



City of Milpitas

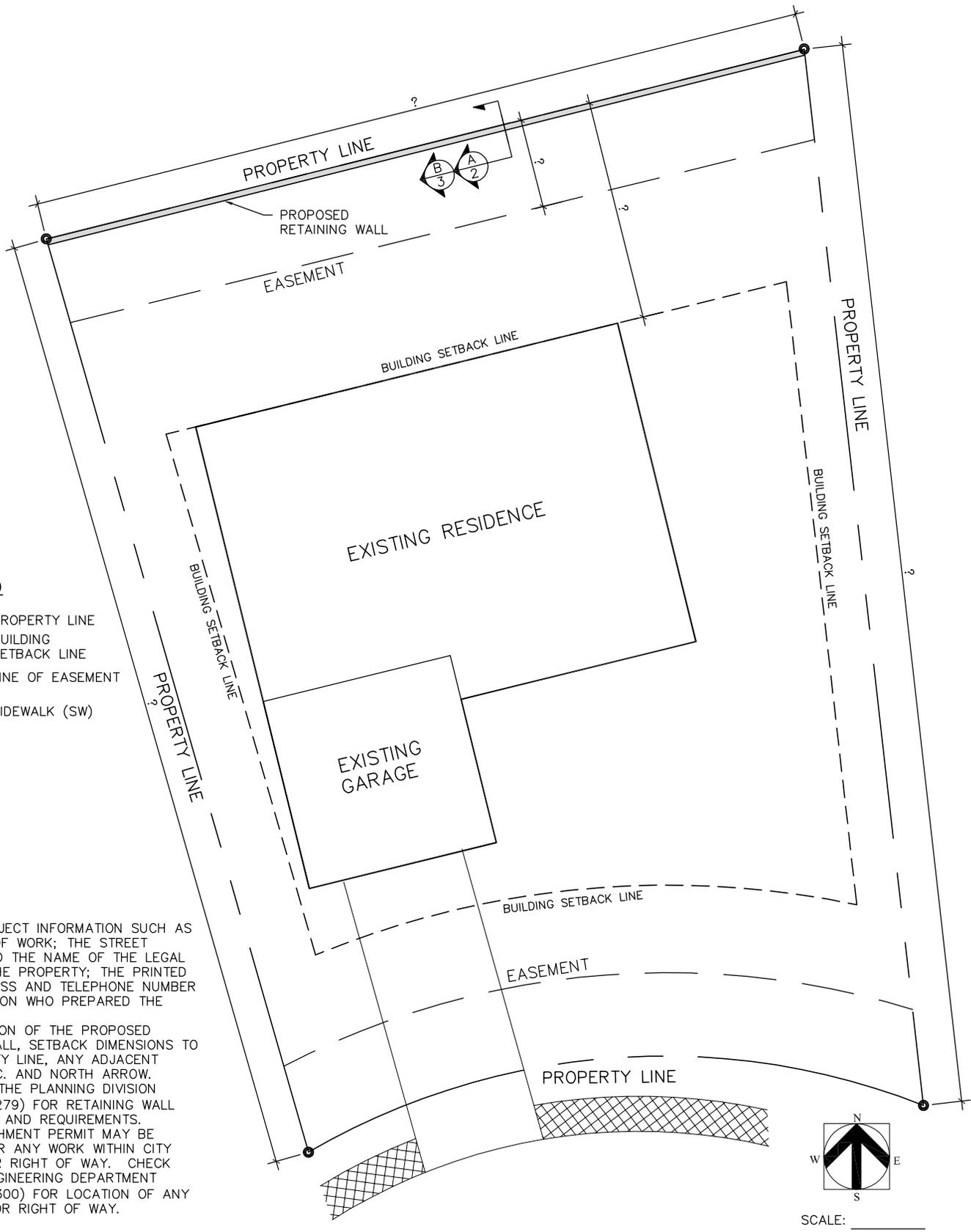
Building & Safety Department

DESIGN GUIDELINES FOR RESIDENTIAL RETAINING WALL

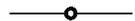


455 E. Calaveras Blvd.
Milpitas, CA 95035
408-586-3240
www.ci.milpitas.ca.gov

REV. JANUARY 2014



PLAN LEGEND

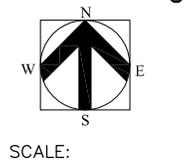
-  PROPERTY LINE
-  BUILDING SETBACK LINE
-  LINE OF EASEMENT
-  SIDEWALK (SW)

NOTE:

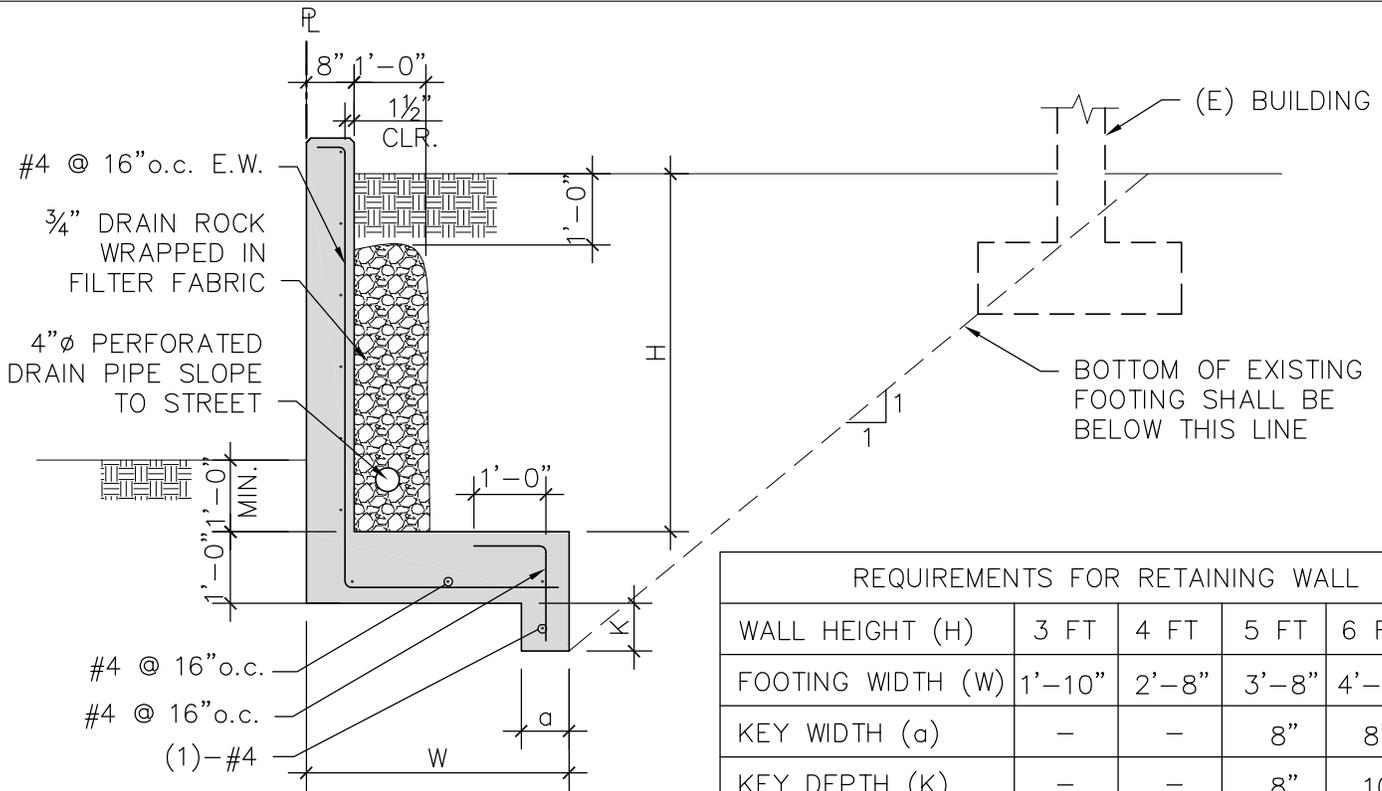
1. PROVIDE PROJECT INFORMATION SUCH AS THE SCOPE OF WORK; THE STREET ADDRESS AND THE NAME OF THE LEGAL OWNER OF THE PROPERTY; THE PRINTED NAME, ADDRESS AND TELEPHONE NUMBER OF THE PERSON WHO PREPARED THE PLANS.
2. SHOW LOCATION OF THE PROPOSED RETAINING WALL, SETBACK DIMENSIONS TO THE PROPERTY LINE, ANY ADJACENT BUILDING, ETC. AND NORTH ARROW. CHECK WITH THE PLANNING DIVISION (408-586-3279) FOR RETAINING WALL REGULATIONS AND REQUIREMENTS.
3. AN ENCROACHMENT PERMIT MAY BE REQUIRED FOR ANY WORK WITHIN CITY EASEMENT OR RIGHT OF WAY. CHECK WITH THE ENGINEERING DEPARTMENT (408-586-3300) FOR LOCATION OF ANY EASEMENTS OR RIGHT OF WAY.

REV.	DATE	BY	SCALE: N.T.S.
1	1/11	BYC	DATE: MAY 2010
2	1/14	OC	DESIGNED BY: OC
			DRAWN BY: BYC
			REVIEW BY: KI/LS/OC/GA/BK

City of Milpitas
 Building & Safety Department
RESIDENTIAL RETAINING WALL
SAMPLE PLOT PLAN

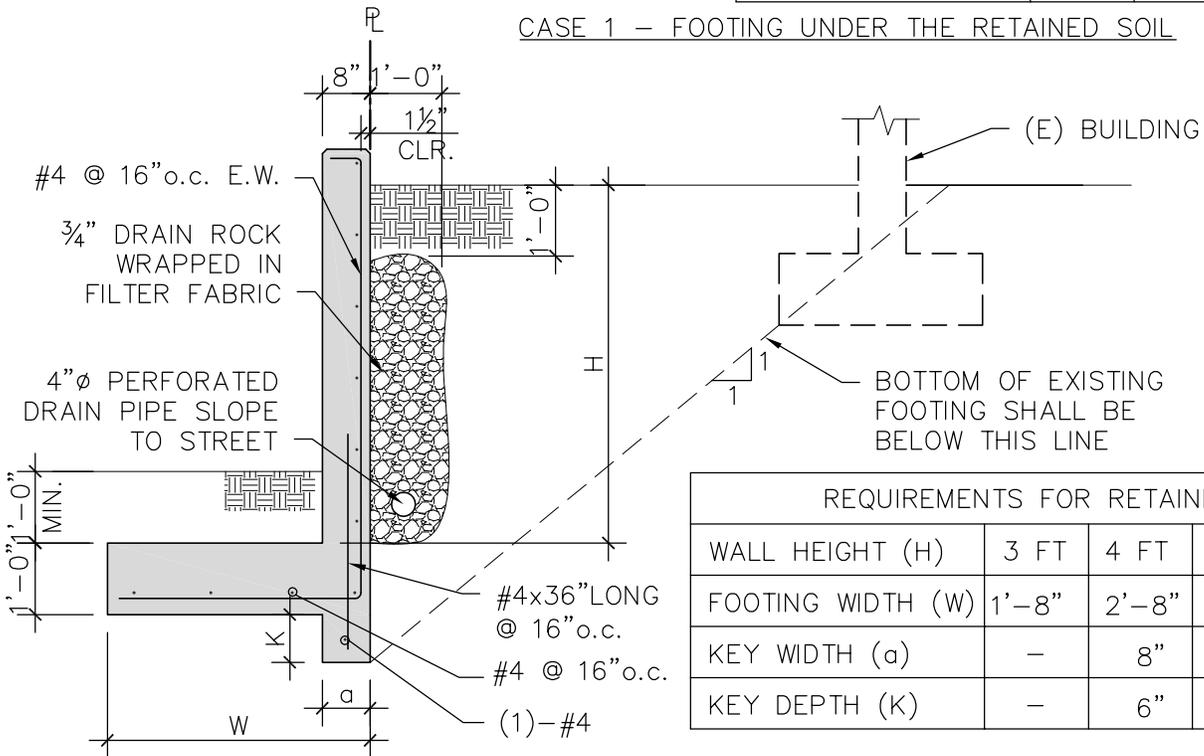


SHEET
1
 OF 3 SHEETS



REQUIREMENTS FOR RETAINING WALL				
WALL HEIGHT (H)	3 FT	4 FT	5 FT	6 FT
FOOTING WIDTH (W)	1'-10"	2'-8"	3'-8"	4'-10"
KEY WIDTH (a)	-	-	8"	8"
KEY DEPTH (K)	-	-	8"	10"

CASE 1 – FOOTING UNDER THE RETAINED SOIL



REQUIREMENTS FOR RETAINING WALL				
WALL HEIGHT (H)	3 FT	4 FT	5 FT	6 FT
FOOTING WIDTH (W)	1'-8"	2'-8"	3'-2"	4'-2"
KEY WIDTH (a)	-	8"	8"	8"
KEY DEPTH (K)	-	6"	9"	1'-3"

CASE 2 – FOOTING ON OPPOSITE SIDE OF THE RETAINED SOIL

SEE SHEET 3 FOR ADDITIONAL NOTES

(A) CONCRETE RETAINING WALL

SCALE: N.T.S.

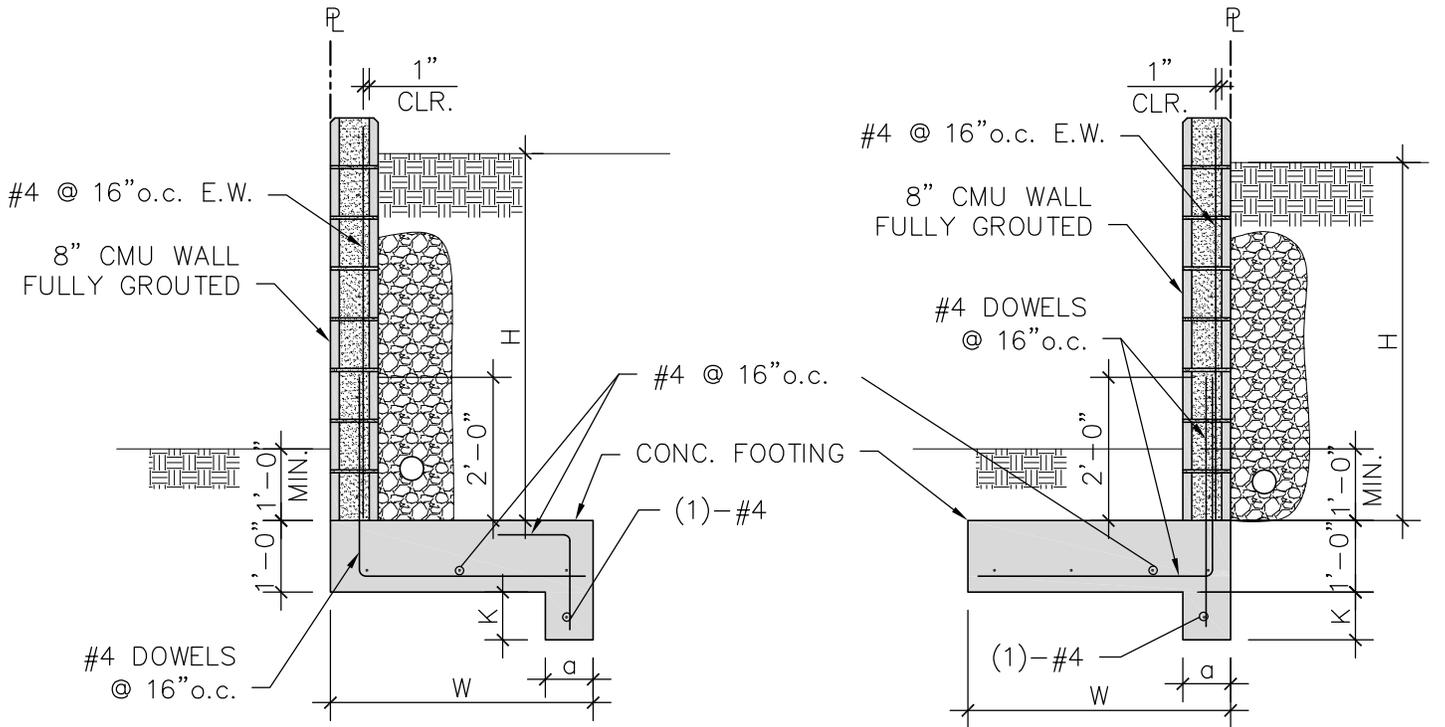
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City of Milpitas
 Building & Safety Department
RESIDENTIAL RETAINING WALL
CONCRETE RETAINING WALL DETAILS

SHEET
2
 OF 3 SHEETS

NOTES:

1. THE GUIDELINE COVERS RETAINING WALLS UP TO 6' MEASURING FROM THE TOP OF FOOTING TO THE TOP OF THE RETAINED SOIL.
2. THE BACKFILL OF RETAINING WALLS SHALL BE LEVEL AND HAVE NO SURCHARGE AND THE WATER LEVEL SHALL BE BELOW THE BASE OF THE FOOTING OF THE WALL.
3. THE HORIZONTAL DISTANCE OF THE AREA IN FRONT OF THE RETAINING WALL SHALL BE LEVEL AT LEAST 10' MEASURING FROM THE FACE OF THE WALL.
4. DRAINAGE SHALL BE PROVIDED BEHIND THE RETAINING WALL PER DETAILS.
5. THE MAXIMUM ACTIVE EARTH PRESSURE OF THE RETAINED SOIL IS 50 PCF EQUIVALENT FLUID WEIGHT.
6. RETAINING WALLS TALLER THAN 6', NOT MEETING THE ABOVE CONDITIONS OR ON THE HILL-SIDE SHALL BE DESIGNED BY AN ARCHITECT OR ENGINEER REGISTERED IN THE STATE OF CALIFORNIA.
7. CONCRETE SHALL BE NORMAL WEIGHT WITH COMPRESSIVE STRENGTH OF 2,500 PSI MINIMUM AT 28 DAYS.
8. MASONRY COMPRESSIVE STRENGTH SHALL BE 1,500 PSI AND GROUT STRENGTH SHALL BE 2000 PSI. MORTAR SHALL BE TYPE M WITH 1900 PSI COMPRESSIVE STRENGTH.
9. REINFORCEMENT SHALL BE GRADE 60.
10. THE INFORMATION PROVIDED IN THIS DESIGN GUIDE CARRIES NO IMPLIED OR INFERRED GUARANTEE AGAINST FAILURE OR DEFECTS. BY USING THIS DESIGN GUIDE, THE CONTRACTOR/OWNER ACCEPTS THE FULL RESPONSIBILITY OF RISK. ALTERNATE DESIGN MAY BE USED WHEN PROVIDED WITH WET STAMPED AND SIGNED STRUCTURAL CALCULATIONS & DETAILS BY A CALIFORNIA LICENSED ENGINEER OR ARCHITECT.



CASE 1 – FOOTING UNDER THE RETAINED SOIL

CASE 2 – FOOTING ON OPPOSITE SIDE OF THE RETAINED SOIL

SEE SHEET 2 FOR FOOTING SIZE TABLE AND DETAILS NOT SHOWN

B CMU RETAINING WALL

SCALE: N.T.S.

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City of Milpitas
 Building & Safety Department
RESIDENTIAL RETAINING WALL
CMU RETAINING WALL DETAILS



CITY OF MILPITAS

BUILDING AND SAFETY DEPARTMENT

455 East Calaveras Boulevard, Milpitas, CA 95035-5479 – Tel. 408.586.3240, Fax 408.586.3285

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CITY OF MILPITAS DISCLAIMER

The City of Milpitas has provided design guidelines to the public for informational purposes. These guidelines are sufficient to meet the Building Code requirements and obtain a City permit. However, the guidelines were drafted to fit generic design and building conditions, not project specific conditions.

I, the undersign, expressly acknowledge and agree that any and all use of the City of Milpitas Building & Safety Department Design Guidelines is at my sole risk. Neither the City of Milpitas nor any of its respective employees, agents, or officials warrant that access to and use of the Guidelines will be free from failure or defects. Nor does the City of Milpitas offer any warranty for the results that may be obtained from using the Guidelines or for the accuracy, reliability or design of any information provided by the Guidelines.

Print Name

Company

Signature

Plan Check No.

Date