CIVIL CONSTRUCTION PLANS

BARRETT HEIGHTS SITE IMPROVEMENTS

GENERAL NOTES (APPLICABLE TO ALL SHEETS)

- 1. Excavated material shall be placed as directed by the Owner.
- 2. Construction shall meet the requirements of the latest revision of the Standards of Design and Standard Details for the City of Rockwall & NTCOG Standards, 5TH Edition.
- 3. All fill areas to be density controlled and compacted to 95% density at optimum moisture content. Compacted with sheep foot roller.
- 4. Pavement thickness and strength shall be as follows:

Fire Lanes......7"
Parking areas......5"

3600 psi at 28 days and reinforced with No. 4 bar at 18" centers each way using a 6 sack mix for machine pour and a 6-1/2 sack mix for hand pour.

- 5. All street subgrade shall be moisture controlled and compacted to 95% standard proctor density.
- 6. It shall be the responsibility of the Contractor to locate and verify all existing utilities prior to the beginning of construction to insure no conflicts between all utility lines.
- 7. Where water pipelines either cross or otherwise come within 9 feet of a sanitary sewer pipeline, the sewer pipeline shall be with a minimum working pressure Class 150 psi.
- 8. All water lines installed to be PVC pipe C900 conforming to AWWA DR14 Standard C-900, fitting shall be mechanical or 0-ring.
- 9. All water lines are to be installed a minimum of 48" deep measured from top of pipe.
- 10. All storm inlets shall be cast-in-place with a minimum of 4200 psi and 7.0 sack for all structures.
- 11. Utility contractor shall use MEGALUGS when installing the water line and double strap services when installing the services.
- 12. Water services shall be a minimum of 1" SDR-9 polyethelene pipe installed with two in-line nylon ball cutoff valves inside the meter box. Corporation cock shall be Muellar No. H-15000 w/ straight coupling nut or approved equal. Curb stops shall be Muellar No. H-15174 MK oriseal or approved equal.
- 13. All water lines shall be pressure tested and disinfected in accordance with
- 14. All gate valves shall be Muellar or approved equal and conform to AWWA C-500 specifications. All gate valves shall be iron body, bronze mounted, double disk, parallel seat, non-rising stem, internal wedging type.
- 15. All fire hydrants shall be located 2' to 6' behind curb line. All fire hydrants shall be Muellar or approved equal.
- 16. All handicap ramps shall be installed with paving.
- 17. Contractor is responsible for acquiring NTCOG and Rockwall Standards and Details.
- 18. Blue EMS disk to installed at every change in direction, services, and valves on waterlines
- 19. Green EMS disks to installed at every change in direction, manhole, cleanout, and service on sanitary sewer lines...
- 20. Floodway monument shall be installed per City of Rockwall detail.
- 21. All gravity sewer shall be SDR 35, unless otherwise noted and in conformance with
- City of Rockwall Standards.

 22. All TxDOT & CITY right-of-way to be sodded.
- 23. Contractor to adjust all proposed utilities to grade.

<u>CAUTION!!!</u>

UNDERGROUND UTILITIES

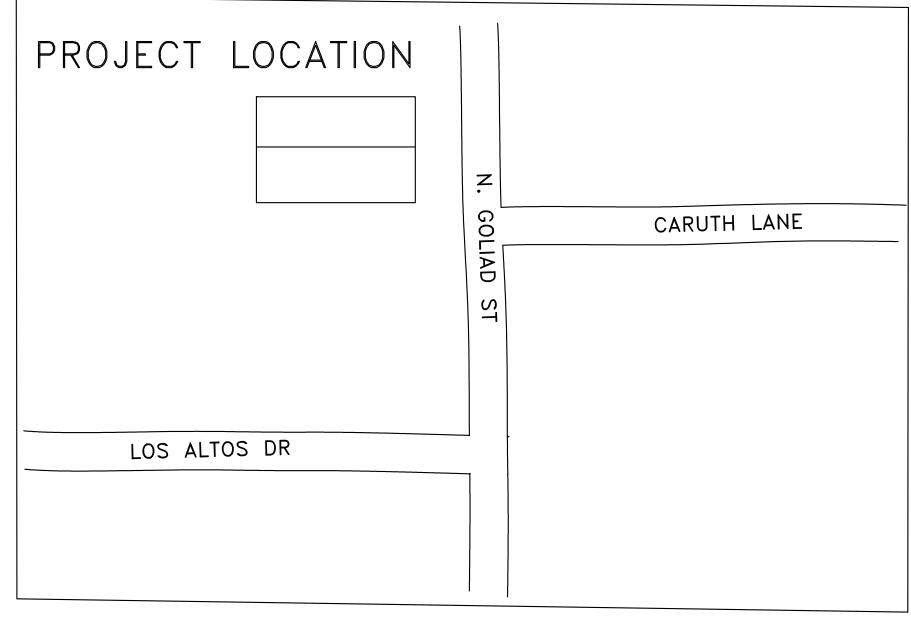
EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION SUPPLIED BY THE VARIOUS OWNERS OF THE FACILITIES. THE ENGINEER DOES NOT ACCEPT THE RESPONSIBILITY FOR THE UTILITY LOCATIONS SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED, AND TO NOTIFY THE ENGINEER PROMPTLY OF ALL CONFLICTS OF THE WORK WITH EXISTING FACILITIES. THE CONTRACTER SHALL PRESERVE AND PROTECT ALL EXISTING FACILITIES FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGE BY THE CONTRACTER TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS/HER EXPENSE.

NOTE:

CONTRACTOR TO VERIFY IN THE FIELD THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. INFORMATION PROVIDED WITHIN THESE PLANS DOES NOT RELIEVE THE CONTRACTOR OF THE FULL AND TOTAL RESPONSIBILITY FOR THE PROTECTION OF EXISTING UTILITIES NOR ANY DAMAGES CAUSED BY SAID CONTRACTOR DURING CONSTRUCTION.



GREEN VALLEY SUBDIVISION LOTS 1 & 2 CITY OF ROCKWALL ROCKWALL COUNTY, TEXAS



LOCATION MAP

GENERAL NOTES
(APPLICABLE TO ALL SHEETS)

1. ALL WORKS ON THIS PROJECT/CONTRACT SHALL COMPLY WITH ALL THE REQUIREMENTS OF CITY OF ROCKWALL AND AUTHORITIES HAVING JURISDICTION.

SHEET INDEX

- 1.0 COVER SHEET
- 1.1 FINAL PLAT
- 1.2 CITY OF ROCKWALL GENERAL CONSTRUCTION NOTES
- 2.0 SITE & LANDSCAPING PLAN
- 2.1 TREE PRESERVATION PLAN
- 3.0 DIMENSION CONTROL PLAN
- 4.0 DRAINAGE AREA MAP
- 5.0 STORMWATER DETENTION CALCULATIONS
- 6.0 WEIR DETAIL, DRAINAGE PILOT FLUME DETAIL
- 7.0 GRADING PLAN
- 8.0 EROSION CONTROL PLAN
- 8.1 EROSION CONTROL DETAILS
- 8.2 PAVING DETAILS

REVISED TO CONFORM TO CONSTRUCTION RECORDS.

___ DATE: ___6-15-24

CIVIL ENGINEER

DOUPHRATE

& ASSOCIATES, INC.

ENGINEERING • PROJECT MANAGEMENT • SURVEYING

P.O. BOX 1336 ROCKWALL, TEXAS 75087
PHONE: (972)771-9004 FAX: (972)771-9005

SURVEYOR

JAMES M. ANDERSON

1195 LAKE GLENN CIRCLE
ROCKWALL, TEXAS 75087
(214)548-2042

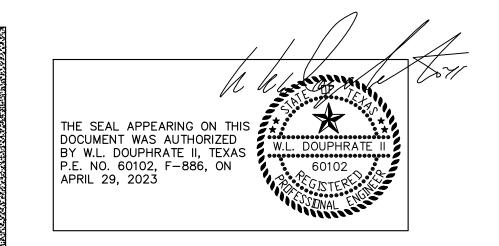
OWNER

HOWARD BARRETT

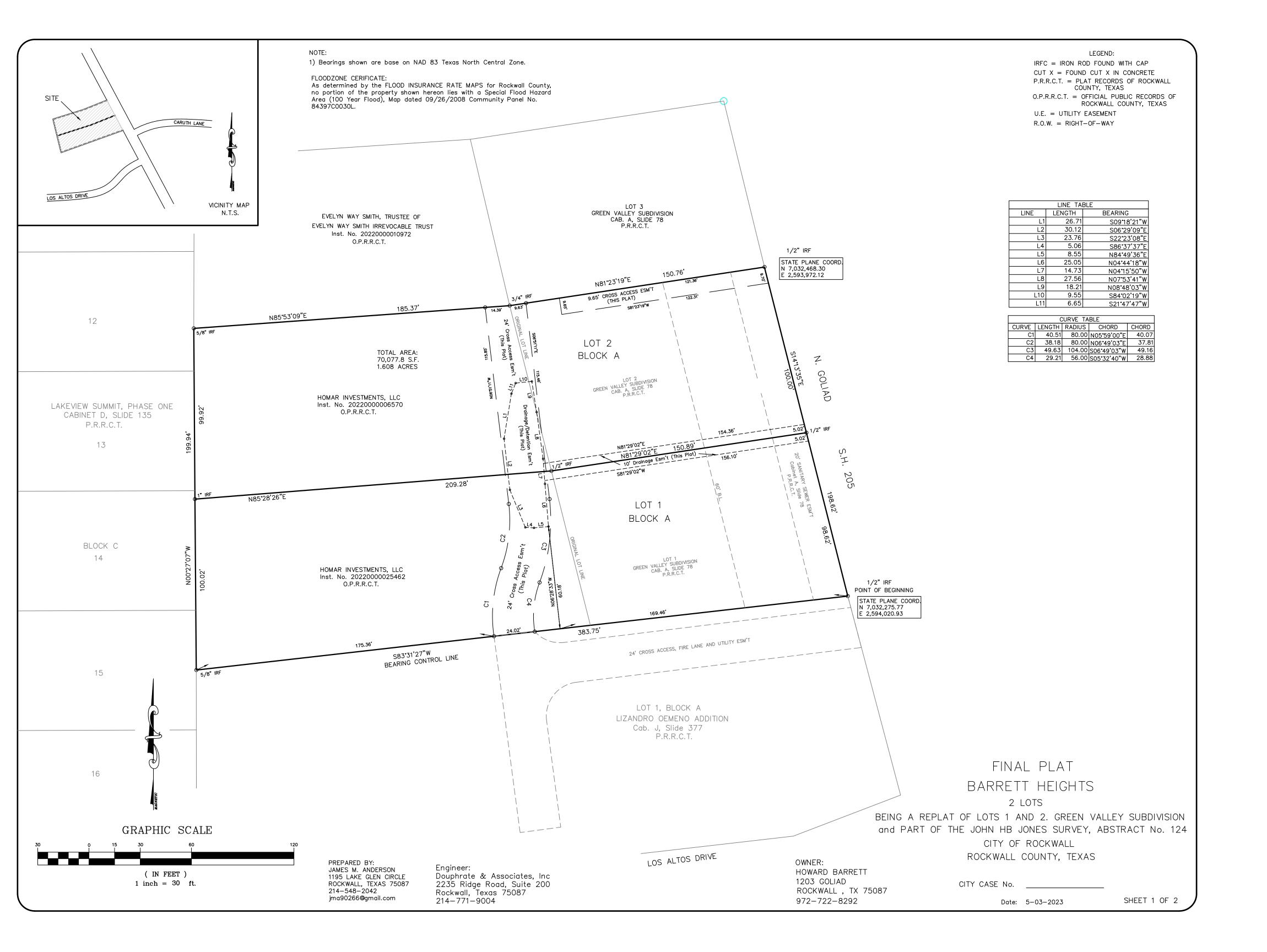
1203 N. GOLIAD

ROCKWALL, TEXAS 75087

(972)722-8292



APRIL, 2023



OWNERS CERTIFICATE:

STATE OF TEXAS

COUNTY OF ROCKWALL

WHEREAS, HOWARD BARRETT, being the owner of Lots 1 and 2 of GREEN VALLEY SUBDIVISION as recorded in Cabinet A, Slide 78 of the Plat Records of Rockwall County, Texas and a part of the John HB JONES SURVEY, ABSTRACT No. 124, ROCKWALL COUNTY, TEXAS by deeds recorded in Instrument Numbers 20220000025462 and 20220000006570 of the Official Public Records of Rockwall County, Texas (O.P.R.R.C.T.) to HOMAR INVESTMENTS, LLC and being more particularly described as follows:

BEGINNING at a $\frac{1}{2}$ " iron rod found on the west right-of-way line of North Goliad Street (S.H. 205), said point being the southeast corner of Lot 1 of said GREEN VALLEY SUBDIVISION and the northeast corner of Lot 1, Block A of the LIZANDRO OEMENO ADDITION, an addition to the City of Rockwall as recorded in Cabinet J, Slide 377 of the Plat Records of Rockwall County, Texas (P.R.R.C.T.);

THENCE South 83°31'27" West along the south line of Lot 1 of said GREEN VALLEY SUBDIVISION and the north line of said LIZANDRO OEMENO ADDITION, a distance of 383.75' to a §" iron rod found at the northwest corner of said OEMENO ADDITION, said point also being of the east line of Lot 15, Block C of the LAKEVIEW SUMMIT PHASE ONE ADDITION, an addition recorded in Cabinet D, Slide 135 P.R.R.C.T.;

THENCE North 00°27'07" West along the east line of said LAKEVIEW SUMMIT ADDITION, passing at 100.02' a 1" iron rod found for the northwest corner of the said HOMAR INVESTMENTS, LLC tract Instrument No. 20220000025462 and the southwest corner of said HOMAR INVESTMENTS, LLC tract Instrument No. 20220000006570, a total distance of 199.94' to a \{ \frac{8}{8}} \) iron rod found on the east line of Lot 12, Block C of said LAKEVIEW SUMMIT ADDITION and the southwest corner of a tract of land conveyed to the TRUSTEES OF EVELYN WAY SMITH IRREVOCABLE TRUST as recorded in Instrument No. 20220000010972, Official Public Records of Rockwall County, Texas;

THENCE North 85°53'09" East along the north line of said HOMAR INVESTMENTS, LLC tract and the south line of said EVELYN WAY SMITH tract, a distance of 185.37' to a $\frac{3}{4}$ " iron rod found for a corner, said point being the northwest corner of Lot 2 of the said GREEN VALLEY SUBDIVISION:

THENCE North 81°23'19" East a distance of 150.76' to a ½" iron rod found for the northeast corner of said Lot 2 and said point being on the west right—of—way line of said North Goliad Street (S.H. 205);

THENCE South 14°13'35" East along said west right—of—way line and passing at 100.00' to northeast corner of Lot 1 of said GREEN VALLEY SUBDIVISION a total distance of 198.62' to the POINT OF BEGINNING and containing 70,077.80 square feet or 1.608 acres of land.

OWNER'S CERTIFICATE:

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

Howard Barrett, the undersigned owner of the land shown on this plat, and designated herein as BARRETT HEIGHTS Addition to the City of Rockwall, Texas, and whose name is subscribed hereto, hereby dedicate to the use of the public forever all streets, alleys, parks, water courses, drains, easements and public places thereon shown on the purpose and consideration therein expressed. I further certify that all other parties who have a mortgage or lien interest in the subject property have been notified and signed this plat. I understand and do hereby reserve the easement strips shown on this plat for the purposes stated and for the mutual use and accommodation of all utilities desiring to use or using same. I also understand the following:

- 1. No buildings shall be constructed or placed upon, over, or across the utility easements as described
- 2. Any public utility shall have the right to remove and keep removed all or part of any buildings, fences, trees, shrubs, or other growths or improvements which in any way endanger or interfere with construction, maintenance or efficiency of their respective system on any of these easement strips; and any public utility shall at all times have the right of ingress or egress to, from and upon said easement strips for purpose of construction, reconstruction, inspecting, patrolling, maintaining, and either adding to or removing all or part of their respective system without the necessity of, at any time, procuring the permission of anyone.
- 3. The City of Rockwall will not be responsible for any claims of any nature resulting from or occasioned by the establishment of grade of steers in the subdivision.
- 4. The developer and subdivision engineer shall bear total responsibility for storm drain improvements.
- 5. The developer shall be responsible for the necessary facilities to provide drainage patterns and drainage controls such that properties within the drainage area are not adversely affected by the storm drainage
- 6. No house dwelling unit, or other structure shall be constructed on any lot in this addition by the owner or any other person until the developer and/or owner has complied with all requirements o the Subdivision Regulations of the City of Rockwall regarding improvements with respect to the entire block on the street or streets on which the property abuts, including the actual installation of streets with the required base and paving, curb and gutter, water and sewer, drainage structures, storm structures, storm sewer, and alleys, all according to the specifications of the City of Rockwall; or Until an escrow deposit, sufficient to pay for the cost o such improvements, as determined by the city's engineer and/or city administrator, computed on a private commercial rate basis, has been made with the city secretary, accompanied by an agreement signed by the developer and/or owner, authorizing the city to make such improvements at prevailing private commercial rates, or have the same made by a contractor and pay for the same out of the escrow deposit, should the developer and/or owner fail or refuse to install the required improvements within the time stated in such a written agreement, but in no case shall the City be obligated to make such improvements itself. Such deposit may be used by the owner and/or developer s progress payments as the work progresses in making such improvements by making certified requisitions to the city secretary, supported by evidence of work done; or Until the developer and/or owner files a corporate surety bond with the city secretary in a sum equal to the cost of such improvements tor the designated area, guaranteeing the installation thereof within the time stated in the bond, which time shall be fixed by the city council of the City of Rockwall.
- 7. Property owners are responsible for maintenance, repair, and replacement of all retaining walls and drainage and detention systems in easements.

I further acknowledge that the dedications and/or exaction's made herein are proportional to the impact of the Subdivision upon the public services required in order that the development will comport with the present and future growth needs of the City; I, my successors and assigns hereby waive any claim, damage, or cause of action that I may have as a result of dedication of exactions made herein.

FOR:	BARRETT HEIGHTS		
 Ву:			
FOR:			(LIEN HOLDER)
BY:		NAME:	
TITLE:			

APPROVA	AL CERTIFICATE	
	Date	_
APPROVED: I hereby certify that the above and foregowas approved by the City Council of the Council of the Council of the Councy Clerk of Rockwall, County, Textof final approval.	City of Rockwall on the proved plat for such c	day of,2023.
WITNESS OUR HANDS, this day of	2023.	

SURVEYOR'S CERTIFICATE

NOW, THEREFORE KNOW ALL MEN BY THESE PRESENTS:

That I Rudy Rangel, do hereby certify that this plat was prepared from an actual and accurate survey of the land, and that the corner monuments shown thereon were properly placed under my personal supervision.

GIVEN UNDER MY HAND AND SEAL THIS _____ DAY _____,2023.

RUDY RANGEL REGISTERED PROFESSIONAL LAND SURVEYOR STATE OF TEXAS NO. 5664 TBPLS No. 10077100

nd for the said County and State on this day personally
to be the person whose name is subscribed to the executed the same for the purposes and a stated and as the act and deed therein stated.
of, 2023.
Notary Signature

Engineer:
Douphrate & Associates, Inc
2235 Ridge Road, Suite 200
Rockwall, Texas 75087
214-771-9004

Surveyor: Rudy Rangel Rangel Land Surveying 1012 Timberline Drive Heath, Texas 75032 214-325-8026 Rangellandsurvey@swb.com

OWNER:
HOWARD BARRETT
1203 GOLIAD
ROCKWALL , TX 75087
972-722-8292

FINAL PLAT BARRETT HEIGHTS

2 LOTS

BEING A REPLAT OF LOTS 1 AND 2. GREEN VALLEY SUBDIVISION and PART OF THE JOHN HB JONES SURVEY, ABSTRACT No. 124

CITY OF ROCKWALL

ROCKWALL COUNTY, TEXAS

YTI	CASE	No		
/1 1 1	CASE	NO.		

SHEET 2 OF 2

Date: 5-03-2023

GENERAL ITEMS

- 1. 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 strict.
- 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, etc.
- 6. 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".
- 7. 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.
- 3. All site dimensions are referenced to the face of curb or edge of pavement unless otherwise noted.
- 9. 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

- 1. 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
- 2. Erosion control devices as shown on the erosion control plan for the project shall be installed prior to the start of land disturbing activities.
- 3. 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.
- 4. 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.
- 5. 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 inspection.
- 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.
- 8. 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 10-inches 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.
- 14. 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 cleaning.
- 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.
- 2. 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.
- 3. 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.
- 4. 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.
- 7. 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.
- 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.
- 5. 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.
- 3. 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.
- 4. 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'.
- 8. 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

- 1. The CONTRACTOR shall maintain existing wastewater service at all times during construction.
- 2. 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.
- 4. Green EMS pads shall be installed at every 250', manhole, clean out and service lateral on proposed wastewater lines.
- 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.
- 6. 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.
- 7. Existing manholes and cleanouts not specifically called to be relocated shall be adjusted to match final grades.
- 8. 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.
- 11. 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 P (972) 771-7746 Rockwall, Texas 75087 F (972) 771-7748

DEMOLITION, REMOVAL, DISPOSAL AND EXCAVATION NOTES

- 1. All pavements to be removed and replaced shall be saw cut to full depth along neat squared lines shown in the plans.
- 2. Proposed concrete pavement shall be constructed with longitudinal butt construction joints at all connections to existing concrete pavement.
- 3. 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.
- 4. 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 comorni to the City	standards of f	ocsign and	Construction	and table b	CIOW.		
Street/Persons out Tyre	Minimum Thickness	Streng th 28-	Minimum (sacks /		Steel Reinforcement		
Street/Pavement Type	(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"	

- 3. 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.
- 4. No sand shall be allowed under any paving.
- 5. All concrete mix design shall be submitted to the City for review and approval prior to placement.
- 6. 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 reduction.
- 7. All curb and gutter shall be integral (monolithic) with the pavement.
- 8. 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).
- 11. 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 appearance)
- 13. 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.
- 3. 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.
- 4. 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
- 8. 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
- 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

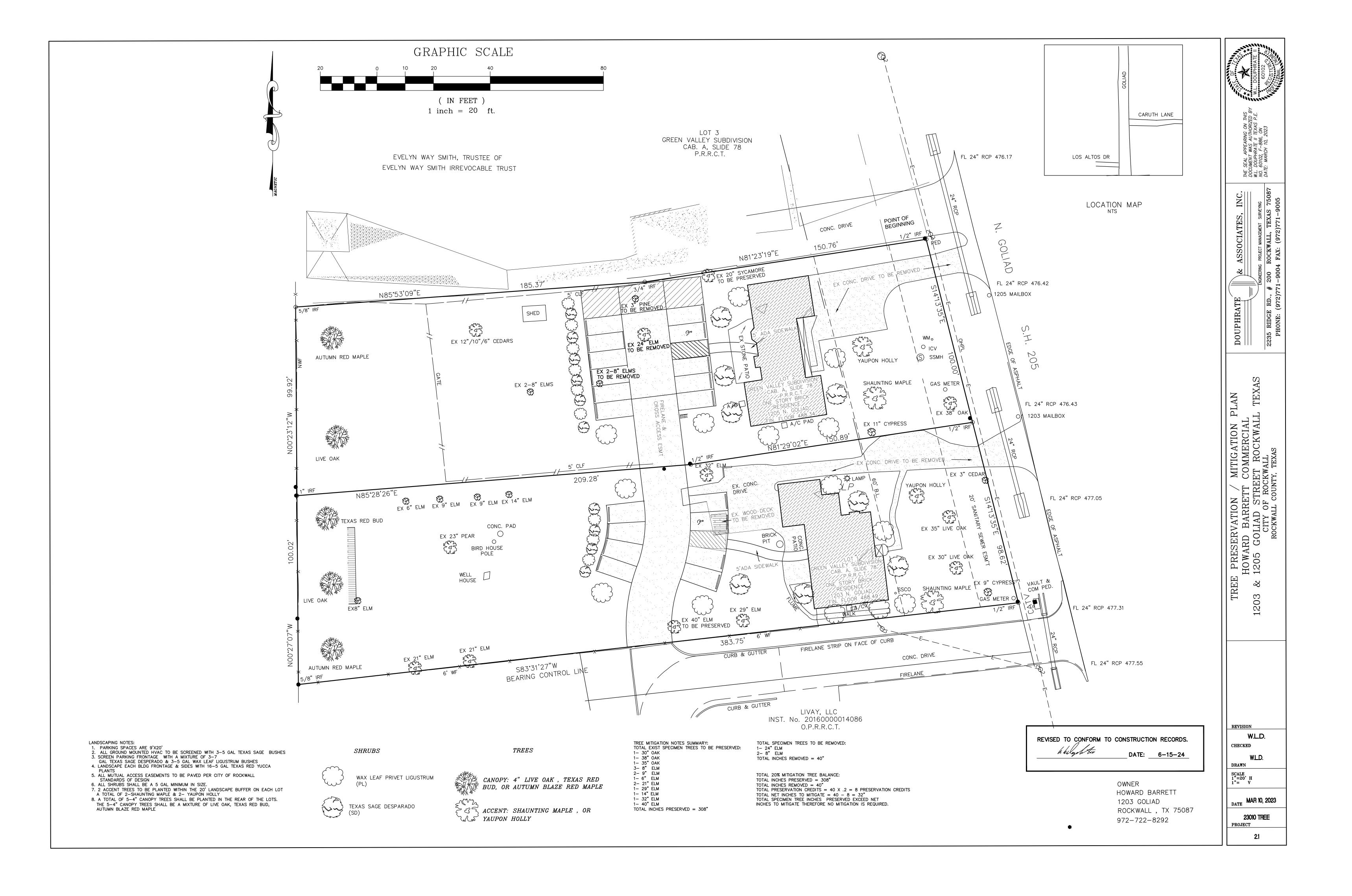
- Final Acceptance shall occur when all the items on the Checklist for Final Acceptance have been completed
 and signed-off by the City. An example of the checklist for final acceptance has been included in the
 Appendix of the Standards of Design and Construction. Items on the checklist for final acceptance 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.
- . 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.
- 4. 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.
- 5. 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.
- 5. 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."

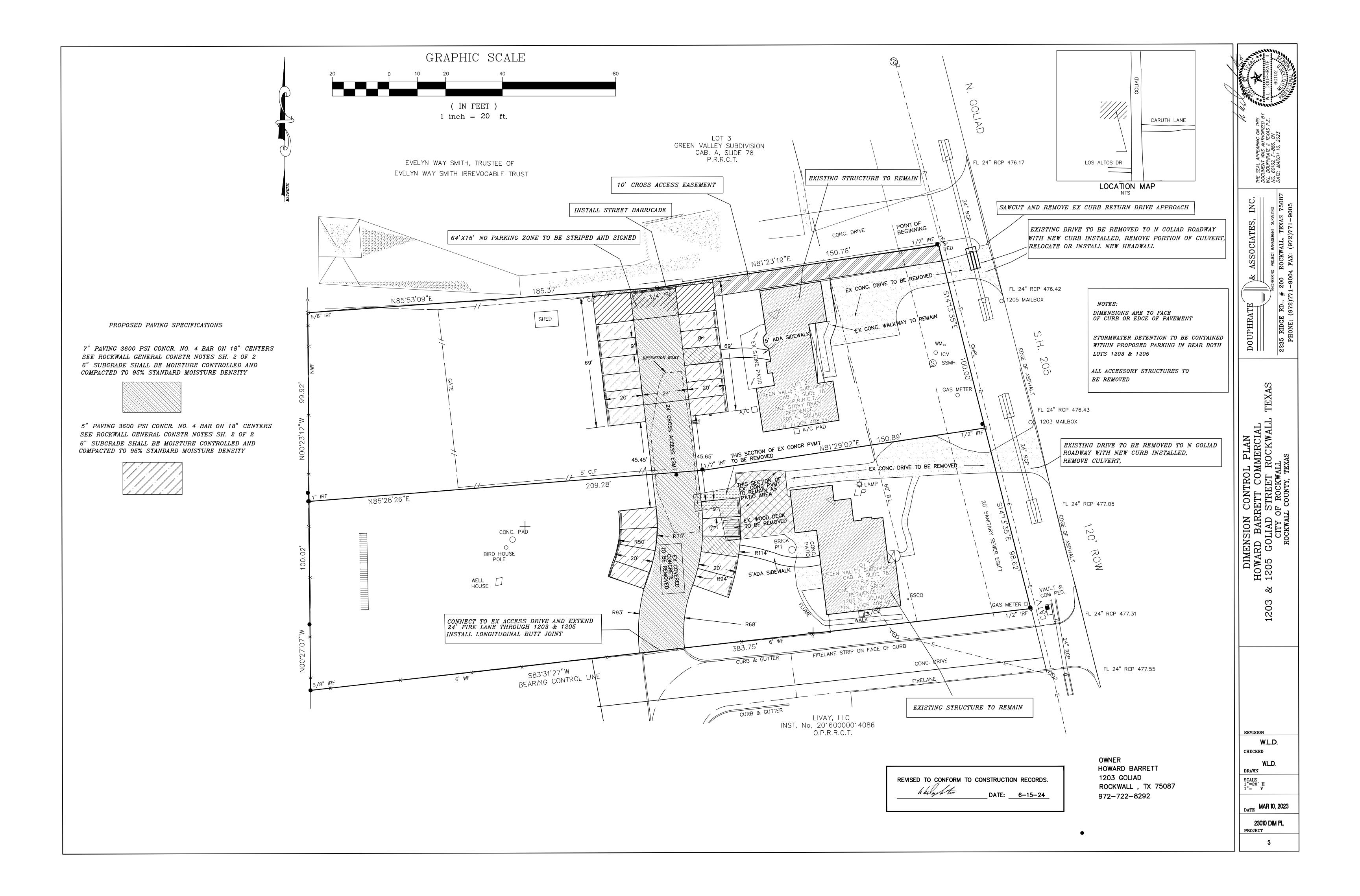


GENERAL CONSTRUCTION NOTES
Sheet 2 of 2
October 2020

CITY OF ROCKWALL ENGINEERING DEPARTMENT

385 S. Goliad Rockwall, Texas 75087 P (972) 771-7746 F (972) 771-7748





	TON 1 - 5	YEAR S	TORM								TION 1 -	10 YEAR	STORM				
Present Co	onditions								Present C	onditions							
Q=CIA	0.04								Q=CIA	0.04							
A =	0.21								A =	0.21							
C = Tc =	0.5 10								C = Tc =	0.5							
15 =	6.1									7.2							
									I ₁₀ =								
Q ₅ =	0.6405								Q ₁₀ =	0.756							
Future Cor	nditions (De	eveloped)	Offsite Co	nditions (Ur	ndeveloped)	Bypass		Future Co	nditions (De	eveloped)	Offsite Co	nditions (Ui	ndevelope	ed)	Bypass	
A =	0.21	volopou)	A =	0.74		A=	0		A =	0.21		A =	0.74		A=	Бурасс	
Aadj=	0.21								Aadj=	0.21							
C =	0.9		C =	0.5		C=	0.9		C =	0.9		C =	0.5		C=	0.9	
Tc =	10		Tc =	10		Tc=	10		Tc =	10		Tc =	10		Tc=	10	
15 =	6.1		15 =	6.1		15 =	6.1		I ₁₀ =	7.2		I ₁₀ =	7.2		I ₁₀ =	7.1	
Q5 =	1.1529		Q5=	2.257		Q5 =	0		Q ₁₀ =	1.3608		Q ₁₀ =	2.664		Q ₁₀ =	0	
Flow for S	torm Durati	ons (Devel	oped)		Flow for S	torm Durat	ions (Offsite)		Flow for S	torm Durat	ions (Deve	loped)		Flow for	Storm Durat	ions (Offsite)	
<u>Time</u>	<u>l</u>	<u>C</u>	<u>Q</u>		<u>Time</u>	<u>l</u>	C	<u>Q</u>	<u>Time</u>	<u>L</u>	<u>C</u>	<u>Q</u>		<u>Time</u>	<u>l</u>	C	<u>Q</u>
10 min	6.1	0.9			10 min	6.1	0.5	2.257	10 min	7.1				10 min	7.1	0.5	2.627
15 min	5.5	0.9			15 min	5.5		2.035	15 min	6.5				15 min	6.5		2.405
20 min	4.9	0.9			20 min	4.9		1.813	20 min	5.9				20 min	5.9		2.183
30 min 40 min	4.1 3.4	0.9 0.9			30 min 40 min	4.1 3.4	0.5 0.5	1.517 1.258	30 min 40 min	4.8				30 min 40 min	4.8		1.776 1.48
50 min	2.8	0.9			50 min	2.8		1.036	50 min	3.5				50 min	3.5		1.46
60 min	2.6	0.9			60 min	2.6		0.962	60 min	3.3				60 min	3.3		1.11
70 min	2.4	0.9			70 min	2.4		0.888	70 min	2.8				70 min	2.8		1.036
80 min	2.3	0.9	0.4347		80 min	2.3	0.5	0.851	80 min	2.6	0.9	0.4914		80 min	2.6	0.5	0.962
90 min	2.1	0.9			90 min	2.1		0.777	90 min	2.5				90 min	2.5		0.925
100 min	1.9				100 min	1.9		0.703	100 min	2.4				100 min			0.888
110 min	1.8	0.9	0.3402		110 min	1.8	0.5	0.666	110 min	2.3	0.9	0.4347		110 min	2.3	0.5	0.851
Storage Ca	alculations								Storage C	alculations							
<u>10 min</u>									<u>10 min</u>								
Inflow	2045.94		Storage	307.44					Inflow	2381.34		Storage	329.34				
Outflow	1738.5								Outflow	2052							
15 min									15 min								
Inflow	2767.05		Storage	593.925					Inflow	3270.15		Storage	705.15				
Outflow	2173.125		_						Outflow	2565							
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Inflow	4125.42		Storage	648.42					Inflow	4829.76		Storage	725.76				
Outflow	3477								Outflow	4104							
40 min									40 min								
Inflow	4561.44		Storage	215.19					Inflow	5366.4		Storage	236.4				
Outflow	4346.25								Outflow	5130							
<u>50 min</u>									50 min								
Inflow	4695.6 5215.5		Storage	-519.9					Inflow	5869.5		Storage	-286.5				
Outflow	0∠15.5								Outflow	6156							
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Outflow	7823.25								Outflow	9234							
90 min									90 min								
Inflow	6339.06		Storage	-2353.44					Inflow	7546.5		Storage	-2713.5				
Outflow	8692.5								Outflow	10260							
100 min									100 min								
Inflow	6372.6		Storage	-3189.15					Inflow	8049.6		Storage	-3236.4				
Outflow	9561.75								Outflow	11286							
110 min									110 min								
Inflow	6037.2		Storage	-4393.8					Inflow	7714.2		Storage	-4597.8				
Outflow	10431								Outflow	12312							

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C =	0.21							
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Q25 =	0.861							
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A =	0.21		A =	0.74		A=	0	
Aadj=	0.21						_	
C =	0.9		C =	0.5		C=	0.9	
Tc =	10		Tc =	10		Tc=	10	
125 =	8.2		125 =	8.2		125 =	8.3	
Q25 =	1.5498		Q25=	3.034		Q25 =	0	
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15 min	7.5	0.9			15 min	7.5		2.7
20 min	6.6	0.9			20 min	6.6		2.4
30 min	5.5	0.9			30 min	5.5		2.03
40 min	4.6	0.9			40 min	4.6		1.70
50 min	4	0.9			50 min	4		1.4
60 min	3.5	0.9	0.6615		60 min	3.5	0.5	1.29
70 min	3.3	0.9	0.6237		70 min	3.3	0.5	1.2
80 min	3.1	0.9			80 min	3.1		1.1
90 min	2.9	0.9			90 min	2.9		1.0
100 min	2.7	0.9			100 min	2.7		0.99
110 min	2.5	0.9			110 min	2.5		0.9
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Storage Ca	alculations							
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Inflow	3773.25		Storage	852				
Outflow	2921.25		otoray e	002				
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Inflow	4427.28		Storage	921.78				
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Outflow	4674		Storage	600. I				
<u>40 min</u>								
Inflow	6171.36		Storage	328.86				
Outflow	5842.5							
EO								
<u>50 min</u>	2===		01					
Inflow	6708		Storage	-303				
Outflow	7011							
<u>60 min</u>								
Inflow	7043.4		Storage	-1136.1				
Outflow	8179.5							
70 min								
	7717 71		Storage	1600.06				
Inflow Outflow	7747.74 9348		Storage	-1600.26				
80 min								
Inflow	8317.92		Storage	-2198.58				
Outflow	10516.5		Juliaye	-2130.30				
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00 min								
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Inflow	8753.94		Storage	-2931.06				
Outflow	11685							
100 min								
Inflow	9055.8		Storage	-3797.7				
Outflow	12853.5							
110								
110 min Inflow	8385		Storage	-5637				
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			00 YEAR	OTOTAIN				
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A =	0.21							
C =	0.5							
Tc =	10							
I ₁₀₀ =	9.8							
	1.029							
Q ₁₀₀ =	1.029							
Future Con	ditions (Dev	reloped)	Offsite Cor	nditions (Ur	ndeveloped))	Bypass	
A =	0.21		A =	0.74		A=	0	
Aadj=	0.21		,	0.7 1				
C =	0.9		C =	0.5		C=	0.9	
	10							
Tc =			Tc =	10		Tc=	10	
I ₁₀₀ =	9.8		I ₁₀₀ =	9.8		I ₁₀₀ =	9.8	
Q ₁₀₀ =	1.8522		Q ₁₀₀ =	3.626		Q ₁₀₀ =	0	
Flow for St	orm Duratio	ns (Devel	oped)		Flow for St	torm Durat	ions (Offsite)	
<u>Time</u>	<u>L</u>	<u>C</u>	<u>Q</u>		<u>Time</u>	<u>L</u>	<u>C</u>	<u>Q</u>
10 min	9.8	0.9	1.8522		10 min	9.8	0.5	3.62
15 min	9	0.9			15 min	9		3.3
20 min	8.3	0.9			20 min	8.3		3.07
30 min	6.9	0.9			30 min	6.9		2.55
40 min	5.8	0.9			40 min	5.8		2.14
50 min	5	0.9			50 min	5		1.8
60 min	4.5	0.9			60 min	4.5		1.66
70 min	4	0.9			70 min	4	0.5	1.4
80 min	3.7	0.9	0.6993		80 min	3.7		1.36
90 min	3.5	0.9	0.6615		90 min	3.5	0.5	1.29
100 min	3.3	0.9	0.6237		100 min	3.3	0.5	1.22
110 min	2.9	0.9	0.5481		110 min	2.9		1.07
		2.0				5		
Storage Ca	alculations							
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Outflow	2793		July	- 1 00.02				
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Inflow	4527.9		Storage	1036.65				
Outflow	3491.25							
<u>20 min</u>								
Inflow	5567.64		Storage	1378.14				
Outflow	4189.5							
30 min								
Inflow	6942.78		Storage	1356.78				
Outflow	5586		otol aye	1000.70				
Junow	2200							
40 min								
Inflow	7781.28		Storage	798.78				
Outflow	6982.5		2.2.490	, 55.70				
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EO mailin								
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Inflow	8385		Storage	6				
Outflow	8379							
<u>60 min</u>								
Inflow	9055.8		Storage	-719.7				
Outflow	9775.5		. J-					
70 min								
Inflow	9391.2		Storage	-1780.8				
Outflow	11172			55.5				
→ MITTO VV	11112							
20 min								
80 min	0007.01		C+	00.40.00				
Inflow	9927.84		Storage	-2640.66				
Outflow	12568.5							
<u>90 min</u>								
Inflow	10565.1		Storage	-3399.9				
Outflow	13965		_					
100 min								
Inflow	11068.2		Storage	-4293.3				
Outflow	15361.5		J.C. age	7 ∠30.0				
Jatriow	10001.0							
440								
<u>110 min</u>	0===		01					
1	9726.6		Storage	-7031.4				
Inflow Outflow	16758		ote. age	, , , ,				

REVISED TO CONFORM TO CONSTRUCTION RECORDS.

| Lange | Lange | DATE: 6-15-24

Outflow

16758

THE SEAL APPEARING ON THIS TO DOCUMENT WAS AUTHORIZED W.L. DOUPHRATE II, TEXAS P.E. NO. 60102, F-886, ON POLY POLY PROTERT.

DOUPHRATE

REASSOCIATE:

2235 RIDGE RD., # 200 ROCKWALL, TEXPROJECT (972)777

DETENTION CALCULATIONS
BARRETT HEIGHTS
CITY OF ROCKWALL
ROCKWALL COUNTY, TEXAS

W.L.D.
CHECKED

G.C.W.

DRAWN

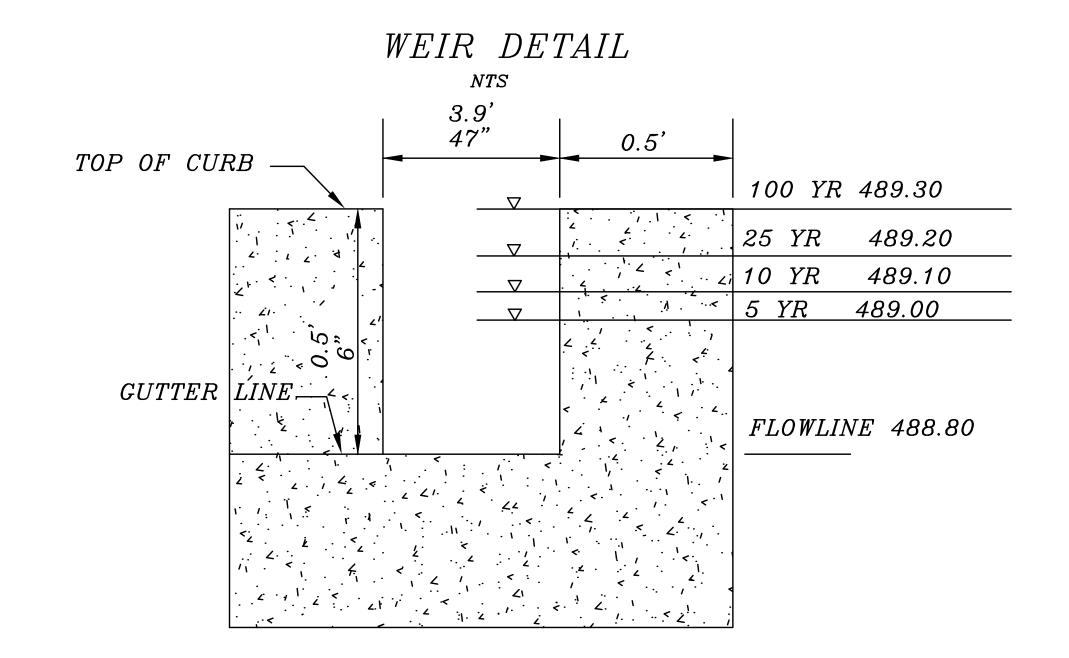
SCALE
1"= 20'H
1"= 4'V

APRIL, 2023

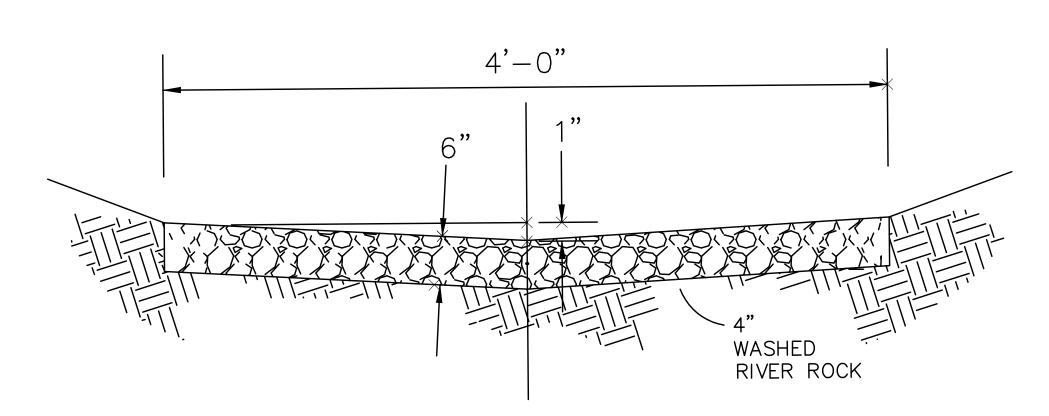
23010 PROJECT 5 Rectangular Suppressed Weir

 $Q = 3.33 \ h1^{3/2} \ L$ Q = Exist. Conditions Flowrate Allowed= cfs h1 = Height of Weir = 6 in. = 0.5 ft. L = Length of Weir $4.6 = 3.33 \ (.5)^{1.5} L$ $L = 3.9 \ ft = 47 \ in.$

STORAGE VOLUME STAGE										
STORM	d	ELEVATION	VOLUME	Qallowable	Qactual					
5 YR	02	489.00 ft	679 cf	2.90 cfs	2.9 cfs					
10 YR	0.30	489.10 ft	880 cf	3.4 cfs	3.4 cfs					
25 YR	0.40	489.20 ft	922 cf	3.9 cfs	3.9 cfs					
100 YR	0.50	489.3 ft	1378 cf	4.6 cfs	4.6 cfs					



DETENTION REQUIRED - 1378 cf DETENTION PROVIDED - 1378 cf



4' - 4" WASHED RIVER ROCK DRAINAGE FLUME nts

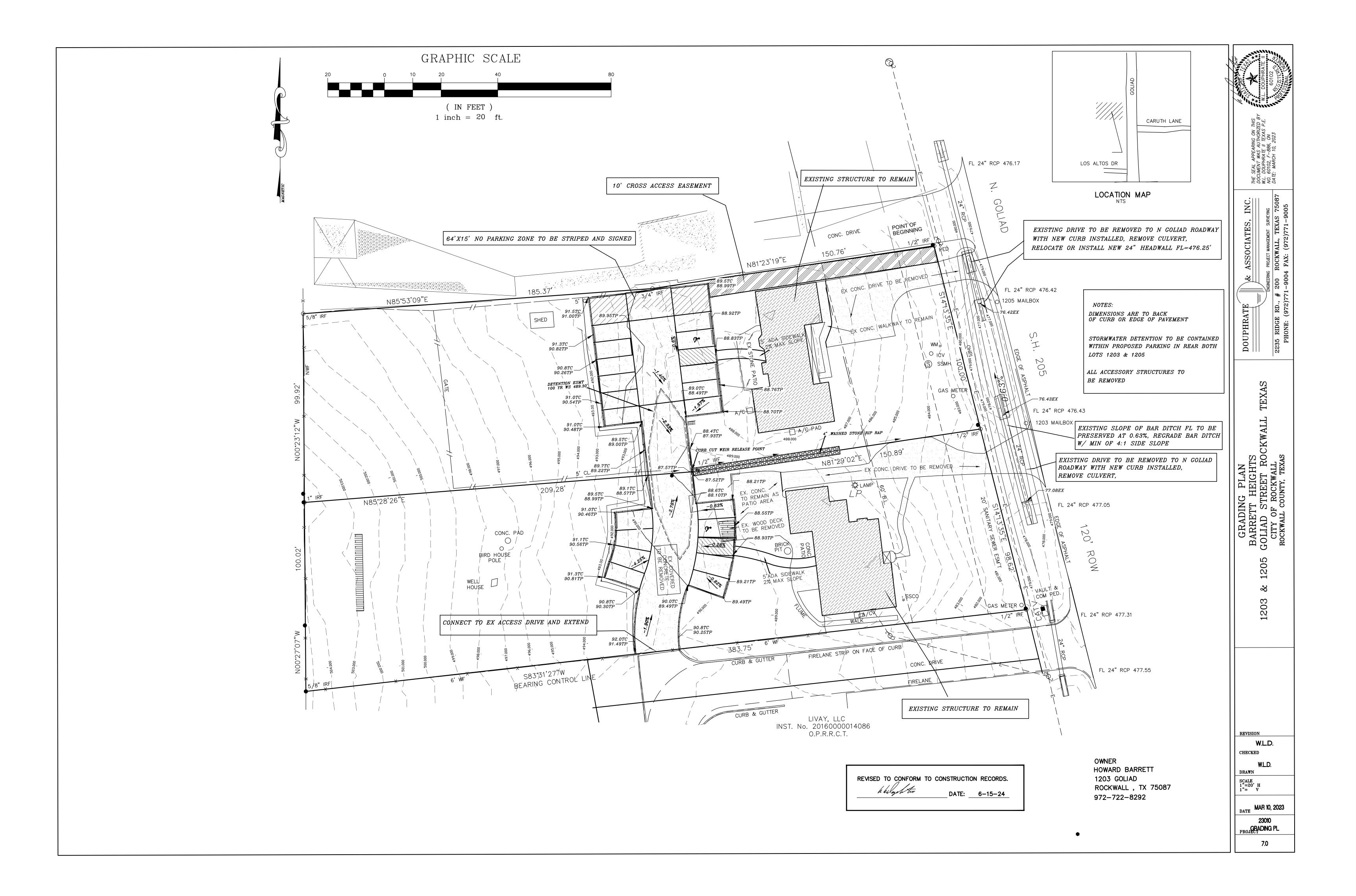
REVISED TO CONFORM TO CONSTRUCTION RECORDS.

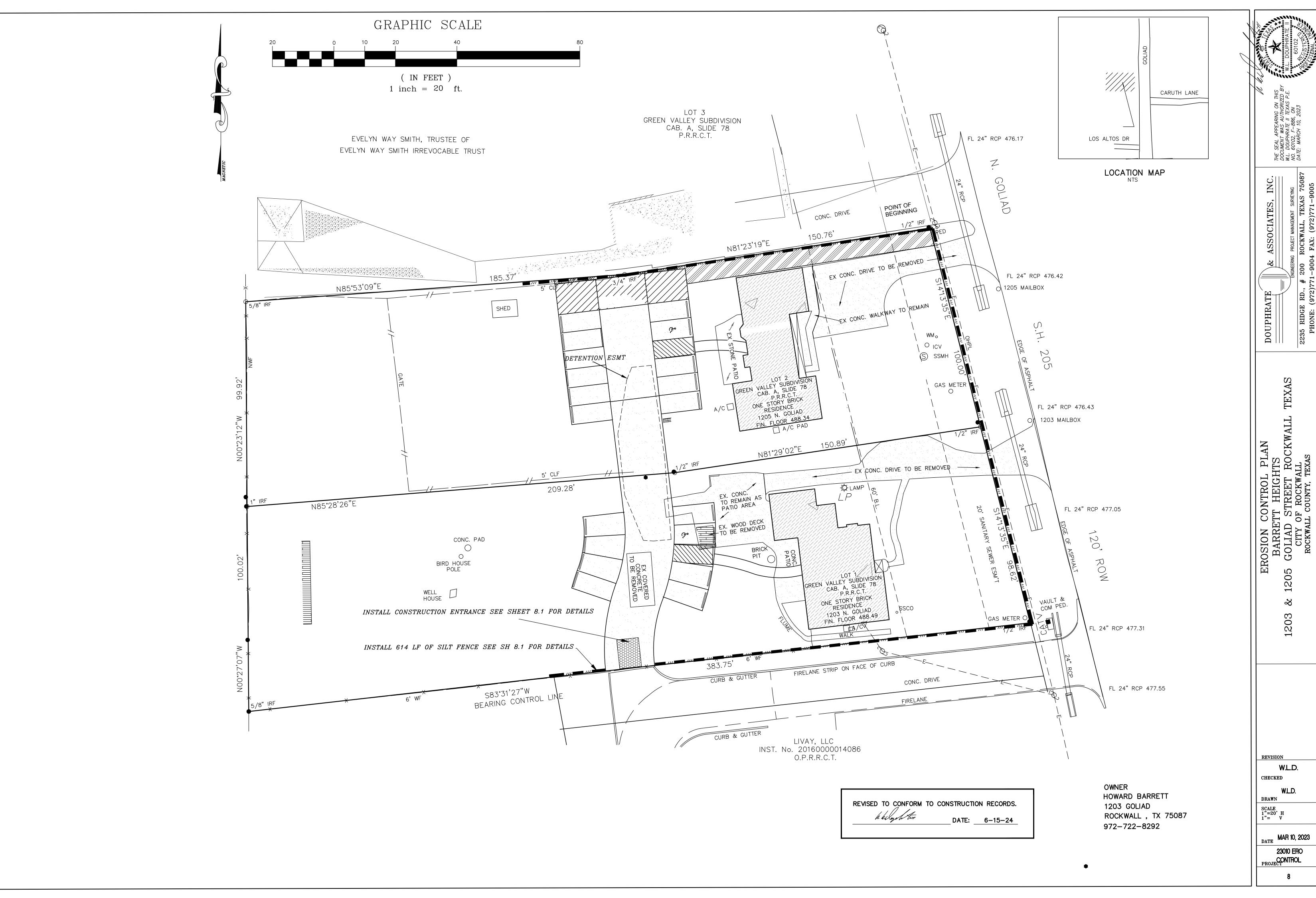
DATE: 6-15-24

GC.W.
DRAWN
SCALE

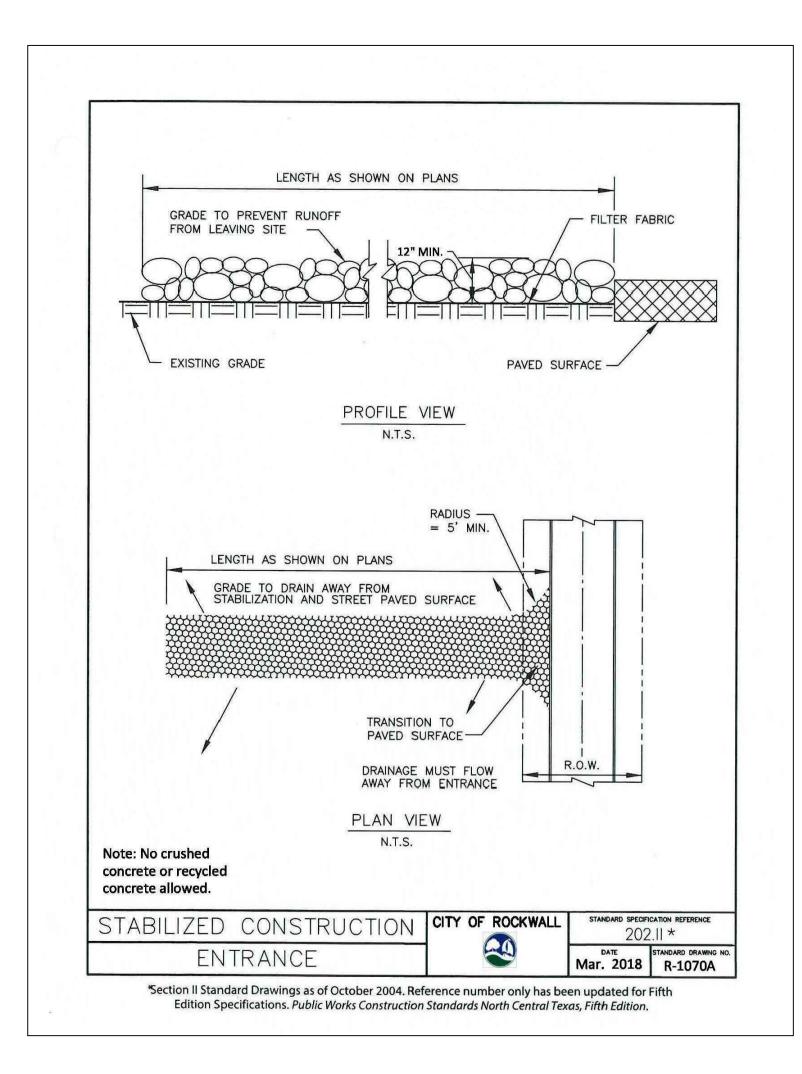
APRIL, 2023 DATE

PROJECT 6





23010 ERO PROJECT



STANDARDS FOR SILT FENCE

DEFINITION

TEMPORARY BARRIER FENCE MADE OF BURLAP OR POLYPROPYLENE MATERIAL WHICH IS WATER PERMEABLE BUT WILL TRAP WATER - BORNE SEDIMENT.

PURPOSE_

TO INTERCEPT- AND DETAIN WATER - BORNE SEDIMENT FROM UNPROTECTED AREAS OF LIMITED EXTENT.

CONDITIONS WHERE PRACTICE APPLIES

SILT FENCE IS USED DURING THE PERIOD OF CONSTRUCTION NEAR THE PERIMETER OF A DISTURBED AREA TO INTERCEPT SEDIMENT WHILE ALLOWING WATER TO PERCOLATE THROUGH. THIS FENCE SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED. SILT FENCE SHOULD NOT BE USED WHERE THERE IS A CONCENTRATION OF WATER IN A CHANNEL OR OTHER DRAINAGE WAY.

DESIGN CRITERIA

SILT FENCE IS CONSTRUCTED NEAR THE PERIMETER OF A DISTURBED SITE WITHIN THE DEVELOPING AREA. IT IS NOT TO BE CONSTRUCTED OUTSIDE THE PROPERTY LINES WITHOUT OBTAINING A LETTER OF PERMISSION FROM THE AFFECTED ADJACENT PROPERTY OWNERS.

A DESIGN IS NOT REQUIRED FOR THE INSTALLATION OF THE SILT FENCE. HOWEVER, THE FOLLOWING CRITERIA SHALL BE OBSERVED:

DRAINAGE AREA - LESS THAN TWO ACRES

30 INCHES MINIMUM HEIGHT MEASURED FROM EXISTING OR

BURLAP, POLYPROPYLENE FABRIC, OR NYLON REINFORCED WITH POLYESTER NETTING. THE MULLEN BURST STRENGTH SHALL BE MATERIAL -

GREATER THAN 150 PSI. THE EDGES SHALL BE TREATED TO PREVENT UNRAVELING.

STEEL FENCE POSTS SPACED A MAXIMUM OF 8 FEET APART. SUPPORT -WOVEN WIRE WILL BE USED TO SUPPORT THE MATERIAL.

SILT FENCE SHALL BE PLACED AND CONSTRUCTED IN SUCH A MANNER THAT RUNOFF FROM A DISTURBED SURFACE OR EXPOSED UPLAND AREA SHALL BE INTERCEPTED, SEDIMENT TRAPPED, AND THE SURFACE RUNOFF ALLOWED TO PERCOLATE THROUGH THE STRUCTURE.

SILT FENCE SHALL BE PLACED IN SUCH A MANNER THAT SURFACE RUNOFF WHICH PURCOLATES THROUGH WILL FLOW ONTO AN UNDISTURBED STABILIZED AREA OR STABILIZED

1. SHOULD WORK CEASE FOR A PERIOD OF 21 DAYS PERMANENT STABALIZATION SHALL BE INSTALLED.

2. SHOULD THE CONTRACTOR STORE ANY FUEL OR OTHER HAZARDOUS MATERIAL ONSITE THIS PLAN WILL BE MODIFIED TO REFLECT PROTECTION MEASURES. EROSION CONTROL GENERAL NOTES

- 1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE.
- 2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL
- TO THE LINE OF FLOW.
- FOR THE SILT FENCE TO BE LAID IN THE GROUND AND BACKFILLED. 4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO
- WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POSTS. 5. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- BLOCK OR IMPEDE STORM FLOW OR DRAINAGE. 7. SEDIMENT TRAPPED BY THIS PRACTICE SHALL BE DISPOSED OF IN AN APPROVED SITE IN A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.
- DISPOSED OF IN AN APPROVED SPOIL SITE OR AS IN NO. 7 ABOVE. 9. EROSION PROTECTION WILL BE DELETED OR ADDED PER THE CITY OF ROCKWALL
- 10. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL EROSION, CONSERVATION, AND SILTATION ORDINANCES. THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF PERMANENT DRAINAGE FACILITIES AND THE ESTABLISHMENT OF A STAND OF GRASS OR OTHER GROWTH TO PREVENT EROSION.
- 11. ALL SEEDING AND FERTILIZATION OF DISTURBED AREAS WILL BE THE RESPONSIBILITY OF THE GRADING CONTRACTOR.

STORM DRAIN INLET PROTECTION CONSTRUCTION SPECIFICATIONS

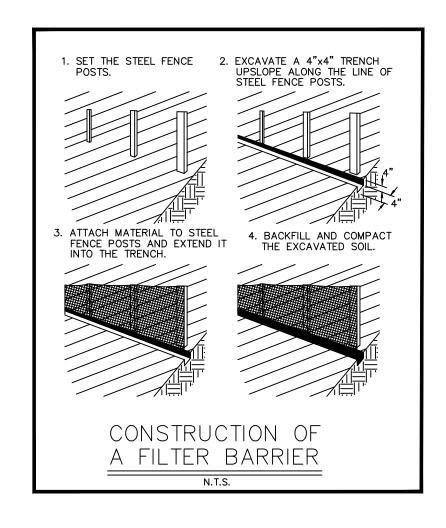
- 1. STEEL FRAME IS TO BE CONSTRUCTED OF SUITABLE MATERIAL. 2. WIRE MESH MUST BE OF SUFFICIENT STRENGTH TO SUPPORT FILTER FABRIC,
- AND STONE FOR CURB INLETS, WITH WATER FULLY IMPOUNDED AGAINST IT. 3. FILTER CLOTH MUST BE OF A TYPE APPROVED FOR THIS PURPOSE; RESISTANT
- TO SUNLIGHT WITH SIEVE SIZE, EOS, 40-85, TO ALLOW SUFFICIENT PASSAGE OF WATER AND REMOVAL OF SEDIMENT.
- 4. STONE IS TO BE 2" IN SIZE AND CLEAN, SINCE FINES WOULD CLOG THE
- 5. THE ASSEMBLY SHALL BE PLACED SO THAT THE END SPACERS ARE A MINIMUM 1' BEYOND BOTH ENDS OF THE THROAT OPENING. 6. FORM THE WIRE MESH AND FILTER CLOTH TO THE CONCRETE GUTTER AND
- AGAINST THE FACE OF CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN 2" STONE OVER THE WIRE MESH AND FILTER FABRIC IN SUCH A MANNER AS TO PREVENT WATER FROM ENTERING THE INLET UNDER OR
- AROUND THE FILTER CLOTH. 7. THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE FILTER CLOTH AND STONE REPLACED WHEN CLOGGED WITH SEDIMENT.
- 8. ASSURE THAT STORM FLOW DOES NOT BYPASS INLET BY INSTALLING TEMPORARY EARTH OR ASPHALT DIKES DIRECTING FLOW INTO INLET.

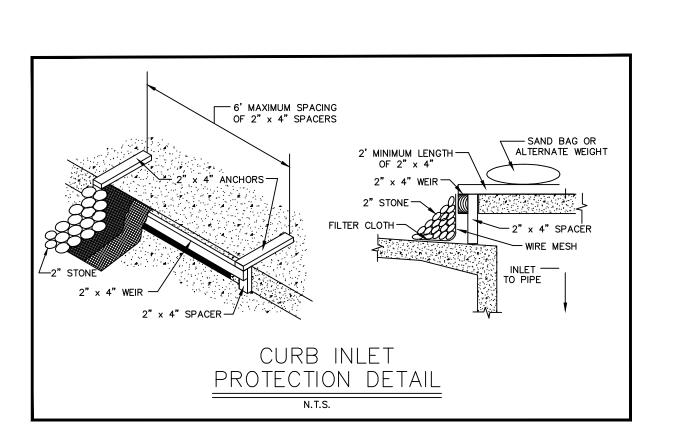
1. SILTATION FENCE SHALL BE PLACED AROUND INLETS DURING CONSTRUCTION.

2. 75%-80% OF ALL DISTURBED AREAS TO HAVE MINIMUM 1" STAND OF GRASS (NOT RYE OR WEEDS) PRIOR TO CITY ACCEPTANCE.

3. ALL RIGHT OF WAY TO BE SODDED PRIOR TO CITY ACCEPTANCE AND CERTIFICATE OF OCCUPANCY

EROSION CONTROL DETAILS





REVISED TO CONFORM TO CONSTRUCTION RECORDS.

DATE: 6-15-24

REVISION

D.A.C. DRAWN

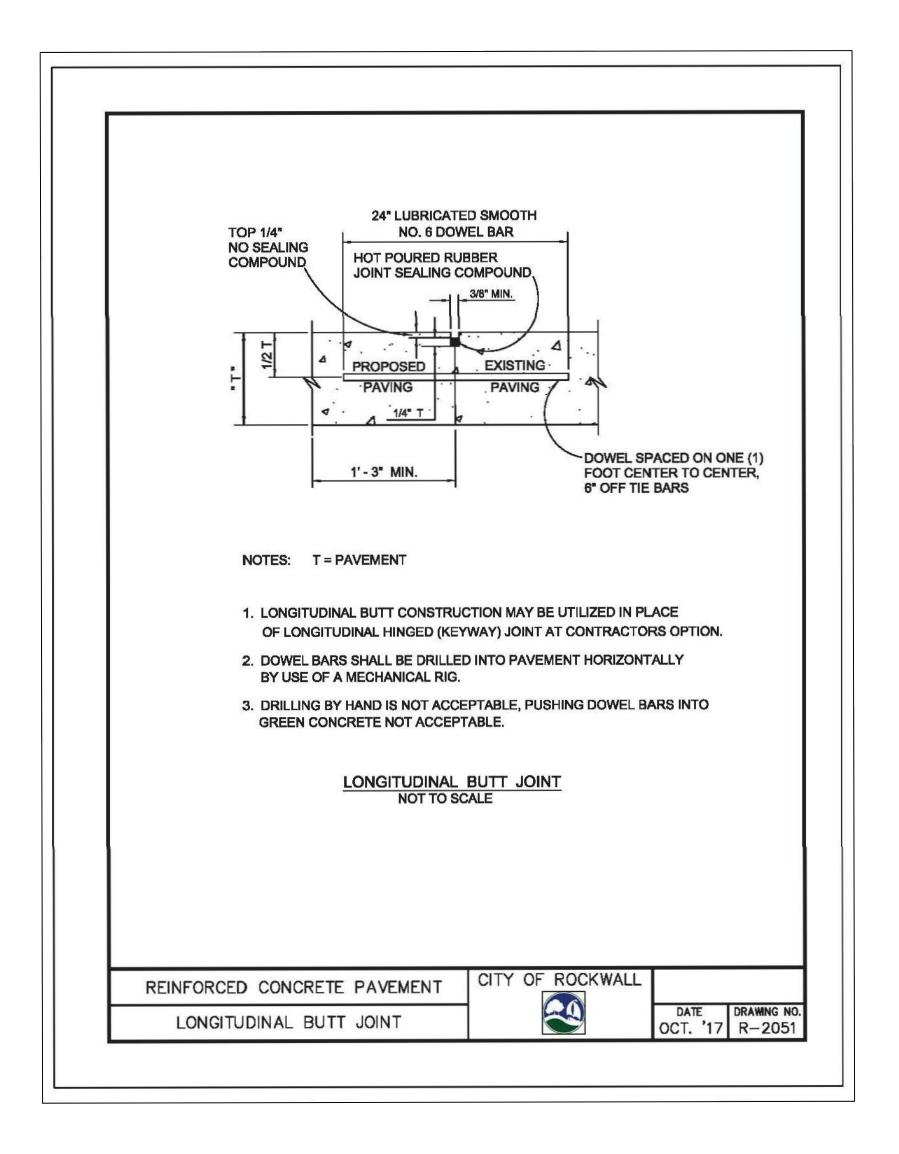
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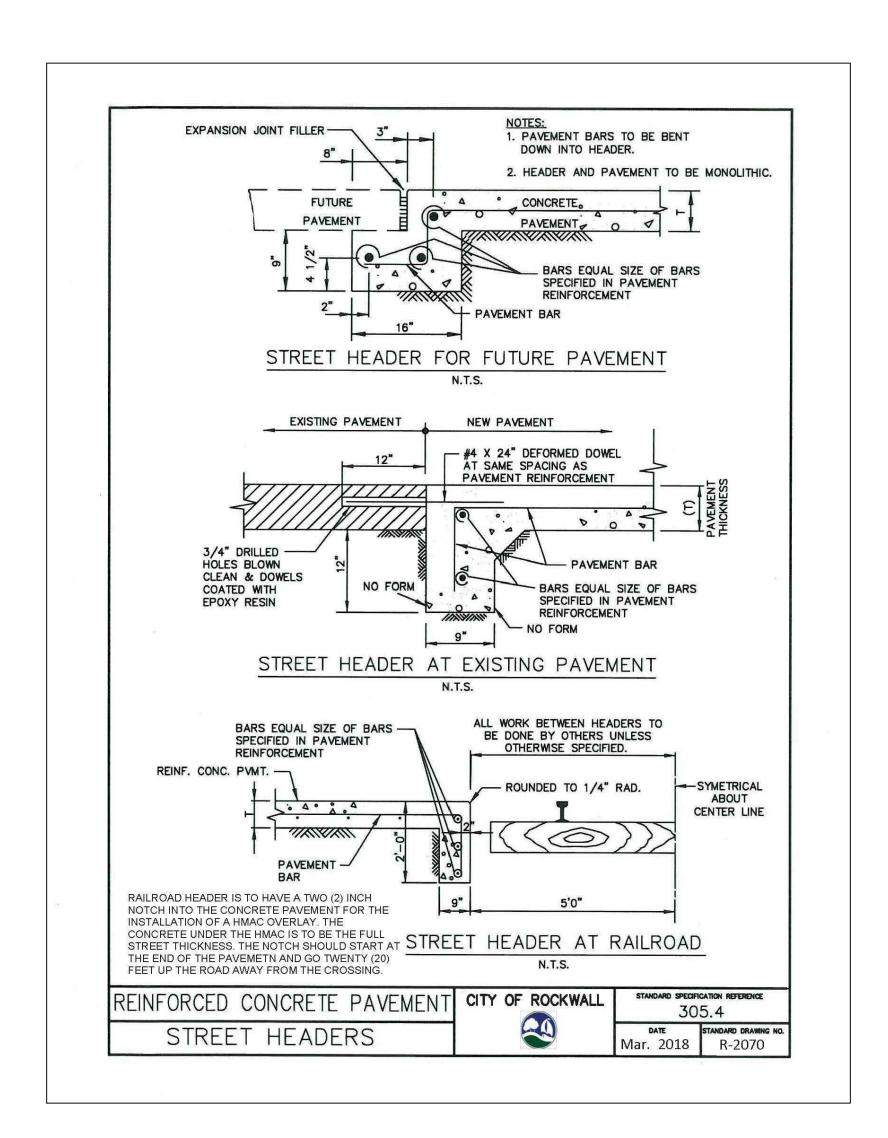
SCALE 1"=60'H 1"=V FEB, 2023

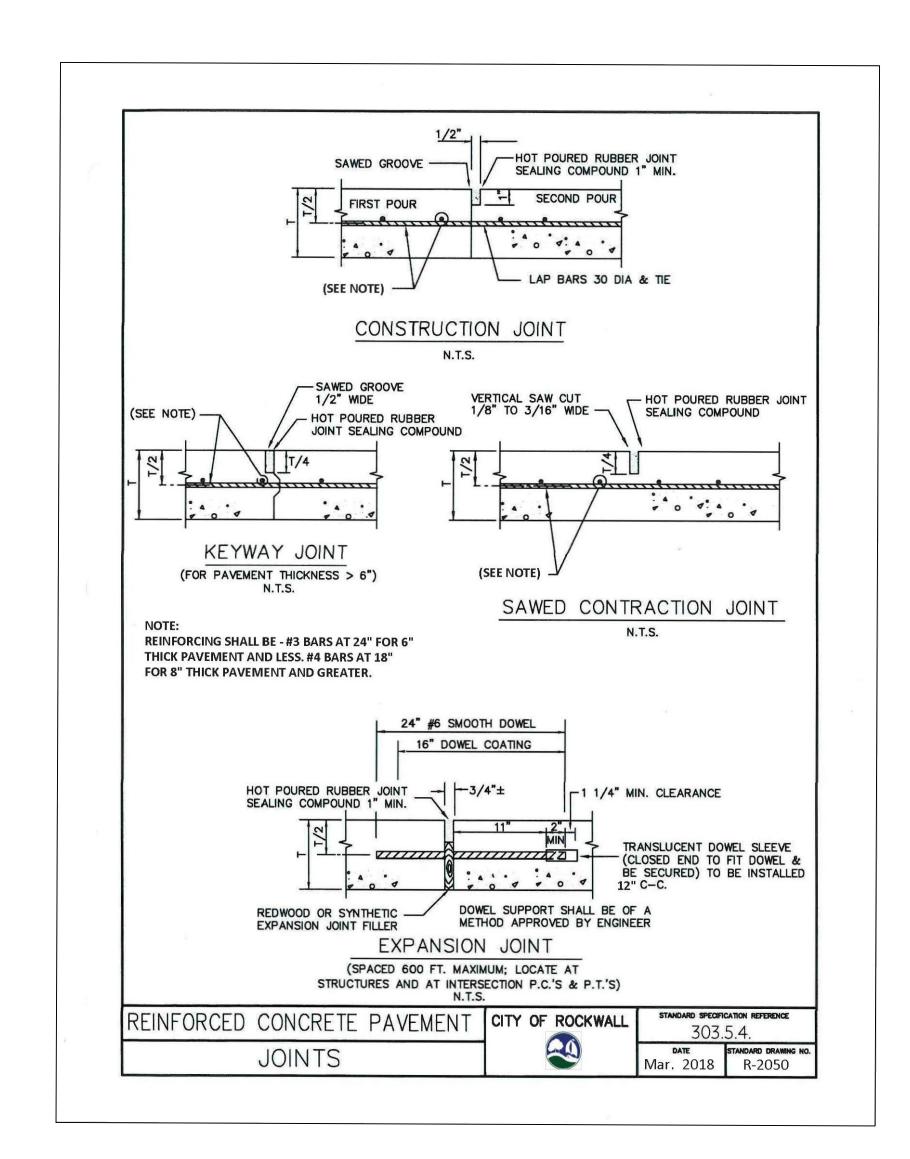
23010 **PROJECT**

DOUPHRATE

EROSION CONTROL DET BARRETT HEIGHTS







REVISED TO CONFORM TO CONSTRUCTION RECORDS.

| h long | br | DATE: 6-15-24

HIS TOUR BY W.L. DOUPHRATE II 60102

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY W.L. DOUPHRATE II TEXAS P.E. NO. 60102, F-886, ON DATE: FEBRUARY 13, 2023

DOUPHRATE

Read ASSOCIATES, INC.

ENGINEERING - PROJECT MANAGEMENT - SURVEYING

2235 RIDGE RD., # 200 ROCKWALL, TEXAS 75087

S: VAI.I.

PAVING DETAILS BARRETT HEIGHTS

REVISION
W.L..C

D.A.C.
DRAWN

SCALE
1"=60'H
1"=V

FEB, 2023 DATE

22027 PROJECT 8.2