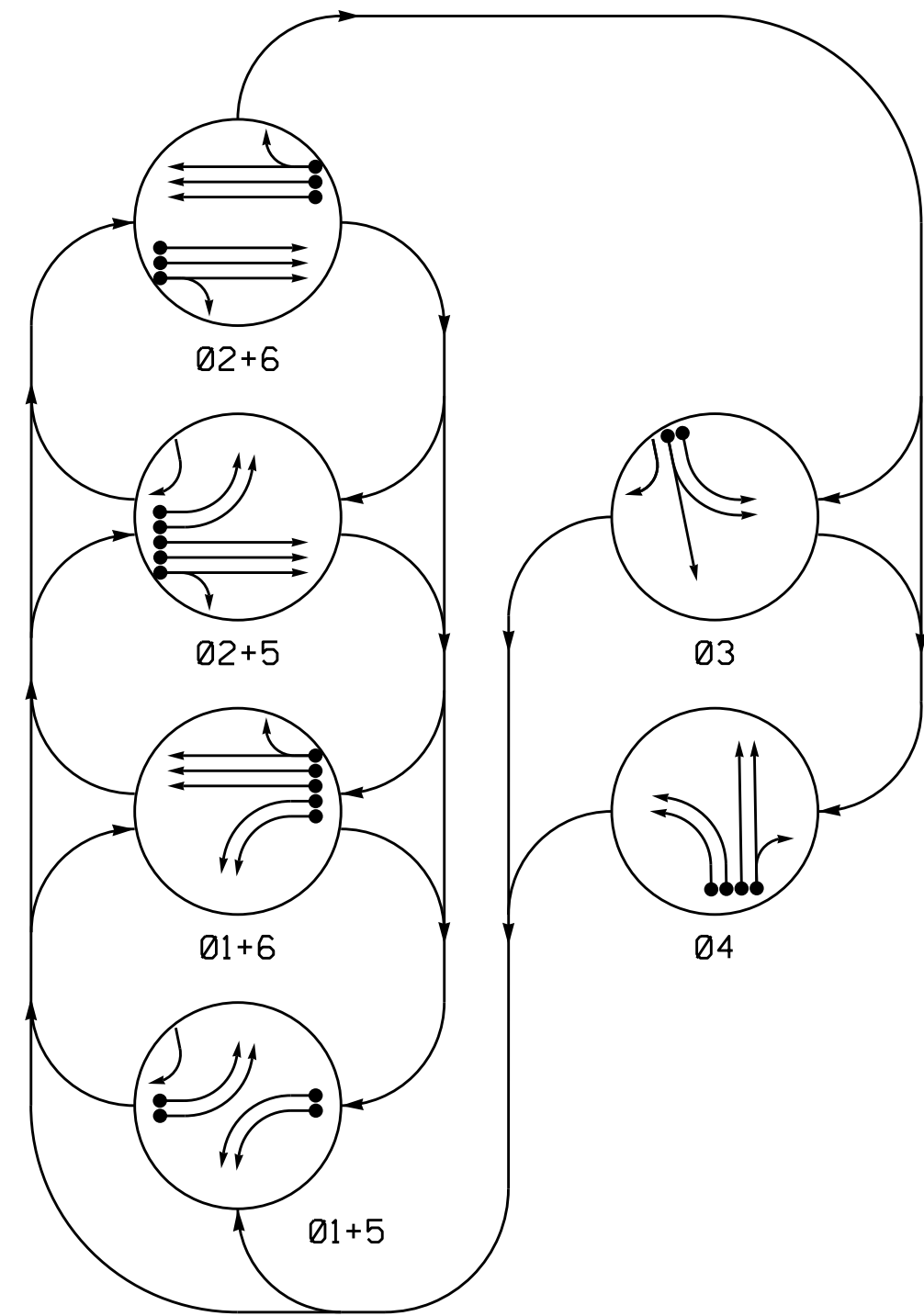


PHASING DIAGRAM

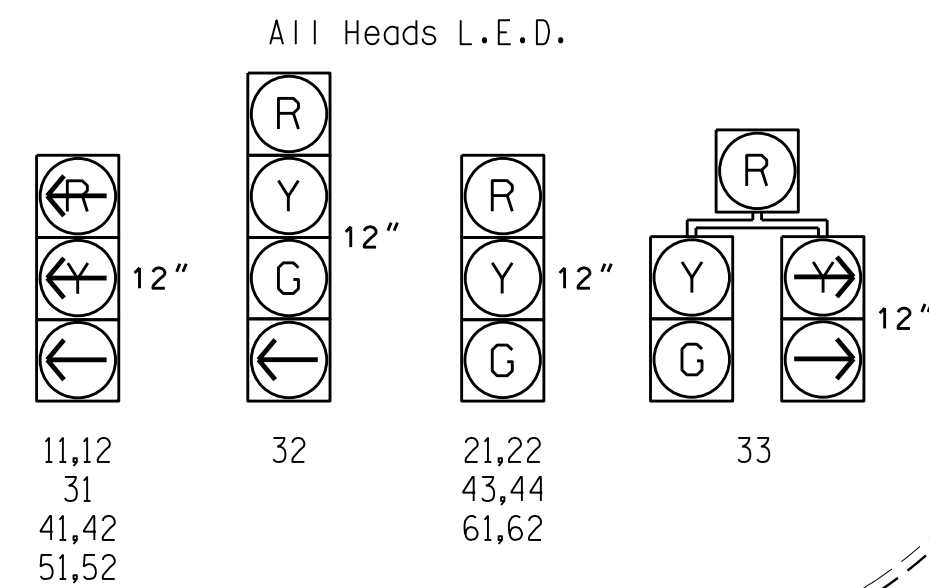


PHASING DIAGRAM DETECTION LEGEND

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

| SIGNAL FACE | PHASE | | | | | |
|-------------|-------|------|----|----|---|---|
| | 01+5 | 02+5 | 03 | 04 | F | Y |
| 11,12 | ← | ← | ← | ← | ← | ← |
| 21,22 | R | R | G | G | R | R |
| 31 | ← | ← | ← | ← | ← | ← |
| 32 | R | R | R | R | G | R |
| 33 | R | R | R | R | G | R |
| 41,42 | ← | ← | ← | ← | ← | ← |
| 43,44 | R | R | R | R | G | R |
| 51,52 | ← | ← | ← | ← | ← | ← |
| 61,62 | R | G | R | G | R | Y |

SIGNAL FACE I.D.

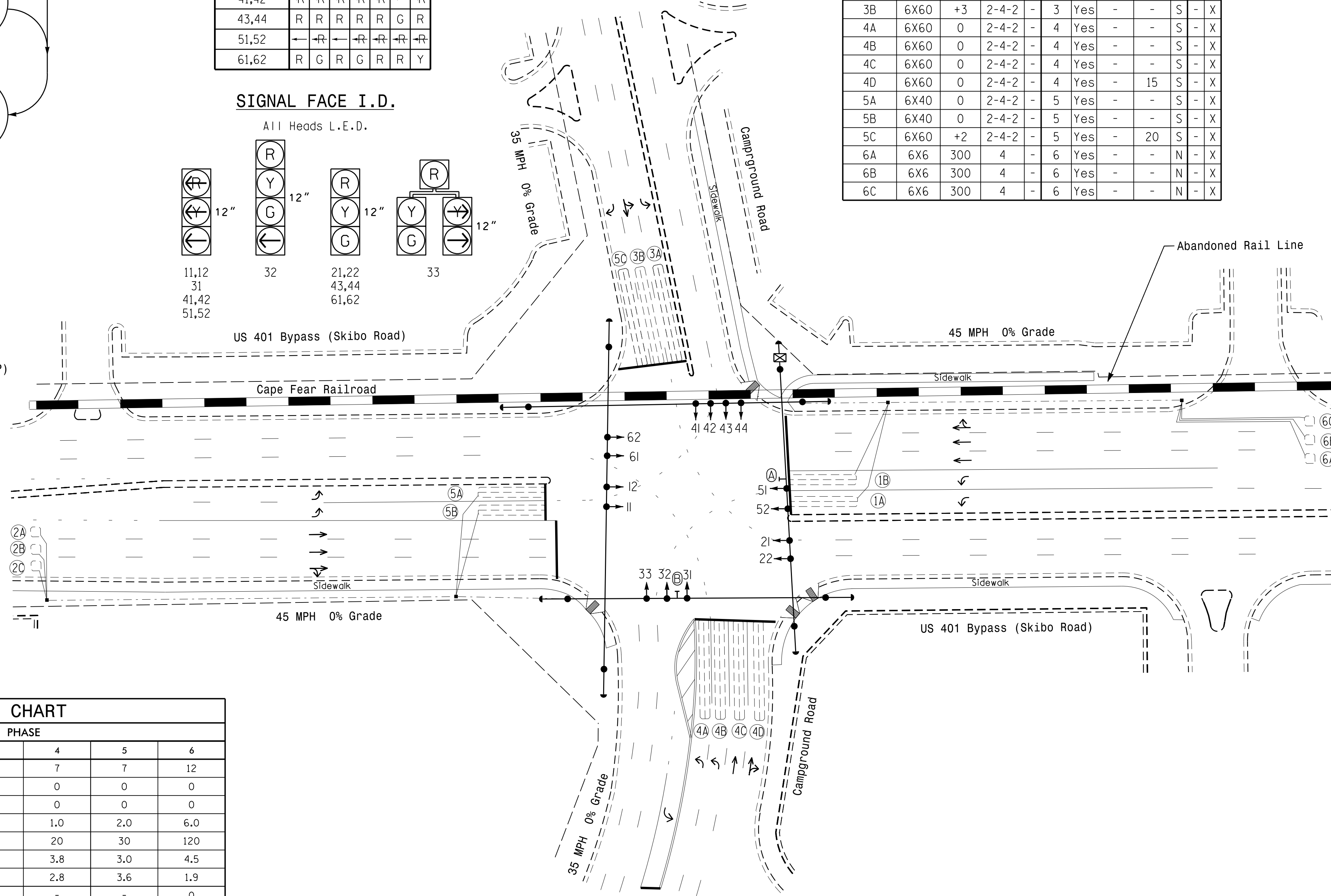


| ASC/3 DETECTOR INSTALLATION CHART | | | | | | | | | | |
|-----------------------------------|-----------|----------------------------|-------|-------------|-------|---------|-------------|------------|------|----------------------|
| DETECTOR | | | | PROGRAMMING | | | | | | |
| LOOP | SIZE (FT) | DISTANCE FROM STOPBAR (FT) | TURNS | NEW LOOP | PHASE | CALLING | EXTEND TIME | DELAY TIME | TYPE | SYSTEM LOOP NEW CARD |
| 1A | 6X40 | 0 | 2-4-2 | - | 1 | Yes | - | - | S | - X |
| 1B | 6X40 | 0 | 2-4-2 | - | 1 | Yes | - | - | S | - X |
| 2A | 6X6 | 300 | 4 | - | 2 | Yes | - | - | N | - X |
| 2B | 6X6 | 300 | 4 | - | 2 | Yes | - | - | N | - X |
| 2C | 6X6 | 300 | 4 | - | 2 | Yes | - | - | N | - X |
| 3A | 6X60 | +5 | 2-4-2 | - | 3 | Yes | - | - | S | - X |
| 3B | 6X60 | +3 | 2-4-2 | - | 3 | Yes | - | - | S | - X |
| 4A | 6X60 | 0 | 2-4-2 | - | 4 | Yes | - | - | S | - X |
| 4B | 6X60 | 0 | 2-4-2 | - | 4 | Yes | - | - | S | - X |
| 4C | 6X60 | 0 | 2-4-2 | - | 4 | Yes | - | - | S | - X |
| 4D | 6X60 | 0 | 2-4-2 | - | 4 | Yes | - | 15 | S | - X |
| 5A | 6X40 | 0 | 2-4-2 | - | 5 | Yes | - | - | S | - X |
| 5B | 6X40 | 0 | 2-4-2 | - | 5 | Yes | - | - | S | - X |
| 5C | 6X60 | +2 | 2-4-2 | - | 5 | Yes | - | 20 | S | - X |
| 6A | 6X6 | 300 | 4 | - | 6 | Yes | - | - | N | - X |
| 6B | 6X6 | 300 | 4 | - | 6 | Yes | - | - | N | - X |
| 6C | 6X6 | 300 | 4 | - | 6 | Yes | - | - | N | - X |

6 Phase Fully Actuated Fayetteville 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.
- The order of phase 3 and phase 4 may be reversed.
- Set all detector units to presence mode.
- In the event of loop replacement, refer to the current ITS and Signals 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.
- Pavement markings are existing.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



| FEATURE | PHASE | | | | | |
|-------------------------|-------|-------------|-----|-----|-----|-------------|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Min Green * | 7 | 12 | 7 | 7 | 7 | 12 |
| Walk * | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped Clear | 0 | 0 | 0 | 0 | 0 | 0 |
| Veh. Extension * | 2.0 | 6.0 | 1.0 | 1.0 | 2.0 | 6.0 |
| Max I * | 15 | 120 | 30 | 20 | 30 | 120 |
| Yellow | 3.0 | 4.5 | 3.8 | 3.8 | 3.0 | 4.5 |
| Red Clear | 3.3 | 1.9 | 2.9 | 2.8 | 3.6 | 1.9 |
| Actuations B4 Add * | - | 0 | - | - | - | 0 |
| Seconds / Actuation * | - | 1.2 | - | - | - | 1.2 |
| Max Initial * | - | 34 | - | - | - | 34 |
| Time Before Reduction * | - | 20 | - | - | - | 20 |
| Time To Reduce * | - | 40 | - | - | - | 40 |
| Minimum Gap | - | 3.0 | - | - | - | 3.0 |
| Locking Detector | - | X | - | - | - | X |
| Recall Position | - | VEH. RECALL | - | - | - | VEH. RECALL |
| Dual Entry | - | - | - | - | - | - |
| Simultaneous Gap | X | X | 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.

LEGEND

- | | | | |
|-----|---|-----|---|
| ○ | PROPOSED Traffic Signal Head | ● | EXISTING Traffic Signal Head |
| ○ | PROPOSED Modified Signal Head | N/A | EXISTING Modified Signal Head |
| ○ | PROPOSED Sign | ○ | EXISTING Sign |
| ○ | PROPOSED Pedestrian Signal Head With Push Button & Sign | ○ | EXISTING Pedestrian Signal Head With Push Button & Sign |
| ○ | PROPOSED Signal Pole with Guy | ○ | EXISTING Signal Pole with Guy |
| ○ | PROPOSED Signal Pole with Sidewalk Guy | ○ | EXISTING Signal Pole with Sidewalk Guy |
| ○ | PROPOSED Inductive Loop Detector | ○ | EXISTING Inductive Loop Detector |
| ○ | PROPOSED Controller & Cabinet | ○ | EXISTING Controller & Cabinet |
| ○ | PROPOSED Junction Box | ○ | EXISTING Junction Box |
| ○ | PROPOSED 2-in Underground Conduit | ○ | EXISTING 2-in Underground Conduit |
| N/A | Right of Way | ○ | EXISTING Right of Way |
| ○ | PROPOSED Directional Arrow | ○ | EXISTING Directional Arrow |
| ○ | PROPOSED Railroad Tracks | ○ | EXISTING Railroad Tracks |
| ○ | PROPOSED U-Turn "MUST YIELD" Sign (R3-27) | ○ | EXISTING U-Turn "MUST YIELD" Sign (R3-27) |
| ○ | PROPOSED Combined Through and Right Arrow Sign (R3-6R) | ○ | EXISTING Combined Through and Right Arrow Sign (R3-6R) |

Signal Upgrade

Prepared In the Offices of:

US 401 Bypass (Skibo Road) at Campground Road

Division 6 Cumberland County Fayetteville

PLAN DATE: December 2015 REVIEWED BY: JPG

PREPARED BY: KGP, Jr. REVIEWED BY:

750 N. Greenfield Pkwy, Garner, NC 27529

SCALE 0 40 1"=40'

REVISIONS INIT. DATE

SEAL

SEAL 029904

SEAL

DATE 4/20/2016

SIG. INVENTORY NO. 06-0521

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED