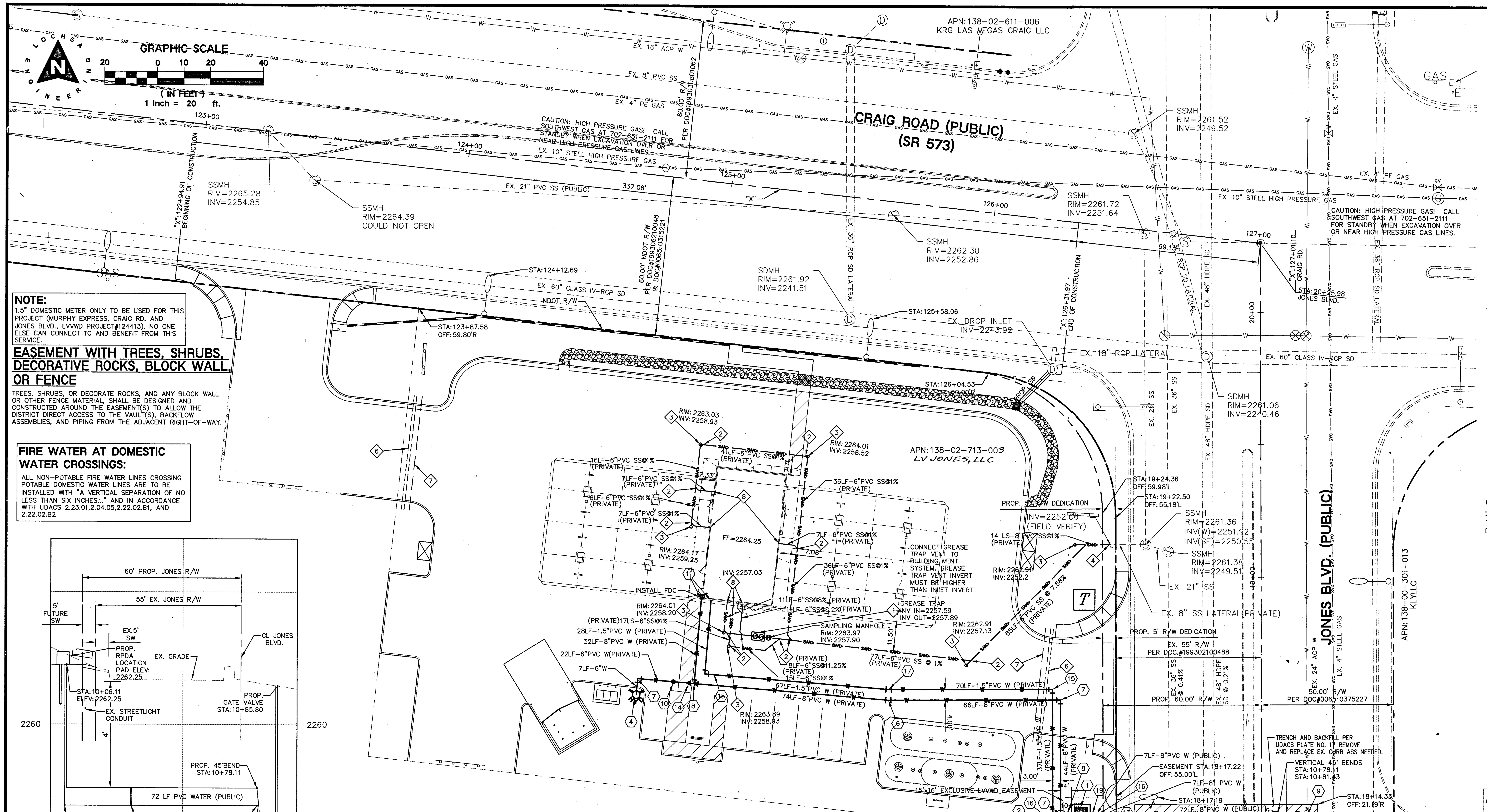


NOTE:

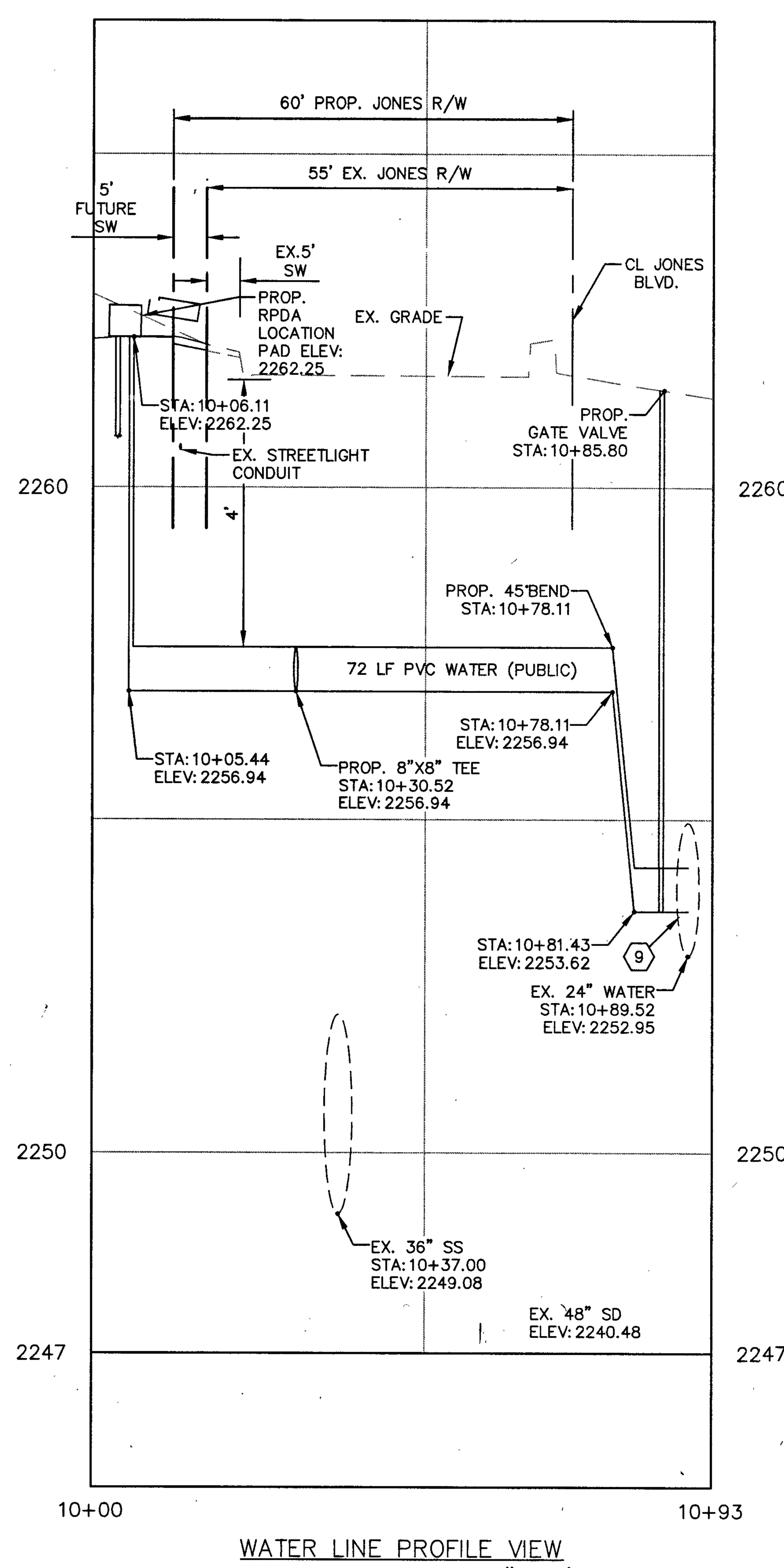
1.5" DOMESTIC METER ONLY TO BE USED FOR THIS PROJECT (MURPHY EXPRESS, CRAIG RD. AND JONES BLVD., LVVWD PROJECT#124413). NO ONE ELSE CAN CONNECT TO AND BENEFIT FROM THIS SERVICE.

EASEMENT WITH TREES, SHRUBS, DECORATIVE ROCKS, BLOCK WALL, OR FENCE

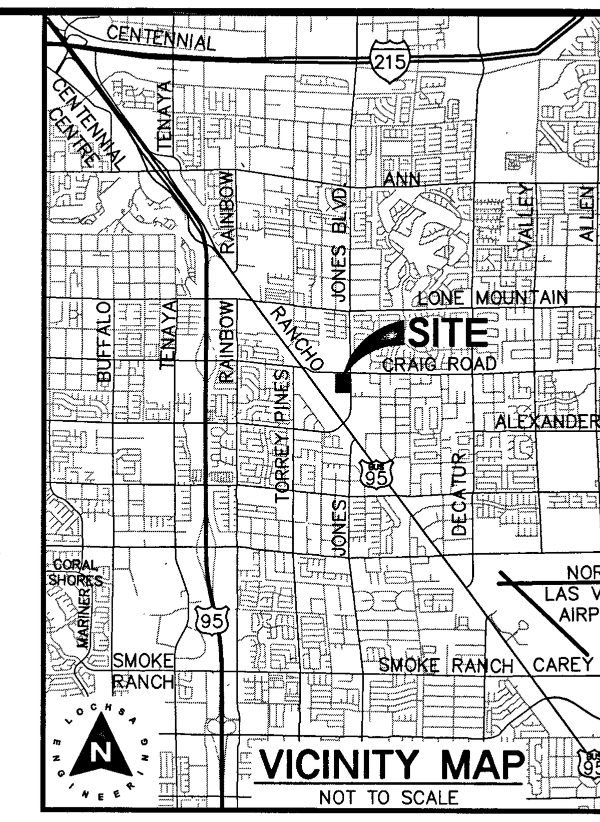
TREES, SHRUBS, OR DECORATE ROCKS, AND ANY BLOCK WALL OR OTHER FENCE MATERIAL, SHALL BE DESIGNED AND CONSTRUCTED AROUND THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS TO THE VAULT(S), BACKFLOW ASSEMBLIES, AND PIPING FROM THE ADJACENT RIGHT-OF-WAY.

FIRE WATER AT DOMESTIC WATER CROSSINGS:

ALL NON-POTABLE FIRE WATER LINES CROSSING POTABLE DOMESTIC WATER LINES ARE TO BE INSTALLED WITH "A VERTICAL SEPARATION OF NO LESS THAN SIX INCHES..." AND IN ACCORDANCE WITH UDACS 2.23.01,2.04.05,2.22.02.B1, AND 2.22.02.B2



WATER LINE PROFILE VIEW
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=2'



VICINITY MAP
NOT TO SCALE

SEWER NOTES:

1. PROPOSED GREASE INTERCEPTOR LOCATION PER DETAIL 8 ON C-5.0. REFER TO PLUMBING PLANS FOR SPECIFICATIONS.
2. SANITARY SEWER WYE CONNECTION
3. INSTALL SEWER CLEAN-OUT PER DETAIL 4 ON C-5.0.
4. POINT OF CONNECTION, REMOVE CAP AND CONNECT. CONTRACTOR TO VERIFY INVERT ELEVATION
5. INSTALL TERMINAL END SEWER CLEAN-OUT PER DETAIL 7 ON C-5.0.
6. INSTALL (2) 4"PVC SLEEVES 30" BELOW FINAL GRADE UNDER DRIVEWAY. EXTEND SLEEVES 2 FEET BEYOND BACK OF PROPOSED CURB OR EDGE OF PAVEMENT. STAKE BOTH ENDS OF EACH SLEEVE WITH CAPPED VERTICAL PVC PIPE, 12" ABOVE GRADE. DO NOT ALLOW SOIL OR WATER TO ENTER SLEEVES DURING OR AFTER CONSTRUCTION.
7. INSTALL (1) 4"PVC SLEEVES 30" BELOW FINAL GRADE UNDER DRIVEWAY FOR IRRIGATION LINE. EXTEND SLEEVE 2 FEET BEYOND BACK OF PROPOSED CURB OR EDGE OF PAVEMENT. STAKE BOTH ENDS OF SLEEVE WITH CAPPED VERTICAL PVC PIPE, 12" ABOVE GRADE. DO NOT ALLOW SOIL OR WATER TO ENTER SLEEVES DURING OR AFTER CONSTRUCTION.
8. STUB AND CAP. REFER TO PLUMBING PLANS FOR CONTINUATION

WATER NOTES:

- ALL WATER CONSTRUCTION TO BE DONE IN ACCORDANCE WITH "UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS (UDACS)" LATEST EDITION.

1. INSTALL 8" RPDA PER UDACS PLATE NO. 56.
2. INSTALL 1.5" RPPA PER JDACS PLATE NO. 8
3. INSTALL 1.5" WATER METER & RPPA PER UDACS PLATE No.4.
4. INSTALL FIRE HYDRANT W/GATE VALVE PER UDACS PLATE NO. 40
6. INSTALL 5° BEND (SAME SIZE AS PIPE) W/ THRUST BLOCK PER UDACS PLATE NO. 31.
7. INSTALL 90° BEND (SAME SIZE AS PIPE) W/THRUST BLOCK PER UDACS PLATE NO. 31.
8. INSTALL TEE (SAME SIZE AS PIPES) W/ THRUST BLOCK PER UDACS PLT. 31.
9. CONNECT TO EXISTING WATER MAIN AND INSTALL 24"X8" WET TAP & TAPPING SLEEVE (SAME SIZE AS PIPE) AND 8" TAPPING VALVE PER UDACS PLATE NO. 34 AND UDACS SECTION 2.24.01A.
10. INSTALL GATE VALVE (SAME SIZE AS PIPE) W/ANCHOR BLOCK PER UDACS PLT. 30.
11. STUB WATER SERVICE. REFER TO PLUMBING PLANS FOR CONTINUATION.
12. INSTALL 1" RPPA PER UDACS PLT. 8. REFER TO LANDSCAPING/ IRRIGATION PLANS FOR CONTINUATION.
13. INSTALL SERVICE SADDLE AND CORPORATION STOP PER UDACS PLATE NO. 4.
14. INSTALL REDUCER W/ ANCHOR BLOCK (SAME SIZE AS PIPES) PER UDACS PLATE NO. 30.
15. INSTALL 90° BEND (1.5") PER UDACS PLATE NO. 31.
16. INSTALL TEE (1.5") PER UDACS PLT. 31.
17. INSTALL 5° BEND (1.5") PER UDACS PLATE NO. 31.
18. INSTALL 8"X8" TEE PER UDACES PLT.31 WOTH 8" GATE VALVE PER UDACS PLT.30
19. INSTALL 8" GATE VALVE PER UDACES PLT.30&39 WITHIN PAVEMENT, OUTSIDE EX. GUTTER.
20. INSTALL CAP PER UDACS PLT.31.

UTILITY CONFLICTS ADDITONAL NOTES:

GROUND PENETRATING RADAR (GPR) SHALL BE USED TO VERTICALLY/HORIZONTALLY LOCATE ALL CONFLICTING UTILITY LINES FOR WHICH THE SURVEY DOES NOT PROVIDE SUFFICIENT INFORMATION TO DETERMINE SAID LOCATION. SIZE OF LINE SHALL ALSO BE DETERMINED BY GPR.

UTILITY TRENCH NOTE:

THE SAWCUT LINES AND LIMITS OF A.C. REMOVAL AND REPLACEMENT SHALL BE DETERMINED BY A CNLV CONSTRUCTION SERVICES INSPECTOR; A.C. SHALL BE REPLACED BY MECHANICAL MEANS. TRENCH BACKFILL MATERIAL SHALL BE SAMPLED, DESIGNED, TESTED AND CERTIFIED PER CNLV TRENCH BACKFILL POLICY.

METER SIZES:

DOMESTIC: 1.5"

NOTE:

CONTRACTOR TO INCLUDE COST OF UNDERGROUND UTILITY DETECTION COMPANY TO LOCATE AND MARK ALL EXISTING UTILITIES PRIOR TO ANY DEMOLITION OR EXCAVATION. ENGINEER TO BE PROVIDED WITH AS-BUILT SKETCH OF EXISTING UTILITIES, AND IS TO BE NOTIFIED IMMEDIATELY OF ANY POTENTIAL CONFLICTS WITH PROPOSED UTILITIES AND/OR FINISHED GRADES.

NOTE:

REMOVAL OF EXISTING ACTIVE UTILITIES TO BE PHASED AS DIRECTED BY OWNER.

NOTE:

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARD FOR WATER DISTRIBUTION SYSTEMS (UDACS) FOR WATER AND STORM DRAIN CROSSING AND CLEARANCES.

FIRE FLOW CALCULATIONS

BASED ON:

SQUARE FOOTAGE:	1,400 SF
LARGEST AREA BETWEEN SEPARATION WALL:	N/A
BUILDING HEIGHT:	13'-10"
NUMBER OF STORIES:	1
TYPE OF CONSTRUCTION:	II B
EXPOSURES:	4
SPRINKLER SYSTEM:	YES
OCCUPANCY:	M
ROOF CONSTRUCTION:	METAL DECK
FLOW REQUIRED @ 20 PSI RESIDUAL:	1,500 GPM
MAX. STORAGE HEIGHT:	LESS THAN 12'

EX. STATIC WATER PRESSURE IS 66± psi IN STREET.

ESTIMATED UTILITY FEE SCHEDULE

WATER & SANITARY SEWER FEES TO BE PAID BY MURPHY:
WATER:

$ 1,621.00	-SERVICE CONNECTION INSTALLATION CHARGE
$ 17/FOOT OR 1,190.00 MIN	-FRONTAGE CONNECTION CHARGE
$ 7,200.00	-FACILITIES CONNECTION CHARGE
$ 700.00	-APPLICATION FEES
$ 1,085.00	-INSPECTION FEES
$19,170.00	-REGIONAL CONNECTION CHARGE
$30,966.00+/- TOTAL	

REDUCED PRESSURE DETECTOR ASSEMBLY (RPDA): (1) 8"

THE REDUCED PRESSURE DETECTOR ASSEMBLIES SHALL BE INSTALLED IN ACCORDANCE WITH THE UDACS PLATE No.56.

ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS TO THE VAULT(S) FROM THE ADJACENT RIGHT-OF-WAY.

EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

COORDINATION NOTE:

ADJUST AND/OR COLLAR ALL EXISTING VALVES, MANHOLES, PULLBOXES & VAULTS WITHIN THE WORK ZONE TO PROPOSED FINISHED GRADE, TYP.

UTILITY CONTACT INFORMATION

WATER
LAS VEGAS VALLEY WATER DISTRICT
1001 S. VALLEY VIEW BLVD
5857 E. FLAMINGO
PHONE: 702-258-3166

SEWER
LAS VEGAS CITY SEWER DEPT
495 S. MAIN STREET
LAS VEGAS, NV 89101
PHONE: 702-229-6227

ELECTRIC
NV ENERGY
6226 WEST SAHARA
LAS VEGAS, NV 89146
PHONE: 702-402-5555

TELEPHONE
CENTURY LINK
6700 VIA AUSTI PARKWAY
LAS VEGAS, NV 89119
PHONE: 702-222-4444

GAS
SOUTHWEST GAS
6355 SHATZ STREET
NORTH LAS VEGAS, NV 89115
PHONE: 702-365-2055

CABLE
COX COMMUNICATION
1700 W. VEGAS DRIVE
LAS VEGAS, NV

GENERAL UTILITY NOTES

A. ALL BUILDING WATER LINES FROM METER TOWARDS BUILDING SHALL BE SCHEDULE 40 PVC, MEETING ASTM D1785 & D2665 SPECIFICATIONS, AND SHALL BE RATED FOR USE WITH POTABLE WATER PER NSF STD. 61, WITH 36" MIN. COVER.

B. ALL SANITARY SEWER LINES SHALL BE SCHEDULE 40 PVC UNLESS OTHERWISE SPECIFIED BY THE UTILITY COMPANY, PROVIDE 36" MINIMUM COVER.

C. CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING UTILITY SERVICES WITH ADJACENT PROPERTY OWNERS.

D. ALL ELECTRIC AND TELEPHONE EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.

E. CONSTRUCTION SHALL NOT START ON ANY PUBLIC UTILITY SYSTEM UNTIL WRITTEN APPROVAL HAS BEEN RECEIVED BY THE ENGINEER FROM THE APPROPRIATE GOVERNING AUTHORITY AND CONTRACTOR HAS BEEN NOTIFIED BY THE ENGINEER.

F. PRIOR TO THE CONSTRUCTION OF OR CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, WATER MAIN OR ANY OTHER UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM GREENBERGFARROW ENGINEERS AND THE OWNER/DEVELOPER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF (72) HOURS PRIOR TO CONSTRUCTION. GREENBERGFARROW AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION.

G. CONTRACTOR SHALL COMPLY COMPLETELY WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION. THIS IS TO INCLUDE, BUT NOT LIMITED FOR ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH PERFORMANCE CRITERIA AS REQUIRED BY OSHA.

REDUCED PRESSURE PRINCIPLE ASSEMBLY (RPPA): (1) 1-1/2"

APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE No. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACK FLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVVWD.

ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY.

EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

A.P.N.:

138-02-713-003

BASIS OF BEARINGS:

THE BASIS OF BEARINGS IS THE SOUTHERLY LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 2, TOWNSHIP 20 SOUTH, RANGE 60 EAST M.D.,. AS SHOWN ON THAT MAP ON FILE IN FILE 192, PAGE 31 OF SURVERY IN THE CLARK COUNTY RECORDERS OFFICE. SAID LINE BEARS: (NORTH 83°42'46" WEST.

BENCHMARK:

BENCHMARK NO 5LVC02E4. CITY OF LAS VEGAS BENCHMARK. RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF CRAIG ROAD AND JONES BOULEVARD. ELEVATION=2261.88 FEET / 689.423 METERS (NAVD 88 DATUM)

APPROVED FOR CONSTRUCTION

M. Dishari, for [signature]
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
DATE: 10/10/16 PROJECT No. 124413
LVVWD APPROVED FIRE FLOW = 1500 GPM AT 20 PSI RESIDUAL

CITY OF LAS VEGAS FIRE DEPARTMENT APPROVAL

BY: [signature] DATE: 9/12/16

APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS. FIRE FLOW 1500 GPM AT 20 P.S.I. RESIDUAL.

NOTE:

LOCHSA ENGINEERING ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITY LOCATIONS AND ELEVATIONS. THE UTILITIES SHOWN ON THIS PLAN ARE FROM THE BEST AVAILABLE INFORMATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES, INCLUDING BUT NOT LIMITED TO, THE WATER, FIRE, SANITARY SEWER, STORM SEWER, TELEPHONE, POWER, GAS, AND IRRIGATION LINES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. IF CONFLICT EXISTS IN THE FIELD, THE CONTRACTOR IS TO NOTIFY THE PROJECT ARCHITECT, OWNER'S REPRESENTATIVE AND THE PROJECT ENGINEER IMMEDIATELY.

SAFETY ALERT
Call Before You Overhead
1-702-227-2929
AVOID HITTING UNDERGROUND TRAFFIC SIGNAL AND STREET LIGHT SYSTEM CONDUITS IT'S COSTLY
Call before you UnderGround
1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION
Call before you dig
Avoid cutting underground utility lines. It's costly.
Call 811
or 1-800-227-2600

LEGEND

CL OR SURVEY LINE	EASEMENT LINE	
PROPERTY LINE	SAWCUT LINE	
ROW LINE	SCARP LINE	

DESCRIPTION:	CONTOUR LINES	EDGE OF PAVEMENT	"A" TYPE CURBS	"L" TYPE CURBS	WALLS	FENCES	AC PAVEMENT	CONCRETE	SPOT ELEVATIONS	SIGNS	MANHOLE W/ DESCRIPTION	MANHOLE DESCRIPTIONS	FIRE HYDRANTS	GATE VALVES	REDUCERS	CLEAN CUTS	UTILITY BOX OR VAULT	BACKWATER VALVES	100w HPS STREETLIGHTS	150w HPS STREETLIGHTS	200w HPS STREETLIGHTS	250w HPS STREETLIGHTS
EXISTING:	(2210)								(12.34) BC		Ⓢ	Ⓢ = SANITARY SEWER; Ⓓ = STORM DRAIN						BWV				
PROPOSED:	(2122)								12.34 BC		Ⓢ	Ⓔ = ELECTRICAL; Ⓣ = TELEPHONE						BWV				

MURPHY OIL USA, INC.
MURPHY USA
422 NORTH WASHINGTON
EL DORADO, AR 71730

Lochsa engineering
6345 South Jones Blvd.
Suite 100
Las Vegas, NV 89118
Phone (702) 365-9312
Fax (702) 365-9317
www.lochsa.com

REV.:	DATE:	BY:	DESCRIPTION:

SHEET: UTILITY PLANS SHEET 1 OF 1
TITLE: MURPHY EXPRESS CRAIG RD. AND JONES BLVD. CITY OF LAS VEGAS, NEVADA

PROJECT No.:	151068
DATE:	04/07/16
SCALE:	1"=20'
DRAWN BY:	LAS
DESIGNED BY:	LAS
CHECKED BY:	GMM

SEAL: PROFESSIONAL ENGINEER, STATE OF NEVADA, GUY M. MORRIS, EXP. 12-31-17, CIVIL, No. 14526
3-25-16

SHEET No. C-4.0
SHEET 7 OF 8
CLV No. 107V6740 H#63369

PROJ#:124413 AGR#:115819 QS:138-02-SE

9/7/2016 2:56 PM
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