

SEWER CONSTRUCTION NOTES: NOTE:

- NOT ALL NOTES USED ON THIS SHEET -
- 1. INSTALL SEWER CLEANOUT PER DETAIL 2 SHEET C8-01.
- 2. CONNECT TO EXISTING MANHOLE (NOT USED)
- 3. INSTALL TYPE 1 MANHOLE PER C.C.A.U.S.D. #403
- 4. STUB AND CAP 5' FROM BUILDING.

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 TO THE SEWER MAIN CROSSINGS AND CLEARANCES.

NOTE:

INSTALL PLUMBING MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER UDACS PLATE 27.
INSTALL VEHICULAR PROTECTION BOLLARDS AS NEEDED PER UDACS PLATE 23.
ALL SEWER / STORM DRAIN CROSSINGS WATER LINES MUST CONFORM TO SECTION 2.10 OF THE UDACS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

WATER CONSTRUCTION NOTES:

- ALL WATER CONSTRUCTION TO BE DONE IN ACCORDANCE WITH DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS (U.D.A.C.S.) LATEST EDITION. - NOT ALL NOTES USED ON THIS SHEET -
- 1. INSTALL 6" DCDA PER U.D.A.C.S. PLATE No.11C
- 2. INSTALL 2" DOMESTIC WATER METER
- 3. INSTALL 8"x8" REDUCER W/ANCHOR BLOCK PER U.D.A.C.S. PLATE No. 3
- 4. INSTALL 2" RPPA PER U.D.A.C.S. PLATE No. 11C
- 5. INSTALL 10"x8" MECHANICAL JOINT TAPPING TEE WITH 8" TAPPING VALVE PER U.D.A.C.S. PLATE No. 22, THRUST BLOCK PER U.D.A.C.S. PLATE No. 5 AND U.D.A.C.S. PLATE No. 6C
- 6. INSTALL 2" CL. 150, C900 PVC PIPE
- 7. INSTALL 90° BEND W/THRUST BLOCK (SAME SIZE AS PIPE) PER U.D.A.C.S. PLATE No. 5
- 8. INSTALL TEE (SAME SIZE AS PIPE)
- 9. INSTALL 8" CL. 200, C900 PVC PIPE
- 10. INSTALL FIRE HYDRANT W/GATE VALVE PER U.D.A.C.S. PLATE No. 7
- 11. STUB AND CAP 5 FEET FROM THE BUILDING W/ 3/4" METER
- 12. INSTALL VALVE (SAME SIZE AS PIPE) PER U.D.A.C.S. PLATE No. 8
- 13. INSTALL 6" CL. 200, C900 PVC PIPE
- 14. INSTALL 10" GATE VALVE
- 15. WALL MNTD FDC-SEE MECHANICAL PLAN FOR CONTINUATION

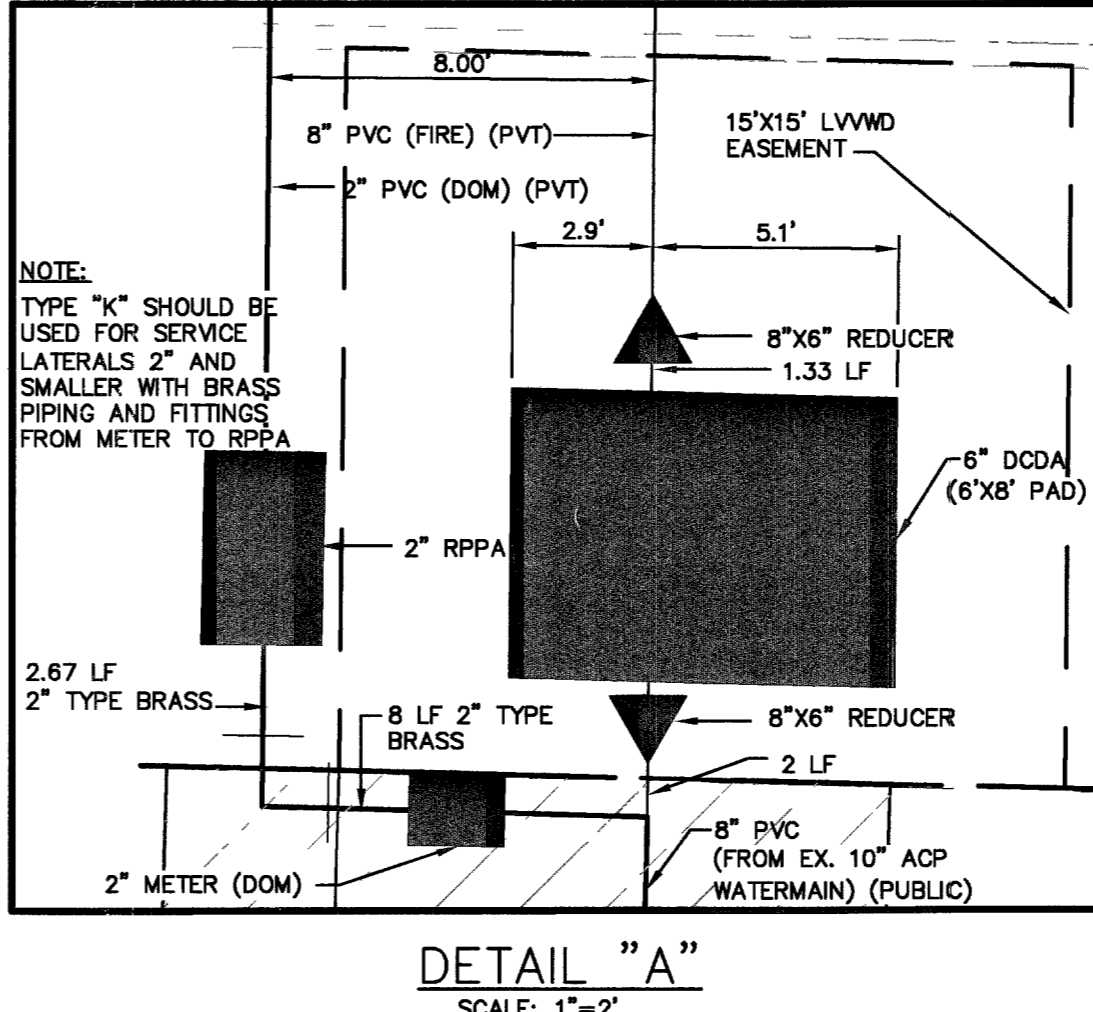
ABANDONMENT OF EXISTING SERVICE LATERALS:

THE CONTRACTOR SHALL NOTIFY THE AGENCY TWO (2) FULL BUSINESS DAYS PRIOR TO THE REQUESTED REMOVAL THAT TO ALLOW THE AGENCY TO TAKE THE FINAL METER READING AND TO NOTIFY THE AGENCY'S INSPECTOR OF THE IMPENDING WORK. THE CONTRACTOR MAY THEN BEGIN REMOVAL PROCEDURES FOR THE AFFECTED SERVICE AS FOLLOWS:
ALL VALVES TO BE ABANDONED IN THE CLOSED POSITION, UNLESS SHOWN OTHERWISE, BY REMOVING A MINIMUM OF THE TOP TWENTY-FOUR (24) INCHES OF THE VALVE BOX AND THEN FILLING THE BOTTOM OF THE BOX WITH A MINIMUM OF EIGHT (8) INCHES OF SAND OR TYPE II COGREGATE BASE. THE REMAINING PORTION OF THE VALVE BOX SHALL BE FILLED WITH CONCRETE HAVING A COMPRESSIVE STRENGTH OF AT LEAST TWO THOUSAND (2,000) PSI.
THE LATERAL MUST BE CUT WITHIN THREE (3) FEET OF THE ABANDONED VALVE, OR AS SHOWN ON PLANS, AND CAPPED. THE CONTRACTOR SHALL CUT THE EXISTING PIPE WHERE SHOWN ON THE DRAWING AND INSTALL A CAP COMPLETE WITH THRUST BLOCK, WHERE A JOINT OR COUPLING IN THE EXISTING PIPE IS UNCOVERED AT THE CUT AND CAP LOCATIONS, THE INSTALLATION OF A PLUG MAY BE PERMITTED WITH AGENCY APPROVAL. A CONCRETE THRUST BLOCK SHALL BE INSTALLED AT ALL CAP OR PLUG LOCATIONS IN ACCORDANCE WITH THE PROVISIONS OF U.D.A.C.S. PLATE 5.

THIS PROPERTY MAY HAVE STATIC WATER PRESSURE IN EXCESS OF 80 PSI. THE UNIFORM PLUMBING CODE REQUIRES THAT TO ALLOW THE AGENCY TO TAKE THE FINAL METER READING AND TO NOTIFY THE AGENCY'S INSPECTOR OF THE IMPENDING WORK. THE CONTRACTOR MAY THEN BEGIN REMOVAL PROCEDURES FOR THE AFFECTED SERVICE AS FOLLOWS:
ALL VALVES TO BE ABANDONED IN THE CLOSED POSITION, UNLESS SHOWN OTHERWISE, BY REMOVING A MINIMUM OF THE TOP TWENTY-FOUR (24) INCHES OF THE VALVE BOX AND THEN FILLING THE BOTTOM OF THE BOX WITH A MINIMUM OF EIGHT (8) INCHES OF SAND OR TYPE II COGREGATE BASE. THE REMAINING PORTION OF THE VALVE BOX SHALL BE FILLED WITH CONCRETE HAVING A COMPRESSIVE STRENGTH OF AT LEAST TWO THOUSAND (2,000) PSI.
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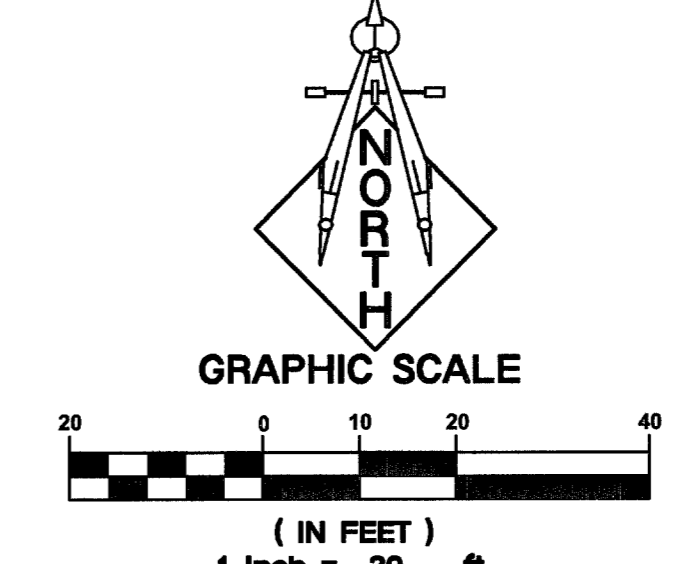
ESTIMATE OF QUANTITIES:

WATER (FIRE)		WATER (DOMESTIC)	
8" PVC (PUB)	57 LF	8" PVC (PUB)	57 LF
8" PVC (PVT)	1,056 LF	2" PVC (PVT)	481 LF
6" PVC (PVT)	25 LF	8" WET TAP ASSEMBLY (PUB)	2 EA
6" DCDA	2 EA	RPPA	1 EA
8" GATE VALVE	2 EA	2" METER	1 EA
8" VALVE	2 EA	2" GATE VALVE	3 EA
8"x8" TEE	4 EA	2"x2" TEE	1 EA
8"x8" TEE	9 EA	2"-90° ELBOW	4 EA
8" ELBOW	7 EA	2" CAP	2 EA
8" CAP	2 EA	SEWER	
FIRE HYDRANT ASSEMBLY (PVT)	3 EA	8" PVC (PUB)	50 LF
FDC	8 EA	8" PVC (PVT)	157 LF
8" D.I.P.	9 LF	6" PVC	22 LF
		CLEANOUT	2 EA
		WYE	2 EA



INSTALLATION OF DOUBLE CHECK DETECTOR ASSEMBLY (2)-6"

THE DOUBLE CHECKS SHALL BE INSTALLED IN ACCORDANCE WITH THE UDACS PLATE 11C. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S), SO AS 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.



GENERAL UTILITY NOTES:

- 1. ALL WATER LINES 4" OR GREATER TO BE CL. 150, C900 PVC. ALL WATER LINES SMALLER THAN 4" TO BE SCH. 40, P.V.C. ALL WATER LINES CONNECTED TO REMOTE FIRE DEPT. CONNECTIONS TO BE CL. 200, C900 PVC.
- 2. ALL GRAVITY SANITARY SEWER LINES TO BE 30-35 PVC. ALL FORCE MAIN SANITARY SEWER LINES TO BE SCH. 40 PVC. PLATE No. 7
- 3. STATIC WATER PRESSURE IN ZONE 2538 = 78.0 PSI±.
- 4. WATER LINES TO HAVE THRUST BLOCKS CONSTRUCTED PER U.D.A.C.S. PLATE No. 5. THRUST BLOCKS TO BE LOCATED AT ALL ANGLE FITTINGS (BENDS), TEES, AND FIRE HYDRANTS. ANCHOR BLOCKS TO BE CONSTRUCTED, PER U.D.A.C.S. PLATE No. 3. ANCHOR BLOCKS TO BE LOCATED AT ALL IN-LINE REDUCERS AND GATE VALVES.
- 5. WET TAPS TO BE CONSTRUCTED IN CONFORMANCE WITH U.D.A.C.S. PLATE No. 22.
- 6. THE FIRE SAFETY CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING THE SIZE OF PIPING THAT IS REQUIRED TO CONNECT FROM THE FIRE WATER LOOP TO THE FIRE SPRINKLER RISER. LINE SIZE SHOWN FOR INFORMATION PURPOSES ONLY.
- 7. TRENCH BACKFILL FOR WATER LINES TO BE CONSTRUCTED PER U.D.A.C.S. PLATE No. 6A, 6B, 6C OR 6D.
- 8. TRENCH BACKFILL FOR STORM DRAIN LINES TO BE CONSTRUCTED PER D.C.S.W.C.S. DRAWING No. SD-16B.
- 9. ONLY SEWER LINES AND LATERALS MAY BE INSTALLED IN TRENCHES EXCAVATED FOR SEWER LINES. SEE D.C.S.W.C.S. SECTION 2.2.18 (TYPICAL).
- 10. WATER AND SEWER SEPARATION OF TRENCHES MUST BE AT LEAST 10' MINIMUM (TYPICAL). SEE D.C.S.W.C.S. SECTION 2.2.21 "A1", U.D.A.C.S. SECTION 2.19.01 "A".
- 11. CONTRACTOR TO SAWCUT AND REMOVE EXISTING ASPHALT AND CONCRETE AS NECESSARY FOR UTILITY TRENCHES. BACKFILL AND PATCH ALL TRENCHES AS INDICATED ON DETAILS AND/OR ACCORDING TO THE GOVERNING ENTITY.
- 12. THESE DRAWINGS MAY NOT INDICATE ALL EXISTING BURIED UTILITY LINES. CONTRACTOR TO EXERCISE GREAT CARE DURING EXCAVATION IN ORDER TO AVOID MAKING CONTACT WITH ANY EXISTING UTILITY LINES. IF UTILITY LINES ARE DAMAGED BY THE CONTRACTOR, SUCH DAMAGE SHALL BE REPLACED TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.
- 13. CONTRACTOR TO LOCATE AND VERIFY SIZE, LINE TYPE, CONDITION, DEPTH, PRESSURE, AND LOCATION OF ALL EXISTING UTILITY LINES WITHIN THE CONSTRUCTION AREA PRIOR TO CONSTRUCTION. THE CIVIL ENGINEER SHALL BE CONTACTED ONCE THE UTILITY LINE IS LOCATED.
- 14. CONTRACTOR/OWNER TO OBTAIN C.C.P.W. OFF-SITE IMPROVEMENT PERMIT FOR ALL WORK WITHIN PUBLIC RIGHT-OF-WAY.
- 15. CONTRACTOR TO VERIFY UTILITY STUB LOCATIONS AND SIZE WITH PLUMBING PLANS PRIOR TO INSTALLATION OF NEW UTILITIES.
- 16. LATERALS SHALL NOT BE CONNECTED INTO STUBS EXTENDING FROM MANHOLES, SERVICE LATERALS 6" OR SMALLER WILL NOT BE ALLOWED TO CONNECT TO MANHOLES. SEE D.C.S.W.C.S. SECTION 2.2.19 (TYPICAL).
- 17. ALL EXISTING STREET LIGHTS INDICATED ON THESE PLANS ARE SHOWN FOR INFORMATION PURPOSES ONLY. LOCATION IS APPROXIMATE UNLESS NOTED WITH STATION AND OFFSET.
- 18. ALL EXISTING GAS LINE LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATIONS ONLY. PROPOSED GAS LINES SHOWN ON THESE PLANS ARE FOR COORDINATION ONLY. SEE SOUTHWEST GAS PLANS FOR CONSTRUCTION.
- 19. ALL EXISTING ELECTRICAL LINES SHOWN ON THESE PLANS ARE APPROXIMATIONS ONLY. PROPOSED ELECTRICAL LINES SHOWN ON THESE PLANS ARE FOR COORDINATION ONLY. SEE ELECTRICAL PLANS FOR CONSTRUCTION.
- 20. SEE LEGEND FOR EXISTING AND PROPOSED UTILITY SYMBOLS.
- 21. ALL DIMENSIONS TO UTILITIES LINES ARE TO CENTERLINE OF PIPE UNLESS INDICATED OTHERWISE.
- 22. ALL LINEAR FEET OF STORM DRAIN AND SANITARY SEWER PIPE NOTED ON PLANS IS MEASURED FROM CENTER OF MANHOLE TO CENTER OF MANHOLE.

STORM DRAIN NOTE:

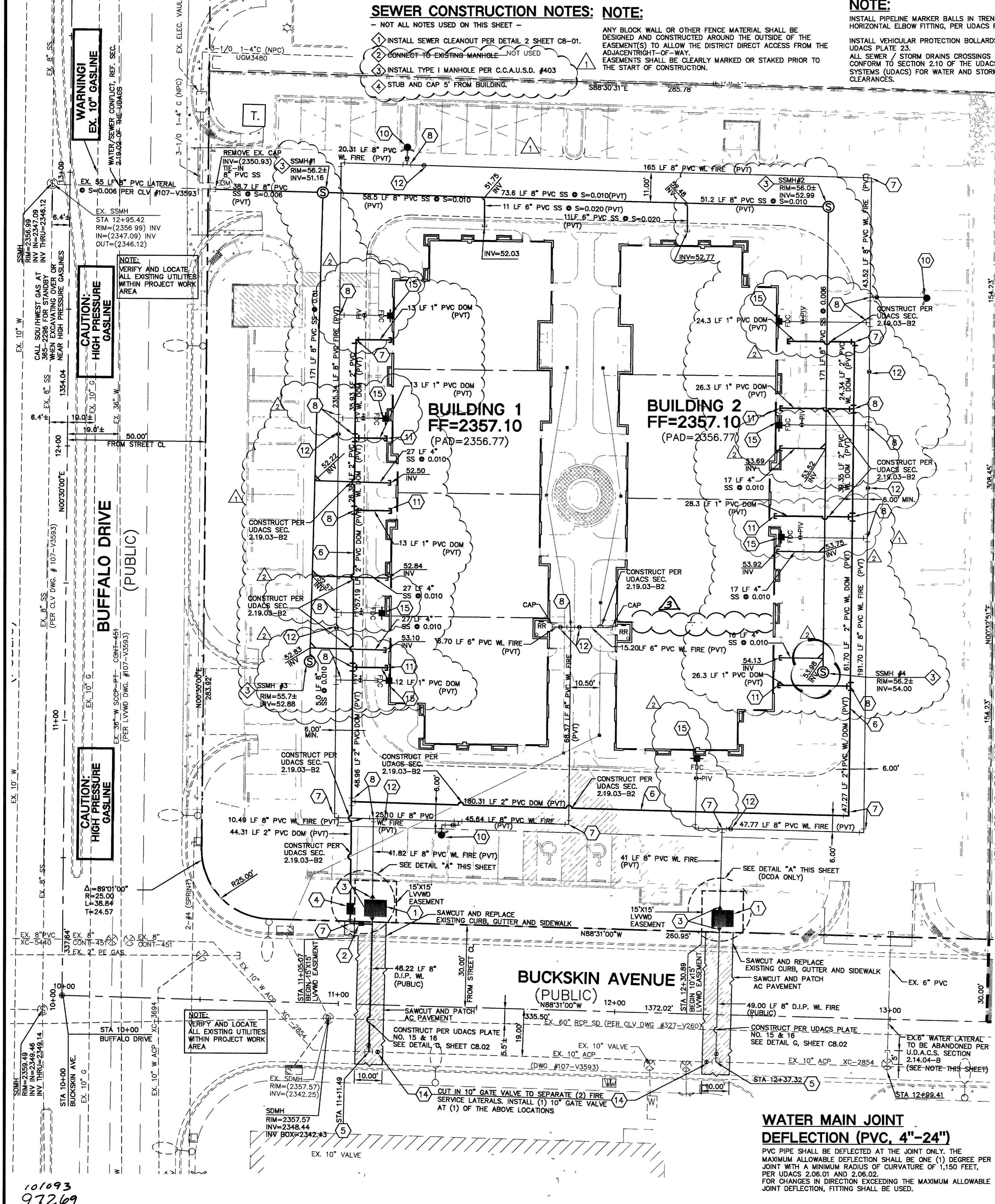
REFER TO GRADING PLAN SHEET C3.01 FOR STORM DRAIN DESIGNS AND APPURTENANCES.

REDUCED PRESSURE PRINCIPLE ASSEMBLY (1)-2"

APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE DISTRICT'S STANDARD PLATE No. 11A. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVMD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S), SO AS 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.

SAFETY ALERT

Call before you Dig
Call before you Overhead
1-800-227-2600 1-702-227-2929



CL OR SURVEY LINE	EASEMENT LINE	HEAVY AC PWMT.	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 OUTS	UTILITY BOX OR VAULT	100W HPS STREETLIGHTS	150W HPS STREETLIGHTS	200W HPS STREETLIGHTS	250W HPS STREETLIGHTS	
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---	---	---	PROPOSED:	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

FIRE FLOW CALCULATIONS

BASED ON:

SQUARE FOOTAGE:	10,038 SF/BLDG
LARGEST AREA BETWEEN SEPARATION WALL:	NONE
BUILDING HEIGHT:	22'
NUMBER OF STORIES:	N/A
TYPE OF CONSTRUCTION:	TYPE V-B
EXPOSURES:	N/A
SPRINKLER SYSTEM:	YES
OCCUPANCY:	TYPE B
ROOF CONSTRUCTION:	N/A
FLOW REQUIRED @ 20 PSI RESIDUAL:	1,500 GPM
MAX. STORAGE HEIGHT:	N/A

EX. STATIC WATER PRESSURE IS 78.0± psf IN STREET.

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT DATE:
PROJECT #110314

CITY OF LAS VEGAS FIRE DEPARTMENT APPROVAL

BY: [Signature] DATE: 10/24/06
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:

FOR FIRE ACCESS ROUTE SEE HORIZONTAL CONTROL SHEET C6.01
FOR CITY OF LAS VEGAS FIRE DEPT. NOTES SEE SHEET C2.01

NOTE:

CONTRACTOR TO INCLUDE COST OF UNDERGROUND UTILITY DETECTION COMPANY TO LOCATE AND MARK ALL EXISTING UTILITIES 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.

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.

A.P.N.:

APN 138-10-301-010

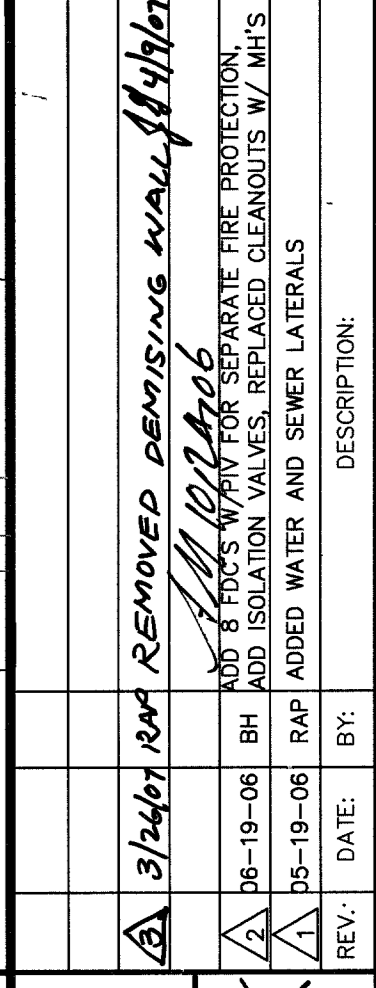
BASIS OF BEARINGS:

THE BASIS OF BEARINGS FOR THIS SURVEY IS THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 10, TOWNSHIP 20 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA AS SHOWN ON THAT MAP ON FILE IN FILE 36 OF PARCEL MAPS, PAGE 67 IN THE CLARK COUNTY RECORDER'S OFFICE, CLARK COUNTY, NEVADA.

BENCHMARK:

CLV BM BLVD 056E

BEING A RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF BUFFALO AND BUCKSKIN. ELEVATION: 2358.63 FEET / 718.9129 METERS (NAVD '88 DATUM)



INDIGO ARCHITECTURE, INC.
100 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89118
(702) 456-2731 fax
(702) 456-2772 ph

LOCHSA ENGINEERING
6345 SOUTH JONES BOULEVARD SUITE 100
LAS VEGAS, NV 89118
PHONE: (702) 365-9312. FAX: (702) 365-9317

UTILITY PLAN

DATE: 09-20-05
DESIGNED BY: [Signature]
CHECKED BY: [Signature]
PROJECT NO.: 041198

