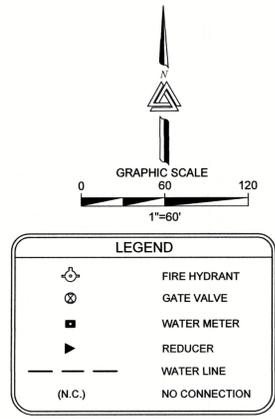


NO	REVISION	DATE



Water Utility Notes - The requirements stated in most current version of the Water Distribution System Design Criteria Technical Manual shall supersede these notes if they conflict.

- All taps to the COSM water system for private property shall be metered.
- When a tap is proposed on an existing Asbestos Cement (AC) pipe the contractor will replace the AC pipe segment with an approved PVC pipe per City Standard Product List (SPL). If the proposed tap is less than 24 inches from an AC pipe joint the replacement of the AC pipe will require additional segments to ensure adequate tap and joint separation. New pipe will be connected to the existing AC pipe with wide range coupling adaptor per City SPL.
- List of accepted metering devices can be found on the engineering webpage under SPL WW-144. All metering devices shall be located on public right-of-way in easement.
- All water utility lines leading to private property (except some authorized small domestic water lines) shall be provided with a testable back flow prevention device approved by the AWWA and the COSM. See detail.
- The back-flow prevention device must be located as close as possible to the public right-of-way on private property.
- A backflow prevention device with a low-flow indicator is required on all dedicated fire lines as per COSM details.
- Any bypass to a backflow prevention device must have a testable back flow prevention device at least equivalent to the primary line approved by the AWWA and the COSM.
- It is the responsibility of the owner and contractor to verify the type and size of the backflow prevention device with the COSM's Water Services (512)393-8010, for the property served, prior to construction.
- Accepted Metering Devices - See Standard Product List WW-144
- Accepted Utility Line Types (verify use with Inspector)

Use	Pipe Material	1" Pipe Sizes	2" SPL
Service lines	Copper Tubing	1"	WW-613
Service lines	Polyethylene Tubing	1"	WW-65
Service lines	PVC	2"	WW-587
Service lines	PVC	4", 6", 8", 12"	WW-308
Fire Hydrant Lead	DI	6"	WW-27
1" Distribution lines	PVC	8" or 12"	WW-308 or WW-308A
1" Distribution lines	DI	8" or 12"	WW-27 or WW-27F
Transmission lines	PVC	16" or 24"	WW-308C
Transmission lines	DI	16" or 24"	WW-27 or WW-27F

Note 1: If the required pipe size is not listed, then install the next larger size listed and reduce to the needed size at the meter per the COSM details. See COSM details for more information.

Note 2: The COSM Standard Products List (SPL) can be found on the engineering webpage.

Note 3: The minimum distribution system line size is eight (8) inches, with the exception of short Cul-de-Sacs as indicated in the City's Water Distribution System Design Criteria Technical Manual.
- Private property fire hydrants shall be RED - Public fire hydrants shall be factory coated aluminum based silver paint. No pre-owned hydrants permitted.
- All utility lines shall be tested after all appurtenances (hydrants, sampling ports, valves, etc.) are installed complete in place and located at final grade. All utility lines shall be tested from gate valve to gate valve at 200 psi for 10 minutes and @ 150 psi for 2 hours. A fire line dedicated for a fire protection system shall be tested @ 200 psi for 2 hrs.
- A licensed underground installer certified by the Texas Commission on Fire Protection must perform underground fire line installation (Fire Sprinkler System). Most plumbers and utility contractors do not meet this criteria! Please verify before construction.
- COSM to be given 48-hour notice (required) prior to all testing of utility lines. COSM inspection required for all utility lines.

- Public:**
- All utility taps, line installations, extensions, or adaptations in the public right-of-way, up to and including the metering device, for all Public Improvement Construction Projects will be inspected by the Engineering Inspector.
- Private:**
- All domestic water line installations, extensions, or adaptations on public or private property for all Site Plan Permits, including the valve, and meter will be inspected by a Building Inspector.
 - Private utility lines utilized by any fire protection system (fire line), or utility combo line will be inspected by the Fire Prevention Office.
 - All backflow prevention devices will be reviewed by the Backflow Prevention Manager (Public Services-Water Division) prior to installation.

- All backflow prevention devices must be tested by a State licensed/certified back flow prevention assembly tester. Test reports shall be on a form as prescribed by the COSM-Public Services Water Division. All testers submitting inspection results must be registered prior to testing devices by the Public Services Water Division. A copy of the test results are to be submitted to the COSM-Public Services Water Division and the COSM Inspector prior to activation of water service. A copy of the backflow test is to be attached to the back-flow prevention device that was inspected and/or tested.
- All water lines leading to private property must provide a bacteriological test to the inspector noted in the inspections section above. All bacteriological samplings must be certified within 20 days of project acceptance. On all dead-end lines and lines not yet tied into a water system, an automatic flush valve shall be installed with an approved water meter. After the pressure tests and bacteriological samples have passed, the Contractor must give notice to the Engineering Inspector for activation of the device.
- Fire hydrants must be placed or moved to finished elevation after installation per detail 511S-17-SM. Finished elevation is 18" to 24" from the center of the lowest connection to the adjacent grade.
- Fire hydrant is rejoined within 100 feet of the Fire Department Connection (FDC) if building is equipped with a fire sprinkler system.
- Fire hydrants are required to have a clear area of 5 feet. No plants, trees or obstacles allowed except as impact protection outlined by Fire Code

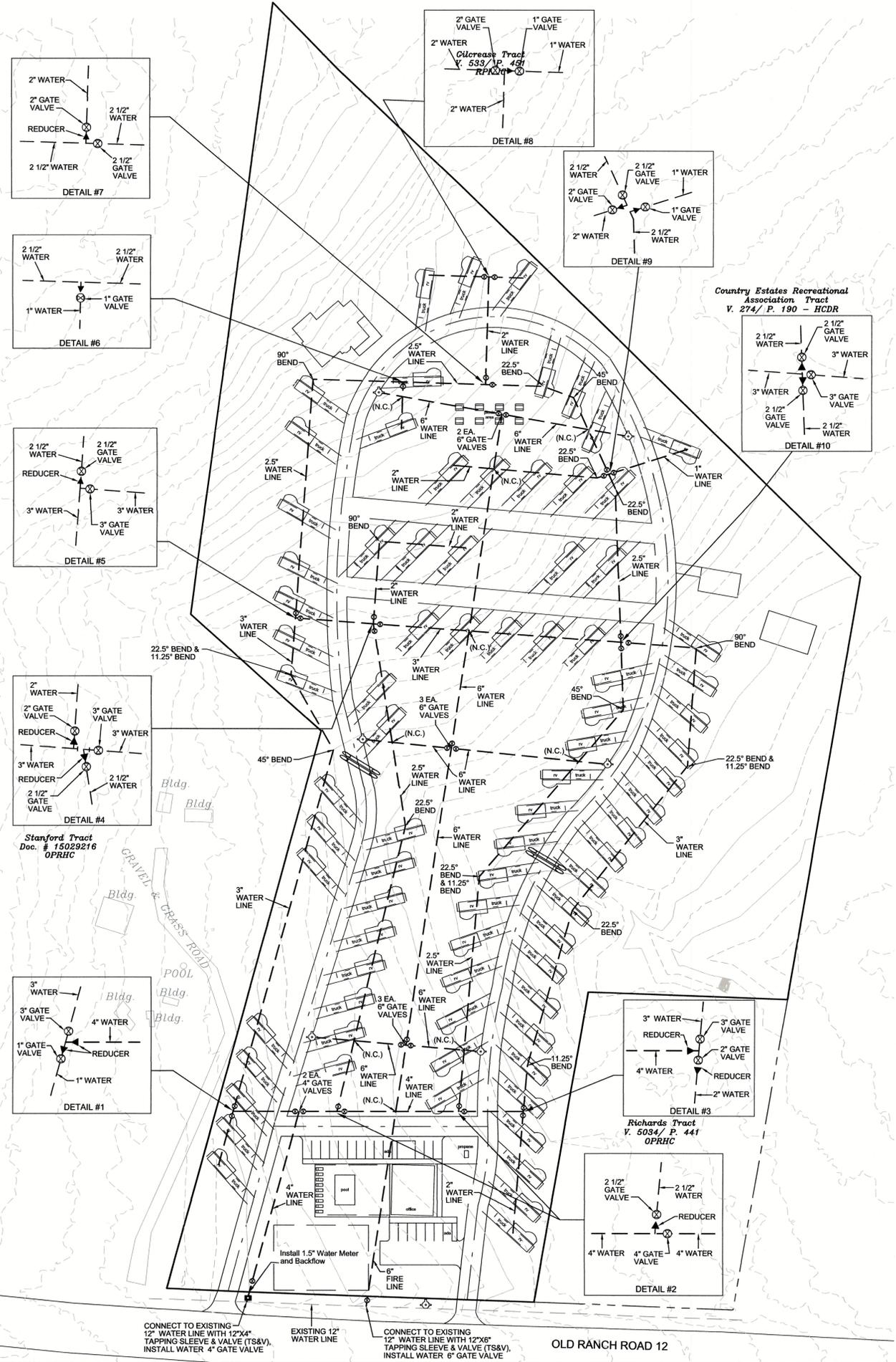
Select Development Type: Type II

Fixture	Occupancy	Type	Amount
Bathtub	Private	Faucet	
Bathtub	Public	Faucet	
Bidet	Private	Faucet	
Combination Fixture	Private	Faucet	
dishwashing machine	Private	Automatic	
Drinking fountain	Offices, etc.	3/8" valve	
Kitchen sink	Private	Faucet	80
Kitchen sink	Hotel, Restaurant	Faucet	1
Laundry trays(1 to 3)	Private	Faucet	
Lavatory	Private	Faucet	80
Lavatory	Public	Faucet	5
Service sink	Offices, etc.	Faucet	
Shower head	Public	Mixing Valve	4
Shower head	Private	Mixing Valve	80
Urinal	Public	1" flush valve	
Urinal	Public	3/4" flush valve	1
Urinal	Public	flush tank	
Washing Machine(8 lb.)	Private	Automatic	
Washing Machine(8 lb.)	Public	Automatic	3
Washing Machine(15 lb.)	Public	Automatic	
Water closet	Private	Flush Valve	
Water closet	Private	Flush tank	80
Water closet	Public	Flush Valve	
Water closet	Public	Flush tank	
Water closet	Private or Public	Flushometer tank	
Bedpan Washers	AWWA Fixtures		
Dental Unit	AWWA Fixtures		
(Hose-50 ft. Wash Down)			
-1/2 in	AWWA Fixtures		
-5/8 in	AWWA Fixtures		
-3/4 in	AWWA Fixtures		

AWWA = 114.39 GPM
IPC = 124 GPM

This development's lowest Peak Demand from AWWA and IPC is 114.39 gpm. This development will need to install a 1.5" or 2" meter and has a LUE of [32.5]

Note
Each RV Slip is assumed to have kitchen sink, lavatory, shower, and water closet.



CONNECT TO EXISTING 12" WATER LINE WITH 12"x4" TAPPING SLEEVE & VALVE (TS&V). INSTALL WATER 4" GATE VALVE

EXISTING 12" WATER LINE

CONNECT TO EXISTING 12" WATER LINE WITH 12"x6" TAPPING SLEEVE & VALVE (TS&V). INSTALL WATER 6" GATE VALVE

OLD RANCH ROAD 12

This drawing was prepared by TRI-TECH Engineering, LP (TRI-TECH) as an instrument of service, and shall remain the property of TRI-TECH. The information herein shall be used only by the client to whom the services are rendered and only for the purpose of constructing or installing the work as shown at the designated address. Any other use, including (without limitation) any reproduction or alteration, is strictly prohibited, and the user shall hold harmless and indemnify TRI-TECH from all liabilities which may arise from such unauthorized use.

NATURE'S SYMPHONY RV PARK
ONSITE WATER SYSTEM LAYOUT
2404 Ranch Road 12
CITY OF SAN MARCOS
HAYS COUNTY, TEXAS



TRI-TECH
ENGINEERING, L.P.
155 RIVERWALK DRIVE #666
SAN MARCOS, TX 78666
PH: 512-440-0222

PROJ. NO: SM-23-1130
DRAWN BY: AC
CHECKED BY: AC
DESIGN BY: AC
DATE: 05/13/2025
SCALE: 1"=60'
SHEET:
1 OF 1