Department of Public Works
Town of Colonie

Site Plan Review Process Completeness and Compliance Review Checklists

August 2023

347 Old Niskayuna Road
Latham, New York 12110-2290
(518) 783-2795

Peter G. Crummey
Town Supervisor

Matthew J. McGarry, P.E.
Commissioner of Public Works

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Introduction

The checklists herein were developed from the Highway and Drainage Standards (revised August 2023), Latham Water District Standards (revised 2023), and the Division of Pure Waters requirements. The checklists shall be used to review Preliminary Final Plans with respect to the requirements of the Bureau of Engineering, Division of Highway, Stormwater Management Office, Division of Latham Water, and the Division of Pure Waters.

The Completeness Checklist will be used by the Town-Designated Engineers (TDE's) to ensure that Preliminary Final Plan submittals sent to the Planning and Economic Development Department (PEDD) contain all necessary Department of Public Works (DPW) documents. If the submittal is missing any required items, it is rejected and sent back to the Applicant/Applicant Engineer. If the submittal passes the Completeness check, the TDE will use the Compliance Checklists to confirm that the submittal meets the requirements of each respective department's standard specifications.

The Town strongly recommends that the Applicant Engineers use these checklists when developing site plans and prior to Preliminary Final Plan submittal to the Town to ensure conformance with the Town of Colonie, Albany County, and New York State requirements as they pertain to new construction or redevelopment of existing sites. Using the provided checklists should reduce the Town's review time for projects and shorten the duration of the Plan Review Process.

After the TDE's confirm that the plan submittal passes the Completeness and Compliance check, the plans are distributed to the Town Departments for review. This should reduce the plan review process timeline by reducing the iterations of submittals and the time required to review them.

Note that the requirements within the Compliance Checklists are what is necessary for a complete review of the project's highway and drainage work by the Bureau of Engineering and Division of Highway (including the Stormwater Management Office), water distribution by the Division of Latham Water, and sanitary infrastructure by the Division of Pure Waters. Additional requirements may be set forth by other departments such as PEDD or Building and Fire Services that aren't listed herein. These checklists don't exclude the Applicant from satisfying the requirements of those departments. For more information on other departments' requirements, visit the links below or contact the department directly.

- Planning and Economic Development Webpage, (518) 783-2741
- Building and Fire Services Webpage, (518) 783-2706 or (518) 783-2712

If you find that links are no longer active, or content is erroneous, please contact the Town of Colonie Department of Public Works, Bureau of Engineering at (518) 783-6292.

Completeness Checklist

A copy of this checklist should be used to review each sheet Preliminary Final Plan submittal to confirm that all necessary fees, documents, permits, etc., are present.

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No	N/A
Division of Highway and Stormwater Management Office			
SWPPP Review Fee			
Stormwater Pollution Prevention Plan (SWPPP)			
Stormwater Management Report (SWMR)			
Stormwater Operation and Maintenance (O&M) Manual			
All bound separately			
Division of Pure Waters			
Pure Waters Engineer's Report with S.I.A Map			
Pure Waters Engineer's Report Fee or Escrow			
All			
Project Drawings			

End of Section

Highway and Drainage Standards Checklist

347 Old Niskayuna Road
Latham, New York 12110
(518) 783-6292

General

A copy of this checklist should be used to review each sheet of the drawing set, with the exception of the Cover Sheet any detail sheets.

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No
Sheet Size (circle)		
ANSI D (22" x 34") ANSI E (34" x 44")		
Scale (circle)		
1:20 1:30 1:40 1:50		
Scale Bar	_____	_____
North Arrow	_____	_____
Legend		
Line type	_____	_____
Utility	_____	_____
Boundary	_____	_____
Abbreviation	_____	_____
Structure	_____	_____
Plan and Profile		
Plan view is above the profile view	_____	_____
Vertical scale is labeled	_____	_____
Vertical scale bar	_____	_____
Title block		
Project title	_____	_____
Sheet name	_____	_____
Sheet number and number of total sheets	_____	_____
Drawing date	_____	_____
Design Professional stamp and signature	_____	_____
Revision Block		
Revision date	_____	_____
Record of revision	_____	_____
All previous entries are present	_____	_____
Applicant Information		
Firm name	_____	_____
Firm address	_____	_____
Phone number	_____	_____
Fax number	_____	_____

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No
Design Firm Information		
Firm name	_____	_____
Firm address	_____	_____
Phone number	_____	_____
Fax number	_____	_____
Existing conditions are lighter line weight than proposed conditions	_____	_____
All items are called out once on the sheet with "TYP"	_____	_____
All items with details have detail bubbles directing to the corresponding detail number and page number	_____	_____
Match lines with continuation sheet number	_____	_____

Cover Sheet

This is the cover of the drawing set.

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

		Yes	No
Sheet Size (circle)			
ANSI D (22" x 34")	ANSI E (34" x 44")		
Project title		_____	_____
Project address		_____	_____
Sheet index		_____	_____
Drawing date		_____	_____
All revision dates are listed		_____	_____
Vicinity Map			
Map		_____	_____
Scale (1" = 2,000')		_____	_____
North Arrow		_____	_____
Applicant Information			
Firm name		_____	_____
Firm address		_____	_____
Phone number		_____	_____
Fax number		_____	_____
Design Firm Information			
Firm name		_____	_____
Firm address		_____	_____
Phone number		_____	_____
Fax number		_____	_____

Existing Conditions

Surface, subsurface, and legal conditions of the project site and its surrounding area.

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No
Survey Data		
Date		
Licensed surveyor stamp		
Surveying company name		
Map references		
Existing Topography		
Extending 50' from the project boundary in each direction		
2-foot minimum contours with elevation labeled to the nearest foot		
Based on NGVD 1929 benchmark		
Surface characteristics (i.e., grass, gravel, asphalt, concrete) within 100' of the project boundary in each direction		
Buildings within 100' of the project boundary in each direction		
Boundaries		
Within 50' from the project bouundary in each direction		
Municipal		
GEIS		
Predominant vegetation		
Resource protection areas		
Roadways		
Within 100' of project boundary		
Name		
Edge of roadway		
ROW boundary		
Width		
Sidewalks		
Curbing		
Easements		
Albany County Clerk filing designation		
Numeric or alphabetic identifier		
Public or private		
Easement type		
Length and direction		

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No
Right-of-Way Monumentation		
Materials		
Coordinates		
Utilities		
Within 100' of the project boundary		
Piping		
Structures		
Parcels		
Boundaries		
Real property address		
Owner name		
Land use		
Lot area		
Natural Resources		
Trees measuring 12-inches diameter at breast height (dbh) and larger		
Protected watercourse and buffer area		
Perennial and intermittent streams		
Steep slopes		
Hilltops		
Ridgelines		
Surface waters		
Wetlands, labeled with regulatory authority		
Areas of ecological or historical value		
100-year floodplain and sub-areas		

Site Plan

Proposed final site conditions overlaid on the existing conditions.

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No
Topography		
Extending 50' from the project boundary in each direction		
2-foot minimum contours with elevation labeled to the nearest foot		
Based on NGVD 1929 benchmark		
Boundaries		
Within 50' from the project boundary in each direction		
Proposed vegetation		
Buildings		
Label if walk-out basement		
Edge of driveway		
Label total area of building		
Roadways		
Layout		
Dimensions		
Centerlines		
Edge of pavement		
Proposed street names		
Road paint		
Right-of-way boundary		
Proposed right-of-way monumentation		
Final elevation of monument is 3 inches above the finished ground elevation		
Granite monuments are, at minimum, 4 feet x 4 feet x 4 feet with a cross cut at the top and 1/2 inch diameter hole drilled 1/2 inch deep at the point of crossing		
Precast concrete monuments are, at minimum, 4 feet x 4 feet x 4 feet with a flush, 1/4-inch diameter galvanized, zinc plated, or copper pin at the top and center of the monument		
Sidewalks and Paths		
Material		
Type		
Width		
Easements		
Number		
Type		

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No
Dimensions		
Other Site Improvements		
Surface characteristics (i.e., grass, gravel, asphalt, concrete)		
Fencing		
Gates		
Retaining Walls		
Parcels		
Boundaries		
Street address		
Lot number		
Lot dimensions		
Lot area		
Storm Sewer Pipe and Drainage Structures		
Connection points to existing storm sewer infrastructure		
Piping labeled with size, material, and slope		
Storm sewer is 10' (min.) horizontal distance from water pipe		
Structures labeled with type and number (i.e., CB 1)		
Catch basins or drainage structures every 300' (min.)		
Catch basins or drainage structures at each intersection (no cross-intersection surface stormwater flow)		
Directional flow arrows		
4" PVC SDR 35 sump pump laterals from all buildings into junction box or catch basin		
Natural Resources		
Trees measuring 12-inches diameter at breast height (dbh) and larger		
Trees are 10' (min.) from all utilities		
Protected watercourse and buffer area		
Perennial and intermittent streams		
Steep slopes		
Hilltops		
Ridgelines		
Surface waters		
Wetlands, labeled with regulatory authority		
Areas of ecological or historical value		
100-year floodplain and sub-areas		
Open space		
Locations of existing stormwater discharges		
Stormwater practices		

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No
"No cut" zones		
Highway Department Notes		
1. Streets and storm sewers shall conform to the Town of Colonie Highway and Drainage Standards.		
2. All drainage structures (catch basins, storm sewer manholes, and junction boxes) shall be in accordance with the Town of Colonie Highway and Drainage Standard Details.		
3. Buildings with easements or crawl spaces will be allowed only on lots that have direct access to a storm sewer catch basin (junction box if catch basin isn't possible) and shall have a sump pump lateral pipe with a check valve for a sump pump connection.		
4. No embankment slope shall exceed 3 feet horizontal to one foot vertical unless otherwise approved by the Commissioner of Public Works or the Public Works Operations Supervisor.		
5. A minimum of two (2) trees of at least 2-½"-minimum caliper shall be planted or preserved in the front yard of each lot.		
6. A minimum of three shallow-rooted trees of at least 2-½"-minimum caliper shall be planted in the cul-de-sac island. Trees shall be planted a minimum of 10 feet from any utility.		
7. In cut areas, where groundwater is encountered, underdrains will be installed as directed by the Commissioner of Public Work or the Public Works Operations Supervisor.		
Standard Notes		
1. The Applicant shall comply with all applicable Federal, state, and local laws, rules and regulations, including but not limited to the State Environmental Quality Review Act (SEQRA), Freshwater Wetlands Permit Regulations, and Town Grading Law, and the Town Flood Plains Management Law.		
2. Contours shown on this plan represent existing topographic conditions. For proposed grades, refer to the grading plan (sheet ___ of ___).		
3. The Applicant shall be responsible for keeping existing public highways and adjacent lands free of debris, soil, and other matter which may accumulate due to construction related to the site.		
4. All required erosion control measures shall be installed. The Bureau of Engineering and Stormwater Office must be notified prior to issuance of any grading permit or any soil disturbance.		
5. Activities within or adjacent to wetlands, streams, and waterbodies may require permits from the New York State Department of Environmental Conservation (NYSDEC) pursuant to the Environmental Conservation Law		

Grading Plan

Cut/fill of existing land, elevations of all proposed final site components, area of disturbance, and any necessary phasing to comply with NYSDEC General Permit requirements.

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No
Site		
Total site area (acres)		
Limits of disturbance boundary		
Area of disturbance, labeled (square feet and acres)		
Clearing and grading boundary(ies), labeled (acres), with explanation how they won't be exceeded in the field		
Construction sequence, in order		
2-foot minimum contours with elevation labeled to the nearest foot		
Existing USDA soil characterization		
High and low points		
Surface characteristics (i.e., grass, gravel, asphalt, concrete)		
Test pits		
Locations		
Test pit table with the number, depth of soil and its composition, depth to bottom of test pit, date of test pit		
Notes containing the contractor name, witness, equipment and methods		
Infiltration Test Pits		
Locations		
Infiltration test pit table with the number, depth of soil and its composition, depth to groundwater, date of test pit		
Notes containing the contractor name, witness, equipment and methods		
Additional Site-Specific Notes		
Rock removal		
Borrow materials		
Fill material composition		
Cut material disposal		
Roadways		
Layout		
Edge of pavement		
Proposed street names		
Street grades are between 3/4% and 6%		
Sidewalks and Paths		
Material		

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No
Type		
Width		
Easements		
Boundaries		
Type		
Utilities		
Pipes drawn as a continuous line of a specified style indicated in the Legend		
Rim or top of frame elevations for stormwater structures		
Invert elevations for end sections		
Pipe labels with size, material, and slope		
Structure labels by type and number		
Parcels		
Boundaries		
Parcel area		
Final elevation label at lot corners		
Lot number		
Street address		
Buildings		
Total area (square feet)		
Finished floor elevation (FFE), to the nearest hundredth of a foot		
Garage finished floor elevation (GFF), to the nearest hundredth of a foot		
GFF is 18" (min.) above centerline of roadway		
Basement finished floor elevation (BFF), to the nearest hundredth of a foot		
Driveway grade is 10% or less		
Natural Resources		
Trees measuring 12-inches diameter at breast height (dbh) and larger		
Protected watercourse and buffer area		
Perennial and intermittent streams		
Steep slopes		
Hilltops		
Ridgelines		
Surface waters		
Wetlands, labeled with regulatory authority		
Areas of ecological or historical value		
100-year floodplain and sub-areas		
Open space		

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No
Stormwater		
Locations of existing stormwater discharges	____	____
Post-construction stormwater management practices	____	____
Snow removal plan with areas reserved	____	____
Notes		
1. A SPDES General Permit for Stormwater Discharges from Construction Activity (latest edition) must be executed for projects exceeding 1 acre of disturbance.	____	____
2. For project sites greater than 5 acres, a phasing plan will be provided, indicating the areas of disturbance, including acres and limits of disturbance for each phase. The phasing plan will confirm that no more than five (5) acres will be disturbed at one time. The plans will show how the limits are depicted in the field and not exceeded.	____	____
3. Total area of development: ___ acres (list the number of acres)	____	____
4. Surface stormwater shall flow away from houses and may not flow across lot lines.	____	____
5. Contractor shall protect all surface waters from siltation during construction as is shown on the Erosion and Sediment Control plan and details.	____	____

Erosion & Sediment Control Plan

Proposed conditions overlaid on existing conditions showing all erosion and sediment control practices to be installed. To prevent migration of sediment and pollutants off site.

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No
General		
Existing and proposed topography with contours labeled and spot elevations in critical areas		
Property boundaries		
Easements		
Proposed facilities/improvements including buildings and utilities		
Planning and Phasing		
Site preparation activities are planned to minimize area and duration of soil disruption		
Limits for clearing and grading, labeled with area (acres)		
Explanation on how limits will be shown in field and not exceeded		
Construction phase boundaries, labeled with phase number and area (acres)		
Phasing plan with 5-acre threshold limits shown		
Erosion control practices		
Location shown as phased with construction		
Callout bubble for corresponding detail		
Implementation schedule		
Dewatering practices shown for subsurface construction activities		
Open-grate stormwater structures have inlet protection installed		
All outlet/discharge conditions are stabilized		
Silt Fence		
Silt fence installed along contour lines		
No more than 1/4 acre per 100 foot of drainage directed to it		
Check Dams and Sediment Filters		
Until stabilization, all drainage flows pass through aggregate sediment filters prior to discharge		
Sediment filter fully spans the width of the drainage ditch		
Stone check dams or aggregate sediment filters at least every 200' in a drainage ditch		
Stone sediment filter at drainage ditch downstream termini		
Temporary Sediment Traps (TST's)		
Installed wherever stable areas for dewatering aren't available		
Not installed in location of future stormwater infiltration facilities		
Total volume is labeled		
Table for each TST is on the ESC Details sheet		
Discharge outlet is stabilized with aggregate		
Outlet elevation is labeled		

Cityworks Project ID: _____
Project Name: _____
Address: _____
Drawing Date: _____

	Yes	No
Slope Protection and Site Stabilization		
Existing vegetation delineated is preserved where possible		
Final landscaping plan for site reforestation/vegetation		
Trees to remain are protected by construction fencing		
Slopes greater than 3:1, perimeter dikes, sediment basins or traps, and embankments are stabilized immediately with rolled erosion control products		
Temporary slopes don't exceed 2:1		
Stabilized Construction Access		
Permanent traffic corridors are established, avoiding "routes of convenience"		
Construction traffic doesn't cross streams or ditches, unless an approved water crossing facility is installed (shown on the plan and has corresponding water crossing detail)		
Stabilized construction access is installed at all potential entrances to the construction site, and all other access points are blocked off		
Stockpiles, Storage, Staging, and Waste		
Staging areas		
Location of waste, borrow, or equipment storage areas		
Stockpile areas		
Stockpile areas are greater than 25 feet from a ditch, stream, or surface water body		
Stockpiles are surrounded by silt fence		
Notes contain methods and proposed locations for spoil disposal		
Concrete washout		
Headwalls and Riprap		
Headwalls are as far from the edge of roadway as necessary to provide a stable slope		
Roadway ROW or easement provides suitable access area to headwalls		
Soils downstream from headwalls are stabilized with riprap		
Standard Erosion and Sediment Control Notes		
1. A pre-construction meeting must be held with the Contractor, SWPPP Inspector, Owner, and the Stormwater Office prior to issuance of a Building Permit.		
2. Establish a permanent traffic corridor for all traffic during construction. A stone stabilized construction entrance must be installed and inspected and approved by the Stormwater Office prior to issuance of a building permit. Traffic shall not cross or operate unnecessarily within waterways or drainage ditches.		
3. If requested by the Stormwater Office, additional silt fence must be installed a minimum of 6 inches into the ground surface.		
4. Any soils tracked into public roads must be swept up immediately.		
5. Concrete pouring may not take place until a concrete washout area is installed.		

Cityworks Project ID: _____
Project Name: _____
Address: _____
Drawing Date: _____

	Yes	No
6. Any pumping of stormwater on site must be discharged through a filter and/or stone.	_____	_____
7. A final grading inspection is required with the Stormwater Office prior to issuance of a Certificate of Occupancy (C.O.). All exposed soils must be stabilized and approved. If the C.O. is needed during non-growing months, the Owner must provide a grading escrow to the Stormwater Office for the outstanding work to be completed during the growing months.	_____	_____
8. Prior to C.O., a Stormwater Maintenance Agreement must be populated and signed by the Owner, complete with a check for $65 made out to the Albany County Clerk for filing fees.	_____	_____
a. All post-construction stormwater management facilities that are intended to be operated and maintained by the Town must be on a parcel deeded to the Town. Stormwater Maintenance Escrow agreements for the facilities must be executed prior to Road Dedication.	_____	_____

Erosion & Sediment Control Details

Erosion and sediment control details and site-specific tables for measures to be constructed on site. Provide instructions on installation, inspection, maintenance, and removal of all structures and site restoration.

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No
Temporary Structural and Vegetative Sediment Control Measure Details		
Dimensions		
Materials		
Installation instructions		
Maintenance frequency and requirements		
Removal criteria		
Special timing for practice installation (if applicable)		
Inspection frequency for all controls: Once every 7 days, twice every 7 days for 5-acre sites		
Corrective action must be implemented within 1 business day where deficiencies are identified		
Construction Pollution Prevention Plan		
Spoil disposal methods for sediment, excavation spoils, and construction debris		
chemicals storage and controls		
Storage practices for construction and waste materials		
Off-site disposal locations		
Spill Prevention, Control, and Countermeasure (SPCC) Plan for temporary fueling facilities on-site and/or site is/will be a hot spot		
Construction Phasing Table		
Phase		
Description of area		
Approximate area of disturbance (acres)		
Construction Phasing Plan		
Explains coordination of ESC practices with construction activities		
Indicates area of disturbance for each phase		
Minimum requirements:		
Pre-construction meeting with Stormwater Office, SWPPP inspector, site contractor, and site owner		
Delineate any resources thar require protection, such as trees and wetlands		
Establish staging area, construction entrance, topsoil stockpile, and concrete truck washout areas		
Protect post-construction practice areas during construction to preserve native soil permeability		
Clearing and grubbing as necessary for the installation of perimeter controls		
Establish method of spoils disposal (on and/or off site)		
Physically mark limits of land disturbance on the site with tape, signs, or		

Cityworks Project ID: _____
Project Name: _____
Address: _____
Drawing Date: _____

	Yes	No
orange construction fence		
Construction and stabilization or perimeter controls		
Install initial runoff controls and stabilization		
Remaining clearing and grubbing within perimeter		
Road grading		
Site grading		
Utility installation		
Construction of buildings, roads, etc.		
Install permanent stormwater management measures (only once site is stabilized)		
Soil restoration		
Final fine grading, landscaping, and stabilization		
Removal of temporary ESC and restore and stabilize the remaining disturbed areas		
Temporary Sediment Trap (TST)		
Detail includes proposed dewatering device within		
Drainage area (acres)		
Required storage volume (cubic feet)		
Bottom elevation		
Bottom length and width		
Top elevation		
Top length and width		
Storage provided (cubic feet)		
Rider/barrel diameter (inches)		
Top of riser outlet elevation (ft)		
Dewatering device type (see Blue Book)		
Clean-out elevation (50% capacity)		
Outlets are stabilized with graded aggregate sized 1-1/2 inches in diameter and smaller		
Stabilization aggregate spans the entire flow cross section and all flow passes through it		
Not to be removed until 80% permanent stabilization is achieved in all contributory drainage areas		
Dust Control		
Dust control measures in-place		
Method is from Geotechnical engineering dust palliatives (NYSDOT website)		
Method conforms with Blue Book (2016) page 2.25		
Site Stabilization & Soil Restoration Plan		
Exposed soils to be stabilized within 14 days of last disturbance, within 7 days for sites with greater than 5 acres disturbed, and within 3 days in the winter (November 15 - April 1)		
Temporary stabilization where land disturbance is necessary and area will be exposed > 14 days:		
June 1 - August 31: mulch or rye		

Cityworks Project ID: _____
Project Name: _____
Address: _____
Drawing Date: _____

	Yes	No
October 15 - November 30: mulch or rye		
Permanent Site Stabilization & Soil Restoration		
Stabilization of disturbed areas shall take place as soon as possible following construction, not exceeding 14 days		
March - May, or September - October 15		
Seed type		
Application rate		
Soil amendments		
Seedbed preparation		
Mulching		
Winter Shutdown ESC		
Snow management plan		
Enlarged entrance		
Perimeter buffer of 25 feet		
Tall marker stakes on silt fence		
Two (2) rows of silt fence if within 100-feet of waterbody		
Clear flow paths to drainage structures		
Stabilized soil stockpiles		
Soil stabilization seed type, application rate, seedbed preparation		
Mulching rate 2x typical		
Materials		
Geotextile is "WINFAB 200W" by WINFAB or approved or equal		
Aggregate in sediment filter is well-graded stone, sized 1-1/2 inches in diameter and smaller		
Riprap weight range is 20 to 35 pounds		
Riprap consists of 75% of its material in the 25 to 35-pound weight range		
Pea gravel is U.S. Standard Sieve Mesh No. 6		
Mulch is wood fiber hydro mulch or sprayable product		
Mulching blanket is used on steep slopes and drainage swales		
Mulching blanket is one of the following		
"Curlex Enforcer" by American Excelsior Company		
"GEOWEB Slope Protection System" by Presto Geosystems		
Topsoil complies with the Blue Book		
Topsoil pH is between 5.5 and 7.5 s.u		
Topsoil has an organic content between 2 and 20%		
Topsoil Gradation complies with the following		
100% passing 1-1/2 inch sieve		
85-100% passing 1 inch sieve		
65-100% passing 1/4 inch sieve		

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No
20-100% passing No. 200 sieve		
Total live seed is 80 pounds per acre		
Total weed seed content is less than 1/4%		
Seed mixture complies with Highway and Drainage Standards, Table 11-2		

Stormwater Plan

Shows the plan for all post-construction stormwater management practices and their associated structures with respect to the existin and future site conditions.

Cityworks Project ID: _____
Project Name: _____
Address: _____
Drawing Date: _____

	Yes	No
General		
All stormwater facilities and post-construction stormwater management practices (SMP) comply with the New York State Stormwater Management Design Manual		
1-foot contours, labeled		
Fencing		
Buffer zones		
Location of utilities		
Location of all existing stormwater infrastructure within 100 feet of the site		
Test pit locations		
Easements		
Parcels		
Stormwater facilities to be operated by the Town are on independent, Town-owned parcels		
Stormwater facilities to be operated by the Town have 80 feet of frontage on a Town road, or have frontage that is the average frontage of the subdivision's lots with		
Proposed snow storage location with signage - cannot be located at an SMP		
Access Drive		
Facilities have a 12 foot wide access drive		
Access drive extends to the outlet piping system cleanout point		
Access drive is within 12 linear feet of all outlet control structures (OCS)		
Access drive contains a 20-foot wide double swing gate		
If distance from the gate and the end of the drive exceeds 20 feet, a collapsible two-way bollard is present		
Access drive complies with the Highway and Drainage Standard Details		
Post-Construction Stormwater Management Practices (SMP's)		
Location		
Size		
Storage volume		
Maintenance access		
Sign location		
Conveyance system locations (swales, manholes, pipes, etc.)		
Final stormwater discharge points with flow directional arrows		
Piping		
Length		
Diameter		

Cityworks Project ID: _____
Project Name: _____
Address: _____
Drawing Date: _____

	Yes	No
Material		
Slope		
Flow directional arrow		
Fittings		
Structures with elevations labeled		
Invert at structures with direction labeled		
Pipe sizing complies with Sections 1, 2, and 3 of the Highway and Drainage Standards		
Other utilities		
Facilities		
Riprap is installed at the inlet		
Plunge pool and/or large grouted riprap installed at the discharge		
Maximum side slope within a SMP is 4:1		
Facilities have a 6 foot high black vinyl clad chain link fence on the perimeter		
All locations with outlet pipes contain a 4 foot wide lockable pedestrian gate		
Perimeter walls and berms made of impervious materials and don't allow migration of stormwater		
Non-perimeter walls made of compacted soil		
Spillway elevation labeled		
Facility area labels		
Spillways are composed of concrete		
Final landscaping/planting plans		
Retention Facilities		
Lowest point of the basin contains an 8-foot diameter concrete drywell		
Inlet control structure present		
Pond drainage system interconnects to drain the forebay and micropool at the same time with one pump and/or valve system		
Pond drain valve is a gate valve and complies with Section 5 of the Latham Water District Standard Specifications for Water Distribution Systems		
Pond drainage system drain valve key is between 3 and 5 feet from the top of frame of its outlet control structure		
When not in OCS, pond drainage system drain valve key is less than or equal to 6 feet deep, measured from the top of frame to the top of valve nut		
Open Channels		
Can carry a 10-year peak flow		
Within a 30-foot easement, measured 15 feet each side from the centerline of the channel, that extends the full channel length		

Stormwater Profile and Details

Shows the cross-section and construction details for all post-construction stormwater management practices and their associated structures.

Cityworks Project ID: _____
Project Name: _____
Address: _____
Drawing Date: _____

	Yes	No
General		
Each SMP shown on the plan has an associated structural detail, numbered to match		
Each facility shown on the plan has an associated profile/cross-section, numbered to match		
Elevations, utility locations, and design stormwater event elevations match the Stormwater Plan sheet		
Piping Profile		
Length		
Diameter		
Material		
Slope		
Flow directional arrow		
Pipe sizing complies with Sections 1, 2, and 3 of the Highway and Drainage Standards		
Fittings		
Structures with elevations labeled		
Other utilities		
Structural SMP Details		
Existing structural elevations (inverts of pipes, manholes, etc.)		
Proposed structural elevations (inverts of pipes, manholes, etc.)		
Dimensions		
Storage volume		
Design water surface elevations for applicable storms per hydrologic modeling results		
Inverts		
Materials		
Sump		
Orifices		
Structural details for any outlet structures, embankments, spillways, grade-control structures, stilling basins, conveyance channels, etc.		
Applicable notes for specific SMP		
Construction specifications including installation details, materials, and construction sequence for the specific SMP		
Profile/Section Views for Structural SMPs		
Dimensions		
Storage volume		
Proposed structural elevations (inverts of pipes, manholes, etc.)		

Cityworks Project ID: _____
Project Name: _____
Address: _____
Drawing Date: _____

	Yes	No
Design water surface elevations for applicable storms per hydrologic modeling results		
Inverts		
Materials		
Sump		
Orifices		
Structural detail profiles for any outlet structures, embankments, spillways, grade-control structures, stilling basins, conveyance channels, etc.		
If located within the Schenectady/Niskayuna sole source aquifer, the groundwater elevation from the test pits is shown and the practices are a minimum of 4 feet above the site's seasonally high groundwater table		
Schedule of draiange structures (table)		
Label/number		
Type		
Size		
Frame and grate make and model		
Sheet number		
Facility Cross-Sections		
Maximum side slope within a SMP is 4:1		
Areas are labeled		
Storm event shown across the practices, labeled with the storm frequency and elevation to one hundredth of a foot		
All practices shown		
Spillway elevations labeled		
Structures - General		
Shop drawings, signed by the design professional, are available for all storm sewer drainage structures		
Pipes less than 48 inches in diameter that penetrate the structure are installed by "Kor-N-Seal®" boot connection by Trelleborg or an approved or equal		
Pipes greater than 48 inches in diameter that penetrate the structure are installed with bricks, block, and non-shrink hydraulic cement		
All structures are precast and composed of reinforced concrete		
Reinforced concrete is 4,000 pounds per square inch (psi) compressive strength at 28 days		
Reinforced concrete is composed of Portland cement, course and fine aggregate, steel reinforcement, and low water-cement ratios		
Reinforcement complies with the following standards		
ASTM A615/A615M		
ASTM A1064/1064M		
Aggregates used in reinforced concrete comply with ASTM C33/C33M		
Entrained air content is between 5.5 and 9.5%, except for drywells		

Cityworks Project ID: _____
Project Name: _____
Address: _____
Drawing Date: _____

	Yes	No
Drywell entrained air content is between 5.0 and 9.0%		
Structure subbase complies with NYSDOT SS §304 (May 1, 2008) and is either Type 2 Crusher Run or Type 3 Subbase Gravel		
Material is smaller than four inches (4") in the maximum dimension		
Field construction structure mortar is one part Type 1A Portland cement and two parts Clean Masonry Sand		
Clean Masonry Sand complies with NYSDOT SS §703-03 (January 1, 2023)		
Portland Cement complies with the following standards		
ASTM C150/C150M		
AASHTO M 85		
"Preco Plug Cement" by Sakrete or an approved or equal is used instead of mortar in water conditions		
"Preco Plug Cement" by Sakrete or an approved or equal is used instead of mortar where inverts are greater than 28 inches in diameter		
"Preco Plug Cement" by Sakrete or an approved or equal is used instead of mortar when "Kor-N-Seal®" boot is not possible		
Structures - Catch Basins		
Contains precast lid		
Catch basin height is less than or equal to four feet (4"), measured from finished top of frame and grate (rim) elevation to the invert out elevation		
Penetrating pipe is less than or equal to 15 inches (15") in diameter		
Sump is 12 inches (12") or greater		
Lids are four inches (4") thick		
Grade adjustment is between four inches (4") and eight inches (8")		
Measure 2.5' x 2.5' x 3.5' as manufactured by The Fort Miller Co., Inc or an approved equal		
Structures - Storm Sewer Manholes		
Has a standard, monolithic base		
Precast manhole, lid, and base complies with ASTM C478/478M		
Contains precast lid		
Structures - Drywells		
Precast drywell is 48 inches tall with an ID of 72" as manufactured by The Fort Miller Co., Inc or an approved or equal		
Has tapered holes		
Structures - Junction Boxes		
Contains a four-inch (4") SDR 35 PVC sump pump lateral		
Contains an eight-inch (8") PVC SDR 35 collector pipe		
Pipe penetrations into box extend less than or equal to two inches (2") from the inside wall		
Precast structure complies with ASTM C890		

Cityworks Project ID: _____
Project Name: _____
Address: _____
Drawing Date: _____

	Yes	No
Precast concrete measuring 2.5 feet by 2.5 feet by 2.5 feet inside diameter (ID) as manufactured by The Fort Miller Co., Inc or approved or equal		
Has no grade adjustment		
Structures - Structure Steps		
Steps are present in each structure that exceeds four feet (4') deep, measured from top of frame (rim) elevation to the invert out elevation		
Steps line up from the base to the top of the structure		
Step material complies with NYSDOT SS §725-05 (January 1, 2023)		
Steps are 12-inches on center		
First step is a minimum of 12 inches below the lid		
Steps centerline is equidistant from pipe penetrations		
Frames, Grates, Lids and Grade Adjustments - General		
All structures are precast and composed of reinforced concrete		
Reinforced concrete is 4,000 pounds per square inch (psi) compressive strength at 28 days		
Reinforced concrete is composed of Portland cement, course and fine aggregate, steel reinforcement, and low water-cement ratios		
Precast concrete components comply with the following standards		
ASTM A615/A615M		
ASTM A1064/1064M		
ASTM C33/C33M		
Entrained air content is between 5.5 and 9.5%		
Grade Adjustments		
Made of precast reinforced concrete		
Ring or square shape		
Opening matches proposed frame and grate/cover		
Lids		
Last unit prior to grade adjustment		
Made of precast reinforced concrete		
Round: Thickness is 8-inch minimum		
Square: Thickness is 5-inch minimum		
Withstands superimposed earth loads plus the maximum AASHTO H20 truck loadings		
Precast risers stack on top of lid from smallest to largest		
Opening matches proposed frame and grate/cover		
Drywell flat slab tops are 5" thick if installed in grass		
Drywell flat slab tops are 8" thick if installed in roadway		
Drywell covers are solid, precast concrete, and H20 rated		
Junction box cover is Campbell 1009 without vent holes or an approved or equal, labeled "TOWN OF COLONIE STORM SEWER"		

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No
Frames and Grates/Covers		
Made of cast iron		
Round frames and grates are Neenah R-2556-A Grate Type F or an approved or equal		
Cascade frames and grates are Neenah R-3588-LL4 or an approved or equal		
Roadways		
Subbase		
Complies with NYSDOT SS §304 (May 1, 2008)		
Is NYSDOT Item 304.12, Type 2 (May 1, 2008)		
Gradation meets NYSDOT SS §304, Table 304-1, Type 2 (May 1, 2008)		
Geotextile		
Undercut subgrade stabilization fabric is "WINFAB 200W" by WINFAB or an approved or equal		
Base Course		
Is NYSDOT Item 403.118902, Type 1 (May 1, 2008)		
Complies with NYSDOT SS §403, Table 403-1, Base Type 2 (May 1, 2008)		
Does NOT contain crushed glass		
Binder Course		
Is NYSDOT Item 403.138902, Type 3 Binder Course (May 1, 2008)		
Complies with NYSDOT SS §403, Table 403-1, Binder Type 3 (May 1, 2008)		
The final elevation of the back of the integral wing wedge shall be the same as the finished road centerline		
Top Course		
Is one of the following materials		
NYSDOT Item 403.178902, Type 6 F2 Top Course (May 1, 2008)		
NYSDOT Item 403.198902, Type 7 Top Course (May 1, 2008)		
Complies with NYSDOT SS §403, Table 403-1 (May 1, 2008)		
Tack Coat		
Complies with AASHTO T 59		
Complies with NYSDOT SS §702, Table 702-10 (May 1, 2008)		
Is NYSDOT Item 407.0101, Tack Coat (May 1, 2008)		

Utility Plan & Profile

Shows the proposed utilites over the existing site conditions. Plan view is on top, profile view is below.

Cityworks Project ID: _____
Project Name: _____
Address: _____
Drawing Date: _____

	Yes	No
General		
Road name in title block		
Note: Inspection of newly-installed stormwater utilities or new connections must be inspected by the Stormwater Office prior to backfilling		
Plan View		
Sump line, labeled 4-inch SDR 35 PVC, for each building		
Stationing that matches profile		
Utility locations		
Catch basins		
Junction boxes		
Drainage manholes		
Inlets/outlets		
Structures		
Labels		
Invert elevations with direction letter		
Top of frame or rim elevations		
Piping Labels		
Distance		
Size		
Material		
Schedule		
Slope		
Type		
Flow directional arrows		
Valves, bends, and fittings		
Property boundaries		
Easement delineations		
Right-of-way		
Profile View		
Proposed fill areas		
Existing grade centerline, labeled "existing grade"		
Proposed grade over centerline of road, labeled "proposed grade"		
Road grade and slope labeled (to nearest hundredth) and direction of pitch (arrow) every 200 feet or whenever it changes		
Pipelines drawn as hollow (two single lines representing top and bottom of pipe)		
Pipeline labels		
Pipe length from face of the exit structure to face of the entrance structure (feet)		

Cityworks Project ID: _____
Project Name: _____
Address: _____
Drawing Date: _____

	Yes	No
Diameter (inches)		
Pipe material		
Slope (nearest hudredth of a percent)		
Water pipe crossings		
Vertical separation distance between utilities		
Valves, bends, fittings		
High and low points		
Existing and proposed storm pipe and structures shown with elevations labeled		
Catch basins and junction boxes		
Drainage manholes		
All structures have a vertical centerline, extending above and below the structure, and labeled with the structure ID, roadway stationing, top of frame elevation, invert sizes and elevations, and sump elevation		
Storm Drain Pipe - General		
Storm drain pipe is 12" in diameter or greater		
Pipe is not deflected		
Depth of cover, measured from finished ground elevation to top of pipe, is 2-1/2 feet or greater		
Pipe crown elevations entering a drainage structure are at the same elevation		
Invert difference between pipes of different sizes in a drainage structure is less than 3 feet (excluding underdrain)		
Storm Drain Pipe - Corrugated Metal Pipe (CMP)		
Will NOT be installed in or below groundwater		
Diameter is 12 to >48"		
Inside diameter (ID) pipe >48" is factory elongated or strutted on the vertical axis a minimum of 5% of the pipe diameter		
Is proper gauge per diameter as shown in Table 1-2		
CMP material is one or more of the following		
polymer-coated aluminized steel		
coated corrugated aluminum pipe		
helical corrugated aluminum pipe (HCAP)		
Aluminized steel complies with NYSDOT SS §707-02 (January 1, 2023)		
HCAP complies with NYSDOT SS §707-13 (January 1, 2023)		
Storm Drain Pipe - Polyvinyl Chloride Pipe (PVC)		
Will NOT be daylighted		
Diameter is 12 to 24"		
Schedule is standard dimension ratio (SDR) 26/35, 35, or 26 Class 160 Water Pressure Pipe		
Pipe complies with each of the following standards		
ASTM D3034		
ASTM D3212		

Cityworks Project ID: _____
Project Name: _____
Address: _____
Drawing Date: _____

	Yes	No
ASTM F477		
ASTM F679		
Pipe has bell-and-spigot joints with rubber gasket inserted into the bell		
Storm Drain Pipe - High-Density Polyethylene (HDPE) Pipe		
Diameter is 12 to 60"		
Pipe is double walled		
Pipe complies with each of the following standards		
AASHTO M 252		
AASHTO M 294		
ASTM D2321		
ASTM D3350		
Storm Drain Pipe - Reinforced Concrete Pipe (RCP)		
Will NOT be installed in or below groundwater		
Diameter is 12 to 48"		
RCP complies with NYSDOT SS §706-02 (January 1, 2023) or NYSDOT SS §706-03 (January 1, 2023)		
Culverts and End Sections - General		
Culvert can discharge the 10-year peak flow without static head entrance		
Culvert can discharge the 100-year peak flow utilizing available head at entrance		
Culverts		
Culvert is 12 inches or greater in diameter		
Culvert material is CMP, RCP, or HDPE		
Materials comply with Section 1-2 of the Highway and Drainage Standards		
HDPE pipe is double-walled "HD Storm Pipe" by ADS or approved or equal		
End Sections		
End section material is HDPE, galvanized steel, aluminum, or reinforced concrete		
Steel end sections comply with NYSDOT SS 707-10		
Aluminum end sections comply with NYSDOT SS 707-11		
Concrete end sections comply with NYSDOT SS 706-07		
HDPE flared end sections are in compliance with the following standards		
ASTM D1248		
ASTM F667/F667M		
Aluminum and steel end sections comply with AASHTO M 96		
Aluminum and steel end sections are made from steel alloy sheet containing Alclad 3004-H32 or 3004-H34		
Underdrain - Pipe		
Underdrain is connected directly into drainage structure		
Pipe diameter is 6 or 8 inches		

Cityworks Project ID: _____
Project Name: _____
Address: _____
Drawing Date: _____

	Yes	No
HDPE pipe conforms to Section 1-2, Materials, High-Density Polyethylene Pipe		
Pipe is corrugated HDPE without fabric sock		
Pipe is "Single Wall Perforate Pipe" by ADS or approved or equal		
Pipe is not deflected		
Pipe has a sock where it is installed in groundwater		
Underdrain - Filter Media		
Filter media is Type 1 or Type 2 in compliance with NYSDOT SS §733-20 (January 1, 2023)		
Filter media complies with soundness criteria of NYSDOT SS §703-02, Table 703-2 (January 1, 2023)		
Geotextile Filter Fabric		
Geotextile underdrain fabric is "WINFAB 450N" by WINFAB or an approved or equal		
Approved or equal is listed in the NYSDOT Approved Materials, Equipment, Methods and Procedures (July 14, 2022)		
Sump Laterals		
Sump lateral exits the building and discharges into a stormwater structure in the roadway		
Sump lateral extends to or beyond the limits of the utility easement or to the edge of the right-of-way (ROW)		
Sump lateral placement complies with the Highway and Drainage Standard Details		
Sump laterals and collectors flow by gravity		
Sump lateral slope from the building to the structure is a minimum of one-half percent (0.5%)		
Sump lateral has an end cap or plug		
Daylit sump laterals are only in back yards		
Daylit sump laterals have a critter cap on the exposed end		
End of the sump lateral pipe is marked by an orange 2-inch by 4-inch (2" x 4") marker that extends two feet (2') or greater above the finished grade		
Sump Collector Pipe		
Collector pipe slope is a minimum of one-half percent (0.5%)		
Collector pipe is buried two and one-half feet (2.5') or greater, measured from top of pipe to finished grade		
Collector pipe is connected to the storm sewer system at a catch basin or storm sewer manhole		
Structures - Genereal		
Storm sewer drainage structure is precast concrete		
Storm sewer drainage structure is one of the following		
Catch Basin		
Storm Sewer Manhole		
Drywell		
Junction Box		

Cityworks Project ID: _____
Project Name: _____
Address: _____
Drawing Date: _____

	Yes	No
Structures - Catch Basins		
Catch basins are installed at all intersections and prevent run-off from accumulating in or passing through the intersections		
Catch basins with connected flow are placed a maximum distance of 300 linear feet apart		
Catch basin height is less than or equal to four feet (4"), measured from finished top of frame and grate (rim) elevation to the invert out elevation		
Penetrating pipe is less than or equal to 15 inches (15") in diameter		
Sump is 12 inches (12") or greater		
Lids are four inches (4") thick		
Grade adjustment is between four inches (4") and eight inches (8")		
Measure 2.5' x 2.5' x 3.5' as manufactured by The Fort Miller Co., Inc or an approved equal		
Structures - Storm Sewer Manholes		
Manhole is by The Fort Miller Co., Inc or an approved or equal with inside diameters (ID) of 4 feet, 5 feet, 6 feet, 6.5 feet, 7 feet, or 8 feet		
Sump is 12 inches (12") or greater		
Structures - Drywells		
Precast drywell is 48 inches tall with an ID of 72" as manufactured by The Fort Miller Co., Inc or an approved or equal		
Structures - Junction Boxes		
Use of the junction box is approved by the Commissioner of Public Works or the Public Works Operations Supervisor		
Located at the property line corner		
Contains a four-inch (4") SDR 35 PVC sump pump lateral		
Contains an eight-inch (8") PVC SDR 35 collector pipe		
Pipe penetrations into box extend less than or equal to two inches (2") from the inside wall		
Precast structure complies with ASTM C890		
Precast concrete measuring 2.5 feet by 2.5 feet by 2.5 feet inside diameter (ID) as manufactured by The Fort Miller Co., Inc or approved or equal		
Has no grade adjustment		
Frames, Grates, Lids and Grade Adjustments - General		
Frames are flush with binder grade		
Grates are flush with binder grade		
Where centerline grade exceeds 5%, Cascade grates are used		
Lids		
Last unit prior to grade adjustment		
Junction box cover is flush with finished grade		
Frames and Grates/Covers		

Cityworks Project ID: _____
Project Name: _____
Address: _____
Drawing Date: _____

	Yes	No
Cascade frame and grate center is in alignment with the gutter line formed at the intersection point of the outer edge of the carriage way and the toe of the wing		
Roadways - General		
Streets comply with Code of the Town of Colonie, Chapter 162, Streets and Sidewalks		
Private utilities are in the right-of-way at least 2-1/2 feet inside the boundary		
Cul-de-sacs shall have 120-foot right-of-way		
Right-of-way to be measured perpendicular to the lot lines on tangents and on the radial line on curves		
Street grade shall be between 3/4 and 6%		
Designed in compliance with the Highway and Drainage Standard Details		
Type I Streets		
Paved surface is 30 feet wide		
Right-of-way is 50 feet wide		
Type II Streets		
Paved surface is 32 feet wide		
Right-of-way is 60 feet wide with an additional 6 foot permanent utility easement on each side		
The final elevation of the back of the integral wing wedge shall be the same as the finished road centerline		

End of Section

Division of Pure Waters Checklist

347 Old Niskayuna Road
Latham, New York 12110
(518) 783-2766

Mainline Gravity Pipe

Covers the design, materials, and repairs of public sewer mainline gravity pipes.

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No	N/A
General			
Gravity sewer considered where physically feasible			
No trees placed within 10 feet of centerline of sewer main or within easements			
Engineer's report conforms with Pure Waters standards for public sewer extension (If Applicable)			
Each section of a Sanitary sewer mainline gravity pipe shall be labeled "___LF of __" (Pipe Material & Class) @__%"			
Attributes (Pipe)			
Size, hydraulics - minimum diameter required to convey design flows and achieve cleansing velocity			
Size - diameter 8" minimum			
Length - maximum 400 LF between structures			
Alignment - straight alignment between structure			
Slope - consistent between structures			
Slope - minimum — Pipe Diameter: 8" (typical) — Min Slope: 0.50%			
Slope - minimum — Pipe Diameter: 8" (dead end run) — Min Slope: 1.00%			
Slope - minimum — Pipe Diameter: 10" — Min Slope: 0.33%			
Slope - minimum — Pipe Diameter: 12" — Min Slope: 0.27%			
Slope - minimum — Pipe Diameter: > 12" — Min Slope: Contact Pure Waters			
Depth of Cover - minimum 4' from top of pipe to finished grade			
Transitions - no transition of pipe types or classes between structures			
Encasements - no excasements, concrete or otherwise			
Casing - Only when required for pipe protection or by right-of-way authority. Minimum inside diameter shall be twice outside diameter of carrier pipe.			
Location			
Primarily within centerline of public roadways or utility easement			
Relative to Manhole Connection - 0.10' minimum above invert out elevation			
Relative to Watermain or service (vertical) - 18" minimum separation outside edge of pipes when physically feasible			
Relative to all utilities (vertical) - 6" minimum separation outside edge of pipes			
Relative to Watermain or service (horizontal) - 10 LF minimum separation outside edge of pipes when physically feasible			
Relative to all utilities (horizontal) - 5 LF minimum			
Relative to all utilities crossings - 90 degrees			
Relative to footings - outside bearing plane of 45 degrees from outside edge of footing or wall			

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No	N/A

Materials

Note: Material shall be new and of the type and specification required to achieve desired finished product. Town reserves the right to reject materials that don't comply.

ANSI/NSF 14	Plastic Pipe System Components and Related Materials
ANSI C111	Rubber-Gasket Joints for Ductile-Iron Pressure pipe
ANSI C151	Ductile Iron Pipe
ASTM D1784	Rigid Poly (Vinyl Chloride) (PVC) compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) compounds
ASTM D2241	PVC Pressure-Rated Pipe
ASTM D3034	PVC Sewer Pipe and Fittings
ASTM D3139	Joints for Plastic Pressure Pipes Using Flexible Elastomeric
ASTM F477	Elastomeric Seals for Joining Plastic Pipe
AWWA C900	PVC Pressure Pipe and Fabricated Fittings

Attributes

Condition	Type	
<14' deep	PVC SDR26 - ASTM D3034 (gravity)	_____
14' and greater	PVC C900 DR18 - AWWA C900	_____
<10'H/18"V separation from watermain	PVC IPS SDR21 - ASTM D2241 (Pressure)	_____
Stream Crossings	Contact Pure Waters	_____

Repairs

Mainline gravity pipe repair/connection materials is below

Attributes

Connect with kor-n-seal at manhole (when possible) _____

ABS Truss pipe connection - exposed concrete ends sealed with water resistant grout _____

Approved connection methods

Existing	New		
PVC SDR26	PVC SDR26	Connect at existing bell. PVC SDR35 rubber gasketed repair coupling, non-center stop	_____
PVC IPS SDR21	PVC SDR26	PVC SDR35 rubber gasketed transition coupling	_____
VCP	PVC SDR26	Flexible strongback rubber coupling (Fernco or approved equal	_____
ABS	PVC SDR26	PVC SDR 35 rubber gasketed repair coupling, non-center stop	_____
ABS Truss	PVC SDR26	Flexible rubber coupling (Fernco or approved equal)	_____

Cityworks Project ID: _____
Project Name: _____
Address: _____
Drawing Date: _____

			Yes	No	N/A
ACP	PVC SDR26	Flexible strongback rubber coupling (Fernco or approved equal). May require concrete support if ordered by inspector			
HDPE	PVC SDR26	Manufactured Transition Fitting (Poly-Cam 731 Series or approved equal)			
HDPE	PVC IPS SDR21	Manufactured Transition Fitting (Poly-Cam 730 Series or approved equal)			
HDPE	HDPE	Butt Welded or Electrofusion Coupling (Beads reamed out)			
DIP	DIP	Connect at existing bell. Full circumfrenence repair clamp, stainless steel or epoxy coated with stainless hardware. (Smith-Blair, Hymax, maxadaptor, or approved equal)			
PVC SDR26	DIP	Full circumfrenence repair clamp, stainless steel or epoxy coated with stainless hardware. (Smith-Blair, Hymax,			
PVC IPS SDR21	DIP	Full circumfrenence repair clamp, stainless steel or epoxy coated with stainless hardware. (Smith-Blair, Hymax, maxadaptor, or approved equal)			
VCP	DIP	Flexible strongback rubber coupling (Fernco or approved equal			
ABS	DIP	Flexible strongback rubber coupling (Fernco or approved equal			
ACP	DIP	Flexible strongback rubber coupling (Fernco or approved equal			

Mainline Pressure Pipe

Covers the design, materials, and repairs of public sewer mainline pressure pipes.

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No	N/A
Design - General			
Gravity sewer CANNOT be utilized requiring a pressure main			
No trees placed within 10 feet of centerline of sewer main or within easements			
Engineer's report conforms with Pure Waters standards for public sewer extension (If Applicable)			
Each section of a Sanitary sewer mainline pressure pipe shall be labeled "___LF of __" (Pipe Material & Class)"			
Attributes (Pipe)			
Size, hydraulics - minimum diameter required to convey design flows and achieve cleansing velocity			
Size - diameter 1.5" minimum (low pressure sewer) or			
4" minimum (public pumping station)			
Length - maximum 1,500 LF between structures			
Alignment - straight alignment between structure or fittings (except HDPE)			
Slope - consistent upgradient to discharge location or air relief chamber			
Joints — HDPE — Butt Welded (bead removed) Electrofusion			
Joints — PVC IPS SDR21 or SDR26 Pressure — Bell & spigot with elastomeric gasket only			
Joints — PVC SCH80 — Compression Fitting			
Joints — DIP — Flange or MJ			
Depth of Cover - minimum 4' from top of pipe to finished grade			
Transitions - No transition of pipe types or classes between structures except at public pump stations			
Encasements - no excasements, concrete or otherwise			
Casing - Only when required for pipe protection or by right-of-way authority. Minimum inside diameter shall be twice outside diameter of carrier pipe.			
Tracer Wire - copper, single strand, #12 gauge			
Burial Tape - 18" below finished grade			
Location			
Primarily within rights-of-way outside of pavement. Easements will be considered if required to provide gravity service.			
Relative to Manhole Connection - 0.10' minimum above invert out elevation			
Relative to Watermain or service (vertical) - 18" minimum separation outside edge of pipes when physically feasible			
Relative to all utilities (vertical) - 6" minimum separation outside edge of pipes			

Cityworks Project ID: _____
Project Name: _____
Address: _____
Drawing Date: _____

	Yes	No	N/A
Relative to Watermain or service (horizontal) - 10 LF minimum separation outside edge of pipes when physically feasible			
Relative to all utilities (horizontal) - 5 LF minimum			
Relative to all utilities crossings - 90 degrees			
Relative to footings - outside bearing plane of 45 degrees from outside edge of footing or wall			

Materials

Note: Material shall be new and of the type and specification required to achieve desired finished product. Town reserves the right to reject materials that don't comply.

ANSI/NSF 14	Plastic Pipe System Components and Related Materials
ANSI C111	Rubber-Gasket Joints for Ductile-Iron Pressure pipe
ANSI C151	Ductile Iron Pipe
ASTM D1784	Rigid Poly (Vinyl Chloride) (PVC) compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) compounds
ASTM D2241	PVC Pressure-Rated Pipe
ASTM D3034	PVC Sewer Pipe and Fittings
ASTM D3139	Joints for Plastic Pressure Pipes Using Flexible Elastomeric
ASTM F477	Elastomeric Seals for Joining Plastic Pipe
AWWA C900	PVC Pressure Pipe and Fabricated Fittings

Attributes

Condition	Type	
<14' deep	PVC SDR26 - ASTM D3034 (gravity)	_____
14' and greater	PVC C900 DR18	_____
<10'H/18"V separation from watermain	PVC IPS SDR21 - ASTM D2241 (Pressure)	_____
Stream Crossings	Contact Pure Waters	_____

Repairs

Mainline pressure pipe repair/connection materials below is coming soon

Attributes

Connect with kor-n-seal at manhole (when possible)

Approved connection methods

Existing **New**

Building Drains & Sewers

Covers the design, materials, and repairs of public sewer mainline gravity pipes.

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No	N/A
General			
Building Drain - extends 30 inches beyond the walls of the building and conveys the drainage to the building sewer.			
Building Sewer - drainage system that extends from the end of the building drain and conveys the discharge to the public sewer, individual sewage disposal system or other point of disposal.			
Town Owned Sanitary - public sewer main and building sewer which extends from public sewer main to right-of-way line, or edge of a public utility easement.			
Standards			
Great Lakes Upper Mississippi River Board of State and Provincial Public Health and Environments Managers, 2014			
NYS Design Standards for Intermediate Sized WWTS, NYSDEC, March 2014			
Plumping Code of New York State 2020			
Gravity Sanitary Sewer Design and Construction, American Society of Civil Engineers Water pollution Control Federation, 1982			
Code of the Town of Colonie, Chapter 155			
Design			
Building Drain			
General			
4" building drain extended up to 10' without transitioning to 6" for discharges to grinder pump or oil / water separator			
Inverts shown on building drain at foundation wall			
Pipe labeled "___LF of ___(pipe Material & Type)@ ___%"			
No trees within 10 feet of centerline of building drain			
Attributes			
Size - diameter 4" standard			
Size - diameter 6" non-standard			
Distance to cleanout - maximum 30" (2'-6")			
Slope - minimum 2% or 1/4" per foot			
Depth of Cover - minimum 4' from top of pipe to finished grade			
Location			
Exit perpendicular to building foundation footing and wall			

Cityworks Project ID: _____
Project Name: _____
Address: _____
Drawing Date: _____

	Yes	No	N/A
Relative to Watermain or service (vertical) - 18" minimum separation outside edge of pipes when physically feasible			
Relative to all utilities (vertical) - 6" minimum separation outside edge of pipes			
Relative to Watermain or service (horizontal) - 10 LF minimum separation outside edge of pipes when physically feasible			
Relative to all utilities (horizontal) - 5 LF minimum			
Water service and building drain separated by minimum of 5' of undisturbed or compacted earth on private property ONLY. 10' minimum in Public ROW			
Where building drain is installed within 5' of water service, sewer pipe conforms to one of the standard for ABS plastic, cast-iron, copper, or PVC pipe listed in Table 702.3 of the NYS Plumbing Code. Private Property ONLY			
Relative to all utilities crossings - 90 degrees			

Building Sewer

General

	Yes	No	N/A
Inverts shown at right-a-way line, property line, or edge of easement			
Pipe sections labeled "___LF of ___ (Pipe Material & Type) @ ___%"			
No trees within 10 feet of centerline of building sewer			
No more than 45 degree fittings used for building sewer			
Minimum 12" spool piece between fittings			
No more than one 45 degree fitting within public right-of-way located at the wye			
No cleanout at changes in building sewer direction			
Clean-out located in maximum interval of 100' per NYS Plumbing Code 708.1.2			
Valve box labeled "sewer" installed over clean-out when installed in blacktop			

Notes - Where applicable

	Yes	No	N/A
A test pit is required prior to a connection to an existing building sewer to determine location and invert elevation. Contact the Division of Pure Waters and the design professional for direction if discrepancies from the design drawings are found.			
Prior to connection to an existing building sewer, existing building sewer shall be CCTV'd within the presence of the Division of Pure Waters sewer inspector prior to connection. Any deficiencies found shall be corrected by the Contractor and re-CCTV'd within the presence of the Division of Pure Waters sewer inspector prior to connection.			
If capping an existing building sewer, a note is required stating "prior to capping the existing building sewer, a Sewer Modification Permit will be required from the Division of Pure Waters."			

Cityworks Project ID: _____
Project Name: _____
Address: _____
Drawing Date: _____

	Yes	No	N/A
Attributes			
Size - diameter 6" standard			
Size - diameter 8" - requires supporting flow calculations			
Distance to cleanout - maximum 30" (2'-6")			
Slope - minimum 2% or 1/4" per foot			
Depth of Cover - minimum 4' from top of pipe to finished grade			
Location			
Relative to Manhole Connection - 0.50' minimum above invert out elevation			
Relative to Watermain or service (vertical) - 18" minimum separation outside edge of pipes when physically feasible			
Relative to all utilities (vertical) - 6" minimum separation outside edge of pipes			
Relative to Watermain or service (horizontal) - 10 LF minimum separation outside edge of pipes when physically feasible			
Relative to all utilities (horizontal) - 5 LF minimum			
Water service and building drain separated by minimum of 5' of undisturbed or compacted earth on private property ONLY. 10' minimum in Public ROW			
Where building drain is installed within 5' of water service, sewer pipe conforms to one of the standard for ABS plastic, cast-iron, copper, or PVC pipe listed in Table 702.3 of the NYS Plumping Code. Private Property ONLY			
Relative to all utilities crossings - 90 degrees			
Relative to footings - outside bearing plane of 45 degrees from outside edge of footing or wall			

Materials

Building Drain

Note: Material shall be new and of the type and specification required to achieve desired finished product. Town reserves the right to reject materials that don't comply.

ANSI/NSF 14	Plastic Pipe System Components and Related Materials
ASTM D1785	PVC Plastic Pipe Schedule 40, 80, and 120
ASTM F477	Elastomeric Seals for Joining Plastic Pipe

	Yes	No	N/A
Attributes			
PVC SCH 40 - ASTM D1785 (Gravity)			

Building Sewer

Note: Material shall be new and of the type and specification required to achieve desired finished product. Town reserves the right to reject materials that don't comply.

ANSI/NSF 14	Plastic Pipe System Components and Related Materials

Cityworks Project ID: _____
Project Name: _____
Address: _____
Drawing Date: _____

		Yes	No	N/A
	Rigid Poly(Vinyl Chloride) (PVC) Compounds and			
ASTM D1784	Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds			
ASTM D2241	PVC Pressure Rated Pipe			
ASTM D3034	PVC Sewer Pipe and Fittings			
ASTM D3139	Joints for Plastic Press. Pipe Using Flexible Elastomeric Seals			
ASTM F477	Elastomeric Seals for Joining Plastic Pipe			
ASTM F714	Polyethylene Plastic Pipe			

Attributes

Material Type	Notes	
PVC SDR 26 - ASTM D3034 (Gravity)	Standard	_____
PVC I.P.S. SDR 21 - ASTM D2241 (Pressure)	If water service is < 5' to building sewer or crossing watermain with <18" of vertical clearance	_____

Repairs

Mainline gravity pipe repair/connection materials below is coming soon

Attributes

Connect with kor-n-seal at manhole (when possible) _____

Approved connection methods

Existing	**New**

End of Section

Division of Latham Water
Drawing Sheet Checklist

347 Old Niskayuna Road
Latham, New York 12110
(518) 783-2750

Guidelines for Engineer's Report for Expansion of Water Distribution System

Details for inclusion in engineer's report

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No
Title Sheet		
Table of Contents - include Developer's Name and Address		
Site location map - 8 1/2" x 11"		
Introduction and Project Description		
Location		
Zoning		
Description of the existing Latham Water District, which should include the following:		
Existing permitted raw water sources:		
Mohawk River, 31.5 MGD		
Stony Creek Reservoir, 6 MGD		
Mohawk View Well Complex, 7 MGD		
Existing treatment capacity of the Mohawk View Water Treatment Plant, 30 MGD		
Average and Maximum daily demand-10.6 MGD and 20.7 MGD respectively for 2022		
Water demand and design criteria - projected average and maximum daily demands		
Pressure data		
Existing connection		
Proposed - minimum		
Hydraulic analysis based on flow demands, pressure requirements in critical situations		
Water Distribution System.....		
Size, type and class of water main and services		
Polywraping of water main		
Approximate number of feet of pipe		
Number of valves, hydrants		
Number of corporations, curb stops		
Number of feet of copper type "K"		
Fire protection - fire flow demand, including a discussion indicating whether the proposal meets current Insurance Services Office Fire Flow Requirements		
Wastewater handling		
District Extension (if required)		
Description		
Extension plan - reproducible copy needed		
Financing (including legal costs (legal costs are only used for projects with a NYSDEC Water District Extension) which can be calculated as follows: 3.0% of the first $6,500 of construction cost + 1.0% of the second $8,500 of construction cost + 0.5% of the construction cost over $15,000 with a minimum legal cost of $1,000.)		
Engineer's Estimate of Cost		
Engineer's Signature and Stamp		

Subdivision Review Checklist

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No
Premliminary Final Submission		
Is the subdivision address correct?		
Is the subdivision in the LWD?		
Will an extension of the LWD be required?		
Has a submittal been made for this site before?		
If so, have you reviewed the file?		
Has a site visit been made by LWD?		
Is system capacity sufficient to serve this proposal?		
Have you reviewed the file for this proposal?		
Has an Engineer's report been submitted?		
Is Engineer's Report stamped and signed by a P.E. or L.S.?		
Does report include all information required in attached LWD report guidelines?		
Has a district extension description been submitted?		
Has a district extension map been submitted?		
Has description and map been stamped and signed by an L.S.?		
Are description and map correct and do they match?		
Are all water mains, valves, hydrants, etc. shown on District extension map?		
Are all existing water system features shown correctly?		
Are existing extension numbers shown on the map and referenced in the description?		
Are pressure reducing valves required (if house finish floor is below 315ft.)?		
Are any house finish 1st floor elevations above 410ft (if so the Latham Water District cannot issue a water permit)?		
Is there a potential of serving others areas through this subdivision?		
Are easements required to serve other areas through this subdivision?		
Are all water mains and appurtenances in R.O.W.'s or easements?		
Are all proposed utility easements 30 feet wide?		
Are easements for existing water mains 20 feet wide?		
Is reference made to LWD Standards on plans?		
Is main called out to be polywrapped?		
How is the proposed main connected to existing mains?		
If a TS & V is proposed, is a cut-in w/reducers more appropriate?		
If not a TS & V, is a detail of the connection provided?		
Is a test pit warranted to verify location, depth and OD of existing main?		
Are all mains of sufficient size?		
If water main is outside of pavement, are other utilities called out to be on other side of road?		

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No
Is 10’ of horizontal separation between water and sewer mains provided?		
Are all dead-end mains of appropriate size?		
Is hydrant spacing adequate?		
Are hydrants located on property lines?		
Are hydrants on same side of road as the main?		
If an existing water main is to be used on the site, are additional hydrants required on the existing line?		
Are all fittings called out on the plan?		
Are water main profiles provided?		
Is a minimum of 5 feet of cover provided over the main?		
Are all utility crossings shown on the profile(s)?		
Is 18” of vertical separation provided at all water and sewer crossings?		
Are hydrants provided at high and low points in the main?		
Has finished grade reduced or increased fill over existing water mains?		
If restrained-joint pipe is req’d, is it shown on the plans?		
Are existing water system components affected by any other proposed utilities or landscaping?		
Are proposed water system components affected by any other proposed utilities or landscaping?		
Should affected components be relocated or reinstalled?		
Do any water services have to be abandoned or relocated?		
Should water services be larger than ¾”?		
If 2” services are proposed, are tapped tees proposed?		
Do proposed details match LWD standard details?		
Are any water services over 300 feet in length? If so, a meter pit must be installed within 10 feet of the curb stop.		

Site Plan Review Checklist

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No
Concept Submission		
Is the site plan address correct?		
Is the site in the LWD?		
Will an extension of the LWD be required?		
Has a submittal been made for this site before?		
If so, have you reviewed the file?		
Has a site visit been made by LWD?		
Is system capacity sufficient to serve this proposal?		
Is a completed LWD "Commercial Sites" form included with this package?		
Preliminary Final Submission		
Have you reviewed the file for this proposal?		
Has an Engineer's report been submitted?		
Is Engineer's Report stamped and signed by a P.E. or L.S.?		
Does report include all information required in attached LWD report guidelines?		
Has a district extension description been submitted?		
Has a district extension map been submitted?		
Has description and map been stamped and signed by an L.S.?		
Are description and map correct and do they match?		
Are all watermains, valves, hydrants, etc. shown on District extension map?		
Are all existing water system features shown correctly?		
Are existing extension numbers shown on the map and referenced in the description?		
Are pressure reducing valves required (if building finish floor is below 315ft.)?		
Is the building finish floor elevation above 410ft (if so the Latham Water District cannot issue a water permit)?		
Is there a potential of serving others areas through this site?		
Are easements required to serve other areas through this site?		
If a fire hydrant is proposed for this site, is there an easement from the main serving the hydrant to the hydrant?		
If no easement is proposed, is the hydrant protected by a RPZ?		
Are all proposed utility easements 30 feet wide?		
Are easements for existing watermains 20 feet wide?		
Has a map and description been submitted for each easement?		
Is reference made to LWD Standards on plans?		
Is the service and its size shown on the site plan?		
Is service called out to be polywrapped?		

Cityworks Project ID: _____

Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No
Is the proposed connection to existing main at least 6”?		
If a TS & V is proposed for connecting to the existing main, is a cut-in w/reducers more appropriate?		
If not a TS & V, is a detail of the connection provided?		
Is a test pit warranted to verify location, depth and OD of existing main?		
Is 10’ of horizontal between water and sewer mains provided?		
If an existing watermain is to be used on the site, are additional hydrants required on the existing line?		
Are all fittings called out on the plan?		
Are watermain profiles provided?		
Is a minimum of 5 feet of cover provided over the main?		
Are all utility crossings shown on the profile(s)?		
Is 18” of vertical separation provided at all water and sewer crossings?		
Has finished grade reduced or increased fill over existing watermains?		
If restrained-joint pipe is req’d, is it shown on the plans?		
Are existing water system components affected by any other proposed utilities or landscaping?		
Are proposed water system components affected by any other proposed utilities or landscaping?		
Should affected components be relocated or reinstalled?		
Do any water services have to be abandoned or relocated?		
Do proposed details match LWD standard details?		
Applicant must submit a current site plan, floor plan, plumbing plan, sprinkler plan and meter backflow preventer detail?		
Is a meeting with the designer appropriate?		

Water Service Application Submission

Cityworks Project ID: _____

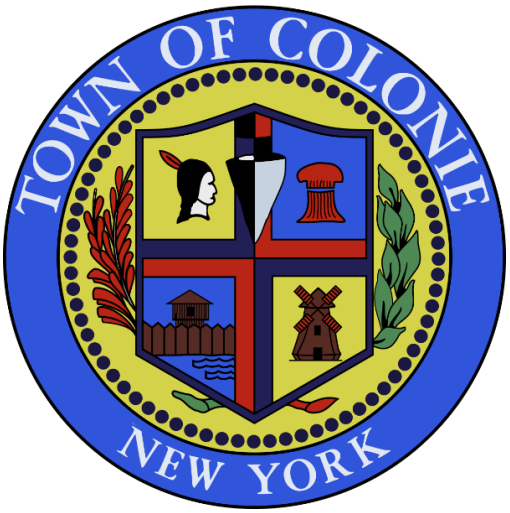
Project Name: _____

Address: _____

Drawing Date: _____

	Yes	No
Has applicant submitted a current site plan, floor plan, plumbing plan, sprinkler plan and meter/backflow preventer detail?	_____	_____
Have all easements been executed by the applicant?	_____	_____
Does the meter detail show size of service?	_____	_____
Does the meter detail show dimensions from meter to walls and floor?	_____	_____
Does the meter detail show only DIP or copper pipe ahead of the meter?	_____	_____
Does the meter detail show the fire sprinkler riser?	_____	_____
Does the meter detail call out the size and type of meter to be used?	_____	_____
Is the type of meter proposed sized properly?	_____	_____
Is a landscape irrigation system proposed?	_____	_____
If so, will chemicals be injected into the irrigation system?	_____	_____
Is a backflow preventer required? If so, state whether a double check valve or RPZ is required.	_____	_____

End of Section



Town of Colonie

534 Loudon Road
Latham, New York 12110