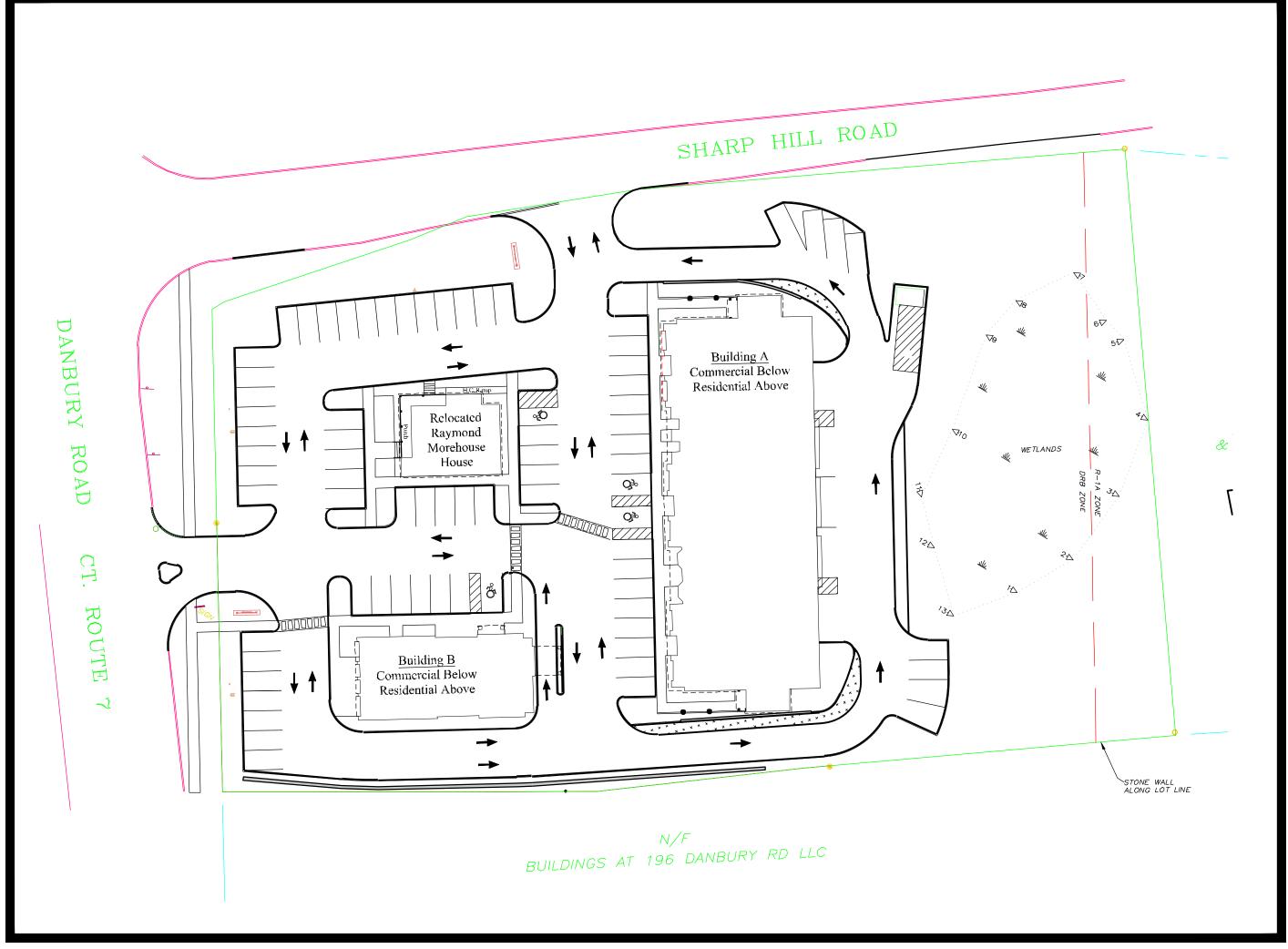
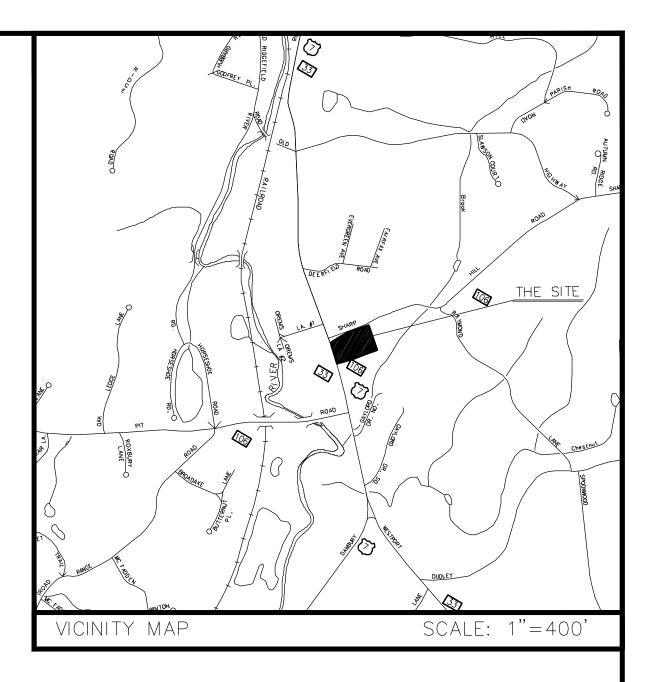
SITE DEVELOPMENT PLANS SHARP HILL SQUARE **198 & 200 DANBURY ROAD** WILTON, CT **PREPARED FOR** 200 DANBURY ROAD, LLC

LIST OF DRAWINGS

SHEET	TITLE
N1	GENERAL LEGEND, NOTES & ABBREVIATIONS
C1	DEMOLITION PLAN
C2	LAYOUT & MATERIALS PLAN
C3	GRADING & DRAINAGE PLAN
C4	UTILITY PLAN
C5	EROSION CONTROL PLAN
N2-N8	NOTES & DETAILS
ES1	SEDIMENTATION & EROSION CONTROL DETAILS



© COPYRIGHT ALL RIGHTS RESERVED 14369SP



APPLICANT/DEVELOPER 200 DANBURY ROAD, LLC 283 MAIN STREET RIDGEFIELD, CT 06877

CIVIL ENGINEER



BROOKFIELD, CONNECTICUT



NOVEMBER 8, 2018

01/06/20 I.W.C. COMMENTS 01/08/20 ZONING SUBMISSION 02/06/20 TOWN ENGINEER DRAINAGE COMMENT 02/18/20 P&Z COMMENTS 02/24/20 FIRE MARSHAL COMMENTS 03/03/20 SITE PLAN REVISIONS 03/13/20 SITE PLAN REVISIONS

Not Valid Without Embossed Seal

(SEAL AND SIGNATURE LIMITED TO PLANS PREPARED BY CCA, LLC)

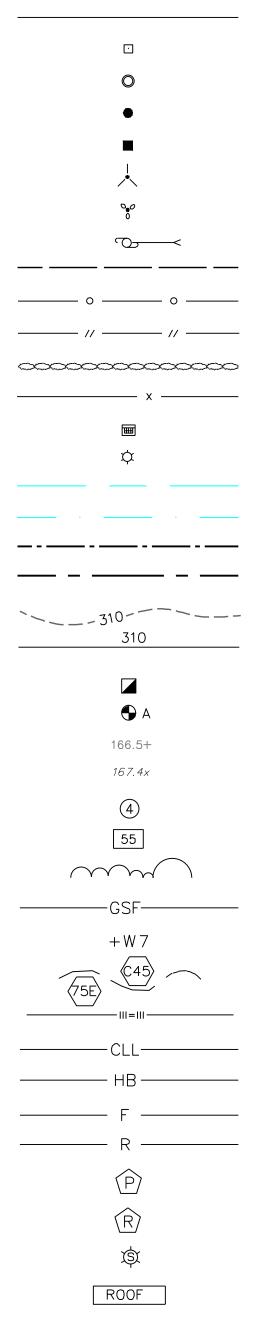
ABBREVIATIONS

APPROX	APPROXIMATE
BF BM	BASEMENT FLOOR BENCH MARK
BCLC	BITUMINOUS CONCRETE LIP CURB
BLDG	BUILDING
CIP CB	CAST IRON PIPE CATCH BASIN
CD	CURTAIN DRAIN
Ch	CHORD
CLL CONC	CONSTRUCTION LIMIT LINE CONCRETE
CONST	CONSTRUCT
CMP	CORRUGATED METAL PIPE
CPEP-S CULV	CORRUGATED POLYETHYLENE PIPE WITH SMOOTH INTERIOR
DOT	CULVERT DEPARTMENT OF TRANSPORTATION
DB	DISTRIBUTION BOX
DMH	DRAINAGE MANHOLE
DH DR	DEEP HOLE DRIVEWAY
DIP	DUCTILE IRON PIPE
EOP	EDGE OF PAVEMENT
ELEC ELEV	ELECTRIC ELEVATION
EXIST, EX	EXISTING
EG	EXISTING GRADE
FE FF	FLARED END FIRST FLOOR
FG	FINISH GRADE
FND	FOUNDATION
GPD	GALLONS PER DAY
GAR GND	GARAGE GROUND
GSF	GEOTEXTILE SILT FENCE
GV	GAS VALVE
HW	HEADWALL
HC HWY	HANDICAP HIGHWAY
HYD	HYDRANT
IN	
INV IP	INVERT IRON PIPE
Ĺ	LENGTH
LF	LINEAR FEET
LP MH	LIGHT POLE MANHOLE
MAX	MAXIMUM
MET	METAL
MBR MIN	METAL BEAM RAIL MINIMUM
MISC	MISCELLANEOUS
MON	MONUMENT
NO OUT	NUMBER OUTLET
P-#	PERCOLATION TEST
PC	POINT OF CURVATURE
PCC PI	POINT OF COMPOUND CURVATURE POINT OF INTERSECTION
PT	POINT OF TANGENCY
PV	PERMANENT VEGETATION
PVC PVI	POINT OF VERTICAL CURVATURE POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVRC	POINT OF VERTICAL REVERSE CURVE
PVC PROJ	POLYVINYL CHLORIDE PIPE PROJECT
PL	PROPERTY LINE
PROP, PR	PROPOSED
PS R	PUMP STATION RADIUS
RR	RAILROAD
RCP	REINFORCED CONCRETE PIPE
RELOC	RELOCATION REQUIRED
REQ'D RET	REQUIRED
ROW	RIGHT OF WAY
RD.	ROAD
RD SAN	ROOF DRAIN SANITARY
SSMH	SANITARY SEWER MANHOLE
ST	SEPTIC TANK
SPEC SPK	SPECIFICATION SPIKE
STK	STAKE
STD	STANDARD
STA SW	STATION STONE WALL
SS	SANITARY SEWER
STY	STORY
ST.	STREET TANGENT
TAN TEL	TELEPHONE
TEMP	TEMPORARY
	TOP OF FRAME UNDER DRAIN
U-DRAIN VERT	VERTICAL
WV	WATER VALVE
W/ YD	WITH YARD DRAIN

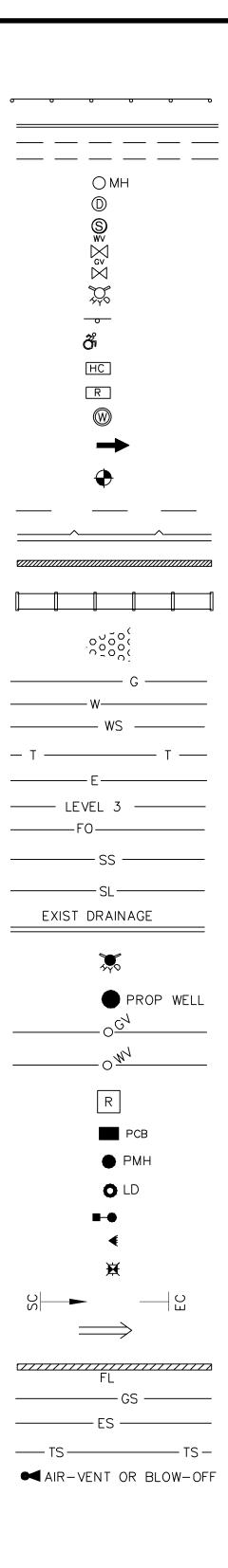
PROPERTY LINE EXISTING MONUMENT EXISTING IRON PIN OR PIPE PROPOSED IRON PIN OR PIPE PROPOSED MONUMENT DRILL HOLE STONE BOUND UTILITY POLE W/ANCHOR EASEMENT LINE CHAIN FENCE WOOD FENCE STONE WALL WIRE FENCE CATCH BASIN LIGHT POLE BLDG. SETBACK LINE WATERCOURSE FLOODWAY FLOODPLAIN EXISTING CONTOUR PROPOSED CONTOUR PROPOSED TEST PIT PERCOLATION TEST EXISTING SPOT ELEVATION PROPOSED SPOT ELEVATION LOT NUMBER STREET NUMBER TREE LINE GEOTEXTILE SILT FENCE (GSF) FLAGGED WETLANDS SOIL BOUNDARY ROCK OUTCROP CONSTRUCTION LIMIT LINE HAY BALES (HB) FOOTING DRAIN (F) ROOF DRAIN (R) PRIMARY SEPTIC SYSTEM AREA RESERVE SEPTIC SYSTEM AREA SOLAR ACCESS

ROOF RECHARGE GALLERY

GENERAL LEGEND

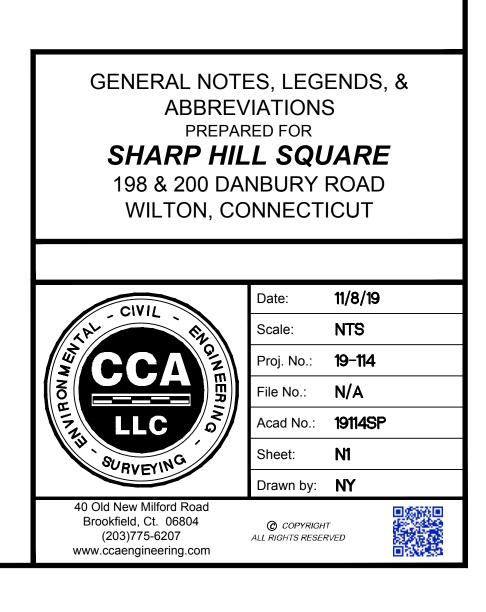


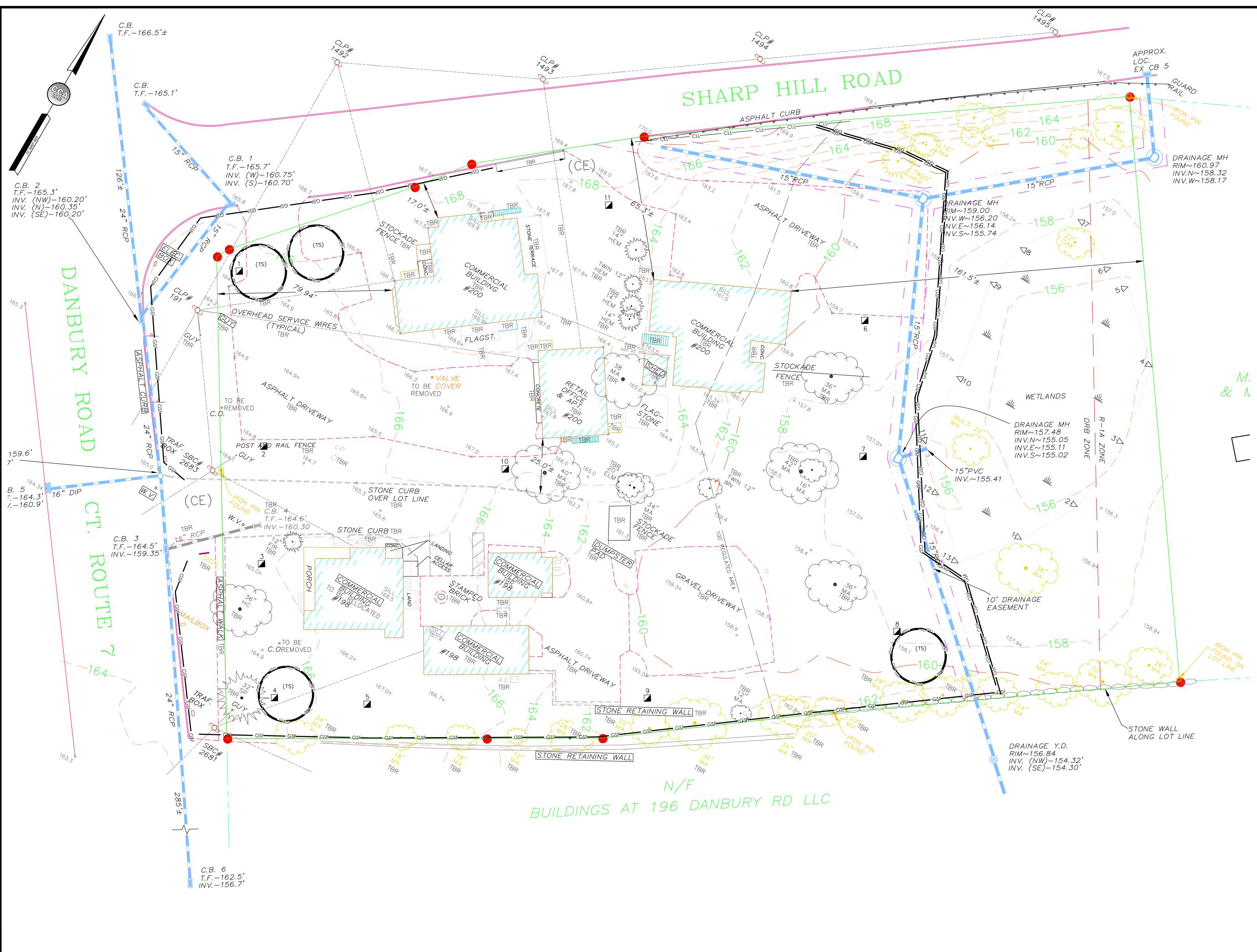
GUIDE RAIL
EXISTING CURB
GRAVEL ROAD
EXISTING MANHOLE EXISTING STORM DRAINAGE MANHOLE
EXISTING SANITARY SEWER MANHOLE
EXISTING WATER VALVE
EXISTING GAS VALVE
EXISTING FIRE HYDRANT EXISTING SIGN
HANDICAP PARKING SPACE
HANDICAP RAMP
REFUSE AREA
EXISTING WELL
TRAFFIC FLOW DIRECTION
MONITORING WELL
SWALE, GRADE TO DRAIN
EXISTING RETAINING WALL
PROPOSED RETAINING WALL
RAILROAD TRACKS
RIPRAP PAD
EXIST. GAS MAIN
EXIST. WATER MAIN
EXIST. WATER SERVICE
EXIST. TELEPHONE LINE
EXIST. ELECTRIC SERVICE
EXIST. LEVEL 3 COMMUNICATION LINE EXIST. FIBER OPTIC LINE
EXIST. SANITARY SEWER
EXIST. SANITARY SEWER LATERAL
EXIST. DRAINAGE
PROPOSED FIRE HYDRANT
PROPOSED WELL
PROPOSED GAS VALVE
PROPOSED WATER VALVE
SCREENED REFUSE AREA
PROPOSED CATCH BASIN
PROPOSED MANHOLE
PROPOSED LAWN DRAIN PROPOSED LIGHT POLE
PROPOSED BUILDING LIGHT
PROPOSED POST TOP LIGHT
START / END CURBING
TEMPERORY SWALE
PROPOSED FIRE LANE
PROPOSED GAS MAIN
PROPOSED ELECTRIC SERVICE
PROPOSED TELEPHONE LINE
PROPOSED AIR VENT OR BLOW-OFF



GENERAL NOTES

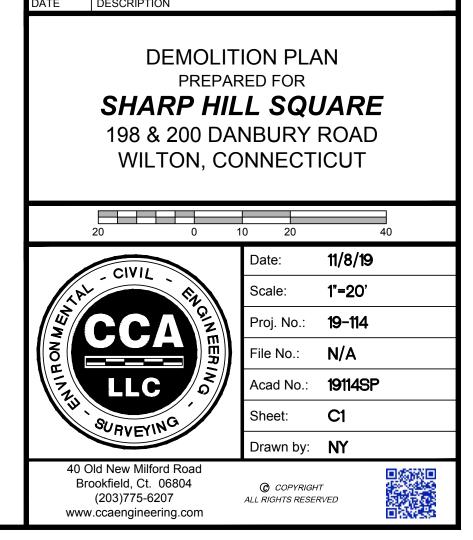
- 1. HOLD PRE-CONSTRUCTION MEETING WITH OWNER, EXCAVATION AND WALL
- CONTRACTORS, ENGINEER AND TOWN STAFF. 2. ALL WORK TO MEET TOWN OR CITY, STATE AND FEDERAL CODES,
- REGULATIONS AND STANDARDS AS APPLICABLE.
- DISCREPANCIES IN THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY FOR RESOLUTION.
 ALL PERMITS SHALL BE OBTAINED PRIOR TO CONSTRUCTION.
- 5. CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING REQUIRED PERMITS AND NOTIFYING THE TOWN OR CITY DEPARTMENTS AND THE ENGINEER FOR INSPECTIONS.
- 6. THE TOWN AND PROJECT ENGINEER SHALL INSPECT THE PROPERTY REGULARLY. IMPROVEMENTS TO THE SITE BASED ON THOSE INSPECTIONS ARE INTENDED TO BE COMPLETED WITHIN 48 HOURS OR BEFORE THE NEXT STORM WHICHEVER IS EARLIER. CHANGES TO THE SEQUENCE PLANS SHALL BE NOTED ON THE PLANS AND SUBMITTED TO THE TOWN FOR STAFF REVIEW PRIOR TO IMPLEMENTATION.
- 7. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL MEET CONNECTICUT D.O.T. STANDARDS FOR ITEMS NOT SPECIFIED IN THE TOWN OR CITY REGULATIONS.
- 8. ALL CATCH BASINS, MANHOLES, PIPING AND OTHER UTILITY COMPONENTS
- WITHIN TRAFFIC AREAS SHALL BE CAPABLE OF SUPPORTING H-20 LOADING.
 9. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL ON-SITE AND OFF-SITE FIELD CONDITIONS AND VERIFY THAT NO CHANGES HAVE OCCURRED SINCE THE ISSUANCE OF THIS PLAN. THE DESIGN ENGINEER IS TO BE NOTIFIED OF ANY CHANGES WHICH CONFLICT WITH THIS PLAN.
- THE EROSION CONTROL LINE (GSF) IS TO BE CONSIDERED AS THE LIMIT OF CONSTRUCTION UNLESS OTHERWISE NOTED.
 THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND
- QUANTITIES SHOWN ON THESE PLANS PRIOR TO PROCEEDING WITH CONSTRUCTION AND ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER WHOM SHALL HAVE FINAL SAY AS TO THE ACTUAL DIMENSIONS TO
- CONSTRUCT BY. 12. STRICT ADHERENCE TO ALL OSHA, TOWN OR CITY AND STATE OF CONNECTICUT REGULATIONS REGARDING CONSTRUCTION IS REQUIRED AT ALL TIMES.
- 13. CONTRACTOR SHALL NOTIFY CALL-BEFORE-YOU-DIG (1-800-922-4455) FOR UTILITY MARKOUT PRIOR TO CONSTRUCTION.
- 14. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR JOB SAFETY.15. ALL UTILITIES TO BE INSTALLED UNDERGROUND
- 16. UTILITY LOCATIONS WILL BE AS DETERMINED BY THE UTILITY COMPANIES.
 17. THE LOCATION AND ELEVATION OF UNDERGROUND UTILITIES IS UNKNOWN. IF THEY ARE INDICATED AT ALL ON THESE PLANS, THEY ARE APPROXIMATE AND
- CCA, LLC, IT'S PRINCIPALS OR EMPLOYEES, SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES AND/OR ADDITIONAL COSTS WHICH MIGHT RESULT FROM THE EXISTENCE OF SAID UTILITIES.
 18. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING
- UTILITIES BEFORE COMMENCING ANY WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- 19. ALL GRADING SHALL BE PERFORMED TO ELIMINATE LOW POINTS AND DEPRESSIONS WHICH WOULD TRAP SURFACE WATER. CONTACT THE DESIGN ENGINEER IF CHANGES ARE WARRANTED.
- 20. GRADING TO BE TO ALL APPLICABLE REGULATIONS AND NORMAL STANDARDS OF GOOD PRACTICE.
- 21. MINOR GRADING CHANGES ARE PERMITTED TO MEET FIELD CONDITIONS PROVIDED PRIOR APPROVAL IS OBTAINED FROM THE ENGINEER.
- 22. GRADING SHALL MAINTAIN EXISTING RUNOFF CONDITIONS.
 23. ALL BACKFILL FOR BUILDINGS, TRENCHES, STRUCTURES, PARKING, DRIVEWAY AND SIDEWALK ETC. SHALL BE ADEQUATELY COMPACTED TO PREVENT
- EXCESSIVE SETTLEMENT. CONTACT THE ENGINEER SHOULD ADDITIONAL CLARIFICATION BE NECESSARY. 24. CONTRACTOR TO MATCH INTO EXISTING CONDITIONS AT ALL POINTS WHERE
- CONSTRUCTION MUST MATCH SUCH EXISTING CONDITIONS. 25. ALL DRAINAGE AND SANITARY SEWER STRUCTURE FRAMES SHALL BE CONSTRUCTED SO THAT THEY MAY BE ADJUSTED DOWN AT LEAST 12".
- USE GRADE RINGS OR BRICK TO CONSTRUCT TOP 12". 26. NO SILTY WATER SHALL BE PERMITTED TO DISCHARGE INTO THE DETENTION SYSTEMS. STORMWATER SYSTEMS SHALL BE CLEANED PRIOR TO CONNECTION TO THE DETENTION SYSTEMS. SILT SACKS SHALL BE MAINTAINED IN CATCH BASINS UNTIL PROJECT IS COMPLETED.

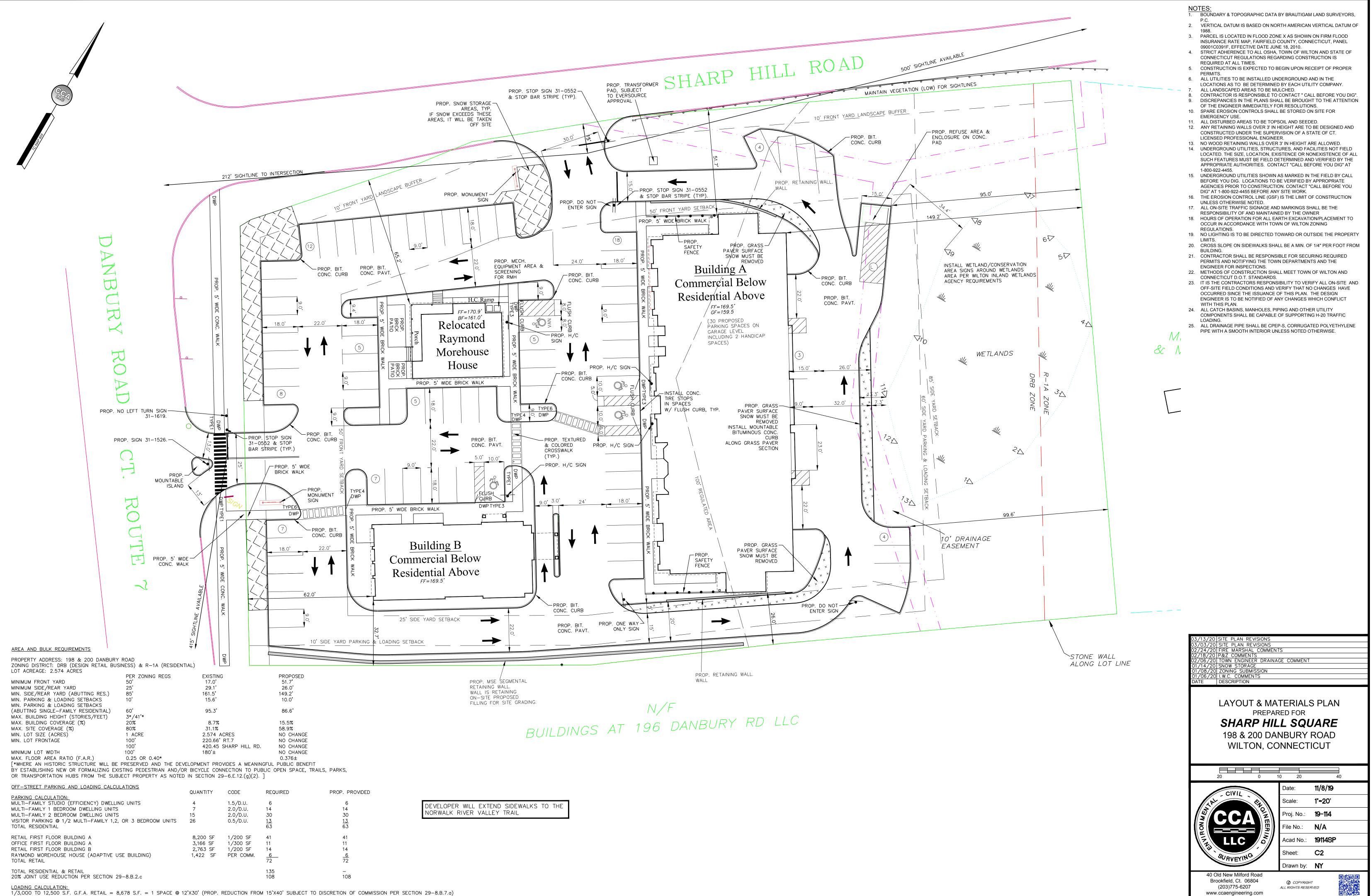




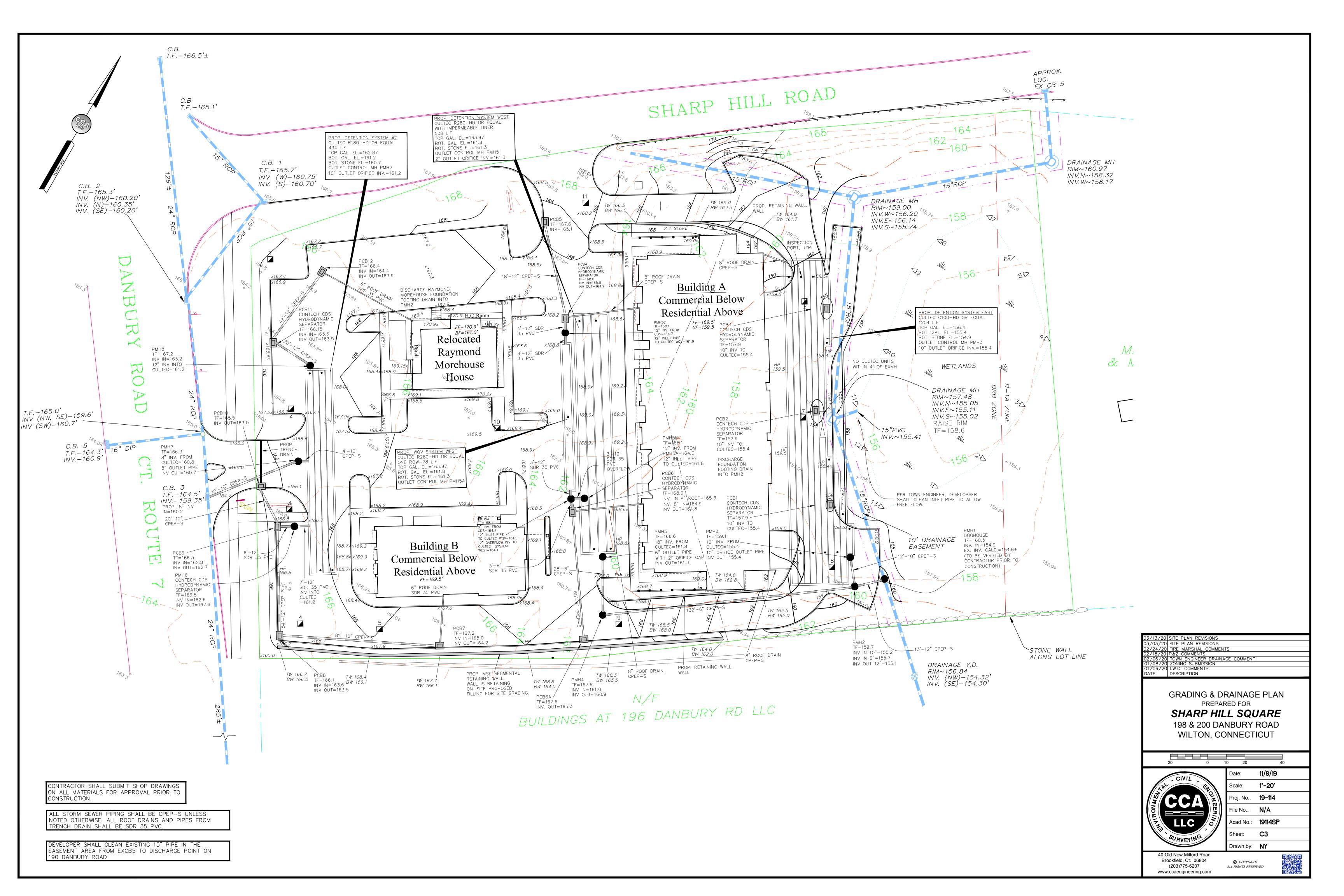
- DEMOLITION NOTES
 REMOVAL OF EXISTING STRUCTURES, INCLUDING BUILDINGS, PUMPS, TANKS AND ALL OTHER STRUCTURES SHALL BE INCONFORMANCE WITH THE REGULATIONS OF THE STATE OF CONNECTICUT AND ALL OTHER APPROPRIATE AGENCIES AND UTILITY OPERATORS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS FOR DEMOLITION AND DISPOSAL OF EXISTING STRUCTURES AND MATERIALS.
 ALL EXISTING STRUCTURES TO BE REMOVED (FOUNDATIONS, ETC.) SHALL BE REPLACED WITH CLEAN COMPACTED, GRANULAR FILL, COMPACTED TO 95% STANDARD PROCTOR DENSITY IN 6" LIFTS
- WITH CLEAN COMPACTED, GRANULAR FILL, COMPACTED TO 95% STANDARD PROCTOR DENSITY IN 6" LIFTS.
 ALL EXISTING CONCRETE AND BITUMINOUS WALKS, DRIVES AND PARKING AREAS TO BE REMOVED DURING CONSTRUCTION.
 EXISTING BITUMINOUS PAVEMENT SHALL BE REMOVED, STOCKPILED, PULVERIZED, AND INSPECTED BY PROJECT ENGINEER OR PROJECT MATERIALS INSPECTOR PRIOR TO USE. THE APPROVED MATERIAL SHALL BE USED AS, OR INCLUDED IN THE SUB-BASE BACKFILL MATERIAL FOR THE PROPOSED PAVEMENT. ALL REMAINING PAVEMENT MATERIAL THAT IS TO BE REMOVED SHALL BE PROPERLY DISPOSED OF OFF SLITE IN ACCORDANCE WITH TOWN AND STATE RECULATIONS
- SITE IN ACCORDANCE WITH TOWN AND STATE REGULATIONS. SITE IN ACCORDANCE WITH TOWN AND STATE REGULATIONS.
 THE CONTRACTOR SHALL USE THE APPROPRIATE MEANS TO PREVENT SEDIMENT AND DEBRIS FROM WASHING TO ADJACENT PROPERTIES. EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE CONNECTICUT STATE GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL. SEE EROSION CONTROL SHEETS.
 ANY PORTION OF PAVEMENT TO BE REMOVED OR REPLACED ALONG ROUTE 7 SHALL BE SAMULT 2 SEET. INTO EVISION CONDUCTION OF THE STATE STATE STATE STATE STATE AND SEDIMENT AND STATE ST
- ANT PORTION OF PAGEMENT TO BE REMOVED OR REPLACED ALONG ROUTE / SHALL BE SAWCUT 2 FEET INTO EXISTING ROADWAY.
 EXTENSIVELY CRACKED OR PATCHED AREAS SHALL BE RENOVATED BY SAW CUTTING AND REMOVING AFFECTED AREAS AND REPAYING TO FULL DEPTH TO MATCH EXISTING.
 ANY EXISTING FEATURE NOT SHOWN HERE TO BE REMOVED WHICH INTERFERES WITH THE PROPOSED CONSTRUCTION OR SERVES NO USEFUL PURPOSE IN THE PROPOSED PLANS SHALL BE REMOVED AND DISPOSED OR ABANDONED IN ACCORDANCE WITH APPLICABLE
- 9. THE CONTRACTOR SHALL BE PERMITTED TO SALVAGE ANY EQUIPMENT OR MATERIALS HE DEEMS FEASIBLE FOR THAT PURPOSE. ALL SALVAGED MATERIAL OR ITEMS SHALL BE REMOVED FROM THE SITE IMMEDIATELY UPON REMOVAL. NO SUCH MATERIAL SHALL BE
- REMOVED FROM THE STIELIMMEDIATELT OF ON REMOVAL NO SOCH MATERIAL STALL BE STORED ON SITE. ABSOLUTELY NO SALES OF SALVAGED MATERIALS SHALL BE ALLOWED ON THE SITE PROJECT.
 10. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ABANDONED UTILITY SERVICE CONNECTIONS, THE INSTALLATION OF NEW SERVICE CONNECTIONS AND SHALL COORDINATE ALL WORK WITH THE APPROPRIATE UTILITY COMPANY.
- THE CONTRACTOR SHALL WORK WITH THE APPROPRIATE UTILITY COMPANY.
 THE CONTRACTOR SHALL OBTAIN AND PAY ALL FEES ASSOCIATED WITH ALL PERMITS NECESSARY TO COMPLETE THE WORK.
 CONTRACTOR IS RESPONSIBLE TO VERIFY GRADES AND UTILITIES SHOWN ON EXISTING CONDITIONS PLAN PRIOR TO START OF ANY WORK. ANY AND ALL DISCREPANCIES ARE TO BE DOCUMENTED AND SUBMITTED TO THE OWNER'S REPRESENTATIVE AT THE TIME OF DISCOVERY.
- 13. CONTRACTOR MUST CALL UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION (CYBD-CALL BEFORE YOU DIG) AT LEAST 2 DAYS BEFORE STARTING EXCAVATION, DRILLING OR BLASTING.
- DRILLING OR BLASTING.
 14. ALL FOUNDATIONS, SLABS, STRUCTURAL STEEL, MASONRY SIDEWALKS, RETAINING WALLS, CURB, ETC. WITHIN THE DESIGNATED DEMOLITION AREAS SHALL BE DEMOLISHED ACCORDING TO SPECIFICATIONS.
 15. ALL EXISTING ON-SITE UTILITIES SHALL BE REMOVED UNLESS DESIGNATED FOR REUSE. REMAINING UTILITIES SHALL BE PROTECTED DURING CONSTRUCTION.
 16. MANHOLES, CATCH BASINS, DRY WELLS, CLEANOUTS, VALVE BOXES, FRAMES, COVERS AND GRATES REMAINING IN USE SHALL BE PROTECTED AND ADJUSTED TO PROPOSED GRADES AS NECESSARY.
 17. EVISTING CURPS. SIDEWALK AND CURP. CULT APPONS PEMOVED. SHALL BE PEPI ACED.
- GRADES AS NECESSARY.
 17. EXISTING CURBS, SIDEWALK AND CURB CUT APRONS REMOVED SHALL BE REPLACED FROM EXPANSION JOINT TO EXPANSION JOINT TO FULL DEPTH OF INSTALLATION.
 18. FOR ALL UTILITY LINES DESIGNATED TO BE REMOVED, PLACE AND COMPACT STRUCTURAL BACKFILL WITHIN TRENCH, FOLLOW CTDOT REQUIREMENTS WITHIN RIGHT-OF-WAY. CONTRACTOR RESPONSIBLE FOR UTILITY VERIFICATION. SHOULD UTILITIES BE FOUND DURING DEMOLITION WORK THEY WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DEMONG
- REMOVE. REMOVE.
 19. ALL ASPHALT AND CONCRETE MATERIALS SHALL BE REMOVED TO FULL DEPTH WHERE LANDSCAPED AREAS ARE PROPOSED OR WHERE NEW CONSTRUCTION IS PROPOSED. SEE NOTE 3.
 20. PRIOR TO DEMOLITION WORK OF EXISTING STRUCTURES, A MEETING WITH THE PUBLIC UTILITIES DEPARTMENT MUST OCCUR TO ENSURE THAT PROVISIONS ARE MADE TO ABANDON EXISTING SEWER AND WATER SERVICES IN A MANNER THAT PRESERVES THE INTEGRITY OF THE EXISTING SYSTEMS AND TO IDENTIFY AND PROTECT EXISTING UTILITIES.
 21. T.R. = TO BE REMOVED
- 21. T.B.R. = TO BE REMOVED

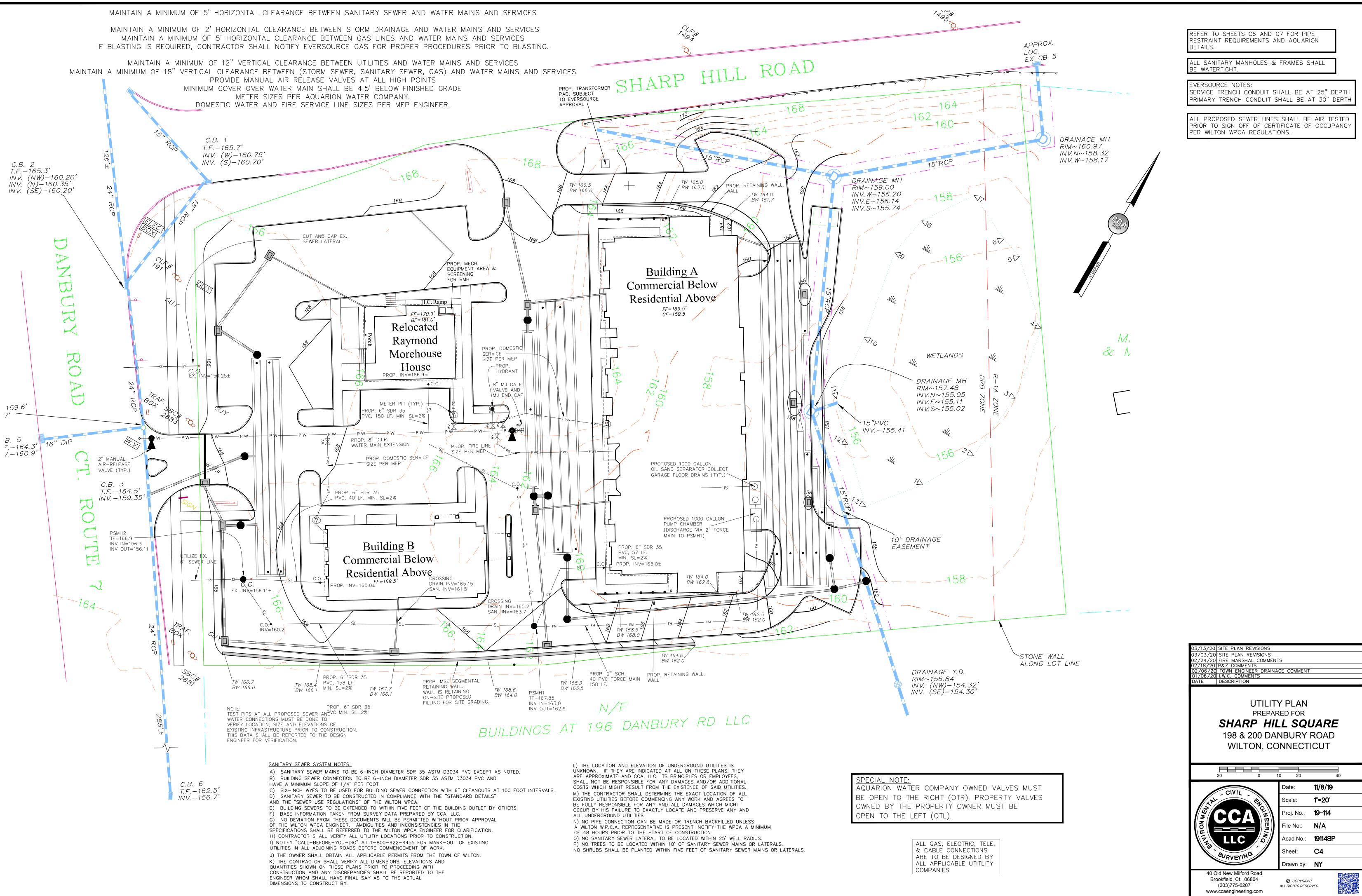
03/03/20 SITE PLAN REVISIONS DATE DESCRIPTION

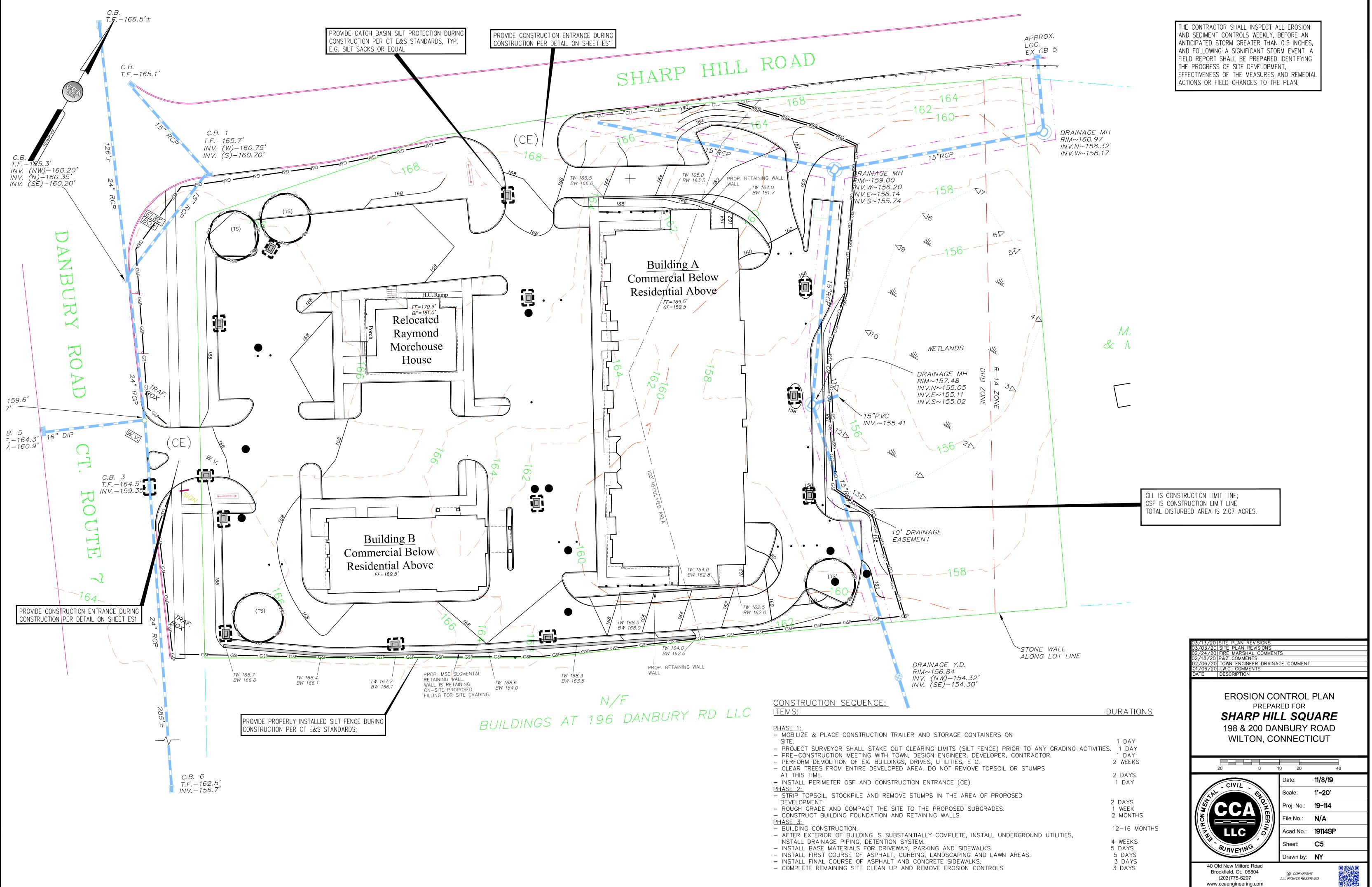


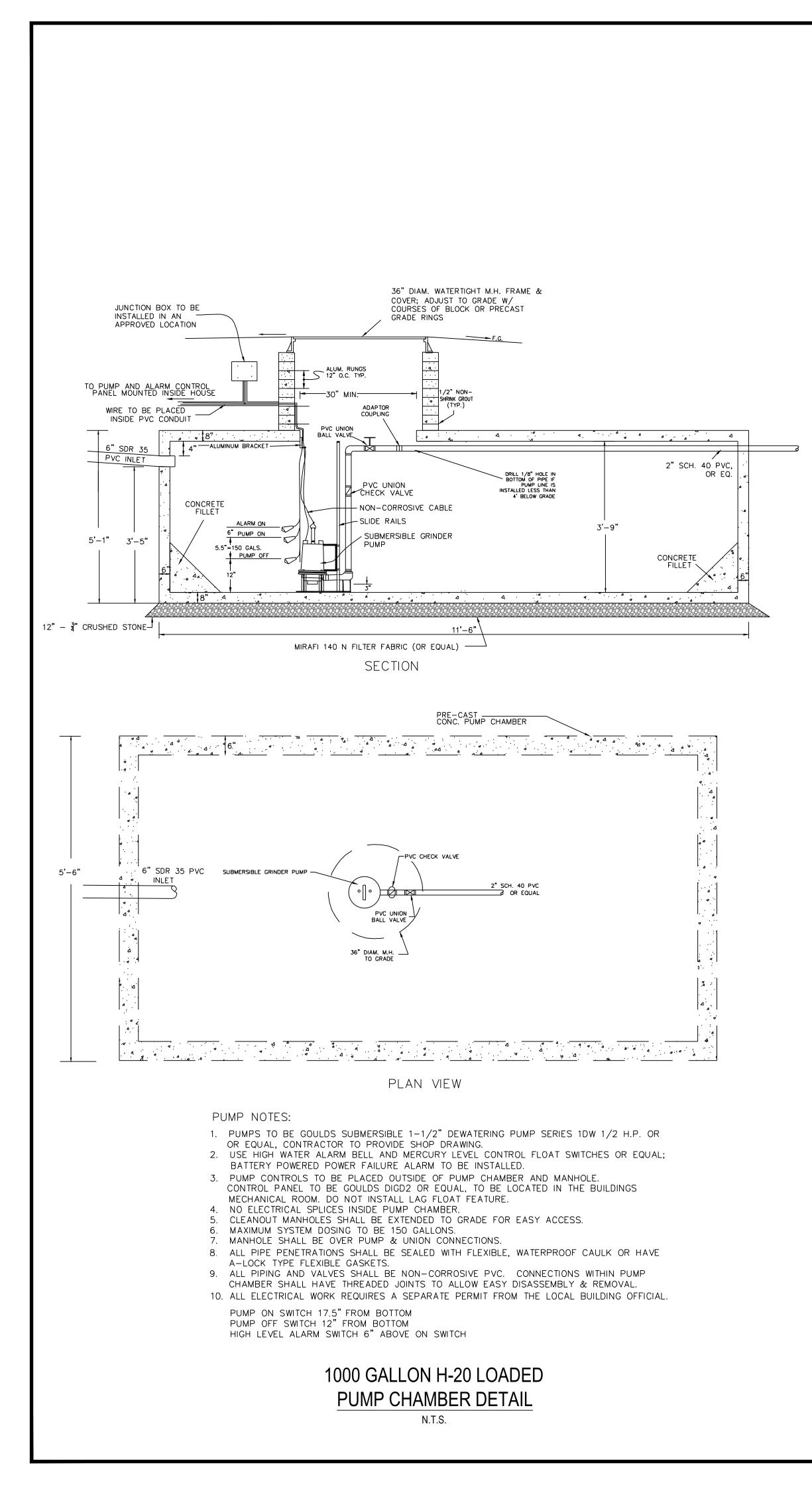


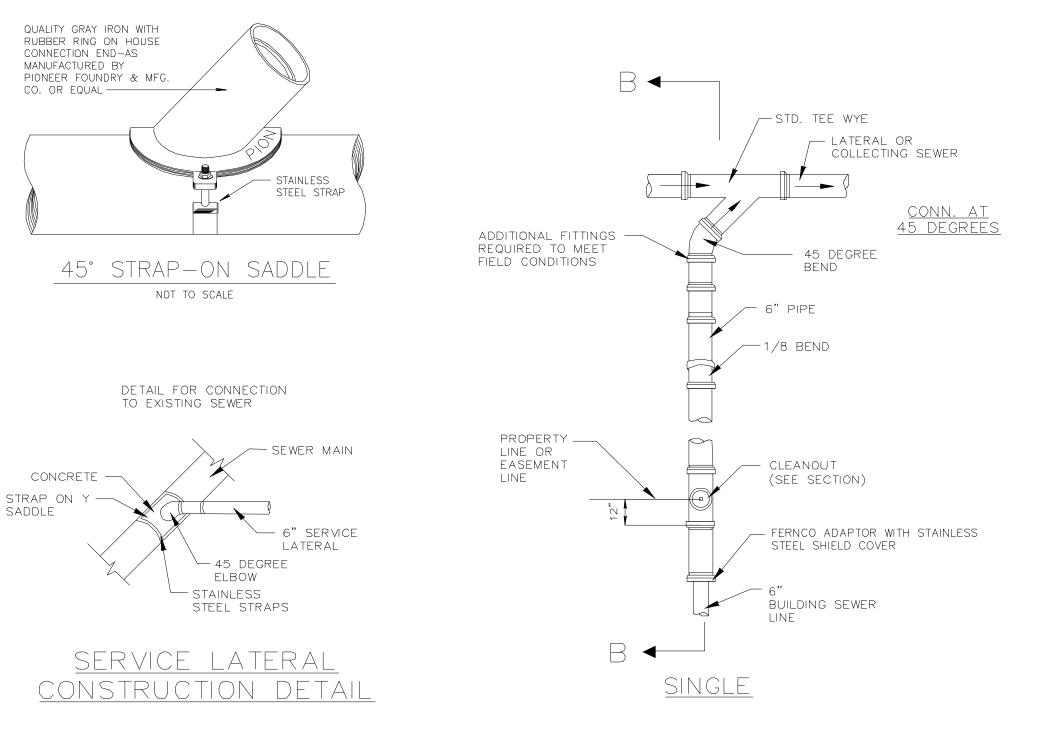
 $\frac{1}{3,000}$ TO 12,500 S.F. G.F.A. RETAIL = 8,678 S.F. = 1 SPACE @ 12'X30' (PROP. REDUCTION FROM 15'X40' SUBJECT TO DISCRETION OF COMMISSION PER SECTION 29-8.B.7.a)



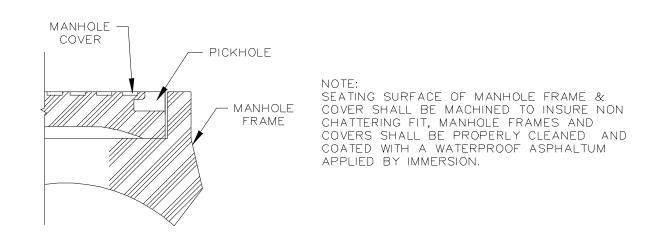




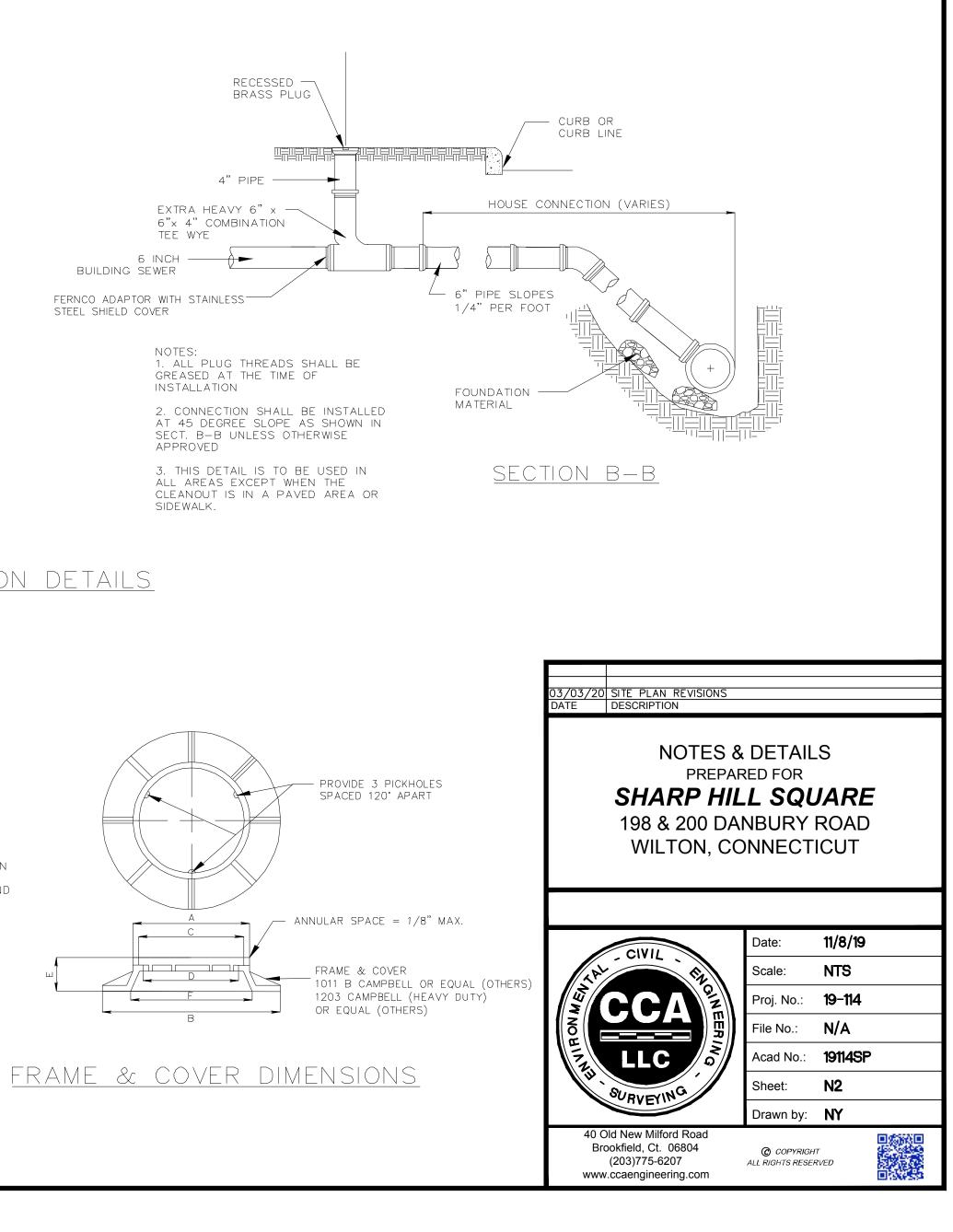


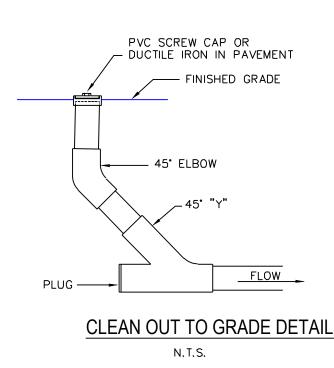


HOUSE CONNECTION DETAILS



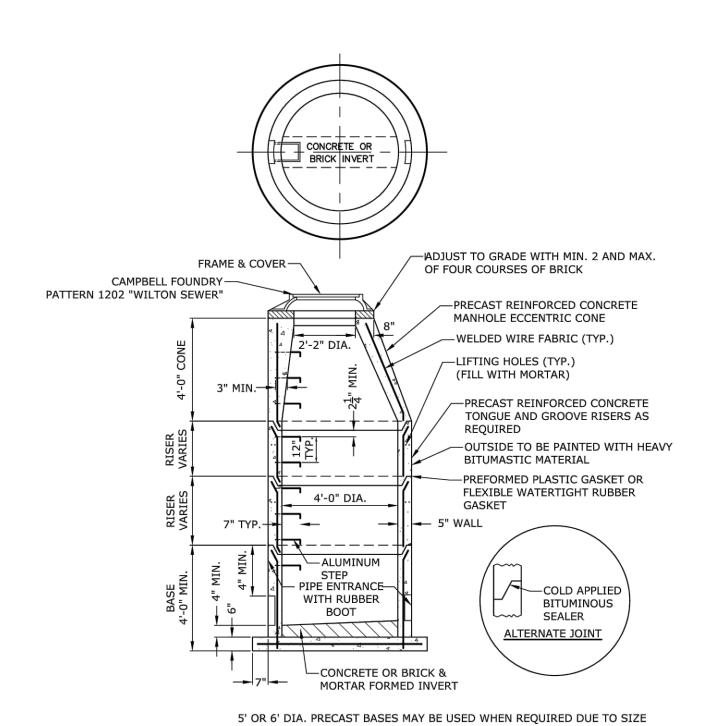
SPECIAL PICKHOLE DETAIL





* 1000 GALLONS MINIMUM SIZE

	"A"	"В"	" C"	"D"	"E"
TANK CAPACITY	INLET HGT.	O.A. HGT.	OUTLET HGT.	LIQUID LEVEL	INSIDE HGT.
1000 GAL. *	47"	61"	44"	36"	45"
1250 GAL.	56"	70"	53"	45"	54"
1500 GAL.	66"	79"	63"	55"	63"
2000 GAL.	82"	95"	79"	71"	79"
2500 GAL.	102"	115"	98"	92"	99"
3000 GAL.	117"	130"	114"	108"	114"
3500 GAL.	135"	148"	132"	124"	132"



OR NUMBER OF PIPES AT THE MANHOLE.

DIRECTED BY THE ENGINEER.

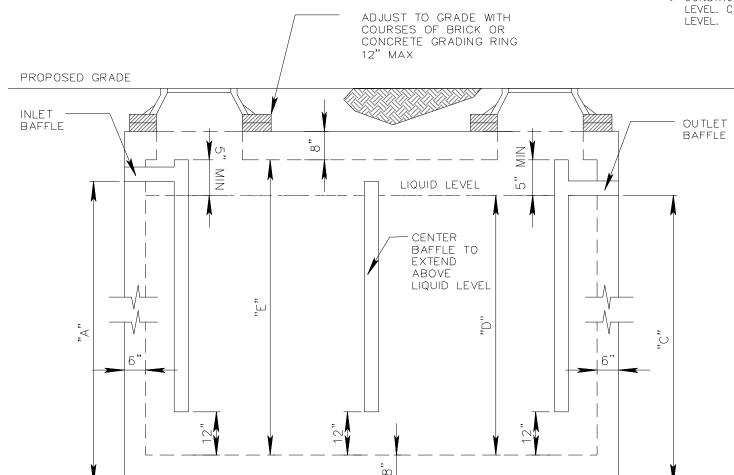
INCREASE.

PRECAST REDUCERS WILL BE PLACED ABOVE THE 5' & 6' BASES AS

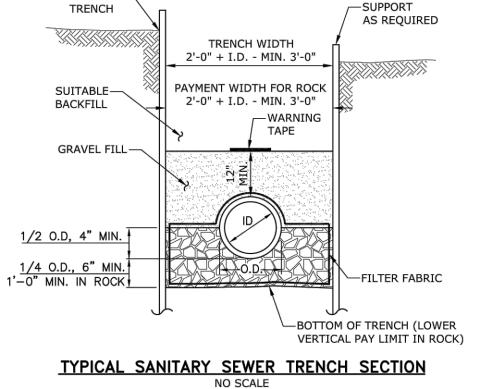
WALL THICKNESS TO INCREASE 1" FOR EACH 1' OF INSIDE DIAMETER

PRECAST SANITARY MANHOLE

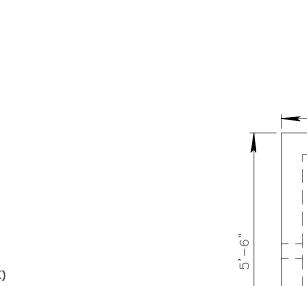
NO SCALE

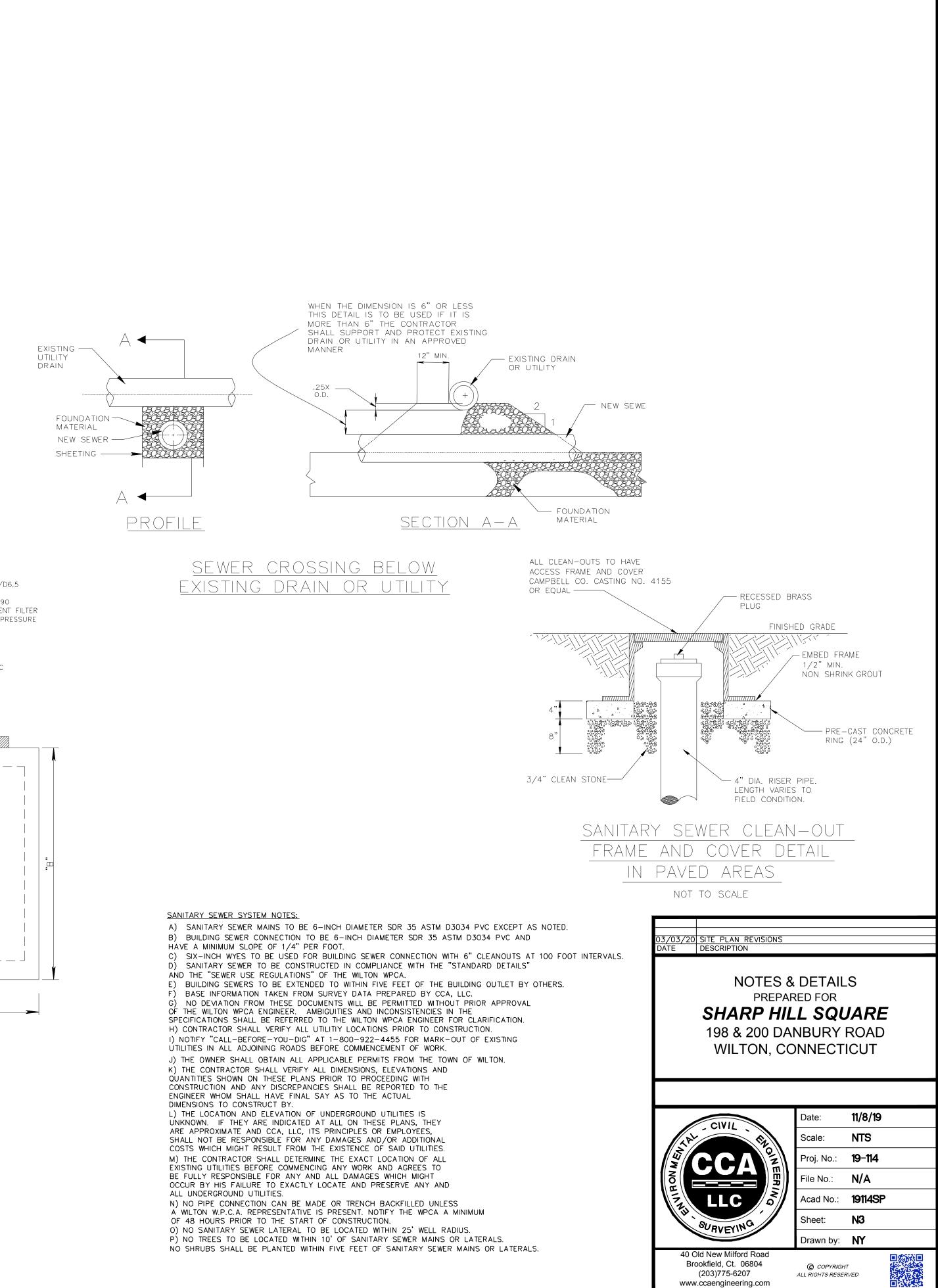


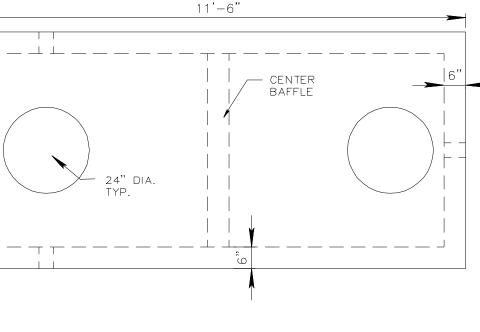




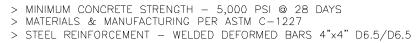
EDGE OF -





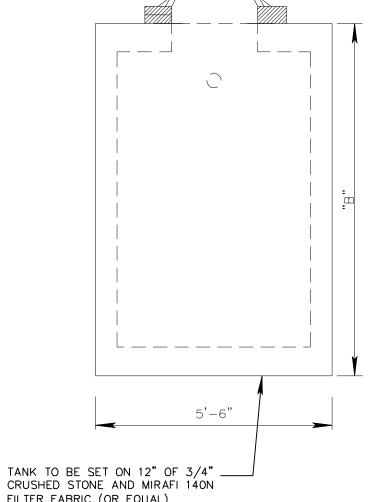






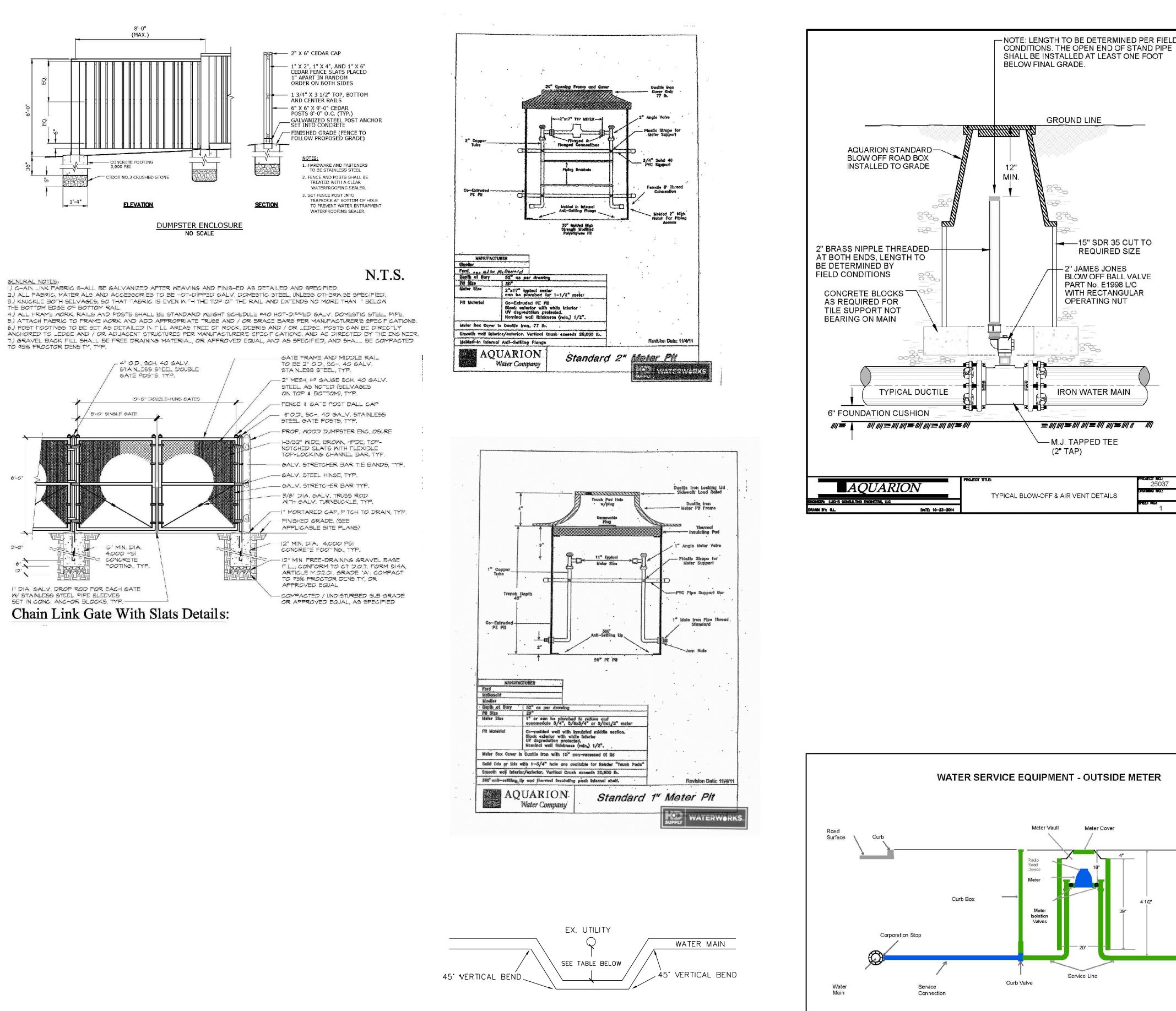
- (GR. 80) ASTM A-497, OR EQUAL > CONSTRUCTION JOINT SEALED WITH 1" BUTYL MASTIC ASTM C-990
- > 4" DIA. OUTLET TEE EQUIPPED WITH GAS DEFLECTOR OR EFFLUENT FILTER > 4" PIPE SEALS: RISSY PLASTICS MINI BOOT, OR EQUAL. MEETS PRESSURE
- REQUIREMENTS OF ASTM C-923. > CAPACITY @ FLOW LINE: 1,026 GALLONS
- > 28.5 GALLONS/INCH OF RISE > APPROXIMATE ASSEMBLED WEIGHT: 19,800 LBS.
- > CONSTRUCTION JOINT ON 1000 GAL IS ABOVE STATIC LIQUID LEVEL. CONSTRUCTION JOINT ON LARGER SIZES IS BELOW STATIC LEVEL.

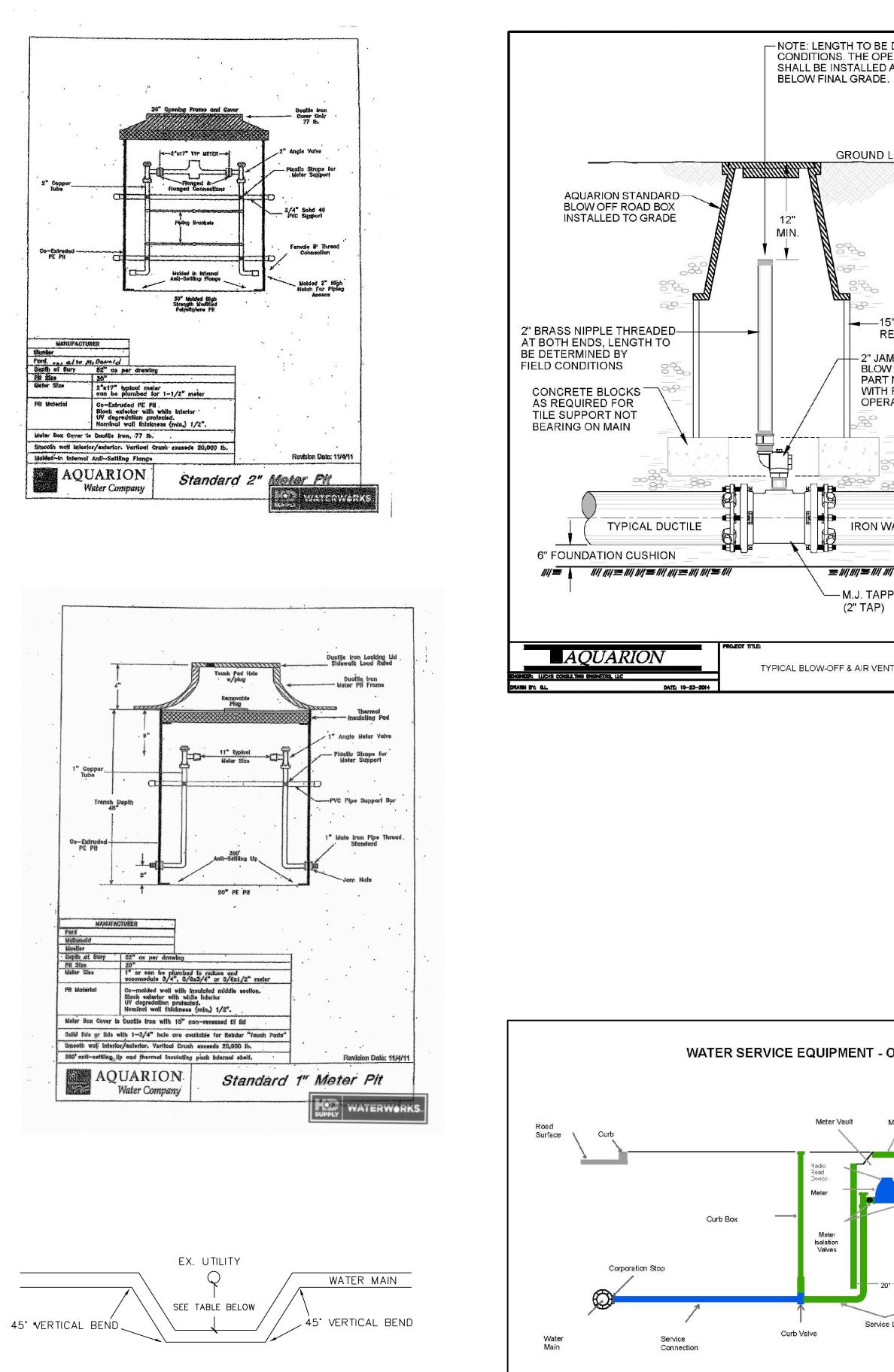




FILTER FABRIC (OR EQUAL)

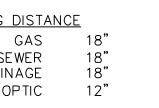
SHOP DRAWINGS SHALL BE PROVIDED TO THE DESIGN ENGINEER FOR REVIEW AND APPROVAL OF ALL STRUCTURES TO BE INSTALLED.





VERTICAL SEPARATING DISTANCE

SANITARY SEWER STORM DRAINAGE ELEC., TV, TELE, FIBER OPTIC WATER CROSSING UTILITY DETAIL



Typical Service Line Installation

AQUARION

Water Company

CUSTOMER OWNED WATER COMPANY OWNED

Building -

First Floor

— Cold Water Line

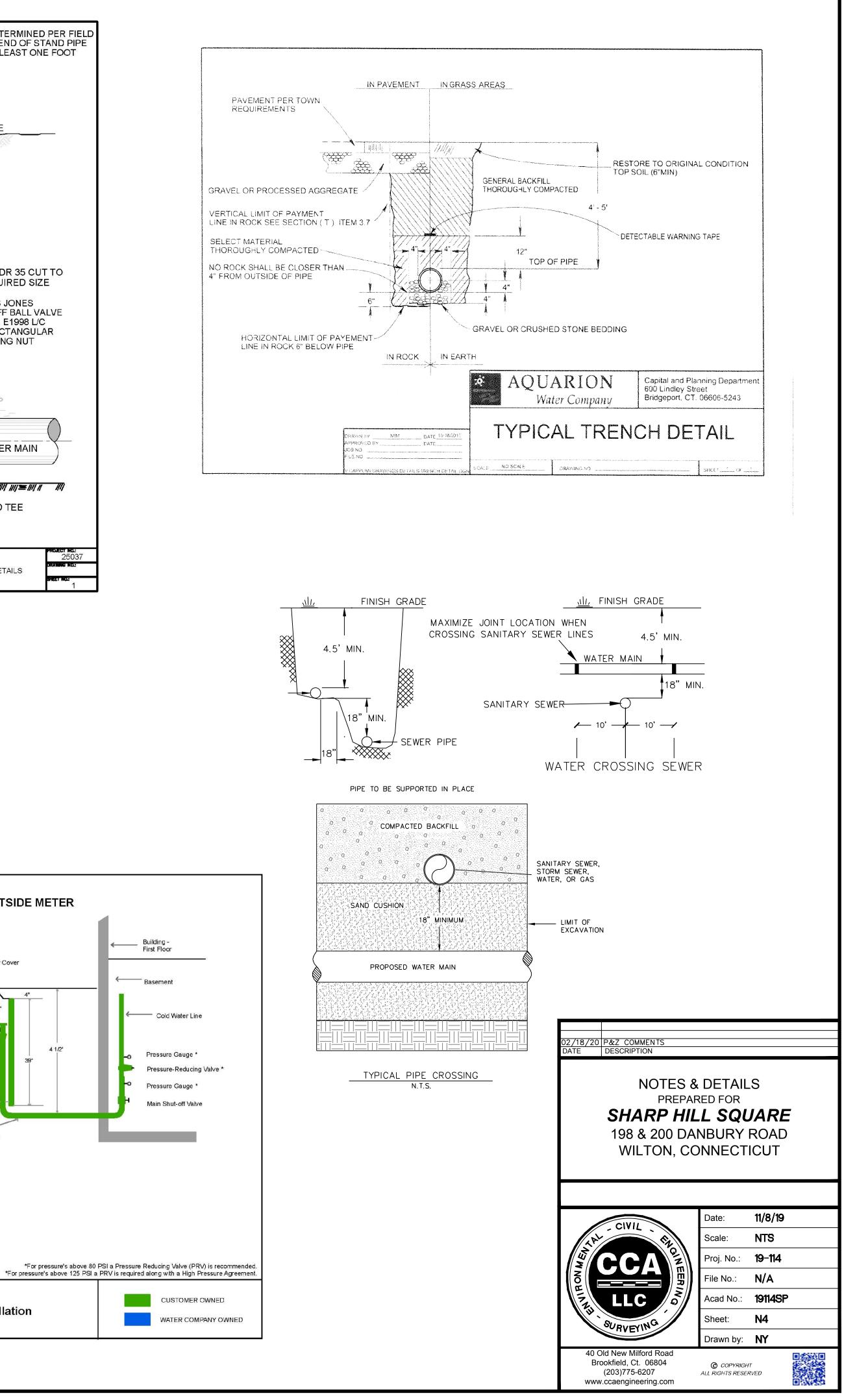
Pressure Gauge *

Pressure Gauge

Main Shut-off Valve

Basement

4 1/2



NOTE: HEADING NUMBERS CORRESPOND TO SECTION "I. NARRATIVE" OF THE EROSION AND SEDIMENTATION CONTROL PLAN CHECKLIST THAT APPEARS ON PAGE 3-12 OF THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.)

1.1 PROJECT DESCRIPTION

THE PROJECT CONSISTS OF THE CONSTRUCTION OF A MIXED USE FACILITY IN THE DRB DESIGN RETAIL BUSINESS DISTRICT ZONE. TWO BUILDINGS ARE TWO STORIES AND A THIRD IS THREE STORIES HIGH. THE BUILDINGS WILL CONTAIN A MIX OF RETAIL, OFFICE, AND 26 RESIDENTIAL DWELLING UNITS. VEHICLE ACCESS WILL BE FROM ONE NEW DRIVEWAY ON DANBURY ROAD AND ANOTHER NEW DRIVEWAY ON SHARP HILL ROAD. THE SITE WILL CONTAIN 77 SURFACE PARKING SPACES AND 30 GARAGE SPACES. INCLUDED AS INTEGRAL PARTS OF THE DEVELOPMENT ARE PARKING, SIDEWALKS, UTILITIES AND RETAINING WALLS. THE STORMWATER MANAGEMENT FACILITIES INCLUDE CATCH BASINS, PIPES, HYDRODYNAMIC SEPARATORS AND UNDERGROUND RECHARGE/DETENTION GALLERIES. THE PROPOSED BUILDING WILL CONNECT INTO THE MUNICIPAL SANITARY SEWER SYSTEM AND TO THE AQUARION WATER COMPANY SYSTEM IN DANBURY ROAD.

1.2 SITE DISTURBANCE

UNDISTURBED

THE SITE IS 2.57 ACRES IN SIZE. APPROXIMATELY 2.07 ACRES WILL BE DISTURBED. THE REMAINING 0.50 ACRES WILL BE KEPT

1.3 SITE SPECIFIC SEDIMENTATION AND EROSION ISSUES

SPECIFIC SOIL EROSION AND SEDIMENTATION ISSUES RELATE TO THE

1) DISTURBANCE OF SOIL SURFACES ASSOCIATED WITH ROUGH GRADING, PARKING AND ASSOCIATED UTILITY CONSTRUCTION.

2) CONSTRUCTION OF BUILDINGS AND DRIVES

3) STABILIZATION OF CUT & FILL SLOPES.

4) MAINTENANCE OF TEMPORARY E&S CONTROL MEASURES DURING CONSTRUCTION.

.4 PROJECT PHASING

THE PROJECT IS TO BE COMPLETED IN THREE PHASES WITH SEVERAL SEQUENTIAL STEPS. DESCRIPTIONS OF THE SEQUENCE APPEAR ON SHEET C5.

1.5 SCHEDULING

ONCE FINAL APPROVALS ARE RECEIVED, OVERALL CONSTRUCTION IS EXPECTED TO TAKE 18-24 MONTHS.

1.6 DESIGN CRITERIA, MAINTENANCE AND CONSTRUCTION SEQUENCING

1.6.1 DESIGN CRITERIA

THE STORM WATER MANAGEMENT SYSTEM IS DESIGNED FOR THE 2 THRU 25 YEAR STORM EVENTS.

1.6.2 MAINTENANCE OF E & S CONTROL MEASURES

1) LAND DISTURBANCE WILL BE KEPT TO A MINIMUM: RE-STABILIZATION WILL BE SCHEDULED AS SOON AS PRACTICAL.

2) ALL CATCH BASINS ARE TO HAVE "SILT SACK" OR EQUIVALENT INSERTS INSTALLED AT. TIME OF CONSTRUCTION AND MAINTAINED UNTIL SITE IS STABILIZED.

3) SILT FENCE, COIR LOGS OR HAY BALES WILL BE INSTALLED ALONG THE TOE OF ALL CRITICAL CUT AND FILL SLOPES, SOIL STOCKPILE AREAS. AND IN THOSE AREAS SHOWN ON THE PLAN.

4) ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND

SPECIFICATIONS OF THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL. AS MAY BE AMENDED.

5) EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED PRIOR TO LAND DISTURBANCE WHENEVER POSSIBLE.

6) ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE PROPERLY MAINTAINED UNTIL STABILIZATION HAS BEEN ACHIEVED.

7) ADDITIONAL CONTROL MEASURES WILL BE INSTALLED DURING THE CONSTRUCTION PERIOD IF NECESSARY OR REQUIRED. A MINIMUM OF 300 FEET OF SILT FENCE SHALL BE STORED AT THE SITE FOR EMERGENCY USE.

8) THE CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENT CONTROLS WEEKLY, BEFORE AN ANTICIPATED STORM GREATER THEN 0.5 INCHES. AND FOLLOWING A SIGNIFICANT STORM EVENT. A FIELD REPORT SHALL BE PREPARED IDENTIFYING THE PROGRESS OF SITE DEVELOPMENT, EFFECTIVENESS OF THE MEASURES AND REMEDIAL ACTIONS OR FIELD CHANGES TO THE PLAN.

)) ANY EXCAVATIONS THAT MUST BE DEWATERED WILL BE PUMPED INTO AN ACTIVE DRAINAGE SYSTEM OR DISPERSED IN AN UNDISTURBED UPLAND AREA. THE INLETS OF ALL PUMPS ARE TO BE FLOATED A MINIMUM OF 24 INCHES OFF THE BOTTOM OF THE EXCAVATION AS DEFINED AND DESIGNED BY THE PROJECT ENGINEER. NO SILTY WATER IS ALLOWED TO BE DISCHARGE OFF-SITE OR INTO THE WETLANDS DUE TO DEWATERING

10) WATER OR CALCIUM CHLORIDE SHALL BE APPLIED TO UNPAVED DRIVEWAYS AND HAUL ROUTES TO CONTROL DUST.

11) DEBRIS AND OTHER WASTES RESULTING FROM EQUIPMENT MAINTENANCE AND CONSTRUCTION ACTIVITIES WILL NOT BE DISCARDED ON-SITE.

12) SILT FENCES SHALL HAVE SEDIMENT REMOVED WHEN THE DEPTH OF THE SEDIMENT IS EQUAL TO 1/3 THE HEIGHT OF THE FENCE. FENCES SHALL BE PROPERLY INSTALLED AND RIPPED FENCE OR BROKEN POSTS REPAIRED REGULARLY.

3) CATCH BASIN INSERTS (SILT SACK OR EQUIVALENT) SHALL BE CLEANED WHEN THE RESERVOIR IS FULL OR WHEN WATER BYPASSES SILT SACK WHICHEVER OCCURS FIRST. CONTRACTOR SHOULD CLEAN SILT SACKS IN A PROACTIVE MANNER TO AVOID UNINTENTIONAL DISCHARGE OF SILT

14) CONSTRUCTION ENTRANCES SHALL BE REPLACED WHEN VOID SPACES ARE FULL AS DETERMINED BY A VISUAL INSPECTION OF SURFACE ONLY OR AS SOON AS TRACKING ON THE ROAD OCCURS WHICHEVER IS SOONER.

15) SEDIMENT REMOVED FROM CONTROL STRUCTURES WILL BE DISPOSED OF IN A MANNER CONSISTENT WITH THE INTENT OF THE PLAN. 6) TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED AND THE SOIL SURFACE STABILIZED WHEN CONSTRUCTION IS COMPLETE AND THE SOIL SURFACES ARE PERMANENTLY STABILIZED. STRUCTURAL COMPONENTS SHALL BE CLEANED OF ALL SEDIMENT

UPON COMPLETION OF CONSTRUCTION STABILIZATION MEANS THAT 1. TEMPORARY OR PERMANENT VEGETATION HAS BEEN ESTABLISHED 2. DISTURBED SOIL SURFACES WITHIN 100 FEET OF THE WETLAND HAVE A DENSE STAND OF GRASS OR ALL EXPOSED SOILS ARE

COVERED AND VEGETATIVE COVER IS EXPECTED SHORTLY (7-14 DAYS). 3. TURF OR LANDSCAPE AREAS ARE PLANTED OR MULCHED. IF SEASONAL RESTRICTIONS EXIST FOR PLANTING, THE TOWN OF WILTON STAFF SHALL DETERMINE WHETHER THE SITE IS STABILIZED IN ACCORDANCE WITH THE ABOVE CRITERIA, PRUDENT CONSTRUCTION PRACTICES AND THE CONNECTICUT GUIDELINES FOR EROSION AND SEDIMENT CONTROL

PRIOR TO CONSTRUCTION A PERSON WILL BE DESIGNATED TO THE TOWN OF WILTON AS THE PERSON RESPONSIBLE FOR IMPLEMENTING THIS EROSION AND SEDIMENT CONTROL PLAN. THIS RESPONSIBILITY INCLUDES INSTALLATION AND MAINTENANCE OF CONTROL MEASURES. INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REOUIREMENTS AND OBJECTIVES OF THE

PLAN. NOTIFYING THE TOWN OF WILTON OF ANY TRANSFER OF THIS RESPONSIBILITY AND FOR CONVEYING A COPY OF THE EROSION AND SEDIMENT PLAN, IF AND WHEN THE TITLE OF LAND IS TRANSFERRED.

1.7 PERMITTING

THE PROPOSED DEVELOPMENT WILL REQUIRE PERMITS FROM THE TOWN OF WILTON INLAND WETLANDS AND WATERCOURSES COMMISSION AND THE PLANNING AND ZONING COMMISSION IN ADDITION TO ALL APPLICABLE BUILDING PERMITS. DEVELOPER SHALL OBTAIN ALL REQUIRED STATE AND LOCAL PERMITS APPLICABLE.

1.8 CONSERVATION PRACTICES CONSERVATION PRACTICES INCLUDE:

MINIMIZED SITE DISTURBANCE

RESTORATION AND STABILIZATION OF AFFECTED WETLANDS. PROTECTION OF STEEP SLOPES.

PROTECTION OF DOWNSTREAM WETLANDS/WATERCOURSES MINIMAL DISTURBANCE TO REGULATED AREAS.

> GRASS SEED OR SOD: AS SPECIFIED IN THE CONTRACT DOCUMENTS OR BY THE LANDSCAPE SOIL INFILL: COMPOSITION OF THE MATERIAL WILL BE BASED ON LOCAL CONDITIONS AND AS SPECIFIED IN THE CONTRACT DOCUMENTS OR DETERMINED BY THE LANDSCAPE ARCHITECT

> > - 1" THICK EZ ROLL GRASS ROAD PAVER AS MANUFACTURED BY NDS, INC. 1-800-726-1994 OR APPROVED

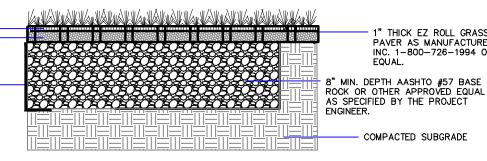
NTS

EQUAL.

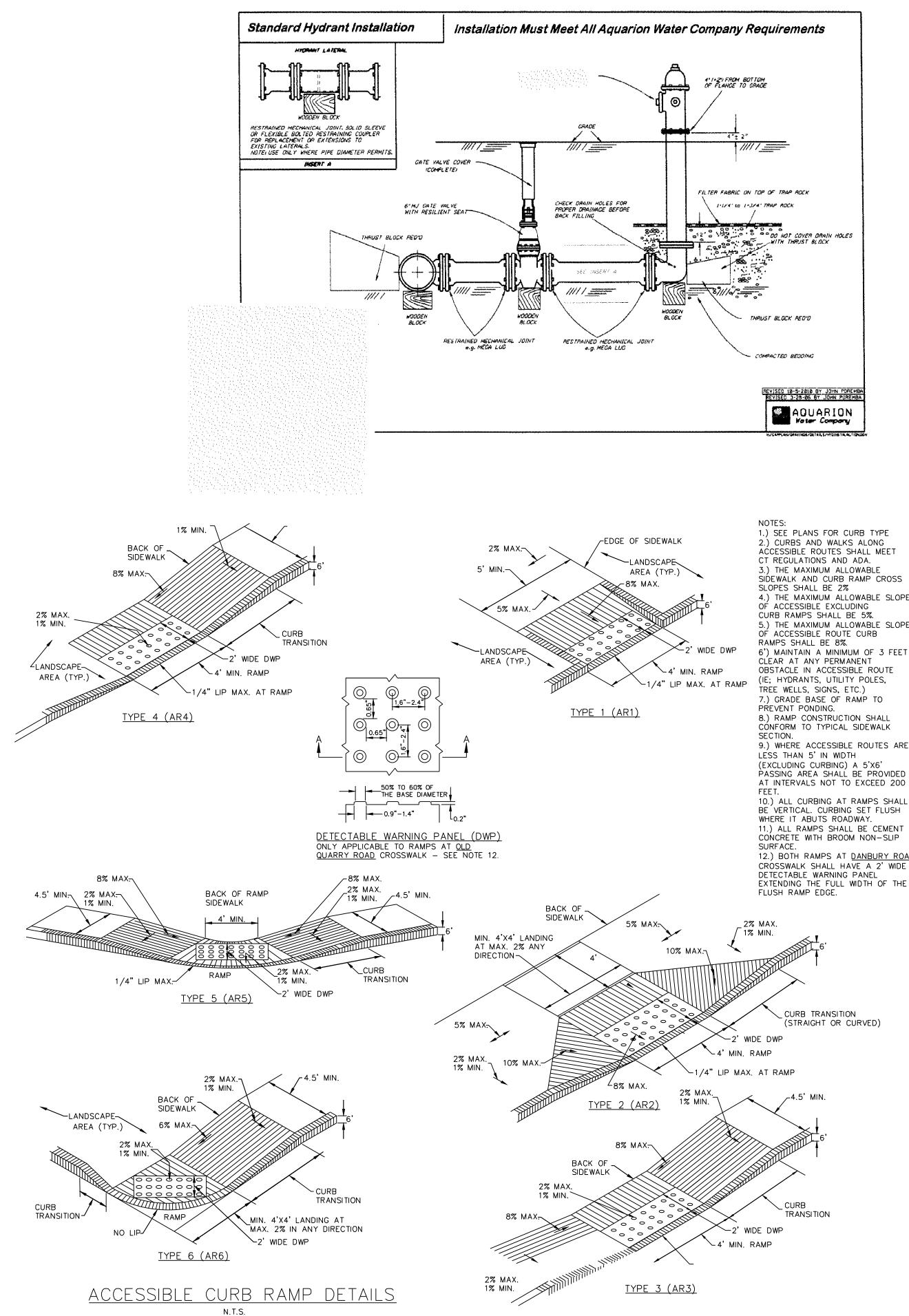
COMPACTED SUBGRADE

3/4" SOIL INFILL-NON-WOVEN GEOTEXTILE FILTER FABRIC ON PAVEMENT SIDE

SOD OVER SOIL INFILL-



EZ ROLL GRASS PAVERS



1.) SEE PLANS FOR CURB TYPE 2.) CURBS AND WALKS ALONG ACCESSIBLE ROUTES SHALL MEET 3.) THE MAXIMUM ALLOWABLE SIDEWALK AND CURB RAMP CROSS

4.) THE MAXIMUM ALLOWABLE SLOPE 5.) THE MAXIMUM ALLOWABLE SLOPE ACCESSIBLE ROUTE CURB

6') MAINTAIN A MINIMUM OF 3 FEET OBSTACLE IN ACCESSIBLE ROUTE (IE; HYDRANTS, UTILITY POLES,

7.) GRADE BASE OF RAMP TO 8.) RAMP CONSTRUCTION SHALL CONFORM TO TYPICAL SIDEWALK

9.) WHERE ACCESSIBLE ROUTES ARE (EXCLUDING CURBING) A 5'X6' PASSING AREA SHALL BE PROVIDED

10.) ALL CURBING AT RAMPS SHALL BE VERTICAL. CURBING SET FLUSH 11.) ALL RAMPS SHALL BE CEMENT

12.) BOTH RAMPS AT DANBURY ROAD CROSSWALK SHALL HAVE A 2' WIDE

EXTENDING THE FULL WIDTH OF THE

WATER SYSTEM OPERATOR: AQUARION WATER COMPANY, INC.

- GENERAL NOTES:
- 1. TOPOGRAPHY BASED NGVD 1929.
- 2. ANY CHANGES IN THIS PLAN SHALL FIRST BE APPROVED BY THE ENGINEER, AQUARION WATER COMPANY, AND OTHER REGULATORY AGENCIES AS MAY BE APPLICABLE.

CONSTRUCTION NOTES:

- 1. ORGANIC OR OTHERWISE UNSUITABLE SOILS IN AREA OF PROPOSED ROADS AND WATER LINES TO BE REMOVED PRIOR TO EXCAVATION OR EMBANKMENT CONSTRUCTION AND STOCKPILED ONSITE FOR RE-USE, OR DISPOSED OF PROPERLY OFFSITE.
- 2. SUITABLE FILL SHALL BE PLACED AND COMPACTED IN 8" LIFTS TO 92% DENSITY AS DETERMINED BY ASTM D1557.
- 3. DISTURBED SUBGRADE IN EXCAVATION AREAS SHALL BE RE-COMPACTED TO 92% DENSITY AS DETERMINED BY ASTM D1557.
- 4. ALL SEEDED AND SODDED AREAS SHALL HAVE A MINIMUM OF 4" OF TOPSOIL; ALL GRASS AREAS SHALL BE FERTILIZED AND REFER TO SHEET E1.
- 5. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND QUANTITIES AS SHOWN ON THE PLANS PRIOR TO PROCEEDING WITH CONSTRUCTION AND ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER WHO SHALL HAVE FINAL SAY AS TO THE ACTUAL DIMENSIONS TO CONSTRUCT BY.
- 6. THE PRECISE LOCATION AND ELEVATION OF UNDERGROUND UTILITIES IS UNKNOWN. IF THEY ARE INDICATED AT ALL ON THESE PLANS, THEY ARE APPROXIMATE AND CCA, LLC, ITS PRINCIPLES OR EMPLOYEES SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES AND/OR ADDITIONAL COSTS WHICH MIGHT RESULT FROM THE EXISTENCE OF SAID UTILITIES.
- 7. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING ANY WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- 8. NOTIFY "CALL-BEFORE-YOU-DIG" (1-800-922-4455) FOR UTILITY MARKOUT PRIOR TO START OF CONSTRUCTION.
- 9. ROAD AND DRAINAGE MATERIALS AND METHODS TO MEET CONNECTICUT D.O.T. SPECIFICATIONS FOR ITEMS NOT SPECIFIED IN THE LOCAL MUNICIPALITY STANDARDS.

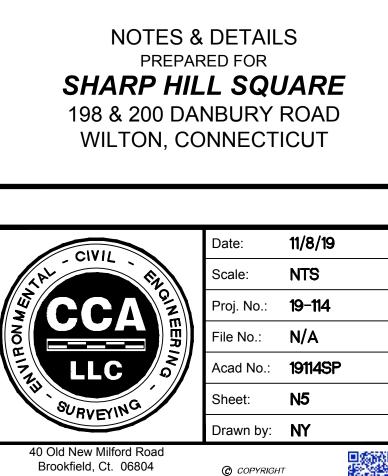
WATER SYSTEM NOTES:

- 1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING WILTON PUBLIC WORKS
- DEPARTMENT PERMITS AND CT. DOT ENCROACHMENT PERMITS. 2. ALL NEW DISTRIBUTION PIPE TO BE CLASS 52 DUCTILE IRON PIPE WITH PUSH-ON JOINTS
- OR MECHANICAL JOINTS.
- 3. ALL PIPE TO BE JOINED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. 4. ALL GATE/BUTTERFLY VALVES SHALL CONFORM TO A.W.W.A. STANDARD C500. VALVES SHALL BE INSTALLED LEVEL ON CONCRETE THRUST BLOCKING WITH THE STEM PLUMB. ALL GATE/BUTTERFLY VALVES SHALL OPEN RIGHT (CLOCKWISE).
- 5. ALL WATER LINES SHALL BE FLUSHED AND DISINFECTED BEFORE BEING PUT IN SERVICE IN ACCORDANCE WITH THE STATE HEALTH DEPARTMENT GUIDELINES.
- 6. ALL WATER LINES SHALL BE PRESSURE TESTED ACCORDING TO THE CT. P.U.R.A AND AWWA CRITERIA.
- 7. ALL WATER LINES SHALL BE MARKED DURING BACKFILLING BY PLACEMENT OF A METALLIC TAPE 12" TO 18" ABOVE PIPE. TAPE SHALL BE A BLUE PLASTIC-JACKETED 0.35 MIL ALUMINUM FOIL, AS MANUFACTURED BY ALLEN SYSTEMS, INC.
- 8. BACKFILL SHALL CONSIST OF NATIVE EXCAVATION, BUT SHALL BE FREE OF ANY DELETERIOUS MATERIALS OR STONES AND PIECES OF PAVEMENT IN EXCESS OF 4 INCHES IN SIZE. ANY UNSUITABLE MATERIAL SHALL BE REJECTED AND DISPOSED OF, AND REPLACE WITH CLEAN SANDY BORROW, SAND, OR GRAVEL. BACKFILL SHALL BE COMPACTED IN 6" LAYERS TO 95% OPTIMUM DENSITY AS DETERMINED BY ASTM METHOD D1557.
- 9. UNLESS OTHERWISE NOTED, MAINTAIN 18" MINIMUM VERTICAL CLEARANCE BETWEEN THE PROPOSED WATER LINE AND ANY STORM OR SANITARY SEWER, AND 12" MINIMUM VERTICAL CLEARANCE BETWEEN ANY OTHER UTILITY OR SERVICE (SEE DETAIL).
- 10. JOINT RESTRAINT FITTINGS (E.B.A.A. MEGALUGS SERIES 1100 OR 1700) SHALL BE USED AT
- ALL BENDS, TEES, VALVES, HYDRANTS AND FITTINGS IN ACCORDANCE WITH THE DETAIL. 11. CONTRACTOR SHALL BE RESPONSIBLE FOR RETAINING A CONNECTICUT LICENSED LAND
- SURVEYOR FOR CONSTRUCTION STAKING AND AS-BUILT MEASUREMENTS.
- 12. ALL WORK IS SUBJECT TO INSPECTION AND APPROVAL BEFORE BACKFILLING.

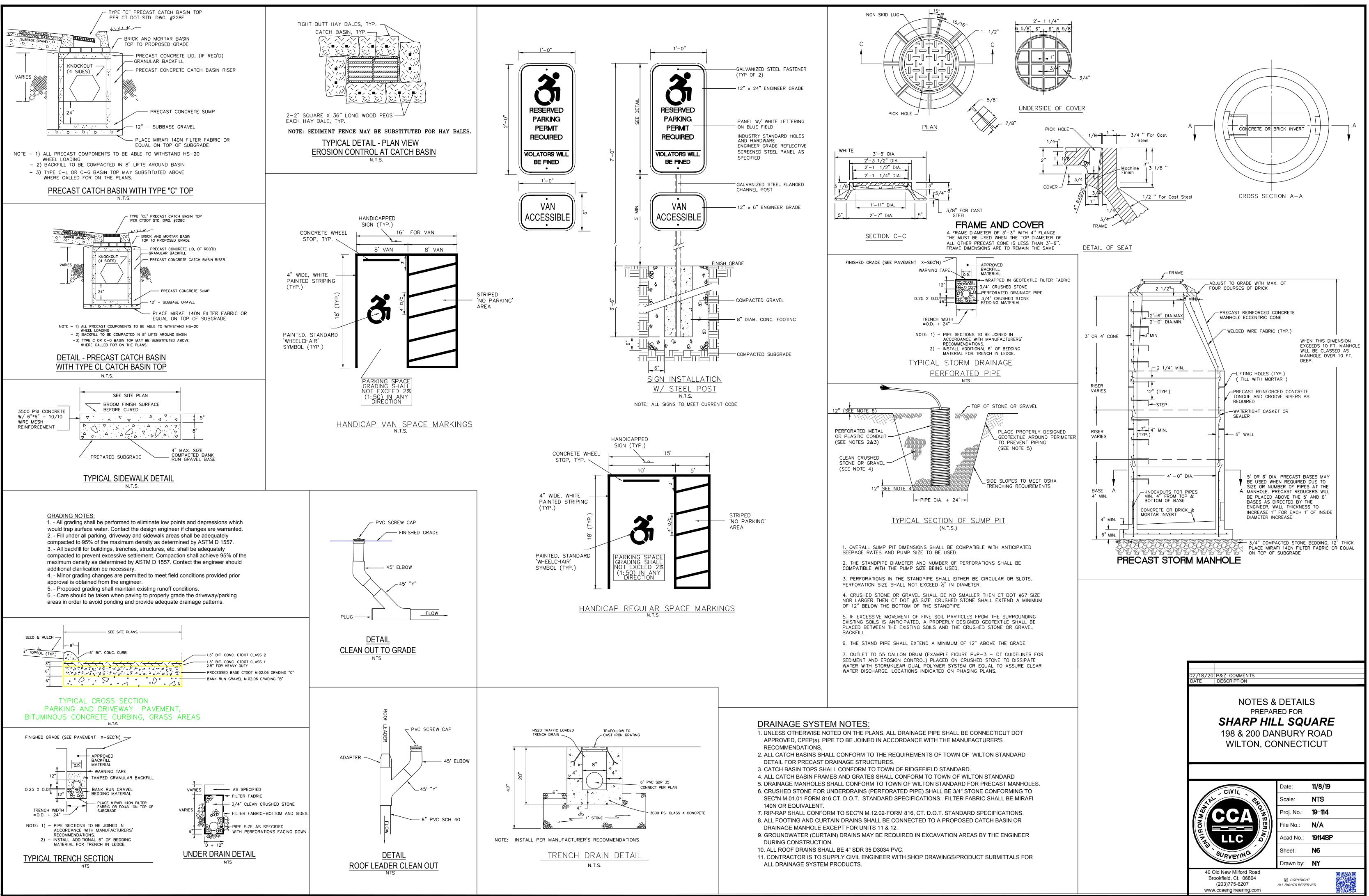
MINIMUM REQUIRED PIPE RESTRAINT			
FITTING	MIN. LENGTH TO EACH SIDE OF FITTING (L.F.)		
8" × 4" TEE	20		
8" x 6" TEE	20		
8" × 8" TEE	40		
8" – 45° BEND	20		
8" – 22.5° BEND	20		
8" – 11.25° BEND	20		
8" DEAD END	60		

* EVERY JOINT WITHIN SPECIFIED LENGTH ABOVE SHALL BE RESTRAINED WITH MEGALUGS SERIES 1100 OR FIELD LOK 350.

3/20 SITE PLAN REVISIONS 5/20 I.W.C. COMMENTS DESCRIPTION



(203)775-6207 ALL RIGHTS RESERVED www.ccaengineering.com



LONG TERM MAINTENANCE PROCEDURES

Sharp Hill Square Wilton, Connecticut

Inspection of the stormwater management system shall generally be performed on a semi-annual basis. More frequent inspections shall occur if sediment levels are deemed to be excessive after major storm events and after any type of spill.

The inspector shall keep a permanent log of inspections including date of inspection, any noted sediment levels, accumulation of oils, notation of any irregularities, name of contractor, etc. An annual report shall be submitted to the Town indicating the conditions observed and any measures taken to repair or refresh irregularities. CATCH BASINS:

- After the site has been stabilized, monthly monitoring shall occur for the first year of a new installation. After the first year, semi-annual inspections shall generally be performed. - It is best to schedule maintenance based on the solids collected in the sump. Optimally, the structure should be cleaned when the sump is half full.

- Maintenance is best achieved with a vacuum truck. The requirements for disposal of materials removed from the basins are similar to that of any other BMP. Disposal should be by a Connecticut licensed waste management company and discharged to a Connecticut DEEP approved location.

SWEEPING:

All parking areas, sidewalks and driveways and other impervious surfaces (except roofs) are swept clean of sand, litter and any other possible pollutants at least twice a year as described below, and at other times as may be necessary.

- Once between November 14 and December 15 (i.e., after leaf fall)

- Once during the month of April (i.e., after snow melt)

HYDRODYNAMIC SEPARATORS:

Inspection of the hydrodynamic separator units shall generally be performed on a semi-annual basis. More frequent inspections shall occur if sediment levels are deemed to be excessive after major storm events and after any type of spill.

Maintenance of the hydrodynamic separator type units is performed using vacuum and/or pumping trucks. This industry is a well-established sector of the service industry that cleans tanks, sewers and catch basins. The use of a vacuum or pumping truck and hose will allow maintenance personnel to pump the unit while the truck is parked on the paved parking lot, thereby not disturbing the adjacent areas.

The hydrodynamic separator unit is sized based on the appropriate guidelines provided in the technical documentation. A CONTECH Hydrodynamic separator was selected. An equivalent may be substituted. Based on this data approximately 15% of the total sediment capacity will be utilized per year. Therefore the unit should be cleaned each year. It is suggested that the cleaning take place in the spring of each year. Based on the accumulated sediment levels the cleaning and monitoring schedule may be adjusted accordingly but not less than once per year.

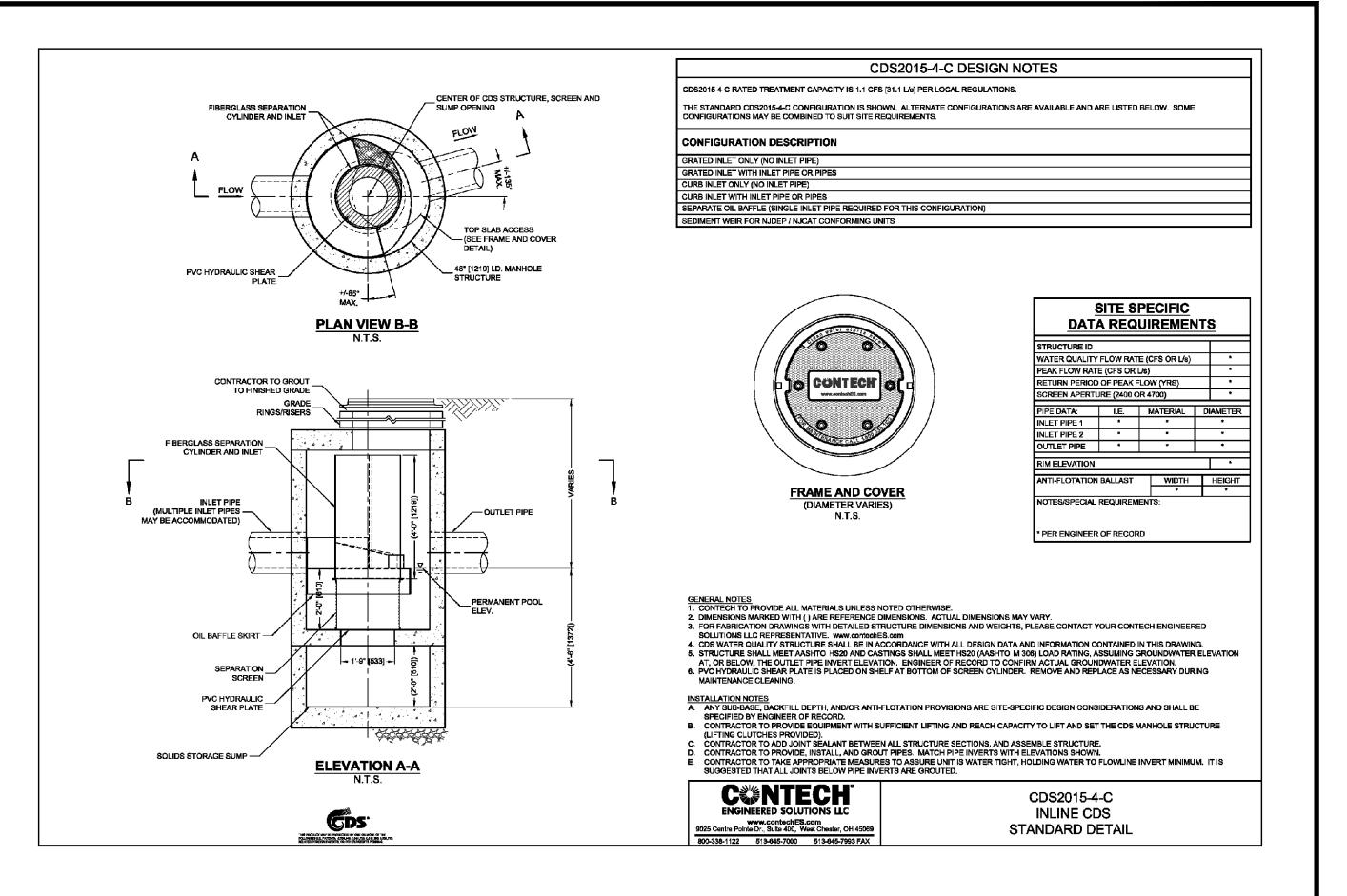
The requirements for disposal of materials removed from the unit are similar to that of any other BMP. Disposal should be by a Connecticut licensed waste management company and discharged to a Connecticut DEEP approved location.

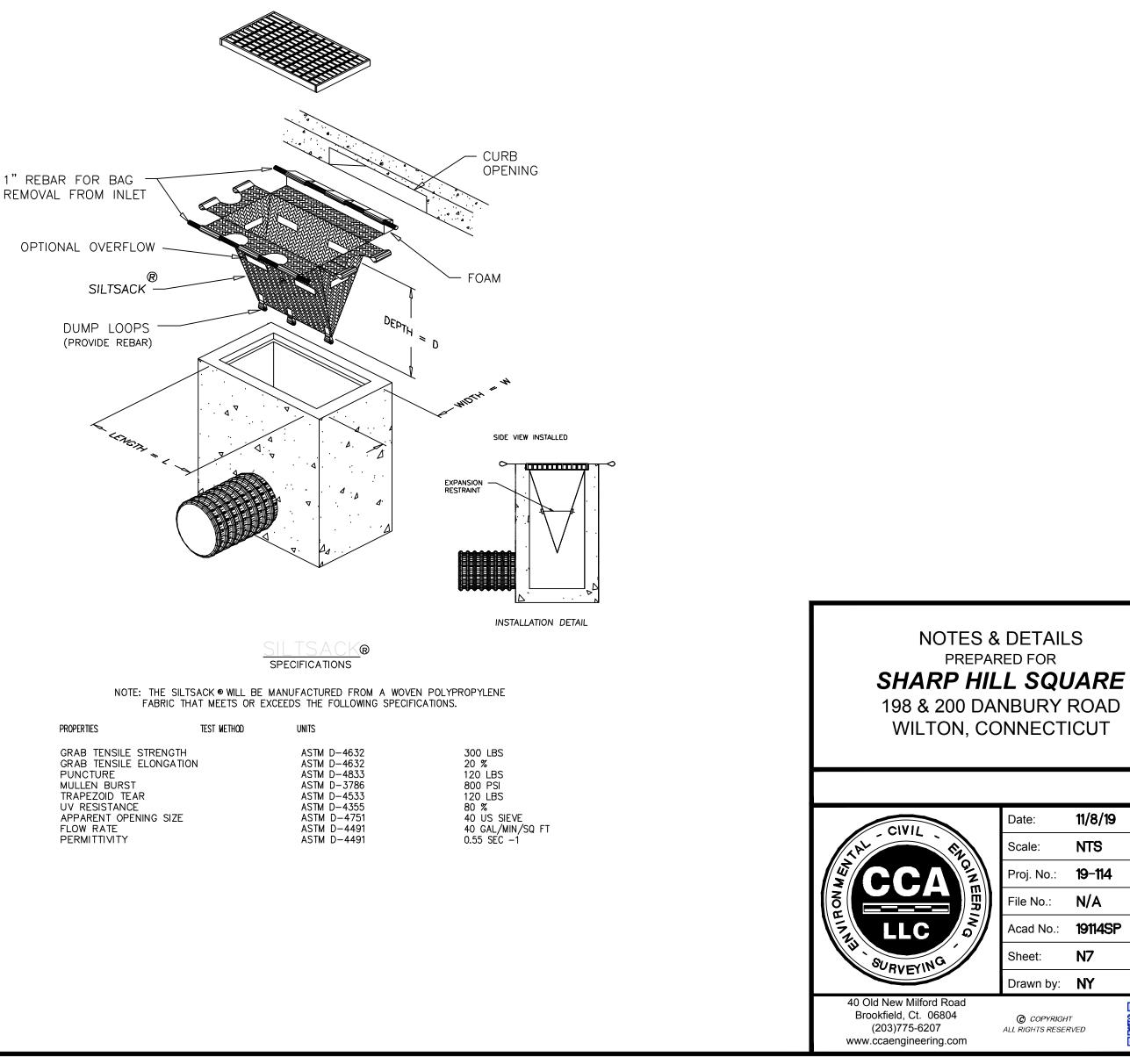
CULTEC RECHARGERS:

Visit www.cultec.com for the manufacturer's maintenance guidelines and schedules.

Form 817 Construction Notes

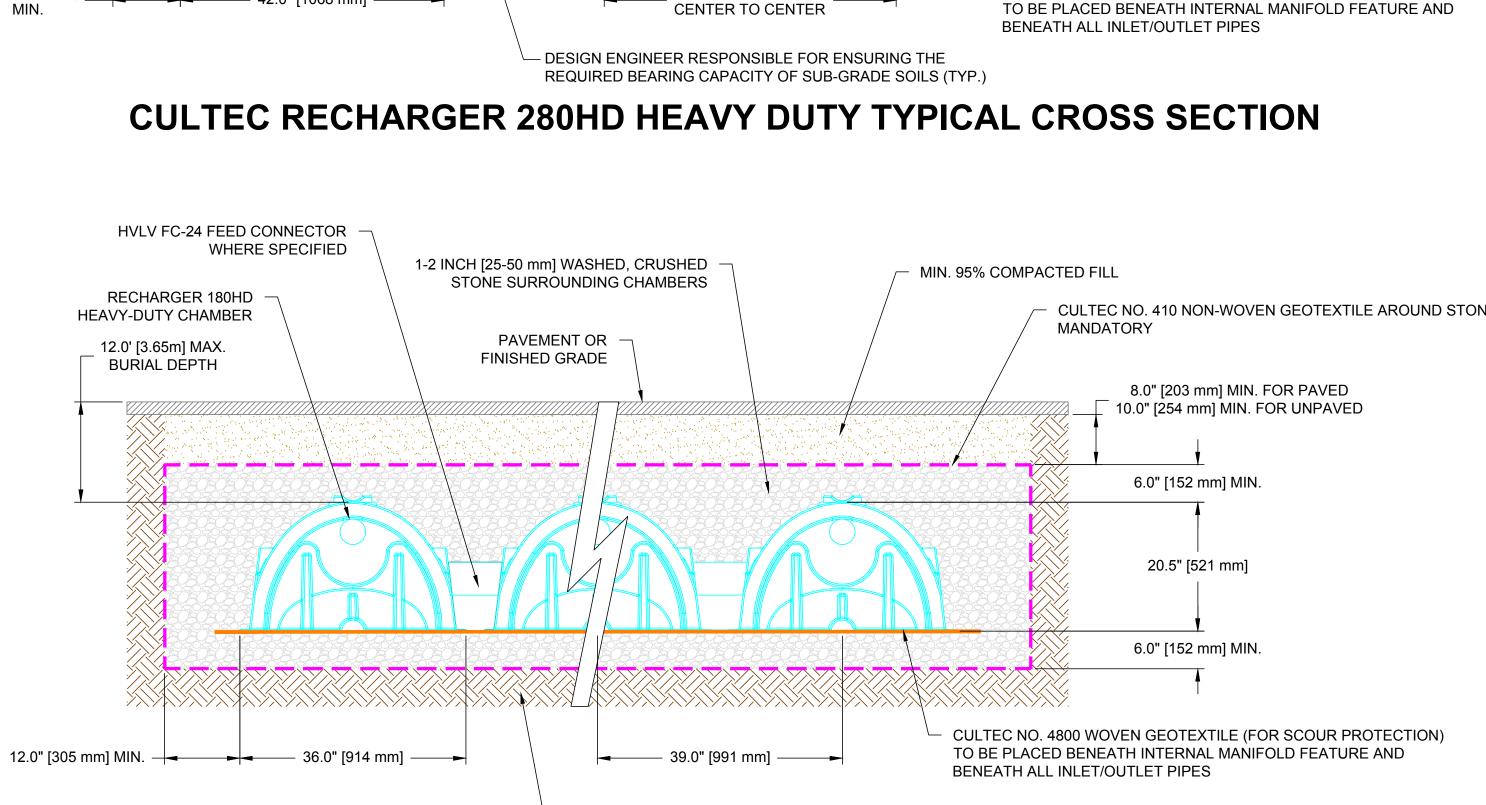
- All work within the State right-of-way will comply with Form 817, "The State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction" with the latest Special Provisions and Typical State Standard Details. In any case where the construction is not specifically detailed in the Form 817, the work will be completed as directed by the Engineer or District Permit Section Representative.
- Removal of pavement markings along state roadways shall be completed by a non-destructive method in compliance with the State of Connecticut Department of Transportation Standard Specifications for Road, Bridges, and Incidental Construction Form 817 Section 12.11 as revised.
- New Pavement markings shall be painted with epoxy resin paint in compliance with the State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges, and Incidental Construction Form 817 Section 12.10 as revised.
- New sign material and sheeting shall be made of reflective material in compliance with State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges, and Incidental Construction Form 817 Section 12.08 as revised. Type 1 Reflective Sheeting shall be used for signs with white background , Type 3 Reflective Sheeting shall be used for signs with colored background except for signs with red background that shall be Type 8 or 9 Reflective Sheeting.
- All signs and pavement markings installed within the State Right of Way must conform to the "Manual on Uniform Traffic Control Devices" and the latest State of Connecticut Catalog of Signs as revised.
- Any damage to the existing curb, sidewalk or any other highway appurtenances during the development of the permitted site will be replaced by the contractor as directed by the District 3 Permit Section at no cost to the State.
- ALL WORK WITHIN THE CT D.O.T. RIGHT OF WAY REQUIRES A CT D.O.T PERMIT.
- THE CT D.O.T. WILL DETERMINE THE AMOUNT OF THE REQUIRED AREA TO BE RESURFACED FOR ANY PAVEMENT ENCROACHMENT.

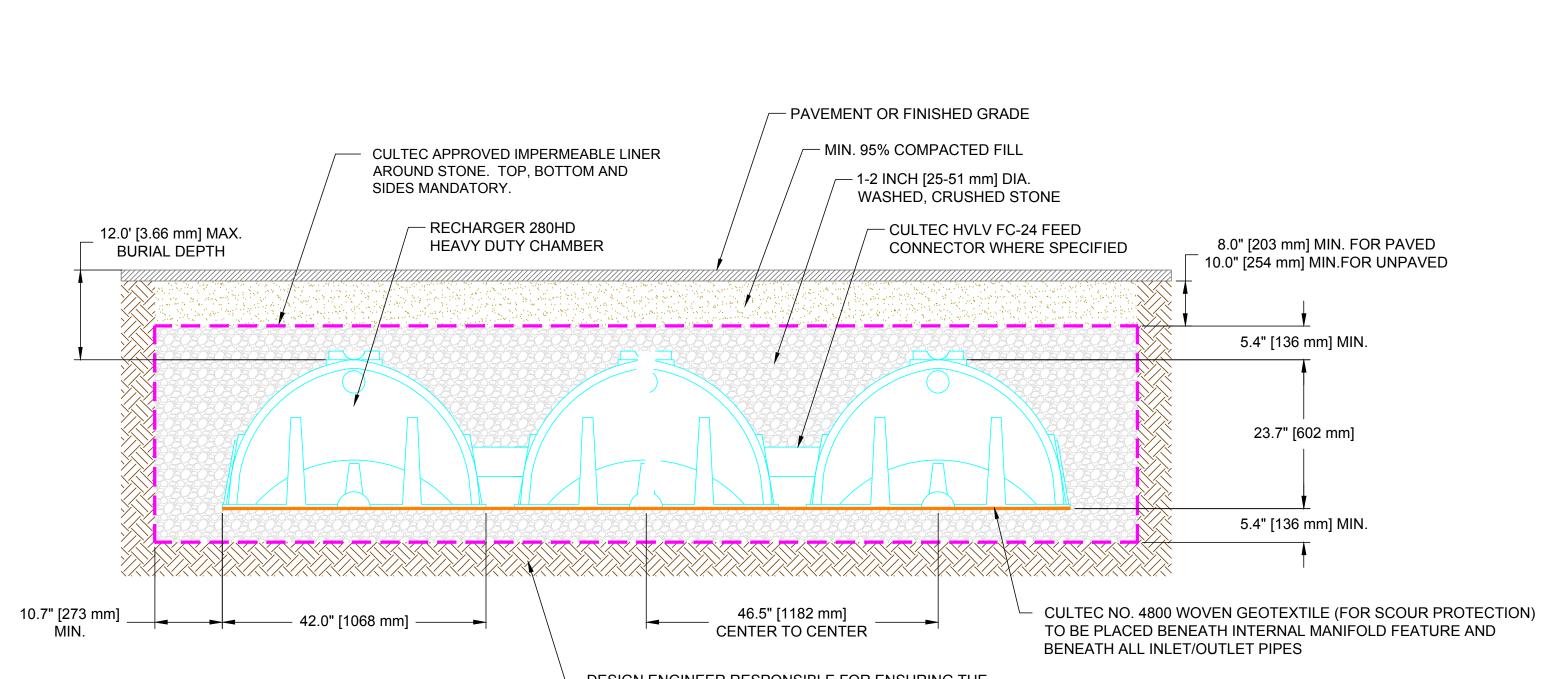




NOTE: THE SILT FABRIC TH	SACK © WILL BE IAT MEETS OR E	
PROPERTIES	test method	UNITS
GRAB TENSILE STRENGTH GRAB TENSILE ELONGATIO PUNCTURE MULLEN BURST TRAPEZOID TEAR UV RESISTANCE APPARENT OPENING SIZE FLOW RATE PERMITTIVITY	Ν	ASTM D- ASTM D- ASTM D- ASTM D- ASTM D- ASTM D- ASTM D- ASTM D- ASTM D-

CULTEC RECHARGER 180HD HEAVY DUTY CROSS SECTION





CULTEC NO. 410 NON-WOVEN GEOTEXTILE AROUND STONE. TOP, BOTTOM AND SIDES

8.0" [203 mm] MIN. FOR PAVED

10.0" [254 mm] MIN.FOR UNPAVED

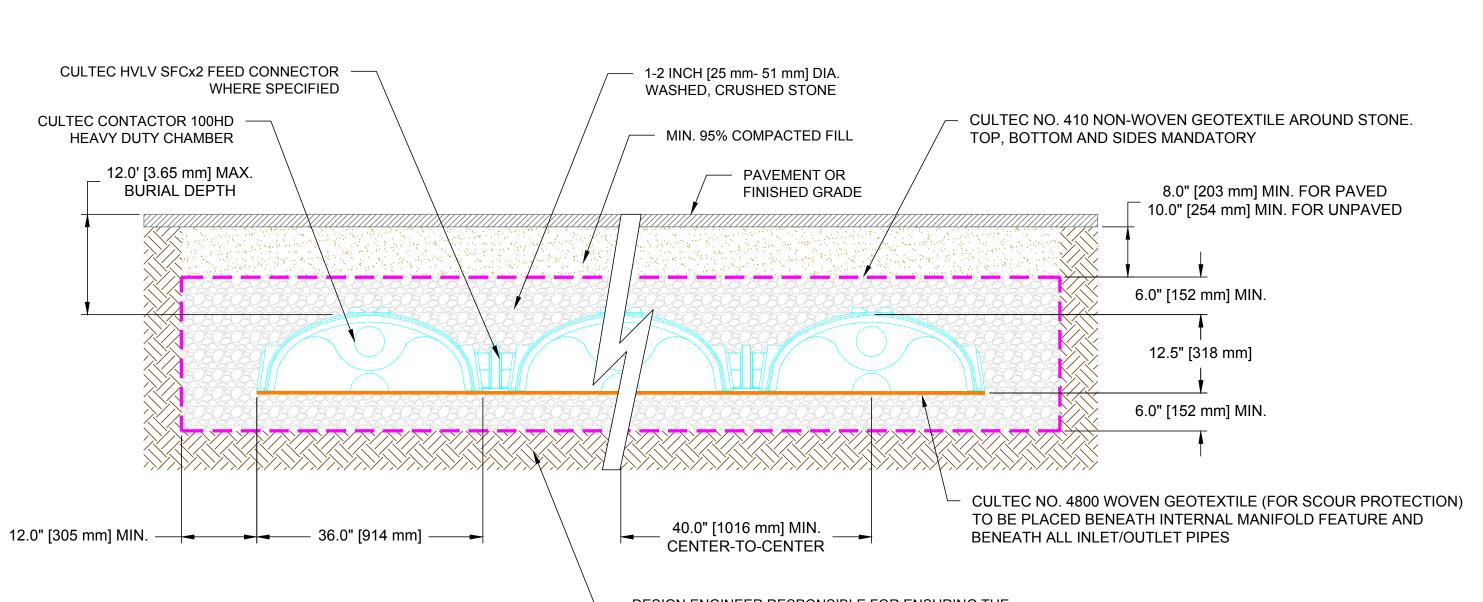
5.4" [136 mm] MIN.

23.7" [602 mm]

5.4" [136 mm] MIN.

PROJECT ENGINEER OF RECORD OR GEOTECHNICAL CONSULTANT IS RESPONSIBLE FOR ENSURING THAT THE REQUIRED BEARING CAPACITY OF SUB-GRADE SOILS HAS BEEN MET



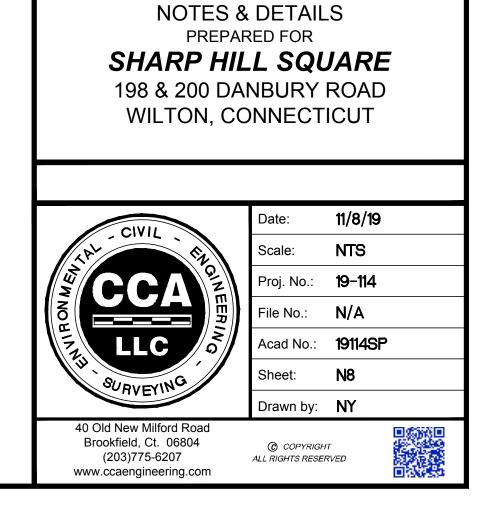




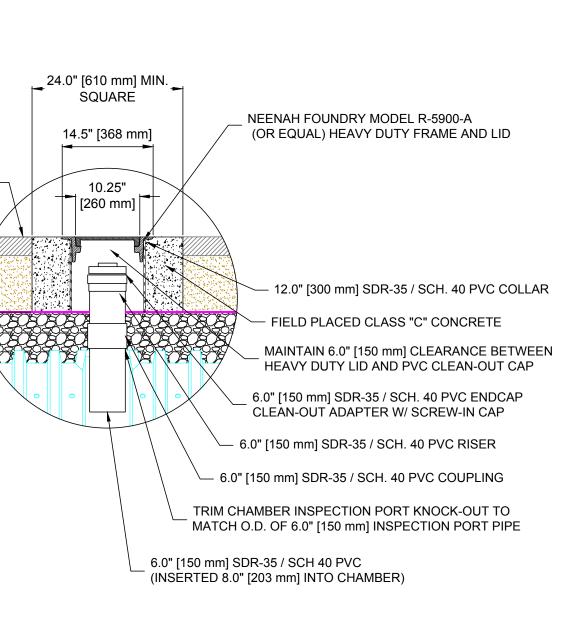
PAVEMENT

OR FINISHED GRADE

12.0" [300 mm] MIN.



INSPECTION PORT - ZOOM DETAIL



CULTEC CONTACTOR 100HD HEAVY DUTY TYPICAL CROSS SECTION

DESIGN ENGINEER RESPONSIBLE FOR ENSURING THE REQUIRED BEARING CAPACITY OF SUB-GRADE SOILS (TYP.)

DESIGN CRITERIA A. SIZES - EQUIVALENT SPHERES

RIP RAP

RIP RAP SIZES CAN BE DESIGNATED BY FITHER THE DIAMETER OR THE WEIGHT OF THE STONES. THEY CAN ALSO BE DESIGNATED BY ESTABLISHED PUBLISHED STANDARDS, SUCH AS THAT FOUND IN THE DOT STANDARDS AND SPECIFICATIONS SECTION M.02.06. IT IS OFTEN MISLEADING TO THINK OF RIP RAP IN TERMS OF DIAMETER, SINCE THE STONES SHOULD BE ANGULAR INSTEAD OF SPHERICAL. IT IS SIMPLER TO SPECIFY THE DIAMETER OF AN EQUIVALENT SIZE OF SPHERICAL STONE. STONE SIZES ARE BASED UPON AN ASSUMED BULK WEIGHT OF 2.65 GRAMS PER CUBIC CENTIMETER (165 LBS./CF).

A DIAMETER OF STONE IN THE MIXTURE IS SPECIFIED FOR WHICH SOME PERCENTAGE, B WEIGHT, WILL BE SMALLER. FOR EXAMPLE, d85 REFERS TO A MIXTURE OF STONES IN WHICH 85% OF THE STONE BY WEIGHT WOULD BE SMALLER THAN THE DIAMETER SPECIFIED. MOST DESIGNS ARE BASED ON d50 (SEE FIGURE RR-2). IN OTHER WORDS, THE DESIGN IS BASED ON THE AVERAGE SIZE OF STONE IN THE MIXTURE. B. GRADATION

RIP RAP GRADATIONS SHALL BE SPECIFIED BY EITHER THE DOT STANDARD SPECIFICATIONS, OR OTHER ESTABLISHED PUBLISHED STANDARDS. REGARDLESS OF THE STANDARD USED, RIP RAI SHALL BE COMPOSED OF A WELL-GRADED MIXTURE DOWN TO THE ONE-INCH SIZE PARTICLE SUCH THAT 50% OF THE MIXTURE BY WEIGHT SHALL BE LARGER THAN THE d50 SIZE AS DETERMINED FROM THE DESIGN PROCEDURE. THE DIAMETER OF THE LARGEST STONE SIZE SUCH A MIXTURE SHALL BE 1.5 TIMES THE d50 SIZE. A WELL-GRADED MIXTURE AS USED HEREIN IS DEFINED AS A MIXTURE COMPOSED PRIMARILY OF THE LARGER STONE SIZES BUT WITH A SUFFICIENT MIXTURE OF OTHER SIZES TO FILL THE PROGRESSIVELY SMALLER VOIDS BETWEEN THE STONES. THE DOT RIP RAP STANDARDS ARE EXAMPLES OF WELL GRADED

AFTER DETERMINING THE RIP RAP SIZE THAT WILL BE STABLE UNDER THE FLOW CONDITIONS, CONSIDER THAT SIZE TO BE A MINIMUM AND THEN, BASED ON RIP RAP GRADATIONS ACTUALLY AVAILABLE IN THE AREA, SELECT THE SIZE OR GRADATIONS THAT EQUAL OR EXCEED THE

FIGURE RR-2: EXAMPLES OF AVERAGE STONE SIZE FOR d50 MODIFIED d50: 0.42 FEET OR 5 INCHES 0.67 FEET OR 8 INCHES INTERMEDIATE d50 1.25 FEET OR 15 INCHES STANDARD d50:

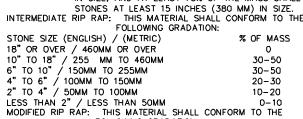
THICKNESS THE MINIMUM THICKNESS OF THE RIP RAP LAYER SHALL BE 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 12 INCHES. , QUALITY OF STONE

INDIVIDUAL ROCK FRAGMENTS SHALL BE DENSE, SOUND AND FREE FROM CRACKS, SEAMS AND OTHER DEFECTS CONDUCIVE TO ACCELERATED WEATHERING. THE ROCK FRAGMENTS SHALL BE ANGULAR IN SHAPE. THE LEAST DIMENSION OF AN INDIVIDUAL ROCK FRAGMENT SHALL BE NOT LESS THAN ONE-THIRD THE GREATEST DIMENSION OF THE FRAGMENT. THE STONE SHALL BE OF SUCH QUALITY THAT IT WILL NOT DISINTEGRATE ON EXPOSURE TO WATER OR WEATHERING, BE CHEMICALLY STABLE, AND SHALL BE SUITABLE IN ALL OTHER RESPECTS FOR THE PURPOSE INTENDED. THE BULK SPECIFIC GRAVITY (SATURATED SURFACE-DRY BASIS) OF THE INDIVIDUAL STONES SHALL BE AT LEAST 2.65. DOT STANDARD SPECIFICATIONS DO NOT ACCEPT ROUNDED STONE OR BROKEN

CONCRETE FOR RIPRAF

MINIMUM SIZE.

- D.O.T. STANDARD RIP RAP SIZES STANDARD RIP RAP: THIS MATERIAL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS: (A) NOT MORE THAN 15% OF THE RIP RAP SHALL BE
- SCATTERED SPALLS AND STONES LESS THAN 6 INCHES (150 MM) IN SIZE.
- (B) NO STONE SHALL BE LARGER 30 THAN INCHES (760 MM) IN SIZE, AND AT LEAST 75% OF THE MASS SHALL BE



FOLLOWING GRADATION: STONE SIZE (ENGLISH) / (METRIC) 10" OR OVER / 255 MM OR OVER TO 10" / 150MM TO 255MM 4" TO 6" / 100MM TO 150MM 2" TO 4" / 50MM TO 100MM TO 4" / 25MM TO 50MM

LESS THAN 1" / LESS THAN 50MM F. RIP RAP AT OUTLETS

DESIGN CRITERIA FOR SIZING THE STONE AND DETERMINING THE DIMENSIONS OF RIP RAP PADS USED AT THE OUTLET OF DRAINAGE STRUCTURES ARE CONTAINED IN THE OUTLET PROTECTION MEASURE. A PROPERLY DESIGNED BEDDING, FILTER, AND/OR GEOTEXTILE UNDERLINING IS REQUIRED FOR RIP RAP USED AS OUTLET PROTECTION. WHERE THE NATIVE MATERIAL MEETS THE REQUIREMENTS FOR GRANULAR FREE DRAINING BEDDING MATERIAL, NO ADDITIONAL FILTER OR GEOTEXTILE IS REQUIRED.

% OF MASS

30 - 50

20 - 30

10-20

0-10

F. RIP RAP FOR CHANNEL STABILIZATION RIP RAP FOR CHANNEL STABILIZATION SHALL BE DESIGNED TO BE STABLE FOR THE CONDITION OF BANK-FULL FLOW IN THE REACH OF CHANNEL BEING STABILIZED (SEE PERMANENT LINED WATERWAY MEASURE), THE DESIGN PROCEDURE, WHICH IS EXTRACTED FROM THE FEDERAL HIGHWAY ADMINISTRATION'S DESIGN OF ROADSIDE CHANNELS WITH FLEXIBLE LININGS, IS ONE ACCEPTED METHOD. OTHER GENERALLY ACCEPTED PUBLISHED METHODS MAY BE USED.

RIP RAP SHALL EXTEND UP THE BANKS OF THE CHANNEL TO A HEIGHT EQUAL TO THE DESIGN DEPTH OF FLOW OR TO A POINT WHERE VEGETATION CAN BE ESTABLISHED TO ADEQUATEL' PROTECT THE CHANNEL.

THE RIP RAP SIZE TO BE USED IN A CHANNEL BEND SHALL EXTEND UPSTREAM FROM THE POINT OF CURVATURE A MINIMUM OF 0.4 TIMES THE WATER SURFACE WIDTH, AND DOWNSTREAM FROM THE POINT OF TANGENCY A DISTANCE OF AT LEASE 5 TIMES THE CHANNEL BOTTOM AND UP BOTH SIDES OF THE CHANNEL OR ONLY PROTECT THE OUTSIDE BANK, DEPENDING UPON SPECIFIC DESIGN REQUIREMENT

WHERE RIP RAP IS LISED ONLY FOR BANK PROTECTION AND DOES NOT EXTEND ACROSS THE BOTTOM OF THE CHANNEL, RIP RAP SHALL BE KEYED INTO THE BOTTOM OF THE CHANNEL TO A MINIMUM ADDITIONAL DEPTH FOUAL TO 1.5 TIMES THE MAXIMUM SIZE STONE.

FOR RIP RAPPED AND OTHER LINED CHANNELS, THE HEIGHT OF CHANNEL LINING ABOVE THE DESIGN WATER SURFACE SHALL BE BASED ON THE SIZE OF THE CHANNEL, THE FLOW VELOCITY, THE CURVATURE, INFLOWS, WIND ACTION, FLOW REGULATION, ETC.

TOPSOILING (TO)

- APPLICABILITY WHERE THE TEXTURE, PH, OR NUTRIENT BALANCE OF THE AVAILABLE SOIL (SANDS, GRAVELS OR OTHER UNCONSOLIDATED MATERIALS) CANNOT BE MODIFIED BY REASONABLE MEANS TO
- PROVIDE AN ADEQUATE GROWTH MEDIUM. WHERE THE EXISTING SOIL MATERIAL IS TOO SHALLOW TO PROVIDE AN ADEQUATE ROOT ZONE AND TO SUPPLY NECESSARY MOISTURE AND NUTRIENTS FOR PLANT GROWTH. - WHERE HIGH QUALITY TURF IS DESIRABLE TO PREVENT EROSION AND
- WITHSTAND INTENSIVE USE AND/OR MEET AESTHETIC REQUIREMENTS. WHERE LANDSCAPE PLANTINGS ARE PLANNED. WHERE EXTENSIVE FILLING AND CUTTING OF SLOPES HAS OCCURRED. ONLY ON SLOPES NO STEEPER THAN 2:1.
- 2. MATERIALS TOPSOIL SHALL INCLUSIVELY MEAN A SOIL A. MEETING ONE OF THE FOLLOWING SOIL TEXTURAL CLASSES ESTABLISHED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE CLASSIFICATION SYSTEM BASED UPON THE PROPORTION OF SAND, SILT, AND CLAY SIZE PARTICLES AFTER PASSING A 2 MILLIMETER (MM) SIEVE AND SUBJECTED TO A PARTICLE SIZE ANALYSIS:
- LOAMY SAND, INCLUDING COARSE, LOAMY FINE, AND LOAMY VERY FINE SAND. SANDY LOAM, INCLUDING COARSE, FINE AND VERY FINE SANDY LOAM SILT LOAM WITH NOT MORE THAN 60% SILT;
 B. CONTAINING NOT LESS THAN 6% AND NOT MORE THAN 20% ORGANIC MATTER AS DETERMINED BY LOSS-ON-IGNITION OF OVEN DRIED SAMPLES DRIED AT 105 DEGREES
- CENTIGRADE
- POSSESSING A PH RANGE OF 6.0 7.5. EXCEPT IF THE VEGETATIVE PRACTICE BEING USED SPECIFICALLY REQUIRES A LOWER PH, THEN PH MAY BE ADJUSTED ACCORDINGLY; D HAVING SOLUBLE SALTS NOT EXCEEDING 500 PPM; AND
 E. THAT IS LOOSE AND FRIABLE AND FREE FROM REFUSE, STUMPS, ROOTS, BRUSH, WEEDS, FROZEN PARTICLES, ROCKS, AND STORES OVER 1.25 INCHES IN DIAMETER, AND ANY MATERIAL THAT WILL PREVENT THE FORMATION OF A SUITABLE SEEDBED OR PREVENT SEED GERMINATION AND PLANT GROWTH. TOPSOIL MAY BE OF NATURAL ORIGIN OR MUNICACTURED DAY DISTURDED AND DECOMPOSITE OPENANT. MANUFACTURED BY BLENDING COMPOSTED ORGANIC MATERIALS WITH ORGANIC DEFICIENT
- MATERIAL SPECIFICATIONS LISTED ABOVE. TOPSOIL SHALL BE ANALYZED BY A RECOGNIZED SOIL TESTING LABORATORY FOR ORGANIC CONTENT, PH AND SOLUBLE SALTS REQUIREMENTS GIVEN ABOVE. 3. CALCULATING TOPSOIL NEED

CONCLUSING NEEDS CAN BE CALCULATED BY USING THE VALUES GIVEN IN FIGURE TO-1. CALCULATE TOPSOIL NEEDS IN ADVANCE OF STRIPPING TO DETERMINE IF THERE IS SUFFICIENT TOPSOIL OF GOOD QUALITY TO JUSTIFY STRIPPING. FIGURE TO-1: TOPSOIL REQUIRED FOR APPLICATION OF VARIOUS DEPTHS DEPTH CY/1,000 SF CY/ACRE

12.4 15.5 18.6 806 4. STRIPPING

MEASURE(S) USED

STRIPPING SHALL BE CONFINED TO THE IMMEDIATE CONSTRUCTION AREA. A 4- TO 6-INCH STRIPPING DEPTH IS COMMON, BUT DEPTH MAY VARY DEPENDING ON THE PARTICULAR SOIL. PLACE ALL PERIMETER DIKES, BASINS, AND OTHER SEDIMENT CONTROLS PRIOR TO STRIPPING 5. STOCKPILING

STOCKPILE TOPSOIL THAT IS STRIPPED FROM THE SITE IN SUCH A MANNER THAT NATURAL SITE DRAINAGE IS NOT OBSTRUCTED AND NO OFF-SITE SEDIMENT DAMAGE RESULTS. IN ALL CASES, LOCATE STOCKPILES TO MAXIMIZE DISTANCE FROM WETLANDS AND/OR WATERCOURSES THE SIDE SLOPES OF ALL STOCKPILES SHALL NOT EXCEED 2:1. INSTALL A SEDIMENT BARRIER DOWN SLOPE TO TRAP SEDIMENTS ERODING FROM THE STOCKPILE. STABILIZE THE STOCKPILED MATERIAL IF IT IS TO REMAIN FOR A PERIOD OF 3D DAYS OR LONGER.

- 6. APPLICATION OF TOPSOIL A. SITE PREPARATION: INSTALL AND/OR REPAIR EROSION AND SEDIMENT CONTROL MEASURES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, WATERWAYS, SILT FENCE AND SEDIMENT BASINS BEFORE TOPSOILING, MAINTAIN THESE MEASURES DURING TOPSOILING. BONDING: AFTER BRINGING THE SUBSOIL TO GRADE (AND IMMEDIATELY PRIOR TO SPREADING THE TOPSOIL), THE SUBGRADE SHALL BE LOOSENED BY DISCING, SCARIFYING OR TRACKING TO A DEPTH OF AT LEAST 4 INCHES TO ENSURE BONDING OF THE TOPSOIL
- AND SUBSOIL. B. APPLYING TOPSOIL: DISTRIBUTE THE TOPSOIL UNIFORMLY TO A MINIMUM DEPTH OF 4 INCHES. MAINTAIN APPROVED GRADES WHEN SPREADING TOPSOIL. CORRECT ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS NOTE: DO NOT PLACE TOPSOIL IF THE SUBGRADE OR THE TOPSOIL IS FROZEN OR EXCESSIVELY WET. ENSURE GOOD CONTACT WITH THE UNDERLYING SOIL AND OBTAIN A INFORM FIRM SEEDBED FOR THE ESTABLISHMENT OF VEGETATION. AVOID EXCESSIVE COMPACTION AS IT INCREASES RUNOFF VELOCITY AND VOLUME, AND INHIBITS SEED
- LIMING: WHERE THE PH OF THE SUBSOIL IS 6.0 OR LESS, GROUND AGRICULTURAL LIMESTONE SHALL BE SPREAD IN ACCORDANCE WITH THE SOIL TEST TO ATTAIN A PH OF 5.0 TO 6.5 OR TO ATTAIN A PH AS REQUIRED BY THE VEGETATIVE ESTABLISHMENT
- D. STABILIZING APPLIED TOPSOIL: IMMEDIATELY FOLLOWING TOPSOIL APPLICATIONS, PROTECT THE TOPSOIL FROM EROSION BY EITHER SODDING, SEEDING AND/OR MULCHING.

INSPECT AND MAINTAIN IN ACCORDANCE WITH THE SURFACE PROTECTION

G. RIP RAP FOR SLOPE STABILIZATION RIP RAP FOR CHANNEL STABILIZATION SHALL BE DESIGNED TO BE STABLE FOR THE CONDITION

OF BANK-FULL FLOW IN THE REACH OF CHANNEL BEING STABILIZED (SEE PERMANENT LINED WATERWAY MEASURE). THE DESIGN PROCEDURE, WHICH IS EXTRACTED FROM THE FEDERAL HIGHWAY ADMINISTRATION'S DESIGN OF ROADSIDE CHANNELS WITH FLEXIBLE LININGS. IS ONE ACCEPTED METHOD. OTHER GENERALLY ACCEPTED PUBLISHED METHODS MAY BE USE RIP RAP SHALL EXTEND UP THE BANKS OF THE CHANNEL TO A HEIGHT EQUAL TO THE DESIGN LOW OR TO A POINT WHERE VEGETATION CAN BE ESTABLISHED TO ADEQUATELY PROTECT THE CHANNEL.

THE RIP RAP SIZE TO BE USED IN A CHANNEL BEND SHALL EXTEND UPSTREAM FROM THE POINT OF CURVATURE A MINIMUM OF 0.4 TIMES THE WATER SURFACE WIDTH, AND DOWNSTREAM FROM THE POINT OF TANGENCY A DISTANCE OF AT LEAST 5 TIMES THE CHANNEL BOTTOM WIDTH. THE RIP RAP MAY EXTEND ACROSS THE BOTTOM AND UP BOTH IDES OF THE CHANNEL OR ONLY PROTECT THE OUTSIDE BANK, DEPENDING UPON SPECIFI DESIGN REQUIREMENTS.

WHERE RIP RAP IS USED ONLY FOR BANK PROTECTION AND DOES NOT EXTEND ACROSS THE 30TTOM OF THE CHANNEL, RIP RAP SHALL BE KEYED INTO THE BOTTOM OF THE CHANNEL TO A MINIMUM ADDITIONAL DEPTH EQUAL TO 1.5 TIMES THE MAXIMUM SIZE STONE FOR RIP RAPPED AND OTHER LINED CHANNELS, THE HEIGHT OF CHANNEL LINING ABOVE THE DESIGN WATER SURFACE SHALL BE BASED ON THE SIZE OF THE CHANNEL, THE FLOW VELOCITY, THE CURVATURE, INFLOWS, WIND ACTION, FLOW REGULATION, ETC H. FILTER BLANKETS OR BEDDING

A FILTER BLANKET OR BEDDING IS A LAYER OF MATERIAL PLACED BETWEEN THE RIP RAP AND THE UNDERLYING SOIL SURFACE TO PREVENT SOIL MOVEMENT THROUGH THE RIP RAP FILTER BLANKETS OR BEDDING SHOULD ALWAYS BE PROVIDED WHERE SEEPAGE FROM JNDERGROUND SOURCES THREATENS THE STABILITY OF THE RIP RAF

A FILTER BLANKET OR BEDDING CAN BE EITHER GRANULAR STONE LAYER(S). A GEOTEXTILE OR OTH. A DETERMINATION OF THE NEED FOR A FILTER BLANKET IS MADE BY COMPARING PARTICLE SIZE'S OF THE OVERLYING MATERIAL AND THE UNDERLYING MATERIAL IN ACCORDANCE WITH THE CRITERIA BELOW.

(1) GRANULAR FILTER LAYER: A GRANULAR (STONE) BEDDING IS A VIABLE OPTION WHEN THE FOLLOWING RELATIONSHIP EXISTS:

d15 filter/d85 bose < 5 < d15 filter/d15 bose < 40 d50 filter/d50 base < 40

IN SOME CASES, MORE THAN ONE LAYER OF FILTER MATERIAL MAY BE NEEDED. IN THESE CASES, FILTER REFERS TO THE OVERLYING MATERIAL AND BASE REFERS TO THE UNDERLYING MATERIAL. THE RELATIONSHIPS MUST HOLD BETWEEN THE RIP RAP AND THE FILTER MATERIAL. ACH LAYER OF FILTER MATERIAL SHALL BE A MINIMUM OF 6 INCHES THICK. (2) GEOTEXTILE (SPECIFICALLY INTENDED TO PREVENT PIPING): MAY BE USED IN CONJUNCTION MTH A LAYER OF COARSE AGGREGATE. THE GEOTEXTILE SHALL NOT BE USED ON SLOPES

STEEPER THAN 1-1/2 : 1 AS SLIPPAGE MAY OCCUR. THE FOLLOWING PARTICLE SIZE RELATIONSHIPS MUST EXIST:

(A) FOR GEOTEXTILE ADJACENT TO BASE MATERIALS CONTAINING 50% OR LESS (BY WEIGHT) OF FINE PARTICLES (LESS THAN 0.075MM): I) d85 BASE (MM)/EOS GEOTEXTILE(MM) > 1

- WHERE EOS = EQUIVALENT OPENING SIZE TO A U.S. STANDARD SIEVE SIZE
- II) TOTAL OPEN AREA OF GEOTEXTILE IS LESS THAN 36%.
- (B) FOR GEOTEXTILE ADJACENT TO ALL OTHER SOILS: A) EOS LESS THAN U.S. STANDARD SIEVE NO. 70

B) TOTAL OPEN AREA OF GEOTEXTILE IS LESS THAN 10%. NO GEOTEXTILE SHOULD BE USED WITH AND EOS SMALLER THAN U.S. STANDARD SIEVE NO.

INSTALLATION REQUIREMENTS

A. SUB GRADE PREPARATION

PREPARE THE SUB GRADE THE SUB GRADE FOR THE RIP RAP, BEDDING, FILTER OR GEOTEXTILI TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUB GRADE TO A DENSITY APPROXIMATING THAT OF THE SURROUNDING UNDISTRIBUTED MATERIAL. REMOVE BRUSH, TREES, STUMPS AND OTHER OBJECTIONABLE MATERIAL B. GEOTEXTILE

FOR GEOTEXTILE FILTERS, USE ONLY GEOTEXTILES THAT WERE STORED IN A CLEAN DRY PLACE, OUT OF DIRECT SUNLIGHT, WITH THE MANUFACTURER'S PROTECTIVE COVER IN PLACE TO INSURE THE GEOTEXTILE WAS NOT DAMAGED BY ULTRAVIOLET LIGHT. PLACE THE GEOTEXTILE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. C. FILTER BLANKET OR BEDDING

MMEDIATELY AFTER SLOPE PREPARATION, INSTALL THE FILTER OR BEDDING MATERIALS. SPREAD THE FILTER OR BEDDING MATERIALS IN A UNIFORM LAYER TO THE SPECIFIED DEPTH. WHERE MORE THAN ONE DISTINCT LAYER OF FILTER OR BEDDING MATERIAL IS REQUIRED, SPREAD THE LAYERS SO THAT THERE IS MINIMAL MIXING BETWEEN MATERIALS. D. STONE PLACEMENT

MMEDIATELY AFTER PLACEMENT OF THE FILTER BLANKET, BEDDING AND/OR GEOTEXTILE, PLACE THE RIP RAP TO ITS FULL COURSE THICKNESS IN ONE OPERATION SO THAT IT PRODUCES A DENSE WELL-GRADED MASS OF STONE WITH A MINIMUM OF VOIDS. THE DESIRED DISTRIBUTION OF STONES THROUGHOUT THE MASS MAY BE OBTAINED BY SELECTIVE LOADING AT THE DUARRY, CONTROLLED DUMPING OF SUCCESSIVE LOADS DURING FINAL PLACING, OR BY A COMBINATION OF THESE METHODS. DO NOT PLACE THE RIP RAP IN LAYERS OR USE CHUTES SIMILAR METHODS TO DUMP THE RIP RAP WHICH ARE LIKELY TO CAUSE SEGREGATION OF HE VARIOUS STONE SIZES.

AKE CARE NOT TO DISLODGE THE UNDERLYING MATERIAL WHEN PLACING THE STONES. WHEN PLACING RIP RAP ON A GEOTEXTILE TAKE CARE NOT TO DAMAGE THE FABRIC. IF DAMAGE OCCURS, REMOVE AND REPLACE THE DAMAGED SHEET. FOR LARGE STONE, 12 INCHES OR GREATER, USE A 6-INCH LAYER OF FILTER OR BEDDING MATERIAL TO PREVENT DAMAGE TO HE MATERIAL FROM PUNCTURE.

ENSURE THE FINISHED SLOPE IS FREE OF POCKETS OF SMALL STONES OR CLUSTERS OF LARGE STONES. HAND PLACING MAY BE NECESSARY TO ACHIEVE THE REQUIRED GRADES AND A GOOD DISTRIBUTION OF STONE SIZES. ENSURE THE FINAL THICKNESS OF THE RIP RAP BLANKET IS WITHIN PLUS OR MINUS 0.25 OF THE SPECIFIED THICKNESS.

THE CONTROL OF DUST ON CONSTRUCTION SITES, CONSTRUCTION ROADS AND OTHER AREAS WHERE DUST IS GENERATED D PREVENT THE MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, WHICH MAY CAUSE BOTH OFF-SITE AND ON-SITE DAMAGE, BE A HEALTH HAZARD TO HUMANS, WILDLIFE AND

3. APPLICABILITY ON UNSTABLE SOILS SUBJECT TO CONSTRUCTION TRAFFIC WHERE UNSTABLE SOILS ARE LOCATED ON HILL TOPS OR LONG REACHES OF OPEN GROUND AND CAN BE EXPOSED TO HIGH WINDS.

PLANT LIFE, OR CREATE A SAFETY HAZARD BY REDUCING TRAFFIC VISIBILITY

4. PLANNING CONSIDERATIONS WHEN CONSTRUCTION ACTIVITIES EXPOSE SOILS, FUGITIVE DUST IS EMITTED BOTH DURING THESE ACTIVITIES (I.E., EXCAVATION, DEMOLITION, VEHICLE TRAFFIC, ROCK DRILLING AND OTHER HUMA ACTIVITIES) AND AS A RESULT OF WIND EROSION OF THE EXPOSED EARTH SURFACES. LARGE QUANTITIES OF DUST CAN BE GENERATED DURING "HEAVY" CONSTRUCTION ACTIVITIES, SUCH AS ROAD AND STREET CONSTRUCTION, SUBDIVISION, COMMERCIAL OR INDUSTRIAL DEVELOPMENT. IN PLANNING FOR DUST CONTROLS:

- A. LIMIT THE AMOUNT OF EXPOSED SOIL BY PHASING CONSTRUCTION TO REDUCE THE AREA OF LAND DISTURBED AT ANY ONE TIME AND BY USING, AS SOON AS POSSIBLE, STABILIZATION MEASURES SUCH AS ANCHORED TEMPORARY SOIL PROTECTION, TEMPORARY SEEDING OR PERMANENT SEEDING WITH ANCHORED MULCH FOR SEED, LANDSCAPE PLANTINGS WITH LANDSCAPE MULCH, SODDING OR STONE SLOPE PROTECTION.
- B. MAINTAIN AS MUCH NATURAL VEGETATION AS IS PRACTICABLE. UNDISTURBE VEGETATIVE BUFFERS (MINIMUM OF 50° WIDTH) LEFT BETWEEN GRADED AREAS AND AREA TO BE PROTECTED CAN BE VERY EFFECTIVE.
- C. IDENTIFY AND ADDRESS SOURCES OF DUST GENERATED BY CONSTRUCTION ACTIVITIES. LIMIT CONSTRUCTION TRAFFIC TO PREDETERMINED ROUTES. PAVED SURFACES REQUIRE MECHANICAL SWEEPERS TO REMOVE SOIL THAT HAS BEEN DEPOSITED OR TRACKED ONTO THE PAVEMENT. ON UNPAVED TRAVEL WAYS AN EMPORARY HAUL ROADS. USE ROAD CONSTRUCTION STABILIZATION MEASURES AND/OR WATER AS NEEDED TO KEEP SURFACE DAMP. STATIONARY SOURCES DUST, SUCH AS ROCK CRUSHERS, USE FINE WATER SPRAYS TO CONTROL DUS IF WATER IS EXPECTED TO BE NEEDED FOR DUST CONTROL, IDENTIFY THE SOURCE OF WATER IN ADVANCE. PUMPING FROM STREAMS, POND AND SIMILAR WATERBODIES MAY REQUIRE APPROVAL FROM THE MUNICIPAL INLAND WETLAND
- D. IDENTIFY AND ADDRESS SOURCES OF WIND GENERATED DUST. PROVIDE SPECIAL CONSIDERATION TO HILL TOPS AND LONG REACHES OF OPEN GROUND WHERE SLOPES MAY BE EXPOSED TO HIGH WINDS. CONSIDER BREAKING UP LONG REACHES WITH TEMPORARY WINDBREAKS CONSTRUCTED FROM BRUSH PILES GEOTEXTILE SILT FENCES OR HAY BALES. PLAN ON STABILIZING SLOPES EARLY JULCH FOR SEED WILL REQUIRE ANCHORING WHEN USED
- CONSIDER WATER QUALITY WHEN SELECTING THE METHOD AND/OR MATERIAL USED FOR DUST CONTROL. WHEN CONSIDERING THE USE OF CALCIUM CHLORIDE BE AWARE OF THE FOLLOWING: THE RECEIVING SOIL'S PERMEABILITY SO AS T PREVENT GROUNDWATER CONTAMINATION: THE TIMING OF THE APPLICATION TO RAINFALL TO PREVENT WASHING OF SALTS INTO SENSITIVE AREAS SUCH AS WETLANDS AND WATERCOURSES: AND PROXIMITY TO SENSITIVE AREAS SUCH AS WATERCOURSES, PONDS, ESTABLISHED OR SOON TO BE ESTABLISHED AREA OF PLANTINGS, WHERE SALTS COULD IMPAIR OR DESTROY PLANT AND ANIMAL LIF ADDITIONALLY, SOME MATERIALS USED FOR DUST CONTROL MAY BE RENDERED

CONSIDER USING DUST CONTROL MEASURES ONLY AFTER IT IS DETERMINED THAT OTHER MEASURES FOR SOIL STABILIZATION CANNOT BE PRACTICALLY APPLIED.

A. MECHANICAL SWEEPING

MECHANICAL SWEEPING ON PAVED AREAS WHERE DUST AND FINE MATERIALS ACCUMULATE AS A RESULT OF TRUCK TRAFFIC, PAVEMENT SAW CUTTING SPILLAGE, AND WIND OR WATER DEPOSITION FROM ADJACENT DISTURBED AREAS. SWEEP DAILY IN HEAVILY TRAFFICKED AREAS PERIODICALLY MOISTEN EXPOSED SOIL SURFACES ON UNPAVED TRAVEL WAYS TO KEEP THE

TRAVEL WAY DAMP. NON-ASPHALTIC SOIL TACKIFIER NON-ASPHALTIC SOIL TACKIFIER CONSISTS OF AN EMULSIFIED LIQUID SOIL STABILIZER OF ORGANIC, INORGANIC OR MINERAL ORIGIN, INCLUDING, BUT NOT LIMITED TO THE FOLLOWING: MODIFIED RESINS, CALCIUM CHLORIDE, COMPLEX SURFACTANT, COPOLYMERS OR HIGH GRADE

LATEX ACRYLICS. THE SOLUTIONS SHALL BE NON-ASPHALTIC, NON TOXIC TO HUMAN, ANIMAL AND PLANT LIFE, NON-CORROSIVE AND NONFLAMMABLE. MATERIALS USED SHALL MEET LOCAL, STATE AND FEDERAL GUIDELINES FOR INTENDED USE. ALL MATERIALS ARE TO BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS AND ALL SAFETY GUIDELINES SHALL BE FOLLOWED IN STORING, HANDLING AND APPLYING MATERIALS MAINTENANCE

REPEAT APPLICATION OF DUST CONTROL MEASURES WHEN FUGITIVE DUST BECOMES EVIDENT.

DIMENT BARRIERS SEOTEXTILE SILT FENCE (ST) CIFICATIONS

EOTEXTILE SILT FENCING MINIMUM REQUIREMENTS PHYSICAL PROPERTY

ILTERING EFFICIENC GRAB TENSILE STRENGTH (LBS.) ONGATION @ FAILURE IULLEN BURST STRENGTH PUNCTURE STRENGTH APPARENT OPENING SIZE OW RATE ERMATIVITY

LTRAVIOLET RADIATION STABILITY 🕱 DTEXTILE SILT FENCE SLOPE/ LENGTH LIMITATIONS SLOPE STEEPNESS*

5:1 OR FLATTER 3:1 TO 5:1 2:1 TO 3:1 WHERE THE GRADIENT CHANGES THROUGH THE DRAINAGE AREA THE STEEPEST SLOPE SECTION ALL BE USED.

GEOTEXTILE FABRIC: SHALL BE A PERVIOUS SHEET OF POLYPROPYLENE, NYLON, POLYESTER A DEVICE OR SIMILAR FILLAMENTS AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS SHOWN. THE GEOTEXTILE SHALL BE NON-ROTTING, ACID ND ALKALI RESISTANT AND HAVE SUFFICIENT STRENGTH AND PERMEABILITY FOR THE PURPOS ENDED, INCLUDING HANDLING AND BACKFILLING OPERATIONS. FILAMENTS IN THE GEOTEXTI 1ALL BE RESISTANT TO ABSORPTION. THE FILAMENT NETWORK MUST BE DIMENSIONALLY STABLE TREATMENT OR COATING THAT WILL REDUCE ITS PERMEABILITY. THE GEOTEXTILE SHALL ALSO BE FREE OF ANY FLAWS OR DEFECTS WHICH WILL ALTER ITS PHYSICAL PROPERTIES. TORN OR

PUNCTURED GEOTEXTILES SHALL NOT BE USED.

3. SUPPORTING POSTS: SHALL BE AT LEAST 42 INCHES LONG MADE OF EITHER 1.5 INCH SQUARE HARDWOOD STAKES OR STEEL POSTS WITH PROJECTIONS FOR FASTENING THE GEOTEXTILE OSSESSING A MINIMUM STRENGTH OF 0.5 POUND PER LINEAR FOOT

PLACEMENT ON THE LANDSCAPE A. FOR TOE OF SLOPE: LOCATE 5-10 FEET DOWN GRADIENT FROM THE TOE OF THE SLOPE, GENERALLY ON THE CONTOUR WITH MAINTENANCE AND SEDIMENT REMOVAL REQUIREMENTS IN MIND SWALES: LOCATE "U" SHAPE ACROSS SWALE SUCH THAT THE BOTTOM OF BOTH ENDS OF THE ENCE ARE HIGHER THAN THE TOP OF THE LOWEST SECTION OF THE FENC CATCH BASINS IN SWALE ON SLOPES: LOCATE 2 "U" SHAPES ACROSS SWALE AS ABOVE: NE IMMEDIATELY UP SLOPE FROM THE CATCH BASIN AND THE OTHER IMMEDIATELY DOWN SLOPE

WHEN THE CONTOUR CANNOT BE FOLLOWED INSTALL THE FENCE SUCH THAT PERPENDICULAR WINGS ARE CREATED TO BREAK THE VELOCITY OF WATER FLOWING ALONG THE FENCE.

FROM THE CATCH BASIN. D CATCH BASINS IN DEPRESSIONS: ENCIRCLE ENTIRE CATCH BASIN

CULVERT INLETS: LOCATE IN A "U" SHAPE APPROXIMATELY 6 FEET FROM THE CULVERT IN E DIRECTION OF THE INCOMING FLOW CULVERT OUTLETS: LOCATE ACROSS THE SWALE AT LEAST 6 FEET FROM THE CULVERT

INSTALLATION A. TRENCH EXCAVATION: EXCAVATE A TRENCH A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE ON THE UP SLOPE SIDE OF THE FENCE LOCATION. FOR SLOPE AND SWALE INSTALLATIONS, EXTEND THE ENDS OF THE TRENCH SUFFICIENTLY UP SLOPE SUCH THAT BOTTOM END OF THE FENCE WILL BE HIGHER THAN THE TOP OF THE LOWEST PORTION OF THE FENCE. WHEN THE FENCE IS NOT TO BE INSTALLED ON THE CONTOUR, EXCAVATE WING TRENCHES SPACED AT THE INTERVALS GIVEN IN TABLE

SUPPORT POSTS: DRIVE SUPPORT POSTS ON THE DOWN SLOPE OF THE TRENCH TO A DEPTH OF I LEAST 12 INCHES INTO ORIGINAL GROUND. NEVER INSTALL SUPPORT POSTS MORE THAN 10 TET APART. INSTALL SUPPORT POSTS CLOSER THAN 10 FEET APART WHEN CONCENTRATED FLOWS RE ANTICIPATED OR WHEN STEEP CONTRIBUTING SLOPES AND SOIL CONDITIONS ARE EXPECTED TO ENERATE LARGER VOLUMES OF SEDIMENT. FOR CATCH BASINS IN HOLLOWS, DRIVE POSTS AT EACH CORNER OF THE CATCH BASIN. WHENEVER THE GEOTEXTILE FILTER FABRIC THAT IS USED EXCEEDS E MINIMUM MATERIAL SPECIFICATIONS CONTAINED IN THIS MEASURE, THE SPACING OF THE STAKES SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.

GEOTEXTILE FILTER FABRIC: STAPLE OR SECURE THE GEOTEXTILE TO THE SUPPORT POSTS PER IANUFACTURER 'S INSTRUCTION SUCH THAT AT LEAST 6 INCHES OF GEOTEXTILE LIES WITHIN THE RENCH. THE HEIGHT OF THE FENCE DOES NOT EXCEED 30 INCHES AND THE GEOTEXTILE IS TAUT BETWEEN THE POSTS. WHEN THE TRENCH IS OBSTRUCTED BY STONES, TREE ROOTS, ETC. ALLO THE GEOTEXTILE TO LAY OVER THE OBSTRUCTION SUCH THAT THE BOTTOM OF THE GEOTEXTILE POINTS UP SLOPE IN THE ABSENCE OF MANUFACTURER'S INSTRUCTIONS, SPACE WIRE STAPLES ON WOODEN STAKES AT

MAXIMUM OF 4 INCHES APART AND AI TERNATE THEIR POSITION FROM PARALLEL TO THE AXIS OF THE STAKE TO PERPENDICULAR. DO NOT STAPLE THE GEOTEXTILE TO LIVING TREES. PROVIDE REINFORCEMENT FOR THE FENCE WHEN IT CAN BE EXPOSED TO HIGH WINDS. WHEN JOINTS IN THE GEOTEXTILE FABRIC ARE NECESSARY, SPLICE TOGETHER ONLY AT A SUPPORT POSTS, AND SECURELY SEAL (SEE MANUFACTURER'S RECOMMENDATIONS). BACKFILL & COMPACTION: BACKFILL THE TRENCH WITH TAMPED SOIL OR AGGREGATE OVER THE OTEXTILE. WHEN THE TRENCH IS OBSTRUCTED BY A STONE, TREE ROOT, ETC. MAKE SURE THE TTOM OF THE GEOTEXTILE LIES HORIZONTAL ON THE GROUND WITH THE RESULTING FLAP ON THE

IP SLOPE SIDE OF THE GEOTEXTILE AND BURY THE FLAP 6 INCHES OF TAMPED SOIL, OR MAINTENANCE

PECT THE SILT FENCE AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM) FOR DEWATERING OPERATIONS, INSPECT FREQUENTLY BEFORE, DURING AND AFTER PUMPING ALURE. FAILURE OF THE FENCE HAS OCCURRED WHEN SEDIMENT FAILS TO BE RETAINED BY THE) THE BARRIER HAS BEEN OVER TOPPED, UNDERCUT OR BYPASSED BY RUNOFF WATER,

WITH A RAINFALL AMOUNT OF 0.5 INCH OR CREATER TO DETERMINE MAINTENANCE NEEDS. WHEN REMOVE THE SEDIMENT DEPOSITS OR, IF ROOM ALLOWS, INSTALL A SECONDARY SILT FENCE UP SLOPE OF THE EXISTING FENCE WHEN SEDIMENT DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE EXISTING FENCE. REPLACE OR REPAIR THE FENCE WITHIN 24 HOURS OF OBSERVED FENCE BECAUSE:) THE BARRIER HAS BEEN MOVED OUT OF POSITION, OR THE HAY BALES HAVE DETERIORATED OR BEEN DAMAGED WHEN REPETITIVE FAILURES OCCUR AT THE SAME LOCATION, REVIEW CONDITIONS AND LIMITATIONS FOR USE AND DETERMINE IF ADDITIONAL CONTROLS (E.G. TEMPORARY STABILIZATION OF

CONTRIBUTING AREA, DIVERSIONS, STONE BARRIERS) ARE NEEDED TO REDUCE FAILURE RATE OR REPLACE HAY BALE BARRIER MAINTAIN THE HAY BALE BARRIER UNTIL THE CONTRIBUTING AREA IS STABILIZED. AFTER THE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED, PULL THE STAKES OUT OF THE HAY BALES. UNLESS OTHERWISE REQUIRED, NO REMOVAL OR REGRADING OF ACCUMULATED SEDIMENT IS REQUIRED. THE HAY BALES MAY THEN BE LEFT IN PLACE OR BROKEN UP FOR GROUND COVER.

FDIMENT BARRIERS HAY BALE BARRIER (HB) SPECIFICATIONS

PLACEMENT ON THE LANDSCAPE

SLOPE STEEPNESS

TO 3:

MATERIALS

1 OR SHALLOWER

SHOWN IN TABLE ABOVE

CHECK DAM MEASURES

ROTTING OF THE BINDINGS).

MAINTENANCE

BECAUSE:

REPLACE FENCE

INSTALLATION

GEOTEXTILE SILT FENCE (GSF)

GEOTEXTILE SILT FENCES SHALL BE UTILIZED EXCEPT WHERE NOTED OTHERWISE

TEST METHOD ASTM 5141 ASTM D4632 ASTM D4632 ASTM D3786 ASTM 483 ASTM D4751 NO GREATER THAN 0.90MM ASTM D4491 ASTM D4491 ASTM-D4355

AND NO LESS THAN 0.60 N 0.2 GAL/FT2/MIN 0.05 SEC. -1 (MIN) 70% AFTER 500 HOURS OF EXPOSURE (MIN

MINIMUM

REQUIREMENT

75% (MIN)

100 LBS.

15%

250 PSI 50 LBS.

SLOPE LENGTH AND WING SPACING

HAY BALE DESIGN SLOPE/LENGTH LIMITATIONS SLOPE STEEPNESS SLOPE LENGTH AND WING SPACING 100 FEE1 50 FEE

HAY BALES: SHALL BE MADE OF HAY OR STRAW WITH 40 POUNDS MINIMUM WEIGHT AND 120 POUNDS MAXIMUM WEIGHT HELD TOGETHER BY TWINE OR WIRE. B. STAKES FOR ANCHORING HAY BALES: SHALL BE A MINIMUM OF 36 INCHES LONG AND MADE OF EITHER HARDWOOD WITH DIMENSIONS OF AT LEAST 1.5 INCHES SQUARE OR STEEL POSTS WITH A MINIMUM WEIGHT OF 0.5 POUND PER LINEAR FOOT.

CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 1 ACRE. MAXIMUM SLOPE LENGTH IS AS A. TOE OF SLOPE : LOCATE 5-10 FEET DOWN GRADIENT FROM THE TOE OF SLOPE GENERALLY ON THE CONTOUR. 3. SWALES: NOT RECOMMENDED. SEE GEOTEXTILE SILT FENCE OR STONE CHECK DAM MEASURES. C. CATCH BASINS IN SWALES ON SLOPES: NOT RECOMMENDED. SEE GEOTEXTILE SILT FENCE OR STONE CHECK DAM MEASURES.

D. CATCH BASINS IN DEPRESSIONS OR LOW SPOTS (YARD DRAINS): ENCIRCLE CATCHBASIN. CULVERT INLETS: NOT RECOMMENDED. SEE GEOTEXTILE SILT FENCE MEASURE. NOT RECOMMENDED. USE TEMPORARY SEDIMENT TRAP AND/OR STONE

TRENCH EXCAVATION: EXCAVATE A TRENCH AS WIDE AS THE BALES AND AT LEAST 4 INCHES EP. EACH END OF THE TRENCH SHOULD BE WINGED UPSLOPE SO THAT THE BOTTOM OF THE AST BALE IS HIGHER THAN THE TOP OF THE LOWEST HAY BALE IN THE BARRIER. B. HAY BALE PLACEMENT: PLACE BALES IN A SINGLE ROW IN THE TRENCH, LENGTHWISE, WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER AND THE BINDINGS ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES (TO AVOID PREMATURE

STAKING HAY BALES: ANCHOR EACH BALE WITH AT LEAST 2 STAKES, DRIVING THE FIRST STAKE N EACH BALE TOWARD THE PREVIOUSLY LAID BALE TO FORCE THE BALES TOGETHER. STAKES MUST BE DRIVEN A MINIMUM OF 18 INCHES INTO THE GROUND. FILL ANY GAPS BETWEEN THE BALES WITH HAY OR STRAW TO PREVENT WATER FROM ESCAPING BETWEEN THE BALES. BACKFILL & TAMPED: BACKFILL THE BALES WITH THE EXCAVATED TRENCH MATERIAL TO A MINIMUM DEPTH OF 4 INCHES ON THE UPHILL SIDE OF THE BALES TAMP BY HAND OR MACHINE AND COMPACT THE SOIL. LOOSE HAY OR STRAW SCATTERED OVER THE DISTURBED AREA IMMEDIATELY UPHILL FROM THE HAY BALE BARRIER TENDS TO INCREASE BARRIER EFFICIENCY.

ISPECT THE HAY BALE BARRIER AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.5 INCH OR GREATER TO DETERMINE MAINTENANCE NEEDS. OR DEWATERING OPERATIONS, INSPECT FREQUENTLY BEFORE, DURING AND AFTER PUMPING REMOVE THE SEDIMENT DEPOSITS OR, INSTALL A SECONDARY BARRIER UPSLOPE FROM THE EXISTING BARRIER WHEN SEDIMENT DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF T EXISTING BARRIER. REPLACE OR REPAIR THE BARRIER WITHIN 24 HOURS OF OBSERVED FAILURE. AILURE OF THE BARRIER HAS OCCURRED WHEN SEDIMENT FAILS TO BE RETAINED BY THE BARRIER) THE FENCE HAS BEEN OVER TOPPED, UNDERCUT OR BYPASSED BY RUNOFF WATER, B) THE FENCE HAS BEEN MOVED OUT OF POSITION (KNOCKED OVER), OR THE GEOTEXTILE HAS DECOMPOSED OR BEEN DAMAGED.

WHEN REPETITIVE FAILURES OCCUR AT THE SAME LOCATION, REVIEW CONDITIONS AND LIMITATIONS FOR USE AND DETERMINE IF ADDITIONAL CONTROLS (F.G. TEMPORARY STABILIZATION OF NTRIBUTING AREA, DIVERSIONS, STONE BARRIERS) ARE NEEDED TO REDUCE FAILURE RATE OR REPLACE FENCE. MAINTAIN THE FENCE UNTIL THE CONTRIBUTING AREA IS STABILIZED. AFTER THE CONTRIBUTING AREA IS STABILIZED DETERMINE IF SEDIMENT CONTAINED BY THE FENCE REQUIRES REMOVAL OR REGRADING AND STABILIZATION. IF THE DEPTH IS GREATER THAN OR EQUAL TO 6 INCHES, REGRADING OR REMOVAL OF THE ACCUMULATED SEDIMENT IS REQUIRED. NO REMOVAL OR REGRADING IS REQUIRED IF SEDIMENT DEPTH IS LESS THAN 6 INCHES REMOVE THE FENCE BY PULLING UP THE SUPPORT POSTS AND CUTTING THE GEOTEXTILE AT GROUND LEVEL. REGRADE OR REMOVE SEDIMENT AS NEEDED, AND STABILIZE DISTURBED SOILS.

STONE CHECK DAM (SCD) 1. PLANNING CONSIDERATIONS

A STONE CHECK DAM IS CONSIDERED TO BE TEMPORARY IF IT IS USED LESS THAN 1 YEAR. IT IS CONSIDERED TO BE PERMANENT IF IT IS USED MORE THAN 1 YEAR. ITS LENGTH OF USE AND THE SIZE OF THE WATERSHED DETERMINE IF AN ENGINEERED DESI IS REQUIRED. DESIGN REQUIREMENTS

DRAINAGE AREA < OR = TO 2 ACRES > 2 ACRES ANY DRAINAGE SIZE

LENGTH OF USE < 6 MONTHS > 6 MONTHS, < 1 YEAR > 1 YEAR

FOR ENGINEERED STONE CHECK DAMS, CONSTRUCT THE STONE CHECK DAM IN ACCORDANCE WITH THE DESIGN STANDARDS AND SPECIFICATIONS. FOR ALL NON-ENGINEERED STONE CHECK DAMS, COMPLY WITH THE FOLLOWING: A. MATERIALS

STONE: SHALL MEET THE REQUIREMENTS OF DOT STANDARD SPECIFICATIONS SECTION M.01.01, #3 AGGREGATE. THE STONE SHALL BE SOUND, TOUGH, DURABLE, ANGULAR, NO SUBJECT TO DISINTEGRATION ON EXPOSURE TO WATER OR WEATHERING, BE CHEMICALLY STABLE, AND SHALL BE SUITABLE IN ALL OTHER RESPECTS FOR THE PURPOSE INTENDED B. APPLICATION

PLACE THE STONE BY HAND OR MACHINE, MAKING SIDE SLOPES NO STEEPER THAN 1:1 (I.E., THE ANGLE OF REPOSE WITH A MAXIMUM HEIGHT OF 3 FEET AT THE CENTER OF E CHECK DAM. A GEOTEXTILE MAY BE USED UNDER THE STONE TO PROVIDE A STABL FOUNDATION AND TO FACILITATE REMOVAL OF THE STONE.

IN DRAINAGEWAYS: THE MINIMUM HEIGHT OF THE CHECK DAM SHALL BE THE FLOW DEPTH OF THE DRAINAGEWAY BUT IT SHALL NOT EXCEED 3 FEET IN HEIGHT AT THE CENTER. EXTEND THE STONE CHECK DAM TO THE FULL WIDTH OF THE DRAINAGEWAY. PLUS 18 INCHES ON EACH SIDE LEAVING THE HEIGHT OF THE CENTER OF THE STONE CHECK DAM APPROXIMATELY & INCHES LOWER THAN THE HEIGHT OF THE OUTER EDGE THE MAXIMUM SPACING BETWEEN CHECK DAMS SHALL BE SUCH THAT THE TOE OF TH UPSTREAM CHECK DAM IS AT THE SAME ELEVATION AS THE TOP OF THE CENTER OF T DOWNSTREAM CHECK DAM.

. CATCH BASIN IN DRAINAGEWAYS ON SLOPES AND AT THE CULVERT INLETS: WHERE CATCH BASINS IN DRAINAGEWAYS ARE LOCATED ON SLOPES OR AT CULVERT INLETS, LOCATE THE CHECK DAM ACROSS THE DRAINAGEWAY NO FARTHER THAN 20 FEET ABOVE THE CATCH BASIN OR CULVERT. FOR CULVERT INLETS, LOCATE THE CHECK DAM AT LEAST & FEET FROM THE INLET

CATCH BASINS IN DEPRESSIONS OR LOW SPOTS (YARD DRAINS): ENCIRCLE THE ENTIRE CATCH BASIN WITH A STONE CHECK DAM NOT TO EXCEED 18 INCHES IN HEIGHT AND 3 FEET OUT FROM THE OUTSIDE EDGE OF THE TOP OF THE FRAME. F. CULVERT INLETS: LOCATE THE STONE CHECK DAM APPROXIMATELY 6 FEET FROM

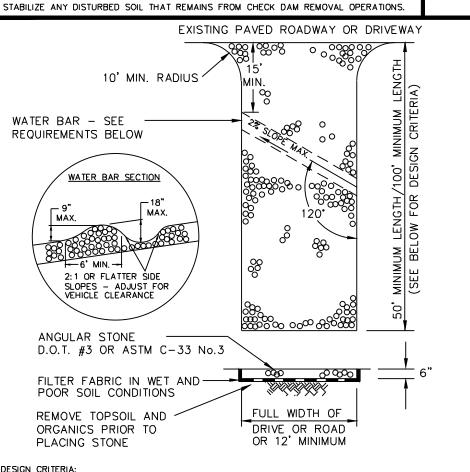
THE CULVERT IN THE DIRECTION OF THE INCOMING FLOW. SPECIAL CASE COMBINATIONS FOR ADDED FILTRATION & FROZEN GROUND CONDITIONS: THESE ARE NON-ENGINEERED STONE CHECK DAMS MODIFIED FOR USE IN CRITICAL WATERSHEDS (E.G. PUBLIC WATER SUPPLY, COLD WATER FISHERIES) WHEN THE DRAINAGE

AREA IS 2 ACRES OR LESS OR WHEN A SEDIMENT BARRIER NEEDS TO BE INSTALLED DURING FROZEN GROUND CONDITIONS. STONE CHECK DAM/GEOTEXTILE: STONE CHECK DAMS THAT ARE INSTALLED WITH AN INTERNAL CORE OF GEOTEXTILE. THE GEOTEXTILE MUST MEET THE MINIMUM STANDARDS SET FORTH IN GEOTEXTILE SILT FENCE MEASURE. PARTIALLY CONSTRUCT THE STONE HECK DAM TO AT LEAST HALF ITS HEIGHT. PLACE THE GEOTEXTILE OVER THE PARTIALLY BUILT DAM WITH SUFFICIENT MATERIAL ON THE UPSTREAM SIDE TO ALLOW FOR T TO MAKE COMPLETE CONTACT WITH THE GROUND. COMPLETE THE PLACEMENT OF STONE BY BURYING THE GEOTEXTILE WITHIN THE CHECK DAM. USEFUL LIFE OF THE MEASURE IS LIMITED BY THE LIFE OF THE GEOTEXTILE USED AND MAINTENANCE. STONE CHECK DAM/HAY BALES: STONE CHECK DAMS THAT ARE INSTALLED WITH A CORE OF HAY BALES. THE HAY BALES MUST MEET THE MINIMUM STANDARDS SET FORTH IN HAY BALE BARRIER MEASURE. AT THE LOCATION OF THE STONE CHECK DAM FIRST LAY A LOOSE BED OF HAY SEVERAL INCHES THICK ALONG THE ENTIRE LENGTH OF THE CHECK DAM ALIGNMENT, PLACE HAY BALES WITH THE ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER. WEDGE ANY GAPS WITH LOOSE HAY. BURY HAY BALES WITH STONE AND COMPLETE THE CONSTRUCTION OF THE STONE CHECK DAM AS INDICATED IN THE APPLICATION PARAGRAPHS ABOVE. USEFUL LIFE OF THE MEASURE IS LIMITED BY THE LIFE OF THE HAY BALES AND MAINTENANCE.

MAINTENANCE FOR PERMANENT STONE CHECK DAMS, INSPECT AND MAINTAIN THE STONE CHECK DAM IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS PROVIDED IN THE DESIGN. FOR TEMPORARY STONE CHECK DAMS, INSPECT STONE CHECK DAMS AT LEAST ONCE WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF D

ICH OR GREATER TO DETERMINE MAINTENANCE NEEDS. REMOVE THE SEDIMENT DEPOSI WHEN DEPOSITS REACH APPROXIMATELY HALF THE HEIGHT OF THE CHECK DAM. REPLACE OR REPAIR THE CHECK DAM WITHIN 24 HOURS OF OBSERVED FAILURE. FAILURE OF THE CHECK DAM HAS OCCURRED WHEN SEDIMENT FAILS TO BE RETAINED BECAUSE: STONE HAS MOVED. SOIL HAS ERODED AROUND OR UNDER THE CHECK DAM REDUCING ITS FUNCTIONAL CAPACITY, OR TRAPPED SEDIMENTS ARE OVER TOPPING THE CHECK DAM.

WHEN REPETITIVE FAILURES OCCUR AT THE SAME LOCATION, REVIEW CONDITIONS AND LIMITATIONS FOR USE AND DETERMINE IF ADDITIONAL CONTROLS (E.G. TEMPORARY STADULTATION OF CONTRIBUTING ADEA DIVERSIONS STONE CHECK DAMS) ARE NEE O REDUCE FAILURE RATE. MAINTAIN THE STONE CHECK DAM UNTIL THE CONTRIBUTING AREA IS STABILIZED. AFTER THE CONTRIBUTING AREA IS STABILIZED, REMOVE ACCUMULATED SEDIMENT. STONE CHECK DAMS MAY BE REMOVED OR GRADED INTO THE FLOW LINE OF THE CHANNEL OVER THE AREA LEFT DISTURBED BY SEDIMENT REMOVAL GRADE SO THERE ARE NO OBSTRUCTIONS TO WATER FLOW. IF STONE CHECK DAMS ARE USED IN GRASS-LINED CHANNELS, WHICH WILL BE MOWED, REMOVE ALL THE STONE OR CAREFULLY GRADE OUT THE STONE TO ENSURE IT DOES NOT INTERFERE WITH MOWING



FAR THE AREA OF THE ENTRANCE OF ALL VEGETATION. ROOTS, AND OTHER OBJECTIONABLE MATERIA POORLY DRAINED LOCATIONS INSTALL SUBSURFACE DRAINAGE INSURING THE OUTLET TO THE DRAINS ARE FREE FLOWING. FUSING A GEOTEXTILE IN PLACE OF FREE DRAINING MATERIAL, UNROLL THE GEOTEXTILE IN A DIRECTION PARALLEL TO THE ROADWAY CENTERLINE IN A LOOSE MANNER PERMITTING IT TO CONFORM TOO THE SURFACE IRREGULARITIES WHEN THE STONE IS PLACED. UNLESS OTHERWISE SPECIFIED BY THE MANUFACTURER, THE MINIMUM OVERLAP OF GEOTEXTILE PANELS JOINED WITHOUT SEWING ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. THE GEOTEXTILE MAY BE TEMPORARILY SECURED WITH PINS RECOMMENDED OR PROVIDED BY THE MANUFACTURER BUT THEY SHALL BE REMOVED PRIOR TO LACEMENT OF THE STONE FLACE THE STONE TO THE SPECIFIED DIMENSION. KEEP ADDITIONAL STONE AVAILABLE OR STOCKPILE FOR FUTURE USE. IF THE GRADE OF THE CONSTRUCTION ENTRANCE DRAINS TO THE PAVED SURFACE AND IT CONSTRUCT A WATER BAR WITHIN THE CONSTRUCTION ENTRANCE AT LEAST 15 FEET FROM S ENTRANCE ON THE PAVED SURFACE DIVERTING RUNOFF WATER TO A SETTLING OR FILTERING AREA CONSTRUCT ANY DRAINAGE AND SETTLING FACILITIES NEEDED FOR WASHING OPERATIONS. IF WASH RACKS ARE USED, INSTALL ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS

MOST OF THE SEDIMENT IS NOT REMOVED BY TRAVEL OVER THE STONE, WASH TIRES BEFORE VEHICLES ENTER A PUBLIC ROAD. DIVERT WASH WATER AWAY FROM THE ENTRANCE TO A SETTLING AREA TO REMOVE SEDIMENT. SIZE SETTLING AREA TO HOLD THE VOLUME OF WATER USED DURING ANY 2-HOUR PERIOD. USING A WASH RACK MAY MAKE WASHING MORE CONVENIENT AND EFFECTIVE. MAINTENANC

MAINTAIN THE ENTRANCE IN A CONDITION WHICH WILL PREVENT TRACKING AND WASHING OF SEDIMENT NTO PAVED SURFACES. PROVIDE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL ENGTH AS CONDITIONS DEMAND. REPAIR ANY MEASURES USED TO TRAP SEDIMENT AS NEEDEL IMMEDIATELY REMOVE ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PAVED SURFACES. ROADS ADJACENT TO A CONSTRUCTION SITE SHALL BE LEFT CLEAN AT THE END OF EACH DAY. THE CONSTRUCTION ENTRANCE IS BEING PROPERLY MAINTAINED AND THE ACTION OF A VEHICLE TRAVELING OVER THE STONE PAD IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF THE SEDIMENT, THEN EITHER (1) INCREASE THE LENGTH OF THE CONSTRUCTION ENTRANCE, (2) MODIFY THE CONSTRUCTION ACCESS ROAD SURFACE, OR (3) INSTALL WASHING RACKS AND ASSOCIATED SETTLING AREA OR SIMILAR DEVICES BEFORE THE VEHICLE ENTERS A PAVED SURFACE. I-IKAUKING

N. T. S. REFERENCE: 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL HANDBOOK.

SPECIFICATIONS

. SEED SELECTION ELECT GRASS SPECIES APPROPRIATE FOR THE SEASON AND SITE CONDITIONS FROM TABLE B. TIMING CONSIDERATION

ED WITH A TEMPORARY SEED MIXTURE WITHIN 7 DAYS AFTER THE SUSPENSION OF GRADING WORK IN DISTURBED AREAS WHERE LE SUSPENSION OF WORK IS EXPECTED TO BE MORE THAN 30 DAYS BUT LESS THAN 1 YEAR. SEEDING OUTSIDE THE OPTIMUM EEDING DATES GIVEN IN TABLE MAY RESULT IN EITHER INADEQUATE GERMINATION OR LOW PLANT SURVIVAL RATE, REDUCING ROSION CONTROL EFFECTIVENESS. SITE PREPARATION

STALL NEEDED EROSION CONTROL MEASURES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, SEDIMENT BASINS AND ASSED WATERWAYS IN ACCORDANCE WITH THE APPROVED PLAN. GRADE ACCORDING TO PLANS AND ALLOW FOR THE USE OI PPROPRIATE EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING HOULD BE DONE IN ACCORDANCE WITH THE LAND GRADING MEASURE.

SEEDBED PREPARATION DOSEN THE SOIL TO A DEPTH OF 3-4 INCHES WITH A SLIGHTLY ROUGHENED SURFACE. IF THE AREA HAS BEEN RECENTLY OOSENED OR DISTURBED, NO FURTHER ROUGHENING IS REQUIRED. SOIL PREPARATION CAN BE ACCOMPLISHED BY TRACKING WITH A BULLDOZER, DISCING, HARROWING, RAKING OR DRAGGING WITH A SECTION OF CHAIN LINK FENCE. AVOID EXCESSIVE COMPACTION OF THE SURFACE BY EQUIPMENT TRAVELING BACK AND FORTH OVER THE SURFACE. IF THE SLOPE IS TRACKED, THE CLEAT MARKS SHALL BE PERPENDICULAR TO THE ANTICIPATED DIRECTION OF THE FLOW OF SURFACE WATER. APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL COOPERATIVE EXTENSION SYSTEM OFFICE. APPENDIX E CONTAINS A LISTING OF THE COOPERATIVE EXTENSION SYSTEM OFFICES. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTINIZER MA BE APPLIED AT THE RATE OF 300 POUNDS PER ACRE OR 7.5 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT. DDITIONALLY, LIME MAY BE APPLIED USING RATES GIVEN IN TABLE BELOW.

OIL TEXTURE VS. LIMING RATES SOIL TEXTURES TONS/ACRE OF LIME LBS/1,000 SF OF LIME LAY. CLAY LOAM SANDY LOAM, LOAM, SILT LOAM OAMY SAND, SAND

SEEDING PLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER AT A MINIMUM RATE IE SELECTED SEED IDENTIFIED IN TABLE BELOW. INCREASE SEEDING RATES BY 10% WHEN HYDROSEEDING.

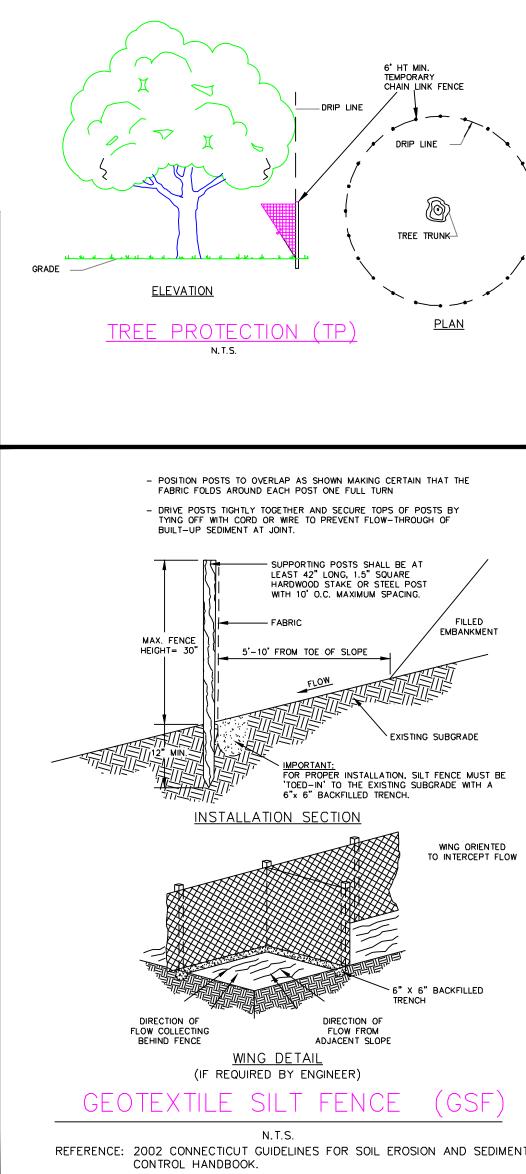
EMPORARY SEEDINGS MADE DURING OPTIMUM SEEDING DATES SHALL BE MULCHED ACCORDING TO THE MULCH FOR SEED MEASURE DTE WHEN SEEDING OUTSIDE OF THE OPTIMUM SEEDING DATES, INCREASE THE APPLICATION OF MULCH TO PROVIDE 95% - 100%

SPECT SEEDED AREA AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT O 5 INCH OR GREATER FOR SEED AND MULCH MOVEMENT AND RILL EROSION. WHERE SEED HAS MOVED OR WHERE SOIL EROSION AS OCCURRED, DETERMINE THE CAUSE OF THE FAILURE, BIRD FEEDING MAY BE A PROBLEM IF MULCH WAS APPLIED TOO THINL' PROTECT SEED. RE-SEED AND RE-MULCH. IF MOVEMENT WAS THE RESULT OF WIND, THEN REPAIR EROSION DAMAGE (IF ANY) EAPPLY SEED AND MULCH AND APPLY MULCH ANCHORING, IF FAILURE WAS CAUSED BY CONCENTRATED RUNOFF, INSTAL TH ANCHORING OR USE TEMPORARY EROSION CONTROL BLANKET MEASURE. CONTINUE INSPECTIONS UNTIL THE GRASSES ARE IRMLY ESTABLISHED, GRASSES SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED WHICH IS MATURI NOUGH TO CONTROL SOIL EROSION AND TO SURVIVE SEVERE WEATHER CONDITIONS (APPROXIMATELY 80% VEGETATIVE SURFACE

SPECIES	SE R (P	MPORARY EDING ATES OUNDS) /1000 S.F.	OPTIMUM SEED DEPTH(N		PLA CHARACTI
ANNUAL RYEGRASS		•	• •		MAY BE ADDE
LOLIUM MULTIFLORUM	40	1.0	0.5	<u> 3/1 - 6/15 & 8/1 - 10/15</u>	WILL MOW OU
PERENNIAL RYEGRASS					USE FOR WIN
LOLIUM PERENNE	40	1.0	0.5	3/15 -7/1 & 8/1 - 10/15	TOLERATES C
WINTER RYE					QUICK GERMIN
SECALE CEREALE	120	3.0	1.0	4/15 - 7/1 & 8/15 -10/15	GROWTH. DIES
					LITTLE REGRO
OATS					IN NORTHERN
AVENA SATIVA	86	2.0	1.0	3/1 - 6/15 & 8/1 - 9/15	WITH THE FIR
					MAY THROUGH
					SEVERE WINTE
WINTER WHEAT	100	7.0	1.0		QUICK GERMIN
TRITICUM AESTIVUM	120	3.0	1.0	4/15 - 7/1 & 8/15 - 10/15	GROWTH. DIES REGROWTH.
MILLET					WARM SEASON
FCHINOCHLOA CRUSGALLI	20	0.5	1.0	5/15 - 7/15	FROST IN SEF
SUDANGRASS		0.0	1.0	5/15 = 7/15	TOLERATES WA
SORGHUM SUDANENSE	30	0.7	1.0	5/15 - 8/1	DROUGHTY CC
BUCKWHEAT		<u> </u>			HARDY PLANT
FAGOPYRUM ESCULENTUM	15	0.4	1.0	4/1 - 9/15	AND IS GOOD
		.		.,,	CROP.
WEEPING LOVEGRASS					WARM-SEASO
ERAGROSTIS CURVULA	5	0.2	0.25	6/1 - 7/1	TOLERATES H
					INFERTILE SOI
					CROP. USUA

CROP. USUALLY WINTER KILLS. 0.5 3/15 - 6/15 & 8/15 - 10/15 SUITABLE FOR ALL CONDITIONS. (NO DT ALL PURPOSE MIX 150 3.4 I MAY BE PLANTED THROUGHOUT SUMMER IF SOIL MOISTURE IS ADEQUATE OR CAN BE IRRIGATED. FALL SEEDING MAY BE EXTENDED DAYS IN THE COASTAL TOWNS. SEED AT TWICE THE INDICATED DEPTH FOR SANDY SOILS

E PERMANENT SEEDING TABLE FOR SEEDING MIXTURE REQUIREMENTS. LISTED SPECIES MAY BE USED IN COMBINATIONS TO OBTAIN A BROADER TIME SPECTRUM. IF USED IN COMBINATIONS, REDUCE ACH SPECIES PLANTING RATE BY 20% OF THAT LISTED.



DESIGN REQUIREMENTS NO ENGINEERED DESIGN 2-YR FREQUENCY STORM 25-YR FREQUENCY STORM 2. SPECIFICATIONS

SPECIFICATIONS

CTERISTICS

DED IN MIXES. OUT OF MOST STANDS. INTER COVER. COLD AND LOW MOISTURE. S BACK IN JUNE WITH <u>)WTH.</u> I CT. WINTER WILL KILL IRST KILLING OF FROST AND HOUT THE STATE IN ILRS. INATION WITH MODERATE ES BACK IN JUNE WITH NO ON SMALL GRAIN. DIES WITH EPTEMBER. WARM TEMPERATURES AND CONDITIONS. IT THAT WILL RESEED ITSELF

D AS A GREEN MANURE ON PERENNIAL, MAY BUNCH. HOT, DRY SLOPES, ACID

SECTION

A. SEED SELECTION AND QUANTITY ECT A SEED MIXTURE APPROPRIATE TO THE INTENDED USE AND SOIL CONDITIONS No. R USE MIXTURE RECOMMENDED BY THE NRCS. FOR SEED MIXTURES CONTAINING EGUMES, SELECT THE TYPE AND AMOUNT OF INOCULANT THAT IS SPECIFIC FOR THE LEGUME TO BE USED. WHEN BUYING SEED MAKE SURE THE QUALITY OF THE SEED IS GIVEN FOR PURE LIVE SEED AND GERMINATION RATE. ASK THE SUPPLIER FOR AN AFFIDAVIT OF PURITY ND GERMINATION RATE IF THERE IS ANY QUESTION EXPECT A PURITY BETWEEN OF 5% AND 98% AND A GERMINATION RATE BETWEEN 70% AND 90%. SOME SEEDING IXTURES CALL FOR PURE LIVE SEED. NCREASE SEEDING RATES 10% WHEN USING FROST CRACK SEEDING OR HYDROSEEDING. EED WITH A PERMANENT SEED MIXTURE WITHIN 7 DAYS AFTER ESTABLISHING FINAL RADES OR WHEN GRADING WORK WITHIN A DISTURBED AREA IS TO BE SUSPENDED OR A PERIOD OF MORE THAN I YEAR. SEEDING IS RECOMMENDED FROM APRIL 1 THROUGH JUNE 15 AND AUGUST 15 THROUGH OCTOBER 1, WITH THE FOLLOWING FOR THE COASTAL TOWNS AND IN THE CONNECTICUT RIVER VALLEY FINAL FALL SEEDING DATES CAN BE EXTENDED AN ADDITIONAL 15 DAYS, AND ORMANT OR FROST CRACK SEEDING IS DONE AFTER THE GROUND IS FROZEN. . SITE PREPARATION GRADE IN ACCORDANCE WITH THE LAND GRADING MEASURE INSTALL ALL NECESSARY SURFACE WATER CONTROLS. FOR AREAS TO BE MOWED REMOVE ALL SURFACE STONES 2 INCHES OR LARGER. REMOVE ALL OTHER DEBRIS SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS ROTHE UNSUITABLE MATERIAL. OTE: ON AREAS WHERE WOOD CHIPS AND/OR BARK MULCH WAS PREVIOUSLY PPLIED, EITHER REMOVE THE MULCH OR INCORPORATE IT INTO THE SOIL WITH A NITROGEN FERTILIZER ADDED. NITROGEN APPLICATION RATE IS DETERMINED BY SOIL TEST AT TIME OF SEEDING; ANTICIPATE 12 LBS NITROGEN PER TON OF WOOD CHIPS AND/OR BARK MULCH. SEEDBED PREPARATION ILY TOPSOIL IF NECESSARY, IN ACCORDANCE WITH THE TOPSOILING MEASURE PPLY FERTILIZER AND GROUND LIMESTONE ACCORDING TO SOIL TESTS CONDUCTED TESTING LABORATORY OF CONNECTICUT SOIL TESTING LABORATORY OF OTHER RELIABLE SOURCE. A PH RANGE OF 6.2 TO 7.0 IS PTIMAL FOR PLANT GROWTH OF MOST SRASS SPECIES. WHERE SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE ACRE OR 7.5 POUNDS PER 1,000 SQUARE FEET USING 10-10-10 OR EQUIVALENT AND LIMESTONE AT 4 TONS PER ACRE OR 200 POUNDS PER 1,000 SQUARE FEET. DITIONALLY, LIME MAY BE APPLIED USING RATES GIVEN IN TABLE BELOW. A PH OF 6.2 TO 7.0 IS OPTIMAL FOR AREAS THAT WERE PREVIOUSLY MULCHED WITH WOOD CHIPS OR BARK AND THE WOOD CHIPS OR BARK ARE TO BE INCORPORATED INTO THE SOIL, APPLY ADDITIONAL NITROGEN AT A RATE THAT IS DETERMINED BY SOIL TESTS AT TIME OF SEEDING. WORK LIME AND FERTILIZER INTO THE SOIL TO A DEPTH OF 3 TO 4 INCHES WITH A DISC OR OTHER SUITABLE EQUIPMENT. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED. FOR 115 REAS TO BE MOWED THE FINAL SOIL LOOSENING AND SURFACE ROUGHENING PERATION IS BY HAND, HARROW OR DISC. IF DONE BY HARROW OR DISC. IT IS ENERALLY DONE ON THE CONTOUR. AREAS NOT TO BE MOWED CAN B ITH CLEATED EARTH MOVING EQUIPMENT PERPENDICULAR TO THE SLOPE. HOWEVER FOR AREAS WHERE TEMPORARY EROSION CONTROL BLANKETS ARE TO BE USED INSTEAD OF MULCH FOR SEED PREPARE THE SEED BED IN ACCORDANCE WITH BLANKET MANUFACTURER'S RECOMMENDATIONS. INSPECT SEEDBED JUST BEFORE SEEDING. IF THE SOIL IS COMPACTED, CRUSTED OR HARDENED, SCARIFY THE AREA PRIOR TO SEEDING SOIL TEXTURE VS. LIMING RATES SOIL TEXTURE TONS/ACRE OF LIME LBS/1000 SF OF LIME LAY. CLAY LOAM HIGH ORGANIC SOIL 135 ANDY LOAM, LOAM, OAMY SAND, SAND SEED APPLICATION PPLY SELECTED SEED AT RATES PROVIDED IN TABLE BELOW UNIFORMLY BY HAND, YCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY NCLUDING SEED, FERTILIZER). NORMAL SEEDING DEPTH IS FROM 0.25 TO 0.5 INCH. NCREASE SEEDING RATES BY 10% WHEN HYDROSEEDING OR FROST CRACK SEEDING. ED WARM SEASON GRASSES DURING THE SPRING PERIOD ONLY PPLY MULCH ACCORDING TO THE MULCH FOR SEED MEASURE IRRIGATION FOR SUMMER SEEDING

WHEN SEEDING OUTSIDE OF THE RECOMMENDED SEEDING DATES IN THE SUMMER MONTHS, WATERING MAY BE ESSENTIAL TO ESTABLISH A NEW SEEDING. IRRIGATION IS SPECIALIZED PRACTICE AND CARE NEEDS TO BE TAKEN NOT TO EXCEED THE INFILTRATION RATE OF THE SOIL EACH APPLICATION MUST BE UNIFORMLY APPLIED WITH 1 TO 2 INCHES OF WATER APPLIED PER APPLICATION, SOAKING THE GROUND O A DEPTH OF 4 INCHES. MAINTENANCE

A. INITIAL ESTABLISHMENT NSPECT SEEDED AREA AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END A STORM WITH A RAINFALL AMOUNT OF 0.5 INCH OR GREATER DURING THE IRST GROWING SEASON. WHERE SEED HAS BEEN MOVED OR WHERE SOIL EROSION HAS OCCURRED DETERMINE THE CAUSE OF THE FAILURE. BIRD DAMAGE MAY BE A PROBLEM IF MULCH WAS APPLIED TOO THINLY TO PROTECT SEED, RE-SEED AND RE-MULCH. IF MOVEMEN WAS THE RESULT OF WIND, REPAIR FROSION DAMAGE (IF ANY), RE-APPLY SEED ND MULCH, AND APPLY MULCH ANCHORING. IF FAILURE WAS CAUSED BY CONCENTRATED WATER. (1) INSTALL ADDITIONAL MEASURES TO CONTROL WATER AND SEDIMENT MOVEMENT. (2) REPAIR EROSION DAMAGE, (3) RE-SEED AND (4) E-APPLY MULCH WITH ANCHORING OR USE TEMPORARY FROSION CONTROL BLANKET MEASURE AND/OR PERMANENT TURF REINFORCEMENT MAT MEASURE THERE IS NO FROSION, BUT SEED SURVIVAL IS LESS THAN 10D PLANTS PER SQUARE FOOT AFTER 4 WEEKS GROWTH, RE-SEED AS PLANTING SEASON ALLOWS. CONTINUE INSPECTIONS UNTIL AT LEAST 100 PLANTS PER SQUARE FOOT HAVE 205 DELETED DUE TO INVASIVE SPECIES WN AT LEAST 6 INCHES TALL OR UNTIL THE FIRST MOWING

B. FIRST MOWING OW THE MAJORITY OF PLANTS TO ACHIEVE A HEIGHT OF AT LEAST 6 INCHES BEFORE MOWING IT THE FIRST TIME. DO NOT MOW WHILE THE SURFACE IS WET GOVING WHILE THE SURFACE IS STILL WET MAY PULL MANY SEEDLINGS FROM THE SOIL AND OFTEN LEAVES A SERIES OF UNNECESSARY RUTS. THE FIRST MOWING YOULD REMOVE APPROXIMATELY ONE THIRD OF THE GROWTH, DEPENDING ON TH TYPE OF GRASS AND WHERE IT IS BEING USED. DO NOT MOW GRASS BELOW 3 THE SEEDING WAS MULCHED, DO NOT ATTEMPT TO RAKE OUT THE MULCHING MATERIAL, NORMAL MOWING WILL GRADUALLY REMOVE ALL UNWANTED DEBRIS.

NOW AND FERTILIZE AT A RATE THAT SUSTAINS THE AREA IN A CONDITION THAT 255 SUPPORTS THE INTENDED USE. IF APPROPRIATE THE HEIGHT OF CUT MAY BE ADJUSTED DOWNWARD, BY DEGREES, AS NEW PLANTS BECOME ESTABLISHED. T ANY FERTILIZATION PROGRAM IN ACCORDANCE WITH APPROVED SOIL TESTS 266 AT DETERMINE THE PROPER AMOUNT OF LIME AND FERTILIZER NEEDED MAINTAIN A VIGOROUS SOD YET PREVENT EXCESSIVE LEACHING OF NUTRIENTS TO LTHOUGH WEEDS MAY APPEAR TO BE A PROBLEM, THEY SHADE THE NEW SEEDLINGS AND HELP CONSERVE SURFACE MOISTURE. DO NOT APPLY WEED CONTROL NTIL THE NEW SEEDLING HAS BEEN MOWED AT LEAST FOUR TIMES.

SELECTING SEED MIX TO MATCH NEED AREA TO BE SEEDED MIXTURE NUMBER MOWING DESIRED MOWING NOT REQUIRED

BORROW AREAS, ROADSIDES KES, LEVEES, POND BANKS ND OTHER SLOPES AND BANKS A) WELL OR EXCESSIVELY 1,2,3,4,5, OR 8 5,6,7,8,9,10,11,12,16,22 DRAINED SOILS) SOMEWHAT POORLY DRAINED 5.6 5.6.11 VARIABLE DRAINAGE SOILS INAGE DITCH AND CHANNEL BANKS A) WELL OR EXCESSIVELY DRAINED SOILS2 1,2,3, OR 4 9,10,11,12 3) SOMEWHAT POORLY DRAINED SOILS2 VARIABLE DRAINAGE SOILS2 IVERSIONS A) WELL OR EXCESSIVELY DRAINED SOILS 2,3, OR 4 9,10,11 B) SOMEWHAT POORLY DRAINED SOILS VARIABLE DRAINAGE SOILS FLUENT DISPOSAL GRAVEL PITS3 GULLIED AND ERODED AREAS MINESPOIL & WASTE AND OTHER SPOIL BANKS 15,16,17,18,26,27,28 F TOXIC SUBSTANCES AND PHYSICAL PROPERTIES NOT LIMITING)3 HORELINES 5 OR 6 LUCTUATING WATER LEVELS) OD WATERWAYS AND SPILLWAYS 1,2,3,4,6,7, OR 8 1,2,3,4,6,7, OR 8 1,2, OR 23 UNNY RECREATION AREAS PICNIC AREAS AND PLAYGROUND DRIVING AND ARCHERY RANGES NATURE TRAILS) CAMPING AND PARKING, NATURE 19,*21*, OR 23 RAILS (SHADED)

AND DUNES (BLOWING SAND) WOODLAND ACCESS ROADS. SKID TRAILS AND LOG YARDING AREAS 9,10,16, 22,26 1,19,21, OR 29 AWNS AND HIGH MAINTENANCE THE NUMBERS FOLLOWING IN THESE COLUMNS REFER TO SEED MIXTURES IN OLLOWING TABLE. MIXES FOR SHADY AREAS ARE IN BOLD ITALICS PRINT NCLUDING MIXES 20 THROUGH 24) SEE COUNTY SOIL SURVEY FOR DRAINAGE CLASS. SOIL SURVEYS ARE AVAILABLE OM THE COUNTY SOIL AND WATER CONSERVATION DISTRICT OFFICE.

3 USE MIX 26 WHEN SOIL PASSING A 200 MESH SIEVE IS LESS THAN 15% OF TOTAL WEIGHT. USE MIX 26 & 27 WHEN SOIL PASSING A 200 MESH SIEVE IS BETWEEN 15 AND 20% OF TOTAL WEIGHT. USE MIX 26, 27 & 28 WHEN SOIL PASSING A 200 MESH SIEVE IS ABOVE 20% OF TOTAL WEIGHT.

SECTION B

POSTS DETAIL OF FENCE JOINT (TOP VIEW)

LBS/ACRE LBS/1.000 SF SEED MIXTURE (VARIETY)4 KENTUCKY BLUEGRASS CREEPING RED FESCUE (PENNLAWN, WINTERGREEN) PERENNIAL RYEGRASS (NORLEA, MANHATTAN) CREEPING RED FESCUE (PENNLAWN, WINTERGREEN REDTOP (STREAKER, COMMON) TALL FESCUE (KENTUCKY 31) OR SMOOTH BROMEGRASS TOTAL 4 (SARATOGA, LINCOLN) CREEPING RED FESCUE (PENNLAWN, WINTERGREEN) RDS FOOT TREFOIL (EMPIRE, VIKING) WITH INOCULANT ALL FESCUE (KENTUCKY 31) OR SMOOTH BROMEGRASS (SARATOGA, LINCOLN) TOTAL 48 REEPING RED FESCUE (PENNLAWN, WINTERGREEN R TALL FESCUE (KENTUCKY 31) REDTOP (STREAKER, COMMON) BIRDS FOOT TREFOIL (EMPIRE, VIKING) W/INOCULANT1 TOTAL 30 WHITE CLOVER PERENNIAL RYE GRASS TOTAL 1 CREEPING RED FESCUE 20 EDTOP (STREAKER, COMMON) PERENNIAL RYE GRASS TOTAL 4 SMOOTH BROMEGRASS (SARATOGA, LINCOLN) PERENNIAL RYEGRASS (NORLEA, MANHATTAN) BIRDS FOOT TREFOIL (EMPIRE, VIKING) W/ INOCULANT1 SWITCHGRASS (BLACKWELL, SHELTER, CAVE-IN-ROCK) EEPING LOVEGRASS LITTLE BLUESTEM (BLAZE, ALDOUS, CAMPER) TOTAL CREEPING RED FESCUE (PENNLAWN, WINTERGREEN) CROWN VETCH (CHEMUNG, PENNGIFT) WITH INOCULANT1 OR (FLATPEA (LATHCO) WITH INOCULANT1) (30) (.75) ALL FESCUE (KENTUCKY 31) OR SMOOTH BROMEGRASS (SARATOGA, LINCOLN) REDTOP (STREAKER, COMMON) TOTAL 42 (OR 57) 1.00 (OR 1.40 CREEPING RED FESCUE (PENNLAWN, WINTERGREEN) REDTOP (STREAKER, COMMON) CROWN VETCH (CHEMUNG, PENNGIET) WITH INOCULANT OR (FLATPEA (LATHCO) WITH INOCULANT 1) TOTAL 37 (OR 52) .85 (OR 1.2 BIRDS FOOT TREFOIL (EMPIRE, VIKING) WITH INOCULANT1 CROWN VETCH (CHEMUNG, PENNGIFT) WITH INOCULANT CREEPING RED FESCUE (PENNLAWN, WINTERGREEN)OR TALL FESCUE (KENTUCKY 31 OR SMOOTH BROMEGRASS (SARATOGA, LINCOLN) TOTAL 43 SWITCHGRASS (BLACKWELL, SHELTER, CAVE-IN-ROCK) PERENNIAL RYEGRASS (NORLEA, MANHATTAN) CROWN VETCH (CHEMUNG, PENNGIFT) WITH INNOCULANT1 1 05 TOTAL 45 CROWN VETCH (CHEMUNG, PENNGIFT) WITH INNOCULANT OR (FLATPEA (LATHCO) WITH INOCULANT1) (.75 SWITCHGRASS (BLACKWELL, SHELTER, CAVE-IN-ROCK) PERENNIAL RYEGRASS (NORLEA, MANHATTAN) TOTAL 20 (OR40) .45 (OR .9 CROWN VETCH (CHEMUING, PENNGIFT) WITH INNOCULANT OR (FLATPEA (LATHCO) WITH INOCULANT1) PERENNIAL RYEGRASS (NORLEA, MANHATTAN) TOTAL 25 (OR 40) .60 (OR 1.0 SWITCHGRASS (BLACKWELL, SHELTER, CAVE-IN-ROCK) BIG BLUESTEM (NIAGRA, KAW) OR LITTLE BLUESTEM (BLAZE, ALSOUS, CAMPER) PERENNIAL RYEGRASS (NORLEA, MANHATTAN) BIRDS FOOT TREFOIL (EMPIRE, VIKING) WITH INOCULANT1 TOTAL 2 TALL FESCUE (KENTUCKY 31 .45 FLATPEA (LATHCO) WITH INOCULANT1 TOTAL 50 DEER TONGUE (TIOGA) WITH INOCULANT BIRDS FOOT TREFOIL (EMPIRE VIKING) WITH INOCULANT PERENNIAL RYEGRASS (NORLEA, MANHATTAN) TOTAL 21 DEER TONGUE (TIOGA) WITH INOCULANT 1 186 CROWN VETCH (CHEMUING, PENNGIFT) WITH INNOCULANT PERENNIAL RYEGRASS (NORLEA, MANHATTAN) TOTAL 28 CHEWINGS FESCUE IARD FESCUE COLONIAL BENTGRASS BIRDS FOOT TREFOIL (EMPIRE, VIKING) WITH INOCULANT PERENNIAL RYEGRASS 2.30 TOTAL 100 215 CREEPING RED FESCUE (PENNLAWN, WINTERGREEN) TOTAL 60 1.35 CREEPING RED FESCUE (PENNLAWN, WINTERGREEN) 225 40 TALL FESCUE (KENTUCKY 31) 1.35 TOTAL 60 CREEPING RED FESCUE (PENNLAWN, WINTERGREEN) 15 235 FLATPEA (LATHCO) WITH INOCULANTI .<u>/5</u> 3.6/ TOTAL 45

TALL FESCUE (KENTUCKY 31 TOTAL 150 3.6 AMERICAN BEACHGRASS (CAPE) 58.500 1.345 CULMS/ACRE CULMS/100 SWITCHGRASS (BLACKWELL, SHELTER, CAVE-IN-ROCK) 4.0 BIG BLUESTEM (NIAGRA, KAW) LITTLE BLUESTEM (BLAZE, ALDOUS, CAMPER SAND LOVEGRASS (NE-27, BEND) **BIRD'S-FOOT TREFOIL (EMPIRE VIKING** TOTAL 13.5 FLATPEA (LATHCO) 275 PERENNIAL PEA (LANCER) CROWN VETCH (CHEMUNG, PENNGIFT) TALL FESCUE (KENTUCKY 31) TOTAL 24 ORCHARDGRASS (PENNLATE, KAY, POTOMAC) TALL FESCUE (KENTUCKY 31 REDTOP (STREAKER, COMMON **BIRD'S-FOOT TREFOIL (EMPIRE VIKING** TOTAL 2

TURF TYPE TALL FESCUE (BONANZA, MUSTANG, REBEL II, SPARTAN, JAGUAR) **OR PERENNIAL RYE** ("FUTURE 2000" MIX: FIESTA II, BLAZER II, AND DASHER II) 175-250

29

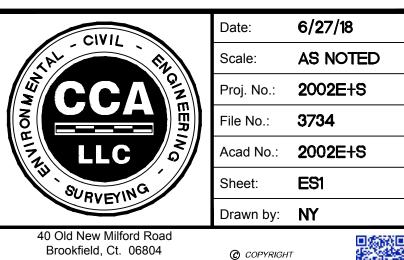
1 USE PROPER INOCULANT FOR LEGUME SEEDS, USE FOUR TIMES RECOMMENDED RATE WHEN HYDROSEEDING

 $^{20,27,20}_{3,4,5,8,10,11,12}$ 2 USE PURE LIVE SEED (PLS) = $\frac{(\% \text{ GERMINATION } \times \% \text{ PURITY})}{100}$ EXAMPLE: COMMON BERMUDA SEED WITH 70% GERMINATION AND 80% PURITY=

 $\frac{70\times80}{100}$ OR $\frac{56}{100}$ OR 56% 10LBS PLS/ACRE/56% = 17.9 LBS/ACRE OF BAGGED SEED 3 D.O.T. ALL PURPOSE MIX

4 WILD FLOWER MIX CONTAINING NEW ENGLAND ASTER, BABY'S BREATH, BLACK EYE SUSAN, CATCHFLY, DWARF COLUMBINE, PURPLE CONEFLOWER, LANCED-LEAVED COREOPSIS, CORNFLOWER, OX-EYE DAISY, SCARLET FLAX, FOXGLOVE, GAYFEATHER, ROCKY LARKSPUF SPANISH LARKSPUR, CORN POPPY, SPURRED SNAPDRAGON, WALLFLOWER AND/OR YARROW MAY BE ADDED TO ANY SEED MIX GIVEN. MOST SEED SUPPLIERS CARRY A WILD FLOWER MIX THAT IS SUITABLE FOR THE NORTHEAST AND CONTAINS A VARIETY OF BOTH ANNUAL AND PERENNIAL FLOWERS. SEEDING RATES FOR THE SPECIFIC MIXTURES SHOULD BE FOLLOWED 5 CONSIDERED TO BE A COOL SEASON MIX. 6 CONSIDERED TO BE A WARM SEASON MIX.

SEDIMENTATION & EROSION CONTROL DETAILS



ALL RIGHTS RESERVED

(203)775-6207 www.ccaengineering.com

REFER TO 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL FOR ADDITIONAL INFORMATION