DALLAS DISTRICT
ADVANCE PROJECT DEVELOPMENT
DESIGN SCHEMATIC CHECKLIST

SCHEMATIC TITLES
1) For schematic rolls: Place title block @ both ends of each roll.
2) For 22”x34” sheets: Provide title sheet (First Sheet).
3) Place in title block or title sheet.
   ● Term “Texas Department of Transportation.”
   ● Term “Design Schematic” not “Preliminary Design Schematic”
   ● DCIS project information for each CSJ/project (Information in DCIS and information on schematic must match for each CSJ.)
     • Project name (project name in DCIS and on Schematic must match)
     • Control-section-job (CSJ) numbers
     • Functional classification (DCIS functional classification numbers are provided)
       (1) Interstate (main lanes, frontage road, loop, direct connector, or ramp)
       (2) Other urban freeway or expressway
       (3) Rural principal arterial, urban principal arterial
       (4) Minor arterial
       (5) Rural major collector, or urban collector street
       (6) Rural minor collector
       (7) Local
     • Project limits (Limits in DCIS and on Schematic must match word for word)
       (1) If project limits do not match word for word, change limits in DCIS or on Schematic.
       (2) City or County Lines cannot be used for project limits.
       (3) Project limits should be from west to east and from south to north.
     • Design speed (mph) (Do not give minimum or desirable speed)
     • Project length (miles)
   ● Location map of projects
   ● Date (Month and Year)
   ● Counties
   ● Scale
   ● Roll # of # (for rolls)
   ● Sheet # of # (for 22”x34” sheets)
   ● Copyright (© 200X by Texas Department of Transportation; all rights reserved)
   ● P.E. signature block
   ● William Hale, P.E. District Engineer
   ● Provide table of contents for sheets
SCHEMATIC 22”x34” SHEETS

1) Place a title block on each 22”x 34” sheet after title page.
   ● Show sheet number, state, district name, county, CSJ, and highway number (roadway name).
   ● Show term “Texas Department of Transportation.”
   ● Show functional name (NB IH35E frontage road, ramp, loop, mainlanes etc.) of the profile shown.
   ● Show copyright (Texas Department of Transportation © 200X)

   PLAN PORTION

1) Label streets, buildings, parks, railroads, airports, waterways, and known utilities.
2) Show typical roadway sections and label following things:
   ● Station or station limits,
   ● Dimensions,
   ● Centerlines and Baselines,
   ● Directional arrows for each lane,
   ● Pavement width (If width varies, show for example varies from 2’ to 4’),
   ● Median widths (If width varies, show for example varies from 2’ to 4’),
   ● Border separation,
   ● Profile elevation,
   ● Curb offsets,
   ● Type of curb (mountable or barrier),
   ● Existing and proposed R.O.W., and
   ● Side slopes.
3) Mark and label beginning and ending stations with the following:
   ● “Begin Project” or “End Project, and
   ● CSJ.
4) Show and label (and dimension at certain locations) proposed and existing R.O.W., and any easements (drainage / utility / landscaping, etc.).
5) Identify specific properties to be displaced.
6) Label existing and proposed bridges (beginning and ending stations for existing structures).
7) Show and label existing centerline and proposed centerline with stationing. (Stationing should increase in value from south to north, west to east.)
8) Show all curve data; proposed centerline, stationing, PC points, PT points, bearing, PI points, and PI curve data.
9) Show and label retaining walls and noise walls.
10) Show number of lanes using a directional arrow for each lane.
11) Show pavement transition areas and tapers.
12) Show and label ADT traffic volumes on traffic diagram at each major roadway.
   ● Existing
   ● Projected 20 year
   ● Source of data (for example: Texas Department of Transportation; Transportation, Programming and Planning Division Memorandum, January 1, 200X.)
13) Show and label city limits and county limits.
14) Show north arrow.
15) Show control of access (if applicable).
16) Show and label project and cross street stationing at intersecting points.
17) Label signalized intersections.
18) Show and label ramp stationing, frontage road stationing, and direct connection stationing. *(Station only from physical gore to physical gore. Make sure ramp grades match frontage road / mainlane grades and elevation matches frontage road / mainlane elevation +/- cross slope.)*
19) Show median openings for highways at street intersections. Include note that other median opening locations to be determined in PS&E in coordination with city.
20) Check intersection turn bay lengths.
21) Show sidewalks (use 5’ width). Show locations for sidewalk ADA ramps at intersections. *(1.5% slope is recommended on sidewalk ADA ramps even though the maximum is 2% because of construction tolerances)*
22) Show superelevation by table format or beginning and ending superelevation stations on horizontal profile.
23) Show matchlines when two or more sheets or rolls.
   - Label matchline with CSJs and stationing.
22) For controlled access facilities show major guide signs.

**PROFILE PORTION**

1) Mark and label beginning and ending stations with the following:
   - “Begin Project” or “End Project,”
   - CSJs, and
   - Elevations.
2) Show and label existing and proposed centerline profile.
3) Show annotation listed below of proposed vertical profile.
   - PC’s and PT’s
   - VPI’s
   - VPI curve data
   - Curve length
   - Grades *(prefer no grades less than 0.5%)*
   - K values
4) Color-code or separate different profiles when multiple roadways are involved.
5) Show proposed elevations (0.00) and existing (0.0) elevations on reference line. Design elevations are on the left and existing elevations are on the right.
6) Label elevations on vertical scale and label stations on horizontal scale.
7) Show and label existing drainage structures.
8) Show and label proposed bridges. *(Check and label bridge clearances)*
9) Show and label beginning and ending stations for existing structures.
10) Show clearance on proposed structures.
11) Show cross street, railroad, frontage road, ramp and direct connections, if applicable.
12) In cases where existing profile is maintained or matched, show vertical profile data and superelevation data in table format to verify adequate design speed.
13) Provide cross-sections (for review only).
14) Provide Level of Service at intersections and ramp weaving (for review only).
Page 3 of 3, 1002 Form

1) Check information in DCIS, on schematic, and on page 3 of 3, 1002 Form. The information must be exactly the same.

Schematic Submittal Memorandum

1) Enclose 3 copies of the design schematic (1 copy for Design Division (DES), 1 copy for FHWA, and 1 copy for Transportation Operations Division). If your project has no Federal Oversight, then just submit 2 copies.
2) Enclose one copy of page 3 of Form 1002. After DES approves project, page 3 of Form 1002 must be sent to PS&E so that the same form can be used throughout the whole project life span.
3) It is encouraged to submit a design summary report to DES for their approval.