

**GENERAL NOTES**

- ALL WATER MAINS AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF WICHITA, KANSAS STANDARD SPECIFICATIONS FOR WATER MAIN INSTALLATIONS.
- CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM ADVANCE NOTICE OF SEVENTY-TWO (72) HOURS TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:  
 KANSAS ONE-CALL 1-800-344-7233  
 OR LOCAL (WICHITA) 687-2470
- THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF EMERGENCY:  
 CITY OF ANDOVER (LES MANGUS) 733-1303 EXT. 223  
 COX COMMUNICATIONS (CABLE) 262-0661  
 KANSAS GAS SERVICE (GAS) 832-3101  
 AT&T (TELEPHONE) 800-870-8390  
 CITY OF WICHITA WATER & SEWER 262-6000  
 AQUILA (GAS) 800-303-0357  
 WESTAR 383-8600
- THE WATER MAIN SHALL BE CONSTRUCTED ON THE ALIGNMENT SHOWN ON THE PLANS. TREES AND SHRUBS IN PUBLIC RIGHT OF WAY WHICH ARE IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR WITH THE ENGINEER'S APPROVAL, AND SHALL BE INCLUDED IN THE PRICE BID FOR THE INSTALLED WATER PIPE. TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH PROPOSED CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.
- OPENING AND CLOSING WATER VALVES SHALL BE DONE SLOWLY TO PREVENT DAMAGE TO THE WATER DISTRIBUTION SYSTEM FROM WATER HAMMER. ALL VALVES CLOSED BY THE CONTRACTOR MUST BE REOPENED AS NEW CONSTRUCTION PERMITS. PROJECT INSPECTOR MUST ASCERTAIN THAT ANY VALVE CLOSED BY THE CONTRACTOR IS REOPENED. CONTRACTOR WILL BE PERMITTED TO OPERATE WATER VALVES ONLY WHEN THE PROJECT INSPECTOR ASSIGNED TO THE PROJECT IS PRESENT.
- CONTRACTOR SHALL NOT START WORK ON THE PROJECT UNTIL THE PROJECT INSPECTOR IS ASSIGNED TO THE PROJECT AND IS PRESENT ON THE SITE. ANY WORK DONE WITHOUT INSPECTION WILL BE REQUIRED TO BE UNCOVERED FOR INSPECTION.
- UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.
- THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY DIRECTLY ADJUTING CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS NOTICE PRIOR TO START OF CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS. ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO SITE RESTORATION.
- THE CONTRACTOR SHALL RESTORE ALL DITCHES, SWALES, ROAD SHOULDERS, ENTRANCES AND BANK LINES TO THEIR ORIGINAL SLOPES AND GRADES EXCEPT AS SHOWN OTHERWISE.
- NO SERVICES WILL BE INSTALLED AS PART OF THIS PROJECT.
- INTERURBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA, AND LOCAL BUSINESS OR RESIDENTIAL TRAFFIC GENERATED WITHIN THE PROJECT AREA ARE TO BE CARRIED THROUGH CONSTRUCTION AS FURTHER PROMULGATED BY PROJECT SPECIAL PROVISIONS.
- RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES INCLUDING ANY TREES REMOVED AND TREE TRIMMINGS SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE AND SITE LOCATION. LOCATIONS THAT, IN THE OPINION OF THE ENGINEER, WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED. ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WOULD REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WOULD REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.
- ALL DISTURBED AREAS TO BE SEEDED WITH PERENNIAL RYE GRASS AT A RATE OF 200 LBS. PER ACRE WITHIN 10 DAYS OF CONSTRUCTION. CONTRACTOR TO PREPARE GROUND PER CITY SPECIFICATIONS. COST IS SUBSIDIARY TO SITE PREPARATION AND RESTORATION.
- THE CONTRACTOR SHALL LAY A TRACER WIRE & SET TEST STATIONS ALONG ALL WATER LINE PIPE INSTALLED IN ACCORDANCE WITH CITY OF WICHITA SPECIFICATIONS & TRACER WIRE DETAIL ON THIS SHEET. COST IS SUBSIDIARY TO PIPE INSTALLATION.
- OTHER PUBLIC IMPROVEMENT CONSTRUCTION PROJECTS MAY BE UNDER WAY SIMULTANEOUSLY. THE CONTRACTOR SHALL COORDINATE WITH ANY CONTRACTORS CONSTRUCTING OTHER PORTIONS OF THE PROJECT.
- IN LIEU OF STABILIZED CONSTRUCTION ENTRANCE CONTRACTOR TO ACCESS SITE VIA CLOUD AVE.
- CONTRACTOR TO PROVIDE CONSTRUCTION STAKING.
- CITY OF ANDOVER TO PROVIDE CONSTRUCTION INSPECTION.

**NOTES:**  
 1. CONTRACTOR TO VERIFY DEPTH & LOCATION OF EXISTING UTILITIES AND 12" WATER LINE PRIOR TO CONSTRUCTION.  
 2. ALL LINES TO BE INSTALLED BY OTHERS ARE SUBJECT TO O.C.I. REVIEW.

**WATER LINE VALVES TO BE OPERATED BY CONTRACTOR ONLY IF WATER INSPECTOR IS ON SITE**

**AS-BUILT PLANS**

**CONTRACTOR: MIES CONSTRUCTION**

**INSPECTOR: POE & ASSOCIATES, INC.**

**P.D.F. BY: M.L.T.**

**RECORD DRAWING**  
 12-21-2009

**CLOW HYDRANT**  
 8" PVC Pipe

Remove & Replace Sidewalk as required to Install Water Line

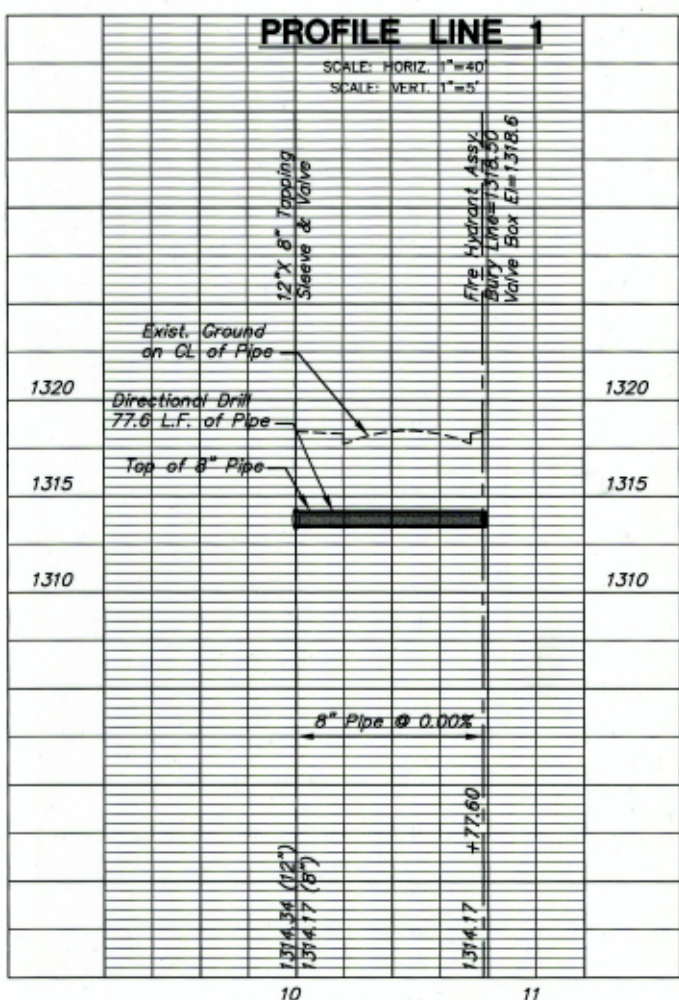
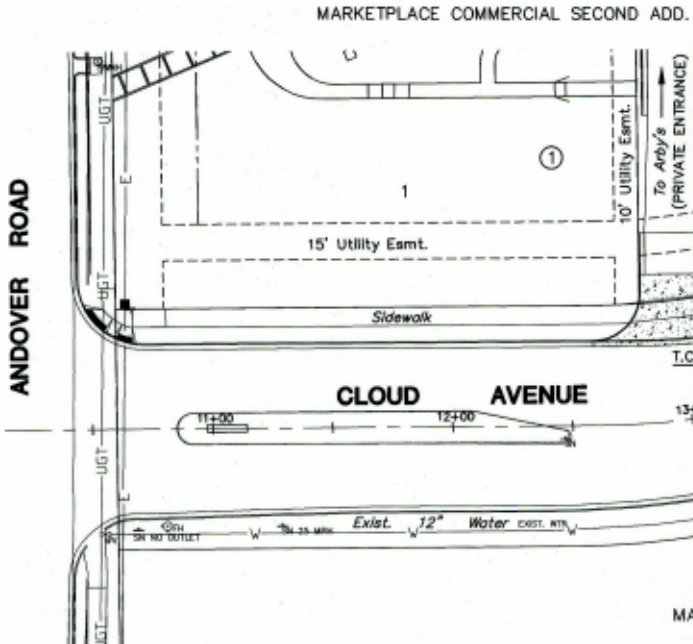
STA. 10+77.60, LINE 1 = St Sta. 13+47.74, 37.68' Lt.  
 1-Fire Hydrant Assy.  
 L=5.0'  
 1-8" DIMJ Plug (NW)

Valve: 3.0' WEST OF HYDRANT  
 14.7' W.S.W. TO END OF ENTRANCE RETURN  
 35.2' N.N.W. TO END OF ENTRANCE RETURN  
 77.60' of 8" Directional Drill

Valve: 62.0' S.S.E. TO TOP NORTH EDGE OF LIGHT BASE  
 4.2' S. OF END OF CURB RETURN  
 28.3' E.S.E. TO END OF CURB RETURN

STA. 10+00.00, LINE 1 = St Sta. 13+61.50, 38.74' Rt.  
 1-12" X 8" Tapping Sleeve & Valve to be furnished & installed by C.O.W. Water Dept. Contractor to reimburse the City of Wichita \$1830

Install 26 LF Of Erosion Protection At Back Of Curb. Excelsior Sediment Log, Rolled-Up Excelsior Matting, Or Approved Equal Per City Of Andover Standards

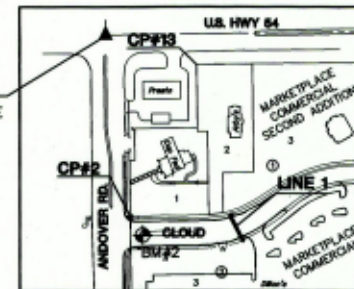


**BENCHMARKS**

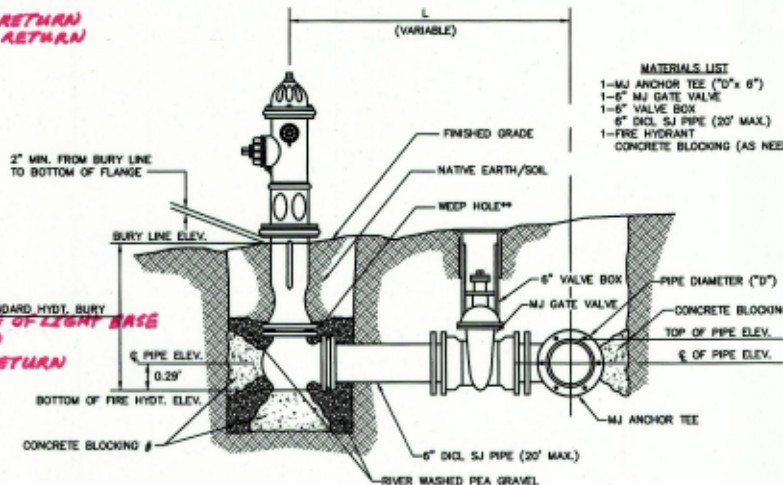
BM#2 1/2" TOP OF N CURB OF MEDIAN ISLAND IN CLOUD AVE. 42' E & 57' N OF NE COR. OF LOT 1, BLK. 2, REPLAT OF THE SECOND PHASE OF CLOUD CITY SUBDIVISION TO ANDOVER, KS ELEV.=1324.56 MVD 29

CONTROL POINT	ELEVATION	COORDINATES
CP#2	11683707.79	E17207530.82
CP#1	11684128.63	E17207215.60
TEE	11683708.10	E17207807.73
FH	11683638.11	E17207843.34

NW. Cor., NW 1/4, Sec. 29, T27S, R3E



**KEY MAP**



**MATERIALS LIST**  
 1-MJ ANCHOR TEE (10" x 6")  
 1-6" MJ GATE VALVE  
 1-6" VALVE BOX  
 6" DIAM. SJ PIPE (20' MAX.)  
 1-FIRE HYDRANT  
 CONCRETE BLOCKING (AS NEEDED)

FIRE HYDRANTS REQUIRED			
STATION	BURY LINE ELEVATION	TOP OF PIPE ELEVATION	FIRE HYDRANT BURY REQUIRED*
10+77.60, LINE 1	1318.50	1314.17	5.0'

**FIRE HYDRANT ASSEMBLY**  
 PER CITY OF WICHITA SPECIFICATIONS

**PRIVATE PROJECT 1479PPW**  
**OCA NO. 607853**

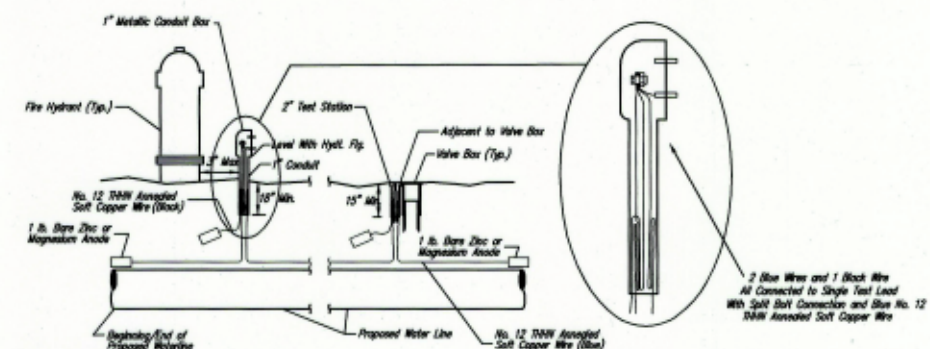
**APPROVED AS NOTED**  
 BY CITY ENGINEER OF WICHITA,  
 BY WICHITA WATER & SEWER DEPARTMENT,  
 & BY WICHITA FIRE DEPARTMENT

**Water Mains (Public Works)** [Signature] 7/18/09  
**Water Mains (Water & Sewer Dept.)** [Signature] 7/08/2009

**NOTE TO CONTRACTORS**

**Public Property:**  
 Inspection and testing for the waterline is to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita Standard Construction Engineering Practices and certified by a Professional Engineer licensed in the state of Kansas. No work shall be performed in dedicated easements or public rights-of-way by the Contractor without such inspection, nor shall any work be commenced without written authorization by the City Engineer. All construction and materials shall comply with the City of Wichita Specifications and Standards (on file and available in the City Engineer's Office).

**Private Property:**  
 Installation and testing for the fire protection line is to be performed by a City of Wichita Licensed Fire Protection Contractor in accordance with the fire codes as adopted by the City of Wichita. All materials and construction practices for the fire protection line shall comply with the fire codes as adopted by the City of Wichita (available from the City of Wichita Fire Department). The Contractor shall not commence work without notification to and approval of the Wichita Fire Department. Inspection of the fire protection line is to be provided by a licensed engineering firm under contract with the Owner/Developer and the Fire Department. The contractor shall not start work until the project inspector is assigned to the project and present on the site. Any work done without inspection will be required to be uncovered for inspection.



**TRACER WIRE**  
 Conductive type pipe locator/tracer wire shall be installed to locate all waterline pipe regardless of pipe material. The wire shall extend the entire length of the proposed pipe. The wire shall be taped to the waterline and pulled with the pipe. Split-bolt connectors shall be used at splice locations. Electrical tape shall cover all splices so no bare wire is exposed. Test stations shall be installed adjacent to all fire hydrants along the waterline and at blowoffs or valves near the ends of the waterlines. Any exceptions to the location of test stations shall be approved by the engineer. At each test station, the tracer wire shall be connected to a 1 lb. Zinc or magnesium anode. Anodes shall also be attached to the tracer wire at both the beginning and the end of the proposed waterline. A typical layout of the tracer wire and test station is provided in the above figure.

**WIRE**  
 The tracer wire shall be Blue No. 12 THW annealed soft copper wire with thermal plastic insulation. The insulation shall be heat, oil, and gasoline resistant as manufactured by Temple Electric or approved equal. To allow for grade adjustment, a minimum of 12" of excess wire shall be coiled at the bottom of the test station for all wires. The insulation sheathing shall be removed such that 1" bare copper wire is exposed at all points of connection. Contractor shall attach wire being installed with proposed water main to any tracer wire installed with adjacent waterline projects.

**TEST STATIONS**  
 The test station for fire hydrant applications shall be a 1 inch galvanized conduit style test station as manufactured by AGRA Industries with a removable solid cover having two leads extending from the face or approved equal. The test station for valve applications shall be a 2 inch flush style test station (FSS) as manufactured by HANDLEY Industries or approved equal. The conduit style shall be attached to a 1 inch rigid galvanized conduit with a minimum length of 36" and plastic and bushing. The flush style shall have the word "WATER" stamped or molded into the lid. All test stations shall be manufactured using molded blue tops or sufficiently coated with blue enamel paint. The tracer wire and the anode wire shall be installed to allow 10 inches of wire within the test station. In concrete environments such as sidewalks or in the downtown area the contractor shall use the flush style test station. The location of all test stations shall be approved by the engineer, recorded, and shown in the as-built drawings.

**ANODES**  
 The anodes shall be 1 lb. zinc or magnesium. The anodes shall be buried at the same elevation as the waterline at each test station. The anode shall be connected to Black No. 12 THW annealed soft copper wire which shall be extended to the test station.

**TRACER WIRE DETAIL**  
 COST IS SUBSIDIARY TO PIPE INSTALLATION

**MKEC**  
 ENGINEERING  
 CONSULTANTS, INC.  
 411 N. WEBB ROAD  
 WICHITA, KS. 67206  
 316-684-9600

Professional Engineer  
 16472  
 KANSAS

**WATER DISTRIBUTION PLANS TO SERVE**  
**MARKETPLACE COMMERCIAL**  
**SECOND ADDITION**

**LINE 1**  
 SHEET TITLE  
 PROJECT NUMBER 05103  
 MAB | JWC | GJA  
 DESIGNED DRAWN CHECKED  
 ISSUED June 2009  
 REVISIONS  
 SHEET NO. 1 of 1