

**Delaware County Engineer's Office (DCEO)  
Road Widening Review  
Checklist**

**Project Name:** \_\_\_\_\_

**Submittal Items included with Plans**

- Yes  No  N/A Proper number of plan sets provided (Typically part of the subdivision plans – if a separate plan, submit 4 sets of the full size plans and 1 set of half size plans)
- Yes  No  N/A Plan review fees and fee submission checklist (if applicable)
- Yes  No  N/A Completed final plan review checklist provided
- Yes  No  N/A Traffic Impact Study prepared and approved
- Yes  No  N/A Drainage and/or Right-of-Way (R/W) Conveyance Instruments, Metes and Bounds Descriptions, and associated Exhibits provided (If applicable – typically for any off-site easements – easements must state their purpose, such as “for highway purposes” or “for drainage purposes”).
- Yes  No  N/A Construction Work Agreements for all properties affected by the construction (outside existing R/W)
- Yes  No  N/A Stormwater calculations and delineated tributary areas including offsite areas?  
Water Quality calculations provided (if applicable)?
- Yes  No  N/A Engineer's estimate based on Delaware County Engineer's Unit Bid Prices (Section 403 A).
- Yes  No  N/A All required environmental documents, Army Corps permits and ODNR permits submitted before final plan approval (Section 401 A).
- Yes  No  N/A If final plan resubmittal, written response and marked prints included that addresses previous comments and identifies additions/deletions made to plans since previous submittal (Section 401 A)

**Note: DCEO shall contact the plans submitter if the above items have not been submitted with the plans. Failure to submit the items may result in delay or halting of the review process. For all subdivisions, the road widening plans shall be included as part of the final engineering and construction plans for the first phase/section of the proposed development. A separate road widening plan is only permitted with prior approval of DCEO.**

**General**

- Yes  No  N/A Has Section 403G of the Standards Manual (current edition) been reviewed to insure all items have been incorporated into these plans?
- Yes  No  N/A Intersection Sight Distance (ISD) Diagram showing adequate intersection sight distance for the proposed entrance drives(s) per the current ODOT Location and Design (L&D) Manual - Do not use stopping sight distance tables.
- Yes  No  N/A Have all trees and obstructions within the R/W and sight distance triangle been shown and designated to be removed on the ISD diagram?
- Yes  No  N/A Show the Clear Zone Setback line for projects located on County and Township Roads according to the ODOT L&D Manual, current editions. Provide additional utility easements if needed.

- Yes  No  N/A Have drainage easements for the road widening, shoulder and ditch improvements been addressed (in addition to the required R/W per these Standards)?
- Yes  No  N/A Are existing utilities shown in area of the road widening, shoulder and ditch improvements? Have the utilities been called out to be relocated? Have easements been provided for utility relocation or future needs?
- Yes  No  N/A All required easements for R/W, drainage and/or sight distance shall be recorded prior to final engineering plan approval (if offsite or not included on a final plat submittal). Copies of the required easements shall be submitted to the County Engineer for approval.
- Yes  No  N/A For open ditch roads, has the driveway pipe sizes, including calculations been submitted for approval? Minimum drive pipe size is 12". (Section 802 H)
- Yes  No  N/A Any adjacent properties affected by the project?
- Yes  No  N/A Work Agreement(s) and/or Temporary Easement(s) been provided if work is proposed on other property? Typically work agreements or temporary easements are for work beyond the ditch back slope or in other areas affected by the road widening.
- Yes  No  N/A Has plans and plat for any adjoining subdivisions or other adjoining properties been reviewed to insure the proposed project is compatible?
- Yes  No  N/A Have the proposed storm sewer inverts, project pavements, project grading, etc. align (horizontally & vertically) with adjacent existing storm sewers, pavements, and grading? Have differences between 1929 Datum and 1988 Datum been addressed if adjacent projects or sewers were based on a different Datum?
- Yes  No  N/A General DESC permit must be approved before final plans can be approved.
- Yes  No  N/A General Summary/Table of Estimated Quantities provided (if separate plan from subdivision)
- Yes  No  N/A If the road widening is part of a publicly bid project and the County Engineer's Office will be involved in administering the contract, please contact the DCEO for other plan requirements.
- Yes  No  N/A Reference to the current ODOT CMS provided?
- Yes  No  N/A General Notes included (refer to Supplemental Specifications and General Notes section of this checklist)
- Yes  No  N/A Utilities relocated in compliance with County Engineer's Utilities Policy. (See Supplemental Specifications for copy of current policy)
- Yes  No  N/A Are the plan and profile sheets to the proper scale (1" = 20 feet - plan; 1" = 5 feet - profile)?
- Yes  No  N/A Do the turn lane lengths match those provided in the approved Traffic Impact Study and with the current requirements of ODOT L&D Manual, Vol. 1?
- Yes  No  N/A Do the taper rates from the proposed to existing pavements widths match the required ratio of Design Speed:1?
- Yes  No  N/A Are the cross sections are the proper scale (Vertical – 1" = 5 feet; Horizontal – 1" = 10 feet)
- Yes  No  N/A No more than four cross sections per plan sheet is permitted
- Yes  No  N/A Do the roadway widths, shoulder and ditch section match DCEO Standard Drawing DCED R-2130?
- Yes  No  N/A Has Del-Co Water been provided a set of plans (if existing waterline along roadway)
- Yes  No  N/A Video tape provided (at the time the plans are signed) of existing conditions (Section 403 G and Supplemental Specifications). Include supplemental specification for video taping on Title Sheet.

**Title Sheet - Only used if the road widening plan is a separate plan (must be approved by DCEO). Please contact our office to determine if a title sheet is required.**

- Yes  No  N/A Road Name and Number
- Yes  No  N/A Subdivision Name (if applicable)
- Yes  No  N/A Township Name
- Yes  No  N/A General Description (Range, Township, Quarter Township, and Lot Number or Survey Number)
- Yes  No  N/A Developer's Name, Address and Telephone Number
- Yes  No  N/A Utility Company Name, Address, Contact Person and Telephone provided for all utilities
- Yes  No  N/A Location Map and Index Map with Scale
- Yes  No  N/A Road Classification (Arterial, Collector, etc.), Design Speed, and Speed Limit
- Yes  No  N/A North Arrow
- Yes  No  N/A Written and graphical (bar) scale
- Yes  No  N/A Consultant's Name, Address, and Telephone Number
- Yes  No  N/A Date, PE Seal and Signature of Design Engineer
- Yes  No  N/A Date and Signature Blank for County Engineer
- Yes  No  N/A Date and Signature Blank for General Manager of Del-Co Water
- Yes  No  N/A Design Engineer's Certification paragraph: "This is to certify that good engineering practices have been utilized in this project and that all of the minimum standards as delineated in the Delaware County Engineer's Design, Construction and Surveying Standards Manual have been met, including those standards greater than minimum where, in my opinion, they are needed to protect the safety of the public. Any variances to the above standards are consistent with sound engineering practices and are not detrimental to the public safety and convenience. These variances have been listed herein and have been approved by the Delaware County Engineer."
- Yes  No  N/A County Engineer Disclaimer paragraph: "The Delaware County Engineer's signature on this plan signifies only concurrence with the general purpose and location of the proposed improvements. All technical details remain the responsibility of the Professional Engineer who prepared and certified these plans."
- Yes  No  N/A List of referenced Standard Drawings (Delaware County & ODOT) – Must be included for all applicable standard drawings required for the road widening.
- Yes  No  N/A Supplemental Specifications referenced (Delaware County and ODOT)
- Yes  No  N/A Reference provided to Standard Drawing DCED-R2130
- Yes  No  N/A Proper Specification Statement provided (See Section 402 H)
- Yes  No  N/A List of Bench Marks referencing USGS Datum
- Yes  No  N/A Index of Sheets
- Yes  No  N/A Change Order (revisions) table provided. Numbered Triangles are used to reference changes. Revised Sheets are noted as such and dated. Deleted Sheets and Supplemental Sheets are listed in Revision Box.
- Yes  No  N/A Variance Table with Approval Dates Shown

**Typical Section(s)**

- Yes  No  N/A Widening Section match Standard Drawing DCED-R2130 (must match exactly)
- Yes  No  N/A Pavement buildup must be approved by DCEO. Calculations supporting the proposed typical section must be provided for review. Contact DCEO for guidance regarding the pavement calculations.

- Yes  No  N/A Pavement width must be approved by DCEO
- Yes  No  N/A Legend identifying all items provided
- Yes  No  N/A Sawcut of existing pavement shown and located a minimum of 1'-0" from the existing edge of pavement?
- Yes  No  N/A Leveling course provided to insure constant cross slope per the approved typical section? Quantities for leveling course based on field verified data at 50' intervals, or other approved method, for the entire project length?
- Yes  No  N/A Subgrade compaction, tack coat and prime coat provided?
- Yes  No  N/A Pavement joint reinforcement between existing and proposed pavement shown (callout for reinforcing material shown and DCEO Standard Drawing referenced)
- Yes  No  N/A Reconditioning of the opposite shoulder shown (Only applicable when roads are widened to one side only).

For curb and gutter typical section (must be approved by DCEO)

- Yes  No  N/A Curb, Berm, and Pavement Planning Details
- Yes  No  N/A ODOT Type 2 Curb (required) - reference to ODOT Standard Drawing shown?
- Yes  No  N/A All Type 2 curbs shall have a minimum gutter pan thickness of 9"
- Yes  No  N/A On all arterial roads, 6" underdrain provided

### General Summary/Estimate of Quantities Sheet

- Yes  No  N/A Table includes Item Number, Quantity Total, Unit, and Description
- Yes  No  N/A Accounts for all Sub-summary Table Quantities (Compare with plan sheets)
- Yes  No  N/A Striping items provided and correct
- Yes  No  N/A Accounts for all items shown on the typical section (pavement, berm, guardrail, leveling course, tack coat for intermediate course, subgrade compaction, proof rolling, mailboxes removed/restored, tree removal, etc.)
- Yes  No  N/A Item for pavement joint reinforcing between existing and proposed pavement provided
- Yes  No  N/A Item for subgrade stabilization or full depth pavement repair provided (Per General Notes)
- Yes  No  N/A Milling Quantities (if applicable)
- Yes  No  N/A Proper quantity callouts (CY, SF, etc.) used for the items shown?
- Yes  No  N/A Fabric Item included for undercut areas
- Yes  No  N/A SWPPP/Erosion Control items are provided

### General Notes

\*Refer to the Supplemental Specifications for Road Widening General Notes. These notes must be included without any modifications. The notes can also be downloaded from the website at:

<http://www.co.delaware.oh.us/engineer/review/Standards.htm>

- Yes  No  N/A Additional notes necessary for project specific issues?

### Cost Estimate - Refer to Final Engineering and Construction Plan Review Checklist for Cost Estimate requirements (See Section 403 and example in the Supplemental Specifications)

#### Plan View

- Yes  No  N/A Does plan follow requirements set forth in the ODOT L&D Manual, current edition – Horizontal Scale – 1" = 20', etc.?
- Yes  No  N/A Station and offset of all structure or GPS coordinates provided
- Yes  No  N/A Existing Pavement (dashed lines) and Proposed Pavement (solid lines).

- Yes  No  N/A Pavement Width and Shoulder Widths match Standard Drawing DCED R-2130/Approved Typical Section
- Yes  No  N/A Existing and Proposed R/W (See Supplemental Specifications for Proposed R/W width)
- Yes  No  N/A Existing and Proposed Utilities (Surface and Sub-Surface)
- Yes  No  N/A Existing and Proposed Surface and Subsurface Drainage Features (Ditches, Tiles, Culverts, etc.)
- Yes  No  N/A Work and/or clearing limits shown
- Yes  No  N/A Clearing/grubbing notes provided. Clearing within the R/W and if necessary clearing within the construction limits.
- Yes  No  N/A Benchmark Location, Elevation, and Description (for all benchmarks)
- Yes  No  N/A Existing and/or Proposed Driveway locations
- Yes  No  N/A Proposed Subdivision and Lot Boundaries
- Yes  No  N/A Other Physical Objects shown (Trees, Fences, Signs, Guardrail, Mailbox Posts, Existing Property Corner Monuments, etc.)
- Yes  No  N/A Any Physical Objects to be removed or relocated are noted (outside clear zone or R/W)
- Yes  No  N/A Trees to be removed during the project shown crossed out on the plans
- Yes  No  N/A Show the Clear Zone Setback line for projects located on County and Township Roads according to the ODOT Location and Design Manual, current edition.
- Yes  No  N/A Legend for Abbreviations
- Yes  No  N/A Adjacent Property Owners and Lot numbers
- Yes  No  N/A Intersection Detail shown (Proposed and Existing)
- Yes  No  N/A Sight distance exhibits provided for all proposed intersections.
- Yes  No  N/A Horizontal Curve Data including Delta, Radius, Chord Bearing, and Chord Distance
- Yes  No  N/A All Catch Basins, Ditch Inlets, Manholes, Headwalls, etc. Shown and Labeled with Stations and Referenced Standard Drawing
- Yes  No  N/A Entrance Street must be designed as a Collector with respect to pavement width only to the first intersection or specified length as determined with Tapers based on the ratio of Design Speed:1 (Section 601 B.3).
- Yes  No  N/A Appropriate taper rate (Design Speed:1) used
- Yes  No  N/A Location of beginning and end of roadway tapered sections
- Yes  No  N/A Driveway Pavements – Descriptions of existing types of driveways matches field conditions - asphalt, concrete, gravel.
- Yes  No  N/A Existing drives shall be paved to the proposed R/W line (applies only to drives on the same side of the street as the proposed subdivision)
- Yes  No  N/A Existing Drives shall be paved an additional 5' from the edge of pavement as part as the overlay (applies only to existing drives opposite the side of the street of the proposed subdivision)
- Yes  No  N/A Underdrains outlet at ditch low point (with proper ODOT end treatment referenced) or at a structure
- Yes  No  N/A Butt Joint shown (per ODOT Standard Drawing BP 3.1) at Begin/End of Project
- Yes  No  N/A Any Mailboxes needing removed and/or relocated noted? Mailbox support height needs to be per local USPS standards in General Notes.
- Yes  No  N/A All guardrails have been scrutinized for line of sight obstruction at intersections
- Yes  No  N/A Existing Culvert Condition – DCEO to determine if culvert is to be replaced
- Yes  No  N/A Culverts must extend beyond the required clear zone
- Yes  No  N/A Precast wingwalls, headwalls, footings, etc. per Supplemental Specifications
- Yes  No  N/A Handicap ramps details addressed
- Yes  No  N/A Leveling Course Table of Elevations provided?

For curb and gutter typical section (must be approved by DCEO)

- Yes  No  N/A Has the transition from curb and gutter to the existing open ditch section been addressed (e.g., grading, underdrain outlet, erosion protection at the gutter pan, etc)?
- Yes  No  N/A Has the callout for the curb height transition from 6" to 0" in 10-feet been provided?

### Profile

- Yes  No  N/A Elevation at Centerline (Profile Grade) and Edge of Pavement– every 25' for existing and proposed grades
- Yes  No  N/A Existing and Proposed Ditch Flowline elevations (to a point of adequate outlet)
- Yes  No  N/A Existing Ground Elevation at Proposed Ditch Flowline
- Yes  No  N/A Any Existing and/or Proposed Surface and Sub-Surface Drainage Structures (proposed Tile must be shown to a point of adequate outlet)
- Yes  No  N/A Driveway profiles provided (may be shown on cross sections if appropriate)
- Yes  No  N/A Plan elevations match As-Built elevations for adjoining properties (e.g. roadways, back yards, etc.)?

### Cross-Sections

- Yes  No  N/A Centerline shown and proper scale used (vertically – 1' = 5'; horizontally – 1' = 10')
- Yes  No  N/A Cross sections provided at 50-foot intervals with Station Numbers
- Yes  No  N/A Cross sections also provided at all driveways, culverts and road entrances
- Yes  No  N/A Edge of Pavement, ditch flowline, foreslope and backslope rates, etc. shown and match the approved typical section?
- Yes  No  N/A R/W (Existing and Proposed)
- Yes  No  N/A Existing and Proposed Profile Grade Elevations
- Yes  No  N/A Existing and Proposed Utilities (Surface and Sub-Surface)
- Yes  No  N/A Existing and/or Proposed Surface and Sub-Surface Drainage Structures
- Yes  No  N/A Maximum of 4 cross sections per plan sheet
- Yes  No  N/A Precast wingwalls, headwalls, footings, etc. per Supplemental Specifications
- Yes  No  N/A Proper slope used beyond back of curb (6:1 or flatter - sloping up) when curb and gutter is provided?
- Yes  No  N/A Check cross sections to see if all utilities are drawn accurately (horizontal and vertical). Are there conflicts between the utilities and the proposed work?
- Yes  No  N/A Check Sections against Grading Plan and Driveway Replacement Limits on plan views to verify that the cross sections extend to the proposed work limits.
- Yes  No  N/A Beginning and Ending Stations match beginning and ending Stations on Plan and Profile Sheets
- Yes  No  N/A Cross Section Elevations match Profile Elevations for Objects (storm sewers, culverts, drive pipes, utilities, etc. shown)
- Yes  No  N/A 4:1 Maximum backslope in Lawn Areas
- Yes  No  N/A Grading and proposed elevations on road widening match those shown on the subdivision grading plan (Are they consistent?)
- Yes  No  N/A Sub-summary of Fill and Cut Quantities with totals for the sheet
- Yes  No  N/A Transition of Existing Ditch to Proposed Ditch is shown (typically within last 20' of project limits)
- Yes  No  N/A Storm and sanitary sewers structures, waterlines, culverts, and bridges. Clearly

- Yes  No  N/A label all pipe material specification and classification. (Section 403 A)  
 Yes  No  N/A Ditch enclosure necessary due to steep ditch slopes? See Article 403 G.

**Storm Sewer and/or Culvert Profile – Refer to Final Engineering and Construction Plan Review Checklist for Roadway Culvert and Storm Sewer Requirements. The items listed below are in addition to the checklist items provided in the Final Engineering and Construction Plan Review Checklist.**

- Yes  No  N/A Culvert profiles (including extension of existing culverts) are required. For pipe diameters larger than 36” and for all three and four-sided structures a separate plan and profile sheet is required (Section 403 B. 5).  
 Yes  No  N/A If a proposed pipe connects to an existing pipe a concrete collar is required  
 Yes  No  N/A Items to be removed identified

**Curb Inlets (Section 904 E) - Refer to Final Engineering and Construction Plan Review Checklist for Curb Inlet Requirements (Must be approved by DCEO).**

**Erosion and Sediment Control Plan - Refer to Final Engineering and Construction Plan Review Checklist for Erosion and Sediment Control Plan Checklist Items. The item listed below is in addition to the checklist items provided in the Final Engineering and Construction Plan Review Checklist.**

- Yes  No  N/A OEPA Storm Water NOI submitted before final plans approval.

**Storm Water Management**

- Yes  No  N/A Calculations included for all storm sewers with correct design storm and correct storm hydraulic grade check  
 Yes  No  N/A Calculations included for all culverts with correct design storm and correct storm hydraulic grade check  
 Yes  No  N/A Calculations for all drive pipes provided (based on 10-year storm)  
 Yes  No  N/A 100-year flood routing path shown

**Maintenance of Traffic (MOT) Plan**

- Yes  No  N/A Existing and Proposed Roadway shown?  
 Yes  No  N/A Existing and Proposed Construction Road Work Signs, Drums, Temporary Pavement Markings, etc. shown?  
 Yes  No  N/A Minimum lane widths of 10-feet shown along with typical sections for each phase of construction?  
 Yes  No  N/A Proper notes and details shown for two-way, one-lane traffic with flaggers (9am – 3pm limit)?  
 Yes  No  N/A Temporary Pavement Marking provided (tape is acceptable as a temporary pavement marking)?  
 Yes  No  N/A ODOT Work Zone plan insert sheet (current edition) included with final plans?  
 Yes  No  N/A Maintenance of Traffic Sub-summary  
 Yes  No  N/A Temporary Pavement a pay item when shown (typically required for MOT)  
 Yes  No  N/A Has access been provided if existing adjacent properties are affected? Has a note been provided on the MOT Plan (or in the general notes)?

- Yes  No  N/A Copies of the Traffic Maintenance Plan been submitted to the Township (For emergency response purposes)?

### Traffic Control Plan

- Yes  No  N/A Tapered areas meet current ODOT L&D Manual?  
 Yes  No  N/A Adequate storage length (including taper) for turn lane provided per approved TIS and the current ODOT L&D Manual  
 Yes  No  N/A Island Detail with proper diagonal striping provided (Check width and spacing of diagonal striping)  
 Yes  No  N/A Existing Signs with disposition (to be removed or to remain) shown  
 Yes  No  N/A Proposed Signs with Stations (including street name signs with Township/County Road Number, etc.) shown  
 Yes  No  N/A Line Specifications provided – 4” wide line for edge of pavement and centerline striping; 6” wide line for island and diagonal striping.  
 Yes  No  N/A Striping Plan includes arrows for turn lane and through lane. Also includes “ONLY” for turn lane  
 Yes  No  N/A Does proposed pavement striping match the existing pavement striping at the begin and end project stations?

### Traffic Control Quantities

- Yes  No  N/A Table for signing and includes station, side, type, size, and quantity  
 Yes  No  N/A Table for Pavement Marking that includes station (from & to) and quantity. Quantities carried to General Summary? Item callout correct (thermoplastic striping – not paint - is required)?

### Lighting and Power (if Traffic Signal is required per approved TIS)

- Yes  No  N/A Proper traffic control general notes provided (see Supplemental Specifications)  
 Yes  No  N/A The numbers of luminaries match the number of poles.  
 Yes  No  N/A Provided Loop Locations and Quantities. Installation is before or after overlay?  
 Yes  No  N/A Pull Boxes adjusted to Grade and are on the Quantity Sheet.  
 Yes  No  N/A Provisions were made to relocate Existing Lighting Controllers to County Owned Poles. Verify locations.  
 Yes  No  N/A Highway Lighting-need for lighting to be determined by DCEO. Lighting shall be in conformance with ODOT L& D Manual current edition (Section 403 G).

### Miscellaneous

- Yes  No  N/A Milling Depth vs. Overlay Thickness checked  
 Yes  No  N/A Slopes at Project Limits – Verify that Plans account for Existing Slopes where the proposed pavement begins and the existing pavement ends  
 Yes  No  N/A Field visit completed to insure all items are accounted for in the plans? (e.g., new developments adjacent to site, etc. along with cross sections, if needed)

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**FOR INTERNAL USE ONLY**

- Yes  No  N/A      Check with Design Group to determine if this section of road is to be paved as part of their road paving contract.
- Yes  No  N/A      Coordinate with Permit Department, Design Group and Storm Water Department for any comments
- Yes  No  N/A      Permit Department has been contacted regarding the required permits
- Yes  No  N/A      County Operations Manager has been informed of any pipe replacements on Township Roads

**Comments:**

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**Comment Disclaimer:**

**The County Engineer Reserves The Right To Make Any Additional Comments At Any Time Up To The Actual Approval Of This Project. See the Delaware County Standards for other items not addressed on this list.**

Approved  Disapproved

Reviewed By: \_\_\_\_\_ Date: \_\_\_\_\_

Write letter to: \_\_\_\_\_