TRENCH EXCAVATION SAFETY PROTECTION
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 SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S 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.

CAUTION!!! THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL, DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

LEGAL DESCRIPTION
BEING LOT 61, BLOCK 4, CB 4712, OF THE TC COMMERCIAL PLAT, RECORDED IN VOL. XXXXX, PG. XXX OF THE PLAT RECORDS OF BEXAR, COUNTY, TEXAS

COORDINATION NOTE:

1. CONTACT SPECTRUM TO COORDINATE CABLE TV SERVICE. (210)-244-0500.

2. CONTACT CPS (CITY PUBLIC SERVICE) FOR INSPECTIONS AND CONDUIT SIZES FOR PRIMARY AND ELECTRICAL SERVICES. (210)-353-2256.

3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928.

4. CONTACT GFU (GREY FOREST UTILITIES) TO PLAN GAS SERVICES. (210)-695-5985.

5. CONTACT SAWS (SAN ANTONIO WATER SYSTEM) TO PLAN SANITARY SEWER AND WATER SERVICES. (210)-704-7297.

6. CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

EASEMENT KEY NOTES

1. 10' SOUTHWESTERN BELL EASEMENT (VOL. 1319, PG. 231, O.P.R.)
2. 28' GAS & ELECTRIC EASEMENT (VOL. 9561, PGS. 41 - 43, D.P.R.)
3. VARIABLE WIDTH GAS, ELECTRIC, TELEPHONE & CABLE TELEVISION EASEMENT (VOL. 9561, PGS. 41 - 43, D.P.R.)
4. 20' ELECTRIC EASEMENT (VOL. 17042, PG. 1973, O.P.R.)
5. 14' GAS, ELECTRIC, TELEPHONE & CABLE TELEVISION EASEMENT (PLAT NO. 23-11800148)
6. 16' WATER EASEMENT (PLAT NO. 23-11800148)
7. 16' SEWER EASEMENT (PLAT NO. 23-11800148)
8. 14' GAS, ELECTRIC, TELEPHONE & CABLE TELEVISION EASEMENT
9. 16' WATER EASEMENT
10. 16' SANITARY SEWER EASEMENT
11. 25' X 25' SANITARY SEWER TURNAROUND EASEMENT
12. VARIABLE WIDTH PRIVATE DRAINAGE EASEMENT (0.483 ACRES PERMEABLE)
13. VARIABLE WIDTH PUBLIC DRAINAGE EASEMENT (0.421 ACRES PERMEABLE)
14. VARIABLE WIDTH PUBLIC DRAINAGE EASEMENT (0.278 ACRES PERMEABLE)
15. VARIABLE WIDTH PUBLIC DRAINAGE EASEMENT (0.212 ACRES PERMEABLE)
16. 25' BUILDING SETBACK LINE

GRADING NOTES:

1. CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
2. ALL GRADES AND CONTOURS SHOWN ARE FINAL, TOP OF FINISHED SURFACE ELEVATIONS UNLESS OTHERWISE NOTED. CONTRACTOR SHALL SUBTRACT THICKNESS OF PAVEMENT, BASE, TOP SOIL, SOD, ETC. TO ACHIEVE SUBGRADE ELEVATION.
3. POSITIVE DRAINAGE SHALL BE MAINTAINED ON ALL SURFACE AREAS WITHIN THE SCOPE OF THIS PROJECT. DRAINAGE SHALL BE DIRECTED AWAY FROM ALL BUILDING FOUNDATIONS. CONTRACTOR SHOULD TAKE PRECAUTIONS NOT TO ALLOW ANY PONDING OF WATER.
4. NO ABRUPT CHANGE OF GRADE SHALL OCCUR IN THE ROADWAYS, PARKING AREAS, OR SIDEWALKS.
5. CONTRACTOR SHALL CONSTRUCT TO OBTAIN GRADES SHOWN HEREON ± ONE-TENTH (0.10) FOOT.
6. ALL DISTURBED AREAS SHALL BE REVEGETATED OR STABILIZED IN A MANNER APPROVED BY CIVIL ENGINEER. IF NO STABILIZATION IS SHOWN ON PLANS, CONTRACTOR SHALL ASSUME VEGETATION WILL BE REQUIRED. HYDROMULCH SEEDING OR SOD WILL BE ACCEPTABLE.
7. UTILITIES SHOWN ON THE PLANS ARE FROM THE BEST INFORMATION SOURCES AVAILABLE AT THE TIME OF DESIGN BUT MAY NOT REPRESENT ALL EXISTING UTILITIES ON SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
8. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT WHERE NOT SPECIFICALLY COVERED IN THE PROJECT SPECIFICATIONS SHALL CONFORM TO CITY OF SAN ANTONIO AND BEXAR COUNTY STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ORIGINAL OR BETTER CONDITION ANY DAMAGES DONE TO EXISTING BUILDINGS, UTILITIES, FENCES, PAVEMENT, CURBS, SIDEWALKS, OR DRIVEWAYS (NO SEPARATE PAY ITEM).
10. DUE TO FEDERAL REGULATION TITLE 49, PART 192.191, C.P.S. ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL NECESSARY UTILITY COMPANIES FOR PROVIDING TEMPORARY UTILITY SERVICES DURING CONSTRUCTION. THE CONTRACTOR SHALL PAY FOR ALL TEMPORARY UTILITY SERVICES.
12. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, PLACEMENT, OR LIMITS OF DIMENSIONS OR GRADES NECESSARY FOR CONSTRUCTION OF THIS PROJECT.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS, AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
14. ALL EXCAVATION IS UNCLASSIFIED.
15. ALL BACKFILL MUST BE IN COMPACTED 12 - INCH LIFTS MAXIMUM, AND NO WATER JETTING IS ALLOWED.
16. ALL CURBS ARE 6 INCH UNLESS OTHERWISE SPECIFIED.
17. SEE CIVIL DETAIL SHEETS FOR APPLICABLE DETAILS.
18. ALL CONSTRUCTION AREAS WITHIN THE SITE SHALL BE STRIPPED OF ALL VEGETATION AND LOOSE TOPSOIL. ANY POCKETS OF DEBRIS ENCOUNTERED SHOULD ALSO BE REMOVED.
19. REFER TO GEOTECHNICAL REPORT FOR SUBSURFACE INFORMATION AND CONSTRUCTION GUIDELINES.
20. ALL EARTHEN SLOPES SHALL BE A MAXIMUM OF 3:1 AND A MINIMUM OF 2% UNLESS OTHERWISE SHOWN.
21. TREE PROTECTION SHALL BE PERFORMED FOR ANY TREES BEING PRESERVED ON PROPERTY.
22. MAXIMUM SLOPE ON HANDICAP ACCESSIBLE PARKING SPACES IS 2% IN ANY DIRECTION. CROSS SLOPES ON SIDEWALKS AND FLATWORK AROUND BUILDINGS SHALL NOT EXCEED 2%. SLOPE ALONG THE LENGTH OF SIDEWALKS SHALL NOT EXCEED 5%.
23. EXISTING AND PROPOSED SIDEWALK WITHIN RIGHT OF WAY SHALL NOT EXCEED 2% CROSS SLOPE. SLOPE ALONG THE LENGTH OF SIDEWALKS SHALL NOT EXCEED 5%. CONTRACTOR TO ANALYZE EXISTING SIDEWALK TO DETERMINE IF ANY ADDITIONAL SIDEWALK WILL REQUIRE REMOVAL AND REWORK TO MEET THESE CONSTRAINTS.

EXISTING UTILITY NOTES:

1. THIS PLAN HAS BEEN PREPARED TO THE BEST OF OUR ABILITY USING THE DATA AVAILABLE. EXISTING UTILITY DATA SHOWN ON THIS LAYOUT WAS OBTAINED FROM A SURVEY OF THE VISIBLE FEATURES AT THE SITE AND PUBLIC RECORD MAPS OBTAINED FROM UTILITY COMPANIES.
2. IT IS ESSENTIAL THAT 48 HOURS PRIOR TO CONSTRUCTION ALL UTILITY COMPANIES BE NOTIFIED TO LOCATE AND TAG THEIR UNDERGROUND FACILITIES PRIOR TO EXCAVATION.
3. THE CONTRACTOR NEEDS TO ALLOW FOR THE POSSIBILITY OF UNDETECTED UNDERGROUND UTILITIES WHETHER SHOWN ON THE PLANS OR NOT. ALSO, THE CONTRACTOR MUST ALLOW FOR CHANGES DUE TO UTILITIES BEING IN LOCATIONS DIFFERENT FROM THOSE SHOWN ON THE UTILITY RECORD DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND EXPOSING CONFLICTS PRIOR TO CONSTRUCTION.
4. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO THE CONSTRUCTION AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF SAME DURING CONSTRUCTION WHETHER SHOWN ON THE PLANS OR NOT.

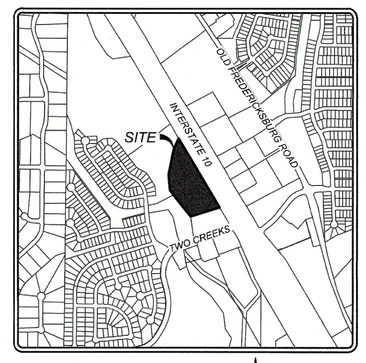
STORM DRAIN GENERAL NOTES:

1. THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH FINAL PLAN OR RECORD MEASUREMENTS, LOCATIONS, TOPS AND LENGTH OF SERVICE CONNECTIONS AND UNDERGROUND PIPING UPON COMPLETION OF CONSTRUCTION.
2. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT, PRIOR TO THE START OF CONSTRUCTION.
3. ALL GARBAGE OR SPOIL MATERIAL FROM THIS WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AT HIS EXPENSE.
4. THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE, AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL, DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHALL BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT THE CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.
5. ALL ONSITE STORM DRAIN PIPES WILL BE PRIVATE AND NOT DEDICATED TO THE CITY OF SAN ANTONIO.
6. ALL STORM DRAIN PIPE SHALL BE HDPE N-12 PROLINK ULTRA HDPE PIPE (UNLESS NOTED OTHERWISE) WITH BELLED ENDS AND WITH RUBBER GASKETS. NO SUBSTITUTIONS SHALL BE ALLOWED UNLESS AUTHORIZED BY OWNER.
7. ALL LENGTHS OF PIPE ARE TO INSIDE FACE OF STRUCTURES.
8. CONTRACTOR SHALL ENSURE PROPER SIZE OF JUNCTION BOXES NEEDED WHERE INDICATED ON PLAN. CONTRACTOR SHALL CONNECT STORM DRAIN PIPE TO JUNCTION BOXES PER MANUFACTURERS SPECIFICATIONS. SIZE OF GRATE INLETS ARE REFERENCED FOR PROPER SIZE OF GRATES AND DO NOT REFLECT SIZE OF PROPOSED JUNCTION BOXES ASSOCIATED WITH GRATE COVERS.

NOTE: CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL PIPE, MANHOLES, JUNCTION BOXES, ADA ACCESSIBLE TRENCH DRAINS, ETC. TO ENGINEER PRIOR TO ORDERING MATERIALS FOR CONSTRUCTION.

TREE PROTECTION NOTES:

1. A ROOT PROTECTION ZONE WILL BE ESTABLISHED AROUND EACH TREE OR ANY VEGETATION TO BE PRESERVED TO MEET THE LANDSCAPE OR TREE PRESERVATION ORDINANCES. THE ROOT PROTECTION ZONE SHALL BE AN AREA DEFINED BY THE RADIUS EXTENDING OUTWARD FROM THE TRUNK OF THE TREE A DISTANCE OF ONE (1) LINEAR FOOT FOR EACH INCH DIAMETER INCH AT BREAST HEIGHT (4.5') OF THE TREE. A 10-INCH DIAMETER TREE WILL HAVE A 10 FOOT RADIUS ROOT PROTECTION ZONE.
2. NO WORK SHALL BEGIN WHERE TREE PROTECTION FENCING HAS NOT BEEN COMPLETED AND APPROVED. TREE PROTECTION FENCING SHALL BE INSTALLED, MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING CONSTRUCTION. THE FENCING WILL BE A MINIMUM OF 4' HEIGHT.
3. ALL ROOTS LARGER THAN ONE-INCH IN DIAMETER ARE TO BE CUT CLEANLY AND OAK WOUNDS PAINTED WITHIN 30 MINUTES.
4. EXPOSED ROOTS SHALL BE COVERED AT THE END OF THE WORK DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH OR WET BURLAP.
5. NO EQUIPMENT, VEHICLES OR MATERIALS SHALL BE OPERATED OR STORED WITHIN THE ROOT PROTECTION ZONE. NO CLEAN-OUT AREAS WILL BE CONSTRUCTED SO THAT THE MATERIAL WILL BE IN OR MIGRATE TO THE ROOT PROTECTION ZONE.
6. NO GRADE CHANGE MORE THAN 3" IS ALLOWED WITHIN THE ROOT PROTECTION ZONE.
7. ROOTS OR BRANCHES IN CONFLICT WITH CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. All OAK WOUNDS SHALL BE PAINTED WITHIN 30 MINUTES TO PREVENT OAK WILT INFECTION.
8. ANY TREE REMOVAL SHALL BE APPROVED BY THE CITY ARBORIST (207-8053).
9. TREES WHICH ARE DAMAGED OR LOST DUE TO THE CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED.
10. TREES MUST BE MAINTAINED IN GOOD HEALTH THROUGHOUT THE CONSTRUCTION PROCESS. MAINTENANCE MAY INCLUDE WATERING THE ROOT PROTECTION ZONE AND OR WASHING FOLIAGE.
11. NO WIRES, NAILS OR OTHER MATERIALS MAY BE ATTACHED TO PROTECTED TREES.

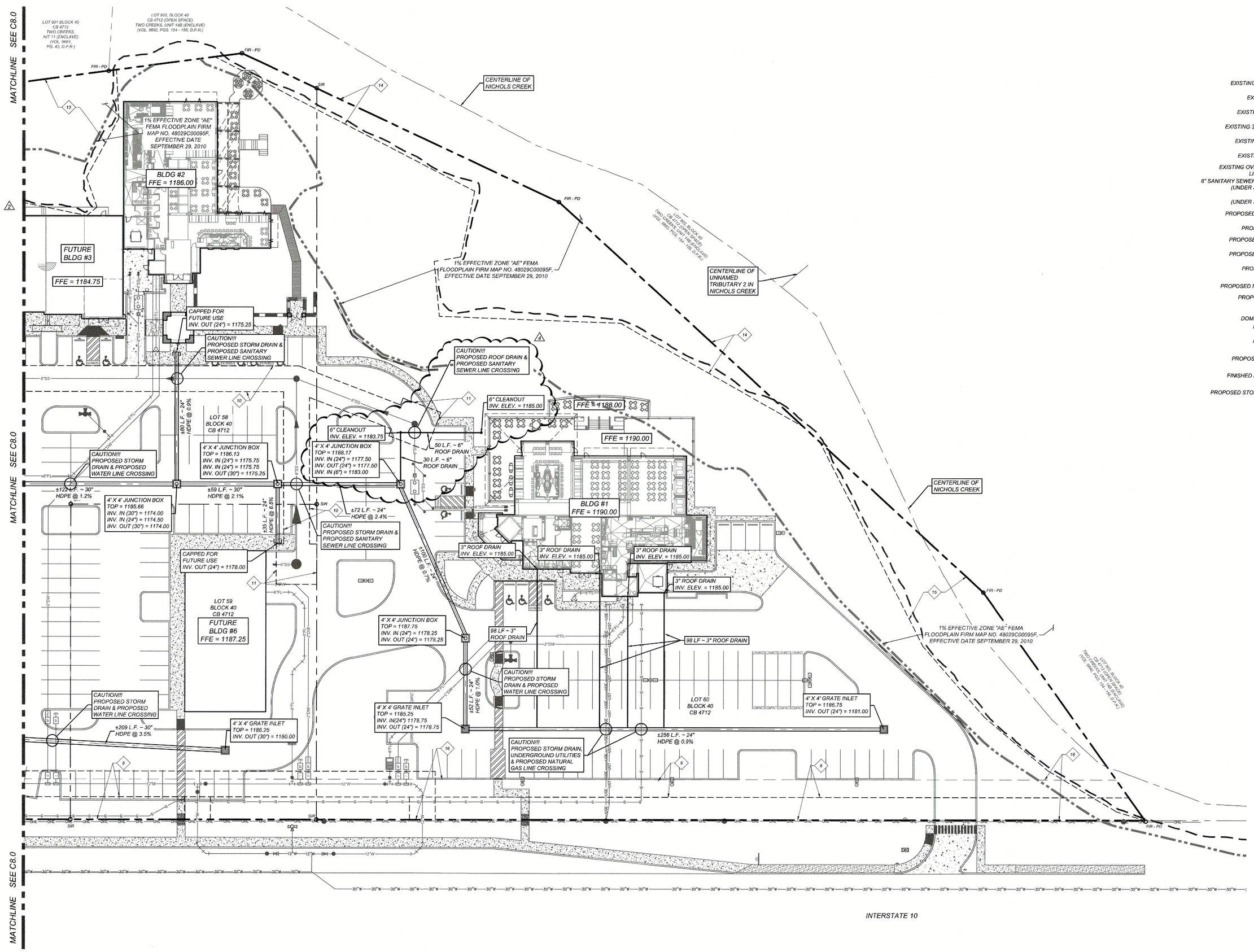


LOCATION MAP
NOT-TO-SCALE

SCALE : 1" = 30'
0' 30' 60' 90'

LEGEND

PROPERTY LINE	
EXISTING CONCRETE CURB	
EXISTING CONCRETE	
EXISTING FIRE HYDRANT	
EXISTING 30" D.I. WATER LINE	30"W
EXISTING 12" WATER LINE	12"W
EXISTING 6" WATER LINE	6"W
EXISTING OVERHEAD ELECTRIC LINE & POWER POLE	OHE
8" SANITARY SEWER MAIN & MANHOLE (UNDER SEPARATE COVER)	8"SS
12" WATER LINE (UNDER SEPARATE COVER)	12"W
PROPOSED CONCRETE CURB	
PROPOSED CONCRETE	
PROPOSED UNDERGROUND ELECTRIC LINE	UGE
PROPOSED UNDERGROUND TELEPHONE LINE	UGT
PROPOSED OVERHEAD UTILITIES LINE	OHU
PROPOSED NATURAL GAS LINE	G
PROPOSED 6" SANITARY SEWER LATERAL	6"SS
PROPOSED 2" DOMESTIC WATER LINE	2"DW
PROPOSED 8" FIRE WATER LINE	8"FL
PROPOSED 6" FIRE WATER LINE	6"FL
PROPOSED FIRE HYDRANT	
FINISHED FLOOR ELEVATION	FFE = 1190.00
PROPOSED STORM DRAIN SYSTEM	



KFW ENGINEERS + SURVEYING
has joined Colliers Engineering & Design
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REVISIONS	ISSUE DATE
0. ISSUED FOR PRICING	09/13/2023
1. STORM DRAIN REVISIONS	02/23/2024
2. SITE PLAN	03/25/2024
4. STORM / WASTEWATER UPDATES	08/07/2024

STATE OF TEXAS
COYD L. ARMSTRONG
87917
LICENSED
PROFESSIONAL ENGINEER
08/7/24

THE CRESCENT
25839 INTERSTATE 10, SAN ANTONIO, TX 78255
DRAINAGE PLAN

PLAT NO. LAND-PLAT-21-11800516
JOB NO. 943-01-02
DATE: August 7, 2024
DRAWN: J.W. CHECKED: J.W.
SHEET NUMBER:
C8.1

Date: Aug 07, 2024, 6:15pm User ID: aogja
File: K:\943\01\02\Design\Civil\943\01\02.dwg

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