CERTIFICATION

I, Kerry Dougherty, Village Clerk of the Village of South Blooming Grove, in the County of Orange, New York, HEREBY CERTIFY that I have compared the foregoing Planning Board Resolution granting conditional final approval for subdivision plat and site plan for the Southgrove Project is a true and complete copy filed with said Village in my office as Village Clerk on the 19th day of August, 2022; and

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal of said village this 19th day of August, 2022.

Kerry Dougherty, Village Clerk

(SEAL)

VILLAGE OF SOUTH BLOOMING GROVE
SOUTH GROVE

WHEREAS, the Planning Board of the Village of South Blooming Grove has reviewed a 25unit subdivision with 24 residential lots and a wellness center; and

WHEREAS, SEQRA has been reviewed and the Planning Board has established Lead Agency with the Planning Board as lead agency; and

WHEREAS, the Village Engineer has reviewed and given comments; and

WHEREAS, the Board has considered public comments; and

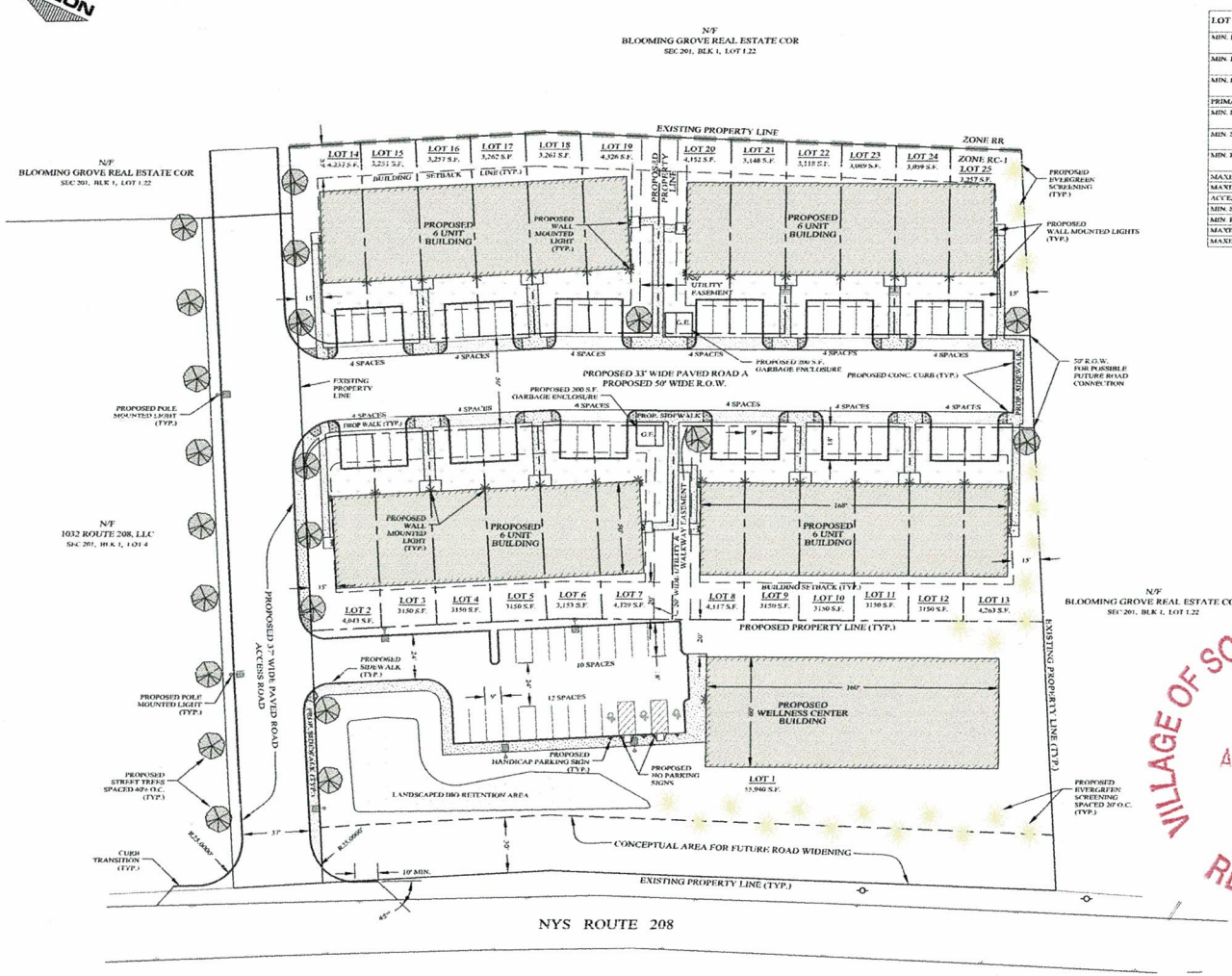
BE IT RESOLVED, the Planning Board of the Village of South Blooming Grove hereby issues a negative declaration of environmental impact; and

FURTHERMORE, grants a conditional final approval condition on Engineers comments and requirements

On a motion by Member Weiss, seconded by Member Ungar

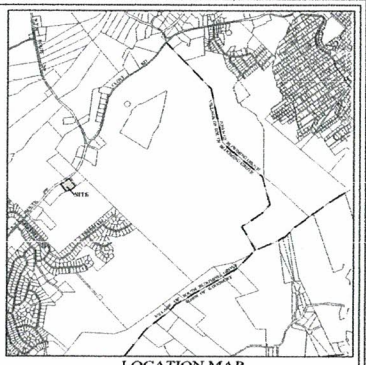
The foregoing resolution was adopted on a vote of 5 Ayes, 0 Nays.

Dated: August 18, 2022
Village of South Blooming Grove
Orange County, NY



VILLAGE OF SOUTH BLOOMING GROVE BULK REQUIREMENTS

LOT DIMENSIONS	ZONING DISTRICT
	RURAL CROSSROADS I
MIN. LOT SIZE	3,000 S.F.
MIN. FRONTAGE	30 FEET
MIN. BUILDING COVERAGE	50%
PRIMARY STRUCTURE	
MIN. FRONT YARD SETBACK	15 FEET
MIN. SIDE YARD	15 FEET
MIN. REAR YARD SETBACK	20 FEET
MAXIMUM HEIGHT (STORIES)	3 STORIES
MAXIMUM HEIGHT (FEET)	40 FEET
ACCESSORY STRUCTURE	
MIN. SIDE YARD	10 FEET
MIN. REAR YARD SETBACK	10 FEET
MAXIMUM HEIGHT (STORIES)	2 STORIES
MAXIMUM HEIGHT (FEET)	30 FEET



LOCATION MAP

SCALE : 1" = 2,000'

ZONING NOTES:

THE PLAN MEETS ALL REQUIREMENTS OF THE VILLAGE OF SOUTH BLOOMING GROVE ZONING CODE §235-14.2 A THROUGH K. AS FOLLOWS:

A. MINIMUM LOT SIZE SHALL BE 3,000 SQUARE FEET: PROVIDED.
ALL BUILDINGS SHALL BE SERVED BY PUBLIC WATER AND SEWER. PROPOSED.

B, C, D. NOT APPLICABLE

E. THE SETBACKS AND BUILD-TO-LINES SHALL BE ESTABLISHED BY THE PLANNING BOARD AT THE TIME OF SITE PLAN APPROVAL: THE APPLICANT REQUESTS THE PLANNING BOARD APPROVE SIDE SETBACKS TO THE BUILD-TO-LINE FOR THE CENTER UNITS OF EACH RESIDENTIAL BUILDING.

F. WHENEVER POSSIBLE, ACCESS DRIVES AND CIRCULATION PATTERNS SHALL MINIMIZE CURB CUTS TO PUBLIC ROADS, JOINT DRIVEWAYS FOR ADJOINING PROPERTIES IS ENCOURAGED: PROVIDED.

G. MAXIMUM FOOTPRINT OF ANY STRUCTURE SHALL BE 10,000 SQUARE FEET: PROVIDED (ALL RESIDENTIAL BUILDINGS ARE PROPOSED WITH 9,600 SQUARE FEET FOOTPRINT AND THE WELLNESS CENTER IS PROPOSED WITH A FOOTPRINT OF 9,600).

H. AT LEAST 10% OF THE DWELLING UNITS SHALL BE AFFORDABLE. PROVIDED 2 UNITS.

I & J. NOT APPLICABLE

K. IN MULTI-ACRE DEVELOPMENTS PROVISIONS SHOULD BE MADE FOR HIKING OR WALKING PATHS THROUGH THE DEVELOPMENT, ALONG PUBLIC ROADS, TO COMMERCIAL AND SERVICE BUSINESSES AND TO THE LOT LINES OF ADJOINING PROPERTIES: PROVIDED.

PARKING CALCULATION

RESIDENTIAL BUILDINGS

2 SPACES PER DWELLING UNIT – (2 SPACES) x (24 UNITS)
48 PARKING SPACES
PARKING SPACES REQUIRED = 48

WELLNESS CENTER BUILDING

1 SPACES PER 800 S.F. = (1 SPACES) x (800 S.F.) / 9,600 S.F.
800 / 9,600 = 12
PARKING SPACES REQUIRED = 12

TOTAL PARKING SPACES REQUIRED = 60
TOTAL PARKING SPACES PROVIDED = 70

HANDICAPPED PARKING SPACES REQUIRED = 1 SPACE PER 25 SPACES
HANDICAPPED PARKING SPACES REQUIRED = 70 / 25 SPACES = 2.8 SPACES
HANDICAPPED PARKING SPACES PROVIDED = 3

GENERAL NOTES:

1. VILLAGE OF SOUTH BLOOMING GROVE TAX MAP DESIGNATION: SEC. 207, BLOCK 1, LOT 1.23.
2. PARCEL LOCATED IN THE RC-1 ZONING DISTRICT
3. AREA OF PARCEL – 3.68 AC.
4. BOUNDARY AND TOPOGRAPHIC SURVEY INFORMATION PROVIDED BY MAP ENTITLED: "SUBDIVISION FOR 30 SHANNON LANE" AS PREPARED BY PETROCCIONE, P.E. AND FILED WITH THE ORANGE COUNTY CLERK AS MAP 446-21 ON DECEMBER 28, 2021.
5. EXISTING UTILITY INFORMATION SHOWN HEREON HAS BEEN COLLECTED FROM VARIOUS SOURCES AND IS NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS. THE CONTRACTOR SHALL VERIFY ALL INFORMATION TO HIS SATISFACTION PRIOR TO EXCAVATION. THE CONTRACTOR SHALL NOTIFY THE UNDERSIGNED PROFESSIONAL IMMEDIATELY IF ANY FIELD CONDITIONS ENCOUNTERED DIFFER MATERIALLY FROM THOSE REPRESENTED HEREON. SUCH CONDITIONS COULD RENDER THE DESIGNS HEREON INAPPROPRIATE OR INEFFECTIVE.
6. BUILDING FOOTPRINT DIMENSIONS SHOWN HEREON ARE APPROXIMATE. FINAL BUILDING FOOTPRINT DIMENSIONS FOR EACH BUILDING SHALL BE FURNISHED ON THE INDIVIDUAL ARCHITECTURAL PLANS AT THE TIME OF APPLICATION FOR A BUILDING PERMIT. ALL STRUCTURES SHALL CONFORM TO THE APPROVED BULK ZONING REQUIREMENTS.

VILLAGE OF SOUTH BLOOMING GROVE
AUG 18 2022
RECEIVED

GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

LEGEND

EXISTING PROPERTY LINE
PROPOSED PROPERTY LINE
EXISTING 2' CONTOUR LINE
EXISTING 10' CONTOUR LINE
PROPOSED CONTOUR LINE
EXISTING EDGE OF PAVEMENT
BUILDING SETBACK

SHEET INDEX

SHEET #1 - SITE PLAN
SHEET #2 - SUBDIVISION PLAT
SHEET #3 - GRADING & DRAINAGE PLAN
SHEET #4 - ROAD PROFILES & SITE DETAILS
SHEET #5 - CONCEPTUAL UTILITY PLAN
SHEET #6 - SANITARY DETAILS
SHEET #7 - EROSION CONTROL PLAN
SHEET #8 - EROSION CONTROL DETAILS
SHEET #9 - DRAINAGE DETAILS
SHEET #10 - STORMWATER MANAGEMENT DETAILS

08-17-22	REV. PER VILLAGE ENGINEER'S COMMENTS
07-21-22	REV. PER VILLAGE ENGINEER'S COMMENTS
06-23-22	INITIAL PREPARATION

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO A DOCUMENT BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW. REPRODUCTIONS OF THIS PLAN WHICH DO NOT BEAR THE ORIGINAL SEAL OF A LICENSED PROFESSIONAL ENGINEER SHALL BE CONSIDERED INVALID.

SOUTHGROVE

PROJECT TITLE: VILLAGE OF SOUTH BLOOMING GROVE, ORANGE COUNTY, NEW YORK

DRAWING TITLE: SITE PLAN

KIRK ROTHER, P.E.
CONSULTING ENGINEER, PLLC
5 St. Stephens Lane, Warwick, NY 10990
(845) 988-0620
KIRK ROTHER, P.E. N.Y.S. LIC. NO. 079053 DATE

D.O.T. SHEET #	D.E.C. SHEET #	D.C.H.D. SHEET #	SHEET #
N.A.	N.A.	N.A.	1 OF 10
CAD # 20129 SP	PROJECT # 20129.0	SCALE AS SHOWN	

GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft.

LEGEND

EXISTING PROPERTY LINE	
PROPOSED PROPERTY LINE	
EXISTING 2' CONTOUR LINE	
EXISTING 10' CONTOUR LINE	
PROPOSED CONTOUR LINE	(600)
EXISTING EDGE OF PAVEMENT	
BUILDING SETBACK	

I HEREBY CERTIFY THAT THIS SUBDIVISION IS BASED ON AN ACTUAL FIELD SURVEY COMPLETED BY EDWARD T. GANNON, PLS, ON

SIGNATURE
EDWARD T. GANNON, PLS.
LICENSE NO. 049997
CHERRY HILL ROAD, BLOOMING GROVE, NEW YORK 10914
(845) 497-8383

08-17-22	REV. PER VILLAGE ENGINEER'S COMMENTS
07-21-22	REV. PER VILLAGE ENGINEER'S COMMENTS
06-23-22	INITIAL PREPARATION

VILLAGE OF SOUTH BLOOMING GROVE
AUG 18 2022
RECEIVED

SOUTHGROVE

PROJECT TITLE: VILLAGE OF SOUTH BLOOMING GROVE, ORANGE COUNTY, NEW YORK

DRAWING TITLE: SUBDIVISION PLAT

KIRK ROTHER, P.E.
CONSULTING ENGINEER, PLLC
5 St. Stephens Lane, Warwick, NY 10990
(845) 988-0620
KIRK ROTHER, P.E. N.Y.S. LIC. NO. 079053 DATE

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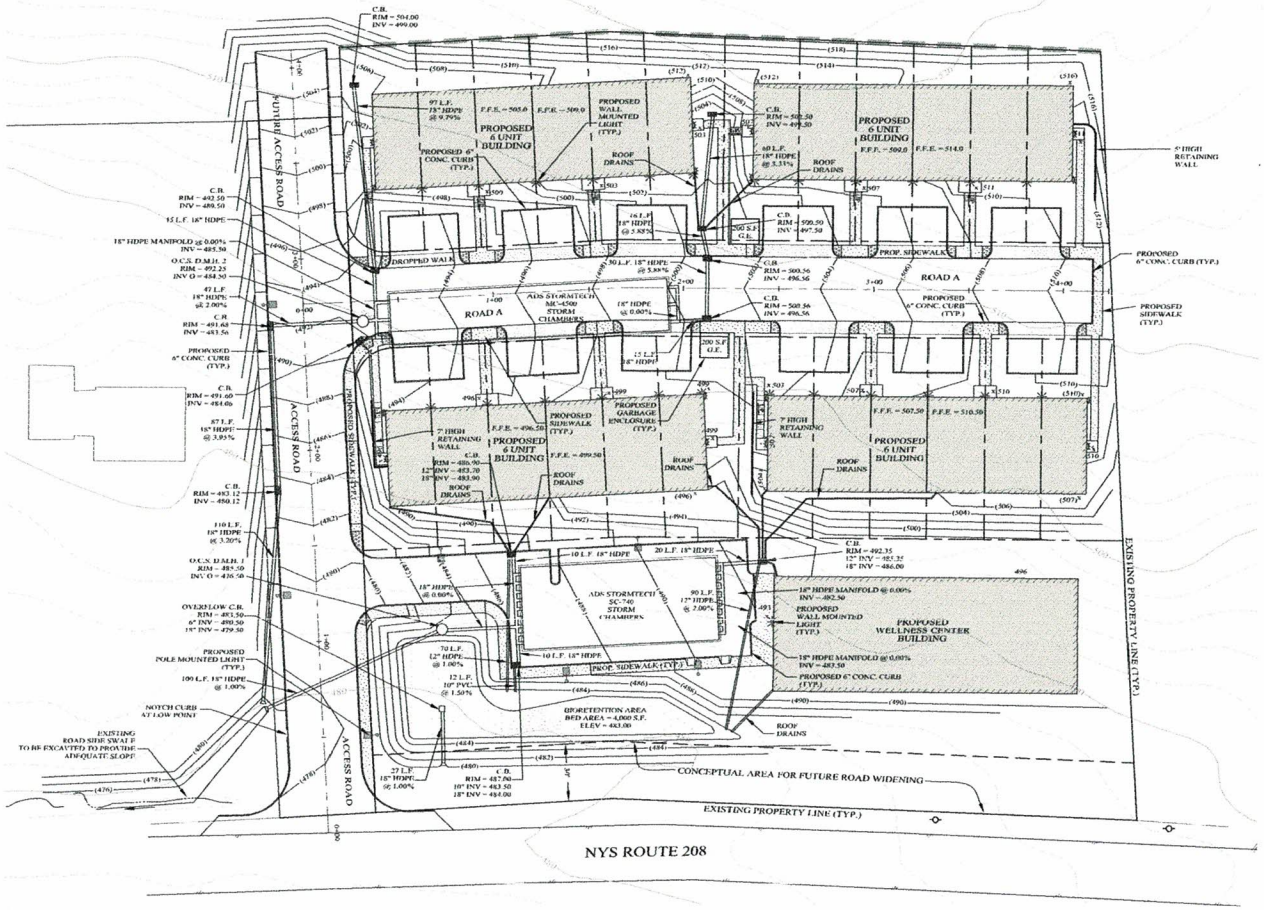
D.O.T. SHEET #	D.E.C. SHEET #	D.C.H.D. SHEET #	SHEET #
N.A.	N.A.	N.A.	2 OF 10
CAD #	PROJECT #	SCALE	
20129 SP	20129.0	AS SHOWN	



GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft.

LEGEND

EXISTING PROPERTY LINE	
PROPOSED PROPERTY LINE	
EXISTING 2' CONTOUR LINE	
EXISTING 10' CONTOUR LINE	
PROPOSED CONTOUR LINE	(100)
EXISTING EDGE OF PAVEMENT	
BUILDING SETBACK	

VILLAGE OF SOUTH BLOOMING GROVE
AUG 18 2022
RECEIVED

SOUTHGROVE

PROJECT TITLE: VILLAGE OF SOUTH BLOOMING GROVE, ORANGE COUNTY, NEW YORK

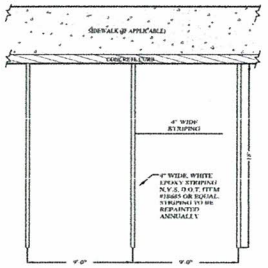
DRAWING TITLE: GRADING & DRAINAGE PLAN

KIRK ROTHER, P.E.
CONSULTING ENGINEER, PLLC
5 St. Stephens Lane, Warwick, NY 10990
(845) 988-0620
KIRK ROTHER, P.E. N.Y.S. LIC. NO. 076053

DATE	REVISIONS
08-17-22	REV. PER VILLAGE ENGINEER'S COMMENTS
07-21-22	REV. PER VILLAGE ENGINEER'S COMMENTS
06-23-22	INITIAL PREPARATION

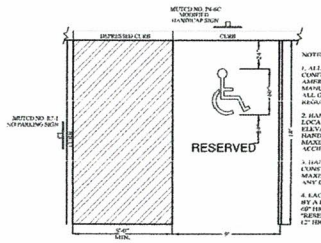
UNAUTHORIZED ALTERATIONS OR ADDITIONS TO A DOCUMENT BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW. REPRODUCTIONS OF THIS PLAN WHICH DO NOT BEAR THE ORIGINAL SEAL OF A LICENSED PROFESSIONAL ENGINEER SHALL BE CONSIDERED INVALID.

D.O.T. SHEET #	D.E.C. SHEET #	O.C.H.D. SHEET #	SHEET #
N.A.	N.A.	N.A.	3 OF 10
CAD # 20129 SP	PROJECT # 20129.0	SCALE AS SHOWN	



PARKING SPACE STRIPING DETAIL

NOT TO SCALE



NOTES:

1. ALL HANDICAP MARKINGS SHALL CONFORM TO THE LATEST REVISION OF THE AMERICANS WITH DISABILITIES ACT, MANUAL OF TRAFFIC CONTROL DEVICES AND ALL OTHER APPLICABLE RULES AND REGULATIONS.

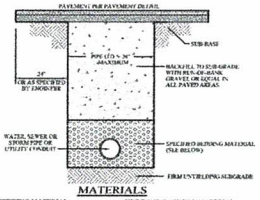
2. HANDICAPPED PARKING SHALL BE LOCATED AS CLOSE AS POSSIBLE TO ELEVATORS, RAMPS, WALKWAYS, AND HANDICAP ACCESSIBLE ENTRANCES. MAXIMUM DISTANCE FROM HANDICAP ACCESSIBLE ENTRANCES SHALL BE 200'.

3. HANDICAP PARKING SPACES SHALL BE CONSTRUCTED NEARLY LEVEL WITH THE MAXIMUM SLOPE NOT TO EXCEED 1:48 IN ANY DIRECTION.

4. EACH PARKING SPACE SHALL BE MARKED BY A HANDICAP SIGN, PAINTED 54" WIDE X 60" HIGH HANDICAP SYMBOL AND PAINTED "RESERVED" LETTERING. LETTERING TO BE 12" HIGH AND STRIPING SHALL BE 6" WIDE.

HANDICAPPED PARKING DETAIL

NOT TO SCALE



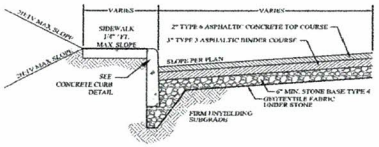
MATERIALS

PIPE ZONE BEDDING MATERIAL:
1. WATER MAINS: SAND OR RUN-OF-BANK GRAVEL, AS APPROVED BY SOB'S ENGINEER.

PIPE ZONE BACKFILL MATERIAL:
1. WATER MAINS: ON-SITE MATERIAL FREE OF STONES, CLAY OR ROCKY MATERIAL OR FROZEN EARTH AS APPROVED BY SOB'S ENGINEER.

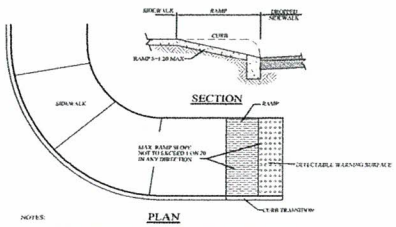
PIPE BEDDING AND BACKFILL DETAIL

NOT TO SCALE



TYPICAL PAVEMENT SECTION PARKING LOTS & DRIVEWAYS

NOT TO SCALE

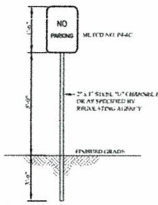


NOTES:

1. CONSTRUCTION OF ALL HANDICAP ACCESSIBLE FEATURES SHALL CONFORM THE TO LATEST REVISION OF ALL APPLICABLE REGULATORY STANDARDS INCLUDING THE AMERICANS WITH DISABILITIES ACT.

HANDICAP ACCESSIBLE RAMP DETAIL

NOT TO SCALE

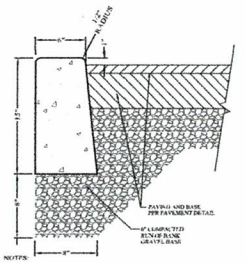


"NO PARKING" SIGN DETAIL

NOT TO SCALE

"HADICAP PARKING" SIGN DETAIL

NOT TO SCALE



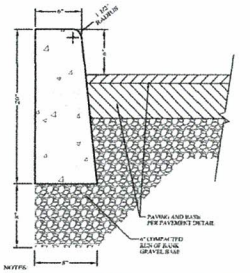
NOTES:

1. CURB SHALL BE CAST IN PLACE CONCRETE WITH CELLULOSE, OR EQUIVALENT, EXPANSION JOINTS INSTALLED AT TEN (10) FOOT INTERVALS.

2. MIX DESIGN SHALL BE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE GUIDELINES FOR CONCRETE EXPOSED TO FREEZING, THAWING AND DEICING CHEMICALS. CONCRETE SHALL HAVE A WATER-CEMENTITIOUS RATIO OF 0.45 AND AIR ENTRAINMENT OF 4 1/2% FOR A 1" NOMINAL AGGREGATE SIZE. CONCRETE TO TEST 4000 PSI AT 28 DAYS.

CONCRETE DROP CURB DETAIL

NOT TO SCALE



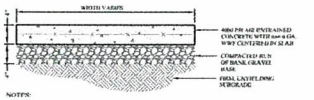
NOTES:

1. CURB SHALL BE CAST IN PLACE CONCRETE WITH CELLULOSE, OR EQUIVALENT, EXPANSION JOINTS INSTALLED AT TEN (10) FOOT INTERVALS.

2. MIX DESIGN SHALL BE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE GUIDELINES FOR CONCRETE EXPOSED TO FREEZING, THAWING AND DEICING CHEMICALS. CONCRETE SHALL HAVE A WATER-CEMENTITIOUS RATIO OF 0.45 AND AIR ENTRAINMENT OF 4 1/2% FOR A 1" NOMINAL AGGREGATE SIZE. CONCRETE TO TEST 4000 PSI AT 28 DAYS.

CONCRETE CURB DETAIL (WITHIN SITE)

NOT TO SCALE



NOTES:

1. SIDEWALKS SHALL BE CAST IN PLACE CONCRETE WITH 1" DEEP JOINTS INSTALLED AT SPACINGS EQUAL TO THE SIDEWALK WIDTH.

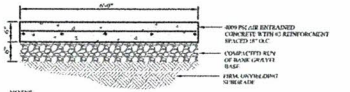
2. CELLULOSE, OR EQUIVALENT, EXPANSION JOINTS SHALL BE INSTALLED 20 FOOT ON CENTER. IF THE SIDEWALK IS POURED AGAINST CONCRETE CURBS, BUILDINGS OR OTHER STRUCTURES, AN EXPANSION JOINT SHALL BE INSTALLED ALONG THE ENTIRE LENGTH OF CONTACT. SIDEWALKS SHALL SLOPE AWAY FROM BUILDINGS TO PROVIDE POSITIVE DRAINAGE AND CONFORM TO THE LATEST REVISION OF ALL APPLICABLE REGULATORY STANDARDS INCLUDING THE AMERICANS WITH DISABILITIES ACT.

3. MIX DESIGN SHALL BE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE GUIDELINES FOR CONCRETE EXPOSED TO FREEZING, THAWING AND DEICING CHEMICALS. CONCRETE SHALL HAVE A WATER-CEMENTITIOUS RATIO OF 0.45 AND AIR ENTRAINMENT OF 4 1/2% FOR A 1" NOMINAL AGGREGATE SIZE. CONCRETE TO TEST 4000 PSI AT 28 DAYS.

4. SIDEWALK SURFACE TO BE A BROOM FINISH WITH GROOVES RUNNING PERPENDICULAR TO THE LENGTH OF SIDEWALK.

CONCRETE SIDEWALK DETAIL

NOT TO SCALE



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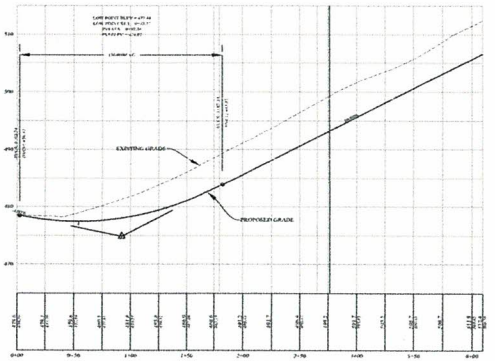
3. MIX DESIGN SHALL BE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE GUIDELINES FOR CONCRETE EXPOSED TO FREEZING, THAWING AND DEICING CHEMICALS. CONCRETE SHALL HAVE A WATER-CEMENTITIOUS RATIO OF 0.45 AND AIR ENTRAINMENT OF 4 1/2% FOR A 1" NOMINAL AGGREGATE SIZE. CONCRETE TO TEST 4000 PSI AT 28 DAYS.

4. SIDEWALK SURFACE TO BE A BROOM FINISH WITH GROOVES RUNNING PERPENDICULAR TO THE LENGTH OF SIDEWALK.

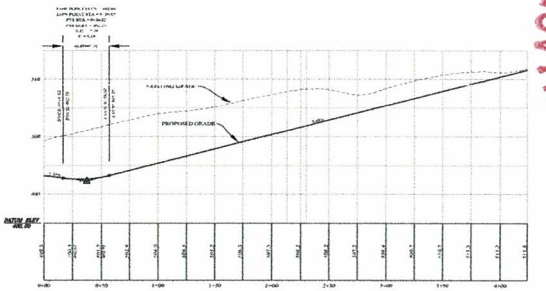
CONCRETE SIDEWALK AT PARKING LOT ENTRANCE DETAIL

NOT TO SCALE



ACCESS ROAD PROFILE

SCALES:
HOR. 1" = 50'
VER. 1" = 10'



ROAD A PROFILE

SCALES:
HOR. 1" = 50'
VER. 1" = 10'

VILLAGE OF SOUTH BLOOMING GROVE
AUG 18 2022
RECEIVED

SOUTHGROVE

PROJECT TITLE: VILLAGE OF SOUTH BLOOMING GROVE, ORANGE COUNTY, NEW YORK

DRAWING TITLE: ROAD PROFILES & SITE DETAILS

KIRK ROTHER, P.E.
CONSULTING ENGINEER, PLLC
5 St. Stephens Lane, Warwick, NY 10990
(845) 988-0620
KIRK ROTHER, P.E. N.Y.S. LIC. NO. 070053

DATE	REVISION
08-17-22	REV. PER VILLAGE ENGINEER'S COMMENTS
07-21-22	REV. PER VILLAGE ENGINEER'S COMMENTS
06-23-22	INITIAL PREPARATION

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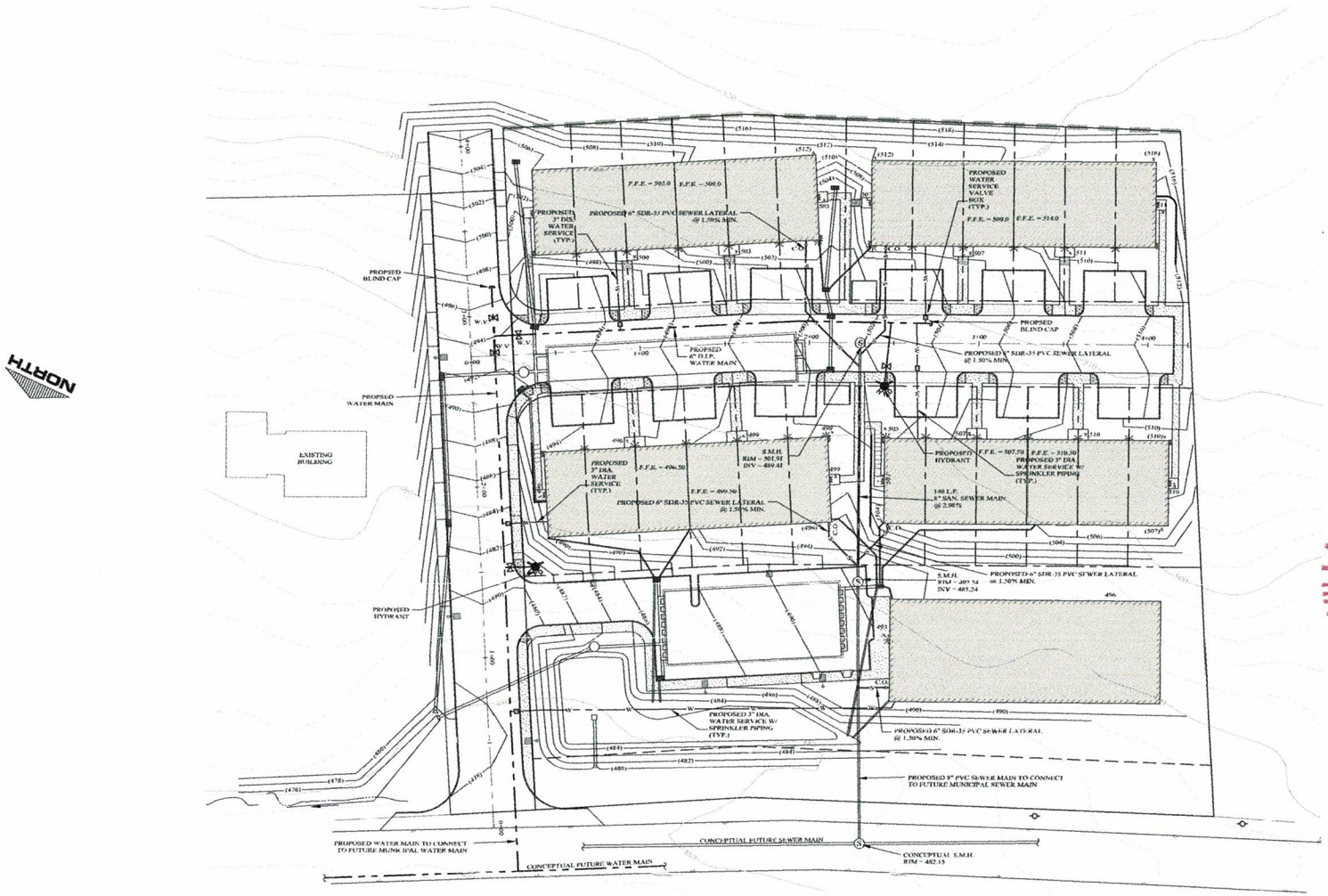
D.O.T. SHEET #	D.E.C. SHEET #	O.C.H.D. SHEET #	SHEET #
N.A.	N.A.	N.A.	4 OF 10
CAD # 20129 SP	PROJECT # 20129.0	SCALE AS SHOWN	



GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft

LEGEND

EXISTING PROPERTY LINE	
PROPOSED PROPERTY LINE	
EXISTING 2' CONTOUR LINE	
EXISTING 10' CONTOUR LINE	
PROPOSED CONTOUR LINE	(600)
EXISTING EDGE OF PAVEMENT	
BUILDING SETBACK	

VILLAGE OF SOUTH BLOOMING GROVE
AUG 18 2022
RECEIVED

SOUTHGROVE

PROJECT TITLE: VILLAGE OF SOUTH BLOOMING GROVE, ORANGE COUNTY, NEW YORK

DRAWING TITLE: CONCEPTUAL UTILITY PLAN

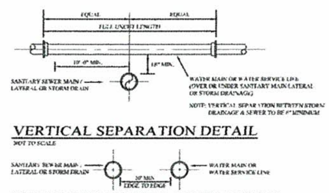
KIRK ROTHER, P.E.
CONSULTING ENGINEER, PLLC
5 St. Stephens Lane, Warwick, NY 10990
(845) 988-0620

08-17-22	INITIAL PREPARATION	KIRK ROTHER, P.E.	N.Y.S. LIC. NO. 076053

DATE

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO A DOCUMENT BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW. REPRODUCTIONS OF THIS PLAN WHICH DO NOT BEAR THE ORIGINAL SEAL OF A LICENSED PROFESSIONAL ENGINEER SHALL BE CONSIDERED INVALID.

D.G.T. SHEET #	D.E.C. SHEET #	D.C.H.D. SHEET #	SHEET #
N.A.	N.A.	N.A.	5 OF 10
CAD # 20129 SP	PROJECT # 20129.0	SCALE AS SHOWN	



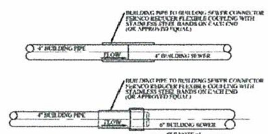
NOTE: VERTICAL SEPARATION BETWEEN STORM DRAINAGE & SEWER TO BE 6" MINIMUM

VERTICAL SEPARATION DETAIL
NOT TO SCALE

HORIZONTAL SEPARATION DETAIL
NOT TO SCALE

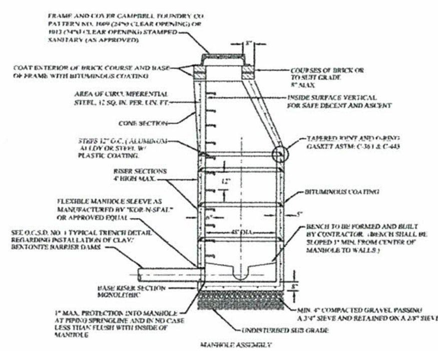
NOTE: THE SEPARATION REQUIREMENT SHALL CONFORM TO CURRENT ORANGE COUNTY DEPARTMENT OF HEALTH STATUTES, CODES, RULES, REGULATIONS AND LAWS AS THEY APPLY. ANY DEVIATION FROM THE ABOVE SEPARATION REQUIREMENTS SHALL REQUIRE WRITTEN APPROVAL FROM THE ORANGE COUNTY DEPARTMENT OF HEALTH.

WATER/SEWER SEPARATION REQUIREMENTS
NOT TO SCALE



NOTES:
1. 4" BUILDING PIPE TO STUB APPROXIMATELY 6" INTO 6" BUILDING SEWER.
2. EACH 4" BUILDING SEWER MAY BE APPROVED FOR CONSTRUCTION OF SINGLE (1) AND TWO (2) FAMILY DWELLINGS ONLY.
3. EACH 6" BUILDING SEWER SHALL BE REQUIRED FOR ALL COMMERCIAL USES AND SERVE NO MORE THAN TWELVE (12) EQUIVALENT LIVING UNITS, AS DETERMINED BY OCSD, UNLESS A REQUESTED DEVIATION IS APPROVED IN WRITING BY OCSD NO.1.
4. BUILDING PIPE SHALL NOT EXCEED MORE THAN 15' FROM EXTERIOR OF BUILDING FOUNDATION.
5. 6" BUILDING PIPE TO 6" BUILDING SEWER SHALL BE MADE BY INSTALLING A TYPE 1, STYLE 62 DRESSER COUPLING OR DRESSER STYLE 202 HYMAX COUPLING (OR APPROVED EQUAL).

BUILDING PIPE TO BUILDING SEWER CONNECTION
NOT TO SCALE



PRECAST REINFORCED CONCRETE MANHOLE
NOT TO SCALE

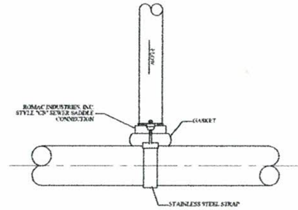
-MANHOLE TO MEET CURRENT REQUIREMENTS OF ASTM: C-478

-JOINTS: LOCK TYPE WITH ROUND RUBBER GASKETS. THE WEIGHT OF EACH SECTION MUST MAKE AN INFILTRATION PROOF JOINT BY FORCING THE GASKET TIGHT.

-ALL MATERIALS AND CONSTRUCTION SHALL MEET THE REQUIREMENTS OF OCSD NO. 1

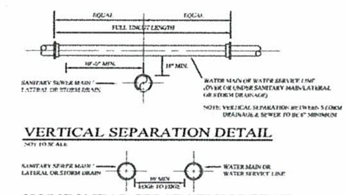
-MANHOLE TO BE SUITABLE FOR H-20 LOADING.

-MANHOLE EXTERIOR MUST BE 100% BITUMINOUS COATING.



NOTES:
1. ALL APPROVED BUILDING SEWER PIPE MATERIAL FOR EACH CONNECTION MADE SHALL BE CONSTRUCTED FROM THE SAME MATERIAL.
2. SADDLE CONNECTION TO BE STYLE "CB" SEWER SADDLE AS MANUFACTURED BY ROMAC INDUSTRIES, INC. OR APPROVED EQUAL.
3. REFER TO DETAIL SPECIFICATIONS FOR STYLE "CB" SEWER SADDLE AS PROVIDED BY ROMAC INDUSTRIES, INC. FOR INSTALLATION GUIDELINES.
4. INSTALLATION AND MATERIALS OF THE SADDLE CONNECTION TO CONFORM WITH O.C.S.D. NO. 1 CRITERIA. THERE WILL BE NO DEVIATION FROM THE APPROVED PLAN WITHOUT WRITTEN APPROVAL FROM THE SEWER DEPARTMENT.

SADDLE CONNECTION DETAIL
NOT TO SCALE



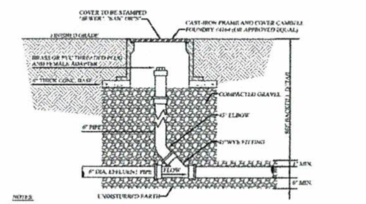
NOTE: VERTICAL SEPARATION BETWEEN STORM DRAINAGE & SEWER TO BE 6" MINIMUM

VERTICAL SEPARATION DETAIL
NOT TO SCALE

HORIZONTAL SEPARATION DETAIL
NOT TO SCALE

NOTE: THE SEPARATION REQUIREMENT SHALL CONFORM TO CURRENT ORANGE COUNTY DEPARTMENT OF HEALTH STATUTES, CODES, RULES, REGULATIONS AND LAWS AS THEY APPLY. ANY DEVIATION FROM THE ABOVE SEPARATION REQUIREMENTS SHALL REQUIRE WRITTEN APPROVAL FROM THE ORANGE COUNTY DEPARTMENT OF HEALTH.

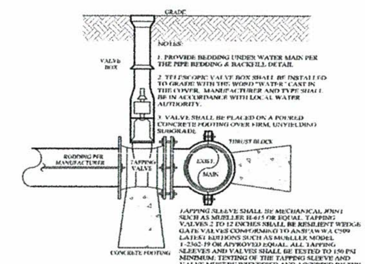
WATER/SEWER SEPARATION REQUIREMENTS
NOT TO SCALE



NOTES:
1. EACH BUILDING SEWER SHALL HAVE A CLEANOUT INSTALLED APPROXIMATELY 2' DOWNSTREAM OF THE BUILDING PIPE TO BUILDING SEWER CONNECTION. THEREAFTER, CLEANOUTS SHALL BE INSTALLED ALONG THE BUILDING SEWER APPROXIMATELY EVERY 100' (MAXIMUM). FOR THE PURPOSE OF CLEANOUT LOCATIONS DISTANCE SHALL BE MEASURED FROM THE FIRST CLEANOUT LOCATED DOWNSTREAM OF THE HOUSE PIPE TO BUILDING SEWER CONNECTION, HENCE DOWNSTREAM ALONG THE BUILDING SEWER TO THE CENTER OF THE SEWER MAIN LINE (GENERALLY LOCATED IN THE CENTER OF THE STREET).

2. A CLEANOUT LOCATED IN A ROAD, DRIVEWAY OR PARKING AREA SHALL REQUIRE A CAMPBELL FOUNDARY #4164 CAST IRON FRAME AND COVER. (OR APPROVED EQUAL)

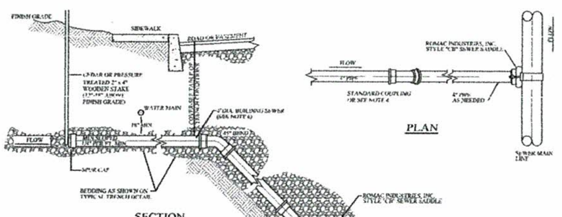
BUILDING SEWER CLEAN-OUT DETAIL
NOT TO SCALE



NOTES:
1. PROVIDE BEDDING UNDER WATER MAIN PER THE PIPE BEDDING & BACKFILL DETAIL.
2. TELESCOPIC VALVE BOX SHALL BE INSTALLED TO GRADE WITH THE WORD "WATER" CAST IN THE COVER. MANUFACTURER AND TYPE SHALL BE IN ACCORDANCE WITH LOCAL WATER AUTHORITY.
3. VALVE SHALL BE PLACED ON A POURED CONCRETE FOOTING OVER FIRM, UNYIELDING SUBGRADE.

TAPPING SLEEVE SHALL BE MECHANICAL JOINT SUCH AS MUELLER H-615 OR EQUAL. TAPPING VALVES 2 TO 12 INCHES SHALL BE RESILIENT WEDGE GATE VALVES CONFORMING TO ANSI/AWWA C509 LATEST EDITIONS SUCH AS MUELLER MODEL T-2362-19 OR APPROVED EQUAL. ALL TAPPING SLEEVES AND VALVES SHALL BE TESTED TO 150 PSI MINIMUM. TESTING OF THE TAPPING SLEEVE AND VALVE MUST BE WITNESSED AND ACCEPTED BY THE VILLAGE OF SOUTH BLOOMING GROVE WATER DEPARTMENT PRIOR TO CUTTING INTO THE PIPE.

WATER MAIN TAPPING VALVE DETAIL
NOT TO SCALE



SPECIAL CONDITIONS FOR SHALLOW TRENCH	
COVER	PIPE
LESS THAN 4'-0"	CLASS 52 DUCTILE IRON OR CAST IRON EXTRA HEAVY OR APPROVED EQUAL

NOTES:
1. EACH 6" BUILDING SEWER SHALL PROVIDE SERVICE FOR NO MORE THAN TWELVE (12) EQUIVALENT LIVING UNITS, AS DETERMINED BY OCSD NO. 1 UNLESS A REQUESTED DEVIATION IS APPROVED IN WRITING BY SEWER DEPARTMENT.
2. ALL APPROVED BUILDING SEWER PIPE MATERIAL FOR EACH CONNECTION MADE SHALL BE CONSTRUCTED FROM THE SAME MATERIAL.
3. MINIMUM HORIZONTAL SEPARATION BETWEEN SPUR CAP AND SIDEWALK SHALL BE 2'-0". IN ALL CASES THE SPUR CAP LOCATION SHALL EXTEND A MINIMUM HORIZONTAL DISTANCE OF 2'-0" ONTO ALL BUILDING LOT PROPERTIES.
4. TRANSITION BETWEEN DIFFERENT PIPE MATERIAL (AS APPROVED) SHALL BE MADE BY INSTALLING A TYPE 1, STYLE 62 DRESSER COUPLING OR DRESSER STYLE 202 HYMAX COUPLING (OR APPROVED EQUAL).
5. SADDLE CONNECTION SHALL BE A FITTING CONSTRUCTED SPECIFICALLY FOR THE INSTALLED MAIN LINE SEWER MATERIAL CLASS (OR APPROVED EQUAL).
6. THE BUILDINGS SEWER SHOWN FROM THE MAIN LINE SOURCE SADDLE CONNECTION FITTING TO THE SPUR CAP SHALL MEET THE SPECIFICATIONS SHOWN FOR 6" SEWER SERVICE LATERALS.
7. 4" BUILDING SEWER LATERAL MAY BE APPROVED FOR CONSTRUCTION OF SINGLE (1) AND TWO (2) FAMILY DWELLINGS ONLY. ALL OTHER BUILDING LATERAL SEWERS (INCLUDING COMMERCIAL) SHALL BE 6" IN DIA.

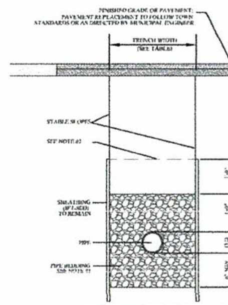
SANITARY SEWER SPECIFICATIONS (FOR BUILDING SEWERS AND SEWER MAIN LINE)

1) REQUIRED MAIN LINE SEWER (OR APPROVED EQUAL):
A) ABS-TRUSS PIPE:
I) PIPE: STAMPED ASTM D2680.
II) FITTINGS: STAMPED ASTM D2680.
III) JOINTS: SOLVENT WELD, ASTM D2235.
B) PVC-TRUSS PIPE:
I) PIPE: STAMPED ASTM D2680.
II) FITTINGS: STAMPED ASTM D2680.
III) JOINTS: SOLVENT WELD, ASTM D2564 OR ELASTOMERIC (GASKET)
C) PVC - SDR 26 HEAVY WALL PIPE:
I) PIPE (8"-15" DIAMETER): STAMPED ASTM 3034.
PIPE (18" AND GREATER DIAMETER): STAMPED ASTM F679.
II) FITTINGS: STAMPED ASTM 3034 OR F679.
III) JOINTS: SOLVENT WELD ASTM 2564 OR ELASTOMERIC (GASKET)
D) PVC - SDR 35 SOLID WALL PIPE:
I) PIPE (8"-15" DIAMETER): STAMPED ASTM D3034.
PIPE (18" OR GREATER DIAMETER): STAMPED ASTM F789.
II) FITTINGS: STAMPED ASTM 3034 OR F679.
III) JOINTS: BELL & SPIGOT WITH ELASTOMETRIC GASKET ASTM D3034 OR SOLVENT WELD ASTM D2564.

2) REQUIRED 6" BUILDING LATERAL SEWER (OR APPROVED EQUAL):
A) PVC - SDR 35 SOLID WALL PIPE:
I) PIPE STAMPED ASTM D3034 AND SDR 35.
II) FITTINGS: STAMPED SDR 35 AND ASTM 3034.
III) JOINTS: BELL & SPIGOT WITH ELASTOMETRIC GASKET ASTM D3034 OR SOLVENT WELD ASTM D2564.
B) PVC - SDR 26 HEAVY WALL PIPE:
I) PIPE STAMPED ASTM D3034 AND SDR 26.
II) FITTINGS: STAMPED D3034 AND SDR 26.
III) JOINTS: BELL & SPIGOT WITH ELASTOMETRIC GASKET ASTM D3034 OR SOLVENT WELD ASTM D2564.
C) PVC - SDR 23.5 ABS SOLID WALL PIPE:
I) PIPE STAMPED ASTM D2751 AND SDR 23.5
II) FITTINGS: STAMPED SDR 23.5 AND ASTM D2751.
III) JOINTS: SOLVENT WELD ASTM D2564.

3) OTHER REQUIRED PIPE MATERIALS FOR 6" LATERAL AND SEWER MAIN LINE (OR APPROVED EQUAL):
A) CAST IRON, EXTRA HEAVY, COATED, HUB & PLAIN END, ASTM C-74 WITH ELASTOMERIC COMPRESSION GASKET (ASTM C-564).
B) DUCTILE IRON PIPE, CLASS 52, CEMENT LINED AND TAR COATED INSIDE AND OUT.

SEWER MAIN CONNECTION DETAIL
NOT TO SCALE



PIPE O.D.	TRENCH WIDTH
24" AND SMALLER	O.D. + 1'-4"
30" AND LARGER	O.D. + 2'-0"

TYPICAL TRENCH DETAIL (SANITARY SEWER)
NOT TO SCALE

Notes:

1) PIPE BEDDING SHALL BE A CLASS I ASTM D2321 EMBEDMENT MATERIAL THAT SHALL BE EITHER CRUSHED STONE OR WASHED GRAVEL PASSING A 3/4" SIEVE AND RETAINED ON A 3/8" SIEVE. THE EMBEDMENT MATERIAL SHALL BE HAND TAMPED AND COMPACTED TO 90% OF THE MAXIMUM DENSITY OF THE EMBEDMENT MATERIAL AS DETERMINED BY STANDARD PROTECTOR TEST IN ACCORDANCE WITH AASHTO DESIGNATION T-99. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A GO-NO-GO TESTING GAUGE, AS DEFINED IN THE GREEN-TITE (TRADEMARK) PVC GRAVITY SEWER PIPE INSTALLATION GUIDE AS PUBLISHED BY J-M PIPE (OR APPROVED EQUAL) FOR TESTING DEFLECTION OF MAIN LINE SEWER PIPE, AS DIRECTED BY OCSD. MAXIMUM MAIN LINE SEWER DEFLECTION SHALL BE NO GREATER THAN 5%.

2) BACKFILL FROM 12 IN. TO 24 IN. ABOVE THE PIPE EMBEDMENT MATERIAL SHALL BE FINE EARTH FREE FROM CINDERS AND SHALL BE MECHANICALLY COMPACTED. REMAINING BACKFILL SHALL BE FREE FROM LARGE CLODS, NATURAL DEBRIS, ROCKS, AND CINDERS.

3) PLACE EMBEDMENT MATERIAL BY HAND AND HAND COMPACT UNDER AND AROUND SIDES OF PIPE. PLACE EMBEDMENT MATERIAL IN 6" LAYERS ABOVE TOP OF PIPE, AND HAND COMPACT TO A POINT 12 INCH MAXIMUM ABOVE THE TOP OF PIPE.

4) THE OWNER AND CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A COMPETENT PERSON DURING ALL PHASES OF CONSTRUCTION WHOSE DUTY SHALL BE TO INSURE THAT ALL PHASES OF CONSTRUCTION ARE IN FULL COMPLIANCE WITH OCSD NO.1 SPECIFICATIONS AND ALL APPLICABLE FEDERAL, STATE AND LOCAL STATUTES, CODES, RULES, REGULATIONS AND LAWS INCLUDING, BUT NOT LIMITED TO, UNITED STATES DEPARTMENT OF LABOR FOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION AND N.Y.S. DEPARTMENT OF LABOR FOR SECTION 1910.146 PERMIT REQUIRED CONFINED SPACE ENTRY, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION SECTION 1926.650 EXCAVATION GENERAL PROTECTION REQUIREMENTS AND OSHA SECTION 1926.651 TRENCHING AND SHORING, STATE OF NEW YORK UNIFORM FIRE PREVENTION AND BUILDING CODES AND NATIONAL FIRE PROTECTION ASSOCIATION CODES.

5) ALL APPROVED MAIN LINE SEWER PIPE SHALL BE THE SAME MATERIAL FROM MAN-HOLE TO MAN-HOLE.

6) FILL SECTION AREA MUST BE GRADED WITH THE PLACEMENT OF SUITABLE SOIL MATERIAL, AS DETERMINED BY THE PROJECT SITE ENGINEER, IN 12" (MAX) LAYERS COMPACTED TO 95% OF THE MAXIMUM DENSITY OF THE SOIL AS DETERMINED BY THE STANDARD PROTECTOR TEST (ASSHTO DESIGNATION T-99) TO 2'-0" (MIN.) ABOVE TOP OF PIPE AT A MINIMUM WIDTH OF O.D. + 4'-0" BEFORE TRENCH EXCAVATING.

7) WHERE ROCK IS ENCOUNTERED IN TRENCH BOTTOM, UNDERCUT MUST BE MADE BETWEEN 12" MIN. TO 24" MAX.

8) WHERE UNSUITABLE MATERIAL IS ENCOUNTERED IN TRENCH BOTTOM, UNDERCUT TO SUITABLE MATERIAL (AS APPROVED BY TOWN ENGINEER).

VILLAGE OF SOUTH BLOOMING GROVE
AUG 8 2022
RECEIVED

PROJECT TITLE
SOUTHGROVE
VILLAGE OF SOUTH BLOOMING GROVE, ORANGE COUNTY, NEW YORK

DRAWING TITLE
SANITARY DETAILS

KIRK ROTHER, P.E.
CONSULTING ENGINEER, PLLC
5 St. Stephens Lane, Warwick, NY 10990
(845) 988-0620

08-17-22	REV. PER VILLAGE ENGINEER'S COMMENTS	
07-21-22	INITIAL PREPARATION	
		DATE

KIRK ROTHER, P.E. N.Y.S. LIC. NO. 079053

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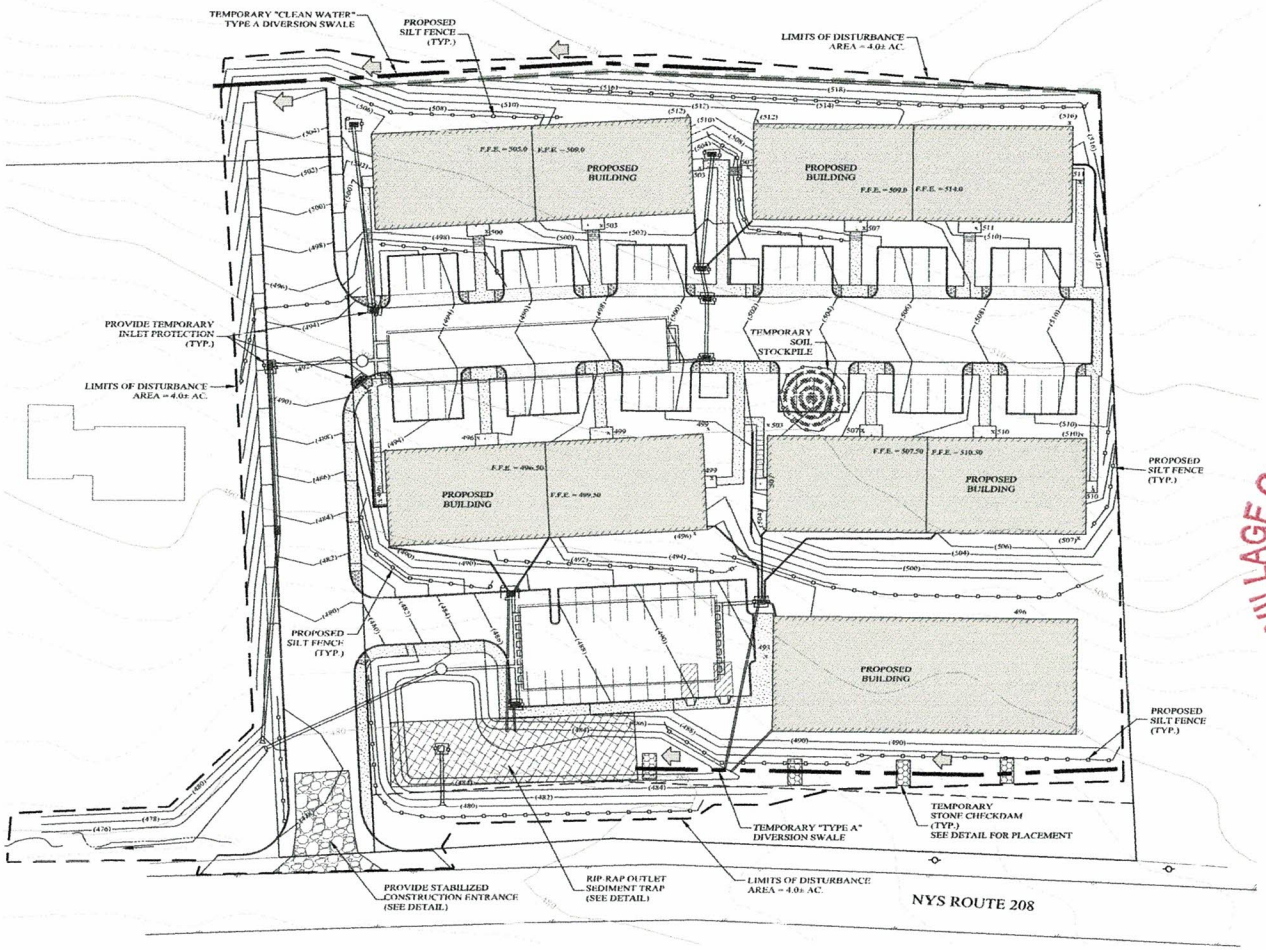
D.O.T. SHEET #	D.E.C. SHEET #	O.C.H.D. SHEET #	SHEET #
N.A.	N.A.	N.A.	6 OF 10
CAD #	PROJECT #	SCALE	
20129 SP	20129.0	AS SHOWN	



VILLAGE OF SOUTH BLOOMING GROVE
AUG 1 8 2022
RECEIVED

LEGEND

- EXISTING PROPERTY LINE
- EXISTING 2' CONTOUR LINE
- EXISTING 10' CONTOUR LINE
- PROPOSED CONTOUR LINE (590)
- EXISTING EDGE OF PAVEMENT
- PROPOSED STONE CHECK DAM
- PROPOSED DIVERSION SWALE
- PROPOSED SOIL STOCKPILE
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED TEMPORARY RIP-RAP OUTLET SEDIMENT TRAP

GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft.

SOUTHGROVE

PROJECT TITLE: VILLAGE OF SOUTH BLOOMING GROVE, ORANGE COUNTY, NEW YORK

EROSION CONTROL PLAN

DRAWING TITLE

KIRK ROTHER, P.E.
CONSULTING ENGINEER, PLLC
5 St. Stephens Lane, Warwick, NY 10990
(845) 988-0620
KIRK ROTHER, P.E. N.Y.S. LIC. NO. 076853

DATE	REVISIONS
06-17-22	INITIAL PREPARATION

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N.A.	N.A.	N.A.	7 OF 10
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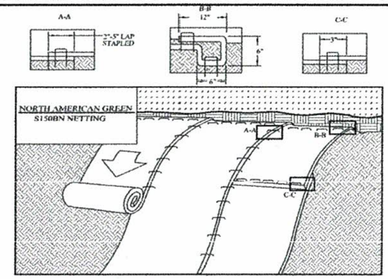


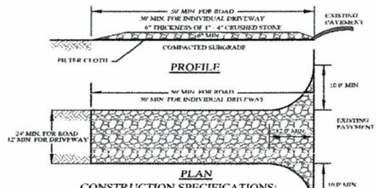
CONSTRUCTION SPECIFICATIONS:

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECPS), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN. A MINIMUM OF 4 INCHES OF TOPSOIL SHALL BE ADDED PRIOR TO STABILIZATION.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECPS IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF RECPS EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECPS WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECPS BACK OVER SEED AND COMPACTED SOIL. SECURE RECPS OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECPS.
3. ROLL THE RECPS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECPS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECPS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECPS MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECPS TYPE.
5. CONSECUTIVE RECPS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECPS WIDTH.

NOTE:
*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECPS.

ROLLED EROSION CONTROL MATTING SLOPE STABILIZATION DETAIL

NOT TO SCALE

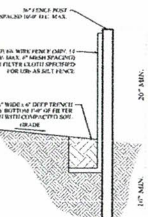


CONSTRUCTION SPECIFICATIONS:

1. ENTRANCE SHALL BE MAINTAINED AS CONDITIONS DEMAND TO PREVENT TRACKING OF SEDIMENT ONTO PUBLIC R.O.W. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC R.O.W. MUST BE REMOVED IMMEDIATELY.
2. A CRUSHED STONE VEHICLE WHEEL CLEANING BLANKET WILL BE INSTALLED WHERE A CONSTRUCTION ACCESS ROAD INTERSECTS ANY PAVED ROADWAY. THE BLANKET SHALL BE COMPOSED OF 6" DEPTH OF 1"-4" CRUSHED STONE. SHALL BE AT LEAST 24' X 50' FOR THE ROAD ENTRANCE AND 12' X 30' FOR DRIVEWAYS, AND SHALL BE PLACED ON COMPACTED SUB-GRADE.
3. A FILTER CLOTH WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
4. ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
5. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE



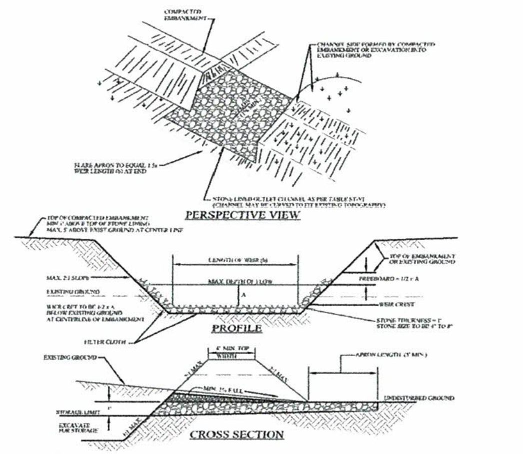
FENCE PROPERTIES	MINIMUM VALUE	STANDARD
GRAB TENSILE STRENGTH (LBS)	90	ASTMD 1682
ELONGATION AT FAILURE(%)	50	ASTM D1682
MULEN BURST STRENGTH (PSI)	190	ASTM D3786
PUNCTURE STRENGTH (LBS)	40	ASTM D751 (MODIFIED)
SLURRY FLOW RATE (GAL/MIN/SF)	0.3	
EQUIVENT OPENING SIZE	40-80	US STD SIEVE CW-02215
ULTRAVIOLET RADIATION STABILITY (%)	90	ASTM G-26

SLOPE STEEPNESS	MAXIMUM FENCE SPACING (FT)
2:1	25
3:1	50
4:1	75
5:1 OR FLATTER	100

NOTES:
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. WOOD POSTS SHALL BE OF SOUND QUALITY HARDWOOD WITH A MINIMUM CROSS SECTIONAL AREA OF 3.0 SQUARE INCHES.
3. STEEL POSTS WILL BE STANDARD "T" AND "U" SECTION WEIGHING NOT LESS THAN 1.00 POUND PER LINEAR FOOT.
4. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUAL.
6. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.
7. ALL SILT FENCES SHALL RUN PARALLEL TO THE CONTOUR OF THE LAND.
8. ALL SILT FENCING SHALL MEET THE MINIMUM REQUIREMENTS AS STATED UNLESS OTHERWISE NOTED AND APPROVED BY THE BUILDING INSPECTOR AND ENGINEER.
9. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

FILTER FABRIC SILT FENCE DETAIL

NOT TO SCALE

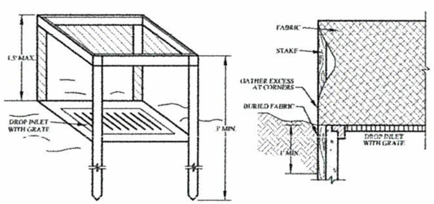


SEDIMENT TRAP CRITERIA

TRAP TYPE	RIP RAP OUTLET SEDIMENT TRAP
DRAINAGE AREA	4.9 AC.
STORAGE REQUIRED	17,640 C.F.
STORAGE PROVIDED	19,500 C.F.
DIMENSIONS AT "AVE." WATER HT	130' x 30'
DEPTH BELOW BASE OF WEIR (AVG.)	5'
CHANNEL DEPTH	1.5'
WEIR LENGTH	6'

RIPRAP OUTLET SEDIMENT TRAP CONSTRUCTION SPECIFICATIONS:

1. THE AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED. MAXIMUM HEIGHT OF EMBANKMENT SHALL BE FIVE (5) FEET, MEASURED AT CENTERLINE OF EMBANKMENT.
3. ALL FILL SLOPES SHALL BE 2:1 OR FLATTER, CUT SLOPES 1:1 OR FLATTER.
4. ELEVATION OF THE TOP OF ANY DIKE DIRECTING WATER INTO TRAP MUST EQUAL OR EXCEED HEIGHT OF EMBANKMENT.
5. STORAGE AREA PROVIDED SHALL BE FIGURED BY COMPUTING THE VOLUME AVAILABLE BEHIND THE OUTLET CHANNEL UP TO AN ELEVATION OF ONE (1) FOOT BELOW THE WEIR CREST.
6. FILTER CLOTH SHALL BE PLACED OVER THE BOTTOM AND SIDES OF THE OUTLET CHANNEL PRIOR TO PLACEMENT OF STONE. SECTIONS OF FABRIC MUST OVERLAP AT LEAST ONE (1) FOOT WITH SECTION NEAREST THE ENTRANCE PLACED ON TOP. FABRIC SHALL BE EMBEDDED AT LEAST SIX (6) INCHES INTO EXISTING GROUND AT ENTRANCE OF OUTLET CHANNEL.
7. STONE USED IN THE OUTLET CHANNEL SHALL BE FOUR (4) TO EIGHT (8) INCHES (RIP RAP). TO PROVIDE A FILTERING EFFECT, A LAYER OF FILTER CLOTH SHALL BE EMBEDDED ONE (1) FOOT WITH SECTION NEAREST ENTRANCE PLACED ON TOP. FABRIC SHALL BE EMBEDDED AT LEAST SIX (6) INCHES INTO EXISTING GROUND AT ENTRANCE OF OUTLET CHANNEL.
8. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
9. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND SHALL BE REPAIRED AS NEEDED.
10. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE MINIMIZED.
11. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
12. DRAINAGE AREA FOR THIS PRACTICE IS LIMITED TO 15 ACRES.

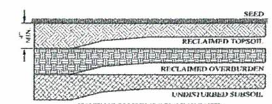


CONSTRUCTION SPECIFICATIONS:

1. FILTER FABRIC SHALL HAVE AN EOS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT. METAL WITH A MINIMUM LENGTH OF 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM OF 18" DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVERFLOW STABILITY.

FILTER FABRIC DROP INLET PROTECTION DETAIL

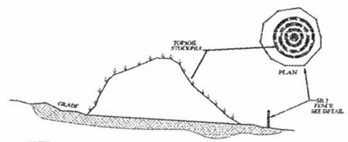
NOT TO SCALE



-SCARIFY SOIL TO DEPTH OF 4" TO 6" IF COMPACTED.
REMOVE LARGE STONES, STUMPS, ROOTS & DEBRIS.
-LIME AS REQUIRED TO ACHIEVE A pH OF 6.5.
-FERTILIZE AT 600#/ACRE OF 5-10-10 FERTILIZER, IF NEEDED.
-ROTOTILL TOP 4" OF SOIL, SEED AND MULCH

RECLAMATION DETAIL

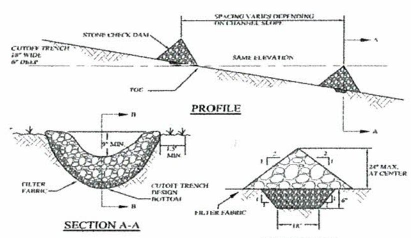
NOT TO SCALE



NOTES:
1. TOPSOIL STOCKPILE TO BE SEEDED AS PER THE TEMPORARY SEEDING SPECIFICATIONS.
2. SILT FENCE TO BE INSTALLED DOWN GRADIENT OF STOCKPILE.

TOPSOIL STOCKPILE DETAIL

NOT TO SCALE

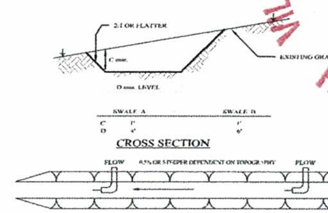


CONSTRUCTION SPECIFICATIONS:

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.
2. SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATION OF THE CREST OF THE DOWN STREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONES.
6. MAXIMUM DRAINAGE AREA IS 2 ACRES ABOVE THE CHECK DAM.

CHECK DAM DETAILS

NOT TO SCALE



	SWALE A	SWALE B
C	1'	1'
D	4'	6'

CONSTRUCTION SPECIFICATIONS:

1. ALL TEMPORARY SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSIVE VELOCITY.
4. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.
5. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH IMPEDE NORMAL FLOW.
6. ALL FILLS ARE TO BE MECHANICALLY COMPACTED.
7. ALL EARTH REMOVED AND NOT NEEDED SHALL BE PLACED AS NOT TO INTERFERE WITH THE FUNCTIONING OF THE SWALE.
8. REFER TO CHART FOR STABILIZATION OF FLOW CHANNEL.
9. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	A (5 AC OR LESS)	B (5 AC-10 AC)
1.	0.5-3.0	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2.	3.1-5.0	SEED AND STRAW MULCH	SEED USING JUTE OR EXCELSIOR
3.	5.1-8.0	SEED WITH JUTE OR EXCELSIOR/SOD	LINED RIP-RAP 4-8" RECYCLED CONCRETE EQUIVALENT
4.	8.1-20	LINED 4-8" RIP RAP	ENGINEERED DESIGN

TEMPORARY DIVERSION SWALE DETAIL

NOT TO SCALE

PERMANENT SEEDING MIXTURES

MODERATE TO STEEP SLOPES AND LOW MAINTENANCE AREAS

SPECIES	APPLICATION RATE
EMPIRE BIRDSFOOT TREFOIL	8 LBS/ACRE
TALL FESCUE	20 LBS/ACRE
RYEGRASS	5 LBS/ACRE

GENERAL RECREATION AREAS AND LAWNS

SPECIES	APPLICATION RATE
SUNNY SITES (WELL, MODERATELY WELL AND SOMEWHAT POORLY DRAINED SOILS)	
65% KENTUCKY BLUEGRASS BLEND	85-114 LBS/ACRE
20% PERENNIAL RYEGRASS	26-35 LBS/ACRE
15% FINE FESCUE	19-26 LBS/ACRE
SUNNY DROUGHTY SITES (SOMEWHAT TO EXCESSIVELY DRAINED SOILS)	
65% FINE FESCUE	114-143 LBS/ACRE
15% PERENNIAL RYEGRASS	26-33 LBS/ACRE
20% KENTUCKY BLUEGRASS BLEND	35-44 LBS/ACRE

SHADY DRY SITES (WELL TO SOMEWHAT POORLY DRAINED SOILS)	
80% SHADE TOLERANT KENTUCKY BLUEGRASS BLEND	105-138 LBS/ACRE
20% PERENNIAL RYEGRASS	25-37 LBS/ACRE
SHADY WET SITES (SOMEWHAT POOR TO POORLY DRAINED SOILS)	
70% ROUGH BLUEGRASS	69-91 LBS/ACRE
30% SHADE TOLERANT KENTUCKY BLUEGRASS BLEND	25-39 LBS/ACRE

SITE PREPARATION

A. INSTALL NEEDED WATER AND EROSION CONTROL MEASURES AND BRING AREA TO BE SEEDED TO DESIRED GRADES USING A MINIMUM OF 4" OF TOPSOIL.
B. PREPARE SEED BED BY LOOSENING SOIL TO A DEPTH OF 4-6 INCHES.
C. LIME TO A pH OF 6.5
D. FERTILIZE PER SOIL TESTS, OR, IF FERTILIZER IS TO BE APPLIED BEFORE SOIL TESTS, APPLY 850 POUNDS OF 5-10-10 OR EQUIVALENT PER ACRE (20 LBS. / 1000 SQ. FT.)
E. INCORPORATE LIME AND FERTILIZER IN TOP 2-4 INCHES OF SOIL.
F. SMOOTH. REMOVE ALL STONES OVER 1" IN DIAMETER, STICKS AND FOREIGN MATTER FROM SEED BED.
G. APPLY SEED PER PERMANENT SEEDING SCHEDULE.

TEMPORARY SEEDING SPECIFICATIONS

AREAS REMAINING DISTURBED FOR 14 DAYS OR MORE SHALL BE STABILIZED AS FOLLOWS:
SCARIFY SOILS IF COMPACTED, LIME TO pH OF 6.0 IF REQUIRED, FERTILIZE WITH 600 LBS/ACRE 5-10-10 FERTILIZER IF REQ., SEED WITH SPECIES AND RATE SHOWN BELOW, MULCH WITH HAY OR STRAW AT A RATE OF 2 TONS/ACRE. ANCHOR MULCH WITH NETTING OF WOOD FIBER OR JUTE IF STEEP SLOPE OR HIGH POTENTIAL FOR EROSION.

SPECIES	APPLICATION RATE
RYEGRASS (ANNUAL OR PERENNIAL) (USE WINTER RYE IF SEEDING IN OCT.-NOV.)	30 LBS/ACRE (0.7 LBS/1000 SF)

SLOPE STABILIZATION, SEEDING METHOD & MULCHING

SLOPES OF 4:1 OR GREATER (HORIZONTAL:VERTICAL)
SLOPES SHALL BE HYDROSEEDED WITH THE MIXTURES AND RATES INDICATED IN THE PERMANENT SEEDING MIXTURE SCHEDULE. STRAW OR HAY MULCH SHALL BE APPLIED AT A RATE OF 2 TONS/ACRE. STRAW OR HAY MULCH SHALL BE ANCHORED WITH GEO-JUTE EROSION CONTROL NETTING AS MANUFACTURED BY MIRAFI OR APPROVED EQUIVALENT. NETTING TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS.

GENTLE SLOPES AND FLAT AREAS
AREAS SHALL BE SEEDED BY HYDROSEEDING OR BROADCASTING WITH THE MIXTURES AND RATES INDICATED ON THE PERMANENT SEEDING MIXTURE SCHEDULE. HYDROSEEDED AREAS SHALL BE MULCHED WITH A WOOD FIBER MULCH APPLIED AT A RATE OF 500 LBS/ACRE. BROADCAST AREAS SHALL BE MULCHED WITH HAY OR STRAW AT A RATE OF 2 TONS/ACRE. AREAS SEEDED BY BROADCASTING SHALL BE LIGHTLY RAKED AND PACKED PRIOR TO PLACING MULCH.

VILLAGE OF SOUTH BLOOMING GROVE
AUG 1 8 2022
RECEIVED

SOUTHGROVE

PROJECT TITLE: VILLAGE OF SOUTH BLOOMING GROVE, ORANGE COUNTY, NEW YORK

DRAWING TITLE: EROSION CONTROL DETAILS

KIRK ROTHER, P.E.
CONSULTING ENGINEER, PLLC
5 St. Stephens Lane, Warwick, NY 10990
(845) 988-0620

06-17-22	INITIAL PREPARATION			
KIRK ROTHER, P.E.	N.Y.S. LIC. NO. 079053			DATE
D.O.T. SHEET # N.A.	D.E.C. SHEET # N.A.	O.C.H.D. SHEET # N.A.	SHEET #	
CAD # 20129 SP	PROJECT # 20129.0	SCALE AS SHOWN	8 OF 10	

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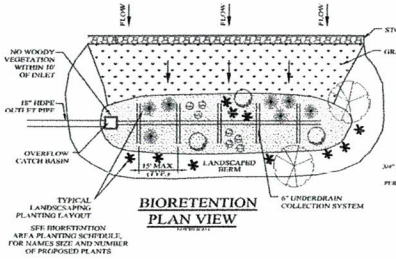
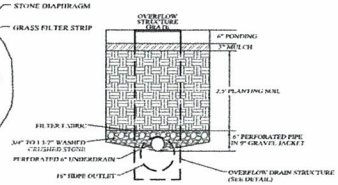
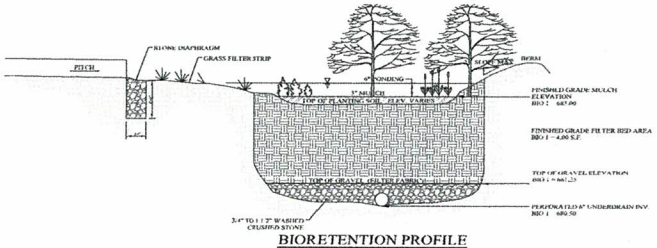


BIORETENTION PLAN VIEW



TYPICAL SECTION



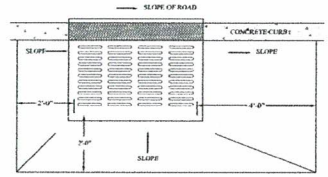
BIORETENTION PROFILE

NOTES:

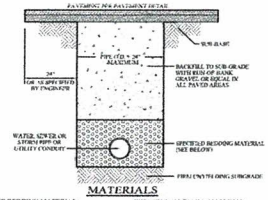
1. A DENSE AND VIGOROUS VEGETATIVE COVER SHALL BE ESTABLISHED OVER THE CONTRIBUTING PERVIOUS DRAINAGE AREAS BEFORE RUNOFF CAN BE ACCEPTED.
2. LANDSCAPING SHALL FOLLOW THE APPROVED PLANS OR A PLAN MUST BE PROVIDED BY A LANDSCAPE ARCHITECT FOR ALL BIORETENTION AREAS.
3. PLANT MATERIALS SHOULD CONFORM TO THE AMERICAN STANDARD NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, AND SHOULD BE SELECTED FROM CERTIFIED, REPUTABLE NURSERIES.
4. SILT/SEDIMENT SHALL BE REMOVED FROM THE FILTER BED WHEN ACCUMULATION EXCEEDS ONE INCH.
5. WHEN WATER PONDS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 48 HOURS THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REMOVED IN AN ACCEPTABLE MANNER (i.e., LANDFILL) AND REPLACED WITH FRESH MATERIAL.
6. AREAS DEVOID OF MULCH SHALL BE RE-MULCHED ANNUALLY
7. DEAD OR DISEASED PLANTS SHALL BE REMOVED AND REPLACED AS NECESSARY.
8. GRASS AROUND BIORETENTION AREA SHALL BE MOWED A MINIMUM OF 3 TIMES PER YEAR TO MAINTAIN MAX. GRASS HEIGHT OF 12"
9. FILTERBED AREA SHALL BE INSPECTED FOR SAND BUILD-UP FOLLOWING THE SPRING MELT EVENT.
10. THE MULCH LAYER SHOULD BE STANDARD LANDSCAPE STYLE, SINGLE OR DOUBLE SHREDDED HARDWOOD MULCH OR CHIPS. THE MULCH LAYER SHOULD BE WELL AGED (STOCKPILED OR STORED FOR AT LEAST 12 MONTHS), UNIFORM IN COLOR, AND FREE OF OTHER MATERIALS, SUCH AS WEED SEEDS, SOIL, ROOTS, ETC. THE MULCH SHOULD BE APPLIED TO A MAXIMUM DEPTH OF THREE INCHES. GRASS CLIPPINGS SHOULD NOT BE USED AS A MULCH MATERIAL.

BIORETENION AREA PLANTING SCHEDULE

SYMBOL	PLANT NAME	SCIENTIFIC NAME	SIZE	SPACING	BIO 1 QTY.	BIO 2 QTY.	BIO 3 QTY.	BIO 4 QTY.
	Red Maple	Acer rubrum	B & B 2-2.5" TO 3" Caliper	15' O.C.	2	3	2	2
	Tupelo	Nyssa sylvatica var.	B & B 5'-6' IN HEIGHT	15' O.C.	8	10	9	6
	Red-Osier Dogwood	Cornus stolonifera	2 GAL.	4' O.C.	33	75	35	10
	Sweet Pepperbush	Clethra alnifolia	2 GAL.	6' O.C.	19	13	30	8
	Fox Sedge	Carex vulpinoidea	2 GAL.	2' O.C.	19	22	30	13
	MULCH		4" Depth		3,900 C.F.	1,100 C.F.	2,600 C.F.	1,500 C.F.



PLAN



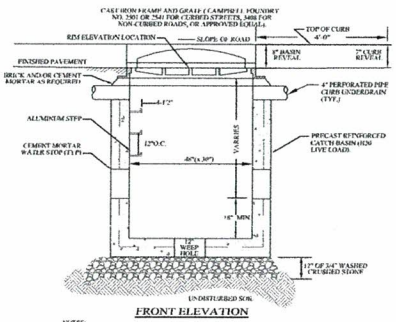
MATERIALS

PIPE ZONE BEDDING MATERIAL:
1. WATER MAINS: SAND OR RUN OF BANK GRAVEL, AS APPROVED BY SOILS ENGINEER.
2. SEWER MAINS: 1/4" CHRUSHED STONE.

PIPE ZONE BACKFILL MATERIAL:
1. WATER MAINS: ON SITE MATERIAL FREE OF FILTH, CLAY FOREIGN MATERIAL OR FROZEN EARTH AS APPROVED BY SOILS ENGINEER.
2. SEWER MAINS: 1/4" CHRUSHED STONE.

PIPE BEDDING AND BACKFILL DETAIL

NOT TO SCALE

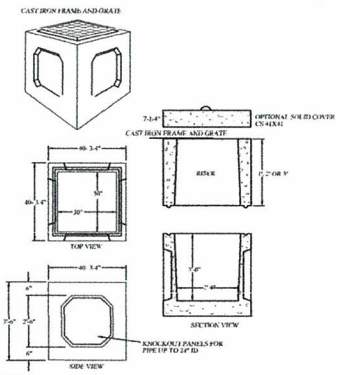


FRONT ELEVATION

NOTES:
1. BACKFILL AROUND CATCH BASIN TO BE COMPACTED IN MAX. 8" LIFTS
2. THE ENDS OF ALL PIPES SHALL BE CUT OFF FLUSH WITH THE INSIDE SURFACE OF CATCH BASIN AND ADEQUATELY MORTARED
3. PRECAST CONCRETE TO BE 4000 PSI @ 28 DAYS

PRECAST CONCRETE CURB INLET DETAIL

NOT TO SCALE



NOTES:
1. BACKFILL AROUND CATCH BASIN TO BE COMPACTED IN MAX. 8" LIFTS.
2. THE ENDS OF ALL PIPES SHALL BE CUT OFF FLUSH WITH THE INSIDE SURFACE OF CATCH BASIN AND ADEQUATELY MORTARED.
3. PRECAST CONCRETE TO BE 4000 PSI @ 28 DAYS

PRECAST CONCRETE FIELD INLET DETAIL

NOT TO SCALE

VILLAGE OF SOUTH BLOOMING GROVE
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VILLAGE OF SOUTH BLOOMING GROVE
AUG 18 2022
RECEIVED

SOUTHGROVE

PROJECT TITLE: VILLAGE OF SOUTH BLOOMING GROVE, ORANGE COUNTY, NEW YORK

DRAWING TITLE: DRAINAGE DETAILS

KIRK ROTHER, P.E.
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DATE	REVISIONS
08-17-22	INITIAL PREPARATION

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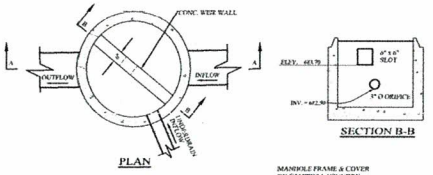
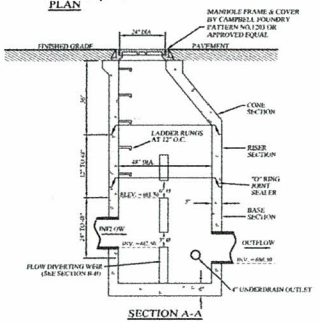
N.A.	N.A.	N.A.	9 OF 10
CAD # 20129 SP	PROJECT # 20129.0	SCALE AS SHOWN	





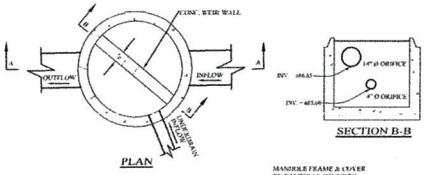
SECTION A-A

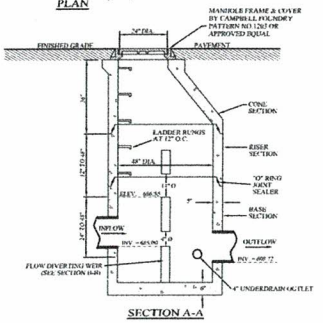
MANHOLES SHALL BE PLACED DIRECTLY ON UNDISTURBED NATURAL SOIL OR A MAXIMUM OF 1' OF SAND IF NEEDED TO ACHIEVE PROPER ELEVATION.

PRECAST CONCRETE MANHOLE MFG. BY MODERN CONCRETE SEPTIC TANK CO. OR APPROVED EQUAL

O.C.S. DRAINAGE MANHOLE 1

NOT TO SCALE





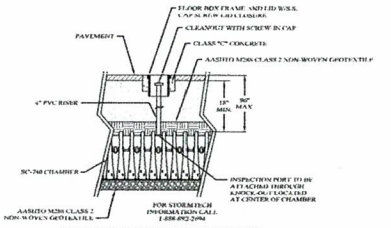
SECTION A-A

MANHOLES SHALL BE PLACED DIRECTLY ON UNDISTURBED NATURAL SOIL OR A MAXIMUM OF 1' OF SAND IF NEEDED TO ACHIEVE PROPER ELEVATION.

PRECAST CONCRETE MANHOLE MFG. BY MODERN CONCRETE SEPTIC TANK CO. OR APPROVED EQUAL

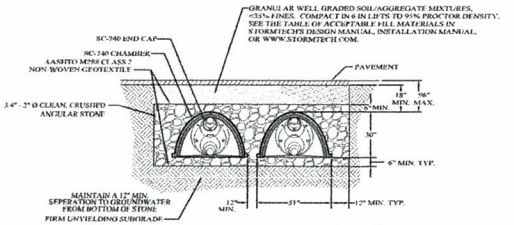
O.C.S. DRAINAGE MANHOLE 2

NOT TO SCALE



INSPECTION PORT DETAIL

NOT TO SCALE



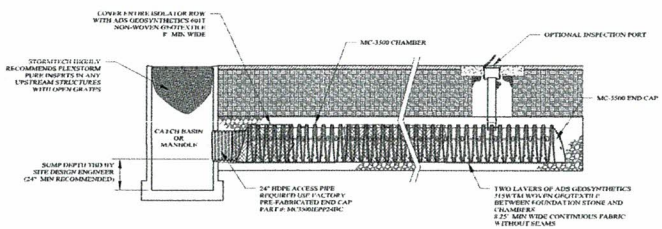
TYPICAL SECTION

NOTES:

1. REFER TO STORMTECH'S DESIGN MANUAL AND INSTALLATION MANUAL FOR DETAILED INSTALLATION INSTRUCTIONS.
2. CHAMBERS SHALL BE INSTALLED AT 0.00% SLOPE AND END CAPPED.
3. STONE SHALL BE 3/4" TO 2" DIAMETER (CLEAN, CRUSHED) STONE.

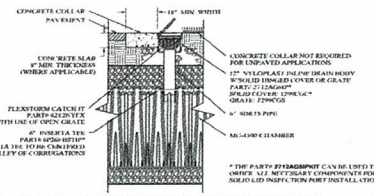
STORMTECH SC - 740 SUBSURFACE STOMWATER MANAGEMENT CHAMBERS DETAIL

NOT TO SCALE



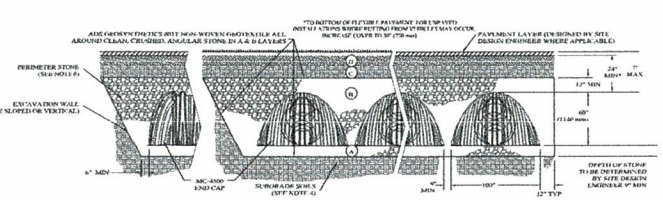
MC-4500 ISOLATOR ROW DETAIL

NOT TO SCALE



MC-4500 6" INSPECTION PORT DETAIL

NOT TO SCALE



STORMTECH MC-4500 CHAMBER SYSTEMS

*FOR COVER DEPTHS GREATER THAN 7.0' PLEASE CONTACT STORMTECH

NOT TO SCALE

NOTES:

1. MC-4500 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. MC-4500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
4. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
   PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. EACH LAYER OF FILL PLACED, ANY SOIL/AGGREGATE CAN BE PLACED IN LAYER "B" UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER "C" OR "D" AT THE SITE DESIGN ENGINEER'S DISCRETION.

VILLAGE OF SOUTH BLOOMING GROVE
AUG 18 2022
RECEIVED

SOUTHGROVE

PROJECT TITLE: VILLAGE OF SOUTH BLOOMING GROVE, ORANGE COUNTY, NEW YORK

DRAWING TITLE: STORMWATER MANAGEMENT DETAILS

KIRK ROTHER, P.E.
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08-17-22	INITIAL PREPARATION	KIRK ROTHER, P.E. N.Y.S. LIC. NO. 079063	DATE

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D.O.T. SHEET #	D.E.C. SHEET #	D.C.H.D. SHEET #	SHEET #
N.A.	N.A.	N.A.	10 OF 10
CAD # 20129 SP	PROJECT # 20129.0	SCALE AS SHOWN	