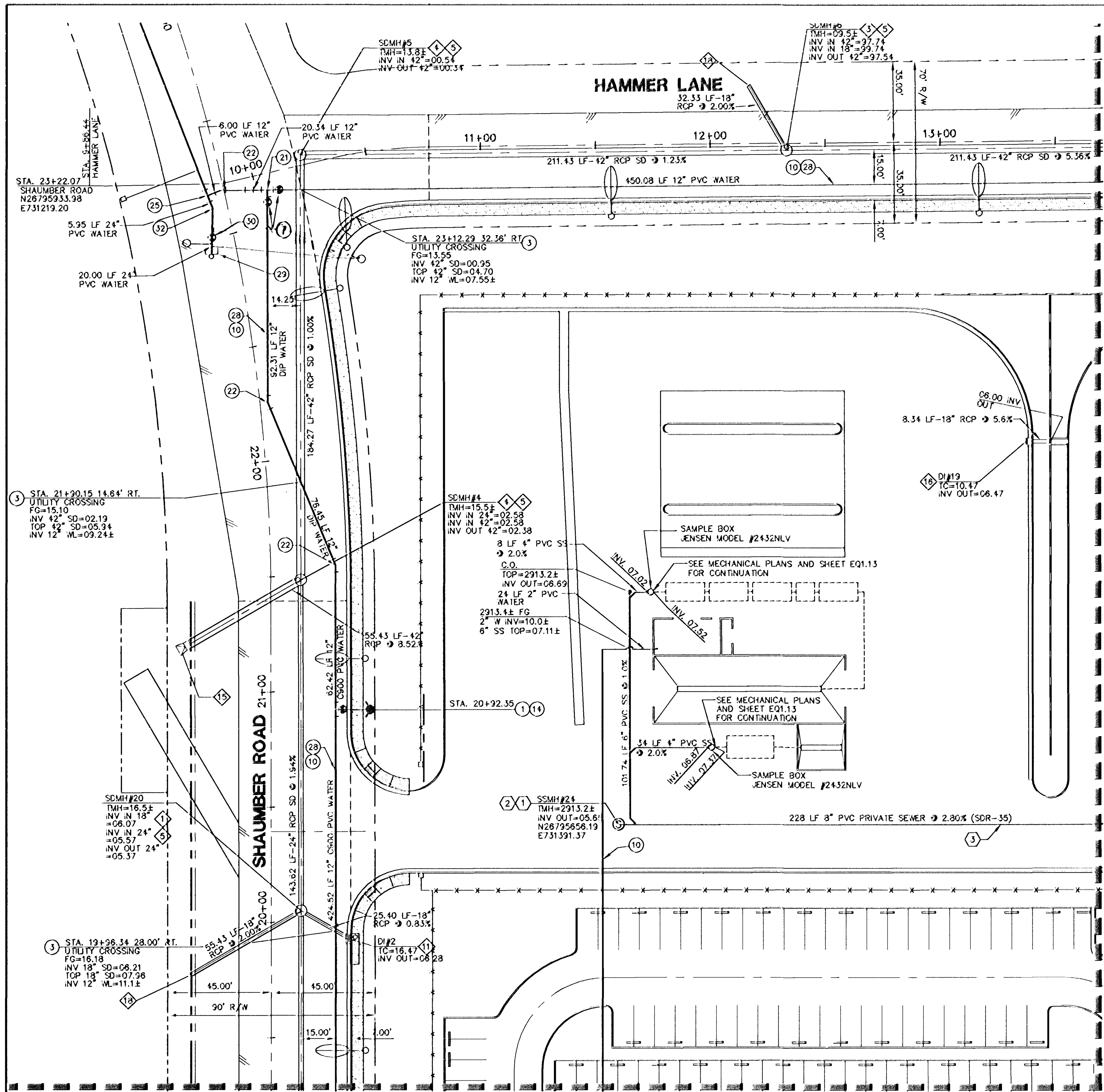
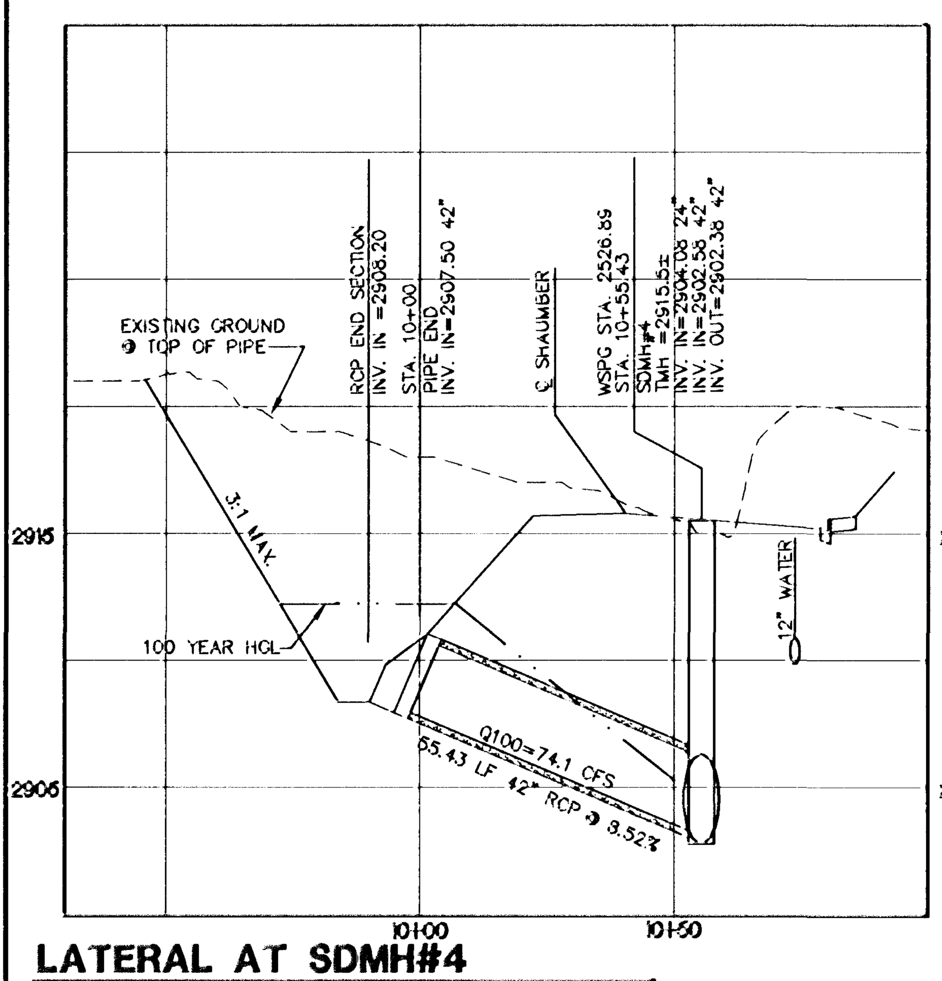
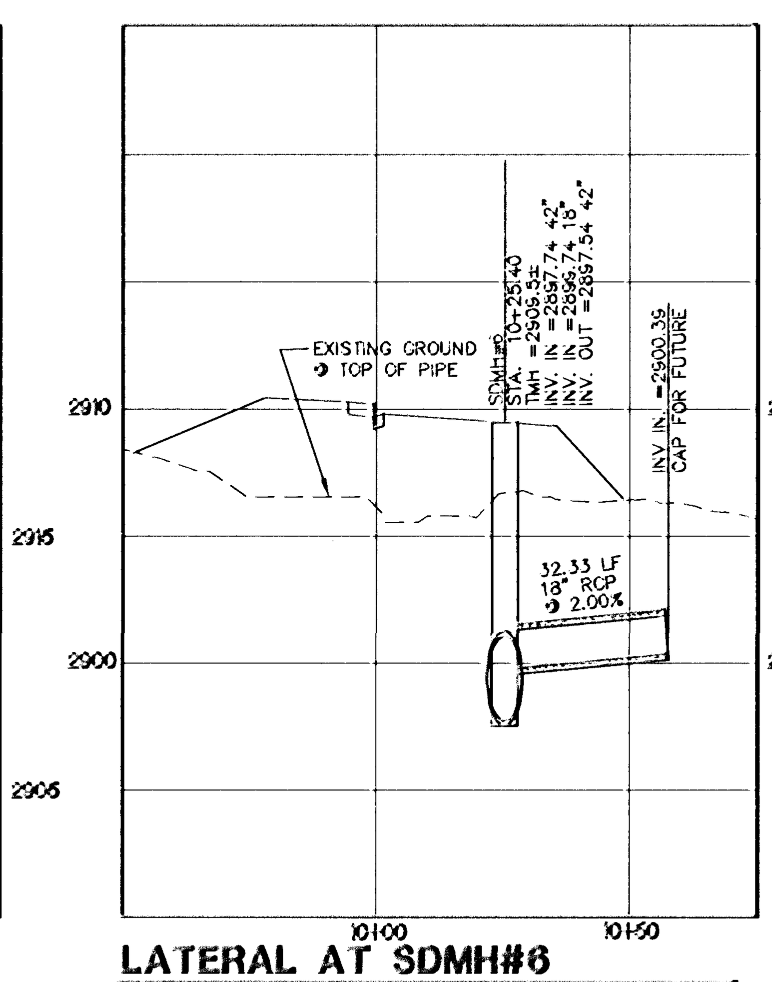




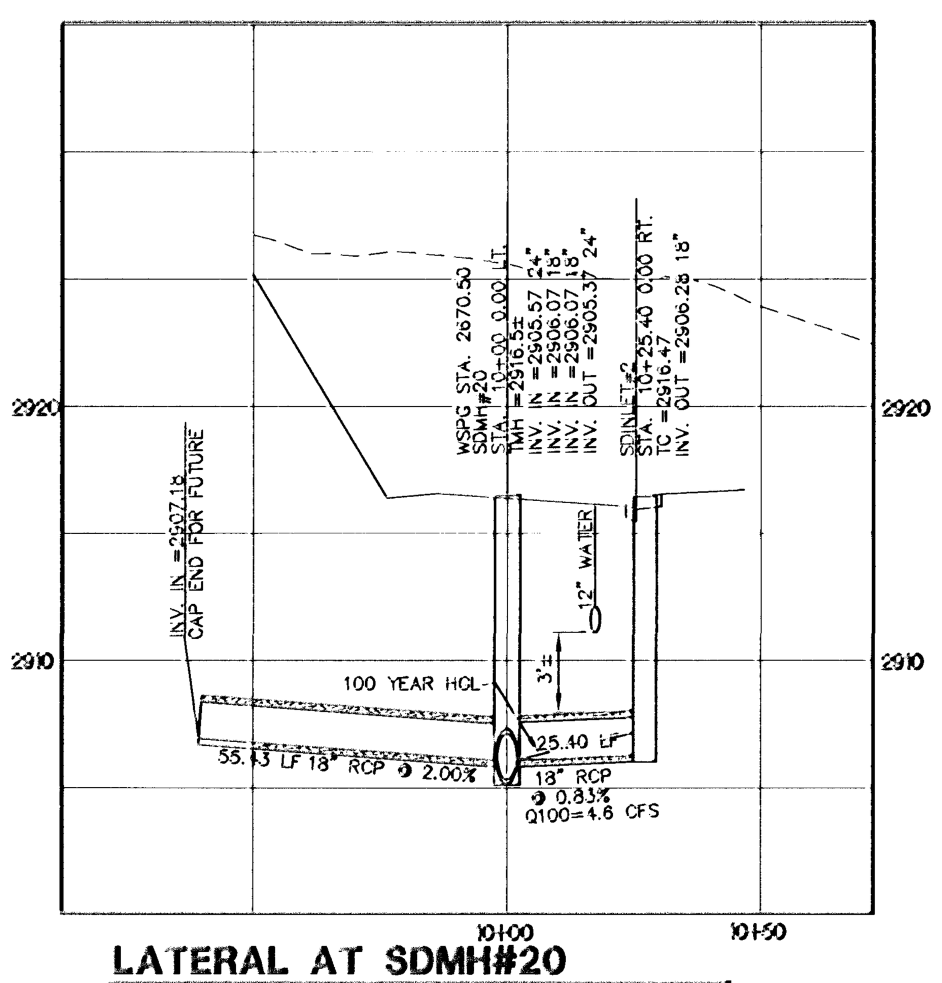
LATERAL AT SDMH#4

SCALE: 1"=30' HORIZ.
1"=6' VERT.



LATERAL AT SDMH#6

SCALE: 1"=30' HORIZ.
1"=6' VERT.



LATERAL AT SDMH#20

SCALE: 1"=30' HORIZ.
1"=6' VERT.

GENERAL UTILITY CONSTRUCTION NOTES

1. WATER LINES TO HAVE THRUST BLOCKS CONSTRUCTED PER UDACS PLATE No. 31. THRUST BLOCKS TO BE LOCATED AT ALL ANGLE FITTINGS (BENDS), TEE'S AND FIRE HYDRANTS. ANCHOR BLOCKS TO BE CONSTRUCTED PER UDACS PLATE No. 31 & 40. ANCHOR BLOCKS TO BE LOCATED AT ALL IN-LINE REDUCERS AND GATE VALVES PER UDACS PLATE No. 30.
2. WET TAPS TO BE CONSTRUCTED IN CONFORMANCE WITH UDACS PLATE No. 34 AND 35.
3. TRENCH BACKFILL FOR WATER LINES TO BE CONSTRUCTED PER UDACS PLATE No. 16, 17, 18 AND 19 WHERE APPLICABLE.
4. TRENCH BACKFILL FOR SEWER LINES TO BE CONSTRUCTED PER DCSWCS SD-16, SD-17 AND SD-18 WHERE APPLICABLE.
5. 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.
6. THESE DRAWINGS MAY NOT INDICATE ALL EXISTING BURIED UTILITY LINES. CONTRACTOR IS 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.
7. CONTRACTOR TO SAWCUT AND REMOVE EXISTING ASPHALT AND CONCRETE AS NECESSARY FOR UTILITY UTILITY TRENCHES. BACKFILL AND PATCH ALL TRENCHES AS INDICATED IN DETAILS AND/OR ACCORDING TO THE GOVERNING ENTITY.
8. INSTALLATION OF ALL UTILITY LINES SHALL BE COORDINATED WITH THE OWNER.
9. CONTRACTOR/OWNER TO OBTAIN A C.L.V. AND C.C. OFF-SITE IMPROVEMENT PERMIT FOR ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
10. ALL DIMENSIONS TO UTILITIES ARE TO CENTERLINE OF PIPE UNLESS INDICATED OTHERWISE.
11. ONLY SEWER LINES AND LATERALS MAY BE INSTALLED IN TRENCHES EXCAVATED FOR SEWER LINES, SEE DCSWCS 2.2.21 AND 2.2.22 (TYP.)
12. WATER AND SEWER LINE SEPARATION MUST BE AT LEAST 10' MIN. (TYP.)
13. ALL WATER FACILITIES CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE "UNIFORM CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS" (UDACS), LATEST EDITION.
14. WATER AND SEWER SERVICE LATERALS SHALL BE INSTALLED A MINIMUM OF FORTY-EIGHT (48) INCHES APART IN SEPARATE TRENCHES. WATER LATERALS SHALL BE A MINIMUM OF TWELVE (12) INCHES ABOVE THE SEWER LATERAL (REFERENCE UNIFORM PLUMBING CODE, UDACS AND DCSWCS SPECIFICATIONS).
15. CONTRACTOR TO VERIFY UTILITY STUB LOCATIONS AND SIZE WITH PLUMBING PLANS PRIOR TO TO INSTALLATION OF NEW UTILITIES.
16. 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 IS FOR INFORMATION PURPOSES ONLY.
17. EXISTING UTILITY LINES ARE SHOWN IN APPROXIMATE LOCATIONS BASED ON INFORMATION AVAILABLE AT THE TIME OF DESIGN. THESE DRAWINGS MAY NOT INDICATE ALL EXISTING UNDERGROUND UTILITY LINES. THE CONTRACTOR SHALL EXERCISE GREAT CARE DURING EXCAVATION IN ORDER TO AVOID MAKING CONTACT WITH ANY EXISTING UTILITY LINES. CONTRACTOR SHALL VERIFY EXISTING UTILITY INFORMATION PRIOR TO CONSTRUCTION PER " CITY OF LAS VEGAS GENERAL NOTES" ON SHEET C1.01.
18. THE PROPOSED GAS LINE LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATIONS ONLY.

REDUCED PRESSURE DETECTOR ASSEMBLY (RPDA) (2) 8"

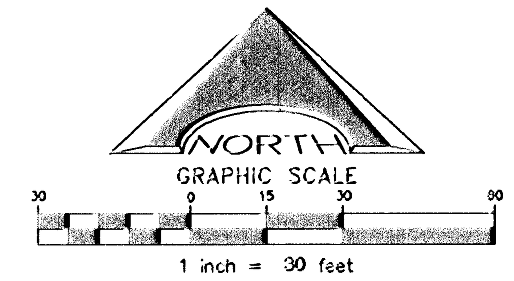
THE REDUCED PRESSURE DETECTOR ASSEMBLIES SHALL BE INSTALLED IN ACCORDANCE WITH THE UDACS PLATE No. 56. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) SO AS TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

REDUCED PRESSURE PRINCIPLE ASSEMBLY - (3) 2"

APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLT No. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW 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

NOTE

ALL ABOVE GROUND UTILITY APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF TITLE 19.12.040.



WATER KEY NOTES
NOT ALL ITEMS ARE USED ON THIS SHEET

1. INSTALL 6" FIRE HYDRANT ASSEMBLY (INCLUDES 6" GATE VALVE) PER UDACS. PLATE NO. 40. PROVIDE A MINIMUM 3' CLEARANCE AROUND HYDRANT.
2. SEE GENERAL UTILITY CONSTRUCTION NOTE #16 ON SHEET C5.02.
3. PROVIDE A MINIMUM OF 18" VERTICAL CLEARANCE BETWEEN WATER AND SEWER/ STORM DRAIN LINES WITH SEWER/ STORM DRAIN LINES BEING BELOW WATER LINES.
4. INSTALL VEHICULAR PROTECTION BOLLARD PER UDACS. PLATE No. 75. SIX (6) BOLLARDS PER HYDRANT.
5. INSTALL 8" REDUCED PRESSURE DETECTOR ASSEMBLY ABOVE FG, PER U.D.A.C.S. PLATE No. 56.
6. INSTALL A 2" METER PER UDACS PLATE No. 4 (POTABLE).
7. INSTALL A 12" GATE VALVE PER UDACS PLATE No. 30 AND 39
8. REFER TO LANDSCAPE PLANS FOR CONTINUATION.
9. INSTALL A RPPA PER UDACS PLATE No. 8.
10. CONTRACTOR TO PROVIDE A MINIMUM OF 4.0' OF COVER ABOVE TOP OF TWELVE INCH (12") AND SMALLER PIPE, BASED ON FINISH GRADE FOR ON-SITE WATER-LINES, OFF-SITE PUBLIC WATERLINES LINES IN RIGHT-OF-WAY TO BE A MINIMUM 3.5' (60' R/W), 4.0' (80' R/W) OF COVER BASED ON FINISH GRADE, REFER TO UDACS SECTION 2.08 AND UDACS PLATE NO. 17 FOR ADDITIONAL INFORMATION.
11. REFER TO MECHANICAL/ PLUMBING PLANS FOR LOCATION AND ADDITIONAL INFORMATION.
12. INSTALL A 2" RPPA PER UDACS PLATE No. 8 (POTABLE).
13. INSTALL A 2x4 MANIFOLD.
14. INSTALL 12"x6" TEE WITH 6" GATE VALVE W/THRUST BLOCK PER UDACS PLATE No. 30, 31 AND 39.
15. INSTALL 8"x8" TEE PER UDACS PLATE No. 31.
16. INSTALL 8"x6" TEE WITH 6" GATE VALVE PER UDACS PLATE No. 30, 31 AND 39.
17. INSTALL 8"x90° BEND W/THRUST BLOCK PER UDACS PLATE No. 31.
18. INSTALL 8"x45° BEND W/THRUST BLOCK PER UDACS PLATE No. 31.
19. INSTALL 8"x11.25° BEND W/THRUST BLOCK PER UDACS PLATE No. 31.
20. INSTALL 12"x8" REDUCER W/THRUST BLOCK PER UDACS PLATE No. 30.
21. INSTALL 12"x12" TEE W/THRUST BLOCK PER UDACS PLATE No. 31.
22. INSTALL 12"x22.5° BEND W/THRUST BLOCK PER UDACS PLATE No. 31.
23. DEFLECT PIPE JOINT 1° MAX. VERTICALLY PER UDACS 2.07.01 AND 2.07.02.
24. INSTALL 8" GATE VALVE PER UDACS PLATE No. 30 AND 39.
25. INSTALL 24"x12" TEE PER UDACS PLATE No. 31.
26. INSTALL 12"x8" TEE PER UDACS PLATE No. 31.
27. INSTALL 12" CAP & 2" BLOWOFF PER UDACS PLATE No. 36.
28. TRENCH SECTION PER UDACS PLATE No. 17.
29. INSTALL 24" CAP & 2" BLOWOFF PER UDACS PLATE No. 36.
30. INSTALL 24" RESILIENT GATE VALVE PER DETAIL SHEET C6.02.
31. TYPE "K" COPPER WATERLINE PER UDACS PLATE No. 4.
32. 24"x22.5° BEND W/RESTRAINED JOINTS
33. INSTALL 12"x45° BEND W/THRUST BLOCK PER UDACS PLATE No. 31.
34. DEFLECT PIPE JOINT 1° MAX. HORIZONTALLY PER UDACS 2.07.01 AND 2.07.02.

STORM DRAIN KEY NOTES
NOT ALL ITEMS ARE USED ON THIS SHEET

1. INSTALL A 48" TYPE I MANHOLE PER C.C.A.U.S.D. 403.
2. INSTALL A 60" TYPE I MANHOLE PER C.C.A.U.S.D. 403.
3. INSTALL A 48" TYPE II MANHOLE PER C.C.A.U.S.D. 405.
4. INSTALL A 60" TYPE III MANHOLE PER C.C.A.U.S.D. 406.
5. INSTALL A CONCRETE COLLAR PER C.C.A.U.S.D. 408.
6. INSTALL A 2.5' GRATE WITH A 10' CURB OPENING MODIFIED TYPE "C" INLET PER C.C.A.U.S.D. 412A. INLET SHALL INCLUDE A WATER QUALITY STAMP PER C.C.A.U.S.D. 421.
7. INSTALL A JENSEN PRECAST DI242448 CATCH BASIN.
8. INSTALL A JENSEN PRECAST DI484872 CATCH BASIN.
9. INSTALL A 5' MODIFIED TYPE "CM" INLET PER C.C.A.U.S.D. 412A. INLET SHALL INCLUDE A WATER QUALITY STAMP PER C.C.A.U.S.D. 421.
10. INSTALL A 7.5' GRATE WITH AN 11.25' CURB OPENING MODIFIED TYPE "CM" INLET PER C.C.A.U.S.D. 412A. INLET SHALL INCLUDE A WATER QUALITY STAMP PER C.C.A.U.S.D. 421.
11. INSTALL A 7.5' MODIFIED TYPE "CM" INLET PER C.C.A.U.S.D. 412A. INLET SHALL INCLUDE A WATER QUALITY STAMP PER C.C.A.US.D. 421.
12. INSTALL A 10' MODIFIED TYPE "CM" INLET PER C.C.A.U.S.D. 412A. INLET SHALL INCLUDE A WATER QUALITY STAMP PER C.C.A.U.S.D. 421.
13. INSTALL A 12.5' MODIFIED TYPE "CM" INLET PER C.C.A.U.S.D. 412A. INLET SHALL INCLUDE A WATER QUALITY STAMP PER C.C.A.U.S.D. 421.
14. INSTALL A 27.5' MODIFIED TYPE "CM" INLET PER C.C.A.U.S.D. 412A. INLET SHALL INCLUDE A WATER QUALITY STAMP PER C.C.A.U.S.D. 421.
15. INSTALL AN RCP END SECTION PER NDOT DETAIL R-2.3.1.
16. INSTALL A 5' MODIFIED TYPE "CM" INLET PER C.C.A.U.S.D. 412A. INLET SHALL INCLUDE A WATER QUALITY STAMP PER C.C.A.U.S.D. 421.
17. INSTALL AN NDOT TYPE 2 INLET PER DWG. NO. R-4.2.1.
18. CAP FOR FUTURE USING BRICK OR CONCRETE. DO NOT USE WOOD.

ALL STORM DRAIN PIPE SHALL BE CLASS III (MIN.) UNLESS OTHERWISE NOTED.

SANITARY SEWER KEY NOTES
NOT ALL ITEMS ARE USED ON THIS SHEET

1. CONSTRUCT A STANDARD 48" PRECAST MANHOLE PER DCSWCS DRAWING No. SD-1A AND SD-1B.
2. INSTALL A CONCRETE COLLAR PER DCSWCS DRAWING No. SD-4.
3. TRENCH SECTION PER DCSWCS DRAWING No. SD-18.
4. INSTALL NEW SANITARY SEWER MAIN UNDER EXISTING WATER LATERAL PER DCSWCS DRAWING No. SD-21.
5. INSTALL A STANDARD 72" PRECAST MANHOLE PER DCSWCS DRAWING No. SD-1A AND SD-1B.
6. INSTALL A LOCKING MANHOLE COVER PER CITY OF LAS VEGAS STANDARDS.
7. INSTALL 30 LF OF WATER QUALITY C900 PVC.
8. INSTALL 24" SS ULTRA CORR/ULTRA RIB PIPE USING A CLASS 1B (ASTM BEDDING CLASSIFICATION) BEDDING. PIPE TO BE INSTALLED PER MFR'S SPECIFICATIONS AND REQUIREMENTS FOR DEEP INSTALLATION.
9. INSTALL A SPECIAL MANHOLE PER DETAIL ON SHEET C4.15. H20 RATED.
10. CONSTRUCT A STANDARD 60" PRECAST MANHOLE PER DCSWCS DRAWING No. SD-1A AND SD-1B.

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER

PROJECT NO. 116679 DATE 12/01/11

REVISIONS			
REV	DESCRIPTION	DATE	BY

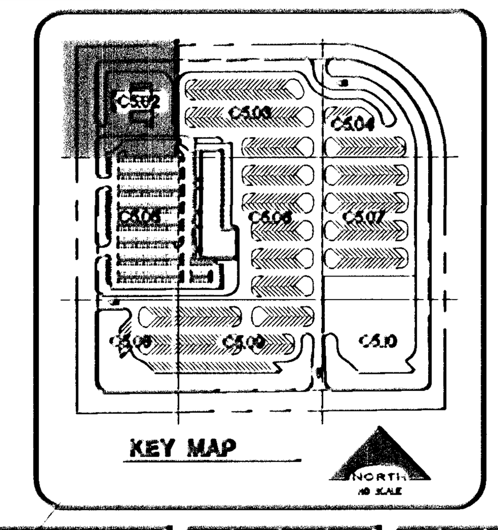
DISCLAIMER NOTE

UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

Call before you Dig
Avoid cutting underground utility lines. it's costly.
Call 811 OR 1-800-227-2600 AND CLARK COUNTY TRAFFIC OPERATIONS 1-702-455-7544

Avoid overhead power line contact
Call before you OVERHEAD
1-702-227-2929
NEVADA POWER ENVIRONMENT AND SAFETY SERVICES DEPARTMENT

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL SYSTEMS AND STREET LIGHT SYSTEM CONDUITS ITS COSTLY
CALL BEFORE YOU DO UNDERGROUND
Call before you Underground
1-702-455-7511 CLARK COUNTY TRAFFIC OPERATIONS
AND 1-702-229-6611 LAS VEGAS AREA COMPUTERIZED TRAFFIC SYSTEM



SEAL: PROFESSIONAL ENGINEER STATE OF NEVADA — VERNON R. HARKINS, EXP 6/30/13, CIVIL, No. 009898 — 11/2/11

CCSD PROJECT NO.	1549
CCSD REVIEW	
APPROVED BY	
DATE	
DATE	OCTOBER 31, 2011
DRAWN BY	
CHECKED BY	
SUBMITTAL	–
A/E PROJECT NO.	08-816

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CLARK COUNTY SCHOOL DISTRICT
DESIGN MANAGEMENT / PLANNING AND DESIGN
4170 McLEOD DRIVE LAS VEGAS, NEVADA 89121

PROJECT
CCSD NORTHWEST SATELLITE TRANSPORTATION FACILITY

DRAWING TITLE
UTILITY PLAN

SHEET NO.
C5.02
SHEET 58 OF 83

CLV #41249 7/5-183

HTE #11-19927

12-305