

2025 LOWHILL TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE

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2025 Lowhill Township Subdivision and Land Development Ordinance

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INTRODUCTION

The 2025 Lowhill Township Subdivision and Land Development Ordinance is a legal document which places restrictions on the development of land in the Township for the purpose of achieving an orderly land use pattern in an exurban rural community and for the protection of the public health, safety, and general welfare in Lowhill Township. This ordinance provides different regulations relating to the approval of subdivision and land development plans, their individual processes for township approval, sketch, preliminary and final plan requirements, overall plan design standards, regulations for all stormwater control systems, road and street engineering design, subdivision lot designs, proposed private and or public sewage and water systems, environmental protection and geological design standards and regulations, landscaping and street tree design standards, commercial building design standards lighting standards, sustainable energy requirements for both structure and environment designs wherever possible, manufactured and tiny homes standards, developers plan review escrows and improvement escrows with financial security for all new land developments, and basic administration and enforcement regulations for this 2025 Lowhill Township Subdivision and Land Development Ordinance.

The 2025 Lowhill Township Subdivision and Land Development Ordinance (SALDO) is specifically designed for new subdivision and land development that is based upon a set of facts, goals and objectives, policies, exemplified sustainable land use and rural building design characteristics as depicted and specifically utilized in a rural exurban environment as further described in policies of the 2022 Northern Lehigh Multi-Municipal Comprehensive Plan.

This SALDO was originally adopted by the Board of Supervisors in June 1971. Further amendments were adopted on July 5, 1978, April 4, 1979, January 9, 1980, September 7, 1988, October 5, 1988, November 7, 1990, August 7, 1991, October 7, 1998

The Township Planning Commission is the official body designated to monitor proposed municipal land development changes with future applications of subdivisions and land development with specific planning recommendations that are then forwarded to the Lowhill Township Board of Supervisors with the overall legal intent to preserve the scenic and existing exurban and rural character of Lowhill Township. It is the function of the Lowhill Township Planning Commission and the Township staff to confer, advise, and cooperate with the applicant, but not to do the work of preparing the applicant's plans. The best subdivision and land development plans will be achieved when the applicant retains qualified engineering and consultants to prepare the proposed subdivision or land development plan according to the Township SALDO and other Township ordinances.

Thus be it ordained by the Board of Supervisors, Lowhill Township, Lehigh County, Pennsylvania, pursuant to the authority conferred by the Pennsylvania Municipal Planning Code, Act 247 of January, 1969, Articles VI, IX, that the existing 1998 Lowhill Township SALDO is to be replaced in its entirety with the following contents including specific ordinance language and supplements thereto, are depicted and provided as follows:

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General Provisions

Section 101 Short Title

This Ordinance shall be known, and may be cited as, the "Lowhill Township Subdivision and Land Development Ordinance of 2025."

Section 102 Purpose and Intent

The Purpose and Intent of this 2025 Subdivision and Land Development Ordinance is to regulate and control the subdivision and development of land within Lowhill Township, so as to provide sites suitable for residential, commercial, institutional and other uses for which land may be developed, thereby creating conditions favorable to the health, safety and welfare of the community and consistent with the goals and policies of the 2022 Northern Lehigh Multi-Municipal Comprehensive Plan and its intergovernmental agreements, the Lowhill Township 2024 Zoning Ordinance as amended and the 2024 Lowhill Township Official map as amended. This ordinance shall include engineering and technical standards, including appropriate financial guarantees, governing the manner by which various improvements including streets, bridges, common facilities, water supply and sewage facilities infrastructure, stormwater management facilities and drainage plans, walkways, lighting, landscaping design standards, noise, natural and scenic byways, architectural design standards for non-residential development and various other improvements to assure these subdivision and land developments are properly constructed. The intent of this SALDO Ordinance is:

1. To promote sustainable, efficient, and integrated development harmonious with the existing buildings and natural environment in order to preserve the exurban rural character of Lowhill Township.
2. To require sites suitable for building purposes and human habitation in keeping with the standards of the existing quality of life in the Township and to alleviate peril from natural disasters or other menace.
3. To ensure that streets and sidewalks throughout and bordering a subdivision or land development shall be coordinated with existing streets, sidewalks, parks, and other public amenities of the Township; and shall be of such widths and grades, and in such locations as deemed necessary to efficiently accommodate pedestrian accessibility, safety, prospective vehicular and bicycle traffic and parking; and emergency apparatus.
4. To provide for adequate/proper plans for stormwater drainage, water supply, sewage disposal systems and for other appropriate utility services and connections.
5. To encourage creation and preservation of existing open spaces for agricultural activities, recreation activities, scenic byways, dark sky light conditions, clean air and the continuing maintenance of all current wonderful natural environmental amenities characteristic of the Township and its public recreation areas.
6. To ensure equitable treatment of all subdivision and land development proposals by providing uniform procedures and standards with an an open and transparent review process with opportunities for public input.
7. To ensure that developments are environmentally sound by requiring preservation of the natural features of the areas to be developed to the greatest extent practicable, to maintain the economic well-being of the Township and to prevent unnecessary or undesirable blight, runoff and pollution.
8. To protect sensitive and important natural features (e.g. floodplains, wetlands, prime farmlands, unique geologic and hydrogeological features, steep slopes, woodlands, game lands, wildlife habitats, etc.) from indiscriminate development.

9. To promote subdivision and land development practices that conserve energy, both during and after construction, and promote the use of carbon-free energy sources by, among other things, the layout of the lots and the siting of buildings while promoting development that reduces greenhouse gas emissions and optimizes the use of natural and man made resources.

10. To promote the efficient and safe movement of traffic through proper traffic studies and design standards.

11. To maintain the economic well being of the Township operations and to prevent unnecessary long term maintenance issues with new development upon existing Township infrastructure by promoting proper fiscal analysis studies for all major subdivisions and new land developments.

12. To protect the people's rights to clean air, pure water, and the preservation of the natural scenic, historic and aesthetic values of the environment pursuant to Article 1, Section 27 of the Pennsylvania Constitution.

Section 103 Adoption

The Board of Supervisors of Lowhill Township, Lehigh County, Pennsylvania, pursuant to the Pennsylvania Municipalities Planning Code, Act 247 of 1968, as reenacted and amended (MPC), hereby enacts and ordains the following Ordinance governing subdivisions and land developments within the limits of Lowhill Township.

Section 104 Scope

- 104.A.** This Ordinance shall apply to all subdivision and land development plans for tracts of land located, in whole or in part, in Lowhill Township regardless of whether development actually occurs within the Township.
- 104.B.** Where a developer and any subsequent landowner have substantially completed the required improvements in accordance with the approved application but have failed to complete any aspects of the approved development in accordance with the terms of such approval within five (5) years of such approval or any extension of time as many be granted by the Board of Supervisors. The developer and any subsequent landowner shall be subject to all changes in governing ordinances enacted subsequent to the date of filing the preliminary plan application provided that such governing ordinances do not preclude the developer from building in strict accordance with the approved application.
- 104.C.** This Ordinance shall not affect any suit or prosecution pending or to be instituted, to enforce any vision of a previous subdivision and land development ordinances. With respect to an act done, contract executed, or liability incurred prior to the effective date of this Ordinance no provision of this Ordinance shall be construed to waive the obligations imposed upon an applicant to complete a previously approved preliminary or final plan application, including the installation of all required improvements, in strict compliance with the requirements of the effective Subdivision and Land Development Ordinance Section 104.
- 104.D.** Subdivision and Land Development. No subdivision or land development of any lot, tract, or parcel of land as defined in Article Two, shall be made, and no street, alley, sanitary sewer, storm drain, water main, gas, oil or electric line, or other improvements in connection therewith, shall be laid out, constructed, or dedicated for public use, or travel, or for the common use of occupants of a building abutting thereon, except in strict accordance with this Ordinance.
- 104.E.** Sale of Lots or Erection of Buildings. No lot in a subdivision or land development may be transferred and no building in a land development may be erected, altered, or repaired, a subdivision and/or land development has been approved and where required, recorded, and until the required improvements in connection therewith have either been constructed or guaranteed for construction in the form of a bond, escrow, or other means approved by Lowhill Township under the advice of Lowhill Township Engineer and Solicitor, in accordance with the laws of the Commonwealth of Pennsylvania.

- 104.F.** Condominiums. No provision of this Ordinance shall be construed to prohibit condominium ownership as permitted by the applicable enabling legislation of the Commonwealth of Pennsylvania.
- 104.G.** Only one preliminary or final plan concerning one tract of land or portion thereof shall be before Lowhill Township Planning Commission or Board of Supervisors for plan review at any time. The plan review time will be terminated once the plan is either final recorded with Lehigh County, denied by the Board of Supervisors or withdrawn by the applicant.
- 104.H.** A conditional use submission shall not be considered officially accepted for Planning Commission review until any needed zoning variance(s) or special exception approval that is directly relevant to the site layout and nature of the use is granted. Furthermore, any zoning variance or interpretation, special exception or conditional use approval shall be required prior to an Applicant submitting any preliminary and/or final plan application proposed for Township review.
- 104.I.** Until a preliminary or final plan submission is approved or rejected by the Board of Supervisors, the applicant or land developer may withdraw the plan and resubmit a revised plan with all of the necessary plans and new submittal fees. A preliminary or final plan submittal following the withdrawal of a preliminary or final plan for the same property shall be considered a new land development or subdivision and shall be regulated by all adopted current Lowhill Township ordinances at the time of this new submission.
- 104.J.** Any revisions to an approved Final Plan or a recorded Final Plan shall be considered a new land development or subdivision and shall be regulated by all current ordinances at the time of this revision.
- 104.K.** No street, sanitary sewer, storm sewer, water main, or other facilities in connection therewith, shall be laid out, constructed, opened, or dedicated for public use or travel, or for the common use of occupants of buildings thereon, unless and until authorized by this Ordinance.
- 104.L.** This Ordinance does not impose any requirements upon subdivision or land development plans for which the Township is the applicant.

Section 105 Other Township Ordinances, Regulations and Requirements

All subdivision and land development plan applications are subject to review and compliance with the prevailing Lowhill Township Zoning Ordinance as amended and all other applicable ordinances, regulations and requirements of the Township.

Section 106 Conflicts

Whenever there exists a conflict between a requirement of this Ordinance and other applicable Lowhill Township Zoning, Stormwater and any other Township ordinances, the more stringent requirement shall apply. This conflict Section includes any and all definitions, additional zoning and plan design standards requirements and stormwater, environmental regulations of all other Township Ordinances.

Section 107 Administration and Enforcement

The Board of Supervisors shall be responsible for the administration of this Ordinance. Unless otherwise provided herein, the Board of Supervisors hereby designates the Planning Commission as the body to provide reviews and make recommendations concerning all subdivision and land development applications filed under this Ordinance. Primary administration and enforcement responsibility under this Ordinance shall be with an authorized Township official.

Section 108 Definitions

108.A. Word Usage - Words and phrases shall be presumed to be used in their ordinary context, unless otherwise defined herein or interpreted in accordance with Section 108.B. Defined terms shall be interpreted in accordance with their definitions. Unless expressly stated otherwise, any pertinent word or term not a part of this specific terms listing in Section 108.C., contained within the Lowhill Township Zoning Ordinance as amended and or any other Township Ordinance but vital to the interpretation of this Ordinance, shall be construed to have its legal definition, or in absence of a legal definition, its meaning as commonly accepted by practitioners including civil engineers, surveyors, architects, landscape architects, and planners, including Blacks Law Dictionary and or the current Webster's New Collegiate Dictionary.

108.B. Language Interpretation - In this Ordinance:

1. Words in the present tense imply also the future tense;
2. The singular includes the plural;
3. The male gender includes the female gender;
4. The terms "shall", "must", or "will" are always mandatory;
5. The phrase "used for" includes "arranged for," "designed for," "intended for," "maintained for," and "occupied for."
6. The word "person" includes an individual, corporation, partnership, incorporated association, and/or any other similar entity, including their successors.
7. The words "include" or "including" shall not limit the term to the specified examples, but are intended to extend the meaning to all other instances of like kind and character.
8. The word "building" shall always be construed as if followed by the words "or part thereof."
9. The word "may" is permissive only;
10. The words: "he" or "she" or "they" are to be used interchangeably with the word person.
11. The word "street" includes road, highway, avenue, boulevard, or expressway.
12. The word "stream" includes watercourse, creek or river, and, where referenced, a seasonal or intermittent stream.

108.C. Specific Terms - The following words and phrases shall be defined as follows:

ACT 247 - The Municipalities Planning Code of July 31, 1968, 53 P.S. S10101, et seq., as amended from time to time.

ACCESS DRIVE - An improved cartway designed and constructed to provide for vehicular movement between a public or private street and the off-street parking and/or loading area for any use other than one single-family dwelling unit or farm.

ABUT - To touch or join at the edge or border; to border on; or to end at.

AGENT - Any person other than the applicant or developer, who acting for the applicant or developer submits subdivision and/or land development plans to the Township or participates in their review for the purpose of obtaining approval thereof and is authorized to bind the applicant or developer.

ALLEY - A minor right-of-way, privately or publicly owned, primarily for service access to the rear or sides of properties.

APPLICANT – A person having interest in land or standing to submit an application for development pursuant to this Ordinance.

APPLICATION - Every submission required to be filed and approved prior to the start of construction of a subdivision or land development. The term application shall be all encompassing and include the plans and all supporting reports and studies required by this Ordinance. The following are the types of applications authorized by this Ordinance:

1. **ECHO Housing Application**: An application specifically for a limited type of housing as defined and regulated in the Zoning Ordinance;
2. **Final Plan Application**: An application prepared for official recording as required by statute to define property rights and depict required improvements and conditions as set forth by the Township Board of Supervisors;
3. **Lot Line Adjustment Plan Application**: An application having as its sole purpose the addition of a parcel of land to an abutting lot with no additional lot being created;
4. **Preliminary/Final Plan Application**: An application representing the combined submission of a preliminary plan and final plan;
5. **Preliminary Plan Application**: An application which authorizes the construction of required Township improvements as set forth in this Ordinance and sets the parameters of a final plan approval with or without Township assigned conditions including zoning variances, special exception and conditional use conditions as set forth by the Township Board of Supervisors;
6. **Revised Final Plan Application**: An application for the correction of an obvious error or a minor alteration in a previously-approved application; and
7. **Sketch Plan Application**: An application submitted for informal review and comment by the Township to which no rights attach.

BEST MANAGEMENT PRACTICE (BMP) - Activities, facilities, designs, measures or procedures used to manage stormwater impacts from regulated activities; to meet Pennsylvania water quality requirements, to promote groundwater recharge; and to otherwise meet the purposes of this Ordinance. Stormwater BMP's are commonly grouped into one of two broad categories or measures: "structural" or "non-structural." In this ordinance, non-structural BMP's or measures refer to operational and/or behavior-related practices that attempt to minimize the contact of pollutants with stormwater runoff, whereas structural BMP's or measures are those that consist of a physical device or practice that is installed to capture and treat stormwater runoff. Structural BMP's include, but are not limited to, a wide variety of practices and devices, from large-scale retention ponds and constructed wetlands, to small-scale underground treatment systems, infiltration facilities, filter strips, low impact design, bio-retention, constructed wet ponds, permeable paving, grassed swales, riparian or forested buffers, sand filters, detention basins, and manufactured devices. Structural stormwater BMP's are permanent appurtenances.

BOARD OF SUPERVISORS - The governing body of Lowhill Township, Lehigh County, Pennsylvania.

BUFFER - An area designed and functioning to separate the elements and uses of land which abut it and to ease the transition between them. Unless otherwise specified, "buffer" may be included as part of the required setbacks and yard areas.

BUILDING - Any structure having a roof supported by columns or walls and intended for the shelter, housing or enclosure of any individual, animal, equipment, goods or materials of any kind or nature.

CALIPER - Tree trunk diameter measured in inches at six (6") inches above ground level for trees four (4") inches or less in diameter or twelve (12") inches above ground level for larger trees.

CARTWAY - The paved surface of a street or access drive that is available for use by vehicular traffic.

CLEAR SIGHT TRIANGLE - An area of unobstructed vision at a street intersection defined by a line of sight between points at center lines.

COMMON AMENITIES - Certain additions, alterations or modifications constructed or made to, upon or in connection with realty as required by an approved subdivision plan or approved land development plan and which are not intended to be offered for dedication to the Township or its Authorities. See definitions for improvements and required improvements.

COMMON OPEN SPACE - Any area of land or water, or a combination of land and water, within a development site designed and intended for use by all residents of the development or the general public. Common open spaces shall not include areas devoted to driveways, access drives, parking lots, street rights-of-way, required setbacks and/or private yards contained on an individual lot of a principal residence. Typically storm water management facilities shall not be counted as common open spaces unless, with Township approval, such facilities are designed and constructed as wet ponds or shallow basins that incorporate natural features, landscaping, recreational uses or other, similar qualities. With Township approval, common open space can include golf courses and parklands subject to the requirements of Sections 427.E. or 214.I. of the Zoning Ordinance.

COMMUNITY SEWAGE DISPOSAL SYSTEM - A system of conveyance, treatment and discharge that provides for the safe and healthful disposal of sewage generated by multiple principal uses that is not proposed to be owned and/ or operated by Lowhill Township and/or the Lehigh County Authority. All community sewage disposal systems shall be approved and permitted by the Pennsylvania Department of Environmental Protection and be in accordance with the Township Act 537 Plan (Official Sewage Plan).

CONCURRENCY - The requirement that development applications demonstrate that adequate public services be available at prescribed levels of service concurrent with the impact or occupancy of the developed property.

CONDOMINIUM - Real estate, portions of which in accordance with the provisions of the Pennsylvania Uniform Condominium Act of 1980 as amended, are designated for separate ownership and the remainder of which is designed for common ownership solely by the owners of those portions. Real estate is not a condominium unless the undivided interests in the common elements are vested in the unit owners.

CONSULTANT - All professional consultants, other experts, attorneys and independent contractors retained by the Township to provide professional or expert advice or services to the Township in connection with the review and comment on the developer's application or the construction, observation, inspection, review and/or approval of the required improvements contemplated by the developer's plan.

CONTIGUOUS - Properties sharing a common boundary. Properties on opposite sides of a public right-of-way shall not be considered contiguous.

CONSTRUCTION - The construction, reconstruction, renovation, repair, extension, expansion, alteration, or relocation of a building or structure, including the placement of mobile homes.

COUNTY - The County of Lehigh, Pennsylvania.

COUNTY PLANNING COMMISSION - The Lehigh Valley Planning Commission.

CURB - The raised edge of a pavement to confine surface water to the pavement and to protect the abutting land from vehicular traffic.

CURB LINE - The outside edge of the cartway.

DEDICATION - The deliberate transfer of land or interest in land by its owner to another party.

DEED - A written instrument whereby an estate in real property is conveyed.

DEVELOPER – An applicant or any person who acquires the rights and obligations of the applicant.

DRIVEWAY - An improved cartway designed and constructed to accommodate vehicular movement between a public road and a tract of land serving one single-family dwelling unit or a farm.

DWELLING - Any building or portion thereof designed and used exclusively for residential occupancy but not including hospitals, nursing homes, hotels, boarding, rooming and lodging houses, institutional houses, tourists courts, and the like, all offering overnight accommodations for guests or patients.

DWELLING UNIT - A single unit providing complete, independent living facilities for one or more persons, including permanent provisions for living, sleeping, cooking, and bathroom facilities.

EASEMENT - A property right granted for the limited use of private land for a public, quasi-public or private purpose, and within which the owner of the property shall not have the right to make use of the land in a manner that violates the right of the grantee.

ECHO HOUSING – (Elder Care Housing Opportunity) A temporary dwelling unit placed on a property with another single family detached dwelling for occupancy by either an elderly, handicapped, or disabled person(s) related by blood, marriage, or adoption, to the occupants of the principal dwelling, or their care giving family members.

ENGINEER - A professional engineer registered as such in the Commonwealth of Pennsylvania.

EROSION - The process by which soil particles are detached and transported by action of natural forces.

EXCAVATION - Any activity by which earth, sand, gravel, rock, or any other similar material is dug into, cut, quarried, uncovered, removed, displaced, relocated, or bulldozed and the resulting conditions.

EXURBAN - A largely low density residential community located outside of a major city and is suburban periphery with a significant and historical agricultural heritage, natural scenic open space viewsheds and that maintains a connection to adjoining suburban municipalities by offering localized personal jobs and services to the entire community.

FARM - A parcel of land that is used for one (1) or more agricultural operations, including but not necessarily limited to the raising of agricultural products, livestock, poultry, or the production of dairy products. A "farm" shall be understood to include a dwelling unit as well as all structures necessary for the housing of animals, storage of feed and equipment, and other operations customarily incidental to farm use.

FLOODPLAIN - An area of land adjacent to the channel of a watercourse which has been or is likely to be flooded, or any area subject to the unusual and rapid accumulation or runoff of surface waters from any source.

FOOT CANDLE - Unit of light intensity stated in lumens per square foot and measurable with a luminance meter.

FRONTAGE - The line of a lot coincident with an abutting right-of-way line of a street that can be used for vehicular access to the site.

GRADE - A measurement of slope expressed in terms of percentage of vertical distance versus horizontal distance.

IMPROVEMENTS - All additions, alterations or modifications constructed or made to, upon or in connection with realty as required by an approved land development application which are intended to be offered for dedication to the Township or its Authorities. See definitions for common amenities and required improvements.

LAND DEVELOPMENT - Any of the following activities:

1. The improvement of one (1) lot or two (2) or more contiguous lots, tracts, or parcels of land for any purpose involving:
 - a. A group of two (2) or more residential or nonresidential buildings, whether proposed initially or cumulatively, or a single nonresidential building on a lot or lots regardless of the number of occupants or tenure; or
 - b. The division or allocation of land or space, whether initially or cumulatively, between or among two (2) or more existing or prospective occupants by means of, or for the purpose of streets, common areas, leaseholds, condominiums, building groups, or other features.
2. A subdivision of land.
3. The following activities are excluded from this term:
 - a. The addition of an accessory building or use, including farm buildings, on a lot or lots subordinate to an existing principal residence or farm;
 - b. The addition or conversion of buildings or rides within the confines of an amusement park. This exclusion shall not apply to newly proposed or newly acquired areas of an existing amusement park until the initial land development plans for such parks or areas have been approved pursuant to the terms of the Subdivision and Land Development Ordinance; and
 - c. Construction of non-residential additions or non-residential accessory buildings provided the construction does not result in the following:
 - i. Building addition or accessory structure in excess of one thousand (1,000) square feet of the existing building's square footage and only as a De Minimus plan. Once the one thousand (1,000) square feet or ten percent (10%) addition has been reached, any further expansions will require land development approval;
 - ii. Increase in employees greater than five percent (5%) of the existing staff, except all principal businesses are entitled to add a minimum of two (2) employees if allowed by the Zoning Ordinance;
 - iii. Increased storm water impacts requiring an expansion of existing storm water facilities or additional storm water impact upon neighboring properties;
 - iv. Installation of additional access drives providing vehicular access to or from a public-right-of-way;
 - v. The need for PA DEP Sewer Planning Module or exemption;
 - vi. Impacts on floodplains and/or wetlands; or
 - vii. More than three (3) additional parking spaces.

LAND SURVEYOR - A land surveyor registered in the Commonwealth of Pennsylvania.

LANDOWNER - The legal or beneficial owner or owners of land, including the holder of an option or contract to purchase (whether or not such option or contract is subject to any condition), a lessee if he is authorized under the lease to exercise the rights of the landowner, or other person having a proprietary interest in land, including, but not limited to, easements.

LCA – Lehigh County Authority

LCCD - Lehigh County Conservation District

LOT - A designated parcel, tract or area of land established by a plat or otherwise as permitted

by law and to be used, developed, or built upon as a unit and that is not divided by a street.

LOT LINE - A recorded boundary line of a lot; however, any line that denotes an adjoining public or private street or railroad right-of-way shall be interpreted as the lot line for the purposes of determining the location of the setbacks required by the Zoning Ordinance.

LVPC – Lehigh Valley Planning Commission

MANUFACTURED HOME - Any structure intended for or capable of permanent human habitation, with or without wheels, and capable of being transported or towed from one place to the next, in one or more pieces, by whatsoever name or title it is colloquially or commercially known, but excluding transport trucks or vans equipped with sleeping space for a driver or drivers, and travel trailers. Manufactured homes placed in parks shall meet the Zoning Ordinance requirements for manufactured home parks. Manufactured homes placed on individual lots shall be considered “dwellings,” and be bound by the requirements there-imposed.

MANUFACTURED HOME PARK AND TINY HOME PARK - A parcel of land under single ownership, which has been planned and improved for the placement of two or more manufactured homes for non-transient use. The building and or installation of two or more “Tiny Homes” shall be considered a type of Manufactured Home Park.

MINIMUM LOT AREA - The least amount of land area required to be to be associated with a principal use as specified within the Zoning Ordinance.

MPC - Pennsylvania Municipalities Planning Code, Act 247 of 1968, as reenacted and amended.

OFFICIAL MAP - The Official Map of Lowhill Township, as may be amended from time to time, adopted pursuant to Ordinance 140 in accordance with Article IV of the MPC.

ON-LOT SEWAGE DISPOSAL SYSTEMS - A system of conveyance, treatment, and discharge that provides for the safe and healthful disposal of sewage generated by one principal use within the confines of the lot on which the use is located, as approved by the PA DEP.

ON-LOT WATER SERVICE - The provision of water to a single user from a private source located on the user's lot.

OPEN SPACE - any parcel or area of land or water unimproved and set aside, dedicated, or reserved for resource protection, public enjoyment, or for the use and enjoyment of owners and occupants of land adjoining or neighboring such open space. Open space shall not include land occupied by non-recreational structures, roads, street right-of-way, rights-of-way for above-ground electric transmission facilities, parking lots, land reserved for future parking, any area which is required by this Ordinance for minimum lot areas, minimum yards, minimum setbacks, building separations, or any stormwater facilities and BMP's, or any other land precluded from being counted as open space in accordance with the terms of this Ordinance and the Lowhill Township Zoning Ordinance. For the purpose of this Ordinance, permanently preserved land is not open space.

ORDINANCE - Lowhill Township Subdivision and Land Development Ordinance as amended

PA – The Commonwealth of Pennsylvania.

PA DEP – The Pennsylvania Department of Environmental Protection.

PAVED - A condition of surface in which man-made materials are applied resulting in a durable, smooth, stable and dust free surface over which vehicles and pedestrians may pass. This definition shall expressly include asphalt, bituminous, concrete, masonry, permeable, geo-grids and other similar materials provided they are applied with sufficient depth and base to achieve the required durable, smooth, stable and dust free surface.

PENNDOT – The Pennsylvania Department of Transportation.

PERSON - An individual, partnership, corporation, limited liability company, limited liability partnership, firm, company, association, governmental entity other than the Township, trustee, receiver, assignee, or similar representative.

PLAN - The representation of a tract of land on a drawing including all supplementary data required to be noted thereon by this Ordinance.

PLANNING COMMISSION – The Planning Commission of Lowhill Township.

PUBLIC SEWER - A system of conveyance, treatment and discharge that provides for the safe and healthful disposal of sewage generated by multiple principal uses that is owned, leased and/or operated by Lowhill Township and/or the Lehigh County Authority, including their successors.

PUBLIC UTILITIES - Facilities, including extension thereof, which are operated, owned or maintained by a municipality or municipal authority or which are privately owned and require a "Certificate of Public Convenience" approved by the Pennsylvania Public Utility Commission for the purpose of providing public sewage disposal and/or treatment; public water supply, storage and/or treatment; or the transmission of energy or telephone service.

PUBLIC WATER - A system of source, treatment, storage and/or distribution of domestic water supply to multiple principal uses that is owned and/or operated by Lowhill Township or Lehigh County Authority and, within specific areas approved by the Township Act 537 Municipal Sewage Plan as amended.

REVIEW FEES - All professional consultant or expert fees paid or incurred by the Township in the course of application review and comment (including all review and comment leading to final plan recording) or paid or incurred by the Township and arising out of or relating to the construction, observation, inspection, review, and/or approval of the required improvements contemplated by the application.

REQUIRED IMPROVEMENTS - All additions, alterations or modifications constructed, or made to, upon or in connection with, realty as required by an approved land development plan or approved subdivision plan and which are the subject of financial security. Required improvements may include improvements and common amenities as those terms are defined herein. The scope of required improvements shall be based upon the approved land development or subdivision plan and may relate to or include, but shall not be limited to, traffic controls, streets, storm water management facilities, sanitary sewage facilities, water distribution facilities, recreational facilities, street trees, parking lots, access roads, buffer plantings, screening, lighting, soil/erosion/ sedimentation controls, and with respect to all of the foregoing, all appurtenances related thereto. See definitions of improvements and common amenities.

RIGHT-OF-WAY - An area secured for public use and which may, but need not, be improved with streets, utilities, storm water management facilities, traffic control facilities, curbs, sidewalks, bicycle lanes or paths, streetlights, and similar improvements for public benefit or enjoyment.

RIPARIAN FORESTED BUFFER - An area of trees and other vegetation adjacent to a watercourse that forms a transition area between the aquatic and terrestrial environment. The riparian buffer is designed to separate more intensive human land uses from sensitive water resources and especially to intercept runoff from upland sources for the purpose of mitigating the effects of nutrients, sediment, organic matter, pesticides or other pollutants prior to entry into surface waters. Where the riparian buffer is not primarily forested, it shall be maintained as a filter strip of dense grass and forbs no less than one (1) foot high or other features to provide sediment filtering, nutrient uptake and convert concentrated flow to uniform, shallow sheet flow.

SALDO - Lowhill Township Subdivision and Land Development Ordinance as amended.

SETBACK - The required horizontal distance between a setback line and a property or street line.

SETBACK LINE - A line within a property and parallel to a property line or street line which

delineates the required minimum distance between some particular use of property and that property line or street line. No structure shall be allowed between the setback line and ultimate right of way line without an approved zoning variance

STANDARD CONSTRUCTION DOCUMENTS - A document or series of documents containing requirements, specifications and details regulating construction in the Township.

STORM WATER MANAGEMENT - A program of controls and Best Management Practice measures designed to regulate the quality, volume and rate of storm water runoff from a development, while promoting the protection and conservation of groundwater and groundwater recharge.

STORM WATER MANAGEMENT FACILITIES - Those controls and measures (e.g., storm sewers, berms, terraces, forested riparian buffers, bridges, dams, basins, infiltration systems, swales, watercourses, and floodplains) comprising a storm water management program. All stormwater management facilities are a type of man-made structure and shall meet all zoning and other Township ordinance setback requirements as a defined man-made structure.

STREET - A public or private right-of-way, excluding driveways and access drives, intended for use as a means of vehicular and pedestrian circulation that provides a means of access to abutting property. The word "street" includes "thoroughfare," "avenue," "boulevard," "court," "drive," "expressway," "highway," "lane," "road," and similar terms. This definition shall not include alleys as defined herein.

STREET CENTERLINE - A line laterally bisecting a street right-of-way into equal widths, where the street right-of-way cannot be determined, the cartway centerline shall be deemed the street centerline.

STREET LINE OR RIGHT-OF-WAY LINE - The line defining the limit of a street right-of-way and separating the street from abutting property or lots. The street line shall be the same as the legal right-of-way line currently in existence.

STREAM - Any natural or man-made channel of conveyance of surface water with an annual or intermittent flow within a defined bed and bank.

STRUCTURE - Any man-made object having an ascertainable stationary location on land or in water, whether affixed to the land as well as any manufactured or tiny home. All stormwater and sewer facilities, including basins and outfalls and parking lots are considered a man-made structure.

SUBDIVISION - The division or redivision of a lot, tract, or parcel of land by any means into two (2) or more lots, tracts, parcels, or other divisions of land, including changes in existing lot lines for the purpose, whether immediate or future, of lease, partition by the court for distribution to heirs or devisees, transfer of ownership, or building or lot development. The subdivision by lease of land for agricultural purposes into parcels of more than ten (10) acres, not involving any new street or easement of access or any residential dwelling, shall be exempted.

SUBDIVISION, MAJOR - Any division or development of a parcel of land consisting of four or more lots with new utilities, street or easement for access is to be required or for any smaller number of lots if new utilities, streets, or rights of way are currently planned or intended as a future use.

SUBDIVISION, MINOR - Any division or development of a parcel of land into not more than three lots each lot being at least one acre in area and provided that new utilities, street or easement for access are currently NOT planned or intended as a future use. The enumerating of lots shall include as a lot that portion of the original tract or parcel remaining after other lots have been subdivided therefrom and shall be assigned a lot number.

SWALE - A channel which gathers or carries surface water.

TINY HOME - A dwelling unit placed on a property for occupancy as either a principal use dwelling unit with a habitable floor area between 100 square feet and 500 square feet constructed with a foundation or on wheels. Tiny Homes are only permitted in a Manufactured Park.

TINY HOME PARK - A parcel of land under single ownership which has been planned to be subdivided and improved for the placement of two or more Tiny Homes for transient or permanent use.

TOWNSHIP - Lowhill Township.

TOWNSHIP ENGINEER - A professional engineer licensed as such in the Commonwealth of Pennsylvania, duly appointed as the engineer for Lowhill Township.

TOWNSHIP SOLICITOR - The attorney or firm appointed by the Board of Supervisors or duly authorized by the Board of Supervisors.

TRAFFIC CALMING DEVICES - All measures, systems and programs described in the Commonwealth of Pennsylvania Department of Transportation, Bureau of Highway Safety and Traffic Engineering, Publication 383, dated January 2001 and known as "Pennsylvania's Traffic Calming Handbook" and all revisions and updates thereto and any successor publications thereto.

VEHICULAR USE AREA: Any areas of a lot not located within any enclosed or partially enclosed structure which are used by or intended for motor vehicles, including but not limited to the following: accessory or non-accessory parking spaces for the storage of automobiles, trucks or other motor vehicles; parking drive aisles; loading zones and service areas; emergency or fire zones or lanes; access drives and driveways; and paved areas painted or striped in such a manner as to indicate that they are not intended for parking or standing but are otherwise at grade with other areas designed for or used by motor vehicles.

WAIVER - A change or modification to the literal terms of this Ordinance granted by the Board of Supervisors pursuant to the MPC.

WATERCOURSE - A permanent or intermittent stream, river, brook, run, creek, channel, swale, pond, lake or other body of surface water carrying or holding surface water, whether natural or artificial.

WATERSHED - All the land area from which water drains into a particular watercourse.

WETLANDS - Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs, and similar areas, and which shall be identified using that method of the following that delineates the greatest area of wetlands:

1. The United States Army Corps of Engineers Technical Report Y87-1, Corps of Engineers Wetlands Delineation Manual;

2. The United States Environmental Protection Agency Wetlands Identification Delineation Manual, Volume I, Rational, Wetland Parameters, and Overview of Jurisdictional Approach, Volume II, Field Methodology, as most recently updated or modified; or,

3. The Pennsylvania Department of Environmental Protection's Resources Wetlands Identification and Delineation, Chapter 105 Dam Safety and Waterways Management Rules and Regulations, as most recently updated or modified.

ZONING ORDINANCE - The Official Zoning Ordinance and Zoning Map of Lowhill Township as may be amended from time to time.

Procedures for: Processing Applications, Authorization for Start of Work, Construction Observation, and Dedication of Improvements

Section 201 General

201.A. General Description of Procedures - Each application for review of a major and or minor subdivision and/or any type of land development shall be made on a form prescribed by the Township. The procedures for consideration of a subdivision and/or land development include:

1. **Optional Procedures**

- a. Pre-application Review (Section 202.A.) - This procedure provides the applicant an opportunity to receive recommendations and guidance from the Township staff, while the project is at an early stage.
- b. Sketch Plan Review (Section 202.B.) - This procedure provides the applicant a formal review process to receive recommendations and guidance from the Township staff, consultants and Planning Commission.

2. **Mandatory Procedures**

- a. Preliminary/Final Plan Application (Section 203.B.) - This procedure is a combined submission of a Preliminary Plan and Final Plan application. This procedure is only available to the applicant through the granting of a waiver from this ordinance pursuant to Section 205. If the proposed subdivision application is classified as minor subdivision only, then the required preliminary plan approval may be omitted as determined by the Township at the time of application and the Minor Subdivision application may be then filed as a Final Plan application.
- b. Preliminary Plan Application Followed By Final Plan Application (Section 203.C.) - This procedure is for receiving a separate approval for a Preliminary Plan Application before submission of a Final Plan Application. This procedure accommodates phased development and other procedural benefits that are derived from a multi-level submission process. This is the standard procedure for plan reviews in Lowhill Township

3. **Special Procedures**

- a. ECHO Housing (Section 204.B.1.) - This type of housing is defined and regulated in the Zoning Ordinance and is not required to comply with the processing procedure specified in this Ordinance.
- b. Revised Final Plan Application (Section 204.B.2.) - This procedure is for correction of an obvious error or a minor alteration in a previously-approved application.
- c. Lot Line Adjustment Plan Application (Section 204.B.3.) - This procedure is for an addition of a parcel of land to an abutting lot with no additional lot being created.
- d. Discretionary Procedures - Procedures described in this Ordinance that are not mandated by the provisions of the MPC, are discretionary as to the Township's

obligation. Failure of the Township to abide by such procedures shall not invalidate any action taken herein. However, all procedures are mandatory as to the applicant, unless waived by the Board of Supervisors, pursuant to Section 205.

- 201.B. Township Staff and Consultant Review** - Each application shall be subject to Township staff and consultant review prior to recommendation by the Planning Commission and decision by the Board of Supervisors. The applicant is not entitled to participate in, or be present at, any Township staff or consultant review; however, where deemed appropriate, the applicant and/or agent may be invited to attend.
- 201.C. Decision By Board of Supervisors** - The official Township decision on any application filed under this Ordinance rests solely with the Board of Supervisors.
- 201.D. Special Exception or Conditional Use** - Whenever the Zoning Ordinance provides that the use proposed by the applicant shall constitute a use permitted by special exception or a conditional use, the applicant shall obtain such special exception approval from the Zoning Hearing Board or the Conditional Use approval from the Board of Supervisors, as applicable, prior to the submission of an application for Preliminary, Preliminary/Final Plan or Final Plan approval. The application shall conform to any conditions which have been imposed upon the granting of such special exception or conditional use by the Zoning Hearing Board or the Board of Supervisors. All assigned conditions with approval dates of all Special Exception or Conditional Use decisions must be prominently displayed on the record plan for the Preliminary and or Final Plan before the Planning Commission review and recommendation to the Township Board of Supervisors.
- 201.E. Variance/Zoning Interpretation** - Whenever the applicant proposes to develop a subdivision or land development in a manner that would require a variance/zoning interpretation from any requirements of the Zoning Ordinance, the applicant shall obtain such variance from the Zoning Hearing Board prior to the submission of an application for Preliminary/Final Plan or Final Plan approval. The application shall conform to any conditions which have been imposed upon the granting of such variance or variances by the Zoning Hearing Board. All granted variances must be prominently displayed on the Preliminary Plan or Final Plan at the time of application.
- 201.F. Application Revisions After Submission** - Revisions or additions to the application are not permitted after the Planning Commission makes its recommendation to the Board of Supervisors. Only the material acted upon by the Planning Commission shall be considered by the Board of Supervisors.
- 201.G. Schedule for Review and Action**
1. The time frame for review and action with respect to subdivision and/or land development plan applications shall be as set forth in the PA Municipalities Planning Code (MPC) as amended.
 2. At such time and under such circumstances as the Township staff and consultants shall determine that Planning Commission and/or Board of Supervisors review is appropriate, the application shall be placed on the next available Planning Commission or Board of Supervisors agenda and the applicant so notified. Attendance at the Planning Commission and Board of Supervisors meetings by the applicant or agent is required, otherwise the plan will be tabled or rejected.
- 201.H. Review Fees** - The Township shall establish by resolution certain plan review fees to be paid at the time of filing an application for plan review. Upon filing of an application, the Township shall establish an account in the name of the applicant (Please refer to Appendix 2 of the SALDO) and bill to the account those fees and expenses incurred in the course of review as permitted by law. Any failure by the applicant to pay such fees as required by this Ordinance shall constitute grounds for rejection of the application.
- 201.I. Effect of Plan Notes** - All notes on an approved plan shall be deemed mandatory and constitute requirements, obligations, covenants, or restrictions, all of which shall run with the land and bind the applicant and its agents, servants, employees, contractors, transferees, grantees, heirs, successors, and assigns. (Please refer to Appendix 4 of the SALDO)

201.J. Submission of Multiple Design Concepts Layouts for Preliminary Plans – The submission of more than one (1) design concept layout for a Preliminary Plan on the same tract of land shall be permitted as a sketch plan only and shall be determined to be an incomplete preliminary plan submission by the Township. The applicant must officially withdraw the existing preliminary land development plan and submit the multiple design concept plan as a sketch plan only.

201.K. Applicant's Duty of Good Faith

1. Upon the filing of an application for review under this Ordinance, the applicant shall exercise good faith and promptly address or otherwise respond substantively to the review comments and requirements of the Township and its staff and consultants.
2. It is the duty of the applicant to move the application to completion in a prompt, timely, and diligent manner so as to enable formal action by the Planning Commission or Board of Supervisors, as the case may be, and to comply with all conditions of approval imposed by the Board of Supervisors, and to record the plan.
3. The Township is not obligated to accept an applicant's offer of a time extension or grant a continuance of any hearing, meeting or review.

201.L. Unsworn Falsification to Authorities - All statements made, whether written or oral, to the Township in the course of the land development plan or subdivision plan procedures, shall be true and correct to the best of the knowledge, information and belief of the applicant or its agents and consultants, and with the understanding that any false statement is subject to the penalties of 18 Pa. C.S.A. Section 4904, relating to "Unsworn Falsification to Authorities."

201.M. Submission Constitutes Public Record (Waiver of Copyright)

1. By making a submission under this Ordinance, the applicant acknowledges and agrees that all documents and other information submitted to the Township or its consultants pursuant hereto constitute public records within the meaning of the Pennsylvania Right to Know Law, Act 3 of 2008, as amended, and are subject to review and reproduction upon request in accordance with that Law and applicable Township ordinances and resolutions.
2. To the extent that any documents or materials constitute public records but are subject to copyright protection pursuant to applicable law, the applicant and all of its agents, employees and consultants, by filing such documents with the Township pursuant to this Ordinance, shall be deemed to have waived all copyright protection and damages relating hereto. This waiver of copyright protection shall relate only to the reproduction and use of such documents in connection with the review, comment, and analysis of the application.
3. By making a submission under this Ordinance, the applicant hereby agrees to indemnify, defend and hold harmless the Township and all its agents, servants, employees, officials and consultants of and from any and all claims, damages, suits or causes of actions arising out of violations or allegations of violations of copyright law.

Section 202 Optional Review Procedures

202.A. Pre-application Procedure - The applicant may discuss plans under the Pre-application Procedure with Township staff prior to a formal submission under Sections 202.B, 203, 204, or 205. The purpose of the Pre-application Procedure is to afford the applicant an opportunity to receive input from the Township staff, while the project is at an early stage and before the formal filing of a plan. The Pre-application review shall not be considered submission of a plan for the purpose of determining approval, nor is this filing subject to Section 508 of the MPC. No legal rights attach to the Pre-application Procedure.

202.B. Sketch Plan and or Lowhill Planning Commission Advisory Report Application Procedure

1. Purpose - The applicant may submit an application to the Township using this procedure before submission under Sections 203, 204 or 205. The purpose of the Sketch Plan/Advisory

Report review is to afford the applicant an opportunity to receive recommendations and guidance from Township staff, consultants and the Planning Commission, while the project is at an early stage.

2. Submission Procedure - Applications may be submitted to the Township on any business day but must be received by the Township no later than thirty-five (35) calendar days prior to a Planning Commission meeting in order to be considered for placement on the agenda. The Township reserves the right to determine when an application will be placed on an agenda.
3. Application Requirement - All applications shall include an application form, application fee, thirteen (13) copies of the plans and supporting information as specified on the application form. The Township may require additional copies of the above-referenced material.
4. Review - The application is reviewed by Township staff, consultants, and the Planning Commission. Township staff shall determine when the application will be placed on the Planning Commission agenda and notify the applicant. Attendance at the Planning Commission meeting by the applicant or agent is necessary to discuss all aspects of the application. All major subdivision and land development sketch plans shall be submitted to the LVPC for their respective comments at the time of plan application.
5. Legal Rights - No legal rights attach to the Sketch Plan Application, and Section 508 of the MPC shall not apply.

Section 203 Mandatory Review Procedures

203.A. General - The filing of an application under this Section is mandatory for all subdivision and land development plans, except as provided in Section 204 Special Plan Procedures.

203.B. Preliminary/Final Plan Application Procedure

1. **Purpose** - The Preliminary/Final Plan Application provides a procedure for the combined submission of an application for Preliminary Plan Application and Final Plan Application if a Subdivision and Land Development waiver has been requested and granted by the Township Planning Commission and Lowhill Board of Supervisors. In the alternative, the applicant may sequentially submit a Preliminary Plan followed by Final Plan under Section 203.C. as this is the standard application procedure for Lowhill Township.
2. **Submission Procedure**
 - a. The application may be submitted to the Township on any business day but must be received by the Township no later than thirty-five (35) calendar days prior to a Planning Commission meeting in order to be considered for placement on the agenda. The Township reserves the right to determine when an application will be placed on an agenda.
 - b. All zoning variance relief, special exception approval, other zoning approval by the Lowhill Township Zoning Hearing Board and any conditional use approval by the Board of Supervisors that is required by the Lowhill Township Zoning Ordinance for the land development or subdivision application shall be obtained and secured prior to submission of an application for land development review by the Planning Commission. The submission of an application without these approvals shall be deemed an incomplete for filing purposes and the application shall be returned to the applicant.
3. **Submission to Other Outside Agencies**
 - a. The applicant shall submit a copy of the Preliminary/Final Plan to the Lehigh Valley Planning Commission, PA DEP, PENNDOT, LCCD, and any other applicable agency with environmental permitting and jurisdiction and provide the Township with evidence of the submission at the time of plan application .

- b. Where a subdivision or land development abuts another municipality or is considered a regional significance and impact by Lowhill Township, the applicant shall provide a courtesy copy of the Preliminary Plan to that abutting municipality and provide the Township with evidence of the submission. Lowhill Township shall be copied on all reviews and correspondences involving this application with neighboring municipalities until the final plan is recorded.
4. **Lehigh Valley Planning Commission Review(s)** - The Township will not schedule an application for action by the Board of Supervisors until the receipt of the Lehigh Valley Planning Commission Land use report, or the expiration of thirty (30) calendar days from the date the application was forwarded to the Lehigh Valley Planning Commission (LVPC). Additionally all land use reports by the LVPC must be reviewed by the Lowhill Township Planning Commission during the preliminary plan stage before the preliminary plan is recommended to the Board of Supervisors. Lastly, all Act 167 Stormwater Drainage Plans for the Jordan Creek and or Little Lehigh Creek submitted to the LVPC shall be determined to be consistent with the goals and requirements of the Jordan Creek and or Little Lehigh Creek watershed drainage plan involved with the application **before the preliminary plan is recommended for approval to the Board of Supervisors by the Lowhill Township Planning Commission.**
5. **Application Contents**
 - a. All applications shall include a completed application form, fee, escrow deposit, thirteen (13) copies of the plans, and all other documents as specified on the application form. Upon filing, the same shall constitute an "application for development" within the meaning of the MPC. Additionally, Proof of equitable ownership for the landowner must be accompanied by a signed sales agreement and is required for all preliminary and final plan submissions. This sales agreement information must match the owners certificate on the recorded final plan.
 - b. Failure to fully complete the application form, provide all of the aforementioned required information above with the required fees and follow all directives contained therein shall be grounds to reject the application as incomplete and therefore not filed within the meaning of Section 508 of the MPC. If an application is deemed incomplete, the time for review and action on the proposed subdivision and/or land development plan application shall not be deemed to have commenced.
6. **Review Requirements for Completeness of Filing for a Subdivision and or Land Development Application**
 - a. **Basis for Determination** - To be a complete submission, the submission shall contain:
 - i. Fully completed and executed application forms property deeds and sales agreements to properly establish equitable ownership of the property;
 - ii. Application fee(s) and escrow deposit;
 - iii. All documents specified in the application form; and
 - iv. Correct number of copies of all required documents and plans.
 - v. Compliance with Section 203.B.2(b) of the is ordinance has been achieved by the applicant providing associated documentation proving compliance.
 - vi. A copy of the original initial technical deficiency review letter from the LCCD or PA DEP involving the NPDES Stormwater permit for Construction Activities for all proposed earthmoving activities greater than (1) one acre. Please note that a copy of an incomplete submission letter from the LCCD or PA DEP shall not be considered as the initial technical deficiency letter and shall not constitute compliance with this requirement,
 - vii. PENNDOT's initial scoping review letter for the applicants PENNDOT Highway

Occupancy Permit. Additionally, drainage structures that are located on state highway rights-of-way shall be approved by the Pennsylvania Department of Transportation and a letter from that office indicating such approval shall be secured with the preliminary plan application

- b. Complete Application - If determined to be complete, the application shall be deemed accepted for filing as of the date of receipt. Acceptance for filing shall not constitute a waiver of any deficiencies or irregularities.
- c. Incomplete Application - If determined to be incomplete, the application may be rejected. If rejected, the Township shall notify the applicant of the rejection within ten (10) days of receipt of the application. The MPC 90 day review period as required by the PA MPC shall not begin until the the Application is fully accepted.
- d. Appeal of Rejection - The applicant may, within seven (7) days of receipt of the notice of rejection, file with the Township an appeal of the rejection. Such appeal shall state the grounds for the appeal. The Board of Supervisors will consider the appeal at a public meeting within forty-five (45) calendar days of receipt of the appeal. The time period for action on the application is not extended by appeal if the applicant prevails.
- e. No legal rights attach if the application is rejected, and Section 508 of the MPC shall not apply.

7. **Staff and Consultant Review**

- a. Review - Prior to review by the Planning Commission, the application may be reviewed by the Township staff and it's consultants. Where appropriate, the applicant may be invited to attend a review meeting with the Township staff and consultants.
- b. Review Letter - The Township staff and consultants may issue review letters. The review letters shall cite, where appropriate, the legal authority in support of the comments contained therein.

8. **Planning Commission Review**

- a. Schedule - At such time and under such circumstances as the Township staff and consultants shall determine that Planning Commission consideration is appropriate, the application shall be placed on the next available meeting agenda and the applicant so notified. The application must also be determined to be complete and must be filed at least 28 days prior to the next available Planning Commission before being heard and reviewed by the Planning Commission.
- b. Attendance at Public Meeting - Attendance at the Planning Commission public meeting by the applicant or agent is required. The applicant or agent must be prepared to discuss all aspects of the application. If the applicant fails to attend the meeting, the subdivision and or land development application may be denied.
- c. Deliberation and Recommendation - At the public meeting, the Planning Commission will consider the applicant's submission, Township staff and consultant reviews, other pertinent material, and public comment. The Planning Commission may:
 - i. Table action on the application; or
 - ii. Take action on the application which may include a recommendation of approval, approval with conditions or denial. Such action will form the basis for the resolution to be acted upon by the Board of Supervisors. Receipt of the Planning Commission recommendation is a prerequisite for review and action by the Board of Supervisors.
- d. Resubmission of Application - If the applicant revises the application before action by the Planning Commission, the revised application shall be submitted to the Township according to Section 203.B with a brief narrative identifying the alterations.

- e. Application Revisions After Submission - Revisions or additions to the application are not permitted after the Planning Commission makes its recommendation to the Board of Supervisors. Only the material acted upon by the Planning Commission shall be considered by the Board of Supervisors.
- f. Resolution to Board of Supervisors - Based upon the recommendation of the Planning Commission, the Township staff will prepare and submit a resolution for consideration by the Board of Supervisors. Where applicable, the resolution shall cite provisions of this Ordinance, as well as other pertinent ordinances, rules, regulations, specifications, and authority relied upon. The Board of Supervisors is not bound by the resolution and may modify the same.

9. **Board of Supervisors Decision**

- a. Schedule - Following a Planning Commission recommendation, the application shall be placed on the Board of Supervisors agenda and the applicant so notified.
- b. Attendance at Public Meeting - Attendance at the Board of Supervisors public meeting by the applicant or agent is required. The applicant or agent must be prepared to discuss all aspects of the application. Failure to attend this required meeting may result in a denial of the application.
- c. Decision - Before rendering a decision on the application, the Board of Supervisors shall, at the public meeting, consider the applicant's submission, other pertinent material, and public comment. The Board of Supervisors is not bound by the Planning Commission resolution and may modify the same. The Board of Supervisors shall announce its decision at this public meeting.
- d. Applicant Acceptance of Conditions - If the application is approved subject to modification or other additional conditions, the applicant or agent will be requested at the public meeting to verbally indicate acceptance or rejection of such modification or conditions. The decision of the Board of Supervisors shall also be in writing by resolution and shall be communicated to the applicant personally or mailed to the applicant's representative at the last known address not later than fifteen (15) days following the decision or not later than the last day of the aforesaid ninety-day period, whichever day shall first occur. One of the following procedures will be implemented, depending on the type of decision:

1. Denial. If the Board of Supervisors shall disapprove the preliminary or final plan, the reasons therefore will be set forth in a writing by a Board of Supervisors resolution. Where applicable, this resolution shall cite provisions of this Ordinance, as well as other pertinent Township ordinances, rules, regulations, specifications, engineering design standards, stormwater, environmental regulations and all authority relied upon. Upon denial by the Board of Supervisors, the applicant may submit a new plan application for approval, in which case they shall do so in accordance with the current township ordinances and requirements at the time of this submission for the new plan application, including additional fees, after modifying the new plan to conform to requirements of the disapproval Board of Supervisors resolution.

2. Approval. If there are no conditions of approval, the preliminary plan may be submitted for final plan approval.

3. Approval Subject to Conditions. If the Board of Supervisors approves the preliminary or final plan, conditioned upon the performance of any act including the Township Engineers review letter, the Planning Commission resolution, the zoning officer and or planning consultants review letters, the obtaining of any other outside agency permit or approval letter for consistency by the applicant, or any other conditions contained within the Board of Supervisors resolution, the applicant shall be given the opportunity to accept or reject all of these assigned conditions within ten (10) days of receipt of the Board of Supervisors formal approval resolution letter. The approval of the plan shall be rescinded automatically without action of the Board of Supervisors, at the end of the

ten (10) days from the date at which the conditional approval was received by the applicant, upon either the applicant's failure to execute the written acceptance or upon rejection of such conditions by the applicant, in either case the application shall be deemed to be denied. Written notice will be provided by the Township to the applicant in the following manner:

(a) Specifying the exact conditions of approval, and request the applicant's written agreement to these conditions.

(b) Stating that the preliminary and or final plan approval shall be rescinded automatically upon the applicant's failure to accept or reject the conditions within ten (10) days following the decision by the Board of Supervisors to grant conditional approval.

- e. Extension of Time - The applicant or agent may offer the Township an extension of time within which to act upon the application and/or render a written decision. The Township shall not be obligated to act on this applicant's proposal as presented.

10. **Compliance With Conditions of Approval**

- a. If the Board of Supervisors approves the application subject to conditions, documents evidencing compliance with such conditions (including but not limited to required financial security and improvement agreements as specified in Article 4) shall be submitted to the Township. The applicant shall include a brief narrative concerning the submitted data.
- b. Where financial security and an improvements agreement are required as a condition of approval, the plan shall not be recorded until such time as the same are provided to the satisfaction of the Township.
- c. The Township staff will advise the applicant when all conditions of approval have been satisfied.
- d. After all conditions of approval are satisfied, the applicant shall present to the Township:
- i. One (1) paper copy of the full plan set and supporting material for the Township files; and
 - ii. One (1) electronic file of the full plan set and supporting material formatted to the current Township specifications;

11. **Plan Certification and Recording**

- a. Plan Standards for Certification and Recording - All plan copies shall be in black ink and bear original signatures on each certificate and seal of each professional responsible for preparation of the plan.
- b. Number of Plans for Recording - For plan certification and recording, the applicant shall present to the Township for execution:
- i. One (1) paper copy of the plans sheets that are intended for recording, to be returned to the Township after recording;
 - ii. One (1) paper copy of the plan sheets that are intended for recording, to be returned to the Lehigh Valley Planning Commission;
 - iii. One (1) Mylar copy of plan sheets that are intended for recording, to be filed with the Lehigh County Recorder of Deeds; and
 - iv. The number of plan sheet copies, with original signatures, that are desired to be retained by the applicant.

- c. Payment of Fees - No plan shall be released for recording until all consultant review fees and any other sums due and owing which relate to the subject property are paid in full in accordance with this Ordinance and applicable Township agreements and resolutions.
- d. Recording of Plans
 - i. Upon execution by the Township, the applicant shall submit the plans to the Lehigh Valley Planning Commission for signature and thereafter the office of the Lehigh County Recorder of Deeds for recording. The applicant shall provide the Township with a proof of recordation.
 - ii. One (1) paper copy containing original signatures of the Lehigh Valley Planning Commission and Lehigh County Recorder of Deeds must be returned by the applicant to the Township.
 - iii. Recording of the plan shall have the effect of an irrevocable offer to dedicate all improvements shown thereon. Approval by the Board of Supervisors shall not impose any duty upon the Township concerning maintenance of any such improvements until the Board of Supervisors shall have accepted the same.

203.C. Preliminary Plan Application Followed By Final Plan Application

- 1. Purpose - This standard procedure provides for receiving separate approval of a Preliminary Plan Application and a Final Plan Application. This procedure also accommodates phased development and other procedural benefits derived from a multi-level submission process.
- 2. Sequential Preliminary and Final Plan Submission - The Preliminary Plan and Final Plan procedures are sequential. The Preliminary Plan approval must be received before submission of the Final Plan. The Final Plan shall be substantially consistent with the Preliminary Plan. The Final Plan must be submitted by the Applicant within six (6) months from the date of the original Preliminary Plan approval. Any extension to this deadline shall be requested in writing and shall meet the requirements for granting of a land development waiver. Furthermore the Final Plan shall be accepted as being officially submitted for review only after the approval of the Preliminary Plan and the completion of all improvements as shown on the approved Preliminary Plan or the posting of adequate security in lieu of improvements as required by this Ordinance and as required by the applicants Board of Supervisors resolution for the original approved Preliminary Plan. Additionally all outside agency permits such as PADOT permits, LVPC stormwater drainage plans for Act 167 and PA DEP NPDES stormwater and environmental permits must be secured by the applicant before granting Final Plan approval by the Township. The Final Plan may consist of phases of an approved Preliminary Plan, provided:
 - a. In a residential subdivision or land development each phase shall contain the minimum number of dwelling units permitted by the MPC, unless a lesser number is approved by the Board of Supervisors in its discretion;
 - b. Each phase independently conforms to the Ordinance, regulations and other standards of the Township; and
 - c. Each phase independently results in a logical extension of streets, access drives, alleys, storm water management facilities, sanitary sewer facilities, water supply facilities, and other required improvements.
- 3. Submission Procedure - Each application shall be submitted in compliance with Sections 203.B. 2 through 4, as applicable.
- 4. Application Contents - Each application shall be in compliance with Section 203.B.5.
- 5. Application Process - Each application shall be processed in compliance with Sections 203.B.6 through 10.

6. **Plan Certification and Recording** - The Final Plan shall be processed in compliance with Section 203.B.11.

Section 204 Special Procedures

204.A. Eligibility for Special Procedure - Except as otherwise specified, eligibility for a Special Procedure is at the discretion of the Township.

204.B. Type of Plan Applications

1. **ECHO Housing Plan** - ECHO Housing, as regulated in the Zoning Ordinance, is not required to comply with the processing procedure specified in this Ordinance. The procedures of the Zoning Ordinance shall apply to ECHO housing.
2. **Revised Final Plan** - The procedures of Section 204.C. shall apply to a Revised Final Plan. A Revised Final Plan is limited to the following:
 - a. Correction of an obvious error in an approved application; or
 - b. Depiction of a minor alteration that is substantially consistent with an approved application.
3. **Lot Line Adjustment Plan** - The procedures of Section 204.C. shall apply to a Lot Line Adjustment Plan. A Lot Line Adjustment Plan is limited to the addition of a parcel of land to an abutting lot with no additional lot that is being created.
4. **De Minimus Land Development Plan** - An applicant for a land improvement on an existing a primarily agricultural use or an existing public conservation lot only within an RC or R zoning district lot of ten (10) acres or more, which will not involve an increase to impervious surface on said lot existing prior to the new improvement of 2,000 square feet or less, may elect to proceed under the following procedure.
 - a. An applicant who elects to proceed under these provisions shall submit, together with the appropriate Township fees, the following: A De Minimus land development application, a building/zoning/grading permit application setting forth the proposed improvement, the costs thereof and any changes to be made to the land including a stormwater, erosion control and sedimentation plan and grading plan. The Township Zoning Officer, Township Engineer or Township Planning Consultant shall review the application pursuant to all applicable Township ordinances.
 - b. Upon completion of the appropriate review, the applicant shall agree, in writing, to those conditions, improvements and/or requirements as determined by the Township review; upon the applicant's agreement, the application will be approved and the appropriate Township permits will be issued. In the event that the applicant does not agree with the Township review conclusions, the applicant agrees that the application shall be immediately withdrawn. The applicant may elect to amend and resubmit the application under the standard land development procedure as set forth in this ordinance.

204.C. Submission Procedure for Revised Final Plan and Lot Line Adjustment Plan Applications - The application shall be submitted to the Township on any business day.

1. **Submission Procedure** - The application shall be submitted in compliance with Sections 203.B. 2 through 4, as applicable.
2. **Application Requirements** - The application shall be in compliance with Section 203.B.5. **Staff and Consultant Review** - The application is reviewed by Township staff and consultants in accordance with Sections 203.B.6 and 7. Township staff may refer the application to the Planning Commission for review in accordance with Section 203.B.8.
3. **Board of Supervisors Decision** - At such time and under such circumstances as the

Township staff shall determine that Board of Supervisors consideration is appropriate, the application shall be placed on the next available agenda. The decision will be in accordance with Section 203.B.9.

4. **Compliance With Conditions of Approval** - If the Board of Supervisors conditions its approval upon receipt of additional information, alterations, changes, or notifications, such data shall be submitted and/or alterations noted in compliance with Section 203.B.10.
5. **Plan Certification and Recording** - The plan shall be processed in compliance with Section 203.B.11.

Section 205 Waiver Procedure

205.A. Purpose - A waiver is the remedy by which an applicant may receive a modification or deferment of an Ordinance requirement as it applies to a specific project. The Subdivision and Land Development ordinance requirements are minimum standards for the protection and promotion of the public health, safety, and welfare. The regulations preserve public order and establish interactions among citizens in a way that prevents a conflict of rights. The regulations ensure the uninterrupted enjoyment of rights by all of the citizenry by guiding development and growth and to permit municipalities to minimize such problems as may presently exist or which may be foreseen.

205.B. Standards for Waiver - A waiver may be approved at the sole discretion of the Township when the applicant demonstrates all of the following:

1. The literal enforcement of the Ordinance requirement is unreasonable or will exact undue hardship because of a peculiar condition pertaining to the land, or that an alternative standard will provide an equal or better result;
2. The waiver will not be contrary to the public interest;
3. The waiver is consistent with the intent of this Ordinance;
4. The waiver is consistent with Section 102 – Purpose; and
5. The waiver represents the minimum modification for relief.
6. The hardship is unique and not shared by other properties in the immediate vicinity and there is no reasonable possibility because of the unique topographical and physical circumstances that the property can be develop in strict conformity of the these regulations;
7. Granting of the waiver will not change the character of the immediate area and preserve the purpose and intent of these regulations contain within this ordinance . These specific regulations shall include relieving or correcting existing and future traffic congestion, for the overall protection of the Lowhill Township environment including potable water sources, stormwater, future sewage allocation, wetlands, streams, steep slopes, noise and light pollution, woodlands and scenic byway view-sheds within Lowhill Township.
8. Waivers shall only be granted when consistent with the provisions of 2022 Northern Lehigh Multi-Municipal Comprehensive Plan and the 1966 Act 537 Municipal Sewage Plan as amended when the literal compliance with mandatory provisions is shown to the satisfaction of Lowhill Township to be unreasonable, to cause undue hardship, or where an alternative standard can be demonstrated to provide equal or better results.
9. The specific grounds and facts of unreasonableness or hardship on which the request is based or demonstrate that an alternative standard can provide equal or better results;

205.C. Submission Procedure

1. **Written Request** - The request for all waiver(s) shall be submitted in writing at the time of

preliminary plan application submission to the Township. The request shall include a citation to the specific ordinance provision for which the waiver is sought, together with a complete summary setting forth the purpose and grounds for the waiver request. The written waiver request shall include:

- A. The specific grounds and facts of unreasonableness or hardship on which the request is based or demonstrate that an alternative standard can provide equal or better results;
 - B. List the specific provision(s) of the Ordinance involved in the request;
 - C. State the minimum modification necessary in order to comply with the ordinance;
 - D. Provide an overall cost benefit analysis to the Township for each requested modification/waiver request for the deviation of actually satisfying the ordinance requirement.
 - E. Granting of the waiver will not change the character of the immediate area and preserve the purpose and intent of these regulations contain within this ordinance and all other Township ordinances. These specific regulations shall include relieving or correcting existing and future traffic congestion, for the overall protection of the Lowhill Township environment including potable water sources, stormwater, future sewage allocation, wetlands, streams, steep slopes, noise and light pollution, woodlands, architectural and landscape requirements and scenic byway view-sheds within Lowhill Township.
2. **Planning Commission Review** - At the public meeting, the Planning Commission shall consider the Township staff and consultant review comments concerning the proposed waiver, the applicant's plan submission, and other pertinent material and public comment for all waivers. The Planning Commission may recommend reasonable conditions that may be attached to the waiver. The Planning Commission shall make a recommendation on the waiver which will form the basis of the resolution to be acted upon by the Board of Supervisors.
3. **Draft Resolution to Board of Supervisors** - Based upon the recommendation of the Planning Commission, Township staff will prepare and submit a draft resolution for consideration by the Board of Supervisors. Where applicable, the resolution shall cite provisions of this Ordinance, as well as other pertinent ordinances, specifications, and authority relied upon or the reason therefore. The Board of Supervisors is not bound by the draft resolution and may modify the same.
4. **Schedule** - At such time and under such circumstances as the Township staff and consultants shall determine that Board of Supervisors consideration is appropriate, the waiver request may be placed on the next available Board of Supervisors agenda and the applicant so notified. At no time will additional SALDO waivers be entertained and approved by the Planning Commission and or Board of Supervisors after the initial preliminary plan approval by the Board of Supervisors. **The applicant is again forewarned that failure to secure all required SALDO waivers at the time of preliminary plan approval by the Board of Supervisors will result in a denial of the applicants final plan by the Board of Supervisors and resubmission of the applicants initial preliminary plan with the appropriate Township fees and shall be filed under the current applicable Township ordinances at the time of the plan resubmission.**
5. **Attendance at Public Meeting** - Attendance at the Board of Supervisors public meeting by the applicant or agent is required. The applicant or agent must be prepared to support the grounds and basis for the waiver request. Failure of the applicant or agent to attend the public meeting is a deemed denial of all waivers requested by the applicant.
6. **Deliberation** - At the public meeting, the Board of Supervisors shall consider Township staff and consultant reviews, the applicant's submission, and other relevant material and public comment. The Board of Supervisors shall decide the request and may attach reasonable conditions to any grant thereof.

7. **Applicant Acceptance of Conditions** - If the waiver is approved subject to modification or other conditions, the applicant will be requested at the public meeting to verbally indicate acceptance or rejection of such modification or conditions. Refusal by the applicant to accept modification or conditions of approval constitutes denial of the waiver.
8. **Written Notification of Board of Supervisors Decision and Applicant's Acceptance** - Township staff shall provide written notice of the Board of Supervisor's decision to the applicant personally or by mail to the last known address. The applicant shall provide the Township with a written approval or rejection of the Board of Supervisors decision. Refusal by the applicant to accept conditions of approval shall constitute denial of the waiver.
9. **Waiver Review and Action By the Board of Supervisors** - The Board of Supervisors may consider a land development waiver independent of the Planning Commission review procedure.

Section 206 Authorization for Start of Work

206.A. Unless authorized by the Township, no work shall commence until:

1. All required township and outside agency permits and approvals are received;
2. The developer reimburses the Township for all review fees and any other sums due and owing which relate to the subject property;
3. The improvements agreement and or stormwater maintenance agreement is executed;
4. The developer's expense escrow improvements account is established and funded;
5. Approved financial security (if applicable) is provided;
6. Approved insurance is provided;
7. A pre-construction conference is conducted with Township staff and LCCD; and
8. A notice to proceed is issued in writing by the Township.

Section 207 Construction Observation

207.A. Township Assignment of Representatives - The Township may, during the course of construction, installation, erection, and completion of the required improvements, assign representatives to observe or inspect the performance of the developer's work. Such representatives are not authorized to revoke, alter, amend, enlarge, relax, or release any requirements or conditions of approval; approve or accept any portion of the developer's work; or issue instructions contrary to the requirements of the application or conditions of approval of the application. The presence of such representatives during the performance of the work and any acceptance or approval by such representatives of the Township shall not relieve the developer of responsibility for work that is later determined by the Township to be defective.

207.B. Authorization for Township Observation - The construction, installation, erection, and completion of required improvements are subject to the observation and approval of the Township according to the improvements agreement, approved application and Township Standard Construction Documents. The developer shall permit the Township to observe the work, to make reasonable observation(s) and re-observations, and to perform or conduct appropriate tests. In the event that any portion of the work is backfilled or concealed prior to observation and without the consent of the Township, the developer shall, if required by the Township, uncover such work at its sole cost and expense and make the same available for observation and/or testing.

207.C. Township Determination - The Township shall determine in its sole discretion, whether the

required improvements comply with this Ordinance, the improvements agreement and the approved plan and it's application.

Section 208 Offer and Acceptance of Dedication

208.A. Deemed Private Until Accepted

1. Until such time as an offer of dedication has been accepted by the Board of Supervisors, all improvements or property shall be deemed to be private and for the benefit of the project.
2. Dedication is not complete until it is authorized by resolution of the Board of Supervisors.
3. The Township shall have no responsibility for such improvements or property unless and until there occurs an acceptance of an offer of dedication.

208.B. Procedure for Township Engineer's Review of Improvements - Upon Township receipt of written notice from the developer indicating that the improvements are installed and ready for final inspection, the Township shall notify the Township Engineer, who shall inspect the work and determine if it is in compliance with the approved application and improvements agreement. Following the inspection, the Township Engineer shall notify the Township and developer of the results and if the Township Engineer determines that the work is complete, the developer may proceed with the dedication process. If the work is not complete, the developer shall take any necessary action to complete the improvements and notify the Township in accordance with this sub-section.

208.C. Requirements for Submission of an Offer of Dedication - No offer of dedication shall be submitted unless and until:

1. All requirements of the approved application and the improvements agreement have been fulfilled; the Township Engineer confirms in writing that the improvements are installed in accordance with the approved application and improvements agreement;
2. The developer provides an as-built plan in compliance with the Standard Construction Documents and including, where necessary, notes identifying all deviations from the approved plan;
3. The developer reimburses the Township for all review fees, costs, and any other sums due and owing which relate to the application;
4. The developer provides evidence of final acceptance of the improvements by all other applicable agencies;
5. The developer provides an executed maintenance guarantee to the satisfaction of the Township;
6. The developer provides a certification of clear title or other acceptable guarantees for any dedicated property; and
7. The developer provides all necessary instruments of conveyance to the satisfaction of the Township.

208.D. Standards for Conveyance

1. An interest in land or property shall be conveyed free and clear of all liens and encumbrances, for nominal consideration and by instrument approved by the Township solicitor.
2. As a condition of dedication of real property, the developer shall present a petition to the Township offering fee simple title by deed of dedication. With respect to streets, the deed shall include all real property and all improvements constructed therein, as set forth on the approved application, together with a diagram depicting the real property and improvements thereto. The deed of dedication shall be in the form of a special

warranty deed and shall contain a metes and bounds description.

3. Unless otherwise authorized by the Township, all improvements shall be offered for dedication at the same time.
4. It shall be a violation of this Ordinance for any person to place or allow to be placed mechanic liens on land or improvements that are to be offered by bill of sale or otherwise conveyed to the Township.

208.E. Acceptance of Dedication – Acceptance of an offer of dedication shall be by resolution of the Board of Supervisors.

Article 3

Information To Be Shown On or Submitted With Subdivision and Land Development Applications Plan Filing, Processing And Review

Section 301 Sketch Plan Drafting Standards

- 301.A. Purpose** - The submission of a Sketch Plan Application does not constitute submission of a plan for the purpose of determining approval, and is not subject to Section 508 of the MPC. No legal rights are attached to the Sketch Plan. The Sketch Plan affords the applicant an opportunity to receive recommendations and guidance from Township staff, consultants and the Planning Commission, while the project is at an early stage. The type and quality of information provided with the sketch plan has a direct nexus to the level of assistance that is provided by the Township. The Sketch Plan should be prepared accordance with the guidelines set forth in this section.
- 301.B. Drafting** - The plan should be prepared according to the following:
1. Clearly and legibly drawn at a typical civil engineering scale and in no case may be drawn to a scale less than one hundred feet (100') to the inch. All plans and their plan sheets must also be submitted in an electronic format as determined by the Township.
 2. Sheet size should be twenty-four inches by thirty-six inches (24"x 36"), or thirty inches by forty- two inches (30"x 42"). If the plan is prepared in two (2) or more sections, a key map showing the location of the sections should be placed on each sheet. If more than one (1) sheet is necessary, each sheet should be numbered to show the relationship to the total number of sheets in the plan (e.g., Sheet 1 of 2). All sheets should be folded to the size of eight and one- half inches by eleven inches (8½"x 11").
 3. Profile sheets should include the horizontal alignment of required improvements, utilities and stormwater facilities located in a given area on the same sheet to show their interrelationship.
- 301.C. Project Identification and Location Data** - Where appropriate, the plan should include the following:
1. Proposed project name or identifying title;
 2. Name of the municipality in which the project is located and if in the vicinity of a municipal boundary line, identify the location of the boundary line;
 3. Location map, drawn to a scale that clearly identifies the relationship of the property to at least two (2) intersections of existing street centerlines;
 4. Name (if a corporation, partnership, etc. provide the full legal name, type of entity, State of registration/incorporation and address (if a Post Office Box also provide a physical address of the following:
 - a. Owner;
 - b. Applicant;
 - c. Authorized agent for the owner and applicant, if any; and
 - d. Firm that prepared the plans.

5. Source of title to the land, as shown in the office of the Lehigh County Recorder of Deeds, and if the property is subject to an equitable ownership, the name, address of the owner, and equity agreement should be identified;
6. Names of all landowners, and names/plan book record numbers of the last recorded plans for property located within two hundred feet (200') of the subject property;
7. Street address and Parcel Identification Number (PIN) assigned to the property by the Lehigh County Tax Assessment Office;
8. Plan date and date(s) of all plan revisions;
9. North arrow, graphic scale and written scale;
10. Total acreage of the existing subject property;
11. Zoning Ordinance District designation for the subject property and surrounding property;
12. Relevant Zoning District requirements for the subject property;
13. Date of decision, relief granted, and conditions imposed for any existing waivers, variances, special exceptions, conditional uses, existing nonconforming structures/uses, and previous conditions of plan and other regulatory approvals that are applicable to the plan and property;
14. Proposed land use, total proposed number of lots, number of units of occupancy, density, minimum lot size, lot coverage, building coverage, type of sanitary sewage disposal, type of water supply, and if applicable, name of authority providing sanitary sewage disposal and/or water supply;
15. Building setback lines, with distances from the property and street right-of-way;
16. Buildings and other improvements to be demolished, and the construction sequence thereof;
17. Approximate lot line dimensions and lot areas for proposed lots;
18. Lots numbers for proposed lots in consecutive order;
19. Lands to be dedicated or reserved for public or private use; and
20. Vertical aerial photograph enlarged to a scale not less detailed than one inch equals four hundred feet (1"= 400'), with the tract boundaries clearly marked.

301.D. Existing Features - The following existing features should be identified on the plan, when located on the subject property or within two hundred feet (200') thereof:

1. **Topography** - Existing contours, at a minimum vertical interval of two feet (2') for land with average natural slope of ten percent (10%) or less, and at a minimum vertical interval of five feet (5') for more steeply sloping land. Contours should be accompanied by the location of the benchmark within or immediately abutting to the subject property and a notation indicating the datum used. Contours plotted from the Lehigh County Geographic Information System mapping may only be used for plans which require no new streets, drainage swales, or other public improvements. Ridgelines and watershed boundaries must be identified.
2. **Existing Land Use** - All existing land uses on the subject property and adjoining properties, including across the street.

3. **Natural and Cultural Features** - As applicable, the information required by the Natural and Cultural Features Site Plan and Report prepared according to Section 302.D.4 of this Ordinance.
4. **Man-Made Features** - All existing man-made features such as streets, access drives, driveways, alleys, farm roads, abandoned/paper roads, street signs/traffic controls, parking/loading facilities, pedestrian-ways, buildings, foundations, walls, wells, drainage fields, utilities, fire hydrants, walls, bus stops, street furniture, lighting fixtures, refuse collection stations, quarries, above and below ground utilities, stormwater management facilities, domestic water supply, and sanitary sewers.
5. **Open Space/Recreation** - Location of areas that have been in public use, including, but not limited to, pedestrian, equestrian and bicycle trails.
6. **Encumbrances** - All easements and any other restrictions or encumbrances which are filed of record with the Lehigh County Recorder of Deeds for facilities such as stormwater, sanitary sewer, water supply, electric, telecommunication or telephone transmission line, gas pipeline, or petroleum products transmission line.

301.E. Proposed Features - The plan should identify the location of all proposed features and alteration of features that are included with the application. Proposed features include the following:

1. Access drives, driveways, and alleys;
2. Buildings and conceptual building locations;
3. Utilities including but not limited to sanitary sewer, water and stormwater;
4. Landscaping;
5. Lighting;
6. Off-street loading;
7. Parking facilities;
8. Refuse collection stations;
9. Sidewalks and pedestrian paths;
10. Streets;
11. Rights-of-way and easements for all purposes;
12. Recreational facilities and open space features;
13. Streams, ponds, riparian buffers, and other watercourses;
14. Proposed names for new streets, pavement markings, and traffic control devices; and
15. Location of each land use, if several types of uses are proposed.

Section 302 Preliminary/Final Plan Drafting Standards

302.A. General - The Preliminary/Final Plan Application shall be prepared by an engineer, land surveyor, landscape architect and/or other individuals registered in the Commonwealth of Pennsylvania to perform such duties. Metes and bounds descriptions shall be prepared by a land surveyor. The Preliminary/Final Plan shall show, be accompanied by and be prepared in accordance with the standards set forth in this Section.

302.B. Drafting - The plan shall be prepared according to the following:

1. Clearly and legibly drawn at a typical civil engineering scale and in no case may be drawn to a scale less than one hundred feet (100') to the inch. All plans and plan sheets must also be submitted to the Township in an electronic format as determined by the Township.
2. Sheet size shall be twenty-four inches by thirty-six inches (24"x 36"), or thirty inches by forty-two inches (30"x 42"). If the plan is prepared in two (2) or more sections, a key map showing the location of the sections shall be placed on each sheet. If more than one (1) sheet is necessary, each sheet shall be numbered to show the relationship to the total number of sheets in the plan (e.g., Sheet 1 of 2). All sheets shall be folded to the size of eight and one-half inches by eleven inches (8½"x 11").
3. Plan sheets shall be titled by the type of information being provided (e.g., cover sheet, existing conditions and demolition plan, easement plan, grading and drainage plan, landscape plan, lighting plan, overall site plan, soil erosion and sediment plan, utility plan).
4. Profile plans shall maintain a ratio of 1:5 or 1:10 vertical to horizontal. Profile plans shall identify the vertical and horizontal alignment for each proposed street, stormwater management facility, sanitary sewer facility, and water distribution facility, and shall include:
 - a. Vertical and horizontal alignment on the same sheet;
 - b. Utility structure identification numbers;
 - c. Vertical street alignment;
 - d. Existing (natural) and proposed grades along the street centerline;
 - e. Proposed street grades at the curb line within street intersections and within the turnaround of cul-de-sacs; and
 - f. Such other information as required by the Township.

302.C. Project Identification and Location Data - Where appropriate, the plan shall identify the following data:

1. Proposed project name or identifying title;
2. Name of the municipality in which the project is located and if in the vicinity of a municipal boundary line, identify the location of the boundary line;
3. Location map, drawn to scale, that clearly identifying the relationship of the property to at least two (2) existing named street centerlines;
4. Name and address of the following:
 - a. Owner;

- b. Applicant;
- c. Authorized agent for the owner and applicant, if any; and
- d. Firm that prepared the plans.

If the name is not a person (e.g., corporation, partnership), the information shall include the full legal name, type of entity, State of registration/incorporation, and address (not Post Office Box) of the principal office;

- 5. Source of title to the land, as shown in the office of the Lehigh County Recorder of Deeds, and if the property is subject to an equitable ownership, the name, address, and equity agreement shall be identified;
- 6. Names of all landowners, and the name and plan book record numbers of the last recorded plans for property located within two hundred feet (200') of the subject property;
- 7. Street address and Parcel Identification Number (PIN) assigned by the Lehigh County Tax Assessment Office;
- 8. Plan date and date(s) of all plan revisions;
- 9. North arrow, graphic scale and written scale;
- 10. For property located within two hundred feet (200') of the subject property, the name of each landowner, Parcel Identification Number (assigned by the Lehigh County Tax Assessment Office), and if applicable, the name and plan book record number of the last recorded plan;
- 11. Vertical aerial photograph that reflects the current surrounding conditions at a scale not less than four hundred feet (400') to the inch; and
- 12. Such other information as required by the Township.

302.D. Existing Features - The plan shall identify the following features when located on or within two hundred feet (200') of the subject property. The Township may require the applicant to provide this information beyond the prescribed area when the item affects the property.

- 1. **Property Boundaries** - Lot lines, street right-of-way and easement lines with distance and bearings. The description shall not have an error of closure greater than one foot (1') in ten thousand feet (10,000'). If the landowner retains a single lot with a lot area in excess of ten (10) acres, the boundary of that lot may be identified as a deed-plotting and may be drawn at any legible scale.
- 2. **Topography** - Existing contours, at a minimum vertical interval of two feet (2') for land with average natural slope of ten percent (10%) or less, and at a minimum vertical interval of five feet (5') for more steeply sloping land. Contours shall be accompanied by the location of the benchmark within or immediately abutting to the subject property and a notation indicating the datum used. Ridgelines and watershed boundaries shall be identified.
- 3. **Official Map** - Areas reserved for public use as depicted on the Official Map of Lowhill Township.

4. **Natural and Cultural Features** – Areas with natural and cultural features as required in the Site Plan and an inclusive detailed Report and or Study prepared according to the SALDO and Township Zoning Ordinance. Natural and cultural features include but are not limited to:
- a. Floodplains;
 - b. Existing Riparian buffers;
 - c. Wetlands;
 - d. Wetland buffers;
 - e. Steep slopes;
 - f. Carbonate or slate/shale geologic features;
 - g. Woodlands;
 - h. Wellhead protection overlay zones;
 - i. Historic structures;
 - j. Pennsylvania Natural Diversity Inventory sites (PNDI);
 - k. Areas of suspected archaeological/historical significance;
 - l. Individual soil type;
 - m. Watercourses (e.g., creek, stream, spring, pond);
 - n. Rock outcrops and other geologic formations;
 - o. Other significant and natural scenic byway features;
 - p. Such other information as required by the Township.
5. **Man-Made Features** – Existing man-made features, and any other information deemed necessary by the Township including:
- a. Streets including pavement limits, pavement markings, traffic control devices, names, and bus stops;
 - b. Access drives including pavement limits, pavement markings, traffic control devices, and names;
 - c. Alleys including pavement limits, pavement markings, and traffic control devices;
 - d. Driveways;
 - e. Sidewalks and pedestrian-ways;
 - f. Buildings;
 - g. Off-street parking areas including pavement limits, pavement markings and traffic control devices;

- h. Off-street loading area improvement including pavement limits, pavement markings and traffic control devices;
 - j. Stormwater management improvements and easements for stormwater conveyance and storage facilities including size, elevations, types of material and manhole locations and service connections;
 - k. Water and sanitary sewer systems including manhole locations and invert elevations, size, types of materials pipe locations, grade and size, valves, service connections, and fire hydrants;
 - l. Other utility and communication transmission lines;
 - m. Outdoor lighting fixtures;
 - n. Surface waters (e.g. swimming pools, ponds and other watercourses);
 - o. Survey monuments and markers; and
 - p. With respect to all of the above, all necessary dimensions and specifications.
- 6. **Open Space/Recreation** - Area(s) and improvements that are in public use, including, but not limited to, parks, athletic fields, pedestrian, equestrian and bicycle trails.
 - 7. **Encumbrances** - All easements and any other restrictions or encumbrances which are filed of record with the Lehigh County Recorder of Deeds for facilities such as stormwater, sanitary sewer, water supply, electric, telecommunication or telephone transmission line, gas pipeline, or petroleum products transmission line.
 - 8. **Other** - Such other information as required by the Township.

302.E. Proposed Features – The plan shall identify the location and construction specifications for all proposed features and alteration of features that are included with the application. Proposed features including the following:

- 1. Lot lines, street centerline, street right-of-way and easement lines with dimensions in feet and decimals; bearings shall be in degrees, minutes and seconds. Descriptions shall read in a clockwise direction. The description shall not have an error of closure greater than one foot (1') in ten thousand feet (10,000'). If the landowner retains a single lot with a lot area in excess of ten (10) acres, the boundary of that lot, if permitted by the Township, may be identified as adeed-plotting and may be drawn at a legible scale.
- 2. Street improvements and rights-of-way including pavement limits, pavement markings, traffic control devices, name, furniture and bus stops;
- 3. Typical cross-section of the entire street right-of-way for each proposed street and existing street that are proposed for modification. A cross-section for improvement to an existing street shall be provided for each fifty foot (50') station location, unless otherwise specified by the Township;
- 4. Access drive improvement including pavement limits, pavement markings, traffic control devices, name, furniture and conceptual design of future access drive improvements and a conceptual design of future access drives for subdivision plans when required by the Township required;
- 5. Alley improvement and right-of-way including pavement limits, pavement markings, and traffic

control devices;

6. Driveway improvement and conceptual design of future driveway improvement when required by the Township for subdivision plans;
7. Sidewalk and pedestrian-way improvement and right-of-way (if applicable);
8. Building setback lines, isolation distances and other restriction lines with dimensions;
9. Buildings and other improvements to be demolished with construction sequence for demolition;
10. Buildings and conceptual locations of future buildings when required for subdivision plans;
11. Off-street parking areas including pavement limits, pavement markings and traffic control devices;
12. Off-street loading areas including pavement limits, pavement markings and traffic control devices;
13. Grading and first floor elevation of all buildings;
14. Stormwater management improvements and easements for stormwater conveyance and management facilities including size and types of materials, manhole and pipe locations, etc.;
15. Public and on-lot water and sanitary sewer systems including manhole locations and inverts, size and type of material, pipe locations, grade and size, valves, service connections, fire hydrants, wells, on-lot sewage disposal systems sites, rights-of way, easements and all other details required by the Township and Authority specifications, rules and regulations;
16. Other utility and communication transmission lines and rights-of-way;
17. Landscaping and detailed specifications;
18. Outdoor lighting plan identifying outdoor lighting fixtures and illumination levels;
19. Surface waters (e.g. swimming pools, ponds and other watercourses);
20. Location and area of lands to be dedicated or reserved for public or private use;
21. Open space areas and recreation areas and with respect to both, the required improvements to be construction thereon;
22. Survey monuments and markers including a note that all monuments and lot line markers are set or indicating when they will be set;
23. Rights-of-way and easements for areas that are proposed for restrictions and encumbrances including a plan note identifying the purpose, property rights and obligations area; and
24. Areas and facilities intended for dedication or sale to the Township or other public entity (ex., streets, utilities and other public property).
25. Such other information as required by the Township.

302.F. Plan Notes – The plans shall include the following notes and any other information deemed necessary by the Township.

1. Plan notes as specified in the Standard Plan Notes (Please refer to Appendix 4 of this Ordinance) and other information including but not limited to:

- a. Access to State highway;
 - b. Planning Commission signature block;
 - c. Board of Supervisors signature block;
 - d. Certificate of ownership, acknowledgment of plan and offer of dedication;
 - e. Engineer's/surveyor's certification;
 - f. Lehigh Valley Planning Commission signature block;
 - g. Plan sheet index;
 - h. Zoning data;
 - i. Site data;
 - j. Wetland note;
 - k. Stormwater management notes and
 - l. General plan notes.
- 2. A listing of all required outside agency permits and approvals.
 - 3. Rights and responsibilities for proposed easements and rights-of-way that are not offered for dedication to the Township or other government agency.
 - 4. Description of existing waivers, variances, special exceptions, conditional uses, nonconforming structures/uses, and other regulatory permits and approvals applicable to the property, including date of decision, relief granted, and conditions imposed.
 - 5. Proposed relief that is necessary for the subject plan (e.g., waiver, variance, special exception, conditional use).
 - 6. Developer's representation on the final plan that to the best of its knowledge:
 - a. The project complies with and is not in violation of any applicable statutes, rules, regulations, ordinances, or orders of any governmental entity relating to hazardous wastes or substances with regard to the ownership or operation of the property;
 - b. The project has not received any request for information, notice of claim, demand or notification that it is or may be potentially responsible concerning any investigation or cleanup of any threatened or actual release of any hazardous wastes or substances at, on, about or under the property;
 - c. The Township has not become an owner or operator with respect to the property within the meaning of the Comprehensive Environmental Response Compensation and Liability Act of 1980, by virtue of holding any easement or right-of-way shown on this plan; and

Section 303 Preliminary Plan Drafting Standards

303.A. General - The Preliminary Plan Application shall be prepared by an engineer, land surveyor, landscape architect and/or other individuals registered in the Commonwealth of Pennsylvania to perform such duties. Land surveyors shall prepare metes and bounds descriptions. The plan shall

show, be accompanied by, or be prepared in accordance with, the standards set forth in this Section.

- 303.B. **Drafting** - The same standards as required for a Preliminary/Final Plan in Section 302.B.
- 303.C. **Project Identification and Location Data** - The same standards as required for a Preliminary/Final Plan in Section 302.C.
- 303.D. **Existing Features** - The same standards as required for a Preliminary/Final Plan in Section 302.D.
- 303.E. **Proposed Features** - The same standards as required for a Preliminary/Final Plan in Section 302.E.
- 303.F. **Plan Notes** – To the extent applicable, the same standards as required for a Preliminary/Final Plan in Section 302.F.

Section 304 Final Plan Drafting Standards

- 304.A. **General** - The Final Plan Application shall be prepared by an engineer, land surveyor, landscape architect and/or other individual registered in the Commonwealth of Pennsylvania to perform such duties. Land surveyors shall prepare metes and bounds descriptions. The Final Plan shall show, be accompanied by, or be prepared in accordance with the standards set forth in this Section.
- 304.B. **Drafting** - The same standards as required for a Preliminary/Final Plan in Section 302.B.
- 304.C. **Project Identification and Location Data** - The same standards as required for a Preliminary/Final Plan in Section 302.C.
- 304.D. **Existing Features** - The same standards as required for a Preliminary/Final Plan in Section 302.D.
- 304.E. **Proposed Features** - The same standards as required for a Preliminary/Final Plan in Section 302.E.
- 304.F. **Plan Notes** - The same standards as required for a Preliminary/Final Plan in Section 302.F.

Section 305 Required Plans, Reports, Studies, and Other Information

- 305.A. **General** – The applicant shall submit the following plans, reports and studies and other information (with the exception of Item 8. Fiscal Impact Study and Item 9. Water Resources Impact Study) at the time of the initial preliminary or preliminary/final plan submission. The application shall not be considered complete without these required submitted plans, reports, studies and other information and must also be submitted in an electronic format as determined by the Township:
 - 1. **Future Concept Plan** – A future development scheme is required when, in the opinion of the Township, the application significantly impacts the undeveloped portion of the property which is the subject of the application. A future concept plan shall be drawn to the standards of a sketch plan. Such scheme shall not be considered part of the plan approval.
 - 2. **Phase 1 Environmental Site Assessment** - A Phase 1 Environmental Site Assessment shall be provided to Lowhill Township and shall conform with the scope and limitations of the American Society Testing and Materials (ASTM) Standard Practice for Environmental Site Assessment Process (ASTM E-1 527-05) as subsequently amended, and United States Environmental Protection Agency (U.S. EPA) Title 40 Code of Federal Regulations Part 312, Standard Practices for All Appropriate Inquiries (40 CFR Part 312) as subsequently amended. If the Phase 1 Environmental Site assessment determines that a Phase 2 or other environmental assessments are required and further remediation is required or warranted of

the project site, the applicant shall supply all documents demonstrating compliance with all of Lowhill Township Ordinances. The land use remediation plan must be approved by Lowhill Township and incorporated with the applicants subdivision or land development preliminary plan and is subjected to further review by the Planning Commission before recommending approval to the Board of Supervisors.

3. **Stormwater Management Report** - Stormwater management plans and reports, prepared in accordance with all Township Stormwater Management Ordinances shall be submitted in accordance with that Stormwater Ordinance. Copies of all PA DEP NPDES Stormwater Permit for construction activities applications and planning documents for the proposed stormwater system construction shall be submitted with the Preliminary Plan. All approved preliminary plans shall **NOT** be recommended for FINAL plan approval to the Lowhill Board of Supervisors until the applicant has received an NPDES Individual Permit for Stormwater Activities for the project site and an Act 167 Stormwater Drainage Plan consistency letter from the LVPC. Additionally, the Planning Commission **shall not conduct a formal review** or accept the applicants preliminary or final plan as being a complete submission until a technical deficiency letter from PA DEP and or the LCCD for the NPDES Stormwater Permit for Construction Activities has been issued and accompanied the applicants initial preliminary plan submission. The following information must be included must be included in this Stormwater Management Report:
 - i. A full description of all proposed types of Best Management Practices (BMP's) proposed for the project stormwater system. All proposed and new storm water systems for the project must include either a green and or blue roofs, and one of these type of stormwater basins such as a bio-retention wet basin or a naturalized infiltration basin or an engineered wetland retention basin. If the applicant fails to incorporate the aforementioned BMP's into their proposed stormwater system, the applicant must provide specific reasons why these aforementioned BMP's were NOT chosen for their project and the applicant must also secure a SALDO waiver. All proposed BMP's for the project must be derived from the most recently adopted PA BMP Stormwater Manual as amended. The development and placement of level spreaders, gravel verges, stilling basins, rain gardens, underground detention basins, extended dry detention and or Managed Release Concept basins are specifically prohibited as water quality and volume/rate BMP's in Lowhill Township in designated PA DEP HQ and or EV designated watersheds and within 150 feet of an EV wetland.
 - ii. A complete wetland delineation report and location map of all known wetlands and their designation (EV eg.) with the accompanied PNDI report indicating the extent of all possible endangered species such as bog turtles Wetlands must be delineated by a qualified specialist according to the 1989 Federal Manuals (as amended) for the Delineation of Jurisdictional Wetlands (whichever is greater) or according to any subsequent Federal or State regulation. The study shall be submitted with sufficient detail to allow a thorough review by the Township. The report and study must be approved by the Board of Supervisors.
 - iii. A jurisdictional wetlands delineation report determination by the Army Corps of Engineers shall be considered but shall not be the sole determination as to the status of the wetlands where that determination conflicts with a Wetlands Study performed by another qualified wetlands consultant. The Board of Supervisors of the Township shall make the final determination.
 - iv. All wetland delineation studies are subject to review and acceptance by the Township. The Township may require an independent review of the wetland delineation provided by the applicant, with the Township selecting a qualified professional after notification to the applicant, and with the applicant responsible to pay the costs of such review. In the event of a dispute, the delineation that provides the greatest restriction to development or disturbance of the resource applies.
4. **Vehicle Turning Template Plan** - AASHTO vehicle including 52 ft truck turning templates

are required for each intersection of streets, access drives, alleys, off-street parking area and vehicle loading areas. The applicant shall coordinate all fire equipment vehicle turning movements with the appropriate Township emergency response personnel. All turning templates must be clearly demonstrated on the land development plans. Turning templates for the design vehicles shall be used to demonstrate the adequacy of the design on the plan. Vehicles shall not encroach into other lanes or impede safe flow of traffic. Standard design vehicles are as follows:

- a. Residential Access: AASHTO Type "P" vehicle;
- b. Multi-Family Residential Access: AASHTO Type "SU" vehicle; and
- c. Commercial Access: AASHTO Type "SU" vehicle, unless proposed facility warrants use of a larger design vehicle. Facilities serviced by larger vehicles shall be designed for the AASHTO Type "WB-62" with a regular cab tractor, unless the Applicant verifies that an alternate design vehicle is applicable.

5. Traffic Impact Study and PADOT Scoping Meeting

- a. A Traffic Impact Study shall be submitted for every plan which involves one or more of the following and or as required by the Lowhill Township engineer:
 - i. Generation of greater than five hundred (500) new, daily average, weekday average vehicle trips (total of inbound and outbound);
 - ii. Generation of fifty (50) or more new AM or PM peak hour trips during the peak hour of the adjacent streets or of the development;
 - iii. Traffic conditions in the local area including but not limited to high accident locations, confusing intersections, congested intersections, etc;
 - iv. Questionable road capacity and geometry of the existing local and state road system to handle increased traffic from this land development or major subdivision as specifically determined by the Lowhill Township Planning Commission or Board of Supervisors during preliminary plan review; and
 - v. If the Zoning Ordinance or a Conditional Use and or its conditions requires a Traffic Impact Study to be conducted.
- b. The Traffic Impact Study shall be prepared in accordance with PENNDOT Publications and Procedures for Transportation Impact Studies, Publication 46 Traffic Engineering Manual, and Institute of Transportation Engineers' (ITE) Recommended Practice "Transportation Impact Analyses for Site Development".
- c. Area and Scope of Traffic Impact Study - The Traffic Impact Study area and scope shall be based on the characteristics of the surrounding area and the impact of the plan on the area. The intersections to be included in the Study shall be adjacent to the site or have direct impact upon the access to the site. Prior to initiation of the study, the area and scope shall be mutually agreed upon between the Township Engineer and the traffic engineer preparing the Study.
- d. Preparation by Transportation Engineer Required - The Traffic Impact Study shall be prepared by a Professional Engineer registered in Pennsylvania with specific training in traffic and transportation engineering, at least four (4) years experience related to preparing traffic studies for existing or proposed developments, and sufficient prior traffic study experience to qualify the engineer to render any opinions and recommendations in the study.
- e. Horizon Year - The traffic forecasts shall be prepared for the anticipated opening year

of the development, assuming full build-out and occupancy. The horizon year in the remainder of this Ordinance, and shall be a minimum of five (5) years after the opening year.

f. Traffic Data, Projections and Analysis Periods

- i. Traffic data used in the Study shall not be more than one (1) year old.
- ii. Estimates of non-site traffic shall be made, and will consist of traffic generated by all other developments within the study area for which Preliminary and/or Final Plans have been approved and traffic from background traffic growth in and around the study area. Traffic generated by other development for which an application has been submitted but not yet approved shall be included at the discretion of the Township. Non-site traffic may be estimated using the "build-up" technique, or, by way of area transportation plan data or modeled volumes. Background growth compounded annually shall be established using the growth rates from PENNDOT.
- iii. Analyses shall be conducted for the AM and PM peak hour periods. If the study area includes an intersection on an arterial roadway, or if the proposed development includes retail related uses, then the Saturday peak hour period shall also be analyzed. Where the peak hour of the generator does not coincide with the peak hour of the adjacent street, then the peak hour(s) of the generator shall also be analyzed.

g. Trip Generation Rates Required

- i. The Traffic Impact Study shall include a table showing the land uses and codes as defined by ITE and quantities of each land use, with the corresponding trip generation rates or equations (with justification for selection of one or the other), and resulting number of trips, including entering, exiting and total trips. The trip generation rates used must be either from the latest edition of Trip Generation by ITE, or from a local study of corresponding land uses and quantities. All sources must be referenced in the Study. The anticipated types and volumes of truck traffic using the site shall be identified.
 - ii. All trip generation calculations shall be based on the methodologies as published in ITE's "Trip Generation Handbook" or as mutually agreed between the Township Engineer and the traffic engineer preparing the Study.
 - iii. Consideration of Pass-By or Shared Trips - If pass-by trips or shared trips are a major consideration for the land use in question, calculations of pass-by and/or shared trips shall be based on published rates as identified in ITE's "Trip Generation Handbook".
- h. Rate Sum - Any significant difference between the sums of single-use rates and proposed mixed-use estimates must be justified in the Study.
- i. Explanations Required - The reasoning and data used in developing a trip generation rate for special/unusual generators must be justified and explained in the Study.
- j. Definition of Influence Area
- i. Prior to trip distribution of site-generated trips, an influence area must be defined which contains eighty percent (80%) or more of the trip ends that will be attracted to the development. A market study may be used to establish the limits of an influence area, if available. If no market study is available, an influence area shall be determined based on a reasonably defined market area. The influence area may also be based on a reasonable maximum convenient travel time to the site,

or delineating area boundaries based on locations of competing developments.

- ii. Other methods, such as using trip data from an existing development with similar characteristics, or using an existing origin-destination survey of trips within the area, may be used in place of the influence area to delineate the boundaries of the impact.

k. Estimates of Trip Distribution Required

- i. Trip distribution shall be estimated using analogy, trip distribution model, or surrogate data.
- ii. Whichever method is used, trip distribution must be estimated and analyzed for the horizon year and must be justified in the study. A multi-use development may require more than one distribution and coinciding assignment for each phase (e.g., residential and retail phases on the same site). Consideration must also be given to whether inbound and outbound trips will have similar distributions.
- iii. The methodology for determining trip distribution shall be mutually agreed upon between the Township Engineer and the traffic engineer preparing the Study.

l. Trip Assignments

- i. Assignments must be made considering logical routings, available roadway capacities, left turns at critical intersections, and projected (and perceived) minimum travel times. In addition, multiple paths shall often be assigned between origins and destinations to achieve realistic estimates, rather than assigning all of the trips to the route with the shortest travel time. The assignments must be carried through the external site access points and, in projects producing 500 or more additional peak direction trips to or from the site during the development's peak hour, through the internal roadways. When the site has more than one access driveway, logical routing and possibly multiple paths shall be used to obtain realistic driveway volumes. The assignment shall reflect conditions at the time of the analysis. Assignments may be accomplished either manually or with applicable computer models.
- ii. If a thorough analysis is required to account for pass-by trips, such analysis shall determine the percentage of pass-by trips in the total trips generated using *methodology*; estimate a trip distribution for the pass-by trips; perform two separate trip assignments, based on the new and pass-by trip distributions; and combine the pass-by and new trip assignment.
- iii. Upon completion of the initial site traffic assignment, the results shall be reviewed to determine if the volumes appear logical, given characteristics of the road system and trip distribution. Adjustments shall be made if the initial results do not appear to be logical or reasonable.
- iv. The methodology for determining trip assignments shall be mutually agreed upon between the Township Engineer and the traffic engineer preparing the Study.

- m. Total Traffic Impacts - Traffic estimates for any site with current traffic activity shall reflect not only new traffic associated with the site's redevelopment, but also the trips subtracted from the traffic stream because of the removal of a land use. The number of trips to be subtracted for the existing use shall be based on actual counts. The Traffic Impact Study shall clearly depict the total traffic estimate and its components.

n. Analysis

- i. Traffic analyses shall be completed for the existing conditions and opening

day/build-out year and horizon year, both without and with development. Analyses may consider proposed roadway improvements only if said improvements have committed funding.

- ii. Capacity analysis shall be performed at each of the major street and project site access intersection locations (signalized and unsignalized) within the study area. In addition, analyses shall be completed for roadway segments, deemed sensitive to site traffic within the study area. These may include such segments as weaving sections, ramps, internal site roadways, parking facility access points, and reservoirs for vehicles queuing off-site and on-site. Other locations may be deemed appropriate depending on the situation.
 - iii. The recommended level of service analysis procedures detailed in the most recent edition of the Highway Capacity Manual shall be followed. The operational analyses in the Highway Capacity Manual should be used for analyzing existing conditions, traffic impacts, access requirements, or other future conditions for which traffic, geometric and control parameters can be established.
 - iv. Where a Level of Service (LOS) "F" results, the associated delay shall be noted in the study. Existing peak hour factors and site specific truck and roadway grade percentages shall be utilized.
 - v. Traffic Signal Warrant analyses evaluating all warrant criteria shall be completed for each unsignalized intersection which is shown to have an approach operating at an LOS "E" or "F."
 - vi. Where traffic signals exist or are proposed, analyses of the need for signalized left-turn phases shall be completed in accordance with PENNDOT Publication 149.
 - vii. Queue length analyses shall be completed for each lane group. The need for acceleration and deceleration lanes shall be presented in the study. The need for right- and left-turn lanes shall also be evaluated. For both signalized and unsignalized intersections, PENNDOT Publication 46 shall be used as the basis for determining the need and required lengths for said lanes.
 - viii. Accident data for the most recent three-year period shall be presented and analyzed for trends, type of accidents and causation factors.
 - o. Required Levels of Service - The Study shall identify the improvements necessary to meet the goals thereof and the applicant shall be responsible to make all improvements required by law.
 - p. PENNDOT Scoping Meeting – Lowhill Township shall be invited to all scoping meetings involving PENNDOT Highway Occupancy Permits with the applicant/developer. All minutes of such scoping meetings including the initial meeting shall be provided to the Township (at the time of the Conditional Use Hearing if required) and shall accompany the Preliminary Plan application at the time of submission. All subsequent scoping meetings with PENNDOT during the preliminary plan approval process shall be forwarded to the Planning Commission and the Board of Supervisors for their respective review.
6. **Park and Recreation Study** - A Park and Recreation Study shall be prepared for developments that generate the demand for greater than two (2) acres of park and/or recreation under Section 522 of this Ordinance, whether or not there is an offer of dedication. The Park and Recreation Study shall be prepared by a Certified Park and Recreation Practitioner (CPRP) with the following minimum considerations:
- a. Description of the total projected number of residents in their respective age groups;
 - b. Description of those existing public recreation facilities located within a one-half mile

radius of the site;

- c. Description of the adequacy of existing recreation facilities to serve the proposed residents, taking into consideration current usage;
- d. Analysis of potential for any recreation facilities to be provided by the applicant to accommodate new residents and/or compensate for any anticipated deficiencies of the Township's recreational facilities;
- e. Description of any recreation facilities to be provided by the applicant;
- f. Analysis on the relationship of the proposal to the programs of the Township Park and Recreation Commission;
- g. Description of responsibility for maintenance of any recreational facilities to be provided by the applicant;
- h. Description of accessibility of the proposed facilities to general Township residents;
- i. Description of any contributions in accordance with Section 522 of this Ordinance that the applicant plans to make for Township recreation to compensate for expected impacts; and
- j. Source of standards used in the data presented.

7. **Natural Features, Cultural Features and Scenic Byways Study** - A plan and report of natural and cultural features showing the effects of the proposed land development or major subdivision on local scenic byways on all of the these features listed in Section 302.D.4 with proposed elevation drawings/renderings is required at the time of preliminary plan application.

8. **Fiscal Impact Study** - When, in the opinion of the Township Planning Commission or Board of Supervisors or Township Staff the land development or major subdivision application during the preliminary plan review may generate a significant impact to the current fiscal characteristics of the Township and/or School District, a fiscal impact study shall be submitted to the Township. The purpose of the study is to compare the public costs and public revenues associated with the development and shall analyze the impact on the following:

- a. Education involving the Northwestern Lehigh School District;
- b. Public Works (e.g., roads, sanitary sewer, stormwater drainage systems, signage, traffic control and water supply);
- c. Fire and Emergency Medical Services;
- d. Police and other Township services;

9. **Water Resources Impact Study** - A Water Resources Impact Study shall be required when in the opinion of the Township Planning Commission, Board of Supervisors or Township Staff that this land development or major subdivision during the preliminary plan review may generate a significant impact to water resources. The purpose of the study is to determine if there is an adequate water supply to serve the proposed use(s), and to estimate the impact of the additional water use and additional stormwater discharges on existing nearby wells, underlying aquifers, and surface water bodies including all types of streams and wetlands. Any proposed water system or on-lot water supply for a major subdivision or land development which does not provide an adequate water supply for use, or which adversely affects nearby wells or streams shall not be approved by the Township and shall be cause for denial of the subdivision or land development plans. The Township Engineer and/or other consultants appointed by the Township, shall be involved in the water impact study as the

Township feels is necessary and appropriate. All costs incurred by the Township for the water impact study shall be reimbursed by the developer. The adequacy of the water supply shall be determined based upon the following assumption: an average three and one-half persons per dwelling unit and each person is assumed to use 75 gallons of water per day.

- a. The Study shall be prepared by a qualified hydrogeologist professional. The analysis shall include the following:
 - i. Calculations of the projected water needs using the criteria set forth in Public Water Supply Manual, Bureau of Water Quality Management, Publication Number 15, PA DEP, Harrisburg, PA and Guide for Determination of Required Fire Flow, by the Insurance Services Office (ISO) as modified;
 - ii. Geological map of the area within a one (1) mile radius of the property;
 - iii. Location of all closed depressions, geological/bedrock faults, lineaments, fracture traces, ghost lakes, sinkholes, caverns, underground shafts, etc., within one-quarter (¼) mile of the property;
 - iv. Location of all existing and proposed wells within one-quarter (¼) mile of the site and of all large withdrawal wells ten thousand (10,000) gallons per day or greater within one (1) mile of the property;
 - v. Location of all existing and proposed on-lot septic systems within one-quarter (¼) mile of the property;
 - vi. Location of all streams, perennial and intermittent, and all known point and non-point sources of pollution within one-quarter (¼) mile of the site;
 - vii. Description of the aquifer characteristics underlying the site and their long-term drought recharge capability based on site-specific investigation. Analysis is not required to perform pumping tests and may base the discussion of long-term drought recharge capability on accepted published data;
 - viii. Based on the drought recharge capability and the calculated daily groundwater withdrawals of the project, a hydrologic budget shall be estimated for the property itself and for the area within a one-quarter (¼) mile radius of the site with a determination, aided by the results of the hydrologic budget, of whether the potential exists for adverse effects on the hydrologic environment by the proposed subdivision or land development;
 - ix. Any and all potential issues for potential stormwater infiltration problems, soil loading ratios and hydrogeological limitations including groundwater mounding and offsite spring formation;
 - x. A determination, aided by the results of the hydrologic budget, of whether the potential exists for adverse effects on the hydrologic environment by the proposed subdivision or land development; and
 - xi. A statement of qualifications of the person(s) preparing the study.
- b. In addition to the above, all developments proposing to construct a public water supply and distribution system shall follow regulations outlined in the Pennsylvania Department of Environmental Protection (PA DEP) Public Water Supply Manual, Part II Community Design Standards, latest edition, along with the American Water Works Association (AWWA) Standard for Water Wells, ANSI/AWWA A 100, latest edition, as referenced in the DEP Manual. All aspects of the construction, testing and sampling of a new water supply shall be as directed by a professional acceptable to the Township.

A PA DEP-certified laboratory shall collect and analyze samples for all parameters required by PA DEP for new-sources. To supplement requirements of PA DEP and AWWA:

- i. During the test, a representative number of existing wells within a ½-mile radius of the proposed well shall be monitored for changes from the static water level. If existing wells are not available, a sufficient number of monitor wells shall be constructed at locations directed by DEP or the Township's hydrogeological consultant. If monitor wells are drilled, the applicant shall provide to the Township perpetual easements allowing the Township access for continuing monitoring of water levels; and
 - ii. Discharge during testing shall be directed away from the site by a method and to a point acceptable to the Township. Flooding on adjacent properties shall be avoided, and adequate erosion and sedimentation controls shall be implemented.
 - c. A comprehensive report shall be issued to the Township for review by its hydrogeological consultant and or PA DEP. The report shall include all data required to obtain a Public Water Supply Permit from PA DEP, including:
 - i. A topographic plan showing locations of the proposed well(s) and monitor wells;
 - ii. All drilling, testing and sampling data;
 - iii. Analysis and interpretation of the data related to the impact on the groundwater supply and existing wells;
 - iv. Conclusions drawn from the analysis related to the appropriateness of the site for the proposed well; and
 - v. Credentials of the professional preparing the report.
 - d. Applications to DEP for a Public Water Supply Permit, and to Delaware River Basin Commission (DRBC) for approval of groundwater withdrawal, shall be in the name of Lowhill Township, which shall be the contact for inquiries from those agencies.
10. **Additional Studies and Reports** - The Township may also require the applicant to prepare studies, data and reports that adequately address the proposal's coordination with the existing Township facilities and with the requirements of Township fire and emergency services necessary to service the land development or subdivision and Township according to the standards of this Ordinance, or to the level of service that existed prior to the development.
11. **Architectural Renderings and Elevations** – All non-residential use land development applications shall provide detailed building elevations and renderings of all proposed structures and their facades, lighting, basins, fencing tree plantings and other proposed landscaping treatments, proposed signage and landscape buffers on the property at the time of preliminary plan application submission. These elevations and renderings shall comply with all Lowhill Township ordinances and shall be consistent with the goals and policies of the 2002 Northern Lehigh Comprehensive Plan as amended. The renderings and elevations must also be provided in an electric format as determined and required by the Township.
12. **Lighting Plan** - Lighting plans shall be submitted to the Township for review and approval and for all land developments and shall include:
- A. Layout of all proposed fixture locations.
 - B. Ten by ten (10' X 10') foot illuminance grid (point-by-point) plots carried out to 0.0 foot-candles, which demonstrate compliance with the light trespass, intensities and

uniformities set forth in this Ordinance or as otherwise required by the Township. The lamp-lumen rating and nomenclature, light-loss factors and IES file names used in calculating the illuminance values shall be documented on the plan.

C. Description of the equipment, including fixture catalog cuts, photometrics, glare reduction devices, lamps, control devices, mounting heights, pole foundation details and mounting methods to meet dark sky compliance.

D. When requested by the Planning Commission, the applicant shall submit a visual impact plan/study that demonstrates appropriate steps have been taken to mitigate glare. Please refer to Section 525 of this ordinance for specific glare mitigation requirements.

305.B. Other Information - Prior to final plan approval, and where applicable, the application shall include the following information.

1. Current deed and sale agreement for equitable ownership for the subject property;
2. Controlling agreements for easements and rights-of-way that are not offered for dedication to public use;
3. Controlling agreements from adjacent property owners where the natural drainage discharge is to be altered;
4. When sewage disposal service is individual on-lot sewage disposal systems, documentation as to the feasibility of on-lot sewage disposal systems;
5. When sewage and/or water service is to be provided by a public system, notice from teagency, authority, or utility which states that is can adequately serve the development; and
6. Proposed deed restrictions and other covenants.
7. Deeds of dedication in recordable form for all easements and streets in the subdivision to be held in escrow by the Township until certified by the Township Engineer as being completed.

305.C. Prerequisite to Recording – The following requirements must be in a recordable form that must be presented prior to recording the the final plan of all subdivisions and land developments.

1. Fully executed subdivision and land development Improvements Agreement;
2. Fully executed easement agreements and payment of recreation fees in favor of the Township;
3. All required outside agency permits and approvals;
4. All Township NPDES Stormwater Permit Maintenance agreements;
5. For residential development, A Declaration of Covenants, Easements and Restrictions establishing a Homeowners Association to maintain private streets, common areas and common facilities where they are proposed;
6. Covenant requiring perpetual maintenance of the stormwater management system by the property owner of a land development or home owners association for a residential subdivision
7. Covenant requiring perpetual maintenance of the landscape plan, including any fencing and or retaining walls, by the property owner of a land development or a homeowners association for a residential subdivision.

Section 306 Lot Line Adjustment Plan Application

The Lot Line Adjustment Plan Application shall be prepared according to the Final Plan standards as shown in Section 304.

Section 307 Revised Final Plan Application

The Revised Final Plan Application shall be prepared according to the Final Plan standards in Section 304.

Article 4

Reimbursable Fees, Developer's Expense Escrow Account, Improvements Agreement, Financial Security and Maintenance Guarantee

Section 401 General

- 401.A. Compliance with Ordinance** - No project shall be considered in compliance with this Ordinance until the developer constructs and installs all required improvements according to the approved plan, Township resolution of approval, improvements agreement, permits, and all applicable laws, ordinances, and resolutions including, but not limited to, those relating to review fees, inspection fees, and security.
- 401.B. Developer's Responsibility** - The developer shall pay all costs connected with the design, acquisition of materials, acquisition or interest in lands, installation of required improvements, cost of dedication related to improvements, and Township fees. The developer shall obtain and maintain in full force and effect all required approvals and permits. The developer shall comply with all resolutions relating to payment of consultant review fees and maintain a developer's expense escrow account.
- 401.C. Required Submission** - The developer of projects that include required improvements shall provide the Township, and where relevant the Township Authorities, an up-to-date expense escrow, executed improvements agreement and, as necessary, financial security as required by the Township. With an offer of dedication, the developer is required to provide dedication documents, easement documents, bills of sale, and maintenance guarantee.
- 401.D. Start of Construction** - Unless authorized by the Township, no work shall commence until the developer complies with Section 206.
- 401.E. Private Work** - Work to be executed by the developer pursuant to the approved plan or improvements agreement shall not be considered "Public Work" within the meaning of the Pennsylvania Prevailing Wage Act, and funds received by the Township from security established pursuant to this Ordinance shall not be considered "funds of a public body." The bidding requirements of the Second Class Township Code shall not apply.
- 401.F. Security for Utilities** - Financial security as otherwise required by this Article does not apply to sanitary sewer and water supply facilities that are:
1. Installed under the jurisdiction and pursuant to the rules and regulations of a public utility or an Authority other than the Township Authorities, and
 2. Subject to financial security to assure proper completion, and maintenance thereof is posted in accordance with the regulations of the controlling public utility or Authority,
- 401.G. Security for State Routes** - Financial security as otherwise required by this Article does not apply when financial security is required by, and provided to, PENNDOT in connection with the issuance

of a Highway Occupancy Permit pursuant to Section 420 of the Act of June 1, 1945 (P.L. 1242, No. 428) known as the "State Highway Law".

- 401.H. Developer Default** - Where required improvements have not been properly or timely completed, or where the developer otherwise breaches any of the terms and conditions of the improvements agreement; the Township may claim against the financial security posted by the developer and undertake to install, construct, erect and/or complete such portions of the improvements as are then not completed, repaired or replaced as well as any portions of the improvements deemed defective or deficient, or otherwise cure the developer's default or breach. The Township may use the security to pay for all costs (including fees for engineers, attorneys and other necessary consultants) incurred in identifying, inspecting, enforcing and completing the developers obligation. To complete the work, the Township may do some or all of the work using its own labor force (and reimburse itself for all of the direct and indirect costs thereof including, but not limited to, employee wage and benefits costs, insurances, and engineering, legal and consulting fees) and/or may contract directly with third parties. The Township shall not be required to bid any work, and the developer shall become immediately responsible to pay to the Township any deficiency incurred as a result of the default or breach. The Township shall retain all other rights and remedies to secure compliance with the conditions of approval, the terms of the improvements agreement and completion of the work.
- 401.I. Violations of Improvements Agreement** – In addition to any other remedies at law or equity, any violation of this Article, including the terms of any improvements agreement shall be subject to the penalties and remedies afforded by the MPC.

Section 402 Reimbursable Fees

- 402.A. General Requirements** - The developer shall provide a signed Lowhill Township Professional Services Agreement (consultant escrow account) at the time an application for subdivision or land development is filed with the Township. – (**Please refer to Appendix 2 of this Ordinance**) The escrow account is for reimbursement to the Township for consultant review fees and other associated cost and fees relating to the project. The escrow account shall comply with the provisions of the approved Township Contract of Professional Services and or resolution. The escrow account shall be held in the name of, and be administered by, the Township for payment of all costs incurred by the Township and to be reimbursed by the developer pursuant to this Ordinance. The account shall be irrevocable and the funds may not be withdrawn or reduced in amount by other than the Township.
- 402.B. Duty to Replenish** - At such time as the funds held in the escrow account are depleted by one-half (1/2) prior to project close-out, the developer shall deposit into the escrow account additional funds as shall be determined by the Township, not to exceed the original escrow amount. Such funds shall be provided to the Township within ten (10) business days of the date of the Township's written request for same. Any failure of the Township to notify the developer of a deficiency in an escrow account or any failure to demand escrow account replenishment, shall not constitute a defense to, or waiver of, any claim by the Township to be reimbursed for fees paid or incurred by the Township in connection with the review, observation, and comment on the developer's application, and construction of the required improvements contemplated by the developer's application.
- 402.C. Developer Responsibility to Reimburse Township** - In accordance with the MPC and any improvements agreement, the developer shall reimburse the Township for all professional consultant review fees as herein defined. No construction contemplated by a plan shall commence and no recording of a plan shall occur until all consultant review fees paid or incurred by the Township are reimbursed by the developer.

- 402.D. Other Reimbursable Fees** – In addition to consultant review fees, the developer shall pay or reimburse to the Township administrative document processing, notary fees, recording fees, and such other fees as may occur.
- 402.E. Payment Schedule** - No construction of required improvements contemplated by an application shall commence and no recording of a Plan shall occur until all fees paid or incurred by the Township are paid by the developer in accordance with this Ordinance, applicable resolutions and/or the improvements agreement, as applicable.
- 402.F. Expense Escrow Account** - Following application approval and as a condition of recording the Plan, in order to fund and secure the developer's obligations, the developer shall enter into an appropriate agreement with the Township and a developer's expense escrow account pursuant to Section 403 of this Ordinance.
- 402.G. Interest Charged on Unpaid Fees** - In the event that the Township issues an invoice for charges in excess of the existing escrow account balance, in addition to the obligation to replenish the escrow account, the developer shall pay all sums due and owing as reflected on the invoice within thirty (30) calendar days of the date thereof. Thereafter, the unpaid balance of fees shall incur interest at the rate of one and one-half percent (3.5%) per month, not to exceed eighteen percent (18%) per annum (not compounded).
- 402.H. Failure to Pay Fees and Maintain Funds** - A failure by the developer to timely replenish an escrow account or to pay the Township's bill for consultant review fees may in the sole discretion of the Township result in the imposition of any or all of the preventive remedies found in Section 515.1 of the MPC, and/or the issuance of a "Stop-Work Order." In addition to these remedies the Township shall retain the right to initiate and prosecute actions at law or in equity to obtain payment and/or reimbursement of consultant review fees. In the event that the Township shall initiate suit to recover consultant review fees, the Township shall be entitled to claim and recover all costs, witness fees, expert witness fees and reasonable attorney fees relating to the prosecution of the claim.
- 402.I. Fee Disputes** - If, in accordance with the requirements of the MPC, a developer disputes the reasonableness or necessity of a consultant review fee, any appeal taken and perfected shall not stay the developer's obligation to pay or reimburse the Township, and the developer shall pay to the Township the full amount of the consultant review fee then due and owing without deducting the sum in dispute.

Section 403 Improvements Agreement

- 403.A. Agreement Required** - Where an approved application includes required improvements, the developer shall enter into a written improvements agreement in a recordable form providing for construction standards, financial security, expense escrow funds, maintenance guarantees, insurance, indemnification, and such other matters as the Township shall deem necessary to construct the approved application.
- 403.B. Insurance** - The improvements agreement shall include, at a minimum, the following provisions related to insurance. Upon request, full copies of the insurance policy shall be provided to the Township.
1. The developer shall obtain and maintain in full force and effect until eighteen (18) months after the required improvements have been finally approved or, if appropriate, dedicated or sold to the Township, whichever is later, the following insurance policies and coverage:
 - a. Comprehensive Commercial General Liability Insurance coverage including "premises

operations" coverage in the amount of \$2,000,000.00 and "products and completed operations" coverage in the amount of \$2,000,000.00, and with respect to both, naming as additional insureds "Lowhill Township and its Boards, Commissions and Authorities (including the individual members thereof) and their elected and appointed officers, officials, employees, professional consultants and agents" for any and all claims arising out of or relating to the performance of this Agreement;

- b. Owners and Contractors Protective Liability insurance in the amount of \$2,000,000.00, naming as additional insureds "Lowhill Township and its Boards, Commissions and Authorities (including the individual members thereof) and their elected and appointed officers, officials, employees, professional consultants and agents" bprovide liability coverage for any and all claims arising out of or relating to the negligent acts or omissions of independent contractors or subcontractors which arise out of or relate to the performance of this Agreement; and
- c. Commercial Motor Vehicle Insurance coverage.

- 2. The developer shall cause each insurance policy to include an endorsement which provides that the policy shall not be cancelable or subject to any amendment reducing the amount or breadth of coverage without at least thirty (30) days advance written notice to the Township, via certified mail.
- 3. Each policy of insurance obtained pursuant to this Section shall contain an endorsement making the same applicable solely to the application and the premises. A general policy applicable to other operations of the developer shall not be deemed to comply with these requirements
- 4. Each policy of insurance obtained pursuant to this Section shall contain an endorsement which provides that with respect to the additional insureds, the additional insurance provided shall be primary over all other applicable policies of insurance maintained by the additional insureds.
- 5. The developer shall furnish to the Township a copy of each policy and all endorsements and proof of payment of the annual premium, and thereafter at least annually, provide a certificate of insurance evidencing continuing compliance with this Section.
- 6. The developer shall require all contractors installing, constructing, erecting or completing the required improvements before commencing any work in connection with the application to provide to the developer and the Township certificates of insurance evidencing that each such contractor has in force and effect the insurance policies and coverage identified in sub-section 1, above, and the endorsements identified in sub-sections 2 through 4 above.

403.C. Indemnification - The developer shall indemnify, defend and hold harmless "Lowhill Township and its Boards, Commissions and Authorities (including the individual members thereof) and their elected and appointed officers, officials, employees, professional consultants and agents" from demands, claims, suits, actions or judgments of and from all damages or expenses on account of personal injury, death or property damage arising out of or relating to the plan, or the conditions of approval of the plan, or any work performed by or on behalf of the developer in connection with the plan or conditions of approval of the plan.

403.D. Assignment of Improvements Agreement - The improvements agreement shall not be assigned without the prior written approval of the Township and under terms and conditions acceptable to the Township. No assignment shall relieve the assignor of its duties and obligations to the Township under the improvements agreement.

Section 404 Financial Security

- 404.A. Requirement of Financial Security** - Upon preliminary application approval by the Board of Supervisors and in lieu of completing the required improvements of a plan prior to final plan submission and approval, an improvements agreement shall be executed by the developer, providing for financial security to secure the completion of construction of the required improvements. Financial security shall be calculated and provided in accordance with the MPC, this Ordinance, conditions of application approval, and applicable Township resolutions.
- 404.B. Forms of Security** - Unless otherwise permitted by the Township, financial security shall be in the form of an irrevocable letter of credit or cash escrow. Acceptable financial institutions shall include Federal institutions authorized to conduct such business within the Commonwealth and maintain an office in the greater Lehigh Valley area where claims against the security may be presented.
- 404.C. Amount of Financial Security** - The financial security shall be in an amount equal to one hundred ten percent (110%) of the cost of completion of the required improvements (which includes contingency allowances), estimated as of ninety (90) days following the date scheduled for completion.
- 404.D. General Construction Schedule** - The submission of a financial security estimate to the Township shall be accompanied by a general construction schedule setting forth the estimated dates of commencement and completion for the project. For projects with an anticipated duration greater than one (1) year, the developer's engineer shall adjust the financial security estimate to reflect an increase of ten percent (10%) per year for every year thereafter.
- 404.E. Posting of Additional Security** - If the financial security estimate fails to adequately address or excludes any required improvements because of oversight, because the need for the same was not anticipated by the engineers preparing or reviewing the plan and/or the cost estimates submitted pursuant thereto, or because of unanticipated field conditions, then the developer nevertheless shall be solely responsible for the installation, construction, erection and/or completion of the same and the cost thereof, and the Township, upon discovery that certain required improvements are not included in the engineering estimate or that the estimate is not properly calculated or is understated, may require the developer to post additional security in an amount adequate to address the deficiency as a condition precedent to proceeding with the development.
- 404.F. Adjustment of Security** - If the required improvements are not completed by the completion date set forth in the original construction schedule, the Township Engineer may annotate the Improvements Security Release Certification forms to reflect one hundred ten percent (110%) of the cost for the completion of the remaining required improvements estimated as of ninety (90) days following the original date scheduled for completion or a rescheduled date of completion, and the developer shall post the revised security.
- 404.G. Term of Security** - The developer shall maintain security for a minimum of ninety (90) calendar days after the scheduled completion date of construction unless a different date is established in the improvements agreement.
- 404.H. Approved Claim Form** - The developer shall provide to the Township a sample claim form, acceptable to the financial institution, for use by the Township in making claims against the security.

- 404.I. **Irrevocable Security** - The financial security shall be irrevocable during the term thereof and shall automatically renew unless thirty (30) days written notice is provided to the Township. The amount of security shall not be reduced except pursuant to written and signed authority by an authorized Township official. Minutes of meetings of the Board of Supervisors or other Township Authorities authorizing the reduction in financial security shall not constitute written authorization hereunder.
- 404.J. **Assignment of Security** - The security shall not be assignable to other parties without prior written authorization of the Township. A general assignment of the security is not a release of liability of the assignor.
- 404.K. **Reduction of Security** - The Township shall reduce the amount of financial security in accordance with the requirements of the MPC and applicable Township resolutions.

Section 405 Maintenance Guarantee

- 405.A. **Warranty on Structural Integrity and Function** - The developer warrants the structural integrity and function of all improvements to be conveyed or offered for dedication to the Township in accordance with improvements agreement for an eighteen (18) month period following the date of acceptance of the conveyance or dedication. During the warranty period, the developer shall repair, restore, or replace all work determined by the Township to be defective.
- 405.B. **Required Maintenance Guarantee** – A maintenance guarantee shall be provided by the developer to secure its obligation to repair, restore, or replace defective work that effects the structural integrity and function of all improvements that are offered for dedication or conveyance to the Township. The maintenance guarantee shall be submitted as a condition of the Township acceptance of the offer of dedication.
- 405.C. **Duration of Maintenance Guarantee** - The maintenance guarantee shall be in effect for a period of eighteen (18) months from the date of acceptance of dedication or sale to the Township.
- 405.D. **Amount of Security** – Security for the maintenance guarantee shall be fifteen percent (15%) of the actual cost of installation of the improvements.
- 405.E. **Type of Security** – Unless otherwise agreed to by the Township, the maintenance guarantee shall be in the same form as that used to secure the construction of the improvements.
- 405.F. **Irrevocable Maintenance Guarantee** - The maintenance guarantee shall be irrevocable and may not be withdrawn or reduced in amount without the consent of the Township.

Design Standards

Section 501 General

501.A. Other Standards and Requirements

1. The standards and requirements contained in this Article shall apply as minimum design standards for subdivisions and/or land developments. Whenever other Township ordinances, rules, resolutions, or regulations impose more restrictive standards and requirements than those contained herein, the more restrictive shall apply.
2. To the extent the design standards contained in this Ordinance are more restrictive in the Rural Village Zoning District than in the provisions of the Zoning Ordinance, the standards of this Ordinance shall govern.
3. Unless otherwise specified, all references in this Ordinance to documents, regulations, ordinances, rules and other material are to the latest edition, including amendments, replacements, revisions and/or superseding.
4. Subdivisions and/or land developments shall be designed to comply with the following:
 - a. The Lowhill Township Zoning Ordinance as amended;
 - b. The Lowhill Township Official Map;
 - c. The policies of the 2022 Northern Lehigh Multi-Municipal Comprehensive Plan as amended;
 - d. Lowhill Township Standard Construction and Design Ordinances and Documents;
 - e. All Regulations of PA DEP Act 167 Jordan Creek/Little Lehigh Watershed Drainage Plan and or Lowhill Stormwater Ordinance as amended concerning environmental and stormwater regulations. All existing Township stormwater ordinances have the ability to be more restrictive and or preempt PADEP NPDES requirements for specific stormwater BMP design and for stormwater runoff volumes and rates as determined by Lowhill Township Planning Commission at the time of preliminary plan approval.
 - f. PENNDOT Design Manual Part 2, Highway Design as amended;
 - g. AASHTO - A Policy on Geometric Design of Highways and Streets;
 - h. All applicable Township, State and Federal rules and regulations; and
 - i. Commonly accepted engineering standards.
5. Where no written standard applies, the development shall be designed to an acceptable industry standard as determined by the Township Engineer.
6. Whenever the Zoning Ordinance provides that the use proposed by the developer for subdivision and/or land development approval shall constitute a use by special exception or a conditional use, the application shall be designed and developed in accordance with any conditions which have been imposed by the Zoning Hearing Board or the Board of Supervisors, as applicable.

7. Whenever the developer proposes to develop a subdivision and/or land development in a manner that would require a variance from any requirements of the Zoning Ordinance, the application shall be designed and developed in accordance with any conditions which have been imposed upon the granting of such variance or variances by the Zoning Hearing Board.
 8. The developer shall obtain all required easements and rights-of-way to the satisfaction of the Township. Under no circumstance shall the Township be obligated to secure easements or rights-of-way. All easements and rights-of-way shall be in the form of a written agreement prepared to the satisfaction of the Township.
- 501.B. Environmental Protection** - Characteristics, such as site configuration, geology, soil, topography, bodies of water, ecology, wildlife, vegetation, structures, road network, visual features and past/present use shall be considered in the design of the proposal. To the greatest extent possible, designs shall preserve the natural features of the site, avoid areas of environmental sensitivity, and minimize negative impacts and alteration of natural features.
- 501.C. Land Requirements** - No subdivision and/or land development shall occur in such a way that would threaten the public health and safety including hazards of toxic substances, traffic hazards, explosive hazards and/or fire hazards. Land shall be suitable for the purpose for which it is to be subdivided and/or developed. Land subject to hazardous conditions, such as open quarries, mines, mine shafts, sinkholes, limestone solution channels, unconsolidated fill, landslides, groundwater mounding, high soil loading ratios, poor soil infiltration, flooding, excessive erosion, unsafe water supply or hazardous or toxic site pollution, shall not be approved for subdivision and/or land development until the developer has provided, or has legally committed to provide, adequate measures to overcome or eliminate, mitigate and/or safeguard against such hazards, in the determination of the Board of Supervisors, to the best of their knowledge. However, the Township accepts no responsibility to identify or to guarantee their resolution.
- 501.D. Coordination With Nearby Development** - A subdivision and/or land development and its street pattern shall be coordinated with existing or approved nearby developments or neighborhoods, to develop the area and the community harmoniously, and to prevent conflicts between neighboring development.
- 501.E. Design and Environmentally Sustainable Goals** – All land development plans shall be designed to minimize impervious cover and to mitigate adverse effects of noise, glare, odor, traffic and stormwater drainage issues on neighboring properties. Additionally, all non-residential uses are required to utilize LEEDv4 (Leadership in Energy and Environmental Design) for SS Credit only (stormwater and other environmental credits and or with architectural designs) when designed and must be shown on the applicants land development preliminary and final plan application at the time of the initial submission. .

Section 502 Proposed Streets

502.A. General

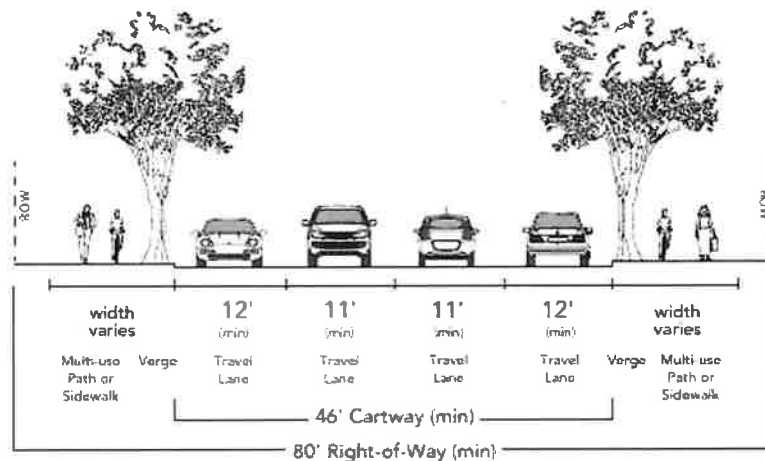
1. **Arrangement of Streets** - Streets shall be designed to:
 - a. Permit the safe, efficient, and orderly movement of vehicles and facilitate adequate access for emergency vehicles;
 - b. Provide, when possible, two directions of vehicular access to and within a development;
 - c. Meet the needs of the present and future population;
 - d. Provide a simple and logical pattern;
 - e. Function under a hierarchy system where the intensity of intersections decreases as traffic volumes and speed increase;

- f. Conform to the natural features and topography;
- g. Present an attractive streetscape; and
- h. Harmonize with existing streets forms and patterns.
- i. Rights-of-way Rights-of-way shall be set aside to provide adequate space for the construction and maintenance of streets, shoulders, curbs, street gutters, and cross drainage pipes and culverts. They may also accommodate sidewalks, snow storage, sight triangles, slope maintenance areas, and utilities such as water, sewer, storm drainage, electrical service, cable TV, and gas lines where appropriate.

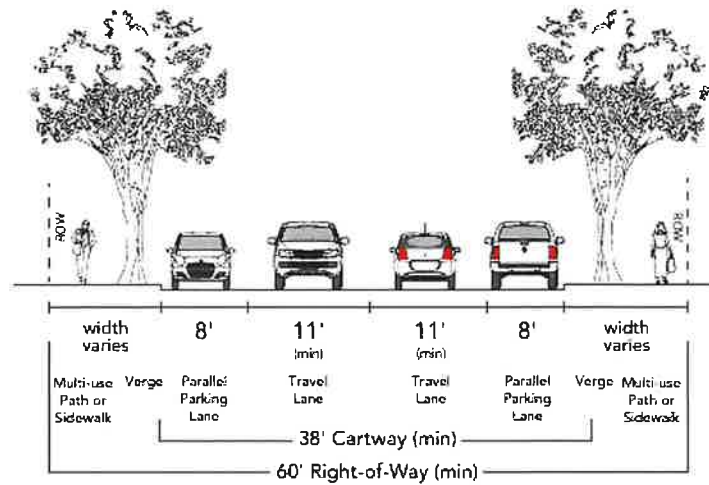
2. **Street Classification** - Classifications for proposed streets are as follows:

- a. **Arterial and Minor Arterial** - A street used primarily for through traffic that maximizes mobility over land access through infrequent driveway intersections. This type of roadway typically connects urban centers with outlying communities and employment or shopping centers.
- b. **Collector** - A street used primarily for moving traffic from local streets to the major system of arterial streets and/or linking those streets to community wide activity centers, including but not limited to the large residential developments, commercial and industrial areas, smaller rural settlements.
- c. **Local** - A street used primarily for immediate access to adjoining land uses and are generally separated from through traffic. These roads are generally intended for transportation within a particular neighborhood, serving internally developed areas, while in outlying rural areas, local roads tend to run for great distances and serve more individual properties.

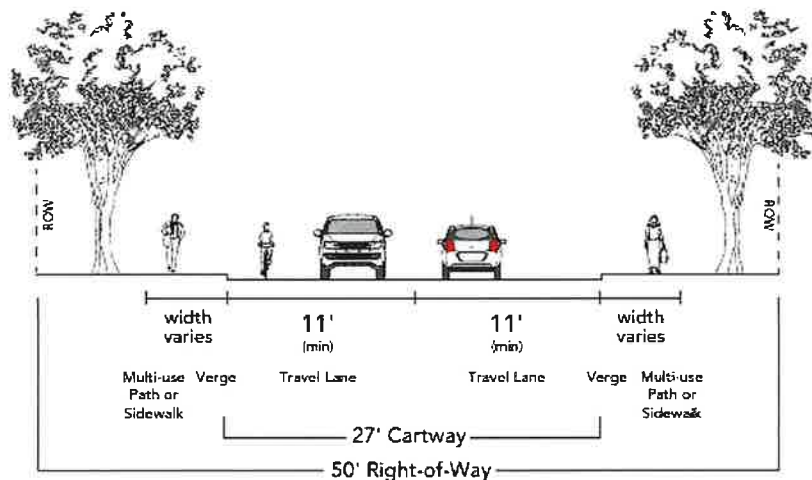
Arterial and Minor Arterial Roads Diagram



Collector Roads Diagram



Local Roads Diagram



502.B. **Street Function**

1. Where the Township deems appropriate, streets shall be designed to form continuations of streets with similar function and to access streets of a greater function.
2. Local streets shall be laid out to discourage use as a collector street and discourage excessive speeds.
3. Where vehicular circulation and safety considerations necessitate providing for street access to adjacent property, streets shall be extended by dedication to the boundary of such property. Streets shall provide an interconnected network of for efficient trips within the neighborhood and more appropriately accommodates pedestrian, and bicycle oriented trips.
4. No vehicular access is permitted along an arterial street when alternative access is possible from a street of less classification.
5. Access to arterial streets shall be designed for use by adjoining properties to coordinate and reduce the number of access points. Shared access drives, feeder roads, marginal access streets, reverse frontage lots, or other such treatment should be utilized to reduce the number of intersections along arterial streets.

502.C. Street Provisions for Future Development

1. Where the Township deems appropriate, areas shall be reserved for future streets in conjunction with the development of adjacent land. Areas reserved for future streets shall include sufficient area to establish street and lot grades and the extent of area necessary to construct the street. The Township may require the extension of sanitary sewer and water supply lines within the future street. An agreement satisfactory to the Township shall be submitted for the construction and future removal of the temporary turnaround.
2. Wherever there exist a dedicated or platted area reserved for future streets along the boundary of a property being developed, the adjacent street shall be extended into the proposed project.
3. When connecting a proposed street to an existing temporary cul-de-sac, such connection, and all work required to restore the adjacent lots in the area of the existing turnaround shall be the responsibility of the developer proposing the connection.

502.D. Street Signs, Traffic Controls, and Street Names - Street signs, traffic controls and parking controls shall be constructed and installed by the developer according to the specifications of the Township and PENN DOT. Streets that are continuations of existing streets shall be known by the same name. The developer shall erect at every street intersection street name signs and stop signs, meeting Township approval, having thereon the names of both intersecting streets. Name signs shall have mixed case lettering with the first letter in uppercase followed by lowercase lettering. The initial uppercase letter shall have a minimum height of 6 inches. Lettering shall be white on a green background. Street name signs and stop signs shall be erected on a street prior to the first dwelling on that street being occupied, and on all streets providing access to the dwelling(s) being occupied. Street name signs and stop signs shall be diamond grade reflective sheeting and installed on PENNDOT approved breakaway posts. Street name signs and stop sign shall not be installed on the same post resemble names of existing streets. All new street names are subject to Township approval.

502.E. Vertical Street Alignment

1. Street Grade - Vertical street alignments shall be measured along the centerline. The minimum grade of all streets shall be one percent (1%) unless in a transition between a crest or sag. The maximum grade for streets shall not exceed ten percent (10%). Local streets, where access is also available over streets with ten percent (10%) or less, may have grades up to twelve percent (12%). A cul-de-sac street shall not exceed ten percent (10%) and the cross-slope of a turnaround shall not exceed five percent (5%).
2. Vertical Curve - Vertical curves shall be used in changes of grade exceeding one percent (1%). The minimum lengths (in feet) of vertical curves shall be according to AASHTO A Policy on Geometric Design of Highways and Streets. Vertical curves shall be consistent with the proposed posted speed limit. The development plan must identify the designated design speed for each street. The designated design speed is subject to Township approval. The posted speed limit shall not exceed the design speed limit.
3. Street Grade at Street Intersection - A leveling area shall be provided where the approaching grade, within one hundred feet (100') of the centerline intersection, exceeds seven percent (7%) on streets at a four-way street intersection, or the terminating street at a three-way intersection. Such leveling area shall have a maximum grade of five percent (5%) for a minimum length of one hundred feet (100') measured from the intersection of the centerlines.
4. Street Grade at Street Turnaround - The grade, in all directions, within the diameter of a turnaround and along the curb line at the terminus of a permanent cul-de-sac shall be at least one percent (1%) and not exceed five percent (5%) in all directions.

5. Street Side Slope - All areas within the street right-of-way shall be graded substantially consistent with the street centerline and shall be constructed according to the Standard Construction Documents.

502.F. Horizontal Street Alignment

1. Horizontal Curves - Horizontal curves shall be used at all angle changes. Horizontal street alignments shall be measured along the centerline. Single, long radius curves shall be used, rather than a series of curves with varying radii and/or a series of short curves separated by short, straight segments. The minimum centerline radii for horizontal curves shall be according to AASHTO A Policy on Geometric Design of Highways and Streets. Horizontal street alignments shall be consistent with the proposed posted speed limit. The development plan must identify the designated design speed for each street. The designated design speed is subject to Township approval. The posted speed limit shall not exceed the design speed limit.
2. Perimeter Street - Where streets are located along the perimeter of a property, the developer shall obtain, clear sight triangle, and sight distance easements within the adjacent properties.
3. Cartway Alignment - The centerline of the street cartway shall correspond with the centerline of the street right-of-way.
4. Intersection - Right angle intersections shall be used whenever possible. No street shall intersect another at a centerline angle of less than seventy-five degrees (75°), or more than one hundred and five degrees (105°). Intersections shall be approached on all sides by a straight centerline with a minimum length of fifty feet (50').

502.G. Street Improvement Specifications - All streets shall be designed and constructed in accordance with:

1. Standard Construction Documents;
2. PENNDOT Design Manual Part 2, Highway Design; and
3. AASHTO - A Policy on Geometric Design of Highways and Streets.

502.H. Traffic Calming Measures - The Township may require the installation of "traffic calming measures" for streets and access drives. Traffic calming measures are devices, systems and programs described in PENNDOT Publication 13 Design Manual Part 2, Contextual Roadway Design, Chapter 18 *Traffic Calming* as amended. The criteria used to determine the necessity, location, design, and construction of traffic calming measures, including all related warnings, signs, and markings shall be in accordance with accepted traffic engineering principles and Publication No. 13.

502.I. Street Intersection

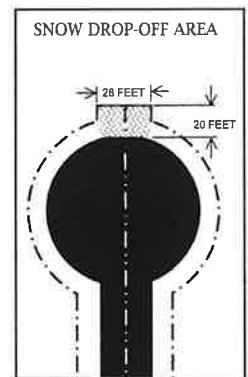
1. State Route - All intersections with a State Route shall be subject to the approval of PENNDOT. The developer shall include Township comments with the submission of a PENNDOT Highway Occupancy Permit.
2. Multiple Intersections - Multiple intersections involving the junction of more than two (2) streets are prohibited. Only three-and four-way intersections are permitted.
3. Separation - Streets shall intersect with a common street centerline or be offset according to the following standards:
 - a. The two (2) streets shall be separated by a distance of one hundred fifty feet (150') between centerlines, measured along the centerline of the street being intersected, when all streets involved are local streets;
 - b. The two (2) streets shall be separated by a distance of four hundred feet

(400') between centerlines, measured along the centerline of the street being intersected, when one or more streets involved are collector streets; and

- c. The two streets shall be separated by a distance of one thousand feet (1,000') between centerlines, measured along the centerline of the street being intersected, when one or more of the streets involved are arterial streets.
4. **Radii** - The cartway edge at intersections shall be:
 - a. Designed for the largest vehicle anticipated to use the intersection. The minimum radii shall conform to PENNDOT Design Manual Part 2, Highway Design, and AASHTO Design Manual, Exhibit 9-20, Edge of Traveled Way for Turns at Intersections;
 - b. Rounded with a minimum fifty-five foot (55') tangential arc for arterial and collector streets, and thirty feet (30') tangential arc for local streets;
 - c. Provided with acceleration and/or deceleration lanes when deemed by the Township to be necessary; and
 - d. Substantially concentric with the street right-of-way edge.
5. **Sight Triangle** - There shall be provided and maintained a sight triangle at all intersections in conformance with the requirements of the Zoning Ordinance.
6. **Sight Distance at Intersections** - All intersections shall be designed to comply with the minimum sight distance requirements, as described in Pennsylvania Department of Transportation Design Manual Part 2, Highway Design, and AASHTO A Policy on Geometric Design of Highways and Streets.. Whenever a proposed street intersects an existing or proposed street of higher-order or traffic volume, the street of lower-order or traffic volume shall be made a stop street. The street of lower order or traffic volume shall also be designed to provide a minimum clear line-of-sight.

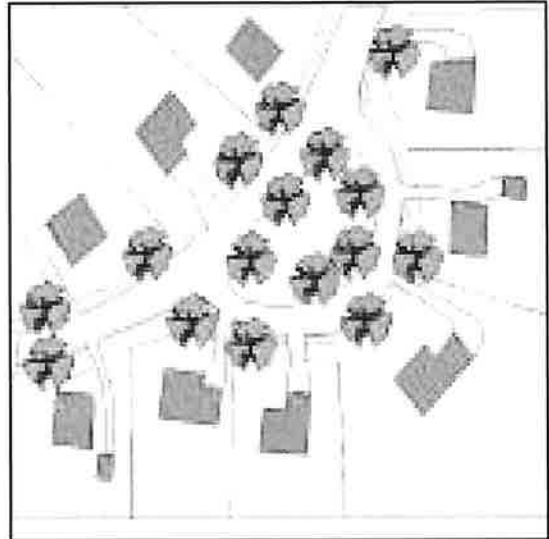
502.J. Cul-de-Sac Street (Dead-end Street)

1. **Length** - Temporary or permanent cul-de-sac streets shall have a minimum length of two hundred fifty feet (250') and not exceed six hundred feet (600') in length or provide access to greater than twenty-five (25) residential dwelling units. The cul-de-sac length is measured from the centerline intersection with a street that is not a cul-de-sac, to the center of the cul-de-sac turnaround.
2. **Turnaround** - All cul-de-sac streets, whether permanently or temporarily designed, shall be provided with a fully-paved, closed-end, turnaround at a minimum width/diameter of one hundred feet (100') and a right-of-way width/diameter of one hundred twenty feet (120'). The use of a temporary turnaround shall be guaranteed by a temporary easement until the street is extended. At the time that a temporary cul-de-sac is extended, the area located within the temporary turnaround shall be released to the abutting landowner. A right side centerline offset for the turnaround is desired. A left side centerline offset of the turnaround is prohibited.
3. **Snow Drop-Off Area** - A snow drop-off area shall be provided at the terminus of the turnaround area. The snow drop-off area shall be twenty-eight feet (28') wide and twenty feet (20') deep from the street curb line. The snow drop-off area shall be centered on the centerline of the street as the street approaches the turnaround area. The snow drop-off area shall be free of utility terminal boxes, mailboxes, and other facilities that may hamper snow storage, or may require accessibility during snow periods. Street curb located with the snow drop-off area shall be depressed. The sidewalk shall be located outside the snow drop-off area. The snow drop-off area shall be a permeable surface.



502.K. Eyebrow and Loop Streets

1. **Design** – These streets are a semicircular shaped streets, providing one-way circulation to and from a through street with an interior green space, containing trees, shrubs and ground cover located between the through street and the eyebrow and/or loop street. These streets shall maintain a minimum pavement width of eighteen feet (18'), and a minimum inside diameter of thirty feet (30').



2. **Maximum Length** – These streets shall have a maximum length of six hundred feet (600') measured from the centerline intersections with a through street or provide access to no greater than twenty-five (25) residential dwelling units.

3. **Private Ownership** – These streets and the interior green space shall be privately owned and maintained as a private street.

502.L. Vehicle Access to Lots and Units of Occupancy - The location and number of vehicle access points (streets, access drives) shall be adequate for, and appropriate to, the size and nature of the land use. Development that generates greater than two hundred twenty five (225) average daily vehicle trips per day shall have at least two (2) vehicular access points.

502.M. Street Lights - When provided, street lights shall be in conformance with the Zoning Ordinance.

502.N. Street Trees - Street trees shall be provided according to Section 518.

502.O. Private Street - Private streets shall meet all street design standards of this Ordinance. Approval of a private street shall be at the discretion of the Board of Supervisors. Applications proposing private streets shall include a written operation, maintenance, future use, and ownership document that shall be recorded with the office of the Lehigh County Recorder of Deeds in conjunction with the Final Plan. The developer shall provide to the Township any and all private street documents for review and approval.

Section 503 Modifications to Existing Streets

503.A. Modifications to existing streets shall conform with the following:

1. For the purpose of determining the extent of onsite improvements as defined by the MPC to be required of a developer hereunder, and where necessary for the ingress to or egress from the subdivision or land development; the entire width of a street abutting the developer's property including right-of-way and ultimate right-of-way, shall be deemed to be onsite.
2. Where deemed to be onsite, existing streets shall be modified to comply with the applicable street width.
3. Where a subdivision or land development abuts an existing street of improper cartway or a right-of-way width, improvement or alignment, as herein required, the dedication of land in accordance with the Zoning Ordinance, or additional as may be required to widen the street and/or correct the improvement or alignment shall be provided, or as an alternative, at the discretion of the Township, a fee in lieu of the of the dedication of right-of-way shall be provided in an amount

determined by Township.

4. Where a subdivision or land development requires the construction of onsite improvements, as identified by an approved traffic impact study, including but not limited to signalization, the same shall be designed, constructed, and installed at the developer's sole cost and expense. If a traffic impact study is not performed, the developer shall install at its sole cost and expense all onsite improvements required by accepted traffic engineering principles.
5. The design and placement of traffic control and other street signs placed within public right-of-way shall follow the requirements specified in the most current edition of the Federal Manual of Uniform Traffic Control Devices for Streets and Highways as amended
6. At least one street-name sign pole shall be placed at each intersection identifying all crossing street names. Signs shall be placed so they do not obstruct sight distances, and shall be under light standards if present. The design of street-name signs shall be consistent, of a style appropriate to the community, of a uniform size and color, and erected in accordance with any local standards
7. At signalized intersections, street signs shall be located on the overhead arm supporting the traffic signal, or otherwise suitably suspended over the intersection. Street clearance shall be a minimum of 15 feet from the bottom of any sign or supporting equipment and the top of the paved surface.
8. Where a subdivision or land development abuts in whole or in part an existing street intersection, all property abutting each side or corner of the street intersection shall be deemed to abut the developer's property for the purpose of determining whether improvements are deemed onsite.

Section 504 Alleys

504.A. Alleys shall conform with the following:

1. The use of alleys is limited to providing a secondary means to the side and or the rear of those lots with street frontage and designed to discourage through traffic .
2. Except as otherwise required by the Zoning Ordinance, no part of any dwelling, garage or other structure shall be located within four feet (4') of the cartway of an alley.
3. Alleys shall be designed in accordance with the street standards in Sections 502.A., 502.B., 502.C., 502.E., 502.F., 502.H., and 502.I.
4. The distance between the centerline intersections of alleys with streets shall be measured along the centerline of the street being intersected and conform with the following:

Classification	Minimum Separation
Arterial	1,000 feet
Collector	400 feet
Local	150 feet

5. An alley shall not terminate in a dead-end or cul-de-sac.
6. A minimum right-of-way width of eighteen feet (18') and a minimum cartway width of sixteen feet (16') shall be provided for alleys.
7. Alleys shall be privately owned. Applications that propose private alleys shall include a written operation, maintenance, future use and ownership document that shall be

recorded with the office of the Lehigh County Recorder of Deeds in conjunction with the Final Plan. The developer shall provide to the Township any and all private alley documents for review and approval.

8. All alleys shall be designed and constructed in accordance with of the Lowhill Township Standard Construction Documents and of PENNDOT Design Manual Part 2, Highway Design, and AASHTO A Policy on Geometric Design of Highways and Streets.

Section 505 Driveways

505.A. Driveways shall conform with the following:

1. Driveways shall conform to the standards and slopes contained in the Zoning Ordinance. The Township may require the plan to identify the potential location of driveways when site conditions may limit available driveway locations. Copies of all joint driveway easements and deed restrictions must be provided at the time of final plan approval
2. Driveway intersections with a State Route shall be subject to the approval of PENNDOT. The developer shall include Township comments with the submission of a PENNDOT Highway Occupancy Permit.
3. General: Driveways shall be located, designed, constructed and maintained in such a manner as not to interfere or be inconsistent with the design, maintenance, and drainage of the street.
4. Approach: All driveway entrances shall be designed to maintain proper drainage from the street. Where the street is curbed, driveway approaches shall be installed to maintain continuation of flow along the gutter-line. Alternatively, a gutter-line may be formed in the pavement across the driveway entrance to ensure proper drainage.
5. Minimum distance from Intersections: The distance from the edge of pavement of the intersecting street to the point of curvature of the driveway edge of pavement or curb radius shall be a minimum of 20 feet on curbed streets and 30 feet on uncurbed streets. For flared driveways, measurement shall be to the beginning of the flair. In no case shall the tangent distance between the intersection radius and driveway radius or flair point be less than 10 feet
6. Corner lots: When bounded by streets of two different street classifications, driveways for corner lots shall gain access from the street of lower classification. However, access shall be permitted from the street of higher classification in the following cases: 1. if no other reasonable access is available; and 2. when grading limitations or other restrictions dictate that access be from the higher order street.
7. Property line clearance: Except for joint-use driveways, no portion of any access shall be located outside the property frontage boundary line.
8. Sidewalk Crossing: If a sidewalk is present, the sidewalk pavement material (concrete) shall be continued across the driveway width.
9. Joint Use Driveways are prohibited.

Section 506 Access Drives

506.A. Zoning Ordinance Standards - Access drives shall conform to the Zoning Ordinance.

506.B. Vertical Alignment -The vertical alignments of access drives shall conform to the specifications for streets, as stated in Section 502.E.

- 506.C. Horizontal Alignment** -The horizontal alignment of access drives shall be measured along the centerline. Horizontal curves shall be used at all angle changes more than two degrees (2°). All curves shall be tangential arcs. The minimum horizontal curve radius shall be seventy-five feet (75').
- 506.D. Dead-End** - Access drives which form a dead-end shall not exceed six hundred feet (600') in length, measured from the centerline intersection of a street or access drive which is not a dead- end. Dead-ends that do not terminate in a parking compound shall be provided at the terminus with a fully paved turnaround with a minimum diameter of one hundred feet (100'). The Township may permit an alternative turnaround design, including a turnaround incorporated in a parking court or a landscaped island, provided safe movement of traffic is assured.
- 506.E. Parking** - When vehicular parking is prohibited along access drives, the prohibition must be acknowledged on the plan and properly signed along the cartway.
- 506.F. Improvement** - The cartway of all access drives shall be constructed to the local street improvement specification stated in Section 502.G., except for right-of-way and cartway width.
- 506.G. Side Slope** - The maximum slopes of areas located within twenty feet (20') of the cartway shall not exceed three to one (3:1) for fills and two to one (2:1) for cuts.
- 506.H. Radii** - The cartway edge at intersections shall be:
1. Designed for the largest vehicle anticipated to use the intersection. The minimum radii shall conform to PENNDOT Design Manual Part 2, Highway Design, and AASHTO Design Manual.;
 2. Provided with acceleration and/or deceleration lanes when deemed by the Township to be necessary; and
 3. Perpendicular to the intersection.
- 506.I. Access Drive Signs, Traffic Controls and Name Signs** - Access drive signs, including name, traffic controls and parking controls shall be constructed and installed by the developer according to the specifications of the Township and PENNDOT.

Section 507 Bicycle Paths & Recreation Trails

- 507.A. Bicycle Paths** - Bicycle paths shall be provided, when designated on or as part of an Official Map, or as otherwise required by the Township. Bicycle lanes located within a street right-of-way shall conform to PENNDOT specifications.
- 507.B. Recreation Trails**
1. Recreation trails shall be provided, when designated on or as a part of an official plan or map, or as otherwise required by the Township.
 2. Choice of surface materials includes bituminous mixes, concrete, gravel, soil cement, stabilized earth, and wood planking. The type of material shall be based upon the projected intensity of use and may be determined by the developer, subject to approval by the Township. Trails shall be constructed and maintained in a firm and stable condition.
 3. Trail width shall be a minimum width of eight feet (8'). Trail signage and their locations shall be required and the design of the Trail signs shall be approved by the Township.
 4. Trails surfaces and its material shall be meet ADA standards and located in common open space area or in a minimum sixteen feet (16') wide easement.
 5. Marked crosswalks shall be provided within vehicular travel ways intersecting trails according to PENNDOT standards.

6. The intersection of a trail and a street shall conform to the clear sight triangle and safe stopping distance according to PENNDOT standards.

507.C. Non-Licensed Vehicle Crossings - Non-licensed vehicle crossings (e.g., bicycle, carriage, golf carts, off-road vehicles, and snowmobiles) of a street, alley, access drive, or driveway shall conform to PENNDOT standards.

Section 508 Vehicular Parking

Off-street parking shall be provided as specified in the Zoning Ordinance. Designated parking stalls and lots shall not be utilized to store or sell product or store any donation type clothing bins.

Section 509 Off-Street Loading

Off-street loading spaces shall be provided as specified in the Zoning Ordinance.

Section 510 Sidewalks

Sidewalks shall be provided along all streets and access drives. Sidewalks along access drives leading to streets do not need to parallel an access drive when the Township determines that an alternate location is suitable. Sidewalks shall be provided as specified in the Lowhill Township Standard Construction Details as shown in Appendix 6 of this Ordinance and in the Zoning Ordinance. Sidewalks and entrance to all commercial sites shall not be utilized for selling products or storage of products at any time.

Section 511 Curbs

Curbs shall be provided along all streets and along all access drives where there is parallel sidewalk. Curbs shall be provided as shall be provided as specified in the Lowhill Township Standard Construction Details and Documents as shown in Appendix 6 of this Ordinance.

Section 512 Blocks and Lots

512.A. General - The configuration of blocks and lots shall be based upon the lot area requirements of the Zoning Ordinance, traffic circulation, salient natural features, existing man-made features, and land use. Lot configurations should provide for flexibility in building locations, while providing safe vehicular and pedestrian circulation.

512.B. Residential Block - All blocks in a residential subdivision shall have a maximum length along any side of one thousand, six hundred feet (1,600') and a minimum length of any side of two tiers of lots that conform to the prevailing standards.

512.C. Nonresidential Block - Block configurations in nonresidential areas shall be based primarily upon safe and efficient traffic circulation, and salient natural features.

512.D. Lot Configuration

1. Side lot lines shall be at right angle or radial to street lines, whenever practical.
2. Lot lines shall, wherever feasible, follow municipal boundaries, rather than cross them.
3. Lots with areas that are two (2) or more times the minimum area requirements shall, wherever feasible, be designed with configurations that allow for additional subdivision. The Township may require a sketch plan of such large lots that indicates the potential future subdivision is generally in conformance with the design standards.

4. All lots shall front on a street. Satisfactory guarantee of the street construction shall be provided to the Township, when a lot is provided with street frontage solely from a proposed street that is located within an adjoining municipality.
5. Lots that front upon two parallel streets, or upon two streets that do not intersect (also know as through lots), shall comply with the Zoning Ordinance.
6. Flag lots and similar lot configurations are prohibited in Lowhill Township.

Section 513 Easements

513.A. Easements shall be provided according to the following:

1. Easements shall be provided for public or shared facilities, services and utilities;.
2. Easements shall be located in a manner that minimizes disruption of the use or land;
3. Nothing shall be placed, planted, set, or constructed within an easement that would adversely affect the function of the easement or conflict with the easement agreement;
4. All existing and proposed easements shall be identified on the plan and shall include a metes and bounds description;
5. When deemed appropriate by the Township, the plan shall identify the entity to which the easement is granted and the terms thereof;
6. Each easement depicted on the plan shall be the subject of a written agreement to be recorded in the office of the Lehigh County Recorder of Deeds. Any easement agreement which includes the Township or Authorities as parties is subject to Township approval. Each agreement shall be recorded concurrently with the final plan;
7. Every deed for property that is burdened by an easement shall contain a notice thereof on the deed.
8. Sanitary sewer, water supply and storm water easements shall have a minimum horizontal width of thirty feet (30') unless a greater width is required by the Township. In the case of a shared easement, sufficient area shall be provided to allow a minimum horizontal separation of ten feet (10') between the facilities, and from the edge of the easement boundary; and
9. Where an existing utility (i.e., electric or telephone transmission or petroleum product transmission line) traverses a property, the developer shall identify the easement or right-of-way and provide a plan note certifying compliance with any existing easement or right-of-way.

Section 514 Survey Monuments and Markers

514.A. Survey monuments and markers shall be provided according to the following:

1. Permanent stone or concrete monuments shall be accurately placed along one side of the right-of-way lines of each street and on the property lines of the parent property. Monuments shall be placed at the intersection of all street lines forming angles, changes in direction, and at the end of each curved line. An intermediate monument shall be placed wherever topographical or other conditions make it impossible to sight between two otherwise required monuments.
2. Markers shall be set at all points where lot lines intersect curves and/or other property lines.

3. Monuments shall be of concrete or stone, with a flat top having a minimum width or diameter of four inches (4") and a minimum length of thirty inches (30"). Concrete monuments shall be marked with a three-quarter inch ($\frac{3}{4}$ ") copper or brass dowel; stone or pre-cast monuments shall be marked on the top with a proper inscription and a drill hole.
4. Markers shall consist of iron pipes or steel bars at least thirty inches (30") long and not less than a three-quarter inch ($\frac{3}{4}$ ") diameter.
5. All monuments and markers shall be placed by a registered land surveyor so that the scored or marked point shall coincide exactly with the point of intersection of the lines being monumented or marked.
6. All monuments/markers shall be set flush with the finished grade, except for temporary placement and/or woodland conditions.
7. Existing and proposed monuments and lot line markers shall be delineated on the plan and installation certified by the developer.

Section 515 Stormwater Management

Applications shall conform to the requirements of the Lowhill Township Stormwater Management, Drainage and Erosion Control Ordinance and or Act 167 Jordan Creek/Little Lehigh Creek Stormwater Drainage Plan as amended prior to the Lowhill Board of Supervisors preliminary and or /final plan approval. All engineering details for erosion control and stormwater drainage systems shall be provided as specified in the Lowhill Township Standard Construction Details as shown in Appendix 6 of this Ordinance and as required in all other Township Ordinances.

Section 516 Floodplains

Applications shall conform to the floodplain standards of the Township Zoning Ordinance.

Section 517 Wetlands

Applications shall conform to the wetland requirements and standards contained in the Township Zoning Ordinance, in this ordinance and in Lowhill Township Stormwater Management, Drainage and Erosion Control Ordinance

Section 518 Landscaping Requirements

518.A. Preservation and Protection of Existing Wooded Areas and Natural Features

All new land developments and major subdivision plans that are proposed to disturb more than 2000 square feet shall be required to prepare a landscaping/planting plan and shall be prepared by a landscape architect registered by the Commonwealth of Pennsylvania to engage in the practice of landscape architecture. In addition, planting plans shall include a planting schedule which summarizes the quantity, type, size and root conditions of all plantings. A compliance chart shall also be included, which demonstrates compliance with all of the requirements of this Ordinance. A full detailed landscaping and buffering plan in an electronic format with elevations and renderings shall be provided at the time of preliminary plan application for Township approval.

1. **Waiver of Section 518.A. Landscaping Plan Requirement-** In the event that an applicant requests a waiver from the Landscaping Requirements of this Section 518.A. on the basis that compliance with such requirements would represent an undue hardship, the granting of any such waiver may be conditioned upon the payment to the Township of a fee-in-lieu of planting. Such required landscaping shall be in accordance with the following:

- a. The developer shall provide sufficient plans and documentation to establish what landscaping is to be waived, to permit the proper evaluation of the effect

of the grant of the proposed waiver and the reasons for such waiver.

b. The fee shall be based upon the value of the required landscaping that is to be waived. The calculation of which value shall be performed by a registered landscape architect licensed by the Commonwealth of Pennsylvania, and shall be based on the costs of materials, installation, relocation, and guaranty of the landscaping that is not to be installed.

c. The fee-in-lieu of the provision of the required landscaping shall be used, unless the developer paying such fee shall agree otherwise, only for the purpose of providing for the planting of trees and other landscaping on Township owned lands or along the streets or highways of the Township.

2. Protection of Existing Trees and Plant Material:

a. All major subdivisions and land developments shall be laid out in such a manner so as to maximize preservation of healthy trees and shrubs on the site. Any trees with a diameter of ten (10) inches or more that are removed must be replaced pursuant to this SALDO and shown on the preliminary plan to be removed.

b. On a forested lot, tree removal shall be permitted in the following areas only:

- i. On land to be occupied by a building or structure and within 40 feet of all sides of a building or structure.
- ii. On land to be occupied by and within 15 feet of all sides of any driveway, parking area, stormwater management facility, utility line, water system or sewage disposal system.
- iii. In any location where removal of a tree is required by a Township Ordinance.

c. No grading, construction activity, or storage of topsoil or materials shall occur within a tree protection zone (**TPZ**) measured 15 feet from the trunk of a tree to be retained, or the distance from the trunk to the dripline, whichever is greater. No equipment may be driven over this area and no building materials are to be stacked against the trees or within the area of this buffer. Prior to construction, the TPZ shall be delineated by the following methods:

- i. The TPZ that is delineated on the site prior to construction shall conform to the approved development plans.
- ii. All trees scheduled to remain shall be marked; where groups of trees exist, only the trees on the edge need to be marked.
- iii. A 48-inch high wooden snow fence mounted on steel posts, located 8 feet on center, or other delineation approved by the Township, shall be placed along the boundary of the TPZ.
- iv. When the tree protection fence has been installed, it shall be inspected and approved by the Township prior to clearing and further construction.
- v. Fencing along the tree protection zone shall be maintained until all work/construction has been

- vi. Trees being removed shall not be felled, pushed, or pulled into a TPZ or into trees that are to be retained.
- d. During the construction on any site, trees and shrubs to be preserved shall be protected by snow fencing, safety fencing, or silt fencing, to insure that there is no encroachment within the area of their dripline by changing grade, trenching, stockpiling of building materials or topsoil, or the compaction of the soil and roots by any motor vehicle unless the following regulations are met:
- i. The grade of land within the entire area of dripline shall not be raised more than 6 inches unless tree wells are constructed around each trunk or group of trunks and aeration pipes are extended out to the edge of the dripline.
 - ii. Tree wells are to be constructed of uncemented stone, or any other suitable material. Such walls shall be a minimum of three (3) feet in diameter or 1 foot in diameter for each inch in caliper measured twelve (12) inches above natural ground level, whichever is greater; and shall be a maximum of three (3) feet deep.
 - iii. Retaining walls are to be constructed around each tree or group of trees immediately after any grade is lowered within the area of the dripline. This retaining wall is to be constructed of 8-inch by 8-inch pressure treated landscape ties or any other suitable material. Retaining walls must be designed and constructed to withstand overturning and frost heave.
- e. If any plant material is to be moved, it must be done in accordance with specifications set forth by the American Association of Nurserymen.
- f. All diseased or dead trees shall be promptly removed from the site. All trees to be preserved shall be pruned when necessary to remove dead limbs.
- g. No tree is to support any scaffolding, signs, temporary utilities, surveying spikes or any other device.
- h. Those trees whose removal will damage other trees which are to remain must be removed by hand. The resulting stumps must be carefully removed to minimize damage to roots and trunks of other trees.
- i. Tree trunks and exposed roots damaged during construction shall be protected from further damage. Damaged branches shall be pruned according to Tree Care Industry Association (formally National Arborist Association) standards. All cuts shall be made sufficiently close to the trunk or parent limb but without cutting into the branch collar or leaving a protruding stub. All necessary pruning cuts must be made to prevent bark from being torn from the tree and to facilitate rapid healing. All trees which have been disturbed or have experienced damage to their roots or branches shall be fertilized in early fall or mid-spring. Fertilizer grade shall have approximately 3 parts nitrogen to 1 part phosphorus and potassium (3-1-1 ratio). Fertilizer shall be broadcast over the soil surface in an area twice the size of the tree protection zone at a rate of 1 pound of nitrogen per 1,000 square feet. Trees proposed to remain on a subdivision or land development plan which die or are so severely damaged during construction to require removal as determined by the Township shall be immediately replaced by the developer.
- j. Stumps, branches and other wood debris shall not be buried on site. Where trees are removed outside of an area to be excavated, it is preferred that stumps be removed by grinding to a point six (6) inches below existing grade.

3. Replacement of Trees/Reforestation. -Trees with a diameter of ten (10) inches or more to be removed or destroyed during any stage of development, grading and/or construction within a

major subdivision or land development, shall be replaced with a tree or trees of the type found Lowhill Township Required Trees and Plantings in Appendix 5 of this Ordinance. However, removal of trees on a site shall not exceed the maximum permitted pursuant to Natural Resource

Protection Standards of § 509.2 of the Zoning Ordinance. Replacement trees shall meet the following size limitations:

- a. Trees with a diameter of ten (10) inches or more, but less than eighteen (18) inches which are removed, shall each be replaced with a tree of like caliper or no less than four trees measuring 2½ inches to 3 inches in diameter.
- b. Trees with a diameter of eighteen (18) inches or more, but less than thirty (30) inches which are removed shall each be replaced with no less than seven trees measuring 2½ inches to 3 inches in diameter.
- c. Trees with a diameter of thirty (30) inches or more which are removed, shall each be replaced with no less than 10 trees measuring 2½ inches to 3 inches in diameter.
- d. All replacement trees shall be measured at a height of 4 feet above the finished grade level. Replacement trees shall be provided in addition to, not in place of, required buffers, street trees, trees in parking lots, or trees planted on single-family lots or common open space.
- e. Where sufficient replacement trees of the required caliper size are not available or smaller caliper trees would have a greater survivability rate due to the planting environment, The Board of Supervisors may authorize smaller caliper replacement trees provided that the total caliper inches to be planted is comparable to the requirements set forth above.
- f. Where development takes place on fully-wooded lots, replacement trees or their equivalent shall be planted to enhance existing wooded areas on site through planting of shade tolerant and deer resistant understory trees, shrubs and ground cover.

518.B. Street Trees

1. Street trees shall be provided along each side of the street with spacing at a maximum of thirty feet (30') on center; however, the spacing of trees may be adjusted in order to account for driveways, signs, utilities, sight triangles, sight distance, etc.
2. The variety of street trees shall be limited to the approved shade trees and small deciduous trees specified in the Zoning Ordinance.
3. Street trees shall be, at the time of planting, a minimum caliper of two and one-half inches (2½ ") measured six inches (6") above the root ball and shall have a single straight stem of at least ten feet (10') to the first lateral branches above grade.
4. Street trees shall be symmetrical, free of insects, pests, and disease. No "volcano" type mulching is allowed and all trees shall be certified by a the developers landscape architect arborist to be planted and staked properly.
5. Street trees shall be of nursery stock quality, grown under the same climatic conditions as at the location of their proposed planting and transplanted in accordance to the American Nursery & Landscape Association, in the American Standard for Nursery Stock, ANSI Z60,

518.C. Landscaping Ground Cover - Native climate adaptive and carbon sequestering ground cover shall be provided on all areas of the project to prevent soil erosion. All areas that are not covered by paving, stone, pine needles, bark mulch, or other solid material shall be protected with a vegetative growth. Varieties of ground cover shall be subject to the approval of the Township.

518.D. Landscaping Grading – In areas of earth excavation or fill, such grading shall be to a maximum slope of three feet (3') horizontal to one foot (1') vertical. All proposed retaining walls and slopes proposed to be graded to steeper and or greater than 3:1 will require a Subdivision and Land Development waiver and/or any required Township Zoning Variance.

518.E. General Landscaping and Screening Buffer Plantings Design Guidelines: General Landscaping design guidelines are intended to mitigate the new development by preserving existing healthy vegetation while supplementing additional native plantings within the side and yard setbacks of the development. The preservation of existing healthy vegetation and supplementing native plantings provides environmental benefits to promote biodiversity and enhances the community tree canopy. Screening Buffer Plantings are established to separate incompatible land uses by providing screening, to reduce wind, enhance environmental benefits, and to minimize or eliminate views to certain site elements in compliance with the following regulations:

1. **Specific Use Requirements.** General Landscaping and Screening Buffer plantings shall be required for the following types of development:

- a. All nonresidential development.
- b. All single-family detached development.
- c. All multifamily, single family attached, and semi-attached development.
- d. All manufactured and tiny home parks.
- e. All public utility facilities or structures waste collection, storage and/or treatment facilities and any other structure of similar character or impact.
- f. In the case of vacant land, the existing zoning designation shall be used. The existing or zoned uses shall be noted on the plan. In the case when several uses are allowed on a site, the most restrictive landscaping requirements shall apply as determined by the Township.
- g. **Mitigation of Visual Impacts.** The use of a screening buffer planting shall be required to mitigate the adverse visual impacts that the proposed land uses or site elements have on the subject tract, adjoining properties, and the community in general. In addition to the requirements for buffer plantings, the following proposed land uses and site elements, shall be screened from off-site with a screening buffer planting. If available ten(10) feet shall be provided. Alternatively, the limited area buffer standards shall be utilized:
 - i. Dumpsters, generators, trash collection & disposal, recycling areas, junkyard, quarry, transfer stations, and mechanical equipment.
 - ii. Service and loading docks.
 - iii. Outdoor storage areas.
 - iv. Sewage treatment plants and pump stations.
 - v. Utility installations, storage or holding tanks, mechanical housing for HVAC systems, electrical transformers and substations.
 - vi. Any other structure or fixture of similar character or impact.

2. **Alternative Compliance Options for Screening Buffers.**

- a. Where a berm is proposed in conjunction with a buffer, the required plantings shall be placed on the side of the berm facing the property line or

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right-of-way. All existing berms must be landscaped with trees and shrubs and

mulched to the satisfaction of the Township.

b. Architectural elements such as walls or fencing may be permitted to augment part of the landscape buffering requirements where a wall or fence is proposed in conjunction with a buffer, the required plantings shall be placed between the wall or fence and the property line or right of way.

3. Maintenance Requirements for Screening Buffers

a. All Screening buffers shall be maintained into perpetuity by the property owner at their expense, assuring that the required plant material is kept in good condition

b. Plant materials required within the landscape and/or buffer area shall be assured by a performance guarantee, posted with the Township in an amount equal to the estimated cost of the plant materials.

c. All buffers shall be maintained and kept clean of all debris, rubbish, weeds, and invasive plants.

4. General Landscaping and Screening Buffer Design Requirements.

a. The landscape area shall be installed within the required principal building setback area(s). and within the side and rear setbacks.

b. The landscape or buffer area width shall be measured from the property line(s).

c. The landscape area shall be an area consisting of existing qualifying trees and proposed canopy trees, evergreen trees, small understory trees, and shrubs, with grasses or ground cover. Arrangement of plant materials shall have a naturalistic appearance, with larger trees arranged closer to the boundary line, as space is available. The landscape area should have a diversity of species and provide seasonal interest. Mixed, layered planting preferred for increased ecosystem services/ environmental benefits/ wildlife value.

d. The zoning established screening buffers shall provide immediate visual screening of 50% and reach 75% after five years of establishment of the planting, as determined by the Township.

e. No paving shall be permitted within the zoning established buffer areas except for driveway and/or walkway crossings, No parking or parking area shall be permitted in the zoning established buffer areas.

f. Engineered stormwater basins and green stormwater facilities such as rain gardens, bio-swales, etc., are NOT permitted in the landscape area or buffer area, and that the visual screening requirements of the screening buffers still must be achieved at all times.

g. The landscape or buffer plantings shall be designed so that at maturity will not obstruct a street or sidewalk.

5. General Landscaping and Screening Buffer Plant Material Requirements.

The following requirements are minimum requirements; additional plant material, grading treatments, or architectural elements may be included in the plan.

a. Every 500 linear feet of property line of the tract proposed for any major subdivision or land development shall be landscaped and/or for a screen buffer with the following minimum quantities, types, and sizes **of plant material, deciduous trees, ornamental evergreen trees, buffer vegetation and shrubs derived from the approved Lowhill Township Required Trees and Planting List in Appendix 5 of this SALDO:**

1. Twenty-five(25) evergreen trees with a mixture of at least three species of evergreen tree species to provide adequate screening while promoting plant health. (8' minimum height.)
2. Six (6) deciduous trees (2-2 1/2" minimum. caliper)
3. Fifteen (15) shrubs (30" minimum. height)
4. An alternative planting design that will result in at least an equivalent degree of visual screening to one of the above screening buffers at the discretion of the Township. Several different planting options could be used to create an effective buffer. Grading treatments and architectural features may be required in addition to the minimum planting quantities in order to effectively provide a visual screen. Alternative planting arrangements, such as shade or flowering trees with deciduous shrubs, could be considered in conjunction with this alternate planting design. An eight (8) foot plastic vinyl solid fence or wall with perennials and grasses sufficient to screen 50% of the linear length of the proposed fence at the time of planting may be required. This type of screening buffer must be adequate to visually screen the proposed land use or development from off-site view. This type of screening buffer will be at the discretion of the Township through the granting of a SALDO waiver only.

6. General Landscaping and Screening Buffer Planting Specifications

The following specifications shall apply to all new trees and plants landscaping provided in subdivisions and land developments regulated by this chapter, and shall be demonstrated on the required landscape plans, which shall be prepared, signed, and sealed by a registered landscape architect, licensed by the Commonwealth of Pennsylvania. **All plant material, trees, ornamental evergreen trees, buffer vegetation and shrubs must be derived from the approved Lowhill Township Required Trees and Planting List in Appendix 5 of this SALDO:**

a. Plant Species Selection. Plant species selection shall be based on the following considerations:

1. Any planting materials proposed, including but not limited to deciduous and evergreen trees, shrubs; herbaceous and woody perennials, ground covers, and grasses, shall only be utilized for the application and or project and must be approved by the Township approved Trees and Planting List as depicted in Appendix 5 of this SALDO or the Township Landscape Consultant.
2. In addition, the registered Landscape Architect for the application shall also consider the following when selecting plant species:
 - i. Existing site conditions and their suitability for the selected plants based on the site's soils, hydrology, and microclimate.
 - ii. Specific functional objectives of the plantings which may include but not be limited to visual screening, noise abatement, energy conservation, wildlife habitat, erosion control, stormwater management, and aesthetic value.
 - iii. Maintenance and replacement considerations such as hardiness, resistance to insects and disease, longevity, availability, and cost of plant materials. All plants shall meet the minimum standards for health, form, and root condition, and plantings shall conform to the standards of the publication American Standard for Nursery Stock, ANSI Z60.1, 2014 or later of the American Association of Nurserymen, as amended. All plant material shall be hardy and

Pennsylvania. All plant material used on the site shall have been grown within the same USDA hardiness zone as the site and shall be nursery grown. The location, dimensions, and spacing of required plantings should be adequate for their proper growth and maintenance, taking into account the sizes of such plantings at maturity and their present and future environmental requirements and tolerances including wind, moisture, and sunlight. All buffers shall be maintained and kept clean of all debris, rubbish, weeds, and invasive plants.

iv. Landscaping Security. The applicant shall be responsible for the full replacement of all dead or diseased trees or shrubs for eighteen (18) months after final acceptance and certification of project completion. Final inspection of landscaping shall be performed while trees are fully leafed out— typically May 1 through November 15.

Additionally, landscape improvements approved for commercial, institutional, townhouse and or multifamily residential subdivisions and land developments shall be perpetually maintained in a healthy and /or sound condition. Applicants shall record a covenant on the property in a form acceptable to the Township Solicitor to guarantee this requirement.

518.F. Specific Open Space Plantings.

1. The applicant shall provide a method of physically delineating open space areas from private lots. Such methods shall include shrubs, trees, markers, fencing or other methods acceptable to the Township. Trees, shrubs, markers or fencing shall be placed on the linked open space at its boundary. Where hedge plant material is provided as screening or a barrier between private lots and open space, additional markers or plant material for delineation are not necessary. A planting plan which identifies tree species, genus, size, and spacing; and ground cover/preparation shall be submitted with the preliminary plan application and is subject to approval by the Township. The planting plan shall, at a minimum, provide for the installation of one tree per 100 square feet of reforestation area. Trees shall have a minimum height of 2 feet at the time of installation. Bare root plants shall be planted between October 15 and December 1. Potted plants shall be planted between March 15 and May 1. Trees shall be fertilized, mulched, and staked and, protected from deer browsing. Species shall be approved native hardwoods. (Please refer to Appendix 5 for Lowhill Township Approved Tree and Planting List)

2. A plan for control of noxious weeds, as defined by the Noxious Weed Control Law (Act 72 of 1994, as amended) and Invasive Plants as listed by the Department of Conservation and Natural Resources, shall be submitted for approval by the Township for all open space areas. The control plan may include periodic cutting, grubbing, foliar spray, basal bark herbicide application, soil application, or a combination of methods. Control plan approved by the Township shall be determined based upon the extent of infestation, quality of native vegetation, existing natural resources (floodplains, wetlands, steep slopes), natural habitat disturbance, etc. Herbicide applications must receive Township approval prior to use in a riparian corridor.

3. Open space areas not existing as forest or proposed as natural areas (e.g., wetland) shall be established in meadow, turf grass, or lawn; or established as forest. Open space areas to be dedicated to the Township and to remain “natural” which are field/meadow, shall be planted with native tree species to establish forest. Township-owned open space may be designated and remain in agricultural use pursuant to Zoning Ordinance requirements where permitted by the Board of Supervisors.

4. Prior to seeding open space areas, a soil test must be conducted by a soil testing laboratory and the soils amended to achieve pH and N.P.K. levels as recommended for the proposed seeding. At time of dedication, all open land areas must have at least 90 percent cover with appropriate grasses or other species and be free of noxious weeds as defined by the Commonwealth of Pennsylvania.

5. Open space reforestation plantings which do not survive, exhibit poor growth habits, are diseased, are missing, or are damaged by deer within 5 years from the date of acceptance by the Township shall be replaced in kind by the developer.

6. Financial security shall be posted with the Township in an amount equal to the estimated cost of the trees and plantings, to be released 5 years from Township acceptance of the installation, or installation of replacement trees.

518.G Additional General Landscaping Plantings Standards: The following standards shall apply to all subdivisions or land developments. The plantings required by this section shall be cumulative and in addition to plantings required by any other section of this Ordinance and the Lowhill Township Zoning Ordinance as amended. All proposed developments shall incorporate the following minimum plant materials in the landscaping areas adjacent to the proposed structure:

1. A minimum of 25% of the area between the proposed building facade facing a public street and the property frontage shall consist of pervious planting areas.

2. Planting areas shall be a minimum of 150 square feet in area with a minimum depth of ten (10) feet.

3. Five (5) deciduous or evergreen shrubs shall be planted for every 20 feet of proposed building facade facing a public street or parking lots, or portion thereof.

4. All proposed single-family residential lots shall plant a four (4) canopy trees per lot in addition to the required street trees. Existing trees to remain may satisfy all or part of this planting requirement.

5. At the discretion of the Township, if sufficient planting space is not available immediately adjacent to the proposed structure, required building facade plantings may be located on other areas of the tract.

6. Additional Greening Elements for all Non-Residential uses over 5,000 square feet shall be required and clustered or evenly spread along a property's frontage. Each non-residential use shall over 5,000 square feet shall have an urban garden area or courtyard of 500 square feet or more or courtyard with one public seat or bench for every 50 square feet of the urban garden or courtyard or portion thereof. Trash and recycling containers shall be provided in the urban garden area. A minimum of 30% of the area shall be landscaped with trees, shrubs and/or mixed plantings with year-round interest. One (1) tree is required for every 100 square feet of area, or portion thereof. Paving materials that may be used in the courtyard are limited to the following: unit pavers or paving stones. Shade shall be provided by trees, canopies/shade sail, trellises, or tables with umbrellas. Each lot shall also contain one of the following greening elements: A window box or boxes along ground floor windows (minimum size of 6 inches deep, vertically and horizontally, planted with shrubs, ground covers and/or flowers), a trellis (minimum size thirty (30) square feet, planted with vines and/or shrubs) or an Arbor or Pergola (minimum size of eight (8) feet high by six (6) feet wide by four (4) feet deep, planted with vines and/or shrubs) or a water feature (fountain, fish pond, waterfall, etc).

7. Stormwater Basin and Natural Resource Protection Area Plantings shall be required in and around all stormwater management basins and natural resource protection areas according to the following:

a. All areas of stormwater management basins, including basin floors, side slopes, berms, impoundment structures, or other earth structures, shall be planted with suitable vegetation such as naturalized meadow plantings specifically suited for stormwater basins. Trees and shrubs shall be planted in and around stormwater basins, provided they do not interfere in the proper function of the basin and no trees are planted within thirty (30') feet of an outlet/drain structure, emergency spillway, or dam. A minimum of two (2) trees and ten (10) shrubs per 100' linear feet of basin perimeter shall be planted in

and around the basin. Plantings can be uniformly applied with 2-3 inches of shredded mulch or leaf compost. No wood chips are permitted.

b. Stormwater basins shall be screened from adjacent properties using the filtering buffer plantings standards of this Ordinance

c. Landscaping for Stormwater Management Facilities shall also comply with all Lowhill Act 167 Stormwater Management Plans, the Lowhill Stormwater Ordinance and the Pennsylvania Best Management Practices Manual as amended (PA DEP).

d. Additional vegetation shall be planted in natural resource protection areas, including riparian corridors, forests, and wetland areas, as required by PADEP wherever existing trees do not meet the minimum tree planting requirements. Existing trees within these natural resource areas shall be preserved and retained. Existing tree cover must be surveyed and inventoried to assess the need for any new plantings. Existing tree species included on the noxious/invasive plant species list, provided by PA Department of Natural Resources as amended must be removed where conditions warrant.

518.H. Parking Lot Greening and Landscaping Design Standards

1. **Intent.** Parking lots should be effectively landscaped with trees and shrubs to reduce the visual impact of glare from headlights, and parking lot lights; to delineate driving lanes; and define rows of parking. Parking lots should be adequately landscaped to provide shade in order to reduce the amount of reflected heat, to allow surface infiltration of stormwater runoff, and to improve the aesthetics of parking lots. This intent can be accomplished by promoting well-designed and sustainable parking lot design and retrofit designs which produce environmental benefits through incorporation of appropriate native plants into the exurban environment, to promote greater landscape resiliency and to enhance natural environments of the township. Lastly, this intent is to also integrate stormwater management and landscape design by the use of trees and plants to promote compliance with state water quality mandates and stormwater management and erosion control, through detention, treatment, infiltration and groundwater recharge of rainwater.

2. **Applicability.** Unless otherwise expressly stated, the interior landscape parking lot and buffer requirements of this section shall apply to any of the following:

- a. The construction or installation of new vehicular use areas.
- b. The expansion of existing vehicular use areas, if such repair, rehabilitation or expansion would increase the area of the vehicular use.
- c. The existing vehicular use areas which are accessory to an existing principal building, when such building or any portion thereof is expanded or enlarged, requiring additional new parking.
- d. The excavation, rehabilitation or in-place reconstruction of existing vehicular use areas if such work involves full-depth pavement removal.
- e. The construction or installation of new vehicular use areas with more than 20 parking spaces shall incorporate bio-retention and rainwater infiltration elements into the parking lot design.
- f. If an existing parking lot associated with a proposed subdivision or land development does not meet the applicability above, existing parking lots should incorporate the standards below, to the greatest extent feasible to meet the intent of this Section. Alternatives such as retrofitting existing island(s) with larger canopy trees and incorporating landscaping within void area(s) not used as parking stalls or aisles of existing parking lots should be explored.

3. **Interior Landscaping Area Standards.** The following landscaping requirements are intended to promote shading and healthy vigorous growth of larger shade tree, understory deciduous trees, evergreen trees, shrubs, and ground covers, as well as to create generous physical space to accommodate rain gardens, or depressed absorbent areas for stormwater infiltration, and detention within the parking lot. The internal parking lot landscaping shall be provided according to the following standards:

- a. Minimum interior landscaping area requirements. The minimum required interior landscaping area of parking areas shall be a ten (10) percent of the total vehicle use area of the lot
- b. Interior landscaping areas shall be composed of planting islands and planting strips, within which are planting areas. The sum of the surface areas shall constitute the interior landscaping Area.
- c. The minimum ground coverage and canopy coverage of planting material, as determined by the design canopy/ground coverage of the plant species proposed, shall be 85% of the designated interior landscaping area.
- d. The landscape architect shall provide the number and locations of planting areas, planting islands and planting strips delineated on the development plan, to satisfy the requirements above.
- e. The landscape architect shall also propose the number and species of plant materials to satisfy the requirements of a minimum of two shade or canopy trees are provided in a planting island or planting strip for each 340 square feet of interior landscape areas provided or fraction thereof. Such shade or canopy trees shall be distributed throughout the parking lot to ensure well-distributed canopy coverage of the vehicular use areas.
- f. **Perimeter Landscape Buffer Requirements.** For vehicular use areas of any size which are located in the side or rear setback of a property, or otherwise abut an adjacent property where no right-of-way intervenes, a 10-foot wide screen buffer landscape area shall be provided. If any of the proposed land uses or site elements of the property are already subject to a screen buffer requirement, the greater planting requirement shall apply.

4. **Parking Lot Landscaping Design Standards.** General Standards. The following standards shall apply to all planting areas, planting islands, and planting strips provided to satisfy the requirements of this section.

- a. Planting islands and planting areas should be distributed throughout the parking lot to maximize tree canopy coverage over the entire parking lot. Large canopy trees shall be required to meet this requirement.
- b. Required planting areas are encouraged to be consolidated into larger islands to provide greater soil volumes for plants or to accommodate stormwater BMP's.
- c. When planting areas are provided within interior parking lot landscaping, including planting strips or planting islands, they shall have curbs, wheel stops, or bollards for protection from erosion or automobile damage; however, openings shall be included which direct rainwater to the planting areas.
- d. At least 25%, but no more than 50%, of the plant materials shall be evergreen.

5. **Planting Areas.** Any contiguous paved and curbed area greater than 50 square feet raised above and separated from the vehicular use area shall be provided with a planting area, which shall meet the General Landscaping Standards in this Ordinance.

6. Planting Islands.

- a. Planting islands shall be placed so as to provide safe movement of traffic and shall be designed as an integral part of the stormwater management plan.
- b. All parking rows must be terminated by a planting island, provided that in such cases where accessible parking and gore areas are provided at the end of row, planting islands shall be accommodated elsewhere along the row in close proximity to the row end.
- c. The minimum size of each planting island shall be at least 340 square feet, and be located every twelve (12) parking spaces, or portion thereof. These planting islands may be altered for reasons of public safety and/or to provide additional stormwater management through the granting of a waiver.
- d. If compact spaces are installed, the planting island area may be reduced to no less than 270 square feet.
- e. In addition to any proposed trees, planting islands require a minimum of 85% ground coverage of low-growing shrubs, grasses, and/or ground cover plants, as determined by the design ground coverage of the plant species proposed.
- f. In order to preserve sight distance, plants shall be selected or pruned to limit vegetation at the ends of planting islands where vehicles turn to a maximum height of two (2) feet, in order to preserve sight distance. Trees may be planted in these areas, provided that branches are limbed up to a minimum height of seven (7) feet.

7. Planting Strips. Planting strips, as required below, shall have a minimum width of five (5) feet. In addition to any proposed trees, planting strips require a minimum of 85% ground coverage of low-growing shrubs, grasses, and/or ground cover plants, as determined by the design ground coverage of the plant species proposed.

- a. Planting Strips are encouraged to be designed as an integral part of the stormwater management systems.
- b. Parallel rows of parking spaces, which are not separated by a drive aisle, shall be separated by a planting strip.
- c. A single row of parking spaces located parallel to and between two drive aisles, shall be separated from one of the drive aisles by a planting strip.
- d. **For Larger Non-Residential Parking Lots.** Unless otherwise noted in this Section when required, all planting strips shall be a minimum of 15 feet wide and run the entire length of the parking row. Lots with a capacity of from 50 to 100 cars shall require a planting strip around the perimeter and one planting island for every ten spaces within the perimeter of the lot. Parking lots for more than 100 cars shall be divided into sections no greater than 100 stalls each by planting strips. These planting strips shall be located parallel to the rows of parking, to serve the following purposes:
 - i. To separate main access (entrance-exit) driveways from rows of parking spaces.
 - ii. To separate other major driveways (service drives, general internal circulation) from rows of parking spaces.
 - iii. To separate large parking areas into smaller units at intervals of not more than four (4) rows of parking stalls.
- e. Alternative design(s) which achieve(s) the purposes of these parking area requirements may be requested, if determined that the alternative design(s) satisfies the requirements herein by a Township waiver only

8. **Bio-retention Elements in Parking Lots.** The construction or installation of new vehicular use areas with more than 20 parking spaces shall incorporate bio-retention elements into the parking lot design.

a. Bio-retention and Rainwater Infiltration set aside area is required to be incorporated into the parking lot design, as noted above. The Township shall approve the functional design of the area(s) and determine if the bio-retention areas can be utilized to demonstrate compliance with the Lowhill Township ACT 167 Stormwater Management Ordinance as a functional stormwater BMP.

B. In addition to the requirements above, the bio-retention area shall at least include the following:

i. Three (3) deciduous trees per 100 square feet of Bio-retention areas; and

ii. Shrubs/Grasses: a minimum of six (6) large shrubs or twelve(12) small shrubs and 8 types of grasses, sedges or reeds per 200 square feet of Bio-retention Area.

Section 519 Steep Slopes

Applications shall conform to all steep slope standards contained in this Ordinance and the Lowhill Zoning Ordinance as amended. All finish graded slopes shall not exceed a 3:1 slope. All retaining walls shall have a separate engineering plan approved by Lowhill Township at the time of Preliminary Plan approval by the Lowhill Township Board of Supervisors.

Section 520 Sanitary Sewage Disposal

520.A. The developer shall provide sanitary sewage disposal facilities consistent with the following:

1. Pennsylvania Sewage Facilities Act, Act 537 of 1966;
2. Lowhill Township 1966 Municipal Act 537 Official Plan as amended for sanitary sewer;
3. Where on-lot sanitary wastewater disposal facilities are to be utilized, each lot so served shall be of a size and shape to accommodate the necessary subsurface wastewater disposal system at a safe distance from Building and water supply in accordance with Title 25, Chapter 73, Rules and Regulations of DEP (Pennsylvania Department of Environmental Protection), as amended. Each lot to be developed shall contain a suitable location for the installation of a primary individual on-lot sewage system and shall also contain a suitable and approved perc tested location specifically for a replacement on-lot sewage system. All primary and replacement septic systems testing areas must be clearly shown on the preliminary plan. All sewer modules must be approved by the sewage enforcement officer, Planning Commission and Board of Supervisors in order to prove that each lot is suitable for on-site wastewater disposal prior to the submission of the Final Plan.
4. On-lot sewage maintenance agreements with Lowhill Township shall be prohibited.
5. If the primary Sewage Facility fails, connection to a private secondary Sewage Facility shall occur as soon as available.
6. Any other ordinances, resolutions and specifications of the Township and its Authorities.

520.B. Individual on-lot sanitary sewage disposal systems shall conform to the on-lot sewage disposal system requirements of the PA DEP, and the Lowhill Township Zoning Ordinance.

Section 521 Water Supply and Fire Hydrants

521.A. Water supply and fire hydrants shall conform with the following:

1. Public Water supply systems shall be designed and constructed in accordance with the prevailing rules and regulations of the PA DEP and the 1966 Act 537 Lowhill Township Municipal Plan as amended.
2. All industrial use developments and commercial sites shall connect to the Township public water system when feasible in accordance with Lowhill Township Zoning Ordinance, 1966 Act 537 Lowhill Township Municipal Plan as amended and any other applicable law.
3. Where the Township 1966 Act 537 Lowhill Township Municipal Plan as amended and or the Lowhill Township Zoning Ordinance as amended determines that the public water supply system cannot feasibly provide service to the proposed residential or commercial development, individual on-lot water supply systems shall be utilized. Each lot served by individual wells and each system shall conform to the requirements of PA DEP and the Township. Water storage tanks and its fire suppression systems for fire fighting shall be provided for all commercial structures over 10,000 square feet. The design and storage capability of the water storage tanks with their fire suppression system shall be approved by the Township at the time of a conditional use approval. If a conditional use is approval is not required, the design and storage capability of the water tanks shall still be required for preliminary or preliminary/final plan approval.
4. Fire hydrants shall be provided wherever the water supply system contains sufficient capability, or will in the near future, with or without developer assistance. Type and location of fire hydrants shall meet the specifications of the fire department that services the project. Location and fitting types shall be in accordance with the standards of the applicable fire department.

Section 522 Park and Recreation Lands

522.A. Requirements for Reservation of Park and/or Recreation Lands

1. Every proposed residential subdivision of land and/or residential, and residential, commercial or institutional land development regulated by this Ordinance and the MPC, shall provide land for dedication which is suitable for park and/or recreation land.
2. The amount of land required to be dedicated shall be five thousand (5,000) square feet per residential lot or three thousand (3000) per dwelling unit (whichever number is greater) or for a commercial, industrial or institutional use per one (1) acre in lot size that is part of an approved application. If at the time of plan application submission the developer is domiciled in a dwelling unit on one of the lots in the proposed subdivision or development, said dwelling unit shall not be included in this calculation.
3. All land proposed for dedication as park and/or recreation land shall comply with the standards set forth in Section 522.B.
4. A developer shall dedicate land for park and recreation purposes. In lieu thereof of this dedication, the developer may propose the following or a combination of the following, subject to approval of the Board of Supervisors:
 - a. Dedication of land for park and/or recreation purposes,
 - b. Payment of recreation fees as required and set by the Lowhill Township Recreation Fee Resolution as amended;

- c. Construction of park and/or recreational facilities, or
 - d. Private reservation of park and/or recreation land.
5. If the developer receives approval from the Board of Supervisors for the payment of a fee in lieu of dedication of all or some of the required park and/or recreation land, then the fee shall be calculated on the basis of the most current Lowhill Township Parks and Recreation fee schedule as amended.
 6. If the developer elects to pay a fee in lieu of the dedication of park and/or recreation land, then such payment, if approved by the Board of Supervisors, shall be deemed a condition of application approval and shall be paid at the time of execution of the improvements agreement with the Township or if no improvements agreement is necessary, then prior to recording the approved plan.
 7. All fees paid pursuant to this Section shall be maintained in a separate, interest bearing, account for the purpose of park and recreation. Such funds shall not be used for any purpose inconsistent with the applicable provisions of the MPC.
 8. The requirements of Section 522 shall be in addition to, and not in lieu of:
 - a. Open space which is required to be provided in connection with certain uses, developments, subdivisions and/or other residential living arrangements pursuant to the Zoning Ordinance; and
 - b. Any private park and/or recreation land provided by the developer for the benefit of the residents thereof, unless approved by the Board of Supervisors pursuant to Section 522.A.4.d.

522.B. General Standards for Park and/or Recreation Land Set-Aside by the Developer

1. Unless otherwise approved by the Board of Supervisors, where the developer elects to fulfill the requirements of this Article through an offer of dedication of land to the Township, the developer shall demonstrate to the satisfaction of the Township that the land will support a legitimate park and recreation use considering, where relevant, with the following factors:
 - a. Consistency with the 2022 Northern Lehigh Multi-Municipal Comprehensive as amended;
 - b. Consistency with the Lowhill Township Official Map;
 - c. Availability for use by the public;
 - d. Location entirely within Lowhill Township;
 - e. Means for public ingress and egress;
 - f. Accessible to essential utilities and services;
 - g. Ability to accommodate adequate vehicle parking facilities;
 - h. Suitability of land characteristics for the intended use, including but not limited to configuration, natural features, cultural features, and man-made features;
 - i. Compatibility with the surrounding neighborhood;
 - j. Proximity to other community facilities; and
 - k. Such other factors that the Township may deem relevant.

Section 523 Carbonate and Sensitive Shale Infiltration Geologic Areas

Applications shall conform to the carbonate and sensitive shale infiltration area standards contained in the Township Zoning Ordinance, the Act 167 Stormwater Drainage Ordinance and any other Township Ordinances. Ground water mounding investigations, bedrock faulting, specific soil infiltration loading ratios and additional hydrogeological features in shale geology shall be provided for all commercial, industrial and institutional uses and for their stormwater drainage plan as required by Lowhill Township and PADEP. This required hydrogeological study shall be submitted at the time of a conditional use application and for all major preliminary and or preliminary final plan applications for Township review and approval.

Section 524 Wellhead Protection

Applications shall conform to the wellhead protection standards contained within PADEP isolation for wellhead requirements with the design of all on-lot septic and stormwater systems as amended.

Section 525 Control of Glare From Land Developments

525.A. Control of Nuisance and Disabling Glare.

1. All outdoor spot lighting shall be aimed, located, designed, fitted, and maintained so as not to present a hazard to drivers or pedestrians by impairing their ability to safely travel.
2. Unless for safety, security, or all-night operations, lighting shall be controlled by automatic switching devices to permit extinguishing between eleven (11) pm. and dawn.
3. Lighting proposed for use after eleven (11) pm., or after the normal hours of operation, shall be reduced by an average of seventy-five percent (75%) from that time until dawn, unless supporting a specific purpose.
4. Vegetation screens shall not be employed to serve as the primary means for controlling Glare. Rather, glare control shall be achieved primarily through the use of such means as full-cutoff fixtures, shields and baffles, and appropriate application of mounting height, wattage, aiming angle, fixture placement, etc. to meet dark sky compliance.
5. The intensity of illumination projected onto an existing residential use from an existing property boundary shall not exceed 0.0 vertical Foot-candle, measured at the existing property line at a height of five (5) feet.
6. Electrical feeds to lighting standards shall be run underground, not overhead.
7. Pole mounted fixtures shall not be mounted in excess of 25 feet high must have cutoff shoe box lighting and all lighting shall be dark sky compliant at all times. Lighting standards in parking areas shall be placed outside paved areas or on concrete pedestals at least thirty (30) inches high above the pavement, or by other approved protective means. The Board of supervisors may require all fixtures and poles to be designed as "old village" type lighting.
8. The following note must be placed on all preliminary and final recorded land development plans: *"The Township reserves the right to conduct a post installation nighttime inspection to verify compliance with the requirements of this Ordinance and, if appropriate, to require remedial action at no expense to the Township to remove the excessive glare condition. Post approval alterations to lighting plans or intended substitutions for approved lighting equipment shall be submitted to the Township for review and approval."*

Article 6

Manufactured and Tiny Home Parks

Section 601 General

The standards and requirements contained in this Article and the Township Zoning Ordinance shall apply as minimum design standards for a tiny home or manufactured home. Whenever other Township ordinances or regulations impose more restrictive standards and requirements than those contained herein, the more restrictive shall apply.

Section 602 Procedure

All proposed Manufactured Home Parks and Tiny Home Park Communities and its expansions to existing Manufactured Home Parks and Tiny Home Park Communities shall conform to the procedural and application requirements of this Ordinance for subdivision and land development (see Article 2, Article 3, and Article 4).

Section 603 Design Standards

- 603.A. General** - The standards and requirements contained in Article 5 shall apply as minimum design standards for Section 602.
- 603.B. Driveways** - Driveways to manufactured homes and or tiny homes must access onto the interior street or access drive system of the manufactured home park or tiny Home Park. Direct driveway access to an existing adjoining public street is prohibited. The Manufactured or Tiny Home Park shall provide two (2) off-street parking spaces for each unit.
- 603.C. Intersections** - A fifty-five foot (55") tangential arc shall be provided at the cartway edge for all intersections of both streets and access drives.
- 603.D. Sidewalks** - Sidewalks shall be provided along both sides of streets and access drives and, where applicable connect manufactured/tiny homes to parking compounds and service buildings.
- 603.E. Sanitary Sewage Disposal** - Each manufactured home/tiny home park shall be directly connected to and served by public sewer.
- 603.F. Water Supply and Fire Hydrants** - Each manufactured home/tiny home park shall be directly connected to and served by public water. Fire hydrants shall be required.

Article 7

Administration and Enforcement

Section 701 General

701.A. Prohibited Acts - It shall be a violation of this Ordinance for any person to perform or commence the following without first complying with all applicable provisions of this Ordinance:

1. Lay out, construct, open, transfer, and/or dedicate any street, sanitary sewer, storm sewer, water main or other improvement for public use, travel or other purposes, when part of a subdivision or land development;
2. Sell, transfer or enter into an agreement to sell or transfer any land in or relating to a subdivision or land development;
3. Construct or erect any building or structure which constitutes a land development or which otherwise requires a land development or subdivision application; or
4. Commence site grading or site improvements associated with a land development or subdivision unless otherwise authorized by the Township and by PADEP.

Section 702 Enforcement of Security

The Township may enforce any security posted pursuant to this Ordinance for the construction of any required improvements which have not been constructed or installed in accordance with this Ordinance, the improvements agreement, or the conditions of approval. If the balance of the security is insufficient to pay the costs of installation, repair or correction of the required improvements, the Township may institute proceedings at law or in equity to recover sums spent or to otherwise secure the completion of the same.

Section 703 Township Not Engaged in Development

Township review and approval of an application or the subsequent observation and approval of required improvements, shall not constitute land development on behalf of or by the Township or otherwise cause the Township to be engaged in the process of land development. By submitting an application under this Ordinance, the developer hereby agrees to indemnify, defend, and hold harmless the Township and all its agents, servants, employees, officials and consultants of and from any and all claims, demands, causes of action or suits which arise out of or relate to the review, approval, construction or observation of the developer's application and required improvements.

Section 704 Developer Responsibility

Absent the receipt of a waiver approved by the Township in accordance with this Ordinance, the developer shall comply with the requirements of this Ordinance, the conditions of approval, the improvements agreement and all applicable ordinances, laws and regulations. The approval of an application or the construction of required improvements in violation of any of the above does not constitute a waiver or otherwise absolve the developer of responsibility for full compliance with all of the requirements relative to a subdivision or land development.

Section 705 Erroneous Approval

- 705.A.** **Fraudulent, Misleading or Materially Inaccurate Information** - The approval of an application by the Township based upon any fraudulent, misleading or materially inaccurate information shall be voidable at the sole discretion of the Township.
- 705.B.** **Approvals in Violation of Ordinance** – Notwithstanding approval of the application by the Township, the developer shall not be relieved of the obligation to comply with all applicable ordinances, laws and regulations.
- 705.C.** **Remedies** – Upon discovery of an erroneous approval, as set forth in Subsections A or B above, the developer may be subject to the remedies contained in this Article and may be required to modify or revise the approved application to correct the defect. Unless authorized by the Township, the further processing of the application or performance of the work hereunder shall cease.

Section 706 Preventive Remedies

- 706.A.** In addition to any other available remedies, the Township may institute and maintain appropriate actions at law or in equity to:
1. Restrain, correct, or abate violations;
 2. Prevent unlawful construction;
 3. Recover damages, including but not limited to court costs and attorney fees; and
 4. Prevent illegal occupancy of a building, structure, or premises.
- 706.B.** The description by metes and bounds in the instrument of transfer or other documents used in the process of selling or transferring shall not exempt the seller or transferor from such penalties or from the remedies herein provided.
- 706.C.** The Township may refuse to issue any permit, refuse to issue an approval, or revoke a permit or an approval that is necessary to further improve or develop any real property which has been developed or which has resulted from a subdivision of real property in violation of any ordinance adopted pursuant to Article 5 of the MPC. This authority to deny or revoke such a permit or revoke approval shall apply to any of the following persons:
1. The owner of record at the time of such violation;
 2. The vendee or lessee of the owner of record at the time of such violation without regard as to whether such vendee or lessee had actual or constructive knowledge of the violation;
 3. The current owner of record who acquired the property subsequent to the time of violation without regard as to whether such current owner had actual or constructive knowledge of the violation; and

4. The vendee or lessee of the current owner of record who acquired the property subsequent to the time of violation without regard as to whether such vendee or lessee had actual or constructive knowledge of the violation.
- 706.D.** As a condition for issuance of a permit or the granting of an approval to any such person identified in subsection 706.C above, the Township may require compliance with the conditions that would have been applicable to the property at the time the violation occurred.

Section 707 Enforcement Remedies

- 707.A.** Any person who or which has violated the provisions of this Ordinance shall, upon being found liable therefore in a civil enforcement proceeding commenced by the Township, pay a judgment of not more than \$500 plus all court costs, including reasonable attorney fees incurred by the Township as a result thereof. No judgment shall commence or be imposed, levied, or payable until the date of the determination of a violation by the district justice. If the defendant neither pays nor timely appeals the judgment, the Township may enforce the judgment pursuant to the applicable rules of civil procedure. Each day that a violation continues shall constitute a separate violation, unless the district justice determining that there has been a violation further determines that there was a good faith basis for the person, partnership or corporation violating the ordinance to have believed that there was no such violation, in which event there shall be deemed to have been only one (1) such violation until the fifth day (5) following the date of the determination of a violation by the district justice and thereafter each day that a violation continues shall constitute a separate violation.
- 707.B.** The Court of Common Pleas, upon petition, may grant an order of stay, upon cause shown, tolling the per diem judgment pending a final adjudication of the violation and judgment.
- 707.C.** Nothing contained in this Section shall be construed or interpreted to grant to any person or entity other than the Township the right to commence any action for enforcement pursuant to this Section.
- 707.D.** District Justices shall have initial jurisdiction in proceedings brought under this Section.

Section 708 Remedies Not Exclusive

The remedies available to the Township as set forth in this Ordinance shall not be deemed to be exclusive, and in addition to such remedies the Township shall have all other remedies available at law or in equity.

Section 709 Public Records and Waiver of Copyright

- 709.A.** By making a submission under this Ordinance, the applicant acknowledges and agrees that all documents and other information submitted to the Township or its consultants pursuant hereto constitute public records within the meaning of the Pennsylvania Right to Know Law, Act 3 of 2008, as amended, and are subject to review and reproduction upon request in accordance with that Law and applicable Township ordinances and resolutions.
- 709.B.** To the extent that any documents or materials constitute public records but are subject to copyright protection pursuant to applicable law, the applicant and all of its agents, employees and consultants, by filing such documents with the Township pursuant to this Ordinance, shall be deemed to have waived all copyright protection and damages relating hereto. This waiver of copyright protection shall relate only to the reproduction and use of such documents in connection with

the review, comment and analysis of the application.

- 709.C.** By making a submission under this Ordinance, the applicant hereby agrees to indemnify, defend and hold harmless the Township and all its agents, servants, employees, officials and consultants of and from any and all claims, damages, suits or causes of actions arising out of violations or allegations of violations of copyright law.

Section 710 Severability

The provisions of this Ordinance are severable, and should any Article, Section, subsection, paragraph, clause, phrase, or provision of this Ordinance be declared by a court of competent jurisdiction to be invalid, such determination shall not affect the validity of the Ordinance as a whole or any part or provision thereof, other than the part so declared to be invalid to the extent of the invalidity.

Section 711 Repeal

The Subdivision and Land Development Ordinance of the Township of Lowhill Ordinance No. 50, as enacted and ordained on June 24, 1971, and as subsequently amended, is hereby repealed in its entirety; provided, however, this repeal shall in no manner be construed as a waiver, release or relinquishment of the right to initiate, pursue, or prosecute, as the case may be, any proceeding at law or in equity pertaining to any act done which constitutes or would have constituted a violation of that Ordinance. Except as otherwise provided in the MPC, the provisions of Ordinance No. 50, as amended, shall remain in full force and effect and are not repealed with respect to applications filed prior to the effective date of this Ordinance.

Section 712 Adoption and Effective Date

This Subdivision and Land Development Ordinance shall become effective five (5) calendar days after this enactment by the Board of Supervisors of Lowhill Township, County of Lehigh, Commonwealth of Pennsylvania.

DULY ORDAINED AND ENACTED this _____ day of _____, 2025, by the Board of Supervisors of the Township of Lowhill of Lehigh County, Pennsylvania, by a lawful session duly assembled.

BOARD OF SUPERVISORS OF LOWHILL TOWNSHIP

By:

Curtis Dietrich - Chairman

Michael Divers - Vice-Chairman

Jack Iannantuono - Supervisor

ATTESTED:

Jill Seymour, Secretary

AN ORDINANCE
NO. 2025-01

AN ORDINANCE To Amend the Lowhill Township the current Subdivision and Land Development In Its Entirety, Revoking The Text As It Now Appears, And Adopting The Text Attached, Including Specifically The Following Articles:

Article 1: General Provisions,
Article 2: Procedures for Processing Applications, Authorization for Start of Work, Construction Observation and for Dedication of Improvements;
Article 3: Information To Be Shown On or Submitted With the Subdivision and Land Development Applications Plan Filing, Processing And Review;
Article 4: Reimbursable Fees, Developer's Expense Escrow Account, Improvements Agreement, Financial Security and Maintenance Guarantee;
Article 5: Design Standards;
Article 6: Manufactured and Tiny Home Park Standards;
Article 7: Administration and Enforcement

Section 1. The Board of Supervisors of the Township of Lowhill does hereby enact and ordain that the original June, 1971 Subdivision and Land Development as most recently amended in October, 1998 shall be amended in its entirety thus effecting a comprehensive revision of the original 1971 Subdivision and Land Development Ordinance, and adopting by reference this 2025 Lowhill Subdivision and Land Development Ordinance printed in the attached text hereto, which text has been accepted for adoption by the Board of Supervisors and consists of the following Articles:

Article 1: General Provisions,
Article 2: Procedures for Processing Applications, Authorization for Start of Work, Construction Observation and for Dedication of Improvements;
Article 3: Information To Be Shown On or Submitted With the Subdivision and Land Development Applications Plan Filing, Processing And Review;
Article 4: Reimbursable Fees, Developer's Expense Escrow Account, Improvements Agreement, Financial Security and Maintenance Guarantee;
Article 5: Design Standards;
Article 6: Manufactured and Tiny Home Park Standards;
Article 7: Administration and Enforcement

Section 2. The revision of the 2025 Subdivision and Land Development Ordinance is hereby enacted was introduced to the Board of Supervisors more than thirty (30) days prior to the date of this enactment and first notice of the intent to enact this revision, specifying its general nature and listing its table of contents has been given by advertisement in a newspaper of general circulation in the Township at least fifteen (15) days prior hereto.

The Township Secretary is hereby authorized to advertise the fact that this ordinance was finally enacted following the date hereof making reference to the previously advertised intent of the Board of Supervisors to do so.

Section 3 . Nothing in this Ordinance, as hereby amended, shall be construed to affect any suit or proceedings in any Court, any rights acquired or liability incurred, any permit issued, or any cause or causes of action existing under this said Subdivision and Land Development Ordinance prior to the adoption of this amendment.

Section 4. The provisions of this Ordinance are severable, and if any section,sentence, clause, part, or provision thereof shall be held illegal, invalid, or unconstitutional by any Court of competent jurisdiction, such decision of this court shall not affect or impair the remaining sections, sentences, clauses, parts or provisions of this ordinance. It is hereby declared to be the intent of the Board that this ordinance would have been adopted if such illegal, invalid, or unconstitutional section, sentence, clause, part, or provision had not been included

Section 5. This Ordinance shall take effect and be in force from and after its approval as required by law.
Approved by the Board this 30th day of April, 2025.

APPENDIX 1

LOWHILL TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT PLAN APPLICATION

SUBMISSION INFORMATION FOR APPLICATION

1. Any person seeking to subdivide and/or develop any land within Lowhill Township shall submit a complete subdivision and land development application and required plans in accordance with the 2025 Subdivision and Land Development Ordinance (SALDO) for review and approval by the Township.
2. This SALDO application must include the following items to be a complete application:
 - A. A copy of the applicant's property deed with any attached covenants to properly establish legal title to the property to be developed or subdivided;
 - B. A signed sales agreement with monetary figures redacted as proof of equitable ownership for the applicant and their SALDO application. The date of expiration of this sales agreement must be clearly shown in the sales agreement. The applicant is reminded that the SALDO application shall be immediately determined to be incomplete and any plan currently under review will therefore be denied by Lowhill Township if this the expiration dates lapse before preliminary and or final plan approval has been granted;
 - C. The required non-refundable application fee;
 - D. A signed Lowhill Township Professional Services Agreement with the required escrow fees;
 - E. Thirteen (13) copies of the entire site plan and its sheets accompanied by a flash drive in an electronic digital TIFF or PDF format, all required SALDO reports, required outside agency review letters as further described and mandated in the 2025 SALDO which includes the Lehigh Valley Planning Commission Land Use review letter and the initial Act 167 Stormwater Drainage Review letter for consistency, Lehigh County Conservation District and the Pennsylvania Department of Environmental NPDES Stormwater Permit for Construction Activities initial technical deficiency letter with comments (Not a simple LCCD completeness of NPDES application letter) if applicable, PADOT HOP initial scoping letter if applicable, or other information as required by the 2025 SALDO requirements which together comprise as part of this complete application;
 - F. This application must be submitted at least by thirty-five (35) days prior to the Planning Commission meeting at which the Applicant desires to have the application reviewed. Please note, Lowhill Township Administrative Office shall not accept any SALDO application after 1:00 pm on the 35th day before the next regular scheduled Planning Commission meeting. **It is well-advised that the applicant should make an appointment with the Township administrative staff when submitting the SALDO application to assure completeness of the actual application;**
 - G. Applications that do not contain all of the required aforementioned items, information and required signatures shall be considered as an incomplete application. The applicant is reminded that this application requirement will be strictly adhered to for compliance. Incomplete applications shall be returned to the applicant with a statement of the reason(s) for rejection.
3. The Township reserves the right to determine in its sole discretion whether the application will be placed on the Planning Commission meeting agenda.

APPLICATION FORM

This SALDO application form is to be used for all subdivision and land development applications. Specific submission and plan drafting requirements for each plan application type can be found in the 2025 Lowhill Township SALDO.

APPENDIX 1

APPLICATION FEE AND ESCROW DEPOSIT

1. All SALDO applications shall be accompanied by a non-refundable application fee and a consultant review escrow deposit in accordance with the 2025 Township Fee Schedule as amended and within the 2025 SALDO requirements. Separate checks are required for the non-refundable application fee and the escrow deposit.

2. The applicant must sign the Lowhill Township Professional Services Agreement as part of this SALDO application.

2. In the event that the escrow funds deposited with the Township are depleted by one-half and to the extent that the Township, in its sole discretion determines that the remaining escrow balance is insufficient to pay the Township's anticipated costs for performing its functions, then the Applicant shall, within fifteen (15) days of notice from the Township, deposit additional funds in an amount sufficient to restore the escrow account to its original amount. Failure to replenish the escrow account may delay the plan review process and or constitute grounds for denial of the plan application.

3. All such escrow funds deposited with the Township by an Applicant which are not expended by the Township to pay the costs of consultant reviews shall be returned to the Applicant.

NOTE: By submitting and signing this application, the Applicant agrees to comply with the terms set forth above.

APPENDIX 1

Project Number: _____

Date Received: _____

LOWHILL TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT APPLICATION FORM

NAME OF PROPOSED DEVELOPMENT:

Property Address:

Lehigh County Tax Parcel ID No(s): _____ Total Tract Acreage: _____

APPLICATION TYPE: (Please mark "X" for the appropriate application type below:)

Sketch Plan _____ Deminimus Land Development Plan _____

ECHO Housing Plan _____ Lot Line Adjustment/Lot Consolidation Plan _____

Minor Subdivision - Preliminary Plan Only _____ Minor Subdivision - Preliminary/Final Plan _____

Minor Subdivision - Final Plan Only _____

Major Subdivision - Preliminary Plan Only _____ Major Subdivision - Preliminary/ Final Plan _____

Major Subdivision - Preliminary Final Plan Only _____

Land Development - Preliminary Plan Only _____ Land Development - Preliminary/Final Plan _____

Major Subdivision - Final Plan Only _____

Revised Final Plan Only _____

DESCRIPTION OF PROPOSED DEVELOPMENT:

LEGAL NAME OF APPLICANT:

Contact Person:

APPENDIX 1

Email:

Mailing Address:

Phone: _____ Cell Phone: _____ Fax: _____

RECORD TITLE OWNER NAME (If Different than Applicant):

Contact Person:

Email:

Mailing Address:

Phone: _____ Cell Phone: _____ Fax: _____

NOTE: If this application is for a Lot Line Adjustment/Consolidation Plan, the record title owner of the second property must also sign this application.

SECOND RECORD TITLE OWNER NAME:

Contact Person:

Email:

Mailing Address:

APPENDIX 1

Phone: _____ Cell Phone: _____ Fax: _____

DESIGN/ENGINEERING FIRM NAME:

Contact Person: _____

Email: _____

Mailing Address:

Phone: _____ Cell Phone: _____ Fax: _____

ATTORNEY NAME & FIRM: _____

Contact Person: _____

Email: _____

Mailing Address:

Phone: _____ Cell Phone: _____ Fax: _____

OTHER CONSULTANT NAME:

Contact Person: _____

Email: _____

Mailing Address:

Phone: _____ Cell Phone: _____ Fax: _____

Type of Water Supply Proposed: _____ Public _____ Individual Well _____ Private Centralized System

Type of Sanitary Sewage Disposal Proposed: _____ Public _____ Individual On-Lot Septic

Street Ownership Proposed: _____ Public (for dedication to the Township) _____ Private Homeowners' Association?: _____ Yes _____ No

APPENDIX 1

All required SALDO Waiver Request are included with this application: ____ Yes ____ No

REPRESENTATIONS

1. By making a submission under this Ordinance, the applicant acknowledges and agrees that all documents and other information submitted to the Township pursuant to this Ordinance constitute public records within the meaning of the Pennsylvania Right to Know Law, Act 3 of 2008, as amended, and are therefore subject to review and reproduction upon request in accordance with that Law and applicable Township ordinances and resolutions.
2. To the extent that any such documents or information are not deemed public records and are subject to protection pursuant to Federal or State copyright laws, or Common Law copyright protection, the applicant and all of its agents, employees and consultants, by filing documents with the Township pursuant to this Ordinance, shall be deemed to have waived all copyright protection as relates to reproduction, review, analysis, criticism, or approval of the application by the Township and all of its agents, servants, employees, officials, and consultants, and the public at large.
3. The applicant hereby agrees to indemnify, defend and hold harmless the Township and all its agents, servants, employees, officials, and consultants of and from any and all claims, demands, judgments or damages arising out of or relating to claims of violation and violations of Federal and State copyright laws or Common Law copyright protection.
4. Applicant(s) and/or Owner(s) hereby grant(s) permission to and authorize(s) members of the Lowhill Township Planning Commission, Township staff and Township consultants to enter subject property to view the premises in conjunction with the Subdivision and Land Development application which is hereby filed.

UNSWORN FALSIFICATION TO AUTHORITIES: To the best of my knowledge and belief, all information on this application is true, correct, and complete and with the understanding that any false statement is subject to the penalties of 18 Pa. C.S.A. Section 4904, relating to "Unsworn Falsification to Authorities".

Signature of Applicant Date _____

Print Name of Applicant _____

Signature of Second Applicant Date _____

Print Name of Second Applicant _____

Signature of Record Title Owner Date (If the Applicant is different from the Record Title Owner, both MUST sign this Application.) _____

Print Name of Record Title Owner _____

APPENDIX 1

TOWNSHIP USE ONLY----- APPLICATION COMPLETION CHECKLIST

Application Form, signed by Applicant and Owner(s) if different than Applicant _____

Application Fee in the amount of \$ _____ CK# _____ Date _____

Escrow Deposit in the amount of \$ _____ CK# _____ Date _____

Full Size Plan Sets, 13 copies

Digital format (PDF required/ TIF recommended), flash drive (1 copy) for all plans and reports

Waiver Request Form

Natural & Cultural Features Plan

Carbonate and or Shale Geologic Features Plan/Report/Test Results

Stormwater Management Report and Plan (3 copies required)

Traffic Impact Study (2 copies required)

Lighting Plan

Phase 1 Environmental Site Assessment

Fiscal Impact Study

Water Resources Study

SALDO Required outside agency review letters

Landscaping Plan

Application deemed incomplete _____ Date determined to be incomplete _____

Other _____

APPENDIX 2

LOWHILL TOWNSHIP CONTRACT FOR PROFESSIONAL SERVICES

THIS AGREEMENT made this _____ day of _____, 20____, by and between **LOWHILL TOWNSHIP**, Lehigh County, Pennsylvania, with offices located at 7000 Herber Rd New Tripoli, PA 18066 (hereinafter referred to as "**Township**") and

Printed Property Owner Name:

Property Owner Address:

(hereinafter referred to as "**Applicant**").

OR

Printed Equitable Property Owner Name:

Title and or Corporation Name and Address:

(hereinafter referred to as "**Applicant**")

WHEREAS, Applicant is the legal or equitable owner or tenant of certain real estate consisting of Tax

Map Parcel No. _____

located in Lowhill Township within the _____ Zoning District hereinafter referred to as the "**Site**"; and

WHEREAS, Applicant has presented to the Township plans for either grading, subdivision, land development, or other building development of the Site (hereinafter referred to as the "**Project**"); and

WHEREAS, Applicant has requested and/or requires Township approval for the Project and/or review of Applicant's plans and proposals concerning the Project, and the Township is willing to authorize its professional consultants to review said plans and proposals concerning the Project upon execution of this Agreement, and upon deposit of an Escrow Account.

NOW, THEREFORE, the parties agree as follows:

1. Applicant and Township hereby authorize and direct Township's professional consultants, as defined at Section 107 of the Pennsylvania Municipalities Planning Code (PA MPC), to review Applicant's plans and proposals concerning the Project proposed for the Site, and to make such recommendations and specifications as may be necessary with respect to the Project in accordance with all applicable Federal, State, County, and Township statutes, ordinances, codes, rules, and regulations.

APPENDIX 2

2. Applicant and Township acknowledge that Township will incur costs and fees relating to the review of the Project by Township's professional consultants, and Applicant agrees to pay and/or reimburse Township for such costs in accordance with this Agreement.

3. Applicant shall pay the professional consultant's charges and fees for the following: (a) review of any and all plans, proposals, studies, or other correspondence relating to the Project; (b) attendance at any and all meetings relating to the Project; (c) preparation of any documents related to the Project, including, but not limited to: studies, reports, engineered plans, surveys, appraisals, agreements, deeds, declarations, easements, other legal documents, or other correspondence; (d) monitoring, testing, and inspecting of the work conducted by Applicant and/or its agents, contractors, representative, or employees in conjunction with the Project.

4. Applicant hereby agrees to deposit with Township the sum of _____ Dollars (\$ _____), payable as cash in U.S. Dollars or check drawn on a Pennsylvania bank ("**Escrow Account**") as security for the payment of all Township expenses, costs, charges, and fees as set forth in Paragraph 3 above, upon execution of this Agreement, which shall be held in a non interest-bearing account by the Township. In the event that the Escrow Account shall fall below Fifty Percent (50%) of the original posted amount, Applicant shall immediately, upon receipt of written notice from Township, deposit sums with the Township necessary to replenish the Account to its original balance. In the event that there are insufficient funds to pay current Township-incurred expenses, Applicant agrees to pay the total amount currently due for Township-incurred expenses without delay in addition to re-establishing the base escrow account balance. Township will use its best efforts to advise Applicant of the impending likelihood that its costs have exceeded the required Escrow Account sums as described above.

5. Applicant and Township agree that all unused portions of the Escrow Account shall be returned to Applicant upon written request to the Township once all of the work on the Project is completed by Applicant, including the maintenance period, if any, and all Township expenses, costs, charges, and fees as set forth in Paragraph 3 above have been paid.

6. If the project is a subdivision or land development, Applicant and Township acknowledge that the Township Subdivision and Land Development Ordinance requires Applicant to pay Township's professional consultant fees relating to this Project, and in the event that Applicant fails to provide sufficient funds in the Escrow Account upon ten (10) days written notice to Applicant or fails to make the initial deposit payment described above within five (5) days of the date of this Agreement, Applicant shall be in default of this Agreement and no further Professional Consultant reviews of the project will be authorized by the Township that may result in the denial of the Project by the Township.

7. Applicant and Township further agree that all fees or costs arising out of this Agreement shall be paid prior to the issuance of any permit, occupancy or otherwise, for the use, improvement, or construction of the buildings as proposed on Applicant's final plan. Applicant agrees and acknowledges that no permit, occupancy or otherwise, or recordable plans, shall be released by Township until all outstanding professional consultant fees and costs are paid to Township, and provided that Applicant is not in default under this Agreement.

8. By execution of this Agreement, Applicant acknowledges and agrees that Township employees and professional staff, including Township Planning Commission members and members of the Township Board of Supervisors, may enter upon and inspect the Site upon forty-eight (48) hours notice in order to determine compliance with Township ordinances and to facilitate appropriate planning for the Project.

9. Applicant may at any time terminate all further obligations under this Agreement by giving fifteen (15) days written notice to the Township that it does not desire to proceed with the development as set forth on the plan. Upon receipt of such written notice by Township, Applicant shall only be liable to the Township for the Township expenses, costs, charges, and fees incurred prior to the end of this 15 day

APPENDIX 2

notice period.

10. This Agreement shall be binding on and inure to the benefit of the successors and assigns of Applicant. Applicant shall provide Township with at least thirty (30) days advance written notice of any proposed assignment of Applicant's rights and responsibilities under this Agreement.

11. Applicant and Township acknowledge that this Agreement represents their full understanding as to Township's reimbursement for professional or consultant services. If the Project constitutes a subdivision or land development under Township ordinances, the parties acknowledge that they intend to execute Improvement and/or Financial Security Agreements in the future. Any such Improvement and Financial Security Agreements may incorporate or replace this Agreement.

12. This Agreement and the Application it is a part of shall be governed by and construed under the laws of the Commonwealth of Pennsylvania, the PA MPC, as specifically outlined in Section 503.1 and Section 402 of the Subdivision and Land Development Ordinance and all other Ordinances of Lowhill Township. The Applicant and Township hereby consent to the exclusive jurisdiction of the Court of Common Pleas of Lehigh County, PA regarding any dispute arising out of or in connection with this Agreement.

13. If any provision of this Agreement is determined by a court of competent jurisdiction to be illegal, invalid, unenforceable, unconstitutional, or void, for any reason, only that provision shall be illegal, invalid, unenforceable, unconstitutional, or void and the remainder of this Agreement shall be in full force and effect.

IN WITNESS WHEREOF, and intending to be legally bound, the parties have caused their signatures to be affixed and have affixed their hands and seals the day and year first above written.

APPLICANT:

Owner/Developer-----Print Name

Signature

Date Notary Seal _____

LOWHILL TOWNSHIP

Township Secretary of LOWHILL TOWNSHIP

Date Township Seal _____

APPENDIX 3

REQUEST FOR MODIFICATION (WAIVER) OF REQUIREMENTS OF THE LOWHILL TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE (SALDO)

DIRECTIONS FOR A PROPERLY COMPLETED WAIVER SUBMISSION:

This form may be reproduced for each requested modification (waiver) from the Lowhill Township SALDO. If you prefer to write a letter or statement, the following information below must be included in accordance with Municipalities Planning Code Section 503(8) and 512.1, and all requirements specifically under Lowhill SALDO Section 205. This waiver request shall accompany and be part of the preliminary or preliminary/final application submission for all subdivisions and land developments.

1. Subdivision/Land Development Plan identified as -

Dated _____ with a latest revision date of _____

2. Applicant hereby requests a modification (waiver) of the SALDO requirements of:

Article _____,

Section _____,

Subsection(s) _____,

of the Lowhill Township SALDO on the basis that literal enforcement will exact undue hardship, is unreasonable, or that an alternative standard can be demonstrated to provide equal or better results.

3. State in full the grounds and facts of unreasonableness or hardship on which this request is based because of peculiar conditions pertaining to the land requisition:

(OR)

4. State in full the grounds and facts that demonstrate that an alternative standard can be demonstrated to provide equal or better results;

APPENDIX 3

5. Printed Name of Applicant or Record Owner making this request:

6. Signature of Applicant or Record Owner:

Date: _____

APPENDIX 4

LOWHILL STANDARD PLAN NOTES

The following standard notes have been developed for use by developers and subdividers for all plans submitted for review by Lowhill Township.

1. **ACCESS TO STATE HIGHWAY:** For Subdivisions fronting along State Highways that will not propose any driveway or underground utility onto the Highway at the time of plan approval: In Accordance with 53 P.S. 10508(6), driveway access or underground utility construction from Lot (Lot Numbers) to (Name of Road), State Highway S.R.(Route Number), will require that a Highway Occupancy Permit be obtained from the Pennsylvania Department of Transportation. For Subdivisions or Land Developments that will have Highway Occupancy Permits issued by Final Plan approval: In accordance with 53 P.S. 10508(6), Highway Occupancy Permit Number Permit Number), dated (Permit Date) has been obtained for (state purpose) from Lot (Lot Number) to (Name of Road), State Highway S.R. (Route Number). Construction shall be in accordance with the conditions of this Permit. For Subdivisions or Land Developments that require Highway Occupancy Permits but which will not have permits issued by time of Final Plan approval: Final Approval of this Plan is specifically conditioned upon the issuance of a Highway Occupancy Permits for (state purpose) by the Pennsylvania Department of Transportation without changes to the design of this subdivision.

2. **PLANNING COMMISSION RECOMMENDATION FOR APPROVAL** : (if your plan is not reviewed by the Planning Commission omit this note) Recommended for Approval on _____ by the Planning Commission of the Township of Lowhill. _____ Secretary Chairman

3. **BOARD OF SUPERVISORS APPROVAL**: Approved on _____ by the Board of Supervisors of the Township of Lowhill. _____ Secretary Chairman

4. **CERTIFICATION OF OWNERSHIP, ACKNOWLEDGMENT OF PLAN and OFFER OF DEDICATION** (I)(We) hereby certify that (I am) (we are) the Record Owner(s) of the property shown hereon in peaceful possession, and that there are no suits affecting the title of the same. (I) (We) certify that the subdivision plan thereof was made at (my) (our) direction, that (I) (We) acknowledge the same to be (my) (our) act and plan and desire the same to be recorded as such according to law. (I) (We) further certify that monuments will be placed where indicated upon completion of final grading (if applicable) and that all right-of-way for township roads shown and not previously dedicated will be dedicated to the public use. _____ (Type name and title) (Type name and title) Sworn and subscribed before me this _____ day of _____, 20____. _____ Notary Public [Note: Notary stamps, seals and signatures must not overlap, and not be smudged or blurred.]

5. **ENGINEER'S / SURVEYOR'S CERTIFICATION**: I hereby certify that this plan and survey are correct in all details, and that monuments will be accurately placed as shown on the plan. _____ Professional Land Surveyor/Engineer

6. **LEHIGH VALLEY PLANNING COMMISSION REVIEW**: Reviewed this _____ day of _____, 20____ by the Lehigh Valley Planning Commission. _____ for the Lehigh Valley Planning Commission

7. **PLAN SHEET INDEX** This must appear on the Preliminary, Final and Record Plan where the subdivision or land development plan contains more than one plan sheet. PLAN SHEET INDEX--The plan sheets listed below are also a part of this Plan, and are hereby incorporated by reference: Plan Sheet No. Title Date of Last Revision

8. **ZONING DATA** (layout example only-- additional zoning data maybe required based on land use and all Lowhill Township Ordinance requirements)

Zoning District.....RV - Rural Village
Proposed Use..... Single Family Detached Dwellings
Minimum Lot Size..... 1 acre
Minimum Lot Width..... 100 feet
Minimum Yards: Front..... 25' Side: One..... 10' Both..... 30'
Rear..... 30'
Maximum Building Height..... 35'
Maximum Building Coverage..... 20%
Impervious Coverage62% (entire site)

9. **SITE DATA:** (layout example only– additional zoning data maybe required based on land use and all Lowhill Township Ordinance requirements)

Record Owner..... (Name and address)
Developer (if different)..... (Name and address)
Deed Reference..... DBV & Page or Document ID No.
Tax Map Parcel Reference..... Map, Block, Lot or Document ID No.
Total Tract Area..... 10 Acres
Number of Lots..... 8

10. **WETLAND NOTE:** Property owners are hereby notified that any construction, grading or earth disturbance of ground cover within the area designated as Wetlands on this plan, and located on Lots (list lots), is prohibited without permission from the Pennsylvania Department of Environmental Protection and the United States Army Corps of Engineers.

11. **STORMWATER MANAGEMENT NOTES:** (Public Systems) The owner(s) of each lot in this subdivision on which there is located a pipe which is part of the overall stormwater management system, including any stormwater conveyance pipe(s) under the driveway, shall, by virtue of accepting a deed for and taking title to any such lot, be deemed to have covenanted to and with each other lot owner in the subdivision and the Township that the covenanting owner(s) will be responsible for maintaining, repairing and, if necessary, replacing any such pipe that becomes blocked or so damaged as to no longer effectively convey stormwater runoff. The swales and stormwater drainage easements depicted on the record plan and the developer's stormwater management plan (on file with the Township) constitute part of the overall stormwater management system for this subdivision and the Township and the contours and elevations of said drainage swales and/or easements shall not be changed by the developer or the individual lot owners or their agents. Lot owners and builders are encouraged to examine the stormwater management plan at the township municipal building before undertaking excavation, earthmoving or lot grading activities. Furthermore, all swales and/or stormwater drainage easements depicted on the subdivision and or land development plans shall constitute permanent easements in favor of the Township and the other lot owners in the subdivision for stormwater management purposes and shall be maintained by the individual lot owners and kept free of structures, plantings, debris and any other obstructions to surface water flow.

12. **PLAN NOTE:** The following statement should be provided on the plan to be recorded: "This plan has been reviewed by the Township Staff, Township Engineer and Township Solicitor for consistency with municipal regulations and ordinances related to land usage and dimensional requirements of zoning. Investigations regarding peripheral land and plan issues which are not required as part of a review process such as clarity of title, subsurface conditions including, but not limited to, soil and water quality, karst/shale geological activity, infiltration conditions and historic and archaeological issues, or such other issues (as appropriate) that may affect the merchantability of the land, have not been investigated or reviewed by the Township, the Township Engineer, or the Township Solicitor. The Township, Township Engineer, and Township Solicitor make no representation or warranty concerning these issues, which should be addressed by qualified professionals, commissioned by the Developer and/or land owner(s) as appropriate, and who are engaged in the appropriate field of practice".

13. Required Certifications Note: The sample certifications below are information that the applicant must provide on the preliminary and final plan, as appropriate. The certifications shown below must be placed on the plan for recording:

Sample Professional Engineer Statement of Certification:

I, _____, do hereby certify that I am a Professional Engineer, licensed and registered in the state of Pennsylvania and the application, plans, specifications and reports for this land development or subdivision have been prepared in accordance with accepted practice of engineering, are true and correct, and are in accordance with all Lowhill Township Ordinances and to perform engineering land surveys in the Commonwealth of Pennsylvania, pursuant to the Pennsylvania **Engineer**, Land Surveyor and Geologist Registration Law, Act of May 23, 1945, P.L. 913, as amended December 16, 1992 found at 63 P.S. §148 et seq., and do hereby certify that this plan has been prepared from a field land survey, and that to the best of my knowledge the Plan complies with all of the requirements of the Ordinances for Lowhill Township. I further certify that it is within my professional expertise to verify the correctness of the information on all applications, plan specifications and reports . I am also aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

_____ Professional Engineer Signature

Date: _____

Seal

Sample Professional Land Surveyors Statement of Certification:

I, _____, do hereby certify that I am a Professional Land Surveyor, licensed and registered in the state of Pennsylvania and the application, plans, specifications and reports for this land development or subdivision have been prepared in accordance with accepted practice of a land surveyor, are true and correct, and are in accordance with all Lowhill Township Ordinances and to also perform engineering land surveys in the Commonwealth of Pennsylvania, pursuant to the Pennsylvania Engineer, **Land Surveyor** and Geologist Registration Law, Act of May 23, 1945, P.L. 913, as amended December 16, 1992 found at 63 P.S. §148 et seq., and do hereby certify that this plan has been prepared from a field land survey, and that to the best of my knowledge the Plan complies with all of the requirements of the Ordinances for Lowhill Township. I further certify that it is within my professional expertise to verify the correctness of the information on all applications, plan specifications and reports . I am also aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

_____ Professional Land Surveyor Signature

Date: _____

Seal

Sample Professional Geologist Statement of Certification:

I, _____, do hereby certify that I am a Professional Geologist, licensed and registered in the state of Pennsylvania and the application, plans, specifications and reports for this land development or subdivision have been prepared in accordance with accepted practice of geology and hydrology, are true and correct, and are in accordance with all Lowhill Township Ordinances and to also perform engineering land surveys in the Commonwealth of Pennsylvania, pursuant to the Pennsylvania Engineer, Land Surveyor and **Geologist** Registration Law, Act of May 23, 1945, P.L. 913, as amended December 16, 1992 found at 63 P.S. §148 et seq., and do hereby certify that this plan has been prepared from a field land survey, and that to the best of my knowledge the Plan complies with all of the requirements of the Ordinances for Lowhill Township. I further certify that it is within my professional expertise to verify the correctness of the information on all applications, plan specifications and reports . I am also aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

_____ Professional Geologist Signature

Date: _____

Seal

APPENDIX 5

LOWHILL TOWNSHIP REQUIRED TREES AND PLANTINGS

DECIDUOUS TREES

(Two and one half (2-1/2) inches minimum caliper at installation)

Botanical Name	Common Name	Mature Height (FT)	Street Tree Use	Comments
Acer nigrum	Black maple	50-60	Y	
Acer rubrum	Red maple	40-60	Y	
Acer saccharinum	Silver maple	80-100	N	
Acer saccharum	Sugar maple	60-75	N	
Aesculus hippocastanum	Horsechestnut	60-70	N	Native species only
Aesculus x carnea	Red horsechestnut	35-50	N	Hybrid (A.pavia & A. hippocastanum)
Betula alleghaniensis	Yellow birch	60-80	N	
Betula lenta	Black birch	60-80	N	
Betula nigra	River birch	45-55	N	
Betula populifolia	Gray birch	40-50	N	
Carya tomentosa	Mockernut hickory	50-70	N	
Carya cordiformis	Bitternut hickory	50-70	N	
Carya glabra	Pignut hickory	50-70	N	
Carya ovata	Shagbark hickory	50-70	N	
Cladrastis kentukea	American yellowwood	30-50	Y	
Fagus grandifolia	American beech	50-70	N	
Ginkgo biloba	Ginkgo	50-70	Y	Use male only
Gleditsia tricanthos	Honeylocust	40-60	Y	Thornless variety only (i.e. v. Inermis)

<i>Juglans nigra</i>	Black walnut	50-70	N	Refer foot note (2)
<i>Larix laricina</i>	Eastern larch (Tamarack)	30-50	N	
<i>Liquidambar straciflua</i>	Sweet gum	50-75	Y	
<i>Liriodendron tulipifera</i>	Tulip tree	75-100	N	
<i>Magnolia acuminata</i>	Cucumbertree	50-70	N	Hybrid (<i>P.orientalis</i> & <i>P.occidentalis</i>)
<i>Morus rubra</i>	Red mulberry	50-70	N	
<i>Nyssa sylvatica</i>	Black gum	40-70	N	
<i>Ostrya virginiana</i>	American hornbeam	30-40	Y	
<i>Platanus occidentalis</i>	American sycamore	75-100	N	
<i>Platanus x acerifolia</i>	London planetree	70-80	Y	
<i>Populus deltoides</i>	Eastern cottonwood	75-100	N	
<i>Populus tremuloides</i>	Quaking aspen	40-60	N	
<i>Prunus serotina</i>	Black cherry	50-80	N	
<i>Quercus acutissima</i>	Sawtooth oak	40-50	N	
<i>Quercus alba</i>	White oak	50-100	N	
<i>Quercus bicolor</i>	Swamp white oak	60-80	N	
<i>Quercus coccinea</i>	Scarlet oak	70-90	Y	
<i>Quercus ilicifolia</i>	Bear oak	60-80	N	
<i>Quercus imbricaria</i>	Shingle oak	40-65	N	
<i>Quercus macrocarpa</i>	Bur oak	70-90	Y	
<i>Quercus montana</i>	Chestnut oak	40-75	N	
<i>Quercus muehlenbergii</i>	Chinkapin oak	60-80	Y	

Quercus palustris (3)	Pin oak	60-75	N	Refer foot note (3)
Quercus phellos	Willow oak	55-75	N	
Quercus robur	English oak	60-80	Y	
Quercus rubra	Red oak	60-80	Y	
Quercus shumardii	Shumard oak	60-80	Y	
Quercus velutina	Black oak	60-80	Y	
Salix nigra	Black willow	60-80	N	
Sassafras albidum	Sassafras	30-50	N	
Tilia americana	Basswood (American linden)	50-70	Y	
Tilia cordata	Littleleaf linden	60-80	Y	
Tilia tomentosa	Silver linden	50-70	Y	
Ulmus Americana (disease resistant varieties)	American elm	70-90	Y	Disease resistant varieties only
Ulmus parvifolia	Lacebark elm	40-50	Y	
Ulmus rubra	Slippery elm	45-55	N	

(1) General notes:

a. Deciduous trees shall not be utilized where potential conflict may exist with overhead electric facilities.- (See smaller deciduous tree table below)

b. Trees identified with "Y" within the street tree use column may be utilized as street trees where there is no potential conflict with overhead electric facilities.

(2) Only seedless cultivars permitted when utilized as a street tree or planted adjacent to parking lots, sidewalks, pedestrian paths and drainage structures.

(3) Quercus palustris (pin oak) has drooping branches and should not be installed adjacent to parking lots, sidewalks, or pedestrian paths unless the cultivar "Green pillar" is planted.

SMALLER DECIDUOUS TREES (1)

(Two and one half (2-1/2) inches minimum caliper at installation)

Botanical Name	Common Name	Mature Height (FT)	Street Tree Use	Comments
Acer ginnala	Amur maple	15-20	Y	
Acer griseum	Paperbark maple	25-35	Y	
Acer negundo	Box elder	30-40	Y	
Acer tataricum	Tatarian maple	15-25	N	
Alnus serrulata	Smooth alder	12-20	N	
Amelanchier (species & varieties)	Serviceberry	15-30	Y	Use tree form
Asima triloba	Pawpaw	6-30	N	
Carpinus caroliniana	American hornbeam	20-35	Y	
Castanea pumila	Allegheny chinkapin	20-25	N	
Celtis occidentalis	Common hackberry	25-30	N	
Cercis canadensis	Eastern redbud	25-30	Y	
Chionanthus virginicus	White fringetree	15-25	N	
Cornus alternifolia	Pagoda dogwood	20-30	N	
Cornus florida	Flowering dogwood	20-30	N	
Cornus kousa	Kousa dogwood	20-30	N	Use tree form
Cornus mas	Cornelia dogwood	20-30	N	
Cornus racemosa	Gray dogwood	20-30	N	
Crataegus viridis	Green hawthorn	20-30	N	Use tree form

Crataegus crus-galli	Cockspur hawthorn (thornless)	15-20	N	Use tree form (Thornless variety only)
Crataegus laevigata	English hawthorn	15-20	N	Use tree form
Crataegus phaenopyrum	Washington hawthorn (thornless)	20-30	N	Use tree form
Crataegus punctata	Dotted hawthorn	20-25	Y	Use tree form
Crataegus viridis	General hawthorn	25-30	Y	Use tree form
Diospyros virginiana	Common persimmon	30-40	Y	
Hamamelis virginiana	Witch hazel	15-25	N	
Koelreuteria paniculata	Goldenrain tree	25-40	N	
Magnolia stellata	Star magnolia	10-20	N	Use tree form
Magnolia virginiana	Sweetbay magnolia	15-25	Y	Use tree form
Malus (species & varieties)	Flowering crabapple	15-30	Y	
Prunus okame	Okame cherry	20-25	Y	Use tree form
Prunus pensylvanica	Pin cherry	25-40	N	Use tree form
Prunus virginiana	Choke cherry	20-30	Y	Use tree form

(1) General notes:

- a. Small deciduous trees may be utilized for street tree installation only where medium to large trees may conflict with overhead electric facilities.
- b. Trees identified with "Y" within the street tree use column may be utilized as street trees

EVERGREEN TREES

(Six (6) feet minimum height at installation)

Botanical Name	Common Name	Mature Height	Street Tree Use	Comments
<i>Abies balsamea</i>	Balsam fir	60-80	N	
<i>Chamaecyparis thyoides</i>	Atlantic white cedar	50-70	N	
<i>Ilex opaca</i>	American holly	30-40	N	
<i>Juniperus virginiana</i>	Eastern red cedar	30-60	N	
<i>Picea abies</i>	Norway spruce	60-80	N	Naturalized
<i>Picea glauca</i>	White spruce	40-60	N	
<i>Picea pungens</i>	Blue spruce	50-75	N	
<i>Picea rubens</i>	Red spruce	60-80	N	
<i>Pinus echinata</i>	Shortleaf pine	70-90	N	
<i>Pinus resinosa</i>	Red pine	70-90	N	
<i>Pinus rigida</i>	Pitch pine	40-60	N	
<i>Pinus strobus</i>	Eastern white pine	100-140	N	
<i>Pinus virginiana</i>	Virginia pine	30-50	N	
<i>Thuja occidentalis</i>	Eastern arborvitae	30-50	N	
<i>Tsuga canadensis</i>	Eastern hemlock	80-100	N	

NATIVE SHRUBS

(Three (3) feet minimum height at installation for buffer plantings)

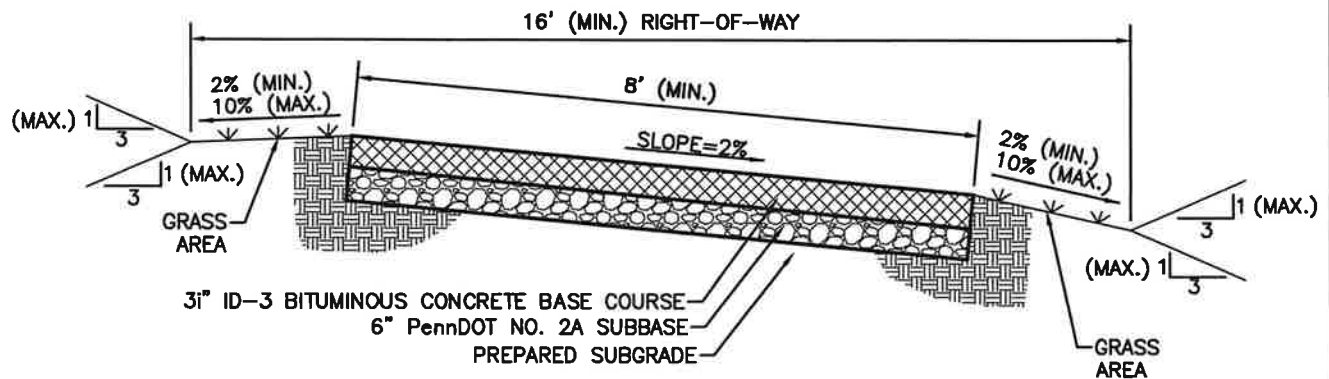
Botanical Name	Common Name	Comments
<i>Alnus incana</i>	speckled alder, mountain alder	
<i>Alnus serrulata</i>	smooth alder	
<i>Amelanchier arborea</i>	downy serviceberry, shadbush, Juneberry	
<i>Aronia arbutifolia</i>	red chokeberry	
<i>Aronia melanocarpa</i>	black chokeberry	
<i>Castanea pumila</i>	chinuapin	
<i>Ceanothus americanus</i>	New Jersey tea, red root	
<i>Cephalanthus occidentalis</i>	buttonbush	
<i>Clethra alnifolia</i>	sweet pepper bush	
<i>Comptonia peregrina</i>	sweet fern	
<i>Cornus alternifolia</i>	paegoda dogwood	
<i>Cornus amomum</i>	silky dogwood	
<i>Cornus racemosa</i>	gray dogwood	
<i>Cornus sericea</i>	red-twig dogwood	
<i>Corylus americana</i>	American hazelnut	
<i>Corylus cornuta</i>	beaked hazelnut	
<i>Diervilla lonicera</i>	bush honeysuckle	
<i>Dirca palustris</i>	leatherwood	
<i>Epigaea repens</i>	trailing arbutus	Evergreen
<i>Euonymus americana</i>	strawberry bush, brook euonymus	
<i>Gaultheria procumbens</i>	wintergreen, checkerberry	Evergreen
<i>Hamamelis virginiana</i>	Witch Hazel	
<i>Hydrangea arborescens</i>	wild hydrangea	
<i>Hypericum hypericoides</i> ssp. <i>Hypericoides</i>	St. Andrew's cross	
<i>Hypericum prolificum</i>	shrubby St. John's wort	
<i>Ilex glabra</i>	Inkberry	
<i>Ilex verticillata</i>	winterberry	

<i>Kalmia angustifolia</i>	sheep laurel	Evergreen
<i>Kalmia latifolia</i>	mountain laurel	Evergreen
<i>Lindera benzoin</i>	spicebush	
<i>Lyonia ligustrina</i>	male-berry	
<i>Myrica pensylvanica</i>	Northern bayberry	
<i>Physocarpus opulifolius</i>	ninebark	
<i>Prunus virginiana</i>	chokecherry	
<i>Rhododendron arborescens</i>	smooth azalea	
<i>Rhododendron canadense</i>	rhodora	
<i>Rhododendron maximum</i>	rosebay, great laurel	Evergreen
<i>Rhododendron periclymenoides</i>	pinxterbloom azalea	
<i>Rhododendron prinophyllum</i>	roseshell azalea	
<i>Rhododendron viscosum</i>	swamp azalea	
<i>Rhus aromatica</i>	fragrant sumac	
<i>Rhus copallinum</i>	dwarf sumac	
<i>Rhus glabra</i>	smooth sumac	
<i>Rhus hirta</i>	stag horn sumac	
<i>Ribes cynosbati</i>	prickly gooseberry	
<i>Rosa blanda</i>	smooth rose	
<i>Rosa Carolina</i>	Carolina rose	
<i>Rosa palustris</i>	Swamp rose	
<i>Rubus allegheniesis</i>	Blackberry	
<i>Rubus idaeus ssp.strigosus</i>	red raspberry	
<i>Rubus occidentalis</i>	black raspberry	
<i>Rubus odoratus</i>	thimbleberry	
<i>Salix bebbiana</i>	Bebb willow, long-beaked willow	
<i>Salix discolor</i>	pussy willow	
<i>Sambucus canadensis</i>	elderberry, red-berried elder	
<i>Spiraea alba</i>	meadow sweet	
<i>Spiraea tomentosa</i>	steeplebush	
<i>Staphylea trifolia</i>	bladdernut	

Symphoricarpos albus	snowberry	
Taxus canadensis	Canada yew	Evergreen
Vaccinium aagustifolium	low-bush blueberry	
Vaccinium corymbosom	highbush blueberry	
Viburnum acerifolium	maple leaf viburnum	
Viburnum dentatum	southern arrowwood	
Viburnum lentago	black haw, nannyberry	
Viburnum nudum var. cassindoides	wild raisin	
Viburnum prunifolium	black haw, nanny berry	
Viburnum regonitum	Northern arrowwood	
Virurnum trilobum	highbush cranberry	

Appendix 6

Lowhill Township Standard Construction Details



BICYCLE PATH CROSS SECTION

NOT TO SCALE

NOTES:

- BIKEWAY MAY BE REQUIRED TO BE ILLUMINATED TO TOWNSHIP STANDARDS.
- BIKEWAY SHALL HAVE A CROSS SLOPE OF TWO (2) PERCENT AND A MAXIMUM LONGITUDINAL SLOPE OF FIVE (5) PERCENT.
- GUIDE RAIL OR OTHER SUITABLE PROTECTIVE BARRIER SHALL BE INSTALLED AT THE EDGE OF THE RIGHT-OF-WAY AS DETERMINED BY THE TOWNSHIP.
- EXPANSION JOINT SHALL BE PLACED EVERY 50 FEET.

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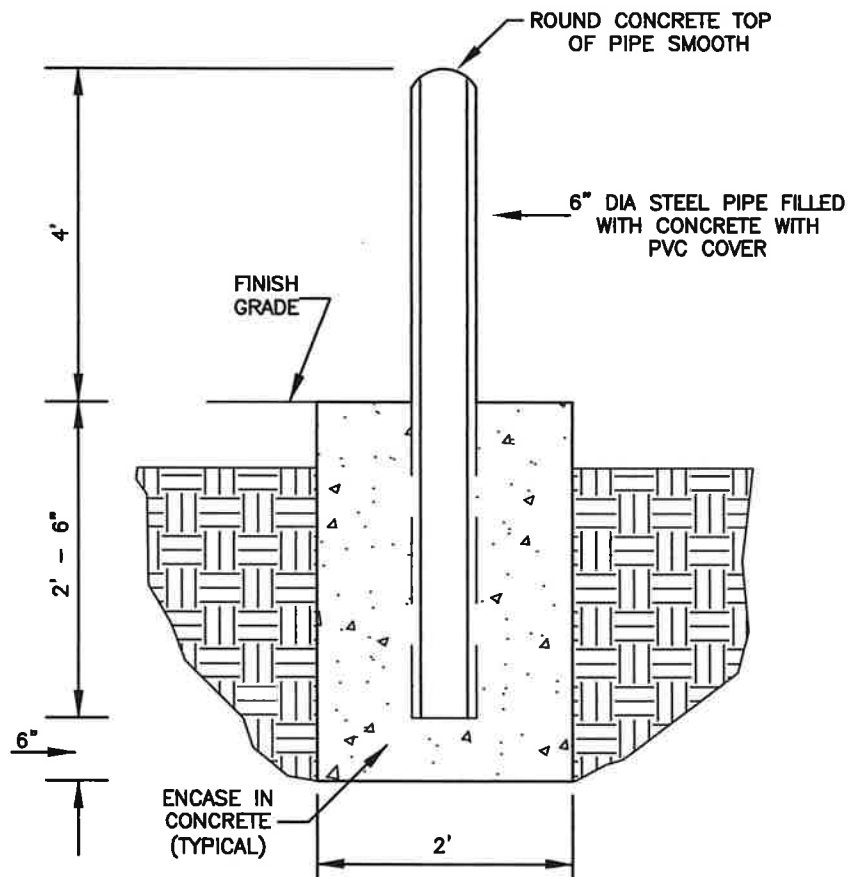
LOWHILL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

STANDARD DETAIL
FOR
BICYCLE PATH

DRAWN: DAM
DATE: 2/15/05

REVISIONS
ANH 9/17/24

PLATE NUMBER: LC-R-8



BOLLARD DETAIL
NO SCALE

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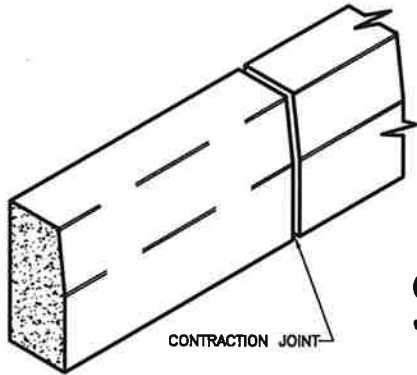


LOWHILL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

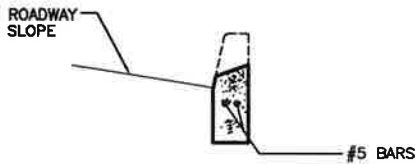
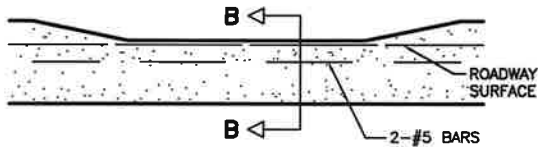
STANDARD DETAIL
FOR
BOLLARD

DRAWN: EJE
DATE: 4/4/06
REVISIONS
ANH 9/17/24

PLATE NUMBER: LC-06-41



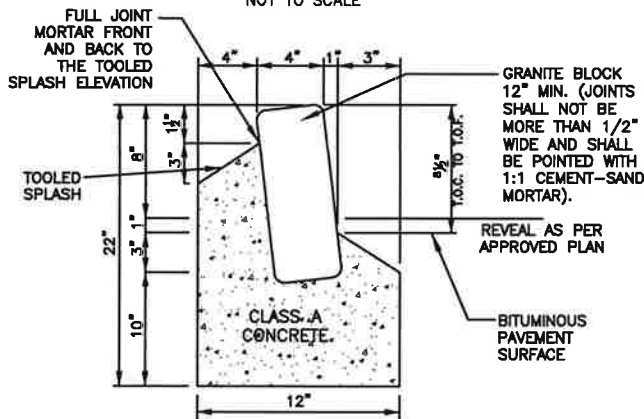
CONTRACTION JOINT DETAIL
NOT TO SCALE



SECTION B-B

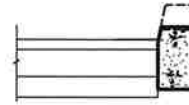
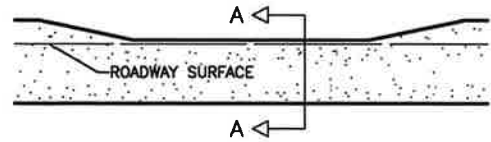
PennDOT DEPRESSED CURB DETAIL
NOT TO SCALE

TYPICAL CURB DETAIL
NOT TO SCALE



BELGIUM CURB DETAIL
NTS

NOTE: TRANSVERSE JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB AT ALL STRUCTURES OR WHERE THE CURB MEETS A DISSIMILAR MATERIAL AND SHALL BE FILLED WITH PREFORMED BITUMINOUS - IMPREGNATED FIBER JOINT FILLER RECESSED 1/4" IN FROM FRONT FACE AND TOP OF CURB. EXPANSION JOINT SHALL BE INSTALLED WHERE CURB BUTTS TO STRUCTURES.

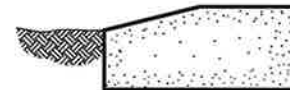


SECTION A-A

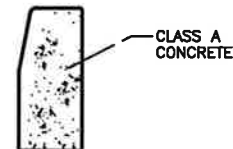
DEPRESSED CURB DETAIL
(PRIVATE)
NOT TO SCALE

NOTES:

1. EXISTING CURB REMOVAL SHALL BE IN COMPLETE SECTIONS (JOINT TO JOINT), NOT PARTIAL SECTIONS.
2. PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PUB. 408, SECTION 630.
3. SPACE CONTRACTION JOINTS IN UNIFORM LENGTHS OR SECTIONS, 10'-0" MAX. TO 5'-0" MIN.
4. PLACE 1/2-INCH PREMOLDED EXPANSION JOINT FILLER MATERIAL AT STRUCTURES AND AT THE END OF THE WORK DAY. CUT MATERIAL TO CONFORM TO AREA ADJACENT TO CURB OR TO CONFORM TO CROSS SECTIONAL AREA OF CURB.
5. EXPANSION JOINTS EVERY 50 FT.



TAPERED END DETAIL
(PRIVATE)
NOT TO SCALE



PennDOT CURB DETAIL
NOT TO SCALE

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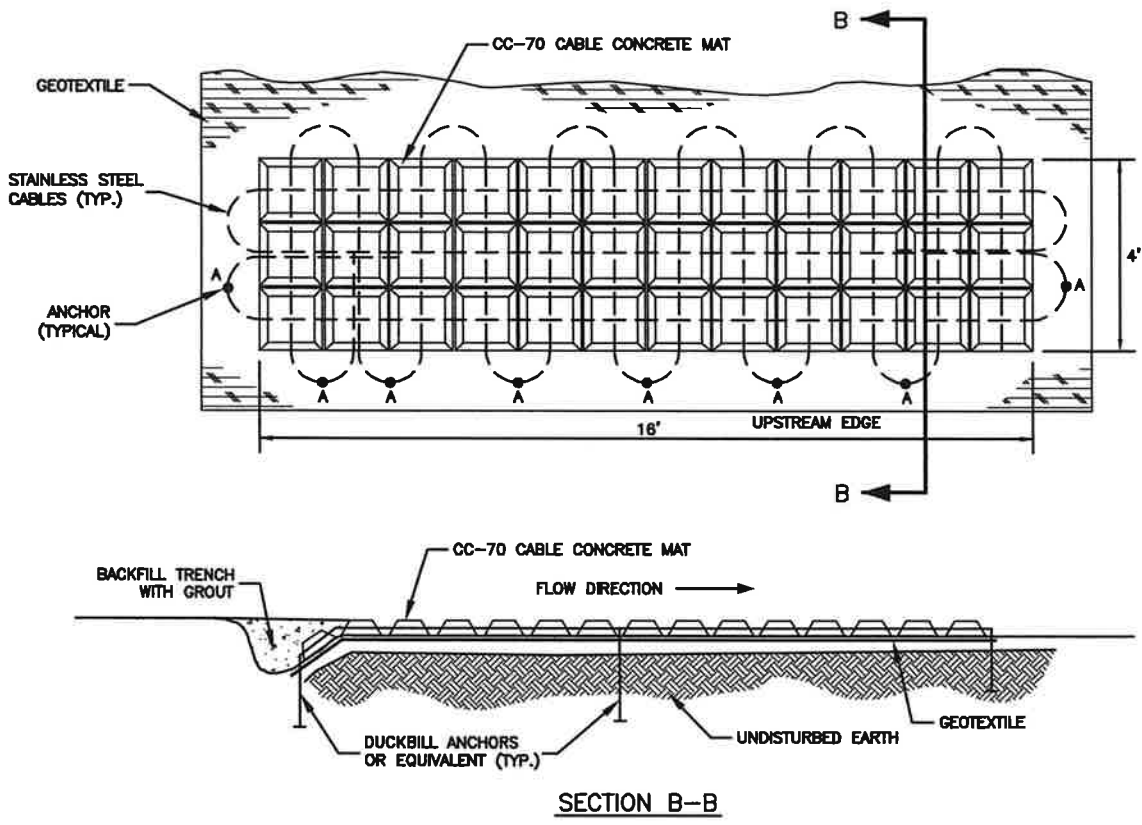
LOWHILL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

STANDARD DETAIL
FOR
CONCRETE CURB

DRAWN: DAM
DATE: 2/15/05

REVISIONS	
KTL	10/28/22
ANH	9/17/24

PLATE NUMBER: LC-R-6



NOTES:

1. MATERIALS AND CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE CABLE CONCRETE CONCRETE EROSION CONTROL SYSTEM MANUAL AS PROVIDED BY THE MANUFACTURER.
2. INSTALLATION SHALL START AT THE DOWNSTREAM END OF THE MAT AND PROCEED UPSTREAM TO ENSURE THE UPSTREAM MAT OVERLAPS THE DOWNSTREAM GEOTEXTILE.
3. ADJOINING MATS SHALL BE CLAMPED TOGETHER WHERE THE STAINLESS STEEL LOOPS OVERLAP AT A MAXIMUM SPACING OF 4 FEET IN BOTH DIRECTIONS.
4. ANCHORS SHALL BE SPACED A MAXIMUM OF 4 FEET APART ALONG THE LONGITUDINAL EDGE OF THE MAT.
5. WHERE THERE IS A DANGER OF SIGNIFICANT ABRASION OF THE FILTER CLOTH, GROUT OR OTHER PROTECTION SHALL BE APPLIED IN THE CREVICES BETWEEN THE BLOCKS.
5. CABLE CONCRETE MATTING SHALL ABUT THE 12" THICK CONCRETE APRON POURED BETWEEN THE ENDWALL WING WALLS.

CABLE CONCRETE MAT DETAIL

N.T.S.

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LOWHILL TOWNSHIP
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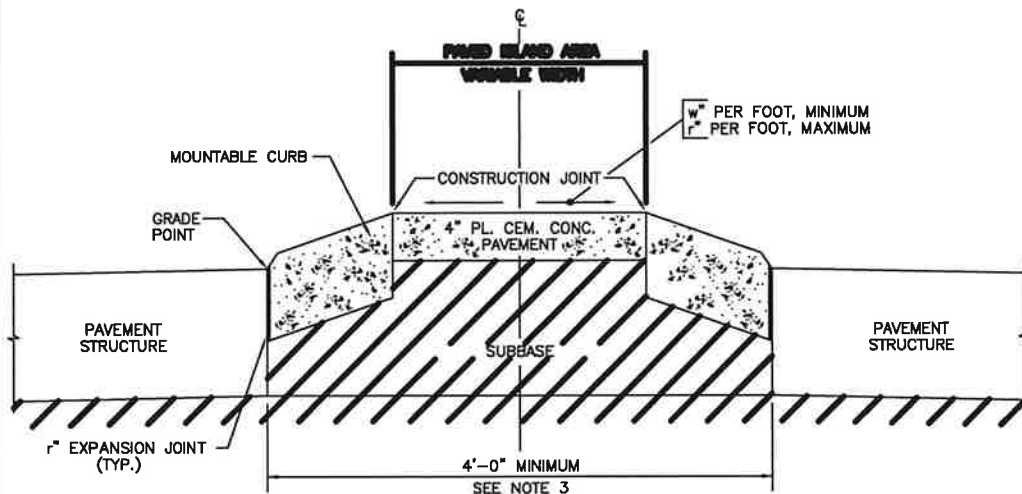
STANDARD DETAIL
FOR

CABLE CONCRETE MAT DETAIL

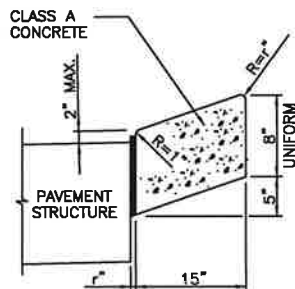
DRAWN: DAM
DATE: 2/17/05

REVISIONS
ANH 9/17/24

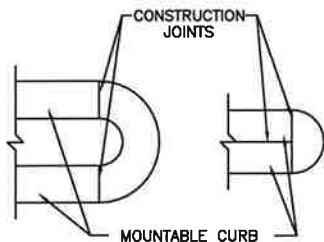
PLATE NUMBER: LC-D-17



TYPICAL CONSTRUCTION



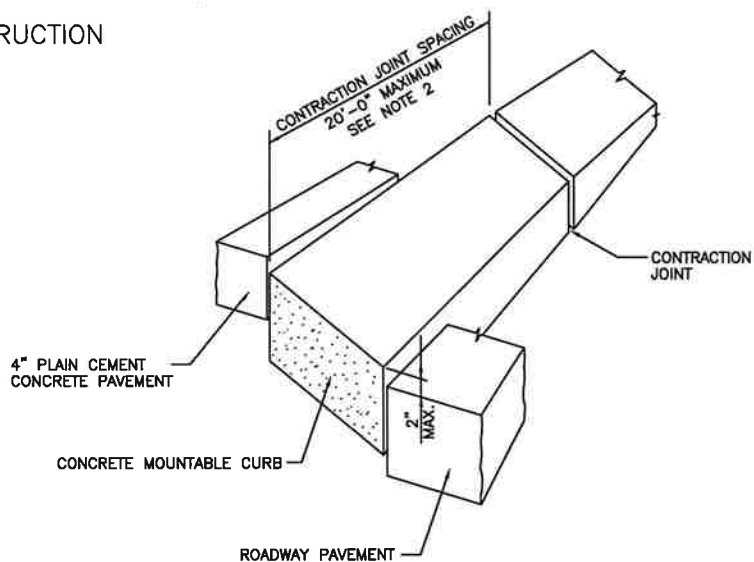
CONCRETE MOUNTABLE CURB



END DETAILS

CONCRETE MOUNTABLE CURB

NO SCALE



TYPICAL DIVISOR AREA

NOTES

1. PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PUBLICATION 408, SECTION 633.
2. SPACE CONTRACTION JOINTS IN UNIFORM LENGTHS OR SECTIONS AND SEAL AS SPECIFIED IN SECTION 501.3(n), PUBLICATION 408.
3. PLACE 1/2-INCH PREMOLDED EXPANSION JOINT FILLER MATERIAL AT STRUCTURES AND AT THE END OF THE WORK DAY. CUT MATERIAL TO CONFORM TO AREA ADJACENT TO CURB OR TO CONFORM TO CROSS SECTIONAL AREA OF CURB.
4. PROVIDE ELONGATED ISLANDS NOT LESS THAN 4'-0" WIDE AND 20'-0" LONG.

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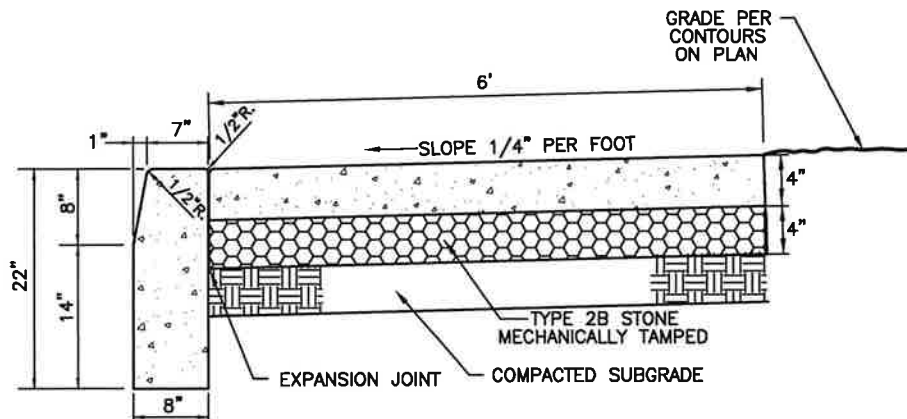
STANDARD DETAIL
FOR

CONCRETE MOUNTABLE CURB

DRAWN: DAM
DATE: 2/15/05

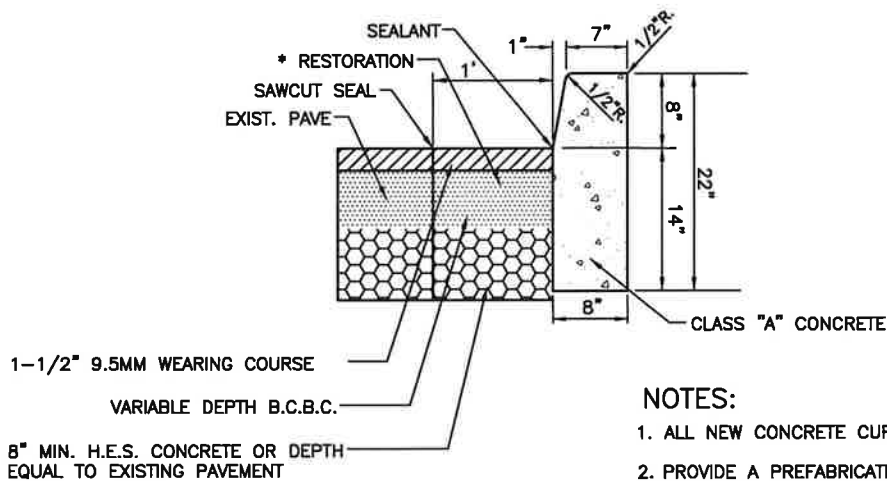
REVISIONS
ANH 9/17/24

PLATE NUMBER: LC-R-1



CONCRETE CURB AND SIDEWALK DETAIL

NOT TO SCALE



NOTES:

1. ALL NEW CONCRETE CURBING SHALL BE SMOOTH FINISHED.
2. PROVIDE A PREFABRICATED EXPANSION JOINT AT STRUCTURES AND AT THE END OF THE WORK DAY.
3. CONTRACTION JOINT SPACING (20'-0" MAX. TO 4'-0" MIN.)
4. CONTRACTION JOINTS SHALL BE SPACED IN UNIFORM LENGTH OR SECTIONS.

TYPICAL CURBING AND PAVEMENT RESTORATION DETAIL

NOT TO SCALE

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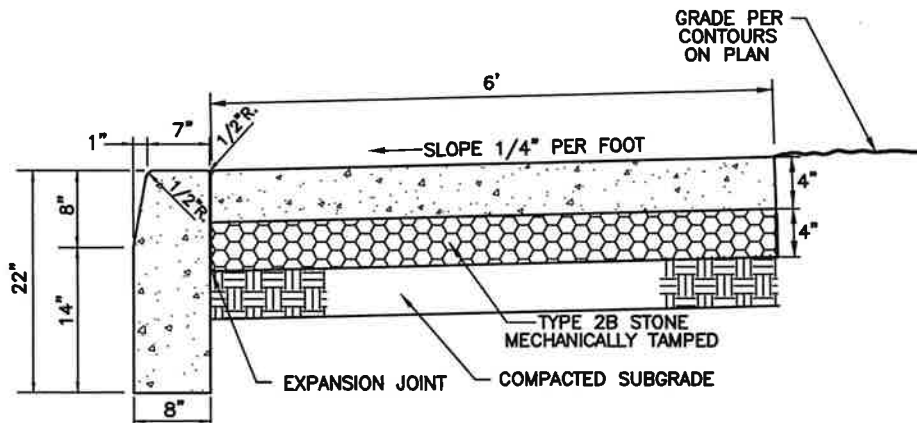
PLATE NUMBER: LC-R-11

LOWHILL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

STANDARD DETAIL
FOR
CURBING DETAILS

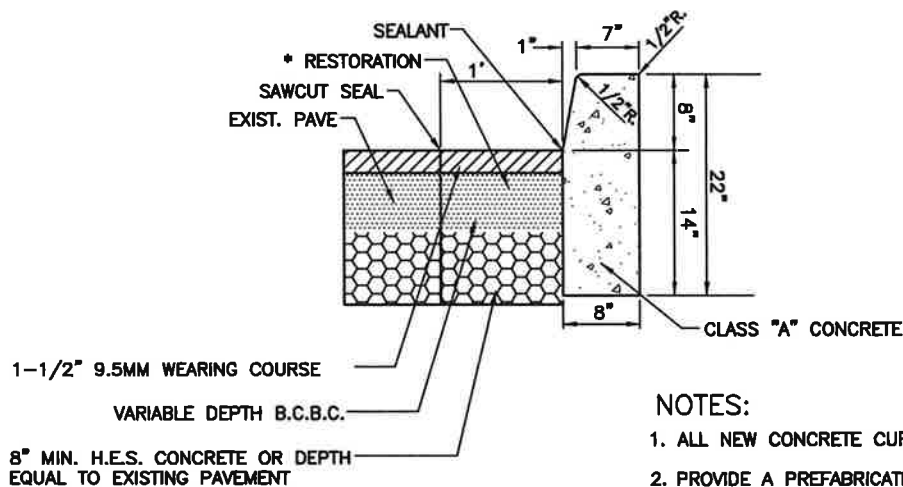
DRAWN: JGB
DATE: 2/16/05

REVISIONS
KTL 10/28/22
ANH 9/17/24



CONCRETE CURB AND SIDEWALK DETAIL

NOT TO SCALE



NOTES:

1. ALL NEW CONCRETE CURBING SHALL BE SMOOTH FINISHED.
2. PROVIDE A PREFABRICATED EXPANSION JOINT AT STRUCTURES AND AT THE END OF THE WORK DAY.
3. CONTRACTION JOINT SPACING (20'-0" MAX. TO 4'-0" MIN.)
4. CONTRACTION JOINTS SHALL BE SPACED IN UNIFORM LENGTH OR SECTIONS.

TYPICAL CURBING AND PAVEMENT RESTORATION DETAIL

NOT TO SCALE

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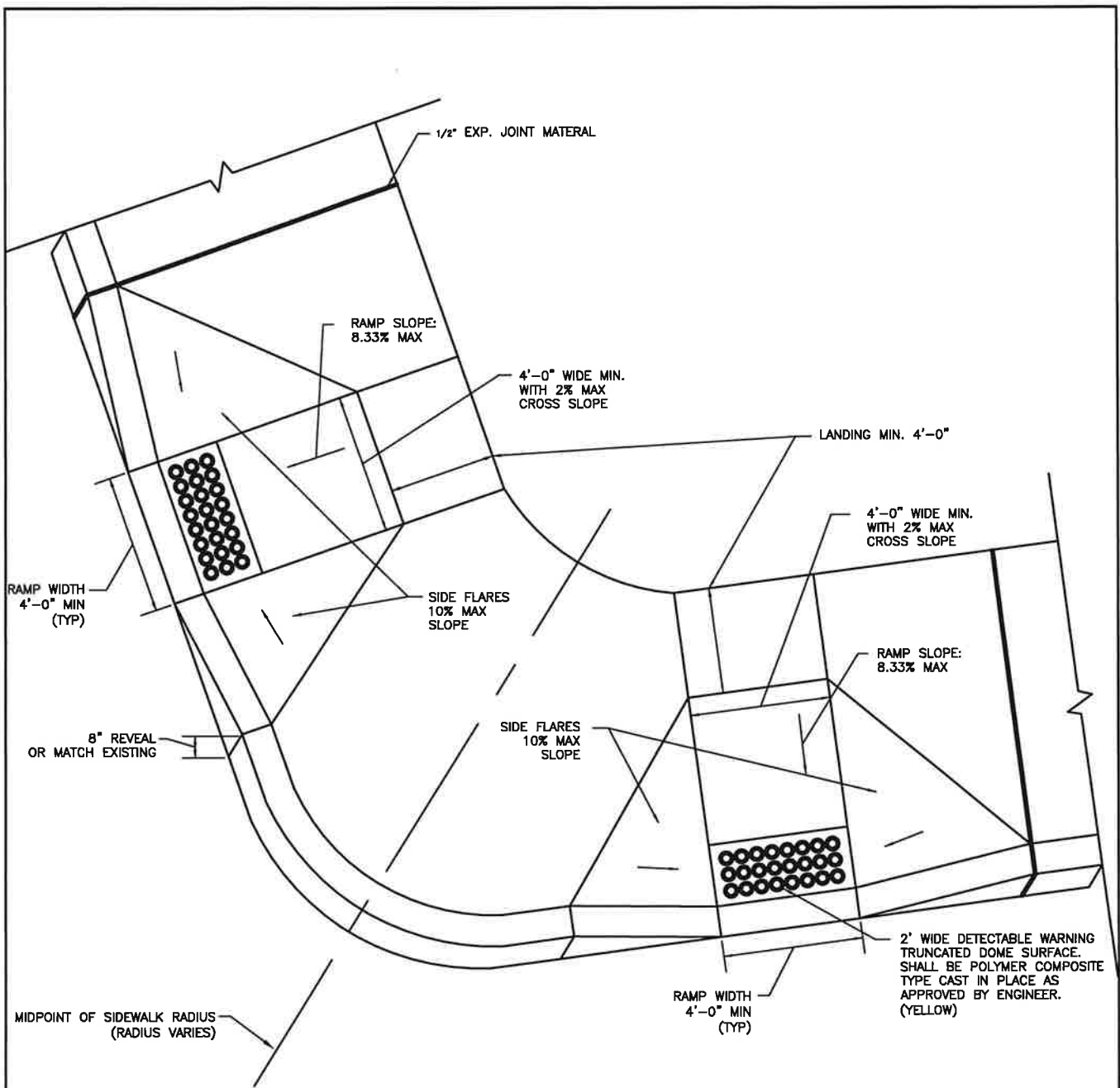
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LOWHILL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

STANDARD DETAIL
FOR
CURBING DETAILS

DRAWN: JGB
DATE: 2/16/05

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DOUBLE CURB RAMP DETAIL
NOT TO SCALE

*ALL WORK SHALL MEET ADA. AND
PENNDOT SPECIFICATIONS

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PLATE NUMBER: LC-R-12

LOWHILL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

STANDARD DETAIL
FOR
DOUBLE CURB RAMP DETAIL

DRAWN: MPS
DATE: 1/22/09

REVISIONS	
ANH	9/17/24

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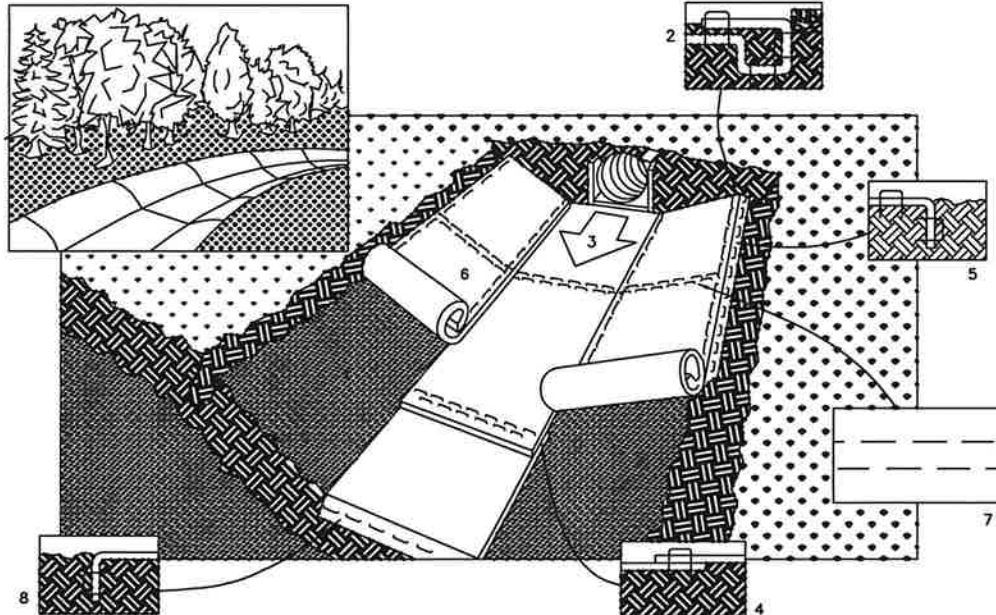
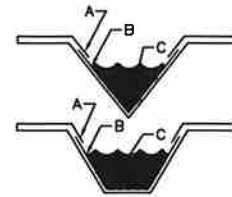
CHANNEL INSTALLATION

NOTE: HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

REFER TO GENERAL STAPLE PATTERN GUIDE FOR CORRECT STAPLE RECOMMENDATIONS FOR CHANNELS.

CRITICAL POINTS

- A. OVERLAPS AND SEAMS
- B. PROJECTED WATER LINE
- C. CHANNEL BOTTOM/SIDE SLOPE VERTICES




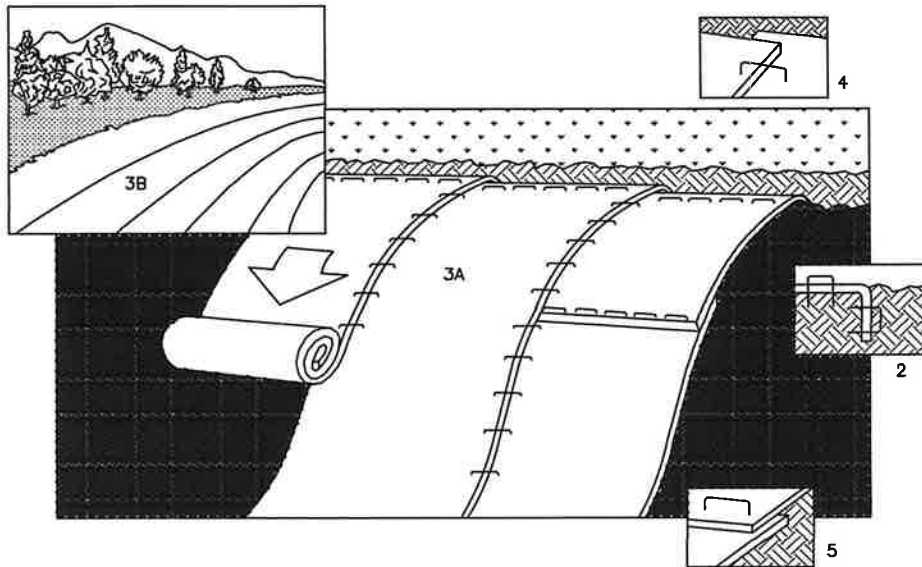
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW ON BOTTOM OF CHANNEL.
4. PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH A 6" OVERLAP. USE A DOUBLE ROW OF STAGGERED STAPLES 4" APART TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED IN 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. BLANKETS ON SIDE SLOPES MUST BE OVERLAPPED 4" OVER THE CENTER BLANKET AND STAPLED (2" FOR C350 MATTING).
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A ROW OF STAPLES 4" APART OVER ENTIRE WIDTH OF THE CHANNEL. PLACE A SECOND ROW 4" BELOW THE FIRST ROW IN A STAGGERED PATTERN.
8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

MAINTENANCE SCHEDULE:

PREVENT DEBRIS FROM COLLECTING AND IMPEDING WATER FLOW THROUGH MATTING. ENSURE THAT MATTING IS STAPLED PER MANUFACTURERS RECOMMENDATION. RESTAPLE OR REPLACE LOOSE OR DAMAGED MATTING.

EROSION CONTROL MATTING SWALE INSTALLATION DETAIL

KEYSTONE CONSULTING ENGINEERS, INC. 2870 EMRICK BOULEVARD BETHLEHEM, PA 18020 610-865-4555		LOWHILL TOWNSHIP LEHIGH COUNTY, PENNSYLVANIA STANDARD DETAIL FOR EROSION CONTROL MATTING SWALE	DRAWN: DAM DATE: 2/14/05 REVISIONS ANH 9/17/24
PLATE NUMBER: LC-D-13			



NOTE: REFER TO GENERAL STAPLE PATTERN GUIDE FOR CORRECT STAPLE PATTERN RECOMMENDATIONS FOR SLOPE INSTALLATIONS.

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP.
5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 4" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.

EROSION CONTROL MATTING SLOPE INSTALLATION DETAIL

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610-865-4555



LOWHILL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

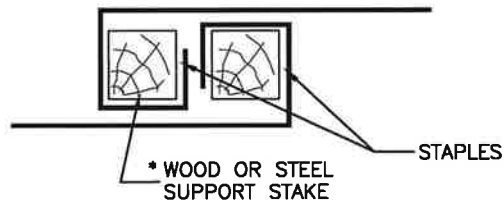
STANDARD DETAIL
FOR

EROSION CONTROL MATTING SLOPE

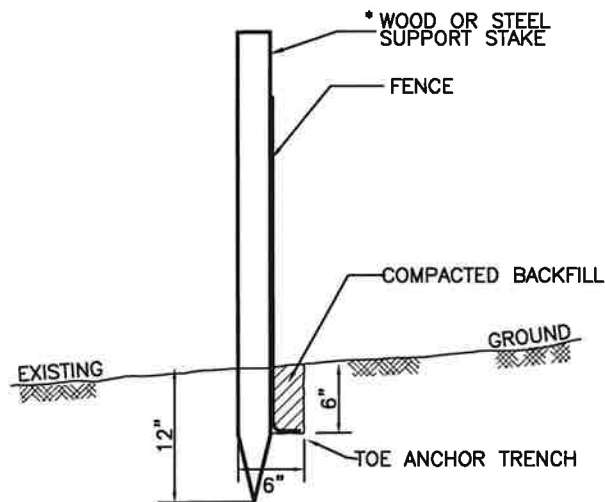
DRAWN: DAM
DATE: 2/14/05

REVISIONS
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PLATE NUMBER: LC-D-14



JOINING FENCE SECTIONS



* SPACING OF SUPPORT STAKES @ 8' MAX.

NOTES:

1. SILT FENCING MUST BE INSTALLED PARALLEL TO EXISTING CONTOURS OR CONSTRUCTED LEVEL ALIGNMENTS. ENDS OF FENCING MUST BE EXTENDED 10 FEET, TRAVELLING UPSLOPE AT 45 DEGREES TO THE ALIGNMENT OF THE MAIN FENCING SECTION.
2. SEDIMENT MUST BE REMOVED WHERE ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT OF SILT FENCING.
3. ANY SILT FENCING WHICH HAS BEEN UNDERMINED OR TOPPED WILL BE REPLACED WITH ROCK FILTER OUTLETS IMMEDIATELY.
4. STONE FILTER OUTLETS SHALL BE PLACED AT 100' INTERVALS ALONG THE SILT FENCE. SEE DETAIL OF STONE FILTER OUTLET.

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LOWHILL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

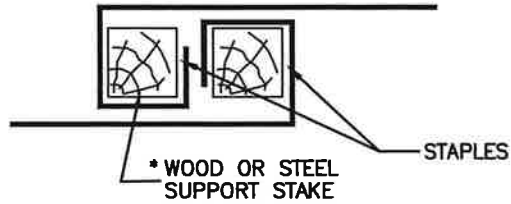
STANDARD DETAIL
FOR

FF-18 SILT FENCE

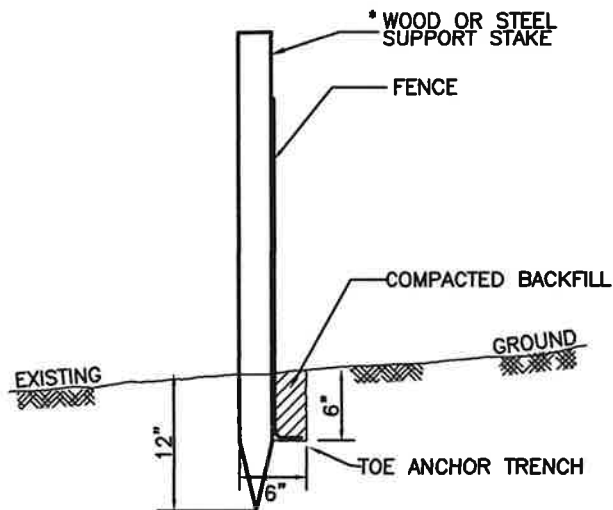
DRAWN: DAM
DATE: 2/14/05

REVISIONS
ANH 9/17/24

PLATE NUMBER: LC-D-15



JOINING FENCE SECTIONS



* SPACING OF SUPPORT STAKES @ 8' MAX.

NOTES:

1. SILT FENCING MUST BE INSTALLED PARALLEL TO EXISTING CONTOURS OR CONSTRUCTED LEVEL ALIGNMENTS. ENDS OF FENCING MUST BE EXTENDED 10 FEET, TRAVELLING UPSLOPE AT 45 DEGREES TO THE ALIGNMENT OF THE MAIN FENCING SECTION.
2. SEDIMENT MUST BE REMOVED WHERE ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT OF SILT FENCING.
3. ANY SILT FENCING WHICH HAS BEEN UNDERMINED OR TOPPED WILL BE REPLACED WITH ROCK FILTER OUTLETS IMMEDIATELY.
4. STONE FILTER OUTLETS SHALL BE PLACED AT 100' INTERVALS ALONG THE SILT FENCE. SEE DETAIL OF STONE FILTER OUTLET.

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LOWHILL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

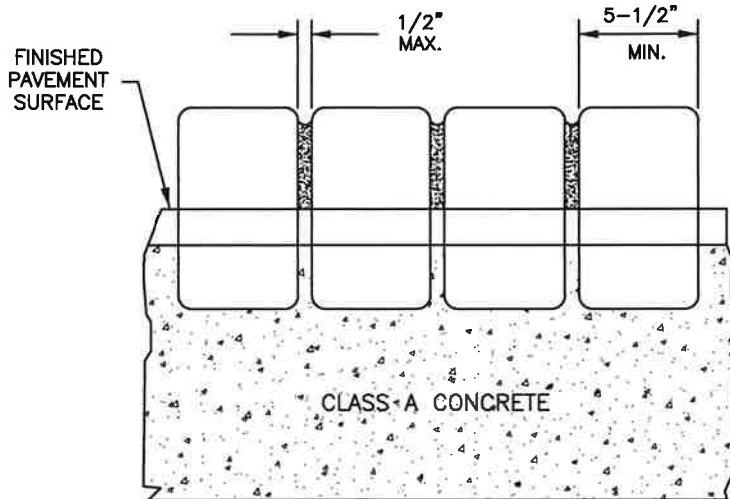
STANDARD DETAIL
FOR

FF-36 SILT FENCE

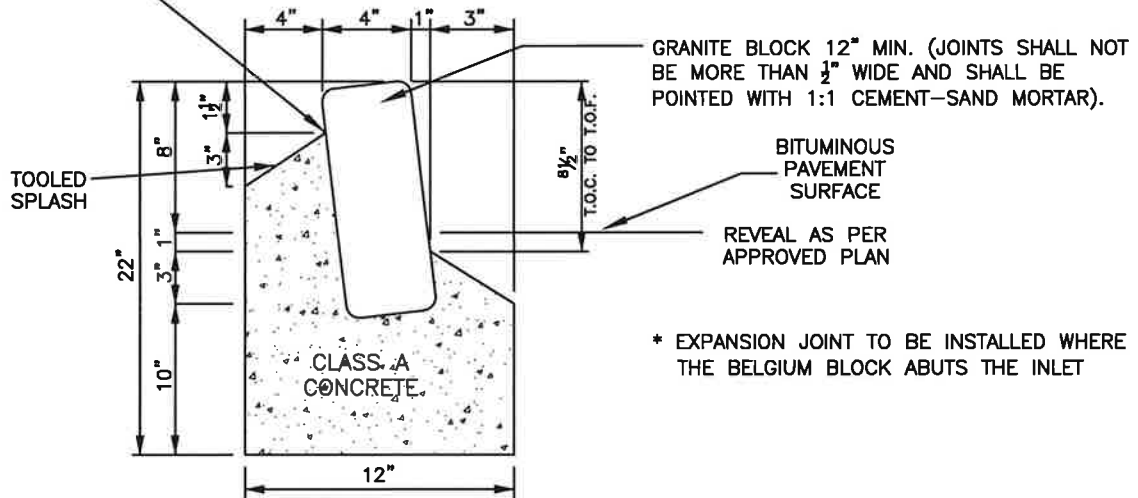
DRAWN: DAM
DATE: 2/14/05

REVISIONS
ANH 9/17/24

PLATE NUMBER: LC-D-15A



FULL JOINT MORTAR
FRONT AND BACK TO
THE TOOLED SPLASH
ELEVATION



* EXPANSION JOINT TO BE INSTALLED WHERE
THE BELGIUM BLOCK ABUTS THE INLET

BELGIUM CURB DETAIL

NTS

NOTE: TRANSVERSE JOINTS $\frac{1}{2}$ " WIDE SHALL BE INSTALLED IN THE CURB AT ALL STRUCTURES OR WHERE THE CURB MEETS A DISSIMILAR MATERIAL AND SHALL BE FILLED WITH PREFORMED BITUMINOUS - IMPREGNATED FIBER JOINT FILLER RECESSED $\frac{1}{4}$ " IN FROM FRONT FACE AND TOP OF CURB. EXPANSION JOINT SHALL BE INSTALLED WHERE CURB BUTTS TO STRUCTURES.

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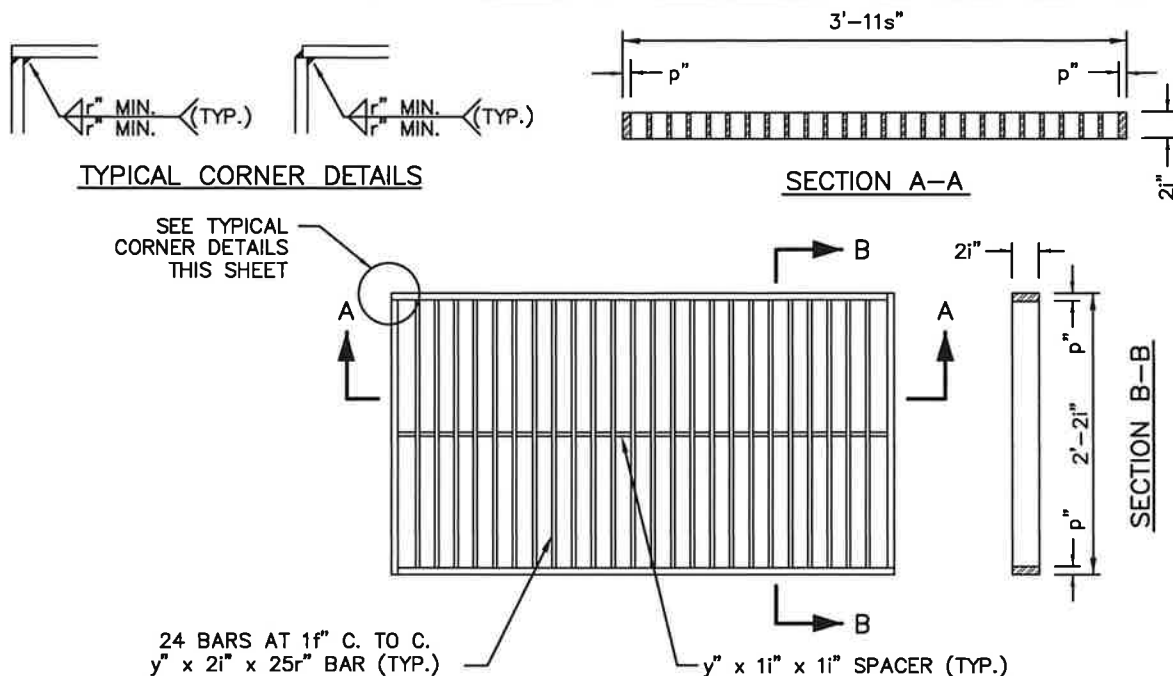
PLATE NUMBER: LC-R-10

LOWHILL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

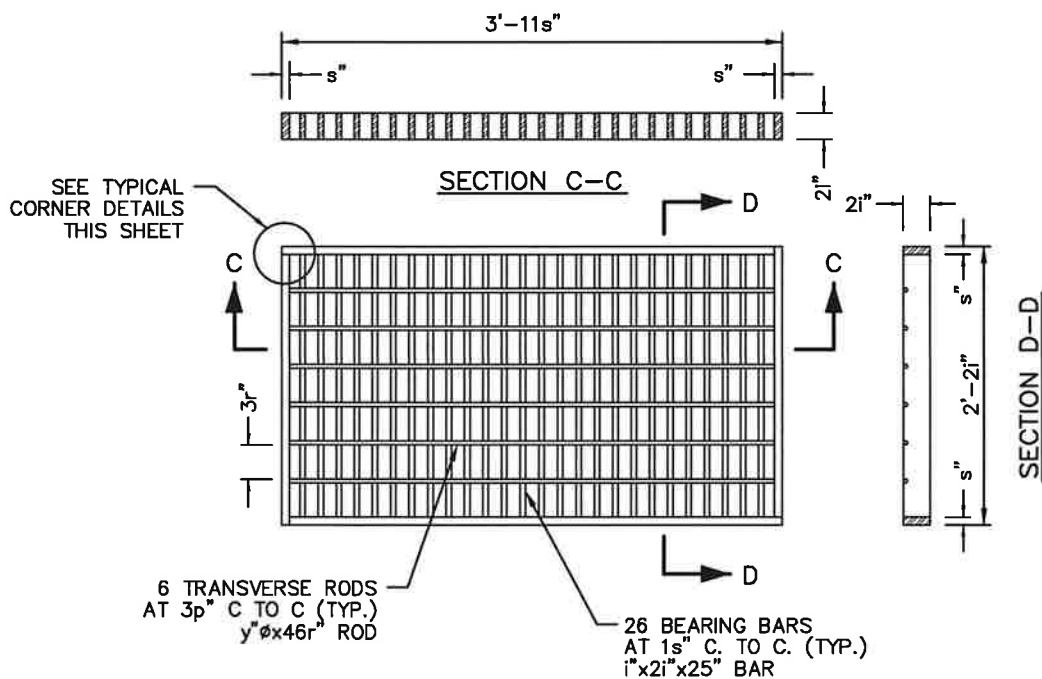
STANDARD DETAIL
FOR
GRANITE BLOCK CURB

DRAWN: JGB
DATE: 2/16/05

REVISIONS	
EJE	5/24/06
ANH	9/17/24



STRUCTURAL STEEL GRATE



BICYCLE SAFE STRUCTURAL STEEL GRATE

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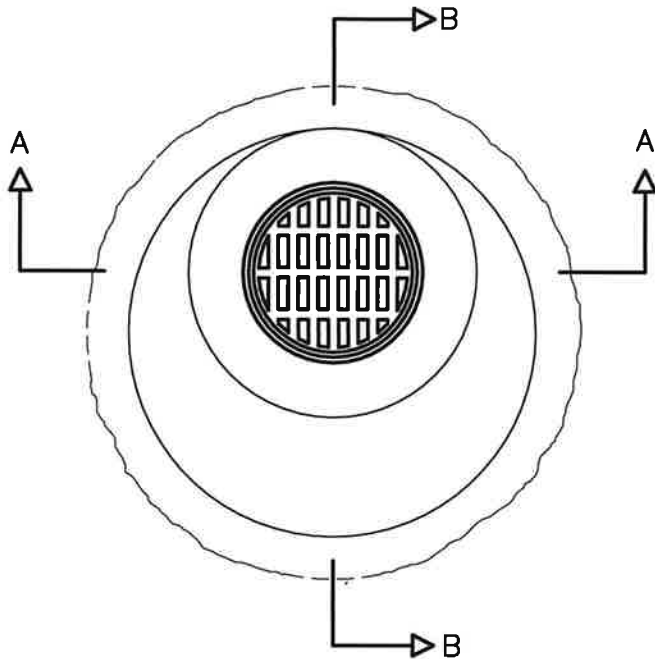
STANDARD DETAIL
FOR

INLET GRATES

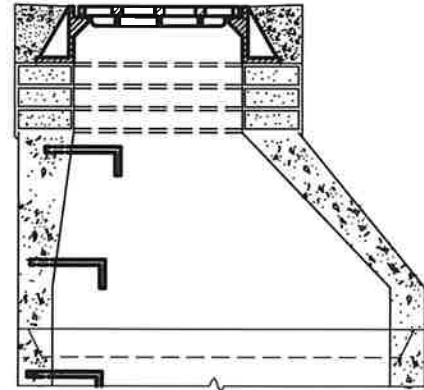
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DATE: 2/14/05

REVISIONS
ANH 9/17/24

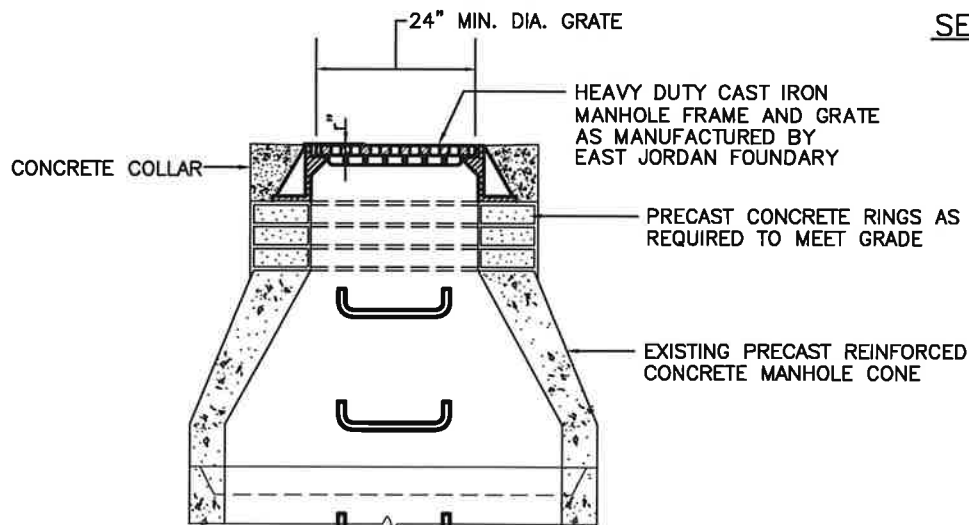
PLATE NUMBER: LC-D-10



PLAN



SECTION B-B



SECTION A-A

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LOWHILL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

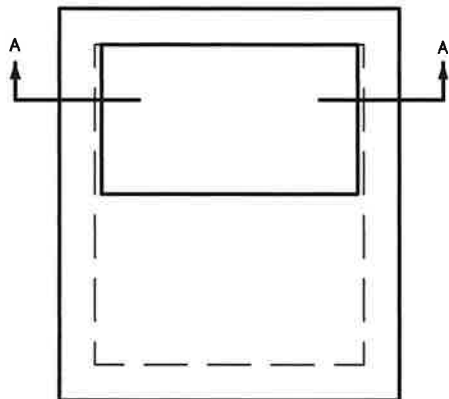
STANDARD DETAIL
FOR

MANHOLE TO INLET CONVERSION

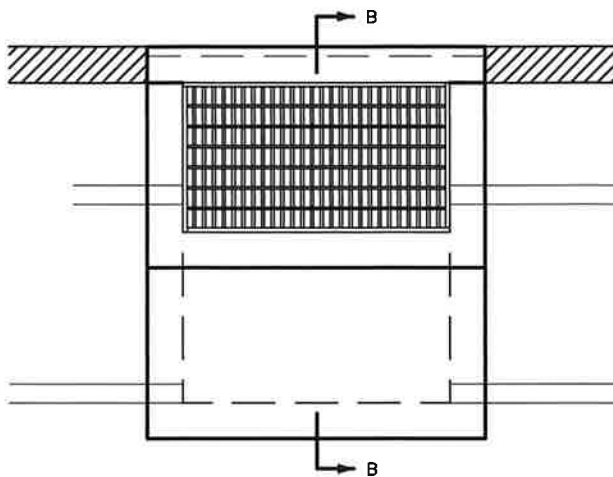
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DATE: 2/14/05

REVISIONS
ANH 8/17/24

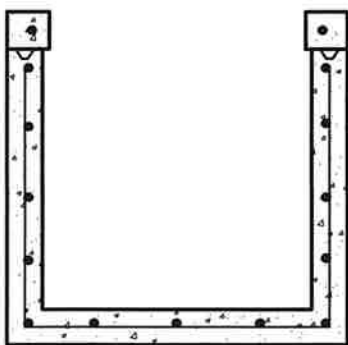
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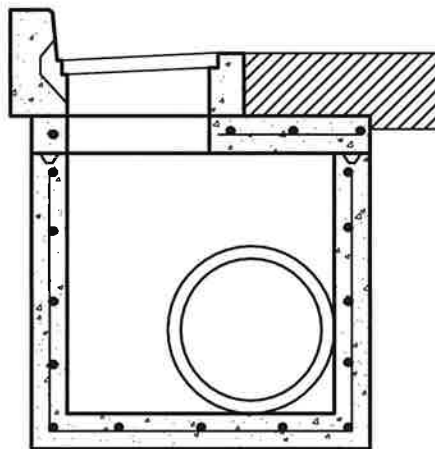
FLAT SLAB TO RECEIVE
PennDOT TYPE 'C', 'M', OR 'S' INLET
PLAN



PLAN



SECTION A-A



SECTION B-B

MODIFIED INLET DETAIL

N.T.S.

NOTES:

1. ALL INLETS REQUIRING A WIDTH DIMENSION GREATER THAN 48" SHOULD BE DESIGNED BY THE DEVELOPER'S ENGINEER AND SUBMITTED FOR REVIEW.

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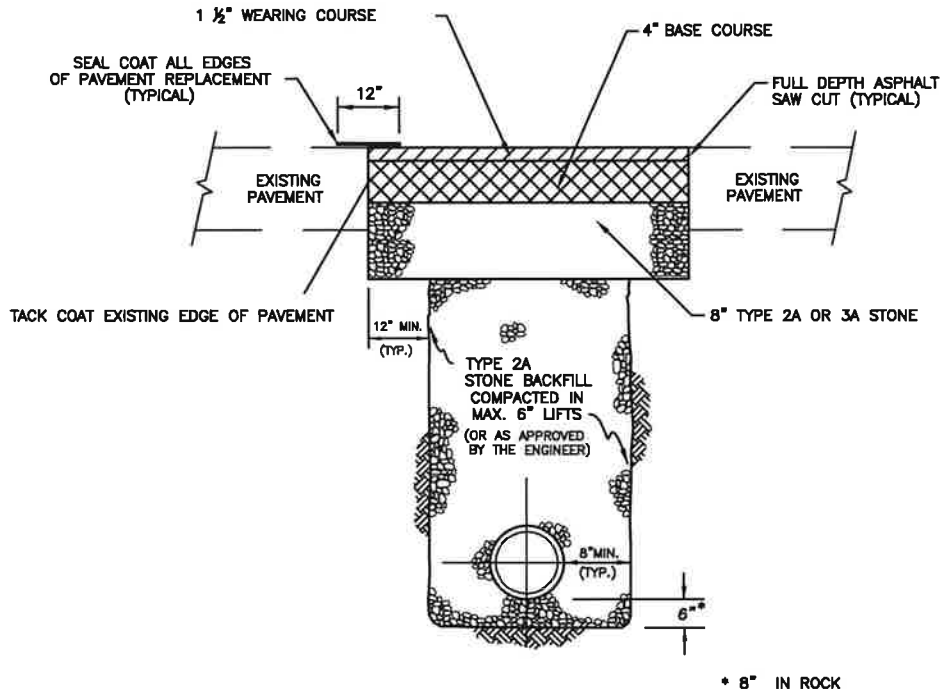
LOWHILL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

STANDARD DETAIL
FOR
MODIFIED INLET DETAIL

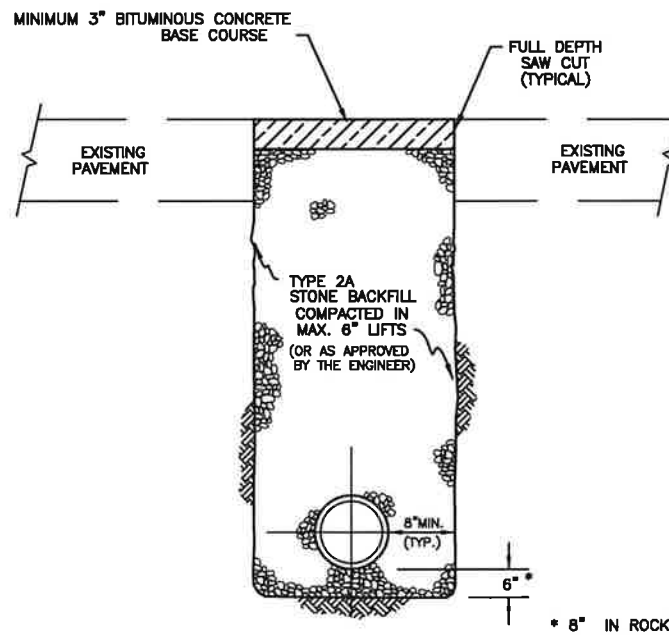
DRAWN: DAM
DATE: 2/15/05

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PLATE NUMBER: LC-D-16
SHEET 1 OF 2



PERMANENT ROADWAY RESTORATION



TEMPORARY ROADWAY RESTORATION

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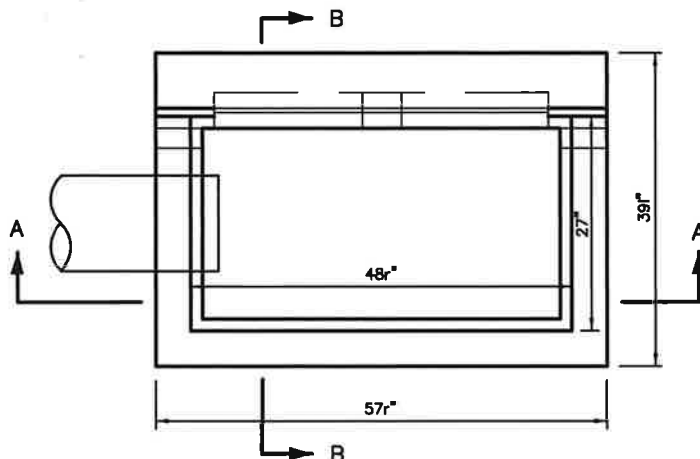
STANDARD DETAIL
FOR

ROADWAY CONSTRUCTION NON-STATE HIGHWAY
PAVEMENT RESTORATION AND TRENCH BACKFILL

DRAWN: DAM
DATE: 2/15/05

REVISIONS
ANH 9/17/24

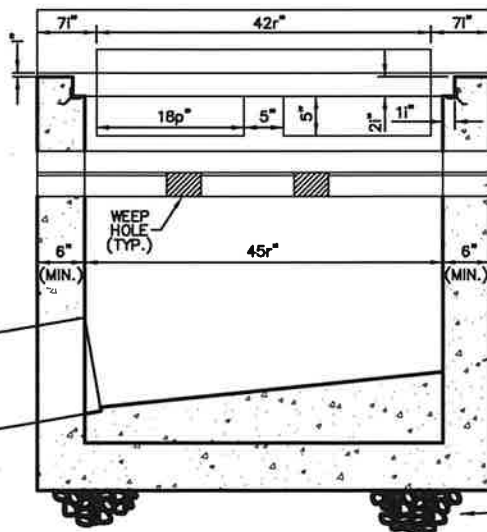
PLATE NUMBER: LC-R-4



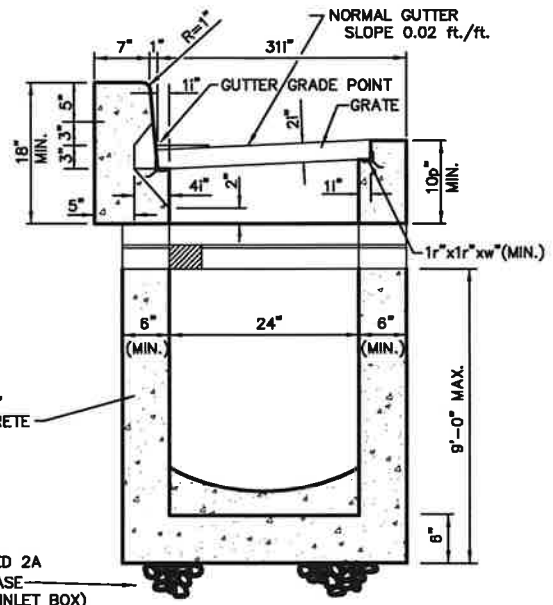
PLAN

NOTES

1. CONSTRUCT INLET BOXES IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTION 605.
2. REFER TO 'COMMONWEALTH OF PENNSYLVANIA', DEPARTMENT OF TRANSPORTATION - STANDARDS FOR ROADWAY CONSTRUCTION, LATEST EDITION, FOR REINFORCING SPECIFICATIONS AND CONSTRUCTION STANDARDS.
3. PROVIDE 1" x 1" ANGLES EMBEDDED IN THE CONCRETE AS A BEARING AREA FOR THE GRATE FOR ALL TOP UNITS WHICH SEAT THE GRATE DIRECTLY WITHIN THE UNIT.
4. PROVIDE STEPS SIMILAR TO MANHOLES WHENEVER THE STRUCTURE HEIGHT EXCEEDS 4 FEET IN DEPTH.
5. ALL EXPOSED EDGES SHALL BE CHAMFERED 1"x1".
6. BICYCLE-SAFE GRATES FOR INLETS SHALL BE PROVIDED ONLY WHERE BICYCLE TRAFFIC IS ANTICIPATED.
7. PROVIDE A MIN. OF 2" AND A MAXIMUM 4" OF PRECAST CONCRETE COLLARS THROUGH WALL OPENINGS ADJACENT TO SUBGRADE TO SERVE AS WEEP HOLES.
8. WITHOUT SCREENING THE VOIDS, PLACE CLEAN STONE AROUND THE WEEPHOLES AS TO ALLOW WATER TO ENTER THE WEEPHOLE.
9. ALL JOINTS IN RISER SECTIONS ARE TO BE SEALED WITH 1" BUTYL JOINT MATERIAL.



SECTION A-A



SECTION B-B

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LOWHILL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

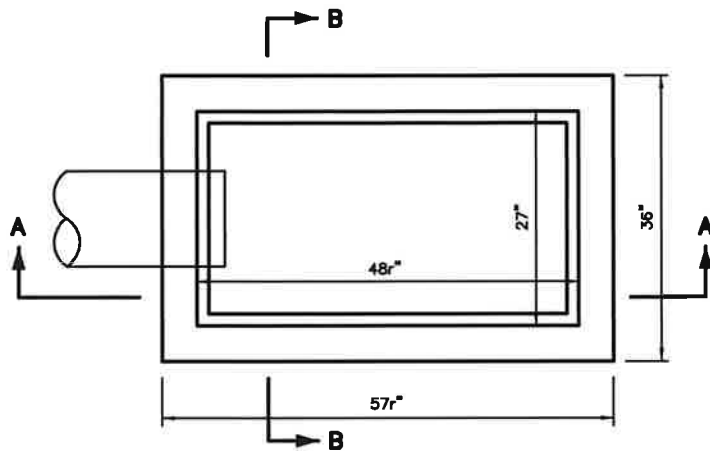
STANDARD DETAIL
FOR

PennDOT-PRECAST CONCRETE TYPE C INLET

DRAWN: DAM
DATE: 2/14/05

REVISIONS
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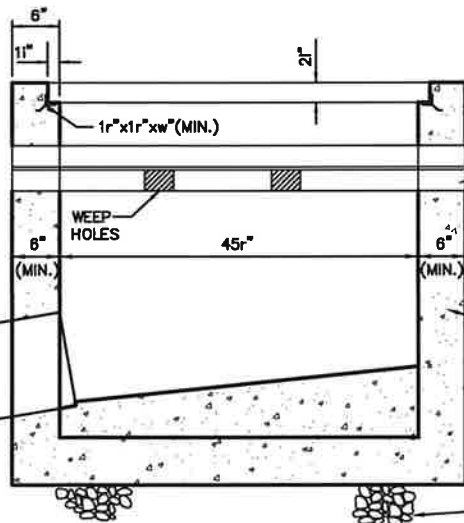
PLATE NUMBER: LC-D-11



PLAN
N.T.S.

NOTES

1. CONSTRUCT INLET BOXES IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTION 805.
2. REFER TO 'COMMONWEALTH OF PENNSYLVANIA', DEPARTMENT OF TRANSPORTATION - STANDARDS FOR ROADWAY CONSTRUCTION, LATEST EDITION, FOR REINFORCING SPECIFICATIONS AND CONSTRUCTION STANDARDS.
3. PROVIDE $1\text{--}1/4" \times 1\text{--}1/4"$ ANGLES EMBEDDED IN THE CONCRETE AS A BEARING AREA FOR THE GRATE FOR ALL TOP UNITS WHICH SEAT THE GRATE DIRECTLY WITHIN THE UNIT.
4. PROVIDE STEPS SIMILAR TO MANHOLES WHENEVER THE STRUCTURE HEIGHT EXCEEDS 4 FEET IN DEPTH.
5. ALL EXPOSED EDGES SHALL BE CHAMFERED $1" \times 1"$.
6. BICYCLE-SAFE GRATES FOR INLETS SHALL BE PROVIDED ONLY WHERE BICYCLE TRAFFIC IS ANTICIPATED.
7. PROVIDE A MIN. OF 2" AND A MAX. OF 4" OF PRECAST CONCRETE COLLARS WITH THROUGH WALL OPENINGS ADJACENT TO SUBGRADE TO SERVE AS WEEP HOLES.
8. **WITHOUT SCREENING THE VOIDS, PLACE CLEAN STONE** AROUND THE WEEPHOLES AS TO ALLOW WATER TO ENTER THE WEEPHOLE.
9. ALL JOINTS IN RISER SECTIONS ARE TO BE SEALED WITH 1" BUTYL JOINT MATERIAL.

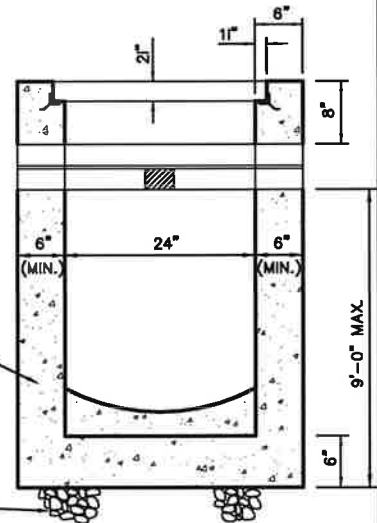


SECTION A-A
N.T.S.

SEE NOTE 7

CLASS "AA" CEMENT CONCRETE

COMPACTED 2A STONE
6" SUBBASE
(FOR PRECAST INLET BOX)



SECTION B-B
N.T.S.

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LEHIGH COUNTY, PENNSYLVANIA

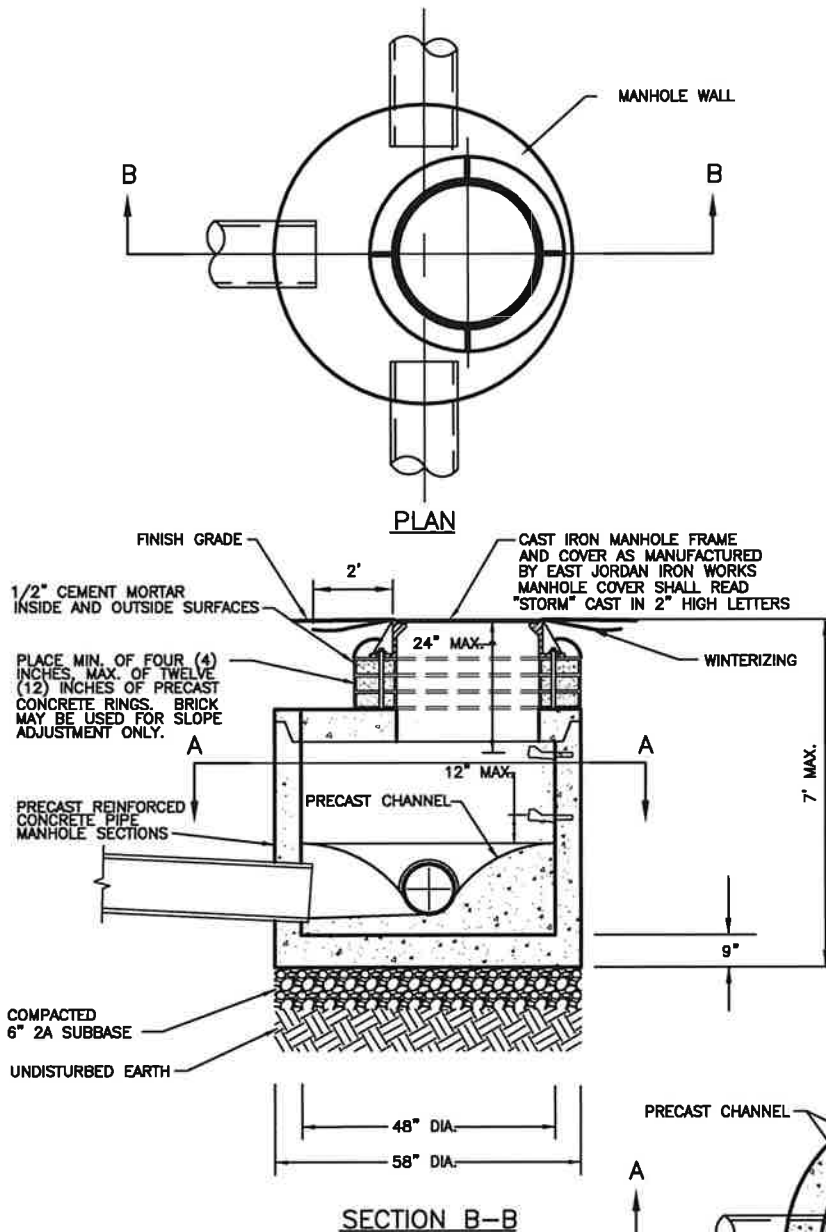
STANDARD DETAIL
FOR

PennDOT-PRECAST CONCRETE TYPE M INLET

DRAWN: DAM
DATE: 2/14/05

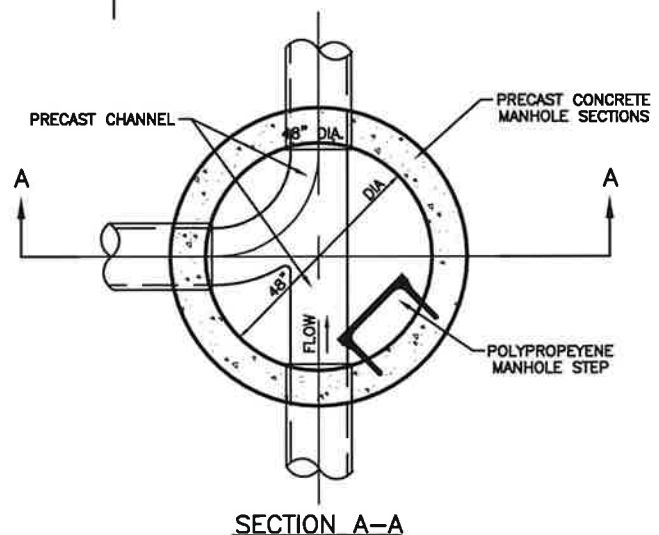
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PLATE NUMBER: LC-D-09



NOTES

1. STEPS TO BE INSTALLED IN PLASTIC STEP INSERT COMPATIBLE WITH THE STEP.
2. STEP AND STEP INSTALLATION SHALL MEET ALL REQUIREMENTS OF ASTM C-478 AND C497 FOR DIMENSIONS, LOAD RATING AND PULLOUT RESISTANCE.
3. STEP DIMENSIONS AND CONFIGURATION SHALL BE IN ACCORDANCE WITH Penn DOT STANDARDS, (RC-39).
4. ONE RING OF MASTIC FOR JOINTS.



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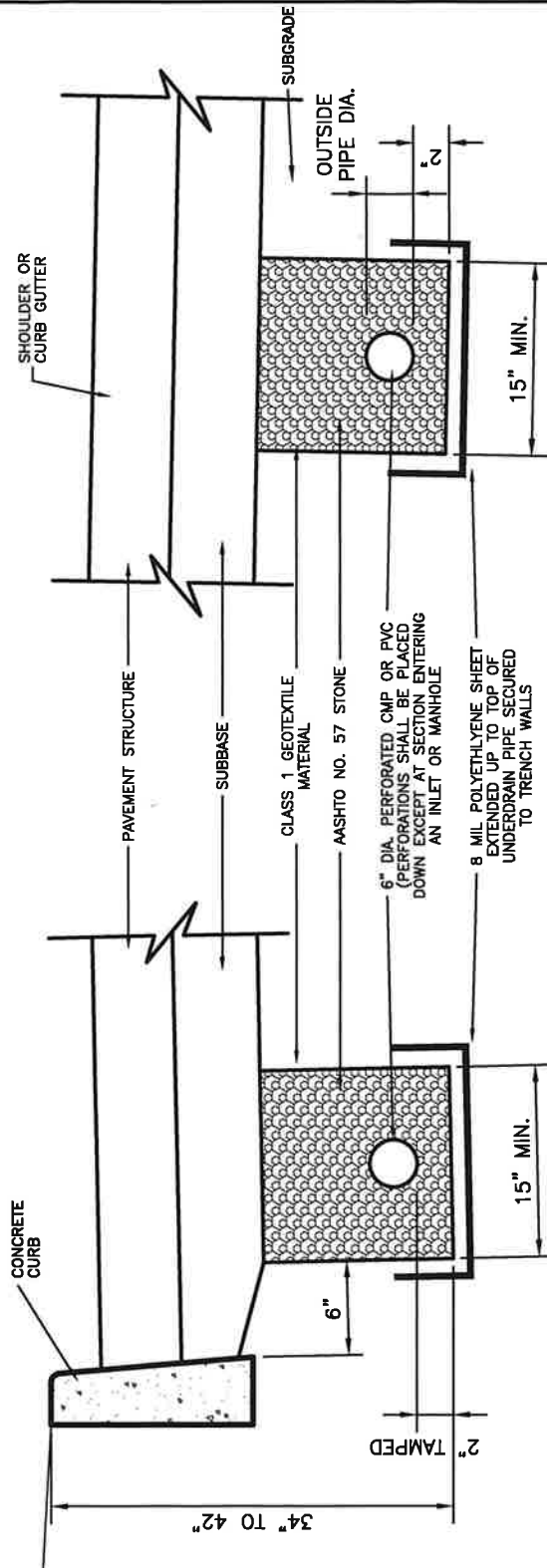
LOWHILL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

STANDARD DETAIL WITH FLAT SLAB
FOR
STANDARD PRECAST STORM MANHOLE

DRAWN: JGB
DATE: 2/15/05

REVISIONS	
JGB	9-15-05
MPS	2-26-07
ANH	9/17/24

PLATE NUMBER: LC-D-5



TYPE II
(STANDARD SUBBASE)

NO SCALE

TYPE I
(PLACEMENT AT CURB SECTION)

NO SCALE

NOTE:
WHEREVER PAVEMENT UNDERDRAINS ARE CONSTRUCTED AND NO SUBBASE WAS ORIGINALLY REQUIRED, A SUBBASE COURSE SHALL BE ADDED FOR THAT HALF OF THE ROADWAY IN WHICH THE UNDERDRAIN IS BEING CONSTRUCTED. MINIMUM THICKNESS SHALL BE THREE (3) INCHES.

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LOWHILL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

STANDARD DETAIL
FOR
SUBSURFACE DRAINS

DRAWN: DAM
DATE: 2/16/05

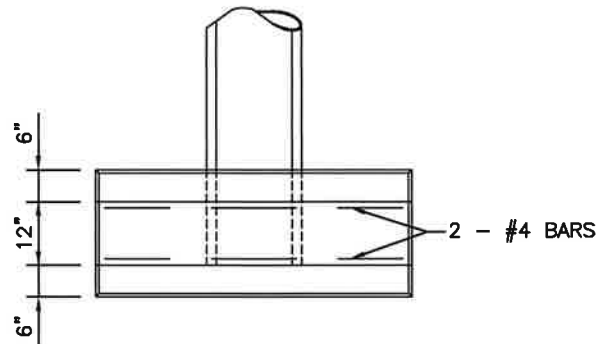
REVISIONS
ANH 9/17/24

PLATE NUMBER: LC-D-6

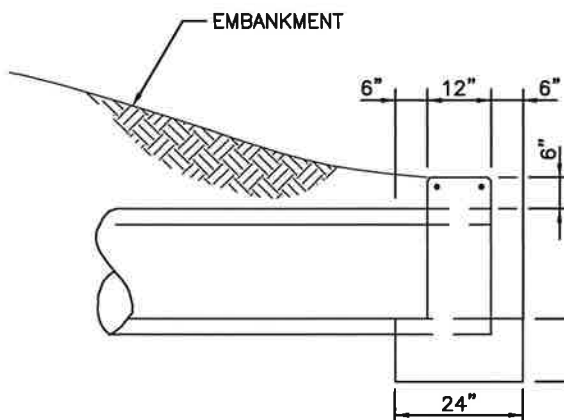
PLATE NUMBER: LC-D-3

1. PROVIDE MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH THE REQUIREMENTS OF PennDOT SPECIFICATIONS PUBLICATION 408, (LATEST EDITION), SECTION 605 AND 714.
2. USE CLASS 'A' CONCRETE OR BETTER
3. ALL EXPOSED EDGES SHALL BE CHAMFERED ONE (1) INCH.
4. PROVIDE PIPE OPENING IN PRECAST UNITS AT LEAST TWO (2) INCHES BUT NOT MORE THAN FOUR (4) INCHES LARGER THAN THE OUTSIDE DIAMETER OF THE PIPE.
5. PRECAST UNITS SHALL BE PLACED ON A LEVELING COURSE OF COMPACTED STONE PLACED ON UNDISTURBED EARTH.
6. ALL ENDWALLS SHALL HAVE A CONCRETE APRON BETWEEN WALLS 1/2" THICK.

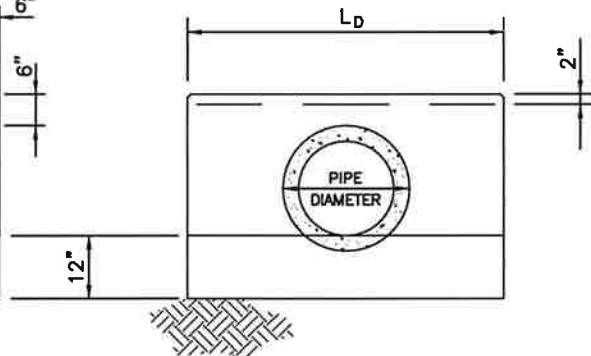
PIPE DIAMETER	L _D
18" AND 21"	5'
24" AND 27"	7'
30" AND 33"	9'



PLAN VIEW



SIDE ELEVATION VIEW



FRONT ELEVATION VIEW

NOTE:

1. PROVIDE MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH THE REQUIREMENTS OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION (Penn DOT) SPECIFICATIONS PUBLICATION 408, (LATEST EDITION) SECTION 605 AND SECTION 714.
2. USE CLASS A CONCRETE OR BETTER.
3. ALL EXPOSED EDGES SHALL BE CHAMFERED ONE (1) INCH.
4. PROVIDE PIPE OPENING SIZE IN PRECAST UNITS AT LEAST TWO (2) INCHES BUT NOT MORE THAN FOUR (4) INCHES LARGER THAN THE OUTSIDE DIAMETER OF THE PIPE.
5. PRECAST UNIT MAY BE USED IF PLACED ON A LEVELING COURSE OF COMPACTED STONE PLACED ON UNDISTURBED EARTH.
6. PROVIDE A 12" THICK CONCRETE APRON (MIN 3' LONG)

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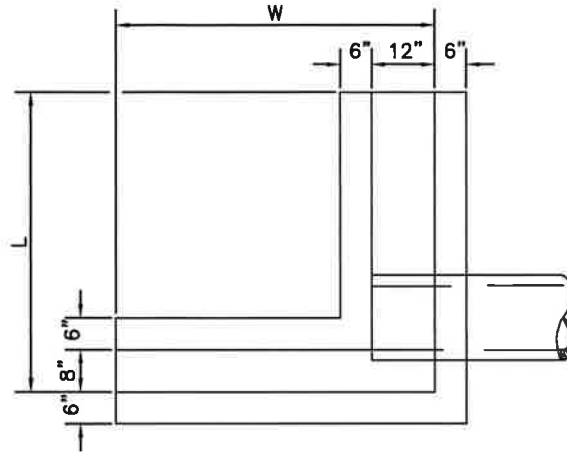
PLATE NUMBER: LC-D-2

LOWHILL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

STANDARD DETAIL
FOR
TYPE "D" ENDWALL

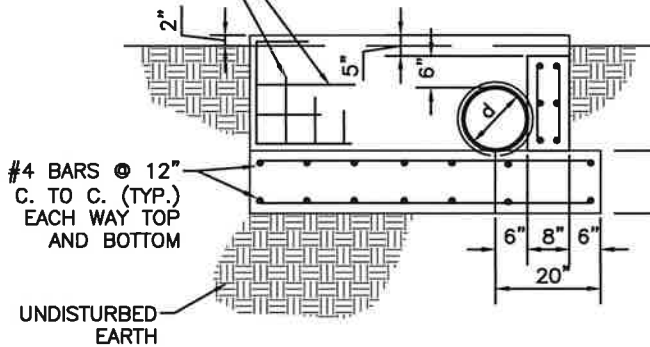
DRAWN: JGB
DATE: 2/15/05

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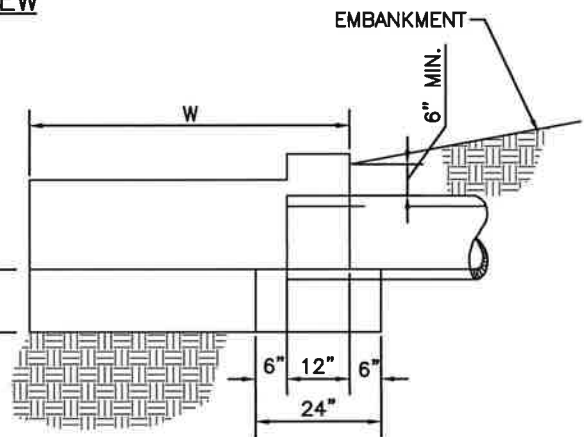


PLAN VIEW

PROVIDE 1 LAYER OF
REINFORCEMENT BARS
(.12 IN²/LN. FT.)
EACH WAY



FRONT ELEVATION VIEW



SIDE ELEVATION VIEW

NOTES:

1. PROVIDE MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH THE REQUIREMENTS OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION (PennDOT) SPECIFICATIONS PUBLICATION 408. (LATEST EDITION), SECTION 605 AND SECTION 714.
2. USE CLASS A CONCRETE OR BETTER.
3. ALL EXPOSED EDGES SHALL BE CHAMFERED ONE (1) INCH.
4. LOCAL CONDITIONS WILL GOVERN DIMENSION W.
5. $L = 2.5d + 12"$
6. PROVIDE PIPE OPENING SIZE IN PRECAST UNITS AT LEAST TWO (2) INCHES BUT NOT MORE THAN FOUR (4) INCHES LARGER THAN THE OUTSIDE DIAMETER OF THE PIPE.
7. PRECAST UNITS MAY BE USED IF PLACED ON A LEVEL COURSE OF COMPACTED STONE PLACED ON UNDISTURBED EARTH.
8. PROVIDE A 12" THICK CONCRETE APRON BETWEEN THE WALL SECTIONS.

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LOWHILL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

STANDARD DETAIL
FOR
TYPE D-E ENDWALL

DRAWN: DAM
DATE: 2/15/05

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ANH 9/17/24

PLATE NUMBER: LC-D-1