

954 Keeler Avenue, Berkeley, CA

RETAINING WALL DESIGN

BASIC INFORMATION:

=====

SOIL UNIT WEIGHT, G:	120 pcf
STEM WALL UNIT WEIGHT, GC:	150 pcf
EQUIV. FLUID PASSIVE PRESS., PP:	350 pcf
EQUIV. FLUID ACTIVE PRESS. PA:	65 pcf
EARTH PRESS. FACTOR, KA:	0.5
SLOPE RATIO:	1: 5
SURCHARGE LOAD, QS:	0 psf
VERTICAL (LINE) LOAD, PW:	0 plf
COEFF. OF FRICTION, CF:	0.35

WALL GEOMETRY:

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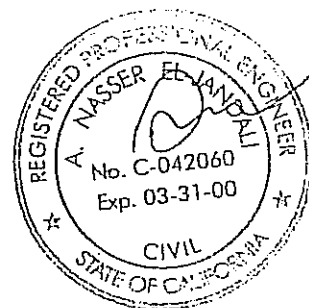
SOIL HEIGHT BEHIND THE WALL, H:	5 feet
HT. OF WALL ABOVE GRADE, HC:	0.5 feet
TOP STEM THICKNESS, T1:	8 inches
LOWER STEM THICKNESS, T2:	8 inches
BASE WIDTH, L:	3 feet
BASE THICKNESS, D:	12 inches
TOE LENGTH, B:	2.33333 feet
HEEL LENGTH, I:	3.333E-06 feet
KEY DEPTH, K:	1.333 feet
KEY THICKNESS, T3:	1 inches
KEY ARM FROM HEEL, K1:	2 feet
SOIL THICKNESS ABOVE BASE, S:	0.5 feet

SOIL PRESSURES AND FORCES:

=====

THE RESULTANT IS OUTSIDE THE MIDDLE THIRD.

MAX. SOIL PRESSURE, Q1:	1385.5952 psf
MIN. SOIL PRESSURE, Q2:	0 psf
OVERTURNING MOMENT, OM:	2340.0008 lb-ft
RESISTING MOMENT, RM:	3490.9722 lb-ft
HORIZONTAL FORCE, FA:	1170.0003 lb
F.S. AGAINST OVERTURNING:	1.491868
F.S. AGAINST SLIDING:	1.6631305
MAX. MOMENT AT BOTT. OF WALL, M:	2302.0833 lb-ft

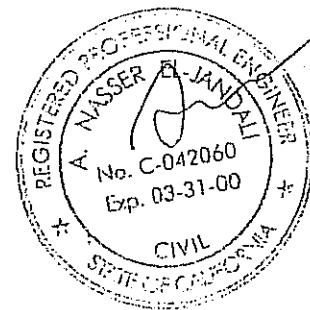


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954 Keeler Avenue, Berkeley, CA

REINFORCED CONCRETE BEAM DESIGN

MA=	2302.0833 lb-ft	x12 inches *1.7 (FACTORED LOAD)
MU=	46962.5 lb-in	
FC=	2500 psi	BM WIDTH, B1= 3.4855807 inches
FY=	60000 psi	BM WIDTH, B2= 3.1887013 inches
RW MAX. MOMENT, M=	2302.0833 lb-ft	BM DEPTH, D1= 6.0997662 inches
DESIGN WIDTH, B=	12 inches	BM DEPTH, D2= 6.3774027 inches
DESIGN DEPTH, D=	5.6875 inches	BM. FULL DEPTH, H= 8 inches
REQ'D. STEEL, AS=	0.1710178 inch ²	REQ'D. DEPTH, D= 5.6875 inches
MAX. STEEL, AS1=	0.911995 inch ²	
MIN. STEEL, AS2=	0.2275 inch ²	
DESIGN STEEL, AS=	0.3067962 inch ²	Rebar size = # 5
DESIGN MOMENT, MN=	88227.196 lb-in	Spacing = 12 in. O.C.
=	7352.2663 lb-ft	AS(BAR)= 0.3067962 in. ²



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RETAINING WALL DESIGN

BASIC INFORMATION:

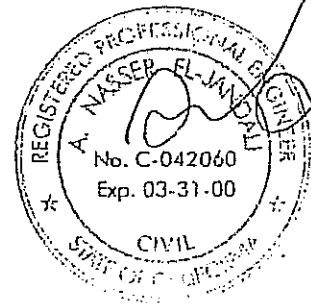
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STEM WALL UNIT WEIGHT, GC:	150 pcf
EQUIV. FLUID PASSIVE PRESS., PP:	350 pcf
EQUIV. FLUID ACTIVE PRESS. PA:	65 pcf
EARTH PRESS. FACTOR, KA:	0.5
SLOPE RATIO:	1: 5
SURCHARGE LOAD, QS:	0 psf
VERTICAL (LINE) LOAD, PW:	0 plf
COEFF. OF FRICTION, CF:	0.35

WALL GEOMETRY:

=====

SOIL HEIGHT BEHIND THE WALL, H:	6 feet
HT. OF WALL ABOVE GRADE, HC:	0.5 feet
TOP STEM THICKNESS, T1:	8 inches
LOWER STEM THICKNESS, T2:	8 inches
BASE WIDTH, L:	3.75 feet
BASE THICKNESS, D:	12 inches
TOE LENGTH, B:	3 feet
HEEL LENGTH, I:	0.0833333 feet
KEY DEPTH, K:	2.1 feet
KEY THICKNESS, T3:	12 inches
KEY ARM FROM HEEL, K1:	2 feet
SOIL THICKNESS ABOVE BASE, S:	0 feet



SOIL PRESSURES AND FORCES:

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THE RESULTANT IS OUTSIDE THE MIDDLE THIRD.	
MAX. SOIL PRESSURE, Q1:	1431.0734 psf
MIN. SOIL PRESSURE, Q2:	0 psf
OVERTURNING MOMENT, OM:	3742.4382 lb-ft
RESISTING MOMENT, RM:	5838.0298 lb-ft
HORIZONTAL FORCE, FA:	1600.0924 lb
F.S. AGAINST OVERTURNING:	1.5599535
F.S. AGAINST SLIDING:	1.5149636
MAX. MOMENT AT BOTT. OF WALL, M:	3978 lb-ft

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4513

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REINFORCED CONCRETE BEAM DESIGN

MA=	3978 lb-ft	x12 inches *1.7 (FACTORED LOAD)	
MU=	81151.2 lb-in		
FC=	2500 psi	BM WIDTH, B1=	4.1826968 inches
FY=	60000 psi	BM WIDTH, B2=	3.8264416 inches
RW MAX. MOMENT, M=	3978 lb-ft	BM DEPTH, D1=	7.3197194 inches
		BM DEPTH, D2=	7.6528832 inches
DESIGN WIDTH, B=	12 inches	BM. FULL DEPTH, H=	8 inches
DESIGN DEPTH, D=	5.69 inches	REQ'D. DEPTH, D=	5.6875 inches
REQ'D. STEEL, AS=	0.295389 inch ²		
MAX. STEEL, AS1=	0.9123959 inch ²		
MIN. STEEL, AS2=	0.2276 inch ²		
DESIGN STEEL, AS=	0.6135923 inch ²	Rebar size = #	5
DESIGN MOMENT, MN=	164542.08 lb-in	Spacing =	6 in. O.C.
=	13711.84 lb-ft	AS(BAR)=	0.3067962 in. ²
P1=	0.0075		



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AMANA ENGINEERING & CONSTRUCTION, INC.

930 Dwight Way, Suite 112
Berkeley, CA 94710
California Contractor's License = 555138

TEL: (510) 845-4515
TEL: (510) 649-0468
FAX: (510) 649-0239

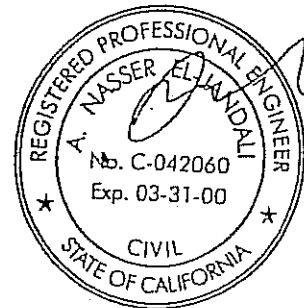
Title Page

Project: Replace Existing Concrete
Retaining Wall at
954 Keeler Avenue
Berkeley, California

Owner: C/O Vic Linden

Date: 7-23-2000

Contractor: Vic Linden



00 3798



AMANA ENGINEERING & CONSTRUCTION, INC.

NOTES

FOUNDATIONS

1. All footings not formed shall be poured into neat excavations. Measures shall be taken to prevent sloughing of soil into the footing excavation prior to and during the placing of concrete.
2. The contractor shall be responsible of carrying out all the recommendations of the Engineer:

CONCRETE

1. All concrete shall meet the following minimum specifications:
Design strength at 28 days 3000 psi U.O.N.
Cement content shall be a minimum of 5 sacks per cubic yard for 1"-1 1/2" maximum aggregate size.
Maximum slump shall be 4 inches.
Aggregate size shall be compatible with pouring, placing and finishing conditions.
2. All concrete shall conform with requirements of the latest edition of the ACI Code.
3. Cement shall conform to ASTM C-150 Type 1 or 2.
4. Concrete aggregates shall conform to ASTM C-33
5. Remove all debris from the forms before pouring any concrete. No wood form spreaders or wood stakes shall be used in areas to be poured with concrete.
6. All formwork shall remain in place for the periods of time specified in the ACI Code as minimum.
7. All concrete shall be cured by an approved method.
8. Follow all ACI recommendations for placing and curing concrete during hot or cold weather conditions.

CONCRETE REINFORCING

1. Reinforcing steel shall conform to ASTM A615 Grade 60 FOR #4 AND LARGER
2. Reinforcing steel shall be fabricated according to the "Manual of Standard Practice for Reinforced Concrete Construction".
3. Reinforcing dowels, bolts, anchors and other items to be embedded in concrete shall be securely positioned before placing concrete.
4. All rebars to be welded shall be continuously inspected by a qualified laboratory. Contractor must furnish to the laboratory mill certificate showing chemical analysis. All preheating and welding shall be done in accordance with AWS Standards.
5. Concrete coverage shall be from the face of the bar and shall denote clear coverage. The following minimum coverage shall be observed:

Concrete poured against earth	1"
Concrete poured in forms and exposed to earth or weather	2"
Bars in beams or columns	2"
Bars in walls or interior face	3/4"
Bars in interior slabs	3/4"
6. All bars shown continuous in plans shall have if spliced a minimum splice length of 40 x rebar diameter.

PIPES AT CONCRETE FOUNDATIONS

All pipe shall be encased in sleeves. Pipes clear sleeves by 1/2". Caulk with plastic material. If pipe is in place prior to pouring concrete, wrap pipe with 1" glass wool. Step footing if pipe passes below or in spread footing portion of foundation. No digging is allowed for pipe trench parallel to footing below lines indicated.



930 Dwight Way, Suite 10A
Berkeley, CA 94710
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FAX: (510) 649-0239

DESIGN ASSUMPTIONS

1. BASIS OF DESIGN IS U.B.C. 1997 EDITION
2. CONCRETE SHALL ATTAIN A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2500 PSI PER ACI-318-88.
3. REINFORCING STEEL SHALL CONFORM TO ASTM 1-615, GR. 40.
4. FOUNDATION DESIGN PER U.B.C. REQUIREMENTS.
5. LUMBER-DOUGLAS FIR GRADE 1.2 OR BETTER (U.O.N.).
6. COLUMNS AND POSTS SHALL HAVE CONTINUOUS BEARING ON BEAMS AND FOOTINGS OR MUD SILLS.
7. COLUMNS AND POSTS SHALL HAVE I.C.B.O. APPROVED COLUMN CAPS AND POST ANCHORS.
8. THE OWNER SHALL INSURE THAT CONSTRUCTION CONFORMS TO THESE CALCULATIONS; AND THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS.
9. NOTHING IN THESE CALCULATIONS OR DRAWINGS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO LOCAL CODES, STATE, AND NATIONAL ORDINANCES AND REGULATIVE.
10. THESE CALCULATIONS HAVE BEEN PREPARED EXCLUSIVELY FOR SPECIFIC APPLICATIONS TO THE PROPOSED BUILDING IN ACCORDANCE WITH GENERALLY ACCEPTED CIVIL-STRUCTURAL ENGINEERING PRACTICES. NO WARRANTY, EXPRESSED OR IMPLIED, IS MADE. IN THE EVENT THAT ANY CHANGES IN THE NATURE, DESIGN, OR LOCATION OF THE STRUCTURE ARE PLANNED, THE CONCLUSIONS AND RECOMMENDATIONS CONTAINED IN THESE CALCULATIONS SHOULD NOT BE CONSIDERED VALID UNLESS THE CHANGES ARE REVIEWED AND CALCULATIONS OF THESE CALCULATIONS MODIFIED OR VERIFIED IN WRITING.

PLOT PLAN

DRAWN BY:

VIC LUNDEN

954 KEELER AVE,

BERKELEY, CA 94706

(510) 524-5157

PROPERTY OWNER:

SAME

DRAWING NOT TO SCALE

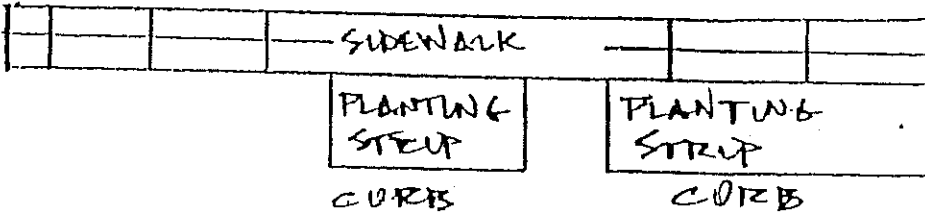
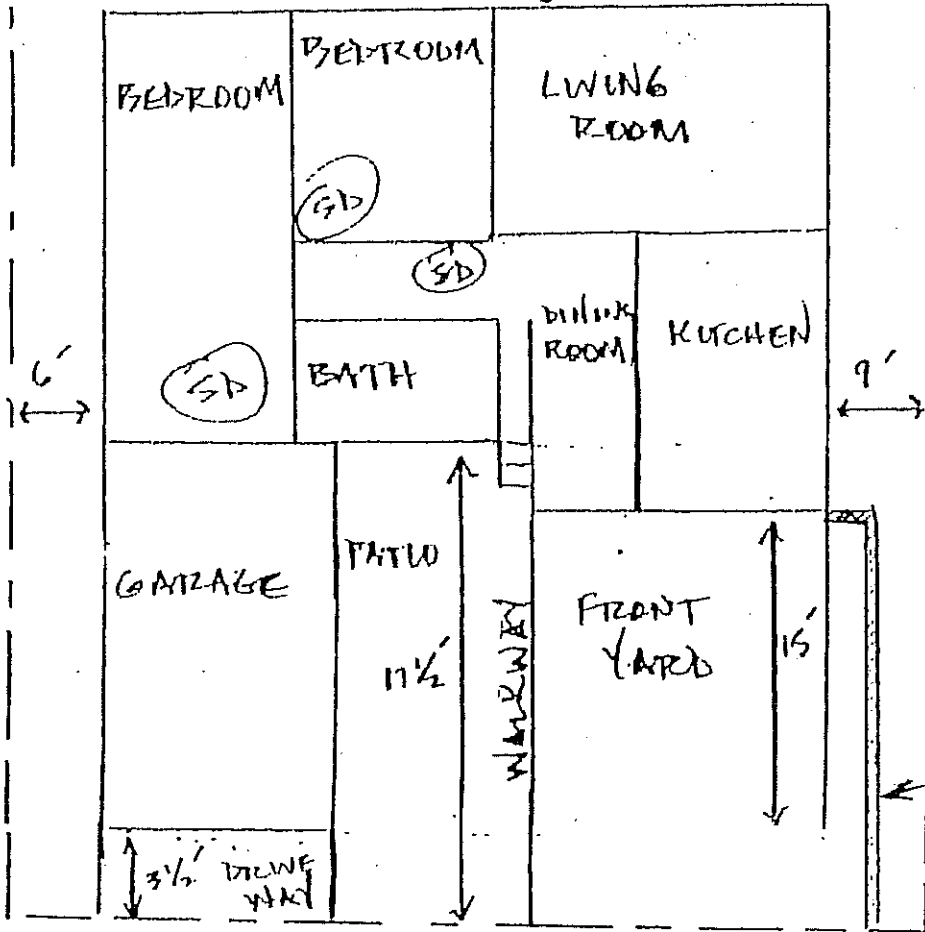
LEGEND:

----- = PROPERTY LINE

REPLACE EXISTING RETAINING WALL

98 1/2'

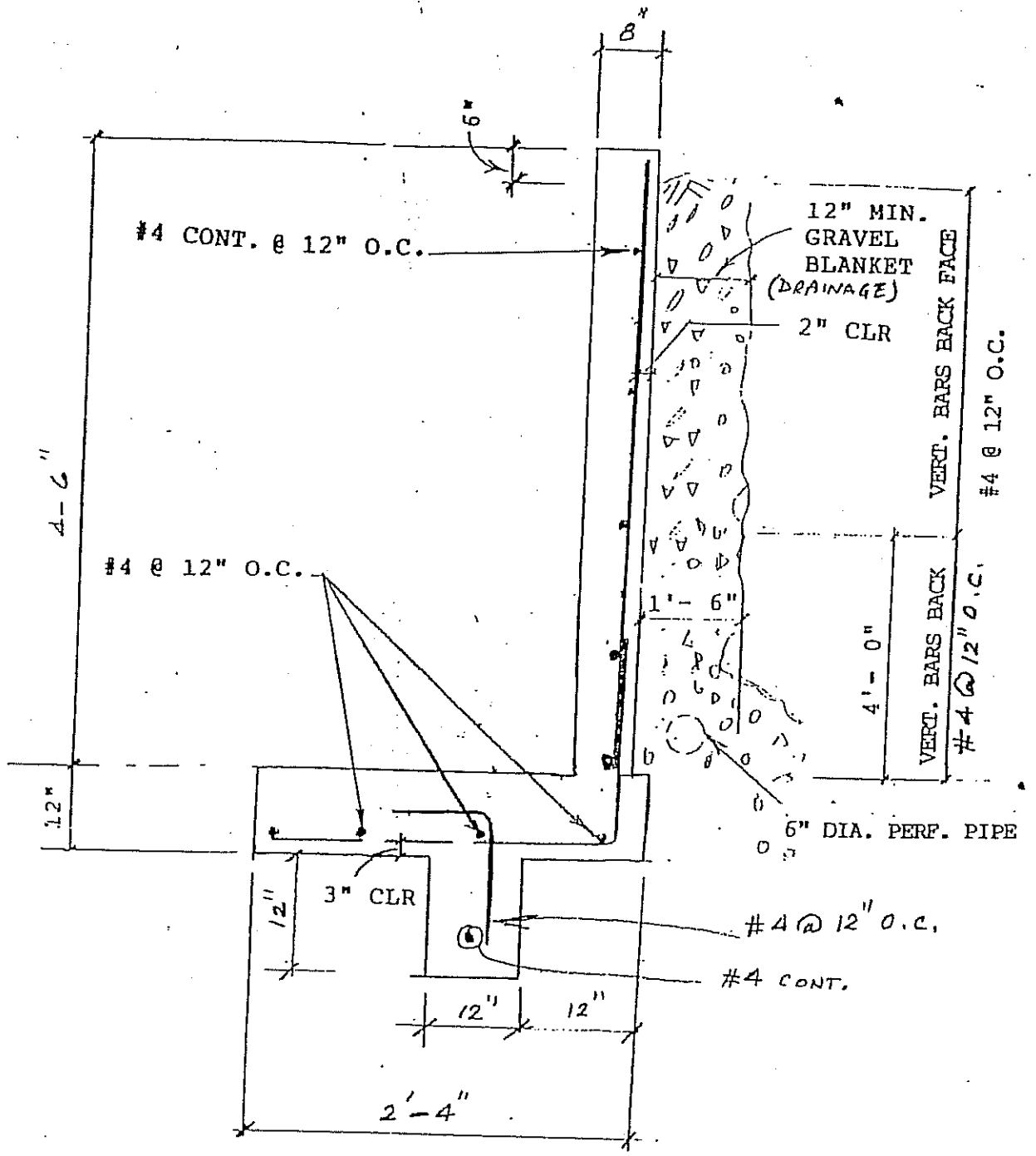
98 1/2'



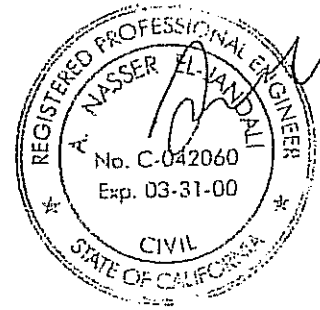
66'
954 KEELER AVENUE

PLOT PLAN

N.T.S

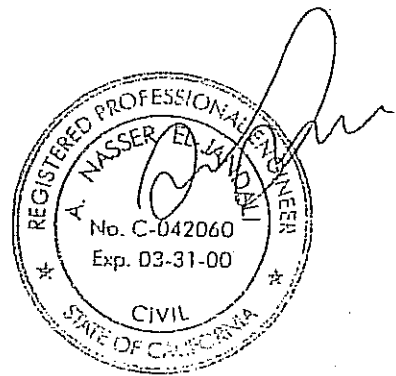
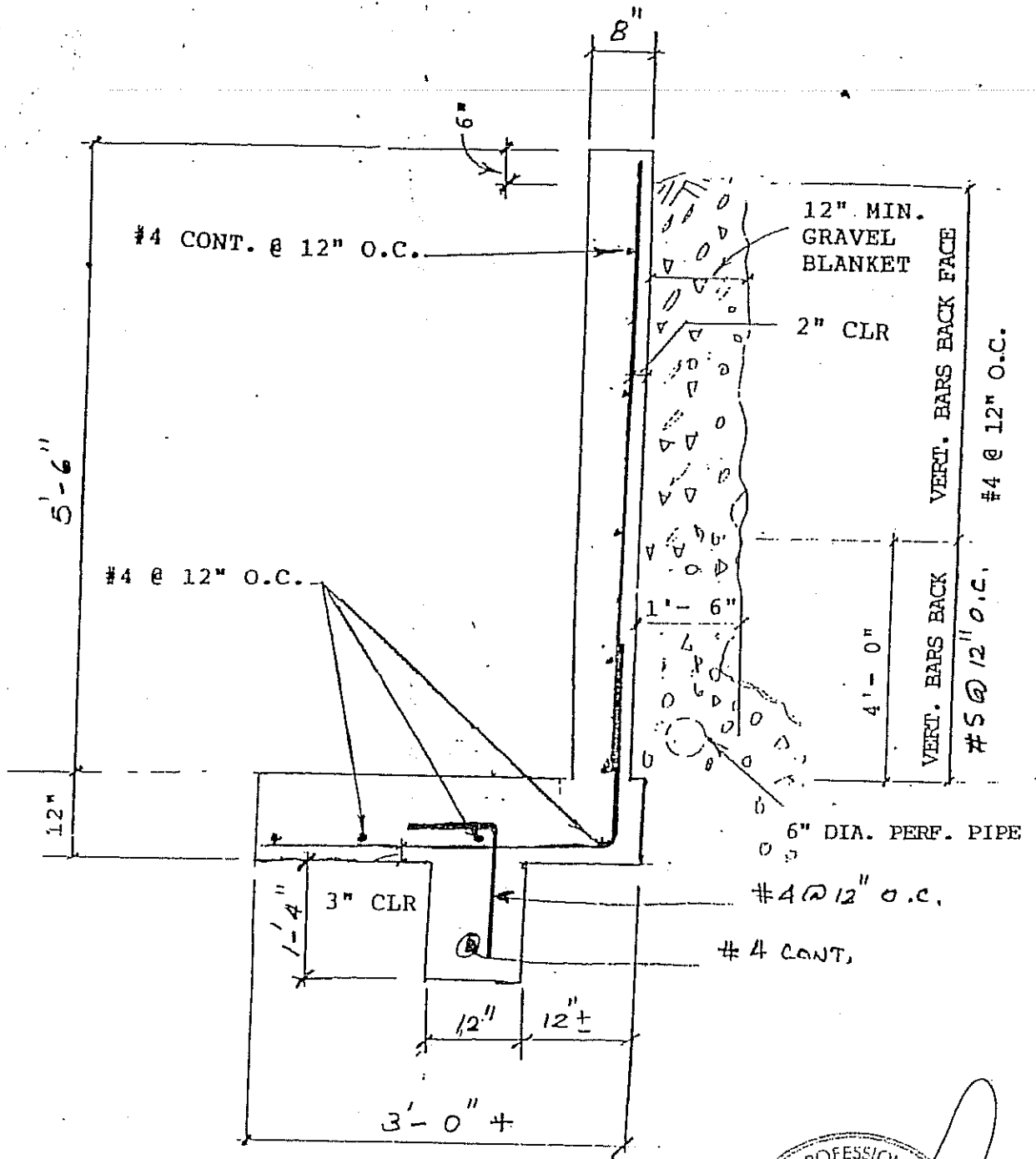


954 Keeler Avenue, Berkeley, CA



RETAINING WALL DESIGN

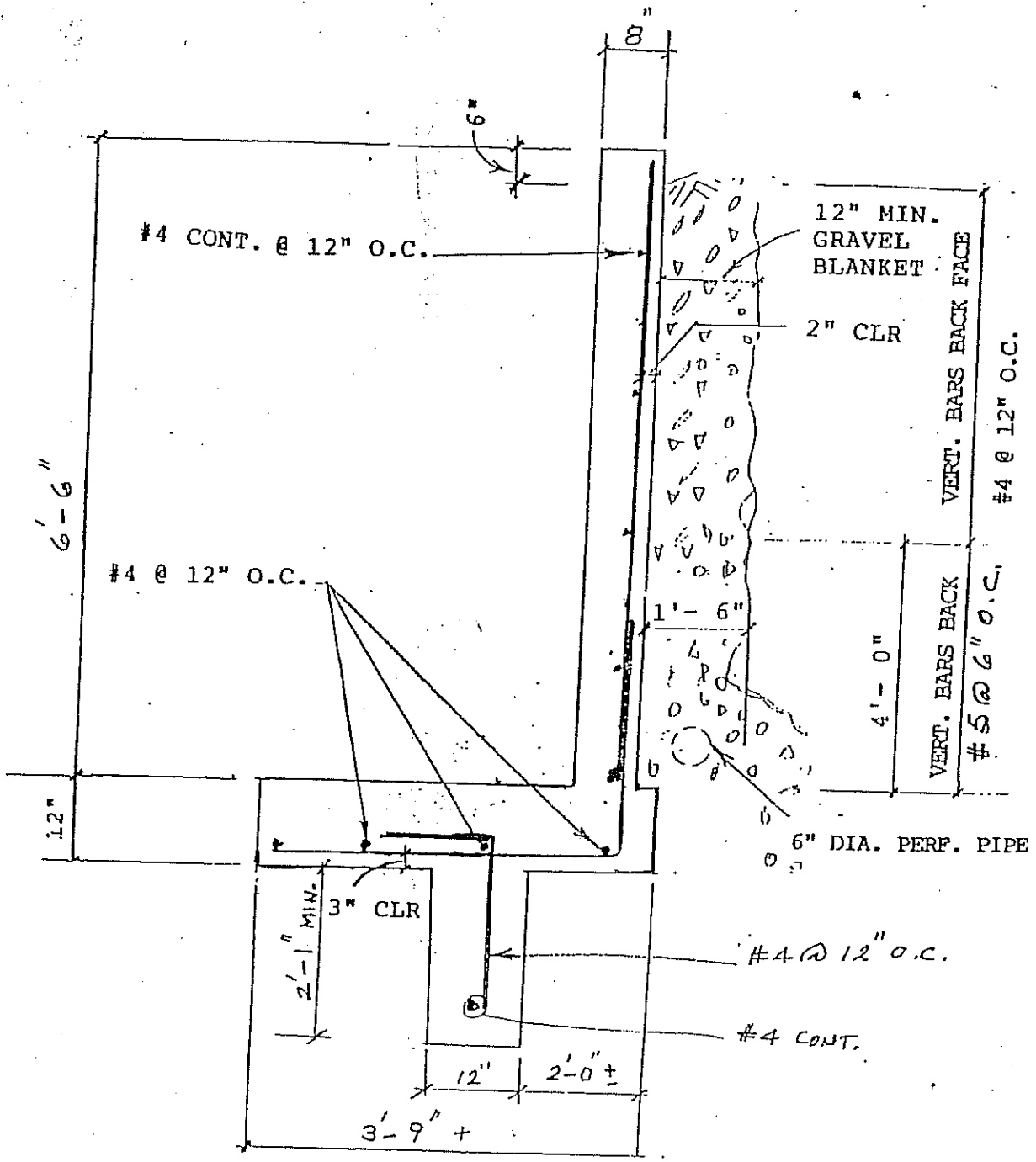
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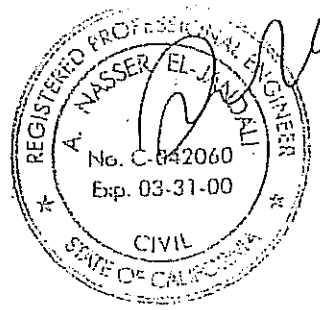
954 Keeler Avenue, Berkeley, CA

RETAINING WALL DESIGN

N.T.S



NOTE: CONNECT DRAINAGE PIPE TO (E) DRAIN PIPE.

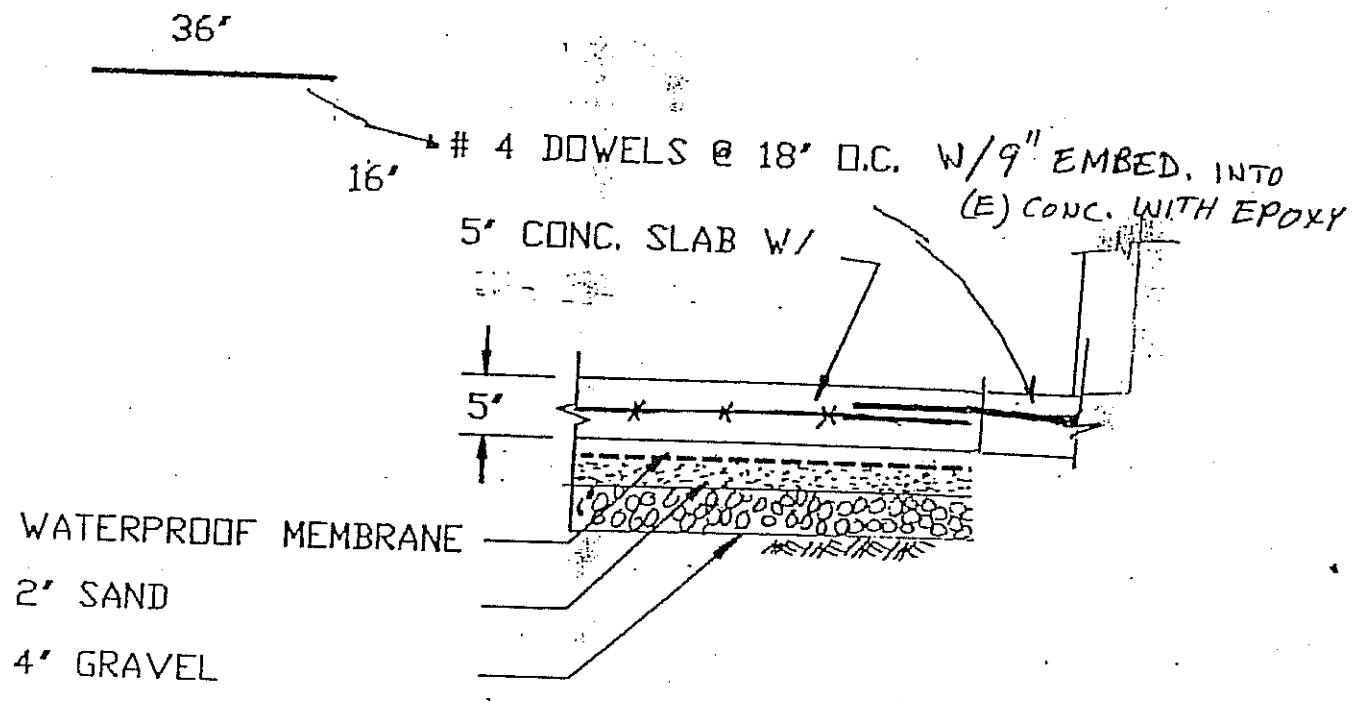


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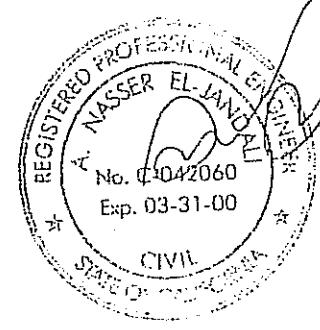
N.T.S.

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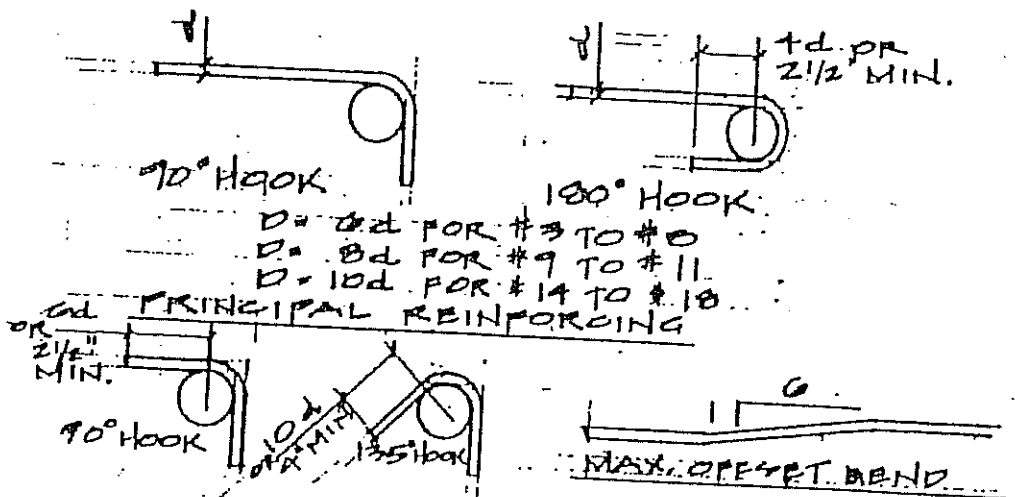
DETAIL FOR (E) CONC. SLAB REPLACEMENT

N.T.S.



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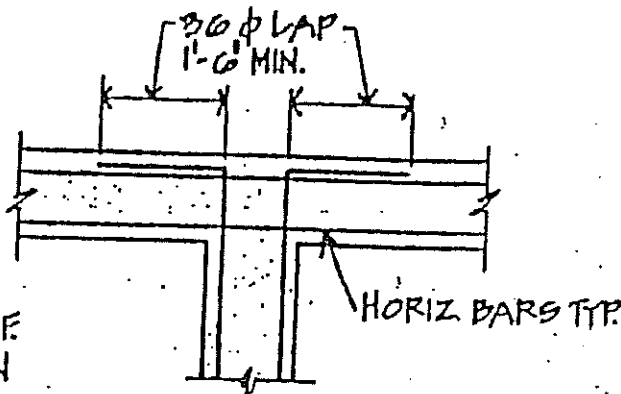
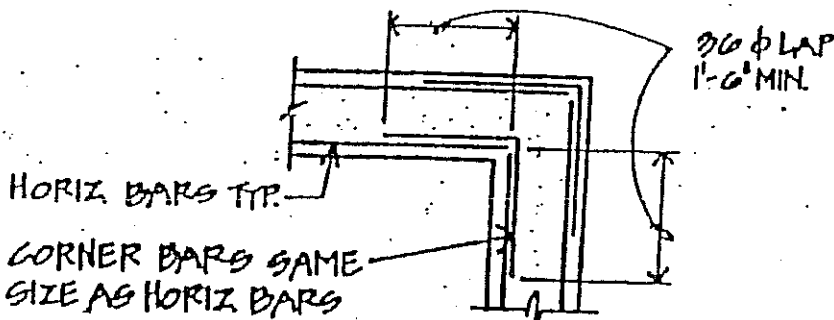
MIN $D = 1\frac{1}{2}$ " FOR #3
 MIN $D = 2$ " FOR #4
 MIN $D = 2\frac{1}{2}$ " FOR #5

TIE OR STIRRUP

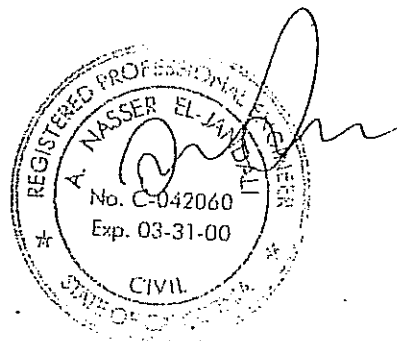
NOTES:

1. ALL BENDS SHALL BE MADE COLD
2. #14 & #18 BARS SHALL BE BEND TESTED & LAB APPROVED PRIOR TO BENDING.

BAR BENDS
N.T.S.



NOTE:
VERT. REINF.
NOT SHOWN



CONC. FOUNDATION TIE JUNCTION

N.T.S.

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BASIC INFORMATION:

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SOIL UNIT WEIGHT, G:	120 pcf
STEM WALL UNIT WEIGHT, GC:	150 pcf
EQUIV. FLUID PASSIVE PRESS., PP:	350 pcf
EQUIV. FLUID ACTIVE PRESS. PA:	65 pcf
EARTH PRESS. FACTOR, KA:	0.5
SLOPE RATIO:	1: 5
SURCHARGE LOAD, QS:	0 psf
VERTICAL (LINE) LOAD, PW:	0 plf
COEFF. OF FRICTION, CF:	0.35

WALL GEOMETRY:

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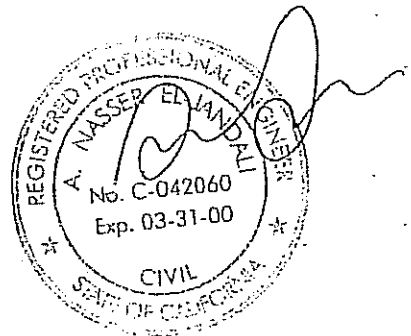
SOIL HEIGHT BEHIND THE WALL, H:	4 feet
HT. OF WALL ABOVE GRADE, HC:	0.5 feet
TOP STEM THICKNESS, T1:	8 inches
LOWER STEM THICKNESS, T2:	8 inches
BASE WIDTH, L:	2.333 feet
BASE THICKNESS, D:	12 inches
TOE LENGTH, B:	1.6 feet
HEEL LENGTH, I:	0.0663333 feet
KEY DEPTH, K:	1 feet
KEY THICKNESS, T3:	1 inches
KEY ARM FROM HEEL, K1:	2 feet
SOIL THICKNESS ABOVE BASE, S:	0.5 feet

SOIL PRESSURES AND FORCES:

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THE RESULTANT IS OUTSIDE THE MIDDLE THIRD.

MAX. SOIL PRESSURE, Q1:	1395.9395 psf
MIN. SOIL PRESSURE, Q2:	0 psf
OVERTURNING MOMENT, OM:	1364.9745 lb-ft
RESISTING MOMENT, RM:	2067.2187 lb-ft
HORIZONTAL FORCE, FA:	816.81739 lb
F.S. AGAINST OVERTURNING:	1.5144743
F.S. AGAINST SLIDING:	1.8586349
MAX. MOMENT AT BOTT. OF WALL, M:	1178.6667 lb-ft

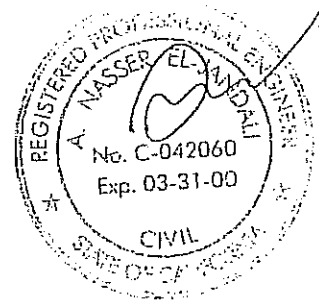


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954 Keeler Avenue, Berkeley, CA

REINFORCED CONCRETE BEAM DESIGN

MA=	1178.6667 lb-ft	x12 inches *1.7 (FACTORED LOAD)	
MU=	24044.8 lb-in		
FC=	2500 psi	BM WIDTH, B1=	2.7884645 inches
FY=	60000 psi	BM WIDTH, B2=	2.5509611 inches
RW MAX. MOMENT, M=	1178.6667 lb-ft	BM DEPTH, D1=	4.879813 inches
		BM DEPTH, D2=	5.1019221 inches
DESIGN WIDTH, B=	12 inches	BM. FULL DEPTH, H=	8 inches
DESIGN DEPTH, D=	5.75 inches	REQ'D. DEPTH, D=	5.75 inches
REQ'D. STEEL, AS=	0.0866094 inch ²		
MAX. STEEL, AS1=	0.9220169 inch ²		
MIN. STEEL, AS2=	0.23 inch ²		
DESIGN STEEL, AS=	0.1963495 inch ²	Rebar size = #	4
		Spacing =	12 in. O.C.
DESIGN MOMENT, MN=	58509.926 lb-in	AS(BAR)=	0.1963495 in. ²
=	4875.8272 lb-ft		

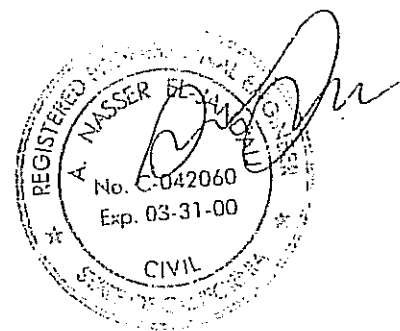


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WALL GEOMETRY:

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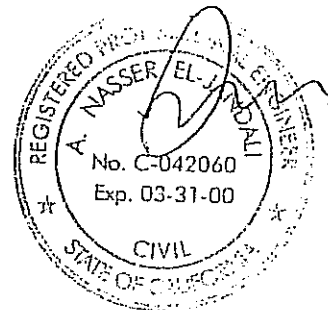
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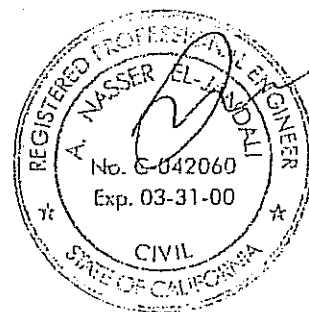


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DESIGN STEEL, AS=	0.6135923 inch ²	Rebar size = # 5
		Spacing = 6 in. O.C.
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	= 13711.84 lb-ft	
P1=	0.0075	



Handwritten signature/initials



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California Contractor's License # 505138

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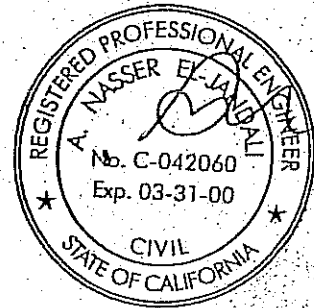
Title Page

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Retaining Wall at
954 Keeler Avenue
Berkeley, California

Owner: C/O Vic Linden

Date: 7-23-2000

Contractor: Vic Linden



[Handwritten signature]



AMANA ENGINEERING & CONSTRUCTION, INC.

NOTES

FOUNDATIONS

1. All footings not formed shall be poured into neat excavations. Measures shall be taken to prevent sloughing of soil into the footing excavation prior to and during the placing of concrete.
2. The contractor shall be responsible of carrying out all the recommendations of the Engineer.

CONCRETE

1. All concrete shall meet the following minimum specifications:
 Design strength at 28 days 3000 psi U.O.N.
 Cement content shall be a minimum of 5 sacks per cubic yard for 1"-1 1/2" maximum aggregate size.
 Maximum slump shall be 4 inches.
 Aggregate size shall be compatible with pouring, placing and finishing conditions.
2. All concrete shall conform with requirements of the latest edition of the ACI Code.
3. Cement shall conform to ASIM C-150 Type 1 or 2.
4. Concrete aggregates shall conform to ASIM C-33.
5. Remove all debris from the forms before pouring any concrete. No wood form spreaders or wood stakes shall be used in areas to be poured with concrete.
6. All formwork shall remain in place for the periods of time specified in the ACI Code as minimum.
7. All concrete shall be cured by an approved method.
8. Follow all ACI recommendations for placing and curing concrete during hot or cold weather conditions.

CONCRETE REINFORCING

1. Reinforcing steel shall conform to ASTM A615 Grade 60 FOR #4 AND LARGER
2. Reinforcing steel shall be fabricated according to the "Manual of Standard Practice for Reinforced Concrete Construction".
3. Reinforcing dowels, bolts, anchors and other items to be embedded in concrete shall be securely positioned before placing concrete.
4. All rebars to be welded shall be continuously inspected by a qualified laboratory. Contractor must furnish to the laboratory mill certificate showing chemical analysis. All preheating and welding shall be done in accordance with AWS Standards.
5. Concrete coverage shall be from the face of the bar and shall denote clear coverage. The following minimum coverage shall be observed:

Concrete poured against earth	- 1"
Concrete poured in forms and exposed to earth or weather	- 2"
Bars in beams or columns	- 2"
Bars in walls or interior face	- 3/4"
Bars in interior slabs	- 3/4"
6. All bars shown continuous in plans shall have if spliced a minimum splice length of 40 x rebar diameter.

PIPES AT CONCRETE FOUNDATIONS

All pipe shall be encased in sleeves. Pipes clear sleeves by 1/2". Caulk with plastic material. If pipe is in place prior to pouring concrete, wrap pipe with 1" glass wool. Step footing if pipe passes below or in spread footing portion of foundation. No digging is allowed for pipe trench parallel to footing below lines indicated.



930 Dwight Way, Suite 10A
Berkeley, CA 94710
California Contractor's License # 505138

TEL: (510) 845-4515
TEL: (510) 649-0468
FAX: (510) 649-0239

DESIGN ASSUMPTIONS

1. BASIS OF DESIGN IS U.B.C. 1997 EDITION
2. CONCRETE SHALL ATTAIN A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2500 PSI PER ACI-318-88.
3. REINFORCING STEEL SHALL CONFORM TO ASTM 1-615, GR.40.
4. FOUNDATION DESIGN PER U.B.C. REQUIREMENTS.
5. LUMBER-DOUGLAS FIR GRADE NO. 2 OR BETTER (U.O.N.).
6. COLUMNS AND POSTS SHALL HAVE CONTINUOUS BEARING ON BEAMS AND FOOTINGS OR MUD SILLS.
7. COLUMNS AND POSTS SHALL HAVE I.C.B.O. APPROVED COLUMN CAPS AND POST ANCHORS.
8. THE OWNER SHALL INSURE THAT CONSTRUCTION CONFORMS TO THESE CALCULATIONS; AND THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS.
9. NOTHING IN THESE CALCULATIONS OR DRAWINGS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO LOCAL CODES, STATE, AND NATIONAL ORDINANCES AND REGULATIONS.
10. THESE CALCULATIONS HAVE BEEN PREPARED EXCLUSIVELY FOR SPECIFIC APPLICATIONS TO THE PROPOSED BUILDING IN ACCORDANCE WITH GENERALLY ACCEPTED CIVIL-STRUCTURAL ENGINEERING PRACTICES. NO WARRANTY, EXPRESSED OR IMPLIED, IS MADE. IN THE EVENT THAT ANY CHANGES IN THE NATURE, DESIGN, OR LOCATION OF THE STRUCTURE ARE PLANNED, THE CONCLUSIONS AND RECOMMENDATIONS CONTAINED IN THESE CALCULATIONS SHOULD NOT BE CONSIDERED VALID UNLESS THE CHANGES ARE REVIEWED AND CALCULATIONS OF THESE CALCULATIONS MODIFIED OR VERIFIED IN WRITING.

PLOT PLAN

DRAWN BY:

VIC LUNNEN
954 KEELER AVE,
BERKELEY, CA 94701
(510) 524-5157

PROPERTY OWNER:

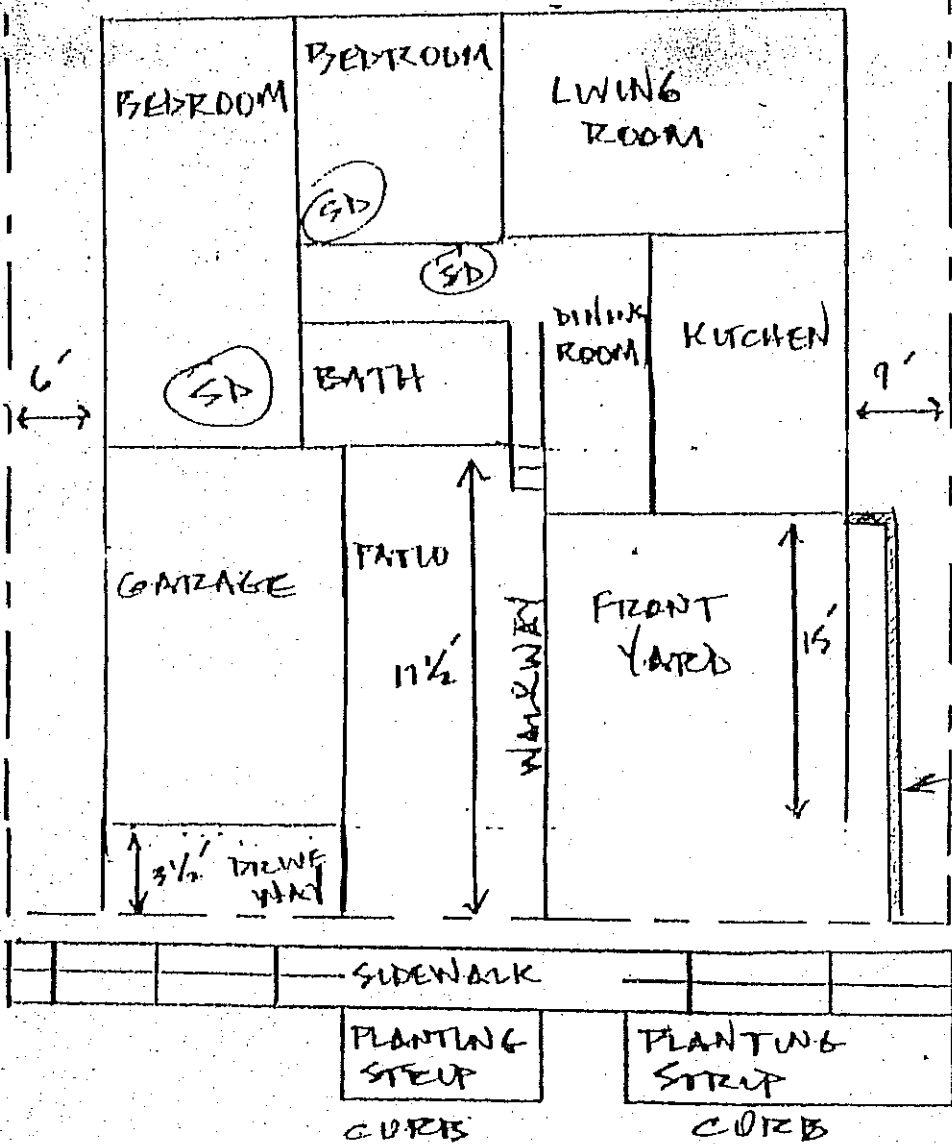
SAME

DRAWING NOT TO
SCALE

LEGEND:

----- = PROPERTY LINE

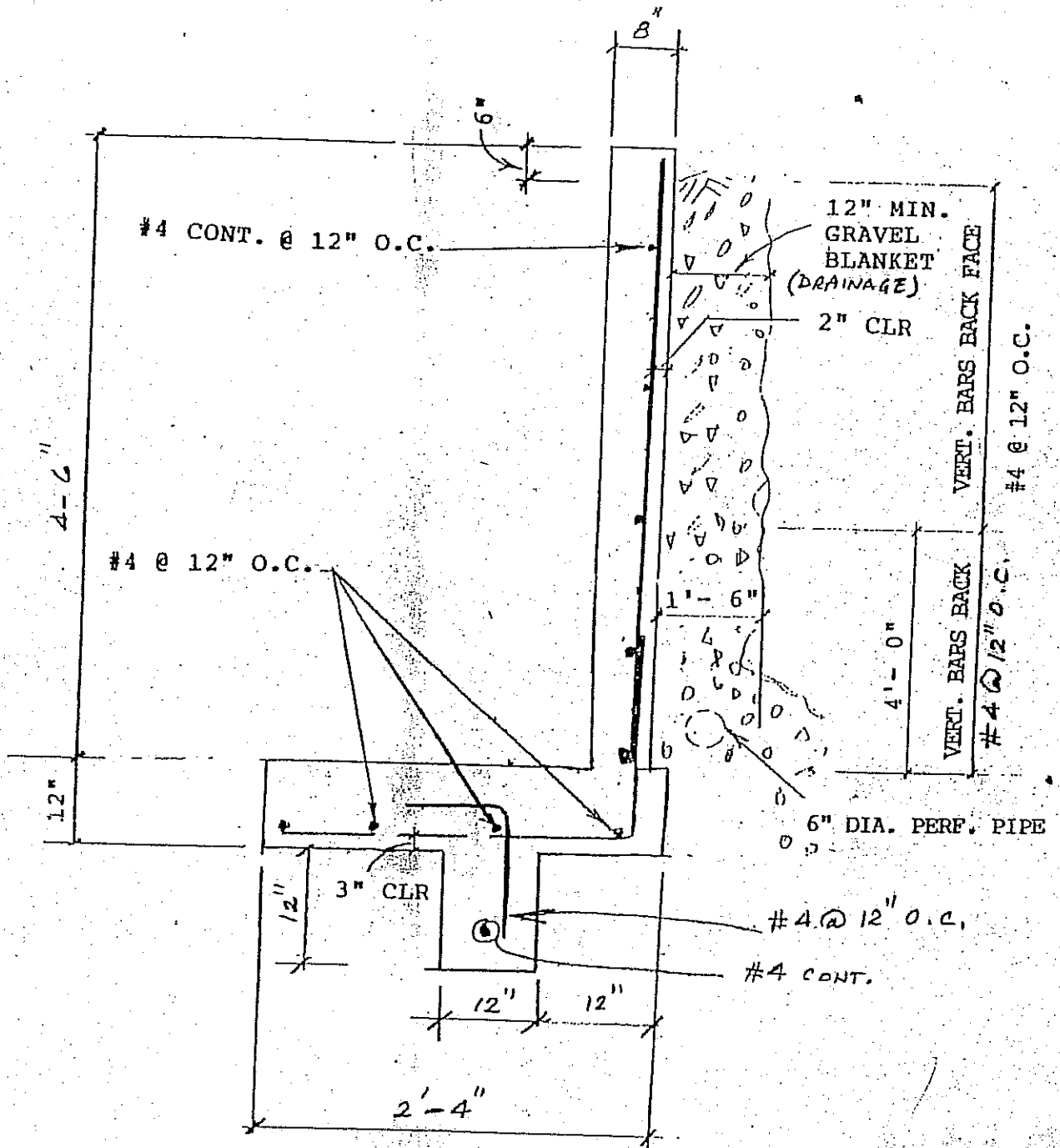
REPLACE
EXISTING RETAINING WALL



66'
954 KEELER AVENUE

PLOT PLAN

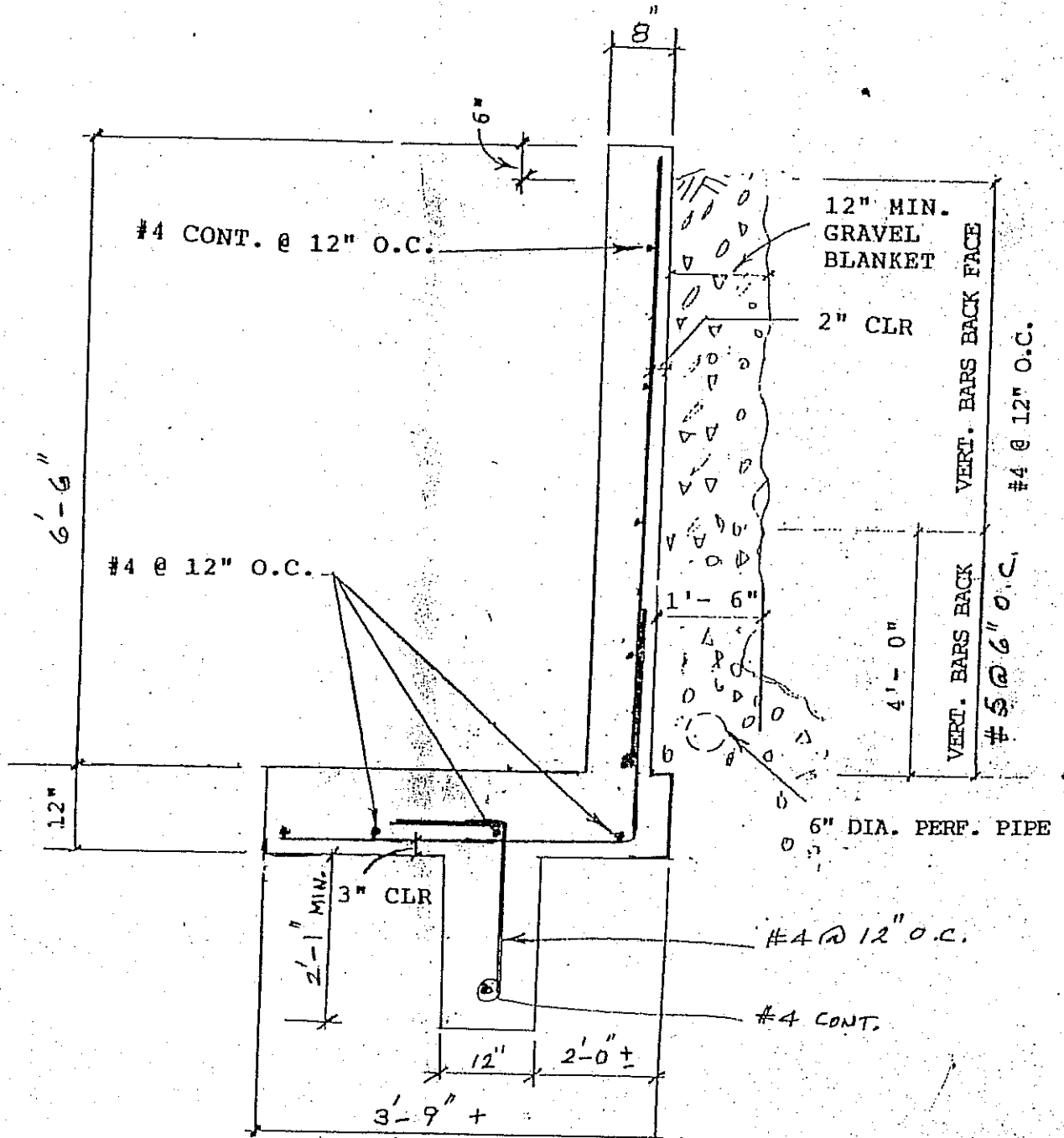
N.T.S.



954 Keeler Avenue, Berkeley, CA

RETAINING WALL DESIGN

N.T.S.

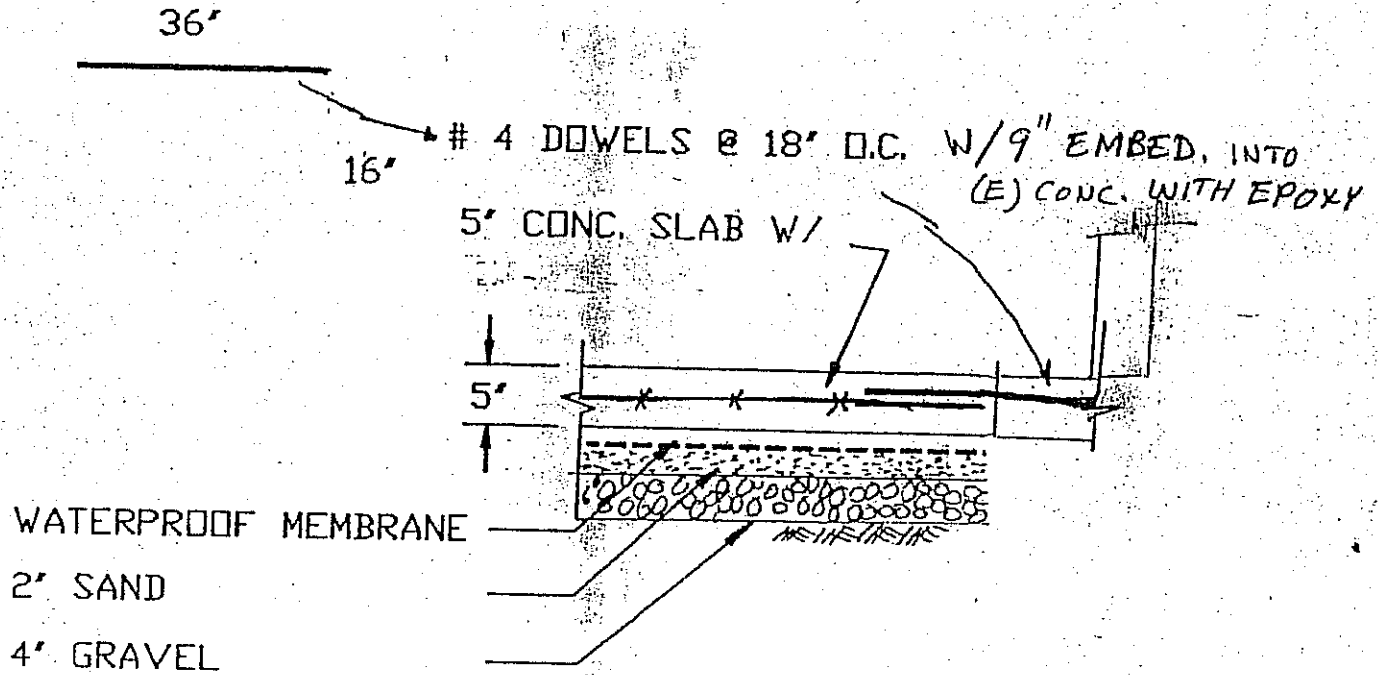


NOTE: CONNECT DRAINAGE PIPE TO (E) DRAIN PIPE.

954 Keeler Avenue, Berkeley, CA

RETAINING WALL DESIGN

N.T.S.



DETAIL FOR (E) CONC. SLAB REPLACEMENT

N.T.S.

954 Keeler Avenue, Berkeley, CA

RETAINING WALL DESIGN

BASIC INFORMATION:

=====

SOIL UNIT WEIGHT, G:	120 pcf
STEM WALL UNIT WEIGHT, GC:	150 pcf
EQUIV. FLUID PASSIVE PRESS., PP:	350 pcf
EQUIV. FLUID ACTIVE PRESS. PA:	65 pcf
EARTH PRESS. FACTOR, KA:	0.5
SLOPE RATIO:	1: 5
SURCHARGE LOAD, QS:	0 psf
VERTICAL (LINE) LOAD, PW:	0 plf
COEFF. OF FRICTION, CF:	0.35

WALL GEOMETRY:

=====

SOIL HEIGHT BEHIND THE WALL, H:	4 feet
HT. OF WALL ABOVE GRADE, HC:	0.5 feet
TOP STEM THICKNESS, T1:	8 inches
LOWER STEM THICKNESS, T2:	8 inches
BASE WIDTH, L:	2.333 feet
BASE THICKNESS, D:	12 inches
TOE LENGTH, B:	1.6 feet
HEEL LENGTH, I:	0.0663333 feet
KEY DEPTH, K:	1 feet
KEY THICKNESS, T3:	1 inches
KEY ARM FROM HEEL, K1:	2 feet
SOIL THICKNESS ABOVE BASE, S:	0.5 feet

SOIL PRESSURES AND FORCES:

=====

THE RESULTANT IS OUTSIDE THE MIDDLE THIRD.

MAX. SOIL PRESSURE, Q1:	1395.9395 psf
MIN. SOIL PRESSURE, Q2:	0 psf
OVERTURNING MOMENT, OM:	1364.9745 lb-ft
RESISTING MOMENT, RM:	2067.2187 lb-ft
HORIZONTAL FORCE, FA:	816.81739 lb
F.S. AGAINST OVERTURNING:	1.5144743
F.S. AGAINST SLIDING:	1.8586349
MAX. MOMENT AT BOTT. OF WALL, M:	1178.6667 lb-ft

954 Keeler Avenue, Berkeley, CA

REINFORCED CONCRETE BEAM DESIGN

MA=	1178.6667 lb-ft	x12 inches *1.7 (FACTORED LOAD)	
MU=	24044.8 lb-in		
FC=	2500 psi	BM WIDTH, B1=	2.7884645 inches
FY=	60000 psi	BM WIDTH, B2=	2.5509611 inches
RW MAX. MOMENT, M=	1178.6667 lb-ft	BM DEPTH, D1=	4.879813 inches
DESIGN WIDTH, B=	12 inches	BM DEPTH, D2=	5.1019221 inches
DESIGN DEPTH, D=	5.75 inches	BM FULL DEPTH, H=	8 inches
REQ'D. STEEL, AS=	0.0866094 inch ²	REQ'D. DEPTH, D=	5.75 inches
MAX. STEEL, AS1=	0.9220169 inch ²		
MIN. STEEL, AS2=	0.23 inch ²		
DESIGN STEEL, AS=	0.1963495 inch ²	Rebar size = #	4
DESIGN MOMENT, MN=	58509.926 lb-in	Spacing =	12 in. O.C.
=	4875.8272 lb-ft	AS(BAR)=	0.1963495 in. ²

954 Keeler Avenue, Berkeley, CA

RETAINING WALL DESIGN

BASIC INFORMATION:

=====

SOIL UNIT WEIGHT, G:	120 pcf
STEM WALL UNIT WEIGHT, GC:	150 pcf
EQUIV. FLUID PASSIVE PRESS., PP:	350 pcf
EQUIV. FLUID ACTIVE PRESS. PA:	65 pcf
EARTH PRESS. FACTOR, KA:	0.5
SLOPE RATIO:	5
SURCHARGE LOAD, QS:	0 psf
VERTICAL (LINE) LOAD, PW:	0 plf
COEFF. OF FRICTION, CF:	0.35

1:

WALL GEOMETRY:

=====

SOIL HEIGHT BEHIND THE WALL, H:	5 feet
HT. OF WALL ABOVE GRADE, HC:	0.5 feet
TOP STEM THICKNESS, T1:	8 inches
LOWER STEM THICKNESS, T2:	8 inches
BASE WIDTH, L:	3 feet
BASE THICKNESS, D:	12 inches
TOE LENGTH, B:	2.33333 feet
HEEL LENGTH, I:	3.333E-06 feet
KEY DEPTH, K:	1.333 feet
KEY THICKNESS, T3:	1 inches
KEY ARM FROM HEEL, K1:	2 feet
SOIL THICKNESS ABOVE BASE, S:	0.5 feet

SOIL PRESSURES AND FORCES:

=====

THE RESULTANT IS OUTSIDE THE MIDDLE THIRD.

MAX. SOIL PRESSURE, Q1:	1385.5952 psf
MIN. SOIL PRESSURE, Q2:	0 psf
OVERTURNING MOMENT, OM:	2340.0008 lb-ft
RESISTING MOMENT, RM:	3490.9722 lb-ft
HORIZONTAL FORCE, FA:	1170.0003 lb
F.S. AGAINST OVERTURNING:	1.491868
F.S. AGAINST SLIDING:	1.6631305
MAX. MOMENT AT BOTT. OF WALL, M:	2302.0833 lb-ft

954 Keeler Avenue, Berkeley, CA

REINFORCED CONCRETE BEAM DESIGN

MA=	2302.0833 lb-ft	x12 inches *1.7 (FACTORED LOAD)
MU=	46962.5 lb-in	
FC=	2500 psi	BM WIDTH, B1= 3.4855807 inches
FY=	60000 psi	BM WIDTH, B2= 3.1887013 inches
RW MAX. MOMENT, M=	2302.0833 lb-ft	BM DEPTH, D1= 6.0997662 inches
DESIGN WIDTH, B=	12 inches	BM DEPTH, D2= 6.3774027 inches
DESIGN DEPTH, D=	5.6875 inches	BM. FULL DEPTH, H= 8 inches
REQ'D. STEEL, AS=	0.1710178 inch ²	REQ'D. DEPTH, D= 5.6875 inches
MAX. STEEL, AS1=	0.911995 inch ²	
MIN. STEEL, AS2=	0.2275 inch ²	
DESIGN STEEL, AS=	0.3067962 inch ²	Rebar size = # 5
DESIGN MOMENT, MN=	88227.196 lb-in	Spacing = 12 in. O.C.
=	7352.2663 lb-ft	AS(BAR)= 0.3067962 in. ²

954 Keeler Avenue, Berkeley, CA

RETAINING WALL DESIGN

BASIC INFORMATION:

=====

SOIL UNIT WEIGHT, G:		120 pcf
STEM WALL UNIT WEIGHT, GC:		150 pcf
EQUIV. FLUID PASSIVE PRESS., PP:		350 pcf
EQUIV. FLUID ACTIVE PRESS. PA:		65 pcf
EARTH PRESS. FACTOR, KA:		0.5
SLOPE RATIO:	1:	5
SURCHARGE LOAD, QS:		0 psf
VERTICAL (LINE) LOAD, PW:		0 plf
COEFF. OF FRICTION, CF:		0.35

WALL GEOMETRY:

=====

SOIL HEIGHT BEHIND THE WALL, H:		6 feet
HT. OF WALL ABOVE GRADE, HC:		0.5 feet
TOP STEM THICKNESS, T1:		8 inches
LOWER STEM THICKNESS, T2:		8 inches
BASE WIDTH, L:		3.75 feet
BASE THICKNESS, D:		12 inches
TOE LENGTH, B:		3 feet
HEEL LENGTH, I:		0.0833333 feet
KEY DEPTH, K:		2.1 feet
KEY THICKNESS, T3:		12 inches
KEY ARM FROM HEEL, K1:		2 feet
SOIL THICKNESS ABOVE BASE, S:		0 feet

SOIL PRESSURES AND FORCES:

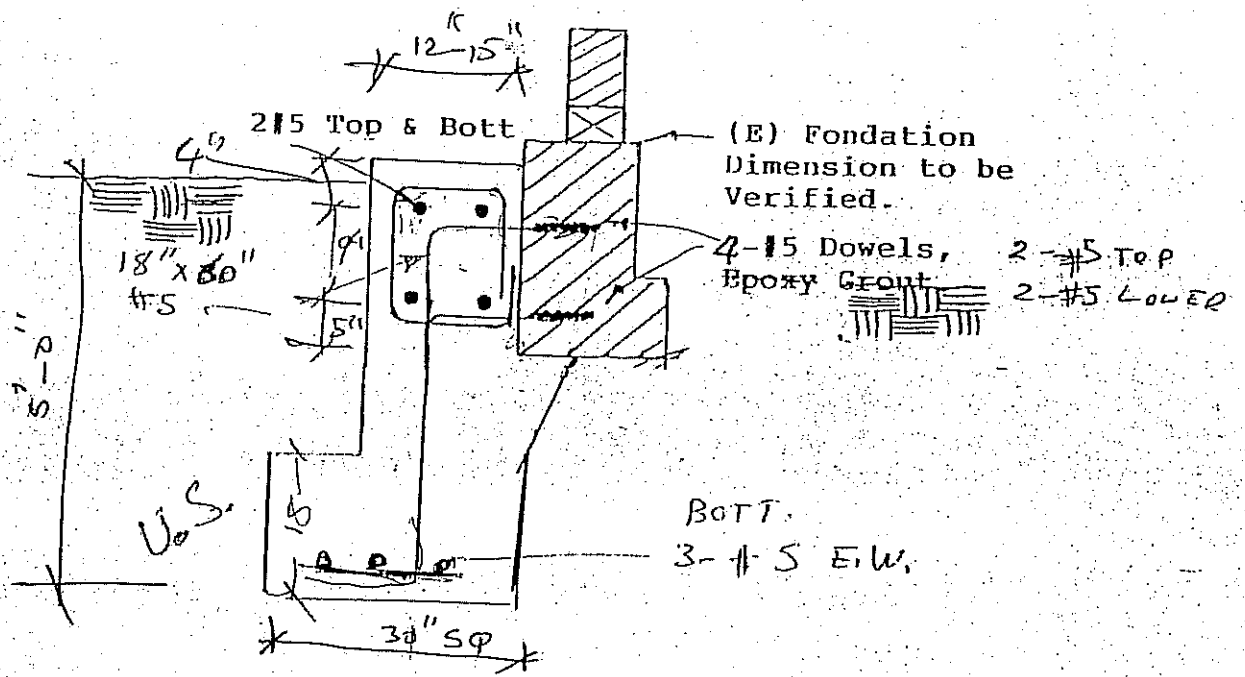
=====

THE RESULTANT IS OUTSIDE THE MIDDLE THIRD.		
MAX. SOIL PRESSURE, Q1:		1431.0734 psf
MIN. SOIL PRESSURE, Q2:		0 psf
OVERTURNING MOMENT, OM:		3742.4382 lb-ft
RESISTING MOMENT, RM:		5838.0298 lb-ft
HORIZONTAL FORCE, FA:		1600.0924 lb
F.S. AGAINST OVERTURNING:		1.5599535
F.S. AGAINST SLIDING:		1.5149636
MAX. MOMENT AT BOTT. OF WALL, M:		3978 lb-ft

954 Keeler Avenue, Berkeley, CA

REINFORCED CONCRETE BEAM DESIGN

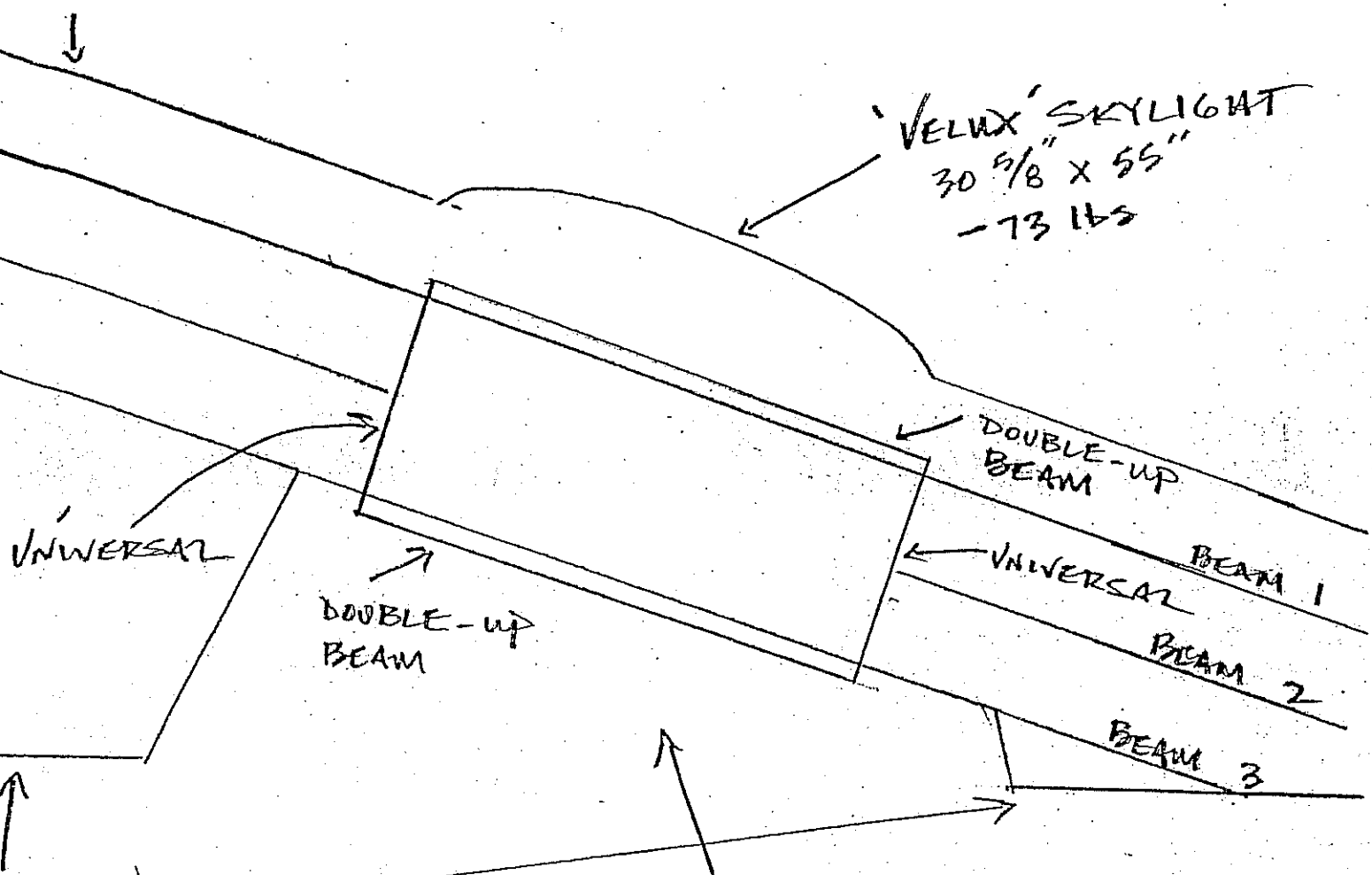
MA=	3978 lb-ft	x12 inches *1.7 (FACTORED LOAD)	
MU=	81151.2 lb-in		
FC=	2500 psi	BM WIDTH, B1=	4.1826968 inches
FY=	60000 psi	BM WIDTH, B2=	3.8264416 inches
RW MAX. MOMENT, M=	3978 lb-ft	BM DEPTH, D1=	7.3197194 inches
		BM DEPTH, D2=	7.6528832 inches
DESIGN WIDTH, B=	12 inches	BM. FULL DEPTH, H=	8 inches
DESIGN DEPTH, D=	5.69 inches	REQ'D. DEPTH, D=	5.6875 inches
REQ'D. STEEL, AS=	0.295389 inch ²		
MAX. STEEL, AS1=	0.9123959 inch ²		
MIN. STEEL, AS2=	0.2276 inch ²		
DESIGN STEEL, AS=	0.6135923 inch ²	Rebar size =	# 5
		Spacing =	6 in. O.C.
DESIGN MOMENT, MN=	164542.08 lb-in	AS(BAR)=	0.3067962 in. ²
=	13711.84 lb-ft		
P1=	0.0075		



[Handwritten signature]

93
ROOF LINE (SPANISH TILE)

VELUX SKYLIGHT
30 5/8" X 55"
- 73 LBS



UNIVERSAL BEAM

DOUBLE-UP BEAM

DOUBLE-UP BEAM

UNIVERSAL BEAM 1

UNIVERSAL BEAM 2

BEAM 3

BUILDING & SAFETY DIVISION
City Planning Department
APPROVED

By

PYRAMID-TYPE LIGHT TUNNEL

OCT 26 1999

This set of plans and specifications MUST be kept on the job at all times and it is unlawful to make any changes or alterations on same without written permission from the City of Berkeley, Building & Safety Division. The stamping of this plan and specifications SHALL NOT be held to permit or to be an approval to the violation of any provision to any City Ordinance or state law.

SKYLIGHT INSTALLATION: 954 KEELER AVE.

CONTRACTOR: GOODRICH CONSTRUCTION

PERMIT NO.: 99-00002919

OWNER: VIC LINDEN

APPROVED PLAN

Matthew

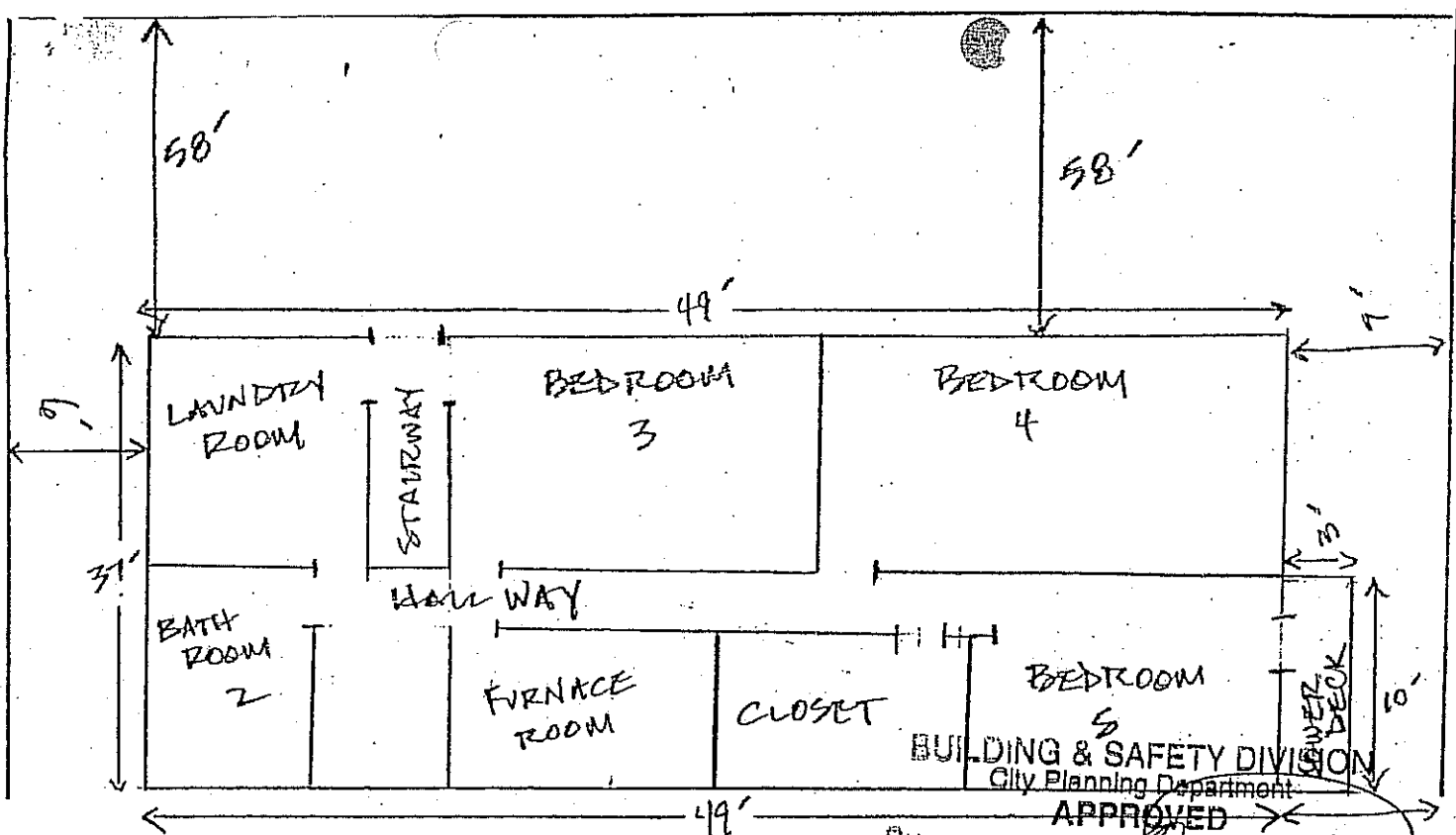
CURRENT PLANNING

[Signature]

10/26/99

DATE

ADJACENT PROPERTY

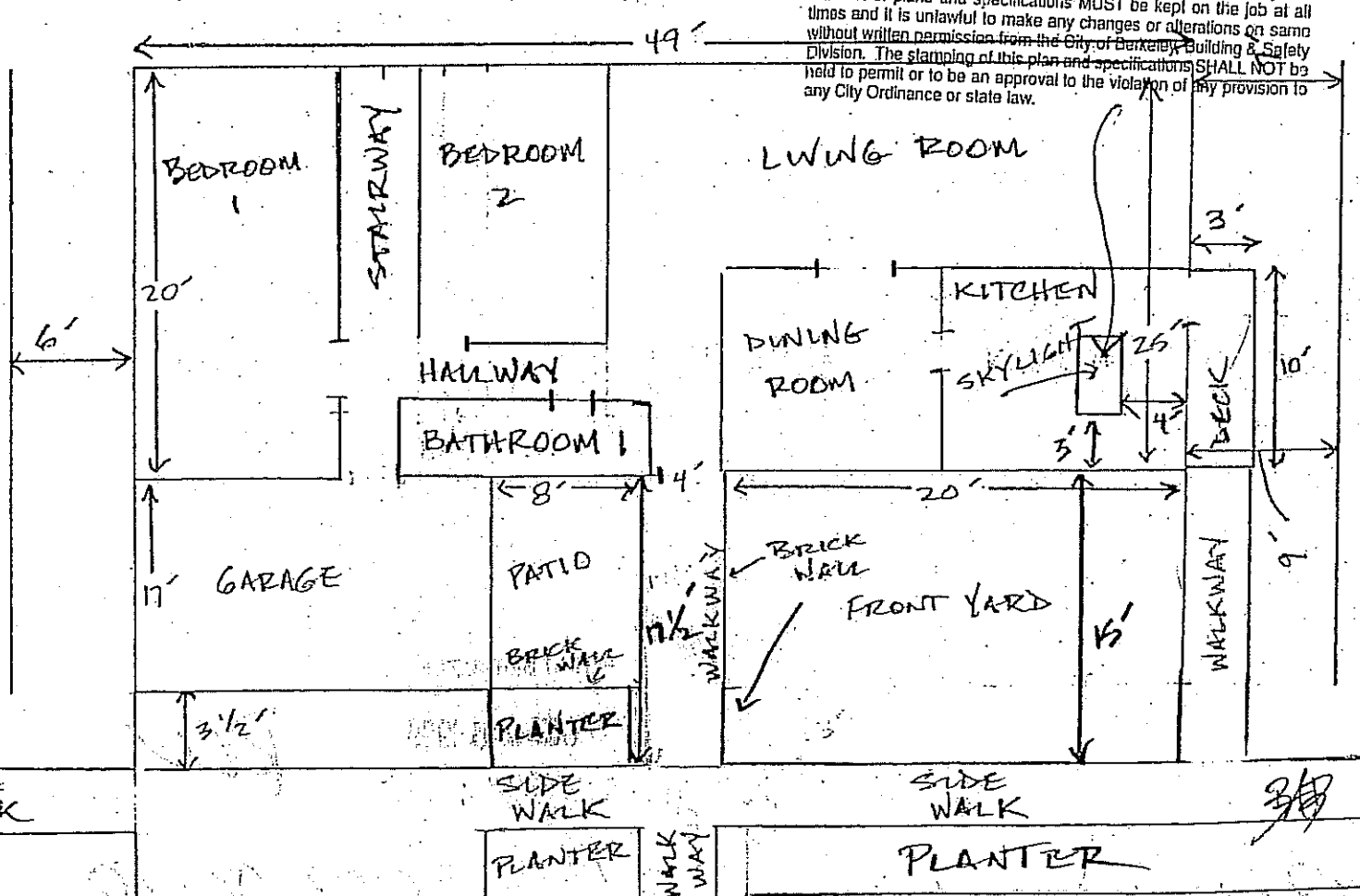


LOWER LEVEL
 MAIN LEVEL

BUILDING & SAFETY DIVISION
 City Planning Department
 APPROVED
 By [Signature]
 OCT 26 1999

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ADJACENT PROPERTY



KEELER AVENUE

LOCATION - 954 KEELER AVE
 D. LINDER - VIC LINDEN

ADJACENT PROPERTY

WIDE WALK



AMANA ENGINEERING & CONSTRUCTION, INC.

930 Dwight Way, Suite 10A
Berkeley, CA 94710
California Contractor's License # 505138

TEL: (510) 845-4515
TEL: (510) 649-0468
FAX: (510) 649-0239

August 24, 2000

Vic Linden
954 Keeler Avenue
Berkeley, CA 94708

RE: Foundation Repair for the property located at:
954 Keeler Avenue, Berkeley, CA 94708

Dear Mr. Linden:

This is to certify that have inspected the above mentioned property and based on our inspection of the visual and accessible exterior areas we believe that the foundation repair that is needed for this property should be base on soil engineer's report and usually calls for foundation repair similar to the details shown in sheet 1 and 2 (PIER foundation with concrete tie grade beams).

Since you are not interested in the above expensive solution we suggested to you using the detail shown on page 3 for a concrete pad that to the best of our engineering judgement will improve the existing foundation condition.

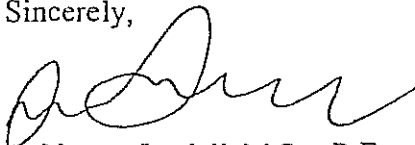
The opinions expressed in this statement are based on visual examination of the property. While we believe that our conclusions are well founded, it is possible that there may be undiscovered conditions that would cause us to revise our opinions and/or recommendations.

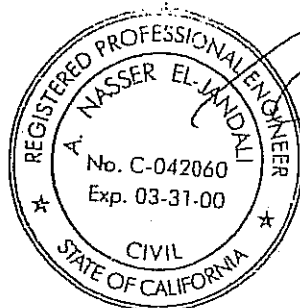
This statement, therefore, should not be construed to be of any type of guarantee or insurance.


Per your request this statement is made.

If you have any questions, please don't hesitate to contact us.

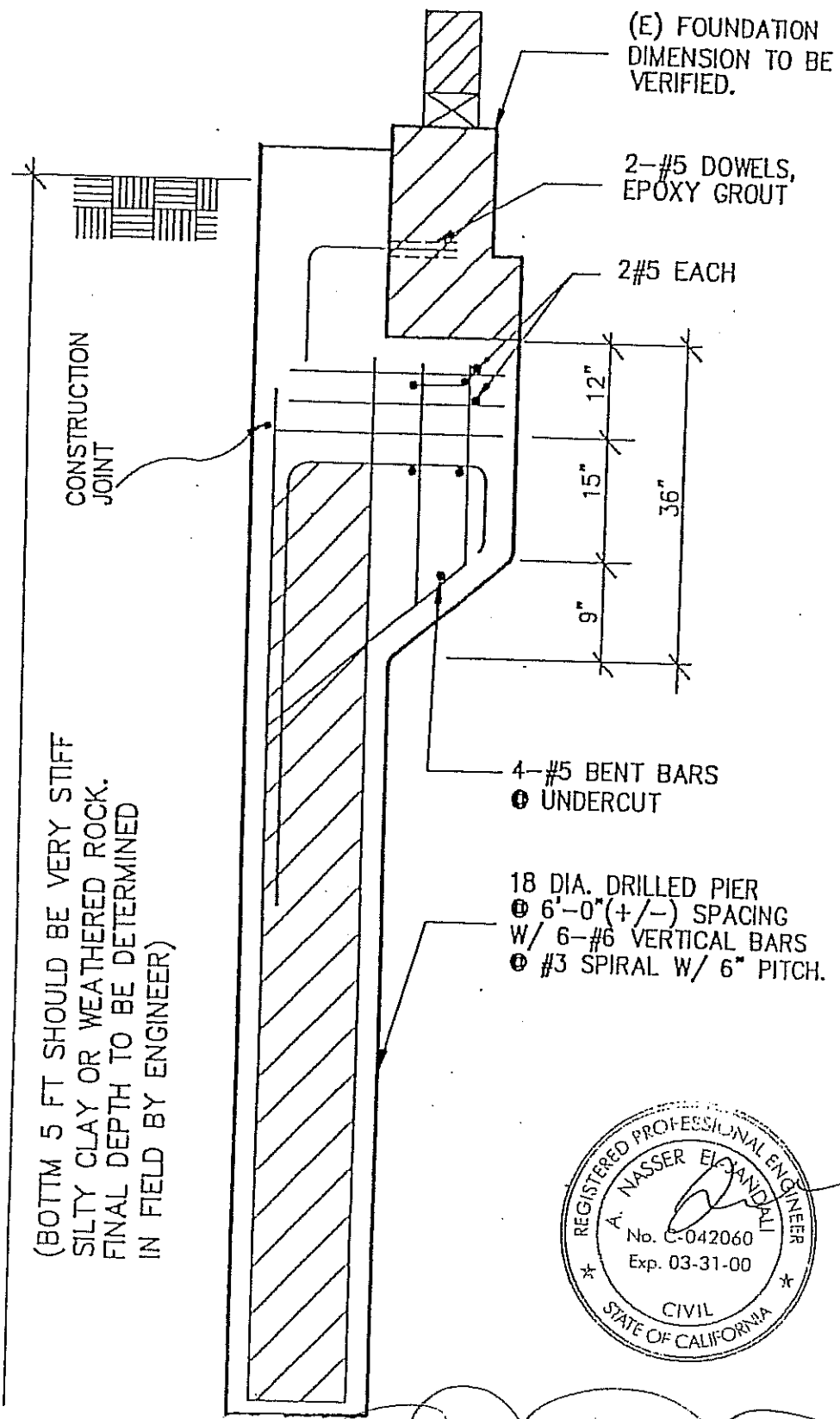
Sincerely,


A. Nasser Jandali, M.Sc., P.E.




8-31-00





(BOTTM 5 FT SHOULD BE VERY STIFF SILTY CLAY OR WEATHERED ROCK. FINAL DEPTH TO BE DETERMINED IN FIELD BY ENGINEER)



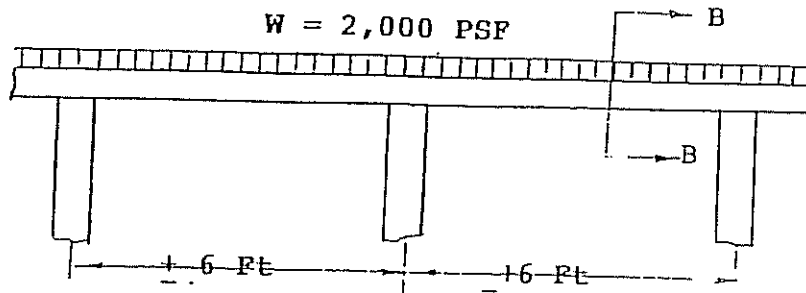
8-31-00

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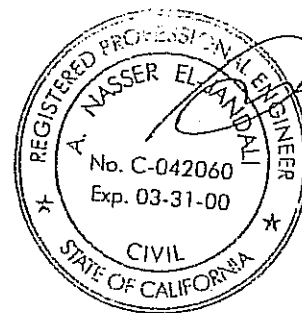
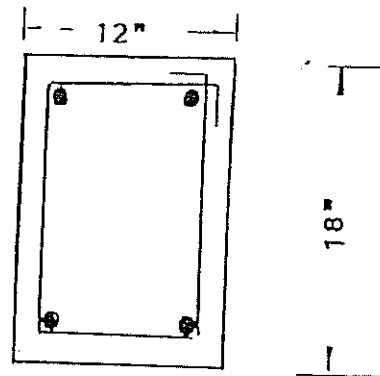
FOR INFO ONLY

Grade Beam Design

Assume 2,000 PSF Of Uplift Force On The Grade Beam.

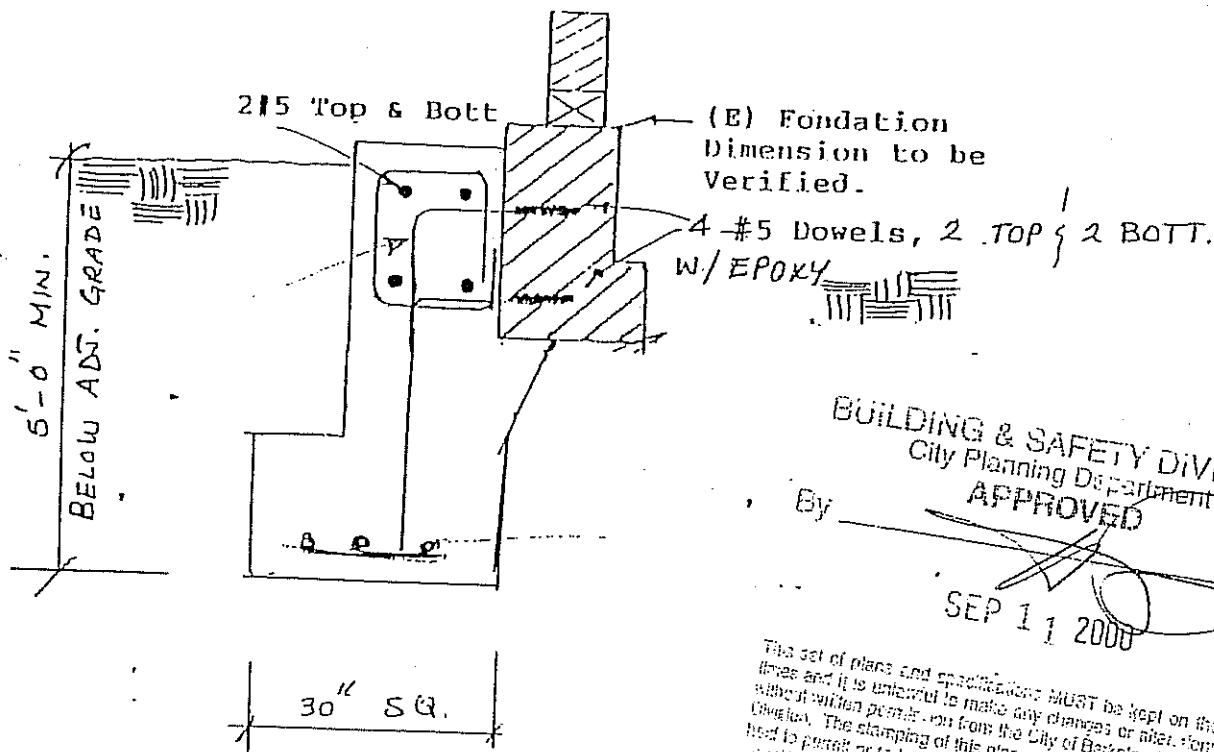


2-#5 T&B
W/ #3 Ties
@ 12" O.C.



8-31-00

FOR INFO ONLY



BUILDING & SAFETY DIVISION
City Planning Department
APPROVED

By

SEP 11 2000

The set of plans and specifications MUST be kept on the job at all times and it is unlawful to make any changes or alterations on same without written permission from the City of Berkeley, Building & Safety Division. The stamping of this plan and specifications SHALL NOT be held to permit or to be an approval to the violation of any provision of the City Ordinance or state law.



8-31-00

CONCRETE PAD DETAIL

N.T.S.

BUILDING & SAFETY DIVISION
City Planning Department
APPROVED

By

SEP 11 2000

This set of plans and specifications MUST be kept on the job at all times and it is unlawful to make any changes or alterations on same without written permission from the City of Berkeley, Building & Safety Division. The stamping of this plan and specifications SHALL NOT be held to permit or to be an approval to the violation of any provision of any City Ordinance or state law.

EXPOSED
SLAB

18'9"

10'10"

7'

JOB SITE

HOUSE

NOTICE TO CONTRACTOR
Instance of a variance or approval of plans shall not be construed as a permission to violate other provisions of codes.

We have assumed that the site has no easements, or other items which is represented on the plans.

Please read and understand all of the marks and stamps prior to proceeding construction. You have the right to alternate methods and materials of construction, and the right to appeal.

CONCRETE
FIND SLAB

12'6"

3'8"

9'

954 KEELER AVE

LOT PLAN DRAWN BY:

MIC LINDEN

954 KEELER, BERKELEY, CA 94708

PROPERTY OWNER:

SAME

LEGEND:

☒ - CONCRETE
FIND

... along TO SIDE

E

P.

9-1-00

TO WHOM IT MAY CONCERN:

RE: CONCRETE PADS TO ASSIST REAR FOUNDATION,
~~AND~~ SIDE PORCH SLAB, AND BACK YARD SLAB
AT 954 KEELEZ AVE., BERKELEY, CA 94708

I HOLD NASSER EL-JANDALI, THE ENGINEER
HARMLESS ON THE RELATED CONSTRUCTION
DRAWING DETAILS ON PAGE 3.

Vic Linden
VIC LINDEN
954 KEELEZ AVE.
BERKELEY, CA 94708
510-524-5157 (H)
415-274-1366 (W)



947 WEELEER AVE

BACK YARD

STAIRS
DOWN
TO BACKYARD

LINEN
ROOM

BATHROOM

Bedroom 1

FURNACE
&
WATER HEATER

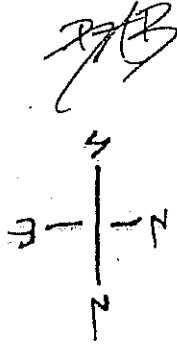
HALLWAY

Bedroom 2

CLOSET

Bedroom 3

DOOR
TO
SIDE
YARD



— REFRIG
— HEATER

⊗ - RECESSED
LIGHT (1/2)

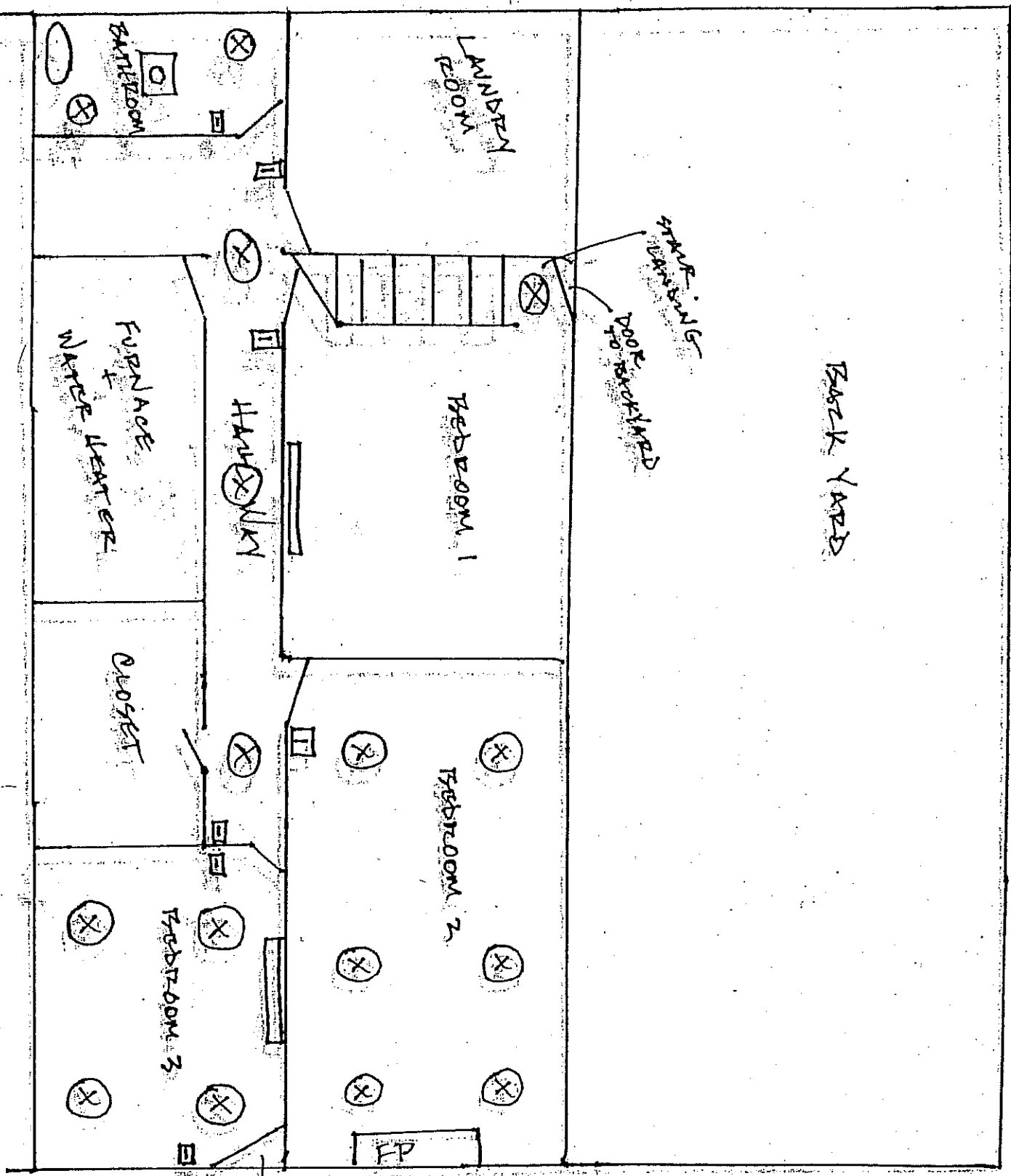
▣ - SWITCHES

□ - EXHAUST
FAN
(ATTACHED)

DRAWN BY:
VIC LINNEN

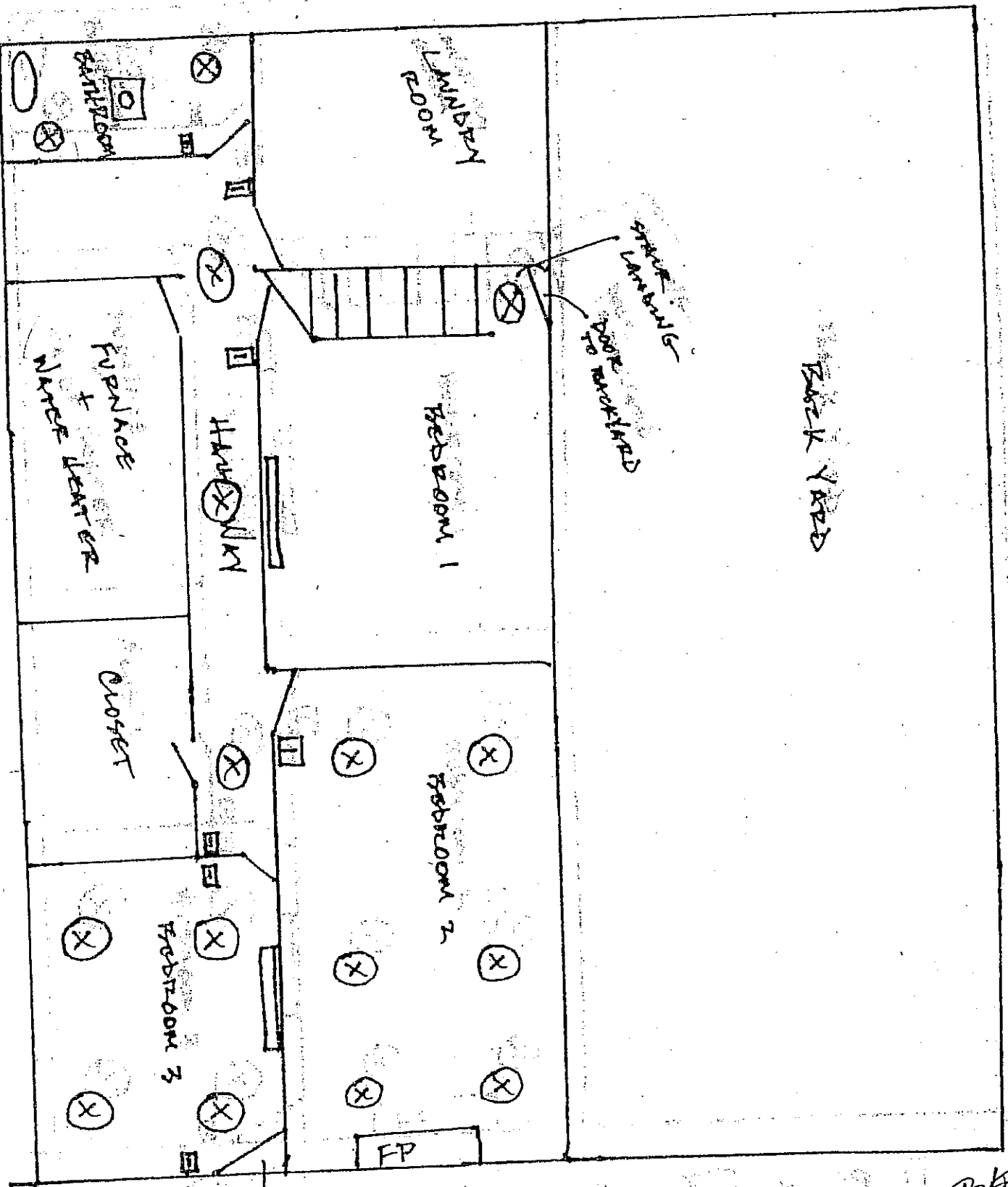
947 WEELEER AVE
BREMEN, GA
94708

OWNER:
SOME



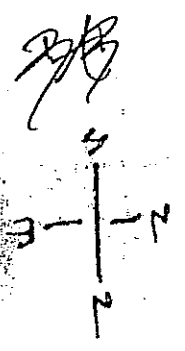
944 KEELER AVE

BACK YARD



STAIRS
DOWN TO
DOOR MARKED

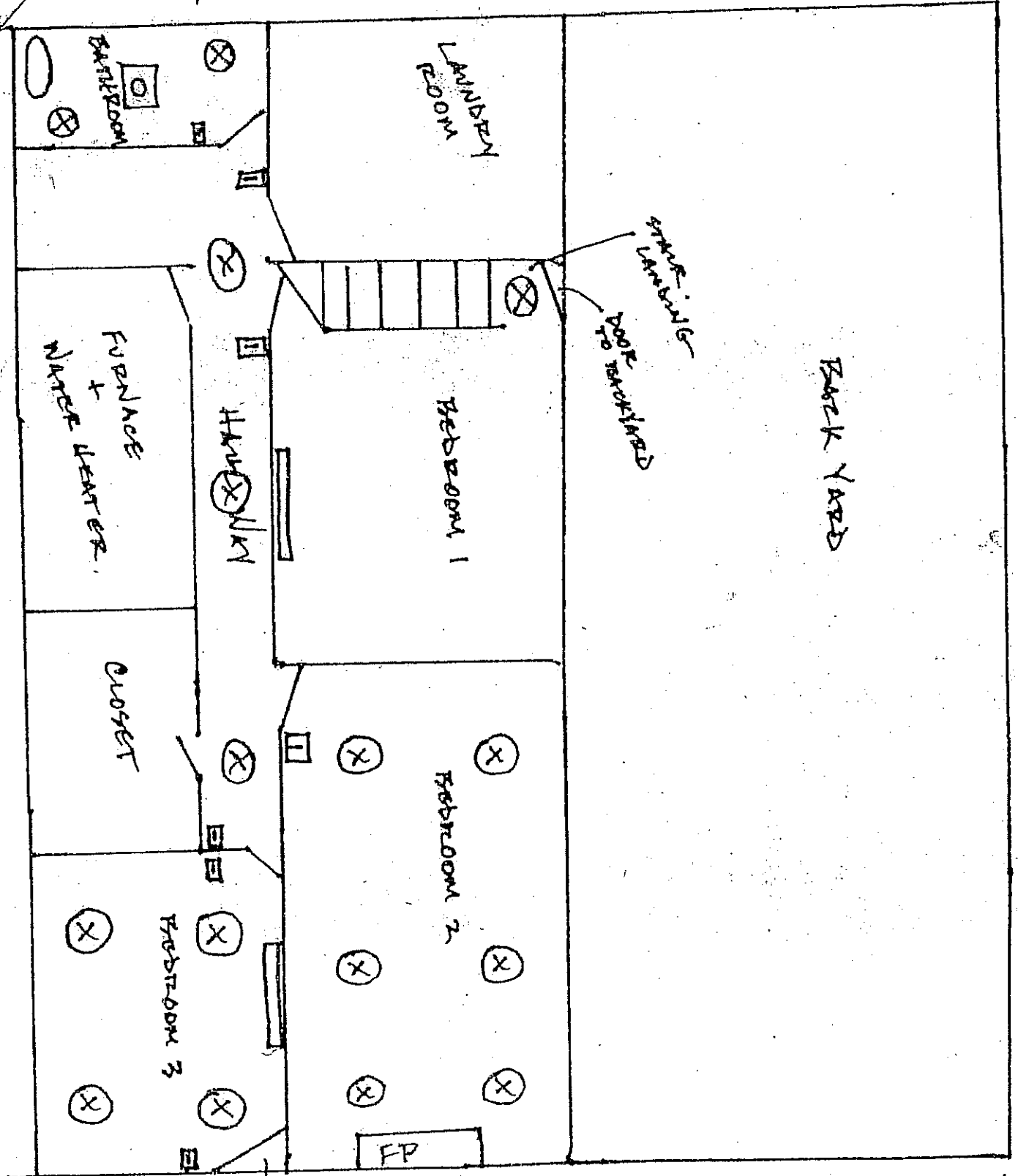
DOOR
TO
SIDE
YARD



- - RECESSED LIGHT (16)
- - SWITCH
- - EXHAUST FAN ATTACHED

BEAMIN BEN:
VIC LINDEN
944 KEELER AVE
BERKELEY, CA
94708

OWNER:
SARVE



944 KEELE AVENUE

BACK YARD

LIVING ROOM

BEDROOM 1

BEDROOM 2

BEDROOM 3

FURNACE + WATER HEATER

CLOSET

KITCHEN

DOOR TO BACK YARD

DOOR TO GARAGE

BR 1 2

REAR PORCH

NECESSARY LIGHT (1/2)

SWITCH

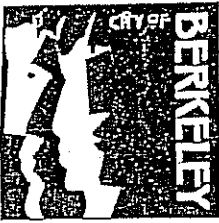
EXHAUST FAN HEATER

DRAINAGE VIA LIVING

944 KEELE AVENUE
PERKINS, ON
44708

OWNER: S. S. S. S.

64



COPY

Planning Department
Building and Safety Division

December 13, 1999

Diablo Roofing Co., Inc.
510 Garcia Avenue, Suite A
Pittsburg, CA 94565

Attention: Matt Henderson

Re: 954 Keeler Avenue, Berkeley, CA
Permit #99-5134

Dear Mr. Henderson:

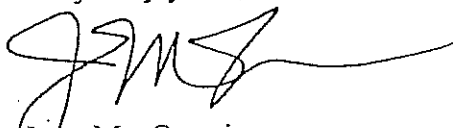
I am in receipt of your letter dated December 6, 1999 requesting code modification or hardship exemption for strict compliance with the City of Berkeley's Hillside Ordinance, Chapter 16 of the Berkeley Building Code.

You are requesting a waiver of the installation of stopping at the eave ends due to the age of the existing tiles which were in good condition and reinstalled, but for which eave end stopping is not available. The cost to install new tiles with stopping at the eave ends is twice the price to make the necessary repairs using the existing tiles.

The repairs made to the roof maintain conformance with the code edition under which the roof was originally installed, and the roofing constitutes a Class A assembly as required by Code. I will allow the roof to remain as installed without further alteration under Uniform Building Code Section 3403.3, Existing Structures.

You may send or bring in the jobsite copy of the permit for the final sign off, as the roof was already inspected on November 15, 1999 by Inspector Leard, who found no deficiencies other than the omission of the stopping at the eave ends.

Very truly yours,



Joan MacQuarrie,
Building Official

Cc: Eleanor Leard, Building Inspector
Daryl Williams, Building Inspector



1 of 1

COURTESY NOTICE
BUILDING AND SAFETY DIVISION

City of Berkeley
City Planning Department
Building and Safety Division
2120 Milvia Street
Berkeley, California 94704



Job Site: 954 Keeler

Owner: No. roofing permit # 99-5137

PLEASE CORRECT THE FOLLOWING:

1) Hillside Ordinance -
Chapter 16 of Berkeley
Building Code requires
tile roofs to be
stopped at eave ends
to preclude entry of
flame or embers under the
tile

Ellie Leard
INSPECTOR

11-15-99
DATE

SEE HELPFUL INFORMATION ON THE BACK OF THIS NOTICE

[Handwritten signature]



	Date	Inspector	Comment
Set back/lot coverage			
Foundation forms/depth/size	8/7/02	G. Heu	① 1/2 piers.
Steel			
Anchor bolts			② Grade Sm. 9/10/02 G. Heu
Holddowns			
UFER			
Underfloor electric			
Underfloor mechanical			
Underfloor plumbing			
Underfloor insulation			
Floor frame			
Slab			
DO NOT COVER UNTIL ABOVE IS SIGNED			
Frame electric - rough			
Frame mechanical - rough			
Frame plumbing - rough			
Frame	11/31/03	G. Heu	
Shear walls			
Framing insulation			
DO NOT COVER UNTIL ABOVE IS SIGNED			
Sheathing	10/9/03	G. Heu	
Lath - exterior	10/17/03	G. Heu	
Lath - Drywall - Interior			
Fire Department Approvals			
Sprinkler system			
Hood Extinguishing system			
Extinguishing system			
Fire alarm system			
Public Works/Engineering Approvals			
Public Right-of-Way			
Sewer			
Drain			
Finals - Division/Department			
Fire Department			
Hazardous Materials			
Health Department			
Public Works			
Planning/Zoning			
Final Gas Test			
Gas release to PG&E			
Electrical release to PG&E			
Building and Safety Division			
Final - Electrical			
Final - Plumbing			
Final - Mechanical			
Final - Building	11/13/03	G. Heu	
CERTIFICATE OF OCCUPANCY			

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P. 2 of 2

I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

License Class: _____ Lic No. _____

Date _____ Contractor _____

OWNER BUILDER DECLARATION

I hereby affirm under penalty of perjury that I am exempt from the Contractors' State License Law for the following reason (Sec. 7031.5, Business and Professions Code: *Any city that requires a permit to construct, alter, improve, demolish or repair any structure, prior to its issuance, also requires the applicant for the permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors' State License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he or she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars (\$500).*)

I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who builds or improves thereon, and who does the work himself or herself or through his or her own employees, provided that the improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he or she did not build or improve for the purpose of sale).

I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who builds or improves thereon, and who contracts for the projects with a contractor(s) licensed pursuant to the Contractors' State License Law).

I am exempt under Sec. _____, B. & P.C. for this reason.

WORKERS' COMPENSATION DECLARATION

I hereby affirm under penalty of perjury one of the following declarations:

I have and will maintain a certificate of consent to self-insure for workers' compensation, as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

CARRIER: _____ POLICY NUMBER: _____

(This section need not be completed if the permit is for one hundred dollars (\$100) or less).

I certify that, in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the worker's compensation laws of California, and agree that, if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

WARNING: FAILURE TO SECURE WORKERS' COMPENSATION COVERAGE IS UNLAWFUL AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS (\$100,000). IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.

CITY ORDINANCES (Ordinances available for view on request)

In conformance with the City of Berkeley Noise Ordinance, and/or Use Permit, I understand my obligation to comply and work within prescribed hours.

I am aware of my responsibilities under the Relocation Ordinance.

I certify that I have read and shall use to the maximum extent practicable applicable portions of the State Storm Water Best Management Practices Manual for construction.

CONSTRUCTION LENDING AGENCY

I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. C.).

Lender's Name: _____

Lender's Address: _____

BUILDING & SAFETY - Certificate Of Compliance And Authorization Of Of Entry. I certify that I have read this application and state that the information given is correct. I agree to comply with all state laws and city ordinances relating to building construction and authorize a representative of the City of Berkeley Building and Safety Division to enter upon the property for which I have applied for this permit for the purpose of making inspections.

ENGINEERING - Certificate Of Compliance. I hereby agree, to indemnify and hold harmless the City of Berkeley and its officers and employees from any and all claims arising from or out of work connected with this permit to perform all work under BMC Title 16 and 17 as amended, specifications, detail plans and the Uniform Building Code of the City of Berkeley, all special provision made a part of this permit, whether written or oral, and to the satisfaction of the Director of Public Works. I furthermore agree to comply with all regulations and ordinances of the City of Berkeley.

Signature of: Contractor or Owner (CIRCLE ONE) _____

Date _____

Authorized Agent for: Contractor Owner _____
PRINT NAME

Address: _____

Phone No. _____

2 of 2



LEA & SUNG ENGINEERING, INC.

CIVIL ENGINEERS • LAND SURVEYORS

City of Berkeley
Planning Department
Building and Safety Division
2120 Milvia Street
Berkeley, CA 94704
Phone: (510) 883-6544 ext. 4

August 9, 2002

Subject: Linden Residence – 954 Keeler Avenue, Berkeley, CA
Job No.: 2010678

To Whom It May Concern:

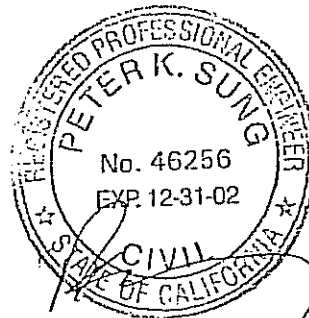
Please accept this letter as our certification that we have made a field review at the request of the general contractor of the following items and found them to be in accordance with the overall structural design:

1. The placement of reinforcing steel for cast-in-place piers and pier depth.

Our certification was based on a visual inspection of the construction, as it existed at the time of our inspection. The inspection was made to verify compliance with the basic parameters of the design. No measurements were taken, nor did we attempt to verify the overall quality of the work. Uniform compliance with the designs and specifications is the responsibility of the contractor and is not guaranteed by this letter.

Exclusion of warranties: Our services consist of professional opinion only. No WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR THE PURPOSES is made or intended.

Very truly yours,



Peter K. Sung
Civil Engineer



LEA & SUNG ENGINEERING, INC.

CIVIL ENGINEERS • LAND SURVEYORS

2495 Industrial Parkway West

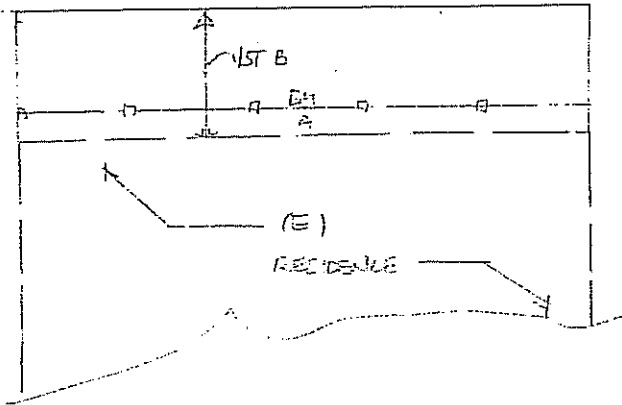
Hayward, CA 94545-5037

(510) 887-4086 • FAX (510) 887-3019

PROJECT	LINDEJ	SHEET NO.	1	OF	5
	954 KEELER AVE.	JOB NO.	2010678		
	BERKELEY CA.	BY	PS	DATE	4/10/2007

SCOPE: RE-BUILT (E) DECK & REAR OF EXISTING RESIDENCE

CODE: 1997 UBC

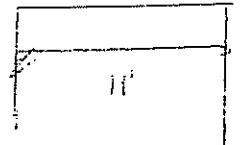


BEAM A

$$W = 7 \times 60 = 420 \text{ lb}$$

$$L_2 = 420 \times \left(\frac{11}{12}\right) \times \left(\frac{17}{12}\right) = 720 \text{ lb}$$

$$L_1 = 420 \times \left(\frac{11}{12}\right) \times \left(\frac{45}{12}\right) = 45 \text{ lb}$$



6x12 OK

Handwritten signature/initials



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2495 Industrial Parkway West

Hayward, CA 94545-5037

(510) 887-4086 • FAX (510) 887-3019

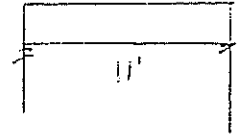
PROJECT	UNDEJ	SHEET NO.	2	OF	5
		JOB NO.	2010678		
		BY	DATE		

DEAL SIZE B

$$W = 60 \times 1.3 = 79 \frac{1}{2}$$

$$f_b = 79 \times \frac{111 \frac{1}{8}}{8} \times 12 / 13.1 = 1105 < 375 \times \frac{C_2}{1.5} \times \frac{C_2}{1.2} \quad B1$$

$$f_u = 79 \times 1.5 \times 4.9 / 10.7 = 55 \quad B1$$

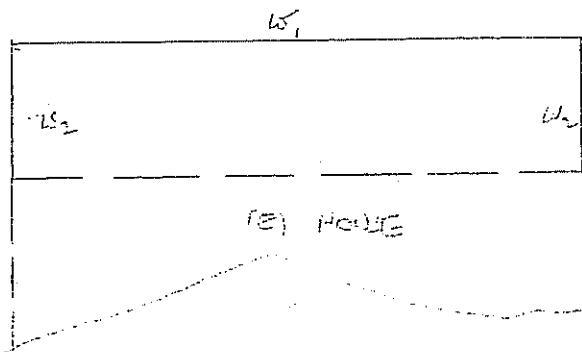


2x8 @ 16" oc
ok

FOUNDATION

LEGEND

- GRADE SH
- (E) FLY



$$W_1 = 60 \times 10 + 55 \times 60 + 5 \times 17 + 300 = 705 \frac{1}{2}$$

$$W_2 = 60 \times 10 + 55 \times 60 + 5 \times 17 + 300 = 705 \frac{1}{2}$$

BAB



LEA & SUNG ENGINEERING, INC.

CIVIL ENGINEERS • LAND SURVEYORS

2495 Industrial Parkway West

Hayward, CA 94545-5037

(510) 887-4086 • FAX (510) 887-3019

PROJECT	UNDEJ	SHEET NO.	3 OF 5
		JOB NO.	2010678
		BY	DATE

FOUNDATION (CONT)

8" x 18" DEEP GRADE BEAM w/ 2-N 4 HORIZ REIN TOP & BOTTOM w/ N3 TIE
8" x 8" w

$$\text{LOAD PER } M_{\text{allow}} = 0.25 \times 2 \times 1.48 + 145 = 86 \text{ k-ft}$$

$$F_{\text{friction}} = 2 \sqrt{2500} \times 8 \times 145 + 85\% \times 50\% = 4.78 \text{ k}$$

$$16" \phi \text{ PIER : LOAD PER } 1.33 \times \pi \times 0.250 \times (8' - 2') = 6.3 \text{ k}$$

$$\text{@ } W_1 \quad P_1 = 705 \times 9' = 6.3 \text{ k} ; M = 705 \times (9')^2 / 8 = 7.1 \text{ k-ft} ; f_v = 3.1 \text{ k} \quad \text{OK}$$

$$\text{@ } W_2 \quad P_2 = 420 \times 10' = 4.2 \text{ k} ; M = 420 \times (10')^2 / 8 = 5.2 \text{ k-ft} ; f_v = 2.2 \text{ k} \quad \text{OK}$$

$$\text{@ BEAM A : } P = 420 \times 11 = 4.6 \text{ k} < 6.3 \text{ k} \quad 16" \phi \text{ PIER OK}$$

LATERAL FORCES (CHECK BEAR CAP)

SEISMIC:

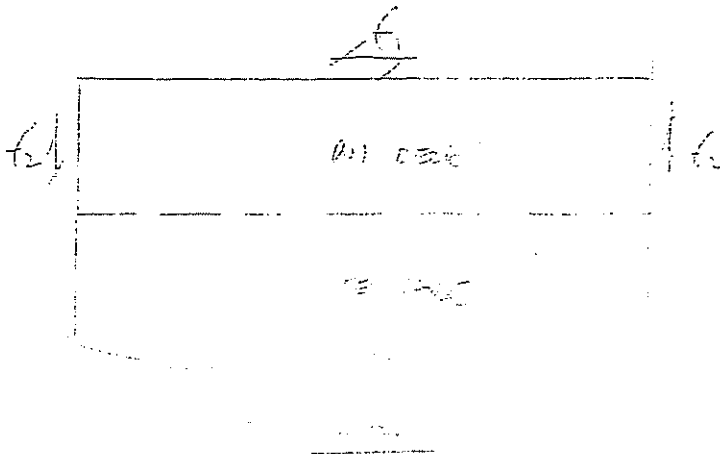
$$V = \frac{3.0 \times C_a}{1.4 \times R} \times W_i$$

$$N_2 = 13$$

$$C_a = 0.25 \times N_2$$

$$R = 5T$$

$$V = \frac{0.225}{1.4 \times 5} \times \left[\overset{\text{SEISMIC}}{714 \times 20} + \overset{\text{WIND}}{240 \times 17} \right] = 4.19$$





LEA & SUNG ENGINEERING, INC.

CIVIL ENGINEERS • LAND SURVEYORS

2495 Industrial Parkway West

Hayward, CA 94545-5037

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PROJECT LINDEN	SHEET NO. 4	OF 5
	JOB NO. 2010676	
	BY	DATE

LATERAL FORCES (100T)

$$f_1 = 4.19^k ; v_1 = 4.19 / (51) = 8.2\% \triangle$$

$$f_2 = f_3 = 4.19 / 2 = 2.1^k ; v_2 = 2.1 / (14) = 15.0\%$$

$$v_2 = 2.1 / (11) = 19.0\%$$

SHEAR WALL SPECIFICATIONS

\triangle 1/2" COX REIN W/ BA NAILS @ 6" OC ; GOOD FOR 260% \triangle

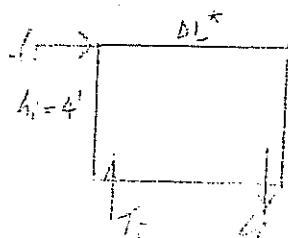
ANCHOR BOLTS (2x PTDF 211)

5/8" ϕ x 10" AB, @ 45" OC ; GOOD FOR 110T x 1.33/4 = 360% (TRP)

HOLD-DOWNS

$$T_r = \frac{f_t \times h_i \times DL^* \times \sqrt{d_i}}{d_i}$$

* DL = 135 ONLY
90%



f_t	h_i	d_i	DL*	T_r
f_1	51'	4'	4.19 x 4.17 + 5 x 20	2.1^k ϕ x 1/2
f_2	14'	3'	4.19 x 2.17 + 5 x 20	0.2^k ϕ x 1/2
f_3	11'	3'	4.19 x 1.17 + 5 x 20	0.5^k ϕ x 1/2

[Handwritten signature]



LEA & SUNG ENGINEERING, INC.

CIVIL ENGINEERS • LAND SURVEYORS

2495 Industrial Parkway West

Hayward, CA 94545-5037

(510) 887-4086 • FAX (510) 887-3019

PROJECT LINDEN	SHEET NO. 5	OF 5
	JOB NO. 2010678	
	BY	DATE

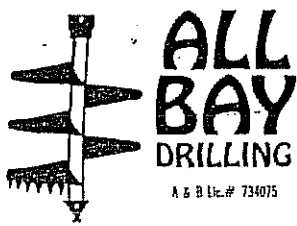
LATERAL FORCES (cont.)

CHECK REQUIREMENTS

$$\Gamma_{max} = \frac{V_1}{H_1} \pm \frac{M_0}{2.15} \quad ; \quad P = \frac{2-20}{\Gamma_{max} \sqrt{A}}$$

f_i	d_{iw}	Γ_{max}	P	
f_1	51'	0.09	-6.33	N/A
f_2	14'	0.36	-0.08	N/A
f_3	11'	0.45	0.34	N/A

[Handwritten signature]



P.O. Box 2086
 Petaluma, CA 94953
 Tel: (707) 762.1199
 Fax: (707) 781.9874

BID WORK SHEET

DATE 1/1/11

OUR JOB NO. 0752

CONTRACTOR Vic Linden (owner)
 CONTRACTOR'S P.O. # _____ SUPT. number
 JOB LOCATION 954 Keeler

EQUIPMENT AND LABOR CONTRACT HOURLY DRILLING AS DIRECTED AND SUPERVISED BY OTHERS
NOTE: DRILLED SHAFTS LEFT OPEN ARE RESPONSIBILITY OF GENERAL CONTRACTOR AND/OR OWNER!
 TERMS AND CONDITIONS ARE ON REVERSE SIDE!

WORK REQUESTED AS FOLLOWS: Drill and off haul spoils per contract

SPECIAL INSTRUCTIONS: 12-16" x 8 foot

SHAFT #	REGULAR DRILLED FOOTAGE		T & M REFUSAL DRILLING TIME			TOTAL DRILLED FOOTAGE	
	HR.	MIN.					
1	12'	—"				12'	—"
2	12'	—"				12'	—"
3	12'	—"				12'	—"
4	12'	—"				12'	—"
5	8'	6"				8'	6"
6	8'	6"				8'	6"
7	9'	—"				9'	—"
8	8'	6"				8'	6"
9	8'	—"	15		core thru concrete footing	8'	—"
10	8'	—"				8'	—"
11	8'	—"				8'	—"
12	8'	—"				8'	—"
13							
14							

ADDITIONAL WORK AUTHORIZATION
 T & M DRILLING ABOVE BID CONTRACT, STANDBY OR DELAY TIME, ADDITIONAL WORK (SEE T & M REFUSAL DRILLING TIME ABOVE).
 OTHER EXTRA CHARGES FOR:

 OWNER OR CONTRACTOR'S AUTHORIZED REPRESENTATIVE

I HAVE READ THIS REPORT AND HEREBY ACKNOWLEDGE THE SATISFACTORY COMPLETION OF THE DESCRIBED WORK AND AGREE TO PAY THE CHARGES THAT WILL ACCRUE THEREFROM.

BY: Will [Signature]
ALL BAY DRILLING

OWNER OR CONTRACTOR'S AUTHORIZED REPRESENTATIVE [Signature]

City/Service Center
Planning and Development Department
1200 Milvia Street
Berkeley, California 94704

Fire Prevention 883-6555
Engineering Permits 883-6555
Toxics 705-8150
Health Dept 644-6510
Zoning 705-8111



(510) 883-6555 Telecommunications Service for the Deaf (1) 800-469-5211 FAX (510) 883-6543
To Arrange Building and Public Works Inspections Call (510) 883-6566

PERMITS AND DEPT. 180 - BUILDING DEPARTMENT

APP. COUNTY NUMBER: 00 000020
PROJECT NUMBER: 883-6555
APPLICANT: [Illegible]
ADDRESS: [Illegible]
CITY: [Illegible]

RECEIVED AND READ
NUMBER OF PAGES: 2

PROJECT TITLE: [Illegible]
PROJECT LOCATION: [Illegible]
PROJECT TYPE: [Illegible]

PROJECT DESCRIPTION: [Illegible]
PROJECT SCOPE: [Illegible]
PROJECT VALUE: [Illegible]

PROJECT STATUS: [Illegible]
PROJECT DATE: [Illegible]
PROJECT CONTACT: [Illegible]

NOTE: This permit is not valid until signed by the building official and the deputy and is only valid if the receipt is acknowledged in the space provided.

Signature of Deputy

APPLICATION APPROVAL STATEMENT
[Handwritten Signature]

JOBSITE RECORD

[Handwritten marks]



	Date	Inspector	Comment
Set back/lot coverage			
Foundation forms/depth/size	10/22/09	K. Moss	Handwritten notes
Steel			
Anchor bolts			
Holddowns			
UFER			
Underfloor electric			
Underfloor mechanical			
Underfloor plumbing			
Underfloor insulation			
Floor frame			
Slab			
DO NOT COVER UNTIL ABOVE IS SIGNED			
Frame electric - rough			
Frame mechanical - rough			
Frame plumbing - rough			
Frame			
shear walls			
Roaming insulation			
DO NOT COVER UNTIL ABOVE IS SIGNED			
Paint - exterior			
Paint - Dry Wall - Interior			
Fire Department Approvals			
Sprinkler system			
Hood Extinguishing system			
Extinguishing system			
Fire alarm system			
Public Works/Engineering Approvals			
Public Right of Way			
Sewer			
Drain			
Finals - Division/Department			
Fire Department			
Hazardous Materials			
Health Department			
Public Works			
Planning/Zoning			
Final Gas test			
Gas release to PG&E			
Electrical release to PG&E			
Building and Safety Division			
Final - Electrical			
Final - Plumbing			
Final - Mechanical			
Final - Building			
CERTIFICATE OF OCCUPANCY			

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No.

	Date	Inspector	Comment
Lot coverage			
Foundation/depth/size			
Steel			
Anchor bolts			
Holddowns			
UFER			
Underfloor cleart			
Underfloor mechanical			
Underfloor plumbing			
Underfloor insulation			
Floor frame			
Slab			
DO NOT COVER UNTIL ABOVE IS SIGNED			
Frame electric - rough			
Frame mechanical - rough			
Frame plumbing - rough			
Frame			
Shear walls			
Framing insulation			
DO NOT COVER UNTIL ABOVE IS SIGNED			
Lath - exterior			
Lath - Drywall - interior			
Fire Department Approvals			
Sprinkler system			
Flood extinguishing system			
Extinguishing system			
Fire alarm system			
Public Works/Engineering Approvals			
Public Right-of-Way			
Sewer			
Drain			
Finals - Division/Department			
Fire Department			
Hazardous Materials			
Health Department			
Public Works			
Planning/Zoning			
Final Gas Test			
Gas release to PG&E			
Electrical release to PG&E			
Building and Safety Division			
Final - Electrical	4/22/60	MWU	
Final - Plumbing	4/22/60	MWU	
Final - Mechanical	4/22/60	MWU	
Final - Building			
CERTIFICATE OF OCCUPANCY			

CITY OF BERKELEY

Permit Service Center
 Planning and Development Department
 2120 Milvia Street
 Berkeley, California 94704

Fire Prevention 883-6555
 Engineering Permits 883-6555
 Toxics 705-8150
 Health Dept 644-6510
 Zoning 705-8111



(510) 883-6555 • Telecommunications Device for the Deaf (510) 644-6915 • FAX (510) 883-6543
 To Arrange Building and Public Works Inspections Call (510) 883-6560

PERMIT EXPIRES 180 DAYS FROM DATE OF ISSUANCE

Application Number: 99-00003950 Date: 7/07/99
 Parcel Number: 054 KEELER AVE
 Application description: ELECTRICAL PERMIT - 2210 EXPRESS
 Property Use: SINGLE FAMILY RESIDENTIAL

Owner: VTC LINDEN Contractor:

VTC LINDEN
 954 KEELER AV
 BERKELEY CA 94708
 (415) 759-8359

RECEIVED AND READ
 NUMBER OF PAGES: 3
 NAME: [Signature]
 DATE: 11/21/03

Work Description and Information
 SINGLE FAMILY RESIDENCE

Permit: ELECTRICAL PERMIT
 Additional desc:
 Permit Fee: 67.25 Plan Check Fee: 00
 Issue Date: 7/07/99 Valuation: 0
 Expiration Date: 1/04/00

Qty	Unit Charge	Per	Extension
		BASE FEE	31.25
8.00	1.7500	EA EL21 RECEPTACLE	14.00
4.00	1.7500	EA EL22 SWITCH	7.00
2.00	1.7500	EA EL23 LIGHT	7.00
1.00	7.5000	EA EL26 FIXED APPLIANCE OUTLET	7.50

Permit: MECHANICAL PERMIT
 Additional desc:
 Permit Fee: 67.25 Plan Check Fee: 00
 Issue Date: 7/07/99 Valuation: 0
 Expiration Date: 1/04/00

Qty	Unit Charge	Per	Extension
		BASE FEE	31.25
1.00	8.0000	EA ME50 HOODS, RESIDENTIAL	8.00
1.00	8.0000	EA ME51 DUCTS, FANS, REGISTERS	8.00

Special Notes and Comments:
 ADDITIONAL CIRCUITS IN 2 UPSTAIRS
 BEDROOMS AND THE BATHROOM, KITCHEN AND
 LAUNDRY ROOM

Other Fees:
 FILING FEE - ELECTRICAL 11.50
 FILING FEE - MECHANICAL 11.50
 MICROFILMING APPLICATION APPROVAL STATEMENT

NOTE: This permit does not become valid until signed by the building official or his deputy and fees are paid, and receipts acknowledged in the space provided.

Signature of Deputy: [Signature]