

**- SITE DEVELOPMENT REVIEW -**

**CUSTOM RESIDENTIAL PLANS FOR:  
MR. & MRS. DALE TOWNSEND**

2&142 FAIRVIEW AVENUE

HAYWARD, CALIFORNIA

**DS BOLINGER  
DESIGN  
(()) SERVICES**

1525 63RD STREET  
EMERYVILLE, CALIFORNIA 468 8

☎ 518.151.542

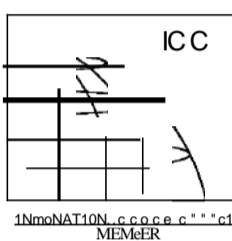
☎ 518.181.53

WEB SITE: [WWW.60LINGERDESIGN.COM](http://WWW.60LINGERDESIGN.COM)

EMAIL: 6RUCE@60LINGERDESIGN.COM

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- PROFESSIONAL 6 ULDING DESIGNERS
- ICC CERTIFIED 6 ULDING INSP ECTORS
- ICC CERTIFIED PLANS EXAMINERS
- PROJECT PLANNERS/MANAGERS

ICC - 1033421-6 5  
ICC - 1833421-R 5  
ICC - 1833421-E 5  
ICC - 1833421-P 4  
ICC - 1833421-M 5



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REVISION 1-11STY: DATE:

REVISION: DATE:

**CUSTOM  
DWELLING FOR=**

**MR. & MRS. DALE  
TOWNSEND  
2&142 FAIRVIEW AVE.  
HAYWARD, CA  
APN=411-e 2 e -e e 4-e 1**

**SITE PLAN  
VICINITY MAP  
CODE REQUIREMENTS  
PROJECT INFORMATION**

DATE: 16 OCTOBER 2921 SHEET NO.:

SCALE: AS NOTED **1**

PROJECT NO.: 2921-99 6

**SHEET INDEX**

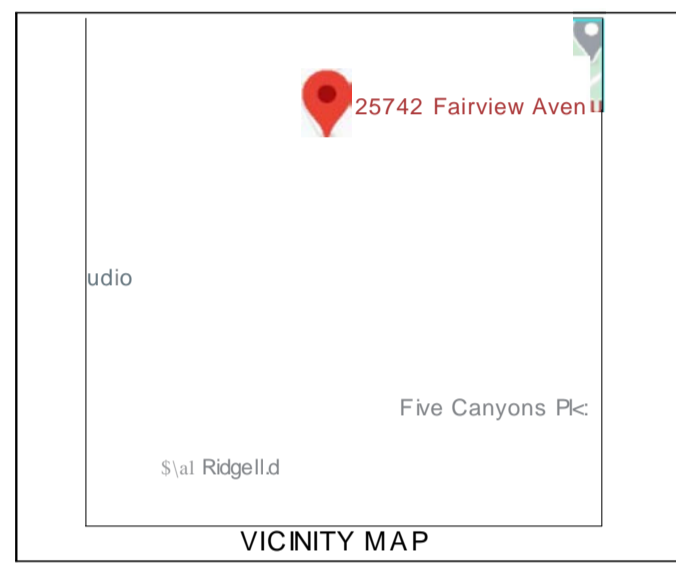
- TL1 EXISTING & NEW SITE PLAN
- AL1 EXISTING 1' PLAN  
- TO 6 E DEMOUSH-IED -
- AL3 NEW 2ND 1' PLAN
- A2.1 FRONT & RIGHT ELEVATIONS
- A2.2 REAR & LEFT ELEVATIONS
- NONE FRONT & RIGHT COLORED ELEVATIONS
- REAR & LEFT SIDE COLORED ELEVATIONS
- A3.1 TYPICAL CROSS-SECTIONS A & B
- C1 EXISTING & PROPOSED GRADING PLANS
- C2 S T M WATER PREVENTION PLAN  
6 10 RETENTION FACILITY 1-IART  
ON-SITE CLEAN OUT  
SITE SECTION THRU A & B
- C3 SOIL EROSION CONTROL PLAN  
EROSION AND SEDIMENT CONTROL MEASURES  
STRAW SALE SEDIMENT CONTROL DETAIL  
DOWNSPOUT CONNECTION DETAIL  
6 10 RETENTION DETAILS
- 1 OF 3 OWTS SITE PLAN
- L-9.9 COVER SHEET
- L-1.e LANDSCAPE MASTER PLAN
- L-2.9 1-HYDROZONE PLAN & MAPPING CALCULATIONS
- L-3.9 PLANT PALETTE & IMAGERY
- PVI.1 SOLAR DESIGN & DETAILS
- PVI.2 SOLAR DESIGN & DETAILS
- PVI.3 SOLAR DESIGN & DETAILS

I, BRUCE A. BOLINGER, CERTIFIED ARCHITECT, THAT THIS SITE PLAN HAS BEEN PREPARED BY ME UNDER MY DIRECTION AND DO ATTEST TO THE ACCURACY OF ALL INFORMATION INDICATED THEREON. SIGNATURE: *Bolinger*

TITLE: CEO/PRINCIPAL, REG. NO. NONE DATE: 05 DECEMBER 2921.

SCOPE OF WORK:

1. PREPARE SITE PLAN TOTAL BUILDING DEMOLITION.
2. TERMINATE (E) DWELLING MAINTENANCE ELECTRICAL SERVICE.  
USE THIS LOCATION TO ESTABLISH ON-SITE TEMP. POWER ONLY.
3. TERMINATE AND CAP SANITARY SEWER SOURCE AND LIGHTNING PROTECTIVES.  
PROVIDE NEW TWO STORY RESIDENTIAL DESIGN.
4. PROVIDE CALGREEN MANDATED ENERGY DESIGN REQUIREMENTS.
5. PROVIDE GAS CALCULATION AND GAS LINE SIZES.
6. PROVIDE TITLE 24 CALIFORNIA ENERGY CALCULATION.
7. PROVIDE MECHANICAL DESIGN.
8. PROVIDE MECHANICAL DESIGN.
9. PROVIDE MECHANICAL DESIGN.



**PROJECT INFORMATION:**

ASSESS PARCEL NUMBER (APN): 411-0239-994-91 TRACT NO: N/A  
LOT NO: N/A  
ZONING: R1 L6E LOT AREA: 436,319 S'  
OCCUPANCY: R3 q; U NO. OF STIES: 2  
TYPE OF CONSTRUCTION: V6 SPRINKLERS: YES

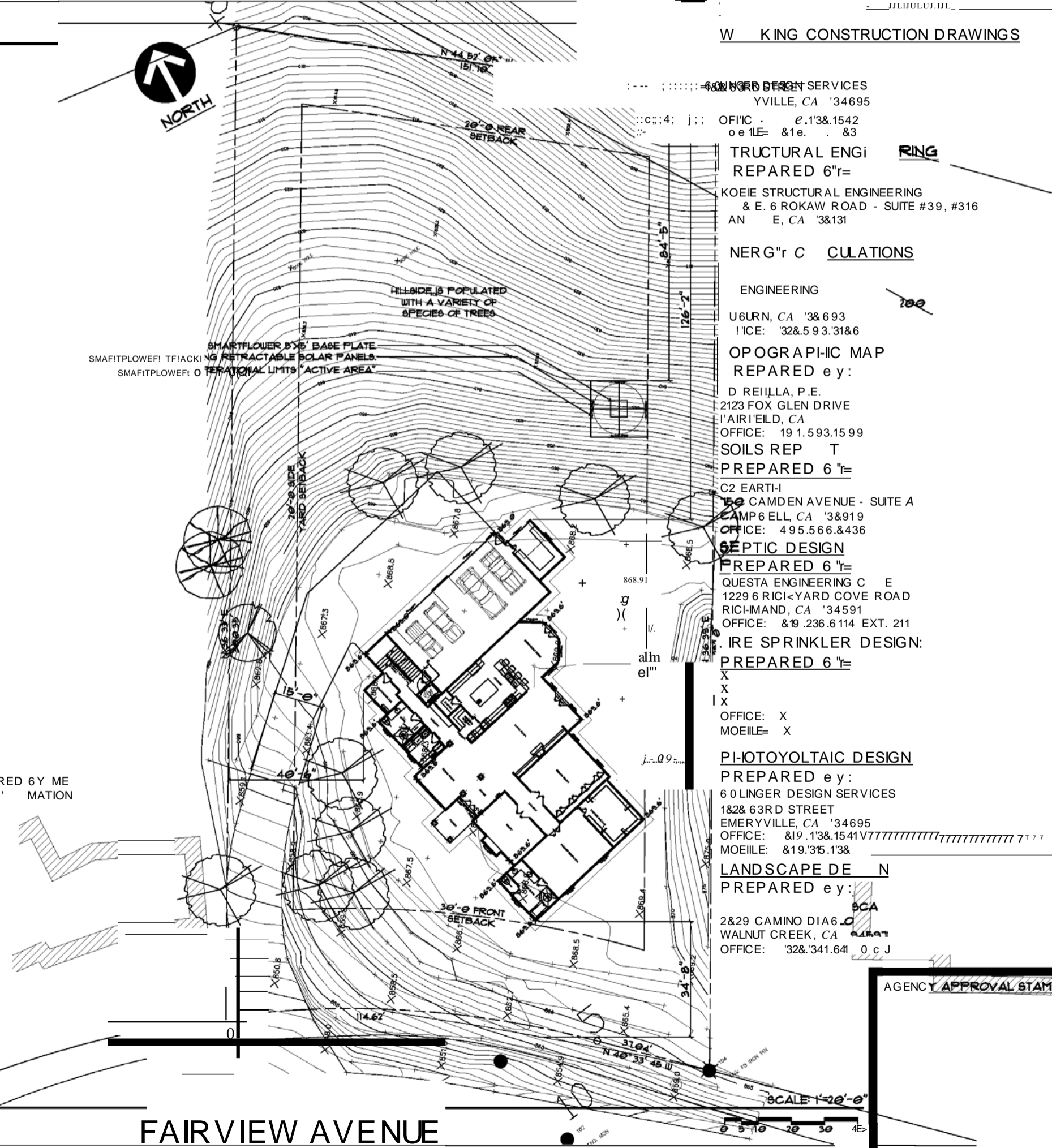
SETBACKS:	REQUIRED:	ACTUAL:
FRONT	39'-9"	34'-5"
REAR	2e'-e"	12e'-2"
LEFT SIDE	2e'-e"	2e'-e"
RIGHT SIDE	2e'-e"	49'-6"

**AREA:**

(E) 1ST FLOOR	1,443.15 S'	DEMO
(E) GREENWAY	326.14 S'	EXISTING
(E) GARAGE	293 S'	DWELLING
TOTAL EXISTING:	2,346.39 S'	
(N) 1ST FLOOR	368.46 S'	
(N) SECOND FLOOR	352.51 S'	4'324.33 S' (N)
GARAGE/SHOP	1,213.36 S'	
TOTAL PROPOSED:	8,392.3 S'	

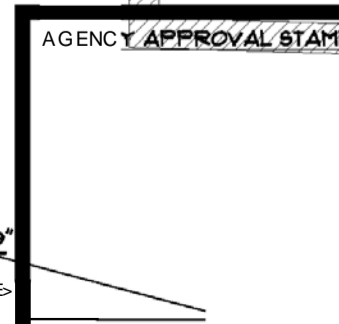
TOTAL AREA: 8,392.3 S' BUILDING REUSE (E) SEPTIC SYS.  
FOOTPRINT: 4,324.42 S' LOT: 2 NO RETAINING WALLS.  
COVERAGE: 11.21% 3. 2ND FL. 1.1% OF 1ST FL.  
AREA RATIO 13.8%

- CODES AND REGULATIONS:**
1. MINISTATUTE CODE, 2819 EDITION, CALIF STATE TITLE 24, PART 1.
  2. UNIFORM BUILDING CODE, 2819 EDITION, CAUPOF-NIA C, TITLE 24, PART 2, VOLUME 1 & 2.
  3. CALIFORNIA BUILDING CODE, 2819 EDITION, CAUPOF-NIA C, TITLE 24, PART 2 & 3.
  4. CALIFORNIA ELECTRICAL CODE, 2819 EDITION, CAUPOF-NIA C, TITLE 24, PART 3.
  5. CALIFORNIA MECHANICAL CODE, 2819 EDITION, CAUPOF-NIA C, TITLE 24, PART 4.
  6. CALIFORNIA PLUMBING CODE, 2819 EDITION, CAUPOF-NIA C, TITLE 24, PART 4.
  7. CALIFORNIA ENERGY EFFICIENCY CODE, 2913 EDITION, CAUPOF-NIA C, TITLE 24, PART 6.
  8. CALIFORNIA BUILDING CODE, 2819 EDITION, CAUPOF-NIA C, TITLE 24, PART 3.
  9. CALIFORNIA BUILDING CODE, 2819 EDITION, CAUPOF-NIA C, TITLE 24, PART 9.
  10. CALIFORNIA BUILDING CODE, 2819 EDITION, CAUPOF-NIA C, TITLE 24, PART 1, CHAPTER 10.1.3.3.3.3.
  11. CALIFORNIA BUILDING STANDARDS CODE, 2819 EDITION, CAUPOF-NIA C, TITLE 24, PART 11.
  12. CALIFORNIA BUILDING STANDARDS CODE, 291 EDITION, CAUPOF-NIA C, TITLE 24, PART 12.
  13. CALIFORNIA BUILDING STANDARDS CODE, 291 EDITION, CAUPOF-NIA C, TITLE 24, PART 12.



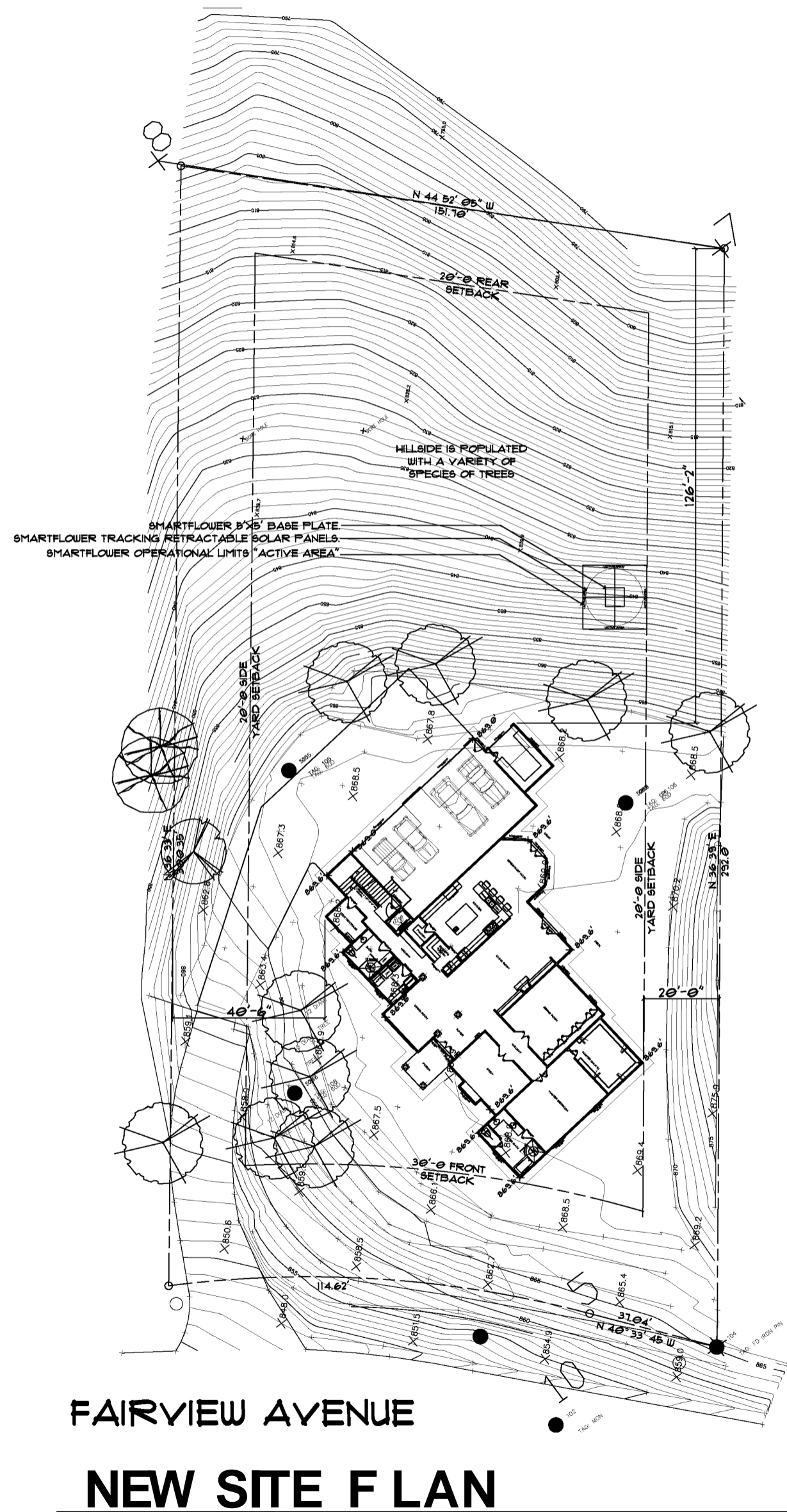
**WORKING CONSTRUCTION DRAWINGS**

- 60LINGER DESIGN SERVICES  
EMERYVILLE, CA 94695  
OFFICE: 518.151.542  
MOBILE: 518.181.53
- STRUCTURAL ENGINEER  
REPAIRED 6/18/21  
KOEIE STRUCTURAL ENGINEERING  
& E. 6 ROKAW ROAD - SUITE #39, #316  
SAN FRANCISCO, CA 94131
- MECHANICAL ENGINEER  
REPAIRED 6/18/21  
D REILLA, P.E.  
2123 FOX GLEN DRIVE  
FAIRFIELD, CA 94504  
OFFICE: 191.593.1599
- SOILS REPORT  
REPAIRED 6/18/21  
C2 EARTHWORK  
150 CAMDEN AVENUE - SUITE A  
CAMPBELL, CA 95008  
OFFICE: 495.566.8436
- SEPTIC DESIGN  
REPAIRED 6/18/21  
QUESTA ENGINEERING CONSULTANTS  
1229 RICKYARD COVE ROAD  
RICHMOND, CA 94801  
OFFICE: 819.236.6114 EXT. 211
- FIRE SPRINKLER DESIGN  
REPAIRED 6/18/21  
X  
X  
X  
OFFICE: X  
MOBILE: X
- PHOTOVOLTAIC DESIGN  
REPAIRED 6/18/21  
60LINGER DESIGN SERVICES  
1&2& 63RD STREET  
EMERYVILLE, CA 94695  
OFFICE: 518.151.542  
MOBILE: 518.181.53
- LANDSCAPE DESIGN  
REPAIRED 6/18/21  
2&29 CAMINO DIABLO  
WALNUT CREEK, CA 94596  
OFFICE: 328.341.641

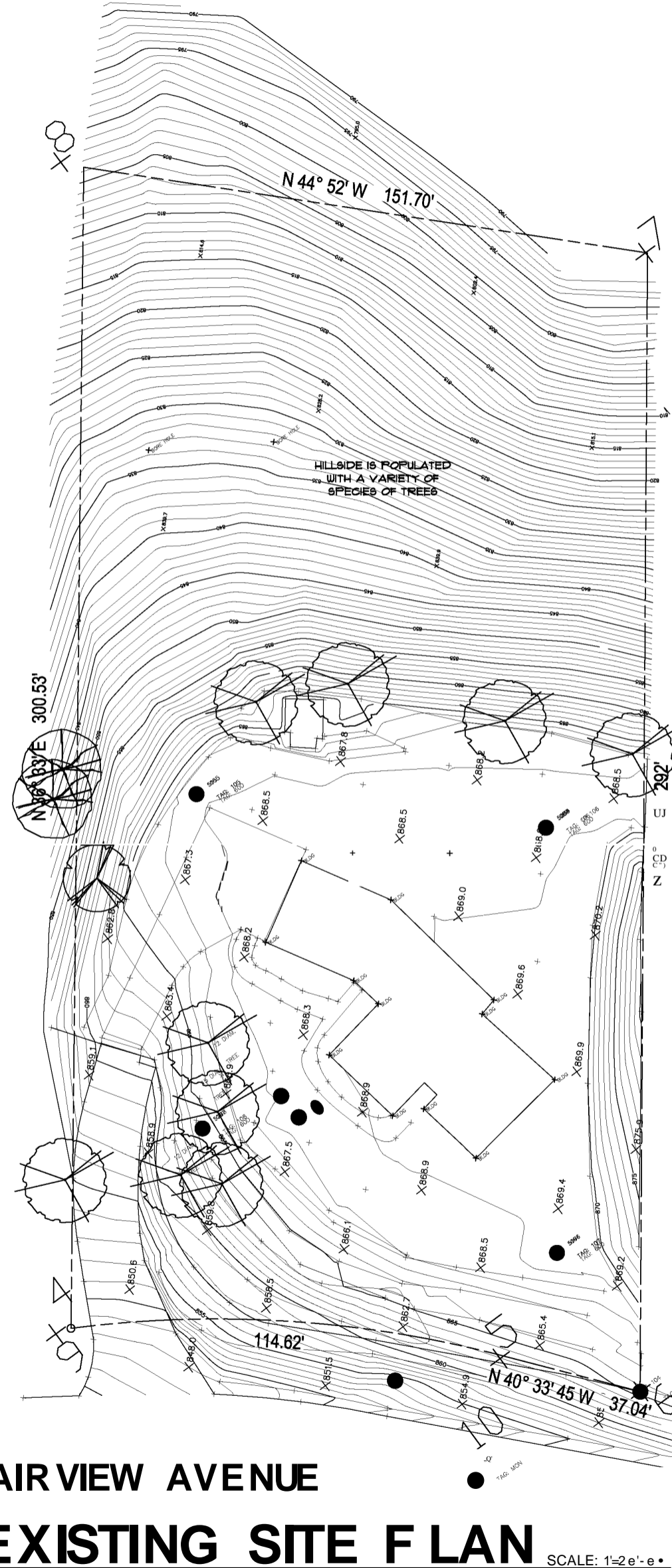


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**FAIRVIEW AVENUE**  
**NEW SITE PLAN**



**FAIRVIEW AVENUE**  
**EXISTING SITE PLAN**

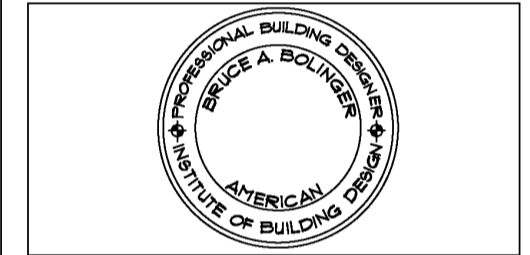
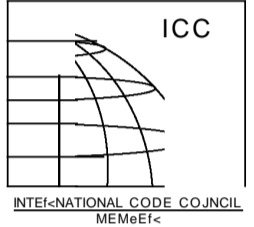
SCALE: 1"=20'-0"

AGENCY APPROVAL  
STAMP

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www.bolingerdesign.com  
EMAIL: BRUCE@BOLINGERDESIGN.COM

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  - ICC CERTIFIED BUILDING INSPECTORS
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  - PROJECT PLANNERS/MANAGERS
- PROFESSIONAL CERTIFICATIONS:
- ICC 1033421-6&
  - ICC 1e33421-R&
  - ICC 1e33421-E&
  - ICC 1e33421-P4
  - ICC 1e33421-M&
  - 1ceo 1e33421-1e
  - 1ceo 1e33421-e&
  - AJeD 1e33421-1s12



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REVISION HISTORY:

REVISION:	DATE:

**CUSTOM DWELLING FOR:**  
**MR. MRS. DALE TOWNSEND**  
**28142 FAIRVIEW AVE.**  
**HAYWARD, CA**  
**AFN=411-e2-e-e4-e1**

**NEW SITE PLAN**  
**EXISTING SITE PLAN**  
DATE: 16 OCT 06ER 2e21 SHEET NO.:  
SCALE: AS NOTED  
PROJECT NO.: 2021-006

**11**

WARNING: ALL PLANS, SPECIFICATIONS, CALCULATIONS, MANDATORY REQUIREMENTS, TITLE 24 ENERGY CALCULATIONS AND STRUCTURAL ENGINEERING, AS INDICATED BY THESE DRAWINGS ARE THE SOLE PROPERTY OF BOLINGER DESIGN SERVICES AND SHALL NOT BE USED BY OR REPRODUCED TO ANY PERSON, FIRM OR CORPORATION FOR ANY PURPOSE WITHOUT THE WRITTEN CONSENT OF BRUCE A. BOLINGER, PRINCIPAL ARCHITECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE AND NOTIFY THE DESIGNER OF ANY DISCREPANCIES BETWEEN ACTUAL CONDITIONS AND WHAT IS SHOWN ON THE DRAWINGS BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY OF THE BUILDING DURING DEMOLITION AND CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BRACING AND GUYS IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES. ANY DEVIATIONS MUST BE APPROVED BY THE DESIGNER AND THE LOCAL BUILDING DEPARTMENT FOR DEMOLITION AND CONSTRUCTION.

**EXISTING FIELD DIMENSIONING:**

ALL WORK SHALL CONFORM WITH THE CBC, CRC, 2014 EDITION, FEDERAL, STATE AND LOCAL CODE REQUIREMENTS, LAWS AND ORDINANCES.

1. THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE AND NOTIFY THE DESIGNER OF ANY DISCREPANCIES BETWEEN ACTUAL CONDITIONS AND WHAT IS SHOWN ON THE DRAWINGS BEFORE PROCEEDING WITH THE WORK.

- A1. EXISTING FOUNDATION.
- A2. EXISTING FRAMING.
- A3. EXISTING WALL LOCATIONS AND CONDITIONS.
  - 1. WINDOW SIZE AND LOCATIONS.
  - 2. DOOR SIZE AND LOCATIONS.
  - 3. KITCHEN LAYOUT.
  - 4. FURNACE, POWER AND UTILITY LOCATIONS.
- A4. EXISTING ROOF FRAMING.
- A5. EXISTING POWER PLAN.
  - A5a. EXISTING LIGHTING PLAN.
  - A5b. EXISTING SPECIAL CONDITIONS.

2. THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE AND NOTIFY THE DESIGNER OF ANY DISCREPANCIES BETWEEN ACTUAL CONDITIONS AND WHAT IS SHOWN ON THE DRAWINGS BEFORE PROCEEDING WITH THE WORK.

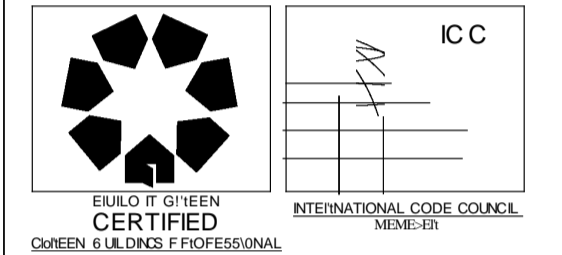
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY OF THE BUILDING DURING DEMOLITION AND CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BRACING AND GUYS IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES. ANY DEVIATIONS MUST BE APPROVED BY THE DESIGNER AND THE LOCAL BUILDING DEPARTMENT FOR DEMOLITION AND CONSTRUCTION.

**BOLINGER DESIGN SERVICES**

1228 b3RD STREET  
 EMERYVILLE, CALIFORNIA 94698  
 (O) & 19.19&.1842  
 (C) & 19.918.19&3

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 EMAIL: BRUCE@BOLINGERDESIGN.COM

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- PLAN EXAMINERS
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REVISION HISTORY: DATE=

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RESIDENTIAL MOVEMENT PLANS Foyer:

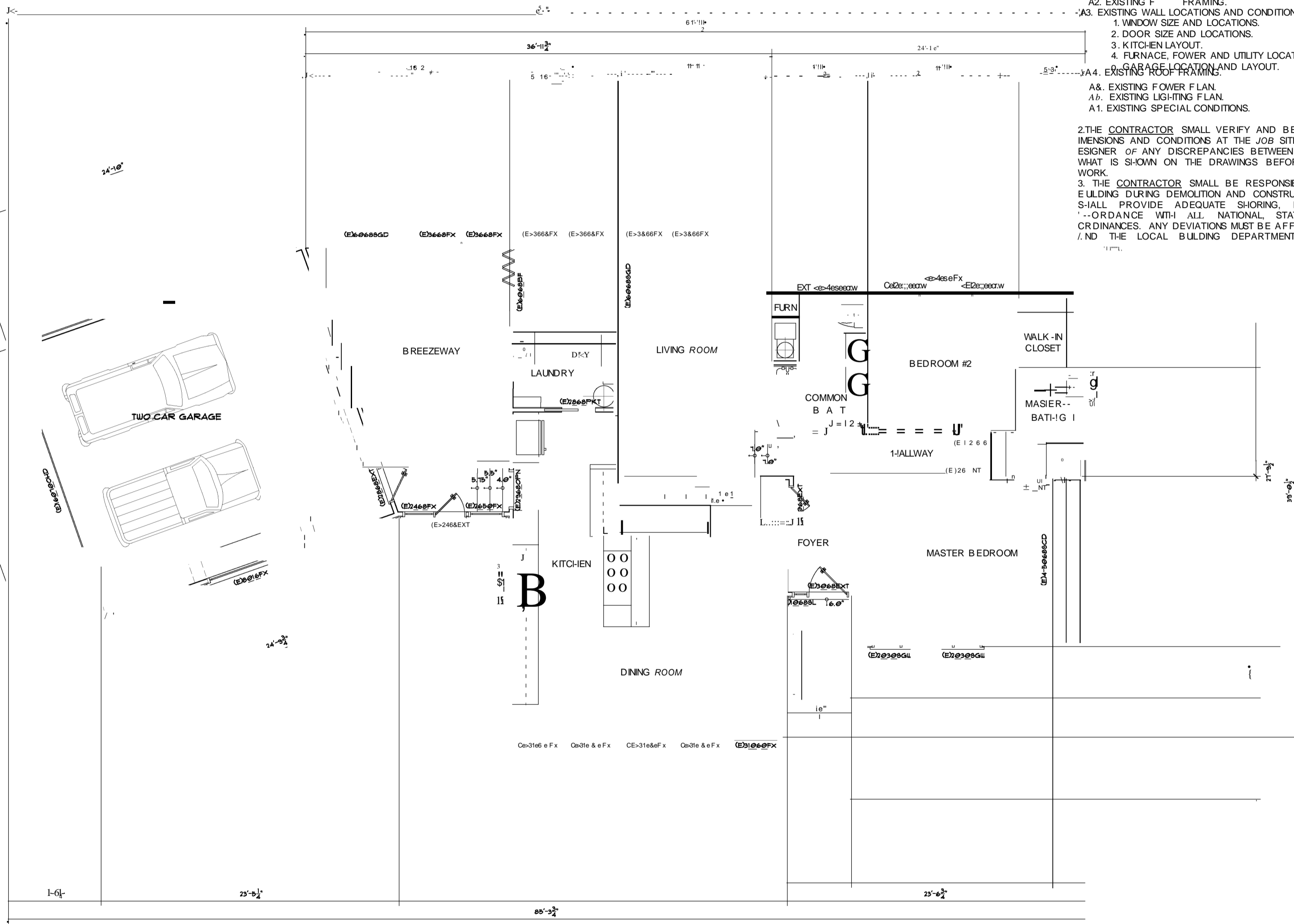
MR. & MRS. DALE TOWNSEND  
 25142 FAIRVIEW AVE.  
 144 YWARD, CA

**EXISTING FLOOR PLAN**

DATE: 16 OCTOBER 2020 SHEET NO.:

**A11**

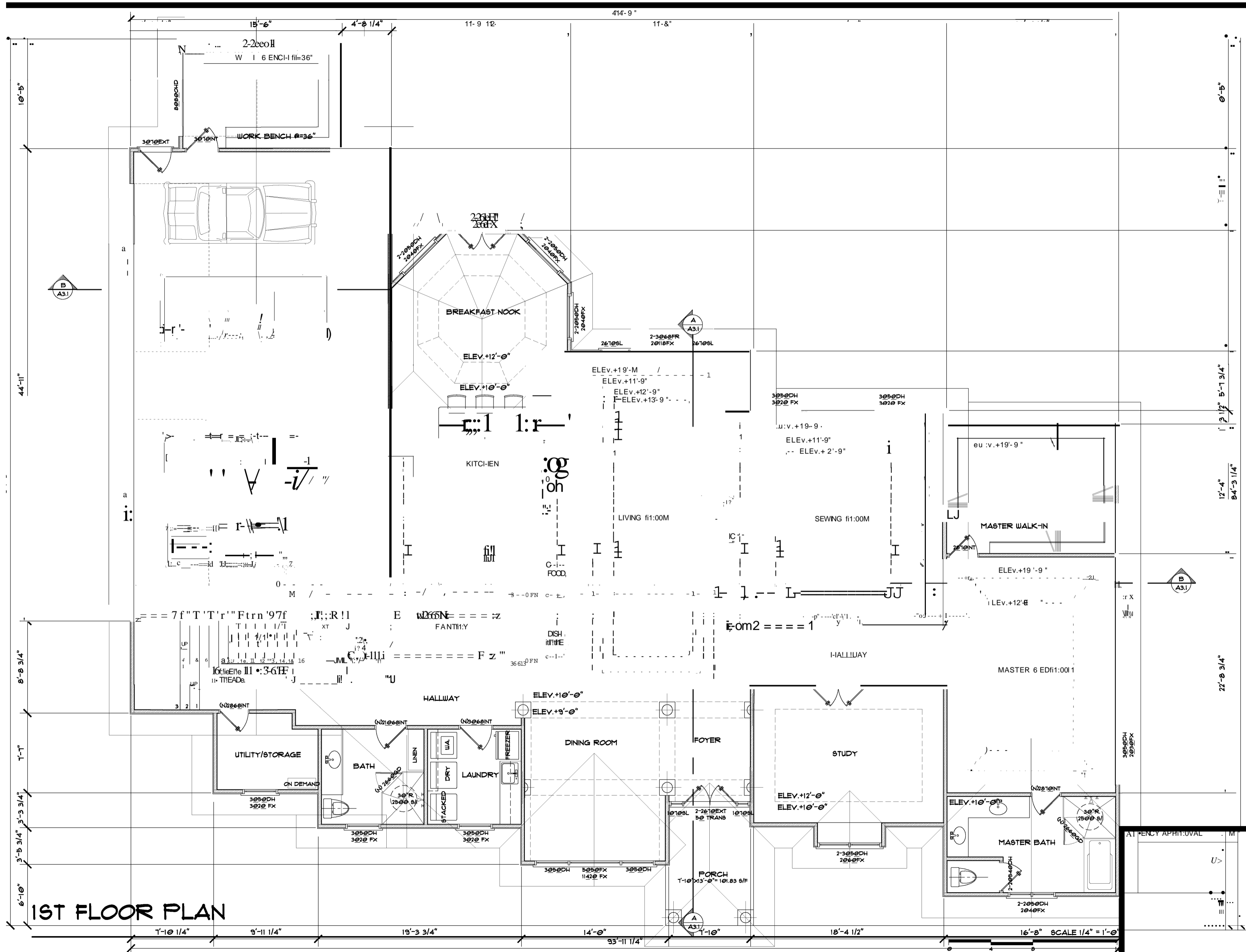
PROJECT NO.: 2e2e-e13



**EXISTING FLOOR PLAN - TO 6 E DEMOLISHED -**

SCALE 1/4" = 1'-0"

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**1ST FLOOR PLAN**

**BOLINGER DESIGN SERVICES**

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 EMERYVILLE, CALIFORNIA 9469 8  
 (O) 819.198.1842  
 (C) 819.918.1983  
 www SITE: www.e o UNGER DESIGN.COM  
 EMAIL: 6 RUCE6i60UNGER DESIGN.COM

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  - PROFESSIONAL 6 ULDING DESIGNERS
  - ICC CERTIFIED 6 ULDING INSPECTORS
  - ICC CERTIFIED 6 LANS EXAMINERS
  - PROJECT P LANNERS/MANAGERS
- PROFESSIONAL CERTIFICATIONS:
- ICC - 1033421-6&
  - ICC - 1933421-R&
  - ICC - 1933421-E&
  - ICC - 1933421-F 4
  - ICC - 1933421-M&
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PROFESSIONAL BUILDING DESIGNER  
 BRUCE A. BOLINGER  
 AMERICAN INSTITUTE OF BUILDING DESIGN  
 MEMBER

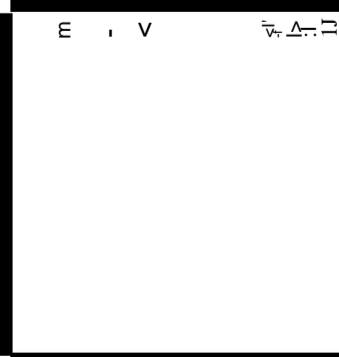
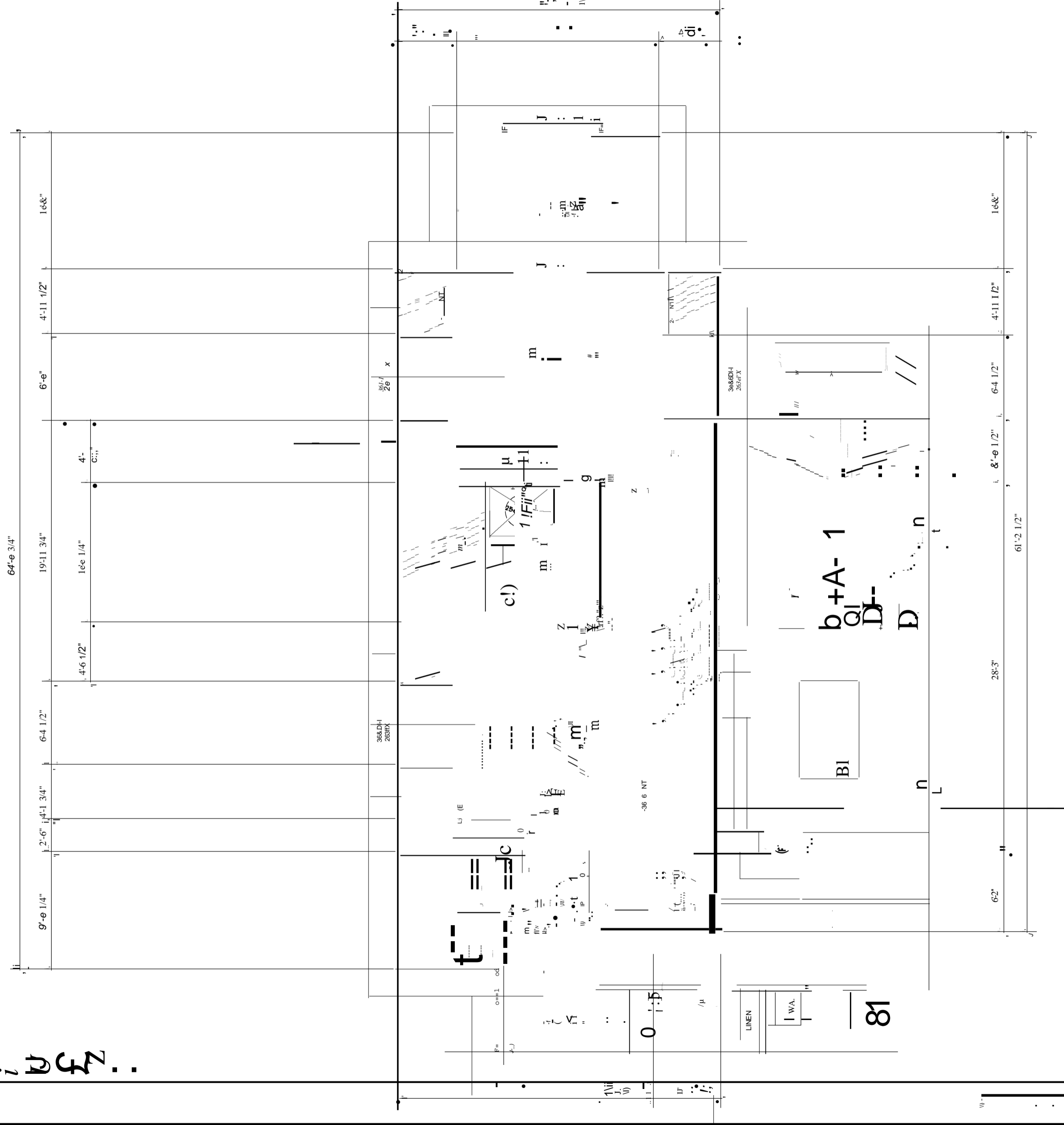
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**CUSTOM DWELLING FOR=**  
**MR. MRS. DALE TOWNSEND**  
**25142 FAIRVIEW AYE.**  
**1-HAYWARD, CA**  
**AFN=411-e 2 e-ee 4-e 1**

**NEW 1ST FLOOR PLAN**  
 DATE: 16 OCT06Efr: 2921 SHEET NO.:  
 SCALE: AS NOTED  
 PROJECT NO.: 2921-99 6  
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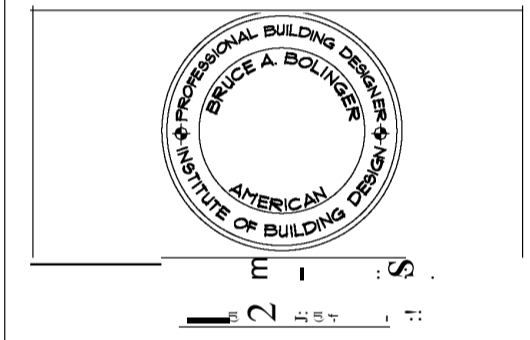
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 6'-e  
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 16'-8"

UNLESS ALL PLANS SPECIFICATIONS CALIFORNIA MANDATORY REQUIREMENTS, TITLE 24 ENERGY CALCULATIONS AND STRUCTURAL ENGINEERING, AS INDICATED BY THESE DRAWINGS ARE THE SOLE PROPERTY OF BOLINGER DESIGN SERVICES AND WERE DEVELOPED FOR USE ON THIS PROJECT AND SHALL NOT BE REPRODUCED OR DISCLOSED TO ANY PERSON, FIRM OR CORPORATION FOR ANY PURPOSE WITHOUT THE WRITTEN CONSENT OF BRUCE A. BOLINGER, PRINCIPAL ARCHITECTURAL DESIGNER. ARCHITECTURAL WORK AS THE DESIGN OF A BUILDING OR BUILDINGS INCLUDING A BUILDING ARCHITECTURAL PLANS OR DRAWINGS. THE WORK INCLUDES THE OVERALL FORM AS WELL AS THE ARRANGEMENT AND COMPOSITION OF SPACES AND ELEMENTS IN THE DESIGN, BUT DOES NOT INCLUDE INDIVIDUAL FINISHED MATERIALS. (1) I.L.C. (SECTION 10)



**FRONT ELEVATION**

SCALE 1/4" = 1'-8"



**R I G H T SIDE ELEVATION**

SCALE 1/4" = 1'-8"

**SDS BOLINGER DESIGN SERVICES**

182& b3RD STREET  
 EMERYVILLE, CALIFORNIA 94608  
 (916) 491-1ca&1e42  
 (916) 491-1a6.1a&3  
 WEB SITE: [www.60UNGERDESIGN.COM](http://www.60UNGERDESIGN.COM)  
 EMAIL: 60RUCE 60UNGERDESIGN.COM

- CERTIFIED GREEN 6 LD PROFESSIONALS
  - PROFESSIONAL 6 ULTING DESIGNERS
  - ICC CERTIFIED 6 ULTING INSPECTORS
  - ICC CERTIFIED PLANS EXAMINERS
  - PROJECT PLANNERS/MANAGERS
- PROFESSIONAL CERTIFICATIONS:
- ICC - 10 33421-6 &
  - ICC - 19 33421-R&
  - ICC - 19 33421-E&
  - ICC - 19 33421-P 4
  - ICC - 19 33421-M&
  - IC 60 1933421-19



REVISION HISTORY:

REVISION:	DATE:
&	

**CUSTOM DWELLING FOR:**

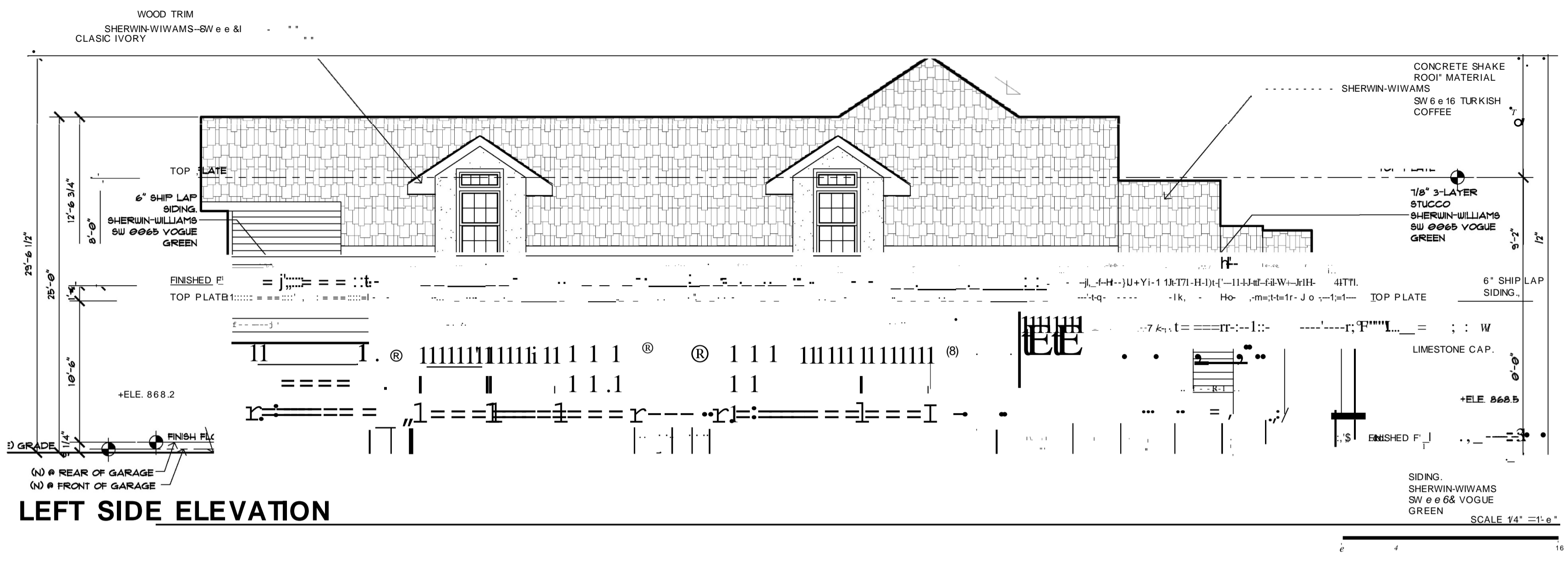
**MR. & MRS. DALE TOWNSEND**  
 25142 FAIRVIEW AVE.  
 TAYWARD, CA  
 APN=411-e2 e-ee4-e1

**FRONT & RIGHT SIDE ELEVATIONS**

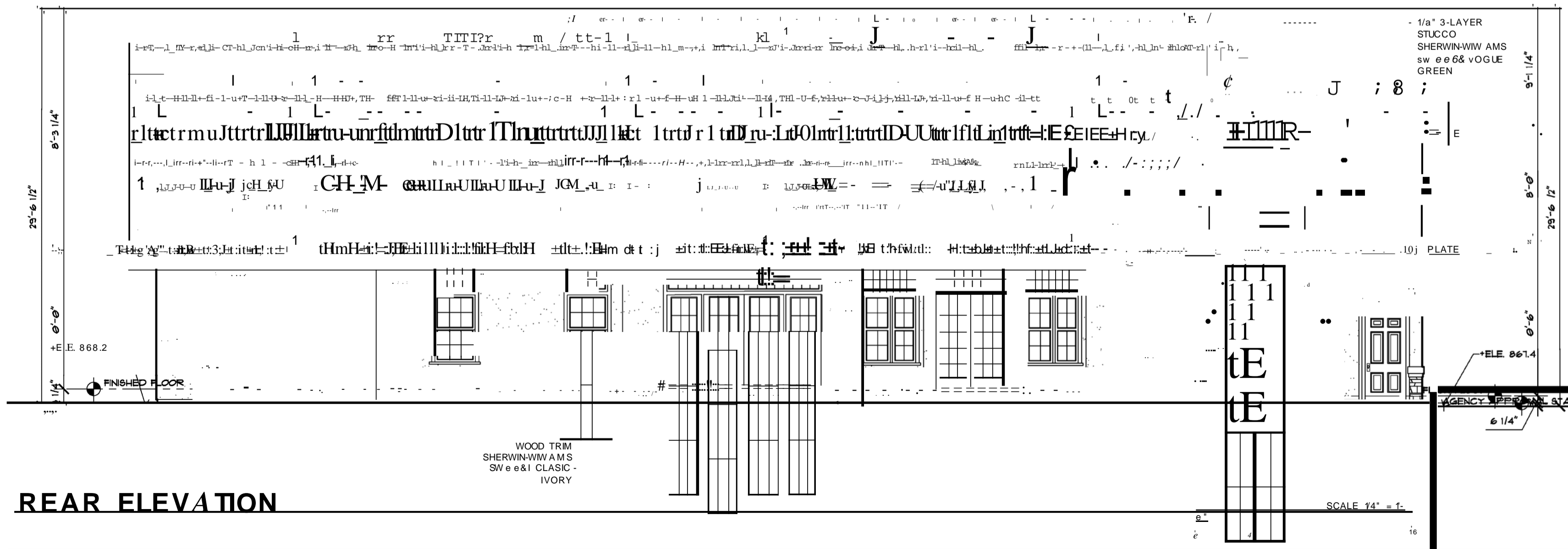
DATE: 16 OCTOBER 2021 SHEET NO.:  
 SCALE: AS NOTED **A2.1**  
 PROJECT NO.: 2821-88 6



UNLESS ALL PLANS SPECIFICATIONS CALGREEN MANDATORY REQUIREMENTS, TITLE 24 ENERGY CALCULATIONS AND STRUCTURAL ENGINEERING, AS INDICATED BY THESE DRAWINGS ARE THE SOLE PROPERTY OF BOLINGER DESIGN SERVICES AND WERE DEVELOPED FOR ANY PURPOSE WITHOUT THE WRITTEN CONSENT OF BOLINGER DESIGN SERVICES. NO PART OF THESE DRAWINGS SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF BOLINGER DESIGN SERVICES. THE WORK INCLUDES THE OVERALL FORM AS WELL AS THE ARRANGEMENT AND POSITION OF SPACES AND ELEMENTS IN THE DRAWING. THE WORK DOES NOT INCLUDE INDIVIDUAL PACKAGED MATERIALS. (1) ILL. (SECTION 180)



**LEFT SIDE ELEVATION**



**REAR ELEVATION**

**SDS BOLINGER DESIGN SERVICES**

101.1ca&1e42  
 (C) &1e.a16.1a&3  
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- ICC CERTIFIED BUILDING INSPECTORS
- ICC CERTIFIED PLANS EXAMINERS
- PROJECT PLANNERS/MANAGERS

ICC - 10 33421-6 &  
 ICC - 19 33421-R&  
 ICC - 19 33421-E&  
 ICC - 19 33421-P4  
 ICC - 19 33421-M&  
 IC60 1933421-1e  
 IC60 1933421-e &  
 A16 D 1e 1e 2b-1ca12



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REVISION HISTORY:

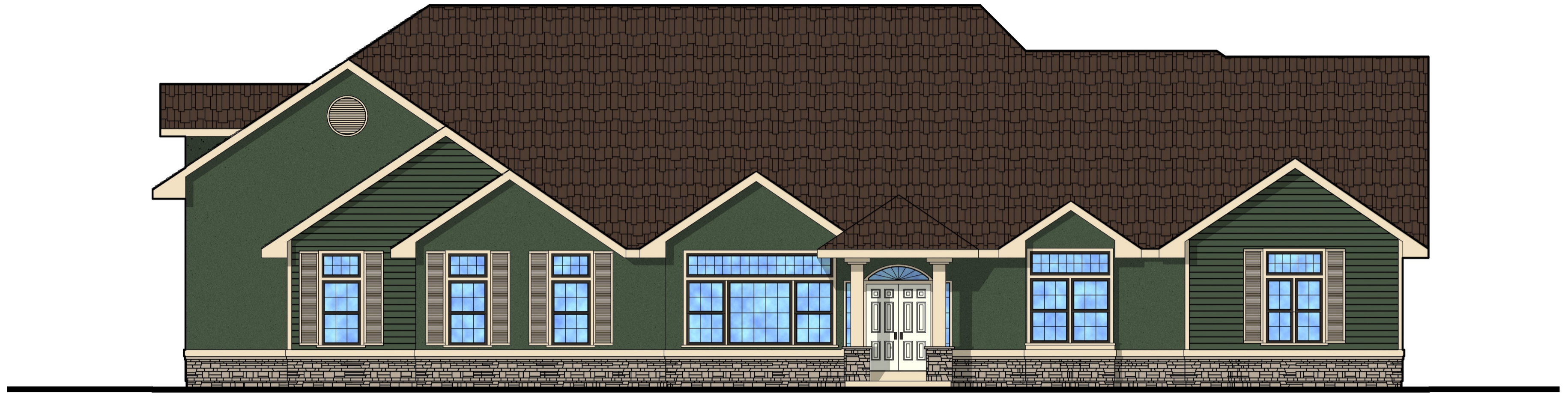
REVISION:	DATE:
&	

**CUSTOM DWELLING FOR:**

**MR. & MRS. DALE TOWNSEND**  
 25142 FAI VIEW AVE.  
 HAYWARD, CA  
 APN=411-e2 e-ee 4-e1

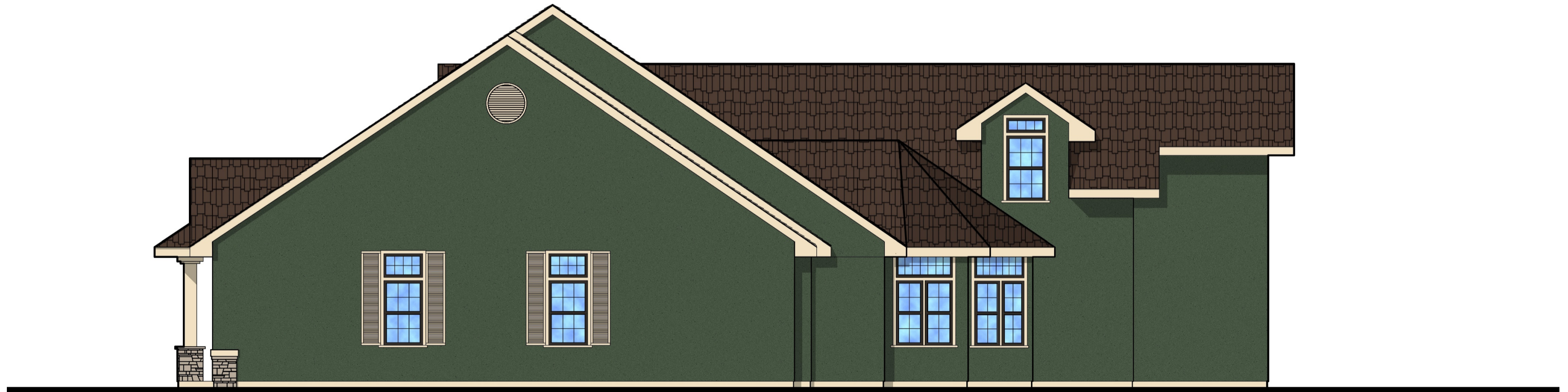
**LEFT SIDE & REAR ELEVATIONS**

DATE: 16 OCT06ER 2e21 SHEET NO.: **A22**  
 PROJECT NO.: 2e21-ee 6



FRONT ELEVATION

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0 4 8 16



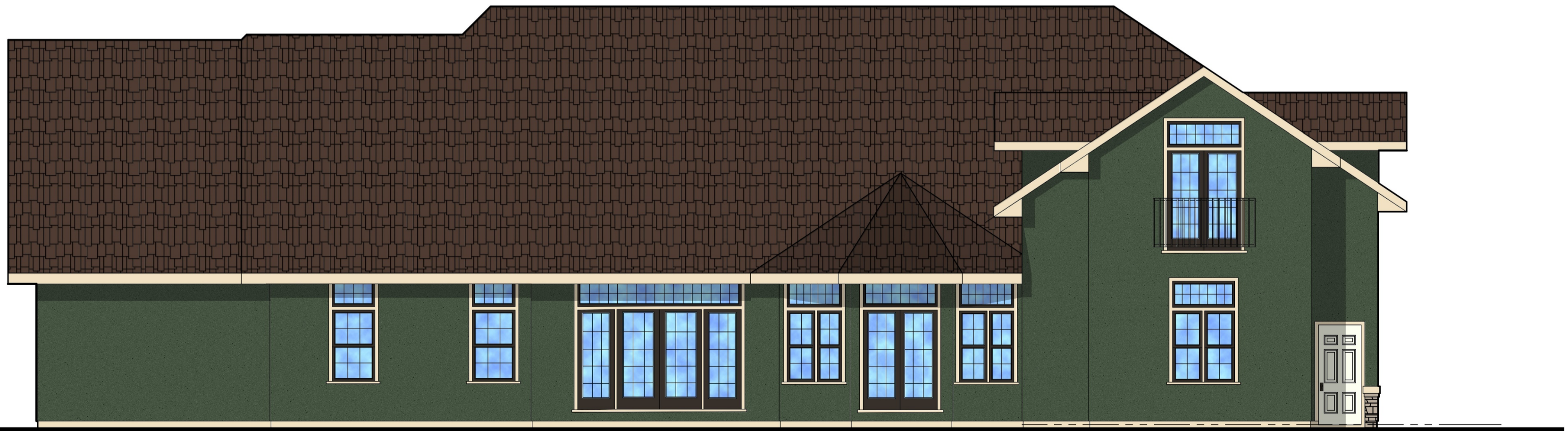
RIGHT SIDE ELEVATION

SCALE 1/4" = 1'-0"  
0 4 8 16



LEFT SIDE ELEVATION

SCALE 1/4" = 1'- 0"



REAR ELEVATION

SCALE 1/4" = 1'- 0"

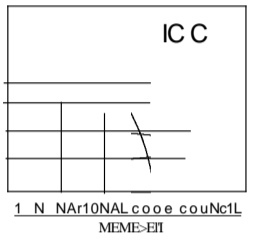


WARNING: ALL PLANS, SPECIFICATIONS, CALCULATIONS, MATERIALS, METHODS, AND CONSTRUCTION SHALL BE USED BY OR UNDER THE CLOSE SUPERVISION OF THE ARCHITECT OR ENGINEER. THE ARCHITECT OR ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE TO THE PROPERTY OR PERSONS OR FOR ANY OTHER CAUSE OF LOSS OR INJURY. THE ARCHITECT OR ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE TO THE PROPERTY OR PERSONS OR FOR ANY OTHER CAUSE OF LOSS OR INJURY. THE ARCHITECT OR ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE TO THE PROPERTY OR PERSONS OR FOR ANY OTHER CAUSE OF LOSS OR INJURY.

# DS BOLINGER DESIGN SERVICES

1828 I&3RD STREET  
 EMERYVILLE, CALIFORNIA 41&e6  
 (O) &1e.1 &.1642  
 (C) &1e. 16.1 &.3  
 WE6 SITE: [WWW.60UNGERDESIGN.COM](http://WWW.60UNGERDESIGN.COM)  
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  - PROFESSIONAL 6 ULIDING DESIGNERS
  - ICC CERTIFIED 6 ULIDING INSPECTORS
  - ICC CERTIFIED PLANS EXAMINERS
  - PROJECT PLANNERS/MANAGERS
- PROFESSIONAL CERTIFICATIONS:  
 ICC - 10334216&  
 ICC - 1e 33421R&  
 ICC - 1e 33421E&  
 ICC - 1e33421P4  
 ICC - 1e 33421M&  
 ICC 0 1e 334211e
- 1 ceo 1e 33421-e &  
 A16 D 1e ie 21&-1 12



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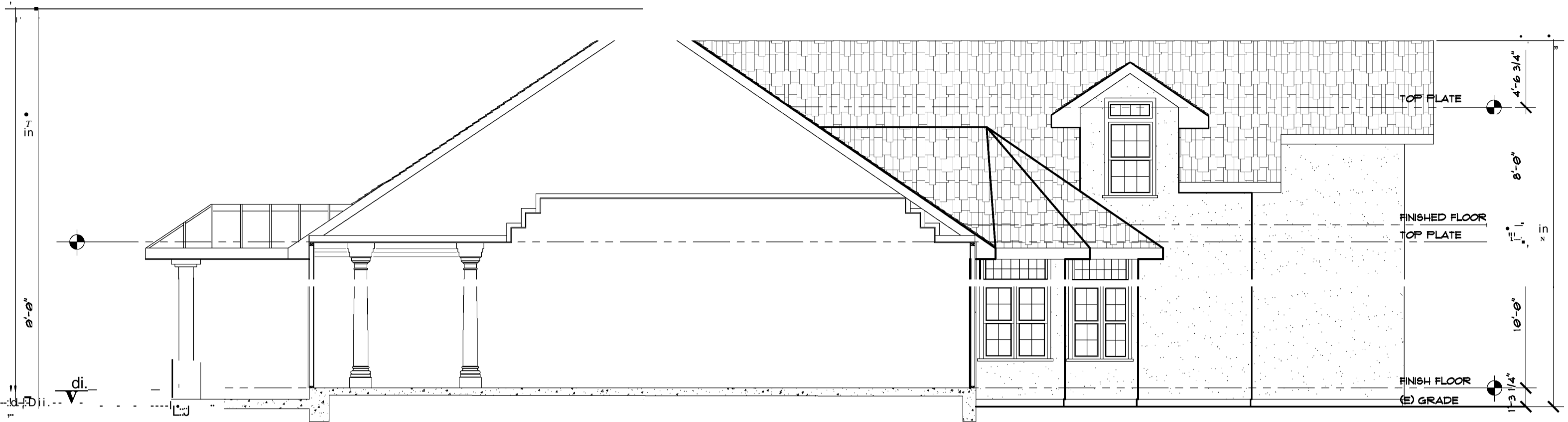
REVISION HISTORY: DATE=

NO.	DESCRIPTION	DATE

**CUSTOM  
D W E L L I N G F O R =**  
 MR. & MRS. DALE  
 TOWNSEND  
 25142 FAIRVIEW AYE.  
 HAYWARD, CA  
 AFN=411-e 2se-ee 4-e 1

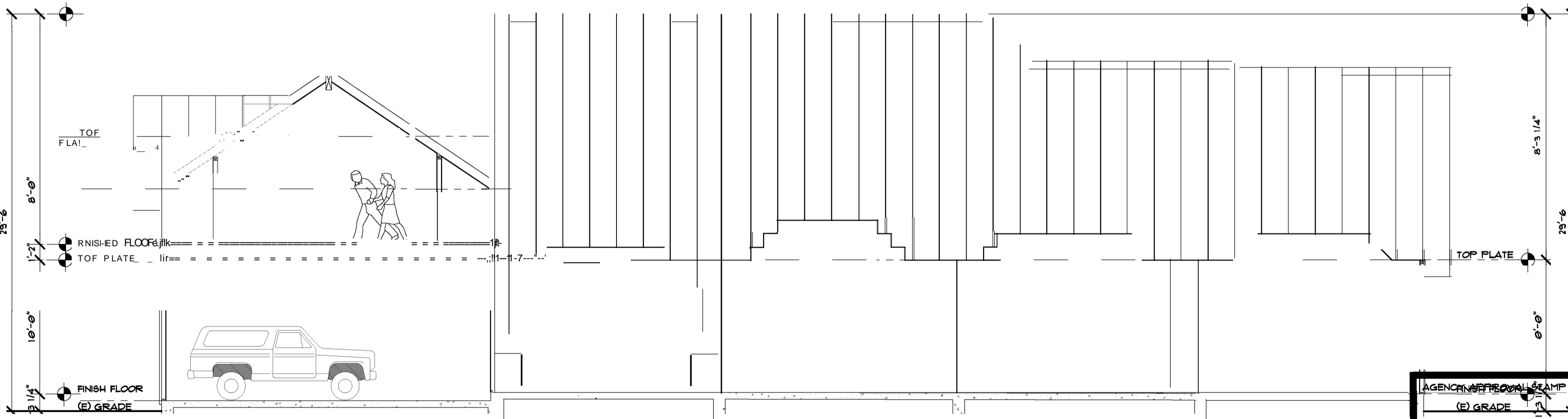
## CROSS-SECTION A e

DATE: \_\_\_\_\_ SHEET NO.: \_\_\_\_\_  
 1b OCT06ER 2821  
 SCALE: AS NOTED  
 PROJECT NO.: 2e21-e e b  
A'2.e 1



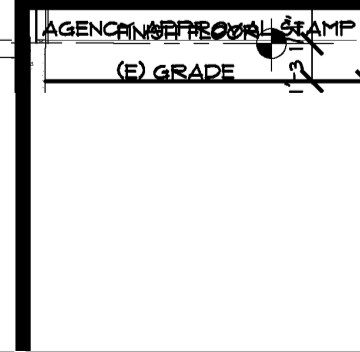
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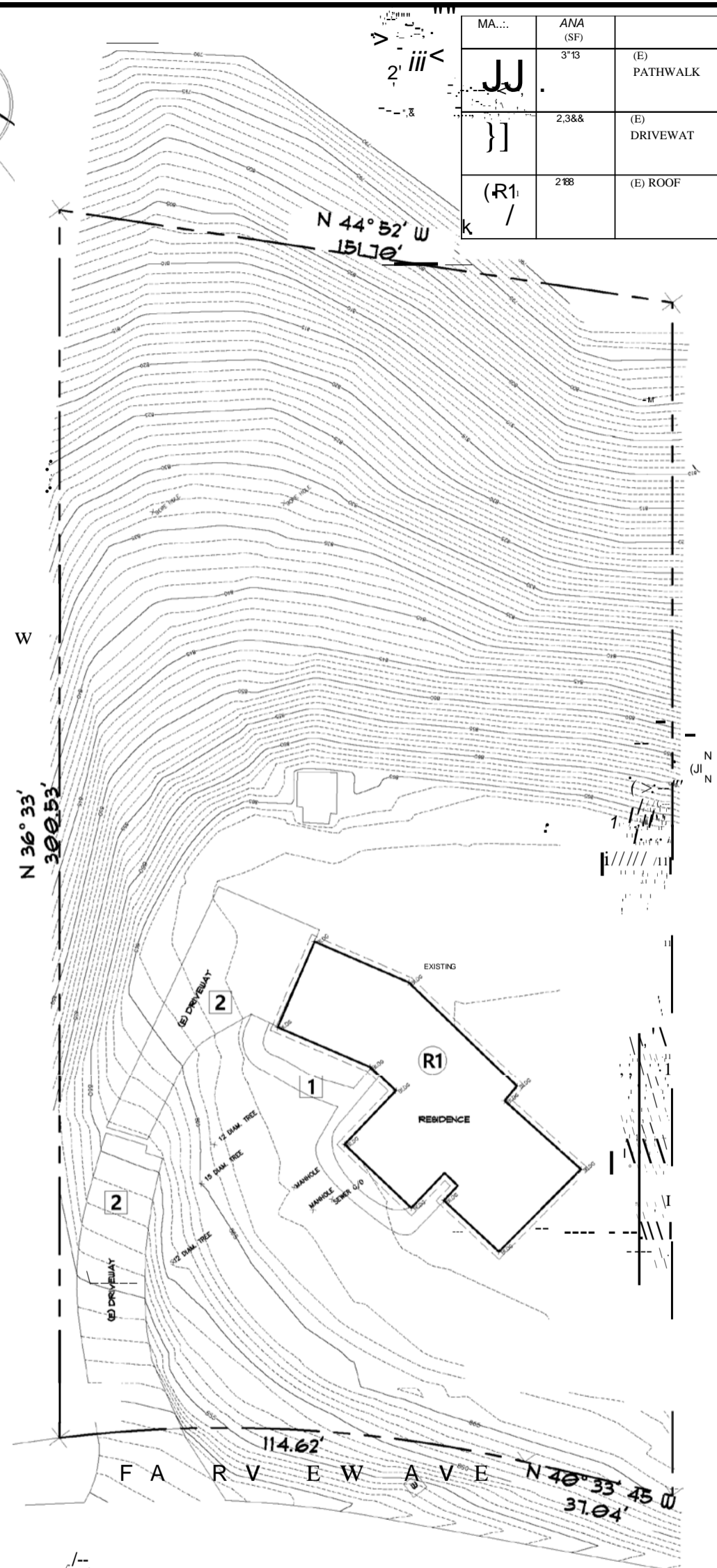
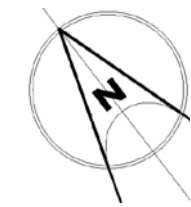
SCALE 1/4" = 1'-0"



**SECTION 6**

SCALE 1/4" = 1'-0"

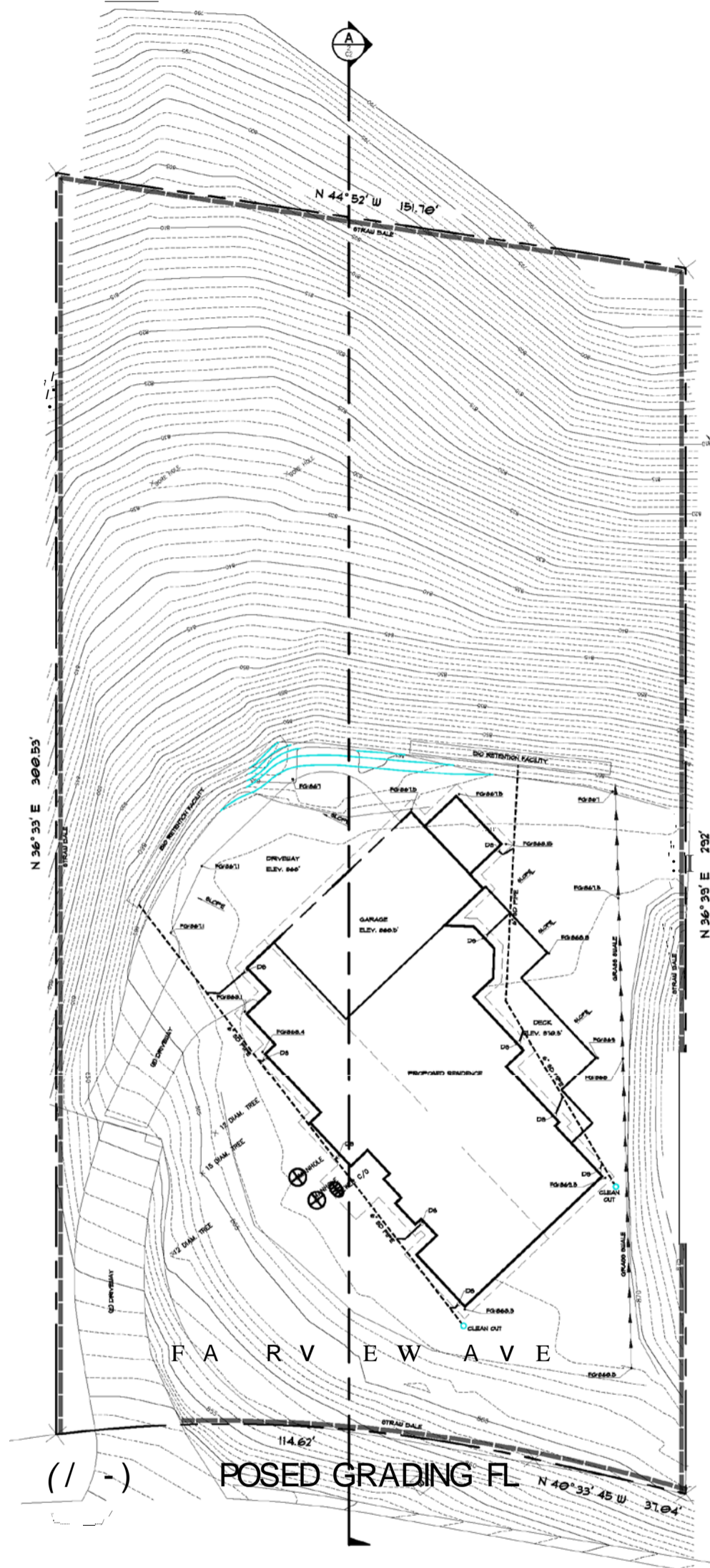
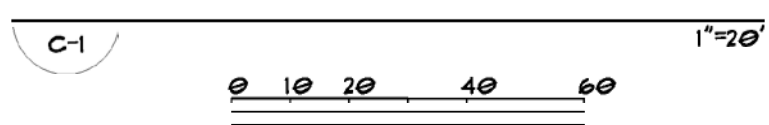




EXISTING GRADING PLAN

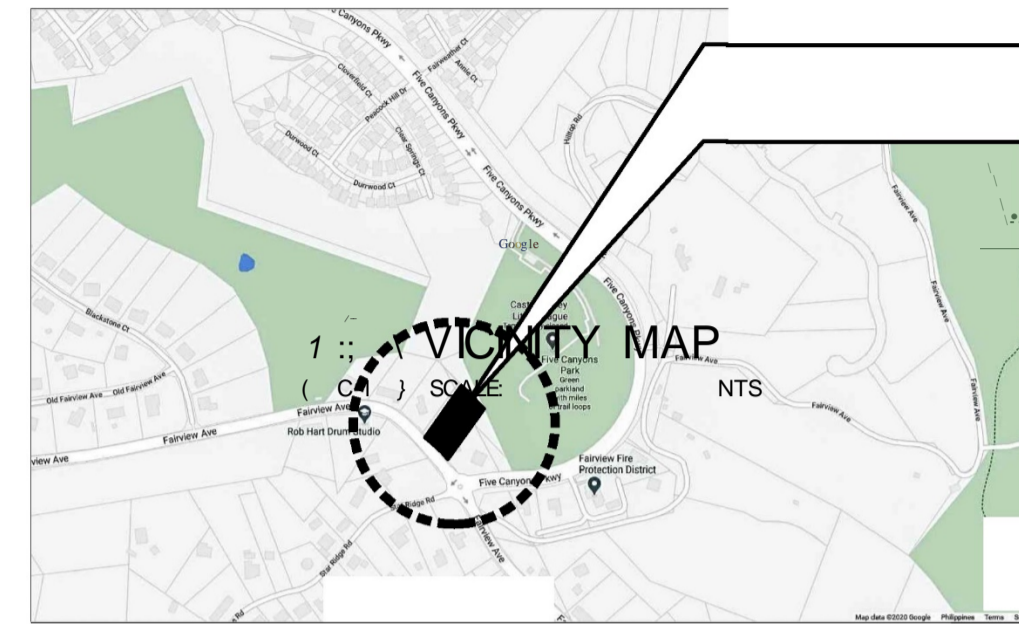
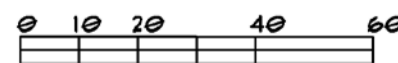
SCALE:

GRAPHIC SCALE



POSED GRADING PLAN

GRAPHIC SCALE



VICINITY MAP

- GRADING NOTES:
1. ALL GRADING SHALL COMPLY WITH THE APPENDIX N CHAPTER 22 OF THE UNIFORM BUILDING CODE, CITY GRADING ORDINANCES AND THE CITY STANDARD SPECIFICATIONS AND ALL RECOMMENDATIONS CONTAINED IN THE REPORT PREPARED BY DATED.
  2. IT IS CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES SHOWN IN THIS PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT U.S.A. (642-2444) AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UTILITIES.
  3. ALL GRADING OPERATIONS SHALL PROVIDE DUST CONTROL AT ALL TIMES. MEASURES SHALL BE TAKEN TO AVOID DUST OR CONSTRUCTION MATERIALS FROM BEING BLOWN OFF THE CONSTRUCTION SITE OR FLOWING FROM CONTRACTOR'S EQUIPMENT ONTO CITY STREETS.
  4. CUT AND FILL SLOPES SHOULD NOT BE STEEPER THAN 2:1 (HORIZONTAL TO VERTICAL). KEYWAYS SHOULD BE CUT INTO TOE OF FOUNDATION PRIOR TO FILL PLACEMENT.
  5. NO SLOPE SHALL BE LEFT STANDING THROUGH A WINTER SEASON WITHOUT DRAINAGE AND EROSION CONTROL MEASURES BEING PROVIDED.
  6. SOILS ENGINEER, PRIOR TO FILL PLACEMENT SHALL BE RETAINED TO PROVIDE OBSERVATION AND TESTING DURING GRADING OF CONSTRUCTION. TESTING AND REPORT SHALL BE SUBMITTED TO BUILDING DEPARTMENT.
  7. ALL EXISTING INFORMATION TAKEN AND SUPPLIED BY THE ARCHITECT AND THE OWNER.

PREPARED BY OR UNDER THE DIRECTION OF:

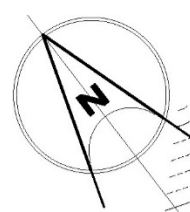
E.C. REVILLA  
R.C.E. 32102  
EXP. DATE: 2-31-22



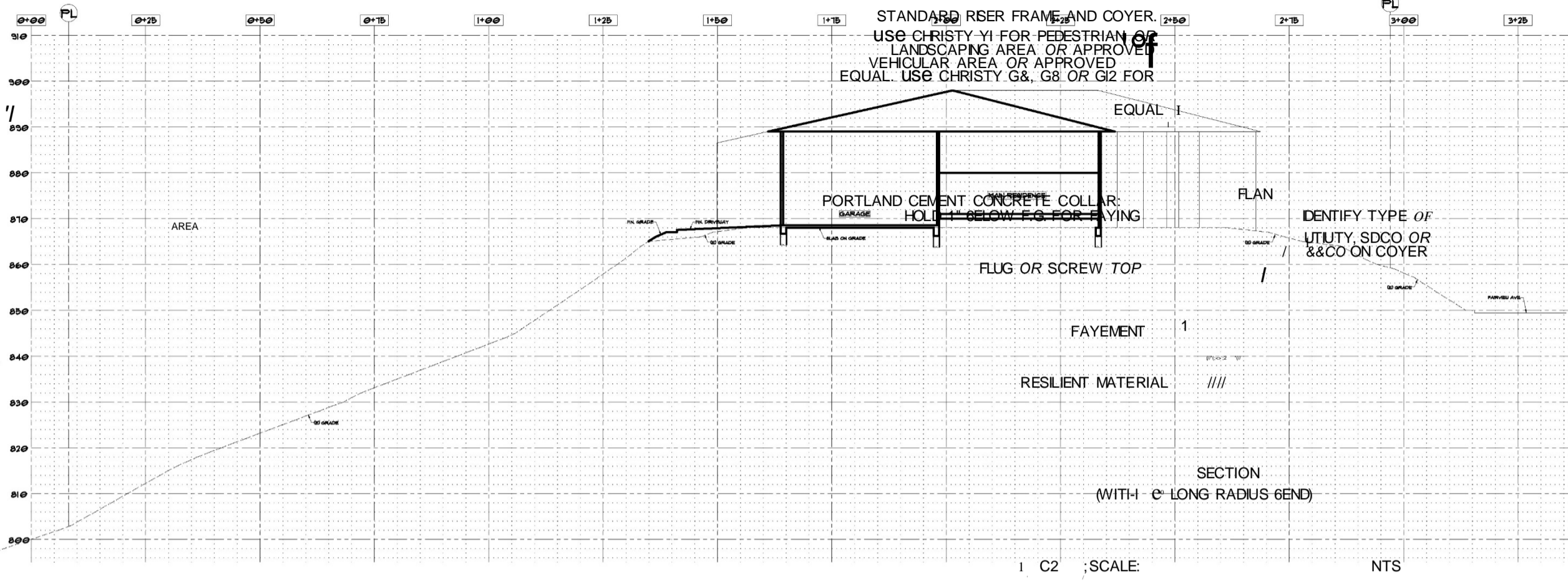
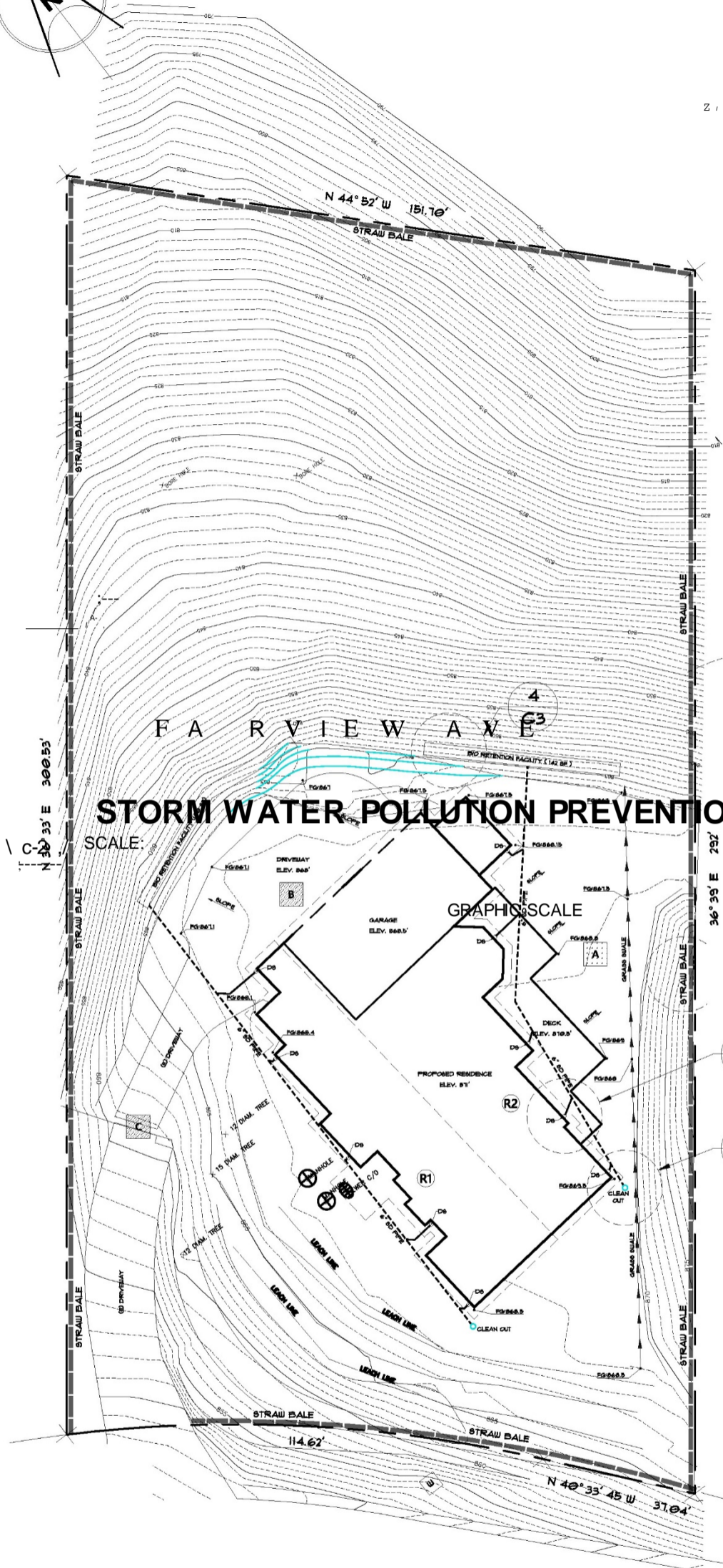
PROJECT SITE  
25742 FAIRVIEW AVE.

PROJECT	FAIRVIEW AVE - 32102
GRA	EXISTING GRADING PLAN
REVISED	02/11/22
FOR	DALE DOWNSEND
SHEET CONTENT	EXISTING GRADING PLAN GRADING PLAN VICINITY MAP GRADING NOTES
REVISIONS	NO. DATE DESCRIPTION
JOB NUMBER	FA2020
DRAWING BY:	FCL
CHECKED BY:	ECR
DATE:	11-09-2021
	01 OF 03 SH.

C1

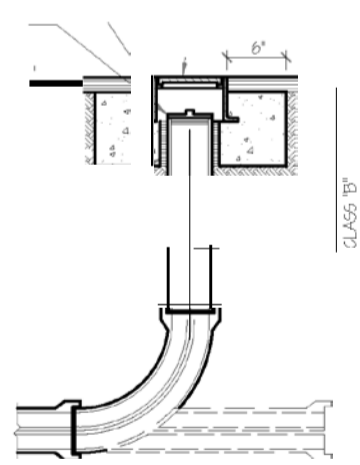
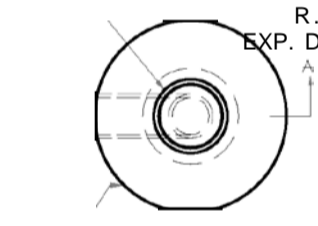


**1) SITE SECTION THRU A"**  
 SCALE:



PREPARED BY OR UNDER THE DIRECTION OF:

E.C. REVILLA  
 R.C.E. 32102  
 EXP. DATE: 12-31-22



**3 ON-SITE CLEAN OUT**

610 RETENTION FACILITY CHART						
DMA NAME	(SQ.FT.)	POST PROJECT	RUNOFF FACTOR	SIZING FACTOR	RECEIVING SELF RETAINING DMA	PROPOSED
<b>G</b>	1464	DECK	e.e	e.e	GRASST LANDSCAPE	38 SF
<b>J</b>	1464	UPPER DRIVEWAT	i.e	e.e4	BD RETENTION	65 SF
<b>B</b>	1636	(E) LOWER DRIVEWAT	i.e	e.e	GRASST LANDSCAPE	52 SF
<b>C</b>	2,25 > 11	ROOF	i.e	e.e4	BD RETENTION	118 SF
<b>R1</b>	3,5 > 41	ROOF	i.e	e.e4	BD RETENTION	142 SF



**PROJECT:** 28700 FOX HOLLOW DRIVE FAIRFIELD, CA 94534

**GRADING PLAN**

**SUBMITTED:** 11/10/2020

**FOR:** DALE TOWNSEND

**SHEET NO.:** 1 OF 3

**REVISIONS:**

NO.	DATE	DESCRIPTION

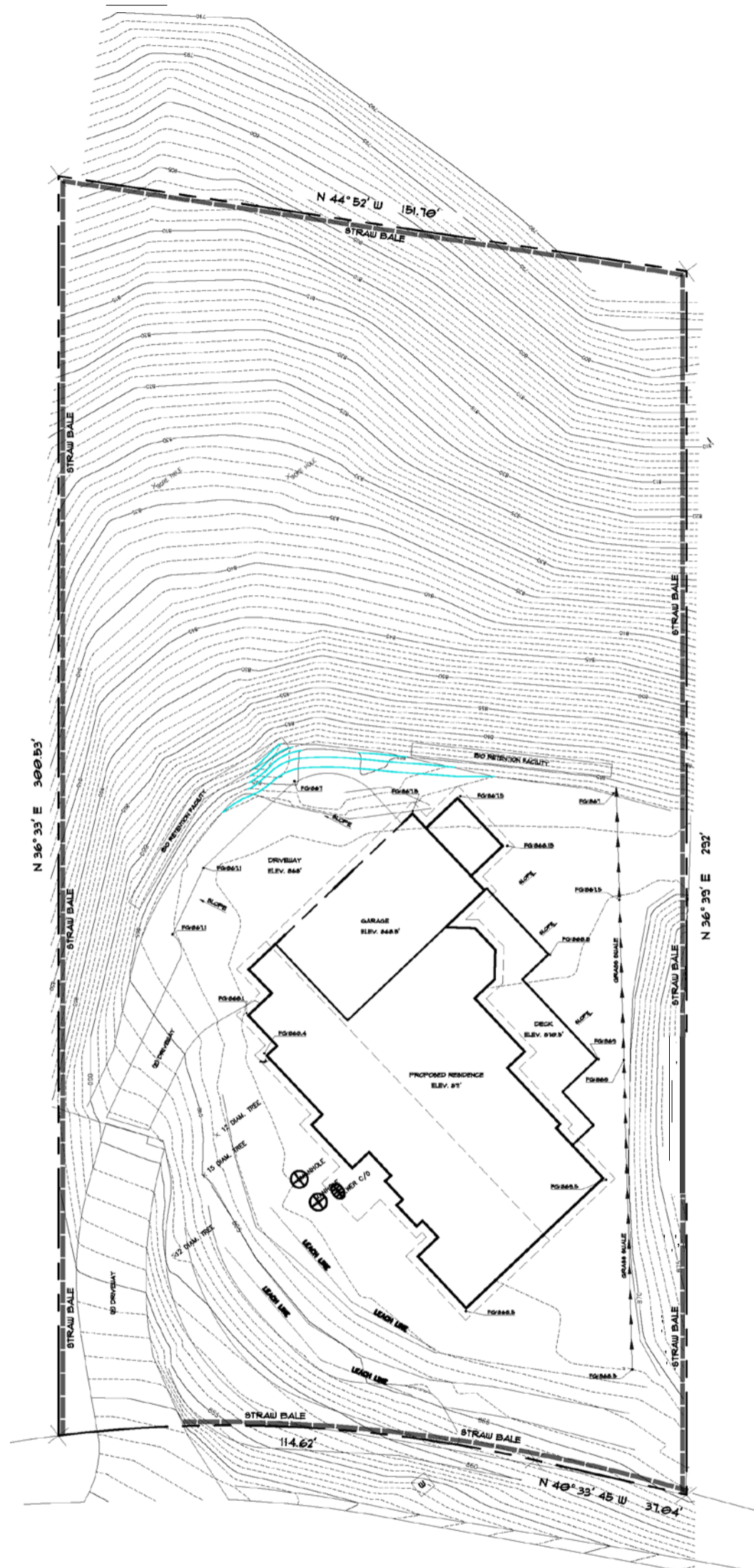
**JOB NUMBER:** FA2020

**DRAWING BY:** FCL

**CHECKED BY:** ECR

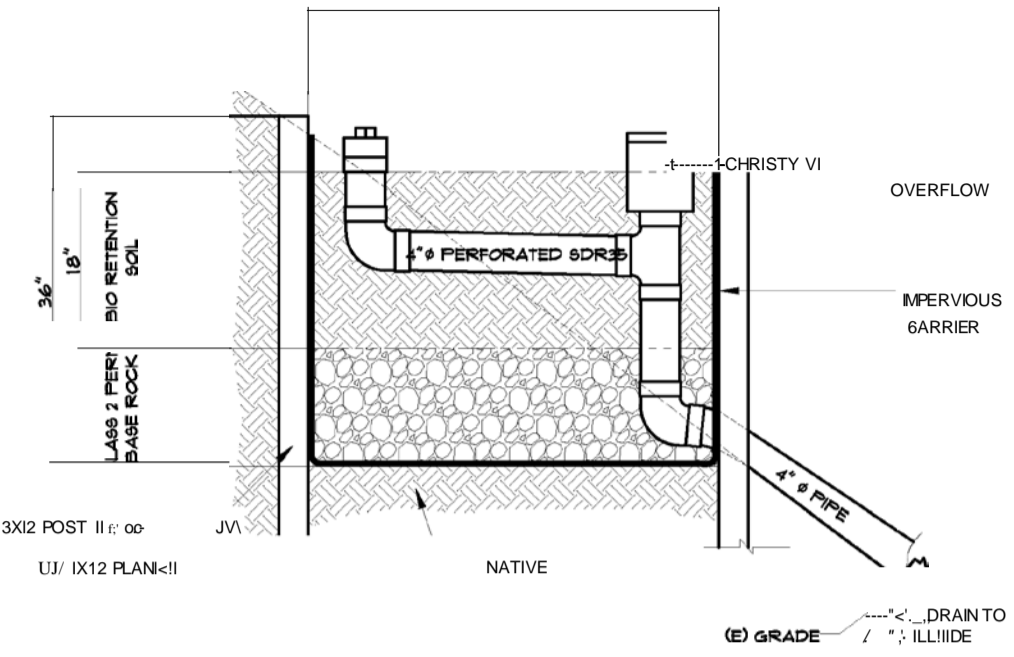
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**1 OF 03 SH.**

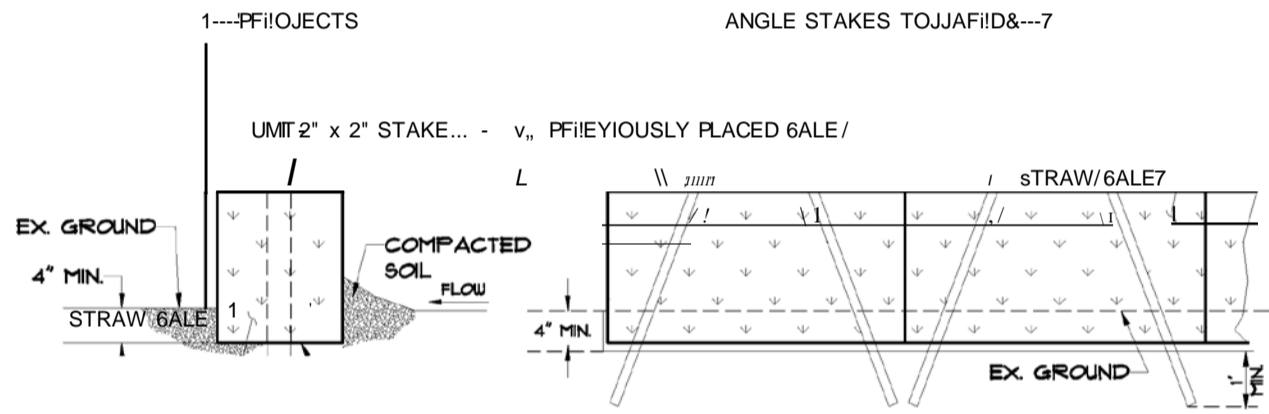


EROSION CONTROL MEASURES

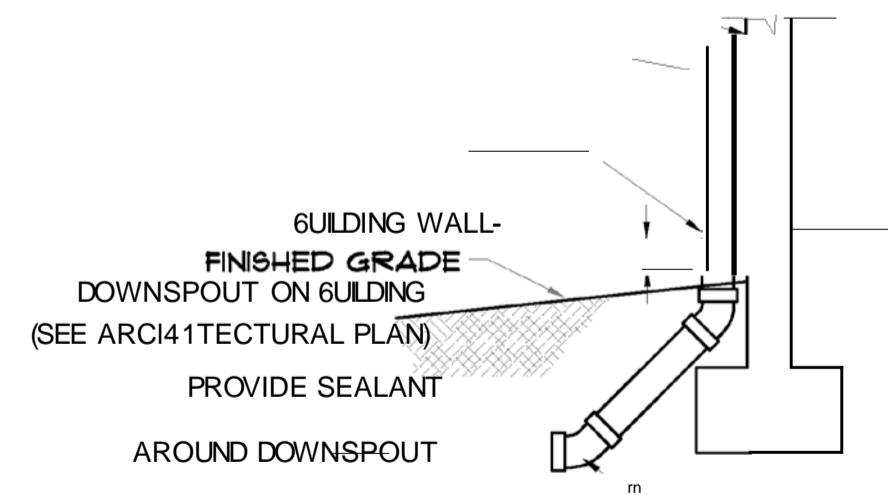
1. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE EFFECTIVE FOR CONSTRUCTION DURING THE RAINY SEASON (OCT. 15 TO APRIL 15).
2. AFTER THE UNDERGROUND STORM DRAIN SYSTEM IS INSTALLED, THE CATCH BASINS WILL BE INSTALLED AS SOON AS PRACTICAL AND SEDIMENT TRAPS SHALL BE CONSTRUCTED AROUND CATCH BASINS AS SHOWN AND DETAILED ON THIS PLAN.
3. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED AND CHANGES TO THIS EROSION AND SEDIMENT CONTROL PLAN SHALL BE MADE TO MEET FIELD CONDITIONS ONLY WITH THE APPROVAL OF OR AT THE DIRECTION OF THE CITY AND ARCHITECT.
4. ALL EROSION CONTROL FACILITIES MUST BE INSPECTED AND REPAIRED AT THE END OF EACH WORKING DAY DURING RAINY SEASON.
5. THIS PLAN MAY NOT COVER ALL THE SITUATIONS THAT ARISE DURING CONSTRUCTION DUE TO ANTICIPATED FIELD CONDITIONS. VARIATIONS MADE TO THE PLAN IN THE FIELD SUBJECT TO THE APPROVAL OF THE CITY.



C3 / SCALE: NTS

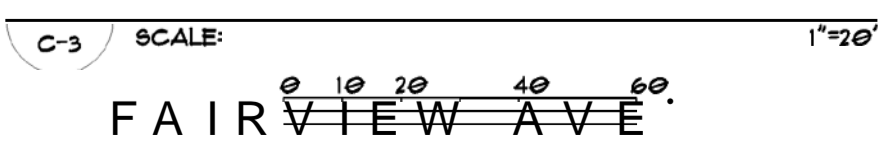


AW STRAW BALE SEDIMENT CONTROL DETAIL



4" RAINWATER  
 SCALE:  
 LEADER 1/8"  
 SEE MIN

DOWNSPOUT CONNECTION SECTION



PREPARED BY OR UNDER THE DIRECTION OF:

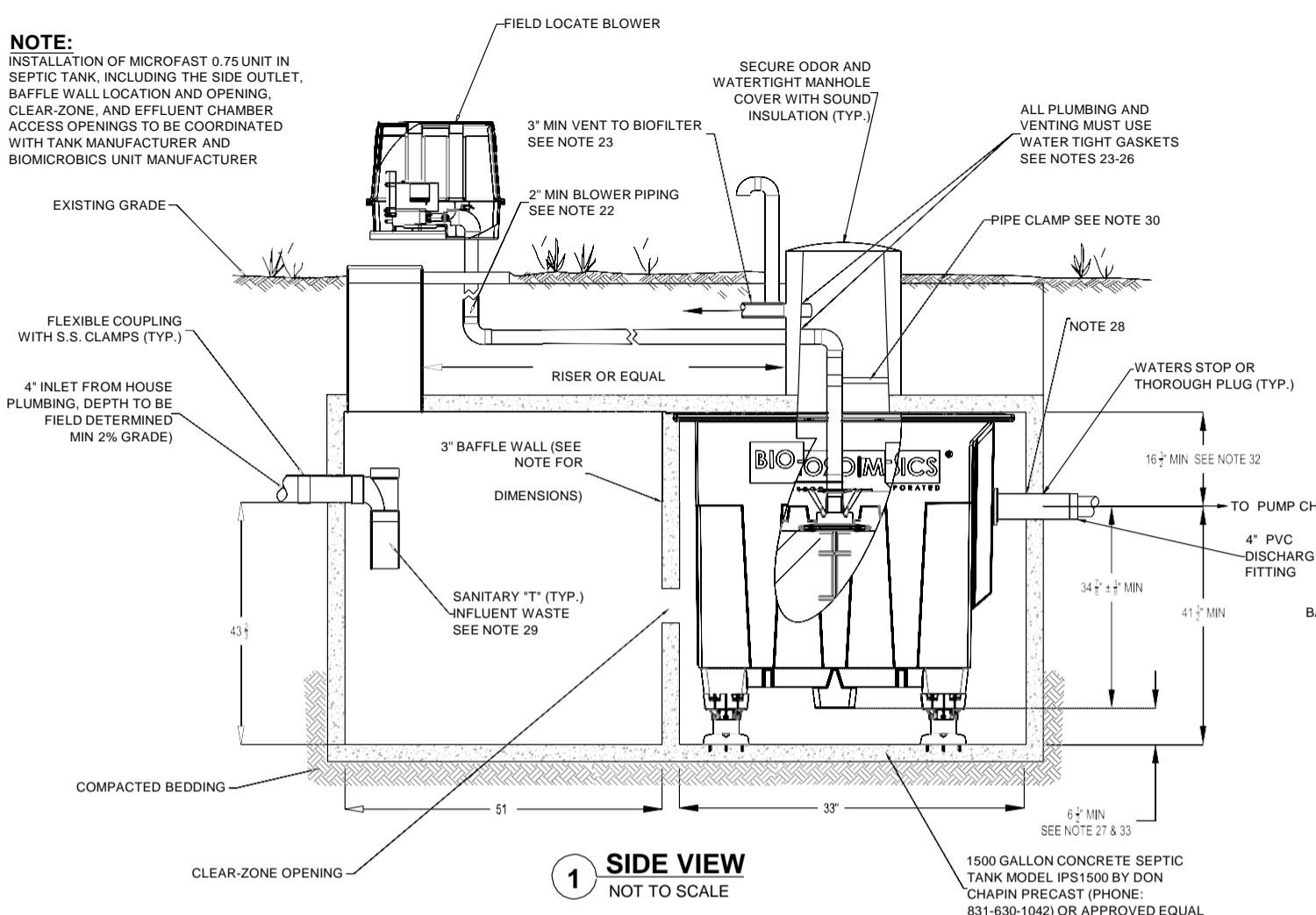
PROJECT	28700 FOX HOLLOW DRIVE, GLEN HAYWARD CA. 94542
DATE	10/11/20
DESIGNER	E. C. REVILLA
CHECKER	E. C. REVILLA
APPROVER	E. C. REVILLA
SCALE	AS SHOWN
SUBMITTED BY	E. C. REVILLA
FOR	DALE J. TOWNSEND
SHEET CONTENT	- SOIL EROSION CONTROL PLAN - EROSION CONTROL DETAIL - SEDIMENT TRAP DETAIL - STRAW BALE SEDIMENT CONTROL DETAIL - DOWNSPOUT CONNECTION DETAIL - BIO RETENTION DETAIL

REVISIONS		
NO.	DATE	DESCRIPTION

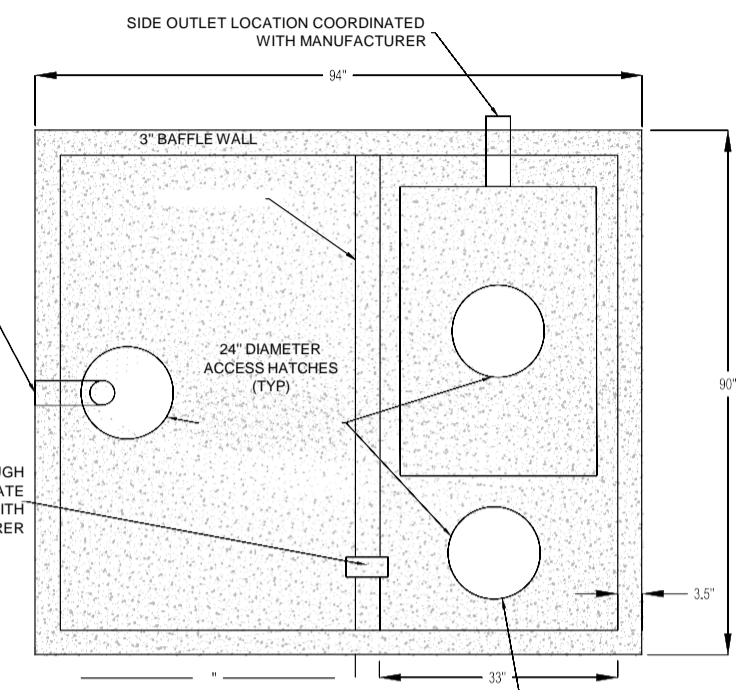
JOB NUMBER: FA2020



**NOTE:**  
INSTALLATION OF MICROFAST 0.75 UNIT IN SEPTIC TANK, INCLUDING THE SIDE OUTLET, BAFFLE WALL LOCATION AND OPENING, CLEAR-ZONE, AND EFFLUENT CHAMBER ACCESS OPENINGS TO BE COORDINATED WITH TANK MANUFACTURER AND BIOMICROBICS UNIT MANUFACTURER

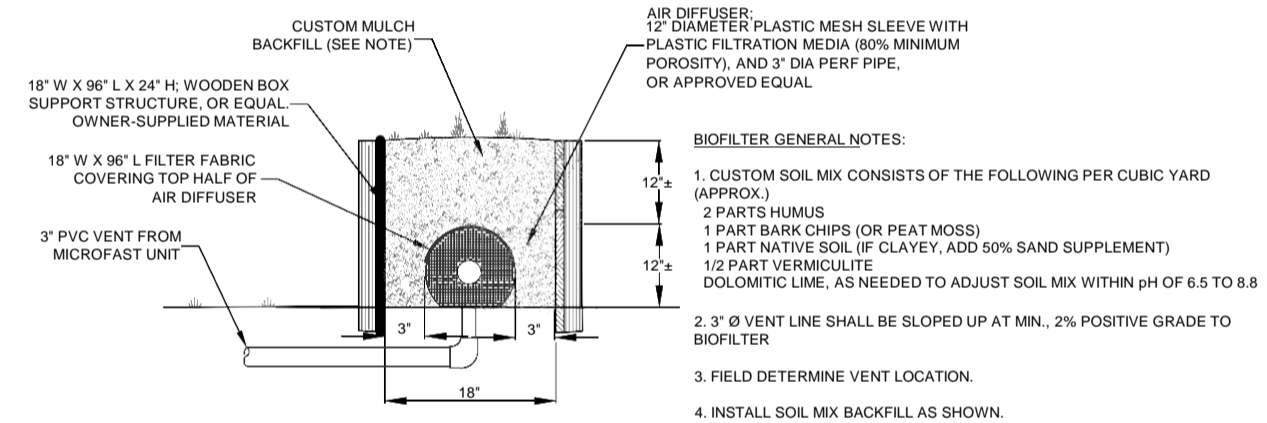


1 SIDE VIEW NOT TO SCALE

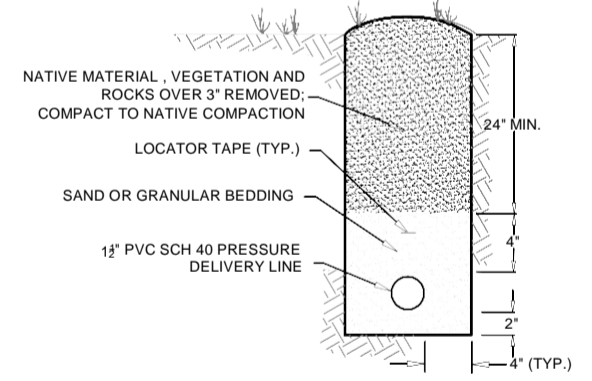


2 TOP VIEW NOT TO SCALE

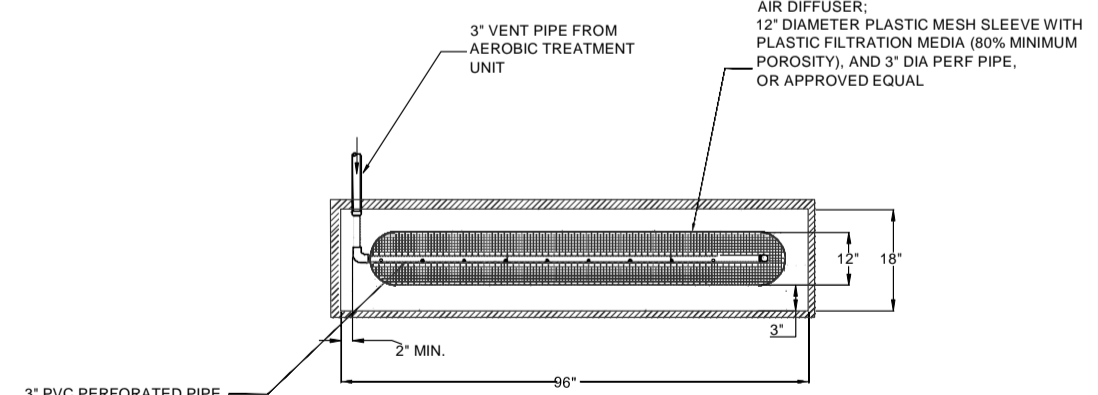
**SEPTIC TANK AND MICROFAST UNIT**



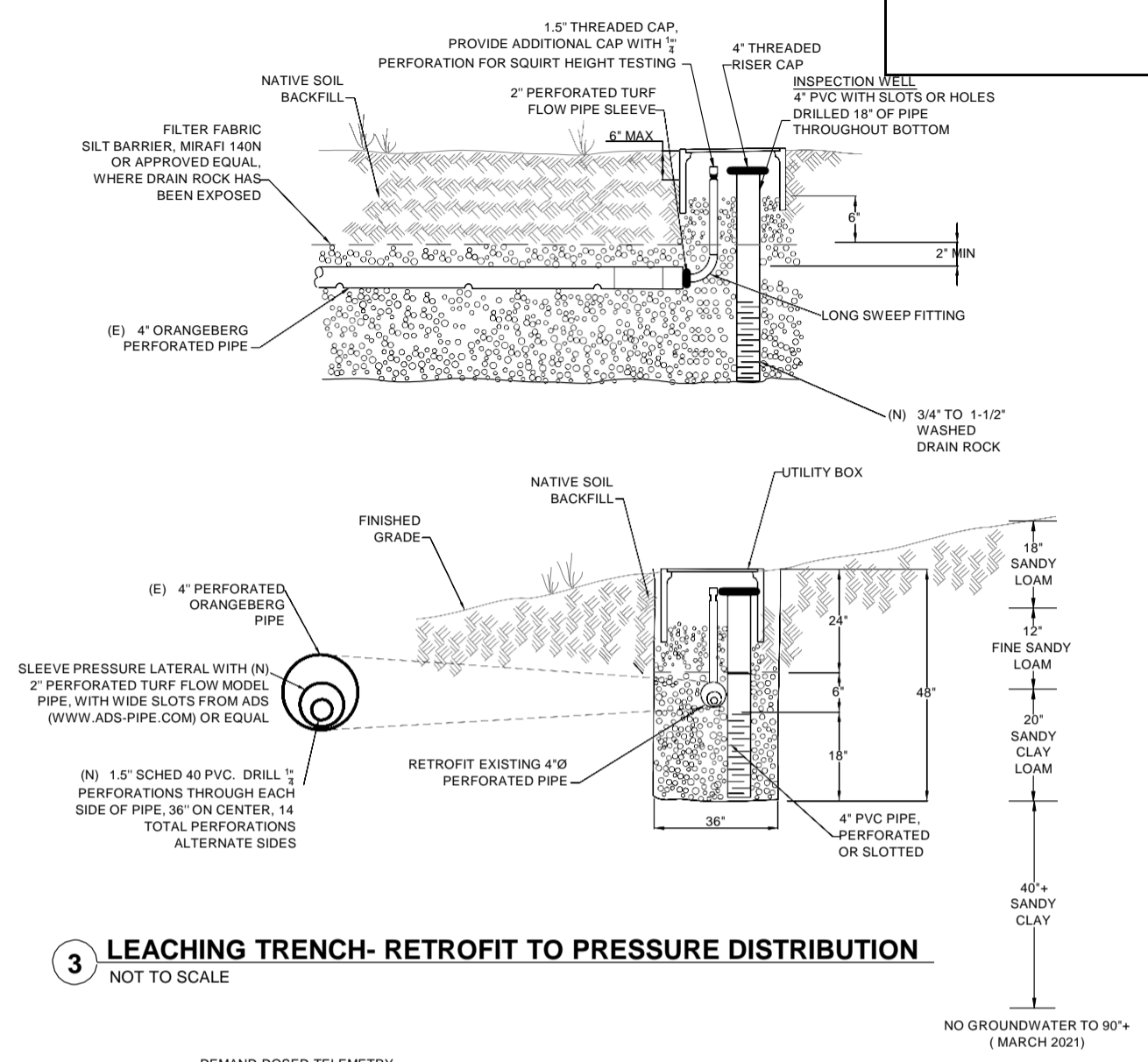
5 BIOFILTER VENT - END VIEW NOT TO SCALE



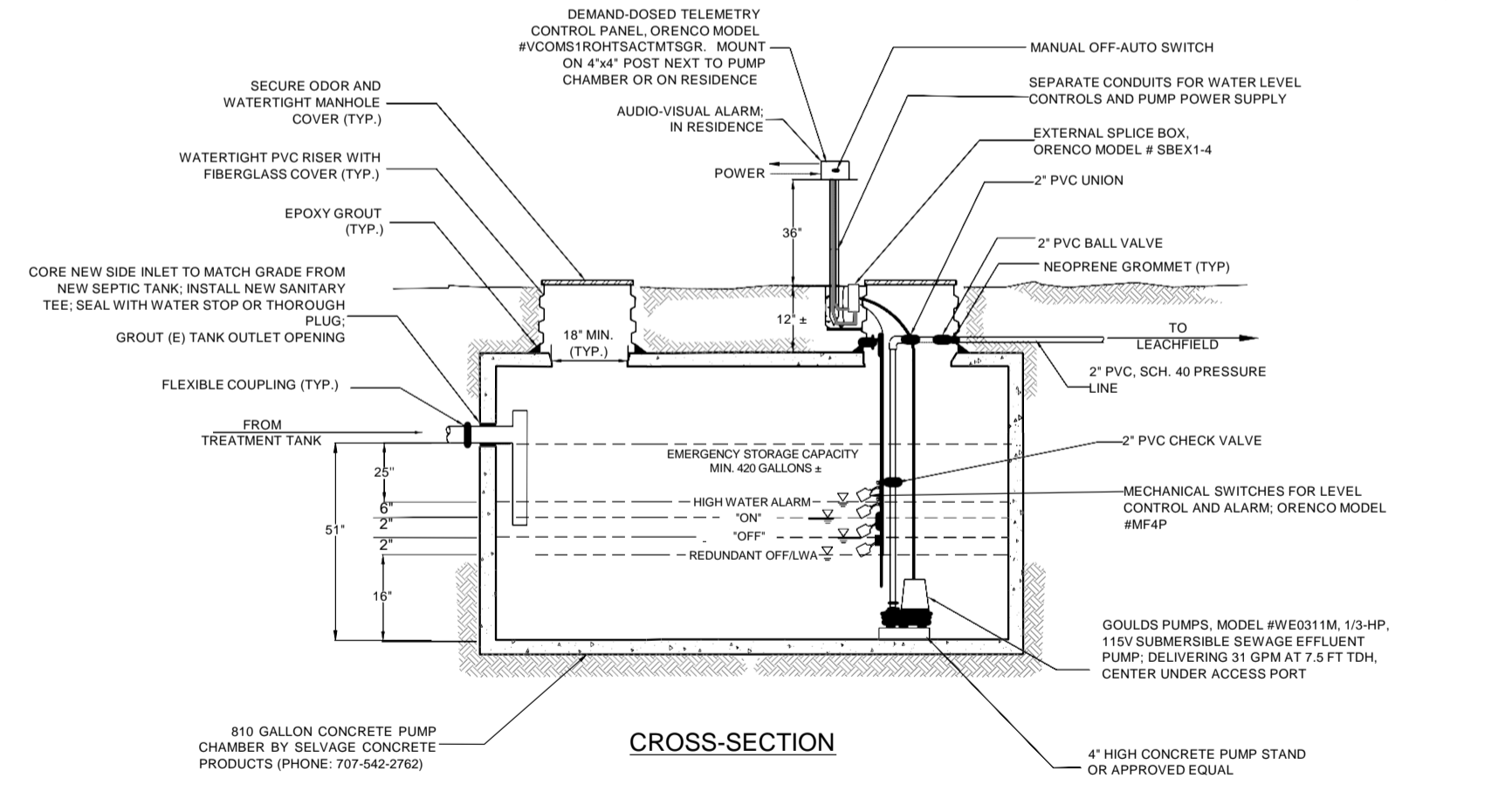
4 PIPELINE TRENCH FILL NOT TO SCALE



6 BIOFILTER VENT PIPING DETAIL (TYP.) NOT TO SCALE



3 LEACHING TRENCH- RETROFIT TO PRESSURE DISTRIBUTION NOT TO SCALE



7 810 GALLON PUMP CHAMBER NOT TO SCALE

**TOWNSEND RESIDENCE**

HAYWARD, CA  
25742 FAIRVIEW AVENUE

**QUESTA**  
ENGINEERING CORP.  
P.O. Box 70356 1220 Brickyard Cove Road Point Richmond, CA 94807  
Civil Environmental & Water Resources  
(510) 236-6114 FAX (510) 236-2423  
QUESTA@QUESTAENR.COM



Sht	Rev	Date	By	Description	App'd
2	1	8/26/22	PS	LEACHING TRENCH DETAIL	NH

Design:	MW
Drawn:	RP
Checked:	MW
Apprd:	NNH

**DETAILS**  
HAYWARD, CA  
25742 FAIRVIEW AVENUE

AutoCAD SHX Text  
Project: 200134  
Scale: 1"=1'-0"  
Date: 8/26/22  
SHEET: 2 OF 3

### CONSTRUCTION SPECIFICATIONS

#### GENERAL

- PLAN CHANGES.** CHANGES IN PLANS OR SPECIFICATIONS SHALL BE MADE ONLY AFTER CONSULTATION WITH AND APPROVAL OF THE ENGINEER OF RECORD.
- PROPERTY LINES.** CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATION OF PROPERTY LINES AND REQUIRED SETBACKS FROM PROPERTY LINES.
- CONSTRUCTION INSPECTION.** CONSTRUCTION INSPECTION BY THE DESIGN ENGINEER SHALL BE REQUIRED AT CHECKPOINTS AS OUTLINED IN THE RECOMMENDED CONSTRUCTION INSPECTION SCHEDULE SECTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CALL FOR REQUIRED INSPECTIONS, AND TO PROVIDE AT LEAST 48 HOURS ADVANCE NOTIFICATION TO THE DESIGN ENGINEER AND ALAMEDA COUNTY ENVIRONMENTAL HEALTH.
- GENERAL CLEANUP AND RESTORATION.** AT ALL TIMES DURING THE WORK, KEEP THE PREMISES CLEAN AND ORDERLY, AND UPON COMPLETION OF THE WORK, REPAIR ALL DAMAGE CAUSED BY EQUIPMENT. STOCKPILE EXCAVATED MATERIAL IN A MANNER THAT WILL CAUSE THE LEAST DAMAGE TO ADJACENT LAWN, GARDENS, SHRUBBERY, OR FENCES. LEAVE THE PROJECT SITE FREE OF RUBBISH OR EXCESS MATERIALS OF ANY KIND.

#### MATERIALS

- GENERAL.** ALL CONSTRUCTION MATERIALS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
- SEPTIC TANK.** CONTRACTOR SHALL USE A 1,500-GALLON CONCRETE SEPTIC TANK AS MANUFACTURED BY DON CHAPIN COMPANY INC. 560 CRAZY HORSE RD SALINAS, CA 93907. THE SEPTIC TANK SHALL BE OF WATERTIGHT CONSTRUCTION AND SHALL BE CERTIFIED AS SUCH.
- PRETREATMENT.** PRETREATMENT UNIT INSTALLED IN SECOND CHAMBER OF NEW SEPTIC TANK SHALL BE MICROFAST 0.75. BLOWER SHALL BE PER MANUFACTURER'S SPECIFICATIONS, BIO-VENT SHALL BE PER PLAN DETAILS, OR APPROVED EQUAL.
- PUMP CHAMBER.** CONTRACTOR SHALL USE AN 810-GALLON CONCRETE PUMP CHAMBER AS MANUFACTURED BY SELVAGE CONCRETE PRODUCTS (707-542-2762).
- PUMP.** CONTRACTOR SHALL USE GOULDS EFFLUENT PUMP MODEL #WE0311M, 1/3-HP, 115 V SUBMERSIBLE SEWAGE EFFLUENT PUMP DELIVERING 31 GPM AT 7.5 FEET TDH.
- TELEMETRY CONTROL PANEL AND ALARM SWITCHES.** CONTRACTOR SHALL USE DEMAND-DOSED ORENCO CONTROL PANEL MODEL # VCOM S1RDHTSACTM5GR, WITH ELAPSED TIME METER AND EVENT COUNTER, ORENCO EXTERNAL SPLICE BOX MODEL#SBEX1-4P, AND ORENCO FLOAT SWITCH ASSEMBLY MODEL MF4P, OR APPROVED EQUAL.
- ACCESS RISERS.** WATERTIGHT AND GAS TIGHT ACCESS RISERS SHALL BE INSTALLED OVER THE INLET, CENTER OF PRETREATMENT UNIT, AND TO ALLOW MAINTENANCE PUMPING UNDER THE PRETREATMENT UNIT OF THE NEW SEPTIC TANK. ACCESS RISERS SHALL BE INSTALLED FROM THE TOP OF THE TANKS TO APPROXIMATELY 2 INCHES ABOVE GROUND SURFACE AT ALL TANK OPENINGS. THE RISERS MUST BE WATERTIGHT AT ALL POINTS AND HAVE A WATERTIGHT SEAL AT THE TOP OF THE TANK. WATERTIGHT AND GAS TIGHT ACCESS RISERS SHALL BE INSTALLED OVER THE INLET AND PUMP OF THE NEW PUMP CHAMBER.

#### CONSTRUCTION

- INSTALLATION.** ALL INSTALLATION WORK SHALL BE IN ACCORDANCE WITH ALAMEDA COUNTY SEWAGE DISPOSAL REGULATIONS.
- LOCATION OF SEPTIC TANK, PUMP CHAMBER AND LEACHING TRENCHES.** LOCATIONS SHOWN FOR SEPTIC TANK AND LEACHING TRENCHES ARE APPROXIMATE, SUBJECT TO ADJUSTMENT IN THE FIELD BY THE CONTRACTOR ACCORDING TO BUILDING CONSTRAINTS AND NOTED SETBACK REQUIREMENTS.
- TANK LEAK TEST.** THE SEPTIC TANK AND PUMP CHAMBER SHALL BE REQUIRED CERTIFIED AS WATERTIGHT. FIELD TESTING OF TANKS SHALL BE REQUIRED AND CONDUCTED AS FOLLOWS:  
  
ENGINEER TO VISUALLY INSPECT TANK PRIOR TO CONDUCTING LEAK TEST. FILL TANK AND PUMP CHAMBER SO WATER LEVEL IS +2 INCHES ABOVE TANK/ACCESS RISER JOINTS. NOTE DEPTH OF WATER AND RE-MEASURE NOT LESS THAN ONE HOUR LATER. A WATER LEVEL DROP OF 1/4 INCH OR GREATER WILL BE CONSIDERED AS AN INDICATOR OF A LEAKING TANK; TANK SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER. NOTE: THE SEPTIC TANK AND PUMP CHAMBER ARE NOT TO BE BACKFILLED UNTIL THE LEAK TEST IS COMPLETED.
- LEACHFIELD.** PORTIONS OF THE EXISTING LEACHFIELD TRENCHES SHALL BE ABANDONED. THE REMAINING 90' OF TRENCHES SHALL BE RETROFITTED AND INSTALLED TO ENSURE THAT ALL TRENCH BOTTOMS ARE MAINTAINED LEVEL THROUGHOUT THEIR ENTIRE LENGTH. USE OF A TRIPOD MOUNTED LEVEL OR TRANSIT SHALL BE REQUIRED FOR PLACEMENT AND INSTALLATION OF LEACHING TRENCHES.
- PUMP CONTROLS.** FINAL SETTING OF FLOAT SWITCHES SHALL BE DETERMINED IN THE FIELD; MINIMUM PUMPING VOLUME SHALL BE SET AT APPROXIMATELY 42 GALLONS PER DOSE. RESERVE CAPACITY SHALL BE EQUAL TO AT LEAST ONE FULL DAY OF WASTEWATER FLOW, I.E., 420 GALLONS.
- ELECTRICAL.**
  - HIGH WATER AUDIO AND VISUAL ALARM SHALL BE LOCATED WITHIN OR ADJACENT TO THE HOUSE.
  - ALL ELECTRICAL WORK SHALL CONFORM TO PROCEDURES AND CODES OF ALAMEDA COUNTY BUILDING DEPARTMENT.
- PRESSURE PIPE NETWORK.**
  - ALL PRESSURE PIPE SHALL BE SCHEDULE 40 PVC OR APPROVED EQUAL.
  - ALL JOINTS SHALL BE GLUED WITH SOLVENT CEMENT.
  - HYDRAULIC TESTING SHALL BE CONDUCTED IN THE PRESENCE OF THE DESIGN ENGINEER TO DETERMINE ANY LEAKS IN THE SYSTEM AND TO CHECK THE DISCHARGE HEAD AND PUMP OPERATION.
  - A CONCRETE THRUST BLOCK (OR EQUIVALENT RESTRAINT) SHALL BE INSTALLED AT ALL PIPE BENDS OF 45° OR GREATER IN THE 1.5-INCH PRESSURE LINE FROM THE PUMP TO THE LEACHFIELD.
  - RETROFIT EXISTING 4" ORANGEBERG GRAVITY LEACHLINES WITH NEW 1.5" PVC LATERALS PERFORATED PER DETAIL 4. SLEEVE NEW LATERALS WITH 2" PERFORATED FLEXIBLE PIPE TO PROTECT LATERALS FROM ORANGEBERG DETERIORATION.
- EROSION PROTECTION.** EROSION CONTROL MEASURES SUCH AS PLACEMENT OF JUTE NETTING, STRAW WATTLES, AND SILT FENCING ARE REQUIRED TO BE IMPLEMENTED IN ALL DISTURBED AREAS. INSTALLATION SHALL BE TO MANUFACTURERS SPECIFICATIONS.
- DISPOSAL OF CLEARING AND GRUBBING DEBRIS.** THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR LAWFUL AND SAFE DISPOSAL OF ALL CLEARED AND GRUBBED MATERIAL.
- DISPOSAL OF CONTAMINATED MATERIALS.** ANY SEWAGE-CONTAMINATED SOIL OR MATERIALS REMOVED DURING THE PROCESS OF INSTALLING THE NEW/REPLACEMENT FACILITIES SHOULD BE PROPERLY DISPOSED OF AT AN APPROVED DISPOSAL FACILITY.

#### CONSTRUCTION NOTES FOR MICROFAST 0.75:

- THE MICROFAST 0.75 AEROBIC UNIT IS TO BE INSTALLED PER MANUFACTURER'S INSTALLATION MANUAL ([https://biomicrobics.com/wp-content/uploads/fast-installation-manual\\_20182.pdf](https://biomicrobics.com/wp-content/uploads/fast-installation-manual_20182.pdf)).
- AIRLINE PIPING TO FAST® MAY NOT EXCEED 100 FT [30M] TOTAL LENGTH AND HAVE A MAXIMUM OF 4 ELBOWS IN THE PIPING SYSTEM. FOR DISTANCES GREATER THAN 100 FT [30M] CONSULT FACTORY. BLOWER MUST BE LOCATED ABOVE FLOOD LEVELS ON A CONCRETE BASE 26" X 20" X 2" [65 X 50 X 5CM] MIN.
  - VENT TO BIOFILTER AT DESIRED LOCATION. VENT PIPING MUST NOT ALLOW CONDENSATE BUILD UP OR CREATE BACK PRESSURE. VENT MUST BE ABOVE FINISHED GRADE OR HIGHER.
  - ALL APPURTENANCES TO FAST® (E.G. TANKS, ACCESS PORTS, ELECTRICAL, ETC.) MUST CONFORM TO ALL APPLICABLE U.S. STATE, PROVINCE, AND LOCAL PLUMBING AND ELECTRICAL CODES. PUMP OUT ACCESS SHALL BE ADEQUATE TO THOROUGHLY CLEAN OUT BOTH ZONES.
  - ALL INSPECTION, VIEWING AND PUMP OUT PORTS MUST BE SECURED TO PREVENT ACCIDENTAL OR UNAUTHORIZED ACCESS.
  - TANK, PIPING, CONDUIT, ETC. ARE PROVIDED BY OTHERS. BLOWER CONTROL SYSTEM BY BIO-MICROBICS, INC. SEE INSTALLATION MANUAL.
  - IF LESS THAN THE SPECIFIED MINIMUMS ARE CONSIDERED NECESSARY, CONSULT FACTORY FOR GUIDANCE.
  - ALL PIPING AND ANCILLARY EQUIPMENT INSTALLED AFTER FAST MUST NOT IMPEDE OR RESTRICT FREE FLOW OF EFFLUENT.
  - THE TANK(S) SHALL BE DESIGNED TO PREVENT AIR PASSAGE BETWEEN THE SETTLING ZONE/TANK AND THE TREATMENT ZONE AND PREVENTING AN AIR LOCK. EXAMPLES INCLUDE A BAFFLE WALL SEALED TO THE LID OR TREATMENT ZONE INLET LINE WITH A PIPE CAP. CONSULT FACTORY FOR GUIDANCE.
  - THE AIR SUPPLY LINE INTO THE FAST® UNIT MUST BE SECURED TO PREVENT VIBRATION INDUCED DAMAGE. THE AIR SUPPLY LINE SHOULD BE SECURED WITH A NON-CORROSIVE CLAMP EVERY 2' MIN [60 CM].
  - SPECIALIZED TREATMENT LEVELS MAY REQUIRE SPECIFIC FEATURES TO BE INCORPORATED INTO THE DESIGN. CONSULT FACTORY FOR GUIDANCE.
  - MIN. HEIGHT MAY BE REDUCED, CONSULT FACTOR AND REFERENCE "LOW PROFILE MODULE PROCEDURE.PDF"
  - REFER TO MANUFACTURER'S INSTALLATION MANUAL FOR LEG EXTENSIONS REQUIREMENTS - SEE NOTE 44

#### SPECIFICATIONS FOR MICROFAST 0.75 WASTEWATER TREATMENT SYSTEM

##### 34. GENERAL

THE CONTRACTOR SHALL FURNISH AND INSTALL (1) MICROFAST®0.75 TREATMENT SYSTEM AS MANUFACTURED BY BIO-MICROBICS, INC. THE TREATMENT SYSTEM SHALL BE COMPLETE WITH ALL NEEDED EQUIPMENT AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.

THE PRINCIPAL ITEMS OF EQUIPMENT SHALL INCLUDE FAST® SYSTEM INSERT, LEG EXTENSIONS, OR LID, BLOWER ASSEMBLY, BLOWER CONTROLS AND ALARMS. ALL OTHER ITEMS WILL BE PROVIDED BY OTHERS. THE MICROFAST 0.75 UNIT SHALL BE SITUATED WITHIN A 625 GALLON [2400L] MINIMUM COMPARTMENT AS SHOWN ON THE DRAWINGS. SUGGESTED MAXIMUM SETTLING ZONE IS (1X) THE DAILY FLOW. TANK MUST PROVIDE ADEQUATE PUMP OUT ACCESS AND CONFORM TO LOCAL, STATE, AND ALL OTHER APPLICABLE CODES. THE CONTRACTOR SHALL COORDINATE THE PROPER FABRICATION OF THE TANK BETWEEN THE TANK AND FAST SYSTEM SUPPLIERS AS WELL AS THE INSTALLATION OF THE FAST UNIT, AND DELIVERY TO THE JOB SITE.

##### 35. OPERATING CONDITIONS

THE MICROFAST 0.75 TREATMENT SYSTEM SHALL BE CAPABLE OF TREATING THE WASTEWATER PRODUCED BY TYPICAL FAMILY ACTIVITIES (BATH, LAUNDRY, KITCHEN, ETC.) RANGING FROM (1) ONE TO (11) ELEVEN PERSONS AND NOT TO EXCEED 750 US GALLONS PER DAY (2800LPD) PROVIDED THE WASTE CONTAINS NOTHING THAT WILL INTERFERE WITH BIOLOGICAL TREATMENT. THE FAST SYSTEM IS A BIOLOGICAL TREATMENT SYSTEM NOT MEANT FOR NON-BIODEGRADABLE OR INDUSTRIAL WASTEWATER.

##### 36. MEDIA

THE FAST MEDIA SHALL BE MANUFACTURED OF RIGID PVC, POLYETHYLENE, OR POLYPROPYLENE AND IT SHALL BE SUPPORTED BY THE POLYETHYLENE INSERT. THE MEDIA SHALL BE FIXED IN POSITION AND CONTAIN NO MOVING OR WEARING PARTS AND SHALL NOT CORRODE. THE MEDIA SHALL BE DESIGNED AND INSTALLED TO ENSURE THAT SLOUGHED SOLIDS DESCEND THROUGH THE MEDIA TO THE BOTTOM OF THE SEPTIC TANK.

##### 37. BLOWER

THE MICROFAST 0.75 UNIT SHALL COME EQUIPPED WITH A REGENERATIVE TYPE BLOWER CAPABLE OF DELIVERING 17-25 CFM [31-46M3/HR]. THE BLOWER ASSEMBLY SHALL INCLUDE AN INLET FILTER WITH METAL FILTER ELEMENT. THE BLOWER SHALL BE MOUNTED OUTSIDE THE TANK ON A CONTRACTOR SUPPLIED CONCRETE BASE. BLOWER PIPING TO THE TANK SHALL USE NON-CORROSIVE MATERIAL (PVC, GALVANIZED, OR STAINLESS STEEL). DO NOT RUN GALVANIZED PIPE INSIDE THE TREATMENT TANK. REFER TO INSTALLATION MANUAL FOR FURTHER DETAILS.

##### 38. REMOTE MOUNTED BLOWER

THE BLOWER MUST NOT SET IN STANDING WATER AND ITS ELEVATION MUST BE HIGHER THAN THE NORMAL FLOOD LEVEL. A TWO-PIECE, RECTANGULAR HOUSING SHALL BE PROVIDED. THE DISCHARGE AIR LINE FROM THE BLOWER TO THE MICROFAST SYSTEM, SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR.

##### 39. ELECTRICAL

THE ELECTRICAL SOURCE SHOULD BE WITHIN 150 FEET [45 METERS] OF THE BLOWER, CONSULT LOCAL CODES FOR LONGER WIRING DISTANCES. ALL WIRING MUST CONFORM TO ALL APPLICABLE CODES (IEC, NEC, ETC.). WIRING DISTANCES MUST PREVENT SIGNIFICANT VOLTAGE LOSS. INPUT POWER ON 0HZ ELECTRICAL SYSTEMS 110/220VAC, 1Ø, 3.5/1.7 FLA, ON 50 HZ ELECTRICAL SYSTEMS 220VAC, 1Ø, 1.9 FLA. OTHER VOLTAGES AND PHASE ARE ALSO AVAILABLE. ACTUAL POWER CONSUMPTION VARIES WITH SITE CONDITIONS. ALL CONDUIT AND WIRING SHALL BE SUPPLIED BY CONTRACTOR.

##### 40. CONTROLS

THE CONTROL PANEL PROVIDES POWER TO THE BLOWER WITH AN ALARM SYSTEM CONSISTING OF A VISUAL AND AUDIBLE ALARM CAPABLE OF SIGNALING BLOWER CIRCUIT FAILURE AND HIGH WATER CONDITIONS. THE CONTROL PANEL IS EQUIPPED WITH SFR® (SEQUENCING FIXED REACTOR) TIMED CONTROL FEATURE. A MANUAL SILENCE BUTTON IS INCLUDED.

##### 41. INSTALLATION AND OPERATING INSTRUCTIONS

ALL WORK MUST BE DONE IN ACCORDANCE WITH LOCAL CODES AND REGULATIONS. INSTALLATION OF THE FAST 0.75 SHALL BE DONE IN ACCORDANCE WITH THE WRITTEN INSTRUCTIONS PROVIDED BY THE MANUFACTURER. MANUALS SHALL BE FURNISHED, WHICH WILL INCLUDE A DESCRIPTION OF SYSTEM INSTALLATION, OPERATION, AND MAINTENANCE PROCEDURES.

##### 42. FLOW AND DOSING

FAST SYSTEMS HAVE BEEN SUCCESSFULLY DESIGNED, TESTED AND CERTIFIED RECEIVING GRAVITY, DEMAND-BASED INFLUENT FLOW. WHEN INFLUENT FLOW IS CONTROLLED BY PUMP OR OTHER MEANS TO HELP WITH HIGHLY VARIABLE FLOW CONDITIONS, THEN MULTIPLE DOSING EVENTS SHOULD BE USED TO MAXIMIZE PERFORMANCE. THE FLOW RATE SHALL NOT EXCEED 5 GPM (19 LPM) WITH A MAXIMUM HOURLY FLOW NOT TO EXCEED 10% OF THE DESIGN DAILY FLOW (75 GPH (280 LPH)).

#### 43. WARRANTY

PLEASE SEE OWNER'S MANUAL FOR WARRANTY INFORMATION

#### 44. ADDITIONAL MICROFAST 0.75 NOTES

- SECURE LEG EXTENSION TO THE FAST UNIT BY PLACING TWO SCREWS ON EACH SIDE OF THE LEG EXTENSION (4 SCREWS PER FOOT ARE INCLUDED).
- CUT 4" SCHD. 40 PVC (NOT INCLUDED) TO OBTAIN THE DESIRED HEIGHT. MINIMUM PIPE LENGTH OF 6" [15.56 CM] WILL PROVIDE MINIMUM CLEARANCE OF 6" [15.2 CM]. FOR HEIGHTS GREATER THAN 18" [45.7 CM] USE SCHD. 80 PVC PIPE (NOT INCLUDED). CONSULT FACTORY FOR EXTENDING LEG BEYOND 36" [90 CM].
- ANCHOR THE LEG EXTENSIONS TO THE TANK WITH NON-CORROSIVE HARDWARE (NOT INCLUDED) AT THE PROVIDED MOUNTING POINTS.
- IF LESS THAN THE SPECIFIED MINIMUMS ARE CONSIDERED NECESSARY, CONSULT FACTORY FOR GUIDANCE.
- THE AIR SUPPLY LINE INTO THE FAST UNIT MUST BE SECURED TO PREVENT VIBRATION INDUCED DAMAGE. THE AIR SUPPLY LINE SHOULD BE SECURED WITH A NON-CORROSIVE CLAMP EVERY 2 FT [0.6 M] MINIMUM.
- TANK, ANCHORS, PIPING CONDUIT, BLOWER HOUSING PAD, AND VENTS NOT PROVIDED BY MICROFAST.

#### CONSTRUCTION INSPECTION SCHEDULE

IN ACCORDANCE WITH REQUIREMENTS OF THE ALAMEDA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH (ACDEH), THE FOLLOWING CONSTRUCTION ACTIVITIES SHALL BE INSPECTED BY THE SYSTEM DESIGNER:

##### INSPECTION #1

- ON-SITE PRE-CONSTRUCTION CONFERENCE TO DISCUSS PROJECT WITH CONTRACTOR
- STAKING OF SEPTIC TANK AND PUMP CHAMBER
- STAKING AND LAYOUT OF LEACHFIELD RETROFIT
- SELECTION OF MATERIALS

##### INSPECTION #2

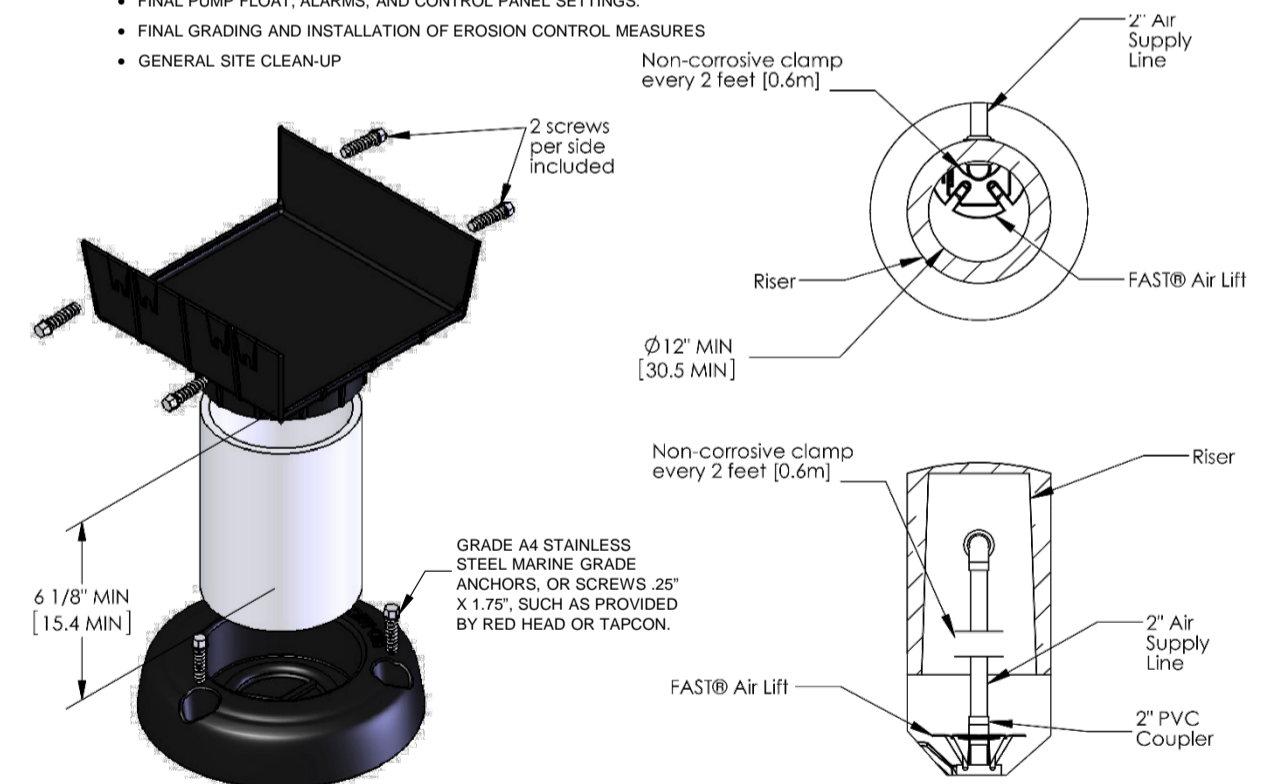
- PLACEMENT OF SEPTIC TANK, AERATION UNIT, AND ALL RELATED PIPING. PLACEMENT OF PUMP CHAMBER AND RELATED EQUIPMENT.

##### INSPECTION #3

- PLACEMENT OF DISTRIBUTION PIPE NETWORK
- CONDUCT SEPTIC TANK/PUMP CHAMBER WATER TIGHTNESS TEST
- TESTING OF PUMPS AND DISTRIBUTION SYSTEMS
- CONDUCT FLOW AND HYDRAULIC SQUIRT TESTS

##### INSPECTION #4

- FINAL BACKFILL OF LEACHFIELD AREA
- FINAL PUMP FLOAT, ALARMS, AND CONTROL PANEL SETTINGS.
- FINAL GRADING AND INSTALLATION OF EROSION CONTROL MEASURES
- GENERAL SITE CLEAN-UP



1 MICROFAST LEG EXTENSION  
NOT TO SCALE

2 ALTERNATE AIR SUPPLY  
NOT TO SCALE

### TOWNSEND CUSTOM HOME MR. AND MRS. DALE TOWNSEND

HAYWARD, CA  
25742 FAIRVIEW AVENUE

**QUESTA**  
ENGINEERING CORP.

Civil  
Environmental  
& Water Resources

(510) 236-6114  
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P.O. Box 70356 1220 Brickyard Cove Road Point Richmond, CA 94807



Sht	Rev	Date	By	Description	App'd

Design:	MW
Drawn:	RP
Checked:	MW
Appr'd:	NNH

### NOTES

HAYWARD, CA  
25742 FAIRVIEW AVENUE

AutoCAD SHX Text  
Project 200134  
Scale: 1" = 1'-0"  
Date: 11/22/21  
3 of 3

# TOWNSEND RESIDENCE

25742 FAIRVIEW AVE, HAYWARD, CA 94542

## LANDSCAPE MASTER PLAN

### GENERAL NOTES

1. CONTRACTOR SHALL INSPECT THE SITE AND BE FAMILIAR WITH ALL EXISTING CONDITIONS PRIOR TO SUBMITTING HIS/HER BID.
2. THE CONTRACTOR SHALL VERIFY ALL PROPERTY AND LOT LINES, EXISTING CONDITIONS, UTILITIES, GRADES AND DIMENSIONS PRIOR TO THE START OF ANY WORK AND REPORT ANY DISCREPANCIES TO CAMP & CAMP ASSOCIATES, INC. BEFORE PROCEEDING. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
3. ALL WORK TO BE PERFORMED SHALL CONFORM TO ALL APPLICABLE LOCAL CODES AND ORDINANCES BY AN EXPERIENCED WORKMAN AND A LICENSED LANDSCAPE CONTRACTOR.
4. THE CONTRACTOR SHALL COORDINATE ALL WORK TO PREVENT CONFLICTS BETWEEN TRADES AND SHALL REPORT ALL CONFLICTS OR INCONGRUITIES BETWEEN NEW IMPROVEMENTS AND EXISTING FACILITIES TO CAMP & CAMP ASSOCIATES, INC. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL UTILITIES AND STRUCTURES TO REMAIN, AND TO REPAIR OR REPLACE AT HIS/HER OWN EXPENSE ANY UTILITY LINES OR STRUCTURES DAMAGED DURING CONSTRUCTION WHETHER SHOWN OR NOT.
5. ALL PIPING, SLEEVES CONDUIT, ETC. SHALL BE INSTALLED PRIOR TO INSTALLATION OF CONSTRUCTION ITEMS.
6. THE SITE SHALL BE KEPT IN A NEAT, CLEAN AND ORDERLY MANNER DURING INSTALLATION AND ALL REFUSE SHALL BE REMOVED FROM THE SITE ON COMPLETION OF THE PROJECT.

#### LAYOUT NOTES

1. ANY ERRORS OR OMISSIONS ON THESE DRAWINGS SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF CAMP & CAMP ASSOCIATES, INC.
2. THE DRAWINGS SHOW ONLY REPRESENTATIVE AND TYPICAL DETAILS TO ASSIST THE CONTRACTOR. THEY DO NOT ILLUSTRATE EVERY CONDITION. ALL ATTACHMENTS, CONNECTIONS, FASTENINGS, ETC. ARE TO BE PROPERLY EXECUTED IN CONFORMANCE WITH BEST ACCEPTABLE PRACTICES AND THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING MATERIALS.

#### PLANTING NOTES

1. THE SCOPE OF WORK INCLUDES FURNISHING ALL MATERIALS NECESSARY FOR THE INSTALLATION OF THE PLANTING, BACKFILL, IRRIGATION AND DRAINAGE WORK OUTLINED IN THESE DRAWINGS. ALL WORK SHALL BE PERFORMED BY PERSONS FAMILIAR WITH PLANTING WORK AND UNDER SUPERVISION OF A QUALIFIED PLANTING FOREMAN.
2. PLANT MATERIAL LOCATIONS ARE DIAGRAMATIC AND MAY BE SUBJECT TO CHANGE BY THE LANDSCAPE ARCHITECT BEFORE THE MAINTENANCE PERIOD BEGINS.
3. ALL PLANTING AREAS SHALL HAVE THE FOLLOWING SOIL AMMENDMENTS INCORPORATED INTO THE TOP 6" OF NATIVE SOIL:
  - 6 CUBIC YARDS NITROGEN AND IRON FORTIFIED ORGANIC AMMENDMENT
  - 30 POUNDS 6-20-20 NPK COMMERCIAL FERTILIZER
  - 15 POUNDS SOIL SULPHUR
4. DIG PLANTING PITS 2 TIMES THE HEIGHT AND WIDTH OF ROOTBALL. BACKFILL PITS WITH 70% NATIVE ON-SITE SOIL AND 30% NITROLIZED SHAVINGS OR EQUIVILANT.
  - SAMPLE BACKFILL:
  - 70% NATIVE SOIL BY VOLUME
  - 30% NITROLIZED SHAVINGS OR EQUIVILANT
  - 16 LBS. GRO-POWER PLUS, PER CUBIC YARD MIX
  - OTHER AMMENDMENTS PER SOIL ANALYSIS
  - GROW-POWER PLANTING TABLETS
5. ALL TREES TO BE STAKED AS SHOWN IN THE TREE PLANTING DETAIL.

### MATERIALS & FINISHES

#### LAWN

SYNTHETIC TURF

MANUFACTURER: FOREVER LAWN BY DUFONT  
MODEL: SELECT HD



#### PAVING

CONCRETE PAVERS

AVALON SLATE, 3-PIECE LARGE  
MANUFACTURER: BELGARD  
SIZE: 6"x12" / 9"x12" / 12"x12"  
ALL ARE 2-3/8" THICKNESS  
COLOR: RIVIERA  
6"x9" EDGE BAND



#### PATHWAYS

DECOMPOSED GRANITE

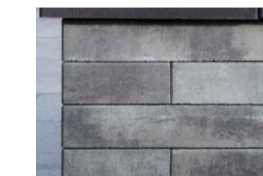
COLOR: CALIFORNIA GOLD FINES AS AVAILABLE BY:  
PENINSULA BUILDING MATERIALS  
(925) 443-2800



#### SEAT WALLS

WALL BLOCK

MELVILLE WALL  
MANUFACTURER: BELGARD  
SIZE: 4"x20"x10"  
COLOR: RIVIERA



#### WALL CAP

MANUFACTURER: GOLDEN STATE CAST STONE  
SIZE: 24" WIDTH PER PLANS, 2" THICKNESS  
EDGE STYLE: SQUARE EASED EDGE  
COLOR: DOVE GREY



#### LANDSCAPE BOULDERS

BOULDERS

SONOMA FIELD STONE OR APPROVED EQUAL AS AVAILABLE BY:  
PENINSULA BUILDING MATERIALS  
(925) 443-2800



### SHEET INDEX

- L-0.0 COVER
- L-1.0 LANDSCAPE MASTER PLAN
- L-2.0 HYDROZONE PLAN & MELO CALCS
- L-3.0 PLANT PALETTE & IMAGES

### ABBREVIATIONS

BC	BEGINNING OF CURVE
BW	BOTH WAYS
(E)	EXISTING
(N)	NEW
PA	PLANTING AREA
TYP.	TYPICAL
T.B.S.	TO BE SELECTED
MIN.	MINIMUM
MAX.	MAXIMUM
HOR.	HORIZONTAL
VERT.	VERTICAL

"I agree to comply with the requirements of the Water Efficient Landscape Ordinance and submit a complete Landscape Documentation Package."

Signature:

R. Terrence Camp  
Landscape Architect No. 4494

AutoCAD SHX Text  
 CONSTRUCTION/AS LAYOUT  
 NUMBER OF SHEETS: 3  
 DRAWING NUMBER: 25742-01  
 PROJECT NAME: TOWNSEND RESIDENCE  
 DATE: 08/23/2018  
 SCALE: N/A  
 JOB: 25742  
 SHEET: L-0.0  
 REVISIONS:  
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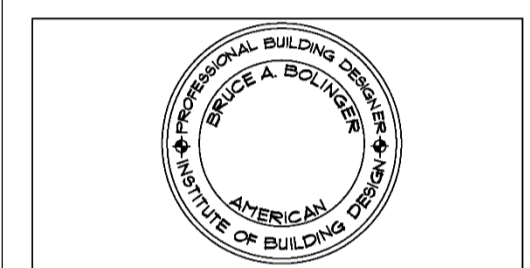


WARNINGS: ALL PLANS, SPECIFICATIONS, CALCULATIONS, DIMENSIONS AND STRUCTURAL ENGINEERING ARE THE SOLE PROPERTY OF BOLINGER DESIGN SERVICES AND SHALL NOT BE USED BY OR FOR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF BRUCE A. BOLINGER, PRINCIPAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL APPLICABLE AGENCIES. THE WORK INCLUDES THE OVERALL FORM AS WELL AS THE ARRANGEMENT AND POSITIONING OF SPACES AND ELEMENTS IN THE DESIGN, BUT DOES NOT INCLUDE INDIVIDUAL STANDARD FEATURES. © 11/18/2021

1828 & 7th RD STREET  
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**UJ66 SITE: WWW.UJ66.ONGERDESIGN.COM**  
**EMAIL: 6RUCE@UJ66ONGERDESIGN.COM**

- CERTIFIED GREEN 6 LD PROFESSIONALS
- PROFESSIONAL 6 ULTING DESIGNERS
- ICC CERTIFIED 6 ULTING INSPECTORS
- ICC CERTIFIED FLANS EXAMINERS
- PROJECT PLANNERS/MANAGERS

**PROFESSIONAL CERTIFICATIONS:**  
 ICC 1028421  
 6 & ICC  
 1828421-R & ICC  
 1828421-E & ICC  
 1828421-F 4 ICC  
 1828421-18  
 ICC 60 18 28421-8 &  
 A16D 18 1828-1912



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REVISION HISTORY:

REVISION:	DATE:
IG	

**CUSTOM DWELLING FOR**  
**MR. & MRS. DALE TOWNSEND**  
 25142 FAIRVIEW AVE.  
 HAYWARD, CA  
 APN=411e2 e e e 4-e 1

**SMARTFLOW PHOTOVOLTAIC DESIGN**  
 DATE: 16 OCTOBER 2021 SHEET NO.:  
 SCALE: AS NOTED  
**PV1.2**  
 PROJECT NO.: 2021-006

### Detailed Information on Main Panel and Meter

**MAIN PANEL RATING**

E S I G SPUT PHASE 3W  
 200A RATIO G=200A  
 IA1 SERVICE BREAKER + 200A OP ED  
 20% RULE:  
 AX OWED FEED = 12 \* 200A = 2400A  
 ACTUAL FEED = 200A MSB  
 220A < 240A MAX  
 OK OADD SOLAR BREAKER @ THE OPPOSITE  
 E O OF E BUS AWAY FROM THE KER

www.locusenergy.com  
 LGates 120-30k  
 LGates 120-30k

**Three Line Diagram**

### SMARTFLOW FOUNDATION DESIGN - SLAB ON GRADE

CONTAINH FOR... (TOP) (S-4CUV)  
 UH...  
 CONTAINH FOR... (TOP) (S-4CUV)  
 UH...

**MAXIMUM LOADS**  
 DOWNWARD FORCE: 8200 LBS  
 LATERAL FORCE: 780 LBS  
 OVERTURNING MOMENT: 7200 LB-FT

**NOTES:**  
 1. FORCES BASED ON 50 MPH ULTIMATE WIND SPEED (ASD LOAD COMBINATION 6).  
 2. FORCES BASED ON DESIGN IN ID SOIL CRITERIA MENTIONED ABOVE.  
 3. FORCES SHOWN ARE IN EN FROM THE BASE OF THE STRUCTURE.  
 4. IF DESIG AND SOIL CRITERIA ARE NOT COMPARABLE TO SITE CONDITIONS, CONTACT PROFESSIONAL ENGINEER FOR FOUNDATION DESIGN REVIEW PRIOR TO THE START OF WORK.

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**SmartFlow Solar**  
 REVISION: 1 DATE: 8/8/2017  
 TEC WOF: 8743.01

### SMARTFLOW FOUNDATION DESIGN-GROUND SCREWS

**SOIL PARAMETERS:**  
 CONSTRUCTION DESIGN CRITERIA  
 SOIL TYPE: SPT  
 SOIL CLASSIFICATION: SPT  
 SOIL STRENGTH: SPT

Screw Designation	Yellow (lb)	Yellow (lb)	Yellow (lb)
UTS-3000-012	19700	19700	19700
UTS-3000-014	19700	19700	19700
UTS-3000-016	19700	19700	19700
UTS-3000-018	19700	19700	19700
UTS-3000-020	19700	19700	19700
UTS-3000-022	19700	19700	19700
UTS-3000-024	19700	19700	19700
UTS-3000-026	19700	19700	19700
UTS-3000-028	19700	19700	19700
UTS-3000-030	19700	19700	19700
UTS-3000-032	19700	19700	19700
UTS-3000-034	19700	19700	19700
UTS-3000-036	19700	19700	19700
UTS-3000-038	19700	19700	19700
UTS-3000-040	19700	19700	19700
UTS-3000-042	19700	19700	19700
UTS-3000-044	19700	19700	19700
UTS-3000-046	19700	19700	19700
UTS-3000-048	19700	19700	19700
UTS-3000-050	19700	19700	19700
UTS-3000-052	19700	19700	19700
UTS-3000-054	19700	19700	19700
UTS-3000-056	19700	19700	19700
UTS-3000-058	19700	19700	19700
UTS-3000-060	19700	19700	19700
UTS-3000-062	19700	19700	19700
UTS-3000-064	19700	19700	19700
UTS-3000-066	19700	19700	19700
UTS-3000-068	19700	19700	19700
UTS-3000-070	19700	19700	19700
UTS-3000-072	19700	19700	19700
UTS-3000-074	19700	19700	19700
UTS-3000-076	19700	19700	19700
UTS-3000-078	19700	19700	19700
UTS-3000-080	19700	19700	19700
UTS-3000-082	19700	19700	19700
UTS-3000-084	19700	19700	19700
UTS-3000-086	19700	19700	19700
UTS-3000-088	19700	19700	19700
UTS-3000-090	19700	19700	19700
UTS-3000-092	19700	19700	19700
UTS-3000-094	19700	19700	19700
UTS-3000-096	19700	19700	19700
UTS-3000-098	19700	19700	19700
UTS-3000-100	19700	19700	19700
UTS-3000-102	19700	19700	19700
UTS-3000-104	19700	19700	19700
UTS-3000-106	19700	19700	19700
UTS-3000-108	19700	19700	19700
UTS-3000-110	19700	19700	19700

**MAXIMUM LOADS**  
 DOWNWARD FORCE: 8200 LBS  
 LATERAL FORCE: 780 LBS  
 OVERTURNING MOMENT: 7200 LB-FT

**NOTES:**  
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### Detailed Information on Solar PV Cable (HIZZIKI, AC Disconnect R UN and OCPD R tings

**H1222 Solar PV Cable (1 x 4mm²)**  
 Product features:  
 U-4A-W-C-W  
 Design:  
 Fire-retardant, low smoke, zero halogen  
 Construction made of cross-linked polyethylene  
 Core colour: white  
 Outer sheath made of cross-linked polyethylene  
 Sheath colour: black, red or blue

**SMART FLOWER RATINGS:**  
**MODULES & INVERTER ARE PRE-ASSEMBLED & PRE-WIRED**  
 MODULES MANUFACTURER: SMARTFLOW  
 INVERTER MANUFACTURER: FRONIUS  
 PANEL 1, 220WP: INVERTER MODEL: FRONIOS  
 V<sub>oc</sub> = 32.17V  
 V<sub>m</sub> = 28.69V  
 I<sub>sc</sub> = 9.15A  
 I<sub>mp</sub> = 8.17A  
 DC VOLT RATING = 480V  
 DC MAX INPUT CURRENT = 18A

**Panel 2-11, 250WP:**  
 AC MODEL: TV180WH-1  
 INVERTER MODEL: FRONIOS  
 V<sub>oc</sub> = 32.17V  
 V<sub>m</sub> = 28.69V  
 I<sub>sc</sub> = 9.15A  
 I<sub>mp</sub> = 8.17A  
 DC VOLT RATING = 480V  
 DC MAX INPUT CURRENT = 18A

**Panel 12, 155WP:**  
 AC MODEL: TV180WH-1  
 INVERTER MODEL: FRONIOS  
 V<sub>oc</sub> = 32.17V  
 V<sub>m</sub> = 28.69V  
 I<sub>sc</sub> = 9.15A  
 I<sub>mp</sub> = 8.17A  
 DC VOLT RATING = 480V  
 DC MAX INPUT CURRENT = 18A

**SmartFlow to AC on ct**  
 1. 2/11 L2 U EGC  
 12. 1/1 N.A.S RAIB @ ISC  
 12. 1/1 Y PER 31015(BH 18) 25A  
 1/1 SAUN U RGRONI  
 1/1 CT 1-AC1  
 TO USE 1/1 THM1-7 CU RA 3/11C

**Electrical Three Line Diagram**

**NOTE:**  
 4000 PSI CONCRETE IS REQUIRED. THEREFORE, SPECIAL INSPECTION IS REQUIRED, SEE SPECIAL REQUIREMENTS ABOVE.

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### CONCRETE NOTES

CONCRETE NOTES  
 1. DESIGN AND CONSTRUCTION SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE "BUILDING CODE FOR OUR TIMES" (FOR STRUCTURAL CONCRETE) ACI 318, WITH THE FOLLOWING:  
 2. CONCRETE REQUIREMENTS:  
 COMPRESSIVE STRENGTH (f<sub>c</sub>) 4000 PSI (0.28 U.S. (MIN.))  
 CEMENT (ASTM C150) TYPE I/II  
 COARSE AGGREGATE (ASTM C33) ASTM C33  
 STONE FILL (ASTM C618) LIQUID MEMBRANE (ASTM C109) - CVSS (A)  
 CURING TEST CYCLES REQUIRED: 1 PER EACH CUR  
 CONCRETE FOR EXTERIOR SURFACES SHALL HAVE AN AIR ENTRAINMENT OF 8%.  
 3. REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, "FORMED AND PLAIN STEEL-BARS FOR CONCRETE REINFORCEMENT", GRADE 60.  
 4. CONCRETE WORK AND DETAILS SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE "SPECIFICATIONS FOR STRUCTURAL CONCRETE", ACI 308.  
 5. CONCRETE COVER FOR REINFORCING SHALL BE 1 INCHES FOR CONCRETE CAST AGAINST AND OTHERWISE EXPOSED TO AIR AT ALL OTHER CONCRETE SURFACES. MINIMUM COVER SHALL BE 2 INCHES FOR 18 AND WIGER BARS, AND 1 1/2 INCHES FOR 15 AND 16 BARS. OTHERWISE NOTED. CONCRETE COVER FOR REINFORCEMENT NOT EXPOSED TO WEATHER SHALL BE 1/4" FOR SLABS, WALLS, JOISTS, UNLESS OTHERWISE NOTED.  
 6. WELDING OF REINFORCING STEEL IS SPECIFICALLY PROHIBITED.  
 7. GROUT SHALL BE NON-SHRINK, NON-SHRINK PREPACKAGED GROUT WITH A COMPRESSIVE STRENGTH OF 5000 PSI AT 28 DAYS.  
 8. ALL REINFORCING, EMBEDDED STEEL, NICHOR, BOLTS, INSERTS AND ALL OTHER EMBEDDED ITEMS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT. PRE-MOISTEN SURFACES FOR SETTING OF ANCHOR BOLTS.  
 9. HOT WEATHER CONCRETING SHALL CONFORM TO ACI 308 "HOT WEATHER CONCRETING".  
 10. COLD WEATHER CONCRETING SHALL CONFORM TO ACI 308 "COLD WEATHER CONCRETING".  
 11. THE TOP OF ALL CONCRETE SURFACES SHALL BE TRUE AND LEVEL WITH A SMOOTH FLOAT FINISH.  
 12. SHALL BE WITHIN 1/8" OR 1/8" NCH  
 13. REMOVE ALL LOOSE MATERIAL AND DEBRIS FROM EXISTING SURFACE PRIOR TO PLACING CONCRETE.  
 14. TO CARRY ITS OWN WEIGHT, CONSTRUCTION LOADS, AND DESIGN LOADS WHICH ARE UNABLE TO BE IMPOSED UPON IT, VERIFY STRENGTH OF CONCRETE BY COMPRESSIVE TEST RESULTS.  
 15. THROUGHOUT CONSTRUCTION, THE CONCRETE WORK SHALL BE ADEQUATELY PROTECTED AGAINST DAMAGE DUE TO DECENTRIFUGAL LOADING, COLLAPSE OF EQUIPMENT, MATERIALS OR METHODS, ICE, FLOODING, EXCESSIVE HEAT AND FREEZING.  
 16. BRINGING OUT OF CONCRETE, ESPECIALLY DURING THE FIRST 24 HOURS, SHALL BE CAREFULLY GUARDED AGAINST. ALL SURFACES SHALL BE MOIST CURED.  
 17. FORMS SHALL BE BUILT TRUE. THEY SHALL BE STRONG, RIGID, MORTAR-TIGHT, AND ADEQUATELY BRACED OR SHORING SHALL BE DESIGNED AND CONSTRUCTED TO WITHSTAND ALL LIVE AND DEAD LOADS, INCLUDING THOSE IMPOSED BY PLASTIC CONCRETE CURING CURTAINING OF THE STRESSES DUE TO THE RATE OF CURING, SETTLEMENT, VIBRATION AND CONDITIONS BROUGHT ABOUT BY CONSTRUCTION METHODS.  
 18. PROVIDE 48 HOURS NOTICE TO THE ENGINEER PRIOR TO EACH PLACEMENT OF CONCRETE.  
 19. ALL CONCRETE WORK SHALL BE SUBJECT TO SPECIAL INSPECTIONS DURING CONSTRUCTION.

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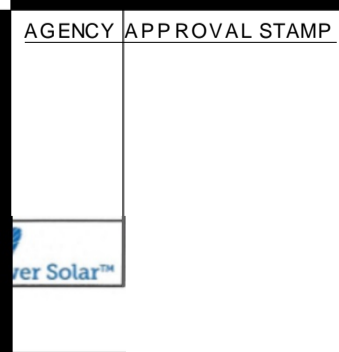
**SmartFlow Solar**  
 REVISION: 1 DATE: 8/8/2017  
 TEC WOF: 8743.01

### FOUNDATION DESIGN - SLAB ON GRADE (OPTION 1)

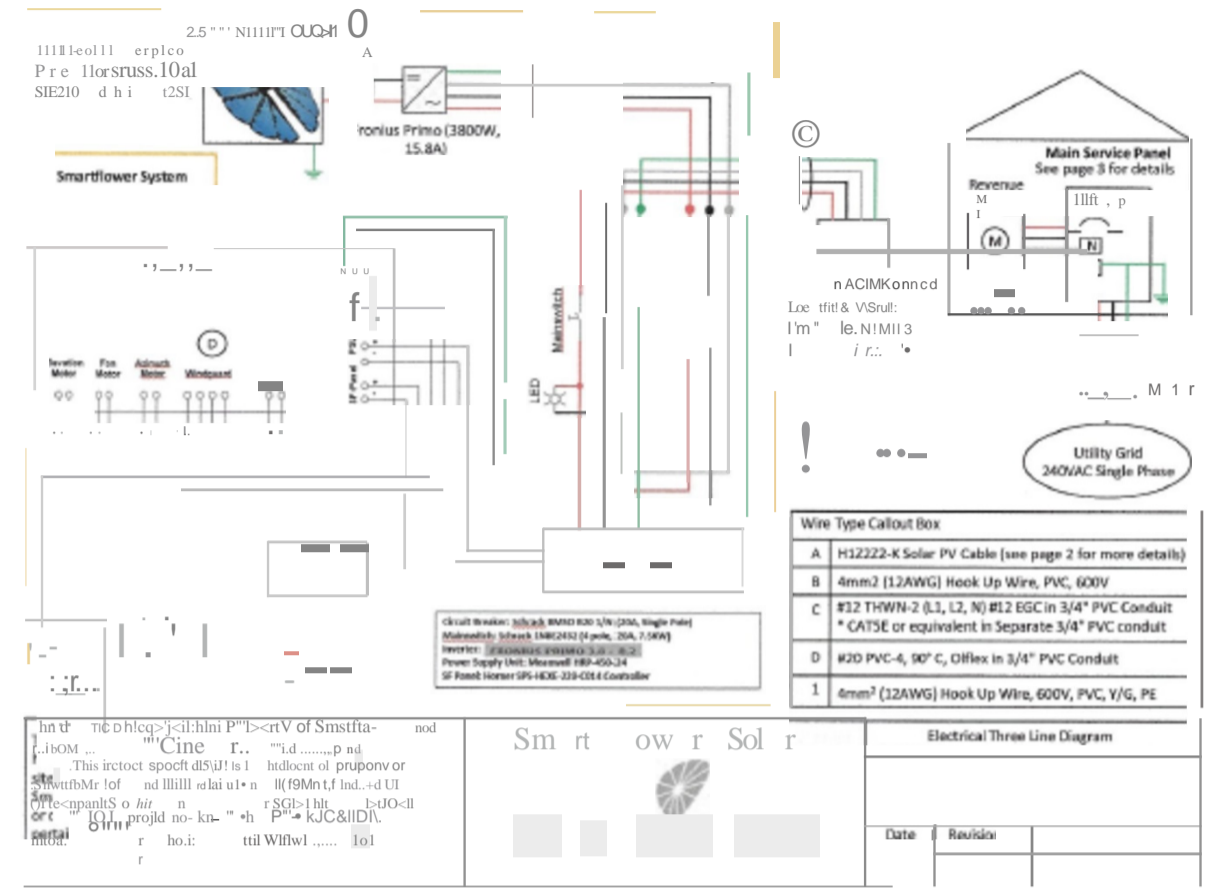
**SECTION "A-A"**

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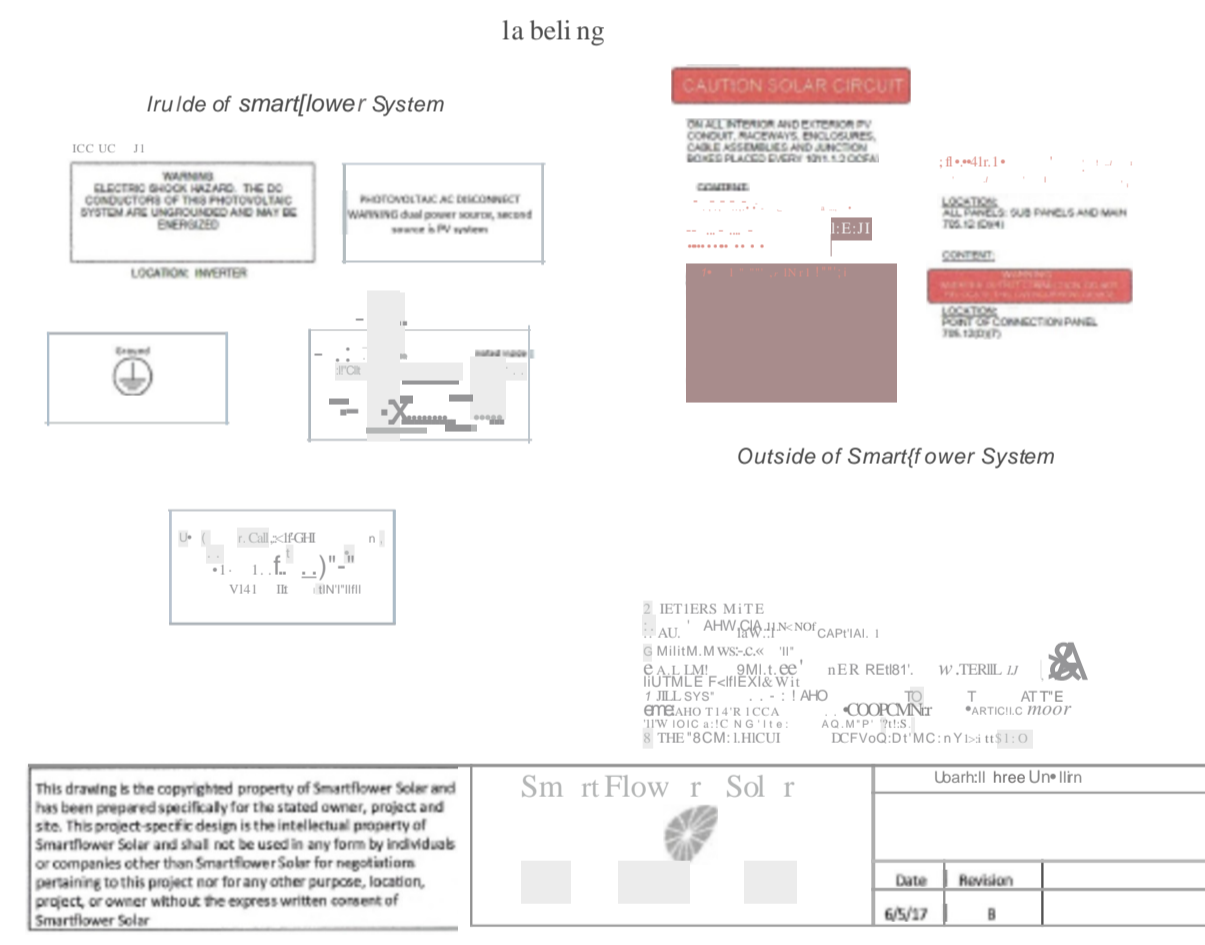
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Date	Revision
6/5/17	8



Date	Revision
6/5/17	8

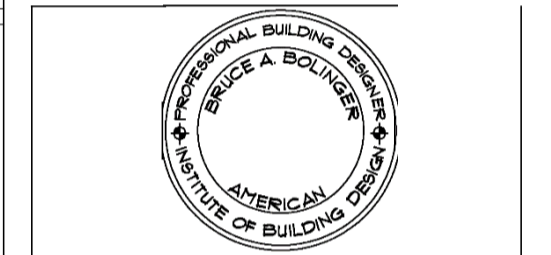
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- ICC CERTIFIED PLAN EXAMINERS

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 ICC - 1833421-E&  
 ICC - 1833421-F4  
 ICC - 1833421-M&  
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 AIA 6181821-1S12 INTERNATIONAL CODE COUNCIL MEMBER



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REVISION	HISTORY	DATE

**CUSTOM**  
 MR. & MRS. DALE TOWNSEND  
 25142 FAIRVIEW AVE.  
 AYWARD, CA  
 APN=411-e2se-ee4-e1

**SMARTFLOWER PHOTOVOLTAIC DESIGN**  
 DATE: 16 OCT 06 ER 2021 SHEET NO.:  
 NOTED L => **V 1.1**  
 PROJECT NO.:  
 2e21-ee&

