### **GENERAL NOTES:**

- SAN ANTONIO RIVER AUTHORITY (RIVER AUTHORITY) STANDARD SPECIFICATIONS AND STANDARD DETAILS ARE PROVIDED FOR DESIGN AND CONSTRUCTION OF SEWER COLLECTION SYSTEMS MANAGED BY THE RIVER ALITHORITY
- 2. AT ANY TIME, THESE STANDARD SPECIFICATIONS AND DETAILS MAY BE ALTERED OR SUPERSEDED BY THE GENERAL CONDITIONS, SUPPLEMENTAL CONDITIONS, PLANS OR PROJECT SPECIFICATIONS WITHIN THE CONTRACT DOCUMENT PER DIRECTION FROM THE RIVER
- 3. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY RIVER AUTHORITY AND COMPLY WITH THE CONTRACT DOCUMENTS AND THE FOLLOWING AS APPLICABLE:
- CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) "DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEM", TEXAS ADMINISTRATIVE CODE (TAC) TITLE 30, PART 1, CHAPTER
- 3.2. CURRENT TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT), "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS,
- 3.3. CURRENT RIVER AUTHORITY "STANDARD SPECIFICATIONS FOR SANITARY SEWER CONSTRUCTION".
- 3.4. CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION". CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL"
- 4. THE CONTRACTOR IS TO NOTIFY AND MAKE ARRANGEMENTS WITH THE RIVER AUTHORITY INSPECTIONS DIVISION AT (210) 302-4200 FORTY EIGHT (48) HOURS PRIOR TO ANY EXCAVATION. CONTRACTOR SHALL ALSO PROVIDE PROCEDURES THAT WILL BE USED TO NOTIFY AFFECTED RESIDENTS AND/OR PROPERTY OWNERS 48 HOURS PRIOR TO ANY EXCAVATION OR CONSTRUCTION. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD BEFORE START OF PROJECT.
- WORK SHALL NOT BE PERFORMED ON SATURDAYS, SUNDAYS, FEDERAL HOLIDAYS, RIVER AUTHORITY HOLIDAYS, BEFORE 7:30 AM, OR AFTER 4:30 PM, UNLESS PRIOR APPROVAL IS GRANTED BY THE RIVER AUTHORITY ENGINEER. REQUEST TO PERFORM WORK DURING THESE TIMES MUST BE EMAILED 48 HOURS IN ADVANCE TO UTILITIESDEVELOPMENT@SARIVERAUTHORITY.ORG.
- NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR IN THE PLANS BUT NOT INCLUDED IN THE BID SCHEDULE. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER THE PAY ITEM WHICH IT RELATES TO.
- 7. WORK COMPLETED BY CONTRACTOR WHICH HAS NOT RECEIVED A WORK ORDER OR THE CONSENT OF RIVER AUTHORITY WILL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE EXPENSE OF THE
- 8. LOCATIONS AND DEPTHS OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR AT LEAST 48 HOURS PRIOR TO CONSTRUCTION REGARDLESS OF ILLUSTRATION ON THE PLANS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION AT NO COST TO RIVER AUTHORITY. CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGES TO EXISTING UTILITIES AND REPAIRS WILL BE AT CONTRACTOR'S EXPENSE.
- CERTAIN PORTIONS OF THE PROJECT MAY PARALLEL AND/OR CROSS EXISTING UTILITIES, AND CONTRACTOR IS REQUIRED TO PROTECT THESE UTILITIES. ADDITIONAL SUPPORTIVE SHORING MAY BE REQUIRED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL PERSONNEL ON SITE, EXISTING UTILITIES, AND FINISHED WORK THROUGHOUT THE PROJECT. CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGES, AND REPAIRS WILL BE AT CONTRACTOR'S FULL EXPENSE.
- 10. WHERE WATER LINES AND NEW SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE LESS THAN 9 FEET (I.E. WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES OR WATER LINES NEXT TO MANHOLES), THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC 217 AND 30 TAC 290.
- 11. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.161, CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND VALVES THAT ARE IN THE
- 12. A SAFE OVERHEAD CLEARANCE MUST BE MAINTAINED BETWEEN ALL OVERHEAD EQUIPMENT AND PERSONNEL. THE CONTRACTOR SHALL NOTIFY CPS AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION IN VICINITY OF CPS OVERHEAD LINES. CONTRACTOR SHALL MAINTAIN CPS RECOMMENDED CLEARANCE REQUIREMENTS
- 13. ALL WORK IN THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) RIGHT-OF-WAY SHALL PROCEED DURING WORKING HOURS AGREED UPON BY RIVER AUTHORITY AND TXDOT INSPECTORS

14. BEFORE THE START OF ANY CONSTRUCTION, CONTRACTOR SHALL

- FULLY DOCUMENT THE SITE WITH PHOTOS AND DIGITAL VIDEO WITH ONE COPY SUBMITTED TO RIVER AUTHORITY PRIOR TO STARTING THE PRE-CON SITE VIDEO SHALL PROVIDE ACCURATE DOCUMENTATION OF EXISTING CONDITIONS.
- 15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES TO ORIGINAL OR BETTER CONDITION AS A RESULT OF DAMAGE DONE DURING THE PROJECT CONSTRUCTION.
- 16. ANY AND ALL FENCING, INCLUDING ELECTRIC FENCE, WHETHER OR NOT IDENTIFIED ON THE PLANS, MUST BE MAINTAINED AT ALL TIMES. ANY AND ALL DAMAGES DIRECTLY ATTRIBUTED TO THE CONTRACTOR MUST BE REPLACED TO EQUAL OR CONDITIONS AT THE CONTRACTOR'S EXPENSE AND AS APPROVED THE RIVER AUTHORITY INSPECTOR. GATES, OR GAPS IN FENCING IF APPROVED, MUST BE PROVIDED AT ALL LOCATIONS WHERE THE SEWER LINE EASEMENT CROSSES FENCING. FENCING REQUIRED TO MAINTAIN LIVESTOCK MUST BE MAINTAINED AT ALL TIMES. ALL GATES SHALL BE APPROVED PRIOR TO INSTALLATION.
- 17. CONTRACTOR MUST AVOID DAMAGE TO ADJACENT LAND OUTSIDE THE IDENTIFIED CONSTRUCTION LIMITS OR EASEMENTS. ANY CLAIMS DIRECTLY ATTRIBUTED TO THE CONTRACTOR RESULTING FROM STRAYING BEYOND THE CONSTRUCTION LIMITS MUST BE SETTLED BY THE CONTRACTOR TO THE SATISFACTION OF RIVER AUTHORITY AND THE APPROPRIATE LANDOWNER.
- 18. CONTRACTOR MUST MAINTAIN ACCESS FOR PRIVATE INDIVIDUALS AND BUSINESSES AT ALL TIMES. IF NORMAL ACCESS IS DAMAGED DURING CONSTRUCTION, THE CONTRACTOR MUST REPLACE THE ACCESS TO EQUAL OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE AND AS APPROVED BY RIVER AUTHORITY.
- 19. CONTRACTOR MUST COMPLY WITH TEXAS GOVERNMENT CODE SECTION 2166.303 UNIFORM TRENCH SAFETY CONDITIONS.
- SHALL NOT BACKFILL ANY TRENCHES UNTIL INSPECTION CAN BE CONDUCTED BY THE RIVER AUTHORITY, NO OPEN TRENCHES SHALL BE PERMITTED OVERNIGHT. ALL ENDS OF OPEN PIPE SHALL BE PLUGGED OVERNIGHT.
- 21. CONTRACTOR SHALL HAVE THE LATEST APPROVED COPY OF PLANS AND SPECIFICATIONS ON SITE AT ALL TIMES FOR REFERENCE.
- 22. NO TREES SHALL BE REMOVED AS PART OF THIS PROJECT UNLESS OTHERWISE SPECIFIED IN THE PLANS.
- 23. FOR PORTIONS OF THE CONSTRUCTION THAT ARE WITHIN THE LIMITS OF THE 100-YEAR FLOODPLAIN, THE CONTRACTOR IS REQUIRED TO KEEP THE CHANNEL CLEAR OF POTENTIAL OBSTRUCTIONS TO FLOOD POTENTIAL OBSTRUCTIONS INCLUDE HEAVY CONSTRUCTION EQUIPMENT, TEMPORARY ROADS ACROSS CHANNEL, MATERIAL. STOCKPILED DEBRIS, AND ALL OTHER ITEMS DEEMED UNACCEPTABLE BY RIVER AUTHORITY. UNDER THREATENING WEATHER CONDITIONS AND WHERE FLOODING IS LIKELY. OBSTRUCTIONS SHALL BE IMMEDIATELY REMOVED CONTRACTOR AT NO ADDITIONAL COST TO RIVER AUTHORITY. THE CONTRACTOR ASSUMES ALL RISK FOR UNFINISHED WORK. NO EQUIPMENT OR MATERIALS SHALL BE STOCKPILED IN THE 100-YEAR FLOODPLAIN OVERNIGHT.
- 24. NO WASTE MATERIAL SHALL BE PLACED IN EXISTING DRAINAGE AREAS THAT WILL BLOCK OR ALTER FLOW LIMITS OR NATURAL DRAINAGE.
- 25. IF A THREATENED OR ENDANGERED PLANT OR ANIMAL SPECIES AND/OR CULTURAL/ARCHAEOLOGICAL RESOURCES ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL ARF STOP WORK IMMEDIATELY AND NOTIFY THE APPROPRIATE PERSONNEL.

- 26. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT NO 38. NO SANITARY SEWERS, OTHER THAN LATERALS AND FORCE MAINS, SANITARY SEWER OVERFLOW (SSO) OCCURS AS A RESULT OF THE WORK. ALL PERSONNEL RESPONSIBLE FOR SSO PREVENTION AND CONTROL SHALL BE TRAINED ON THE PROPER RESPONSE. SHOULD AN SSO OCCUR. THE CONTRACTOR SHALL:
- 26.1. IDENTIFY THE SOURCE OF THE SSO AND ATTEMPT TO ELIMINATE ANY ADDITIONAL SPILLAGE.
- 26.2. NOTIFY RIVER AUTHORITY CONSTRUCTION INSPECTIONS DIVISION AT (210) 302-4200 AND ATTEMPT TO ELIMINATE THE SOURCE OF THE SSO.
- 26.3. CONTAIN SEWAGE FROM THE SSO TO PREVENT CONTAMINATION OF WATERWAYS.
- 26.4. CLEAN UP THE SPILL AREA AND REMOVE CONTAMINATED MATERIALS
- 26.5. DISINFECT THE AREA OF THE SPILL THE PROPER MIXTURE OF HTH CHIORINE AND WATER
- 26.6. CLEAN THE AFFECTED SEWER LINE AND REMOVE ANY DEBRIS IDENTIFY AND TRAIN PERSONNEL RESPONSIBLE FOR SPILLAGE PREVENTION AND CONTROL.
- 26.8. NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE FOR THIS WORK. ALL WORK SHALL BE DONE ACCORDING TO GUIDELINES SET BY THE TCEQ AND RIVER AUTHORITY.
- 27. THE CONTRACTOR SHALL PROVIDE BYPASS PUMPING OF SEWAGE

- AROUND EACH SEGMENT OF PIPE TO BE REPLACED, CONTRACTOR SHALL HAVE STANDBY PUMPS AVAILABLE TO BYPASS FLOW IN CASE PRIMARY PUMP FAILS. THE CONTRACTOR SHALL PROVIDE SEQUENCE OF BYPASS PUMPING FOR REVIEW AND APPROVAL BY RIVER AUTHORITY. THE CONTRACTOR SHALL ALSO PROVIDE A DETAILED SKETCH SHOWING THE LOCATION OF BYPASS PUMPING; SPECIFICATIONS FOR THE PUMPING EQUIPMENT; AND TYPE, SIZE, CAPACITY AND NUMBER OF PUMPS REQUIRED TO HANDLE THE PEAK WET WEATHER FLOW.
- 28. CONTRACTOR WILL MAINTAIN SERVICE TO ALL EXISTING SANITARY SEWERS AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR WILL CLEAN ALL DEBRIS, GRAVEL, DIRT, ETC. OUT OF MANHOLES AND FIX ANY STOPPAGES CAUSED BY DEBRIS DURING CONSTRUCTION AT CONTRACTOR'S EXPENSE. ANY DAMAGE TO EXISTING MANHOLES OR SEWER MAIN WILL BE CORRECTED AT CONTRACTOR'S EXPENSE. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT DAMAGE TO EXISTING OR NEW RINGS, COVERS, OR CONES FROM EQUIPMENT AND MATERIALS USED OR TAKEN THROUGH THE WORK AREA. IF AN EXISTING OR NEW MANHOLE COVER, RING, OR CONE IS DAMAGED BY THE CONTRACTOR, IT SHALL BE REPLACED AS DIRECTED BY THE RIVER AUTHORITY INSPECTOR, MANHOLES WILL NEED TO BE RESEALED WITH RIVER AUTHORITY APPROVED SEALANT. SEAL COATING IS COMPROMISED, CONTRACTOR WILL MANHOLE RECOATED AND RESEAL ALL LEAKS AT CONTRACTOR
- 29. CONTRACTOR TO ENSURE ALL PLUGS USED TO PLUG SEWER LINES WHILE TESTING THE PROJECT ARE LABELED, MARKED OR TAGGED. THE CONTRACTOR SHALL RECORD HOW MANY PLUGS ARE BEING USED, AS WELL AS THE LOCATION AND IDENTIFICATION OF EACH PLUG. CONTRACTOR WILL REPORT TO PROJECT INSPECTOR OF ANY LOST OR UNRESTRAINED PLUGS, CONTRACTOR SHALL ONLY BE ALLOWED TO USE SCREW TYPE PLUG ON PROJECT
- 30. CONTRACTOR WILL BE HELD LIABLE FOR ANY DAMAGE TO SEWER COLLECTION SYSTEM, WASTEWATER TREATMENT EQUIPMENT, STOPPAGES, OVER-FLOWS, OR BACKUPS INTO HOMES CAUSED BY LOST OR RÚNAWAY SEWER PLUGS.
- 31. RIVER AUTHORITY IS NOT RESPONSIBLE FOR ANY ABNORMALITIES ON STUB OUT, INVERT, GRADE OR SLOPE FOR ANY EXISTING MANHOLE TIE-IN OR SERVICE LATERALS. CONTRACTOR SHALL BE RESPONSIBLE FOR RE-CONSTRUCTION, IF NECESSARY.

### MANHOLE NOTES:

- 32. ALL MANHOLES SHALL BE CONSTRUCTED PER LATEST DETAILED DRAWINGS AND SPECIFICATIONS, UNLESS AN EXCEPTION IS NOTED.
- 33. PENETRATION INTO THE MANHOLE WILL BE CORE DRILLED. ANY DAMAGE TO EXISTING MANHOLE WILL BE REPAIRED AT CONTRACTOR'S EXPENSE. IF EXISTING SEWER MANHOLE SEAL COATING IS COMPROMISED, ALL OF THE MANHOLE WILL BE RESEALED AND RECOATED PER CURRENT SPECIFICATIONS AND APPROVED PRODUCT LIST
- 34. IF ANY EXISTING MANHOLES CONNECTED WITH THIS PROJECT ARE FOUND TO HAVE INFILTRATION, THE MANHOLES SHALL BE SEALED AND TESTED AT CONTRACTORS EXPENSE.
- 35. UPON REQUEST FROM THE RIVER AUTHORITY, CONTRACTOR SHALL PROVIDE SAMPLE VERIFYING PROPER INSTALLATION OF FLOWABLE BACKFILL, INCLUDING, BUT NOT LIMITED TO CORE SAMPLES.

- 36. THE TYPE AND DESCRIPTION OF THE PIPE IS SHOWN ON THE PLANS. REFER TO RIVER AUTHORITY SPECIFICATIONS AND APPROVED PRODUCT LIST FOR MATERIALS, STIFFNESS, AND TYPE.
- 37. SIZES AND GRADES FOR SANITARY SEWER SHALL BE AS REQUIRED BY THE RIVER AUTHORITY ENGINEER.
- SHALL BE LESS THAN EIGHT (8) INCH IN DIAMETER.

## SEWER SERVICE LATERALS:

- 39. WHEN SEWER LATERALS ARE TO BE CONNECTED TO EXISTING SEWER MAINS AND NO STUB-OUT HAS BEEN PROVIDED, THE CONNECTION MUST BE CONDUCTED PER THE LATEST RIVER AUTHORITY STANDARD DETAILS AND APPROVED PRODUCT LIST, REFER TO THE RIVER AUTHORITY APPROVED PRODUCTS LIST FOR ACCEPTABLE FITTINGS
- 40. ALL RESIDENTIAL SERVICE LATERALS SHALL BE SDR 26 PVC WITH RATING OF 115 PSI OR 160 PSI, DETERMINED BY RIVER AUTHORITY SPECIFICATION. LINE SHALL BE EXTENDED TO THE PROPERTY LINE AND CAPPED AND SEALED, ATTACH SEWER BURIAL TAPE TO THE END OF ALL SEWER LATERALS AND BRING UP TO THE GROUND LEVEL FOR MARKER (GREEN). (SEE HOUSE LATERALS DETAILS).
- 41. UPON REQUEST FROM THE SAN ANTONIO RIVER AUTHORITY, CONTRACTOR SHALL PROVIDE SAMPLE VERIFYING PROPER INSTALLATION OF FLOWABLE BACKFILL, INCLUDING, BUT NOT LIMITED SANITARY SEWER PIPING:

- 42. THE TYPE AND DESCRIPTION OF THE PIPE IS SHOWN ON THE PLANS. REFER TO LATEST RIVER AUTHORITY SPECIFICATIONS AND APPROVED PRODUCT LIST FOR MATERIALS, STIFFNESS, AND TYPE.
- 43. SIZES AND GRADES FOR SANITARY SEWER SHALL BE AS REQUIRED BY THE RIVER AUTHORITY ENGINEER.
- 44. NO SANITARY SEWERS, OTHER THAN LATERALS AND FORCE MAINS, SHALL BE LESS THAN EIGHT (8) INCH IN DIAMETER.

- 45. TESTING SHALL NOT BE CONDUCTED UNTIL ALL OTHER UTILITIES WITHIN THE VICINITY OF SANITARY SEWER ARE FULLY INSTALLED.
- 46. TESTING SHALL BE CONDUCTED PER LATEST RIVER AUTHORITY SPECIFICATIONS AND SHALL NOT BEGIN WITHOUT 48 HOURS NOTICE TO RIVER AUTHORITY INSPECTOR.
- 47. A COPY OF ALL TESTING REPORTS, INCLUDING BACKFILL COMPACTION, SHALL BE FORWARDED TO THE RIVER AUTHORITY
- 48 DENSITY TESTING WILL BE REQUIRED ON ALL SANITARY SEWER TRENCHES INCLUDING SERVICE LATERALS. TESTING FOR SERVICE LATERALS TO BE IDENTIFIED BY RIVER AUTHORITY INSPECTOR AT RANDOM. DENSITY TESTING FOR SERVICE LATERALS SHALL NOT EXCEED 25% OF TOTAL NUMBER OF LATERALS.

# EXCAVATION:

- 49. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/ EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTORS TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCÁVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM OSHA STANDARDS FOR TRENCH EXCAVATIONS, SPECIALLY CONTRACTOR AND/OR CONTRACTORS INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
- 50. IF A SAFETY VIOLATION IS NOTED BY A RIVER AUTHORITY INSPECTOR, THE RIVER AUTHORITY RESERVES THE RIGHT TO STOP
- 51. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION.
- 52. CONTRACTOR IS RESPONSIBLE FOR UPDATING AND MAINTAINING ALL FIFLD UTILITY MARKINGS.

S A N A N T O N I O

RIVER AUTHORITY

100 E, GUENTHER STREET

SAN ANTONIO, TEXAS 78283

DESIGNED
DRAWN BY
CHECKED
APPROVED GENER.

SHEET

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