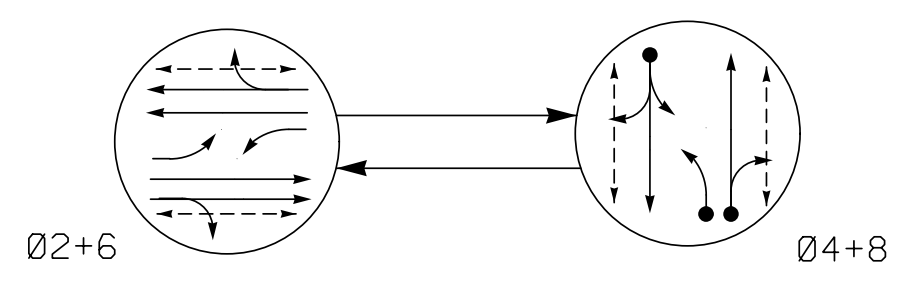


**PHASING DIAGRAM**



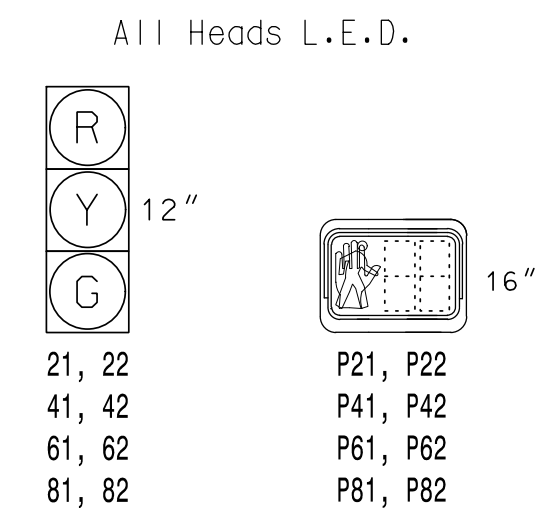
**PHASING DIAGRAM DETECTION LEGEND**

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

**TABLE OF OPERATION**

| SIGNAL FACE | PHASE |      |       |
|-------------|-------|------|-------|
|             | 02+6  | 04+8 | FLASH |
| 21, 22      | G     | R    | Y     |
| 41, 42      | R     | G    | R     |
| 61, 62      | G     | R    | Y     |
| 81, 82      | R     | G    | R     |
| P21, P22    | W     | DW   | DRK   |
| P41, P42    | DW    | W    | DRK   |
| P61, P62    | W     | DW   | DRK   |
| P81, P82    | DW    | W    | DRK   |

**SIGNAL FACE I.D.**



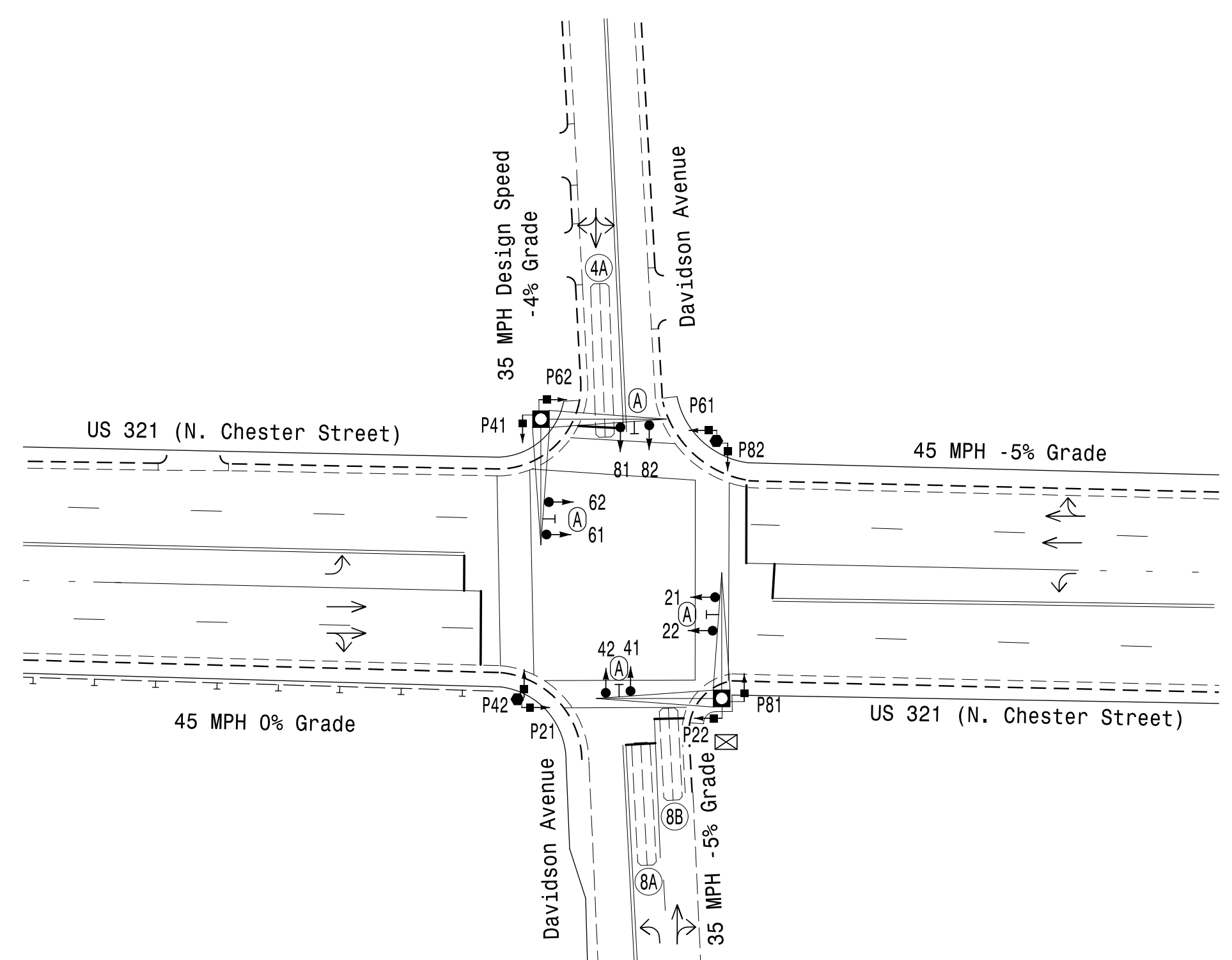
**DETECTOR INSTALLATION CHART**

| LOOP | SIZE (FT) | DISTANCE FROM STOPBAR (FT) | TURNS | NEW LOOP | PROGRAMMING |         |             |            |                   |      |      |      |
|------|-----------|----------------------------|-------|----------|-------------|---------|-------------|------------|-------------------|------|------|------|
|      |           |                            |       |          | PHASE       | CALLING | EXTEND TIME | DELAY TIME | USE ADDED INITIAL | TYPE | LOOP | CARD |
| 4A   | 6X50      | +5                         | 2-4-2 | -        | 4           | Yes     | -           | -          | -                 | N    | -    | X    |
| 8A   | 6X40      | 0                          | 2-4-2 | -        | 8           | Yes     | -           | -          | -                 | N    | -    | X    |
| 8B   | 6X30      | +5                         | 2-4-2 | -        | 8           | Yes     | -           | -          | -                 | N    | -    | X    |

**2 Phase Semi-Actuated Gastonia Signal System**

**NOTES**

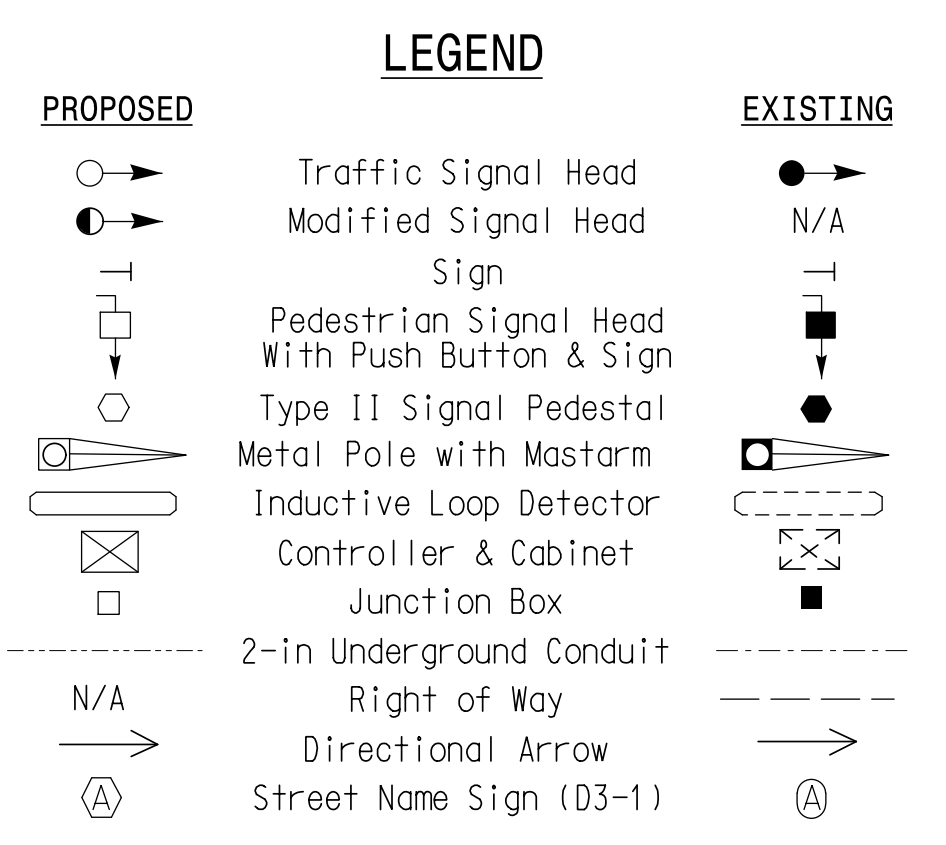
- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Set all detector units to presence mode.
- In the event of loop replacement, refer to the current ITS and Signal Design Manual and submit a Plan of Record to the Signal Design Section.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls on phases 4 and 8.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- Pavement markings are existing.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
- Install new cabinet on the existing cabinet foundation.
- All new cabinets and base extenders shall be black in color. See Project Special Provisions for details.
- City system data:  
Controller Asset #0017.



**TIMING CHART**

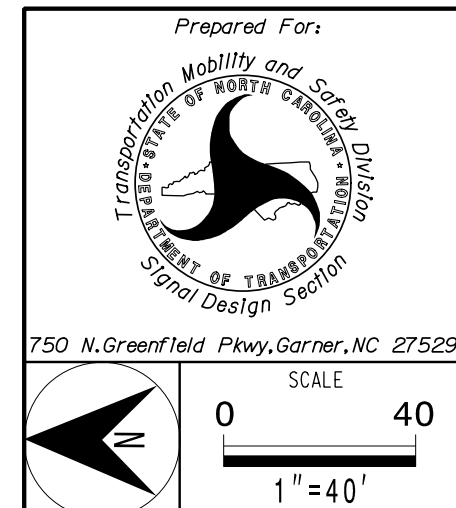
| FEATURE                 | PHASE   |     |         |     |
|-------------------------|---------|-----|---------|-----|
|                         | 2       | 4   | 6       | 8   |
| Min Green *             | 12      | 7   | 12      | 7   |
| Walk *                  | 7       | 7   | 7       | 7   |
| Ped Clear               | 10      | 16  | 11      | 18  |
| Veh. Extension *        | -       | 2.0 | -       | 2.0 |
| Max I *                 | 45      | 25  | 45      | 25  |
| Yellow                  | 5.0     | 4.2 | 5.0     | 4.2 |
| Red Clear               | 1.2     | 3.3 | 1.2     | 3.3 |
| Red Revert              | 2.0     | 2.0 | 2.0     | 2.0 |
| Actuations B4 Add *     | -       | -   | -       | -   |
| Seconds / Actuation *   | -       | -   | -       | -   |
| Max Initial *           | -       | -   | -       | -   |
| Time Before Reduction * | -       | -   | -       | -   |
| Time To Reduce *        | -       | -   | -       | -   |
| Minimum Gap             | -       | -   | -       | -   |
| Locking Detector        | -       | -   | -       | -   |
| Recall Position         | PED/MAX | -   | PED/MAX | -   |
| Dual Entry              | -       | X   | -       | X   |
| Simultaneous Gap        | X       | X   | 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**

PLANS PREPARED IN THE OFFICE OF:  
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**US 321 (N. Chester Street) at Davidson Avenue**

Division 12 Gaston County Gastonia

PLAN DATE: May 2021 REVIEWED BY: SL Phillips

PREPARED BY: DM Curri REVIEWED BY: KP Baumann

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DocuSigned by:  
*Kevin P. Baumann*  
3/11/2022  
SIGNATURE DATE  
SIG. INVENTORY NO. 12-0017