DRAIN/WATER CROSSING DETAIL "N"
NOT TO SCALE

PROP. GROUND
42" RCP
5'(min.)
0.33' (TYP.)
2.00" MIN.
7.57'
5'(min.)
8" PVC PIPE
5.62 L.F. - 8" PVC PIPE
14 L.F. - 8" PVC PIPE
8" PVC PIPE
5.62 L.F. - 8" PVC PIPE
1-8" 1/8 BEND, M.J.
1-8" 1/8 BEND, M.J.
4-8" RETAINER GLAND
1-8" 1/8 BEND, M.J.
1-8" 1/8 BEND, M.J.
4-8" RETAINER GLAND

TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
NOT-TO-SCALE

FINISHED GROUND/PAVEMENT (TOP OF GRADE)
PROPOSED WATER LINE
12" MIN.
WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER CROSSING
SEPARATION DISTANCE AND PROTECTION REQUIREMENTS TO COMPLY WITH 30 TAC 217.53(d) AND 290.44(e)
PROPOSED SANITARY SEWER LINE
10' 10'

LOCATION MAP
NOT-TO-SCALE

SITE
CITY OF SAN ANTONIO
SE I-410 LOOP

SCALE: 1" = 50'
0' 50' 100' 150'

WATER LEGEND

PROJECT LIMITS	
EXISTING WATER	FIRE HYDRANT
EXISTING SEWER	MANHOLE
PROPOSED SEWER	
PROPOSED WATER	FIRE HYDRANT
PROPOSED 3/4" SINGLE SERVICE WITH 5/8" METER	
PROPOSED 1" DUAL SERVICE WITH 5/8" METER	
3/4" SINGLE IRRIGATION SERVICE WITH 5/8" METER	IRR
JOINT RESTRAINT	
EXISTING WELL	
VEHICULAR NON ACCESS EASEMENT	VNAE

FIRE FLOW NOTE:
IN AN EFFORT TO MEET THE CITY OF SAN ANTONIO'S FIRE FLOW REQUIREMENTS FOR THE PROPOSED RESIDENTIAL DEVELOPMENT, THE PUBLIC WATER MAIN SYSTEM HAS BEEN DESIGNED FOR A MINIMUM FIRE FLOW DEMAND OF 1500 GPM AT 25 PSI RESIDUAL PRESSURE. THE FIRE FLOW REQUIREMENTS FOR INDIVIDUAL STRUCTURES WILL BE REVIEWED DURING THE BUILDING PERMIT PROCESS IN ACCORDANCE WITH THE PROCEDURES SET FORTH BY THE CITY OF SAN ANTONIO DIRECTOR OF DEVELOPMENT SERVICES DEPARTMENT AND THE SAN ANTONIO FIRE DEPARTMENT FIRE MARSHAL.

ROW PERMIT NOTE:
A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY RIGHTS-OF-WAY.

PRESSURE REDUCING VALVE NOTE:
PRESSURE REDUCING VALVE TO BE INSTALLED ON CUSTOMER'S SIDE OF METER BY HOMEBUILDER.

PRESSURE NOTE:
CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 565 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 565 FEET, THE DEVELOPER OR BUILDER SHALL INSTALL AT EACH LOT, ON THE CUSTOMER'S SIDE OF THE METER, AN APPROVED TYPE PRESSURE REGULATOR IN CONFORMANCE WITH THE PLUMBING CODE OF THE CITY OF SAN ANTONIO. NO DUAL SERVICES ALLOWED FOR ANY LOT(S) IF *PRV IS/ARE REQUIRED FOR SUCH LOT(S), ONLY SINGLE SERVICE CONNECTIONS SHALL BE ALLOWED.
*NOTE: A PRESSURE REGULATOR IS ALSO KNOWN AS A PRESSURE REDUCING VALVE (PRV).

JOINT RESTRAINT NOTE:
CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOINT RESTRAINING HARNESSES OR FIELD LOCK GASKETS AT ALL JOINTS WITHIN THE LENGTH SHOWN. CONTRACTOR SHALL INSURE THAT ALL TEES, BENDS, VALVES, ETC. HAVE A MINIMUM OF 5 FT. OF PIPE WITH NO JOINTS ON EACH SIDE OF THE FITTING. JOINT RESTRAINTS AND RETAINER GLANDS SHALL BE CALCULATED BY SAWS APPROVED PROGRAMS. THERE WILL BE NO SEPARATE PAY ITEM FOR RETAINER GLANDS AND/OR JOINT RESTRAINING HARNESSES AND GASKETS, BUT SHALL BE SUBSIDIARY TO THE UNIT COST PER LINEAL FOOT OF PIPE INSTALLED.

TRENCH EXCAVATION SAFETY PROTECTION:
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND /OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

WATER (SAWS PRESSURE ZONE 750)

DEVELOPER'S NAME: LENNAR HOMES OF TEXAS
ADDRESS: 100 NE LOOP 410, STE. 1155
CITY: SAN ANTONIO   STATE: TEXAS   ZIP: 78216
PHONE# (210) 403-6200   FAX# N/A
SAWS BLOCK MAP# 170536   TOTAL EDU'S 272   TOTAL ACREAGE 74.46
TOTAL LINEAR FOOTAGE OF PIPE: 8661.02 LF   PLAT NO.22-1180659
NUMBER OF LOTS 263   SAWS JOB NO. 23-1049

Title Block (right side)

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

ESPADA TRACT PHASE 1
San Antonio, Texas

OVERALL WATER DISTRIBUTION PLAN

EUGENE H. DAWSON III
112792
STATE OF TEXAS LICENSED PROFESSIONAL ENGINEER

PLAT NO. 22-11800659
JOB NO. 12632-08
DATE MAY 2023
DESIGNER JG
CHECKED DW DRAWN TC/JR
SHEET C4.04

Date: Sep 12, 2023, 1:20pm   User ID: tcamacho
File: P:\126\32\08\Design\Civil\Cad\126-3208.dwg

MATCHLINE "F" - SEE SHEET C4.05
MATCHLINE "F" - SEE SHEET C4.05

CABRAS RANCHO (50' RIGHT-OF-WAY)
MONCLOVA COVE (50' RIGHT-OF-WAY)
BUSTILLO PLACE (50' RIGHT-OF-WAY)
MUNOZ MANOR
YSASMENDI RIDGE (50' RIGHT-OF-WAY)
ESPADA RIDGE (VARIABLE WIDTH RIGHT-OF-WAY)
AQUEDUCT CREEK (50' RIGHT-OF-WAY)

FUTURE ESPADA UNIT 13
FUTURE ESPADA UNIT 15
FUTURE ESPADA UNIT 12

CAUTION!!! WATER/SEWER CROSSING

TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
NOT-TO-SCALE

FINISHED GROUND/PAVEMENT (TOP OF GRADE)

PROPOSED WATER LINE

WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER CROSSING

PROPOSED SANITARY SEWER LINE

SEPARATION DISTANCE AND PROTECTION REQUIREMENTS TO COMPLY WITH 30 TAC 217.53(d) AND 290.44(e)

10' | 10'

DETAIL "A"
NOT-TO-SCALE

EXISTING GROUND

APPROX. LOCATION 20" GAS MAIN. CONTRACTOR TO FIELD VERIFY EXACT LOCATION

PROPOSED 8" WATER LINE

PROPOSED WATER FLOW LINE

8" C-900 PVC (DR18)

60 LF OF 24" STEEL CASING

LOCATION MAP
NOT-TO-SCALE

SITE
CITY OF SAN ANTONIO

SCALE: 1" = 50'
0'   50'   100'   150'

EUGENE H. DAWSON III
112792

WATER LEGEND

PROJECT LIMITS	
EXISTING WATER	W
EXISTING SEWER	SS
PROPOSED SEWER	SS
PROPOSED WATER	W
PROPOSED 3/4" SINGLE SERVICE WITH 5/8" METER	
PROPOSED 1" DUAL SERVICE WITH 5/8" METER	
3/4" SINGLE IRRIGATION SERVICE WITH 5/8" METER	IRR
JOINT RESTRAINT	
EXISTING WELL	
VEHICULAR NON ACCESS EASEMENT	VNAE

FIRE HYDRANT
MANHOLE
FIRE HYDRANT

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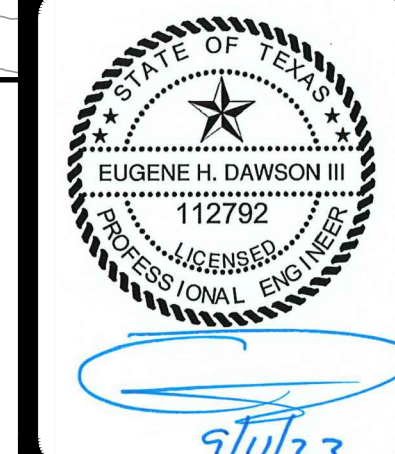
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WATER (SAWS PRESSURE ZONE 750)

DEVELOPER'S NAME:	LENNAR HOMES OF TEXAS	
ADDRESS:	100 NE LOOP 410, STE. 1155	
CITY:	SAN ANTONIO	STATE: TEXAS ZIP: 78216
PHONE#:	(210) 403-6200	FAX#: N/A
SAWS BLOCK MAP#: 170536	TOTAL EDU'S: 272	TOTAL ACREAGE 74.45
TOTAL LINEAR FOOTAGE OF PIPE:	6661.02 L.F.~12"PVC	PLAT NO. 22-1180659
NUMBER OF LOTS: 263	SAWS JOB NO. 23-1049	

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

ESPADA TRACT PHASE 1
SAN ANTONIO, TEXAS
OVERALL WATER DISTRIBUTION PLAN

PLAT NO.	22-11800659
JOB NO.	12632-08
DATE	MAY 2023
DESIGNER	JG
CHECKED DW	DRAWN TC/JR
SHEET	C4.05

Revision table
NO.	REVISION	DATE
1	REVISED FH LAYOUT, FUTURE UNIT NAME, HYDRO, GATE VALVES, REMOVED BENDS, WATER ALIGNMENT	05/03/23
2	REVISED PROPERTY INFO, REVISED SAWS BLOCK EDU'S AND NUMBER OF LOTS	09/11/23

Labels and callouts (selected)
1-12" ½2 BEND, M.J.
1-8"x6" ANCHOR TEE, M.J.
1-STD. FIRE HYDRANT ASSEMBLY
1-6" GATE VALVE, M.J.
1-6" VALVE BOX, COMPLETE
1-6" ¾ BEND, M.J.
1-STD. FIRE HYDRANT
6" D.I. PIPE, CUT AND RESTRAIN AS REQUIRED (SEE SAWS STD DWG DD-834-01)

1-8"X2" ECCENTRIC REDUCER M.J.
1-2" PERMANENT BLOW-OFF ASSEMBLY (SEE SAWS STD. DETAIL: DD-844-01)

1-8"X8" ANCHOR CROSS, M.J.
3-8" GATE VALVE, M.J.
3-6" VALVE BOX, COMPLETE

CAUTION!!! WATER/SEWER CROSSING
CAUTION!!! EXISTING HIGH PRESSURE GAS/WATER CROSSING N:13661379.97 E:2141162.77 60 L.F. STEEL CASING SEE DETAIL "A" THIS SHEET

CONTRACTOR TO OPEN CUT & EXPOSE EXISTING GAS MAIN. SEE "FOREIGN PIPELINES & UTILITY CROSSING" SECTION OF THE ENTERPRISE PRODUCTS ENCROACHMENT GUIDELINES.

50' PIPELINE EASEMENT (VOL.3403, PG. 338-340 D.R.) (VOL.3889, PG 545-547 D.R. RELEASE OF PIPELINE EASEMENT (VOL.4464, PG. 574-576 O.P.R.)

VARIABLE WIDTH MAINTENANCE ACCESS, SANITARY SEWER, WATER, ELECTRIC, GAS, TELEPHONE, CABLE TELEVISION, AND PUBLIC DRAINAGE EASEMENT, ENTIRE EASEMENT TO EXPIRE UPON INCORPORATION INTO FUTURE PLATTED PUBLIC STREET RIGHT-OF-WAY.

FUTURE ESPADA UNIT 13, 14, 15, 19
UNPLATTED A REMAINING PORTION OF 425.799 ACRES MARMAXX OPERATING CORP. (DOC# 20170188144 OPR)

LIFT STATION TEMPORARY ROAD

8" C-900 PVC (DR18)
12" C-900 PVC (DR18)