

PUBLIC WATER MAIN EXTENSION

To Serve GRACE MED AND JARDINE ELEMENTARY SCHOOL 1788 PPW OCA 607853

GENERAL NOTES

1 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 687-2470

The Contractor must notify the following in case of an emergency:

Cox Communications 260-7204
 Kansas Gas Service 888-482-4950
 Westar 383-8600
 AT&T 1-800-286-8313
 City of Wichita Water and Sewer 316-262-6000

2 All water mains and appurtenances shall be installed in accordance with City of Wichita, Kansas, Standard Specifications for Water Main Installations. The water main shall be constructed on the alignment shown by 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. Trees and shrubs which are not in direct conflict with proposed new construction shall be saved and protected from damage. The cost for any necessary tree trimming, clearing and/or grubbing shall be included in the price bid for the installed water main pipe.

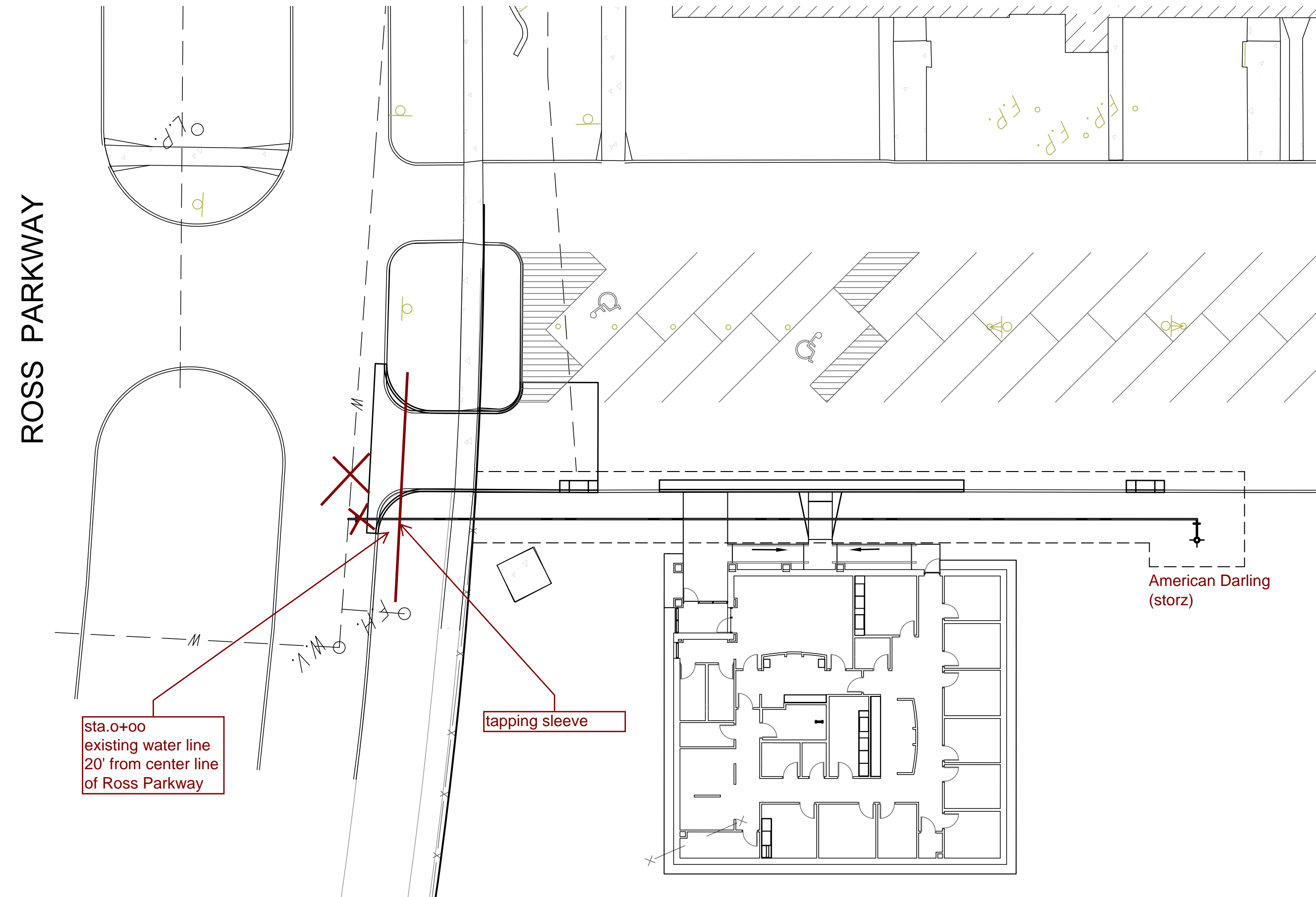
3 Opening and closing water valves shall be done slowly to prevent damage to the water distribution system from water hammer. All valves closed by the Contractor must be reopened as new construction permits. Project inspector must ascertain that any valve closed by the Contractor is reopened. Contractor will be permitted to operate water valves only when the project inspector assigned to the project is present.

4 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.

5 Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted 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.

6 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.

7 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 or unless the plans specifically identify a utility to be adjusted by its owner during construction. 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.



sta. 0+00
existing water line
20' from center line
of Ross Parkway

tapping sleeve

American Darling
(storz)

INDEX OF SHEETS

1. TITLE SHEET
2. LINE 1 PLAN/PROFILE
3. WATER ASSEMBLY DETAILS

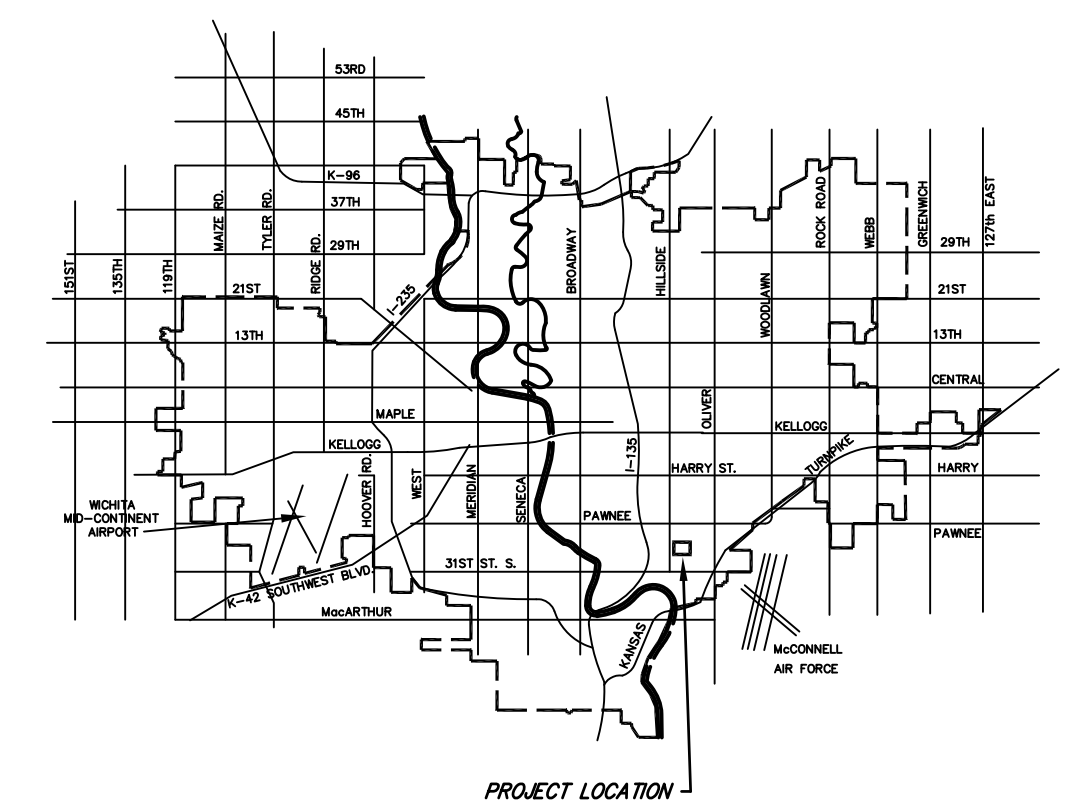
APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

Engineering *Jim Rich* 04-02-2014
 Water *Aug Jolly* 04-02-14
 Fire *BTM* 4-2-14


NOTE TO CONTRACTORS

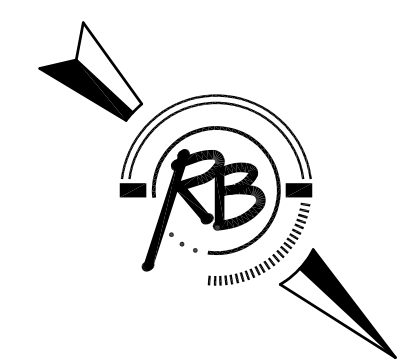
Inspection and testing for this project are to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer. No work shall be performed in dedicated easements or public right-of-way by the Contractor without such inspection, nor shall any work be commenced without written authorization by the City Engineer.

THE CONTRACTOR IS RESPONSIBLE FOR ALL INSPECTION AND TESTING FEES ASSOCIATED WITH THIS PRIVATE PROJECT.



VICINITY MAP

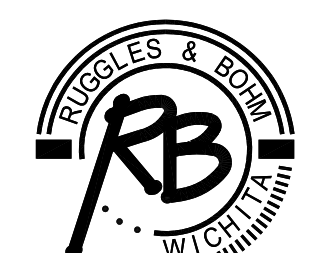
AS BUILTS	
Contractor: B2 Excavating	Project Inspector: Tom Jones
4/22/2014	 117 E. Lewis, Wichita, KS 67202 (316)264-0242



Scale 1" = 20'

BENCHMARKS				
POINT	NORTH	EAST	ELEV.	DESCRIPTION
BM-1	20350.95	20400.41	98.26	CHISELED SQ. ON TOP OF CURB, SW RETURN OF WEST ENTRANCE TO PARKING LOT EAST SIDE OF JARDINE SCHOOL

CITY OF WICHITA, KANSAS
GARY JANZEN, P.E. - CITY ENGINEER


Ruggles & Bohm, P.A.
 Engineering, Surveying, Land Planning
 924 North Main (316) 264-8008
 Wichita, Kansas 67203 (316) 264-4621 fax
 www.rbkansas.com E-mail: info@rbkansas.com

TAPPING VALVE IS 20' FROM CENTER LINE OF ROSS PARKWAY NORTH

FIRE HYDRANT IS 22' EAST OF CENTER LINE OF DRIVE

AND 183' NORTH OF CENTER LINE OF ROSS PARKWAY

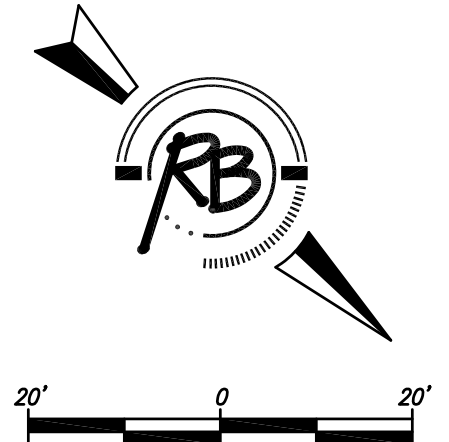
SIP FITTINGS
AMERICAN
CONTROL VALVE
AMERICAN
DARLING (storz)

N 20403.00 E 20468.12
STA. 0+00 LINE 1
CONNECT TO EXISTING 6" WATER MAIN.
*1 - 6"x 6" TAPPING SLEEVE
*1 - 6" TAPPING VALVE
*1 - 8"x6" REDUCER
1 - 6" VALVE BOX TOP ELEV. = MATCH
*FURNISHED AND INSTALLED BY DEPT. OF WATER AND SEWER. CONTRACTOR TO REIMBURSE CITY.

REMOVE 60 S.F. CONCRETE PAVEMENT.
PLACE TEMP A.C. P.V.M.T. CONCRETE REPLACEMENT BY CITY CONTRACTOR. CONTRACTOR TO PAY CITY AND OBTAIN PAVEMENT CUT PERMIT.

REMOVE SIDEWALK. PLACE TEMP A.C. P.V.M.T. CONCRETE REPLACEMENT BY CITY CONTRACTOR. CONTRACTOR TO PAY CITY.

BM #1
Sq. cut, top of curb.
N 20350.95 E 20400.41
ELEV 98.26



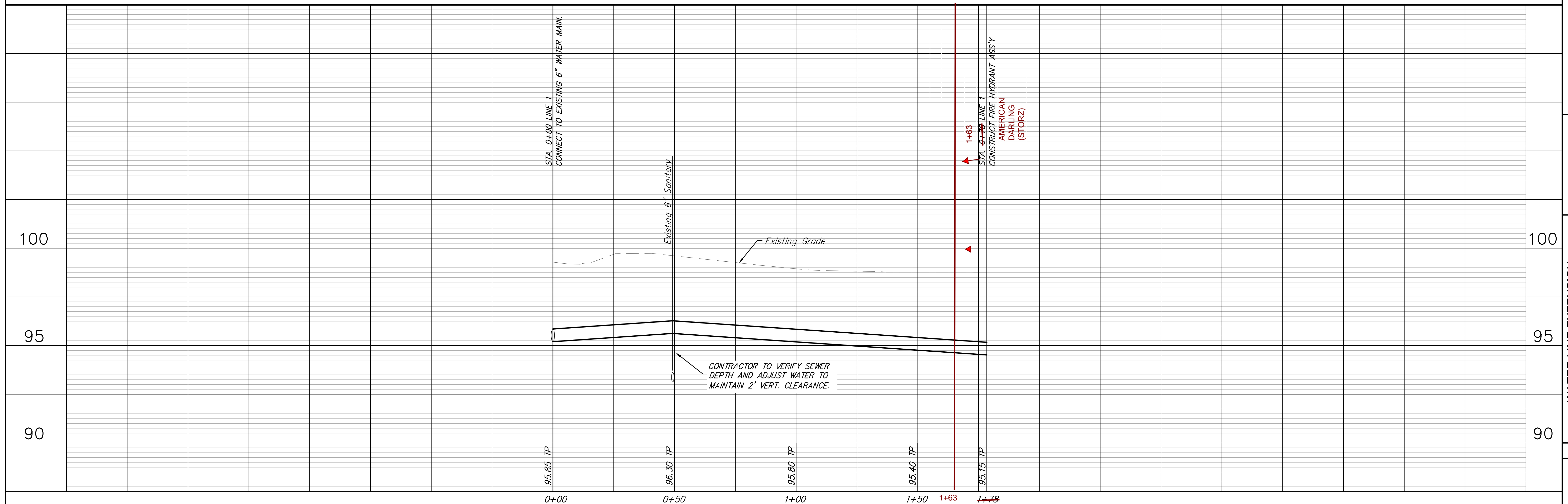
N 20532.71 E 20345.64
STA. 1+78 LINE 1 1+63
1 - FIRE HYDRANT ASS'Y
L = 4.5' American Darling (storz)
VALVE BOX ELEV. 99.00
BURY LINE ELEV. 99.46

COORDINATE WATER LINE
CONSTRUCTION WITH
BUILDING CONTRACTOR

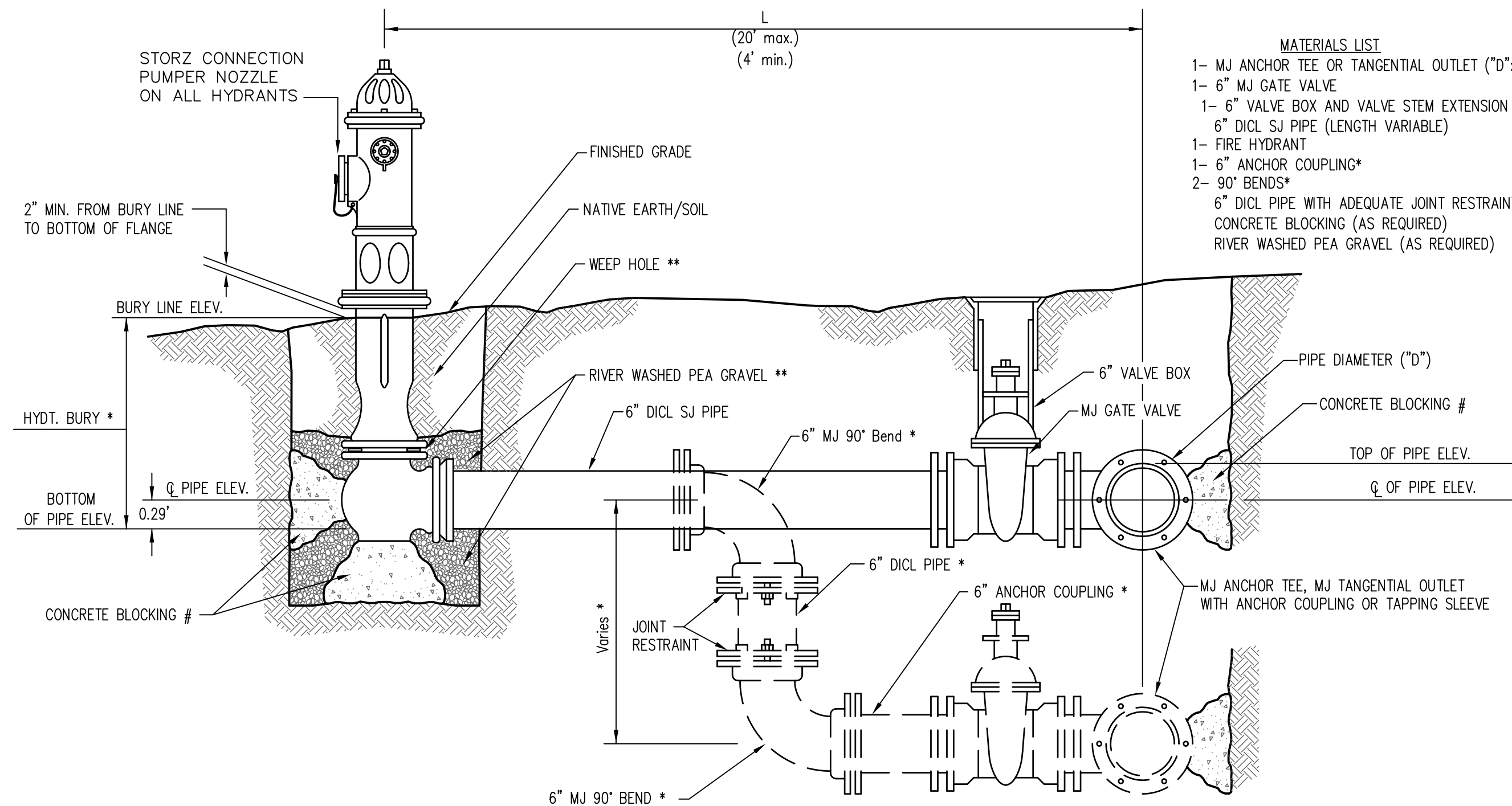
163.00
~~178.00~~ L.F. 8" PIPE

STA. 0+00
Tap & Valve

Proposed Grace Med Building



PROJECT NUMBER	PROJECT NAME	DATE	REVISION
RA CMB	UTILITY	Jan. 30, 2014	REVIEW
WATER LINE EXTENSION Grace Med / Jardine Elem. WICHITA, KANSAS		DESIGN	RA CMB
		DATE	Jan. 30, 2014
		REVIEW	
		REVISION	
RB JOB	4184E		
SHEET	2		
	3		



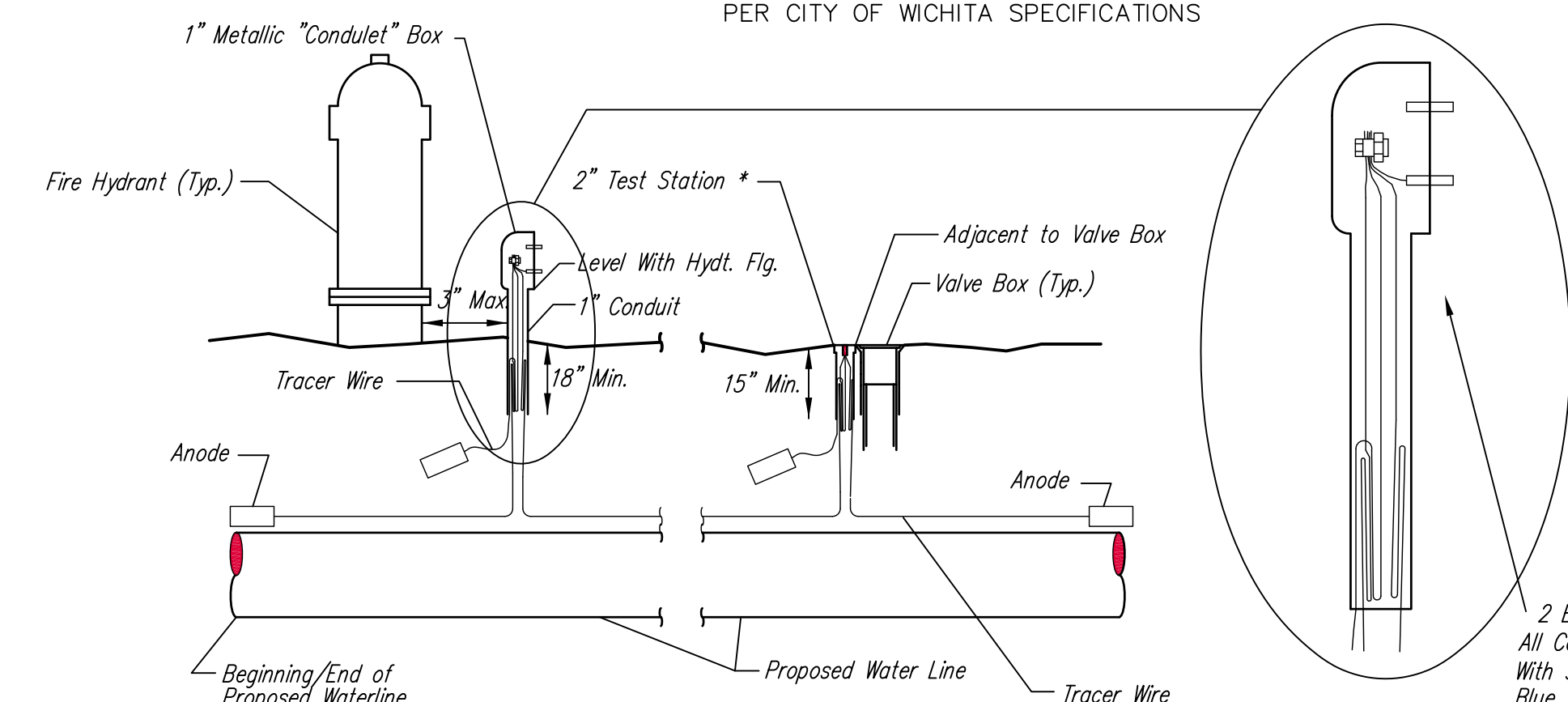
- MATERIALS LIST**
- 1- MJ ANCHOR TEE OR TANGENTIAL OUTLET ("D"x 6")
 - 1- 6" MJ GATE VALVE
 - 1- 6" VALVE BOX AND VALVE STEM EXTENSION IF REQUIRED *
 - 6" DI CL SJ PIPE (LENGTH VARIABLE)
 - 1- FIRE HYDRANT
 - 1- 6" ANCHOR COUPLING*
 - 2- 90° BENDS*
 - 6" DI CL PIPE WITH ADEQUATE JOINT RESTRAINT *
 - CONCRETE BLOCKING (AS REQUIRED)
 - RIVER WASHED PEA GRAVEL (AS REQUIRED)

* IF THE REQUIRED HYDRANT BURY IS IN EXCESS OF 5', BUT LESS THAN 7', CONTRACTOR SHALL USE STANDARD 5' HYDRANT BURY AND HYDRANT BARREL EXTENSIONS AS NECESSARY. IF THE REQUIRED HYDRANT BURY IS GREATER THAN 7', CONTRACTOR SHALL USE 5' HYDRANT BURY, 2-MJ 90° BENDS, 6" ANCHOR COUPLING AND 6" DI CL PIPE AS NECESSARY FOR VERTICAL ADJUSTMENT. THE CONTRACTOR SHALL PROVIDE ADEQUATE THRUST BLOCKING AT HYDRANT AND MEGALUGS, OR SIMILAR RESTRAINT BETWEEN 90° BENDS TO SECURE ALL FITTINGS DURING TESTING AND OPERATION. THE CONTRACTOR SHALL PROVIDE A VALVE STEM EXTENSION PER DETAIL THIS SHEET.

** CAUTION: WEEP HOLES TO BE KEPT CLEAR DURING CONSTRUCTION AND BACKFILL. CONCRETE FOR THRUST BLOCKING SHALL NOT OBSTRUCT WEEP HOLES. PLACE 1 CUBIC FOOT OF RIVER WASHED PEA GRAVEL AROUND EACH WEEP HOLE.

CONCRETE THRUST BLOCKING SHALL BE KEPT CLEAR OF BOLTS, NUTS, AND MJ ACCESSORIES.

FIRE HYDRANT ASSEMBLY
PER CITY OF WICHITA SPECIFICATIONS



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 3 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.

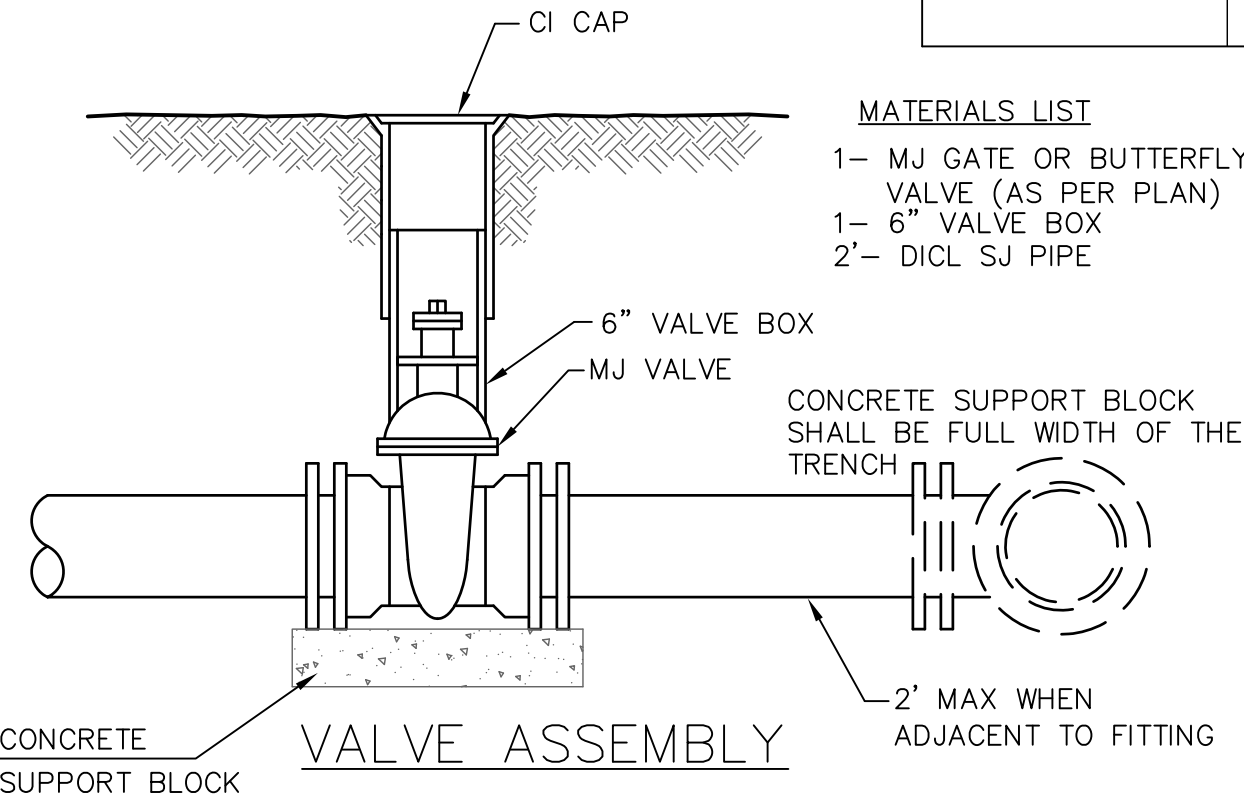
WIRES
The tracer wire shall be Blue No. 12 THHN annealed soft copper wire with thermal plastic insulation or Blue No. 12 AWG CCS with 30 mil HDPE insulation. The insulation shall be heat, oil, and gasoline resistant as manufactured by Temple Electric or approved equal. To allow for grade adjustment, 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 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 "condulet" 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 2 inch flush style test station T2PS3B as manufactured by HANDLEY Industries or approved equal. The "conduit" style test station shall be attached to a 1 inch rigid galvanized conduit with a minimum length of 36" and plastic end 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.

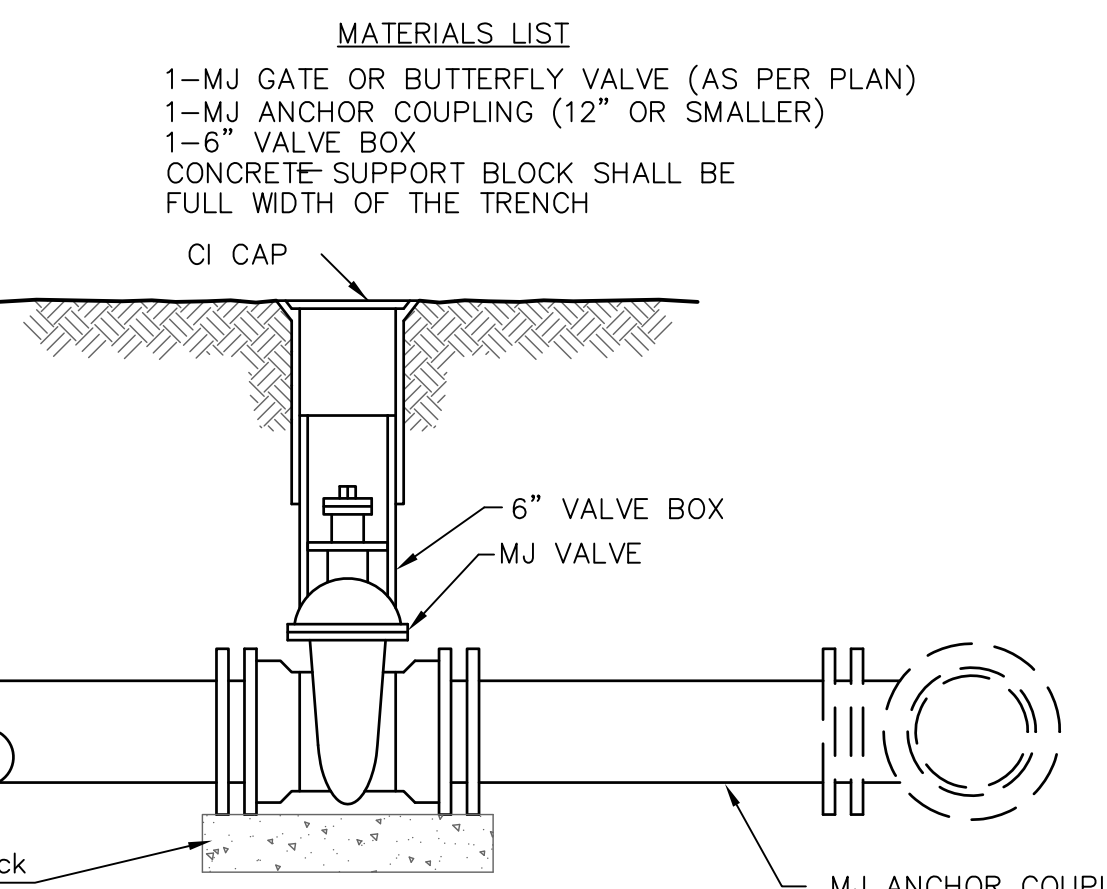
ANODES
The anodes shall be 3 lb. bare zinc or magnesium. The anodes shall be buried at the same elevation as the waterline at each test station. The anodes shall be connected to Black No. 12 THHN annealed soft copper wire which shall be extended to the test station.

TRACER WIRE DETAIL
COST IS SUBSIDIARY TO PIPE INSTALLATION

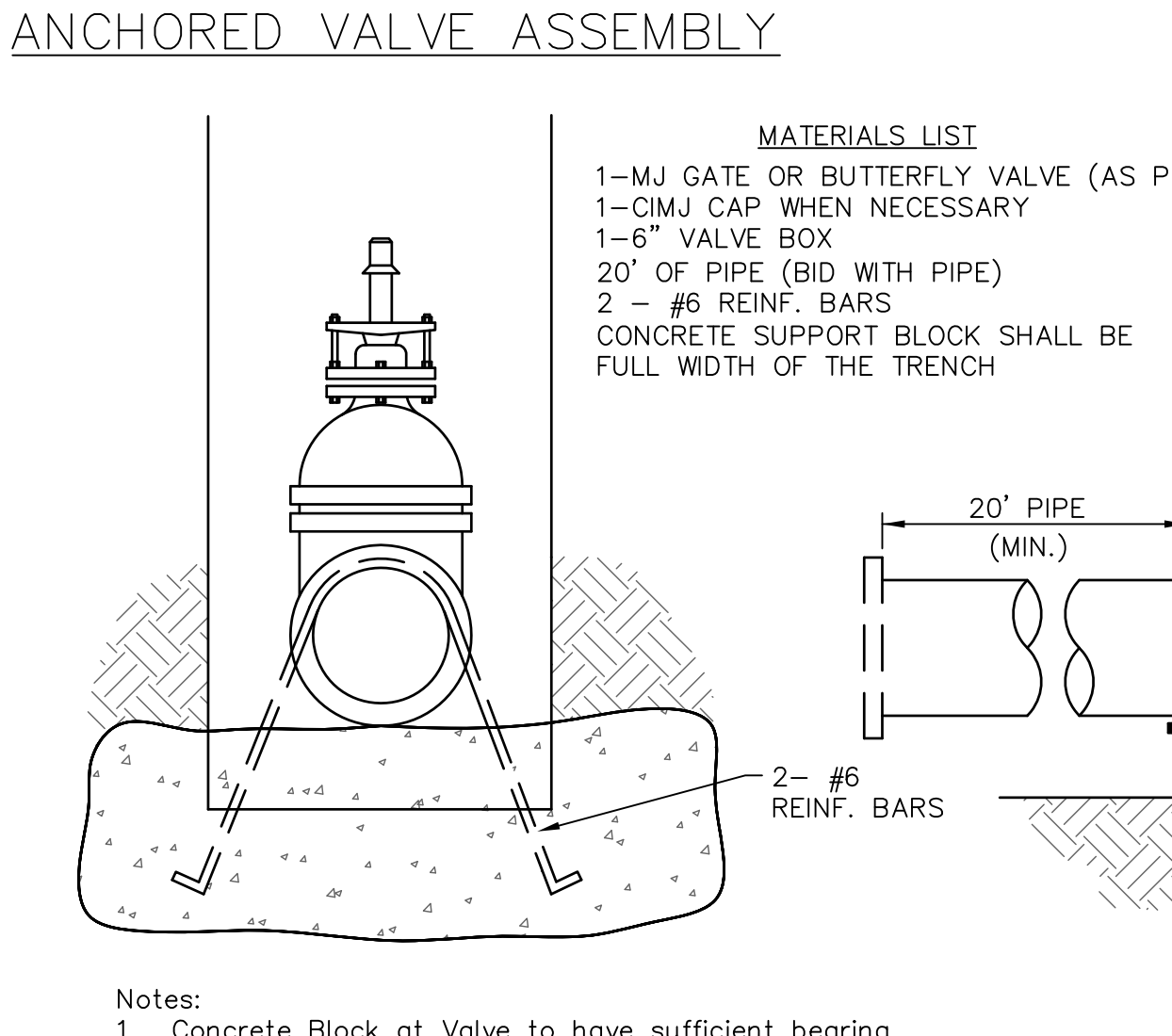
FIRE HYDRANTS REQUIRED				
STATION	BURY LINE ELEVATION	TOP OF PIPE ELEVATION	FIRE HYDRANT BURY REQUIRED*	VALVE STEM EXT. REQUIRED (ft)*
1+78	99.46	95.15	5.0'	
1+63				



- MATERIALS LIST**
- 1- MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
 - 1- 6" VALVE BOX
 - 2- DI CL SJ PIPE



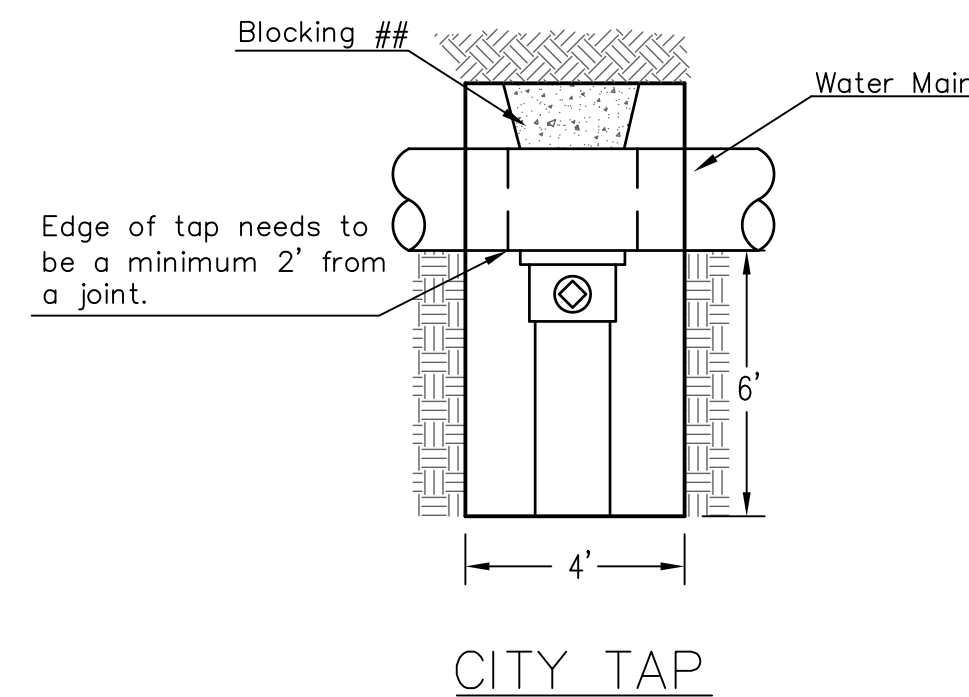
- MATERIALS LIST**
- 1-MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
 - 1-MJ ANCHOR COUPLING (12" OR SMALLER)
 - 1-6" VALVE BOX
 - CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH



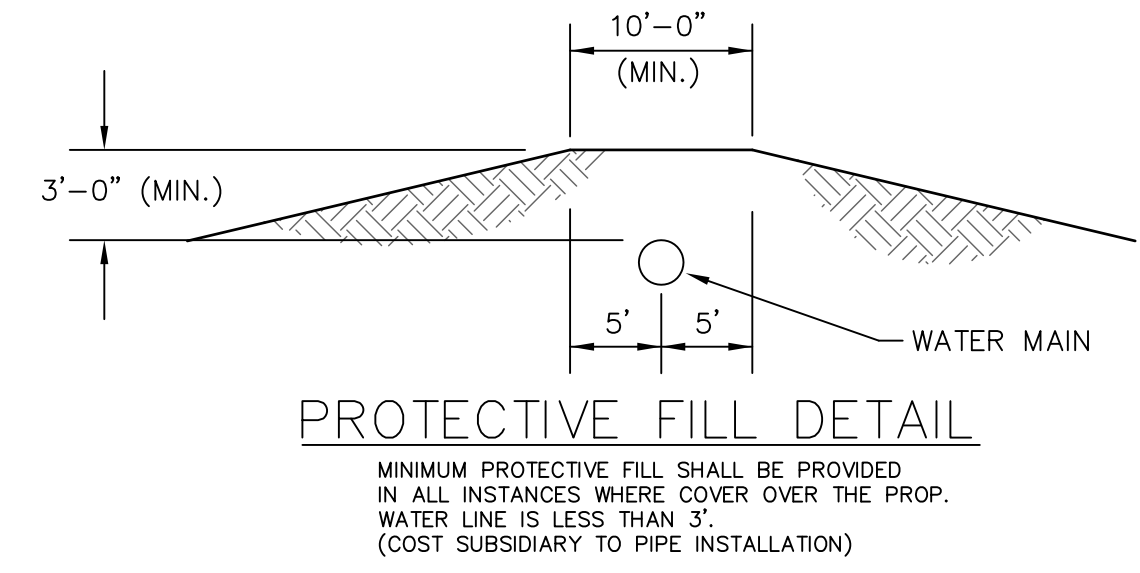
- Notes:**
- Concrete Block at Valve to have sufficient bearing in undisturbed soil to prevent thrust movement as shown in table at right. Field Engineer to determine thrust loading of undisturbed soil and final size of thrust block.
 - The thrust block shall be constructed such that bolts, nuts, and other MJ accessories are kept clear of concrete.
 - All valves at dead ends and at other locations as called out on the plans shall be blocked as shown here.

THRUST AT VALVES	
VALVE	THRUST AT 150 #/sq in
4"	1809 lbs.
6"	4245 lbs.
8"	7540 lbs.
12"	16965 lbs.

ANCHORED VALVE ASSEMBLY, SPECIAL

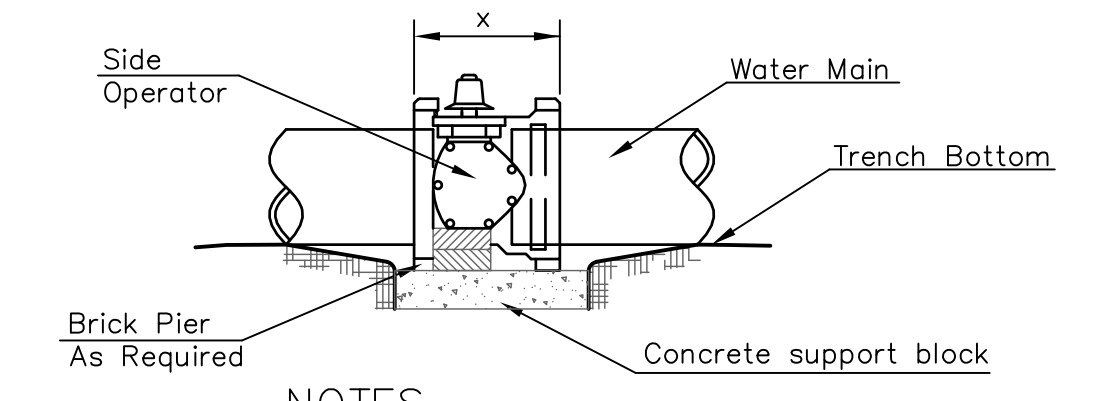


When the City of Wichita makes tap, blocking is to be done by Contractor



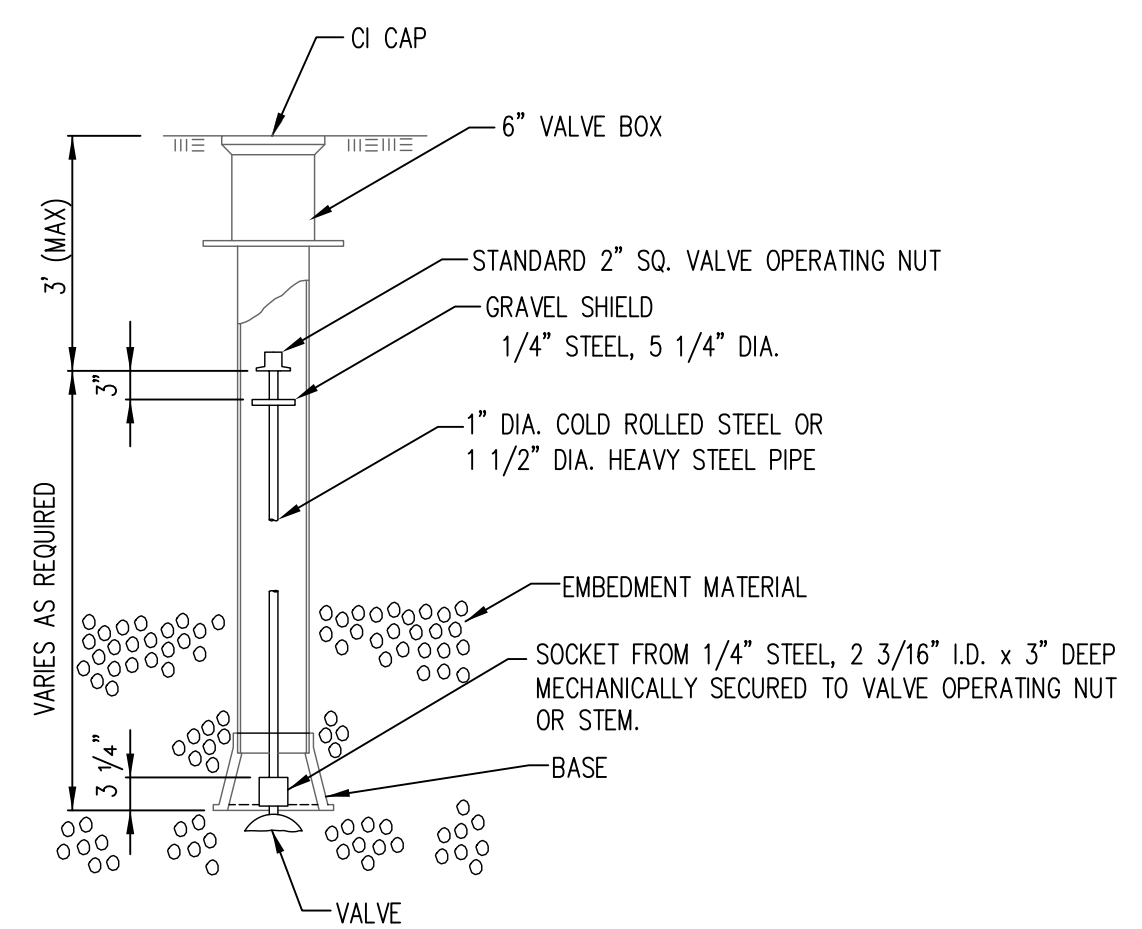
PROTECTIVE FILL DETAIL

MINIMUM PROTECTIVE FILL SHALL BE PROVIDED IN ALL INSTANCES WHERE COVER OVER THE PROP. WATER LINE IS LESS THAN 3". (COST SUBSIDIARY TO PIPE INSTALLATION)



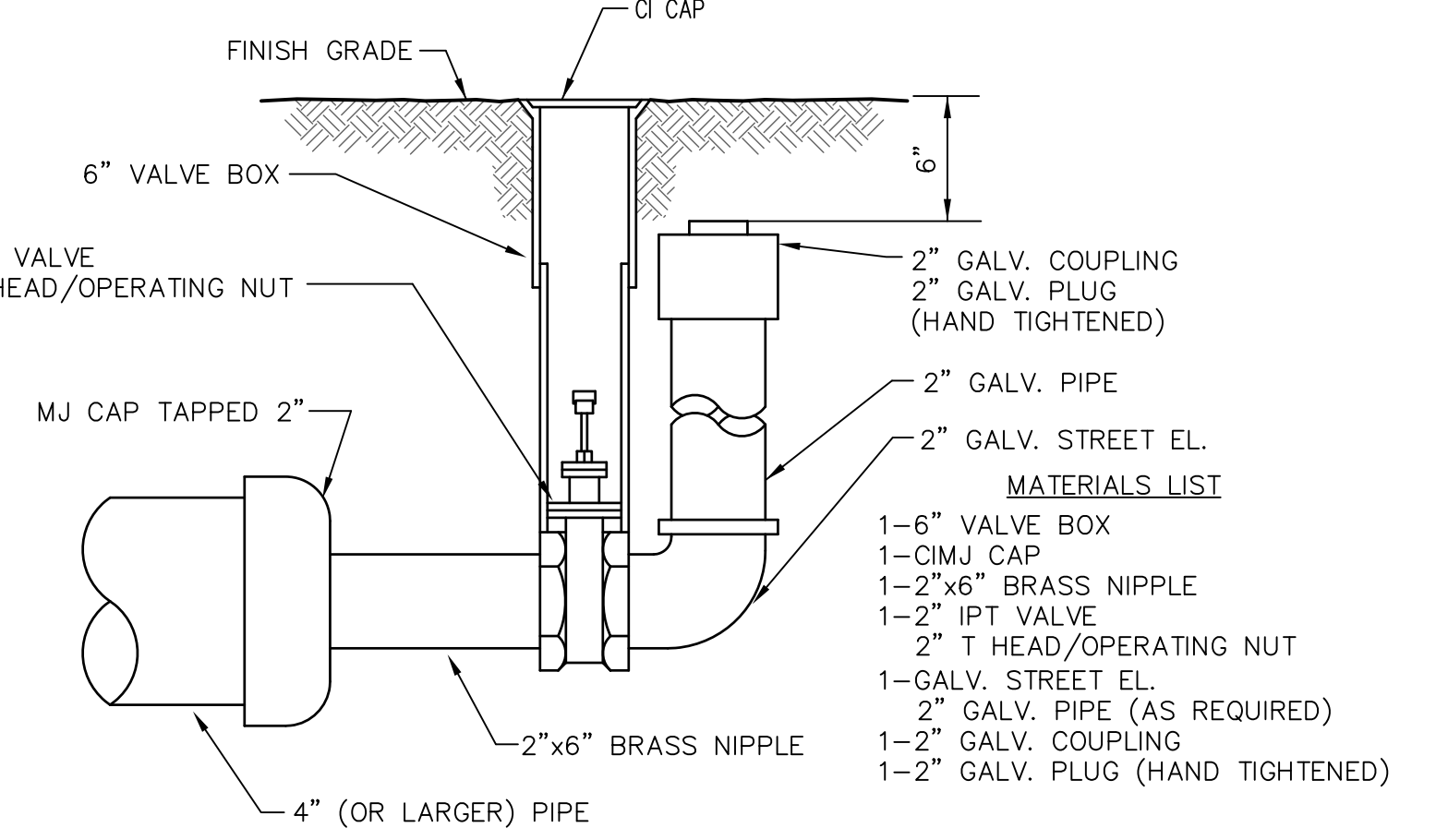
- NOTES**
- This detail covers Butterfly Valve installation, inclusive, regardless of type of pipe or joint used. 24" and larger lines to be detailed on plans.
 - 6" Valve Box and Cover required per City of Wichita Std. Specifications.
 - Conc. Support Block to be full width of trench.

CONCRETE SUPPORT BLOCKING FOR BUTTERFLY VALVE INSTALLATION



VALVE STEM EXTENSION DETAIL

NOTE: ONE VALVE STEM EXTENSION FOR EACH VALVE BURIED GREATER THAN 5'.



2" BLOWOFF ASSEMBLY

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

STANDARD WATER ASSEMBLY DETAIL

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OGA NUMBER	DATE
		04/2013

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET
3 of 3