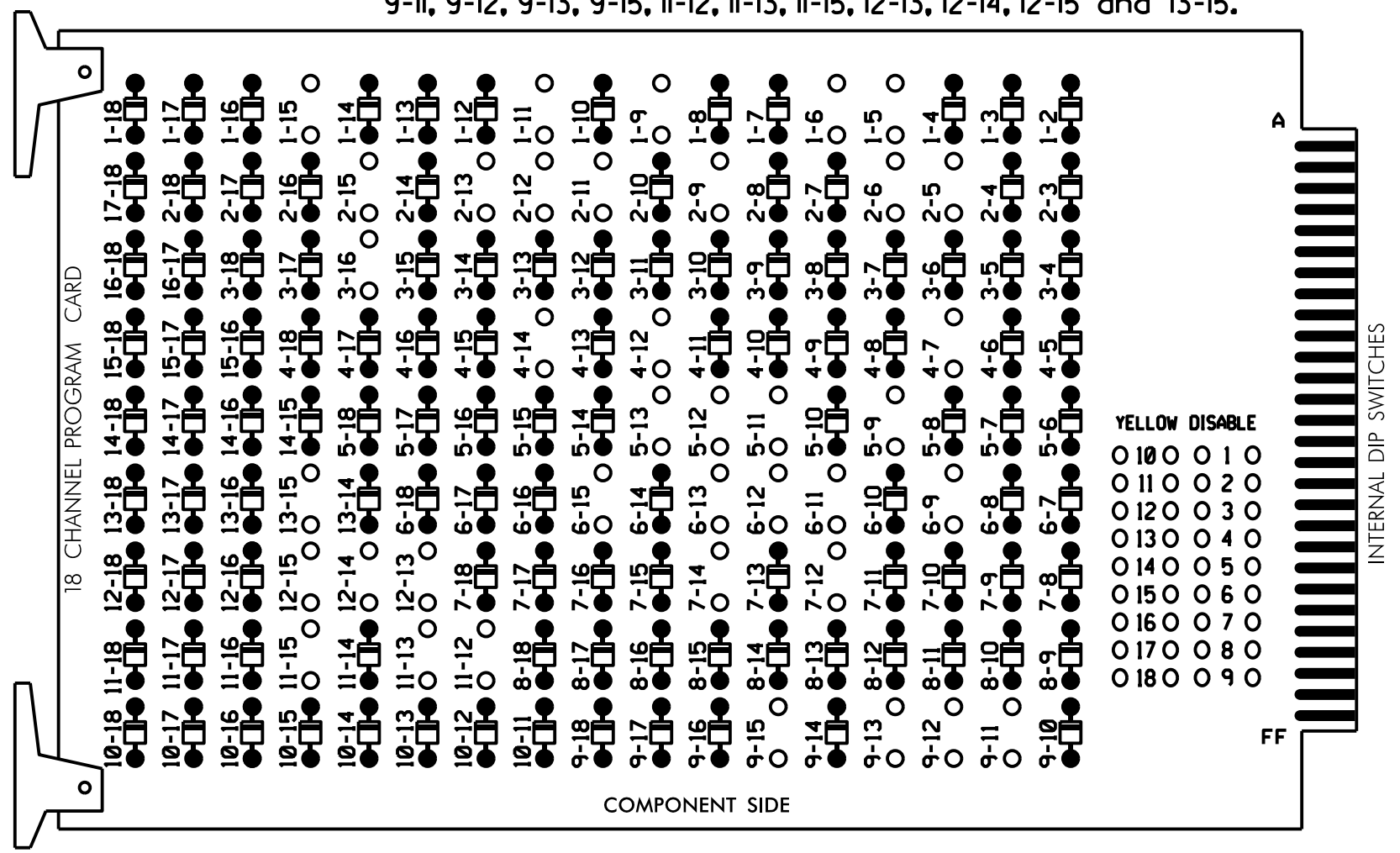
Edward W. Sirgany
9/7/2023
DATE

SIG. INVENTORY NO. 09-0589

18 CHANNEL IP CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)

REMOVE DIODE JUMPERS 1-5, 1-6, 1-9, 1-11, 1-15, 2-5, 2-6, 2-9, 2-11, 2-12, 2-13, 2-15, 3-16, 4-7, 4-12, 4-14, 5-9, 5-11, 5-12, 5-13, 6-9, 6-11, 6-12, 6-13, 6-15, 7-12, 7-14, 9-11, 9-12, 9-13, 9-15, 11-12, 11-13, 11-15, 12-13, 12-14, 12-15 and 13-15.



REMOVE JUMPERS AS SHOWN

NOTES:

- Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
- Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
- Ensure that Red Enable is active at all times during normal operation.
- Integrate monitor with Ethernet network in cabinet.

NOTES

- To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans.
- Program controller to start up in phase 2 Green No Walk and phase 6 Green No Walk.
- If this signal will be managed by an ATMS software, enable controller and detector logging for all enabled detectors.
- The cabinet and controller are part of the Old Hollow Road Closed Loop System. Signal System #: D09-29_Walkertown

EQUIPMENT INFORMATION

CONTROLLER.....2070LX
 CABINET.....332 W/AUX
 SOFTWARE.....Q-FREE MAXTIME
 CABINET MOUNT.....BASE
 OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE
 LOAD SWITCHES USED.....S1,S2,S3,S4,S5,S6,S7,S8,S9,S10,S12,AUX S1,AUX S4,AUX S5
 PHASES USED.....1,2,2PED,3,3PED,4,4PED,5,6,6PED
 OVERLAP "1".....*
 OVERLAP "2".....NOT USED
 OVERLAP "3".....*
 OVERLAP "4".....*
 OVERLAP "7".....*
 * See overlap programming detail on sheet 2.

SIGNAL HEAD HOOK-UP CHART

| LOAD SWITCH NO. | S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 | S9 | S10 | S11 | S12 | AUX S1 | AUX S2 | AUX S3 | AUX S4 | AUX S5 | AUX S6 | | | | | |
|-----------------------|-----|-------|----------|-----|-------|-------|-------|----------|-------|-------|----------|--------|--------|----------|--------|--------|--------|--------|----|------|------|------|------|
| CMU CHANNEL NO. | 1 | 2 | 13 | 3 | 4 | 14 | 5 | 6 | 15 | 7 | 8 | 16 | 9 | 10 | 17 | 11 | 12 | 18 | | | | | |
| PHASE | 1 | 2 | 2 PED | 3 | 4 | 4 PED | 5 | 6 | 6 PED | OL7 | 8 | *3 PED | OL1 | OL2 | SPARE | OL3 | OL4 | SPARE | | | | | |
| SIGNAL HEAD NO. | 11 | 21,22 | P21, P22 | 31 | 32,33 | 41 | 42,43 | P41, P42 | 51 | 61,62 | P61, P62 | 23 | NU | P31, P32 | 11 | NU | NU | 51 | 23 | NU | | | |
| RED | | 128 | | 116 | 116 | 101 | 101 | | | 134 | | | | | | | | | | A101 | | | |
| YELLOW | * | 129 | | 117 | 117 | 102 | 102 | | * | 135 | | * | | | | | | | | | | | |
| GREEN | | 130 | | 118 | 118 | 103 | 103 | | | 136 | | | | | | | | | | | | | |
| RED ARROW | | | | | | | | | | | | | | | | | | | | A121 | A114 | | |
| YELLOW ARROW | | | | | | | | | | | | | | | | | | | | | A122 | A115 | A102 |
| FLASHING YELLOW ARROW | | | | | | | | | | | | | | | | | | | | | A123 | A116 | A103 |
| GREEN ARROW | 127 | | | 118 | 103 | | | 133 | | 124 | | | | | | | | | | | | | |
| Hand | | | | 113 | | | | 104 | | 119 | | | 110 | | | | | | | | | | |
| Walking | | | | 115 | | | | 106 | | 121 | | | 112 | | | | | | | | | | |

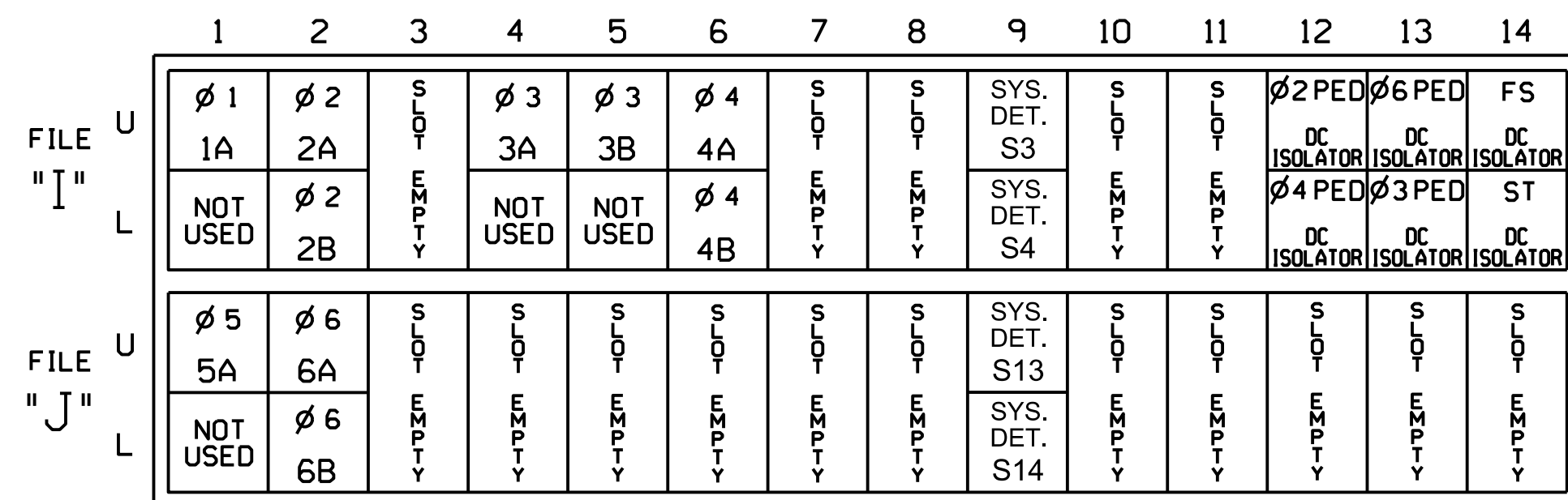
NU = Not Used

* Denotes install load resistor. See load resistor installation detail this sheet.

** Load switch must be reassigned from phase 8 Ped to phase 3 Ped. See sheet 3.
 * See pictorial of head wiring in detail below.

INPUT FILE POSITION LAYOUT

(front view)



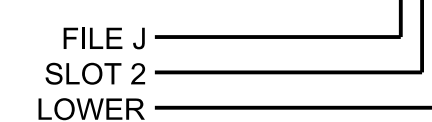
INPUT FILE CONNECTION & PROGRAMMING CHART

| LOOP NO. | LOOP TERMINAL | INPUT FILE POS. | PIN NO. | INPUT POINT | DETECTOR NO. | CALL PHASE | DELAY TIME | EXTEND TIME | EXTEND | ADDED INITIAL | CALL | DELAY DURING GREEN |
|------------------|---------------|-----------------|---------|-------------|--------------|------------|------------|-------------|--------|---------------|------|--------------------|
| 1A | TB2-1,2 | I1U | 56 | 18 | 1 | 1 | 15.0 | | X | | X | |
| 2A | TB2-5,6 | I2U | 39 | 1 | 2 | 2 | 3.0 | | X | X | X | X |
| 2B | TB2-7,8 | I2L | 43 | 5 | 3 | 2 | | | X | X | X | |
| 3A | TB4-1,2 | I4U | 47 | 9 | 6 | 3 | 3.0 | | X | | X | |
| 3B | TB4-5,6 | I5U | 58 | 20 | 7 | 3 | 10.0 | | X | | X | |
| 4A | TB4-9,10 | I6U | 41 | 3 | 8 | 4 | | | X | | X | |
| 4B | TB4-11,12 | I6L | 45 | 7 | 9 | 4 | 10.0 | | X | | X | |
| 5A | TB3-1,2 | J1U | 55 | 17 | 15 | 5 | 15.0 | | X | | X | |
| 6A | TB3-5,6 | J2U | 40 | 2 | 16 | 6 | | | X | X | X | |
| 6B | TB3-7,8 | J2L | 44 | 6 | 17 | 6 | | | X | X | X | |
| * S3 | TB6-9,10 | I9U | 60 | 22 | 13 | SYS | | | | | | |
| * S4 | TB6-11,12 | I9L | 62 | 24 | 14 | SYS | | | | | | |
| * S13 | TB7-9,10 | J9U | 59 | 21 | 27 | SYS | | | | | | |
| * S14 | TB7-11,12 | J9L | 61 | 23 | 28 | SYS | | | | | | |
| PED PUSH BUTTONS | | | | | | | | | | | | |
| P21,P22 | TB8-4,6 | I12U | 67 | 33 | 2 | PED 2 | | | | | | |
| P31,P32 | TB8-8,9 | I13L | 70 | 36 | 8 | PED 3 | | | | | | |
| P41,P42 | TB8-5,6 | I12L | 69 | 35 | 4 | PED 4 | | | | | | |
| P61,P62 | TB8-7,9 | I13U | 68 | 34 | 6 | PED 6 | | | | | | |

NOTE: INSTALL DC ISOLATORS IN INPUT FILE SLOTS I12 AND I13.

* System detector only. Remove any assigned vehicle phase.
 * For the detectors to work as shown on the signal design plan, see the Vehicle Detector Setup Programming Detail for Alternate Phasing on Sheet 2.

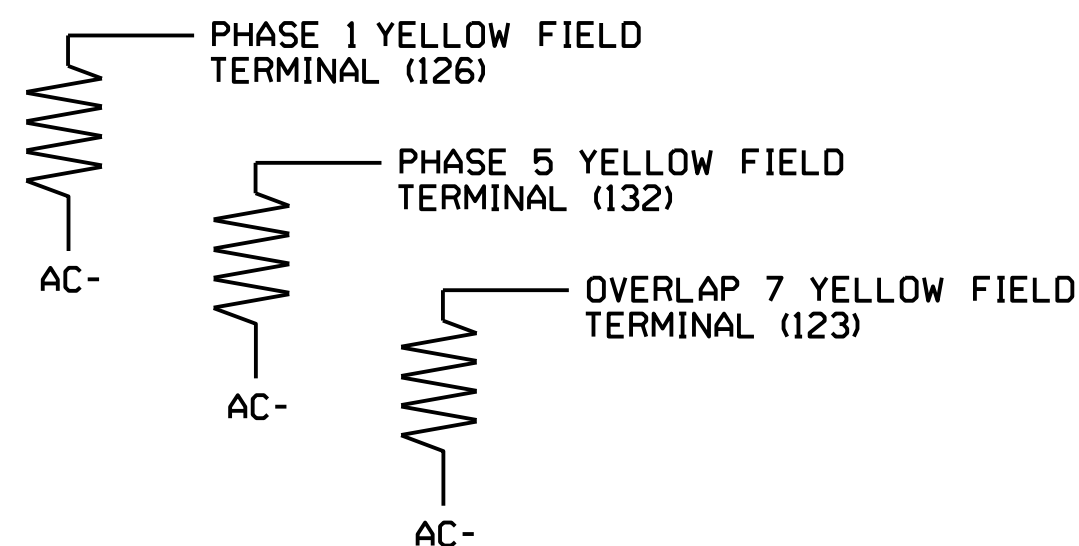
INPUT FILE POSITION LEGEND: J2L



LOAD RESISTOR INSTALLATION DETAIL

(install resistors as shown below)

| VALUE (ohms) | WATTAGE |
|--------------|-----------|
| 1.5K - 1.9K | 25W (min) |
| 2.0K - 3.0K | 10W (min) |



COUNTDOWN PEDESTRIAN SIGNAL OPERATION

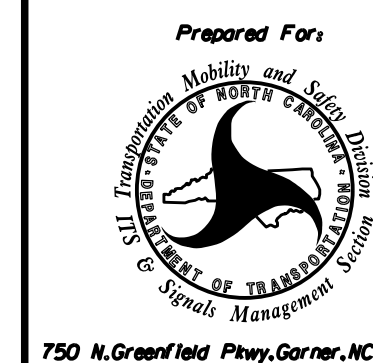
Countdown Ped Signals are required to display timing only during Ped Clearance Interval. Consult Ped Signal Module user's manual for instructions on selecting this feature.

Prepared in the Office of:



NC FIRM LICENSE No: P-0339
 504 Meadowlands Drive
 Hillsborough, NC 27278
 (919) 732-3883
 (919) 732-6676 (FAX)

ELECTRICAL AND PROGRAMMING DETAILS FOR:



NC 66 (Old Hollow Road) at SR 2004 (Main Street) / Centre Stage Shopping Center
 Division 9 Forsyth County Walkertown
 PLAN DATE: August 2023 REVIEWED BY: E. Sirgany
 PREPARED BY: J. Smith REVIEWED BY:
 REVISIONS INIT. DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 018174
 EDWARD W. SIRGANY
 ENGINEER
 Documented by: Edward W. Sirgany 9/7/2023
 DATE
 SIG. INVENTORY NO. 09-0589

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 09-0589
 DESIGNED: August 2023
 SEALED: 9/7/2023
 REVISED: N/A

MAXTIME OVERLAP PROGRAMMING DETAIL FOR DEFAULT PHASING

Front Panel
Main Menu > Controller > Overlap > Overlap Parameters/Overlap Timings

Web Interface
Home > Controller > Overlap Configuration > Overlaps
Overlap Plan 1

| Overlap | 1 | 3 | 4 | 7 |
|-------------------|-----------------|-----------------|-----------------|--------|
| Type | FYA 4 - Section | FYA 4 - Section | FYA 4 - Section | Normal |
| Included Phases | 2 | 6 | 2 | 4 |
| Modifier Phases | 1 | 5 | - | - |
| Modifier Overlaps | - | - | 7 | - |
| Trail Green | 0 | 0 | 0 | 0 |
| Trail Yellow | 0.0 | 0.0 | 0.0 | 0.0 |
| Trail Red | 0.0 | 0.0 | 0.0 | 0.0 |

MAXTIME OVERLAP PROGRAMMING DETAIL FOR ALTERNATE PHASING

Front Panel
Main Menu > Controller > Overlap > Overlap Parameters/Overlap Timings

Web Interface
Home > Controller > Overlap Configuration > Overlaps

In the table view of the web interface, right click on "Overlap" in the top left corner of the table. Copy the entire contents of Overlap Plan 1. Paste Overlap Plan 1 into Overlap Plan 2. Modify Overlap Plan 2 as shown below and save changes.

Overlap Plan 2

| Overlap | 1 | 3 | 4 | 7 |
|-------------------|-----------------|-----------------|-----------------|--------|
| Type | FYA 4 - Section | FYA 4 - Section | FYA 4 - Section | Normal |
| Included Phases | - | - | 2 | 4 |
| Modifier Phases | 1 | 5 | - | - |
| Modifier Overlaps | - | - | 7 | - |
| Trail Green | 0 | 0 | 0 | 0 |
| Trail Yellow | 0.0 | 0.0 | 0.0 | 0.0 |
| Trail Red | 0.0 | 0.0 | 0.0 | 0.0 |

← NOTICE INCLUDED PHASE

MAXTIME DETECTOR PROGRAMMING DETAIL FOR ALTERNATE PHASING LOOPS 1A & 5A

Front Panel
Main Menu > Controller > Detector > Veh Det Plans

Web Interface
Home > Controller > Detector Configuration > Vehicle Detectors

In the table view of web interface right click on "Detector" in the top left corner of the table. Copy the entire contents of Detector Plan 1. Paste Detector Plan 1 into Detector Plan 2. Modify Detector Plan 2 as shown below and save changes.

Plan 2

| Detector | Call Phase | Delay |
|----------|------------|-------|
| 1 | 1 | 3.0 |
| 29 | 0 | 3.0 |

1A

| Detector | Call Phase | Delay |
|----------|------------|-------|
| 15 | 5 | 3.0 |
| 31 | 0 | 3.0 |

5A

MAXTIME ALTERNATE PHASING ACTIVATION DETAIL

To run alternate phasing, select a Pattern that is programmed to run Overlap Plan 2 and Detector Plan 2. A Pattern can be selected through the scheduler or manually by changing the Operational Mode.

| PHASING | OVERLAP PLAN | VEH DET PLAN |
|---|--------------|--------------|
| ACTIVE PLAN REQUIRED TO RUN DEFAULT PHASING | 1 | 1 |
| ACTIVE PLAN REQUIRED TO RUN ALTERNATE PHASING | 2 | 2 |

ALTERNATE PHASING CHANGE SUMMARY

THE FOLLOWING IS A SUMMARY OF WHAT TAKES PLACE WHEN OVERLAP PLAN 2 AND VEHICLE DETECTOR PLAN 2 ACTIVATE TO CALL THE "ALTERNATE PHASING":

OVERLAP PLAN 2: Modifies overlap included phases for heads 11 and 51 to run protected turns only.

VEH DET PLAN 2: Disables phase 6 call on loop 1A and reduces delay time for phase 1 call on loop 1A to 3.0 seconds.

Disables phase 2 call on loop 5A and reduces delay time for phase 5 call on loop 5A to 3.0 seconds.

MAXTIME ALTERNATE PHASING PATTERN PROGRAMMING DETAIL

Front Panel
Main Menu > Controller > Coordination > Patterns

Web Interface
Home > Controller > Coordination > Patterns

Pattern Parameters

| Pattern | Veh Det Plan | Overlap Plan |
|---------|--------------|--------------|
| * | 2 | 2 |

* The Pattern number(s) are to be determined by the Division Traffic Engineer.

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 09-0589
DESIGNED: August 2023
SEALED: 9/7/2023
REVISED: N/A

Electrical Detail - Final Design - Sheet 2 of 3

Prepared in the Office of:



NC FIRM LICENSE No: P-0339
504 Meadowlands Drive
Hillsborough, NC 27278
(919) 732-3883
(919) 732-6676 (FAX)

ELECTRICAL AND PROGRAMMING DETAILS FOR:



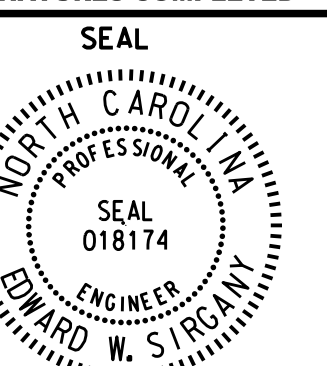
NC 66 (Old Hollow Road)
at
SR 2004 (Main Street) /
Centre Stage Shopping Center
Division 9 Forsyth County Walkertown

PLAN DATE: August 2023 REVIEWED BY: E. Sirgany

PREPARED BY: J. Smith REVIEWED BY:

REVISIONS INIT. DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



DocuSigned by: Edward W. Sirgany 9/7/2023

SIG. INVENTORY NO. 09-0589

OUTPUT CHANNEL CONFIGURATION

Front Panel
Main Menu >Controller >More>Channels>Channels Config

Web Interface
Home >Controller >Advanced IO>Channels>Channels Configuration

Channel Configuration

| Channel | Control Type | Control Source | Flash Yellow | Flash Red | Flash Alt | MMU Channel |
|---------|---------------|----------------|--------------|-----------|-----------|-------------|
| 1 | Phase Vehicle | 1 | | X | X | 1 |
| 2 | Phase Vehicle | 2 | X | | | 2 |
| 3 | Phase Vehicle | 3 | | X | X | 3 |
| 4 | Phase Vehicle | 4 | | X | | 4 |
| 5 | Phase Vehicle | 5 | | X | | 5 |
| 6 | Phase Vehicle | 6 | X | | X | 6 |
| 7 | Overlap | 7 | | X | | 7 |
| 8 | Phase Vehicle | 8 | | X | X | 8 |
| 9 | Overlap | 1 | X | | X | 9 |
| 10 | Overlap | 2 | | X | X | 10 |
| 11 | Overlap | 3 | X | | | 11 |
| 12 | Overlap | 4 | X | | | 12 |
| 13 | Phase Ped | 2 | | | | 13 |
| 14 | Phase Ped | 4 | | | | 14 |
| 15 | Phase Ped | 6 | | | | 15 |
| 16 | Phase Ped | 3 | | | | 16 |
| 17 | Overlap | 5 | | X | X | 17 |
| 18 | Overlap | 6 | | X | | 18 |

NOTICE OVERLAP 7
ASSIGNED TO CHANNEL 7 →

NOTICE OVERLAP 4
FLASH YELLOW →

NOTICE PHASE 3 PED
ASSIGNED TO CHANNEL 16 →

PED 3 DETECTOR PROGRAMMING DETAIL

Front Panel
Main Menu >Controller >Detector >Ped Det Plans

Web Interface
Home >Controller >Detector Configuration >Pedestrian Detector

Plan 1

| Detector | Description | Call Phase | Call Overlap |
|----------|-------------|------------|--------------|
| 2 | | 2 | 0 |
| 4 | | 4 | 0 |
| 6 | | 6 | 0 |
| 8 | | 3 | 0 |

NOTICE PHASE 3 PED
ASSIGNED TO
DETECTOR 8 PED →

FLASHER CIRCUIT MODIFICATION DETAIL

IN ORDER TO ENSURE THAT SIGNALS FLASH CONCURRENTLY ON THE SAME APPROACH, MAKE THE FOLLOWING FLASHER CIRCUIT CHANGES:

- ON REAR OF PDA - REMOVE WIRE FROM TERM. T2-4 AND TERMINATE ON T2-2.
- ON REAR OF PDA - REMOVE WIRE FROM TERM. T2-5 AND TERMINATE ON T2-3.
- REMOVE FLASHER UNIT 2.

THE CHANGES LISTED ABOVE TIES ALL PHASES AND OVERLAPS TO FLASHER UNIT 1.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 09-0589
DESIGNED: August 2023
SEALED: 9/7/2023
REVISED: N/A

Electrical Detail - Final Design - Sheet 3 of 3

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

Prepared in the Office of:



NC FIRM LICENSE No: P-0339
504 Meadowlands Drive
Hillsborough, NC 27278
(919) 732-3883
(919) 732-6676 (FAX)

ELECTRICAL AND PROGRAMMING
DETAILS FOR:



NC 66 (Old Hollow Road)
at
SR 2004 (Main Street) /
Centre Stage Shopping Center
Division 9 Forsyth County Walkertown

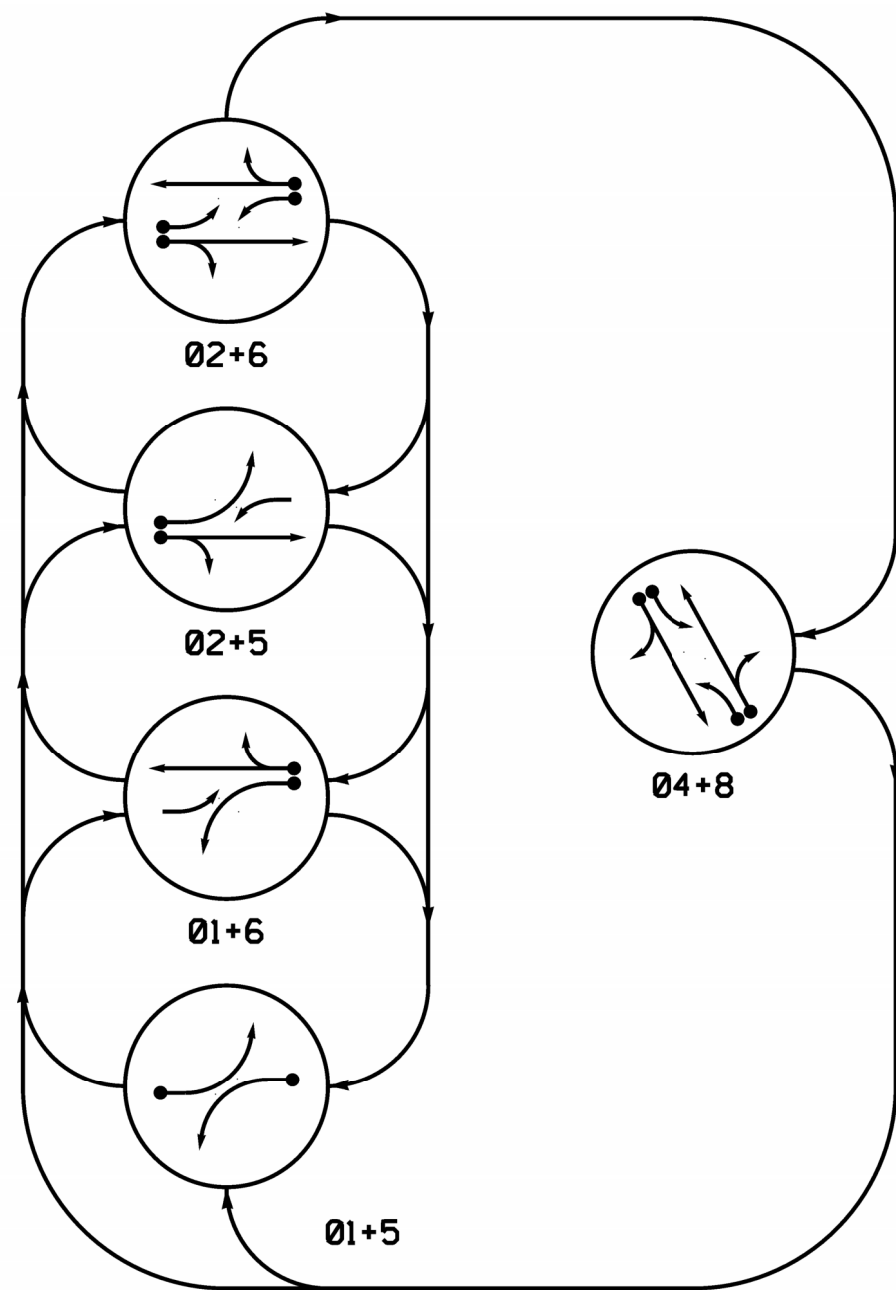
PLAN DATE: August 2023 REVIEWED BY: E. Sirgany
PREPARED BY: J. Smith REVIEWED BY:

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

SEAL
NORTH CAROLINA
PROFESSIONAL
ENGINEER
SEAL
018174
EDWARD W. SIRGANY

DocuSigned by:
Edward W Sirgany 9/7/2023
DATE
SIG. INVENTORY NO. 09-0589

PHASING DIAGRAM

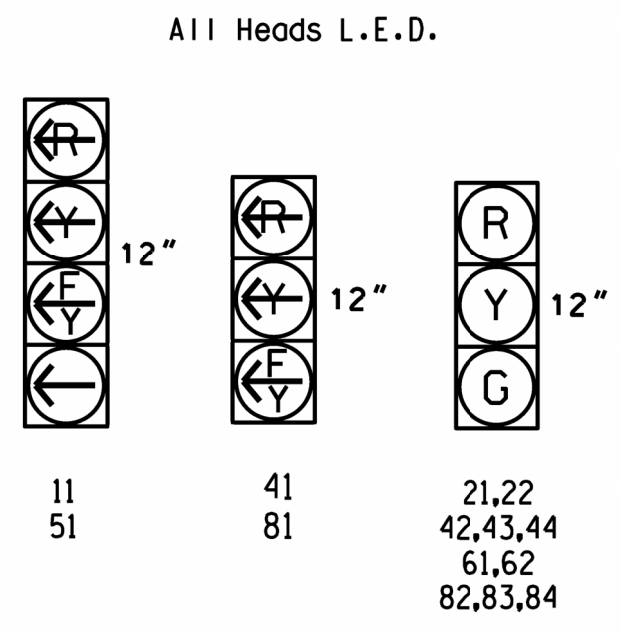


PHASING DIAGRAM DETECTION LEGEND

- ← ● → DETECTED MOVEMENT
- ← ○ → UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- ← - - - → PEDESTRIAN MOVEMENT

| SIGNAL FACE | PHASE | | | | | |
|-------------|-------|------|------|------|------|---------|
| | 01+5 | 01+6 | 02+5 | 02+6 | 04+8 | F L U A |
| 11 | --- | --- | F | F | R | Y |
| 21,22 | R | R | G | G | R | Y |
| 41 | R | R | R | R | F | R |
| 42,43,44 | R | R | R | R | G | R |
| 51 | --- | --- | F | F | R | Y |
| 61,62 | R | R | G | G | R | Y |
| 81 | R | R | R | R | F | R |
| 82,83,84 | R | R | R | R | G | R |

SIGNAL FACE I.D.



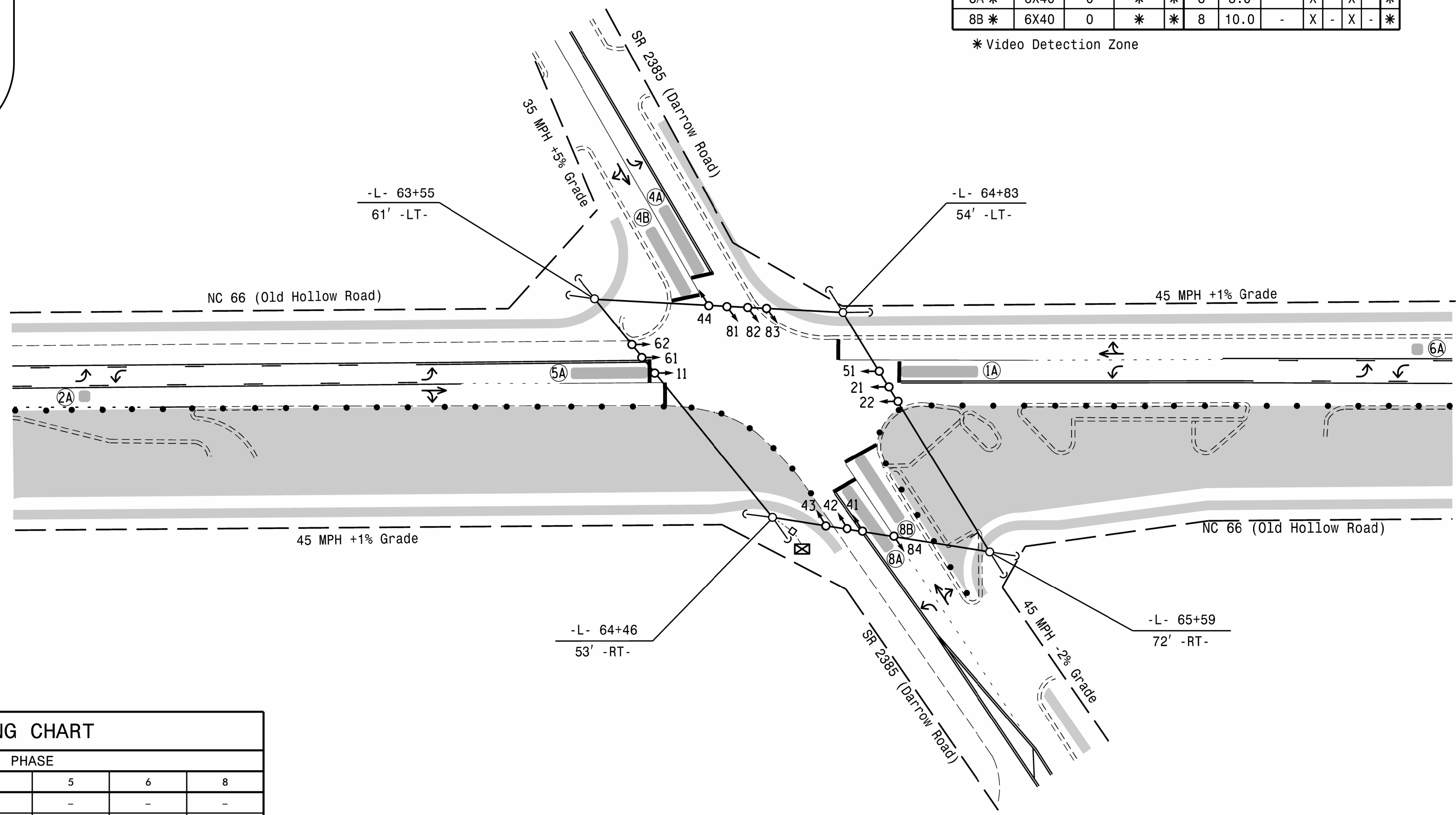
| MAXTIME DETECTOR INSTALLATION CHART | | | | | | | | | | | | |
|-------------------------------------|-----------|----------------------------|-------|----------|------------|-------------|-------------|--------|--------------------|--------------------|----------|--|
| DETECTOR | | | | | | PROGRAMMING | | | | | | |
| ZONE | 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 | * | * | 1 | 15.0 | - | X | - | X | * | |
| | | | | | 6 | 3.0 | - | X | - | X | * | |
| 2A * | 6X6 | 300 | * | * | 2 | - | - | X | X | X | * | |
| 4A * | 6X40 | 0 | * | * | 4 | 3.0 | - | X | - | X | * | |
| 4B * | 6X40 | 0 | * | * | 4 | 10.0 | - | X | - | X | * | |
| 5A * | 6X40 | 0 | * | * | 5 | 15.0 | - | X | - | X | * | |
| | | | | | 2 | 3.0 | - | X | - | X | * | |
| 6A * | 6X6 | 300 | * | * | 6 | - | - | X | X | X | * | |
| 8A * | 6X40 | 0 | * | * | 8 | 3.0 | - | X | - | X | * | |
| 8B * | 6X40 | 0 | * | * | 8 | 10.0 | - | X | - | X | * | |

* Video Detection Zone

5 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. 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. Pavement markings are existing.
7. This intersection uses video detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.



| MAXTIME TIMING CHART | | | | | | | |
|-------------------------|-------|------------|-----|-----|------------|-----|--|
| FEATURE | PHASE | | | | | | |
| | 1 | 2 | 4 | 5 | 6 | 8 | |
| Walk * | - | - | - | - | - | - | |
| Ped Clear * | - | - | - | - | - | - | |
| Min Green * | 7 | 12 | 7 | 7 | 12 | 7 | |
| Passage * | 2.0 | 6.0 | 2.0 | 2.0 | 6.0 | 2.0 | |
| Max I * | 20 | 50 | 30 | 20 | 50 | 30 | |
| Yellow Change | 3.0 | 4.4 | 4.7 | 3.0 | 4.4 | 4.7 | |
| Red Clear | 2.4 | 1.4 | 2.6 | 2.1 | 1.4 | 2.6 | |
| Added Initial * | - | 3.0 | - | - | 3.0 | - | |
| Maximum Initial * | - | 34 | - | - | 34 | - | |
| 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 | |
| Vehicle Recall | - | MIN RECALL | - | - | MIN RECALL | - | |
| Dual Entry | - | - | X | - | - | X | |

| PROPOSED | | EXISTING | |
|----------|--|----------|-------------------------------|
| | Traffic Signal Head | | Traffic Signal Head |
| | Modified Signal Head | | N/A |
| | Sign | | N/A |
| | Pedestrian Signal Head With Push Button & Sign | | N/A |
| | Signal Pole with Guy | | Signal Pole with Guy |
| | Signal Pole with Sidewalk Guy | | Signal Pole with Sidewalk Guy |
| | Video Detection Zone | | Video Detection Zone |
| | Controller & Cabinet | | Controller & Cabinet |
| | Junction Box | | Junction Box |
| | 2-in Underground Conduit | | 2-in Underground Conduit |
| | Right of Way | | Right of Way |
| | Directional Arrow | | Directional Arrow |
| | Construction Zone | | Construction Zone |
| | Construction Zone Drums | | Construction Zone Drums |

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

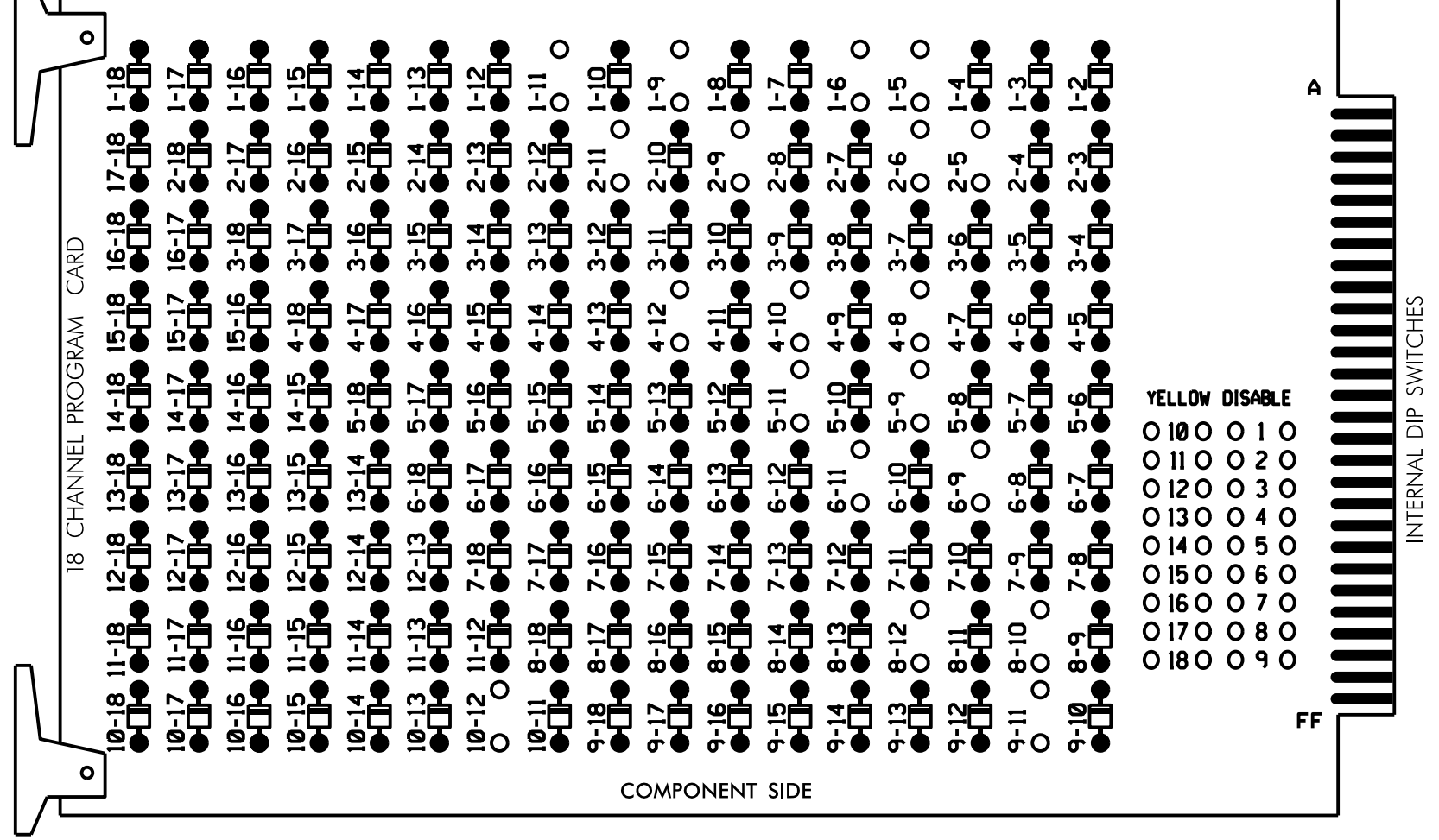
Signal Upgrade - Temporary Design 1 (TMP Phase I - Step 2)

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

| | | | | | |
|---|--|--|---|---------------------------|-------------------------|
| Prepared in the Office of: NC FIRM LICENSE No: P-0339 320 Executive Court Hillsborough, NC 27278 (919) 732-3883 (919) 732-6676 (FAX) | Prepared For: 750 N. Greenfield Hwy, Garner, NC 27525 | NC 66 (Old Hollow Road) at SR 2385 (Darrow Road) Division 9 Forsyth County Walkertown PLAN DATE: August 2023 REVIEWED BY: E. Sirgany PREPARED BY: J. Smith REVIEWED BY: | Edward W. Sirgany 9/7/2023 DATE SIG. INVENTORY NO. 09-065411 | | |
| | | | | SCALE 0 40 1" = 40' | REVISIONS INIT. DATE |
| | | | | REVISIONS INIT. DATE | REVISIONS INIT. DATE |
| | | | | REVISIONS INIT. DATE | REVISIONS INIT. DATE |

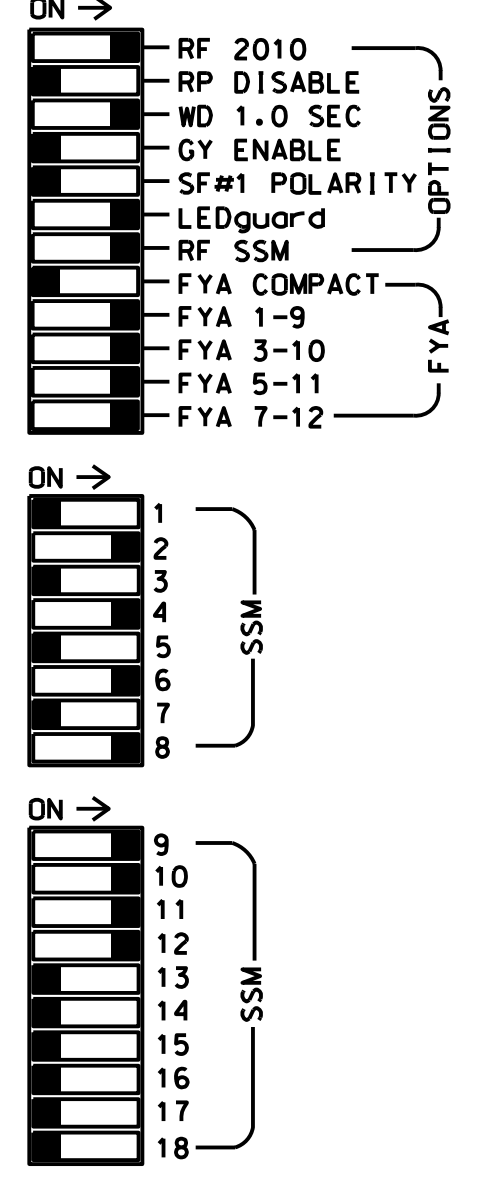
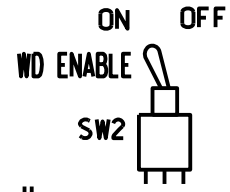
18 CHANNEL IP CONFLICT MONITOR PROGRAMMING DETAIL
(remove jumpers and set switches as shown)

REMOVE DIODE JUMPERS 1-5, 1-6, 1-9, 1-11, 2-5, 2-6, 2-9, 2-11, 4-8, 4-10, 4-12, 5-9, 5-11, 6-9, 6-11, 8-10, 8-12, 9-11 and 10-12.



REMOVE JUMPERS AS SHOWN

- NOTES:**
- Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
 - Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
 - Ensure that Red Enable is active at all times during normal operation.



NOTES

- To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans.
- Program phases 4 and 8 for Dual Entry.
- Program controller to start up in phase 2 Green No Walk and 6 Green No Walk.

EQUIPMENT INFORMATION

CONTROLLER.....2070LX
 CABINET.....332 W/AUX
 SOFTWARE.....0-FREE MAXTIME
 CABINET MOUNT.....BASE
 OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE
 LOAD SWITCHES USED.....S1,S2,S5,S7,S8,S11,
 AUX S1,AUX S2,AUX S4,AUX S5
 PHASES USED.....1,2,4,5,6,8
 OVERLAP "1".....*
 OVERLAP "2".....*
 OVERLAP "3".....*
 OVERLAP "4".....*
 * See overlap programming detail below.

SIGNAL HEAD HOOK-UP CHART

| LOAD SWITCH NO. | S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 | S9 | S10 | S11 | S12 | AUX S1 | AUX S2 | AUX S3 | AUX S4 | AUX S5 | AUX S6 |
|-----------------------|-----|-------|-------|----|----------|-------|----|-------|-------|-----|----------|-------|--------|--------|--------|--------|--------|--------|
| CH1 CHANNEL NO. | 1 | 2 | 13 | 3 | 4 | 14 | 5 | 6 | 15 | 7 | 8 | 16 | 9 | 10 | 17 | 11 | 12 | 18 |
| PHASE | 1 | 2 | 2 PED | 3 | 4 | 4 PED | 5 | 6 | 6 PED | 7 | 8 | 8 PED | OL1 | OL2 | SPARE | OL3 | OL4 | SPARE |
| SIGNAL HEAD NO. | 11 | 21,22 | NU | NU | 42,43,44 | NU | 51 | 61,62 | NU | NU | 82,83,84 | NU | 11 | 81 | NU | 51 | 41 | NU |
| RED | | 128 | | | 101 | | | 134 | | | 107 | | | | | | | |
| YELLOW | * | 129 | | | 102 | | * | 135 | | | 108 | | | | | | | |
| GREEN | | 130 | | | 103 | | | 136 | | | 109 | | | | | | | |
| RED ARROW | | | | | | | | | | | | | A121 | A124 | | A114 | A101 | |
| YELLOW ARROW | | | | | | | | | | | | | A122 | A125 | | A115 | A102 | |
| FLASHING YELLOW ARROW | | | | | | | | | | | | | A123 | A126 | | A116 | A103 | |
| GREEN ARROW | 127 | | | | | | | 133 | | | | | | | | | | |

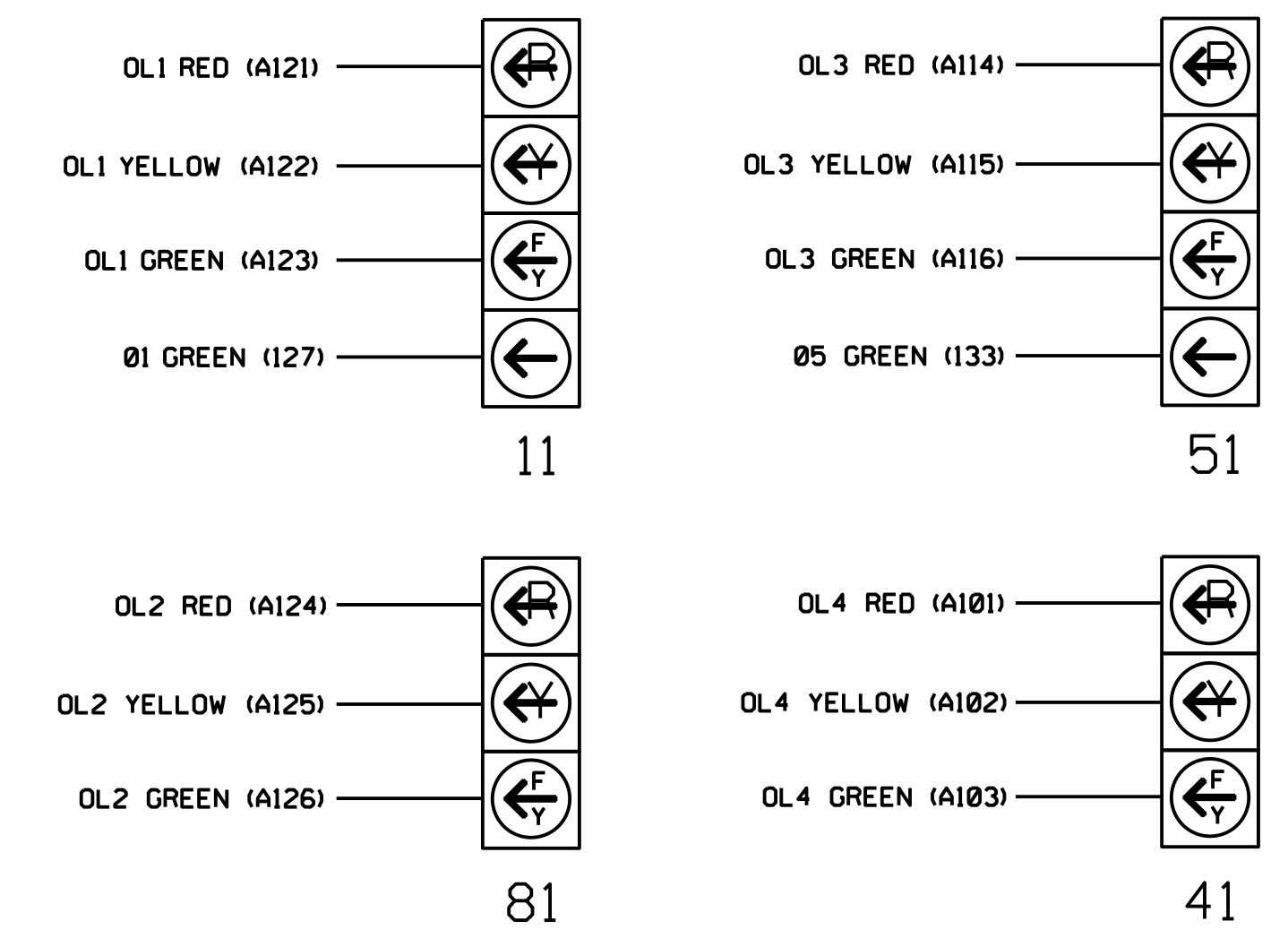
NU = Not Used
 * Denotes install load resistor. See load resistor installation detail this sheet.
 ★ See pictorial of head wiring in detail this sheet.

OVERLAP PROGRAMMING

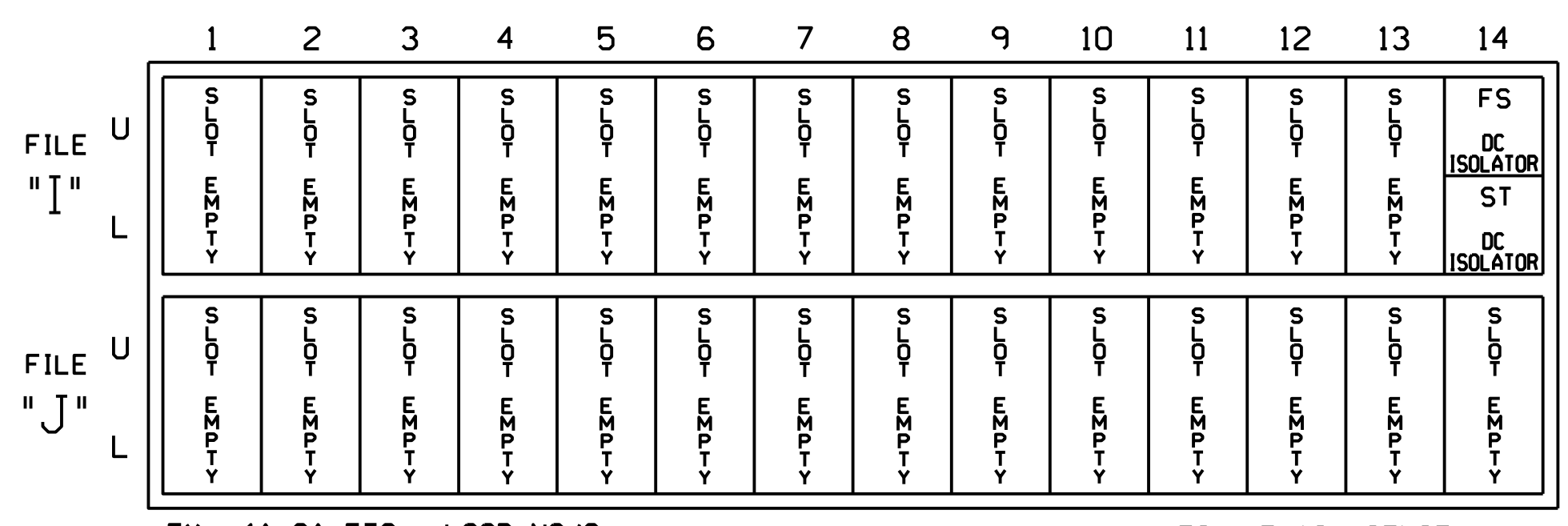
Front Panel
 Main Menu >Controller >Overlap >Overlap Parameters/Overlap Timings
 Web Interface
 Home >Controller >Overlap Configuration >Overlaps
 Overlap Plan 1

| Overlap | 1 | 2 | 3 | 4 |
|-------------------|-----------------|-----------------|-----------------|-----------------|
| Type | FYA 4 - Section | FYA 4 - Section | FYA 4 - Section | FYA 4 - Section |
| Included Phases | 2 | 4 | 6 | 8 |
| Modifier Phases | 1 | - | 5 | - |
| Modifier Overlaps | - | - | - | - |
| Trail Green | 0 | 0 | 0 | 0 |
| Trail Yellow | 0.0 | 0.0 | 0.0 | 0.0 |
| Trail Red | 0.0 | 0.0 | 0.0 | 0.0 |

FYA SIGNAL WIRING DETAIL
(wire signal heads as shown)



INPUT FILE POSITION LAYOUT
(front view)

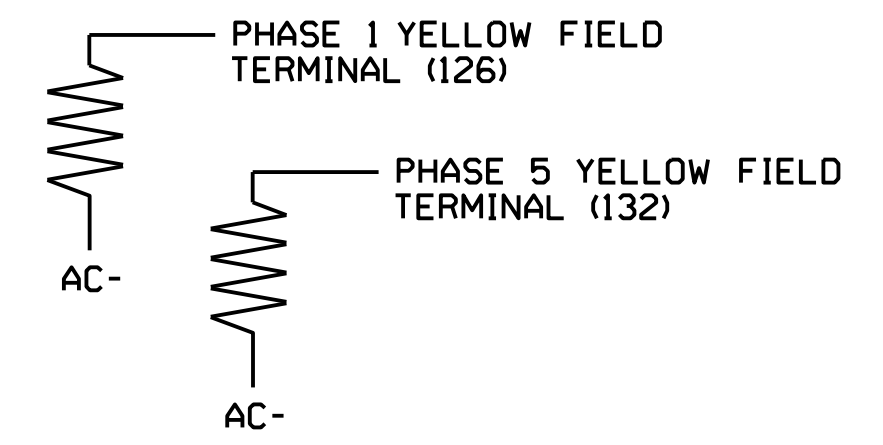


EX.: 1A, 2A, ETC. = LOOP NO.'S
 FS = FLASH SENSE
 ST = STOP TIME

LOAD RESISTOR INSTALLATION DETAIL
(install resistors as shown below)

ACCEPTABLE VALUES

| VALUE (ohms) | WATTAGE |
|--------------|-----------|
| 1.5K - 1.9K | 25W (min) |
| 2.0K - 3.0K | 10W (min) |



FLASHER CIRCUIT MODIFICATION DETAIL

IN ORDER TO ENSURE THAT SIGNALS FLASH CONCURRENTLY ON THE SAME APPROACH, MAKE THE FOLLOWING FLASHER CIRCUIT CHANGES:

- ON REAR OF PDA - REMOVE WIRE FROM TERM. T2-4 AND TERMINATE ON T2-2.
 - ON REAR OF PDA - REMOVE WIRE FROM TERM. T2-5 AND TERMINATE ON T2-3.
 - REMOVE FLASHER UNIT 2.
- THE CHANGES LISTED ABOVE TIES ALL PHASES AND OVERLAPS TO FLASHER UNIT 1.

SPECIAL DETECTOR NOTE

Install a video detection system for vehicle detection. Perform installation according to manufacturer's directions and NCDOT engineer-approved mounting locations to accomplish the detection scheme shown on the Signal Design Plans.

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 09-0654T1
 DESIGNED: August 2023
 SEALED: 9/7/2023
 REVISED: N/A

Prepared in the Office of:

NC FIRM LICENSE No: P-0339
 320 Executive Court
 Hillsborough, NC 27278
 (919) 732-3883
 (919) 732-6676 (FAX)

Electrical Detail - Temporary Design 1

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 018174
 EDWARD W. SIRGANY

Prepared For:
 North Carolina Department of Transportation
 750 N. Greenfield Pkwy, Corner, NC 27529

NC 66 (Old Hollow Road) at SR 2385 (Darrow Road)

Division 9 Forsyth County Walkertown
 PLAN DATE: August 2023 REVIEWED BY: E. Sirgany
 PREPARED BY: J. Smith REVIEWED BY:

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

DocuSigned by:
 Edward W. Sirgany 9/7/2023
 30DF37865883E9 DATE

SIG. INVENTORY NO. 09-0654T1