

SUBDIVISION AND LAND DEVELOPMENT

213 Attachment 6

Borough of Stockertown

**Appendix F
Standards for Improvements Construction**

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100 GENERAL STANDARDS

101 SCOPE.

All improvements required to be built, placed, erected or planted within existing or proposed Borough roads or rights-of-way or on private property eligible for use by the public, shall conform to these standards for improvements construction.

102 REFERENCES.

Throughout these standards, references will be made to various standard specifications. When such standards are referenced, they shall be considered as being the most current publication, and fully incorporated into these standards.

103 CONTROL OF WORK.

The Borough and/or its agents, employees or consultants, have no direct or indirect supervisory control over improvements construction. Construction methods, procedures and safety provisions are the responsibility of the developer.

104 SAFETY.

In particular, compliance with all local, state and federal regulations regarding safety of all operations, of all workers and of the general public, is the responsibility of the developer.

105 INSPECTION.

Borough inspection of improvements construction will be made to check general compliance with the material and workmanship criteria of these standards. Such inspection shall not relieve the developer from full responsibility for the quality of his work product or the layout of improvements to the lines and grades on the approved plans.

106 NOTIFICATION.

It shall be the responsibility of the developer to notify the appropriate inspection consultant for the Borough or designated authority at least 24 hours prior to commencing any construction activity.

107 CONFLICTS.

Where a conflict exists between the requirements of these standards and the requirements of another jurisdiction, it shall be the responsibility of the developer to resolve the conflict prior to proceeding with construction. The

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developer shall inform the Borough, in writing, of any conflicts, and his methods of resolving same.

200 STREETS

201 GRADING.

Streets shall be graded to the full width of the right-of-way, surfaced and improved to the grades and dimensions shown on the plans, profiles and cross-sections submitted by the developer and approved by the Council.

202 SUBBASE AND PAVEMENT SPECIFICATIONS.

202.1 Subbase and Underdrain

An eight-inch compacted subbase consisting of Type "C" or better PennDOT No. 2A stone shall be constructed on a properly prepared subgrade for all roads. Subbase shall be constructed in accordance with the requirements of Section 350 PennDOT Form 408, current edition. The use of pavement base drain shall be required along both edges of cartway. The pavement base drain shall be constructed in accordance with Section 610 of PennDOT Form 408, current edition Specifications, and Publication 70, Guidelines for Design of Local Roads and Streets.

202.2 Base Course

For all classifications of streets, base course shall be constructed of three inches compacted depth bituminous base course (25 millimeter size) constructed in accordance with PennDOT Superpave Standards.

202.3 Surface Course

Tack Coat – Tack Coat conforming to Section 460 of PennDOT Form 408, current edition, shall be required on all bituminous pavement surfaces prior to placement of surface course(s) paving, if in the opinion of the Borough Engineer, the base course has become nonadherent.

Primary Wearing Course – Within three months after placement of the Bituminous Base Course, a one-inch compacted depth primary top course (9.5 millimeter size) shall be applied. This course shall be in accordance with PennDOT Superpave Standards.

Finish Wearing Course – The final wearing course shall consist of 1 1/2 inches compacted depth bituminous wearing course (12.5 millimeter size) conforming to PennDOT Superpave Standards. This finish course shall not be applied until the subdivision or land

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development has achieved 80% build-out, unless otherwise approved by the Borough.

203. PAVEMENT MARKINGS.

All pavement markings (stop bars, arrows, hatching, etc.) shall be thermoplastic, either cold in-laid or hot applied, conforming to current PennDOT Standards. Long lines, such as street centerline striping or edge of shoulder markings, can either be thermoplastic or painted and shall conform to current PennDOT Standards.

300 CURBING

301 TYPE.

Curbing where required (except for PennDOT roadways) shall be plain cement concrete, upright design, having a height of 22 inches and tapering from a top width of six inches to a base width of eight inches. A six-inch reveal shall be used unless otherwise directed by the Borough Engineer. At street intersections where curbing and sidewalks are required, the curb shall be depressed for the full sidewalk width for handicapped access. The curb reveal at these intersections shall not exceed 1/2 inch.

302 SUBGRADE.

The subgrade shall be substantially dry, unfrozen, firmly compacted soil. Thorough compaction shall be attained by using an approved pneumatic compactor or self-contained compactor, capable of delivering 800 to 1,000 pounds at the shoe.

303 FORMS.

Forms shall be made of approved substantial material, preferably of steel, and shall be smooth, free of warp and sufficiently rigid and supported to resist springing out of shape. These forms shall be of a depth equal to that of the proposed curb. Prior to pouring the concrete, all forms and templates shall be thoroughly cleaned and treated with an approved material to prevent the concrete from adhering thereto. Material which will adhere to or discolor the concrete shall not be used.

304 CONCRETE.

Concrete shall meet the requirements of PennDOT Form 408, current edition, Section 704 for Class A Cement concrete. No concrete shall be mixed or placed when the air temperature is below 40° F. or above 90° F.

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305 POURING.

Curbs shall be carefully poured monolithically without segregation of constituents, tamped and screeded true to grade and section, eliminating all voids and bring sufficient mortar to the surface for finishing in a smooth, neat, even manner using approved tools.

306 JOINTS.

Each curb section shall be constructed in lengths of 10 feet where practicable; in no case shall a section be less than five feet long. Each section shall be separated when pouring by a 1/8 inch steel template equal to the full depth of the curb.

Expansion joints of approved 1/2 inch premoulded bituminous material shall be placed for the full curb depth at all points adjoining sidewalk and existing curb, at point of tangency of street returns and intersecting curbs, and in no case more than 30 feet apart.

307 FINISHING.

Forms may be removed no earlier than 12 hours after placement of the concrete. All construction joints shall then be filled with approved dry, sharp sand. Minor defects and honeycombing shall be corrected by patching with mortar; no plastering will be permitted. All exposed concrete shall be rubbed to a smooth surface and edges at joints finished with a suitable tool.

400 SIDEWALKS

401 SUBGRADE.

The subgrade shall substantially be dry, unfrozen, firmly compacted soil. Thorough compaction shall be attained by using an approved pneumatic compactor or self-contained compactor capable of delivering 800 to 1,000 pounds at the shoe.

402 BASE.

A stone bed shall be placed and thoroughly compacted to a depth of four inches using the above-mentioned compactors. The stone shall be PennDOT No. 2A.

403 FORMS.

Forms shall be made of approved substantial material, preferably of steel, and shall be smooth, free of warp and sufficiently rigid and supported to resist springing out of shape. These forms shall be of a depth equal to that of the proposed sidewalk. Prior to pouring the concrete, all forms and templates shall be thoroughly cleaned and treated with an approved material to prevent the

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concrete from adhering thereto. Material which will adhere to or discolor the concrete shall not be used.

404 CONCRETE.

Concrete shall meet the requirements of PennDOT Form 408, current edition, Section 704, for Class A cement concrete. No concrete shall be mixed or placed when the air temperature is below 40° F or above 90° F.

405 POURING.

Sidewalks shall be carefully poured monolithically without segregation of constituents to a depth of five inches and cross-overs six inches – see details, and screeded true to grade and sections, eliminating all voids and bringing sufficient mortar to the surface for finishing in a smooth, neat, even manner using approved wood floats.

406 CONSTRUCTION.

Sidewalk shall slope toward the street at the rate of 1/4 inch per foot. It shall be constructed in separate slabs of 30 feet in length, except for closures. These slabs shall be separated for their full depth by expansion joints of approved 1/2 inch premoulded bituminous material. This premoulded material shall also be placed longitudinally at the joint where sidewalk slabs abut concrete curb and existing sidewalk. Between the transverse expansion joints, the slabs shall be divided into blocks five feet in length by using 1/8 inch steel templates equal in depth to that of the slab. Where existing light standards, poles, fire hydrants, etc., are within the sidewalk area, concrete around such structures shall be scored to a depth of 1/4 the slab thickness, in a block eight inches wider than the maximum dimension of the structure at a sidewalk elevation. Prior to placing the concrete, 1/4 inch premoulded expansion joints shall be placed completely around the structures for the full depth of the sidewalk. All joints shall be edged with an edger having a 1/4 inch radius.

407 HANDICAPPED RAMP.

At all intersections, sidewalks shall be extended through the planting strip, if it exists, to abut depressed concrete curbing on the curve return, to facilitate a handicapped ramp to the cartway.

500 SANITARY SEWERS

501 SPECIFICATIONS.

Materials, workmanship and acceptance criteria shall be in accordance with the latest revision of Sanitary Sewer Specifications of the controlling Authority.

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502 STOCKERTOWN BOROUGH PRE-EMPTION – BACKFILL REQUIREMENTS.

After proper installation of the pipe and special envelope, backfilling with select material may be performed. All backfill shall be compacted through the use of approved mechanical tampers and water jetting as directed. In existing roads and the first six feet of shoulder areas or 16 1/2 feet from centerline, whichever is greater, the entire width and depth shall be backfilled with PennDOT No. 2-A crushed stone and shall be mechanically tamped in layers not to exceed 12 inches. In new developments where new roads are being constructed, the trench may be backfilled with earth backfill material which shall not contain rock pieces in excess of six inches in any dimension and shall be mechanically tamped in six-inch layers. The trench, backfilled with earth, shall be temporarily surfaced and maintained with bituminous cold patch material, and allowed to settle for at least 180 days, after which the bituminous coated base course may be applied. If this one-hundred-eighty-day lag time is not acceptable, the full stone backfill requirement shall apply.

503 PAVEMENT RESTORATION PROCEDURES.

The following restoration procedures shall be followed within the paved areas of all Borough streets:

503.1 Mechanical Cutting of Existing Pavement

Prior to performing any trench excavation, the Contractor shall determine the location and width of all proposed water mains. The outline shall be marked on the existing pavement and cut by mechanical means, such as a saw, or jackhammer. All cuts shall be full pavement depth, straight and true.

503.2. Subgrade Preparation

After the trench has completely settled, the area shall be excavated to the required depth, shaped and thoroughly compacted in accordance with the requirement of Section 210 of PennDOT Publication 408 (latest edition). If the materials of subgrade are wet or unsuitable, they shall be removed and replaced with suitable material, placed and compacted in accordance with Section 350 of PennDOT Publication 408 (latest edition).

503.3. Base Course

On the prepared subgrade, the contract shall place an eight-inch crush aggregate base course in accordance with Section 310 of PennDOT Publication 408 (latest edition).

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503.4. Bituminous Surface Course

Immediately after the crushed aggregate base course is placed, and before traffic is allowed over the area, the contractor shall place a 1 1/2 inch bituminous binder course ID-2 and a one-inch bituminous wearing course ID-2. The binder course shall comply with Section 421 of PennDOT Publication 408 (latest edition). The bituminous wearing course shall comply with Section 420 of PennDOT Publication 408 (latest edition) and have a SRL value of M or better.

If the bituminous wearing course is not placed on the binder course within 48 hours, the area shall be tack-coated as specified in Section 460 of PennDOT Publication 408 (latest edition).

503.5. Joint Sealing

Where the bituminous wearing course is placed adjacent to existing drives and pavements, these joints should be sealed with hot PennDOT Class AC-2000 asphalt cement. The seal shall be applied to the surface by means of squeegees immediately after final rolling to completely fill the surface voids and provide a watertight joint. Excess asphalt shall be removed from the surface in an approved manner.

600 WATER SUPPLY AND DISTRIBUTION

601 SPECIFICATIONS.

Materials, workmanship and acceptance criteria shall be in accordance with the latest revision of Water System Specifications of the Controlling Authority.

602 STOCKERTOWN BOROUGH PRE-EMPTION – BACKFILL REQUIREMENTS.

After proper installation of the pipe and special envelope, backfilling with select material may be performed. All backfill shall be compacted through the use of approved mechanical tampers and water jetting as directed. In existing roads and the first six feet of shoulder areas or 16 1/2 feet from center line, whichever is greater, the entire width and depth shall be backfilled with PennDOT No. 2-A Modified crushed stone and shall be mechanically tamped in layers not to exceed 12 inches. In new developments where new roads are being constructed, the trench may be backfilled with earth backfill material which shall not contain rock pieces in excess of six inches in any dimension and shall be mechanically tamped in six-inch layers. The trench, backfilled with earth, shall be temporarily surfaced and maintained with bituminous cold patch material, and allowed to settle for at least 180 days, after which the bituminous coated base course may be applied. If this one-hundred-eighty-day lag time is not acceptable, the full stone backfill requirement shall apply.

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603 PAVEMENT RESTORATION PROCEDURES.

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603.1 Mechanical Cutting of Existing Pavement

Prior to performing any trench excavation, the Contractor shall determine the location and width of all proposed water mains. The outline shall be marked on the existing pavement and cut by mechanical means, such as a saw or jackhammer. All cuts shall be full pavement depth, straight and true.

If during the actual trench excavation the pavement edge is damaged or lost, the area shall be recut to provide a straight edge.

603.2 Subgrade Preparation

After the trench has completely settled, the area shall be excavated to the required depth, shaped and thoroughly compacted in accordance with the requirement of Section 210 of PennDOT Publication 408 (latest edition). If the materials of subgrade are wet or unsuitable, they shall be removed and replaced with suitable material, placed and compacted in accordance with Section 350 of PennDOT Publication 408 (latest edition).

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On the prepared subgrade, the contract shall place an eight-inch crush aggregate base course in accordance with Section 310 of PennDOT Publication 408 (latest edition).

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Immediately after the crushed aggregate base course is placed, and before traffic is allowed over the area, the contractor shall place a 1 1/2 inch bituminous binder course, and a one-inch bituminous wearing course. The binder course shall be an ID-2 mix complying with Section 420 of PennDOT Publication 408 (latest edition) and have a SRL value of M or better.

If the bituminous wearing course is not placed on the binder course within 48 hours, the area shall be tack coated as specified in Section 460 of PennDOT Publication 408 (latest edition).

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603.5 Joint Sealing

Where the bituminous wearing course is placed adjacent to existing drives and pavements, these joints should be sealed with hot PennDOT Class AC-2000 asphalt cement. The seal shall be applied to the surface by means of squeegees immediately after final rolling to completely fill the surface voids and provide a watertight joint. Excess asphalt shall be removed from the surface in an approved manner.

700 STORM DRAINAGE SYSTEM

Storm drainage systems shall be installed in accordance with the design standards and requirements set forth in § 213-25 of Chapter 213, Subdivision and Land Development.

701 STORM PIPING.

Storm sewers shall have a minimum diameter of 15 inches. Storm sewers within all roads and road rights-of-way shall be made of reinforced concrete, Class III or better. All other storm sewers shall either be made of galvanized coated helical corrugated metal or reinforced concrete, Class III or better. Sewers shall be installed on sufficient slopes to provide a minimum velocity of three feet per second when flowing full.

Reinforced cement concrete and galvanized coated helical corrugated metal pipe shall comply with PennDOT Form 408, Section 600, current edition.

702 INLETS AND MANHOLES.

Inlets shall be placed at points of abrupt changes in the horizontal or vertical directions of storm sewers, at points where the flow in swales exceeds three inches, and at a maximum distance of 600 feet apart. Inlets shall normally be located beyond the curb radius points. For inlet location at corners, the depth shall be considered for each gutter. The Manning Equation shall be used to calculate the capacities of gutters. Pennsylvania Department of Transportation two feet by four feet and two feet by six feet special inlets or equivalents should be and can be considered to have capacities of 3.0 cfs and 5.0 cfs, respectively. Inlets shall be depressed two inches below the grade of the gutter or ground surface. Manhole may be substituted for inlets at locations where inlets are not required to handle surface runoff.

Inlets and manholes shall be of precast concrete construction in accordance with Section 605 of PennDOT, Form 408, Specifications, current edition, except that masonry inlets or manholes are specifically prohibited.

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703. HEADWALLS/WINGWALLS.

Headwalls shall be used where storm runoff enters the storm sewer horizontally from a natural or manmade channel. The capacity of such storm sewers shall be calculated for both steady flow and culvert design.

The lower values of the two shall be used to determine the capacity of the storm sewer.

Headwalls and wingwalls shall be of precast or poured in place concrete construction in accordance with Section 605 of PennDOT, Form 408, current edition. The headwall length shall be long enough to facilitate a transverse return from the culvert invert to the top of embankment behind the wall at a slope not exceeding three horizontal to one vertical.

704 OPEN CHANNELS.

Open channels shall be designed to handle, without overflowing, the calculated runoff from a storm of ten-year to one-hundred-year frequency, as specified in § 213-25C. The capacities of any modifications to natural channels shall be computed using the Manning Equation. If the open channels to be constructed are within a watershed with an approved Stormwater Management Plan enacted pursuant to Act 167, the criteria in the applicable plan shall be used.

705 INSTALLATION.

All pipe laying shall carefully progress uphill with hubs upgrade and ends fully and closely jointed. Trench widths shall not exceed the outside diameter of the pipe plus 16 inches, and depths shall be as required. Trench walls shall be vertical and bottoms shall be horizontal.

706 BEDDING.

Prior to laying the pipe in the trench, a bedding of PennDOT No. 2A crushed stone shall be placed on the trench bottom. This material shall be a minimum of four inches in depth and thoroughly compacted with approved mechanical tampers. The bedding shall be graded to provide a uniform and continuous bearing support for the pipe throughout its entire length. Bell holes shall be provided at the ends of pipe length to prevent bearing on the joints.

707 BACKFILLING.

After proper installation of the pipe and special envelope, backfilling with select material may be performed. All backfill shall be compacted through the use of approved mechanical tampers as directed. In existing roads and the first six feet of shoulder areas or 16 1/2 feet from center line, whichever is greater, the entire width and depth shall be backfilled with PennDOT No. 2-A crushed stone and shall be mechanically tamped in layers not to exceed 12 inches. In new

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developments where new roads are being constructed, the trench may be backfilled with earth backfill material, which shall not contain rock pieces in excess of six inches in any dimension and shall be mechanically tamped in six-inch layers. The trench, backfilled with earth, shall be temporarily surfaced and maintained with bituminous cold patch material, and allowed to settle for at least 180 days after which the bituminous coated base course may be applied. If this one-hundred-eighty-day lag time is not acceptable, the full stone backfill requirement shall apply.

800 EROSION AND SEDIMENTATION CONTROL

Improvements installed to control soil erosion and sedimentation shall be in accordance with design standards set forth in § 213-27A of Chapter 213, Subdivision and Land Development.

801 RESPONSIBILITIES.

The responsibility for soil erosion and sedimentation control during the installation of improvements and the development of subdivision or land development shall be in accordance with the following requirements:

801.1 Sedimentation Control

Whenever sedimentation is caused by stripping vegetation, regrading or other development, it shall be the responsibility of the person, corporation or other entity causing such sedimentation to remove it from all adjoining surfaces, drainage systems and water courses and to repair any damage at his expense as quickly as possible.

801.2 Facilities Maintenance

Maintenance of all drainage facilities and water courses within any subdivision or land development is the responsibility of the developer until they are accepted by the Borough Council or some other official agency, after which they become the responsibility of the accepting agency.

801.3 Restoration

It is the responsibility of any person, corporation or other entity doing any act on or across a communal stream, water course or swale, or upon the floodplain or right-of-way thereof, to maintain as nearly as possible in its present state the stream, watercourse, swale, flood plan or right-of-way during the pendency of the activity and to return it to its original or equal condition after such activity is completed.

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801.4 Maintenance on Private Property

Maintenance of drainage facilities or watercourses originating and completely on private property are the responsibilities of the owner to their point of open discharge at the property line or at a communal watercourse within the property.

801.5 Encroachment Prohibited Without Permit

No person, corporation or other entity shall block, impede the inflow or alter, construct any structure, or deposit any material or thing, or commit any act which will affect normal or flood flow in any stream or water course without having obtained prior approval from the Borough Council or the Pennsylvania Department of Environmental Resources, whichever is applicable.

900 TREE PLANTING AND LANDSCAPING

901 LANDSCAPE PLAN.

A landscape plan shall be required for any subdivision or land development which proposes the planting of trees and shrubbery. The plan shall locate and provide specifications for all landscaping proposed by the developer.

902 PLANT MATERIALS.

Street trees, conifers and shrubs shall be of nursery stock quality, grown under the same climatic conditions as at the development site. All materials shall be of the size indicated on the plans and required by Chapter 213, Subdivision and Land Development. They shall be of hearty and symmetrical growth, free of insect pests and disease.

903 PLANTING.

All planting shall be at the location and spacing indicated on the plans and required by the Borough Zoning and/or Subdivision and Land Development Ordinances and shall be done in conformance with good nursery and landscape practice.

904 GROUND COVER AND SEEDING.

904.1 Detention Basins

Detention basin subgrade shall be sealed with a top course of impermeable clay over the entire pond bottom and returning a minimum of one foot up the pond banks. A minimum of six inches of topsoil shall then be placed and fine graded to the design grades. Seed

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on the pond bottom shall be PennDOT Formula “D” placed at 21 pounds per 1,000 square yards with PennDOT Formula “C” at 9 pounds per 1,000 square yards on the side slopes and berm. Fertilization and mulching shall be in accordance with Section 804 of PennDOT Form 408, current edition.

904.2 Planting Strips and Recreation Areas

A minimum of four inches of topsoil shall be placed and fine graded to the design grades. PennDOT Formula “B” seed mix at 21 pounds per 1,000 square yards shall be placed. Fertilization and mulching shall be in accordance with Section 804 of PennDOT Form 408 Specifications, current edition.

1000 TRAFFIC SIGNALIZATION AND CONTROLS

1001 CONTROLLER ASSEMBLY AND CABINET.

Controller Assembly shall meet the following minimum standards:

- 1001.1 Be compatible with Peek Traffic Systems Model 3000 or newer.
- 1001.2 Nema TS2 controller in a TS2 Type 1 base-mounted cabinet.
- 1001.3 Cabinet shall be Hennessy Products M36 or equal base mount, with MMU 16 malfunction management unit, 3 BIU Interface units, 12 position rear panel, 24 volt cabinet power supply, detector rack, and TS2 two-channel loop amplifiers. TS2 type 2 controller shall include optional D module to provide for downward compatibility with TS1 cabinets.
- 1001.4 The cabinet shall be installed meeting the requirements of PennDOT PUB 148 base mounting “Type I” base mounting arrangement.
- 1001.5 Provide surge protection package, SHP 300, as manufactured by EDCO Incorporated of Florida, or an approved equal. Install per manufacturer’s specifications.
- 1001.6 Cabinet shall be supplied with communication module and panel for future closed-loop system operation.
- 1001.7 Cabinet shall be wired for 3M Opticom, Emergency vehicle preemption.
- 1001.8 Cabinet shall contain receptacle, 30 amp, 120 volts, Hubble model #2615, or approved equal, for attachment of alternative power source (emergency generator). The neutral wire of the alternative power source circuit should be connected with the neutral buss of the

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controller unit. All switches necessary to facilitate change over from public to generated power supply shall be provided.

- 1001.9 Appropriate overload and short circuit protection shall be provided within the controller assembly. A thirty-amp circuit breaker should be utilized.
- 1001.10 Cabinet-vent fan shall be weather- and verminproof and thermostatically controlled.
- 1001.11 The controller shall be capable of providing the signal timing and sequences as shown on the permit.
- 1001.12 At the time of traffic signal startup, the developer shall have a traffic signal technician from the installer be present to ensure proper signal function. All functions of the traffic signal system shall be fully operational at this time and shall be to the satisfaction of PennDOT and Stockertown Borough.
- 1001.13 Police panel shall be equipped with a hand control switch.

1002 DETECTORS.

- 1002.1 The loop detectors shall be capable of detecting various types of vehicles ranging from motorcycles to tractor-trailers.
- 1002.2 Detectors shall be solid state type, self contained, Sarasota 222 GP6 or equal.

1003 DETECTOR WIRE.

- 1003.1 Loop detector sensor wire shall be 14 AWG minimum in accordance with IMSA Spec. 51-5.
- 1003.2 Epoxy embedding material must be approved per PennDOT Bulletin 15.

1004 JUNCTION BOXES.

- 1004.1 Junction boxes shall be in accordance with PennDOT Standards and shall be Type JB-27 with the following exception:
 - 1004.11 If junction box is located in cartway or stone or paved shoulder, the unit shall be installed with top surface finishing at or just below finish grade and shall meet H-20 traffic loading standards.

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1005 WIRING.

- 1005.1 Signal cable conductors shall be 14 AWG stranded color coded with thermo-plastic jacket in conformance with IMSA specification number 19.
- 1005.2 The number of conductors shall be the specific quantity as required on the condition diagram plus one spare conductor.

1006 ELECTRICAL SERVICE/METER.

- 1006.1 All service equipment shall meet the requirements of the utility company.
- 1006.2 Service disconnect enclosure shall be aluminum or stainless steel.
- 1006.3 Power service equipment shall be capable of supporting the traffic signal operation with proper overcurrent protection.
- 1006.4 Meter socket as specified by utility company.

1007 EMERGENCY VEHICLE PREEMPTION.

All traffic signal installations shall provide a fully functional "Emergency Vehicle Preemption" system meeting the following requirements:

- 1007.1 Shall be the latest 3M Opticom Priority Control System Series.
- 1007.2 Installation and location of optical detectors shall be to the satisfaction of PennDOT and the Borough.
- 1007.3 Optical detectors shall be aimed and adjusted at the time of signal startup for optimum performance.
- 1007.4 Shall have data encoding capability.
- 1007.5 Shall be warranted for five years.
- 1007.6 At each detector location, shall be equipped with flashing white fail-safe indication light facing street or approach where emergency vehicle is approaching.

1008 WARRANTY.

- 1008.1 All equipment furnished under these specifications shall be new.
- 1008.2 Equipment shall be warranted for a period not less than one year from the date of acceptance, except where otherwise noted.

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1008.3 All inspections, as required by the provider of electric service, shall be performed by a certified electrical inspection agency.

1009 DOCUMENTATION.

1009.1 Furnish three copies of warranties, guarantees, instruction manuals, wiring diagrams, and parts lists with each different type material.

1009.2 Provide in the controller assembly cabinet one instruction manual for each controller unit, time clock, and coordination unit.

1010 LUMINARIES.

Each intersection constructed within the scope of a project shall be illuminated. Illumination shall be achieved in the following manner:

1010.1 Installation of a four-hundred-watt sodium vapor fixture on signal mast arm support or strain pole in accordance with the requirements of PennDOT and the Borough.

1010.2 Lighting device installation shall be coordinated and in accordance with the electric utility providing service in that area.

1010.3 It is the intention of the Borough that this lighting device becomes incorporated into the highway lighting program between the Borough and the respective utility.

1011 KEYS.

Provide three sets of keys for each controller cabinet and Police door included in the project.

1100 MISCELLANEOUS IMPROVEMENTS

1101 MONUMENTS.

Permanent concrete monuments shall be accurately placed, at the intersection of all lines forming angles and at changes in directions of lines in the boundary of the property subdivided, and along all interior streets at changes in direction, at beginning and end of curves and at intermediate points where topographical considerations make it impossible to sight between two adjacent monuments.

Monuments shall be of reinforced concrete construction, a minimum of four inches in diameter and a minimum of 24 inches long.

Monuments shall be set flush with adjacent grade.

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All monuments shall be set by a Professional Land Surveyor in the Commonwealth of Pennsylvania.

1102 MARKERS.

Markers consisting of a minimum 3/4 inch diameter pipe, bar or reinforcing rod at least 30 inches long shall be set at all lot corners not occupied by a concrete or stone monument.

Markers shall be set flush with adjacent grade.

1103 STREET AND TRAFFIC CONTROL SIGNS.

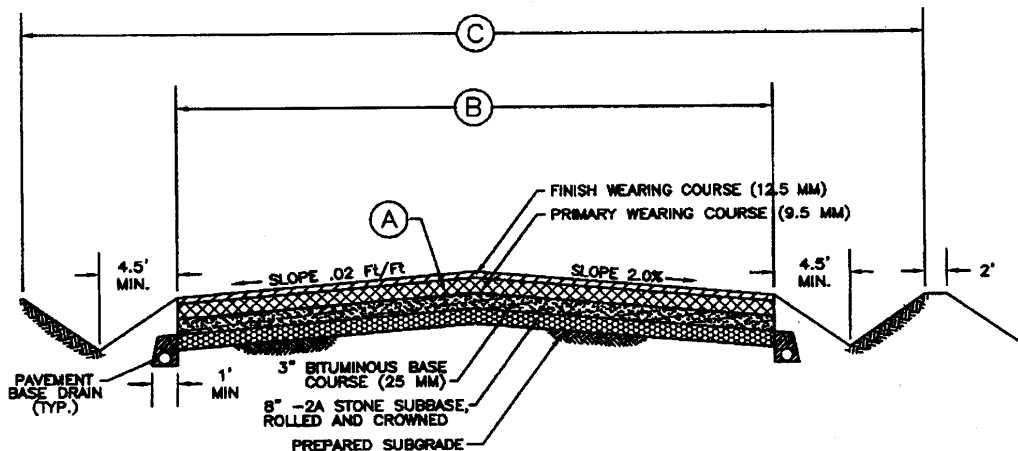
Street name signs shall be installed at all street intersections. Traffic control signs shall be set at all locations shown on the approved plans. The size, type and placement of all signs shall be subject to PennDOT standards or, in the event no standard applies, signs shall be set at the locations requested by the Borough Council. All sign supports and mounting devices shall be approved by the Borough prior to placement.

1104 STREET LIGHTS.

In accordance with the conditions to be agreed upon by the developer and the Borough Council, street lights installed in subdivisions and land developments shall be in accordance with specification of the applicable electric supplier.

1200 DETAILS

Typical Street Section



A. Pavement specification.

Three-inch bituminous base course (25 mm size).

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One-inch primary wearing course (9.5 mm size).

One-and-one-half-inch finish wearing course (12.5 mm size).

All bituminous surfaces shall conform to PennDOT superpave standards.

B. Cartway widths.

Local street: 36 feet.

Collector street: 36 feet.

Arterial street: as per AASHTO and PennDOT standards.

C. Right-of-way widths.

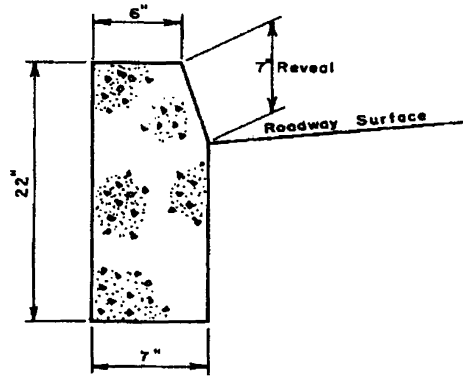
Local street: 50 feet.

Collector street: 60 feet.

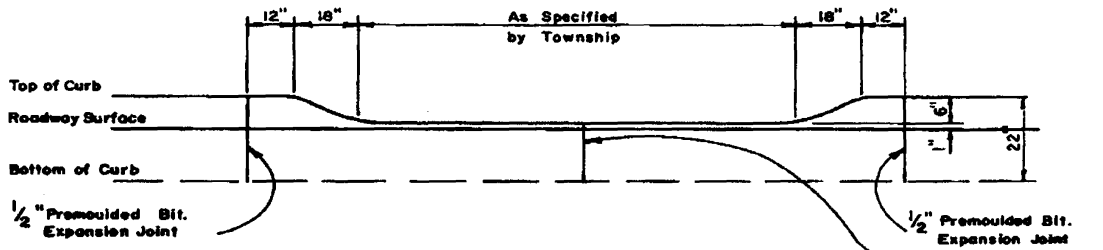
Arterial street: 80 feet.

STOCKERTOWN CODE

Standard Detail for Vertical Curb



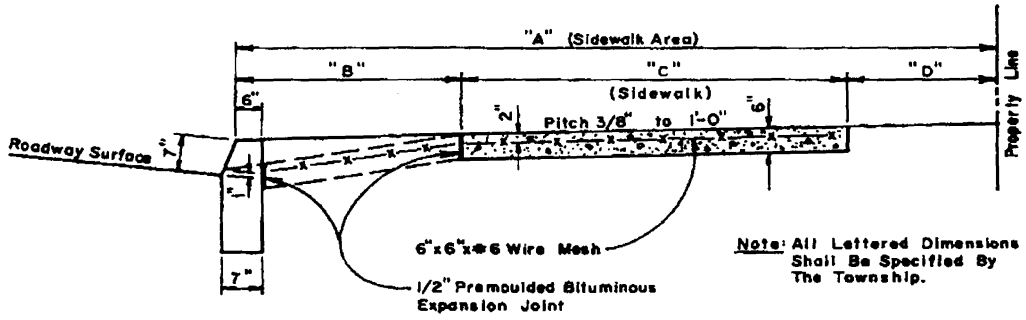
TYPICAL SECTION
NO SCALE



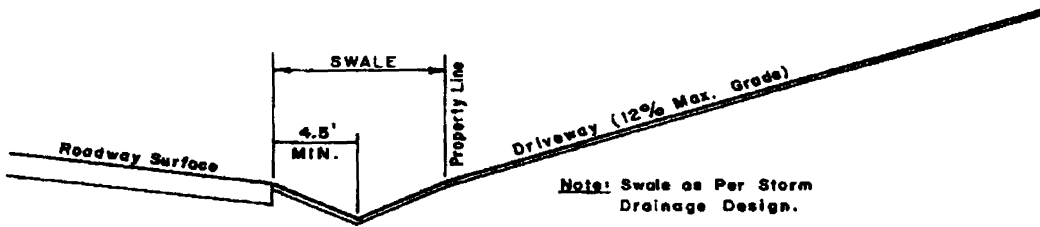
FRONT VIEW OF TYPICAL DEPRESSED CURB AT CROSSOVER
NO SCALE

SUBDIVISION AND LAND DEVELOPMENT

Driveway Crossover Details



STREETS WITH CURB AND SIDEWALK
NO SCALE



STREETS WITH ROADSIDE SWALES
NO SCALE