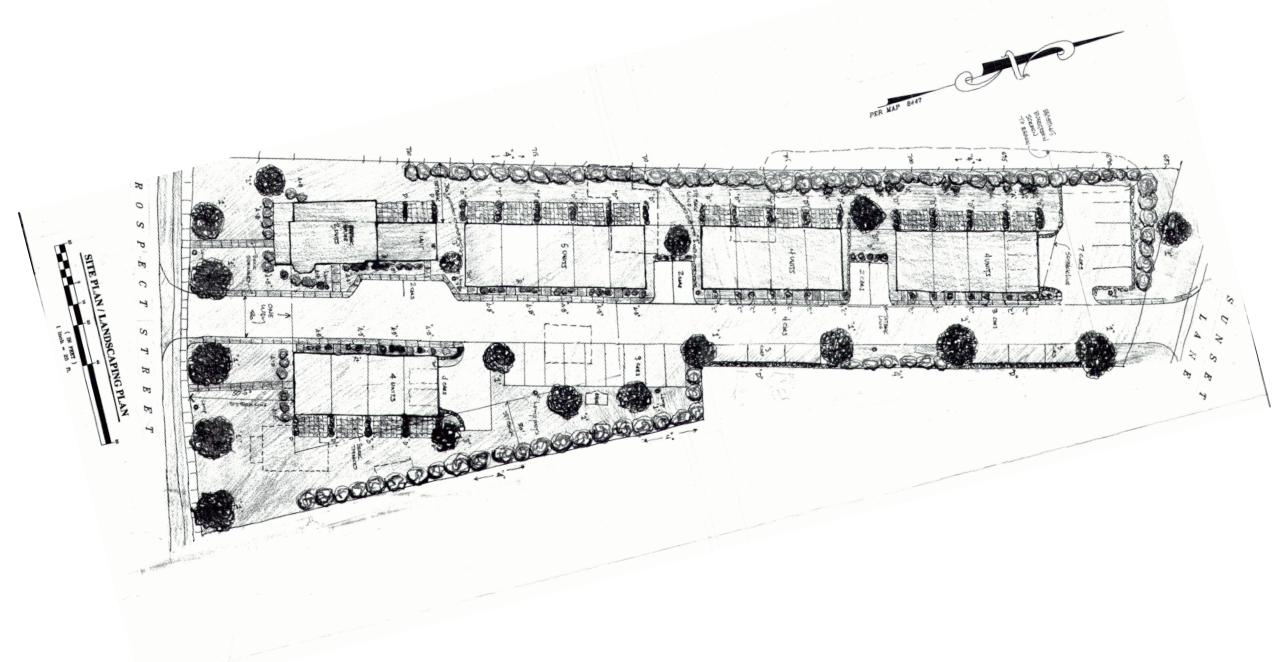


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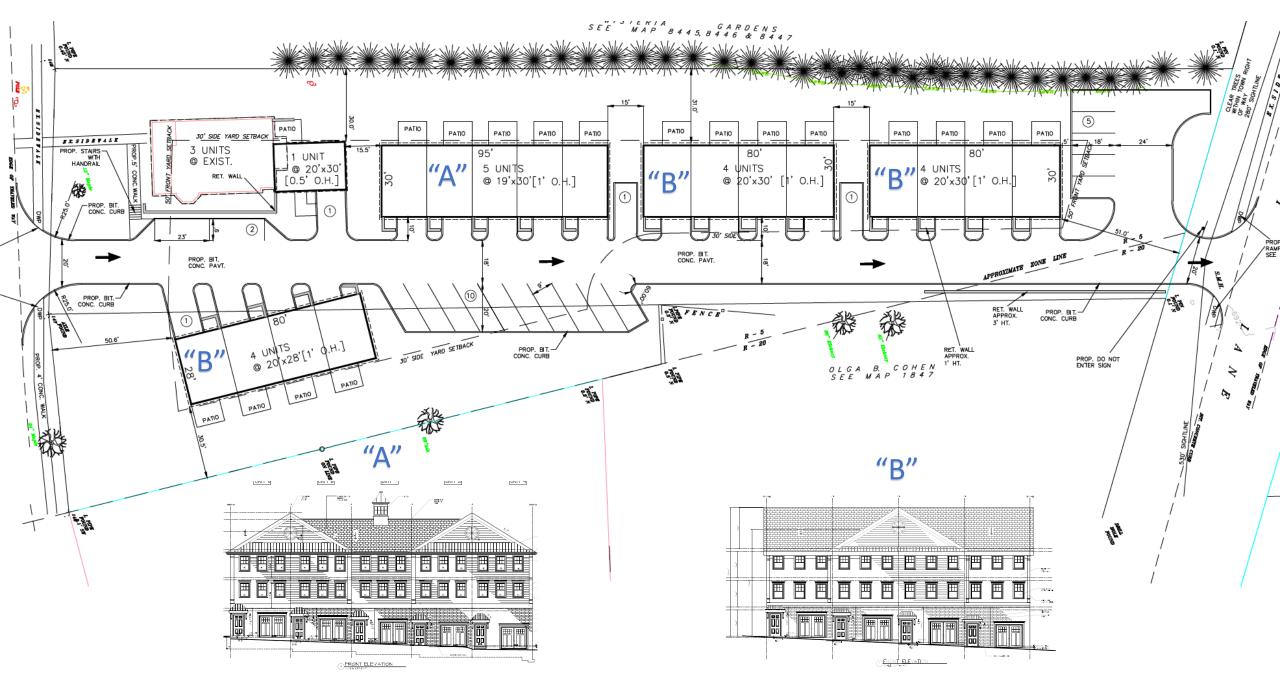
Lot	Density	
	and a set of the	
Tat	Corregeo	

		PLANT LIST			
MPE	COMMON HAME	BOTANICAL	SIZE	ROOT	alent
	SUESR MAPLE	ACEP SACCHARUM	4"CAL	580	4
2	PRADFORD PEAR	PRUS CALLERYANA	2-212" Car	ちゅう	4
3	PLOWERING DOGWOOD	CORNUS FLORIDA	2-212" COL	040	2
4	NORWEY SPIRUCE	PICEA SBIES	4-6' HT	545	80
สมมาก แน่นายารรัฐประชุม (สุมภาพระ)					
A	2400000-1000N	PHODODENOROH CATANDIANE	5 GAL		1 *
B	AZALEA	AZALEA HYBRIDA	to care	•	2*
6	PRANSONDER (AS GLOUNE	(CONER)	-		2:3 FLATS
D	COINTON BOXWOOD	BUXUS SEXPERVIRENS	36- 42" 47	B·B	250



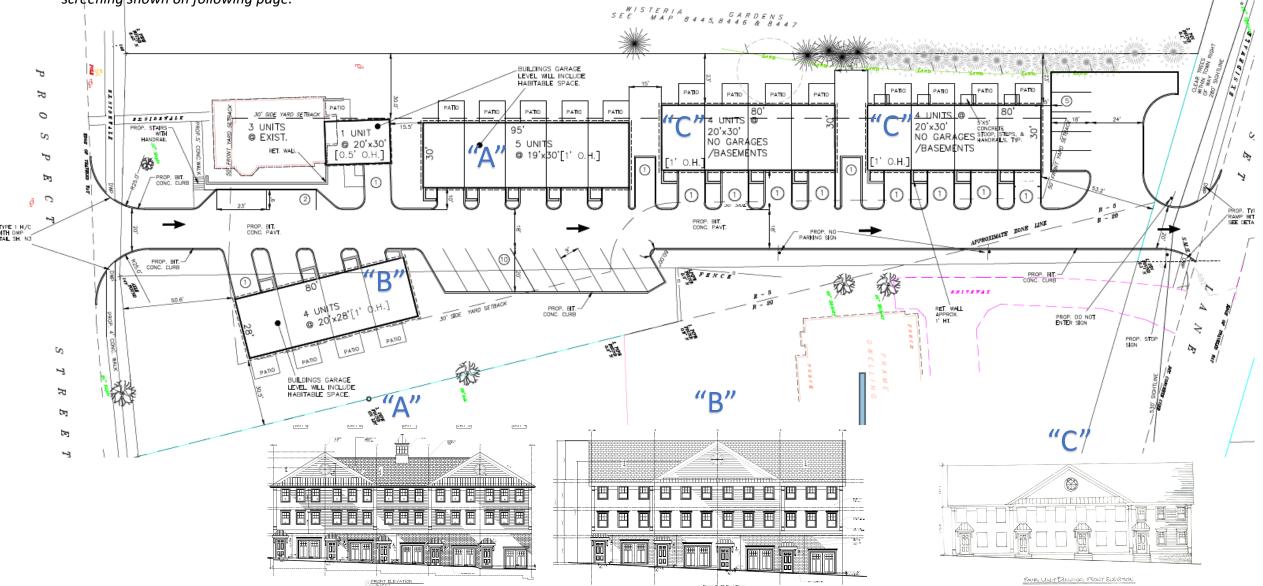


2021 Site Plan



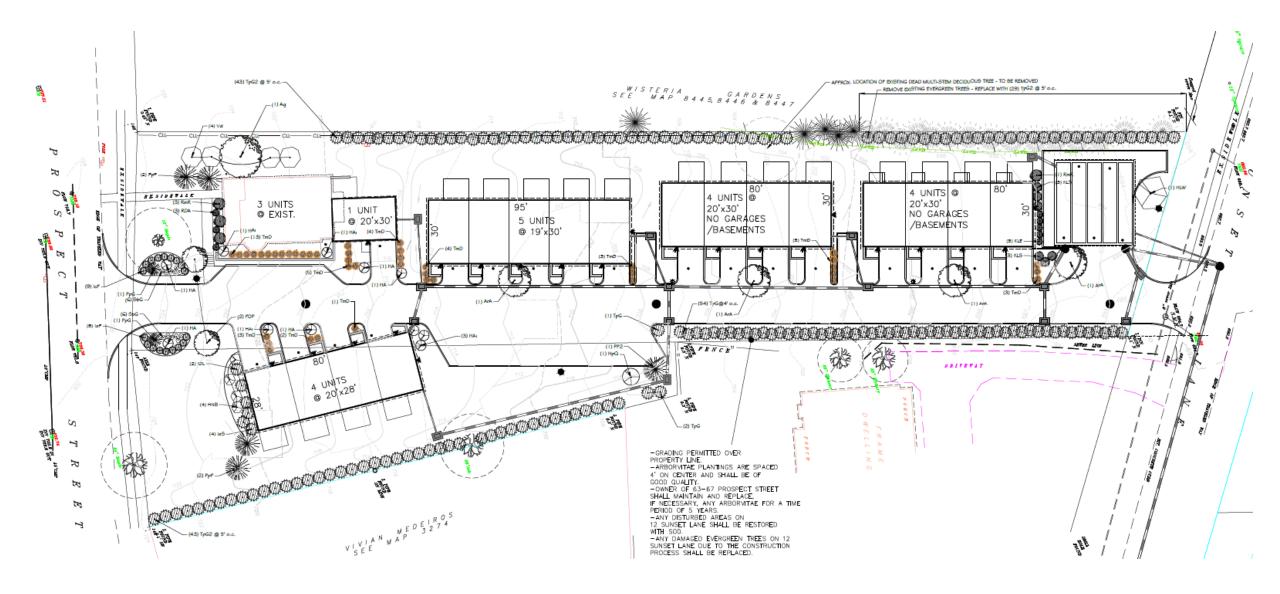
The Proposed Settlement:

Height Reduction: Two "B" type buildings are changed to "C" type buildings. **Replacement Parking:** "B" type buildings include four single car garage spaces per building (one per unit). As a result of replacing two "B" type buildings with two "C" type buildings, four surface parking spaces was added in front of each "C" type building. In order to accommodate the surface parking, the two type "C" buildings move 7' into the setback to allow for an 18' long surface parking space. Added Screening: In addition to the reduction of a full story in height, a 10'-12' landscape screen is added along the property border to reduce the impact of the reduced side yard setback. *Note: Additional screening shown on following page.*



Proposed Settlement Landscape Plan:

At the recommendation of Planning and Zoning, 172 Thuja Green Giant Arborvitae (10'-12' in height at planting) are added along the property boundary providing a dense screen.



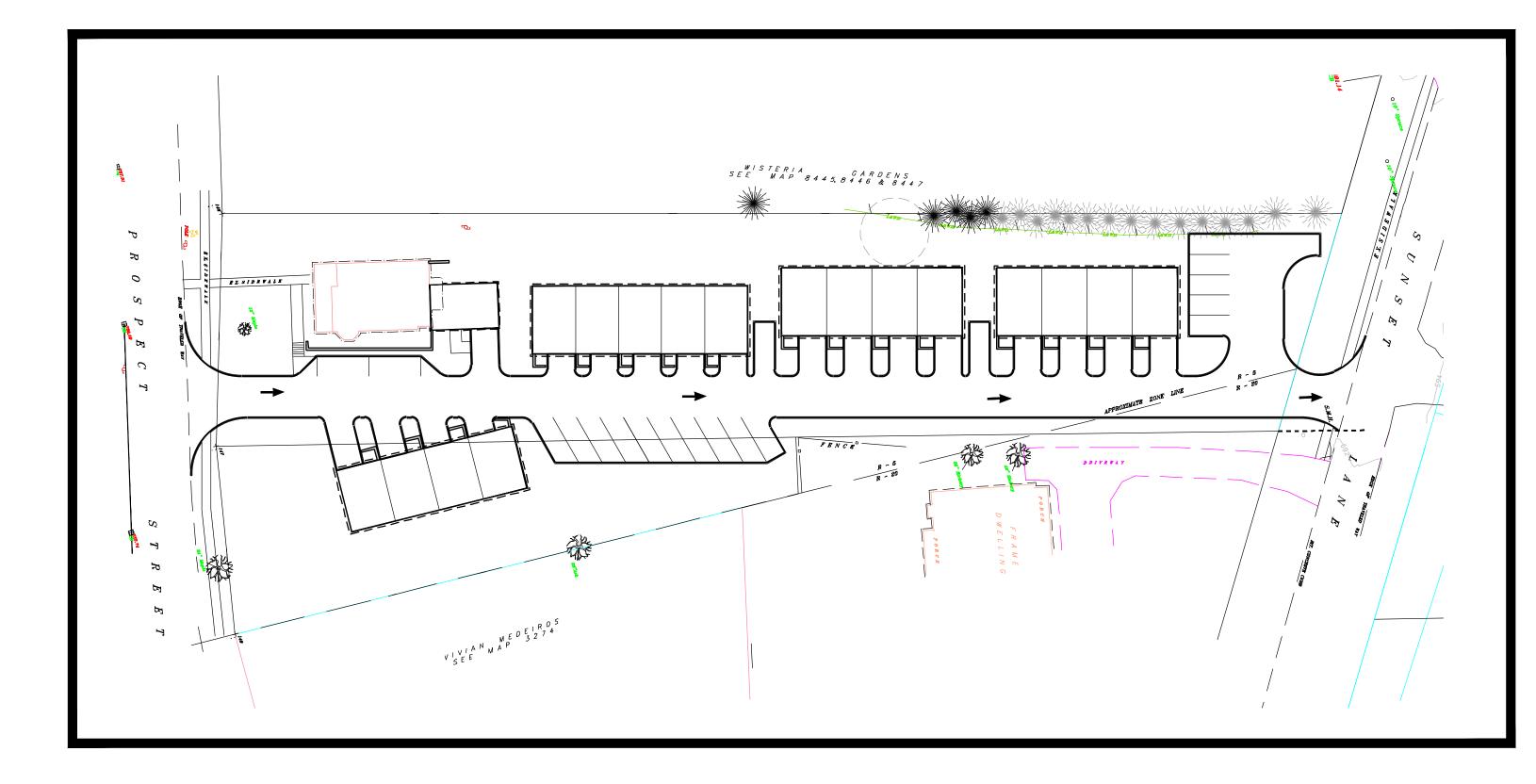
Proposed Settlement-Full Plan Set

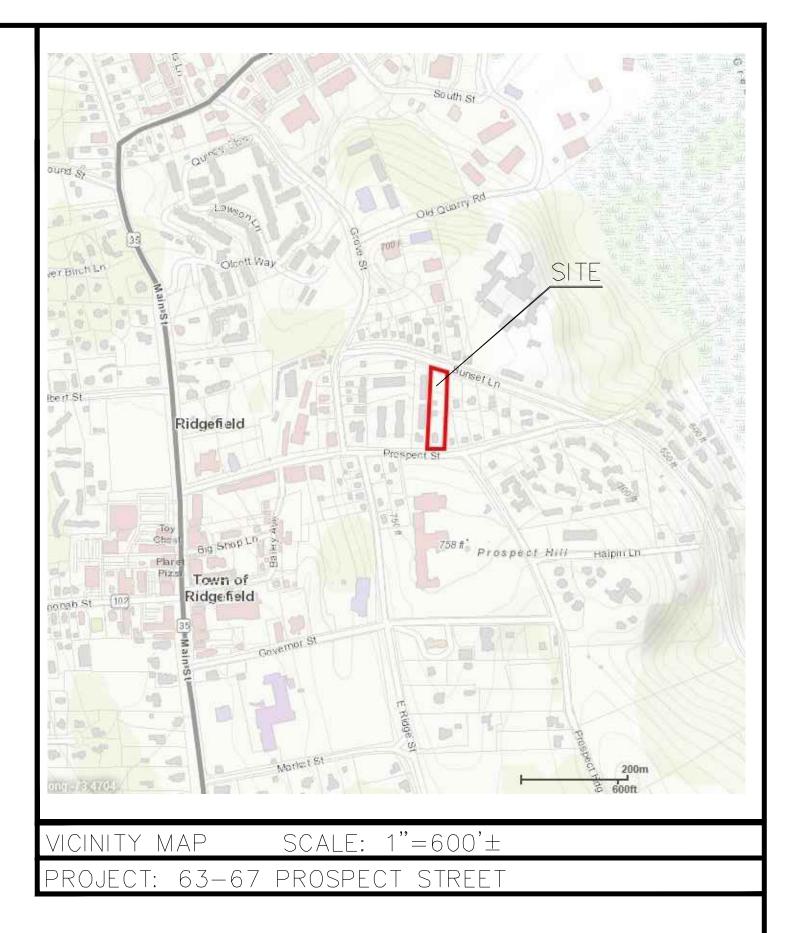
SITE DEVELOPMENT PLANS 63-67 PROSPECT STREET RIDGEFIELD, CT PREPARED FOR 63-67 PROSPECT STREET OWNERS

LIST OF DRAWINGS

SHEET	TITLE
N1	GENERAL LEGEND, NOTES & ABBREVIATIONS
C1	EXISTING CONDITIONS & DEMOLITION PLAN
C2	LAYOUT & MATERIALS PLAN
C3	GRADING & DRAINAGE PLAN
СЗа	OFFSITE DRAINAGE PLAN
C4	UTILITY PLAN
C5	EROSION CONTROL PLAN
C 6	LANDSCAPE PLAN
N2-N7	NOTES & DETAILS
ES1	SEDIMENTATION & EROSION CONTROL DETAILS
SL-1A	SITE LIGHTING PHOTOMETRIC CALCULATION

R447





APPLICANT/DEVELOPER 63-67 PROSPECT STREET OWNERS 19 FULTON PLACE WEST HARTFORD, CT

CIVIL ENGINEER & LANDSCAPE ARCHITECT



40 OLD NEW MILFORD ROAD BROOKFIELD, CONNECTICUT



FEBRUARY 18, 2021

04/01/21 PEER REVIEW REVISIONS 12/16/22 REVISIONS PER ADJOINERS 02/02/23 REVISIONS PER ZONING COMMENTS

Not Valid Without Embossed Sea

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

ABBREVIATIONS

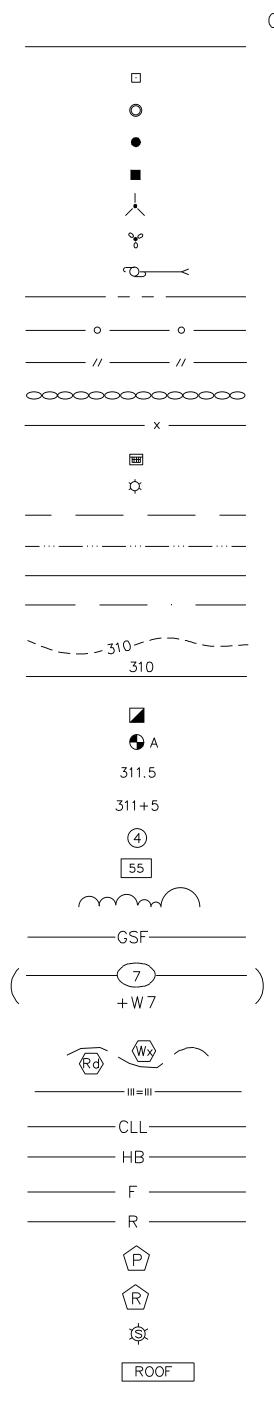
APPROX	APPROXIMATE
BF	BASEMENT FLOOR
3M	BENCH MARK
BCLC	BITUMINOUS CONCRETE LIP CURB
BLDG	BUILDING
CIP	CAST IRON PIPE
CB	CATCH BASIN
CD	CURTAIN DRAIN
Ch	CHORD
CLL	CONSTRUCTION LIMIT LINE
CONC	CONCRETE
CONST	CONSTRUCT
СМР	CORRUGATED METAL PIPE
CPEP-S	CORRUGATED POLYETHYLENE PIPE WITH SMOOTH INTERIOR
CULV	CULVERT
ТОС	DEPARTMENT OF TRANSPORTATION
DB	DISTRIBUTION BOX
ОМН	DRAINAGE MANHOLE
ЭН	DEEP HOLE
OR	DRIVEWAY
DIP	DUCTILE IRON PIPE
EOP	EDGE OF PAVEMENT
ELEC	ELECTRIC
ELEV	ELEVATION
EXIST, EX	EXISTING
EG	EXISTING GRADE
-E	FLARED END
FF	FIRST FLOOR
FG	FINISH GRADE
	FOUNDATION
GPD	GALLONS PER DAY
	GARAGE
GND GSF	GROUND GEOTEXTILE SILT FENCE
GSF GV	GEOTEXTILE SILT FENCE GAS VALVE
GV ⊣W	HEADWALL
HC HWY	HANDICAP HIGHWAY
HYD	HYDRANT
N	INLET
NV	INVERT
P	IRON PIPE
	LENGTH
- _F	LINEAR FEET
P	LIGHT POLE
МН	MANHOLE
XAN	MAXIMUM
MET	METAL
MBR	METAL BEAM RAIL
MIN	MINIMUM
VISC	MISCELLANEOUS
MON	MONUMENT
NO	NUMBER
TUC	OUTLET
⊃−#	PERCOLATION TEST
⊃C	POINT OF CURVATURE
20°	POINT OF COMPOUND CURVATURE
	POINT OF INTERSECTION
⊃T	POINT OF TANGENCY
$\supset V$	PERMANENT VEGETATION
⊃VC	POINT OF VERTICAL CURVATURE
⊃VI	POINT OF VERTICAL INTERSECTION
	POINT OF VERTICAL TANGENCY
PVRC	POINT OF VERTICAL REVERSE CURVE
≥VC	POLYVINYL CHLORIDE PIPE
PROJ	PROJECT
⊃L ⊃ROP, PR	PROPERTY LINE PROPOSED
S - KOF, FK	PUMP STATION
~s 7	RADIUS
R R	RAILROAD
RCP	REINFORCED CONCRETE PIPE
RELOC	RELOCATION
REQ'D	REQUIRED
RET	RETAINING
ROW	RIGHT OF WAY
RD.	ROAD
RD	ROOF DRAIN
SAN	SANITARY
SSMH	SANITARY SEWER MANHOLE
ST	SEPTIC TANK
SPEC	SPECIFICATION
SPK	SPIKE
STK	STAKE
STD	STANDARD
STA	STATION STONE WALL
SW	STONE WALL
SS	SANITARY SEWER
STY	STORY
ST.	STREET
TAN	
TEL	TELEPHONE TEMPORARY
TEMP	TOP OF FRAME
	UNDER DRAIN
J-DRAIN VERT	VERTICAL
WV	WATER VALVE
	WITH
W/ YD	YARD DRAIN
U	

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 DEEPHOLE TEST PIT PERCOLATION TEST EXISTING SPOT ELEVATION PROPOSED SPOT ELEVATION LOT NUMBER STREET NUMBER TREE LINE GEOTEXTILE SILT FENCE (GSF) FLAGGED WETLANDS SOIL BOUNDARY

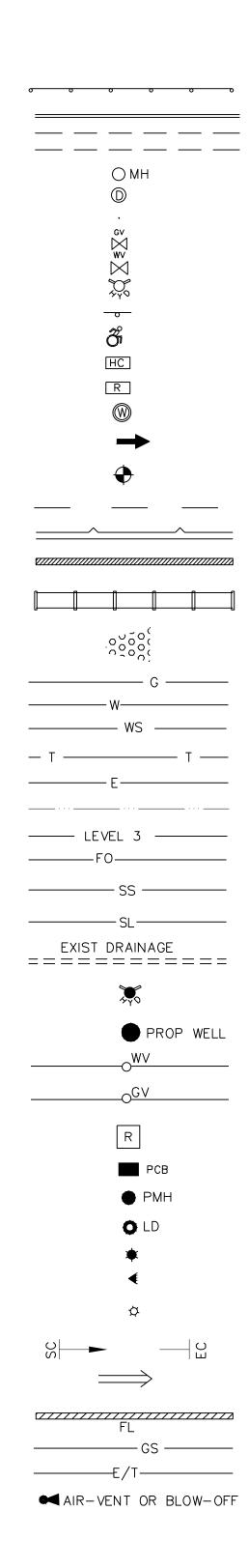
ROCK OUTCROP CONSTRUCTION LIMIT LINE HAY BALES (HB) FOOTING DRAIN (F) ROOF DRAIN (R) PRIMARY SEPTIC SYSTEM AREA

RESERVE SEPTIC SYSTEM AREA SOLAR ACCESS

ROOF RECHARGE GALLERY



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. OVERHEAD 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 BOLLARD LIGHT
START / END CURBING
TEMPERORY SWALE
PROPOSED FIRE LANE
PROPOSED GAS MAIN
PROPOSED ELECTRIC/TELEPHONE SERVICE PROPOSED AIR VENT OR BLOW-OFF

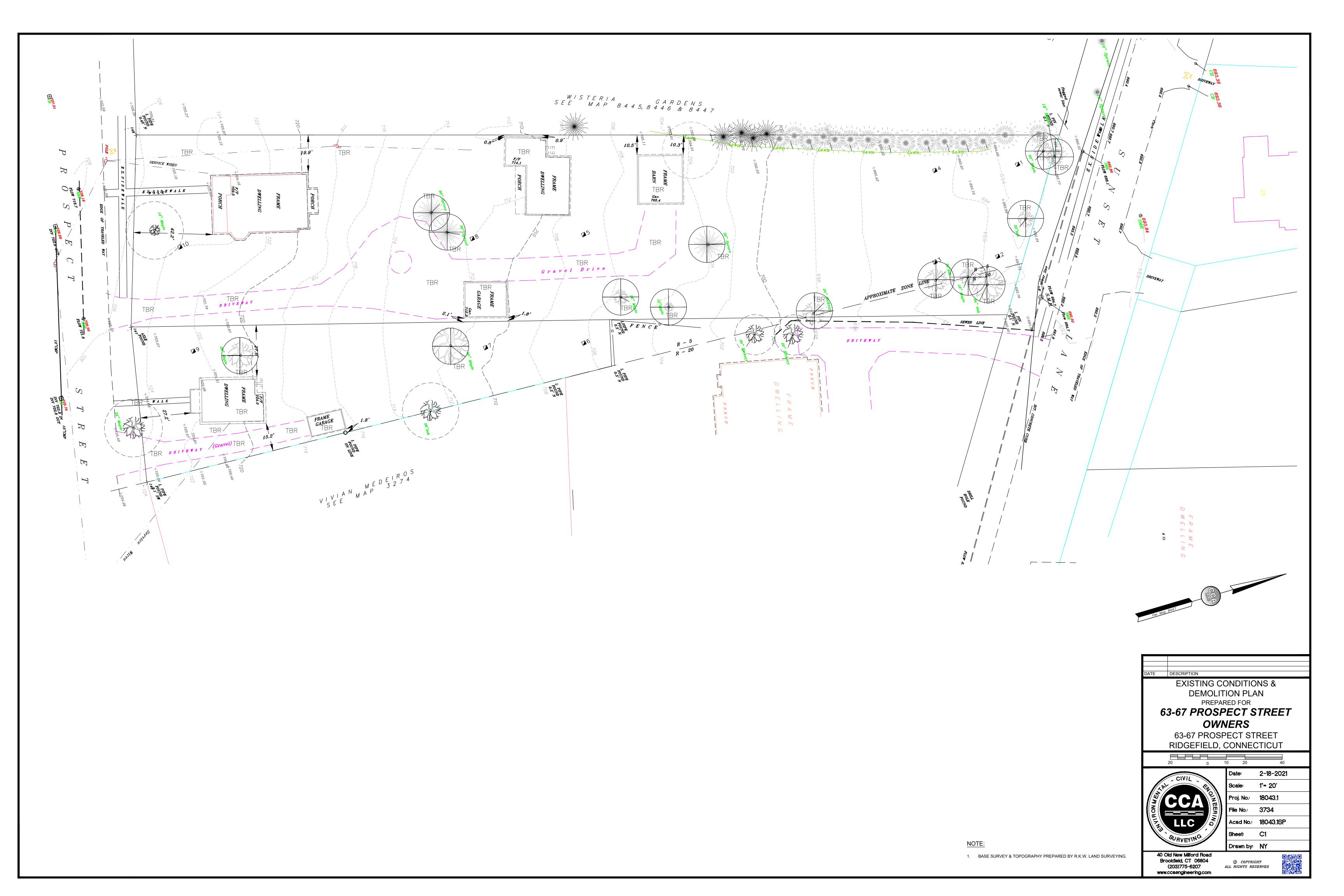


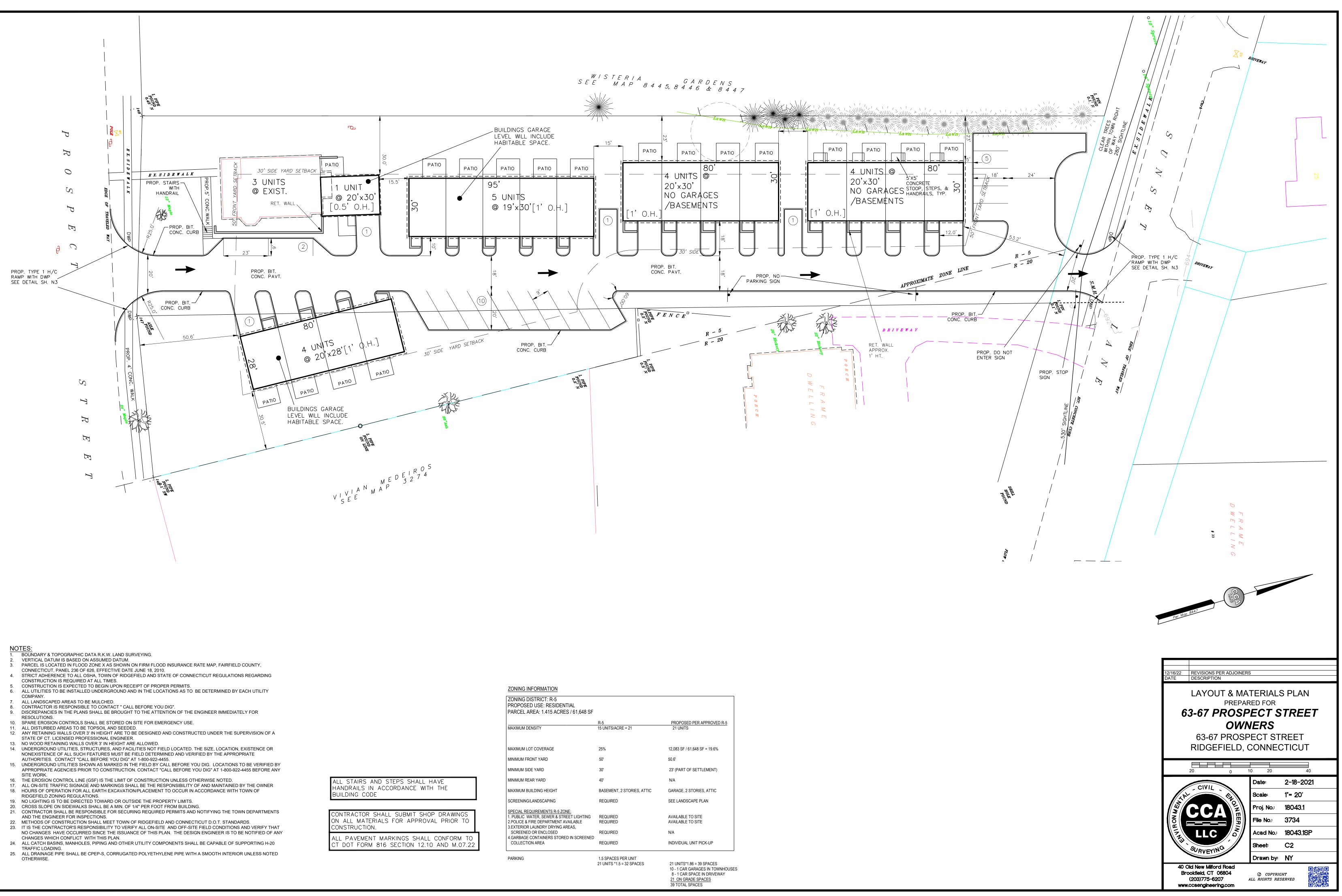
GENERAL LEGEND

GENERAL NOTES

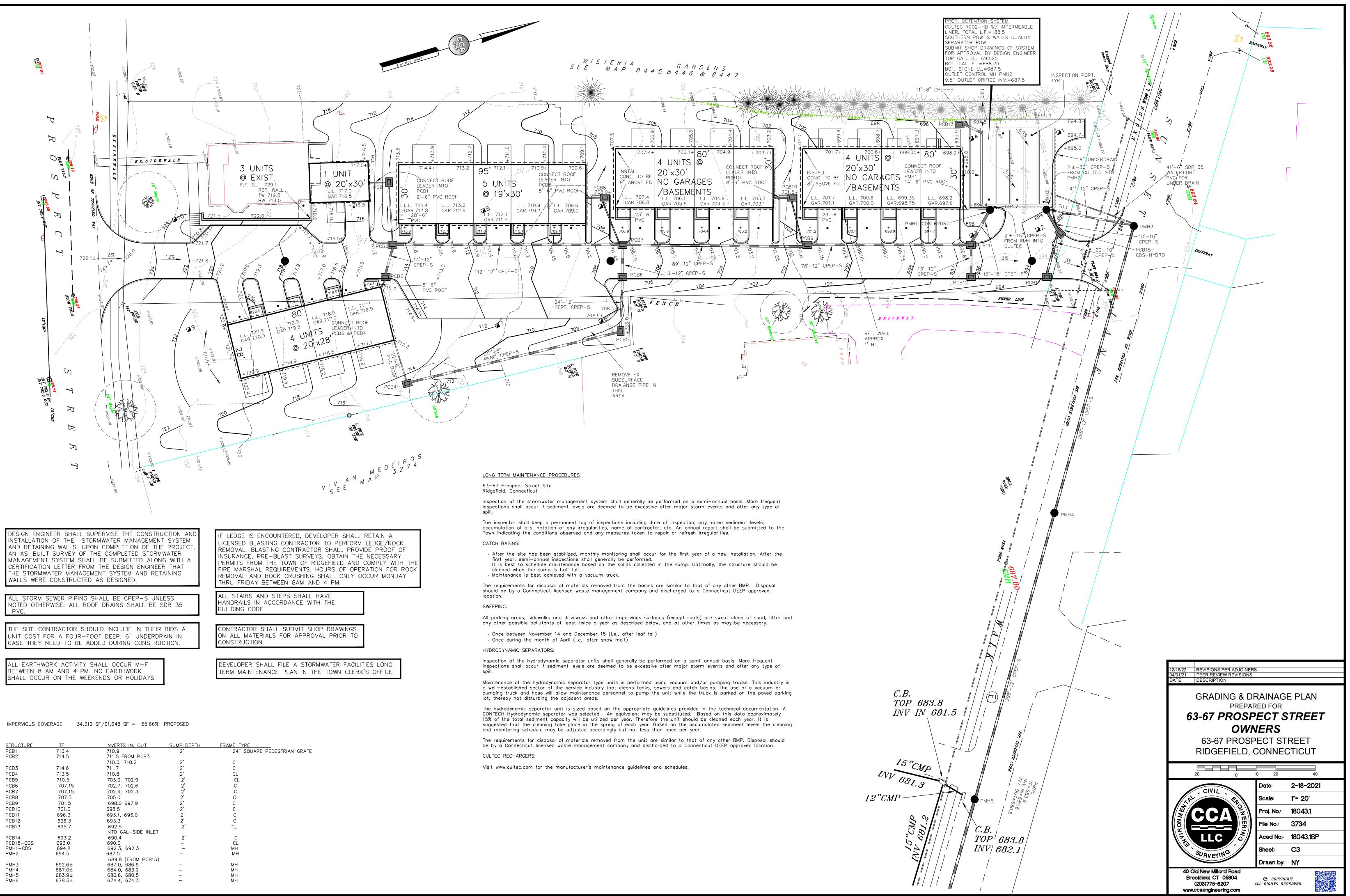
- 1. HOLD PRE-CONSTRUCTION MEETING WITH OWNER, EXCAVATION AND WALL
- CONTRACTORS, ENGINEER AND TOWN STAFF. 2. ALL WORK TO MEET TOWN OR CITY, STATE AND FEDERAL CODES,
- REGULATIONS AND STANDARDS AS APPLICABLE.
- DISCREPANCIES IN THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY FOR RESOLUTION.
 ALL PERMITS SHALL BE OBTAINED PRIOR TO CONSTRUCTION.
- 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.
- 10. THE EROSION CONTROL LINE (GSF) IS TO BE CONSIDERED AS THE LIMIT OF CONSTRUCTION UNLESS OTHERWISE NOTED.
- 11. 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 STRUCTURES SHALL BE CONSTRUCTED SO THAT THEY MAY BE ADJUSTED DOWN AT LEAST 12".26. NO SILTY WATER SHALL BE PERMITTED TO DISCHARGE INTO THE DETENTION
- 26. NO SILTE 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.
- 27. THESE PLANS ARE FOR LAND USE APPROVALS ONLY. ADDITIONAL ENGINEERING MAY BE NECESSARY PRIOR TO CONSTRUCTION.

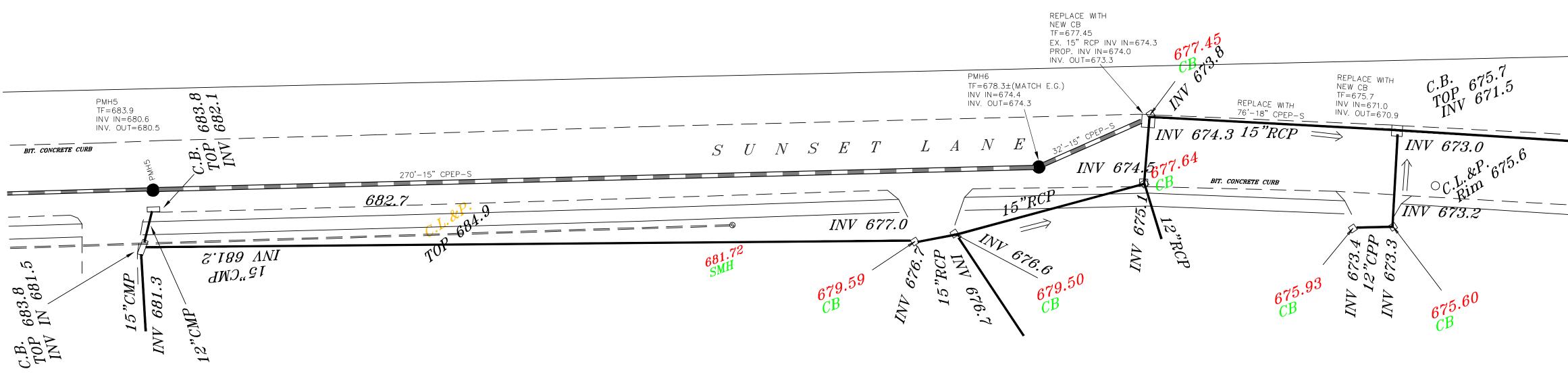
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(203)775-6207 www.ccaengineering.com	ALL RICHTS RES	





ZONING DISTRICT: R-5 PROPOSED USE: RESIDENTIAL		
PARCEL AREA: 1.415 ACRES / 61,648 SF		
	R-5	PROPOSED PER APPROVED R-
MAXIMUM DENSITY	15 UNITS/ACRE = 21	21 UNITS
MAXIMUM LOT COVERAGE	25%	12,083 SF / 61,648 SF = 19.6%
MINIMUM FRONT YARD	50'	50.6'
MINIMUM SIDE YARD	30'	23' (PART OF SETTLEMENT)
MINIMUM REAR YARD	40'	N/A
MAXIMUM BUILDING HEIGHT	BASEMENT, 2 STORIES, ATTIC	GARAGE, 2 STORIES, ATTIC
SCREENING/LANDSCAPING	REQUIRED	SEE LANDSCAPE PLAN
SPECIAL REQUIREMENTS R-5 ZONE: 1. PUBLIC WATER, SEWER & STREET LIGHTING 2.POLICE & FIRE DEPARTMENT AVAILABLE 3.EXTERIOR LAUNDRY DRYING AREAS,	REQUIRED REQUIRED	AVAILABLE TO SITE AVAILABLE TO SITE
SCREENED OR ENCLOSED 4.GARBAGE CONTAINERS STORED IN SCREENED	REQUIRED	N/A
COLLECTION AREA	REQUIRED	INDIVIDUAL UNIT PICK-UP





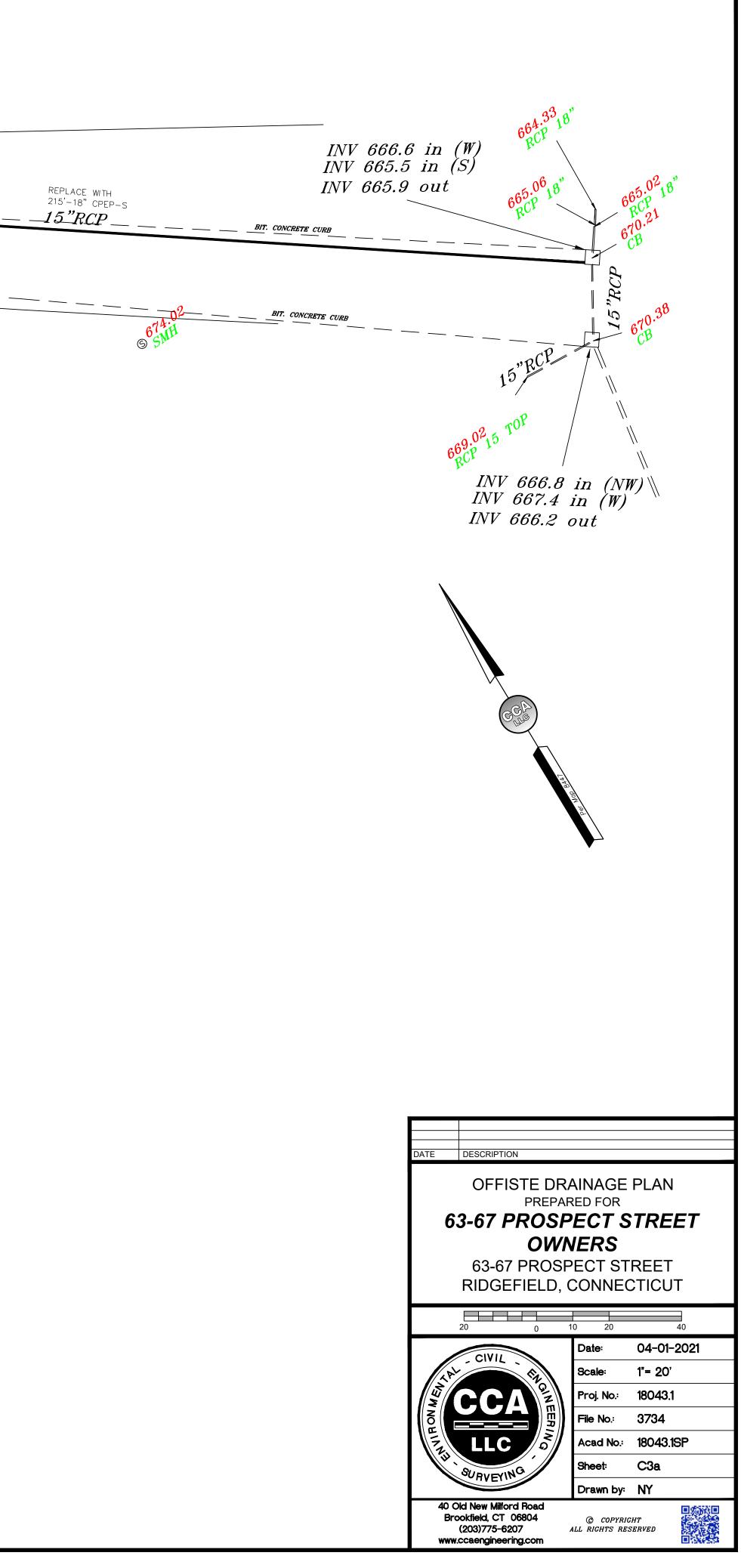
DESIGN ENGINEER SHALL SUPERVISE THE CONSTRUCTION AND INSTALLATION OF THE STORMWATER MANAGEMENT SYSTEM AND RETAINING WALLS. UPON COMPLETION OF THE PROJECT, AN AS-BUILT SURVEY OF THE COMPLETED STORMWATER MANAGEMENT SYSTEM SHALL BE SUBMITTED ALONG WITH A CERTIFICATION LETTER FROM THE DESIGN ENGINEER THAT THE STORMWATER MANAGEMENT SYSTEM AND RETAINING WALLS WERE CONSTRUCTED AS DESIGNED.

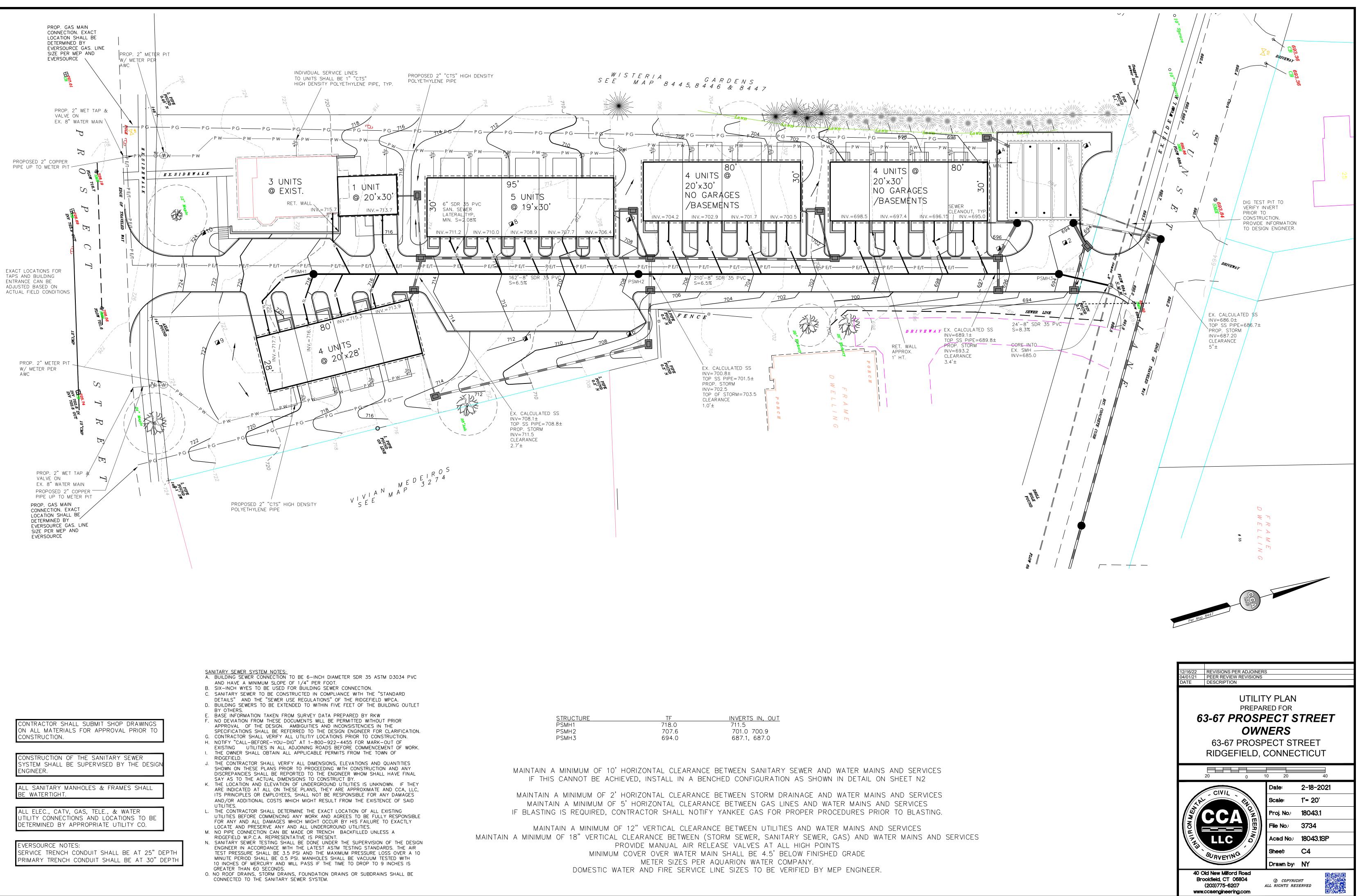
ALL STORM SEWER PIPING SHALL BE CPEP-S UNLESS NOTED OTHERWISE.

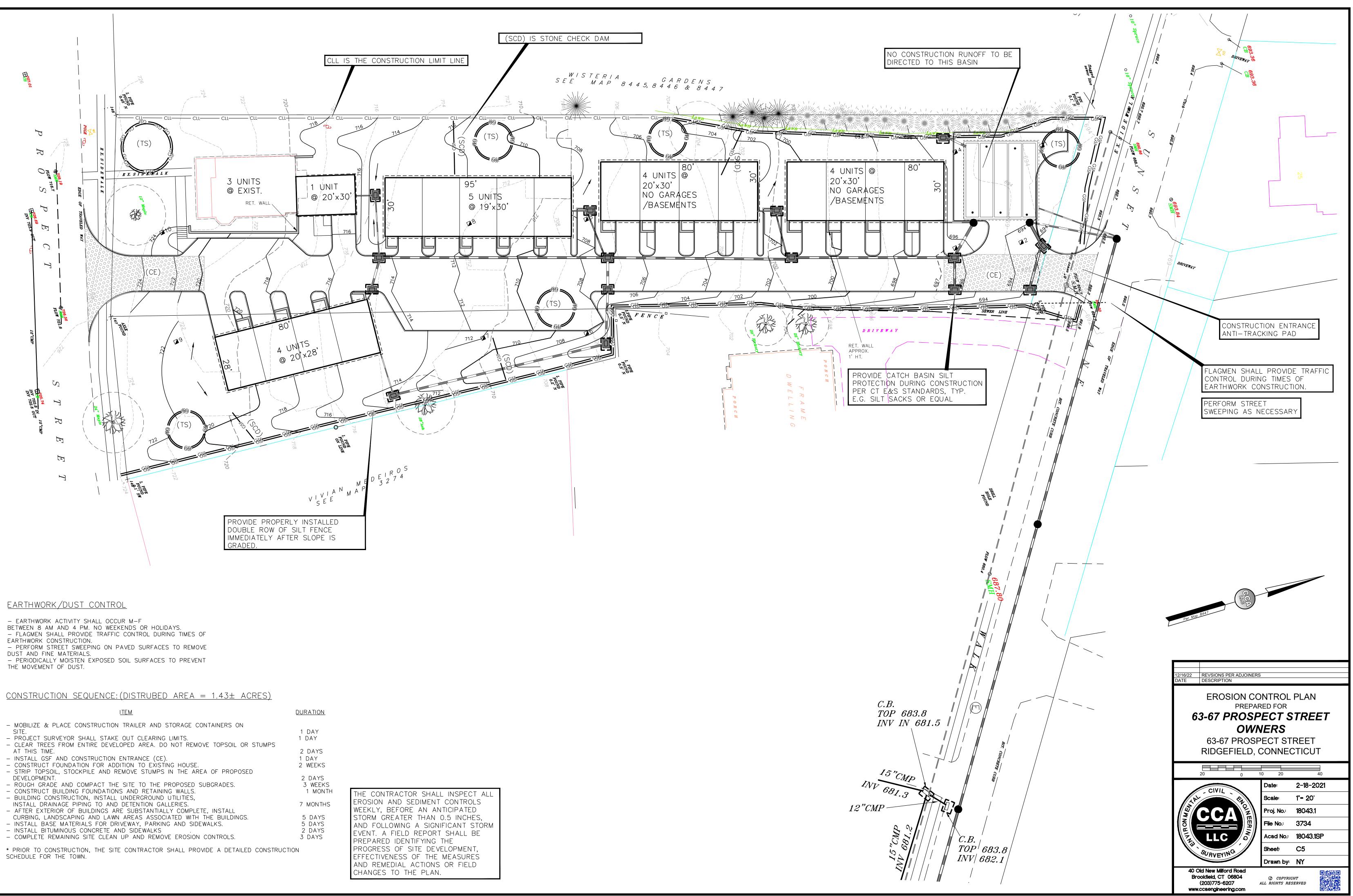
CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL MATERIALS FOR APPROVAL PRIOR TO CONSTRUCTION.

REPLACE DISTURBED BIT. CONCRETE CURB AND MILL AND OVERLAY GUTTER LINE TO GUTTER LINE. SEE PAVING DETAILS ON SH. N2

CONTACT CALL BEFORE YOU DIG PRIOR TO CONSTRUCTION TO VERIFY EXISTING UTILITY LOCATIONS.







EARTHWORK/DUST CONTROL

- EARTHWORK ACTIVITY SHALL OCCUR M-F BETWEEN 8 AM AND 4 PM. NO WEEKENDS OR HOLIDAYS. - FLAGMEN SHALL PROVIDE TRAFFIC CONTROL DURING TIMES OF EARTHWORK CONSTRUCTION. - PERFORM STREET SWEEPING ON PAVED SURFACES TO REMOVE DUST AND FINE MATERIALS. - PERIODICALLY MOISTEN EXPOSED SOIL SURFACES TO PREVENT

 MOBILIZE & PLACE CONSTRUCTION TRAILER AND STORAGE CONTAINERS ON SITE.
- PROJECT SURVEYOR SHALL STAKE OUT CLEARING LIMITS.
- CLEAR TREES FROM ENTIRE DEVELOPED AREA. DO NOT REMOVE TOPSOIL OR STUMPS
AT THIS TIME.
 INSTALL GSF AND CONSTRUCTION ENTRANCE (CE).
- CONSTRUCT FOUNDATION FOR ADDITION TO EXISTING HOUSE.
- STRIP TOPSOIL, STOCKPILE AND REMOVE STUMPS IN THE AREA OF PROPOSED
DEVELOPMENT.
 ROUGH GRADE AND COMPACT THE SITE TO THE PROPOSED SUBGRADES.
 CONSTRUCT BUILDING FOUNDATIONS AND RETAINING WALLS.
 BUILDING CONSTRUCTION, INSTALL UNDERGROUND UTILITIES,
INSTALL DRAINAGE PIPING TO AND DETENTION GALLERIES.
 AFTER EXTERIOR OF BUILDINGS ARE SUBSTANTIALLY COMPLETE, INSTALL
CURBING, LANDSCAPING AND LAWN AREAS ASSOCIATED WITH THE BUILDINGS.

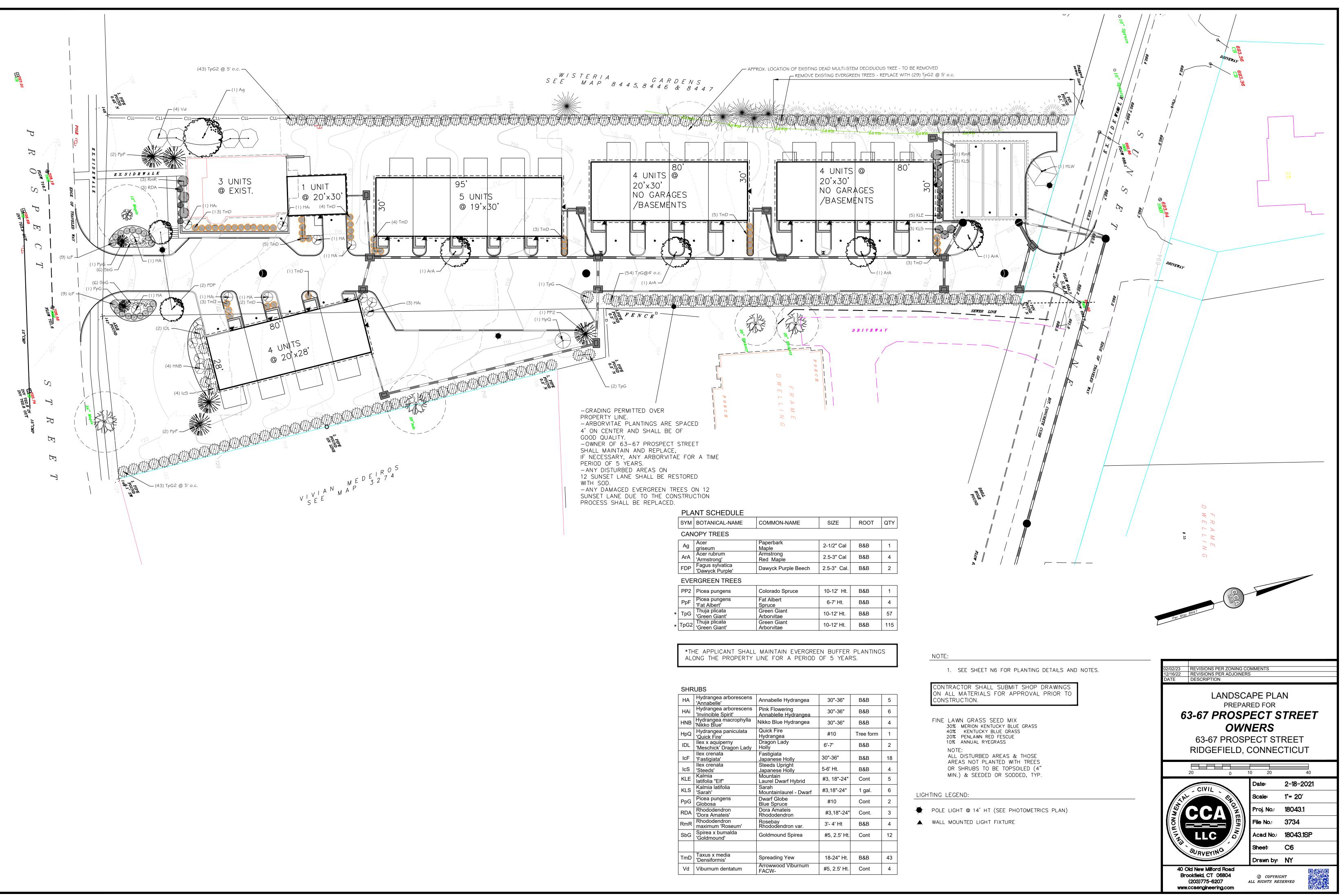
- INSTALL BASE MATERIALS FOR DRIVEWAY, PARKING AND SIDEWALKS.
- COMPLETE REMAINING SITE CLEAN UP AND REMOVE EROSION CONTROLS.

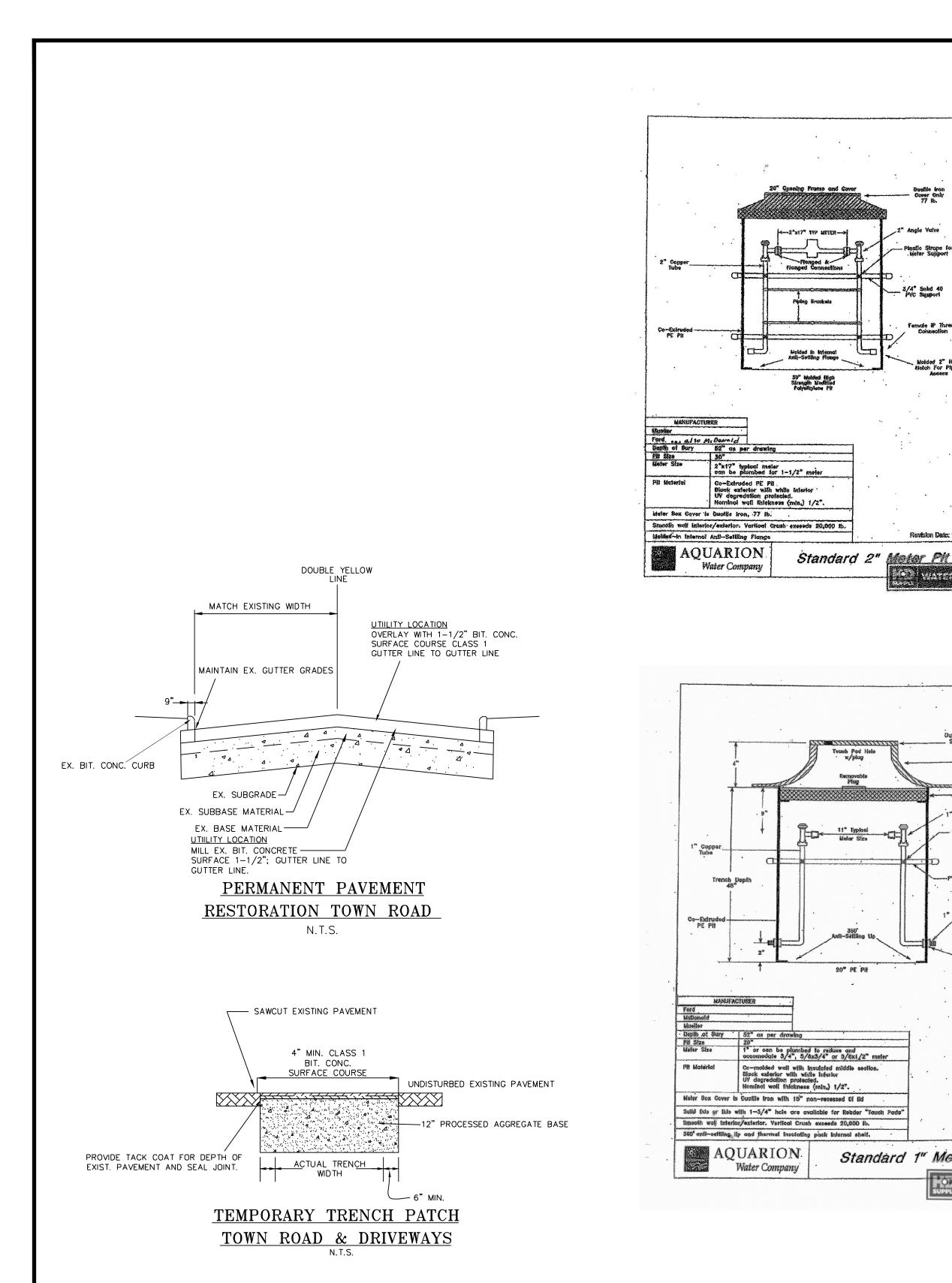
* PRIOR TO CONSTRUCTION, THE SITE CONTRACTOR SHALL PROVIDE A DETAILED CONSTRUCTION SCHEDULE FOR THE TOWN.

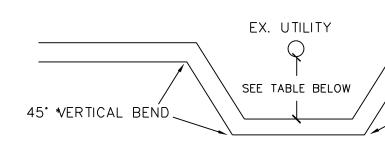
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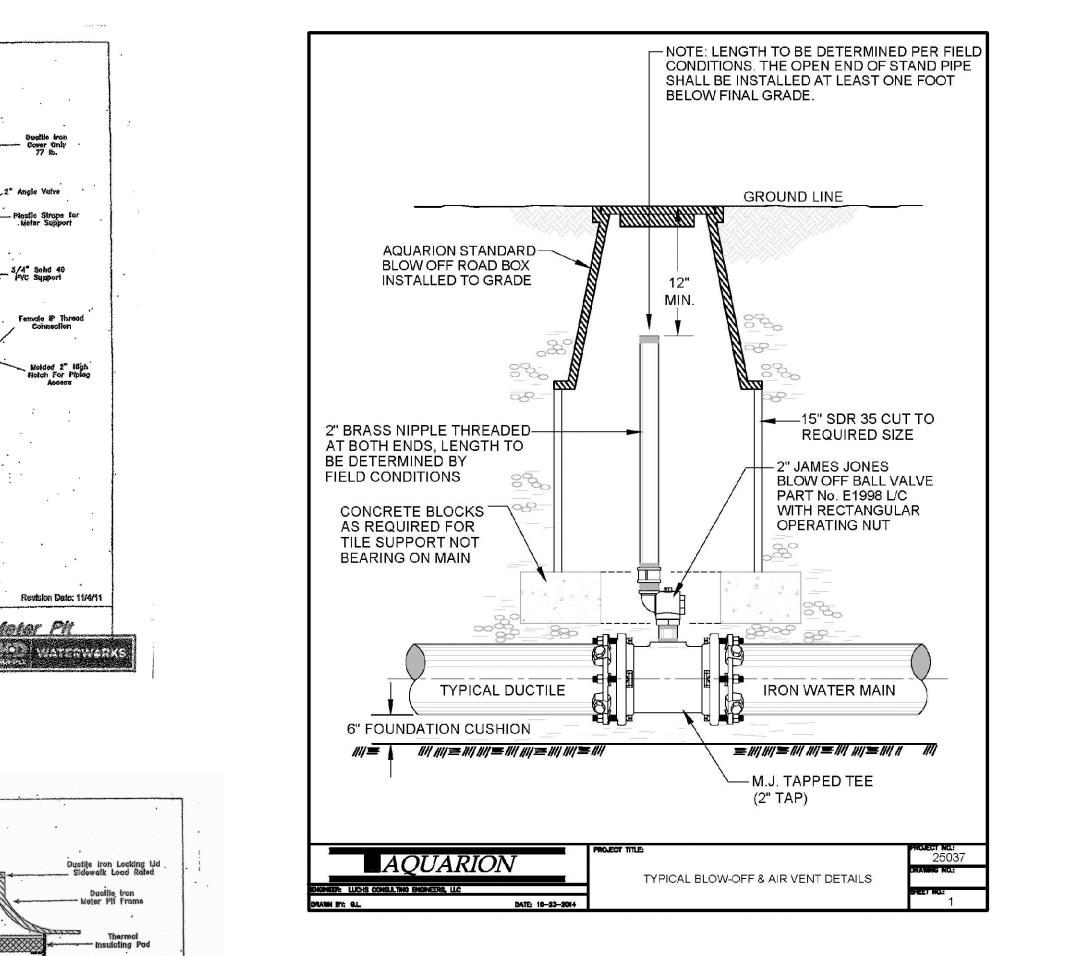


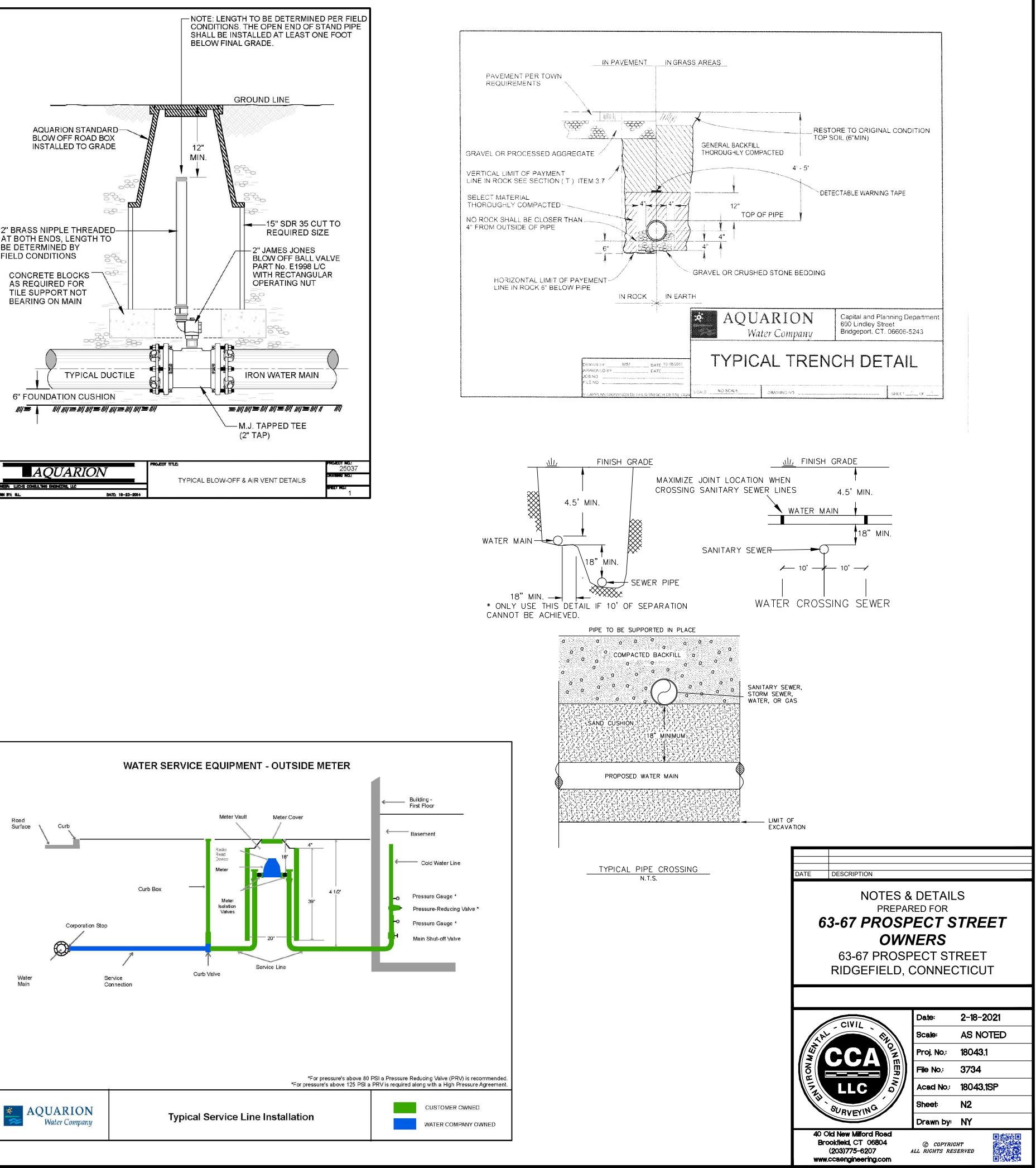


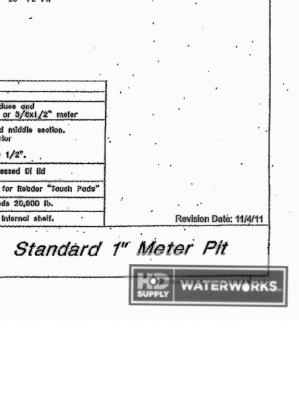


VERTICAL SEPARATING DISTANCE SANITARY SEWER STORM DRAINAGE ELEC., TV, TELE, FIBER OPTIC

WATER CROSSING UTILITY DETAIL







/ 1" Angle Meter Valve

- Plastic Strops for Motor Support

-PYC Pipe Support Bar

1" Male Iron Pipe Thread Standard

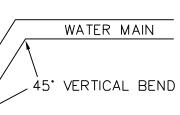
" Angle Velve

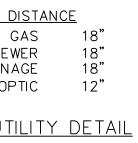
3/4" Solid 40 PVC Support

Removable

11" Typical

-





SEDIMENTATION AND EROSION CONTROL PLAN

(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 MULTI-FAMILY RESIDENTIAL DEVELOPMENT IN THE R-5 ZONE. AN EXISTING BUILDING IS TO REMAIN AND WILL CONTAIN 3 UNITS, PLUS A 1 UNIT ADDITION AT ITS NORTH END CONTAINING A GARAGE LEVEL. STORIES, AND AN ATTIC. THERE ARE FOUR PROPOSED BUILDINGS THAT CONTAIN A GARAGE LEVEL, TWO STORIES AND AN ATTIC. THERE ARE A TOTAL OF 21 UNITS. VEHICLE ACCESS WILL BE FROM A NEW ENTRANCE DRIVEWAY FROM PROSPECT ST. AND AN EXIT DRIVEWAY TO SUNSET LANE. THE SITE WILL CONTAIN 18 GARAGE SPACES AND 21 ON-GRADE SPACES FOR A TOTAL OF 39 PARKING SPACES. INCLUDED AS INTEGRAL PARTS OF THE DEVELOPMENT ARE PARKING, SIDEWALKS, UTILITIES AND RETAINING WALLS, THE STORMWATER MANAGEMENT FACILITIES INCLUDE CATCH BASINS, PIPES, HYDRODYNAMIC SEPARATOR AND A DETENTION GALLERY SYSTEM. THE PROPOSED BUILDINGS WILL CONNECT INTO THE MUNICIPAL SANITARY SEWER SYSTEM ON SUNSET LANE AND TO THE AQUARION WATER COMPANY SYSTEM ON PROSPECT STREET.

1.2 SITE DISTURBANCE

DISTURBANCE.

THE SITE IS 1.42 ACRES IN SIZE. APPROXIMATELY 1.43 ACRES WILL BE DISTURBED WHICH INCLUDES ON-SITE DISTURBANCE AND OFFSITE

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.

1.4 PROJECT PHASING

THE PROJECT IS TO BE COMPLETED IN ONE PHASE.

1.5 SCHEDULING

ONCE FINAL APPROVALS ARE RECEIVED, OVERALL CONSTRUCTION IS EXPECTED TO TAKE 1 YEAR.

1.6 DESIGN CRITERIA, MAINTENANCE AND CONSTRUCTION SEQUENCING

1.6.1 DESIGN CRITERIA

THE STORM WATER MANAGEMENT SYSTEM IS DESIGNED FOR THE 2 THRU 50 YEAR STORM EVENTS.

1.6.2 MAINTENANCE OF E & S CONTROL MEASURES

1) LAND DISTURBANCE WILL BE KEPT TO A MINIMUM: RESTABILIZATION 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) DOUBLE ROW OF SILT FENCE 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 AND PROJECT ENGINEER 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.

9) 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.

13) 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.

16) 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. TURF OR LANDSCAPE AREAS ARE PLANTED OR MULCHED. IF SEASONAL RESTRICTIONS EXIST FOR PLANTING, THE TOWN OF RIDGEFIELD 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.

17) PRIOR TO CONSTRUCTION A PERSON WILL BE DESIGNATED TO THE TOWN OF RIDGEFIELD 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 REQUIREMENTS AND OBJECTIVES OF THE PLAN, NOTIFYING THE TOWN OF RIDGEFIELD 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

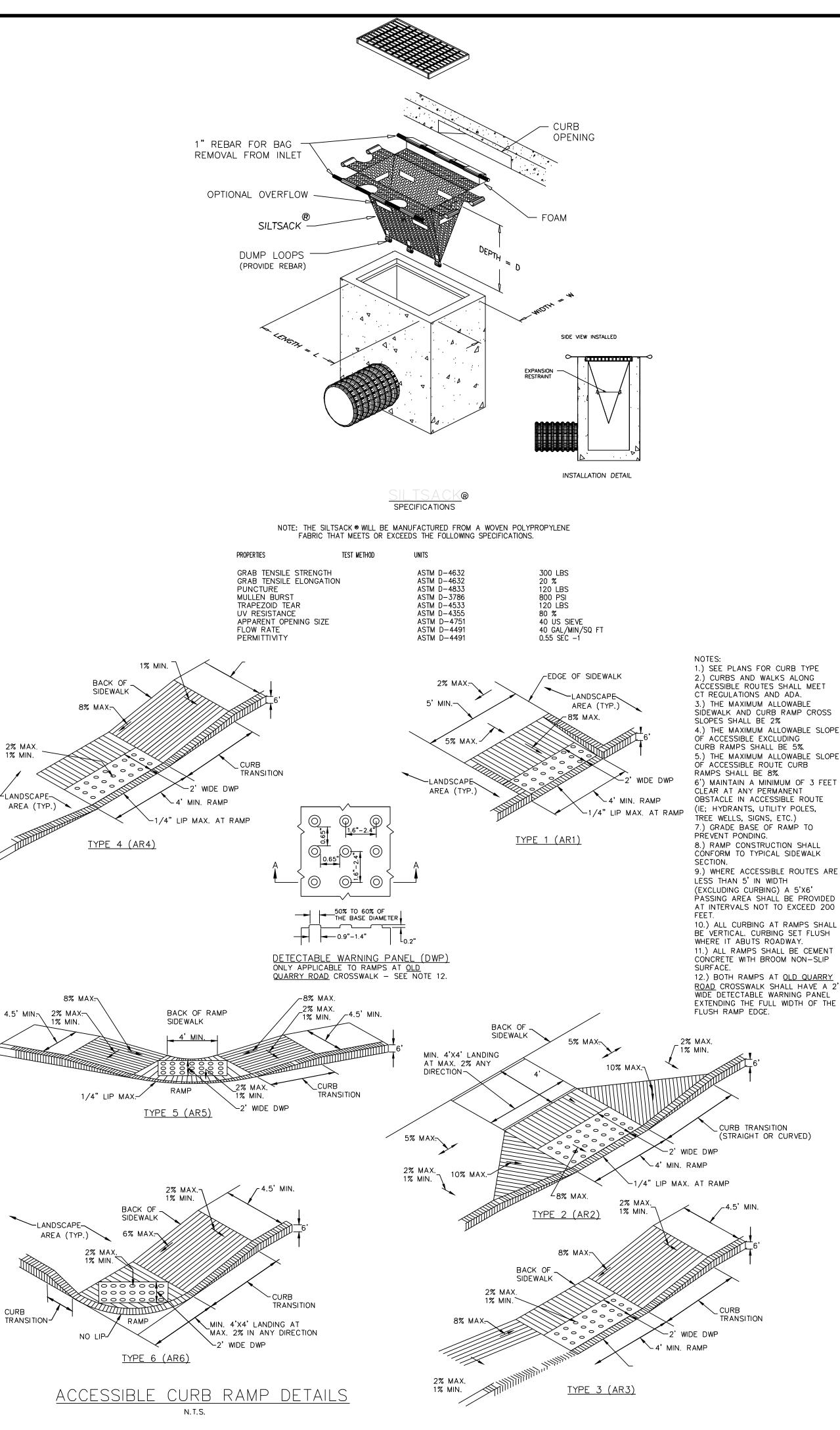
1.7 PERMITTING

THE PROPOSED DEVELOPMENT WILL REQUIRE PERMITS FROM THE TOWN OF RIDGEFIELD 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



GENERAL NOTES:

- 1. TOPOGRAPHY BASED ON ASSUMED DATUM.
- 2. ANY CHANGES IN THIS PLAN SHALL FIRST BE APPROVED BY THE ENGINEER, AQUARION WATER COMPANY, AND OTHER REGULATORY AGENCIES AS MAY BE APPLICABLE.

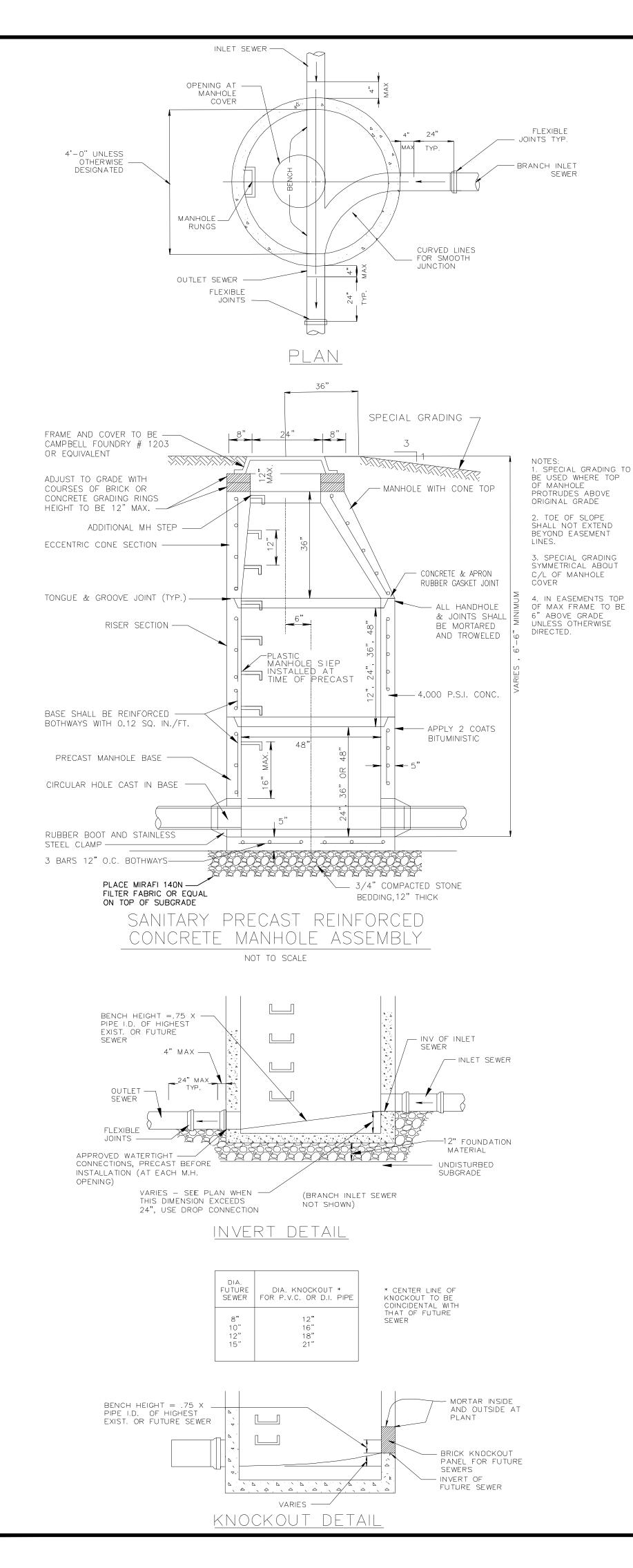
CONSTRUCTION NOTES:

- 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 RIDGEFIELD PUBLIC WORKS DEPARTMENT 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 OR FIELD LOK 350) 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.

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- C. SANITARY SEWER TO BE CONSTRUCTED IN COMPLIANCE WITH THE "STANDARD
- BY OTHERS.

- RIDGEFIELD.
- K. THE LOCATION AND ELEVATION OF UNDERGROUND UTILITIES IS UNKNOWN. IF THEY UTILITIES.
- RIDGEFIELD W.P.C.A. REPRESENTATIVE IS PRESENT.
- GREATER THAN 60 SECONDS.

SANITARY SEWER SYSTEM NOTES: A. BUILDING SEWER CONNECTION TO BE 6-INCH DIAMETER SDR 35 ASTM D3034 PVC AND HAVE A MINIMUM SLOPE OF 1/4" PER FOOT. B. SIX-INCH WYES TO BE USED FOR BUILDING SEWER CONNECTION.

DETAILS" AND THE "SEWER USE REGULATIONS" OF THE RIDGEFIELD WPCA. D. BUILDING SEWERS TO BE EXTENDED TO WITHIN FIVE FEET OF THE BUILDING OUTLET

E. BASE INFORMATION TAKEN FROM SURVEY DATA PREPARED BY RKW F. NO DEVIATION FROM THESE DOCUMENTS WILL BE PERMITTED WITHOUT PRIOR APPROVAL OF THE DESIGN. AMBIGUITIES AND INCONSISTENCIES IN THE SPECIFICATIONS SHALL BE REFERRED TO THE DESIGN ENGINEER FOR CLARIFICATION. G. CONTRACTOR SHALL VERIFY ALL UTILITIY LOCATIONS PRIOR TO CONSTRUCTION. H. NOTIFY "CALL-BEFORE-YOU-DIG" AT 1-800-922-4455 FOR MARK-OUT OF EXISTING UTILITIES IN ALL ADJOINING ROADS BEFORE COMMENCEMENT OF WORK. I. THE OWNER SHALL OBTAIN ALL APPLICABLE PERMITS FROM THE TOWN OF

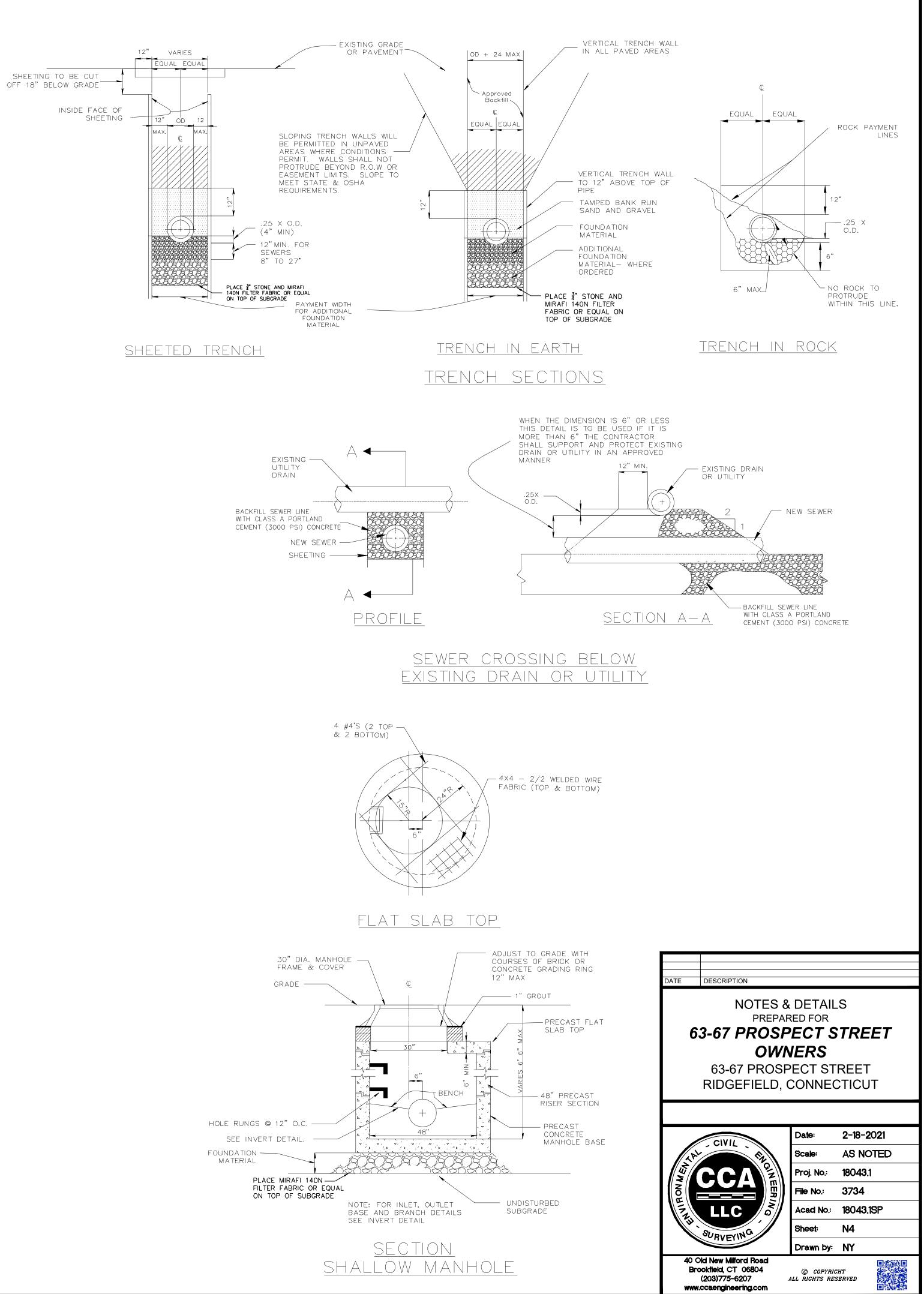
J. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND QUANTITIES SHOWN ON THESE PLANS PRIOR TO PROCEEDING WITH CONSTRUCTION AND ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER WHOM SHALL HAVE FINAL SAY AS TO THE ACTUAL DIMENSIONS TO CONSTRUCT BY.

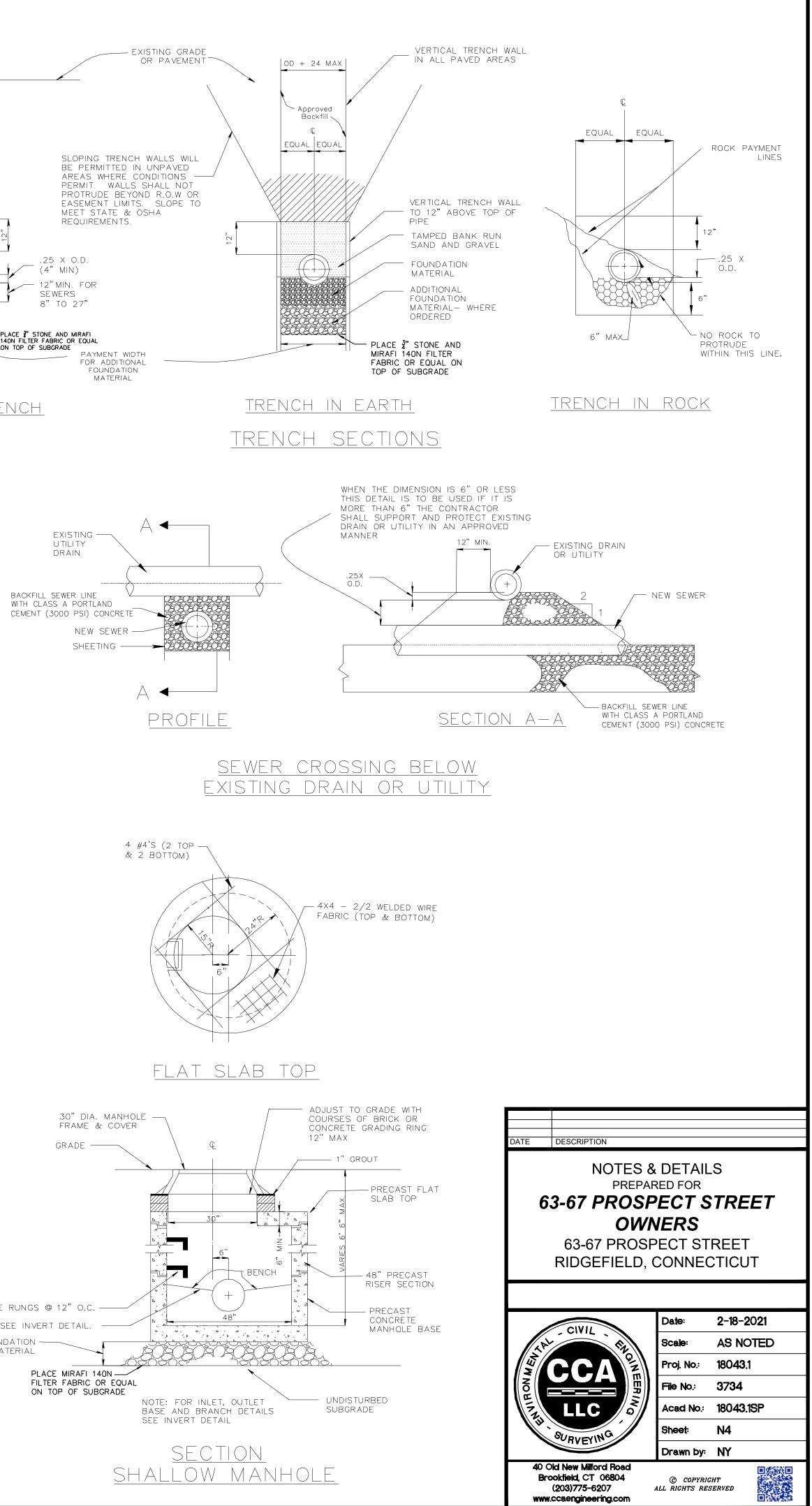
ARE INDICATED AT ALL ON THESE PLANS, THEY ARE APPROXIMATE AND CCA, LLC, ITS PRINCIPLES OR EMPLOYEES, SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES AND/OR ADDITIONAL COSTS WHICH MIGHT RESULT FROM THE EXISTENCE OF SAID

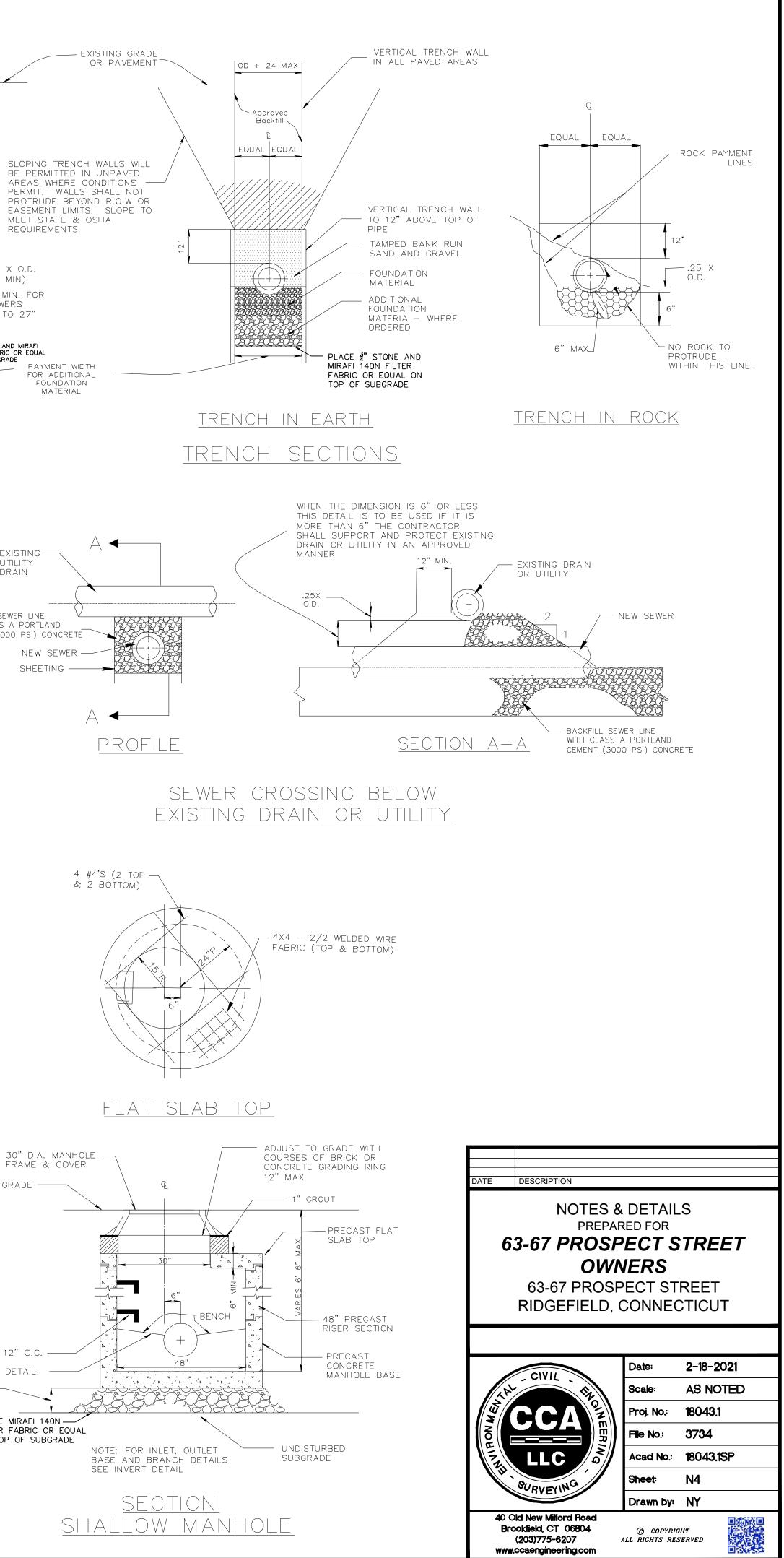
L. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING ANY WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. M. NO PIPE CONNECTION CAN BE MADE OR TRENCH BACKFILLED UNLESS A

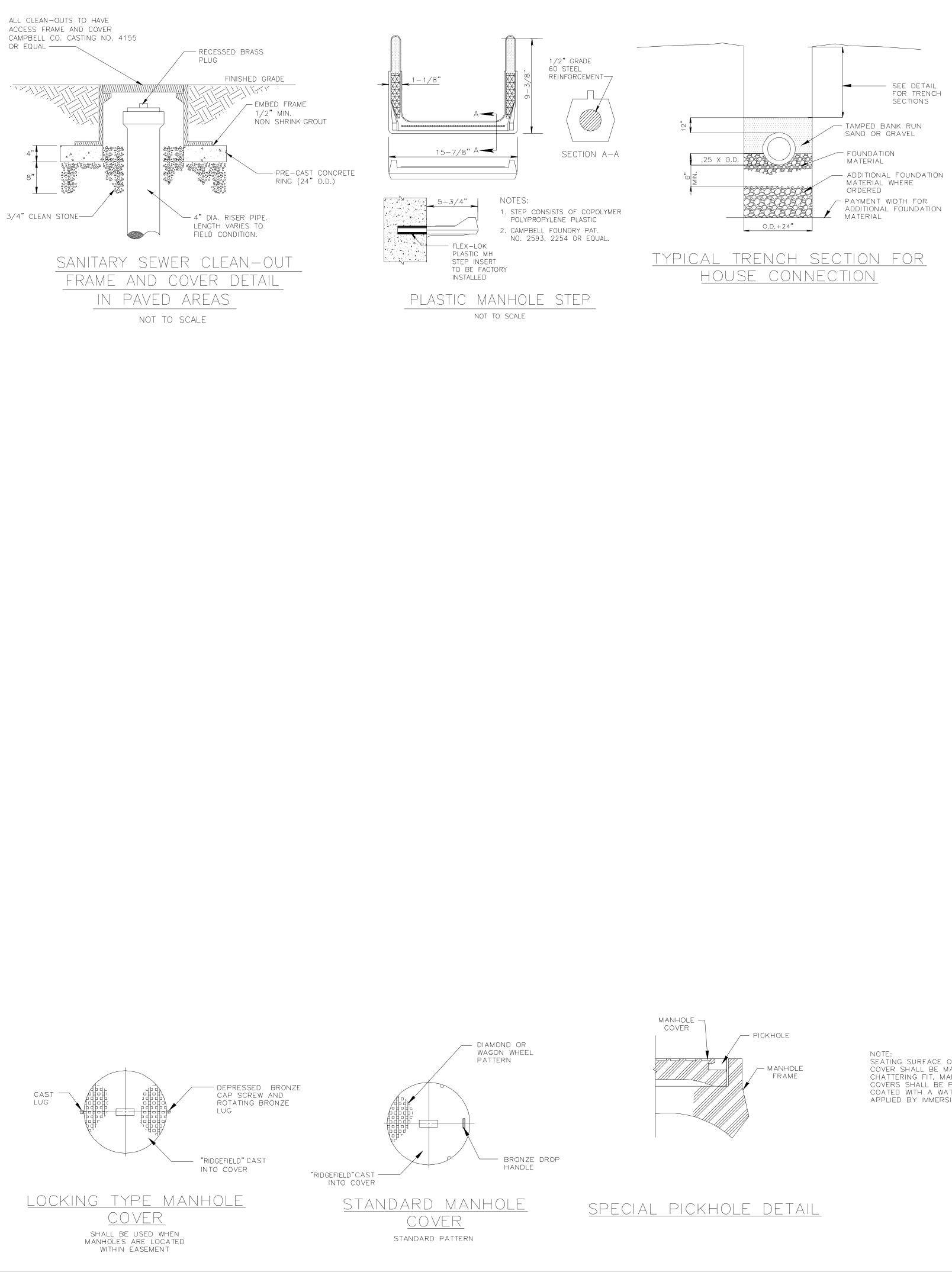
N. SANITARY SEWER TESTING SHALL BE DONE UNDER THE SUPERVISION OF THE DESIGN ENGINEER IN ACCORDANCE WITH THE LATEST ASTM TESTING STANDARDS. THE AIR TEST PRESSURE SHALL BE 3.5 PSI AND THE MAXIMUM PRESSURE LOSS OVER A 10 MINUTE PERIOD SHALL BE 0.5 PSI. MANHOLES SHALL BE VACUUM TESTED WITH 10 INCHES OF MERCURY AND WILL PASS IF THE TIME TO DROP TO 9 INCHES IS

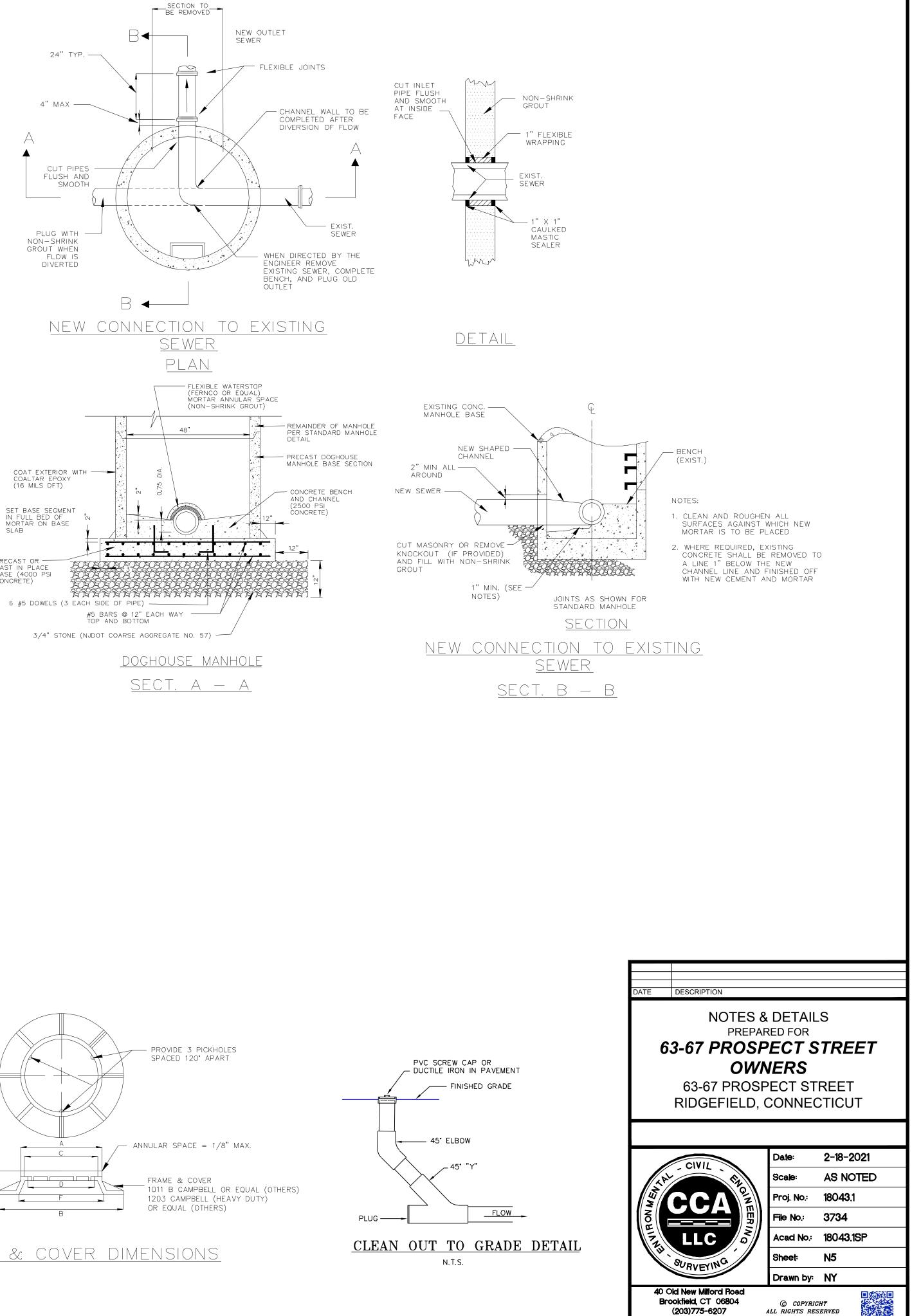
O. NO ROOF DRAINS, STORM DRAINS, FOUNDATION DRAINS OR SUBDRAINS SHALL BE CONNECTED TO THE SANITARY SEWER SYSTEM.





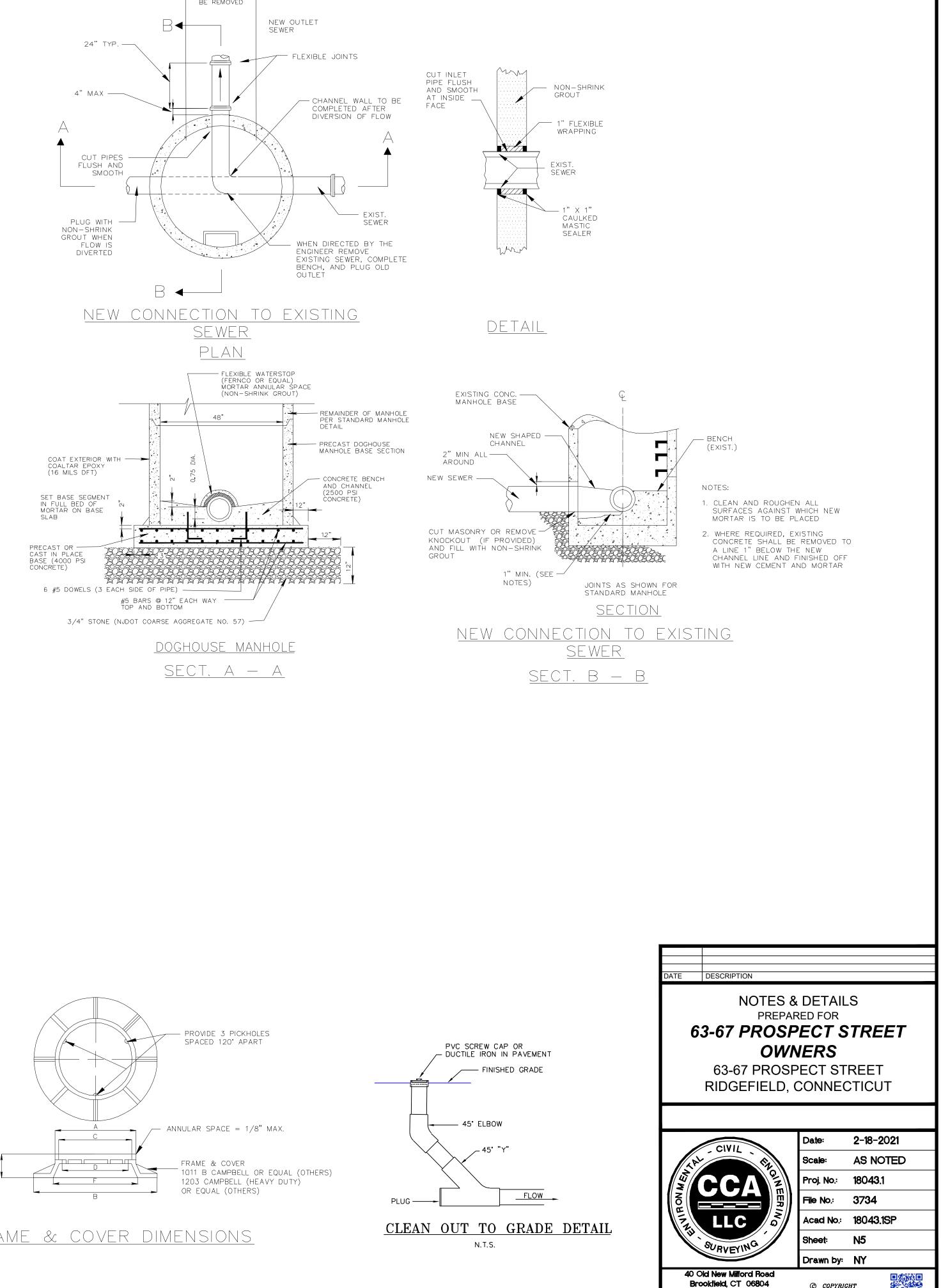




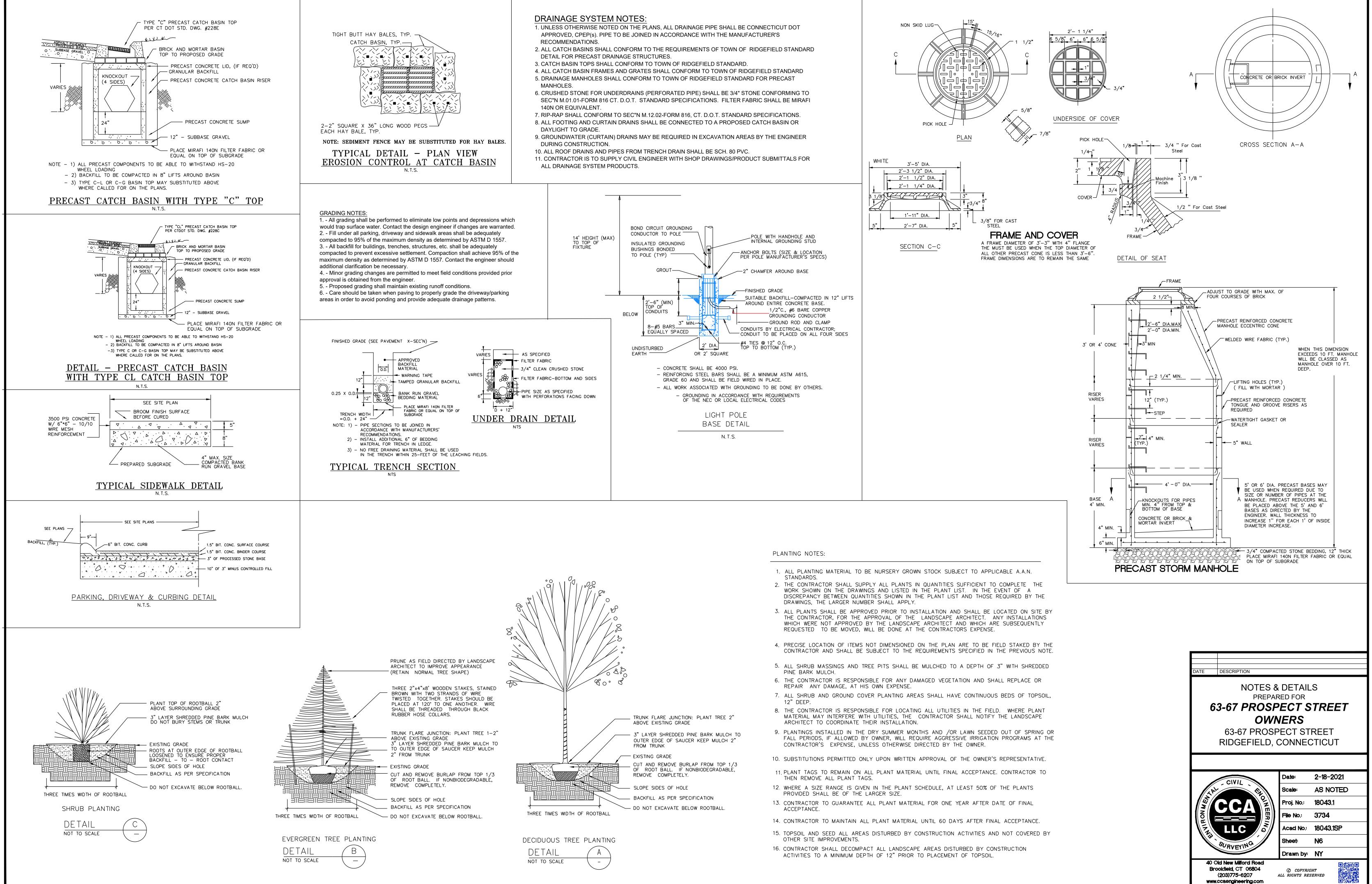


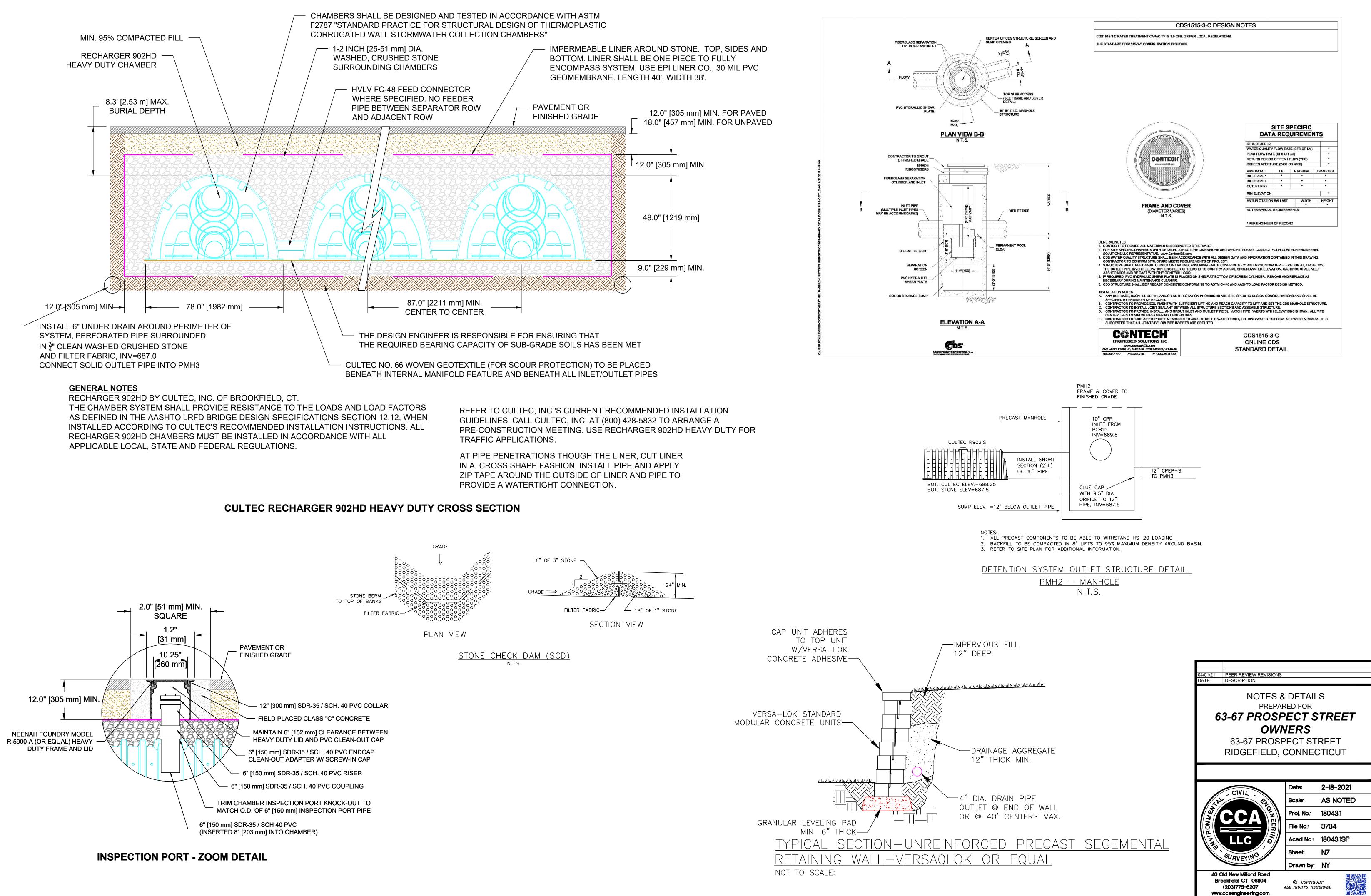
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SEATING SURFACE OF MANHOLE FRAME & COVER SHALL BE MACHINED TO INSURE NON CHATTERING FIT, MANHOLE FRAMES AND COVERS SHALL BE PROPERLY CLEANED AND COATED WITH A WATERPROOF ASPHALTUM APPLIED BY IMMERSION.



FRAME & COVER DIMENSIONS





DESIGN CRITERIA A. SIZES - EQUIVALENT SPHERES

RIP RAP

RIP RAP SIZES CAN BE DESIGNATED BY EITHER THE DIAMETER OR THE WEIGHT OF THE RIP RAP SIZES CAN BE DESIGNATED BY EITHER 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.O.2.06. 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, BY 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 RAP SHALL BE COMPOSED OF A WELL-GRADED MIXTURE DOWN TO THE ONE-INCH SIZE PARTICLE SHALL BE COMPOSED OF A WELL-GRADED MIXTURE DOWN TO THE ORE-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 IN 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

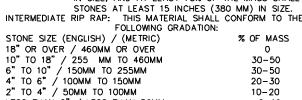
FIGURE RR-2: EXAMPLES OF AVERAGE STONE SIZE FOR d50 MODIFIED d50: 0.42 FEET OR 5 INCHES INTERMEDIATE d50: 0.67 FEET OR 8 INCHES STANDARD d50: 1.25 FEET OR 15 INCHES STANDARD d50:

. THICKNESS THE MINIMUM THICKNESS OF THE RIP RAP LAYER SHALL BE 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 12 INCHES. D. 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. NOTE: DOT STANDARD SPECIFICATIONS DO NOT ACCEPT ROUNDED STONE OR BROKEN CONCRETE FOR RIPRAP.

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



LESS THAN 2" / LESS THAN 50MM 0-10 MODIFIED RIP RAP: THIS MATERIAL SHALL CONFORM TO THE 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

1" TO 4" / 25MM TO 50MM LESS THAN 1" / LESS THAN 50MM E. 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 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 LEASE 5 TIMES THE CHANNEL BOTTOM AND UP BOTH SIDES OF THE CHANNEL OR ONLY PROTECT THE OUTSIDE BANK, DEPENDING UPON SPECIFIC DESIGN REQUIREMENTS

WHERE RIP RAP IS USED 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 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.

TOPSOILING (TO)

- . APPLICABILITY - WHERE THE TEXTURE, PH. OR NUTRIENT BALANCE OF THE AVAILABLE SOIL (SANDS, GRAVEL) 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: (MM) SIEVE AND SUBJECTED TO A PARTICLE SIZE ANALISIS: I LOAMY SAND, INCLUDING COARSE, LOAMY FINE, AND LOAMY VERY FINE SAND. SANDY LOAM, INCLUDING COARSE, FINE AND VERY FINE SANDY LOAM
- * LOAM, OR * 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; DIALD SECTIONALE SALES A LOWIN FIT, MICH FIT MAT DE ADOSTED ACCONDUCT,
 D. HAVING SOLUBLE SALES NOT EXCEEDING 500 PPM; AND
 E. THAT IS LODSE AND FRIABLE AND FREE FROM REFUSE, STUMPS, ROOTS, BRUSH, WEEDS, FROZEN PARTICLES, ROCKS, AND STONES OVER 1.25 INCHES IN DIAMETER, AND ANY MATERIAL THAT WILL PREVENT THE FORMATION OF A SUITABLE SEEDBED OR PREVENT SEED CERMINATION AND PLANT GROWTH. TOPSOIL MAY BE OF NATURAL ORIGIN OR MULTACTURED DY DIFFUDING CONDECTED CONDUCTION ON MATERIAL WITH CONTROL OF DOLLANG CONDUCTION MANUFACTURED BY BLENDING COMPOSTED ORGANIC MATERIALS WITH ORGANIC DEFICIENT SOLS, MINERAL SOLS, SAND AND LINE SUCH THAT THE RESULTING SOL MEETS THE 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 NEEDS S. CALCULA ING TOPSOIL 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 30 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
- GERMINATION. 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

(RR)

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 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 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 SIDES OF THE CHANNEL OR ONLY PROTECT THE OUTSIDE BANK, DEPENDING UPON SPECIFIC DESIGN REQUIREMENTS.

HERE RIP RAP IS USED ONLY FOR BANK PROTECTION AND DOES NOT EXTEND ACROSS THE 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 UNDERGROUND SOURCES THREATENS THE STABILITY OF THE RIP RAP.

A FILTER BLANKET OR BEDDING CAN BE EITHER GRANULAR STONE LAYER(S), A GEOTEXTILE OR BOTH. 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 WITH 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 GEOTEXTILE 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. WHERE MORE THAN ONE DISTINCT LAYER OF FILTER OR BEDDING MATERIAL IS REQUIRED, SPREAD THE FILTER OR BEDDING MATERIALS IN A UNITORM 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 OF STONE WITH A MINIMUM OF VOIDS. THE DESIRED DISTRIBUTION OF STONES THROUGHOUT THE MASS MAY BE OBTAINED BY SELECTIVE LOADING AT THE QUARRY, 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 OR 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.

DUST CONTROI

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

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.

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 HUMAN ACTIVITIES) AND AS A RESULT OF WIND FROSION OF THE EXPOSED FARTH 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. UNDISTURBED 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 O 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. ULCH FOR SEED WILL REQUIRE ANCHORING WHEN USED.
- E. CONSIDER WATER QUALITY WHEN SELECTING THE METHOD AND/OR MATERIALS USED FOR DUST CONTROL. WHEN CONSIDERING THE USE OF CALCIUM CHLORIDE BE AWARE OF THE FOLLOWING: THE RECEIVING SOIL'S PERMEABILITY SO AS TO 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 INEFFECTIVE BY DEGRADED WATER QUALITY IF IT IS USED FOR MIXING

CONSIDER USING DUST CONTROL MEASURES ONLY AFTER IT IS DETERMINED THAT OTHER MEASURES FOR SOIL STABILIZATION CANNOT BE PRACTICALLY APPLIED. 5. SPECIFICATIONS

A. MECHANICAL SWEEPING

MECHANICAL SWEEPING ON PAVED AREAS WHERE DUST AND FINE MATERIALS ACCUMULATI 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. C. 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)

EOTEXTILE SILT FENCING MINIMUM REQUIREMENTS MINIMUM PHYSICAL PROPERTY TEST METHOD REQUIREMENT FILTERING EFFICIENCY ASTM 5141 GRAB TENSILE STRENGTH (LBS.) ELONGATION @ FAILURE ASTM D4632 ASTM D4632 ASTM D3786 ASTM 4833 ASTM D4751 MULLEN BURST STRENGTH APPARENT OPENING SIZE NO GREATER THAN 0.90MM AND NO LESS THAN 0.60 MM ASTM D4491 OW RATE ASTM D4491 PERMATIVITY LTRAVIOLET RADIATION ASTM-D4355

STABILITY % DTEXTILE SILT FENCE SLOPE/ LENGTH LIMITATIONS SLOPE STEEPNESS* SLOPE LENGTH AND WING SPACING

5:1 OR FLATTER 3:1 TO 5:1 2:1 TO 3:1 HALL BE USED. . MATERIALS

A. GEOTEXTILE FABRIC: SHALL BE A PERVIOUS SHEET OF POLYPROPYLENE, NYLON, POLYESTER, ETHYLENE OR SIMILAR FILAMENTS AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS SHOWN. THE GEOTEXTILE SHALL BE NON-ROTTING, ACID AND ALKALI RESISTANT AND HAVE SUFFICIENT STRENGTH AND PERMEABILITY FOR THE PURPOSE NTENDED, INCLUDING HANDLING AND BACKFILLING OPERATIONS. FILAMENTS IN THE GEOTEXTILE SHALL BE RESISTANT TO ABSORPTION. THE FILAMENT NETWORK MUST BE DIMENSIONALLY STABLE AND RESISTANT TO DE-LAMINATION. THE GEOTEXTILE SHALL BE FREE OF ANY CHEMICAL 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.

B. 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. 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. 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 FEN 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

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

3. SUPPORT POSTS: DRIVE SUPPORT POSTS ON THE DOWN SLOPE OF THE TRENCH TO A DEPTH OF T LEAST 12 INCHES INTO ORIGINAL GROUND. NEVER INSTALL SUPPORT POSTS MORE THAN 10 EET APART. INSTALL SUPPORT POSTS CLOSER THAN 10 FEET APART WHEN CONCENTRATED FLOWS ARE ANTICIPATED OR WHEN STEEP CONTRIBUTING SLOPES AND SOIL CONDITIONS ARE EXPECTED TO GENERATE 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 HE 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 MANUFACTURER 'S INSTRUCTION SUCH THAT AT LEAST 6 INCHES OF GEOTEXTILE LIES WITHIN THE TRENCH, 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. ALLOW 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

A MAXIMUM OF 4 INCHES APART AND ALTERNATE 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). D. BACKFILL & COMPACTION: BACKFILL THE TRENCH WITH TAMPED SOIL OR AGGREGATE OVER THE GEOTEXTILE. WHEN THE TRENCH IS OBSTRUCTED BY A STONE, TREE ROOT, ETC. MAKE SURE THE BOTTOM OF THE GEOTEXTILE LIES HORIZONTAL ON THE GROUND WITH THE RESULTING FLAP ON THE UP SLOPE SIDE OF THE GEOTEXTILE AND BURY THE FLAP 6 INCHES OF TAMPED SOIL, OR

MAINTENANCE

FOR THE SILT FENCE AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM D FOR DEWATERING OPERATIONS, INSPECT FREQUENTLY BEFORE, DURING AND AFTER PUMPING AILURE. 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,) THE BARRIER HAS BEEN MOVED OUT OF POSITION, OR

WITH A RAINFALL AMOUNT OF 0.5 INCH OR GREATER TO DETERMINE MAINTENANCE NEEDS. WHEN FMOVE THE SEDIMENT DEPOSITS OR. IF ROOM ALLOWS, INSTALL A SECONDARY SILT FENCE UP SLOPE OF THE EXISTING FENCE. REPLACE OR REPAIR THE FENCE WITHIN 24 HOURS OF OBSERVED FENCE BECAUSE:) 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 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.

SEDIMENT BARRIERS HAY BALE BARRIER (HB) SPECIFICATIONS

HAY BALE DESIGN SLOPE/LENGTH LIMITATIONS SLOPE STEEPNESS SLOPE LENGTH AND WING SPACING SLOPE STEEPNESS :1 OR SHALLOWER 1 TO 3:1

PLACEMENT ON THE LANDSCAPE

CHECK DAM MEASURES.

ROTTING OF THE BINDINGS).

MAINTENANCE

BECAUSE:

REPLACE FENCE

INSTALLATION

MATERIALS A. 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.

GEOTEXTILE SILT FENCE (GSF`

GEOTEXTILE SILT FENCES SHALL BE UTILIZED EXCEPT WHERE NOTED OTHERWISE

0.2 GAL/FT2/MIN 0.05 SEC. -1 (MIN) 70% AFTER 500 HOURS OF EXPOSURE (MIN)

75% (MIN)

100 LBS. 15%

250 PSI 50 LBS.

100 FEE 75 FEE *WHERE THE GRADIENT CHANGES THROUGH THE DRAINAGE AREA THE STEEPEST SLOPE SECTION

100 FEE1 75 FEE1 50 FEE1

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. B. 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. CULVERT OUTLETS: NOT RECOMMENDED. USE TEMPORARY SEDIMENT TRAP AND/OR STONE

A. TRENCH EXCAVATION: EXCAVATE A TRENCH AS WIDE AS THE BALES AND AT LEAST 4 INCHES DEEP. EACH END OF THE TRENCH SHOULD BE WINGED UPSLOPE SO THAT THE BOTTOM OF THE LAST 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 IN 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.

NSPECT 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 & SECONDARY BARRIER LIPSLOPE FROM THE EXISTING BARRIER WHEN SEDIMENT DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF I 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 ONTRIBUTING AREA, DIVERSIONS, STONE BARRIERS) ARE NEEDED TO REDUCE FAILURE RATE OR

AINTAIN THE FENCE UNTIL THE CONTRIBUTING AREA IS STABILIZED 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 DESIGN IS REQUIRED. DESIGN REQUIREMENTS DESIGN REQUIREMENTS

DRAINAGE AREA NO ENGINEERED DESIGN 2-YR FREQUENCY STORM < OR = TO 2 ACRES > 2 ACRES ANY DRAINAGE SIZE 25-YR FREQUENCY STORM 2. SPECIFICATIONS

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 THE CHECK DAM. A GEOTEXTILE MAY BE USED UNDER THE STONE TO PROVIDE A STABLE FOUNDATION AND TO FACILITATE REMOVAL OF THE STONE.

C. 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 EDGES 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 THE DOWNSTREAM CHECK DAM.

D. 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 6 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

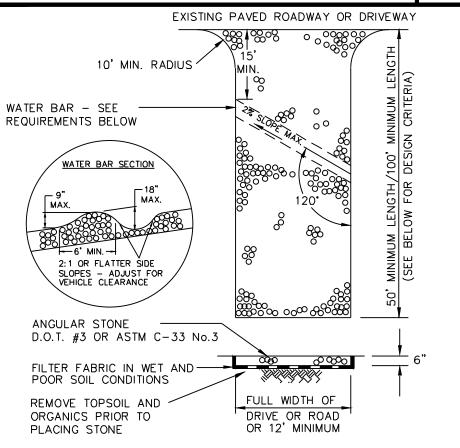
AREA IS 2 ACRES OR LESS OR WHEN A SEDIMENT BARRIER NEEDS TO BE INSTALLED DURING FROZEN GROUND CONDITIONS. STONE CHECK DAM/GEOTEXTILE: STONE CHECK DAMS THAT ARE INSTALLED WITH AN INTERNAL CORE OF GEOTEXTILE. THE GEOTEXTILE MUST MEET THE MINIMUM STANDARDS SET FORTH IN GEOTEXTILE SILT FENCE MEASURE. PARTIALLY CONSTRUCT THE STONE CHECK 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 IT 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 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. REMOVE THE SEDIMENT DEPOSITS 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 STABILIZATION OF CONTRIBUTING AREA DIVERSIONS STONE CHEC 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 CRADE OUT THE STONE TO ENSURE IT DOES NOT INTERFERE WITH MOWING

STABILIZE ANY DISTURBED SOIL THAT REMAINS FROM CHECK DAM REMOVAL OPERATIONS



ESIGN CRITERIA CLEAR THE AREA OF THE ENTRANCE OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABL F POORLY DRAINED LOCATIONS INSTALL SUBSURFACE DRAINAGE INSURING THE OUT ARE FREE FLOWING. ARE FREE FLOWING. IF USING A GEOTEXTILE IN PLACE OF FREE DRAINING MATERIAL, UNROLL THE GEOTEXTILE IN PARALLEL TO THE ROADWAY CENTERLINE IN A LOOSE MANNER PERMITTING IT TO CONFORM SURFACE IRREGULARITIES WHEN THE STONE IS PLACED. UNLESS OTHERWISE SPECIFIED BY TI MANUFACTURER, THE MINIMUM OVERLAP OF GEOTEXTILE PANELS JOINED WITHOUT SEWING ACC THE MANUFACTURER'S RECOMMENDATIONS. THE GEOTEXTILE MAY BE TEMPORARILY SECURED COMMENDED OR PROVIDED BY THE MANUFACTURER BUT THEY SHALL BE REMOVED PRIOR PLACEMENT OF THE STONE PLACE THE STORE. PLACE THE STORE TO THE SPECIFIED DIMENSION, KEEP ADDITIONAL STORE AVAILABLE OR S FUTURE USE. IF THE GRADE OF THE CONSTRUCTION ENTRANCE DRAINS TO THE PAVED SURF/ CONSTRUCT A WATER BAR WITHIN THE CONSTRUCTION ENTRANCE AT LEAST S ENTRANCE ON THE PAVED SURFACE DIVERTING RUNOFF WATER TO A SETTLING OR FILTE CONSTRUCT ANY DRAINAGE AND SETTLING FACILITIES NEEDED FOR WASHING OPERATIONS. IF ARE USED, INSTALL ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS

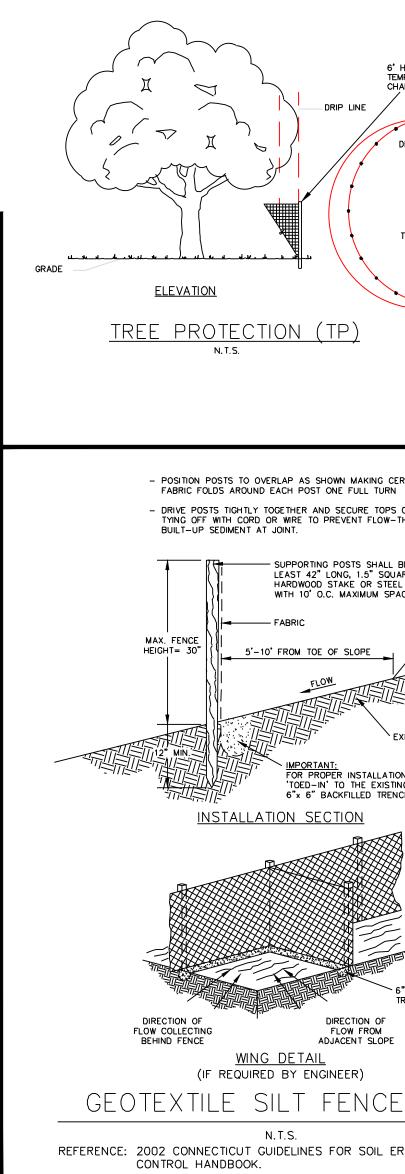
R WASHING MOST OF THE SEDIMENT IS NOT REMOVED BY TRAVEL OVER THE STONE, WASH TIRES BEF ENTER A PUBLIC ROAD. DIVERT WASH WATER AWAY FROM THE ENTRANCE TO A SETTLING AR REMOVE SEDIMENT. SIZE SETTLING AREA TO HOLD THE VOLUME OF WATER USED DURING ANY PERIOD. USING A WASH RACK MAY MAKE WASHING MORE CONVENIENT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

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

ANTI-TRACKING PAD CONSTRUCTION ENTRAI

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

1. SPECIFICATIO A. SEED SELE		1. SPECIFICATIONS	SEEDING (PS)
SELECT GRASS B. TIMING CON SEED WITH A T	SPECIES APPROPRIATE FOR THE SEASON AND SITE CONDITIONS FROM TABLE. ISIDERATIONS EMPORARY SEED MIXTURE WITHIN 7 DAYS AFTER THE SUSPENSION OF GRADING WORK IN DISTURBED AREAS WHERE	LEGUMES, SELECT THE TYPE AND AMOUNT OF INOCULANT THAT IS SPECIFIC FOR THE	15 KENTUCKY BLUEGRASS 20 .45 CREEPING RED FESCUE (PENNLAWN, WINTERGREEN) 20 .45
SEEDING DATES	IN OF WORK IS EXPECTED TO BE MORE THAN 30 DAYS BUT LESS THAN 1 YEAR. SEEDING OUTSIDE THE OPTIMUM GIVEN IN TABLE MAY RESULT IN EITHER INADEQUATE GERMINATION OR LOW PLANT SURVIVAL RATE, REDUCING ROL EFFECTIVENESS. PARATION	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 AND GERMINATION RATE IF THERE IS ANY QUESTION. EXPECT A PURITY BETWEEN OF 95% AND 98% AND A GERMINATION RATE BETWEEN 70% AND 90%. SOME SEEDING	PERENNIAL RYEGRASS (NORLEA, MANHATTAN) 5 .10 TOTAL 45 1.00 25 CREEPING RED FESCUE (PENNLAWN, WINTERGREEN) 20 .45 REDTOP (STREAKER, COMMON) 2 .05
GRASSED WATE APPROPRIATE	D EROSION CONTROL MEASURES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, SEDIMENT BASINS AND RWAYS IN ACCORDANCE WITH THE APPROVED PLAN. GRADE ACCORDING TO PLANS AND ALLOW FOR THE USE OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING NE IN ACCORDANCE WITH THE LAND GRADING MEASURE.	MIXTURES CALL FOR PURE LIVE SEED. INCREASE SEEDING RATES 10% WHEN USING FROST CRACK SEEDING OR HYDROSEEDING.	TALL FESCUE (KENTUCKY 31) OR SMOOTH BROMEGRASS 20 .45 (SARATOGA, LINCOLN) TOTAL 42 .95 35 CREEPING RED FESCUE (PENNLAWN, WINTERGREEN) 20 .45 BIRDS FOOT TREFOIL (EMPIRE, VIKING) WITH INOCULANT 1 8 .20
LOOSENED OR BULLDOZER, DI	OIL TO A DEPTH OF 3-4 INCHES WITH A SLIGHTLY ROUGHENED SURFACE. IF THE AREA HAS BEEN RECENTLY DISTURBED, NO FURTHER ROUGHENING IS REQUIRED. SOIL PREPARATION CAN BE ACCOMPLISHED BY TRACKING WITH A SCING, HARROWING, RAKING OR DRAGGING WITH A SECTION OF CHAIN LINK FENCE. AVOID EXCESSIVE COMPACTION OF	B. TIMING SEED WITH A PERMANENT SEED MIXTURE WITHIN 7 DAYS AFTER ESTABLISHING FINAL GRADES OR WHEN GRADING WORK WITHIN A DISTURBED AREA IS TO BE SUSPENDED FOR 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	TALL FESCUE (KENTUCKY 31) OR SMOOTH BROMEGRASS 20 45 (SARATOGA, LINCOLN) TOTAL 48 1.10 45 CREEPING RED FESCUE (PENNLAWN, WINTERGREEN) 45
SHALL BE PERI APPLY GROUND FROM THE LOC	BY EQUIPMENT TRAVELING BACK AND FORTH OVER THE SURFACE. IF THE SLOPE IS TRACKED, THE CLEAT MARKS PENDICULAR TO THE ANTICIPATED DIRECTION OF THE FLOW OF SURFACE WATER. I LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS. SOIL SAMPLE MAILERS ARE AVAILABLE AL COOPERATIVE EXTENSION SYSTEM OFFICE. APPENDIX E CONTAINS A LISTING OF THE COOPERATIVE EXTENSION S. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY	EXCEPTIONS: • FOR THE COASTAL TOWNS AND IN THE CONNECTICUT RIVER VALLEY FINAL FALL SEEDING DATES CAN BE EXTENDED AN ADDITIONAL 15 DAYS, AND • DORMANT OR FROST CRACK SEEDING IS DONE AFTER THE GROUND IS FROZEN.	REDTOP (STREAKER, COMMON) 2 .05 BIRDS FOOT TREFOIL (EMPIRE, VIKING) W/INOCULANT1 8 .20 TOTAL 30 .70
BE APPLIED AT ADDITIONALLY, SOIL TEXTURE	THE RATE OF 300 POUNDS PER ACRE OR 7.5 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT. LIME MAY BE APPLIED USING RATES GIVEN IN TABLE BELOW. VS. LIMING RATES	C. SITE PREPARATION GRADE IN ACCORDANCE WITH THE LAND GRADING MEASURE. INSTALL ALL NECESSARY SURFACE WATER CONTROLS.	55 WHITE CLOVER PERENNIAL RYE GRASS 10 .25 65 CREEPING RED FESCUE 20 .50
SOIL TEXTURES CLAY, CLAY LC AND HIGH ORG SANDY LOAM, LOAMY SAND,	AM ANIC SOIL 3 135 LOAM, SILT LOAM 2 90	REMOVE ALL OTHER DEBRIS SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS OR OTHER UNSUITABLE MATERIAL.	REDTOP (STREAKER, COMMON) 2 .05 PERENNIAL RYE GRASS 20 .50 TOTAL 42 1.05 75 SMOOTH BROMEGRASS (SARATOGA, LINCOLN) 15 .35
E. SEEDING APPLY SEED U	NIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER AT A MINIMUM RATE FOR SEED IDENTIFIED IN TABLE BELOW. INCREASE SEEDING RATES BY 10% WHEN HYDROSEEDING.	NOTE: ON AREAS WHERE WOOD CHIPS AND/OR BARK MULCH WAS PREVIOUSLY APPLIED, 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	PERENNIAL RYEGRASS (NORLEA, MANHATTAŃ) 5 .10 BIRDS FOOT TREFOIL (EMPIRE, VIKING) W/ INOCULANT1 10 .25 TOTAL 30 .79
	EDINGS MADE DURING OPTIMUM SEEDING DATES SHALL BE MULCHED ACCORDING TO THE MULCH FOR SEED MEASURE. EDING OUTSIDE OF THE OPTIMUM SEEDING DATES, INCREASE THE APPLICATION OF MULCH TO PROVIDE 95% - 100%	AND/OR BARK MULCH. D. SEEDBED PREPARATION APPLY TOPSOIL IF NECESSARY, IN ACCORDANCE WITH THE TOPSOILING MEASURE. APPLY FERTILIZER AND GROUND LIMESTONE ACCORDING TO SOIL TESTS CONDUCTED	85 SWITCHGRASS (BLACKWELL, SHELTER, CAVE-IN-ROCK) 101 .25 WEEPING LOVEGRASS 3 .07 LITTLE BLUESTEM (BLAZE, ALDOUS, CAMPER) 101 .25 TOTAL 23
0.5 INCH OR G	E D AREA AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF REATER FOR SEED AND MULCH MOVEMENT AND RILL EROSION. WHERE SEED HAS MOVED OR WHERE SOIL EROSION D DETERMINE THE CAUSE OF THE FAILURE. BIRD FEEDING MAY BE A PROBLEM IF MULCH WAS APPLIED TOO THINLY	BY THE UNIVERSITY OF CONNECTICUT SOIL TESTING LABORATORY OR OTHER RELIABLE SOURCE. A PH RANGE OF 6.2 TO 7.0 IS OPTIMAL FOR PLANT GROWTH OF MOST GRASS SPECIES. WHERE SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES. OR WHERE	95 CREEPING RED FESCUE (PENNLAWN, WINTERGREEN) 10 .25 CROWN VETCH (CHEMUNG, PENNGIFT) WITH INOCULANT1 15 .35 OR (FLATPEA (LATHCO) WITH INOCULANT1) (30) (.75) TALL FESCUE (KENTUCKY 31) OR SMOOTH BROMEGRASS
REAPPLY SEED ADDITIONAL ME WITH ANCHORIN	EED. RE-SEED AND RE-MULCH. IF MOVEMENT WAS THE RESULT OF WIND, THEN REPAIR EROSION DAMAGE (IF ANY), AND MULCH AND APPLY MULCH ANCHORING. IF FAILURE WAS CAUSED BY CONCENTRATED RUNOFF, INSTALL ASURES TO CONTROL WATER AND SEDIMENT MOVEMENT, REPAIR EROSION DAMAGE, RE-SEED AND RE-APPLY MULCH IG OR USE TEMPORARY EROSION CONTROL BLANKET MEASURE. CONTINUE INSPECTIONS UNTIL THE GRASSES ARE ISHED. GRASSES SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED WHICH IS MATURE	TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 300 POUNDS PER 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. ADDITIONALLY, LIME MAY BE APPLIED USING RATES GIVEN IN TABLE BELOW. A PH	(SARATOGA, LINCOLN) 15 .35 REDTOP (STREAKER, COMMON) 2 .05 TOTAL 42 (OR 57) 1.00 (OR 1.40) 05 CREEPING RED FESCUE (PENNLAWN, WINTERGREEN) 20 .45
	INTROL SOIL EROSION AND TO SURVIVE SEVERE WEATHER CONDITIONS (APPROXIMATELY 80% VEGETATIVE SURFACE	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	REDTOP (STREAKER, COMMON) 2 .05 CROWN VETCH (CHEMUNG, PENNGIFT) WITH INOCULANT1 15 .35 OR (FLATPEA (LATHCO) WITH INOCULANT1) (30) (.75) TOTAL 37 (OR 52) .85 (OR 1.25)
SPECIES	SEEDING OPTIMUM OPTIMUM SEEDING PLANT RATES SEED DATES(NOTE1) CHARACTERISTICS (POUNDS) DEPTH(NOTE2) /Ac. /1000 S.F. (INCHES)	DISC OR OTHER SUITABLE EQUIPMENT. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED. FOR 1 AREAS TO BE MOWED THE FINAL SOIL LOOSENING AND SURFACE ROUGHENING OPERATION IS BY HAND, HARROW OR DISC. IF DONE BY HARROW OR DISC, IT IS GENERALLY DONE ON THE CONTOUR. AREAS NOT TO BE MOWED CAN BE TRACKED	BIRDS FOOT TREFOIL (EMPIRE, VIKING) WITH INOCULANT1 8 20 CROWN VETCH (CHEMUNG, PENNGIFT) WITH INOCULANT1 15 .35 CREEPING RED FESCUE (PENNLAWN, WINTERGREEN)OR TALL FESCUE (KENTUCKY 31)
ANNUAL RYEGR LOLIUM MULTIFI PERENNIAL RYE LOLIUM PEREN WINTER RYE	ASS MAY BE ADDED IN MIXES. ORUM 40 1.0 0.5 3/1 – 6/15 & B/1 – 10/15 WILL MOW OUT OF MOST STANDS. USE FOR WINTER COVER.	WITH 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 1 BLANKET MANUFACTURER'S RECOMMENDATIONS.	OR SMOOTH BROMEGRASS (SARATOGA, LINCOLN) 20 .45 TOTAL 43 1.00 26 SWITCHGRASS (BLACKWELL, SHELTER, CAVE-IN-ROCK) 101 .25 PERENNIAL RYEGRASS (NORLEA, MANHATTAN) 5 .10
OATS AVENA SATIVA	ALE 120 3.0 1.0 4/15 - 7/1 & 8/15 -10/15 GROWTH, DIES BACK IN JUNE WITH LITTLE REGROWTH. IN NORTHERN CT. WINTER WILL KILL A 86 2.0 1.0 3/1 - 6/15 & 8/1 - 9/15 WITH THE FIRST KILLING OF FROST AND	SOIL TEXTURE TONS/ACRE OF LIME LBS/1000 SF OF LIME	CROWN VETCH (CHEMUNG, PENNGIFT) WITH INNOCULANT1 15 .35 TOTAL 45 1.05 36 CROWN VETCH (CHEMUNG, PENNGIFT) WITH INNOCULANT1 10 .25 OR (FLATPEA (LATHCO) WITH INNOCULANT1) (30) (.75)
WINTER WHEAT TRITICUM AES	MAY THROUGHOUT THE STATE IN SEVERE WINTERS. QUICK GERMINATION WITH MODERATE	CLAY, CLAY LOAM AND HIGH ORGANIC SOIL 3 135 SANDY LOAM, LOAM, SILT LOAM 2 90	SWITCHGRASS (BLACKWELL, SHELTER, CAVE-IN-ROCK) 51
SUDANGRASS SORGHUM SUI	WARM SEASON SMALL GRAIN. DIES WITH CRUSGALLI 20 0.5 1.0 5/15 – 7/15 FROST IN SEPTEMBER. TOLERATES WARM TEMPERATURES AND DANENSE 30 0.7 1.0 5/15 – 8/1 DROUGHTY CONDITIONS.	E. SEED APPLICATION APPLY SELECTED SEED AT RATES PROVIDED IN TABLE BELOW UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY	45 CROWN VETCH (CHEMUING, PENNGIFT) WITH INNOCULANT1 15 .35 OR (FLATPEA (LATHCO) WITH INOCULANT1) (30) (.75) PERENNIAL RYEGRASS (NORLEA, MANHATTAN) 10 .25 TOTAL 25 (OR 40) .60 (OR 1.00)
BUCKWHEAT FAGOPYRUM ES WEEPING LOVEC ERAGROSTIS CL		INCLUDING SEED, FERTILIZER). NORMAL SEEDING DEPTH IS FROM 0.25 TO 0.5 INCH. 1 INCREASE SEEDING RATES BY 10% WHEN HYDROSEEDING OR FROST CRACK SEEDING. SEED WARM SEASON GRASSES DURING THE SPRING PERIOD ONLY. APPLY MULCH ACCORDING TO THE MULCH FOR SEED MEASURE.	BIG BLUESTEM (NIAGRA, KAW) OR LITTLE BLUESTEM (BLAZE, ALSOUS,CAMPER) 51 .10 PERENNIAL RYEGRASS (NORLEA, MANHATTAN) 5 .10
DOT ALL PURP	INFERTILE SOILS. EXCELLENT NURSE CROP. USUALLY WINTER KILLS. OSE MIX 150 3.4 0.5 3/15 - 6/15 & 8/15 - 10/15 SUITABLE FOR ALL CONDITIONS. (NOTE3)	F. 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 A SPECIALIZED PRACTICE AND CARE NEEDS TO BE TAKEN NOT TO EXCEED THE INFILTRATION RATE OF THE SOIL, EACH APPLICATION MUST BE UNIFORMLY APPLIED	
15 DAYS IN 2 SEED AT TW 3 SEE PERMAN	NTED THROUGHOUT SUMMER IF SOIL MOISTURE IS ADEQUATE OR CAN BE IRRIGATED. FALL SEEDING MAY BE EXTENDED THE COASTAL TOWNS. CE THE INDICATED DEPTH FOR SANDY SOILS. ENT SEEDING TABLE FOR SEEDING MIXTURE REQUIREMENTS. IES MAY BE USED IN COMBINATIONS TO OBTAIN A BROADER TIME SPECTRUM. IF USED IN COMBINATIONS, REDUCE	WITH 1 TO 2 INCHES OF WATER APPLIED PER APPLICATION, SOAKING THE GROUND TO A DEPTH OF 4 INCHES. 1 2. MAINTENANCE	TOTAL 50 1.20 176 DEER TONGUE (TIOGA) WITH INOCULANT1 101 .25 BIRDS FOOT TREFOIL (EMPIRE, VIKING) WITH INOCULANT1 8 .20
EACH SPECIES	PLANTING RATE BY 20% OF THAT LISTED.	A. INITIAL ESTABLISHMENT INSPECT SEEDED AREA 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 DURING THE FIRST GROWING SEASON. 1 WHERE SEED HAS BEEN MOVED OR WHERE SOIL EROSION HAS OCCURRED DETERMINE	PERENNIAL RYEGRASS (NORLEA, MANHATTAN) <u>3</u> 07 TOTAL 21 .52 86 DEER TONGUE (TIOGA) WITH INOCULANT 1 101 .25 CROWN VETCH (CHEMUING, PENNGIFT) WITH INNOCULANT 1 15 .35
		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 MOVEMENT WAS THE RESULT OF MUD, REPAIR EROSION DAMAGE (IF ANY), RE-APPLY SEED – AND MULCH, AND APPLY MULCH ANCHORING. IF FAILURE WAS CAUSED BY 1	PERENNIAL RYEGRASS (NORLEA, MANHATTAN) 3 .07 193 CHEWINGS FESCUE 35 .80 HARD FESCUE 30 .70
	6' HT MIN. TEMPORARY CHAIN LINK FENCE	CONCENTRATED WATER, (1) INSTALL ADDITIONAL MEASURES TO CONTROL WATER AND SEDIMENT MOVEMENT. (2) REPAIR EROSION DAMAGE, (3) RE-SEED AND (4) RE-APPLY MULCH WITH ANCHORING OR USE TEMPORARY EROSION CONTROL BLANKET MEASURE AND/OR PERMANENT TURF REINFORCEMENT MAT MEASURE. IF THERE IS NO EROSION, BUT SEED SURVIVAL IS LESS THAN 100 PLANTS PER	COLONIAL BENTGRASS 5 .10 BIRDS FOOT TREFOIL (EMPIRE, VIKING) WITH INOCULANT1 10 .20 PERENNIAL RYEGRASS 20 .50 TOTAL 100 2.30
	DRIP LINE	SQUARE FOOT AFTER 4 WEEKS GROWTH, RE-SEED AS PLANTING SEASON ALLOWS. CONTINUE INSPECTIONS UNTIL AT LEAST 100 PLANTS PER SQUARE FOOT HAVE GROWN AT LEAST 6 INCHES TALL OR UNTIL THE FIRST MOWING.	205 DELETED DUE TO INVASIVE SPECIES 215 CREEPING RED FESCUE (PENNLAWN, WINTERGREEN) TOTAL 60 1.35
	DRIP LINE		225 CREEPING RED FESCUE (PENNLAWN, WINTERGREEN) 40 .90 TALL FESCUE (KENTUCKY 31) 20 .45 TOTAL 60 1.35
AΥ		INCHES.	235 CREEPING RED FESCUE (PENNLAWN, WINTERGREEN) 15 .35 FLATPEA (LATHCO) WITH INOCULANTI <u>30</u> .75 TOTAL 45 3.60 245 TALL FESCUE (KENTUCKY 31) TOTAL 150 3.60
-	GRADE	SUPPORTS THE INTENDED USE. IF APPROPRIATE THE HEIGHT OF CUT MAY BE ADJUSTED DOWNWARD, BY DEGREES, AS NEW PLANTS BECOME ESTABLISHED. CARRY -	255 AMERICAN BEACHGRASS (CAPE) 58,500 1.345 CULMS/ACRE CULMS/100 SF
СКІ ІЕКІА)	ELEVATION	OUT ANY FERTILIZATION PROGRAM IN ACCORDANCE WITH APPROVED SOIL TESTS 2 THAT DETERMINE THE PROPER AMOUNT OF LIME AND FERTILIZER NEEDED TO MAINTAIN A VIGOROUS SOD YET PREVENT EXCESSIVE LEACHING OF NUTRIENTS TO THE GROUNDWATER OR RUNOFF TO SURFACE WATERS. ALTHOUGH WEEDS MAY APPEAR TO BE A PROBLEM. THEY SHADE THE NEW	266 SWITCHGRASS (BLACKWELL, SHELTER, CAVE-IN-ROCK) 4.0 .10 BIG BLUESTEM (NIAGRA, KAW) 4.0 .10 LITTLE BLUESTEM (BLAZE, ALDOUS, CAMPER) 2.0 .05 SAND LOVEGRASS (NE-27, BEND) 1.5 .03
UESIGN CI	TREE PROTECTION (TP)	SELECTING SEED WIX TO WATCH NEED	BIRD'S-FOOT TREFOIL (EMPIRE VIKING) 2.0 .05 TOTAL 13.5 .33 275 FLATPEA (LATHCO) 10 .20 PERENNIAL PEA (LANCER) 2 .05
- OK		AREA TO BE SEEDED MIXTURE NUMBER1 MOWING DESIRED MOWING NOT REQUIRED BORROW AREAS, ROADSIDES, DIKES, LEVEES, POND BANKS	CROWN VETCH (CHEMUNG, PENNGIFT) 10 .20 TALL FESCUE (KENTUCKY 31) 2 .20 TOTAL 24 .65
BELOW		AND OTHER SLOPES AND BANKS A) WELL OR EXCESSIVELY DRAINED SOILS2 B) SOMEWHAT POORLY DRAINED SOILS2 A) WELL OR EXCESSIVELY 1,2,3,4,5, OR 8 5,6,7,8,9,10,11,12,16,22 5,6 SOILS2	285 ORCHARDGRASS (PENNLATE, KAY, POTOMAC) 5 .10 TALL FESCUE (KENTUCKY 31) 10 .20 REDTOP (STREAKER, COMMON) 2 .05 BIRD'S-FOOT TREFOIL (EMPIRE VIKING) 5 .10 TOTAL 2 .45
(SE E	 POSITION POSTS TO OVERLAP AS SHOWN MAKING CERTAIN THAT THE FABRIC FOLDS AROUND EACH POST ONE FULL TURN DRIVE POSTS TIGHTLY TOGETHER AND SECURE TOPS OF POSTS BY 	C) VARIABLE DRAINAGE SOILS2 2 5,6,11 - DRAINAGE DITCH AND CHANNEL BANKS 2 A) WELL OR EXCESSIVELY DRAINED SOILS2 1,2,3, OR 4 9,10,11,12 B) SOMEWHAT POORLY DRAINED SOILS2 2	29 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 6 TO 8
	- DRIVE POSIS IGHILY TOGETHER AND SECURE TOPS OF POSIS BY TYING OFF WITH CORD OR WIRE TO PREVENT FLOW-THROUGH OF BUILT-UP SEDIMENT AT JOINT.		OTNOTES:
6"	SUPPORTING POSTS SHALL BE AT LEAST 42" LONG, 1.5" SQUARE HARDWOOD STAKE OR STEEL POST WITH 10' O.C. MAXIMUM SPACING.	EFFLUENT DISPOSAL5 OR 6GRAVEL PITS326,27,28GULLIED AND ERODED AREAS3,4,5,8,10,11,12UNICED IN CONTRACT20,21,21	USE PROPER INOCULANT FOR LEGUME SEEDS, USE FOUR TIMES RECOMMENDED RATE WHEN HYDROSEEDING. USE PURE LIVE SEED (PLS) = (<u>% GERMINATION x % PURITY)</u> 100 EXAMPLE: COMMON BERMUDA SEED WITH 70% GERMINATION AND 80% PURITY=
	MAX. FENCE HEIGHT = 30"	(IF TOXIC SUBSTANCES AND PHYSICAL PROPERTIES NOT LIMITING)3 SHORELINES 5 OR 6 (FLUCTUATING WATER LEVELS) 3	$\frac{70\times80}{100} \text{ OR } \frac{56}{100} \text{ OR } 56\%$ 10LBS PLS/ACRE/56% = 17.9 LBS/ACRE OF BAGGED SEED D.O.T. ALL PURPOSE MIX
BLE MATERIAL. THE DRAINS		SOD WATERWAYS AND SPILLWAYS 1,2,3,4,6,7, OR 8 1,2,3,4,6,7, OR 8 SUNNY RECREATION AREAS 1,2, OR 23 (PICNIC AREAS AND PLAYGROUNDS	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 LARKSPUR, 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
N A DIRECTION TOO THE THE	EXISTING SUBGRADE	NATURE TRAILS) CAMPING AND PARKING, NATURE 19,21, OR 23 TRAILS (SHADED) 5 SAND DUNES (BLOWING SAND) 25	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. CONSIDERED TO BE A COOL SEASON MIX. CONSIDERED TO BE A WARM SEASON MIX.
CCORDING TO WITH PINS TO STOCKPILE FOR	International and a second and a second	WOODLAND ACCESS ROADS, SKID TRAILS AND LOG YARDING AREAS LAWNS AND HIGH MAIN TENANCE9,10,16,22,261,19,21, OR29	
RFACE AND IT 15 FEET FROM ERING AREA. F WASH RACKS	INSTALLATION SECTION	FOOTNOTES: 1 THE NUMBERS FOLLOWING IN THESE COLUMNS REFER TO SEED MIXTURES IN FOLLOWING TABLE. MIXES FOR SHADY AREAS ARE IN BOLD ITALICS PRINT (INCLUDING MIXES 20 THROUGH 24). 2 SEE COUNTY SOIL SURVEY FOR DRAINAGE CLASS. SOIL SURVEYS ARE AVAILABLE	SEDIMENTATION & EROSION
FORE VEHICLES AREA TO NY 2-HOUR	WING ORIENTED TO INTERCEPT FLOW	FROM 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.	CONTROL DETAILS
F SEDIMENT			Date: 8-27-19
DITIONAL EDED.) SURFACES. DAY. VEHICLE			Scale: AS NOTED
EDIMENT, THEN STRUCTION EA OR SIMILAR	6" X 6" BACKFILLED TRENCH	SECTION A	Willing CCCA Proj. No.: 2002E+S The No.: 3734
) 	DIRECTION OF DIRECTION OF FLOW COLLECTING FLOW FROM BEHIND FENCE ADJACENT SLOPE WING DETAIL	POSTS	One Solution Solution
	(if required by engineer) GEOTEXTILE SILT FENCE (GSF)	DETAIL OF FENCE JOINT (TOP VIEW)	Surveying Sheet: ES1 Drawn by: NY
) SEDIMENT	N.T.S. REFERENCE: 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT	REFER TO 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL	40 Old New Milford Road Brookfield, CT 06804 (203)775-6207 ALL RICHTS RESERVED
	CONTROL HANDBOOK.	FOR ADDITIONAL INFORMATION	www.ccaengineering.com

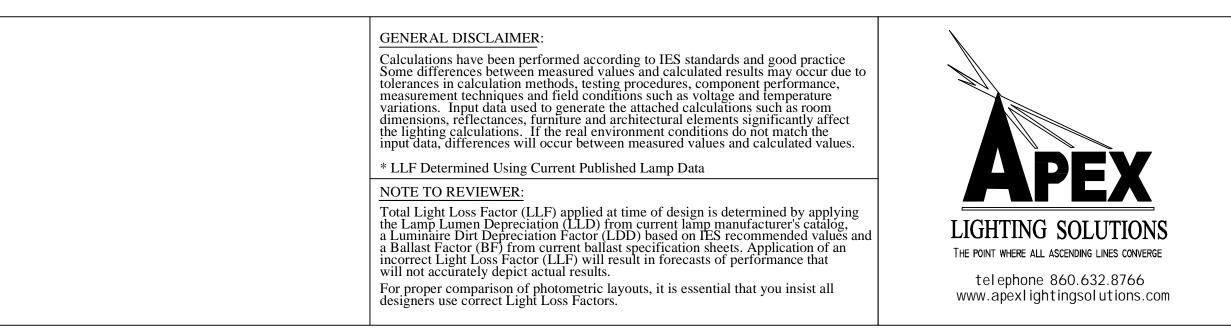


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JOB NAME: 63-67 PROSPECT STREET - RIDGEFIELD, CT APEX LIGHTING SOLUTIONS WORKPLANE/CALC PLANE: AT FINISH GRADE MOUNTING HEIGHT: SEE LUMINAIRE SCHEDULE APPS: LED SALES: SP

Luminaire Schedule							
Qty	Label	Arrangement	Lumens	Input Watts	LLF	BUG Rating	Description
1	SL3	SINGLE	3739	54.4	0.850	B1-U0-G1	LUMEC MPTR-55W48LED3K-G2-LE3W-VOLT-DMG-HS-APR4F-10.5-B104-COLTX
1	SL4	SINGLE	3802	54.4	0.850	B1-U0-G1	LUMEC MPTR-55W48LED3K-G2-LE4-VOLT-DMG-HS-APR4F-10.5-B104-COLTX
1	SL5	SINGLE	4661	54.4	0.850	B3-U0-G1	LUMEC MPTR-55W48LED3K-G2-LE5-VOLT-DMG-APR4F-10.5-B104-COLTX
18	WM	SINGLE	814	14	1.080	B1-U0-G0	SUNPARK 3-4081D-05-3000K / WALL MOUNTED @ 8FT AFG TO TOF
3	WP3	SINGLE	2132	22.3	0.850	B1-U0-G0	STONCO LPW16-20-WW-G3-3-UNV-FINISH / WALL MOUNTED @ 8FT AFG TO BOF
2	WP4	SINGLE	2065	22.3	0.850	B1-U0-G1	STONCO LPW16-20-WW-G3-4-UNV-FINISH / WALL MOUNTED @ 8FT AFG TO BOF

Calculation Summary									
Label	Grid Height	Avg	Max	Min	Avg/Min	Max/Min			
CalcPts_1	0	0.16	7.0	0.0	N.A.	N.A.			
PARKING & DRIVE AISLES		0.69	3.6	0.0	N.A.	N.A.			



63-67 PROSPECT STREET RIDGEFIELD, CT

SCALE : 1"=20'-0"

DATE: 2/18/21

DRAWN BY: LED

SL-1A

DRAWING TITLE:

PROJECT TITLE:

SITE LIGHTING PHOTOMETRIC CALCULATION

FILE NAME: SL-1A 63-67 PROSPECT STREET - RIDGEFIELD, CT 2-18-2021 LED.dwg