

## *Article 4: Plan Requirements*

### **Section 401: Statement of Intent**

- (A) Article 4 of this Subdivision and Land Development Ordinance provides the basic plan requirements for all proposed subdivision plans or land development plans within Lower Alsace Township.
- (B) The provisions established for plan requirements, as established under this Subdivision and Land Development Ordinance shall be subject to the interpretation of Lower Alsace Township. Should a dispute arise concerning the interpretation of these regulations, the person aggrieved by the interpretation may file an appeal with the Board of Supervisors. In all cases, the burden of proof and submission of technical evidence shall be the responsibility of the applicant or person appealing the interpretation of Lower Alsace Township.

### **Section 402: Sketch Plan Requirements**

- (A) A sketch plan shall be considered as an unofficial submission to Lower Alsace Township for the purposes of informal review and discussion between the applicant and Lower Alsace Township.
- (B) When a sketch plan application is submitted to Lower Alsace Township, the sketch plan shall contain at least the following data, legibly drawn to scale, but not necessarily showing precise dimensions:
  - (1) Name or identifying title of the proposed subdivision or land development.
  - (2) The name and address of the record owner, equitable owner, developer, engineer, architect, planner and/or surveyor.
  - (3) Tract boundaries, accurately labeled
  - (4) Total acreage of the tract and total acreage being considered for development.
  - (5) North arrow.
  - (6) Written and graphic scales.
  - (7) Significant natural, topographical, physical and environmental features.
  - (8) A statement of the existing use and proposed use of the property being subdivided and/or developed.
  - (9) Proposed streets, buildings, lot layout and site improvements within the development.
  - (10) Proposed sewer and water facilities that will service the development.
  - (11) Other information or documentation that may be considered essential for the subdivision or land development, as determined by Lower Alsace Township.
- (C) If requested by Lower Alsace Township, the applicant shall provide additional information or other documentation to understand the conceptual plan and/or to provide direction to the applicant.
- (D) The sketch plan may be required by Lower Alsace Township as a prerequisite to the formal submission of a preliminary subdivision and land development plan. The sketch plan shall not be considered as an official plan submission under the review procedures and provisions of the Pennsylvania Municipalities Planning Code.

**Section 403: Preliminary Plan Requirements**

- (A) A preliminary plan shall be considered as an official submission to Lower Alsace Township for the purposes of formal review and discussion between the applicant and Lower Alsace Township.
- (B) Unless otherwise exempted from the standard application procedures of this Subdivision and Land Development Ordinance, all preliminary subdivision plans or preliminary land development plans shall contain the plan requirements specified under this section. Any modifications to these plan requirements shall be subject to the provisions of Section 309 of this Subdivision and Land Development Ordinance.
- (C) The preliminary plan application shall be subject to the following drafting or general layout standards:
  - (1) The preliminary plan shall be clearly and legibly drawn to a scale of one (1) inch equals fifty (50) feet, except under the following conditions:
    - (a) The plan may be drawn at a scale of one (1) inch equaling one hundred (100) feet if the average size of the proposed lots within the subdivision is five (5) acres or larger;
    - (b) The plan may be drawn at a scale of one (1) inch equaling twenty (20) feet if the average frontage or lot width is less than fifty (50) feet; or
    - (c) The plan shall be prepared at a scale ranging between one (1) inch equaling twenty (20) feet and one (1) inch equaling fifty (50) feet if the applicant can sufficiently demonstrate that the scale is necessary to depict the amount of detail required by this Subdivision and Land Development Ordinance while conforming with the provisions for permitted sheet sizes.
  - (2) The plan and all submitted prints thereof, shall be made on sheets no smaller than twenty-four (24) inches by thirty-six (36) inches and no greater than thirty (30) inches by forty-two (42) inches.
  - (3) If the preliminary plan requires more than one sheet, a key diagram showing relative location of the several sections shall be drawn on each sheet.
  - (4) Where the preliminary plan shows the proposed subdivision or land development of only a part of the applicants total property, a sketch shall be required, showing the prospective street system and tentative lot layout of the remainder of the property, so that the total site improvements may be considered in relation to existing conditions. To prevent undue hardship in the case of extremely large properties, the Planning Commission may, based upon existing natural or man-made features, limit the area for which the prospective street system and tentative lot layout shall be sketched.
- (D) The preliminary plan application shall include the following general information:
  - (1) Name or identifying title of the proposed subdivision or land development.
  - (2) North point, graphic scale, written scale, and date, including the month, day and year that the original drawing was completed, and the month, day and year that the original drawing was revised, for each plan revision.
  - (3) A key map, for the purpose of locating the property being subdivided, drawn at a scale of one (1) inch equals eight hundred (800) feet and showing the relation of the property, differentiated by tone or pattern, to adjoining property and to all streets, roads, municipal boundaries, and recorded subdivision plans existing within one thousand (1,000) feet of any part of the property. In addition, the name and approximate distance to the closest recognized city, town or village, or the approximate distance to the nearest existing street, shall be shown and a title, scale and north point shall be indicated.
  - (4) Name and address of the record owner, equitable owner and applicant or developer. Where requested by Lower Alsace Township, the relationship between all parties seeking subdivision or land development plan approval shall be confidentially disclosed to Lower Alsace Township.

- (5) A complete source of title, including all relevant information of the landowner (grantor and grantee), deed references and transfer dates.
  - (6) Name and address of the registered engineer, surveyor, architect or planner responsible for the plan.
  - (7) Names of all adjoining record owners, with reference to their respective tax parcel identification numbers and their deed reference, as recorded with the Berks County Recorder of Deeds.
  - (8) Names of all adjoining subdivision or land development plans, if any, with the appropriate plan book reference, as recorded with the Berks County Recorder of Deeds.
  - (9) Total tract boundaries of the property being subdivided or developed, showing bearings and distances.
  - (10) A statement of total acreage of the property and the total area being subdivided or developed.
  - (11) A statement of the existing use and proposed use of the property being subdivided and/or developed.
  - (12) Zoning data including all of the following which are applicable:
    - (a) Existing zoning district designations, requirements, use and bulk regulations;
    - (b) Any zoning district boundary lines traversing the land area proposed for the subdivision or land development;
    - (c) Any changes in the existing zoning including any variances, conditional uses, or special exceptions that have been granted; and/or
    - (d) Any changes in the existing zoning proposed to be requested by the applicant or developer.
  - (13) Other general information that may be considered essential for the subdivision or land development, as determined by Lower Alsace Township.
- (E) The preliminary plan application shall include the following existing and natural features:
- (1) Contour lines determined by acceptable surveying practices at vertical intervals of at least two (2) feet for land with average natural slope of twenty (20) percent or less, and at intervals of at least five (5) feet for land with average natural slope exceeding twenty (20) percent.
  - (2) Location and elevation of the datum to which contour elevations refer. Where reasonably practicable, the datum used shall be a known, established benchmark.
  - (3) All existing streets, including streets of record (recorded but not constructed), on or abutting the tract, including names, right-of-way widths, cartway (pavement) widths, and centerline road grades.
  - (4) All existing buildings or other structures located within the proposed development.
  - (5) All existing man-made features within the proposed development and within fifty (50) feet of the proposed development. This may include, but not limited to, sanitary sewer facilities, on-lot sewage facilities, water supply facilities, wells, fire hydrants, utility transmission lines, stormwater management facilities, culverts, bridges and railroad lines. Where applicable, the size, type, material and invert elevations shall also be identified on the preliminary plan.
  - (6) All existing natural features within the proposed development and within fifty (50) feet of the proposed development. This may include, but not limited to, water courses, floodplain areas, natural drainage patterns, soil types with descriptions, delineated wetlands, hydric soils, high water table soils, tree masses, steep slopes, sinkholes and rock out-crops.

- (7) The location, size and ownership of all existing utilities and utility rights-of-way within the proposed development. A statement of any conditions governing their ownership and use shall be included on the preliminary plan.
  - (8) The location, dimensions and ownership of all existing rights-of-way or easements within the proposed development. A statement of any conditions governing their ownership and use shall be included on the preliminary plan.
  - (9) Other existing or natural features that may be considered essential for the subdivision or land development, as determined by Lower Alsace Township.
- (F) The preliminary plan application shall be accurately designed considering the following requirements:
- (1) Location, dimensions and functional classification of all proposed streets and rights-of-way, with a statement of any conditions governing their ownership, maintenance and use.
  - (2) Suggested street names.
  - (3) Location and dimensions of all proposed easements and rights-of-way, with a statement of any conditions governing their ownership and use.
  - (4) Location, layout, dimensions and areas of all existing and proposed lots within the development.
  - (5) The minimum building setback lines for each lot within the development. This shall include the front, side, rear and reverse setbacks, as determined acceptable by the Zoning Officer.
  - (6) A statement of the intended use of all lots and parcels within the development.
  - (7) Lot numbers and a statement of the total number of lots and parcels being developed. The residue parcel shall be included as a separate lot, not intended for development.
  - (8) The location of all existing and proposed street monuments.
  - (9) The location of all existing and proposed property markers.
  - (10) The location of proposed sanitary sewage disposal facilities, with a statement of any conditions governing the ownership, operation and maintenance of the proposed sanitary sewage disposal facilities and their relationship to existing sanitary sewage disposal facilities.
  - (11) Location of proposed water supply facilities, with a statement of any conditions governing the ownership, operation and maintenance of the proposed water supply facilities and their relationship to existing water supply facilities.
  - (12) Location and arrangement of proposed stormwater management facilities, with a statement of any conditions governing the ownership, operation and maintenance of the proposed stormwater management facilities and their relationship to existing stormwater management facilities.
  - (13) Parks, playgrounds and other areas dedicated or reserved for public use, with a statement of any conditions governing their ownership, operation, maintenance and use.
  - (14) Where on-lot sewage disposal is proposed, the location of the probe and percolations test sites shall be shown on the preliminary plan. The results of such tests shall be submitted to Lower Alsace Township for review and consideration.
  - (15) Other design elements relating to zoning, land use, community facilities, emergency management, utilities, stormwater management and transportation, as determined by Lower Alsace Township.

- (G) The preliminary plan application shall be accompanied with the following supplemental or supporting information:
- (1) Typical street cross-section drawing(s) for all proposed streets.
  - (2) Profiles along the centerline of each proposed street shown on the Preliminary Plan. Such profiles shall show at least the following information, properly labeled:
    - (a) Existing (natural) and proposed finished grades along the centerline and at the right-of-way line for both sides of each proposed street.
    - (b) The elevation, grades and length of all vertical curves.
    - (c) Existing and proposed storm sewer mains, manholes, inlets and culverts.
    - (d) Existing and proposed sanitary sewer main and manholes.
    - (e) Existing and proposed water distribution system and all appurtenances.
    - (f) All profiles shall show pipe crossings, storm sewers, sanitary sewers, water mains, and any other underground utility crossings.
    - (g) Profiles shall extend to points of connection with existing lines.
  - (3) Upon consulting with Lower Alsace Township Engineer and Planning Consultant, the profile sheets shall be drawn at one of the following sets of scales:
    - (a) One (1) inch equals ten (10) feet horizontal, and one (1) inch equals one (1) foot vertical;
    - (b) One (1) inch equals twenty (20) feet horizontal, and one (1) inch equals two (2) feet vertical;
    - (c) One (1) inch equals forty (40) feet horizontal, and one (1) inch equals four (4) feet vertical; or
    - (d) One (1) inch equals fifty (50) feet horizontal, and one (1) inch equals five (5) feet vertical.
  - (4) A stormwater management plan shall be prepared in accordance with Section 512 of this Subdivision and Land Development Ordinance.
  - (5) A riparian buffer plan shall be prepared in accordance with Section 513 of this Subdivision and Land Development Ordinance.
  - (6) A sediment and erosion control plan shall be prepared in accordance with Section 514 of this Subdivision and Land Development Ordinance.
  - (7) Preliminary designs of any bridges or culverts, which may be required. Such designs shall meet all applicable requirements of Lower Alsace Township, as well as all other local, county, state or federal laws and/or permitting procedures.
  - (8) The Pennsylvania Department of Transportation shall review all Plans when access is proposed onto a state road or when encroachment is proposed within a state right-of-way. All applicable permits shall be approved by the Pennsylvania Department of Transportation prior to municipal approval. The Highway Occupancy Permit Number shall be noted on the plan.
  - (9) Where considered appropriate by Lower Alsace Township, the preliminary plan application shall be accompanied with the following supplemental reports:
    - (a) An environmental impact assessment to comply with the provisions of Section 405 of this Subdivision and Land Development Ordinance.
    - (b) A community facilities impact to comply with the provisions of Section 406 of this Subdivision and Land Development Ordinance.

- (c) A traffic impact assessment to comply with the provisions of Section 407 of this Subdivision and Land Development Ordinance.
  - (d) A utility impact assessment to comply with the provisions of Section 408 of this Subdivision and Land Development Ordinance.
  - (e) A landscaping plan and lighting plan to comply with the provisions established by Lower Alsace Township.
- (10) Where considered necessary to meet the community development objectives specified by this Subdivision and Land Development Ordinance, additional studies to address concerns relative to zoning, land use, environmental features, natural habitats, community facilities, emergency management, utilities, flooding, stormwater management and transportation.

**Section 404: Final Plan Requirements**

- (A) A final plan shall be considered as an official submission to Lower Alsace Township for the purposes of formal review and discussion between the applicant and Lower Alsace Township.
- (B) Unless otherwise exempted from the standard application procedures of this Subdivision and Land Development Ordinance, all final subdivision plans or final land development plans shall contain the plan requirements specified under this section. Any modifications to these plan requirements shall be subject to the provisions of Section 309 of this Subdivision and Land Development Ordinance.
- (C) The final plan application shall be subject to the following drafting or general layout standards:
  - (1) The final plan shall be clearly and legibly drawn to a scale of one (1) inch equals fifty (50) feet, except under the following conditions:
    - (a) The plan may be drawn at a scale of one (1) inch equaling one hundred (100) feet if the average size of the proposed lots within the subdivision is five (5) acres or larger;
    - (b) The plan may be drawn at a scale of one (1) inch equaling twenty (20) feet if the average frontage or lot width is less than fifty (50) feet; or
    - (c) The plan shall be prepared at a scale ranging between one (1) inch equaling twenty (20) feet and one (1) inch equaling fifty (50) feet if the applicant can sufficiently demonstrate that the scale is necessary to depict the amount of detail required by this Subdivision and Land Development Ordinance while conforming with the provisions for permitted sheet sizes.
  - (2) The plan and all submitted prints thereof, shall be made on sheets no smaller than twenty-four (24) inches by thirty-six (36) inches and no greater than thirty (30) inches by forty-two (42) inches.
  - (3) If the final plan requires more than one sheet, a key diagram showing relative location of the several sections shall be drawn on each sheet.
  - (4) Where the final plan shows the proposed subdivision or land development of only a part of the applicants total property, a sketch shall be required, showing the prospective street system and tentative lot layout of the remainder of the property, so that the total site improvements may be considered in relation to existing conditions. To prevent undue hardship in the case of extremely large properties, the Planning Commission may, based upon existing natural or man-made features, limit the area for which the prospective street system and tentative lot layout shall be sketched.
  - (5) All final plans shall be prepared by the applicant and submitted to Lower Alsace Township with the anticipation that such plan may be approved by Lower Alsace Township and released for recording with the Berks County Recorder of Deeds.

- (D) The final plan application shall include the following general information:
- (1) Name or identifying title of the proposed subdivision or land development.
  - (2) North point, graphic scale, written scale, and date, including the month, day and year that the original drawing was completed, and the month, day and year that the original drawing was revised, for each plan revision.
  - (3) A key map, for the purpose of locating the property being subdivided, drawn at a scale of one (1) inch equals eight hundred (800) feet and showing the relation of the property, differentiated by tone or pattern, to adjoining property and to all streets, roads, municipal boundaries, and recorded subdivision plans existing within one thousand (1000) feet of any part of the property. In addition, the name and approximate distance to the closest recognized city, town or village, or the approximate distance to the nearest existing street, shall be shown and a title, scale and north point shall be indicated.
  - (4) Name and address of the record owner, equitable owner and applicant or developer. Where requested by Lower Alsace Township, the relationship between all parties seeking subdivision or land development plan approval shall be confidentially disclosed to Lower Alsace Township.
  - (5) A complete source of title, including all relevant information of the landowner (grantor and grantee), deed references and transfer dates.
  - (6) Name and address of the registered engineer, surveyor, architect or planner responsible for the plan.
  - (7) Names of all adjoining record owners, with reference to their respective tax parcel identification numbers and their deed reference, as recorded with the Berks County Recorder of Deeds.
  - (8) Names of all adjoining subdivision or land development plans, if any, with the appropriate plan book reference, as recorded with the Berks County Recorder of Deeds.
  - (9) Total tract boundaries of the property being subdivided or developed with accurate distances to hundredths of a foot and bearings to one-quarter (1/4) of a minute. These boundaries shall be determined by accurate field survey, which shall be balanced and close with an error of closure not to exceed one (1) foot in ten thousand (10,000) feet; provided, however, that the boundary adjoining additional unplatted land of the applicant (for example, between separately submitted final plan sections) is not required to be based upon field survey, and may be calculated. The location and elevation of all boundary line (perimeter) monuments shall be indicated, along with a statement of the total area of the property being subdivided. In addition, the engineer or surveyor shall certify to the accuracy of the survey, the drawn plan, and the placement of the monuments.
  - (10) A statement of total acreage of the property and the total area being subdivided or developed.
  - (11) A statement of the existing use and proposed use of the property being subdivided and/or developed.
  - (12) Zoning data including all of the following which are applicable:
    - (a) Existing zoning district designations, requirements, use and bulk regulations;
    - (b) Any zoning district boundary lines traversing the land area proposed for the subdivision or land development;
    - (c) Any changes in the existing zoning including any variances, conditional uses, or special exceptions that have been granted; and/or
    - (d) Any changes in the existing zoning proposed to be requested by the applicant or developer.
  - (13) A note relative to the "Certification of Ownership, Acknowledgement of Plan and Offer of Dedication" shall be provided on the final plan and shall be duly acknowledged and signed by the owner or owners of the

property before an officer authorized to take acknowledgement of deeds. A sample certification note has been included within Appendix B of this Subdivision and Land Development Ordinance.

- (14) A note relative to the "Certification of Accuracy" shall be provided on the final plan and shall be duly acknowledged, signed and sealed by the professional engineer, surveyor, architect, landscape architect, or land planner, responsible for preparing the final plan. A sample certification note has been included within Appendix B of this Subdivision and Land Development Ordinance.
  - (15) A note relative to the certification of any supplemental studies, plans, reports and/or assessments conducted to support the final plan shall be duly acknowledged, signed and sealed by the professional responsible for preparing the supplemental studies, plans, reports and/or assessments. All such certification notes shall be subject to the approval of Lower Alsace Township.
  - (16) Certificates for municipal endorsement of the final plan by Lower Alsace Township. Sample endorsement or certification notes have been included within Appendix B of this Subdivision and Land Development Ordinance.
  - (17) A blank space measuring three and one-half (3.5) inches by six (6) inches shall be provided on the final plan, preferably adjacent to the certificates of municipal endorsement, by which the endorsement stamp of the Berks County Planning Commission may be applied.
  - (18) A blank space measuring three (3) inches square shall be left along the lower edge of the final plan, preferably adjacent to the certificates of municipal endorsement, by which the Berks County Recorder of Deeds may acknowledge receipt and recording of the final plan when it is presented.
  - (19) Other general information that may be considered essential for the subdivision or land development, as determined by Lower Alsace Township.
- (E) The final plan application shall include the following existing and natural features:
- (1) Contour lines determined by acceptable surveying practices at vertical intervals of at least two (2) feet for land with average natural slope of twenty (20) percent or less, and at intervals of at least five (5) feet for land with average natural slope exceeding twenty (20) percent.
  - (2) Location and elevation of the datum to which contour elevations refer. Where reasonably practicable, datum used shall be a known, established benchmark.
  - (3) All existing streets, including streets of record (recorded but not constructed), on or abutting the tract, including names, right-of-way widths, cartway (pavement) widths, and centerline road grades.
  - (4) All existing buildings or other structures located within the proposed development.
  - (5) All existing man-made features within the proposed development and within fifty (50) feet of the proposed development. This may include, but not limited to, sanitary sewer facilities, on-lot sewage facilities, water supply facilities, wells, fire hydrants, utility transmission lines, stormwater management facilities, culverts, bridges and railroad lines. Where applicable, the size, type, material and invert elevations shall also be identified on the final plan.
  - (6) All existing natural features within the proposed development and within fifty (50) feet of the proposed development. This may include, but not limited to, water courses, floodplain areas, natural drainage patterns, soil types with descriptions, delineated wetlands, hydric soils, high water table soils, tree masses, steep slopes, sinkholes and rock out-crops.
  - (7) The location, size and ownership of all utilities and utility rights-of-way within the proposed development. A statement of any conditions governing their ownership and use shall be included on the final plan.
  - (8) The location, dimensions and ownership of all rights-of-way or easements within the proposed development. A statement of any conditions governing their ownership and use shall be included on the final plan.



- (9) Other existing or natural features that may be considered essential for the subdivision or land development, as determined by Lower Alsace Township Planning Commission, Engineer, Planning Consultant or Zoning Officer.
- (F) The final plan application shall be accurately designed considering the following requirements:
- (1) Location, dimensions and functional classification of all proposed streets and rights-of-way, with a statement of any conditions governing their ownership, maintenance and use.
  - (2) The names of all existing and proposed streets, as approved by Lower Alsace Township, Berks County Emergency Management Agency (Berks County 911) and the Post Office having jurisdiction.
  - (3) The precise location and dimensions of all proposed easements and rights-of-way, with a statement of any conditions governing their ownership and use.
  - (4) The precise location, layout, dimensions and areas of all existing and proposed lots within the development. All such dimensions, arc lengths and curve radii shall be shown and defined to the nearest one-hundredth (0.01) foot. Bearings or deflection angles at changes in direction of line as well as central angles of all curves shall be shown to the nearest fifteen (15) seconds
  - (5) The minimum building setback lines for each lot within the development. This shall include the front, side, rear and reverse setbacks, as determined acceptable by the Zoning Officer.
  - (6) A statement of the intended use of all lots and parcels within the development.
  - (7) Lot numbers and a statement of the total number of lots and parcels being developed. The residue parcel shall be included as a separate lot, not intended for development.
  - (8) The location and elevation of all existing street monuments and/or the proposed street monuments to be set as a condition of municipal approval.
  - (9) The location and type of all existing property markers and/or the proposed property markers to be set as a condition of municipal approval.
  - (10) The location of proposed sanitary sewage disposal facilities, with a statement of any conditions governing the ownership, operation and maintenance of the proposed sanitary sewage disposal facilities and their relationship to existing sanitary sewage disposal facilities.
  - (11) Location of proposed water supply facilities, with a statement of any conditions governing the ownership, operation and maintenance of the proposed water supply facilities and their relationship to existing water supply facilities.
  - (12) Location and arrangement of proposed stormwater management facilities, with a statement of any conditions governing the ownership, operation and maintenance of the proposed stormwater management facilities and their relationship to existing stormwater management facilities.
  - (13) Parks, playgrounds and other areas dedicated or reserved for public use, with a statement of any conditions governing their ownership, operation, maintenance and use.
  - (14) Where on-lot sewage disposal is proposed, the location of the probe and percolations test sites shall be shown on the final plan. The results of such tests shall be submitted to Lower Alsace Township for review and consideration.
  - (15) Other design elements relating to zoning, land use, community facilities, emergency management, utilities, stormwater management and transportation, as determined by Lower Alsace Township.

- (G) The final plan application shall be accompanied with the following supplemental or supporting information:
- (1) Typical street cross-section drawing(s) for all proposed streets.
  - (2) Profiles along the centerline of each proposed street shown on the Final Plan. Such profiles shall show at least the following information, properly labeled:
    - (a) Existing (natural) and proposed finished grades along the centerline and at the right-of-way line for both sides of each proposed street.
    - (b) The elevations, grades and length of all vertical curves.
    - (c) Existing and proposed storm sewer mains, manholes, inlets and culverts.
    - (d) Existing and proposed sanitary sewer main and manholes.
    - (e) All profiles shall show pipe crossings, storm sewers, sanitary sewers, water mains, and any other underground utility crossings.
    - (f) Profiles shall extend to points of connection with existing lines.
    - (g) Proposed water distribution system and all appurtenances (if applicable).
  - (3) Upon consulting with Lower Alsace Township Engineer and Planning Consultant, the profile sheets shall be drawn at one of the following sets of scales:
    - (a) One (1) inch equals ten (10) feet horizontal, and one (1) inch equals one (1) foot vertical;
    - (b) One (1) inch equals twenty (20) feet horizontal, and one (1) inch equals two (2) feet vertical;
    - (c) One (1) inch equals forty (40) feet horizontal, and one (1) inch equals four (4) feet vertical; or
    - (d) One (1) inch equals fifty (50) feet horizontal, and one (1) inch equals five (5) feet vertical.
  - (4) A stormwater management plan shall be prepared in accordance with Section 512 of this Subdivision and Land Development Ordinance.
  - (5) A riparian buffer plan shall be prepared in accordance with Section 513 of this Subdivision and Land Development Ordinance.
  - (6) A sediment and erosion control plan shall be prepared in accordance with Section 514 of this Subdivision and Land Development Ordinance.
  - (7) Final designs of any bridges or culverts, which may be required. Such designs shall meet all applicable requirements of Lower Alsace Township, as well as all other local, county, state or federal laws and/or permitting procedures.
  - (8) The Pennsylvania Department of Transportation shall review all Plans when access is proposed onto a state road or when encroachment is proposed within a state right-of-way. All applicable permits shall be approved by the Pennsylvania Department of Transportation prior to municipal approval. The Highway Occupancy Permit Number shall be noted on the plan.
  - (9) Where considered appropriate by Lower Alsace Township, the final plan application shall be accompanied with the following supplemental reports:
    - (a) An environmental impact assessment to comply with the provisions of Section 405 of this Subdivision and Land Development Ordinance.

- (b) A community facilities impact assessment to comply with the provisions of Section 406 of this Subdivision and Land Development Ordinance.
  - (c) A traffic impact assessment to comply with the provisions of Section 407 of this Subdivision and Land Development Ordinance.
  - (d) A utility impact assessment to comply with the provisions of Section 408 of this Subdivision and Land Development Ordinance.
  - (e) A landscaping and lighting plan to comply with the applicable provisions of the Joint Zoning Ordinance and this Subdivision and Land Development Ordinance.
  - (f) The appropriate planning modules for the planned sewage disposal facilities for the subdivision or land development plan, as may be required by Lower Alsace Township and the Pennsylvania Department of Environmental Protection.
- (10) Where considered necessary to meet the community development objectives specified by this Subdivision and Land Development Ordinance, Lower Alsace Township may require additional studies to address concerns relative to zoning, land use, environmental features, natural habitats, community facilities, emergency management, utilities, flooding, stormwater management and transportation.
  - (11) Where required by Lower Alsace Township, the supplemental or supporting information submitted with the final plan shall be recorded as part of the approved final plan.
  - (12) All conditions, standards and provisions pertaining to the guarantee and/or the installation of all required improvements have been included within this Subdivision and Land Development Ordinance. Where required by Lower Alsace Township, a municipal improvements agreement shall be properly executed between Lower Alsace Township and the developer prior to municipal approval.
  - (13) All conditions and provisions pertaining to contributions and fees have been included within this Subdivision and Land Development Ordinance. All pertinent agreements shall be properly executed between Lower Alsace Township and the applicant prior to municipal approval.

**Section 405: Environmental Impact Assessment**

- (A) If required by the Joint Zoning Ordinance or this Subdivision and Land Development Ordinance, a Phase I Environmental Impact Assessment (EIA) Report shall be completed by the applicant and submitted to Lower Alsace Township for review and consideration.
- (B) The Phase I EIA Report shall consider potential impacts relating to environmental, ecological and other natural features. Specific attention shall be provided to floodplains, wetlands, hydric soils, high water table soils, steep slopes, woodlands, carbonate geological formations, endangered habitats, biodiversity corridors and other natural features identified by Lower Alsace Township.
- (C) The Phase I EIA Report shall be prepared in accordance with the American Standards Testing Manual (ASTM), Standard Practice for Environmental for Phase I Environmental Site Assessments (E-1527-050).
- (D) All maps that are utilized as part of an EIA or are contained within the EIA Report shall be prepared at an appreciable scale utilizing information obtained from reliable sources. All such maps should accurately depict the location of the property and all proposed site improvements for the subdivision or land development plan.
- (E) The documentation presented as part of an EIA or included within an EIA Report shall be subject to the review and consideration by Lower Alsace Township as part of the proposed subdivision plan, land development plan, zoning variance application, special exception application, conditional use application and/or rezoning application.
- (F) Based upon the results of the Phase I EIA Report, a Phase II EIA Report may be required by Lower Alsace Township. The Phase II EIA Report shall be prepared in accordance with the American Standards Testing Manual (ASTM).

#### **Section 406: Community Facilities Impact Assessment**

- (A) A Community Facilities Impact Assessment (CFIA) shall be completed for all subdivision and land development applications. Where required by Lower Alsace Township, a formal report shall be submitted with the subdivision or land development application.
- (B) The CFIA shall consider potential impacts relating to community facilities and municipal services. Specific attention shall be provided to parks, recreation, open space, emergency management services, historical and cultural resources, educational facilities, and municipal services.
- (C) When a formal CFIA Report is not required by Lower Alsace Township, all such potential impacts, mitigation measures or other issues relating to the CFIA shall be adequately addressed with the appropriate agency, board, organization or authority.
- (D) When a formal CFIA Report is required by Lower Alsace Township, the format and contents of the CFIA should contain a detailed description of the proposed uses and activities, the potential impacts, and the recommended mitigation measures to be considered. The CFIA Report shall be submitted to the appropriate agency, board, organization or authority for review and consideration.
- (E) The documentation presented as part of a CFIA or included within a CFIA Report shall be subject to the review and consideration of Lower Alsace Township as part of the proposed subdivision plan, land development plan, zoning variance application, special exception application, conditional use application and/or rezoning application.

#### **Section 407: Traffic Impact Assessment**

- (A) A Traffic Impact Study (TIS) shall be submitted to Lower Alsace Township in the following conditions:
  - (1) A residential subdivision or land development which has or will have twenty-five (25) or more lots and/or dwelling units.
  - (2) A non-residential subdivision of five (5) or more lots.
  - (3) A non-residential land development containing 20,000 square feet or more of gross floor area.
  - (4) Any non-residential land development within one quarter (1/4) mile of an intersection involving an arterial road or two collector roads.
  - (5) Lower Alsace Township reserves the right to require a traffic study for any subdivision or land development other than a minor residential subdivision, lot annexation, and plan for revision to lot lines when Lower Alsace Township deems such a study necessary to adequately review the impact of the subdivision or land development on existing and proposed roads
  - (6) Lower Alsace Township may require that a TIS be completed as part of an initial application or as part of a supplemental application considering the cumulative impact of the development over time.
- (B) The TIS shall be prepared by a qualified professional traffic engineer with verified experience in preparing such transportation plans and studies.
- (C) The area for the TIS shall be based upon sound engineering judgment and an understanding of existing traffic conditions at the site as well as the area that is likely to be affected by the development. Prior to the commencement of work on the TIS, the applicant shall consult with Lower Alsace Township Engineer and Planning Consultant regarding the overall content of the TIS as well as the area to be studied as part of the TIS.
- (D) Unless otherwise directed by Lower Alsace Township, the TIS shall contain the following:
  - (1) The study area boundary and identification of the roadways included within the study area.
  - (2) A general description, including:

- (a) The size and location of existing and the proposed land use activity and dwelling types.
  - (b) Construction staging and the completion dates of the proposed development.
  - (c) Existing land uses, including any approved or proposed subdivision or land development activity that may have an impact.
  - (d) A description of the existing roadways and intersections (geometries and traffic signal control) as well as improvements contemplated by landowners, developers or governmental agencies.
  - (e) The TIS shall include documentation of the existing and proposed transit service within 1,000 feet of the site of the development.
- (3) Analysis of existing conditions, including:
- (a) Daily and Peak Hour(s) of Traffic Volumes. Schematic diagrams depicting daily and peak hour(s) traffic volumes within the study area. Turning movement and mainline volumes shall be presented for the three (3) peak hour conditions (AM, PM and site generated) while only mainline volumes are required to reflect daily traffic volumes. The source and/or method of computation for all traffic volumes shall be included.
  - (b) Volume/Capacity Analysis at Critical Points utilizing techniques described in derivative Highway Capacity Manual, latest edition or derivative nomographs, an assessment of the relative balance between roadway volumes and capacity shall be described. The analysis shall be performed for existing conditions (roadway geometry and traffic signal control) for the appropriate peak hours.
  - (c) Level of Service at Critical Points. Based upon the results obtained in the previous section, levels of service (A through F) shall be computed and presented for all movements. Included in this section shall also be a description of typical operating conditions at each level of service.
  - (d) A tabulation of accident locations during the most recent three-year period shall be provided.
- (4) Analysis of future conditions without the proposed development. The future year(s) for which projections are to be made shall be specified by Lower Alsace Township and will be dependent on the timing or phasing of the proposed development. The following information shall be included:
- (a) Daily and Peak Hour(s) Traffic Volumes. This section shall clearly indicate the method and assumptions used to forecast future traffic volumes. The schematic diagrams depicting future traffic volumes shall be similar to those specified by Lower Alsace Township in terms of location and times (daily and peak hours).
  - (b) Volume/Capacity Analysis at Critical Locations. The ability of the existing roadway system to accommodate future traffic (without site development) shall be described in this section. If roadway improvements or modifications are committed for implementation, the volume/capacity analysis shall be presented for these conditions. In case of existing signalized intersections, traffic signal timing shall be optimized to determine the best possible levels of service that can be obtained utilizing existing roadway geometry and traffic signal equipment.
  - (c) Levels of Service at Critical Points. Based upon the results obtained in the previous section, levels of service (A through F) shall be determined.
- (5) Trip Generation. The amount of traffic generated by the development shall be presented in this section for daily and three peak hour conditions. The trip generation rates used in this phase of the analysis shall be justified and documented to the satisfaction of Lower Alsace Township. Trip Generation (latest edition) published by the Institute of Transportation Engineers (ITE) shall be utilized.

- (6) Trip Distribution. The direction of approach for site generated traffic shall be presented in this section for the appropriate time periods. As with all technical analysis steps, the basic method and assumptions used in this work shall be clearly stated so that Lower Alsace Township can replicate these results.
- (7) Traffic Assignment. This section shall describe the utilization of study area roadways by site generated traffic. The proposed traffic volumes shall be combined with the anticipated traffic volumes specified by the TIS in order to describe mainline and turning movement volumes for future conditions with the site developed in accordance with the implementation schedule for the proposed site improvements.
- (8) Analysis of Future Conditions with Development. This section shall describe the adequacy of the roadway system to accommodate future traffic with development of the site. Any unique characteristics of the site or within the study area affecting traffic shall be considered. If staging of the proposed development is anticipated, analysis for each stage of completion shall be considered. The following information shall be included:
  - (a) Daily and Peak Hour(s) Traffic Volumes, Mainline and turning movement volumes shall be presented for the highway network in the study area as well as driveways and internal circulation roadways for the appropriate time periods.
  - (b) Volume/Capacity Analysis at Critical Points. A volume/capacity analysis shall be performed for the appropriate peak hours for future conditions with the site developed as proposed.
  - (c) Levels of Service at Critical Points. As a result of the volume/capacity analysis, the level of service on the study area roadway system shall be computed and described for all movements.
- (9) Recommended Improvements. In the event that the analysis indicated a decrease in the level of service for any movements will occur on study area roadways, a description of the proposed improvements to remedy the deficiencies shall be provided. These proposals should not include committed projects by Lower Alsace Township or the Commonwealth of Pennsylvania. The following information shall be included:
  - (a) Proposed Recommended Improvements. This section shall include the location, nature and extent of proposed improvements to assure sufficient roadway capacity. Cost estimates shall be included for the recommended improvements.
  - (b) Volume/Capacity Analysis at Critical Points: An iteration of the volume/capacity analysis shall be described, which demonstrates the anticipated results of making these recommendations.
  - (c) Levels of Service at Critical Points. As a result of the revised volume/capacity analysis presented within the TIS, levels of service for the roadway system shall be presented.
- (10) Conclusion. The last section of the TIS shall include a clear and concise description of the conclusions.
- (E) The applicant shall provide advanced notification to Lower Alsace Township Engineer and Planning Consultant regarding any meetings that may be scheduled with the Pennsylvania Department of Transportation.
- (F) On-site traffic improvements may be required by Lower Alsace Township in order to control traffic patterns, to lessen traffic congestion, to facilitate the adequate provision for future community or transportation improvements, and/or when clearly in the interest of the public health, safety, or general welfare. On-site traffic improvements may include, but are not limited to, cartway widening, right-of-way dedication, shoulder stabilization, vertical or horizontal curve realignment, grading and/or traffic control devices. The TIS shall include a list of recommendations for on-site traffic improvements and shall assure safe interior circulation patterns by separating vehicular and pedestrian traffic within the site whenever possible.
- (G) On-site pedestrian improvements may be required by Lower Alsace Township in to order to improve non-motorized modes of transportation, and/or when clearly in the interest of the public health, safety, or general welfare. On-site traffic improvements may include, but are not limited to, sidewalks, crosswalks, bicycle lanes, walking trails and handicapped ramps. The TIS shall include a list of recommendations for pedestrian improvements.

- (H) The applicant shall incur the cost of all required TIS as well as all on-site traffic and pedestrian improvements that may be required by Lower Alsace Township and/or the Pennsylvania Department of Transportation.
- (I) The documentation, analysis and recommendations presented within the TIS shall be subject to the review and consideration of Lower Alsace Township, as part of the proposed subdivision plan, land development plan, zoning variance application, special exception application, conditional use application and/or rezoning application

**Section 408: Utility Impact Assessment**

- (A) A Utility Impact Assessment (UIA) shall be completed for all subdivision and land development applications. Where required by Lower Alsace Township, a formal report shall be submitted with the subdivision or land development application.
- (B) The UIA shall consider potential impacts relating to sewage disposal, water supply and other utility services. Specific attention shall be provided to the capacities and condition of the existing utility infrastructure as well as the ability to accommodate the additional utility demands of the subdivision or land development.
- (C) When a formal UIA Report is not required by Lower Alsace Township, all such potential impacts, mitigation measures or other issues relating to the UIA shall be adequately addressed with the appropriate agency, board, organization or authority.
- (D) When a formal UIA Report is required by Lower Alsace Township, the format and contents of the UIA should contain a detailed description of the proposed uses and activities, the potential impacts and the recommended mitigation measures to be considered.
- (E) The documentation presented as part of a UIA or included within a UIA Report shall be subject to the review and consideration of Lower Alsace Township as part of the proposed subdivision plan, land development plan, zoning variance application, special exception application, conditional use application and/or rezoning application.
- (F) Where considered appropriate by Lower Alsace Township, the UIA Report shall be submitted to the appropriate agency, board, organization or authority for review and consideration

**Section 409: As-Built Plans or Improvement Plans**

- (A) Upon the completion of all site improvements required by the approved final plan and subsequent improvements agreement, the applicant or any successor of interest to the applicant, shall supply Lower Alsace Township with a complete set of as-built plans or improvement plans for the entire tract showing all lot lines as deeded and all surface and subsurface improvements as actually constructed.
- (B) The as-built plans or improvement plans shall be prepared at the same scale as the approved final plan.
- (C) The as-built plans shall be made on sheets no smaller than twenty-four (24) inches by thirty-six (36) inches and no greater than thirty (30) inches by forty-two (42) inches.
- (D) The applicant or any successor of interest to the applicant shall submit the as-built plans or improvement plans to Lower Alsace Township for review and consideration prior to the acceptance of any municipal improvements within the development. The as-built plans or improvement plan shall contain the following information:
  - (1) Street cartway and right-of-way, including the width, horizontal curves, vertical curves, curb radius, transitions for the cartway and curb, and center line road grades;
  - (2) Sidewalks, crosswalks and handicapped ramps, including the location, width and alignment;
  - (3) Driveways and curb cuts, including the locations and widths;
  - (4) Curbs, including elevations along all transitions involving horizontal curves and intersections;

- (5) Street monuments with elevations;
  - (6) Public utilities, including gas, electric, cable and telephone;
  - (7) Stormwater management facilities, including all detention basins, retention basins, infiltration trenches, pipes, catch basins, manholes, outlet structures, emergency spillways, berms and all other structures, with locations, elevations, dimensions, widths, lengths, slopes, inverts, volume and material;
  - (8) Erosion and sedimentation control facilities, including location, type and specifications for permanent facilities;
  - (9) Sanitary sewer facilities, including treatment facilities, pump stations, collection and conveyance facilities, manholes, clean-outs and laterals, with locations, dimensions, widths, lengths, slopes, inverts and material;
  - (10) Water supply facilities, including treatment facilities, booster pump stations, mains, valves, fire hydrants, service lines, and connections, with locations, dimensions, widths, lengths, slopes, inverts and material;
  - (11) Streetlights, including location, type, size and intensity;
  - (12) Street and traffic control signs, including location, type and size;
  - (13) Street addresses for each lot or building;
  - (14) Landscaping and planting materials, including location, diameter and size;
  - (15) Easements and rights-of-way, including location, width, description and purpose;
  - (16) Tract boundaries and lot lines, including locations and descriptions;
  - (17) Any additional information required by Lower Alsace Township Engineer and Planning Consultant.
- (E) The following wording shall be required to be placed on the as-built plans or improvement plans:
- (1) Well and sewage disposal systems shall be constructed in accordance with standards of the Pennsylvania Department of Environmental Protection.
  - (2) Individual owners of lots must receive approval from Lower Alsace Township for a sewage permit prior to undertaking the construction of an on-lot sewage disposal system or building that will need to be served by such a system.
  - (3) Lower Alsace Township has not passed upon the feasibility of any individual lot or location within a lot being able to sustain any type of well or sewage system.
  - (4) All on-site sewage disposal easements shall remain free and clear of all encroachments including, but not limited to, sheds, buildings or other structures. No grading without the prior written permission of Lower Alsace Township.
  - (5) Lower Alsace Township shall have the right, but not the duty, to replace or maintain any drainage facilities shown within the easement(s) provided on the lot(s) at the lot owner's expense.
  - (6) All drainage easements shall remain free and clear of all impediments including, but not limited to, sheds, fences, trees, shrubs, or other plantings or structures. No grading without the prior written permission of Lower Alsace Township shall be permitted.
  - (7) Lower Alsace Township shall have the right to inspect the drainage facilities located on the lot(s) from time to time as deemed necessary.



- (F) Lower Alsace Township shall review the as-built plans to determine if they are complete and acceptable. Upon determining if the as-built plans are acceptable, the applicant or developer shall provide Lower Alsace Township with the following:
- (1) One (1) complete mylar set of as-built plans or improvement plans;
  - (2) Three (3) complete paper copies of the as-built plans or improvement plans, of which one (1) complete set shall be recorded with the Berks County Recorder of Deeds;
  - (3) One (1) complete copy of the as-built plans or improvement plans in an electronic format acceptable to Lower Alsace Township; and
  - (4) An aerial photograph of the project site extending five hundred (500) feet beyond the tract boundaries shall be provided at a scale of 1"=200' or larger.