|  |
| --- |
| Index:  HDM – Highway Design Manual  IB – Instructional Bulletins  PPG – Plan Preparation Guide |

**CONSTRUCTION PLANS**

**BOUND WITH COMPLETED R./W. PLANS**

**QUALITY ASSURANCE REVIEW**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | **Preliminary** |  |  | **FINAL** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| County: |  | Road/Route: |  | PIN: |  |

|  |  |  |
| --- | --- | --- |
| Design Group No.: |  | Secondary/Primary (Circle One) |

|  |  |
| --- | --- |
| Consultant: |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Reviewed By:** |  |  |  | - |  |  |  |
|  | **Initials** |  | **Begin Date** |  | **End Date** |  | **Let Date** |

1. **CHECK PPMS & PES DATA**

|  |  |
| --- | --- |
|  | a. Project Identification Number (PIN) |
|  | b. County |
|  | c. File Number |
|  | d. Project Number |
|  | e. Road/Route Number(s) |
|  | f. Mileage |

1. **TITLE SHEET**

|  |  |  |
| --- | --- | --- |
|  | a. Correct Title Sheet cell for Project (DFR Title Sheet, C-Title Sheet, PRW-Title-Sheet, Title Sheet/Stacked) | |
|  | b. Index with Subtotals and Total Sheets (HDM 34.1.9) | |
|  | c. Location/Description | |
|  | 1. Check Map against Description. | |
|  | 2. North Arrow | |
|  | 3. Location Map Labels (…..County or Town/City of …..) | |
|  | d. NPDES Data (HDM 34.2.2) | |
|  | e. Longitude and Latitude | |
|  | f. Railroad Involvement Indicated | |
|  | g. Traffic Data (most recent year) | |
|  | h. Check Beginning and Ending Stations Notes on Location Map Agree with: | |
|  | 1. Typical Sections | |
|  | 2. Plans | |
|  | 3. Profiles | |
|  | 4. Cross Sections | |
|  | 5. Include arrows indicating “Begin” and “End” of project survey(s) | |
|  | 6. Project area clearly highlighted on map. | |
|  | i. Include notes for bridges/culverts and notes for exceptions Agree with: | |
|  | 1.Typical Sections | |
|  | 2. Plans | |
|  | 3. Profiles | |
|  | 4. Cross Sections | |
|  | j. Check Length of Project | |
|  | 1. Show Length(s) in Thousandths (Three Decimal Places) |
|  | 2. Show mileage for each mainline survey (side roads, connectors, ramps, detours, etc.). |
|  | 3. Show total mileage if multiple roads/lines. |
|  | 4. Check for Exceptions for Roadway |
|  | 5. Show equalities in stationing: |
|  | a. Agrees with Plans |
|  | b. None |
|  | 6. Check for Bridge/Structures Over 20’ in Length. |
|  | a. Included in plans |
|  | b. Note: “Bridge plans bound under separate cover”. |
|  | k. Group Coordinator – Initials and Date |
|  | l. Design Group – Initials and Date |
|  | m. Standard Drawing & Specification Note – Latest Edition |
|  | n. Design Group No./Group Coordinator Initials & Initials of Preparer |
|  | o. Check for correct Seal on Title Sheet |
|  | 1. Check for Randall Young’s Seal. |
|  | p. Correct design reference label (IB 2003-8) |
|  | q. Correct Hydrology Design Reference Label (IB 2009-3) |

1. **SUMMARY OF ESTIMATED QUANTITIES**

|  |  |
| --- | --- |
|  | A. Proofread Quantities |
|  | 1. Check PES numbers against descriptions. |
|  | b. Determine if Stabilized Construction Entrance is warranted |
|  | c. Check Quantity for correct Unit. |
|  | d. Inclusion Items Reflected in Totals |
|  | e. Minimum Quantities Necessary for the Construction of Plans |
|  | f. Asphalt Materials Comply with Guidelines for Hot Mix Asphalt Selection (Latest Version) |
|  | g. All District 6 Projects to include |
|  | 1. 1050800 Construction stakes lines & Grades | |
|  | 2. 1090200 As-Built Construction Plans | |
|  | h. Check for Graded Aggregate Base Course. |
|  | i. Check for Alternate Bases. (IB 99-7) |
|  | 1. Marine Limestone Base Cr. |
|  | 2. Recycled Portland Cement Concrete Base Cr. |
|  | 3. Macadam Base Cr. |
|  | j. Check for Coquina Base in District 5. |
|  | 1. Note placed on General Construction Note when Coquina Base is selected. (See Instructional Bulletin 2000-2) |
|  | k. All Bridge Projects Developed by Road Design will Include Pavement Markings (IB 99-4) |
|  | 1. 6040010 Paint 4” White Solid Lines (Pvt. Edge Lines) |
|  | 2. 6040105 Paint 4” Yellow Broken Lines (Gaps Exc.) |
|  | 3. 6040110 Paint 4” Yellow Solid Lines (Pvt. Edge & No Passing Zone) |
|  | 4. 6051100 Permanent Yellow Pavement Markers Bi-Dir., Refl. 4”x4” |
|  | l. Check for new specification for Borrow Excavation |

1. **MOVING ITEMS and REMOVAL & DISPOSAL ITEMS**

|  |  |
| --- | --- |
|  | a. Not Required per Project Manager |
|  | b. Included |
|  | 1. Location |
|  | 2. Description |
|  | 3. Owner |
|  | 4. Work To Be Done |

1. **DESIGN EXCEPTIONS**

|  |  |
| --- | --- |
|  | a. Final Pre-Construction Report Items |
|  | 1. Design Speed (HDM 10.1(4)) |
|  | 2. Horizontal Alignment (HDM CHP. 11) |
|  | 3. Vertical Alignment (HDM CHP. 12) |
|  | 4. Vertical Clearance (HDM 19.3.2) |
|  | 5. Grade (HDM CHP. 12) |
|  | 6. Bridge width (HDM 13.5.1) |
|  | 7. Superelevation (HDM CHP. 11) |
|  | 8. Cross Slope (HDM 13.2.3) |
|  | 9. Lane width (HDM 13.2.2) |
|  | 10. Shoulder width (HDM 13.2.6) |
|  | 11. Stopping sight distance (HDM 10.1.3) |
|  | 12. Structural Capacity of Bridges (HDM 9.2.2) |
|  | 13. Horizontal clearance (HDM 11.2.7) |
|  | B. Copy of “Request for Approval of Design Exceptions” (HDM 9.2A) |

1. **TYPICAL SECTION(S)**

|  |  |
| --- | --- |
|  | a. Pavement design |
|  | 1. Primary – approved by Pavement Design Engineer within the last three years (HDM 3.1.15 & IB 2001-8) |
|  | 2. Secondary check against Design Plans Field Review Recommendations. |
|  | 3. Widths and Thickness/Rates of Materials |
|  | a. Agrees with Plans and x-sections |
|  | 4. Pavement Legend |
|  | 5. Road Group Number, if applicable (IB-2000-3) |
|  | 6. Asphalt Materials Used Comply With Guidelines for Hot Mix Asphalt Selection (Latest Version) |
|  | 7. Graded Aggregate Bases Shown – not be used in areas with 6’ or less width (Requires note on typical section). |
|  | B. “NTC” If Not To Scale |
|  | C. Point of Grade Indicated |
|  | D. Design Speed Block |
|  | 1. Completed |
|  | 2. Lowest Speed Noted For Group 1 Roads (No Exceptions To Be Noted) |
|  | E. Ditch note allowing variable ditch where applicable |
|  | F. Other Notes/Details |
|  | 1. Re: Applicable Standard Drawings |
|  | 2. Re: Guardrail (Extra 3.5’) |
|  | 3. Re: Curb & Gutter/Sidewalk |
|  | 4. Necessary Detail Drawings |
|  | G. Lane Width |
|  | 1. Agrees with Plans |
|  | H. Minimum 1.0’ Depth of Ditch |

1. **RIGHT OF WAY DATA SHEET**

|  |  |
| --- | --- |
|  | a. Tract Numbers |
|  | 1. Agree with Property Strip Map |
|  | 2. Agree with Plans |
|  | B. Owner(s) |
|  | C. Tax Map Reference |
|  | D. Tract Total |
|  | 1. Acres or square feet per Right of Way Instruments |
|  | E. Obtain in square feet and acres |
|  | F. Remain in Acres |
|  | 1. If equal to or less than 0.25 acres show remain in square feet |
|  | G. Permissions Noted |
|  | 1. Outfall Ditches |
|  | 2. Slope |
|  | 3. Drainage Structures |
|  | 4. Erosion Control |
|  | 5. Entrance |

1. **PROPERTY STRIP MAP**

|  |  |
| --- | --- |
|  | A Tracts Numbered (HDM 34.2.5.2) |
|  | B. Clearly Note Present and New Right of Way |
|  | 1. Agrees with Plans |

1. **GENERAL CONSTRUCTION NOTE**

|  |  |  |
| --- | --- | --- |
|  | A. Omitted for R/W Plans | |
|  | B. General Construction Note (IB 2003-6) | |
|  | C. Inclusion Items – items Not Shown in Detail on Plans | |
|  | 1. Check items for appropriate unit | |
|  | a. Accurate description for intended use (IB 2003-3) | |
|  | D. Clearing and Grubbing outfall Ditches | |
|  | E. Drives & Build Up/Leveling | |
|  | 1. Base/Binder | |
|  | 2. Surface | |
|  | 3. Liquid Asphalt Binder | |
|  | F. Extra Pipe Per Field Review | |
|  | G. Perforate Pipe Underdrain Per Field Review | |
|  | 1. Aggregate Underdrain | |
|  | a. For 4” pipe = 11CY per 100LF | |
|  | b. For 6” pipe = 13CY per 100LF | |
|  | H. Riprap (Tons) | |
|  | 1. Geotextile Fabric under Riprap (HDM 35.5C) | |
|  | 2. Quantities broken down for specific use (bridges ends, ditches, etc.) | |
|  | I. Reset Fence | |
|  | J. Seeding/Sodding or Permanent/Temporary Vegetation | |
|  | 1. Unmulched unless otherwise specified on field review |
|  | a. Fertilizer (10-10-10) – Tons (1000#Ac) |
|  | b. Lime – Tons (1 Ton/Acre) |
|  | c. Nitrogen – Pounds (48# Per Acre) |
|  | 2. Temporary Seeding |
|  | a. 50% unless otherwise specified on field review |
|  | b. Fertilizer @ 500 lbs./Ac unless otherwise specified on field review |
|  | K. Mowing |
|  | L. Erosion Control Items (Listed Separate) |
|  | 1. Sediment tubes per field review/Job Requirements (IB 2003-4) |
|  | 2. Silt Fence per field review/Job Requirements |
|  | 3. Other Items |
|  | a. Specified on field review |
|  | b. Necessary for adequate erosion control |
|  | M. Unclassified Excavation & Borrow Per field review – for removal and replacing unstable material |
|  | N. Prime Coat for Aggregate or Sand Clay Bases (IB 94-7) |
|  | O. Project Data (Information Box) |
|  | P. Alternate Pipe Note (IB 96-8) |

1. **REFERENCE DATA SHEETS**

|  |  |  |
| --- | --- | --- |
|  | A. Plan Data | |
|  | 1. Control Points | |
|  | 2. Relocation Control Points (IB 97-10) | |
|  | 3. Reference Points | |
|  | 4. Curve Data | |
|  | a. Superelevation Noted (IB 2003-11) | |
|  | 5. Benchmarks | |
|  | a. Description |
|  | b. Elevation |
|  | c. Datum: Assumed, NAVD-88, Or NGVD-29 (IB 96-3) |
|  | 6. Curb Grade Profile Data | |
|  | B. Plan Sheet Layout Diagram | |
|  | 1. Agrees with Plans | |

1. **FIRST PLAN SHEET**

|  |  |
| --- | --- |
|  | A. Right of Way Notes (IB 97-8) |
|  | B. Utility Notes (PPG 4-2) |
|  | C. All Items in Section XII Below |

1. **ALL PLAN SHEETS**

|  |  |  |
| --- | --- | --- |
|  | A. North Arrow | |
|  | 1. Bearing(s) on all Centerline Tangents | |
|  | B. R/W Data | |
|  | 1. Show Property Lines | |
|  | 2. Tracts numbered | |
|  | 3. Give Pluses for Shifts and at Beginning and End of Tapers for New R/W. | |
|  | 4. Label R/W at Beginning and End of each Plan Sheet. | |
|  | 5. Label R/W at Breaks/Shifts for New R/W. | |
|  | 6. Label Triangle Areas (PPG 12-7) | |
|  | 7. Estimated Excavation | |
|  | a. Entrances | |
|  | 1. Beyond Right of Way Limits | |
|  | 2. Relocated, New Construction/Alignment (IB 97-10) | |
|  | 3. Estimated Excavation | |
|  | b. Pipe/Drainage Structures Beyond Right of Way Limits | |
|  | C. Show Travelway Widths | |
|  | 1. Beginning & End of Each Street | |
|  | 2. Beginning and End of Tapers | |
|  | a. Give Pluses at Beginning and End | |
|  | 3. Radii at Intersections per Face of Gutter/Edge of Pavement | |
|  | 4. Medians Labeled per Standard Drawing No. 100-8 | |
|  | D. Construction Lines Plotted and labeled (cut/fill) | |
|  | 1. N.P.D.E.S. Lines (IB 2002-7) | |
|  | E. New Guardrail Plotted (Check Roadside Design Guide) – use only after all other options are considered. | |
|  | F. Relocation Notes (IB 97-10) | |
|  | G. Plotted For Readability at 50% reduction | |
|  | H. Label Control of Access | |
|  | I. Special Notes | |
|  | J. Drainage – Pipe and Structures | |
|  | 1. Check against Design Plans Field Review Recommendations/Hydrology. | |
|  | 2. Adequate Cross line Lengths | |
|  | 3. Location of Catch Basins | |
|  | a. Agrees with grades |
|  | b. Locations (Low Points and Spacing) |
|  | 4. Extra depth of box (include additional pay items if needed; drainage base, riser, etc. per Std. Drw. 719-21) |
|  | 5. Structures (ie. Culvert) |
|  | a. Agrees with Culvert Details (Bridge Department). |
|  | 6. Drainage information provided by Hydraulic Section (Including invert elevation for storm sewer and cross line pipe). | |
|  | 7. Check Profile for cross line pipe 48” or greater (Hydrology data) | |
|  | 8. Length of pipe plotted correctly. | |
|  | K. Symbology (Per Standard Drawing No. 100-8) |
|  | L. Design |
|  | 1. Turning Radii meets design (HDM 15.3.2.2) |
|  | 2. Sight Distances (Stopping) |
|  | 3. Lane Alignment |
|  | M. Right of Way Note(s) for Present R/W |
|  | 1. File/Docket/Project Number/Date | |
|  | N. Alignment Control Note (IB 97-11) |

1. **PROFILE SHEETS**

|  |  |  |
| --- | --- | --- |
|  | A. Grade Line | |
|  | 1. Vertical Curves | |
|  | a. Pl Station and elevation |
|  | b. Lengths |
|  | c. Sight Distance |
|  | 2. Equalities in stationing plotted | |
|  | B. Special Ditch Notes if over 300’ | |
|  | C. Proposed Outfall Ditch Grades | |
|  | D. Elevations | |
|  | 1. V.P.C. s | |
|  | 2. V.P.T. s | |
|  | 3. Percent of Grade Shown | |
|  | a. Check for Minimum or Maximum (HDM 12.3.1) | |
|  | 4. Type of Gradeline Noted (Finished, Subgrade) | |
|  | 5. Agrees with X-Sections | |
|  | E. Vertical Clearances (Bridges, Overpasses, Trees etc.) | |
|  | 1. Structure Stations | |
|  | 2. Toe of fill | |
|  | F. Earthwork | |
|  | 1. Notes Agree with Excavation/Embankment on Cross-Sections | |
|  | 2. Balance Points | |
|  | 3. Overhaul | |
|  | a. 3,000ft Freehaul – Roadway Only | |
|  | b. Include calculations in quantity folder. | |
|  | G. Curb grades included in plans. | |
|  | 1. Agree with centerline grades when parallel. | |
|  | 2. Agree with top of curb elevations on cross sections. | |

1. **EROSION CONTROL PLANS**

|  |  |
| --- | --- |
|  | A. a Need Erosion Control Data sheet if N.P.D.E.S. is over 1.0 Acres |

1. **CROSS SECTIONS**

|  |  |
| --- | --- |
|  | A. Show exceptions to project |
|  | B. Equality in Stationing Notes |
|  | C. Volumes agrees with earthwork |
|  | D. S. E. Notes |
|  | 1. Beginning and Ending |
|  | 2. Maximum |
|  | 3. Not required for Curb and Gutter Sections |
|  | E. Bridge Notes |
|  | 1. Begin and End of Bridge |
|  | 2. Toe of Fills |