

DelDOT DC Manual

Chapter 4 Construction Plans



May 18, 2015

Chapter 4

► Plan Submittal Requirements

- Entrance Plan/Construction Plan Gatekeeping Checklist*
- Checklist for Subdivision Plan Approval*
- Construction Stage Fee Calculation Form and fee
- Entrance Plan
- Intersection Sight Distance Worksheet**
- Auxiliary Lane Worksheet**
- Back-up Calcs/Reports
 - Drainage, SWM, structural, etc.
- Incomplete submittals will be rejected

Section 4.3

* – See Appendix – Coming soon

** – See DC webpage to download

Chapter 4

► Plan Submittal Requirements

- Entrance Plan/Construction Plan Gatekeeping Checklist*
- Checklist for Subdivision Plan Approval*
- Construction Stage Fee Calculation Form and fee
- Entrance Plan
- Intersection Sight Distance Worksheet**
- Auxiliary Lane Worksheet**
- Back-up Calcs/Reports
 - Drainage, SWM, structural, etc.
- Incomplete submittals will be rejected

Section 4.3

* – See Appendix – Coming soon

** – See DC webpage to download

4

Page 5 of 5

Revised 10/2014

Revised 5/30/2013

Plan Submittal Requirements Cont.

JMT JOHNSON, MERRIMAN & THOMPSON
Engineering & Planning Solutions
Revised: April 14, 2013

Intersection Sight Distance

Project Name: _____
Submission Date: April 15, 2013
Maintenance Road No. (i.e. K234A): _____
Road Name: _____
Location: _____

Intersection Conditions

From Type: _____
Number of Through Lanes: _____
Number of Left Turn Lanes (Excluding Right Turn): _____
Number of Right Turn Lanes (Excluding Right Turn): _____
Number of Through Lanes (Including Right Turn): _____
Number of Right Turn Lanes (Including Right Turn): _____
Minor Road Approach Grade: _____
Adjustment Factor: _____
Time Lag: _____
Sight Distance: _____

Left Turn from Minor Road (Case B1)

From Type: _____
Number of Through Lanes: _____
Number of Left Turn Lanes: _____
Minor Road Approach Grade: _____
Adjustment Factor: _____
Time Lag: _____
Sight Distance: _____

Right Turn from Minor Road (Case B2)

From Type: _____
Number of Through Lanes: _____
Number of Right Turn Lanes: _____
Minor Road Approach Grade: _____
Adjustment Factor: _____
Time Lag: _____
Sight Distance: _____

Minor Road Approach Grade

Typical of cross slopes that are commonly crossed
**Typically zero for right turning vehicles

SIGHT DISTANCE DIAGRAM

EXAMPLE

1. If the intersection is a T-intersection, the sight distance (SD) is the distance from the intersection point to the sight triangle (ST).
2. If the intersection is a cross-intersection, the sight distance (SD) is the distance from the intersection point to the sight triangle (ST).
3. If the intersection is a roundabout, the sight distance (SD) is the distance from the intersection point to the sight triangle (ST).
4. If the intersection is a signalized intersection, the sight distance (SD) is the distance from the intersection point to the sight triangle (ST).

15-Jul

Project Name: _____
Date of Submission: _____
Maintenance Road No. (i.e. K234A): _____
Road Name: _____
Location: _____

Intersection Information

Number of Intersection Legs: _____
Calculation for Specific Legs: _____
Proposed Entrance: _____
Design Speed: _____
Roadway Functional Classification: _____

Left Turn Information

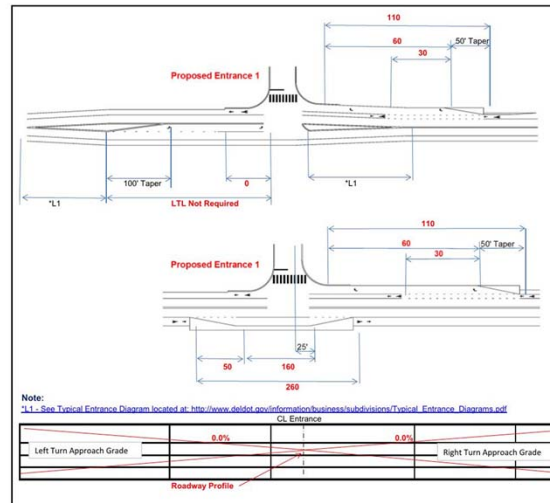
Left Turn ADT: _____
Left Turn VPH: _____
Left Turn Approach Grade: _____
Heavy Vehicle %: _____
Left Turn Opposing Vol. (COUNT based): _____
Left Turn Opposing Volume (Calculated Vol.): _____
Left Turn Length (ft.): _____
Opposing Lane Taper: _____
Opposing Lane Storage: _____

Right Turn Information

Right Turn ADT: _____
Right Turn VPH: _____
Right Turn Approach Grade: _____
Heavy Vehicle %: _____
Right Turn Opposing Vol. (COUNT based): _____
Right Turn Opposing Volume (Calculated Vol.): _____
Right Turn Length (ft.): _____
Opposing Lane Taper: _____
Opposing Lane Storage: _____

NOTE: This worksheet is for Right Turn Auxiliary Lanes, and Unsignalized Left Turn Auxiliary Lanes. If a signal analysis is required, please refer to signalized intersection analysis spreadsheet (Tab 6).

Plan Submittal Requirements Cont.



Chapter 4

► Plan Submittal Requirements – Title Sheet

- Provide complete legend of utilities and ex. and pr. symbols
- Verify that the linestyles and symbols are used on the plan sheets

Section 4.3.2

INDEX OF SHEETS

- TITLE SHEET
- TYPICAL SECTION AND CONSTRUCTION DETAILS
- PLAN AND PROFILE SHEETS

LEGEND OF UTILITIES

- G — GAS
- W — WATER
- T — UNDERGROUND TELEPHONE
- E — UNDERGROUND ELECTRIC
- S — SANITARY SEWER

EXISTING SYMBOLS

SURVEY CONTROL & MONUMENTATION

- BM — SURVEY BENCHMARK LOCATION
- TP — SURVEY TIE POINT LOCATION
- Δ — SURVEY TRAVERSE POINT
- — POINT OF CURVATURE OR TANGENCY
- — POINT OF INTERSECTING TANGENTS

RIGHT-OF-WAY SYMBOLS

- CP — PROPERTY MARKER - CONCRETE MON.
- IP — PROPERTY MARKER - IRON PIPE
- 100+00 — HISTORIC RIGHT-OF-WAY BASELINE
- -- -- -- -- EXISTING RIGHT-OF-WAY
- -- -- -- -- EXISTING PROPERTY LINE
- -- -- -- -- EXISTING EASEMENT
- -- -- -- -- EXISTING DENIAL OF ACCESS
- -- -- -- -- EXISTING R/W & DENIAL OF ACCESS

PROPOSED SYMBOLS

- — PROPOSED RIGHT-OF-WAY MONUMENT
- -- -- -- -- PROPOSED DENIAL OF ACCESS
- -- -- -- -- PROPOSED PERMANENT EASEMENT
- -- -- -- -- PROPOSED RIGHT-OF-WAY
- -- -- -- -- PROPOSED R/W & DENIAL OF ACCESS
- -- -- -- -- TEMPORARY CONSTRUCTION EASEMENT
- 100+00 — PROPOSED RIGHT-OF-WAY BASELINE

Chapter 4

► Plan Submittal Requirements – Typical Sections

- Typical Sections are not the same as Cross Sections
- Represent a typical section of a roadway over a station range to define:
 - Existing and proposed widths of streets, ROW and easements
 - Travel lane, shoulder, sidewalk, SUP widths and cross slopes
 - Swale geometry (width, depth, side slopes)
 - Clear zone width and lateral offset
 - Depth and type of pavement material
 - Curb types, underdrain, topsoil, seed, mulch, ERCB

Section 4.3.3

Chapter 4

► Plan Submittal Requirements – Typical Sections

- Non-roadside ditches/swales:
 - Width of ditch bottom
 - Point-of-profile grade application (PGA)
 - Ditches longer than 100' in length require profiles along PGA
 - Side slopes
 - Type and depth of depth protection
 - Topsoil, seed and mulch locations
 - Existing and proposed easements

Section 4.3.3

Chapter 4

► Plan Submittal Requirements – Details

- Intersection Details
 - Scale 1" = 10'
 - Include stations and offsets
 - Provide grade elevations at edge of pavement
 - 25' intervals on tangents
 - 10' intervals on radii
 - Curb ramps and drainage inlets
- Special Details
 - Superelevation – see DeIDOT model plans
 - Bridges
 - Non-standard drainage structures
 - Pavement Sections

Section 4.3.4

For bridges, refer to DeIDOT Bridge Manual for design and submittal requirements

Chapter 4

► Plan Submittal Requirements – Cross Sections

- Provide a snap shot of roadway at +00 and +50 stations along frontage road
- Provide every 50'
 - Existing and proposed widths of streets, ROW and easements
 - Travel lane, shoulder, sidewalk, SUP widths and cross slopes
 - Swale geometry (width, depth, side slopes)
 - Point-of-Profile Grade Application (PGA)
 - Clear zone width and lateral offset
 - Depth and type of pavement material
 - Ex. and pr. curb types and underdrain
 - Topsoil, seed, mulch and ERCB

Section 4.3.10

Chapter 4

▶ Standards and Specifications

▶ Standard Construction Details

- Utilize when applicable
- DO NOT SHOW ON PLANS
 - Per Section 105.06 of Supplemental Specifications
 1. General Description
 2. General Notices
 3. Plans
 4. Special Provisions
 5. Supplemental Specifications
 6. Standard Construction Details
 7. Standard Specifications

Section 4.7

DelDOT Development Coordination Manual 5/18/2015

12

Explain why standard details should not be shown on plans.

Per 105.06 of the Supplemental Specs, In the case of a discrepancy between the Contract Documents the governing ranking will be:

1. General Description
2. General Notices
3. Plans
4. Special Provisions
5. Supplemental Specifications
6. Standard Construction Details
7. Standard Specifications

Therefore, if standard details are shown on the approved construction plans and the standards details are updated by DelDOT prior to project construction, then the contractor would be required to construct per the older std. details shown on the plans instead of using the latest standard details.