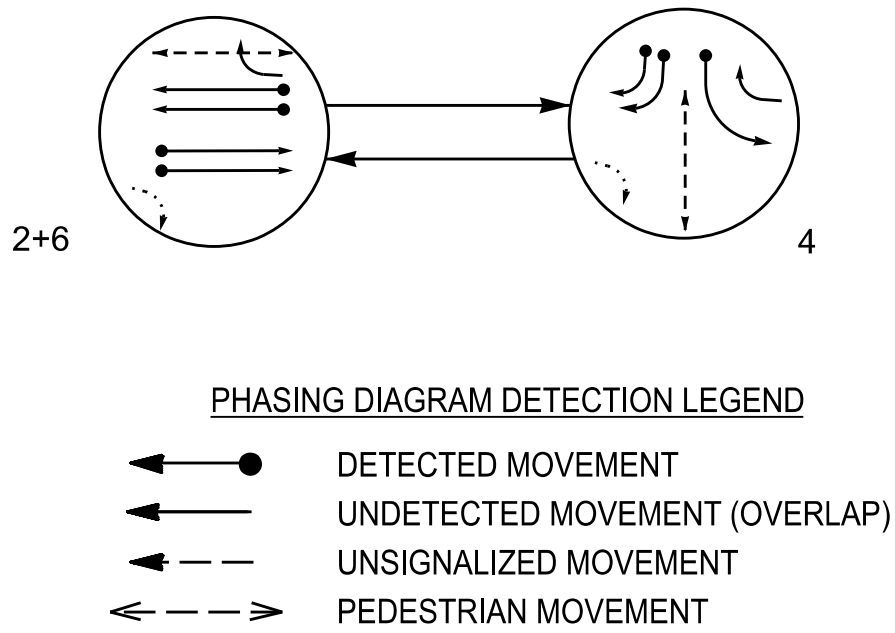
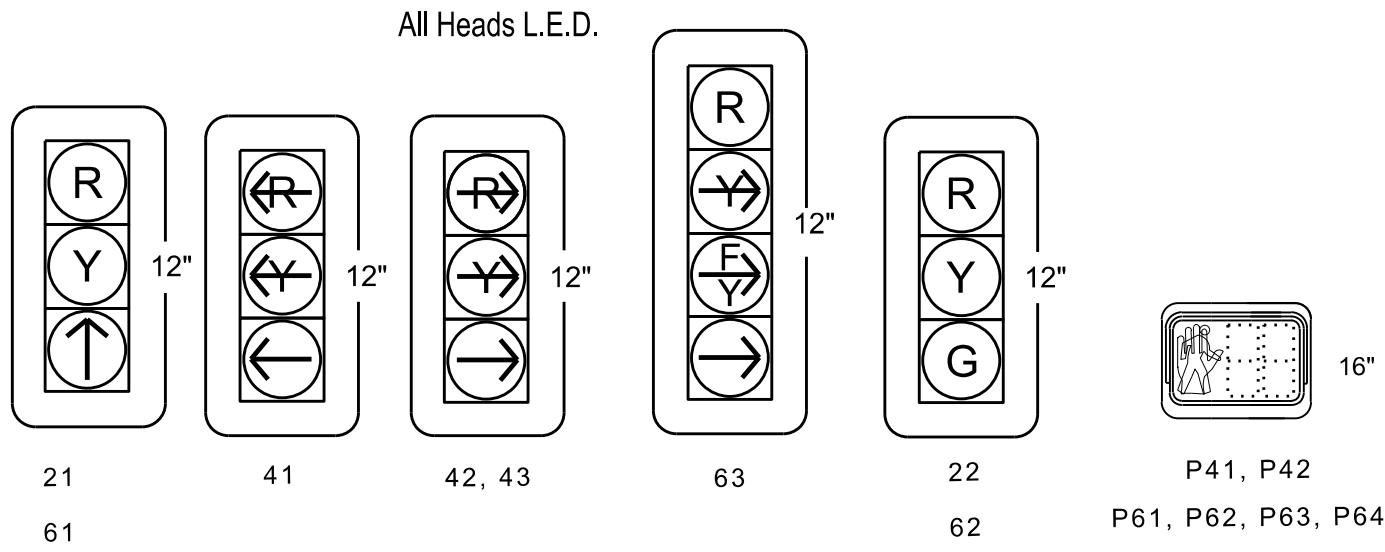


PHASING DIAGRAM



| SIGNAL FACE        | TABLE OF OPERATION |    |     |
|--------------------|--------------------|----|-----|
|                    | 2                  | 4  | 6   |
| 21                 | ↑                  | R  | R   |
| 22                 | G                  | R  | R   |
| 41                 | ←                  | ←  | ←   |
| 42, 43             | ←                  | ←  | ←   |
| 61                 | ↑                  | R  | R   |
| 62                 | G                  | R  | R   |
| 63                 | ←                  | ←  | ←   |
| P41, P42           | DW                 | W  | DRK |
| P61, P62, P63, P64 | W                  | DW | DRK |

SIGNAL FACE I.D.



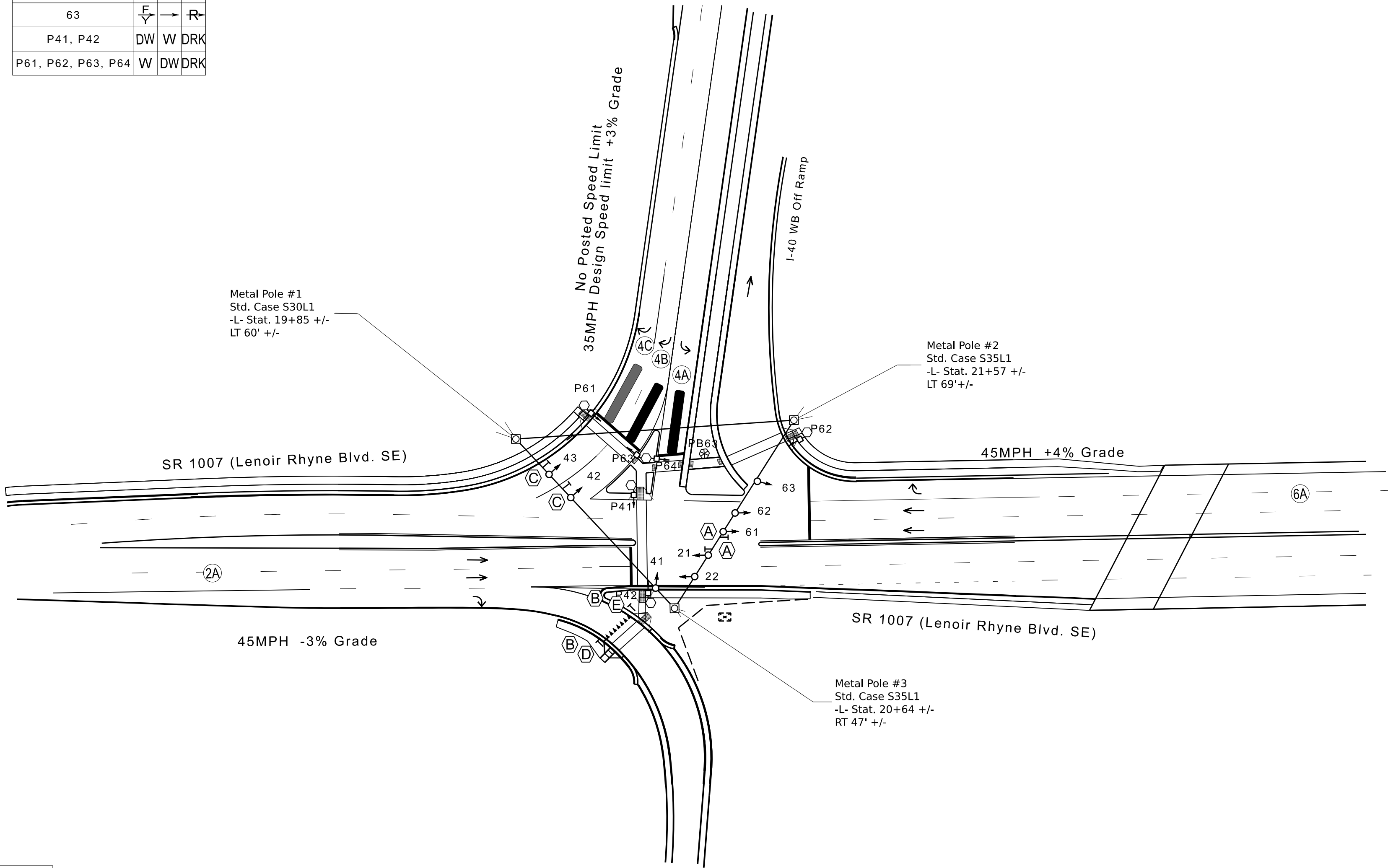
| SE-PAC 2070 LOOP & DETECTOR UNIT INSTALLATION CHART |           |       |                           |     |          |                   |        |         |                      |                  |        |        |               |                  |     |   |        |                 |
|-----------------------------------------------------|-----------|-------|---------------------------|-----|----------|-------------------|--------|---------|----------------------|------------------|--------|--------|---------------|------------------|-----|---|--------|-----------------|
| INDUCTIVE LOOP                                      |           |       |                           |     |          | ASSIGNED<br>PHASE | TIMING |         | DETECTOR PROGRAMMING |                  |        |        |               |                  |     |   |        |                 |
|                                                     |           |       |                           |     |          |                   |        |         | OPERATION MODE       |                  |        |        |               |                  |     |   | SWITCH | SYSTEM<br>LOOPS |
| LOOP NO.                                            | SIZE (FT) | TURNS | DIST. FROM STOP LINE (FT) | NEW | EXISTING |                   |        |         | DELAY                | EXTEND (STRETCH) | 0      | 1      | 2             | 3                | 4   | 5 |        |                 |
|                                                     |           |       |                           |     |          |                   |        | VEHICLE | PEDESTRIAN           | 1 CALL           | STOP A | STOP B | PROT/PER LEFT | PROT/PER THROUGH | AND |   |        |                 |
| 4A                                                  | *         | *     | 0                         | *   | -        | 4                 | -      | X       | -                    | -                | -      | -      | -             | -                | -   | - | -      |                 |
| 4B                                                  | *         | *     | 0                         | *   | -        | 4                 | -      | X       | -                    | -                | -      | -      | -             | -                | -   | - | -      |                 |
| 4C                                                  | *         | *     | 0                         | -   | *        | 4                 | -      | X       | -                    | -                | -      | -      | -             | -                | -   | - | -      |                 |

\* Multi -Zone Microwave Detection

2-Phase  
Fully Actuated  
Hickory City SignalSystem

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Set all detector units to presence mode.
- This intersection uses multi-zone microwave detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
- Install backplates with retro-reflective sheetings on signal all signal heads .
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

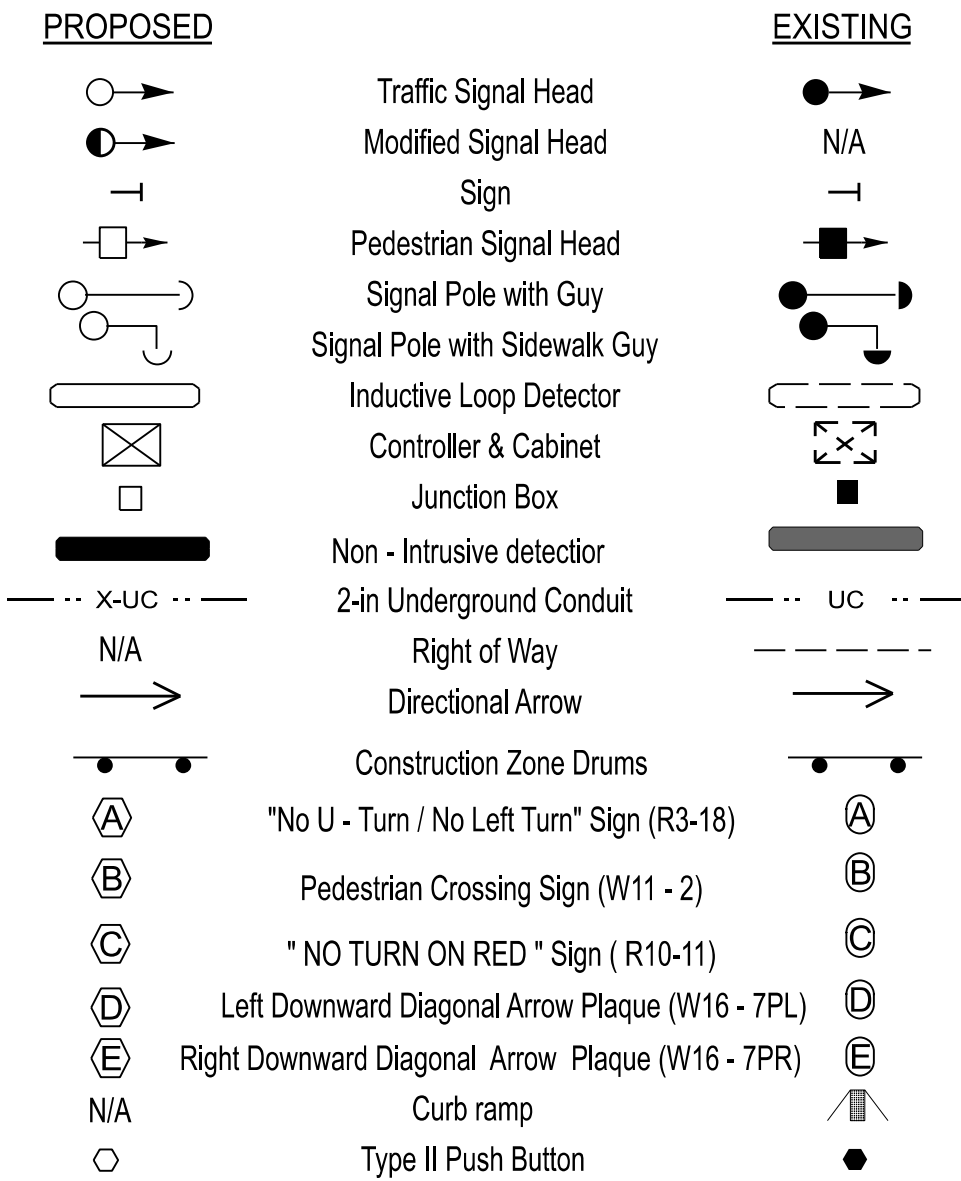


| SE-PAC 2070 TIMING CHART |            |          |            |  |
|--------------------------|------------|----------|------------|--|
| FEATURE                  | PHASE      |          |            |  |
|                          | 2          | 4        | 6          |  |
| Min Green*               | 12         | 7        | 12         |  |
| Passage Gap*             | 2.0        | 2.0      | 2.0        |  |
| Maximum Green*           | 90         | 30       | 90         |  |
| Yellow Change            | 4.8        | 3.7      | 4.8        |  |
| Red Clear                | 3.1        | 2.6      | 3.1        |  |
| Walk*                    | -          | 11       | 14         |  |
| Pedestrian Clear         | -          | 13       | 35         |  |
| Advance Walk             | -          | 4        | 7          |  |
| Added Initial*           | -          | -        | -          |  |
| Maximum Initial*         | -          | -        | -          |  |
| Time Before Reduction*   | -          | -        | -          |  |
| Time To Reduce*          | -          | -        | -          |  |
| Minimum Gap              | -          | -        | -          |  |
| Recall Mode              | MIN RECALL | -        | MIN RECALL |  |
| Vehicle Call Memory      | LOCK       | NON-LOCK | LOCK       |  |
| Dual Entry               | -          | -        | -          |  |
| Simultaneous Gap         | 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.

| Microwave Detection              |               |         |         |               |          |         |
|----------------------------------|---------------|---------|---------|---------------|----------|---------|
| FUNCTION                         | SENSOR 1 (2A) |         |         | SENSOR 2 (6A) |          |         |
| Channel                          | 1             |         |         | 1             |          |         |
| Phase                            | 2             |         |         | 6             |          |         |
| Direction of Travel              | SB            |         |         | NB            |          |         |
| Type                             | Priority      |         |         | Priority      |          |         |
| Level                            | 1             | 2       | Queue   | 1             | 2        | Queue   |
| Discovery Zone (ft)              | >= 750        | <750    | -       | >= 750        | <750     | -       |
| Range                            | 900-100       | 600-100 | 150-100 | 900-100       | 600-100  | 150-100 |
| Enable Speed                     | Y             | Y       | Y       | Y             | Y        | Y       |
| Speed Range(mph)                 | 35-100        | 35-100  | 1-35    | 35-100        | 35-100   | 1-35    |
| Enable Estimated Time of Arrival | Y             | Y       | N       | Y             | Y        | N       |
| Estimated Time of Arrival (sec)  | 2.5-10.0      | 2.5-6.5 | -       | 2.5-10.0      | 2.5-10.0 | -       |

LEGEND



Signal Upgrade - Final Design

|                                                                             |                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                     |
|-----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Prepared in the Offices of:<br><br>750 N. Greenfield Pkwy, Garner, NC 27529 | I-40 EB Ramp<br>at<br>SR 1007 (Lenoir Rhyne Blvd. SE)<br>Division 12      Catawba County      Hickory<br>PLAN DATE: August 2026      REVIEWED BY: R. N. Zinser<br>PREPARED BY: Adja Fall      REVIEWED BY:<br>REVISIONS<br>INIT.      DATE<br>08/12/2026<br>DATE<br>SIG. INVENTORY NO. 12-0309 | DOCUMENT NOT CONSIDERED<br>FINAL UNLESS ALL<br>SIGNATURES COMPLETED<br>SEAL<br>NORTH CAROLINA<br>PROFESSIONAL ENGINEER<br>R. N. ZINER<br>043914<br>08/12/2026<br>DATE<br>SIG. INVENTORY NO. 12-0309 |
|-----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|