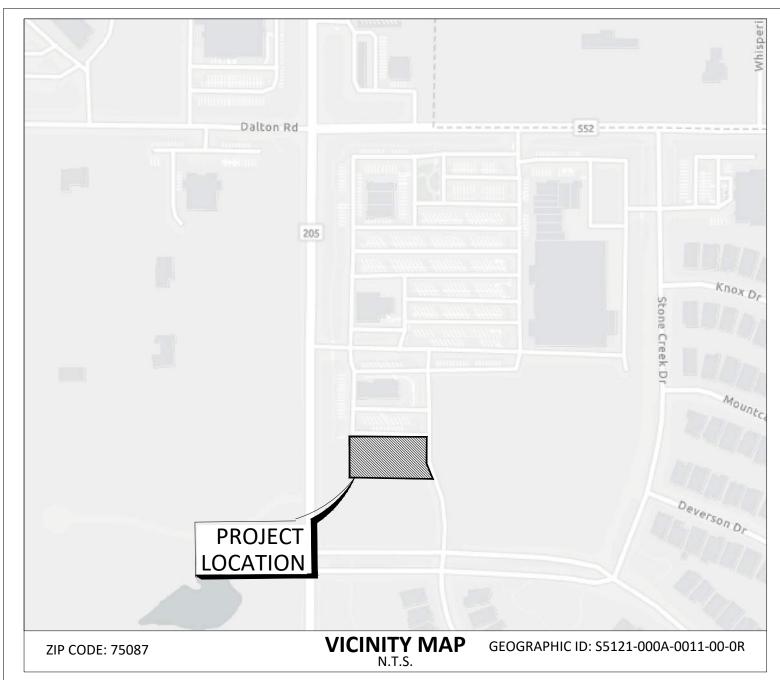
CONSTRUCTION CIVIL SITE WORK **FOR**

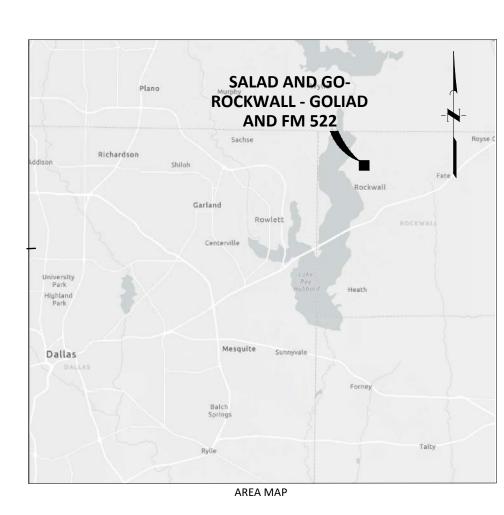
SALAD AND GO - ROCKWALL - GOLIAD ST AND FM 522

FOR SALAD AND GO CONCEPTS LLC 3068 N GOLIAD ST ROCKWALL, TEXAS 75087 **ROCKWALL COUNTY, TEXAS**



FEBRUARY 2023





OWNER

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CIVIL ENGINEER

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LANDSCAPE

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CONTACT: AMANDA W. RICHARDSON

NUMBER 48397C0030L, EFFECTIVE ON SEPTEMBER 26, 2021

THIS PROPERTY IS LOCATED IN NON-SHADED ZONE "X" AS SCALED FROM THE FEMA FLOOD INSURANCE RATE MAP AND IS LOCATED IN COMMUNITY NUMBER 480547 AS SHOWN ON MAP

REVISIONS

TEXAS811 NOTIFICATION SYSTEM CALL BEFORE YOU DIG!!! www.texas811.org/ 1-800-344-8377

NTMWD NOTES

- 1. NORTH TEXAS MUNICIPAL WATER DISTRICTS (NTMWD) 20-INCH WATER TRANSMISSION
- PIPELINES ARE LOCATED WITHIN LIMITS OF CONSTRUCTION.
- OPERATION OF HEAVY EARTHMOVING EQUIPMENT, COMPACTION EQUIPMENT ORHEAVY CONSTRUCTION EQUIPMENT, SUCH AS CONCRETE TRUCKS, SHALL BE RESTRICTED TO SPECIFIC CROSSING POINTS ACROSS NTMWD EASEMENTS, AS APPROVED BY THE NTMWD. THE CROSSINGS SHALL BE DESIGNATED AND VERIFIED TO PROVIDE A MINIMUM OF FIVE-FEET OF COVER.
- ASSURE THAT PLACING OF SIGNIFICANT LOADS OVER THE NTMWD PIPELINE DOES NOT DAMAGE THE EXISTING PIPELINE, NO MATERIALS SHALL BE STOCKPILED ON THE NTMWD EASEMENT WITHOUT AUTHORIZATION FROM THE NTMWD. IF THE CONTRACTOR DESIRES TO USE NTMWD'S EASEMENT FOR STOCKPILE OF MATERIALS, CONTACT NTMWD ENGINEERING AT (972) 442-5405 SO YOUR PLANS FOR USE OF NTMWD'S EASEMENT CAN BE REVIEWED.
- 4. A MINIMUM OF 4.5 FEET SEPARATION BETWEEN BOTTOM OF PAVEMENT AND TOP OF NTMWD PIPELINE IS REQUIRED. IN ADDITION, IF SEPARATION BETWEEN BOTTOM OF PAVEMENT AND TOP OF PIPELINE IS LESS THAN 4.5 FEET, THEN A THICKENED PAVEMENT
- CROSSING OF THE NTMWD EASEMENT WITH OTHER UTILITIES, SUCH AS TV CABLE, PHONE, GAS AND ELECTRIC, SHALL BE COORDINATED WITH THE NTMWD TO AVOID DAMAGE TO THE NTMWD FACILITIES.
- 6. OUTDOOR LIGHTING, LANDSCAPING, SCREENING WALLS OR OTHER FACILITIES SHALL NOT BE INSTALLED IN NTMWD EASEMENTS WITHOUT WRITTEN APPROVAL OF THE
- 7. UNLESS OTHERWISE SHOWN OR REQUIRED, A MINIMUM OF TWO-FOOT CLEARANCE SHALL BE PROVIDED FOR ALL UTILITIES CROSSING THE NTMWD PIPELINES.
- 8. "THE CONTRACTOR SHALL CONTACT NTMWD LINE LOCATES AT (469) 626-4569 AT LEAST 48 HOURS PRIOR TO PERFORMING ANY WORK IN THE VICINITY OF THE NTMWD

PREPARED BY



JOB NUMBER 17007-0037-00

RYAN J ALCALA

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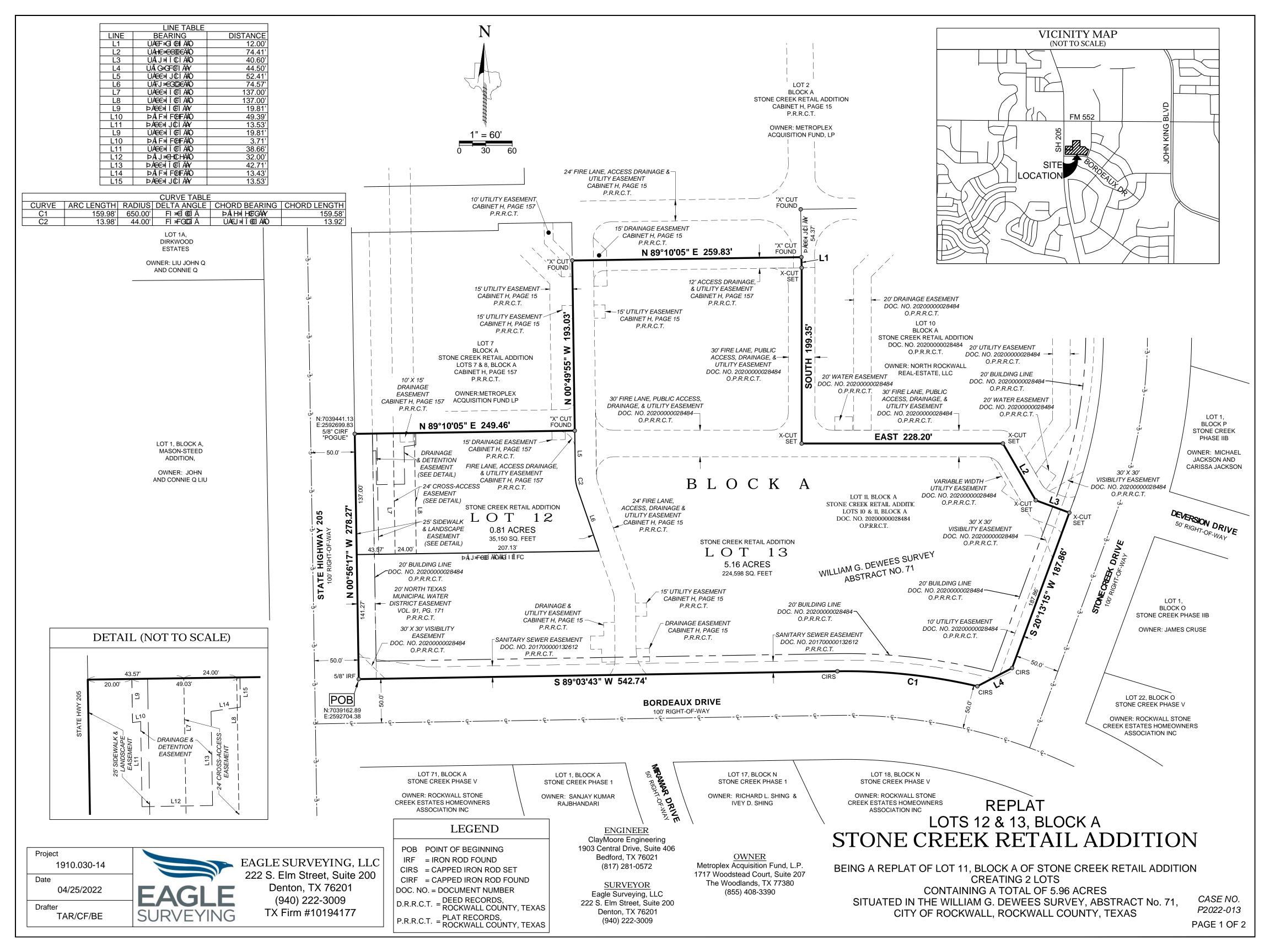
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RECORD DRAWING

TO THE BEST OF OUR KNOWLEDGE QUIDDITY ENGINEERING INC., HEREBY STATES THAT THIS PLAN IS ASBUILT. THIS INFORMATION PROVIDED IS BASED ON POST CONSTRUCTION SURVEYING AT THE SITE AND INFORMATION PROVIDED BY THE CONTRACTOR.





GENERAL CONSTRUCTION NOTES ALL REINFORCING STEEL SHALL BE DEFORMED BILLED STEEL BAR HAVING A MINIMUM YIELD STRENGTH OF NOT LESS 1. THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THESE PLANS AND THAN 60 KSI CONFORMING TO ASTM A615, GRADE 50. 1. DEMOLITION OF EXISTING STRUCTURES AND IMPROVEMENTS SHALL INCLUDE ALL WORK CONTAINED ON THESE PLANS, OTHER CONSTRUCTION DRAWINGS OF DIFFERING DISCIPLINES & SPECIFICATIONS. BUT SHALL NOT BE LIMITED TO THE ITEMS SPECIFICALLY IDENTIFIED. ANY MATERIALS TO BE DEMOLISHED OR CLEARED 2. ALL REINFORCING STEEL SHALL BE FREE FROM RUST OR OTHER BOND REDUCING AGENTS. SHALL BE COMPLETELY REMOVED AND DISPOSED OF. THIS WORK WILL NOT ONLY CONSIST OF ABOVE GROUND ITEMS. 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES OR SERVICE LINES THAT BUT UNDERGROUND FLEMENTS AS WELL, INCLUDING BUT NOT LIMITED TO: TREE ROOTS, FOUNDATION SYSTEMS, OLD ARE CROSSED OR EXPOSED DURING CONSTRUCTION OPERATIONS. WHERE EXISTING UTILITIES OR SERVICE LINES ARE 3. ALL SPLICES IN PAVEMENT AND CURBING STEEL SHALL BE STAGGERED AND LAPPED 30"XBAR DIAMETER OR 12", PIPES, ETC... THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY ADDITIONAL ITEMS THAT REQUIRE DEMOLITION, CUT, BROKEN, OR DAMAGED, THE CONTRACTOR SHALL REPAIR OR REPLACE THE UTILITIES OR SERVICE LINE WITH THE NOT IDENTIFIED ON THIS PLAN, PRIOR TO REMOVAL. SAME TYPE OF MATERIAL AND CONSTRUCTION OR BETTER; THIS MATERIAL AND WORK SHALL BE AT THE 4. CONCRETE COVERAGE FOR THE REINFORCING STEEL SHALL COMPLY WITH THE A.C.I. CODE, LATEST EDITION, THE STEEL 2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO STAGE AND SEQUENCE ALL DEMOLITION WORK WITH THE ENGINEER & UTILITY COMPANIES TO PROVIDE MINIMAL INTERRUPTION AND INCONVENIENCE OF UTILITY SERVICES AND SHALL HAVE A MINIMUM 1 1/2" CLEARANCE WITH THE SOIL. 3. DURING THE EXECUTION OF THE WORK, THE CONTRACTOR SHALL MAINTAIN THE PROJECT SITE IN AN ORDERLY AND SUCH SEQUENCE AND STAGING OF WORK SHALL BE APPROVED BY THE ENGINEER PRIOR TO COMMENCEMENT OF ACCEPTABLE MANNER AS FAR AS PRACTICAL. THE CONTRACTOR SHALL CLEAN AND REMOVE FROM THE PROJECT AREA ALL SURPLUS AND DISCARDED MATERIALS, TEMPORARY STRUCTURES, AND DEBRIS OF ANY KIND AND SHALL LEAVE THE PROJECT SITE IN A NEAT AND ORDERLY CONDITION. ALL CLEAN UP WILL BE DONE TO THE SATISFACTION OF THE 3. DEMOLISHED SURPLUS MATERIAL SHALL BE LEGALLY DISPOSED OF OFF-SITE. 4. ALL PAVEMENT EDGES, BOUNDING THE CONSTRUCTION AREA & MATCHING WITH NEW CONSTRUCTION, SHALL BE 4. CONTRACTOR SHALL COMPLY WITH LATEST EDITION OF OSHA REGULATIONS AND THE STATE OF TEXAS LAWS 1. CONTRACTOR SHALL PROVIDE SIGNED AND SEALED PLANS AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE NEATLY SAW CUT, UNLESS GRAVEL, FLEXIBLE PAVEMENT SHALL BE SAW CUT A MINIMUM OF 24" BEYOND ANY WITH PART VI OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TEXAS MUTCD, MOST RECENT CONCERNING EXCAVATION PROPOSED STRUCTURES. EDITION WITH REVISIONS) DURING CONSTRUCTION. 7. AN ORIGINAL SIGNED APPROVED CONSTRUCTION DRAWINGS MUST BE KEPT ON SITE AT ALL TIMES THROUGH OUT THE 5. THE CONTRACTOR SHALL CLEAR ALL RIGHT-OF-WAYS AND EASEMENTS CONTAINED IN THESE CONSTRUCTION ENTIRE DURATION OF CONSTRUCTION OF THIS PROJECT. CONTRACTOR SHALL MAINTAIN A SET OF REDLINE DRAWINGS, LANE CLOSURE WILL NOT BE ALLOWED UNLESS APPROVED BY THE AREA OR CITY ENGINEER, WHICHEVER IS RECORDING AS-BUILT CONDITIONS DURING CONSTRUCTION. THESE REDLINE MARKED UP DRAWINGS WILL BE SUBMITTED TO THE DESIGN CONSULTANT WHO WILL MAKE THE CHANGES ON THE ORIGINAL TRACINGS, LABELING 6. THE CONTRACTOR SHALL FIELD VERIFY AND LOCATE ALL EXISTING UTILITIES ON SITE PRIOR TO DEMOLITION. 3. THE WORK SHALL BE COMPLETED SUCH THAT THE ROADWAY WILL BE FULLY OPENED TO TRAFFIC OVERNIGHT. EACH SHEET IN THE SET AS "RECORD DRAWINGS", AND RETURNING SAME TO THE COUNTY ENGINEER. OVERNIGHT LANE CLOSURES WILL NOT BE PERMITTED. UNLESS OTHERWISE APPROVED BY THE APPLICABLE ENGINEER. 7. THE CONTRACTOR SHALL PERFORM DEMOLITION ACTIVITIES AS NOTED AND SHOWN ON THESE PLANS AND AS 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFEGUARDING AND PROTECTING ALL MATERIAL AND EQUIPMENT STORED ON THE JOBSITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STORAGE OF MATERIALS IN A SAFE AND 4. PLASTIC DRUMS SHALL BE USED FOR OVERNIGHT DELINEATION OF OFF ROADWAY WORK AREAS. WORKMANLIKE MANNER TO PREVENT INJURIES, DURING AND AFTER WORKING HOURS, UNTIL PROJECT COMPLETION. 8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY PERMITS AND PAY ANY FEES REQUIRED FOR 5. THE STANDARD TXDOT TRAFFIC CONTROL PLAN (TCP1-1-98) IS ISSUED FOR REFERENCE ONLY. IF REQUIRED, THE DEMOLITION AND DISPOSAL FROM THE APPROPRIATE AUTHORITIES. 9. CONTRACTOR SHALL SAW CUT REMOVE AND REPLACE CONCRETE PLACEMENT, CURB AND GUTTER AS REQUIRED TO CONTRACTOR SHALL PROVIDE TXDOT WITH A SITE SPECIFIC TRAFFIC CONTROL PLAN FOR APPROVAL AND USE. CONSTRUCT PROPOSED IMPROVEMENTS. 9. THE CONTRACTOR SHALL INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES, AS SHOWN ON THE SWPPP, PRIOR 10. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PAY FOR AND OBTAIN ALL REQUIRED PERMITS AND INSPECTION APPROVALS FOR ALL WORK SHOWN. 10. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES THAT ARE TO REMAIN IN PLACE. 11. ANY ADJACENT PROPERTY AND RIGHT-OF-WAY DISTURBED DURING CONSTRUCTION WILL BE RETURNED TO THEIR 11. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO AVOID UNNECESSARY DAMAGE TO ANY EXISTING ROAD 1. EROSION CONTROL MEASURES SHOWN SHALL BE CONSIDERED THE VERY MINIMAL REQUIRED. IT SHALL BE THE EXISTING CONDITIONS OR BETTER. RESPONSIBILITY OF THE CONTRACTOR TO IMPLEMENT ALL OTHER EROSION CONTROL MEASURE (DIVERSION BERMS DRAINAGE STRUCTURES, SWALES, ADDITIONAL FENCING, ETC...) NECESSARY TO KEEP THE EXISTING IMPROVEMENTS 12. ALL WORK WITHIN THE STATE, COUNTY, OR CITY RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH 12. ALL EXISTING ITEM THAT ARE TO REMAIN IN PLACE WHICH ARE ADVANTAGED DURING CONSTRUCTION SHALL BE AND DEVELOPMENTS FROM DAMAGE OF ANY KIND, DURING ALL PHASES OF DEMOLITION AND CONSTRUCTION. RESTORED TO ORIGINAL CONDITION, OR BETTER, AT THE SOLE EXPENSE OF THE CONTRACTOR. APPLICABLE STANDARDS AND SPECIFICATIONS AS TO THE INSTALLATION AND EROSION CONTROL PROTECTION. THE SITE OPERATOR, OR HIS REPRESENTATIVE ESTABLISHED BY A LETTER OF DELEGATION, SHALL MAKE A VISUAL 13. SHOULD ANY EXITING UTILITIES NOT SHOWN OR SHOWN INCORRECTLY ON THIS PLACE BE FOUND ON SITE. THE 13. ALL EXPOSED DIRT SURFACES SHALL BE SEEDED/HYDROMULCHED. YARDS WITH SOD SHALL BE RESODDED TO THE SAME 2. INSPECTION OF ALL SILTATION CONTROLS AND NEWLY STABILIZED AREAS ON A DAILY BASES: ESPECIALLY AFTER A CONDITIONS OR BETTER. CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY TO DISCUSS ANY POSSIBLE CONFLICTS BEFORE RAINFALL TO INSURE THAT ALL CONTROLS ARE MAINTAINED AND PROPERLY FUNCTIONING. ANY DAMAGED PROCEEDING WITH ANY WORK IN THAT AREA. CONTROLS SHALL BE REPAIRED PRIOR TO THE END OF THE WORK DAY, INCLUDING RE-SEEDING AND MULCHING OR 14. THE CONTRACTOR SHALL NOT CREATE A DIRT NUISANCE OR SAFETY HAZARD IN ANY STREET. THE PAVEMENT SHALL BE 14. AN ASBESTOS SURVEY MUST BE PERFORMED PRIOR TO THE DEMOLISHING ON ANY STRUCTURES, THE CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS SET FORTH IN THE ASBESTOS SURVEY AND REPORT. ALL SEDIMENT TRAPPING DEVICES SHALL BE INSTALLED AS SOON AS PRACTICAL AFTER THE AREA HAS BEEN 15. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR DISTURBED, ALL SEDIMENT TRAPPING DEVICES SHALL BE CLEANED WHEN THE SEDIMENT LEVEL REACHES 25% STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO EXISTING CONDITIONS OR BETTER. CAPACITY, SEDIMENT SHALL BE DISPOSED OF BY SPREADING ON SITE OR HAULING AWAY IF NOT SUITABLE FOR FILL. 16. THE CONTRACTOR SHALL COORDINATE ALL FENCE REMOVAL AND REPLACEMENT WITH THE DEVELOPER. 4. DURING CONSTRUCTION, CONTRACTOR SHALL MAINTAIN BEST MANAGEMENT PRACTICE (BMP). SEDIMENT FENCE, OR OTHER SEDIMENT FENCE TRAPPING DEVICES SHALL CONTROL ALL STORM WATER LEAVING THE SITE. 17. THE CONTRACTOR AGREES TO REPAIR ANY DAMAGE TO THE PUBLIC RIGHT-OF-WAY IN ACCORDANCE WITH THE STANDARDS OF THE APPLICABLE REGULATORY AGENCY. 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING TEMPORARY FROSION CONTROL MEASURES AS DIMENSIONAL CONTROL NOTES: 18. THE CONTRACTOR SHALL PROTECT ALL MONUMENTS, IRON PINS, AND PROPERTY CORNERS DURING CONSTRUCTION. REQUIRED FOR DIFFERENT PHASES OF CONSTRUCTION. EROSION CONTROL MEASURES SHOWN MAY NEED TO BE ADJUSTED TO HANDLE INCREASED OR CONCENTRATED FLOWS CREATED BY VARIOUS STAGES OF THE CONSTRUCTION. THE CONTRACTOR MAY OBTAIN AN ELECTRONIC COPY OF THE SITE PLAN FOR CONSTRUCTION PURPOSES. THE ELECTRONIC FILE AND INFORMATION GENERATED, BY JONES CARTER, INC. (J/C), FOR THIS PROJECT IS CONSIDERED BY 6. THE CONTRACTOR IS RESPONSIBLE FOR FILING A NOTICE OF INTENT PRIOR TO COMMENCEMENT OF WORK AND A J|C TO BE CONFIDENTIAL. WHEN ISSUED. IT'S USE IS INTEND SOLELY FOR THE INDIVIDUAL OR ENTITY TO WHICH IT IS NOTICE OF TERMINATION AT THE COMPLETION OF THE PROJECT TO THE TCEQ, A LAMINATED COPY OF THE ADDRESSED. THIS MATERIAL IS INTENDED FOR USE BY THE RECIPIENT NAMED. ONLY, AND PERMISSION IS NOT GRANTED CONSTRUCTION SITE NOTICE NOI AND SWPPP, VISIBLE FROM THE PUBLIC RIGHT-OF-WAY. SHALL BE POSTED AT THE TO THE RECIPIENT FOR DISTRIBUTION OF THESE DOCUMENTS IN ANY FORM OR FASHION. THE RECIPIENT UNDERSTANDS THAT THIS DATA IS AUTHORIZED "AS IS" WITHOUT ANY WARRANTY AS TO ITS PERFORMANCE, ACCURACY, FREEDOM FROM ERROR, OR AS TO ANY RESULTS GENERATED THROUGH ITS USE. THE RECIPIENT ALSO UNDERSTANDS AND AGREES 7. PHASE TWO EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IMMEDIATELY AFTER CONSTRUCTION OF THEIR THAT J|C, UPON RELEASE OF SUCH DATA, IS NO LONGER RESPONSIBLE FOR THEIR USE OR MODIFICATION. THE USER ASSOCIATE IMPROVEMENTS. INLET PROTECTION BARRIERS SHALL BE CONSTRUCTED WITH HAY BALES OR SILT EXISTING TREES, STUMPS, AND LARGE TREE ROOT SYSTEMS, SHALL BE GRUBBED AND REMOVED, VEGETATION SHALL BE AND RECIPIENT OF THE ELECTRONIC DATA ACCEPTS FULL RESPONSIBILITY AND LIABILITY FOR ANY CONSEQUENCES FENCING. INLETS LOCATED IN PAVEMENT SHALL BE PROTECTED WITH SAND BAGS, REPLACING THE HAY BALES OR SILT REMOVED AND THE TOP 6" OF TOP SOIL AND SUBGRADE SHALL BE STRIPPED FROM THE AREAS COVERED BY THE FENCING. ONCE THE PAVEMENT IS IN PLACE, EROSION CONTROL MEASURES SHALL BE KEPT IN PLACE UNTIL UPSTREAM ARISING OUT OF THEIR USE PROPOSED IMPROVEMENTS. DRAINAGE AREAS ARE FULLY STABILIZED. 2. ALL DIMENSIONS SHOWN ARE TO BE USED IN CONJUNCTION WITH THESE PLANS FOR LOCATING ALL IMPROVEMENTS 2. PAVING AREAS SHALL BE PROOF-ROLLED AND, IF REQUIRED AT THE TIME OF CONSTRUCTION, THE CONTRACTOR SHALL AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR FOR WORKABILITY PRIOR TO CONSTRUCTION OF IMPROVEMENTS. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SEDIMENT CONTROL DEVICES AFTER THE SITE HAS BEEN SEEDED STABILIZE WEAK AREAS AS DIRECTED BY THE ENGINEER. MITIGATION OF WEAK AREAS MAY INCLUDE OVER EXCAVATION AND/OR SODDED, AND GROUND COVER HAS TAKEN ROOT. AND BACKFILLING, REPROCESSING TO REMOVE MOISTURE, MODIFICATION WITH LIME OR CEMENT ADMIXTURE, OR 3. UNLESS OTHERWISE SHOWN, ALL DIMENSIONING IS TO THE FACE OF CURB OR EDGE OF PAVEMENT, WHICHEVER IS USING GEOTEXTILES, FOLLOWING PROOF-ROLLING, THE SUBGRADE SHALL BE COMPACTED TO BETWEEN 95% AND 100% THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO ENSURE THAT ALL DISTURBED AREAS ARE STABILIZED. OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D698, MOISTURE CONTENT SHALL BE BETWEEN 0% AND +4% OF DESIGNATED AREAS SHALL BE BLOCK SODDED. AND ALL OTHER AREAS DISTURBED DUE TO CONSTRUCTION SHALL BE THE OPTIMUM MOISTURE CONTENT. ONE IN-PLACE DENSITY TEST SHALL BE PERFORMED FOR EVERY 5,000 SQ.FT. WITH 4. THE BOUNDARY SURVEY WAS PROVIDED & PERFORMED BY EAGLE SURVEYING (DENTON,TX). THE TOPOGRAPHICAL HYDRO-MULCHED SEEDED. THESE STABILIZED AREAS SHALL BE SODDED OR SEEDED, FERTILIZED, AND WATERED TO A MINIMUM OF THREE (3) TEST BEING PERFORMED. DATA, FOR THE SITE, WAS PERFORMED BY THIS OFFICE. ESTABLISH A SOLID GROUND COVER WITHIN 30 DAYS OF COMPLETION, OR IF ACTIVITY CEASES FOR MORE THAN 14 3. EXISTING DRAINAGE WAYS THAT ARE TO BE FILLED SHALL HAVE BENCHES EXCAVATED INTO THE SIDE WALLS OF THE CHANNEL SIDE SLOPES PRIOR TO PLACEMENT OF FILL BENCHES SHOULD BE AT LEAST SIX FEET IN WIDTH WITH ONE 10. WHEN HYDROMULCH IS REQUIRED. CONTRACTOR SHALL KEEP MULCH MOIST AFTER INSTALLATION AND UNTIL AREA RENCH REING PLACED VERTICALLY FOR EVERY TWO FEET OF CHANN SHOWS GROWTH. 4. MATERIAL EXCAVATED ON SITE EXCLUDING THE TOP 6", MAY BE USED AS FILL MATERIAL, UNDER PAVEMENT AREAS 11. EROSION CONTROL MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY EXCAVATION OR DEMOLITION WORK. ONLY, AS LONG AS THE PI IS BETWEEN 19 AND 35, WITH A LIQUID LIMIT LESS THAN 49, AND THE MATERIAL IS FREE FROM TRASH, LUMPS, CLODS, ORGANIC SUBSTANCE & OTHER FOREIGN MATTER. 12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTAINMENT AND PROPER DISPOSAL OF ALL LIQUID AND SOLID WASTE ASSOCIATED WITH THIS PROJECT. THE CONTRACTOR SHALL USE ALL MEANS NECESSARY TO PREVENT THE 5. SUBGRADE MATERIAL, UNDER PAVEMENT STRUCTURES, CONSISTING OF GRANULAR SOILS WITH A LOW PLASTICITY OCCURRENCE OF WINDBLOWN LITTER FROM THE PROJECT SITE. (PI<7) SHALL BE STABILIZED WITH TYPE 1 PORTLAND CEMENT (APPROXIMATELY 4% BY WEIGHT). 6. SUBGRADE MATERIAL, UNDER PAVEMENT STRUCTURES, CONSISTING OF CLAYEY SANDS, SANDY CLAYS AND CLAYS OF INTERMEDIATE PLASTICITY (7<PI<20) SHALL BE STABILIZED WITH EQUAL RATIOS OF LIME AND FLY ASH (APPROXIMATELY 3% EACH BY WEIGHT). RYAN J ALCALA 7. SUBGRADE MATERIAL, UNDER PAVEMENT STRUCTURES, CONSISTING OF CLAYS OF HIGH PLASTICITY (PI>20) SHALL BE STABILIZED WITH TYPE A HYDRATED LIME (APPROXIMATELY 6% BY WEIGHT). 8. STABILIZED MATERIAL OR FILL MATERIAL SHALL BE PLACED IN FIGHT INCH MAXIMUM LOOSE LIFTS. WITH FACH LIFT WETED OR DRIED TO A MOISTURE CONTENT RANGE OF 0% TO +3% OF THE OPTIMUM MOISTURE CONTENT AND COMPACTED TO A UNIFORM DENSITY OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698. 9. COMPACTION TESTS, FOR FILL, SHALL BE VERIFIED BY IN-PLACE DENSITY TESTS FOR EACH LIFT (1 TEST PER 5,000 SQ.FT. OF FILL AREA) WITH A MINIMUM OF THREE (3) TEST BEING PERFORMED PER LIFT. 10. STABILIZED MATERIAL SHOULD BE ROTARY TILLED TO PROVIDE A HOMOGENOUS MIXTURE THAT MEETS THE GRADATION REQUIREMENTS SPECIFIED IN THE TXDOT. (JUNE 1, 2004) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS & BRIDGES, ITEM NO. 260 FOR LIME TREATMENT AND ITEM NO. 265 FOR 11. THE SUBGRADE SHALL BE STABILIZED TWO FOOT (2') BEYOND THE BACK OF CURB OR EDGE OF PAVEMENT, WHICHEVER IS GREATER, UNLESS OTHERWISE SPECIFIED BY STRICTER REQUIREMENTS. 12. COMPACTION TEST, FOR STABILIZED MATERIAL, SHALL BE VERIFIED BY IN-PLACE DENSITY TEST FOR EACH LIFT (1 TEST PER 5,000 SQ.FT. OF FILL AREA) WITH A MINIMUM OF THREE (3) TEST BEING PERFORMED PER LIFT. B. PORTLAND CEMENT CONCRETE: ALL CONCRETE, UNLESS OTHERWISE SPECIFIED, SHALL BE 6.5 SACK MIX WITH A MINIMUM COMPRESSIVE STRENGTH OF 2. ALL CONCRETE SHALL BE PROPERLY VIBRATED WHEN PLACED AND NOT RAKED A DISTANCE GREATER THAN TEN (10) GOLIAD OCKWALL, 1 3. THE CONTRACTOR SHALL FOLLOW THE GENERAL INTENT OF THE JOINT PLANS SHOWN. JOINT SPACING SHALL NOT

EXCEED 15' IN ANY DIRECTION TO ANOTHER JOINT OR EDGE OF PAVEMENT. CONTROL JOINTS SHALL BE CUT BETWEEN 4

4. EXPANSION JOINTS SHALL NOT EXCEED A MAXIMUM SPACING OF 60' AND SHOULD NOT BE PLACED THROUGH THE MIDDLE OF AREA INLET OR JUNCTION BOXES LOCATED IN THE PAVEMENT. ALL AREA INLETS OR JUNCTION BOXES. LOCATED IN PAVEMENT AREAS, SHALL BE INSTALLED WITH ISOLATION JOINTS BETWEEN THE STRUCTURE AND THE

AND 18 HOURS AFTER PLACEMENT OF CONCRETE AND MAY BE SUBSTITUTED WITH CONSTRUCTION JOINTS.

6. AS FAR AS PRACTICAL, THE CONTRACTOR SHALL ALIGN ALL SIDEWALK JOINTS WITH CURB AND PAVEMENT JOINTS.

7. CONCRETE SHALL NOT BE PLACED IF THE AIR TEMPERATURE IS 50°F AND FALLING OR 95°F OR HIGHER, CONCRETE MAY

5. ALL JOINTS SHALL BE SEALED WITH SONBORN SONOLASTIC SL1, OR APPROVED EQUIVALENT.

BE PLACED IF THE AIR TEMPERATURE IS 40°F AND RISING OR LESS THAN 95°F.

RECORD DRAWING

TO THE BEST OF OUR KNOWLEDGE QUIDDITY ENGINEERING INC., HEREBY STATES THAT THIS PLAN IS ASBUILT. THIS INFORMATION PROVIDED IS BASED ON POST CONSTRUCTION SURVEYING AT THE SITE AND INFORMATION PROVIDED BY THE CONTRACTOR.

SHEET NO.

K:\17007\17007-0037-00 Salad and Go - Goliad and FM 522 - Rockw\2 Design Phase\CAD\Plans\Site\17007-0037-00 PLAT & GENERAL NOTES.dwg HTF: February 09, 2023

- All construction shall conform to the requirements set forth in the City of Rockwall's Engineering Department's "Standards of Design and Construction" and the "Standard Specifications for Public Works Construction" by the North Texas Central Council of Governments, 5th edition amended by the City of Rockwall. The CONTRACTOR shall reference the latest City of Rockwall standard details provided in the Rockwall Engineering Departments "Standards of Design and Construction" manual for details not provided in these plans. The CONTRACTOR shall possess one set of the NCTCOG Standard Specifications and Details and the City of Rockwall's "Standards of Design and Construction" manual on the project site at all times
- Where any conflicting notes, details or specifications occur in the plans the City of Rockwall General Construction Notes, Standards, Details and Specifications shall govern unless detail or specification is more
- The City of Rockwall Engineering Departments "Standards of Design and Construction" can be found online at: http://www.rockwall.com/engr.asp
- 4. All communication between the City and the CONTRACTOR shall be through the Engineering Construction Inspector and City Engineer or designated representative only. It is the responsibility of the CONTRACTOR to contact the appropriate department for inspections that do not fall under this approved engineering plan set.
- Prior to construction, CONTRACTOR shall have in their possession all necessary permits, plans, licenses,
- The CONTRACTOR shall have at least one original stamped and signed set of approved engineering plans and specifications on-site and in their possession at all times. A stop work order will be issued if items are not on-site. Copies of the approved plans will not be substituted for the required original "approved plans to be on-site".
- All material submittals, concrete batch designs and shop drawings required for City review and approval shall be submitted by the CONTRACTOR to the City sufficiently in advance of scheduled construction to allow no less than 10 business days for review and response by the City.
- All site dimensions are referenced to the face of curb or edge of pavement unless otherwise noted.
- The City requires ten (10%) percent-two (2) year maintenance bond for paving, paving improvements, water systems, wastewater systems, storm sewer systems including detention systems, and associated fixtures and structures which are located within the right-of-ways or defined easements. The two (2) year maintenance bond is to state "from date of City acceptance" as the starting time.
- 10. A review of the site shall be conducted at twenty (20) months into the two (2) year maintenance period. The design engineer or their designated representative and the CONTRACTOR shall be present to walk the site with the City of Rockwall Engineering Inspection personnel.

EROSION CONTROL & VEGETATION

- The CONTRACTOR or developer shall be responsible, as the entity exercising operational control, for all permitting as required by the Environmental Protection Agency (EPA) and the Texas Commission on Environmental Quality (TCEQ). This includes, but is not limited to, preparation of the Storm Water Pollution Prevention Plan (SWPPP), the Construction Site Notice (CSN), the Notice of Intent (NOI), the Notice of Termination (NOT) and any Notice of Change (NOC) and is required to pay all associated fees
- Erosion control devices as shown on the erosion control plan for the project shall be installed prior to the start of land disturbing activities.
- All erosion control devices are to be installed in accordance with the approved plans, specifications and Storm Water Pollution Prevention Plan (SWPPP) for the project. Erosion control devices shall be placed and in working order prior to start of construction. Changes are to be reviewed and approved by the design engineer and the City of Rockwall prior to implementation.
- If the Erosion Control Plans and Storm Water Pollution Prevention Plan (SWPPP) as approved cannot appropriately control erosion and off-site sedimentation from the project, the erosion control plan and/or the SWPPP is required to be revised and any changes reported to the Texas Commission on Environmental Quality (TCEQ), when applicable.
- All erosion control devices shall be inspected weekly by the CONTRACTOR and after all major rain events, or more frequently as dictated in the project Storm Water Pollution Prevention Plan (SWPPP). CONTRACTOR shall provide copies of inspection's reports to the engineering inspection after each
- The CONTRACTOR shall not dispose of waste and any materials into streams, waterways or floodplains. The CONTRACTOR shall secure all excavation at the end of each day and dispose of all excess materials.
- CONTRACTOR shall take all available precautions to control dust. CONTRACTOR shall control dust by sprinkling water or other means as approved by the City Engineer.
- CONTRACTOR shall establish grass and maintain the seeded area, including watering, until a "Permanent Stand of Grass" is obtained at which time the project will be accepted by the City. A "Stand of Grass" (not winter rye or weeds) shall consist of 75% to 80% coverage of all disturbed areas and a minimum of one-inch (1") in height as determined by the City. No bare spots will be allowed. Re-seeding will be required in all washed areas and areas that don't grow.
- All City right-of-ways shall be sodded if disturbed. No artificial grass is allowed in any City right-of-way and/or easements.
- 10. All adjacent streets/alleys shall be kept clean at all times
- 11. CONTRACTOR shall keep construction site clean at all times, immediately contain all debris and trash, all debris and trash shall be removed at the end of each work day, and all vegetation on the construction site 10inches or taller in height must be cut immediately.
- 12. Suspension of all construction activities for the project will be enforced by the City if any erosion control requirements are not meet. Work may commence after deficiency has been rectified.
- 13. During construction of the project, all soil stockpiles and borrow areas shall be stabilized or protected with sediment trapping measures. The CONTRACTOR is responsible for the temporary protection and permanent stabilization of all soil stockpiles on-site as well as borrow areas and soil intentionally transported from the project site.
- 4. Where construction vehicles access routes intersect paved or public roads/alleys, construction entrances shall be installed to minimize the transport of sediment by vehicular tracking onto paved surfaces. Where sediment is transferred onto paved or public surfaces, the surface shall be immediately cleaned. Sediment shall be

- removed from the surface by shoveling or sweeping and transported to a sediment disposal area. Pavement washing shall be allowed only after sediment is removed in this manner.
- 15. All drainage inlets shall be protected from siltation, ineffective or unmaintained protection devices shall be immediately replaced and the inlet and storm system cleaned. Flushing is not an acceptable method of
- 16. During all dewatering operations, water shall be pumped into an approved filtering device prior to discharge into a receiving outlet.

TRAFFIC CONTROL

- 1. All new Detouring or Traffic Control Plans are required to be submitted to the City for review and approval a minimum of 21 calendar days prior to planned day of implementation.
- When the normal function of the roadway is suspended through closure of any portion of the right-of-way, temporary construction work zone traffic control devices shall be installed to effectively guide the motoring public through the area. Consideration for road user safety, worker safety, and the efficiency of road user flow is an integral element of every traffic control zone.
- All traffic control plans shall be prepared and submitted to the Engineering Department in accordance with the standards identified in Part VI of the most recent edition of the TMUTCD. Lane closures will not occur on roadways without an approval from the Rockwall Engineering Department and an approved traffic control plan. Traffic control plans shall be required on all roadways as determined by the City Engineer or the designated representative.
- All traffic control plans must be prepared, signed, and sealed by an individual that is licensed as a professional engineer in the State of Texas. All traffic control plans and copies of work zone certification must be submitted for review and approval a minimum of three (3) weeks prior to the anticipated temporary traffic control.
- 5. The CONTRACTOR executing the traffic control plan shall notify all affected property owners two (2) weeks prior to any the closures in writing and verbally.
- 6. Any deviation from an approved traffic control plan must be reviewed by the City Engineer or the designated representative. If an approved traffic control plan is not adhered to, the CONTRACTOR will first receive a verbal warning and be required to correct the problem immediately. If the deviation is not corrected, all construction work will be suspended, the lane closure will be removed, and the roadway opened to traffic.
- All temporary traffic control devices shall be removed as soon as practical when they are no longer needed. When work is suspended for short periods of time at the end of the workday, all temporary traffic control devices that are no longer appropriate shall be removed or covered. The first violation of this provision will result in a verbal warning to the construction foreman. Subsequent violations will result in suspension of all work at the job site for a minimum of 48 hours. All contractors working on City funded projects will be charged one working day for each 24 hour closure.
- 8. Lane closures on any major or minor arterial will not be permitted between the hours of 6:00 am to 9:00 am and 3:30 pm to 7:00 pm. Where lane closures are needed in a school area, they will not be permitted during peak hours of 7:00 am - 9:00 am and 3:00 pm to 5:00 pm. Closures may be adjusted according to the actual start-finish times of the actual school with approval by the City Engineer. The first violation of this provision will result in a verbal warning to the construction foreman. Subsequent violations will result in suspension of all work at the job site for a minimum of 48 hours. All contractors working on City funded projects will be charged one working day for each 24 hour closure of a roadway whether they are working or not.
- 9. No traffic signs shall be taken down without permission from the City.
- 10. No street/roadway will be allowed to be fully closed.

UTILITY LINE LOCATES

- 1. It is the CONTRACTOR's responsibility to notify utility companies to arrange for utility locates at least 48 hours prior to beginning construction. The completeness and accuracy of the utility data shown on the plans is not guaranteed by the design engineer or the City. The CONTRACTOR is responsible for verifying the depth and location of existing underground utilities proper to excavating, trenching, or drilling and shall be required to take any precautionary measures to protect all lines shown and .or any other underground utilities not on record or not shown on the plans.
- 2. The CONTRACTOR shall be responsible for damages to utilities
- 3. CONTRACTOR shall adjust all City of Rockwall utilities to the final grades.
- 4. All utilities shall be placed underground.
- 5. CONTRACTOR shall be responsible for the protection of all existing main lines and service lines crossed or exposed by construction operations. Where existing mains or service lines are cut, broken or damaged, the CONTRACTOR shall immediately make repairs to or replace the entire service line with same type of original construction or better. The City of Rockwall can and will intervene to restore service if deemed necessary and charge the CONTRACTOR for labor, equipment, material and loss of water if repairs aren't made in a timely manner by the CONTRACTOR.
- 6. The City of Rockwall (City utilities) is not part of the Dig Tess or Texas one Call 811 line locate system. All City of Rockwall utility line locates are to be scheduled with the City of Rockwall Service Center. 972-771-7730. A 48-hour advance notice is required for all non-emergency line locates.
- Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:
 - a. No more than 500 linear feet of trench may be opened at one time.
 - b. Material used for backfilling trenches shall be properly compacted to 95% standard density in order to minimize erosion, settlement, and promote stabilization that the geotechnical engineer recommends. c. Applicable safety regulations shall be complied with.
- 11. This plan details pipes up to 5 feet from the building. Refer to the building plans for building connections. CONTRACTOR shall supply and install pipe adapters as necessary.
- 12. All underground lines shall be installed, inspected, and approved prior to backfilling.
- 13. All concrete encasement shall have a minimum of 28 days compressive strength at 3,000 psi (min. 5.5 sack mix).

WATER LINE NOTES

- 1. The CONTRACTOR shall maintain existing water service at all times during construction.
- Proposed water lines shall be AWWA C900-16 PVC Pipe (blue in color) for all sizes, DR 14 (PC 305) for pipeline sizes 12-inch and smaller, and DR 18 (PC 235) for 14-inch and larger water pipelines unless otherwise shown on water plan and profiles sheets. Proposed water lines shall be constructed with minimum cover of 4 feet for 6-inch through 8-inch, 5 feet for 12-inch through 18-inch and 6 feet for 20-inch and larger.
- Proposed water line embedment shall be NCTCOG Class 'B-3' as amended by the City of Rockwall's engineering standards of design and construction manual.
- CONTRACTOR shall coordinate the shutting down of all water lines with the City of Rockwall Engineering Inspector and Water Department. The City shall operate all water valves. Allow 5 business days from the date of notice to allow City personnel time to schedule a shut down. Two additional days are required for the CONTRACTOR to notify residents in writing of the shut down after the impacted area has been identified. Water shut downs impacting businesses during their normal operation hours is not allowed. CONTRACTOR is required to coordinate with the Rockwall Fire Department regarding any fire watch requirements as well as any costs incurred when the loss of fire protection to a structure occurs.
- CONTRACTOR shall furnish and install gaskets on water lines between all dissimilar metals and at valves (both existing and proposed).
- All fire hydrants and valves removed and salvaged shall be returned to the City of Rockwall Municipal Service Center.
- Blue EMS pads shall be installed at every change in direction, valve, curb stop and service tap on the proposed water line and every 250'.
- All water valve hardware and valve extensions, bolts, nuts and washers shall be 316 stainless steel.
- 9. All fire hydrants bolts, nuts and washers that are buried shall be 316 stainless steel.
- 10. Abandoned water lines to remain in place shall be cut and plugged and all void spaces within the abandoned line shall be filled with grout, flowable fill or an expandable permanent foam product. Valves to be abandoned in place shall have any extensions and the valve box removed and shall be capped in concrete.
- 11. All fire hydrants will have a minimum of 5 feet of clearance around the appurtenance including but not limited to parking spaces and landscaping.
- 12. All joints are to be megalug joints with thrust blocking.
- 13. Water and sewer mains shall be kept 10 feet apart (parallel) or when crossing 2 feet vertical clearance.
- 14. CONTRACTOR shall maintain a minimum of 4 feet of cover on all water lines.
- 15. All domestic and irrigation services are required to have a testable backflow device with a double check valve installed per the City of Rockwall regulations at the property line and shown on plans.

WASTEWATER LINE NOTES

- The CONTRACTOR shall maintain existing wastewater service at all times during construction.
- Wastewater line for 4-inch through 15-inch shall be Green PVC SDR 35 (ASTM D3034) [less 10 ft cover] and SDR 26 (ASTM D3034) [10 ft or more cover]. For 18-inch and lager wastewater line shall be Green PVC – PS 46 (ASTM F679) [less 10 ft cover] and PS 115 (ASTM F679) [10 ft or more cover]. No services will be allowed on a sanitary sewer line deeper than 10 feet.
- Proposed wastewater line embedment shall be NCTCOG Class 'H' as amended by the City of Rockwall's public works standard design and construction manual.
- Green EMS pads shall be installed at every 250', manhole, clean out and service lateral on proposed wastewater lines.
- 5. CONTRACTOR shall CCTV all existing wastewater lines that are to be abandoned to ensure that all laterals are accounted for and transferred to proposed wastewater lines prior to abandonment.
- All abandoned wastewater and force main lines shall be cut and plugged and all void spaces within the
- abandoned line shall be filled with grout, flowable fill or an expandable permanent foam product. Existing manholes and cleanouts not specifically called to be relocated shall be adjusted to match final grades.
- All wastewater pipes and public services shall be inspected by photographic means (television and DVD) prior to final acceptance and after franchise utilities are installed. The CONTRACTOR shall furnish a DVD to the Engineering Construction Inspector for review. Pipes shall be cleaned prior to TV inspection of the pipes. Any sags, open joints, cracked pipes, etc. shall be repaired or removed by the CONTRACTOR at the CONTRACTOR's expense. A television survey will be performed as part of the final testing in the twentieth (20th) month of the maintenance period.
- All manholes (public or private) shall be fitted with inflow prevention. The inflow prevention shall conform to the measures called out in standard detail R-5031.
- 10. All new or existing manholes being modified shall have corrosion protection being Raven Liner 405 epoxy coating, ConShield, or approved equal.. Consheild must have terracotta color dye mixed in the precast and cast-in-place concrete. Where connections to existing manholes are made the CONTRACTOR shall rehab manhole as necessary and install a 125 mil thick coating of Raven Liner 405 or approved equal.
- 1. All new or existing manholes that are to be placed in pavement shall be fitted with a sealed (gasketed) rim and cover to prevent inflow.
- 12. If an existing wastewater main or trunk line is called out to be replaced in place a wastewater bypassing pump plan shall be required and submitted to the Engineering Construction Inspector and City Engineer for approval prior to implementation. Bypass pump shall be fitted with an auto dialer and conform to the City's Noise Ordinance. Plan shall be to the City sufficiently in advance of scheduled construction to allow no less than 10 business days for review and response by the City.
- 13. CONTRACTOR shall maintain a minimum of 4 feet of cover on all wastewater lines.



GENERAL CONSTRUCTION NOTES Sheet 1 of 2 October 2020

CITY OF ROCKWALL **ENGINEERING DEPARTMENT**

385 S. Goliad Rockwall, Texas 75087

P (972) 771-7746 F (972) 771-7748

RECORD DRAWING

TO THE BEST OF OUR KNOWLEDGE QUIDDITY ENGINEERING, INC., HEREBY STATES THAT THIS PLAN IS ASBUILT. THIS INFORMATION PROVIDED IS BASED ON POST CONSTRUCTION SURVEYING AT THE SITE AND INFORMATION PROVIDED BY THE CONTRACTOR.

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RYAN J ALCALA 137823

AND GO - ROCKWALL - GOLIAD AND FM 522 3064 NORTH GOLIAD STREET- ROCKWALL, TX 75087

DEMOLITION, REMOVAL, DISPOSAL AND EXCAVATION NOTES

- All pavements to be removed and replaced shall be saw cut to full depth along neat squared lines shown in
- Proposed concrete pavement shall be constructed with longitudinal butt construction joints at all connections to existing concrete pavement
- All public concrete pavement to be removed and replaced shall be full panel replacement, 1-inch thicker and on top of 6-inch thick compacted flexbase.
- No excess excavated material shall be deposited in low areas or along natural drainage ways without written permission from the affected property owner and the City of Rockwall. No excess excavation shall be deposited in the City Limits without a permit from the City of Rockwall. If the CONTRACTOR places excess materials in these areas without written permission, the CONTRACTOR will be responsible for all damages resulting from such fill and shall remove the material at their own cost.

PAVING AND GRADING

- All detention systems are to be installed and verified for design compliance along with the associated storm sewer and outflow structures, prior to the start of any paving operations (including building foundations). Erosion protection shall be placed at the pond outflow structures, silt fence along the perimeter of the pond along with any of the associated erosion BMPs noted on the erosion control plan, and the sides and bottom of the detention system shall have either sod or anchored seeded curlex installed prior to any concrete placement.
- All paving roadway, driveways, fire lanes, drive-isles, parking, dumpster pads, etc. sections shall have a minimum thickness, strength, reinforcement, joint type, joint spacing and subgrade treatment shall at a minimum conform to the City standards of Design and Construction and table below.

minimum conform to the City standards of Design and Constitution and table below.								
Street/Davanant True	Minimum	Streng Minimum Cement th 28- (sacks / CY)		Steel Reinforcement				
Street/Pavement Type	Thickness (inches)	Day (psi)	Machine placed	Hand Placed	Bar#	Spacing (O.C.E.W.)		
Arterial	10"	3,600	6.0	6.5	#4 bars	18"		
Collector	8"	3,600	6.0	6.5	#4 bars	18"		
Residential	6"	3,600	6.0	6.5	#3 bars	24"		
Alley	7"-5"-7"	3,600	6.0	6.5	#3 bars	24"		
Fire Lane	6"	3,600	6.0	6.5	#3 bars	24"		
Driveways	6"	3,600	6.0	6.5	#3 bars	24"		
Barrier Free Ramps	6"	3,600	N/A	6.5	#3 bars	24"		
Sidewalks	4"	3,000	N/A	5.5	#3 bars	24"		
Parking Lot/Drive Aisles	5"	3,000	5.0	5.5	#3 bars	24"		
Dumpster Pads	7"	3,600	6.0	6.5	#3 bars	24"		

- Reinforcing steel shall be tied (100%). Reinforcing steel shall be set on plastic chairs. Bar laps shall be minimum 30 diameters. Sawed transverse dummy joints shall be spaced every 15 feet or 1.25 time longitudinal butt joint spacing whichever is less. Sawing shall occur within 5 to 12 hours after the pour, including sealing. Otherwise, the section shall be removed and longitudinal butt joint constructed.
- No sand shall be allowed under any paving.
- All concrete mix design shall be submitted to the City for review and approval prior to placement.
- Fly ash may be used in concrete pavement locations provided that the maximum cement reduction does not exceed 20% by weight per C.Y. of concrete. The fly ash replacement shall be 1.25 lbs. per 1.0 lb. cement
- All curb and gutter shall be integral (monolithic) with the pavement.
- All fill shall be compacted by sheep's foot roller to a minimum 95% standard proctor. Maximum loose lift for compaction shall be 8 inches. All lifts shall be tested for density by an independent laboratory. All laboratory compaction reports shall be submitted to the City Engineering Construction Inspector once results are received. All reports will be required prior to final acceptance.
- All concrete compression tests and soil compaction/density tests are required to be submitted to the City's Engineering Inspector immediately upon results.
- 10. All proposed sidewalks shall include barrier free ramps at intersecting streets, alleys, etc. Barrier free ramps (truncated dome plate in Colonial or brick red color) shall meet current City and ADA requirements and be approved by the Texas Department of Licensing and Regulation (TDLR).
- . All public sidewalks shall be doweled into pavement where it abuts curbs and driveways. Expansion joint material shall be used at these locations.
- 12. All connection of proposed concrete pavement to existing concrete pavement shall include a longitudinal butt joint as the load transfer device. All longitudinal butt joints shall be clean, straight and smooth (not jagged in
- . Cracks formed in concrete pavement shall be repaired or removed by the CONTRACTOR at the City's discretion. CONTRACTOR shall replace existing concrete curbs, sidewalk, paving, a gutters as indicated on the plans and as necessary to connect to the existing infrastructure, including any damage caused by the CONTRACTOR.
- 14. All residential lots will require individual grading plans submitted during the building permit process that correspond with the engineered grading and drainage area plans.
- 15. Approval of this plan is not an authorization to grade adjacent properties when the plans or field conditions warrant off-site grading. Written permission must be obtained and signed from the affected property owner(s) and temporary construction easements may be required. The written permission shall be provided to the City as verification of approval by the adjacent property owner(s). Violation of this requirement will result in suspension of all work at the job site until issue has been rectified.
- 16. All cut or fill slopes of non-paved areas shall be a maximum of 4:1 and minimum of 1%.
- 17. CONTRACTOR agrees to repair any damage to property and the public right-of-way in accordance with the City Standards of Design and Construction.
- 18. CONTRACTOR shall protect all monuments, iron pins/rods, and property corners during construction.
- 19. CONTRACTOR shall ensure positive drainage so that runoff will drain by gravity flow to new or existing drainage inlets or sheet flow per these approved plans.

DRAINAGE / STORM SEWER NOTES

- 1. The CONTRACTOR shall maintain drainage at all times during construction. Ponding of water in streets, drives, trenches, etc. will not be allowed. Existing drainage ways shall not be blocked or removed unless explicitly stated in the plans or written approval is given by the City.
- All structural concrete shall be 4200 psi compressive strength at 28 days minimum 7.0 sack mix, air entrained, unless noted otherwise. Fly ash shall not be allowed in any structural concrete.
- Proposed storm sewer embedment shall be NCTCOG Class 'B' as amended by the City of Rockwall's Engineering Department Standards of Design and Construction Manual.
- All public storm pipe shall be a minimum of 18-inch reinforced concrete pipe (RCP), Class III, unless otherwise noted.
- 5. All storm pipe entering structures shall be grouted to assure connection at the structure is watertight.
- 6. All storm structures shall have a smooth uniform poured mortar invert from invert in to invert out.
- 7. All storm sewer manholes in paved areas shall be flush with the paving grade, and shall have traffic bearing ring and covers.
- All storm sewer pipes and laterals shall be inspected by photographic means (television and DVD) prior to final acceptance and after franchise utilities are installed. The CONTRACTOR shall furnish a DVD to the Engineering Construction Inspector for review. Pipes shall be cleaned prior to TV inspection of the pipes. Any sags, open joints, cracked pipes, etc. shall be repaired or removed by the CONTRACTOR at the CONTRACTOR's expense. A television survey will be performed as part of the final testing in the twentieth (20th) month of the maintenance period.

RETAINING WALLS

- 1. All retaining walls, regardless of height, will be reviewed and approved by the City Engineering Department 2. All retaining walls (including foundation stem walls), regardless of height, will be constructed of rock/stone/brick or rock/stone/brick faced. No smooth concrete walls are allowed. Wall materials shall be the same for all walls on the project.
- 3. All portions, including footings, tie-backs, and drainage backfill, of the wall shall be on-site and not encroach into any public easements or right-of-way. The entire wall shall be in one lot and shall not be installed along a lot line.
- 4. All walls 3 feet and taller will be designed and signed/sealed by a registered professional engineer in the State of Texas. The wall design engineer is required to inspect the wall construction and supply a signed/sealed letter of wall construction compliance to the City of Rockwall along with wall as-builts prior to City Engineering acceptance.
- 5. No walls are allowed in detention easements. A variance to allow retaining walls in a detention easement will require approval by the Planning and Zoning Commission with appeals being heard by the City Council.

FINAL ACCEPTANCE AND RECORD DRWINGS/AS-BUILTS

- 1. Final Acceptance shall occur when all the items on the Checklist for Final Acceptance have been completed and signed-off by the City. An example of the checklist for final acceptance has been included in the Appendix of the Standards of Design and Construction. Items on the checklist for final acceptance will vary per project and additional items not shown on the check list may be required.
- 2. After improvements have been constructed, the developer shall be responsible for providing to the City "As Built" or "Record Drawings". The Design Engineer shall furnish all digital files of the project formatted in Auto Cad 14, or 2000 format or newer and Adobe Acrobat (.pdf) format with a CD-ROM disk or flash drive. The disk or drive shall include a full set of plans along with any landscaping, wall plans, and details sheets.
- 3. Submit 1-set of printed drawings of the "Record Drawings" containing copies of all sheets to the Engineering Construction Inspector for the project. The printed sheets will be reviewed by the inspector PRIOR to producing the "Record Drawing" digital files on disk or flash drive. This will allow any revisions to be addressed prior to producing the digital files.
- Record Drawing Disk drawings shall have the Design Engineers seal, signature and must be stamped and dated as "Record Drawings" or "As Built Drawings" on all sheets.
- The City of Rockwall will not accept any Record Drawing disk drawings which include a disclaimer. A disclaimer shall not directly or indirectly state or indicate that the design engineer or the design engineer's surveyor/surveyors did not verify grades after construction, or that the Record Drawings were based solely on information provided by the construction contractor/contractors. Any Record Drawings which include like or similar disclaimer verbiage will not be accepted by the City of Rockwall.
- Example of Acceptable Disclaimer: "To the best of our knowledge ABC Engineering, Inc., hereby states that this plan is As-Built. This information provided is based on surveying at the site and information provided by the contractor."



GENERAL CONSTRUCTION NOTES Sheet 2 of 2 October 2020

CITY OF ROCKWALL **ENGINEERING DEPARTMENT**

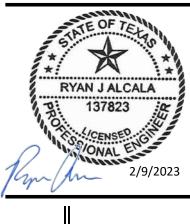
385 S. Goliad Rockwall, Texas 75087

P (972) 771-7746 F (972) 771-7748

RECORD DRAWING

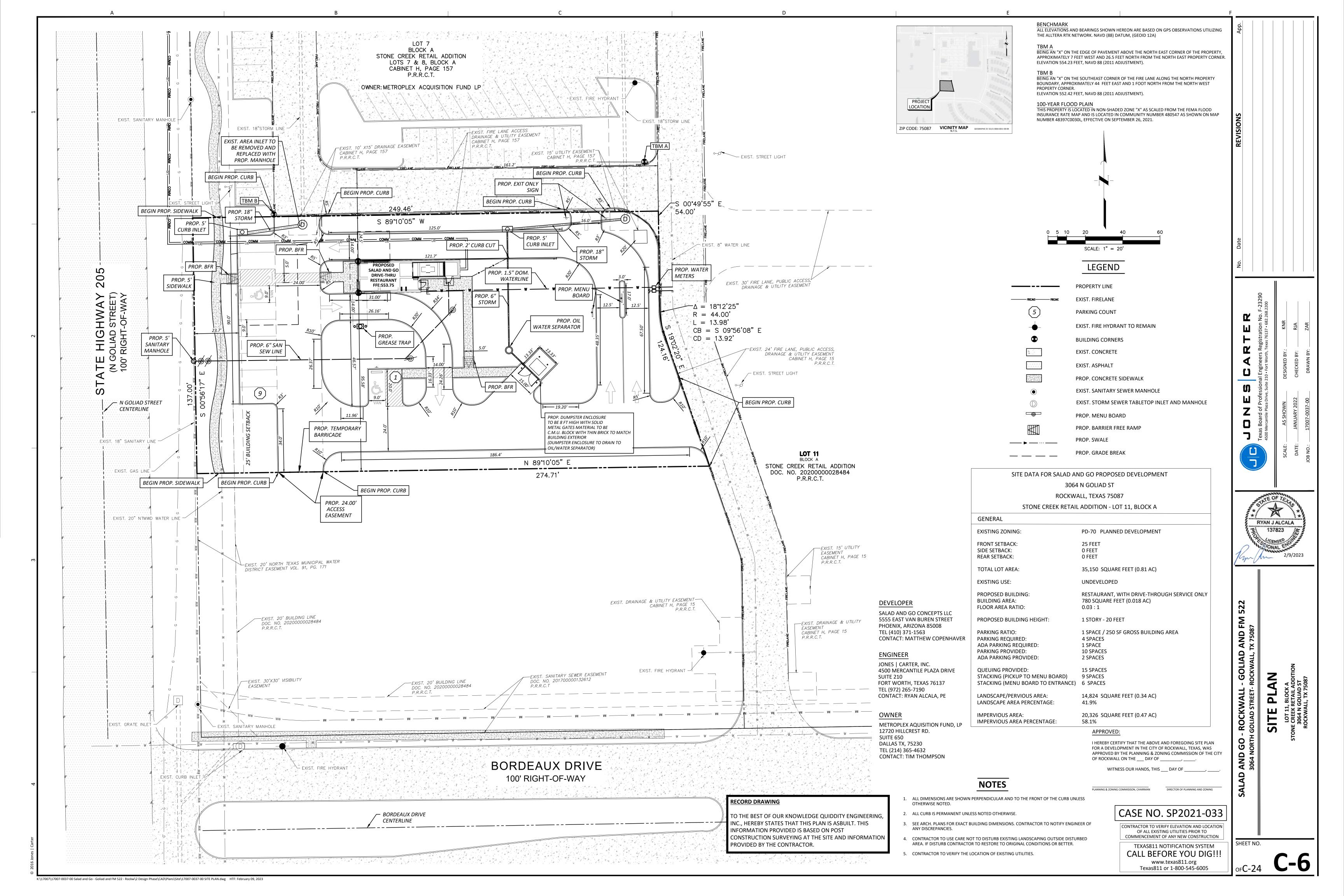
TO THE BEST OF OUR KNOWLEDGE QUIDDITY ENGINEERING. INC., HEREBY STATES THAT THIS PLAN IS ASBUILT. THIS INFORMATION PROVIDED IS BASED ON POST CONSTRUCTION SURVEYING AT THE SITE AND INFORMATION PROVIDED BY THE CONTRACTOR.

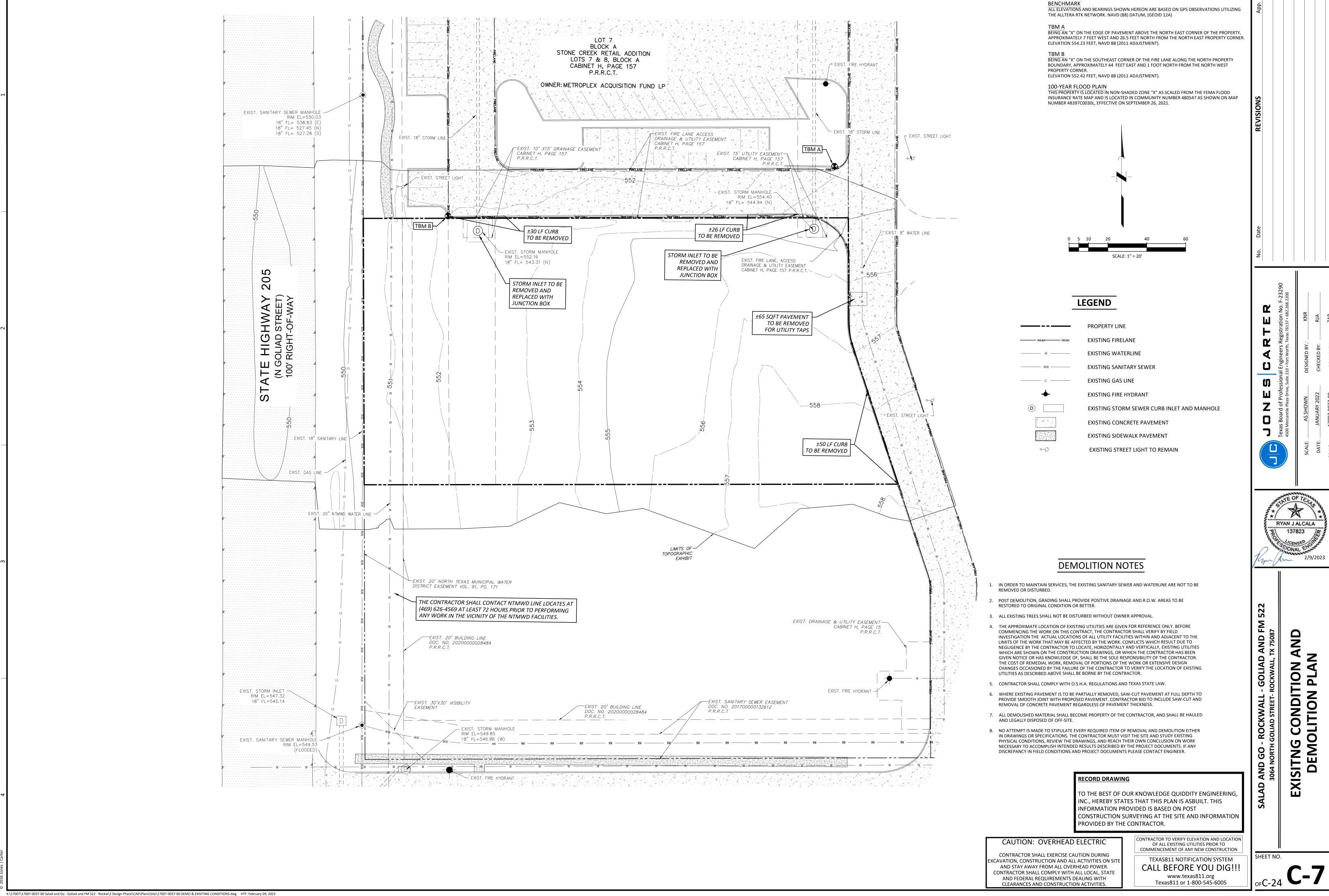
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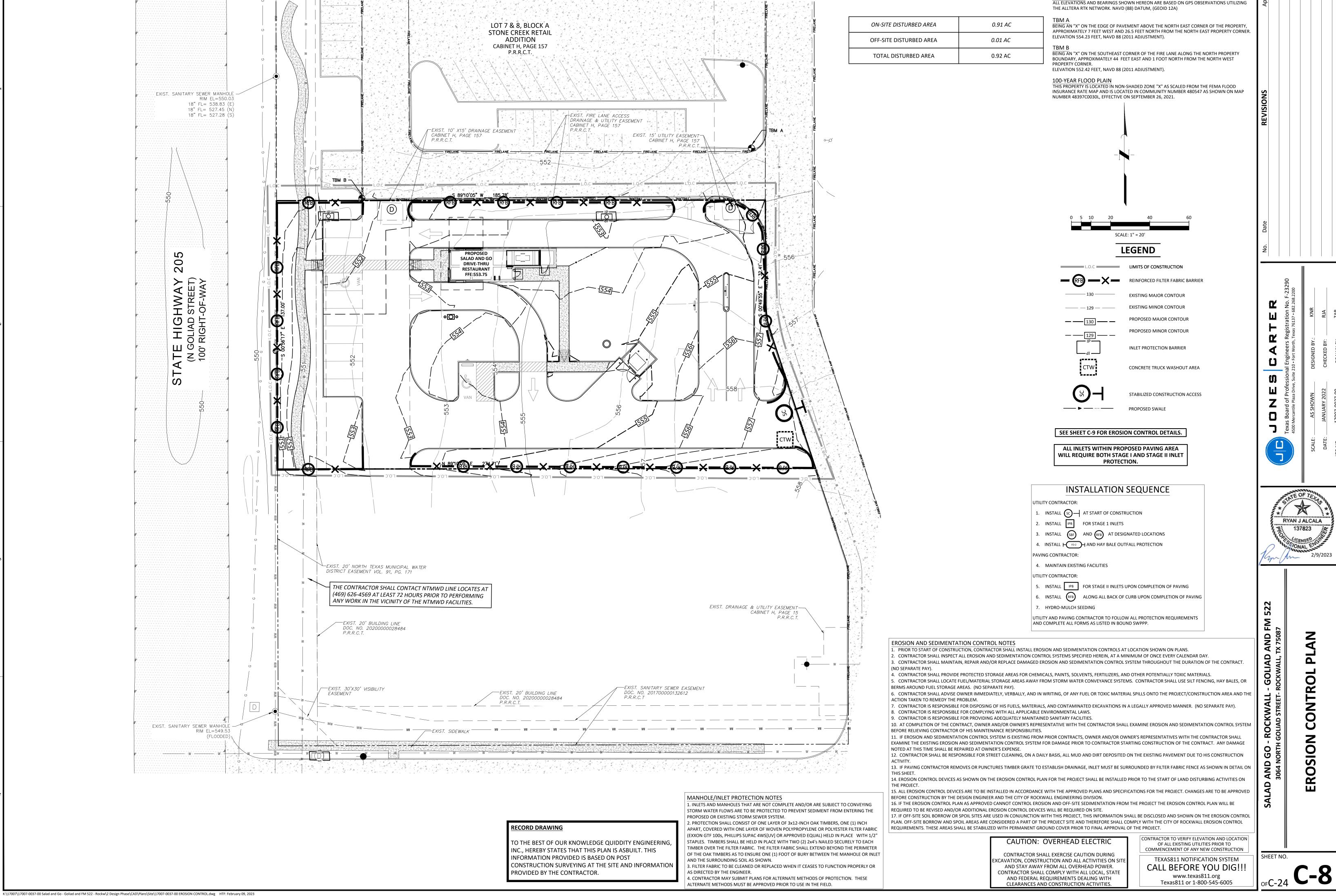


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AND GO - ROCKWALL - GOLIAD AND FM 3064 NORTH GOLIAD STREET- ROCKWALL, TX 75087

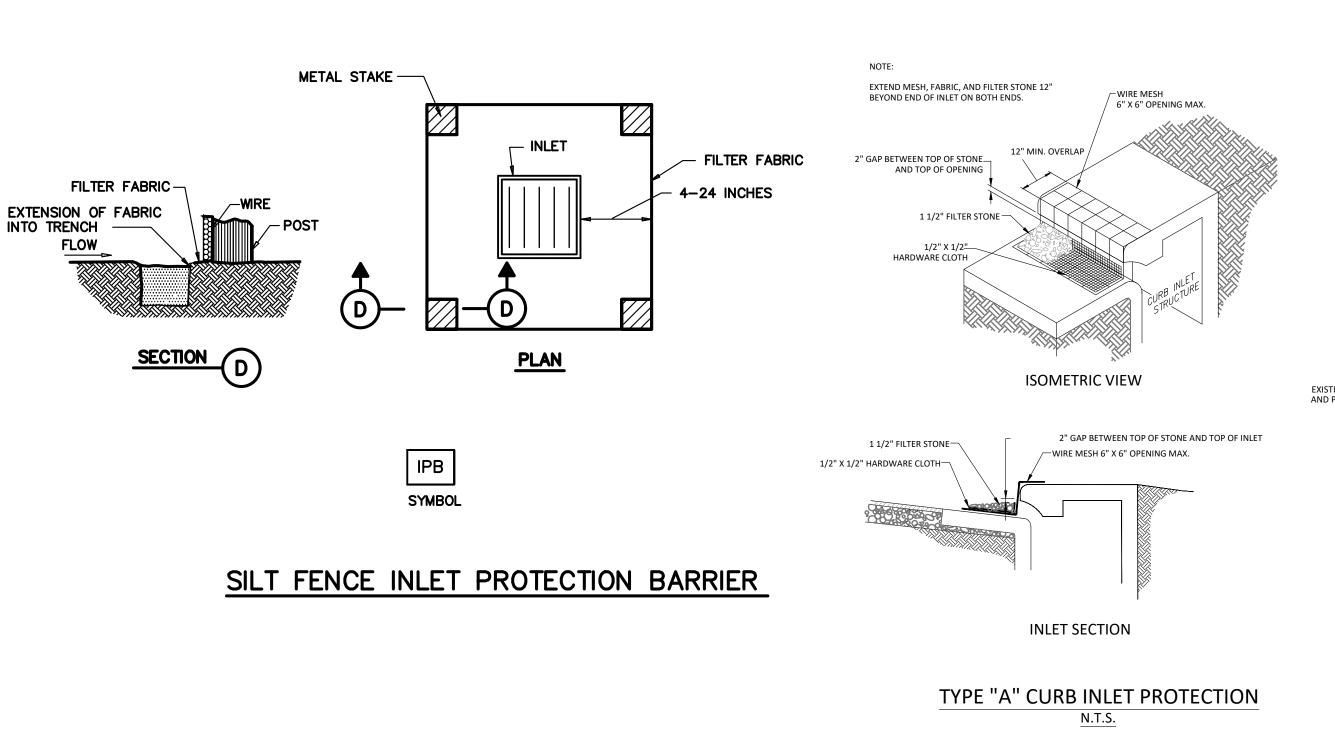






BENCHMARK

ALL ELEVATIONS AND BEARINGS SHOWN HEREON ARE BASED ON GPS OBSERVATIONS UTILIZING



LENGTH AS SHOWN ON PLANS

PROFILE VIEW

N.T.S.

TRANSITION TO

PLAN VIEW

N.T.S.

Section II Standard Drawings as of October 2004. Reference number only has been updated for Fifth

Edition Specifications. Public Works Construction Standards North Central Texas, Fifth Edition.

PAVED SURFACE

DRAINAGE MUST FLOW

PAVED SURFACE -

GRADE TO PREVENT RUNOFF

LENGTH AS SHOWN ON PLANS

GRADE TO DRAIN AWAY FROM STABILIZATION AND STREET PAVED SURFACE

STABILIZED CONSTRUCTION CITY OF ROCKWALL

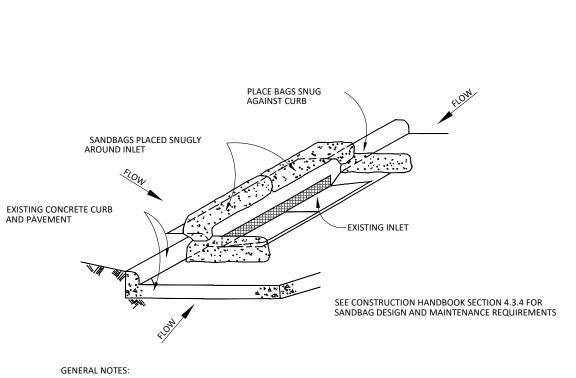
ENTRANCE

FROM LEAVING SITE

- EXISTING GRADE

Note: No crushed concrete or recycled concrete allowed.

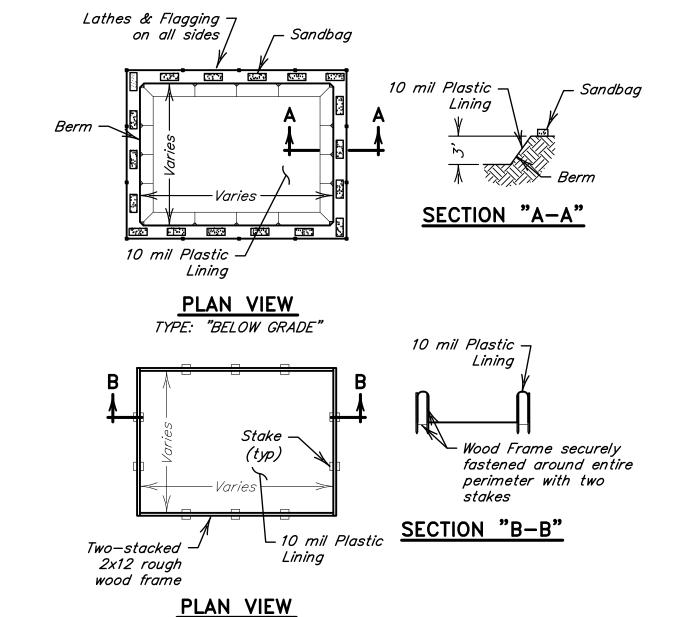
K:\17007\17007-0037-00 Salad and Go - Goliad and FM 522 - Rockw\2 Design Phase\CAD\Plans\Site\17007-0037-00 EROSION CONTROL.dwg HTF: February 09, 2023



- BAGS OR WATTLES CAN BE USED FOR THIS APPLICATION
- 2. PROVIDE WOVEN OR UNWOVEN GEOTEXTILE FILTER FABRIC FOR BAGS.
- 3. PROVIDE COARSE SAND AND AGGREGATE MIX FOR FILL MATERIAL FOR BAGS. USE ONLY PARTICLES CONSISTING OF CLEAN, HARD, DURABLE MATERIALS FREE FROM ADHERENT COATINGS, SALT, ALKALI, DIRT, CLAY, LOAM, SHALE, SOFT OR FLAKY MATERIALS, OR
- 4. REMOVE SEDIMENT DEPOSIT WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-THIRD THE HEIGHT OF THE BARRIER.

INLET PROTECTION BARRIERS FOR STAGE II INLETS

IPB SYMBOL

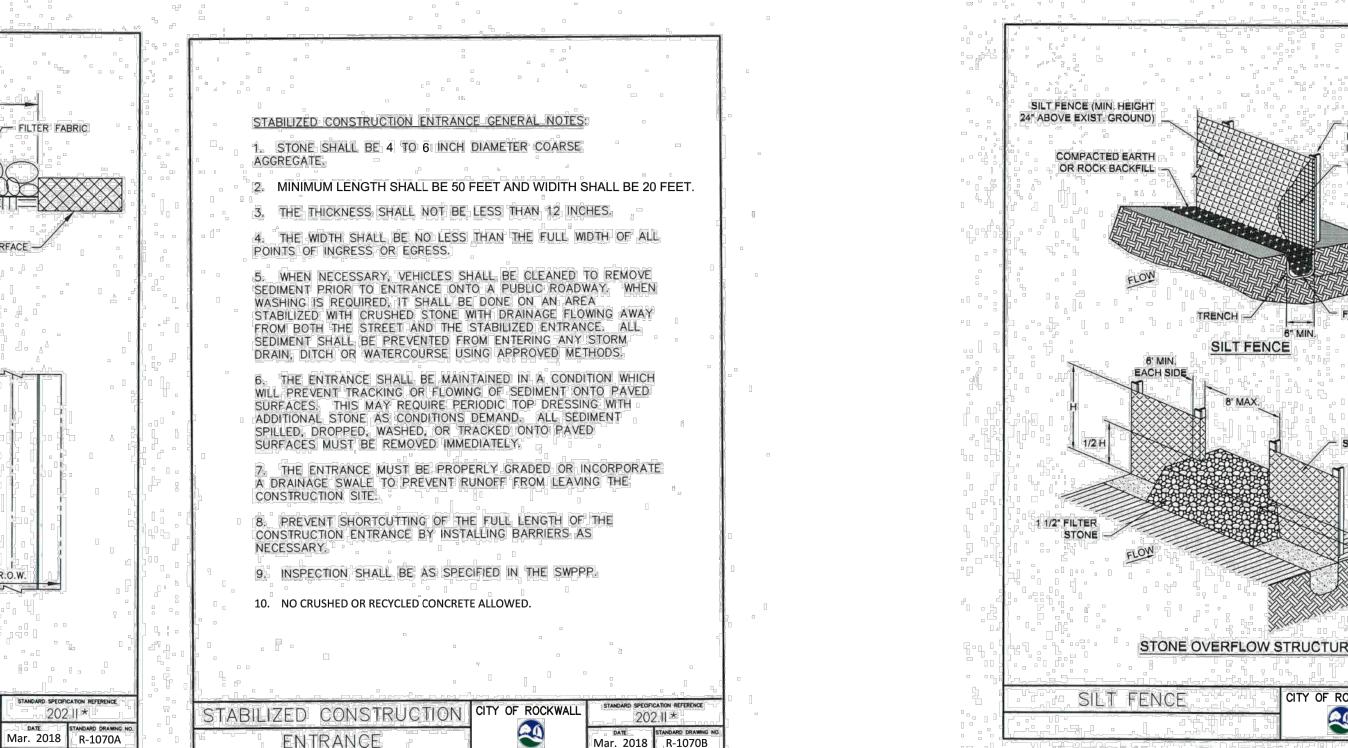


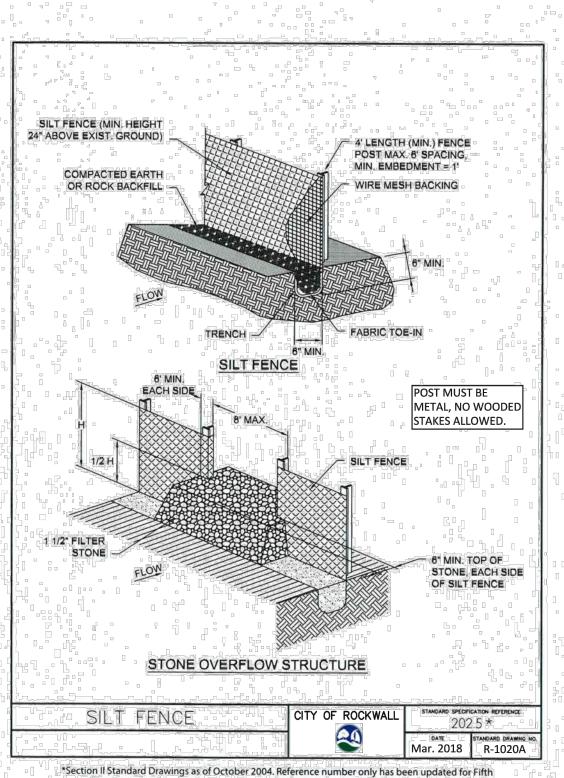
- Actual layout to be determined in the field. 2. Temporary concrete washout facility should be constructed with sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations. Plastic lining material should be a minimum of 10 mil in polyethylene sheeting and
- the material. 3. The pit shall be located in an area easily accessible to construction traffic. The pit shall be located at least 50 feet from sensitive features, storm drains, open ditches, or

should be free of holes, tears, or other defects that compromise the impermeability of

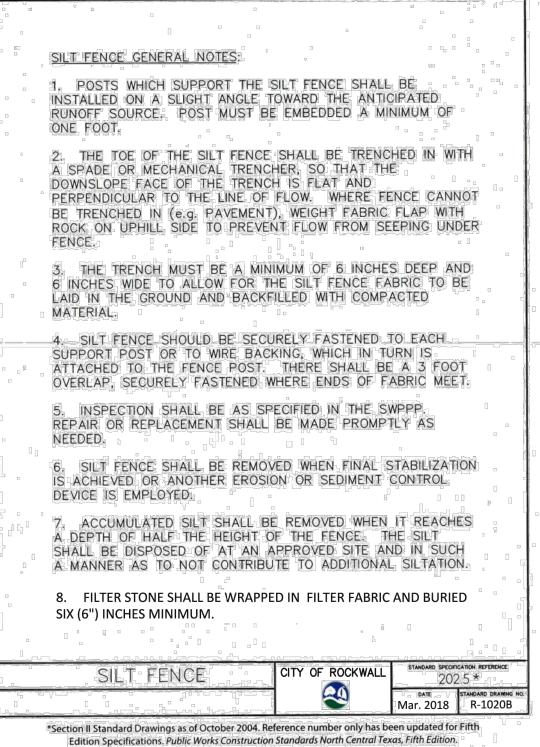
- water bodies and protected from storm water runoff. 4. When temporary concrete washout facilities are no longer required for the work, the hardened concrete should be removed and disposed of. All materials used to construct the temporary facility should be removed from the site and disposed of. Holes,
- depressions or other ground disturbance caused by the removal of the temporary facilities should be backfilled and repaired.
- 5. Excess concrete shall not be disposed of within the pit.

CONCRETE WASHOUT AREA





Edition Specifications. Public Works Construction Standards North Central Texas, Fifth Edition.





TO THE BEST OF OUR KNOWLEDGE QUIDDITY ENGINEERING, INC., HEREBY STATES THAT THIS PLAN IS ASBUILT. THIS INFORMATION PROVIDED IS BASED ON POST CONSTRUCTION SURVEYING AT THE SITE AND INFORMATION PROVIDED BY THE CONTRACTOR.

AND 3064 N

RECORD DRAWING

ROCKWALL GOLIAD STREET-

SHEET NO.

GOLIAD OCKWALL, T

RYAN J ALCALA

137823

2/9/2023

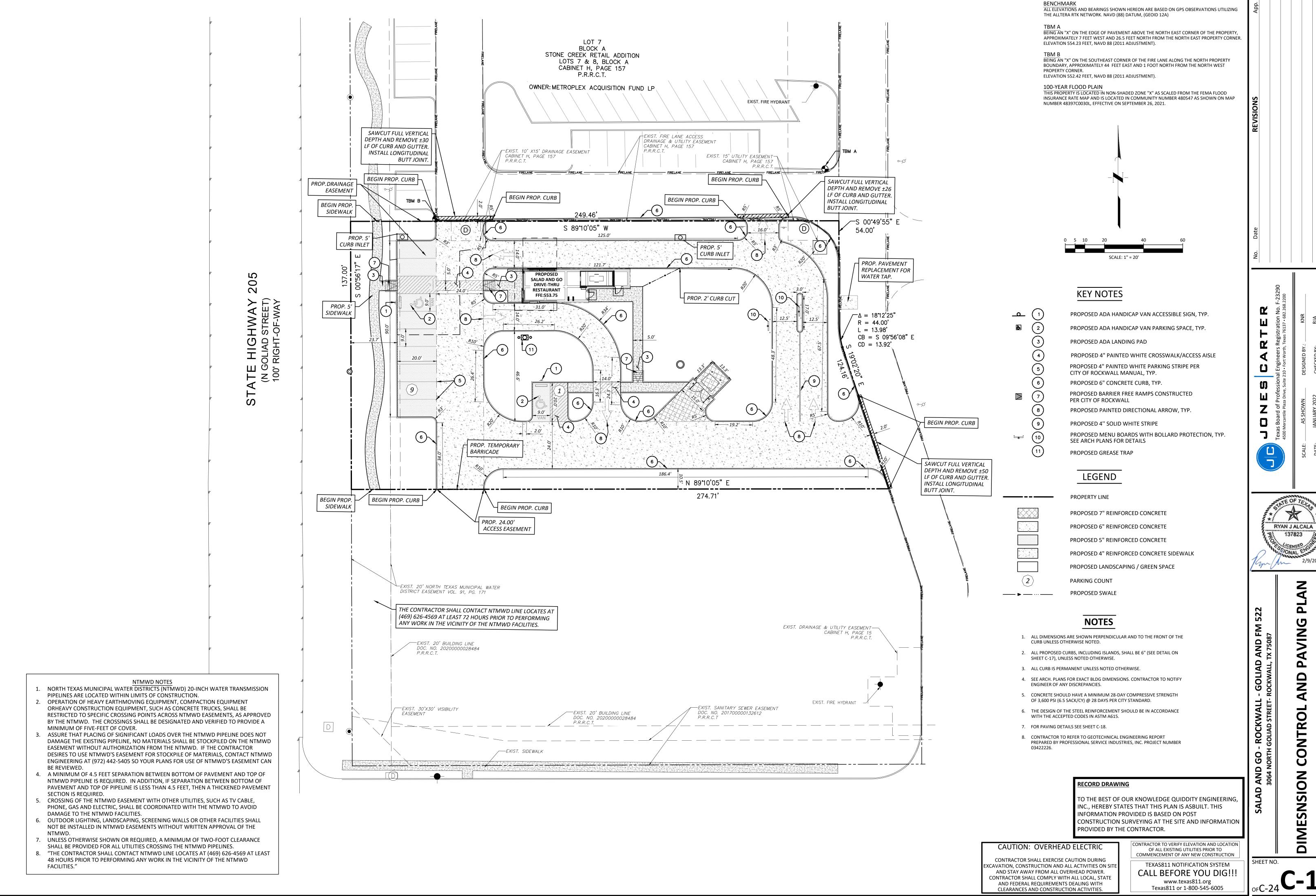
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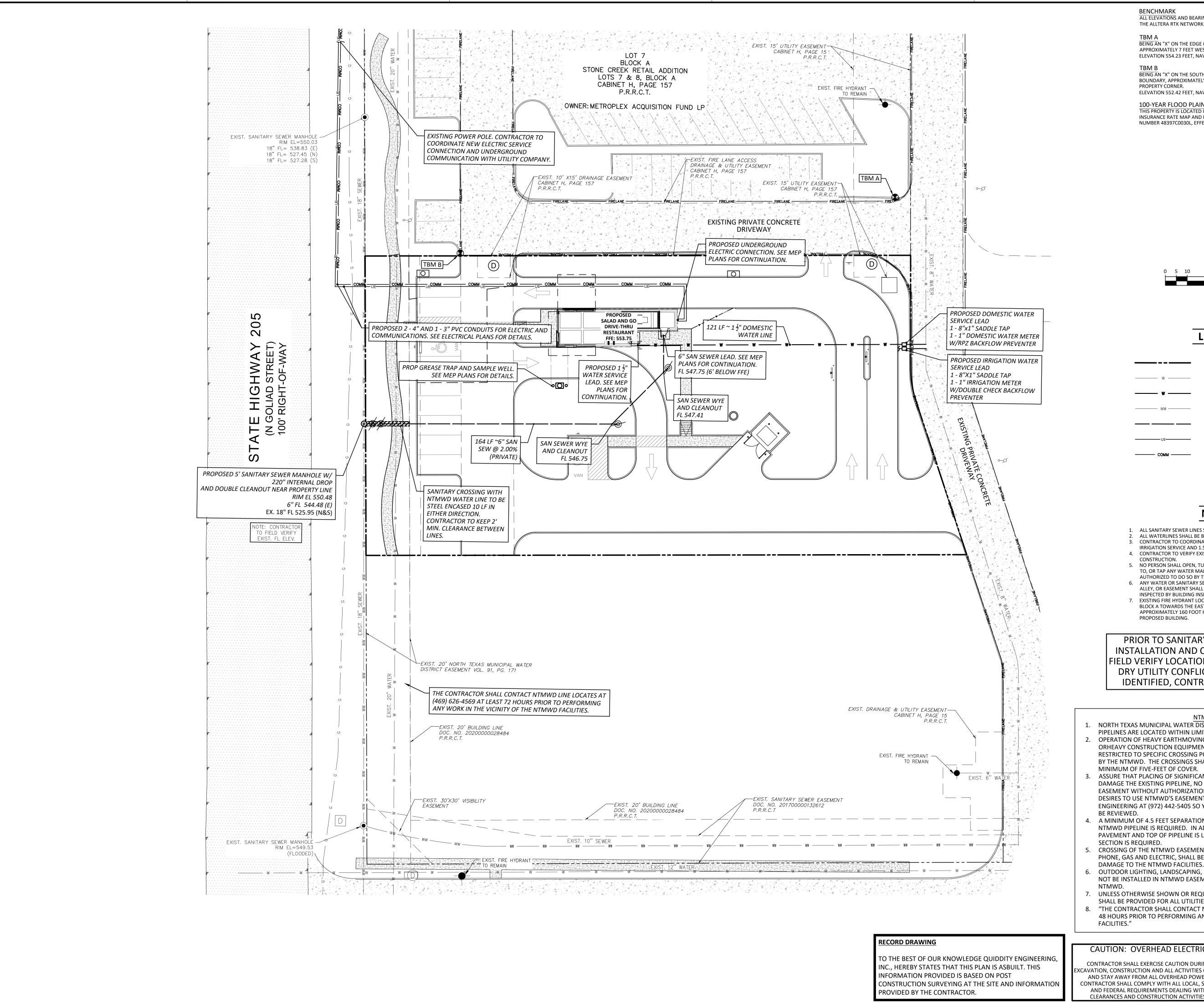
STABILIZED CONSTRUCTION ACCESS

*Section II Standard Drawings as of October 2004. Reference number only has been updated for Fifth

Edition Specifications. Public Works Construction Standards North Central Texas, Fifth Edition.



© K:\17007\17007-0037-00 Salad and Go - Goliad and FM 522 - Rockw\2 Design Phase\CAD\Plans\Site\17007-0037-00 DIMENSION CNTRL.dwg HTF: February 09, 2023



ALL ELEVATIONS AND BEARINGS SHOWN HEREON ARE BASED ON GPS OBSERVATIONS UTILIZING THE ALLTERA RTK NETWORK. NAVD (88) DATUM, (GEOID 12A)

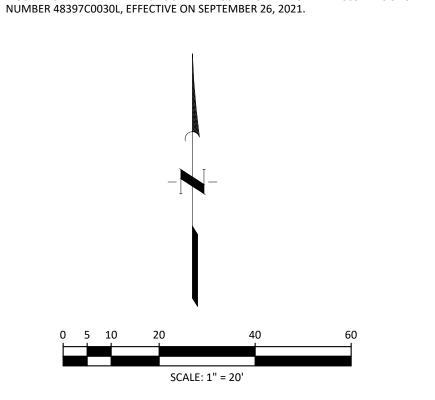
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BEING AN "X" ON THE SOUTHEAST CORNER OF THE FIRE LANE ALONG THE NORTH PROPERTY BOUNDARY, APPROXIMATELY 44 FEET EAST AND 1 FOOT NORTH FROM THE NORTH WEST

PROPERTY CORNER. ELEVATION 552.42 FEET, NAVD 88 (2011 ADJUSTMENT).

100-YEAR FLOOD PLAIN

THIS PROPERTY IS LOCATED IN NON-SHADED ZONE "X" AS SCALED FROM THE FEMA FLOOD INSURANCE RATE MAP AND IS LOCATED IN COMMUNITY NUMBER 480547 AS SHOWN ON MAP



LEGEND

PROPERTY LINE **EXISTING WATERLINE** PROPOSED WATERLINE EXISTING SANITARY SEWER PROPOSED SANITARY SEWER PROPOSED UNDERGROUND ELECTRIC PROPOSED COMMUNICATION LINE

NOTES

ALL SANITARY SEWER LINES SHALL BE PVC SDR-26.

ALL WATERLINES SHALL BE BE C-900 PVC DR-18. CONTRACTOR TO COORDINATE WITH CITY OF ROCKWALL FOR NEW 1" IRRIGATION SERVICE AND 1.5" DOMMESTIC SERVICE LEAD. 4. CONTRACTOR TO VERIFY EXISTING FLOW LINES BEFORE COMMENCING

CONSTRUCTION. 5. NO PERSON SHALL OPEN, TURN-OFF, INTERFERE WITH, ATTACH ANY HOSE TO, OR TAP ANY WATER MAIN BELONGING TO THE TOWN UNLESS DULY AUTHORIZED TO DO SO BY THE CITY OF ROCKWALL.

6. ANY WATER OR SANITARY SEWER SERVICE LOCATED OUTSIDE OF A STREET, ALLEY. OR EASEMENT SHALL BE INSTALLED BY A PLUMBER AND BE

INSPECTED BY BUILDING INSPECTIONS. 7. EXISTING FIRE HYDRANT LOCATED NORTH OF THE SUBJECT TRACT IN LOT 7 BLOCK A TOWARDS THE EASTERN PRIVATE DRIVE. FIRE HYDRANT IS APPROXIMATELY 160 FOOT HOSE LAY FROM SOUTHEAST CORNER OF THE PROPOSED BUILDING.

PRIOR TO SANITARY SEWER AND STORM SEWER INSTALLATION AND CONNECTION, CONTRACTOR TO FIELD VERIFY LOCATION AND DEPTH OF ALL POTENTIAL DRY UTILITY CONFLICTS WITHIN ROW. IF CONFLICT IDENTIFIED, CONTRACTOR TO NOTIFY ENGINEER.

NORTH TEXAS MUNICIPAL WATER DISTRICTS (NTMWD) 20-INCH WATER TRANSMISSION PIPELINES ARE LOCATED WITHIN LIMITS OF CONSTRUCTION.

OPERATION OF HEAVY EARTHMOVING EQUIPMENT, COMPACTION EQUIPMENT ORHEAVY CONSTRUCTION EQUIPMENT, SUCH AS CONCRETE TRUCKS, SHALL BE RESTRICTED TO SPECIFIC CROSSING POINTS ACROSS NTMWD EASEMENTS, AS APPROVED BY THE NTMWD. THE CROSSINGS SHALL BE DESIGNATED AND VERIFIED TO PROVIDE A MINIMUM OF FIVE-FEET OF COVER.

ASSURE THAT PLACING OF SIGNIFICANT LOADS OVER THE NTMWD PIPELINE DOES NOT DAMAGE THE EXISTING PIPELINE, NO MATERIALS SHALL BE STOCKPILED ON THE NTMWD EASEMENT WITHOUT AUTHORIZATION FROM THE NTMWD. IF THE CONTRACTOR DESIRES TO USE NTMWD'S EASEMENT FOR STOCKPILE OF MATERIALS, CONTACT NTMWD ENGINEERING AT (972) 442-5405 SO YOUR PLANS FOR USE OF NTMWD'S EASEMENT CAN

BE REVIEWED. A MINIMUM OF 4.5 FEET SEPARATION BETWEEN BOTTOM OF PAVEMENT AND TOP OF NTMWD PIPELINE IS REQUIRED. IN ADDITION, IF SEPARATION BETWEEN BOTTOM OF PAVEMENT AND TOP OF PIPELINE IS LESS THAN 4.5 FEET, THEN A THICKENED PAVEMENT

CROSSING OF THE NTMWD EASEMENT WITH OTHER UTILITIES, SUCH AS TV CABLE, PHONE, GAS AND ELECTRIC, SHALL BE COORDINATED WITH THE NTMWD TO AVOID

OUTDOOR LIGHTING, LANDSCAPING, SCREENING WALLS OR OTHER FACILITIES SHALL NOT BE INSTALLED IN NTMWD EASEMENTS WITHOUT WRITTEN APPROVAL OF THE

UNLESS OTHERWISE SHOWN OR REQUIRED, A MINIMUM OF TWO-FOOT CLEARANCE SHALL BE PROVIDED FOR ALL UTILITIES CROSSING THE NTMWD PIPELINES.

8. "THE CONTRACTOR SHALL CONTACT NTMWD LINE LOCATES AT (469) 626-4569 AT LEAST 48 HOURS PRIOR TO PERFORMING ANY WORK IN THE VICINITY OF THE NTMWD

CAUTION: OVERHEAD ELECTRIC

CONTRACTOR SHALL EXERCISE CAUTION DURING XCAVATION, CONSTRUCTION AND ALL ACTIVITIES ON SITE AND STAY AWAY FROM ALL OVERHEAD POWER. CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS DEALING WITH CLEARANCES AND CONSTRUCTION ACTIVITIES.

CONTRACTOR TO VERIFY ELEVATION AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY NEW CONSTRUCTION

TEXAS811 NOTIFICATION SYSTEM CALL BEFORE YOU DIG!!! www.texas811.org Texas811 or 1-800-545-6005

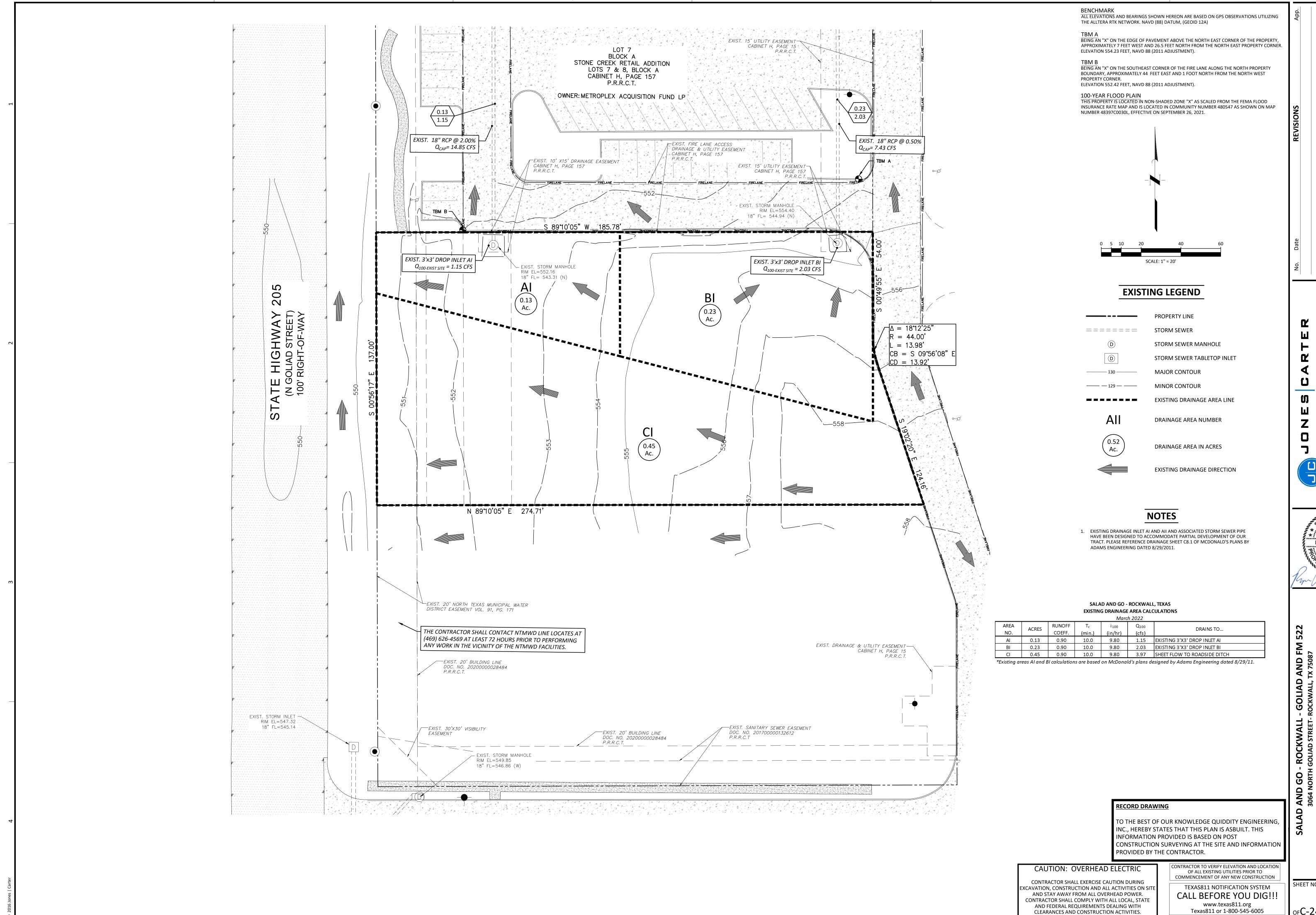
LIAD WALL, 1

- 05

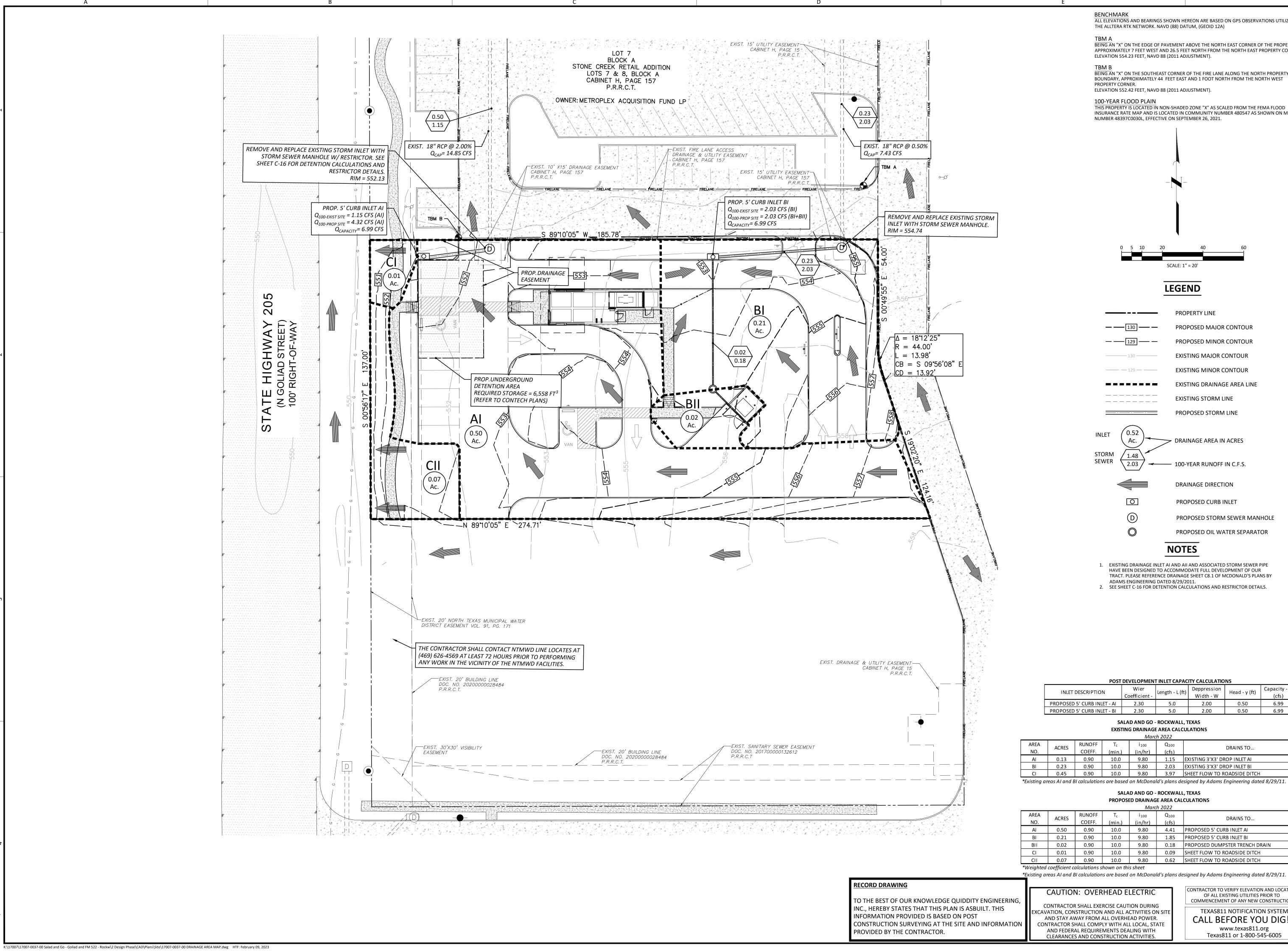
K:\17007\17007-0037-00 Salad and Go - Goliad and FM 522 - Rockw\2 Design Phase\CAD\Plans\Site\17007-0037-00 UTILITY PLAN.dwg HTF: February 14, 2023

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RYAN J ALCALA



RYAN J ALCALA 137823

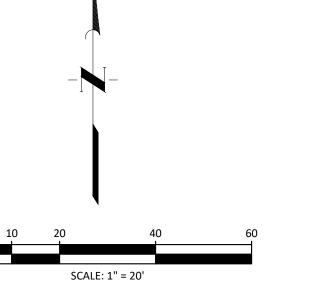


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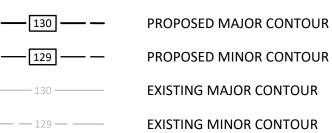
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LEGEND

PROPERTY LINE



EXISTING MAJOR CONTOUR EXISTING MINOR CONTOUR

EXISTING DRAINAGE AREA LINE EXISTING STORM LINE

PROPOSED STORM LINE

DRAINAGE AREA IN ACRES

——— 100-YEAR RUNOFF IN C.F.S. DRAINAGE DIRECTION

PROPOSED CURB INLET

PROPOSED STORM SEWER MANHOLE PROPOSED OIL WATER SEPARATOR

- **NOTES** 1. EXISTING DRAINAGE INLET AI AND AII AND ASSOCIATED STORM SEWER PIPE HAVE BEEN DESIGNED TO ACCOMMODATE FULL DEVELOPMENT OF OUR
- TRACT. PLEASE REFERENCE DRAINAGE SHEET C8.1 OF MCDONALD'S PLANS BY ADAMS ENGINEERING DATED 8/29/2011.

RYAN J ALCALA 137823

GOLIAD AND I

9

(I)

POST DEVELOPMENT INLET CAPACITY CALCULATIONS

Head - y (ft)
 PROPOSED 5' CURB INLET - AI
 2.30
 5.0
 2.00
 0.50
 6.99
 PROPOSED 5' CURB INLET - BI 2.30 5.0 2.00 0.50 6.99

SALAD AND GO - ROCKWALL, TEXAS **EXISTING DRAINAGE AREA CALCULATIONS**

	March 2022									
AREA	ACRES	RUNOFF	T _c	i ₁₀₀	Q ₁₀₀	DRAINS TO				
NO.		COEFF.	(mi n.)	(in/hr)	(cfs)	BRAINS TO				
Al	0.13	0.90	10.0	9.80	1.15	EXISTING 3'X3' DROP INLET AI				
ВІ	0.23	0.90	10.0	9.80	2.03	EXISTING 3'X3' DROP INLET BI				
CI 0.45 0.90 10.0 9.80 3.97 SHEET FLOW TO ROADSIDE DITCH										
cisting ar	isting areas AI and BI calculations are based on McDonald's plans designed by Adams Engineering dated 8/29/11.									

SALAD AND GO - ROCKWALL, TEXAS DDODOCED DDAINIAGE ADEA CALCULATIONS

PROPOSED DRAINAGE AREA CALCULATIONS											
	March 2022										
AREA	ACDEC	RUNOFF	T _c	i ₁₀₀	Q ₁₀₀	DRAING TO					
NO. ACRES		COEFF.	(min.)	(in/hr)	(cfs)	DRAINS TO					
Al	0.50	0.90	10.0	9.80	4.41	PROPOSED 5' CURB INLET AI					
ВІ	0.21	0.90	10.0	9.80	1.85	PROPOSED 5' CURB INLET BI					
BII	0.02	0.90	10.0	9.80	0.18	PROPOSED DUMPSTER TRENCH DRAIN					
CI	0.01	0.90	10.0	9.80	0.09	SHEET FLOW TO ROADSIDE DITCH					
CII	0.07	0.90	10.0	9.80	0.62	SHEET FLOW TO ROADSIDE DITCH					

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CONTRACTOR TO VERIFY ELEVATION AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO

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BENCHMARK

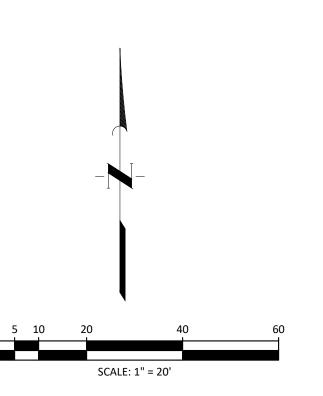
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LEGEND

	PROPERTY LINE
—	PROPOSED MAJOR CONTOUR
——————————————————————————————————————	PROPOSED MINOR CONTOUR
130	EXISTING MAJOR CONTOUR
———————————————————————————————————————	EXISTING MINOR CONTOUR
	EXISTING DRAINAGE AREA LINE
	EXISTING STORM LINE
	PROPOSED STORM LINE
0	PROPOSED CURB INLET
D	PROPOSED STORM SEWER MAN

NOTES

PROPOSED OIL WATER SEPARATOR

- 1. EXISTING DRAINAGE INLET AI AND AII AND ASSOCIATED STORM SEWER PIPE HAVE BEEN DESIGNED TO ACCOMMODATE PARTIAL DEVELOPMENT OF OUR TRACT. PLEASE REFERENCE DRAINAGE SHEET C8.1 OF MCDONALD'S PLANS BY
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NTMWD NOTES

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RECORD DRAWING

TO THE BEST OF OUR KNOWLEDGE QUIDDITY ENGINEERING INC., HEREBY STATES THAT THIS PLAN IS ASBUILT. THIS INFORMATION PROVIDED IS BASED ON POST CONSTRUCTION SURVEYING AT THE SITE AND INFORMATION PROVIDED BY THE CONTRACTOR.

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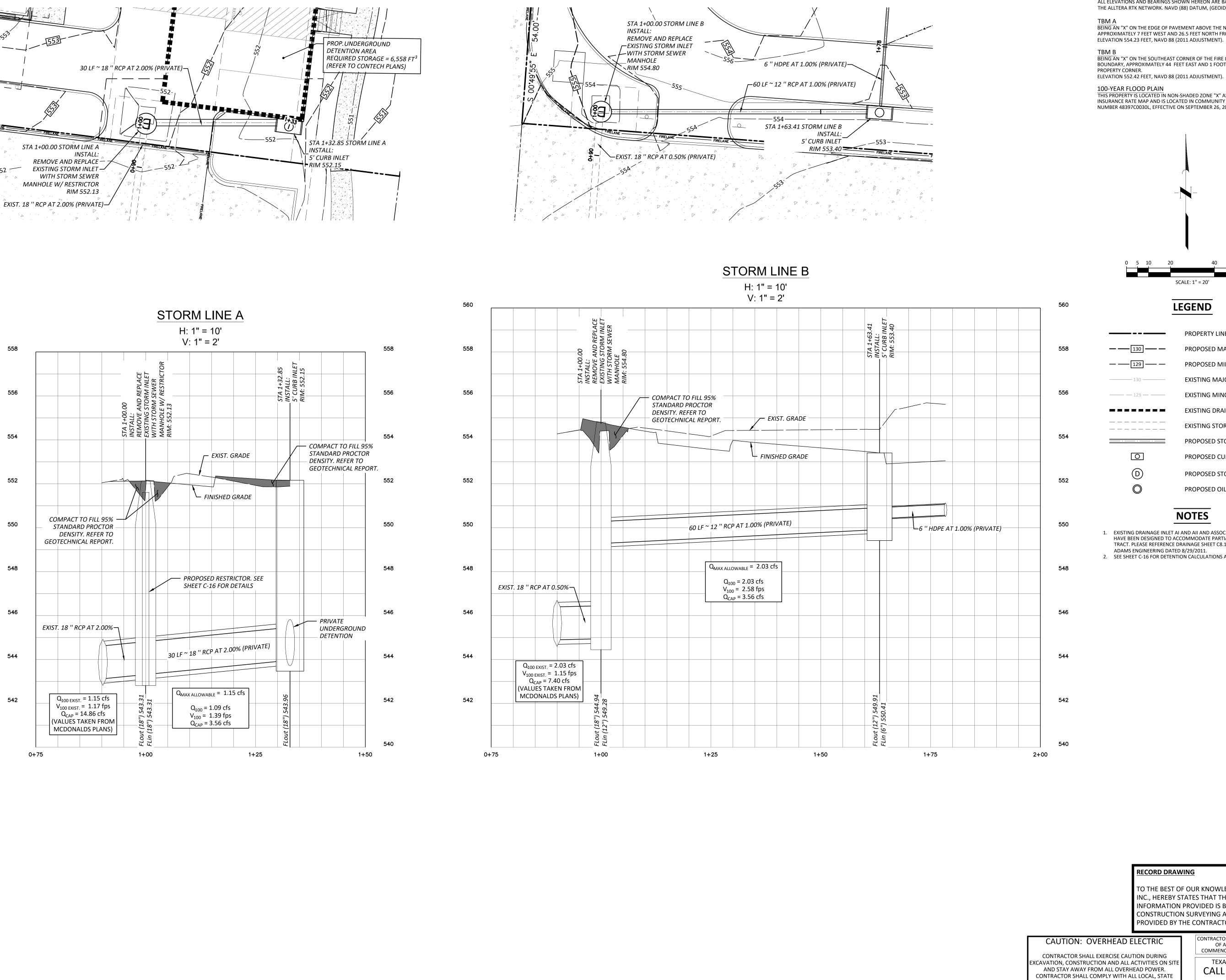
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RYAN J ALCALA 137823

AND TX 7508

- GOLIAD ROCKWALL, T



K:\17007\17007-0037-00 Salad and Go - Goliad and FM 522 - Rockw\2 Design Phase\CAD\Plans\Site\17007-0037-00 STORM Plan and Profile.dwg HTF: February 09, 2023

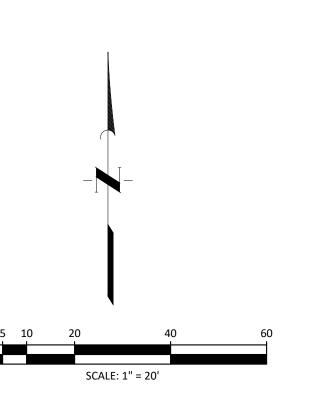
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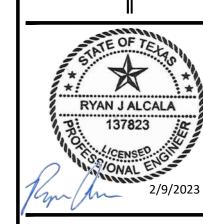
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LEGEND

	PROPERTY LINE
— 130 — —	PROPOSED MAJOR CONTOUR
—— <u>[129]</u> ———	PROPOSED MINOR CONTOUR
130	EXISTING MAJOR CONTOUR
———————————————————————————————————————	EXISTING MINOR CONTOUR
	EXISTING DRAINAGE AREA LINE
	EXISTING STORM LINE
	PROPOSED STORM LINE
0	PROPOSED CURB INLET
D	PROPOSED STORM SEWER MANHOLI
	PROPOSED OIL WATER SEPARATOR

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AND GO - ROCKWALL - GOLIAD AND FM 3064 NORTH GOLIAD STREET- ROCKWALL, TX 75087 **STORM**

RECORD DRAWING

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Texas811 or 1-800-545-6005

CITY OF ROCKWALL MODIFIED RATIONAL METHOD

September 8, 2022

SALAD AND GO	DETENTION	CALCULATIONS

DESIGN FREQUENCY =	100	YEAR 5TORM	5AFETY FACTOR =	1.00	
EXISTING CONDITIONS:					
ON-5ITE RUNOFF CI:			ON-5ITE RUNOFF CII:		
DRAINAGE AREA (A) "AI"	0.13	AC	*DRAINAGE AREA (A) "CI"	0.45	AC
TIME OF CONC. (T _c)	10	MIN	TIME OF CONC. (T _c)	10	MIN
RAINFALL INTENSITY (I)	9.80	IN/HR	RAINFALL INTENSITY (I)	9.80	IN/HR
RUNOFF COEFFICIENT (C)	0.90		RUNOFF COEFFICIENT (C)	0.50	
SAFETY FACTOR (C _F)	1.00		5AFETY FACTOR (C _F)	1.00	
ALLOW. DI5CHARGE:	1.15	CF5	**OFF-5ITE RUNOFF DISCHARGE:	2.21	CFS
			Note: "CI" only shown as r	eference. Not used in bel	ow calculations.
PROPOSED CONDITIONS:					
ON-5ITE DETAINED RUNOFF:			OFF-5ITE FLOW PA55ING THROUGH	l DETENTION:	
DRAINAGE AREA (A) "AI"	0.50	AC	DRAINAGE AREA (A)	0.00	AC
TIME OF CONC. (T _c)	10	MIN	TIME OF CONC. (T_c)	10	MIN
RAINFALL INTEN5ITY (I)	9.80	IN/HR	RAINFALL INTENSITY (I)	9.80	IN/HR
RUNOFF COEFFICIENT (C)	0.90		RUNOFF COEFFICIENT (C)	0.90	
5AFETY FACTOR (C _F)	1.00		5AFETY FACTOR (C _F)	1.00	
DETAINED RUNOFF	4.41	CF5	OFF-5ITE PA55 THROUGH FLOW:	0.00	CF5
ON-5ITE UNDETAINED RUNOFF:			ALLOWABLE DI5CHARGE	0.82	CF5
DRAINAGE AREA (A)	0.01	AC	ACTUAL DI5CHARGE	0.81	CF5
"CI"			OPENING A & B		
TIME OF CONC. (T _c)	10	MIN			
RAINFALL INTEN5ITY (I)	9.80	IN/HR			
RUNOFF COEFFICIENT (C)	0.55	(0.90 - 0.35) ZON	IING ADJU5TMENT		
SAFETY FACTOR (C _F)	1.00				
UNDETAINED RUNOFF	0.05	CF5			
ON-5ITE UNDETAINED RUNOFF:					
DRAINAGE AREA (A) "CII"	0.07	AC			
TIME OF CONC. (T _c)	10	MIN			
RAINFALL INTENSITY (I)	9.80	IN/HR			

STORAGE CALCULATIONS:

RUNOFF COEFFICIENT (C)

5AFETY FACTOR (C_F)

UNDETAINED RUNOFF

DURATION		RAINFALL INTENSITY	INFLOW RATE	INFLOW VOLUME	OUTFLOW RATE	VOLUME	1	RED STORAGE V - OUTFLOW)
(MIN)	(HR5)	(IN/HR)	(CF5)	(CF)	(CF5)	(CF)	(CF)	(AC-FT
10	0.17	9.80	4.41	2,646	0.82	491	2,155	0.05
15	0.25	9.00	4.05	3,645	0.82	614	3,031	0.07
20	0.33	8.30	3.74	4,482	0.82	736	3,746	0.09
30	0.50	6.90	3.11	5,589	0.82	982	4,607	0.11
40	0.67	5.80	2.61	6,264	0.82	1,227	5,037	0.12
50	0.83	5.00	2.25	6,750	0.82	1,473	5,277	0.12
60	1.00	4.50	2.03	7,290	0.82	1,718	5,572	0.13
70	1.17	4.00	1.80	7,560	0.82	1,964	5,596	0.13
80	1.33	3.70	1.67	7,992	0.82	2,209	5,783	0.13
90	1.50	3.50	1.58	8,505	0.82	2,455	6,050	0.14
100	1.67	3.40	1.53	9,180	0.82	2,700	6,480	0.15
110	1.83	3.20	1.44	9,504	0.82	2,946	6,558	0.15
120	2.00	3.00	1.35	9,720	0.82	3,191	6,529	0.15
130	2.17	2.80	1.26	9,828	0.82	3,437	6,391	0.15
140	2.33	2.60	1.17	9,828	0.82	3,682	6,146	0.14
150	2.50	2.40	1.08	9,720	0.82	3,928	5,792	0.13

0.40 (0.90 - 0.50) ZONING ADJU5TMENT

0.27 CF5

MAXIMUM REQUIRED STORAGE = 6,558 0.15

10 yr Release rate at Opening A

PROVIDED STORAGE = 6,571

0	_	0.47 efc	5 vr Release rate at Opening
$Q_{restrictor} = AC\sqrt{2gh} = (0.20ft)(0.25ft)$	$(0.6)\sqrt{2(3)}$	$2.2ft/s^2)(4.44ft) =$	= 0.51 cfs
Dimension of Opening A	=	0.20' x 0.25'	
Proposed Width of Opening	=	0.25 ft	
Max. Width of Opening A (req.) = $\frac{Q}{HC\sqrt{2gh}}$	= -(($0.51 cf$ $0.20ft) (0.6) \sqrt{2(32)}$	
Assumed Height of Opening A (H)	=	0.2 ft	
Coefficient of Discharge (C)	=	0.6	
5 yr Allowable Discharge (Q)	=	0.51 cfs	from detention calculations
Head = WSE - Tailwater - 1/2 Opening Size (h)	=	3.82 ft	
Oufall Elevation	=	543.31 ft	FL at outfall structure
5 yr WSE	=	547.23 ft	Calculated

SALAD AND GO - CITY OF ROCKWALL - RESTRICTOR CALCULATIONS

	Qrelease	=	0.47 cfs	5 yr Release rate at Opening A
<u>s</u>	10 yr WSE	=	548.43 ft	Calculated
	Oufall Elevation	=	543.31 ft	FL at outfall structure
[AT	Head = WSE - Tailwater - 1/2 Opening Size (h)	=	5.02 ft	
2	10 yr Allowable Discharge	=	0.59	from detention calculations
S	Coefficient of Discharge (C)	=	0.6	
CTOR	Area of Opening A (H)	=	0.05 ft ²	
STRIC	$Q_{restrictor} = AC\sqrt{2gh} = (0.20ft)(0.25ft)$	$(0.6)\sqrt{2(3)}$	$\overline{2.2ft/s^2)(5.02ft)} =$	0.54 cfs

Note: Second opening not required for 10 year event as Opening A allows event release rate

CITY OF ROCKWALL MODIFIED RATIONAL METHOD

September 8, 2022

SALAD AND GO DETENTION CALCULATIONS

DE5IGN FREQUENCY =	25	YEAR 5TORM	5AFETY FACTOR =	1.00	
EXISTING CONDITIONS:					
ON-SITE RUNOFF CI:			ON-SITE RUNOFF CII:		
DRAINAGE AREA (A) "AI"	0.13	AC	*DRAINAGE AREA (A) "CI"	0.45	AC
TIME OF CONC. (T _c)	10	MIN	TIME OF CONC. (T_c)	10	MIN
RAINFALL INTENSITY (I)	8.30	IN/HR	RAINFALL INTENSITY (I)	8.30	IN/HR
RUNOFF COEFFICIENT (C)	0.90		RUNOFF COEFFICIENT (C)	0.50	
5AFETY FACTOR (C _F)	1.00		5AFETY FACTOR (C _F)	1.00	
ALLOW. DISCHARGE:	0.97	CF5	**OFF-5ITE RUNOFF DI5CHARGE:	1.87	CF5
			Note: "CI" only shown as	reference. Not used in bel	ow calculations.
PROPOSED CONDITIONS:					
ON-5ITE DETAINED RUNOFF:			OFF-5ITE FLOW PASSING THROUG	SH DETENTION:	
DRAINAGE AREA (A)	0.50	AC	DRAINAGE AREA (A)	0.00	AC
"AI"	0.00		5.1	5.55	
TIME OF CONC. (T _c)	10	MIN	TIME OF CONC. (T_c)	10	MIN
RAINFALL INTENSITY (I)	8.30	IN/HR	RAINFALL INTENSITY (I)	8.30	IN/HR
RUNOFF COEFFICIENT (C)	0.90		RUNOFF COEFFICIENT (C)	0.90	
5AFETY FACTOR (C _F)	1.00		5AFETY FACTOR (C _F)	1.00	
DETAINED RUNOFF	3.74	CF5	OFF-51TE PA55 THROUGH FLOW:	0.00	CF5
ON-5ITE UNDETAINED RUNOFF:			ALLOWABLE DI5CHARGE	0.69	CF5
DRAINAGE AREA (A)	0.01	AC	ACTUAL DI5CHARGE	0.56	CF5
"CI"			OPENING A		
TIME OF CONC. (T _c)	10	MIN			
RAINFALL INTENSITY (I)	8.30	IN/HR			
RUNOFF COEFFICIENT (C)	0.55	(0.90 - 0.35) ZON	IING ADJU5TMENT		
5AFETY FACTOR (C _F)	1.00	,			
UNDETAINED RUNOFF	0.05	CF5			
ON SITE UNDETAINED BUNGS					
ON-SITE UNDETAINED RUNOFF:	0.07	A. C.			
DRAINAGE AREA (A) "CII"	0.07	AC			
UI					

STORAGE CALCULATIONS:

TIME OF CONC. (Tc)

5AFETY FACTOR (C_F)

UNDETAINED RUNOFF

RAINFALL INTENSITY (I)

RUNOFF COEFFICIENT (C)

DUR	ATION	RAINFALL INTENSITY	INFLOW RATE	INFLOW VOLUME	OUTFLOW RATE	OUTFLOW VOLUME	1	RED STORAGE V - OUTFLOW)
(MIN)	(HR5)	(IN/HR)	(CF5)	(CF)	(CF5)	(CF)	(CF)	(AC-FT)
10	0.17	8.30	3.74	2,241	0.69	416	1,825	0.04
15	0.25	7.50	3.38	3,038	0.69	520	2,518	0.06
20	0.33	6.60	2.97	3,564	0.69	624	2,940	0.07
30	0.50	5.50	2.48	4,455	0.69	832	3,623	0.08
40	0.67	4.60	2.07	4,968	0.69	1,040	3,928	0.09
50	0.83	4.00	1.80	5,400	0.69	1,247	4,153	0.10
60	1.00	3.50	1.58	5,670	0.69	1,455	4,215	0.10
70	1.17	3.30	1.49	6,237	0.69	1,663	4,574	0.10
80	1.33	3.10	1.40	6,696	0.69	1,871	4,825	0.11
90	1.50	2.90	1.31	7,047	0.69	2,079	4,968	0.11
100	1.67	2.70	1.22	7,290	0.69	2,287	5,003	0.11
110	1.83	2.50	1.13	7,425	0.69	2,495	4,930	0.11
120	2.00	2.30	1.04	7,452	0.69	2,703	4,749	0.11
130	2.17	2.10	0.95	7,371	0.69	2,911	4,460	0.10
140	2.33	1.90	0.86	7,182	0.69	3,119	4,063	0.09
150	2.50	1.70	0.77	6,885	0.69	3,327	3,558	0.08

10 MIN

8.30 IN/HR

0.23 CF5

1.00

0.40 (0.90 - 0.50) ZONING ADJUSTMENT

MAXIMUM REQUIRED STORAGE = 5,003

S	25 yr WSE		548.76 ft		Calculated
NOI	Oufall Elevation	=	543.31 ft		FL at outfall structure
LAT	Head = WSE - Tailwater - 1/2 Opening Size (h)	=	5.35 ft		
רכח	25 yr Allowable Discharge	=	0.69		from detention calculations
CA	Coefficient of Discharge (C)	=	0.6		
CTOR	Area of Opening A (H)	=	0.05 ft ²		
25 YEAR RESTRICTOR CALCULATIONS	$Q_{restrictor} = AC\sqrt{2gh} = (0.20ft)(0.25ft)$	$(0.6)\sqrt{2}$	$(32.2ft/s^2)(5.35f$	$\overline{f(t)} = 0.56$	6 cfs
AR I	Discharge Rate at Opening A (Q)	=	0.56 cfs		
5 YE	Note: Second opening not required for	10 year e	vent as Opening A all	ows even	t release rate
2	Qrelease	=	0.56 cfs		25 yr Release rate at Opening A
	100 yr WSE	=	550.46 ft		
	Tailwater Elevation	=	544.81 ft		Assume crown of outfall pipe
	Head = WSE - Tailwater (h)	=	5.65 ft		
	100 yr Allowable Discharge	=	0.82		from detention calculations
	Coefficient of Discharge (C)	=	0.6		
	Area of Opening A (A)	=	0.05 ft ²		
CALCULATIONS	$Q_{restrictor} = AC\sqrt{2gh} = (0.20ft)(0.25ft)$	$(0.6)\sqrt{2}$	$(32.2ft/s^2)(5.65f$	$\overline{f(t)} = 0.57$	7 cfs
710:	Discharge Rate at Opening A	=	0.57 cfs		
ALC	Allowable Discharge of Opening B	=	0.25 cfs		
8	Head = 1/2 Opening Size (h)	=	0.13 ft		
ICT(Assumed Height of Opening B (H)	=	0.25 ft		
100 YEAR RESTRICTO	Max. Width of Opening (req.) = $\frac{Q}{HC\sqrt{2gh}}$	=	$\frac{(0.25)}{(0.25)(0.6)\sqrt{2}}$	$\frac{5 cfs)}{\left(32.2 \frac{f}{s}\right)}$	$\frac{t}{(0.13ft)} = 0.58 \text{ ft}$ = 6.938 in
100 \	Proposed Width of Opening	=	0.55 ft		
	Dimension of Opening B	=	0.25' x 0.55'		
	$Q_{restrictor} = AC\sqrt{2gh} = (0.25ft)(0.55ft)$	$(0.6)\sqrt{2}$	$(32.2ft/s^2)(0.13ft)$	$\overline{f(t)} = 0.23$	3 cfs
	Discharge Rate at Opening B (Q)	=	0.23 cfs		
	Qrelease	=	0.81	cfs	100 yr Release rate at Opening A & B

CITY OF ROCKWALL MODIFIED RATIONAL METHOD

SALAD AND GO DETENTION CALCULATIONS

September 8, 2022

DESIGN FREQUENCY =	10	YEAR 5TORM	5AFETY FACTOR =	1.00	
EXISTING CONDITIONS:		***************************************			***************************************
ON-5ITE RUNOFF CI:			ON-5ITE RUNOFF CII:		
DRAINAGE AREA (A) "AI"	0.13	AC	*DRAINAGE AREA (A) "CI"	0.45	AC
TIME OF CONC. (T _c)	10	MIN	TIME OF CONC. (T _c)	10	MIN
RAINFALL INTENSITY (I)	7.10	IN/HR	RAINFALL INTENSITY (I)	7.10	IN/HR
RUNOFF COEFFICIENT (C)	0.90		RUNOFF COEFFICIENT (C)	0.50	
5AFETY FACTOR (C _F)	1.00		5AFETY FACTOR (C _F)	1.00	
ALLOW. DI5CHARGE:	0.83	CF5	**OFF-5ITE RUNOFF DI5CHARGE	: 1.60	CF5
			Note: "CI" only shown a	s reference. Not used in bel	ow calculations
PROPOSED CONDITIONS:					
ON-5ITE DETAINED RUNOFF:			OFF-5ITE FLOW PA55ING THROU	IGH DETENTION:	
DRAINAGE AREA (A) "AI"	0.50	AC	DRAINAGE AREA (A)	0.00	AC
TIME OF CONC. (T_c)	10	MIN	TIME OF CONC. (T _c)	10	MIN
RAINFALL INTENSITY (I)	7.10	IN/HR	RAINFALL INTENSITY (I)	7.10	IN/HR
RUNOFF COEFFICIENT (C)	0.90		RUNOFF COEFFICIENT (C)	0.90	
5AFETY FACTOR (C _F)	1.00		5AFETY FACTOR (C _F)	1.00	
DETAINED RUNOFF	3.20	CF5	OFF-5ITE PA55 THROUGH FLOW	0.00	CF5
ON-5ITE UNDETAINED RUNOFF:			ALLOWABLE DISCHARGE	0.59	CF5
DRAINAGE AREA (A) "CI"	0.01	AC	ACTUAL DI5CHARGE O PENING A	0.54	CF5
TIME OF CONC. (T _c)	10	MIN			
RAINFALL INTENSITY (I)	7.10	IN/HR			
RUNOFF COEFFICIENT (C)	0.55	•	NING ADJUSTMENT		
5AFETY FACTOR (C _F)	1.00	,			
UNDETAINED RUNOFF	0.04	CF5			
ON-5ITE UNDETAINED RUNOFF:					
DRAINAGE AREA (A) "CII"	0.07	AC			
TIME OF CONC. (T_c)	10	MIN			
RAINFALL INTENSITY (I)	7.10	IN/HR			
RUNOFF COEFFICIENT (C)	0.40	(0.90 - 0.50) ZON	IING ADJU5TMENT		
5AFETY FACTOR (C _F)	1.00	•			
UNDETAINED RUNOFF	0.20	CF5			

STORAGE CALCULATIONS:

DUR	ATION	RAINFALL INTENSITY	INFLOW RATE	INFLOW VOLUME	OUTFLOW RATE	OUTFLOW VOLUME		RED STORAGE W - OUTFLOW)
(MIN)	(HR5)	(IN/HR)	(CF5)	(CF)	(CF5)	(CF)	(CF)	(AC-FT
10	0.17	7.10	3.20	1,917	0.59	356	1,561	0.04
15	0.25	6.50	2.93	2,633	0.59	445	2,188	0.05
20	0.33	5.90	2.66	3,186	0.59	534	2,652	0.06
30	0.50	4.80	2.16	3,888	0.59	711	3,177	0.07
40	0.67	4.00	1.80	4,320	0.59	889	3,431	0.08
50	0.83	3.50	1.58	4,725	0.59	1,067	3,658	0.08
60	1.00	3.00	1.35	4,860	0.59	1,245	3,615	0.08
70	1.17	2.80	1.26	5,292	0.59	1,423	3,869	0.09
80	1.33	2.60	1.17	5,616	0.59	1,601	4,015	0.09
90	1.50	2.50	1.13	6,075	0.59	1,779	4,296	0.10
100	1.67	2.40	1.08	6,480	0.59	1,956	4,524	0.10
110	1.83	2.30	1.04	6,831	0.59	2,134	4,697	0.11
120	2.00	2.10	0.95	6,804	0.59	2,312	4,492	0.10
130	2.17	1.90	0.86	6,669	0.59	2,490	4,179	0.10
140	2.33	1.70	0.77	6,426	0.59	2,668	3,758	0.09
150	2.50	1.50	0.68	6,075	0.59	2,846	3,229	0.07

CITY OF ROCKWALL MODIFIED RATIONAL METHOD

SALAD AND GO DETENTION CALCULATIONS

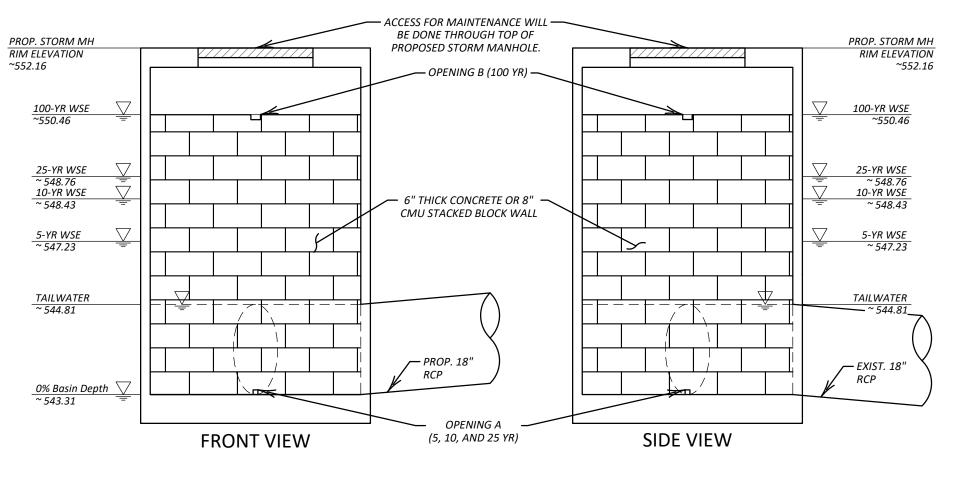
DESIGN FREQUENCY =	5	YEAR 5TORM	5AFETY FACTOR =	1.00	
EXISTING CONDITIONS:					
ON-5ITE RUNOFF CI:			ON-5ITE RUNOFF CII:		
DRAINAGE AREA (A)	0.13	AC	*DRAINAGE AREA (A) "CI"	0.45	AC
TIME OF CONC. (T _c)	10	MIN	TIME OF CONC. (T _c)	10	MIN
RAINFALL INTENSITY (I)	6.10	IN/HR	RAINFALL INTENSITY (I)	6.10	IN/HR
RUNOFF COEFFICIENT (C)	0.90	•	RUNOFF COEFFICIENT (C)	0.50	·
5AFETY FACTOR (C _F)	1.00		5AFETY FACTOR (C _F)	1.00	
ALLOW. DI5CHARGE:	0.71	CF5	**OFF-5ITE RUNOFF DI5CHARGE	1.37	CF5
			Note: "CI" only shown a	s reference. Not used in bel	ow calculat
PROPOSED CONDITIONS:					
ON-5ITE DETAINED RUNOFF:			OFF-5ITE FLOW PASSING THROU	JGH DETENTION:	
DRAINAGE AREA (A) "AI"	0.50	AC	DRAINAGE AREA (A)	0.00	AC
TIME OF CONC. (T _c)	10	MIN	TIME OF CONC. (T _c)	10	MIN
RAINFALL INTENSITY (I)	6.10	IN/HR	RAINFALL INTENSITY (I)	6.10	IN/HR
RUNOFF COEFFICIENT (C)	0.90		RUNOFF COEFFICIENT (C)	0.90	
5AFETY FACTOR (C _F)	1.00		5AFETY FACTOR (C _F)	1.00	
DETAINED RUNOFF	2.75	CF5	OFF-SITE PASS THROUGH FLOW:	0.00	CF5
ON-5ITE UNDETAINED RUNOFF:			ALLOWABLE DI5CHARGE	0.51	CF5
DRAINAGE AREA (A)	0.01	AC	ACTUAL DI5CHARGE	0.47	CF5
"CI"			OPENING A		
TIME OF CONC. (T _c)	10	MIN			
RAINFALL INTENSITY (I)	6.10	IN/HR			
RUNOFF COEFFICIENT (C)	0.55	(0.90 - 0.35) ZON	NING ADJU5TMENT		
5AFETY FACTOR (C _F)	1.00				
UNDETAINED RUNOFF	0.03	CF5			
ON-5ITE UNDETAINED RUNOFF:					
DRAINAGE AREA (A) "CII"	0.07	AC			
TIME OF CONC. (T _c)	10	MIN			
RAINFALL INTENSITY (I)	6.10	IN/HR			
RUNOFF COEFFICIENT (C)	0.40	(0.90 - 0.50) ZON	ING ADJUSTMENT		
5AFETY FACTOR (C _F)	1.00				
UNDETAINED RUNOFF	0.17	CF5			

STORAGE CALCULATIONS:

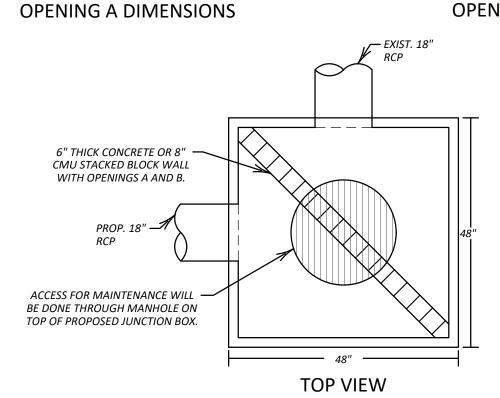
DURATION		RAINFALL INTENSITY		INFLOW VOLUME	OUTFLOW RATE	OUTFLOW VOLUME	REQUIRED STORAGE (INFLOW - OUTFLOW)	
(MIN)	(HR5)	(IN/HR)	(CF5)	(CF)	(CF5)	(CF)	(CF)	(AC-FT)
10	0.17	6.10	2.75	1,647	0.51	306	1,341	0.03
15	0.25	5.50	2.48	2,228	0.51	382	1,845	0.04
20	0.33	4.90	2.21	2,646	0.51	458	2,188	0.05
30	0.50	4.10	1.85	3,321	0.51	611	2,710	0.06
40	0.67	3.40	1.53	3,672	0.51	764	2,908	0.07
50	0.83	2.80	1.26	3,780	0.51	917	2,863	0.07
60	1.00	2.60	1.17	4,212	0.51	1,070	3,142	0.07
70	1.17	2.40	1.08	4,536	0.51	1,222	3,314	0.08
80	1.33	2.30	1.04	4,968	0.51	1,375	3,593	0.08
90	1.50	2.10	0.95	5,103	0.51	1,528	3,575	0.08
100	1.67	1.90	0.86	5,130	0.51	1,681	3,449	0.08
110	1.83	1.80	0.81	5,346	0.51	1,834	3,512	0.08
120	2.00	1.60	0.72	5,184	0.51	1,986	3,198	0.07
130	2.17	1.40	0.63	4,914	0.51	2,139	2,775	0.06
140	2.33	1.20	0.54	4,536	0.51	2,292	2,244	0.05
150	2.50	1.00	0.45	4,050	0.51	2,445	1,605	0.04

MAXIMUM REQUIRED STORAGE = 3,593

MAXIMUM REQUIRED STORAGE = 4,697 0.11 PROVIDED STORAGE = 6,S71







RESTRICTOR JUNCTION BOX DETAIL

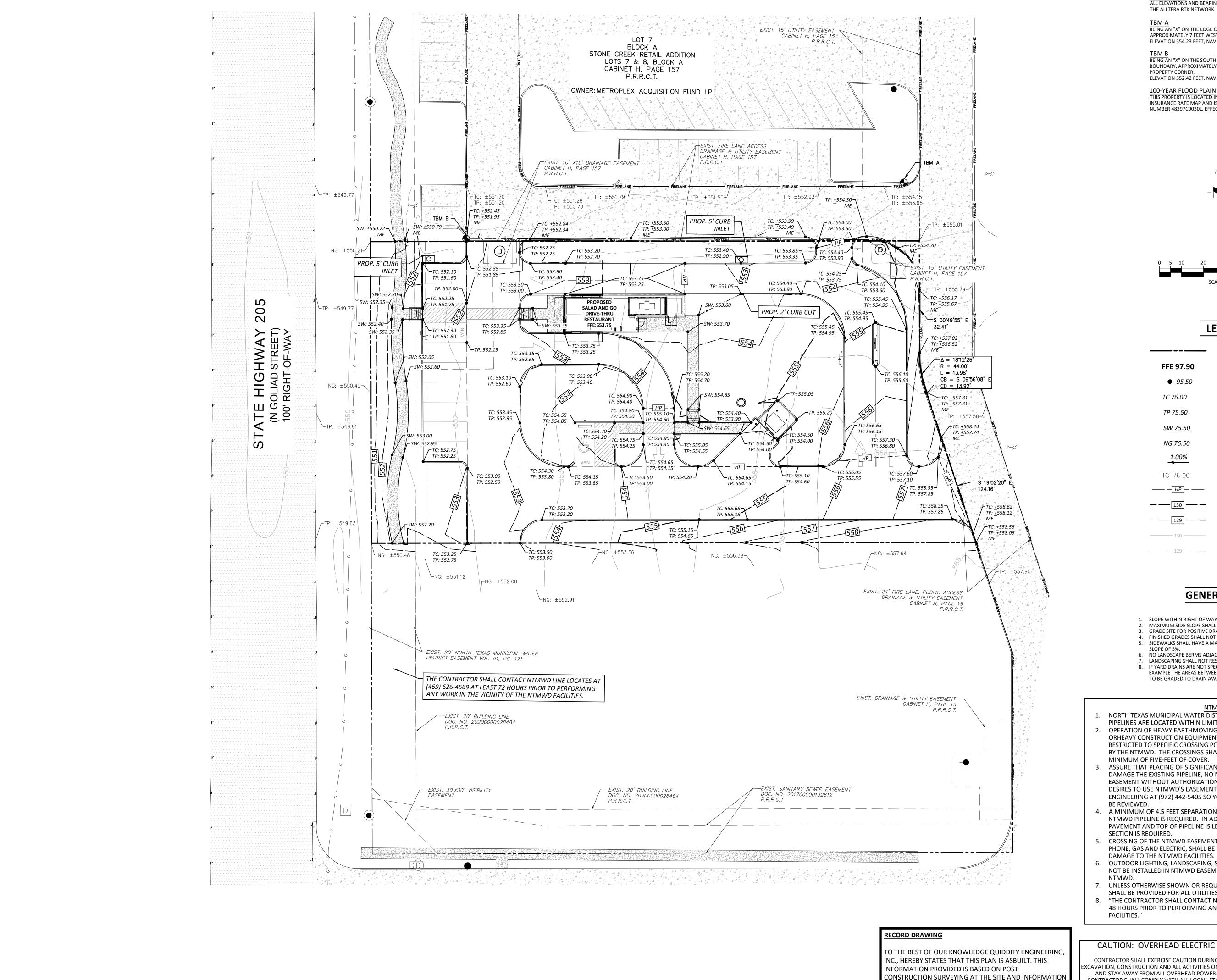
RECORD DRAWING

TO THE BEST OF OUR KNOWLEDGE QUIDDITY ENGINEERING, INC., HEREBY STATES THAT THIS PLAN IS ASBUILT. THIS INFORMATION PROVIDED IS BASED ON POST CONSTRUCTION SURVEYING AT THE SITE AND INFORMATION PROVIDED BY THE CONTRACTOR.

RYAN J ALCALA

AND GO - ROCKWALL - GOLIAD AND FM 3064 NORTH GOLIAD STREET- ROCKWALL, TX 75087

Discharge Rate at Opening A (Q)



K:\17007\17007-0037-00 Salad and Go - Goliad and FM 522 - Rockw\2 Design Phase\CAD\Plans\Site\17007-0037-00 GRADING AND DRAINAGE PLAN.dwg HTF: February 09, 2023

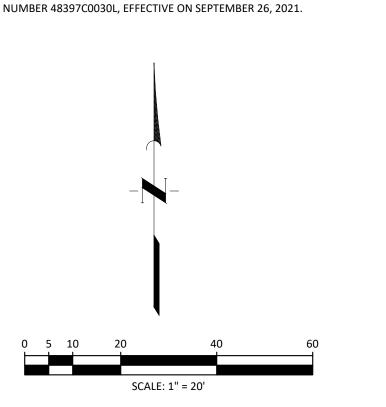
BENCHMARK

ALL ELEVATIONS AND BEARINGS SHOWN HEREON ARE BASED ON GPS OBSERVATIONS UTILIZING THE ALLTERA RTK NETWORK. NAVD (88) DATUM, (GEOID 12A)

BEING AN "X" ON THE EDGE OF PAVEMENT ABOVE THE NORTH EAST CORNER OF THE PROPERTY, APPROXIMATELY 7 FEET WEST AND 26.5 FEET NORTH FROM THE NORTH EAST PROPERTY CORNER ELEVATION 554.23 FEET, NAVD 88 (2011 ADJUSTMENT).

BEING AN "X" ON THE SOUTHEAST CORNER OF THE FIRE LANE ALONG THE NORTH PROPERTY BOUNDARY, APPROXIMATELY 44 FEET EAST AND 1 FOOT NORTH FROM THE NORTH WEST PROPERTY CORNER. ELEVATION 552.42 FEET, NAVD 88 (2011 ADJUSTMENT).

100-YEAR FLOOD PLAIN THIS PROPERTY IS LOCATED IN NON-SHADED ZONE "X" AS SCALED FROM THE FEMA FLOOD INSURANCE RATE MAP AND IS LOCATED IN COMMUNITY NUMBER 480547 AS SHOWN ON MAP



LEGEND

	PROPERTY LINE
FFE 97.90	FINISHED FLOOR ELEVATION
● <i>95.50</i>	PROPOSED SPOT ELEVATION
TC 76.00	PROPOSED TOP OF CURB ELEVATION
TP 75.50	PROPOSED TOP OF PAVEMENT ELEVATION
SW 75.50	PROPOSED TOP OF SIDEWALK ELEVATION
NG 76.50	PROPOSED NATURAL GROUND
1.00%	PROPOSED GRADE SLOPE
TC 76.00	EXISTING SPOT GRADE
——————————————————————————————————————	GRADE BREAKS
	PROPOSED MAJOR CONTOUR
— <u>129</u> — —	PROPOSED MINOR CONTOUR

EXISTING MAJOR CONTOUR

EXISTING MINOR CONTOUR

GENERAL NOTES

- SLOPE WITHIN RIGHT OF WAY SHALL NOT EXCEED 2.0%.
- MAXIMUM SIDE SLOPE SHALL BE 4:1. GRADE SITE FOR POSITIVE DRAINAGE.
- 4. FINISHED GRADES SHALL NOT IMPACT OFFSITE DRAINAGE. 5. SIDEWALKS SHALL HAVE A MAX. SIDE SLOPE OF 2% AND A MAX. RUNNING
- SLOPE OF 5%.
- NO LANDSCAPE BERMS ADJACENT TO BUILDINGS.

TO BE GRADED TO DRAIN AWAY FROM THE BUILDING.

LANDSCAPING SHALL NOT RESTRICT STORM WATER RUN-OFF. 8. IF YARD DRAINS ARE NOT SPECIFIED IN ANY OF THE ENCAPSULATED AREAS, FOR

EXAMPLE THE AREAS BETWEEN THE BUILDING AND SIDEWALKS, THE SURFACE IS

NTMWD NOTES

- 1. NORTH TEXAS MUNICIPAL WATER DISTRICTS (NTMWD) 20-INCH WATER TRANSMISSION
- PIPELINES ARE LOCATED WITHIN LIMITS OF CONSTRUCTION. 2. OPERATION OF HEAVY EARTHMOVING EQUIPMENT, COMPACTION EQUIPMENT ORHEAVY CONSTRUCTION EQUIPMENT, SUCH AS CONCRETE TRUCKS, SHALL BE RESTRICTED TO SPECIFIC CROSSING POINTS ACROSS NTMWD EASEMENTS, AS APPROVED BY THE NTMWD. THE CROSSINGS SHALL BE DESIGNATED AND VERIFIED TO PROVIDE A MINIMUM OF FIVE-FEET OF COVER.
- ASSURE THAT PLACING OF SIGNIFICANT LOADS OVER THE NTMWD PIPELINE DOES NOT DAMAGE THE EXISTING PIPELINE, NO MATERIALS SHALL BE STOCKPILED ON THE NTMWD EASEMENT WITHOUT AUTHORIZATION FROM THE NTMWD. IF THE CONTRACTOR DESIRES TO USE NTMWD'S EASEMENT FOR STOCKPILE OF MATERIALS, CONTACT NTMWD ENGINEERING AT (972) 442-5405 SO YOUR PLANS FOR USE OF NTMWD'S EASEMENT CAN BE REVIEWED.
- 4. A MINIMUM OF 4.5 FEET SEPARATION BETWEEN BOTTOM OF PAVEMENT AND TOP OF NTMWD PIPELINE IS REQUIRED. IN ADDITION, IF SEPARATION BETWEEN BOTTOM OF PAVEMENT AND TOP OF PIPELINE IS LESS THAN 4.5 FEET, THEN A THICKENED PAVEMENT SECTION IS REQUIRED.
- CROSSING OF THE NTMWD EASEMENT WITH OTHER UTILITIES, SUCH AS TV CABLE, PHONE, GAS AND ELECTRIC, SHALL BE COORDINATED WITH THE NTMWD TO AVOID
- 6. OUTDOOR LIGHTING, LANDSCAPING, SCREENING WALLS OR OTHER FACILITIES SHALL NOT BE INSTALLED IN NTMWD EASEMENTS WITHOUT WRITTEN APPROVAL OF THE
- 7. UNLESS OTHERWISE SHOWN OR REQUIRED, A MINIMUM OF TWO-FOOT CLEARANCE SHALL BE PROVIDED FOR ALL UTILITIES CROSSING THE NTMWD PIPELINES.
- 8. "THE CONTRACTOR SHALL CONTACT NTMWD LINE LOCATES AT (469) 626-4569 AT LEAST 48 HOURS PRIOR TO PERFORMING ANY WORK IN THE VICINITY OF THE NTMWD FACILITIES."

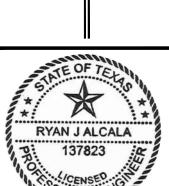
CAUTION: OVERHEAD ELECTRIC

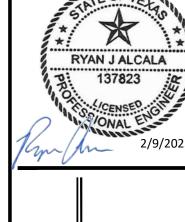
PROVIDED BY THE CONTRACTOR.

CONTRACTOR SHALL EXERCISE CAUTION DURING XCAVATION, CONSTRUCTION AND ALL ACTIVITIES ON SITE AND STAY AWAY FROM ALL OVERHEAD POWER. CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS DEALING WITH CLEARANCES AND CONSTRUCTION ACTIVITIES.

CONTRACTOR TO VERIFY ELEVATION AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY NEW CONSTRUCTION TEXAS811 NOTIFICATION SYSTEM

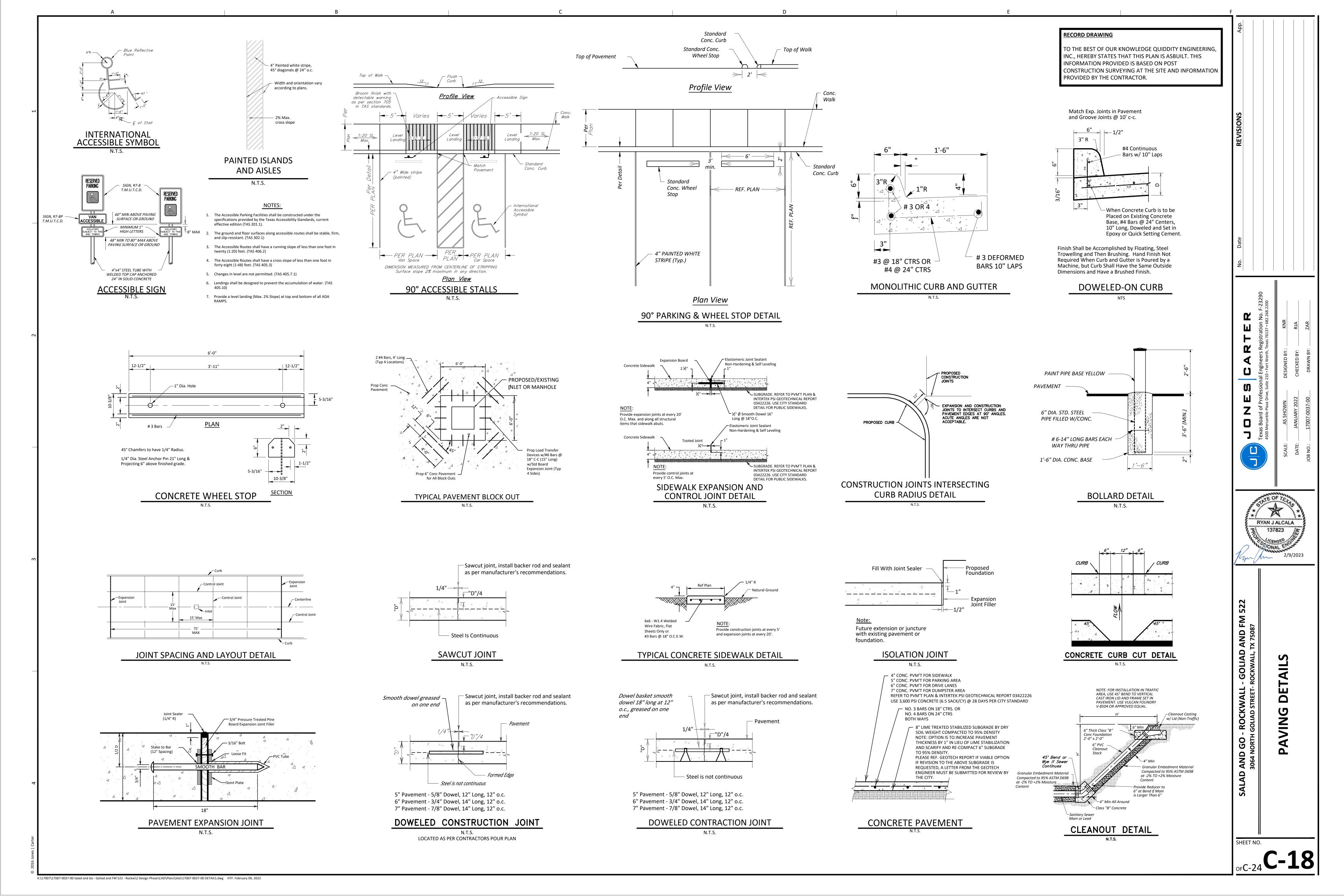
CALL BEFORE YOU DIG!!! www.texas811.org Texas811 or 1-800-545-6005

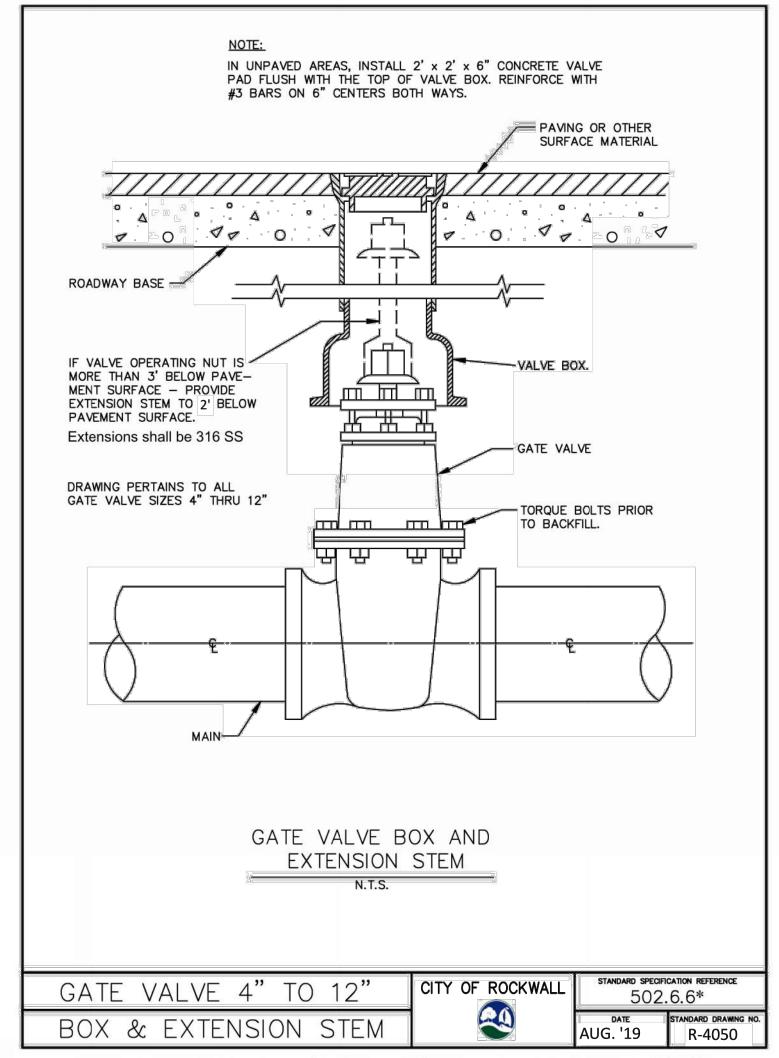


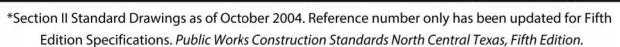


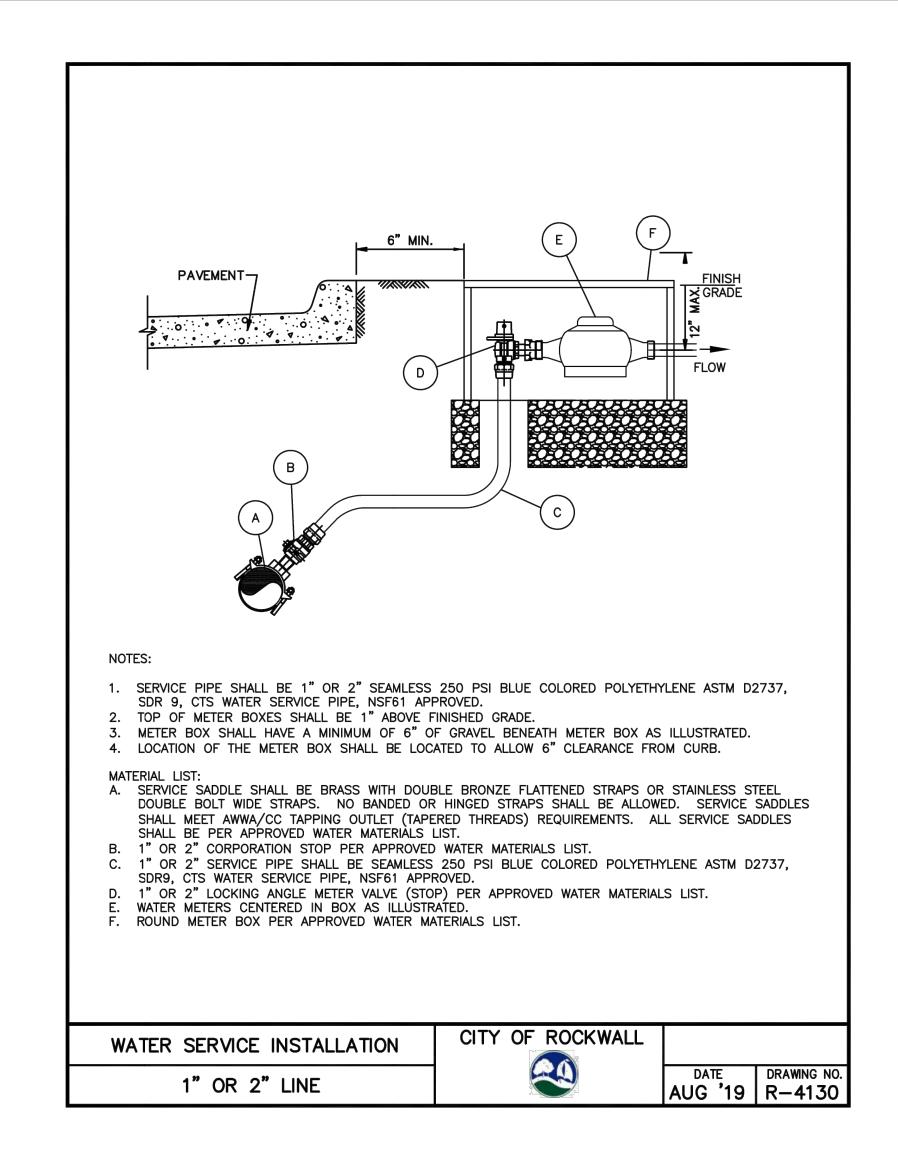
GOLIAD A - ROCKWALL GOLIAD STREET-

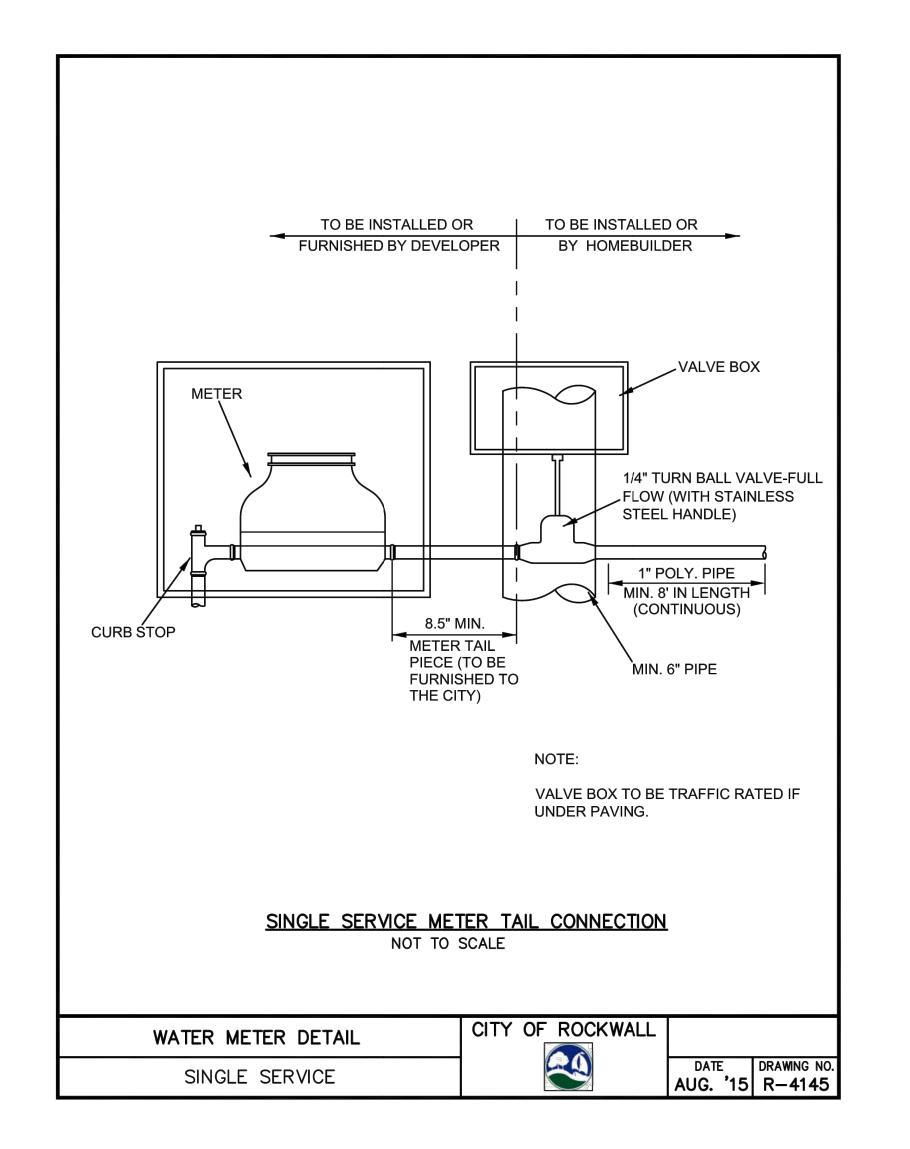
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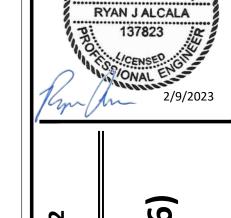








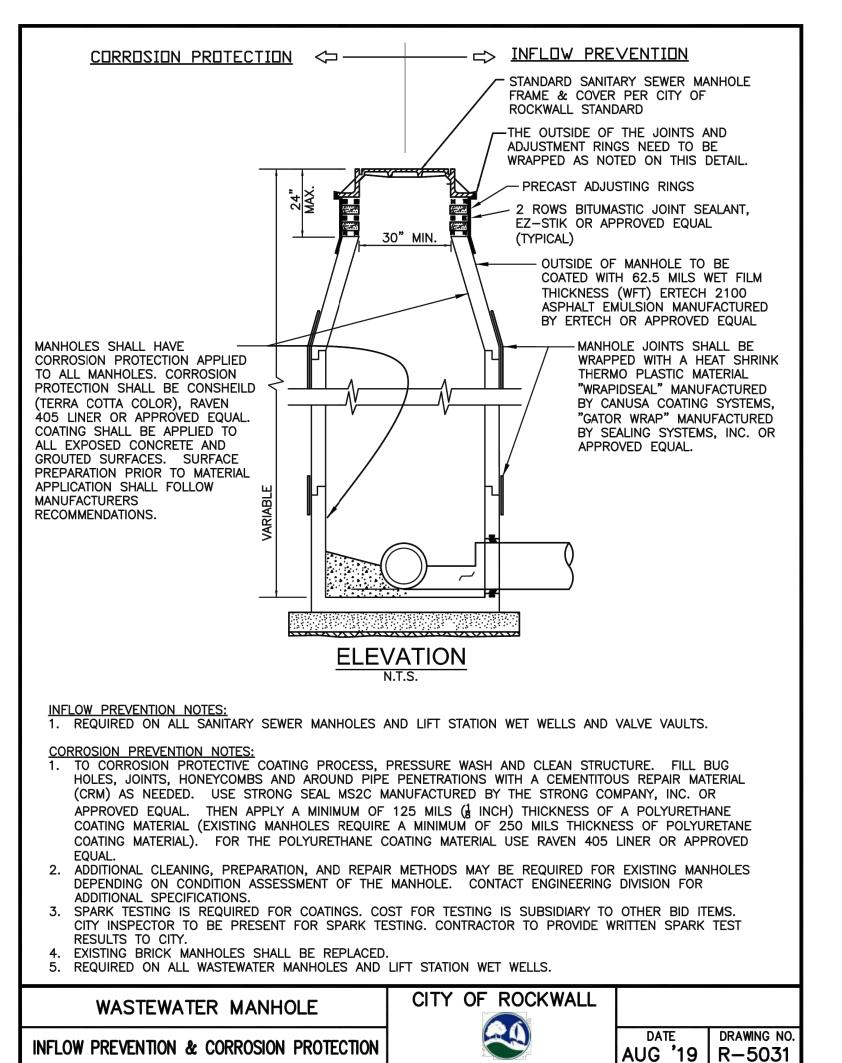


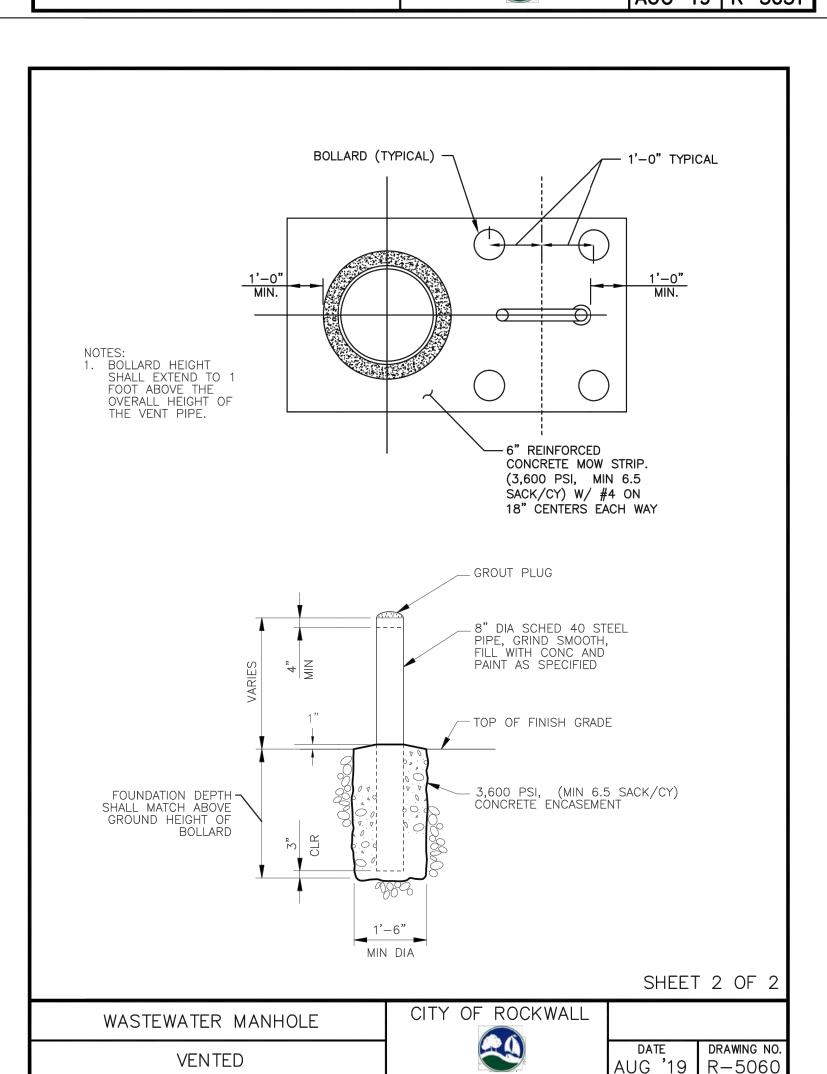


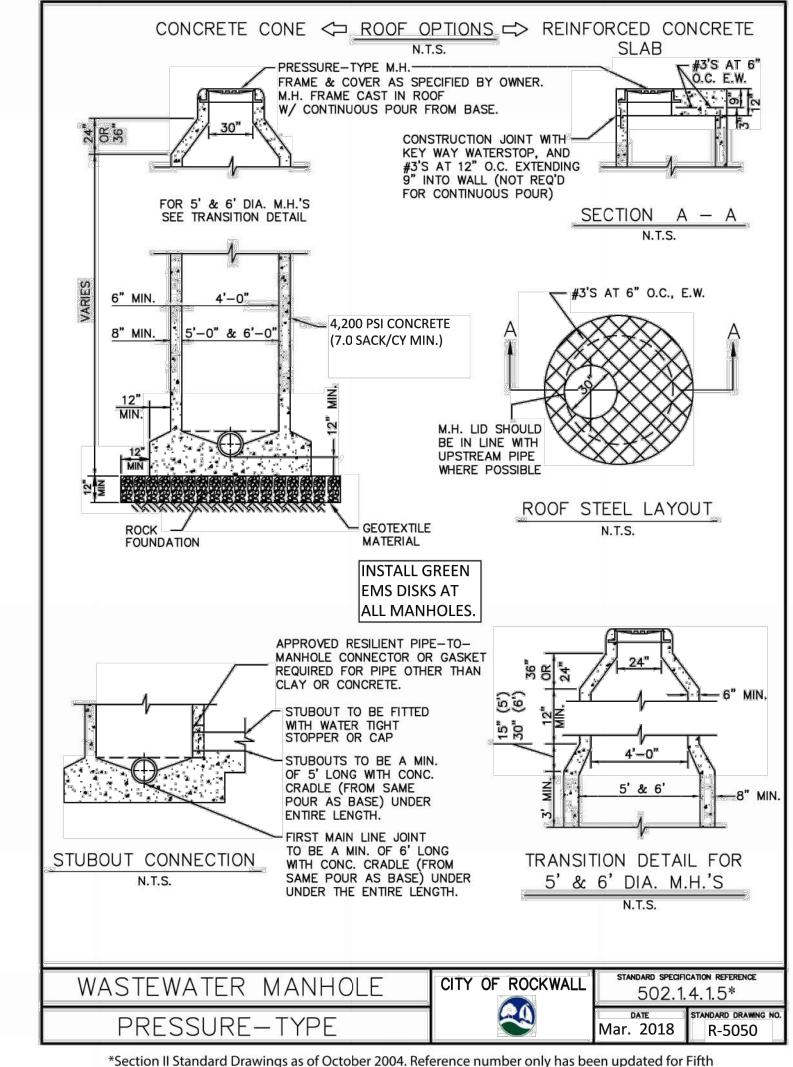
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TO THE BEST OF OUR KNOWLEDGE QUIDDITY ENGINEERING, INC., HEREBY STATES THAT THIS PLAN IS ASBUILT. THIS INFORMATION PROVIDED IS BASED ON POST CONSTRUCTION SURVEYING AT THE SITE AND INFORMATION PROVIDED BY THE CONTRACTOR.

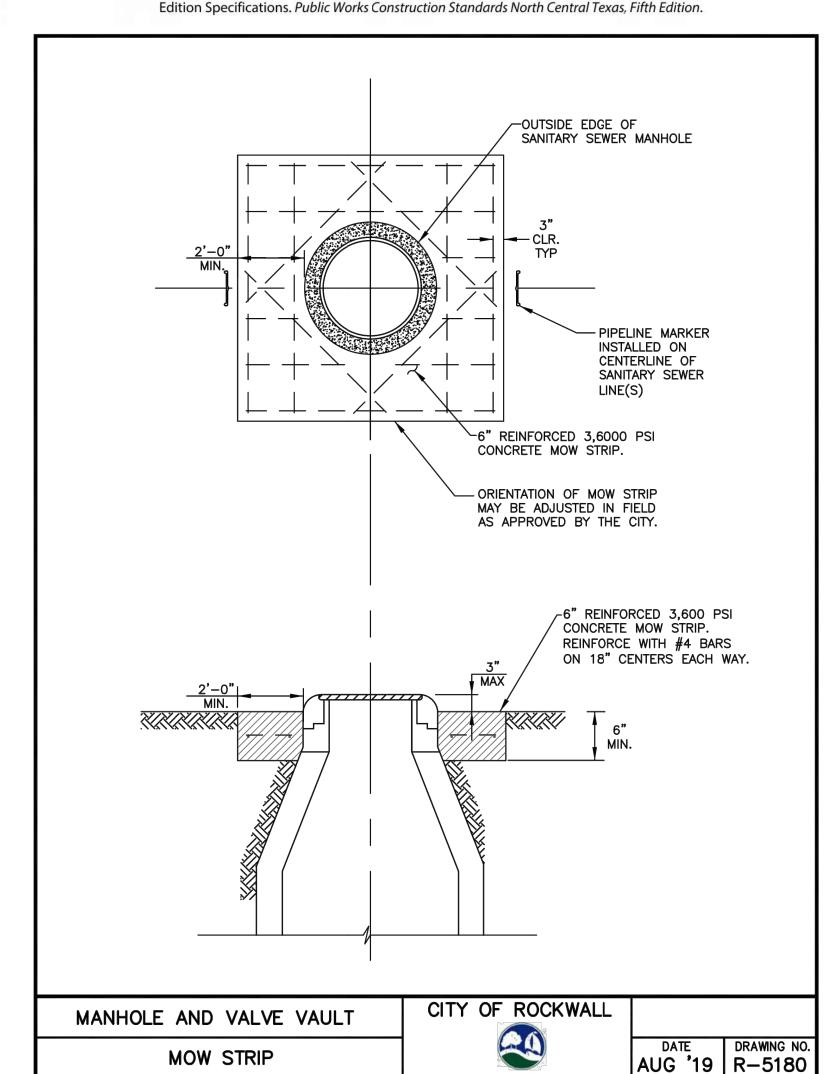
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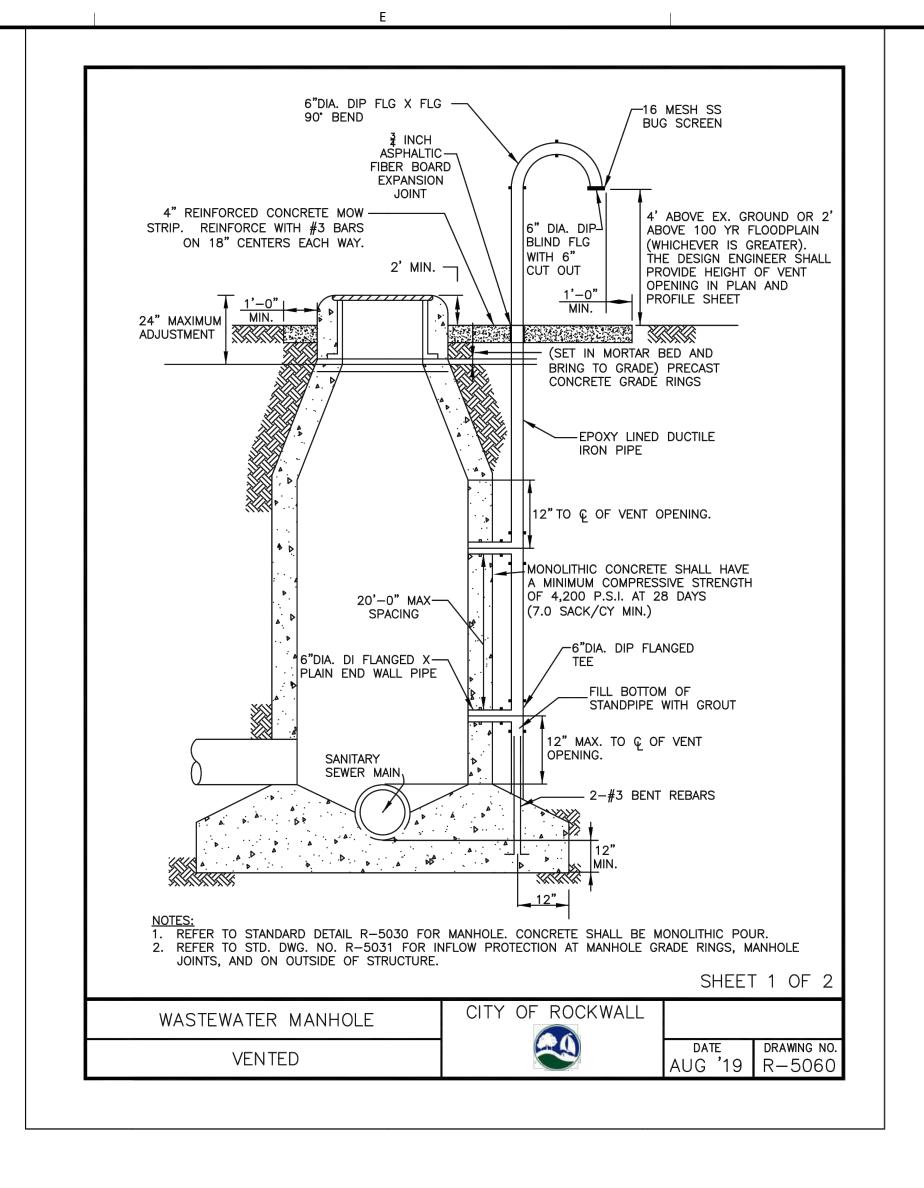


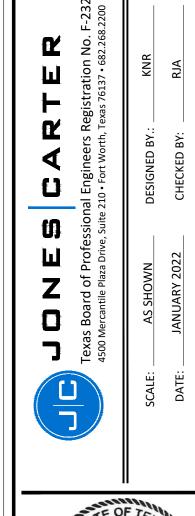




*Section II Standard Drawings as of October 2004. Reference number only has been updated for Fifth Edition Specifications. Public Works Construction Standards North Central Texas, Fifth Edition.





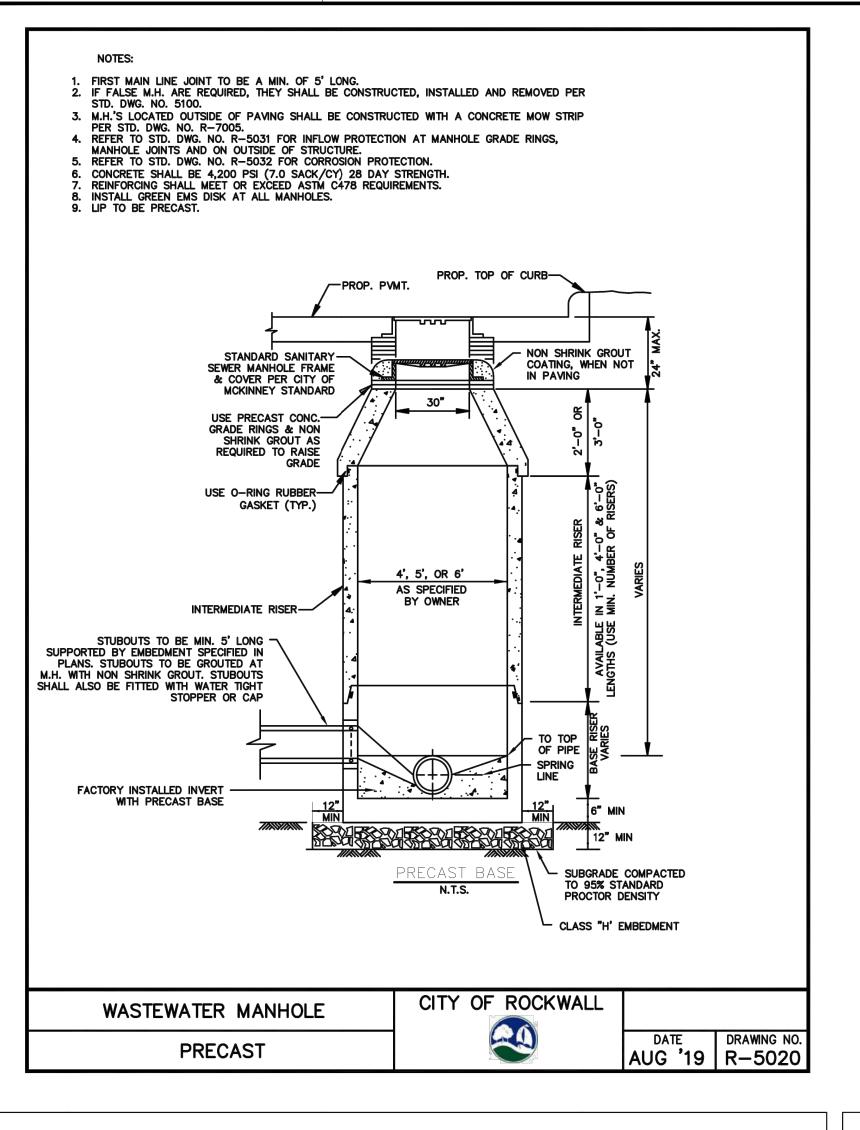


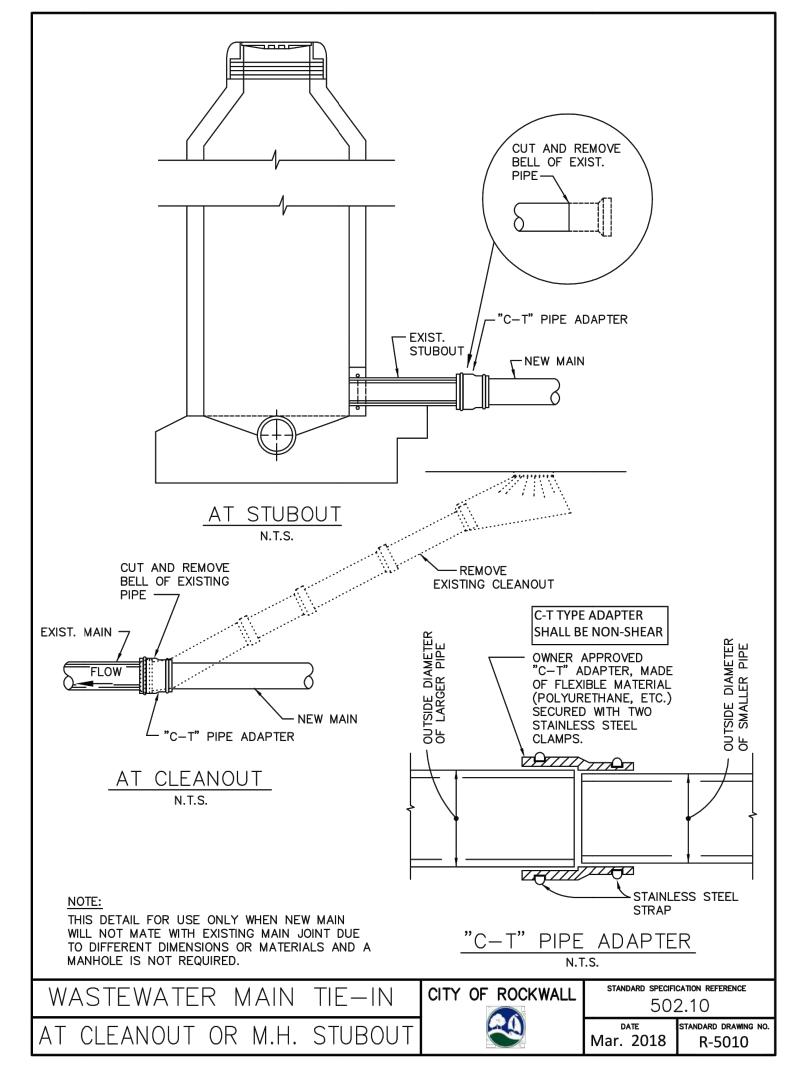
RYAN J ALCALA

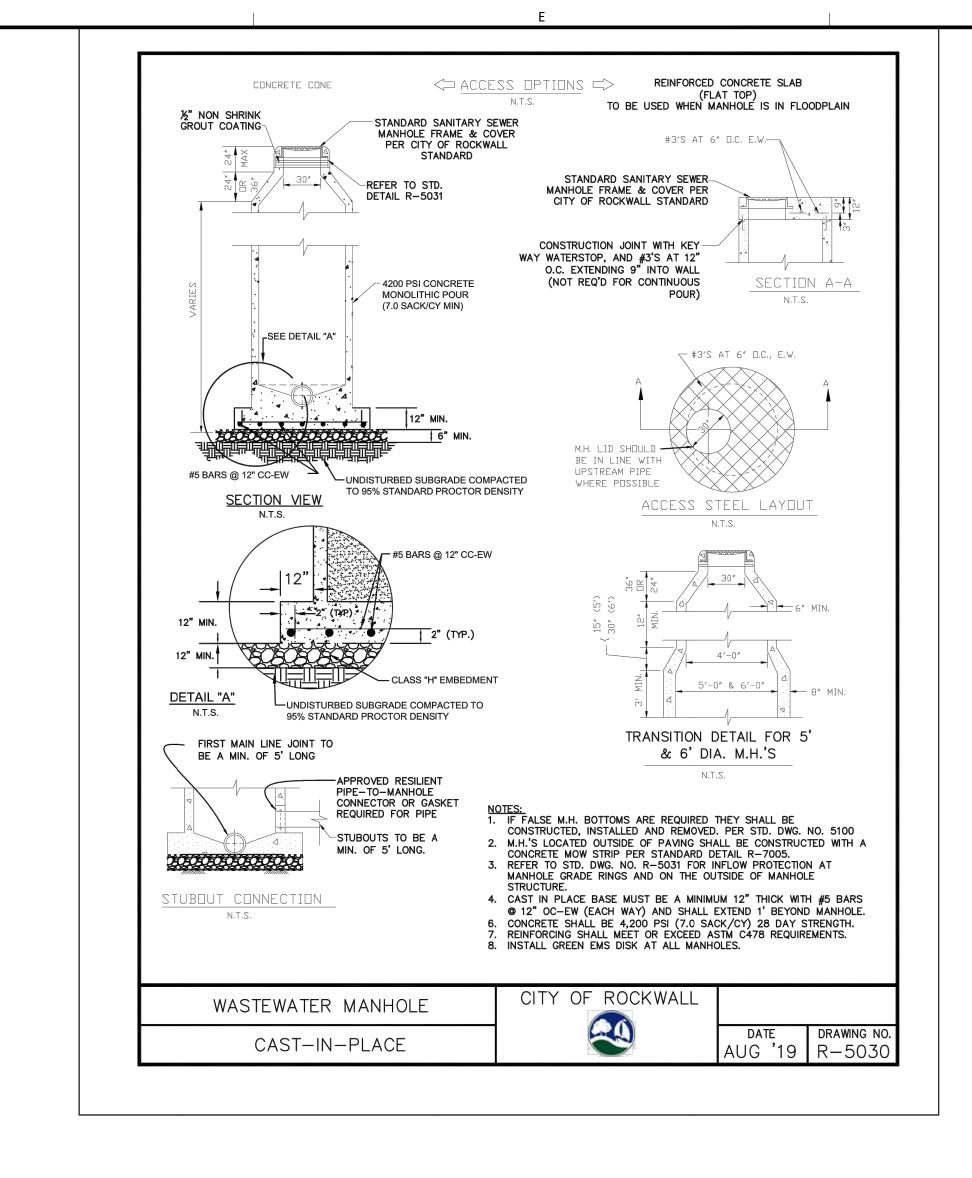
- GOLIAD AND FM ROCKWALL, TX 75087 AND GO - ROCKWALL 3064 NORTH GOLIAD STREET-

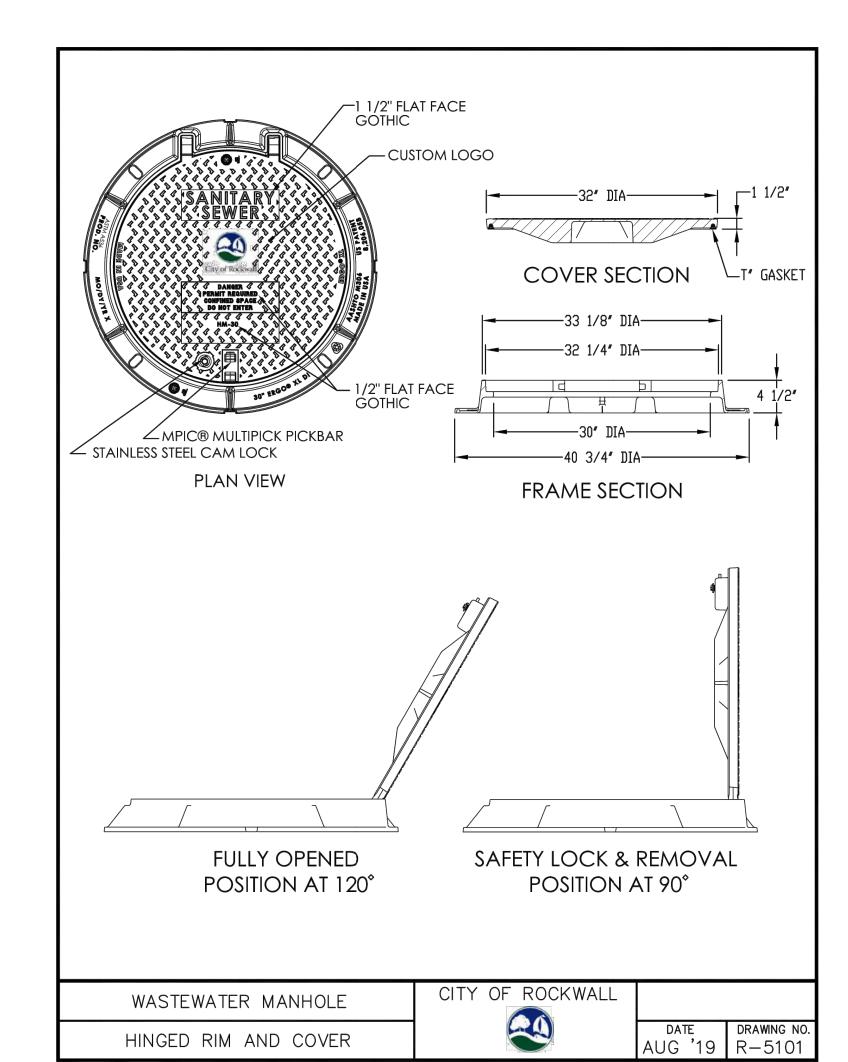
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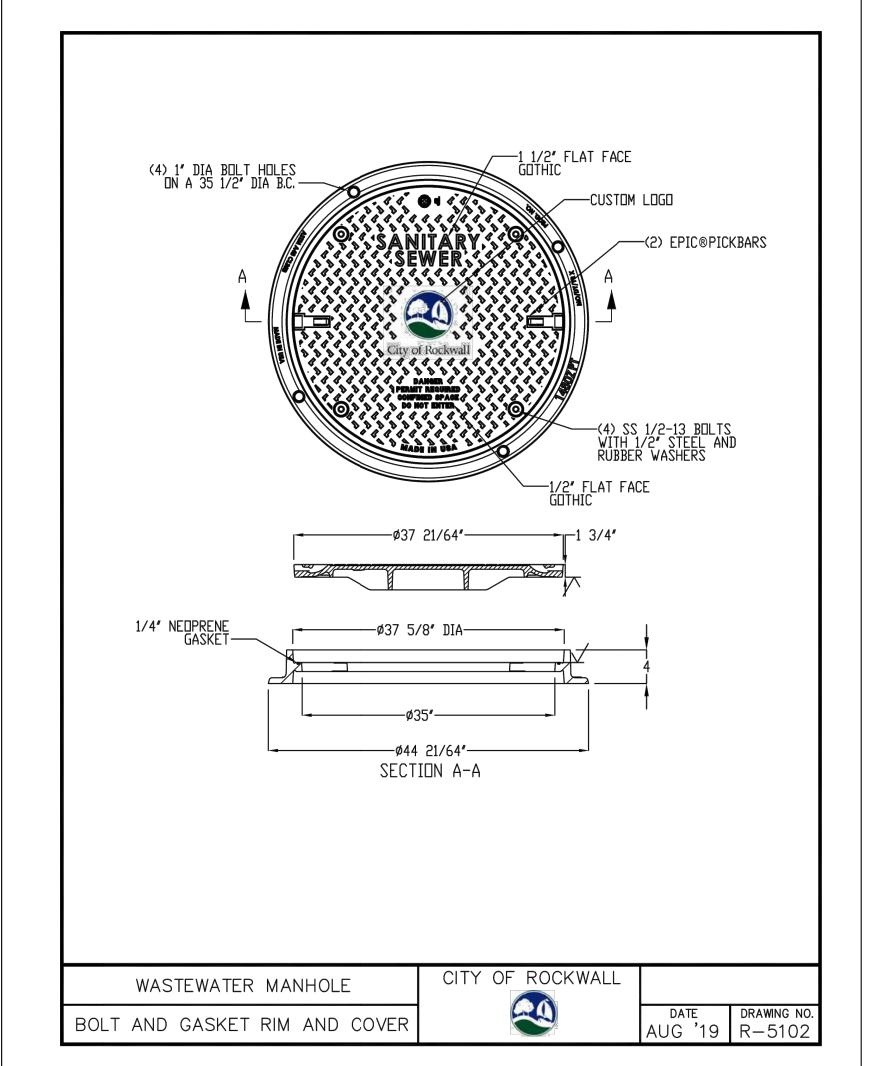
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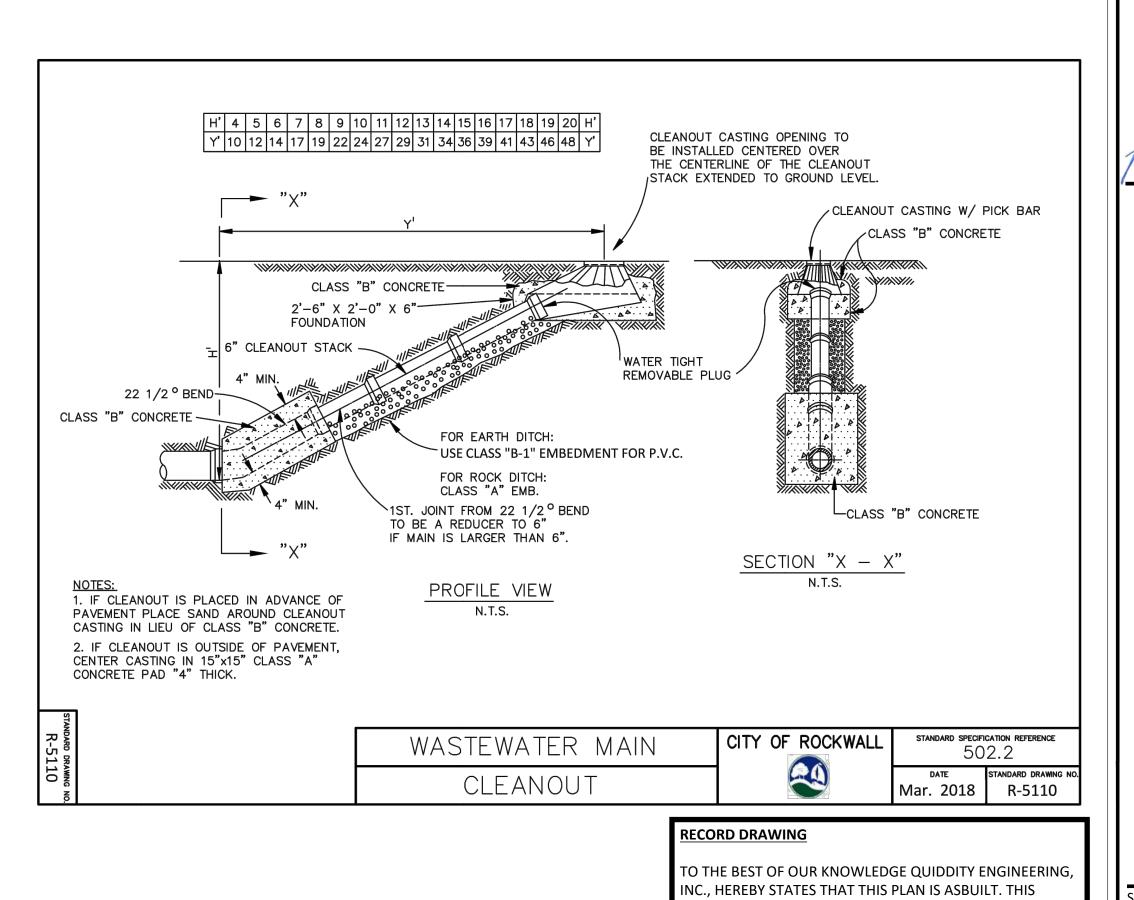












INFORMATION PROVIDED IS BASED ON POST

PROVIDED BY THE CONTRACTOR.

CONSTRUCTION SURVEYING AT THE SITE AND INFORMATION

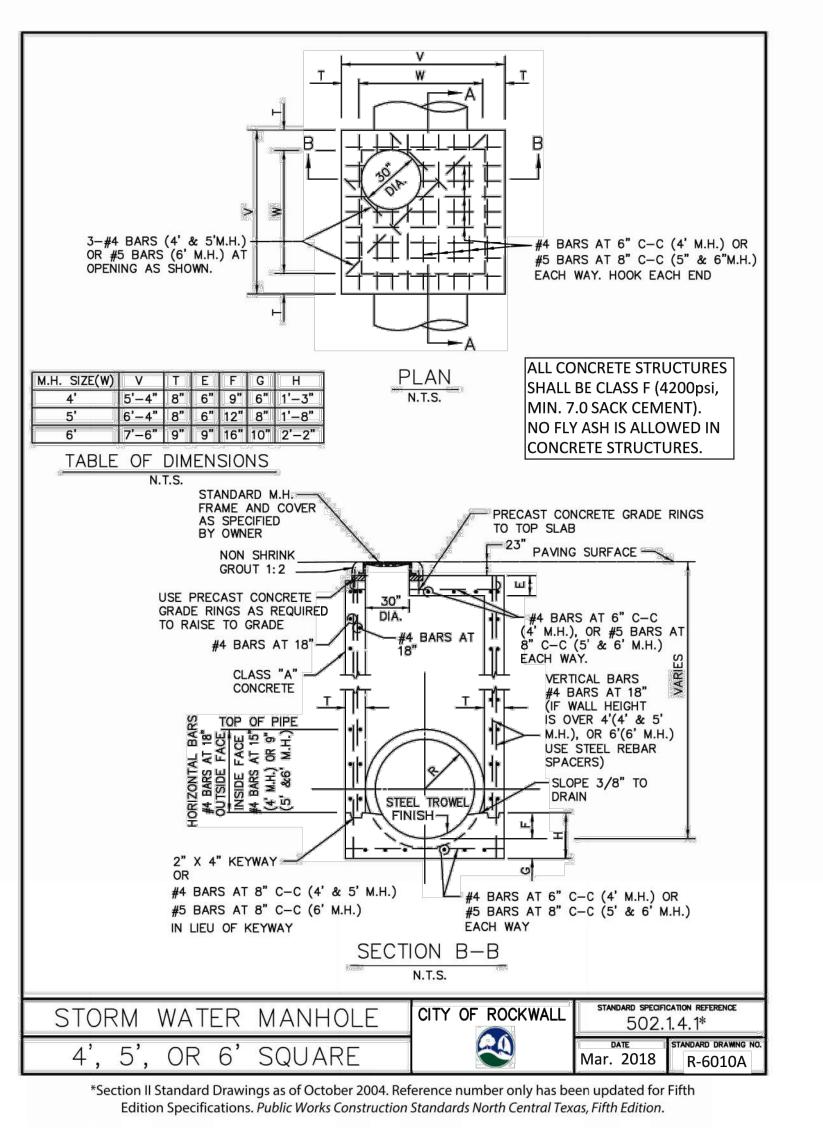
ROCKWALL DETAILS (3 OF 6)

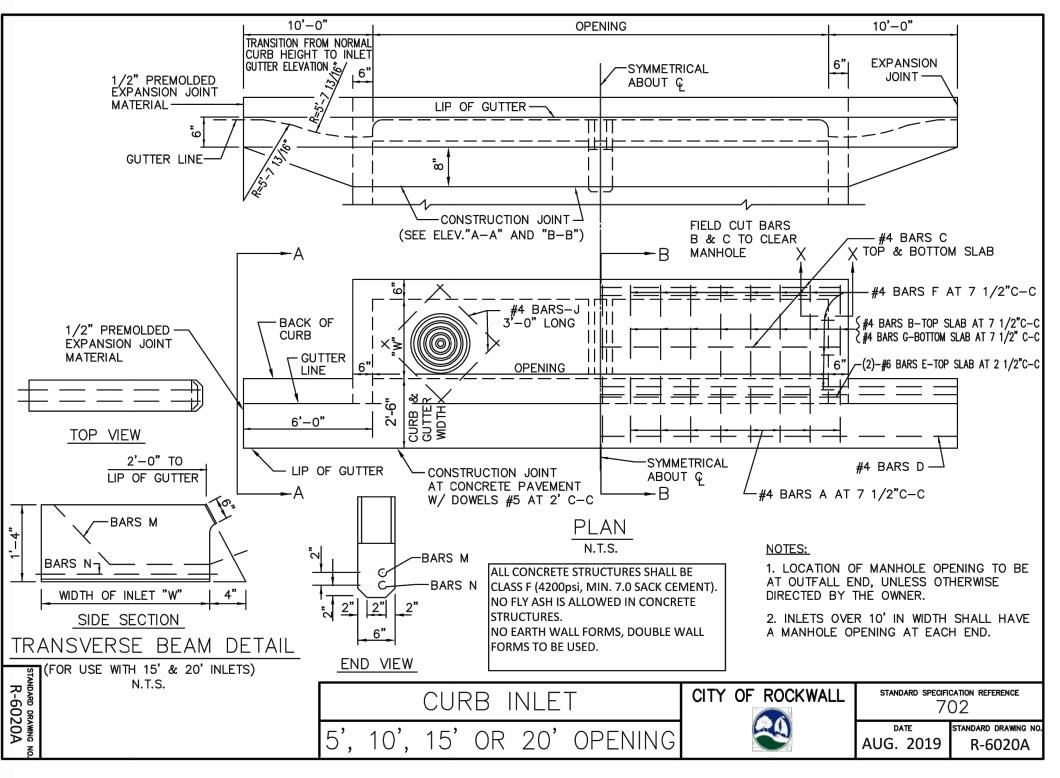
RYAN J ALCALA

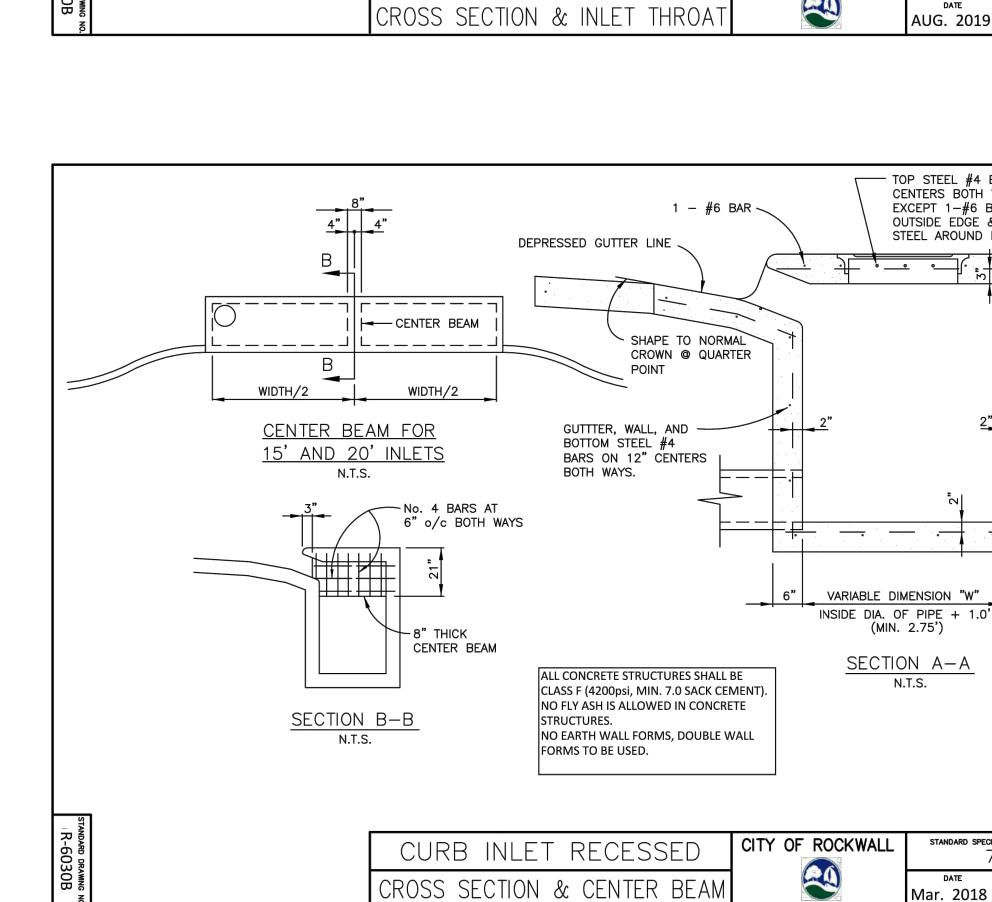
SALAD AND GO - ROCKWALL - GOLIAD A 3064 NORTH GOLIAD STREET- ROCKWALL, TY

SHEET NO.

OF C-24 C-2







TRANSVERSE BEAM (TO CURB —

√(3'-0"MIN.,5'-0"MAX.)

SECTION "B-B"

2. REINFORCING BARS SHALL BE STANDARD GRADE STEEL, DEFORMED REINFORCING

5. FIELD CUT AND BEND BARS AS NECESSARY TO ACCOMODATE STORM SEWER PIPE.

3. CHAMFER ALL EXPOSED CORNERS 3/4" EXCEPT WHERE OTHERWISE NOTED.

4. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.

6. RING AND COVER SHALL BE APPROVED BY THE OWNER AND INSTALLED BY

ALL CONCRETE SHALL BE CLASS "A" CONCRETE.

BARS OF A DIAMETER AND LENGTH AS SHOWN.

∠2"RADIUS ∕–6"CURB

/ -- 6" GUTTER / DEPRESSION

7 1/2"C-C

- PERMISSABLE

CONSTRUCTION

JOINTS-KEYED

-BARS C AT 7 1/2"C-C

└─BARS G AT 7 1/2"C-C

\$ A A

BARS B AT-

7 1/2"C-C

BARS G AT-7 1/2"C-C

SECTION "X-X"

CURB INLET

BE USED ON 15' & 20'

INLETS ONLY) ----

SLOPE 1/4" PER FT.

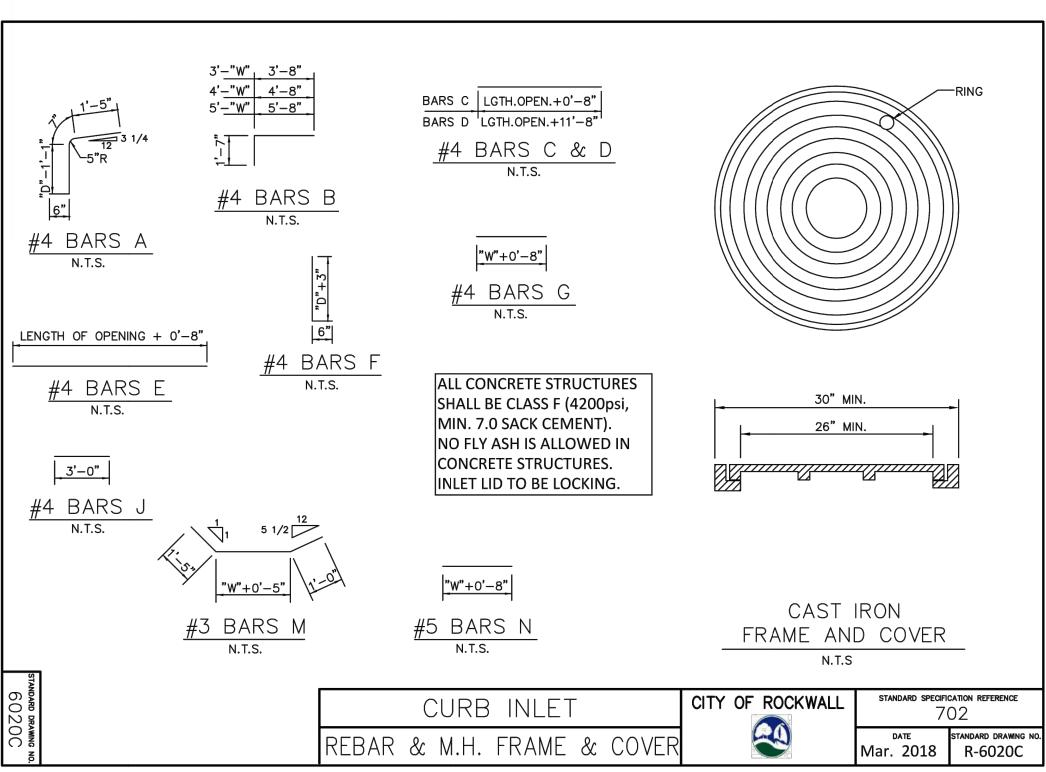
AT 7 1/2"C-C-

7 1/2"C-C

7 1/2"C-C

GENERAL NOTES:

THE CONTRACTOR.





TO THE BEST OF OUR KNOWLEDGE QUIDDITY ENGINEERING, INC., HEREBY STATES THAT THIS PLAN IS ASBUILT. THIS INFORMATION PROVIDED IS BASED ON POST CONSTRUCTION SURVEYING AT THE SITE AND INFORMATION PROVIDED BY THE CONTRACTOR.

N.T.S.

STANDARD SPECIFICATION REFERENCE

Mar. 2018 R-6030B

702

GUTTER POINT TO REMAIN

___ 6" OPENING MIN.

ON THIS LINE AND

CONSTANT AT 2" -

CONSTRUCTION

JOINTS KEYED -

SECTION "A-A"

STRUCTURES.

CITY OF ROCKWALL

FORMS TO BE USED.

ALL CONCRETE STRUCTURES SHALL BE

NO FLY ASH IS ALLOWED IN CONCRETE

NO EARTH WALL FORMS, DOUBLE WALL

STANDARD DRAWING N

(1)

RYAN J ALCALA

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ET.

AUG. 2019 | R-6020B

- TOP STEEL #4 BARS ON 6" CENTERS BÖTH WAYS,

OUTSIDE EDGE & ADDITIONAL

STEEL AROUND MANHOLE.

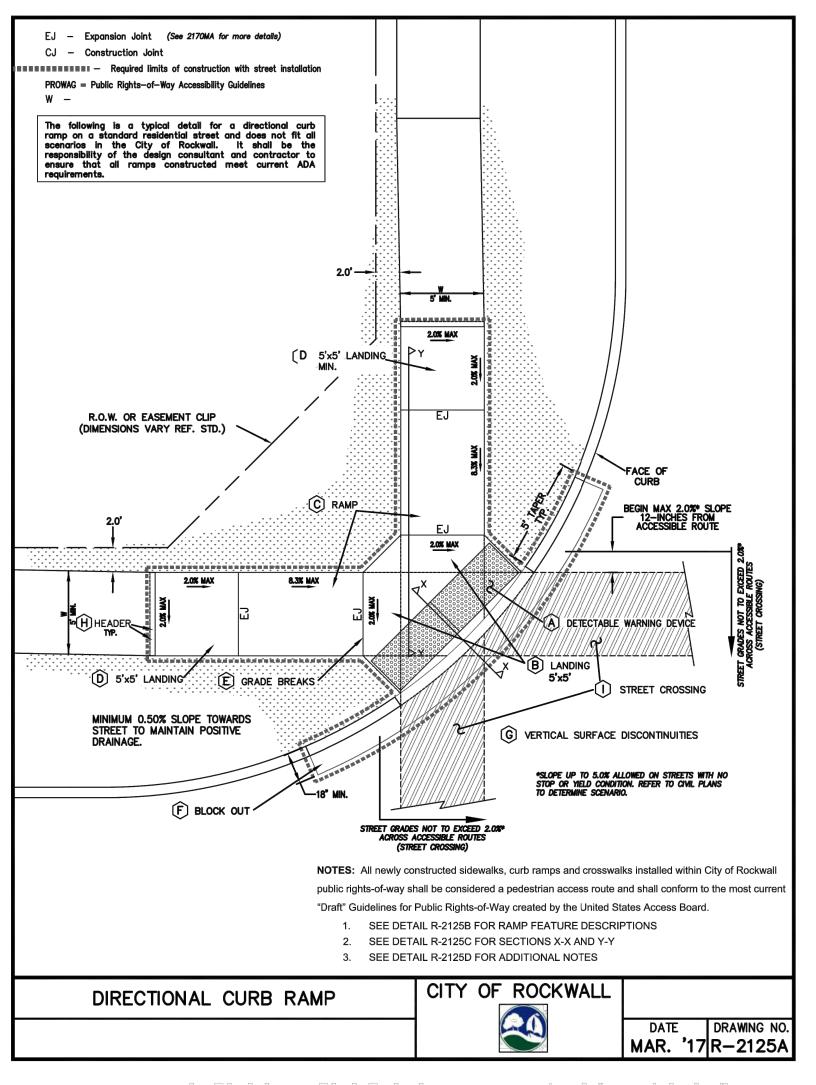
EXCEPT 1-#6 BAR IN

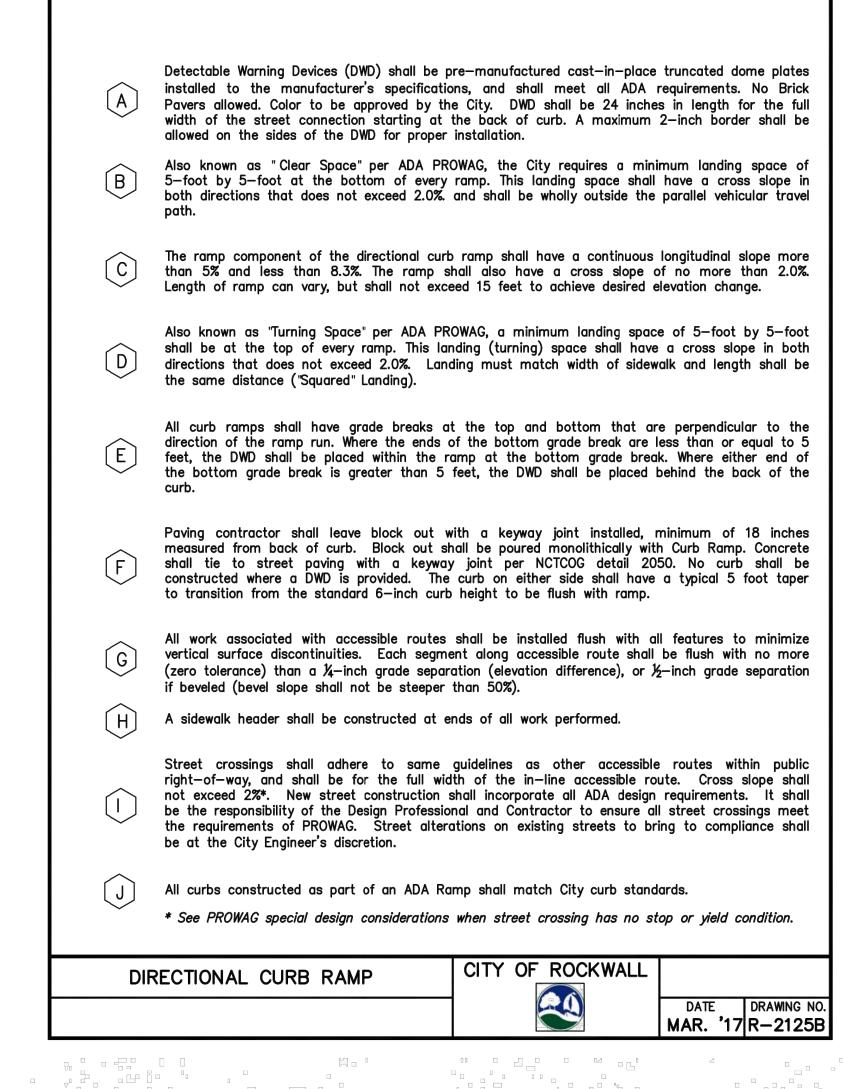
CLASS F (4200psi, MIN. 7.0 SACK CEMENT)

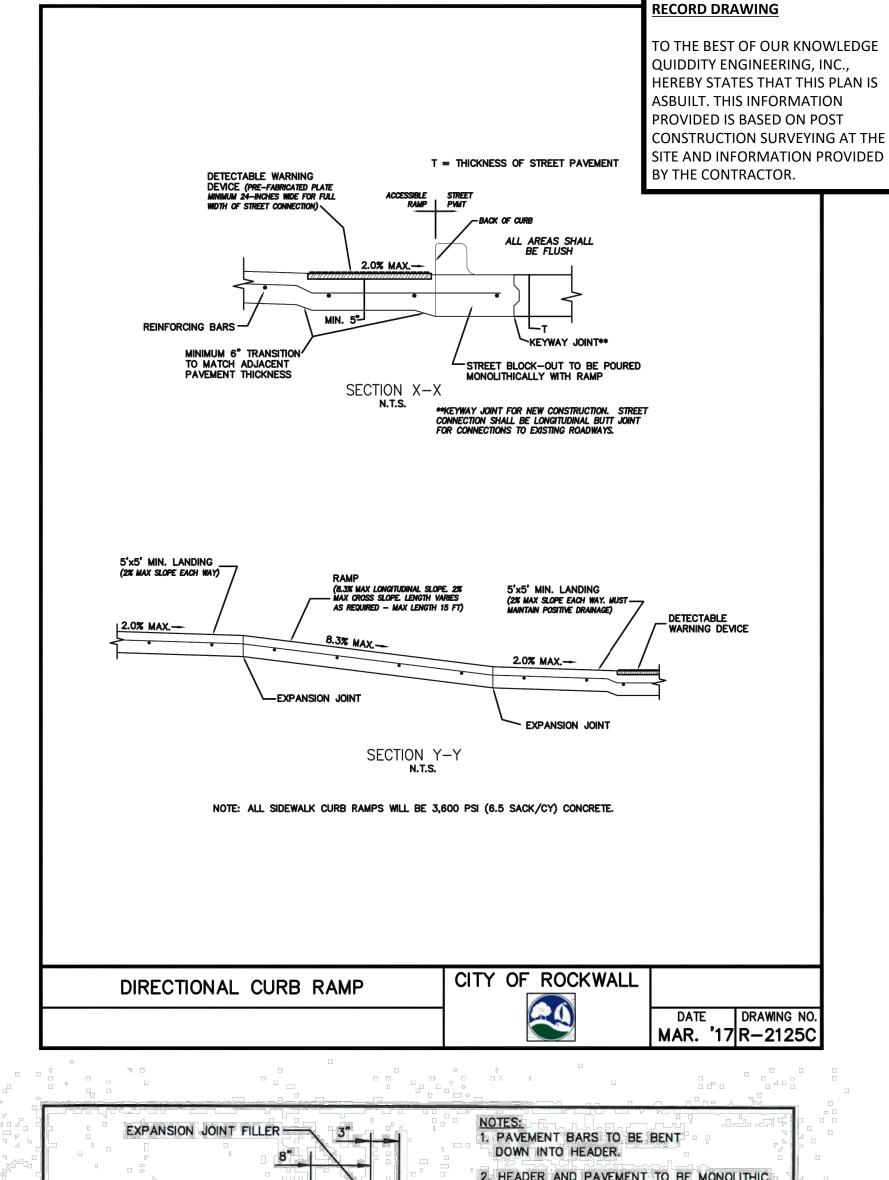
SHEET NO.

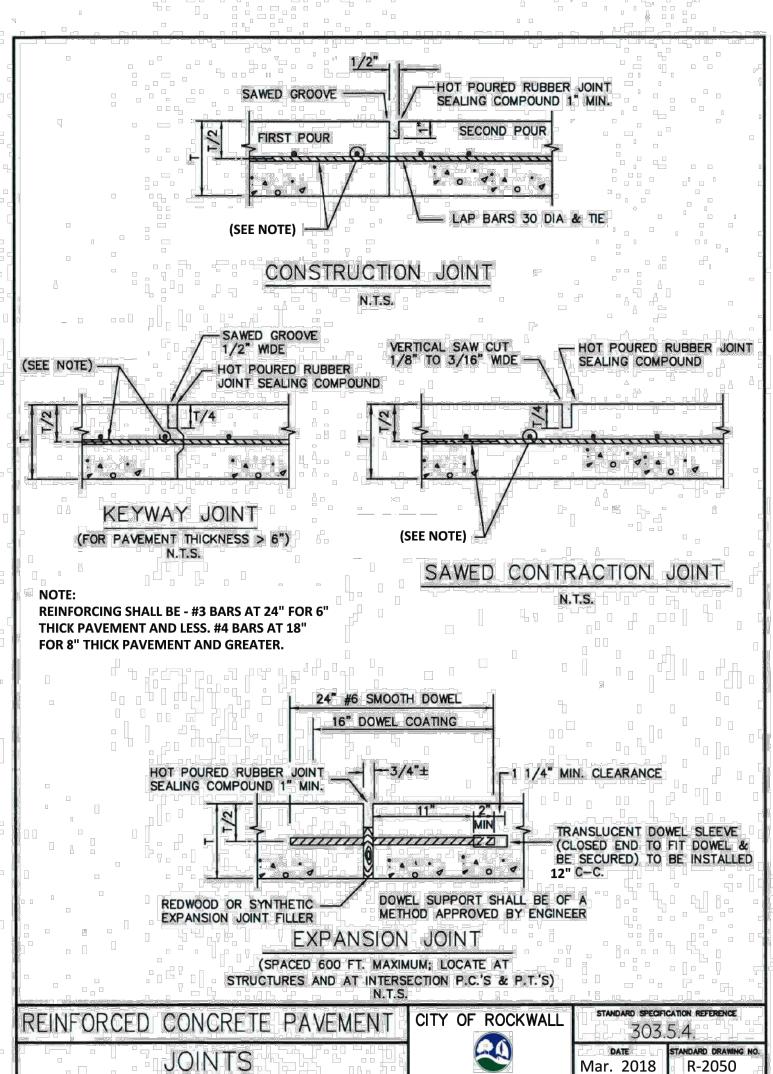
AND GO - ROCKWALL - GOLIAD AND FM 3064 NORTH GOLIAD STREET- ROCKWALL, TX 75087

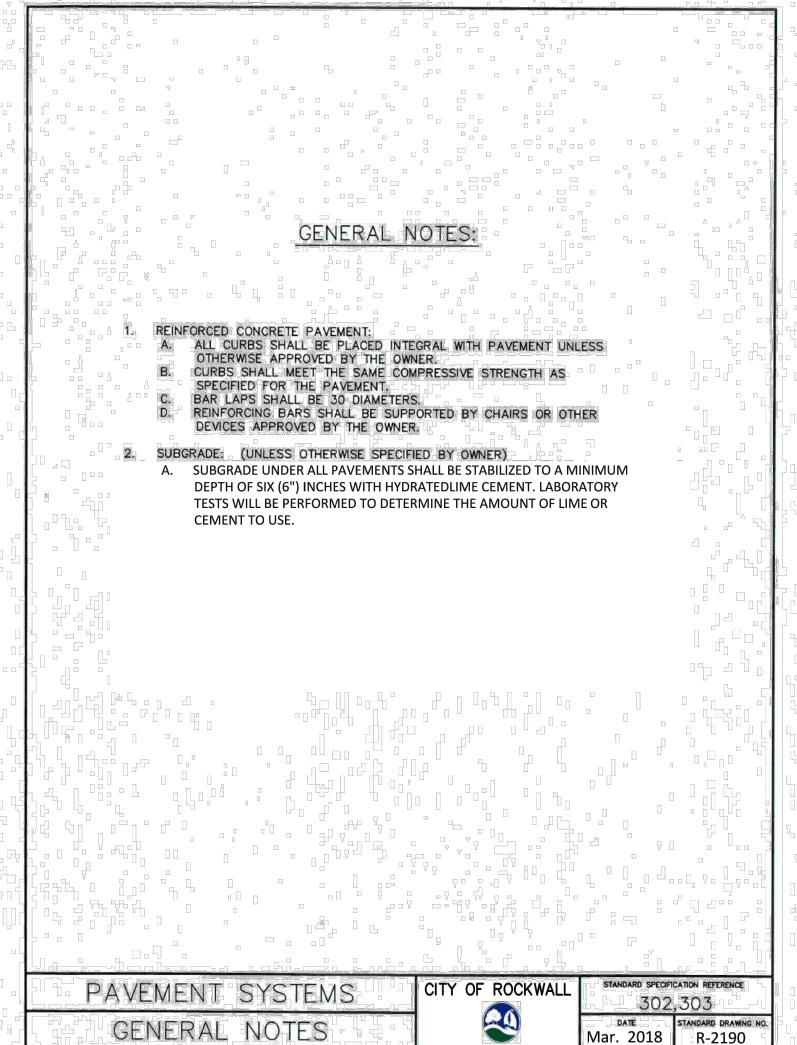
K:\17007\17007-0037-00 Salad and Go - Goliad and FM 522 - Rockw\2 Design Phase\CAD\Plans\Site\17007-0037-00 DETAILS.dwg HTF: February 09, 2023

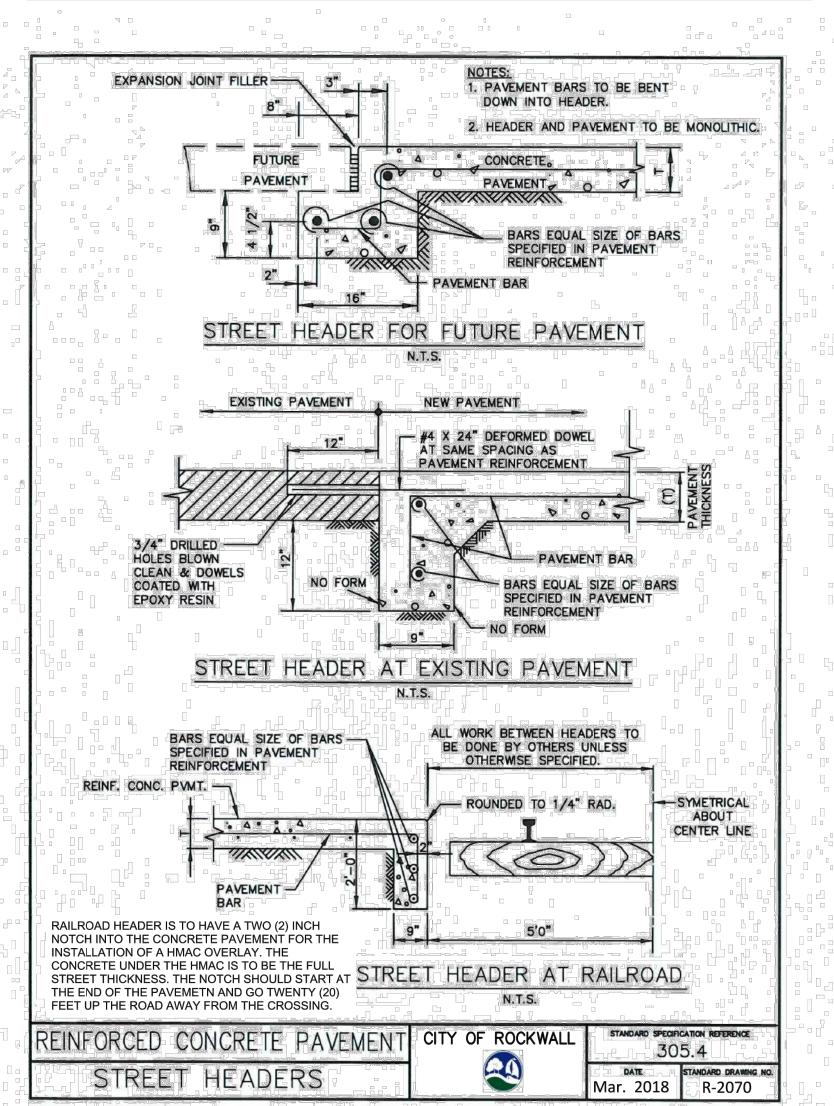




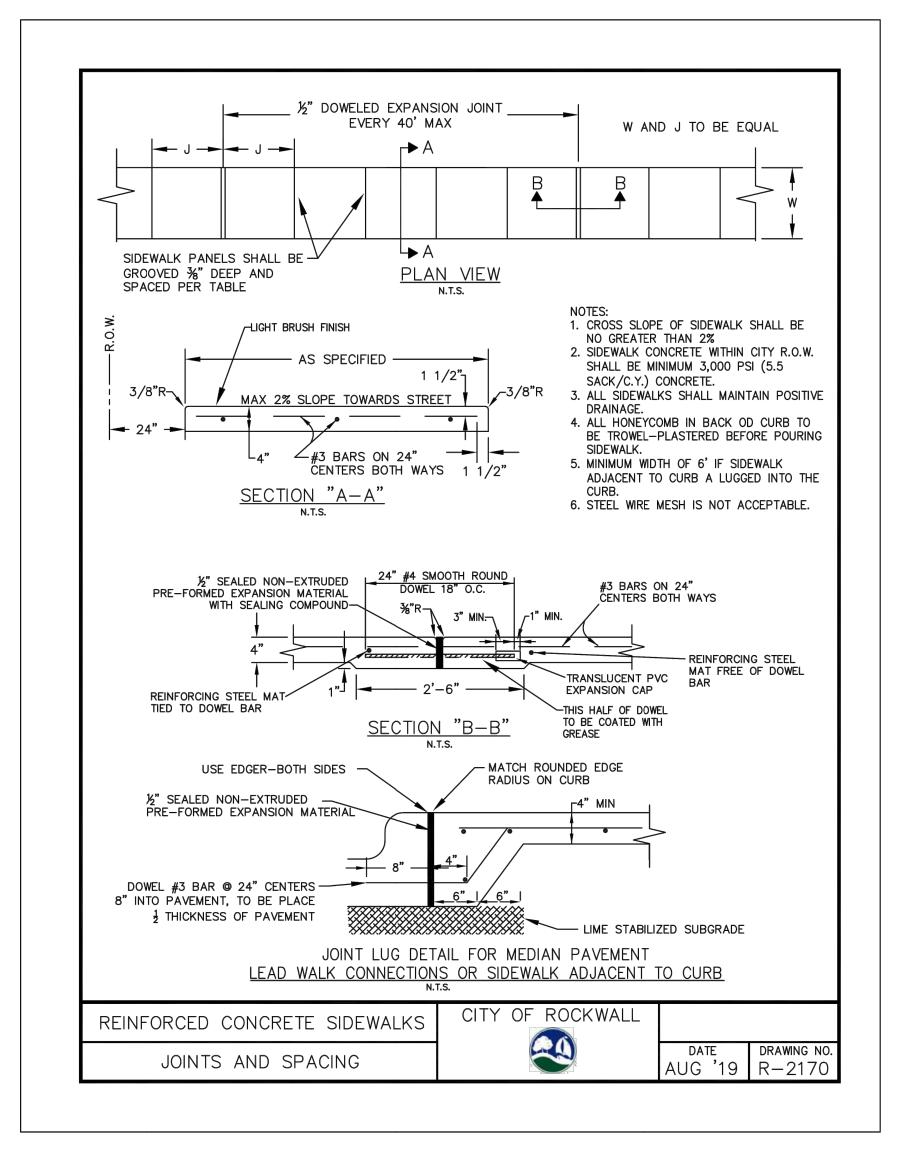








(I) 0 RYAN J ALCALA 137823 AND IX 7508 GOLIAD ROCKWALL, T AND GO - ROCKWALL 3064 NORTH GOLIAD STREET-SHEET NO.



PEDESTRIAN ACCESSIBILITY (WITHIN PUBLIC R.O.W.)

All newly constructed sidewalks, curb ramps and crosswalks installed within City of Rockwall public rights—of—way shall be considered a pedestrian access route and shall conform to the most current Guidelines for Public Rights—of—Way created by the United States Access Board. CURB RAMPS

- 1. All slopes shown are MAXIMUM ALLOWABLE. Lesser slopes that will still drain properly should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
- 2. Landings shall be 5'x 5' minimum with a maximum 2% slope in the transverse and longitudinal directions..
- 3. Clear space at the bottom of curb ramps shall be a minimum of 5'x 5' wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.
- 4. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%. 5. Additional information on curb ramp location, design, light reflective value and texture may
- be found in the most current edition of the Texas Accessibility Standards (TAS) and 16 TAC 68.102. Federal guidelines shall supersede any conflicts.
- 6. Crosswalk dimensions, crosswalk markings and stop bar locations shall be as shown elsewhere in the plans. At intersections where crosswalk markings are not required, curb ramps and accessible routes shall align with theoretical crosswalks unless otherwise directed.
- 7. Handrails are not required on curb ramps. 8. Provide a flush transition where the curb ramps connect to the street.
- 9. Accessible routes are considered "ramps" when longitudinal slopes are between 5% and 8.3% (maximum allowable). Sidewalks under 5% longitudinal slope are deemed accessible routes and must follow all applicable guidelines.

DETECTABLE WARNING DEVICE

- 10. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with Section 705 of the TAS. The surface must contrast visually with adjoining surfaces. Furnish and install an approved cast—in—place dark red detectable warning surface material adjacent to uncolored concrete, unless specified elsewhere in the
- 11. Detectable Warning Materials shall be truncated dome plates in the color approved by the
- City. Install products in accordance with manufacturer's specifications. 12. Detectable warning surfaces must be slip resistant and not allow water to accumulate.
- 13. Detectable warning surfaces shall be a minimum of 24" in depth in the direction of pedestrian travel, and extend the full width of the curb ramp or landing where the pedestrian
- access route enters the street. 14. Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb. When placed on the ramp, align the rows of domes to be perpendicular to the grade break between the ramp run and the street. Where detectable warning surfaces are provided on a surface with a slope that is less than 5 percent, dome orientation is less critical. Detectable warning surfaces may be curved along the corner radius.

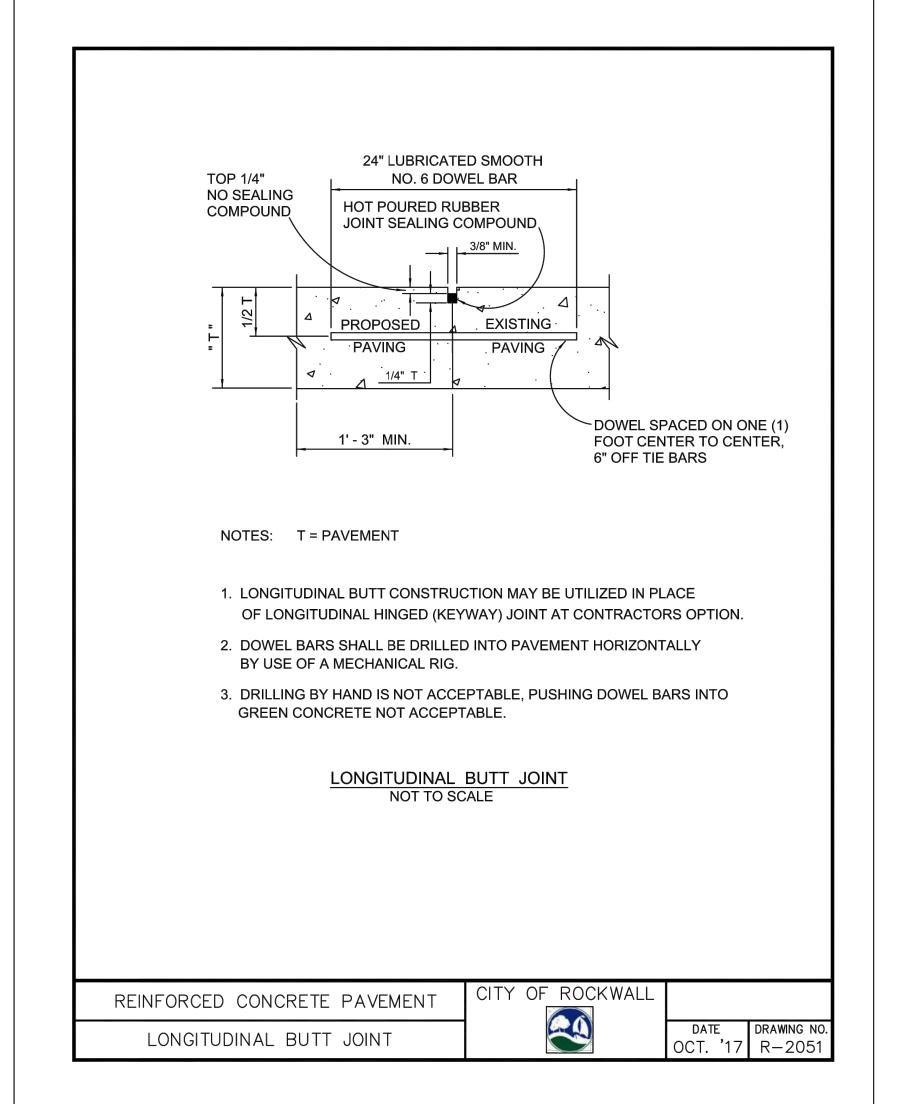
- 15. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within one or more reach ranges specified in TAS 308.
- 16. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items so as not to obstruct the pedestrian access route or clear ground
- 17. Street grades and cross slopes shall be as shown elsewhere in the plans.
- 18. Changes in level greater than 1/4 inch are not permitted (1/2 inch with bevel).
- 19. The least possible grade should be used to maximize accessibility. The running slope of sidewalks and crosswalks within the public right of way may follow the grade of the parallel roadway. Where a continuous grade greater than 5% must be provided, handrails may be desirable to improve accessibility. Handrails may also be needed to protect pedestrians from potentially hazardous conditions. If provided, handrails shall comply with TAS 505.
- 20. Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.

DIRECTIONAL CURB RAMP

CITY OF ROCKWALL



DATE DRAWING NO. MAR. '17 R-2125D



RECORD DRAWING

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SHEET NO.

AND GO - ROCKWALL - GOLIAD AND FM 3064 NORTH GOLIAD STREET- ROCKWALL, TX 75087

(1)

RYAN J ALCALA

PROJECT SUMMARY

CALCULATION DETAILS

- LOADING = HS20 & HS25
- APPROX. LINEAR FOOTAGE = 198 lf.

STORAGE SUMMARY

- STORAGE VOLUME REQUIRED = 6,558 cf.
- PIPE STORAGE VOLUME = 6,570 cf.
- BACKFILL STORAGE VOLUME = 0 cf.
- TOTAL STORAGE PROVIDED = 6,570 cf.

PIPE DETAILS

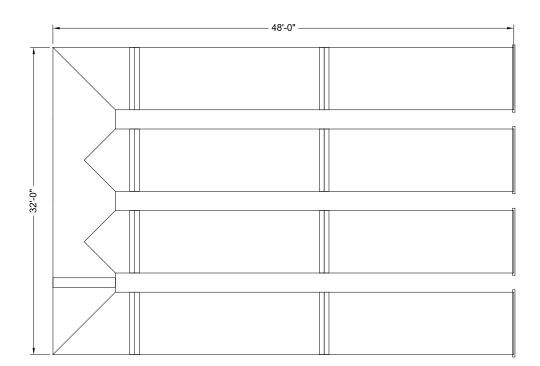
- DIAMETER = 78 IN.
- CORRUGATION = 5x1
- GAGE = 16
- COATING = ALT2
- WALL TYPE = Solid
- BARRELL SPACING = 24 IN.

BACKFILL DETAILS

- WIDTH AT ENDS = 12 IN.
- ABOVE PIPE = 0 IN.
- WIDTH AT SIDES = 12 IN.
- BELOW PIPE = 0 IN.

NOTES

- ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE. ALL ELEVATIONS, DIMENSIONS, AND LOCATIONS OF RISERS AND INLETS, SHALL BE VERIFIED BY THE ENGINEER OF RECORD PRIOR TO RELEASING FOR FABRICATION.
- ALL FITTINGS AND REINFORCEMENT COMPLY WITH ASTM A998.
- ALL RISERS AND STUBS ARE $2\frac{2}{3}$ " x $\frac{1}{2}$ " CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
- RISERS TO BE FIELD TRIMMED TO GRADE.
- QUANTITY OF PIPE SHOWN DOES NOT PROVIDE EXTRA PIPE FOR CONNECTING THE SYSTEM TO EXISTING PIPE OR DRAINAGE STRUCTURES. OUR SYSTEM AS DETAILED PROVIDES NOMINAL INLET AND/OR OUTLET PIPE STUB FOR CONNECTION TO EXISTING DRAINAGE FACILITIES. IF ADDITIONAL PIPE IS NEEDED IT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- BAND TYPE TO BE DETERMINED UPON FINAL DESIGN.
- THE PROJECT SUMMARY IS REFLECTIVE OF THE DYODS DESIGN, QUANTITIES ARE APPROX. AND SHOULD BE VERIFIED UPON FINAL DESIGN AND APPROVAL. FOR EXAMPLE, TOTAL EXCAVATION DOES NOT CONSIDER ALL VARIABLES SUCH AS SHORING AND ONLY ACCOUNTS FOR MATERIAL WITHIN THE ESTIMATED EXCAVATION FOOTPRINT.
- THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.



ASSEMBLY SCALE: 1" = 10'

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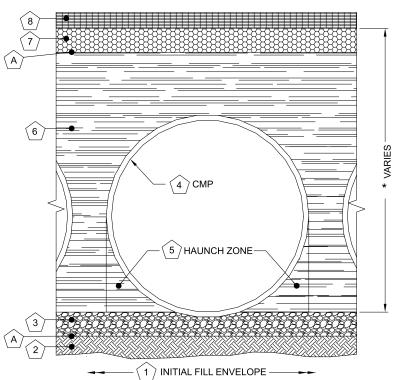
ENGINEERED SOLUTIONS LLC www.ContechES.com

CANTECH® CMP DETENTION SYSTEMS **DYODS**

DRAWING

DYO14543 Salad & Go - Rockwall 78" Underground Detention Rockwall, TX **DETENTION SYSTEM**

PROJECT No.:	SEQ. I	No.:	DATE:
704200	1	0	3/15/2022
DESIGNED:		DRAW	N:
DYO			DYO
CHECKED:		APPR	OVED:
DYO			DYO
SHEET NO.:	D	1	



Material Location Description		Material Designation	Designation		
Rigid or Flexible Pa (if applicable)	avement				
Road Base (if applicable)					
Geotextile Layer	Non-Woven Geotextile	CONTECH C-40 or C-45	Engineer Decision for consideration to prevent soil migration into varying soil types		
Backfill	Well graded granular material which may contain small amounts of silt or clay.	AASHTO M 145- A-1, A-2, A-3	Placed in 8" +/- loose lifts and compacted to 90% Standard Proctor Per AASHTO T 99		
Bedding Stone	Well graded granular bedding material w/maximum particle size of 3"	AASHTO M43 - 3,357,4,467, 5, 56, 57	Engineer to determine if bedding is required. Pipe may be placed on the trench bottom of a relatively loose, native suitable well graded & granular material. For Arch pipes it is recommended to be shaped to a relatively flat bottom or fine-grade the foundation to a slight v-shape. Unsuitable material should be over-excavated and re-placed with a 4"-6" layer of well graded & granular stone per the material designation. See AASHTO 26.3.8.1 / 26.5.3 Bedding info.		
Geotextile Layer	Non-Woven Geotextile	CONTECH C-40 or C-45	Engineer Decision for consideration to prevent so migration into varying soil types		

not allow for placement and adequate compaction of the backfill.

MINIMUM WIDTH DEPENDS ON SITE CONDITIONS AND ENGINEERING JUDGEMENT

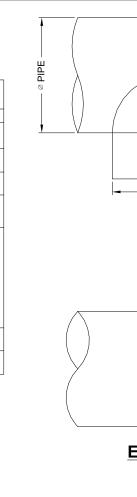
FOUNDATION/BEDDING PREPARATION

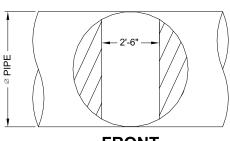
- PRIOR TO PLACING THE BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION. THEY SHALL BE REMOVED AND BROUGHT BACK TO THE GRADE WITH A FILL MATERIAL AS APPROVED BY THE ENGINEER.
- HAUNCH ZONE MATERIAL SHALL BE PLACED AND UNIFORMALLY COMPACTED WITHOUT

BACKFILL

WHEN PLACING THE FIRST LIFTS OF BACKFILL IT IS IMPORTANT TO MAKE SURE THAT THE BACKFILL IS PROPERLY COMPACTED UNDER AND AROUND THE PIPE HAUNCHES. BACKFILL SHALL BE PLACED SUCH THAT THERE IS NO MORE THAN A TWO LIFT (16") DIFFERENTIAL BETWEEN ANY OF THE PIPES AT ANY TIME DURING THE BACKFILL PROCESS. THE BACKFILL SHALL BE ADVANCED ALONG THE LENGTH OF THE DETENTION SYSTEM AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING ON THE PIPE.

OTHER ALTERNATE BACKFILL MATERIAL MAY BE ALLOWED DEPENDING ON SITE SPECIFIC CONDITIONS, AS APPROVED BY SITE ENGINEER.

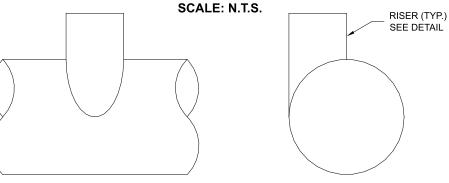




FRONT

MANWAY DETAIL APPLICABLE FOR CMP SYSTEMS WITH DIAMETERS 48" AND LARGER. MANWAYS MAY BE REQUIRED ON SMALLER SYSTEMS DEPENDING ON ACTUAL SITE SPECIFIC CONDITIONS.

TYPICAL MANWAY DETAIL



ELEVATION

2'-6" –

Ø PIPF

PLAN

TYPICAL RISER DETAIL

SCALE: N.T.S.

END LADDERS ARE OPTIONAL AND ARE NOT REQUIRED FOR ALL SYSTEMS.

20 MIL HDPE MEMBRANE LINER OVER TOP OF PIPE (IF REQUIRED) LIMITS OF REQUIRED BACKFILL SYSTEM DIAMETER **VARIES** VARIES

TYPICAL SECTION VIEW

LINER OVER ROWS SCALE: N.T.S.

NOTE: IF SALTING AGENTS FOR SNOW AND ICE REMOVAL ARE USED ON OR NEAR THE PROJECT, AN HDPE MEMBRANE LINER IS RECOMMENDED WITH THE SYSTEM. THE IMPERMEABLE LINER IS INTENDED TO HELP PROTECT THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM A CHANGE IN THE SURROUNDING ENVIRONMENT OVER A PERIOD OF TIME. PLEASE REFER TO THE CORRUGATED METAL PIPE DETENTION DESIGN GUIDE FOR ADDITIONAL INFORMATION.

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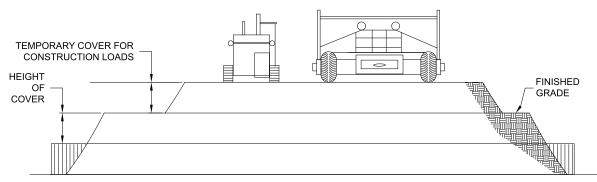
www.ContechES.com

CHATECH CMP DETENTION SYSTEMS

DYO14543 Salad & Go - Rockwall 78" Underground Detention Rockwall, TX **DETENTION SYSTEM**

PROJECT No.:	SEQ. I	No.:	DATE:
704200	10		3/15/2022
DESIGNED:		DRAW	N:
DYO			DYO
CHECKED:		APPR	OVED:
DYO			DYO
SHEET NO.:	D	2	

9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069 **DYODS** 800-338-1122 513-645-7000 513-645-7993 FAX DRAWING



CONSTRUCTION LOADS

FOR TEMPORARY CONSTRUCTION VEHICLE LOADS, AN EXTRA AMOUNT OF COMPACTED COVER MAY BE REQUIRED OVER THE TOP OF THE PIPE. THE HEIGHT-OF-COVER SHALL MEET THE MINIMUM REQUIREMENTS SHOWN IN THE TABLE BELOW. THE USE OF HEAVY CONSTRUCTION EQUIPMENT NECESSITATES GREATER PROTECTION FOR THE PIPE THAN FINISHED GRADE COVER MINIMUMS FOR NORMAL HIGHWAY TRAFFIC.

PIPE SPAN, INCHES	AXLE LOADS (kips)						
INCLIES	18-50	50-75	75-110	110-150			
	MINIMUM COVER (FT)						
12-42	2.0	2.5	3.0	3.0			
48-72	3.0	3.0	3.5	4.0			
78-120	3.0	3.5	4.0	4.0			
126-144	3.5	4.0	4.5	4.5			

*MINIMUM COVER MAY VARY, DEPENDING ON LOCAL CONDITIONS. THE CONTRACTOR MUST PROVIDE THE ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. MINIMUM COVER IS MEASURED FROM THE TOP OF THE PIPE TO THE TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE.

CONSTRUCTION LOADING DIAGRAM

SCALE: N.T.S.

SPECIFICATION FOR DESIGNED DETENTION SYSTEM:

SCOPE

THIS SPECIFICATION COVERS THE MANUFACTURE AND INSTALLATION OF THE DESIGNED DETENTION SYSTEM DETAILED IN THE PROJECT PLANS.

MATERIA

THE MATERIAL SHALL CONFORM TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2 STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-274 OR ASTM A-92.

THE GALVANIZED STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-218 OR ASTM A-929.

THE POLYMER COATED STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-246 OR ASTM A-742.

THE ALUMINUM COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-197 OR ASTM B-744.

CONSTRUCTION LOADS

THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL

CONSTRUCTION LOADS MAY BE HIGHER THAN FINAL LOADS. FOLLOW THE MANUFACTURER'S OR NCSPA GUIDELINES.

DIDE

THE PIPE SHALL BE MANUFACTURED IN ACCORDANCE TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2: AASHTO M-36 OR ASTM A-760

GALVANIZED: AASHTO M-36 OR ASTM A-760

POLYMER COATED: AASHTO M-245 OR ASTM A-762

ALUMINUM: AASHTO M-196 OR ASTM B-745

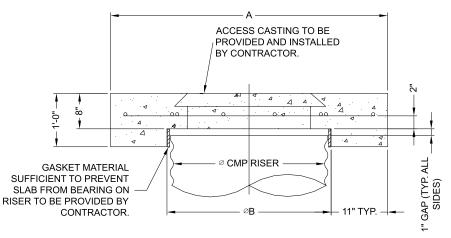
HANDLING AND ASSEMBLY

SHALL BE IN ACCORDANCE WITH NCSP'S (NATIONAL CORRUGATED STEEL PIPE ASSOCIATION) FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL. SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR ALUMINIUM PIPE

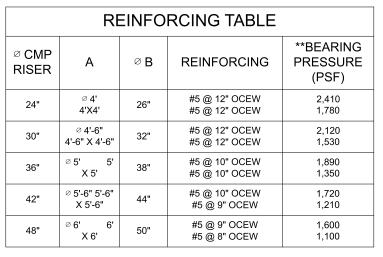
INSTALLATIO

SHALL BE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SECTION 26, DIVISION II DIVISION II OR ASTM A-798 (FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL) OR ASTM B-788 (FOR ALUMINUM PIPE) AND IN CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. IF THERE ARE ANY INCONSISTENCIES OR CONFLICTS THE CONTRACTOR SHOULD DISCUSS AND RESOLVE WITH THE SITE ENGINEER.

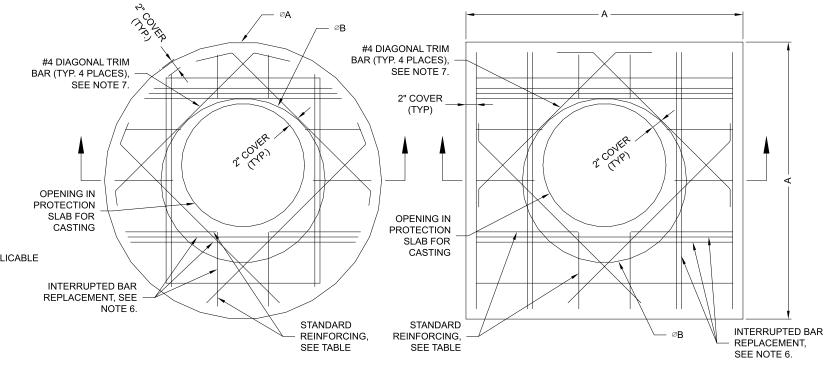
IT IS ALWAYS THE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.



SECTION VIEW



** ASSUMED SOIL BEARING CAPACITY



ROUND OPTION PLAN VIEW

NOTES:

- 1. DESIGN IN ACCORDANCE WITH AASHTO, 17th EDITION.
- 2. DESIGN LOAD HS25.
- 3. EARTH COVER = 1' MAX.
- 4. CONCRETE STRENGTH = 3,500 psi
- 5. REINFORCING STEEL = ASTM A615, GRADE 60.
- PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, HALF EACH SIDE. ADDITIONAL BARS TO BE IN THE SAME PLANE.

SQUARE OPTION PLAN VIEW

- 7. TRIM OPENING WITH DIAGONAL #4 BARS, EXTEND BARS A MINIMUM OF 12" BEYOND OPENING, BEND BARS AS REQUIRED TO MAINTAIN BAR COVER.
- 8. PROTECTION SLAB AND ALL MATERIALS TO BE PROVIDED AND INSTALLED BY CONTRACTOR.
- 9. DETAIL DESIGN BY DELTA ENGINEERING, BINGHAMTON, NY.

MANHOLE CAP DETAIL

SCALE: N.T.S.

PREFERENCES OR REGULATIONS. PLEASE
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MODIFICATIONS.

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DYO14543 Salad & Go - Rockwall 78" Underground Detention Rockwall, TX DETENTION SYSTEM

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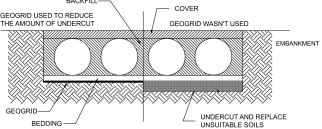
CMP DETENTION INSTALLATION GUIDE

PROPER INSTALLATION OF A FLEXIBLE UNDERGROUND DETENTION SYSTEM WILL ENSURE LONG-TERM PERFORMANCE. THE CONFIGURATION OF THESE SYSTEMS OFTEN REQUIRES SPECIAL CONSTRUCTION PRACTICES THAT DIFFER FROM CONVENTIONAL FLEXIBLE PIPE CONSTRUCTION. CONTECH ENGINEERED SOLUTIONS STRONGLY SUGGESTS SCHEDULING A PRE-CONSTRUCTION MEETING WITH YOUR LOCAL SALES ENGINEER TO DETERMINE IF ADDITIONAL MEASURES, NOT COVERED IN THIS GUIDE, ARE APPROPRIATE FOR YOUR SITE.

FOUNDATION

CONSTRUCT A FOUNDATION THAT CAN SUPPORT THE DESIGN LOADING APPLIED BY THE PIPE AND ADJACENT BACKFILL WEIGHT AS WELL AS MAINTAIN ITS INTEGRITY DURING CONSTRUCTION.

IF SOFT OR UNSUITABLE SOILS ARE ENCOUNTERED, REMOVE THE POOR SOILS DOWN TO A SUITABLE DEPTH AND THEN BUILD UP TO THE APPROPRIATE ELEVATION WITH A COMPETENT BACKFILL MATERIAL. THE STRUCTURAL FILL MATERIAL GRADATION SHOULD NOT ALLOW THE MIGRATION OF FINES, WHICH CAN CAUSE SETTLEMENT OF THE DETENTION SYSTEM OR PAVEMENT ABOVE. IF THE STRUCTURAL FILL MATERIAL IS NOT COMPATIBLE WITH THE UNDERLYING SOILS AN ENGINEERING FABRIC SHOULD BE USED AS A SEPARATOR. IN SOME CASES, USING A STIFF REINFORCING GEOGRID REDUCES OVER EXCAVATION AND REPLACEMENT FILL QUANTITIES.

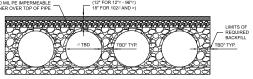


GRADE THE FOUNDATION SUBGRADE TO A UNIFORM OR SLIGHTLY SLOPING GRADE. IF THE SUBGRADE IS CLAY OR RELATIVELY NON-POROUS AND THE CONSTRUCTION SEQUENCE WILL LAST FOR AN EXTENDED PERIOD OF TIME, IT IS BEST TO SLOPE THE GRADE TO ONE END OF THE SYSTEM. THIS WILL ALLOW EXCESS WATER TO DRAIN QUICKLY, PREVENTING SATURATION OF THE SUBGRADE.

GEOMEMBRANE BARRIER

A SITE'S RESISTIVITY MAY CHANGE OVER TIME WHEN VARIOUS TYPES OF SALTING AGENTS ARE USED, SUCH AS ROAD SALTS FOR DEICING AGENTS. IF SALTING AGENTS ARE USED ON OR NEAR THE PROJECT SITE, A GEOMEMBRANE BARRIER IS RECOMMENDED WITH THE SYSTEM. THE GEOMEMBRANE LINER IS INTENDED TO HELP PROTECT THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM THE USE OF SUCH AGENTS INCLUDING PREMATURE CORROSION AND REDUCED ACTUAL SERVICE LIFE.

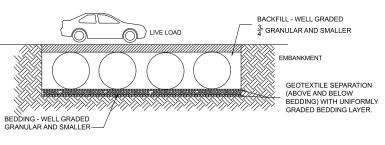
THE PROJECT'S ENGINEER OF RECORD IS TO EVALUATE WHETHER SALTING AGENTS WILL BE USED ON OR NEAR THE PROJECT SITE, AND USE HIS/HER BEST JUDGEMENT TO DETERMINE IF ANY ADDITIONAL PROTECTIVE MEASURES ARE REQUIRED. BELOW IS A TYPICAL DETAIL SHOWING THE PLACEMENT OF A GEOMEMBRANE BARRIER FOR PROJECTS WHERE SALTING AGENTS ARE USED ON OR NEAR THE PROJECT SITE.



IN-SITU TRENCH WALL

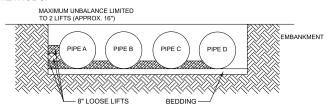
IF EXCAVATION IS REQUIRED, THE TRENCH WALL NEEDS TO BE CAPABLE OF SUPPORTING THE LOAD THAT THE PIPE SHEDS AS THE SYSTEM IS LOADED. IF SOILS ARE NOT CAPABLE OF SUPPORTING THESE LOADS, THE PIPE CAN DEFLECT PERFORM A SIMPLE SOIL PRESSURE CHECK USING THE APPLIED LOADS TO DETERMINE THE LIMITS OF EXCAVATION BEYOND THE SPRING LINE OF THE OUTER MOST PIPES.

IN MOST CASES THE REQUIREMENTS FOR A SAFE WORK ENVIRONMENT AND PROPER BACKFILL PLACEMENT AND COMPACTION TAKE CARE OF THIS CONCERN.



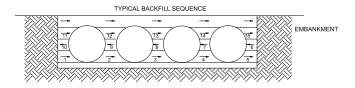
BACKFILL PLACEMENT

MATERIAL SHALL BE WORKED INTO THE PIPE HAUNCHES BY MEANS OF SHOVEL-SLICING, RODDING, AIR TAMPER, VIBRATORY ROD, OR OTHER EFFECTIVE METHODS.

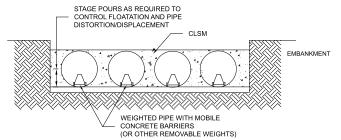


IF AASHTO T99 PROCEDURES ARE DETERMINED INFEASIBLE BY THE GEOTECHNICAL ENGINEER OF RECORD, COMPACTION IS CONSIDERED ADEQUATE WHEN NO FURTHER YIELDING OF THE MATERIAL IS OBSERVED UNDER THE COMPACTOR, OR UNDER FOOT, AND THE GEOTECHNICAL ENGINEER OF RECORD (OR REPRESENTATIVE THEREOF) IS SATISFIED WITH THE LEVEL OF COMPACTION.

FOR LARGE SYSTEMS, CONVEYOR SYSTEMS, BACKHOES WITH LONG REACHES OR DRAGLINES WITH STONE BUCKETS MAY BE USED TO PLACE BACKFILL. ONCE MINIMUM COVER FOR CONSTRUCTION LOADING ACROSS THE ENTIRE WIDTH OF THE SYSTEM IS REACHED, ADVANCE THE EQUIPMENT TO THE END OF THE RECENTLY PLACED FILL, AND BEGIN THE SEQUENCE AGAIN UNTIL THE SYSTEM IS COMPLETELY BACKFILLED. THIS TYPE OF CONSTRUCTION SEQUENCE PROVIDES ROOM FOR STOCKPILED BACKFILL DIRECTLY BEHIND THE BACKHOE, AS WELL AS THE MOVEMENT OF CONSTRUCTION TRAFFIC. MATERIAL STOCKPILES ON TOP OF THE BACKFILLED DETENTION SYSTEM SHOULD BE LIMITED TO 8- TO 10-FEET HIGH AND MUST PROVIDE BALANCED LOADING ACROSS ALL BARRELS. TO DETERMINE THE PROPER COVER OVER THE PIPES TO ALLOW THE MOVEMENT OF CONSTRUCTION EQUIPMENT SEE TABLE 1, OR CONTACT YOUR LOCAL CONTECH SALES ENGINEER.



WHEN FLOWABLE FILL IS USED, YOU MUST PREVENT PIPE FLOATATION. TYPICALLY, SMALL LIFTS ARE PLACED BETWEEN THE PIPES AND THEN ALLOWED TO SET-UP PRIOR TO THE PLACEMENT OF THE NEXT LIFT. THE ALLOWABLE THICKNESS OF THE CLSM LIFT IS A FUNCTION OF A PROPER BALANCE BETWEEN THE UPLIFT FORCE OF THE CLSM, THE OPPOSING WEIGHT OF THE PIPE, AND THE EFFECT OF OTHER RESTRAINING MEASURES. THE PIPE CAN CARRY LIMITED FLUID PRESSURE WITHOUT PIPE DISTORTION OR DISPLACEMENT, WHICH ALSO AFFECTS THE CLSM LIFT THICKNESS. YOUR LOCAL CONTECH SALES ENGINEER CAN HELP DETERMINE THE PROPER LIFT THICKNESS.

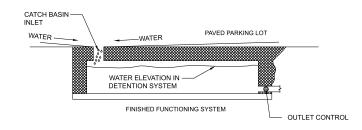


CONSTRUCTION LOADING

TYPICALLY, THE MINIMUM COVER SPECIFIED FOR A PROJECT ASSUMES H-20 LIVE LOAD. BECAUSE CONSTRUCTION LOADS OFTEN EXCEED DESIGN LIVE LOADS, INCREASED TEMPORARY MINIMUM COVER REQUIREMENTS ARE NECESSARY. SINCE CONSTRUCTION EQUIPMENT VARIES FROM JOB TO JOB, IT IS BEST TO ADDRESS EQUIPMENT SPECIFIC MINIMUM COVER REQUIREMENTS WITH YOUR LOCAL CONTECH SALES ENGINEER DURING YOUR PRE-CONSTRUCTION MEETING.

ADDITIONAL CONSIDERATIONS

BECAUSE MOST SYSTEMS ARE CONSTRUCTED BELOW-GRADE, RAINFALL CAN RAPIDLY FILL THE EXCAVATION; POTENTIALLY CAUSING FLOATATION AND MOVEMENT OF THE PREVIOUSLY PLACED PIPES. TO HELP MITIGATE POTENTIAL PROBLEMS, IT IS BEST TO START THE INSTALLATION AT THE DOWNSTREAM END WITH THE OUTLET ALREADY CONSTRUCTED TO ALLOW A ROUTE FOR THE WATER TO ESCAPE. TEMPORARY DIVERSION MEASURES MAY BE REQUIRED FOR HIGH FLOWS DUE TO THE RESTRICTED NATURE OF THE OUTLET PIPE



CMP DETENTION SYSTEM INSPECTION AND MAINTENANCE

UNDERGROUND STORMWATER DETENTION AND INFILTRATION SYSTEMS MUST BE INSPECTED AND MAINTAINED AT REGULAR INTERVALS FOR PURPOSES OF PERFORMANCE AND LONGEVITY.

INSPECTION

INSPECTION IS THE KEY TO EFFECTIVE MAINTENANCE OF CMP DETENTION SYSTEMS AND IS EASILY PERFORMED. CONTECH RECOMMENDS ONGOING, ANNUAL INSPECTIONS. SITES WITH HIGH TRASH LOAD OR SMALL OUTLET CONTROL ORIFICES MAY NEED MORE FREQUENT INSPECTIONS. THE RATE AT WHICH THE SYSTEM COLLECTS POLLUTANTS WILL DEPEND MORE ON SITE SPECIFIC ACTIVITIES RATHER THAN THE SIZE OR CONFIGURATION OF THE SYSTEM.

INSPECTIONS SHOULD BE PERFORMED MORE OFTEN IN EQUIPMENT WASHDOWN AREAS, IN CLIMATES WHERE SANDING AND/OR SALTING OPERATIONS TAKE PLACE, AND IN OTHER VARIOUS INSTANCES IN WHICH ONE WOULD EXPECT HIGHER ACCUMULATIONS OF SEDIMENT OR ABRASIVE/CORROSIVE CONDITIONS. A RECORD OF EACH INSPECTION IS TO BE MAINTAINED FOR THE LIFE OF THE SYSTEM

MAINTENANCE

CMP DETENTION SYSTEMS SHOULD BE CLEANED WHEN AN INSPECTION REVEALS ACCUMULATED SEDIMENT OR TRASH IS CLOGGING THE DISCHARGE ORIFICE.

ACCUMULATED SEDIMENT AND TRASH CAN TYPICALLY BE EVACUATED THROUGH THE MANHOLE OVER THE OUTLET ORIFICE. IF MAINTENANCE IS NOT PERFORMED AS RECOMMENDED, SEDIMENT AND TRASH MAY ACCUMULATE IN FRONT OF THE OUTLET ORIFICE. MANHOLE COVERS SHOULD BE SECURELY SEATED FOLLOWING CLEANING ACTIVITIES. CONTECH SUGGESTS THAT ALL SYSTEMS BE DESIGNED WITH AN ACCESS/INSPECTION MANHOLE SITUATED AT OR NEAR THE INLET AND THE OUTLET ORIFICE. SHOULD IT BE NECESSARY TO GET INSIDE THE SYSTEM TO PERFORM MAINTENANCE ACTIVITIES, ALL APPROPRIATE PRECAUTIONS REGARDING CONFINED SPACE ENTRY AND OSHA REGULATIONS SHOULD BE FOLLOWED.

ANNUAL INSPECTIONS ARE BEST PRACTICE FOR ALL UNDERGROUND SYSTEMS. DURING THIS INSPECTION, IF EVIDENCE OF SALTING/DE-ICING AGENTS IS OBSERVED WITHIN THE SYSTEM, IT IS BEST PRACTICE FOR THE SYSTEM TO BE RINSED, INCLUDING ABOVE THE SPRING LINE SOON AFTER THE SPRING THAW AS PART OF THE MAINTENANCE PROGRAM FOR THE SYSTEM.

MAINTAINING AN UNDERGROUND DETENTION OR INFILTRATION SYSTEM IS EASIEST WHEN THERE IS NO FLOW ENTERING THE SYSTEM. FOR THIS REASON, IT IS A GOOD IDEA TO SCHEDULE THE CLEANOUT DURING DRY WEATHER

THE FOREGOING INSPECTION AND MAINTENANCE EFFORTS HELP ENSURE UNDERGROUND PIPE SYSTEMS USED FOR STORMWATER STORAGE CONTINUE TO FUNCTION AS INTENDED BY IDENTIFYING RECOMMENDED REGULAR INSPECTION AND MAINTENANCE PRACTICES. INSPECTION AND MAINTENANCE RELATED TO THE STRUCTURAL INTEGRITY OF THE PIPE OR THE SOUNDNESS OF PIPE JOINT CONNECTIONS IS BEYOND THE SCOPE OF THIS GUIDE.

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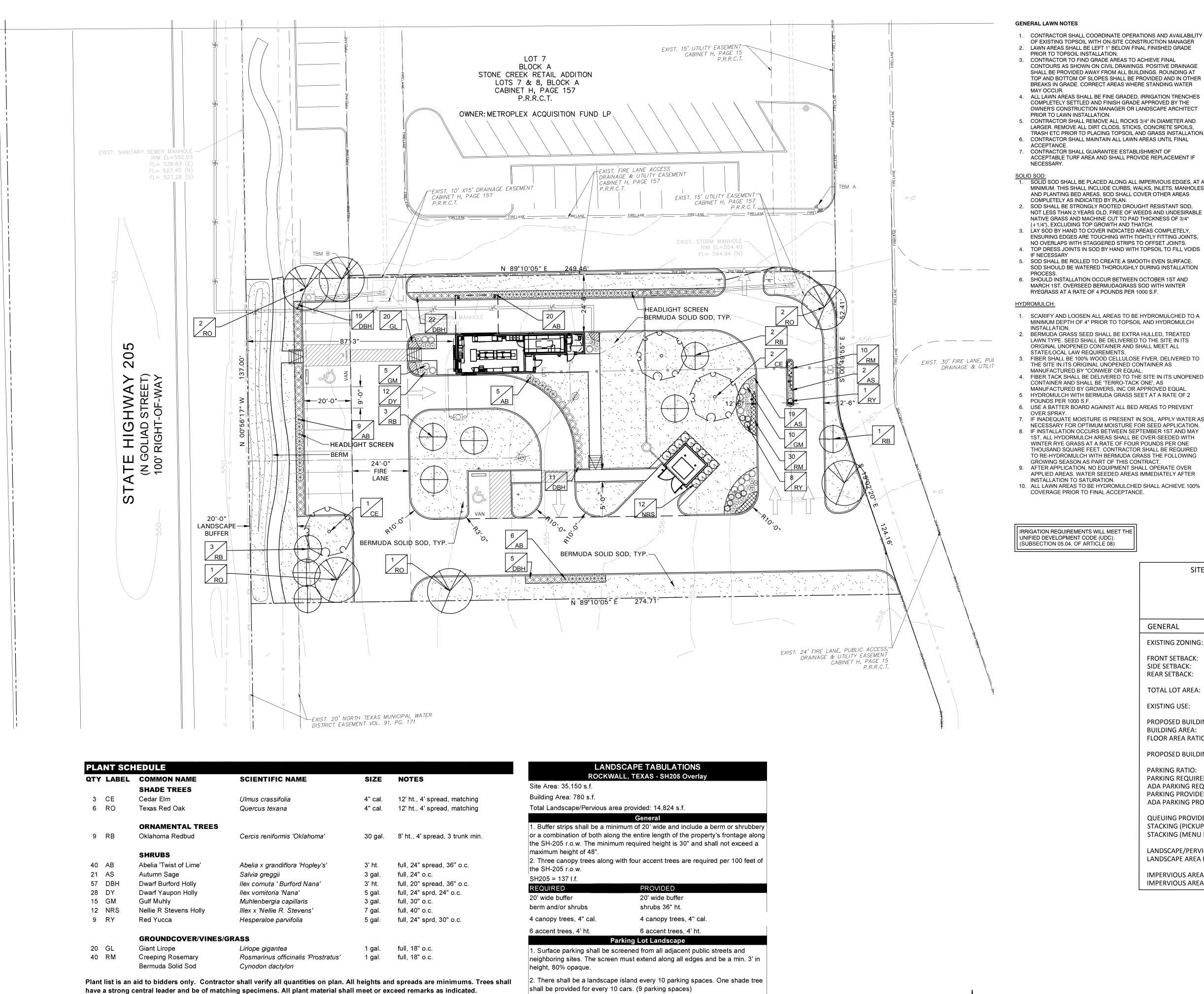
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DRAWING

DYO14543 Salad & Go - Rockwall 78" Underground Detention Rockwall, TX DETENTION SYSTEM

	PROJECT No.:	SEQ. No.:		DATE:					
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	DESIGNED:		DRAWN:						
	DYO		DYO						
	CHECKED:		APPROVED:						
	DYO		DYO						
	SHEET NO.: D4								



REQUIRED

1 canopy trees, 4" cal.

36" screen

PROVIDED

36" screen

1 canopy trees, 4" cal.

1. CONTRACTOR SHALL COORDINATE OPERATIONS AND AVAILABILITY OF EXISTING TOPSOIL WITH ON-SITE CONSTRUCTION MANAGER 2. LAWN AREAS SHALL BE LEFT 1" BELOW FINAL FINISHED GRADE

3. CONTRACTOR TO FIND GRADE AREAS TO ACHIEVE FINAL CONTOURS AS SHOWN ON CIVIL DRAWINGS. POSITIVE DRAINAGE SHALL BE PROVIDED AWAY FROM ALL BUILDINGS, ROUNDING AT TOP AND BOTTOM OF SLOPES SHALL BE PROVIDED AND IN OTHER BREAKS IN GRADE. CORRECT AREAS WHERE STANDING WATER

4. ALL LAWN AREAS SHALL BE FINE GRADED, IRRIGATION TRENCHES COMPLETELY SETTLED AND FINISH GRADE APPROVED BY THE OWNER'S CONSTRUCTION MANAGER OR LANDSCAPE ARCHITECT

PRIOR TO LAWN INSTALLATION 5. CONTRACTOR SHALL REMOVE ALL ROCKS 3/4" IN DIAMETER AND LARGER. REMOVE ALL DIRT CLODS, STICKS, CONCRETE SPOILS, TRASH ETC PRIOR TO PLACING TOPSOIL AND GRASS INSTALLATION.

7. CONTRACTOR SHALL GUARANTEE ESTABLISHMENT OF ACCEPTABLE TURF AREA AND SHALL PROVIDE REPLACEMENT IF

SOLID SOD:

1. SOLID SOD SHALL BE PLACED ALONG ALL IMPERVIOUS EDGES, AT A MINIMUM. THIS SHALL INCLUDE CURBS, WALKS, INLETS, MANHOLES AND PLANTING BED AREAS. SOD SHALL COVER OTHER AREAS

2. SOD SHALL BE STRONGLY ROOTED DROUGHT RESISTANT SOD, NOT LESS THAN 2 YEARS OLD, FREE OF WEEDS AND UNDESIRABLE NATIVE GRASS AND MACHINE CUT TO PAD THICKNESS OF 3/4" (+1/4"). EXCLUDING TOP GROWTH AND THATCH. 3. LAY SOD BY HAND TO COVER INDICATED AREAS COMPLETELY, ENSURING EDGES ARE TOUCHING WITH TIGHTLY FITTING JOINTS, NO OVERLAPS WITH STAGGERED STRIPS TO OFFSET JOINTS. 4. TOP DRESS JOINTS IN SOD BY HAND WITH TOPSOIL TO FILL VOIDS

5. SOD SHALL BE ROLLED TO CREATE A SMOOTH EVEN SURFACE. SOD SHOULD BE WATERED THOROUGHLY DURING INSTALLATION

6. SHOULD INSTALLATION OCCUR BETWEEN OCTOBER 1ST AND MARCH 1ST, OVERSEED BERMUDAGRASS SOD WITH WINTER

1. SCARIFY AND LOOSEN ALL AREAS TO BE HYDROMULCHED TO A MINIMUM DEPTH OF 4" PRIOR TO TOPSOIL AND HYDROMULCH

2. BERMUDA GRASS SEED SHALL BE EXTRA HULLED, TREATED LAWN TYPE. SEED SHALL BE DELIVERED TO THE SITE IN ITS ORIGINAL UNOPENED CONTAINER AND SHALL MEET ALL STATE/LOCAL LAW REQUIREMENTS.

FIBER SHALL BE 100% WOOD CELLULOSE FIVER, DELIVERED TO THE SITE IN ITS ORIGINAL UNOPENED CONTAINER AS MANUFACTURED BY "CONWEB' OR EQUAL.

CONTAINER AND SHALL BE 'TERRO-TACK ONE', AS MANUFACTURED BY GROWERS, INC OR APPROVED EQUAL. 5. HYDROMULCH WITH BERMUDA GRASS SEET AT A RATE OF 2

6. USE A BATTER BOARD AGAINST ALL BED AREAS TO PREVENT

7. IF INADEQUATE MOISTURE IS PRESENT IN SOIL, APPLY WATER AS NECESSARY FOR OPTIMUM MOISTURE FOR SEED APPLICATION IF INSTALLATION OCCURS BETWEEN SEPTEMBER 1ST AND MAY 1ST. ALL HYDORMULCH AREAS SHALL BE OVER-SEEDED WITH

GROWING SEASON AS PART OF THIS CONTRACT. 9. AFTER APPLICATION, NO EQUIPMENT SHALL OPERATE OVER APPLIED AREAS. WATER SEEDED AREAS IMMEDIATELY AFTER

INSTALLATION TO SATURATION. 10. ALL LAWN AREAS TO BE HYDROMULCHED SHALL ACHIEVE 100%

LANDSCAPE NOTES

- 1. CONTRACTOR TO VERIFY AND LOCATE ALL PROPOSED AND EXISTING ELEMENTS. NOTIFY LANDSCAPE ARCHITECT OR DESIGNATED REPRESENTATIVE FOR ANY LAYOUT DISCREPANCIES OR ANY CONDITION THAT WOULD PROHIBIT THE INSTALLATION AS SHOWN. SURVEY DATA OF EXISTING CONDITIONS WAS SUPPLIED
- 2. CONTRACTOR SHALL CALL 811 TO VERIFY AND LOCATE ANY AND ALL UTILITIES ON SITE PRIOR TO COMMENCING WORK. LANDSCAPE ARCHITECT SHOULD BE NOTIFIED OF ANY CONFLICTS. CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN WORKING
- NEAR UNDERGROUND UTILITIES. 3. A MINIMUM OF 2% SLOPE SHALL BE PROVIDED AWAY FROM ALL STRUCTURES. 4. CONTRACTOR SHALL FINE GRADE AREAS TO ACHIEVE FINAL CONTOURS AS INDICATED. LEAVE AREAS TO RECEIVE TOPSOIL 3" BELOW FINAL FINISHED GRADE IN PLANTING AREAS AND 1" BELOW
- FINAL FINISHED GRADE IN LAWN AREAS. 5. LANDSCAPE ISLANDS SHALL BE CROWNED, AND UNIFORM THROUGHOUT THE SITE. 6. PLANTING AREAS AND SOD TO BE SEPARATED BY STEEL EDGING. NO STEEL EDGING SHALL BE INSTALLED ADJACENT TO BUILDINGS,
- WALKS OR CURBS. EDGING NOT TO BE MORE THAN 1/2" ABOVE FINISHED GRADE. 7. EDGING SHALL BE CUT AT 45 DEGREE ANGLE WHERE IT
- INTERSECTS WALKS AND/OR CURBS. 8. MULCH SHALL BE INSTALLED AT 1/2" BELOW THE TOPS OF
- SIDEWALKS AND CURBING 9. QUANTITIES ON THESE PLANS ARE FOR REFERENCE ONLY. THE SPACING OF PLANTS SHOULD BE AS INDICATED ON PLANS OR OTHERWISE NOTED. ALL TREES AND SHRUBS SHALL BE PLANTED PER DETAILS.
- 10. CONTAINER GROWN PLANT MATERIAL IS PREFERRED HOWEVER BALL AND BURLAP PLANT MATERIAL CAN BE SUBSTITUTED IF NEED BE AND IS APPROPRIATE TO THE SIZE AND QUALITY INDICATED ON THE PLANT MATERIAL LIST.
- 11. TREES SHALL BE PLANTED AT A MINIMUM OF 5' FROM ANY UTILITY LINE, SIDEWALK OR CURB. TREES SHALL ALSO BE 10' CLEAR FROM FIRE HYDRANTS. 12. 4" OF SHREDDED HARDWOOD MULCH (2" SETTLED THICKNESS) SHALL BE PLACED OVER WEED BARRIER FABRIC. MULCH SHALL BE
- SHREDDED HARDWOOD MULCH OR APPROVED EQUAL, PINE STRAW MULCH IS PROHIBITED 13. WEED BARRIER FABRIC SHALL BE USED IN PLANT BEDS AND AROUND ALL TREES AND SHALL BE MIRAFI 1405 WEED BARRIER OR
- APPROVED EQUAL 14. CONTRACTOR TO PROVIDE UNIT PRICING OF LANDSCAPE

MATERIALS AND BE RESPONSIBLE FOR OBTAINING ALL LANDSCAPE AND IRRIGATION PERMITS.

IRRIGATION:

1. ALL REQUIRED LANDSCAPE AREAS SHALL HAVE AN AUTOMATIC IRRIGATION SYSTEM WITH A FREEZE/RAIN SENSOR. SYSTEM SHALL ALSO HAVE AN ET WEATHER BASED CONTROLLER AND BE DESIGNED AND INSTALLED BY A LICENSED IRRIGATOR.

VEGETATION SHOULD BE INSPECTED REGULARLY TO ENSURE THAT PLANT MATERIAL IS ESTABLISHING PROPERLY AND REMAINS IN A HEALTHY GROWING CONDITION APPROPRIATE FOR THE SEASON. IF DAMAGED OR REMOVED, PLANTS MUST BE REPLACED BY A SIMILAR VARIETY AND SIZE.

APPLICATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR UNTIL THE OWNER OR OWNER'S REPRESENTATIVE ACCEPTS AND ASSUMES REGULAR MAINTENANCE. 3. ALL LANDSCAPE AREAS SHOULD BE CLEANED AND KEPT FREE

STEEL LANDSCAPE EDGING UNLESS NOTED OTHERWISE ON

2. MOWING, TRIMMING, EDGING AND SUPERVISION OF WATER

OF TRASH, DEBRIS, WEEDS AND OTHER MATERIAL. STEEL EDGING SHALL BE 3/16" X 4 X 16' DARK GREEN DURAEDGE

IRRIGATION REQUIREMENTS WILL MEET THE UNIFIED DEVELOPMENT CODE (UDC)

SITE DATA FOR SALAD AND GO PROPOSED DEVELOPMENT

PLANS/DETAILS.

3064 N GOLIAD ST

ROCKWALL, TEXAS 75087

STONE CREEK RETAIL ADDITION - LOT 11, BLOCK A

GENERAL

EXISTING ZONING: PD-70 PLANNED DEVELOPMENT FRONT SETBACK: 25 FEET 0 FEET SIDE SETBACK:

0 FEET **REAR SETBACK:**

TOTAL LOT AREA: 35,150 SQUARE FEET (0.81 AC) **EXISTING USE:** UNDEVELOPED

RESTAURANT, WITH DRIVE-THROUGH SERVICE ONLY PROPOSED BUILDING: **BUILDING AREA:** 780 SQUARE FEET (0.018 AC) FLOOR AREA RATIO: 0.03:1

PROPOSED BUILDING HEIGHT: 1 STORY - 20 FEET

PARKING RATIO: 1 SPACE / 250 SF GROSS BUILDING AREA PARKING REQUIRED: 4 SPACES ADA PARKING REQUIRED: 1 SPACE PARKING PROVIDED: 10 SPACES ADA PARKING PROVIDED: 2 SPACES 15 SPACES QUEUING PROVIDED: STACKING (PICKUP TO MENU BOARD) 9 SPACES

STACKING (MENU BOARD TO ENTRANCE) 6 SPACES LANDSCAPE/PERVIOUS AREA: 14,824 SQUARE FEET (0.34 AC) 41.9%

LANDSCAPE AREA PERCENTAGE: IMPERVIOUS AREA:

20,326 SQUARE FEET (0.47 AC) IMPERVIOUS AREA PERCENTAGE: 58.1%

APPROVED:

I HEREBY CERTIFY THAT THE ABOVE AND FOREGOING SITE PLAN FOR A DEVELOPMENT IN THE CITY OF ROCKWALL, TEXAS, WAS APPROVED BY THE PLANNING & ZONING COMMISSION OF THE CITY OF ROCKWALL ON THE ___ DAY OF ____

WITNESS OUR HANDS, THIS ___ DAY OF __

DIRECTOR OF PLANNING AND ZONING

. 512.517.5589

AWR Designs, LLC P.O. Box 1746

amanda@awr-designs.com

AND

GOLIAD A

- ROCKWALL - G

GO -

SHEET NO.

L1.01

Scale 1"=20' - 0"

GRAPHIC SCALE



WHICH WILL ENSURE THE PURCHASED MATERIALS WILL MEET AND/OR REPRESENTATIVE WILL BE COMPLETED PRIOR TO WRITTEN ACCEPTANCE. EXCEED PROJECT SPECIFICATIONS. E. NOTIFY OWNER OR OWNER'S REPRESENTATIVE SEVEN DAYS PRIOR TO THE E. DO NOT MAKE PLANT MATERIAL SUBSTITUTIONS, IF THE LANDSCAPE EXPIRATION OF THE WARRANTY PERIOD. MATERIAL SPECIFIED IS NOT READILY AVAILABLE. SUBMIT PROOF TO LANDSCAPE ARCHITECT ALONG WITH THE PROPOSED MATERIAL TO BE F. REMOVE DEAD, UNHEALTHY AND UNSIGHTLY PLANTS DURING WARRANTY USED IN LIEU OF THE SPECIFIED PLANT G. REMOVE GUYING AND STAKING MATERIALS AFTER ONE YEAR H. ALL LANDSCAPE MUST BE MAINTAINED AND GRASS MOWED/EDGED ON A SPECIFIED. WEEKLY SCHEDULE UNTIL ACCEPTANCE BY OWNER. REMOVE CLIPPINGS AND DEBRIS FROM SITE PROMPTLY.

F. AT THE TIME BIDS ARE SUBMITTED, THE CONTRACTOR IS ASSUMED TO HAVE LOCATED THE MATERIALS NECESSARY TO COMPLETE THE JOB AS G. OWNER'S REPRESENTATIVE SHALL INSPECT ALL PLANT MATERIAL AND REMOVE TRASH, DEBRIS, AND LITTER. WATER, PRUNE, RESTAKE TREES, FERTILIZE, WEED AND APPLY HERBICIDES AND FUNGICIDES AS REQUIRED. J. COORDINATE THE OPERATION OF IRRIGATION SYSTEM TO ENSURE THAT

RETAINS THE RIGHT TO INSPECT MATERIALS UPON ARRIVAL TO THE SITE AND DURING INSTALLATION. THE OWNER'S REPRESENTATIVE MAY ALSO REJECT ANY MATERIALS HE/SHE FEELS TO BE UNSATISFACTORY OR DFFFCTIVE DURING THE WORK PROCESS. ALL PLANTS DAMAGED IN PLANTS ARE ADEQUATELY WATERED. HAND WATER AREAS NOT RECEIVING TRANSIT OR AT THE JOB SITE SHALL BE REJECTED. 1.10 PRODUCT DELIVERY, STORAGE AND HANDLING K. THE LANDSCAPE CONTRACTOR SHALL MAINTAIN THE IRRIGATION SYSTEM IN

> A. PREPARATION 1. BALLED AND BURLAPPED B&B PLANTS): DIG AND PREPARE SHIPMENT IN A MANNER THAT WILL NOT DAMAGE ROOTS, BRANCHES, SHAPE AND FUTURE

D. DEVELOP A PROGRAM OF MAINTENANCE (PRUNING AND FERTILIZATION)

2. CONTAINER GROWN PLANTS: DELIVER PLANTS IN RIGID CONTAINER TO HOLD BALL SHAPE AND PROTECT ROOT MASS. B. DELIVERY 1. DELIVER PACKAGED MATERIALS IN SEALED CONTAINERS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER, PROTECT MATERIALS FROM DETERIORATION DURING DELIVERY AND WHILE STORED ON SITE.

2. DELIVER ONLY PLANT MATERIALS THAT CAN BE PLANTED IN ONE DAY UNLESS ADEQUATE STORAGE AND WATERING FACILITIES ARE AVAILABLE 3. PROTECT ROOT BALLS BY HEELING IN WITH SAWDUST OR OTHER APPROVED MOISTURE RETAINING MATERIAL IF NOT PLANTED WITHIN 24 HOURS OF DELIVERY 4. PROTECT PLANTS DURING DELIVERY TO PREVENT DAMAGE TO ROOT BALL OR DESICCATION OF LEAVES.

5. KEEP PLANTS MOIST AT ALL TIMES. COVER ALL MATERIALS DURING 6. NOTIFY OWNERS REPRESENTATIVE OF DELIVERY 72 HOURS PRIOR TO DELIVERY OF PLANT MATERIAL AT JOB SITE. 7. REMOVE REJECTED PLANT MATERIAL IMMEDIATELY FROM JOB SITE 8. TO AVOID DAMAGE OR STRESS, DO NOT LIFT, MOVE, ADJUST TO PLUMB, OR OTHERWISE MANIPULATE PLANTS BY TRUNK OR STEMS.

PART 2 - PRODUCTS A. GENERAL: WELL FORMED NO. 1 GRADE OR BETTER NURSERY GROWN STOCK. LISTED PLANT HEIGHTS ARE FROM TOPS OF FOOT BALLS TO NOMINAL TOPS OF PLANTS. PLANT SPREAD REFERS TO NOMINAL OUTER WIDTH OF THE PLANT NOT THE OUTER LEAF TIPS. PLANTS SHALL BE INDIVIDUALLY APPROVED BY THE OWNERS REPRESENTATIVE AND THEIR

DECISION AS TO THEIR ACCEPTABILITY SHALL BE FINAL. B. QUANTITIES: THE DRAWINGS AND SPECIFICATIONS ARE COMPLIMENTARY. IYTHING CALLED FOR ON ONE AND NOT THE OTHER IS AS BINDING AS IF SHOWN AND CALLED FOR ON BOTH. THE PLANT SCHEDULE IS AN AID TO BIDDERS ONLY. CONFIRM ALL QUANTITIES ON PLAN. C. QUANTITIES AND SIZE: PLANT MATERIALS SHALL CONFORM TO THE SIZE GIVEN ON THE PLAN AND SHALL BE HEALTHY, WELL SHAPED, FULI

BRANCHED AND WELL ROOTED. SYMMETRY IS ALSO IMPERATIVE. PLANTS SHALL BE FREE FROM INSECTS, INJURY, DISEASE, BROKEN BRANCHES DISFIGUREMENTS, INSECT EGGS AND ARE TO BE OF SPECIMEN QUALITY. D. APPROVAL: ALL PLANTS WHICH ARE FOUND UNSUITABLE IN GROWTH OR ARE UNHEALTHY, BADLY SHAPED OR UNDERSIZED WILL BE REJECTED BY THE OWNERS REPRESENTATIVE EITHER BEFORE OR AFTER PLANTING AND SHALL BE REMOVED AT THE EXPENSE OF THE LANDSCAPE CONTRACTOR

AND REPLACED WITH ACCEPTABLE SPECIMENS. E. TREES SHALL BE HEALTHY, FULL BRANCHED, WELL SHAPED AND SHALL MEET THE MINIMUM REQUIREMENTS AS SPECIFIED ON THE PLANT SCHEDULE. ALL TREES SHALL BE OBTAINED FROM SOURCES WITHIN 200 MILES OF THE PROJECT SITE IF POSSIBLE, AND WITH SIMILAR CLIMACTIC CONDITIONS. F. PRUNING: ALL PRUNING OF TREES AND SHRUBS SHALL BE EXECUTED BY

THE LANDSCAPE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER, PRIOR TO FINAL ACCEPTANCE. G. PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED. EXCEPT THE

PLANTS LARGER THAN THOSE SPECIFIED MAY BE USED. USE OF LARGER PLANTS SHALL NOT INCREASE THE CONTRACT PRICE. H. WHERE MATERIALS ARE PLANTED IN MASSES, PROVIDE PLANTS OF UNIFORM SIZE.

TOP OF MULCH SHOULD BE

CURB OR SIDEWALK NO STEEL EDGING

ALONG WALK, TY

AT MINIMUM, 1/2" BELOW -

WALK OR CURBING

I BOOT SYSTEMS SHALL BE HEALTHY DENSELY BRANCHED FIBROLIS BOOT SYSTEMS, NON-POT-BOUND, FREE FROM ENCIRCLING AND/OR GIRDLING

PRE-EMERGENT HERBICIDE THAT IS LABELED FOR THE SPECIFIC ORNAMENTALS OR TURE ON WHICH IT WILL BE LITHIZED. PRE-EMERGENT HERBICIDES SHALL BE APPLIED PER THE MANUFACTURER'S LABELED RATES. PART 3 - EXECUTION

3.1 PREPARATION A. LANDSCAPE CONTRACTOR TO INSPECT ALL EXISTING CONDITIONS AND REPORT ANY DEFICIENCIES TO THE OWNER.

B. ALL PLANTING AREAS SHALL BE CONDITIONED AS FOLLOWS: 1. PREPARE NEW PLANTING BEDS BY SCRAPING AWAY EXISTING GRASS AND WEEDS AS NECESSARY. TILL EXISTING SOIL TO A DEPTH OF SIX (6") INCHES PRIOR TO PLACING COMPOST AND FERTILIZER APPLY FERTILIZER AS PER MANUFACTURER'S RECOMMENDATIONS ADD SIX (6") INCHES OF COMPOST AND TILL INTO A DEPTH OF SIX (6") INCHES OF SPECIFIED MULCH (SETTLED

2. BACKFILL FOR TREE PITS SHALL BE AS FOLLOWS: USE EXISTING TOP SOIL ON SITE (USE IMPORTED TOPSOIL AS NEEDED) FREE FROM LARGE CLUMPS, ROCKS, DEBRIS, CALICHE, SUBSOILS, ETC., PLACED IN NINE (9") INCH LAYERS AND WATERED IN THOROUGHLY

C. GRASS AREAS: 1. BLOCKS OF SOD SHOULD BE LAID JOINT TO JOINT (STAGGERED JOINTS) AFTER FERTILIZING THE GROUND FIRST. ROLL GRASS AREAS TO ACHIEVE A SMOOTH, EVEN SURFACE. THE JOINTS WHERE THEY ARE GAPED OPEN, THEN WATERED THOROUGHLY.

3.2 INSTALLATION

ROOTS, AND FREE FROM ANY OTHER ROOT DEFECTS (SUCH AS J-SHAPED

TREES WITH CENTRAL LEADERS WILL NOT BE ACCEPTED IF LEADER IS

J. ALL TREES SHALL BE STANDARD IN FORM, UNLESS OTHERWISE SPECIFIED

DAMAGED OR REMOVED. PRUNE ALL DAMAGED TWIGS AFTER PLANTING

TREES WITH DAMAGED OR CROOKED LEADERS, BARK ABRASIONS

SUNSCALD, DISFIGURING KNOTS, OR\INSECT DAMAGE WILL BE REJECTED.

AS FOLLOWS: SIX INCHES ABOVE THE ROOT FLARE FOR TREES UP TO AND

INCLUDING FOUR INCHES IN CALIPER. AND TWELVE INCHES ABOVE THE

THE ROOT BALL, SO THAT THE ROOT FLARE HAS BEEN COMPLETELY

SOD SHALL BE CUT FROM HEALTHY. MATURE TURF WITH SOIL THICKNESS

OF 3/4" TO 1". FACH PALLET OF SOD SHALL BE ACCOMPANIED BY A

M. CALIPER MEASUREMENTS FOR STANDARD (SINGLE TRUNK) TREES SHALL BE

N. MULTI-TRUNK TREES SHALL BE MEASURED BY THEIR OVERALL HEIGHT

O. ANY TREE OR SHRUB SHOWN TO HAVE EXCESS SOIL PLACED ON TOP OF

P. SOD: PROVIDE WELL-ROOTED SOD OF THE VARIETY NOTED ON THE PLANS.

CERTIFICATE FROM SUPPLIER STATING THE COMPOSITION OF THE SOD.

1. FRIABLE, FERTILE, DARK, LOAMY SOIL, FREE OF CLAY

FOREIGN GRASSES. LOAM CONTAINING DALLASGRASS OR

3. ORGANIC MATTER SHALL BE 3%-10% OF TOTAL DRY

A CERTIFIED SOIL ANALYSIS CONDUCTED BY AN

SANDY LOAM MEETS THE ABOVE REQUIREMENTS.

4. IF REQUESTED, LANDSCAPE CONTRACTOR SHALL PROVIDE

B. ORGANIC MATERIAL: COMPOST WITH A MIXTURE OF 80%

VEGETATIVE MATTER AND 20% ANIMAL WASTE. INGREDIENTS

PREMIXED BEDDING SOIL AS SUPPLIED BY VITAL EARTH RESOURCES

GLADEWATER, TEXAS; PROFESSIONAL BEDDING SOIL AS SUPPLIED BY

MUNICIPAL MIX AS SUPPLIED BY SOIL BUILDING SYSTEMS, DALLAS,

LIVING FARTH TECHNOLOGY, DALLAS, TEXAS OR ACID GRO

D. SHARP SAND: SHARP SAND MUST BE FREE OF SEEDS, SOIL PARTICLES

E. MULCH: DOUBLE SHREDDED HARDWOOD MULCH, PARTIALLY

F. ORGANIC FERTILIZER: FERTILAID, SUSTANE, OR GREEN SENSE OR

G. COMMERCIAL FERTILIZER: 10-20-10 OR SIMILAR ANALYSIS. NITROGEN

H. PEAT: COMMERCIAL SPHAGNUM PEAT MOSS OR PARTIALLY

A. STEEL EDGING - SHALL BE 3/16" X 4" X 16" DARK GREEN LANDSCAPE

B. TREE STAKING - TREE STAKING SOLUTIONS OR APPROVED SUBSTITUTE;

C. FILTER FABRIC - MIRAFI 1405 BY MIRAFI INC. OR APPROVED SUBSTITUTE.

F. DECOMPOSED GRANITE - BASE MATERIAL OF NATURAL MATERIAL MIX OF

G. RIVER ROCK - LOCALLY AVAILABLE NATIVE RIVER ROCK BETWEEN 2"-4" IN

H. PRE-EMERGENT HERBICIDES: ANY GRANULAR, NON-STAINING

GRANITE AGGREGATE NOT TO EXCEED 1/8" IN DIAMETER COMPOSED OF

SHRUBS OR GROUNDCOVER AS

LAYER OF MULCH,

SETTLED THICKNESS

ROOT BALL, DO NOT

PLANTING SOIL MIX. TILL IN WITH PARTS

EXISTING SOIL. EXCLUDING LARGE

CLODS AND ROCKS.

UNDISTURBED SUBGRADE / NATIVE SOIL

SPECIFIED ON PLAN

EDGING. DURAEDGE STEEL OR APPROVED EQUAL.

AVAILABLE AT LONE STAR PRODUCTS, INC. (469-523-0444)

E. GRAVEL: WASHED NATIVE PEA GRAVEL, GRADED 1" TO 1.5"

VARIOUS STAGES OF DECOMPOSED EARTH BASE.

D. SAND - UNIFORMLY GRADED, WASHED, CLEAN, BANK RUN SAND.

SOURCE TO BE A MINIMUM 50% SLOW RELEASE ORGANIC NITROGEN

(SCU OR UF) WITH A MINIMUM 8% SULFUR AND 4% IRON, PLUS

DECOMPOSED SHREDDED PINE BARK OR OTHER APPROVED ORGANIC

EQUAL AS RECOMMENDED FOR REQUIRED APPLICATIONS. FERTILIZER

SHALL BE DELIVERED TO THE SITE IN ORIGINAL UNOPENED

CONTAINERS. EACH BEARING THE MANUFACTURER'S GUARANTEED

APPROVED SOIL TESTING LABORATORY VERIFYING THAT

SHOULD BE A MIX OF COURSE AND FINE TEXTURED MATERIAL

LUMPS, SUBSOIL, STONES AND OTHER EXTRANEOUS

MATERIAL AND REASONABLY FREE OF WEEDS AND

ROOT FLARE FOR TREES EXCEEDING FOUR INCHES IN CALIPER

MEASURED FROM THE TOP OF THE ROOT BALL.

COVERED. SHALL BE REJECTED.

NUTGRASS SHALL BE REJECTED

a. CLAY – BETWEEN 7-27%

h. SILT – BETWEEN 15-25%

c. SAND - LESS THAN 52%

TEXAS OR APPROVED EQUAL.

DECOMPOSED, DARK BROWN.

STATEMENT OF ANALYSIS.

MICRONUTRIENTS.

MATERIAL

2.3 MISCELLANEOUS MATERIALS

REFER TO DETAILS.

AND WEEDS.

2. PHYSICAL PROPERTIES AS FOLLOWS:

2.2 SOIL PREPARATION MATERIALS

A. SANDY LOAM:

K. TREE TRUNKS TO BE STURDY. EXHIBIT HARDENED SYSTEMS AND VIGOROUS

AND FIBROUS ROOT SYSTEMS, NOT ROOT OR POT BOUND.

A. MAINTENANCE OF PLANT MATERIALS SHALL BEGIN IMMEDIATELY AFTER EACH PLANT IS DELIVERED TO THE SITE AND SHALL CONTINUE UNTIL ALL CONSTRUCTION HAS BEEN SATISFACTORILY

B. PLANT MATERIALS SHALL BE DELIVERED TO THE SITE ONLY AFTER THE BEDS ARE PREPARED AND AREAS ARE READY FOR PLANTING. ALL SHIPMENTS OF NURSERY MATERIALS SHALL BE THOROUGHLY PROTECTED FROM THE WINDS DURING TRANSIT. ALL PLANTS WHICH CANNOT BE PLANTED AT ONCE, AFTER DELIVERY TO THE SITE, SHALL BE WELL PROTECTED AGAINST THE POSSIBILITY OF DRYING BY WINI AND BALLS OF EARTH OF B & B PLANTS SHALL BE KEPT COVERED WITH SOIL OR OTHER ACCEPTABLE MATERIAL. ALL PLANTS REMAIN THE PROPERTY OF THE CONTRACTOR UNTIL FINAL ACCEPTANCE.

C. POSITION THE TREES AND SHRUBS IN THEIR INTENDED LOCATION AS D. NOTIFY THE OWNER'S AUTHORIZED REPRESENTATIVE FOR INSPECTION

AND APPROVAL OF ALL POSITIONING OF PLANT MATERIALS. E. EXCAVATE PITS WITH VERTICAL SIDES AND HORIZONTAL BOTTOM. TREE PITS SHALL BE LARGE ENOUGH TO PERMIT HANDLING AND PLANTING WITHOUT INJURY TO BALLS OF EARTH OR ROOTS AND SHALL BE OF SUCH DEPTH THAT. WHEN PLANTED AND SETTLED. THE CROWN OF THE PLANT SHALL BEAR THE SAME RELATIONSHIP TO THE FINISH GRADE AS IT DID TO SOIL SURFACE IN ORIGINAL PLACE OF GROWTH. THE SIDES OF THE HOLE SHOULD BE ROUGH AND JAGGED, NEVER SLICK OR GLAZED.

F. SHRUB AND TREE PITS SHALL BE NO LESS THAN TWENTY-FOUR (24") INCHES WIDER THAN THE LATERAL DIMENSION OF THE EARTH BALL AND SIX (6") INCHES DEEPER THAN IT'S VERTICAL DIMENSION REMOVE AND HAUL FROM SITE ALL ROCKS AND STONES OVER THREE-QUARTER (3/4") INCH IN DIAMETER. PLANTS SHOULD BE THOROUGHLY MOIST BEFORE REMOVING CONTAINERS.

G. PERCOLATION TEST: FILL THE HOLE WITH WATER, IF THE WATER LEVEL DOES NOT PERCOLATE WITHIN 24 HOURS, THE TREE NEEDS TO MOVE TO ANOTHER LOCATION OR HAVE DRAINAGE ADDED. INSTALL A PVC STAND PIPE PER TREE IF THE PERCOLATION TEST FAILS. H. BACKFILL ONLY WITH 5 PARTS EXISTING SOIL OR SANDY LOAM AND

PART BED PREPARATION. WHEN THE HOLE IS DUG IN SOLID ROCK. TOPSOIL FROM THE SAME AREA SHOULD NOT BE USED. CAREFULL' SETTLE BY WATERING TO PREVENT AIR POCKETS. REMOVE THE BURLAP FROM THE TOP 1/2 OF THE BALL, AS WELL AS ALL NYLON PLASTIC STRING AND WIRE. CONTAINER TREES WILL USUALLY E ROOT BOUND, IF SO FOLLOW STANDARD NURSERY PRACTICE OF 'ROOT SCORING'.

I. DO NOT WRAP TREES. J. DO NOT OVER PRUNE

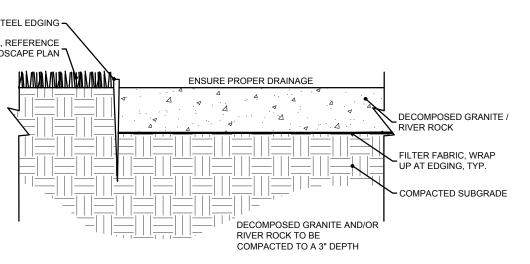
K. REMOVE NURSERY TAGS AND STAKES FROM ALL PLANTS L. REMOVE BOTTOM OF PLANT BOXES PRIOR TO PLACING PLANTS. REMOVE SIDES AFTER PLACEMENT AND PARTIAL BACKFILLING.

M. REMOVE UPPER THIRD OF BURLAP FROM BALLED AND BURLAPPED TREES AFTER PLACEMENT. N. PLACE PLANT UPRIGHT AND PLUMB IN CENTER OF HOLE. ORIENT PLANTS

FOR BEST APPEARANCE. O. MULCH THE TOP OF THE BALL. DO NOT PLANT GRASS ALL THE WAY END OF SECTION

TO THE TRUNK OF THE TREE. LEAVE THE AREA ABOVE THE TOP OF

SHRUB SPACING AND PLANTING AT B.O.C.



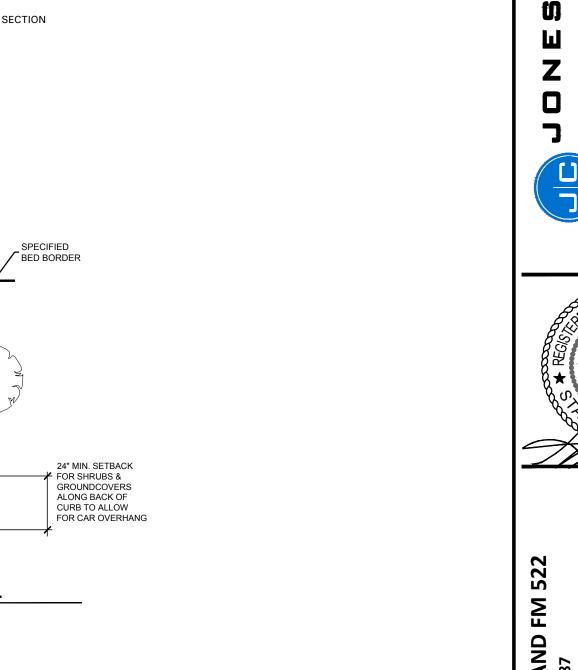
5 DECOMPOSED GRANITE / RIVER ROCK

APPROVED:

I HEREBY CERTIFY THAT THE ABOVE AND FOREGOING SITE PLAN FOR A DEVELOPMENT IN THE CITY OF ROCKWALL, TEXAS, WAS APPROVED BY THE PLANNING & ZONING COMMISSION OF THE CITY OF ROCKWALL ON THE ___ DAY OF _

WITNESS OUR HANDS, THIS DAY OF

P.O. Box 1746



THE BALL AND MULCH WITH AT LEAST TWO (2") INCHES OF SPECIFIED

SETTLED THICKNESS OF TWO (2") INCHES OVER THE ENTIRE BED OR

P. ALL PLANT BEDS AND TREES TO BE MULCHED WITH A MINIMUM

Q. OBSTRUCTION BELOW GROUND: IN THE EVENT THAT ROCK, OR

UNDERGROUND CONSTRUCTION WORK OR OBSTRUCTIONS ARE

ENCOUNTERED IN ANY PLANT PIT EXCAVATION WORK TO BE DONE

UNDER THIS SECTION, ALTERNATE LOCATIONS MAY BE SELECTED BY

OBSTRUCTIONS SHALL BE REMOVED TO A DEPTH OF NOT LESS THAN

THREE (3') FEET BELOW GRADE AND NO LESS THAN SIX (6") INCHES

BELOW THE BOTTOM OF BALL WHEN PLANT IS PROPERLY SET AT THE

REQUIRED GRADE. THE WORK OF THIS SECTION SHALL INCLUDE THE

REMOVAL FROM THE SITE OF SUCH ROCK OR UNDERGROUND

OBSTRUCTIONS ENCOUNTERED AT THE COST OF THE LANDSCAPE

REQUIRE. POSITION STAKES TO SECURE TREES AGAINST SEASONAL

LANDSCAPE ARCHITECT AND SHALL BE PRUNED IN ACCORDANCE

WITH STANDARD HORTICULTURAL PRACTICE FOLLOWING FINE

PRUNING, CLASS I PRUNING STANDARDS PROVIDED BY THE NATIONAL

BRANCHES IS NOT PERMITTED. DO NOT CUT TERMINAL BRANCHES.

3 IMMEDIATELY AFTER PLANTING OPERATIONS ARE COMPLETED

MATERIAL TWO (2") INCHES IN DEPTH. THIS LIMIT OF THE ORGANIC

MATERIAL FOR TREES SHALL BE THE DIAMETER OF THE PLANT PIT.

ON PLANS. STAKE OUT LIMITS OF STEEL CURBING AND OBTAIN

1. ALL STEEL CURBING SHALL BE FREE OF KINKS AND ABRUPT

2. TOP OF EDGING SHALL BE $\frac{1}{2}$ " MAXIMUM HEIGHT ABOVE FINAL

3. STAKES ARE TO BE INSTALLED ON THE PLANTING BED SIDE OF

4. DO NOT INSTALL STEEL EDGING ALONG SIDEWALKS OR

A. CLEANUP: DURING THE WORK, THE PREMISES SHALL BE KEPT NEAT

C. ENSURE THAT WORK IS COMPLETE AND PLANT MATERIALS ARE IN

D. UPON COMPLETION OF THE WORK, THE LANDSCAPE CONTRACTOR SHALL

AN INSPECTION BY THE OWNER TO DETERMINE FINAL ACCEPTABILITY.

E. WHEN/IF THE INSPECTED PLANTING WORK DOES NOT COMPLY WITH THE

F. THE LANDSCAPE MAINTENANCE PERIOD WILL NOT COMMENCE UNTIL THE

SWEEPING OR HOSING THEM AT END OF EACH WORK DAY

B. REPAIR RUTS, HOLES AND SCARES IN GROUND SURFACES.

VIGOROUS AND HEALTHY GROWING CONDITION.

GUARANTEE PERIODS WILL COMMENCE.

AND ORDERLY AT ALL TIMES. STORAGE AREAS FOR ALL MATERIALS

SHALL BE SO ORGANIZED SO THAT THEY. TOO. ARE NEAT AND

ORDERLY. ALL TRASH AND DEBRIS SHALL BE REMOVED FROM THE

SITE AS WORK PROGRESSES. KEEP PAVED AREAS CLEAN BY

PROVIDE THE SITE CLEAN, FREE OF DEBRIS AND TRASH, AND SUITABLE FOR

CONTRACT DOCUMENTS, THE LANDSCAPE CONTRACTOR SHALL REPLACE

AND/OR REPAIR THE REJECTED WORK TO THE OWNER'S SATISFACTION

LANDSCAPE WORK HAS BEEN RE-INSPECTED BY THE OWNER AND FOUND

O BE ACCEPTABLE. AT THAT TIME, A WRITTEN NOTICE OF FINA

ACCEPTANCE WILL BE ISSUED BY THE OWNER, AND THE MAINTENANCE AND

USE AS INTENDED. THE LANDSCAPE CONTRACTOR SHALL THEN REQUEST

5. CUT STEEL EDGING AT 45 DEGREE ANGLE WHERE EDGING

PRUNING SHALL BE DONE WITH CLEAN, SHARP TOOLS.

ALL TREE PITS SHALL BE COVERED WITH A LAYER OF ORGANIC

Q. STEEL EDGE INSTALLATION: EDGE SHALL BE ALIGNED AS INDICATED

OWNERS APPROVAL PRIOR TO INSTALLATION.

MEETS SIDEWALKS OR CURBS.

THE CURBING, AS OPPOSED TO THE GRASS SIDE.

R. TREES AND LARGE SHRUBS SHALL BE STAKED AS SITE CONDITIONS

S. PRUNING AND MULCHING: PRUNING SHALL BE DIRECTED BY THE

1. DEAD WOOD, SUCKERS, BROKEN AND BADLY BRUISED.

BRANCHES SHALL BE REMOVED. GENERAL TIPPING OF THE

THE OWNER. WHERE LOCATIONS CANNOT BE CHANGED, TH

MULCH.

CONTRACTOR.

PREVAILING WINDS.

ARBORIST ASSOCIATION

FINISHED GRADE.

3.3 CLEANUP AND ACCEPTANCE

WITHIN 24 HOURS.

SHEET NO.

L1.02

1.9 QUALITY ASSURANCE

OVERNING LANDSCAPE MATERIALS AND WORK. B. EMPLOY PERSONNEL EXPERIENCED AND FAMILIAR WITH THE REQUIRED WORK AND SUPERVISION BY A FOREMAN.

C. MAKE CONTACT WITH SUPPLIERS IMMEDIATELY UPON OBTAINING NOTICE OF CONTRACT ACCEPTANCE TO SELECT AND BOOK MATERIALS.

b. ALL HARDSCAPE SHALL BE CLEANED PRIOR TO FINAL c. SODDED AREAS MUST BE ACTIVELY GROWING AND MUST REACH A

MINIMUM HEIGHT OF 1 1/2 INCHES BEFORE FIRST MOWING HYDROMULCHED AREAS SHALL SHOW ACTIVE, HEALTHY GROWTH. BARE AREAS LARGER THAN TWELVE SQUARE INCHES MUST BE RESODDED OR RESEEDED (AS APPROPRIATE) PRIOR TO FINAL ACCEPTANCE. ALL SODDED TURF SHALL BE NEATLY MOWED.

GUARANTEE: A. TREES, SHRUBS, GROUNDCVOER SHALL BE GUARANTEED (IN WRITING) FOR A 12 MONTH PERIOD (90 DAYS FOR ANNIJAL PLANTING OR AT THE END OF THE SEASONAL COLOR GROWING SEASON WHICHEVER COMES SOONER AFTER FINAL ACCEPTANCE. THE CONTRACTOR SHALL REPLACE ALL DEAD MATERIALS AS SOON AS WEATHER PERMITS AND UPON NOTIFICATION OF

SHOULD BE SUBMITTED TO THE OWNER AT LEAST 7 DAYS PRIOR TO

COMPLETION, AN ON SITE INSPECTION BY THE OWNER'S AUTHORIZED

ACCORDANCE TO THE MAINTENANCE SERVICE TO ENSURE THE SYSTEM IS

IN PROPER WORKING ORDER WITH SCHEDULING ADJUSTMENTS BY SEASON

AUTOMATIC IRRIGATION SYSTEM, THE LANDSCAPE CONTRACTOR SHALL BE

RESPONSIBLE FOR WATERING THESE AREAS AND OBTAINING A FULL,

a. THE LANDSCAPE SHALL SHOW ACTIVE, HEALTHY GROWTH (WITH

HEALTHY PLANT MATERIAL PRIOR TO FINAL ACCEPTANCE.

EXCEPTIONS MADE FOR SEASONAL DORMANCY). ALL PLANTS NOT

MEETING THIS CONDITION SHALL BE REJECTED AND REPLACED BY

M. SHOULD SEEDED AND/OR SODDED AREAS NOT BE COVERED BY AN

HEALTHY STAND OF GRASS AT NO ADDITIONAL COST TO THE OWNER.

PERIOD, ALL OF THE FOLLOWING CONDITIONS MUST OCCUR:

N. TO ACHIEVE FINAL ACCEPTANCE AT THE END OF THE MAINTENANCE

ADEQUATE WATER FROM AN IRRIGATION SYSTEM.

TO MAXIMIZE WATER CONSERVATION.

REAPPLY MULCH TO BARE AND THIN AREAS.

B. PLANTS INCLUDING TREES. WHICH HAVE PARTIALLY DIED SO THAT SHAPE SIZE OR SYMMETRY HAVE BEEN DAMAGED SHALL BE CONSIDERED SUBJECT O REPLACEMENT. IN SUCH CASES, THE OPINION OF THE OWNER SHALL BE

C. PLANTS USED FOR REPLACEMENT SHALL BE OF THE SAME SIZE AND KIND AS THOSE ORIGINALLY PLANTED OR SPECIFIED ALL WORK INCLUDING MATERIALS, LABOR AND EQUIPMENT USED IN REPLACEMENTS SHALL CARRY A 12 MONTH GUARANTEE. ANY DAMAGE INCLUDING RUTS IN LAWN OR BED AREAS INCURRED AS A RESULT OF MAKING REPLACEMENTS SHALL BE

IMMEDIATELY REPAIRED. D. WHEN PLANT REPLACEMENTS ARE MADE, PLANTS, SOIL MIX, FERTILIZER

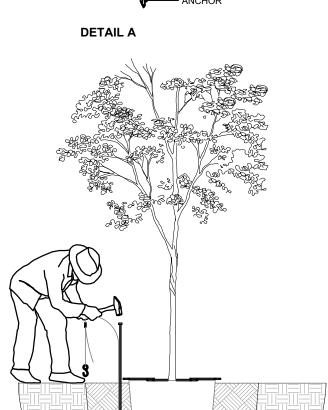
AND MULCH ARE TO BE UTILIZED AS ORIGINALLY SPECIFIED AND RE-INSPECTED FOR FULL COMPLIANCE WITH THE CONTRACT REQUIREMENTS. ALL REPLACEMENTS ARE INCLUDED UNDER "WORK" OF THIS SECTION. F. THE OWNER AGREES THAT FOR THE ONE YEAR WARRANTY PERIOD TO BE

EFFECTIVE, HE WILL WATER PLANTS AT LEAST TWICE A WEEK DURING DRY F. THE ABOVE GUARANTEE SHALL NOT APPLY WHERE PLANTS DIE AFTER ACCEPTANCE BECAUSE OF DAMAGE DUE TO ACTS OF GOD, VANDALISM INSECTS, DISEASE, INJURY BY HUMANS, MACHINES, THEFT OR NEGLIGENCE BY OWNER.

G. ACCEPTANCE FOR ALL LANDSCAPE WORK SHALL BE GIVEN AFTER FINAL INSPECTION BY THE OWNER PROVIDED THE JOB IS IN A COMPLETE, UNDAMAGED CONDITION AND THERE IS A STAND OF GRASS IN ALL LAWN AREAS. AT THAT TIME, THE OWNER WILL ASSUME MAINTENANCE ON THE ACCEPTED WORK.

A. COMPLY WITH ALL FEDERAL, STATE, COUNTY AND LOCAL REGULATIONS

ROOT ANCHOR ITEM# ROOT BALL & CONTAINER SIZE ANCHOR INSTALLATION DE 48" Minimum Depth 200 Gallon or 48" root ball 48" Minimum Depth Root Balls larger than 60"



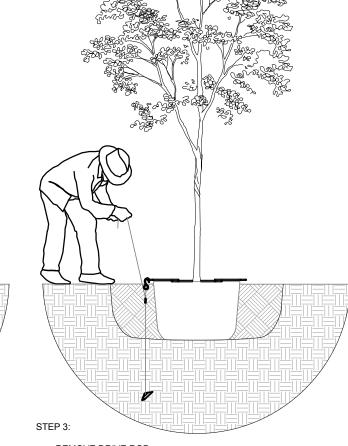
SEE DETAIL A

U-BRACKET

- TREE ROOT BALL - ROOT ANCHOR - TRFF TRUNK

 DRIVE ANCHOR STRAIGHT DOWN INTO SET TREE IN PLANTING PIT UNDISTURBED SUBBASE SOIL PLACE ANCHOR WITH RING SIDE DOWN AGAINST TOP OF ROOT SEE CHART FOR RECOMMENDED DEPTHS PER TREE SIZE CENTER ROOT ANCHOR'S INNER RING(S) AROUND TRUNK OF TREE ALIGN DRIVE ROD AS CLOSE AS POSSIBLE TO OUTSIDE FDGE OF

TREE STAKE SOLUTIONS, LLC Phone: 281-778-1400 9973 FM 521 Road Rosharon, Texas 77583 Mobile: 903-676-6143 Fax: 281-778-1425 www.treestakesolutions.com



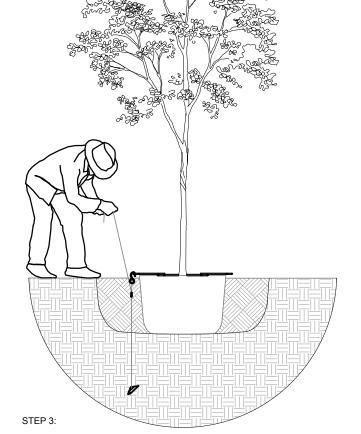
PULL STRAP UP VERTICALLY UNTIL ROOT ANCHOR RINGS BITE INTO THE

REMOVE DRIVE ROD REPEAT STEPS 1 & 2 FOR ALL THREE (3) ANCHOR LOCATIONS PULL BACK ON STRAP APPROXIMATELY 3" FOR THE V-68 ANCHOR, OR 6" TO POSITION. A FULCRUM MAY BE REQUIRED TO ASSIST IN SETTING THE

PLACE "S" HOOK OVER THE END OF THE U-BRACKET

7" FOR THE V-88 ANCHOR TO SET ANCHOR INTO A HORIZONTAL OR LOCKED

TOP OF THE ROOT BALL AND U-BRACKETS ARE SETTING FLUSH ON TOP OF



 TIE EXCESS STRAP OFF TO THE U-BRACKET ALLOWING ENOUGH REMAINING STRAP TO ADJUST TREE, IF NECESSARY



PREPARED SOIL MIX PER SPECIFICATIONS — MULCH PER SPECIFICATIONS 3/16" X 4" X 16" STEEL EDGING WITH SIDEWALKS 4 STEEL EDGING DETAIL

SHRUBS AND GROUNDCOVER REFER TO PLANS FOR PLANT TYPES

REF. LANDSCAPE

PLAN FOR SPACING

NOTE: NO STEEL EDGING TO BE INSTALLED ALONG

SHRUB PLANTING

STEEL EDGING PLANTING AREA REFERENCE LANDSCAPE PLAN

Aledo, Texas 76008 manda@awr-designs.com