

**BOROUGH OF BIG BEAVER
SUBDIVISION AND LAND DEVELOPMENT ORDINANCE**

Rules and Regulations
for the
Subdivision and Development
of Land

Ordinance No. 239
Enacted October 15, 2024

Borough of Big Beaver
Beaver County, Pennsylvania
2024

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BOROUGH OF BIG BEAVER
BEAVER COUNTY, PENNSYLVANIA
SUBDIVISION AND LAND DEVELOPMENT ORDINANCE
ORDINANCE NO. 239

AN ORDINANCE OF THE BOROUGH OF BIG BEAVER, COUNTY OF BEAVER, COMMONWEALTH OF PENNSYLVANIA, REGULATING AND GOVERNING LAND SUBDIVISION AND LAND DEVELOPMENT IN THE BOROUGH OF BIG BEAVER AND THE CONSTRUCTION, OPENING, AND DEDICATION OF STREETS, ALLEYS, STORM WATER DRAINAGE, FIRE HYDRANTS, WATER AND SEWERAGE, AND OTHER FACILITIES AND IMPROVEMENTS IN CONNECTION THEREWITH; PRESCRIBING PROCEDURE AND REQUIREMENTS FOR SUBMITTAL OF PLANS AND FORM OF APPLICATION FOR APPROVAL OF SAME; PROVIDING FOR RIGHT AND PROCEDURE OF APPEAL; AND PROVIDING FOR PENALTIES FOR VIOLATIONS OF THIS ORDINANCE.

NOW THEREFORE, be it Ordained and Enacted by the Borough Council of the Borough of Big Beaver, County of Beaver, Commonwealth of Pennsylvania, and it is hereby Ordained and Enacted with and by Authority of the same.

ARTICLE I
AUTHORITY AND PURPOSE

SECTION 100 GRANT OF POWER

This Chapter is adopted in accordance with the authority granted to municipalities to regulate subdivision and land development by the Pennsylvania Municipalities Planning Code, Act 247 of 1968. The Borough Council of the Borough of Big Beaver, Beaver County, Pennsylvania, does hereby adopt, ordain, and enact the following rules and regulations governing land subdivision and land development in the Borough of Big Beaver.

SECTION 101 SHORT TITLE

This Ordinance shall be known and may be cited as the "Subdivision and Land Development Ordinance" of the Borough of Big Beaver.

SECTION 102 EFFECTIVE DATE

The date on which this Ordinance is duly adopted by the Borough Council, or as specified in Ordinance adopting same.

SECTION 103 PURPOSE AND OBJECTIVES

- 103.1 The purpose of the subdivision regulations is to regulate certain land subdivision, consolidation and development activities in the Borough by providing for a uniform method for the submission of preliminary and final plats to ensure the proper layout or arrangement of land; the proper design of streets to accommodate projected traffic and facilitate fire protection; and the provision of adequate easements or rights-of-way, gutters, storm and sanitary drainage facilities, walkways, stormwater management and other required public facilities.
- 103.2 The Borough Council of the Borough of Big Beaver, County of Beaver, and Commonwealth of Pennsylvania, ordains and enacts this Ordinance regulating land subdivision and land development in the Borough in accordance with the development objectives set forth in the Borough of Big Beaver Zoning Ordinance, and the Big Beaver Borough Comprehensive Plan and are intended to achieve the following goals.
- A. To promote and protect the public health, safety and welfare of the residents of the Borough and of the public, generally.
 - B. To encourage and facilitate orderly community growth and development in accordance with the Borough's Comprehensive Plan and Official Map.
 - C. To provide adequate light, air, amenities and access to private property.
 - D. To guide development in order to provide adequate and economical community facilities and utilities.
 - E. To prevent the overcrowding or incompatible development or use of land and to prevent blighting conditions, congestion and hazard in travel and transportation.

- F. To ensure the provision of public improvements which are necessary and appropriate for the development, and which are coordinated with nearby areas.

SECTION 104 SUBJECT PROPERTIES

- 104.1 All property, lots, tracts, or parcels of land in the Borough of Big Beaver shall be subject to the provisions and requirements of this Ordinance.
- 104.2 Any land development as defined by this Chapter is subject to the provisions and requirements of this Ordinance.
- 104.3 No subdivision of any lot, tract, or parcel of land shall be made, and no streets, sanitary sewers, storm sewers, water mains, or other utilities or facilities in connection therewith shall be laid out, constructed, opened, or dedicated for public use or travel, or for the common use of owners or lessees of land and/or the occupants of buildings or structures abutting thereon, except in strict accordance with the provisions of this Ordinance and the rules and regulations for the subdivision of land and/or land development adopted herein.

SECTION 105 SALE OR TRANSFER OF LAND OR PROPERTY

- 105.1 No lot in a subdivision may be sold, no permit to erect, alter, repair or occupy any building on land in any subdivision or land development may be issued and no building may be erected in any subdivision or land development unless and until the applicant complies with the provisions of this Chapter.
- 105.2 The description by metes and bounds in an instrument of transfer or other documents used for selling or transferring property shall not exempt the seller or transferor from complying with the requirements of this Chapter.

SECTION 106 BUILDING PERMITS

- 106.1 Residential: No building permit to erect or to place any building, structure, house trailer, or mobile home of any type upon land in a subdivision or land development will be issued, and no building, structure, house trailer, or mobile home of any type shall be erected, moved, or placed upon any subdivision or land development, unless and until a land subdivision and/or a land development plan has been submitted to and approved by the Borough Council, and an approved plan of the same has been recorded in the office of the Recorder of Deeds of Beaver County.
- 106.2 Institutional, Recreational, Commercial, Industrial, etc.: No building permit will be issued for the placement or erection of any building or structure, either of a temporary or permanent type, upon any lot, tract, or parcel of land unless and until all plans, specifications, and details for the grading, construction of storm water drainage, supply, and water storage, water mains, fire hydrants, paving of driveways and parking areas and other improvements, developments, and facilities in connection therewith have been prepared, submitted to, and reviewed by the Borough Planning Committee and approved by the Borough Council.

SECTION 107 FINAL APPROVAL OF PLANS

- 107.1 No subdivision of land will be released for recording by the Borough Council until all of the proposed improvements required by this Chapter have been approved by the Borough and the construction of said improvements have either been fully constructed and installed or a satisfactory

guarantee has been furnished by the owner or developer to the Borough that the improvements required by the Borough will be completed within a period of time specified by the Borough Council.

ARTICLE II
DEFINITIONS

SECTION 200 INTERPRETATION

For the purpose of this Ordinance, certain terms and words used herein shall be interpreted or defined as follows:

- 200.1 Words used in the present tense shall include the future.
- 200.2 Words used in the singular number shall include the plural.
- 200.3 Words used in the plural number shall include the singular.
- 200.4 The word "person" includes a profit or non-profit corporation, company, partnership, an association of individuals, as well as an individual.
- 200.5 The words "shall" and "will" are always mandatory.
- 200.6 The word "may" is permissive when approved as a variance.
- 200.7 The word "used" or "occupied" as applied to any land or building shall be construed to include the words intended, arranged, or designed to be used or occupied.
- 200.8 The word "building" includes the word "structure" and any part thereof.
- 200.9 Unless otherwise specified, all distances shall be measured horizontally.
- 200.10 The word "lot" includes the words "plot", "parcel", or "tract".

SECTION 201 MEANING OF WORDS

Unless otherwise expressly stated, the following words shall, for the purpose of this Ordinance, have the meaning herein indicated:

- 201.1 **ACCESSORY STRUCTURE:** A structure which is on the same lot with, but detached from, the principal building or structure and which is customarily incidental and subordinate to the principal structure or principal use of the land, including, but not limited to, private garages, storage sheds and the like.
- 201.2 **ACCESSORY USE:** A use customarily incidental and subordinate to the principal use of the land located on the same lot as the principal use.
- 201.3 **ALLEY:** A public right-of-way providing secondary vehicular access to the side or rear of two or more properties.
- 201.4 **APPLICANT:** A landowner or developer, as hereinafter defined, who has filed an application for the subdivision of land and/or land development including his heirs, successors, and assigns.
- 201.5 **APPLICATION FOR DEVELOPMENT:** Every application, whether preliminary or final, required to be filed and approved prior to start of construction or development including but not

limited to, an application for a building permit, for the approval of a subdivision, plat, or plan, or the approval of a land development plan.

- 201.6 APPOINTING AUTHORITY: The Borough Council of the Borough of Big Beaver, Beaver County, Pennsylvania.
- 201.7 AS-BUILT PLAN: A plan showing the actual location of easements, curbs, paving, catch basins, manholes, storm and sanitary sewers, wye-branches, waterlines, drainage channels, guide rails and retaining walls and the surface and flow line elevations of storm and sanitary sewers at every catch basin and manhole. The “plan” must be based on actual field measurements made during or after construction.
- 201.8 AVAILABLE SEWER: A municipal sewer is considered available if:
- A. Connection is recommended and/or required by the regulations of the Brady’s Run Sanitary Authority, the Beaver Falls Water Pollution Control Plant and/or Big Beaver Borough Council;
 - B. Connection is recommended and/or required by the regulations of the Pennsylvania Department of Environmental Protection pursuant to the Pennsylvania Sewage Facilities Act, Act 537, as amended, or;
 - C. An existing municipal sewer line, with sufficient capacity, is located within 1,500 feet of the nearest point of a subdivision.
- 201.9 BASE FLOOD: A base flood is a flood with a one (1) percent chance of being equaled or exceeded in any given year as clearly defined in the Big Beaver Borough Floodplain Ordinance No. 210.
- 201.10 BLOCK: An area bounded on all sides by streets or other transportation routes such as railroad lines, or by physical barriers such as water bodies or public open space.
- 201.11 BOROUGH COUNCIL: The Borough Council of the Borough of Big Beaver and/or its duly authorized officials and representatives.
- 201.12 BUFFERYARD: A landscaped area of a certain depth, specified by the Big Beaver Borough Zoning Ordinance, which shall be planted and maintained in trees, grass, ground cover, shrubs, or other natural landscaping material or an existing natural or constructed natural barrier.
- 201.13 BUILDING: A roofed structure, whether or not enclosed by walls, to be used for the shelter, enclosure or protection of persons, goods, materials or animals.
- 201.14 BUILDING ELEVATION DRAWING: A plan drawn to scale showing the front, rear and side perspectives of a building, including the building’s architectural features, exterior building materials, first floor elevations of the building, the height of the building in feet and number of stories and the building’s relationship to the finished grade immediately surrounding the building.
- 201.15 BUILDING INSPECTOR: The authorized representative assigned by the Borough Council to make any or all necessary inspections of the work performed and materials furnished by the subdivider or developer or their contractors selected to install the improvements required by this Chapter.

- 201.16 **BULB-OUTS:** Extensions to the curb located at intersections, which result in a narrower curb-to-curb roadway width, resulting in shorter crossing distances and reduced turning speeds.
- 201.17 **CARTWAY OR ROADWAY:** The portion of the street or alley right-of-way that is surfaced for vehicular or other traffic use. Width is determined from face of curb to face of curb or from one edge of driving surface to the other edge of driving surface and excludes shoulders and berms.
- 201.18 **CLEAR SIGHT DISTANCE/CLEAR SIGHT TRIANGLE:** An area of unobstructed vision at street intersections defined by lines of sight between points at a given distance measured at the height of a driver's eye, which is assumed to be 3.75 feet above the road surface, between points at a given distance from the intersection of center lines of the two streets or of a street and a driveway in order to allow the operators of vehicles approaching simultaneously to see each other in time to prevent a collision.
- 201.19 **CLUSTER LOT DEVELOPMENT:** A residential development design technique that concentrates residential lots in specific areas of a tract of land to allow the remaining land to be used for recreation, common open space and preservation of sensitive natural resources.
- 201.20 **CLUSTER HOUSING:** A residential subdivision in which individual lots are designated in somewhat tighter arrangements than a conventional subdivision with a significant percentage of the total plot or parcel being dedicated and held as common open space.
- 201.21 **COMMON AMENITIES:** Features of a subdivision or land development, other than private improvements, as defined herein, which are required by this Ordinance, which are shared in common by the residents or occupants of a subdivision or land development and for which a completion security may be required to guarantee the installation of such features as landscaping, bufferyards, parking areas, loading areas and similar facilities.
- 201.22 **COMMON OPEN SPACE:** A parcel or parcels of land or an area of water, or a combination of land and water within a development site and designed and intended for the use or enjoyment of residents of the development, not including streets, off-street parking areas, and areas set aside for public facilities. Common open space shall be substantially free of structures, but may contain such improvements as are in the development plan as finally approved and as are appropriate for the recreation of residents.
- 201.23 **COMPLETION SECURITY:** Security required to be posted as a condition to final plan approval, by and in accordance with the requirement so this Chapter and the Municipalities Planning Code, §509-511 *et seq.*, in order to assure completion of improvements required by this Chapter.
- 201.24 **COMPREHENSIVE PLAN:** The Comprehensive Plan for the Borough of Big Beaver.
- 201.25 **CORNER LOT:** A lot abutting upon two (2) or more intersecting streets or other public spaces, and on which the building line of both streets must be observed.
- 201.26 **CONSOLIDATION:** The act of combining two or more lots, tracts or parcels of land for any purpose.
- 201.27 **CONSTRUCTION:** The erection, renovation, repair extension, expansion, alteration or relocation of a building, structure or site improvement including the placement of mobile homes.

- 201.28 CONSTRUCTION CODE: A set of rules that specify the standards for constructed objects such as buildings and nonbuilding structures. Buildings must conform to the code to obtain planning approval from the Borough. The main purpose of construction code is to protect public health, safety and general welfare as they relate to the construction and occupancy of buildings and structures.
- 201.29 CONSTRUCTION STANDARDS: The desired and acceptable standard of quality of work and materials on a construction project. The minimum standards of materials and methods of construction, repair or alteration of improvements located within public right-of-way, or easements and other improvements.
- 201.30 CONSTRUCTION STANDARD DETAILS: See “Borough Construction Standards” as adopted or amended by the Borough from time to time. The Borough of Big Beaver Minimum Construction Standards and Details, Appendix A.
- 201.31 COUNTY: Beaver County, Pennsylvania.
- 201.32 COUNTY PLANNING AGENCY: Beaver County Planning Commission its predecessor or successor.
- 201.33 COVENANT: An obligation defined by law or agreement, the violation of which can be restrained by court action; these are usually stated in the deed.
- 201.34 CUL-DE-SAC: A minor street intersecting another street at one-end and terminated at the other end by a vehicular turnaround.
- 201.35 DEVELOPMENT OR IMPROVEMENTS: Any man-made change to improved or unimproved lands or water bodies, including but not limited to: grading, construction, and paving of streets, curbs, gutters, storm water drainage facilities, individual on-lot sanitary sewage disposal system, improvements to existing water course, sidewalks, crosswalks, street signs, monuments establishing street lines, water supply and water distribution systems and facilities, sanitary sewage collection and sewage treatment plant, and facilities and all other work, and any activities related to the improvement and development of land like grading or filling. See also SUBSTANTIAL IMPROVEMENT.
- 201.36 DEVELOPER: Any landowner, lessee, agent of such landowner, or tenant with the permission of such landowner, who makes or causes to be made a subdivision of land or a land development.
- 201.37 DRIVEWAY: A vehicular access route serving only one parcel or lot which provides access to a public street, but which does not provide access to any other lot or parcel under separate ownership. Only one driveway per lot, tract, or parcel shall be permitted for every 100 feet of lot width unless otherwise specified.
- 201.38 DWELLING/RESIDENTIAL DWELLING: As defined in the Borough of Big Beaver Zoning Ordinance, as amended.
- 201.39 DWELLING TYPE: As defined in the Borough of Big Beaver Zoning Ordinance, as amended.
- 201.40 DWELLING UNIT: As defined in the Borough of Big Beaver Zoning Ordinance, as amended.

- 201.41 EASEMENT: A grant or dedication of land by a property owner, subdivider, or developer of a right-of-way, strip, or parcel of land for a specific purpose, or use, to the general public, to a corporation, or to a certain person.
- 201.42 EFFECTIVE DATE: The date on which the Ordinance is duly adopted by the Borough or as specified in Ordinance adopting same.
- 201.43 ENGINEER: A professional engineer licensed as such in the Commonwealth of Pennsylvania, duly appointed as the engineer for the Borough of Big Beaver, its Borough Council, its planning committee, or planning agency.
- 201.44 ERECT: Build, construct, reconstruct, move upon, or any physical operations or work upon the land required for the building or structure. Excavation, fill, drainage, and the like shall be considered part of the erection.
- 201.45 ERECTED: Built, constructed, reconstructed, moved upon, or any physical operations, or work required for the building or structure. Excavation, fill, drainage, and the like shall be considered part of the erection.
- 201.46 EROSION: The natural process by which soil and rock material moves on the earth's surface through the forces of wind and water.
- 201.47 FEE: The required charge established by this Chapter to defray the cost of processing an application, reviewing an application or inspecting improvements during installation which shall be payable to the Borough in accordance with the requirements of this Chapter. The current fee resolutions are on file in the Borough offices.
- 201.48 FINAL APPLICATION: The written and graphic materials specified by this Chapter to be submitted to the Borough in order to obtain final approval of a proposed subdivision or land development plan.
- 201.49 FINAL APPROVAL: The ultimate approval of a development plan granted by the Borough Council which follows tentative approval and filing of an application of final approval.
- 201.50 FINAL PLAT: The map or plan of a proposed subdivision of land development containing all the information required by this Chapter and the Beaver County Subdivision Regulations and Land Development Ordinance or final plan approval and in a form acceptable for recording in the office of the Beaver County Recorder of Deeds.
- 201.51 FLOOD, FLOODED, OR FLOODING: A general or temporary condition of partial or complete inundation of normally dry areas from the overflow of rivers, streams, water courses, or other inland water.
- 201.52 FLOOD PLAIN/FLOOD-PRONE AREA: A normally dry land area adjoining a river, stream or water course which is susceptible to being inundated by overbank stream flows as established by the Federal Flood Insurance Administration on the Flood Hazard Boundary Map. The 100-year floodplain as defined or amended by the National Flood Insurance Program (NFIP) is the area encompassed by a flood that has a one (1) percent chance of being equaled or exceeded in any given year as clearly defined in the Big Beaver Borough Floodplain Ordinance No. 210.

- 201.53 GOVERNING BODY: The Borough Council of the Borough of Big Beaver, Beaver County, Pennsylvania.
- 201.54 GRADE: The slope of a road, street, or other public way specified in percentage terms.
- 201.55 GRADING: Excavation or fill or any combination thereof including conditions resulting from such activities.
- 201.56 IMPROVEMENTS: See DEVELOPMENT or SUBSTANTIAL IMPROVEMENTS.
- 201.57 INTERIOR WALK: An easement or right-of-way for pedestrian use extending from a street into, through, or across a block to another street, and said easement or right-of-way shall have a minimum width of twelve (12) feet.
- 201.58 LAND DEVELOPMENT:
- A. The improvement of one lot or two or more contiguous lots, tracts, or parcels of land for any purpose involving;
 - B. A group of two or more buildings, or
 - C. The division or allocation of land between or among two or more existing or prospective occupants by means of, or for the purpose of streets, common areas, lease holds, building groups, or other features;
 - D. A division of land into lots or parcels of land for the purpose of conveying such lots or parcels of land singly or in groups to any person, partnership, or corporation for the purpose of the erection or placement of buildings or structures by such person, partnership, or corporation.
 - E. The development in accordance with §503(1.1) of the Pennsylvania Municipalities Planning Code, 53 P.S. §10503(1.1).
- 201.59 LAND DEVELOPMENT PLAN: A plan that encompasses a proposed land development, which, in addition to a plan of subdivision, if required, includes all covenants relating to the use of the land; a topographic and boundary survey of the lot or parcel, the proposed use, location and bulk of buildings and other structures; the intensity of use or density of development; vegetation, drainage, floodways, wetlands and waterways, streets, ways and parking facilities; pedestrian circulation routes, common open space and public facilities. The “land development plan” shall include all of the written and graphic information required by this Chapter.
- 201.60 LAND OWNER: 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 having a remaining term of not less than forty years, or other person having a proprietary interest in land, shall be deemed to be a land owner for the purpose of this Ordinance.
- 201.61 LANDSCAPE ARCHITECT: A professional landscape architect licensed as such in the Commonwealth of Pennsylvania.
- 201.62 LANDSCAPING: Acting with the purpose of meeting specific criteria regarding the uses of outside space, including ground cover, buffers, shrubs and shade trees.

- 201.63 LANDSLIDE: A general and temporary movement down a slope of a mass of rock or soil, artificial fill, or a combination of these materials, caused or precipitated by the accumulation of water on or under the ground.
- 201.64 LANDSLIDE AREA OR LANDSLIDE-PRONE AREA: An area characterized by unstable slopes or land surfaces, whose history, geology, soil, bedrock structure, and climate indicate a potential for mudslides.
- 201.65 LOT OR PARCEL OF LAND: A designated parcel, tract, or area of land established by a plat or as otherwise permitted by law and to be used, developed, subdivided, or built upon.
- 201.66 LOT AREA: The area of a horizontal plane measured at grade and bound by the front, side, and rear lot lines. The area of a lot on which a building and its accessories are or may be located; Provided that the area shall be measured to the street right-of-way line only, and not including any part of an alley or areaway used in common with the owner or occupier of other lots.
- 201.67 LOT CORNER: A lot abutting upon two or more streets or other public spaces and on which the building line of both streets must be observed.
- 201.68 LOT DEPTH: The average horizontal distance between the front line and the rear lot line.
- 201.69 LOT, DOUBLE FRONTAGE: Any lot, except a corner lot, bounded on opposite sides by streets.
- 201.70 LOT, FLAG: A lot that has any portion of its front lot line or front yard abut the rear or side yard of any adjacent lot rather than a public road right-of-way. Access would typically be by a narrow, private right-of-way or driveway.
- 201.71 LOT LINE ADJUSTMENT: The alteration of the boundaries between two or more adjacent parcels of land without creating any new lots. The parcel of land shall be subdivided from the parent tract(s) of property and shall be added to and become an integral part of the adjacent parcel(s) of land and shall not be a stand-alone lot or parcel of property.
- 201.72 LOT OF RECORD: Any lot which individually or as part of a subdivision has been recorded in the office of the Beaver County Recorder of Deeds.
- 201.73 MAINTENANCE SECURITY: Security required to be posted as a condition to the Borough's acceptance of dedication of public improvements following completion, by and in accordance with the requirements of this Chapter and the Municipalities Planning Code. 53 P.S. §10101 *et seq.*
- 201.74 MEDIATION: A voluntary negotiating process in which parties in a dispute mutually select a neutral mediator to assist them in jointly exploring and settling their differences, culminating in a written agreement which the parties themselves create and consider acceptable.
- 201.75 MUNICIPALITY: The Borough of Big Beaver, Beaver County, Pennsylvania.
- 201.76 MUNICIPALITIES PLANNING CODE (MPC): The Pennsylvania Municipalities Planning Code Act 247 of 1968, 53 P.S., §10101 *et. seq.*, as amended.
- 201.77 NEW CONSTRUCTION: An activity for which the "start of construction or improvement" commenced on or after the effective date of this Chapter.

- 201.78 **NONRESIDENTIAL DEVELOPMENT:** Buildings or structures and their associated land designed, intended or used for purposes other than as residential dwelling units.
- 201.79 **OCCUPANT:** An owner, tenant, or other person possessing, residing, or otherwise occupying or using a property or structure on a temporary or permanent basis.
- 201.80 **OCCUPANCY PERMIT:** A permit for the use or occupancy of a building, structure or lot indicating compliance with all provisions of the Big Beaver Zoning Ordinance, and the ICC International Property Maintenance Code.
- 201.81 **OFFICIAL MAP:** The map established by the Borough Council pursuant to Article VI Design Standards and Requirements of the Municipalities Planning Code illustrating streets, highways, parks, drainage systems and rights-of-way lines laid out, adopted, and established by law, and any amendments or additions to adopted by the Borough Council resulting from the approval of subdivision plans by the Planning Committee and the subsequent filing of approved plats.
- 201.82 **ORDINANCE:** All references to “this Chapter” refer to the Borough of Big Beaver Subdivision and Land Development Ordinance, as amended from time to time [and as may be codified at the Borough of Big Beaver Code of Ordinances, “Subdivision and Land Development”, unless otherwise noted].
- 201.83 **PARKING SPACE:** An off-street parking space as defined in the Big Beaver Borough Zoning Ordinance, as amended.
- 201.84 **PLANNING COMMITTEE:** The Planning Committee of the Borough of Big Beaver, Beaver County, Pennsylvania.
- 201.85 **PLAN - PRELIMINARY:** A tentative land subdivision plan or land development plan prepared in lesser detail than a final plan, showing the approximate proposed street and lot layout or land development layout on a topographic map, showing location, scope of project, utilities existing or proposed, improvements existing and proposed, etc., submitted to Planning Committee for its review and consideration and Borough Council for its consideration and action relative to approval or disapproval.
- 201.86 **PLAN - FINAL:** A complete and exact plan of land subdivision or land development, prepared for recording as required by statute, to define property lines and proposed streets and other improvements.
- 201.87 **PLANNED RESIDENTIAL DEVELOPMENT:** An area of land, controlled by a land owner, to be developed as a single entity for a number of dwelling units, the development plan for which does not correspond in lot size, bulk, or type of dwelling, density, lot coverage, and required open space to the regulations established in any one residential district created, from time to time, under the provisions of the Borough's Zoning Ordinance.
- 201.88 **PLAT, PLAN OR PLOT:** The map or plan of a land subdivision or land development, whether preliminary or final.
- 201.89 **PRELIMINARY APPLICATION:** The written and graphic materials specified by this Chapter to be submitted to the Borough in order to obtain preliminary approval of a proposed subdivision or land development.

- 201.90 PRELIMINARY PLAT: The map or plan of a proposed subdivision or land development which contains all of the information required by this Chapter for approval of a preliminary application.
- 201.91 PRIVATE: Owned, operated or controlled by an individual, group of individuals, association or corporation, not for profit, and restricted to members who meet certain qualifications and their guests.
- 201.92 PRIVATE IMPROVEMENTS: All roads, streets, walkways, gutters, stormwater management facilities, curbs, sewers and other facilities not to be owned, maintained or operated by the Borough for which specifications shall comply with the requirements of this Chapter and the Borough's Construction Standard Details.
- 201.93 PROFESSIONAL CONSULTANTS: Persons who provide expert or professional advice, including, but not limited to, architects, attorneys, certified public accountants, engineers, geologists, land surveyors, landscape architects, or planners.
- 201.94 PUBLIC: Owned, operated or controlled by a government agency (Federal, State or local).
- 201.95 PUBLIC GROUNDS: Parks, playgrounds, and other public areas; sites for schools, sewage treatment plant and facilities, water supply, storage and distribution facilities; refuse disposal and other publicly owned and operated facilities.
- 201.96 PUBLIC HEARING: A formal meeting held pursuant to public notice (as defined herein) by the governing body or planning agency, intended to inform and obtain public comment, prior to taking action in accordance with this Chapter.
- 201.97 PUBLIC IMPROVEMENTS: All roads, streets, walkways, gutters, stormwater management facilities, curbs, sewers and other facilities to be dedicated to or maintained by the Borough for which plans and specifications must comply with the Borough's Construction Standard Details or other public entity and which the Borough has agreed to accept in the development agreement pursuant to this Chapter.
- 201.98 PUBLIC MEETING: A forum held pursuant to notice under Title 65 Pa.C.S.A. §701 *et seq.*, the "Sunshine Act".
- 201.99 PUBLIC NOTICE: Notice given not more than thirty (30) days and not less than seven (7) days in advance of any public hearing required by this Ordinance. Such notice shall be published once each week for two successive weeks in a newspaper of general circulation in the municipality. Such notice shall state the time and place of the hearing and the particular nature of the matter to be considered at the hearing.
- 201.100 REMAND: To give back, or to not accept.
- 201.101 REMEDIAL INVESTIGATION/FEASIBILITY STUDY: A full site characterization identifying the full extent of soil and groundwater contamination, identifying alternative remediation activities and evaluating the feasibility of the alternatives as well as the selection and implementation of remediation activities.

- 201.102 REVERSE FRONTAGE LOT: A lot or parcel of land having frontage on a major traffic street and extending back therefrom and having frontage on a minor street, with the access by vehicular traffic to said lot being solely by way of the frontage on the minor traffic street.
- 201.103 RESERVE STRIP: A strip of land adjacent to a street, the purpose or intent of which is to limit, control, or obstruct the access to said street from an adjacent property.
- 201.104 RIGHT-OF-WAY: Land granted, dedicated, or reserved for use as a street, alley, interior walk, utilities, drainage facilities, or for other public uses and purposes. All rights-of-way must be recorded in the Recorder of Deeds Office, Beaver County, Beaver, Pennsylvania. The right-of-way grants an ownership and interest in fee to the grantee. No permanent structure may be erected in or on a right-of-way except for structures serving the purpose of the right-of-way as may be expressly authorized by the Borough.
- 201.105 SETBACK: The distance between a building and the curb, street line, and/or property line nearest to the building.
- 201.106 SEWAGE DISPOSAL SYSTEM: An individual on-lot sewage disposal system consisting of a septic tank, disposal field, absorption beds, or seepage pit, disposing of all effluent underground into the soil of the property.
- 201.107 SEWERAGE SYSTEM AND FACILITIES: Whether publicly or privately owned and operated includes sanitary sewers, manholes, pumping facilities, force mains, sewage treatment plants, and other appurtenant facilities, etc.
- 201.108 SIDE LOT ADDITION: The subdivision of a portion of an existing parcel to add to a separate adjacent parcel. The subdivided parcel of land shall be removed from the parent tract of property and shall be added to and become an integral part of the adjacent parcel of land and shall not be a stand-alone lot or parcel of property.
- 201.109 SITE CONDITIONS REPORT: Summary of existing conditions regarding a particular lot or lots.
- 201.110 STORMWATER MANAGEMENT ORDINANCE: The Borough's applicable Stormwater Management Ordinance, as may be duly enacted or amended from time to time as amended from time to time [and as may be codified at the Borough of Big Beaver Code of Ordinances "Stormwater Management".]
- 201.111 STREETS: All land, including the entire length and width of right-of-way, intended for use or future use as means for vehicular traffic or pedestrian travel, as defined in the Comprehensive Plan for Big Beaver Borough - Street Classification. "Street" includes street, avenue, boulevard, road, highway, freeway, parkway, lane, alley, viaduct, and court, etc.
- 201.112 STREET CLASSIFICATIONS: The following street classification shall apply to streets in the Borough of Big Beaver:
- A. Principal Arterial - This class of highway facility is devoted entirely to the task of moving large volumes of traffic. It is generally characterized by limiting access to specific points. This road performs little or no land service function. Normally, this classification should be reserved for multi-lane, divided roads with few, if any, at grade intersections.

- B. Minor Arterial - This class of roadway brings traffic to and from the Principal Arterials and serves major movements of traffic within or through the areas not served by Principal Arterials. They serve primarily to move traffic, but also perform a secondary function of land service.
 - C. Collector - This class of road serves the internal traffic movement within the Borough and connects developed areas with the Minor Arterials. These roads do not accommodate long through trips. The Collector Road is intended to simultaneously serve abutting property as well as local internal traffic movements.
 - D. Local - The local street's sole function is to provide access to immediately adjacent land.
 - E. Public - A street, including the entire public right-of-way, which has been dedicated to and accepted by the Borough, County or State which has been devoted to public use by legal mapping, use or other means.
- 201.113 **STREETS - MARGINAL ACCESS:** Streets parallel and adjacent to arterial streets or collector streets providing access to adjoining properties and control of intersections with arterial streets.
- 201.114 **STREETS - HALF OR PARTIAL:** A street, generally parallel and adjacent to a property line, having a lesser right-of-way width than is normally required for satisfactory improvement, use, acceptability, and dedication of the same as a public street. Half streets are prohibited except to complete an existing half street.
- 201.115 **STREETS - PRIVATE:** A developed way intended for vehicular use which is not developed to Borough Specifications and not maintained by the Borough. Private streets are prohibited.
- 201.116 **STREET RIGHT-OF-WAY WIDTH:** The distance between property lines measured at a right angle to the centerline of the street.
- 201.117 **STREET TREE:** A tree planted in the front yard 12 feet from the front property line whose use is intended, in conjunction with other street trees, to create a tree-lined street.
- 201.118 **STRUCTURE:** Any man-made object having an ascertainable stationary location on or in land or water, whether or not affixed to the land. Among other things, structures include foundations, walls, buildings, mobile homes, prefabricated homes, modular homes or buildings, fences, billboards, sign posts or standards, poster panels, and other similar objects.
- 201.119 **STRUCTURAL ALTERATION:** Any change in the support members of a building such as bearing walls, columns, beams or girders; changes in the means of ingress and/or egress; enlargement of floor area or height of a structure; or relocation from one position to another.
- 201.120 **SUBDIVISION:** The division, re-division, or consolidation of a lot, tract, or parcel of land by any means into two 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, transfer of ownership, or lot development; provided, however, that the division of land for agricultural purposes into parcels of more than ten (10) acres, not involving any new street or easement of access shall be exempted.
- A. "Subdivision" shall be construed to also include any development of a parcel of land, for example, as a shopping plaza or retail center, residential, institutional, commercial, or

industrial complex, etc., which involves the excavating, grading, construction of streets, alleys, storm water drainage, sewerage, water, and other improvements and utilities and facilities, even though the streets and facilities may not be dedicated to public use, and the parcel may not be divided immediately for purpose of conveyance, transfer, sale, or lease.

- B. "Subdivision" includes re-subdivision, and as appropriate in these regulations, shall refer to the process of subdividing land or to the land subdivided.
 - C. "Subdivision" shall also include the development of any existing lot or parcel of land for a use other than residential where the development or use will require changes in existing driveways or construction of new driveways onto public streets and highways; changes in location of water courses or storm water drainage conditions or construction of new storm water drainage facilities; changes in existing sanitary sewerage disposal facilities or construction of new sanitary sewerage disposal facilities; public water supply and distribution systems or any other utilities, facilities, and related improvements.
- 201.121 SUBDIVISION AND LAND DEVELOPMENT ORDINANCE: "This Chapter"; the Borough's applicable Subdivision and Land Development Ordinance, as may be duly enacted or amended from time to time.
- 201.122 SUBDIVIDER: Any land owner, lessee, agent of such land owner or tenant with the permission of such land owner, who makes or causes to be made a subdivision of land or a land development.
- 201.123 SUBSTANTIAL IMPROVEMENT: Any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 (fifty) percent of the actual cost value of the structure either (a) before the improvement started, or (b) if the structure has been damaged and is being restored to the condition before the damage occurred. Substantial improvement is started when the first alteration of any structural part of the building commences.
- 201.124 SURFACE DRAINAGE PLAN: A plan and profile showing all present grades and conditions and all proposed grades and facilities for water drainage.
- 201.125 SURVEYOR: A professional land surveyor licensed as such in the Commonwealth of Pennsylvania.
- 201.126 TEMPORARY STRUCTURE: A building or structure intended to be used for a period of 6 months or less, including but not limited to construction or land sales trailers, tents, bleachers, air-supported structures, seasonal displays and similar structures.
- 201.127 TOPOGRAPHIC MAP: A map showing ground elevations by contour lines and the location of important natural, man-made, and other features.
- 201.128 TRAFFIC NETWORK ANALYSIS: A technical report, submitted by a professional traffic engineer, which projects the trip generation of a land development and the anticipated trip impact on the Borough's Comprehensive Transportation Network.
- 201.129 TRIP: The movement completed by an individual vehicle in a one-way direction.
- 201.130 YARD: An unoccupied, open space located on the same lot with a building or structure, which is unobstructed from the ground to the sky.

- 201.131 USE: Any activity, business, or purpose for which any lot or structure is utilized.
- 201.132 UTILITIES: Facilities and installations rendering services as electric, street lighting, telephone, water, internet, telecommunication, fire protection, sewerage collection system, sewerage treatment facilities, garbage disposal, etc.
- 201.133 WATER COURSE: A channel or conveyance of surface water having defined bed and banks, whether natural or artificial, with perennial or intermittent flow, including but not limited to a stream of water, creek, brook, ditch, drain, channel or bed of stream, dry run, naturally formed drainage way or swale or a manmade or constructed drainage way, swale, or facilities.
- 201.134 ZONING ORDINANCE: The Borough of Big Beaver Zoning Ordinance, as amended from time to time as amended from time to time [and as may be codified at the Borough of Big Beaver Code of Ordinances.

ARTICLE III
SUBMITTAL OF PLANS AND APPLICATION FOR APPROVAL

SECTION 300 GENERAL PROCEDURE

- 300.1 Preparation and submittal of plans of subdivision and plans of land development along with the informative and supporting data and the filing of an application for approval of the same shall strictly conform to the requirements, specifications, rules, regulations, and procedures outlined and set forth in this Ordinance. The procedure generally involves three steps:
- A. Pre-Application Conference (Required)
 - B. Preliminary Plan
 - C. Final Plan
- 300.2 All applications for approval of a plan of subdivision or a plan of development, whether preliminary or final, shall be accompanied by five (5) copies of the plan of subdivision or land development and two (2) copies of all other information and required supporting data and exhibits and shall be submitted to the Borough not less than twenty-five (25) days prior to the regularly scheduled monthly meeting of the Planning Committee.
- 300.3 All applications shall be submitted upon standard forms furnished by the Borough and shall be accompanied by the required filing fee and escrow made payable to the Borough and a compact disc (CD) containing digital copies of all forms, drawings, documents, exhibits, etc. filed to the Borough.
- 300.4 The Borough may at its discretion hold public hearings in its consideration of applications for approval of plans of land subdivision or plans of land development and improvements pursuant to public notice in order to inform the public and obtain comment prior to taking action on a proposed subdivision or land development.
- 300.5 All applications for approval of plans of subdivision or a plan of development, whether preliminary or final, shall be acted upon by the Planning Committee and the Borough Council and shall render their decision and communicate it to the applicant not later than ninety (90) days following the date of the next regular meeting of the Planning Committee; or following the date the application is filed, should the next regular meeting occur more than thirty (30) days following the filing of the application, the said ninety (90) day period shall be measured from the thirtieth (30th) day following the day a complete application has been filed.
- 300.6 The decision of the Planning Committee and/or Borough Council:
- A. Written decision. The decision of the Borough shall be provided in writing by the Borough and shall be communicated to the applicant personally or mailed to him at his last known address not later than fifteen (15) days following the decision unless the applicant agrees in writing to a change in the manner of communication of the decision.
 - B. Acceptance of conditions. If the application is approved subject to conditions, they shall be accepted by the applicant in writing within fifteen (15) days after the written decision of the Borough was mailed or delivered to the applicant or the approval shall be automatically rescinded.

- C. Defects specified. If the application, plans and data is not approved as filed, the decision of the Borough shall specify the defects found in the application, plans and data as filed, and shall cite and describe the provisions of the ordinance which have not been met.

SECTION 301 PRE-APPLICATION CONFERENCE

301.1 Procedure: A potential subdivider or developer is required under this Section to present the recommended general information and data in the form of a “Notice of Intent to Apply for a Subdivision or Land Development” to the Planning Committee at the next regularly scheduled meeting. The Planning Committee shall review the data and provide the subdivider or developer with general information and assessment relative to the requirements of this Ordinance.

- A. In assessing the suitability of the proposed plan, the Planning Committee shall consider the Borough's Comprehensive Plan and Zoning Ordinance.
- B. In addition, this assessment will consider whether the land is subject to hazards of health, safety, and welfare. Such land shall not be developed and/or subdivided until such hazards are mitigated. These hazards shall be interpreted to mean lands subject to flooding, lands subject to mudslides, lands subject to excessive slope or excessive excavation, lands subject to poor soil conditions for the proposed use, land possessing mining subsidence problems, undermined areas, and contaminated sites.
- C. Other hazards as from time to time identified by federal, state and county authorities shall also be considered.

301.2 Exhibits and Plans: Submission of the following exhibits, information, and plans with the Notice of Intent for use at the Pre-Application Conference is required:

- A. Exhibit No. 1 - A certificate of title or other proof of a proprietary interest in the land. If none is provided, the Planning Committee shall not consider the request for a review until such submission is made.
- B. Exhibit No. 2 - Existing Conditions: Utilizing a Beaver County Tax Map, Borough Map, or similar available illustration, identify the parcel under consideration. Either list in text form or on the map the following:
 - 1. Existing lot lines.
 - 2. Existing covenants of the land.
 - 3. Existing easements, rights-of-way, or other restrictions.
 - 4. Existing Land Use: Open Land, Agricultural, Forest, Residential, or other.
- C. Exhibit No. 3 - Plan - Utilizing a Beaver County Tax Map, Borough Map, or similar available illustration, identify the parcel under consideration, either in text form or on the map:
 - 1. Future lot arrangement indicating in general the number of lots, approximate size.
 - 2. For Land Developments future arrangement of structures and buildings.

3. Future roads, streets, driveways, and parking areas in relationship to existing and/or adjacent roads, streets, driveways, and parking areas.
4. Proposed relocation or crossing of any water course.
5. General plan and/or statement of water supply and sanitary sewerage collection and treatment.

SECTION 302 PRELIMINARY APPLICATIONS

302.1 Procedure: The subdivider and/or land developer shall prepare and submit to the Borough Secretary at least twenty-five (25) days prior to the regular monthly meeting of the Planning Committee a complete application package.

- A. Application – The applicant shall file five (5) copies and one (1) electronic copy of the preliminary application for a land development to the Borough using forms provided by the Borough.
 1. Application Fee - At the time of filing the application for preliminary plan review, the subdivider or land developer shall pay to the Borough for use by the Borough a fee to defray the cost of processing the preliminary plan. The fee shall be that required in accordance with the established fee schedule for the Subdivision and Land Development Ordinance. The applicant shall also pay the required Beaver County Planning Commission review fee. The Beaver County review fee amount can be obtained on the Beaver County website: www.beavercountypa.gov/depts/planning/pages/process.aspx.
 2. Plans, Maps, and Drawings - Five (5) copies and one (1) electronic copy of all plans, maps and drawings are required as part of the subdivision application. The electronic file shall be in a Borough-compatible format.
 3. Reports – Two (2) copies and one (1) electronic copy of all reports that are required as part of the application. The electronic file shall be in a Borough-compatible format.
- B. Beaver County Planning Commission Review - Upon receipt of the Plan, the Borough shall forward one (1) copy of the application package to the Beaver County Planning Commission for a review and report; provided that the Borough shall not approve such application until the County report is received, or until the expiration of forty-five (45) days from the date the application was forwarded to the County.
- C. The preliminary application shall not be considered complete when properly filed unless and until all items required by Section 302.2 of this Chapter including the application filing fee have been received by the filing date.
- D. The Borough Engineer will review the application to determine whether all materials required by this Chapter have been submitted by the applicant. Unless all such required materials have been submitted with the application, the Borough Engineer will reject the application as being administratively incomplete and will notify the applicant, in writing, citing the specific deficiencies and the specific requirements of this Chapter have not been met.

- E. Planning Committee Review - After the receipt of a complete application package, the Planning Committee shall then review over a 30-day period the Plan submitted, covering the requirements of this Ordinance point by point, conduct on-site reviews, and shall consult with the Borough Engineer and officials of any other department or authority concerned.
- F. Planning Committee Action - The Planning Committee at the following regularly scheduled monthly meeting will discuss with the subdivider or developer the proposed application.
1. Within thirty (30) calendar days of the Borough Secretary's transmission of a complete final application, the Borough Engineer will submit a written report to the Borough's Secretary and Planning Committee which states whether the application complies with all Subdivision and Land Development requirements of this Chapter. The report will be included in the minutes of the Planning Committee meeting. The Planning Committee will not make a recommendation on the application until the Borough Engineer's report has been received or thirty (30) calendar days has passed from the date of referral to the Borough Engineer.
 2. Within sixty (60) calendar days of the date of filing of an administratively complete application, the Planning Committee will make a recommendation, in writing, to the Borough Council for approval, approval with conditions or disapproval of the final application. The recommendation of the Planning Committee will provide reasons for the recommendation and, in the case of a recommendation for disapproval, shall cite the specific requirements of this Chapter, which have not been met.

G. Borough Council Action

1. The Borough Council will act upon the application not later than ninety (90) days following the regular meeting of the Planning Committee next following the date of filing of an administratively complete application, provided that should the next said Planning Committee occur more than thirty (30) days following the filing of an administratively complete application, said ninety (90) day period shall be measured from the thirtieth (30th) day following the date of filing of the administratively complete application. The recommendation of the Planning Committee and the Planning Committee Minutes containing the report of the Borough Engineer will be made a part of the record at the said Borough Council's meeting.
2. A letter indicating approval, approval with conditions or disapproval will be sent to the applicant by regular mail within fifteen (15) calendar days of the date of the decision. If the final application is not approved, the Borough Council will specify the defects found in the final application and, in each case, shall cite the requirements of this Chapter that the applicant has not met.
3. If the Borough Council determines that certain conditions are warranted to be attached to final approval to guarantee compliance with the requirements of this Chapter, the conditions of approval shall be specified, in writing, in the notice of approval required by Borough Council.
4. The applicant shall accept or reject the conditions attached to final approval either by giving written notice to the Borough Secretary or executing the development agreement within thirty (30) days of the date of the public meeting of the Borough Council at which final approval is granted. If the applicant fails to give written notice to the Borough regarding

acceptance or rejection of the conditions attached to final approval within the required thirty (30) days, final approval shall automatically be rescinded without written notice to the applicant.

- H. Nature of Approval - Approval of a preliminary plan shall not constitute approval of a final plan, but rather an expression of the layout submitted on the preliminary plan as a guide to the preparation of the final plan. Granting a preliminary approval shall not qualify a plan for recording, nor authorize development or the issuing of any building permits.
- I. Expiration of Preliminary Plan Approval – Final plat approval after completion of proposed improvements (optional, in lieu of providing completion security per this Chapter).
 - 1. Upon completion of the proposed improvements contained in the final application, the developer and/or landowner shall notify the Borough, in writing, of the completion and shall submit three copies of the final plat, as required by this ordinance, with the notice of completion. Within ten (10) calendar days of the receipt of the notice of completion and submission of the final plat, the Borough Council will authorize the Borough Engineer to inspect the improvements and review the final plat to determine whether the final plat is in conformance with the previously approved final application and all applicable requirements of this Chapter and whether the proper officers of the Borough can affix their signatures to the final plat for recording purposes, in accord.
 - 2. Within thirty (30) calendar days of receiving such authorization, the Borough Engineer will report to the Borough Council, in writing, whether the completed improvements comply with the requirements of this Chapter and the Borough's Construction Standards and whether the final plat complies with all applicable requirements of this Chapter. The Borough Engineer's report will indicate approval or rejection of the improvements, either in whole or in part, and, in the case of rejection, will contain a statement of reasons for such rejection.
 - 3. Within forty-five (45) calendar days of receipt of the notice of completion of improvements, the Borough Council will notify the developer and/or landowner, in writing, by certified or registered mail, of the approval or rejection of the improvements. Acceptance of the improvements shall be in accordance with the requirements of Article IV Conditions of Acceptance, and shall be further subject to the posting of the maintenance security required by Article VIII Inspection and Acceptance of Improvements if the same are to be public improvements dedicated and accepted by the Borough.
 - 4. The Borough Council will act upon the final application not later than ninety (90) days following the regular meeting of the Planning Committee next following the date of filing of an administratively complete application, provided that should the next said Planning Committee occur more than thirty (30) days following the filing of an administratively complete application, said ninety (90) day period shall be measured from the thirtieth day following the date of filing of the administratively complete application. The recommendation of the Planning Committee and the Planning Committee Minutes containing the report of the Borough Engineer will be made a part of the record at the said Borough Council's meeting. A letter indicating approval, approval with conditions or disapproval will be sent to the developer and/or landowner by regular mail within fifteen (15) calendar days of the date of the decision. If the final plat is not approved, the Borough Council shall specify the defects found in the final plat and shall cite the requirements of this Chapter that have not been met.

302.2 Preliminary Plan Requirements: The preliminary plans of all land development and for land subdivision over three (3) lots shall include all the following data and exhibits but not be limited the following:

A. Proof of Proprietary Interest - A certificate of title or other proof of proprietary interest in the land. If none is provided, the Planning Committee and/or Borough Council need not consider the request for a review until such submission is made.

B. Preliminary Plan - The preliminary plan shall include but not be limited to the following data and exhibits:

1. All plans and exhibits shall be drawn at a scale of one hundred (100) feet to the inch or larger;

2. All plans and exhibits shall provide the following:

a. Title Block to include:

b. Name of subdivision or land development which shall not have the same spelling or be pronounced similar to the name of any other subdivision located within the Borough.

c. Location by municipality, county, and state.

d. Name address and phone number of the owner(s), subdivider(s), and/or developer(s) and applicant.

e. North arrow, graphic scale of plan, and date the plan was prepared.

f. Name address and phone number of registered engineer or registered surveyor who surveyed the land and prepared the plan; and name, signature, registration number and seal of engineer, surveyor, landscape architect and/or architect involved in the preparation of the plans.

g. Location Map: A generalized "key" map showing the general area within the Borough in which the subdivision or land development is located and its relationship to existing roads and railroads, existing water courses and water bodies, existing development, existing community facilities.

3. All plans and exhibits shall illustrate the following:

a. Entire tract boundaries with bearings, distances, and area in acres to the nearest thousandths.

b. All adjacent or contiguous streets, roads, and railroads' rights-of-way and all adjacent or contiguous utility easements or rights-of-way.

c. All adjacent or contiguous lots or parcels' lines and the names of the owners and names of adjacent or contiguous subdivisions or land developments.

- d. Location of Borough limit lines; if they traverse or are immediately adjacent or form part of the boundaries, to the subdivision or land development.
4. Existing Conditions: Submission of an application for preliminary plan shall require an exhibit of existing conditions drawn to the scale of not more than one hundred (100) feet to the inch and shall include but not be limited to the following data:
 - a. All items noted in the previous sections - 302.2; 1, 2, and 3.
 - b. Topography shown by contour lines at vertical intervals of two (2) feet, or in the case of relatively level tracts, at such lesser intervals as may be necessary for satisfactory study and planning of the tract; or where slopes exceed forty percent (40%), at vertical intervals of ten (10) feet. Show existing contours with dashed lines and number clearly. State location and elevation of datum to which contour elevations refer. Datum used shall be a known, established benchmark. Contours plotted from USGS quadrangle maps shall not be acceptable.
 - c. All existing water courses or water bodies, floodways, flood plains, drainage courses, and existing drainage facility structure or systems. To be included is the exact location, dimension, flow line, and description. If any part of the site lies within a floodplain, as indicated on a certified FEMA map, plot the floodway and one-hundred-year floodplain boundary on the base map and reference the community panel number, map name, date and map panel numbers.
 - d. Location of all existing significant natural features such as significant trees and tree masses, embankments, areas of past or current strip or subsurface mining activities, plant and wildlife habitat areas for rare or endangered species, wetlands, biodiversity area. With tracts having past or current subsurface mining activities, the depth of overburden shall be illustrated and source of data noted.
 - e. All existing property lines, rights-of-way or easements, and the purpose for which the easements or rights-of-way have been established, including railroads, trails, gas or oil wells and gas or oil transmission lines, etc.
 - f. All existing zoning district lines and the zoning district classification within the tract, and for the adjacent area within three hundred (300) feet of the tract.
 - g. Schedule of zoning district requirements, including area and bulk regulations, density, coverage and building and yard requirements. Show zoning of all adjacent land.
 - h. All existing land use, location, and size of existing buildings and structures, within the tract and for the adjacent area within three hundred (300) feet of the tract.
 - i. Location, size, and invert elevation of all sanitary and storm sewers and water mains.
 - j. Location of all manholes, inlets, culverts, and bridges, fire hydrants, gas, telephone, and/or electrical overhead or conduit lines.
 - k. Location of rights-of-way or easements for electrical power transmission lines, petroleum or petroleum product transmission lines, and other significant man-made features.

- l. Location of all existing streets within or adjacent to the tract, including name, right-of-way, and cartway widths, and type of surface materials of the cartway.
 - m. Any other natural or man-made condition adjacent to the tract affecting the design of the subdivision or land development.
 - n. List any variances or other approvals which are being requested or which have been granted by the Borough.
 - o. List, with supporting evidence for the request, any modifications or waivers of subdivision and land development regulations that are requested.
 - p. Public water supply wells; wellhead protection areas; riverine raw water intakes within two thousand (2,000) feet of the proposed development.
5. Slope Map: Steep slopes, with categories of slope delineated as follows:
- a. Fifteen percent (15%) to twenty-five percent (25%).
 - b. Twenty-five percent (25%) to forty percent (40%).
 - c. Greater than forty percent (40%).
6. Plan of Proposed Layout: Submission of an application for a preliminary plan shall require an exhibit of the proposed layout of the subdivision or land development drawn to the scale of not more than one hundred (100) feet to the inch and shall include but not be limited to the following data:
- a. All items noted in the previous sections - 302.2; 1, 2, and 3.
 - b. Any proposed changes in the existing topography shown by contour lines on a basis of two (2) feet vertical interval in terrain or in the case of relatively level tracts, at such lesser intervals as may be necessary for satisfactory study and planning of the tract; or where slopes exceed forty percent (40%), at vertical intervals of ten (10) feet. Show proposed contours with solid, continuous lines and number clearly. Proposed contours shall tie back into existing contours. The grading plan shall include the following information:
 - i. Approximate finished floor elevations of proposed buildings.
 - ii. Approximate grades on all accessible parking spaces and related access routes.
 - c. All proposed lot lines and a number or letter to identify each lot or site and each block.
 - d. The proposed location, dimensions, description, and purpose of all streets; roads, sidewalks, drainage ways, reservations, easements or other rights-of-way.
 - e. The proposed location, dimensions, description, and purpose of all lots, blocks, parks, open space, public areas, sites for multi-family residential structures, commercial or manufacture areas, churches or other uses.

- f. Proposed zoning and boundaries of new zoning districts.
 - g. Front building setback lines on all lots and tracts. Side yard building setback lines at street intersections and crosswalks. All required yards and building setback lines. Show any required bufferyards.
 - h. Data specifying the gross area of the subdivision and/or land development, the proposed number of residential lots, the area of each residential lot, the approximate area in parks and in other non-residential uses, typical lot size, and minimum lot size.
 - i. Data or preliminary draft of covenants specifying the proposed changes or proposed development of protective covenants regulating the use of the land or the construction of improvements.
7. Proposed Stormwater Drainage Plan-Profile: Shall include but not be limited to the following data;
- a. Location of existing natural channels and proposed changes hereto, direction of flow, rights-of-way, or easements.
 - b. Locations, dimensions, elevations and grades of all existing and proposed structures and/or improvements in the storm water drainage system.
 - c. Plan for the off-site disposal of runoff.
 - d. A general description of the proposed development, including the name of the watershed in which the proposed development is located and the (sub)basin release rate percentage.
 - e. Preliminary stormwater management report in accordance with the Big Beaver Borough Stormwater Ordinance.
 - f. Approximate location of any proposed permanent stormwater management facilities, such as detention basins, storage tanks, sumps, outlet structures, inlets, manholes, piping, permanent swales, or etc.
 - g. Soils information from the U.S. Department of Agriculture, Natural Resources Conservation Service, National Cooperative Soil Survey.
8. Proposed Water Distribution System Plan-Profile: Shall be required for review and approval by the appropriate authority.
9. Proposed Sanitary Sewerage Collection and Treatment Plan-Profile: Shall be required for review and approval by the appropriate authority. These plans and profiles will be developed in accordance with the Pennsylvania Sewage Facilities Act, Act 537, as amended and shall consider but not be limited to the following:
- a. In area where municipal sewerage facilities are installed or plans for installation are in progress, the proposed subdivision or land development shall be connected into such

municipal sewerage system, and plans and agreements for such connection shall be submitted to the Borough.

- b. In areas where municipal sewerage facilities do not exist, or plans for the same are not in progress, or soon to be programmed, and where, in the opinion of the Borough, the scope of the subdivision or land development is sufficiently great, or where the soil classification and conditions require on-lot sewage disposal systems consisting of septic tank, subsurface leaching field, etc., the Borough shall require the subdivider or developer to submit design plans, provisions, and written agreement guaranteeing the construction of a sanitary sewerage system, including complete treatment plant facilities all in accordance with the requirements and subject to the approval of the Borough and the Pennsylvania State Health Department and any other agencies having regulations to be complied with.
 - c. Provisions for sewers and sewage treatment facilities or the guarantee thereof shall be prerequisite to preliminary plat, plan, or development approval.
 - d. In areas and locations where permission is requested to install on-lot sewage disposal system, (as septic tank and leaching field) the Borough may require the subdivider or developer to submit a written report of percolation tests made upon the site, such tests to be made in accordance with the Borough's sanitary disposal ordinance and the Pennsylvania Sewage Facilities Act, No. 537.
 - e. Unsatisfactory soil percolation tests for installation of individual on-lot sewage disposal systems shall be cause for the Borough to disapprove the plan of land subdivision and refuse the issuance of a building permit relative to the property.
 - f. Incomplete or unsatisfactory provisions, agreement, or guarantee providing for the construction of the required sewerage system and sewerage treatment facilities shall be cause for the Borough to disapprove the plan of land subdivision or land development and refuse the issuance of a building permit relative to the property.
10. Proposed Soil Erosion and Sedimentation Control Plan: Shall be submitted as required and in accordance with Chapter 102 of Pennsylvania Title 25 and the current rules and regulations of the Pennsylvania Department of Environmental Protection Soil Erosion and Sedimentation Control Manual.
11. Proposed Street and Roads Plan-Profile: Shall be required for review and approval by the appropriate authority. This submittal shall include but not be limited to:
- a. Typical cross sections (50-foot interval) of grading for embankments, cartways, curbs, sidewalks, and underground utilities.
 - b. Profiles showing existing ground elevations along the centerline and rights-of-way lines of proposed streets and roads and the proposed finished grade of such streets and roads.
 - c. Plan showing such street extensions or spurs as are reasonably necessary to provide adequate street connections and facilities to adjoining or contiguous developed or undeveloped areas of land.

12. The subdivider, developer, or owner shall provide such additional information as may be required by the Planning Committee, Borough Council, Zoning Officer, Borough Engineer, or other Borough agency or organization in order to more fully evaluate the proposed subdivision and its effect on adjacent property or the Borough as a whole.

13. Geotechnical Investigation:

- a. At a minimum, the applicant shall conduct a geotechnical investigation as outlined in this Section. The intent of the investigation is to determine the general geologic and subsurface conditions at the site and their impact on development, especially with respect to limitations/constraints on site grading, including cut slope and fill embankment construction, building foundations, pavement design and the capacity of natural soils to support development. This investigation shall include consultation and review of existing maps, such as, but not limited to: Map of Zones Where Land Use Can Be Affected by Landslides, Flooding, and Undermining, Beaver County, PA, by Reginald P. Briggs and William R. Cohl, 1975, USGS Map MF-685D; Coal Resources of Beaver County, PA, Part 1, Coal Crop Lines, Mined-Out Areas and Structure Contours, compiled by Clifford H. Dodge, Mineral Resource Report 89, 1985, by PaDEP; Soil Survey of Beaver County, PA, by United States Department of Agriculture, Soil Conservation Service.
- b. The following requirements are encouraged, but not required as part of the geotechnical investigation:
 1. Standard penetration tests (SPTs) should be conducted in all test borings at no greater than 3-foot vertical intervals in the soil mantle of all borings in compliance with American Society for Testing and Materials (ASTM) Test Designation: D158684. Where SPT refusal on bedrock is encountered prior to reaching the required depth, continuous NX, NQ or NQ-2 rock cores should be procured as required for the engineering analysis. Thin-walled steel (shelby) tube samples of relatively undisturbed soil samples should be procured from selected borings, if and where required for physical laboratory testing to determine relevant soil properties for the engineering analysis.
 2. Groundwater encountered in each test boring should be recorded during drilling operations and 24 hours after completing each boring.
 3. The borings must be accurately located in the field. Ground surface elevations must be obtained at each boring. Final boring locations and their ground surface locations must be shown on a scaled topographical survey in accordance with this Section.
 4. A suitable boring log should be provided for each boring. At minimum, the logs should include: boring designations; SPT results; depths of strata encountered; percent core recoveries and rock quality designations (RQDs) of rock cores; date boring was drilled; groundwater information; types and descriptions of geomaterials encountered; comments or notes regarding voids, boulders, obstructions, or any other unusual subsurface conditions encountered.
 5. A written report prepared and signed by the professional geotechnical engineer licensed in the Commonwealth of Pennsylvania performing the preliminary

investigation shall be submitted to the Borough. The report should, at a minimum, include: a description of the existing surface and subsurface site conditions; a review of the site geology and geohydrology; a discussion of any slope movements, sloughs, landslides, rock falls, or mining on or adjacent to the site, and an evaluation of their existing and/or potential impact on the site; the test boring logs and laboratory test results and the to-scale boring location plan. The report should also include geotechnical engineering recommendations regarding apparent limitations/constraints on grading for land development, including apparent stable grades for proposed cut slopes and fill embankments. Any general measures required to provide for long-term stability, including, but not limited to, drainage requirements, benching, erosion protection, and subgrade preparation should also be discussed in the report. This investigation report will not be considered a detailed engineering evaluation of site grading. The Borough Engineer will review the report and will provide a summary recommendation to the Planning Committee.

6. The written geotechnical investigation report shall include design parameters and details for all proposed retaining walls and reinforced slopes. Final retaining wall and reinforced slope designs shall be prepared by an Engineer licensed in the Commonwealth of Pennsylvania and submitted to the Borough for review and approval prior to the start of construction.

SECTION 303

FINAL PLANS

303.1 Procedure: The subdivider and/or land developer shall prepare and submit to the Borough Secretary at least twenty-five (25) days prior to the regular monthly meeting of the Planning Committee a complete application package.

- A. Application – The applicant shall file five (5) copies and one (1) electronic copy of the final application for a land development to the Borough using forms provided by the Borough.
 1. Application Fee - At the time of filing the application for final plan review, the subdivider or land developer shall pay to the Borough for use by the Borough a fee to defray the cost of processing the final plan. The fee shall be that required in accordance with the established fee schedule for the Subdivision and Land Development Ordinance. The applicant shall also pay the required Beaver County Planning Commission review fee. The Beaver County review fee can be obtained on the Beaver County website: www.beavercountypa.gov/depts/planning/pages/process.aspx.
 2. Plans, Maps, and Drawings - Five (5) copies and one (1) electronic copy of all plans, maps and drawings are required as part of the subdivision application. The electronic file shall be in a Borough-compatible format.
 3. Reports – Two (2) copies and one (1) electronic copy of all reports that are required as part of the application. The electronic file shall be in a Borough-compatible format.
- B. Beaver County Planning Commission Review - Upon receipt of the Plan, the Borough shall forward one (1) copy of the application package to the Beaver County Planning Commission for a review and report; provided that the Borough shall not approve such application until the County report is received, or until the expiration of forty-five (45) days from the date the application was forwarded to the County.

- C. The final application shall not be considered complete when properly filed unless and until all items required by Section 302.2 of this Chapter including the application filing fee have been received by the filing date.
- D. The Borough Engineer will review the application to determine whether all materials required by this Chapter have been submitted by the applicant. Unless all such required materials have been submitted with the application, the Borough Engineer will reject the application as being administratively incomplete and will notify the applicant, in writing, citing the specific deficiencies and the specific requirements of this Chapter have not been met.
- E. Planning Committee Review - After the receipt of a complete application package, the Planning Committee shall then review over a thirty (30) day period the Plan submitted, covering the requirements of this Ordinance point by point, conduct on-site reviews, and shall consult with the Borough Engineer and officials of any other department or authority concerned.
- F. Planning Committee Action - The Planning Committee at the following regularly scheduled monthly meeting will discuss with the subdivider or developer the proposed application.
 - 1. Within thirty (30) calendar days of the Borough Secretary's transmission of a complete final application, the Borough Engineer will submit a written report to the Borough's Secretary and Planning Committee which states whether the application complies with the requirements of this Chapter. The report will be included in the minutes of the Planning Committee meeting. The Planning Committee will not make a recommendation on the application until the Borough Engineer's report has been received or thirty (30) calendar days has passed from the date of referral to the Borough Engineer.
 - 2. Within sixty (60) calendar days of the date of filing of an administratively complete application, the Planning Committee will make a recommendation, in writing, to the Borough Council for approval, approval with conditions or disapproval of the final application. The recommendation of the Planning Committee will provide reasons for the recommendation and, in the case of a recommendation for disapproval, shall cite the specific requirements of this Chapter, which have not been met.
- G. Borough Council Action
 - 1. The Borough Council will act upon the final application not later than ninety (90) days following the regular meeting of the Planning Committee next following the date of filing of an administratively complete application, provided that should the next said Planning Committee occur more than thirty (30) days following the filing of an administratively complete application, said ninety (90) day period shall be measured from the thirtieth day following the date of filing of the administratively complete application. The recommendation of the Planning Committee and the Planning Committee Minutes containing the report of the Borough Engineer will be made a part of the record at the said Borough Council's meeting.
 - 2. A letter indicating approval, approval with conditions or disapproval will be sent to the applicant by regular mail within fifteen (15) calendar days of the date of the decision. If the final application is not approved, the Borough Council will specify the defects found in the final application and, in each case, shall cite the requirements of this Chapter that the applicant has not met.

- 3. If the Borough Council determines that certain conditions are warranted to be attached to final approval to guarantee compliance with the requirements of this Chapter, the conditions of approval shall be specified, in writing, in the notice of approval required by this ordinance.
 - 4. The applicant shall accept or reject the conditions attached to final approval either by giving written notice to the Borough Secretary or executing the development agreement required by this ordinance within thirty (30) days of the date of the public meeting of the Borough Council at which final approval is granted. If the applicant fails to give written notice to the Borough regarding acceptance or rejection of the conditions attached to final approval within the required thirty (30) days, final approval shall automatically be rescinded without written notice to the applicant.
- H. Nature of Approval - Approval of a preliminary plan shall not constitute approval of a final plan, but rather an expression of the layout submitted on the preliminary plan as a guide to the preparation of the final plan. Granting a final approval shall not qualify a plan for recording, nor authorize development or the issuing of any building permits.
- I. Expiration of Final Plan Approval - Final plat approval after completion of improvements (optional, in lieu of providing completion security per this Chapter).
- 1. Upon completion of the improvements contained in the final application, the developer and/or landowner shall notify the Borough, in writing, of the completion and shall submit three copies of the final plat, as required by this ordinance, with the notice of completion. Within ten (10) calendar days of the receipt of the notice of completion and submission of the final plat, the Borough Council will authorize the Borough Engineer to inspect the improvements and review the final plat to determine whether the final plat is in conformance with the previously approved final application and all applicable requirements of this Chapter and whether the proper officers of the Borough can affix their signatures to the final plat for recording purposes, in accord.
 - 2. Within thirty (30) calendar days of receiving such authorization, the Borough Engineer will report to the Borough Council, in writing, whether the completed improvements comply with the requirements of this Chapter and the Borough's Construction Standards and whether the final plat complies with all applicable requirements of this Chapter. The Borough Engineer's report will indicate approval or rejection of the improvements, either in whole or in part, and, in the case of rejection, will contain a statement of reasons for such rejection.
 - 3. Within forty-five (45) calendar days of receipt of the notice of completion of improvements, the Borough Council will notify the developer and/or landowner, in writing, by certified or registered mail, of the approval or rejection of the improvements. Acceptance of the improvements shall be in accordance with the requirements of this Ordinance, and shall be further subject to the posting of the maintenance security required by Section 803 of this Chapter if the same are to be public improvements dedicated and accepted by the Borough.
- 303.2 The Borough Council will act upon the final application not later than ninety (90) days following the regular meeting of the Planning Committee next following the date of filing of an administratively complete application, provided that should the next said Planning Committee

occur more than thirty (30) days following the filing of an administratively complete application, said ninety (90) day period shall be measured from the thirtieth day following the date of filing of the administratively complete application. The recommendation of the Planning Committee and the Planning Committee Minutes containing the report of the Borough Engineer will be made a part of the record at the said Borough Council's meeting. A letter indicating approval, approval with conditions or disapproval will be sent to the developer and/or landowner by regular mail within fifteen (15) calendar days of the date of the decision. If the final plat is not approved, the Borough Council shall specify the defects found in the final plat and shall cite the requirements of this Chapter that have not been met.

303.3 Final Plan Requirements: The final plan shall include but not be limited to the following data and exhibits:

A. All Plans and Exhibits shall be submitted according to the following:

1. Shall be on sheets not larger than thirty (30) inches by forty-two (42) inches overall, or not less than eight (8) inches by fourteen (14) inches. Where necessary to avoid sheets larger than the maximum size prescribed above, final plans shall be drawn in two or more sections accompanied by a key diagram showing relative location of the sections.
2. Shall be drawn to a scale of one hundred (100) feet to the inch or larger; more than one sheet may be used for larger tracts and must be indexed.
3. Shall contain a title block in the lower right-hand corner with the following information:
 - a. Name under which the subdivision is to be recorded.
 - b. North arrow, scale of plan, and date plan was prepared.
 - c. Name of the recorded owner and subdivider or land developer.
 - d. Municipality, County, and State in which the subdivision is located.
 - e. Name, address and seal of the Registered Professional Engineer or Registered Surveyor preparing the plan.
4. Outside of the subdivision all final plans submitted shall be drawn according to the following:
 - a. Streets and other ways of medium solid lines.
 - b. Property lines of adjacent subdivision by medium dashed and two dotted lines.
 - c. Lot setback lines by light small dashed lines.
 - d. Restriction lines, easements; etc., by light dashed lines.

5. Within the subdivision all final plans submitted shall be drawn according to the following:
 - a. Streets or ways of heavy solid lines.
 - b. Perimeter property lines of subdivision by heavy dashed and two dotted lines.
 - c. Lot setback lines of medium small dashed lines.
 - d. Restriction of building lines by medium small dashed lines.
 - e. Easements or other reserved areas by medium dashed lines.

- B. Final Plan and exhibits prepared in final form submitted for approval shall include and show the following information and be accompanied by the following data, certificates, documents, and exhibits:
 1. Location and identification upon the plan of primary control points, or permanent monuments, the number and location of which shall be subject to the direction and approval of the Borough Engineer; and the description and ties to such control points or monuments to which all dimensions, angles, bearings, elevations, and similar data shall be referred.
 2. Accurate description shown by magnetic bearings (bearings to be shown in a clockwise direction) and dimensions in feet and to the nearest one- hundredth foot (on the horizontal plane) shall be shown on all: tract boundary lines, streets, street widths, easements, right-of-way lines, lot lines, property lines, site development lines, etc. (Error of closure in description to be not greater than 1.00 foot in 10,000 feet).
 3. Location and description of survey monuments.
 4. All curve data shall be shown in terms of tangent bearings and length, radius, central angles, arc lengths, and tangent distance between curves, etc.
 5. All interior excepted parcels shall be clearly indicated and labeled, "not a part of this plat."
 6. The location, description, dimensions, and purpose and name of all rights-of-way, easements, and area dedicated to the public or to public use in, across, through, or adjacent to the subdivision must be clearly indicated or stated on the plan.
 7. The purpose of all areas dedicated to the public must be clearly indicated or stated on the plan.
 8. No strip or parcel of land shall be reserved by the subdivider unless the same is of sufficient size and shape to be of some practical use or service.
 9. All blocks must be numbered or lettered in consecutive order. All streets must be named, numbered, or lettered in a manner acceptable to the Borough.
 10. Purpose for which areas and sites other than for residential purposes are to be reserved or dedicated.
 11. Building lines or setback lines on all lots and parcels of land.

12. Acreage of each lot or parcel.
13. The names of the recorded owners of all adjoining properties shall be identified, and where such adjoining properties are a part of a recorded subdivision the name of that subdivision and the book and page number where it is recorded shall be shown. If the subdivision platted is a resubdivision of a part or the whole of a previously recorded subdivision, sufficient ties shall be shown to controlling lines appearing on the earlier plat to permit an overlay to be made; the fact of its being a re-subdivision shall be stated as a sub-title following the name of the subdivision wherever it appears on the plan.
14. Certification of Title stating that the Applicant is the owner of the tract of land to be subdivided and/or developed.
15. Lot closure calculations shall be provided for all proposed lots within the development in a format acceptable by the Borough Engineer.
16. Sworn statement by the Owner dedicating to the Public the streets, right-of-way easements, and any area and site reserved or dedicated for public use and purpose, including all street, drainage, water, sewerage, and other similar facilities and improvements constructed and installed in the land subdivision and development project.
17. Such other certificates, bonds, affidavits, endorsements, or dedications as may be required in the enforcement of these regulations, including certification blocks for the appropriate governing and planning bodies.
18. Certification of the Registered Professional Engineer or Registered Surveyor certifying to the accuracy of the survey and plan of subdivision and land development.
19. Protective covenants, if any, in form for recording.
20. Existing Conditions Plan: Submission of an application for final plan shall require an exhibit of existing conditions drawn to the scale of not more than one hundred (100) feet to the inch and shall include but not be limited to the following data:
 - a. All items noted in the previous sections - 302.2; and 302.3
 - b. Topography shown by contour lines at vertical intervals of two (2) feet, or in the case of relatively level tracts, at such lesser intervals as may be-necessary for satisfactory study and planning of the tract; or where slopes exceed forty percent (40%), at vertical intervals of ten (10) feet. Show existing contours with dashed lines and number clearly. State location and elevation of datum to which contour elevations refer. Datum used shall be a known, established benchmark. Contours plotted from USGS quadrangle maps shall not be acceptable.
 - c. All existing water courses or water bodies, floodways, flood plains, drainage courses, and existing drainage facility structure or systems. To be included is the exact location, dimension, flow line, and description. If any part of the site lies within a floodplain, as indicated on a certified FEMA map, plot the floodway and one-hundred-year floodplain boundary on the base map and reference the community panel number, map name, date and map panel numbers.

- d. Location of all existing significant natural features such as tree masses, embankments, areas of past or current strip or subsurface mining activities, plant and wildlife habitat areas for rare or endangered species, wetlands, biodiversity area. With tracts having past or current subsurface mining activities, the depth of overburden shall be illustrated and source of data noted.
- e. All existing property lines, rights-of-way or easements, and the purpose for which the easements or rights-of-way have been established, including railroads, trails, gas or oil wells and gas or oil transmission lines, etc.
- f. All existing zoning district lines and the zoning district classification within the tract, and for the adjacent area within three hundred (300) feet of the tract.
- g. The names of the recorded owners of all adjoining properties shall be identified, and where such adjoining properties are a part of a recorded subdivision the name of that subdivision and the book and page number where it is recorded shall be shown. If the subdivision platted is a resubdivision of a part or the whole of a previously recorded subdivision, sufficient ties shall be shown to controlling lines appearing on the earlier plat to permit an overlay to be made.
- h. Schedule of zoning district requirements, including area and bulk regulations, density, coverage and building and yard requirements. Show zoning of all adjacent land.
- i. All existing land use, location, and size of existing buildings and structures, within the tract and for the adjacent area within three hundred (300) feet of the tract.
- j. Location, size, and invert elevation of all sanitary and storm sewers and water mains.
- k. Location of all manholes, inlets, culverts, and bridges, fire hydrants, gas, telephone, and/or electrical overhead or conduit lines.
- l. Location of rights-of-way or easements for electrical power transmission lines, petroleum or petroleum product transmission lines, and other significant man-made features.
- m. Location of all existing streets within or adjacent to the tract, including name, right-of-way, and cartway widths, and type of surface materials of the cartway.
- n. Any other natural or man-made condition adjacent to the tract affecting the design of the subdivision or land development.
- o. List any variances or other approvals which are being requested or which have been granted by the Borough.
- p. List, with supporting evidence for the request, any modifications or waivers of subdivision and land development regulations that are requested.
- q. Public water supply wells; wellhead protection areas; riverine raw water intakes within two thousand (2,000) feet of the proposed development.

21. Slope Map: Steep slopes, with categories of slope delineated as follows:
 - a. Fifteen percent (15%) to twenty-five (25%).
 - b. Twenty-five percent (25%) to forty (40%).
 - c. Greater than forty percent (40%).

22. Plan of Proposed Layout: Submission of an application for a final plan shall require an exhibit of the proposed layout of the subdivision or land development drawn to the scale of not more than one hundred (100) feet to the inch and shall include but not be limited to the following data:
 - a. All items noted in the previous sections - 302.2 and 302.3.
 - b. Any proposed changes in the existing topography shown by contour lines on a basis of two (2) feet vertical interval in terrain or in the case of relatively level tracts, at such lesser intervals as may be necessary for satisfactory study and planning of the tract; or where slopes exceed forty (40%), at vertical intervals of ten (10) feet. Show proposed contours with solid, continuous lines and number clearly. Proposed contours shall tie back into existing contours. The grading plan shall include the following information:
 1. Approximate finished floor elevations of proposed buildings.
 2. Approximate grades on all accessible parking spaces and related access routes.
 - c. All proposed lot lines and a number to identify each lot or site and each block.
 - d. The proposed location, dimensions, description, and purpose of all streets; roads, sidewalks, drainage ways, reservations, easements or other rights-of-way.
 - e. The proposed location, dimensions, description, and purpose of all lots, blocks, parks, open space, public areas, sites for multi-family residential structures, commercial or manufacture areas, churches or other uses.
 - f. Proposed zoning and boundaries of new zoning districts.
 - g. Front building setback lines on all lots and tracts. Side yard building setback lines at street intersections and crosswalks. All required yards and building setback lines. Show any required buffer yards.
 - h. Data specifying the gross area of the subdivision and/or land development, the proposed number of residential lots, the area of each residential lot, the approximate area in parks and in other non-residential uses, typical lot size, and minimum lot size.
 - i. Data or final draft of covenants specifying the proposed changes or proposed development of protective covenants regulating the use of the land or the construction of improvements.

23. Proposed Stormwater Drainage Plan-Profile: Shall include but not be limited to the following data;
 - a. Location of existing natural channels and proposed changes hereto, direction of flow, rights-of-way, or easements.
 - b. Locations, dimensions, elevations and grades of all existing and proposed structures and/or improvements in the storm water drainage system.
 - c. Plan for the off-site disposal of runoff.
 - d. A general description of the proposed development, including the name of the watershed in which the proposed development is located and the (sub)basin release rate percentage.
24. Stormwater management report in accordance with the Big Beaver Borough Stormwater Ordinance, as amended.
 - a. Approximate location of any proposed permanent stormwater management facilities, such as detention basins, storage tanks, sumps, outlet structures, inlets, manholes, piping, permanent swales, or etc.
 - b. Soils information from the U.S. Department of Agriculture, Natural Resources Conservation Service, National Cooperative Soil Survey.
25. Proposed Water Distribution System Plan-Profile: Shall be required for review and approval by the appropriate authority.
26. Proposed Sanitary Sewerage Collection and Treatment Plan-Profile: Shall be required for review and approval by the appropriate authority. These plans and profiles will be developed in accordance with the Pennsylvania Sewage Facilities Act, Act 537, as amended and shall consider but not be limited to the following:
 - a. In area where municipal sewerage facilities are installed or plans for installation are in progress, the proposed subdivision or land development shall be connected into such municipal sewerage system, and plans and agreements for such connection shall be submitted to the Borough.
 - b. Proof of sewage facility planning approval from the Pennsylvania Department of Environmental Protection, in accordance with the Pennsylvania Sewage Facilities Act, Act 537, as amended must be provided with all subdivision and land development applications.
 - c. In areas where municipal sewerage facilities do not exist, or plans for the same are not in progress, or soon to be programmed, and where, in the opinion of the Borough, the scope of the subdivision or land development is sufficiently great, or where the soil classification and conditions require on-lot sewage disposal systems consisting of septic tank, subsurface leaching field, etc., the Borough shall require the subdivider or developer to submit design plans, provisions, and written agreement guaranteeing the construction of a sanitary sewerage system, including complete treatment plant facilities all in accordance with the requirements and subject to the approval of the

Borough and the Pennsylvania State Health Department and any other agencies having regulations to be complied with.

- d. Provisions for sewers and sewage treatment facilities or the guarantee thereof shall be prerequisite to final plat, plan, or development approval.
 - e. In areas and locations where permission is requested to install on-lot sewage disposal system, (as septic tank and leaching field) the Borough may require the subdivider or developer to submit a written report of percolation tests made upon the site, such tests to be made in accordance with the Borough's sanitary disposal ordinance and the Pennsylvania Sewage Facilities Act, No. 537.
 - f. Unsatisfactory soil percolation tests for installation of individual on-lot sewage disposal systems shall be cause for the Borough to disapprove the plan of land subdivision and refuse the issuance of a building permit relative to the property.
 - g. Incomplete or unsatisfactory provisions, agreement, or guarantee providing for the construction of the required sewerage system and sewerage treatment facilities shall be cause for the Borough to disapprove the plan of land subdivision or land development and refuse the issuance of a building permit relative to the property.
27. Proposed Soil Erosion and Sedimentation Control Plan: An approved Soil Erosion and Sedimentation Control Plan and National Pollution Discharge Elimination System (NPDES) Permit (if required) from the Pennsylvania Department of Environmental Protection shall be submitted as required and in accordance with Chapter 102 of Pennsylvania Title 25 and the current rules and regulations of the Pennsylvania Department of Environmental Protection Soil Erosion and Sedimentation Control Manual.
28. Proposed Street and Roads Plan-Profile: Shall be required for review and approval by the appropriate authority. This submittal shall include but not be limited to:
- a. Typical cross sections (50-foot interval) of grading for embankments, cartways, curbs, sidewalks, and underground utilities.
 - b. Profiles showing existing ground elevations along the centerline and rights-of-way lines of proposed streets and roads and the proposed finished grade of such streets and roads.
 - c. Plan showing such street extensions or spurs as are reasonably necessary to provide adequate street connections and facilities to adjoining or contiguous developed or undeveloped areas of land.
29. The subdivider, developer, or owner shall provide such additional information as may be required by the Planning Committee, Borough Council, Zoning Officer, Borough Engineer, or other Borough agency or organization in order to more fully evaluate the proposed subdivision and its effect on adjacent property or the Borough as a whole.
30. Submit to the Borough a written agreement guaranteeing that all construction, improvements, and facilities as required by the terms of this Ordinance and by the Borough, shall be constructed, installed, improved, and completed by the Applicant within a period of time as may be stipulated by the Borough in accordance with the terms of this Ordinance.

31. Submit and deposit with the Borough a Corporate Surety Bond, or other security acceptable to the Borough in an amount sufficient to cover the costs of any construction, installation, and improvements which may be required by the Borough.

32. Comprehensive Geotechnical Investigation:

- a. The intent of the comprehensive investigation is to determine the stability of proposed grading operations and develop detailed engineered measures to provide for long-term slope stability. Test borings extending to sufficient depths to evaluate proposed grading should be performed. Specifically, borings should be located at the toes (base) of proposed fill embankments supporting roads or structures, or are 8 feet or greater in height and will be graded to a slope steeper than four (4) horizontals to one (1) vertical (4:1). Sufficient borings should be located in cut slope areas supporting roads or structures, or that is greater than six (6) feet in height and will be graded to a slope steeper than four and one half (4½) horizontal to one (1) vertical (4.5:1). The borings should extend at least to bedrock surface, but must also extend to a depth of at least five (5) feet beyond the anticipated cut depth.
- b. Standard penetration tests (SPTs) should be conducted in all test borings at no greater than three-foot (3) vertical intervals in the soil mantle of all borings in compliance with American Society for Testing and Materials (ASTM) Test Designation: D1586-84. Where SPT refusal on bedrock is encountered prior to reaching the required depth, continuous NX, NQ, or NQ-2 rock cores should be procured as required for the engineering analysis. Thin-walled steel (shelby) tube samples of relatively undisturbed soil samples should be procured from selected borings, if and where required for physical laboratory testing, to determine relevant soil properties for the engineering analysis.
- c. Groundwater encountered in each test boring should be recorded during drilling operations twenty-four (24) hours after completing each boring.
- d. The borings should be accurately located in the field. Ground surface elevations should be obtained at each boring. The final boring locations and their ground surface locations must be shown on a to-scale topographical survey (in accordance to this Article) that includes existing contours and proposed site grading contours.
- e. A suitable boring log should be provided for each boring. At minimum, the logs should include: boring designation; SPT results; depths of strata encountered; percent core recoveries and rock quality designations (RQDs) of rock cores; date boring was drilled; groundwater information (minimum 0-hour and 24-hour readings); types and descriptions of geomaterials encountered; comments or notes regarding voids, boulders, obstructions, or any other unusual subsurface conditions encountered.
- f. A Professional Geotechnical Engineer licensed in the Commonwealth of Pennsylvania shall complete a quantitative slope stability analysis of proposed cut slopes and fill embankments. At minimum, test boring and relevant laboratory soil or rock test results, site groundwater and surface water findings, anticipated surcharge and/or hydrostatic loads/conditions and any other factors affecting the proposed slopes should be included in the analysis. The slope stability analysis must be based on a method accepted by the geo-technical engineering community, and that has been published in

an accepted engineering text book, journal, or proceedings. The analysis should ultimately provide a factor of safety (FS) against movement/failure of the proposed slope. A slope will generally be considered stable in the long term when the $FS \geq 1.5$, unless special circumstances, as approved by the Borough, should be allowed. Various slope/embankment construction scenarios can be analyzed by the engineer, but no proposed slopes/embankments indicating a FS less than that approved will be deemed acceptable.

- g. The written report, prepared and signed by the Professional Engineer performing the slope stability analyses, shall be submitted to the Borough. The report should, at minimum, include: a description of the existing surface and subsurface site conditions; a review of the site geology and geohydrology; a discussion of any slope movements, sloughs, landslides, rock falls, or mining on or adjacent to the site, and an evaluation of their existing and/or potential impact on the site; subsurface profile drawings depicting all relevant parameters of the slopes that were analyzed; a discussion of the slope stability analyses; conclusion(s) regarding the stability of proposed site grading; the test boring logs and laboratory test results; a copy of the calculations/computer output for the stability analyses; and the to-scale boring location plan described above in subsection 4. With respect to slope stability, the report should also include recommendations, as required for: grades for stable cut slopes and fill embankments; drainage requirements; subgrade preparations; benching requirements; suitable fill material, compaction, and moisture requirements, erosion protection requirements, retaining structures, if necessary; and limitations or constraints to proposed slope construction. The report will generally be reviewed by the Borough Engineer and shall provide a summary recommendation to the Borough Secretary and the Planning Committee.

33. Traffic Impact Studies

- a. Any land development or subdivision which will generate, on average, 100 or more peak hour trips on any adjacent street shall be required to have a traffic impact study completed as part of the approval process. The estimated number of trips shall be determined by an analysis of similar uses through data collected by the Institute of Transportation Engineers (ITE) or through similar uses acceptable to the Borough.
- b. The Borough may require a traffic impact study for developments or changes in uses generating less than 100 trips in addition to the adjacent roadways' peak hour volumes in cases where known traffic deficiencies exist or where the development or redevelopment is expected to have a significant impact on highway safety or traffic flow in the area of the proposed development or change in use. The Borough may waive the study requirement for an individual development or change in use, where a comparison of the ITE traffic generation data of said development or change in use to the existing use is, upon the recommendation of the Borough Engineer, determined to be *de minimis*.
- c. The scope of the study, study area and methodology shall be approved by the Borough Secretary or his or her designee before the study is initiated. A pre-application conference shall be scheduled for this purpose. The traffic impact study shall include the following if appropriate as determined by the Borough:
 1. A brief description of the proposed project in terms of land use and magnitude.

2. An inventory and analysis of existing roadway and traffic conditions in the site environs including:
 - (i.) Roadway network and traffic control.
 - (ii.) Existing traffic volumes in terms of peak hours and average daily traffic (ADT).
 - (iii.) Planned roadway improvements by others.
 - (iv.) Intersection levels of service.
 - (v.) Other measures of roadway adequacy; i.e., lane widths, traffic signal warrants, vehicle studies, etc.
3. Proposed site-generated traffic volumes in terms of:
 - (i.) Peak hours and ADT (by development phase if required).
 - (ii.) Arrival/departure distribution including method of determination.
 - (iii.) Site traffic volumes on study roadways.
4. An analysis of future traffic conditions including:
 - (i.) Future opening year traffic volumes (site traffic plus future background roadway traffic). Opening year is the projected year of opening for the proposed development or change in use.
 - (ii.) Future design year, or years with phasing, combined traffic volumes (site traffic plus future roadway traffic). Design year is projected to 5 years beyond the expected opening year of the development or change in use.
 - (iii.) Background traffic growth rates for study roadways will be provided by the Borough. These growth rates shall be consistent with the analysis performed for the Borough's Comprehensive Plan and any subsequent updates/revisions to the Comprehensive Plan.
 - (iv.) Intersection levels of service.
 - (v.) A structural pavement analysis of roadways which are projected to experience significant increases in ADT volumes off-site.
 - (vi.) Other measures of roadway adequacy; i.e., lane widths, traffic signal warrants, vehicle delay studies, etc.
 - (vii.) When access is onto a state road, the analysis of future conditions shall be consistent with PennDOT requirements.

5. A description of future levels of service and their compliance with standards for traffic capacity of streets, intersections and driveways. New streets shall be designed for adequate traffic capacity defined as follows. All reference to levels of service (LOS) shall be defined by the Highway Capacity Manual, Special Report 209, published by Transportation Research Board. These standards may be waived by the Borough if upon the recommendation and concurrence of the Borough Engineer sufficient evidence is provided that criteria cannot be met with reasonable mitigation.
 - (i.) Traffic capacity LOS shall be based upon future design year analysis.
 - (ii.) New or modified (a new approach created) unsignalized intersections or driveways which intersect streets shall be designed for LOS C or better for each traffic movement unless otherwise specified by the Borough.
 - (iii.) New or modified (a new approach created) signalized intersections shall be designed for LOS C or better for each traffic movement, unless otherwise specified by the Borough.
 - (iv.) Existing intersections impacted by development traffic shall maintain a minimum LOS D for each traffic movement, or, if future base (without development traffic) LOS is E then mitigation shall be made to maintain LOS E with development traffic. If future base LOS is F, then degradation in delays shall be mitigated.
6. A description and analysis of the proposed access plan and site plan including:
 - (i.) Access plan including analysis of required sight distances using PennDOT criteria and description of access roadway, location, geometric conditions and traffic control.
 - (ii.) On-site circulation plan showing parking locations and dimension, loading access circulation roadway and traffic control.
7. Traffic circulation mitigating action plan shall include:
 - (i.) Project features relative to site access and on-site circulation which could be modified to maximize positive impact or minimize negative impact.
 - (ii.) Off-site improvement plan depicting required roadway and signal installation and signing improvements to meet the minimum level of service requirements.
- d. Traffic Control Devices and Other Traffic Improvements. Whenever, as a result of additional traffic generated by a proposed development, the traffic impact study determines the need for a traffic signal or regulatory sign, additional traffic lanes (acceleration, deceleration or turning) or other traffic improvements to be constructed on the applicant's property or on the property abutting the applicant's property, the applicant shall, as a condition to approval of the final plat, agree to construct the improvements at the applicant's cost, or in lieu thereof, and with the written consent of the Borough, reimburse the Borough for the cost of the improvements.

34. Building Elevation Drawings:

- a. Building elevation drawings shall be provided to the Borough, containing the following information. A plan drawn to scale showing:
 - 1. Preliminary front, rear and side elevations of all proposed buildings including building's architectural features, exterior building materials, colors and/or finishes.
 - 2. The height of the building in feet and number of stories and the building's relationship to the finished grade immediately surrounding the building.
 - 3. Spot elevations designating the existing and proposed grading.

35. Proposed Landscape Plan:

- a. Landscape plan shall be provided to the Borough, containing the following:
 - 1. Drawing scale.
 - 2. North arrow.
 - 3. Location and spacing of all proposed plant material.
 - 4. Botanical and common names of all plant species.
 - 5. Indication of plant size to be installed by species.
 - 6. Quantities of species.
- b. The landscape plan shall be provided to the Borough in accordance with Big Beaver Borough Zoning Ordinance, as amended.

303.4 Phased Approvals.

- A. In the case where development of a subdivision or land development is projected over a period of years, the Borough authorizes submission of final applications by sections or phases of development, subject to such requirements or guarantees for private or public improvements in future sections or phases of the development which are essential for the protection of the public welfare and any existing or proposed section or phase of the plan.
- B. All sections or phases must conform to the final application as previously approved by the Borough. Any phase that contains substantive changes in the number of lots or buildings proposed or in the layout of the lots, buildings or streets previously approved in the final application will require complete resubmission of the final application in accordance with this Article.

303.5 Completion Security.

- A. In lieu of the completion of any improvement required prior to and as a condition for final approval of a plat, the applicant shall post a completion security, as defined by this Chapter, in favor of the Borough, in an amount equal to one hundred ten (110) percent of the cost of completion of the improvements estimated as of ninety (90) calendar days following the date scheduled for completion by the developer and/or landowner. Annually, the Borough may adjust the amount of the completion security by comparing the actual cost of the improvements which have been completed and the estimated cost for the completion of the remaining

improvements as of the expiration of the ninetieth calendar day after either the original date scheduled for completion or a rescheduled date of completion. Subsequent to said adjustment, the Borough may require the developer and/or landowner to post additional security in order to assure that the completion security equals said one hundred ten (110) percent. The developer and/or landowner in accordance with this Section shall post any additional security.

- B. The amount of the completion security required shall be based upon an estimate of the cost of completion of the required improvements and the cost of the as-built plans, submitted by an applicant or developer and/or landowner and prepared by an engineer and certified by such engineer to be a fair and reasonable estimate of such cost. The Borough, upon recommendation of the Borough Engineer, may refuse to accept such estimate for good cause shown. If the applicant or developer or landowner and the Borough are unable to agree upon an estimate, then the estimate shall be recalculated and re-certified by another engineer and chosen mutually by the Borough and the applicant or developer or landowner. The estimate, certified by the third engineer, shall be presumed fair and reasonable and shall be the final estimate. In the event that a third engineer is so chosen, fees for the services of said engineer shall be paid equally by the Borough and the applicant or developer or landowner.
- C. If the party posting the completion security requires more than one (1) year from the date of posting of the completion security to complete the required improvements, the amount of the completion security may be increased by an additional ten (10) percent for each one-year (1) period beyond the first anniversary date from posting of the completion security or to an amount not exceeding 110 percent of the cost of completing the required improvements as reestablished on or about the expiration of the preceding one-year (1) period by using the above procedure.
- D. Form of Security.
 - 1. The following requirements shall apply to any surety bond posted as completion security in accordance with this Chapter:
 - a. The bond shall be obtained from as surety incorporated in the United States and authorized to do business in Commonwealth of Pennsylvania.
 - b. The surety shall have a current A.M. Best's rating of no less than "A" and an underwriting capacity as stated in Best's equal to or greater than the amount of the bond written by that surety, or in the alternative be listed on the current United States Department of the Treasury's annual list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in the Federal Register and have an underwriting capacity in said list equal to or greater than the amount of the bond written by that surety.
 - 2. The following requirements shall apply to any letter of credit posted as completion security in accordance with this Chapter:
 - a. The letter of credit shall be issued by a Federal or Commonwealth chartered lending institution, authorized to conduct business in Pennsylvania.
 - b. The letter of credit shall have an expiration date of no earlier than ninety (90) days after the required completion date of any improvements. The Borough, at its discretion, may accept a letter of credit having an earlier expiration date; provided, however, that in either event the Borough may require that the letter of credit state that

it will automatically be renewed for a period of at least one (1) year from any present or future expiration date unless the Borough receives notice in writing from the issuer at least sixty (60) days prior to the expiration date that the issuer elects to not further extend the letter of credit, and that if such notice is given the Borough may draw on the letter of credit up to the amount of its unused balance on or before the relevant expiration date.

- c. Multiple draws on the letter of credit shall be permitted.
- d. Draws shall be permitted at sight at the issuer's office in a location as set forth in subparagraph (1), and by overnight mail.
 - (i.) All financial security tendered by an applicant pursuant to this Chapter shall be subject to review and approval by the Borough's Solicitor with respect to the form, source and sufficiency of the same.

E. Approval Resolution to Facilitate Financing. When requested by the developer and/or landowner, in order to facilitate financing, the Borough Council will furnish the developer and/or landowner with a signed copy of a resolution indicating approval of the final plat contingent upon the developer and/or landowner providing satisfactory completion authority. The final plat shall not be signed nor recorded until the completion security and development agreement are executed and all other conditions of final approval are met.

303.6 Development Agreement. Prior to a developer and/or landowner beginning construction of a subdivision and/or land development, the Borough Council shall require that the developer and/or landowner execute a development agreement with the Borough, in a form acceptable to the Borough Solicitor, containing provisions that are reasonably required to guarantee compliance with the conditions of approval, if any, and to guarantee the proper installation of on-site and off-site improvements related to the subdivision and/or land development and provisions necessary to indemnify the Borough in connection therewith, including but not limited to reimbursement of associated fees and costs, including professional consultant and other review and inspection fees incurred by the Borough.

303.7 Supplemental Approvals. Approval of final plats by the Borough Council shall not be binding if any County, State or Federal agencies find just cause to disapprove the development. It shall be the developer's and/or landowner's responsibility to obtain all necessary approvals from County, State or Federal agencies.

SECTION 304 RESUBDIVIDING OR REPLATTING

The procedures and regulations heretofore described shall be followed when resubdividing or replatting. These procedures and regulations may be modified on application to the Planning Committee when in the combination or recombination of lots or portions or previously plotted lots, the resultant lots are increased in total area, size, and lot width so that they reach or exceed the standards of this Ordinance and that the resultant street pattern is in conformity to the Borough Comprehensive Plan.

SECTION 305 SUBDIVISION OF THREE LOTS OR LESS

305.1 Procedure: The Planning Committee may waive the requirements of §302.2 and §303.2 for subdivisions of three lots or less requiring no additional streets or street openings upon application of the subdivider for waiver of said requirements. In the case where a waiver is granted, an

application for final plan approval shall be filed with the Planning Committee Secretary along with the plans and data required in §305.2 and shall be processed according to the procedure established under §303.1.

305.2 Plans and Data: Plans approved for wavier under §305.1 of this Ordinance shall include but not be limited to the following information:

- A. The proposed plan shall be drawn at a scale of one hundred (100) feet to the inch or larger;
- B. The proposed plan shall be on sheets not larger than thirty (30) inches by forty-two (42) inches overall, or not less than eight (8) inches by fourteen (14) inches.
- C. The proposed plan shall be drawn with waterproof ink and all records, data, exhibits, statements, etc., thereon shall also be made with the same type of ink or reproducible typing.
- D. The plan shall show or be accompanied by the following:
 1. A certificate of title or other proof of proprietary interest in the land. If none is provided, the Planning Committee and/or Borough Council need not consider the request for a review until such submission is made.
 2. Description of covenants existing or proposed.
 3. Title Block to include:
 - a. Location by municipality, County, and State.
 - b. Names and addresses of the owner or owners.
 - c. Name, address and seal of the Registered Professional Engineer or Registered Surveyor preparing the plan.
 - d. North arrow, scale of plan and date plan was prepared.
 4. Existing use of land, location, and dimension of all existing structures.
 5. Proposed use of land, location, and dimension of all proposed structures.
 6. Lot lines, dimensions, and land area of proposed lot, as well as the area remaining in the original parcel.
 7. All lots shall be numbered or lettered.
 8. Existing streets, roads, easements, or rights-of-way within or immediately adjacent to the tract.
 9. Proposed alteration of or new streets, roads, easements, or rights-of-way.
 10. Available utilities and proposed use of utilities.
 11. Any existing water courses.

12. Names of abutting property owners.
13. Any other additional data shall be submitted upon request of the Planning Committee or Borough Council.
14. Certificates, affidavits, endorsements, or dedications as may be required in the enforcement of this Ordinance.

ARTICLE IV
CONDITIONS OF ACCEPTANCE

SECTION 400 COMPLETION OF IMPROVEMENTS

No plan of subdivision or land development shall be finally approved unless the streets and improvements shown on such plan of subdivision or land development including any, and all walkways, sidewalks, curbs, gutters, street lights, fire hydrants, shade trees, water mains, storm drains, and inlets, sanitary sewers, and sewage treatment plant and facilities, street paving, and any and all other construction and improvements as may be required by the Borough Council have been fully and satisfactorily completed in accordance with the standards, specifications, and requirements of the Borough Council.

SECTION 401 IMPROVEMENT OR PERFORMANCE BOND IN LIEU OF COMPLETION

401.1 In lieu of the completion of any improvements required as a condition for the final approval of a plan of land subdivision or land development, the subdivider or land developer may deposit with the Borough Council a corporate bond, cash bond, or other financial security acceptable to the Borough Council sufficient in amount and coverage as shall be determined by the Borough Engineer to cover the cost of any and all improvements which may be required by the Borough Council. Such bond, or other financial security, shall provide for and secure to the public the completion of any improvements which may be required within the period of time specified by the Borough Council for the completion of such improvements.

401.2 In the case where land development is projected over a period of years, the Borough Council may authorize submission of final plans by sections or stages of development subject to such requirements or guarantees as to improvements in future sections or stages of development as Borough Council finds essential for the protection of any finally approved section of the development.

401.3 Before finally approving any plan of subdivision or land development, the Borough Council shall require from the subdivider or developer a written agreement outlining, defining, and agreeing therein that the improvements required by the Borough Council shall be constructed, installed, and completed in accordance to the regulations, specifications, and requirements of the Borough and in the time, period so specified by the Borough Council.

SECTION 402 ALTERATIONS OR CHANGES

402.1 The Borough Council may alter any subdivision plat or plan of land development and specify alterations, changes, or modifications therein which it deems proper and necessary and may make its approval subject to such alterations, changes, or modifications.

402.2 Before acting to approve or disapprove any subdivision or land development plan, the Borough Council may arrange for a public hearing thereon, after giving such notice as may be deemed advisable.

402.3 No road or street or related improvements shall be accepted as a part of the public road and street system of the Borough for maintenance purposes unless said roads and streets and related improvements are laid out, opened, constructed, and improved in strict accordance with the standards, specifications, regulations, requirements, and Ordinances of the Borough.

402.4 No storm water drainage facilities, sanitary sewers, and sewage treatment facilities, water supply, and water distribution system, and facilities or any other facilities or improvements will be accepted as a part of the Borough's facilities for operation and maintenance unless designed and constructed in strict compliance with all of the standards, specifications, rules, regulations, Ordinances, and requirements of the Borough.

SECTION 403 MAINTENANCE BOND

403.1 Before the Borough Engineer shall issue to the Borough Council a written certification that all improvements specified and required have been satisfactorily completed in accordance with the agreement and requirements relative to the land development and in compliance with the specifications, standards, Ordinances, and requirements of the Borough Council, the subdivider, or developer shall be required to deposit with the Borough Council a Corporate Maintenance Bond, in such amount, under such conditions, in such form, and with approved surety as shall be required by the Borough Council Said Maintenance Bond to guarantee the repairs and maintenance by the subdivider or developer of the streets, roads, pavement, sidewalks, curbs, gutters, storm drains and facilities, sanitary sewers and facilities, sewage treatment plant and facilities, and any other improvements constructed and installed in the subdivision or development, for a period of two (2) years from the date of final and official acceptance of the above said improvements and facilities by the Borough Council.

403.2 The repairs and maintenance required to be performed by the subdivider or developer shall extend only to making good any inherent defects which become manifested in the materials and workmanship under ordinary conditions and shall not be held to cover any breakage or damage caused by improper use or by accident resulting from circumstances over which the subdivider or developer has not control.

403.3 The amount of the maintenance bond shall be determined by the Borough Engineer and subject to the approval of the Borough Council.

403.4 The Borough Council shall not accept any street, road, or any other facilities and improvements for operation and maintenance purposes until all requirements of the plans, specifications, agreements, bonds, and Ordinances of the Borough have been fully complied with.

SECTION 404 RELEASE FROM IMPROVEMENT BOND

404.1 When developer has completed all of the required improvements, the developer shall notify the Borough Council, in writing, by certified or registered mail, of the completion of the required improvements and shall send a copy thereof to the Borough Engineer.

404.2 The Borough Council shall, within thirty (30) days after receipt of such notice, direct and authorize the Borough Engineer to inspect all of the aforesaid improvements. The Borough Engineer shall, thereupon, file a report, in writing, with the Borough Council, and shall promptly mail a copy of the same to the developer by certified or registered mail. The report shall be made and mailed within thirty (30) days after receipt by the Borough Engineer of the aforesaid authorization from the Borough Council; said report shall be detailed and shall indicate approval or rejection of said improvements, either in whole or in part, and if said improvements, or any portion thereof, shall not be approved or shall be rejected by the Borough Engineer, said report shall contain a statement of reasons for such non-approval or rejection.

- 404.3 The Borough Council shall notify the developer, in writing by certified or registered mail of the action of said Borough Council with relation thereto.
- 404.4 If the Borough Council or the Borough Engineer fails to comply with the time limitation provisions contained herein, all improvements will be deemed to have been approved and the developer shall be released from all liability, pursuant to its performance guaranty bond.
- 404.5 If any portion of the required improvements shall not be approved or shall be rejected by the Borough Council, the developer shall proceed to complete the same and, upon completion, the same procedure of notification, as outlined herein, shall be followed.
- 404.6 Nothing herein, however, shall be construed in limitation of the subdivider's or developer's right to contest or question by legal proceedings or otherwise any determination of the Borough Council or the Borough Engineer.
- 404.7 Where herein reference is made to the Municipal Engineer or Borough Engineer, he shall be a duly registered professional engineer employed by the Borough or engaged as a consultant thereto.

SECTION 405 REMEDIES TO EFFECT COMPLETION OF IMPROVEMENTS

- 405.1 In the event that any improvements which may be required have not been constructed and installed as provided for in the written agreement, this Ordinance and the requirements of the Borough Council or in accord with the approved final plan, the Borough Council shall enforce any corporate bond, or other financial security by appropriate legal and equitable remedies.
- 405.2 If proceeds of such bond, or other security are insufficient to pay the cost of installing or making repairs or corrections to all the improvements covered by said security, the Borough Council, may at its option, install part of such improvements in all or part of the subdivision or land development and may institute appropriate legal or equitable action to recover the moneys necessary to complete the remainder of the improvements.
- 405.3 All of the proceeds, whether resulting from the security or from any legal or equitable action brought against the developer, or both, shall be used solely for the installation of the improvements covered by such security, and not for any other municipal purpose.

SECTION 406 RECORDING PLAT

- 406.1 Upon the approval of a final plat, the subdivider or developer shall within ninety (90) days of such final approval deliver the originals, as required, to the Borough offices for signature by the Borough Council. Upon execution of the final plat by Borough Engineer, Borough Planning Committee and Borough Council the subdivider or developer will be apprised to pick up the plat and shall record such plat in the Office of the Recorder of Deeds of Beaver County. Upon recording the plat, the subdivider or developer shall provide the Borough with the duplicate of the official recorded plat and a digital copy of the final recorded document(s) in a format approved by the Borough Engineer. This shall become part of the Borough records.
- 406.2 Upon enactment of this Ordinance, the Beaver County Recorder of Deeds shall not accept any plat of subdivision or land development unless such plat officially noted the approval of the Borough Council of the Borough of Big Beaver.

SECTION 407

EFFECT OF PLAT APPROVAL ON OFFICIAL MAP

- 407.1 After a plat has been approved and recorded as provided in this Ordinance, all streets and public grounds on such plat and accepted for public dedication shall be so considered to be a part of the Official Map of the Borough of Big Beaver without public hearing.
- 407.2 Every street, park, or other improvement shown on a subdivision plat shall be deemed to be a private street, park, or improvement until such time as the same shall have been offered for dedication to the public and accepted by Ordinance or resolution by the appropriate public body, or until it shall have been condemned for use as a public street, park, or other improvement.
- 407.3 Streets, parks, and other public improvements shown on a subdivision plat to be recorded may be offered for dedication to the Borough by formal notation thereof on the Plan, or the owner may note on such plat any improvements which have not been offered for dedication to the Borough upon approval of Borough Council.

ARTICLE V
ADMINISTRATION OF THIS ORDINANCE

SECTION 500 WAIVERS, MODIFICATIONS, AND VARIANCE REQUIREMENTS

- 500.1 Where the Planning Committee finds that extraordinary hardship may result from strict enforcement of compliance with these rules and regulations, it may recommend to Borough Council that waivers or modifications be granted so that substantial justice be done and the public interest secured; provided that such waivers or modifications will not have the effect of nullifying the interest and purpose of the Big Beaver Borough Comprehensive Plan, this Ordinance, or other Ordinances of the Borough of Big Beaver.
- 500.2 The Planning Committee's recommendations relative to the granting of waivers, modifications and variances shall be considered conditional and shall be subject to approval or disapproval by Borough Council of any such recommendations.
- 500.3 Where the Borough Council finds that extraordinary hardship may result from strict enforcement of compliance with these rules and regulations, it may grant waivers, modifications, or variances to these rules and regulations provided it shall require such conditions, as will, in its judgment, secure substantially the interests and objectives of the standards or requirements so varied or modified, and as will fulfill the purpose and intent of these regulations. The reasons for granting the variance, waiver, or modifications shall be recorded in the Borough's official record.

SECTION 501 FEES

- 501.1 All applications submitted for the review and approval of plans of subdivision and plans of land development prepared in preliminary form and prepared in final form shall be accompanied by a fee in accordance to a schedule of fees and charges established, or to be established, and adopted by resolution of the Borough Council to defray or to help defray any cost that may be incurred by the Borough in viewing and inspecting the site of the subdivision, or land development and reviewing the application, data, and the plans submitted relative to the same, and for the recording of plats.
- The schedule of fees and charges established or to be established shall vary and be regulated in accordance to the scope and complexity of the plan of subdivision and land development project, such as (a) number of parcels or lots in plan, (b) site development plans, (c) utility development plans, (d) applicants' plan of construction and development of the land, structures, and facilities thereon, and appurtenant thereto, (e) number of times that a plan is submitted or resubmitted for review, and request is made for approval of the same.
- 501.2 Where a plan of subdivision or land development for any reason has been rejected by Borough Planning Committee and Borough Council, the applicant when resubmitting plans and application for review and approval of the same shall be required to pay a fee as set forth in the Borough's schedule of fees and charges for such submissions.
- 501.3 All fees shall be made payable to the treasurer of the Borough of Big Beaver. All fees submitted are nonrefundable, and the approval or rejection for any reason of any plan of subdivision or land development will not be reason or cause for the return of any fee submitted.
- 501.4 Appendix C to this Ordinance contains the current schedule of fees and charges.

SECTION 502 CERTIFICATES, AFFIDAVITS, AND APPROVAL

Certificates, Owner's Adoption, and Affidavits, as required by the Borough Council, shall be inscribed on the plat and shall be properly signed and attested when the plat is submitted for review. Appendix B to this Ordinance contains the current certificates, affidavits, and approvals.

SECTION 503 APPEALS

The decisions of the Borough Council or the Planning Committee with respect to the approval or disapproval of plans of subdivision or of land development may be appealed directly to the courts in the same manner within the same time limitations as is provided for the same in Act of 1968, P.L.805 No. 247, as reenacted and amended, known as the "Pennsylvania Municipalities Planning Code" Seventeenth Edition passed by the General Assembly of the Commonwealth of Pennsylvania, having become effective in January, 2003, and as reenacted and amended.

SECTION 504 COMPLIANCE REQUIREMENTS

- 504.1 No land development or subdivision of any lot, tract or parcel of land shall be made or approved, no lot in a subdivision shall be sold, no permit to grade, erect, alter, repair or occupy any land, building, or structure shall be issued, and no street, sanitary sewer, storm sewer, water main or other improvements in connection therewith shall be laid out, constructed, opened or dedicated for public use or travel, or for the common use of occupancy of buildings abutting thereon, except in accordance with the provisions of this Chapter and all other provisions of the Borough of Big Beaver Code of Ordinances and other Borough ordinances, resolutions and regulations, and all other applicable Federal, State and County laws, regulations and ordinances.
- 504.2 No grading, construction or site development activity shall be undertaken, nor shall any grading, building, occupancy or other permit shall be issued until an applicant shall apply for, obtain and comply with all necessary Federal, State, County and Borough permits, including, but not limited to, any highway occupancy permits and traffic signal permits required by of the Borough of Big Beaver Code of Ordinances, "Streets and Sidewalks," the County of Beaver under its applicable regulations and the Pennsylvania Department of Transportation, under the State Highway Law, 63 P.S. §67-420, as amended, the Department of Transportation's regulations or otherwise.

SECTION 505 MORE RESTRICTION PROVISIONS TO GOVERN

- 505.1 Whenever any provision of these subdivision regulations is at variance with another lawfully adopted rule, regulation, ordinance, restriction or covenant, that which imposes the most restrictive requirement shall govern.
- 504.2 Whenever there is a difference between a minimum standard or dimension specified in these subdivision regulations and those contained in another official regulation, resolution or ordinance of the Borough, the highest standard shall apply. If a question of conflict arises between various portions of these subdivision regulations, the most restrictive term shall apply.

SECTION 506 VIOLATIONS AND PENALTIES

- 506.1 Any person, partnership, or corporation who or which being the owner or agent of the owner of any lot, tract, or parcel of land shall lay out, construct, open, or dedicate any street, sanitary sewer, storm sewer, water main, or other improvements for public use, travel, or other purposes, or for the common use of occupants of buildings abutting thereon, or who sells transfers, or agrees or enters

into an agreement to sell any land in a subdivision or land development whether by reference to or by other use of a plat of such subdivision or land development or otherwise, or erect any building thereon, unless and until a final plat has been prepared in full compliance with the provisions of the aforementioned Pennsylvania Act No. 247, as amended, known as the "Pennsylvania Municipalities Planning Code" and of this Ordinance of the Borough of Big Beaver and the rules and regulations adopted hereunder and has been recorded as provided herein, shall be guilty of misdemeanor, and upon conviction thereof, such person, or the members of such partnership, or the officers of such corporation, or the agent of any of them, responsible for such violation pay a fine not exceeding one thousand dollars (\$1,000) per lot or per parcel or per dwelling, building or structure within each lot or parcel, all court costs, including reasonable Attorney fees incurred by the Borough as a result thereof.

506.2 All fines collected for such violations shall be paid over to the Borough of Big Beaver.

506.3 The description by metes and bounds in the instrument of transfer or other document used in the process of selling or transferring shall not exempt the seller or transferor from such penalties or from the remedies herein provided.

ARTICLE VI
DESIGN STANDARDS AND REQUIREMENTS

SECTION 600 APPLICATION OF STANDARDS

The following standards, principles, and requirements for the subdivision and development of land shall be considered as minimum standards and requirements by the Planning Committee and the Borough Council in their review, evaluation, and decisions on plans of subdivision and land development.

SECTION 601 LAND REQUIREMENTS

- 601.1 Land shall be suited for the purpose for which it is to be subdivided and developed.
- 601.2 Land subject to hazards of life, health, and safety, such as deep mined or strip mined, quarried land, channels, swamps, land subject to flooding, mud slides, and subsidence shall not be approved for subdivision or development until all such hazards have been satisfactorily eliminated or unless a written agreement and guarantee is given by the subdivider or developer that provision for correcting and removing such hazards are provided for in the subdivision or land development plans, or such land shall be set aside for uses which shall not endanger life or property or further aggravate or increase the existing menace.

SECTION 602 SURVEY MARKERS

Permanent concrete or durable stone monuments thirty-six (36) inches by four (4) inches with an eighteen (18) inch iron pin projecting one quarter ($\frac{1}{4}$) inch above the ground shall be set at all boundary corners, angle points of boundary, street intersections, road right-of-way tangents and such intermediate points as may be required. Benchmarks shall be placed on the monuments at all street intersections based on the North American Datum of 1983 (NAD 83), Pa South State Plane Coordinates. All lot corners shall be staked and plainly marked with metal pins, where feasible. The location of all monuments and markers shall be shown on the final plat for recording.

SECTION 603 STREET REQUIREMENTS

- 603.1 Each single-family and two-family residential lot shall have frontage on a public street, as defined by this Chapter. All multi-family and non-residential lots shall have access to a public street by means of a Borough-approved right-of-way.
- 603.2 Proposed streets shall be located, laid out, and properly coordinated to the existing system of streets and highways in the Borough regardless of whether such streets and highways be Borough, County or State Highways and streets.
- 603.3 Proposed streets shall be properly related to the Borough of Big Beaver Comprehensive Plan.
- 603.4 Streets shall be logically located to the topography so as to produce usable lots and reasonable grades.
- 603.5 Local streets shall be laid out so as to discourage high volume of through traffic through residential areas, but provisions for street connections into and from adjacent subdivisions and areas of development will be generally required.

- 603.6 Where a subdivision or land development abuts or contains an existing or proposed arterial street, the Planning Committee and the Borough Council may require marginal access streets, reverse frontage lots, or such other layout and treatment which will provide protection for abutting properties, reduction in the number of intersections with arterial streets, and separation of local and through traffic.
- 603.7 New half or partial streets will not be permitted, except where essential to reasonable subdivision and development of a tract in conformance with the other requirements and standards of these regulations, and where, in addition, satisfactory assurance for the dedication for public use of the remaining part of the street has been secured.
- 603.8 Wherever a tract to be subdivided or developed borders on an existing half or partial street, the existing and the proposed shall both be included, shown, and clearly designated on the plan or plat submitted to the Borough.
- 603.9 Wherever there exists a dedicated or platted area reserved for future street usage along the boundary of a tract being developed, the adjacent street shall be extended into the proposed project.
- 603.10 When existing stub streets or temporary cul-de-sac streets adjoin the tract to be developed, they shall be extended into the site and made part of the proposed street layout. Where a temporary cul-de-sac is being extended, the bulb shall be reconstructed to borough street specifications, any existing sidewalk extended through the area and the remaining areas shall be re-graded and seeded.
- 603.11 Areas shall be reserved for future street usage in conjunction with the development of adjacent tracts. A sketch plan and/or other information may be required to demonstrate the feasibility of future expansion of the street system. Streets within the reserved areas shall be constructed to the full standards of this Chapter, including extensions of underground utilities, unless a waiver is granted. If a waiver to construct the cartway is granted, these areas shall be reserved for street improvements to be provided by the developer of the adjacent tract. When reservations for future streets will adjoin lots to be developed prior to the construction of the streets, the subdivider shall determine the proposed grades of the future streets and the extent of the area necessary for the construction of those streets. If the area necessary for the construction of the streets extends beyond the proposed street necessary for the roads beyond the right-of-way lines shall be done as required improvements in conjunction with the subdivision which contained the adjoining lots. Where reservations for future streets intersect existing streets, radii shall be provided for the reservations such that the requirements of this Chapter could be met for a street to be constructed in the future.
- 603.12 The extension of existing streets which are presently constructed with a cartway different from current Borough standards shall be provided with a transition area, the design of which is subject to Borough approval.
- 603.13 If a subdivision or land development abuts an existing street which has a right-of-way width of less than the required set forth in the Borough Construction Standards, the Developer shall lay out as a street on the plat the additional amount of land necessary so that the distance from the centerline of the street to the edge of the right-of-way abutting the proposed development is one half the right-of-way width required by the Borough Construction Standards. The Developer may dedicate and the Borough or other governmental entity may accept any such expanded right-of-way width in accordance with applicable law for purposed of calculating any applicable yard and bulk requirements, the area of the expanded street right-of-way shall not be considered a portion of the lot.

603.14 Except as set forth in subparagraph E, below, the following requirements shall apply to all subdivisions and land developments:

- A. Where a subdivision or land development is situated on both sides of an existing street, the street shall be improved in accordance with the standards set forth in this Chapter to the full minimum width set forth in the Borough Construction Standards.
- B. Where a subdivision or land development is situated on one side of an existing street, the street shall be improved to the center line for one-half the full minimum width set forth in the Borough Construction Standards.
- C. Where a traffic study is required per the structural pavement analysis recommendations of this Chapter and per the Borough Engineer, the developer shall construct or implement, at developer's cost, all improvements recommended by the study, including, but not limited to, any required structural improvements, traffic signals, traffic control devices, additional traffic and turning lanes, traffic dividers, highway markings, regulatory signs or other traffic improvements.
- D. In the event the Borough determines that the improvements required by this paragraph are not feasible at the time of development, the applicant shall deposit with the Borough an amount equal to one hundred ten (110) percent of the projected cost of the improvements computed in accordance with Article IV, Condition of Acceptance.
- E. A subdivision or land development shall be exempt from the requirements of Article IV provided all of the following criteria are met:
 1. All portions of the tract, parcel or lot of which the subdivision or land development constitutes all or a portion thereof as that tract, parcel or lot existed on [date of this Chapter adoption] (the "parent tract") is used solely for residential purposes.
 2. The development of the parent tract involves, cumulatively, since [date of adoption of this Chapter], five or fewer dwelling units.
 3. The development of the parent tract involves, cumulatively, since [date of adoption of this Chapter], five or fewer lots.
 4. A condition of approval shall be that no further subdivision or land development of the parent tract shall be permitted unless the entire parent tract either complies with the exemption requirements of Section 603.14 of this Chapter or are met for the entire parent tract. A note to this effect in a form acceptable to the Borough Solicitor shall be affixed to the approved plat.
 5. Compliance with paragraph 603.13.

603.15 When the proposed development requires construction within an existing street right-of-way, such as sewer, water or stormwater lines, the Borough may require construction of a new wearing course along the disturbed area.

603.16 At a minimum, all new streets shall be graded to the right-of-way line with a maximum cross slope of two percent (2%). All cut and fill banks shall not exceed a maximum of two to one (2:1) slope.

- 603.17 Streets, access drives, and parking compounds shall be designed to preclude or minimize the need for guiderail. The Borough may, however, require a guide rail to be placed for protection on embankments when a barrier is indicated, as warranted in Design Manual, Part 2, Highway Design, by PennDOT, as amended, or where otherwise deemed necessary. The design and selection of guide rail shall be in accordance with the standards in Design Manual, Part 2, Highway Design, as amended and Publication No. 72, Standards for Roadway Construction; however, the Borough shall approve all guide rail systems.
- 603.18 Streets that are extensions of or obviously in alignment with, existing streets shall bear the names of the existing streets. Street names shall not be repeated within the Borough and all street names shall be subject to the approval of the Borough.
- 603.19 All proposed streets, whether or not offered for dedication, shall be designed and constructed in accordance with the design and construction standards for public streets under the Borough Construction Standards. Where a waiver of this subsection is granted by the Borough, all private streets shall conform to the requirements of the Borough Construction Standards.
- 603.20 All streets shall be designed and constructed in accordance with the Borough Construction Standards and PennDOT specifications Publication No. 72 and Publication No. 408, as amended from time to time. All materials used for construction shall be supplied from PennDOT pre-approved manufacturers or suppliers; verification shall be provided to the Borough.
- 603.21 Where, in the opinion of the Borough, unique site conditions are present, the applicant shall provide a street pavement structure in accordance with an approved design performed by an Engineer in accordance with PennDOT Publication 70, Guidelines for the Design of Local Roads and Streets; however, under no circumstance shall the approved section be less than the Borough minimum standards in accordance with the Borough Construction Standards.
- 603.22 Dead end streets when provided with a turn-around or cul-de-sac may be permitted when it is clearly determined that through traffic at such a street end is not essential to the street system in that district, or to the development of adjacent properties in the area, or that the topography of the land prohibits the future extension of the street. Such dead-end streets shall not be less than two hundred fifty (250) feet or more than twelve hundred (1,200) feet in length.
- A. A turn-around or cul-de-sac having a minimum cartway diameter of eighty (80) feet and having a minimum right-of-way diameter of one hundred (100) feet shall be required at the end of all such streets. The terminus of a nonresidential cul-de-sac street shall be designed so that the largest vehicles expected to use the street can complete the turn without backing.
 - B. Unless the future extension of such street is clearly impractical or undesirable, the turn-around or cul-de-sac right-of-way shall be located adjacent to and abut a property or tract line in such a manner that a right-of-way of the same width as the street leading into the cul-de-sac shall be provided and extended to the property line thereby permitting the future extension of the street into an adjoining tract of land.
 - C. A "no outlet" sign shall be erected at the entrance to every cul-de-sac or dead-end street, which shall comply with the standards and specifications of the jurisdiction owning the intersecting street.

- D. A cul-de-sac street serving residential development shall not provide the sole access for more than twenty-five (25) dwellings, or a maximum of two hundred fifty (250) vehicle-trips per day.

603.23 Reserve strips of land, restricting, blocking, or controlling access to adjacent streets or tracts of land shall be prohibited.

603.24 Widths: Minimum street right-of-way widths and cartway (roadway) widths shall be as follows:

Type of Street	Type of Development	Cartway	Right-of-Way
Local Roads	Single-Family Lots	24 feet	50 feet ¹
Collector Roads	Single-Family, Residential, and Commercial	30 feet	60 feet ¹
Arterial Roads	All Types	As prescribed by the Pennsylvania Department of Transportation	

¹An Additional ten (10) feet of right-of-way may be required by the Borough for underground utilities.

- A. Right-of-way and cartway widths wider than the above standards may be required by the Borough for the following purposes:

1. To promote public safety and convenience.
2. To provide adequate width for the installation of the various utilities, facilities, and improvements.
3. To provide for the movement and flow of traffic in commercial districts and in areas of high-density residential development.
4. To provide for bicycle or pedestrian facilities.
5. To provide parking areas in urban districts and in areas of high-density residential development.
6. To provide slopes rights whenever the topography is such that an additional right-of-way is need to provide adequate earth slopes.

603.25 Design Speeds: For the purpose of these regulations and to establish the minimum design criteria for various classes of Borough streets, the minimum design speeds are as follows:

Local Roads	35 mph	Higher design speeds shall be established where conditions warrant same.
Collector Roads	40 mph	
Arterial Roads	55 mph	

603.26 Alignment Criteria at Center Line of Street.

	Local Roads	Collector Roads	Arterial Roads
Design Speed (Miles per hour)	35 mph	40 mph	55 mph
Maximum Curve (Degree – Rounded)	16.0	12.5	6.0
Minimum Radius (Feet – Rounded)	350	460	930
Maximum Grade (Percent)	12.0	9.0	5.0
Minimum Grade (Percent)	1.0	1.0	1.0
Maximum Super Elevation (Ft/Ft)	0.08	0.08	0.08
Super Elevation Runoff (Ft.)	155	170	200

A. Whenever street lines are deflected in excess of two (2) degrees, connection shall be made with the installation of horizontal curves.

B. Super elevation may be reduced or eliminated by the Borough on local streets in residential areas.

C. Reverse curves shall have a minimum connecting tangent distance of:

Arterial Streets	Three hundred (300) feet
Collector Streets	One hundred fifty (150) feet
Local Streets	One hundred (100) feet

D. Vertical curves of proper and adequate length shall be installed on all street grade changes exceeding one (1) percent. Length of vertical curve shall be designed so as to provide for safe stopping and passing site distance, and shall be designed as follows:

1. “K” values for minimum vertical curve lengths are:

	Local Roads	Collector Roads	Arterial Roads
“K” for STOPPING SIGHT DISTANCE:			
Crest Curves	45	55	110
Sag Curves	45	55	90
“K” for PASSING SIGHT DISTANCE:			
Crest Curves	520	686	1,135

2. Multiply “K” value by algebraic difference in grades to obtain minimum length of vertical curve in feet.

603.27 Street Intersections:

A. The location of street intersections shall be carefully selected to avoid sharp horizontal curvature and steep profile grades and to ensure adequate sight distances particularly for motorists who are stopped on the cross route. The alignment of intersecting roadways shall be as straight and gradients shall be as low as practical. The design of intersections shall balance the needs of all street users, including pedestrians and bicyclists. Safe pedestrian crossings shall be included on every arterial and collector.

- B. **Dedicated Turning Lanes.** On street types with medians, the median shall be narrowed to allow the left-turn lane without disrupting on-street parking and bulb-outs. On street types without medians and with on street parking, on-street parking shall cease a safe distance from the intersection, and travel lanes shall shift to allow for a dedicated left-turn lane. At a minimum, parking shall cease thirty (30) feet from the intersection.
- C. **Bulb-Outs:** Bulb-outs are encouraged where possible. At a safe distance from the intersection, on-street parking shall cease and the curb shall be extended to the travel lane.
- D. **Medians:** On street types with medians, a ten (10) foot median is permitted at intersections after a left-turn lane has been provided. Construction and landscaping of these medians shall provide a mid-intersection pedestrian refuge.
- E. Roundabout design shall comply with state and federal design guidelines.
- F. Where the grade of any street at the approach to a street intersection exceeds five (5) percent, a leveling area shall be provided with a transitional grade not to exceed five (5) percent for a distance of one hundred (100) feet from the nearest right-of-way line of the intersection. The maximum grade within a turnaround cul-de-sac may not exceed five (5) percent.
- G. Intersections of more than two (2) streets shall be avoided.
- H. The angle of intersecting streets shall be as close to ninety degree (90°) as possible. No streets shall intersect at an angle less than sixty degrees (60°).
- I. The minimum corner radii of intersections shall be as follows:

Local Roads	Twenty-five (25) feet
Collector Roads	Fifty (50) feet
Arterial Roads	Eighty (80) feet

The developer shall provide a truck turning analysis for all arterial and collector streets.

- J. Minimum corner sight distances (in feet) shall be provided at intersections with the following streets as follows:

	Design Speed (mph)		
	35	40	55
Two (2) Lane Streets			
Arterial	620	700	920
Collector	350	400	550
Local	350	400	550

Four (4) Lane Streets			
Arterial	690	790	1050
Collector	420	475	635
Local	420	475	635

- K. Any and all hills, slopes, banks, vegetation, etc., adjacent to an intersection shall be cut/removed/graded, in conjunction with the right-of-way grading, to provide for the minimum corner sight distances herein specified.

603.28 Street Offsets: Street offsets (distance between streets) measured from centerline to centerline of less than two hundred (200) feet are not permitted.

603.29 Alleys:

- A. Alleys shall not be permitted in residential areas except by approval by Borough Council. Alleys in residential developments shall have a minimum right-of-way of sixteen (16) feet and a minimum cartway of twelve (12) feet.
- B. Alleys shall not be permitted in commercial and industrial areas except by approval by Borough Council. Alleys in nonresidential developments shall have a minimum right-of-way of twenty (20) feet and a minimum cartway of sixteen (16) feet. Where necessary, a radius shall be provided at the alley intersection, sufficient to accommodate any large vehicles that may be expected to use the alley.
- C. Where approved, alleys shall be paved as per Local Street specifications.
- D. Where approved, alleys shall have a maximum grade of twelve (12) percent.
- E. Alleys may not be used as the only means of access to a lot.

603.30 Private streets shall not be approved nor shall improvements be approved for private streets.

603.31 Driveways:

- A. Driveways shall be located to provide the best visibility possible within the limits of the property that each driveway serves. Driveways shall conform to the following tabulation:

	<u>Residential</u>	<u>Commercial</u>
Minimum Intersection Angle	90 Degrees	60 Degrees
Width - Minimum	10 feet	24 feet
- Maximum	20 feet *	48 feet *
Corner Radium - Minimum	10 feet	35 feet
- Maximum	15 feet	**

* Maximum driveway width does not include corner radium's.

** Corner radium must be designed to meet design vehicle requirements.

- B. A minimum distance of twenty (20) feet shall be maintained between the driveway curb and any adjacent intersection curb line.
- C. Minimum corner sight distances shall be required, in accordance with §602.27, j, where feasible for Residential driveways.
- D. Minimum corner sight distances shall be required, in accordance with §602.27, j., for Commercial driveways.

- E. Driveways shall be constructed not to interfere with roadway drainage. Cross drains shall be constructed beneath the driveway where required to provide adequate drainage. (See §703.4 of this Ordinance)
- F. For Driveway Surface Drainage Requirements see §703.6 of this Ordinance.
- G. The grade line of the driveway shall be sloped to meet the edge of the roadway shoulder so that the difference in slopes between the driveway and cross slope of the shoulder does not exceed an algebraic difference of eight (8) percent.
- H. The maximum permitted grade on residential driveways shall be fourteen (14) percent, and on nonresidential driveways shall be seven (7) percent. A leveling area for all driveways and access drives shall be provided for a minimum distance of twelve (12) feet, measured from the edge of the pavement of the intersecting street, at a maximum grade of five (5) percent.

SECTION 604 LOTS

- 604.1 Residential lots shall be subdivided in accordance with the lot and area requirements of the Borough of Big Beaver Zoning Ordinance.
- 604.2 Subdivision or land development other than for residential purposes shall be subject to review by the Planning Committee and Borough Council insofar as size, depth, width of lots, and parking are concerned.
- 604.3 The lot width of lots fronting a cul-de-sac or other irregularly shaped lots shall be determined as the width at the building line.
- 604.4 On irregularly shaped lots where a building or structure does not parallel the lot line, the yard requirement or minimum distance to the lot line at every point along the wall of the structure shall be at least equal to the minimum dimension required for the yard or distance to the lot line under the terms of the Borough of Big Beaver Zoning Ordinance.
- 604.5 Corner lots shall be widened in accordance with the terms of this Ordinance and the Borough Zoning Ordinance to permit appropriate building setback for orientation to both streets. (See §605 Building Lines of this Ordinance)
- 604.6 For purposes of measuring lot area on exceptionally deep lots, only the part of the depth which is less than four (4) times the average width of the lot may be utilized in calculations.
- 604.7 All lot lines shall be set perpendicular or radial to the centerline of the street whenever possible. All nonradial lines shall be denoted as such on plat.
- 604.8 Lots abutting local streets shall front upon the streets which parallel the long dimension of the block, if possible.
- 604.9 All lots shall abut by their full frontage on a publicly dedicated street or on a street that has received the legal status of such. Lots abutting on a private street or easement shall not be approved except that lots developed on private streets in existence prior to the enactment of this Ordinance may be approved. Private streets normally shall not be extended to permit additional lot development.

604.10 Lots or parcels of land resulting from previous subdivision of a larger tract may be re-subdivided if the re-subdivided lots, tracts, or parcels of land meet all of the standards, provisions and requirements of this Ordinance and the Borough Zoning Ordinance such as, but not limited to, adequate access, area, width, and depth of lots, building or setback lines.

604.11 Where a portion but not all of a tract of land is being subdivided and/or developed, the portion of land, currently being subdivided, shall be properly laid out and/or developed so as to provide for the future extension of the subdivision, street rights-of-way, and access to the land not being subdivided and/or developed, as well as access to other tracts of land adjacent thereto; and so as to provide for the future extension of utilities, municipal sewerage and water facilities, and services to serve such undivided and undeveloped adjacent areas of land.

604.12 Lots shall be graded to provide drainage away from buildings and structures and, where practical, water shall be drained to the street rather than to adjoining property. The developer and/or landowner shall be required to provide drains or other drainage facilities, as approved by the Borough Engineer, to drain off surface water within the development.

SECTION 605 BUILDING LINES

605.1 The building lines (front yards) shall be in accordance with the terms of the Borough of Big Beaver Zoning Ordinance.

605.2 For corner lots the building line (front yard) of both streets shall be observed.

605.3 The building line (front yard requirements) established within the Borough of Big Beaver Zoning Ordinance may be adjusted in the following cases:

A. Where forty (40) percent or more of the frontage on one (1) side of a street between two (2) intersecting streets is developed with buildings or structures that have observed (with a variation of five (5) feet or less) a front yard greater in depth than required under the Borough Zoning Ordinance, new buildings or structures shall not be erected closer to the street than the front yards so established by the nearest adjacent building and/or structure.

B. Where the topography of the land requires installation of individual sanitary disposal facilities be located in the front yard area, the front building line shall be increased and subject to the approval of the Borough Council.

SECTION 606 BLOCKS

606.1 Block lengths shall not exceed one thousand (1,000) feet, nor be less than three hundred (300) feet, unless existing conditions or the topography of the land makes it impossible to comply with the above requirements, and where such variance is approved by Borough Council.

606.2 Residential blocks shall be of sufficient depth to accommodate two (2) tiers of lots, except where reverse frontage lots bordering a major arterial traffic street are laid out and used.

606.3 Exceptionally long blocks shall be provided with cross walks with a minimum right-of-way width or reservation of twelve (12) feet, and a four (4) foot wide paved walkway.

SECTION 607

EASEMENTS OR RIGHTS-OF-WAY

- 607.1 Utility easements and rights-of-way shall be a minimum width of twenty (20) feet and to the fullest extent possible shall be centered on or adjacent to rear or side lot lines.
- 607.2 When Borough Council determines that conditions are suitable for future essential services, an easement reservation will be required.
- 607.3 Where a subdivision is traversed by a water course, there shall be provided a drainage easement or right-of-way, conforming substantially with the line of such water course and of such width as will be adequate to preserve natural drainage and provide sufficient width for maintenance purposes. Minimum fifty (50) foot width shall be provided. See §613.3 (C.) within this Ordinance for further requirements.
- 607.4 Other drainage easements shall be a minimum twenty (20) feet wide and shall be provided where necessary.
- 607.5 Anchor easements shall be approximately four (4) by thirty (30) feet and placed on a lot line.
- 607.6 Gas, electric, and telephone utilities, internet service and cable television shall be located in subdivisions in accordance with utility company practice and Appendix A, and be approved by Borough Council. A minimum easement width of ten (10) feet must be provided.
- 607.7 The use or purpose of the proposed easement or right-of-way shall be so designated on the plan of said subdivision.

SECTION 608

SIDEWALKS

- 608.1 Sidewalks and crosswalks are required along frontage of all commercial developments, residential developments exceeding ten (10) lots and where required by the Borough Council and shall be installed by the Subdivider or Developer along public streets or where deemed necessary for public safety, as determined by the Borough Council.
- 608.2 Sidewalks shall be provided on both sides where streets of a proposed subdivision are extensions of existing streets having sidewalks on both sides.
- 608.3 Sidewalks shall be provided on the same side of streets having existing or proposed sidewalks on one side which are extensions of existing or platted streets.
- 608.4 The minimum width for sidewalks shall be five (5) feet exclusive of the width of the curb, but Borough Council may require a greater width in the vicinity of the shopping centers, schools, and recreational facilities, or where similar intensive urban uses exist.
- 608.5 Sidewalks, where provided, shall be within the right-of-way and abut on property lines, unless otherwise authorized by Borough Council. Sidewalks should line up with existing or proposed walks in adjoining subdivisions.

SECTION 609 STREET NAMES AND STREET SIGNS

- 609.1 No street, other than an extension of an existing street, shall be given the name of an existing street in the Borough, or an existing street in the U. S. Postal Service Areas of which Big Beaver Borough is a part.
- 609.2 The subdivider or developer may submit a name of his/her choice for a proposed street.
- 609.3 The final choice or approval of a name whereby to identify a street shall be that of the Borough Council.
- 609.4 Street name signs shall be installed at each street intersection or where deemed necessary as determined by Borough Council. See §711 of this Ordinance and Appendix A for further requirements.

SECTION 610 STREET TREES

The Subdivider or Land Developer shall provide, at a minimum, one (1) tree for every fifty (50) linear feet of roadway. Their proposed location, spacing, and species must consider utility corridors and be submitted for approval by the Planning Committee and Borough Council. On narrow rights-of-way or where the planting strip between sidewalk and the curb is less than five (5) feet wide, trees will not be permitted, but are to be placed inside the property lines.

SECTION 611 ACCESS

In subdividing land, it shall be done in a manner that will not have the effect of debarring adjacent property owners from access to the streets and ways of the allotment.

SECTION 612 PUBLIC PARKING AREAS

In subdividing or in the development of land the design, layout, and arrangement of public off-street parking areas open and available to the public and/or required in the Big Beaver Zoning Ordinance shall be subject to the approval of Borough Council upon advice of the Borough Engineer and recommendations of the Planning Committee. Design requirements shall include but not be limited to number traffic signing and arrangement of spaces, cruise lane and fire lane requirements, storm water drainage, and significant landscaping.

SECTION 613 AREAS RESERVED FOR PUBLIC USE

- 613.1 Parcels of land reserved or dedicated for public use, such as parks, playgrounds, recreational purposes, municipal facilities, and uses shall be so located and be of such size, dimensions, and topography to make it suitable and adaptable to the uses intended and shall be subject to the approval of Borough Council upon advice of the Borough Engineer and recommendation of the Planning Committee.
- 613.2 Public access to the dedicated land shall be provided either by adjoining street frontage or public easement to the dedicated parcel. The easement shall be sufficiently wide so that maintenance equipment will have reasonably convenient access to the land. Minimum easement shall be twenty (20) feet wide.

613.3 The developer of a subdivision of five (5) acres or more and includes more than five (5) residential lots shall be required to dedicate a minimum area based on the size of the Plan for use by the Borough as a public recreation area, or in lieu of said dedication shall make a cash payment to the Borough for acquisition and development of public recreation areas. Said dedication shall be a minimum of one (1) percent of the gross area of land within the development. In lieu of said dedication, the developer shall make a cash payment of twenty-five (25) cents per square foot of land required by this Section. Borough Council, upon advice of the Planning Committee, shall stipulate where land shall be dedicated or an "in lieu of cash payment" shall be made in compliance with the requirements of this Section.

613.4 All fees paid to the Borough under this provision shall be deposited in a special escrow fund to be used for acquisition and development of park and recreational facilities. Monies spent may be expended on neighborhood or community facilities in reasonable proximity to the subdivision.

SECTION 614 FLOOD-PRONE AND MUDSLIDE-PRONE AREAS

614.1 Purpose:

- A. Certain areas of Big Beaver Borough are subject to periodic flooding and/or mudslides from streams and other waters causing damage to properties and improvements within the reach of such waters.
- B. Big Beaver desires the insurance coverage for its citizens, residents, and properties within the Borough offered by the National Flood Insurance Act of 1968, as amended, to protect against loss resulting from flooding and/or mudslides.
- C. Borough Council of Big Beaver Borough has determined to participate in the National Flood Insurance Program.
- D. Regulations promulgated by the Federal Insurance Administrator under the National Flood Insurance Act of 1968, as amended, require Borough Council to enact adequate regulations of land use for those areas subject to the hazards of flooding or mudslides consistent with the criteria set forth in Section 1910 of the National Flood Insurance Program Regulations, as amended.

614.2 Adoption of Borough Flood-Plain/Flood-Prone Map:

- A. The boundaries of the Big Beaver Borough flood-plains/ flood-prone areas hereby established are shown on the FLOOD HAZARD BOUNDARY MAP as prepared by the Federal Flood Insurance Administrator bearing the date January 31, 1975. This map and all the notations, references, and other data shown thereon are hereby incorporated by reference into this Ordinance and shall be as much a part of this Ordinance as if all were fully described herein.
- B. Amendments to this Flood Hazard Boundary Map shall have approval from the Federal Flood Insurance Administrator.

614.3 Regulation of Flood-Plain/Flood-Prone Areas: Any development on land identified as a flood plain/flood-prone on maps issued by the Federal Insurance Administration shall be subject to the regulations of the National Flood Insurance Program and must be in compliance with Big Beaver Borough Floodplain Ordinance No. 210.

614.4 Regulation of Mudslide-Prone Areas

- A. Any Development or Substantial Improvement shall be reviewed by the Borough Engineer to determine whether the Development or Substantial Improvement will be reasonably safe from mudslides.
- B. If in the judgment of the Borough Engineer, the proposed site and its improvement or Development are in a location that is not reasonably safe from the hazards of mudslides, a further review must be made by a qualified geologist or soils engineer acceptable to the Borough Engineer and paid for by the applicant.
 1. Such geologist or soils engineer shall furnish, without charge to the Borough, two (2) copies of a written report of his review to the Borough Engineer.
 2. Borough Council reserves the right to retain at the developer's cost a qualified geologist or soils engineer to perform such further review and/or furnish advice and recommendation on this matter.
 3. The proposed Development or Substantial Improvement in this mudslide-prone area must be:
 - a. Adequately protected against mudslide damage, and
 - b. Not aggravate the existing hazard.
 4. All mobile homes and any additions thereto shall be anchored to resist flotation, collapse, or lateral movement by providing over-the-top and frame ties to ground anchors in accordance with the American National Standards Institute and the National Fire Protection Association Standards as specified in the Standard for Installation of Mobile Homes Including Mobile Home Park Requirements, as amended, for Mobile Homes in Hurricane Zones, or other Appropriate Standards such as the following:
 - a. Over-the-top ties shall be provided at each of the four (4) corners of the mobile home with two (2) additional ties per side at intermediate locations for units fifty (50) feet or more in length, and four (4) additional ties per side for units less than fifty (50) feet in length.
 - b. Frame ties shall be provided at each corner of the mobile home, with five (5) additional ties per side at intermediate locations for units fifty (50) feet or more in length, and four (4) additional ties per side for units less than fifty (50) feet in length.
 - c. All components of the anchoring system shall be capable of carrying a force of four thousand eight hundred (4,800) pounds.

614.5 Legislative Intent: The degree of flood and/or mudslide protection required by the provisions of this Ordinance shall be that minimum considered reasonable for regulating purposes. Because the conditions, which may result in flood or mudslide damage, are in many instances unpredictable or may be increased by man-made or natural causes, it is not intended, nor should it be assumed, that areas outside of identified flood prone and/or mudslide prone areas, or that land uses permitted within such areas, will be free from flooding and/or mudslide and damage resulting therefrom. Accordingly, the provisions of this Ordinance shall not create liability on the part of the Borough

of Big Beaver, its governing body, its officers, its agents, or its employees for damage resulting from flooding and/or mudslide, whether or not the damage may result from reliance upon any provision of this Ordinance or any administrative determination made thereunder.

SECTION 615 STREET LIGHTS

- 615.1 The installation of street lighting poles and fixtures shall be the mandatory responsibility and expense of the developer in any subdivision containing five (5) or more lots. The type of installation shall be in accordance with the designs provided in the Standard Drawings and Specifications for Construction, Appendix A. The type of design selected shall be compatible with the design of the structures of the development and agreed to by Borough Council.
- 615.2 The underground wiring and necessary appurtenances shall be installed at the same time the general distribution underground supply lines for the development are being installed.
- 615.3 After preliminary plan approval, but prior to final approval of any plan containing five (5) or more lots, the developer shall present evidence to the Planning Committee of the design of an underground electric wiring plan approved by the appropriate power company for installation of the necessary underground wiring and surface connections which will readily accommodate the future installation of street lighting poles and fixtures.
- 615.4 Prior to the approval of the final plan, a guarantee for installation of said street lighting poles and fixtures at the developer's expense within two (2) years of the final approval of the plan shall be made in compliance with Article IV - Conditions of Acceptance of this Ordinance.
- 615.5 The developer shall make the necessary application for service to Borough Council and pay energy charges until such time as fifty one percent (51%) of the lots are sold. Energy charges shall then revert back to the people living in the development.
- 615.6 Where street lighting or site lighting is proposed, a photometric plan shall be submitted that contains all of the following information:
- A. All structures, parking spaces, building entrances, traffic areas, vegetation and adjacent uses.
 - B. Layout of proposed fixtures by location, orientation, aiming direction, mounting height and type.
 - C. A 10' x 10' illumination grid of maintained horizontal footcandles overlaid on the site plan plotted to 0.0 footcandles demonstrating compliance with requirements of this Ordinance.
 - D. Proposed equipment including fixture catalog cuts, photometrics, glare reduction devices, lamps, on-off control devices, mounting heights, pole foundation details and mounting methods.
 - E. Placement of fixtures in landscaping.
 - F. Visual impact plan including plan views showing pole locations and adjacent residences.

SECTION 616

TRAFFIC CONTROL DEVICES

616.1 Signalization of intersections shall be provided by the developer as required by Borough Council following recommendation of the Planning Committee and/or the Pennsylvania Department of Transportation.

SECTION 617

COMMON OPEN SPACE - LOCATION, DESIGN, AND MANAGEMENT

- 617.1 Location/Design: The common open space permitted in cluster or grouped housing developments shall be located so as to be consistent with good design principles, to preserve natural features, and to provide recreational opportunities to the owners and residents within the development. Where possible the common open space shall be designed as a contiguous area. Access to all lots and parcels of the land development is required. The location of the common open space is subject to the approval of Borough Council upon recommendation of the Planning Committee.
- 617.2 Ownership of Common Open Space: There shall be provisions which ensure that the common open space land shall continue as such and be properly maintained. The developer shall either (a) dedicate such land to public use, if the Borough or another public agency has indicated it will accept such dedication, (b) retain ownership and responsibility for maintenance of such open space land, or (c) provide for and establish one or more organizations for the ownership and maintenance of all common open space. In the case of (c) above, each organization shall be a nonprofit homeowner's corporation, unless the developer demonstrates that a community open space trust is a more appropriate form of organization.
- 617.3 Homeowner's Association: If a homeowner's association or open space trust is formed, it shall be governed according to the following regulations:
- A. The organization is organized by the developer and operating with financial subsidization by the developer, if necessary, before the sale of any lots within the development.
 - B. Membership in the organization is mandatory for all purchasers of homes therein and their successors.
 - C. The organization shall be responsible for maintenance, insurance, and taxes on common open space.
 - D. The members of the organization shall share equitably the costs of maintaining and developing common open space, in accordance with procedures established by them. Include a maintenance program for all facilities, outlining the type of maintenance activities, probable frequencies, personnel and equipment requirements, and estimated annual maintenance costs.
 - E. The organization shall hire adequate staff to administer common facilities and maintain the common open space.
 - F. In the event that the organization established to own and maintain a common open space or any successor organization, shall at any time after establishment of the homeowners' association fail to maintain the common open space in reasonable order and condition in accordance with the development plan, the Borough may serve written notice upon such organization or upon the residents and owners of the development setting forth the manner in which the organization has failed to maintain the common open space in a reasonable condition, and said notice shall include a demand that such deficiencies of maintenance be cured within thirty (30) days

thereof, and shall state the date and place of a hearing thereon which shall be held within fourteen (14) days of the notice. At such hearing, the Borough may modify the terms or the original notice as to the deficiencies and may give an extension of time within which they shall be cured. If the deficiencies set forth in the original notice or in the modifications thereof shall not be cured within said thirty (30) days or any extension thereof, the Borough, in order to preserve the taxable values of the properties within the development and to prevent the common open space from becoming a public nuisance, may enter upon said common open space and maintain the same for a period of one year. Said entry and maintenance shall not vest in the public any rights to use the common open space except when the same is voluntarily dedicated to the public by the residents and owners. Before the expiration of said year, the Borough shall, upon its initiative or upon the request of the organization theretofore responsible for the maintenance of the common open space, call a public hearing upon notice to such organization, or to the residents and owners of the development, to be held by the Borough, at which hearing such organization of the residents and owners of the development shall show cause why such maintenance by the Borough shall not, at the election of the Borough, continue for a succeeding year. If the Borough shall determine that such organization is ready and able to maintain said common open space in reasonable condition, the Borough may, in its discretion, continue to maintain said common open space during the next succeeding year and subject to a similar hearing and determination in each year thereafter. The decision of the Borough in any such case shall constitute a final administration decision subject to judicial review.

The cost of such maintenance by the Borough shall be assessed ratably against the properties within the land development that a right of enjoyment of the common open space and shall become a tax lien on said properties. Said assessments or charges shall be a subordinate lien to the lien of any mortgage or mortgages on the property which is subject to such assessments or charges. The Borough, at the time of entering upon said common open space for the purpose of maintenance, shall file a notice of such lien in the Office of the Prothonotary of Beaver County, upon the properties affected by such lien within the land development.

SECTION 618 STORMWATER MANAGEMENT

618.1 Stormwater management facilities shall be provided for all subdivisions and land developments in accordance with the requirements of the Big Beaver Borough Stormwater Ordinance as amended from time to time and as may be codified at the Borough of Big Beaver Code of Ordinances. Unless specifically exempted by the Big Beaver Stormwater Ordinance stormwater management plan shall be approved by the Borough prior to the commencement of any earth-disturbing activity and the development must be in compliance with the regulations of the Big Beaver Borough Stormwater Management Ordinance.

A. Size and Grade.

1. Storm drains shall be adequate for the anticipated runoff originating on or running through the site when the land development is fully developed. The minimum diameter of storm sewers shall be 15 inches, and the minimum grade shall be 1 percent, unless approved by the Borough Engineer.
2. Manholes.
 - a. For pipe sizes of 24-inch diameter or less, manholes shall be spaced at a maximum of 400 feet; for pipe sizes larger than 24 inches diameter, the maximum distances between manholes shall be 600 feet.

- b. Manholes shall be installed at all points of abrupt changes in alignment and grade.
 - c. Inlets may be substituted for manholes where practical.
 - d. Manholes shall not be permitted to be constructed at a depth below finished grade greater than 15 feet.
3. Inlets.
- a. A developer and/or landowner shall install inlet types shown in the Borough's Construction Standard Details. Inlets shall be placed on the tangent and not on the radius portions of street intersections, unless approved by the Borough.
 - b. A developer and/or landowner shall not be permitted to construct inlets at a depth greater than 10 feet below finished grade.
4. Castings.
- a. Manholes and inlet castings shall be installed as indicated in the Borough's Construction Standard Details.
5. Stormwater Roof Drains.
- a. Stormwater roof drains shall be discharged into an on-lot detention sump or other Pennsylvania Department of Environmental Protection approved best management practices. The sump's size and design shall comply with the Borough's Construction Standards.
6. Unnatural Drainage.
- a. Whenever site construction prevents or concentrates the natural flow of storm drainage in such a way that affects adjoining properties, the developer and/or landowner shall obtain adjacent property owners' approval in writing, and shall cause a drainage easement to be recorded as necessary in the judgment of the Borough. The Borough's approval of plans does not authorize or sanction drainage affecting adjoining properties.
7. Watercourses.
- a. Open watercourses shall not be permitted within the rights-of-way of streets. The stopping, filling up, confining or other interference with or changing the course of drains, ditches, streams and watercourses in the Borough shall not be permitted unless approval, in writing, is obtained from the Borough Council.
 - b. A permit must be obtained from the Pennsylvania Department of Environmental Protection (DEP) for construction or changes in a watercourse as required by applicable DEP regulations and as required by the Corps of Engineers.

8. **Bridges and Culverts.** All bridges and culverts shall be designed to support expected loads and to carry expected flows originating on or running through the site and shall be constructed to the full width of the right-of-way. Bridges and culverts shall be designed to meet current standards of the Pennsylvania Department of Transportation (PennDOT) and the Pennsylvania Department of Environmental Protection (DEP) and shall be subject to such other standards, specifications, and conditions as recommended in the sound discretion of the Borough Engineer.

ARTICLE VII
SITE IMPROVEMENTS AND CONSTRUCTION REQUIREMENTS

SECTION 700 STANDARDS

- 700.1 Any or all of the following improvements, as may be recommended by the Planning Committee and approved by Borough Council pursuant to the authority granted by the Pennsylvania Municipalities Planning Code, Act 247, as amended, considering the needs of the area in which the proposed subdivision is located, must have been completed in accordance with the requirements established by this Ordinance as well as in accordance with Appendix A, Standard Drawings and Specifications for Construction, of this Ordinance, the requirements of the responsible public authority affected, public officials or Borough Council for that portion included in the Final Plat.
- 700.2 If the improvements are not completed prior to the request for Final Approval of a plat, then satisfactory arrangements must have been made with the Planning Committee and Borough Council to the satisfaction of all public authorities concerned regarding proper completion of such improvements prior to the consideration of a Final Plat. Article IV, Conditions of Acceptance of this Ordinance, contains the requirements for performance guarantees.
- 700.3 The following site improvements and construction requirements are to be considered as minimum specifications, standards, and requirements and may by resolution of Borough Council be revised to secure a higher standard of improvement and community development.
- 700.4 All easements and rights-of-way shall be offered for public dedications, and all streets or utility systems shall be turned over to the appropriate public body at their option upon construction to the standards contained herein or referenced.
- 700.5 Unless otherwise noted, all standards and publications referenced in Appendix A are PennDOT Standards and Publications. The most current standards shall apply.

SECTION 701 GRADING, EXCAVATION, AND FILLING

- 701.1 Excavation Standards.
- A. No excavation shall be made with a cut face steeper in slope than two (2) horizontals to one (1) vertical, except under either of the following conditions:
1. The material in which the excavation is made is sufficiently stable to sustain a slope of steeper than 2 horizontals to 1 vertical, and a written statement of a civil engineer licensed by the Commonwealth of Pennsylvania and experienced in erosion control is submitted to and approved by the Borough. The statement shall state that the licensed engineer has inspected the work site and that the specified deviation from the required slope will not cause injury to persons or damage to property.
 2. A retaining wall or other approved support is provided to shore up the face of the excavation. Depending on the location and good safety practice, a guard rail or fence may be required at the top of an excavation cut. A design sealed by a professional engineer must be provided for the retaining wall, including a stability analysis and global stability analysis.

- B. The Borough Engineer may require an excavation to be made with a cut face flatter in slope than two (2) horizontals to one (1) vertical if it finds that the soil or other material from which the excavation is dug is highly susceptible to erosion or if other conditions necessitate a flatter slope. In such case, the Borough shall specify a maximum allowable slope.

701.2 Fill Standards.

- A. No fill shall be made which creates any surface steeper in slope than two (2) horizontals to one (1) vertical, except under either of the following conditions:
 - 1. The fill is located such that settlement, sliding, erosion and water drainage will not endanger adjoining property or human health and safety, in the opinion of the Borough.
 - 2. A written statement is submitted to the Borough by a licensed civil engineer, experienced in erosion control, in which such engineer certifies that he has inspected the work site and concluded that the proposed deviation from the required slope will not result in damage to adjoining property or danger to human health and safety.
 - 3. A retaining wall or other approved support is provided to shore up the face of the excavation. Depending on the location and good safety practice, a guard rail or fence may be required at the top of an excavation cut. A design sealed by a professional engineer must be provided for the retaining wall, including a stability analysis and global stability analysis.
- B. The Borough may require that the fill be graded with a slope flatter than two (2) horizontals to one (1) vertical if he finds such precaution necessary to ensure stability and safety under the circumstances.
- C. The fill must be composed of clean soil or earth.
- D. In order to ensure the stability and even settlement of the fill, each layer of fill shall be compacted by approved mechanical equipment in layers not to exceed 12 inches in thickness and as recommended by the applicant's geotechnical engineer. The entire area of each layer shall be completely compacted to a minimum compaction of 95% of a modified proctor prior to placement of the next layer of fill.
- E. Drainage.
 - 1. The permit holder shall take adequate steps to prevent surface water from damaging the cuts and slopes of excavations and fills. The Borough may require such drainage structures as it deems necessary to prevent erosion damage and to ensure that surface water is properly channeled off to an approved storm drain, water course or catch basin. All grading permit applications must comply with the Big Beaver Borough Stormwater Management Ordinance.
- F. At a minimum, the applicant shall conduct a preliminary geotechnical investigation as outlined in this Section. The intent of the preliminary investigation is to determine the general geologic and subsurface conditions at the site and their impact on development, especially with respect to limitations/constraints on site grading, including cut slope and fill embankment construction and the capacity of natural soils to support development. The preliminary investigation is not to be considered a final, detailed, or comprehensive investigation of proposed site grading, but

only a preliminary evaluation of anticipated limitations. It should be an aid to developing conceptual site grading and development plans. This investigation shall include consultation and review of existing maps, such as, but not limited to: Map of Zones Where Land Use Can Be Affected by Landslides, Flooding, and Undermining, Beaver County, PA, by Reginald P. Briggs and William R. Cohl, 1975, USGS Map MF-685D; Coal Resources of Beaver County, PA, Part 1, Coal Crop Lines, Mined-Out Areas and Structure Contours, compiled by Clifford H. Dodge, Mineral Resource Report 89, 1985, by PaDEP; Soil Survey of Beaver County, PA, by United States Department of Agriculture, Soil Conservation Service.

G. The following requirements are encouraged, but not required as part of the preliminary geotechnical investigation:

1. Standard penetration tests (SPTs) should be conducted in all test borings at no greater than 3-foot vertical intervals in the soil mantle of all borings in compliance with American Society for Testing and Materials (ASTM) Test Designation: D158684. Where SPT refusal on bedrock is encountered prior to reaching the required depth, continuous NX, NQ or NQ-2 rock cores should be procured as required for the engineering analysis. Thin-walled steel (shelby) tube samples of relatively undisturbed soil samples should be procured from selected borings, if and where required for physical laboratory testing to determine relevant soil properties for the preliminary engineering analysis.
2. Groundwater encountered in each test boring should be recorded during drilling operations and 24 hours after completing each boring.
3. The borings must be accurately located in the field. Ground surface elevations must be obtained at each boring. Final boring locations and their ground surface locations must be shown on a scaled topographical survey in accordance with this Chapter.
4. A suitable boring log should be provided for each boring. At minimum, the logs should include: boring designations; SPT results; depths of strata encountered; percent core recoveries and rock quality designations (RQDs) of rock cores; date boring was drilled; groundwater information; types and descriptions of geomaterials encountered; comments or notes regarding voids, boulders, obstructions, or any other unusual subsurface conditions encountered.
5. A written report prepared and signed by the professional geotechnical engineer licensed in the Commonwealth of Pennsylvania performing the preliminary investigation shall be submitted to the Borough. The report should, at a minimum, include: a description of the existing surface and subsurface site conditions; a review of the site geology and geohydrology; a discussion of any slope movements, sloughs, landslides, rock falls, or mining on or adjacent to the site, and an evaluation of their existing and/or potential impact on the site; the test boring logs and laboratory test results and the to-scale boring location plan described above in this Chapter. The report should also include preliminary geotechnical engineering recommendations regarding apparent limitations/constraints on grading for land development, including apparent stable grades for proposed cut slopes and fill embankments. Any general measures required to provide for long-term stability, including, but not limited to, drainage requirements, benching, erosion protection, and subgrade preparation should also be discussed in the report. This preliminary investigation report will not be considered a detailed engineering evaluation of site grading. The Borough Engineer will review the report and will provide a summary recommendation to the Community Development Director and Planning Committee.

6. The amount of buildable area as defined in this Chapter and the Zoning Ordinance, may be adjusted pending upon the results of the preliminary slope stability investigation and pending Borough approval.
- H. Pending the results of the preliminary slope stability investigation, the Borough's Engineer may request a comprehensive slope stability investigation.
- I. Miscellaneous Requirements.
1. No grading permit shall be issued for such a fill unless the applicant furnishes a performance bond in an amount of one hundred ten percent (110%) of the Borough's estimated cost of adequately covering such fill with clean soil.
 2. The top and bottom edges of all graded slopes shall be at least three (3) feet from adjoining property lines and rights of way in order to permit natural rounding of the slope edges without encroachment on abutting property.
 3. Wherever practical, large trees and other natural features constituting substantial physical, aesthetic, historical or economic assets to the community shall be preserved.
 4. In order to prevent and curtail soil erosion, grass or other covering vegetation shall be grown on any soil denuded as a result of excavation, fill or grading activities. All grading permit applications must have a soil erosion and sedimentation control plan, reviewed and approved by the PADEP. Provide a copy of NPDES permit, if required.
 5. The owner of any property on which an excavation or fill has been made shall maintain all retaining walls, fences, drains, drainage structures and protective features in good condition and repair. Such owner shall be responsible for protecting and cleaning all lower properties of silt, rock, soil, mud or other debris washed from his property as a result of the grading of his property, regardless of whether such grading was approved by the Borough.
 6. The owner of any property on which excavation or fill is to be conducted shall ensure that adequate environmental controls and sound erosion and sedimentation measures are in place during the progress of the work. This may include, but is not limited to, noise and dust control, diversion ditches, settlement ponds and silt screens.
- J. Woodland Replacement.
1. Where any permitted woodland disturbance exceeds twenty five percent (25%) of existing woodland coverage, applied independently and cumulatively, replacement plantings shall be installed as follows:
 - a. At a minimum, for each five thousand (5,000) square feet of woodland disturbance area, or fraction thereof, in excess of twenty five percent (25%) and regardless of the character and sizes of the disturbed vegetation, four (4) trees, each at least two to two and one-half inch (2- 2½") caliper shall be planted.
 2. Required replacement plantings shall be in addition to any required street trees or any other landscape material required under applicable provisions of this Ordinance.

3. Where approved by the Borough as a condition of any building, zoning, subdivision or land development approval, required replacement trees may be replaced in whole or in part by greater numbers of trees of smaller caliper than otherwise required or by vegetation other than trees (e.g., for purposes of reforestation).
4. Where approved by the Borough as a condition of any building, zoning, subdivision or land development approval, some or all of the required replacement plantings may be installed at a site other than that subject to required replacement planting.
5. The locations, selected species, and sizes of all replacement plantings, along with a planting schedule tied to the timing and/or phasing of the development, shall be determined by a design professional licensed in the Commonwealth of Pennsylvania and indicated on the Final Subdivision/Land Development Plan(s) or building permit application, as applicable.
6. Required replacement vegetation and their measurement shall conform to the standards of the publications "American or U.S.A. Standard for Nursery Stock," ANSI or U.S.A.S. Z60.1 of the American Association of Nurserymen, as amended. All plant material used on the site shall have been grown so as to have a high likelihood of survival on the site (e.g., grown specifically for planting in the applicable USDA hardiness zone) and shall be nursery grown, unless it is determined by the Borough that the transplanting of trees partially fulfills the requirements of this section.
7. Species of replacement plantings selected and planting locations shall reflect careful site evaluation and in particular the following considerations:
 - a. Existing and proposed site conditions and their suitability for the plant materials, based upon the site's geology, hydrology, soils, and microclimate.
 - b. Specific functional and design objectives of the plantings, which may include but not necessarily be limited to: replacement of woodland area removed, enhancement of existing woodland or old-field area(s), reforestation of riparian buffer areas, mitigation of new woodland edge conditions as a result of land disturbance, provision for landscape buffer, visual screening, noise abatement, energy conservation, wildlife habitats, and aesthetic values.
 - c. Maintenance considerations such as hardiness, resistance to insects and disease, longevity, and availability.
 - d. Because of the many benefits of native plants (ease of maintenance, longevity, wildlife habitat, etc.), the use of nursery-grown native trees and shrubs is required. Species selection should reflect species diversity characteristic of the native deciduous woodland.
8. All replacement plantings shall be guaranteed and maintained in a healthy and/or sound condition for at least twenty-four (24) months or shall be replaced. In addition, the Applicant may be required to escrow sufficient additional funds for the maintenance and/or replacement of the proposed vegetation during the 24-month replacement period and to provide for the removal and replacement of vegetation damaged during construction, based upon the recommendation of the Borough Engineer.

9. Woodland that is designated to remain undisturbed shall be protected from construction activities. Where protected woodland is disturbed, the Borough retains the right to require additional replacement plantings, on site, to mitigate the effects of the disturbance.

701.3 As applicable, all development and earth moving activities shall be required to submit a Soil Erosion and Sedimentation Control Plan and obtain the required permit from the Beaver County Conservation District as required by the Pennsylvania Department of Environmental Protection, pursuant to most recent rules and regulations of the Soil Erosion and Sedimentation Control Manual.

701.4 Streets shall be graded to grades and cross sections as established on and presented with the preliminary plans and street profiles and as approved by the Borough Engineer and the Borough Council.

701.5 Streets shall be graded to the full width of the street right-of-way and with slope ratio of two and one half (minimum) horizontally to one vertically (2.5:1) shall be constructed commencing at the street right-of-way and extending on to the lots or properties adjoining the street right-of-way; this applies to both cut and fill sections.

701.6 Subgrade of street shall be brought to the required grade and contour, and properly rolled and compacted to 95%. All soft areas to be removed and recompacted with suitable material. All such work and the preparation of the subgrade shall require the approval of the Borough Engineer before the placing of any base course material.

SECTION 702 UNDER DRAINAGE

702.1 In areas where springs, wet weather springs, pool soil drainage conditions, or where conditions exist that underground drainage is necessary to properly protect the proposed street pavement, there shall be constructed pipe underdrain, stone underdrain, or subgrade drains according to the methods and standards of the current Pennsylvania Department of Transportation Specifications Form 408 and any supplements thereto. Type of material, size of underdrain, design, location, length, and amount of underdrain shall be subject to the direction and approval of the Borough Engineer and the Borough Council.

702.2 If, during construction, poor drainage conditions are encountered by the subdivider or developer, he shall notify the Borough Engineer of such conditions, and shall correct such conditions encountered to the satisfaction of the Borough Engineer and the Borough Council.

SECTION 703 STORM DRAINS AND FACILITIES

All storm drains and other conveyance facilities shall be designed and constructed in accordance with the Big Beaver Borough Stormwater Ordinance and the Big Beaver Borough Construction Standards, Appendix A of this ordinance.

SECTION 704 STREETS, CURBS, AND PAVEMENT

704.1 Subsurface Investigation

- A. A subsurface report prepared by a registered soils engineer shall be submitted for Borough Council's approval on all street construction in subdivisions.

- B. The subsurface report shall be based upon adequate field investigations and/or subsurface borings and shall include recommendations for roadway stability, subsurface drainage, undercutting, benching, slopes, erosion control, and any other redocumentations necessary for sound construction.

704.2 Grading

- A. All streets shall be graded in accordance with the most stringent requirements of Borough Ordinances and Commonwealth law, then prevailing, and shall be graded to aesthetically blend with the natural lay of the land preserving as many trees as possible where required by the Borough Council. All scrub brush shall be cleared the full width of the right-of-way. Maximum slopes shall be as shown on the Standard Drawings or as recommended on the Subsurface Investigation Report where required herein.

704.3 Subbase

- A. A subbase shall be constructed when required by the Borough where soil or traffic conditions warrant its use with construction as follows:
 - 1. Subbase course with a compacted thickness of not less than three (3) inches in depth, all in accordance with Section 350 of Form 408, Pennsylvania Department of Transportation.

704.4 Base Course

- A. The base course shall be constructed to the lines, grades, and cross sections as approved with all materials used and all construction requirements performed in conformity with the Pennsylvania Department of Transportation, Form 408, and be one of the following approved types of base course:
 - 1. A crushed aggregate base course shall be in accordance with the Big Beaver Borough Construction Details, Appendix A of this Ordinance.

704.5 Pavement Wearing Course

- A. The pavement wearing course shall be constructed to the lines, grades, and cross sections as approved with all materials used and all construction requirements performed in conformity with the Pennsylvania Department of Transportation Form 408 and be one of the following types:
 - 1. A bituminous surface course shall be constructed in accordance with the Big Beaver Borough Construction Details, Appendix A of this Ordinance.

704.6 Curbing

- A. Type of curb used and location required to be determined by the Borough Council and subject to their approval before installation of the same.
- B. Concrete curbs shall be of the following types:
 - 1. Straight Curb eight (8) inches x eighteen (18) inches.
 - 2. Battered Curb six (6) inches x eight (8) inches x eighteen (18) inches.

- 3. Rolled Curb and Gutter.
- 4. Combined Curb and Sidewalk.
- 5. Extruded Concrete.

C. Bituminous curbing shall be of the following type:

- 1. Paved gutter or wedge and rolled curb.

704.7 Construction Drawings for all street construction must be submitted to the Borough Council for approval prior to beginning construction. All details of street construction including, but not limited to, cross section, grading, pavement, and drainage shall conform to this Subdivision Ordinance.

SECTION 705 STRUCTURES

705.1 Bridge structures for all classes of streets shall meet the following design criteria:

- A. Minimum vertical clearance fourteen (14) feet six (6) inches except over Interstate roadways and other locations set by the Pennsylvania Department of Transportation at sixteen (16) feet six (6) inches.
- B. HS-20 loading capacity.
- C. Minimum width shall be as tabulated below for two-lane roadway, Local, and Collector Streets.
 - 1. Equal to the curb-to-curb width of the approach roadway, or
 - 2. If no curbs, equal to the full approach paved width plus eight (8) feet.
- D. Minimum width for Arterial Streets shall be in accordance with the Pennsylvania Department of Transportation and/or Borough Council.
- E. Sidewalks on approaches should be carried across all new structures.
- F. In urban areas, there should be sidewalks on both sides of the roadway across all bridges.

SECTION 706 GUIDE RAIL

706.1 Guiderail protection shall be provided where the height of embankment exceeds or equals the limits shown below:

<u>EMBANKMENT SLOPE (Horizontal/Vertical)</u>	<u>EMBANKMENT HEIGHT</u>
2 : 1	10 feet
2 ^{1/2} : 1	18 feet
3 : 1	28 feet
4 : 1	45 feet

706.2 Guide rail shall be constructed in accordance with Pennsylvania Department of Transportation Design Manual, Part 2.

- 706.3 The length of guiderail for embankment protections shall include extensions beyond the point of need in accordance with Pennsylvania Department of Transportation Design Manual, Part 2.
- 706.4 Where consecutive installations of guide rail are required, and the points of need are 200 feet or less apart, the guide rail protection shall be made continuous between the points of need.

SECTION 707 SANITARY SEWERS

- 707.1 The Borough Planning Committee and the Borough Council may require the subdivider or developer of land to construct and install or agree to construct and install sanitary sewers and appurtenances to serve the proposed subdivision and development of land as pre-requisite to the approval of the subdivision or development plans.
- 707.2 The subdivider or land developer shall construct a sanitary sewer system and connect with such sewer main and provide lateral connections for each lot where a public sanitary sewer main is available at plat boundary or within a reasonable distance thereof (1,500 lineal feet).
- 707.3 Installation of sanitary sewers including house laterals, trunk, interceptor and collector sewer lines, manholes, and all other appurtenances shall comply with the specifications, standards, rules, and regulations of the Borough of Big Beaver, and the Pennsylvania Department of Environmental Protection and subject to the approval and inspection of the same.
- 707.4 In areas where a municipal sewerage system is not available or is not planned for the area or may not be feasibly connected to, the subdivider or developer shall be required to install an individual septic tank and leaching field or project or community type sewage disposal system subject to the approval of the design and installation of the same by the Borough and the Pennsylvania Department of Environmental Protection and in accordance with the Pennsylvania Sewage Facilities Act (Act 537, as amended).
- 707.5 Where septic tanks are used as an accepted method of sewage disposal, consideration shall be given to the lot size in relation to utilities as stated in this Ordinance, and to the regulation promulgated under Act 537, as amended, the Pennsylvania Sewage Facilities Act.
- 707.6 A building permit will not be issued for the erection, construction, or placement of any building, structure, prefabricated structure, mobile home, house trailer, or other mobile unit, irrespective of its use being residential, institutional, recreational, commercial, or industrial purpose, either permanently or temporarily until either (a) connection to existing municipal sanitary sewage system and treatment facilities has been arranged for and assured; (b) installation of and individual sanitary sewage disposal system has been assured; (c) construction and installation of a sanitary sewage collection system and sewage treatment plant and facilities to serve the subdivision or the land to be developed has been approved and assured, all subject to the approval by the Borough and the Pennsylvania Department of Environmental Protection.
- 707.7 In areas where a Municipal Sewage System is in the design stages, and is planned to be available, but not yet constructed, house or service laterals shall be installed and extended into the center of the streets or rights-of-way and collector or interceptor sewer lines shall be installed in and along said streets and rights-of-way to the edge or boundary of the subdivision or development to a point nearest to or most convenient to the municipal planned sewage system.

- A. Until such time as the Municipal Sewage System becomes available for service, individual septic tanks and leaching fields, or a community type sewage disposal system must be installed and approved by the Pennsylvania Department of Environmental Protection.
- B. In the event that an interim community type sewage disposal system is installed, a trunk line or interceptor sewer shall be provided to connect to the Municipal Sewage System at its point of availability or planned availability.

707.8 All individual properties now using sanitary sewage facilities and all future properties requiring sanitary sewage facilities shall be connected to the Municipal Sewage System if such system is available.

707.9 Stormwater shall not be permitted to enter sanitary sewer lines.

707.10 Sanitary Sewer Standards

A. Installation

- 1. Installation of sanitary sewers and appurtenances shall be in accordance with the Borough's Construction Standards.
- 2. All installations, including house connections, shall be made prior to the paving of the street and shall be thoroughly tamped.
- 3. All street crossings within the public right-of-way shall be inspected by the Borough.

B. Minimum Size and Grade.

- 1. The minimum diameter of sanitary sewers shall be eight (8) inches and the minimum grade shall be 5 /10 percent.

C. Laterals.

- 1. Lateral connections, where required, shall be installed to the right-of-way line of the street prior to road paving, with a sight tee connection (clean-out) to be placed per Borough Construction Standards at said location and/or as otherwise recommended in the sound discretion of the Borough Engineer.
- 2. Each building shall have a separate lateral connection to the public sewer, except for garages that are accessory to a residential dwelling unit and may be connected to the dwelling unit's lateral.

SECTION 708 WATER SUPPLY

708.1 The Borough Planning Committee and the Borough Council may require the subdivider or developer of land to construct and install or agree to construct and install water lines and fire hydrants to serve the area to be subdivided or developed as a pre-requisite to the approval of the subdivision or development plans.

708.2 The subdivider or developer shall construct a system of water mains and connect with such public water supply system where a public water supply is available to the plat or tract boundary or within

a reasonable distance thereto (2,000 lineal feet). Water lines shall be so located and of such a size as approved by the Beaver Falls Municipal Water Authority and the Borough of Big Beaver.

- 708.3 If municipal water supply is available, could be extended, or is definitely planned for the area of subdivision or development, then provisions shall be made for its immediate and eventual use.
- 708.4 All water supply and water distribution systems and facilities shall be designed and constructed in conformance with the standards, specifications, and requirements of the Borough Council, Borough Municipal Authority, or any other Authority having jurisdiction over the same, and likewise shall require such Authority's approval of the plans and the project in general.
- 708.5 Fire hydrants shall be installed in the locations as specified and approved by the Borough Council and the Borough's Municipal Authority.
- 708.6 Community type water well and water supply system projects shall be subject to the approval of the Pennsylvania Department of Environmental Protection and the Borough's Municipal Authority, and the Borough Council.
- 708.7 If a public water supply system is not available under the conditions stated above, the subdivider may provide individual or community wells to serve twenty-five (25) or more units which shall be approved by the State Department of Environmental Protection.
- 708.8 Where individual wells provide a water supply in a large subdivision, at least one (1) test well shall be drilled in the proposed area for thirty (30) lots or twenty-five (25) acres, whichever is smaller, or upon the requirements of the State Department of Environmental Protection. Test wells shall ordinarily be drilled to a reasonable depth which will produce safe potable water in sufficient quantity for the use intended and shall be approved by the State Department of Environmental Protection.
- 708.9 Installation.
 - A. Installation of water mains and appurtenances shall be made in accordance with the rules and regulations of the Beaver Falls Municipal Water Authority or Pennsylvania American Water or its assigns.
 - B. All water mains and house connections shall be made prior to the paving of the street and shall be thoroughly tamped.
 - C. The Borough shall inspect all street crossings within the public right-of-way.
- 708.10 Water Mains.
 - A. All water mains shall have a minimum diameter of 6 inches, unless written approval is obtained from the Beaver Falls Municipal Authority or Pennsylvania American Water.
 - B. All water mains shall be extended and connected to existing water mains to provide a circulatory system where required by the Beaver Falls Municipal Authority or Pennsylvania American Water.

708.11 Hydrants, Gate Valves and Meters.

- A. Fire hydrants, gate valves and meters shall be of the type and design required by the Borough, and as per the Borough Fire Marshal/Chief's direction.
- B. Fire hydrants shall be located at accessible points and located to give adequate fire protection as outlined by the Board of Underwriters.
- C. Gate valves shall be located as directed by the Beaver Falls Municipal Authority or Pennsylvania American Water.

SECTION 709 MONUMENTS

709.1 Monuments shall be placed and set at all tract corners, street block corners, angle points, points of curves in streets, and at intermediate points as determined by the Borough Engineer. The monuments shall be in accordance with the requirements set forth in the Big Beaver Borough Construction Standards, see Appendix A. Monuments shall be of concrete or stone at least six inches by six inches by 30 inches and marked on top with a metal dowel. They shall be set at the intersection of lines forming angles in the boundaries of the subdivision and at the intersection of street lines. In minor subdivisions there shall be a minimum of one monument. In all other subdivisions there shall be a minimum of four monuments. The Borough Engineer may require additional monuments in any minor or other subdivision if, in its judgment, circumstances warrant placement of additional monuments.

709.2 All lot corners shall be staked and plainly marked with metal pins, where feasible. The location of all monuments and markers shall be shown on the final plat for recording.

SECTION 710 EXISTING NATURAL CONDITIONS

In wooded areas or where other natural conditions exist, in such a manner that their presence adds to the desirability of a subdivision, the Borough Council shall require that the subdivider preserve as much of the original trees and natural conditions as is economically feasible and require that a minimum of grading be done other than the grading and excavating which is required in the construction of the improvements in accordance with the improvement standards included herein and approved by Borough Council.

SECTION 711 ERECTION OF STREET NAME SIGNS

The subdivider or developer shall furnish and install street name signs at each street intersection in conformity with the type of materials, design, and standards established by the Manual on Uniform Traffic Control Devices (MUTCD) and designated by the Borough Council (See Appendix A).

SECTION 712 CONCRETE SIDEWALK

712.1 The sidewalks shall be constructed of Portland Cement Concrete, be properly reinforced, be a minimum of four (4) inches in thickness, except at driveways where the walks shall be a minimum of six (6) inches in thickness. Sidewalks shall be a minimum of four (4) feet in width exclusive of the width of the curb.

712.2 Sidewalks shall be constructed in accordance with the specifications in Appendix A.

712.3 The Borough seeks to ensure that adequate provision of sidewalks and multi-purpose trails and other public requirements, the promotion of health, safety and the general welfare and the coordination of streets and other public facilities are considered in the development and use of property and that development and use of property are done in accordance with the Borough's Comprehensive Plan. Borough Council hereby finds and declares that the construction and rehabilitation of sidewalks advances those interests of the Borough and, in order to accomplish those purposes, this Section sets out requirements for the construction of sidewalks, multipurpose trails and, where a developer and/or landowner requests it and certain conditions exist, for the payment of a fee in lieu of the requirement for construction of sidewalks.

712.4 Guidelines for Requiring Sidewalks. Sidewalks shall be constructed along all street frontages of the lot for which the development is proposed. All sidewalks shall be constructed in accordance with the standards set forth in the Borough's Construction Standards and or Pennsylvania Department of Transportation (PennDOT) sidewalk specifications on state roads. Sidewalks shall be required for all new construction and for renovations, additions and/or expansions to existing structures which comply with any of the following conditions:

A. All minor land developments.

B. All major land developments.

C. All existing nonresidential development additions or expansions to structures where the addition or expansion results in an increase of more than 10 percent of the existing gross floor area (GFA) of the structure.

712.5 For each phase of construction within an approved minor or major land development plan, the developer and/or landowner shall provide and maintain temporary pedestrian facilities, including, but not limited to, landowner sidewalks until the phase has been built out. In order to ensure pedestrian connectivity and safety throughout construction of a phase, the Borough shall review and approve or deny the materials and locations of the temporary improvements.

SECTION 713 TESTING

If required by the Borough Engineer, a qualified testing laboratory shall test all construction materials used in sewers, streets, sidewalks and other required improvements. The developer and/or landowner shall bear all costs for such tests.

SECTION 714 RESERVED

ARTICLE VIII

INSPECTION AND ACCEPTANCE OF IMPROVEMENTS

SECTION 800 PROGRESS INSPECTIONS

800.1 Progress Inspections.

- A. The developer and/or landowner shall notify the Borough Engineer at least 72 hours prior to beginning any installation of public improvements in an approved plan. While work is in progress, the developer and/or landowner shall notify a Borough-designated inspector at least 72 hours prior to the time that the following required progress inspections are desired:
 - 1. Inspection of subgrade of streets prior to laying of base.
 - 2. Inspection of base as it is being constructed and prior to final paving of streets.
 - 3. Inspection of paving of streets while they are being constructed.
 - 4. Inspection on installation of storm sewers and drainage facilities as they are being constructed.
 - 5. Inspection of all utility's street crossings within the public right-of-way.
 - 6. All grading being performed according to Section 701, "Grading, Excavation and Filling."
 - 7. Inspection on installation of sanitary sewer facilities as they are being constructed.
 - 8. Inspections at such other times as may be provided by Borough policy (including the Borough Public Improvements Inspection Policy, as may be amended from time to time), by the developer's agreement, or where nature of work or conditions such that Borough Engineer believes such to be necessary in his/her sound judgment.
- B. A Borough-designated inspector will prepare a written report of all inspections in duplicate on forms provided by the Borough. One copy shall be retained by the Borough and one copy shall be retained by the Borough Engineer.

800.2 Notice of Completion of Public Improvements.

- A. Any deviation between the location(s) of constructed site improvements with the location(s) of existing recorded easements and rights-of-way must be reported to the Building Inspector or Borough Engineer. No construction affected by the deviation shall proceed until the Building Inspector or Borough Engineer provides a written authorization to proceed. All deviations of constructed public improvements from approved plans, easements and rights-of-way will be documented in the as-built plan and, if necessary, shall be rerecorded with Beaver County. All documentation of the deviation(s) shall be provided to the Borough prior to the final inspection. The Borough shall verify the deviations before the release of any completion security.
- B. When the developer and/or landowner has completed the required private or public improvements in a plan, the developer and/or landowner shall notify the Borough, in writing, by certified or registered mail. Within 10 days of the receipt of such notification, the Borough

Engineer will inspect the private or public improvements in the plan to determine compliance with Part 5, "Design Standards," and the Borough's Construction Standards.

- C. Upon completion of the private or public improvements in a land development plan, the developer and/or landowner shall file paper copies as well as electronic-based as-built plans and profiles of the public improvements, as constructed, to the Borough within ten (10) days of the mailing of the notice of completion. Three paper copies of the as-built plans shall be folded into a final size of 8½ inches x 11 inches. The electronic file of the as-built plans shall be provided in a format compatible with the Borough's geographical information system (GIS) unless otherwise specified by the Borough Engineer.

800.3 Final Inspection.

- A. Borough Engineer's Report. When the developer has completed all of the necessary and appropriate private or public improvements, the developer shall notify the Borough Council, in writing, by certified or registered mail, of the completion of the aforesaid improvements and shall send a copy thereof to the Borough Engineer. Borough Council will, within ten (10) days after receipt of such notice, direct and authorize the Borough Engineer to inspect all of the aforesaid improvements. The Borough Engineer will, thereupon, file a report, in writing, with the Borough Council, and will promptly mail a copy of the same to the developer by certified or registered mail. The report will be made and mailed within 20 days after receipt by the Borough Engineer of the aforesaid authorization from the Borough Council; said report shall be detailed and shall indicate approval or rejection of said improvements, either in whole or in part, and if said improvements, or any portion thereof, shall not be approved or shall be rejected by the Borough Engineer, said report shall contain a statement of reasons for such non-approval or rejection.
- B. Notification of Developer and/or Landowner by the Borough Council. The Borough Council will notify the developer and/or landowner, within 30 days of receipt of the Borough Engineer's report, in writing, by certified mail, of the action of the Borough Council with relation to approval or rejection of the public improvements.
- C. Failure of Borough to Comply. If Borough Council or the Borough Engineer fails to comply with the time limitation provisions contained in this Part, all private or public improvements will be deemed to have been approved and the developer and/or landowner shall be released from all liability pursuant to the completion security posted with the Borough.
- D. Completion of Rejected Public Improvements. If any portion of the private or public improvements shall not be approved or shall be rejected by the Borough Council, the developer and/or landowner shall proceed to make the required corrections or additions and, upon completion, the same procedure of notification, inspection and approval as outlined in this Part shall be followed.
- E. Developer's Rights. Nothing in this Part, however, shall be construed to limit the developer's right to contest or question, by legal proceedings or otherwise, any determination of the Borough Council or the Borough Engineer.

SECTION 801 RELEASE OF COMPLETION SECURITY.

- 801.1 Release of completion security, including partial releases during construction and final releases upon completion, shall be in accordance with this Chapter, and in accordance with any associated developer's agreement.
- 801.2 The Borough Council may require retention of ten (10) percent of the estimated cost of such improvements until such time as all improvements have been installed, maintenance security has been posted for public improvements to be offered for dedication to the public, and all terms and conditions of the development agreement have been satisfied, including satisfaction of all outstanding fees and costs due to the Borough, at which time the completion security is released in its entirety.

SECTION 802 ACCEPTANCE OF PUBLIC IMPROVEMENTS

- 802.1 Upon completion of the inspection and approval of the public improvements, the developer and/or landowner shall submit a request to the Borough Council, in writing, to accept the dedication of the public improvements. The request for acceptance shall be submitted at least 30 days prior to the regular meeting of the Borough Council and shall be accompanied by a legal description(s) and an 8-inch x 11-inch scaled drawing(s) of all rights-of-way to be dedicated to the public. With respect to the request for dedication of any street, the request shall be accompanied by a proposed deed of dedication.
- 802.2 At the regular meeting, the Borough Council may enact an ordinance or adopt a resolution accepting the public improvements as part of the Borough's public facilities, subject to the posting of the maintenance security required by §804.
- 802.3 No property or public improvement shown on a final plat shall be considered to have been finally accepted by the Borough until the dedication thereof has been officially accepted by adoption of a resolution of the Borough.

Section 803 MAINTENANCE SECURITY

- 803.1 When the Borough Council accepts the dedication of all or some of the required public improvements in a plan, following their completion, the Borough Council shall require the posting of a maintenance security, as defined by the Municipalities Planning Code and this Chapter, to secure the structural integrity of the improvements and to guarantee the proper functioning of those improvements in accordance with the Design Standards of the Borough's Construction Standards and the specifications of the final plat defined by §303.
- 803.2 The term of the maintenance security shall be for a period of eighteen (18) months from the date of the acceptance of the public improvements by the Borough Council. The amount of the maintenance security shall be fifteen (15) percent of the actual cost of installation of the public improvements.
- 803.3 Form of Security. The form of security shall be accordance with the requirements of the Municipalities Planning Code, 53 P.S. §10101 et seq., and this Chapter.

SECTION 804

ENFORCEMENT

804.1 In the event that the private or public improvements required to be installed by the provisions of this Chapter are not installed in accordance with the requirements of this Chapter or the approved final plat prior to the expiration of the completion security, the Borough Council shall have the power to enforce the completion security by appropriate legal and equitable remedies provided by the Municipalities Planning Code, 53 P.S. §10101 et seq., and other laws of the Commonwealth of Pennsylvania. If proceeds from the completion security are insufficient to pay the cost of installing or making repairs or corrections to all the improvements guaranteed by such completion security, the Borough Council may, at its option, install part of such improvements in all or part of the subdivision or land development and may institute appropriate legal or equitable action to recover the moneys necessary to complete the remainder of the improvements. All of the proceeds, whether resulting from the completion security or from any legal or equitable action brought against the developer and/or landowner, or both, shall be used solely for the installation of the improvements guaranteed by such completion security and not for any other municipal purpose.

SECTION 805

PRIVATE IMPROVEMENTS

805.1 Approval of private improvements or common amenities, as defined by this Chapter, for which a completion security has been required and final release of that completion security shall indicate compliance with the specifications shown on the approved plan. Such approval and release of the completion security shall not imply approval by the Borough of the method of construction or the structural integrity of the private improvements or common amenities, nor shall there be any liability associated with or responsibility for maintenance of those private improvements or common amenities by the Borough. Maintenance security shall not be required to be posted for private improvements or common amenities upon release of the completion security.

ARTICLE IX
AMENDMENTS

SECTION 900 ALTERATIONS AND CHANGES

The Borough Council may from time to time amend this Ordinance. Amendments to the Subdivision Ordinance shall become effective only after a public hearing held with proper public notice. In case of an amendment other than that prepared by the Planning Committee, the Borough Council shall submit each amendment to the Planning Committee for recommendations at least thirty (30) days prior to the date fixed for the public hearing on each amendment. In addition, each amendment to the Subdivision Ordinance shall be submitted to the Beaver County Planning Commission for its recommendations forty-five (45) days prior to the scheduled public hearing. The recommendation to the Beaver County Planning Commission shall be made to the Borough Council within forty-five (45) days.

Appendix A

Big Beaver Borough Construction Details

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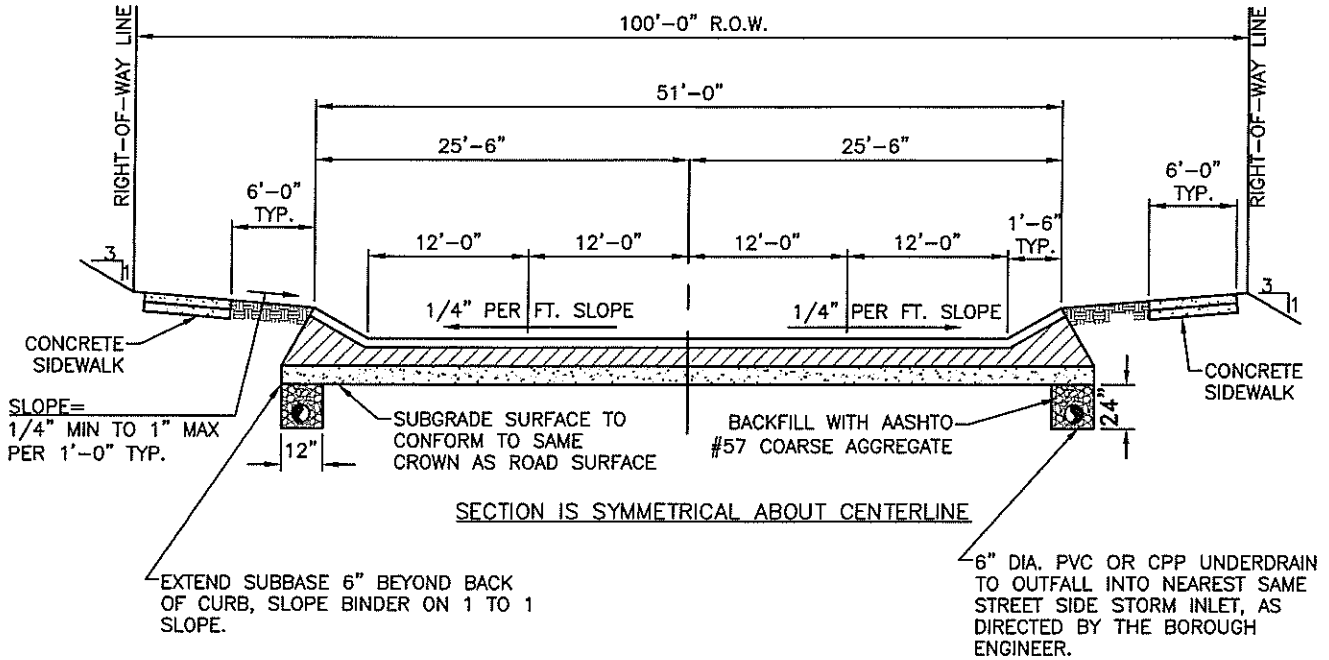
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PAVEMENT SECTION CONSISTS OF THE FOLLOWING:

- 12" - PENNDOT 2A AGGREGATE LIMESTONE BASE COURSE
OR 10" AASHTO #1 CHOKED WITH 2" OF PENNDOT #2A LIMESTONE. (NO SLAG)
- 6" WMA SUPERPAVE BITUMINOUS BINDER COURSE
- 1" WMA SUPERPAVE BITUMINOUS WEARING COURSE, SRL-H (INITIAL)
- 1 1/2" WMA SUPERPAVE BITUMINOUS WEARING COURSE, SRL-H (FINAL)

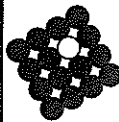
NOTES:

1. ALL DEPTHS INDICATED ARE AFTER COMPACTION.
2. BITUMINOUS WEDGE CURBS SHALL BE 18" WIDE x 6" HIGH. ALTERNATE CURB SPEC (PLAIN CONCRETE CURB GUTTER OR PLAIN CONCRETE CURB IN ACCORDANCE WITH PENNDOT PUBLICATION 408).
3. PREPARATION FOR AND INSTALLATION OF THE FINAL 1 1/2" OF WEARING SURFACE, INCLUDING ALL REPAIRS TO PAVEMENT SECTION REQUIRED BY THE BOROUGH, SHALL BE INSTALLED AFTER 90% OF THE DWELLINGS ARE COMPLETED AND CONSTRUCTION EQUIPMENT IS NOT USING THE ROADWAY IN CONFORMANCE WITH THE DEVELOPER'S AGREEMENT. THIS WORK ALSO INCLUDES BITUMINOUS LEVELING COURSE TO PROVIDE SMOOTH SURFACE FOR FINAL WEARING SURFACE TO BE INSTALLED. ALL MANHOLE LIDS, GRATES, VALVES SHALL BE ADJUSTED TO GRADE PRIOR TO INSTALLATION OF FINAL 1 1/2" WEARING COURSE.
4. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS SET FORTH IN PENNDOT PUBLICATION 408. ALL CONSTRUCTION PROCEDURES SHALL BE IN ACCORDANCE WITH BULLETIN 15 AND THE STANDARDS SET FORTH IN PENNDOT PUBLICATIONS 70, 72M, AND 408.
5. LOCATION AND INSTALLATION OF ALL STREET SIGNS (STREET IDENTIFICATION, STOP, SPEED LIMIT, ETC.) SHALL BE IN ACCORDANCE WITH THE CURRENT MUTCD REQUIREMENTS AND AS DIRECTED BY THE BOROUGH. DEVELOPER TO PROVIDE A SIGNAGE PLAN FOR REVIEW AND APPROVAL OF BOROUGH.
6. SIDEWALK, CROSSWALK, AND CURB RAMP INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT ADA STANDARDS FOR ACCESSIBLE DESIGN.
7. DEVELOPER'S TRAFFIC ENGINEER TO PROVIDE TRAFFIC COUNTS AND ESALS FOR MIX DESIGN WITH SHOP DRAWING SUBMITTAL.

ARTERIAL STREET

N. T. S.

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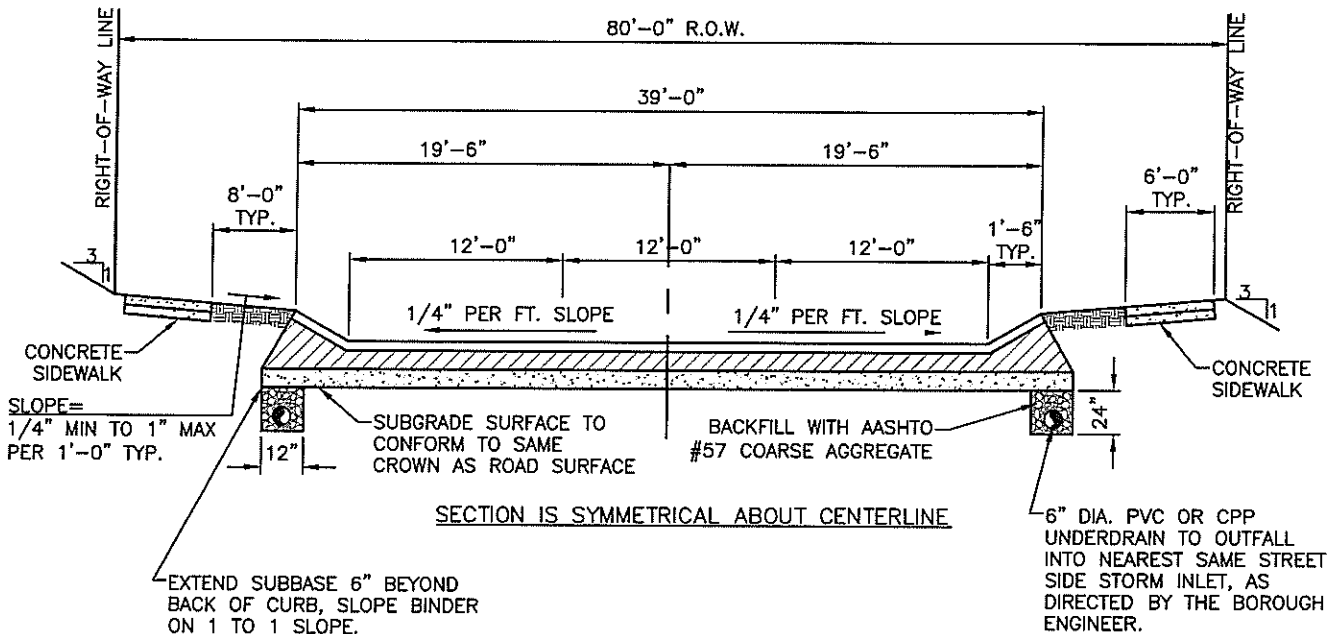
**LENNON, SMITH,
SOULERET
ENGINEERING INC.**
846 Fourth Avenue
Coraopolis, PA 15108
Ph:(412)264-4400
Fax:(412)264-1200
E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Arterial Street.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Arterial Street Detail**

RD-01

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COMMERCIAL COLLECTOR STREET

N. T. S.

PAVEMENT SECTION CONSISTS OF THE FOLLOWING:

- 10" - PENNDOT 2A AGGREGATE LIMESTONE BASE COURSE OR 8" AASHTO #1 CHOKED WITH 2" OF PENNDOT #2A (NO SLAG)
- 5" WMA SUPERPAVE BITUMINOUS BINDER COURSE
- 1" WMA SUPERPAVE BITUMINOUS WEARING COURSE, SRL-H (INITIAL)
- 1 1/2" WMA SUPERPAVE BITUMINOUS WEARING COURSE, SRL-H (FINAL)

NOTES:

1. ALL DEPTHS INDICATED ARE AFTER COMPACTION.
2. BITUMINOUS WEDGE CURBS SHALL BE 18" WIDE x 6" HIGH.
3. PREPARATION FOR AND INSTALLATION OF THE FINAL 1 1/2" OF WEARING SURFACE, INCLUDING ALL REPAIRS TO PAVEMENT SECTION REQUIRED BY THE BOROUGH, SHALL BE INSTALLED AFTER 90% OF THE DWELLINGS ARE COMPLETED AND CONSTRUCTION EQUIPMENT IS NOT USING THE ROADWAY IN CONFORMANCE WITH THE DEVELOPER'S AGREEMENT. THIS WORK ALSO INCLUDES BITUMINOUS LEVELING COURSE TO PROVIDE SMOOTH SURFACE FOR FINAL WEARING SURFACE TO BE INSTALLED. ALL MANHOLE LIDS, GRATES, VALVES SHALL BE ADJUSTED TO GRADE PRIOR TO INSTALLATION OF FINAL 1 1/2" WEARING COURSE.
4. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS SET FORTH IN PENNDOT PUBLICATION 408. ALL CONSTRUCTION PROCEDURES SHALL BE IN ACCORDANCE WITH BULLETIN 15 AND THE STANDARDS SET FORTH IN PENNDOT PUBLICATIONS 70, 72M, AND 408.
5. LOCATION AND INSTALLATION OF ALL STREET SIGNS (STREET IDENTIFICATION, STOP, SPEED LIMIT, ETC.) SHALL BE IN ACCORDANCE WITH THE CURRENT MUTCD REQUIREMENTS AND AS DIRECTED BY THE BOROUGH. DEVELOPER TO PROVIDE A SIGNAGE PLAN FOR REVIEW AND APPROVAL OF BOROUGH.
6. SIDEWALK, CROSSWALK, AND CURB RAMP INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT ADA STANDARDS FOR ACCESSIBLE DESIGN.
7. DEVELOPER'S TRAFFIC ENGINEER TO PROVIDE TRAFFIC COUNTS AND ESALs FOR MIX DESIGN WITH SHOP DRAWING SUBMITTAL.



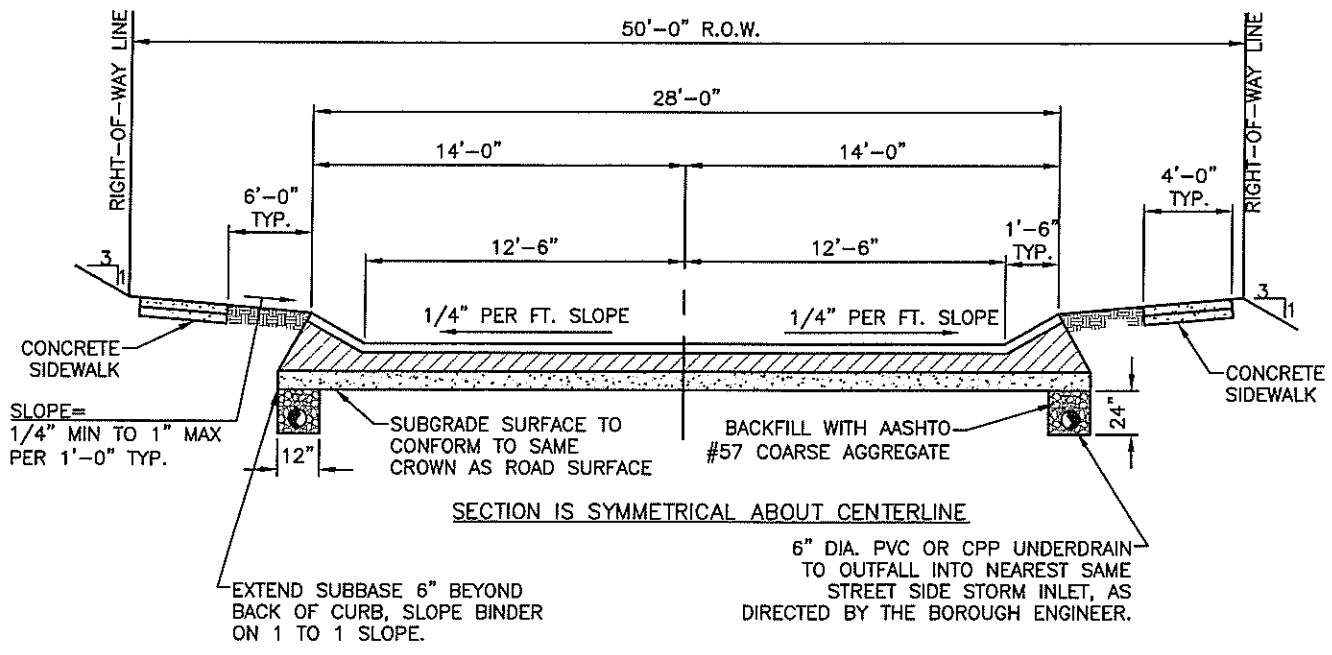
**LENNON, SMITH,
SOULERET
ENGINEERING INC.**
 846 Fourth Avenue
 Coraopolis, PA 15108
 Ph:(412)264-4400
 Fax:(412)264-1200
 E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Commercial Collector Street.dwg
SCALE:	N.T.S.

Big Beaver Borough Commercial Collector Street Detail

RD-02

N:\PROJ\355\355-20_SALDO\Big Beaver Details\Individual Detail Dwg\Residential Collector Street Detail.dwg
 layout = Residential Collector Street
 Username = christinel
 Date = May 01, 2020 - 4:29pm



RESIDENTIAL COLLECTOR STREET

N. T. S.

PAVEMENT SECTION CONSISTS OF THE FOLLOWING:

- 10" - PENNDOT 2A AGGREGATE LIMESTONE BASE COURSE
- OR 8" AASHTO #1 CHOKED WITH 2" OF PENNDOT #2A (NO SLAG)
- 5" WMA BITUMINOUS BINDER COURSE
- 1" WMA BITUMINOUS WEARING COURSE, SRL-H (INITIAL)
- 1 1/2" WMA BITUMINOUS WEARING COURSE, SRL-H (FINAL)

NOTES:

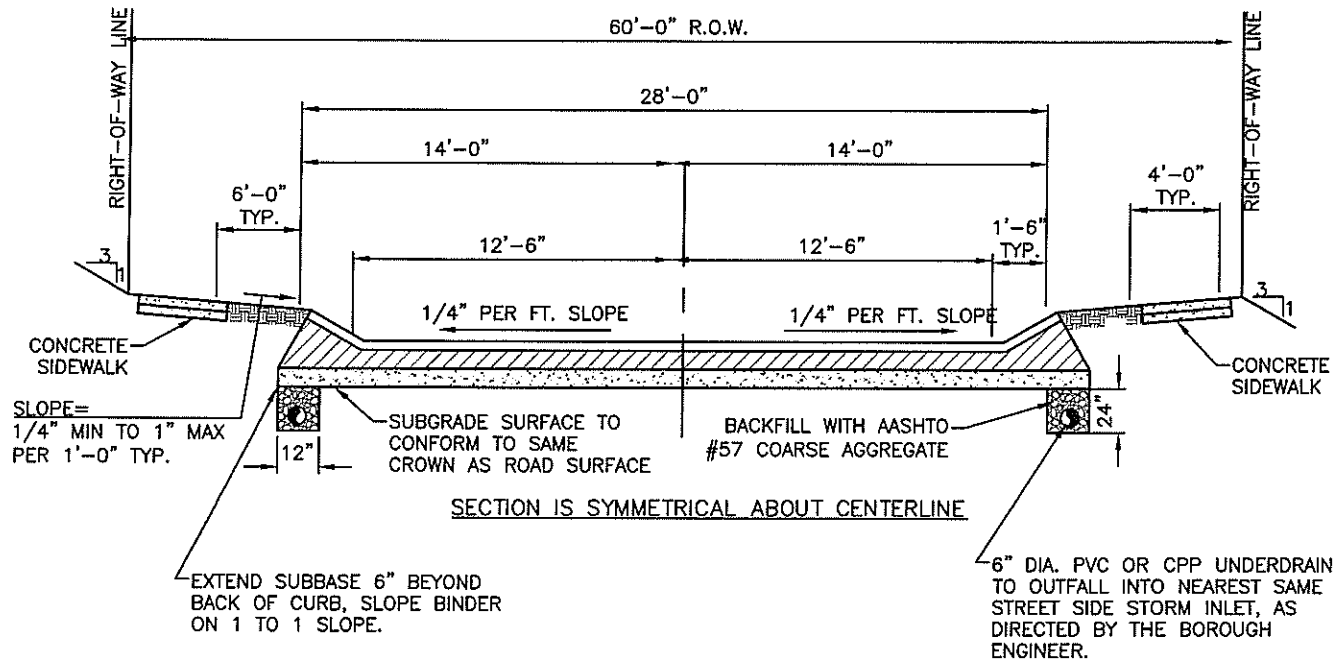
1. ALL DEPTHS INDICATED ARE AFTER COMPACTION
2. BITUMINOUS WEDGE CURBS SHALL BE 18" WIDE x 6" HIGH
3. PREPARATION FOR AND INSTALLATION OF THE FINAL 1 1/2" OF WEARING SURFACE, INCLUDING ALL REPAIRS TO PAVEMENT SECTION REQUIRED BY THE TOWNSHIP, SHALL BE COMPLETED IN CONFORMANCE WITH THE DEVELOPER'S AGREEMENT. THIS WORK ALSO INCLUDES BITUMINOUS LEVELING COURSE TO PROVIDE SMOOTH SURFACE FOR FINAL WEARING SURFACE TO BE INSTALLED. ALL MANHOLE LIDS, GRATES, VALVES SHALL BE ADJUSTED TO GRADE PRIOR TO INSTALLATION OF FINAL 1 1/2" WEARING COURSE.
4. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS SET FORTH IN PENNDOT PUBLICATION 408. ALL CONSTRUCTION PROCEDURES SHALL BE IN ACCORDANCE WITH BULLETIN 15 AND THE STANDARDS SET FORTH IN PENNDOT PUBLICATIONS 70, 72M, AND 408.
5. LOCATION AND INSTALLATION OF ALL STREET SIGNS (STREET IDENTIFICATION, STOP, SPEED LIMIT, ETC.) SHALL BE IN ACCORDANCE WITH THE CURRENT MUTCD REQUIREMENTS AND AS DIRECTED BY THE BOROUGH. DEVELOPER TO PROVIDE A SIGNAGE PLAN FOR REVIEW AND APPROVAL OF BOROUGH.
6. SIDEWALK, CROSSWALK, AND CURB RAMP INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT ADA STANDARDS FOR ACCESSIBLE DESIGN.
7. DEVELOPER'S TRAFFIC ENGINEER TO PROVIDE TRAFFIC COUNTS AND ESALs FOR MIX DESIGN WITH SHOP DRAWING SUBMITTAL.

**LENNON, SMITH,
 SOULERET
 ENGINEERING INC.**
 846 Fourth Avenue
 Coraopolis, PA 15108
 Ph: (412) 264-4400
 Fax: (412) 264-1200
 E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Residential Collector Street.dwg
SCALE:	N.T.S.

Big Beaver Borough
Residential Collector Street Detail
 RD-03

H:\PROJ\355\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\Local Commercial Street.dwg layout - Local Commercial Street Userame - chrstlnel Date - May 01, 2020 - 3:28pm



LOCAL COMMERCIAL STREET

N. T. S.

PAVEMENT SECTION CONSISTS OF THE FOLLOWING:

- 10" - PENNDOT 2A AGGREGATE LIMESTONE BASE COURSE
OR 8" AASHTO #1 CHOKED WITH 2" OF PENNDOT #2A (NO SLAG)
- 4" WMA SUPERPAVE BITUMINOUS BINDER COURSE
- 1" WMA SUPERPAVE BITUMINOUS WEARING COURSE, SRL-H (INITIAL)
- 1 1/2" WMA SUPERPAVE BITUMINOUS WEARING COURSE, SRL-H (FINAL)

NOTES:

1. ALL DEPTHS INDICATED ARE AFTER COMPACTION
2. BITUMINOUS WEDGE CURBS SHALL BE 18" WIDE x 6" HIGH
3. PREPARATION FOR AND INSTALLATION OF THE FINAL 1 1/2" OF WEARING SURFACE, INCLUDING ALL REPAIRS TO PAVEMENT SECTION REQUIRED BY THE BOROUGH, SHALL BE INSTALLED AFTER 90% OF THE DWELLINGS ARE COMPLETED AND CONSTRUCTION EQUIPMENT IS NOT USING THE ROADWAY IN CONFORMANCE WITH THE DEVELOPER'S AGREEMENT. THIS WORK ALSO INCLUDES BITUMINOUS LEVELING COURSE TO PROVIDE SMOOTH SURFACE FOR FINAL WEARING SURFACE TO BE INSTALLED. ALL MANHOLE LIDS, GRATES, VALVES SHALL BE ADJUSTED TO GRADE PRIOR TO INSTALLATION OF FINAL 1 1/2" WEARING COURSE.
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7. DEVELOPER'S TRAFFIC ENGINEER TO PROVIDE TRAFFIC COUNTS AND ESALS FOR MIX DESIGN WITH SHOP DRAWING SUBMITTAL.



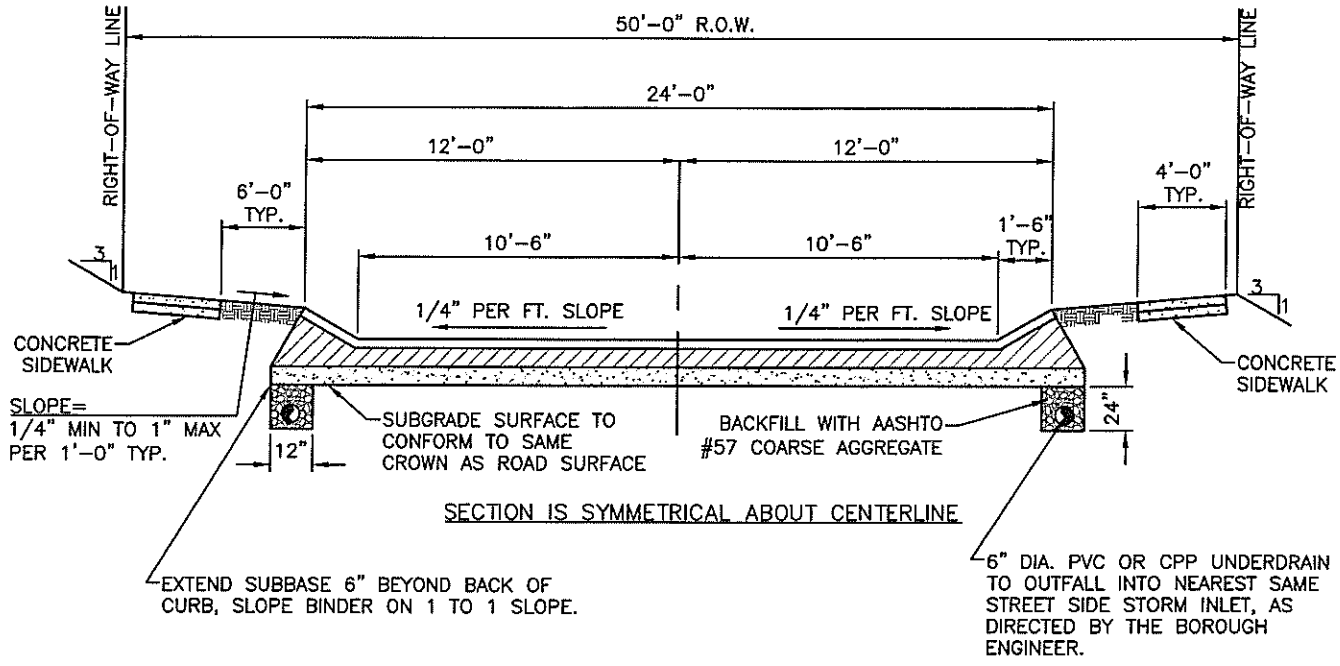
**LENNON, SMITH,
SOULERET
ENGINEERING INC.**
 846 Fourth Avenue
 Coraopolis, PA 15108
 Ph: (412) 264-4400
 Fax: (412) 264-1200
 E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Local Commercial Street.dwg
SCALE:	N.T.S.

Big Beaver Borough Local Commercial Street Detail

RD-04

N:\PROJ\355\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\ Local Residential Street.dwg Layout = Local Residential Street Username = christinel Date = May 01, 2020 - 3:32pm



LOCAL RESIDENTIAL STREET
N. T. S.

PAVEMENT SECTION CONSISTS OF THE FOLLOWING:

- 8" - PENNDOT 2A AGGREGATE LIMESTONE BASE COURSE OR 6" AASHTO #1 CHOKED WITH 2" OF PENNDOT #2A (NO SLAG)
- 3" WMA SUPERPAVE BITUMINOUS BINDER COURSE
- 1" WMA SUPERPAVE BITUMINOUS WEARING COURSE, SRL-H (INITIAL)
- 1 1/2" WMA SUPERPAVE BITUMINOUS WEARING COURSE, SRL-H (FINAL)

NOTES:

1. ALL DEPTHS INDICATED ARE AFTER COMPACTION.
2. BITUMINOUS WEDGE CURBS SHALL BE 18" WIDE x 6" HIGH
3. PREPARATION FOR AND INSTALLATION OF THE FINAL 1 1/2" OF WEARING SURFACE, INCLUDING ALL REPAIRS TO PAVEMENT SECTION REQUIRED BY THE BOROUGH, SHALL BE INSTALLED AFTER 90% OF THE DWELLINGS ARE COMPLETED AND CONSTRUCTION EQUIPMENT IS NOT USING THE ROADWAY IN CONFORMANCE WITH THE DEVELOPER'S AGREEMENT. THIS WORK ALSO INCLUDES BITUMINOUS LEVELING COURSE TO PROVIDE SMOOTH SURFACE FOR FINAL WEARING SURFACE TO BE INSTALLED. ALL MANHOLE LIDS, GRATES, VALVES SHALL BE ADJUSTED TO GRADE PRIOR TO INSTALLATION OF FINAL 1 1/2" WEARING COURSE.
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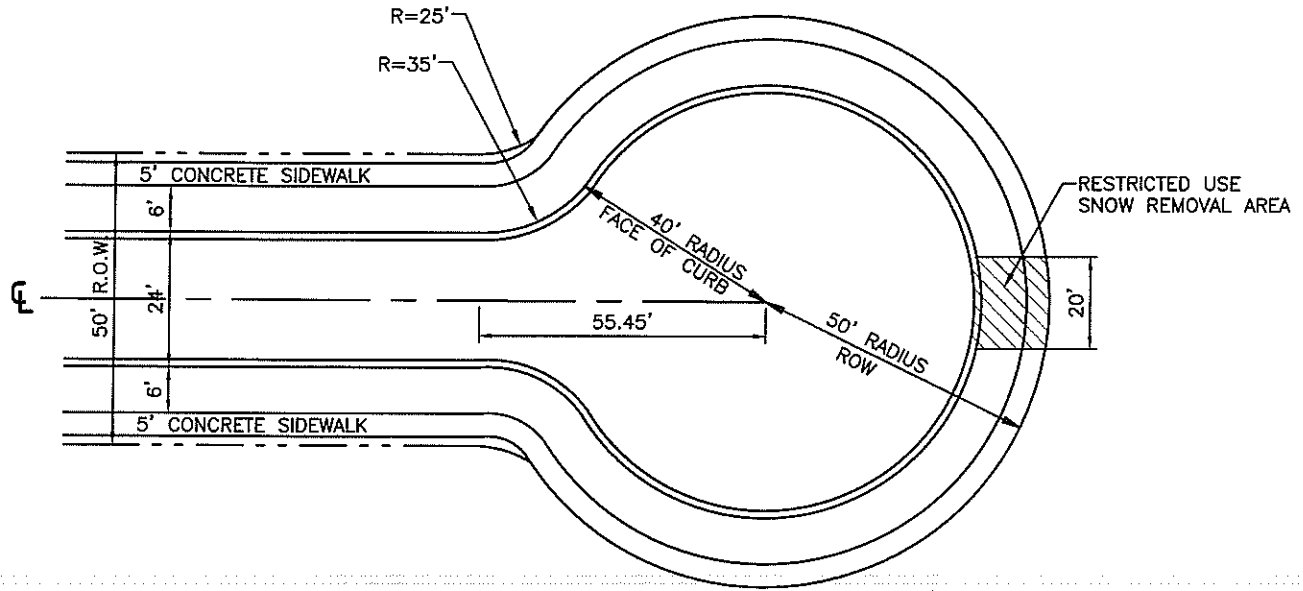
**LENNON, SMITH,
SOULERET
ENGINEERING INC.**
 846 Fourth Avenue
 Coraopolis, PA 15108
 Ph: (412) 264-4400
 Fax: (412) 264-1200
 E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Local Residential Street.dwg
SCALE:	N.T.S.

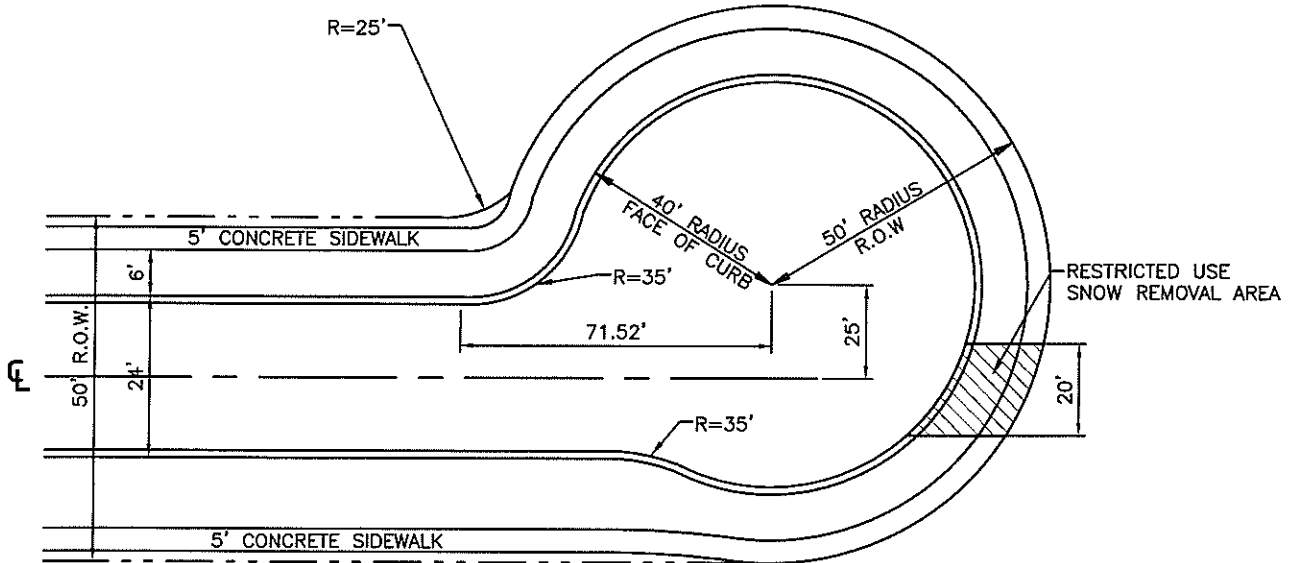
Big Beaver Borough
Local Residential Street Detail

RD-05

TYPICAL



OFFSET



RESIDENTIAL CUL-DE-SAC

N. T. S.

H:\PROJ\355\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\Residential Cul-de-sac.dwg layout - Residential Cul-de-Sac Username - christinel Date - May 01, 2020 - 4:31pm



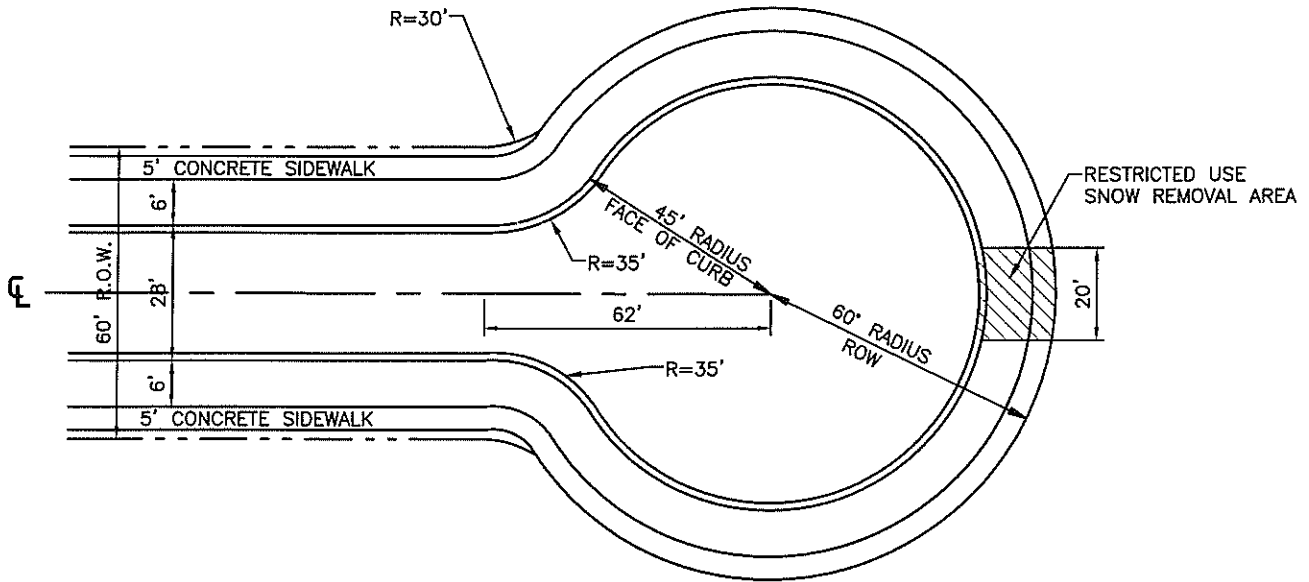
**LENNON, SMITH,
SOULERET
ENGINEERING INC.**
 846 Fourth Avenue
 Coraopolis, PA 15108
 Ph: (412) 264-4400
 Fax: (412) 264-1200
 E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Residential Cul-de-sac.dwg
SCALE:	N.T.S.

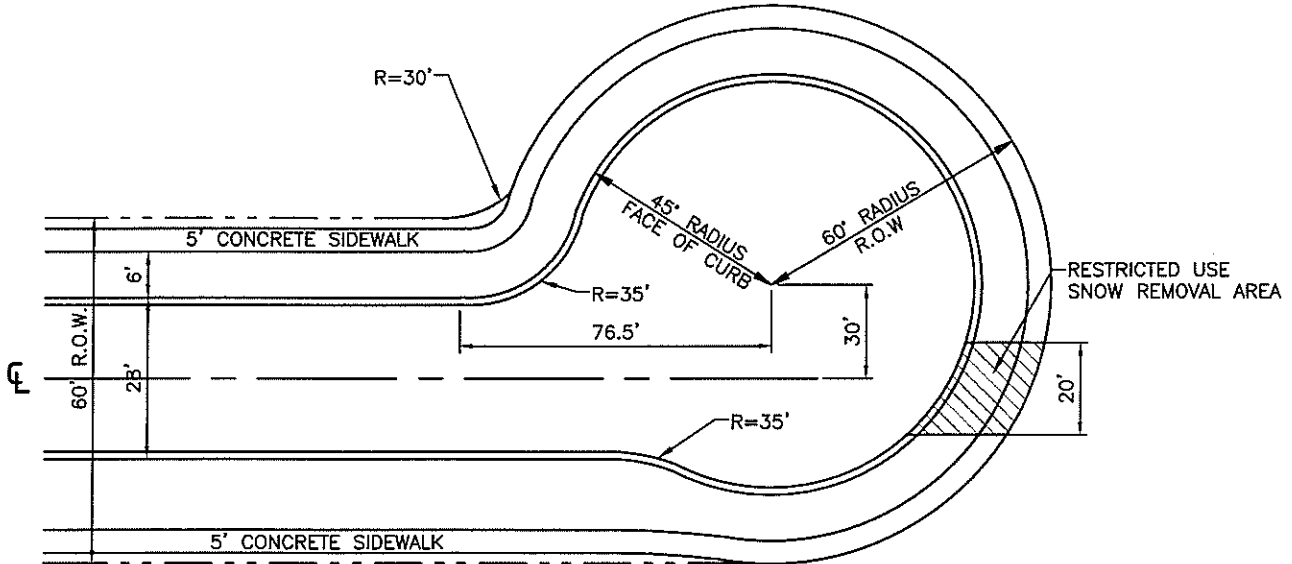
**Big Beaver Borough
Residential Cul-De-Sac Detail**

RD-06

TYPICAL



OFFSET



COMMERCIAL CUL-DE-SAC

N. T. S.

N:\PROJ\355\355-20_SULD0\Big Beaver Details\Individual Detail Dwg\ Commercial Cul-De-Sac.dwg layout Commercial Cul-De-Sac Username christinef Date May 01, 2020 - 2:16pm



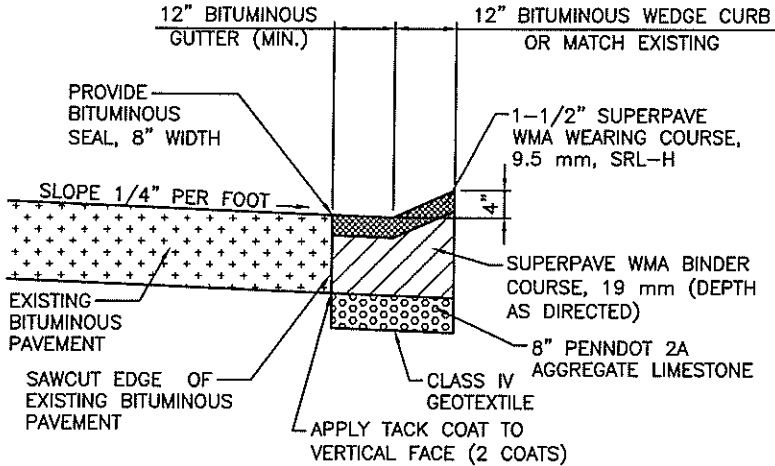
**LENNON, SMITH,
SOULERET
ENGINEERING INC.**
 846 Fourth Avenue
 Coraopolis, PA 15108
 Ph:(412)264-4400
 Fax:(412)264-1200
 E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	CommercialCulDeSac.dwg
SCALE:	N.T.S.

Big Beaver Borough Commercial Cul-De-Sac Detail

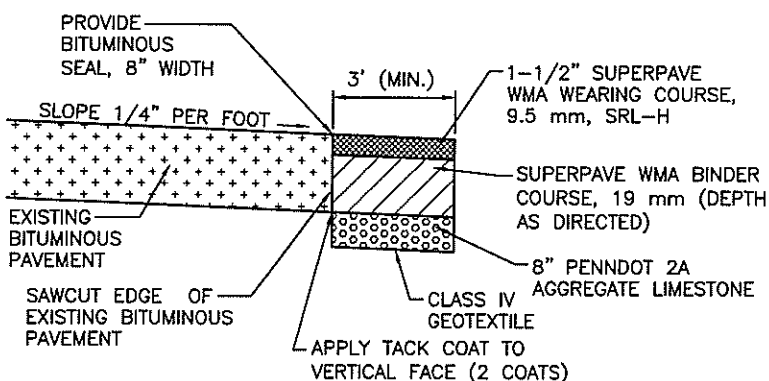
RD-07

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ROAD WIDENING DETAIL WITH WEDGE CURB

N. T. S.



ROAD WIDENING DETAIL WITHOUT WEDGE CURB

N. T. S.



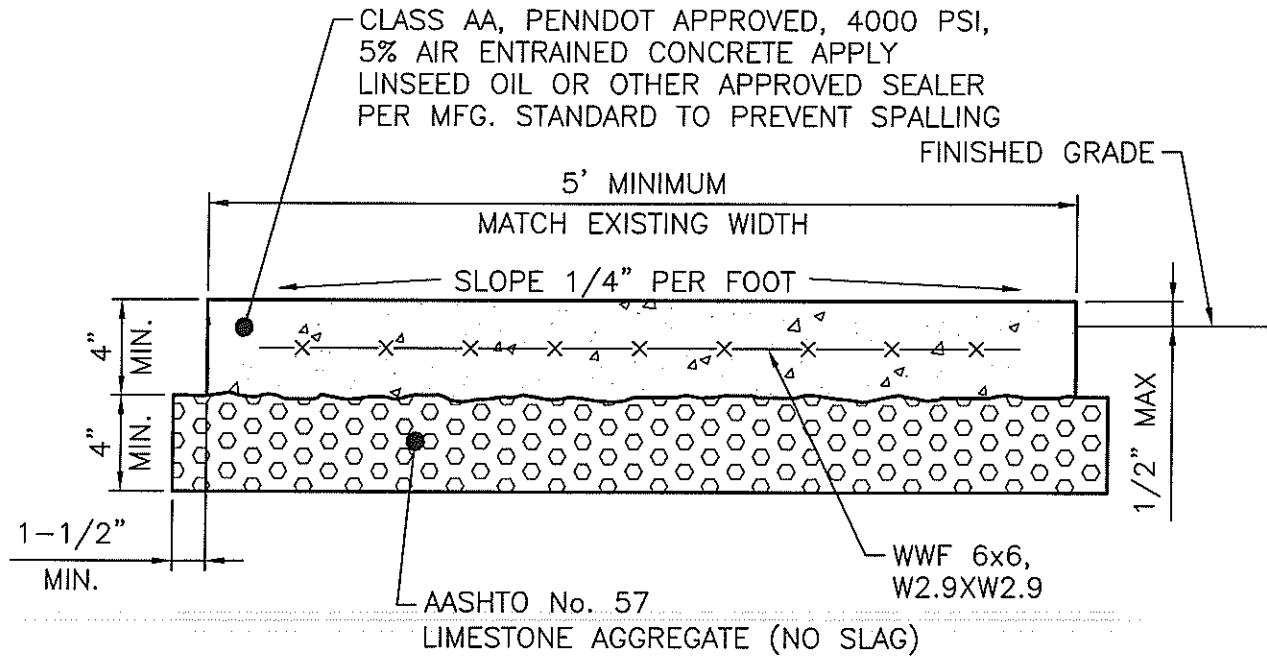
**LENNON, SMITH,
SOULERET
ENGINEERING INC.**
 845 Fourth Avenue
 Coraopolis, PA 15108
 Ph: (412) 264-4400
 Fax: (412) 264-1200
 E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Road Widening w and wo Wedge Curb.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Road Widening Details**

RD-08

N:\PROJ\355\355-20_S\LD\Big Beaver Details\Individual Detail Dwg\Concrete Sidewalk.dwg layout - Concrete Sidewalk User: christina Date: May 08, 2020 - 8:52am



NOTES:

1. WALK SHALL BE CROSS SCORED EVERY FIVE FEET (5'). 1/2" PREFORMED EXPANSION JOINTS EVERY 20 FEET. WALK SHALL HAVE TROWELED EDGES WITH A STIFF BROOM FINISH.
2. IF A DRIVEWAY IS TO BE CONSTRUCTED OVER A SIDEWALK, THE CONCRETE SHALL BE PLACED AT 6" DEPTH.
3. PROVIDE TWO (2) No. 4 DOWELS AT PROPERTY LINES.
4. EXCAVATION, DEMOLITION OF EXISTING WALKWAY (IF ANY) AND SUBBASE ARE INCIDENTAL TO CONCRETE WALK CONSTRUCTION.
5. PROVIDE ADA CURB RAMPS AT ALL INTERSECTIONS.

TYPICAL
CONCRETE SIDEWALK

N. T. S.



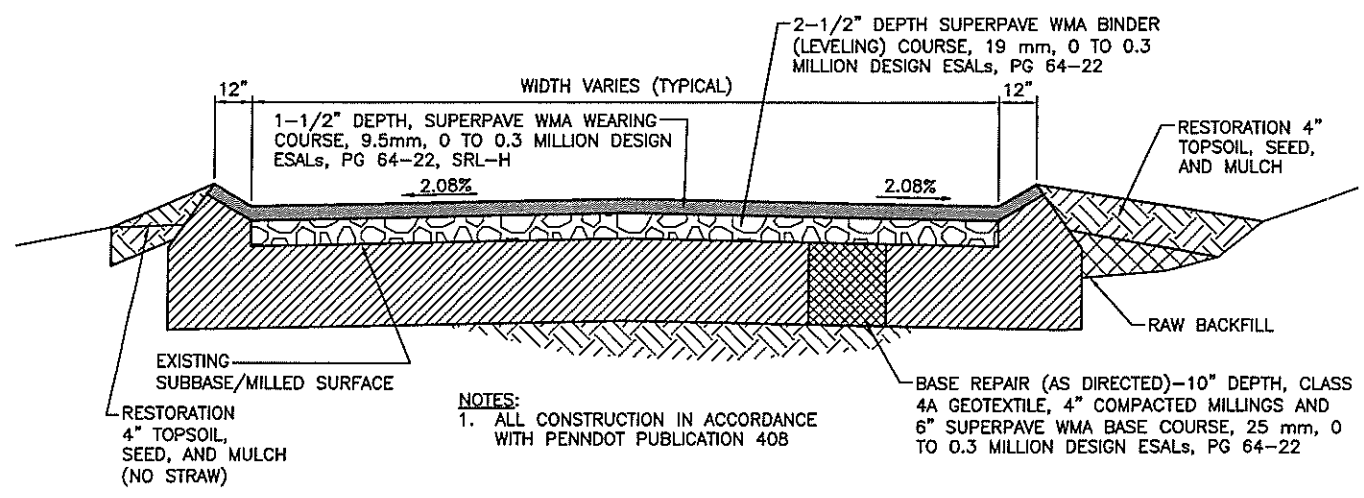
**LENNON, SMITH,
 SOULERET
 ENGINEERING INC.**
 846 Fourth Avenue
 Coraopolis, PA 15108
 Ph: (412) 264-4400
 Fax: (412) 264-1200
 E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Concrete Sidewalk.dwg
SCALE:	N.T.S.

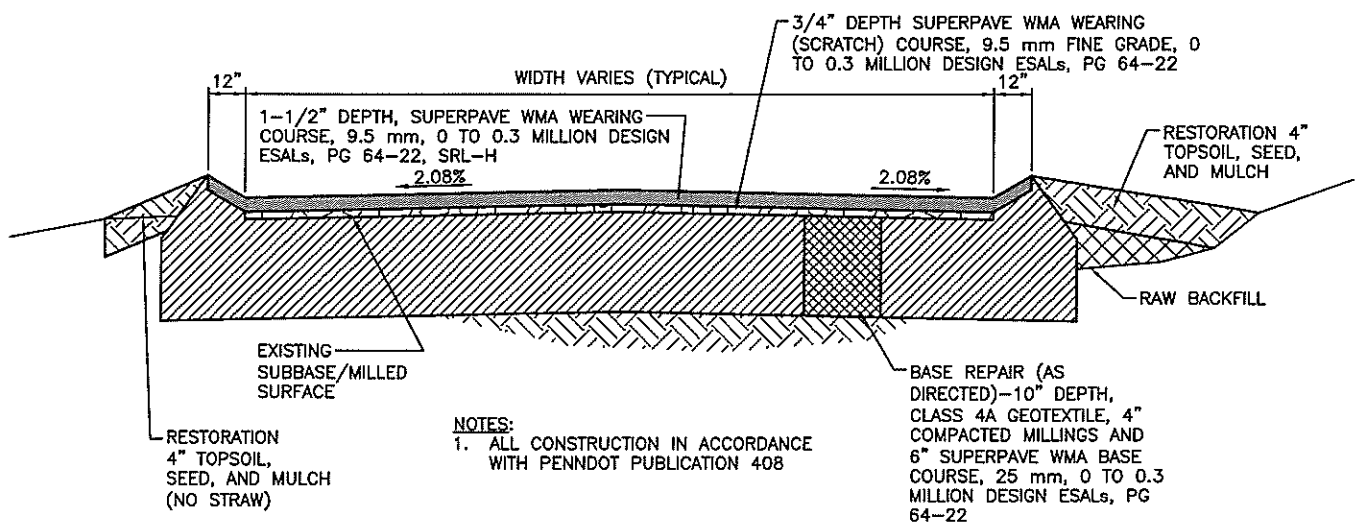
Big Beaver Borough
Typical Concrete Sidewalk Detail

RD-09

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 Layout = Roadway Section
 Username = christinel
 Date = May 06, 2020 - 8:56am



TYPICAL
ROADWAY SECTION - 4" MILL/BINDER/WEARING
 N. T. S.



TYPICAL
ROADWAY SECTION - 2" MILL/SCRATCH/WEARING
 N. T. S.

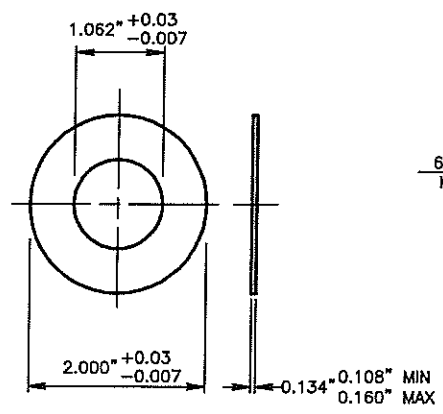


**LENNON, SMITH,
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 ENGINEERING INC.**
 846 Fourth Avenue
 Coraopolis, PA 15108
 Ph:(412)264-4400
 Fax:(412)264-1200
 E-mail: info@lse.com

DATE:	April 2020
FILE NAME:	Roadway Section 4 Inch and 2 Inch.dwg
SCALE:	N.T.S.

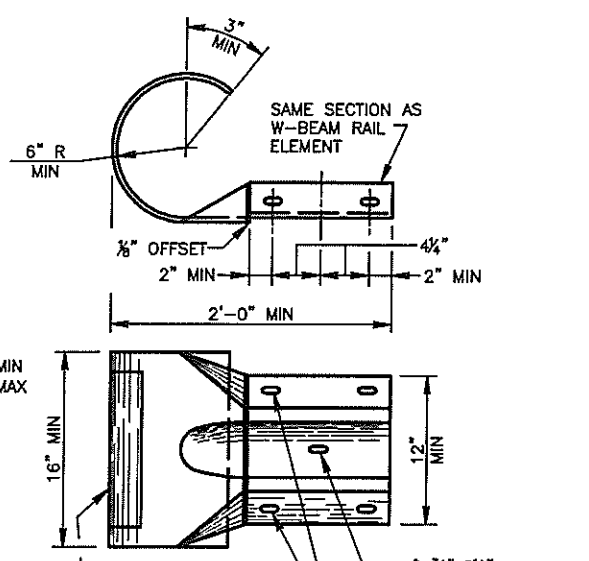
Big Beaver Borough
Typical Roadway Section - Mill/Pave Detail
 RD-10

N:\PROJ\355\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\ Guide Rail w Curb or Rub Rail.dwg
 layout = Guide Rail w Curb or Rub Rail.dwg
 Date = May 06, 2020 - 8:57am
 Username = christina



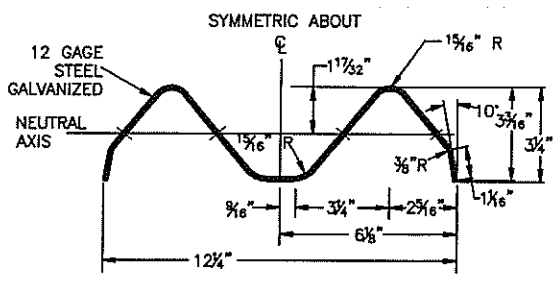
DETAIL B
TYPE A PLAIN WASHER

FOR SPLICE AND POST BOLTS, SEE DETAILS. FOR ALL SPLICE BOLT CONNECTIONS, PROVIDE A TYPE A PLAIN WASHER BETWEEN BOLT HEAD AND TERMINAL SECTION. FOR WASHER, SEE DETAIL B.

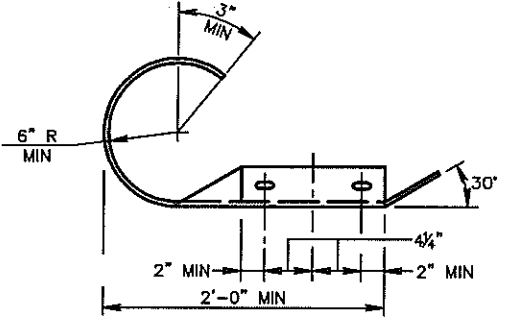


TYPE III
YELLOW
REFLECTIVE
SHEETING

**TERMINAL TO BE PLACED ON BACK
OF RAIL ELEMENT**

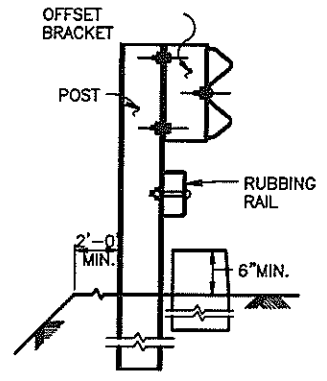


RAIL ELEMENT SECTION



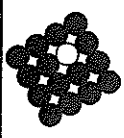
TYPE III
YELLOW
REFLECTIVE
SHEETING

**TERMINAL TO BE PLACED ON FACE
OF RAIL ELEMENT**



GUIDE RAIL WITH CURB OR RUBBING RAIL

N. T. S.



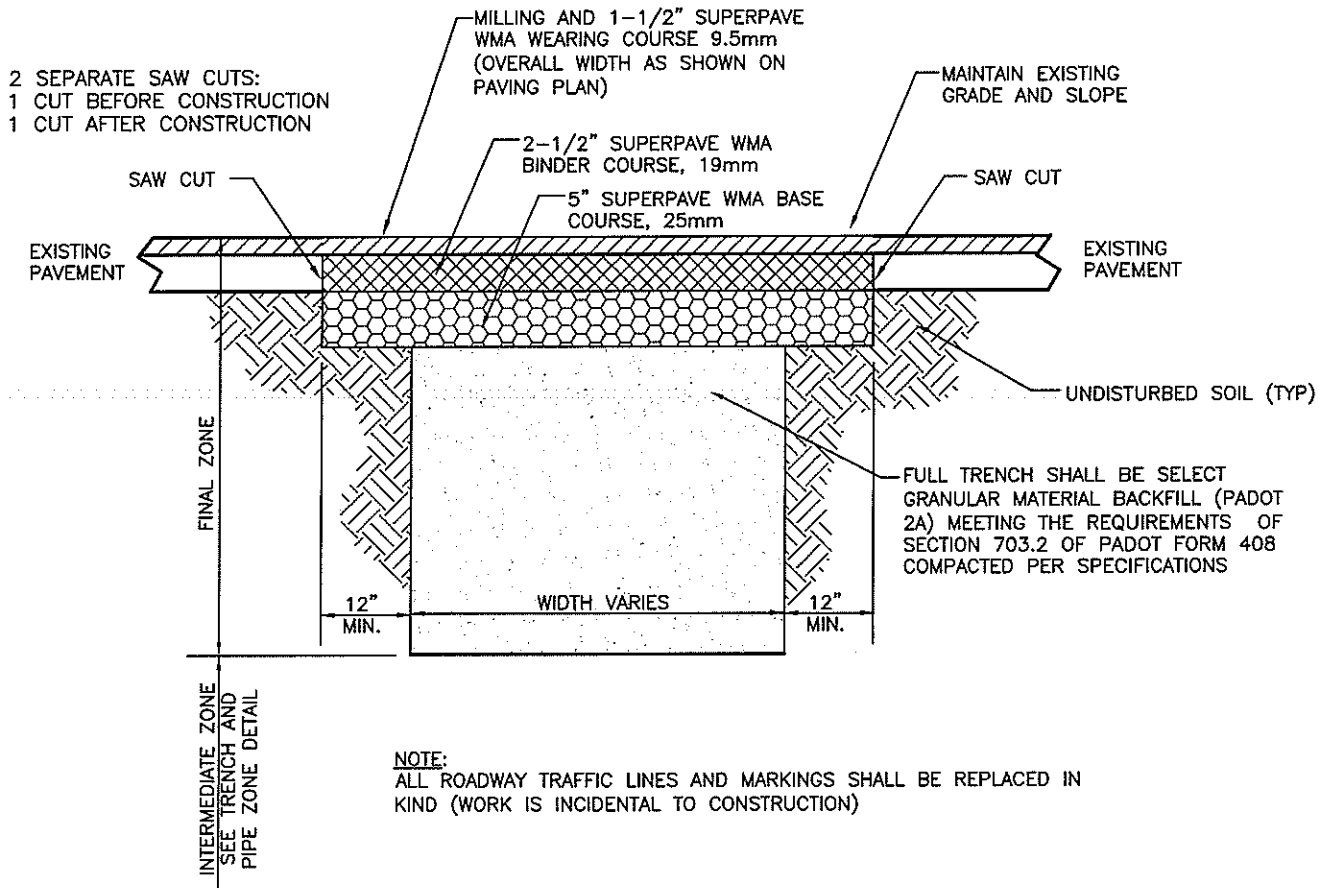
**LENNON, SMITH,
SOULERET
ENGINEERING INC.**
846 Fourth Avenue
Coraopolis, PA 15108
Ph:(412)264-4400
Fax:(412)264-1200
E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Guide Rail w Curb or Rub Rail.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Guide Rail With Curb or Rubbing Rail Detail**

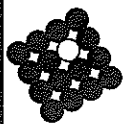
RD-11

N:\PROJ\355\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\ Bituminous Pavement Trench Restoration.dwg Bituminous Pavement Trench Restoration.dwg layout = Blum, Pcv. Trench Restoration Date = May 06, 2020 - 9:00am User = christine



BITUMINOUS PAVEMENT TRENCH RESTORATION

N. T. S.

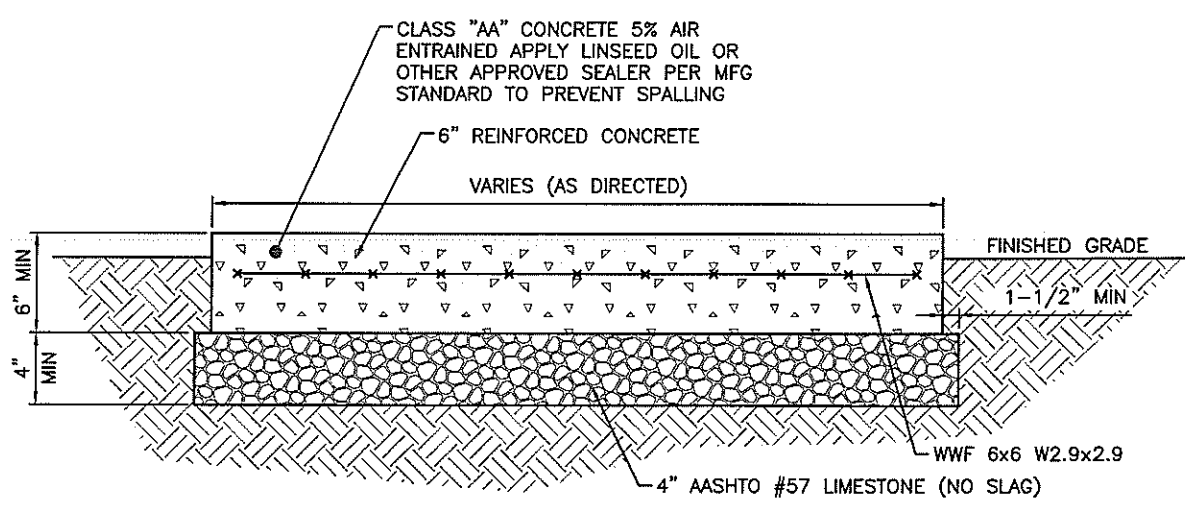


**LENNON, SMITH,
 SOULERET
 ENGINEERING INC.**
 846 Fourth Avenue
 Coraopolis, PA 15108
 Ph:(412)264-4400
 Fax:(412)264-1200
 E-mail: info@lsse.com

DATE: April 2020
 FILE NAME: Bituminous Pavement Trench Restoration.dwg
 SCALE: N.T.S.

**Big Beaver Borough
 Bituminous Pavement
 Trench Restoration Detail**
 RD-12

N:\PROJ\355\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\ Concrete Driveway Adjustment.dwg layout = Concrete Driveway Adjustment Username = christinel Date = May 01, 2020 - 2:28pm



NOTE:
DRIVEWAY SHALL HAVE A STIFF BROOM FINISH W/ TROWELED EDGES

CONCRETE DRIVEWAY ADJUSTMENT
N. T. S.



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ENGINEERING INC.**
846 Fourth Avenue
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Fax:(412)264-1200
E-mail: info@lsse.com

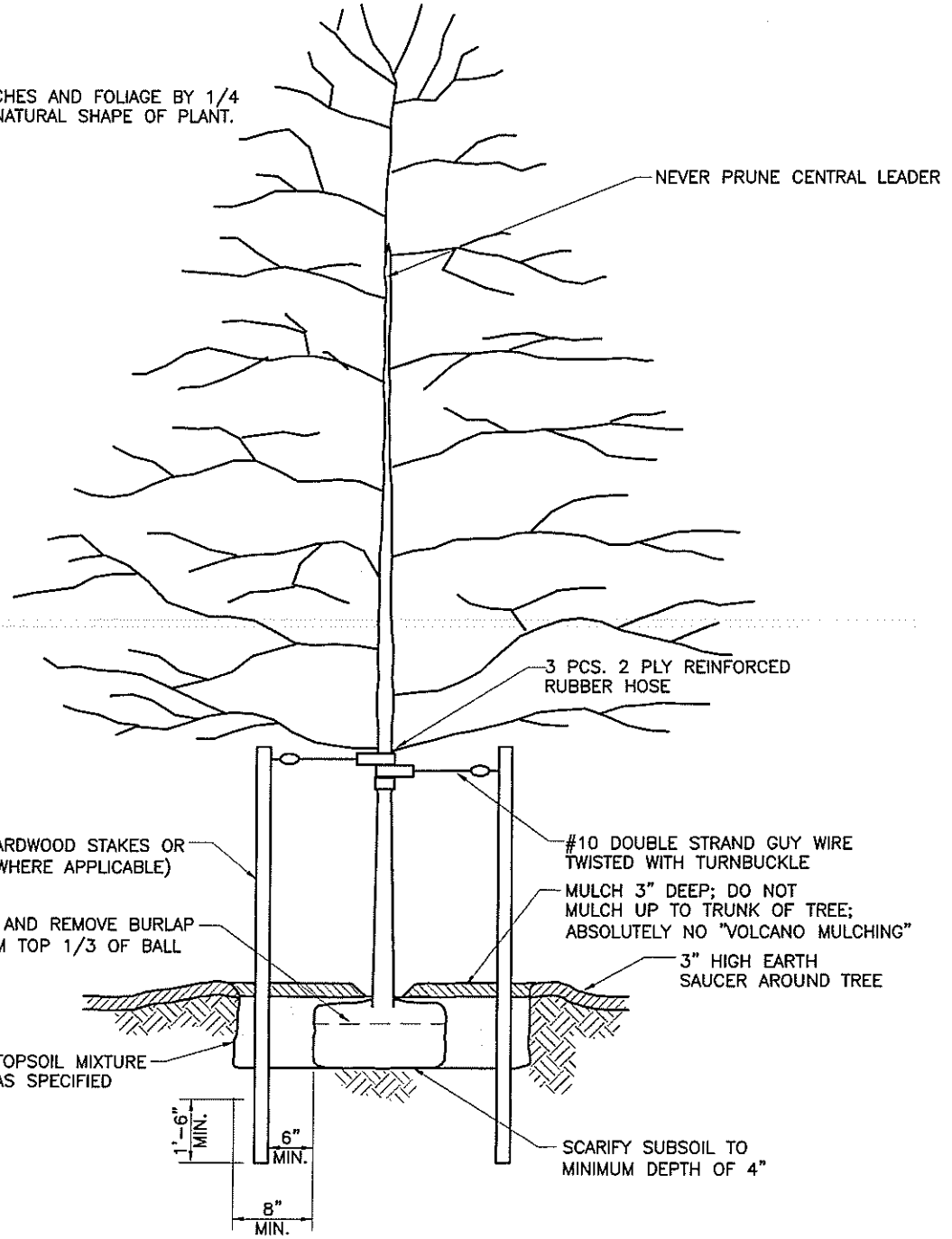
DATE:	April 2020
FILE NAME:	Concrete Driveway Adjustment.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Concrete Driveway Adjustment Detail**

SD-01

N:\PROJ\355\355-20_SALDO\Big Beaver Details\Individual Detail Dwg\ Tree Planting.dwg layout Tree Planting.dwg Username = christine Date = May 01, 2020 - 5:44pm

THIN BRANCHES AND FOLIAGE BY 1/4
RETAINING NATURAL SHAPE OF PLANT.



3-2"x4" HARDWOOD STAKES OR
DEADMAN (WHERE APPLICABLE)

NEVER PRUNE CENTRAL LEADER

3 PCS. 2 PLY REINFORCED
RUBBER HOSE

CUT AND REMOVE BURLAP
FROM TOP 1/3 OF BALL

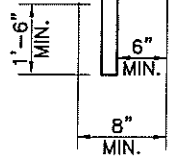
#10 DOUBLE STRAND GUY WIRE
TWISTED WITH TURNBUCKLE

MULCH 3" DEEP; DO NOT
MULCH UP TO TRUNK OF TREE;
ABSOLUTELY NO "VOLCANO MULCHING"

3" HIGH EARTH
SAUCER AROUND TREE

TOPSOIL MIXTURE
AS SPECIFIED

SCARIFY SUBSOIL TO
MINIMUM DEPTH OF 4"



NOTE:
TREE SHALL BEAR SAME RELATIONSHIP TO FINISH
GRADE AS IT BORE TO PREVIOUS EXISTING GRADE.

TREE PLANTING

N. T. S.



**LENNON, SMITH,
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846 Fourth Avenue
Coraopolis, PA 15108
Ph:(412)264-4400
Fax:(412)264-1200
E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Tree Planting.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Tree Planting Detail**

SD-02

N:\PROJ\355\355-20_SALDO\Big Beaver Details\Individual Detail Dwg\Shrub Planting.dwg layout = Shrub Planting Username = christine Date = May 01, 2020 4:35pm

THIN BRANCHES AND FOLIAGE BY 1/4
RETAINING NATURAL SHAPE OF PLANT.
(DO NOT CUT ALL END TIPS AND
NEVER CUT EVERGREEN LEADER;
PRUNE TO NEAREST BRANCH CROTCH.)

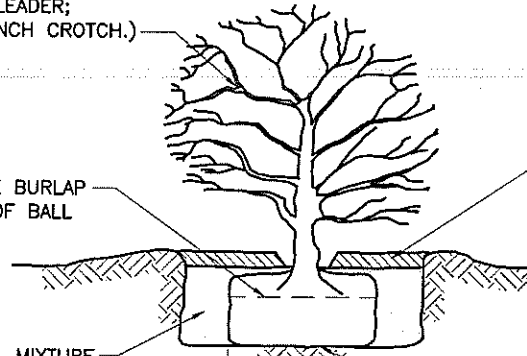
CUT AND REMOVE BURLAP
FROM TOP 1/3 OF BALL

TOPSOIL MIXTURE
AS SPECIFIED

6"
MIN.

SCARIFY SUBSOIL TO
MINIMUM DEPTH OF 4"

MULCH 2" DEEP; DO NOT
MULCH UP TO BASE OF SHRUB



NOTE:
SHRUB SHALL BEAR SAME RELATIONSHIP TO FINISH
GRADE AS IT BORE TO PREVIOUS EXISTING GRADE.

SHRUB PLANTING

N. T. S.



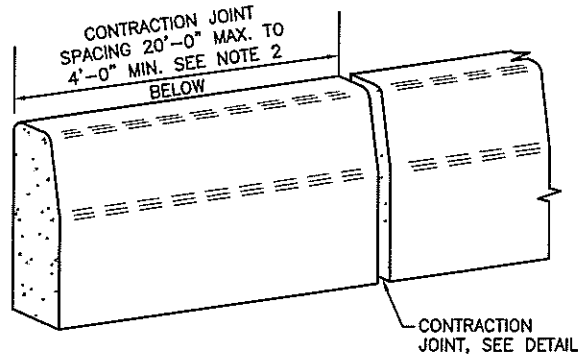
**LENNON, SMITH,
SOULERET
ENGINEERING INC.**
846 Fourth Avenue
Coraopolis, PA 15108
Ph:(412)264-4400
Fax:(412)264-1200
E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Shrub Planting.dwg
SCALE:	N.T.S.

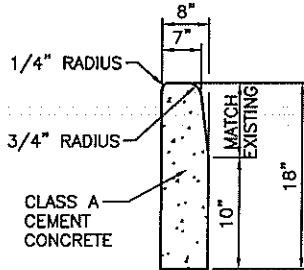
**Big Beaver Borough
Shrub Planting Detail**

SD-03

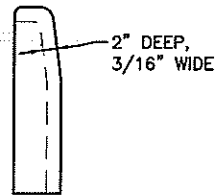
N:\PROJ\355\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\Concrete Curb.dwg
 User: christina
 Date: Jun 02, 2020 8:57am



PLAIN CEMENT CONCRETE CURB



TYPICAL CROSS SECTION



CONTRACTION JOINT

NOTES:

1. MATERIALS AND CONSTRUCTION SHALL MEET THE REQUIREMENTS OF PUBLICATION 408, SECTION 630 FOR PLAIN CONCRETE CURB AND DEPRESSED CURB.
2. SPACE CONTRACTION JOINTS IN UNIFORM LENGTHS OR SECTIONS.
3. PLACE 3/4" 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. SEE RC-50 FOR PLAIN CONCRETE CURB SLOPED TOP TREATMENT AT END OF STRUCTURES.

(PADOT - REFER TO PADOT RC-64 STANDARDS)

CONCRETE CURB

N. T. S.



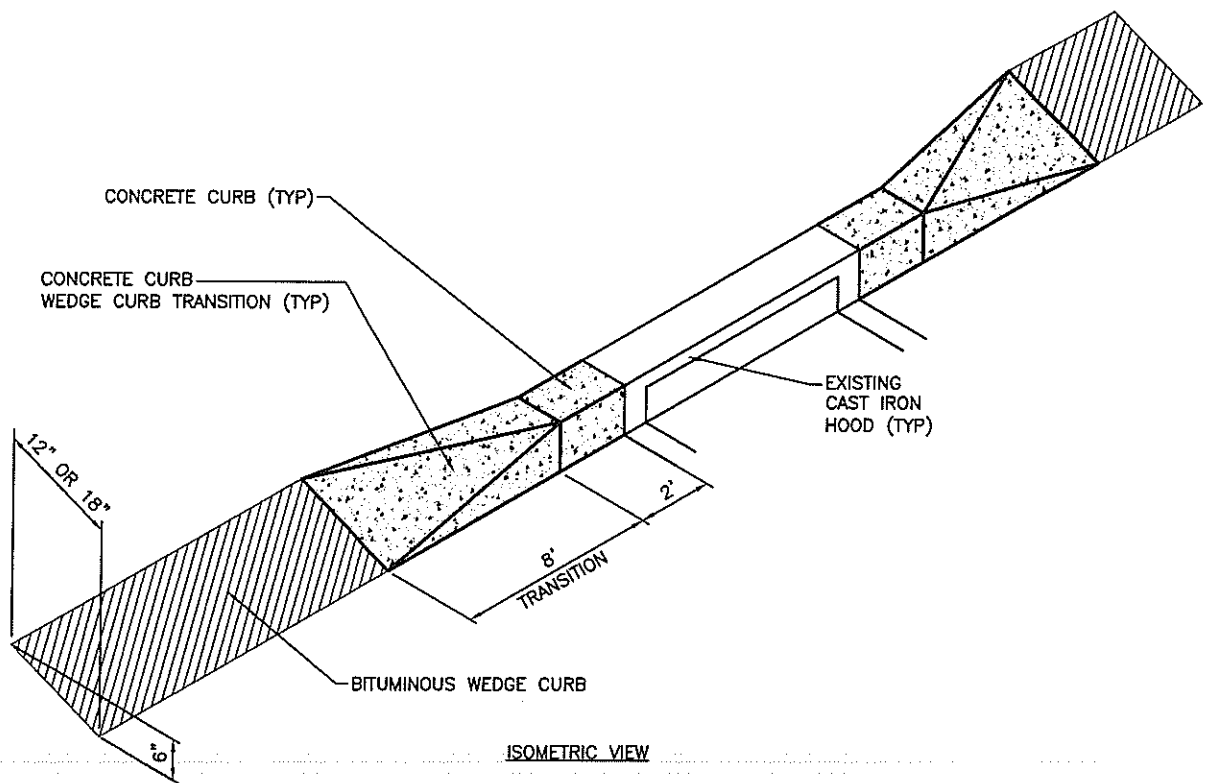
**LENNON, SMITH,
 SOULERET
 ENGINEERING INC.**
 846 Fourth Avenue
 Coraopolis, PA 15108
 Ph: (412) 264-4400
 Fax: (412) 264-1200
 E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Concrete Curb.dwg
SCALE:	N.T.S.

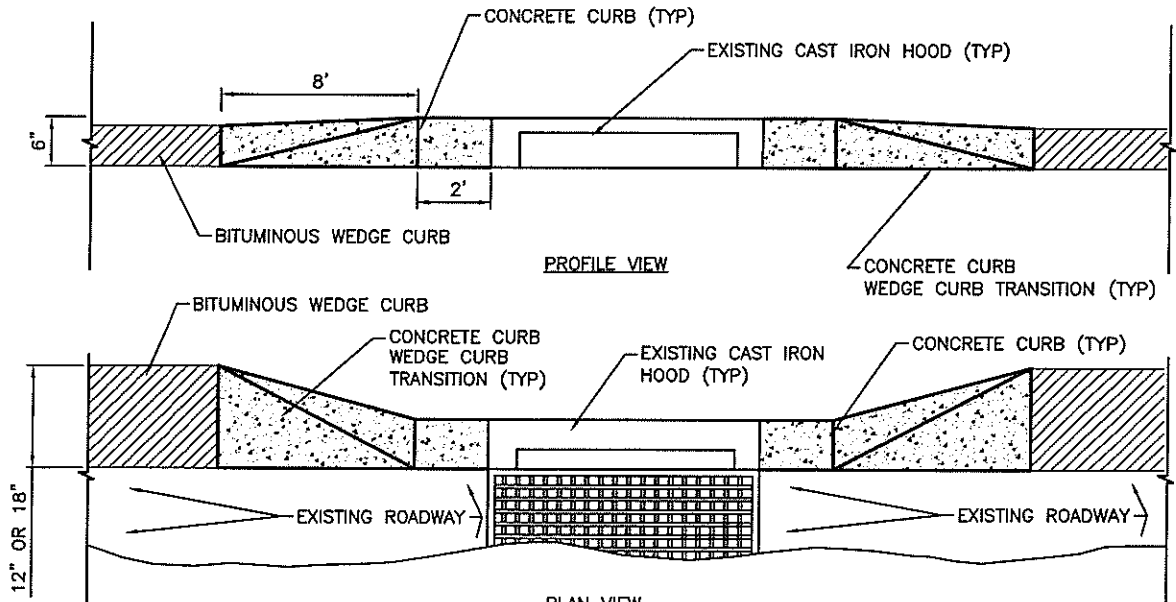
**Big Beaver Borough
 Concrete Curb Detail**

SD-04

N:\PROJ\355\355-20_SALDO\Big Beaver Details\Individual Detail Dwg\Concrete Curb Flare Transition.dwg layout = Concrete Curb Flare Transition User: christine Date: May 08, 2020 - 9:01am



ISOMETRIC VIEW



NOTES:

1. DETAIL IS FOR PAVING WITH WEDGE CURBS AT EXISTING INLETS ONLY. NEW INLETS IN AREAS WITH WEDGE CURB ARE TO BE TYPE M INLETS.
2. MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH PENNDOT PUBLICATION 40B.

CONCRETE CURB FLARE TRANSITION

N. T. S.



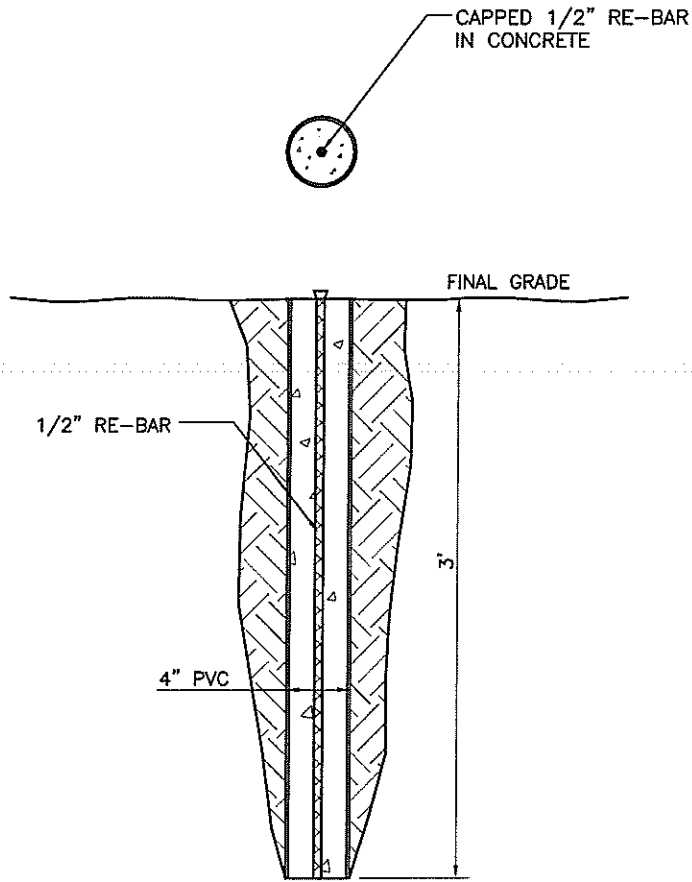
**LENNON, SMITH,
 SOULERET
 ENGINEERING INC.**
 846 Fourth Avenue
 Coraopolis, PA 15108
 Ph:(412)264-4400
 Fax:(412)264-1200
 E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Concrete Curb Flare Transition.dwg
SCALE:	N.T.S.

**Big Beaver Borough
 Concrete Curb Flare Transition Detail**

SD-05

N:\PROJ\355\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\Concrete Monument.dwg Concrete Monument.dwg layout = Concrete Monument Username = christine Date = May 01, 2020 - 2:32pm



CONCRETE MONUMENT

N. T. S.



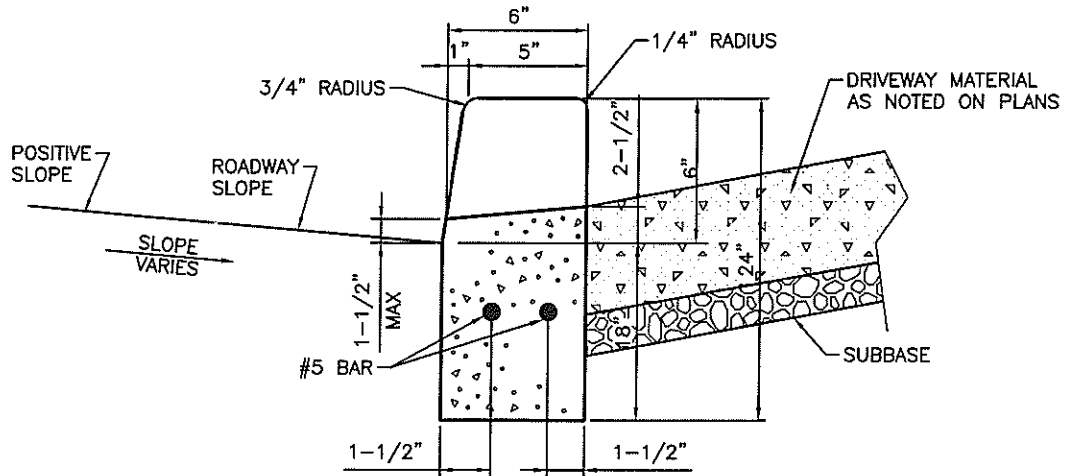
**LENNON, SMITH,
SOULERET
ENGINEERING INC.**
846 Fourth Avenue
Corasopolis, PA 15108
Ph:(412)264-4400
Fax:(412)264-1200
E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Concrete Monument.dwg
SCALE:	N.T.S.

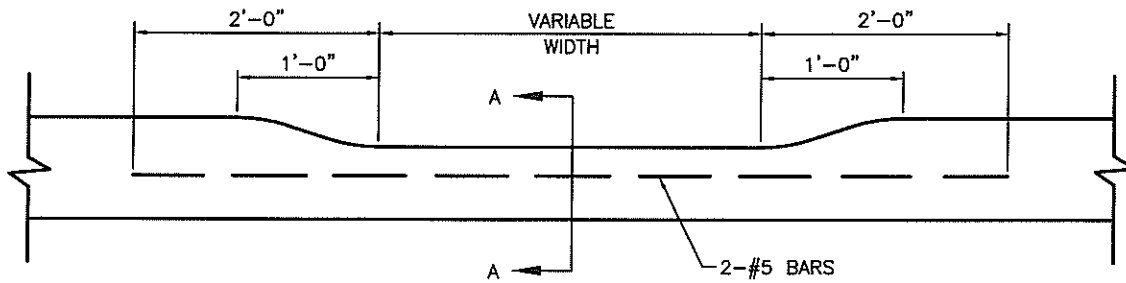
**Big Beaver Borough
Concrete Monument Detail**

SD-06

N:\PROJ\355\355-20_SALDO\Big Beaver Details\Individual Detail Dwg\Depressed Conc Curb Drives.dwg layout = Depressed Conc Curb for Drives Username = chrstline Date = May 06, 2020 - 9:02am



SECTION A-A

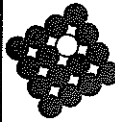


PLAN VIEW

NOTE:
SEE CONCRETE CURB DETAIL FOR
MATERIAL AND CONSTRUCTION
SPECIFICATIONS

**TYPICAL
DEPRESSED CONCRETE CURB FOR DRIVES**

N. T. S.



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 Fax:(412)264-1200
 E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Depressed Conc Curb Drives.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Depressed Concrete Curb for Drives Detail**

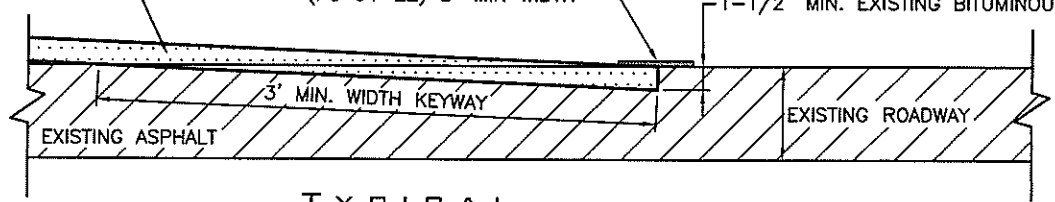
SD-07

H:\PROJ\355\355-20_SALDO\Big Beaver Details\Individual Detail Dwg\ Bituminous Keyway.dwg layout = Bituminous Keyway Username = christinel Date = May 06, 2020 - 9:04am

PROPOSED SUPERPAVE WMA SRL-H WEARING SURFACE

SAWCUT AND BITUMINOUS SEAL (PG 64-22) 8" MIN WIDTH

1-1/2" MIN. EXISTING BITUMINOUS



TYPICAL
BITUMINOUS KEYWAY
N. T. S.



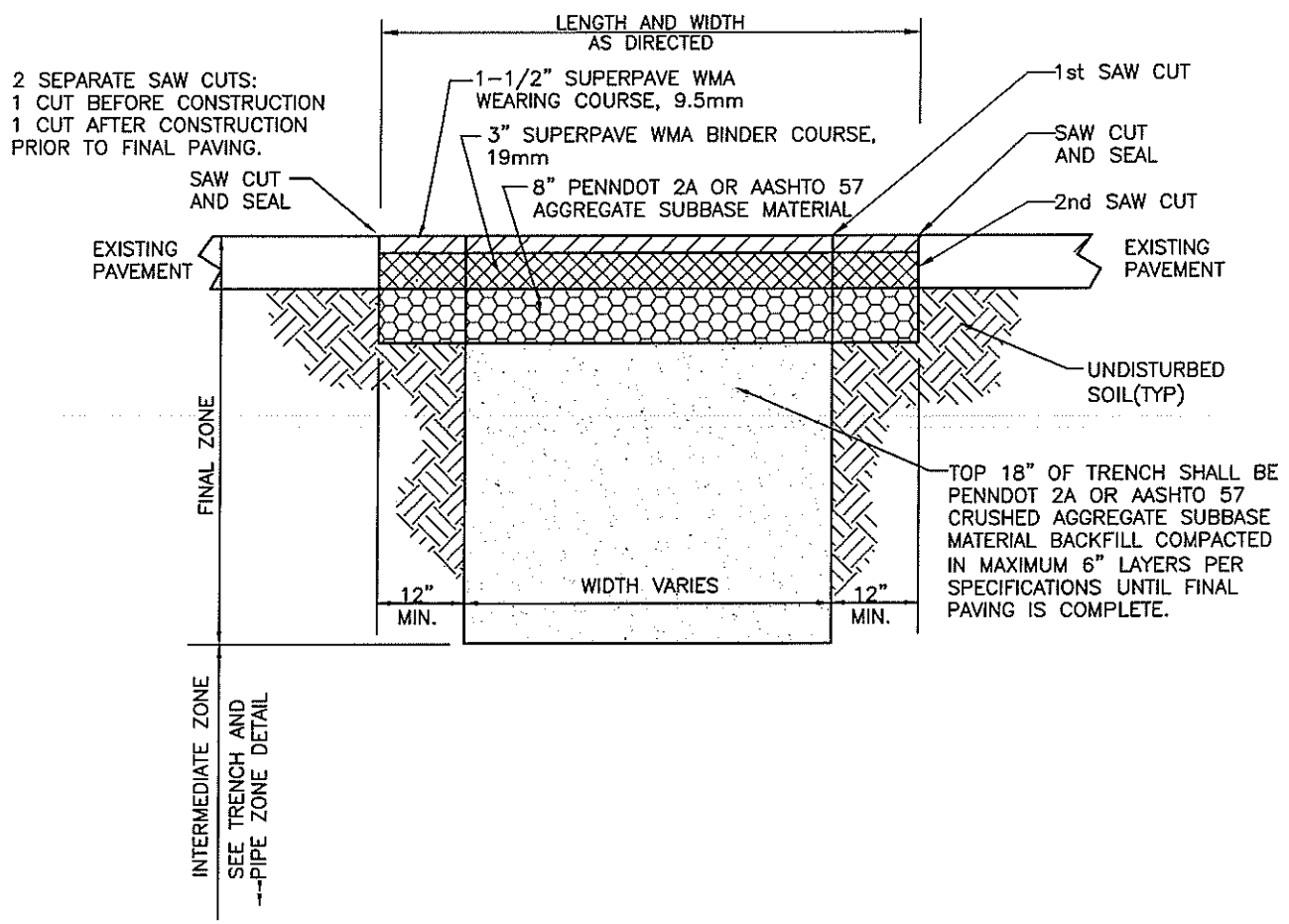
**LENNON, SMITH,
SOULERET
ENGINEERING INC.**
846 Fourth Avenue
Coraopolis, PA 15108
Ph:(412)264-4400
Fax:(412)264-1200
E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Bituminous Keyway.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Bituminous Keyway Detail**

SD-08

N:\PROJ\355\355-20_SLD\Big Beaver Details\Individual Detail Dwg\ Bitum Pmnt Restor Surface Replacement For Drivway.dwg layout = Bitum Pmnt Restor Surface Replacement For Drivway.dwg Userame = christinel Date = May 08, 2020 - 9:09am



**BITUMINOUS PAVEMENT RESTORATION
 SURFACE REPLACEMENT FOR DRIVEWAY**

N. T. S.

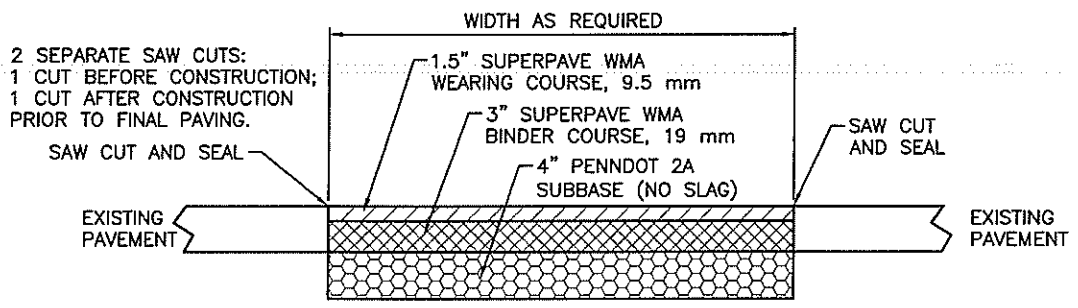


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 Coraopolis, PA 15108
 Ph:(412)264-4400
 Fax:(412)264-1200
 E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Bitum Pmnt Restor Surface Replacement For Drivway.dwg
SCALE:	N.T.S.

**Big Beaver Borough
 Bituminous Pavement Restoration
 Surface Replacement For Driveway Detail**
 SD-09

N:\PROJ\395\395-20 SALDO\Big Beaver Detail\Individual Detail Dwg\ Bituminous Driveway Adjustment.dwg layout - Bituminous Driveway Adjustment.dwg Username = christinel Date = May 06, 2020 - 9:10am



2 SEPARATE SAW CUTS:
 1 CUT BEFORE CONSTRUCTION;
 1 CUT AFTER CONSTRUCTION
 PRIOR TO FINAL PAVING.

BITUMINOUS DRIVEWAY ADJUSTMENT
 N. T. S.



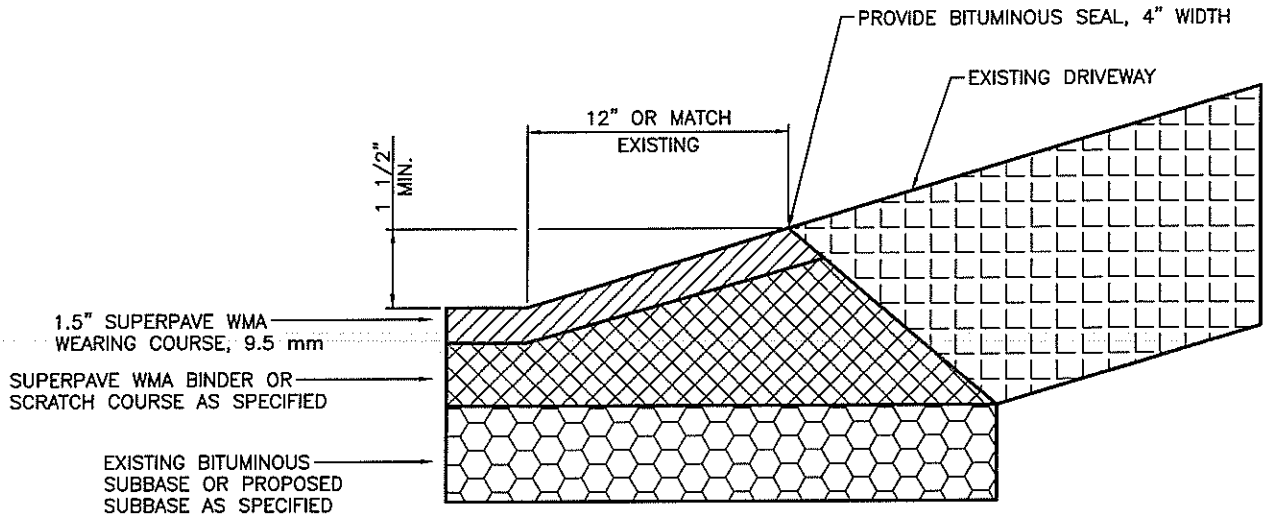
**LENNON, SMITH,
 SOULERET
 ENGINEERING INC.**
 846 Fourth Avenue
 Coraopolis, PA 15108
 Ph: (412) 264-4400
 Fax: (412) 264-1200
 E-mail: info@lsae.com

DATE:	April 2020
FILE NAME:	Bituminous Driveway Adjustment.dwg
SCALE:	N.T.S.

**Big Beaver Borough
 Bituminous Driveway Adjustment Detail**

SD-10

N:\PROJ\355\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\Depressed Bituminous Wedge Curb.dwg layout - Depressed Bituminous Wedge Curb.dwg User: christine Date: May 06, 2020 9:13am

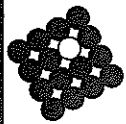


NOTES:

1. MATERIALS AND CONSTRUCTION SHALL MEET THE REQUIREMENTS OF PUBLICATION 408.
2. COORDINATE WEDGE CURB WITH DRIVEWAY REPLACEMENT.

DEPRESSED BITUMINOUS WEDGE CURB FOR DRIVEWAYS

N. T. S.



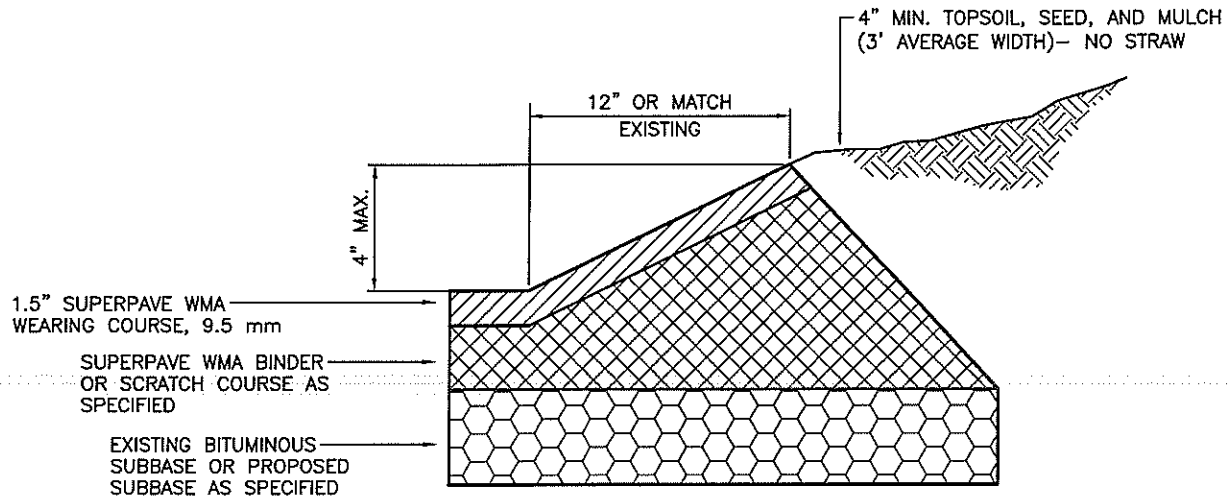
**LENNON, SMITH,
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 ENGINEERING INC.**
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 Coraopolis, PA 15108
 Ph: (412) 264-4400
 Fax: (412) 264-1200
 E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Depressed Bituminous Wedge Curb.dwg
SCALE:	N.T.S.

**Big Beaver Borough
 Depressed Bituminous Wedge Curb Detail**

SD-11

N:\PROJ\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\ Bituminous Wedge Curb.dwg layout - Bituminous Wedge Curb Date May 06, 2020 - 9:15am Username christinel

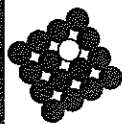


NOTES:

1. MATERIALS AND CONSTRUCTION SHALL MEET THE REQUIREMENTS OF PUBLICATION 408.
2. COORDINATE WEDGE CURB WITH DRIVEWAY REPLACEMENT.

BITUMINOUS WEDGE CURB

N. T. S.



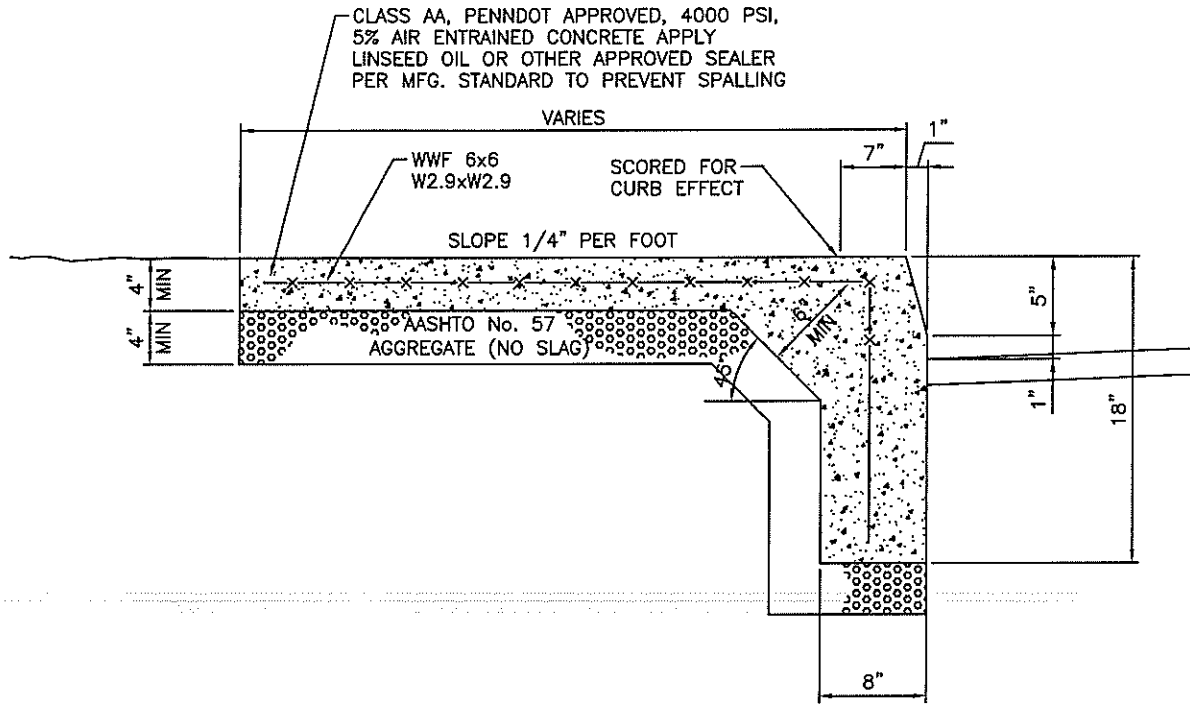
**LENNON, SMITH,
SOULERET
ENGINEERING INC.**
846 Fourth Avenue
Coraopolis, PA 15108
Ph:(412)264-4400
Fax:(412)264-1200
E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Bituminous Wedge Curb.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Bituminous Wedge Curb Detail**

SD-12

H:\PROJ\355\355-20_SALDO\Big Beaver Details\Individual Detail Dwg\ Conc Sidewalk w Integral Curb.dwg layout = Concrete Sidewalk with Integral Curb Userame = chrifinal Date = May 01, 2020 - 3:05pm



NOTES:

1. WALK SHALL BE CROSS SCORED EVERY FIVE FEET (5'). 1/2" PREFORMED EXPANSION JOINTS EVERY 20 FEET. WALK SHALL HAVE TROWELED EDGES WITH A STIFF BROOM FINISH.
2. IF A DRIVEWAY IS TO BE CONSTRUCTED OVER A SIDEWALK, THE CONCRETE SHALL BE PLACED AT 6" DEPTH.
3. PROVIDE TWO (2) No. 4 DOWELS AT PROPERTY LINES.
4. EXCAVATION, DEMOLITION OF EXISTING WALKWAY (IF ANY) AND SUBBASE ARE INCIDENTAL TO CONCRETE WALK CONSTRUCTION.
5. PROVIDE ADA CURB RAMPS AT ALL INTERSECTIONS.

CONCRETE SIDEWALK WITH INTEGRAL CURB

N. T. S.



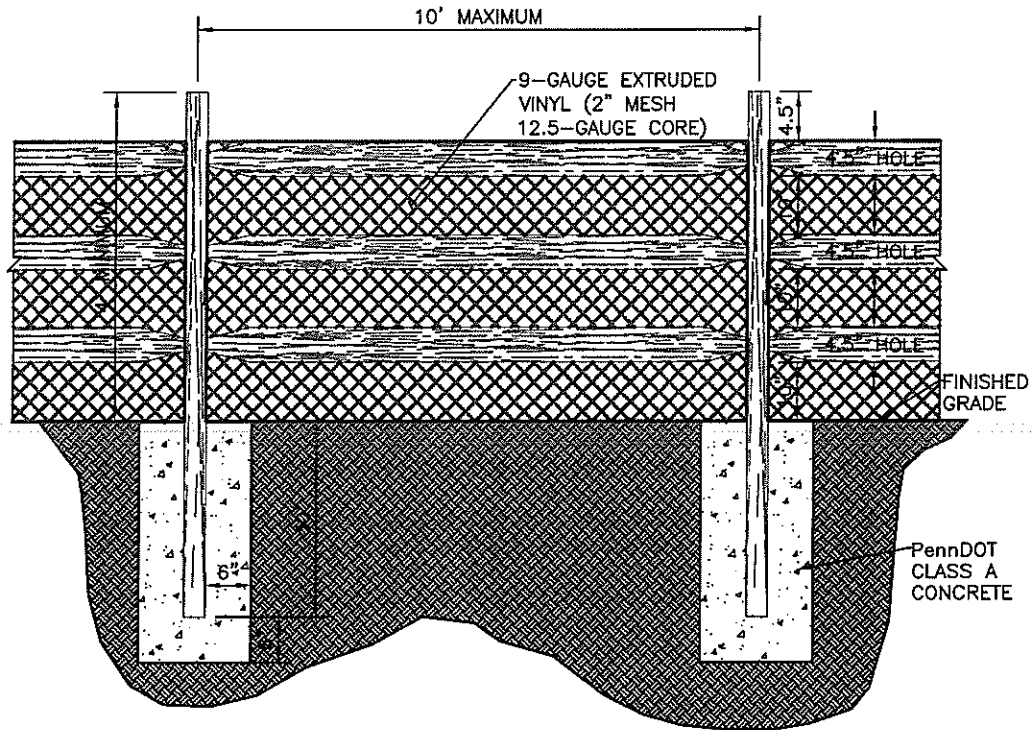
**LENNON, SMITH,
SOULERET
ENGINEERING INC.**
846 Fourth Avenue
Coraopolis, PA 15108
Ph:(412)264-4400
Fax:(412)264-1200
E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Conc Sidewalk w Integral Curb.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Concrete Sidewalk with Integral Curb Detail**

SD-13

H:\PROJ\355\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\Cedar Split Post and Rail Fence.dwg layout = Cedar Split Post and Rail Fence Date = May 04, 2020 -- 12:40pm
 Username = chrifstnel



NOTES:

1. FURNISH AND INSTALL 4' HIGH SPLIT POST AND RAIL FENCE AS MANUFACTURED BY HOOVER FENCE COMPANY OR APPROVED EQUAL.
2. FURNISH AND INSTALL 4' HIGH (2)-5' (10' WIDE TOTAL) SWING GATE WITH GALVANIZED FRAME AS DENOTED ON THE PLAN, MANUFACTURED BY HOOVER FENCE COMPANY OR APPROVED EQUAL. (CATALOG NO. SRG-3RX5)

CEDAR SPLIT POST AND RAIL FENCE

N. T. S.



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 846 Fourth Avenue
 Coraopolis, PA 15108
 Ph: (412) 264-4400
 Fax: (412) 264-1200
 E-mail: info@lsse.com

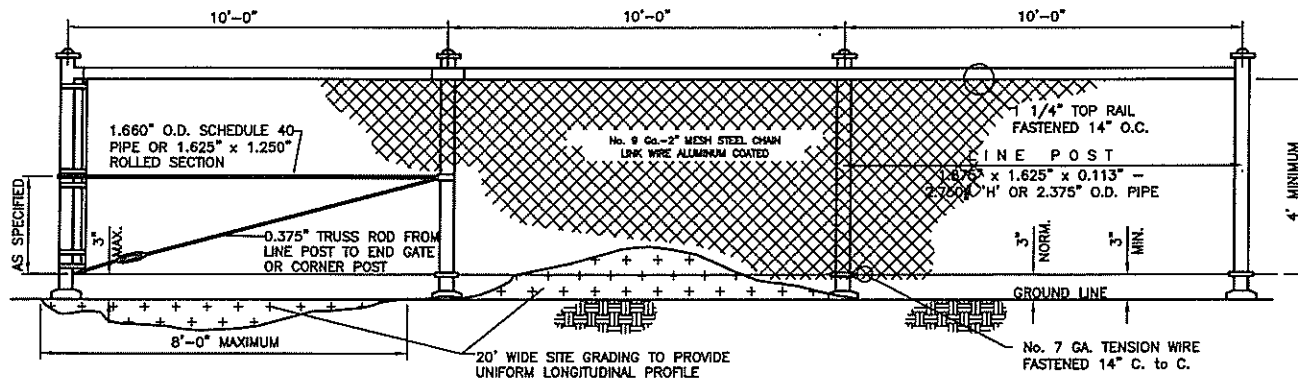
DATE:	April 2020
FILE NAME:	Cedar Split Post and Rail Fence.dwg
SCALE:	N.T.S.

Big Beaver Borough
Cedar Split Post And Rail Fence Detail

SD-14

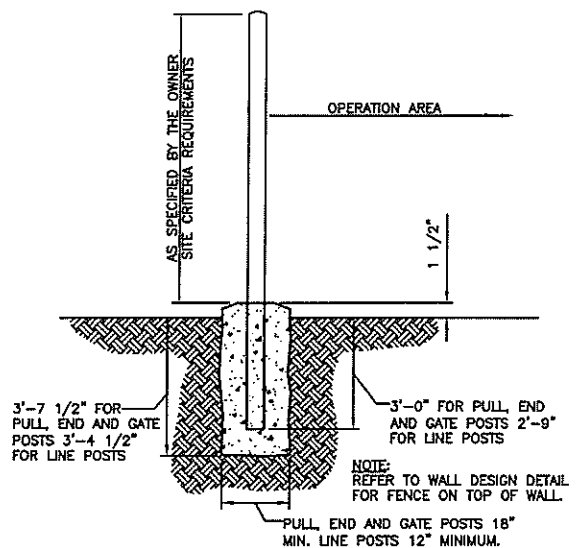
NOTES:

1. ALL MATERIALS ENTERING INTO THE CONSTRUCTION OF THIS FENCE ARE TO BE HEAVILY GALVANIZED, EXCEPT STEEL CHAIN LINK WIRE WHICH IS ALUMINUM COATED.
2. ALL POSTS ARE SET IN CONCRETE BASES, SEE TYPICAL SECTION OF POST FOOTERS.
3. FOR SPORTS COURTS: INSTALL MESH MATERIAL ON INSIDE OF POSTS.
4. SEE TYPICAL DRIVE GATE DETAIL AND DETAIL OF PULL SECTION, SEPARATE SHEET.



CHAIN LINK FENCE

N. T. S.



TYPICAL SECTION OF POST FOOTERS

N. T. S.

N:\PROJ\355\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\Chain Link Fence.dwg layout = Chain Link Fence Username = christinel Date = May 04, 2020 - 12:44pm



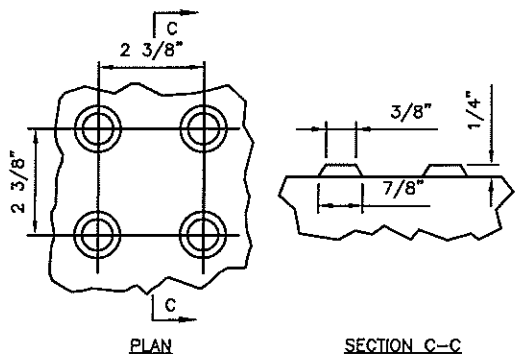
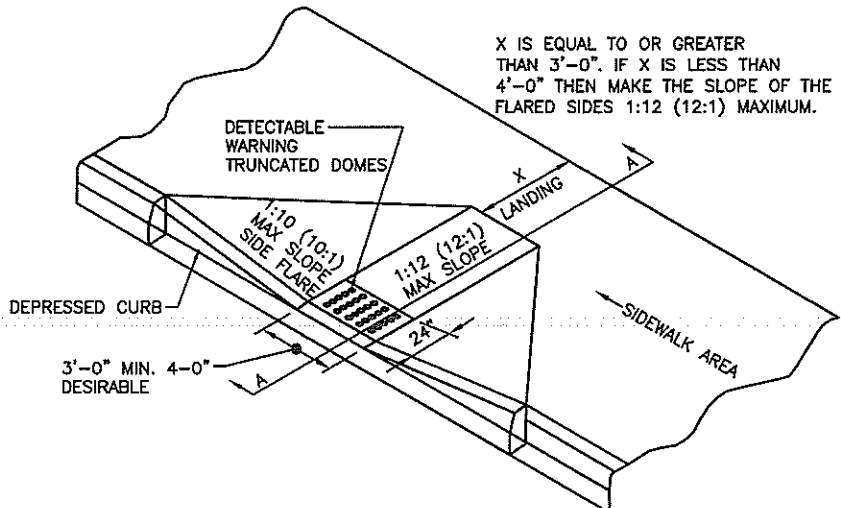
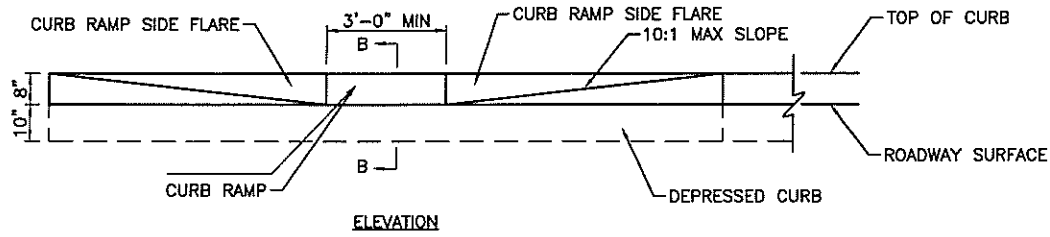
**LENNON, SMITH,
SOULERET
ENGINEERING INC.**
846 Fourth Avenue
Coraopolis, PA 15108
Ph:(412)264-4400
Fax:(412)264-1200
E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Chain Link Fence.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Chain Link Fence Detail**

SD-15

N:\PROJ\355\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\ Type 1 Curb Ramp.dwg layout = Type 1 Curb Ramp Username = christine Date = May 06, 2020 -- 8:16am



DETECTABLE WARNING TRUNCATED DOME DETAIL

NEW CONSTRUCTION (R1)
TYPE 1 CURB RAMP
 N. T. S.

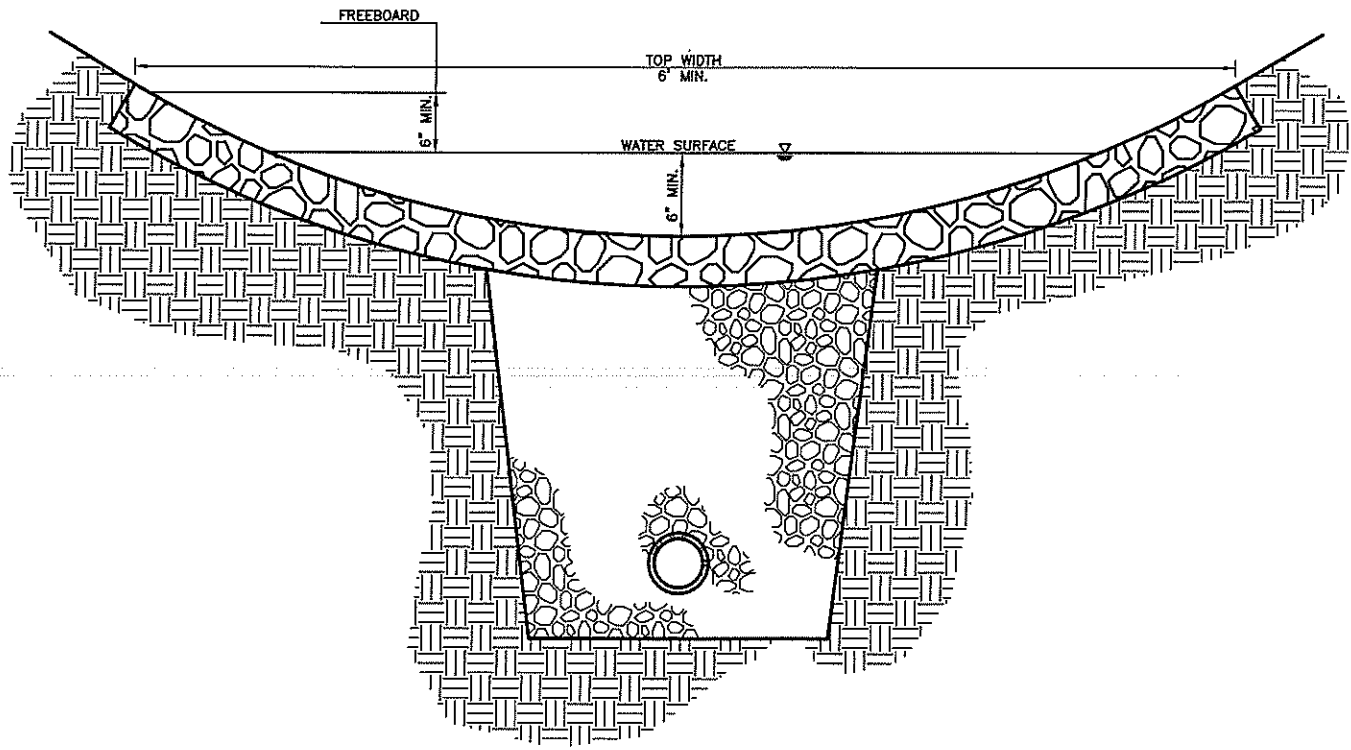


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 Ph: (412) 264-4400
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DATE:	April 2020
FILE NAME:	Type 1 Curb Ramp.dwg
SCALE:	N.T.S.

Big Beaver Borough
New Construction (R1)
Type 1 Curb Ramp Detail
 SD-16

N:\PROJ\355\355-20 SWALDO\Big Beaver Details\Individual Detail Dwg\ Low Flow Channel With Underdrain.dwg layout = Low Flow Channel With Underdrain.dwg Username = christinel Date = May 06, 2020 - 9:17am



LOW FLOW CHANNEL WITH UNDERDRAIN

N. T. S.



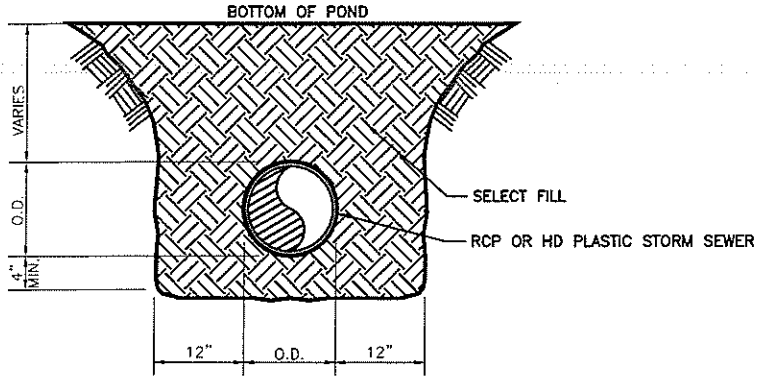
**LENNON, SMITH,
SOULERET
ENGINEERING INC.**
846 Fourth Avenue
Coraopolis, PA 15108
Ph:(412)264-4400
Fax:(412)264-1200
E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Low Flow Channel With Underdrain.dwg
SCALE:	N.T.S.

Big Beaver Borough Low Flow Channel With Underdrain Detail

SW-01

N:\PROJ\355\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\Detention Basin Pipe Bedding.dwg layout = Detention Basin Pipe Bedding User = christina Date = May 01, 2020 - 3:21pm



NOTE:
 1. INSTALL WARNING TAPE DISPLAYING THE PRINTED NOTATION "STORM SEWER SHALL BE LAID BETWEEN BACKFILL LIFTS OVER THE PIPE TWO FEET ABOVE THE PIPE. IN NO EVENT SHALL THE TAPE BE MORE THAN FOUR FEET BELOW THE FINISHED GROUND SURFACE. TAPE SHALL BE 2" IN WIDTH.

**TYPICAL STORMWATER DETENTION FACILITY
 PIPE BACKFILL DETAIL**

N. T. S.

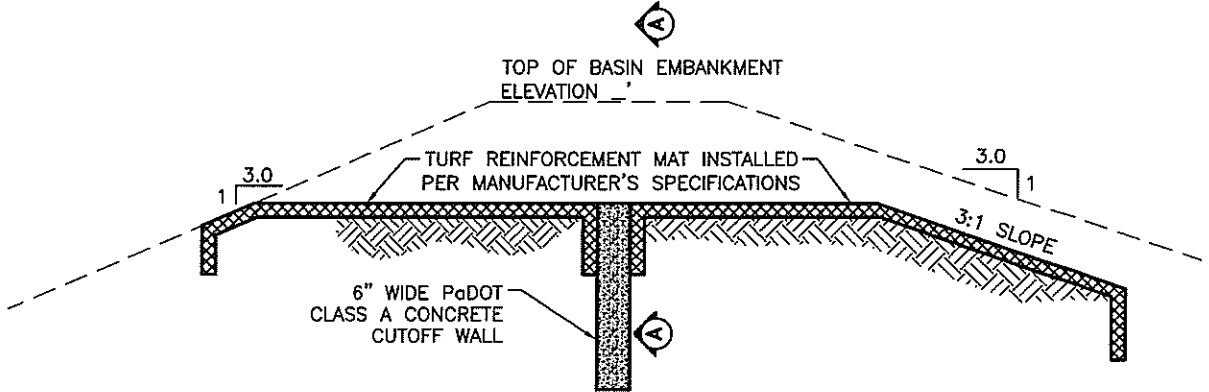
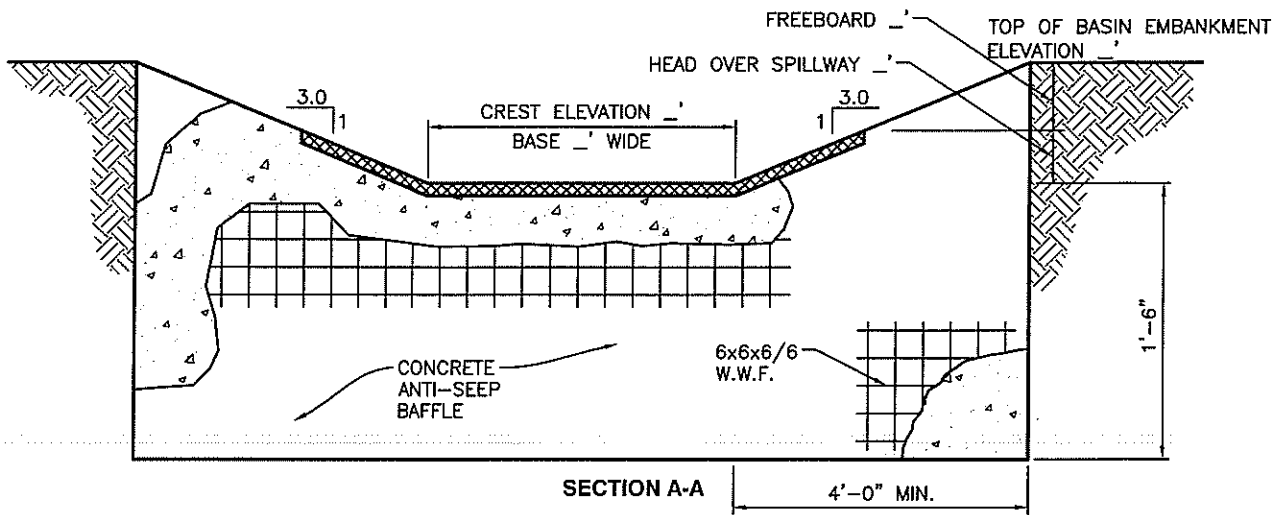


**LENNON, SMITH,
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 ENGINEERING INC.**
 846 Fourth Avenue
 Coraopolis, PA 15108
 Ph:(412)264-4400
 Fax:(412)264-1200
 E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Detention Basin Pipe Bedding.dwg
SCALE:	N.T.S.

**Big Beaver Borough
 Typical Stormwater Detention Facility
 Pipe Backfill Detail**
 SW-02

N:\PROJ\355\355-20_SALDO\Big Beaver Details\Individual Detail Draw\Emergency Spillway.dwg layout Emergency Spillway.dwg User: chrifinal Date: May 06, 2020 9:18am



STORMWATER MANAGEMENT DETENTION BASIN
EMERGENCY SPILLWAY

N. T. S.

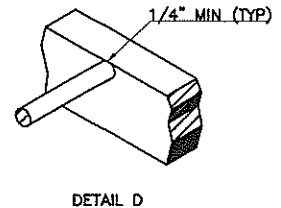
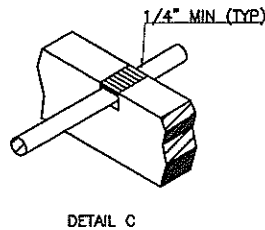
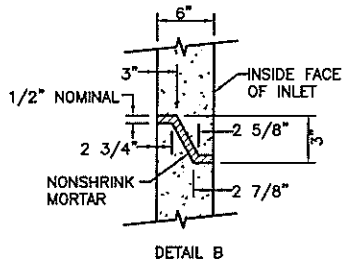
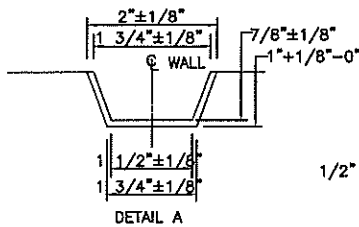
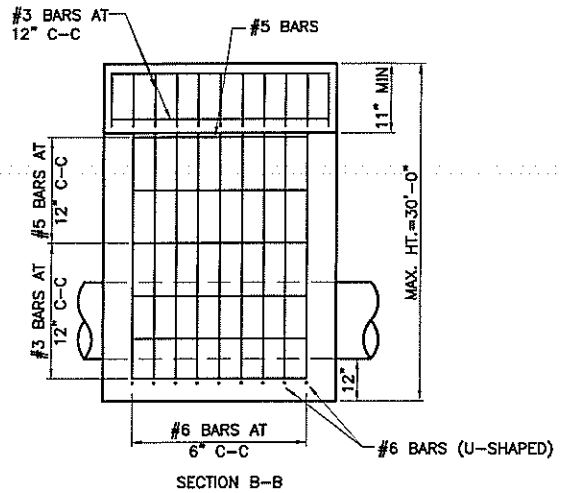
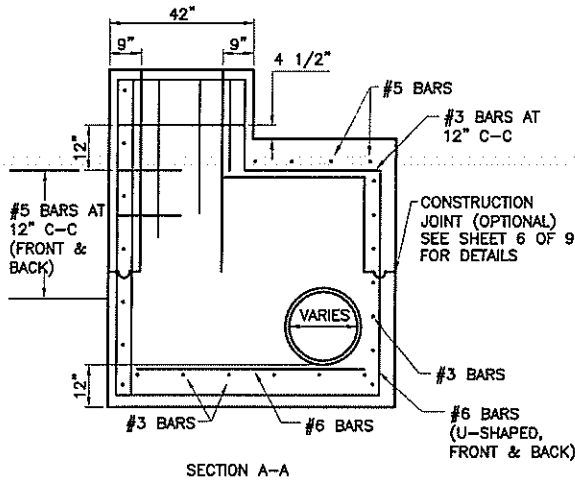
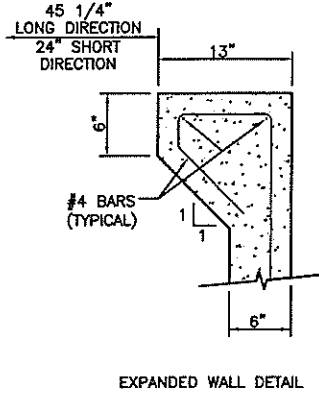
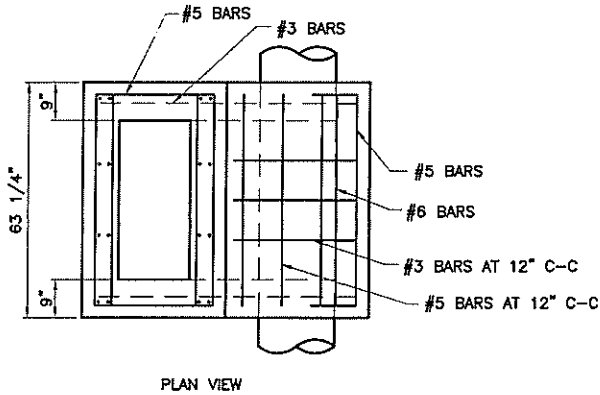


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 846 Fourth Avenue
 Coraopolis, PA 15108
 Ph:(412)264-4400
 Fax:(412)264-1200
 E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Emergency Spillway.dwg
SCALE:	N.T.S.

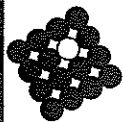
**Big Beaver Borough
 Stormwater Management Detention Basin
 Emergency Spillway Detail**
 SW-03

N:\PROJ\355\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\Inlet Box Mod Type 1.dwg layout - Inlet Box Mod Type 1 User: chrissel Date: May 01, 2020 - 3:28pm



**INLET BOX
MODIFIED TYPE 1**

N. T. S.



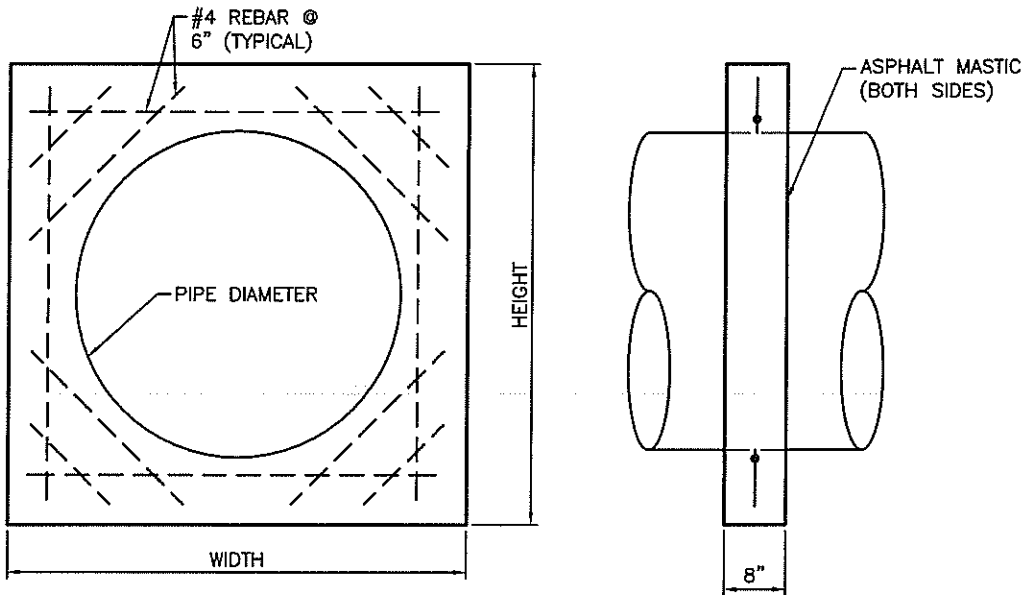
**LENNON, SMITH,
SOULERET
ENGINEERING INC.**
 846 Fourth Avenue
 Coraopolis, PA 15108
 Ph: (412) 264-4400
 Fax: (412) 264-1200
 E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Inlet Box Mod Type 1.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Inlet Box Modified Type 1 Detail**

SW-04

N:\PROJ\355\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\Concrete Anti-Seep Collars.dwg layout = Concrete Anti-Seep Collars Username = christina Date = May 06, 2020 - 9:18am



	PIPE DIA.	WIDTH	HEIGHT	QTY.
DETENTION BASIN No.				

CONCRETE ANTI-SEEP COLLARS

N. T. S.



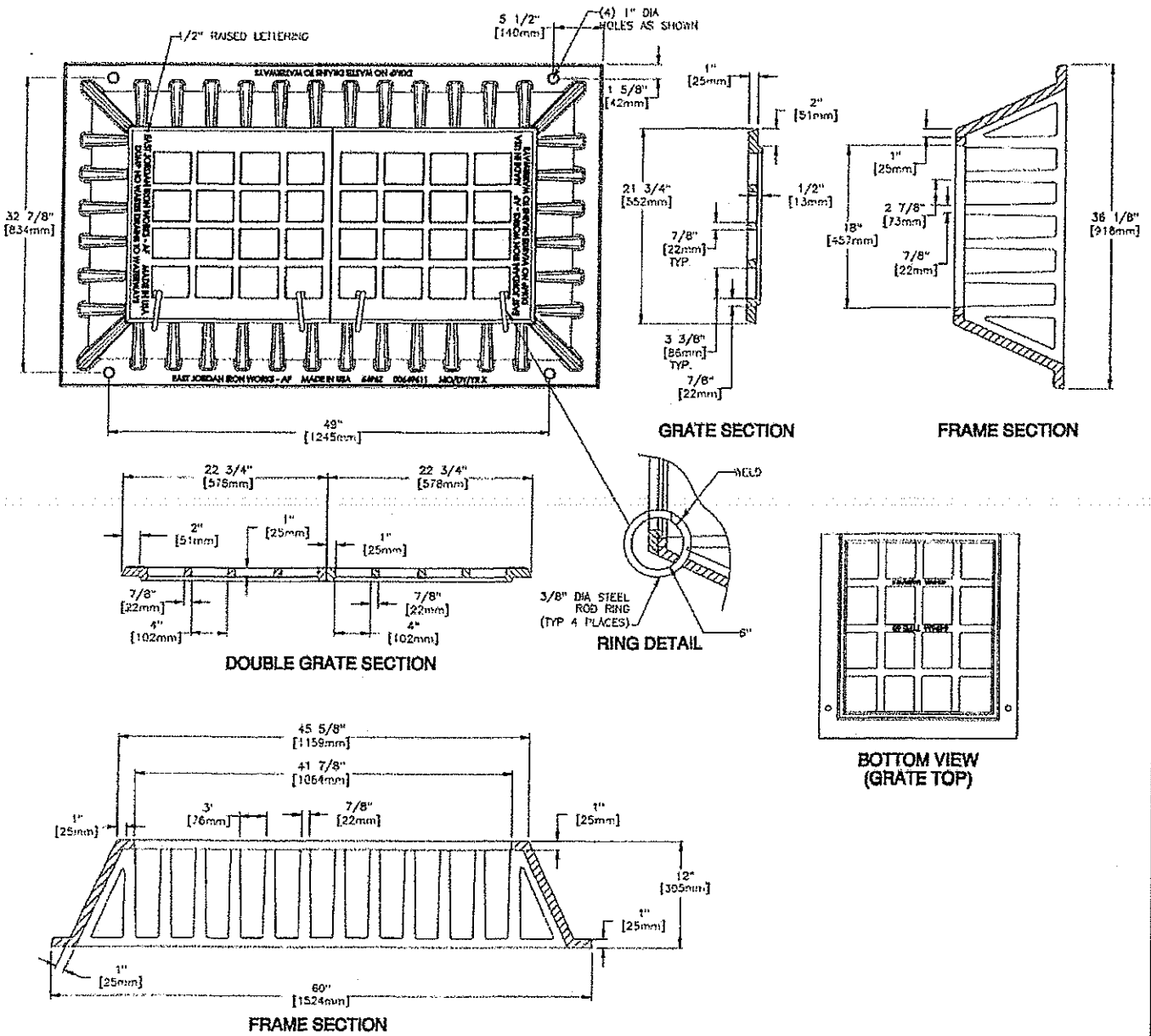
**LENNON, SMITH,
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 E-mail: info@lsse.com

DATE: April 2020
 FILE NAME: Concrete Anti-Seep Collars.dwg
 SCALE: N.T.S.

**Big Beaver Borough
Concrete Anti-Seep Collars Detail**

SW-05

N:\PROJ\355_355-20_SALDO\Big_Beaver_Details\Individual Detail Dwg\Beehive Grate.dwg Layout = Beehive Grate Username = christine Date = May 01, 2020 1:51pm



BEEHIVE GRATE
N. T. S.



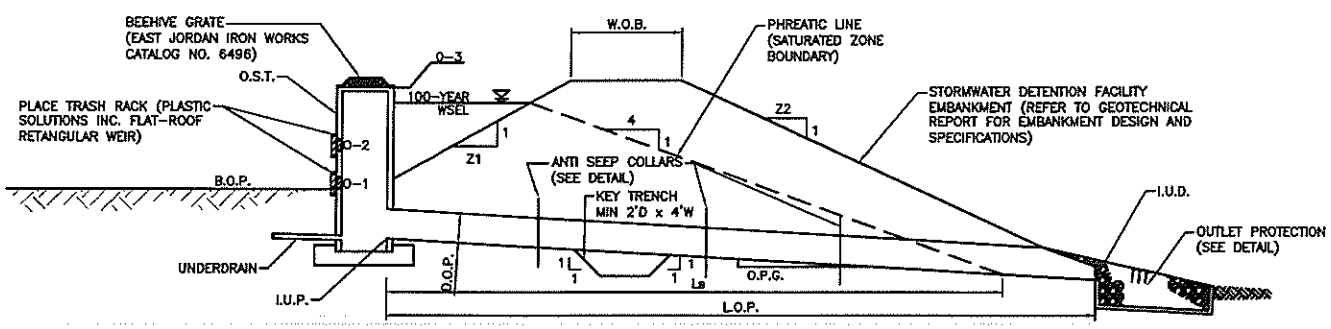
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E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Beehive Grate.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Beehive Grate Detail**

SW-06

N:\PROJ\355\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\ Stormwater Detention Facility.dwg layout = Stormwater Detention Facility Userame = christina Date = May 04, 2020 - 12:27pm



BASIN NO.	FACILITY DIMENSIONS									FACILITY ELEVATIONS							
	Z1 (FT)	Z2 (FT)	ORFICE NO. 1 (O-1) (FT)	ORFICE NO. 2 (O-2) (FT)	DIAMETER OF PIPE (D.O.P.) (IN-TYPE)	LENGTH OF PIPE (L.O.P.) (FT)	OUTLET PIPE GRADE (O.P.G.) (%)	WIDTH OF BERM (W.O.B.) (FT)	OUTLET STRUCTURE TYPE (O.S.T.) (FT x FT)	LENGTH OF SATURATION ZONE (Ls) (FT)	ORFICE NO. 1 INVERT (O-1) (VFT)	ORFICE NO. 2 INVERT (O-2) (VFT)	PRINCIPLE SPILLWAY INVERT (O-3) (VFT)	BOTTOM OF POND (B.O.P.) (VFT)	TOP OF WET POOL (T.O.P.) (VFT)	INVERT UP STREAM (I.U.P.) (VFT)	INVERT DOWN-STREAM (I.U.D.) (VFT)
1	2.0	3.0	6'H X 36'W	N/A	24"-RCP	24	1.00	10	TYPE "M" 4 x 2	20.25	1134.00	N/A	1136.00	1134.00	N/A	1133.24	1133.00

- NOTES:
1. "Ls" DENOTES LENGTH TO 1st DOWNSTREAM STRUCTURE
 2. (VFT) DENOTES "VERTICAL FEET"
 3. ANTI-SEEP COLLARS SHALL BE EVENLY SPACED ALONG OUTLET PIPE WITHIN THE "Ls" LENGTH UNLESS "Ls" IS GREATER THAN PIPE OUTFALL LENGTH (IN THIS CASE EVENLY SPACE COLLARS ALONG OUTFALL PIPE LENGTH "LOP"). COLLARS SHALL NOT BE CLOSER THAN 2' TO A PIPE JOINT. REFER TO ANTI-SEEP COLLAR DETAIL FOR QUANTITY AND SIZES.

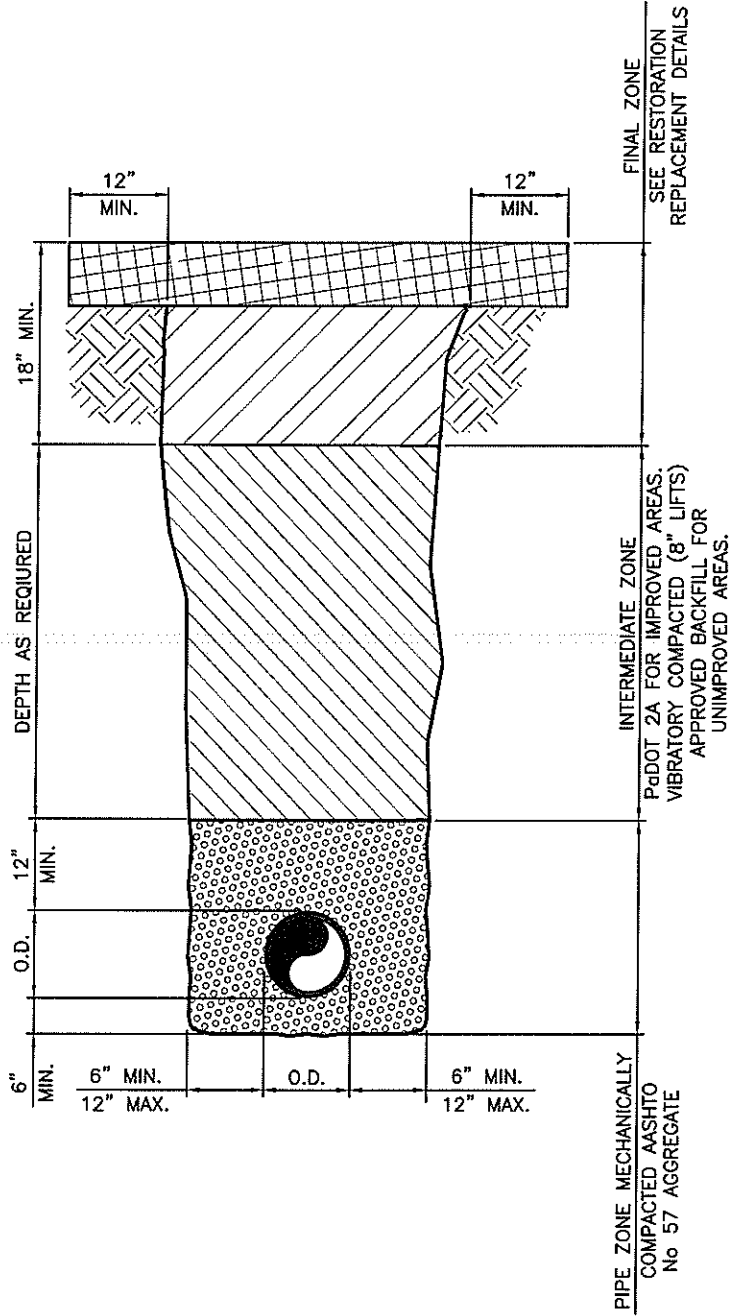
STORMWATER DETENTION FACILITY
 N.T.S.

LENNON, SMITH, SOULERET ENGINEERING INC.
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DATE: April 2020
 FILE NAME: Stormwater Detention Facility.dwg
 SCALE: N.T.S.

Big Beaver Borough
Stormwater Detention Facility Detail

SW-07



**TYPICAL
TRENCH AND PIPE ZONES**
N. T. S.



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DATE:	April 2020
FILE NAME:	Typ Trench and Pipe Zones.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Typical Trench and Pipe Zones**

SS-01

N:\PROJ\355\355-20_S\LD\DW\Big Beaver Details\Individual Detail_Dwg\ Type DW Endwall.dwg layout = Type DW Endwall Username = christinel Date = May 01, 2020 - 8:11pm

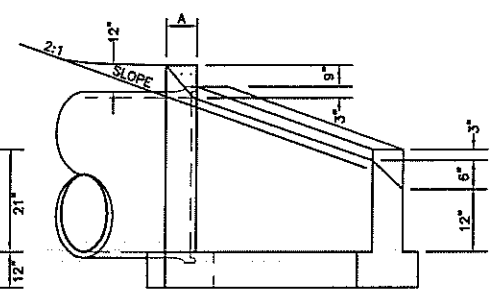
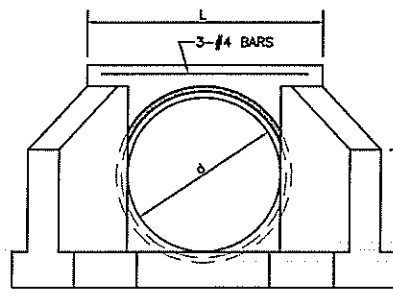
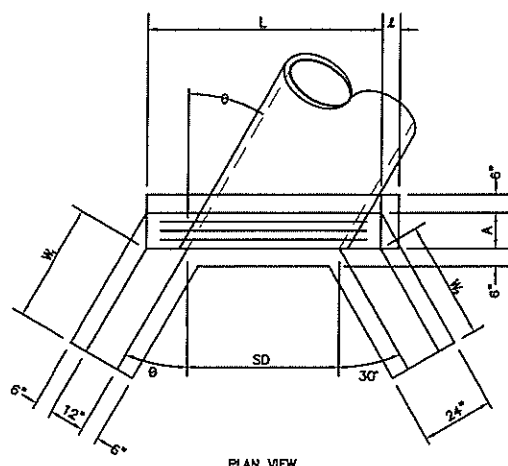


TABLE A
2:1 EMBANKMENT SLOPES

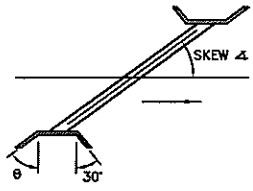
PIPE DIA. d (in)	SKEW Δ=90° TO 60° θ = 30°			SKEW Δ=55° θ = 35°			SKEW Δ=50° θ = 40°			SKEW Δ=45° θ = 45°			SKEW Δ=40° θ = 50°			SKEW Δ=30° θ = 60°			SKEW Δ=20° θ = 70°			SKEW Δ=10° θ = 80°				
	L (ft)	Z (ft)	W ₁ (ft)	L (ft)	Z (ft)	W ₁ (ft)	L (ft)	Z (ft)	W ₁ (ft)	L (ft)	Z (ft)	W ₁ (ft)	L (ft)	Z (ft)	W ₁ (ft)	L (ft)	Z (ft)	W ₁ (ft)	L (ft)	Z (ft)	W ₁ (ft)	L (ft)	Z (ft)	W ₁ (ft)	W ₂ (ft)	A (in)
18	3.6	0	3.0	4.8	0.33	2.5	4.9	0.5	2.6	5.1	0.67	2.9	5.8	0.75	3.1	6.3	1.33	4.0	7.4	1.75	5.8	13.9	5.0	11.2	2.3	12
24	5.2	0	3.8	5.4	0.33	3.7	5.6	0.5	3.9	5.8	0.67	4.3	6.2	0.75	4.7	7.3	1.33	6.0	9.9	1.75	8.7	16.8	5.0	17.1	3.5	12
36	5.8	0	4.6	6.0	0.33	4.9	6.2	0.5	5.2	6.5	0.67	5.7	7.0	0.75	6.2	8.3	1.33	8.0	11.1	1.75	11.7	19.6	5.0	23.0	4.6	12
42	6.3	0	5.8	6.6	0.33	6.1	6.9	0.5	6.5	7.3	0.67	7.1	7.8	0.75	7.8	9.3	1.33	10.0	12.5	1.75	14.6	22.5	5.0	28.8	5.8	12
48	6.9	0	6.9	7.2	0.33	7.3	7.5	0.5	7.8	8.0	0.67	8.5	8.5	0.75	9.4	10.3	1.33	12.0	14.0	1.75	17.5	25.3	5.0	34.8	6.9	12
54	7.5	0	8.0	7.8	0.33	8.5	8.2	0.5	9.1	8.7	0.67	9.9	9.3	0.75	10.9	11.3	1.33	14.0	15.5	1.75	20.5	28.2	5.0	40.3	8.0	12
60	8.1	0	9.2	8.4	0.33	9.8	8.8	0.5	10.4	9.4	0.67	11.3	10.1	0.75	12.5	12.3	1.33	16.0	16.9	1.75	23.4	31.1	5.0	46.0	9.2	15
72	9.2	0	11.5	9.6	0.33	12.2	10.1	0.5	13.0	10.8	0.67	14.1	11.7	0.75	15.6	14.3	1.33	20.0	19.8	1.75	29.2	36.9	5.0	57.6	11.5	15

$$SD = \frac{d}{\cos \theta} = \frac{d}{\sin \text{SKEW } \Delta}$$

$$L = SD + 2.3'$$

$$W_1 = \frac{2d - 2'}{\cos \theta} \text{ (FOR 2:1 SLOPE)}$$

$$W_1 = \frac{x}{\cos \theta} (d - 0.5 - \frac{1.0}{x}) \text{ (FOR VARIABLE SLOPE WHEN X EQUALS HORIZONTAL DIMENSION OF THE SLOPE DESIGNATION)}$$



- NOTES:
- CONSTRUCT ENDWALL IN ACCORDANCE WITH THE REQUIREMENTS OF PENNDOT PUBLICATION 408, SECTION 605, FOR CAST-IN-PLACE UNITS AND SECTION 714 FOR PRECAST CEMENT CONCRETE UNITS.
 - FURNISH AND INSTALL ENDWALLS IN ACCORDANCE WITH PENNDOT PUBLICATION 72M STANDARDS FOR ROADWAY CONSTRUCTION, LATEST EDITION - RC-31M.
 - ONLY PRECAST ENDWALLS SUPPLIED BY MANUFACTURER LISTED IN PENNDOT BULLETIN 15 WILL BE PERMITTED.
 - USE CLASS A CEMENT CONCRETE OR BETTER.
 - CHAMFER EXPOSED EDGES ONE INCH.
 - FOOTINGS SHALL BE DOWELED TO TOP.
 - SEE TABLE A BELOW FOR DIMENSIONS NOT INDICATED.

TYPE 'DW' ENDWALL
N. T. S.

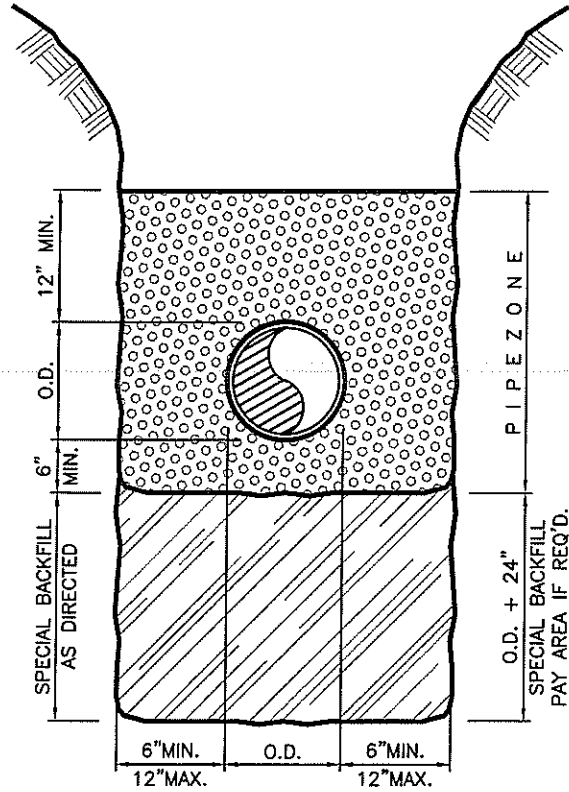
LENNON, SMITH, SOULERET ENGINEERING INC.
 846 Fourth Avenue
 Coraopolis, PA 15108
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 E-mail: info@lss.com

DATE:	April 2020
FILE NAME:	Type DW Endwall.dwg
SCALE:	N.T.S.

Big Beaver Borough
Type 'DW' Endwall Detail

SS-02

N:\PROJ\355\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\ Special Backfill.dwg layout = Special Backfill Username = christinel Date = May 04, 2020 - 12:29pm



**TYPICAL
SPECIAL BACKFILL**
N. T. S.



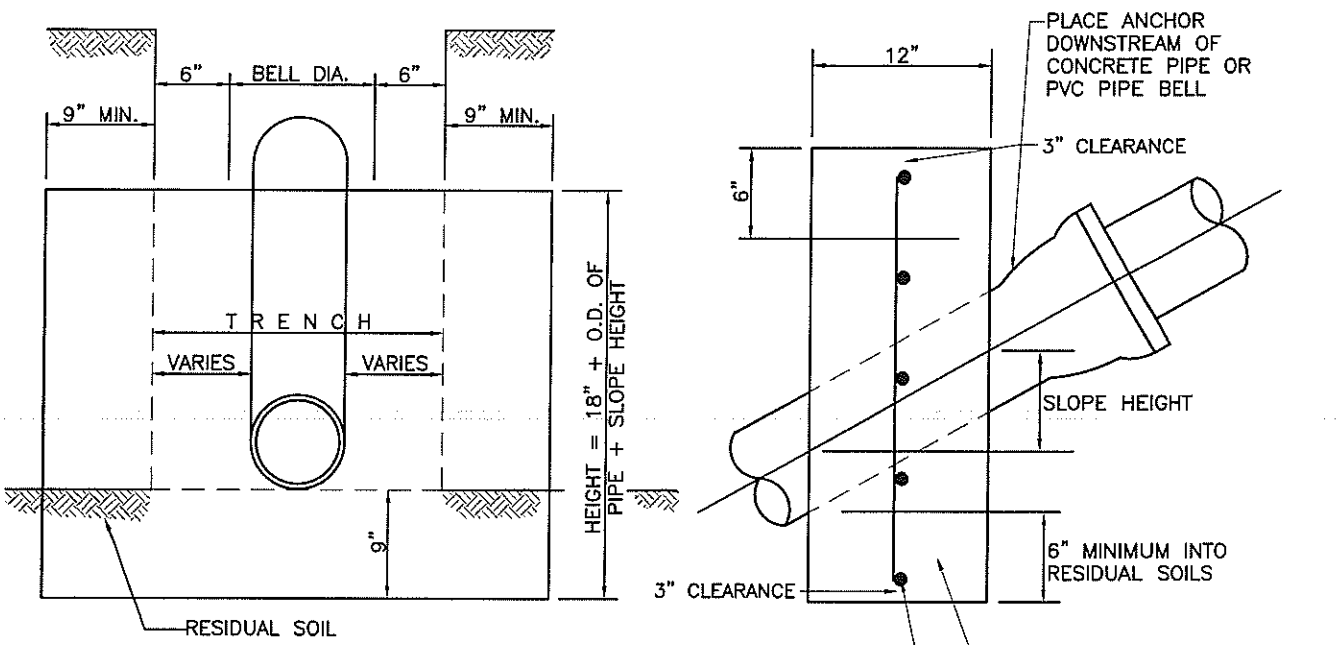
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E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Special Backfill.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Special Backfill Detail**

SS-03

H:\PROJ\355\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\Concrete Anchor.dwg layout = Concrete Anchor User = chrstline Date = May 04, 2020 - 11:33am



SPACING REQUIRED

% GRADE	DISTANCE CENTER TO CENTER
20% TO 35%	36' C. to C.
35% TO 50%	24' C. to C.
50% +	16' C. to C.

#4 @ 12" C/C E.W
BOTTOM OF PIPE TRENCH

CONCRETE ANCHOR

N. T. S.



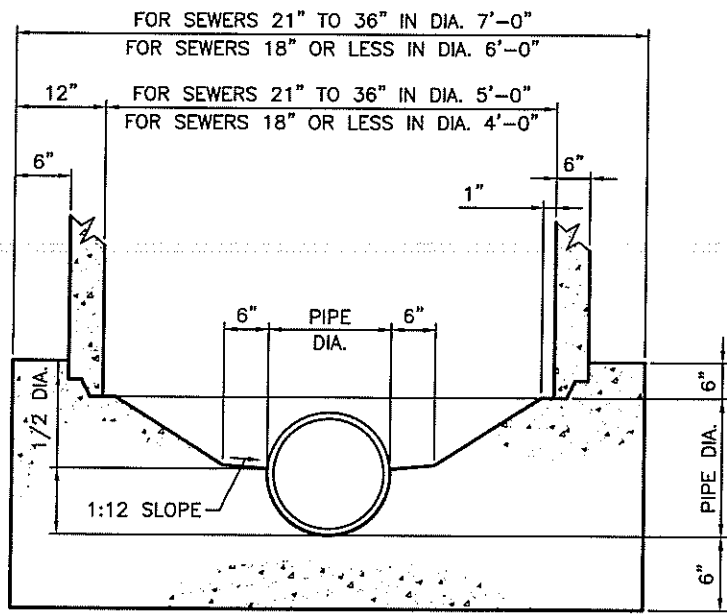
**LENNON, SMITH,
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 846 Fourth Avenue
 Coraopolis, PA 15108
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 Fax: (412) 264-1200
 E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Concrete Anchor.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Concrete Anchor Detail**

SS-04

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- NOTES:**
1. INVERTS SHALL BE IMPLEMENTED IN ALL SANITARY SEWER MANHOLES.
 2. INVERTS SHALL BE IMPLEMENTED IN ALL STORM SEWER MANHOLES EXCEPT FOR THOSE WHICH REQUIRE A TWO FOOT SUMP AS STATED ON THE PLANS.

MANHOLE INVERT
N. T. S.



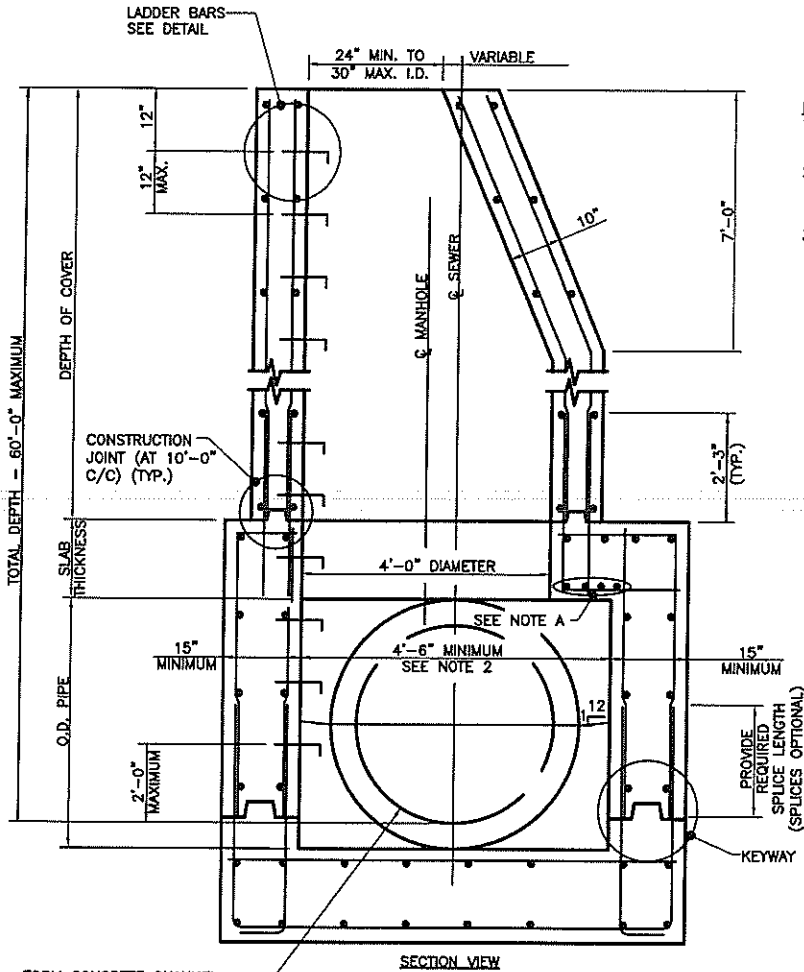
**LENNON, SMITH,
SOULERET
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Coraopolis, PA 15108
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E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Manhole Invert.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Manhole Invert Detail**

SS-05

N:\PROJ\355\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\Modified Manhole.dwg layout = Modified Manhole Username = christine Date = May 06, 2020 - 9:23am



FORM CONCRETE CHANNEL CONFORMING TO SHAPE OF INCOMING AND OUTGOING PIPES (SEE DETAIL)

- NOTES:**
- FOR CONSTRUCTION REQUIREMENTS SEE PENNDOT RC-39 FOR DESIGN REQUIREMENTS SEE PENNDOT RC-39.
 - INCREASE BOX SIZE WHEN REQUIRED TO KEEP WALLS OF MANHOLE BOX SECTION FLUSH WITH THE OPENING FOR PIPES LARGER THAN 42 INCHES I.D.
 - DESIGN PROCEDURE FOR MANHOLE BOX SECTION.
- DESIGN ALL MEMBERS FOR MOMENT, CRACK CONTROL & SHEAR AT DISTANCE d (EFFECTIVE DEPTH OF MEMBER) FROM FACE OF SUPPORT. ALL SPAN LENGTHS ARE CALCULATED FROM THE CENTER OF THE SUPPORTS.
- A. TOP SLAB**
- DESIGN A 12" WIDE SLAB STRIP FOR ONE-WAY ACTION TO CARRY DEAD LOAD, LIVE LOAD, AND WEIGHT OF EARTH. SPAN THE STRIP, SIMPLY SUPPORTED, ACROSS THE WIDTH OF THE BOX OR IN THE SHORT DIRECTION.
 - PLACE ADDITIONAL BARS IN THE SLAB AT 45 DEGREES AROUND THE MANHOLE OPENING. FFF - 1/85
- B. "EDGE BEAM"**
- "EDGE BEAMS" TO BE THE SAME DEPTH AS THE TOP SLAB. TO ACHIEVE REQUIRED CAPACITY WHERE NECESSARY, INCREASE DEPTH OF "EDGE BEAM" BY PROVIDING ADDITIONAL CLEARANCE BETWEEN THE SLAB AND TOP OF OPENING. LOCATE HORIZONTAL STEEL FOR BEAM ABOVE THE SOFFIT OF THE OPENING.
 - DESIGN THE "EDGE BEAMS", SPANNING THE LENGTH OF THE BOX, TO CARRY A UNIFORMLY DISTRIBUTED LOAD EQUAL TO THE REACTION FROM THE SLAB.
- C. WALLS**
- DESIGN THE WALLS TO CARRY THE AXIAL LOAD, DUE TO EARTH LOAD, LIVE LOAD, AND DEAD LOAD APPLIED DIRECTLY TO THE WALL, IN ADDITION TO REACTIONS FROM THE "EDGE BEAMS", AND THE VERTICAL MOMENT CAUSED BY SATURATED AT REST EARTH PRESSURE. CONSIDER THE WALL SIMPLY SUPPORTED BETWEEN TOP SLAB AND FOOTING. PROVIDE THE SAME REINFORCEMENT ON THE OUTSIDE FACE.
- D. FOOTING**
- DESIGN SPAN NORMAL TO PIPE TO CARRY POSITIVE MOMENT OF $1/10 WL$ AND NEGATIVE MOMENT OF $1/12 WL$ WHERE W IS THE UNIFORM BEARING PRESSURE. DO NOT TAKE INTO ACCOUNT THE CONCRETE IN THE CHANNEL WHEN CALCULATING CAPACITY OF THE FOOTING.
 - AS A MINIMUM, PROVIDE NO. 4 BARS AT 12" CENTERS, TOP AND BOTTOM OF SLAB IN THE OPPOSITE DIRECTION.

MODIFIED MANHOLE

For Pipes Greater Than 36 Inches To 84 Inches Inside Diameter
N. T. S.



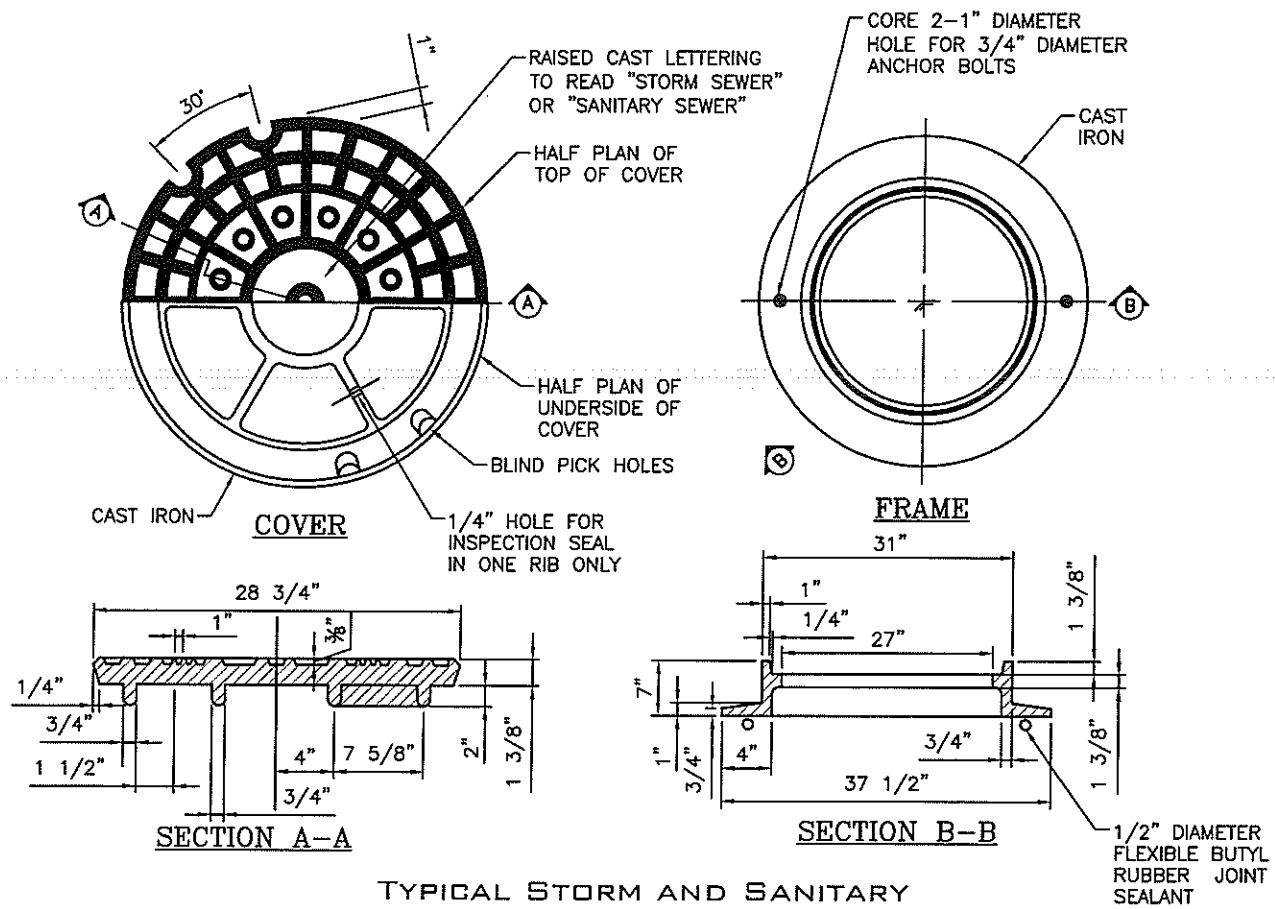
**LENNON, SMITH,
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ENGINEERING INC.**
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Ph:(412)264-4400
Fax:(412)264-1200
E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Modified Manhole.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Modified Manhole Detail**

SS-06

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**TYPICAL STORM AND SANITARY
MANHOLE FRAME AND COVER**
N. T. S.

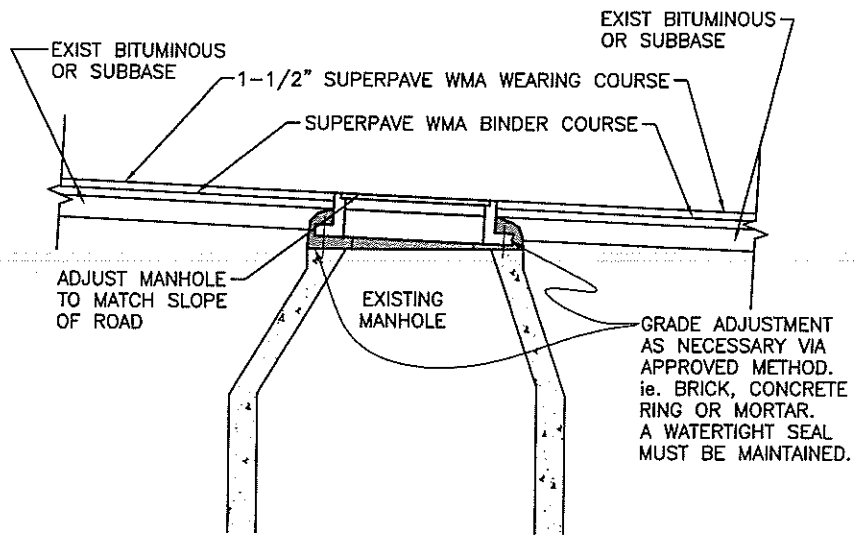


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DATE:	April 2020
FILE NAME:	Manhole Frame and Cover.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Typical Storm And Sanitary
Manhole Frame And Cover Detail**
SS-07

N:\PROJ\355\355-20 SAUDO\Big Beaver Details\Individual Detail Dwg\Manhole Adjustment.dwg layout = Manhole Adjustment Username = christinel Date = May 06, 2020 - 9:25am



- NOTES:**
1. GRADE ADJUSTMENT RINGS MAY NOT BE UTILIZED FOR MANHOLES.
 2. ALL ADJUSTMENTS MUST BE COMPLETED PRIOR TO THE PLACEMENT OF THE WEARING COURSE

TYPICAL
MANHOLE ADJUSTMENT
 N. T. S.



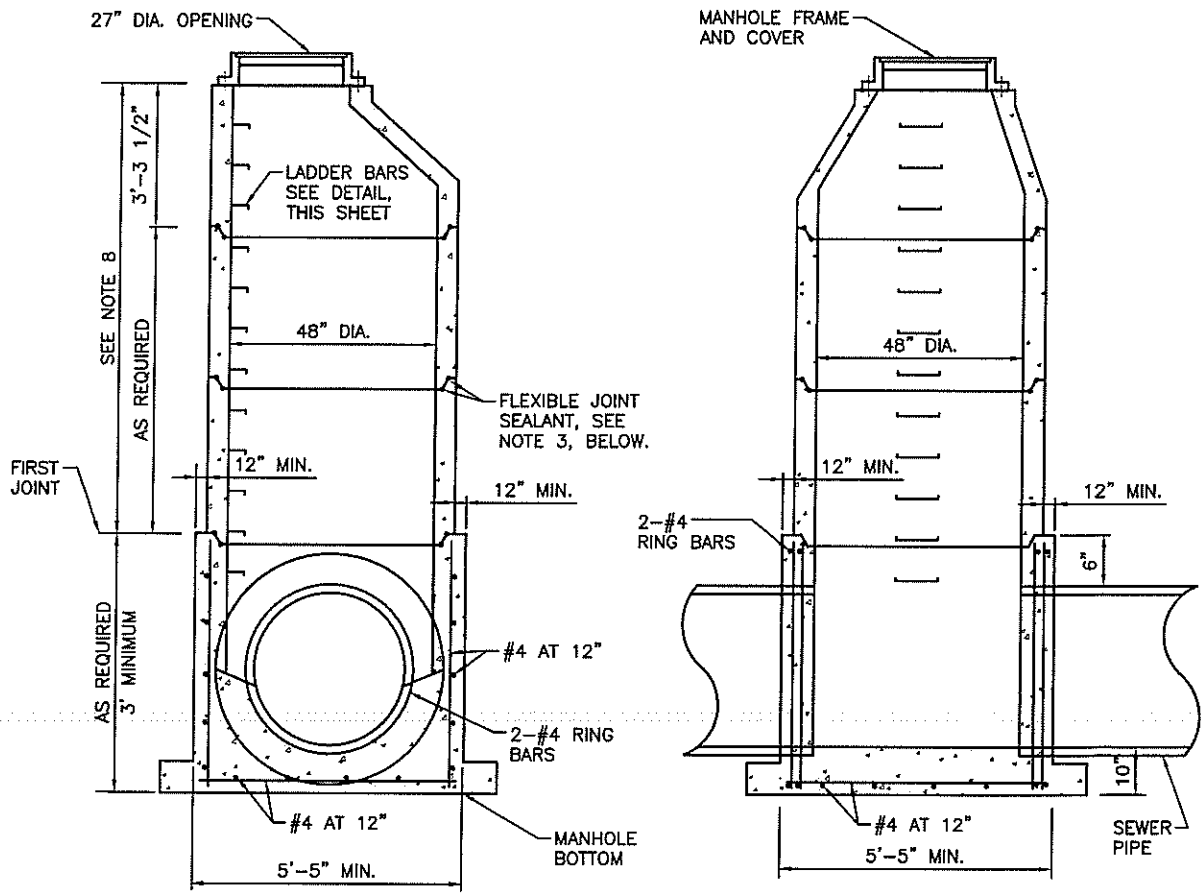
**LENNON, SMITH,
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 846 Fourth Avenue
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DATE:	April 2020
FILE NAME:	Manhole Adjustment.dwg
SCALE:	N.T.S.

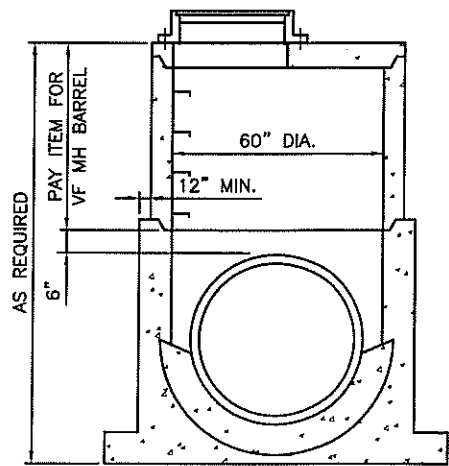
Big Beaver Borough
Typical Manhole Adjustment Detail

SS-08

N:\PROJ\355\355-20_S&UD\Big Beaver Details\Individual Detail Dwg\Storm Manhole.dwg
 Storm Manhole.dwg
 layout = Storm Manhole
 Userame = christine
 Date = May 01, 2020 - 6:33pm



- NOTES:**
1. ALL CONCRETE TO BE CLASS 'AAA' CONCRETE, 4500 PSI, 5% ± 1% AIR ENTRAINED.
 2. ONLY PRECAST MANHOLES SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15 WILL BE PERMITTED.
 3. SEAL MANHOLE BARREL JOINTS WITH 2- 1"Ø FLEXIBLE BUTYL RUBBER JOINT SEALANT, USE 1/2"Ø FOR FRAME AND COVER.
 4. ANCHOR FRAME AND COVER WITH 2-3/4" DIA. S.S. ANCHOR BOLTS SET PERMANENTLY ANCHORED INTO CONCRETE.
 5. POINT LIFTING HOLES WITH NON-SHRINK GROUT, AND LEFT WATERTIGHT, NEAT AND SMOOTH.
 6. MAXIMUM ADJUSTMENT TO FINISHED GRADE USING PRECAST GRADE RINGS SHALL NOT EXCEED SIX INCHES (6").
 7. CONFORM PRECAST SECTIONS TO ASTM C-478 AS REVISED.
 8. IF THIS DIMENSION IS LESS THAN 3'-3" USE PRECAST SLAB TOP DESIGNED TO MEET LOAD CONDITIONS (H-20 MIN).
 9. COAT EXTERIOR OF ALL MANHOLE BARREL SECTIONS WITH APPROVED BITUMINOUS COATING.
 10. CAST LADDER BARS INTO BARREL SECTIONS AND SHALL CONFORM TO ASTM C-478, AS REVISED.
 11. WHERE MANHOLES ARE INSTALLED IN IMPROVED AREAS, THE ENTIRE EXCAVATED AREA SHALL BE BACKFILLED WITH PENNDOT 2A OR AASHTO 57 CRUSHED AGGREGATE.
 12. WHERE MANHOLES ARE CONSTRUCTED IN UNIMPROVED AREAS, BACKFILL THE ENTIRE EXCAVATED AREA WITH PENNDOT 2A OR AASHTO 57 CRUSHED AGGREGATE FROM THE BOTTOM OF THE EXCAVATED AREA TO 12 INCHES ABOVE THE HIGHEST PIPE ENTERING THE MANHOLE. PROVIDE FLANGED BASE.



CAST-IN PLACE OR PRECAST CONCRETE
STORM MANHOLE
 N. T. S.

Big Beaver Borough
Storm Manhole Detail



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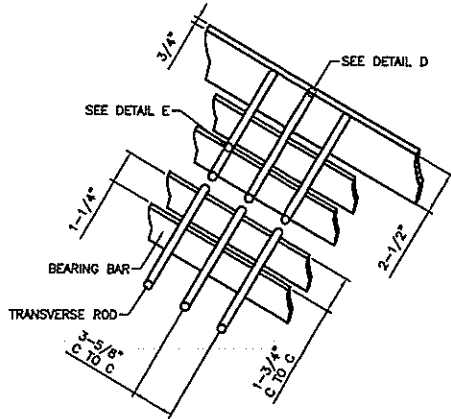
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SCALE:	N.T.S.

SS-09

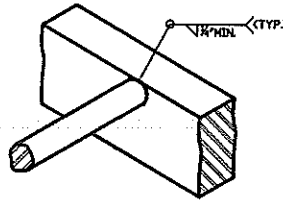
N:\PROJ\355\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\Structural Steel Grate Bicycle Safe.dwg layout - Struc Steel Grate Bicycle Safe User: mchrtalnel Date: May 06, 2020 - 9:26am

GENERAL NOTES

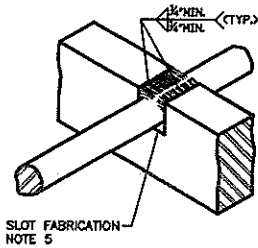
1. THIS SHEET DEPICTS THE DIMENSIONS REQUIRED FOR UNIFORMITY AND INTERCHANGEABILITY. IT DOES NOT INCLUDE DETAILS REQUIRED FOR FABRICATION OR MANUFACTURING. ONLY GRATES SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15 SHALL BE PERMITTED. FOR A BULLETIN 15 LISTING, SUBMIT A 22" X 36" REPRODUCIBLE SHOP DRAWING TO THE BUREAU OF CONSTRUCTION AND MATERIALS, MATERIALS AND TESTING DIVISION FOR REVIEW AND APPROVAL.
2. WELD STRUCTURAL STEEL GRATES IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTION 1105.03 (R).
3. PROVIDE TRANSVERSE BARS, MEETING THE REQUIREMENT OF PUBLICATION 408.
4. PROVIDE BICYCLE-SAFE, STRUCTURAL STEEL OR CAST IRON VANE GRATES FOR INSTALLATION ONLY WHERE BICYCLE TRAFFIC IS ANTICIPATED, SUCH AS CURBED ROADWAYS IN URBAN AREAS OR ROADWAYS SPECIFICALLY ESTABLISHED AND SIGNED AS BIKEWAYS OR BIKE LANES. ALTERNATE BICYCLE-SAFE GRATE DESIGNS SHALL REQUIRE A SHOP DRAWING SUBMISSION, AS SPECIFIED IN NOTE 1, AND SHALL CONFORM TO THE DIMENSIONAL REQUIREMENTS FOR PROPER INSTALLATION WITH THE CURRENT CONCRETE TOP UNITS.
5. FABRICATE SLOTS BY BURNING, DRILLING, SHEARING OR PUNCHING. HAVE THE BOTTOM OF ALL BURNED OR DRILLED SLOTS CONFORM TO THE SHAPE OF THE ROD.
6. PROVIDE STRUCTURAL STEEL GRATES WITH THE GRATE SPACERS LOCATED FLUSH ALONG THE TOP SURFACE OF THE GRATE.
7. DO NOT USE CAST IRON GRATES WITHIN THE TRAVEL LANES. THESE GRATES ARE PERMITTED AT THE EDGE OF OUTSIDE SHOULDERS, SWALES, WIDE MEDIAN SWALES AND INFIELD AREAS THAT ARE OUTSIDE THE TRAVEL LANES OR CURB TO CURB ROADWAYS.



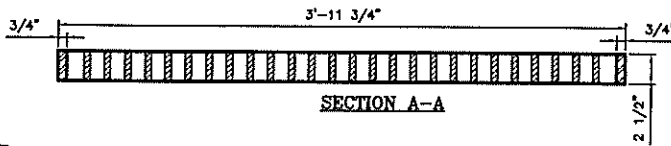
BAR AND ROD SPACING DETAIL



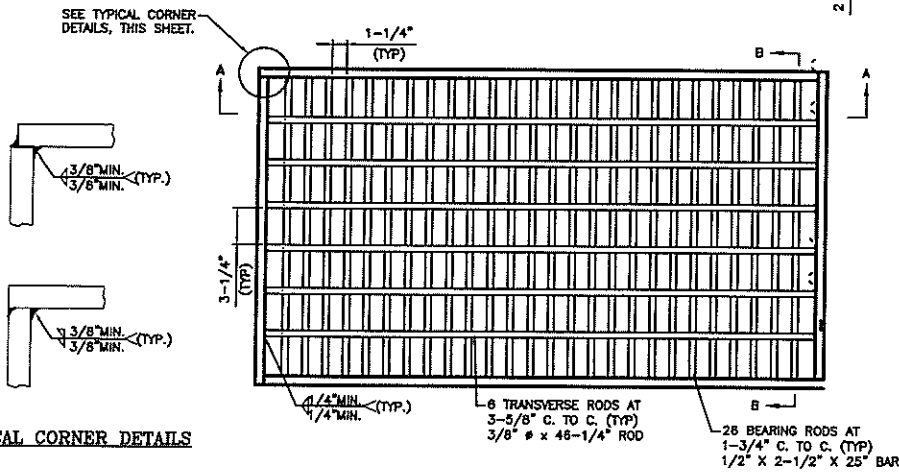
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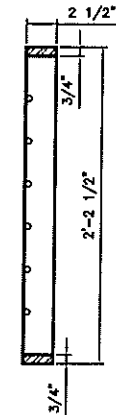
DETAIL E



SECTION A-A



TYPICAL CORNER DETAILS



SECTION B-B

STRUCTURAL STEEL GRATE - BICYCLE SAFE

N. T. S.



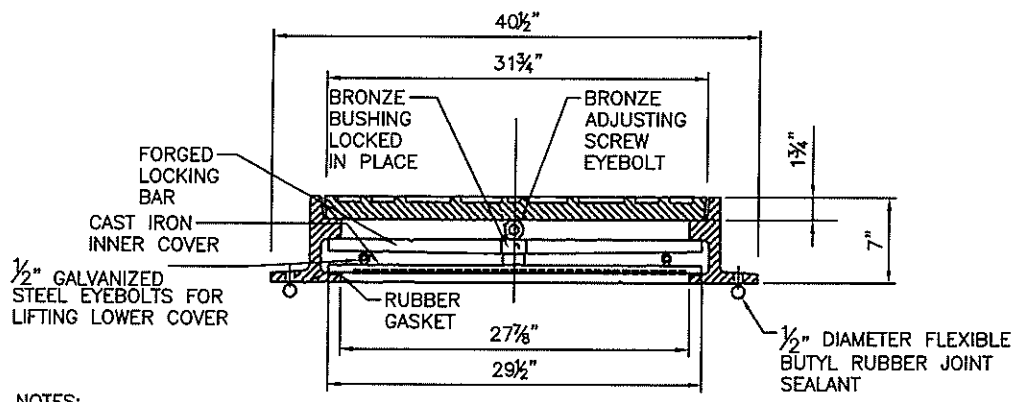
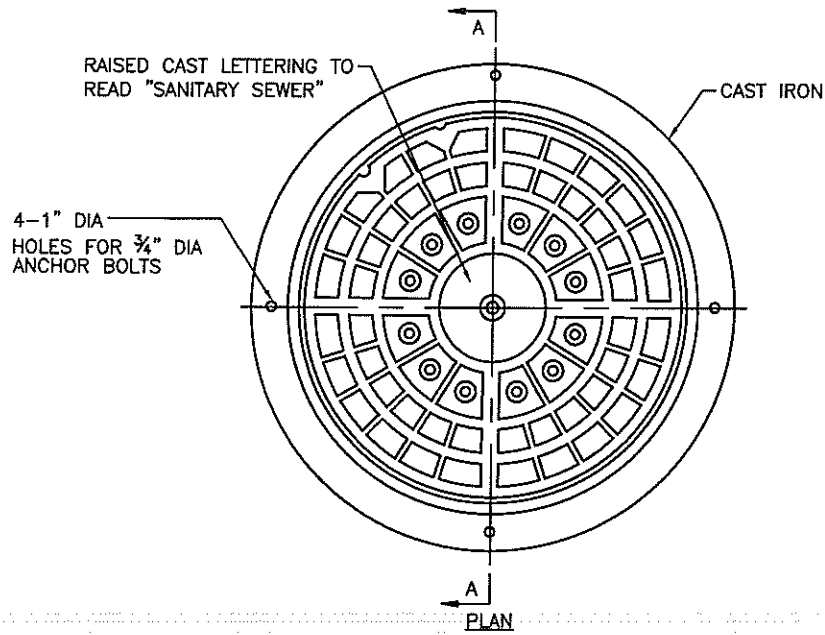
**LENNON, SMITH,
SOULERET
ENGINEERING INC.**
 846 Fourth Avenue
 Coraopolis, PA 15108
 Ph: (412) 264-4400
 Fax: (412) 264-1200
 E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Structural Steel Grate Bicycle Safe.dwg
SCALE:	N.T.S.

Big Beaver Borough
Structural Steel Grate - Bicycle Safe Detail

SS-10

N:\PROJ\355\355-20_SALDO\Big Beaver Details\Individual Detail Dwg\ W.T. Manhole FC Lock Bar Option.dwg W.T. Manhole FC Lock Bar Option.dwg User: w.t. Date: May 01, 2020 6:23pm



- NOTES:**
1. ALL CONTACT SURFACES MACHINED.
 2. PROVIDE SECURITY SADDLE OVER EYEBOLT IF SPECIFIED.
 3. REFER TO STANDARD SANITARY MANHOLE FRAME AND COVER DETAIL FOR DETAIL ON COVER.

WATERTIGHT SANITARY MANHOLE FRAME AND COVER

N. T. S.

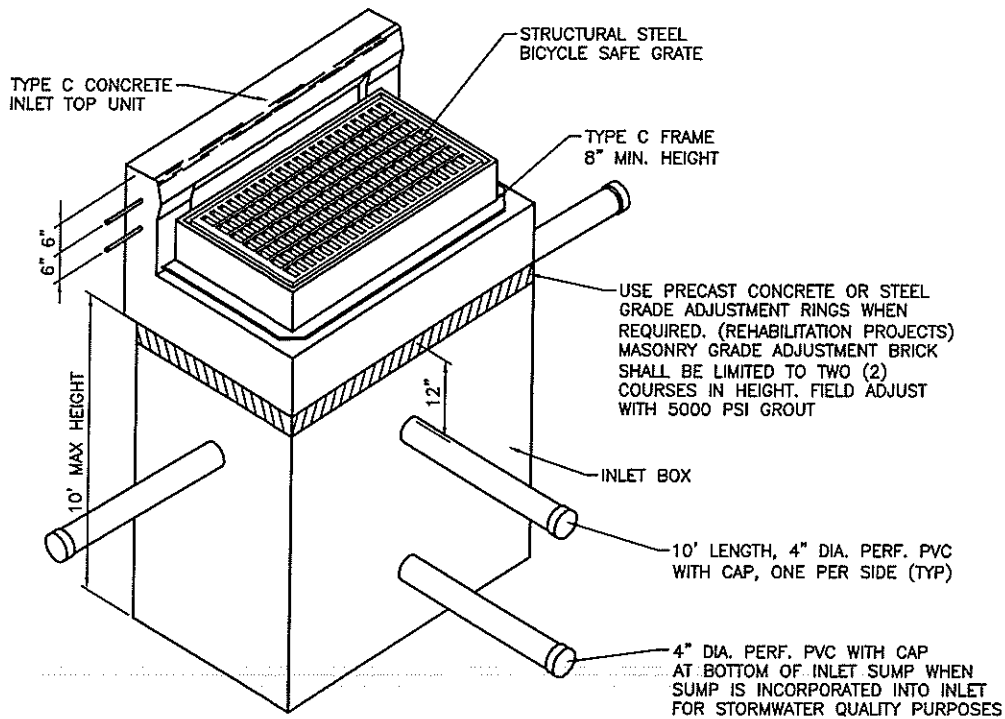


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ENGINEERING INC.**
 846 Fourth Avenue
 Coraopolis, PA 15108
 Ph: (412) 264-4400
 Fax: (412) 264-1200
 E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	W.T. Manhole FC Lock Bar Option.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Watertight Sanitary Manhole Frame
And Cover (With Inner Cover Option) Detail**
 SS-11

N:\PROJ\355\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\ Type C Inlet.dwg layout = Type C Inlet User = christine Date = May 01, 2020 8:00pm



INLET BOX NOTES:

1. CONSTRUCT INLET BOX IN ACCORDANCE WITH THE REQUIREMENTS OF PENNDOT PUBLICATION 408, SECTION 605, FOR CAST-IN-PLACE UNITS AND SECTION 714 FOR PRECAST CEMENT CONCRETE UNITS.
2. FURNISH AND INSTALL INLET BOXES, CONNECTIONS, JOINTS, STEPS, AND OTHER APPURTENANCES AND DETAILS IN ACCORDANCE WITH PENNDOT PUBLICATION 72M STANDARDS FOR ROADWAY CONSTRUCTION, LATEST EDITION - RC-46M, INLET BOX WITH CONCRETE TOP UNIT - TYPE C ALTERNATE WITH TYPE C FRAME. PROVIDE INLET TYPE OF SMALLEST DIMENSION TO ACCOMMODATE CONNECTED PIPE OPENINGS IN ACCORDANCE WITH THIS PUBLICATION.
3. ONLY PRECAST INLET BOXES SUPPLIED BY A MANUFACTURER LISTED IN PENNDOT BULLETIN 15 WILL BE PERMITTED.
4. INLETS THAT EXCEED THE MAXIMUM HEIGHT, AS SHOWN, ARE NOT PERMITTED WITHOUT APPROVAL BY THE TOWNSHIP. A SPECIFIC DESIGN WILL BE REQUIRED FOR REVIEW AND APPROVAL.
5. DO NOT EXTEND PIPE BLOCK-OUTS INTO THE BASE WHEN BASE IS NOT MONOLITHIC WITH THE INLET WALLS.
6. LOCATE PIPE OR PIPES, AS REQUIRED, WITH THE INLET BOTTOM SHAPED TO CHANNEL THE FLOW TOWARD THE OUTLET PIPE.
7. BRICK OR CONCRETE BLOCK INLETS SHALL NOT BE PERMITTED.
8. STORM SEWER DROP CONNECTIONS FROM INVERT OF OUTFLOW PIPE TO INVERT OF INFLOW PIPES SHALL BE A MAXIMUM OF 2 FT.

TYPE C FRAME NOTES:

1. FURNISH AND INSTALL TYPE C ALTERNATE CONCRETE TOP UNIT AND CAST IRON OR STRUCTURAL STEEL TYPE C FRAMES IN ACCORDANCE WITH THE REQUIREMENTS OF PENNDOT PUBLICATION 72M STANDARDS FOR ROADWAY CONSTRUCTION, LATEST EDITION - RC-45M.
2. ONLY TOP UNITS AND FRAMES SUPPLIED BY A MANUFACTURER LISTED IN PENNDOT BULLETIN 15 WILL BE PERMITTED.

INLET GRATE NOTES:

1. FURNISH AND INSTALL STRUCTURAL STEEL BICYCLE SAFE INLET GRATES IN ACCORDANCE WITH THE REQUIREMENTS OF PENNDOT PUBLICATION 72M STANDARDS FOR ROADWAY CONSTRUCTION, LATEST EDITION - RC-45M, STRUCTURAL STEEL GRATE BICYCLE SAFE.
2. VANE GRATES MAY BE USED ONLY WITH PERMISSION FROM THE TOWNSHIP. IF PERMISSION TO USE VANE GRATES IS GRANTED BY THE TOWNSHIP, FURNISH AND INSTALL VANE GRATES IN ACCORDANCE WITH THE REQUIREMENTS OF PENNDOT PUBLICATION 72M STANDARDS FOR ROADWAY CONSTRUCTION, LATEST EDITION - RC-45M, CAST IRON VANE GRATE.
3. CAST IRON GRATES MAY BE USED ONLY WITH PERMISSION FROM THE TOWNSHIP. DO NOT USE CAST IRON GRATES WITHIN THE TRAVEL LANES. IF THESE GRATES ARE PERMITTED BY THE TOWNSHIP, THEY MUST BE LOCATED AT THE EDGE OF OUTSIDE SHOULDERS, SWALES, WIDE MEDIAN SWALES AND INFIELD AREAS THAT ARE OUTSIDE THE TRAVEL LANES OR CURB TO CURB ROADWAYS.
4. ONLY GRATES SUPPLIED BY A MANUFACTURER LISTED IN PENNDOT BULLETIN 15 WILL BE PERMITTED.

TYPE 'C' INLET

N. T. S.



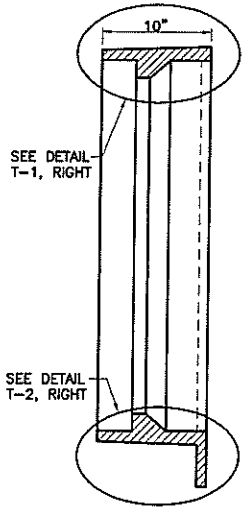
**LENNON, SMITH,
SOULERET
ENGINEERING INC.**
 846 Fourth Avenue
 Coraopolis, PA 15108
 Ph: (412) 264-4400
 Fax: (412) 264-1200
 E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Type C Inlet.dwg
SCALE:	N.T.S.

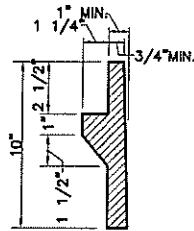
**Big Beaver Borough
Type 'C' Inlet Detail**

SS-12

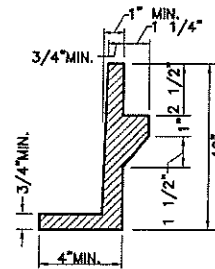
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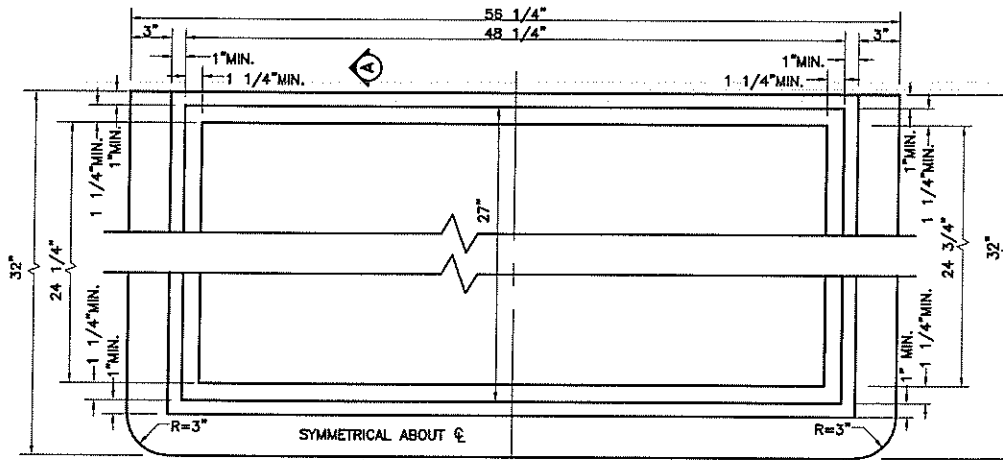
SECTION A-A



DETAIL T-1



DETAIL T-2



SYMMETRICAL ABOUT ϵ

FERROUS CAST MATERIAL FABRICATION

TYPE 'C' FRAME

NOTES:

1. THIS STANDARD DEPICTS THE DIMENSIONS REQUIRED FOR UNIFORMITY AND INTERCHANGEABILITY. IT DOES NOT INCLUDE DETAILS REQUIRED FOR FABRICATION AND MANUFACTURING. ONLY ITEMS SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15 WILL BE PERMITTED.
2. PROVIDE EITHER GRAY, MALLEABLE OR DUCTILE IRON CASTINGS.
3. WELD STRUCTURAL STEEL GRATES IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTION 1105.03(r). WELDING SHOPS ARE NOT REQUIRED TO BE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) CERTIFIED.
4. FURNISH AND INSTALL FRAMES IN ACCORDANCE WITH THE REQUIREMENTS OF PennDOT PUBLICATION 72M STANDARDS FOR ROADWAY CONSTRUCTION, LATEST EDITION - RC-45M.

**TYPICAL
CAST IRON TYPE 'C' FRAME**

N. T. S.



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SOULERET
ENGINEERING INC.**
846 Fourth Avenue
Coraopolis, PA 15108
Ph: (412) 264-4400
Fax: (412) 264-1200
E-mail: info@lssse.com

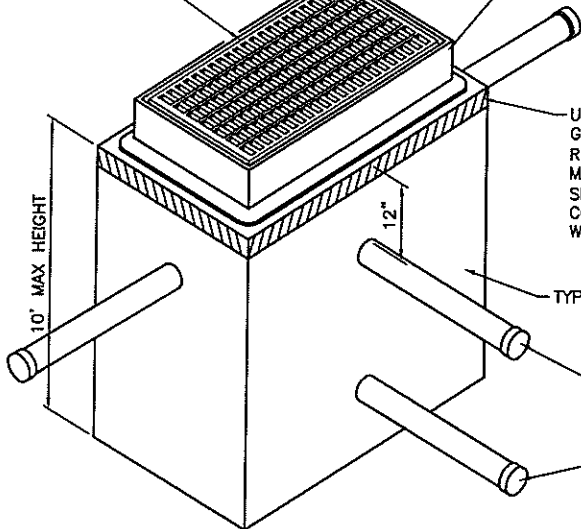
DATE:	April 2020
FILE NAME:	Typ Cast Iron Type C Frame.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Typical Cast Iron Type C Frame Detail**

SS-14

STRUCTURAL STEEL
BICYCLE SAFE GRATE

TYPE M FRAME
10" MIN. HEIGHT



USE PRECAST CONCRETE OR STEEL
GRADE ADJUSTMENT RINGS WHEN
REQUIRED. (REHABILITATION PROJECTS)
MASONRY GRADE ADJUSTMENT BRICK
SHALL BE LIMITED TO TWO (2)
COURSES IN HEIGHT. FIELD ADJUST
WITH 5000 PSI GROUT

TYPE M INLET BOX

10' LENGTH, 4" DIA. PERF. SCHEDULE 40
PVC WITH CAP
ONE PER SIDE (TYP)

4" DIA. PERF. SCHEDULE 40
PVC WITH CAP AT BOTTOM OF INLET
SUMP WHEN SUMP IS INCORPORATED
INTO INLET FOR STORMWATER QUALITY
PURPOSES

INLET BOX NOTES:

1. CONSTRUCT INLET BOX IN ACCORDANCE WITH THE REQUIREMENTS OF PENNDOT PUBLICATION 408, SECTION 605, FOR CAST-IN-PLACE UNITS AND SECTION 714 FOR PRECAST CEMENT CONCRETE UNITS.
2. FURNISH AND INSTALL INLET BOXES, CONNECTIONS, JOINTS, STEPS, AND OTHER APPURTENANCES AND DETAILS IN ACCORDANCE WITH PENNDOT PUBLICATION 72M STANDARDS FOR ROADWAY CONSTRUCTION, LATEST EDITION - RC-46M, INLET BOX WITH TYPE M FRAME. PROVIDE INLET TYPE OF SMALLEST DIMENSION TO ACCOMMODATE CONNECTED PIPE OPENINGS IN ACCORDANCE WITH THIS PUBLICATION.
3. ONLY PRECAST INLET BOXES SUPPLIED BY A MANUFACTURER LISTED IN PENNDOT BULLETIN 15 WILL BE PERMITTED.
4. INLETS THAT EXCEED THE MAXIMUM HEIGHT, AS SHOWN, ARE NOT PERMITTED WITHOUT APPROVAL BY THE MUNICIPALITY. A SPECIFIC DESIGN WILL BE REQUIRED FOR REVIEW AND APPROVAL.
5. DO NOT EXTEND PIPE BLOCK-OUTS INTO THE BASE WHEN BASE IS NOT MONOLITHIC WITH THE INLET WALLS.
6. LOCATE PIPE OR PIPES, AS REQUIRED, WITH THE INLET BOTTOM SHAPED TO CHANNEL THE FLOW TOWARD THE OUTLET PIPE.
7. BRICK OR CONCRETE BLOCK INLETS SHALL NOT BE PERMITTED.
8. STORM SEWER DROP CONNECTIONS FROM INVERT OF OUTFLOW PIPE TO INVERT OF INFLOW PIPES SHALL BE A MAXIMUM OF 2 FT.

TYPE M FRAME NOTES:

1. FURNISH AND INSTALL CAST IRON OR STRUCTURAL STEEL TYPE M FRAMES IN ACCORDANCE WITH THE REQUIREMENTS OF PENNDOT PUBLICATION 72M STANDARDS FOR ROADWAY CONSTRUCTION, LATEST EDITION - RC-45M, TYPE M FRAME, EXCEPT THAT THE FRAME MUST HAVE A MINIMUM 10" HEIGHT.
2. ONLY FRAMES SUPPLIED BY A MANUFACTURER LISTED IN PENNDOT BULLETIN 15 WILL BE PERMITTED.
3. CONCRETE FRAMES ARE PERMITTED ONLY OUTSIDE OF PAVED AREAS. PROVIDE CONCRETE FRAMES PER PENNDOT PUBLICATION 72M, RC-45M.

INLET GRATE NOTES:

1. FURNISH AND INSTALL STRUCTURAL STEEL BICYCLE SAFE INLET GRATES IN ACCORDANCE WITH THE REQUIREMENTS OF PENNDOT PUBLICATION 72M STANDARDS FOR ROADWAY CONSTRUCTION, LATEST EDITION - RC-45M, STRUCTURAL STEEL GRATE BICYCLE SAFE.
2. VANE GRATES MAY BE USED ONLY WITH PERMISSION FROM THE MUNICIPALITY. VANE GRATES (IF PERMITTED) MUST BE TYPE "L" ONLY (BICYCLE SAFE). IF PERMISSION TO USE VANE GRATES IS GRANTED BY THE MUNICIPALITY, FURNISH AND INSTALL VANE GRATES IN ACCORDANCE WITH THE REQUIREMENTS OF PENNDOT PUBLICATION 72M STANDARDS FOR ROADWAY CONSTRUCTION, LATEST EDITION - RC-45M, CAST IRON VANE GRATE.
3. CAST IRON GRATES MAY BE USED ONLY WITH PERMISSION FROM THE MUNICIPALITY. DO NOT USE CAST IRON GRATES WITHIN THE TRAVEL LANES. IF THESE GRATES ARE PERMITTED BY THE MUNICIPALITY, THEY MUST BE LOCATED AT THE EDGE OF OUTSIDE SHOULDERS, SWALES, WIDE MEDIAN SWALES AND INFIELD AREAS THAT ARE OUTSIDE THE TRAVEL LANES OR CURB TO CURB ROADWAYS.
4. ONLY GRATES SUPPLIED BY A MANUFACTURER LISTED IN PENNDOT BULLETIN 15 WILL BE PERMITTED.

TYPE 'M' INLET

N. T. S.

H:\PROJ\355\355-20 SALDD\Big Beaver Details\Individual Detail Dwg\ Type M Inlet.dwg
 layout = Type M Inlet
 Username = christina
 Date = May 04, 2020 - 12:39pm



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SOULERET
ENGINEERING INC.**
846 Fourth Avenue
Coraopolis, PA 15108
Ph:(412)264-4400
Fax:(412)264-1200
E-mail: info@lsse.com

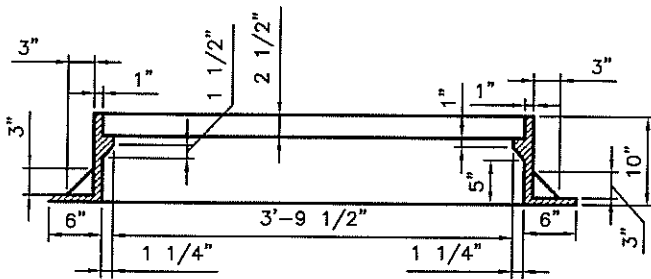
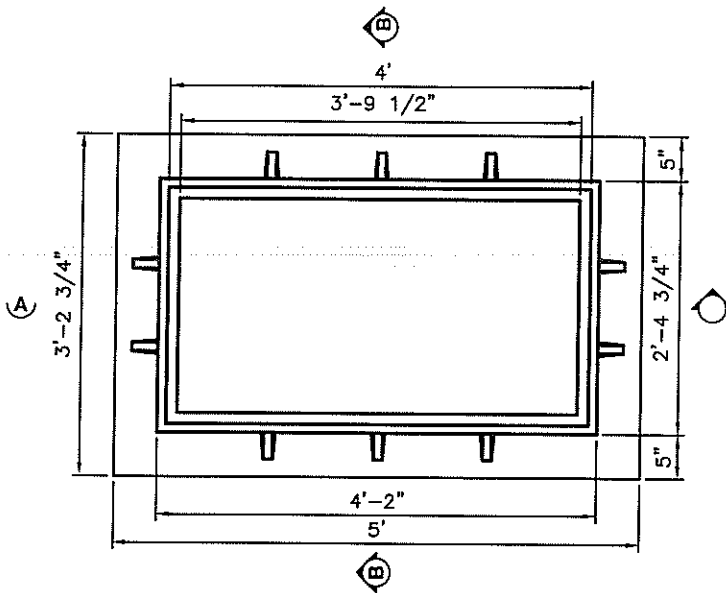
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FILE NAME:	Type M Inlet.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Type 'M' Inlet Detail**

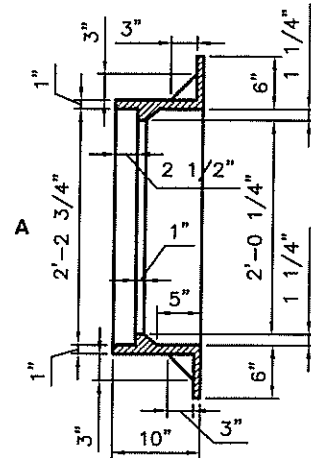
SS-15

NOTES:

1. THIS STANDARD DEPICTS THE DIMENSIONS REQUIRED FOR UNIFORMITY AND INTERCHANGEABILITY. IT DOES NOT INCLUDE DETAILS REQUIRED FOR FABRICATION AND MANUFACTURING. ONLY ITEMS SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15 WILL BE PERMITTED.
2. PROVIDE EITHER GRAY, MALLEABLE OR DUCTILE IRON CASTINGS OR STRUCTURAL STEEL FRAMES.
3. WELD STRUCTURAL STEEL GRATES IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTION 1105.03(r). WELDING SHOPS ARE NOT REQUIRED TO BE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) CERTIFIED.
4. FURNISH AND INSTALL FRAMES IN ACCORDANCE WITH THE REQUIREMENTS OF PennDOT PUBLICATION 72M STANDARDS FOR ROADWAY CONSTRUCTION, LATEST EDITION - RC-45M.
5. CONCRETE FRAMES ARE NOT PERMITTED.
6. SOURCE: PA DOT STANDARDS FOR ROADWAY CONSTRUCTION (LATEST EDITION).



SECTION A-A



SECTION B-B

TYPE 'M' INLET FRAME - 10" HEIGHT

N. T. S.

X:\PROJ\355\355-20_SALDO\Big Beaver Details\Individual Detail Dwg\ Type M Inlet Frame 10 inch Ht.dwg layout = Type M Inlet Frame 10 inch Ht.dwg Userame = chridine Date = May 06, 2020 - 9:30am



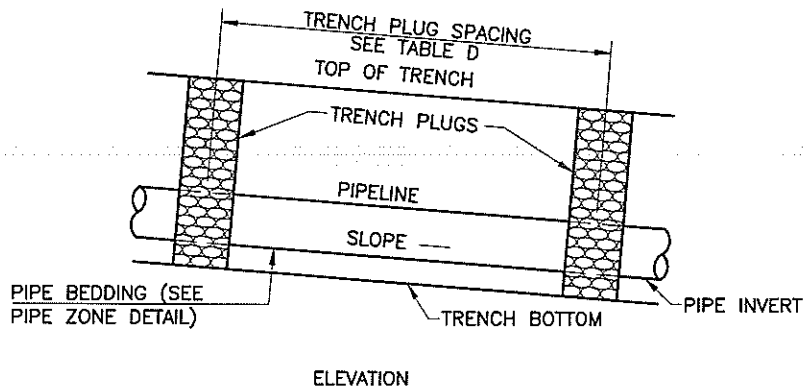
**LENNON, SMITH,
SOULERET
ENGINEERING INC.**
 846 Fourth Avenue
 Coraopolis, PA 15108
 Ph:(412)264-4400
 Fax:(412)264-1200
 E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Type M Inlet Frame 10 inch Ht.dwg
SCALE:	N.T.S.

Big Beaver Borough
Type 'M' Inlet Frame - 10" Height Detail

SS-16

N:\PROJ\355\355-20_SALDO\Big Beaver Details\Individual Detail Dwg\ Trench Plug.dwg layout = Trench Plug User = christine Date = May 04, 2020 - 12:30pm



NOTE:
 LIMIT CLEARING & GRUBBING TO A DISTANCE EQUAL TO TWO TIMES THE LENGTH OF PIPE INSTALLATION THAT CAN BE COMPLETED IN ONE DAY AND LIMIT TRENCH EXCAVATION TO THE LENGTH OF PIPE INSTALLATION, PLUG INSTALLATION, AND BACKFILLING THAT CAN BE COMPLETED IN ONE DAY.

SOURCE:
 PA DEPARTMENT OF ENVIRONMENTAL PROTECTION EROSION AND SEDIMENTATION CONTROL STANDARD WORKSHEETS JANUARY 1996

TRENCH PLUG

N. T. S.



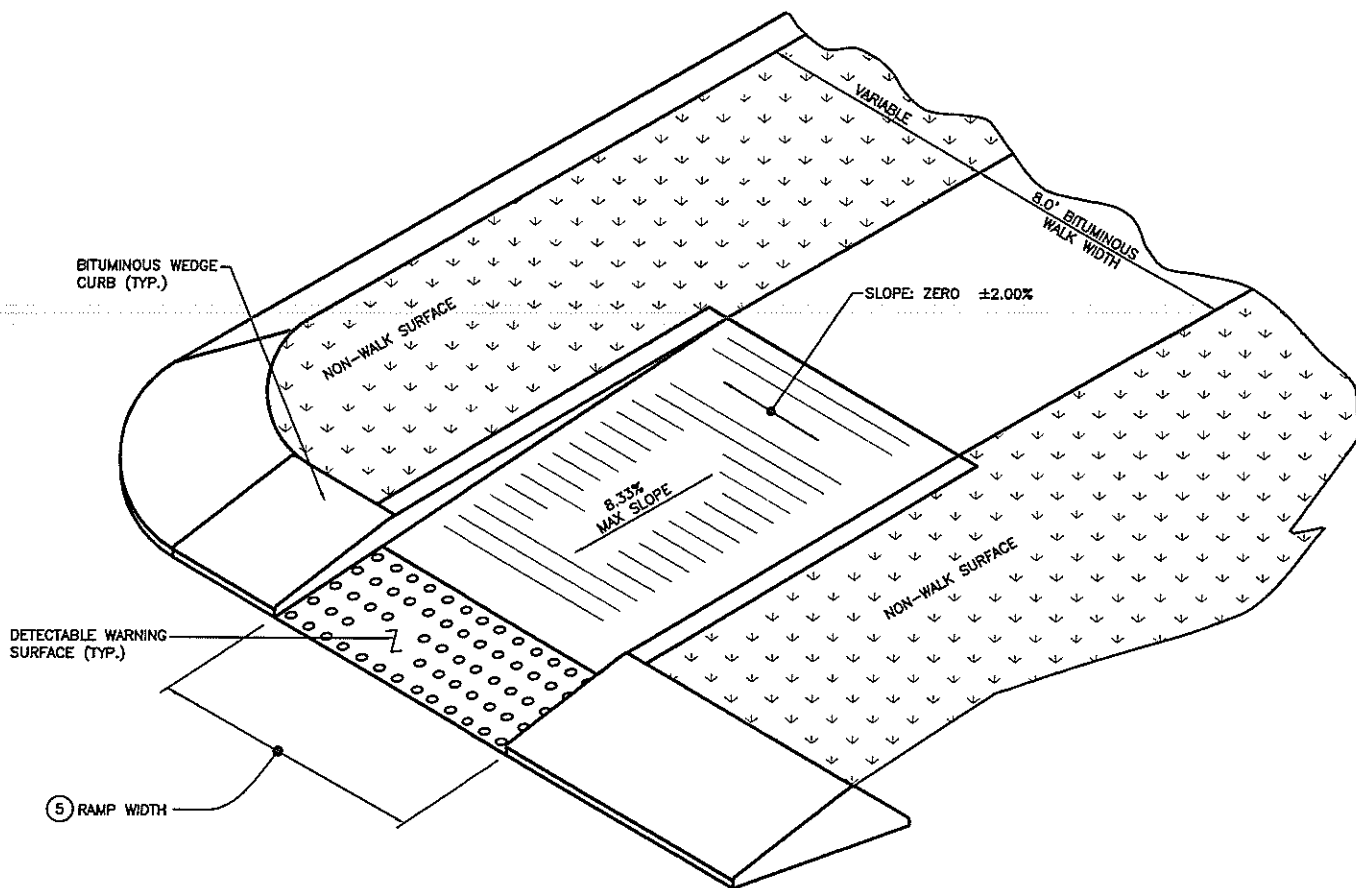
**LENNON, SMITH,
 SOULERET
 ENGINEERING INC.**
 846 Fourth Avenue
 Coraopolis, PA 15108
 Ph: (412) 264-4400
 Fax: (412) 264-1200
 E-mail: info@isse.com

DATE:	April 2020
FILE NAME:	Trench Plug.dwg
SCALE:	N.T.S.

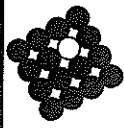
**Big Beaver Borough
 Trench Plug Detail**

SS-17

N:\PROJ\355\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\ Type 4 With Bituminous Wedge Curb.dwg layout = Type 4 With Bituminous Wedge Curb Userame = christinel Date = May 06, 2020 - 9:31am



CURB RAMP DETAIL
N. T. S.

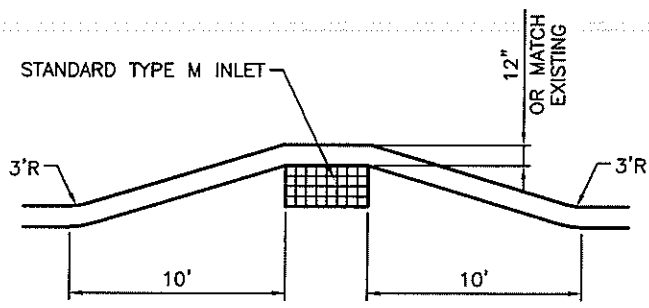


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846 Fourth Avenue
Coraopolis, PA 15108
Ph:(412)264-4400
Fax:(412)264-1200
E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Type 4 With Bituminous Wedge Curb.dwg
SCALE:	N.T.S.

**Big Beaver Borough
PennDOT Type 4 Ramp
With Bituminous Wedge Curb Detail**
SS-18

N:\PROJ\355\20 SALDO\Big Beaver Details\Individual Detail Dwg\Offset Inlet Detail.dwg Layout = Offset Inlet Detail Username = chrstfml Date = May 06, 2020 - 9:33am



OFFSET INLET DETAIL

N. T. S.



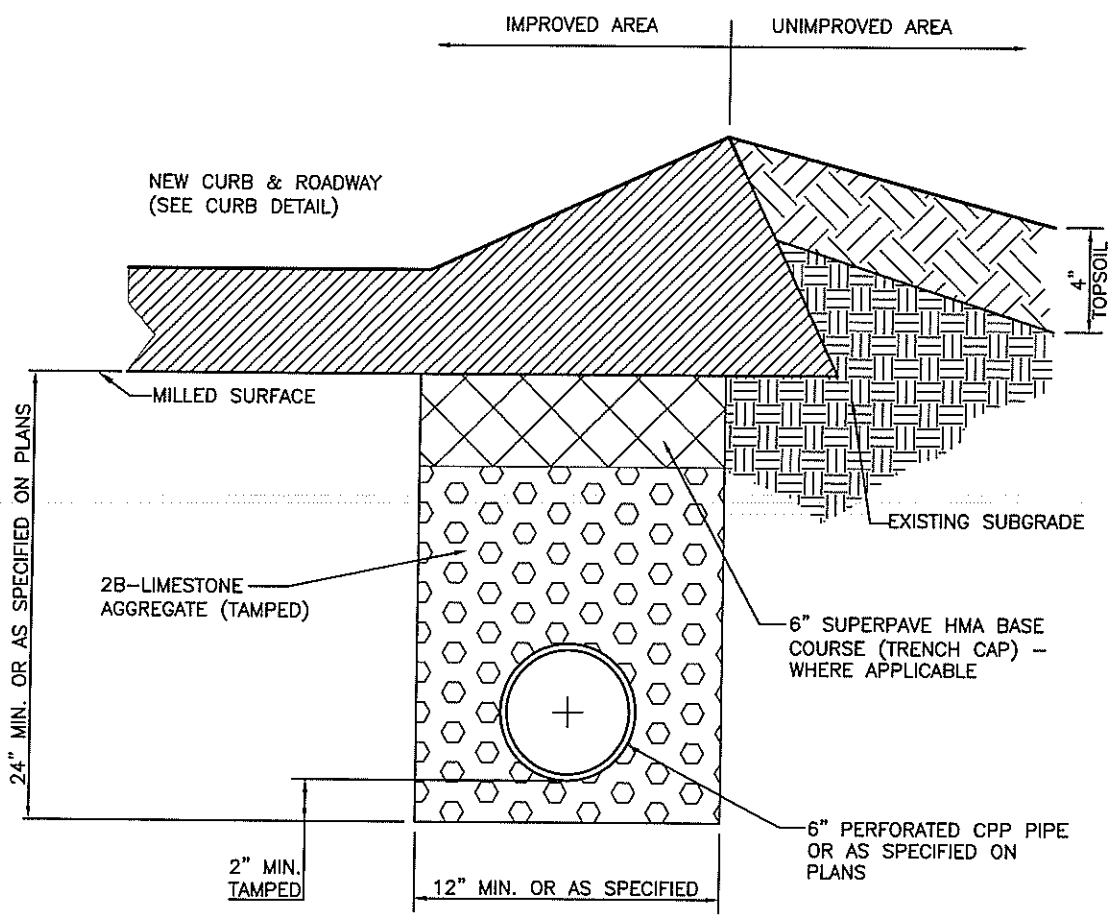
**LENNON, SMITH,
SOULERET
ENGINEERING INC.**
846 Fourth Avenue
Coraopolis, PA 15108
Ph:(412)264-4400
Fax:(412)264-1200
E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Offset Inlet Detail.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Offset Inlet Detail**

SS-19

N:\PROJ\355\355-20 SALDO\Big Beaver Details\Individual Detail Dwg\ Pavement Base Drain.dwg layout = Pavement Base Drain.dwg User = christinel Date = May 06, 2020 - 9:34am



- NOTES:**
1. MATERIALS AND CONSTRUCTION SHALL CONFORM WITH THE REQUIREMENTS OF PENNDOT FORM 408, SECTIONS 610 AND 615.
 2. BITUMINOUS TRENCH CAP IS INCIDENTAL TO THE LF COST OF THE PIPE.

PAVEMENT BASE DRAIN
N. T. S.



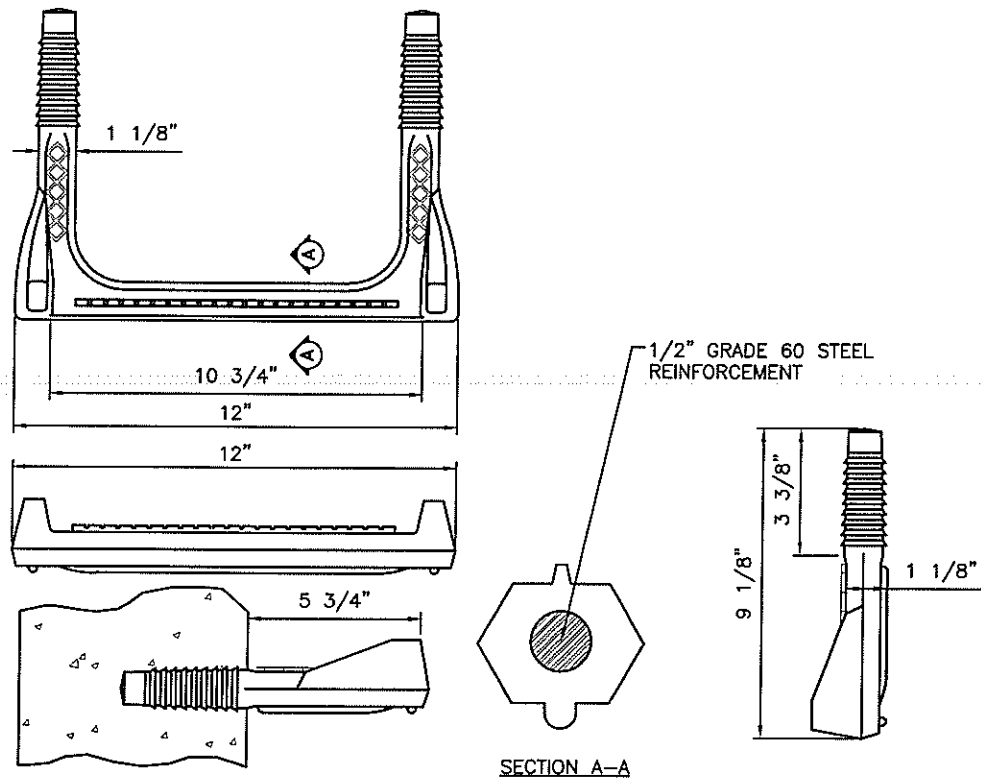
**LENNON, SMITH,
SOULERET
ENGINEERING INC.**
846 Fourth Avenue
Coraopolis, PA 15108
Ph:(412)264-4400
Fax:(412)264-1200
E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Pavement Base Drain.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Pavement Base Drain Detail**

SS-20

N:\PROJ\355\355-20 SAJDO\Big Beaver Details\Individual Detail Dwg\Typical Ladder Bars For Inlet.dwg layout = Typical Ladder Bars For Inlet User: chrifstln Date: May 01, 2020 - 6:21pm



**TYPICAL
LADDER BARS FOR INLET**
N. T. S.



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SOULERET
ENGINEERING INC.**
846 Fourth Avenue
Coraopolis, PA 15108
Ph: (412) 264-4400
Fax: (412) 264-1200
E-mail: info@lsse.com

DATE:	April 2020
FILE NAME:	Typical Ladder Bars For Inlet.dwg
SCALE:	N.T.S.

**Big Beaver Borough
Typical Ladder Bars For Inlet Detail**

SS-21

APPENDIX B

Certificates, Affidavits, Approvals

INDEX

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Beaver County Planning Commission Review	B-7
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Certification of Title and Concurrence of Mortgage Where Applicable	B-11

APPENDIX B

Certificates, Affidavits, Approvals

The certificates acknowledgements and signature blocks that follow shall be inscribed on the subdivision or land development plan as quoted and shall be properly signed and attested when the plan is submitted to the Borough Council. All certificates shall be placed on the final plan in an arrangement suitable for placement of all required seals.

OWNER'S ADOPTION

KNOW ALL MEN BY THESE PRESENTS, that (I, We)

_____ of the
(Name of Owner or Owners)

(City, Borough, Borough) of _____ County of
_____, State of _____, for

(myself, ourselves), (my, our) heirs, executors, administrators and assigns, do hereby adopt this as (my, our) Plan of Subdivision of (my, our) property, situate in the Borough of Big Beaver, County of Beaver and Commonwealth of Pennsylvania, and for divers advantages accruing to (me, us) do hereby dedicate forever, for public use for highway, drainage, sewage and utility purposes, all drives, roads, streets, lands, rights-of-way, easements, ways and other public highways shown upon the Plan, with the same force and effect as if the same had been opened through legal proceedings and in consideration of the approval of said plan and any future acceptance of said public highways, right-of-way and easements by said County of Beaver and Borough of Big Beaver, (I or We),

_____ (Name of Owner or Owners)
hereby agree to and by these presents do release and forever discharge said County of Beaver and said Borough of Big Beaver, their successors or assigns, from any liability for damages arising and to arise from the appropriation of said ground for public highways, and other public uses and the physical grading thereof to any grades that may be established. This dedication and release shall be binding upon

_____ (my our) heirs, executors,
_____ (Name of Owner or Owners)
administrators and assigns and purchasers of lots in this plan.

IN WITNESS WHEREOF, (I or WE) HEREUNTO SET (MY, OUR) HANDS AND SEALS THIS

_____ day of _____, A.D., 20 _____

(Owner or Owners) SEAL

(Owner or Owners) SEAL

WITNESS MY HAND AND NOTARIAL SEAL THIS _____ day of

_____, A.D., 20 _____

My Commission Expires the _____ day of _____, A.D.,
20 _____

SEAL
(Notary Public)

The foregoing adoption and dedication is made by

(Name of Individual or Corporate Owner)

with the full understanding and agreement that the approval of the Borough Council of the Borough of Big Beaver. If hereto attached will become null and void unless this plan is recorded in the Recorder of Deeds Office of Beaver County, County Court House, Beaver, PA, within ninety (90) calendar days of date of said approval.

INDIVIDUAL ACKNOWLEDGMENT

COMMONWEALTH OF PENNSYLVANIA }

} SS:

COUNTY OF BEAVER }

Before me, the subscriber, a Notary Public in and for said State and County personally appeared the above named _____

(Owner)

and acknowledge the foregoing Release and Dedication and Plan to be (his, her, their) act and deed and desired the same to be recorded as such.

WITNESS MY HAND AND NOTARIAL SEAL this _____ day of

_____, A.D., 20 _____

My Commission Expires the _____ day of _____, A.D., 20 _____

SEAL

(Notary Public)

CORPORATION ADOPTION

KNOW ALL MEN BY THESE PRESENTS, that _____
(Name of Corporation)

a corporation, by virtue of a resolution of the Board of Directors, thereof does hereby adopt this as its plan of lots of its property situate in the Borough of Big Beaver, Beaver County, Pennsylvania, and for divers advantages accruing to it, does hereby dedicate forever, for public use and for highway purposes, all drives, roads, streets, lands and ways and other public highways shown upon the plan with the same force and effect as if the same has been opened through legal proceedings, and in consideration of the approval of said plan and any future acceptance of said public highways by the said Borough of Big Beaver, its successors or assigns from any liability for damage arising and to arise from the appropriation of said ground for public highways and the physical grading thereof to any grades that may be established. This

dedication and release shall be binding upon _____
(Name of Corporation)

its successors and assigns and purchasers of lots in this plan.

IN WITNESS WHEREOF, the said corporation has caused its corporate seal to be affixed by the hand of

its president and the same to be attested by its secretary this _____ day of _____, A.D., 20_____

ATTEST:

(Name of Corporation)

(Secretary)

(President)

The foregoing adoption and dedication is made by _____

(Name of Individual or Corporate Owner)

with the full understanding and agreement that the approval of the Borough Council of the Borough of Big Beaver, if hereto attached, will become null and void unless this plan is recorded in the Recorder of Deeds Office of Beaver County, County Court House, Beaver, Pennsylvania, within ninety (90) calendar days of the date of said approval.

CORPORATION ACKNOWLEDGEMENT

COMMONWEALTH OF PENNSYLVANIA }

} SS:

COUNTY OF BEAVER }

On this _____ day of _____, A.D., 20 _____
before me, a Notary Public in and for said County and Commonwealth, personally appeared

_____ of _____
(Name and Title of Officer) (Name of Corporation)

who being duly sworn, deposes and saith that he was personally present at the execution of the adoption,
release and dedication and saw the common and corporate seal of the said Corporation duly signed and

sealed by and as for the act and deed of the said _____
(Name of Corporation)

for the uses and purposes therein mentioned, and that the name of this deponent subscribed to the said
released and dedication as _____
(Title of Officer)

of _____ in attestation of the due execution and
(Name of Corporation)
delivery of said release and dedication of this deponent's own and proper respective handwriting.

(Name of Officer) SEAL

(Title of Officer)

Sworn to and subscribed before me the day and date above written.

WITNESS MY HAND AND NOTARIAL SEAL this _____ day of _____,
A.D., 20 _____

(Notary Public) SEAL

My Commission Expires the _____ day of _____, A.D.,
20 _____

BOROUGH OF BIG BEAVER PLANNING COMMITTEE

The within Plat of Subdivision has been reviewed and recommendations concerning same was dispatched to Borough Council of the Borough of Big Beaver on the _____ day of _____,

DATED this _____ day of _____, A.D. 20_____.

BOROUGH OF BIG BEAVER PLANNING COMMITTEE

(Secretary)

(Chairman)

BEAVER COUNTY PLANNING COMMISSION REVIEW

Minor Subdivisions MUNICIPALITIES with a SALDO:

The Beaver County Planning Commission hereby gives public notice that it has reviewed this plan for recording purposes only. AS REQUIRED BY THE PENNSYLVANIA MUNICIPALITIES PLANNING CODE, ACT 247 OF 1968, AS AMENDED. A COPY OF THE REVIEW IS ON FILE AT THE BEAVER COUNTY OFFICE OF PLANNING AND REDEVELOPMENT. the comments have been FORWARDED to the _____ IN A LETTER dated _____, 20____. The Beaver County Planning Commission does not represent or guarantee that this plan complies with various ordinances, rules, regulations or laws of the local Municipality, The Commonwealth of Pennsylvania, or the Federal Government. The review of the subdivision by the Beaver County Planning Commission does not constitute an acceptance of any services or improvements shown on this plan or an assumption of maintenance responsibilities. (Municipality) has the only and final authority for such conditions.

PLAN TRACKING NUMBER

Director SIGNATURE

DATE

Major Subdivision and/or Land Development Municipality with a SALDO FOR the meeting:

The Beaver County Planning Commission hereby gives public notice that it has reviewed this PLAN FOR RECORDING PURPOSES ONLY AT A MEETING HELD ON _____, 20____, AS REQUIRED BY THE PENNSYLVANIA MUNICIPALITIES PLANNING CODE, ACT 247 OF 1968, AS AMENDED. A COPY OF THE REVIEW IS ON FILE AT THE BEAVER COUNTY OFFICE OF PLANNING AND REDEVELOPMENT. THE COMMENTS HAVE BEEN FORWARDED TO _____ IN A LETTER DATED _____, 20____. THE BEAVER COUNTY PLANNING COMMISSION DOES NOT REPRESENT OR GUARANTEE THAT THIS PLAN COMPLIES WITH THE VARIOUS ORDINANCES, RULES, REGULATIONS OR LAWS OF THE LOCAL MUNICIPALITY, THE COMMONWEALTH OF PENNSYLVANIA, OR THE FEDERAL GOVERNMENT. The review of the subdivision by the Beaver County Planning Commission does not constitute an acceptance of any services or improvements shown on this plan or an assumption of maintenance responsibilities. (Municipality) has the only and final authority for such conditions.

PLAN TRACKING NUMBER

DIRECTOR SIGNATURE

DATE

**OWNER'S ACCEPTANCE OF RESPONSIBILITY FOR PROVIDING STORMWATER
DRAINAGE FACILITIES AND CONTROL OF STORMWATER DRAINAGE**

KNOW ALL MEN BY THESE PRESENTS, that (I, We) _____
of the Borough of Big Beaver, County of Beaver, Commonwealth of Pennsylvania, for ourselves, our
heirs, executors, administrators and assigns, and for our grantees and their subsequent purchasers, do
hereby accept full and complete responsibility, liability, expense and provision of facilities for the
control of stormwater drainage over, across and through this Subdivision of land until such time as (I
or We), our heirs, executors, administrators and assigns construct stormwater drainage facilities in
accordance with the Borough Council specifications and requirements and the same is officially
accepted by action of Borough of Big Beaver, and until such formal acceptance (I or We) for ourselves,
our heirs, executors, administrators, and assigns do hereby release Borough of Big Beaver from any
responsibility in connection therewith. This acceptance of responsibility shall be binding upon

_____ our heirs, executors, administrators and
assigns, and all purchasers of lots in this plan of subdivision.

IN WITNESS WHEREOF, WE HEREUNTO SET OUR HANDS AND SEALS THIS _____

day of _____, A.D., 20_____

(Owner or Owners) SEAL

SURVEYOR'S CERTIFICATE

I, _____ a Professional Land Surveyor of the Commonwealth of Pennsylvania, do hereby certify that this plan correctly represents the lots, lands, streets and highways as surveyed and plotted by me for the owners or agents, and that all property monumentation/iron pins shown on the plan actually exist or will be set in the field.

(SEAL)

(Surveyor)

(Registration No.)

(Date)

HIGHWAY OCCUPANCY PERMIT REQUIREMENT

This plat requires 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." Approval of the Borough of Big Beaver Planning Committee and Borough Council are conditional, subject to action of the Pennsylvania Department of Transportation pursuant to application for a Highway Occupancy Permit.

APPROVAL BY COUNCIL OF BOROUGH OF BIG BEAVER

The Council of the Borough of Big Beaver, Beaver County, Pennsylvania, hereby approves this plan of subdivision for recording purposes only. This approval by the Borough of Big Beaver does not constitute an acceptance of the roads, streets, storm and sanitary drainage facilities, easements or rights-of-way, water mains or any other services or improvements shown on this plan, nor an assumption of maintenance responsibility, nor will the same be accepted or maintained until constructed in accordance with all borough specifications and requirements and officially accepted by action of the Borough Council. This approval shall in no way be deemed an authorization to commence construction or related activities. This plan of subdivision approved by resolution of the Borough Council of the Borough of Big Beaver, Beaver

County, PA, on this _____ day of _____, A.D., 20_____

ATTEST:

(Secretary)

(Chairman)

SEAL:

BOROUGH ENGINEER'S CERTIFICATE

I, _____, a Registered Professional Engineer, certify that this plan meets applicable engineering and design requirements of the current applicable standards and ordinance provisions of the Borough of Big Beaver, except as departures have been authorized by appointed or elected officials of the Borough.

(SEAL)

(Name)

(Registration No.)

(Date)

DATE OF DELIVERY ACKNOWLEDGMENT

This plat was delivered to _____,

by _____

on this _____ day of _____, A.D., 20_____.

(Planning Administrator)

CERTIFICATION OF TITLE AND NO MORTGAGE

I/We hereby certify that the title to the property contained in the _____

_____ is in the name of
(Name of Land Development)

_____ and is recorded in Deed Book
(Owner or Owners)

Volume _____, page _____. I further certify that there is no mortgage, lien, or other encumbrance against this property.

(Witness)

(Owner or Owners)

CERTIFICATION OF TITLE AND CONCURRENCE OF MORTGAGE WHERE APPLICABLE

I/We hereby certify that the title to the property contained in the _____

_____ is in the name of
(Name of Land Development)

_____ and is recorded in Deed Book
(Owner or Owners)

Volume _____, page _____.

(Witness) _____ (Owner or Owners)

_____ mortgagee of the property contained in the
(Name of Land Mortgagee),

_____ consents to the recording of
(Name of Land Development)
said plan and to the dedications and all other matters appearing in the plan.

(Witness) _____ (Name, Title, and Mortgage)



Appendix C
Schedule of Fees and Charges

Refer to the Big Beaver Schedule of Fees, as amended.