PDN Stage 3 - ITS QC Checklist

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| --- | --- |
| **SPOT ID/Project TIP #:** | Click or tap to edit. |
| **County:** | Click or tap to edit. |

3SG1 Complete ITS Design

| **Item #** | **Review Item** | **Yes** | **No** | **N/A** |
| --- | --- | --- | --- | --- |
|  | **Plan Sheet** |  |  |  |
|  | Upper Title Block |  |  |  |
|  | All data included in title block in correct format |  |  |  |
|  | Plan sheets have a numbering scheme that matches Index of Sheets |  |  |  |
|  | Plan sheet numbering corresponds to the Utility Make Ready plan sheet numbering (if applicable) |  |  |  |
|  | Lower Title Block |  |  |  |
|  | North arrow |  |  |  |
|  | Division / County |  |  |  |
|  | City or direction of nearest city (if applicable) |  |  |  |
|  | Scale labeled |  |  |  |
|  | Date |  |  |  |
|  | Prepared By: / Reviewed By: |  |  |  |
|  | Revision made & date (if applicable) |  |  |  |
|  | Seal (final plans) |  |  |  |
|  | PEF Logo (PEF plans) |  |  |  |
|  | DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED |  |  |  |
|  | Base Map for Cable Routing Plans |  |  |  |
|  | Edge of pavement, (identification between existing and proposed edge of pavement) |  |  |  |
|  | Right of way lines (if applicable) |  |  |  |
|  | Route numbers & street names |  |  |  |
|  | Driveways, sidewalks, major culverts, etc. |  |  |  |
|  | Railroad tracks (RR crossing numbers & Name of railroad) |  |  |  |
|  | LEGEND – Identification of pertinent symbols, utility owners, etc. |  |  |  |
|  | Cable Routing Plans |  |  |  |
|  | The plan’s title block shows the correct north orientation with regards to the roadway and the correct scale (if applicable) |  |  |  |
|  | All device cabinets are labeled and identified by a unique identifier number. Device locations/identification numbers are shown on the title sheet and the individual plan sheets (where appropriate) |  |  |  |
|  | Check construction notes against the individual Cable Routing Plan sheets |  |  |  |
|  | Verify all special notes are clearly written and are applicable to the subject |  |  |  |
|  | Legend – Identification of pertinent symbols and notes etc. |  |  |  |
|  | Plan Sheet Checking |  |  |  |
|  | Conduit size |  |  |  |
|  | Verify conduit installation technique (trench, directional drill, plow, etc.) |  |  |  |
|  | Fiber size and count |  |  |  |
|  | Drop cables |  |  |  |
|  | Splice enclosures |  |  |  |
|  | Risers |  |  |  |
|  | Junction boxes |  |  |  |
|  | Delineator makers or Junction box makers |  |  |  |
|  | Tracer wire |  |  |  |
|  | Messenger cable |  |  |  |
|  | Pole grounding - Ground all poles where there is a transition from above ground to below ground and at 1,300 ft intervals for continuous aerial runs |  |  |  |
|  | Down guys (existing and proposed) |  |  |  |
|  | Interconnect centers |  |  |  |
|  | Ethernet switches or transceivers |  |  |  |
|  | Wireless communications devices and antenna |  |  |  |
|  | Cellular modems (if applicable) |  |  |  |
|  | CCTV installations |  |  |  |
|  | Dynamic Message Sign (DMS) installations |  |  |  |
|  | Microwave Vehicle Detector (MVD) installations |  |  |  |
|  | Electrical service installations |  |  |  |
|  | Fiber Splice Plans |  |  |  |
|  | Fiber count and size on Splice plans matches the Cable Routing Plan sheets |  |  |  |
|  | All devices are accounted for with correct identification numbers |  |  |  |
|  | Street names and location correspond with the location of the device |  |  |  |
|  | Verify/trace continuity and termination of fibers |  |  |  |
|  | All necessary notes are present and accurate |  |  |  |
|  | Call-out for transceiver or Ethernet switch matches plan sheets |  |  |  |
|  | Typical and Special Details |  |  |  |
|  | Typical details are included in the plan package as needed |  |  |  |
|  | Develop new typical details that are needed for the project |  |  |  |
|  | DMS S-Dimension sheet is included for each DMS (if applicable) |  |  |  |
|  | **Electrical Service & Feeders** |  |  |  |
|  | Note: power requirements for ITS devices (CCTV, DMS, etc.) normally do not need to do this step for signal cabinets |  |  |  |
|  | Collaborate with Power Company to identify the closest power source and available voltage |  |  |  |
|  | Service and feeder size calculations based on distance and voltage loss |  |  |  |
|  | Conduit sizing |  |  |  |
|  | Identification of service location |  |  |  |
|  | Breaker sizing – Normal: 15 amp single pole for CCTV; 50 amp double pole for DMS |  |  |  |
|  | Feeder sizes – 3 wire for 120 volt applications or 4 wire for 240 volt applications |  |  |  |
|  | **Project Special Provisions (PSPs) & Pay Items** |  |  |  |
|  | Verify proper TIP, county, date, etc., are included in the specifications along with page numbering |  |  |  |
|  | The PSPs identify that the contractor is responsible for obtaining “S-Dimension” for new roadway projects (if applicable) |  |  |  |
|  | All pay items are included and correct |  |  |  |
|  | Specifications are included in the final package that address all items identified in the estimate |  |  |  |
|  | Verify individual quantities of each associated pay item and develop a quantity total |  |  |  |
|  | Review the total quantity estimate for errors in spelling of pay items and quantity totals |  |  |  |
|  | The Engineer of Record has complied with NCGS § 133-3 and NCDOT policy number F.25.0101 regarding the use of proprietary products. |  |  |  |

*For items marked* ***No*** *that require further explanation, provide comments or action items in the table below.*

| **Item #** | **Comments and Action Items** |
| --- | --- |
| Click to edit. | Click to edit. |

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| --- | --- | --- | --- |
| ***This checklist may not be comprehensive to every project. It is the responsibility of the reviewer to ensure that an adequate review is performed.  I have reviewed the plans for consistency with this checklist and confirmed that all items have been completed.*** | | | |
| **QC Reviewer Name:** | | Click to edit. | **Date:** | Click to edit. | |
| **QC Reviewer (Signature):** | |  |  |  | |