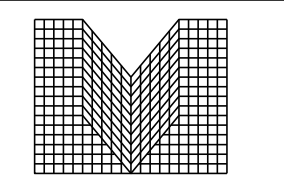


WATER AND SEWER PLANS
FOR

PARKER ADVENTIST HOSPITAL MOB III

A PARCEL OF LAND BEING A PORTION OF LOT 1, TRACT A, CROWN POINT F#1, AMENDMENT 28
SITUATED IN THE NORTHWEST QUARTER OF SECTION 10, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE 6TH PRINCIPAL MERIDIAN,
TOWN OF PARKER, COUNTY OF DOUGLAS, STATE OF COLORADO

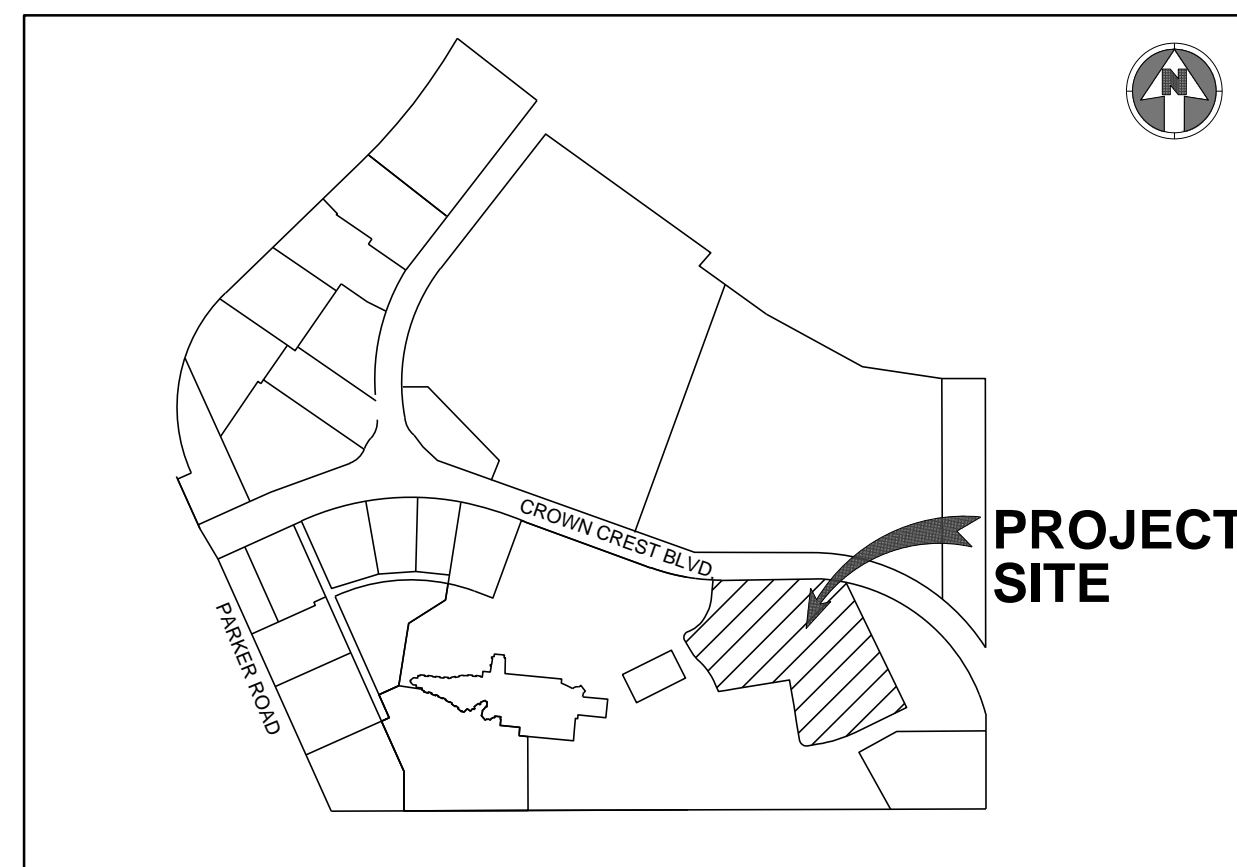


S.A. MIRO INC.
CONSULTING ENGINEERS

4582 South Ulster Street Pkwy.
Suite 750 Denver, CO 80237
ph. 303-741-3737
fax 303-694-3134



Know what's below.
Call before you dig.



VICINITY MAP
NO SCALE

Sheet List Table	
Sheet Number	Sheet Title
C-500	UTILITY COVER
C-501	UTILITY NOTES AND LEGEND
C-511	UTILITY PLAN
C-521	SANITARY SEWER PLAN AND PROFILE
C-531	WATER DETAILS
C-532	WATER DETAILS
C-533	WATER DETAILS
C-534	SANITARY SEWER DETAILS
I100	IRRIGATION COVER SHEET
I101	IRRIGATION PLAN

FIRE FLOW REQUIREMENTS ARE 3,125 GPM MINIMUM @ 20 PSI
RESIDUAL PRESSURE
THIS BUILDING REQUIRES 4 FIRE HYDRANTS TO MEET FIRE-FLOW
REQUIREMENTS. EACH FIRE HYDRANT MUST SUPPLY 1500 GPM
MINIMUM @ 20 PSI RESIDUAL PRESSURE

CODE USED FOR ANALYSIS: 2018 IFC
OCCUPANCY GROUP: S2
CONSTRUCTION TYPE: II-B
FIRE FLOW CALCULATION AREA: 88,291 SF

ENGINEER'S STATEMENT

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT
SUPERVISION AND THAT I AM A REGISTERED PROFESSIONAL ENGINEER UNDER THE
LAWS OF THE STATE OF COLORADO.

JASON DEAN CARR
REGISTERED PROFESSIONAL ENGINEER
COLORADO NO. 33854

12/19/19
DATE SIGNED

AGENCY LIST

ELECTRIC-IREA
PO DRAWER A
5496 US HWY 85
SEDALIA, CO. 80135
303-688-3100
CONTACT: BROOKS KAUFMAN

GAS-XCEL ENERGY
2070 SOUTH VALENTIA STREET
DENVER, CO. 80231
1-800-628-2121
CONTACT: DESIGN MANAGER

FIRE-SOUTH METRO FIRE RESCUE
9195 E. MINERAL AVE
CENTENNIAL, CO 80112
720-989-2000
CONTACT: RANDY CAPRA

TOWN OF PARKER
PLANNING AND BUILDING DEPT.
20120 E. MAIN STREET
PARKER, CO. 80134
303-841-2332
CONTACT: PAUL WORKMAN

TOWN OF PARKER-PUBLIC WORKS
9200 MOTSENBOCKER ROAD
PARKER, CO 80134
303-840-9546
CONTACT: MIKE WAUGH

COTTONWOOD WATER & SANITATION DISTRICT
188 INVERNESS DR. WEST SUITE 150
ENGLEWOOD, CO 80112
303-792-9509
DISTRICT MANAGER: RANDY WARREN
MANAGER ENGINEER:
DISTRICT ENGINEER: SCOTT BARNETT, P.E.
PHONE: 303-649-9857

CABLE-COMCAST
6850 S. TUSCON WAY
ENGLEWOOD, CO. 80112
303-603-5605
CONTACT: KEVIN YOUNG

TRI-COUNTY HEALTH DEPARTMENT
7000 E. BELLEVUE AVENUE
GREENWOOD VILLAGE, CO. 80111
303-220-9200
CONTACT: CAROL MACLENNAN

TELEPHONE - CENTURY LINK
LOCAL NETWORK OPERATIONS
9750 E. COSTILLA AVENUE
ENGLEWOOD, CO. 80112
303-792-1840
CONTACT: WILLIAM BENSON

CROWN POINT ARCHITECTURAL
CONTROL COMMITTEE
27905 MEADOW DRIVE, SUITE 11
EVERGREEN, CO 80439 303-674-7856
CONTACT: TIM LEONARD

OWNER INFORMATION

PARKER ADVENTIST HOSPITAL
9395 CROWN CREST BLVD.
PARKER, CO. 80138
PHONE: 303-269-4014
CONTACT: JONATHON FISHER / CFO

DEVELOPER INFORMATION

CP DEVELOPMENT
OWNER REPRESENTATIVE:
GUIDE MANAGEMENT, LLC
CONTACT: KATE REILLY
PHONE: 720-255-6879
EMAIL: KATE@GUIDEMGMT.COM

DESIGN INFORMATION

ARCHITECT: RTA ARCHITECTS
PHONE: 719-471-7566

CIVIL ENGINEER: S. A. MIRO, INC
PHONE: 303-741-3737

LANDSCAPE ARCHITECT: GROUND LOGIC INC.
PHONE: 303-733-8333

PHOTOMETRIC ENGINEER: SSR, INC.
PHONE: 303-779-1222

COTTONWOOD WATER AND SANITATION DISTRICT SIGNATURE

THE DISTRICT ENGINEER AND MANAGER MUST BE NOTIFIED AT LEAST 48 HOURS PRIOR
TO START OF CONSTRUCTION. CALL DISTRICT ENGINEER, AT 303-649-9857. THE
DISTRICT ENGINEER AND SUPPORTING STAFF WILL OBSERVE THE WORK FOR
COMPLIANCE WITH THE DISTRICT SPECIFICATIONS. THE DEVELOPER/OWNER WILL BE
CHARGED FOR CONSTRUCTION OBSERVATION AND BE BILLED BY THE DISTRICT.
PAYMENT MUST BE RECEIVED IN FULL PRIOR TO FINAL ACCEPTANCE OF THE NEW
LINES. CONSTRUCTION OBSERVATION ASSISTS IN QUALITY CONTROL IN ACHIEVING
CONFORMANCE WITH THE DISTRICT SPECIFICATIONS, BUT DOES NOT GUARANTEE THE
CONTRACTOR'S PERFORMANCE. SUCH CONSTRUCTION OBSERVATION SHALL IN NO WAY
RELIEVE THE CONTRACTOR OF HIS/HER OBLIGATION TO CONSTRUCT FACILITIES IN
ACCORDANCE WITH REGULATIONS. WORK NOT PERFORMED IN ACCORDANCE WITH THE
DISTRICT'S SPECIFICATIONS WILL NOT BE ACCEPTED. THESE PLANS HAVE BEEN
REVIEWED FOR WATER AND SANITARY SEWER ONLY.

REVIEWED FOR COTTONWOOD
WATER AND SANITATION DISTRICT

DISTRICT MANAGER _____ DATE _____

DISTRICT ENGINEER _____ DATE _____

REV.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		
8		

CLIENT NAME: PARKER ADVENTIST HOSPITAL
PROJECT NAME: PARKER MOB III
DRAWING TITLE: 9403 CROWN CREST BLVD. UTILITY COVER

FILE PATH: J:\Jobs\18057 Parker MOB III\05 CAD\Plans and Details\C500-UTIL-COVR.dwg C-500 - 12/18/2019



DESIGNED BY: MHV
DRAWN BY: DAT
CHECKED BY: JDC

DATE: 12/10/2019

MIRO JOB NUMBER: 18057
CLIENT JOB NUMBER:

DRAWING NUMBER:

C-500

ALL FIRE HYDRANTS SHALL BE INSTALLED ACCORDING TO WATER UTILITY STANDARDS. THE NUMBER AND LOCATIONS OF
THE FIRE HYDRANTS AS SHOWN ON THE OVERALL UTILITY PLAN ARE CORRECT AS SPECIFIED BY THE TOWN OF PARKER,
COMMUNITY DEVELOPMENT DEPARTMENT.

FIRE CODE OFFICIAL OR DESIGNATED REPRESENTATIVE _____ DATE _____

(NOTE - UNDERGROUND FIRE LINE (UFL) SUBMITTAL DOCUMENTS MUST MEET THE REQUIREMENTS OF NFPA 24 WHEN
SUBMITTING FOR REVIEW.)

BENCHMARK:

THE SITE BENCHMARK IS DOUGLAS COUNTY CONTROL MONUMENT NO. 1.115026,
473.35± NORTH AND 1959.02± WEST OF THE WEST 1/4 CORNER OF SECTION 3,
TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE 6TH PRINCIPAL MERIDIAN. 3-1/2"
ALUMINUM CAP, ELEVATION 5759.78.

BASIS OF BEARING:

BEARINGS ARE BASED ON THE EAST LINE OF THE NORTHWEST QUARTER OF
SECTION 10, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL
MERIDIAN, BEING MONUMENTED ON THE SOUTH END BY A #6 REBAR WITH A 3.25"
ALUMINUM CAP IN RANGE BOX "PLS 29412" AND ON THE NORTH END BY A #6 REBAR
WITH A 3.25" ALUMINUM CAP "LS 9329". SAID LINE HAVING A BEARING OF NORTH
00°07'01" WEST, 2678.56 FEET AS DEPICTED ON THE CROWN POINT F#1, 4TH
AMENDMENT PLAT. THE BEARINGS SHOWN ON THIS SURVEY ARE BASED ON THE
CROWN POINT FILING NO. 1, 17TH AMENDMENT.

MASTER LEGEND:

PROPOSED	
	PROPERTY LINE
	SECTION LINE
	RIGHT OF WAY LINE
	CENTER LINE
	CURB AND GUTTER
	SIDEWALK
	WALL
	FENCE
	SIGN
	LIGHT
	TREE
	5343 MINOR CONTOURS
	5345 MAJOR CONTOURS
	RL RIDGE LINE
	43.50 SPOT ELEVATION
	LIMITS OF GRADING
	CATV CABLE TV LINE
	COMM COMMUNICATION LINE
	E ELECTRICAL LINE
	OE OVERHEAD ELECTRICAL LINE
	FO FIBER OPTIC LINE
	G GAS LINE
	T TELEPHONE LINE
	IRR IRRIGATION LINE
	RAW RAW WATER LINE
	SS SANITARY SEWER LINE
	ST STEAM LINE
	STORM SEWER LINE
	W WATER LINE
	EASEMENT
	INLET
	FLARED END SECTIONS
	CLEANOUT
	FIRE HYDRANT
	VALVE
	WATER FITTINGS
	PEDESTAL
	UTILITY CROSSING
	MANHOLES

EXISTING	
	CURB AND GUTTER
	SIDEWALK
	WALL
	FENCE
	SIGN
	LIGHT
	TREE
	5343 MINOR CONTOURS
	5345 MAJOR CONTOURS
	43.50 SPOT ELEVATION
	EX CATV CABLE TV LINE
	EX COMM COMMUNICATION LINE
	EX E ELECTRICAL LINE
	EX OE OVERHEAD ELECTRICAL LINE
	EX FO FIBER OPTIC LINE
	EX G GAS LINE
	EX T TELEPHONE LINE
	EX IRR IRRIGATION LINE
	EX RAW RAW WATER LINE
	EX SS SANITARY SEWER LINE
	EX ST STEAM LINE
	EX SD STORM SEWER LINE
	EX W WATER LINE
	EASEMENT
	INLET
	FLARED END SECTIONS
	CLEANOUT
	FIRE HYDRANT
	VALVE
	PEDESTAL
	MANHOLES

COTTONWOOD WATER AND SANITATION DISTRICT GENERAL NOTES

- ALL MAINS, SYSTEM PLANS AND CONSTRUCTION SHALL CONFORM TO THE COTTONWOOD WATER AND SANITATION DISTRICT (THE DISTRICT) SPECIFICATIONS AND SHALL BE SUBJECT TO CONSTRUCTION OBSERVATION BY DISTRICT PERSONNEL OR REPRESENTATIVES. ALL MATERIAL AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH DISTRICT SPECIFICATIONS AND STANDARDS.
- THE OWNER, HIS/HER ENGINEER, OR CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION MEETING WITH THE DISTRICT MANAGER AND DISTRICT ENGINEER AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION. PLANS WITH THE DISTRICT REVIEW STAMP WILL BE DISTRIBUTED PRIOR TO OR AT THE PRECONSTRUCTION MEETING. NO CONSTRUCTION WILL BE PERMITTED UNTIL FORMAL RECORDING OF EASEMENTS IS COMPLETE. NO CONSTRUCTION WILL BE PERMITTED PRIOR TO THE PRECONSTRUCTION MEETING.
- ALL WATER MAINS INSTALLED SHALL CONFORM TO DENVER WATER MATERIAL SPECIFICATIONS.
 - DUCTILE IRON PIPE MS-1 AWWA C151 CLASS 50 WITH POLYWRAP
 - POLYVINYL CHLORIDE (PVC) MS-2 AWWA C900-07 DR14 PVC
- THE APPROVAL OF THE CONSTRUCTION PLANS SIGNIFIES ONLY THAT THE PLANS MEET THE MINIMUM REQUIREMENTS OF THE DISTRICT'S STANDARDS AND SPECIFICATIONS BASED ON THE INFORMATION PROVIDED BY THE DESIGN ENGINEER, OWNER-DEVELOPER, AND CONTRACTOR. APPROVAL IS NOT A REPRESENTATION OR WARRANTY THAT THE SYSTEM AND ASSOCIATED COMPONENTS WILL PERFORM ANY CERTAIN FUNCTIONS.
- THE DISTRICT, ITS REPRESENTATIVE, AND/OR THE DISTRICT ENGINEER, IS NOT A GUARANTOR OF THE CONSTRUCTION CONTRACTORS' OBLIGATIONS AND PERFORMANCE OF CONTRACT.
- OBSERVATION OF WORK IN PROGRESS AND ON-SITE VISITS ARE NOT TO BE CONSTRUED AS A GUARANTEE BY THE DISTRICT OR DISTRICT ENGINEER OF THE CONTRACTOR'S CONTRACTUAL COMMITMENT.
- THE DISTRICT AND/OR DISTRICT ENGINEER IS NOT RESPONSIBLE FOR SAFETY IN, ON, OR ABOUT THE PROJECT SITE, NOR FOR COMPLIANCE BY THE APPROPRIATE PARTY OF ANY REGULATIONS RELATING THERETO.
- THE DISTRICT AND/OR DISTRICT ENGINEER, EXERCISES NO CONTROL OF THE SAFETY OR ADEQUACY OF ANY EQUIPMENT, BUILDING COMPONENTS, SCAFFOLDING, FORMS, OR ANY OTHER WORK AIDS USED IN OR ABOUT THE PROJECT, OR IN THE SUPERINTENDING OF THE SAME.
- THE CONTRACTOR AGREES THAT HE/SHE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY, AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER, THE DESIGN ENGINEER, OR THE COUNTY.
- THE CONTRACTOR IS RESPONSIBLE FOR:
 - NOTIFYING ALL CUSTOMERS POSSIBLY AFFECTED BY OUTAGE OF WATER OR SEWER SERVICE DURING CONSTRUCTION PRIOR TO SHUTTING OFF SAID SERVICE.
 - OBTAINING, AT THE CONTRACTOR'S EXPENSE, ALL APPLICABLE LICENSES, PERMITS, BONDS, ETC. REQUIRED FOR MAIN INSTALLATION/SYSTEM MODIFICATIONS.
 - CONTACTING THE DISTRICT FOR A PRE-CONSTRUCTION MEETING AT 303-649-9857. CONSTRUCTION CANNOT START FOR AT LEAST 48 HOURS AFTER THE MEETING HAS BEEN HELD.
 - NOTIFYING THE DISTRICT 48 HOURS IN ADVANCE OF ANY NEEDS TO SHUT DOWN ANY PORTION OF THE EXISTING WATER AND/OR SANITARY SEWER SYSTEM.
 - NOTIFYING THE DISTRICT 48 HOURS IN ADVANCE FOR CONSTRUCTION OBSERVATIONS.
 - IN CASE OF AN EMERGENCY AFTER WORKING HOURS CALL THE DISTRICT OFFICE AT (303) 426-3167 FOR RECORDED INSTRUCTIONS.
- UNDERGROUND UTILITIES IN THE AREA OF CONSTRUCTION HAVE BEEN LOCATED FROM FIELD INVESTIGATION AND THE BEST AVAILABLE UTILITY RECORDS AND ARE APPROXIMATE ONLY. THE DISTRICT ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITY LINES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL COORDINATE HIS/HER ACTIVITIES WITH THE AFFECTED UTILITY COMPANIES AND SHALL NOTIFY THE UTILITY NOTIFICATION CENTER, PHONE NO. 1-800-922-1987, 48 HOURS PRIOR TO STARTING CONSTRUCTION.
- CONTRACTOR SHALL PERFORM POTHOLING ON EXISTING UTILITIES PRIOR TO THE CONSTRUCTION OF THE WATER AND/OR SANITARY SEWER LINES. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION COST OF THE PIPELINE.
- THE CONTRACTOR SHALL HAVE IN HIS/HER POSSESSION AT ALL TIMES ONE (1) SIGNED COPY OF THE PROJECT PLANS SIGNED BY THE DISTRICT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING ANY EXISTING SIGNS, STRUCTURES, FENCES, ETC ENCOUNTERED ON THE JOB AND RESTORING THEM TO THEIR ORIGINAL CONDITION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY GROUNDWATER ENCOUNTERED DURING THE CONSTRUCTION OF ANY PORTION OF THIS PROJECT. GROUNDWATER SHALL BE PUMPED, PIPED, REMOVED AND DISPOSED OF IN A MANNER WHICH DOES NOT CAUSE FLOODING OF EXISTING STREETS NOR EROSION ON ABUTTING PROPERTIES IN ORDER TO CONSTRUCT THE IMPROVEMENTS SHOWN ON THESE PLANS. USE OF THE DISTRICTS SEWER SYSTEM FOR THE DISPOSAL OF GROUND WATER IS PROHIBITED WITHOUT WRITTEN CONSENT FROM THE DISTRICT. NO CONCRETE SHALL BE PLACED WHERE GROUNDWATER IS VISIBLE OR UNTIL THE GROUNDWATER TABLE HAS BEEN LOWERED BELOW THE PROPOSED IMPROVEMENTS. ANY UNSTABLE AREAS, AS A RESULT OF GROUNDWATER, ENCOUNTERED DURING THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE STABILIZED AS AGREED UPON BY THE DISTRICT AND THE DESIGN ENGINEER AT THE TIME OF THE OCCURRENCE.
- IT SHALL BE THE DESIGN ENGINEER'S RESPONSIBILITY TO RESOLVE CONSTRUCTION PROBLEMS WITH THE DISTRICT DUE TO CHANGED CONDITIONS ENCOUNTERED DURING THE PROGRESS OF ANY PORTION OF THE PROPOSED WORK. IF, IN THE OPINION OF THE DISTRICT, PROPOSED ALTERATIONS TO THE SIGNED CONSTRUCTION PLANS INVOLVES SIGNIFICANT CHANGES TO THE CHARACTER OF THE WORK, OR TO FUTURE CONTIGUOUS PUBLIC OR PRIVATE IMPROVEMENTS, THE DESIGN ENGINEER SHALL BE RESPONSIBLE FOR SUBMITTING REVISED PLANS TO THE DISTRICT FOR REVIEW PRIOR TO ANY FURTHER CONSTRUCTION RELATED TO THAT PORTION OF THE WORK.
- THE OWNER IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH PLAN REVIEW AND CONSTRUCTION OBSERVATION.
- MAINTAIN MINIMUM OF 10 FEET SEPARATION BETWEEN WATER AND SANITARY SEWER MAINS AND SERVICES IN ACCORDANCE WITH COLORADO STATE DEPARTMENT OF HEALTH AND ENVIROMENT STANDARDS.
- THE CONTRACTOR WILL BE REQUIRED TO PROVIDE A TRAFFIC CONTROL PLAN TO DOUGLAS COUNTY AND TO CDOT PRIOR TO ISSUANCE OF A STREET CUT PERMIT.
- SHOP DRAWINGS ARE TO BE SUBMITTED AT LEAST 48 HOURS PRIOR TO THE INSTALLATION OF ANY MATERIALS FOR ALL PIPES, FITTINGS AND APPURTENANCES.

COTTONWOOD WATER NOTES

- EXISTING VALVES IN THE DISTRICT SERVICE AREA MAY ONLY BE OPERATED BY DISTRICT PERSONNEL.
- BEFORE ANY TAPS ARE MADE TO MAINS, APPLICATION(S) FOR THE TAPS MUST BE RECEIVED AND APPROVED BY THE DISTRICT.
- IRRIGATION DEMANDS MUST BE FORMALLY SUBMITTED FOR ALL PROJECT REQUIRING WATER FOR LANDSCAPING PURPOSES.
- FINAL PLUMBING PLANS MUST BE RECIEVED AND REVIEWED BY THE DISTRICT ENGINEER BEFORE WATER SERVICE TAPS CAN BE AWARDED IN ORDER TO PERFORM FIXTURE UNIT ANALYSIS TO VERIFY TAP SIZE FOR ALL COMMERCIAL, INDUSTRIAL AND MULTI-FAMILY DEVELOPMENTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROCUREMENT OF ALL PERMITS NECESSARY FOR THE CONSTRUCTION OF THE WATER LINE WORK.
- PRIOR TO INSTALLATION OF WATER MAINS, ROAD CONSTRUCTION MUST HAVE PROGRESSED TO AT LEAST THE 'SUB-GRADE' STAGE. SUB-GRADE IS DEFINED AS AN ELEVATION OF NO MORE THAN SEVEN (7) INCHES BELOW THE FINISHED STREET GRADE. THE CONTRACTOR WILL ADJUST ALL VALVE BOXES AND FIRE HYDRANTS TO THE FINAL FINISHED GRADE.
- ALL WATER MAINS SHALL HAVE A MINIMUM OF FOUR AND ONE-HALF (4-1/2) FEET OF COVER AND ARE TO BE THREE (3) FEET FROM THE EDGE OF THE GUTTER PAN.
- DISTANCE FOR WATERLINES IS THE HORIZONTAL DISTANCE BETWEEN CENTER OF FITTING TO CENTER OF VALVE, METER, ETC. THEREFORE, THE DISTANCES SHOWN ON THE PLANS ARE APPROXIMATE AND COULD VARY DUE TO VERTICAL ALIGNMENT AT FITTING DIMENSIONS.
- ALL HYDRANT LATERALS AND FIRE LINES SHALL BE DUCTILE IRON PIPE CLASS 50 AND FULLY RESTRAINED WITH POLYWRAP.
- ALL WATER LINE VALVES SHALL BE SET AT THE INTERSECTION OF THE EXTENDED PROPERTY LINE AND WATER LINE, EXCEPT WHERE THAT POINT FALLS IN THE FLOW LINE OF A CONCRETE CROSS PAN. IN THAT CASE, THE VALVE SHALL BE LOCATED SO THAT THE SURFACE DRAINAGE DOES NOT INFILTRATE THE VALVE BOX. IF A TAPPING TEE IS NOT LOCATED ON A PROPERTY LINE THEN THE ASSOCIATED VALVE WILL NOT BE REQUIRED AS SHOWN ON THE PLANS. VALVE BOXES SHALL BE SET AT AN ELEVATION IN ACCORDANCE WITH COUNTY PAVING REQUIREMENTS.
- ALL VALVES, VALVE BOXES, CURB STOPS AND/OR METER PIT COVERS SHALL HAVE THE WORD "WATER" STAMPED ON THEM. ALL POTABLE WATER VALVES SHALL BE OPENED IN A CLOCKWISE DIRECTION. ALL VALVE BOXES AND FIRE HYDRANTS WILL BE ADJUSTED TO THE FINAL FINISHED GRADE BY THE CONTRACTOR.
- ALL IRRIGATION AND NON-POTABLE PIPE SHALL BE PURPLE IN COLOR OR SHALL BE LABELED WITH PURPLE TAPE READING 'CAUTION NONPOTABLE WATER' ALONG THE FULL LENGTH OF THE PIPE.
- POLYETHYLENE WRAPPINGS SHALL BE INSTALLED AROUND ALL DUCTILE IRON PIPE, FITTINGS, VALVES, FIRE HYDRANT BARRELS, AND RODS AND CLAMPS. THE POLYETHYLENE SHALL HAVE A MINIMUM THICKNESS OF EIGHT (8) MILS.
- TRACER WIRE, GAUGE 12 COPPER, SHALL BE INSTALLED ON ALL WATER LINES, FIRE HYDRANTS LATERALS AND APPURTENANCES.
- INDIVIDUAL SERVICE LINES ARE REQUIRED TO HAVE PRVS WHEN SYSTEM PRESSURE EXCEEDS 80 PSI IN ACCORDANCE WITH UNIFORM PLUMBING CODE.
- A BACKFLOW PREVENTION DEVICE APPROVED BY DENVER WATER IS REQUIRED ON THE TREATED WATER SERVICE LINE FOR:
 - ALL COMMERCIAL AND MULTI-FAMILY DOMESTIC TAPS.
 - FIRE LINES
- ALL WATER LINES SHALL BE CHLORINATED IN ACCORDANCE WITH AWWA C-651, "DISINFECTING WATER MAINS." THE REQUIRED METHOD IS TO USE SUFFICIENT CHLORINE TABLET TO PRODUCE A 25 MG/L SOLUTION. THESE TABLETS SHALL BE ADHERED TO THE TOP OF THE PIPE WITH A FOOD GRADE ADHESIVE SUCH AS PERMATED CLEAR R.T.V. CHLORINATION OF 16-INCH AND LARGER PIPE REQUIRE A CHLORINE SLURRY. THE CHLORINATION OF ANY FINISHED PIPELINE SHALL BE COMPLETED PRIOR TO HYDROSTATIC TESTING.
- THE WATER QUALITY CONTROL DIVISION OF THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT (CDPHE) REQUIRES ALL WATER LINE CONTRACTORS TO POSSESS A CURRENT DISCHARGE PERMIT FOR DISCHARGES OF CHLORINATED AND PROCESS WATERS ASSOCIATED WITH THE INSTALLATION OF NEW MAINS OR CONDUITS. CONTACT CDPHE WATER QUALITY CONTROL DIVISION AT (303) 692-3539 FOR INFORMATION ON OBTAINING THE REQUIRED PERMIT.
- HYDROSTATIC TESTING: ALL WATER LINES SHALL BE HYDROSTATIC TESTED IN ACCORDANCE WITH AWWA C-600 SECTION 4 "HYDROSTATIC TESTING". ALL WATER LINES SHALL BE TESTED TO A MINIMUM OF 150 PSI. THE TEST SHALL BE SCHEDULED WITH THE DISTRICT AUTHORITY AND COORDINATED WITH ANY OTHER REVIEWING OR APPROVING AGENCY. THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT FOR TESTING. THE ALLOWABLE LEAKAGE RATES ARE AS FOLLOWS:

PIPE I.D.	ALLOWABLE LEAKAGE PER 1000 FEET	
	D.I.P	PVC
4"	0.37 GAL/HOUR	0.33 GAL/HOUR
6"	0.55 GAL/HOUR	0.50 GAL/HOUR
8"	0.74 GAL/HOUR	0.66 GAL/HOUR
12"	1.10 GAL/HOUR	1.00 GAL/HOUR
16"	1.47 GAL/HOUR	
20"	1.84 GAL/HOUR	

- ONLY ONE (1) POINT OF CONNECTION WILL BE ALLOWED UNTIL ALL TESTING OF NEW INSTALLATIONS IS COMPLETED TO THE DISTRICT'S SATISFACTION.
- PROBATIONARY ACCEPTANCE OF THE NEW WATER LINES IS CONTINGENT UPON RECEIVING COPIES OF:
 - PASSING WATER LINE TRENCH COMPACTION TEST RESULTS;
 - PASSING HYDROSTATIC PRESSURE TEST RESULTS;
 - RECORD DRAWINGS
 - PASSING HEALTH DEPARTMENT TESTS (CHLORINE AND/OR CLEAR WATER AS REQUIRED)
- THE COST OF THE WATER LINE CONSTRUCTION IS \$_____.
- THE STATIC PRESSURE MEASURED AT THE FIRE HYDRANT LOCATED AT THE PARKER ADVENTIST HOSPITAL IS 90 PSI. PLEASE INTERPOLATE TO DETERMINE THE PRESSURE AT THE CONNECTION TO THE EXISTING SYSTEM. 9395 CROWN CREST BLVD, PARKER, CO 80138

COTTONWOOD SANITARY SEWER NOTES

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROCUREMENT OF ALL PERMITS NECESSARY FOR THE CONSTRUCTION OF THE SANITARY SEWER LINE WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR:
 - NOTIFYING THE DISTRICT 48 HOURS IN ADVANCE OF ANY NEED TO SHUT DOWN ANY PORTION OF THE EXISTING SANITARY SEWER SYSTEM.
 - NOTIFYING THE DISTRICT 48 HOURS IN ADVANCE OF THE WORK.
 - IN CASE OF AN EMERGENCY AFTER WORKING HOURS, CALL THE DISTRICT OFFICE AT (303) 986-2275 FOR RECORDED INSTRUCTIONS.
- UNDERDRAINS ARE NOT PART OF THE SANITARY SEWER LINES OR SYSTEM AND WILL NOT BE ALLOWED IN THE SAME TRENCH AS THE SANITARY SEWER MAINS. UNDERDRAINS SHALL NOT BE ACCEPTED, MAINTAINED OR SUBJECT TO CONSTRUCTION OBSERVATION BY THE DISTRICT. THE DISTRICT HAS NO SPECIFICATIONS FOR UNDERDRAINS AND WILL ONLY REVIEW THEIR PROPOSED LOCATION RELATIVE TO THE SANITARY SEWER LINES.
- THE CONTRACTOR SHALL VERIFY EXISTING MANHOLE INVERTS TO BE CONNECTED TO PRIOR TO CONSTRUCTION STAKING AND CONSTRUCTION.
- PRIOR TO INSTALLATION OF SANITARY SEWER MAINS, ROAD CONSTRUCTION MUST HAVE PROGRESSED TO AT LEAST THE SUB-GRADE STAGE. SUB-GRADE IS DEFINED AS AN ELEVATION OF NO MORE THAN SEVEN (7) INCHES BELOW THE FINISHED STREET GRADE. THE CONTRACTOR SHALL ADJUST ALL MANHOLE COVERS TO THE FINAL FINISHED GRADE.
- THE LENGTH OF SANITARY SEWER IS THE HORIZONTAL DISTANCE BETWEEN CENTERS OF MANHOLE. THEREFORE DISTANCES SHOWN ON THE PLANS ARE APPROXIMATE AND COULD VARY DUE TO VERTICAL ALIGNMENT AND MANHOLE DIMENSIONS.
- THE PIPE USED FOR SANITARY SEWER MAINS SHALL BE IN ACCORDANCE WITH ASTM D-3034 SDR 35 PVC PIPE IN PAVED RIGHTS-OF-WAY AND EASEMENTS, AND AWWA C-900 CLASS 165 (DR25) IN UNPAVED EASEMENTS OR AS NOTED ON THE PROJECT PLANS.
- MANHOLE RIMS SHALL BE SET AT AN ELEVATION RELATIVE TO THE PAVEMENT, IN ACCORDANCE WITH COUNTY STANDARDS. WHETHER THE MANHOLE IS IN A PAVED OR UNPAVED GRADE, A MAXIMUM ACCEPTABLE VERTICAL ADJUSTMENT UTILIZING CONCRETE RINGS IS TWELVE (12) INCHES.
- THE CONTRACTOR SHALL TAKE CARE TO PROPERLY SHAPE ALL MANHOLE INVERTS AND BENCHES IN ACCORDANCE WITH DISTRICT STANDARDS AND SPECIFICATIONS, TO PROMOTE SMOOTH FLOW THROUGH THE MANHOLE. INVERTS OF LINES INTERSECTING AT 90 DEGREES AND AT HIGHLY DIVERGENT OR FLAT SLOPES ARE ESPECIALLY CRITICAL. MANHOLE INVERTS SHALL BE CONSTRUCTED WITH A SMOOTH TROWEL FINISH, AND BENCHES FINISHED WITH A LIGHT BROOM, NON-SKID FINISH.
- TRACER WIRE, GAUGE 12 COPPER, SHALL BE INSTALLED ON ALL SEWER LINES, MANHOLES, AND CLEANOUTS.
- THE SANITARY SEWER SERVICE SHALL BE STUBBED OUT. THE END OF THE STUB SHALL BE WITNESSED BY A WOOD, CARBONITE OR METAL POST AT LEAST FOUR FEET LONG, BURIED TO EXPOSE ONE FOOT. THE CONTRACTOR SHALL FURNISH THE AUTHORITY WITH AN AS-BUILT LOCATION OF THE WYE.
- THE SANITARY SEWER SYSTEM WILL BE TESTED IN ACCORDANCE WITH THE DISTRICT STANDARDS AND SPECIFICATIONS. THE DISTRICT WILL REQUIRE THE DEVELOPER TO:
 - LOW PRESSURE AIR TEST 100% OF THE NEW SYSTEM, AND
 - DEFLECTION TEST, AT A MINIMUM 33% OF THE SYSTEM FIFTEEN (15) FEET OR LESS IN DEPTH, AND 100% OF THE SYSTEM GREATER THAN FIFTEEN (15) FEET IN DEPTH.
 - JET AND TV/VIDEO TAPE 100% OF THE SYSTEM.
- PROBATIONARY ACCEPTANCE OF THE NEW SANITARY SEWER MAINS IS CONTINGENT UPON RECEIVING COPIES OF:
 - SANITARY SEWER TRENCH COMPACTION TEST RESULTS,
 - RECORD DRAWINGS, AND
 - COMPLETION OF SYSTEM TESTING.
- CONNECTIONS TO EXISTING DISTRICT LINES WILL BE PERMITTED UPON ACCEPTANCE OF THE NEW SANITARY SEWER SYSTEM. EXISTING PIPE AT THE POINT OF CONNECTION SHALL NOT BE "BROKEN OUT" UNTIL THE NEW SYSTEM IS ACCEPTED.
- MONITORING MANHOLES ARE REQUIRED FOR ALL COMMERCIAL AND INDUSTRIAL SANITARY SERVICE LINES.
- PIPE BEDDING UP TO 16-FEET IN DEPTH IS TO BE SQUEEGEE. PIPE BEDDING IN EXCESS OF 16-FEET IN DEPTH IS TO BE 3/4-INCH AGGREGATE. PIPE BEDDING IN EXCESS OF 22-FEET MUST BE SPECIFIED BY THE DISTRICT ENGINEER.

COTTONWOOD WATER AND SANITATION DISTRICT SIGNATURE

THE DISTRICT ENGINEER AND MANAGER MUST BE NOTIFIED AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION. CALL THE DISTRICT, AT 303-649-9857. THE DISTRICT ENGINEER AND SUPPORTING STAFF WILL OBSERVE THE WORK FOR COMPLIANCE WITH THE DISTRICT SPECIFICATIONS. THE DEVELOPER/OWNER WILL BE CHARGED FOR CONSTRUCTION OBSERVATION AND BE BILLED BY THE DISTRICT. PAYMENT MUST BE RECEIVED IN FULL PRIOR TO FINAL ACCEPTANCE OF THE NEW LINES. CONSTRUCTION OBSERVATION ASSISTS IN QUALITY CONTROL IN ACHIEVING CONFORMANCE WITH THE DISTRICT SPECIFICATIONS, BUT DOES NOT GUARANTEE THE CONTRACTORS PERFORMANCE. SUCH CONSTRUCTION OBSERVATION SHALL IN NO WAY RELIEVE THE CONTRACTOR OF HIS/HER OBLIGATION TO CONSTRUCT FACILITIES IN ACCORDANCE WITH REGULATIONS. WORK NOT PERFORMED IN ACCORDANCE WITH THE DISTRICT'S SPECIFICATIONS WILL NOT BE ACCEPTED. THESE PLANS HAVE BEEN REVIEWED FOR WATER AND SANITARY SEWER ONLY.

REVIEWED FOR COTTONWOOD WATER AND SANITATION DISTRICT

DISTRICT MANAGER

DISTRICT ENGINEER

S.A. MIRO INC.
CONSULTING ENGINEERS
4582 South Ulster Street Pkwy.
Suite 750 Denver, CO 80237
ph. 303-741-3737
fax 303-694-3134

Know what's below.
Call before you dig.

DATE	DESCRIPTION	REV.
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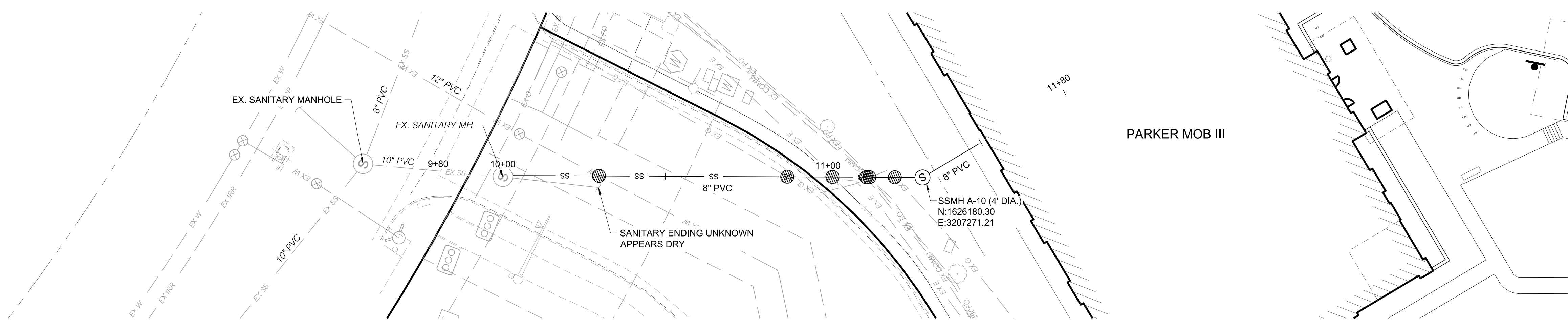
PARKER ADVENTIST HOSPITAL
PARKER MOB III
9403 CROWN CREST BLVD.
UTILITY NOTES AND LEGEND

CLIENT NAME:
PROJECT NAME:
DRAWING TITLE:

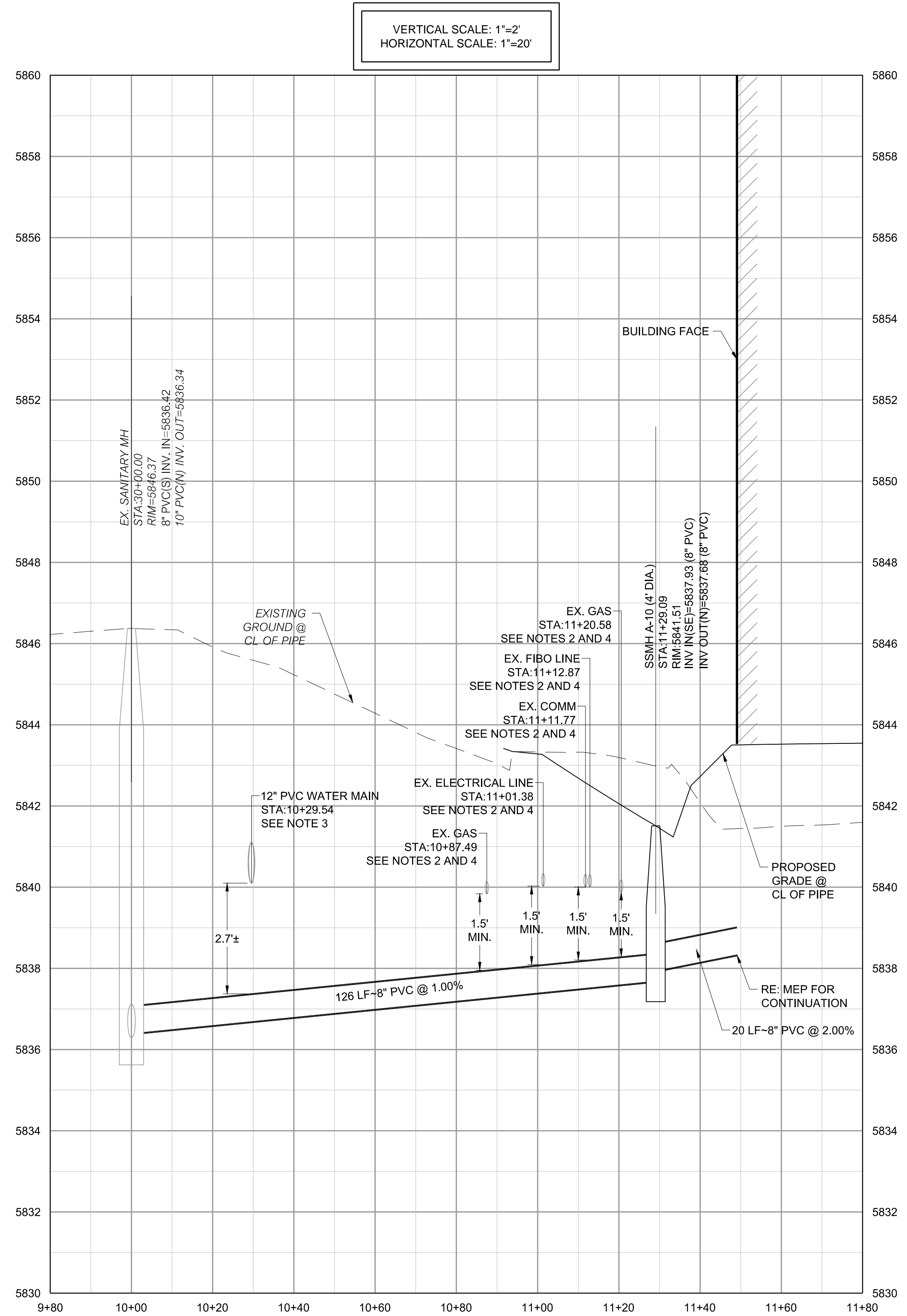
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DESIGNED BY:	MHV
DRAWN BY:	DAT
CHECKED BY:	JDC
DATE:	12/10/2019
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CLIENT JOB NUMBER	

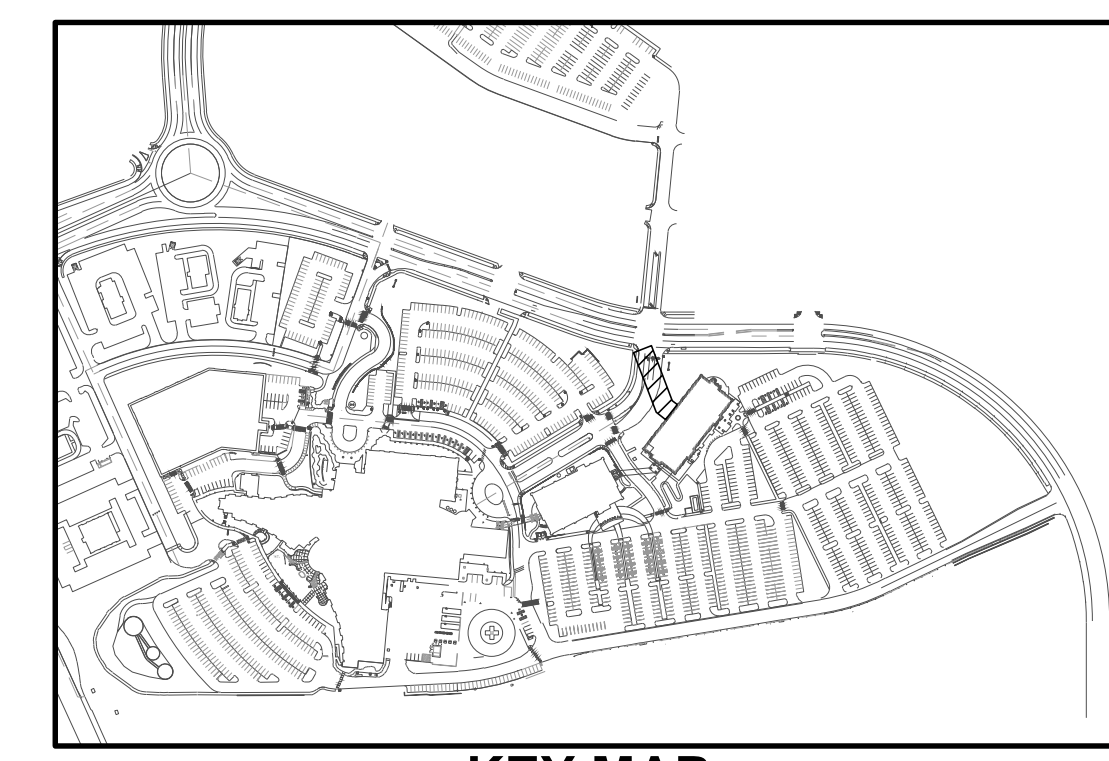
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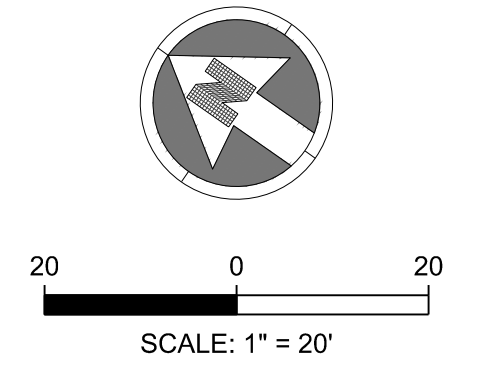
SEWER LINE A PLAN



SEWER LINE A PROFILE



KEY MAP
NOT TO SCALE



- NOTES:**
1. SEE SHEET C-501 FOR CIVIL NOTES AND LEGEND.
 2. ALL EXISTING DRY UTILITIES ARE ASSUMED TO BE 3' DEEP TO TOP OF PIPE.
 3. ALL EXISTING WATER LINES ARE ASSUMED TO BE 4.5' DEEP TO TOP OF PIPE.
 4. THE CONTRACTOR SHALL POTHOLE ALL EXISTING UTILITY CROSSINGS PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY POTENTIAL CONFLICTS IMMEDIATELY.

COTTONWOOD WATER AND SANITATION DISTRICT SIGNATURE

THE DISTRICT ENGINEER AND MANAGER MUST BE NOTIFIED AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION. CALL THE DISTRICT, AT 303-649-9857. THE DISTRICT ENGINEER AND SUPPORTING STAFF WILL OBSERVE THE WORK FOR COMPLIANCE WITH THE DISTRICT SPECIFICATIONS. THE DEVELOPER/OWNER WILL BE CHARGED FOR CONSTRUCTION OBSERVATION AND BE BILLED BY THE DISTRICT. PAYMENT MUST BE RECEIVED IN FULL PRIOR TO FINAL ACCEPTANCE OF THE NEW LINES. CONSTRUCTION OBSERVATION ASSISTS IN QUALITY CONTROL IN ACHIEVING CONFORMANCE WITH THE DISTRICT SPECIFICATIONS, BUT DOES NOT GUARANTEE THE CONTRACTOR'S PERFORMANCE. SUCH CONSTRUCTION OBSERVATION SHALL IN NO WAY RELIEVE THE CONTRACTOR OF HIS/HER OBLIGATION TO CONSTRUCT FACILITIES IN ACCORDANCE WITH REGULATIONS. WORK NOT PERFORMED IN ACCORDANCE WITH THE DISTRICT'S SPECIFICATIONS WILL NOT BE ACCEPTED. THESE PLANS HAVE BEEN REVIEWED FOR WATER AND SANITARY SEWER ONLY.

REVIEWED FOR COTTONWOOD
WATER AND SANITATION DISTRICT

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CLIENT NAME: **PARKER ADVENTIST HOSPITAL**

PROJECT NAME: **PARKER MOB III**

DRAWING TITLE: **9403 CROWN CREST BLVD. SANITARY SEWER PLAN AND PROFILE**

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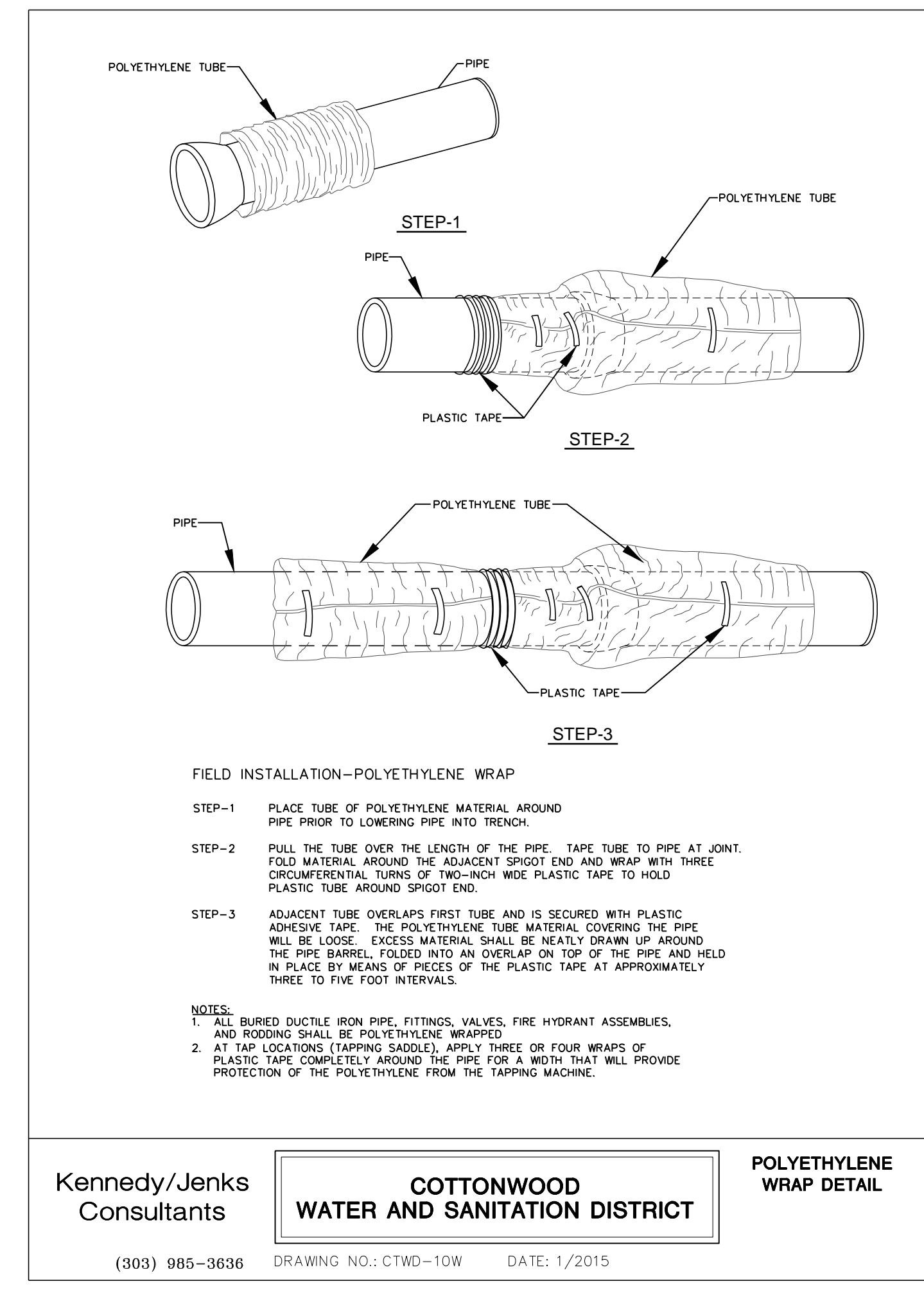
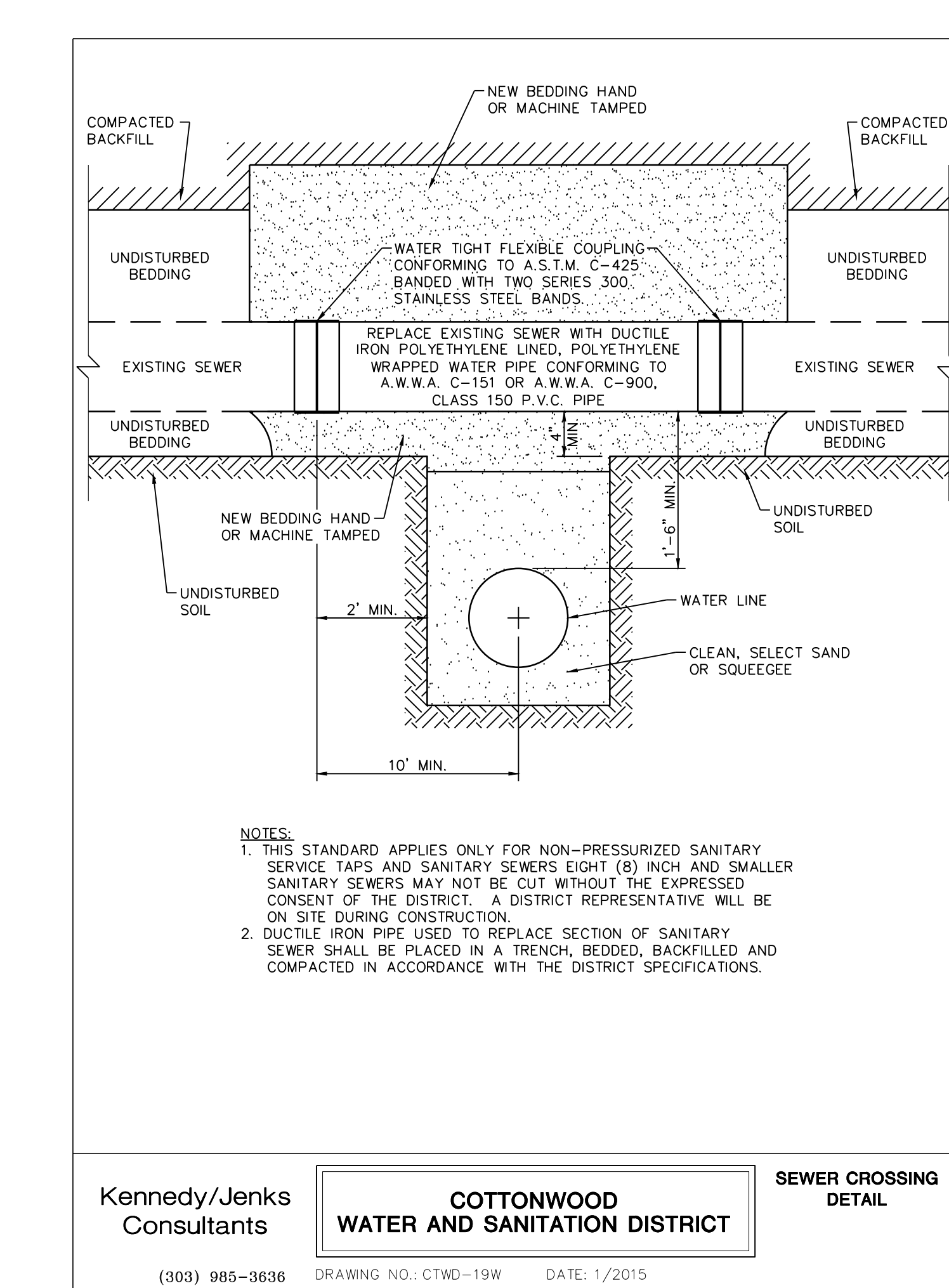
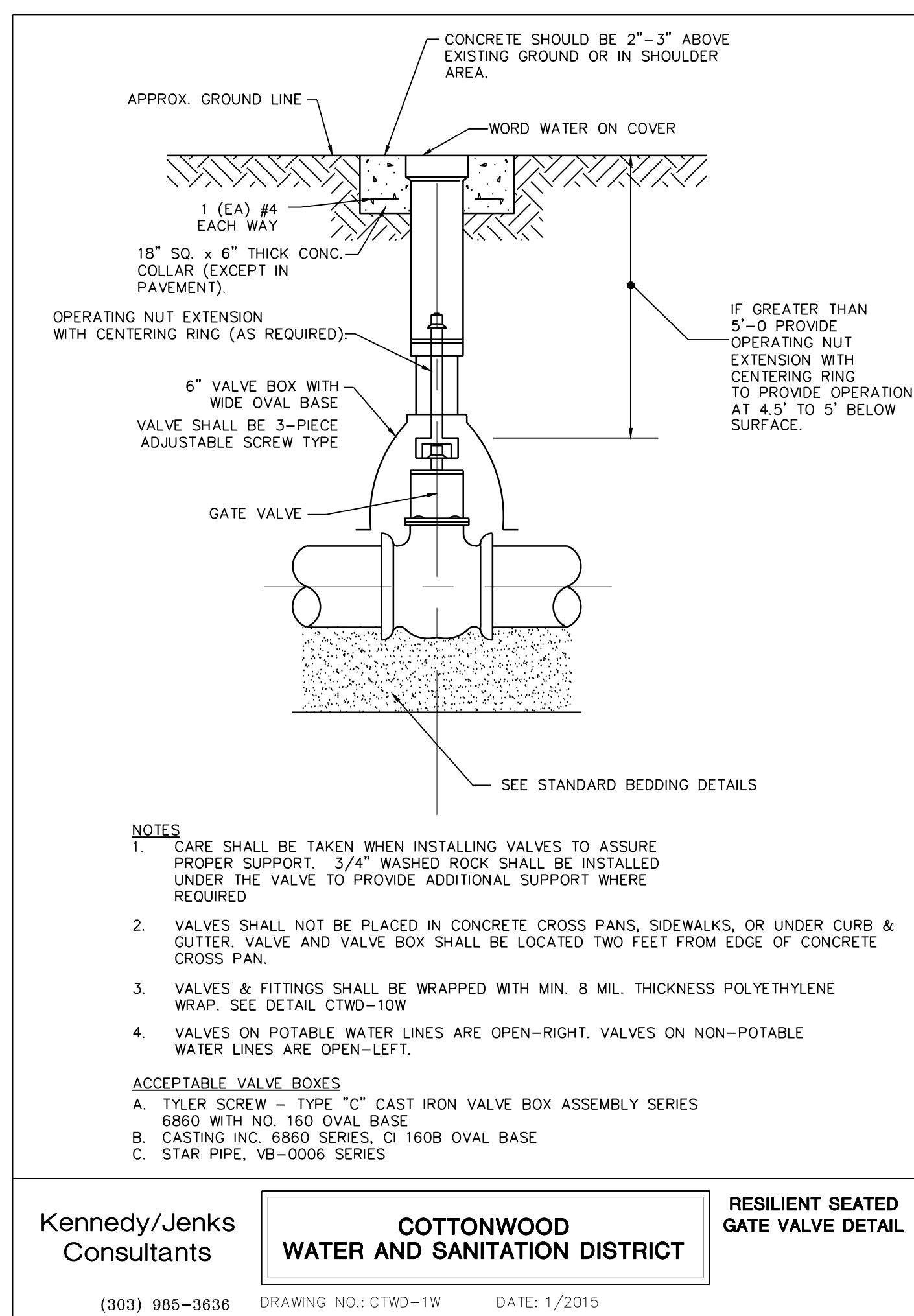
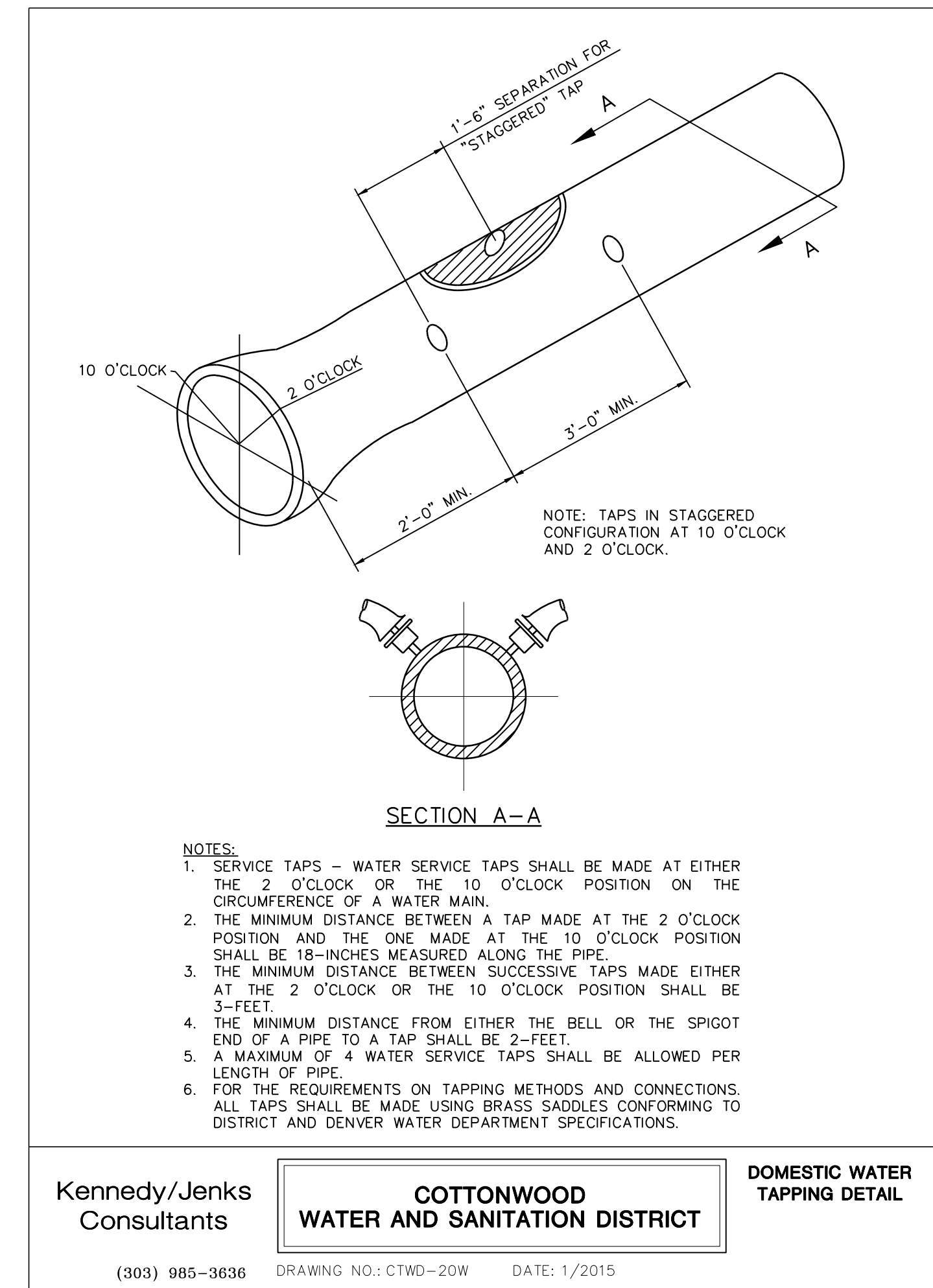
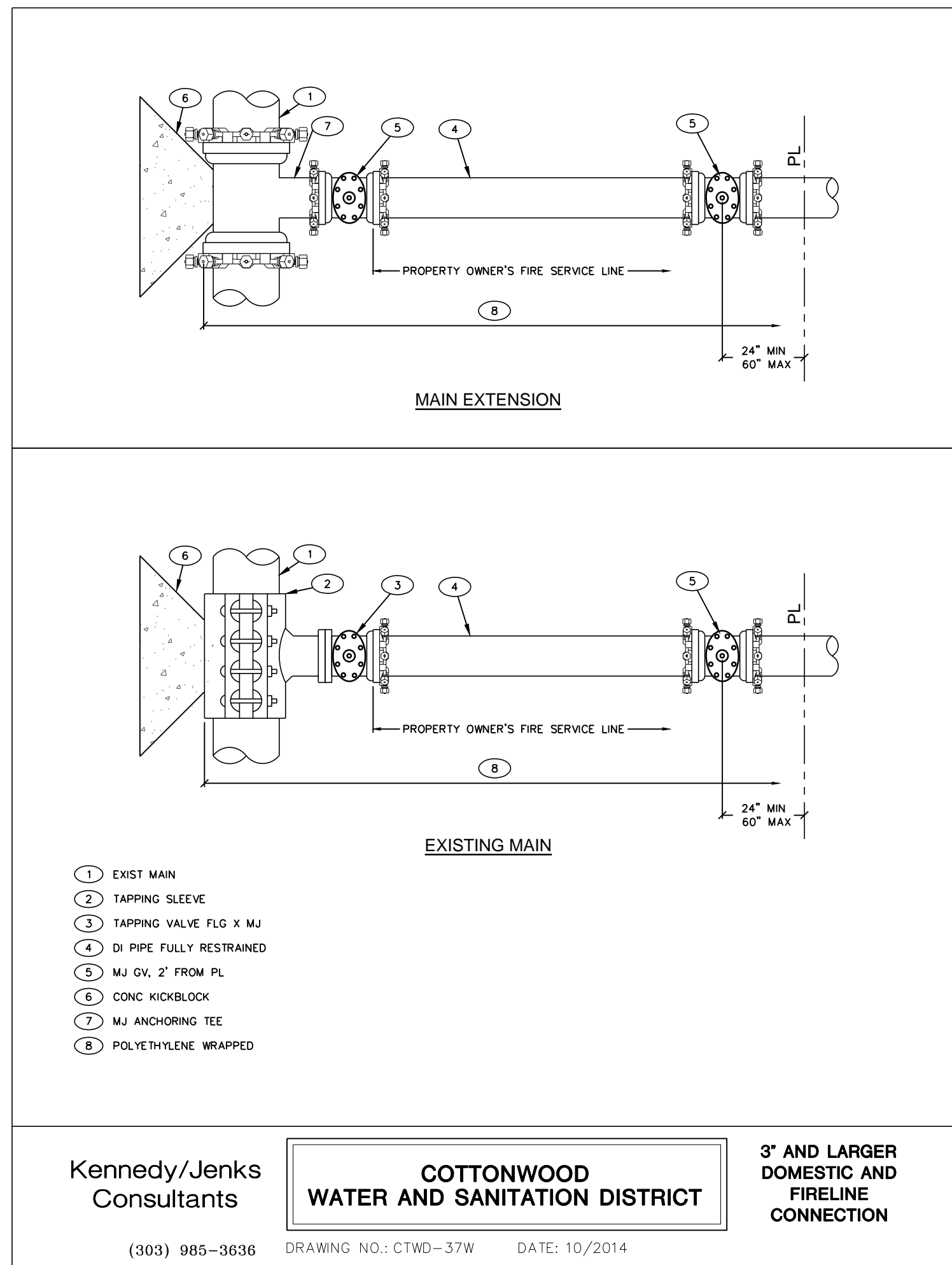
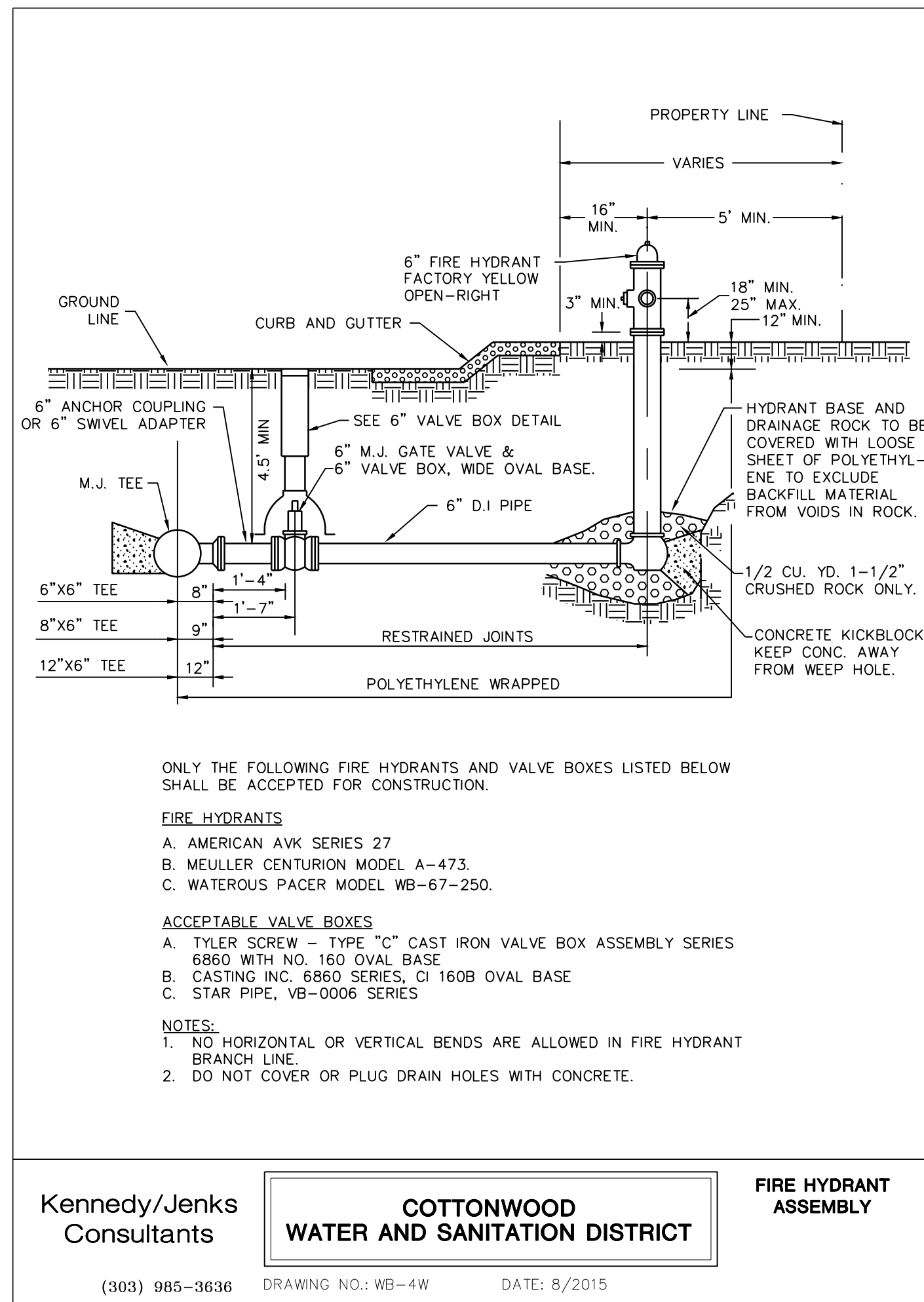


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DRAWN BY: DAT
CHECKED BY: JDC
DATE: 12/10/2019

MIRO JOB NUMBER: 18057
CLIENT JOB NUMBER:

DISTRICT MANAGER: _____
DISTRICT ENGINEER: _____

DRAWING NUMBER: **C-521**

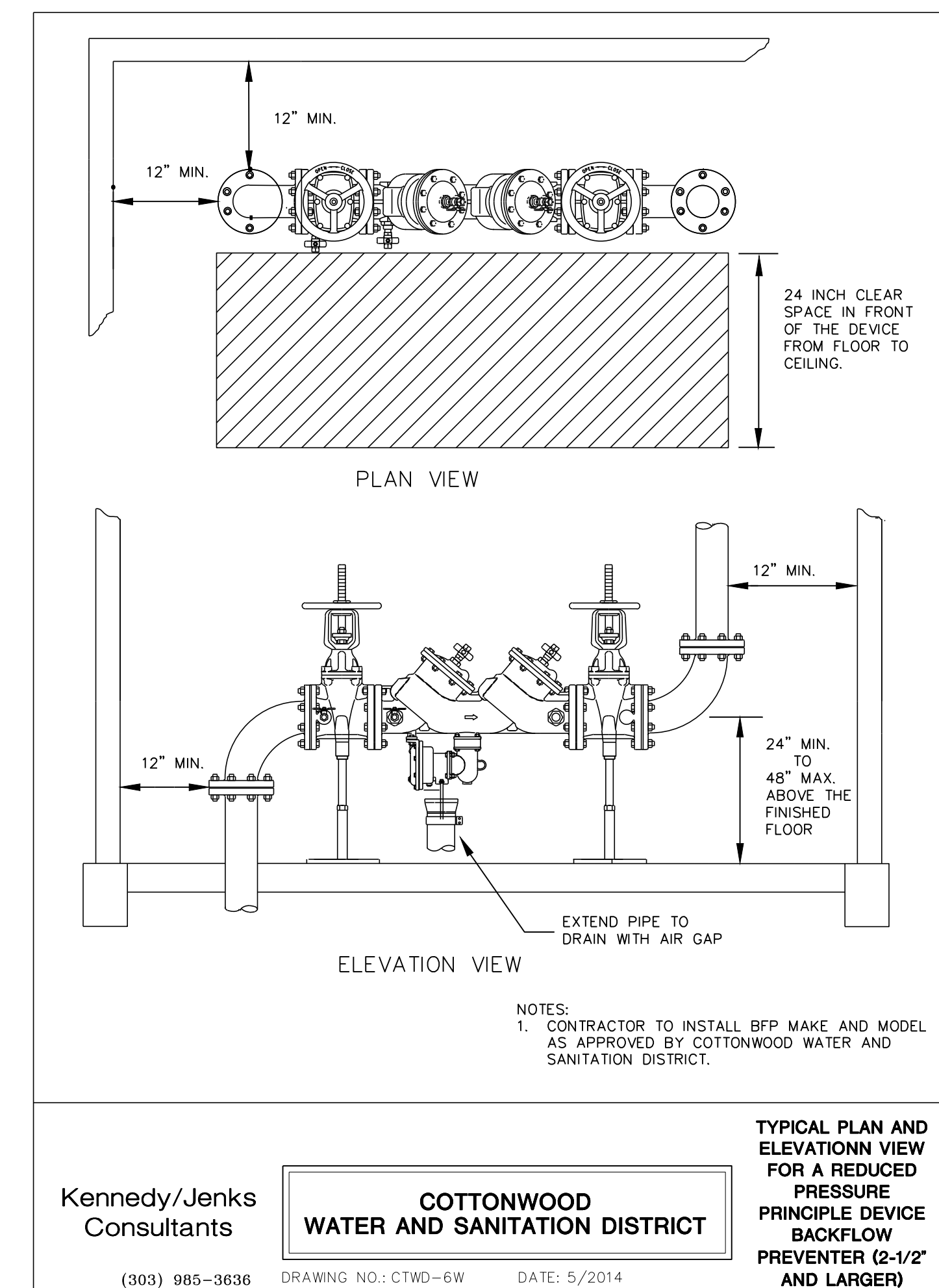
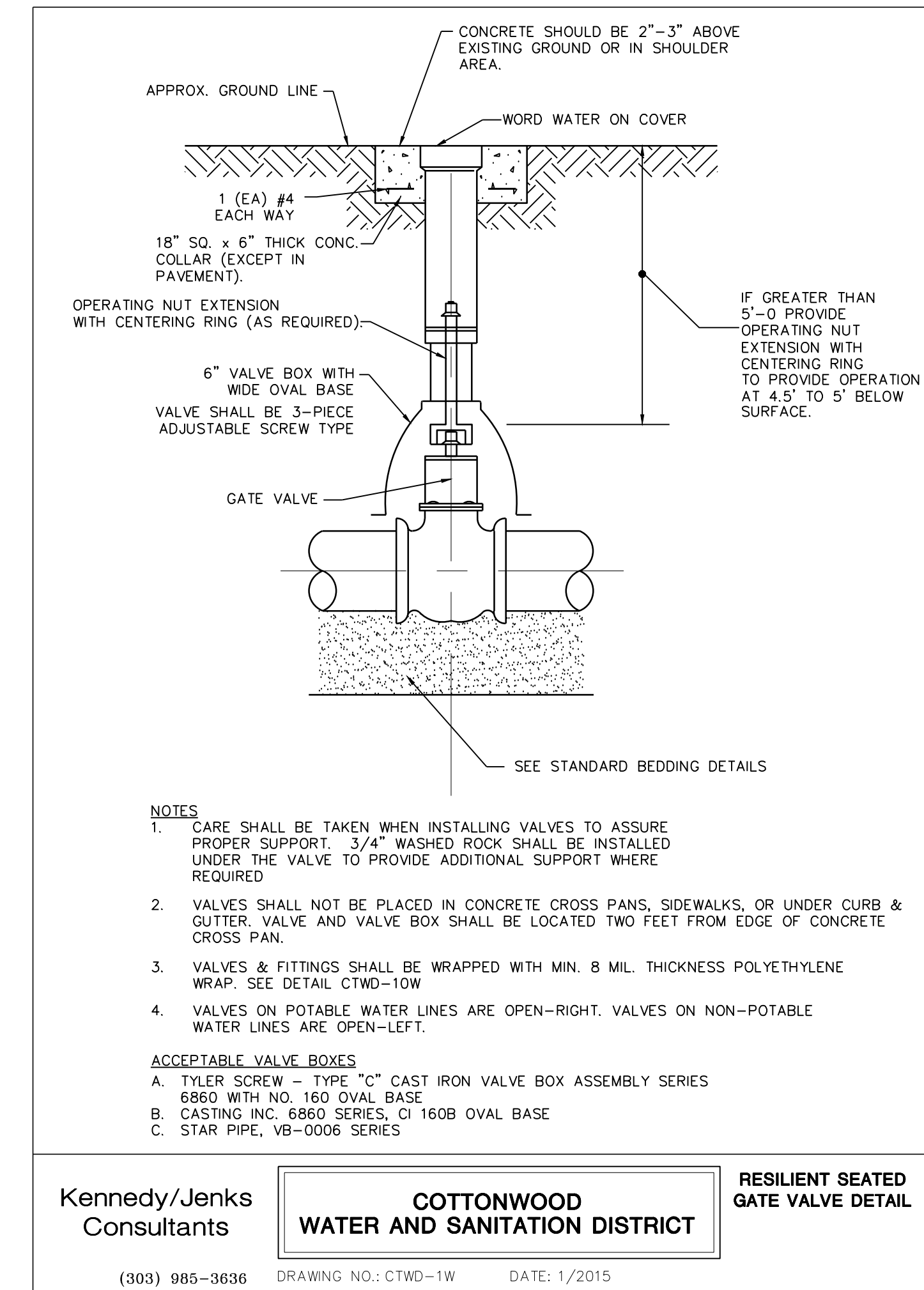
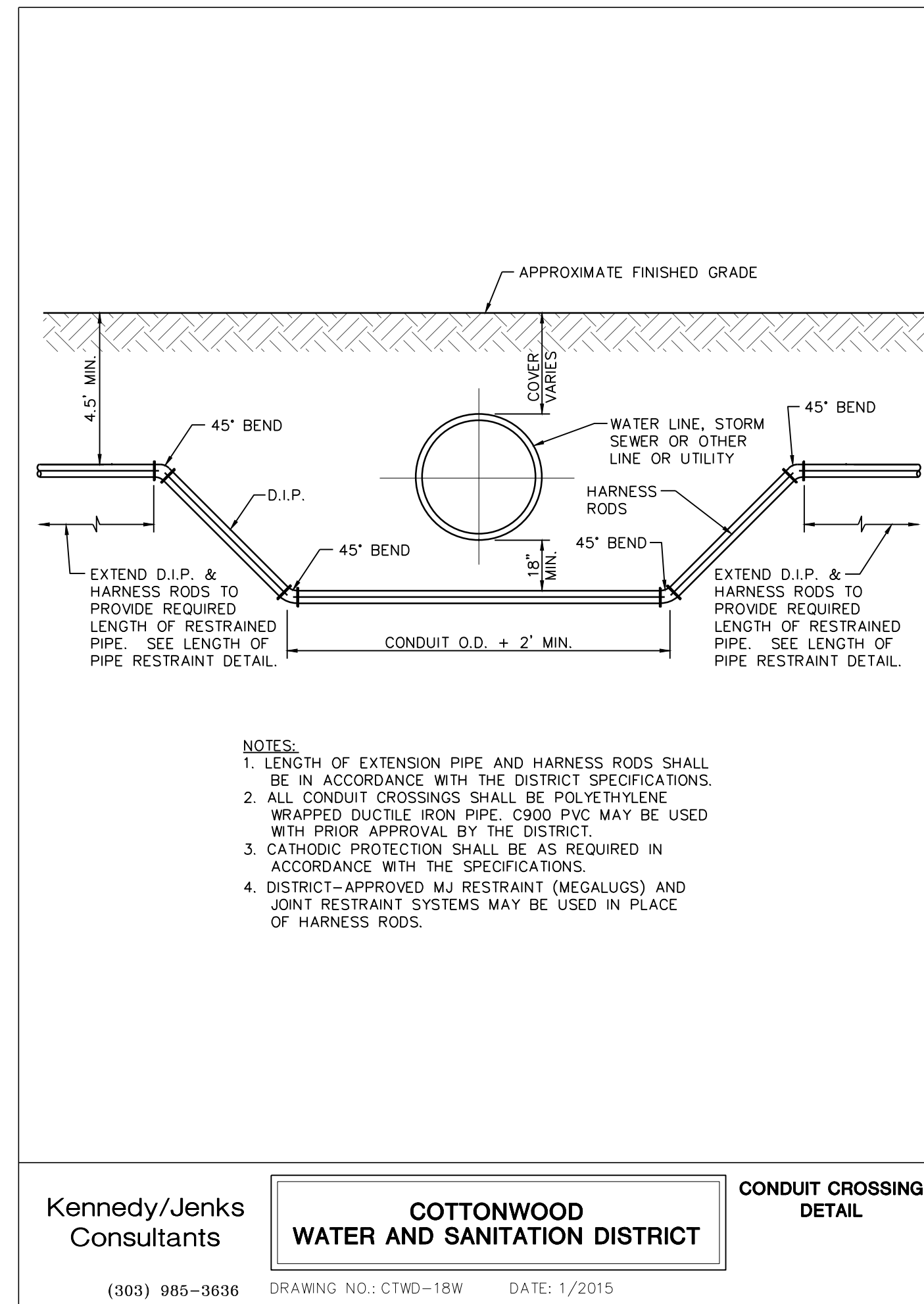


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CLIENT NAME: **PARKER ADVENTIST HOSPITAL**
PROJECT NAME: **PARKER MOB III**
DRAWING TITLE: **9403 CROWN CREST BLVD. WATER DETAILS**
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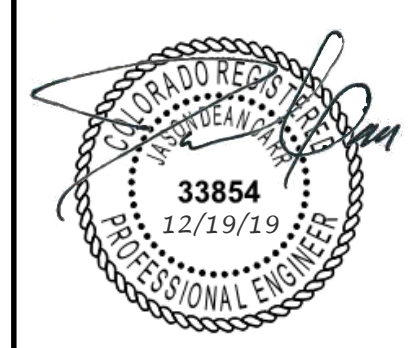
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CHECKED BY: JDC
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DRAWING NUMBER: **C-531**



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CLIENT NAME: **PARKER ADVENTIST HOSPITAL**
 PROJECT NAME: **PARKER MOB III**
 DRAWING TITLE: **9403 CROWN CREST BLVD. WATER DETAILS**

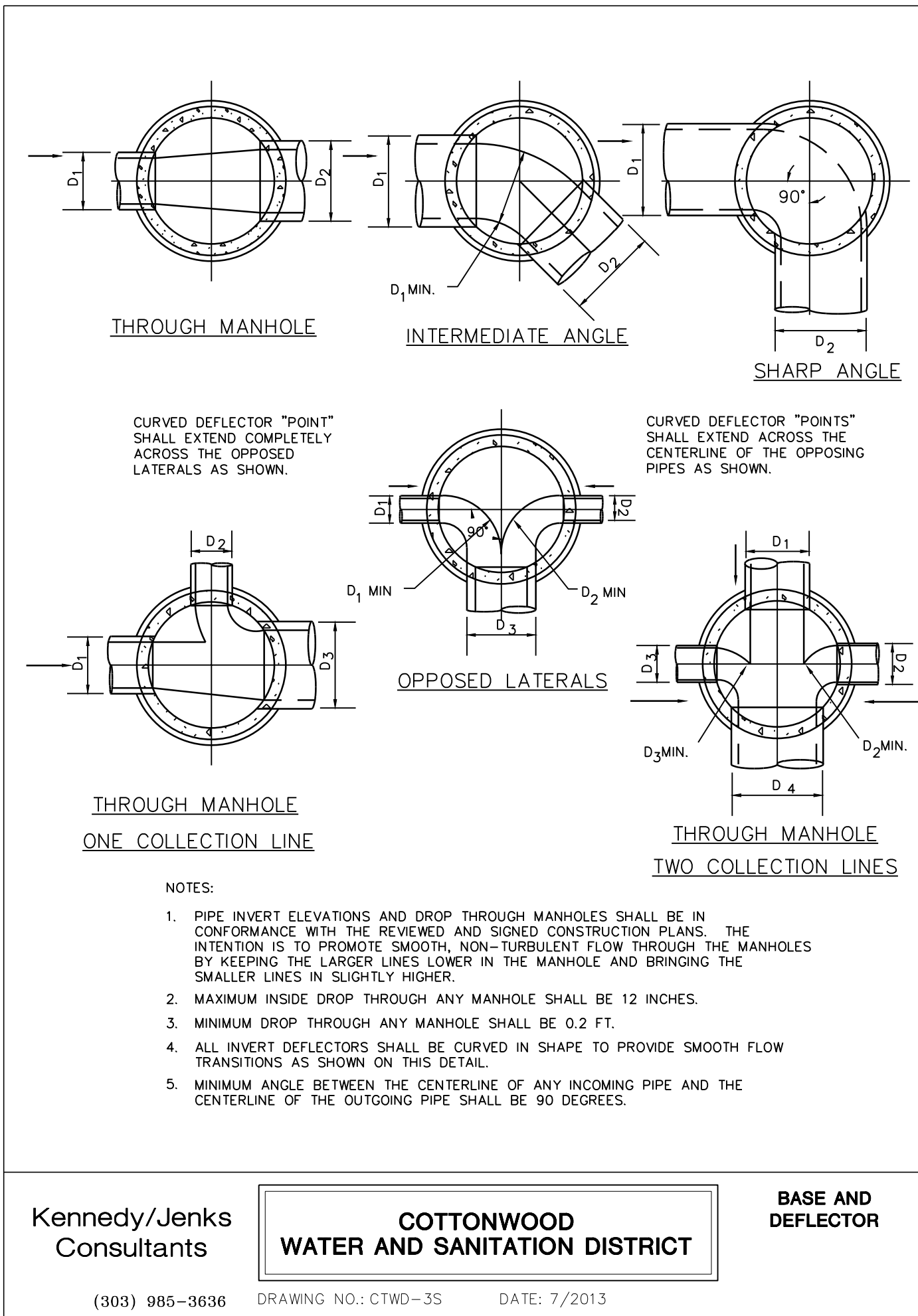
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DESIGNED BY: MHV
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 CHECKED BY: JDC
 DATE: 12/10/2019

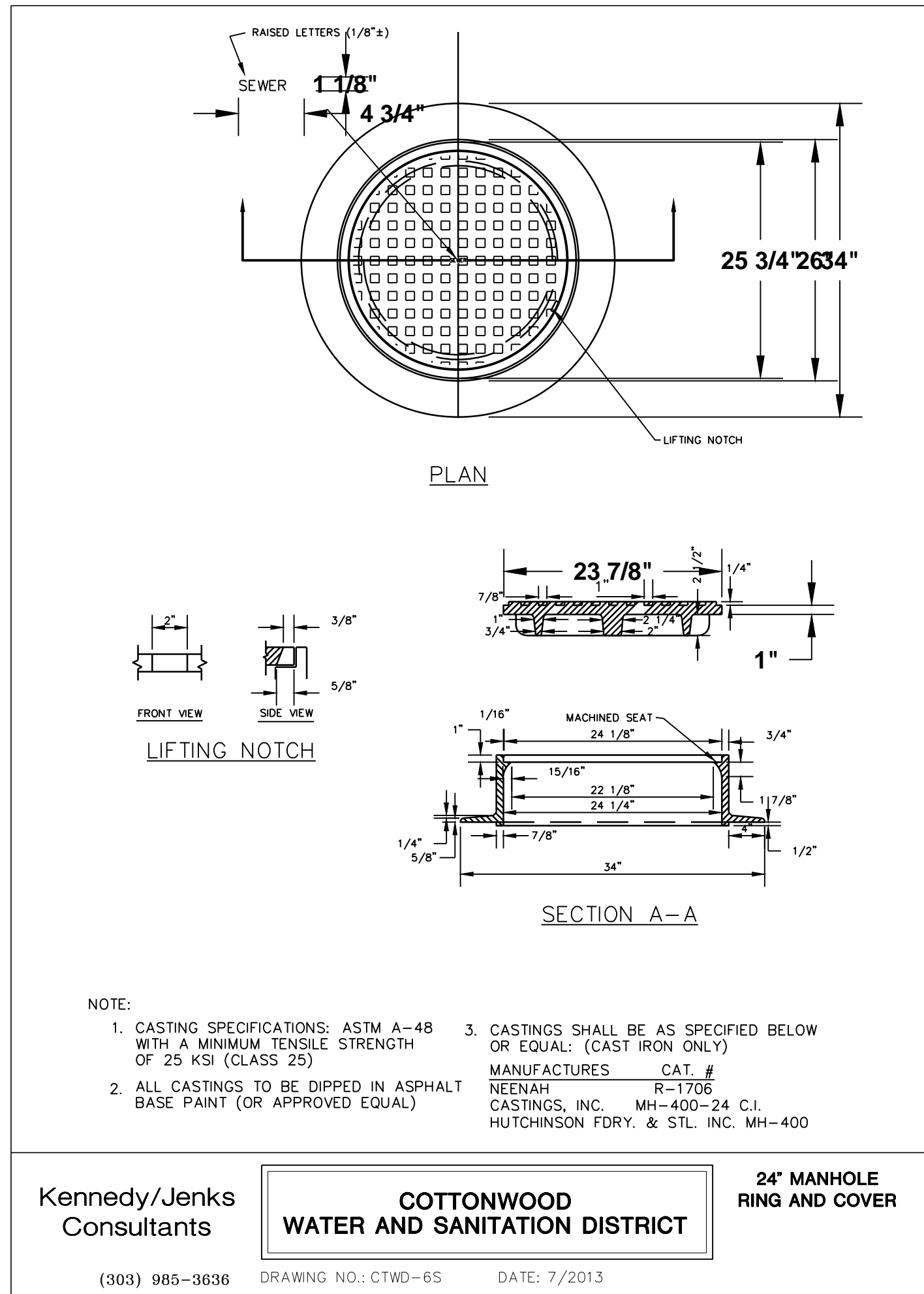
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DRAWING NUMBER: **C-533**



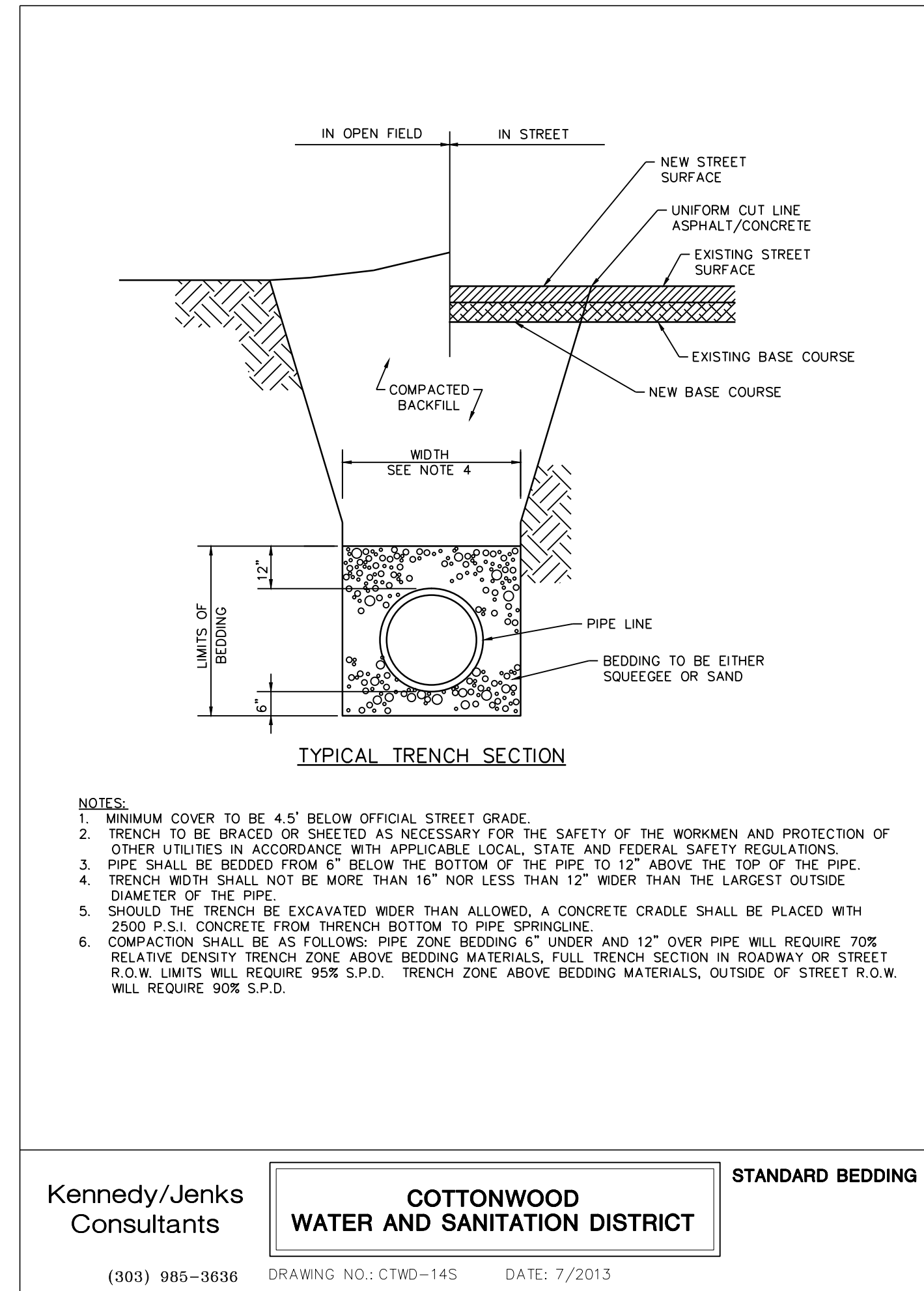
Kennedy/Jenks Consultants **COTTONWOOD WATER AND SANITATION DISTRICT** **BASE AND DEFLECTOR**

(303) 985-3836 DRAWING NO.: CTWD-35 DATE: 7/2013



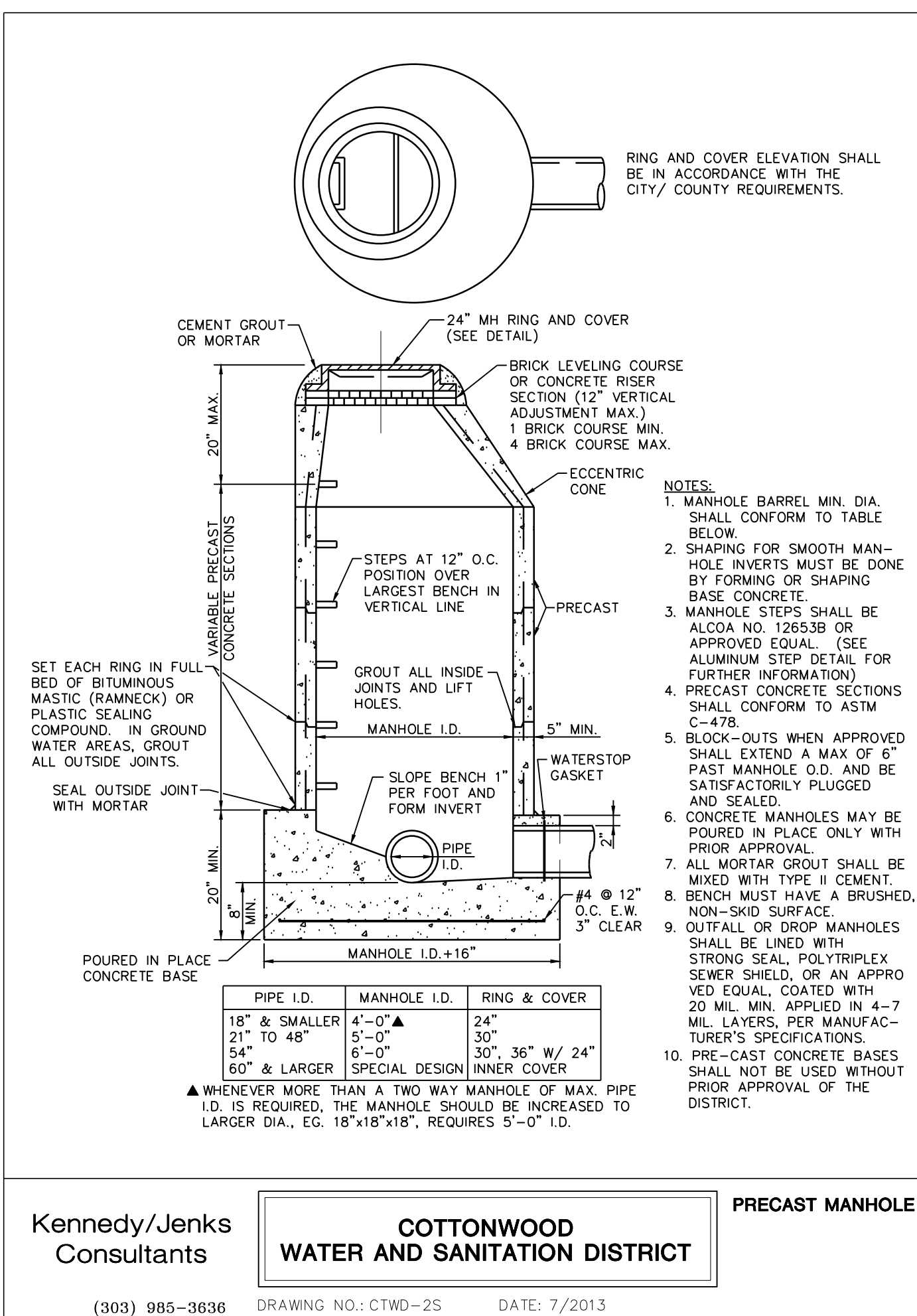
Kennedy/Jenks Consultants **COTTONWOOD WATER AND SANITATION DISTRICT** **24" MANHOLE RING AND COVER**

(303) 985-3836 DRAWING NO.: CTWD-65 DATE: 7/2013



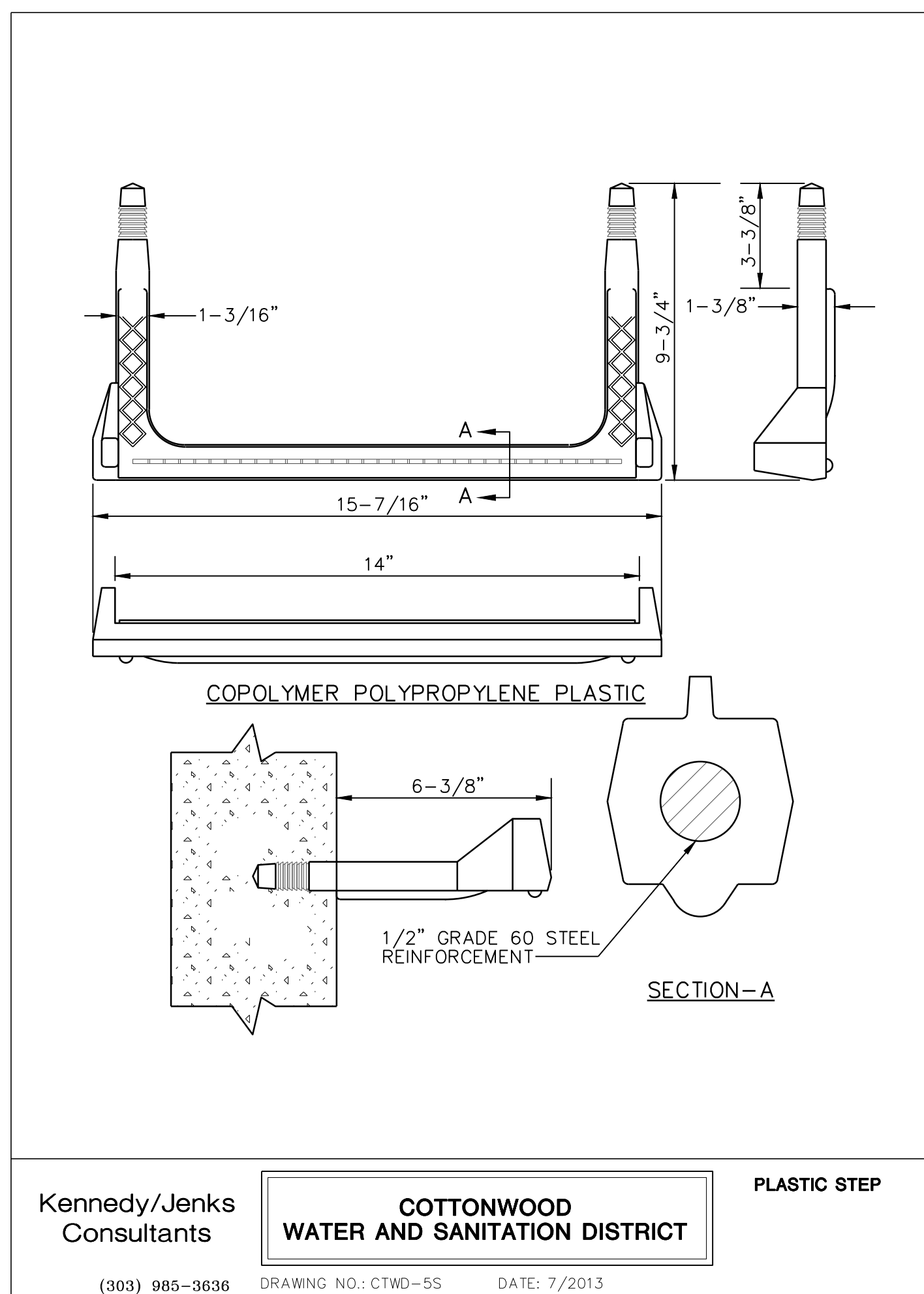
Kennedy/Jenks Consultants **COTTONWOOD WATER AND SANITATION DISTRICT** **STANDARD BEDDING**

(303) 985-3836 DRAWING NO.: CTWD-145 DATE: 7/2013



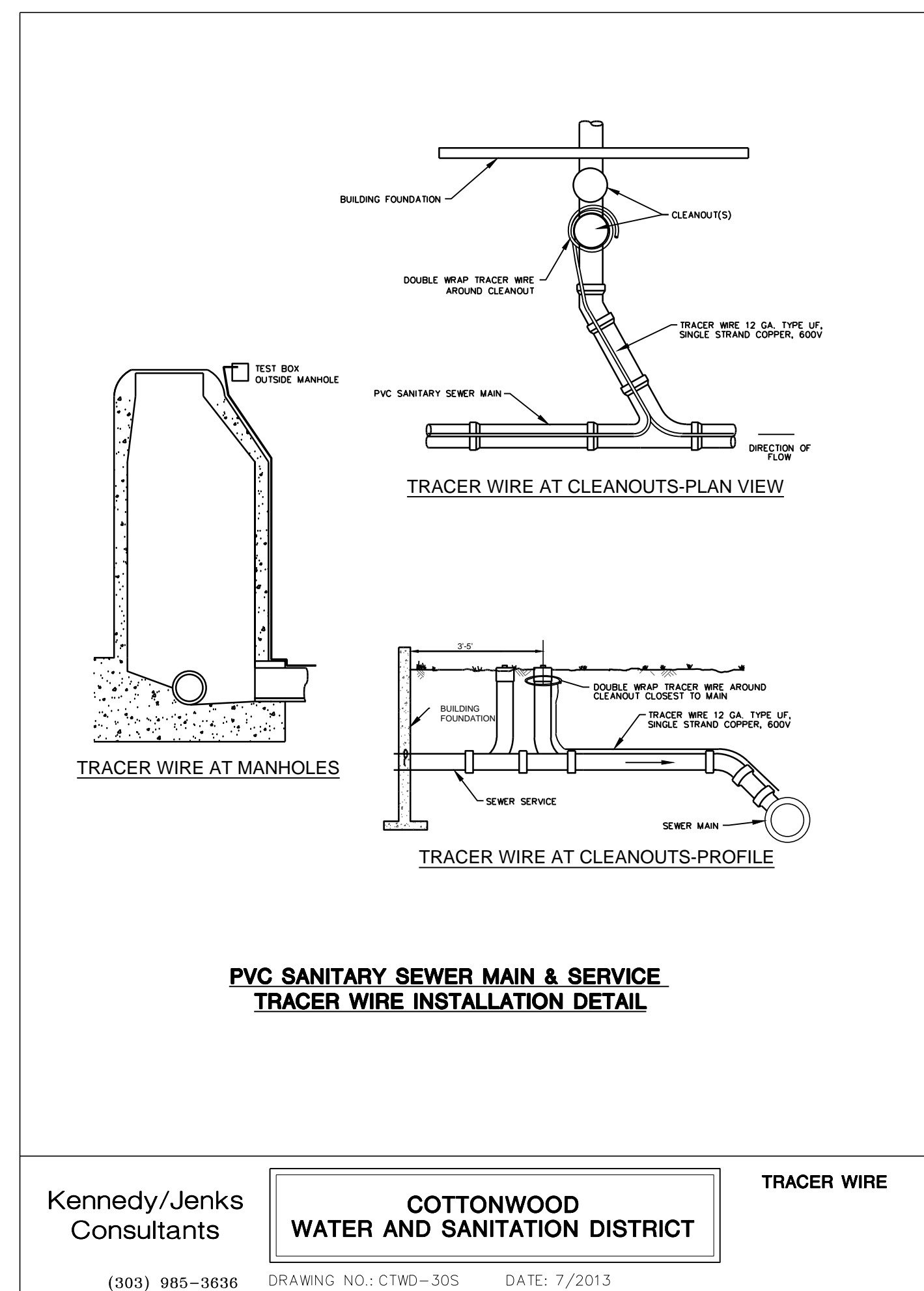
Kennedy/Jenks Consultants **COTTONWOOD WATER AND SANITATION DISTRICT** **PRECAST MANHOLE**

(303) 985-3836 DRAWING NO.: CTWD-25 DATE: 7/2013



Kennedy/Jenks Consultants **COTTONWOOD WATER AND SANITATION DISTRICT** **PLASTIC STEP**

(303) 985-3836 DRAWING NO.: CTWD-55 DATE: 7/2013



Kennedy/Jenks Consultants **COTTONWOOD WATER AND SANITATION DISTRICT** **TRACER WIRE**

(303) 985-3836 DRAWING NO.: CTWD-305 DATE: 7/2013

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PARKER ADVENTIST HOSPITAL
PARKER MOB III
9403 CROWN CREST BLVD.
SANITARY SEWER DETAILS

CLIENT NAME: PARKER ADVENTIST HOSPITAL
PROJECT NAME: PARKER MOB III
DRAWING TITLE: SANITARY SEWER DETAILS

FILE PATH: J:\Jobs\18057 Parker MOB III\05 CAD\Plans and Details\CS31-UTIL-DTLs.dwg C-534 - 12/18/2019

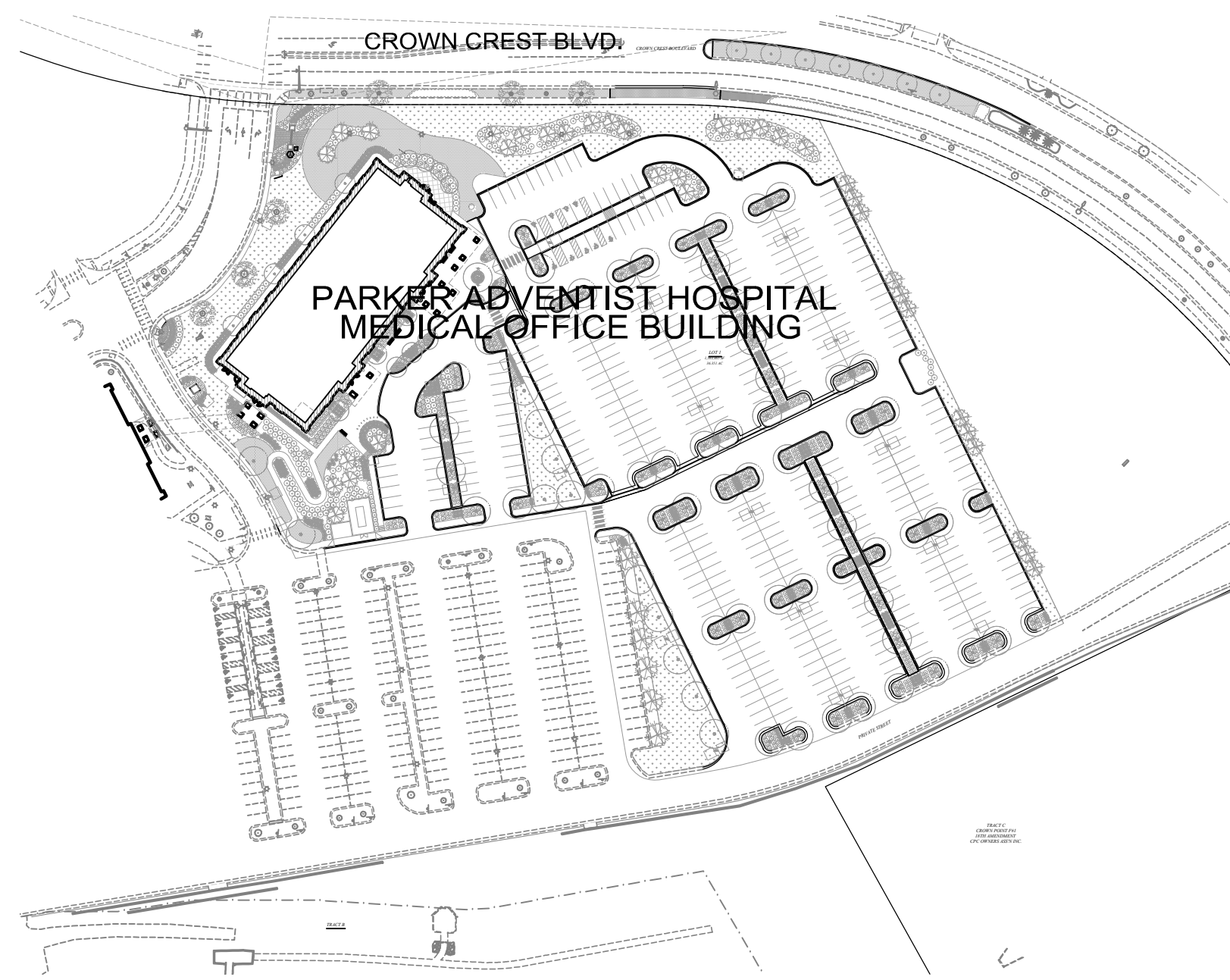


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DRAWN BY: DAT
CHECKED BY: JDC
DATE: 12/10/2019

MIRO JOB NUMBER: 18057 CLIENT JOB NUMBER: 18057

DRAWING NUMBER: **C-534**

KEY MAP



SHEET INDEX

- | | |
|----------------------|--|
| I100
I101
I102 | COVER SHEET
IRRIGATION PLAN
IRRIGATION DETAILS |
|----------------------|--|

GENERAL IRRIGATION NOTES:

- IRRIGATION WORK SHALL BE DONE IN COMPLIANCE WITH COTTONWOOD WATER AND SANITATION DISTRICT (CW&SD) AND THE TOWN OF PARKER LANDSCAPE AND IRRIGATION DESIGN STANDARDS LATEST EDITION. A PRE-CONSTRUCTION MEETING WITH CW&SD IS REQUIRED PRIOR TO BEGINNING CONSTRUCTION. G.C. SHALL NOTIFY CW&SD TO SCHEDULE A MEETING.
- IRRIGATION WITHIN CROWN CREST BLVD. SHALL BE REVIEWED AND APPROVED SEPARATELY BY CROWN CREST OWNER'S ASSOCIATION. IRRIGATION DESIGN SHALL MEET THE MINIMUM REQUIREMENTS OF THE TOWN OF PARKER.
- IRRIGATION WORK SHALL BE INSTALLED BY A QUALIFIED AND LICENSED AND INSURED LANDSCAPE CONTRACTOR.
- THIS SYSTEM IS PROVIDED BY RAW WATER AND SHALL MEET OR EXCEED ALL REGULATION 84 STANDARDS AND PERMITTING REQUIREMENTS. PERMITS WITH THE STATE OF COLORADO ARE REQUIRED UPON COMPLETION OF THE PROJECT. RAW WATER IS PROVIDED FROM CHERRY CREEK DEEP WELL.
- IRRIGATION TAP, SERVICE LINE, AND METER MUST BE THE SAME SIZE FROM THE TAP TO A MINIMUM DISTANCE OF 10 PIPE DIAMETERS PAST THE METER AND WINTERIZATION TEE. THE MAXIMUM VELOCITY THROUGH THE WATER METER SHALL NOT EXCEED 7.5 FPS.
- WINTERIZATION SHALL BE ANNUALLY IN THE FALL.
- EXAMINE THE SITE CONDITIONS, THE SUB-GRADE AND VERIFY ELEVATIONS. NOTIFY THE ARCHITECT IN WRITING OF ANY UNSATISFACTORY CONDITIONS. DO NOT BEGIN LANDSCAPE WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN RESOLVED.
- VERIFY LOCATIONS OF ALL UTILITIES AND SITE FEATURES PRIOR TO ANY DIGGING. ANY DAMAGE TO EXISTING UTILITIES AND SITE FEATURES CAUSED BY THIS CONTRACTOR SHALL BE REPAIRED AT NO ADDITIONAL EXPENSE TO THE OWNER.
- BEFORE ANY TRENCHING, EXCAVATION OR DIGGING, THE CONTRACTOR SHALL HAVE THE UTILITIES MARKED BY UNCC BY CALLING 811 AND CONTACT THE APPROPRIATE UTILITY COMPANIES. CONTRACTOR SHALL PROTECT ALL UTILITIES FROM DAMAGE.
- ALL LINES SHALL SLOPE TO DRAIN, ADD MANUAL DRAINS AT ALL MAINLINE LOW POINTS AS NECESSARY FOR COMPLETE DRAINAGE OF THE ENTIRE SYSTEM. INDICATE ALL DRAIN LOCATIONS ON RECORD DRAWINGS.
- THIS DRAWING IS DIAGRAMMATIC AND IS INTENDED TO CONVEY THE GENERAL LAYOUT OF IRRIGATION SYSTEM COMPONENTS. FIELD ADJUSTMENTS MAY BE NECESSARY TO MAINTAIN FULL COVERAGE IN ACTUAL SITE CONDITIONS. CONTACT THE LANDSCAPE ARCHITECT IF SIGNIFICANT CHANGES ARE NECESSARY. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR REVISIONS TO THE IRRIGATION SYSTEM IF THE IRRIGATION SYSTEM IS INSTALLED WHEN SITE CONDITIONS DIFFER FROM PLAN LAYOUT AND THE LANDSCAPE ARCHITECT WAS NOT INFORMED.
- LATERAL AND MAIN LINES SHALL BE LAID IN COMMON TRENCHES IN LANDSCAPE AREAS WHEREVER POSSIBLE.
- ALL PIPING AND WIRING UNDER PAVEMENT SHALL BE RUN THROUGH SEPARATE SLEEVES. CONTROL WIRES NOT LAID IN A COMMON TRENCH WITH A MAIN LINE SHALL BE INSTALLED IN A CONDUIT OF SUFFICIENT SIZE.
- ALL IRRIGATION EQUIPMENT NOT DETAILED SHALL BE INSTALLED AS PER MANUFACTURER RECOMMENDATIONS, SPECIFICATIONS, AND DETAILS.
- SUPPLY PRODUCTS AS SPECIFIED. UTILIZE PURPLE COLORED IRRIGATION VALVE LIDS, PIPE, AND OTHER EQUIPMENT TO DEMARCATATE RAW WATER AS REQUIRED UNDER REGULATION 84. PROVIDE PERMANENT POSTING WITH SIGNS TO DEMARCATATE THE USE OF RAW WATER. NO SUBSTITUTIONS WILL BE ALLOWED UNLESS PRE-APPROVED IN WRITING BY THE OWNER OR LANDSCAPE ARCHITECT.
- PROVIDE A REDUCED, LAMINATED, AND COLORIZED IRRIGATION PLAN PERMANENTLY MOUNTED AT THE CONTROLLER.

IRRIGATION DESIGN NOTES:

- THE MINIMUM STATIC WATER PRESSURE AS PROVIDED FOR BY COTTONWOOD WATER AND SANITATION DISTRICT IS 95 PSI. CONTRACTOR SHALL FIELD VERIFY THE ACTUAL STATIC WATER PRESSURE PRIOR TO COMMENCING IRRIGATION WORK AND SHALL NOTIFY THE LANDSCAPE ARCHITECT IF ACTUAL STATIC WATER PRESSURE IS LESS THAN 95 PSI.
- THIS IRRIGATION SYSTEM IS DESIGNED TO PROVIDE A MAXIMUM OF 30 GALLONS PER MINUTE WITHIN A WATERING WINDOW OF APPROXIMATELY 8 HOURS.
- TURF AREAS SHALL INCLUDE HUNTER MP ROTATOR POP-UPS SPACED TO ACHIEVE HEAD-TO-HEAD COVERAGE. OVER-SPRAY ONTO HARDSCAPE IS NOT ALLOWED.
- THE IRRIGATION CONTROLLER SHALL INCLUDE A RAIN SHUTOFF SENSOR MOUNTED THE SOUTH SIDE OF THE PROJECT ENTRY SIGN AND IN COORDINATION WITH ELECTRICAL WORK.
- PROPOSED TURF AREAS WITHIN BOTH CROWN CREST BLVD. R.O.W. TREE LAWN AND LANDSCAPE MEDIAN SHALL BE TIED INTO THEIR ADJACENT IRRIGATION SPRAY ZONES. IRRIGATION COMPONENTS INCLUDING BUT NOT LIMITED TO SPRAY HEADS, LATERAL PIPE, ETC...SHALL MEET THE TOWN OF PARKER IRRIGATION STANDARDS FOR STREETSAPES.

IRRIGATION 2-WIRE CONTROLLER NOTES:

- FOR ALL DECODER TWO-WIRE PATHS USE HUNTER IDWIRE OR APPROVED EQUAL. FOR WIRE DISTANCE OF 10,000 FEET OR LESS USE 14 AWG WIRE. FOR DISTANCES OF 15,000 FEET OR LESS USE 12 AWG WIRE.
- USE HUNTER DBRY-6 WATERPROOF CONNECTORS IN THE RED AND BLUE TWO-WIRE PATH.
- LEAVE ADEQUATE SLACK (ABOUT 5') AT EACH SPLICE TO PREVENT DISCONNECTION.
- TWO-WIRE PATHS MAY BE TEE-SPLICED (IN A VALVE BOX WITH APPROVED CONNECTORS) AS LONG AS THE MAXIMUM DISTANCE TO EACH OF THE PATHS FROM THE CONTROLLER DOES NOT EXCEED THE MAXIMUM WIRE USED.
- 5/8" X 10' DECODER GROUNDING RODS ARE REQUIRED A MAXIMUM OF 1,000 L.F. ALONG MAINLINE.
- REFER TO HUNTER 2-WIRE INSTALLATION MANUAL FOR ADDITIONAL INFORMATION.

ESTIMATED ANNUAL WATER USAGE

THIS LANDSCAPE PLAN AND THE SUBSEQUENT PROPOSED IRRIGATION FOR THIS PROJECT HAS AN ESTIMATED ANNUAL WATER USE OF 598,265 GALLONS. TO VERIFY IRRIGATION EFFICIENCY, THE OWNER SHALL COMPARE THIS ESTIMATED IRRIGATION WATER USE WITH THE ACTUAL WATER USE RECORDED ON SITE ONCE THE LANDSCAPE HAS BEEN ESTABLISHED.

THE ESTIMATED ANNUAL IRRIGATION WATER USE OF THIS SYSTEM IS BASED ON THE 30 YEAR HISTORICAL EVAPOTRANSPIRATION RATE (ET) AVERAGES FOR THE LOCAL AREA. THE ESTIMATE ALSO CONSIDERS IRRIGATION EFFICIENCY AND CROP COEFFICIENTS FOR TURF AND SHRUB BEDS. THIS ESTIMATE DOES NOT TAKE INTO CONSIDERATION THE DEDUCTION OF RAIN FALL THROUGH THE IRRIGATION SEASON.

Parker Adventist Hospital MOB					
Seasonal Water Use and Peak Flow Projections-					
Prepared By: Ground Logic					
Date: 7-17-2019					
Description	Irrigated Square Feet	Month	Application Rate (in/month)	Adj %	Monthly water use (gallons)
Spray Irrigated Fescue Sod	7959	April	1.80	27%	8,925
		May	3.30	50%	16,363
		June	5.30	80%	26,280
		July	6.60	100%	32,726
		August	5.70	86%	28,263
		September	3.50	53%	17,355
October	1.80	27%	8,925		
annual sub-total			28.00 "/yr		138,837 gal/yr 0.43 acrefeet
Spray Irrigated Native Seed	30410	April	0.94	26%	17,809
		May	1.79	50%	33,912
		June	2.80	78%	53,047
		July	3.57	100%	67,635
		August	3.11	87%	58,920
		September	1.86	52%	35,238
October	0.93	26%	17,619		
annual sub-total			15.00 "/yr		284,181 gal/yr 0.87 acrefeet
Spray Irrigated Shrubs & Perennials	0	April	0.94	26%	0
		May	1.79	50%	0
		June	2.80	78%	0
		July	3.57	100%	0
		August	3.11	87%	0
		September	1.86	52%	0
October	0.93	26%	0		
annual sub-total			15.00 "/yr		0 gal/yr 0.00 acrefeet
Spray Irrigated Shrubs & Perennials	0	April	0.94	26%	0
		May	1.79	50%	0
		June	2.80	78%	0
		July	3.57	100%	0
		August	3.11	87%	0
		September	1.86	52%	0
October	0.93	26%	0		
annual sub-total			15.00 "/yr		0 gal/yr 0.00 acrefeet
Drip Irrigated Shrubs & Perennials	18753	April	0.94	26%	10,982
		May	1.79	50%	20,913
		June	2.80	78%	32,713
		July	3.57	100%	40,982
		August	3.11	87%	37,635
		September	1.86	52%	23,238
October	0.93	26%	11,619		
annual sub-total			15.00 "/yr		156,865 gal/yr 0.45 acrefeet
Site Totals	57122	Irrigated Square Feet			138,837 gals/yr Turf 459,428 gals/yr Beds & Native 598,265 Total Gallons/Yr 1.84 acrefeet/yr

Projections are based on a three day per week, ten hour per day peak season watering schedule. Peak season application for bluegrass is 1.80" per week. Peak season application for spray irrigated shrubs and native grass is 1.00" per week.

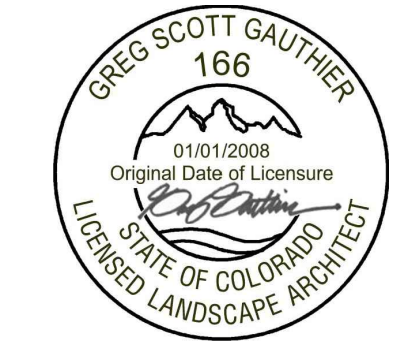
COTTONWOOD WATER AND SANITATION DISTRICT SIGNATURE

THE DISTRICT ENGINEER AND MANAGER MUST BE NOTIFIED AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION. CALL THE DISTRICT AT 303-649-9857. THE DISTRICT ENGINEER AND SUPPORTING STAFF WILL OBSERVE THE WORK FOR COMPLIANCE WITH THE DISTRICT SPECIFICATIONS. THE DEVELOPER/OWNER WILL BE CHARGED FOR CONSTRUCTION OBSERVATION AND BE BILLED BY THE DISTRICT. PAYMENT MUST BE RECEIVED IN FULL PRIOR TO FINAL ACCEPTANCE OF THE NEW LINES. CONSTRUCTION OBSERVATION ASSISTS IN QUALITY CONTROL IN ACHIEVING CONFORMANCE WITH THE DISTRICT SPECIFICATIONS, BUT DOES NOT GUARANTEE THE CONTRACTORS PERFORMANCE. SUCH CONSTRUCTION OBSERVATION SHALL IN NO WAY RELIEVE THE CONTRACTOR OF HIS/OHER OBLIGATION TO CONSTRUCT FACILITIES IN ACCORDANCE WITH REGULATIONS. WORK NOT PERFORMED IN ACCORDANCE WITH THE DISTRICT'S SPECIFICATIONS WILL NOT BE ACCEPTED. THESE PLANS HAVE BEEN REVIEWED FOR WATER AND SANITARY SEWER ONLY.

REVIEWED FOR COTTONWOOD
 WATER AND SANITATION DISTRICT

DISTRICT MANAGER _____
 DISTRICT ENGINEER _____

PROJECT LANDSCAPE ARCHITECT:



PROJECT NUMBER
18035.04
 DATE
7/31/2019

REVISIONS

#	DATE	DESCRIPTION

QA/QC APPROVAL: **gg**
 SC
 gg SC

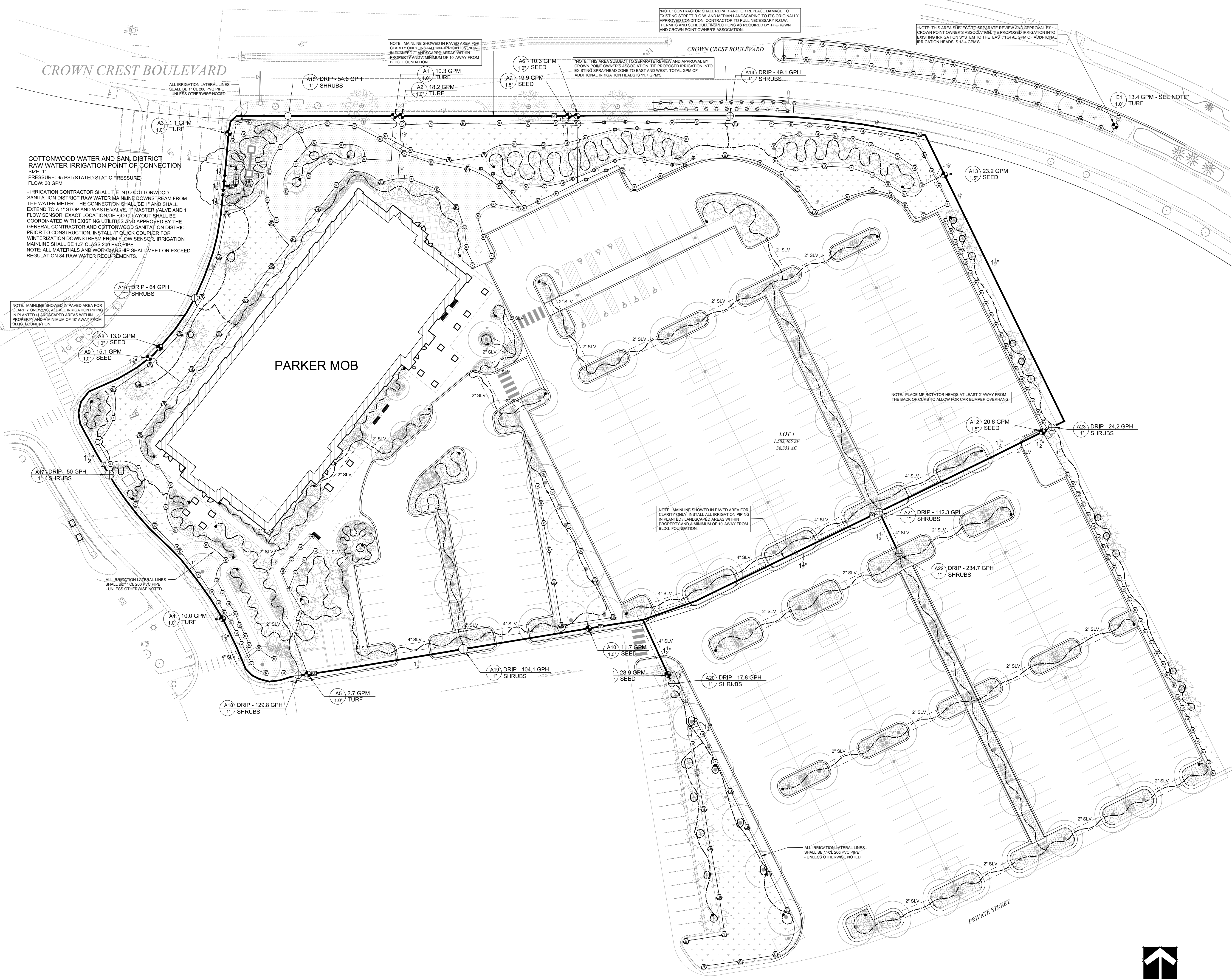
ISSUED FOR:
CONSTRUCTION DOCUMENTS

SHEET NO.

I100

IRRIGATION LEGEND

	MANUFACTURER/MODEL/DESCRIPTION Hunter MP1000 PROS-06-PRS40-CV-R Turf Rotator, 6" (15.24 cm) pop-up with check valve, pressure regulated to 40 psi (2.76 bar), MP Rotator nozzle on PRS40 body. M=Maroon adj arc 90 to 210, L=Light Blue 210 to 270 arc, O=Olive 360 arc.
	Hunter MP2000 PROS-06-PRS40-CV-R Turf Rotator, 6" (15.24 cm) pop-up with factory installed check valve, pressure regulated to 40 psi (2.76 bar), MP Rotator nozzle on PRS40 body. K=Black adj arc 90-210, G=Green adj arc 210-270, R=Red 360 arc.
	Hunter MP3000 PROS-06-PRS40-CV-R Turf Rotator, 6" (15.24 cm) pop-up with factory installed check valve, pressure regulated to 40 psi (2.76 bar), MP Rotator nozzle on PRS40 body. B=Blue adj arc 90-210, Y=Yellow adj arc 210-270, A=Gray 360 arc.
	Hunter MP Strip PROS-06-PRS40-CV-R Turf Rotator, 6" (15.24 cm) pop-up with factory installed check valve, pressure regulated to 40 psi (2.76 bar), MP Rotator nozzle on PRS40 body. LST=Ivory left strip, SST=Brown side strip, RST=Copper right strip.
	Hunter MP Corner PROS-06-PRS40-CV-R Turf Rotator, 6" (15.24cm) pop-up with factory installed check valve, pressure regulated to 40 psi (2.76 bar), MP Rotator nozzle on PRS40 body. T=Turquoise adj arc 45-105.
	Hunter MP800SR PROS-06-PRS40-CV-R Turf Rotator, 6.0" pop-up with check valve, pressure regulated to 40 psi (2.76 bar), MP Rotator nozzle on PRS40 body. ADJ=Orange and Gray (arc 90-210), 360=Lime Green and Gray (arc 360)
	Hunter ICV-G-FS-R 1", 1-1/2", and 2" Plastic Electric Remote Control Valves, Globe Configuration, with NPT Threaded Inlet/Outlet, for Commercial/Municipal Use. With Filter Sentry.
	Hunter 1" ICZ-101-40-R - Drip Zone Control Kit
	Matco 514 - Bronze Gate Valve Assembly - Line Size With Reclaimed Water / Purple Handle
	Stop and Waste Valve - 1"
	Hunter HQ44-LRC-R - Quick Coupler
	Master Valve Assembly - Weathermatic MAX-DW
	Flow Sensor - Weathermatic SLFSI-B15
	Hunter ACC2 75 Station Controller Model: A2C-75D-M Wire: 1D1 blue / red, 14awg Decoder: ICD 100 provided at each control valve Decoder Grounding: 5/8"X10" steel rod at 1,000 I.F. on center max. along mainline
	Hunter Wired Solar Sync - Rain Shutoff Device Model: Solar-Sync-Sen
	Irrigation Lateral Line: PVC Class 200 SDR 21 PVC Class 200 purple reclaimed irrigation pipe. 1" unless otherwise indicated.
	Irrigation Mainline: PVC Class 200 SDR 21 PVC Class 200 purple reclaimed irrigation pipe. 1-1/2"
	3/4" UV Resistant Polyethylene Dripline - Use Purple Colored Pipe for Reclaimed Water Applications. Layout is Diagramatic - See Irrigation Details for Trees and Shrubs
	Netafim TLSOV - manual flush valve
	Pipe Sleeve: PVC Class 200 SDR 21 Typical pipe sleeve for irrigation pipe. Pipe sleeve size shall be 6" for all mainline pipe and twice the size of lateral pipes. Extend sleeves 18 inches beyond edges of paving or construction.
	Valve Number Valve Flow Valve Size



IRRIGATION PLAN
SCALE: 1" = 30'-0"

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REVIEWED FOR COTTONWOOD
WATER AND SANITATION DISTRICT

DISTRICT MANAGER _____
DISTRICT ENGINEER _____



IRRIGATION PLAN

RTA PROJECT NUMBER
18035.04
DATE
7/29/2019

#	DATE	DESCRIPTION
1	10-29-2019	BRIG POC REV

QUICK APPROVAL: **99** sc
CHECKED BY: **99** sc

ISSUED FOR:
CONSTRUCTION DOCUMENTS

SHEET NO.
1101