

# **TOWN OF SWEDEN**

18 State Street  
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Brockport, New York 14420

## **LAND USE DEVELOPMENT & SUBDIVISION REGULATIONS**

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**Town of Sweden  
Land Use Development & Subdivision Regulations  
Chapter 177**

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# **TOWN OF SWEDEN SUBDIVISION REGULATIONS**

## **ARTICLE I. GENERAL PROVISIONS**

**Section A177-1 Authority.** The Town Board of the Town of Sweden, pursuant to Sections 276, 277, and 278 of the Town Law of the State of New York and by Resolution dated January 3, 1961, has authorized the Planning Board to approve plats showing lots, blocks, or sites, with or without streets or highways, in that part of the Town outside the Village of Brockport.

The Town Board of the Town of Sweden, pursuant to Section 278 (formerly Section 281) of the Town Law and by Resolution dated May 14, 1975, has authorized the Planning Board, simultaneously with the approval of a plat or plats, to modify applicable provisions of the zoning ordinance, subject to the conditions below.

**Section A177-2 Purpose.** The purpose of these regulations is to provide for the future growth and development of the Town through the provision of adequate facilities for the housing, transportation, distribution, comfort, convenience, health, safety, and welfare of the people of the Town.

**Section A177-3 Adoption.** These regulations are hereby adopted. Upon their approval by the Town Board, these regulations shall be complied with by all subdivisions within the Town.

**Section A177-4 Re-subdivision.** The same procedures shall be followed for a re-subdivision as for a subdivision. If a proposed re-subdivision consists solely of the simple alteration of lot lines, certain procedures may be waived at the discretion of the Planning Board.

**Section A177-5 Waiver of Requirements.** The Planning Board may waive, subject to appropriate conditions, the provision of any and all improvements and requirements which, in its judgment of the special circumstances of a particular subdivision, are not required in the interest of public health, safety, or welfare, or which in its judgment are inappropriate because of the inadequacy or lack of connecting facilities adjacent to or in proximity to the subdivision.

### **Section A177-6 General Interpretation.**

- A. Words in the singular include the plural and words in the plural include the singular. The word "person" includes a corporation, unincorporated association and a partnership as well as an individual. The word "building" includes "structure" and shall be construed as if followed by the words "or part thereof". The word "street"

includes "road," "highway" and "lane"; "watercourse" includes "drain," "ditch" and "stream". The words "shall" or "will" are mandatory; the word "may" is permissive.

- B. Unless otherwise expressly stated, the following terms shall, for the purpose of these regulations, have the meaning indicated.

**AGRICULTURAL DATA STATEMENT:** Agricultural data statement pursuant to Town Law 283-a, if subdivision is within an Agricultural District containing a farm operation or on properties within boundaries within five hundred (500) feet of a farm operation in an Agricultural District. [Local Law #2-1993, The Right to Farm Law, adopted June 22, 1993, additionally requires submission of such a statement if a proposed subdivision is wholly or partially within five hundred (500) feet of land for which an individual commitment has been received pursuant to Section 305 or 306 of the Agriculture and Markets Law.]

**(ALLEY) SERVICE DRIVE:** A strip of land over which there is a right-of-way, municipally or privately owned, serving as a secondary means of access to two or more properties.

**BLOCK:** An area bounded by streets.

**BUILDER:** A person who obtains a building permit for construction of a structure on an approved site.

**BUILDING INSPECTOR:** An appointed official nominated by the Town Board to enforce the provisions of the New York State Uniform Fire Prevention and Building Code as adopted by the Town.

**CLEAR SIGHT TRIANGLE:** An area of unobstructed vision at a street intersection defined by lines of sight between points at a given distance from the intersection of street right-of-way lines.

**CODE ENFORCEMENT OFFICER:** An appointed official nominated by the Town Board to enforce the Zoning Ordinance of the Town of Sweden.

**COMPREHENSIVE PLAN:** A plan adopted by the Town that addresses future land use considerations pursuant to Town Law 272-a.

**CONDITIONAL APPROVAL OF A FINAL PLAT:** Approval of a final plat subject to conditions set forth by the Planning Board in a resolution conditionally approving such plat. Such "conditional approval" does not qualify a final plat for recording nor authorize issuance of building permits prior to the signing of the plat by a duly authorized officer of the Planning Board and recording of the plat in the office of the County Clerk in accordance with provisions of this article.

**CONSTRUCTION SPECIFICATIONS FOR LAND DEVELOPMENT:** The text entitled "Town of Sweden, Monroe County, New York, Standards and Specifications for Streets and Pavements, Sewers, Water Mains, Related Structures" shall be referred to in these regulations as the "Construction Specifications for Land Development." These criteria and specifications are regulations which have been adopted by the Town Board of the Town of Sweden, and include those amendments, additions or deletions which the Town Board shall adopt from time to time by resolution.

**CONTRACTOR:** A person acting for the Developer to construct the required improvements of the project. The Contractor is responsible to perform the work in conformance with the approved plans subject to a review by Town officials.

**CROSSWALK:** A right-of-way, municipally or privately owned, at least 10 feet in width, which traverses an area to furnish access for pedestrians.

**CUL-DE-SAC:** A residential street with one end open for public vehicles and pedestrian access and the other end terminating in a vehicular turnaround.

**DEDICATION:** The deliberate appropriation of land by its Owner for any general and public uses, reserving to the Owner no other rights than such as are compatible with the full exercise and enjoyment of the public uses to which the land has been devoted.

**DEVELOPER:** A person holding the right to a parcel of land to be developed or subdivided. Commitments and/or requirements for development are solely between the Town and the Developer.

**EASEMENT:** Authorization by a property owner for the use of any designated part of the property for a specified purpose by another person, Town, municipality or public utility district for any public purpose.

**FINAL PLAT:** Drawings prepared in accordance with Section A177-52 of these regulations showing a proposed subdivision, including all information required to be shown on a preliminary plat and the modifications, if any, required by the Planning Board at the time of approval of the preliminary plat.

**FLOOD LIMITS:** The land-water boundary of a natural watercourse flowing at a frequency defined by a responsible agency such as the U.S. Army Corps of Engineers or the U.S. Department of Housing and Urban Development.

**FRESHWATER WETLANDS:** Areas within the Town of Sweden as defined on the Tentative Freshwater Wetlands Map prepared pursuant to Article 24 of the Environmental Conservation Law and filed in the Town Offices.

**FRESHWATER WETLANDS PROTECTION LAW:** Local Law #1-1976, adopted by the Town Board August 26, 1976.

**GRADING PLAN:** A plan showing all present and proposed elevations for storm water drainage and disposal.

**INSPECTOR/OBSERVER:** An agent of the Town empowered to observe the construction progress of the project and its compliance with the approved plans.

**IMPROVEMENTS:** Those physical additions and changes to the land that may be necessary to produce usable and buildable land areas. This may include but is not limited to grading, water supply, sewage disposal, storm water disposal, lighting, landscaping, etc.

**LETTER OF CREDIT:** Financial security required to insure the installation of improvements as shown on the approved plan subject to possible dedication to the Town.

**LOT:** A parcel of land intended for transfer of ownership or site development that is presently occupied or capable of being occupied by a principal building or use and uses accessory to the principal building or use.

**MAJOR SUBDIVISION:** A subdivision plat prepared by a registered professional of more than four lots with individual land areas less than five acres in size or a development proposing dedicated new streets or improvement districts to service such subdivision.

**MINOR SUBDIVISION:** A subdivision plat prepared by a registered professional of four lots or less with access to an existing right-of-way requiring no new streets, nor the creation or extension of improvement districts having no substantial adverse effect on access to, use or development of the remainder of the parcel or adjoining parcels.

**OPEN SPACE or OPEN AREA:** Any space or area of undeveloped land characterized by natural scenic beauty, existing openness and natural condition. A variety of open space forms is encouraged and may include but is not limited to formal squares and parks, informal natural areas, passive and active recreation areas, treed and open fields, agricultural lands used in agricultural production.

**PLANNING BOARD:** The Planning Board of the Town of Sweden.

**PRELIMINARY PLAT:** A drawing prepared in accordance with Section A177-51 of these regulations showing the layout of a proposed subdivision, including, but not restricted to, road and lot, layout and approximate dimensions, key plan, topography and drainage, all proposed facilities unsized, including preliminary plans and profiles.

**RECORD DRAWINGS:** Drawings submitted upon the completion of a subdivision and prior to dedication and Certificate of Occupancy.

**RESERVATION FOR HIGHWAY PURPOSES:** A strip of land between the existing right-of-way line and the future right-of-way line of a highway as determined by the agency having jurisdictional responsibility over the maintenance and construction of the highway.

Where a reservation is required, the front lot line shall be considered to be coincident with the future right-of-way line, with front setbacks and other necessary lot measurements being measured from the future right-of-way line. Where there is no requirement for a "reservation for highway purposes," the front lot line shall be considered to be coincident with the existing right-of-way line, with front setbacks and any other necessary lot measurements being measured from the existing right-of-way line.

**RESUBDIVISION:** A change in a map of an approved or filed subdivision plat if such change affects any street layout or any change of a lot line.

**SET BACK OR BUILDING LINE:** The right angle distance within a property defining the required minimum distances between any structure and the street or the side or rear property lines of a parcel right-of-way.

**SIGHT DISTANCE:** The distance of visual sight available for access to a dedicated right-of-way from any parcel of land to be developed.

**SITE PLAN:** A drawing prepared by a registered professional for review by the Planning Board for the development of an existing lot or parcel without any new subdivision of land.

**SEQR:** State Environmental Quality Review - part of the Environmental Conservation Law applicable to land development per 6NYCRR Part 617.

**STREET:** A general term used to describe a right-of-way, municipally or privately owned, serving as a means of vehicular and pedestrian travel, and utility services. The streets are classified by function as follows:

1. Residential - A new development serving primarily a neighborhood with relatively low volumes of traffic.
2. Commercial - A road connecting area centers serving a large volume of local or regional traffic.
3. Industrial - A road serving commercial and/or industrial areas anticipating continued large truck traffic.

**SUBDIVIDER:** The owner(s) of the land from which the proposed subdivision is being created, or their agents.

**SUBDIVISION:** The division of any parcel of land into a number of lots, blocks, or sites, with or without streets or highways, for the purpose of sale, transfer of ownership, or development. The term "subdivision" shall include any alteration of lot lines or dimensions of any lots or sites shown on a plat previously approved and filed in the office of the County Clerk.

**SUPERINTENDENT OF HIGHWAYS:** Those Town department head who is directly in charge of highway and sewer and shall assume the operation and maintenance of these respective portions of a development upon dedication to the Town.

**SWEDEN ENVIRONMENTAL QUALITY REVIEW ORDINANCE:** The ordinance adopted by Town Board Resolution #53, May 18, 1977.

**TOTAL HOLDINGS MAP:** A map of the contiguous parcels, including the land to be developed, owned by a person applying for development approval.

**TOWN ATTORNEY:** A person or firm certified by the New York State Bar Association engaged by the Town to review and prepare necessary documentation as required for districts, easements, letters of credit, dedication, surety or other legal matters.

**TOWN BOARD:** The Town Board of the Town of Sweden.

**TOWN ENGINEER:** A licensed professional engineer retained by the Town on a consulting or full-time basis.

**TOWN OFFICIAL MAP:** A map established by the Town Board pursuant to Sections 270 and 273 of the Town Law, or additions thereto resulting from the approval of subdivision plats by the Planning Board and the filing of such plats pursuant to Section 278 of the Town Law.

**ZONING ORDINANCE:** The Zoning Ordinance of the Town of Sweden.

**Section A177-7** Throughout these regulations one will find reference to publications of other agencies or testing methods such as:

- AASHTO - American Association of State Highway and Transportation Officials.
- ANSI - American National Standards Institute, Inc.
- ASTM - American Society for Testing and Materials.
- AWWA - American Water Works Association.
- NSF - National Sanitation Foundation.
- NYSDEC - New York State Department of Environmental Conservation.
- NYSDOH - New York State Department of Health.
- NYSDOT - New York State Department of Transportation.

Reference for these designations is widely accepted and readily available for the specifics and details that may be required for a design situation.

**Section A177-8 Conflict with Construction Specifications for Land Development.** In the event of any conflict or inconsistency between Subdivision Regulations Section and the Criteria for Design and Construction Section of these regulations, it is the responsibility of the subdivider to bring such alleged inconsistency or conflict to the Planning Board's attention, in writing, for a decision and its decision shall be final and binding.



**Section A177-9 Interpretation.** Where the conditions imposed by any provision of these regulations are more restrictive than comparable conditions imposed by any other provisions of these regulations, or of any other ordinance, resolution or regulation, the provisions which are more restrictive shall govern.

**Section A177-10 Severability.** The provisions of these regulations are severable. If any article, section, subdivision or provision of these regulations shall be invalid, such invalidity shall apply only to the article, section, subdivision or provision adjudged invalid, and the rest of these regulations shall remain valid and effective.

**Section A177-11 Repeal.** All regulations and all amendments thereto having to do with subdivision procedures are hereby repealed, with the provision that violations of the previous regulations and all amendments thereto shall remain violations to the extent that matters in violation do not conform to the provisions of these regulations.

**Section A177-12 Saving Clause.** The adoption of these regulations shall not affect or impair any act done, offense committed or right incurred or acquired or liability, penalty, forfeiture or punishment that was incurred prior to the time these regulations take effect under the regulations relative to subdivision in said Town.

## **ARTICLE II. SUBDIVISION APPLICATION AND APPROVAL PROCEDURE**

### **Section A177-13 General Procedure.**

- A. The basic procedures as summarized hereafter are those as outlined in the various aspect of Town Law, specifically but not limited to Town Law 261-b, 271, 274-a, 276, 277, 278, 279, 280, 281, and 283-a. The applicant or designated representatives should be aware of the approval process as outlined in the various sections of the Town Law or as modified herein.
- B. Town approval of any subdivision shall be evidenced by a Final Plat containing all the required signatures, filed in the Monroe County Clerk's Office. This approval shall be prerequisite to the issuance of any building permit or certificate of occupancy for the use of any land. Such approval shall hereafter be initiated and processed in accordance with the following basic procedure.
- C. The Town of Sweden has a three-step approval process which includes Accept for Review, Preliminary and Final. All plans submitted to the Town shall be clearly marked for the requested action by the Planning Board and failure to submit a complete package of information will be cause for rejection by the Planning Board.
- D. Before preparing a sketch plan, the subdivider may discuss with the Planning Board, Town Supervisor or any other town boards, commissions, departments and officials the general requirements as to design of streets, reservations or land, town frontage road policy, drainage and erosion control and slope stabilization measures, water retention facilities, sewerage, water supply, fire protection, and other improvements, as well as procedural matters. Subdividers of land adjoining the state or county highways are advised to consult with the District Engineer of the New York State Department of Transportation or the County Director of Public Works at the sketch plan stage, in order to resolve problems regarding street openings or storm water drainage at the earliest possible stage in the design process. Where public utilities are involved, the subdivider's engineer would contact the agencies for connection specifications, capacities, and any other requirements of the respective agencies.
- E. An application for Accept for Review shall be submitted to the Planning Board Clerk a minimum of four (4) business days prior to the next available meeting. All fees associated with the submitted project shall accompany the application at this time.
- F. After the Planning Board has accepted the Plan for review, a formal public hearing date will be set for the preliminary plat.

#### **Section A177-14 Accept for Review.**

- A. The Accept for Review process assures the Board that a complete application has been submitted. The requirements for Accept for Review are outlined in Section A177-51.
- B. Upon acceptance of the Plan at a scheduled public meeting, the Clerk will stamp the Plans as received and it is from this date all legally prescribed time tables in this regard begin.
- C. No formal review or action will take place at the Accept for Review meeting.

#### **Section A177-15 Preliminary Plat Review.**

- A. General. A preliminary plat shall be prepared and submitted to the Planning Board for all proposed subdivisions.
- B. Requirements.
  - 1. The preliminary plat shall be clearly marked "PRELIMINARY PLAT" and shall satisfy the requirements of Section A177-51.
  - 2. Ten (10) copies of the preliminary plat and required supplementary materials shall be submitted. One (1) copy of the preliminary plat shall be returned to the subdivider with notification of the decision, one (1) copy shall be retained by the Planning Board, and eight (8) copies shall be used for review by Planning Board members, other Town boards, officials, agencies, and consultants.
- C. Section 278 Procedure. A subdivider desiring to have some or all of his preliminary plat considered under the provisions of Section 278 of the Town Law and Article IV of these regulations shall make written application for the use of this procedure. Such procedure may be followed if, in the judgment of the Planning Board, its application would benefit the Town.
- D. Public Hearing. The Planning Board shall hold a public hearing within sixty-two (62) days after receipt of a complete preliminary plat by the Clerk of the Planning Board. Such hearing shall be advertised at least once in a newspaper of general circulation in the Town at least five (5) days before such hearing. If the project requires that an Agricultural Data Statement be prepared, then the date and hearing information shall be advertised at least ten (10) days before such hearing. The Planning Board may provide that the hearing be further advertised in such manner as it deems most appropriate for full public consideration of such preliminary plat. If an agricultural data statement is required, the Clerk of the Planning Board shall mail notice of such application to the owners of land as identified by the applicant in the agricultural data statement. The cost of mailing such notice shall be borne by the applicant.

E. Preliminary Plat Review.

1. The Planning Board shall study the preliminary plat, taking into consideration the topography of the area; the Zoning Ordinance; the Comprehensive Plan and any other plans of the Town and the Town Official Map, if any; and the general requirements of the Town. The Planning Board shall refer the preliminary plat to the Town Engineer, the Monroe County Planning Department and such other agencies and officials as may be required or appropriate in each case.
2. The Planning Board shall comply with the provisions of the State Environmental Quality Review Act and its implementing regulations. No preliminary plat application shall be complete until either a negative declaration has been prepared or a draft environmental impact statement has been accepted by the lead agency.
3. Environmental Assessment Form. In accordance with the requirements of the Town Conservation Board, pursuant to Section 4 of the Sweden Environmental Quality Review Ordinance, an Environmental Assessment Form must be filed with the Planning Board. The form will be referred to the Town Conservation Board for a determination as to whether the proposed subdivision has any significant impact on the environment.

F. Action by Planning Board. Within sixty-two (62) days after the public hearing, the Planning Board shall approve with or without modification or disapprove such preliminary plat. The grounds for modification or disapproval shall be stated in the minutes of the Planning Board. The time in which the Planning Board must take action may be extended by mutual consent of the subdivider and the Planning Board.

G. Notification of Decision. Within five (5) days of the approval of a preliminary plat, the preliminary approval shall be certified by the Clerk of the Planning Board and a copy mailed to the subdivider. Should the Planning Board fail to act within the prescribed time, such plat shall be granted preliminary approval. The certificate of the Town Clerk as to the date of submission and the failure to take action shall be issued on demand and shall be sufficient in lieu of written endorsement or other evidence of required approval.

H. Noncompliance with Zoning. Where a plat contains one or more lots which do not comply with the zoning ordinance regulations, application may be made to the Zoning Board of Appeals for an area variance without the necessity of a decision or determination by an administrative official charged with the enforcement of zoning regulations. In reviewing such application, the Zoning Board of Appeals shall request the Planning Board to provide a written recommendation concerning the proposed variance.

## **Section A177-16 Final Subdivision Plat Review.**

- A. After receiving approval, with or without modification of a preliminary plat, the subdivider shall prepare the final plat and submit it to the Planning Board for approval. If more than six (6) months have elapsed and the plat has changed significantly, the Planning Board may require a resubmission of the preliminary plat, in which case a public hearing shall be held on the revised preliminary plat. Final plats not in substantial agreement with approved preliminary plats may require further review under the State Environmental Quality Review Act.
- B. Requirements. The final subdivision plat shall conform substantially to the preliminary plat as approved by the Planning Board. It shall incorporate any modifications or other features required by the Planning Board at the preliminary plat stage; and all such compliances shall be clearly indicated by the subdivider on the appropriate submission. If the subdivider wishes to develop the subdivision in stages, the subdivider may prepare and submit a final subdivision plat for a portion of the area encompassed by the preliminary plat, provided the proposed development stages were indicated in the preliminary plat reviewed by the Planning Board. However, no more than two (2) individual sections of a subdivision shall be in process or under construction at the same time.
- C. Application for Final Approval of Subdivision Plat. A tracing on mylar plus ten (10) copies of the tracing and other exhibits required for approval shall be submitted with the application for approval. When submitting a subdivision plat for final approval, the subdivider shall also file with the Planning Board formal offers of dedication of all streets, parks and playgrounds, and other permanent open spaces for community use, as shown in the subdivision plat. The approval of the plat does not constitute an acceptance by the Town of the dedication of those facilities. Also, evidence of all necessary easements for storm water discharge, sanitary sewer and water lines, petitions for creation of any needed special districts, or any other legal documents required by the Planning Board should be submitted with the final subdivision plat.
- D. Public Hearing. Upon receipt of a plat in final form, as certified by the Clerk of the Planning Board, the Board shall schedule a public hearing within sixty-two (62) days. The notice of hearing shall be advertised at least once in a newspaper of general circulation in the Town (the official newspaper of the Town) at least five (5) days before such hearing. The Planning Board may provide that the hearing be further advertised in such manner as it deems most appropriate for full public consideration of such final plat. When (if) the Planning Board deems the final plat to be in substantial agreement with the approved preliminary plat, the Board may waive the requirement for a public hearing.

E. Notification of Decision.

1. The Planning Board shall by resolution conditionally approve, with or without modifications, disapprove, or grant final approval and authorize the signing of such plat within sixty-two (62) days of its receipt by the Clerk of the Planning Board if no such hearing is held or, in the event such hearing is held, within sixty-two (62) days after the date of such hearing. Notwithstanding the foregoing provisions of these regulations, the time in which the Planning Board must take action on such plat may be extended by mutual consent of the subdivider and the Planning Board. In the event the Planning Board fails to take action on a final plat within the time prescribed therefore, the plat shall be approved; a certificate of the Town Clerk as to the date of submission and the failure to take action within such prescribed time shall be issued on demand and shall be sufficient in lieu of written endorsement or other evidence of approval herein required.
2. In reviewing a subdivision plat, the Planning Board shall consult with the Town Engineer and such other officials or agencies as may be appropriate in each case. The Town Engineer shall report to the Planning Board concerning the adequacy of engineering features shown on the subdivision plat. Approval will be indicated by the Town Engineer's signature on the linen or mylar tracing.
3. The action of the Planning Board shall be recorded in the Board's minutes, and the subdivider shall be notified of such action through transmittal of these minutes and a copy of the map submitted. In case of disapproval of a proposed subdivision, the Planning Board shall have in its minutes its reasons for disapproval.

F. Conditional Approval.

1. Upon resolution of conditional approval of such final plat, the Planning Board shall empower a duly authorized officer to sign the plat subject to completion of such requirements as may be stated in the resolution. Within five (5) days of such resolution, the plat shall be certified by the Clerk of the Planning Board as conditionally approved, and a copy filed in the Clerk's office and a certified copy mailed to the subdividers, including a certified statement of such requirements which when completed will authorize the signing of the conditionally approved final plat. Upon completion of such requirements the plat shall be signed by said duly authorized officer of the Planning Board.
2. Conditional approval of a final plat shall expire within one hundred eighty (180) days after the date of the resolution granting conditional approval, unless such requirements have been certified as completed. Notwithstanding the foregoing provisions of these regulations, the Planning Board may extend the time in which a conditionally approved plan in final

form must be submitted for signature if, in its opinion, such intention is warranted by the particular circumstances thereof, not to exceed two additional periods of ninety (90) days each.

- G. **Expiration of Approval.** An approved plat must be filed in the County Clerk's office within sixty (60) days from the date of the signature of the duly authorized officer of the Planning Board or the certificate of the Town as to the date of the submission of the final plat and the failure of the Planning Board to take action thereon within the time prescribed. If it is not, the approval expires. In the event the owner shall file only a section of such approved plat in the office of the County Clerk, the entire approved plat shall be filed within sixty (60) days of the filing of such section with the County Clerk. Such section shall encompass at least ten (10) percent of the total number of lots contained in the approved plat and the approval of the remaining sections of the approved plat shall expire unless said sections are filed before the expiration of the exemption period to which such plat is entitled under the provisions of Subdivision Two of Section 265-a of the Town Law. In the Town of Sweden, the exemption provided for in such subdivision shall apply for a period of three (3) years after the filing of the subdivision plat or the first section thereof.
- H. **No site improvements or construction including clearing, grading, etc.** shall be allowed nor shall a building permit for any permanent building within the subdivision be issued by the municipality until the subdivision plat has been approved by the Planning Board and has been filed in the office of the Monroe County Clerk, and liber and page numbers assigned by the County Clerk.
- Where a permit is desired for the occupancy of a building in the subdivision prior to the completion of all the improvements shown on the approved construction sheet of the subdivision plat, in addition to other requirements of the Town, the street serving the building shall be completed to a degree satisfactory to the Town Engineer.
- I. **Installation of Improvements After Final Approval.** Once the Planning Board has granted final approval and before the final signatures are placed on the plat, the Developer shall enter into an agreement with the Town Board for the subsequent completion of the platted improvements. The Developer shall submit with the tender of dedication and deeds to all streets, easements, and an irrevocable Letter of Credit so as to assure the proper and timely completion of the required improvements.
- J. **Offers of Cession.** The subdivider shall tender offers of cession in a form certified as satisfactory by the Town Attorney of all land included in streets, highways or parks, not specifically reserved by him. Approval of a Plan by the Planning Board shall not constitute an acceptance by the Town Board of the dedication of any street, highway, utility, park or other public open space.

K. Financial Responsibility - Irrevocable Letter of Credit.

1. A Letter of Credit furnished for the installation of the required improvements shall be in the amount fixed by the resolution of the Town Board and shall be approved by the Town Board as to form, sufficiency and manner of execution. The Letter of Credit shall be issued in favor of the Town of Sweden and shall assure the complete installation of the required improvements within such period, not longer than three years, as shall be fixed by the Town Board. The Letter of Credit shall be issued to the Town for an initial minimum period of one (1) year. The Town shall be notified at least one month in advance of this Letter of Credit expiring. Extensions of Letters of credit shall be provided to the Town in the event that the construction of the project exceeds the timeframe noted in the Letter of Credit.

2. The following guarantees will be required for the development in the Town.

a. Letter of Credit

An irrevocable Letter of Credit shall be submitted by the Developer to insure the installation of improvements in an amount estimated by the Developer's Engineer and approved by the Town Engineer, Town Attorney, Town Fiscal Officer and Town Board.

The amount shall include but not be limited to the following items (see Appendix A for typical format):

- (1) Total estimated construction cost of all utilities, laterals, water services, roads, gutters, earthwork, stormwater management facilities, erosion control, etc.
- (2) Minimum ten (10) percent contingency factor.
- (3) Engineering and construction observation charges will be a minimum of five (5) percent based on the project complexity and construction schedule.
- (4) Street signs and surveyor's monuments.
- (5) Maps.
- (6) Record drawings of installed facilities.

b. Maintenance Bond

Upon completion of the construction and as a condition of dedication to the Town, a Maintenance Bond shall be provided by the Developer guaranteeing the project against faulty workmanship or materials for a period of two (2) years following the acceptance date by the Town. The Bond shall be ten (10) percent of the total construction value.



Individual portions of the project, i.e., sanitary system, storm sewer system, can be bonded with their individual acceptances by the Town.

A Maintenance Bond for the pavement, gutters, and/or sidewalks will not be accepted until the entire project is ready for dedication.

A Maintenance Bond for the final top pavement course will be for two years from the time of topping and acceptance.

**Section A177-17 Time Limit for Filing.** The approval by the Planning Board of a plat showing lots, blocks or sites, with or without streets or highways, or the approval by the Board of the development of a plat or plats already on file in the office of the Monroe County Clerk or the Certificate of the Sweden Town Clerk as to date of submission for which no hearing was duly held, or the date of the hearing for the approval or disapproval of such plat as the case may be, and the failure of the Planning Board to take action thereon within the time prescribed, shall expire sixty-two (62) calendar days from the date of the signing of the plan by the Planning Board or of such certificate, unless within such sixty-two (62) calendar day period such plat or a section thereof shall have been duly filed or recorded by the Owner in the office of the Monroe County Clerk.

If the Owner shall file only a section of an approved plat, within such sixty-two (62) calendar day period, such section shall encompass at least ten (10) percent of the total number of lots contained in the approved plat and the approval of the remaining sections of the approved plat shall expire unless said sections are filed before the expiration of the exemption period to which such plat is entitled under the provisions of the Town Law. In the event the Owner shall file only a section of such approved plat in the office of the Monroe County Clerk, the entire approved plat shall be filed within thirty (30) calendar days of the filing of such section with the Sweden Town Clerk.

**Section A177-18 Site Plan Procedures.** All site plans will require Planning Board approval and they must be prepared in accordance with these regulations except that items relating to boundary data may be omitted if the subdivision has previously been approved by the Planning Board and filed with the County Clerk's Office. (See Site Plan Review Process flow chart.)

**Section A177-19 Expiration of Site Plan.** Approval of a site plan shall expire after thirty-six (36) months, unless the development is sufficiently complete for a Certificate of Occupancy to be issued or, if the development is in two (2) or more phases, the first phase is sufficiently complete for a Certificate of Occupancy to be issued. Re-approval after such expiration shall be given without additional expense to the applicant, provided that no changes are initiated by the applicant, Monroe County or the State of New York or required due to amendments to the Town of Sweden ordinances.

**Section A177-20 Easement Procedure.** If easements are required on a project, the Town has established a procedure to facilitate the process and has a detailed handout for applicants to follow.

In summary all proposed easements must be submitted to the Town's Building Department with map, description, easement form, Transfer Gains Affidavit and filing fees. The Town will assign a control number and the complete package will be submitted to the Town Attorney for review.

Once approved the easement will be recorded in the Monroe County Clerk's Office by the Town of Sweden Town Attorney and proof of such submitted to the Town Clerk. If easements are required by other agencies, proof of such easement(s) being recorded shall be provided by the Developer.

### **ARTICLE III. DEVELOPMENT REQUIREMENTS**

**Section A177-24 General.** Land shall be suited for the purpose for which it is to be developed and the developer's Engineer shall certify to such on the plans submitted for approval.

The Planning Board shall review proposed developments on their individual merit, including preservation of rural/agricultural land and their contribution to the Town.

The subdivider shall strive to comply with standards of good planning and environmental conservation and adhere to the specification codes and ordinances of the Town as well as those rules of agencies having jurisdiction over any particular phase of a development.

**Section A177-25 Flood Land, DEC Wetland and Federal Wetlands.** Land subject to flooding and land deemed by the Planning Board to be uninhabitable shall not be plotted for residential occupancy, nor for such other uses as may involve danger to health, life or property or aggravate the flood hazard, but such land within the area of the Plan shall be set aside for such uses as shall not be endangered by periodic or occasional inundation.

**Section A177-26 Rural/Agricultural Planning Guidelines.** Developers are encouraged to employ the following general principles in the layout of proposed developments. These principles may serve as general guidelines in the assessment of the impact of the development on the rural/agricultural character of the Town.

- A. Preserving rural character. A consideration of the selection of subdivision locations shall be the preservation of rural/agricultural open space areas in contiguous blocks of land to ensure the continuing feasibility of agriculture in the Town. The siting of developments upwind from areas subject to dust, noise, smoke, odors or similar annoyances is considered desirable.
- B. Compatibility with adjacent land uses. Development plans which through lot layout, dwelling placement, landscaping and vegetative screening seek to avoid conflict with neighboring land uses will receive favorable consideration. Developments which improve the view from the public roadway and blend into the existing natural landscape are encouraged.
- C. Protecting natural features. Whenever possible the development shall maintain the existing natural and scenic qualities of the locality. Environmentally sensitive lands and scenic vistas are to be protected. Individual lots, buildings, streets, drainage, utilities and parking areas shall be designed and situated to minimize alteration of existing grades and vegetation.

### **Section A177-27 Streets.**

- A. Streets shall be of such width, grade, and location to accommodate the prospective traffic, to afford adequate light and air, and to facilitate fire protection.
- B. Streets should not be less than four hundred (400) feet in length nor greater than twelve hundred (1,200) feet, with the optimum length being eight hundred (800) feet.
- C. Lots abutting state highways shall consider having access to other streets or a parallel access road where possible. Where direct access to a state highway is proposed, review and approval is required by the New York State Department of Transportation.
- D. All streets shall be named subject to the approval of Monroe County Office of Emergency Communications, pursuant to the 911 Right of Way Naming Act. Street signs shall be provided by the developer at all intersections and other locations deemed necessary and shall be of a type approved by the Town Engineer.

### **Section A177-28 Street Intersections.**

- A. Streets shall be laid out to intersect as nearly as possible at right angles. No street shall intersect another at an angle of less than seventy-five (75) degrees.
- B. Streets entering opposite sides of another street shall be laid out either directly opposite one another or with a minimum off-set of one hundred twenty five (125) feet between their center lines.
- C. Where a subdivision abuts or contains an existing street of inadequate right-of-way width, additional right-of-way width will be required.

### **Section A177-29 Cul-de-Sac Streets.**

- A. Cul-de-sac streets, permanently designed as such, should not exceed twelve hundred (1,200) feet in length and designated to be generally offset turnarounds per Appendix MM to allow for effective snow removal and lot placement.
- B. Hammer head sections may be proposed as per Appendix K to be used at the end of a cul-de-sac in lieu of the circle due to design considerations. If they are temporary they shall be constructed to Town road specifications except for the top course which will not be required.

### **Section A177-30 Blocks.**

- A. The length, width and shape of blocks shall be determined with due regard to the following:
  - 1. Provision of adequate building sites
  - 2. Zoning requirements
  - 3. Topography
  - 4. Requirements for safe and convenient vehicular and pedestrian circulation and access
  - 5. Utility service and the operation and maintenance of same
- B. All blocks in a subdivision shall have a minimum length of at least five hundred (500) feet with a maximum length of twelve hundred (1,200) feet. Such blocks containing individual lots shall be at least two lot depths in width, except where reverse frontage may be employed along major highways. Modifications of the above requirements are possible in commercial and industrial developments.
- C. In large blocks with interior parks, in exceptionally long blocks, or where access to a school, shopping center, or other community facilities is necessary, a crosswalk with a minimum width six (6) feet in width shall be provided.

### **Section A177-31 Driveways.**

- A. Driveway curb cuts shall be limited to one per parcel. Combined or common driveway curb cuts within the right-of-way are encouraged when practical and at the discretion of the Board.
- B. Driveway width for up to two hundred fifty (250) feet from the road shall be a minimum of twelve (12) feet.
- C. Driveway width over two hundred fifty (250) feet from the road shall be a minimum of fourteen (14) feet.
- D. Driveway turnaround areas, when practical, shall be incorporated into all plans.
- E. Common driveways and single driveways over two hundred and fifty feet (250) shall require a pull off area or "bubble" at driveway mid-point. Refer to the Town Fire Marshal and State Building Code for minimum required dimensions of the pull off area.
- F. In all cases, driveways and access for fire and emergency apparatus shall comply with the provisions of the Fire Code of New York unless the provisions herein are more restrictive.

### **Section A177-32 Lot Size and Arrangement.**

- A. No division of land shall result in any of the parcels not having at least one legal access point to a public road. When a subdivided parcel is located so that developable access would be gained by a road from the main portion of the parcel, there shall be enough land remaining to provide for a public road from the parcel to the main road.
- B. Whenever access to a subdivision can be had only across land in another municipality, the Planning Board may request assurance from the Sweden Town Attorney that access is legally established and from the Sweden Town Engineer that the access road is adequately improved or that a sufficient performance bond has been executed and filed with the Town Supervisor to assure construction of the access road.
- C. In general, lot lines shall be laid out so as not to cross Town boundary lines or zoning district lines. Lot lines should be laid out so that side or rear lot lines follow the centerline of a stream or drainage way which may be within the subdivision.
- D. Plats reviewed under the provisions of Section 278 of the Town Law shall result in a number of lots which shall not exceed the number which could be permitted, in the Planning Board's judgment, if the land were subdivided into lots conforming to the minimum lot size and density requirements of the applicable zoning ordinance. In the event that the application of this procedure results in a plat showing lands available for park, recreation, open space, or other municipal purposes directly related to the plat, then the Planning Board may establish such conditions on the ownership, use, and maintenance of such lands as it deems necessary to assure the preservation of such lands for their intended purposes.

**Section A177-33 Building Lines.** The minimum building set-backs shall be controlled by the provisions set forth in the Zoning Ordinance of the Town of Sweden.

**Section A177-34 Utilities.** Sewer, water, gas, electrical, street lighting or other public utility facilities proposed, shall be installed and maintained underground in all residential, commercial and industrial developments.

### **Section A177-35 Easements.**

- A. Easements shall be provided for all utilities of a width necessary for installation, repair and/or replacement of said utility. The depth, type, size and location of a utility in addition to soil conditions will be considered when establishing an easement width.
- B. To the fullest extent possible, easements shall be centered on or adjacent to rear or side lot lines.

- C. No structure shall have its foundation built less than five (5) feet from any easement line.
- D. Where a development is traversed by a watercourse, the applicant shall provide to the Town at no cost a drainage easement or right-of-way conforming substantially to the line of such watercourse and of such width as will be adequate to preserve natural drainage and maintain the same.

#### **Section A177-36 Reservation and Dedication of Lands for Public Use.**

- A. In reviewing subdivision plans, the Planning Board will consider the adequacy of existing or proposed community facilities to serve the additional dwellings proposed by the subdivision. The layout of the proposed subdivision shall be in general conformity with the features or developments proposed on the Comprehensive Plan in effect at the time of the submission of the proposed plat.
- B. The Board may require the reservation and dedication of at least ten (10) percent of the area of land to be subdivided for park, playground, recreation, open land or other public purposes. In locating lands to be reserved and dedicated, the Board shall consider preservation of trees, shrubs, special environmental and geographic features, unsuitability of certain lands for building purposes, future expansion of public use areas, the most appropriate type of public land use for the area and the conditions necessary to preserve access, use and maintenance of such lands for their intended purpose.
- C. Prior to such lands being dedicated to the Town, a Phase I Environmental Audit shall be completed by the applicant at their expense.
- D. In the event that the Planning Board, upon consultation with the Town Board, determines that reservation of land of adequate size and suitable purpose cannot be practically located in a proposed subdivision, or that said reservation would not appropriately serve the locale, the Board may condition its approval of a subdivision upon payment to the Town of a sum as set forth by the Town Board. The amount shall be available for use by the Town for neighborhood, playgrounds or other recreation purposes, including the acquisition of property.

#### **Section A177-37 Tree Protection Guidelines.**

- A. The Owner or Developer or their agents shall not begin clearing or tree cutting operations on any site or subdivision without first obtaining conditional Planning Board approval of their landscaping plan. The landscaping plan shall include locations of isolated trees more than five (5) inches diameter at breast height (DBH). Generally wooded areas which will remain undisturbed may be outlined and labeled "wooded."

- B. While it is understood that areas for roads and buildings must be clear cut, the Owner or Developer shall not clear-cut the remaining portions of the lots in their subdivision. Where clear-cutting is necessary, it shall be indicated on the site plan and no clearing shall be accomplished until the plan is approved.
- C. There shall be no clear-cutting permitted on slopes greater than fifteen (15) percent in grade. However, selective cutting or trimming is permitted consistent with silviculture standards.
- D. The Owner or Developer shall not pile nor store building material or soil debris, or close or obstruct, the open space at the base of trees and shrubs. Short-term exceptions will be authorized by discretion of the building inspector.



## **Section A177-38 Erosion Sediment Control.**

### General

It is the Town's intent to control soil movement by employing effective erosion and sediment control measures before, during and after site disturbance.

Erosion and sediment control measures, both temporary and permanent, must be designed per the SPDES General Permit and presented for approval to the Planning Board prior to any site development or soil disturbance. A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared as described in Chapter 157 - Stormwater Management (as adopted by Town Local Law No. 4 of 2007), and approved by the Stormwater Management Officer (SMO) prior to any site development or soil disturbance unless noted otherwise in the Local Law.

The Planning Board and its designated representatives will evaluate submitted erosion and sediment control design plans against the most current edition of "New York State Standards and Specifications for Erosion and Sediment Control".

In addition, the following general guidelines shall be followed:

1. If a SPDES Permit is required from NYSDEC, no work shall be allowed on the site until notification from the NYSDEC is received.
2. Any maintenance agreements and easements required for the project shall be in place prior to start of any work on the site.
3. Inspections by the Town Stormwater Management Officer or a designated agent in accordance with Section 157-10 of the Town Code will be required.
4. Copies of stormwater inspection reports by "Qualified Inspectors" for projects requiring inspections of erosion and sediment control measures shall be submitted to the Town Stormwater Management Officer. Such reports shall be submitted electronically in PDF format.

## Vegetative Controls

To attain the Town's goals, vegetative measures should be used in a site design to control surface water runoff, provide soil stabilization methods and entrap soil sediments generated from the forces of erosion.

1. Site slopes shall be graded to be stable and provide control of any surface or subsurface water prior to vegetative plantings.
2. Site disturbance, especially in sensitive areas, shall be kept at a minimum. Designs shall limit the removal of existing trees, hedge rows and indigenous plant cover.

Physiographic features such as drumlins, wetlands and forested areas shall be retained in their natural form.

3. The Site developer shall take whatever action is necessary to establish a stabilized vigorous stand of vegetative cover on all disturbed site soils within 14 calendar days after construction activities have ceased, unless otherwise authorized in the SWPPP.

If phasing is necessary to meet these conditions, the developer shall present such in the development plans presented for Town review.

## Structural Controls

Some projects may require erosion and sediment control measures. Before upland soil disturbances begin, the Town Stormwater Management Officer shall determine that erosion and sediment control measures are fully functional. Such stormwater control measures may include but are not limited to silt fences, stabilized construction entrances, siltation traps, ponds, diversion swales or dikes.

## Maintenance Measures

It is imperative that both the vegetative and structural components as constructed be periodically reviewed and maintained for optimum erosion and sediment control.

Facilities must be cleaned, repaired and/or replaced as necessary to meet the original design criteria established in the project approval.

1. Dedicatible Projects:

If the project under consideration involves possible dedication of constructed facilities to the Town, the developer/owner must include sufficient funds in the maintenance bond to cover the projected cost of such facilities for a two year period.

2. Private Projects:

If a project is under consideration without dedicatible facilities to the Town, the Site owner is responsible to make sure the erosion control facilities are constructed and properly maintained. Final acceptance of the erosion control facilities is necessary for the Town to issue a Certificate of Occupancy. The Site owner will also need to enter into a maintenance agreement with the Town to assure that the Site Owner performs the required annual maintenance and repairs on the stormwater management facility or structures. A final Certificate of Occupancy will not be issued until all pertinent maintenance agreements have been executed and filed with the appropriate agencies.

## Penalty

The Town is empowered to assess reasonable penalties to a Site owner for failure to properly construct, operate and maintain an approved soil erosion and sedimentation control plan. The penalties shall be as follows:

1. The Site owner shall be charged for the Town's costs for, but is not limited to, cleaning ditches, swales, drains or streams that require such due to the failure of the Site owner to properly construct, operate and maintain site erosion and sedimentation control devices.
2. No further reviews of such project shall be conducted by the Town until all payments for the Town charges have been satisfied and/or satisfactory completion of the required erosion and sediment control measures has occurred by the Site owner.
3. Refer to Chapter 157 - Stormwater Management (as adopted by Town Local Law No. 4 of 2007) for additional information on penalties.

## **ARTICLE IV. SITE IMPROVEMENTS**

Section A177-39 General. The Developer of a parcel of land shall make improvements to the parcel in accordance with the approved plans or the minimum standards required in these regulations as applicable to a specific project.

Where certain standards of development are not set forth they shall be established by the Planning Board, following their review of the particular situation.

In many cases, alternate improvement standards may be permitted if the Planning Board deems them equal in performance characteristics for the proposed use intended, with the approval of the Town Board as a deviation from adopted regulations. Additional or higher design standards of improvements may be required in specific cases where the Planning Board believes it necessary to create conditions essential to the health, safety, morals and general welfare of the citizens of the Town.

### **Section A177-40 Road Construction.**

- A. The Town of Sweden has established basic guidelines for the classification of roads to be constructed in the Town. The guidelines are listed in these regulations under Article VIII.
- B. All streets or roads developed in the Town shall be constructed to at least the minimum standards as set forth in the specifications or as shown on plans approved by the Town for a given project.
- C. Due to normal construction sequences for development, it is deemed to be in the best interests of the Town that following procedures be followed:
  - 1. Binder material shall not be placed prior to the completion and approval of all underground utilities including the private utility services and a review of the road base by the Town.
  - 2. The weather and seasonal limitations as specified under the Standard Specifications of New York State Department of Transportation shall apply for placing of bituminous mixtures.

Restrictions (1) and (2) imply completion of all underground systems well in advance of the Developer's schedule for paving.
  - 3. No Certificates of Occupancy will be issued unless a proper road surface as herein specified has been constructed.
  - 4. Upon completion of the binder pavement and all other items related to the completion of a project, the Town may elect to accept for dedication the completed facilities if: (1) an acceptable two year maintenance bond is

submitted to the Town; and, (2) the Developer presents a sum of money to complete the top pavement course. The amount of money to be transferred to the Town will be established by the Highway Superintendent subject to the written approval of the Town Engineer and Town Fiscal Officer. This sum shall be sufficient to cover the cost of labor and materials to cause the proper installation of the top course.

It is the intent of this option by the Town to allow the Developer to offer the project for dedication before the final pavement is installed. This option will allow the Developer to substantially complete the related construction in the developed area prior to installing the top course. In this manner the area will receive a new pavement top that is less susceptible to marring or patching as a result of normal construction activity. In the event the Town takes dedication prior to the top course being installed and the road has concrete gutters, the Developer will need to install the binder coarse flush with the top roadside edge of the gutter prior to the winter season so that the gutter will not be damaged during snow plowing activities.

In general, the final top course will not be installed by the developer until the binder/base course has been exposed to one winter season unless a specific waiver of this schedule is obtained (in writing) from the Highway Superintendent. The top course however shall be installed no later than one (1) year after the placement of binder course,.

Before the expiration of the maintenance bond, the Town and the Developer will hold a final site review to assess any damages and required repairs that may be necessary by the Developer under the maintenance agreement. Once top course has been installed, final acceptance of all roadway improvements shall be obtained from the Town Board.

#### D. Driveway Culverts

The installation of driveway culverts requires the approval and a permit for culvert location, size and material from the State, County or Town Highway Department having jurisdiction over a given road. New driveway culvert installation shall be the responsibility of the developer/landowner following the receipt of a permit.

The Town reserves the right to remove and/or install driveway or roadway culverts along any existing road to properly transmit surface drainage as determined by the Town Engineer and the Superintendent of Highways.

**Section A177-41 Sidewalks.** Sidewalks within R1-2S Districts shall be installed on one or both sides of the street as the Planning Board may require, depending upon local conditions of public safety.

**Section A177-42 Storm and Surface Drainage.** All storm sewers and drainage facilities such as gutters, catch basins, bridges, culverts and swales shall be designed for the development and be subject to the approval of the Town. Such facilities shall be capable of handling upland flows that may be generated from future land development. The following points should be considered in the design of storm drainage facilities.

- A. Lots shall be laid out and graded to provide positive drainage away from buildings.
- B. Storm sewers, culverts and related installations shall be provided:
  - 1. To permit unimpeded flow of natural watercourses.
  - 2. To insure adequate drainage of all low points.
  - 3. To intercept storm water runoff along streets at intervals reasonably related to the extent and grade of the area drained.
- C. Discharge of sump pumps or roof leaders directly to roadside gutters or channels will not be permitted.
- D. In the design of storm sewer systems, special consideration shall be given to avoidance of problems which may arise from concentration of storm water runoff over adjacent properties.
- E. The Town requires the completed construction and the design engineer's certification of all surface drainage improvements and erosion control measures on a development before any building permits are issued.

**Section A177-43 Sewage Disposal Systems.** Where the public sanitary sewer system, in the opinion of the Planning Board, is reasonably accessible, sanitary sewers and appurtenances shall be designed to adequately serve all units with connections to the public system. The design and installation of said sewers shall be subject to the approval of the Planning Board and other appropriate agencies.

Where lots cannot be served by the extension of an existing public sanitary sewer, the Developer shall obtain the approval of individual subsurface disposal systems by the appropriate agencies. The Town assumes no liability for the performance of individual disposal systems.

In areas not presently served by public sanitary sewers, the Board may require, in addition to installation of temporary individual on-site sewage disposal facilities, the installation and capping of sanitary sewer mains and house connections if studies of the Board indicate that extension of public sanitary sewer trunks or laterals to service the property subdivided appears probable or necessary to protect the public health.

**Section A177-44 Water Supply.** Where public water supply, in the opinion of the Planning Board, is reasonably accessible, the developer shall provide and dedicate to the Town a complete water distribution system. The design and installation of said system shall be subject to the approval of the Planning Board and jurisdictional agencies.

Where public water supply is not within reasonable distance, an alternate supply, developed under the guidelines of the State Department of Health, shall be required. The Town is not responsible for the quantity or quality of an individual water supply as shown on development plans.

**Section A177-45 Landscaping.**

- A. Adequate site landscaping will be required of the Developer on any lands developed in the Town. A landscape plan will designate plant species and locations. The Planning Board will notify the Developer at the preliminary plan stage if a specific landscape plan is required.
- B. Trees shall be planted outside the Town rights-of-way (R.O.W.) and easements.
  - 1. Visual impacts shall be considered for planting on sight distances.
  - 2. The trees are to be a minimum of ten (10) feet from the edge of any right-of-way and/or easement.
  - 3. There shall be no underground utilities within fifteen (15) feet of any proposed tree.
  - 4. The trees shall be of a variety that will be medium to small in stature, do not generally have a wide-spreading root system and do not generally have a large-spreading trunk base.
  - 5. On new subdivision roads, trees shall be spaced at 75 foot intervals on both sides of the R.O.W.

(See Appendix OO - "Guidelines to Landscaping.")

**Section A177-45A Drainage Facilities.** Any drainage ditch or water course deemed significant by the Town or its agents as an important factor in maintaining or improving local storm water management conditions, shall be cleared of brush and debris and re-graded by the developer of new developments to assure positive drainage.

**Section A177-46 Monuments.** Permanent reference monuments shall be set at final grade at all corners and angle points of the boundaries of any major subdivision plan and at all street intersections and such intermediate points as may be required per Appendix L. These markers shall be set by a licensed land surveyor and certified to the Town as true

and accurate before a Certificate of Occupancy is issued, or acceptance of dedication of the proposed road.

**Section A177-47 Street Signs.** Permanent street signs, of the same specifications as those of the Town Highway Department, shall be erected at each intersection by the Highway Department and paid for by the developer.

**Section A177-48 Street Lighting.** The Planning Board shall require adequate street, sidewalk or site lighting to be installed. Such a system shall be coordinated with the electrical utility system and designed to keep light from illuminating areas outside of the developed site.

**Section A177-49 Electric, Telephone, Cable TV or Other Buried Cable Utility.** In every development, provisions shall be made for service from the private utility supply systems. All utilities and street lighting systems serving residential, commercial and industrial developments (for new subdivisions) shall be underground, rather than on poles, standard or towers. Underground conduit and cables shall be installed per the regulations of the Public Service Commission and a minimum of two (2) feet below any drainage way. Any new subdivisions on existing Town roads that have aboveground utilities shall have all utilities installed underground between the poles and structure. A road crossing height of a minimum of (twenty) 20 feet shall be required for all road crossings that serve these subdivisions.

**Section A177-49A General Site Consideration.** In addition to the above referenced, the following will also be considered by the Board; pedestrian and vehicular access and circulation, provision for handicapped access, location arrangement, size, architectural features and design of buildings, lighting and signs, protection of adjacent properties and general public against noise, glare and unsightliness, or other objectionable features.



## ARTICLE V. PLAN REQUIREMENTS

**Section A177-50 General Provisions.** All submittals requiring Planning Board action shall be submitted to the Planning Board Clerk at least five (5) calendar days prior to a scheduled Planning Board meeting. The package shall include the plans, reports, sketches and exhibits that are required for review by the Board. When the complete application package is received, it shall be scheduled for the next available Planning Board meeting.

Before plans are submitted to the Planning Board for review they shall be checked by the designer according to the following lists for the various phases of plan development.

Incomplete submittals shall be cause for rejection by the Planning Board until they comply with the listed items.

**Section A177-51 Accept for Review/Preliminary.** The following items are required prior to being formally accepted:

- \_\_\_ a. Ten (10) sets of Plans
- \_\_\_ b. Ten (10) SEQR Environmental Assessment Forms, plus the original
- \_\_\_ c. Ten (10) Agricultural Data Statements, plus the original
- \_\_\_ d. Ten (10) Project Information Forms, plus the original
- \_\_\_ e. Signature block with applicable approving agencies, planning board chairperson, town engineer, highway/Highway Superintendent, Fire Marshal
- \_\_\_ f. Names of adjacent property owners with tax account numbers
- \_\_\_ g. Front, rear and side setbacks
- \_\_\_ h. Driveway culvert pipe size at road
- \_\_\_ i. Distance from well to septic leach fields
- \_\_\_ j. Distance from septic leach fields to property lines
- \_\_\_ k. Perc test and deep hole data (if applicable)
- \_\_\_ l. Sump discharge location
- \_\_\_ m. Roof discharge location
- \_\_\_ n. Tie distance to nearest intersection
- \_\_\_ o. Property boundaries with bearing and distances or angles
- \_\_\_ p. First floor elevation
- \_\_\_ q. Total holdings maps
- \_\_\_ r. Location map
- \_\_\_ s. Pond locations (proposed or existing)
- \_\_\_ t. Electric service location
- \_\_\_ u. North arrow
- \_\_\_ v. Scale (no smaller than 1"-50')
- \_\_\_ w. Mailbox detail
- \_\_\_ x. Driveway detail (within road R.O.W.)
- \_\_\_ y. Title or name of development
- \_\_\_ z. Date of plans and revision block
- \_\_\_ aa. Name(s) of the Record Owner(s), Developer(s) and their addresses

- \_\_\_bb. Name of Design Professional responsible for preparation of plan
- \_\_\_cc. Zoning district and limitations
- \_\_\_dd. Area of property
- \_\_\_ee. General topography (5' contour interval) on U.S.C. and G.S. datum
- \_\_\_ff. All existing natural features; drainage ditches; water courses, tree masses, etc.
- \_\_\_gg. All existing buildings, culverts, utilities with dimensions, sizes and inverts with other significant manmade features.
- \_\_\_hh. All existing property lines, easements or other encumbrances on the property, certified by a licensed land surveyor per a recent survey and the purpose for which the easement or R.O.W. were established
- \_\_\_ii. Where the Preliminary Plan covers only a part of the applicant's entire holdings, a concept shall be submitted of a prospective street and utility layout for the remainder of the property
- \_\_\_jj. Sight distance for access to the proposed parcel or proposed streets (required and provided)
- \_\_\_ll. Design report for major subdivisions
- \_\_\_kk. Location and approximate dimensions and sizes of development improvements
- \_\_\_mm. Profiles of proposed streets, utilities, etc. with approximate grades
- \_\_\_nn. Preliminary design of culverts, pump stations, bridges, sewers, road sections, etc.
- \_\_\_oo. Proposed location, size and width of easements, parks, R.O.W., public areas or parcels of land to be dedicated or reserved for public use
- \_\_\_pp. Provide note on plan that the "Town of Sweden is not responsible for the quality or quantity of water produced by the well." (If applicable.)
- \_\_\_qq. If an Agricultural Data Statement has been submitted pursuant to Local Law #2-1993, the following statement shall appear: "It is the policy of the Town of Sweden to conserve, protect and encourage the development and improvement of agricultural land for the production of food, and other products, and also for its natural ecological value. This notice is to inform prospective grantee that the property they are about to acquire lies partially, wholly or within 500 feet of either an agricultural district or land for which an individual commitment has been received pursuant to Section 305 or 306 of the Agriculture and Markets Law of the State of New York, and that farming activities may occur on such property. Such farming activities may include, but not be limited to, activities that cause noise, dust, and odors."
- \_\_\_rr. Note proximity to all County and State identified Hazardous Waste Sites. (If applicable.)
- \_\_\_ss. For subdivision or resubdivision applications without any proposed site development, the minimum requirements for survey information on the plan shall include locating all structures on the property, including houses, driveways, septic systems and wells, along with surveying all boundaries of the land making up the subject subdivision.

## **Section A177-51b Commercial Site Plan Application**

- (1) The application shall include:
- ☐ a. The name and address of the applicant and nature and extend of his interest in the property for which site plan is desired.
  - ☐ b. The name and address of each partner if the applicant is a partnership.
  - ☐ c. The name and address of each officer and director if the applicant is a corporation.
  - ☐ d. A complete description of the property for which site plan approval is desired.
  - ☐ e. The names and addresses of the owner or owners of such property.
  - ☐ f. A statement as to the nature of the proposed use of the property.
  - ☐ g. A statement that the applicant shall not make more extensive use of the premises than is set forth in said application and depicted on the accompanying map, without further application and approval.
  - ☐ h. A statement as to the applicant's election to apply for an approval automatically cancelable upon sale or lease of the premises; or for approval which is not cancelable upon sale or lease of the premises.
  - ☐ i. A project information form or environmental assessment form.
  - ☐ j. An agricultural data statement, if the proposed site is within an agricultural district containing a farm operation or on property with boundaries within five hundred (500) feet of a farm operation located in an agricultural district (Ch. 534, Laws of 1992; Town Law § 283-a).
  - ☐ k. Such other information as may be required by the Planning Board or any other proper officer of the Town of Sweden to assist in the execution of their duties in connection therewith.
- (2) Visibility from public rights-of-way.
- ☐ a. Principal building faces (sides) that are visible from public rights-of-way shall be surfaced with the same construction material that is used to surface the principal customer entrance face (side) of the building or with a material approved by the Planning Board.
  - ☐ b. All accessory buildings and structures located on an unattached principal site shall be sited to minimize their visibility from public rights-of-way and from neighboring properties. Accessory buildings and structures may be sited adjacent to but shall not be sited in perimeter buffer zones. Accessory buildings and structures located on unattached principal sites that are contiguous with lot lines shall conform to the setback requirements as specified elsewhere in this chapter.
  - ☐ c. Loading docks or doors shall not be located on building faces (sides) that are contiguous with public rights-of-way.
- (2) Maps. Every application shall be accompanied by ten (10) copies of the proposed site plan, showing the real property affected and indicating thereon the use to be made of each part thereof. The following information shall be provided:

- \_\_\_ a. The name and address of record owner and designer of the site plan shall be indicated.
- \_\_\_ b. The location of property lines, existing buildings, watercourses, and other essential features shall be shown.
- \_\_\_ c. The names of record owners, use of adjacent properties and physical features meant to project adjacent land uses shall be indicated.
- \_\_\_ d. Any deviations from this Zoning Ordinance as regards said plan shall be stated.
- \_\_\_ e. The date, true North point, and scale shall be shown.
- \_\_\_ f. The suggested location of new buildings or additions to existing buildings shall be shown.
- \_\_\_ g. Connections to existing water supply or alternate means of providing water shall be shown.
- \_\_\_ h. Provisions for collecting and discharging surface drainage shall be shown.
- \_\_\_ i. The permit for connection to an existing sanitary sewer system or alternate means of treatment and disposal approved by Monroe County Health Department shall be shown.
- \_\_\_ j. The proposed finished grade and landscaping shall be shown. For apartments, townhouses, and multiple dwellings, proposed recreation areas shall be shown.
- \_\_\_ k. The design of any bridges or culverts which may be required shall be shown.
- \_\_\_ l. Proposed parking and truck loading facilities shall be shown.
- \_\_\_ m. The proposed exterior design of buildings shall be shown
- \_\_\_ n. Proposed advertising signs on building or premises shall be shown, in conformity with the provisions for Permit 1.
- \_\_\_ o. The location of outside stored equipment and proposed screening shall be shown.
- \_\_\_ r. Detailed information regarding generation, production or emissions of noxious gases, fumes, smoke, odors, refuse, noises, vibrations, or similar conditions or substances which may become a nuisance or interfere with adjacent properties as the result of the proposed use shall be submitted.
- \_\_\_ s. A note indicating that as-built plans will be submitted prior to receiving a certificate of occupancy shall be included.

**Section A177-52 Final Plan.** In addition to the requirements for the Preliminary Plan, the following will be required:

- \_\_\_ a. Size of the plan shall be acceptable for filing in the Monroe County Clerk's Office
- \_\_\_ b. Scale (no smaller than 1" = 50')
- \_\_\_ c. Name, seal and signature of the registered professional(s) responsible for the plan
- \_\_\_ d. Street lines, lot lines, right-of-way, easements and areas dedicated or proposed to be dedicated for public use

- \_\_\_ e. Sufficient data to determine readily the location, bearing and length of every street, lot and boundary line shown on the plan
- \_\_\_ f. All dimensions shall be shown in feet and in hundredths of a foot
- \_\_\_ g. The length of all straight lines, radii, lengths of curves and tangent bearings for each street
- \_\_\_ h. The proposed setback line from each street or property line
- \_\_\_ i. Names of streets within and adjacent to development as approved by the post office
- \_\_\_ j. Location of permanent reference monuments
- \_\_\_ k. Lot numbers and area of each lot to the right-of-way
- \_\_\_ l. Existing contours (2' maximum depending on topography):
  1. Proposed finish contours
  2. Proposed finish garage floor elevations
  3. Lowest architectural opening elevations in designated flood zone areas
  4. Spot elevations of swales, etc.
- \_\_\_ m. Note on all final plans: Placement and arrangement of building, waste disposal system, driveway, utilities and drainage will not be changed without prior approval of the Town of Sweden Building Department

Note: On some projects the plans should incorporate the following as necessary.

- \_\_\_ n. Location, size, invert elevations, type and class of pipe on all sanitary and storm sewer systems
- \_\_\_ o. Location, sizes and types of pipe for all water mains, location of all valves, hydrants, blow offs, etc.
- \_\_\_ p. Profiles with detailed information of all streets, storm sewers, sanitary sewers and water main crossings
- \_\_\_ q. Design and plan details of all special construction (culverts, bridges, headwalls, etc.)
- \_\_\_ r. Engineering calculations are required to substantiate proposed designs.
- \_\_\_ s. Landscaping plan with planting schedule if required by the Planning Board
- \_\_\_ t. Details required to specify special conditions, materials or methods of construction
- \_\_\_ u. Indication of approval from any jurisdictional agencies
- \_\_\_ v. On all subdivisions and site plans, signature lines must appear for project approval by the Superintendent of Highways, Highway Superintendent and Town Engineer. The Planning Board Chairman shall also sign every plan once all approval criteria are met
- \_\_\_ w. An affidavit that the applicant is the Owner or equitable Owner of the land proposed to be developed
- \_\_\_ x. A statement signed by the Owner to the effect that the subdivision as shown on the final plan is made with his full consent and that it is desired to record the same
- \_\_\_ y. An affidavit stating that the applicant will install all improvements shown on the final plan at his own expense

- \_\_\_ z. Easements Descriptions, Legal Covenants, etc.
- \_\_\_ aa. The final map shall contain on its face a certification that the developer will comply with all Federal and State laws, rules and regulations for the development of the subject property

## ARTICLE VI. ADMINISTRATION

**Section A177-53 General Provisions.** For the purpose of enabling and encouraging flexibility of design and development of land in such a manner as to promote the most appropriate use of land, to facilitate the adequate and economical layout of streets and utilities and to preserve the natural and scenic qualities of open lands, the Planning Board, simultaneously with the approval of a Plan, may in appropriate cases modify applicable provisions of the zoning ordinance in accordance with Town Law 278 providing:

- A. The Town Board authorizes the Planning Board to act on a specific application.
- B. The Owner makes written application for such modification.
- C. The Planning Board adopts rules and regulations setting forth the criteria of an application.
- D. The modifications would not result in greater number of dwelling units or building plots than are permitted if the land were subdivided into lots conforming to the minimum lot size and density requirements of the zoning ordinance applicable to such land. Two plans will be required for the Planning Board to review:
  - 1. Conventional layout meeting all zoning aspects of the Town, and other development regulations.
  - 2. Modified plan meeting applicant's intent of development.
- E. No modifications granted by the Planning Board may change the permitted uses of such lands as set forth in the Town's Zoning Ordinance.
- F. The Planning Board shall record in its minutes the grounds for granting any modification and note the date of such modification and the nature thereof on the final subdivision plan to be recorded in the Office of the County Clerk. The Town Clerk shall make appropriate notations and references of such modification on the official Zoning Map of the Town.

**Section A177-54 Hardships.** Where the Planning Board finds that because of unusual circumstances of shape, topography or other physical features of a proposed development - extraordinary hardship may result from strict compliance with these regulations. The Planning Board may specifically waive portions of these regulations with Town Board approval so that substantial justice may be done and the public interest secured; provided that no such waiver shall be granted which will have the effect of nullifying the intent and purpose of these regulations or any other pertinent rules, regulations or ordinances of the Town of Sweden.

**Section A177-55 Large Scale Development.** The standards and requirements of these regulations may be modified by the Planning Board with Town Board approval in the case of a plan and program for a new community or a neighborhood unit, which in the judgment of the Planning Board provides adequate public spaces and improvements for the circulation, recreation, light, air and service needs of the tract when fully developed and populated and which also provides such covenants or other legal provisions as will assure conformity to the achievement of the plan.

**Section A177-56 Conditions.** In granting modifications, the Planning Board may require such conditions as will, in its judgment, secure substantially the objectives of the standards or requirements so modified.

**Section A177-57 Amendments.** The rules and regulations as set forth above may be amended, altered or revised by the Planning Board from time to time, after public hearing and subject to the approval of the Town Board per Section 271 of the Town Law.

**Section A177-58 Validity.** Should any section or provision of these rules and regulations be declared by a court of competent jurisdiction to be invalid, such decision shall not affect the validity of the rules and regulations as a whole or any other part thereof.

**Section A177-59 Fee Charge Schedule.** The Town of Sweden has a Fee Schedule on file at the Town Clerk's Office. Copies of this Schedule are available and any fees due the Town must be paid in full before approvals are considered.



# **TOWN OF SWEDEN PUBLIC WORKS REQUIREMENTS AND SPECIFICATIONS**

*As adopted by the Town Board on February 27, 1996  
Updated April, 2014*

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## CRITERIA FOR DESIGN AND CONSTRUCTION

### ARTICLE VII. GENERAL PROVISIONS

**Section A177-60 Purpose.** The purpose of these Specifications is to provide minimum criteria for the design and construction of improvements within the Town which, upon the satisfactory completion thereof, may be offered for dedication to the Town of Sweden for perpetual operation and maintenance. The information contained in Subdivision Regulations Section is to be used in conjunction with the Criteria for Design and Construction section.

The criteria established is intended to provide minimum standards which may be upgraded to serve the best interests of the Town. The information in this booklet is provided to aid in the submission of material in a uniform manner and attempt to expedite the various review and approval procedures.

This criteria shall govern in all areas of private, public, industrial and commercial development and/or areas that will involve the connections to existing municipal systems in the Town.

**Section A177-61 Responsibility.** It is the responsibility of the Developer to insure preparation of Plans sufficient to meet the standards and requirements herein incorporated. Said Plans shall be prepared by a professional, licensed in the State of New York, who shall have experience in design of land development.

The Town and/or its representatives shall review the proposed Plans as to their compliance with the standards and conditions encountered while meeting the best interests of the Town.

It is the responsibility of the Contractor, acting for the Developer, to construct the facilities in conformance with the approved Plans and the Town standards.

Construction observation shall be provided by the Town or its designated representative to review construction as it is being performed.

The final results of the project remain the prime responsibility of the Developer and until the development is satisfactorily approved the Town and/or its representatives, said development shall not be accepted for dedication.

**Section A177-61A Construction Observation.** Before any construction begins on a subdivision or facilities to be dedicated to the Town, a pre-construction meeting must be held with the building inspector and appropriate Town personnel to address the Plans and intended improvements. The installation of improvements and development of any land shall be subject to construction observation at all stages by representatives of the Town. For such purposes free access shall be accorded and requested information shall be

promptly submitted. All costs of construction observation, including testing of materials, shall be paid for solely by the Developer. Construction observation services shall be provided by the Town Engineer or Town Employees at the discretion of the Superintendent of Highways. Full time construction observation of all improvements to be dedicated to the Town shall be mandatory unless otherwise recommended by the Superintendent of Highways and approved by the Town Board. A sufficient sum shall be provided by the Developer in either the Letter of Credit or cash for the project observation costs.

#### **Section A177-61B Methods of Release of Financing Security.**

##### **A. Letters of Credit**

The procedure required for the release of funds is as follows:

1. Submission of periodic construction estimates by the Contractor to the Developer and the Design Engineer.
2. The site shall be reviewed by the Town's and Developer's agents to review the comparison of the work complete to the monetary value of the requested release of funds.
3. The Developer's Engineer, Developer, and Town Engineer shall approve in writing up to ninety (90) percent of the total amount of an item. (See Appendix B for typical example of release form.)
4. The Town Engineer shall then submit the proposed estimate to the Town's Fiscal Officer for the final authorization of release of funds from the Letter of Credit. Approval by the Town officials for authorized periodic payments is not to be construed as acceptance of the work completed to date.
5. Partial release from the Letter of Credit may be granted by the Town Board as individual components of the subdivision development are completed. This shall not be construed as final acceptance of the work by the Town.

If the required improvements are not completely installed within the period fixed or extended by the Planning Board, the Town Board may declare the Letter of Credit in default and collect the amount payable thereunder. If no time period is fixed by the Planning Board then all improvements shall be completed no later than two (2) years after acceptance of the Letter of Credit. Upon receipt of such amount, the Town shall cause to install such improvements as were covered by the Letter and as commensurate with the extent of building development that has taken place in the subdivision, not exceeding in cost, however, the amount collected upon the Letter of Credit.

B. Release of Retainage

Retainage release shall be considered by the Town Board after the systems have been tested and found acceptable by the Town's representatives.

C. Release of Maintenance Bond

Release of Maintenance Bond shall be authorized in writing by the Town's Fiscal Officer upon final review of the project site by Town authorities. This review will be completed at least one month before the expiration of the Bond.

**Section A177-62 Building Permits. Building permits shall not be granted until:**

- A. A site plan has received final approval of the Planning Board.
- B. An approved subdivision plan is filed in the office of the Monroe County Clerk.
- C. Easements effecting the development of a parcel are filed in the office of the Monroe County Clerk and notification, of such received by the Town.
- D. Drainage improvements and erosion and sediment control measures have been completed to such a degree that the Stormwater Management Officer deems that building construction may commence.
- E. Stormwater inspection reports required by the NYSDEC – “SPDES General Permit for Stormwater Discharges from Construction Activity” for site work completed prior to the issuance of the building permit have been filed with the Town Stormwater Management Officer and all stormwater SPDES construction permit requirements have been satisfactorily addressed.
- F. All punch list items for the approved site plan work which are required by the Town to be addressed prior to issuance of any Building Permit have been satisfactorily addressed with the Town
- G. Record drawings for site work completed prior to the issuance of the Building Permit have been submitted to the Town Engineer, Town Highway Department and Town Building Department for review and approval
- H. All fees, including but not limited to, site plan, subdivision, district, construction observation, and others must be paid.

## ARTICLE VIII. DESIGN CRITERIA

**Section A177-63 Public Sanitary Sewers.** Minimum requirements shall be as established by the New York State Department of Environmental Conservation and Chapter 114 of the Code of the Town of Sweden.

### A. Gravity Sewers - Expanded Information

1. Sewer mains shall be a minimum of 8 inch diameter except in those areas where the sewer shall be of the diameter outlined in a Comprehensive Plan.
2. Manhole spacing, maximum of 300 lineal feet or at the discretion of the Highway Superintendent.
3. The sewer shall be designed at such a depth to provide basement drainage. If site conditions are such that basement drainage cannot be provided to all units, a specific note to that effect shall be placed on the plan.
4. All necessary mains and laterals required to connect to the public sewage system as shown on the final approved plan shall be installed by the Developer.
5. Elevations - Where other utilities parallel or cross the sanitary system, vertical clearance between the systems shall be provided to permit the satisfactory installation of all services.
6. Laterals for each individual lot shall be:
  - a. Minimum of 4 inches in diameter.
  - b. Minimum of slope 1/4"/l.f. (2%).
  - c. Cleanouts shall be provided at a maximum distance of 75 feet and one shall be located on the right-of-way or easement line. All cleanouts shall include a cast iron cover per Appendix C.

### B. Pressure Sewers

1. Pressure sewer systems shall be laid out in a configuration that is hydraulically efficient.
2. Access shall be provided at the upstream end of each forcemain branch.
3. All appurtenances and fittings shall be compatible with the piping system designed and shall be full bore with smooth interior surfaces.
4. Building service connections shall have a minimum diameter of 1-1/2 inches saddle tapped with stainless steel bands and shall tap into the forcemain with a corporation stop. A check valve shall be provided near the service pump.

### C. Sewage Lift Stations

In all cases, the use of gravity systems is encouraged over pump stations. Specific geographic and/or topographic areas may require the use of sewage lift stations to transmit contributory flows to the trunk sewer system.

1. Before sewage pumping stations are designed they will be discussed with the Town to provide compatible equipment to that already in use.
2. Compliance with Design Criteria of the New York State Department of Environmental Conservation recommended standards for Wastewater Facilities (latest edition).
3. Provision of an audible and visual high-water alarm system, battery back-up operated.
4. Provision to operate pumps on supplied auxiliary power equipment.
5. Pump stations shall be designed to have the controls and motors above ground as manufactured by Gorman Rupp or approved equal.
6. Elapsed time meters shall be provided on the motors to determine quantity of flow being pumped from the station.
7. Provision for telemetry system which will be equivalent and compatible to the existing telemetry systems used at other Town pump stations and as required by the Highway Superintendents.

**Section A177-64 Storm Drainage Systems.** All development projects shall be required to provide for the adequate conveyance of storm drainage through the development. The natural drainage patterns are to be followed as much as possible. Drainage systems shall be sized to accommodate the future potential runoff based on the probable land use and the ultimate development of the upland watershed area based on the Town's Comprehensive Plan.

- A. Storm Sewers and Drainage Facilities - A drainage area of up to 1,000 acres shall be designed to transmit the flow of a one-in-ten year storm. Larger systems and structures on natural watercourse channels shall have design return intervals as follows:

<u>Drainage Area</u>	<u>Design Return Interval</u>
1,000 acres to 4 square miles	25 year
4 square miles to 20 square miles	50 year
20 square miles and above	100 year

- B. Allowance for Overflow Conditions - Overflow conditions shall be designed into each system to protect against damage from major storms and provide an outlet for storm water, should inlets or pipes become damaged or plugged.
- C. Natural Channels and Open Swales - Natural channels are generally preferred alignments for major components of a residential drainage system. However, the utilization of open channels shall be evaluated as to the ease and cost of maintenance, safety hazards and aesthetics. The channels may require special invert or side design to properly convey water while keeping the maintenance cost minimal.
- D. Runoff Computations
1. The design of storm systems shall be generally established by the Rational Formula ( $Q = CiA$ ) where:
    - Q = Runoff in cfs
    - C = runoff coefficient
    - i = Rainfall intensity in inches/hour
    - A = Drainage basin area in acres
  2. Rainfall intensity figures shall be taken from the charts provided in Appendix F for the time of concentration and return period required for a particular basin.
  3. Times of concentration shall be calculated by the Design Engineer but shall be a maximum of 15 minutes to the first inlet for a residential subdivision.
  4. Runoff coefficients shall also be calculated by the Design Engineer to establish a weighted value representative of the type of development proposed. In general, the following ranges shall be adhered to:

<u>Description of Area or Character of Surface</u>	<u>Runoff Coefficient</u>
Business District	0.70 to 0.95
Residential - Single family	0.40 to 0.50
Apartments	0.50 to 0.70
Industrial	0.50 to 0.90
Unimproved	0.10 to 0.30
Pavement	0.70 to 0.95
Lawns	0.10 to 0.35

Factors to be considered in the determination of the runoff coefficient are: soil type, slope of land, development density, etc.

5. Points of discharge shall be recognized U.S.C. & G.S. drainage courses which may require the Developer to acquire downstream easements for dedication to the Town.
6. Culverts shall be designed to accommodate the design storm for the drainage area but shall be checked for the next highest increment of storm return interval to evaluate the possible complications. Headwater and/or tailwater calculations will be required to determine ponding that may occur. In general, the use of multiple culverts is discouraged because of maintenance problems. Inlets and outlets of culverts shall be protected from erosion or turbulence problems by the use of rip-rap, headwalls, energy dissipaters, etc.
7. Backyard swales shall be designed with minimum side slopes of 1 on 4 and a minimum longitudinal slope of 1.0 percent. Field inlets shall be generally provided every 300 lineal feet at all low points and where swales intersect.
8. Retention or detention ponds may be required for developments within the Town where, in the judgment of the Planning Board and the Town, these facilities may be applied to the existing conditions or topography which dictate the practicality of this alternative.

If a detention pond is to be used on the site, the following parameters shall be adhered to:

- a. Pond shall be designed to accommodate the return interval storm for the drainage basin size plus a 1'-0" minimum freeboard.
  - b. The pond outlet should be protected against erosion.
  - c. An overflow mechanism should be designed to allow for the next larger return interval design storm.
  - d. Ponds designed in fill or using dikes shall consider soil stability of the facility.
  - e. Runoff calculations for larger facilities may use alternate methods such as the unit hydrograph or one of the Soil Conservation Service methods applicable to the situation and acceptable to the Town.
9. The Design Engineer shall submit as a minimum, the following information for review of the drainage design:
    - a. A U.S.C. & G.S. quadrangle reprint with the development and drainage basin outlined.



- b. A tabular form (see Appendix G for typical) showing computed runoffs and design capacities of the system.
- c. A map of the development showing the on site drainage areas with inlets numbered in conjunction with the tabular calculation sheet.

E. Storm Drains

- 1. Minimum pipe size - 12 inch diameter, unless a waiver is obtained.
- 2. Minimum velocity when flowing full - 3 fps.
- 3. Maximum manhole and catch basin spacing - 300 lineal feet or at the discretion of the Highway Superintendent.
- 4. In general, only natural waterways may be continued in open channels. Street drainage and other parts of a storm sewer system shall be in closed conduit. When gradient and tributary runoff require conduit greater than 36 inches in diameter, then open channel design may be considered.
- 5. All storm drain road crossings are required to utilize polyvinyl chloride (PVC) pipe or smooth bore high density polyethylene (HDPE).

F. Storm Laterals

Gravity laterals shall be a minimum of 6 inches in diameter. Sump pumps with check valves will be permitted to discharge to storm laterals or, in the absence of storm sewers, to splash pads directed to side or rear yard drainage swales. Roof runoff will not be permitted to tie into the storm laterals directly but discharge to splash pads.

G. Catch Basins

Catch basins shall be placed at all low points and intersections with maximum spacing of 300 feet. Catch basins shall not be located within driveway apron areas. Catch basin leads shall only be connected to the storm sewers at manholes.

H. Storm Manholes

Storm manholes shall be designed to accommodate the pipes entering and exiting the structures.

A schedule of manhole diameters shall be provided on the final plan.

I. Drainage Easements

The minimum easement width shall be 20 feet, but the actual width acceptable to the Town will consider all those factors previously listed.

**Section A177-65 Water Mains.** All work performed and materials furnished for the purpose of supplying the development with potable water shall comply with the requirements of the Monroe County Water Authority, as well as any applicable Town of Sweden Rules and Regulations Local Law.

A. Design

Water supply system shall be designed to provide adequate domestic usage and fire protection. Where public water supply is not accessible, an alternate private supply shall be furnished, which conforms to the New York State Health Department regulations.

All main and service sizing shall be substantiated by the Design Engineer using updated flow data provided by the Monroe County Water Authority.

All water mains shall be a minimum of 8 inches except:

1. Where mains are part of a major transmission distribution network, the Town may require a larger size main.
2. Where project demands allow a smaller main while still providing adequate fire and domestic flows. In no case will the Town accept for dedication a main smaller than 6 inches in diameter.

B. Hydrants

Hydrants shall be spaced at maximum 500 foot intervals.

C. Valves

Valves shall be located such that no more than 20 dwelling units and no more than two hydrants need be out of service for repair of a water main. Valves shall generally be provided at intersections and shall be no more than 1,000 feet apart along the water main.

Additional valves shall be required at creek and/or railroad crossings depending on network configuration and permit requirements.

D. Dead End Mains

Provide a hydrant unit, gate valve and 2-inch blow-off units at the end of all "dead end" mains.

E. Water Services

Provide minimum of 1 inch water service to the right-of-way line of all individual lots or where an easement is provided, the service shall extend to the easement line. Service materials shall conform to the standards of the MCWA and the Town Building Code.

F. Meter Pits (for individual services)

Meter pits may be installed when the water service length is greater than 250 feet from the center line of a given road. All services from the water main to the meter pit shall be Type K copper, PVC may be utilized from the meter pit to the building unit. Remote read receptions shall be placed outside the pit area.

**Section A177-66 Grading.**

A. General

The finished grading on developed lands shall provide for the effective removal of storm water runoff to a drainage system.

In general, the Design Engineer shall try to establish a finished grade at the structure line to permit a minimum of 2.0 percent grade away from the structure to the drainage system.

Drainage shall generally be to side or rear lot swales provided:

1. Swales are of a proper cross-section to permit ease of maintenance by the individual Owner.
2. Easements are provided for access and/or maintenance where necessary.
3. Finish grade at right-of-way line shall be not more than 2 feet above finish grade at centerline and the driveway slope within the lot shall not be greater than 12 percent. A leveling area of 3 percent maximum grade adjacent to the right-of-way shall be provided which is a minimum of 30 feet in length from the edge of the street pavement.
4. Where multi-lot grading is proposed, all swales required for positive drainage will be installed prior to the issuance of a building permit.

B. Grading Plan

A Grading Plan shall be submitted, with the final plan for any development, showing at a minimum the following items:

1. Existing contours.
2. Proposed finish contours.
3. Spot elevations of proposed finish grades at key locations.
4. Garage floor elevations.
5. Minimum elevations of any architectural opening where flood hazard areas exist.
6. Culvert invert elevations.
7. All elevations shall be established from U.S.C. & G.S. datum and the plan shall show a site bench mark.

**Section A177-67 Roads.** The following designations will be used by the Town to classify roads and their respective design criteria:

- A. Standard Residential (Subdivision)
- B. Commercial
- C. Industrial

The basic considerations of each road classification are as follows:

A. Standard Residential (Subdivision)

1. Densities as permitted by the Zoning Ordinance.
2. Design speeds of 30 MPH or less.
3. Low volume of traffic.
4. Individual driveways at regular intervals.
5. Usually no effect on overall Town traffic pattern.

B. Collector Roads

1. Densities as permitted by the Zoning Ordinance.
2. Design speeds of 30 mph or less.
3. Medium volume of traffic.
4. Individual driveways at regular intervals.
5. Moderate effect on overall Town traffic pattern.

C. Commercial

1. Provides connections to major roads and represents major traffic pattern throughout the Town.
2. High volume traffic.
3. Provides access to local roads.
4. Relatively low density of development abutting such a road.

D. Industrial

1. Provides access to established industrial zoned areas.
2. Low density residential level.
3. High volume truck/tractor trailer traffic.

Each of these roads has basic characteristics which may be varied to be consistent with unique proposals of development and construction. The individual variations of the conditions will not be permitted if they sacrifice design safety or maintenance of a proposed road type. Standard roads shall comply with the typical cross sections shown on Appendices H and I.

**Section A177-68 General Road Design Considerations.**

A. Right-of-Way

1. Minimum width 60 feet for dedicated roads.
2. Private underground utilities to be located on easements beyond right-of-way limit.

B. Horizontal Alignment

The following factors shall be incorporated into the design of each road type:

1. Sight distance must conform to minimum safe stopping sight distance per "Geometric Design of Highways and Streets" AASHTO Latest Edition.
2. Clear sight at intersections
3. No centerline intersection angles less than 75 degrees.
4. Minimum centerline radius of 150 feet.
5. Road pavement intersections shall have a minimum of 35 foot radius.
6. Cul-de-sacs should not exceed 1,000 feet in length and end with a turnaround (see Appendices FF, GG and HH).
7. Access to future developments will be provided to property lines.
8. Tangent sections shall be used between curves to maintain the proper flow of traffic at design speeds.

C. Vertical Alignment

1. The minimum length of vertical curves shall be based upon current AASHTO policy covering selection of vertical curve length based upon stopping sight distance, passing sight distance, riding comfort, and headlight sight distance. Vertical curves are required whenever changes in grade exceed 1 percent.

D. Road Grades (dedicated)

1. Minimum - 0.7 percent with shoulders; 0.5 percent with gutters.
2. Maximum - 8 percent - Maximum grade may exceed 8 percent for short distances with engineering justification and Town approval.

E. Leveling Areas

Leveling areas shall be incorporated at all intersections for a minimum distance of 100 feet from the edge of the pavement and the grade shall not exceed 3 percent.

F. Road Widths

<u>Class</u>	<u>Pavement Width</u>	<u>Treatment</u>	<u>Drainage</u>
Residential	22' min.	30" concrete gutters or concrete curb	Underground conduit or roadside swales
Collector	26' min.	30" concrete gutters or concrete curb	Underground conduit or roadside swales
Commercial	24' min.	30" concrete gutters or 8' shoulders or concrete curb	Underground conduit or roadside swales
Industrial	26' min.	30" concrete gutters or 8' shoulders or concrete curb	Underground conduit or roadside swales

G. Special Considerations

1. Roadside Swale - Where grades exceed 5 percent and/or unstable soil conditions warrant, the swales shall be designed to control flow velocities.
2. Underdrains - Required under all gutters - The Developer will be required to install underdrains. The method used shall be subject to the review and approval of the Town Engineer and the Superintendent of Highways.

3. Frontage Development - Where frontage development is to be approved along collector roads, the Planning Board may require that the roadside swale be enclosed in conduit along the fronts of the development. Such conduits shall be of the proper size to accommodate anticipated flows as previously outlined. A parallel access road may also be considered by the Planning Board and discussed during sketch plan submittal.

## **Section A177-69 Road Design.**

### **A. General Requirements**

The Design Engineer shall consider the proposed use of the road when preparing a road design. The following criteria is listed as minimum standards to be considered by the designer. It is the intent of these requirements to obtain a road and a base that is stable and capable of supporting H-20 loading to the sites. All roads shall require the installation of underdrains. The method used shall be subject to review and approval of the Town Engineer and Highway Superintendent.

### **B. Minimum Design Standards**

#### **1. Standard Residential**

- a. Supac 6 WS soil stabilization fabric or equal as required by Town Engineer or Highway Superintendent.
- b. Two 6 inch lifts crusher stone Type 2 (12 inch compacted thickness) (NYSDOT Specification 304.12).
- c. Three inch compacted thickness asphalt concrete binder course Type 3 (NYSDOT Specification 403.138902).
- d. One and one-half inch compacted thickness asphalt concrete top course Type 6F (NYSDOT Specification 403.178902).

#### **2. Collector**

- a. Supac 6 WS soil stabilization fabric or equal as required by Town Engineer or Highway Superintendent.
- b. Three 6 inch lifts crusher stone Type 2 (18 inch compacted thickness) (NYSDOT Specification 304.12).
- c. Four inch compacted thickness asphalt concrete binder course Type 3 (NYSDOT Specification 403.138902).

- d. One and one-half inch compacted thickness asphalt concrete top course Type 6F (NYSDOT Specification 403.178902).
3. Commercial
- a. Supac 6 WS soil stabilization fabric or equal as required by Town Engineer or Highway Superintendent.
  - b. Eighteen inch compacted thickness crusher stone Type 2. Three lifts - 6 inches each, (NYSDOT Specification 304.12).
  - c. Four inch compacted thickness asphalt concrete base course Type 1 (NYSDOT Specification 403.118902).
  - d. Four inch compacted thickness asphalt concrete binder course Type 3 (NYSDOT Specification 403.13).
  - e. One and one-half inch compacted thickness asphalt concrete top course Type 6F (NYSDOT Specification 403.178902).
4. Industrial
- a. Supac 6 WS soil stabilization fabric or equal as required by Town Engineer or Highway Superintendent.
  - b. Eighteen inch compacted thickness crusher stone Type 2. Three lifts - 6 inches each, (NYSDOT Specification 304.12).
  - c. Six inch compacted thickness asphalt concrete base course Type 1 (Two lifts @ 3 inches each) (NYSDOT Specification 403.118902).
  - d. Three inch compacted thickness asphalt concrete binder course Type 3 (NYSDOT Specification 403.13).
  - e. One and one-half inch compacted thickness asphalt concrete top course Type 6 (NYSDOT Specification 403.178902).

Note: All depths are compacted thicknesses.

Driveways: All driveway aprons shall match the type of construction from the edge of the pavement to the R.O.W. line.



#### **Section A177-70 Driveway Culverts.**

- A. Shall be provided along existing road frontage lots to properly convey roadside drainage. The culverts shall be installed to the proper grade to allow the natural flow of water. All culverts installed shall be subject to the review of the Superintendent of Highways having jurisdiction on the road.
- B. Minimum of 12 inch diameter unless they are a part of a larger drainage course which may require larger diameter pipes or unless a waiver is obtained for a size smaller than 12 inch..
- C. The culverts shall extend a minimum of 5 feet beyond the edge of the access driveway and be provided with end sections. The slope from the driveway to the culvert end section shall be graded and seeded to maintain the slope stability.
- D. Elevations to be set by U.S.C. & G.S. datum.
- E. Culverts shall have a minimum of 12 inches of cover.

**Section A177-71 Sidewalks.** Where required by the Planning Board, sidewalks shall be concrete per Appendix T.

**Section A177-72 Monuments.** Monuments per Appendix L shall be located at:

- A. P.C. and P.T. of all horizontal curves along one side of the right-of-way.
- B. Maximum of 1,000 feet along one side of right-of-way line.

**Section A177-73 Reserved Land for Future Use.** Where land areas are reserved for future connections to adjacent parcels, all improvements, i.e., sanitary, storm, water, roads, will be constructed to the common property line.

## ARTICLE IX. MATERIAL SPECIFICATIONS

**Section A177-74 General Information.** The materials intended to establish the degree of excellence are herein included and deemed to be of satisfactory quality for installation within the Town. When new materials may be made available, their use may be permitted in limited test sections with the restriction that should these materials prove unsatisfactory through the test period as established by the Town, they shall be removed and replaced with those herein called for at no expense to the Town.

### **Section A177-75 Sanitary Sewers.**

#### A. Polyvinyl Chloride (PVC) Pipe for Gravity Sewer

Shall meet the requirements of ASTM D-3034-08 for Sewer Pipe and Fittings, minimum wall thickness SDR-35. The joints shall be bell and spigot conforming to ASTM D-3212-07 with elastomeric gasket conforming to ASTM F-477-10. All pipe and fittings shall be made from PVC components as defined and described in ASTM D-1784-11.

#### B. Polyvinyl Chloride (PVC) Pipe for Sewage Force Mains

Shall meet the requirements of ASTM D-2241-09 for PVC plastic pipe. Pipe and fittings shall be 160 psi, minimum SDR-26 extruded from clean, virgin, resin compound conforming to ASTM D-1784-11. Bell and spigot joints are required with elastomeric gaskets conforming to ASTM D-3139-98 (2011).

#### C. Ductile Iron (DIP) Pipe for Sewage Force Mains

Shall conform to ANSI/AWWA C-151/A.21.51-09, minimum allowable thickness shall be Class 51. Rubber gasket push on joints shall be used in accordance to AWWA C-111/A21.11-07. All ductile iron pipe shall be cement-mortar lined in accordance with AWWA C-104/A21.4-08.

#### D. Sewer Connections for Gravity Sewer

Sewer connections on new sewer main installations shall be made with wye fabricated or injection molded fittings. The minimum strength classifications of these fittings shall be equal to that of the pipe and the fitting shall be compatible with the pipe.

Connections to an existing sewer shall be made with GENCO strap-on saddles with double stainless steel straps and stainless steel or bronze bolts for sewers up to 14 inches in diameter and GENCO bolt-on saddles for sewers greater than 14 inches in diameter.

Connections to mains must be separated by a minimum of 10 feet.

E. Sewer Lateral Pipe for Gravity Sewer

1. Cast iron sewer pipe shall be extra heavy class with rubber gasket joints and maximum lengths equal to 5'-0" per ASTM A-74-09.
2. PVC pipe shall be of a minimum wall thickness SDR 35 with elastomeric gasket joints, supplied in standard lengths and conform to ASTM D-3034 -08 (#10 gauge copper tracer wire from right-of-way or easement line to the structure shall be included).

F. Sewer Lateral Pipe for Pressure Sewer

1. Polyvinyl chloride (PVC) pipe and fittings shall meet the same requirements as PVC force mains.

**Section A177-76 Storm Sewers.**

A. Reinforced Concrete Pipe

Shall be supplied in conformance with ASTM C-76-11 Class II. Joints shall be of the bell and spigot type with compression type joint ASTM C-443-11.

B. Polyvinyl Chloride (PVC) Pipe

All storm sewers up to 18 inches shall be smooth bore P.V.C. Shall meet the requirements of ASTM D-3034-08 or ASTM F-679-08, minimum wall thickness SDR 35 with elastomeric gasket joint, ASTM D-3212-07 or ASTM F-794-02 (2009) for ribbed gravity pipe. PVC pipe shall not be used as driveway culverts. PVC pipe may be used for storm sewer road crossings (up to 18").

C. Corrugated Steel Pipe

All pipe shall be coated inside and outside and have joints made with connecting bands. Thickness gauge will be dependent on the load conditions, except that 16 gauge shall be the minimum allowable thickness.

D. Corrugated Polyethylene Tubing (HDPE)

Pipe shall be smooth lined (smooth bore) and shall conform to the requirements of ASTM F2648/F2648M-11. HDPE may be used as driveway culverts and storm sewer systems (depending on available cover).

E. Storm Laterals

1. PVC conforming to ASTM D-3034-08, minimum 6 inches in diameter with fabricated tees and wyes SDR-35.

F. Catch Basin Leads

Shall be a minimum of 12 inches in diameter.

1. Reinforced Concrete Pipe.
2. Polyvinyl Chloride Pipe.
3. Corrugated Steel Pipe.
4. High Density Polyethylene Pipe (smooth bore).

**Section A177-77 Manholes and Manhole Ladders.**

A. Manholes

Precast reinforced concrete sections shall be manufactured in accordance with ASTM Specification C-478-11. Riser sections shall have tongue and groove ends and super "O" joints and gaskets conforming to ASTM C-443-11. Manhole bases may be pre-formed or poured in the field. Roof slabs shall be precast structural concrete, reinforced for H-20 loading and 30 percent impact loading. A 24 inch diameter hole shall be eccentrically located in the roof slab. In place of preformed openings in base sections, flexible manhole sleeves may be cast directly into the base walls may be used with compatible pipe material.

All manholes shall be sealed inside and outside completely with two coats of heavy-duty water repellent protective coating which complies with ASTM Specification D-450-07, Type B.

Manholes constructed of other materials shall be considered for approval following a review of said manhole construction. In specifying these manholes, the Developer's Engineer shall submit adequate design data and/ or shop drawings to substantiate the materials.

See Appendix P-1 for minimum manhole diameters.

B. Manhole Ladders and Steps

Manhole ladders or steps shall be provided in all sanitary and storm manholes and shall be constructed of one of the following materials.

1. Copolymer polypropylene or non-corrodible, aluminum magnesium alloy ladders, with intermediate supports at 5 foot intervals.
2. Forged aluminum with drop front design and grooved tread surface.

Steps shall be cast into the walls of riser sections and shall be aligned in each section to form a continuous ladder with rungs equally spaced vertically in the assembled manhole at a distance of 12 inches apart.

#### **Section A177-78 Frames and Covers.**

A. Sanitary Manhole Frames and Covers

Shall be Neenah R-1726-A, Woodward M-138 or other approved equal. The word "Sanitary" shall be cast into the top of the cover. The inside diameter for clearance shall be a minimum of 22 inches.

B. Sanitary Cleanout Covers

Cast iron covers per Kistner Concrete Produces C1-SV-6, or equal.

C. Storm Manhole Frames and Covers

Shall be Neenah R-1726-A, Woodward M-318 or other approved equal. The word "Storm" shall be cast into the top of the cover. The inside diameter for clearance shall be a minimum of 24 inches.

D. Catch Basin Frames and Grates

Shall be reticuline, galvanized (ASTM A-123/A123M-09) and sized to fit gutter inlets or field inlets. The gutter grates shall be NYSDOT 604-2 with NYSDOT 655-01 size no. 9 to fit the catch basin inside minimum dimensions of 24" x 24".

Catch basin manholes shall be set to allow a NYSDOT 604-2 size no. 9 grate to be installed.

Frames and grates shall be as specified in NYSDOT Specification Drawing 655-06 and Section 655 of the NYSDOT Standard Specification Manual. All grates shall be bolted to the frames.

#### **Section A177-79 Water Mains.**

All watermain and appurtenances shall comply to the current requirements and specifications of the Monroe County Water Authority (MCWA).

#### **Section A177-80 Concrete Gutters and Sidewalks.**

A. Concrete

1. Shall be a minimum of 4000 psi (28 day strength) Class A concrete conforming to NYSDOT Specification 608 and 609.

2. Air entraining admixture conforming to ASTM Specification C-260/260m-10a.
3. Bituminous expansion material shall conform to NYSDOT Specification 705-07.
4. Curing and sealing compound - conforming to ASTM C-309-11, Type I, Class B for curing and sealing.
5. A slump test for each truckload of concrete shall be performed. Additionally, three test cylinders for every 15 cubic yards of concrete placed shall be sampled for structural testing. All tests to be completed shall be performed by a certified laboratory.

### **Section A177-81 Road Materials.**

#### **A. Sub-Base and Base Courses**

1. Crusher run stone shall conform to NYSDOT Specification Section 304-2.02, Type 2 (304.12).
2. Aggregate shall conform to NYSDOT Gradation Table 703-4, size as specified.

#### **B. Bituminous Pavement**

1. Residential/Collector Road:
  - a. Asphalt binder course shall conform to NYSDOT Specification Section 403, Type 3 Item No. 403.138902.
  - b. Asphalt top course shall conform to NYSDOT Specification Section 403, Type 6F Item No. 403.178202.
2. Commercial/Industrial Roads:
  - a. Asphalt base course shall conform to NYSDOT Specification Section 403, Type 1 Item No. 403.118902.
  - b. Asphalt binder course shall conform to NYSDOT Specification Section 403, Type 3 Item No. 403.138902.
  - c. Asphalt top course shall conform to NYSDOT Specification Section 403, Type 6F Item No. 403.178202.

d. Liquid Materials – Commercial/Industrial Roads Only

The materials and composition for the mixtures shall meet the requirements specified in Subsection 401.2.01 through 401-2.05, except as noted herein.

The Performance Grade of asphalt binder used in the production of these mixes shall be either PG 64-28L, or PG70-28L with Latex Polymer additive meeting current NYSDOT Specifications in addition to the following Requirements:

A minimum elastic recovery of 52.5% at 10 °C; 20-cm elongation at 5-cm/minute; hold five minutes then cut in half; wait one hour and calculate the elastic recovery (ASTM D6084-97-modified).

C. Tack Coat

Shall conform to NYSDOT Specification Section 407. The grade shall depend on the specific use intended.

D. Pre-molded Bituminous Joint Filler

Shall conform to NYSDOT Specification Section 705-07.

E. Underdrains

Shall be 4 inch perforated SDR-35 PVC per NYSDOT 706-15 or High Density Polyethylene Tubing per AASHTO M-25209.

**Section A177-82 Monuments.** Monuments shall be constructed as shown in Appendix L.

**Section A177-83 Equivalents.** The mention of apparatus, articles or materials by name and such specific description of same as is made herein is intended to convey to the Developer and his Contractor an understanding of the degree of excellence required. The Town shall be the sole judge of the qualifications of the offerings and will determine all questions regarding the conformance of any offer outside the specifications.

For any project it will be assumed that the Developer will furnish the exact materials specified on the plans and specifications unless the Developer files with the Town of Sweden prior to any use in the development, the names and complete description of each article which he proposes to substitute for approval by the Town Board.

Any costs incurred by the Town or its representatives associated with the verification of substitute equipment and materials will be the responsibility of the Developer.

## ARTICLE X. INSTALLATION OF IMPROVEMENTS

### Section A177-84 General Information.

#### A. Pre-Construction Meeting

A pre-construction meeting shall be requested by the Developer and scheduled through the Town Building Department prior to the start of construction of a development. The Developer, his Contractor and Design Engineer shall meet with all private utility representatives, Town Department Heads and project observers to discuss the overall project, its impacts and schedules. A schedule of construction shall be presented in writing at this meeting by the site contractor.

Prior to scheduling a preconstruction meeting, the Developer shall obtain a checklist from the Town Engineer, identifying all items that the Developer must bring to the meeting.

#### B. Meaning of Drawings

The Contractor shall abide by and comply with the true intent and meaning of all drawings and of the specifications taken as a whole. If the Contractor believes that the construction indicated on the project drawings will not, when executed, produce safe and substantial results or if it appears that there is any discrepancy in the drawings, it is his duty to immediately notify the Developer's Engineer, in writing, and to thereafter proceed only upon written order of the Town.

#### C. Protection of Property and Work

1. The Contractor shall conduct his operations to prevent damage to trees, garden plots, shrubbery, pipe lines, conduits, buildings and other structures. The Contractor shall use all necessary precautions to protect the work and adjacent structures of all kinds during construction and shall so conduct his operations that at no time shall the work or such structures be endangered.
2. Responsibility and damage - the Developer shall be responsible for all parts of his work, temporary or permanent, until the project is complete and shall thoroughly protect all work, finished or unfinished, against damage from any cause as all work is at the Contractor's risk until the same is accepted by the Developer. The use of part or all of the work by the Town as provided for in these specifications shall not relieve the Developer of this responsibility. The Contractor shall be responsible for damage to life and property due to his operations and shall provide all necessary guards, rails, night lights, etc.



D. Construction Schedule

The Developer shall provide a construction schedule showing the order in which work will be completed at the preconstruction meeting. The schedule shall be reviewed at the preconstruction meeting and revised if necessary. No work will begin until a schedule acceptable to the Town is on file with the Town.

E. Permits

The Developer shall secure all necessary permits from the Town including Highway Departments and/or any other agency who may have authority over any work prior to the start of construction.

F. Existing Utilities or Structures

Before construction begins near any existing utility or structure, the Contractor shall notify the appropriate Owner of his intention and their instructions as to the protection of their property must be followed. Before commencing work, the Contractor shall determine the exact location of any structure or underground utility in order that the Contractor's project will not damage or disrupt these facilities.

The Contractor shall take necessary precautions to prevent entry of mud, debris, etc. into existing utilities or onto streets near the site.

All existing underground facilities shall be checked for damage before backfilling. In the event a facility is damaged, the Owner of that facility shall be notified by the Contractor so as to insure an acceptable repair and/or replacement.

G. Facilities for Observation

The Contractor shall furnish all reasonable facilities and aid to the construction observers for safe and convenient footways, scaffolds, ladders, etc., that may be needed for the examination and review of any part of the work. The Town of Sweden may stop work when the Contractor has no responsible agent on the project or if the Town feels that the Contractor is not performing the work in the best interests of the municipality. Disorderly, intemperate and incompetent persons shall not be allowed on the project. The employees who neglect or refuse to follow the construction observer's instructions shall be permanently removed from the project by the Contractor. Failure to conform to these controls may warrant refusal of the municipality to consider the development for dedication.

H. Layout

It shall be the responsibility of the Developer to have the work carefully laid out by qualified surveying or engineering personnel in a manner that will assure accurate completion of the work.

I. Approval of Materials

The Contractor shall provide shop drawings and/or material description from suppliers, verifying that all items meet or exceed Town standards.

J. Defective Work

The review of the work shall not relieve the Developer of any of his obligations to comply with the specifications. Any defective work shall be made good and any unsuitable materials which have been previously overlooked by the Town or its representatives shall be removed and replaced. If the work or any part thereof shall be found defective at any time before the final acceptance of the project, the Developer shall make good such defect in a manner satisfactory to the Town.

**Section A177-85 Grading.** Completion of grading per the grading plan to within 1 foot of design grade shall precede any trench excavation. Such grading shall include house "pads", removal of enough material to form "box" for road base, surface drainage channels, required temporary situation basins, etc.

Construction brush and debris will not be buried on the site. Wood materials shall be cut, chipped, mulched or removed from the site and deposited in a permitted construction/demolition landfill.

**Section A177-86 Trench Excavation.**

A. Excavation

Under this term will be included all excavation in trenches and pits, together with all backfilling and embankments that may be needed for the laying of the utilities and appurtenances or that may be necessary for the laying, changing and construction of any water, sewers, conduits, culverts, drainage ditches or water courses, or for any other incidental work that may be required or ordered by the Town or its representative.

It is the Contractor's sole responsibility to make sure that all work shall be conducted in strict accordance with the Federal Safety Standards of OSHA.

B. Width of Trenches

The trenches shall be of such width as may be required by the Design Engineer to insure proper laying and handling of the pipes and appurtenances, proper tamping and backfilling operations. In all cases, trenches should be kept as narrow as possible. The Contractor shall be responsible to provide sheeting/bracing or other requirements to insure the safety of his workmen in conjunction with the proper installation of the pipe.

C. Depth of Trenches

In general, the trenches shall be excavated to such a depth to properly install utilities to the grade established in the field by the Design Engineer. The depth of the excavation shall allow the proper bedding material to be placed under the pipe.

Any extra excavated depth by the Contractor shall be filled with compacted crushed stone to the proper grade required.

Utilities shall be designed to prevent damage from frost penetration or surface forces. Water mains and services shall be generally buried with 4'-6" of cover in fields but at least 6'-0" when they cross existing or proposed roads.

D. Tunneling

Work shall generally be conducted in open trenches or excavations, with proper protection. Tunneling shall be done only in areas specifically called for by the design plans with design details approved by the Town.

E. Blasting

Whenever necessary to resort to blasting for making the excavations, the trench shall be covered in a form to prevent fragments of rock from being thrown out. Only experienced, licensed workmen shall be employed in the handling and uses of explosives. All blasting operations shall be conducted in strict accordance with existing ordinances, regulations and specifications relative to rock blasting, storage and use of explosives.

F. Bailing and Draining

The Contractor shall furnish a sufficient pumping plant and shall provide and maintain, at his own expense, satisfactory drainage whenever needed in the trench and other excavations during the progress of the work and up to final construction observation. No structures shall be laid in water. Water shall not be allowed to flow or rise upon any concrete or other masonry or flow on adjacent lands. All water pumped or bailed from the trench or other excavation shall be conveyed in a proper manner to a suitable point of discharge and may require temporary siltation traps.

G. Bottom of Trench

The bottom of the trench shall be carefully graded and formed according to the directions of the Design Engineer, before any structures are laid thereon. When other instructions or design are not indicated, all trenches shall be excavated in a straight line. In hard pan, boulder formations or rock, the excavation shall extend at least 6 inches below the bottom of the pipe and a carefully compacted bed of

crushed stone screenings placed in the bottom of the trench up to the level of the spring line of the pipe.

It is the intention of this specification to achieve not less than Class "B" pipe bedding.

H. Suitable Bedding and Safety Backfill Material

It shall be the responsibility of the Contractor to generally utilize material excavated from the trench in order to provide the required backfill to meet the listed specifications unless crossing an existing or proposed road. Should the nature of the soil be such that the Contractor is unable to meet the above requirements by selecting, with reasonable care, from the excavated material, he shall provide the following materials, if so ordered by the Town.

Sand, stone or concrete cradle when the trench bottom does not provide sufficient bearing capacity or when specification requires specific bedding for certain utilities.

#1 stone encasement shall be ordered by the Town when the trench is excavated in rock, boulders, or hard pan and none of the material above this level is suitable for backfilling the pipe.

**Section A177-87 Pipe Installation.**

A. Line and Grade

All pipes and appurtenances of whatever character shall, when set, conform to the alignments and grades required by the Design Engineer. All of the required special castings and other fixtures that are indicated upon the plans, or that may be required during the progress of the work, shall be installed in their proper positions.

B. Laying Pipe and Castings

The Contractor shall use suitable tools and appliances for the safe and convenient handling and laying of all utilities and appurtenances. All pipes and castings shall be carefully examined by the Contractor for defects and no pipe or casting which is known to be defective shall be laid. If defective pipe or castings should be discovered after being laid, these shall be removed and replaced with sound pipe or castings. The pipes shall be cleaned before they are laid and shall be kept clean until they are accepted with the completed work. All ends of the pipes shall be watertight capped to exclude water and debris from entering the pipes.

Sewers shall be built to the lines and grades between manholes as shown on the project drawings. The Contractor shall provide sufficient grade control to properly install the pipe and appurtenances. Sewer pipe shall be laid upgrade with spigots

placed in the direction of flow. All pipes shall be fitted together to form a smooth, even invert. Pipes disturbed after laying shall be removed and re-laid.

After the pipe has been placed and adjusted to line and grade, the bed shall be trimmed to support the pipe for its entire length. Material used for bedding shall be thoroughly compacted under the bottom and the haunches of the pipe. The trench shall then be backfilled to above the top of the pipe and carefully compacted to hold the pipe in position.

C. Cutting Pipe

Whenever it may be necessary to cut any straight pipe it shall be completed by skilled workmen with proper tools, in such manner as will not cause any cracking of the pipe.

**Section A177-88 Manhole Construction.**

A. General

Manholes shall be constructed of the size, type and at the locations shown on the Plans, or as designated by the Design Engineer in the field.

The manhole bed shall be excavated level and include a minimum of 6 inches of crushed stone.

Manhole risers and flat slab covers shall be precast reinforced units. Manhole bases may be precast "Monobase" or field poured with 3,500 concrete psi.

Eccentric cone sections may be used on the top of manhole riser sections if the inside height dimension from the bench wall to the bottom of the eccentric section exceeds 8 feet.

Interior and exterior concrete surfaces shall be sealed by the supplier and touched up or recoated by the Contractor with like material.

Any pipe entering a manhole shall be neatly cut with proper sharp tools before installation in the manhole. Pipe shall not be "chipped off" after installation.

All openings and joints in the manhole sections shall be completely filled once the sections are set, with non-shrink grout\* and after initial set, waterproofed on the inside and outside with a coal tar coating.

Note: When PVC is used all openings around pipes shall be completely filled with 100 percent epoxy non-shrink grout.

Before each barrel of the manhole is set, the joint shall be cleaned and the barrel correctly aligned, so that the steps form a continuous ladder. The first step shall be no more than 30 inches below finished grade and continue to the top of the bench wall.

It is the intent of these specifications to construct first-class manholes which will exclude all ground water, by means of carefully constructed foundations, tight barrel joints and the coating of the inside and outside of the manholes.

B. Frames and Covers

The frames shall be firmly set in a bed of not less than one full inch of cement mortar and adjusted to the finished grade. The manhole frame may be set directly on the concrete roof slab, providing the top will be at the proper grade; otherwise, precast concrete spacers or bricks shall be mortared to the roof slab to raise the frame to the proper grade. A maximum of three courses of precast concrete spacers shall be used to adjust the frames and grates to the proper grade.

C. Inverts

Inverts shall be constructed in all manholes. The inverts may be constructed of the mainline pipe or brick (Grade SS) and shall be the depth of the pipe. When PVC material is used, all brick, concrete or other masonry material that interfaces with the PVC shall be adhered to the PVC with 100 percent epoxy non-shrink grout.

D. Drop Manholes

Wherever the invert of the entering sewer is more than 2 feet above the invert of the outlet sewer, it shall be connected with a vertical inside drop with a clean-out pipe half bricked up. When drops are placed, the entire excavation around the drop pipe shall be filled with 3,000 psi concrete extending not less than 2 feet along the main sewer.

The clean-out opening in the barrel of the manhole shall be cut in after the manhole wall pipe is in place and the joint between the clean-out pipe and the manhole wall shall be thoroughly sealed with cement mortar on the inside and bituminous joint material on the outside.

E. Shallow Sewer Manholes

Where any manhole is less than 4 feet from invert to bottom of roof slab, the Contractor is to provide a manhole as shown in Appendix S. The roof slab shall be precast structural concrete reinforced to withstand a concentrated H-20 load plus 30 percent impact. The slab shall be formed to fit into the ends of the vertical pipe and shall have a full bearing for its entire circumference.

F. Sealing of Manholes

All manholes shall be sealed with two coats of sealer as applied by the manhole manufacturer to the entire interior and exterior surfaces in minimum dry thickness of 11 mils per coat. Application shall be in accordance with the coating manufacturer's recommendations and shall be certified thereto by the suppliers. Before placement in the field, abraded areas shall be touched up with two coats by the Contractor. Covers and other exposed surfaces shall also be coated in the field. Improper materials or mil thickness shall be cause for rejection of manhole sections.

**Section A177-89 Catch Basins.** Catch basis shall be constructed as shown in the Appendix N or as shown on the plans for special conditions. Catch basins shall be constructed of precast concrete structures. All catch basins shall be coated inside and outside with two coats of heavy duty coal tar sealer.

**Section A177-90 Sewer Laterals and Water Services.** Sewer laterals and water services shall be installed to the right-of-way (or easement) line for all lots. Each service shall be located with a stake color coded in conformance with Industrial Code 53 to denote the type of service they represent.

**Section A177-91 Hydrants and Valves.** A hydrant unit shall consist of a hydrant, guard valve, mechanical joint anchor tee and anchor pipes. Before hydrants or valves are installed they shall be checked to determine if they are in the proper working order. Hydrants shall be set plumb with the break flange 3 inches above the finished grade. Hydrant weeps shall be surrounded by at least 10 cubic feet of crushed stone or gravel. If the ground water is higher than the drainage plug, the plug shall be closed and the crushed stone eliminated.

Valve boxes shall be placed plumb over the operating nut of the valve and adjusted to the final grade. If the valves are buried deep they must have an extension stem that can be reached with a 6 foot valve box key.

**Section A177-92 Backfilling and Finishing.**

A. General

Trenches shall be immediately backfilled following the installation of utilities unless specifically changed in writing by the Design Engineer and approved by the Town. The roadways and sidewalks shall be left unobstructed, with their surface in a safe passable condition. The trench shall be tamped sufficiently to prevent settlement of or damage to existing or newly installed structures.

B. Backfill Immediately After Approval

Only select earth material shall be deposited around the utility and appurtenances covering them by hand for a depth of at least 12 inches above the pipe. This earth shall be thoroughly tamped as it is being placed so as to fill the lower portion of the trench thoroughly to give utilities a Class B bed for their entire length.

C. Restrictions as to Materials

No rock or frozen materials shall be placed in trenches within existing or proposed streets. Such material may be used in fields where immediate compaction is not necessary and at least 2 feet of select fill has been placed over the pipe.

D. Backfilling Pavement Crossings

All utility lines or laterals that cross existing or proposed streets shall be backfilled with crusher run stone conforming to NYSDOT Specification Section 304-2.02 Gradation Type 2 (304.12).

Material shall be compacted in lifts of 1 foot maximum to the elevation of the road subgrade. From there the backfill shall conform to the material specifications for individual road sections.

E. Cleaning Up

As the work progresses or as directed by the Design Engineer, all rubbish or refuse, unused materials and tools, shall be removed at once from along and near the trench line construction.

Rough clean up along the route shall immediately follow installation procedures. Large spoil banks will not be permitted in developed areas.

Final clean up and landscaping shall proceed immediately after the installation, testing and approval of the facility.

Erosion control measures must be maintained throughout the construction process and removed only upon the approval of the Town.

In all cases, the project site shall be restored to a condition equal to or better than that, which previously existed.

**Section A177-93 Compaction**

Compaction densities specified herein shall be the percentage of the maximum density obtainable at optimum moisture content as determined and controlled, in accordance with



AASHTO T99 (ASTM D698-07e1). Field density tests shall be made in accordance with AASHTO Standard T-238 and T239 (ASTM D6938-10).

Each layer of backfill shall be moistened or dried as required and shall be compacted to the following densities, unless otherwise specified.

A. Select Fill

Under all existing or proposed roads, driveways, parking areas      95%

All other areas      85%

B. Methods and Equipment

Methods and equipment proposed for compaction shall be subject to the approval of the Town. Compaction by rolling or operating heavy equipment over fill areas shall be conducted in a manner by which injury to existing utilities and structures shall be avoided. Any pipe or structure damaged thereby shall be replaced or repaired as directed by the Town at the expense of the Developer.

C. Testing

1. Field density tests may be ordered by the Town as necessary and will be paid for by the Developer.
2. The Developer shall furnish all necessary samples for laboratory tests and shall provide assistance and cooperation during field tests. The Developer shall plan his operations to allow adequate time for laboratory tests and to permit taking of field density tests during compaction.

Any areas found to be below required compaction densities shall be removed and replaced with new material at the Developer's expense. The methods of operation and/or the backfill materials shall be changed to meet required compactions.

Inadequate compaction shall be cause for the Town to issue a stop work order on a project.

**Section A177-94 Testing of Underground Utilities.**

A. General Information

Upon the satisfactory completion of the installation of the underground utilities, the Contractor shall proceed to test each of the installed facilities as herein specified. All utilities shall be pretested by the contractor before the Town is to witness the final tests. No test will be accepted unless witnessed by the Town. Records and

date of these tests shall be submitted to the municipality as part of the record drawing information.

Water or test required of the Developer during any procedures will be paid for by the Developer. All hydrants for water supply or testing use shall be operated only by the MCWA or the Town Water Utilities Department.

B. Sanitary Gravity Sewers

1. All sewers shall be flushed clean by the Contractor and the lines shall be lamped with the Town. After the sewer has been backfilled a minimum of thirty days, all sewers shall be video taped with a report log and a CD of the video submitted to the Town. If construction activities continue in the area of this new sewer, the Town at their discretion may require the developer to wait longer than 30 days to perform this video taping in order to assure that the pipe has not been disturbed by these activities.
2. All flexible pipe shall be tested for deflection. The deflection test shall be conducted after the final backfill has been in place at least 30 calendar days to permit stabilization of the soil-pipe system.
  - a. No pipe shall exceed a deflection of 5 percent. If deflection exceeds 5 percent, replacement of the defective sewer shall be required.
  - b. A rigid ball or mandrel having a diameter of not less than 95 percent of the base inside diameter of the specified pipe shall be used for the deflection test. The test shall be performed without mechanical pulling devices.
3. Leakage test shall also be conducted on the sewer. This test shall be by low pressure air testing (see Appendix U). The Town under specific circumstances may require the contractor to infiltrate a sewer system depending on ground water levels.
4. Manholes

Each manhole shall be subjected to testing as follows:

Vacuum Testing - Each manhole shall be subjected to a vacuum of 10 inches of Hg for one minute with an allowable loss of 1 inch of Hg.

C. Sanitary Pressure Sewer

Pressure tests shall be made only after the completion of backfilling operations and at least 36 hours after the concrete thrust blocks have been cast.

The duration of pressure tests shall be one hour, unless otherwise directed by the Town. Test pressure shall be 60 psi minimum or a pressure of 2-1/2 times the maximum system operating pressure, whichever is greater.

The pipe line shall be slowly filled with water. The specified pressure, measured at the highest point of elevation, shall be applied by means of a pump connected to the pipe in a manner satisfactory to the Town.

During the filling of the pipe and before applying the specified pressure, all air shall be expelled from the pipe line by making taps at the point of highest elevation. After completion of the test, the taps shall be tightly plugged at the main.

D. Storm Sewers

All storm sewers shall be flushed clean by the Contractor and the lines shall be lamped with the Town. After the sewer has been backfilled a minimum of thirty days, all sewers shall be video taped with a report log and a CD of the video submitted to the Town. If construction activities continue in the area of this new sewer, the Town at their discretion may require the developer to wait longer than 30 days to perform this video taping in order to assure that the pipe has not been disturbed by these activities.

E. Water Mains

Watermain testing shall be performed in accordance with the requirements of the Monroe County Water Authority (MCWA) and the Monroe County Department of Health and any other applicable regulatory agencies.

F. Defective Areas

In any areas where satisfactory results of applied tests cannot be obtained, the defective portion of the system shall be located and replaced with new material.

That portion of the system shall then be retested until satisfactory results are obtained. Use of repair clamps will not be permitted by the Town.

**Section A177-95 Roads, Gutters and Sidewalks.**

A. General Information

The Contractor shall not proceed to construct any surface improvements until the underground system has been installed, tested and approved by the Town.

Careful attention shall be given by the Contractor to obtain the necessary compaction densities as specified. All surface improvements shall be constructed to the shape and dimensions as shown on the typical sections or on the approved

plans. A greater road width and base may be required in those areas where particular soil conditions or traffic patterns require special considerations.

### **Section A177-96 Roads.**

#### **A. Subgrade**

The subgrade shall be graded to remove all unsatisfactory or unstable material. Where material is removed below the subgrade elevation, suitable granular material shall be used to bring the road to proper subgrade. Where ground water or poor soil conditions exist, the Developer shall be required to install perforated underdrain and crushed stone weeps to drain the base. The entire subgrade surface shall be thoroughly compacted according to NYSDOT Specification 203-3.12.

Fabric filter material may be required by the Town to stabilize the base or subbase before the Contractor proceeds to install same.

No movement shall be observed in the subgrade material as the roller passes.

When the subgrade is completed, the Contractor shall so notify the Town Highway Superintendent and the Town Engineer for a base determination. Upon the review and written approval of the subgrade by the Highway Superintendent and the Town Engineer, the base material may be placed.

#### **B. Base Material**

Approved base materials shall be uniformly deposited and compacted in layers with a roller, according to NYSDOT Specifications. Rolling shall begin at the sides and continue toward the center and shall continue until there is no movement of the course ahead of the roller. After compaction, the top surface of this course shall not extend above the theoretical elevation for this course and when tested with a straight-edge 16 feet in length, any bump or depression over 1/4 inch from the theoretical grade line shall be satisfactorily eliminated. When the base has been prepared to the satisfaction of the Highway Superintendent, the Developer may place the binder course. If base conditions are changed as determined by the Highway Superintendent before the binder is placed, he may order the Developer to seal the stone with a rapid sealing liquid asphalt emulsion as specified in NYSDOT Section 702-10 or 702-11 with 0.5 gallons per square yard as determined by the conditions and not more than 24 hours prior to placement of binder asphalt.

If the compaction of the base is questionable by the Highway Superintendent, it may require re-rolling or stone replacement by the Developer.

C. Bituminous Pavement

1. Binder shall be placed and compacted to a minimum finished layer thickness of 3 inches with a self-propelled asphalt spreader and rolled according to NYSDOT Specifications 403-3.03. Before applying the top course, any irregularities in the binder course shall be eliminated but at no time will "cold patch" or "winter mix" be allowed on the binder for repair work.
2. Before the surface course is placed, the binder will be cleaned and inspected by the Highway Superintendent to determine the condition of the pavement. If the binder course has been in place for a period of 14 calendar days or longer, tack coat will be required. Tack coat shall be applied at a rate of 0.1 gallon/square yard prior to placing the surface course.
3. Surface Course shall be placed and compacted to a minimum finished layer thickness of 1-1/2 inch with a self-propelled asphalt spreader and rolled in accordance with NYSDOT Specifications 403-3.03.

D. Temporary Road Construction

Where construction sequences preclude the specified road construction items and these requirements for Certificates of Occupancy, a temporary road consisting of the specified road section less top surface course may be constructed.

This temporary road shall be reviewed by the Town Highway Superintendent and approved in writing prior to the issuance of any Certificate of Occupancy.

E. Continuation of Existing Road

When construction of a road is continued from an existing road or previous developed section, the pavements shall be joined with a triangular cut of at least 15 feet from edge of the pavement to the centerline of the old pavement. The intent of this provision is to eliminate any grade difference and make a smooth riding transition.

All pavement joints shall receive a tack coat before placing the binder or top course.

F. Stabilized Shoulders

Stabilized shoulders shall be constructed to the dimensions shown on the typical sections. Construction methods shall conform to NYSDOT Specification 410-3.01. The base course shall consist of a wedge of crusher run stone with a single surface treatment.

G. Underdrains

Underdrains shall be installed under all concrete gutters in conformance with NYSDOT Specification 605 and underdrain filter Type 1 per NYSDOT Specification 605-2.02. The underdrain shall be installed per Appendix M. Fabric material to be placed over all underdrain stone.

**Section A177-97 Concrete Gutters and Sidewalks.**

A. Concrete Gutters (Appendix M)

1. Concrete gutters shall be a minimum of 6 inches in depth and constructed true to the shape, line and grade on a thoroughly compacted base. The gutters may be constructed using a slip form method or in-place form work.
2. Joints between sections shall be placed every 10 feet at right angles to the flow line and must be "wet struck" 1/8 inch wide and 3/4 inch deep. Full depth bituminous expansion joints shall be placed every 50 feet and at all structures or inlets.
3. Gutters shall be broom finished before the joints are struck and the finish shall be consistent throughout the project.
4. Gutters shall be cured and sealed by spraying with an approved curing and sealing compound at the rate recommended by the manufacturer.
5. One coat of curing and sealing compound shall be applied when the work is complete and another coat after the gutters have set for 48 hours.
6. The use of burlap or coverings for curing or protection is not acceptable until after the concrete has been sprayed and set.
7. The gutters, prior to final paving, shall be flooded and checked for horizontal and vertical line and grade and finish. If any gutters are found to be constructed in an unacceptable manner by the Superintendent of Highways, they shall be removed and replaced.
8. Gutter replacements shall conform to the existing gutter regarding finish and color.

B. Concrete Sidewalks (Appendix T)

1. Minimum 4 inches in depth and constructed true to shape, line and grade. Sidewalks installed through driveways shall be 8 inches in depth and be reinforced with 6" x 6" wire mesh (10 gauge).

2. Minimum width shall be 5 feet or to match existing.
3. The base shall be thoroughly compacted crusher run stone with a thickness of 4 inches. The base material shall extend 6 inches outside each edge of the concrete sidewalk.
4. A cross slope of 1/4 inch per foot shall be maintained for positive drainage.
5. Construction joints shall be wet struck at 5 foot increments and be 3/4 inch deep. Full depth bituminous expansion joints shall be placed every 25 feet and at all castings.
6. Sidewalks shall be broom finished and have troweled edges with a corner radius of 1/4 inch. The finish shall be consistent throughout the project.
7. Two coats of approved curing and sealing compound shall be applied. One coat immediately following the finish work and the second coat 48 hours later.

C. Testing

1. The Contractor shall obtain in accordance with ASTM C-31 two samples from every other truck delivering concrete to the site and have the samples compression tested by an independent testing laboratory. Trucks transporting more than 8 cubic yards shall require two samples from each delivery to the site.
2. Results of these tests shall be submitted to the Superintendent of Highways.
3. The Developer shall bear the cost of all testing.

**Section A177-98 Monuments (Appendix L).** The monuments shall be installed at those locations shown on the approved final plan and as located in the field by a Licensed Land Surveyor. They shall be installed to a depth of at least 48 inches below finished grade with the top surface to be flush with finished grade. Upon the installation of the monuments the location shall be certified to the Town by a Licensed Land Surveyor as to their accuracy.

**Section A177-99 Final Grading.** Upon satisfactory completion of the utilities and roads, the entire area within the right-of-way shall be raked and graded to the approved plans.

The site Contractor shall be responsible to fine grade the edge of road and maintain erosion control. In those areas where home building has started, clean up and site maintenance will then become the responsibility of the builder.

Upon completion of road/gutter installation of a 20 foot grass buffer on either side of the road shall be required. This will help reduce silt runoff into the gutter/storm sewer network.

Debris and spoil banks created during the development (not home building) of the site shall be entirely removed and/or disposed of from the site. No burying of debris or material shall be allowed on approved or proposed building lots.

**Section A177-100 Final Cleaning.** During the time period between initial installation and testing and acceptance for dedication, debris and/or sediment may accumulate in the utility systems. The Developer shall be responsible to flush and remove this debris from the system prior to the final construction observation for dedication.

**Section A177-101 Signs.** Street and traffic signs shall be supplied and installed by the Highway Department in accordance with standards outlined in the Manual of Uniform Traffic Control Devices (State of New York, Department of Transportation, Division of Traffic and Safety).

Signs and posts shall be ordered by the Highway Department for consistency throughout the Town. Upon receipt of signs, they shall be placed in the field by the Highway Department with sign, post and installation cost the responsibility of the Developer.



## **ARTICLE XI. REQUIREMENTS FOR DEDICATION AND PROJECT ACCEPTANCE**

**Section A177-102 General.** All construction within the right-of-way or lands to be dedicated to the Town shall be complete with final site reviews and written approvals of the construction by the following:

1. Superintendent Sewer Utilities
2. Building Department
3. Superintendent of Highways
4. Town Engineer

In addition to the field review, the Town Attorney shall notify the Town in writing that all legal aspects of the project have been satisfied.

**Section A177-103 Monuments.** Monuments shall have been set in their required locations and certified to the Town.

**Section A177-104 Grading.** Final grading shall be completed within the right-of-way and all spoil removed from the site.

**Section A177-105 Street Signs.** All street and traffic signs shall be properly set in their designated locations.

**Section A177-106 Record Drawings.** Record drawings and all testing results shall be supplied to the Town Building Department and are subject to its review and approval at least 15 calendar days prior to any dedication procedures.

Record maps shall be prepared by a licensed professional. Upon approval, a reproducible, mylar version, along with a digital copy, shall be submitted to the Town's Building Department. The digital copy shall contain files usable in the Town's GIS/GPS system for locating dedicated infrastructure in the field. The record drawings shall contain, at a minimum, the following information:

- A. The horizontal and vertical position of new utilities to be dedicated to the Town of Sweden shall be related to the New York State Plane Coordinate system Central Zone, North American Datum, 1983 horizontally and North American Vertical Datum 1988. The coordinate positions (x,y,z) shall be clearly delineated on the record drawings. Positions requiring coordinates shall include, but not limited to, all manholes, drainage inlets, end sections, clean outs, valves, curb boxes, hydrants, pump stations, points of utility connection to existing, and dead ends. Maximum horizontal positional error to be no greater than  $0.5'\pm$ , vertical error shall be no greater than  $0.10'\pm$ .
- B. The locations, sizes, elevations, lengths, slopes and invert and top elevations of all structures in storm and sanitary sewer systems.

- C. The elevations of any drainage swales and drainage structures to be dedicated to the Town.
- D. The locations including ties to all valves, curb boxes and hydrants to permanent structures.
- E. The locations at the property or easement line of each individual lot -
  - 1. Sanitary Lateral Cleanouts
  - 2. Storm Lateral
  - 3. Water Service Curb Box
- F. The location of any right-of-way monuments.
- G. Any other significant details affecting the operation or maintenance of any system by the Town.
- H. The location of all facilities shall be tied to visible and reproducible objects.
- I. All easements created for the project with the liber and page number information included.

**Section A177-107 Maintenance Bonds.** The submission and acceptance of the two year Maintenance Bonds for all improvements to be offered to the Town for dedication. Maintenance Bonds shall be written by a surety licensed to do business in New York State and they shall be in the amount of 10 percent of the final construction cost. Bonds shall be approved as to form and content by the Town Attorney prior to any dedication procedure. Formal acceptance of a maintenance bond by the Town on any aspect of a project constitutes the beginning of the two years.

**Section A177-108 Final Release of Funds.** The Town Board, upon signature recommendation of the Design Engineer, Owner, Town Engineer and Town Fiscal Officer, receipt of the Town Attorney's written opinion of legal status, receipt of two year Maintenance Bond, record drawings accepted by the Town Departments and a final field review report, shall then authorize release of monies retained in the Letter of Credit.

## LIST OF APPENDICES

<b><u>APPENDIX</u></b>	<b><u>TITLE</u></b>
A	Engineer's Estimate Summary Sheet
B	Letter of Credit Release
C	Sanitary Cleanout Detail
D	Future Sanitary Connection
E	Sanitary Lateral Detail
F	Rainfall Intensity Curves
G	Storm Sewer Calculations
H-1, H-2	Pavement Cross Section (TYP)
I	Typical Road Cross Sections
J	Concrete Field Gutter
K	Hammer Head Turn-Around
L	Monument
M	Gutter Detail
N-1, N-2	Catch Basin Detail
O	Gutter and Catch Basin Apron Detail
P	Storm Sewer Manhole and Catch Basin Manhole
Q	Sanitary Sewer Manhole
R	Sanitary Sewer Drop Connection
S	Shallow Sewer Manhole
T	Sidewalk Detail
U-1, U-2	Cleaning and Testing of Sanitary Sewers
V	Water/Sewer Crossing Detail
W	Utility Notifications
X	Driveway Apron w/Curb Detail
Y	Driveway Apron w/ Concrete Gutter Detail
Z	Typical Driveway Culvert Standard
AA	Driveway Standard
BB	Sidewalk Ramp Type 1 Detail
CC	Sidewalk Ramp Type 2 Detail
DD-1, DD-2	Type 3 – Sidewalk Ramp and Notes
EE	Mailbox and Support Detail
FF	Standard Cul-De-Sac Plan
GG	Tear-Drop Cul-De-Sac Plan
HH	Typical Cul-De-Sac "Bubble" Detail
II	Guidelines to Landscaping
JJ	Concrete Curb Section
KK	Trench Detail

APPENDIX: A

DATE: MAY-2013

**MRB**|group

ENGINEERING/ARCHITECTURE/SURVEYING, P.C.  
145 CULVER RD SUITE 160 ROCHESTER, N.Y. 14620

TOWN OF SWEDEN

ENGINEER'S ESTIMATE  
SUMMARY SHEET

Based on Engineer's Estimate Dated: \_\_\_\_\_

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

Earthwork	\$ _____	
Contingency (10%)	\$ _____	
TOTAL EARTHWORK		\$ _____
Erosion Control Measures	\$ _____	
Contingency (10%)	\$ _____	
TOTAL EROSION CONTROL		\$ _____
Sewage Disposal Systems	\$ _____	
Contingency (10%)	\$ _____	
TOTAL SEWAGE DISPOSAL SYSTEMS		\$ _____
Drainage Systems	\$ _____	
Contingency (10%)	\$ _____	
TOTAL DRAINAGE SYSTEMS		\$ _____
Water Supply	\$ _____	
Contingency (10%)	\$ _____	
TOTAL WATER SUPPLY		\$ _____
Roadways	\$ _____	
Contingency (10%)	\$ _____	
TOTAL ROADWAYS		\$ _____
Sub Total Construction Cost		\$ _____
Construction Observation		\$ _____
Road Signs & Clean Up		\$ _____
Design Engineering & Surveying Fees		\$ _____
TOTAL ESTIMATE OF COST		\$ _____

APPENDIX: B

DATE: MAY-2013

**MRB** | *group*

ENGINEERING/ARCHITECTURE/SURVEYING, P.C.  
145 CULVER RD SUITE 160 ROCHESTER, N.Y. 14620

TOWN OF SWEDEN

LETTER OF CREDIT RELEASE

PROJECT NAME \_\_\_\_\_

ESTIMATE NO. \_\_\_\_\_

\_\_\_\_\_

DATE \_\_\_\_\_

PROJECT NO. \_\_\_\_\_

Total Construction  
To Date

\$ \_\_\_\_\_

Less Retainage

\$ \_\_\_\_\_

A. Construction  
Value To Be  
Released

\$ \_\_\_\_\_

B. Engineering  
Costs

\$ \_\_\_\_\_

C. Construction  
Observation  
Costs

\$ \_\_\_\_\_

D. Other Costs

\$ \_\_\_\_\_

Amount Previously  
Released Through  
Estimate No. \_\_\_\_\_

\$ \_\_\_\_\_

Amount Authorized  
For Release

\$ \_\_\_\_\_

LETTER OF CREDIT INFORMATION

1) Original Amount

\$ \_\_\_\_\_

2) Authorized For Release  
Per Estimate Nos.

\_\_\_\_\_ \$ \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

Subtotal \$ \_\_\_\_\_

\* Balance Remaining In Letter Of  
Credit Through This Statement

\$ \_\_\_\_\_

\* The balance amount shall be sufficient  
to insure satisfactory completion of  
the remainder of the development.

\_\_\_\_\_  
Project Engineer

\_\_\_\_\_  
Date

\_\_\_\_\_  
Developer

\_\_\_\_\_  
Date

\_\_\_\_\_  
Municipal Engineer

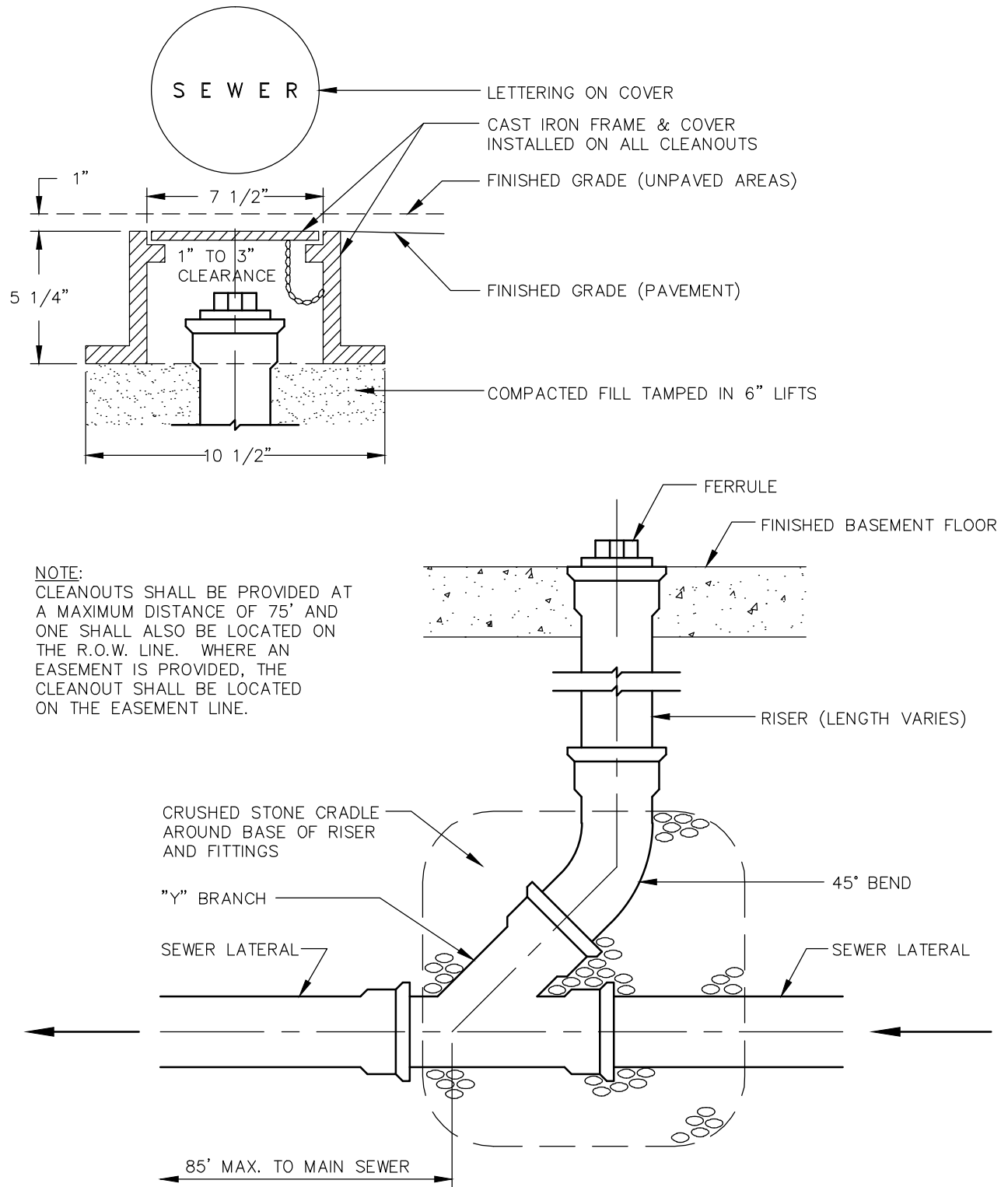
\_\_\_\_\_  
Date

\_\_\_\_\_  
Fiscal Officer

\_\_\_\_\_  
Date

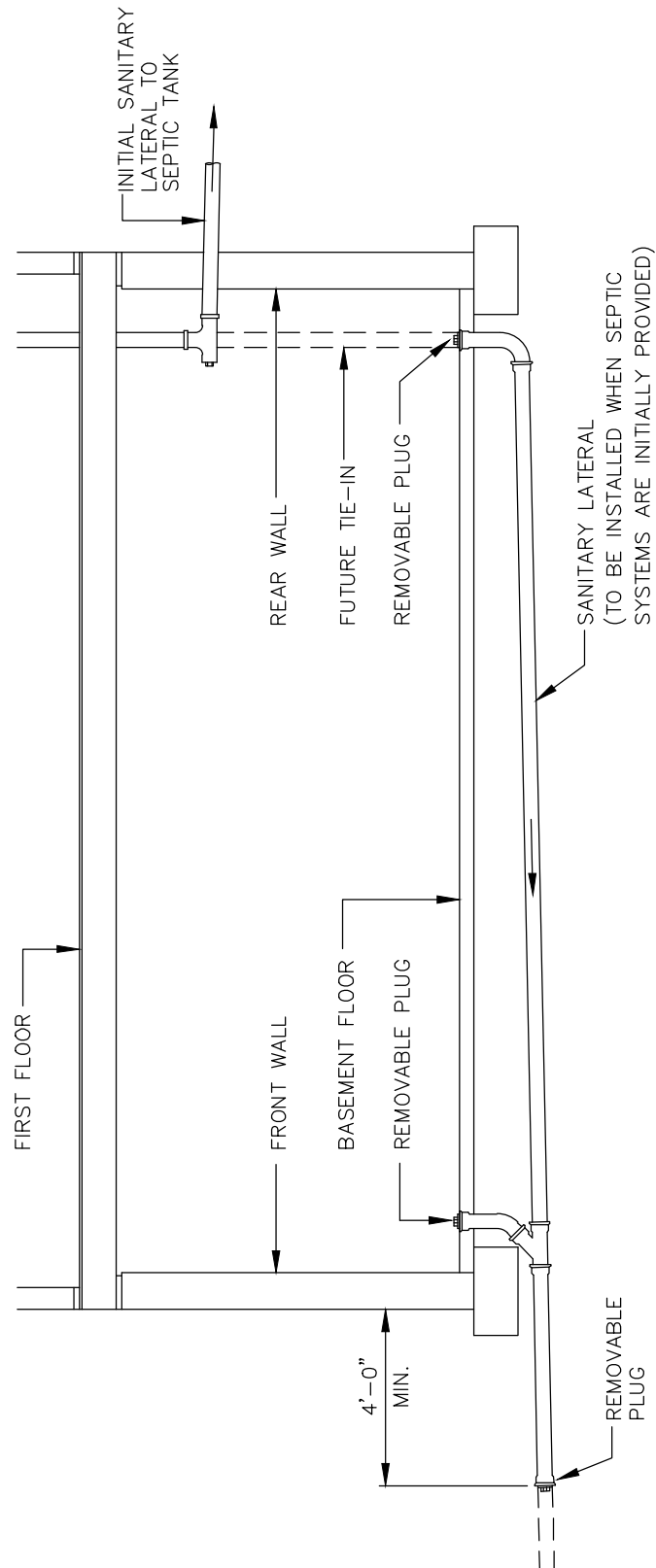
LETTER OF CREDIT EXPIRES \_\_\_\_\_

## TOWN OF SWEDEN

**SANITARY SEWER CLEANOUT DETAIL**

(N.T.S.)

TOWN OF SWEDEN

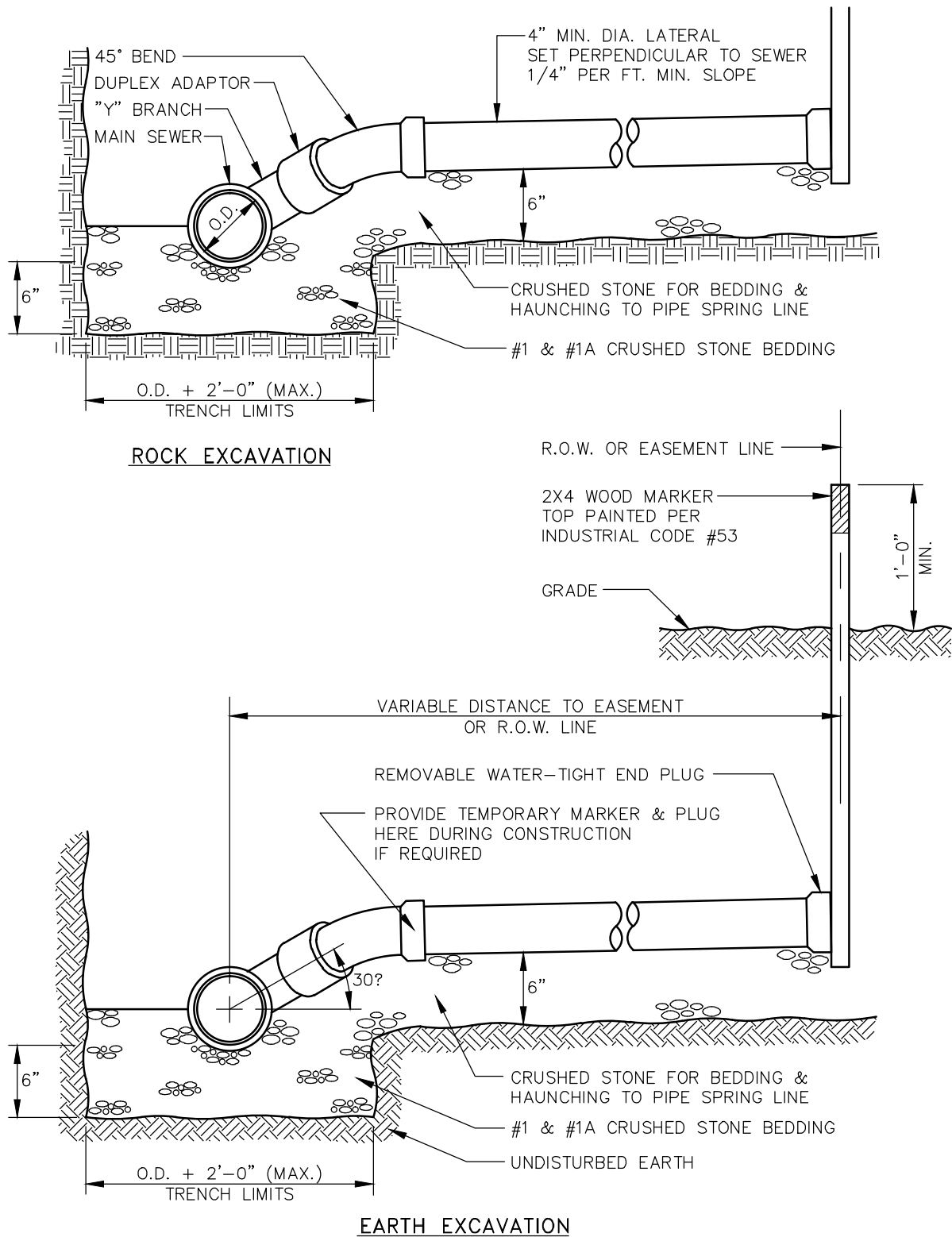


## **FUTURE SANITARY CONNECTION**

(THIS REQUIREMENT MAY BE WAIVED BY THE TOWN)

(N.T.S.)

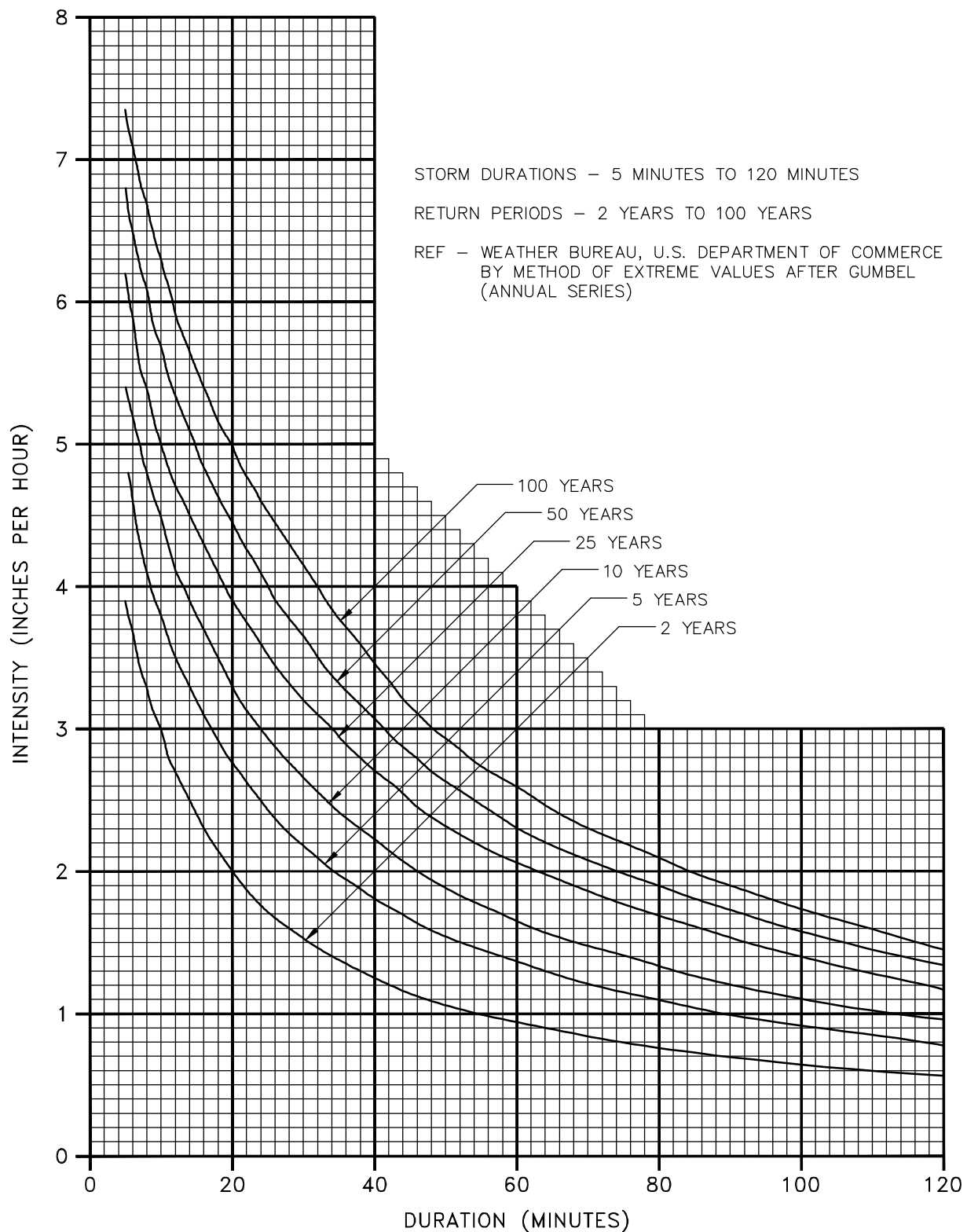
## TOWN OF SWEDEN

**SANITARY LATERAL DETAIL**

(N.T.S.)

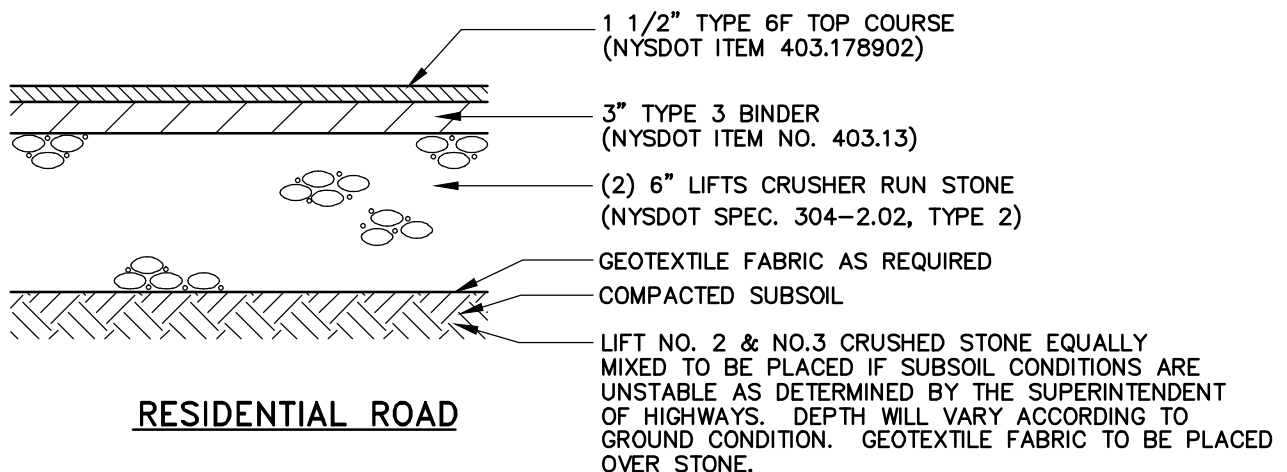
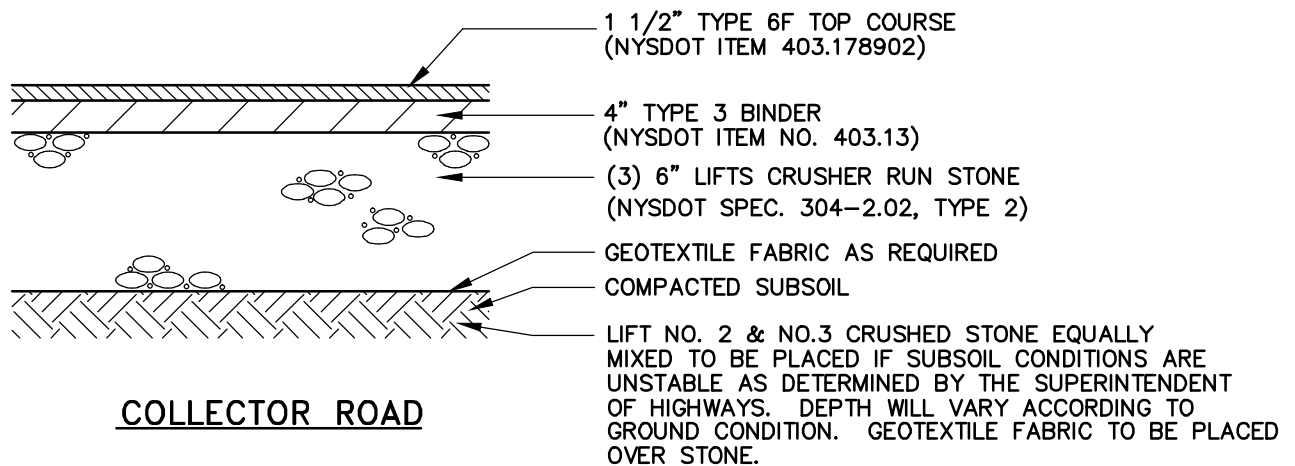


## TOWN OF SWEDEN

**RAINFALL INTENSITY CURVES**



## TOWN OF SWEDEN

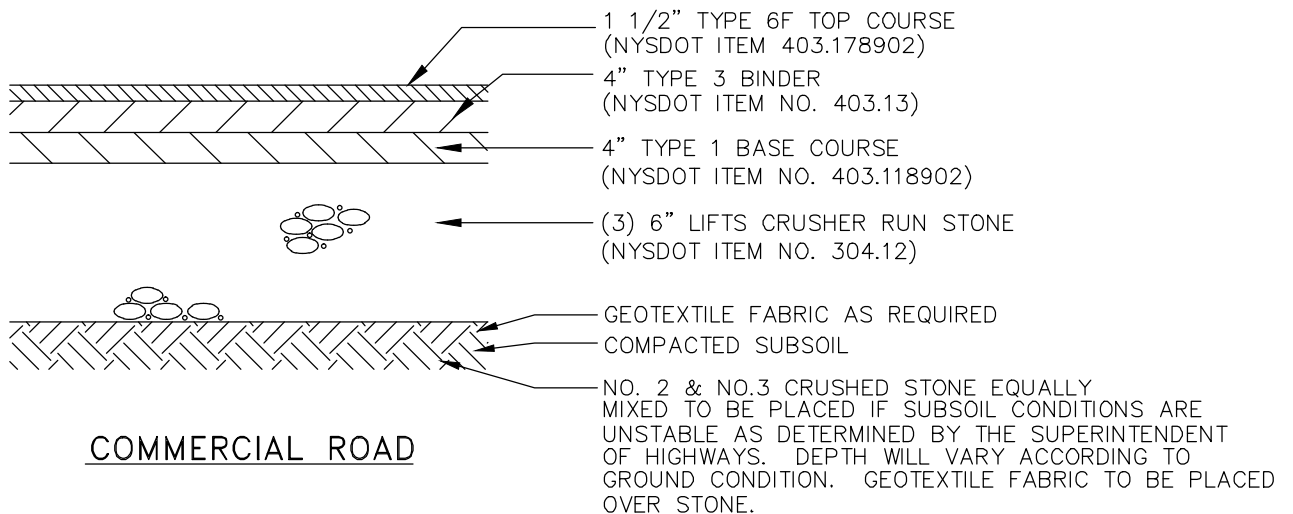
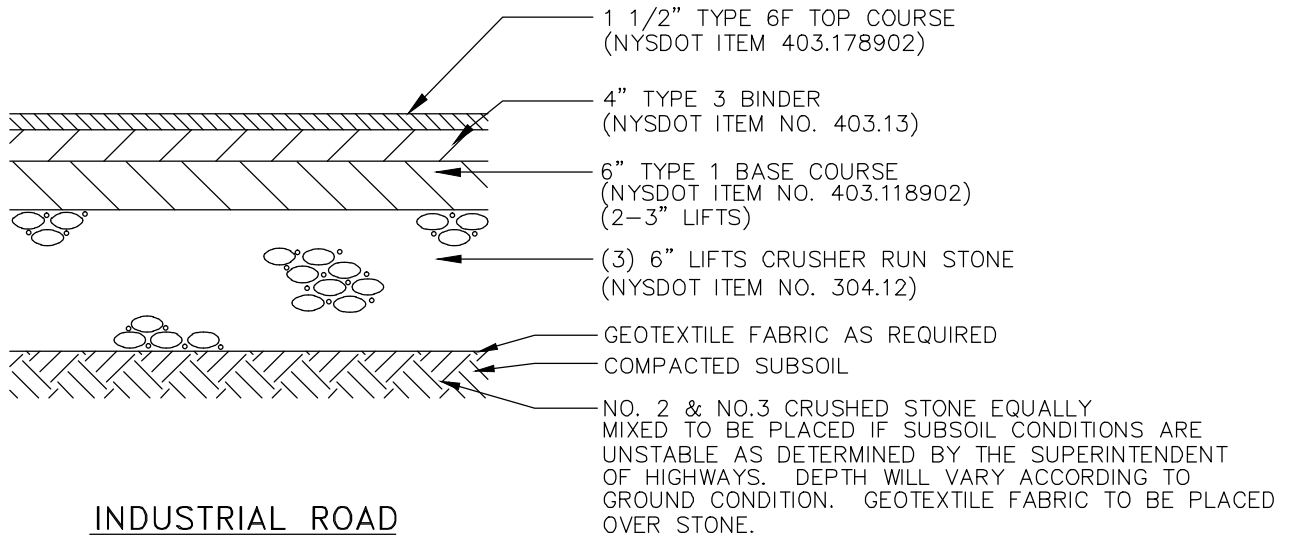


NOTE: ALL DEPTHS ARE COMPACTED THICKNESSES

## PAVEMENT CROSS SECTION (TYP.)

(N.T.S.)

TOWN OF SWEDEN

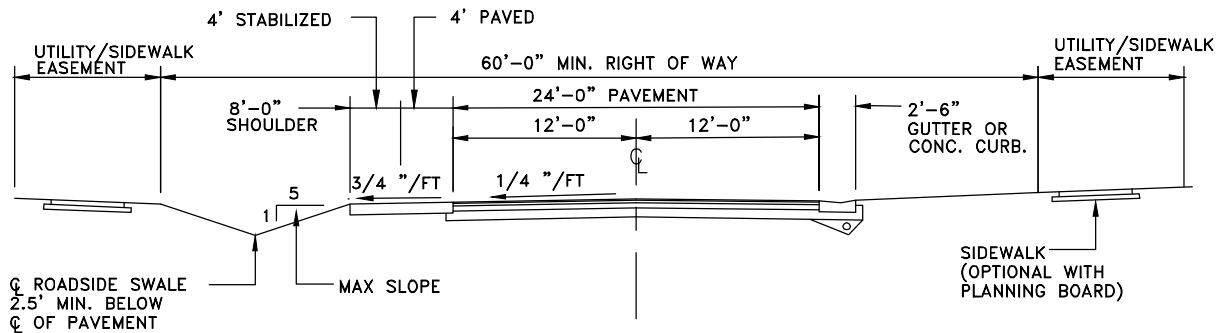
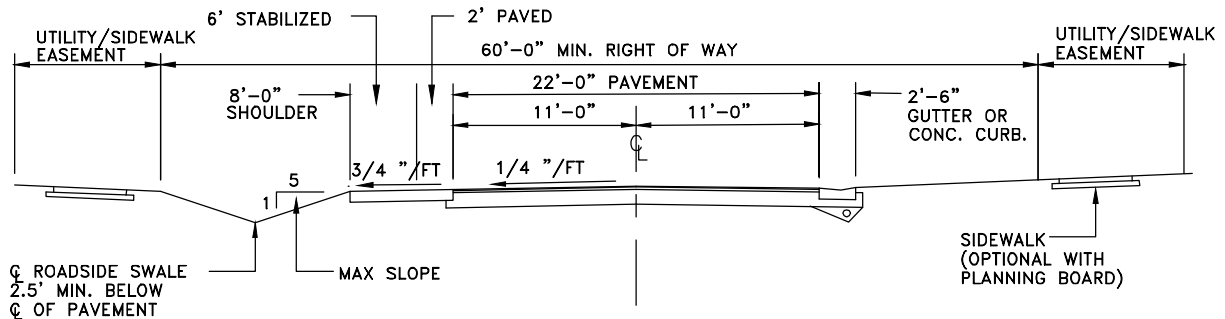


NOTE: ALL DEPTHS ARE COMPACTED THICKNESSES

**PAVEMENT CROSS SECTION (TYP.)**

(N.T.S.)

## TOWN OF SWEDEN

INDUSTRIAL & COMMERCIAL ROADRESIDENTIAL ROAD**TYPICAL ROAD CROSS SECTIONS**

(N.T.S.)

DATE: MAY-2013

ENGINEERING/ARCHITECTURE/SURVEYING, P.C.  
145 CULVER RD SUITE 160 ROCHESTER, N.Y. 14620

Technical drawing of a ditch cross-section showing a concrete gutter, stone base, and sloped sides. The drawing includes the following dimensions and specifications:

- Top Width:** 4'-0" (Total width of the gutter section).
- Side Slope:** 2.5 horizontal to 1 vertical.
- Radius:** R=2'-0" (Radius of the gutter bottom curve).
- Base Material:** BASE-A UNIFORM MIXTURE OF #1 & 2 CRUSHED STONE (Indicated by a hatched pattern).
- Gutter Material:** GUTTER-3000 PSI, NYSDOT CLASS A CAST-IN-PLACE CONCRETE BROOM FINISH (Indicated by a dashed line).
- Reinforcement:** USE 6"X6" 1/1 MESH OR #4 BARS @12" O.C. BOTH WAYS (Indicated by arrows pointing to the gutter walls).
- Height:** 6" (Height of the gutter walls).
- Bottom Width:** 6" (Width of the gutter bottom at the base).
- Centerline:** C DITCH (Centerline of the ditch).
- Slope Requirement:** SLOPE AS REQ'D. (Indicated by an arrow pointing to the side slope).

N.T.S.

(N.T.S.)

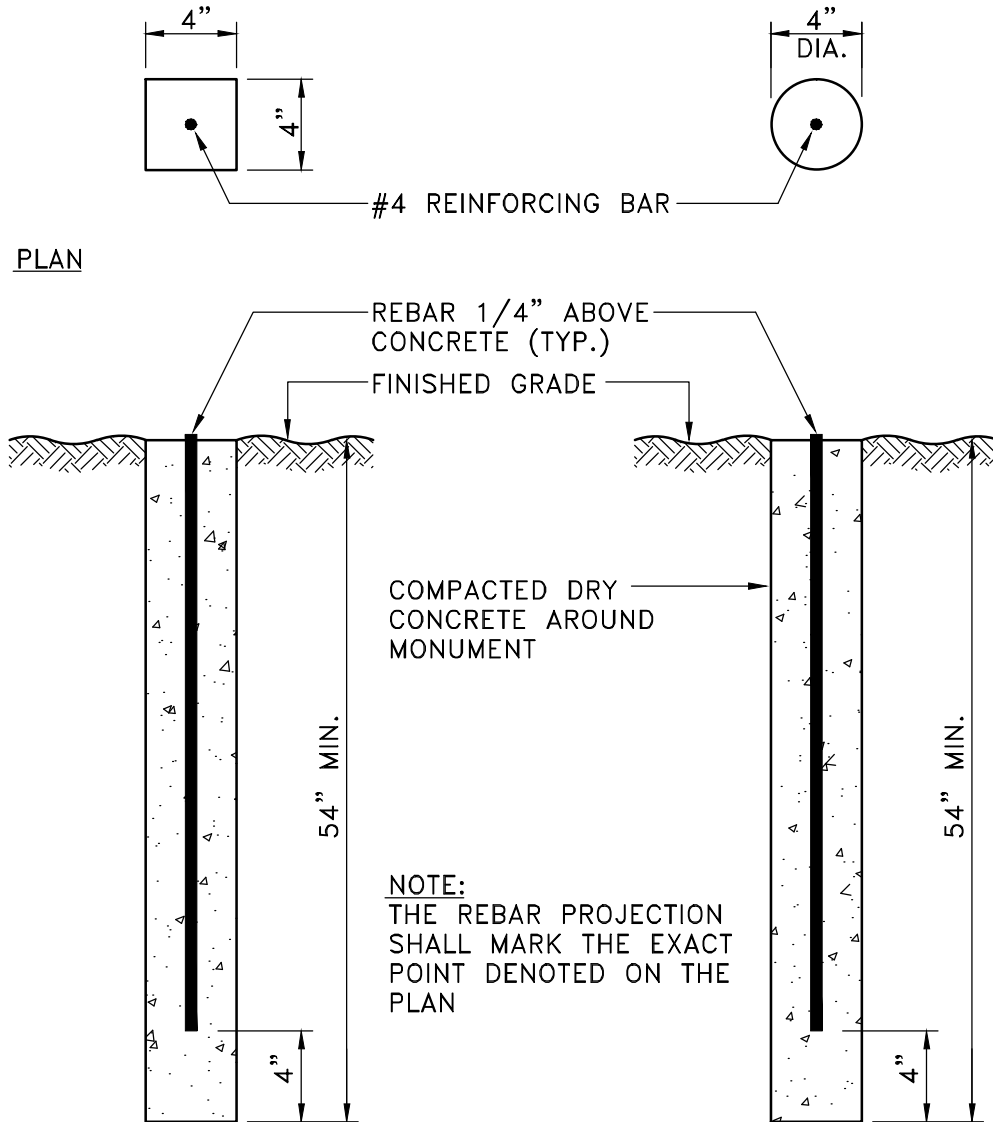
APPENDIX: L

DATE: MAY-2013

**MRB** | group

ENGINEERING/ARCHITECTURE/SURVEYING, P.C.  
145 CULVER RD SUITE 160 ROCHESTER, N.Y. 14620

TOWN OF SWEDEN



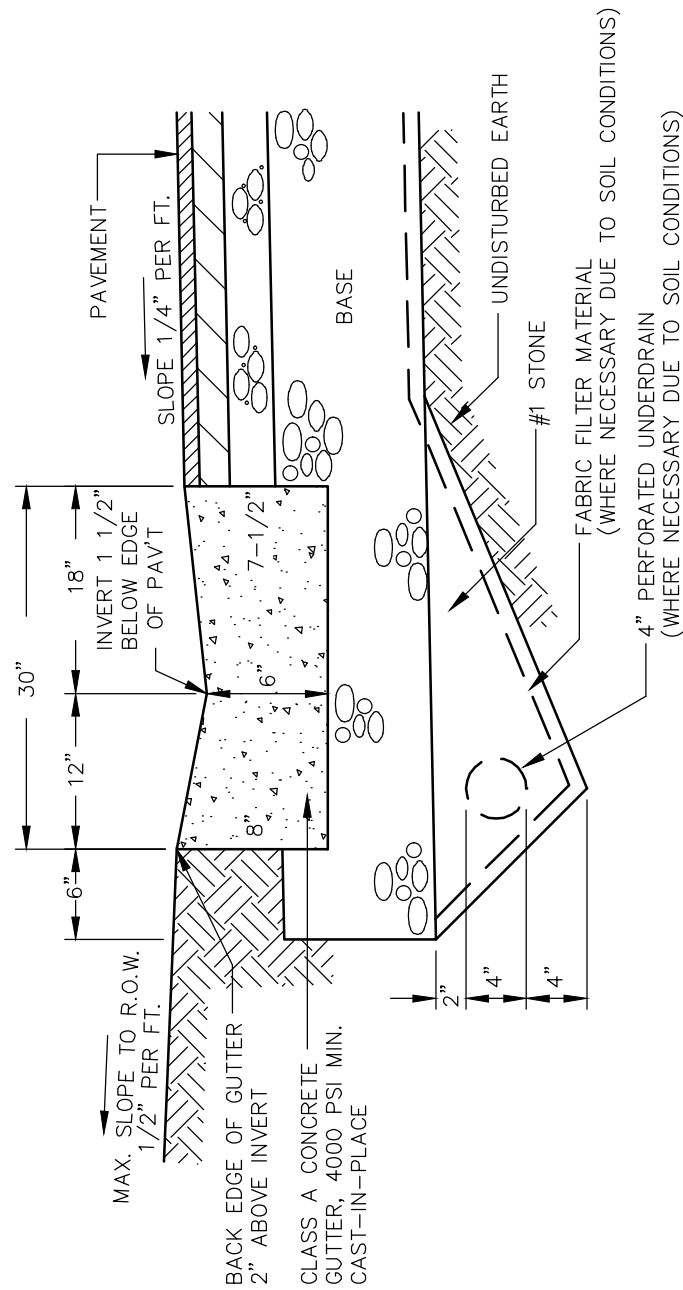
SECTION

**MONUMENT**

(N.T.S.)

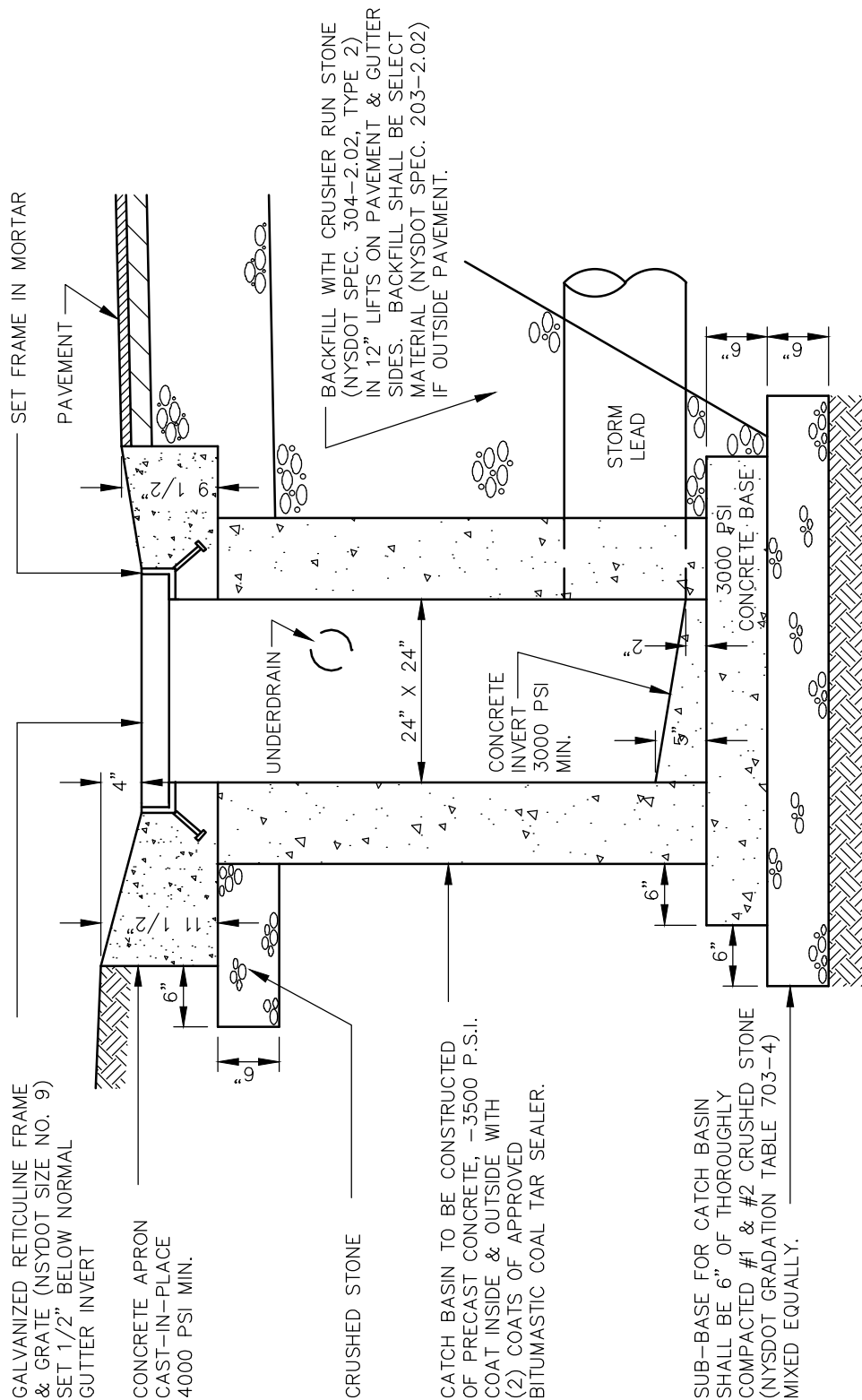


## TOWN OF SWEDEN

**GUTTER DETAIL**

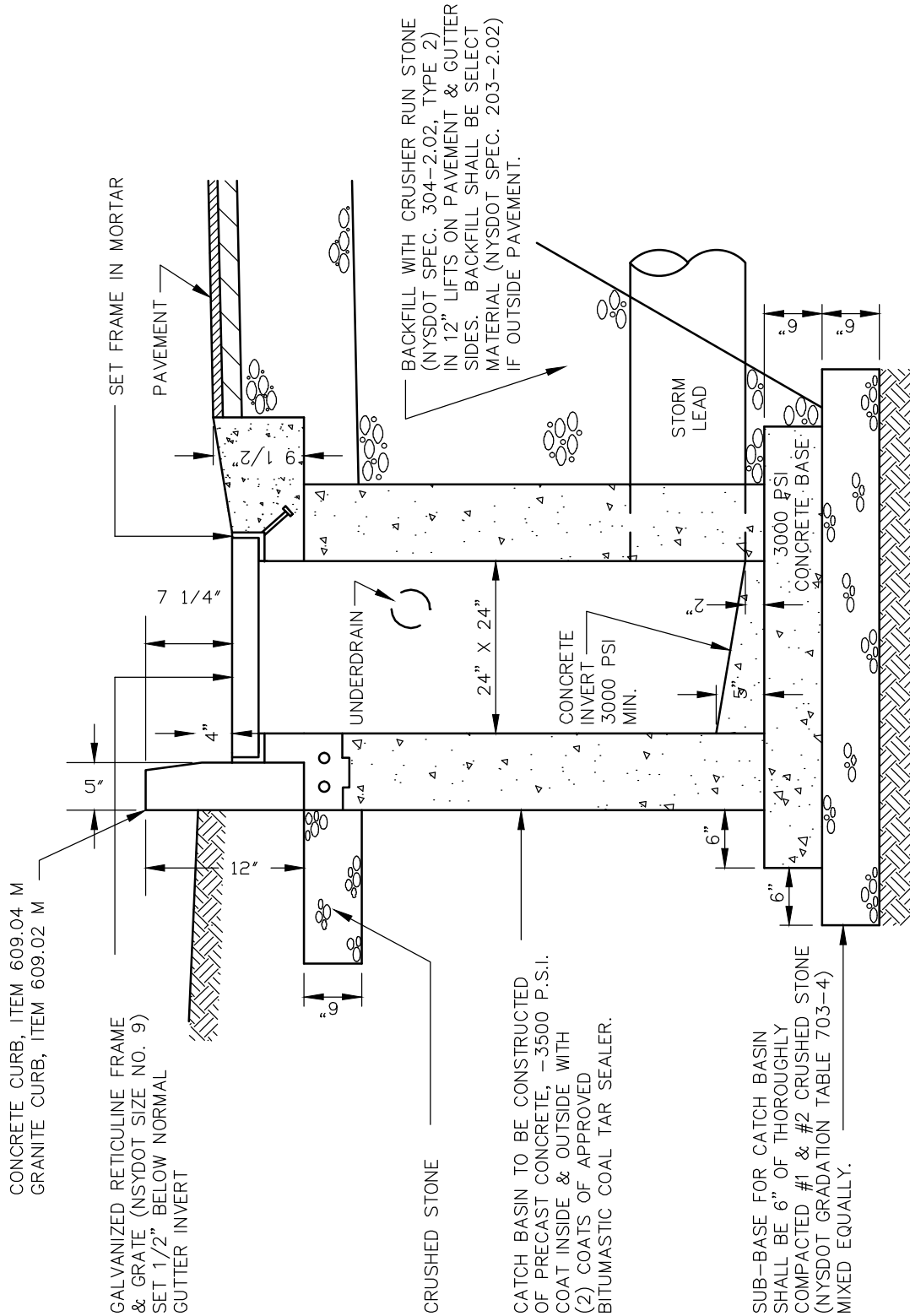
(N.T.S.)

## TOWN OF SWEDEN

**CATCH BASIN DETAIL**

(N.T.S.)

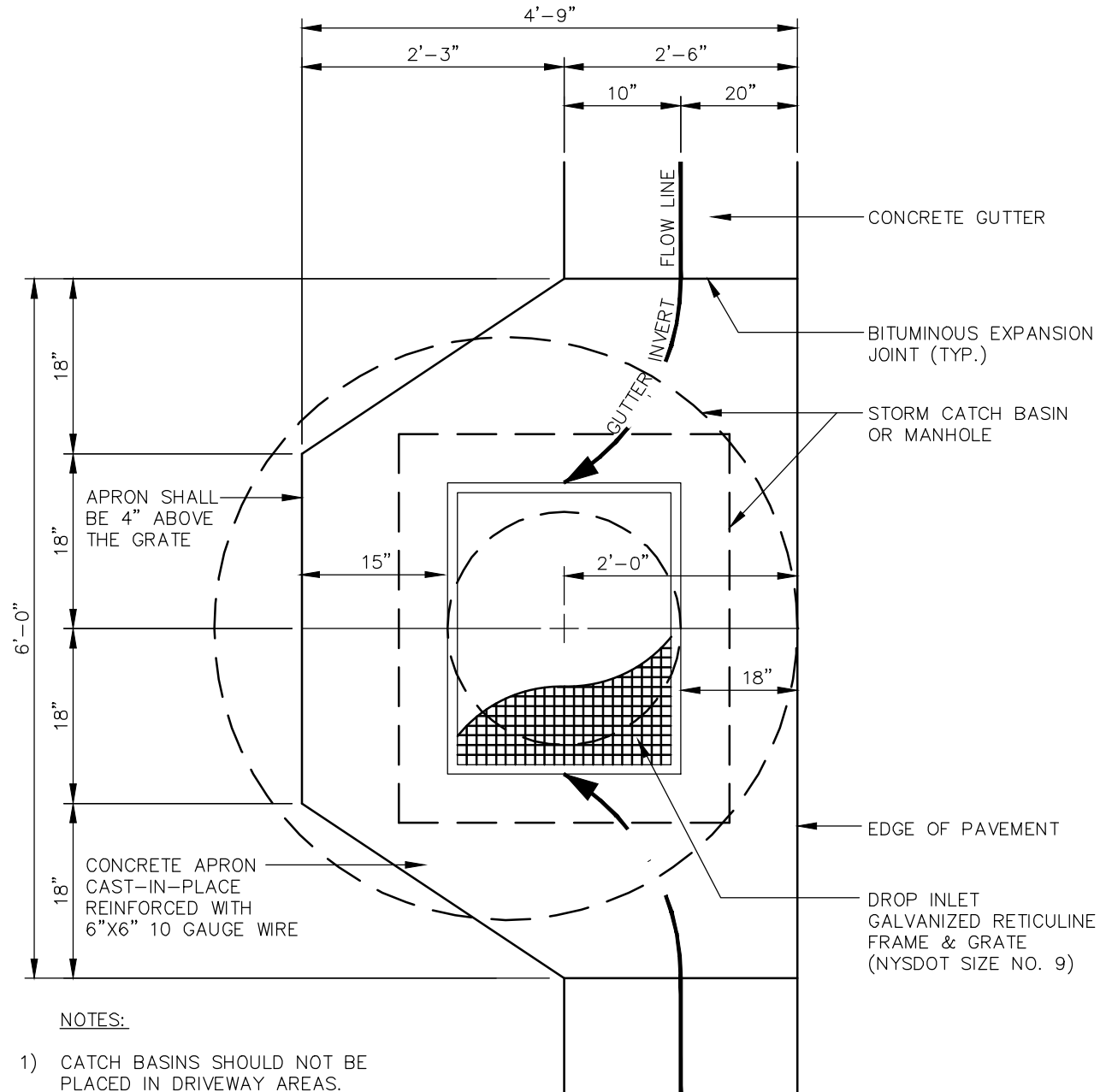
TOWN OF SWEDEN



# CATCH BASIN DETAIL WITH CURB RISER

(N.T.S.)

## TOWN OF SWEDEN



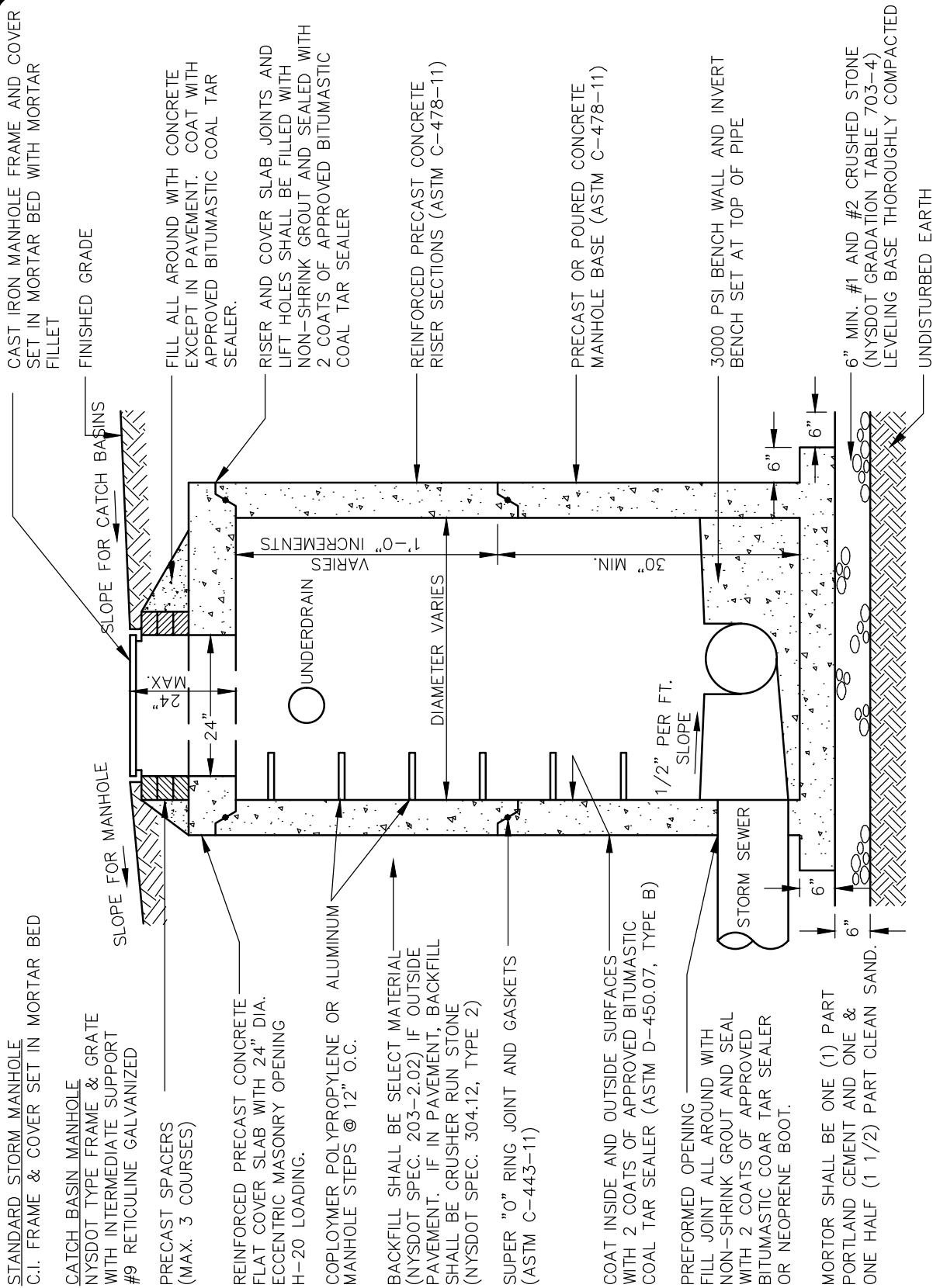
## NOTES:

- 1) CATCH BASINS SHOULD NOT BE PLACED IN DRIVEWAY AREAS.
- 2) SPECIAL DESIGN MAY BE REQUIRED FOR STEEP GRADE SECTIONS.

**GUTTER & CATCH BASIN APRON DETAIL**

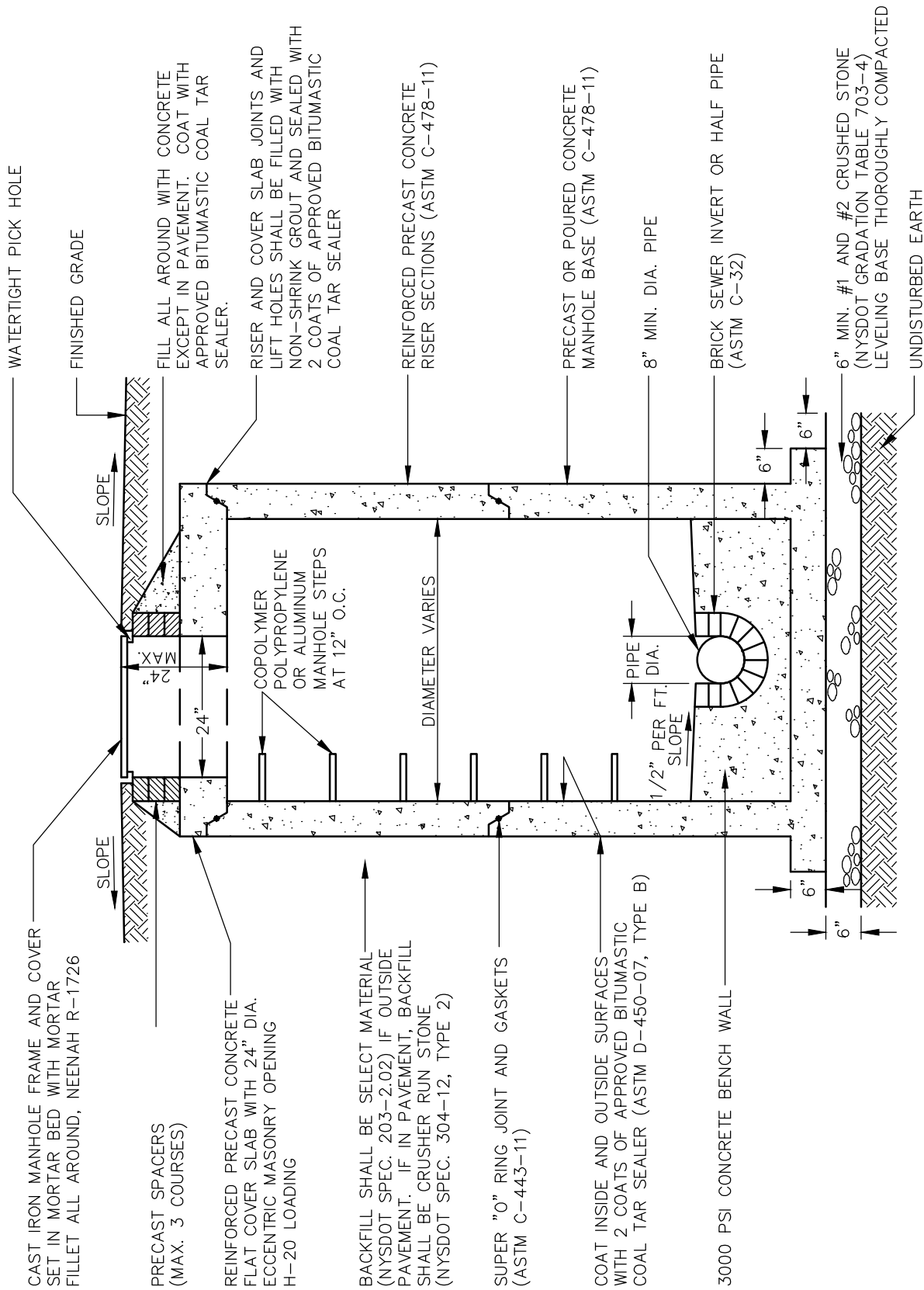
(N.T.S.)

## TOWN OF SWEDEN

**STORM SEWER MANHOLE AND CATCH BASIN MANHOLE**

(N.T.S.)

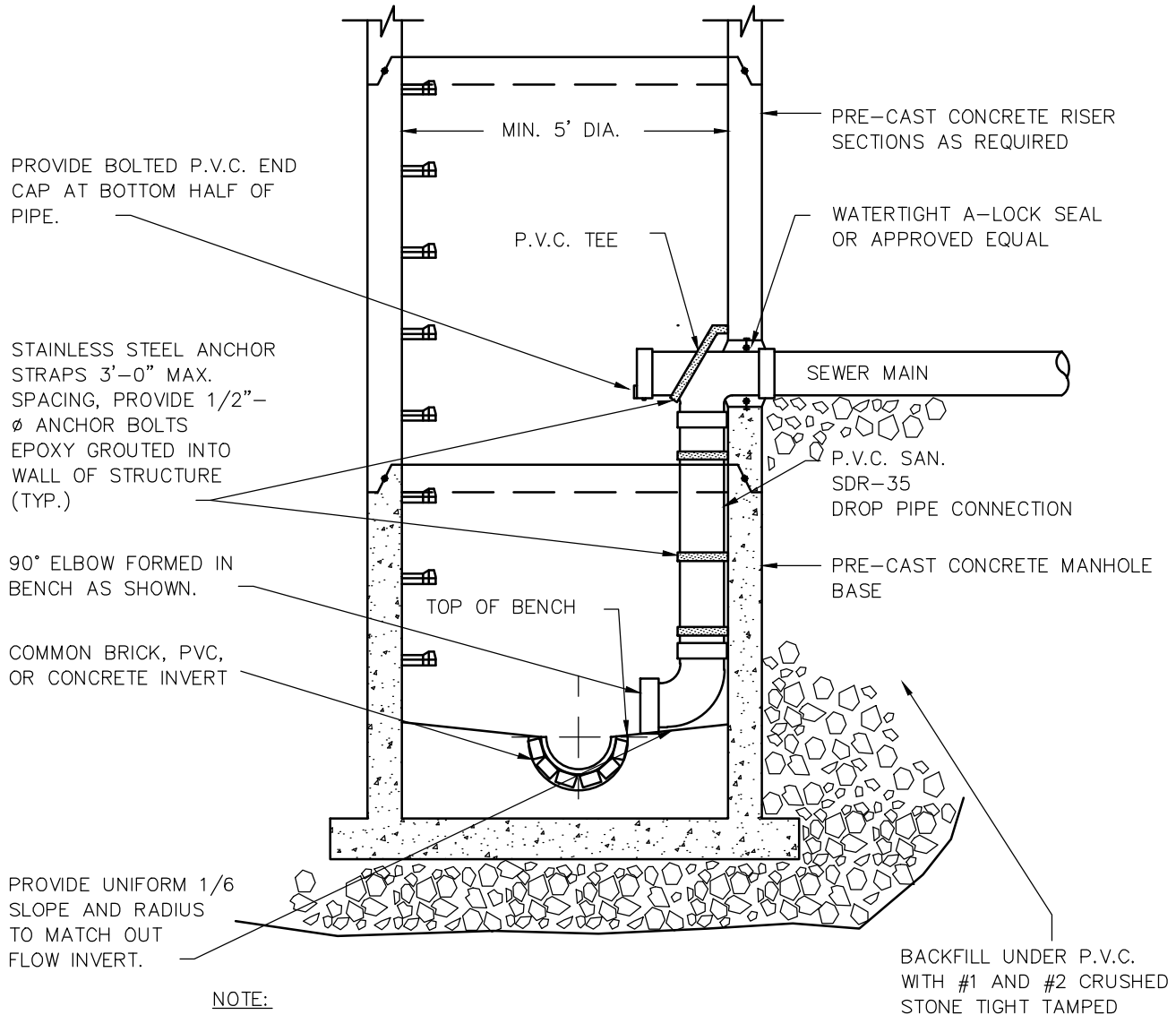
## TOWN OF SWEDEN

**SANITARY SEWER MANHOLE**

(GREATER THAN 4' DEEP)

(N.T.S.)

## TOWN OF SWEDEN

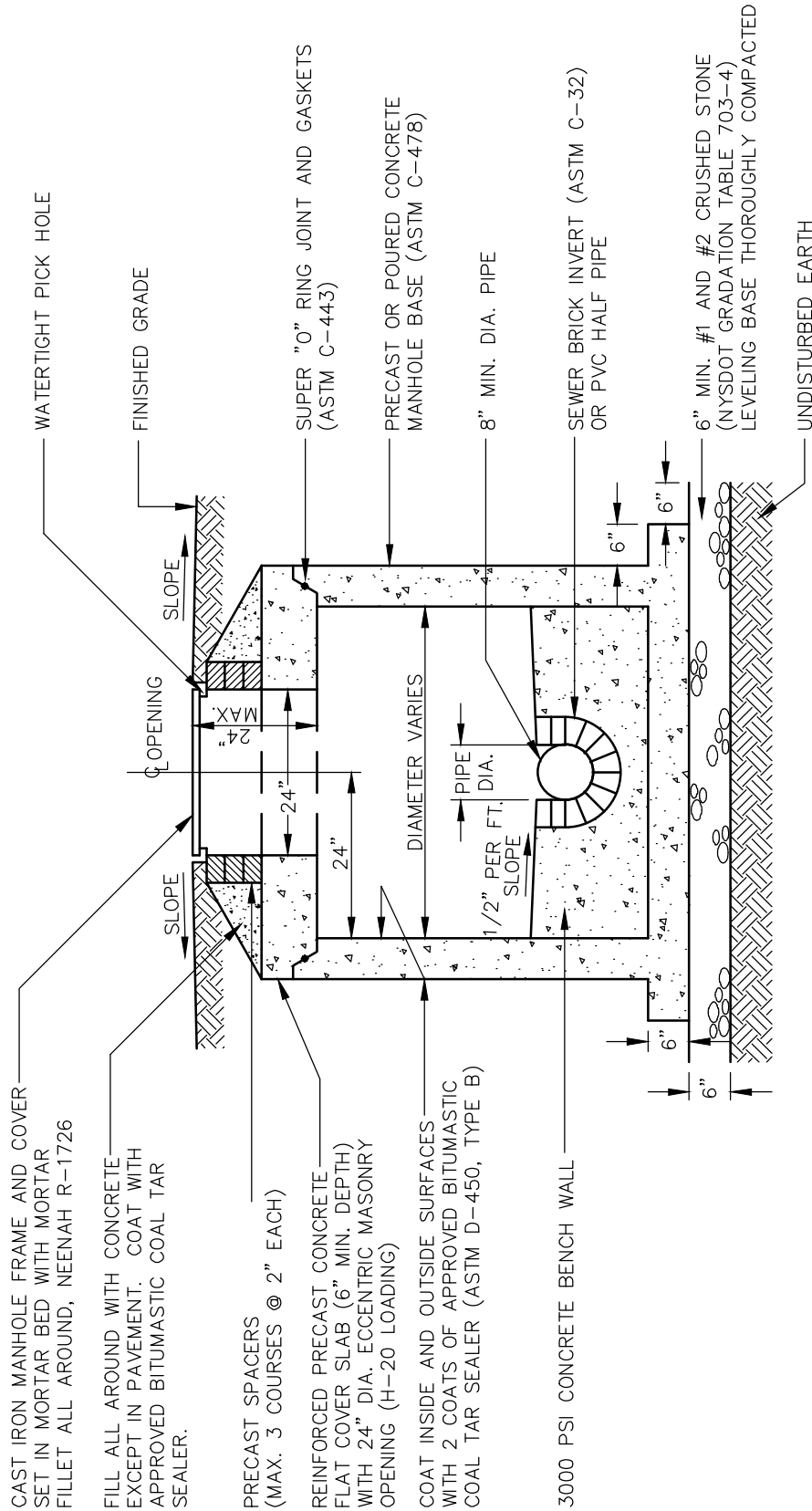
NOTE:

1. SEWER MAIN, TEE AND DROP PIPE SHALL ALL BE THE SAME SIZE.
2. SEE SANITARY SEWER MANHOLE DETAIL FOR ALL OTHER CONSTRUCTION FEATURES NOT SHOWN.
3. PROVIDE INVERT ELEVATIONS AND PIPE SIZES AS SPECIFIED ON PLANS FOR STRUCTURES.

## SANITARY SEWER INSIDE DROP CONNECTION

(N.T.S.)

TOWN OF SWEDEN



NOTES:

1. RISER AND COVER SLAB JOINTS AND LIFT HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND SEALED WITH 2 COATS OF APPROVED BITUMASTIC COAL TAR SEALER.
2. BACKFILL SHALL BE SELECT MATERIAL (NYSDOT SPEC. 230-2.02) IF OUTSIDE PAVEMENT. IF IN PAVEMENT, BACKFILL SHALL BE CRUSHER RUN STONE (NYSDOT SPEC. 304-2.02, TYPE 2)

## SHALLOW SEWER MANHOLE

(LESS THAN 4' DEEP)

(N.T.S.)



DATE: MAY-2013

ENGINEERING/ARCHITECTURE/SURVEYING, P.C.  
145 CULVER RD, SUITE 160 ROCHESTER, N.Y. 14620

R.O.W.  
LINE

1'-0"

5'-0"

1/4" PER FT. SLOPE  
TO PROVIDE POSITIVE DRAINAGE

4"

4"

6"

6"

TWO (2) COATS APPROVED  
CURING AND SEALING  
COMPOUND

MAX. SLOPE  
1 1/2" PER FT.

NYSDOT CLASS A CONCRETE  
AIR ENTRAINED, 4000 PSI MIN.

CRUSHER RUN  
(NYSDOT SPEC. 304.12, TYPE 2)

NOTE:  
CONCRETE SIDEWALKS THROUGH DRIVEWAYS SHALL BE INCREASED TO A 5" THICKNESS AND SHALL INCLUDE 6"x6" WIRE MESH (10 GAUGE) FOR REINFORCEMENT, OR 7' THICK WITHOUT MESH.

## SIDEWALK DETAIL

(N.T.S.)

TOWN OF SWEDEN

GENERAL

All testing of gravity sewers shall be completed under the observation of the Town. The Contractor shall furnish all labor and testing equipment including hoses, pumps, plugs, temporary connections, gauges, etc. necessary to perform the required tests. Water for cleaning and testing shall be furnished by the Contractor through a metered connection as shown in Appendix W.

CLEANING

Each section of gravity sewer shall be flushed to remove all silt, sand, gravel and other debris prior to testing. If any sections of pipe cannot be flushed clean, mechanical methods shall be used to dislodge any deposits in the pipe.

TESTING GRAVITY SEWERS

- I. Air testing shall be the method used for the final acceptance of each section of gravity sewer unless otherwise designated by the Town. Gravity sewers shall be tested between manholes not exceeding 300 feet in length. Any section of gravity sewer which does not give satisfactory test results must be replaced and retested until a satisfactory test is completed.

AIR TEST: Low pressure air test shall be used to test a section of sewer pipe or locate areas requiring replacement. The following procedures shall be used for low pressure air test.

1. The test shall be conducted between two (2) consecutive manholes.
2. The test section of the sewer line shall be plugged at each end. One of the plugs used at the manhole must be tapped and equipped for the air inlet connection for filling the line from the air compressor.
3. All service laterals, stubs and fittings into the sewer test section shall be properly capped or plugged and carefully braced against the internal pressure to prevent air leakage by slippage and blowouts.

**CLEANING AND TESTING OF SANITARY SEWERS**

TOWN OF SWEDEN

4. Supply air to the test section slowly, filling the pipe line until a constant pressure of 4.0 PSIG is maintained. The air pressure shall be regulated to prevent the pressure inside the pipe from exceeding 5.0 PSIG.
5. When constant pressure of 4.0 PSIG is reached, throttle the air supply to maintain the internal pressure above 3.5 PSIG for at least five (5) minutes. This time permits the temperature of the entering air to equalize with the temperature of the pipe wall.
6. After the stabilization period, the air pressure shall be adjusted to 4.0 PSIG and the air supply disconnected. 4.0 PSI shall be maintained for a minimum of 5 minutes. There shall be no drop in pressure.
7. A video tape and log of all sanitary and storm sewers shall be provided to the town after final pressure testing is completed on manholes.

## CLEANING AND TESTING OF SANITARY SEWERS

APPENDIX: U\_SHEET\_3  
DATE: MAY-2013

**MRB** | *group*  
ENGINEERING /ARCHITECTURE /SURVEYING, P.C.  
145 CULVER RD, SUITE 180 ROCHESTER, N.Y. 14620

TOWN OF SWEDEN

Any time which is less than shown in the following table shall be cause for rejection:

TIME REQUIREMENTS FOR AIR TESTING

PIPE SIZE (Inches)	TIME	
	(Minutes)	(Seconds)
4	2	32
6	3	50
8	5	6
10	6	22
12	7	39
14	8	56
15	9	35
16	10	12
18	11	34
20	12	45
21	13	30

For larger diameter pipe: Minimum time in seconds =  
462 x pipe diameter in feet

7. An air pressure correction shall be required when the prevailing ground water is above the sewer line being tested. Under this condition, the air test pressure shall be increased to 0.433 PSIG for each foot the ground water level is above the invert of the pipe.

II. Water Tests  
(If the town determines that infiltration tests are required)

No infiltration shall be allowed.

CLEANING AND TESTING OF SANITARY SEWERS

## TOWN OF SWEDEN

CONDITION	SCHEMATIC	REQUIREMENTS
I WATER LINE ABOVE SEWER LINE		<p>A) WATER LINE AND SEWER LINE PIPE LENGTHS TO BE CENTERED AT CROSSING. EACH LENGTH OF PIPE TO BE 10 FT. MINIMUM.</p> <p>B) BACKFILL WITH COMPACTED CRUSHER RUN STONE.</p>
II WATER LINE ABOVE SEWER LINE		<p>A) WATER LINE AND SEWER LINE PIPE LENGTHS TO BE CENTERED AT CROSSING. EACH LENGTH OF PIPE TO BE 10 FT. MINIMUM.</p> <p>B) WHEN BOTH WATER LINE AND SEWER LINE ARE NEW, SLEEVE SEWER LINE WITH STEEL CASING FOR 10 FT. EACH SIDE OF CROSSING.</p> <p>WHEN ONE LINE IS EXISTING, SLEEVE PIPE BEING INSTALLED WITH STEEL CASING FOR 10 FT. EACH SIDE OF CROSSING.</p> <p>C) BACKFILL WITH COMPACTED CRUSHER RUN STONE.</p>
III SEWER LINE ABOVE WATER LINE		<p>A) WATER LINE AND SEWER LINE PIPE LENGTHS TO BE CENTERED AT CROSSING. EACH LENGTH OF PIPE TO BE 10 FT. MINIMUM.</p> <p>B) SLEEVE SEWER LINE WITH STEEL CASING FOR 10 FT. EACH SIDE OF CROSSING.</p> <p>C) PROVIDE CRADLE OF CONCRETE OR CRUSHER RUN STONE (SEE TRENCH DETAIL BELOW) FOR WATER LINE AND SEWER LINE FOR 10 FT. EACH SIDE OF CROSSING.</p>
<p align="center"><b>NOTES</b></p> <p>WL (WATER LINE)</p> <p>SL (SEWER LINE)</p> <p>D (OUTSIDE DIAMETER OF PIPE)</p> <p>IN NO CASE SHALL PIPES BE CLOSER THAN 18" APART. DISTANCES ARE MEASURED BETWEEN OUTSIDES OF PIPE.</p>		

**WATERMAIN/SEWER CROSSING DETAIL**

(N.T.S.)

APPENDIX: W

DATE: MAY-2013

**MRB**|group

ENGINEERING/ARCHITECTURE/SURVEYING, P.C.  
145 CULVER RD, SUITE 160 ROCHESTER, N.Y. 14620

TOWN OF SWEDEN

**!! CALL !!**

**BEFORE  
YOU DIG, DRILL OR BLAST**

---

**811**

---

IN ACCORDANCE WITH DIG SAFELY NEW YORK,  
CONTRACTORS MUST NOTIFY ALL UTILITIES IN THE  
AREA TWO (2) WORKING DAYS BEFORE EXCAVATION.

THIS WILL NOTIFY – MONROE COUNTY WATER AUTHORITY

- FRONTIER TELEPHONE
- ROCHESTER GAS & ELECTRIC CORPORATION
- NATIONAL GRID
- VERIZON CABLE
- OGDEN TELEPHONE
- TOWN OF SWEDEN
- VILLAGE OF BROCKPORT
- VILLAGE OF HOLLEY
- TIME WARNER COMMUNICATIONS

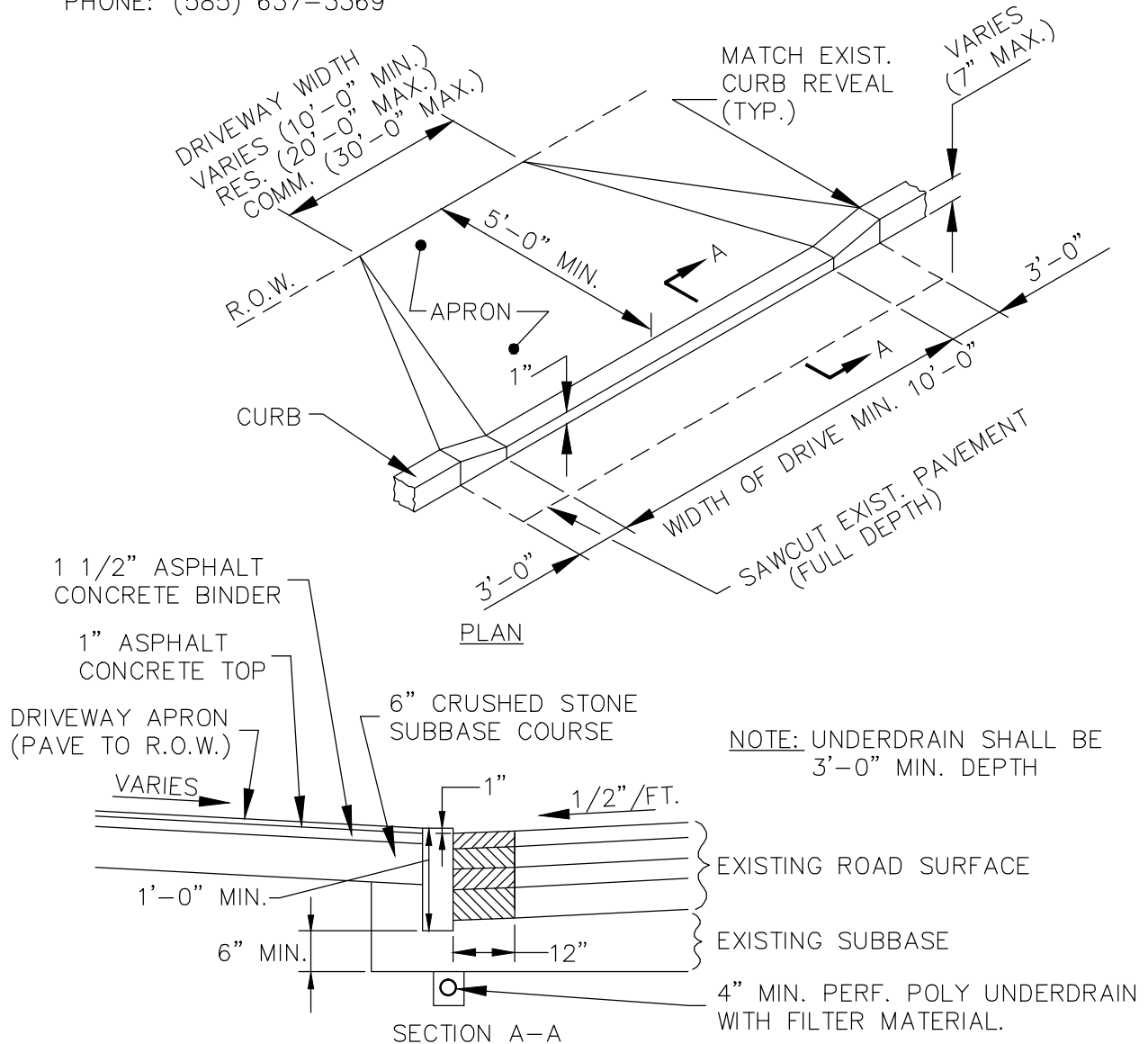
IN ADDITION, THE CONTRACTOR SHALL NOTIFY THE MUNICIPAL SEWER  
AND WATER DEPARTMENTS WITHIN THE PROJECT AREA.

**UTILITY NOTIFICATIONS**

## TOWN OF SWEDEN

NOTES:

1. EXISTING PAVEMENT SHALL BE SAWCUT PRIOR TO GUTTER REPLACEMENT. ALL PAVEMENT JOINTS SHALL BE TACK COATED AND SEALED WITH BITUMINOUS SEALER.
2. THE CONTRACTOR SHALL PROVIDE MAINTENANCE AND PROTECTION OF TRAFFIC. TWO-WAY TRAFFIC SHALL BE PROVIDED DURING WORKING HOURS. EXCAVATIONS IN DRIVING LANES AND PAVED SHOULDERS SHALL BE BACKFILLED, PATCHED OR PLATED OVERNIGHT. EXCAVATIONS OUTSIDE THE DRIVING LANES AND PAVED SHOULDERS MUST BE FENCED AND BARRICADED. WARNING LIGHTS, SIGNS AND FLAGMEN ARE REQUIRED AS DIRECTED BY THE N.Y.S. MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THE CONTRACTOR IS TO NOTIFY THE HIGHWAY DEPARTMENT AT LEAST 48 HOURS PRIOR TO INSTALLATION.  
PHONE: (585) 637-3369

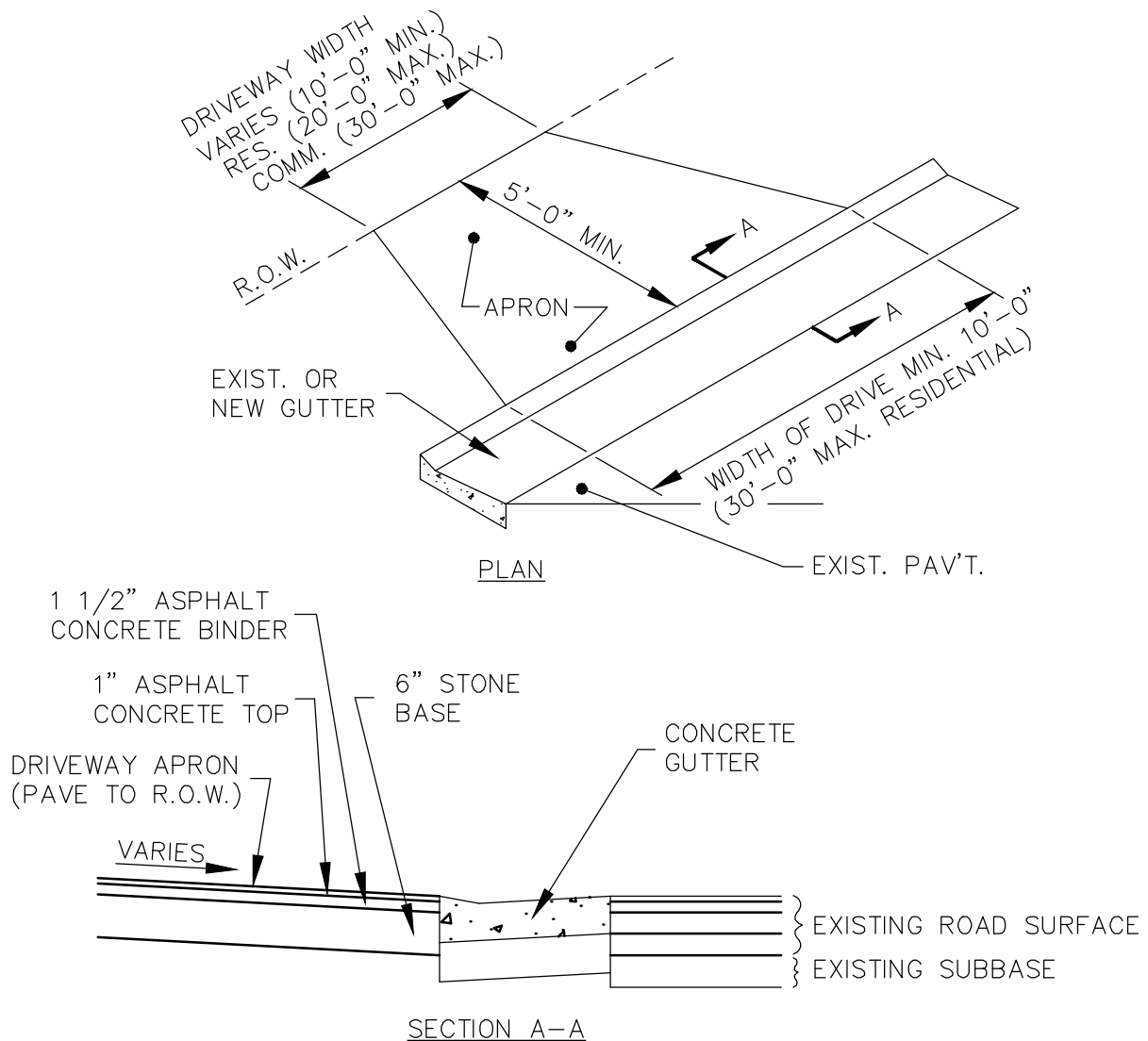
DRIVEWAY APRON WITH CURB DETAIL

N.T.S.

## TOWN OF SWEDEN

NOTES:

1. EXISTING PAVEMENT SHALL BE SAWCUT PRIOR TO GUTTER REPLACEMENT. ALL PAVEMENT JOINTS SHALL BE TACK COATED AND SEALED WITH BITUMINOUS SEALER.
2. THE CONTRACTOR SHALL PROVIDE MAINTENANCE AND PROTECTION OF TRAFFIC. TWO-WAY TRAFFIC SHALL BE PROVIDED DURING WORKING HOURS. EXCAVATIONS IN DRIVING LANES AND PAVED SHOULDERS SHALL BE BACKFILLED, PATCHED OR PLATED OVERNIGHT. EXCAVATIONS OUTSIDE THE DRIVING LANES AND PAVED SHOULDERS MUST BE FENCED AND BARRICADED. WARNING LIGHTS, SIGNS AND FLAGMEN ARE REQUIRED AS DIRECTED BY THE N.Y.S. MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THE CONTRACTOR IS TO NOTIFY THE HIGHWAY DEPARTMENT AT LEAST 48 HOURS PRIOR TO INSTALLATION.  
PHONE: (585) 637-3369



DRIVEWAY APRON WITH CONC. GUTTER DETAIL

N.T.S.



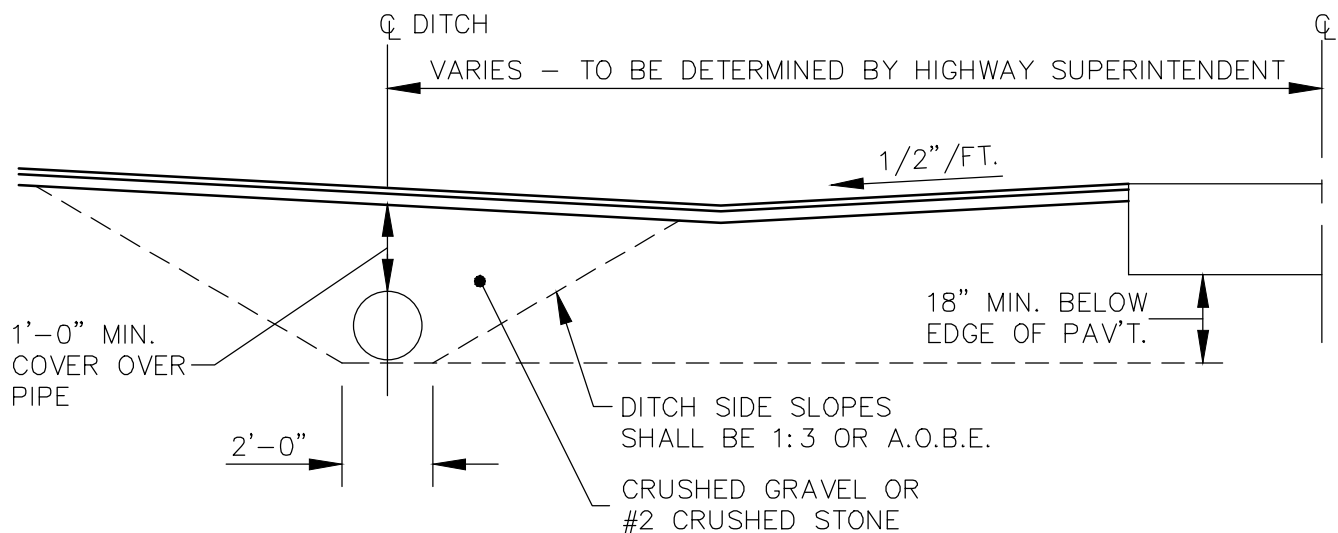
## TOWN OF SWEDEN

THE OWNERS SHALL FURNISH AND INSTALL SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPE (SICPP), MINIMUM LENGTH TO EXTEND AT LEAST FIVE (5) FEET BEYOND THE OUTER EDGES OF THE NEW PROPOSED DRIVEWAY AT THE DITCH LINE. SIZE OF PIPE WILL BE DETERMINED BY TOWN OF SWEDEN. THE NEW PROPOSED DRIVEWAY CULVERT SHALL BE PLACED AT A LINE, GRADE AND OFFSET DETERMINED BY THE EXISTING DITCH LINE, GRADE AND OFFSET OF THE ADJACENT PROPERTIES ON EITHER SIDE OF THE NEW PROPOSED DRIVEWAY TO FLOW PROPERLY IN A MANNER SATISFACTORILY TO THE SUPERINTENDENT OF HIGHWAYS. ALSO, THE OWNERS OR THEIR AGENTS SHALL INSTALL GALVANIZED STEEL END SECTIONS TO EACH END OF THE NEW PROPOSED DRIVEWAY CULVERT.

NOTE: THE OWNERS OR THEIR AGENTS ARE TO CLEAN OUT AND GRADE THE EXISTING DRAINAGE DITCH ALONG THEIR PROPERTY LINES ON THIS SUBDIVISION LOT, AND DURING AND AT THE TIME OF COMPLETION THE DRAINAGE IN FRONT OF THIS SAID SUBDIVISION LOT SHALL CONTAIN NO TREES, WEEDS, SHRUBS OR DEBRIS WITHIN THE CONFINES OF THIS SUBDIVISION FRONTAGE. ALSO, THE OWNERS OR THEIR AGENTS SHALL INSURE THAT THERE WILL BE AT LEAST ONE FOOT OF COVER OVER THE PROPOSED NEW DRIVEWAY CULVERT AT ALL TIMES. RESIDENTIAL DRIVEWAYS SHALL NOT BE ANY WIDER THAN 20 FEET. DRIVEWAY FRONTING ON TOWN ROADS SHALL BE PAVED TO THE RIGHT-OF-WAY LINE. THE DRIVEWAY GRADE SHALL FALL AWAY FROM THE OUTSIDE EDGE OF THE SHOULDER AT A MINIMUM OF 1/2 INCH PER FOOT TO THE CENTERLINE OF DRAINAGE DITCH OR SWALE. COMMERCIAL DRIVEWAY WIDTHS SHALL BE DETERMINED BY TOWN, COUNTY, OR STATE (DEPENDING ON ROAD OWNERSHIP).

THE APPLICANT SHALL NOTIFY THE HIGHWAY DEPARTMENT (585) 637-3369 AT LEAST 48 HOURS PRIOR TO PERFORMING THE WORK TO SCHEDULE FIELD INSPECTION.

THIS PERMIT IS GRANTED WITH THE STIPULATION THAT ALL OF THE ABOVE SPECIAL CONDITIONS ARE MET.



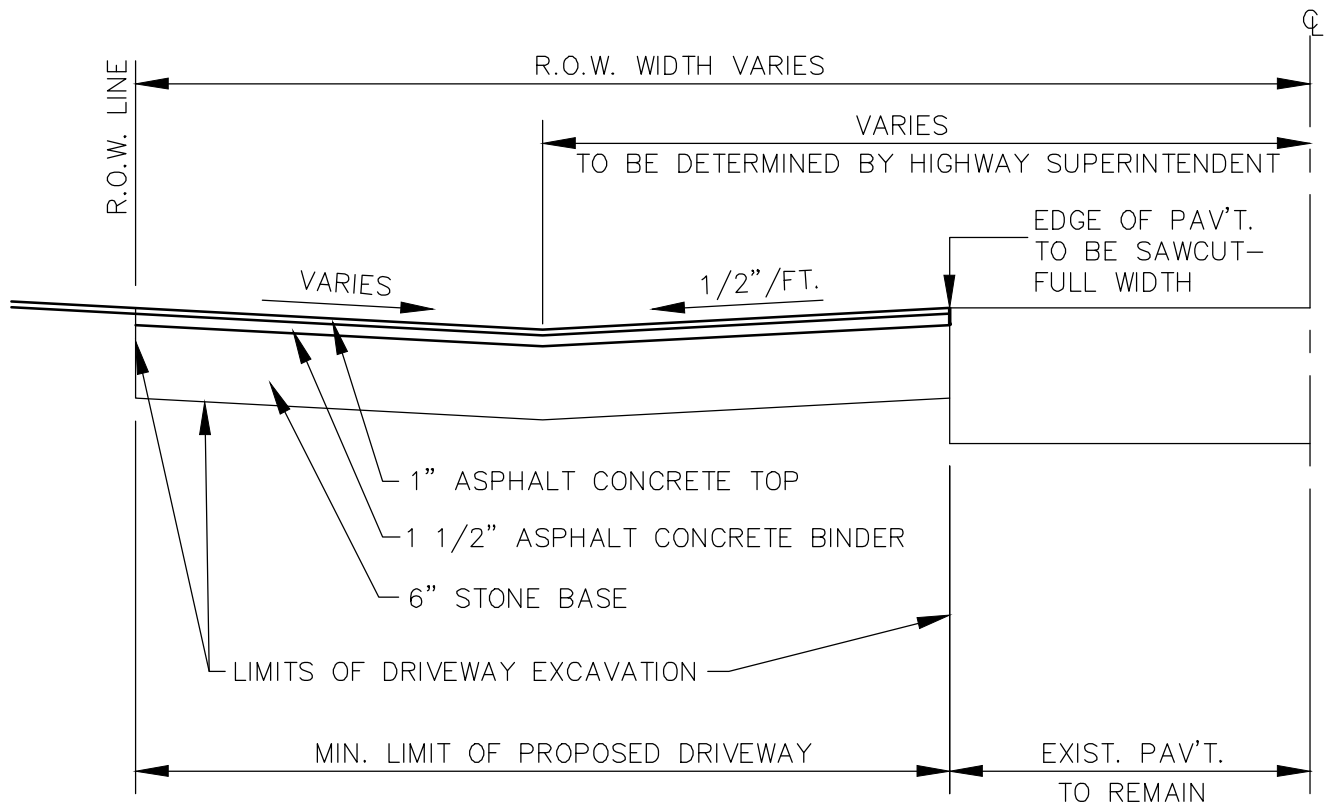
TYPICAL DRIVEWAY CULVERT STANDARD

N.T.S.

## TOWN OF SWEDEN

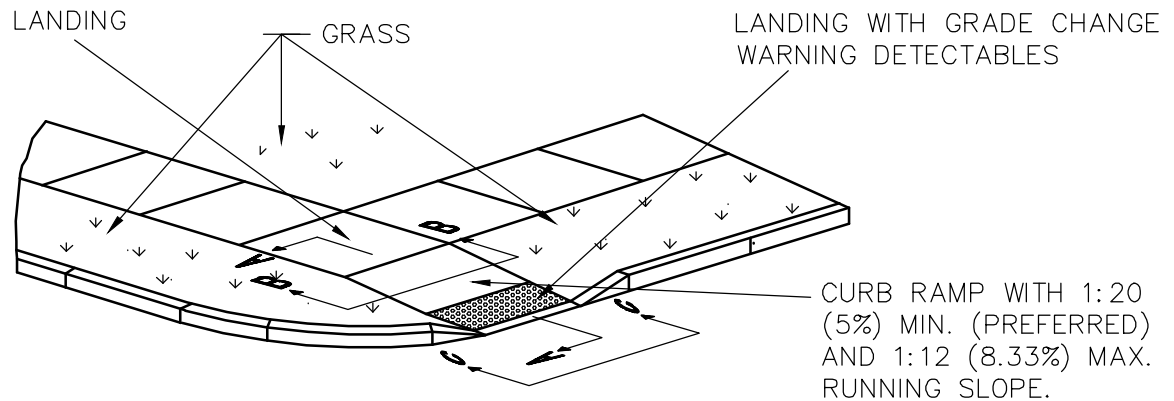
NOTES:

1. THE PROPOSED DRIVEWAY SHALL NOT EXCEED 20 FEET IN WIDTH. DRIVEWAY FRONTING ON TOWN ROADS SHALL BE PAVED TO THE RIGHT-OF-WAY LINE. THE DRIVEWAY GRADE SHALL FALL AWAY FROM THE OUTSIDE EDGE OF THE SHOULDER AT A MINIMUM OF 1/2 INCH PER FOOT.
2. THE APPLICANT SHALL NOTIFY THE HIGHWAY DEPARTMENT (585) 637-3369 AT LEAST 48 HOURS PRIOR TO PERFORMING THE WORK TO SCHEDULE FIELD INSPECTION.

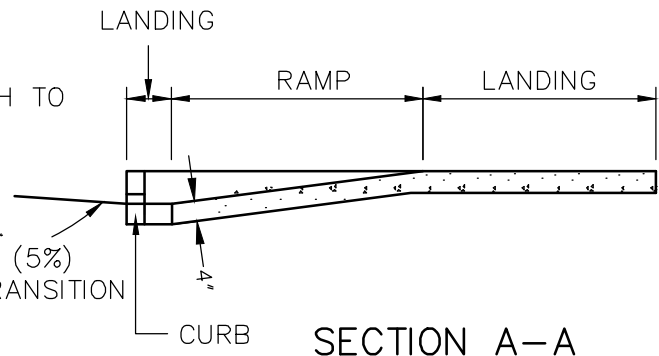
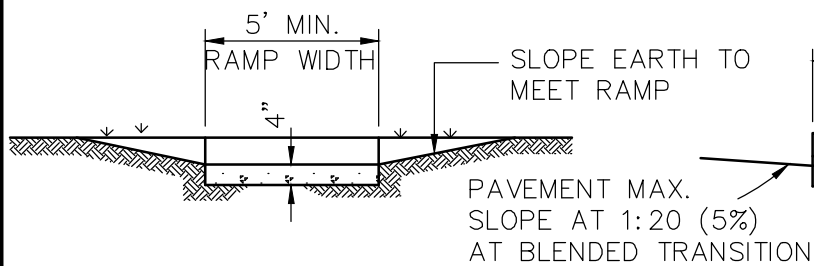
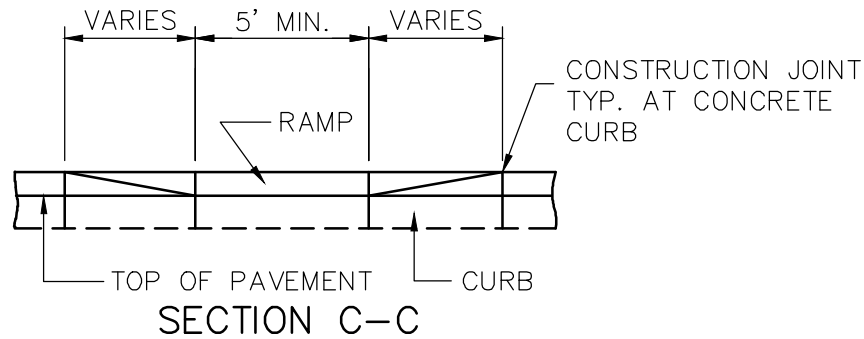
DRIVEWAY STANDARD

N.T.S.

## TOWN OF SWEDEN



TYPE 1 RAMP ISOMETRIC

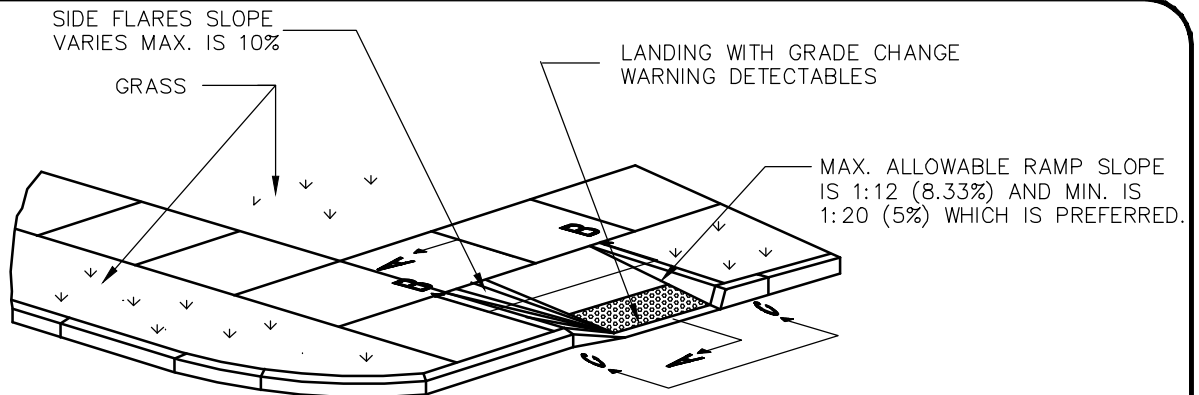
**SIDEWALK RAMP TYPE 1 DETAIL**

N.T.S.

**NOTES :**

- 1.) TYPE 1 RAMPS MAY BE PROVIDED IN BOTH DIRECTIONS.  
USE TYPE 3 RAMPS WHEN DISTANCE BETWEEN LOWER EDGES OF RAMPS IS LESS THAN 3'.
- 2.) DETECTABLE WARNING FIELDS PRESENT AT THE BASE OF ALL RAMPS  
MADE OUT OF DOMES ALIGNED PERPENDICULAR TO ROADWAY.

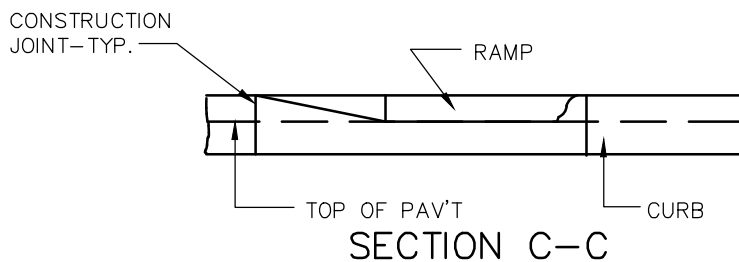
## TOWN OF SWEDEN



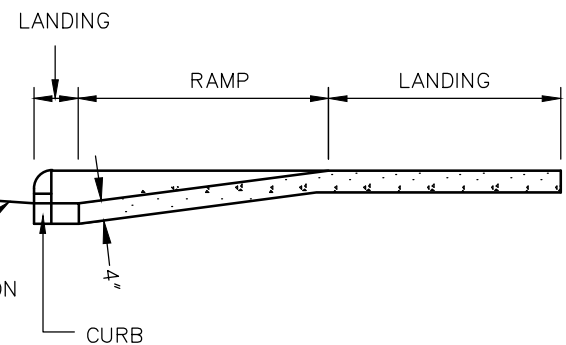
## TYPE 2 RAMP ISOMETRIC

## NOTE :

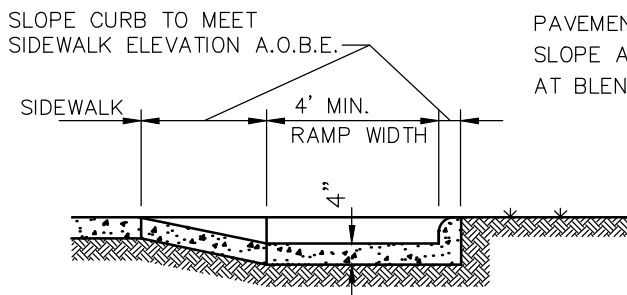
CROSS SLOPES ON LANDSCAPING AT INTERSECTIONS IS 1:50 (2%) AND AT MIDBLOCK CROSSINGS MAY BE WARPED TO MEET STREET OR HIGHWAY GRADE.



## SECTION C-C



## SECTION A-A



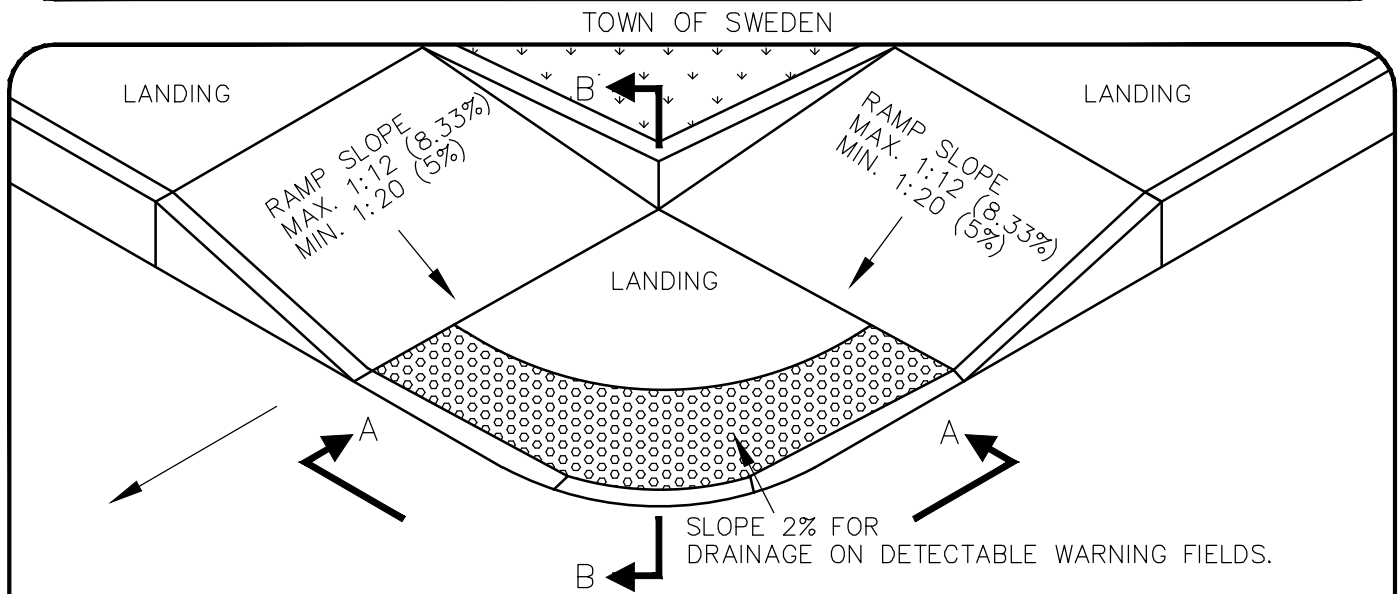
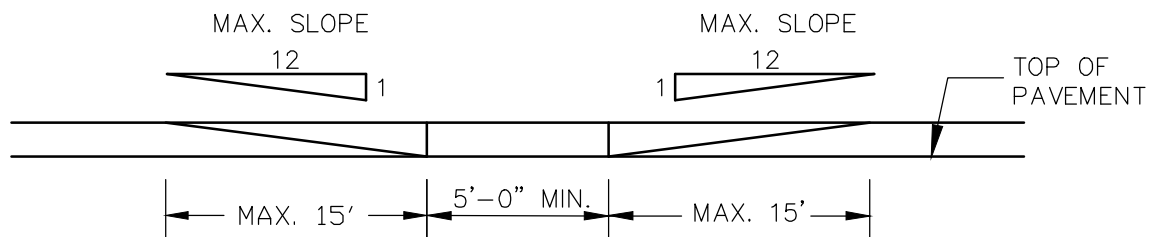
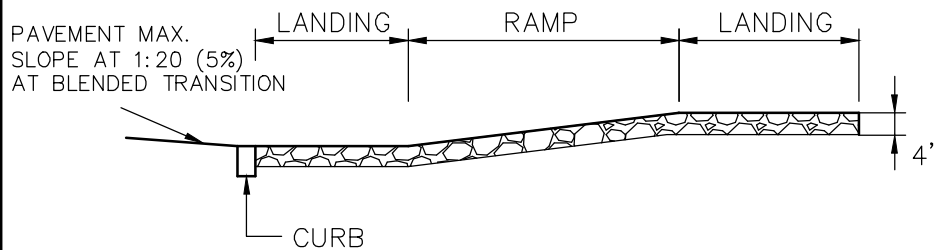
## SECTION B-B

**SIDEWALK RAMP TYPE 2 DETAIL**

N.T.S.

**NOTES :**

- 1.) TYPE 1 RAMPS MAY BE PROVIDED IN BOTH DIRECTIONS. USE TYPE 3 RAMPS WHEN DISTANCE BETWEEN LOWER EDGES OF RAMPS IS LESS THAN 3'.
- 2.) DETECTABLE WARNING FIELDS PRESENT AT THE BASE OF ALL RAMPS MADE OUT OF DOMES ALIGNED PERPENDICULAR TO ROADWAY.

TYPE 3 RAMP ISOMETRICVIEW A-ASECTION B-BNOTES:

1. THE MAXIMUM SLOPE OF A SIDEWALK CURB RAMP IN NEW CONSTRUCTION SHALL BE 1:12.
2. ALL SIDEWALK CURB RAMPS SHALL HAVE FLUSH, SMOOTH TRANSITION TO THE ADJACENT STREET OR HIGHWAY SURFACE.
3. THE SURFACE OF ALL SIDEWALK CURB RAMPS SHALL BE STABLE, FIRM, AND SLIP-RESISTANT.

TYPE 3 – SIDEWALK RAMP

N.T.S.

## TOWN OF SWEDEN

GENERAL NOTES:

1. THE DIMENSIONS AND SLOPES PRESENTED ARE MINIMUM NECESSARY TO COMPLY WITH THE ADA AND DOT STANDARDS.
2. CURB RAMPS, LANDINGS AND BLENDED TRANSITIONS MAY REQUIRE THE USE OF DETECTABLE WARNINGS.

CURB RAMP NOTES:

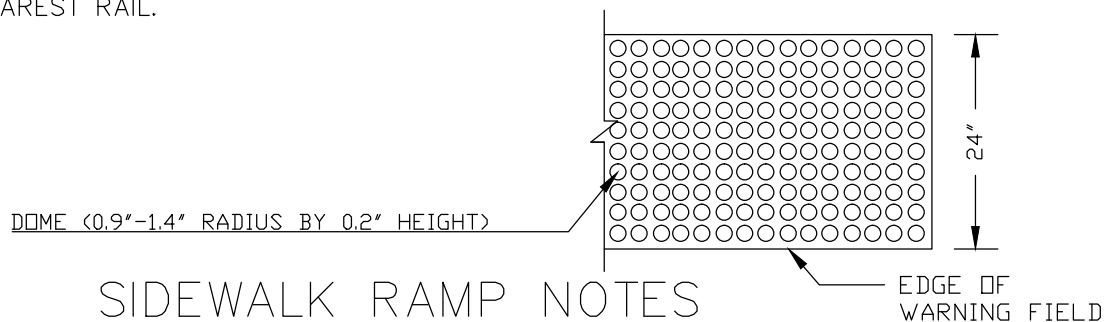
1. THE MINIMUM WIDTH FOR SIDEWALK CURB RAMPS IS 5'-0".
2. THE RUNNING SLOPE OF A CURB RAMP SHALL BE 1:20 (5%) MINIMUM (PREFERRED) AND 1:12 (8.33%) MAXIMUM.
3. WHERE THE SLOPE OF THE ROADWAY EXCEEDS 8.33% THE CURB RAMP IS THE LENGTH NECESSARY TO MEET THE EXISTING SIDEWALK. NOT NECESSARY TO EXCEED THE RAMP LENGTH OF 15'-0".
4. THE CROSS SLOPE OF CURB RAMPS SHOULD BE AS FLAT AS POSSIBLE, NOT TO EXCEED 1:50 (2%). THE CROSS SLOPE AT MIDBLOCK CROSSINGS MAY BE WARPED TO MEET STREET OR HIGHWAY GRADE.
5. THE VERTICAL ALIGNMENT OF A CURB RAMP, EXCLUDING THE FLARES, SHALL BE PLANAR. GRADE BREAKS SHALL BE FLUSH AND PERP. TO THE DIRECTION OF THE RAMP RUN.
6. RAMP TRANSITIONS BETWEEN WALKS, LANDINGS, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT VERTICAL CHANGES (1/4" MAX).
7. WHERE PEDESTRIAN CIRCULATION PATH CROSSES THE CURB RAMP, FLARED SIDES WITH A SLOPE OF 10% MAXIMUM, MEASURED PARALLEL TO THE CURB LINE, SHALL BE PROVIDED.

LANDING NOTES:

1. LANDINGS SHALL HAVE A MINIMUM CLEAR DIMENSION OF 5'-0" BY 5'-0" EXCEPT AT THE BOTTOM OF RAMPS TYPE 1 & 2.
2. THE RUNNING AND CROSS SLOPES ON LANDINGS AT INTERSECTIONS IS 1:50 (2%) MAXIMUM. THE RUNNING AND CROSS SLOPES AT MIDBLOCK CROSSINGS MAY BE WARPED TO MEET STREET OR HIGHWAY GRADE.

DETECHABLE WARNING UNIT NOTES:

1. THE SIZE OF THE DETECHABLE WARNING FIELD SHALL BE 24" IN THE DIRECTION OF TRAVEL AND SHALL EXTEND THE FULL WIDTH OF THE CURB OR FLUSH SURFACE.
2. DETECTABLE WARNING FIELDS SHALL BE LOCATED SO THAT THE EDGE OR CORNER OF THE WARNING FIELD NEAREST TO THE ROADWAY IS 5" TO 9" FROM THE FRONT OF THE CURB OR ROADWAY EDGE (12" WHERE TRANSVERABLE CURB IS USED).
3. THE EDGE OF THE DETECHABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 6'-0" MINIMUM AND 15'-0" MAXIMUM FROM THE CENTERLINE OF THE NEAREST RAIL.



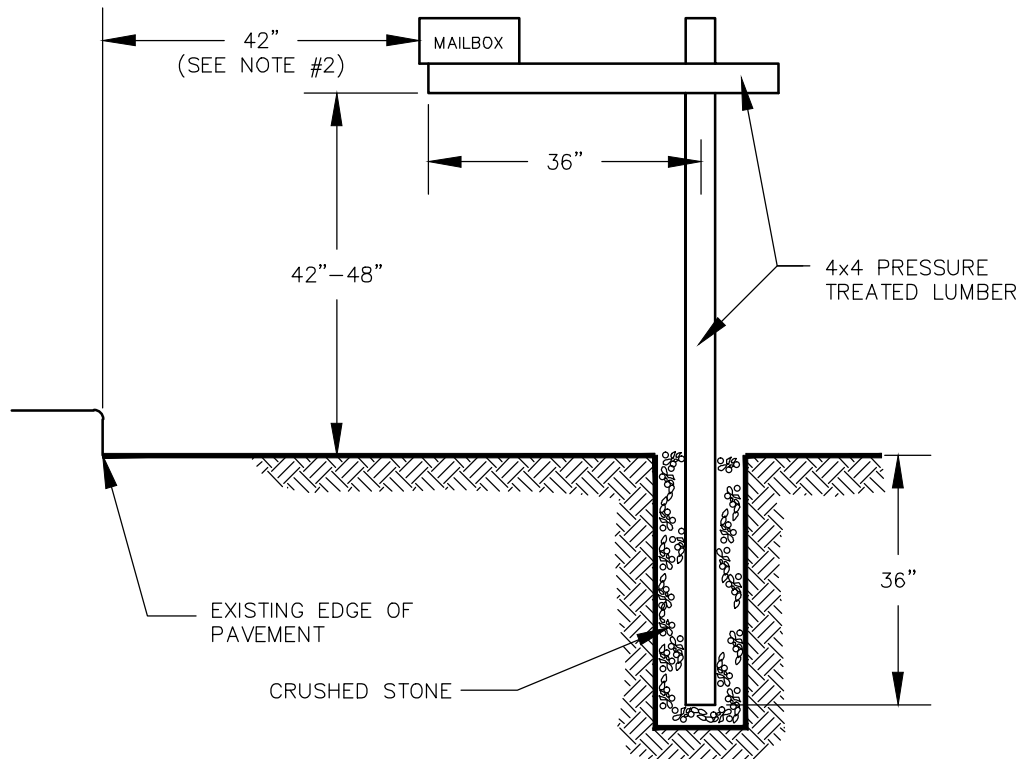
SIDEWALK RAMP NOTES

N.T.S.

## TOWN OF SWEDEN

RECOMMENDED CONSTRUCTION OF MAILBOX AND SUPPORT

The roadside face of the mailbox should be installed approximately 42" from the edge of the road. The approximate height should be between 42" and 48". Use all Pressure Treated 2x4 's and 4x4 post. Galvanized nails are recommended with Pressure Treated wood. The post must be able to break or bend upon impact. The Town of Sweden assumes no responsibility for the construction or replacement of mailboxes or supports.

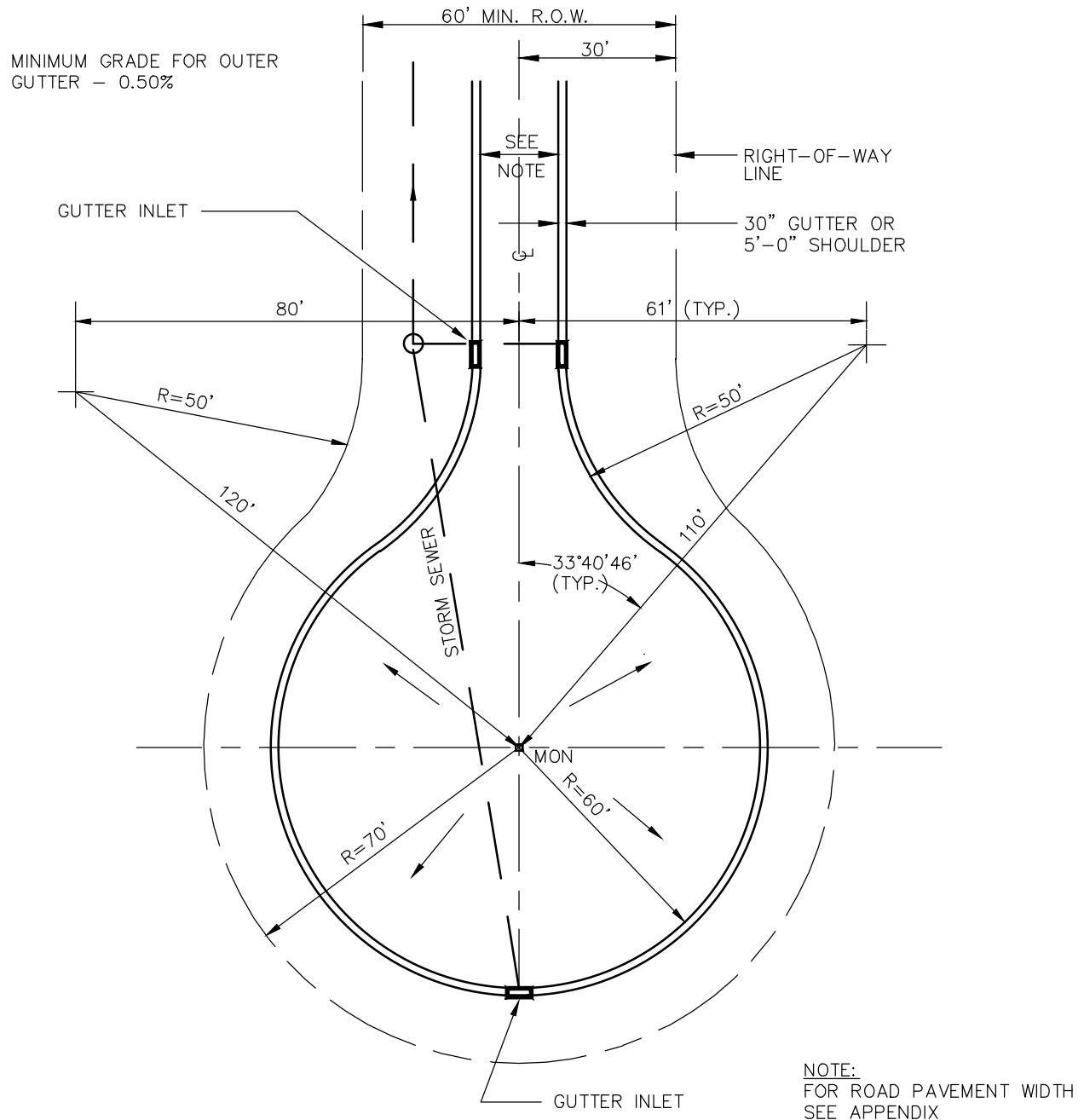
NOTE:

1. ALTERNATE MATERIALS FOR CONSTRUCTION OF SUPPORT MEMBERS MAY BE USED AS LONG AS THE DIMENSIONS ARE MAINTAINED.
2. DIMENSIONS MAY VARY DEPENDING ON ROAD CONDITIONS AS APPROVED BY HIGHWAY SUPERINTENDENT.

**MAILBOX AND SUPPORT DETAIL**

N.T.S.

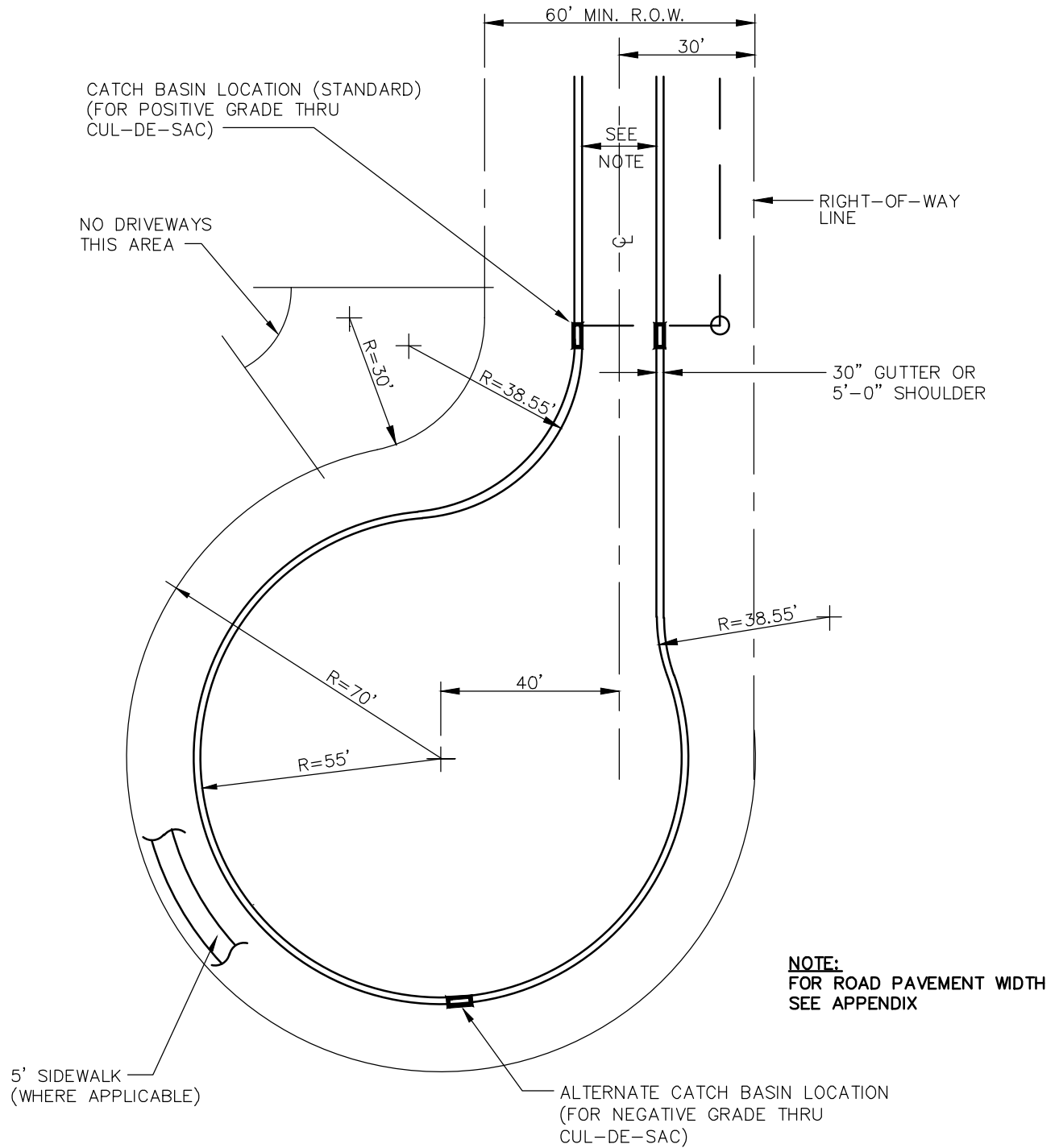
## TOWN OF SWEDEN

**STANDARD CUL-DE-SAC PLAN**

(N.T.S.)

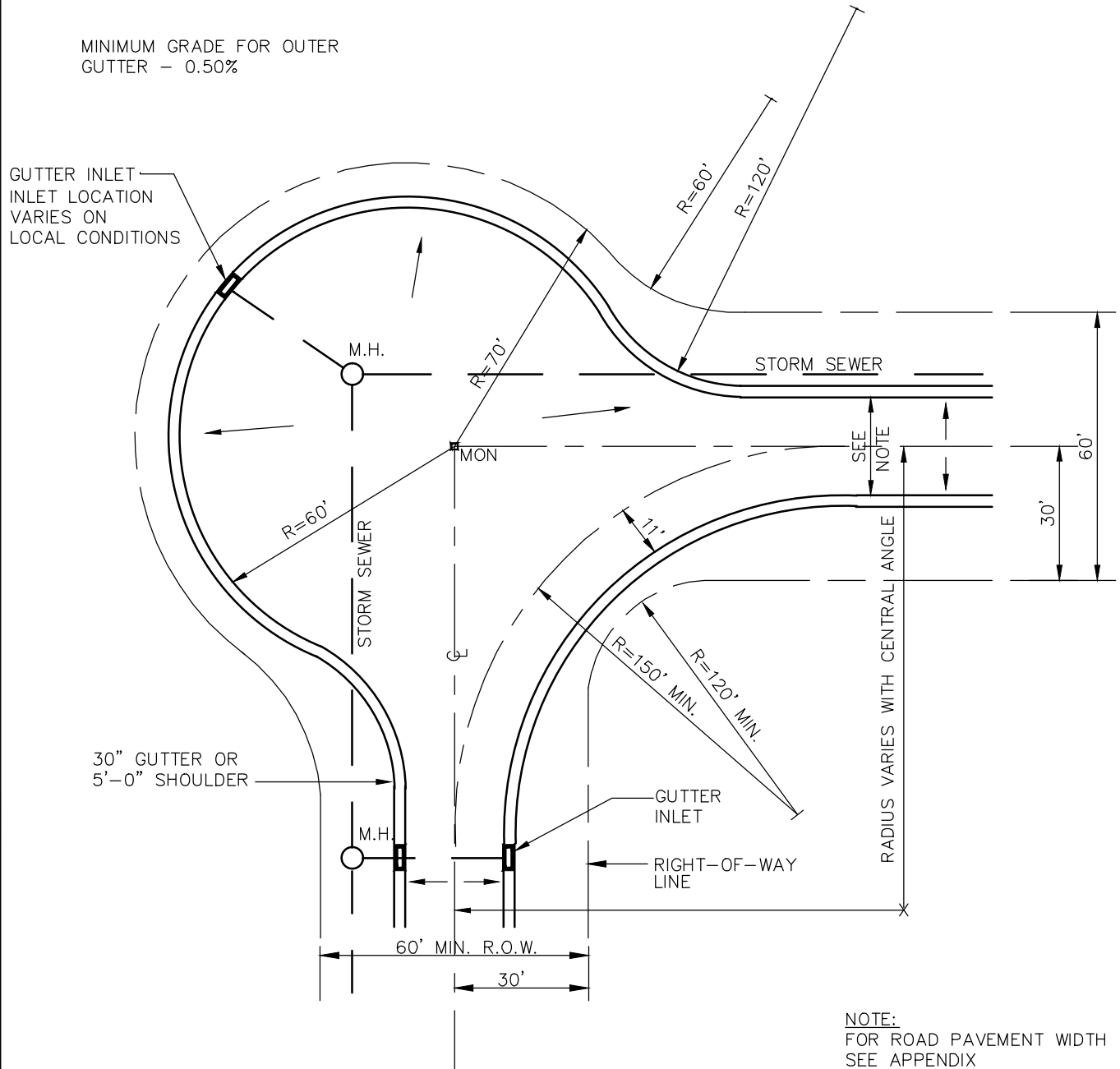


## TOWN OF SWEDEN

**TEAR-DROP CUL-DE-SAC PLAN**

(N.T.S.)

TOWN OF SWEDEN



**TYPICAL "BUBBLE" DETAIL**  
(N.T.S.)

## TOWN OF SWEDEN

GUIDELINES TO LANDSCAPING

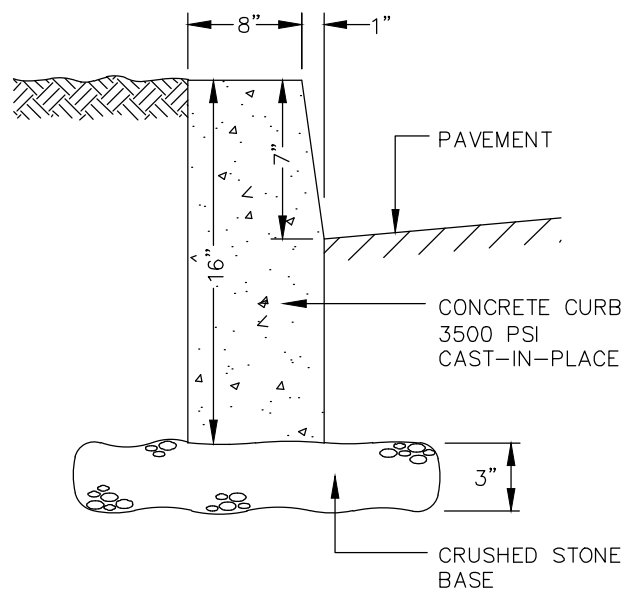
1. THE DEVELOPER OR CONTRACTOR SHALL PLACE TREES AT LOCATIONS SHOWN ON THE LANDSCAPING PLAN OR AS DIRECTED BY THE PLANNING BOARD. TREES SHOULD TYPICALLY BE A MINIMUM OF ONE AND ONE HALF (1 1/2) INCHES DBH, AND PLACED AT APPROXIMATELY SEVENTY FIVE (75) FOOT INTERVALS ON BOTH SIDES OF NEW SUBDIVISION STREETS, OR ALONG THE ROAD FRONT ON SINGLE LOT SUBDIVISIONS. SUGGESTED PLACEMENT TO BE SHOWN ON THE LANDSCAPE PLAN SHALL BE APPROXIMATELY TEN (10) FEET OUTSIDE THE RIGHT-OF-WAY LINE.
2. ACCEPTABLE TREE SPECIES INCLUDE AUSTRIAN PINE, BLACK CHERRY, EUROPEAN WHITE BIRCH, NORWAY SPRUCE, RED MAPLE, RED OAK, SUGAR MAPLE, WHITE OAK, WHITE PINE, WHITE SPRUCE OR OTHER SPECIES APPROVED BY THE PLANNING BOARD.
3. ALL TREES SHALL HAVE A NORMAL HABIT OF GROWTH AND SHALL BE SOUND, HEALTHY VIGOROUS PLANTS WITH WELL DEVELOPED ROOT SYSTEMS. PLANTS SHALL BE FREE FROM DISEASE, INSECT PESTS, EGGS OR LARVAE. TREES SHALL NOT BE PRUNED BEFORE DELIVERY. TREES WHICH HAVE A DAMAGED OR CROOKED LEADER, OR MULTIPLE LEADERS, UNLESS SPECIFIED, WILL BE REJECTED. TREES WITH ABRASION OF THE BARK, SUNSCLADS, DISFIGURING KNOTS OR FRESH CUTS ON LIMBS OVER ONE AND ONE HALF (1 1/2) INCHES WHICH HAVE NOT BEEN COMPLETELY CALLOUSED WILL BE REJECTED. PLANTS SHALL BE FRESHLY DUG. NO HEELED IN PLANTS OR PLANTS FROM COLD STORAGE WILL BE ACCEPTED.
4. TREE ROOTS SHALL BE ADEQUATELY BALLED WITH FIRM NATURAL BALLS OF EARTH OF DIAMETER AND DEPTH NOT LESS THAN THAT RECOMMENDED BY THE AMERICAN STANDARD FOR NURSERY STOCK. BALLS SHALL BE FIRMLY WRAPPED WITH BURLAP. ROOT BALLS OF ALL PLANTS SHALL BE ADEQUATELY PROTECTED AT ALL TIMES FROM SUN AND FROM DRYING WINDS. ALL BALLED AND BURLAPPED PLANTS WHICH CANNOT BE PLANTED IMMEDIATELY UPON DELIVERY SHALL BE SET ON THE GROUND AND SHALL BE WELL PROTECTED WITH SOIL, OR ANOTHER ACCEPTABLE MATERIAL. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN TWO DAYS AFTER DELIVERY.
5. TREES SHALL BE SET AT THE SAME RELATIONSHIP TO FINISHED GRADE AS THEY BORE TO THE GROUND FROM WHICH THEY WERE DUG. PLANTING SOIL SHALL BE USED TO BACKFILL APPROXIMATELY TWO THIRDS (2/3) FULL. THE OWNER OR DEVELOPER SHALL WATER THOROUGHLY BEFORE INSTALLING THE REMAINDER OF THE PLANTING SOIL TO THE TOP OF THE PIT, ELIMINATING AIR POCKETS. A FOUR (4) INCH DEEP SAUCER SHALL BE FORMED AROUND TREE PITS. THE OWNER OR DEVELOPER SHALL MULCH ALL PLANTING AREAS AND BEDS TWO (2) INCHES DEEP IMMEDIATELY AFTER PLANTING.
6. THE OWNER OR DEVELOPER SHALL REPLACE, WITHOUT COST TO THE TOWN, AND AS SOON AS WEATHER CONDITIONS PERMIT AND WITHIN A SPECIFIED PLANTING PERIOD, ALL DEAD PLANTS, AND ALL PLANTS NOT IN VIGOROUS, THRIVING CONDITION. THE PLANTS SHALL BE FREE FROM DEAD OR DYING BRANCHES AND BRANCH TIPS, AND SHALL BEAR FOLIAGE OF A NORMAL DENSITY, SIZE AND COLOR. REPLACEMENTS SHALL CLOSELY MATCH ADJACENT SPECIMENS OF THE SAME SPECIES. REPLACEMENTS SHALL BE SUBJECT TO ALL THE REQUIREMENTS STATED ABOVE.

APPENDIX: JJ  
DATE: MAY-2013

**MRB**|group

ENGINEERING/ARCHITECTURE/SURVEYING, P.C.  
145 CULVER RD, SUITE 160 ROCHESTER, N.Y. 14620

TOWN OF SWEDEN



**CONCRETE CURB SECTION**  
(N.T.S.)

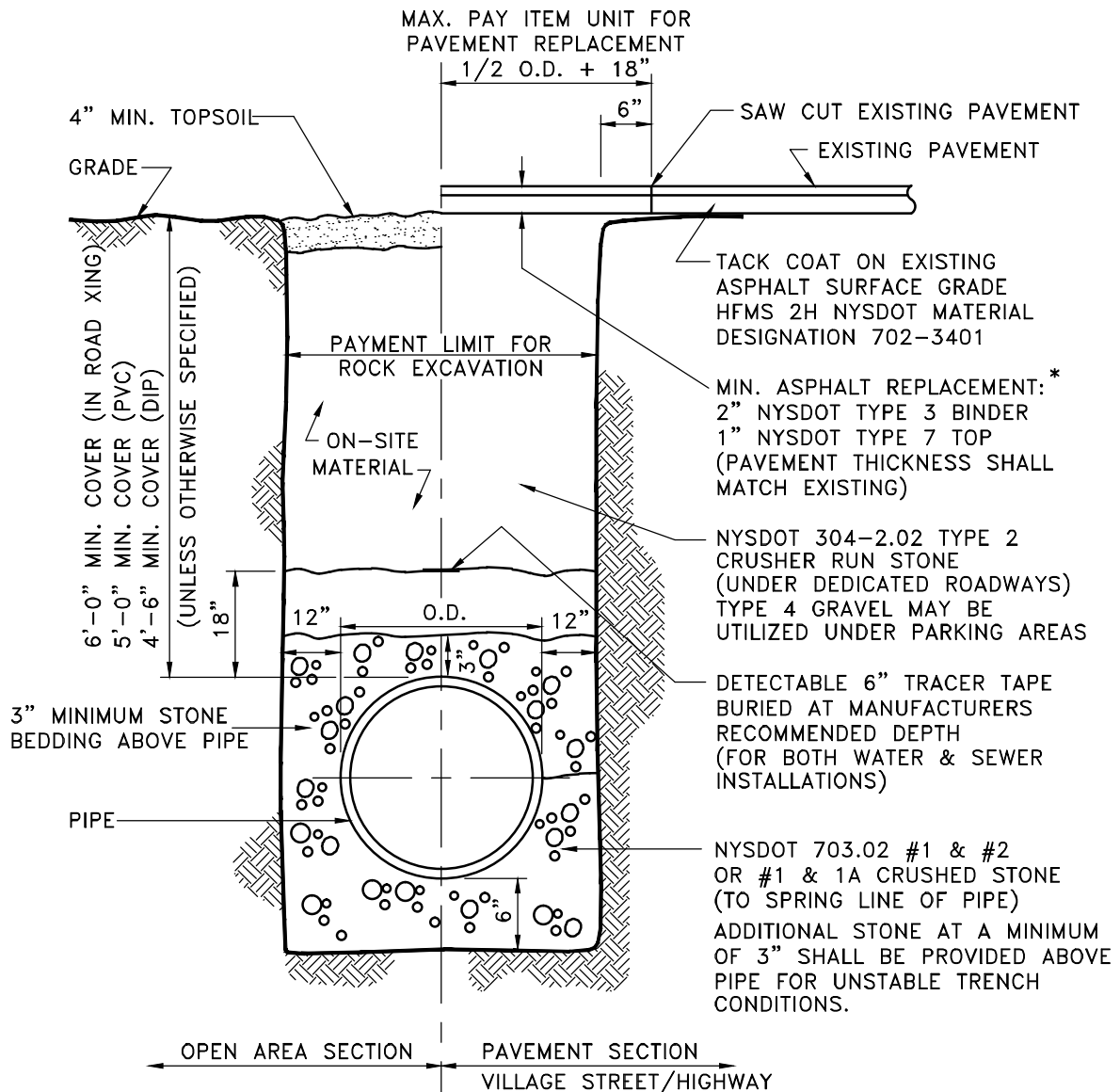
APPENDIX: KK

DATE: MAY 2013

**MRB** | group

ENGINEERING/ARCHITECTURE/SURVEYING, P.C.  
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TOWN OF SWEDEN



\* MINIMUM ASPHALT REPLACEMENT  
FOR DRIVEWAYS & PARKING AREAS:  
2" BINDER (TYPE 3)  
1" TOP (TYPE 7)

## TRENCH DETAIL

(N.T.S.) (OUTSIDE OF N.Y.S. HIGHWAYS)