

PROJECT SUMMARY

BUILT IN 1980, THE EXISTING SINGLE FAMILY RESIDENCE LOCATED AT 31 WILSON STREET IN READING, MA, IS SITUATED ON A .159 ACRE LOT. (PARCEL ID 0220-0000-0159-01/ASSESSORS MAP 22 PARCEL 159).

THE PROPOSED RENOVATION INCLUDES:

1. DEMOLITION OF EXISTING ATTACHED UNHEATED UTILITY ROOM (NO FOUNDATION) AND CHIMNEY FROM REAR PORCH.
2. REBUILD AND ENLARGED FULLY HEATED SUNROOM WITH FIREPLACE, ADJACENT MIDROOM, AND SECOND FLOOR EXPANSION TO PRIMARY BEDROOM, INCLUDING FROST WALL FOUNDATION WITH CRAWL SPACE.
3. FULL GUT RENOVATION OF EXISTING FIRST FLOOR KITCHEN, INCLUDING NEW WALL OPENINGS BETWEEN EXISTING KITCHEN AND NEW SUNROOM, BETWEEN EXISTING KITCHEN AND DINING ROOM, BETWEEN EXISTING PRIMARY BEDROOM AND NEW EXPANDED AREA.

WITH THE REAR PROPERTY LINE BORDERING AN INTERMITTENT STREAM, THE HOME SITS WITHIN THE 100-FT WETLAND BUFFER, BASED ON THE FLAGGED LIMIT OF THE WETLAND EDGE (SEE ATTACHED CERTIFIED PLOT PLAN BY READING LAND SURVEYORS). IT CAN BE ESTIMATED THAT THE SEASONAL HIGH GROUND WATER WOULD BE ENCOUNTERED AT APPROXIMATELY 88'-0" FROM THE REAR PORTION OF THE LOT HAS A MAXIMUM ELEVATION OF 88, WHICH INDICATES A LIMITED DEPTH TO GROUND WATER.

WITH A DESIRE TO NOT DISTURB THE EXTENSIVE EXISTING MATURE TREE ROOT SYSTEMS AND VEGETATION ON SITE, PROACTIVELY MITIGATE CHANGES TO THE STORMWATER RUN-OFF PATTERNS CREATED BY THE PROPOSED RENOVATION. THIS WILL BE ACCOMPLISHED BY MAINTAINING THE EXISTING STORMWATER RUN-OFF PATTERNS ON THE REAR PORTION OF THE LOT, AND PROPOSED INFILTRATION SYSTEMS TO ESTIMATED SEASONAL HIGH GROUND WATER LEVELS. AFTER THE BOTTOM OF ANY PROPOSED INFILTRATION TRENCH, BELOW THE NEW DECK, STORMWATER FROM THE NEW ROOF AREA WILL BE CONVEYED TO THE TRENCH VIA DOWNSPOUTS (SEE 1-SK-02 FOR LOCATIONS) AND ALLOWED TO INFILTRATE.

AS SHOWN BELOW, THE TRENCH WILL BE ADEQUATELY SIZED WITH A STATIC VOLUME THAT WILL INFILTRATE A MINIMUM OF 25% OF THE VOLUME OF STORMWATER EVENTS EXCESS OF 1" VOLUME. INFILTRATE WILL CONTINUE TO FLOW OVERLAND TOWARD THE REAR OF THE LOT, THE WETLAND, CONSISTENT WITH EXISTING CONDITIONS.

WHILE SIZED FOR THE 1" VOLUME OF THE ROOF AREA OF THE ADDITION, IT'S WORTH REITERATING THAT THE PROJECT INCLUDES REMOVAL OF AN EXISTING ROOF AREA, RESULTING IN A NET ROOF INCREASE OF ONLY 225 SF.

INFILTRATION SYSTEM CALCULATION

$0.083 \text{ (1" OF RAIN)} \times 345 \text{ SF} = 28.75 \text{ CF (OF STORAGE REQUIRED)}$

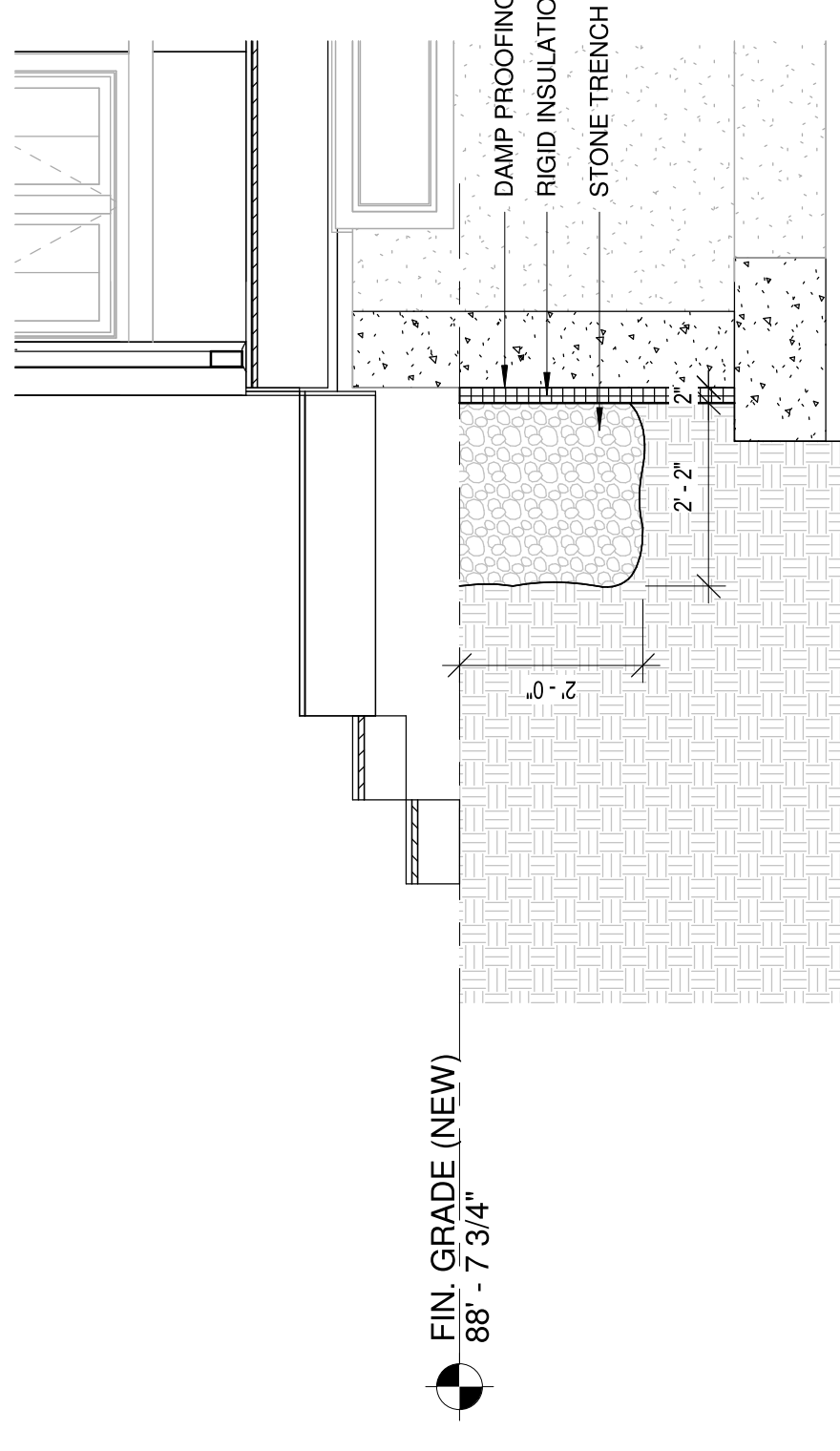
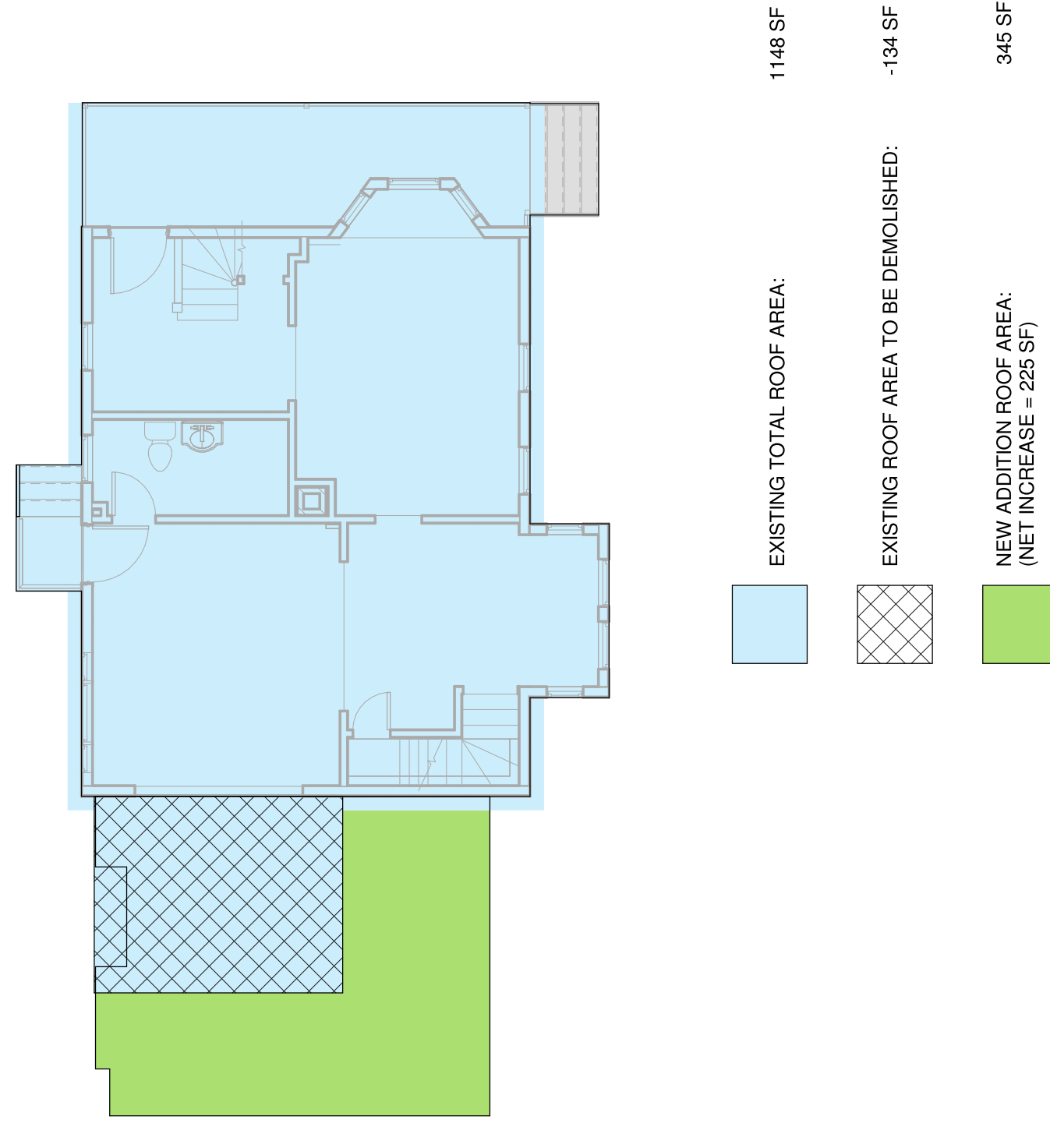
$2 \text{ X } 2 \text{ X } .3 \text{ (VOID)} = 1.2 \text{ CF OF VOLUME/LINEAR FOOT}$

$1.2 \text{ CF/LF} \times 24\text{LF OF TRENCH} = 28.8\text{CF (STORAGE PROVIDED)}$

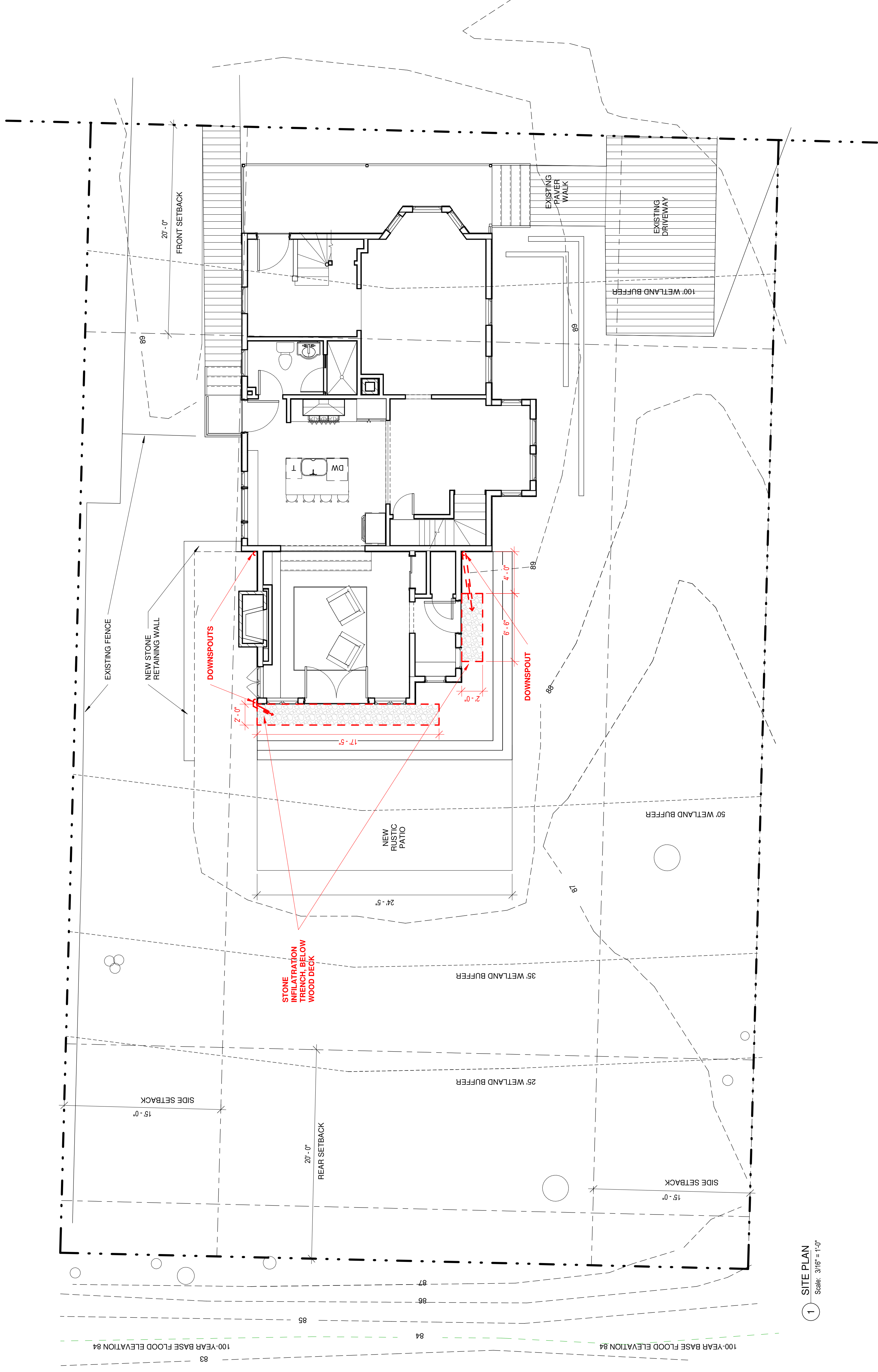
SUMMARY

TOTAL STORAGE REQUIRED = 28.75 CF
 TOTAL LINEAR FEET OF TRENCH PROVIDED = 24.0
 TOTAL STORAGE PROVIDED = 28.8 CF

PLAN DIAGRAM



2 INFILTRATION TRENCH DETAIL
 Scale: 1/2" = 1'-0"



1 SITE PLAN
 Scale: 3/16" = 1'-0"