

ADVENTHEALTH PARKER EXPANSION

CROWN POINT FILING 1 AMMENDMENT 30, LOT 1, TRACT A & B
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

ENGINEER'S STATEMENT

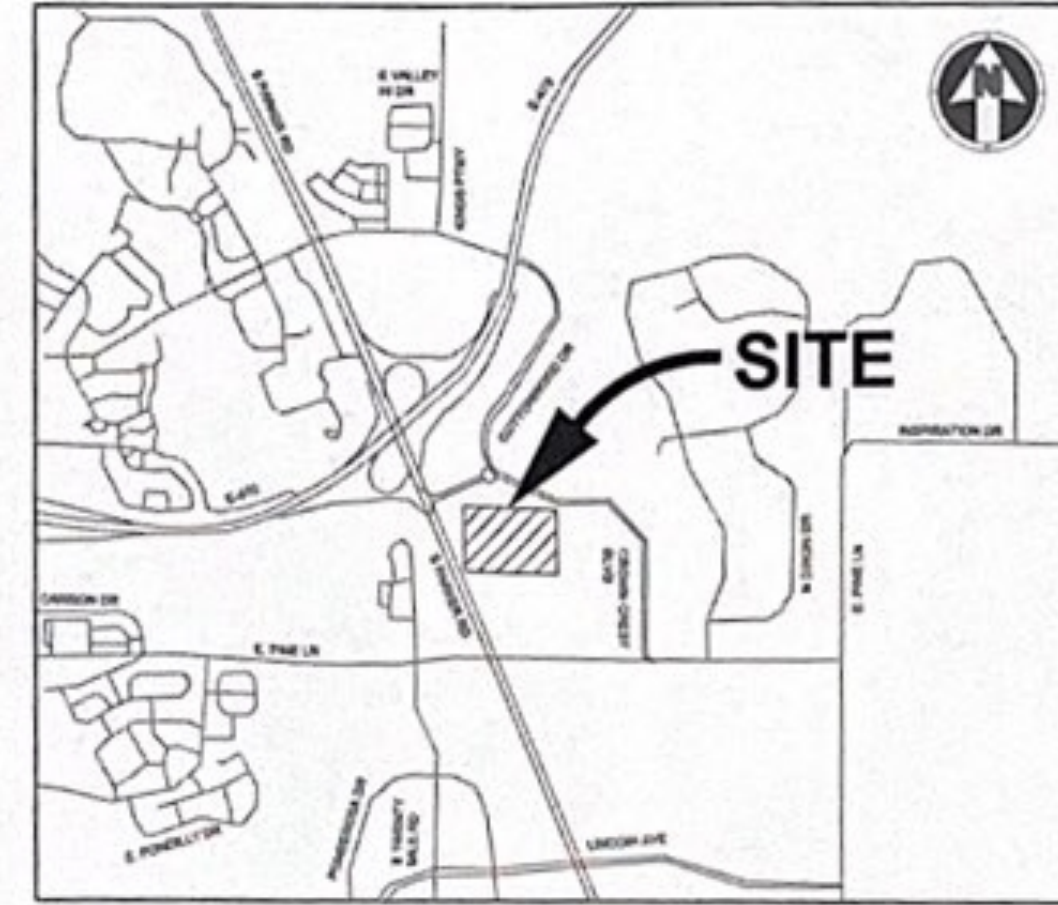
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF COLORADO.



MEGAN HUERTER VOGT
REGISTERED PROFESSIONAL ENGINEER
COLORADO NO. 47666

12/18/24

DATE SIGNED



VICINITY MAP
SCALE: 1"=2000'

MATERIALS LIST	
ITEM	QUANTITY
12" DIP	306 LF
8" DIP	74 LF
6" DIP	51 LF
4" DIP	137 LF
FIRE HYDRANT	1
4" WATER METER	1
12" GATE VALVE	2
8" GATE VALVE	1
6" GATE VALVE	2
4" GATE VALVE	1
12"x12" TEE	1
12"x8" TEE	1
12"x4" TEE	1
45° BEND	1
22.5° BEND	2
11.25° BEND	1
VERTICAL BEND	4
10" PVC	923
4" MANHOLE	7
DUAL CLEANOUT	1

Sheet List Table	
Sheet Number	Sheet Title
A-C500	WATER AND SANITARY COVER SHEET
A-C501	WATER AND SANITARY NOTES AND LEGEND
A-C511	UTILITY PLAN
A-C512	UTILITY PLAN
A-C531	SANITARY PLAN AND PROFILE
A-C532	SANITARY PLAN AND PROFILE
A-C533	WATER PLAN AND PROFILE
A-C551	WATER AND SANITARY DETAILS
A-C552	WATER AND SANITARY DETAILS
A-C111*	DEMOLITION PLAN
A-C112*	DEMOLITION PLAN

SHEET LIST NOTE: DEMOLITION PLANS INCLUDED FOR REFERENCE*

GENERAL NOTES :

- NO VERTICAL CONSTRUCTION ON THIS SITE WILL BE ALLOWED UNTIL SUCH TIME THAT CURB, GUTTER, AND FIRST LIFT ASPHALT ARE INSTALLED. A SITE INSPECTION WILL BE REQUIRED TO ENSURE THAT THIS REQUIREMENT IS MADE PRIOR TO ALLOWING VERTICAL CONSTRUCTION TO COMMENCE

FIRE FLOW BLOCK

TOTAL FIRE FLOW REQUIRED FOR THIS SITE IS 1,500 GPM MINIMUM @ 20 PSI RESIDUAL PRESSURE
THIS FLOW MUST BE PROVIDED FROM A MINIMUM OF 1 FIRE HYDRANTS
INDIVIDUALLY EACH FIRE HYDRANT MUST SUPPLY 1500 GPM MINIMUM @ 20 PSI RESIDUAL PRESSURE

CODE USED FOR ANALYSIS: 2021 IFC WITH APPENDICES B, C AND D

OCCUPANCY TYPE: 1-2

CONSTRUCTION TYPE: 1A

FIRE FLOW CALCULATION AREA: 80,390 SF
TOTAL BUILDING AREA: 166,225 SF

BUILDING IS ANTICIPATED TO BE CONSTRUCTED WITH AN AUTOMATED FIRE SPRINKLER SYSTEM (NFPA 13) SO FIRE FLOW REQUIREMENT HAS BEEN REDUCED BY 50%.

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

Paul K. Capra 12/20/2024
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.)

COTTONWOOD WATER AND SANITATION DISTRICT SIGNATURE
THE DISTRICT ENGINEER MUST BE NOTIFIED AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION. CALL MULHERN MRE, INC. AT 303-649-9857. THE DISTRICT ENGINEER AND SUPPORTING STAFF WILL OBSERVE THE WORK FOR COMPLIANCE WITH THE DISTRICT'S SPECIFICATIONS. CONSTRUCTION OBSERVATION ASSISTS IN QUALITY CONTROL IN ACHIEVING CONFORMANCE WITH THE DISTRICT SPECIFICATIONS, BUT DOES NOT GUARANTEE THE CONTRACTOR'S PERFORMANCE. SUCH CONSTRUCTION OBSERVATIONS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF HIS OBLIGATION TO CONSTRUCT FACILITIES IN ACCORDANCE WITH REGULATIONS. WORK NOT PERFORMED IN ACCORDANCE WITH THE DISTRICT SPECIFICATIONS AND CONTRACT FOR THIS PROJECT WILL NOT BE ACCEPTED.

REVIEWED FOR COTTONWOOD WATER & SANITATION DISTRICT

Scott Barnett 12/18/2024
DISTRICT ENGINEER DATE

BENCHMARK

DOUGLAS COUNTY CONTROL MONUMENT NO. 1.115026. 473.35± NORTH AND 1959.02± WEST | CORNER OF SECTION 3, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE 6TH PRINCIPLE MERIDIAN. 3-1/2" ALUMINUM CAP. ELEVATION 5759.78 (NAVD 88). AN ON SITE CONTROL POINT (200) HAS BEEN SET WITH AN ELEVATION OF 5825.42

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 THE SURVEY ARE BASED ON THE CROWN POINT FILING NO. 1, 17TH AMENDMENT. ON SITE CONTROL POINTS HAVE BEES SET. POINTS 200 AND 2201 WITH A BEARING OF N53°47'17" AND A DISTANCE OF 1,170.67'.

OWNER INFORMATION

ADVENTHEALTH PARKER
9395 CROWN CREST BLVD.
PARKER, CO. 80138
303-269-4014

DESIGN INFORMATION

ARCHITECT: BOULDER ASSOCIATES
PHONE: 303-499-7795

ARCHITECT: SMITHGROUP
PHONE: 303-832-3272

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

LANDSCAPE ARCHITECT: OXBOW DESIGN COLLABORATION
PHONE: 720-465-6168

STRUCTURAL ENGINEER: MGA STRUCTURAL ENGINEERS, INC.
PHONE: 719-635-4473

MEPT ENGINEERS: CATOR RUMA & ASSOCIATES CO
PHONE: 303-232-6200

FIRE PROTECTION: TLH FIRE
PHONE: 303-517-1775

AGENCY LIST

CORE ELECTRIC COOPERATIVE
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

TOWN OF PARKER FIRE & LIFE SAFETY
20120 E MAINSTREET
PARKER, CO 80138
303-805-3163
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
20120 E. MAINSTREET
PARKER, CO 80134
303-840-9546
CONTACT: MIKE WAUGH

COTTONWOOD WATER AND SANITATION DISTRICT
58 INVERNESS DRIVE EAST, SUITE 100
ENGLEWOOD, CO 80112
303-792-9509
CONTACT: SCOTT BARNETT P.E.

CABLE-COMCAST
6650 S. TUSCON WAY
ENGLEWOOD, CO. 80112
303-603-5605
CONTACT: KEVIN YOUNG

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

DOUGLAS COUNTY HEALTH DEPARTMENT
410 S WILCOX
CASTLE ROCK, CO 80104
720-643-2400
CONTACT: MICHAEL HILL

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



DATE	DESCRIPTION
06/03/2024	1ST TOWN SUBMITTAL
08/16/2024	2ND TOWN SUBMITTAL
10/10/2024	3RD TOWN SUBMITTAL

PROJECT: ADVENTHEALTH PARKER EXPANSION
PARKER, CO 80138
DRAWING TITLE: WATER AND SANITARY COVER SHEET
FILE PATH: J:\Users\32079\APP\Expansions\05 CAD\Plans and Details\C500-WATR-SSBW-COVR.dwg C:\000 - 12/17/2024



DESIGNED BY: RJH
DRAWN BY: EDS
CHECKED BY: MHV
MIRO JOB NO: 23079

DRAWING NUMBER:
A-C500

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
	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
	LTD LAMBS TONGUE ROOF DRAIN OVERFLOW
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:
 - A. NOTIFYING ALL CUSTOMERS POSSIBLY AFFECTED BY OUTAGE OF WATER OR SEWER SERVICE DURING CONSTRUCTION PRIOR TO SHUTTING OFF SAID SERVICE.
 - B. OBTAINING, AT THE CONTRACTOR'S EXPENSE, ALL APPLICABLE LICENSES, PERMITS, BONDS, ETC. REQUIRED FOR MAIN INSTALLATION/SYSTEM MODIFICATIONS.
 - C. 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.
 - D. NOTIFYING THE DISTRICT 48 HOURS IN ADVANCE OF ANY NEEDS TO SHUT DOWN ANY PORTION OF THE EXISTING WATER AND/OR SANITARY SEWER SYSTEM.
 - E. NOTIFYING THE DISTRICT 48 HOURS IN ADVANCE FOR CONSTRUCTION OBSERVATIONS.
 - F. 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 ENVIRONMENT 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 RECEIVED 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 PRV'S 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:
 - A. ALL COMMERCIAL AND MULTI-FAMILY DOMESTIC TAPS.
 - B. 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:
 - A. PASSING WATER LINE TRENCH COMPACTION TEST RESULTS;
 - B. PASSING HYDROSTATIC PRESSURE TEST RESULTS;
 - C. RECORD DRAWINGS
 - D. 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:
 - A. NOTIFYING THE DISTRICT 48 HOURS IN ADVANCE OF ANY NEED TO SHUT DOWN ANY PORTION OF THE EXISTING SANITARY SEWER SYSTEM.
 - B. NOTIFYING THE DISTRICT 48 HOURS IN ADVANCE OF THE WORK.
 - C. 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, CARSONITE 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:
 - A. LOW PRESSURE AIR TEST 100% OF THE NEW SYSTEM, AND
 - B. 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.
 - C. JET AND TV/VIDEO TAPE 100% OF THE SYSTEM.
- PROBATIONARY ACCEPTANCE OF THE NEW SANITARY SEWER MAINS IS CONTINGENT UPON RECEIVING COPIES OF:
 - A. SANITARY SEWER TRENCH COMPACTION TEST RESULTS,
 - B. RECORD DRAWINGS, AND
 - C. 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.

ABBREVIATIONS:

BFV	BUTTERFLY VALVE	PCC	POINT OF COMPOUND CURVATURE
BOV	BLOW OFF VALVE	PCR	POINT OF CURB RETURN
BW	BOTTOM OF WALL @ FINISHED GRADE	PI	POINT OF INTERSECTION
CL	CENTERLINE	PRC	POINT OF REVERSE CURVATURE
CMP	CORRUGATED METAL PIPE	PT	POINT OF TANGENCY
EJ	EXPANSION JOINT	PVC	POLYVINYL CHLORIDE
ELEC.	ELECTRIC	RCP	REINFORCED CONCRETE PIPE
ELEV.	ELEVATION	RCB	REINFORCED CONCRETE BOX
EX	EXISTING	RL	RIDGE LINE
FES	FLARED END SECTION	ROW	RIGHT OF WAY
FG	FINISHED GRADE	RT	RIGHT
FS	FINISHED SURFACE	SD	STORM DRAINAGE SEWER
FL	FLOWLINE	SS	SANITARY SEWER
GB	GRADE BREAK	STA	STATION
HP	HIGH POINT	STRM	STORM SEWER
FH	FIRE HYDRANT	TOF	TOP OF FLANGE
INV.	INVERT	TOP	TOP OF PIPE
IRR	IRRIGATION	TW	TOP OF WALL @ FINISHED GRADE
KB	KICK BLOCK	TYP.	TYPICAL
LF	LINEAR FEET	VCP	VITRIFIED CLAY PIPE
LP	LOW POINT	VPC	VERTICAL POINT OF CURVATURE
LT	LEFT	VPI	VERTICAL POINT OF INTERSECTION
ME	MATCH EXISTING	VPT	VERTICAL POINT OF TANGENCY
MH	MANHOLE	WATR	WATER LINE
PC	POINT OF CURVATURE		

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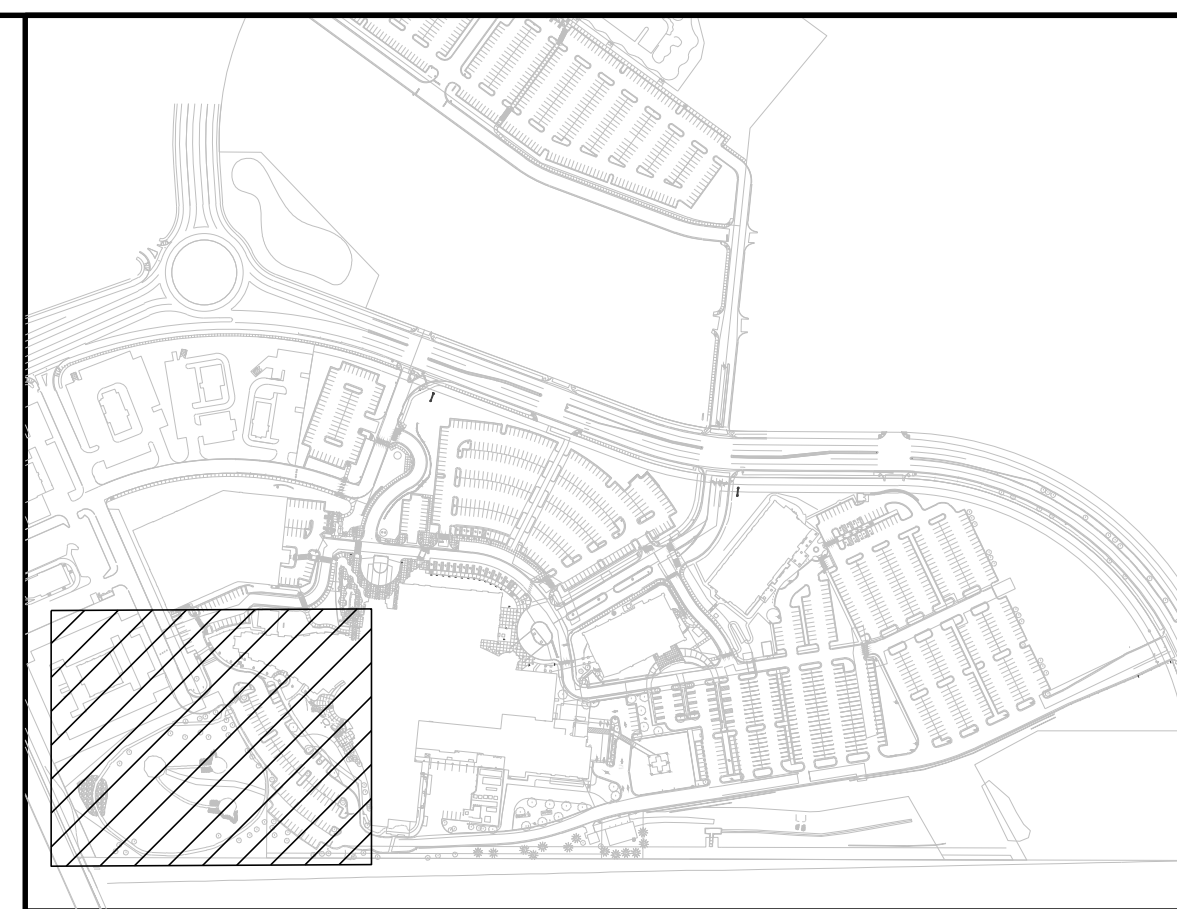
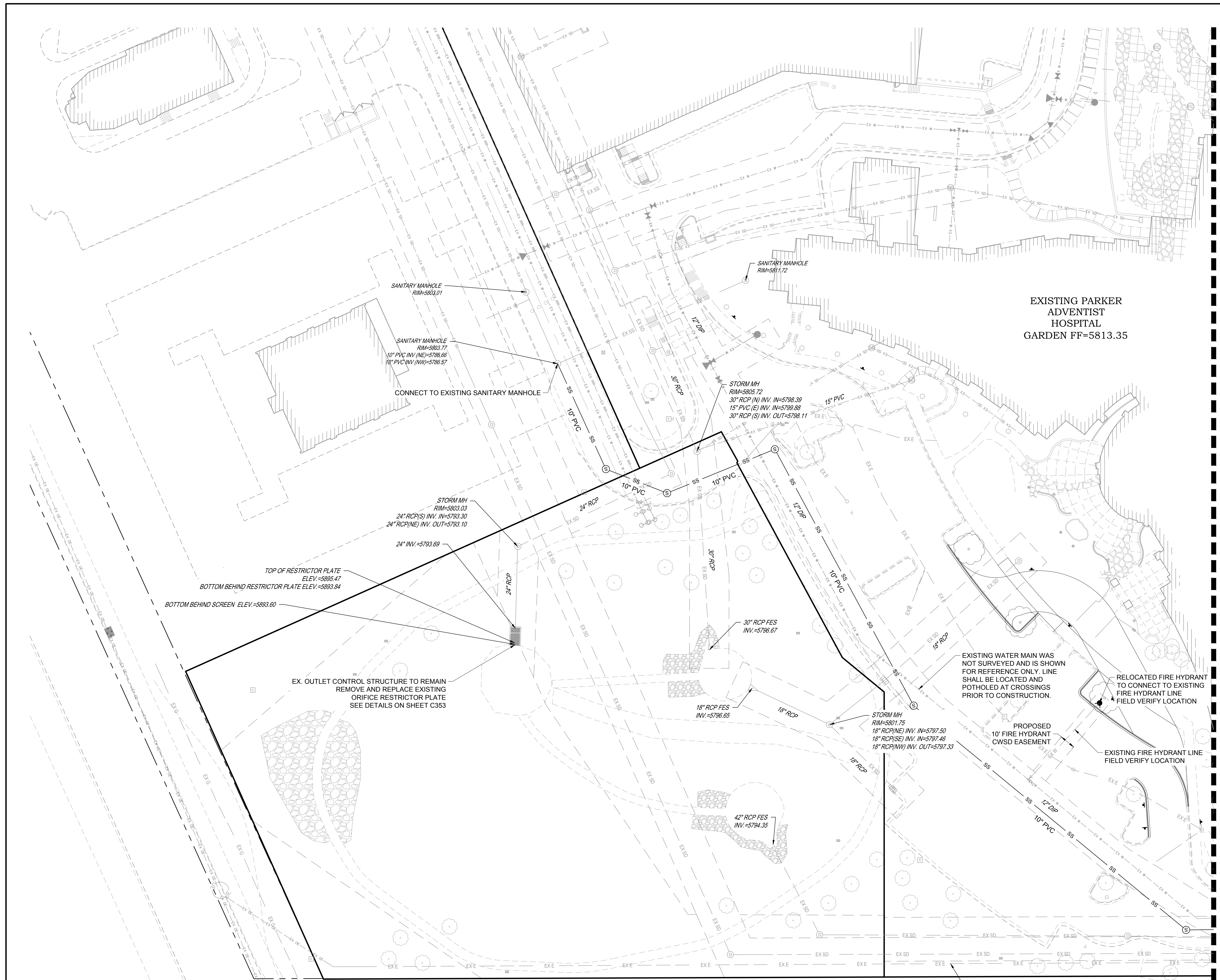
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06/03/2024	1ST TOWN SUBMITTAL
08/16/2024	2ND TOWN SUBMITTAL
10/10/2024	3RD TOWN SUBMITTAL
NO.	1
	2
	3

PROJECT: **ADVENTHEALTH PARKER EXPANSION PARKER, CO 80138**

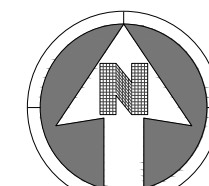
DRAWING TITLE: **WATER AND SANITARY NOTES AND LEGEND**

FILE PATH: J:\Jobs\23079 AHP Expansion\05 CAD\Plans and Details\C500-WATR-SSSEW-COVR.dwg C501 - 12/17/2024

DESIGNED BY: RJH
 DRAWN BY: EDS
 CHECKED BY: MHV
 MIRO JOB NO. 23079
 DRAWING NUMBER: **A-C501**



KEYMAP
NTS



30 0 30
SCALE: 1" = 30'

NOTES:

- SEE SHEET A-C501 FOR UTILITY NOTES AND LEGEND.

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10/10/2024	3RD TOWN SUBMITTAL

NO.	DESCRIPTION
1	
2	
3	

PROJECT: **ADVENTHEALTH PARKER EXPANSION
PARKER, CO 80138**

DRAWING TITLE: **UTILITY PLAN**

FILE PATH: J:\Jobs\23079 AHP Expansion\05 CAD\Plans and Details\C511-UTIL-PLAN.dwg C511 - 12/17/2024



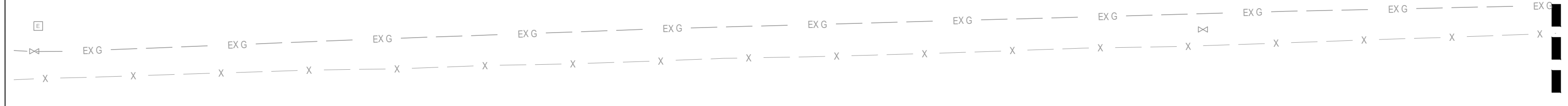
DESIGNED BY: RJH
DRAWN BY: EDS
CHECKED BY: MHV
MIRO JOB NO. 23079

DRAWING NUMBER:
A-C511

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.

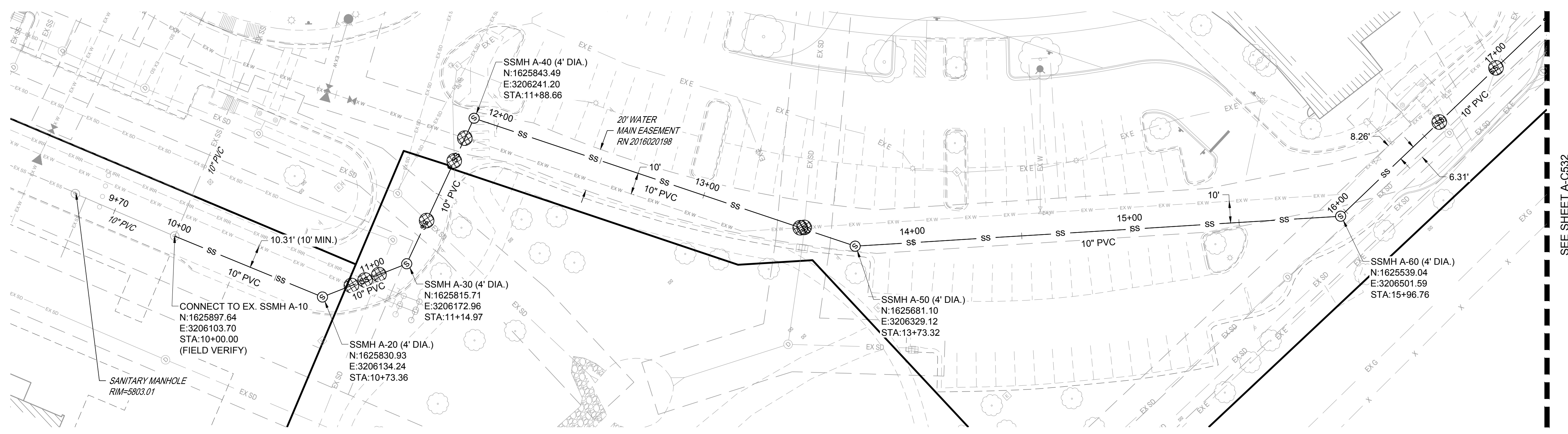
Fire Code Official or Designated Representative _____ Date _____

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



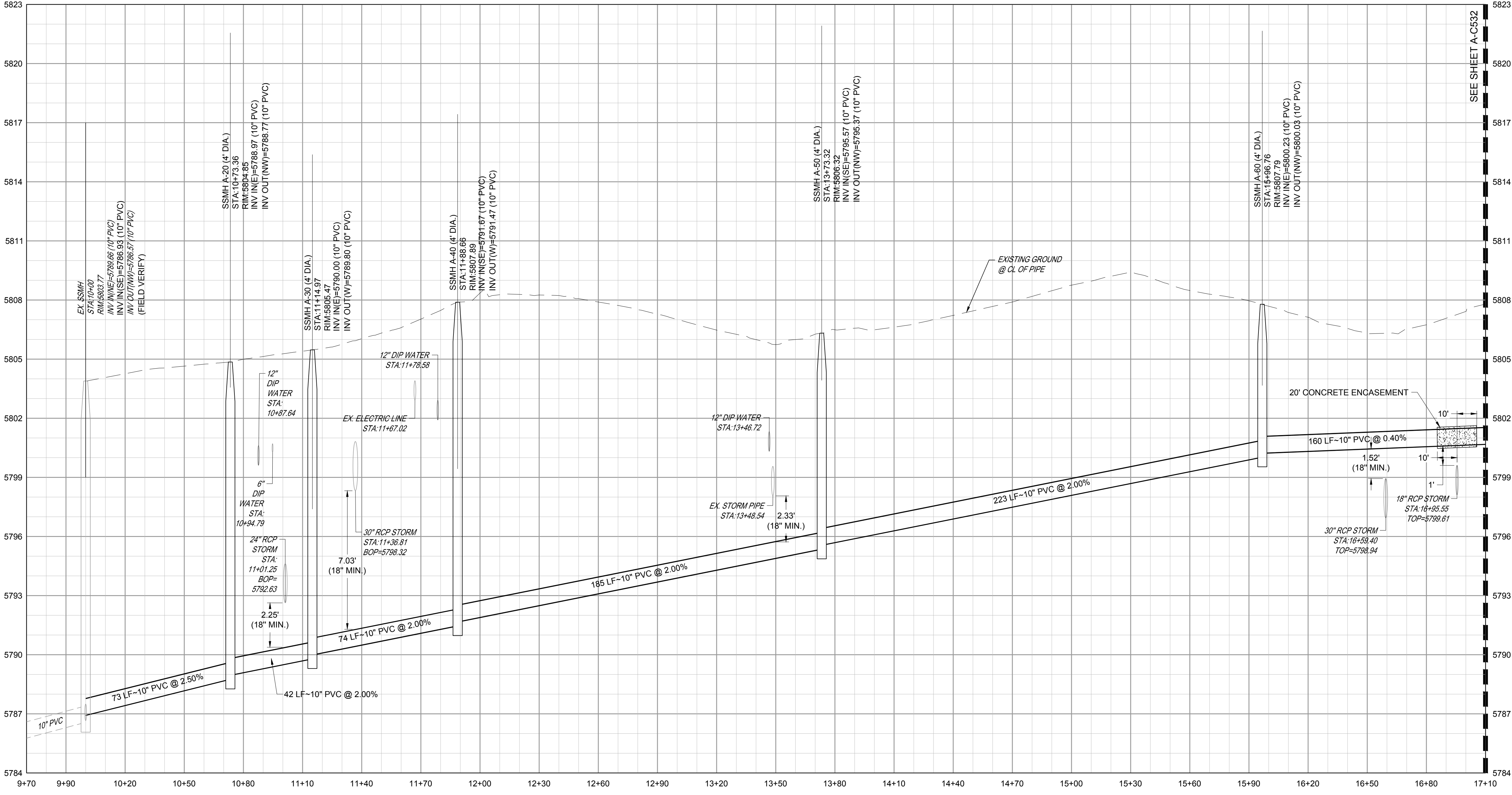
SEE SHEET A-C512

EXISTING CORE UG ELECTRICAL LINE
SKETCHED IN PER CORE MARKUP
NOT SURVEYED
LOCATE IN FIELD PRIOR TO CONSTRUCTION

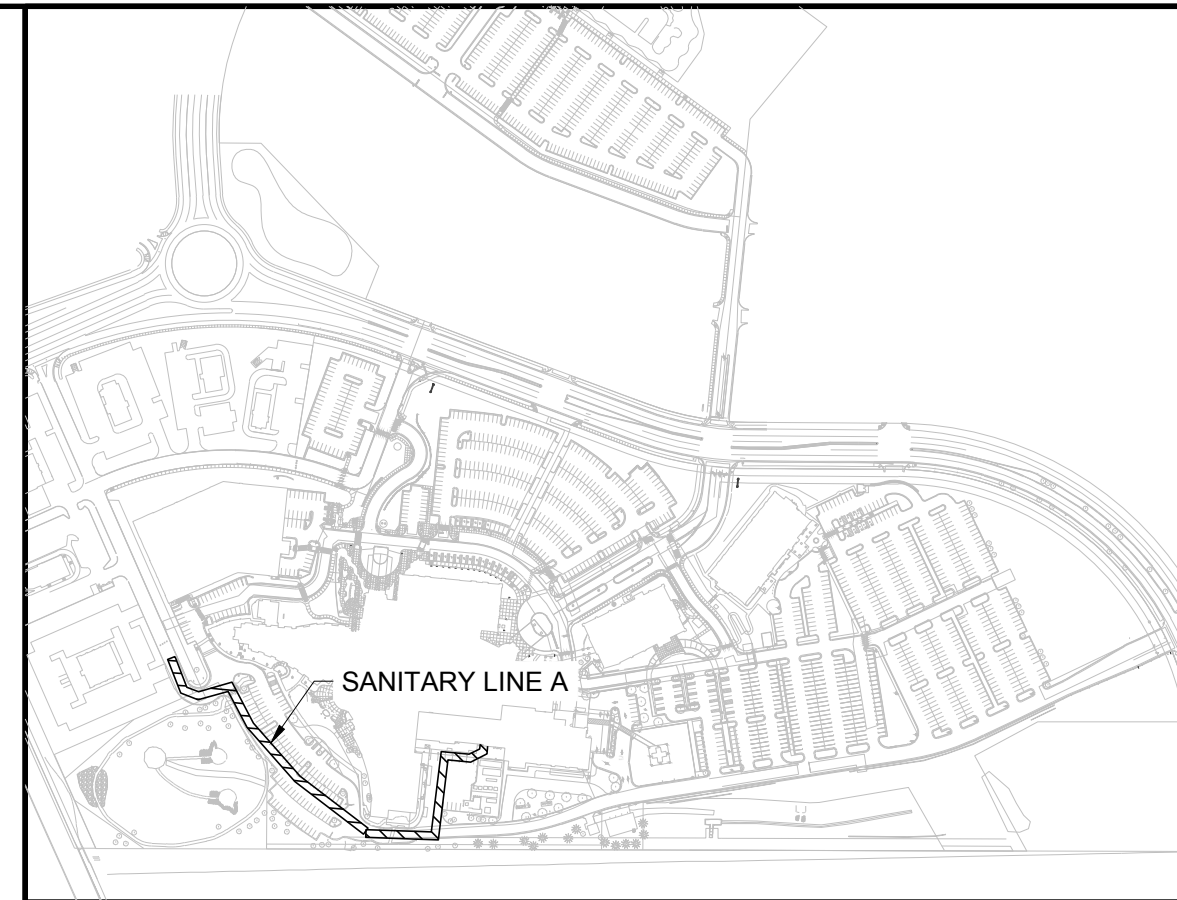


SANITARY LINE A PLAN

VERTICAL SCALE: 1"=3'
HORIZONTAL SCALE: 1"=30'



SANITARY LINE A PROFILE



KEYMAP
NTS
SCALE: 1"=30'

- NOTES:
- SEE SHEET A-C501 FOR SANITARY NOTES AND LEGEND.
 - ALL EXISTING DRY UTILITIES ARE ASSUMED TO BE 3' DEEP TO TOP OF PIPE.
 - ALL EXISTING WATER LINES ARE ASSUMED TO BE 4.5' DEEP TO TOP OF PIPE.
 - THE CONTRACTOR SHALL POTHOLE ALL EXISTING UTILITY CROSSINGS PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY POTENTIAL CONFLICTS IMMEDIATELY.
 - ALL SANITARY SEWER MAINS TO BE SDR 35 PVC (GREEN), UNLESS SPECIFIED OTHERWISE.

LEGEND:

UTILITY CROSSING

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06/03/2024	1ST TOWN SUBMITTAL
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10/10/2024	3RD TOWN SUBMITTAL

PROJECT: **ADVENTHEALTH PARKER EXPANSION
PARKER, CO 80138**

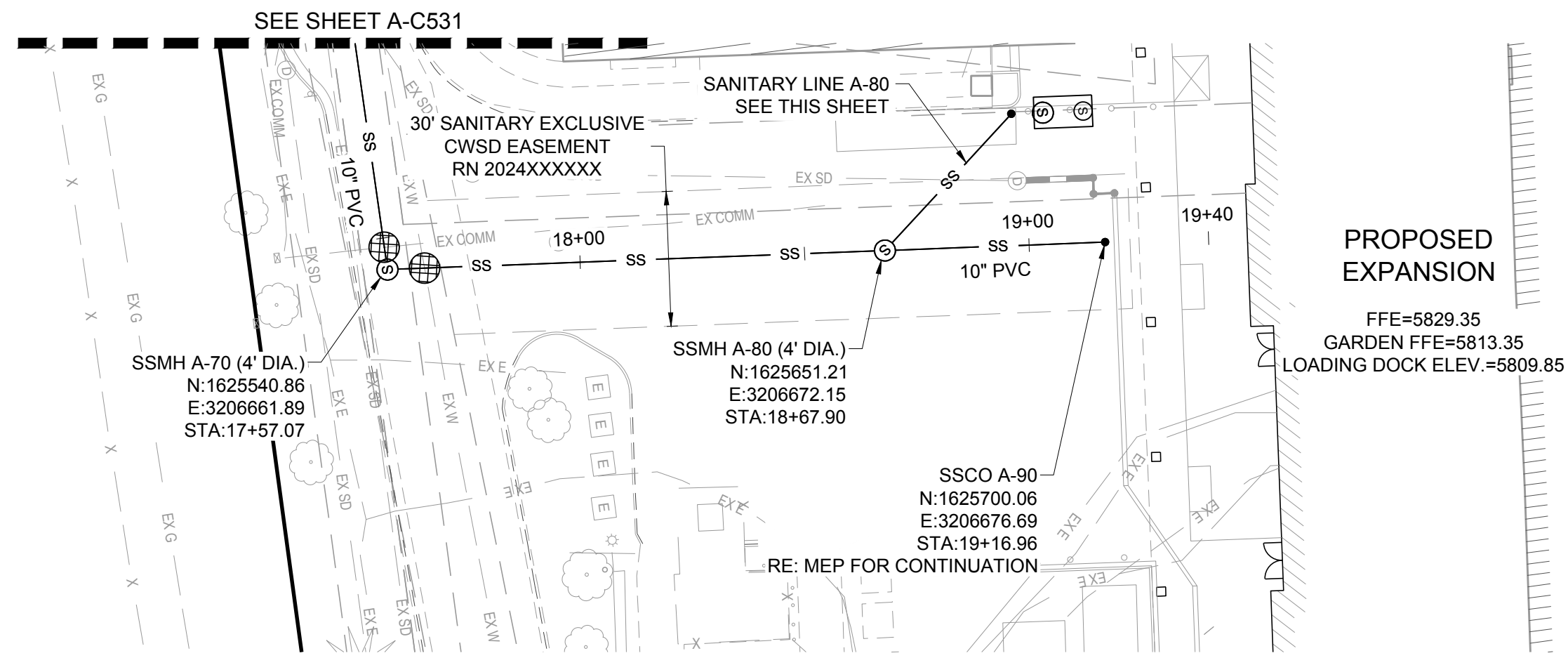
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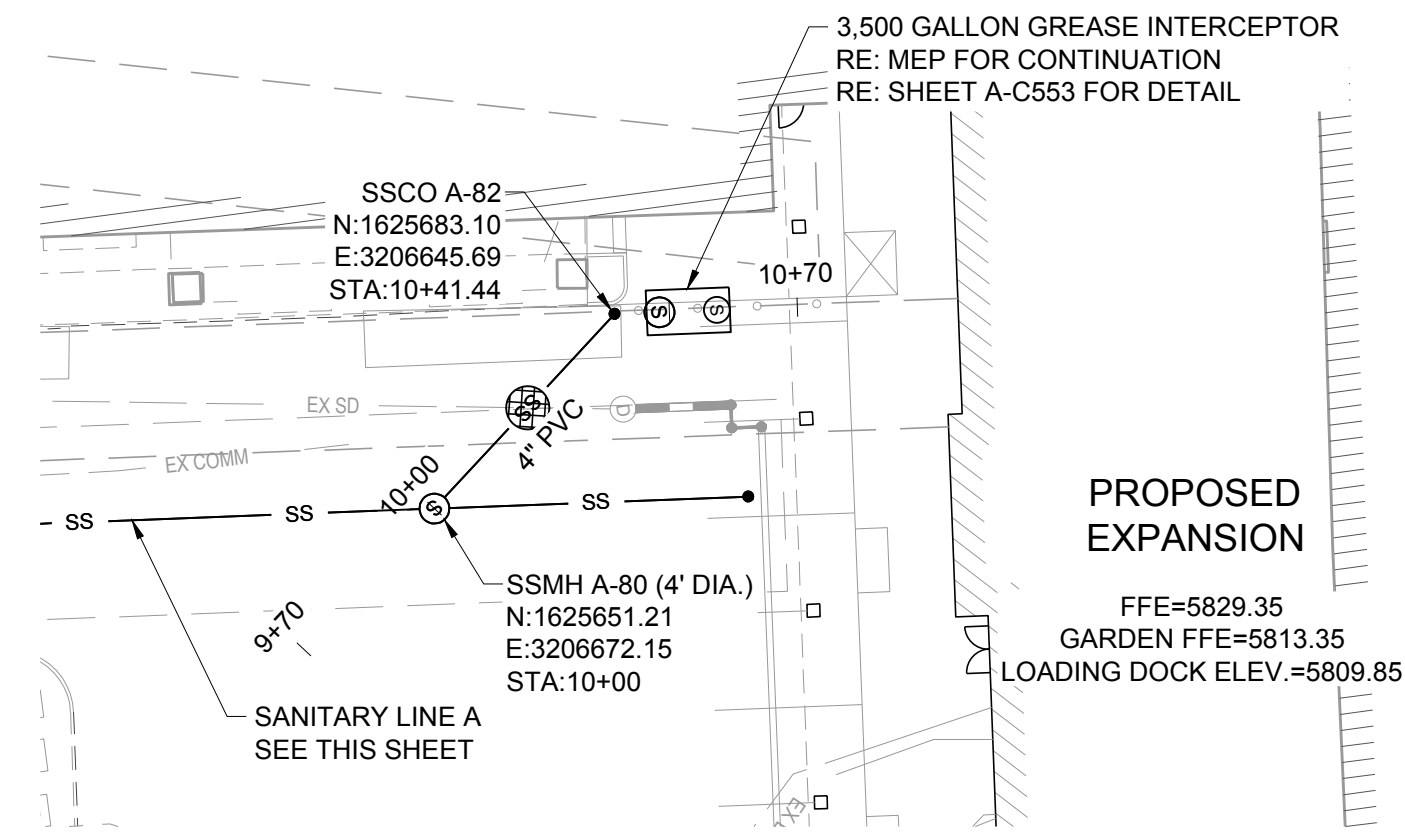


DESIGNED BY: RJH
DRAWN BY: EDS
CHECKED BY: MHV
MIRO JOB NO. 23079

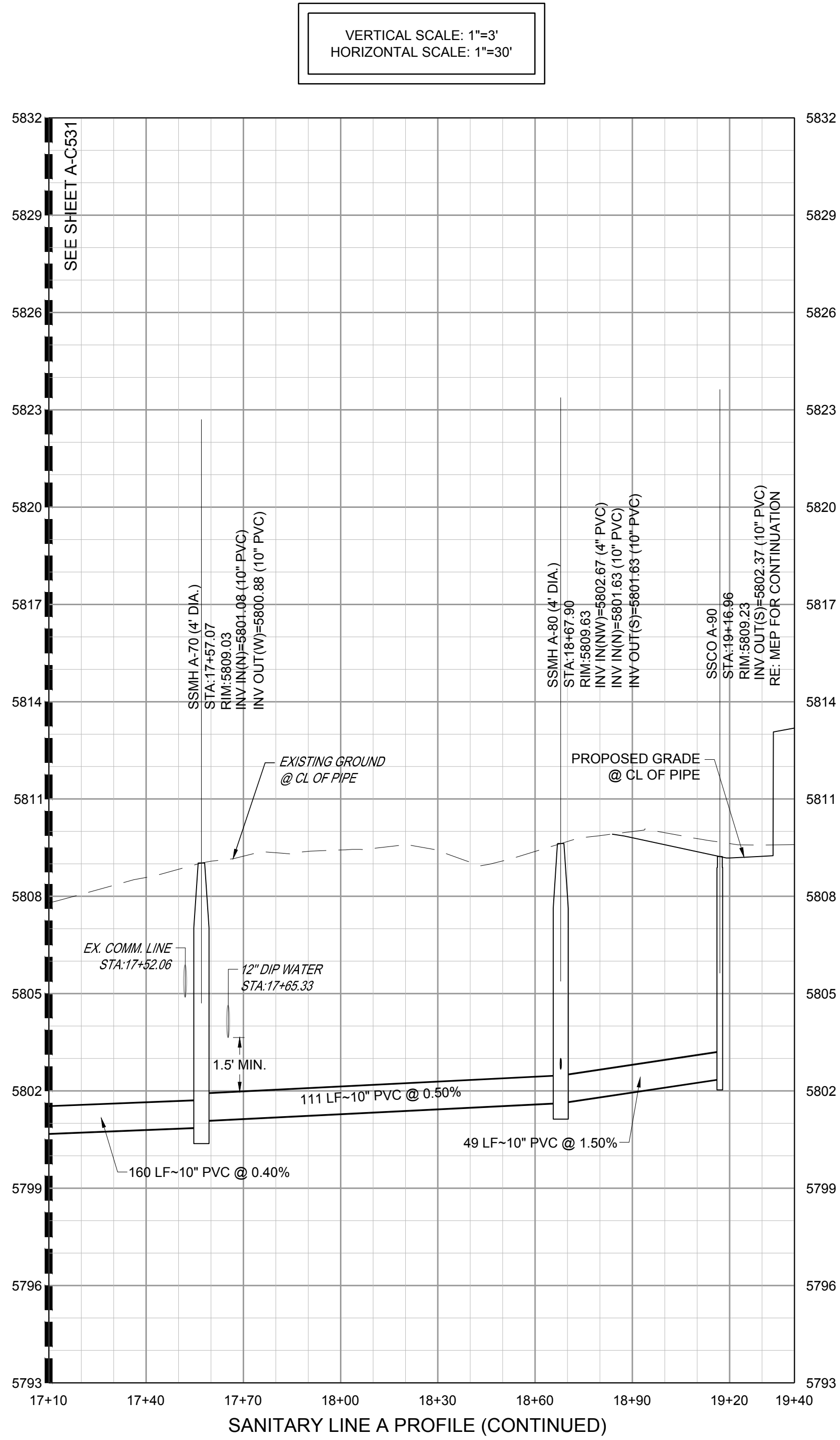
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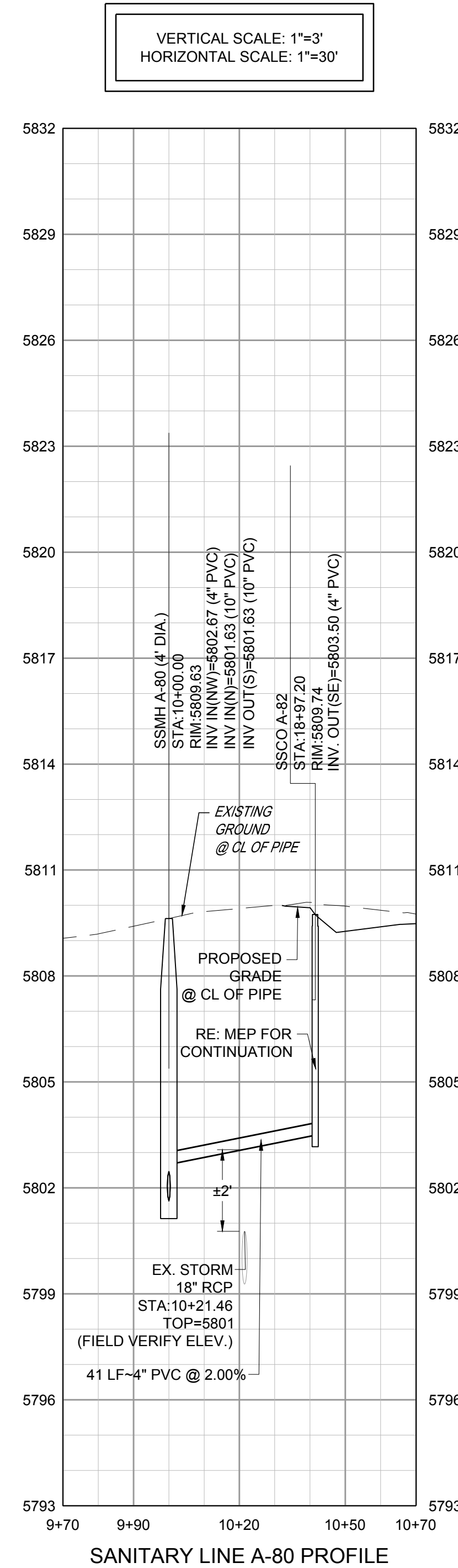
SANITARY LINE A PLAN (CONTINUED)



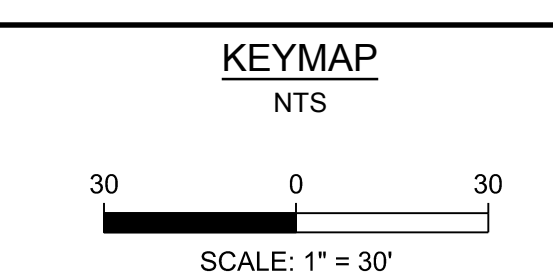
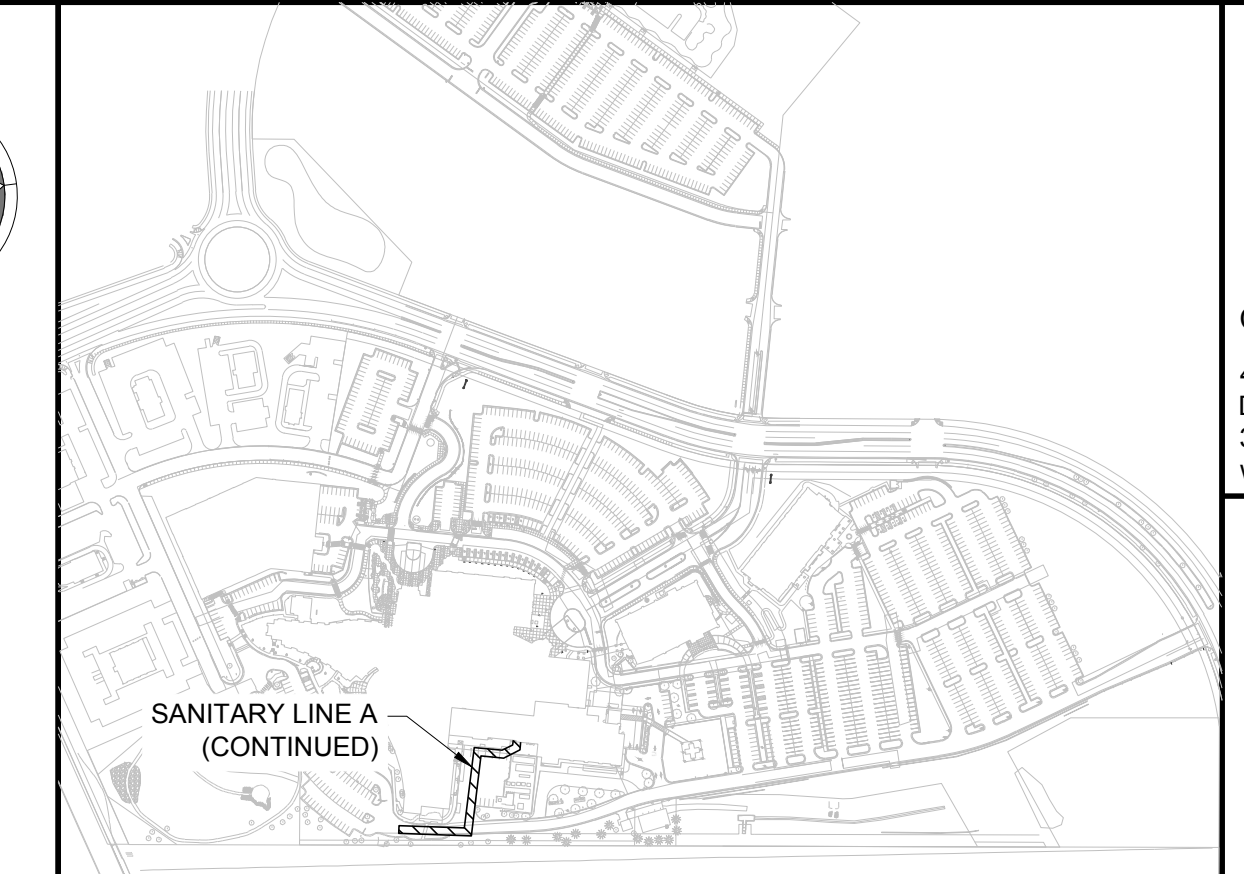
SANITARY LINE A-80 PLAN



SANITARY LINE A PROFILE (CONTINUED)



SANITARY LINE A-80 PROFILE



- NOTES:**
- SEE SHEET A-C501 FOR SANITARY NOTES AND LEGEND.
 - ALL EXISTING DRY UTILITIES ARE ASSUMED TO BE 3' DEEP TO TOP OF PIPE.
 - ALL EXISTING WATER LINES ARE ASSUMED TO BE 4.5' DEEP TO TOP OF PIPE.
 - THE CONTRACTOR SHALL POTHOLE ALL EXISTING UTILITY CROSSINGS PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY POTENTIAL CONFLICTS IMMEDIATELY.
 - ALL SANITARY SEWER MAINS TO BE SDR 35 PVC (GREEN), UNLESS SPECIFIED OTHERWISE.

- LEGEND:**
- UTILITY CROSSING

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2	2ND TOWN SUBMITTAL	08/16/2024
3	3RD TOWN SUBMITTAL	10/10/2024

PROJECT: **ADVENTHEALTH PARKER EXPANSION
 PARKER, CO 80138**

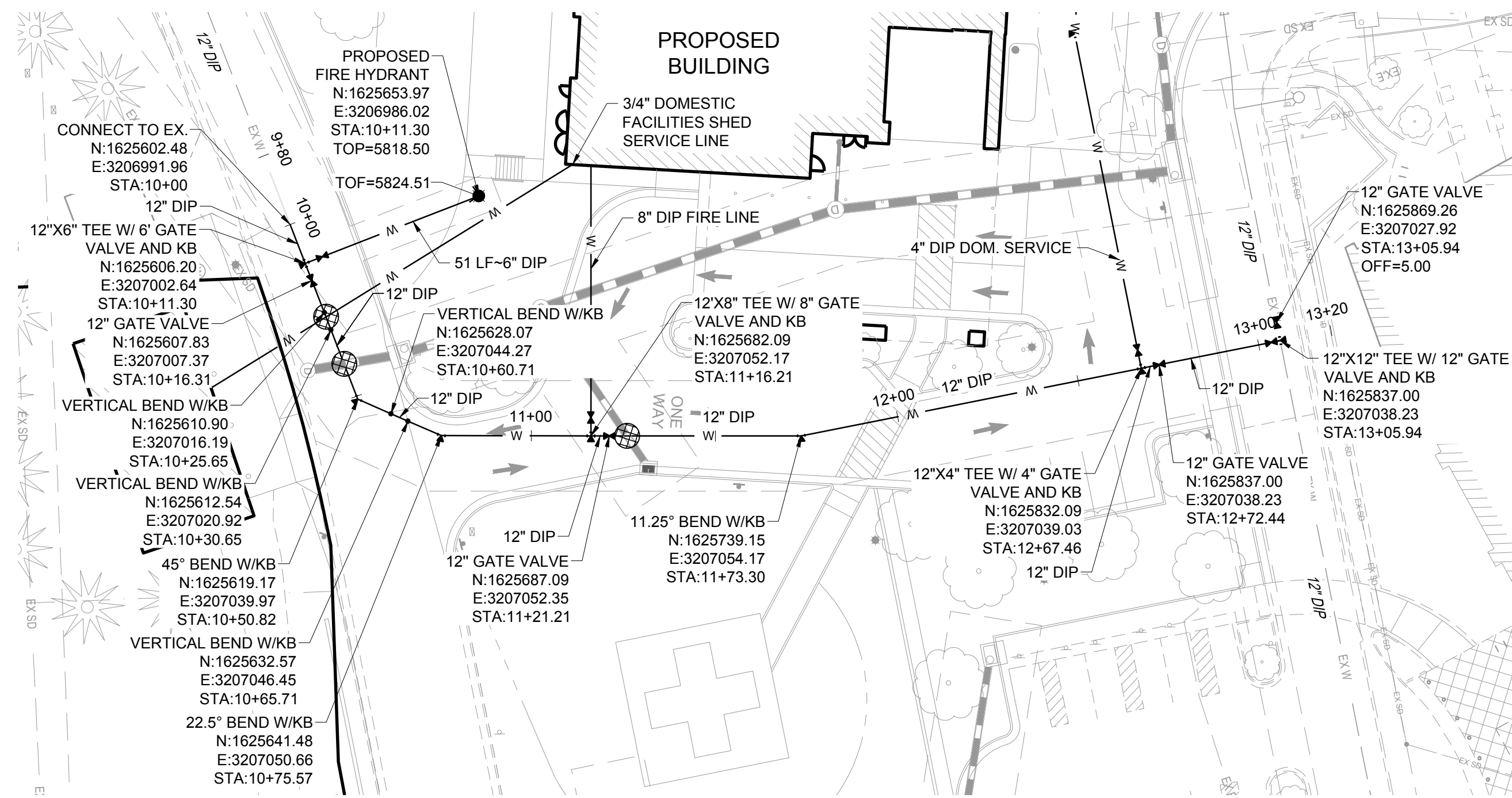
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FILE PATH:



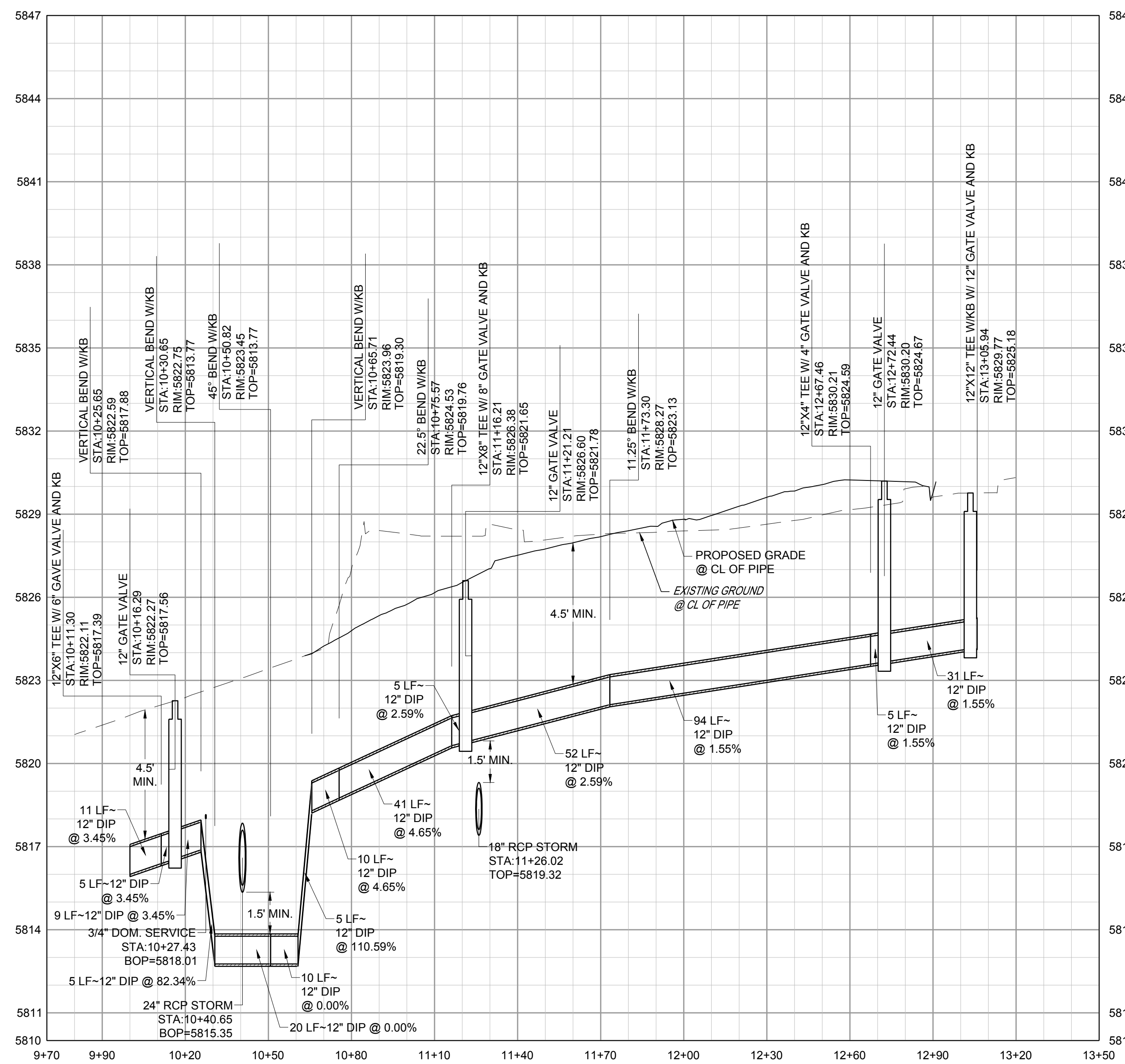
DESIGNED BY: R/JH
 DRAWN BY: EDS
 CHECKED BY: MHV
 MIRO JOB NO. 23079

DRAWING NUMBER:
A-C532

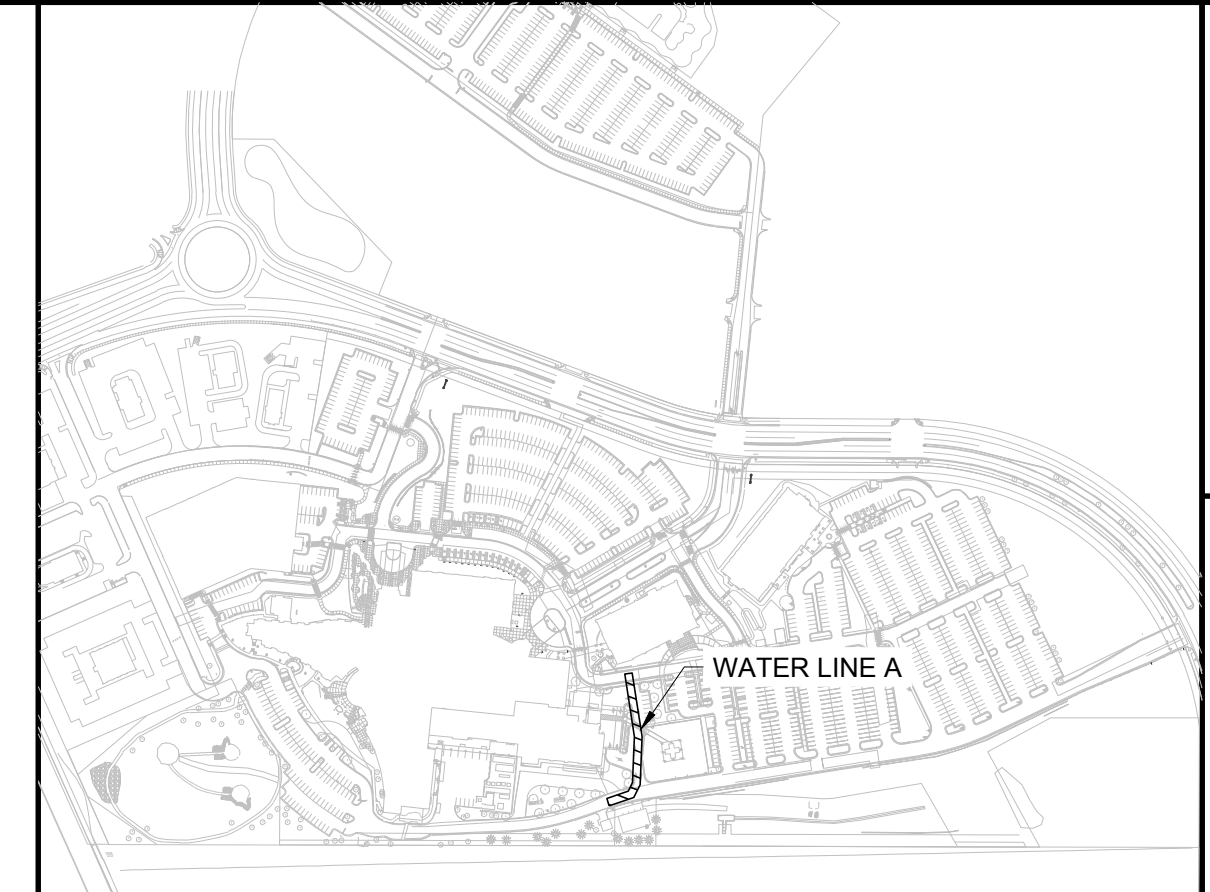
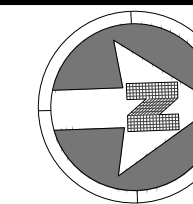


WATER LINE A PLAN

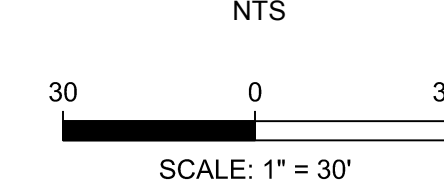
VERTICAL SCALE: 1"=3'
HORIZONTAL SCALE: 1"=30'



WATER LINE A PROFILE



KEYMAP

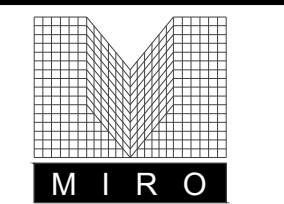


NOTES:

- SEE SHEET A-C501 FOR WATER NOTES AND LEGEND.
- ALL EXISTING DRY UTILITIES ARE ASSUMED TO BE 3' DEEP TO TOP OF PIPE.
- ALL EXISTING WATER LINES ARE ASSUMED TO BE 4.5' DEEP TO TOP OF PIPE.
- THE CONTRACTOR SHALL POTHOLE ALL EXISTING UTILITY CROSSINGS PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY POTENTIAL CONFLICTS IMMEDIATELY.
- ALL MECHANICAL BENDS, TEES, AND PLUGS WILL REQUIRE A CONCRETE THRUST BLOCK, AS PER CWSO STANDARDS.

LEGEND:

- UTILITY CROSSING



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10/10/2024	3RD TOWN SUBMITTAL

PROJECT: ADVENTHEALTH PARKER EXPANSION
PARKER, CO 80138

DRAWING TITLE: WATER PLAN AND PROFILE

FILE PATH:

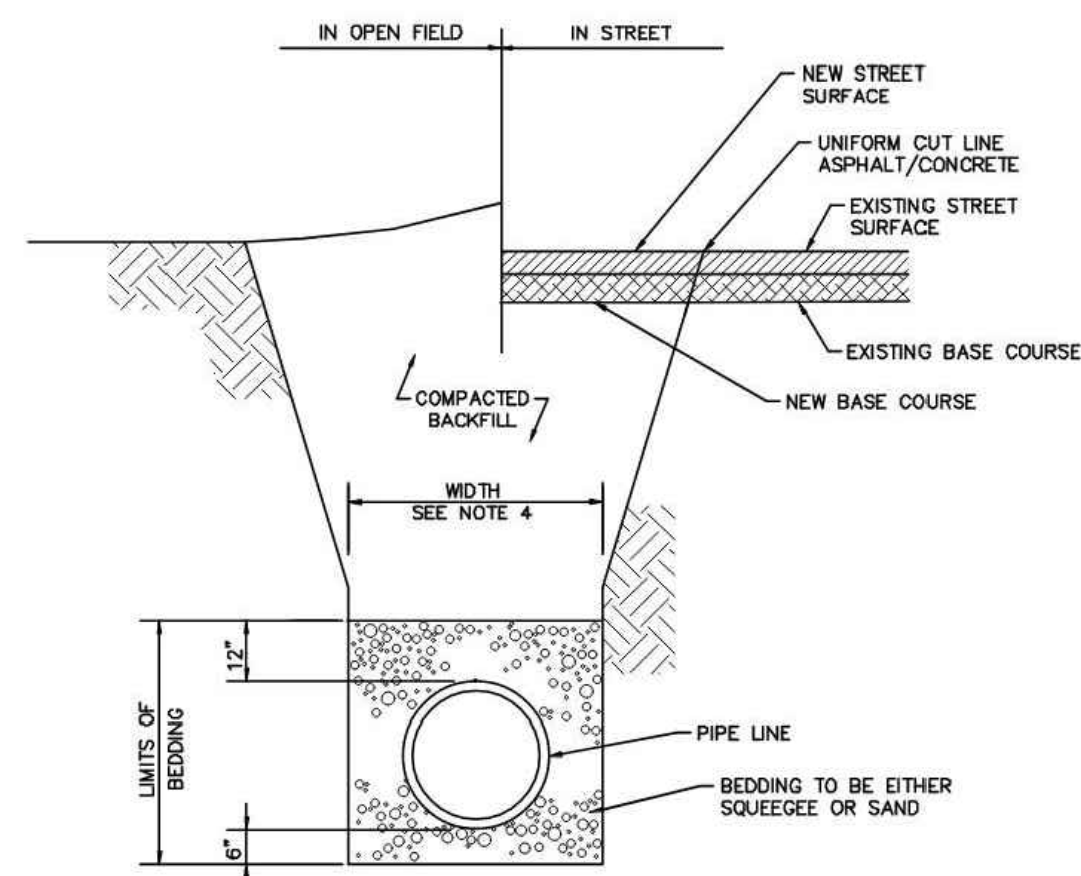
DESIGNED BY: RJH
DRAWN BY: EDS
CHECKED BY: MHV
MIRO JOB NO. 23079



DESIGNED BY: RJH
DRAWN BY: EDS
CHECKED BY: MHV
MIRO JOB NO. 23079

DRAWING NUMBER:

A-C541

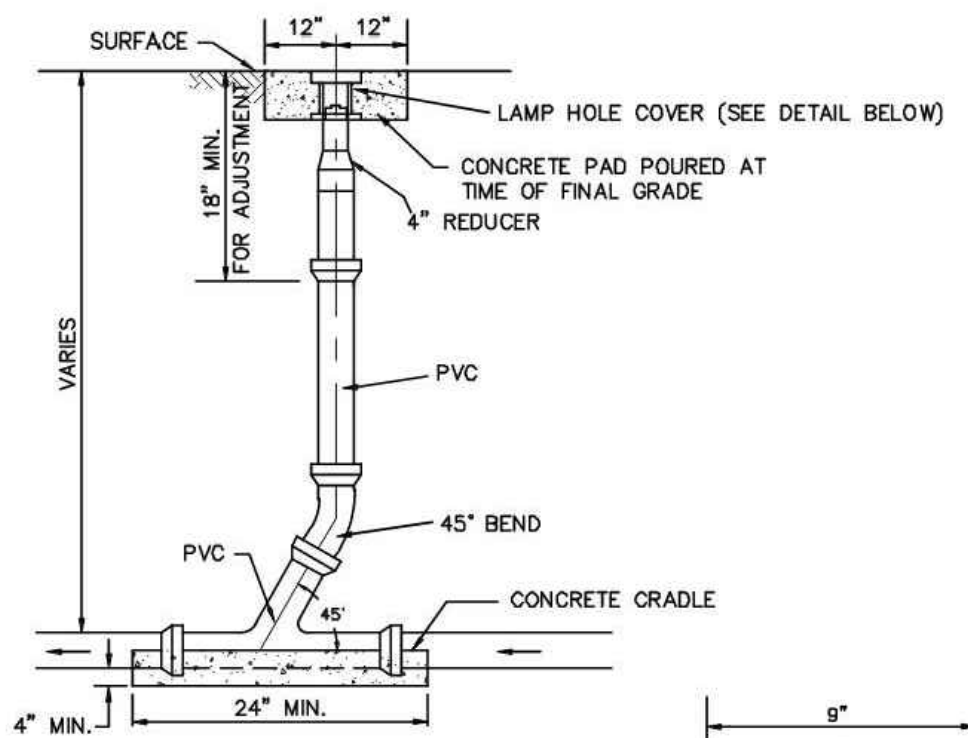


- NOTES:**
- MINIMUM COVER TO BE 4.5' BELOW OFFICIAL STREET GRADE.
 - TRENCH TO BE BRACED OR SHEETED AS NECESSARY FOR THE SAFETY OF THE WORKMEN AND PROTECTION OF OTHER UTILITIES IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL SAFETY REGULATIONS.
 - PIPE SHALL BE BEDDED FROM 6" BELOW THE BOTTOM OF THE PIPE TO 12" ABOVE THE TOP OF THE PIPE.
 - TRENCH WIDTH SHALL NOT BE MORE THAN 10" NOR LESS THAN 12" WIDER THAN THE LARGEST OUTSIDE DIAMETER OF THE PIPE.
 - SHOULD THE TRENCH BE EXCAVATED WIDER THAN ALLOWED, A CONCRETE CRADLE SHALL BE PLACED WITH 2500 P.S.I. CONCRETE FROM TRENCH BOTTOM TO PIPE SPRINGLINE.
 - COMPACTION SHALL BE AS FOLLOWS: PIPE ZONE BEDDING 6" UNDER AND 12" OVER PIPE WILL REQUIRE 70% RELATIVE DENSITY TRENCH ZONE ABOVE BEDDING MATERIALS, FULL TRENCH SECTION IN ROADWAY OR STREET R.O.W. LIMITS WILL REQUIRE 90% S.P.D. TRENCH ZONE ABOVE BEDDING MATERIALS, OUTSIDE OF STREET R.O.W. WILL REQUIRE 90% S.P.D.

Cottonwood
Water & Sanitation District

STANDARD BEDDING

ISSUED: 07-2013
REVISED: 07-2022
DWG: S-14

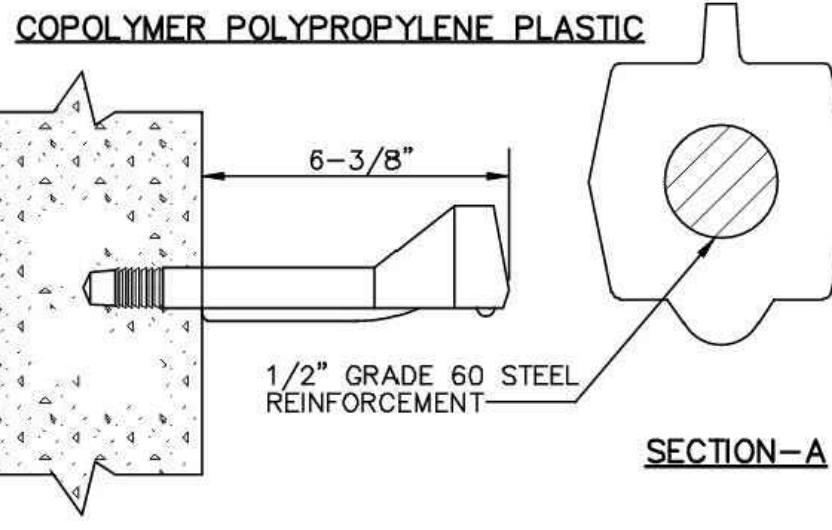
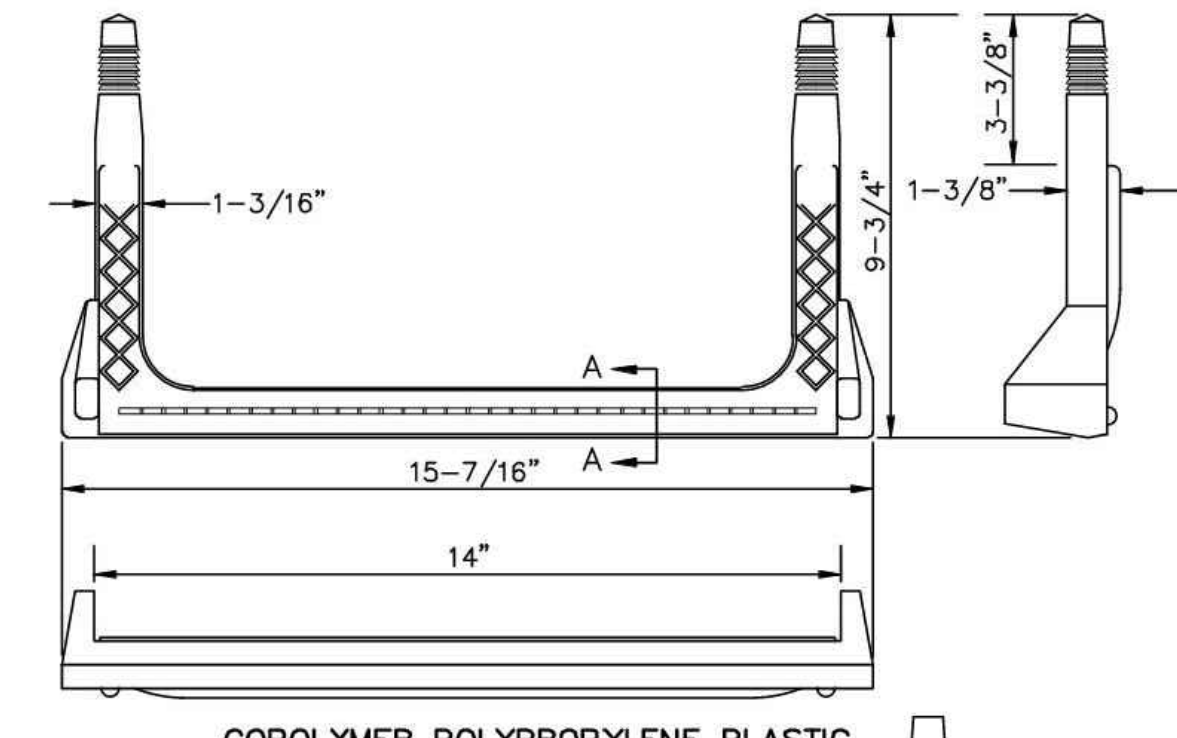


- NOTES:**
- COVER SHALL HAVE A LOCKING LID MARKED "SEWER".
 - TYLER SERIES 6855 SLIP TYPE TOP SECTION, D & L SUPPLY SERIES M8055 OR EQUIV.
 - I.D. = 6 1/8".

Cottonwood
Water & Sanitation District

IN-LINE CLEANOUT

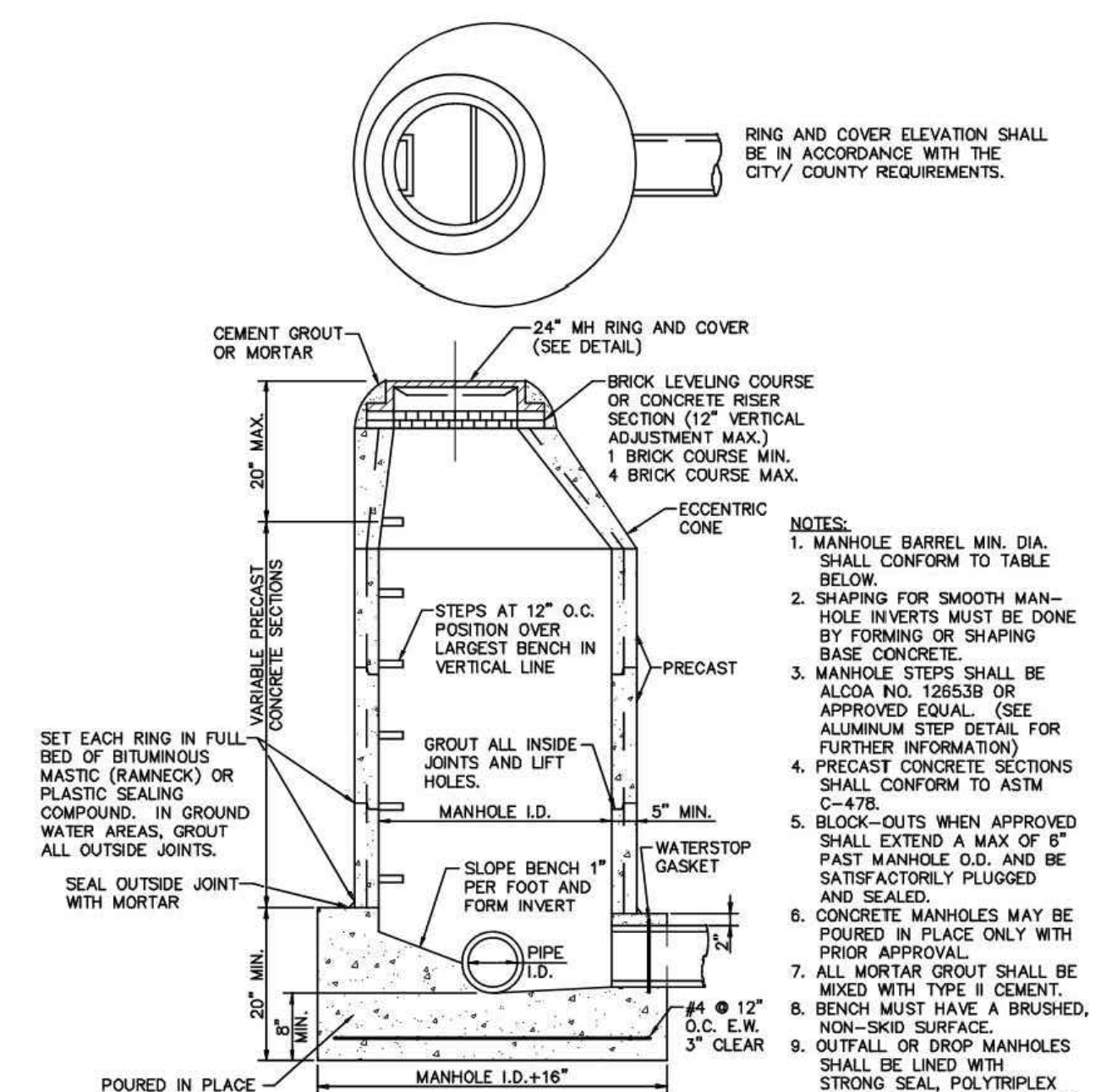
ISSUED: 07-2013
REVISED: 07-2022
DWG: S-10



Cottonwood
Water & Sanitation District

PLASTIC STEP

ISSUED: 07-2013
REVISED: 07-2022
DWG: S-5

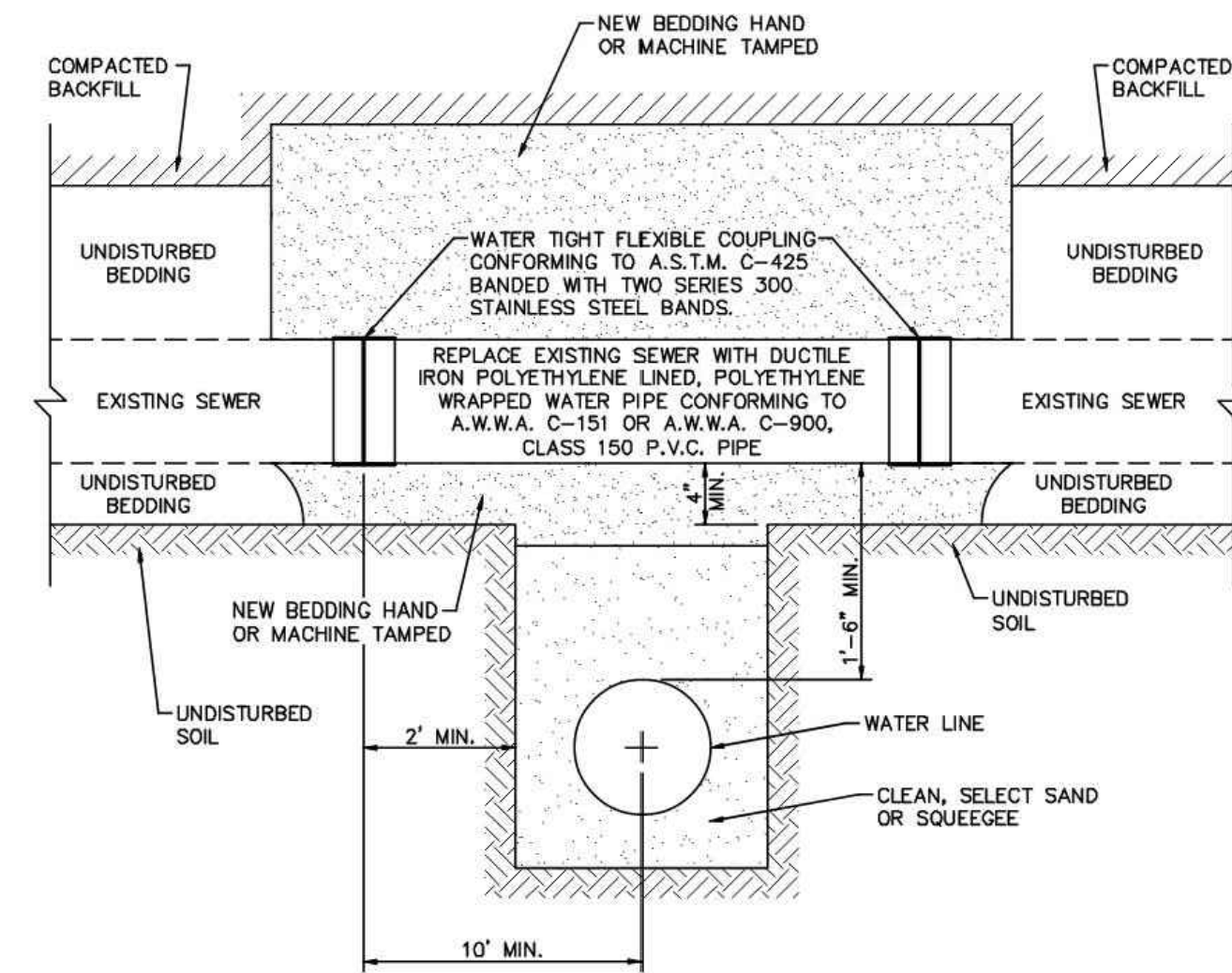


- NOTES:**
- MANHOLE BARREL MIN. DIA. SHALL CONFORM TO TABLE BELOW.
 - SHAPING FOR SMOOTH MANHOLE INVERTS MUST BE DONE BY FORMING OR SHAPING BASE CONCRETE.
 - MANHOLE STEPS SHALL BE ALCOA NO. 12853B OR APPROVED EQUAL. (SEE ALUMINUM STEP DETAIL FOR FURTHER INFORMATION)
 - PRECAST CONCRETE SECTIONS SHALL CONFORM TO ASTM C-478.
 - BLOCK-OUTS WHEN APPROVED SHALL EXTEND A MAX OF 6" PAST MANHOLE O.D. AND BE SATISFACTORILY PLUGGED AND SEALED.
 - CONCRETE MANHOLES MAY BE POURED IN PLACE ONLY WITH PROOF APPROVAL.
 - ALL MORTAR GROUT SHALL BE MIXED WITH TYPE II CEMENT.
 - BENCH MUST HAVE A BRUSHED, NON-SKID SURFACE.
 - CUTFALL OR DROP MANHOLES SHALL BE LINED WITH STRONG SEAL, POLYTRIFLEX SEWER SHIELD, OR AN APPROVED EQUAL, COATED WITH 20 MIL. MIN. APPLIED IN 4-7 MIL. LAYERS, PER MANUFACTURER'S SPECIFICATIONS.
 - PRE-CAST CONCRETE BASES SHALL NOT BE USED WITHOUT PRIOR APPROVAL OF THE DISTRICT.

Cottonwood
Water & Sanitation District

PRECAST MANHOLE

ISSUED: 07-2013
REVISED: 07-2022
DWG: S-2

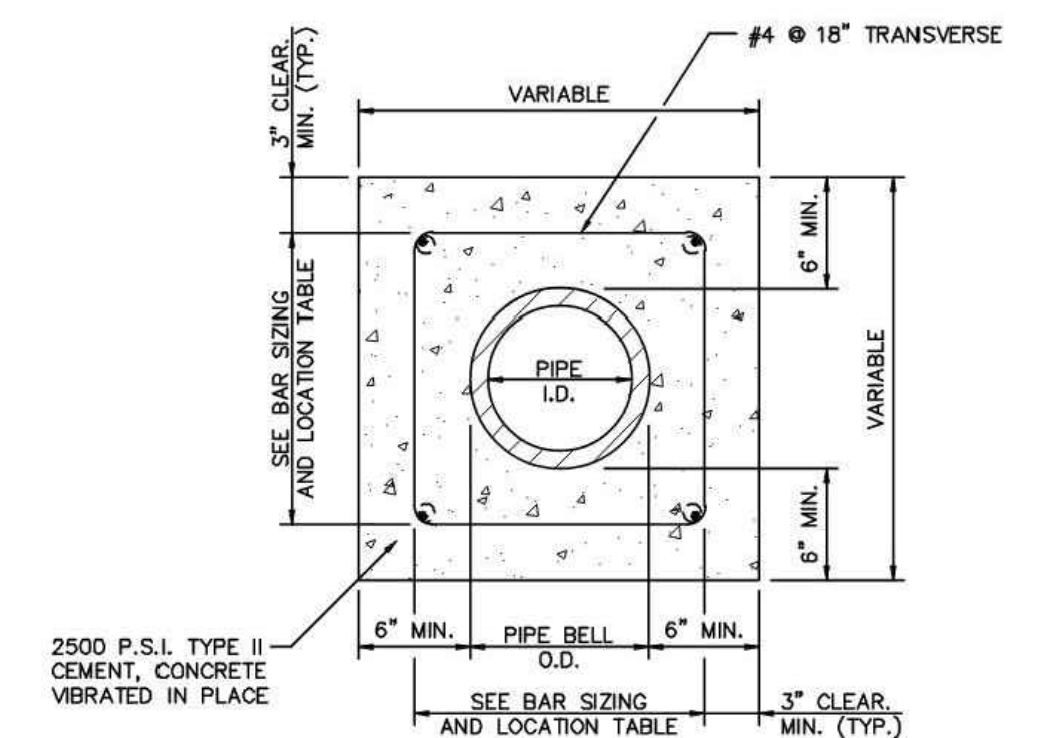


- NOTES:**
- THIS STANDARD APPLIES ONLY FOR NON-PRESSURIZED SANITARY SERVICE TAPS AND SANITARY SEWERS EIGHT (8) INCH AND SMALLER. SANITARY SEWERS MAY NOT BE CUT WITHOUT THE EXPRESSED CONSENT OF THE DISTRICT. A DISTRICT REPRESENTATIVE WILL BE ON SITE DURING CONSTRUCTION.
 - DUCTILE IRON PIPE USED TO REPLACE SECTION OF SANITARY SEWER SHALL BE PLACED IN A TRENCH, BEDDED, BACKFILLED AND COMPACTION IN ACCORDANCE WITH THE DISTRICT SPECIFICATIONS.

Cottonwood
Water & Sanitation District

SEWER CROSSING

ISSUED: 07-2013
REVISED: 07-2022
DWG: S-28



REINFORCEMENT STEEL

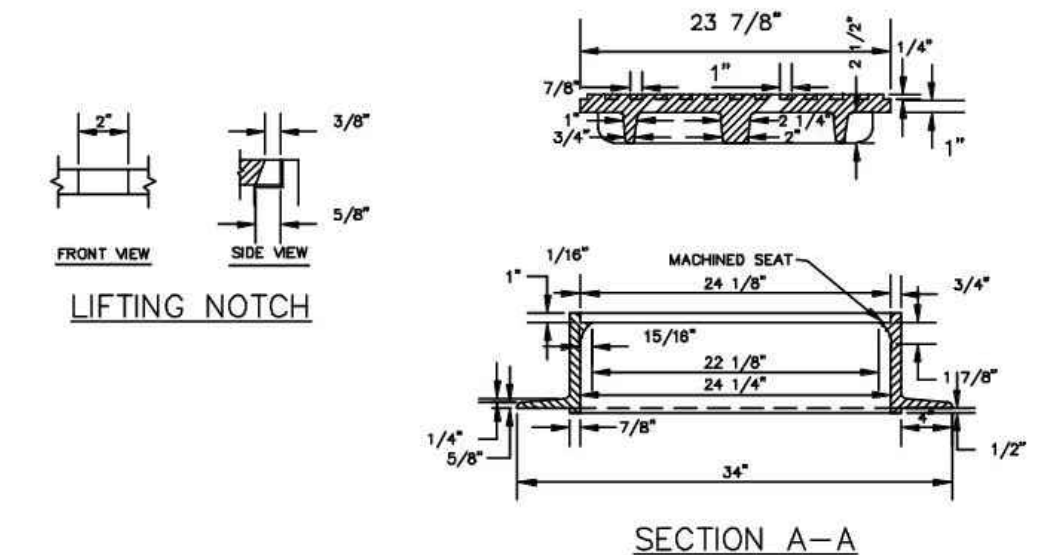
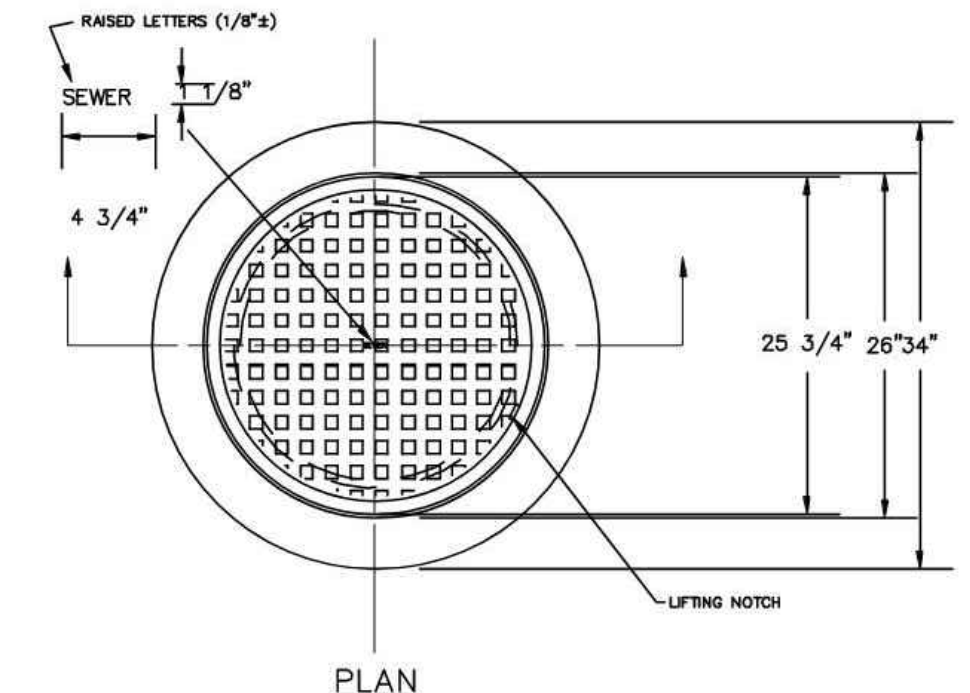
PIPE I.D.	LONGITUDINAL BARS	LOCATION
4 IN.	4-NO. 4 BARS	1 EACH CORNER
6 IN.	4-NO. 4 BARS	1 EACH CORNER
8 IN.	4-NO. 4 BARS	1 EACH CORNER
10 IN.	8-NO. 4 BARS	3 EACH SIDE
12 IN.	8-NO. 4 BARS	3 EACH SIDE
15 IN.	8-NO. 4 BARS	3 EACH SIDE
18 IN.	8-NO. 4 BARS	3 EACH SIDE
21 IN.	12-NO. 4 BARS	4 EACH SIDE
24 IN.	12-NO. 4 BARS	4 EACH SIDE
27 IN.	12-NO. 4 BARS	4 EACH SIDE
30 IN.	12-NO. 4 BARS	4 EACH SIDE
33 IN.	12-NO. 4 BARS	4 EACH SIDE
36 IN.	16-NO. 4 BARS	5 EACH SIDE

- NOTE:**
- THE DISTRICT SHALL REVIEW THIS DETAIL FOR USE ON A CASE BY CASE BASIS. SPECIAL ENCASMENTS MAY BE REQUIRED AT CREEK CROSSINGS AND CONDUIT CROSSINGS.

Cottonwood
Water & Sanitation District

CONCRETE ENCASMENT

ISSUED: 07-2013
REVISED: 07-2022
DWG: S-12

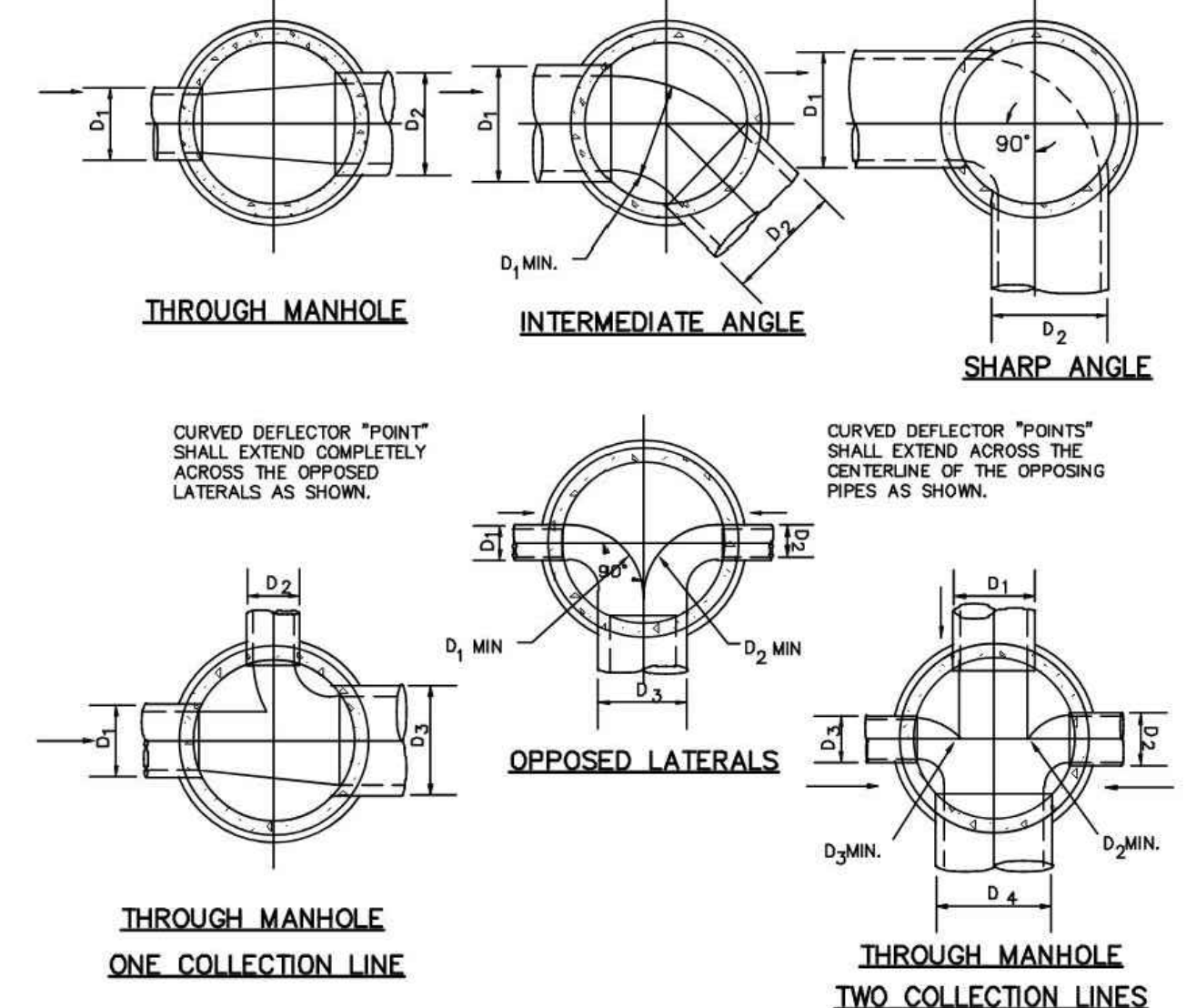


- NOTE:**
- CASTING SPECIFICATIONS: ASTM A-48 WITH A MINIMUM TENSILE STRENGTH OF 25 KSI (CLASS 25)
 - ALL CASTINGS TO BE DIPPED IN ASPHALT BASE PAINT (OR APPROVED EQUAL)
 - CASTINGS SHALL BE AS SPECIFIED BELOW OR EQUAL: (CAST IRON ONLY)
- MANUFACTURERS: CAT. # NEENAH R-1706
CASTINGS, INC. MH-400-24 C.I.
HUTCHINSON FDRY. & STL. INC. MH-400

Cottonwood
Water & Sanitation District

24" MANHOLE RING AND COVER

ISSUED: 07-2013
REVISED: 07-2022
DWG: S-6



- NOTES:**
- PIPE INVERT ELEVATIONS AND DROP THROUGH MANHOLES SHALL BE IN CONFORMANCE WITH THE REVIEWED AND SIGNED CONSTRUCTION PLANS. THE INTENTION IS TO PROMOTE SMOOTH, NON-TURBULENT FLOW THROUGH THE MANHOLES BY KEEPING THE LARGER LINES LOWER IN THE MANHOLE AND BRINGING THE SMALLER LINES IN SLIGHTLY HIGHER.
 - MAXIMUM INSIDE DROP THROUGH ANY MANHOLE SHALL BE 12 INCHES.
 - MINIMUM DROP THROUGH ANY MANHOLE SHALL BE 0.2 FT.
 - ALL INVERT DEFLECTORS SHALL BE CURVED IN SHAPE TO PROVIDE SMOOTH FLOW TRANSITIONS AS SHOWN ON THIS DETAIL.
 - MINIMUM ANGLE BETWEEN THE CENTERLINE OF ANY INCOMING PIPE AND THE CENTERLINE OF THE OUTGOING PIPE SHALL BE 90 DEGREES.

Cottonwood
Water & Sanitation District

BASE AND DEFLECTOR

ISSUED: 07-2013
REVISED: 07-2022
DWG: S-3



DATE	DESCRIPTION
06/03/2024	1ST TOWN SUBMITTAL
08/16/2024	2ND TOWN SUBMITTAL
10/10/2024	3RD TOWN SUBMITTAL

PROJECT: **ADVENTHEALTH PARKER EXPANSION**
PARKER, CO 80138

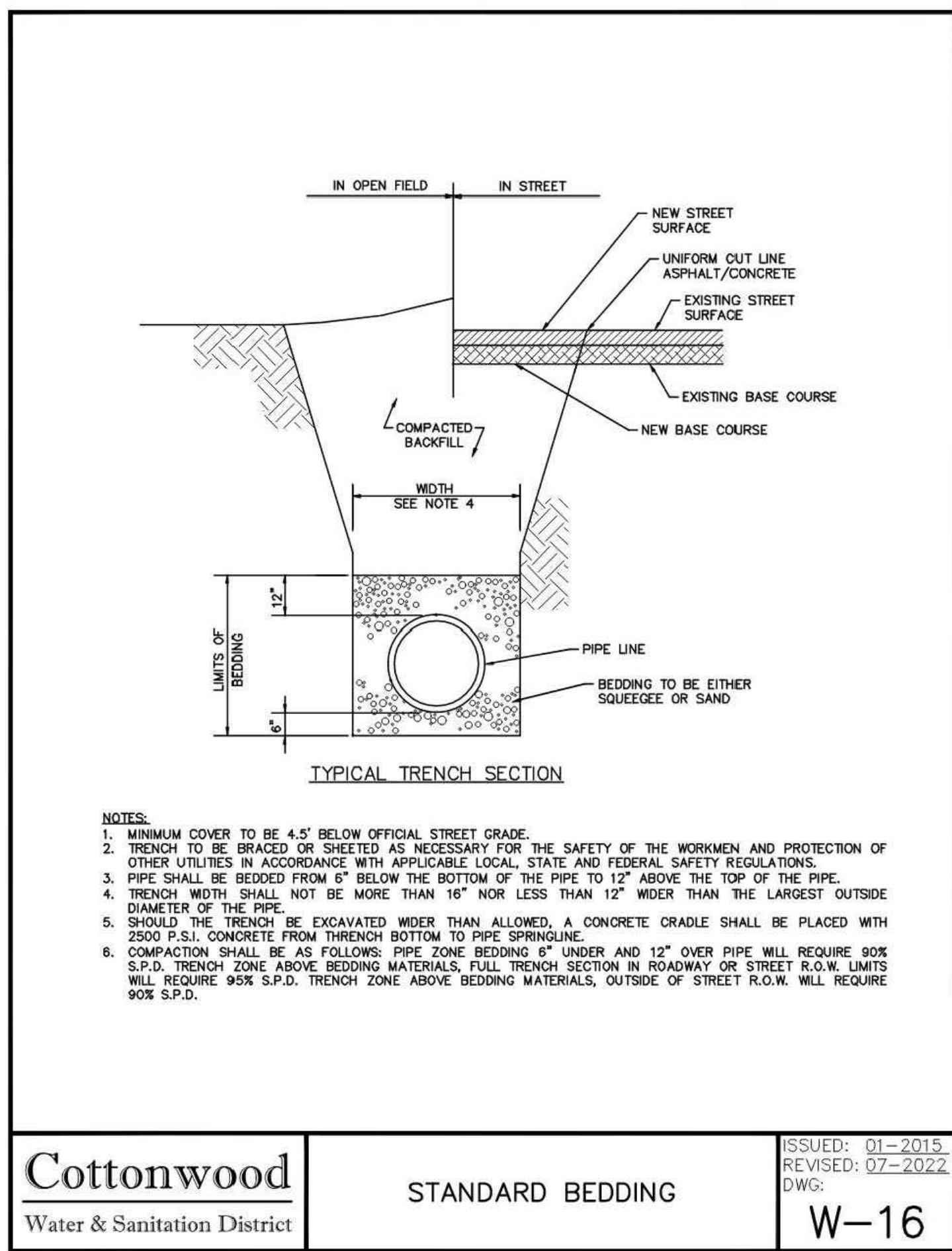
DRAWING TITLE: **WATER AND SANITARY DETAILS**

FILE PATH: J:\Jobs\23079 AHP Expansion\05 CAD\Plans and Details\C551-WATR-SSEW-DTLS.dwg C551 - 12/17/2024



DESIGNED BY: RJH
DRAWN BY: EDS
CHECKED BY: MHV
MIRO JOB NO. 23079

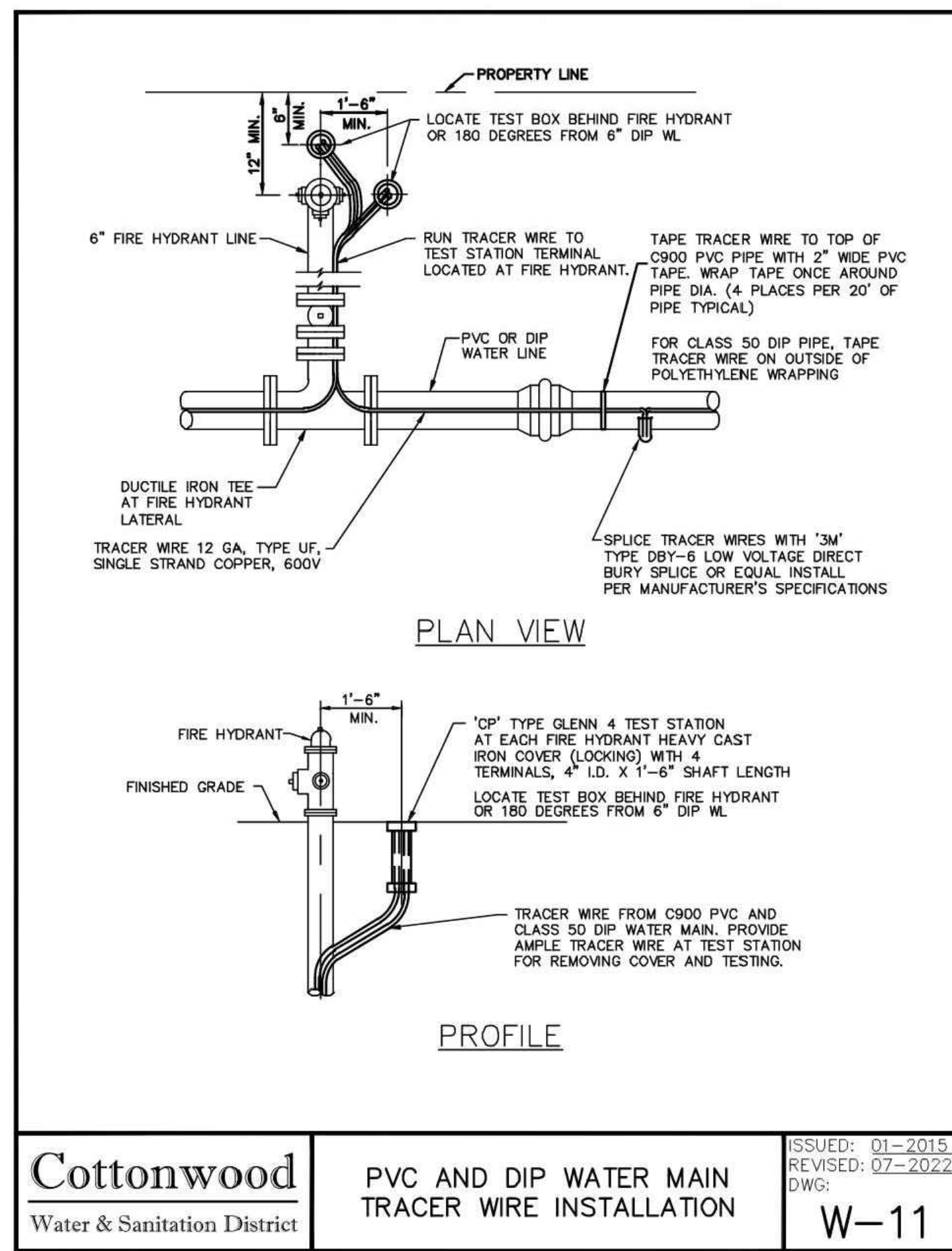
DRAWING NUMBER: **A-C551**



Cottonwood
Water & Sanitation District

STANDARD BEDDING

ISSUED: 01-2015
REVISED: 07-2022
DWG: W-16



Cottonwood
Water & Sanitation District

PVC AND DIP WATER MAIN TRACER WIRE INSTALLATION

ISSUED: 01-2015
REVISED: 07-2022
DWG: W-11

ROD DIAMETER, GRADE & LENGTH OF RESTRAINED PIPE

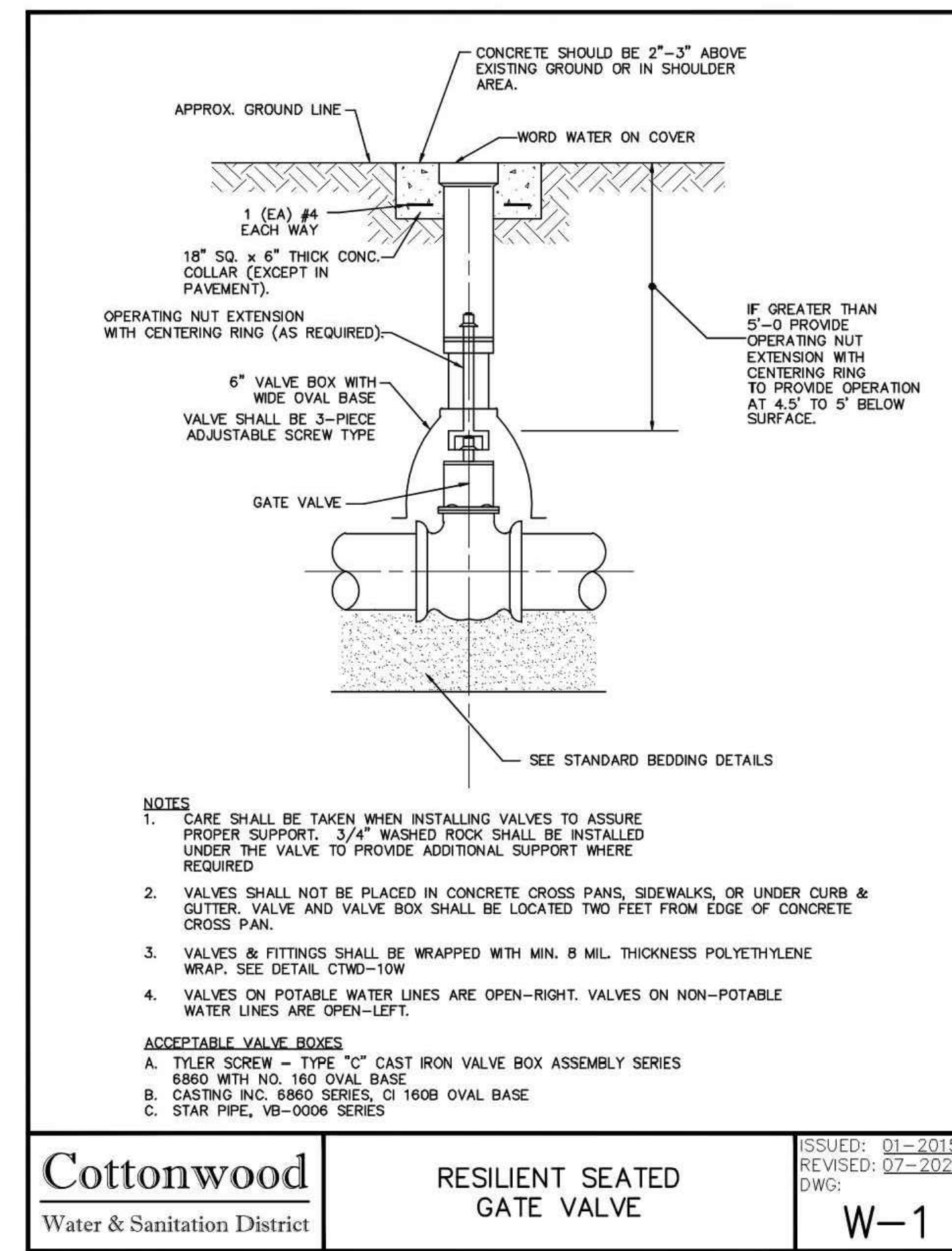
PIPE SIZE	4"			6"			8"			12"			16"			20"			24"								
	F	L	G	F	L	G	F	L	G	F	L	G	F	L	G	F	L	G	F	L	G						
90° BEND, TEE, PLUG	3/4"	30'	MS 3/4"	45'	MS 3/4"	45'	MS 3/4"	60'	MS 3/4"	60'	MS 3/4"	60'	MS 3/4"	100'	MS 1 1/4"	132'	MS 1 1/4"	132'	MS 1 1/4"	150'	MS 1 1/4"	150'	MS 1 1/4"				
VALVE	3/4"	30'	MS 3/4"	45'	MS 3/4"	45'	MS 3/4"	60'	MS 3/4"	60'	MS 3/4"	60'	MS 3/4"	100'	MS 1 1/4"	132'	MS 1 1/4"	132'	MS 1 1/4"	150'	MS 1 1/4"	150'	MS 1 1/4"				
45° BEND	3/4"	15'	MS 3/4"	15'	MS 3/4"	15'	MS 3/4"	20'	MS 3/4"	20'	MS 3/4"	20'	MS 3/4"	30'	MS 3/4"	30'	MS 3/4"	30'	MS 3/4"	45'	MS 3/4"	45'	MS 3/4"				
22 1/2° BEND	3/4"	2'	MS 3/4"	4'	MS 3/4"	4'	MS 3/4"	5'	MS 3/4"	7'	MS 3/4"	7'	MS 3/4"	10'	MS 3/4"	10'	MS 3/4"	10'	MS 3/4"	12'	MS 3/4"	12'	MS 3/4"	12'	MS 3/4"		
11 1/4° BEND	3/4"	2'	MS 3/4"	2'	MS 3/4"	2'	MS 3/4"	2'	MS 3/4"	2'	MS 3/4"	2'	MS 3/4"	2'	MS 3/4"	2'	MS 3/4"	2'	MS 3/4"	2'	MS 3/4"	3'	MS 3/4"	3'	MS 3/4"	3'	MS 3/4"

NOTES:
1. LENGTH OF RESTRAINED PIPE MEASURED EACH WAY FROM VALVES AND BENDS.
2. CLAMPS, RODS & MEGALUGS NOT ALLOWED FOR 24" & LARGER PIPES.
3. D=DIAMETER, L=LENGTH, G=GRADE, MS=MILD STEEL, HS=HIGH STRENGTH.
4. MIN 4.5' GROUND COVER REQD.
5. BASED ON 150 PSI INTERNAL PRESSURE.
6. MS = MILD STEEL ROD ASTM A 36.
7. HS = HIGH STRENGTH ROD ASTM A 193 GRADE B7.
8. NUTS SHALL BE ASTM A 307 GRADE A OR B HEXAGON HEAVY SERIES. HS NUTS SHALL CONFORM TO MS-22.
9. SEE TIE ROD DETAIL DRAWING, ALSO, THE ROD COUPLING DETAILS, CLAMP DETAILS AND SET CLAMP DETAILS.
10. LENGTH REFERS TO THE AMOUNT OF PIPE WHICH MUST BE RESTRAINED TOGETHER AND IS NOT NECESSARILY THE LENGTH OF THE RODS.
11. LENGTH OF RESTRAINED PIPE CHART IS ALSO FOR THE LENGTH OF JOINT RESTRAINT FOR MEGALUGS.
12. CROSSES MUST BE RESTRAINED IN ALL APPLICABLE DIRECTIONS.
13. 12" AND SMALLER IN LINE VALVES AND TEES SHALL HAVE A MECHANICAL JOINT RESTRAINT DEVICE ON EACH SIDE OF THE FITTING OR VALVE. MECHANICAL JOINT RESTRAINT DEVICE SHALL BE PER MS-2.
14. A SECOND VALVE WILL BE REQD TO BE CLOSED WHEN EXCAVATING NEXT TO A EXIST VALVE.
15. ON PLUGS, TEES AND BENDS KICKBLOCK SHALL BE IN ADDITION TO RESTRAINT.
16. WHEN REDUCERS ARE USED ON VALVE INSTALLATIONS THE LENGTH OF RESTRAINT SHALL BE BASED ON THE SIZE OF THE PIPE NOT THE SIZE OF THE VALVE.

Cottonwood
Water & Sanitation District

LENGTH OF RESTRAINED PIPE

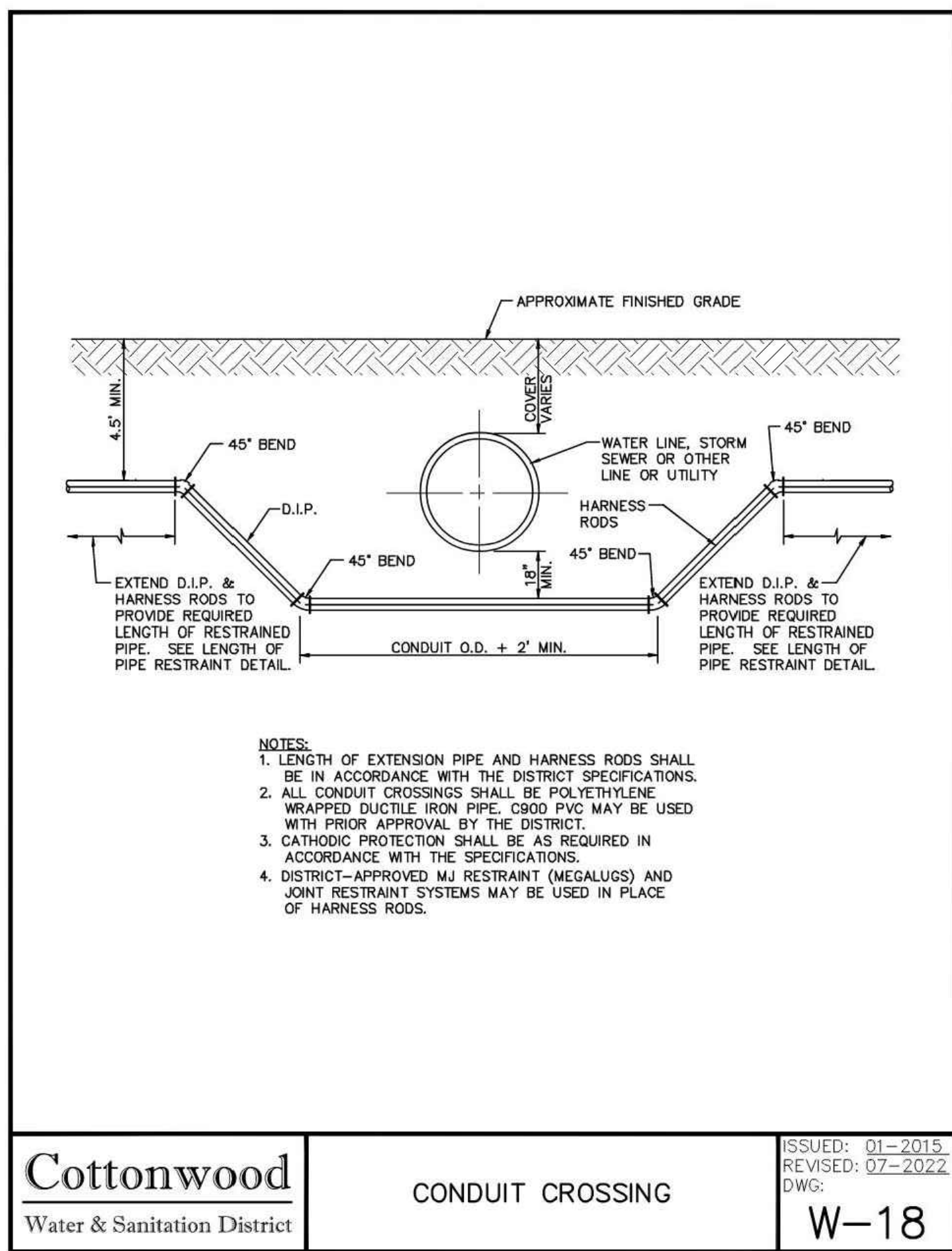
ISSUED: 01-2015
REVISED: 07-2022
DWG: W-9



Cottonwood
Water & Sanitation District

RESILIENT SEATED GATE VALVE

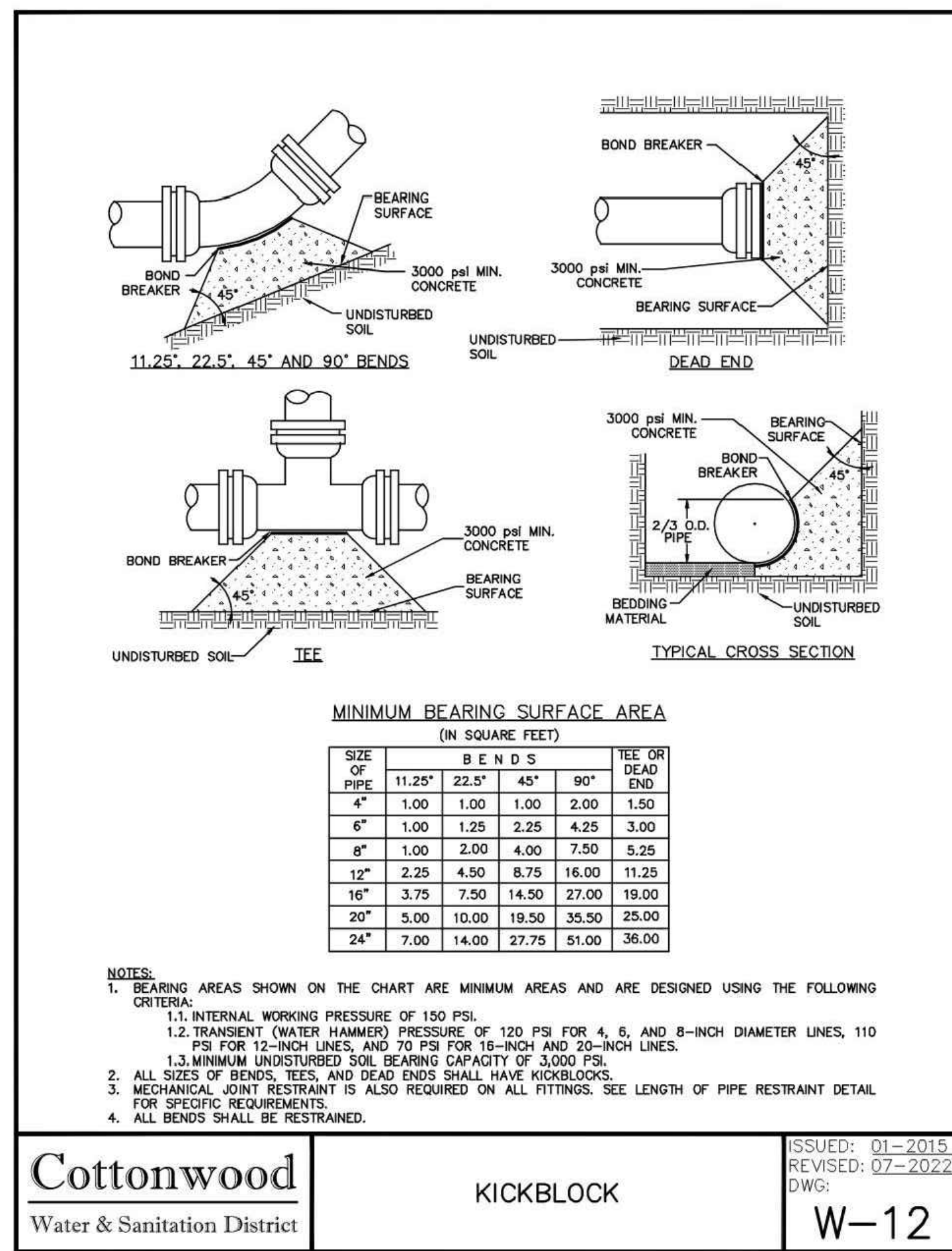
ISSUED: 01-2015
REVISED: 07-2022
DWG: W-1



Cottonwood
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CONDUIT CROSSING

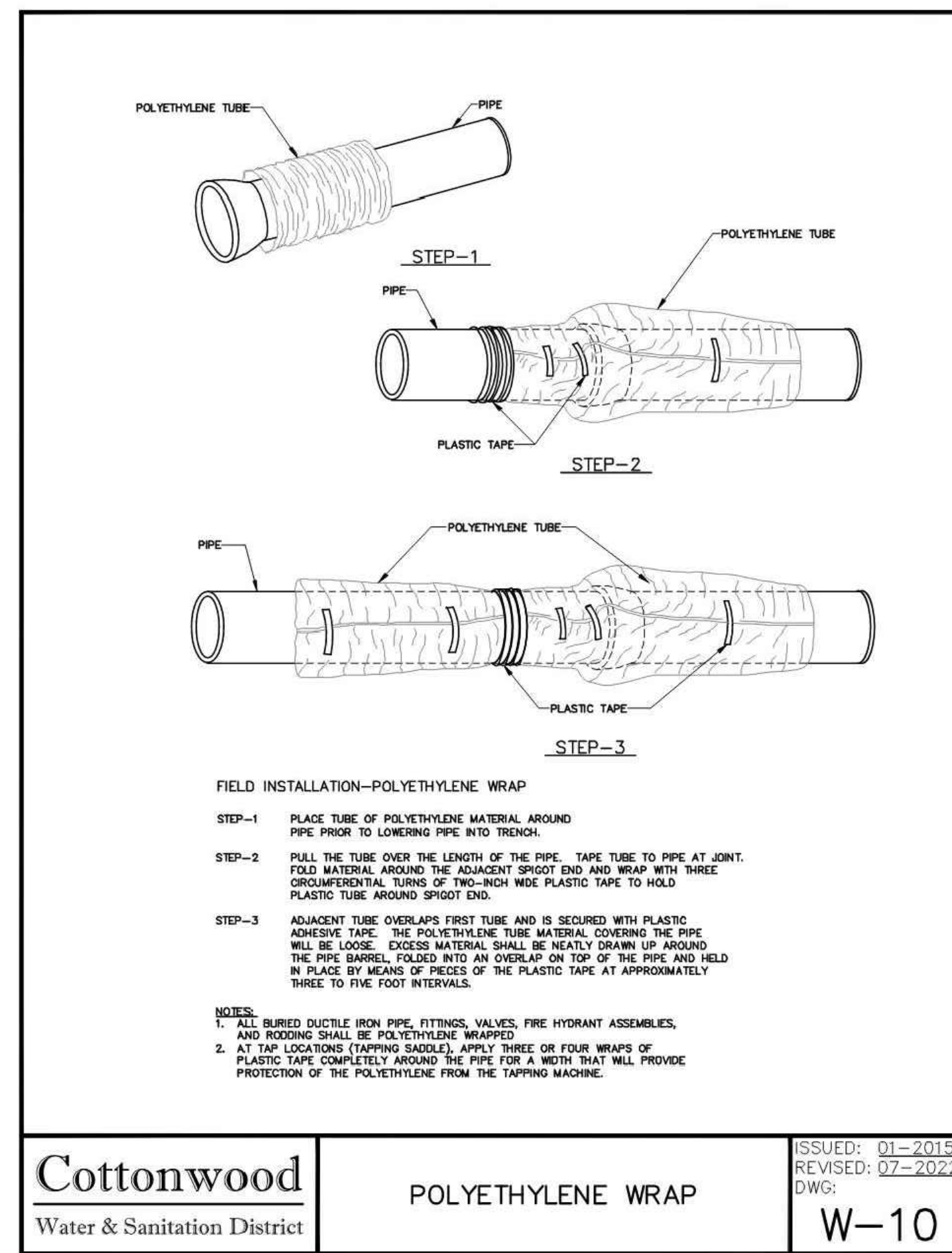
ISSUED: 01-2015
REVISED: 07-2022
DWG: W-18



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KICKBLOCK

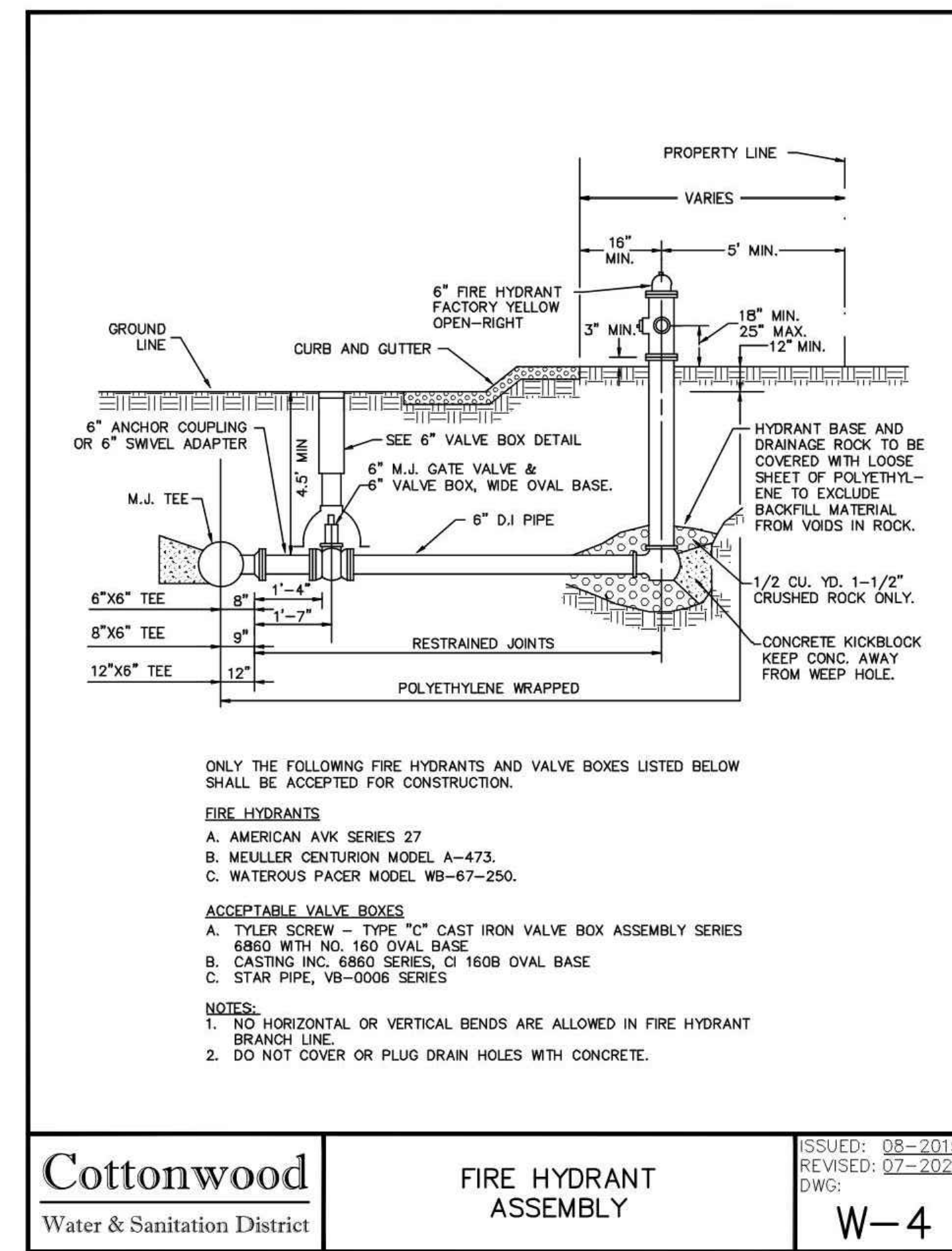
ISSUED: 01-2015
REVISED: 07-2022
DWG: W-12



Cottonwood
Water & Sanitation District

POLYETHYLENE WRAP

ISSUED: 01-2015
REVISED: 07-2022
DWG: W-10



Cottonwood
Water & Sanitation District

FIRE HYDRANT ASSEMBLY

ISSUED: 08-2015
REVISED: 07-2022
DWG: W-4

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811
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DATE	DESCRIPTION
06/03/2024	1ST TOWN SUBMITTAL
08/16/2024	2ND TOWN SUBMITTAL
10/10/2024	3RD TOWN SUBMITTAL

NO. 1 2 3

**ADVENTHEALTH PARKER EXPANSION
PARKER, CO 80138**

WATER AND SANITARY DETAILS

PROJECT: J:\Jobs\23079 AHP Expansion\05 CAD\Plans and Details\C551-WATR-SSEW-DTLS.dwg C552 - 12/17/2024
DRAWING TITLE: WATER AND SANITARY DETAILS

DESIGNED BY: RJH
DRAWN BY: EDS
CHECKED BY: MHV
MIRO JOB NO. 23079
DRAWING NUMBER: A-C552

REGISTERED PROFESSIONAL ENGINEER
NO. 47666
12/18/24



Know what's below.
Call before you dig.

DATE	DESCRIPTION
06/03/2024	1ST TOWN SUBMITTAL
08/16/2024	2ND TOWN SUBMITTAL
10/10/2024	3RD TOWN SUBMITTAL

NO.	DESCRIPTION
1	ISSUED: 01-2015
2	REVISED: 07-2022
3	DWG:

PROJECT: **ADVENTHEALTH PARKER EXPANSION
PARKER, CO 80138**

DRAWING TITLE: **WATER AND SANITARY DETAILS**

FILE PATH: J:\Jobs\23079 AHP Expansion\05 CAD\Plans and Details\C551-WATR-SSEW-DTLS.dwg C553 - 12/17/2024



DESIGNED BY: RJH
DRAWN BY: EDS
CHECKED BY: MHV
MIRO JOB NO. 23079

DRAWING NUMBER:

A-C553

PLAN

SECTION

DETAIL A

DETAIL B

DETAIL C

GENERAL NOTES:

- THESE STANDARD DETAILS SHALL ONLY BE CONSTRUED TO SHOW CONCEPTUAL AND STANDARD DIMENSIONAL REQUIREMENTS FOR GREASE INTERCEPTOR AND SHALL NOT BE USED FOR CONSTRUCTION. THE ARCHITECT/ENGINEER SHALL FURNISH STRUCTURAL DESIGN CRITERIA, HYDRAULIC LOADINGS, VOLUME & RETENTION TIME REQUIREMENTS AND DETAILED CONSTRUCTION DRAWINGS, INCLUDING SITE PLAN FOR APPROVAL PRIOR TO CONSTRUCTION.
- SECONDARY TANK HAS VOLUME EQUAL TO 1/3 OF TOTAL CAPACITY.
- ALL PIPE AND FITTINGS TO BE SCHEDULE 40 PVC EXCEPT WHERE NOTED OTHERWISE AND SHALL BE 4" MINIMUM DIAMETER.
- WELLS, BOTTOM AND TOP SLAB TO BE REINFORCED THROUGHOUT. ADDITIONAL DIAGONAL REINFORCING TOP AND BOTTOM IS REQUIRED AROUND ACCESS OPENINGS. ALL REBAR SHALL HAVE A 3" MINIMUM COVER TO FACE OF CONCRETE.
- THICKNESS OF WALLS, BOTTOM AND TOP SLAB TO BE DETERMINED FROM STRUCTURAL LOADING REQUIREMENTS BY ARCHITECT/ENGINEER. CAST-IN-PLACE BOTTOM SLAB SHALL NOT BE LESS THAN 4" THICK.
- INLET AND OUTLET PIPE SIZES SHALL BE DETERMINED BY ARCHITECT/ENGINEER BUT SHALL NOT BE LESS THAN 4" DIAMETER (OUTLET PIPE INVERT TO BE 2" LOWER THAN INLET).
- REINFORCED CONCRETE BOTTOM SLAB SHOWN, (MAY BE INTEGRALLY CAST WITH PRE-CAST WALL SECTIONS AT CONTRACTOR'S OPTION).
- ALL JOINTS IN PRE-CAST SECTIONS TO BE SEALED WITH FLEXIBLE PLASTIC JOINT SEALING COMPOUND TO FED. SPEC. S-55-02210 (EXCEPT TOP SLAB).
- VENT PIPE MATERIALS AND LOCATION SHALL BE IN ACCORDANCE WITH THE PLUMBING CODE.
- ROUND OR CIRCULAR GREASE INTERCEPTOR WILL REQUIRE SPECIAL DESIGN AND APPROVAL.
- PRE-CAST CONCRETE SHAPES ARE SHOWN. CAST-IN-PLACE CONCRETE STRUCTURE IS OPTIONAL.
- PRE-CAST REINFORCED CONCRETE SECTIONS SHALL BE IN ACCORDANCE WITH ASTM-C-478.
- DESIGN CRITERIA: (MINIMUM)
UNIT WEIGHT OF "SOIL" 120 PCF
EQUIVALENT FLUID PRESSURE 30 PCF
UNLOADS (IF APPLICABLE) HASTO H=20
CONCRETE STRENGTH (F'c) (TYPE II CEMENT) 4000 PSI
TOP SLAB MAY BE ONE PIECE OF MULTIPLE SEGMENT CONSTRUCTION AT CONTRACTOR'S OPTION.
- SUPPORT BRACKETS AND CLEAN-OUT PLUGS SHALL BE BRASS.
- OTHER VARIOUS COMBINATIONS OF TANK DIMENSIONS MAY BE SUBMITTED FOR APPROVAL, PROVIDED THAT ANY ALTERNATE DESIGN SHALL HAVE THE SAME BASIC PROPORTIONAL DIMENSIONS, COMPARABLE VOLUMES AND FUNCTIONAL CAPABILITIES AS THESE STANDARD DETAILS.
- DRAWINGS ARE NOT TO SCALE.
- REFER TO LITTLETON/ENGLEWOOD WASTEWATER TREATMENT PLANT FATS, OILS, AND GREASE POLICY FOR GREASE INTERCEPTOR SIZING.

Cottonwood
Water & Sanitation District

GREASE INTERCEPTOR

ISSUED: 07-2013
REVISED: 07-2022
DWG: **S-27**

NTS

NOTES:

- DOMESTIC SERVICE LINE TO BE INSTALLED A MINIMUM OF 18" AND A MAXIMUM OF 36" ABOVE FLOOR SLAB.
- PROVIDE A MINIMUM OF 12" SEPARATION FROM WALL WITH 24" CLEAR SPACE IN FRONT OF DEVICE.
- MINIMUM AIR GAP REQUIRED TO MEET LOCAL CODE AND HEALTH STANDARDS. DIRECT DISCHARGE TO FLOOR DRAIN.
- CONTRACTOR TO SUBMIT OUT SHEETS FOR ALL MATERIALS TO THE WATER DISTRICT FOR APPROVAL PRIOR TO INSTALLATION. ALL MATERIALS MUST MEET HEALTH DEPT AND FIRE PROTECTION DISTRICT REQUIREMENTS.
- CONTACT WATER DISTRICT @ 303-646-8457 FOR METER INSPECTION.
- TO BE INSTALLED IN MECHANICAL ROOM WITH TEMPERATURE CONTROL DEVICE AND EXTERNAL DOOR ACCESS.
- KEYED FOR FFD AND WATER DISTRICT (NOX BVD).
- ALL PIPE, FITTINGS, AND APPURTENANCES MUST MEET LEAD-FREE REQUIREMENTS.

Cottonwood
Water & Sanitation District

FIRE LINE & DOMESTIC WATER SERVICE

ISSUED: 10-2020
REVISED: 07-2022
DWG: **W-30**

NOTES:

- THIS STANDARD APPLIES ONLY FOR NON-PRESSURIZED SANITARY SERVICE TAPS AND SANITARY SEWERS EIGHT (8) INCH AND SMALLER. SANITARY SEWERS MAY NOT BE CUT WITHOUT THE EXPRESSED CONSENT OF THE DISTRICT. A DISTRICT REPRESENTATIVE WILL BE ON SITE DURING CONSTRUCTION.
- DUCTILE IRON PIPE USED TO REPLACE SECTION OF SANITARY SEWER SHALL BE PLACED IN A TRENCH, BEDDED, BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE DISTRICT SPECIFICATIONS.

Cottonwood
Water & Sanitation District

SEWER CROSSING

ISSUED: 01-2015
REVISED: 07-2022
DWG: **W-19**

MAIN EXTENSION

EXISTING MAIN

LEGEND:

- EXIST MAIN
- TAPPING SLEEVE
- TAPPING VALVE PLG X M
- DI PIPE FULLY RESTRAINED
- M OI, 2" FROM PL
- CONC KICKBLOCK
- M ANCHORING TEE
- POLYETHYLENE WRAPPED

Cottonwood
Water & Sanitation District

3" AND LARGER DOMESTIC AND FIRELINE CONNECTION

ISSUED: 10-2014
REVISED: 07-2022
DWG: **W-37**

MECHANICAL JOINT RESTRAINT

DIMENSIONS

NOMINAL PIPE SIZE	NO. OF BOLTS	NO. OF WEDGES	K2 INCHES	J INCHES	F INCHES	M INCHES
4"	2	2	9.13	7.50	4.90	0.50
6"	6	3	11.13	9.50	7.00	0.50
8"	6	4	13.36	11.75	9.15	0.62
10"	8	6	15.63	14.00	11.20	0.62
12"	8	8	17.88	16.25	13.30	0.75
4"	4	2	9.12	7.50	4.90	0.75
6"	6	3	11.12	9.50	7.00	0.88
8"	6	4	13.37	11.75	9.15	1.00
10"	8	6	15.62	14.00	11.20	1.00
12"	8	8	17.88	16.25	13.30	1.25

NOTES:

- USE EBAA IRON "MEGALUG", SERIES 1100 (D.I.P.), SERIES 2000PVC (P.V.C.) OR APPROVED EQUAL.
- IF ENCASED IN CONCRETE, POLYETHYLENE WRAP MUST BE USED TO PREVENT CONCRETE INTRUSION INTO WEDGE PACKET.

Cottonwood
Water & Sanitation District

MECHANICAL JOINT RESTRAINT

ISSUED: 01-2015
REVISED: 07-2022
DWG: **W-23**