

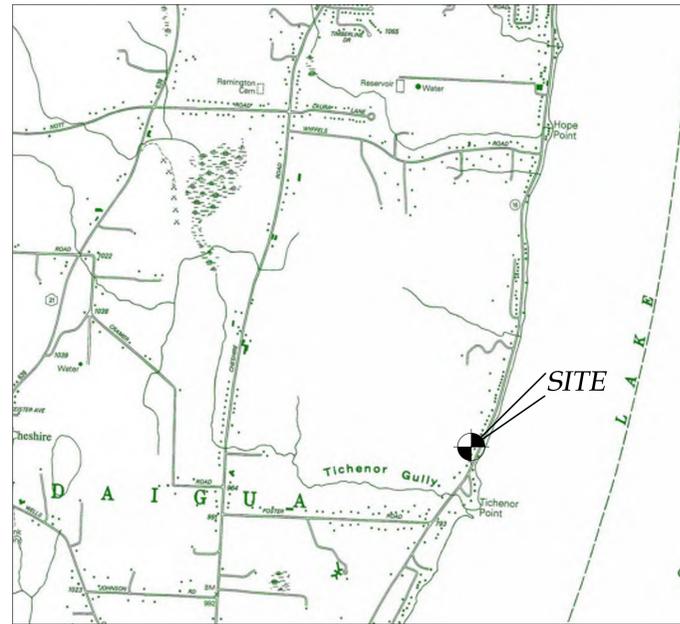
SITE PLANS FOR:

JOHN & SUSAN LEWIS

NEW RESIDENCE

4210 COUNTY ROAD 16
TOWN OF CANANDAIGUA
COUNTY OF ONTARIO
STATE OF NEW YORK

FEBRUARY 10, 2021



LOCATION MAP
NTS



AERIAL MAP - FOR REFERENCE ONLY
NTS



INDEX-
COVER
EX100 - EXISTING CONDITIONS PLAN
C100 - SITE PLAN
L100 - LANDSCAPING PLAN
C500 - GENERAL DETAILS
C501 - SANITARY DETAILS
C502 - DETAILS
C503 - DETAILS
C504 - DETAILS



MarksEngineering

MARKS ENGINEERING, P.C.
42 BEEMAN STREET
CANANDAIGUA, NY 14424
(585)905-0360
WWW.MARKSENGINEERING.COM

PROPERTY OWNER:
JOHN M. & SUSAN S. LEWIS
4210 COUNTY ROAD 16
CANANDAIGUA,
NEW YORK 14424

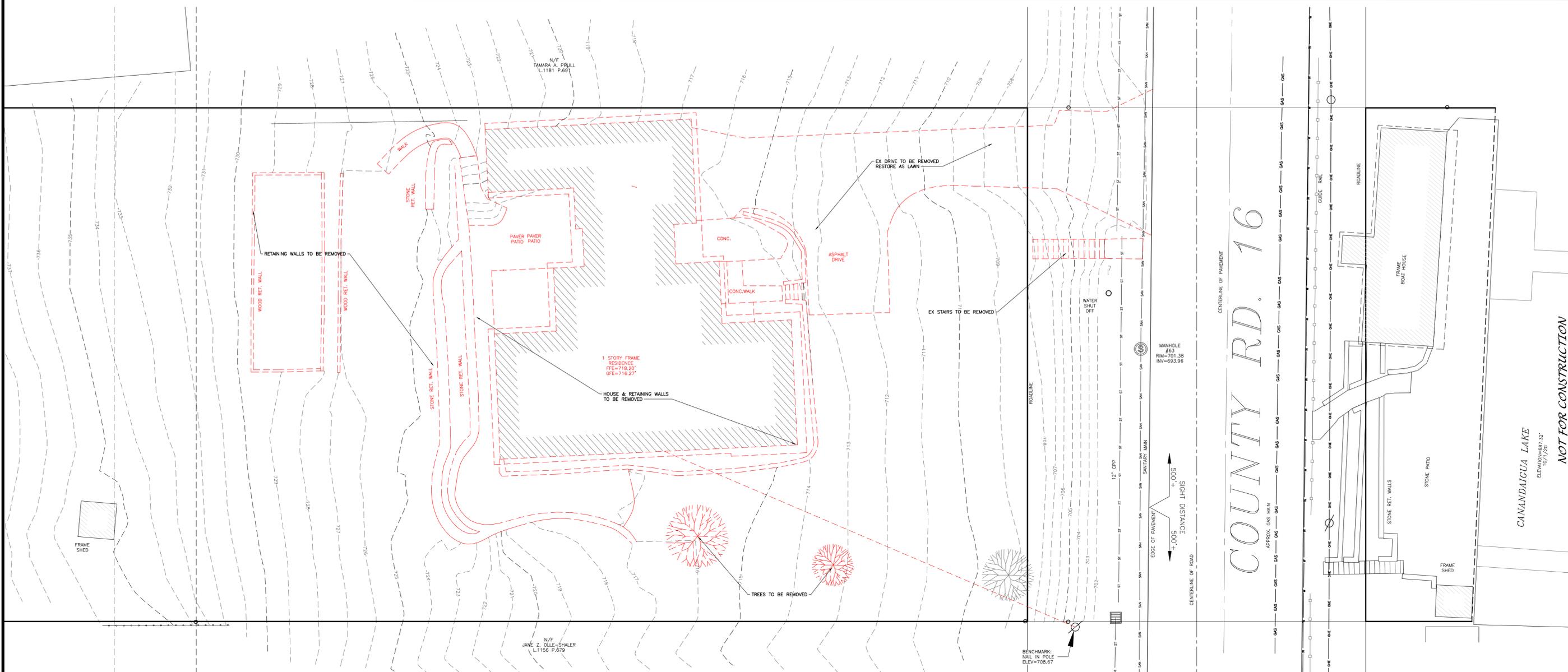
PREPARED FOR:
JOHN & SUSAN LEWIS

REVISIONS:
02/17/21 - PER PRC REVIEW
03/16/21 - PER SAHLER COMMENTS
04/06/21 - PER ZBA REVIEW



NOT FOR CONSTRUCTION

JOHN & SUSAN LEWIS
4210 COUNTY ROAD 16
TOWN OF CANANDAIGUA
COUNTY OF ONTARIO
NEW YORK
JOB #20-203
02/10/2021



NOT FOR CONSTRUCTION

REVISIONS AND APPROVALS			
NO.	DATE	DESCRIPTION OF REVISION OR APPROVAL	BY
1	2/17/21	PER PRC REVIEW	MCT
2	3/16/21	PER SAHLER COMMENTS	JAM
3	4/6/21	PER ZBA REVIEW	MCT

SITE PLANS PREPARED FOR:
JOHN & SUSAN LEWIS
 NEW RESIDENCE
 SHOWING LAND IN:
 4210 COUNTY ROAD 16
 TOWN OF CANANDAIGUA
 COUNTY OF ONTARIO
 STATE OF NEW YORK

DRAWING TITLE:	
EXISTING CONDITIONS	
DRAWN BY:	KRB
DESIGNED BY:	KRB
CHECKED BY:	DMP
SCALE:	AS NOTED
JOB NO.:	20-203
DATE:	02/10/2021
TAX MAP:	127.19-2-30.111

EX100

REFERENCES & NOTES

- MAP: PLAN OF LAND OF JOHN M. & SUSAN S. LEWIS BY FREELAND-PARRINELLO LAND SURVEYORS, DATED NOVEMBER 12, 2019 JOB NO. 16-277
- DEED: L.1365 P.694
- VERTICAL DATUM: NAVD 29
- HORIZONTAL DATUM: PER REF 1
- ZONING: RLD - RESIDENTIAL LAKESHORE DISTRICT
- PARCEL IS LOCATED IN ZONE X FLOOD ZONE PER FEMA MAP 360598 0025C, DATED MARCH 3, 1997.
- CANANDAIGUA LAKE COUNTY SEWER DISTRICT RECORD MAP, SHEET 13 BY HERSHEY, MALONE AND ASSOCIATES, DATED OCTOBER 1975
- THIS PLAN IS SUBJECT TO ANY EASEMENTS OR ENCUMBRANCES THAT AN UPDATED SEARCH OF TITLE MAY REVEAL.

EXISTING LOT COVERAGE

HOUSE/BOAT HOUSE - 3,663 SQ. FT.
 SHEDS - 93 SQ. FT.
 RET. WALLS - 547 SQ. FT.
 WALKS/STEPS - 194 SQ. FT.
 PATIOS - 2,067 SQ. FT.
 DRIVE - 1,221 SQ. FT.

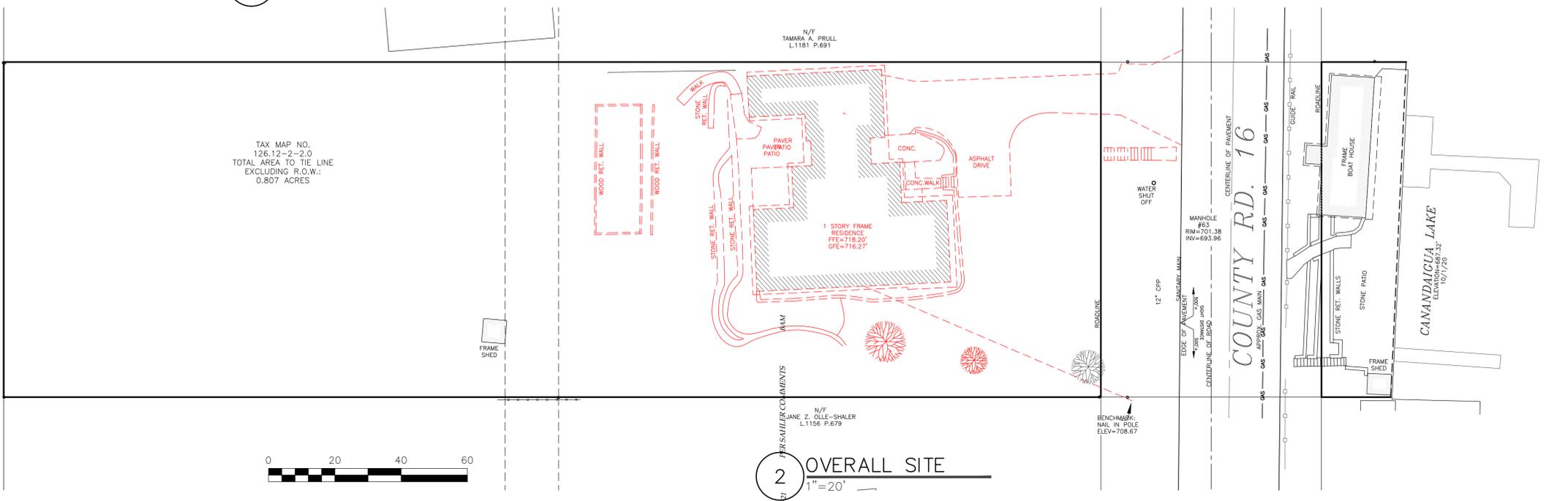
TOTAL EXISTING - 7,785 SQ. FT.

LOT AREA - 35,124 SQ. FT.

EXISTING LOT COVERAGE - 22.2%

EXISTING BUILDING COVERAGE - 10.4%

1 EXISTING CONDITIONS/DEMOLITION PLAN
 1"=10'



2 OVERALL SITE
 1"=20'



LEGEND

○ Iron pin or pipe found	--- EXISTING	--- PROPOSED	--- Utility Lines
● Benchmark	--- etc	--- E/T	--- R.O.W. line
○ Utility pole			--- Easement line
● Hydrant			--- Centerline
● Light pole			--- Drainage
○ PERKINS			--- Fence Line
○ DEEP			--- Contour Line

ABBREVIATIONS:
 EX-EXISTING
 COP-CORRUGATED POLYETHYLENE PIPE
 O.C.-ON CENTER
 SICPP-SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPE
 UG-UNDERGROUND
 CONC-CONCRETE

CO-CLEAN OUT
 TYP-TYPICAL
 R-RADIUS
 BC-BOTTOM OF CURB
 TC-TOP OF CURB
 TW-TOP OF WALL
 BW-BOTTOM OF WALL
 BS-BOTTOM OF STAIRS

PERF-PERFORATED
 MIN-MINIMUM
 MAX-MAXIMUM
 INV-INVERT
 CB-CATCH BASIN
 MH-MANHOLE
 DI-DRAINAGE INLET

N/E CARL A. LUCAS PLS

TAX MAP NO. 126.12-2-2.0
 TOTAL AREA TO THE LINE EXCLUDING P.O.W.: 0.807 ACRES

N/E JANE Z. O'LE-SHALER L.1156 P.679

N/E TAMARA A. PRULL L.1181 P.691

GENERAL NOTES:

1. THE CONTRACTOR SHALL MAINTAIN ALL UTILITIES AND PROPERTY MARKERS. IT IS THE NYS LAW TO CALL NYS DIG SAFE FOR UFPO (811) PRIOR TO ANY EXCAVATION.
2. THE ROADWAY SHALL BE KEPT FREE OF DEBRIS DURING CONSTRUCTION.
3. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY CONTROL DEVICES. SUCH DEVICES (BARRICADES, FENCING, ETC.) SHALL BE IMPLEMENTED TO MINIMIZE RISK OF INJURY TO PEDESTRIANS AND WORKERS. CONSTRUCTION ACTIVITY SHALL BE CONDUCTED WITHIN COMPLIANCE WITH OSHA GUIDELINES.
4. PLANS ARE GRAPHIC REPRESENTATIONS OF WORK TO BE PERFORMED. THESE PLANS ARE TO INTENDED TO CONVEY ENGINEERING INFORMATION ONLY.
5. CONTRACTOR TO VERIFY ALL PROPERTY LINES, LOCATIONS, GRADES AND INVERTS AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO THE START OF WORK.
6. ALL SPECIFIED MATERIALS ARE TO BE INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS OR INDUSTRY STANDARD.
7. ENGINEER DOES NOT HOLD ANY LIABILITY FOR SYSTEM FAILURE. ANY SYSTEM MODIFICATIONS OR DEVIATIONS FROM THE APPROVED PLANS, NYS BUILDING CODES, AND/OR LOCAL REGULATIONS REQUIRED BY SITE CONSTRAINTS, UNFORESEEN CONDITIONS OR GOVERNING AUTHORITIES WILL BE DONE AT THE RISK OF THE CLIENT.
8. ALL CONSTRUCTION SHALL COMPLY WITH CURRENT NYS AND LOCAL BUILDING CODES AS WELL AS NATIONAL ELECTRIC CODE.
9. ELEVATIONS ARE BASED ON NGVD 29 DATUM.

CONSTRUCTION SEQUENCE:

1. INSTALL TEMPORARY EROSION CONTROL MEASURES INCLUDING BUT NOT LIMITED TO: SILT FENCE, STABILIZED ENTRANCES, ETC.
2. THE CONTRACTOR SHALL SELECTIVELY REMOVE VEGETATION AND ROOTS AS REQUIRED.
3. PLACE SILT FENCE FOR STOCKPILE AREA
4. STRIP TOPSOIL
5. CONSTRUCT BUILDING AND INSTALL UTILITIES
6. MAINTAIN EROSION CONTROL PRACTICES AS NECESSARY. IF ADDITIONAL MEASURE ARE REQUIRED THESE SHALL BE PROVIDED AT THE EXPENSE OF THE OWNER OR CONTRACTOR.
7. IN THE EVENT THERE IS A SEDIMENT DISCHARGE THE CONTRACTOR OR OWNER SHALL BE RESPONSIBLE FOR RESTORATION.
8. FINAL GRADE SEED AND MULCH DISTURBED AREAS AS SOON AS POSSIBLE.
9. INSTALL CURTAIN DRAINS AND DRYWELL AFTER LAWN AREAS ARE ESTABLISHED.
10. REMOVE TEMPORARY EROSION CONTROLS AFTER AREAS ARE STABILIZED WITH VEGETATION, STONE OR ASPHALT.

PHOSPHORUS NOTES:

1. NO PHOSPHOROUS SHALL BE USED AT PLANTING TIME UNLESS SOILS TESTING HAS BEEN COMPLETED AND TESTED BY A HORTICULTURAL TESTING LAB AND THE SOIL TESTS SPECIFICALLY INDICATE A PHOSPHOROUS DEFICIENCY THAT IS HARMFUL, OR WILL PREVENT NEW LAWNS AND PLANTINGS FROM ESTABLISHING PROPERLY.
2. IF SOIL TESTS INDICATE A PHOSPHOROUS DEFICIENCY THAT WILL IMPACT PLANT AND LAWN ESTABLISHMENT, PHOSPHOROUS SHALL BE APPLIED AT THE MINIMUM RECOMMENDED LEVEL PRESCRIBED IN THE SOIL TEST FOLLOWING ALL NYS DEC.

SITE NOTES:

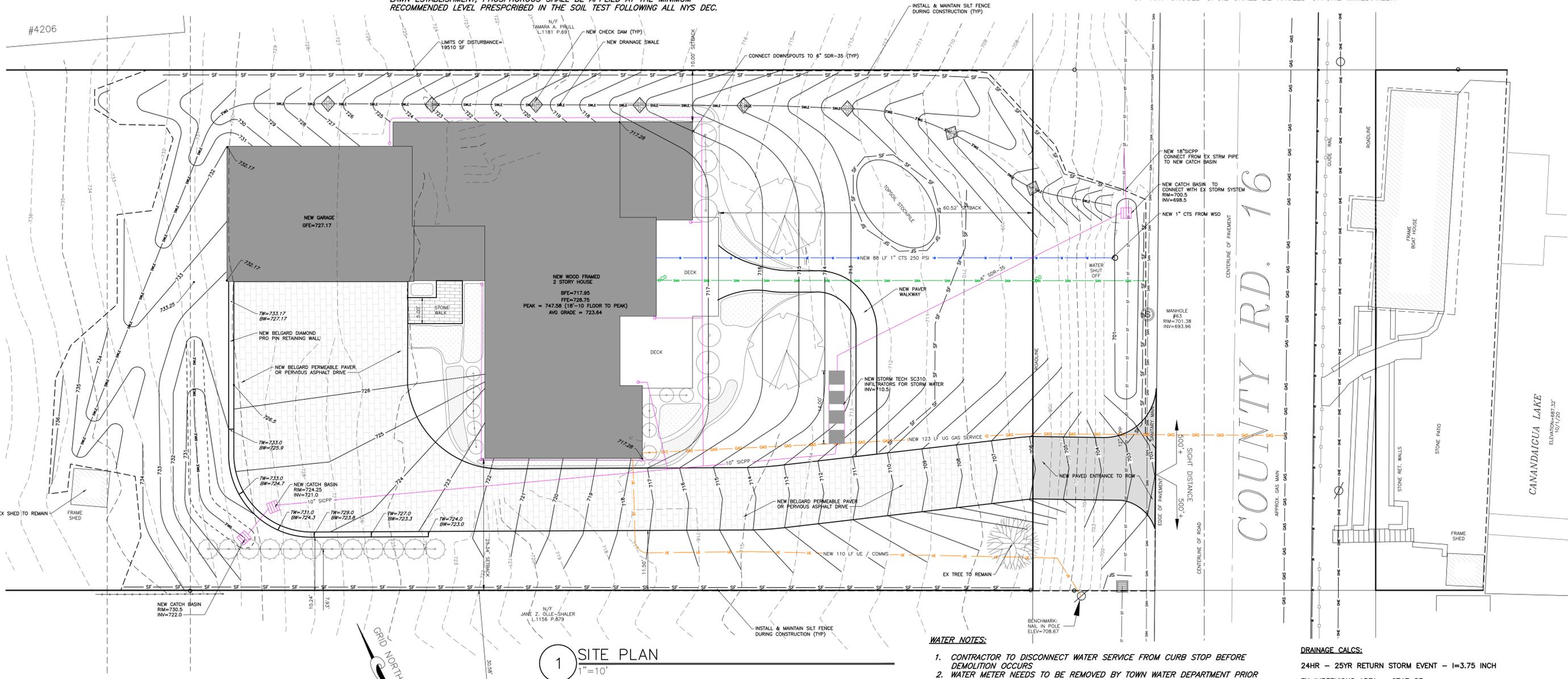
1. ALL EXTERIOR LIGHTING SHALL BE DARK SKY COMPLIANT W/ CUT-OFF TO PROHIBIT SHEDDING OF LIGHT ON TO OTHER PROPERTIES.
2. THE CONSTRUCTION SITE IS NOT WITHIN 100' OF A WETLAND AS DELINEATED BY NYS DEC. THERE ARE NOT NYS DEC DELINEATED OR APPARENT WETLANDS ON THE PROPERTY AS SHOWN.
3. THE CONSTRUCTION SITE IS WITHIN A 100 YEAR FLOODPLAIN AS DELINEATED BY FEMA.
4. WATER & SEWER: TOWN OF CANANDAIGUA WATER & CANANDAIGUA LAKE COUNTY SEWER DISTRICT
5. NYS SPDES PERMIT IS NOT REQUIRED FOR THESE CONSTRUCTION ACTIVITIES. DISTURBANCE SHALL BE LESS THAN ONE ACRE. IF THE CONTRACTOR OR OWNER AT ANY TIME PLAN DISTURB GREATER THAN AN ACRE THE ENGINEER SHALL BE NOTIFIED.

UTILITY NOTES:

- 1) CONTRACTOR SHALL COORDINATE ALL WORK W/ UTILITY PROVIDERS
- 2) NEW UNDERGROUND ELECTRIC AND COMMUNICATION SERVICE DEPTHS UNDER DRIVEWAY SHALL BE COORDINATED WITH UTILITY PROVIDER.
- 3) WATER LINE SHALL BE BURIED AT MIN 5 FEET W/ TRACER WIRE
- 4) ELEC SERVICE AND COMMUNICATION SHALL MEET CURRENT NATIONAL ELECTRIC CODE.
- 5) GAS SERVICE SHALL BE INSTALLED PER CURRENT INTERNATIONAL FUEL GAS CODE.

EROSION AND SEDIMENT CONTROL NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR THE CONTROL OF EROSION AND SEDIMENTATION DURING CONSTRUCTION. SILT FENCE SHALL BE INSTALLED AND MAINTAINED AS NEEDED.
2. SOIL DISTURBANCES SHALL BE STABILIZED IMMEDIATELY. DISTURBED SOIL THAT WILL REMAIN LONGER THAN 14 DAYS SHALL BE TEMPORARILY STABILIZED WITHIN 7 DAYS. SOIL SHALL BE STABILIZED WITH NORTHERN GRASS SEED MIXTURE OR APPROPRIATE SEED MIXTURE FOR CONDITIONS. GRASS SEED SHALL BE INSTALLED PER MANUFACTURERS SPECIFICATIONS. MULCH STRAW APPLIED AT A RATE OF 2 BALES / 1000 SQFT OR SEED MIXTURE TO PROTECT SITE UNTIL SEED GERMINATES. HYDRO-SEED MAY BE INSTALLED AS AN ALTERNATE.
3. CONTRACTOR SHALL INSPECT THE SITE DAILY FOR SIGNS OF EROSION. IF ANY EROSION OR SEDIMENTATION OCCUR CONTRACTOR SHALL IMMEDIATELY PROVIDE PROPER CONTROLS TO STABILIZE THE SITE. ENGINEER WILL RECOMMEND CONTROLS IF REQUIRED.
4. SLOPE GREATER THAN 4 ON 1 SHALL BE STABILIZED WITH JUTE FABRIC WITH STRAW OR EROSION AND SEDIMENT CONTROL FABRIC INSTALLED AS PER MANUFACTURERS SPECIFICATIONS AS REQUIRED. PROVIDE STEEP SLOPE GRASS SEED MIXTURE WITH 30% OR MORE PERENNIAL RYEGRASS FOR THESE AREAS
5. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH 2016 NYS STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENTATION CONTROLS.
6. INSTALL AND MAINTAIN TEMPORARY DIVERSION SWALES AS NEEDED TO CONTROL RUNOFF DURING CONSTRUCTION.
7. THE SITE SHALL BE COMPLETELY STABILIZED FOLLOWING CONSTRUCTION ACTIVITIES AND ALL TEMPORARY EROSION CONTROL DEVICES SHALL BE REMOVED AND DISPOSED OF PROPERLY.
8. CONSTRUCTION STAGING AND PARKING AREAS SHALL BE LIMITED TO PAVED OR STONE AREAS OUTSIDE OF THE HIGHWAY RIGHT-OF-WAY.
9. ANY UNUSED SPOIL SHALL BE HAULED OFFSITE IMMEDIATELY.



PLANNING BOARD CHAIRMAN _____ DATE _____

LEGEND

○ Iron pin or pipe found	— EXISTING	— PROPOSED	— Utility Lines
● Benchmark	— etc	— E/T	— R.O.W. line
○ Utility pole			— Easement line
● Hydrant			— Centerline
○ Light pole			— Drainage
● FERC TEST			— Fence Line
			— Contour Line

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 MIN-MINIMUM
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 INV-INVERT
 CB-CATCH BASIN
 MI-MANHOLE
 DI-DRAINAGE INLET

1 SITE PLAN
1"=10'

SITE DATA		
ZONING/USE - PRINCIPAL	REQUIRED	PROPOSED
ZONING/USE - ACCESSORY	NA	NA
PRINCIPAL BUILDING SQUARE FOOTAGE	1200 SF	3500 SF
FRONT SETBACK	60'	60.52'
SIDE SETBACK	12'	10.00'
REAR SETBACK	60'	172.86'
BUILDING HEIGHT	35'	>35'
LOT COVERAGE	25.00%	26.60%
BUILDING COVERAGE	15.00%	11.00%

PROPOSED LOT COVERAGE

HOUSE/BOAT HOUSE - 4087 SQ. FT.
 SHEDS - 93 SQ. FT.
 RET. WALLS - 139 SQ. FT.
 WALKS/STEPS - 241 SQ. FT.
 PATIOS - 1643 SQ. FT.
 DRIVE - 3160 SQ. FT. (PERVIOUS)

TOTAL PROPOSED - 9363 SQ. FT.
 LOT AREA - 35,124 SQ. FT.
 PROPOSED LOT COVERAGE - 26.6%
 PROPOSED BUILDING COVERAGE - 11%

VARIANCES REQUIRED:
 1. LOT COVERAGE OF 26.6% WHEN 25% IS THE MAXIMUM (1.6% VARIANCE)

- WATER NOTES:**
1. CONTRACTOR TO DISCONNECT WATER SERVICE FROM CURB STOP BEFORE DEMOLITION OCCURS
 2. WATER METER NEEDS TO BE REMOVED BY TOWN WATER DEPARTMENT PRIOR TO DEMOLITION OF HOUSE
 3. A PRESSURE REDUCING VALVE MUST BE INSTALLED IN THE HOME. PRESSURE ON THIS WATER MAIN IS AT 170
 4. WATER METER MUST BE INSTALLED BEFORE C OF O IS ISSUED
- GRADING NOTES:**
1. CUT AND FILL SLOPES SHALL NOT EXCEED 3 ON 1.
 2. CONSTRUCTION SHALL CONFORM TO THE TOWN OF CANANDAIGUA AND NYS CODES AND STANDARDS
 3. SITE SHALL BE GRADED SUCH THAT THERE IS POSITIVE DRAINAGE AT A MINIMUM OF 2% AWAY FROM ANY BUILDINGS, STRUCTURES, DRIVEWAYS, AND SEPTIC SYSTEM.
 4. TOPSOIL SHALL BE STRIPED OF AREAS PLANNED FOR CONSTRUCTION AND REAPPLIED AFTER GRADING IS FINISHED. ANY UNUSED TOPSOIL SHALL BE HAULED OFF SITE.

DRAINAGE CALCS:

24HR - 25YR RETURN STORM EVENT - I=3.75 INCH

EX IMPERVIOUS AREA - 6717 SF
 PRO IMPERVIOUS AREA - 6709 SF (LESS PERVIOUS PAVERS)
 REDUCTION IN IMPERVIOUS AREA - A = (-)85F

Q=C*I*A
 C=0.9 (PRO ASPHALT)
 C=0.4 (EX GRASS)
 DELTA C=0.5 (0.9-0.4)

CHANGE IN RUNOFF = (-)15 FT³

INFILTRATION TRENCH STORAGE:
 CHAMBERS = 31 FT³ EACH

TOTAL # OF CHAMBERS = 2 = 62 FT³

TOTAL STORAGE PROVIDED = 62 FT³

DEVELOPMENT WILL RESULT IN A 70 FT³ DECREASE IN RUNOFF VOLUME OVER PRE-DEVELOPED CONDITIONS FOR 25YEAR STORM.

NOT FOR CONSTRUCTION

STATE OF NEW YORK

COUNTY OF ONTARIO

STAMP

REVISIONS AND APPROVALS

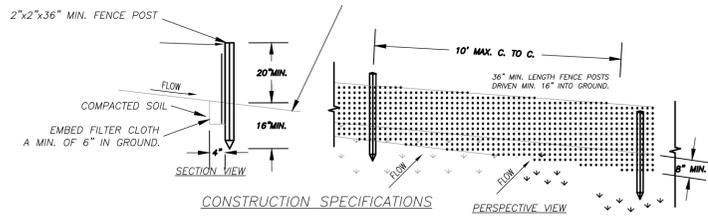
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1	12/17/21	PER IFC REVIEW	MCF
2	3/16/21	PER SAHLEH COMMENTS	BAM
3	4/6/21	PER ZFA REVIEW	MCF

STATE PLANS PREPARED FOR:
JOHN & SUSAN LEWIS
 NEW RESIDENCE
 SHOWING LAND IN:
 4210 COUNTY ROAD 16
 TOWN OF CANANDAIGUA

STATE OF NEW YORK

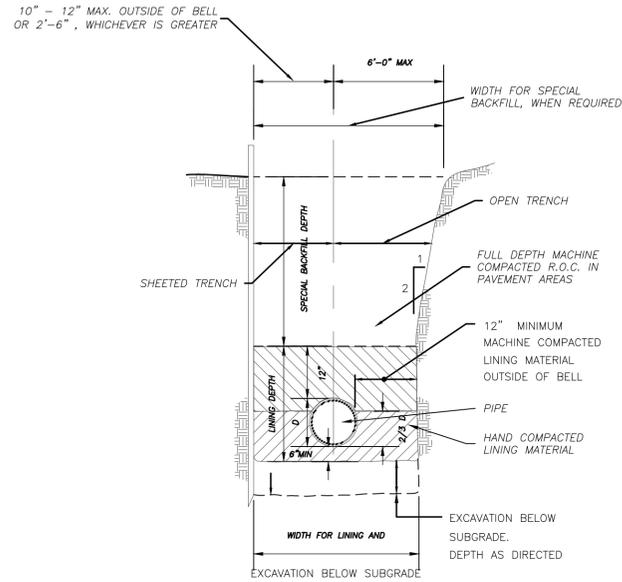
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MARKS ENGINEERING INC. 42 BEEMAN ST. CANANDAIGUA, NY 14424. PHONE 585-905-0360. FAX 585-485-5005. WWW.MARKSENGINEERING.COM

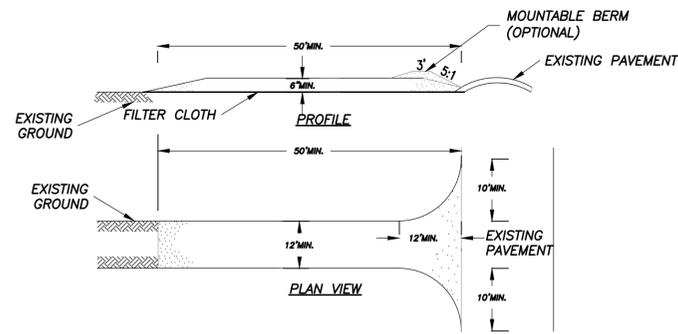


1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO POSTS WITH STAPLES.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIRONMENT, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

1 TYPICAL SILT FENCE DETAIL
NTS



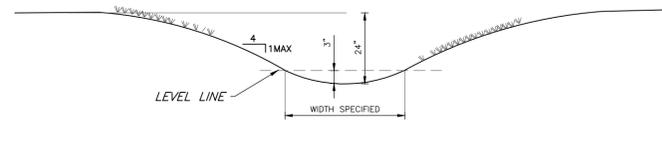
4 UTILITY TRENCH DETAIL
NTS



CONSTRUCTION SPECIFICATIONS

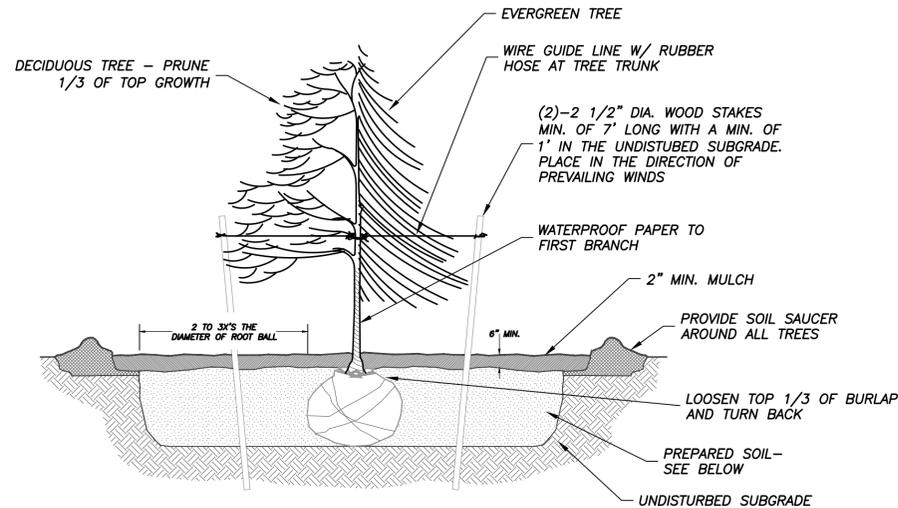
1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE GARAGE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

6 STABILIZED CONSTRUCTION ENTRANCE
NTS



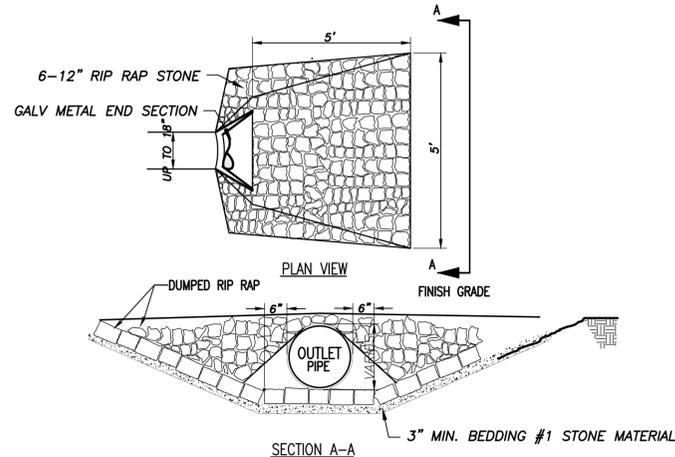
2 TYPICAL SWALE CROSS SECTION
NTS

- NOTES:
1. SWALES SHALL BE SMOOTH GRADED AND LIGHTLY COMPACT.
 2. SWALES SHALL BE MOVABLE WITH STANDARD PUSH MOWER.
 3. SWALES SHALL NOT BE FORMED IN MUD OR SATURATED SOILS. UNACCEPTABLE SOILS SHALL BE REMOVED AND REPLACED WITH 6\"/>
 - 4. SWALE SHALL BE SEEDED AND STABILIZED WITH STRAW BLANKET/JOUTE FABRIC NETTING STAPLED AS PER MANUFACTURER'S RECOMMENDATIONS.

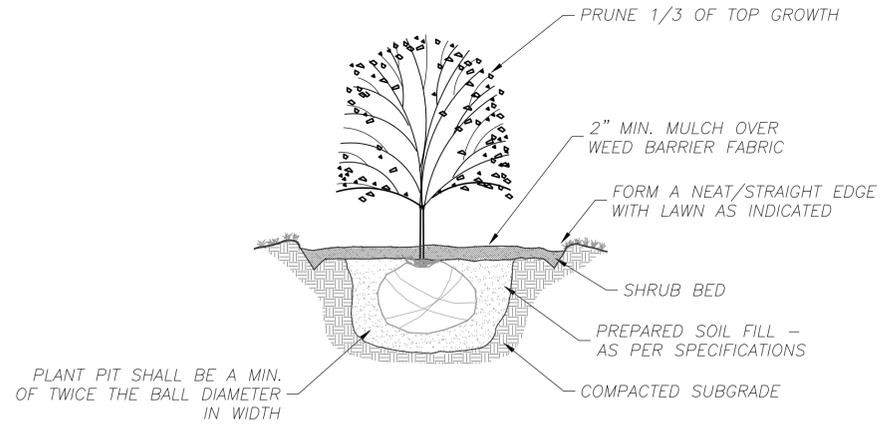


5 TREE PLANTING DETAIL
NTS

- NOTE:
- PREPARED TOPSOIL MIXTURE SHALL BE, BY VOLUME:
4 CUBIC YARDS TOPSOIL, 7.5 CUBIC FEET PEAT MOSS
AND 20 POUNDS FERTILIZED(MILORGANITE, NU-EARTH
OR EQUAL)



7 RIP-RAP OUTLET PROTECTION
NTS



3 SHRUB PLANTING DETAIL
NTS

- NOTE:
- PREPARED TOPSOIL MIXTURE SHALL BE, BY VOLUME:
4 CUBIC YARDS TOPSOIL, 7.5 CUBIC FEET PEAT MOSS AND 20 POUNDS FERTILIZED(MILORGANITE, NU-EARTH OR EQUAL)



SC-310 CHAMBER

Designed to meet the most stringent industry performance standards for superior structural integrity while providing designers with a cost-effective method to save valuable land and protect water resources. The StormTech system is designed primarily to be used under parking lots, thus maximizing land usage for private (commercial) and public applications. StormTech chambers can also be used in conjunction with Green Infrastructure, thus enhancing the performance and extending the service life of these practices.

STORMTECH SC-310 CHAMBER
(not to scale)

Nominal Chamber Specifications

Size (L x W x H)
85.4" x 34.0" x 16.0"
2,170 mm x 864 mm x 406 mm

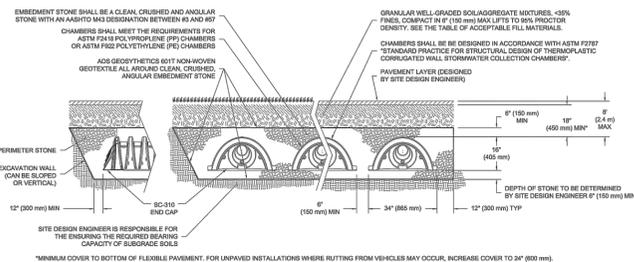
Chamber Storage
14.7 ft³ (0.42 m³)

Min. Installed Storage*
31.0 ft³ (0.88 m³)

Weight
37.0 lbs (16.8 kg)

Shipping
41 chambers/pallet
108 end caps/pallet
18 pallets/truck

*Assumes 6" (150 mm) stone above and below chambers and 40% stone porosity.



SITE DESIGN ENGINEER IS RESPONSIBLE FOR THE ENGINEERING THE REQUIRED BEARING CAPACITY OF SUBGRADE SOILS

*MINIMUM COVER TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 24" (600 mm).

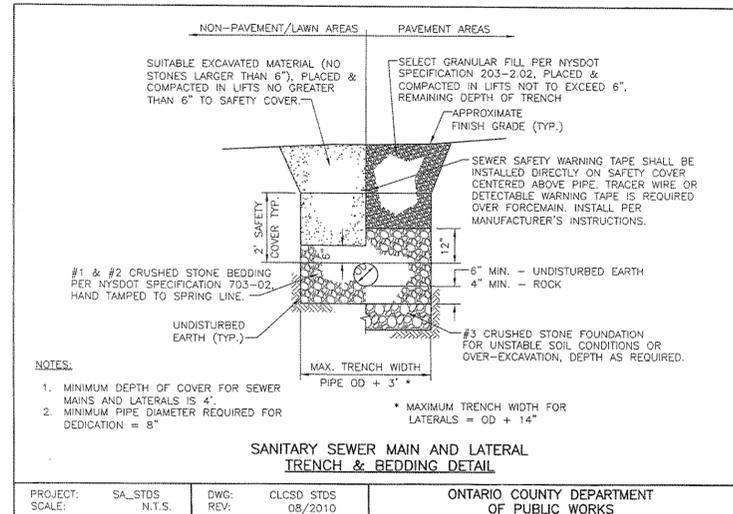
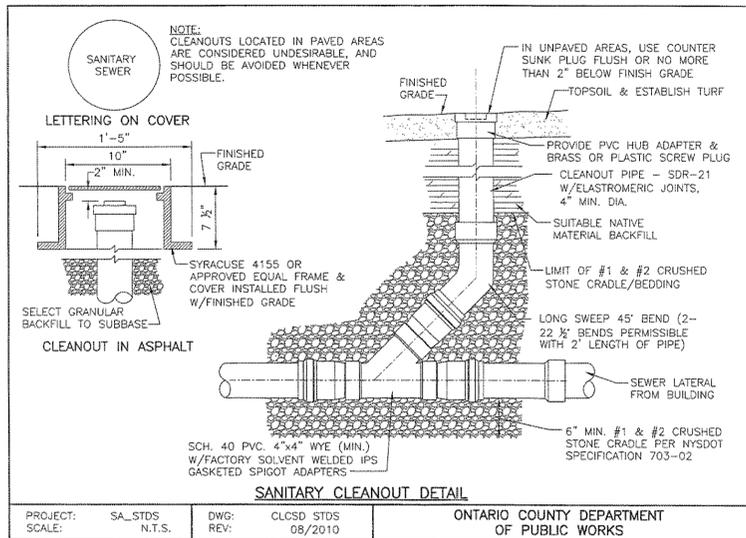
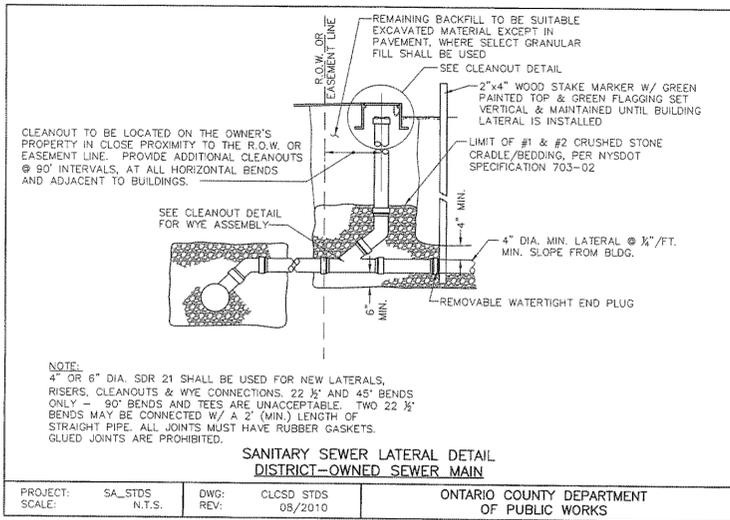
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WATERMAIN / SEWER CROSSING DETAIL		
CONDITION	SCHEMATIC	REQUIREMENTS
I WATER LINE ABOVE SEWER LINE		A) WATER LINE AND SEWER LINE PIPE LENGTHS TO BE CENTERED AT CROSSING EACH LENGTH OF PIPE TO BE 10 FT. MINIMUM.
II WATER LINE ABOVE SEWER LINE		A) WATER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

SANITARY LATERAL NOTES

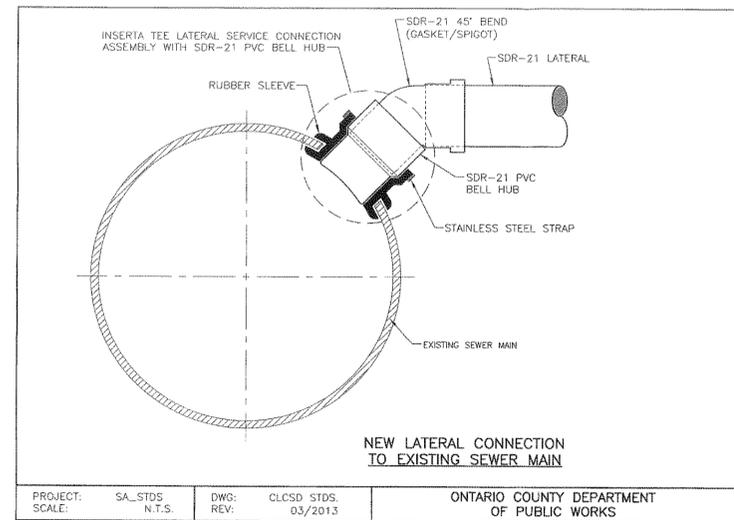
ALL PROJECTS

- All sanitary sewer construction and/or improvements shall be in accordance with the most recent standards and specifications of the Canandaigua Lake County Sewer District, N.Y.S. Department of Environmental Conservation, N.Y.S. Department of Health, the latest edition of *Recommended Standards For Wastewater Facilities* and any other agencies having jurisdiction.
- No sanitary sewer-related work may be performed without first obtaining a written permit from the Canandaigua Lake County Sewer District.
- District personnel shall be notified a minimum of 48 hours prior to beginning any sanitary sewer-related work.
- The contractor shall locate, mark and preserve any right of way monuments or survey control in the area of construction.
- Utility locations shown are approximate only. The contractor shall determine exact location of utilities, excavating to expose the utility, if necessary in the area of construction, before commencing construction. Contact U.F.P.O. at 1-800-962-7962 at least 72 hours prior to beginning work.
- Laterals shall be min. 4" dia. SDR-21 with elastomeric joints; for commercial establishments, laterals are to be 6" dia. SDR-21. Minimum depth of burial is four feet. Cleanouts shall be installed within 30 inches of the outside face of buildings, at all changes in horizontal alignment, at the right of way or easement line, and at spacing not to exceed 90 feet.
- Sewer mains and laterals shall be located a minimum horizontal distance of ten feet from any existing or proposed watermain (as measured from the outside of the sewer/lateral to the outside of the watermain). In cases where the main or lateral crosses a watermain, the minimum vertical separation shall be eighteen inches (measured out-to-out). The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the watermain joints.
- The contractor shall provide the District with shop drawings and material specifications that have been pre-approved by the design engineer before a permit will be issued.
- The contractor is responsible for compliance with OSHA requirements in all aspects of construction.
- The contractor shall be responsible for maintaining sanitary flows at all times by methods acceptable to the District.
- Floor drains in basements or garages are to be connected to the sanitary sewer. Floor drains do not include foundation or footer drains installed to intercept uncontaminated groundwater. All discharges to the sanitary sewer must comply with effluent limits of the Ontario County Sewer Use Law. Foundation and footer drains shall be constructed in a manner that prohibits groundwater from draining into the sanitary sewer pipe cradle.

12. Lateral connections requiring openings in asbestos cement pipe will be designed, inspected and certified by the design engineer or representative thereof.
13. Any excavation not backfilled by the end of the workday shall be fenced, barricaded and lighted for safety and protection of the public.
14. The contractor shall be responsible for the removal of existing sanitary mains, structures and appurtenances, if any, needed to complete the work.

RENOVATION PROJECTS ONLY

15. Existing laterals to be disconnected must be permanently plugged or capped at the easement or right of way line under the direction of Canandaigua Lake County Sewer District personnel. The location of the plug or cap shall be recorded for as-built drawing purposes.
16. Prior to demolishing an existing building, the contractor shall excavate, disconnect and abandon the lateral from the building to the point of disconnection (approximately 30' from the existing building) per District standards. A temporary plug shall be installed in the remaining portion of the existing sanitary lateral until it is tested and televised.
17. In order to determine whether an existing sanitary lateral is acceptable for connection to a new building, the lateral shall be televised in the presence of District personnel at the owner's expense.
18. If an existing lateral is found to be acceptable and meet the minimum District requirements, it shall be temporarily re-plugged and backfilled with a witness stake in place, until connection to the new building can take place.
19. If a new sanitary sewer lateral is required, the existing lateral must be excavated, removed and capped at the easement or right of way line in accordance with District requirements.
20. If a new sanitary sewer lateral is required, the connection to the existing sanitary main shall be made per District standards.



NOT FOR CONSTRUCTION

Marks Engineering
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 CANANDAIGUA, NY 14424
 www.marksengineering.com
 info@marksengineering.com

STATE OF NEW YORK
 JOHN A. MARIANO
 08182
 PROFESSIONAL ENGINEER
 STAMP

REVISIONS AND APPROVALS	
NO.	DATE / DESCRIPTION OF REVISION OR APPROVAL
1	12/17/21 PER MCF REVIEW
2	3/16/21 PER SAJ/LLR COMMENTS
3	4/6/21 PER ZJA REVIEW

SITE PLANS PREPARED FOR:
JOHN & SUSAN LEWIS
 NEW RESIDENCE
 SHOWING LAND IN:
 4210 COUNTY ROAD 16
 TOWN OF CANANDAIGUA
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DRAWING TITLE: SANITARY DETAILS	
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DESIGNED BY:	BAM
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SCALE:	AS NOTED
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DATE:	02/10/2021
TAX MAP#:	12719-2-30.111

- ALL IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE MOST RECENT STANDARDS AND SPECIFICATIONS OF THE TOWN OF CANANDAIGUA AND THE APPROPRIATE WATER/SEWER AGENCIES, UNLESS OTHERWISE NOTED.
- A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED TO CONFORM WITH THE LATEST NYSDEC GENERAL PERMIT AND TO THE TOWN REQUIREMENTS REGARDING MAINTENANCE AND CONTROL OF STORM WATER QUALITY AND QUANTITY.
- ALL SWPPP'S ARE REQUIRED TO BE REVIEWED AND APPROVED BY THE TOWN CEO AND TOWN ENGINEER. THE TOWN MS4 SWPPP ACCEPTANCE FORM IS TO BE SIGNED AND INSERTED INTO THE PROJECT SWPPP PRIOR TO CONSTRUCTION.
- THE OWNER IS RESPONSIBLE FOR IMPLEMENTING THE REQUIRED SWPPP, INCLUDING FILING OF THE "NOTICE OF INTENT" (NOI). A COPY OF THE NYSDEC ACKNOWLEDGEMENT LETTER IS TO BE PROVIDED TO THE TOWN DEVELOPMENT OFFICE AND TOWN ENGINEER PRIOR TO CONSTRUCTION.
- A COPY OF THE PROJECT SWPPP IS TO BE PROVIDED TO THE TOWN DEVELOPMENT OFFICE, TOWN ENGINEER, AND A COPY IS TO REMAIN ONSITE DURING CONSTRUCTION AT ALL TIMES IN A MARKED AND ACCESSIBLE LOCATION.
- ANY MODIFICATIONS OR DEVIATIONS FROM THE APPROVED PLANS, CONSTRUCTION SEQUENCE, AND/OR SWPPP, INCLUDING IMPLEMENTATION OF EROSION CONTROL MEASURES AND STORM WATER MANAGEMENT AREAS, SHALL BE APPROVED BY THE TOWN OF CANANDAIGUA AND DOCUMENTED WITHIN THE PROJECT SWPPP.
- THE OWNER IS REQUIRED TO PROVIDE DAILY ONSITE OBSERVATION BY A LICENSE PROFESSIONAL OR A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC). ALL SWPPP INSPECTIONS ARE TO BE IN A FORM ACCEPTABLE BY THE TOWN OF CANANDAIGUA AND FORWARDED TO OWNER, THE TOWN CEO, TOWN ENGINEER, AND A COPY PLACED WITHIN THE ONSITE PROJECT SWPPP.
- THE OWNER IS RESPONSIBLE FOR PROVIDING ONSITE SWPPP INSPECTIONS BY A LICENSE PROFESSIONAL OR A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC) DURING CONSTRUCTION ONCE PER WEEK (EVERY 7 DAYS) IF UNDER 5-ACRES OF DISTURBANCE AND TWICE PER WEEK (EVERY 7 DAYS) IF 5-ACRES OR MORE WITH RECEIPT OF A 5-ACRE WAIVER FROM THE TOWN OF CANANDAIGUA (MS4).
- DEVELOPMENT IN THE CANANDAIGUA LAKE WATERSHED DISTURBING MORE THAN 5-ACRES AT ONE TIME, IS REQUIRED TO COORDINATE THE REGULAR SWPPP OBSERVATIONS REQUIRED BY THE LATEST GENERAL PERMIT WITH THE CANANDAIGUA LAKE WATERSHED INSPECTOR, THE WATERSHED PROGRAM MANAGER AND THE TOWN CODE ENFORCEMENT OFFICER.
- CONSTRUCTION SEQUENCE - ALL PLANS ARE TO BE PROVIDED WITH A DETAILED CONSTRUCTION SEQUENCE. THE CONTRACTOR SHALL COMPLETE CONSTRUCTION AND INSTALL EROSION CONTROL MEASURES IN ACCORDANCE WITH THE APPROVED CONSTRUCTION SEQUENCE UNLESS SPECIFIED OTHERWISE ON THE APPROVED DESIGN PLANS OR AT THE PRE-CONSTRUCTION MEETING.
- DUST SHALL BE CONTROLLED DURING CONSTRUCTION BY THE CONTRACTOR TO MINIMIZE EFFECT ON THE ADJACENT PROPERTIES. THE CONTRACTOR SHALL IMPLEMENT DUST CONTROL MEASURES AS NEEDED AND/OR AS DIRECTED BY THE TOWN OF CANANDAIGUA.
- THE OWNER'S CONTRACTOR SHALL BE RESPONSIBLE FOR THE ESTABLISHMENT, MAINTENANCE, CLEANING, REPAIR AND REPLACEMENT OF EROSION CONTROL MEASURES DURING SITE CONSTRUCTION AND UNTIL THE SITE IS FULLY STABILIZED, INSPECTED BY THE TOWN OF CANANDAIGUA, AND ISSUANCE OF THE NOTICE OF TERMINATION (NOT) HAS BEEN PROVIDED TO NYSDEC.
- ROOF LEADERS SHOULD BE CONNECTED TO STORM SEWERS WHERE POSSIBLE, UNLESS OTHERWISE SPECIFIED ON THE APPROVED PLANS AND WITHIN THE PROJECT SWPPP.
- NO SITE PREPARATION SHALL COMMENCE UNTIL A VISUAL INSPECTION BY THE TOWN OF CANANDAIGUA, CONFIRMS THE INSTALLATION OF PERIMETER SEDIMENT CONTROLS AND THE STABILIZED CONSTRUCTION ENTRANCE.
- UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF VEGETATION, THE STORM WATER MANAGEMENT FACILITIES SHALL BE CLEANED OF ACCUMULATED SILT.

- ALL SITE STABILIZATION IS TO BE IN ACCORDANCE WITH THE LATEST VERSIONS OF THE NYSDEC STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL AND THE NYSDEC GENERAL PERMIT REQUIREMENTS (WHERE APPLICABLE).
- ADDITIONAL TEMPORARY AND PERMANENT SEEDING AND SITE STABILIZATION REQUIREMENTS:
 - ALL DISTURBED AREAS INCLUDING TOPSOIL STOCKPILES AND STORMWATER MANAGEMENT FACILITIES ARE TO BE STABILIZED WITHIN SEVEN (7) DAYS AFTER COMPLETION.
 - TEMPORARY SEEDING OF DISTURBED AREAS SHALL BE PROVIDED AS FOLLOWS:
 - THE SURFACE TWO INCHES OF SOIL SHOULD BE LOOSENEED BY DISKING, RAKING, OR BACK-BLADING WITH A BULLDOZER.
 - FERTILIZE WITH 300 POUNDS PER ACRE (OR 7 POUNDS PER 1,000 SQUARE FEET).
 - NO PHOSPHORUS SHALL BE USED UNLESS SOIL TESTING HAS BEEN COMPLETED AND TESTED BY HORTICULTURAL TESTING LAB AND THE SOIL TESTS SPECIFICALLY INDICATE A PHOSPHORUS DEFICIENCY THAT IS HARMFUL, OR WILL PREVENT NEW LAWS AND PLANTINGS FROM ESTABLISHING PROPERLY.
 - IF SOIL TESTS INDICATE A PHOSPHORUS DEFICIENCY THAT WILL IMPACT PLANT AND LAWN ESTABLISHMENT, PHOSPHORUS SHALL BE APPLIED AT THE MINIMUM RECOMMENDED LEVEL PRESCRIBED IN THE SOIL TEST FOLLOWING ALL NYSDEC REGULATIONS.
 - THE FOLLOWING SEED MIX SHALL BE USED:

SPRING/SUMMER/EARLY FALL	LBS/ACRE	LBS/1,000 SQ. ACRE
ANNUAL RYE GRASS	30	0.7
PERENNIAL RYEGRASS	30	0.7
LATE FALL/EARLY WINTER		
CEREAL RYE	100	2.5
- SEED SHOULD HAVE A GERMINATION RATE OF AT LEAST 85 PERCENT AND MINIMAL INERT MATERIAL.
- DISTURBED AREAS SHALL BE STABILIZED USING PERMANENT LAWN SEEDING MIX UPON COMPLETION OF GRADING AND CONSTRUCTION:

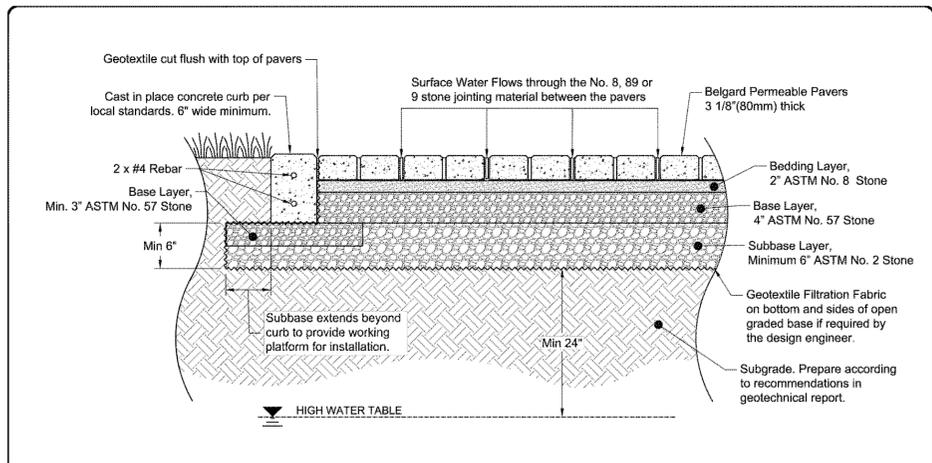
	LBS/ACRE	LBS/1,000 SQ. ACRE
BIRDFOOT TREFLOL OR COMMON WHITE CLOVER	8 OR 8	0.20 OR 0.20
TALL FESCUE	20	0.45
REDDTOP OR RYEGRASS (PERENNIAL)	2 OR 5	0.05 OR 0.10

 - SEEDING RATE: 6.0 POUNDS PER 1,000 SQUARE FEET
 - MULCH: STRAW OR WOOD FIBER MULCH USED WITH HYDRD SEEDING METHOD AT TWO TONS PER ACRE WITH TACKIFIER.
 - FOR FALL OR EARLY WINTER, SEED WITH CERTIFIED "ARROSTOCK" WINTER RYE (CEREAL RYE) AT 100 POUNDS PER ACRE.
 - PERMANENT STABILIZATION FOR STEEP SLOPES GREATER THAN 3:1 SHALL INCLUDE JUTE MESH BLANKET AND CROWN VETCH SEED WITH PERENNIAL RYEGRASS.
- THE CONTRACTOR SHALL LOCATE, MARK, SAFEGUARD AND PRESERVE ALL SURVEY CONTROL MONUMENTS AND RIGHT-OF-WAY MONUMENTS IN THE AREAS OF CONSTRUCTION.
- EXISTING UNDERGROUND UTILITIES SHOWN HEREIN WERE PLOTTED FROM FIELD LOCATIONS AND/OR UTILITY COMPANY RECORD PLANS. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL CALL THE DIG SAFELY NEW YORK (UPO) HOTLINE AT 1-800-962-7962 FOR STAKEOUT OF EXISTING UTILITIES. THE CONTRACTOR SHALL DETERMINE EXACT LOCATION AND ELEVATION OF UNDERGROUND UTILITIES BEFORE COMMENCING CONSTRUCTION. CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS TO LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS AS REQUIRED TO MEET THE EXISTING CONDITIONS.

- THE HOMEOWNER WILL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING INDIVIDUAL LOT EROSION & SEDIMENT CONTROL MEASURES, DURING HOUSE CONSTRUCTION. MEASURES TO BE MAINTAINED UNTIL FINAL LOT LAWN GRADING AND SITE IS FULLY STABILIZED AND INSPECTED BY THE TOWN OF CANANDAIGUA.
- ANY ADDITIONAL EROSION OR SEDIMENT CONTROL MEASURES DEEMED NECESSARY BY THE TOWN OF CANANDAIGUA OR A REPRESENTATIVE THEREOF SHALL BE PROVIDED BY THE OWNER AND INSTALLED BY THE CONTRACTOR.
- SEDIMENT CONTROL MEASURES ARE TO BE ESTABLISHED PRIOR TO COMMENCING EARTHWORK. SEDIMENT CONTROL MEASURES ARE TO BE MAINTAINED BY THE CONTRACTOR UNTIL UPSTREAM GROUND COVER HAS BEEN ESTABLISHED AND REMOVAL IS APPROVED BY THE TOWN OF CANANDAIGUA.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING, REPLACING AND SUBSEQUENTLY REMOVING TEMPORARY EROSION & SEDIMENT CONTROL DEVICES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ADJOINING PROPERTIES, ROADWAYS, DRAINAGE WAYS AND SINKS OF SILT ACCUMULATION AS NEEDED AND AS DETERMINED/REQUESTED BY THE TOWN OF CANANDAIGUA.
- ANY FINAL GRADE DEVIATIONS OF HOUSE PAD ELEVATIONS MORE THAN 12 INCHES SHALL BE APPROVED BY THE PLANNING BOARD.

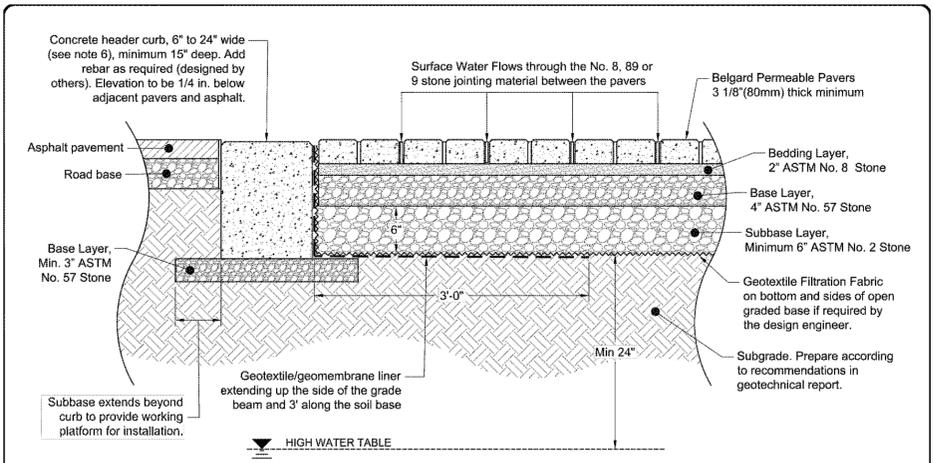
ALL PLANS ARE TO BE PROVIDED WITH A DETAILED CONSTRUCTION SEQUENCE. THE CONTRACTOR SHALL COMPLETE CONSTRUCTION AND INSTALL EROSION CONTROL MEASURES IN ACCORDANCE WITH THE APPROVED CONSTRUCTION SEQUENCE UNLESS SPECIFIED OTHERWISE ON THE APPROVED DESIGN PLANS OR AT THE PRE-CONSTRUCTION MEETING. AN EXAMPLE OF A CONSTRUCTION SEQUENCE IS THE FOLLOWING:

- INSTALL PERIMETER SEDIMENT CONTROLS, (I.E. EROSION FENCING).
- INSTALL STABILIZED CONSTRUCTION ENTRANCE.
- PROTECT VEGETATION TO REMAIN.
- CLEAR GRUB AND CONSTRUCT DIVERSIONARY SWALES AND SEDIMENT BASINS.
- COMPLETE CLEARING AND GRUBBING OPERATION.
- PLACE EROSION CONTROL MEASURES AROUND TOPSOIL STOCKPILES AND STRIP TOPSOIL LOCATIONS.
- CONSTRUCT SWALES AND SILTATION DEVICES AS EARTHWORK OPERATIONS PROGRESS.
- MAINTAIN EROSION CONTROL MEASURES AND PLACE ADDITIONAL MEASURES AS EARTHWORK AND UNDERGROUND UTILITIES ARE CONSTRUCTED.
- RESTORE AREAS AS DEFINED BY CONTRACT DOCUMENTS.
- REMOVE EROSION CONTROL MEASURES AS AREAS ARE REESTABLISHED WITH GROUND COVER.
- IF SITE PREPARATIONS OCCUR BETWEEN SEPTEMBER 1 AND MARCH 31, ADDITIONAL EROSION CONTROLS MUST BE TAKEN INCLUDING REDUCING THE SIZE OF DISTURBED AREAS AND PLACING HEAVY STRAW MULCH WHERE PRACTICAL.



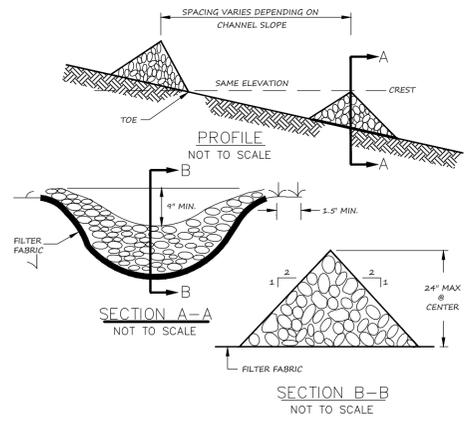
- Design Notes:**
- Depth of subbase subject to site specific hydraulic and structural requirements. Contact Belgard Commercial for design assistance.
 - Paver dimensions subject to aspect and plan ratio requirements based on traffic loading.
 - Geotechnical engineer needs to balance structural stability and soil infiltration when recommending subgrade conditions.
 - Where the filtration geotextile is used, verify with the manufacturer that the material is not subject to clogging and meets requirements of AASHTO M-288.
 - ASTM No. 2 stone may be substituted with No. 3 or No. 4 stone.
 - Strictly pedestrian applications may substitute base/subbase layers with one 6 inch base layer of ASTM No. 57 stone.

	belgardcommercial.com	This drawing is for illustrative purposes only and should not be used for construction without the signature of a registered professional engineer.	Scale:	N.T.S.	Drawn by:	MAH
	877-235-4273		Date:	5/7/18	Drawing number:	PICP_1
Belgard Permeable Paving Detail PICP Pavement						



- Design Notes:**
- Depth of subbase subject to site specific hydraulic and structural requirements. Contact Belgard Commercial for design assistance.
 - Paver dimensions subject to aspect and plan ratio requirements based on traffic loading, including any maintenance and/or emergency vehicles.
 - Geotechnical engineer needs to balance structural stability and soil infiltration when recommending subgrade conditions.
 - Elevation of horizontal discharge pipe(s) subject to storage reservoir requirements. Ensure proper cover over the horizontal pipes.
 - Where the filtration geotextile is used, verify with the manufacturer that the material is not subject to clogging and meets requirements of AASHTO M-288.
 - When traffic flow is perpendicular to the direction of the header, the width of the header curb should be sufficient to ensure that a bouncing tire caused by differential settlement will land on the header and not skip over it.
 - Strictly pedestrian applications may substitute base/subbase layers with one 6 inch base layer of ASTM No. 57 stone.

	belgardcommercial.com	This drawing is for illustrative purposes only and should not be used for construction without the signature of a registered professional engineer.	Scale:	N.T.S.	Drawn by:	MAH
	877-235-4273		Date:	5/7/18	Drawing number:	PICP_7
Belgard Permeable Paving Detail PICP Pavement Transition to Asphalt						



- CONSTRUCTION SPECIFICATIONS**
- STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATION SHOWN IN THE PLAN.
 - SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
 - EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
 - PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
 - ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONES.

1 CHECK DAM DETAIL
N.T.S.

MarksEngineering

4.2 BEEVAN ST
CANANDAIGUA, NY 14124
www.marksengineering.com marksengineering.com

Phone: 585-905-0360
Fax: 585-485-5005



NOT FOR CONSTRUCTION

STAMP

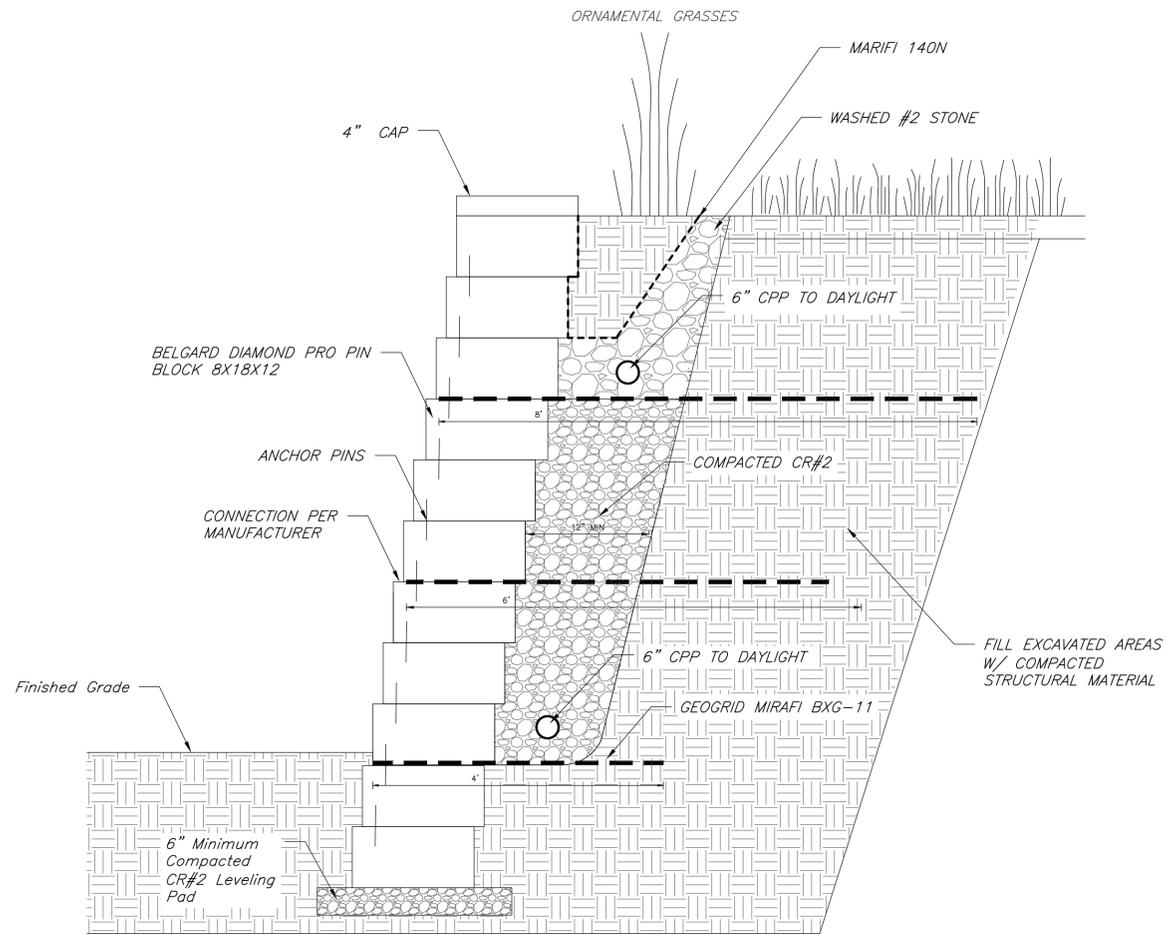
REVISIONS AND APPROVALS			
NO.	DATE	DESCRIPTION OF REVISION OR APPROVAL	BY
1	2/17/21	PER PRC REVIEW	MCF
2	3/16/21	PER SAHLER COMMENTS	BAM
3	4/16/21	PER ORA REVIEW	MCF

STATE OF NEW YORK

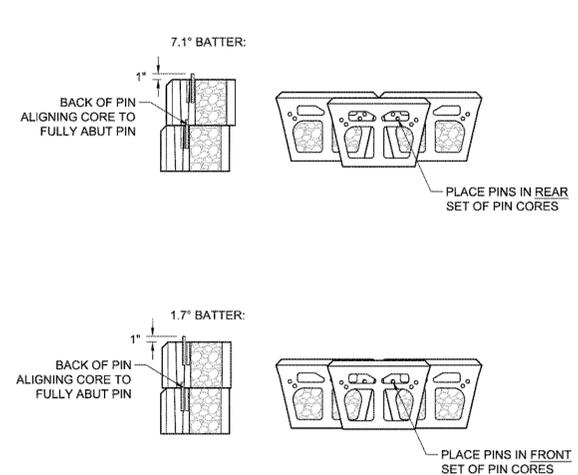
SITE PLANS PREPARED FOR:
JOHN & SUSAN LEWIS
 NEW RESIDENCE
 SHOWING LAND IN:
 4210 COUNTY ROAD 16
 TOWN OF CANANDAIGUA

DRAWING TITLE:	
DETAILS	
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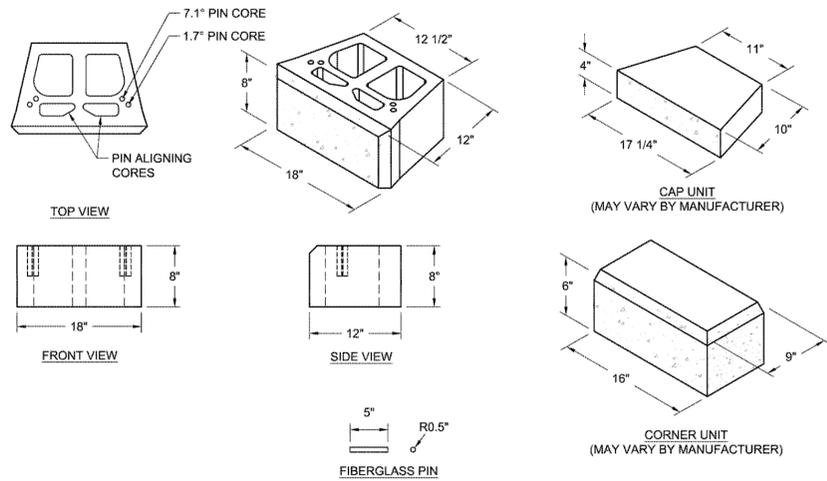
C502



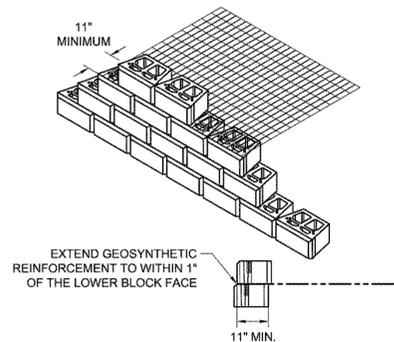
1 BLOCK RETAINING WALL DETAIL
NTS



2 PIN INSTALLATION DETAIL
NTS



3 INDIVIDUAL BLOCK DETAILS
NTS



4 REINFORCEMENT CONNECTION DETAIL
NTS



Construction Geosynthetics

BaseGrid 11

BaseGrid 11 is an integrally formed, polypropylene, bi-axial geogrid with a load transfer mechanism of positive mechanical interlock. BaseGrid 11 is designed for base reinforcement and subgrade improvement. BaseGrid 11 meets the following M.A.R.V. values except where noted:



Property	Test Method	English	Metric
Aperture Dimensions (Nominal)	Measured	1.0 x 1.3 inches	25 x 33 mm
Minimum Rib Thickness (Nominal)	Measured	0.03 x 0.03 inches	0.76 x 0.76 mm
Tensile Strength @ 2% Strain	ASTM D-6637	280 x 450 lb/ft	4.1 x 6.6 kN/m
Tensile Strength @ 5% Strain	ASTM D-6637	580 x 920 lb/ft	8.5 x 13.4 kN/m
Ultimate Tensile Strength	ASTM D-6637	850 x 1,300 lb/ft	12.4 x 19.0 kN/m
Junction Efficiency	GRI-GG2-05	93%	93%
Flexural Stiffness	ASTM D-7748	250,000 mg-cm	250,000 mg-cm
Aperture Stability	USCOE Method (Torsional Rigidity)	0.32 m-N/deg	0.32 m-N/deg
Resistance to Installation Damage (SC-SW-GP)	ASTM D-5818/ASTM D-6637	95%SC/93%SW/90%GP	95%SC/93%SW/90%GP
Resistance to Long Term Degradation	EPA 9090	100%	100%
Resistance to UV Degradation @ 500 Hours	ASTM D-4355	100%	100%

Roll Size	Roll Diameter	Area	Weight
13.1' x 246'	13.0 in	359 sqy	135 lbs

NOT FOR CONSTRUCTION

MarksEngineering



42 BEEBAM ST
CANANDAIGUA, NY 14424
www.marksengineering.com marksengineering.com



STAMP

REVISIONS AND APPROVALS

NO.	DATE	DESCRIPTION OF REVISION OR APPROVAL	BY
1	2/17/21	PER PRC REVIEW	MCF
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COUNTY OF ONTARIO

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DETAILS

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C503



Diamond Pro® PS

Retaining Wall Installation Instructions



Diagram 1 - Excavation



Diagram 2 - Leveling Pad



Diagram 3 - Base Course



Diagram 4 - Base Course

STAKE OUT THE WALL

- A surveyor shall locate the proposed base of wall location. Verify the wall location with the project supervisor.

EXCAVATION

- Excavate for the leveling pad to the lines and grades shown on the approved plans and excavate enough soil behind the wall for the geosynthetic reinforcement material (if required).
- The trench for the leveling pad should be at least 2 feet wide and a minimum of 1 foot (minimum) deep, enough to bury the first course below grade, plus 6 inches for the leveling pad. See Diagram 1.

LEVELING PAD

- An aggregate leveling pad is made of compactible base material of 3/4-inch minus with fines.
- If the planned grade along the wall front will change elevation, the leveling pad may be stepped up by the height of the block (typically 8-inch increments) to match the grade change. Always start at the lowest level and work upward.
- Compact the 6 inch (minimum thickness) aggregate leveling pad, using ordinary compaction methods, to provide a level, hard surface on which to place the base course. Mist lightly with water before compaction, if needed. See Diagram 2.
- For walls with step-ups in the base course, extra care should be given to properly compact the aggregate leveling pad at the step-up locations.

BASE COURSE

- This is the most important step in the installation process.
- Begin laying block at the lowest elevation of the wall, whenever possible.
- Place first block and level, front to back and side to side; lay subsequent blocks in same manner.
- Use string along back edge of the block to check for proper alignment. See Diagram 3.
- Place the blocks side by side, flush against each other, and make sure the blocks are in full contact with the leveling pad. Level front to back and side to side. See Diagram 4.

- If the wall is on an incline, don't slope the blocks. Step them up so they remain consistently level.
- Place soil in front of the base course and compact. Base course should be buried. Continue to fill and compact after each course is laid.

PIN PLACEMENT

- Each unit has two sets of pin cores. The pin cores closest to the face of the block will create a near vertical system. The pin cores closest to the back of the block will create a 1-inch setback with a 7:1 system batter. Additional system batters can be created by alternating pin placement on each course of wall.
- Install pins prior to filling the cores and voids between the blocks. See Diagram 5.

CONSTRUCTION OF THE NEXT COURSE

- Place 12 inches (minimum) of drainage aggregate between, and directly behind the wall units. Fill voids in wall units with free draining aggregate. Place backfill soil and compact. Only lightweight hand operated compaction equipment is allowed within 3 feet from the back of the wall. See Diagram 6.
- Remove excess fill from top of units before placement of the next course.
- Place the next course of blocks over the pins using the pin alignment cores. Align pins into the core of the unit. Pull each block forward as far as possible to engage the pins. Maintain running bond with row below.
- On curves, use partial units to stay on bond. A circular saw with a masonry blade is recommended for cutting partial units. Use safety glasses and other protective equipment when cutting.

DRAINAGE DESIGN (PER DESIGN)

- Each project is unique. The grades on the site will determine at what level to install the drainpipe. Place the drainpipe (4-inch perforated piping) so water drains down and away from the wall into a storm drain, or daylight just above grade.
- Fill in the area behind the blocks with clean drainage aggregate, at least 1 foot from the wall. You may need to place and backfill several courses to achieve the proper drainage level.
- The outlet pipes should be spaced not more



Diagram 5 - Pin Placement



Diagram 6 - Core Fill



Diagram 7 - Reinforcement

than every 50 feet and at low points of the wall. In order for the drainage aggregate to function properly, it must keep clear of regular soil fill.

REINFORCED BACKFILL PLACEMENT AND COMPACTION (PER PLAN)

- Place reinforced backfill in 6 to 8 inch loose lifts and compact to the densities specified on the approved wall construction plans.
- Only hand operated compaction equipment is allowed within 3 feet from the back of the wall.
- If the compaction equipment is too small to achieve the required compaction, thinner lifts should be used.
- Install each subsequent course in a similar manner. Repeat procedure to the extent of wall height.

REINFORCEMENT PLACEMENT (PER PLAN)

- Refer to the approved wall construction plans for the reinforcement type, strength, and placement location. Measure and cut the reinforcement to the lengths shown on the plans.
- Ensure the reinforced backfill is placed and compacted flush with the top of the units and is graded reasonably flat prior to reinforcement placement.
- The reinforcement has a primary strength direction, which must be laid perpendicular to the wall face.
- Place the reinforcement within 1 inch of the front of the units and connect with the pins of the units. See Diagram 7.
- Place the next course of units. Pull the reinforcement hand taut and place staples, stakes, or fill at the back of the reinforcement to maintain reinforcement tension during placement of drainage aggregate and reinforced backfill.
- Place a minimum of 6 inches of reinforced backfill prior to operating equipment above the reinforcement. Avoid sudden braking or turning on fill placed over the reinforcement.

CAPPING A WALL

- Always start capping from the lowest elevation. If the wall elevation changes, caps can be stacked where the wall steps up.
- Lay caps at the elevation change and work back toward the previous step up. Cut caps with a diamond-blade saw to fit, as needed.
- Carefully glue with a high-strength concrete adhesive.

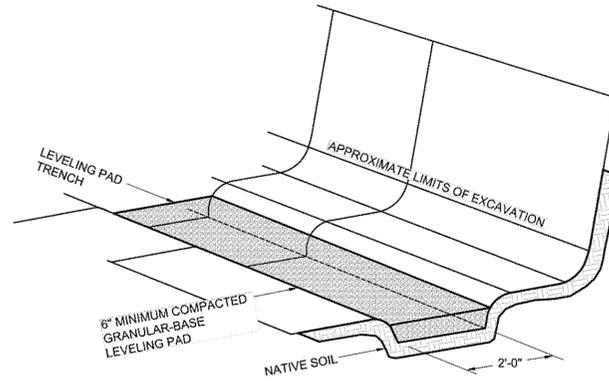
FINISH GRADE AND SURFACE DRAINAGE

- Protect the wall with a finished grade at the top and bottom. To ensure proper water drainage away from the wall, use 6 inches of soil with low permeability and seed or plant to stabilize the surface.
- Consult the wall design engineer if water may be directed behind the wall. If needed, create a swale to divert water away from the wall. This will minimize water seeping into the soil and drainage aggregate behind the wall.

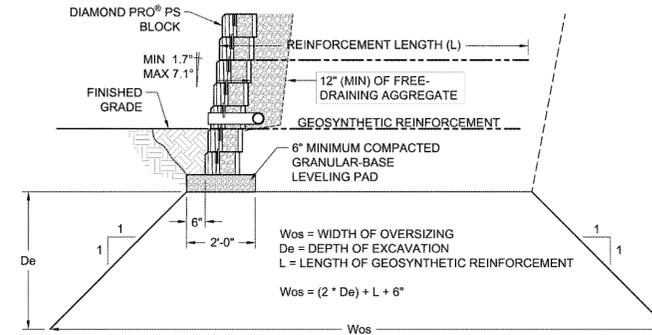
SITE CLEANING AND RESTORATION

- Brush off the wall and pick up any debris left from the construction process. Notify the job superintendent in writing of the completion and that it is ready for final inspection and acceptance.
- Planting vegetation in front and on top of the wall will help reduce the chance of erosion.
- Following these best practices for construction will ensure the success of your Anchor Wall Systems retaining wall. These instructions are meant as general guidelines. Site-specific conditions may warrant additional installation requirements.
- Anchor Wall Systems recommends you consult a professional engineer to design walls over 4 feet high, and have compaction tested by a qualified geotechnical engineer.

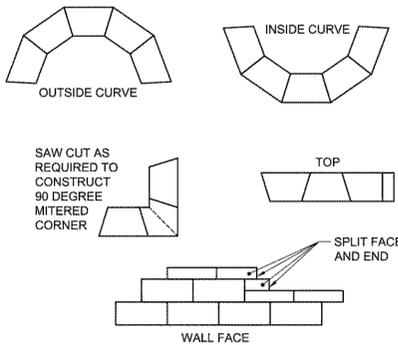
SAFETY NOTE: Always use appropriate equipment, including safety glasses or goggles and respirators, when splitting, cutting or hammering units.



1 BASE PREPERATION DETAIL



2 TYPICAL EXCAVATION OVERSIZING



- ALWAYS START CAPPING WALL FROM THE LOWEST ELEVATION.
- LAYOUT CAPS PRIOR TO USING ADHESIVE.
- CUT CAPS TO FIT. VARIOUS COMBINATIONS OF LONG AND SHORT CAP FACES WILL BE NECESSARY FOR RADII GREATER THAN THE MINIMUM.
- ALTERNATE SHORT AND LONG CAP FACES EVERY OTHER CAP TO ACHIEVE A STRAIGHT ROW OF CAPS.
- USE EXTERIOR-GRADE CONSTRUCTION ADHESIVE TO SECURE CAPS.

3 CAPPING DETAIL

WALL INNOVATIONS BY

ANCHOR
WALL SYSTEMS

GET SOCIAL

Pinterest.com/Belgard Facebook.com/BelgardPhotoscape
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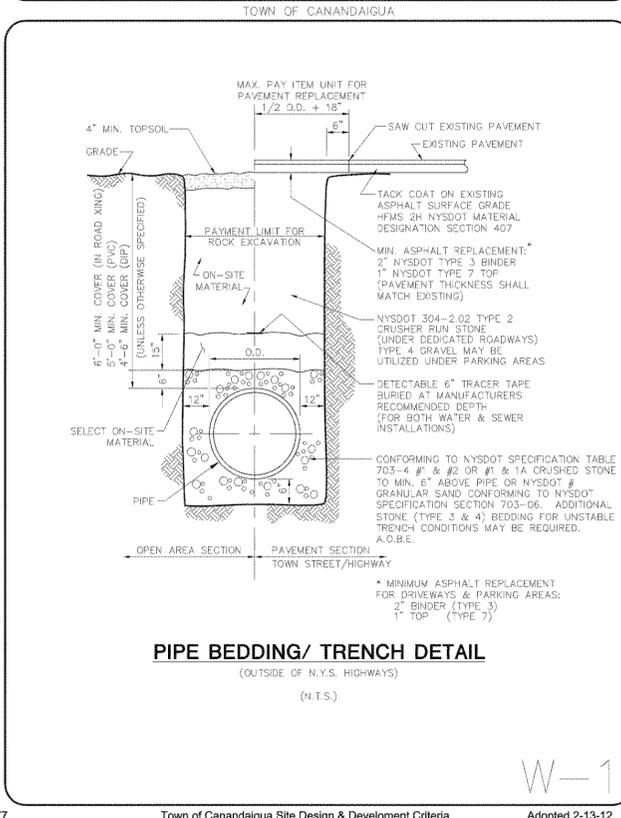
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Oldcastle Architectural
900 Ashwood Parkway, Suite 600
Atlanta, GA 30338

For more info visit: Belgard.com

APPENDIX: W-1
DATE: SEPTEMBER 2008

MRB|group
ENGINEERING/ARCHITECTURE/SURVEYING, P.C.
2480 BROWN CROFT BLVD. ROCHESTER, N.Y. 14625

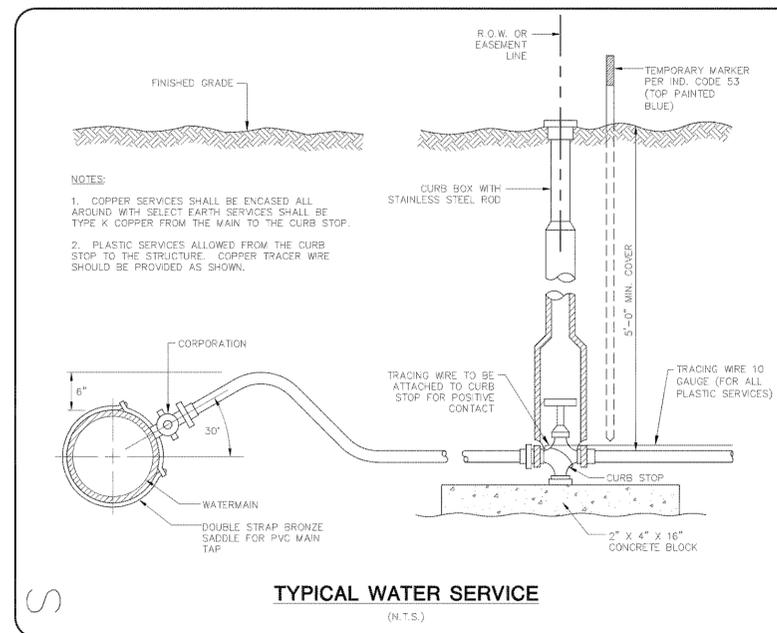


PIPE BEDDING/ TRENCH DETAIL

(OUTSIDE OF N.Y.S. HIGHWAYS)

(N.T.S.)

W-1



TYPICAL WATER SERVICE

(N.T.S.)

APPENDIX: S
DATE: JUNE 2000

Adopted 2-13-12

Town of Canandaigua Site Design & Development Criteria

MRB|group
ENGINEERING/ARCHITECTURE/SURVEYING, P.C.
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NOT FOR CONSTRUCTION

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Fax: 585-485-5805



REVISIONS AND APPROVALS			
NO.	DATE	DESCRIPTION OF REVISION OR APPROVAL	BY
1	2/17/21	PER P&C REVIEW	MCF
2	3/16/21	PER SALES/CLIENT COMMENTS	BAM
3	4/16/21	PER P&C REVIEW	MCF

SITE PLANS PREPARED FOR:
JOHN & SUSAN LEWIS
NEW RESIDENCE
SHOWING LAND IN:
4210 COUNTY ROAD 16
TOWN OF CANANDAIGUA

STATE OF NEW YORK
COUNTY OF ONTARIO

DRAWING TITLE:
DETAILS

DRAWN BY:	MCF
DESIGNED BY:	BAM
CHECKED BY:	BAM
SCALE:	AS NOTED
JOB NO.:	20-203
DATE:	02/10/2021
TAX MAP#:	127-19-2-30-111

C504

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