COUNTY OF MENDOCINO
DEPARTMENT OF PLANNING AND BUILDING SERVICES
860 NORTH BUSH STREET · UKIAH · CALIFORNIA · 95482
120 WEST FIR STREET · FT. BRAGG · CALIFORNIA · 95437

JULIA KROG, DIRECTOR
TELEPHONE: 707-234-6650
FAX: 707-463-5709
FB PHONE: 707-964-5379
FB FAX: 707-961-2427
pbs@mendocinocounty.gov
www.mendocinocounty.org/pbs

February 08, 2024

Environmental Health - Ukiah | Building Inspection - Ukiah | Redwood Valley Water District

CASE#: AP_2024-0007
DATE FILED: 1/26/2024
OWNER: DAVID & INA FORD
APPLICANT: DAVID FORD
AGENT: RON'S QUALITY CONSTRUCTION
REQUEST: Administrative Permit to authorize temporary use of an existing residence for Construction Support during construction of a new residence. The existing residence will be relocated to another location on the same property. The new residence will be placed in approximately the same footprint as the existing residence. The existing residence will be removed from the site following completion of the new residence.
LOCATION: In Redwood Valley, on the north side of a private road 0.25± miles east of its intersection with West Road (CR 237), located at 11177 West Road, Redwood Valley; (APN: 160-100-11).
SUPERVISORIAL DISTRICT: 1
STAFF PLANNER: JULIA ACKER
RESPONSE DUE DATE: February 22, 2024

PROJECT INFORMATION CAN BE FOUND AT:
www.mendocinocounty.org
Select "Government" from the drop-down; then locate Planning and Building Services/Public Agency Referrals.

Mendocino County Planning & Building Services is soliciting your input, which will be used in staff analysis and forwarded to the appropriate public hearing. You are invited to comment on any aspect of the proposed project(s). Please convey any requirements or conditions your agency requires for project compliance to the project coordinator at the above address, or submit your comments by email to pbs@mendocinocounty.org. Please note the case number and name of the project coordinator with all correspondence to this department.

We have reviewed the above application and recommend the following (please check one):

☐ No comment at this time.

☐ Recommend conditional approval (attached).

☐ Applicant to submit additional information (attach items needed, or contact the applicant directly, copying Planning and Building Services in any correspondence you may have with the applicant)

☐ Recommend denial (Attach reasons for recommending denial).

☐ Recommend preparation of an Environmental Impact Report (attach reasons why an EIR should be required).

☐ Other comments (attach as necessary).

REVIEWED BY:

Signature _____ Department _____ Date _____

CASE: AP_2024-0007

OWNER: DAVID & INA FORD

APPLICANT: DAVID FORD

AGENT: RON'S QUALITY CONSTRUCTION

REQUEST: Administrative Permit to authorize temporary use of an existing residence for Construction Support during construction of a new residence. The existing residence will be relocated to another location on the same property. The new residence will be placed in approximately the same footprint as the existing residence. The existing residence will be removed from the site following completion of the new residence.

LOCATION: In Redwood Valley, on the north side of a private road 0.25± miles east of its intersection with West Road (CR 237), located at 11177 West Road, Redwood Valley; (APN: 160-100-11).

APN/S: 160-100-11

PARCEL SIZE: 4.99±

GENERAL PLAN: Agricultural 40-Acre Minimum (AG:40)

ZONING: Agricultural (A-G)

EXISTING USES: Residential

DISTRICT: 1 (McGourty)

RELATED CASES: See below.

	ADJACENT GENERAL PLAN	ADJACENT ZONING	ADJACENT LOT SIZES	ADJACENT USES
NORTH:	Agricultural (AG:40)	Agricultural (A-G)	16± Acres	Agricultural
EAST:	Agricultural (AG:40)	Agricultural (A-G)	4.6± Acres	Residential
SOUTH:	Agricultural (AG:40)	Agricultural (A-G)	2.3± Acres	Residential
WEST:	Agricultural (AG:40)	Agricultural (A-G)	5± Acres	Residential

REFERRAL AGENCIES

LOCAL

☒ Building Division ☒ Environmental Health (EH) ☒ Redwood Valley Water District

ADDITIONAL INFORMATION: The existing residence will be set on a temporary foundation and connected to existing infrastructure, including water service from Redwood Valley Water District, septic, and electric. A propane tank will be relocated to continue to serve the temporary residence. The new residence is slightly larger than the existing residence. The property has two addresses: 11177 and 11167 West Road. 11177 West Road is the site of the existing residence. 11167 West Road is the site of a Family Care Unit that was destroyed by fire, rebuilt, and subsequently removed from the property. The existing residence would be relocated to the site of the Family Care Unit.

Related projects and permits include:

11177 West Road

- AP_2012-0006: Administrative Permit for a Family Care Unit, approved 12/04/2012.
- BU_2012-0695: Building Permit for a new manufactured home (Family Care Unit), finaled 05/03/2013
- BU_2018-0055: Building Permit for a new manufactured home to replace existing manufactured home destroyed by fire (Family Care Unit), finaled 10/22/2018.

11167 West Road

- BU_2014-0662: Building Permit for a new garage, finaled 10/29/2014
- BU_2024-0068: Building Permit for a new manufactured home, currently under review.
- UK 508-87: Building Permit for a new mobile home (main residence), finaled 10/06/1987.
- AP 41-86: Administrative Permit for temporary use of a travel trailer while constructing a mobile home, approved 12/22/1988.

STAFF PLANNER: JULIA KROG **DATE:** 2/7/2024

ENVIRONMENTAL DATA

1. MAC:
GIS
Redwood Valley MAC

2. FIRE HAZARD SEVERITY ZONE:
CALFIRE FRAP maps/GIS
Non-Wildland/Non-Urban

3. FIRE RESPONSIBILITY AREA:
CALFIRE FRAP maps/GIS
Local Responsibility Area (LRA)

4. FARMLAND CLASSIFICATION:
GIS
Rural Residential & Rural Commercial (R)

5. FLOOD ZONE CLASSIFICATION:
FEMA Flood Insurance Rate Maps (FIRM)
No

6. COASTAL GROUNDWATER RESOURCE AREA:
Coastal Groundwater Study/GIS
N/A

7. SOIL CLASSIFICATION:
Mendocino County Soils Study Eastern/Western Part
Eastern Soil Map Unit

8. PYGMY VEGETATION OR PYGMY CAPABLE SOIL:
LCP maps, Pygmy Soils Maps; GIS
N/A

9. WILLIAMSON ACT CONTRACT:
GIS/Mendocino County Assessor's Office
No

10. TIMBER PRODUCTION ZONE:
GIS
No

11. WETLANDS CLASSIFICATION:
GIS
None

12. EARTHQUAKE FAULT ZONE:
Earthquake Fault Zone Maps; GIS
No

13. AIRPORT LAND USE PLANNING AREA:
Airport Land Use Plan; GIS
No

14. SUPERFUND/BROWNFIELD/HAZMAT SITE:
GIS; General Plan 3-11
No

15. NATURAL DIVERSITY DATABASE:
CA Dept. of Fish & Wildlife Rarefind Database/GIS
Yes

16. STATE FOREST/PARK/RECREATION AREA ADJACENT:
GIS; General Plan 3-10
No

17. LANDSLIDE HAZARD:
Hazards and Landslides Map; GIS; Policy RM-61; General Plan 4-44
No

18. WATER EFFICIENT LANDSCAPE REQUIRED:
Policy RM-7; General Plan 4-34
No

19. WILD AND SCENIC RIVER:
www.rivers.gov (Eel Only); GIS
No

20. SPECIFIC PLAN/SPECIAL PLAN AREA:
Various Adopted Specific Plan Areas; GIS
No

21. STATE CLEARINGHOUSE REQUIRED:
Policy
No

22. OAK WOODLAND AREA:
USDA
No

23. HARBOR DISTRICT:
Sec. 20.512
No

PLANNING & BUILDING SERVICES

CASE NO:	AP_2024-0007
DATE FILED:	01/26/24
FEE:	$1,623
RECEIPT NO:	PRJ_060518
RECEIVED BY:	LCR

Office Use Only

APPLICATION FORM

APPLICANT:

Name: David Ford Phone: 707-272-3324

Mailing Address: PO Box 363

City: Redwood Valley State/Zip: CA Email: dave@redwoodvalleygravel.com

PROPERTY OWNER:

Name: David & Ina Ford Phone: 707-272-3324

Mailing Address: PO Box 363

City: Redwood Valley State/Zip: CA Email: dave@redwoodvalleygravel.com

AGENT:

Name: Ron's Quality Construction Phone: 707-485-5688

Mailing Address: 1880 Oak Grove Drive

City: Redwood Valley State/Zip: Ca Email: rqcredwoodvalley@gmail.com

ASSESSOR'S PARCEL NUMBER/S: 160-100-11

TYPE OF APPLICATION:

- ☒ Administrative Permit
- ☐ Agricultural Preserve: New Contract
- ☐ Agricultural Preserve: Cancellation
- ☐ Agricultural Preserve: Rescind & ReEnter
- ☐ Airport Land Use
- ☐ Development Review
- ☐ Exception
- ☐ Flood Hazard Development Permit
- ☐ General Plan Amendment
- ☐ Land Division – Minor
- ☐ Land Division – Major
- ☐ Land Division – Parcel
- ☐ Land Division – Re-Subdivision
- ☐ Modification of Conditions
- ☐ Reversion to Acreage
- ☐ Rezoning
- ☐ Use Permit – Cottage
- ☐ Use Permit – Minor
- ☐ Use Permit – Major
- ☐ Use Permit – Modification
- ☐ Variance
- ☐ Other

I certify that the information submitted with this application is true and accurate.

1/26/2023

Signature of Applicant/Agent *Date* *Signature of Owner* *Date*

Form Ver. 071421

SITE AND PROJECT DESCRIPTION QUESTIONNAIRE

The purpose of this questionnaire is to relate information concerning your application to the Department of Planning and Building Services and other agencies who will be reviewing your project proposal. Please remember that the clearer picture that you give us of your project and the site, the easier it will be to promptly process your application. Please answer all questions. Those questions which do not pertain to your project please indicate "Not applicable" or "N/A".

THE PROJECT

1. Describe your project. Include secondary improvements such as wells, septic systems, grading, vegetation removal, roads, etc. If the proposal is for cancellation of a Williamson Act contract, please specify a proposed alternative use for the land.

Administrative Permit to use existing residence for construction support (Sec. 20.168.025(a)) during construction of new residence. Both residences are manufactured homes. Existing residence will be relocated to another location on the same property, set on a temporary foundation and connected to existing infrastructure, including domestic water (Redwood Valley Water District), septic and electric. Propane tank will be relocated to continute to serve residence. New residence is larger but will set in approximately the same footprint of the existing residence. Existing residence will be removed from site following completion of new residence.

2. Structures/Lot Coverage	**NO. OF UNITS**		**SQUARE FOOTAGE**		
	EXISTING	**PROPOSED**	**EXISTING**	**PROPOSED**	**TOTAL**
■ Single Family ☐ Mobile Home ☐ Duplex ☐ Multifamily ☐ Other: ☐ Other:					
GRAND TOTAL (Equal to gross area of Parcel):					

3. Is the project commercial, industrial, or institutional? If yes, complete item 3. If no, skip to item 4.

Estimated No. of Employees per shift:_____

Estimated No. of shifts per day:_____

Type of loading facilities proposed:_____

4. Will the project be phased? (Work being done over separate periods of time)

■ **NO** ☐ **YES** If yes, explain your plans for phasing:

5. Will vegetation be removed on areas other than the building sites and roads?

■ **NO** ☐ **YES** If yes, explain:

6. Will the project involve the use or disposal of potentially hazardous materials such as toxic substances, flammables, or explosives?

☐ **NO** ■ **YES** If yes, explain:

Existing residence uses propane for furnace and hot water heater. Tank will be relocated to new location along with residence. New residence will be all electric.

7. How much off-street parking will be provided?

	Number	Size
No. of covered spaces:	3	
No. of uncovered spaces:	10+	
No. of standard spaces:		
No. of accessible spaces:		
Existing no. of spaces:		
Proposed additional spaces:		
Total:		

8. Is any road construction or grading planned? If yes, grading and drainage plans may be required.

☐ **NO** ■ **YES** Also, please describe the terrain to be traversed. (e.g., steep, moderate slope, flat, etc.)

Grading, fill, levelling and compaction of ground under existing home to accommodate larger foundation.

9. For grading or road construction, complete the following:

Amount of cut:_____ cubic yards

Amount of fill:_____ cubic yards

Max. height of fill slope:_____ feet

Max. height of cut slope:_____ feet

Amount of import/export:_____ cubic yards

Location of borrow or disposal site:_____

10. Does the project involve sand removal, mining or gravel extraction? If yes, detailed extraction, reclamation and monitoring plans may be required.

■ **NO** ☐ **YES**

11. Will the proposed development convert land currently or previously used for agriculture to another use?

■ **NO** ☐ **YES**

12. Will the development provide public or private recreation opportunities?

■ **NO** ☐ **YES** If yes, explain how:

13. Is the proposed development visible from State Route 1 or other scenic route?

■ **NO** ☐ **YES**

14. Is the proposed development visible from a park, beach or other recreational area?

■ **NO** ☐ **YES**

15. Does the development involve diking, filling, dredging or placing structures in open coastal water, wetlands, estuaries or lakes?

Diking: ☐ NO ☐ YES
Filling: ☐ NO ☐ YES
Dredging: ■ NO ☐ YES
Structures: ☐ Open Coastal Waters ☐ Wetlands ☐ Estuaries ☐ Lakes

If so, what is the amount of material to be dredged/filled?: _____ cubic yards

Location of dredged material disposal site?: _____

Has a U.S. Army Corps of Engineers permit been applied for? ☐ NO ☐ YES

16. Will there be any exterior lighting?

☐ **NO** ■ **YES** If yes, describe below and identify the location of all exterior lighting on the plot and building plans.

External lighting associated with residential use. Standard downcast light fixtures.

17. Utilities will be supplied to the site as follows:

Electricity: ■ Utility Company (service exists to parcel)
☐ Utility Company (requires extension of service to site): _____ feet _____ miles
☐ On Site Generation – Specify:

Gas: ☐ Utility Company/Tank
■ On Site Generation – Specify:
☐ None

Telephone: ☐ NO ■ YES

18. What will be the method of sewage disposal?

☐ Community Sewage System (specify supplier):_____

■ Septic Tank

☐ Other (specify):_____

19. What will be the domestic water source:

■ Community Water System (specify supplier): Redwood Valley Water District

☐ Well

☐ Spring

☐ Other (specify):_____

20. Are there any associated projects and/or adjacent properties under your ownership?

■ **NO** ☐ **YES** If yes, list below (Assessor's Parcel Number, address, etc.)

21. List and describe any other related permits and other public approval required for this project, including those required by other County departments, city, regional, State and Federal agencies:

22. Describe the location of the site in terms of readily identifiable landmarks: (e.g., mailboxes, mile posts, street intersections, etc.)

US 101 north to West Road exit. North on West Road for apprioximately 3.5 miles, right on Redwood Lane (private drive). Fourth driveway on left.

23. Are there existing structures on the property? If yes and the proposal is for a subdivision, describe below and identify the use of each structure on the plot plan or tentative map.

☐ **NO** ■ **YES**

SFD, Garage, associated outbuildings

24. Will any existing structure be demolished or removed? If yes, describe the type of development to be demolished or removed, including the relocation site, if applicable.

☐ **NO** ■ **YES**

Existing SFD will be relocated and later removed from site.

25. What is the maximum height of all structures?

Existing: _____ feet
Proposed: _____ feet

26. What is the gross floor areas of all structures, including covered parking and accessory buildings?

Existing: _____ square feet
Proposed: _____ square feet

27. What is the total lot area within property lines?

Total Lot Area: 4.99 ☒ acres ☐ square feet

28. Briefly describe the project site as it exists before the project, including information on existing structures and their uses, slopes, soil stability, plants and animals, and any cultural, historical or scenic aspects. Attach any photographs of the site that you feel would be helpful:

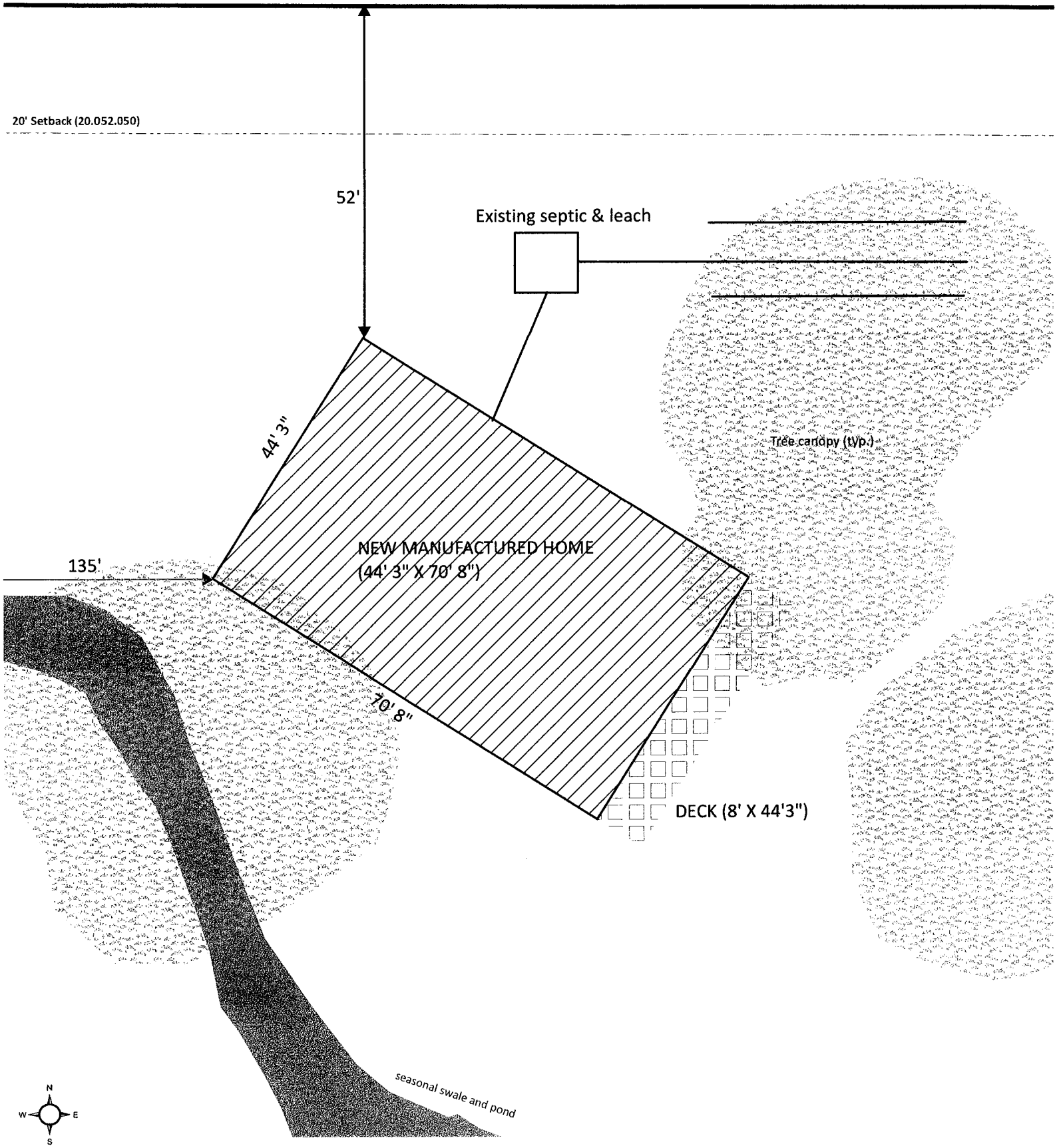
4.9 acre site, mostly flat. Small seasonal pond at northern end fed by winter runoff. Several small groups of oaks, large open meadow in SW portion of parcel.

29. Briefly describe the surrounding properties, including information on plants, animals and any cultural, historic or scenic aspects. Indicate the type of land use (use chart below) and its general intensity. Attach any photographs of the vicinity that you feel would be helpful.

Residential lots to east, south and west. Vineyard to north.

30. Indicate the surrounding land uses:

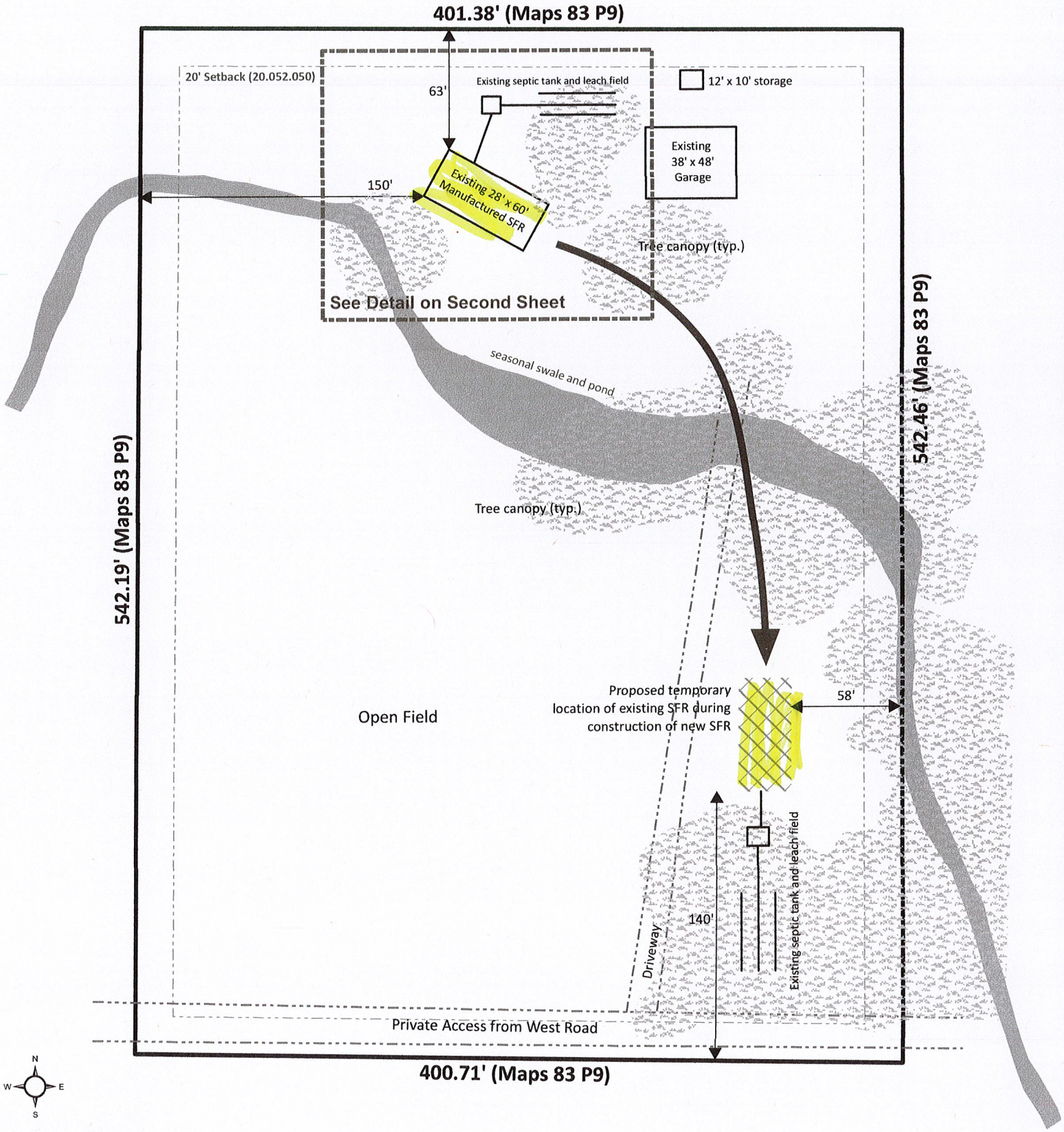
	Vacant	Residential	Agriculture	Commercial	Industrial	Public Facility	Timberland	Other
North:	☐	☐	☐	☐	☐	☐	☐	☐
East:	☐	☐	☐	☐	☐	☐	☐	☐
South:	☐	☐	☐	☐	☐	☐	☐	☐
West:	☐	☐	☐	☐	☐	☐	☐	☐



1 inch = 20 feet

APN: 160-100-11
ADDRESS: 11177 West Road, Redwood Valley
OWNER: David & Ina Ford
ACREAGE: 4.99 A±
ZONING: AG 40

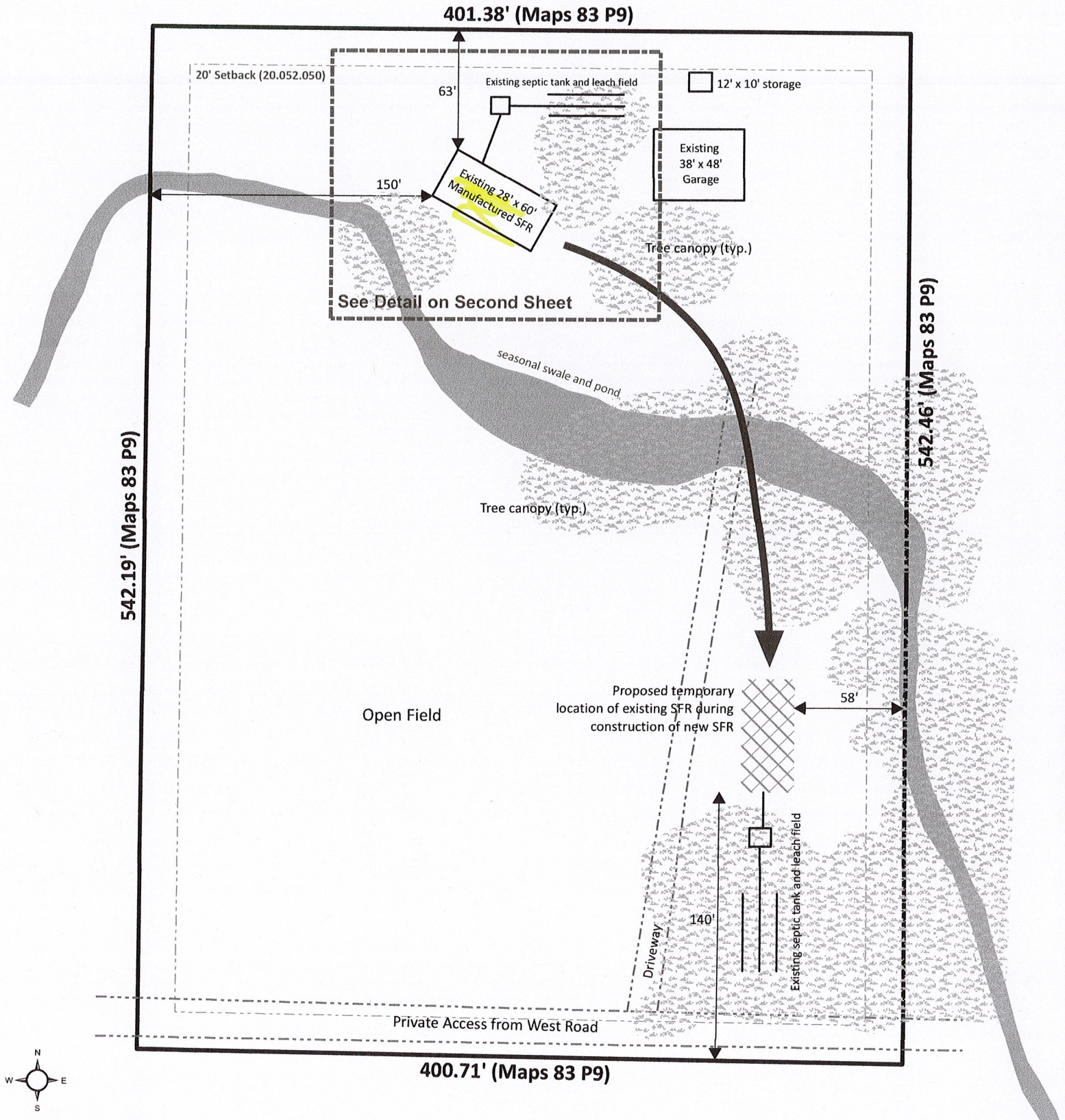
SITE PLAN DETAIL



1 inch = 70 feet

APN: 160-100-11
ADDRESS: 11177 West Road, Redwood Valley
OWNER: David & Ina Ford
ACREAGE: 4.99 A±
ZONING: AG 40

SITE PLAN

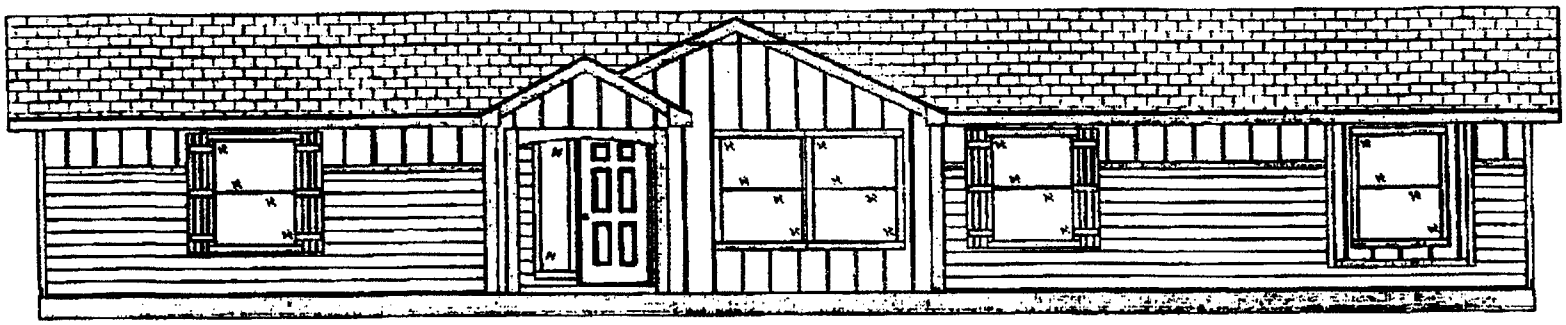


1 inch = 70 feet

APN: 160-100-11
ADDRESS: 11177 West Road, Redwood Valley
OWNER: David & Ina Ford
ACREAGE: 4.99 A±
ZONING: AG 40

SITE PLAN

Grand Manor



Std Exterior

KHBW 10-24-18

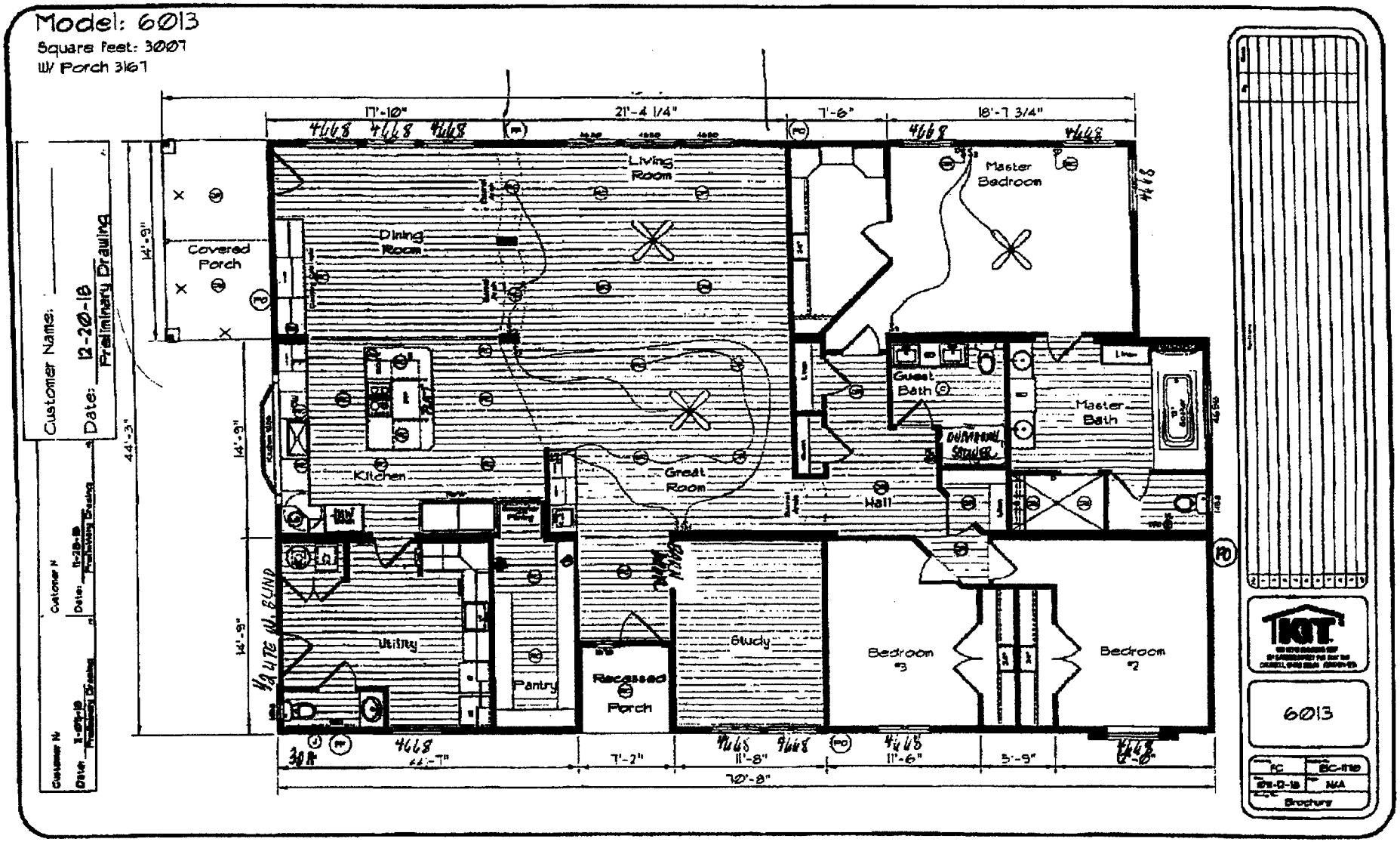
Model: 6013
3 Bedroom, 2 Bath
2756 Square Feet
Floor Size
70'-0" x 40'-0"

KIT HomeBuilders West

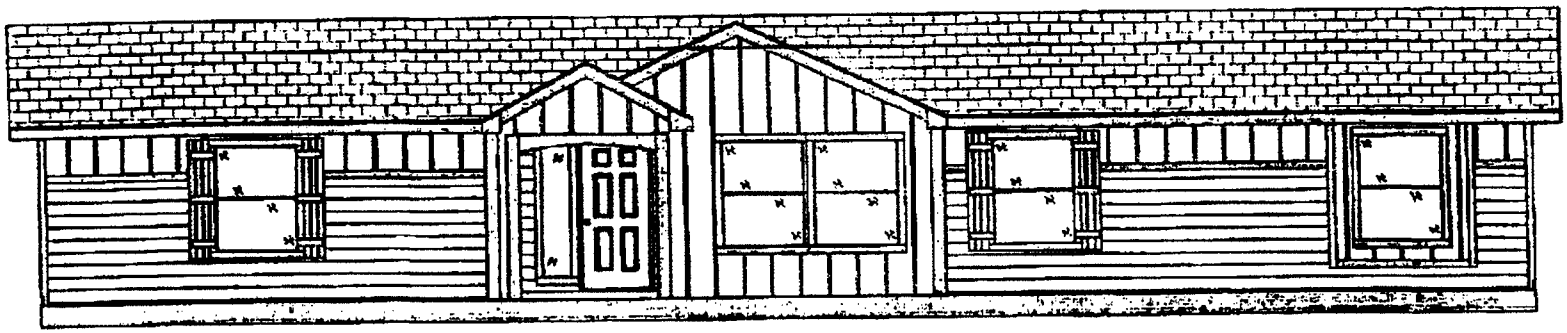
Model: 6013

Square Feet: 3007

W/ Porch 3167



Grand Manor



Std Exterior

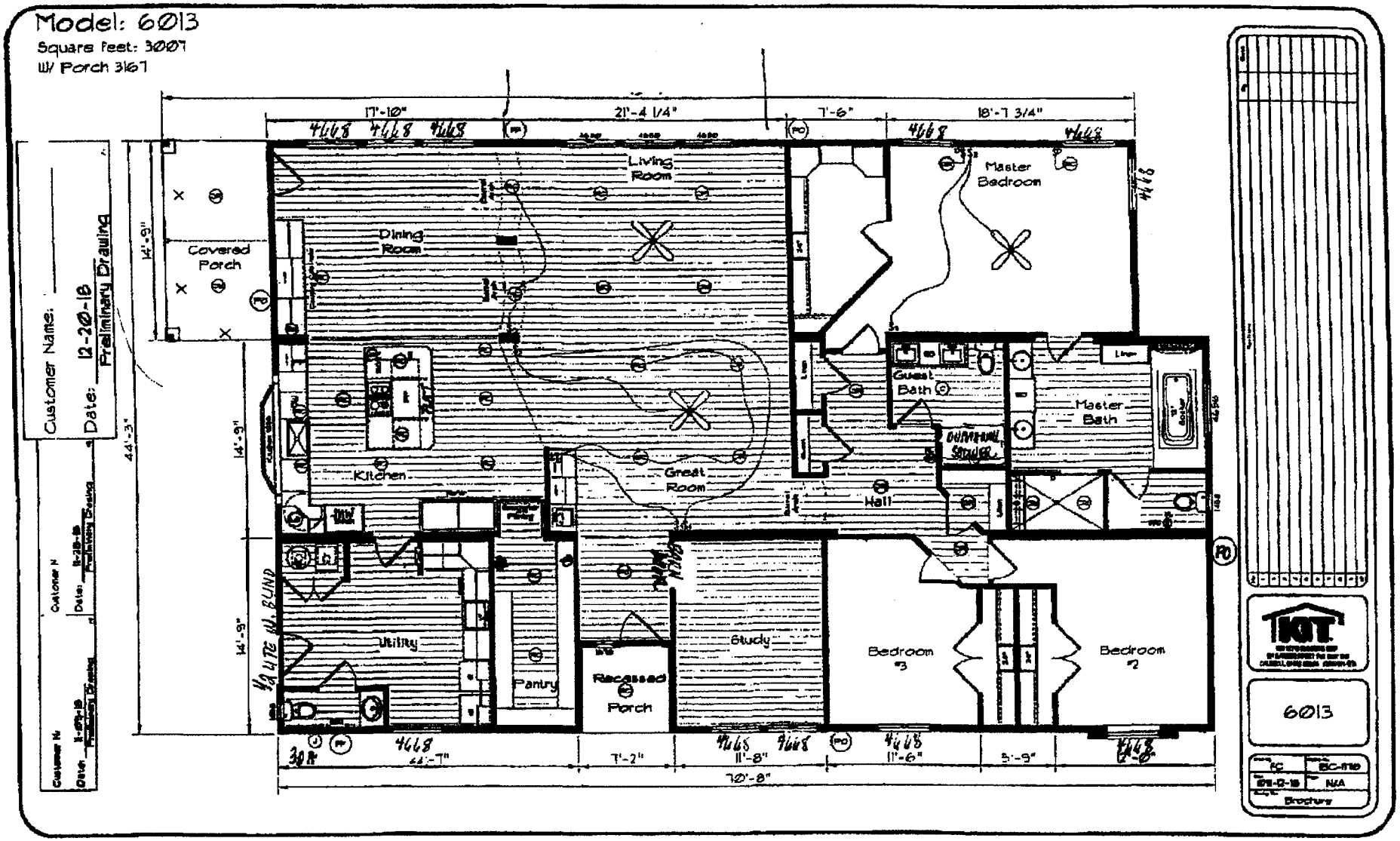
Model: 6013
3 Bedroom, 2 Bath
2156 Square Feet
Floor Size
70'-0" x 40'-0"

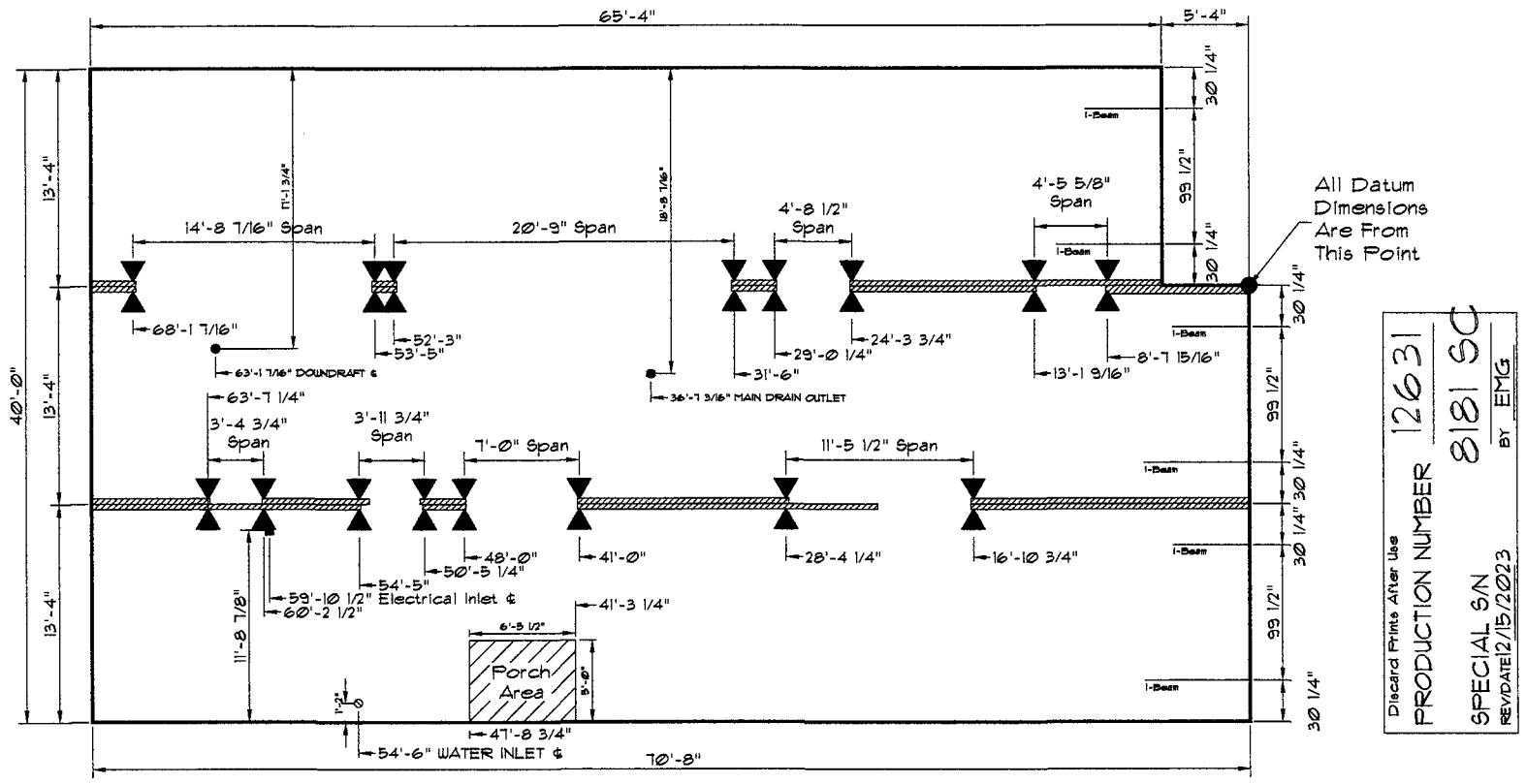
KHBW 10-24-18

KT HomeBuilders West

Model: 6013

Square Feet: 3007
W/ Porch 3167





Discard Prints After Use

PRODUCTION NUMBER 12631

8181 SC

SPECIAL S/N

REV/DATE 12/15/2023 BY EMG

Any alterations done to this home, (requested by the dealer or home owner) may not be reflected on this blocking layout and must be allowed for at time of set-up or make prior arrangements for a custom plan!

Blocking locations are identified down the marriage line with a blocking tag or paint mark. These locations should be checked with this plan and if a tag is missing, a block should be added to match the location shown on this plan.

▲ = Column support locations

▨ = Marriage wall locations

▲=Loads at column support locations

NOTE: Higher roof loads with added column supports or marriage walls may not be illustrated on plan.

Refer to setup manual for specific loads at column support locations.

Customer:

Driskell

Refer to setup manual for standard piers required in addition to those that are shown. Also refer to setup manual for specific loads at column support locations.

Pier Blocking Only!

Plan subject to change without notice.

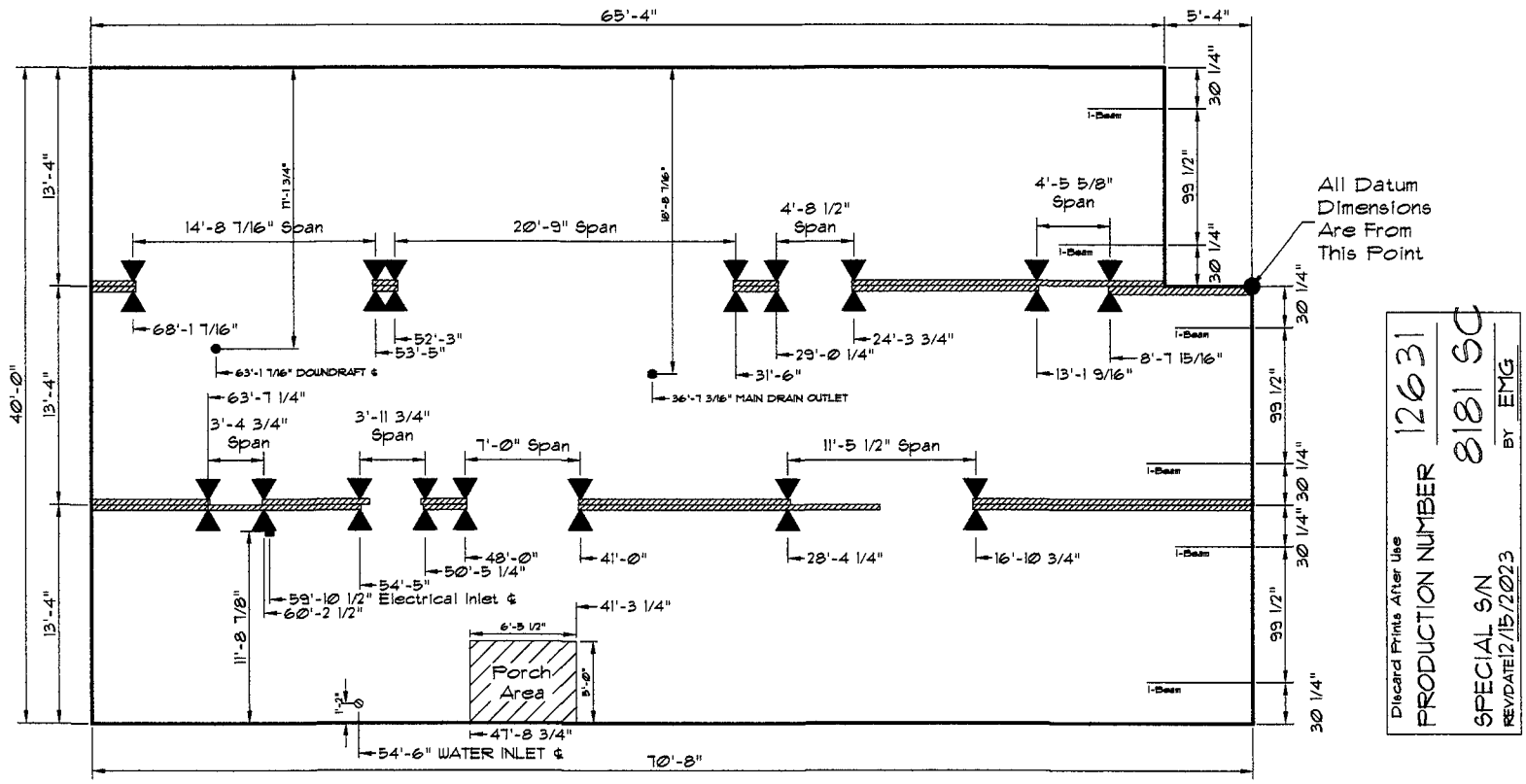
NOTE: Drain outlet shown is location for on-site hook up to local drain system. Care must be taken to ensure other connections (multiple sections) are made and connected to main drain outlet before system is used.

No.	Revisions	By	Date
1			
2			
3			
4			
5			
6			
7			
8			
9			

KIT HOME BUILDERS EAST
124 GARRETT STREET P.O. BOX 250
CALDWELL, IDAHO 83606 (208)459-5751

6013

Drawn By	Drawing No.
FTC	SU-1170
Date	Page
03-15-05	1 of 1
Drawing Title	
Set Up Recessed 2x6	



Discard Prints After Use

PRODUCTION NUMBER 12631

8181 SC

SPECIAL S/N

BY EMG

REV/DATE 12/15/2023

Any alterations done to this home, (requested by the dealer or home owner) may not be reflected on this blocking layout and must be allowed for at time of set-up or make prior arrangements for a custom plan!

Blocking locations are identified down the marriage line with a blocking tag or paint mark. These locations should be checked with this plan and if a tag is missing, a block should be added to match the location shown on this plan.

▲ = Column support locations

▨ = Marriage wall locations

▲=Loads at column support locations

NOTE: Higher roof loads with added column supports or marriage walls may not be illustrated on plan.

Refer to setup manual for specific loads at column support locations.

Customer:

Driskell

Refer to setup manual for standard piers required in addition to those that are shown. Also refer to setup manual for specific loads at column support locations.

Pier Blocking Only!

Plan subject to change without notice.

NOTE: Drain outlet shown is location for on-site hook up to local drain system. Care must be taken to ensure other connections (multiple sections) are made and connected to main drain outlet before system is used.

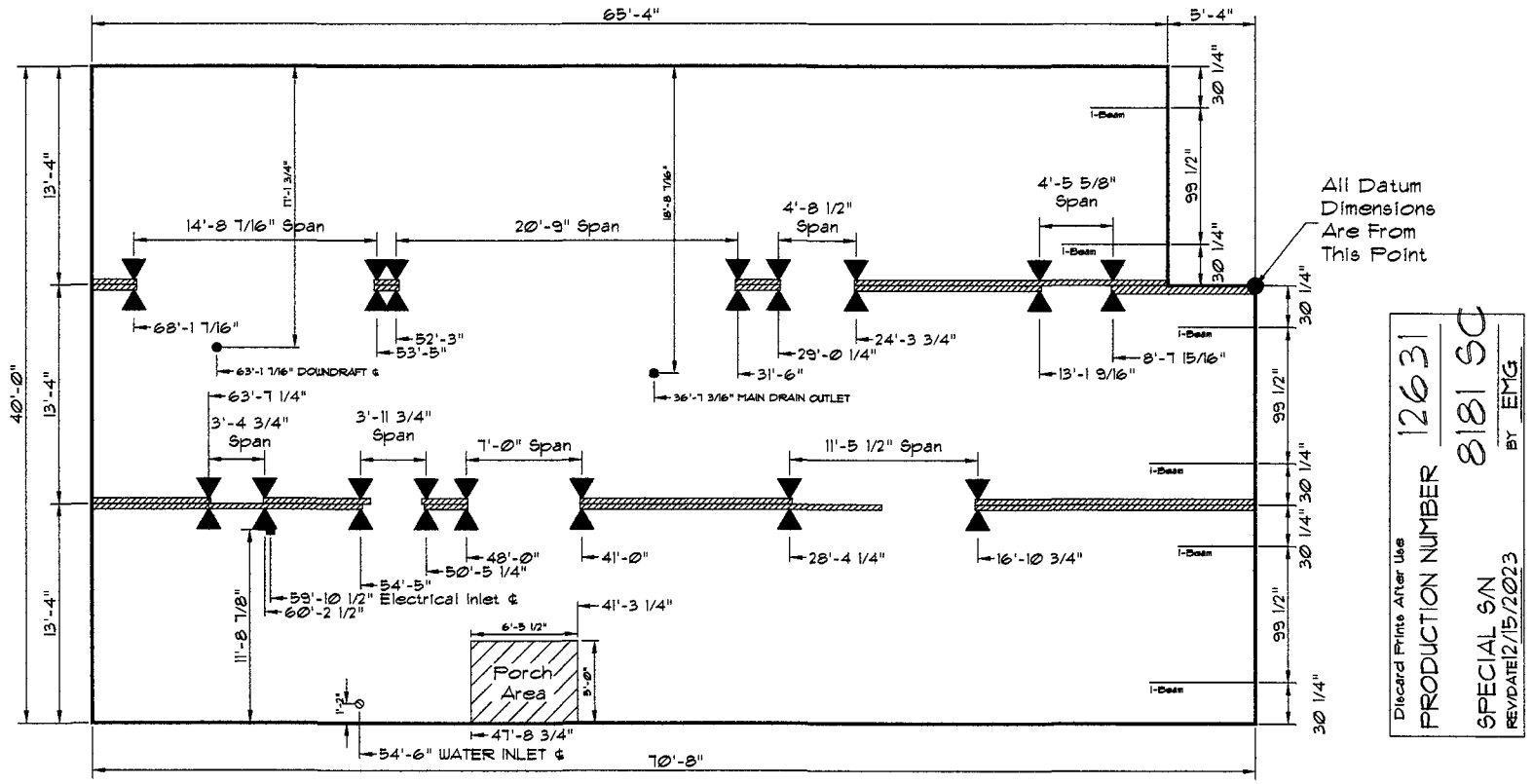
Revisions

No.	By	Date
1		
2		
3		
4		
5		
6		
7		
8		
9		

KIT HOME BUILDERS WEST
124 GARBER STREET P.O. BOX 250
CALDWELL, IDAHO 83606 (208)455-5175

6013

Drawn By	Drawing No.
FTC	SU-1170
Date	Page
03-15-05	1 of 1
Drawing Type	
Set Up Recessed 2x6	



Discard Prints After Use
PRODUCTION NUMBER 12631
8181 SQ
SPECIAL S/N
REVDATE 12/15/2023
BY EMG

Any alterations done to this home, (requested by the dealer or home owner) may not be reflected on this blocking layout and must be allowed for at time of set-up or make prior arrangements for a custom plan!

Blocking locations are identified down the marriage line with a blocking tag or paint mark. These locations should be checked with this plan and if a tag is missing, a block should be added to match the location shown on this plan.

▲ = Column support locations
▨ = Marriage wall locations

▲=Loads at column support locations

NOTE: Higher roof loads with added column supports or marriage walls may not be illustrated on plan.

Refer to setup manual for specific loads at column support locations.

Customer:
Driskell

Refer to setup manual for standard piers required in addition to those that are shown. Also refer to setup manual for specific loads at column support locations.

Pier Blocking Only!

Plan subject to change without notice.

NOTE: Drain outlet shown is location for on-site hook up to local drain system. Care must be taken to ensure other connections (multiple sections) are made and connected to main drain outlet before system is used.

Date
By
Revisions
NO 1 2 3 4 5 6 7 8 9

KIT HOME BUILDERS WEST
824 GARRETT STREET P.O. BOX 350
CALDWELL, IDAHO 83606 (208)459-8575

6013

Drawn By FTC
Drawing No. SU-1170
Date 03-15-05
Page 1 of 1
Drawing Title Set Up Recessed 2x6

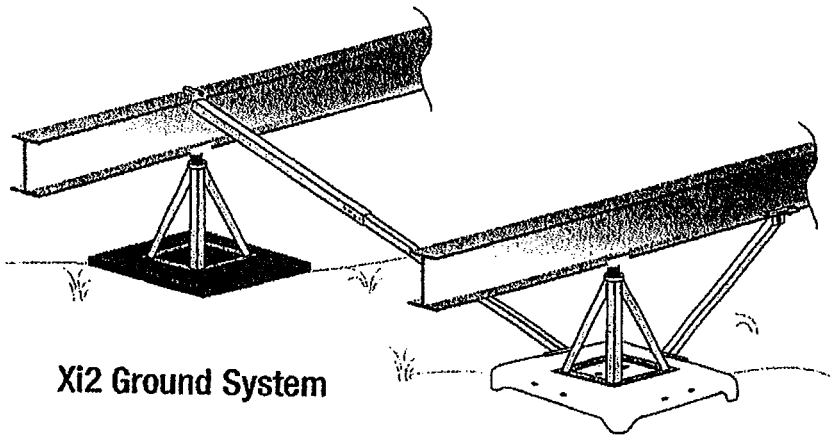
Xi2 Foundation System

Installation Instructions for California for Ground & Concrete Systems

California Residential Code (CRC) 2022

Wind = 105 mph Ultimate, Exposure C; Seismic Design Category Max. D2

By Tie Down

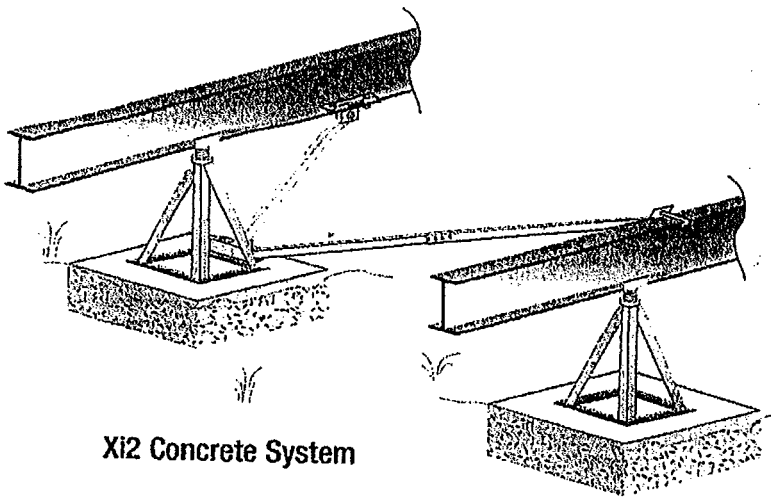


Xi2 Ground System

REGISTERED PROFESSIONAL ENGINEER
WILLIAM C. FARISH IV
C 30123
CIVIL
STATE OF CALIFORNIA

10-07-22

Engineer Approval



Xi2 Concrete System

State Approval

MANUFACTURED HOME/MOBILE HOME
FOUNDATION SYSTEM
HEALTH AND SAFETY CODE, SECTION 18551
APPROVED

APPROVAL DOES NOT AUTHORIZE OR APPROVE ANY OMISSIONS OR DEVIATION FROM REQUIREMENTS OF APPLICABLE STATE LAWS AND REGULATIONS
State of California
Department of Housing and Community Development
DIVISION OF CODES AND STANDARDS

BY _____ DATE 10/17/22
(signature)

SPA-NO 121-1F

This Plan Approval Expires 10/27/24

Approved for Flood Zone A; AE or AH

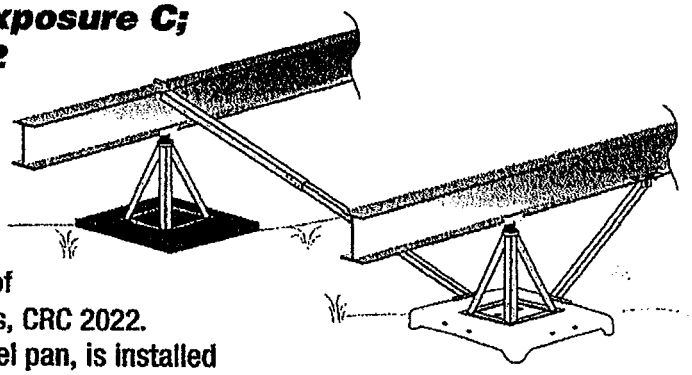
TIE DOWN
MANUFACTURING INGENUITY

404-344-0000 • www.tiedown.com
605 Stonehill Drive SW, Atlanta, GA 30336

Xi2 Foundation System

Installation Instructions for California for Ground & Concrete Systems CRC-2022, 105 mph Ultimate Wind Exposure C; Seismic Category Max. D2

By Tie Down



REQUIREMENTS:

- These plans and specifications meet the requirements of Title 25 Section 1333 and Wind & Seismic Requirements, CRC 2022.
- The Xi2 System, with either a concrete footer or the steel pan, is installed at or in place of one of the piers required by the home manufacturer's set up instructions. The systems must be placed as evenly as possible. Measuring from the center of the pier, systems are to be located a minimum of 2' and a maximum of 1/4 the length of the home from each end of the home as shown on pier placement chart.Components of the Xi2 system such as the longitudinal strut and connecting hardware, may extend beyond the pier location.
- Maximum vertical projection at sidewall is 10' (see charts).
- Main rail spacing must be 75.5" - 99.5" (112" allowed with proper strut).
- The lateral and longitudinal components of the Xi2 System replace standard frame ties. Additional Vertical anchor ties that are unique to a home's design may be required by the home manufacturer. These locations may include shear walls, marriage line ridge beam support posts, and rim plates. Check manufacturers set-up requirements.
- Maximum pier height is 48".
- Maximum floor widths are 16' (single section), 32' (double) and 48' (triple).
- Steel piers must be fastened to the I-beam with clamps provided with steel pier.
- Designed for up to 6:12 roof slope.
- Flood Zone: A, AE or AH Zone flood plain (riverine or inland flood area); Max flood velocity - 1 fps: No waves, Bottom of home main beam is at or above BFE; bottom of main beam max 36" above natural grade. Not suitable for V zones, coastal A zones or floodways. Install Tie Down Engineering anchors per table (on page 7) to resist flotation.
- Designed to provide resistance up to Seimic Design Category D2 Earthquake Loads.
- Maximum roof live load is 100 psf (see charts).

Additional Requirements for Concrete Systems

- Poured concrete must be 2,500 PSI minimum at 28 days.
- Footings must be large enough for pier load at that location and be a minimum of 22" wide by 6" deep with anchor wedge bolts a minimum of 4" from any edge, or 18" wide by 12" deep with wedge bolts a minimum of 1-1/2" from edge. Strip footings to be minimum of 18" wide by 14' long by 6" deep or 27" wide by 14' long by 4" deep.

* Xi2 components exceed HUD code 3280.306g requirements stating "Anchoring equipment exposed to weathering shall have a resistance to weather deterioration at least equivalent to that provided by a coating of zinc on steel of not less than 0.30 ounces per square foot of surface coating...."

TIE DOWN
MANUFACTURING INGENUITY

404-344-0000 • www.tiedown.com
605 Stonehill Drive SW, Atlanta, GA 30336

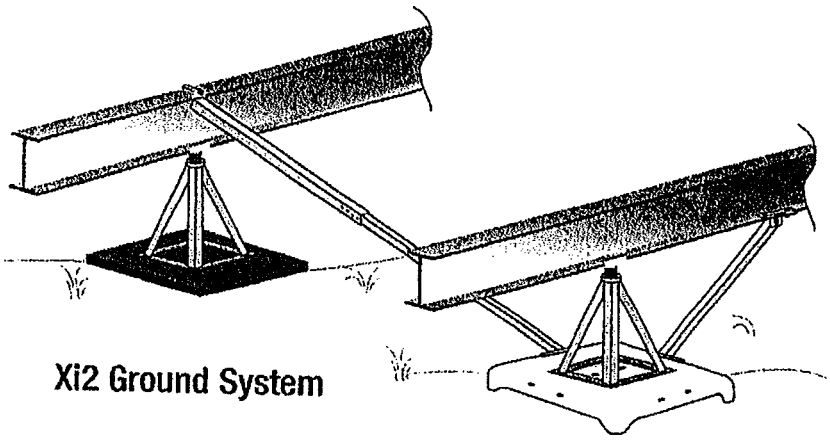
Xi2 Foundation System

Installation Instructions for California for Ground & Concrete Systems

California Residential Code (CRC) 2022

Wind = 105 mph Ultimate, Exposure C; Seismic Design Category Max. D2

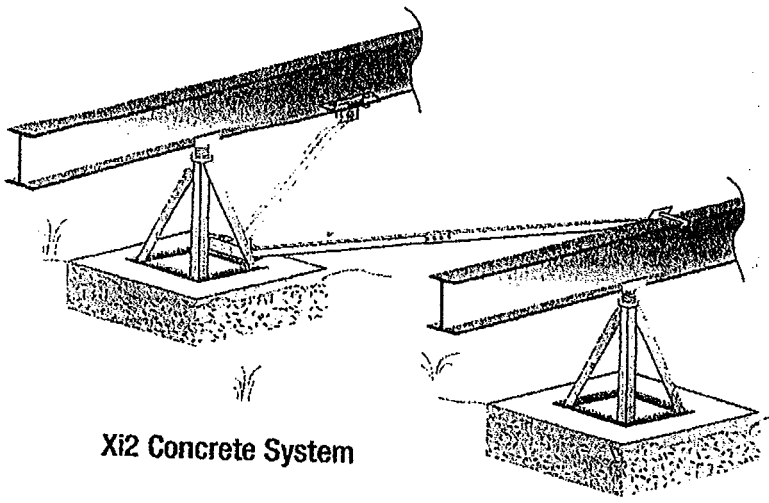
By Tie Down



Xi2 Ground System

REGISTERED PROFESSIONAL ENGINEER
WILLIAM C. FARISH IV
C 30123
CIVIL
STATE OF CALIFORNIA
10-07-22

Engineer Approval



Xi2 Concrete System

State Approval

MANUFACTURED HOME/MOBILE HOME
FOUNDATION SYSTEM
HEALTH AND SAFETY CODE, SECTION 18551
APPROVED

APPROVAL DOES NOT AUTHORIZE OR APPROVE ANY OMISSIONS OR DEVIATION FROM REQUIREMENTS OF APPLICABLE STATE LAWS AND REGULATIONS
State of California
Department of Housing and Community Development
DIVISION OF CODES AND STANDARDS

BY _____ DATE 10/17/22
(signature)
SPA-NO 121-1F
This Plan Approval Expires 10/27/24
Approved for Flood Zone
A; AE & AH

TIE DOWN
MANUFACTURING INGENUITY
404-344-0000 • www.tiedown.com
605 Stonehill Drive SW, Atlanta, GA 30336

Xi2 Concrete Parts Detail

Part #59307
Includes: 5' Strut, Bracket, & Hardware Kit #59315-1 with all nuts and bolt.

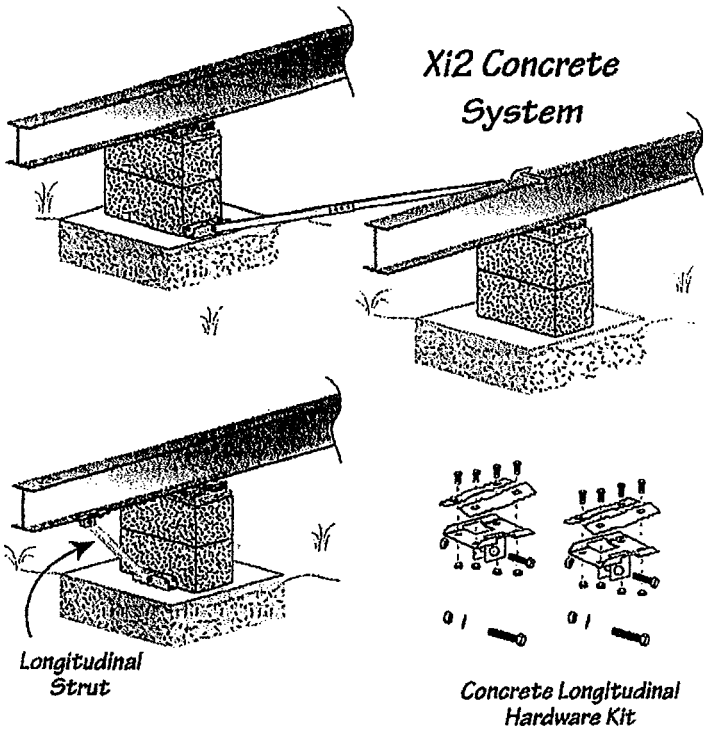
Longitudinal Struts for "Concrete Systems"

Part No.	Length	Pier Height
#59013	44"	up to 4 Blocks
#59015	65"	up to 6 Blocks

Longitudinal Hardware Kit
Part #59263
Includes 2 sets per kit: I-beam bracket, nuts, bolts and washers

Lateral and Longitudinal Combination
Part #59332
Includes: 5' Strut, Longitudinal Strut (#59364), Lateral and Longitudinal Hardware Kit with all nuts and bolts.

For Double I beam Attachment use:
59352 Double Beam Longitudinal Bracket
59329-4 Double Beam Lateral Concrete kit



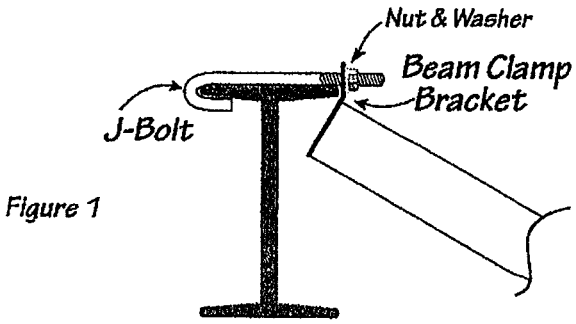
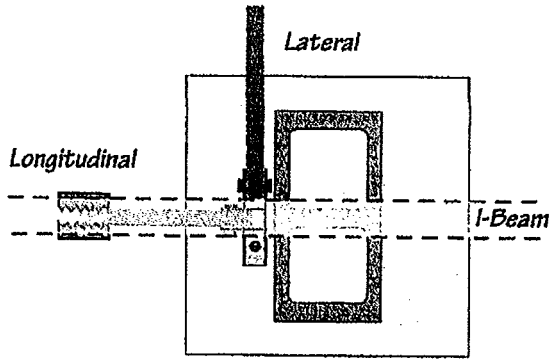
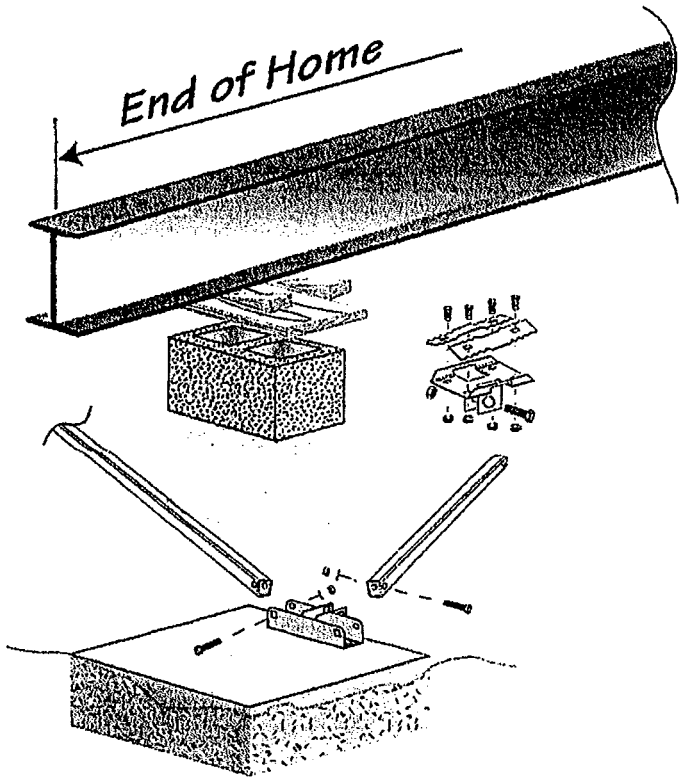


Figure 1



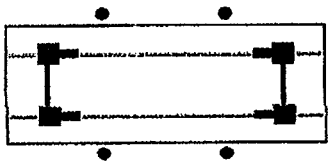
Xi2 Installation Placement



TIE DOWN
MANUFACTURING INGENUITY

404-344-0000 • www.tiedown.com
605 Stonehill Drive SW, Atlanta, GA 30336

FEMA Flood Zones A, AE & AH



Anchor placement to be the same on single or multiple sections. Evenly spaced from the end of unit, between Xi2 placements.

Flotation Anchors Single Section	Total Anchors Per Side
12' x 40' – 16' x 80'	2
Multiple Section	
20' x 40' - 20' x 64'	2
24' x 40' - 24' x 56'	2
Over 56'	2
28' x 40' - 28' x 48'	2
28' x 49' - 28 x 72'	2
Over 72'	2
32' x 56' - 32' x 64'	2
Over 64'	2

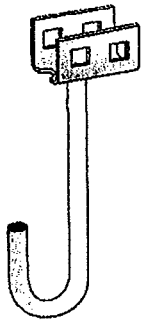
When using concrete anchors in Lieu of ground auger anchors, the Mass of Concrete Per Anchor from chart would be: 21.1 Cu. Ft.
(Example: 3'x 3'x 2.5' = 22.5' Cu. Ft., 2' dia. x 3.5'= 22' Cu. Ft.)

To Reduce the Mass of Concrete, increase the number of tie downs proportionally.

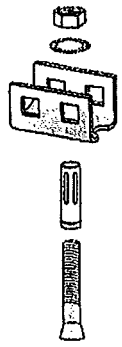
To Reduce concrete to 11 cu. ft. (Example: 2.25' x 2.25' x 2.25'=11.4 Cu. Ft.) double the required number of tie downs.

Concrete Anchors

Concrete must be 2500 PSI minimum slab with a 4" minimum thickness and must allow 4725 lbs. of vertical tension on anchor without lifting. Minimum distance from the anchor shaft to one edge of the slab is 4" from one edge and 6" from any other edge. MIJ2 anchor is designed to be installed into the concrete at the time it is being poured. Slab must be 8" minimum thickness at location under anchor to allow 5" embediment of "J" rod anchor. MICS2 anchor is designed to be installed in dry concrete. Drill a 5/8" x 3" hole in the slab place expansion bolt in hole, place washer and nut over bolt and tighten until maximum expansion is achieved. Remove nut and washer and place anchor head over exposed bolt and place washer and nut back on threaded bolt and tighten nut.



MIJ2
"J" Anchor

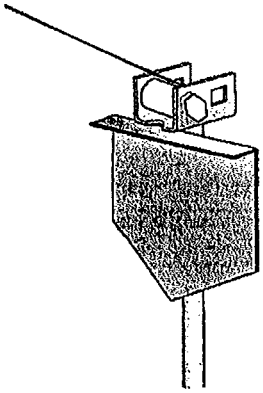


MICS2

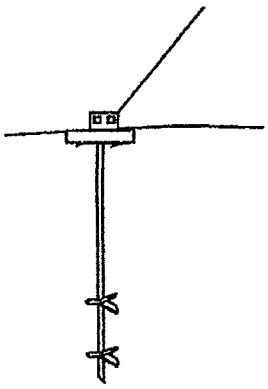
Ground Anchors

All Frame tie ground anchors must be stabilized to prevent horizontal slicing through the soil.

1. Position anchor at a slight back angle so that when Fully installed, anchor will be inside skirting wall.
2. For vertical or stabilized (Deepset) anchors, fully drive anchor into the ground. Horizontal (Frame Tie) anchors install 2/3 of way in ground and install stabilizer plate vertically within 3"-4" of the shaft, parallel to home.
3. Drive anchor fully into ground until head rests on plate and attach strap. Pretension strap to pull anchor against plate with head slightly over top.



Stabilizer
Plate

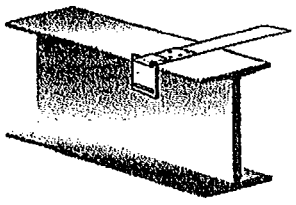


Deepset
Anchor

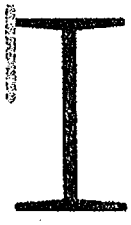
Frame Tie with Buckle

1. Install strap by pushing the end between the inside of The frame "I" beam and floor.
2. Position the buckle at the upper end of the "I" beam frame. Wrap the end of the strap around the "I" beam. Thread the end of the strap through the slot in the buckle as shown. Push the end of the strap in between the "I" beam and floor.
3. Pull the strap, making certain the buckle stays in position. Thread loose end of strap through the slotted tensioning bolt attached to the tension head of anchor. Tighten slotted bolt a minimum of 4-5 turns until all slack in strap is removed.

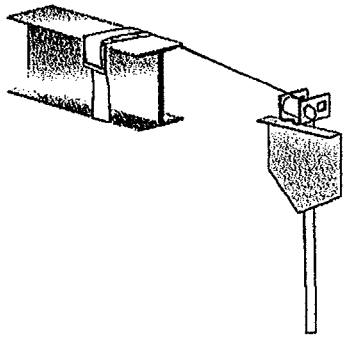
1.



2.



3.



Soil Classification Chart

Soil Class	Soil Description	Recommended Anchors and Stabilizers Model #	STK#	Description
2	Sedimentary and Foliated Rock	MI2255/8	59090	30" x 5/8" rod / 2 - 4" helix
		MI2233/4	59095	30" x 3/4" rod / 2 - 4" helix
			59292	Stabilizer Plate
3	Sandy Gravel and/or Gravel (GW and GP)	MI2H5/8	59080	48" x 5/8" rod / 1 - 6" helix
		MI2H3/4	59085	48" x 3/4" rod / 1 - 6" helix
		Deepset	59091	30" x 3/4" rod / 2 - 4" helix with stabilizer cap
			59292	Stabilizer Plate
4	Sand, Silty Sand, Clayed Sand, Silty Gravel	MI2H5/8	59080	48" x 5/8" rod / 1 - 6" helix
		MI2H3/4	59085	48" x 3/4" rod / 1 - 6" helix
		Deepset	59092	36" x 3/4" rod / 1 - 4" & 1 - 6 helix with stabilizer cap
		MI48	59086	48" x 3/4" rod / 2 - 4" helix
		MI42	59128	42" x 3/4" rod / 2 - 4" helix
			59292	Stabilizer Plate

Higher class anchors can be used in lower class soils. Example; Class 4 anchors can be used in Class 3 soils.

The required flotation anchors shown in the table are in addition to any other anchors or hold down devices required by the manufacturer. See requirements, bullet 5, page 2 of 8.

Xi2 Hardware Breakdown

#59329-1 Hardware for 59306 Lateral System

1	84533Z	U-Bolt 1/2-13 x 2.63 x 2.19 thread 1-3/4 zinc
4	10556	Tek Screw #12 x 1"
1	10631Z	J Bolt 1/2 x 5-1/2 grade 5 zinc
2	10640	Push Nut 1/2
1	12107	Flat Washer 1x2" SS
1	10646Y	Hex Nut 1/2-13 grade 5 zinc
2	10519	Hex Nut 1/2" w/ Serr flange

#59331 Longitudinal Hardware for 59306

2	59272-1	Beam Clamp Base
4	59272-2	Beam Clamp Top Flange
8	10926	Carriage Bolt 1/2-12 x 1-1/4 Full Thread
10	10646Y	Hex Nut 1/2-13 grade 5 zinc
2	10801	Carriage Bolt 1/2-12 x 2-1/2 Grade 5
2	84533Z	U-Bolt 1/2-13 x 2.63 x 2.19 thread 1-3/4 zinc
4	10640	Push Nut 1/2
4	10519	Hex Nut 1/2" w/ Serr flange

#59329 Hardware for 59333 Lateral and Longitudinal combination

1	59329-1	Hardware Kit
1	59272-1	Beam Clamp Base
2	59272-2	Beam Clamp Top Flange
4	10926	Carriage Bolt 1/2-12 x 1-1/4 full thread
5	10646Y	Hex Nut 1/2-13 Grade 5 zinc
1	10801	Carriage Bolt 1/2-12 x 2-1/2 Grade 5 zinc
1	84533Z	U-Bolt 1/2-13 x 2.63 x 2.19 Thread 1-3/4 zinc
2	10640	Push Nut 1/2
2	10519	Hex Nut 1/2" w/Serr Flange

#59315-1 Hardware for Lateral System

1	10631Z	J Bolt 1/2 x 5-1/2 Grade 5 zinc
1	12107	Flat Washer 1/2" SS
4	10556	Tek Screw #12 x 1"
2	10646Y	Hex Nut 1/2x-13 Grade 5 zinc
1	10826	Carriage Bolt 1/2-12 x 3 Grade 5 zinc

#59027 Hardware Kit for 59307 Lateral System

2	59264	3 Way Concrete Bracket
4	10530	Wedge Anchor 3/8 x 3.50
1	59315-1	Hardware Kit

#59263 Longitudinal Hardware for 59307

2	59272-1	Beam Clamp Base
4	59272-2	Beam Clamp Top Flange
8	10926	Carriage Bolt 1/2-13 x 1-1/4 Full Thread zinc
12	10646Y	Hex Nut 1/2-13 Grade 5 zinc
4	10801	Carriage Bolt 1/2-13 x 2-1/2 Grade 5 zinc

#59364 Hardware for 59332 Lateral and Longitudinal combination

1	59264	3 Way Concrete Bracket
2	10530	Wedge Anchor 3/8 x 3.50
1	59315-1	Lateral Hardware Kit
1	59272-1	Beam Clamp Base
2	59272-2	Beam Clamp Top Flange
4	10926	Carriage Bolt 1/2-13 x 1-1/4 Full Thread zinc
2	10801	Carriage Bolt 1/2-13 x 2-1/2 Grade 5 zinc
6	10646Y	Hex Nut 1/2-13 Grade 5 zinc

TIE DOWN
MANUFACTURING INGENUITY

404-344-0000 • www.tiedown.com
605 Stonehill Drive SW, Atlanta, GA 30336

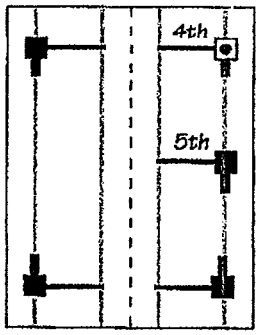
Xi2 Stabilization System Placement for 10 ft. Sidewall - 100 psf Roof

Xi2 Pier Placement

Extra Pier Placement

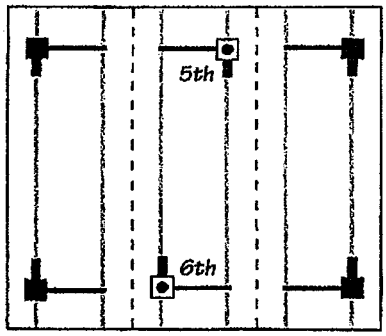
*2 Xi2 systems can be placed at either end of the home.

Both lateral and longitudinal systems at each location.



Double Section Home

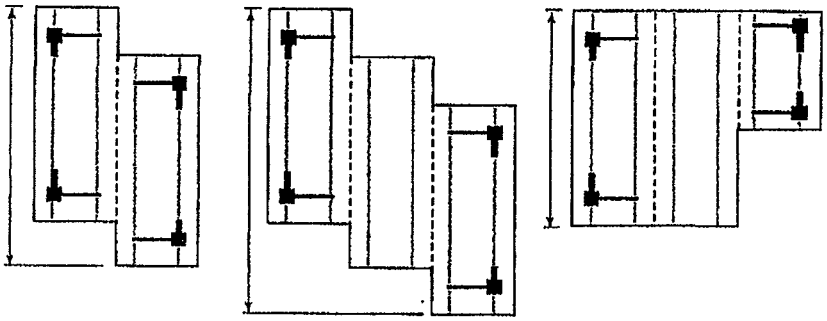
0 - 54'	3 Xi2 Systems*
Over 54' - 74'	4 Xi2 Systems
Over 74' - 76'	5 Xi2 Systems



Triple Section Home

0 - 48'	4 Xi2 Systems
Over 48' - 62'	5 Xi2 Systems
Over 62' - 76'	6 Xi2 Systems

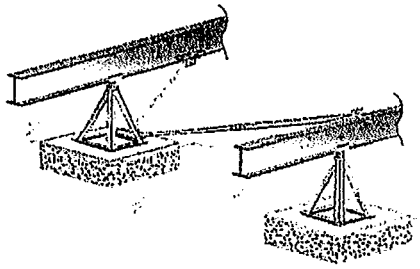
Offset Placement



Diagrams represent examples of double and triple section offsets. Total size is determined by the length of unit plus offset. The number of systems needed would be based on Home Size Charts. For "Quad" Units install systems as 2 Double sections.

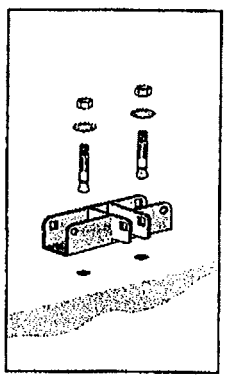
Alternate Anchoring Method: As an alternate to the requirement for ground anchors at the corners of a single section home, approved concrete anchors may be installed into poured concrete footings 18" x 18" x 48" deep. If shallow footing are desirable, and local frost line requirements allow it, footings a minimum of 24" x 24" x 12" deep may be used, with an anchor, at all four corners with the addition of one footing and anchor in the middle of each side, for a total of 6.

Anchors along the sides of a single section may have the straps connecting either vertically to the sidewall, or diagonally to I-beam.



Installation of Xi2 Concrete Systems

1. Identify the number of systems to be used on the home using the chart provided.
2. Identify the location where the systems will be installed.
3. Build pier according to State, Local or Home Manufacturers guidelines.
4. Drill two 3/8"x 3" deep holes in the concrete using holes in galvanized bracket as a guide. Attach bracket to concrete pad using 3/8"x 3-1/2" wedge anchors provided. Place nut & washer on anchor, leave enough room for 1 to 2 threads showing on top of bolt. Using a hammer, tap the wedge bolts into hole through bracket, leaving nut & washer flush with bracket. Using a 9/16" socket wrench, tighten wedge/anchor bolt, securing bracket to the concrete.
5. Attach the end of the smaller tube to the bracket mounted on the pad, using the grade 5, 1/2" x 2-1/2" bolt/nut provided.
6. Attach the flag end of the larger tube to the opposite I-beam using the "J" bolt over the top of the I-beam with the nut & washer provided. *(Figure 1 next page)*
7. Install a minimum of four (#12 x 1" tek screws) self-tapping screws into the holes provided in the lateral strut so that the two tubes are connected together
8. Install frame bracket clamps on I-beam on the inside of block/pier.
9. Insert strut in frame bracket clamp and attach with nut & bolt. Attach opposite end to concrete bracket.
10. Pull the frame bracket clamp with fastened strut outward to remove any slack.
11. Tighten all nuts and bolts on system.



Xi2 Ground Parts Detail

Xi2 Ground Lateral System
Part Number 59306
Includes: 5' Strut, pad & hardware kit
(#59329-1 includes all nuts and bolts).

Longitudinal Hardware Kit
Part Number 59331
Includes: 2 I-beam brackets &
2 U-bolts with all nuts and bolts.

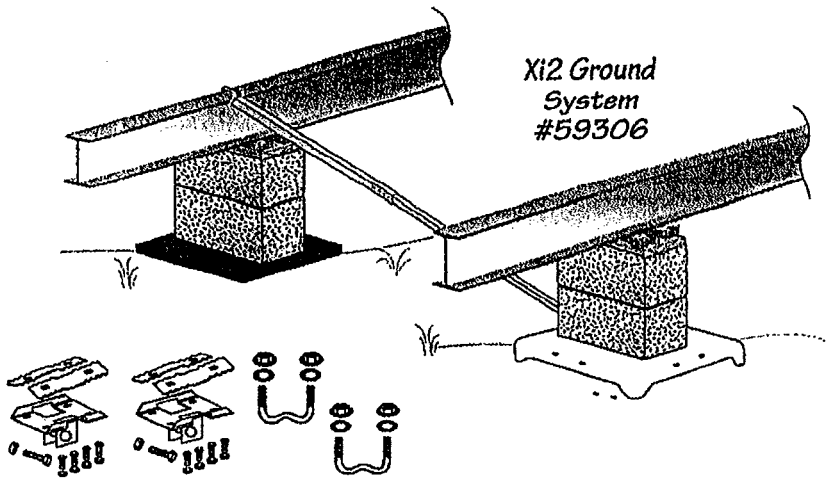
Lateral and Longitudinal Combination
Part Number 59333
Includes: 5' Strut, Pad, Longitudinal Strut
(#59329), Lateral and Longitudinal Hardware
Kit with all nuts and bolts.

Struts for Longitudinal Systems

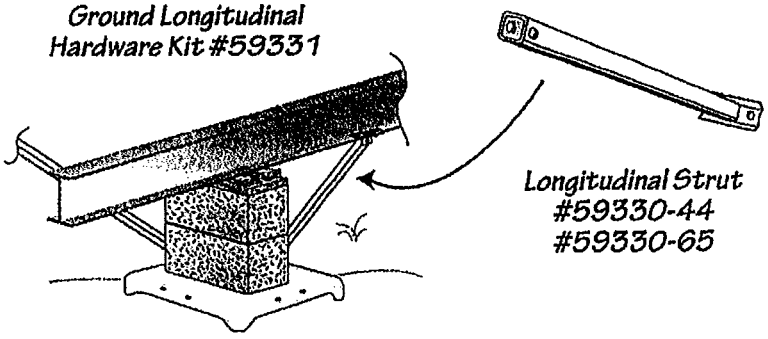
Part No.	Strut Length	Pier Height Up To:
59330-44	44"	4 Blocks or 32"
59330-65	65"	6 Blocks or 48"

For Double I Beam Attachment Use:
59352 Double Beam Longitudinal Bracket
29329-3 Double Beam lateral Ground kit

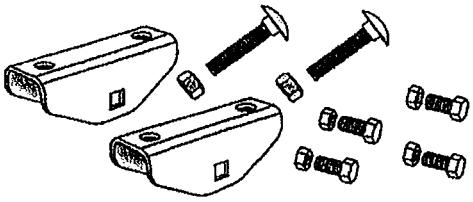
For C or CR Beams use:
59618 C Beam Bracket kit



Ground Longitudinal Hardware Kit #59331



Lateral & Longitudinal Combination #59333



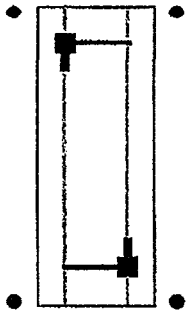
C-Beam Bracket Kit #59618

Xi2 Stabilization System Placement for up to 9 ft. Sidewall - 30 psf Roof

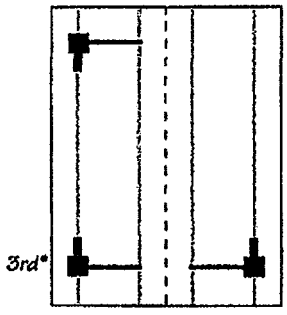
Xi2 Pier Placement

Approved Anchor with straps from 45 to 90 degress

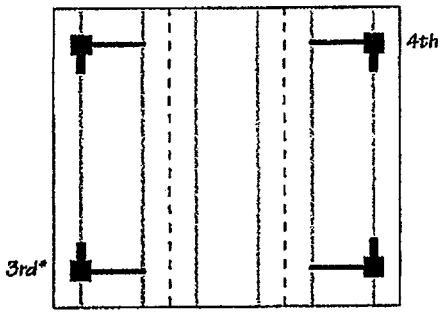
Both lateral and longitudinal systems at each location.



Single Section Home
0 - 76' Box 2 Xi2 Systems



Double Section Home
0-68' Box 2 Xi2 Systems
Over 68'-76' 3 Xi2 Systems*



Triple Section Home
0-70' Box 3 Xi2 Systems*
Over 70' - 76' 4 Xi2 Systems

*3rd Xi2 system can be placed at either end of the home.

TIE DOWN
MANUFACTURING INGENUITY

404-344-0000 • www.tiedown.com
605 Stonehill Drive SW, Atlanta, GA 30336

Installation of Xi2 Ground Systems

1. Identify the number of systems to be used on the home using the chart provided.
2. Identify the location where the systems will be installed.
3. Clear all organic matter and debris from the pad site.
4. Place U-bolts through holes in pan provided.
5. Place pad centered under beam with the lateral strut bracket towards the inside of the home.
6. Press or drive pan into ground until level and flush with prepared surface.
7. Build pier according to State, Local or Home Manufacturers guidelines.*(Figure 1)*
8. Attach the end of the smaller tube to the inside of pan using U-bolt & nuts provided
9. Attach the flag end of the larger tube to the opposite I-beam using the "J" bolt over the top of the I-beam with the nut & washer provided. *(Figure 2)*
10. Install a minimum of four (#12 x 1" tek screws) self-tapping screws into the holes provided in the lateral strut so that the two tubes are connected together. *(Figure 1)*

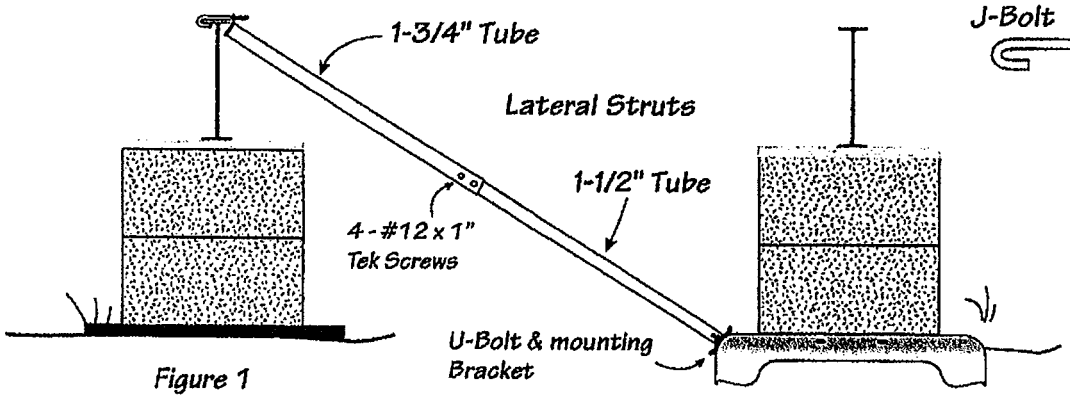


Figure 1

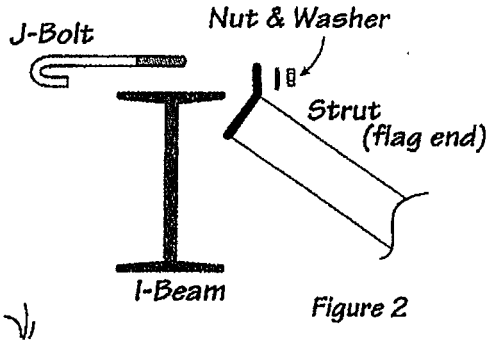
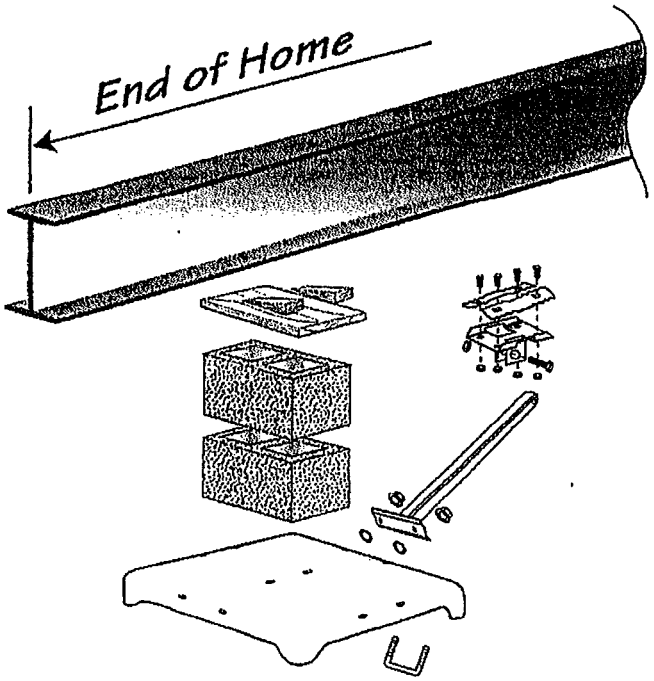


Figure 2



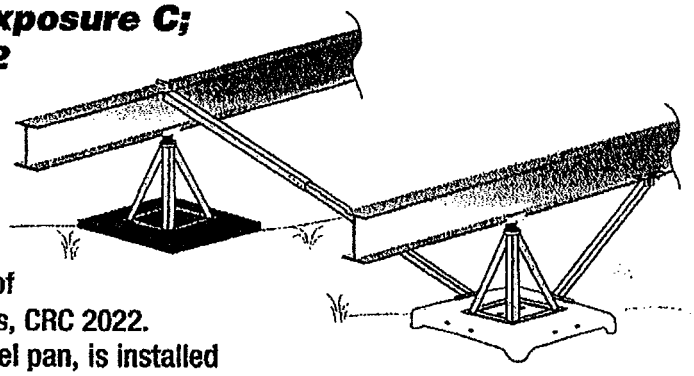
11. Install frame bracket clamps to I-beam on in side of block/pier. Do not tighten nuts at this time.
12. Attach longitudinal strut to U-bolt in pan using nuts provided.
13. Insert strut in the frame bracket clamp, attach with nut and bolt. Do not tighten at this time.
14. Pull the frame bracket clamp with the fastened strut outward to remove any slack.
15. Tighten all nuts and bolts on the struts and beam clamps.

TIE DOWN
MANUFACTURING INGENUITY

404-344-0000 • www.tiedown.com
605 Stonehill Drive SW, Atlanta, GA 30336

Xi2 Foundation System

Installation Instructions for California for Ground & Concrete Systems CRC-2022, 105 mph Ultimate Wind Exposure C; Seismic Category Max. D2 By Tie Down



REQUIREMENTS:

- These plans and specifications meet the requirements of Title 25 Section 1333 and Wind & Seismic Requirements, CRC 2022.
- The Xi2 System, with either a concrete footer or the steel pan, is installed at or in place of one of the piers required by the home manufacturer's set up instructions. The systems must be placed as evenly as possible. Measuring from the center of the pier, systems are to be located a minimum of 2' and a maximum of 1/4 the length of the home from each end of the home as shown on pier placement chart.Components of the Xi2 system such as the longitudinal strut and connecting hardware, may extend beyond the pier location.
- Maximum vertical projection at sidewall is 10' (see charts).
- Main rail spacing must be 75.5" - 99.5" (112" allowed with proper strut).
- The lateral and longitudinal components of the Xi2 System replace standard frame ties. Additional Vertical anchor ties that are unique to a home's design may be required by the home manufacturer. These locations may include shear walls, marriage line ridge beam support posts, and rim plates. Check manufacturers set-up requirements.
- Maximum pier height is 48".
- Maximum floor widths are 16' (single section), 32' (double) and 48' (triple).
- Steel piers must be fastened to the I-beam with clamps provided with steel pier.
- Designed for up to 6:12 roof slope.
- Flood Zone: A, AE or AH Zone flood plain (riverine or inland flood area); Max flood velocity - 1 fps: No waves, Bottom of home main beam is at or above BFE; bottom of main beam max 36" above natural grade. Not suitable for V zones, coastal A zones or floodways. Install Tie Down Engineering anchors per table (on page 7) to resist flotation.
- Designed to provide resistance up to Seimic Design Category D2 Earthquake Loads.
- Maximum roof live load is 100 psf (see charts).

Additional Requirements for Concrete Systems

- Poured concrete must be 2,500 PSI minimum at 28 days.
- Footings must be large enough for pier load at that location and be a minimum of 22" wide by 6" deep with anchor wedge bolts a minimum of 4" from any edge, or 18" wide by 12" deep with wedge bolts a minimum of 1-1/2" from edge. Strip footings to be minimum of 18" wide by 14' long by 6" deep or 27" wide by 14' long by 4" deep.

* Xi2 components exceed HUD code 3280.306g requirements stating "Anchoring equipment exposed to weathering shall have a resistance to weather deterioration at least equivalent to that provided by a coating of zinc on steel of not less than 0.30 ounces per square foot of surface coating...."

TIE DOWN
MANUFACTURING INGENUITY

404-344-0000 • www.tiedown.com
605 Stonehill Drive SW, Atlanta, GA 30336

Soil Classification Chart

Soil Class	Soil Description	Recommended Anchors and Stabilizers Model #	STK#	Description
2	Sedimentary and Foliated Rock	MI2255/8	59090	30" x 5/8" rod / 2 - 4" helix
		MI2233/4	59095	30" x 3/4" rod / 2 - 4" helix
			59292	Stabilizer Plate
3	Sandy Gravel and/or Gravel (GW and GP)	MI2H5/8	59080	48" x 5/8" rod / 1 - 6" helix
		MI2H3/4	59085	48" x 3/4" rod / 1 - 6" helix
		Deepset	59091	30" x 3/4" rod / 2 - 4" helix with stabilizer cap
			59292	Stabilizer Plate
4	Sand, Silty Sand, Clayed Sand, Silty Gravel	MI2H5/8	59080	48" x 5/8" rod / 1 - 6" helix
		MI2H3/4	59085	48" x 3/4" rod / 1 - 6" helix
		Deepset	59092	36" x 3/4" rod / 1 - 4" & 1 - 6 helix with stabilizer cap
		MI48	59086	48" x 3/4" rod / 2 - 4" helix
		MI42	59128	42" x 3/4" rod / 2 - 4" helix
			59292	Stabilizer Plate

Higher class anchors can be used in lower class soils. Example; Class 4 anchors can be used in Class 3 soils.

The required flotation anchors shown in the table are in addition to any other anchors or hold down devices required by the manufacturer. See requirements, bullet 5, page 2 of 8.

Xi2 Hardware Breakdown

#59329-1 Hardware for 59306 Lateral System

1	84533Z	U-Bolt 1/2-13 x 2.63 x 2.19 thread 1-3/4 zinc
4	10556	Tek Screw #12 x 1"
1	10631Z	J Bolt 1/2 x 5-1/2 grade 5 zinc
2	10640	Push Nut 1/2
1	12107	Flat Washer 1x2" SS
1	10646Y	Hex Nut 1/2-13 grade 5 zinc
2	10519	Hex Nut 1/2" w/ Serr flange

#59331 Longitudinal Hardware for 59306

2	59272-1	Beam Clamp Base
4	59272-2	Beam Clamp Top Flange
8	10926	Carriage Bolt 1/2-12 x 1-1/4 Full Thread
10	10646Y	Hex Nut 1/2-13 grade 5 zinc
2	10801	Carriage Bolt 1/2-12 x 2-1/2 Grade 5
2	84533Z	U-Bolt 1/2-13 x 2.63 x 2.19 thread 1-3/4 zinc
4	10640	Push Nut 1/2
4	10519	Hex Nut 1/2" w/ Serr flange

#59329 Hardware for 59333 Lateral and Longitudinal combination

1	59329-1	Hardware Kit
1	59272-1	Beam Clamp Base
2	59272-2	Beam Clamp Top Flange
4	10926	Carriage Bolt 1/2-12 x 1-1/4 full thread
5	10646Y	Hex Nut 1/2-13 Grade 5 zinc
1	10801	Carriage Bolt 1/2-12 x 2-1/2 Grade 5 zinc
1	84533Z	U-Bolt 1/2-13 x 2.63 x 2.19 Thread 1-3/4 zinc
2	10640	Push Nut 1/2
2	10519	Hex Nut 1/2" w/Serr Flange

#59315-1 Hardware for Lateral System

1	10631Z	J Bolt 1/2 x 5-1/2 Grade 5 zinc
1	12107	Flat Washer 1/2" SS
4	10556	Tek Screw #12 x 1"
2	10646Y	Hex Nut 1/2x-13 Grade 5 zinc
1	10826	Carriage Bolt 1/2-12 x 3 Grade 5 zinc

#59027 Hardware Kit for 59307 Lateral System

2	59264	3 Way Concrete Bracket
4	10530	Wedge Anchor 3/8 x 3.50
1	59315-1	Hardware Kit

#59263 Longitudinal Hardware for 59307

2	59272-1	Beam Clamp Base
4	59272-2	Beam Clamp Top Flange
8	10926	Carriage Bolt 1/2-13 x 1-1/4 Full Thread zinc
12	10646Y	Hex Nut 1/2-13 Grade 5 zinc
4	10801	Carriage Bolt 1/2-13 x 2-1/2 Grade 5 zinc

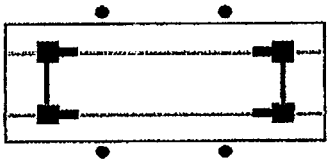
#59364 Hardware for 59332 Lateral and Longitudinal combination

1	59264	3 Way Concrete Bracket
2	10530	Wedge Anchor 3/8 x 3.50
1	59315-1	Lateral Hardware Kit
1	59272-1	Beam Clamp Base
2	59272-2	Beam Clamp Top Flange
4	10926	Carriage Bolt 1/2-13 x 1-1/4 Full Thread zinc
2	10801	Carriage Bolt 1/2-13 x 2-1/2 Grade 5 zinc
6	10646Y	Hex Nut 1/2-13 Grade 5 zinc

TIE DOWN
MANUFACTURING INGENUITY

404-344-0000 • www.tiedown.com
605 Stonehill Drive SW, Atlanta, GA 30336

FEMA Flood Zones A, AE & AH



Anchor placement to be the same on single or multiple sections. Evenly spaced from the end of unit, between Xi2 placements.

Flotation Anchors	Total
Single Section	**Anchors Per Side**
12' x 40' – 16' x 80'	2
Multiple Section	
20' x 40' - 20' x 64'	2
24' x 40' - 24' x 56'	2
Over 56'	2
28' x 40' - 28' x 48'	2
28' x 49' - 28 x 72'	2
Over 72'	2
32' x 56' - 32' x 64'	2
Over 64'	2

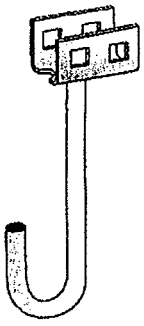
When using concrete anchors in Lieu of ground auger anchors, the Mass of Concrete Per Anchor from chart would be: 21.1 Cu. Ft.
(Example: 3'x 3'x 2.5' = 22.5' Cu. Ft., 2' dia. x 3.5'= 22' Cu. Ft.)

To Reduce the Mass of Concrete, increase the number of tie downs proportionally.

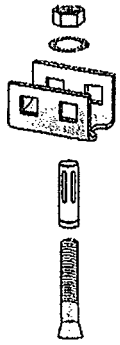
To Reduce concrete to 11 cu. ft. (Example: 2.25' x 2.25' x 2.25'=11.4 Cu. Ft.) double the required number of tie downs.

Concrete Anchors

Concrete must be 2500 PSI minimum slab with a 4" minimum thickness and must allow 4725 lbs. of vertical tension on anchor without lifting. Minimum distance from the anchor shaft to one edge of the slab is 4" from one edge and 6" from any other edge. MIJ2 anchor is designed to be installed into the concrete at the time it is being poured. Slab must be 8" minimum thickness at location under anchor to allow 5" embediment of "J" rod anchor. MICS2 anchor is designed to be installed in dry concrete. Drill a 5/8" x 3" hole in the slab place expansion bolt in hole, place washer and nut over bolt and tighten until maximum expansion is achieved. Remove nut and washer and place anchor head over exposed bolt and place washer and nut back on threaded bolt and tighten nut.



MIJ2
"J" Anchor

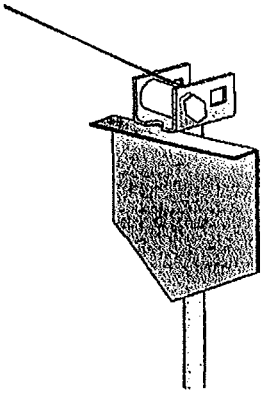


MICS2

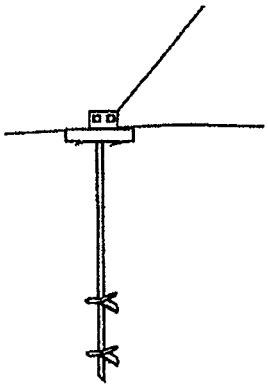
Ground Anchors

All Frame tie ground anchors must be stabilized to prevent horizontal slicing through the soil.

1. Position anchor at a slight back angle so that when Fully installed, anchor will be inside skirting wall.
2. For vertical or stabilized (Deepset) anchors, fully drive anchor into the ground. Horizontal (Frame Tie) anchors install 2/3 of way in ground and install stabilizer plate vertically within 3"-4" of the shaft, parallel to home.
3. Drive anchor fully into ground until head rests on plate and attach strap. Pretension strap to pull anchor against plate with head slightly over top.



Stabilizer
Plate

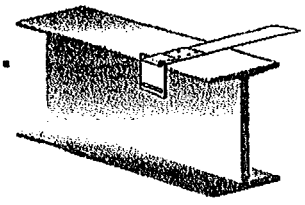


Deepset
Anchor

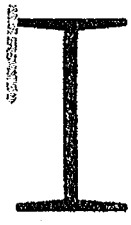
Frame Tie with Buckle

1. Install strap by pushing the end between the inside of The frame "I" beam and floor.
2. Position the buckle at the upper end of the "I" beam frame. Wrap the end of the strap around the "I" beam. Thread the end of the strap through the slot in the buckle as shown. Push the end of the strap in between the "I" beam and floor.
3. Pull the strap, making certain the buckle stays in position. Thread loose end of strap through the slotted tensioning bolt attached to the tension head of anchor. Tighten slotted bolt a minimum of 4-5 turns until all slack in strap is removed.

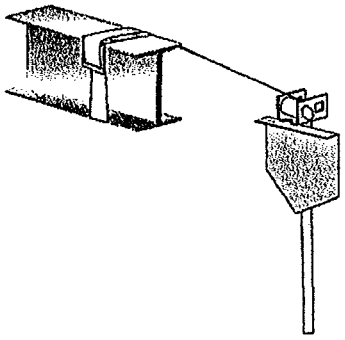
1.



2.



3.



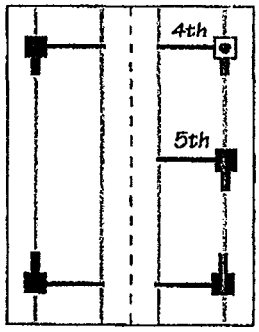
Xi2 Stabilization System Placement for 10 ft. Sidewall - 100 psf Roof

Xi2 Pier Placement

Extra Pier Placement

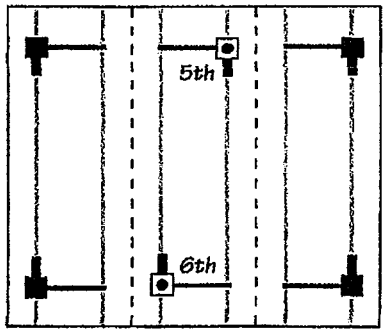
*2 Xi2 systems can be placed at either end of the home.

Both lateral and longitudinal systems at each location.



Double Section Home

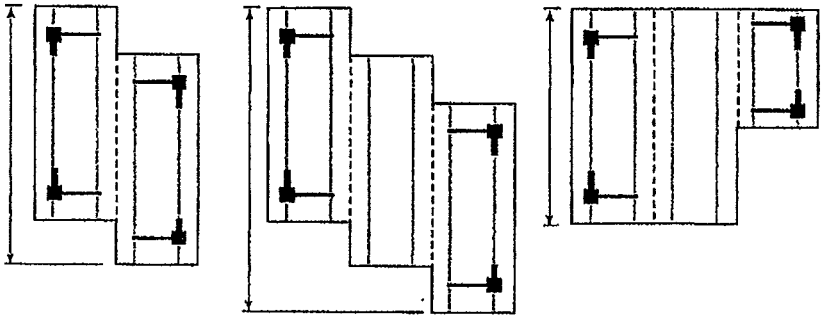
0 - 54'	3 Xi2 Systems*
Over 54' - 74'	4 Xi2 Systems
Over 74' - 76'	5 Xi2 Systems



Triple Section Home

0 - 48'	4 Xi2 Systems
Over 48' - 62'	5 Xi2 Systems
Over 62' - 76'	6 Xi2 Systems

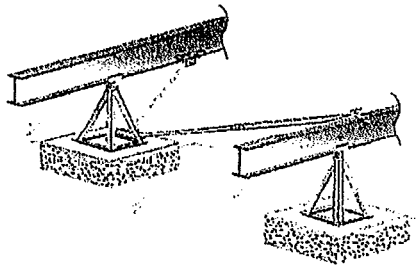
Offset Placement



Diagrams represent examples of double and triple section offsets. Total size is determined by the length of unit plus offset. The number of systems needed would be based on Home Size Charts. For "Quad" Units install systems as 2 Double sections.

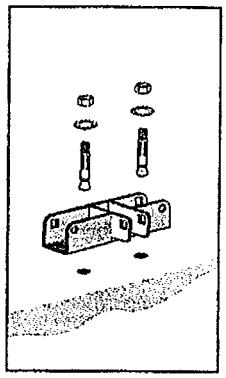
Alternate Anchoring Method: As an alternate to the requirement for ground anchors at the corners of a single section home, approved concrete anchors may be installed into poured concrete footings 18" x 18" x 48" deep. If shallow footing are desirable, and local frost line requirements allow it, footings a minimum of 24" x 24" x 12" deep may be used, with an anchor, at all four corners with the addition of one footing and anchor in the middle of each side, for a total of 6.

Anchors along the sides of a single section may have the straps connecting either vertically to the sidewall, or diagonally to I-beam.



Installation of Xi2 Concrete Systems

1. Identify the number of systems to be used on the home using the chart provided.
2. Identify the location where the systems will be installed.
3. Build pier according to State, Local or Home Manufacturers guidelines.
4. Drill two 3/8"x 3" deep holes in the concrete using holes in galvanized bracket as a guide.
   Attach bracket to concrete pad using 3/8"x 3-1/2" wedge anchors provided. Place nut & washer on anchor, leave enough room for 1 to 2 threads showing on top of bolt. Using a hammer, tap the wedge bolts into hole through bracket, leaving nut & washer flush with bracket. Using a 9/16" socket wrench, tighten wedge/anchor bolt, securing bracket to the concrete.
5. Attach the end of the smaller tube to the bracket mounted on the pad, using the grade 5, 1/2" x 2-1/2" bolt/nut provided.
6. Attach the flag end of the larger tube to the opposite I-beam using the "J" bolt over the top of the I-beam with the nut & washer provided. *(Figure 1 next page)*
7. Install a minimum of four (#12 x 1" tek screws) self-tapping screws into the holes provided in the lateral strut so that the two tubes are connected together
8. Install frame bracket clamps on I-beam on the inside of block/pier.
9. Insert strut in frame bracket clamp and attach with nut & bolt. Attach opposite end to concrete bracket.
10. Pull the frame bracket clamp with fastened strut outward to remove any slack.
11. Tighten all nuts and bolts on system.



Xi2 Concrete Parts Detail

Part #59307
Includes: 5' Strut, Bracket, & Hardware Kit #59315-1 with all nuts and bolt.

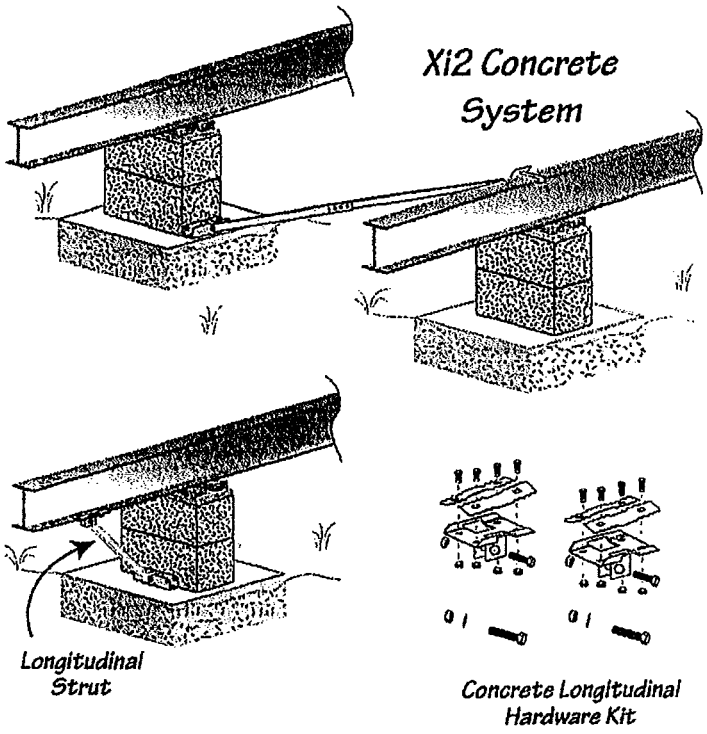
Longitudinal Struts for "Concrete Systems"

Part No.	Length	Pier Height
#59013	44"	up to 4 Blocks
#59015	65"	up to 6 Blocks

Longitudinal Hardware Kit
Part #59263
Includes 2 sets per kit: I-beam bracket, nuts, bolts and washers

Lateral and Longitudinal Combination
Part #59332
Includes: 5' Strut, Longitudinal Strut (#59364), Lateral and Longitudinal Hardware Kit with all nuts and bolts.

For Double I beam Attachment use:
59352 Double Beam Longitudinal Bracket
59329-4 Double Beam Lateral Concrete kit



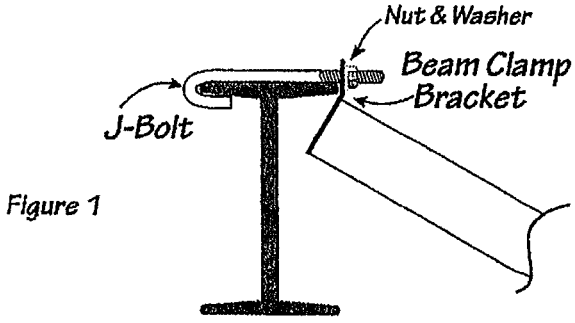
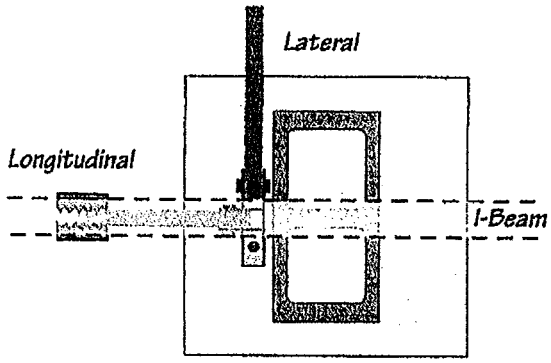
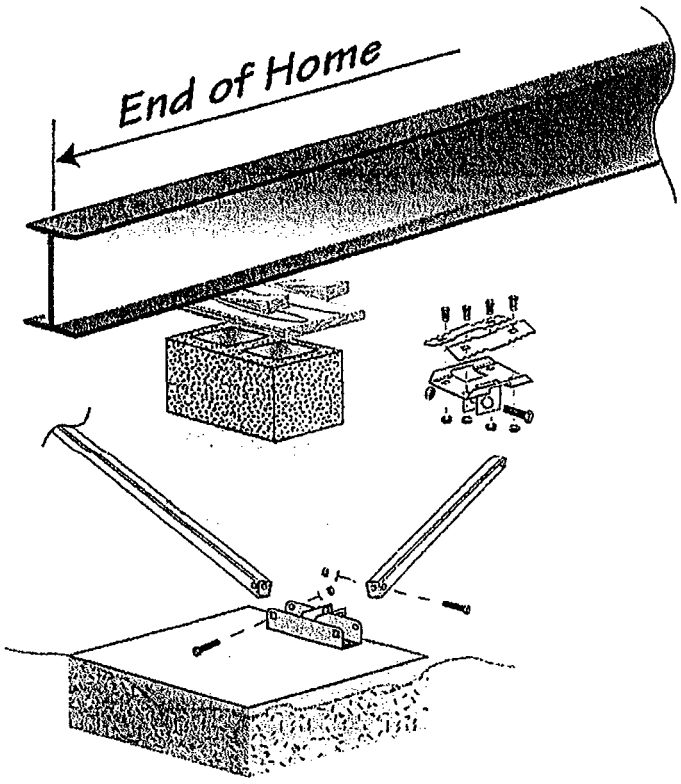


Figure 1



Xi2 Installation Placement



TIE DOWN
MANUFACTURING INGENUITY

404-344-0000 • www.tiedown.com
605 Stonehill Drive SW, Atlanta, GA 30336

Xi2 Ground Parts Detail

Xi2 Ground Lateral System
Part Number 59306
Includes: 5' Strut, pad & hardware kit
(#59329-1 includes all nuts and bolts).

Longitudinal Hardware Kit
Part Number 59331
Includes: 2 I-beam brackets &
2 U-bolts with all nuts and bolts.

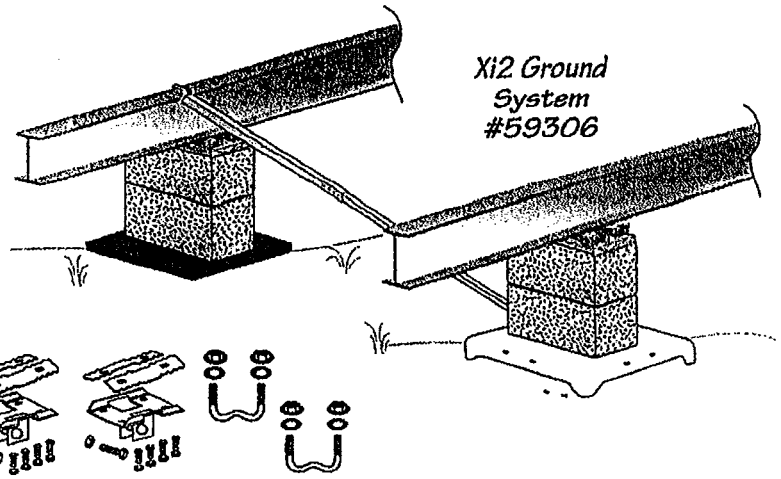
Lateral and Longitudinal Combination
Part Number 59333
Includes: 5' Strut, Pad, Longitudinal Strut (#59329), Lateral and Longitudinal Hardware Kit with all nuts and bolts.

Struts for Longitudinal Systems

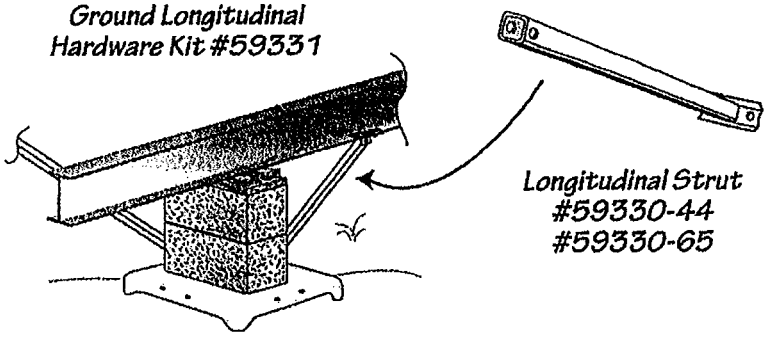
Part No.	Strut Length	Pier Height Up To:
59330-44	44"	4 Blocks or 32"
59330-65	65"	6 Blocks or 48"

For Double I Beam Attachment Use:
59352 Double Beam Longitudinal Bracket
29329-3 Double Beam lateral Ground kit

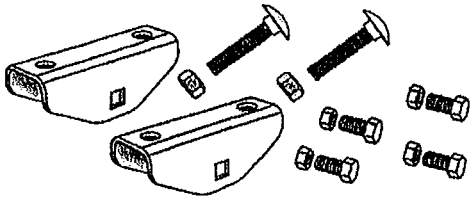
For C or CR Beams use:
59618 C Beam Bracket kit



Ground Longitudinal Hardware Kit #59331



Lateral & Longitudinal Combination #59333



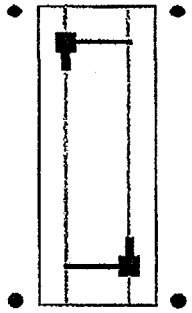
C-Beam Bracket Kit #59618

Xi2 Stabilization System Placement for up to 9 ft. Sidewall - 30 psf Roof

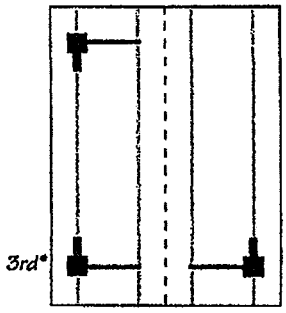
Xi2 Pier Placement

Approved Anchor with straps from 45 to 90 degress

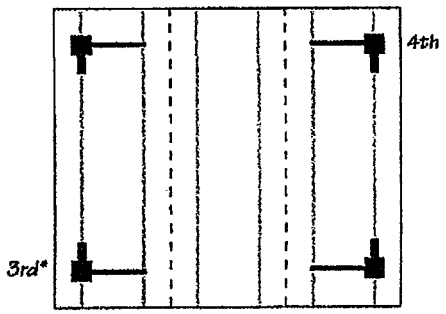
Both lateral and longitudinal systems at each location.



Single Section Home
0 - 76' Box 2 Xi2 Systems



Double Section Home
0-68' Box 2 Xi2 Systems
Over 68'-76' 3 Xi2 Systems*



Triple Section Home
0-70' Box 3 Xi2 Systems*
Over 70' - 76' 4 Xi2 Systems

*3rd Xi2 system can be placed at either end of the home.

TIE DOWN
MANUFACTURING INGENUITY

404-344-0000 • www.tiedown.com
605 Stonehill Drive SW, Atlanta, GA 30336

Installation of Xi2 Ground Systems

1. Identify the number of systems to be used on the home using the chart provided.
2. Identify the location where the systems will be installed.
3. Clear all organic matter and debris from the pad site.
4. Place U-bolts through holes in pan provided.
5. Place pad centered under beam with the lateral strut bracket towards the inside of the home.
6. Press or drive pan into ground until level and flush with prepared surface.
7. Build pier according to State, Local or Home Manufacturers guidelines.*(Figure 1)*
8. Attach the end of the smaller tube to the inside of pan using U-bolt & nuts provided
9. Attach the flag end of the larger tube to the opposite I-beam using the "J" bolt over the top of the I-beam with the nut & washer provided. *(Figure 2)*
10. Install a minimum of four (#12 x 1" tek screws) self-tapping screws into the holes provided in the lateral strut so that the two tubes are connected together. *(Figure 1)*

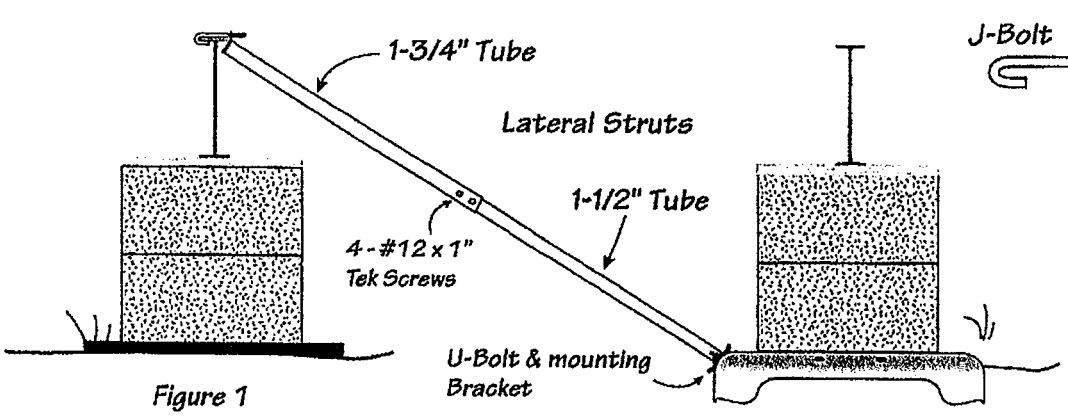


Figure 1

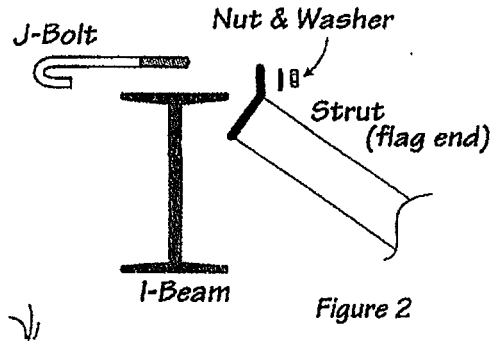
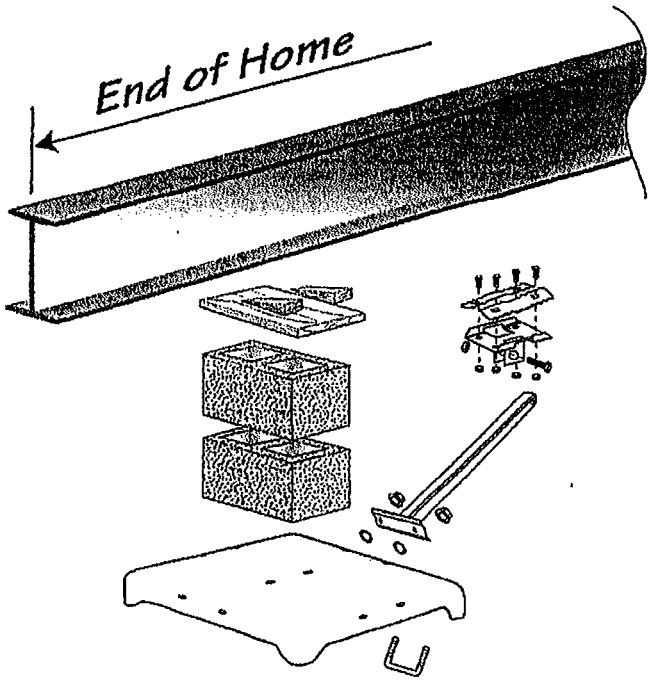


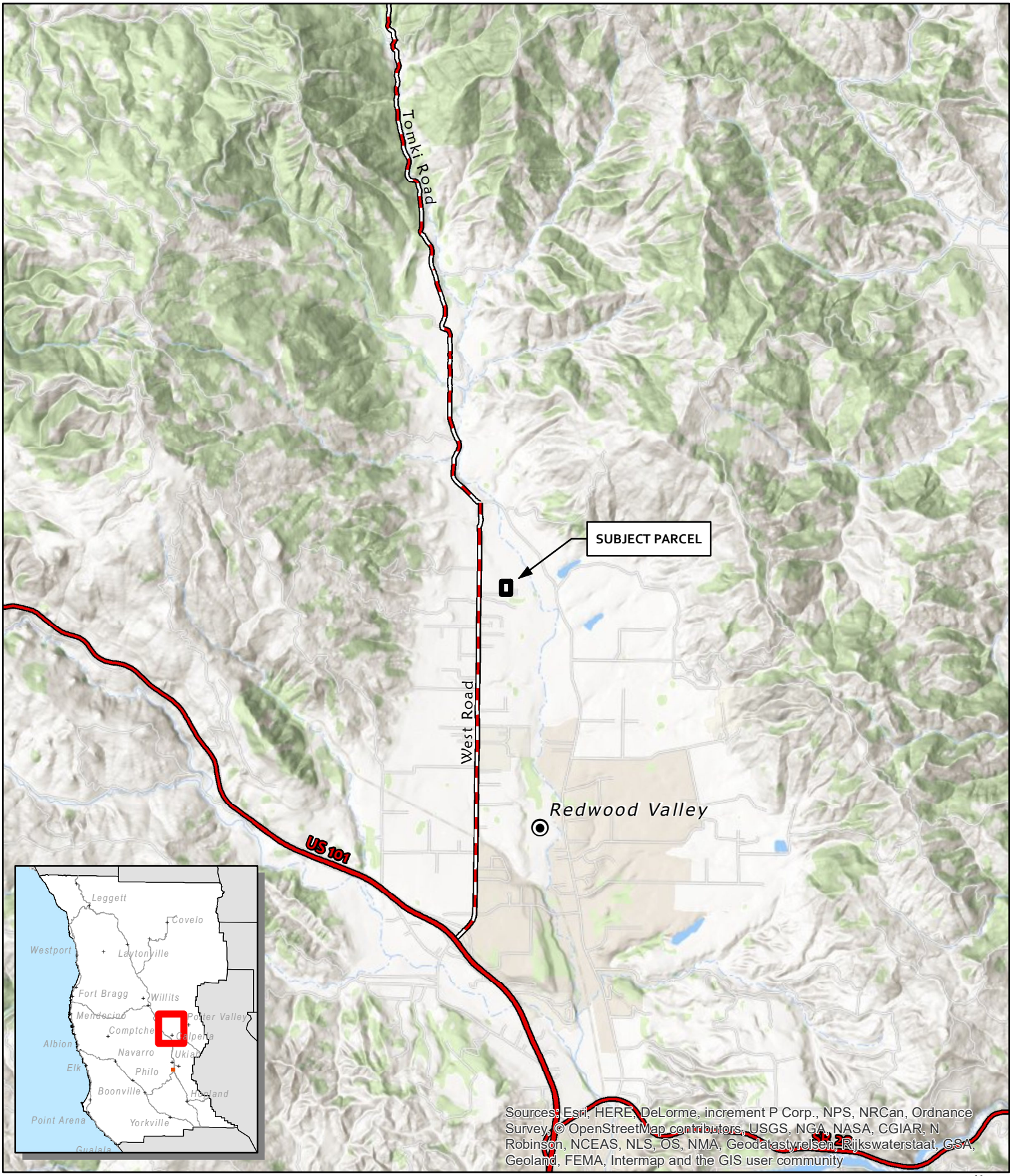
Figure 2



11. Install frame bracket clamps to I-beam on in side of block/pier. Do not tighten nuts at this time.
12. Attach longitudinal strut to U-bolt in pan using nuts provided.
13. Insert strut in the frame bracket clamp, attach with nut and bolt. Do not tighten at this time.
14. Pull the frame bracket clamp with the fastened strut outward to remove any slack.
15. Tighten all nuts and bolts on the struts and beam clamps.

TIE DOWN
MANUFACTURING INGENUITY

404-344-0000 • www.tiedown.com
605 Stonehill Drive SW, Atlanta, GA 30336



CASE: AP 2024-0007
OWNER: FORD, David
APN: 160-100-11
APLCT: David & Ina Ford
AGENT:
ADDRESS: 11167 West Road

Major Towns & Places
Highways
Major Roads

0 2,800 5,600 Feet
0 0.5 1 Miles

N
W E
S

1:63,360

LOCATION

CASE: AP 2024-0007
OWNER: FORD, David
APN: 160-100-11
APLCT: David & Ina Ford
AGENT:
ADDRESS: 11167 West Road

Public Roads
Private Roads
Driveways/Unnamed Roads

0 270 540 Feet
0 0.05 0.1 Miles

N W E S

1:6,000

AERIAL IMAGERY

CASE: AP 2024-0007
OWNER: FORD, David
APN: 160-100-11
APLCT: David & Ina Ford
AGENT:
ADDRESS: 11167 West Road

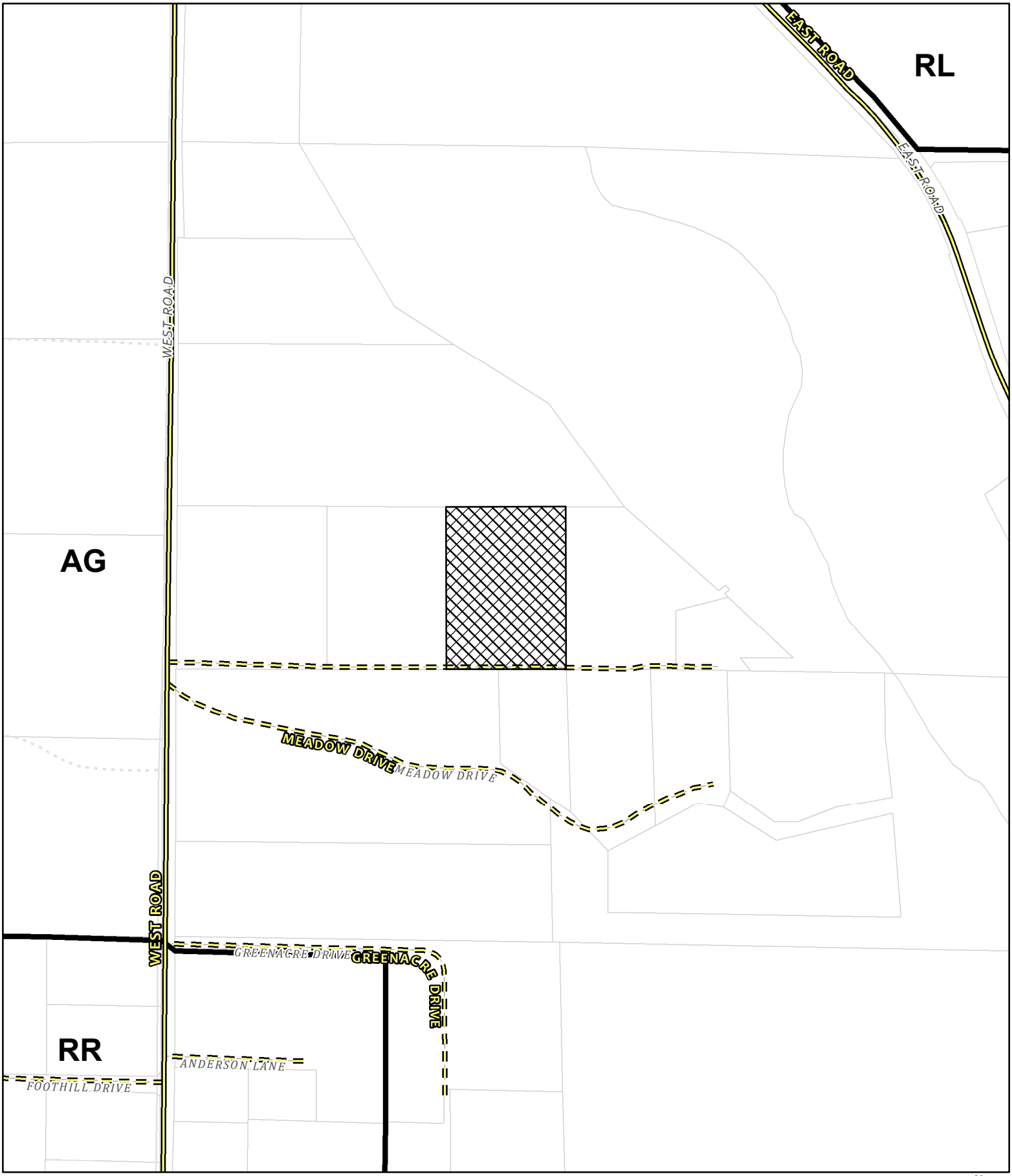
= = = Private Roads

0 45 90 Feet
0 0.0075 0.015 Miles

N
W E
S

1:1,000

AERIAL IMAGERY



CASE: AP 2024-0007
OWNER: FORD, David
APN: 160-100-11
APLCT: David & Ina Ford
AGENT:
ADDRESS: 11167 West Road

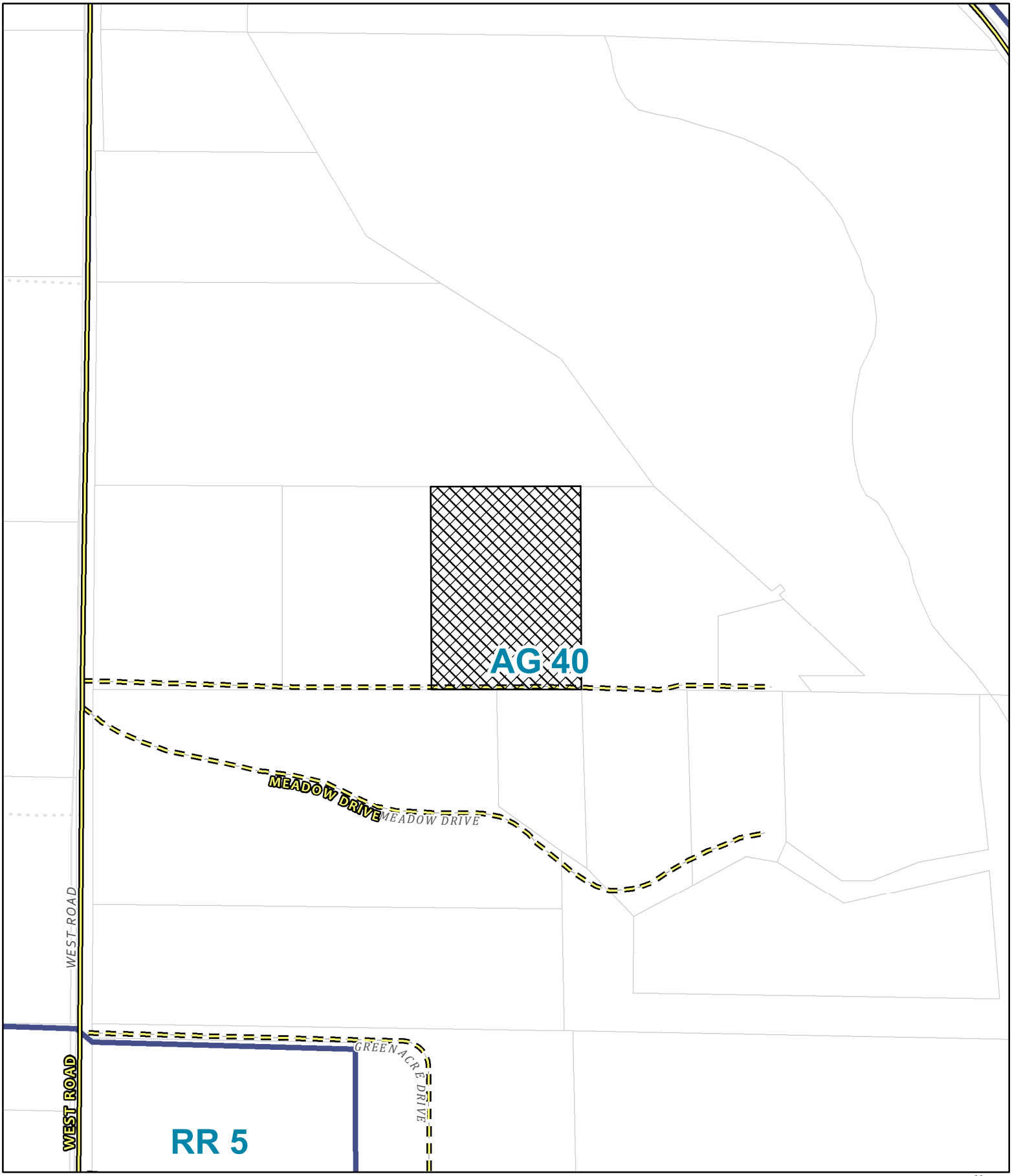
Public Roads
Private Roads
Driveways/Unnamed Roads
Zoning Districts
Public Roads
Private Roads
Assessors Parcels

0 225 450 Feet
0 0.04 0.08 Miles
1:5,000

N
W E
S

ZONING

THIS MAP AND DATA ARE PROVIDED WITHOUT WARRANTY OF ANY KIND.
DO NOT USE THIS MAP TO DETERMINE LEGAL PROPERTY BOUNDARIES



CASE: AP 2024-0007
OWNER: FORD, David
APN: 160-100-11
APLCT: David & Ina Ford
AGENT:
ADDRESS: 11167 West Road

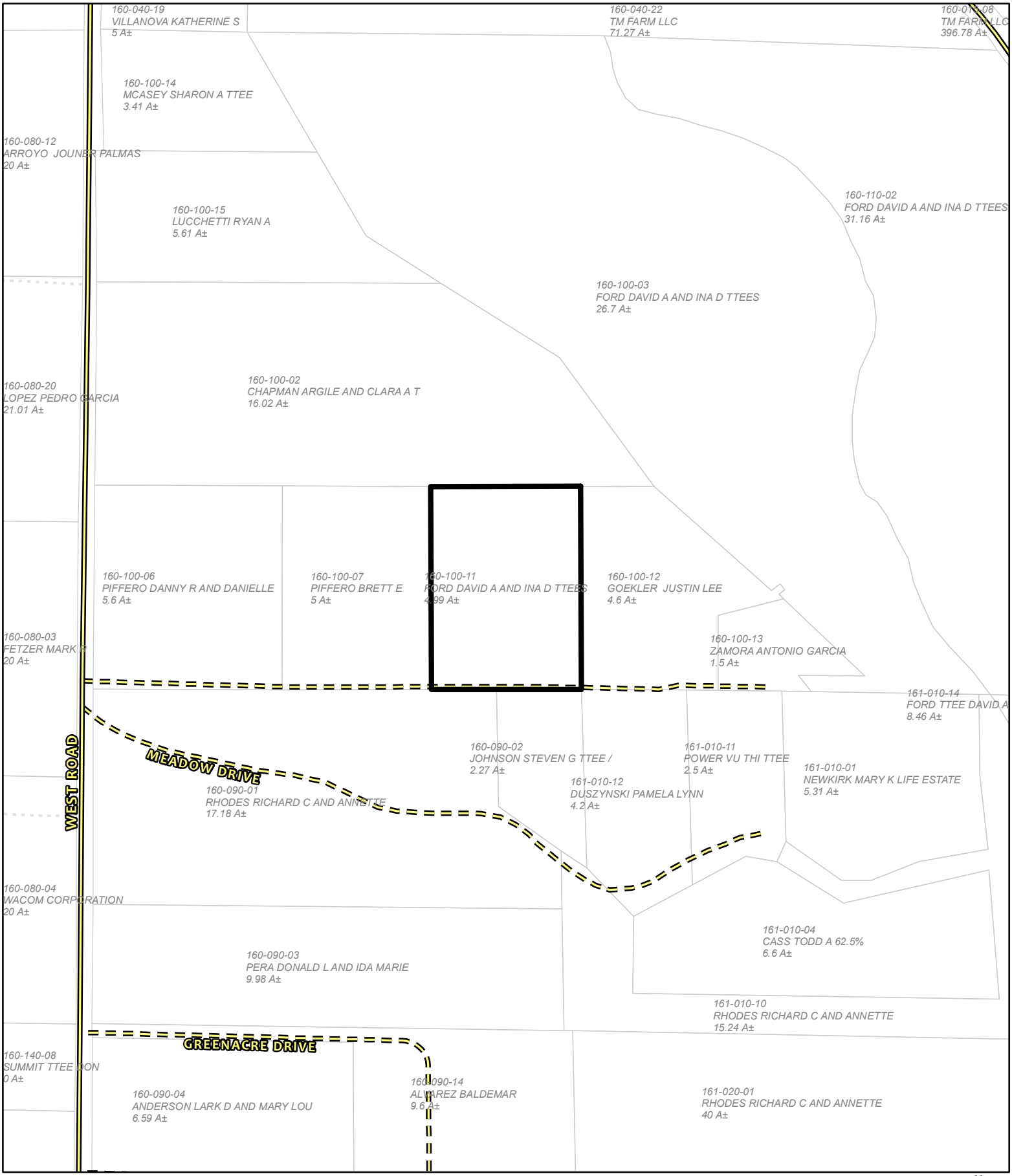
Public Roads
Private Roads
Driveways/Unnamed Roads
Public Roads
Private Roads
Assessors Parcels

0 180 360 Feet
0 0.03 0.06 Miles

N
W E
S

1:4,000

GENERAL PLAN



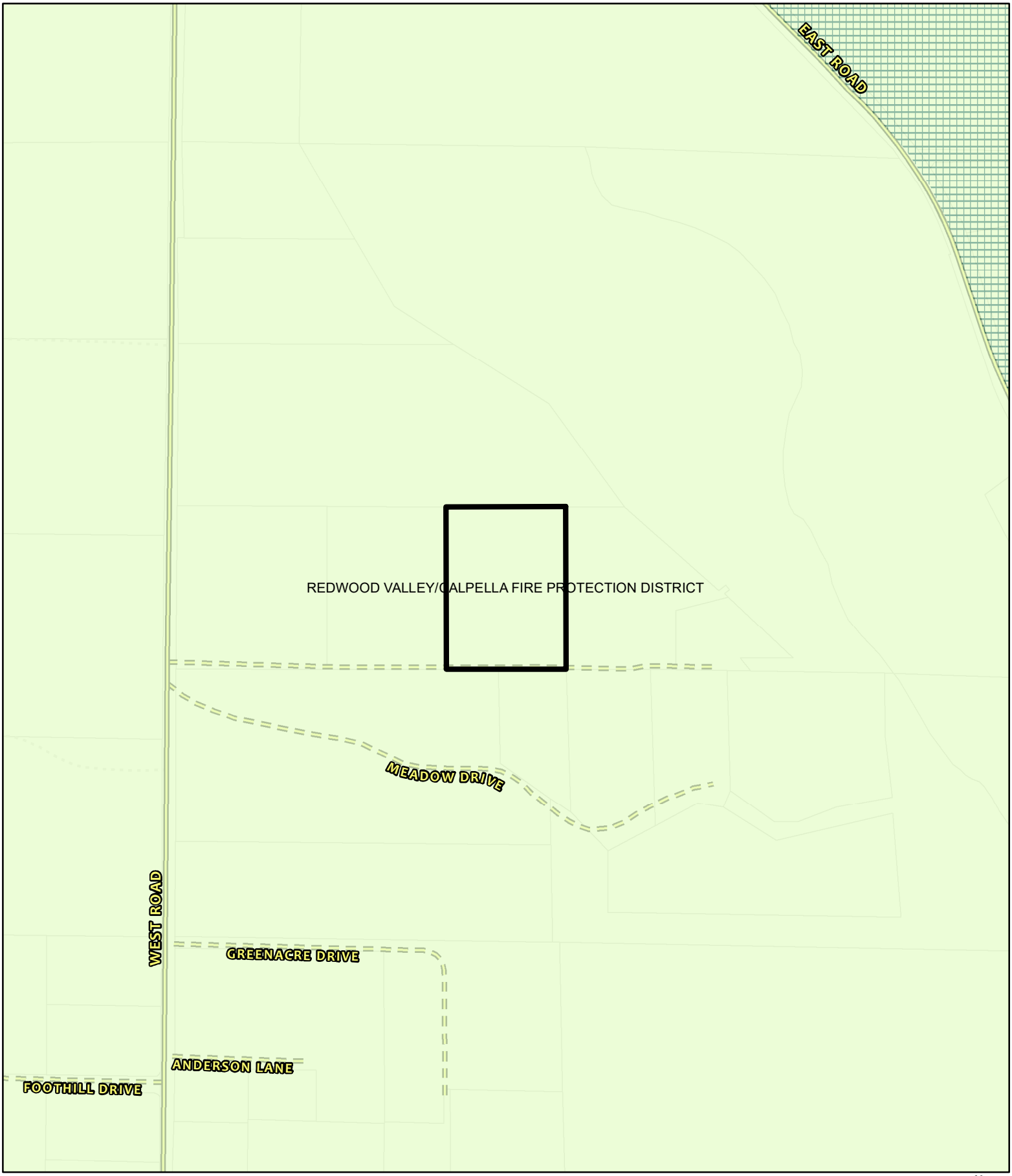
CASE: AP 2024-0007
OWNER: FORD, David
APN: 160-100-11
APLCT: David & Ina Ford
AGENT:
ADDRESS: 11167 West Road

Public Roads
Private Roads
Driveways/Unnamed Roads
Assessors Parcels

0 180 360 Feet
0 0.03 0.06 Miles
1:4,000

N W E S

ADJACENT PARCELS



CASE: AP 2024-0007
OWNER: FORD, David
APN: 160-100-11
APLCT: David & Ina Ford
AGENT:
ADDRESS: 11167 West Road

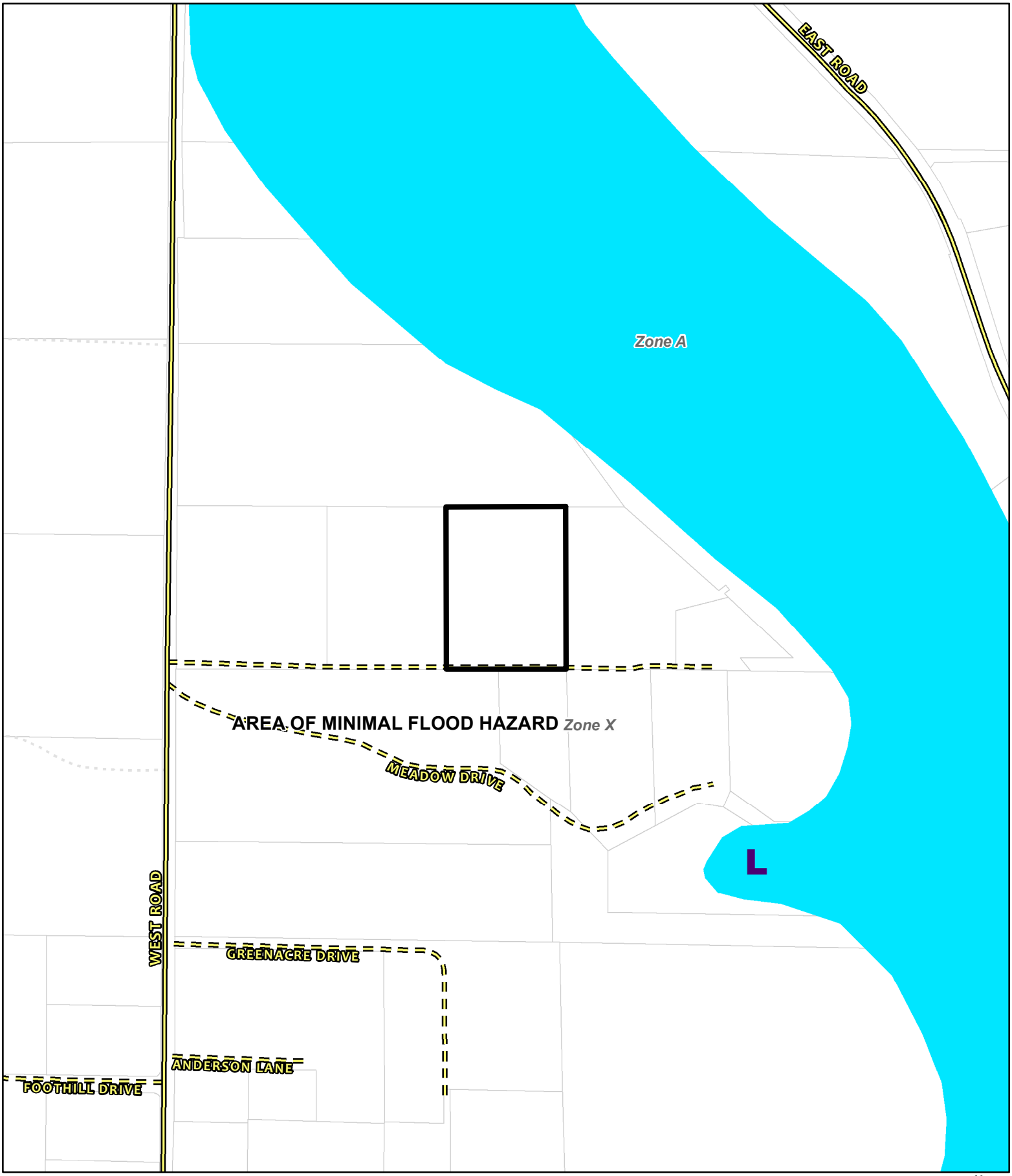
Moderate Fire Hazard
County Fire Districts
Public Roads
Private Roads
Driveways/Unnamed Roads
Assessors Parcels

0 225 450 Feet
0 0.04 0.08 Miles

N
W E
S

1:5,000

FIRE HAZARD ZONES & RESPONSIBILITY AREAS
STATE RESPONSIBILITY AREA



CASE: AP 2024-0007
OWNER: FORD, David
APN: 160-100-11
APLCT: David & Ina Ford
AGENT:
ADDRESS: 11167 West Road

L LOMA Letters
1% Annual Chance Flood Hazard
Public Roads
Private Roads
Driveways/Unnamed Roads
Assessors Parcels

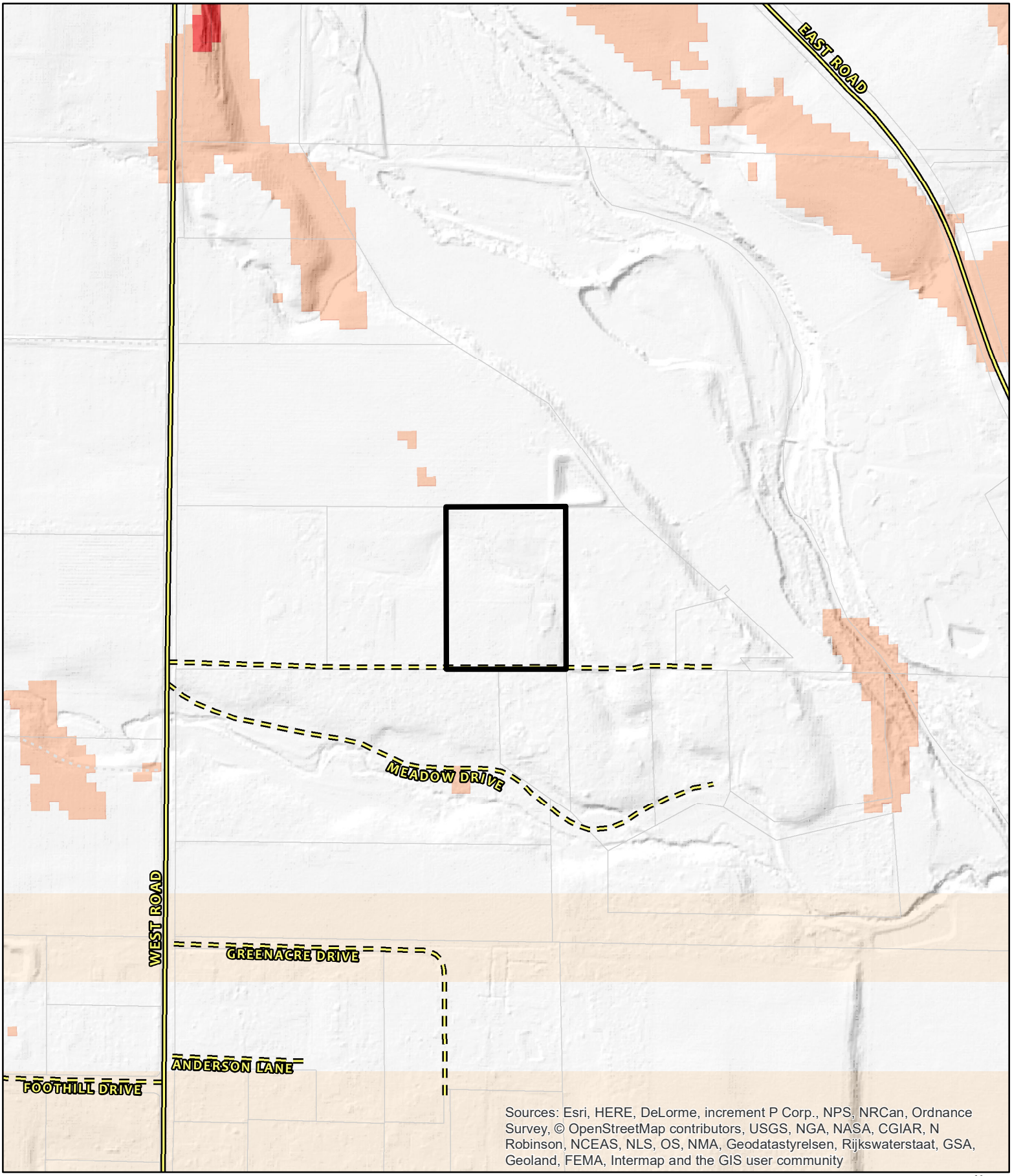
0 225 450 Feet
0 0.04 0.08 Miles

N W E S

1:5,000

FLOOD ZONES

THIS MAP AND DATA ARE PROVIDED WITHOUT WARRANTY OF ANY KIND.
DO NOT USE THIS MAP TO DETERMINE LEGAL PROPERTY BOUNDARIES



Sources: Esri, HERE, DeLorme, increment P Corp., NPS, NRCan, Ordnance Survey, © OpenStreetMap contributors, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

CASE: AP 2024-0007
OWNER: FORD, David
APN: 160-100-11
APLCT: David & Ina Ford
AGENT:
ADDRESS: 11167 West Road

Public Roads
Private Roads
Driveways/Unnamed Roads

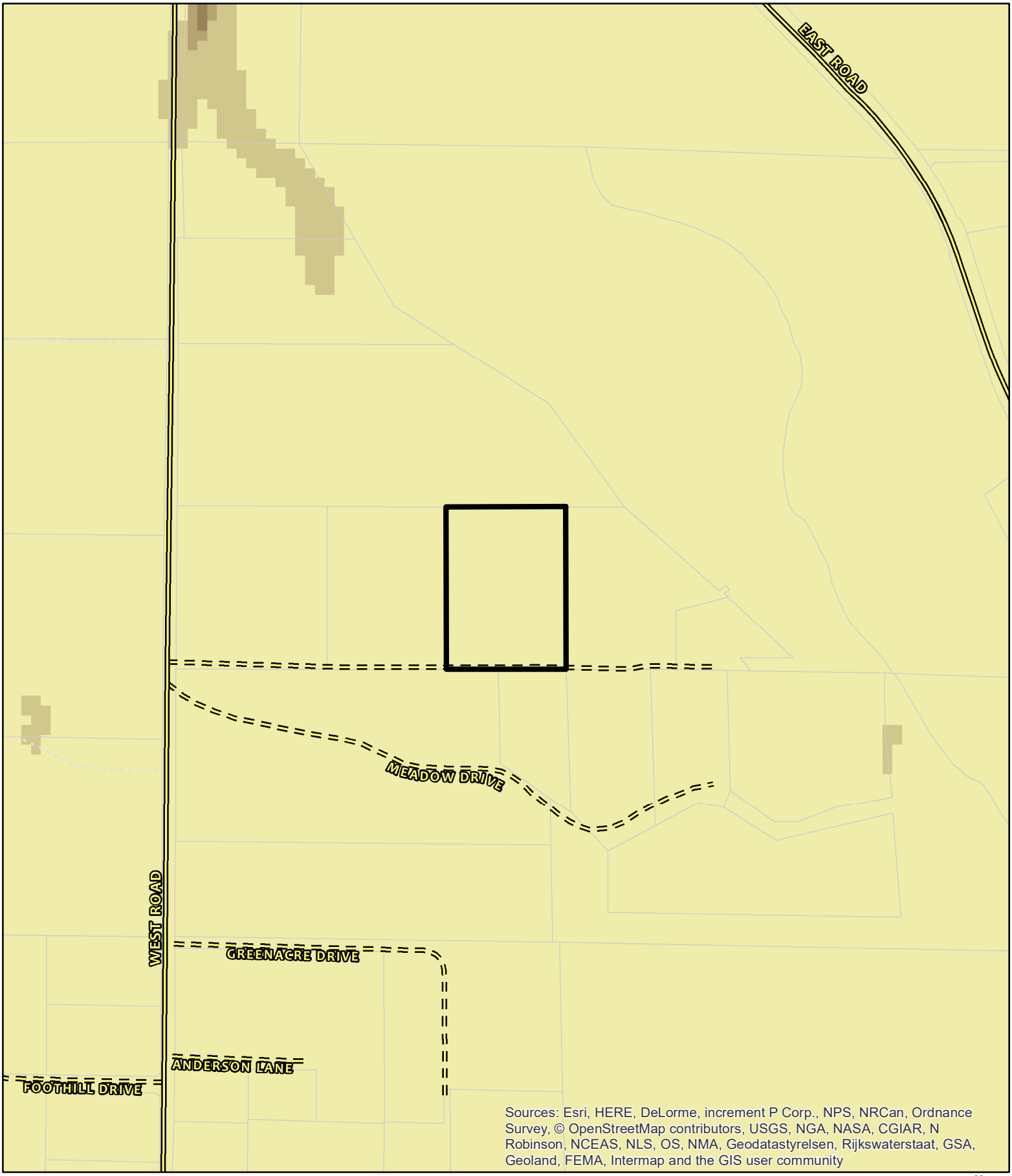
Assessors Parcels
0
5 - 7
8 - 10

0 225 450 Feet
0 0.04 0.08 Miles

N
W E
S

1:5,000

LANDSLIDE HAZARD



Sources: Esri, HERE, DeLorme, increment P Corp., NPS, NRCan, Ordnance Survey, © OpenStreetMap contributors, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

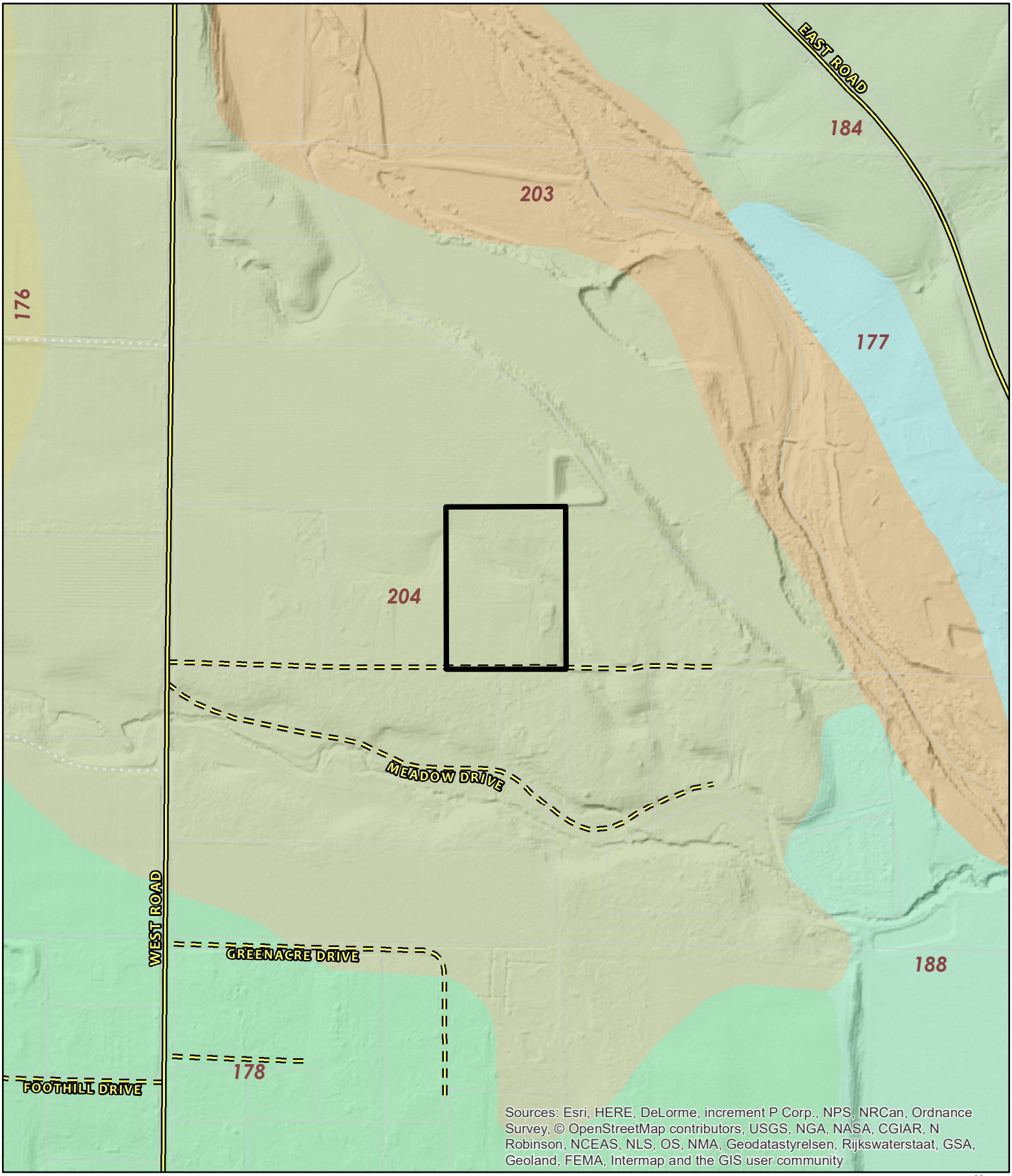
CASE: AP 2024-0007
OWNER: FORD, David
APN: 160-100-11
APLCT: David & Ina Ford
AGENT:
ADDRESS: 11167 West Road

Public Roads
Private Roads
Driveways/Unnamed Roads
Assessors Parcels
0° - 14°
14° - 30°
30° - 42°
42° - 52°

0 225 450 Feet
0 0.04 0.08 Miles
1:5,000

N W E S

ESTIMATED SLOPE



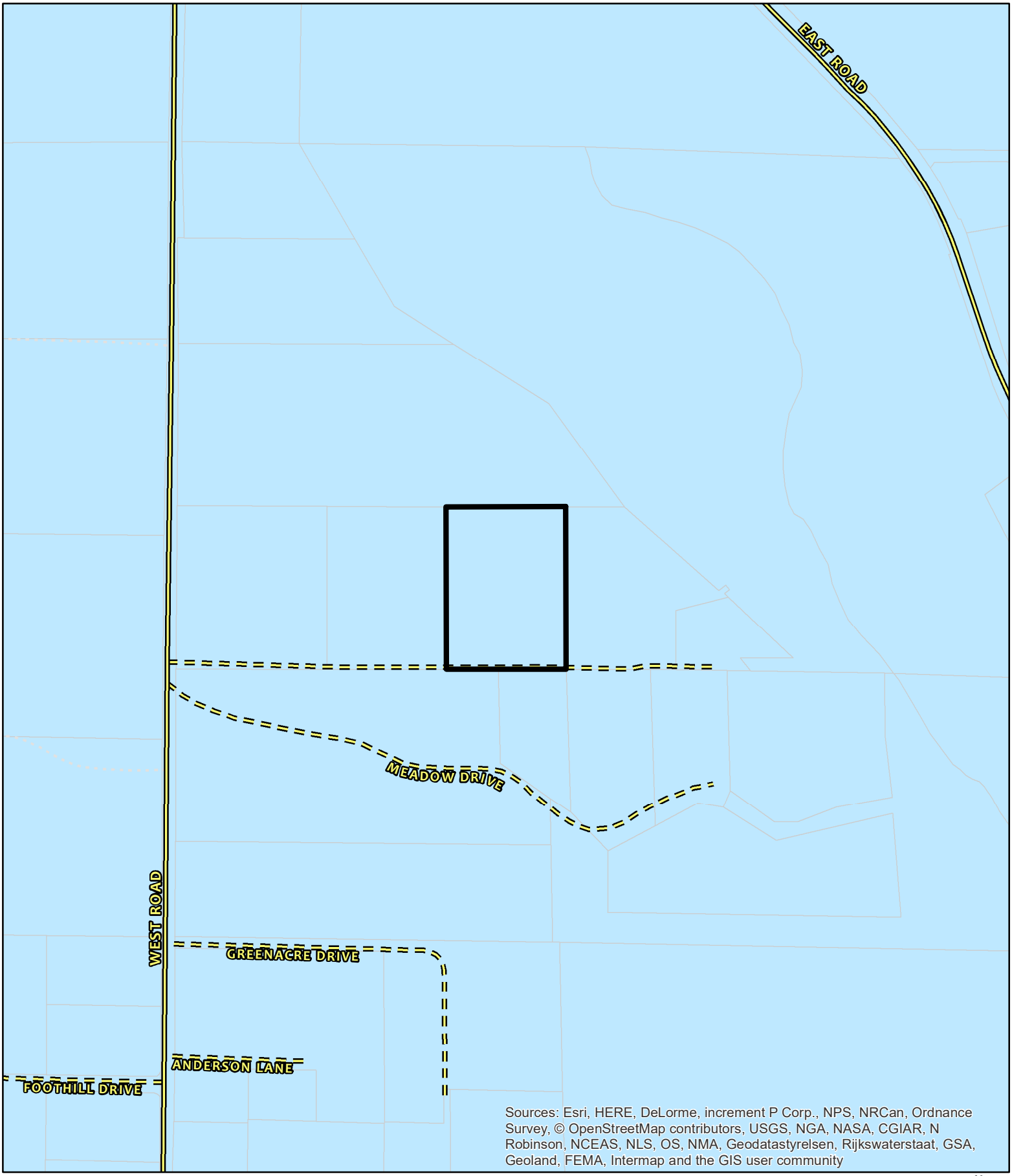
CASE: AP 2024-0007
OWNER: FORD, David
APN: 160-100-11
APLCT: David & Ina Ford
AGENT:
ADDRESS: 11167 West Road

Public Roads
Private Roads
Driveways/Unnamed Roads
Assessors Parcels

0 225 450 Feet
0 0.04 0.08 Miles
1:5,000

N W E S

EASTERN SOIL CLASSIFICATIONS



Sources: Esri, HERE, DeLorme, increment P Corp., NPS, NRCan, Ordnance Survey, © OpenStreetMap contributors, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

CASE: AP 2024-0007
OWNER: FORD, David
APN: 160-100-11
APLCT: David & Ina Ford
AGENT:
ADDRESS: 11167 West Road

Public Roads
Private Roads
Driveways/Unnamed Roads
Assessors Parcels
County Water Districts

0 225 450 Feet
0 0.04 0.08 Miles

N W E S

1:5,000

WATER DISTRICT