

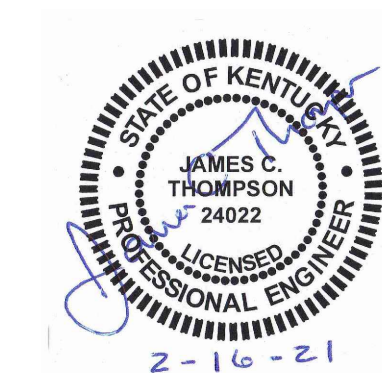
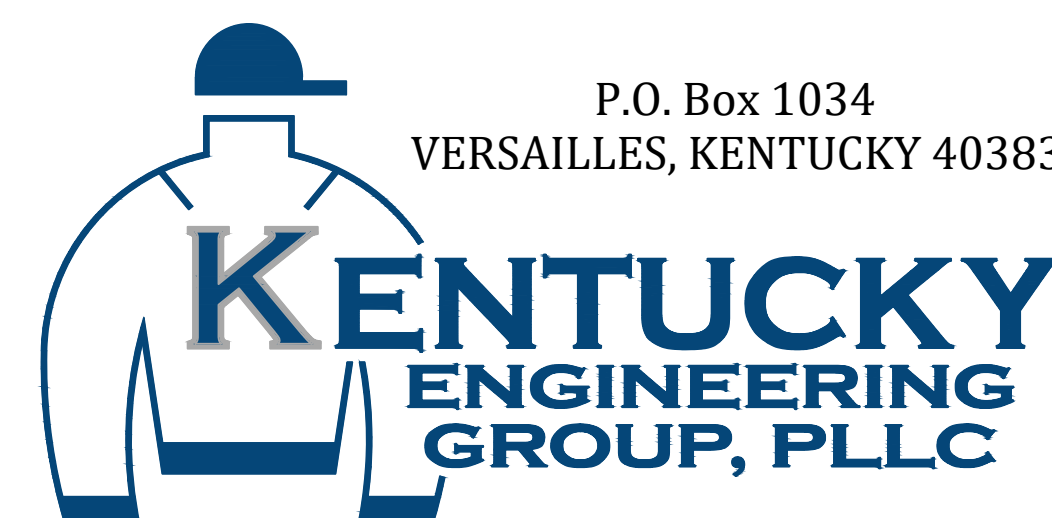
Contract No. 4
**SALT RIVER PUMP STATION
EAST - WEST
INTERCONNECT PROJECT - PHASE II**
for the
GRAYSON COUNTY WATER DISTRICT
Leitchfield, Kentucky

BOARD MEMBERS:

JOHN TOMES - CHAIRMAN
KIRBY JOHNSON - VICE-CHAIRMAN
KENNETH SHARP - SECRETARY
NANCY CAIN - TREASURER
MICHAEL KIPPER - COMMISSIONER
KEVIN SHAW - DISTRICT MANAGER

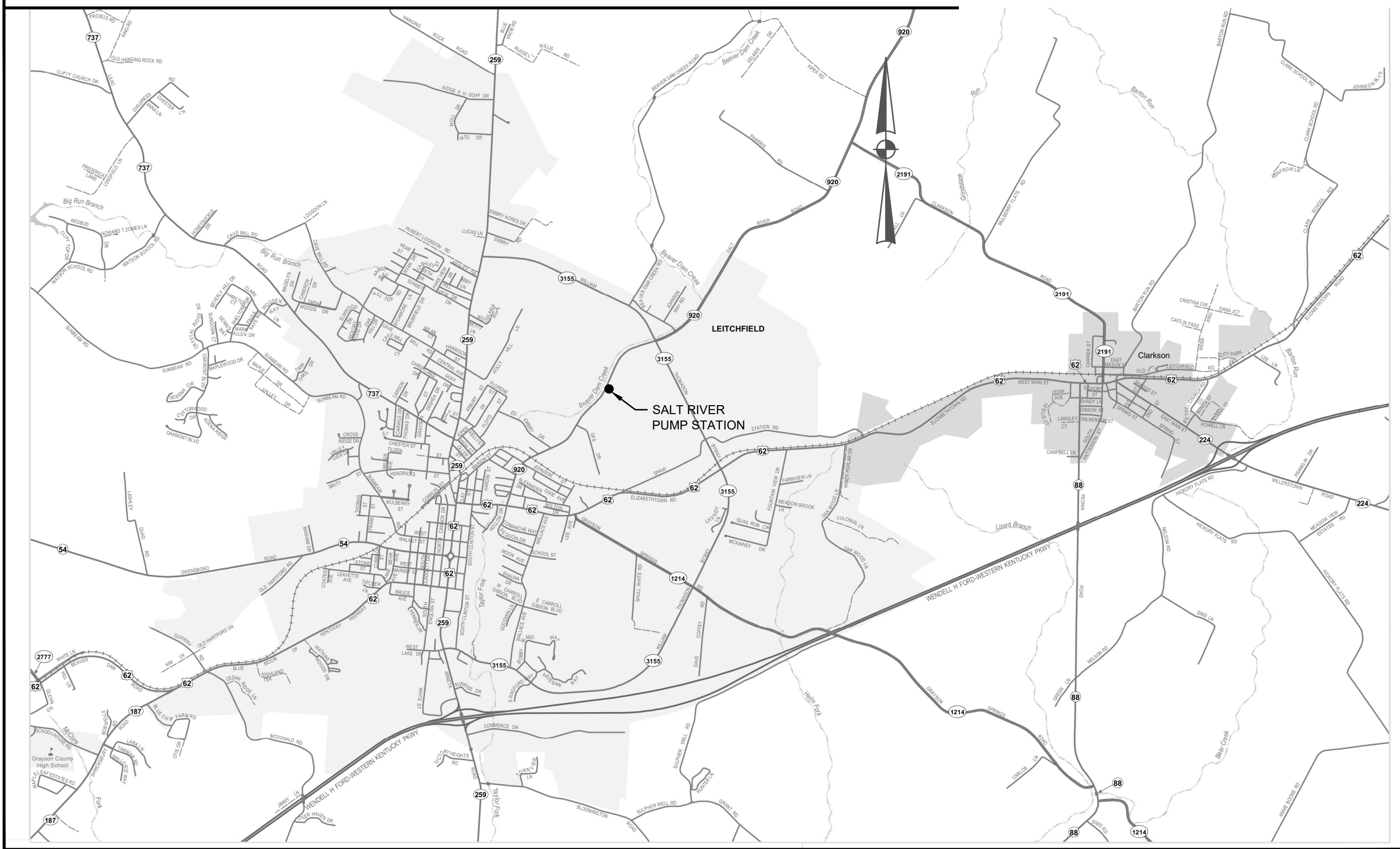
MARCH 2021

PROJECT NO. 19019



BID DOCUMENTS

PROJECT LOCATION MAP



CITY OF LEITCHFIELD

NOT TO SCALE

LEGEND

EXISTING	PROPOSED	DESCRIPTION
PVC	PVC	POLYVINYL CHLORIDE
DIP	DIP	DUCTILE IRON PIPE
WM	WM	WATER MAIN
⊕	⬆	HYDRANT ASSEMBLY
⊕	⬆	FLUSHING/BLOWOFF ASSEMBLY
△	▲	AIR RELEASE VALVE (ARV)
⊗	⊗	GATE VALVE (GV)
---	---	WATER MAIN (WM)
---	---	SPECIAL CROSSING OR CASING PIPE
---	---	WATER MAIN TO BE ABANDONED
R/W	R/W	RIGHT-OF-WAY LINE
---	---	CENTERLINE
---	---	PROPERTY LINE
⊙	---	CUSTOMER SERVICE METER
---	---	EDGE OF PAVEMENT (WHITE LINE)
	←	X' E.O.P.

UTILITIES

BUD - Before You Dig
1-800-752-6007
or DIAL 811

NOTE:
 IN ACCORDANCE WITH KENTUCKY STATE LAW, ANY ACTIVITY THAT RESULTS IN MOVEMENT, PLACEMENT, BORING, PROBING OR DIGGING IN OR ON THE GROUND SHALL CONTACT THE ONE CALL CENTER FOR UNDERGROUND UTILITY LOCATIONS.

GRAYSON COUNTY WATER DISTRICT
 KEVIN SHAW, MANAGER

(270) 259-2917

INDEX OF DRAWINGS

SHT. NO.	DESCRIPTION:
--	COVER
G-1	LOCATION MAP, LEGEND, UTILITY OWNERS and INDEX OF DRAWINGS
G-2	GENERAL NOTES
C-1	SALT RIVER PUMP STATION SITE PLANS
C-2	SALT RIVER PUMP STATION PLAN, SECTION, & DETAILS
SD-1	STANDARD DETAILS
SD-2	STANDARD DETAILS

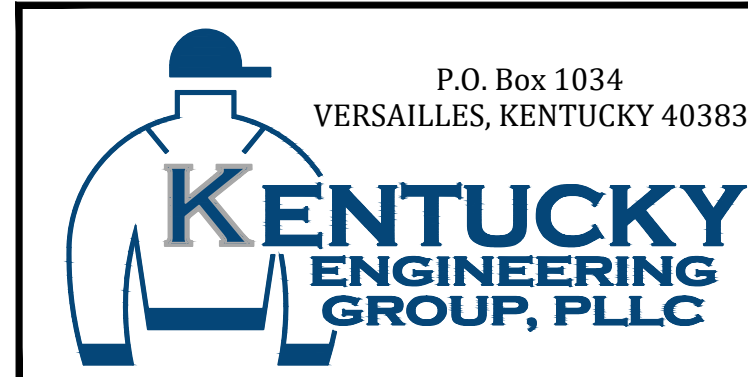
P:\PROJECTS\Grayson County Water District\19019-East-West Interconnect PH 2-Contract 4-Salt River PS\DWG\19019-01.dwg REG: 2/23/21

IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM KENTUCKY ENGINEERING GROUP, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE DRAWING OR TITLE BLOCK TO DETERMINE THE ACTUAL SCALE.

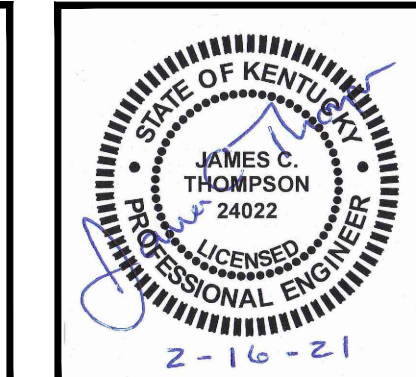
NO.	DATE	REVISIONS	BY

DATE:	MARCH 2021
PROJECT MGR:	RET
DRAWN BY:	JAB
CHECKED BY:	JCT
SCALE:	AS NOTED
2021 © Kentucky Engineering Group, PLLC	



GRAYSON COUNTY WATER DISTRICT
 SALT RIVER PUMP STATION
 EAST - WEST
 INTERCONNECT PROJECT - PHASE II

PROJECT LOCATION MAP,
 UTILITIES,
 LEGEND and INDEX OF
 DRAWINGS



PROJECT NO.	19019
SHEET NO.	G-1

BID DOCUMENTS

WATER MAIN NOTES

- CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AND THE ENGINEER TWO WORKING DAYS (MINIMUM) BEFORE BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF TRAFFIC IN ACCORDANCE WITH CITY, COUNTY AND STATE REQUIREMENTS.
- THE CONTRACTOR SHALL MAINTAIN A CURRENT SET OF CONSTRUCTION PLANS ON THE JOB SITE DURING ALL PHASES OF CONSTRUCTION.
- EXISTING UTILITIES, ESPECIALLY GAS LINES AND OIL LINES, MAY BE CATHODICALLY PROTECTED. THEREFORE, DUCTILE IRON PIPE, FITTINGS, GATE VALVES, AND/OR BOXES LAID WITHIN 100' OF LINES WITH CATHODIC PROTECTION SHALL BE WRAPPED IN POLYETHYLENE ENCASUREMENT. MATERIALS AND INSTALLATION SHALL MEET THE REQUIREMENTS OF AWWA'S LATEST REVISION.
- ALL CONSTRUCTION AND INSTALLATION OF MATERIALS BEING USED SHALL BE IN CONFORMANCE WITH THE PLANS AND SPECIFICATIONS. SUBSTITUTIONS AND DEVIATION SHALL BE PERMITTED ONLY WHEN WRITTEN APPROVAL HAS BEEN ISSUED BY THE ENGINEER.
- SHOP DRAWINGS OF ALL MATERIALS BEING USED SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
- EXISTING UTILITIES HAVE NOT BEEN SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH A REPRESENTATIVE WHEN WORKING NEAR EXISTING UTILITIES.
- THE CONTRACTOR SHALL PROTECT ALL UTILITIES AND OTHER IMPROVEMENTS SHOWN ON THESE PLANS AND ALL OTHER UTILITIES AND OTHER IMPROVEMENTS NOT SHOWN. THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR REPAIRS OF UTILITIES AND OTHER IMPROVEMENTS DAMAGED DURING CONSTRUCTION.
- UNLESS OTHERWISE NOTED, A SEPARATE BID ITEM HAS NOT BEEN ESTABLISHED FOR FITTINGS. THE FITTINGS INCLUDED BUT NOT LIMITED TO ARE: TEES, BENDS, PLUGS, REDUCERS, CROSSES, COUPLINGS, ETC. CONTRACTORS SHALL INCLUDE THE COST OF THESE ITEMS IN THE BID PRICE FOR THE PIPE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE TEMPORARY REMOVAL/RELOCATION OF TRAILERS, BUILDINGS, FENCES, TREES, SHRUBS, ETC. AND REPLACEMENT OF SAID ITEMS AFTER CONSTRUCTION ACTIVITIES.
- CONTRACTOR IS TO COORDINATE WITH THE PROPERTY OWNERS AS TO WHETHER OR NOT TEMPORARY FENCING IS REQUIRED AND CONSTRUCT IF NECESSARY.
- ALL PIPING SHALL HAVE 36" MINIMUM COVER.
- WHERE UNSTABLE MATERIAL IS ENCOUNTERED OR WHERE THE DEPTH OF EXCAVATION IN EARTH EXCEEDS FIVE (5) FEET, THE SIDES OF THE TRENCH OR EXCAVATION SHALL BE SUPPORTED BY SUBSTANTIAL SHEETING, BRACING, SHORING OR THE TRENCH SIDES SLOPED. SLOPING THE SIDES OF THE DITCH WILL NOT BE PERMITTED IN STREETS, ROADS, NARROW RIGHTS-OF-WAY OR OTHER CONSTRICTED AREAS UNLESS OTHERWISE SPECIFIED. THE STANDARDS OF THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT AND THE KENTUCKY LABOR CABINET SHALL BE FOLLOWED.
- ALL EXCAVATION IS UNCLASSIFIED. COMPENSATION FOR ALL EXCAVATION SHALL BE INCLUDED IN LUMP SUM BID.
- REGRADE OF SITE SHALL BE SUCH THAT DRAINAGE IS AWAY FROM ALL STRUCTURES.
- BACKFILL AROUND ALL STRUCTURES SHALL BE SUFFICIENTLY COMPACTED TO PRECLUDE SETTLEMENT AND PONDING OF WATER AROUND STRUCTURES AND GRADED TO DIVERT RUNOFF AWAY FROM THE STRUCTURES.
- DIMENSIONS, DETAILS AND REINFORCEMENT MAY VARY WITH MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL OBTAIN AND MAINTAIN ON SITE, APPROVED SHOP DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.
- ALL VALVES & HYDRANTS SHALL BE LOCATED AT THE BACKSIDE OF THE DITCHLINE.
- FINAL LOCATION OF SERVICES, VALVES, & HYDRANT ORIENTATION ARE TO BE FIELD LOCATED DURING CONSTRUCTION & APPROVED BY THE ENGINEER.
- AT THE CONTRACTORS OPTION, CLASS 350 DUCTILE IRON PIPE MAY BE SUBSTITUTED FOR ANY PIPE PARTICULARLY SPECIFIED, BUT AT NO ADDITIONAL COST TO THE OWNER.
- NO PAY ITEM FOR EXTRA TRENCH DEPTH HAS BEEN SET UP. CONTRACTOR SHALL INCLUDE THE COST OF THE ADDITIONAL DEPTH IN HIS BID PRICE.
- ROCK SOUNDINGS WERE NOT PERFORMED BY THE ENGINEER, THE CONTRACTOR SHALL TAKE APPROPRIATE ACTION TO DETERMINE SUBSURFACE CONDITIONS.
- CONTRACTOR SHALL NOT USE TRENCHING FOR EXCAVATION UNLESS APPROVED BY THE ENGINEER AND OWNER. IF TRENCHING IS APPROVED THE FINAL TRENCH SHALL HAVE A MINIMUM OF 6 INCHES ON EACH SIDE OF THE WATER MAIN BEING INSTALLED.
- CONTRACTOR TO DIG/EXPOSE EXISTING WATER MAIN AT A MINIMUM OF 40' INTERVALS AHEAD OF NEW WATER MAIN CONSTRUCTION TO AVOID DAMAGE TO EXISTING WATER MAIN AND/OR INTERRUPTION OF EXISTING CUSTOMER SERVICES.
- THE MAXIMUM ALLOWABLE LENGTH OF SERVICE LINE FROM THE WATER MAIN TO THE CUSTOMER'S METER SERVICE SHALL BE AS FOLLOWS:

<u>SERVICE LINE DIAMETER</u>	<u>MAXIMUM LENGTH</u>
3/4 INCH	125 FEET
1 INCH	150 FEET
1-1/2 INCH	200 FEET
2 INCH	250 FEET

- CONNECTIONS TO EXISTING DISTRIBUTION SYSTEM SHALL BE MADE AS FOLLOWS:
 - CONNECT TO EXISTING (SIZE) W.M. (WET TAP) - CONTRACTOR SHALL PROVIDE, FURNISH AND INSTALL ALL FITTINGS, VALVES AND APPURTENANCES TO CONNECT THE PROPOSED WATER MAIN TO THE EXISTING WATER MAIN UNDER PRESSURE.
 - CONNECT TO EXISTING (SIZE) W.M. - CONTRACTOR SHALL PROVIDE, FURNISH AND INSTALL ALL FITTINGS AND APPURTENANCES TO CONNECT THE PROPOSED WATER MAIN TO THE EXISTING WATER MAIN. VALVES ARE A SEPARATE PAY ITEM.

FINAL CLEANUP AND RESTORATION

UNLESS SPECIFICALLY APPROVED BY THE OWNER AND ENGINEER, CLEANUP OF DISTURBED AREAS SHALL BE KEPT CURRENT WITH CONSTRUCTION AND RESTORATION EFFORTS BY THE CONTRACTOR INITIATED NO LONGER THAN SEVEN (7) DAYS AFTER THE TRENCH EXCAVATION WORK HAS STARTED. ALL EXCAVATED MATERIAL NOT REQUIRED FOR BACKFILLING OF THE TRENCH AND ANY LARGE ROCKS, STONES OR DEBRIS SHALL BE REMOVED FROM THE SITE, AND SHALL NOT BE A BURDEN TO THE PROPERTY OWNER(S) AND/OR ADJACENT PROPERTIES. THE CONTRACTOR MAY WINDROW OR TRACK-IN THE EXCAVATED MATERIAL OVER THE TRENCH PRIOR TO FINAL CLEANUP TO ALLOW FOR AND TO ASSIST IN THE INITIAL SETTLEMENT OF THE TRENCH. ALL DISTURBED AREAS MUST BE SEEDED AT LEAST WITH A TEMPORARY SEED MIX IF FOR SOME REASON THE AREA CANNOT BE PERMANENTLY SEEDED WITHIN TWO (2) WEEKS.

GENERAL NOTES

- GENERAL PROJECT REQUIREMENTS - IN THE EVENT OF A CONFLICT BETWEEN ANY PORTION OF THE CONTRACT DOCUMENTS, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.
- PROJECT COMMUNICATIONS / INSPECTION - THE ENGINEER SHALL BE THE CONTRACTOR'S DESIGNATED SITE REPRESENTATIVE. ALL COMMUNICATION FROM THE CONTRACTOR AND TO THE CONTRACTOR, SHALL BE THROUGH THE ENGINEER.
- SAFETY - THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR SHALL SELECT THE MEANS, METHODS, SEQUENCES, AND TECHNIQUES OF CONSTRUCTION HE DEEMS APPROPRIATE FOR ACCOMPLISHING THE WORK IN A SAFE MANNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO PERSONS AND PROPERTY RESULTING FROM HIS ACTIVITIES.
- EMERGENCY SHUTOFF - THE CONTRACTOR SHALL LOCATE EXISTING WATER AND GAS VALVES PRIOR TO STARTING WORK SO THAT IN THE EVENT OF AN EMERGENCY THE UTILITY SERVICE MAY BE QUICKLY SHUT OFF.
- EASEMENTS AND RIGHT-OF-WAY - THE OWNER IS RESPONSIBLE FOR THE PROCUREMENT OF ALL PERMANENT EASEMENTS NECESSARY OR REQUIRED FOR THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY EASEMENTS FOR HIS STAGING AREAS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBSERVE THE CONDITIONS OF THESE AGREEMENTS AND CONFINE HIS ACTIVITIES TO THE LIMITS OF THE EASEMENTS. CONTRACTOR TO OBTAIN COPIES OF EASEMENTS OBTAINED BY OWNER AND ABIDE BY THE CONDITIONS OF THESE EASEMENTS DURING CONSTRUCTION.
- EXCAVATION - IT SHALL BE DISTINCTLY UNDERSTOOD THAT ANY REFERENCE TO ROCK, EARTH, OR ANY OTHER MATERIALS ON THE PLANS WHETHER IN NUMBERS, WORDS, LETTERS, OR LINES, IS SOLELY FOR THE OWNER'S INFORMATION AND SHALL NOT BE TAKEN AS AN INDICATION OF CLASSIFIED EXCAVATION OR THE QUANTITY OF EITHER ROCK, EARTH OR ANY OTHER MATERIAL INVOLVED. THE BIDDER MUST DRAW HIS OWN CONCLUSIONS AS TO THE CONDITIONS TO BE ENCOUNTERED. THE CONTRACTOR SHALL PERFORM ALL EXCAVATION NECESSARY OR REQUIRED FOR COMPLETION OF THE PROJECT. THIS WORK SHALL INCLUDE THE REMOVAL AND PROPER DISPOSAL OF ALL MATERIALS OF WHATEVER NATURE ENCOUNTERED. EXCAVATION FOR UTILITIES SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE WORK AND SHALL NOT BE MEASURED FOR PAYMENT.
- TOTAL SITE RESPONSIBILITY - IN OCCUPYING THE SITE AND COMMENCING WORK IN ACCORDANCE WITH THE NOTICE TO PROCEED, THE CONTRACTOR ASSUMES TOTAL AND COMPLETE RESPONSIBILITY FOR THE WORK UNTIL FINAL PAYMENT AND RELEASE OF CLAIMS. ANY PORTION OF THE WORK DAMAGED IN THIS TIME PERIOD BY ACTS OF GOD, OR THE PUBLIC ENEMY, ACTS OF THE OWNER, ACTS OF OTHER CONTRACTORS, FIRES, FLOODS, EPIDEMICS, QUARANTINE, STRIKES, FREIGHT EMBARGOS, VANDALISM AND ABNORMAL WEATHER SHALL BE CORRECTED, REPAIRED, OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- ACCESS TO WORK - THE ENGINEER, HIS REPRESENTATIVES, AND REPRESENTATIVES OF THE OWNER SHALL HAVE FULL ACCESS TO THE WORK AT ALL TIMES.
- BLASTING - NO BLASTING SHALL BE ALLOWED ON THIS PROJECT.
- BURNING - BURNING SHALL CONFORM TO ALL APPLICABLE LOCAL, STATE, AND FEDERAL ORDINANCES.
- WASTE AREAS - THE CONTRACTOR WILL NECESSARILY GENERATE WASTE MATERIALS IN THE FORM OF BRUSH CLIPPINGS, OVERSIZE BOULDERS, MUCK, ETC. THE CONTRACTOR SHALL SUBMIT A WRITTEN PLAN DETAILING THE MANNER IN WHICH WASTE MATERIALS WILL BE HANDLED. THE CONTRACTOR SHALL STRICTLY COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS PERTAINING TO THE DISPOSITION OF CONSTRUCTION RELATED WASTE PRODUCTS. IN NO EVENT SHALL WASTE MATERIALS BE PLACED IN A REGULATORY FLOODWAY (OR FLOODPLAIN) WITHOUT A DOW PERMIT TO CONSTRUCT ALONG OR ACROSS A STREAM. OWNER WILL NOT ASSUME RESPONSIBILITY FOR WASTE AREAS.
- SILT CONTROL - THE CONTRACTOR SHALL CONDUCT HIS WORK IN AN ENVIRONMENTALLY SOUND MANNER AND SHALL UTILIZE "BEST MANAGEMENT PRACTICES" TO MINIMIZE EROSION. THE CONTRACTOR SHALL HOLD HARMLESS THE OWNER FROM ANY VIOLATIONS ASSOCIATED WITH THE CLEAN WATER ACT.
- DRAINAGE - CONTRACTOR SHALL MAINTAIN DRAINAGE WORK AREAS DURING ALL PHASES OF CONSTRUCTION. THE OWNER MAY DIRECT THE CONTRACTOR TO CONSTRUCT DITCHES OR BERMS TO ALLEVIATE SITE DRAINAGE PROBLEMS. CONSTRUCTION AND MAINTENANCE OF MINOR DRAINAGE WORKS SHALL BE CONSIDERED AN INTEGRAL PART OF THE OVERALL ACCOMPLISHMENTS OF THE PROJECT AND SHALL NOT BE MEASURED FOR SEPARATE PAYMENT.
- ADHERENCE TO PERMITS - PERMITS REQUIRED BY THE OWNER ARE:
 - DIVISION OF WATER CONSTRUCTION PERMIT FOR WATER LINE EXTENSIONS.
 - DEPARTMENT OF HIGHWAYS ENCROACHMENT PERMIT.

THE CONTRACTOR SHALL CONDUCT HIS ACTIVITIES IN STRICT ACCORDANCE WITH THESE PERMITS AT ALL TIMES. IN PARTICULAR, THE CONTRACTOR SHALL STRICTLY OBSERVE THE 401 WATER QUALITIES CERTIFICATION KEY REQUIREMENTS OF THE 401 CERTIFICATION WHICH INCLUDE:

- RE-VEGETATION AND CLEANUP OF AREA ADJACENT TO STREAMS SHALL OCCUR CONCURRENTLY WITH THE PROGRESS OF THE WORK. CONCURRENTLY IS HEREIN DEFINED TO MEAN THAT RE-VEGETATION AND CLEANUP.
 - BEST MANAGEMENT PRACTICES SHALL BE EMPLOYED. TO MINIMIZE SEDIMENT RUNOFF AND SOIL EROSION TO THE WATER COURSE.
 - EXTREME CARE SHALL BE TAKEN TO PREVENT SPILLS OF FUELS AND LUBRICANT INTO WATERCOURSES. EQUIPMENT WORKS FROM THE STREAM BANK.
- EXISTING UTILITIES AND UNDERGROUND FACILITIES - THE CONTRACTOR'S ATTENTION IS CALLED TO THE PRESENCE OF EXISTING UTILITIES IN CLOSE PROXIMITY TO THE PROJECT SITE. THE CONTRACTOR IS ADVISED TO CAREFULLY REVIEW THE PROJECT REQUIREMENTS REGARDING UTILITY RELOCATIONS. THE CONTRACTOR CAN CALL 1-800-752-6007 A MINIMUM OF TWO AND NO MORE THAN TEN BUSINESS DAYS PRIOR TO EXCAVATION FOR INFORMATION ON THE LOCATION OF EXISTING UNDERGROUND UTILITIES WHICH SUBSCRIBE TO THE BEFORE-U-DIG (BUD) SERVICE. ALL UTILITY REPAIR AND RELOCATION WORK SHALL BE INCIDENTAL TO OTHER ITEMS OF WORK. THE EXISTING CONTRACTOR MUST MAKE DILIGENT EFFORT TO MAINTAIN THE SERVICE OF EXISTING UTILITIES. THE CONTRACTOR SHALL PROVIDE BY-PASS PUMPING OF WASTEWATER TO THE NEAREST PUBLIC SANITARY SEWER WHENEVER HIS ACTIVITIES INTERRUPT THE FLOW OF AN EXISTING SANITARY WASTEWATER DISPOSAL FACILITY (SEWER, SEPTIC TANK, LEACH FIELD, ETC.) BY-PASS PUMPING SHALL BE CONSIDERED AN INCIDENTAL PART OF THE PIPE LAYING ACTIVITY AND SHALL NOT BE MEASURED FOR SEPARATE PAYMENT.

GENERAL NOTES (continued)

- REPLACEMENT OF EXISTING FACILITIES - THE CONTRACTOR SHALL REPLACE EXISTING ENTRANCE PIPES, RETAINING WALLS, CATCH BASINS, FENCES AND OTHER PROPERTY IMPROVEMENTS, DITCHES, ETC., THAT ARE DAMAGED BY CONSTRUCTION UNLESS SAID FACILITIES ARE SPECIFICALLY SHOWN TO BE REMOVED. IN PARTICULAR, ALL DRAINAGE DITCHES SHALL BE RESTORED TO A CONDITION EQUAL OR BETTER THAN THAT WHICH EXISTED PRIOR TO CONSTRUCTION. UNLESS SAID FACILITY REPLACEMENT IS IDENTIFIED AS A PAY ITEM IN THE DESIGN DRAWINGS OR TECHNICAL SPECIFICATIONS, THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE COST OF LAYING PIPE AND SHALL NOT BE MEASURED FOR PAYMENT
- DAMAGE TO GUARDRAILS, SIGNS, FENCES, STORM DRAINS, ETC. - ALL GUARDRAIL, SIGNS, FENCES, STORM DRAINS, ETC., DAMAGED AS A RESULT OF THE CONSTRUCTION SHALL BE RESTORED IN LIKE KIND AND CHARACTER TO THE SATISFACTION OF THE OWNER. UNLESS SAID REPLACEMENT IS IDENTIFIED AS A PAY ITEM IN THE DESIGN DRAWINGS OR TECHNICAL SPECIFICATIONS, THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE COST OF LAYING PIPE AND SHALL NOT BE MEASURED FOR PAYMENT.
- STREAM CROSSING - THE LAST EIGHTEEN (18) INCHES OF BACKFILL IN ALL STREAM BEDS SHALL CONSIST OF KENTUCKY DEPARTMENT OF HIGHWAY CHANNEL LINING CLASS III.
- THRUST BLOCKS - CONCRETE THRUST BLOCKS OR 'KICKER' BLOCKS SHALL BE INSTALLED IN ALL PRESSURIZED LINES AT INTERSECTION AND CHANGES OF DIRECTION TO RESIST FORCES ACTING UPON THE PIPELINE. THRUST BLOCKS ARE CONSIDERED INCIDENTAL TO THE PIPELINE
- ANCHORS - CONCRETE ANCHORS SHALL BE PROVIDED WHEN THE PIPE SLOPE IS TWENTY (20) PERCENT OR GREATER. ANCHORS ARE CONSIDERED INCIDENTAL TO THE PIPELINE INSTALLATION.
- SEPARATION OF WATER AND SEWER - HORIZONTAL - SEWERS SHALL BE LAID AT LEAST TEN (10) FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN. THIS DISTANCE SHALL BE MEASURED EDGE TO EDGE. IF FIELD CONDITIONS DO NOT ALLOW THIS SEPARATION, THE SEWER SHALL BE LOCATED SUCH THAT THE CROWN OF THE SEWER PIPE IS EIGHTEEN (18) INCHES BELOW THE INVERT OF THE WATER LINE. IF FIELD CONDITIONS DO NOT ALLOW THIS CONDITION TO BE MET THEN THE SEWER SHALL BE CONSTRUCTED OF MECHANICAL JOINT DUCTILE IRON PIPE (PRESSURE TESTED TO 150 PSI) AND ENCASED IN CONCRETE.
- CROSSING - SEWERS SHALL CROSS UNDER WATER MAINS WITH A MINIMUM OF EIGHTEEN (18) INCHES OF SEPARATION BETWEEN THE CROWN OF THE SEWER AND THE INVERT OF THE WATER MAIN. IF FIELD CONDITIONS ARE SUCH THAT THIS SEPARATION CAN NOT BE MAINTAINED, THE SEWER SHALL BE CONSTRUCTED OF MECHANICAL JOINT DUCTILE IRON PIPE WHICH SHALL BE PRESSURE TESTED TO 150 PSI. THE DUCTILE IRON PIPE MUST BE CENTERED ON THE CROSSING SO THAT THE JOINTS ARE AT LEAST TEN (10) FEET ON EITHER SIDE OF THE CROSSING. NO SEPARATE PAYMENT SHALL BE MADE FOR WORK TO INSURE COMPLIANCE WITH THIS SEPARATION CRITERION. MAINTENANCE OF ADEQUATE SEPARATION SHALL BE CONSIDERED AN INTEGRAL PART OF THE UNIT PRICE BID FOR SEWER PIPE.
- TESTING - THE WATER LINES SHALL BE TESTED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS IN THE PRESENCE OF THE ENGINEER AND THE OWNER.
- NOTICE - THE CONTRACTOR SHALL NOT MOVE EQUIPMENT OR MATERIAL TO THE WORK SITE, NOR BEGIN ANY CONSTRUCTION PRIOR TO THE DATE SPECIFIED IN THE 'NOTICE TO PROCEED.' THE CONTRACTOR MUST NOTIFY THE OWNER AND ENGINEER PRIOR TO OCCUPYING THE SITE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TECHNICAL SPECIFICATIONS.
- TRAFFIC CONTROL - THE CONTRACTOR'S WORK WILL DISTURB NUMEROUS PRIVATE DRIVEWAYS AND SUBSTANTIAL PORTIONS OF PUBLIC THOROUGHFARES. THE TERRAIN DOES NOT LEND ITSELF TO DETOURS. CONSEQUENTLY, THE CONTRACTOR MUST OBSERVE THE FOLLOWING TRAFFIC PRINCIPLES:
 - ACCESS TO RESIDENCE DRIVE MAY NOT BE INTERRUPTED FOR MORE THAN THREE (3) HOURS AT ANY ONE TIME
 - ACCESS TO ALL DRIVEWAYS AND PUBLIC THOROUGHFARES MUST BE RESTORED AT THE END OF EACH WORKDAY.
 - WORK WITHIN THE LIMITS OF PUBLIC THOROUGHFARE MAY ONLY BE CONDUCTED BETWEEN THE HOURS OF 8:30 A.M. AND 12:00 NOON, BETWEEN 12:30 P.M. AND 3:30 P.M., AND BETWEEN 6:00 P.M. AND 9:30 P.M. THE CONTRACTOR MUST POST SIGNS ADJACENT TO THE WORK STATING THE ROADWAY WILL BE CLOSED DURING THE POSTED HOURS AT LEAST ONE (1) DAY IN ADVANCE OF THE PROPOSED ROAD CLOSURE.
 - THE CONTRACTOR MUST MAKE SPECIAL PROVISIONS FOR ACCESS FOR EMERGENCY VEHICLES: POLICE, FIRE AND AMBULANCE.
 - THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SAFETY DEVICES IN THE FORM OF SIGNS, FLASHERS, BARRICADES, ETC. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CLAIMS ARISING FROM THE PUBLIC WITH RESPECT TO HIS TRAFFIC CONTROL ACTIVITIES.
- SEEDING - ALL DISTURBED AREAS SHALL BE SEEDED IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS.
- PROTECTION OF TREES - CARE SHALL BE TAKEN DURING CONSTRUCTION TO AVOID DAMAGE TO VEGETATION. ORNAMENTAL SHRUBBERY AND TREE BRANCHES SHALL BE TEMPORARILY TIED BACK, WHERE APPROPRIATE, TO MINIMIZE DAMAGE. TREES WHICH RECEIVE DAMAGE TO THE BRANCHES SHALL BE TRIMMED OF THOSE BRANCHES TO IMPROVE THE APPEARANCE OF THE TREE. TREE TRUNKS RECEIVING DAMAGE FROM EQUIPMENT SHALL BE TREATED WITH A TREE DRESSING.
- TREE REMOVAL IN PROJECT AREA IS RESTRICTED TO LESS THAN 4" IN DIAMETER FROM APRIL 1st TO NOVEMBER 15th UNLESS APPROVAL IS GRANTED BY U.S. FISH AND WILDLIFE.
- PROPERTY LINES AND OWNER INFORMATION _____

KYDOH NOTES

- ALL EFFECTED KYTC DITCHLINES SHALL REMAIN FREE OF EXCESS SILT OR EROSION AND CONSTRUCTED TO THE NORMAL TYPICAL SECTION OF THE ROADWAY WITH A MINIMUM DEPTH OF 18 INCHES FROM THE SHOULDER BREAK POINT.
- ALL NECESSARY STEPS SHALL BE TAKEN TO PREVENT EROSION OR SILTATION OF THE PUBLIC RIGHT-OF-WAY, ADJOINING PROPERTY AND WATERWAYS.
- ALL VALVES TO BE FLUSH W/ EXISTING GRADE.
- ALL WATER LINE LOCATED WITHIN STATE HIGHWAY R.O.W. SHALL BE CONSTRUCTED OUT AND AROUND THE END OF ALL EXISTING CULVERTS AND HEADWALLS.
- UNDERGROUND UTILITIES INSTALLED INSIDE STATE RIGHT-OF-WAY SHALL BE LOCATED WITHIN 3-5 FEET FROM THE EDGE OF THE RIGHT-OF-WAY UNLESS OTHERWISE SHOWN ON THE PLANS.
- UNDERGROUND UTILITIES SHOWN MORE THAN 5 FEET FROM THE EDGE OF THE RIGHT-OF-WAY SHALL BE INSTALLED WITH A MINIMUM DEPTH OF COVER OF 42 INCHES WITH PRIOR APPROVAL ON A CASE BY CASE BASIS.
- UNDERGROUND UTILITIES CROSSING ANY ENTRANCE OR CROSSROAD PAVED WITH CONCRETE OR ASPHALT SURFACE INSIDE STATE RIGHT-OF-WAY SHALL BE INSTALLED BY BORING UNLESS WRITTEN PERMISSION TO OPEN CUT IS OBTAINED FROM THE PROPERTY OWNER AND APPROVED BY THE KYTC DISTRICT PERMITS ENGINEER.
- UNDERGROUND UTILITIES SHALL NOT BE INSTALLED IN EMBANKMENT FILLS OR BETWEEN EDGE OF PAVEMENT AND DITCHLINE UNLESS SPECIFICALLY NOTED ON PERMITTED PLANS.
- FIRE HYDRANTS OR UTILITY SERVICE BOXES SHALL BE LOCATED WITHIN 2 FEET FROM THE EDGE OF RIGHT-OF-WAY LINE, OR OFF RIGHT-OF-WAY.
- CONTACT THE DISTRICT PERMITS ENGINEER AT KYC-DOH #4, ELIZABETHTOWN, KY AT (270) 766-5066 OR 1-800-459-3566 PRIOR TO BEGINNING WORK.

CONTAMINATION PREVENTION REQUIREMENTS

- ALL PIPING, VALVES, FITTINGS, ETC. DELIVERED TO THE JOB SITE SHALL BE STORED ELEVATED ABOVE THE GROUND AND SHALL BE COVERED WITH PLASTIC, TARPS OR SIMILAR MEANS TO PROTECT FROM EXPOSURE TO DUST AND DEBRIS.
- ALL PIPING, FITTINGS AND VALVES SHALL BE THOROUGHLY CLEANED OF DUST, DIRT AND DEPOSITS BY SWABBING OR OTHER MEANS ACCEPTABLE. EACH COMPONENT SHALL BE CLEANED ON THE SAME DAY IT IS TO BE INSTALLED.
- ALL OPENINGS IN THE PIPELINE SHALL BE CLOSED WITH AN APPROVED WATERTIGHT PLUG AT THE END OF EACH DAY WHEN PIPE LAYING HAS STOPPED, OR FOR OTHER REASONS SUCH AS REST OR MEAL BREAKS.

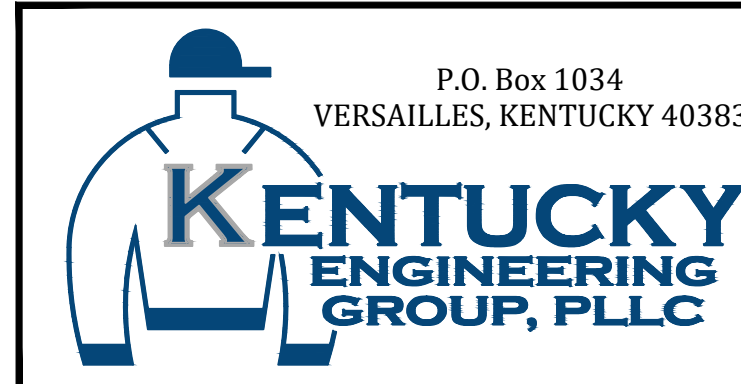
P:\PROJECTS\Grayson County Water District\19019-East-West Interconnect PH 2 -Contract 4-Salt River PS\DWG\19019-02.dwg REF: 2/23/21

IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM KENTUCKY ENGINEERING GROUP, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE DRAWING OR TITLE BLOCK TO DETERMINE THE ACTUAL SCALE.

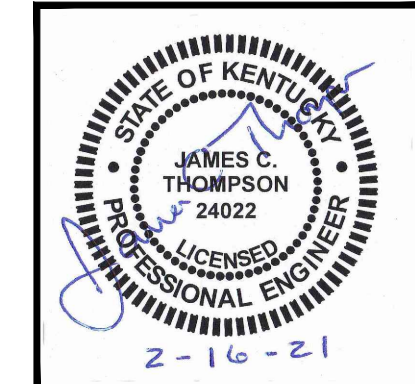
NO.	DATE	REVISIONS	BY

DATE:	MARCH 2021
PROJECT MGR:	RET
DRAWN BY:	JAB
CHECKED BY:	JCT
SCALE:	AS NOTED
2021 © Kentucky Engineering Group, PLLC	



**GRAYSON COUNTY WATER DISTRICT
SALT RIVER PUMP STATION
EAST - WEST
INTERCONNECT PROJECT - PHASE II**

GENERAL NOTES

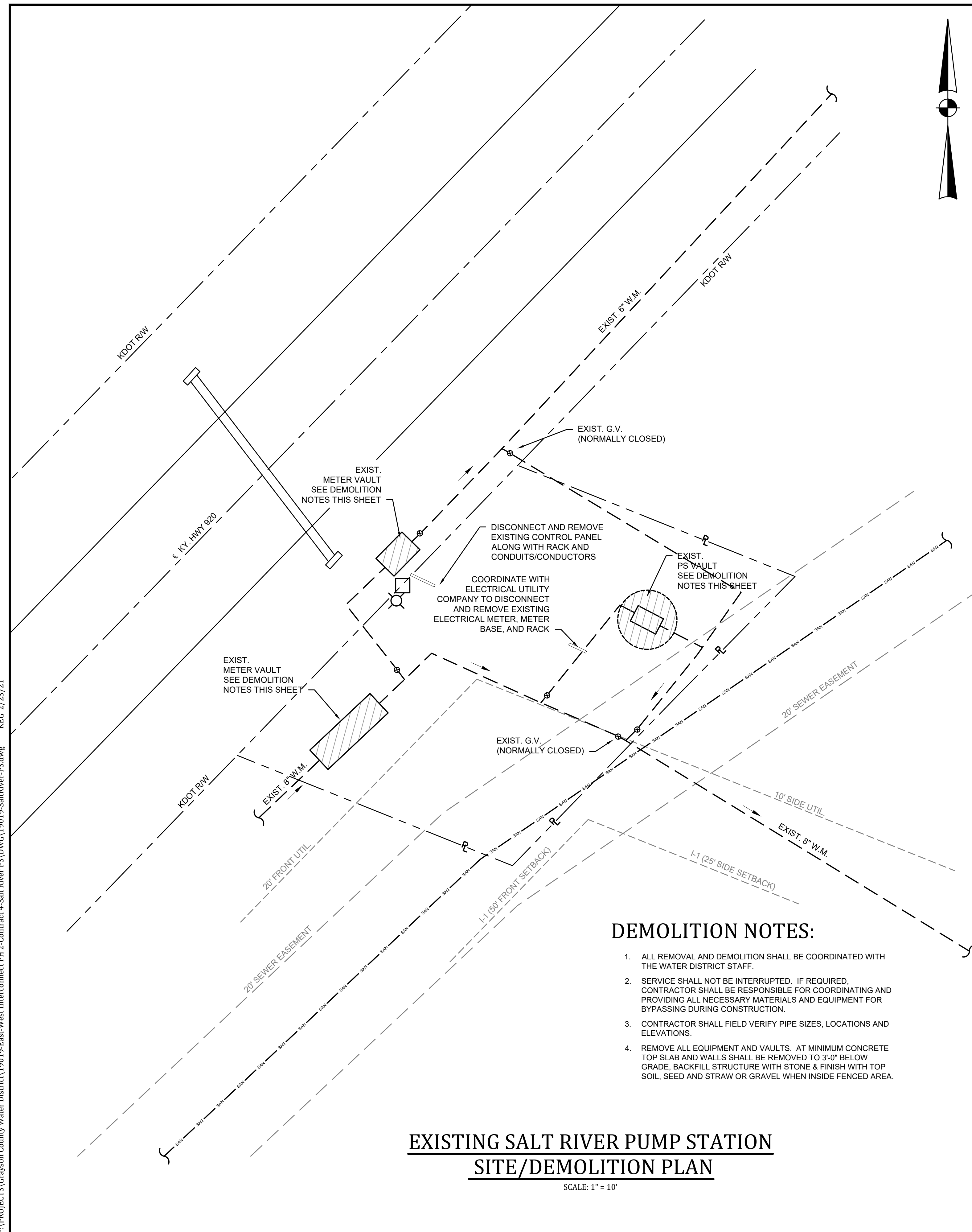


PROJECT NO.
19019

SHEET NO.
G-2

BID DOCUMENTS

P:\PROJECTS\Grayson County Water District\19019-East-West Interconnect PH 2-Contract 4-Salt River PS\DWG\19019-SaltRiver-PS.dwg REG 2/23/21

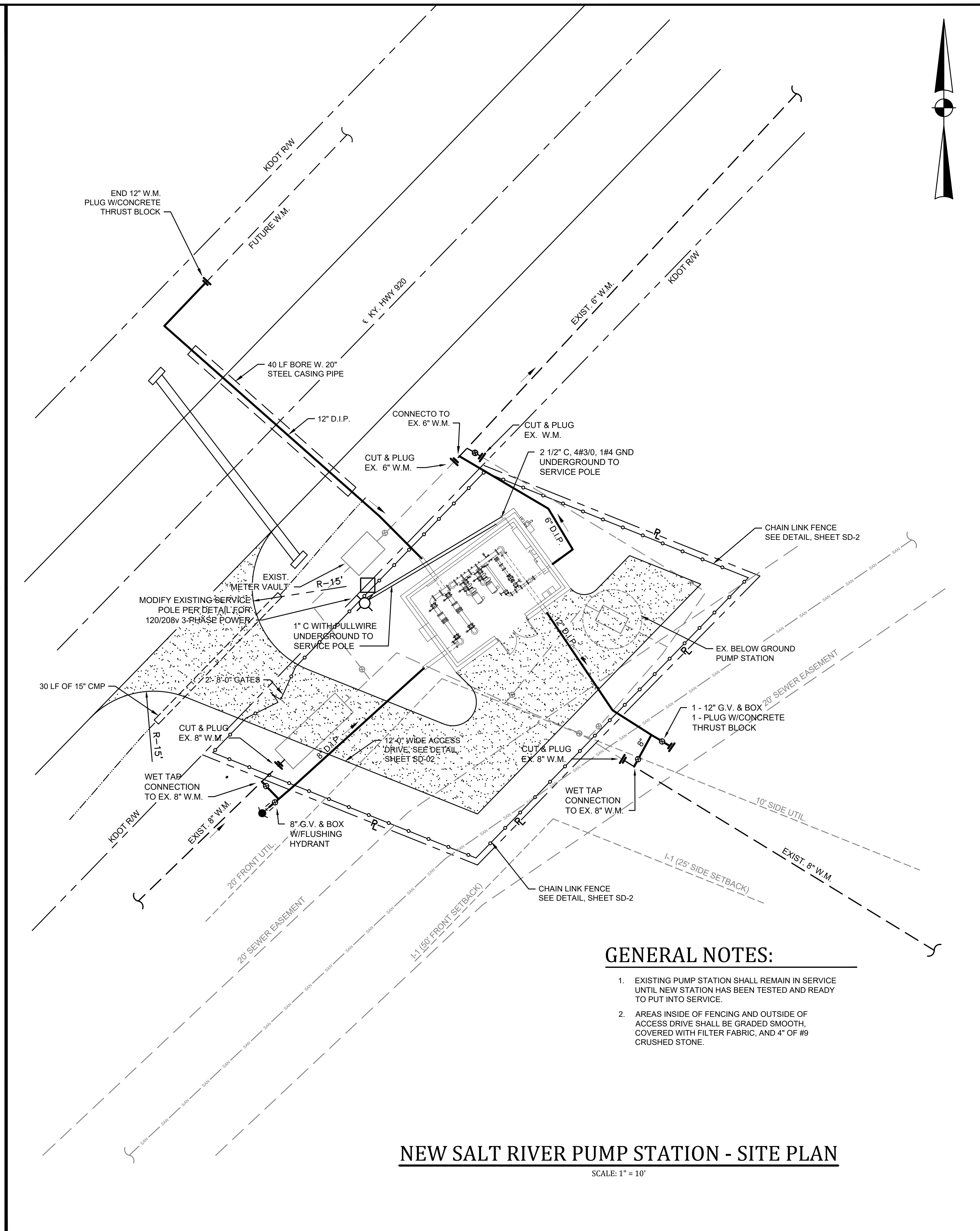


DEMOLITION NOTES:

1. ALL REMOVAL AND DEMOLITION SHALL BE COORDINATED WITH THE WATER DISTRICT STAFF.
2. SERVICE SHALL NOT BE INTERRUPTED. IF REQUIRED, CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND PROVIDING ALL NECESSARY MATERIALS AND EQUIPMENT FOR BYPASSING DURING CONSTRUCTION.
3. CONTRACTOR SHALL FIELD VERIFY PIPE SIZES, LOCATIONS AND ELEVATIONS.
4. REMOVE ALL EQUIPMENT AND VAULTS. AT MINIMUM CONCRETE TOP SLAB AND WALLS SHALL BE REMOVED TO 3'-0" BELOW GRADE. BACKFILL STRUCTURE WITH STONE & FINISH WITH TOP SOIL, SEED AND STRAW OR GRAVEL WHEN INSIDE FENCED AREA.

**EXISTING SALT RIVER PUMP STATION
SITE/DEMOLITION PLAN**

SCALE: 1" = 10'



GENERAL NOTES:

1. EXISTING PUMP STATION SHALL REMAIN IN SERVICE UNTIL NEW STATION HAS BEEN TESTED AND READY TO PUT INTO SERVICE.
2. AREAS INSIDE OF FENCING AND OUTSIDE OF ACCESS DRIVE SHALL BE GRADED SMOOTH, COVERED WITH FILTER FABRIC, AND 4" OF #9 CRUSHED STONE.

NEW SALT RIVER PUMP STATION - SITE PLAN

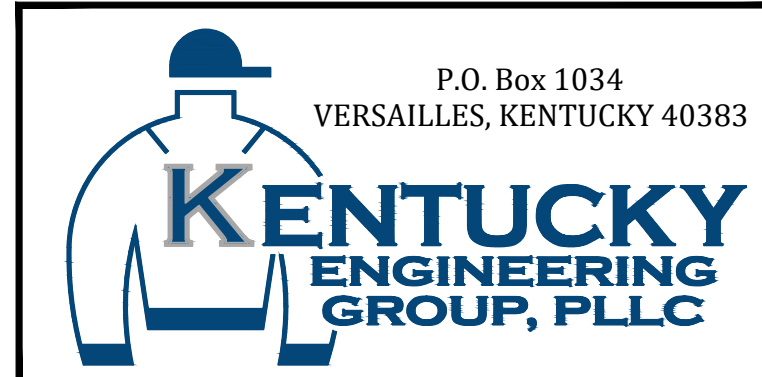
SCALE: 1" = 10'

IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM KENTUCKY ENGINEERING GROUP, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE DRAWING OR TITLE BLOCK TO DETERMINE THE ACTUAL SCALE.

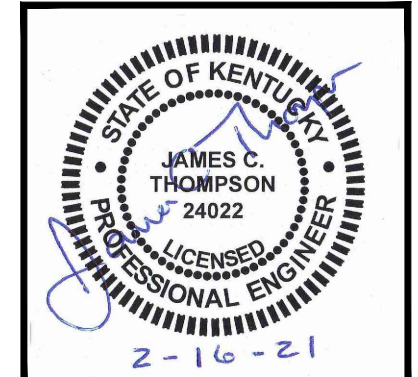
NO.	DATE	REVISIONS	BY

DATE:	MARCH 2021
PROJECT MGR:	RET
DRAWN BY:	JAB
CHECKED BY:	JCT
SCALE:	AS NOTED
2021 © Kentucky Engineering Group, PLLC	



GRAYSON COUNTY WATER DISTRICT
SALT RIVER PUMP STATION
EAST - WEST
INTERCONNECT PROJECT - PHASE II

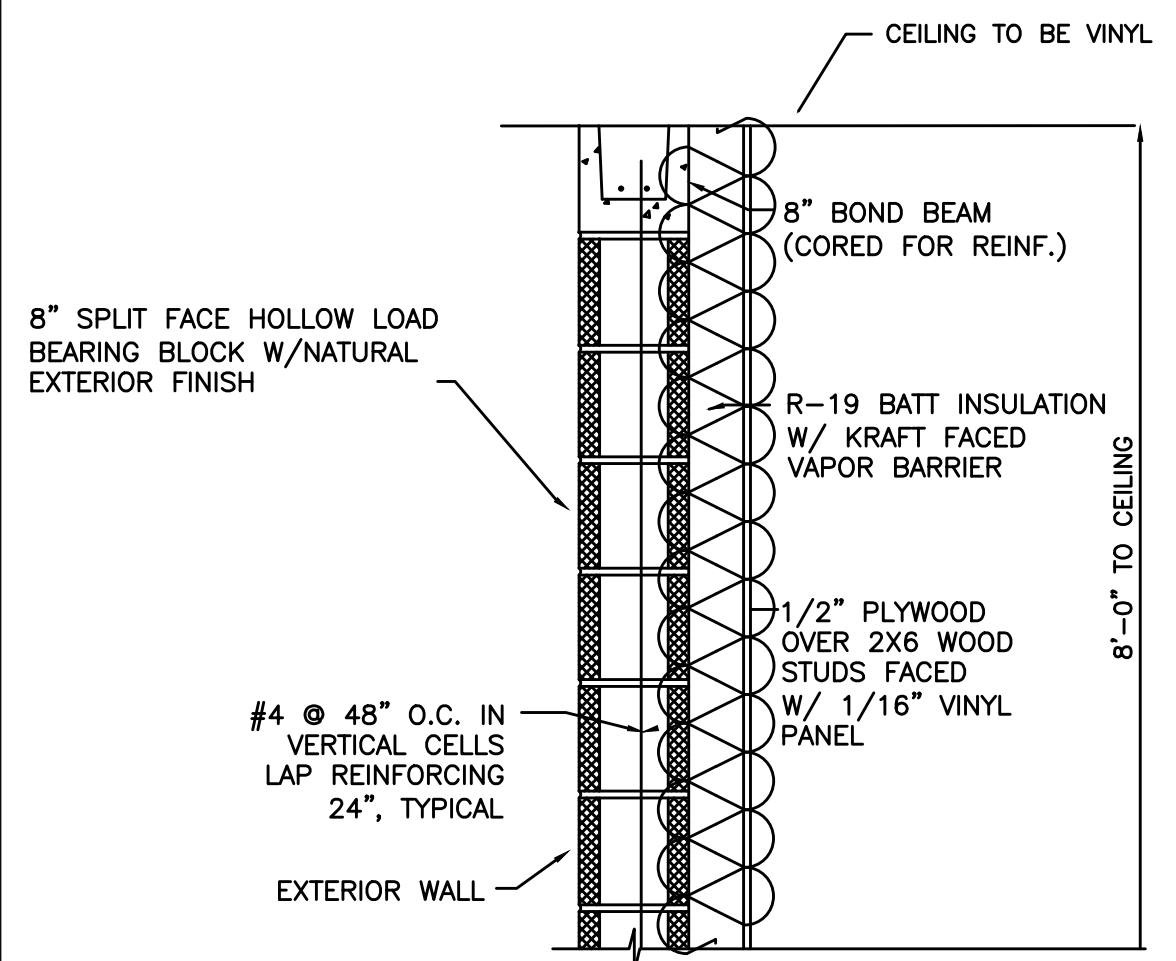
SALT RIVER PUMP STATION
SITE PLANS



PROJECT NO.	19019
SHEET NO.	C-1

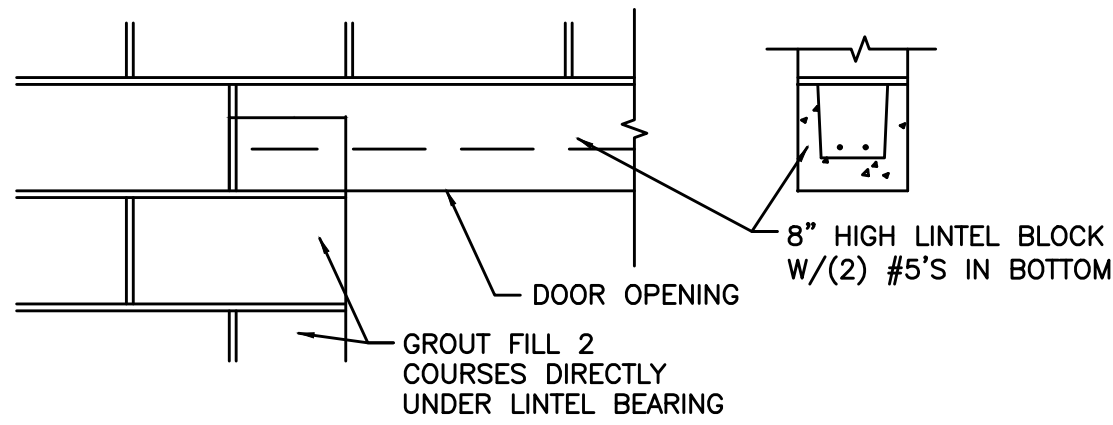
BID DOCUMENTS

P:\PROJECTS\Grayson County Water District\19019-East-West Interconnect PH 2-Contract 4-Salt River PS DWG\19019-SaltRiver-PS PLAN.dwg REG. 2/23/21



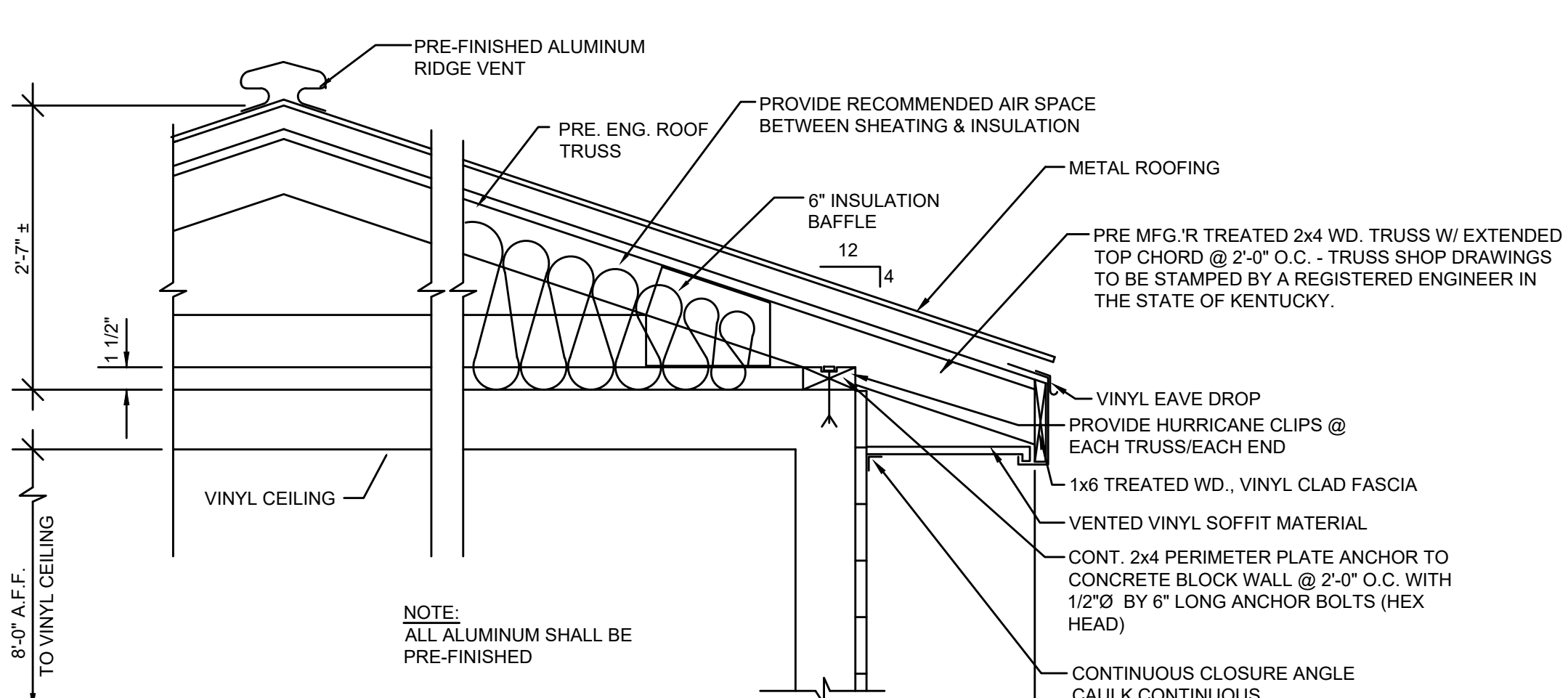
TYPICAL WALL SECTION

NOT TO SCALE



LINTEL DETAIL

NOT TO SCALE



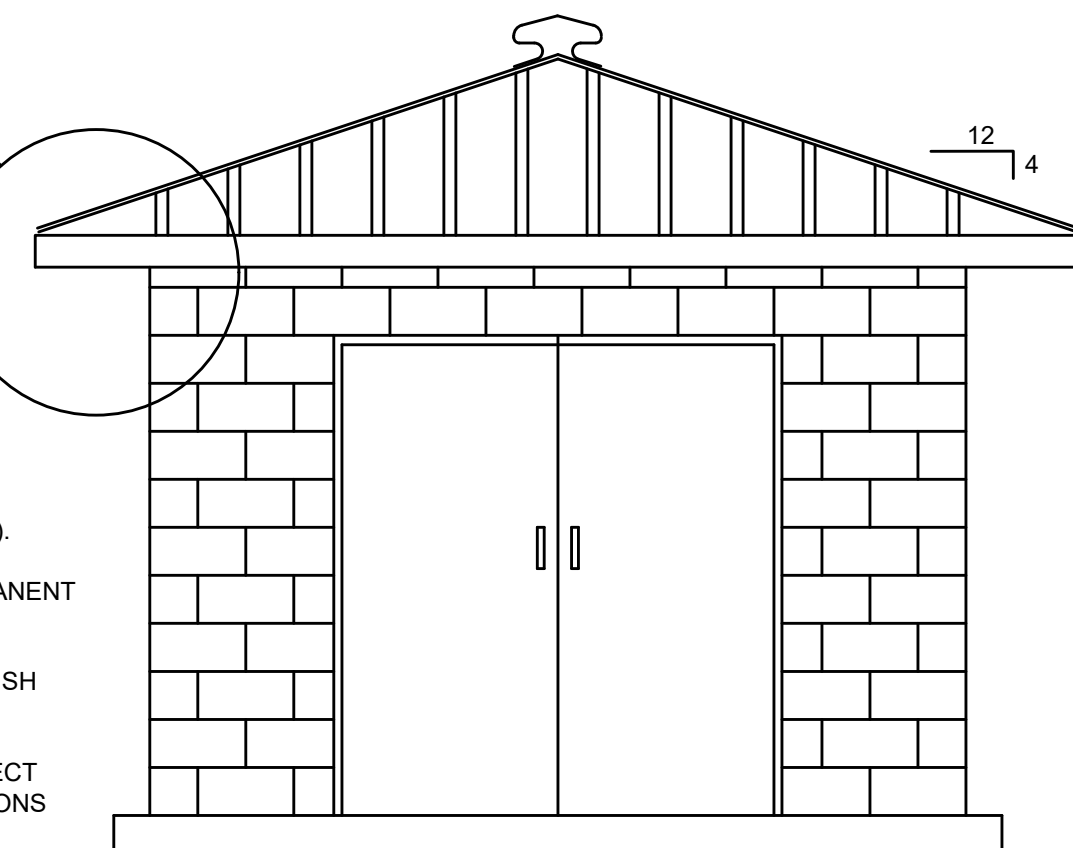
ROOF TRUSS DETAIL

NOT TO SCALE

TRUSS NOTES:

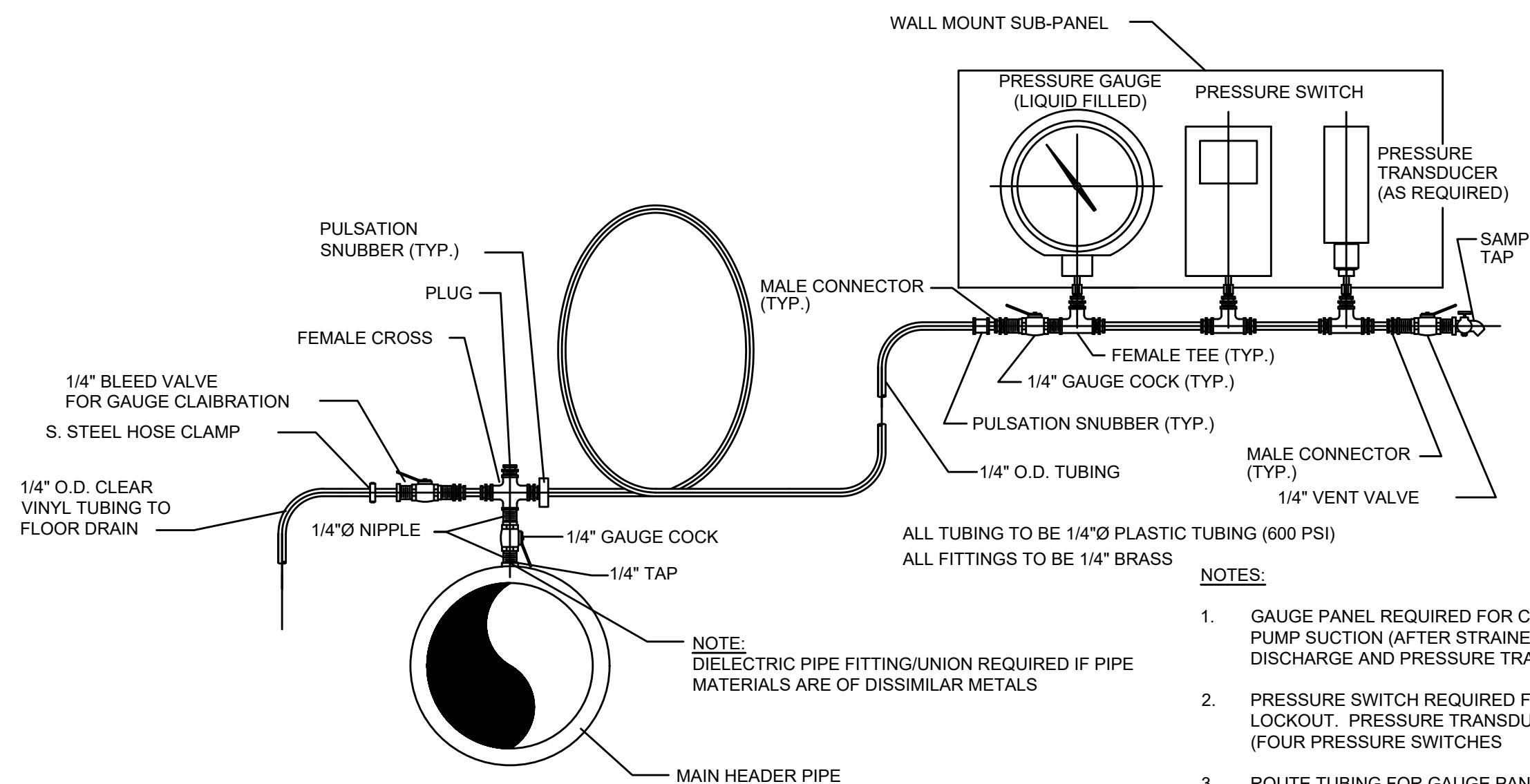
- TRUSS SPACING: 24" O.C. UNLESS NOTED OTHERWISE.
- ROOF TRUSS LOADING: 40 P.S.F.
 - A. TC LL: 20 P.S.F.
 - B. TC DL: 10 P.S.F.
 - C. BC DL: 10 P.S.F.
- MAXIMUM TOTAL DEFLECTION = L/240
- ROOF TRUSS MATERIALS SHALL BE - SOUTHERN PINE (MIN. GRADE 2).
- TRUSS MANUFACTURER SHALL DESIGN ALL TEMPORARY AND PERMANENT LATERAL BRIDGING AND BRACING.
- ENGINEERING CERTIFICATION: TRUSS MANUFACTURER SHALL FURNISH THE SERVICES OF A REGISTERED STRUCTURAL ENGINEER FOR THE DESIGN AND CERTIFICATION OF PREFABRICATED COMPONENTS (TRUSSES). THE ENGINEER SHALL BE RESPONSIBLE FOR THE CORRECT MANUFACTURING OF THE TRUSSES AND FOR THE LOADING CONDITIONS TO WHICH THE TRUSSES WILL BE SUBJECTED IN THE COMPLETED PROJECT.
- ALLOWABLE TRUSS SPANS: BASED UPON METAL PLATE CONNECTED WOOD TRUSSES, TPI-78, RECOMMENDED DESIGN PRACTICE BY THE TRUSS PLATE INSTITUTE.

SEE TRUSS CONNECTION DETAIL (THIS SHEET)



FRONT ELEVATION VIEW

NOT TO SCALE



SUCTION/DISCHARGE GAUGE PANEL

NOT TO SCALE

NOTES:

- GAUGE PANEL REQUIRED FOR COMMON SUCTION (BEFORE STRAINER), EACH PUMP SUCTION (AFTER STRAINER), EACH PUMP DISCHARGE, AND COMMON DISCHARGE AND PRESSURE TRANSDUCER (AS REQUIRED). (SIX TOTAL PANELS)
- PRESSURE SWITCH REQUIRED FOR HIGH DISCHARGE AND LOW SUCTION LOCKOUT. PRESSURE TRANSDUCER REQUIRED FOR TELEMETRY CONTROL. (FOUR PRESSURE SWITCHES TOTAL - TWO PRESSURE TRANSDUCERS TOTAL)
- ROUTE TUBING FOR GAUGE PANEL FROM TAPPED LOCATIONS ALONG THE PIPING AND TO THE WALL MOUNTED LOCATION. TUBING SHOULD BE INSTALLED IN AN ORGANIZED MANNER.

BOOSTER PUMP STATION SPECIFICATIONS

DESIGN CRITERIA

CONTROLS: TELEMETRY SYSTEM (TO BE PROVIDED PER ALLOWANCE BY HTI, INC.)
POWER SERVICE: 120/208V - 3Ø - 4W

PUMP DATA

TYPE: END SUCTION CENTRIFUGAL, CLOSE COUPLED
PUMP 1 & 2

CAPACITY: 520 G.P.M. AT 64 FEET T.D.H. SIZE:
12.10" DIA. IMPELLER, 6" SUCTION, 5" DISCHARGE.
15HP MOTOR, 1187 R.P.M.

PUMP STATION PIPING SHALL INCLUDE:

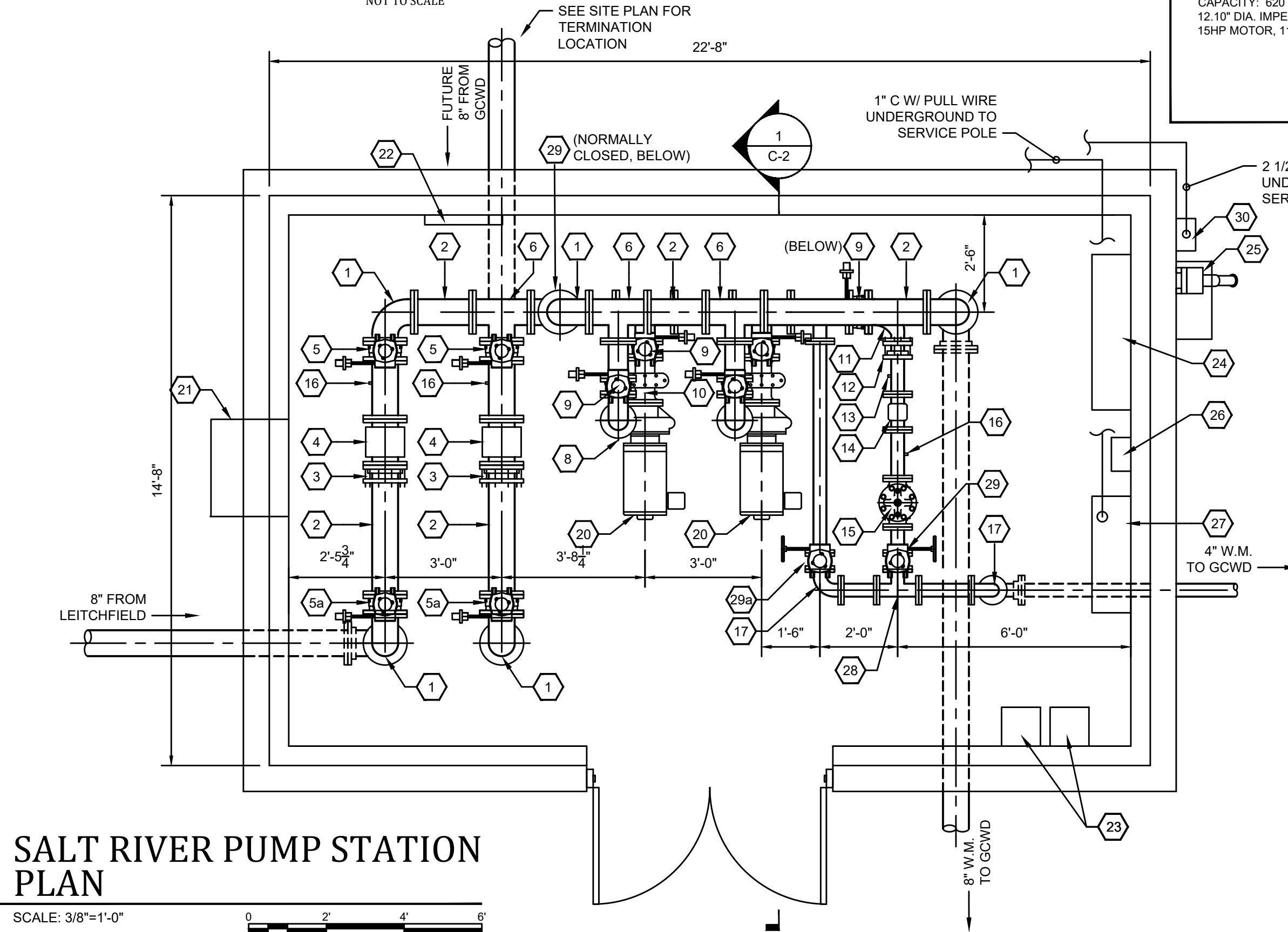
- 8" DIA. MAIN INLET
- 8" SUCTION HEADER
- 6" ISOLATING VALVES
- 8" DISCHARGE HEADER
- 8" DIA. MAIN OUTLET

NOTES:

- LAYOUT AND DIMENSIONS SHOWN ARE FOR ILLUSTRATIVE PURPOSES AND ARE NOT INTENDED TO LIMIT AN INNOVATIVE DESIGN.
- PUMP STATION SHALL BE CAPABLE OF RUNNING BOTH PUMPS SIMULTANEOUSLY.

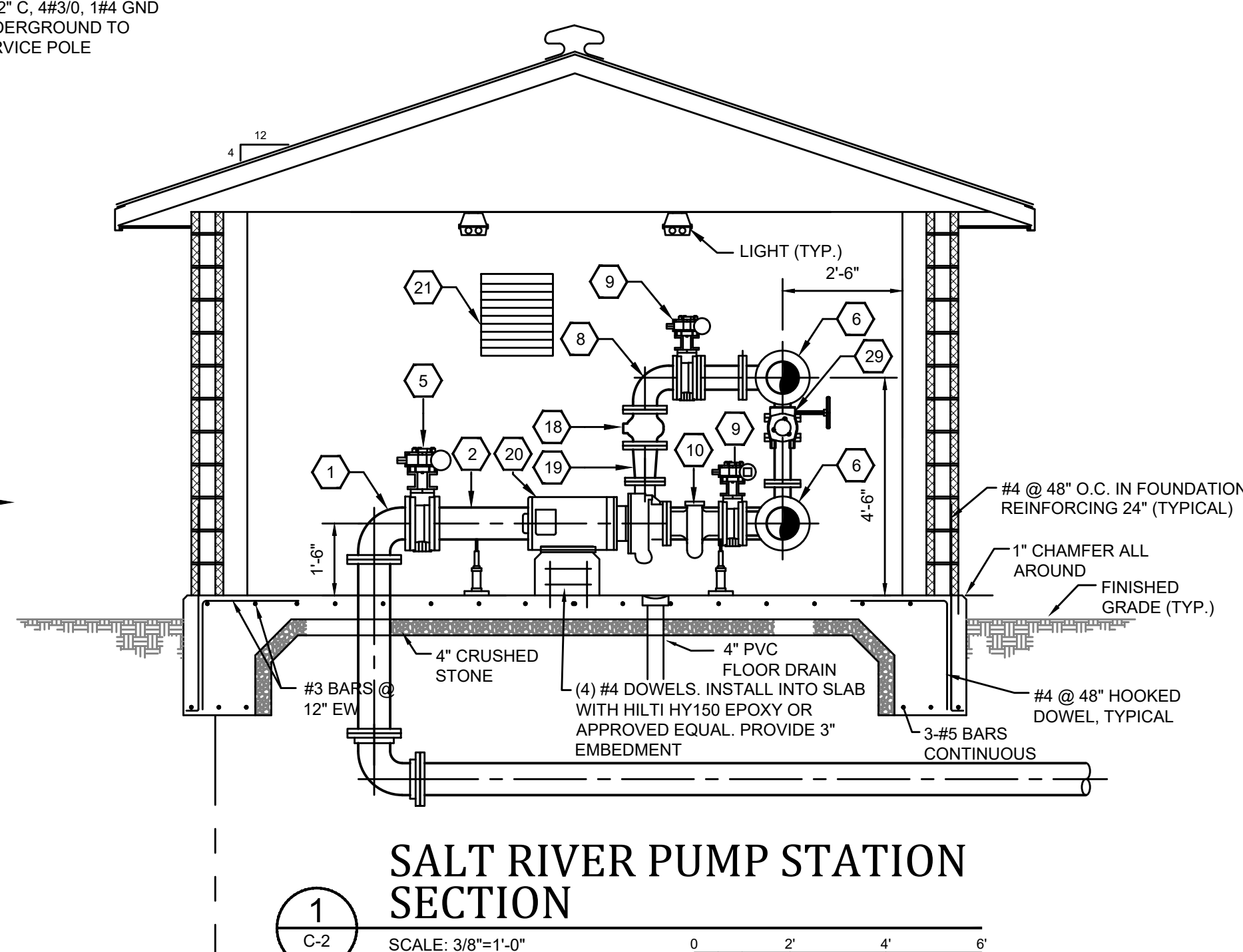
REFERENCE NOTES:

- 8" DI 90° ELBOW
- 8" DI PIPE
- 8" FLANGE COUPLING ADAPTER
- 8" MAGNETIC FLOW METER
- 8" BUTTERFLY VALVE
- 8" X 6" DI TEE
- 8" X 6" DI 90° REDUCING ELBOW
- 6" DI 90° ELBOW
- 6" BUTTERFLY VALVE
- 6" DI STRAINER
- 8" X 4" DI 90° REDUCING ELBOW
- 4" FLANGE COUPLING ADAPTER
- 1/4" TAP AND BALL VALVE
- 4" MAGNETIC FLOW METER
- 4" PRESSURE REDUCING VALVE
- 2" TEST PORT W/ BALL VALVE
- 4" DI 90° ELBOW
- 6" CHECK VALVE
- 6" X 5" DI REDUCER
- END SUCTION CENTRIFUGAL PUMP
- HVAC UNIT
- GAUGE PANEL
- VFD
- CONTROL PANEL
- GENERATOR QUICK CONNECT POWER PANEL, WALL MOUNT NEMA 3R, 240V, 400A, ASCO 3QC-N-C-A-A-3-0400-F-00-F OR EQUAL
- TELEMETRY INTERFACE PANEL
- TELEMETRY PANEL - TO BE DELIVERED "LOOSE", TO BE INSTALLED, WIRED AND TERMINATED BY A QUALIFIED ELECTRICIAN
- 4" DI TEE
- 4" BUTTERFLY VALVE
- 4" BUTTERFLY VALVE (NORMALLY CLOSED)
- 200A/3P, NEMA 3R DOUBLE-THROW NON-FUSED DISCONNECT SWITCH



SALT RIVER PUMP STATION PLAN

SCALE: 3/8"=1'-0"



SALT RIVER PUMP STATION SECTION

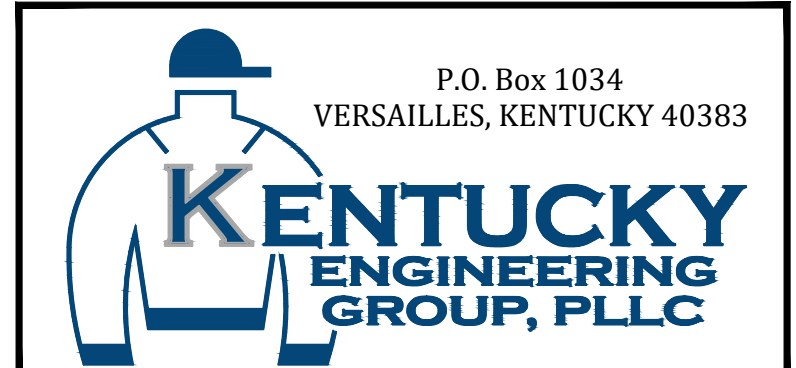
SCALE: 3/8"=1'-0"

IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM KENTUCKY ENGINEERING GROUP, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE DRAWING OR TITLE BLOCK TO DETERMINE THE ACTUAL SCALE.

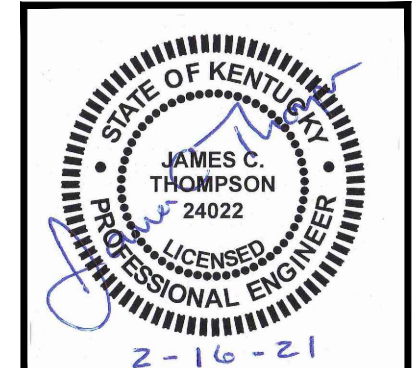
NO.	DATE	REVISIONS	BY

DATE:	MARCH 2021
PROJECT MGR:	RET
DRAWN BY:	JAB
CHECKED BY:	JCT
SCALE:	AS NOTED
2021 © Kentucky Engineering Group, PLLC	



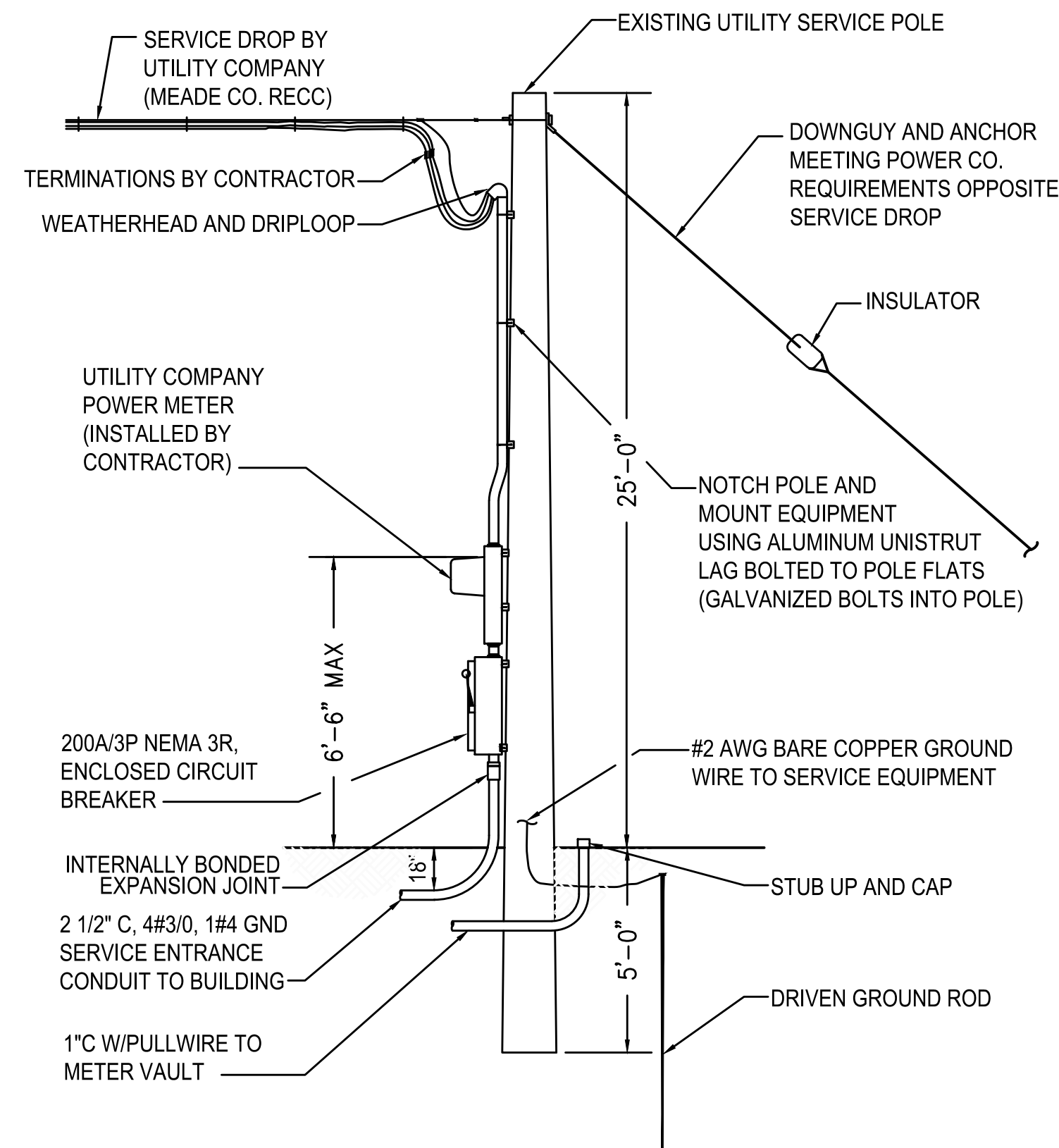
GRAYSON COUNTY WATER DISTRICT
SALT RIVER PUMP STATION
EAST - WEST
INTERCONNECT PROJECT - PHASE II

SALT RIVER PUMP STATION
PLAN, SECTION, & DETAILS



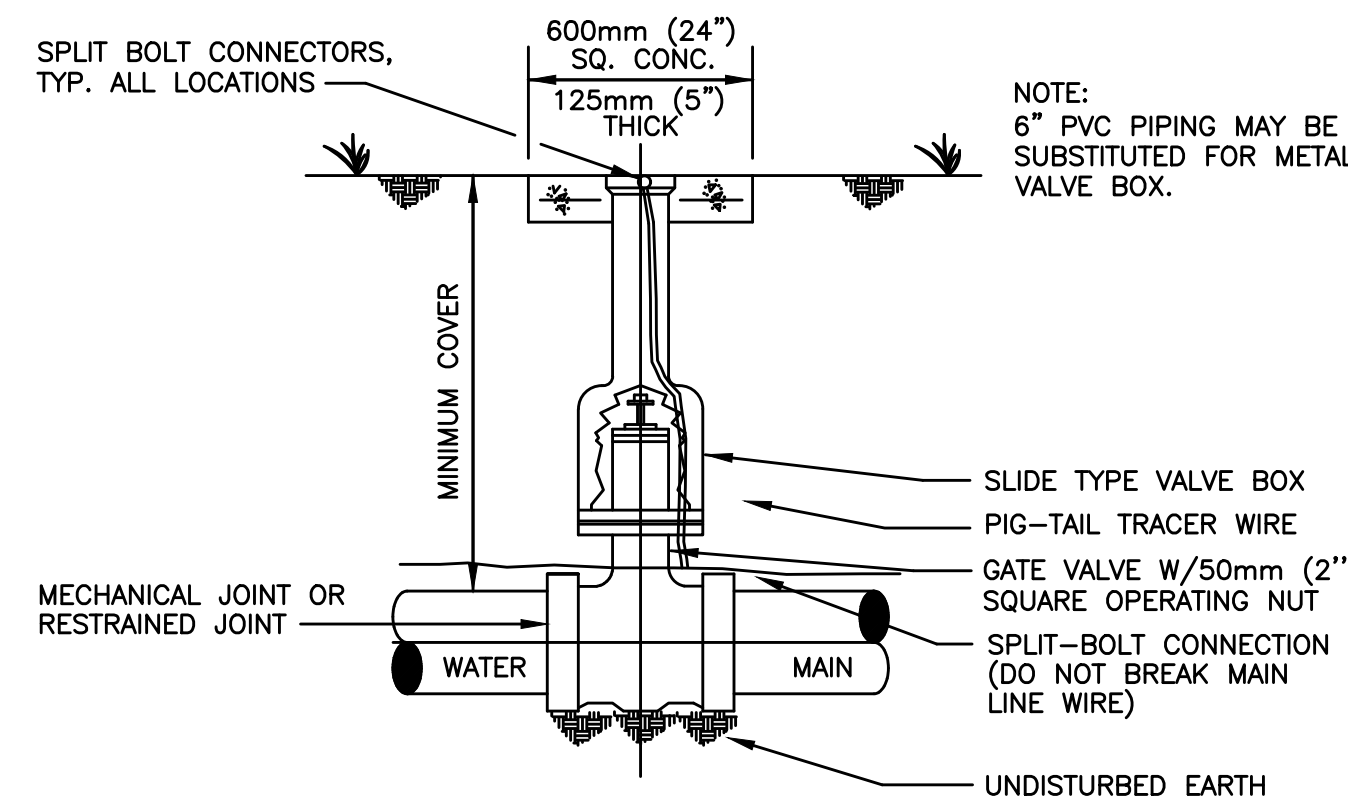
PROJECT NO.	19019
SHEET NO.	C-2

BID DOCUMENTS



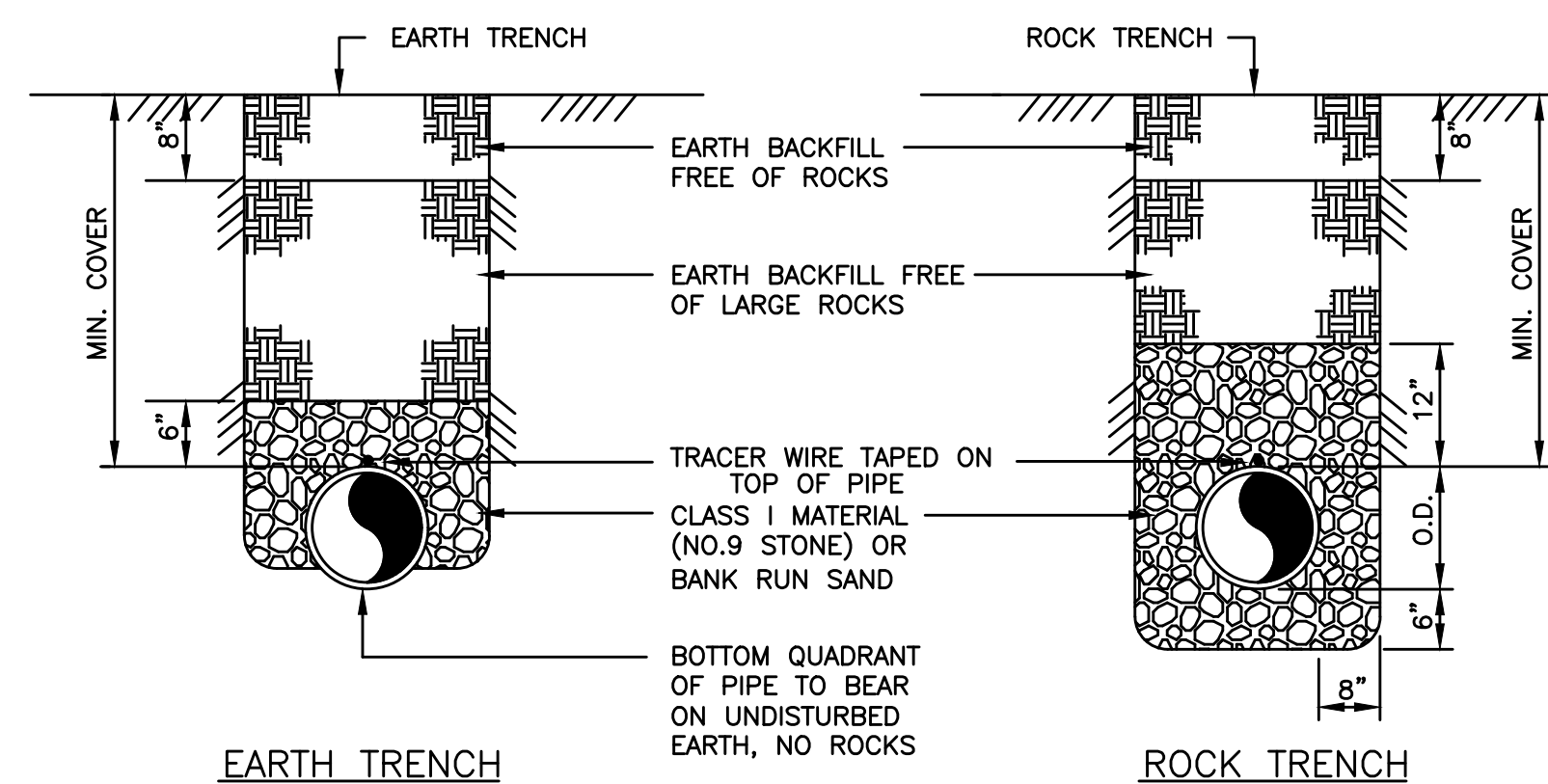
SERVICE / ANTENNA POLE DETAIL
SALT RIVER PUMP STATION

NOT TO SCALE



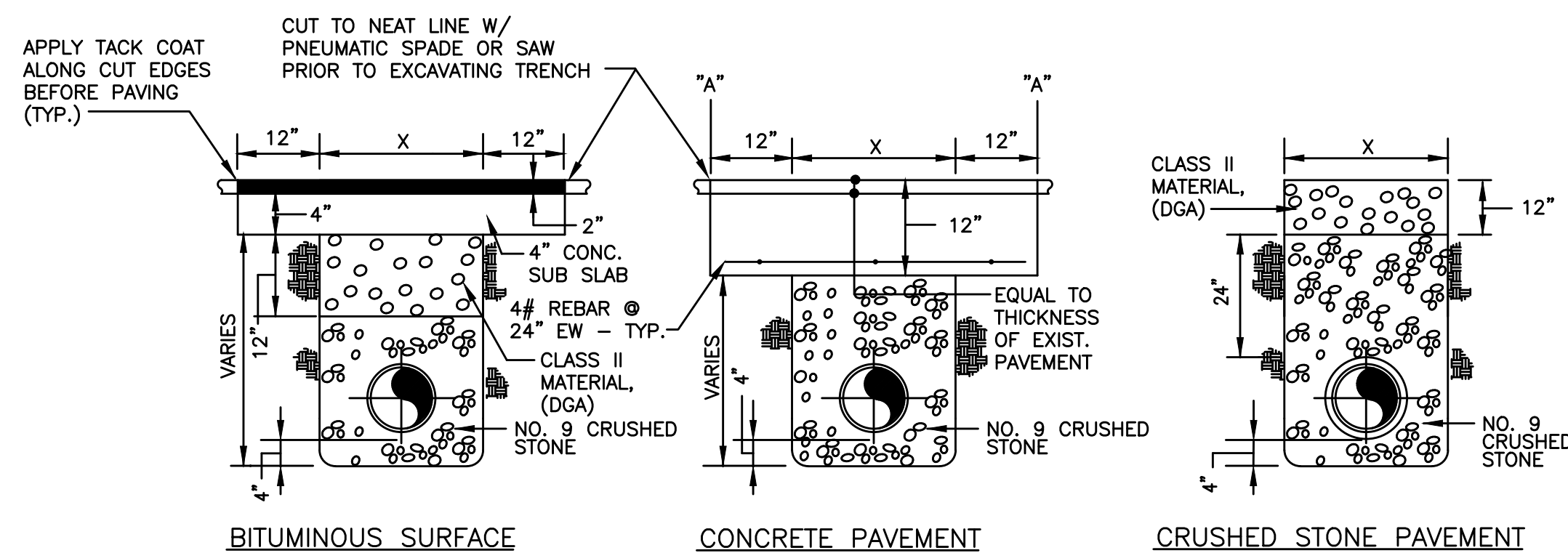
GATE VALVE INSTALLATION

NOT TO SCALE



TYPICAL BEDDING and BACKFILL

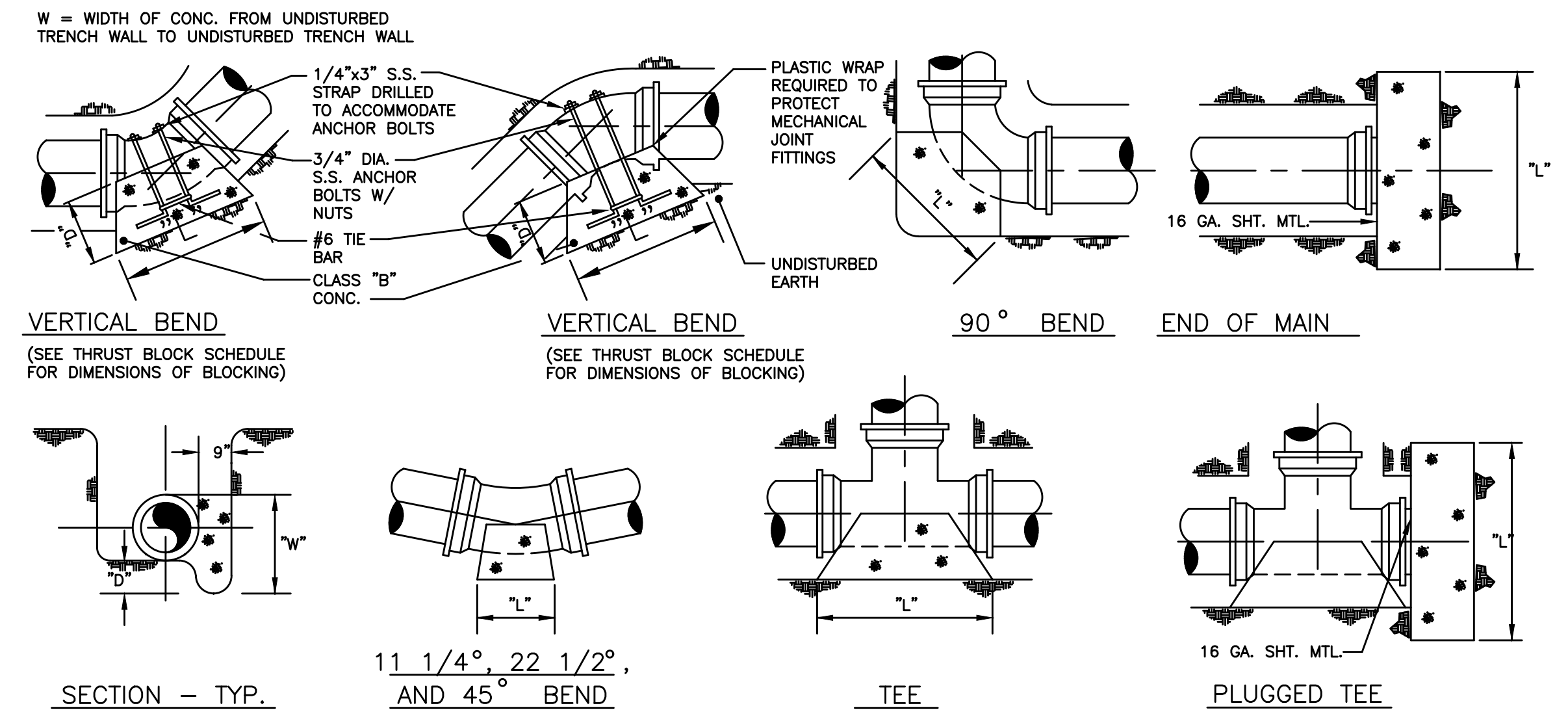
NOT TO SCALE



PAVEMENT REPLACEMENT

NOT TO SCALE

NOTE:
WATER MAIN INSTALLED WHERE FUTURE PAVEMENT IS TO BE CONSTRUCTION SHALL BE BACKFILLED IN ACCORDANCE WITH CRUSHED STONE PAVEMENT REPLACEMENT



NOTE: ALL FITTINGS AND VALVES SHALL INCLUDE GRIP RING GLAND

THRUST BLOCK SCHEDULE - CLASS 250 PVC

SOIL TYPE - SAND & GRAVEL BEARING STRENGTH = 3000 PSF

PIPE SIZE	90° BEND			45° BEND			22 1/2° BEND			11 1/2° BEND			TEE & DEAD ENDS					
	BEARING AREA	YDS OF CONCRETE	D W L	BEARING AREA	YDS OF CONCRETE	D W L	BEARING AREA	YDS OF CONCRETE	D W L	BEARING AREA	YDS OF CONCRETE	D W L	BEARING AREA	YDS OF CONCRETE	D W L	BEARING AREA	YDS OF CONCRETE	D W L
4"	2.667	.10	12 24 16	1.500	.06	12 18 12	.750	.03	12 12 9	.500	.01	6 12 6	1.667	.06	12 24 10			
6"	5.000	.19	12 36 20	3.000	.11	12 24 18	1.500	.06	12 18 12	.750	.01	6 12 9	4.000	.15	12 24 24			
8"	9.000	.50	18 36 36	5.000	.28	18 36 20	3.000	.17	18 24 18	1.500	.06	12 18 12	7.000	.39	18 42 24			
10"	9.255	.78	18 48 42	7.500	.42	18 36 30	4.167	.23	18 30 20	2.250	.08	12 18 18	10.500	.58	18 42 36			
12"	13.327	1.11	18 60 48	12.000	.67	18 48 36	6.000	.33	18 36 24	3.000	.11	12 24 18	14.000	.78	18 48 42			
14"	18.139	2.00	24 72 54	15.750	1.17	24 54 42	7.500	.56	24 36 30	4.000	.22	18 24 24	20.000	1.48	24 60 48			
16"	23.692	2.65	24 78 66	20.000	1.48	24 60 48	10.500	.78	24 42 36	5.000	.28	18 30 24	27.000	2.00	24 72 54			

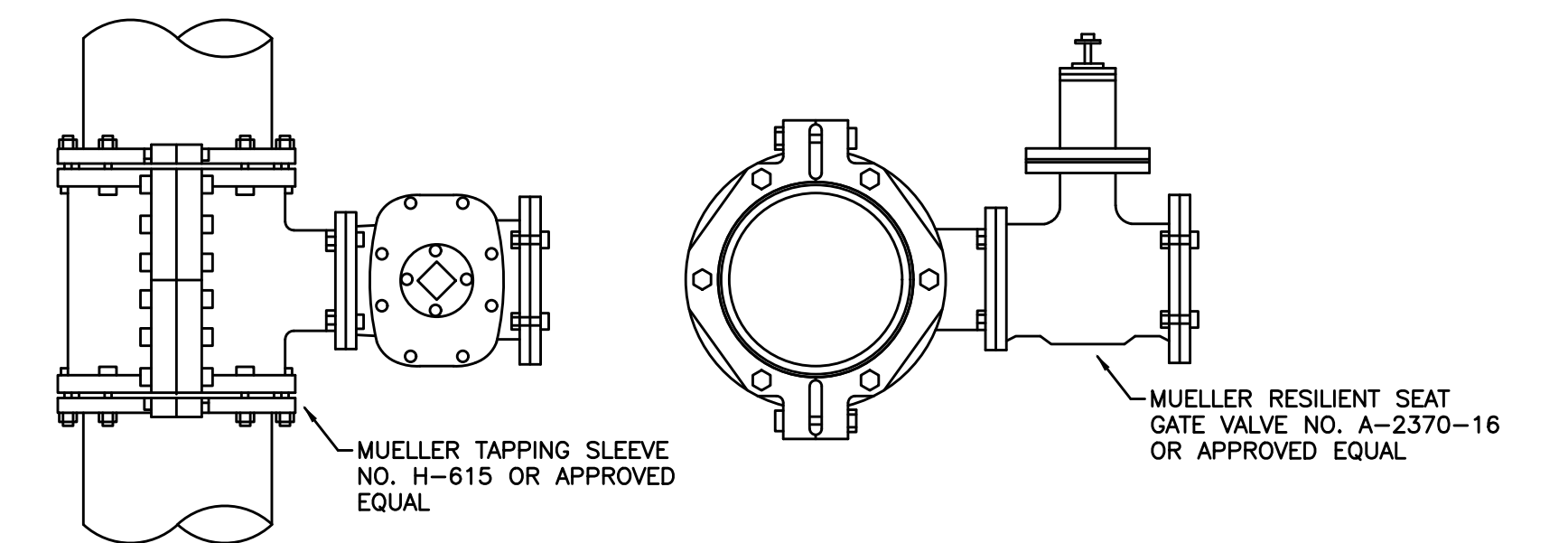
THRUST BLOCK SCHEDULE - CLASS 350 D.I.P.

SOIL TYPE - SAND & GRAVEL BEARING STRENGTH = 3000 PSF

PIPE SIZE	90° BEND			45° BEND			22 1/2° BEND			11 1/2° BEND			TEE & DEAD ENDS					
	BEARING AREA	YDS OF CONCRETE	D W L	BEARING AREA	YDS OF CONCRETE	D W L	BEARING AREA	YDS OF CONCRETE	D W L	BEARING AREA	YDS OF CONCRETE	D W L	BEARING AREA	YDS OF CONCRETE	D W L	BEARING AREA	YDS OF CONCRETE	D W L
4"	3.750	.21	18 30 18	1.750	.10	18 18 14	1.000	.06	18 12 12	.500	.02	12 12 6	2.250	.13	18 18 18			
6"	7.000	.39	18 42 24	3.750	.21	18 30 18	2.000	.11	18 24 12	1.000	.04	12 12 12	5.000	.28	18 30 24			
8"	12.250	.91	24 42 42	7.500	.56	24 36 30	4.000	.30	24 24 24	2.000	.11	18 24 12	9.000	.67	24 36 36			
10"	20.000	1.48	24 60 48	10.500	.78	24 42 36	6.000	.44	24 36 24	3.000	.17	18 24 18	14.000	1.04	24 48 42			
12"	30.000	2.78	30 72 60	15.750	1.46	30 54 42	7.500	.69	30 36 30	4.000	.30	24 24 24	20.000	1.85	30 60 48			
14"	39.000	4.33	36 78 72	20.000	2.22	36 60 48	10.500	1.17	36 42 36	6.000	.56	30 36 24	27.500	3.06	36 66 60			
16"	49.000	6.35	42 84 84	27.500	3.56	42 66 60	14.000	1.81	42 48 42	7.500	.83	36 36 30	37.750	4.63	42 78 66			

THRUST-BLOCKING SCHEDULE

NOT TO SCALE



TOP VIEW

SIDE VIEW

TYPICAL - WET TAP

NOT TO SCALE

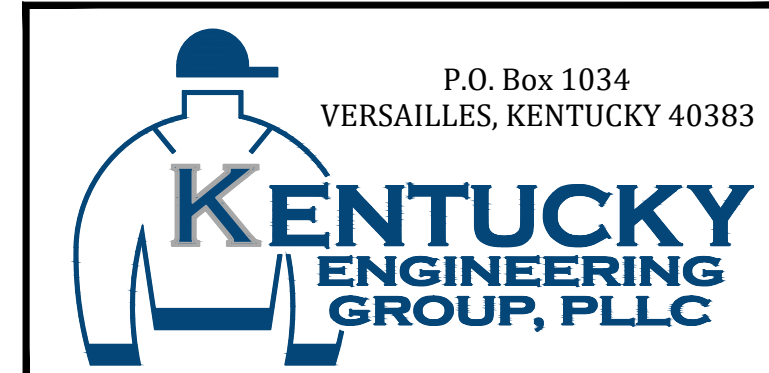
P:\PROJECTS\Grayson County Water District\19019-East-West Interconnect PH 2-Contract 4-Salt River PS DWG\19019-SDI.dwg REG 2/23/21

IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM KENTUCKY ENGINEERING GROUP, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE DRAWING OR TITLE BLOCK TO DETERMINE THE ACTUAL SCALE.

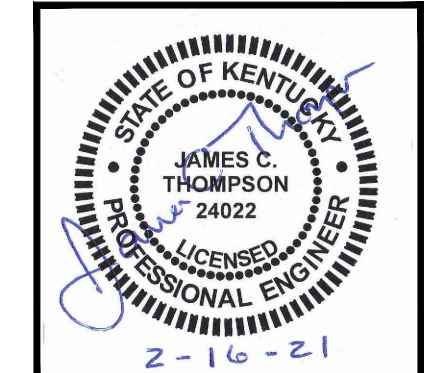
NO.	DATE	REVISIONS	BY

DATE:	MARCH 2021
PROJECT MGR:	RET
DRAWN BY:	JAB
CHECKED BY:	JCT
SCALE:	AS NOTED
2021 © Kentucky Engineering Group, PLLC	



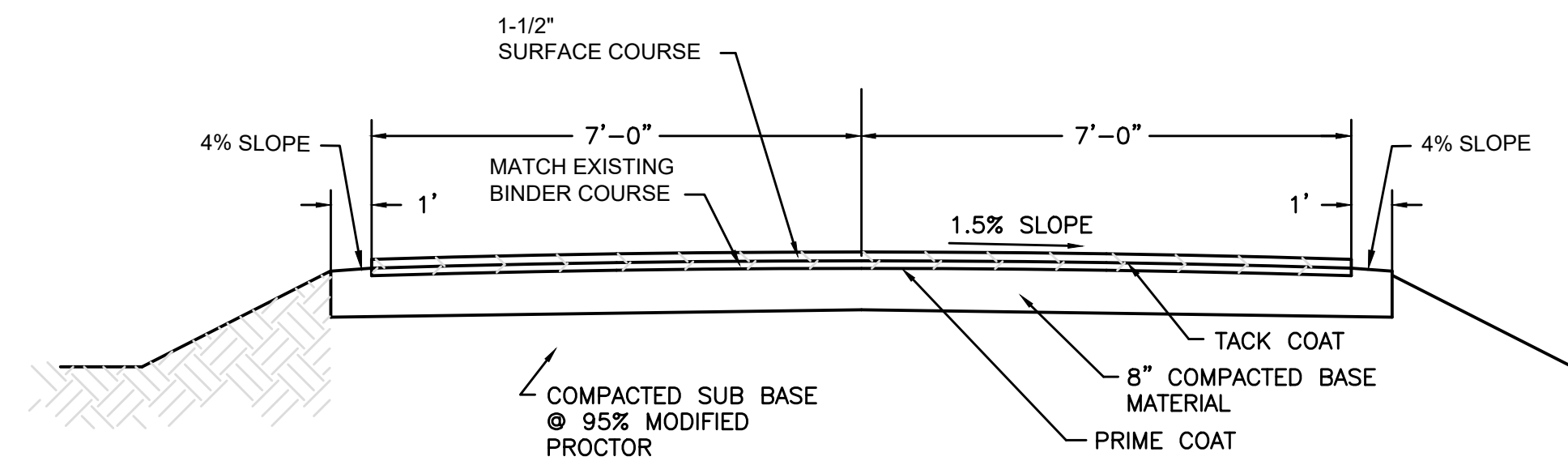
GRAYSON COUNTY WATER DISTRICT
SALT RIVER PUMP STATION
EAST - WEST
INTERCONNECT PROJECT - PHASE II

STANDARD DETAILS



PROJECT NO.	19019
SHEET NO.	SD-1

BID DOCUMENTS

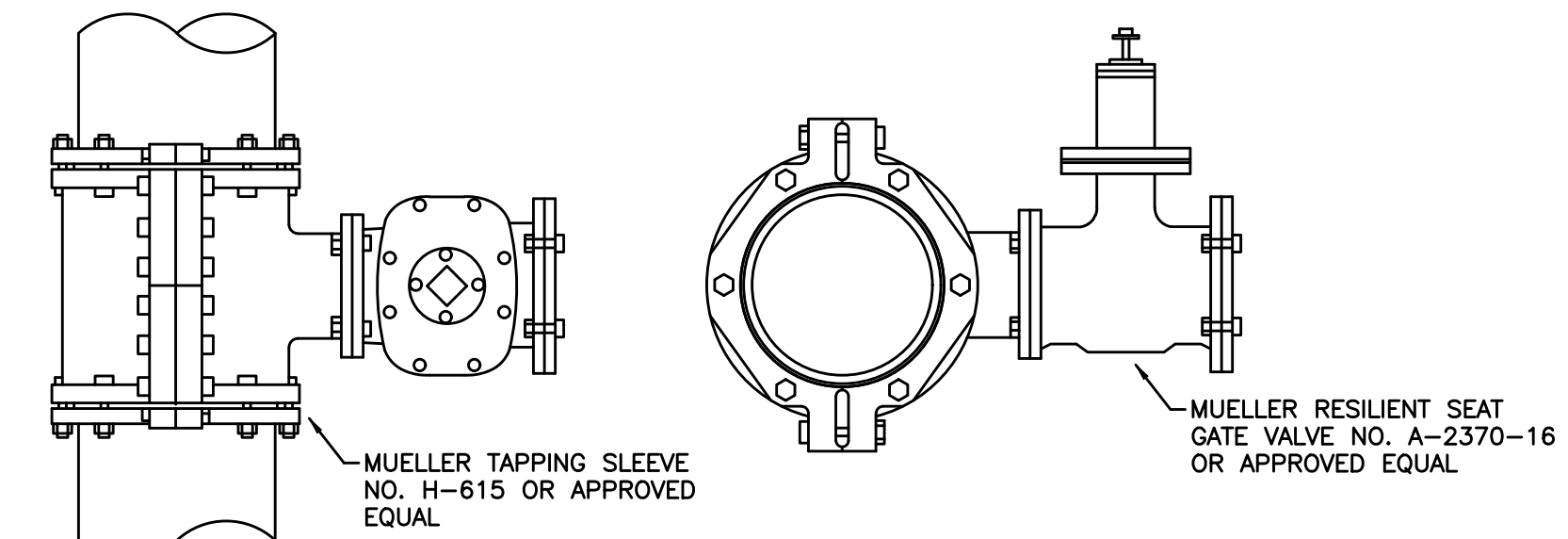


NOTES:

1. AGGREGATE BASE SHALL BE IN ACCORDANCE WITH KDOH SECT. 302.
2. PRIME COAT SHALL BE IN ACCORDANCE WITH KDOH SECT. 406.
3. TYPE 'D' ASPHALT SHALL BE IN ACCORDANCE WITH KDOH SECT. 403.

NEW BITUMINOUS PAVEMENT

NOT TO SCALE



TOP VIEW

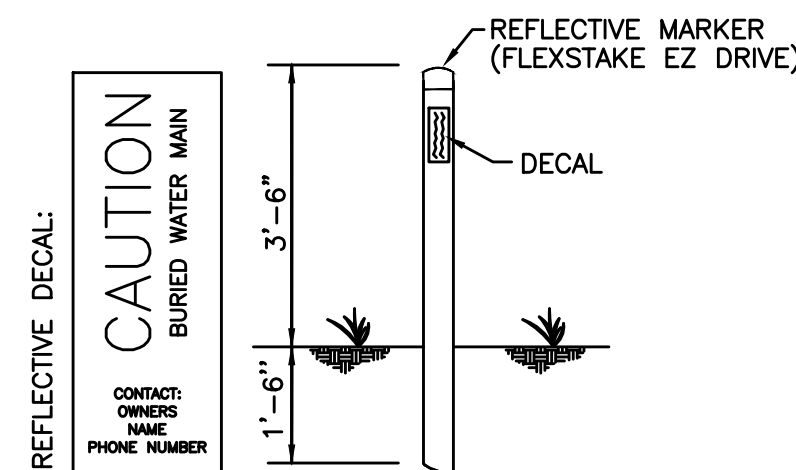
SIDE VIEW

TYPICAL - WET TAP

NOT TO SCALE

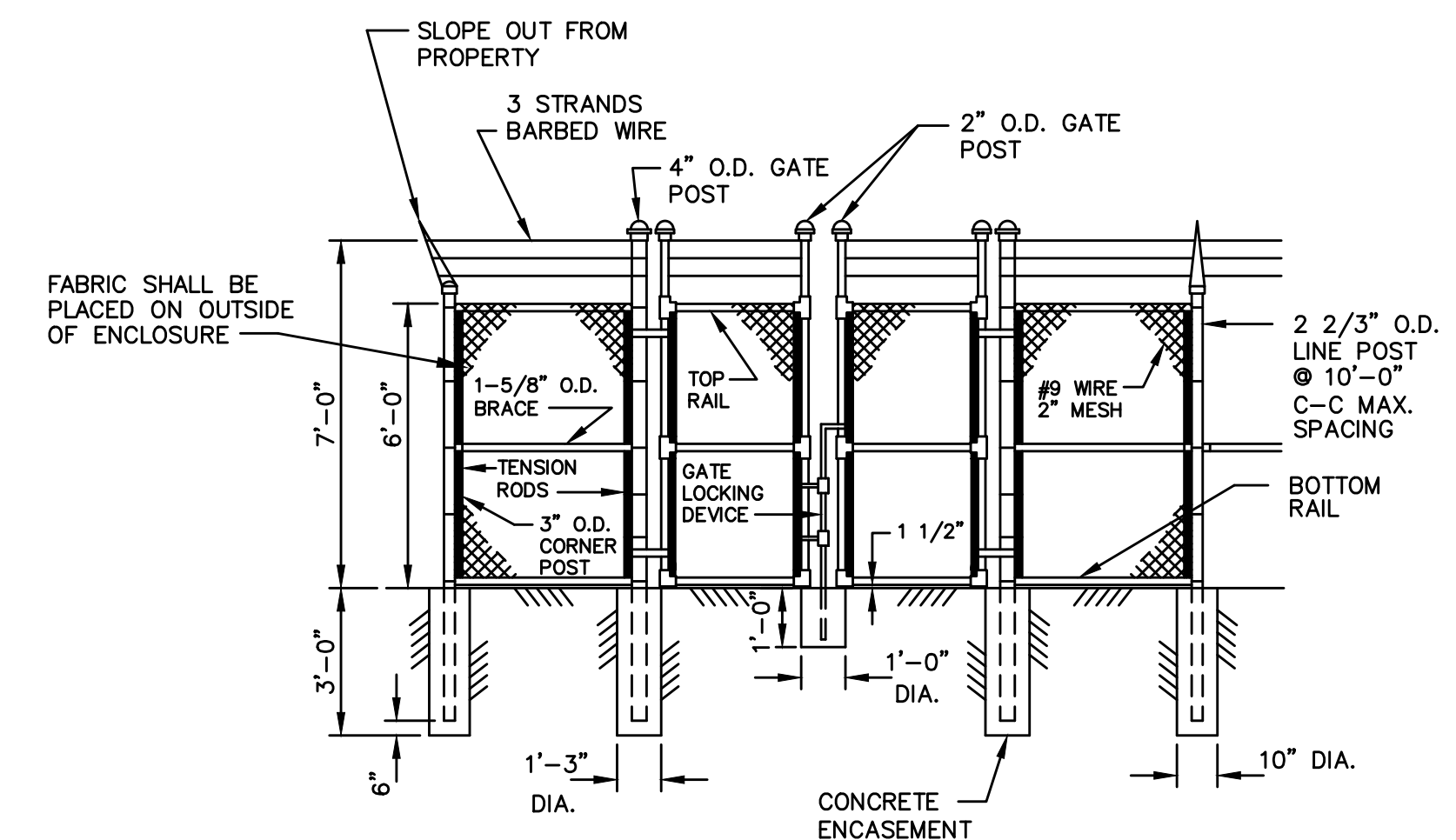
NOTE:

WATER MARKERS SHALL BE PLACED WHENEVER A ROAD CROSSING IS MADE AT EACH SIDE OF THE ROAD AND AT EACH VALVE OR SET OF VALVES.



WATER MARKER DETAIL

NOT TO SCALE



NOTE:
TAMPER PROOF FASTENING REQUIRED THROUGHOUT

CHAIN LINK FENCE W/SWINGING GATES

NOT TO SCALE

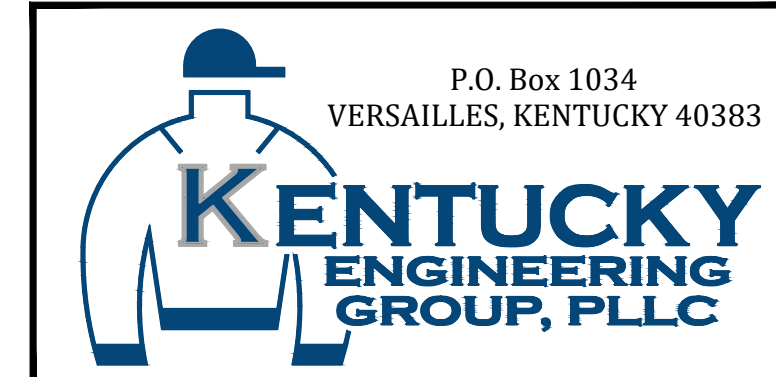
P:\PROJECTS\Grayson County Water District\19019-East-West Interconnect PH 2-Contract 4-Salt River PS\DWG\19019-SD2.dwg KEG 2/23/21

IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM KENTUCKY ENGINEERING GROUP, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE DRAWING OR TITLE BLOCK TO DETERMINE THE ACTUAL SCALE.

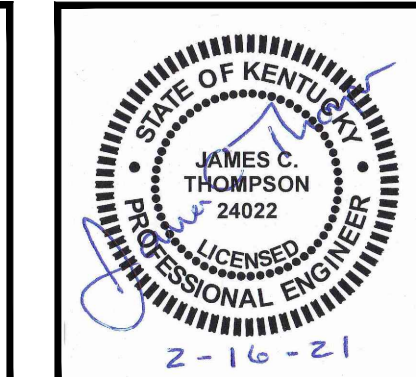
NO.	DATE	REVISIONS	BY

DATE:	MARCH 2021
PROJECT MGR:	RET
DRAWN BY:	JAB
CHECKED BY:	JCT
SCALE:	AS NOTED
2021 © Kentucky Engineering Group, PLLC	



GRAYSON COUNTY WATER DISTRICT
SALT RIVER PUMP STATION
EAST - WEST
INTERCONNECT PROJECT - PHASE II

STANDARD DETAILS



PROJECT NO.	19019
SHEET NO.	SD-2

BID DOCUMENTS