



RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

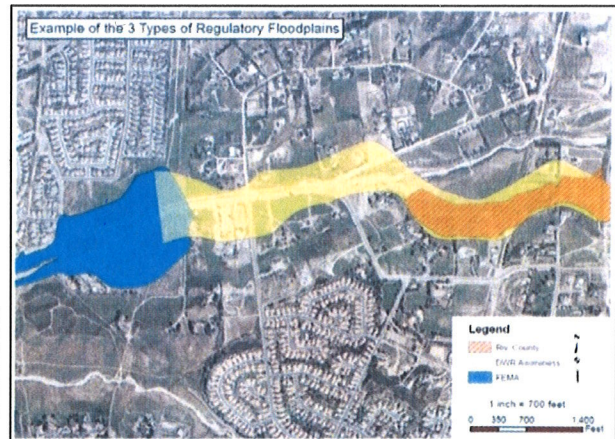
Separate Application for Floodplain Review

County Ordinance 458 regulates development/substantial improvements within a regulatory floodplain.

Examples of development:

- Home, mobile home, garage or barn
- Room addition, replacement, attached deck or block wall
- Enclosed patio, storage of equipment or materials
- Grading or paving
- Excavation, filling, drilling, mining or dredging
- Any man-made change to improved or unimproved real estate [fences included]

Any development or substantial improvement within a regulatory floodplain may require floodplain review. Call Development Review Section at 951.955.1200 to verify your specific case.



Please note that building in a floodplain requires special studies, preparations, and review that result in additional protective measures that are typically more expensive than conventional construction.

Submittal Requirements for Newly/First Time Conditioned Parcels:

1. Floodplain permit application form submitted directly to Riverside County Flood Control (RCFC).
2. \$1,095 Plan Check deposit payable at RCFC plus \$188 for each additional structure on same parcel submitted together. Applicant is entitled to a refund of any remaining funds once Conditions of Approval have been met. Fees reduced to \$357.50 for attached decks, enclosed patios, previously conditioned parcels through entitlement or Separate Application review.
3. Floodplain Management Plan prepared by a registered civil engineer submitted to RCFC:
 - a. One set of stamped, wet-signed plans.
 - b. 1-foot contour interval within 50 feet of construction site or within property boundary, whichever is less. [All elevations based on NAVD88 vertical datum] Indicate source of topo.
 - c. Worksite benchmark with surveyor's notes.
 - d. The finished floor elevation shall be at the Base Flood Elevation (BFE) + 1 foot of freeboard per 2016 California Residential Code Section R322, effective January 1, 2017.
 - e. Two profiles at right angles to each other and centered on the building site.
 - f. Permanent foundation details (stem wall or pier option):
 - i. Flood vent calculations are required for stem walls and rigid skirting (used for mobile homes).
 - ii. Minimum of two flood vents must be shown on two opposite sides of the structure and in line with the direction of flow. Flood vents shown no higher than 1.0 foot above adjacent grade. One sq. in. opening per each sq. ft. of enclosure, and area of vent is required and includes only the area below the calculated BFE. An additional 15% vent area is required when using rodent screens and 40% for decorative screens.
4. Once the Floodplain Management Plan is stamped approved by RCFC, Conditions of Approval will be given to the applicant and Building and Safety.
5. Multiple stages of inspections and a FEMA Elevation Certificate, in addition to the normal routine for permits, will be required before occupancy.

Useful Links:

County Ordinance 458:	http://rcflood.org/downloads/Ordinance_458_16.pdf
Check your flood zone:	http://rcstormwatertool.org/FloodDetermination
Frequently asked Questions:	http://rcflood.org/FloodplainFAQ.aspx
FEMA Technical Bulletins:	https://www.fema.gov/media-library/resources-documents/collections/4
Manufactured Home Guide:	https://www.fema.gov/media-library-data/20130726-1502-20490-8377/fema_p85.pdf



RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

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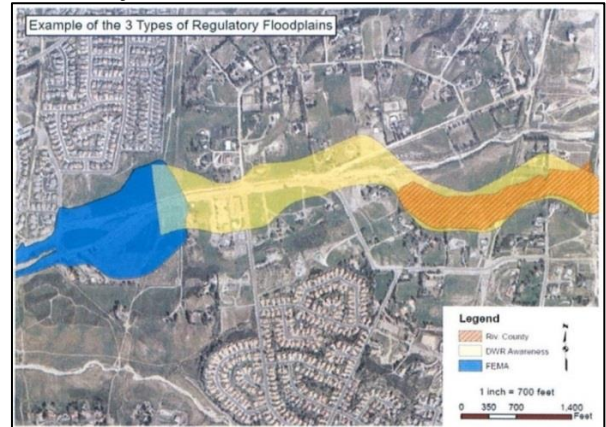
Requisitos para la construcción dentro de un terreno inundable

La Ordenanza 458 del Condado de Riverside regula la construcción, el desarrollo, o mejoramientos substanciales dentro de un terreno inundable.

Ejemplos de desarrollo:

- Casa, casa móvil, garaje o granero
- Adición de habitación, reemplazo, terraza o pared de bloque
- Patio cerrado, almacenamiento de equipos o materiales
- Nivelación de tierra o pavimentación
- Excavación, llenado, perforación, minería o extracciones
- Cualquier cambio hecho para mejorar la parcela (incluyendo un cerco)

Cualquier construcción, desarrollo o mejoramiento substancial dentro de un terreno inundable puede requerir una aplicación. Llame a la Sección Development Review al 951.955.1200 para verificar su caso.



Tenga en cuenta que la construcción en un terreno inundable requiere estudios especiales, preparativos y revisión por el Condado que resultan en medidas de protección adicionales que típicamente son más costosas que la construcción convencional.

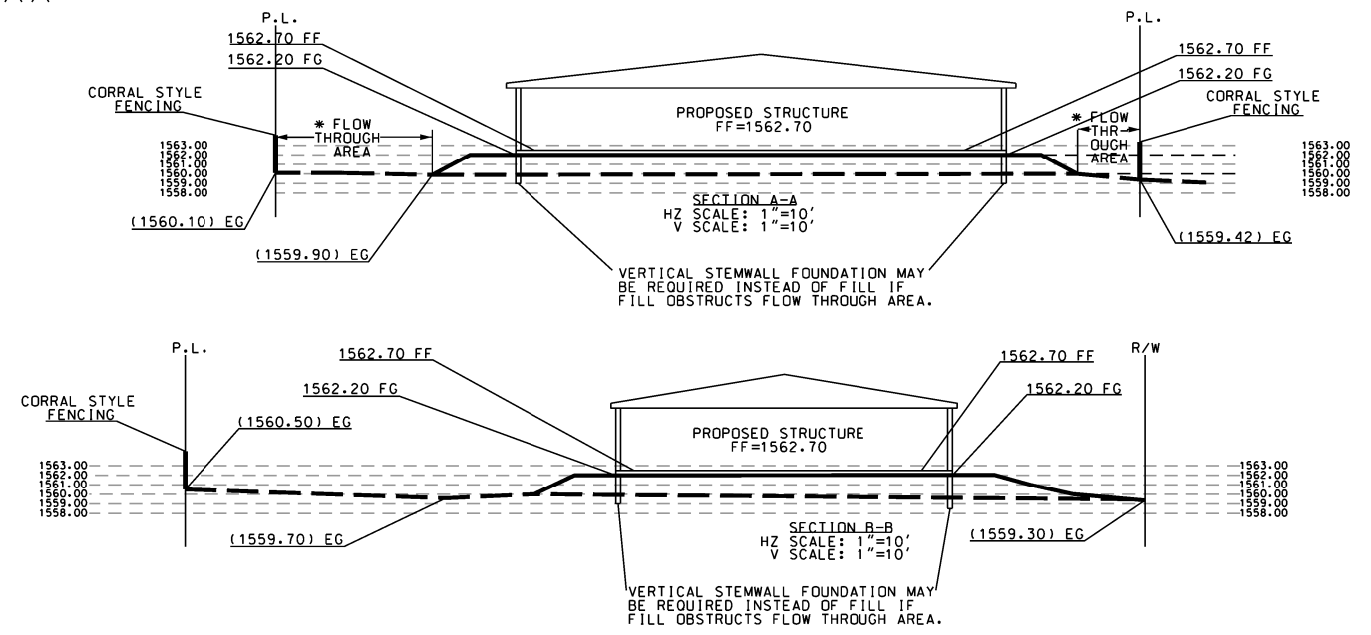
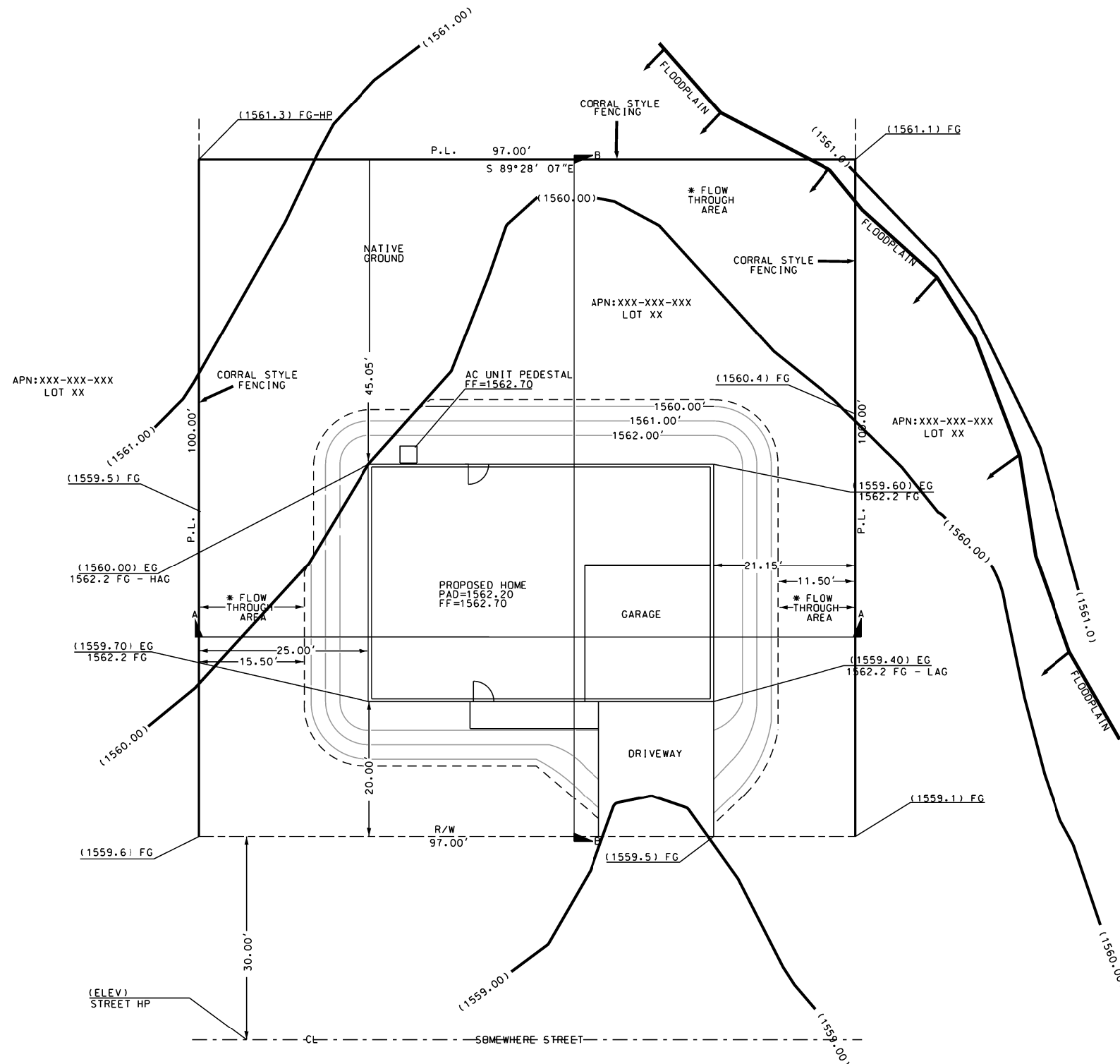
Requisitos para procesar permiso para construcción dentro de un terreno inundable:

1. Entregar solicitud para construcción dentro de terreno inundable directamente a Riverside County Flood Control (RCFC).
2. Incluir un depósito de \$1,095 en cheque con pago a RCFC para revisión de planos, más \$188 por cada estructura adicional que se va a construir en la misma parcela. El aplicante tiene derecho a un reembolso de los fondos restantes una vez que se hayan cumplido las condiciones para aprobación de permiso. Tarifas reducidas a \$357.50 para patios cubiertos adjuntos, patios cerrados, parcelas que previamente hayan recibido permiso de construcción o condiciones para aprobación de permiso.
3. Entregar planos de construcción preparados por un ingeniero civil registrado en el Estado de California a RCFC:
 - a. Un set de planos estampados, sellados y firmados por el ingeniero civil.
 - b. Contorno de 1 pie dentro de 50 pies del sitio de construcción o dentro del límite de la propiedad, lo que sea menor. [Todas las elevaciones basadas en el datum vertical NAVD88] Indique fuente de topografía.
 - c. Punto de referencia del sitio de construcción con notas del ingeniero o topógrafo.
 - d. La elevación del piso más bajo de la estructura debe estar un pie (1-ft) más alto que la elevación en cual se estima la inundación (BFE: Base Flood Elevation) según la Sección R322 del Código Residencial de California 2016, vigente a partir del 1ero de enero del 2017.
 - e. Dos perfiles en ángulo recto y centrados en el sitio de construcción.
 - f. Detalles de cimentación permanente (muro o pilares):
 - i. Casas móviles o prefabricadas usualmente requieren aberturas en los muros del cimiento para dejar que fluya el agua en casos de inundación. Esto ayuda a proteger la estructura al balancear la presión del agua en contra de los muros del cimiento. Cálculos para determinar el tamaño de las aberturas serán requeridos.
 - ii. Se debe mostrar un mínimo de dos aberturas en casos de inundación en dos lados opuestos de la estructura/cimiento y en la dirección del flujo. Las aberturas tendrán que estar no más de un pie (1-ft) sobre el nivel del terreno. Se requiere una abertura de una pulgada cuadrada por cada pie cuadrado de muro/cimiento abajo del BFE calculado. Se requerirá una abertura mas grande cuando se utilizan mallas para roedores (15% adicional) y mallas decorativas (40% adicional).
4. Una vez que los planos sean aprobados y estampados por RCFC, las condiciones de aprobación serán entregadas al aplicante y al departamento de Building and Safety.
5. Durante construcción se requerirán varias inspecciones y no podrá habitar la estructura hasta someter un Certificado de Elevación de FEMA.

Enlaces útiles

Ordenanza del Condado 458:	http://rcflood.org/downloads/Ordinance_458_16.pdf
Compruebe su zona de inundación:	http://rcstormwatertool.org/FloodDetermination
Preguntas frecuentes:	http://rcflood.org/FloodplainFAQ.aspx
Boletines técnicos de FEMA:	https://www.fema.gov/media-library/resources-documents/collections/4
Guía de casa prefabricada:	https://www.fema.gov/media-library-data/20130726-1502-20490-8377/fema_p85.pdf

FLOODPLAIN MANAGEMENT PLAN FOR CASE NO. FPXXXX



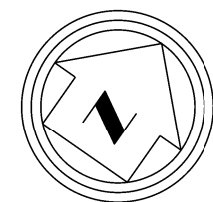
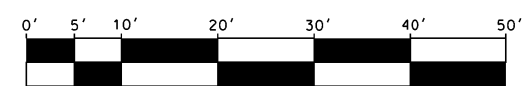
BENCHMARK
 BENCHMARK ID NO.
 ELEVATION = XXXX.X NAVD 88
 WRITTEN DESCRIPTION OF THE BENCHMARK GOES HERE.

SOURCE OF TOPOGRAPHY

NOTES FOR FLOODPLAIN MANAGEMENT REQUIREMENTS

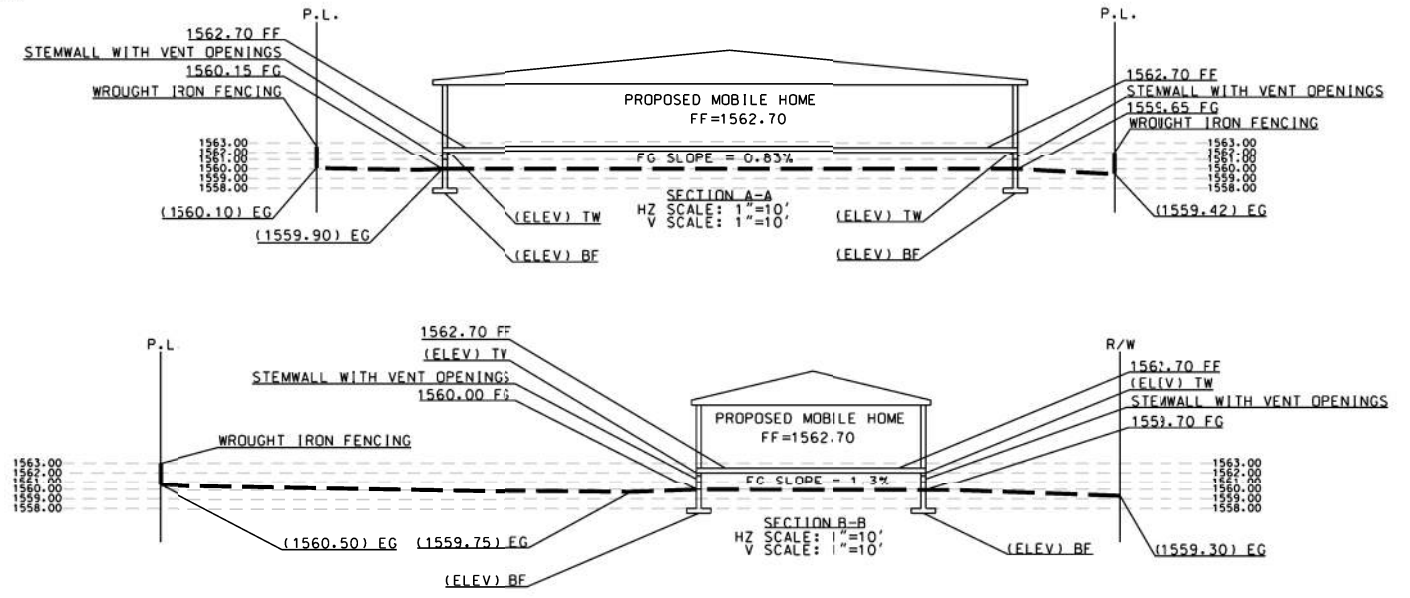
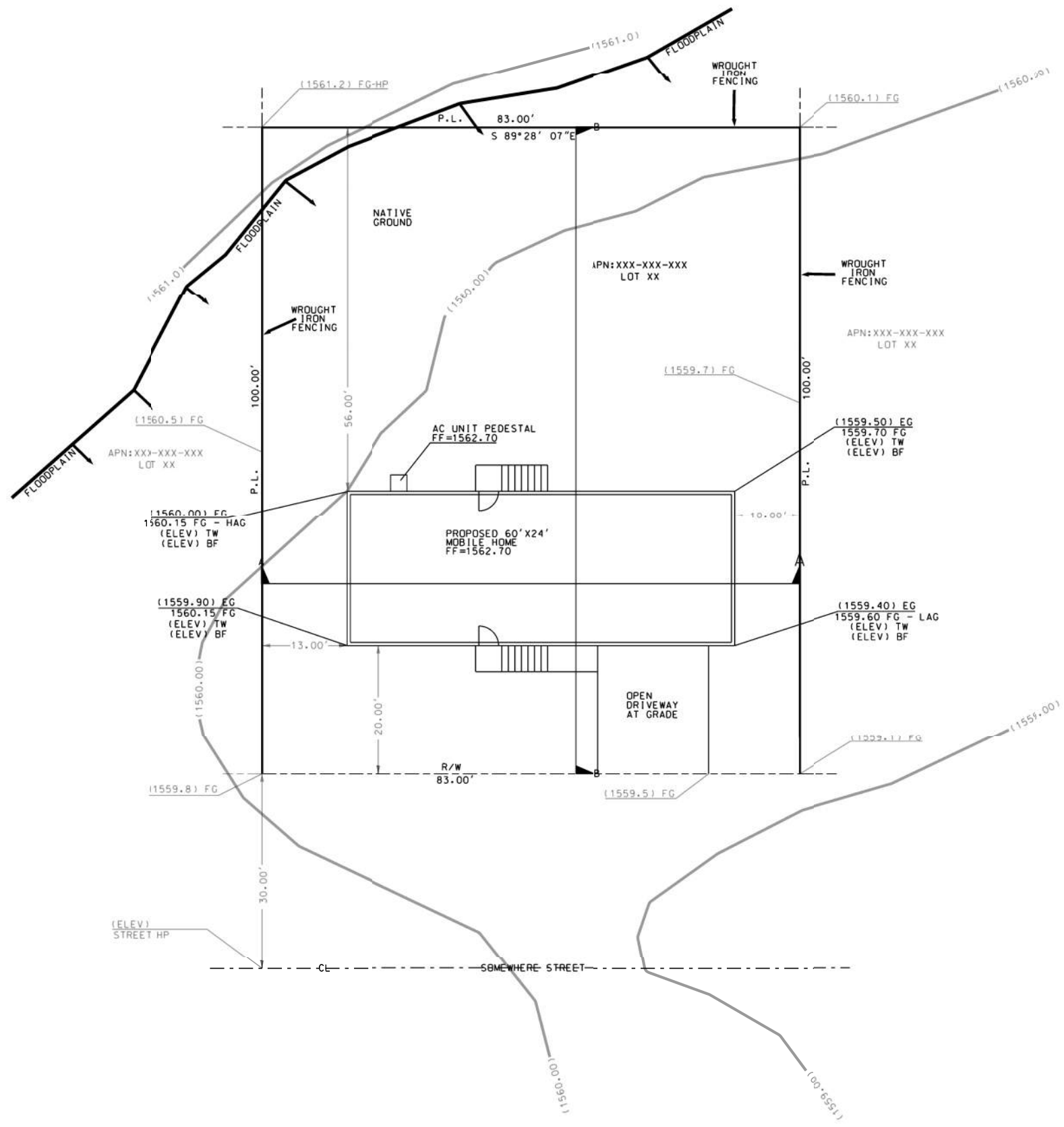
- A. THIS PROPERTY IS IN A SPECIAL FLOOD HAZARD AREA -SFHA- AS SHOWN ON THE FLOOD INSURANCE RATE MAPS -FIRM- ISSUED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY -FEMA- AS REQUIRED BY THE NATIONAL FLOOD INSURANCE PROGRAM -NFIP-. THE PROPERTY IS IN A FEMA ZONE "ZONE TYPE" AS SHOWN ON FIRM 06065C "PANEL #".
 OR
 THIS PROPERTY IS IN A SPECIAL FLOOD HAZARD AREA -SFHA- AS SHOWN ON THE STATE OF CALIFORNIA DEPARTMENT OF WATER RESOURCES -DWR- AWARENESS MAPS ADOPTED IN ORDINANCE NO. 458 IN 2008.
 OR
 THIS PROPERTY IS IN A SPECIAL FLOOD HAZARD AREA -SFHA- AS SHOWN ON THE "SPECIAL STUDY" MAP DATED "XXXX" AND ADOPTED IN ORDINANCE NO. 458.
- B. FLOODPLAINS OR NATURAL WATERCOURSES SHALL NOT BE OBSTRUCTED. THE NATURAL FLOW OF STORMWATER MUST BE ACCEPTED WHERE IT ENTERS A PROPERTY AND RELEASED UNCONCENTRATED WHERE IT WOULD NATURALLY EXIT THE PROPERTY.
- C. ONLY THE AREA NECESSARY FOR CONSTRUCTION OF THE STRUCTURE SHALL BE ELEVATED AND THE REMAINDER OF THE LOT SHALL REMAIN AT NATURAL GRADE IN ORDER TO MINIMIZE OBSTRUCTIONS, DIVERSIONS, AND CONCENTRATIONS OF STORM FLOWS.
- D. FLOW-OBSTRUCTING WALLS (SOLID BLOCK WALL AND CHAINLINKED), FENCING OR ENCROACHMENTS BY GRADING ARE NOT PERMITTED IN THE FLOODPLAINS. FENCING OF THE PROPERTY MUST BE OF A KIND THAT WILL NOT CAUSE DIVERSIONS BUT WILL PASS FLOODFLOWS SUCH AS CORRAL STYLE RAIL AND POST.
- E. THE FINISHED FLOOR OF THE PROPOSED STRUCTURE AND ALL EXTERNAL MACHINERY OR EQUIPMENT THAT SERVICE THE BUILDING (I.E., AC UNIT, ELECTRICAL BOXES) SHALL BE ELEVATED "XX" INCHES ABOVE HIGHEST ADJACENT NATURAL GROUND. PROPANE TANKS SHALL BE SECURELY ANCHORED TO A FOUNDATION SYSTEM TO RESIST FLOTATION, COLLAPSE, OR LATERAL MOVEMENT.
- F. A QUALIFIED PROFESSIONAL SHALL CERTIFY THE TOP ELEVATIONS OF THE FOUNDATION AND THE CERTIFYING DOCUMENT RETURNED FOR THE DISTRICT'S APPROVAL PRIOR TO STARTING ANY CONSTRUCTION ABOVE THE FOUNDATION.
 AND/OR
 A QUALIFIED PROFESSIONAL SHALL CERTIFY THE BOTTOM ELEVATIONS OF THE FOUNDATION AND THE CERTIFYING DOCUMENT RETURNED FOR THE DISTRICT'S APPROVAL PRIOR TO STARTING ANY CONSTRUCTION ABOVE THE FOUNDATION.
 OR
 A QUALIFIED PROFESSIONAL SHALL CERTIFY THE TOP ELEVATIONS OF THE PAD AND THE CERTIFYING DOCUMENT RETURNED FOR THE DISTRICT'S APPROVAL PRIOR TO BUILDING PERMIT ISSUANCE.
- G. AN OFFICIAL ELEVATION CERTIFICATE -FEMA FORM 086-0-33- SHALL BE COMPLETED AND APPROVED BY THE DISTRICT BEFORE FINAL INSPECTION. THE ORIGINALS SHALL BE KEPT ON FILE AT THE DISTRICT. IT IS RECOMMENDED THAT THE PROPERTY OWNER KEEP A COPY FOR HIS OR HER RECORDS. IF THE CURRENT OR FUTURE OWNERS DECIDE TO FINANCE THE PURCHASE OF THIS PROPERTY BY A FHA, VA, OR CONVENTIONAL LOAN FROM A FEDERALLY REGULATED LENDER THEN THE PURCHASE OF FLOOD INSURANCE IS MANDATORY. HOWEVER, A PROPERLY COMPLETED ELEVATION CERTIFICATE MAY QUALIFY THE APPLICANT FOR A SUBSTANTIAL REDUCTION OF THE PREMIUM RATE.

* COMBINED FLOW THROUGH AREA IN DIRECTION OF FLOW SHALL KEEP MINIMUM 25% OF LOT FREE OF OBSTRUCTIONS.



COUNTY OF RIVERSIDE RECOMMENDED BY: _____ DATE: _____ APPROVED BY: _____ DATE: _____ R.C.E. NO: _____ EXPIRES: _____	COUNTY OF RIVERSIDE FLOODPLAIN MANAGEMENT PLAN FOR CASE NO: FPXXXX APN: XXX-XXX-XXX SITE ADDRESS: 1234 SOME STREET ANYTOWN, CA 98765	Drawing No. Sheet 1 of 1
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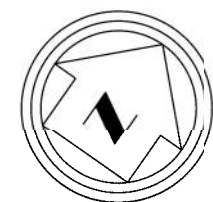
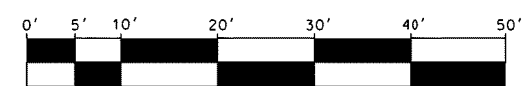


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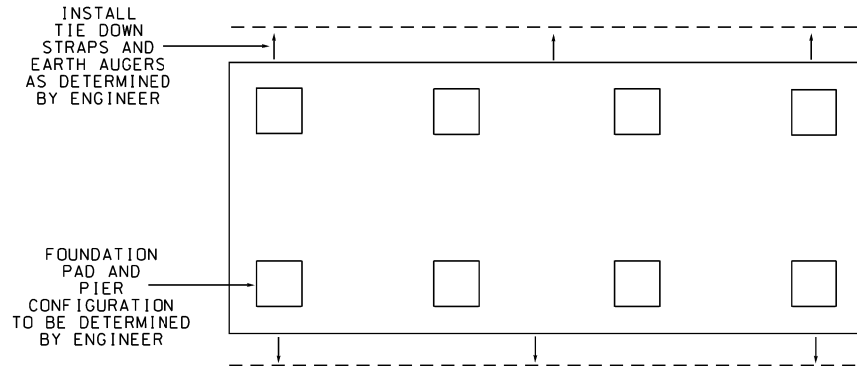
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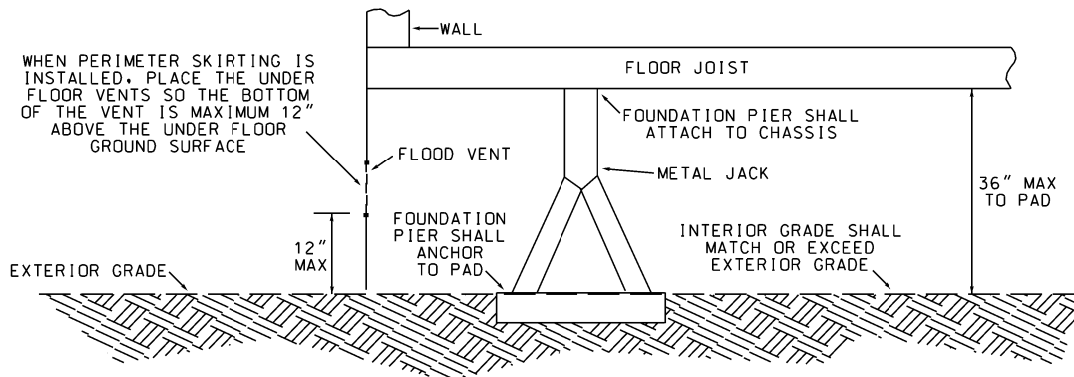
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PERMANENT FOUNDATION-PIER OPTION



NOTE: ENGINEER TO PROVIDE BOUYANCY AND LATERAL FORCE CALCULATIONS FOR FOUNDATION DESIGN

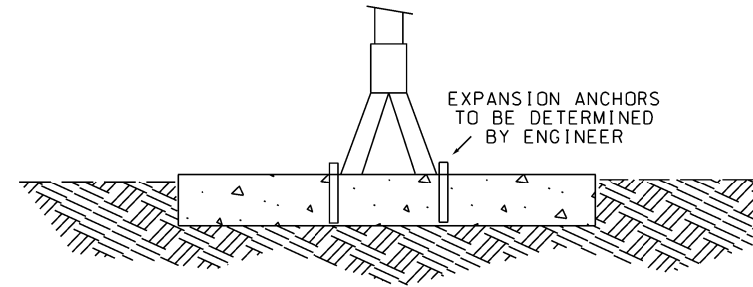
PLAN



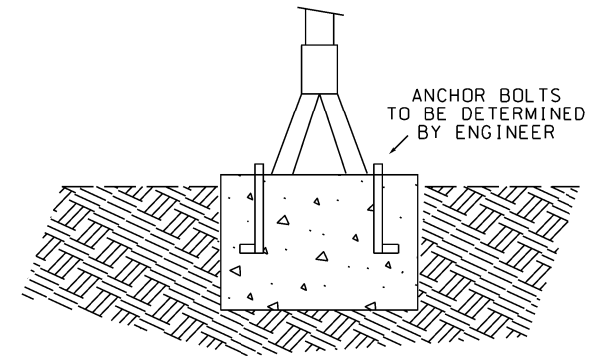
(PROTECTING MANUFACTURED HOMES)

SEE PUBLICATION FEMA-85 FOR ADDITIONAL FOUNDATION OPTIONS OF MASONRY OR TIMBER
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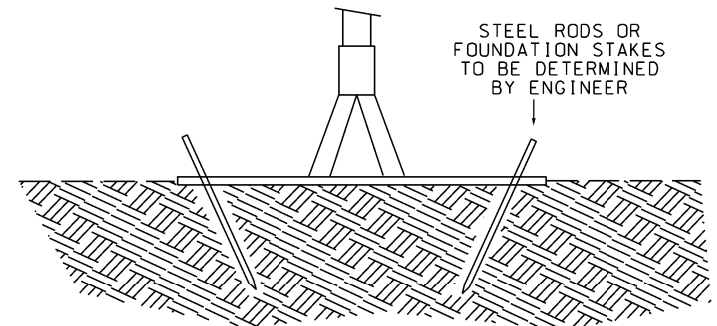
EXISTING CONCRETE SLAB



POURED IN PLACE CONCRETE FOUNDATION INSTALLATION



TIE PAD INSTALLATION



PERMANENT FOUNDATION-STEMWALL OPTION

