- CONTRACTOR SHALL BE RESPONSIBLE FOR RAZING AND REMOVAL OF THE EXISTING STRUCTURES, RELATED UTILITIES, PAVING, AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED. REF. SITE WORK SPECIFICATIONS.
- C. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
- D. THE GENERAL CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
- E. ALL CONSTRUCTION IN TXDOT RIGHT—OF—WAY SHALL BE COORDINATED WITH THE HIGHWAY DEPARTMENT. PERMITS WILL BE REQUIRED. "STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES" ADOPTED BY TEXAS DEPARTMENT OF TRANSPORTATION, JUNE 1, 2004, AND SPECIFICATION ITEMS LISTED AND DATED AS FOLLOWS SHALL GOVERN ON THIS PROJECT.
- F. ALL SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE SPECIFICATIONS OF THE RELEVANT UTILITY COMPANY OR REGULATORY AUTHORITY, AND THE SPECIFICATIONS FOR THE CONSTRUCTION OF THE EXISTING IMPROVEMENTS WHICH ARE BEING ALTERED OR REPLACED. CONTRACTOR SHALL CONTACT THE ENGINEER FOR SPECIFICATION SECTIONS FOR ITEMS SUCH AS LANDSCAPING AND IRRIGATION THAT ARE AFFECTED BY THE WORK BUT NOT COMPLETELY DETAILED OR SPECIFIED ON THESE PLANS.
- G. THE CITY OF ROCKWALL, TEXAS "STANDARDS OF DESIGN AND CONSTRUCTION" AND THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS "PUBLIC WORKS CONSTRUCTION STANDARDS 3RD EDITION" SHALL APPLY TO CONSTRUCTION OF PUBLIC IMPROVEMENTS.
- H. DETENTION SYSTEM MUST BE INSTALLED AND FUNCTIONING PER DESIGN PRIOR TO ANY PAVING INCLUDING SLAB WORK.
- . FIRE LANE SHALL BE MARKED IN ACCORDANCE WITH 2009 IFC AS ADOPTED BY THE CITY OF ROCKWALL.

WETLANDS NOTICE:

ANY DEVELOPMENT, EXCAVATION, CONSTRUCTION, OR FILLING IN A U.S. CORPS OF ENGINEERS DESIGNATED WETLAND IS SUBJECT TO LOCAL, STATE AND FEDERAL APPROVALS. THE CONTRACTOR SHALL COMPLY WITH ALL PERMIT REQUIREMENTS AND/OR RESTRICTIONS AND ANY VIOLATION WILL BE SUBJECT TO FEDERAL PENALTY. THE CONTRACTOR SHALL HOLD THE OWNER/ DEVELOPER, THE ENGINEER AND THE LOCAL GOVERNING AGENCIES HARMLESS AGAINST SUCH VIOLATION.

WARRANTY/DISCLAIMER:

THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER THE ENGINEER NOR ITS PERSONNEL CAN OR DO WARRANT THESE DESIGNS OR PLANS AS CONSTRUCTED EXCEPT IN THE SPECIFIC CASES WHERE THE ENGINEER INSPECTS AND CONTROLS THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

NOTICE TO BIDDERS:

ALL QUESTIONS REGARDING THE PREPARATION OF THE GENERAL CONTRACTOR'S BID SHALL BE DIRECTED TO THE OWNER'S CONSTRUCTION DEPARTMENT AT 918-615-7006. SUBCONTRACTORS MUST DIRECT THEIR QUESTIONS THROUGH THE GENERAL CONTRACTOR. THE CONSULTING ARCHITECT AND/OR THE CONSULTING ENGINEER SHALL NOT BE CONTACTED DIRECTLY WITHOUT PRIOR AUTHORIZATION FROM THE OWNER/DEVELOPER.

FLOOD CERTIFICATION:

THIS PROPERTY LIES IN ZONE "X" AND DOES NOT LOCATE WITHIN ANY PRESENTLY ESTABLISHED 100-YEAR FLOOD PLAIN, AS SHOWN BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP FOR ROCKWALL COUNTY TEXAS, COMMUNITY PANEL NUMBER 48397C0040L EFFECTIVE DATE SEPTEMBER 26, 2008.

BENCHMARKS:

BASIS OF BEARINGS SOUTHWEST LINE OF LOT 1R, BLOCK A MONTEGO ADDITION HELD AS N 35'22'17" W (CABINET E, SLIDE, M.R.R.C.T.)

BM-1 CITY OF ROCKWALL GPS CONTROL MONUMENT "RESET RO05-1, LOCATED IN THE MEDIAN OF SUMMIT RIDGE DRIVE AT THE INTERSECTION WITH F.M. HIGHWAY NO. 740

ELEVATION=578.63'

TFL: (972) 962-3617

CONTACT: BRENDA CALLAWAY, P.E.

BM-2 CITY OF ROCKWALL GPS CONTROL MONUMENT NO. R016, LOCATED AT THE CITY OF ROCKWALL SERVICE CENTER BUILDING ON AIRPORT ROAD.

ELEVATION=558.72

SQUARE CUT WITH "X" SET ON THE WEST EDGE IN THE CENTER OF A CURB INLET LOCATED 18' SOUTH OF THE NORTHWEST PROPERTY CORNER OF SUBJECT PROPERTY (LOT 1R, BLOCK A, MONTEGO ADDITION).

ELEVATION=563.11'

SQUARE CUT WITH "X" SET ON THE SOUTHEAST CORNER OF A CURB INLET LOCATED 5' WEST OF THE SOUTH PROPERTY CORNER OF SUBJECT PROPERTY (LOT 1R, BLOCK A, MONTEGO ADDITION).

FLEVATION=562.56'

SITE DEVELOPMENT PLANS FOR QUIKTRIP STORE #0935

2012 S. GOLIAD STREET ROCKWALL, TEXAS

LOT 1R, BLOCK A MONTEGO ADDITION AND A PORTION OF LOT 2,BLOCK A ROCKWALL SHOPPING CENTER





MUNICIPAL CONTACT LIST:

CITY OF ROCKWALL

PLANNING AND ZONING DEPARTMENT 385 S. GOLIAD STREET ROCKWALL, TEXAS 75087 TEL: (972) 771-7745 CONTACT: RYAN MILLER

ENGINEERING / PUBLIC WORKS DEPARTMENT 385 S. GOLIAD STREET ROCKWALL, TEXAS 75087 TEL: (972) 771-7746 FAX: (972) 771-7748 CONTACT: AMY WILLIAMS, P.E.

CITY FIRE DEPARTMENT 305 E. BOYDSTUN AVE. ROCKWALL, TEXAS 75087 TEL: (972) 771–7770 FAX: (972) 771–7772 CONTACT: ARIANA HARGROVE (FIRE MARSHAL) BUILDING INSPECTIONS DEPARTMENT 385 S. GOLIAD STREET ROCKWALL, TEXAS 75087 TEL: (972) 772-6481 FAX: (972) 771-7748 CONTACT: JOHN ANKRUM (PLANS EXAMINER)

ENGINEERING / PUBLIC WORKS / FIELD OPERATIONS
385 S. GOLIAD STREET
ROCKWALL, TEXAS 75087
TEL: (972) 771-7746
FAX: (972) 771-7748
CONTACT: STEVE CLAWSON

PUBLIC WORKS DEPARTMENTT
1600 AIRPORT ROAD.
ROCKWALL, TEXAS
TEL: (972) 771-7730
CONTACT: RICK SHERER
(WATER/WASTEWATER MANAGER)

PRIVATE UTILITIES

CHARTER COMMUNICATIONS
TEL: (817) 298-3605
CONTACT: BRENT BASCOM

ONCOR ELECTRIC DELIVERY
TEL: (972) 551-7233
CONTACT: RANDY VOIGHT

ATMOS ENERGY (GAS)
TEL: (972) 485-6277
CONTACT: DINAH WOOD
Dinah.Wood@atmosenergy.com

AT&T SOUTHWEST TEL: (903) 457-2303 CONTACT: BRIAN DUNCAN bd5618@att.com

PROJECT CONTACT LIST:

SURVEYOR OF RECORD SURVEY CONSULTANTS, INC. WILLIAM J. JOHNSON, R.P.L.S. 811 E. PLANO PARKWAY, SUITE 117 PLANO, TEXAS 75074 TEL: (972) 424-7002 FAX: (972) 633-1702

ENGINEER OF RECORD R-DELTA ENGINEERS, INC. TBPE FIRM NO. F-001515 BRIAN P. PATRICK, P.E. 618 MAIN STREET GARLAND, TEXAS 75040 TEL: (972) 494-5031 FAX: (972) 487-2270 QT REAL ESTATE PROJECT MANAGER QUIKTRIP CORPORATION JAKE PETRAS 1120 NORTH INDUSTRIAL BLVD. EULESS, TEXAS 76039 TEL. (817) 786-3188 FAX: (918) 615-7287

OT CIVIL PROJECT MANAGER JOHN DROZ 4705 SOUTH 129TH EAST AVENUE TULSA, OK 74134 TEL: (918) 615-7080

SHEET INDEX

 NO.
 TITLE

 C001
 COVER SHEET

 C030
 DEMOLITION PLAN

 C100
 SITE PLAN

 C110
 GRADING PLAN

10 | 11

C110 GRADING PLAN

C111 DETAILED GRADING PLANS

C112 DETAILED CANOPY GRADIN

C122 DETAILED CANC

C130 PAVING
C140 EROSION CONTROL PLAN PHASE 1

C140 EROSION CONTROL PLAN PHASE 1
C141 EROSION CONTROL PLAN PHASE 2

RETAINING WALL

C150 C200 C300

C300 STORM SEWER PROFILE
C310 SANITARY SEWER PROFILE
C400 PRE-DEVELOPED DRAINAGE MAP
C410 POST-DEVELOPED DRAINAGE MAR

C410 POST-DEVELOPED DRAINA
C420 DRAINAGE CALCULATIONS
C500 MISC. SITE DETAILS

C520 PAVING DETAILS
C521 PAVING DETAILS
C522 PAVING DETAILS
C523 PAVING DETAILS

C540 DRAINAGE DETAILS
C541 DRAINAGE DETAILS

C551 TEMPORARY TRAFFIC CONTROL

TRENCHING DETAILS

"ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN REMAINS WITH THE DESIGN ENGINEER. THE CITY OF

ROCKWALL, IN REVIEWING AND RELEASING PLANS FOR CONSTRUCTION, ASSUMES NO RESPONSIBILITY

FOR ADEQUACY OR ACCURACY OF DESIGN.

CD113 ADA COMPLIANCE REFERENCE PLAN

CD131 BUILDING PAVING PLAN
CD170 SECURITY PLAN

CD510 ADA DETAILS
CD530 TRENCHING DETAILS

CD531

L100 LANDSCAPE PLAN
L500 LANDSCAPE DETAILS

PROJECT NOTES:

- 1. THE EXISTENCE AND LOCATIONS OF ALL UNDERGROUND UTILITIES SHOWN ON THE DRAWINGS WERE OBTAINED FROM PUBLIC RECORDS AND FIELD TOPOGRAPHIC SURVEY BY OTHERS. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY FOR UTILITIES NOT SHOWN OR NOT IN THE LOCATION SHOWN. THE CONTRACTOR SHALL DETERMINE THE DEPTH AND LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO TRENCHING, EXCAWATION, AND/OR REMOVAL AND SHALL BE REQUIRED TO TAKE ANY PRECAUTIONARY MEASURES TO PROTECT ALL LINES SHOWN AND/OR ANY UNDERGROUND UTILITIES NOT SHOWN ON THE PLANS AND OUTSIDE THE PROJECT AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL FRANCHISE AND CITY UTILITIES AT LEAST 48 HOURS PRIOR TO EXCAVATION. THE CONTRACTOR SHALL ALSO CONTACT TEXASBI1 (OR 800-344-8377) PRIOR TO EXCAVATION TO FACILITATE UNDERGROUND DAMAGE PREVENTION.
- 2. THE CONTRACTOR IS RESPONSIBLE FOR THE SAFETY OF MATERIALS, THE JOBSITE, WARNING NOTICES, AND ALL OTHER ASPECTS OF THIS PROJECT UNTIL FINAL ACCEPTANCE BY THE CITY/OWNER.
- 3. TRAFFIC BARRICADES WILL BE REQUIRED FOR UTILITY AND PAVING CONSTRUCTION. BARRICADES AND ANY OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE INSTALLATION SHOWN IN THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" PUBLICATION, AS CURRENTLY AMENDED BY THE TEXAS DEPARTMENT OF TRANSPORTATION. CONTRACTOR SHALL INSTALL TEMPORARY STOP SIGNS AND ANY OTHER TRAFFIC CONTROL DEVICES AS NECESSARY IN ACCORDANCE WITH THIS MANUAL. CONTACT CITY PUBLIC WORKS AND TRAFFIC ENGINEERING DEPARTMENT PRIOR TO SETTING BARRICADES.
- 4. THE CONTRACTOR SHALL COORDINATE HIS UTILITY WORK WITH ADJUSTMENTS NECESSARY BY FRANCHISE UTILITIES. CONTRACTOR SHALL VERIFY DEPTHS AND LOCATIONS OF ALL EXISTING UTILITY LINES AT POINTS WHERE NEW LINES OR SERVICES ARE PROPOSED.
- 5. CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS AND ALL UTILITY SERVICES TO THE EXISTING PROPERTIES AT ALL TIMES DURING CONSTRUCTION OF THE PROJECT. HE SHALL COORDINATE THE NECESSARY CLOSING AND REMOVAL OF THE EXISTING PAVEMENT, RELOCATION OF EXISTING UTILITIES, AND INSTALLATION OF PROPOSED UTILITIES, NOT LIMITED TO SANITARY SEWER, WATER, ELECTRICITY, TELECOMMUNICATIONS & GAS WITH THE CITY AND PROPERTY OWNERS. CONTRACTOR SHALL REPAIR, AT NO COST TO THE OWNER, ALL DAMAGES THAT MAY OCCUR TO THE PAVEMENT, WALKWAYS, STRUCTURES AND ANY OTHER FACILITY THAT IS TO REMAIN UNDISTURBED DURING THE DEMOLITION AND CONSTRUCTION PHASES.
- 6. TRENCH AND EXCAVATION SAFETY DRAWINGS AND DETAILS ARE NOT PROVIDED WITHIN THE PROJECT PLANS. ALL TRENCH AND EXCAVATION SAFETY AND SHORING SHALL CONFORM TO ALL CODES, REGULATIONS, SPECIFICATIONS, AND LAWS OF THE CITY OF ROCKWALL, STATE OF TEXAS, AND UNITED STATES GOVERNMENT, WITH PARTICULAR EMPHASIS ON ALL APPLICABLE REQUIREMENTS OF OCCUPATIONAL SAFETY HEALTH ADMINISTRATION (OSHA) STANDARDS, OSHA 2207, PART 1926, AND OSHA 2226. THE CONTRACTOR SHALL PROVIDE TRENCH AND EXCAVATION SAFETY SHORING DESIGN. THE DESIGN SHALL BE PREPARED, SIGNED, AND SEALED BY A LICENSED PROFESSIONAL ENGINEER (STATE OF TEXAS).
- 7. CONTRACTOR SHALL SHORE AND PROTECT EXISTING LIGHT AND POWER POLES AND OTHER UTILITIES AS NECESSARY THROUGHOUT CONSTRUCTION OF THE PROJECT.
- 8. ALL BFR'S MUST COMPLY WITH TEXAS ACCESSIBILITY STANDARDS (TAS) OF THE ARCHITECTURAL BARRIERS ACT AND AMERICANS WITH DISABILITIES ACT (ADA). THE CONTRACTOR SHALL COMPLY WITH ALL ADA AND TAS REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF CONFLICTS ARISE BETWEEN THE PLANS AND/OR ADA OR TAS REQUIREMENTS. REFER TO TECHNICAL SPECIFICATIONS, ADA, AND TAS FOR ADDITIONAL REQUIREMENTS.
- 9. REFER TO PROJECT GEOTECHNICAL SPECIFICATIONS IN GFAC ENGINEERING, INC.'S GEOTECHNICAL EVALUATION REPORT FOR GFAC PROJECT NO. 21012047, ITILED "QUILKTRIP STORE NO. 935, IH-30 AND HIGHWAY 205 (GOLIAD STREET), ROCKWALL, TEXAS" DATED JANUARY 30, 2013 FOR SITE PREPARATION, EXCAVATION, FILL COMPACTION, SUBGRADE, FOUNDATION, TESTING REQUIREMENTS, ETC. THIS DOCUMENT SHALL BECOME A PART OF THESE PLANS AND SPECIFICATIONS.
- REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.

RECORD DRAWING
TO THE BEST OF OUR KNOWLEDGE,
R-DELTA ENGINEERS, INC. HEREBY
STATES THAT THIS PLAN REFLECTS
AS-BUILT CONDITIONS AND IS
BASED ON LIMITED FIELD SURVEYING
AT THE SITE AND INFORMATION
PROVIDED BY THE CONTRACTOR.



CE NO. CD0010 000

BEAN PAIL FATON

THE STAL APPLANTS ON THIS DOCUMENT THE STAL APPLANTS ON THIS DOCUMENT THOUGHT CONTROL THE PROPERTY OF THE STATE OF THE STA

ENGINER R 618 MAIN STREET GARLAND, TEXAS 75040 Phone: (972) 494-5031 Fox: (972) 487-2270

TBPF Firm No. F-001515

rip No. 0935 of Goliad and 1-30 rockwall, tx.

QuikTrip



COPPAIGN GUICERY CORPORATION 20
 ANY CONSTITUENCE DESCRIPTION TO ANY CONTRICTORY C

REV DATE DESCRIPTION
ORIGINAL ISSUE DATE: 06/18/14

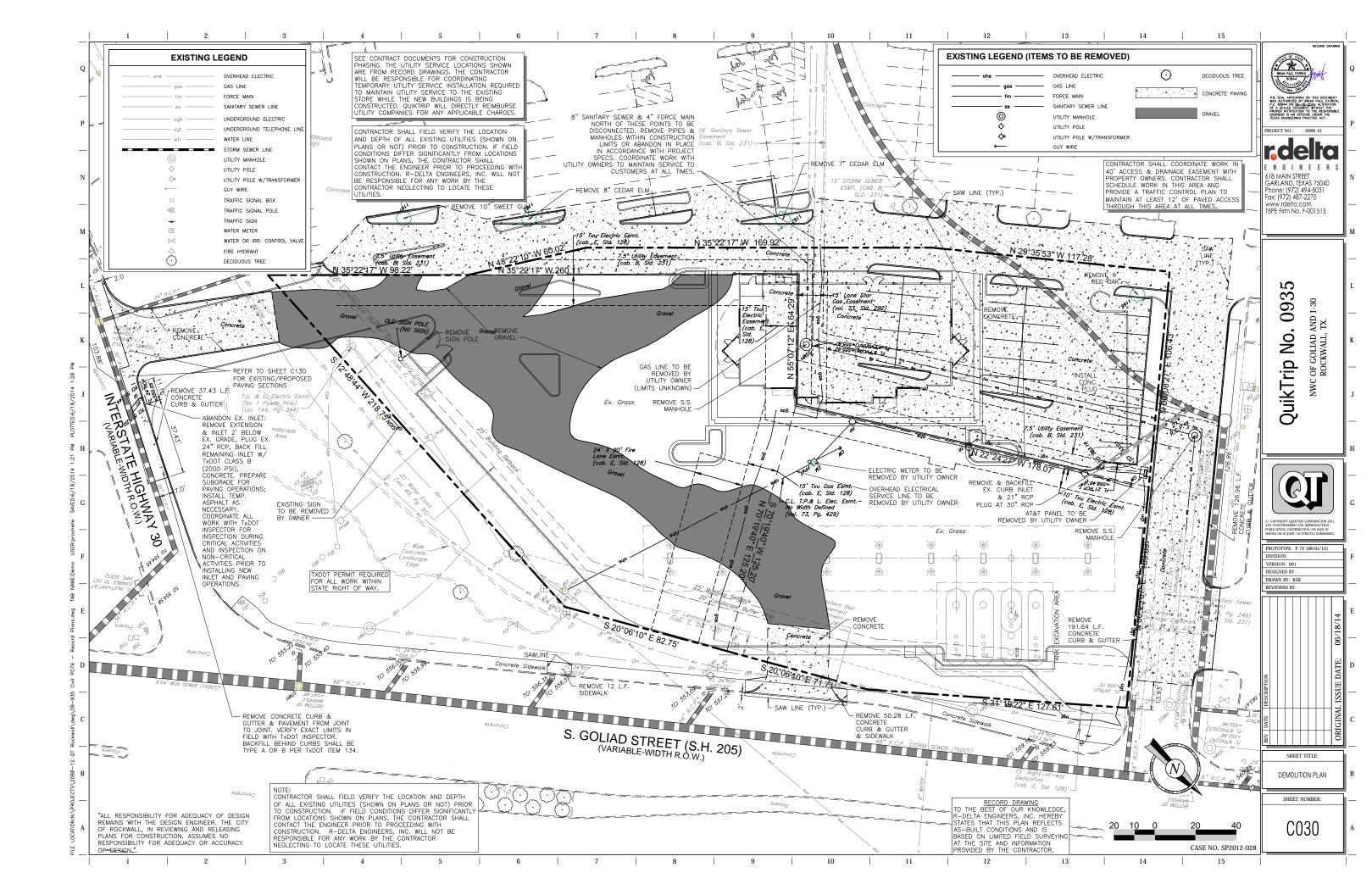
SHEET TITLE:

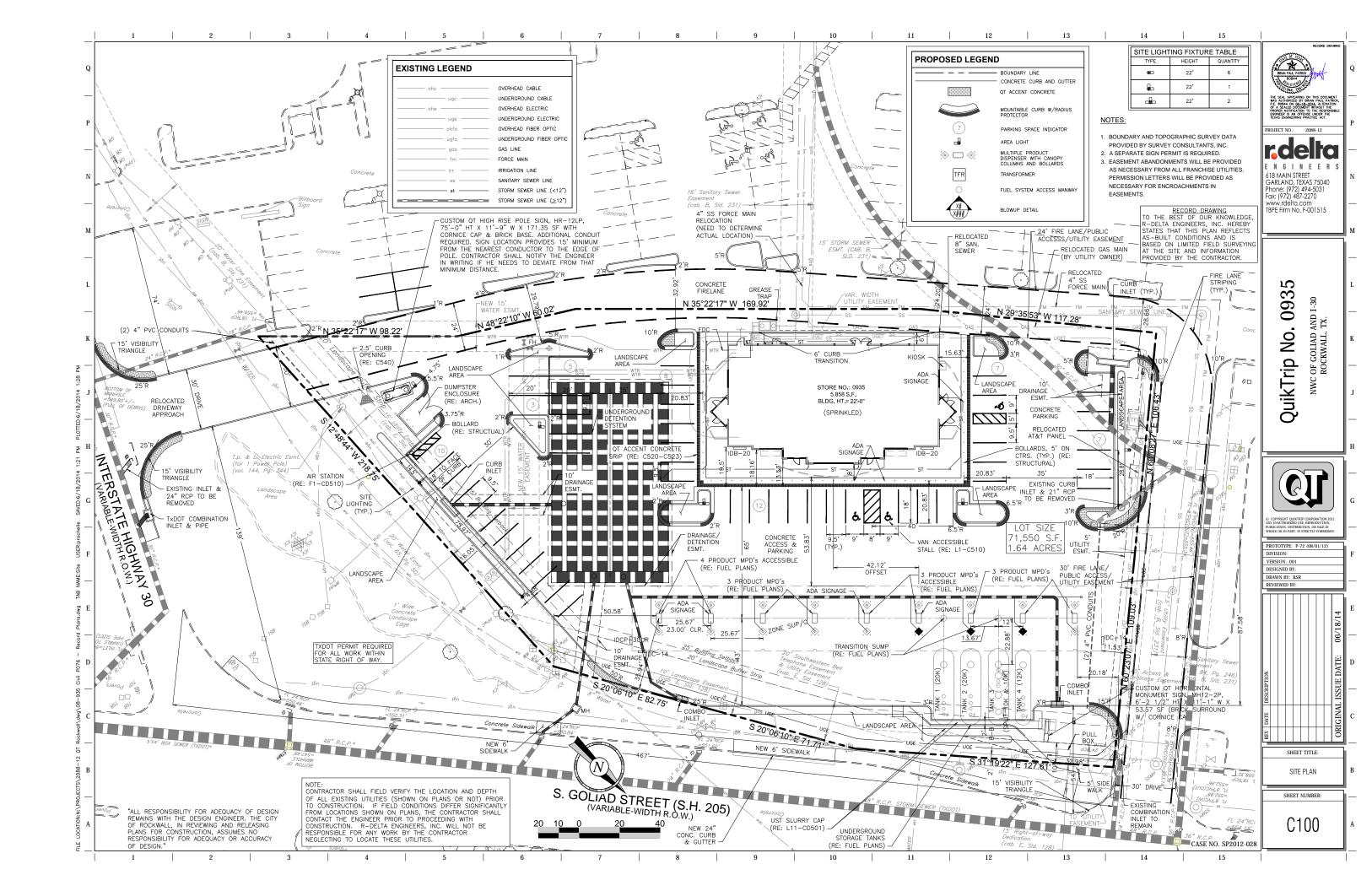
COVER SHEET

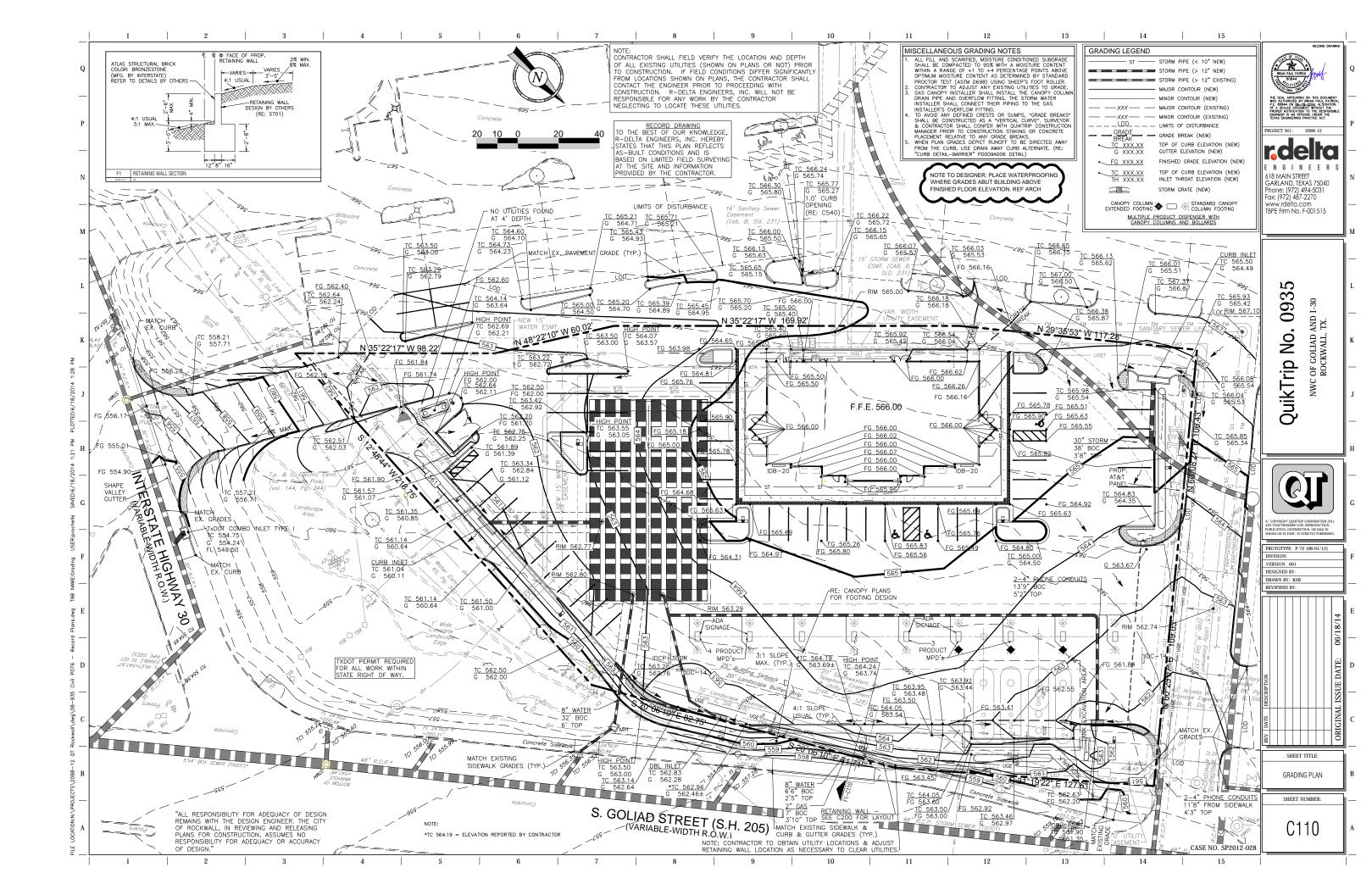
SHEET NUMBER:

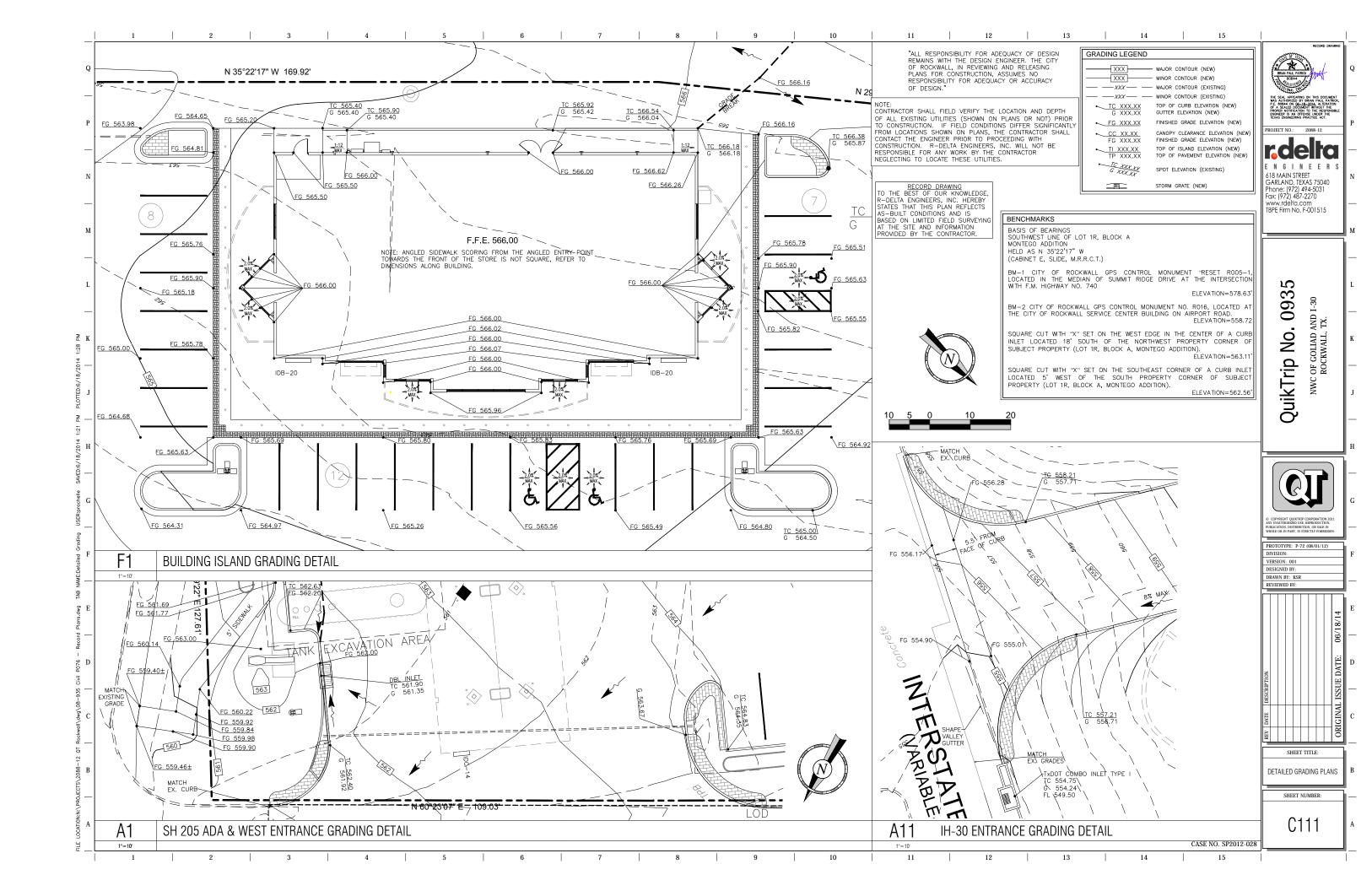
C001

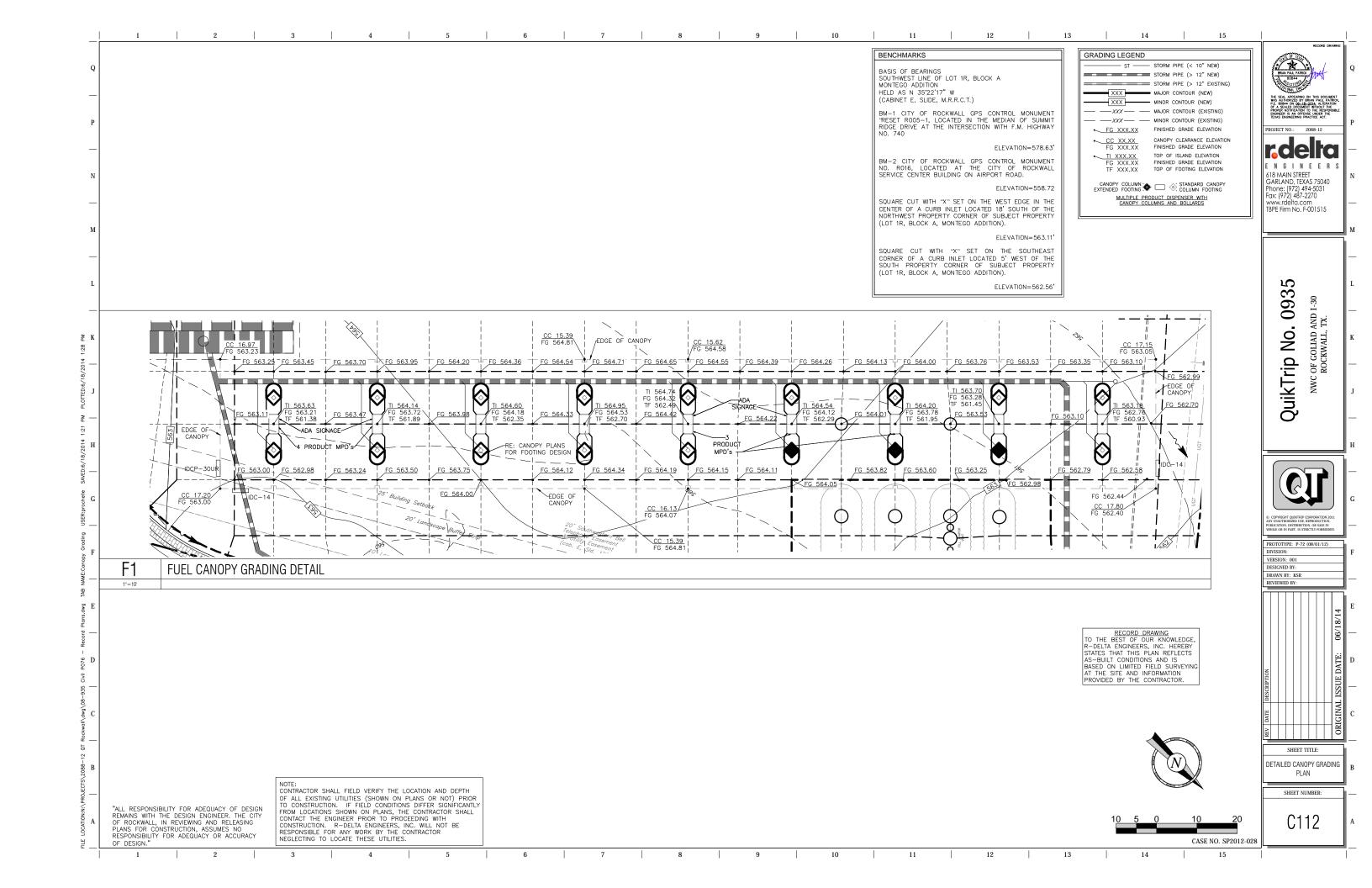
3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |

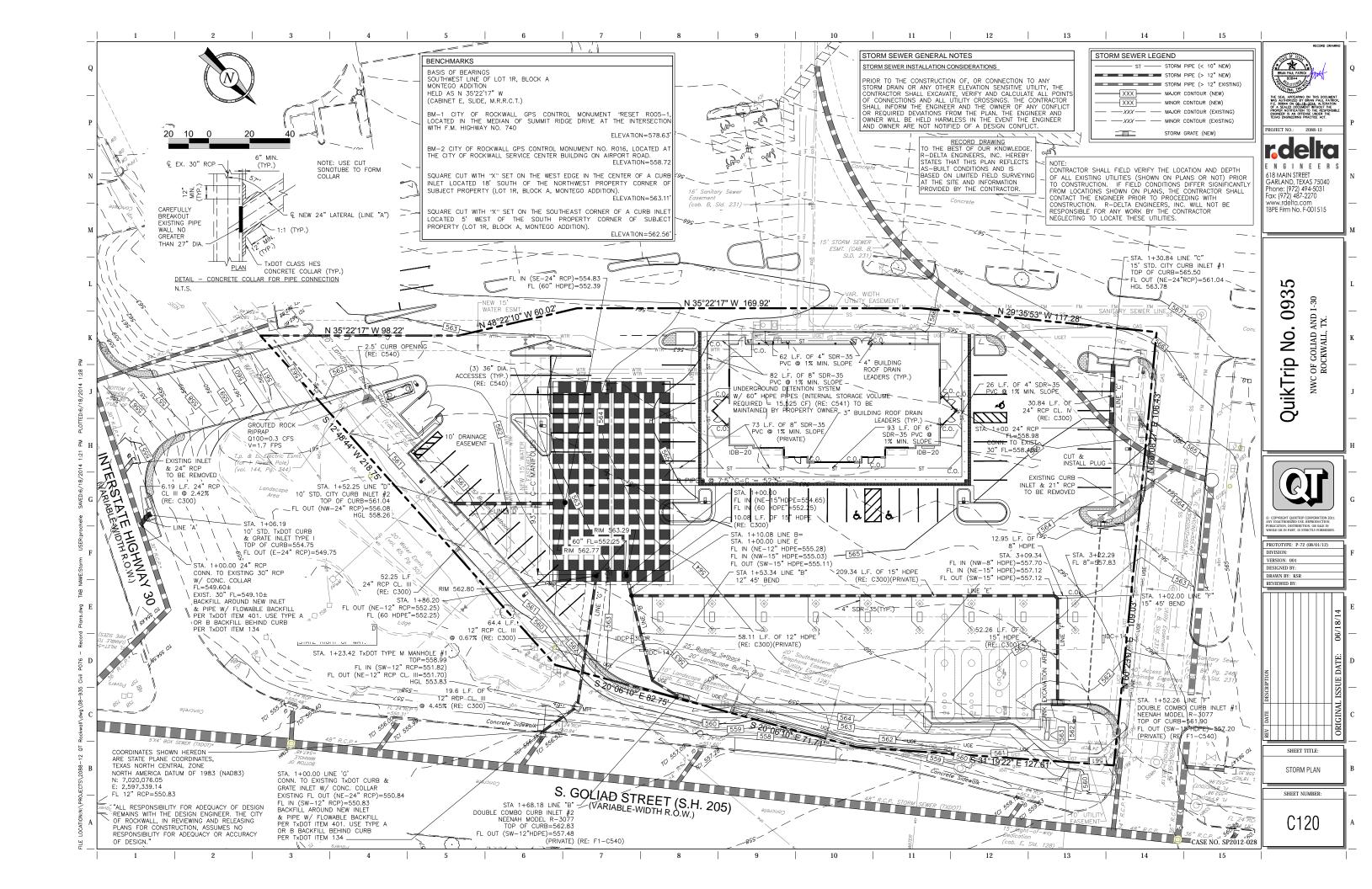


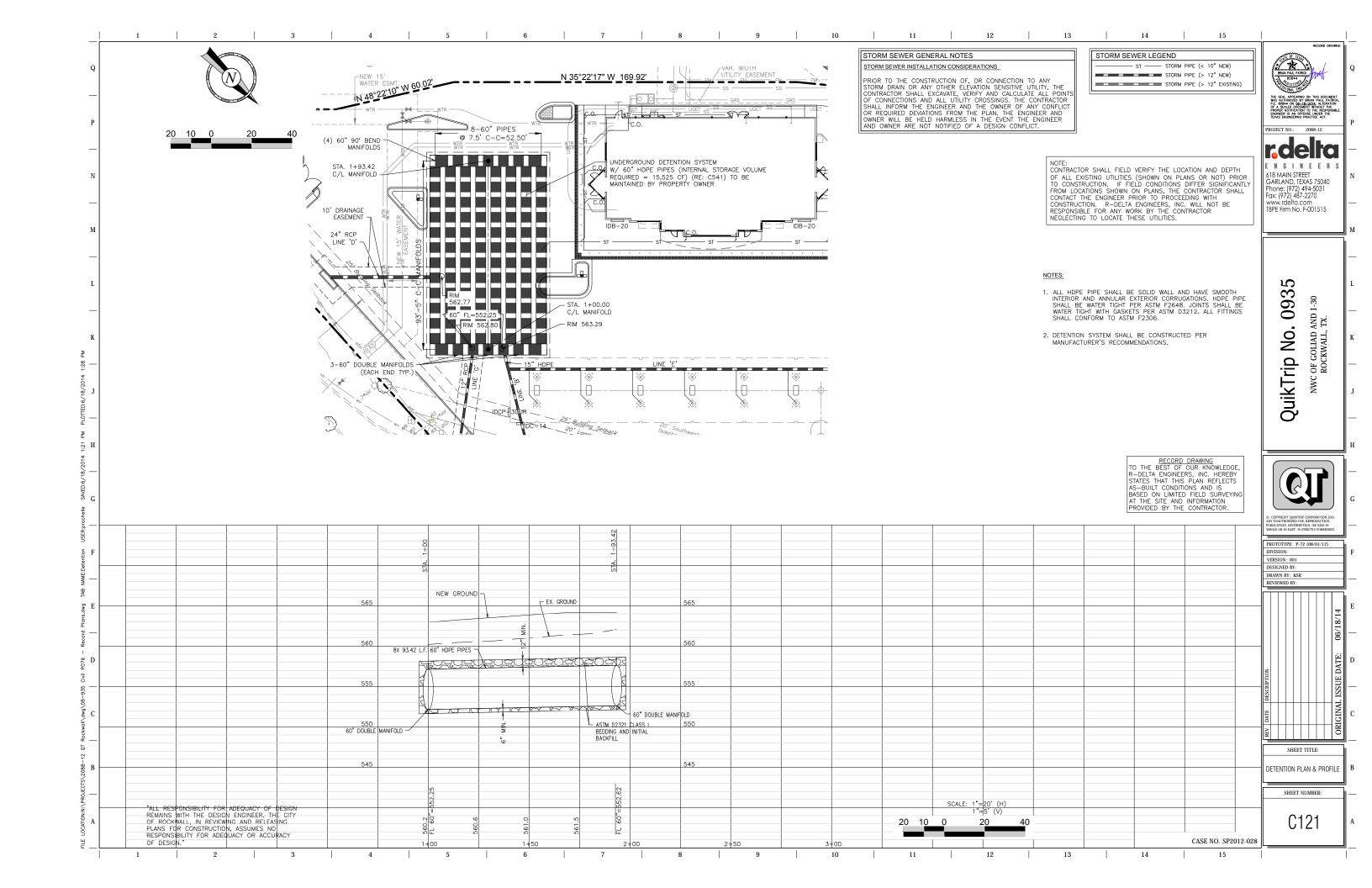


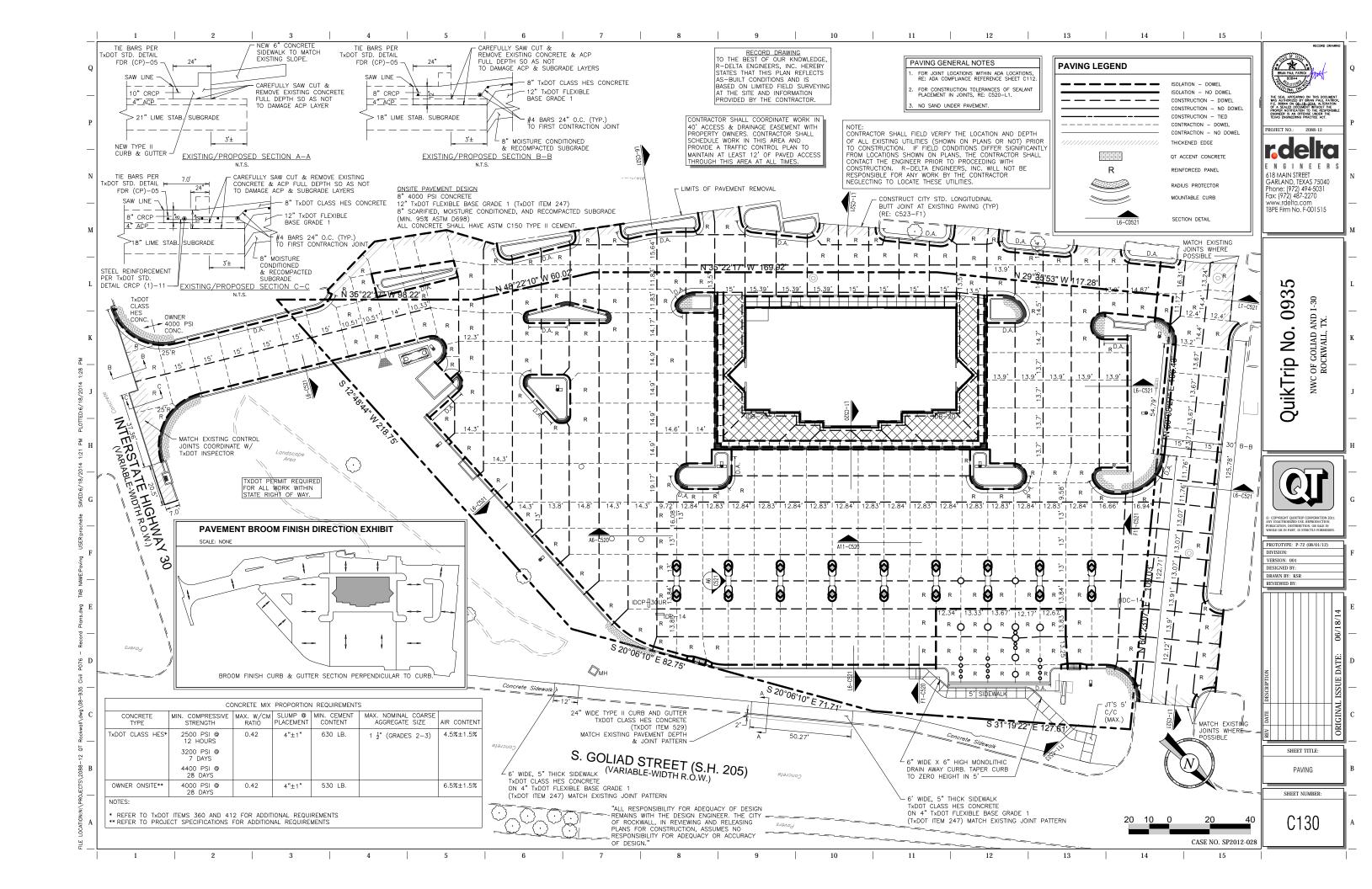


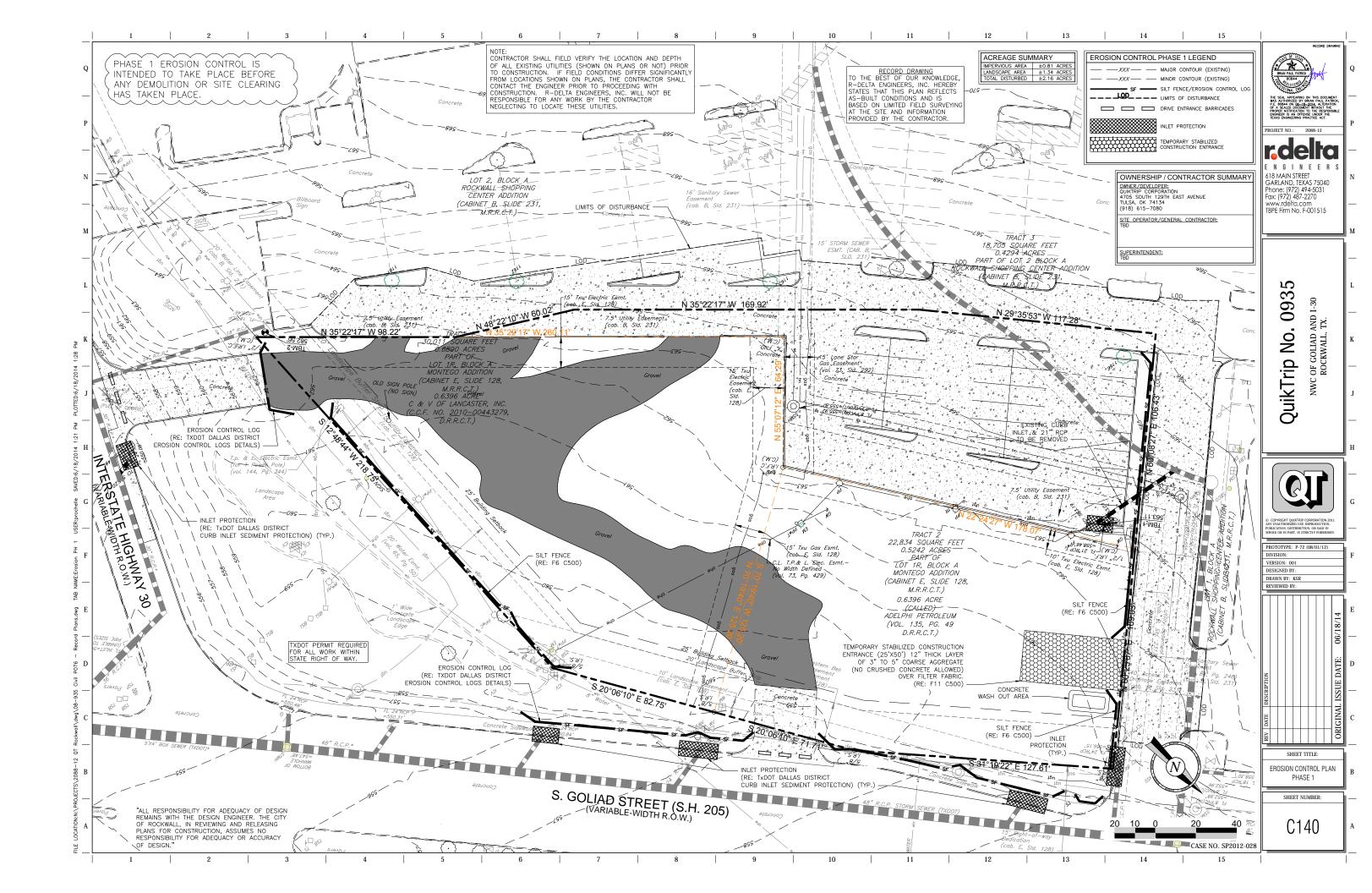


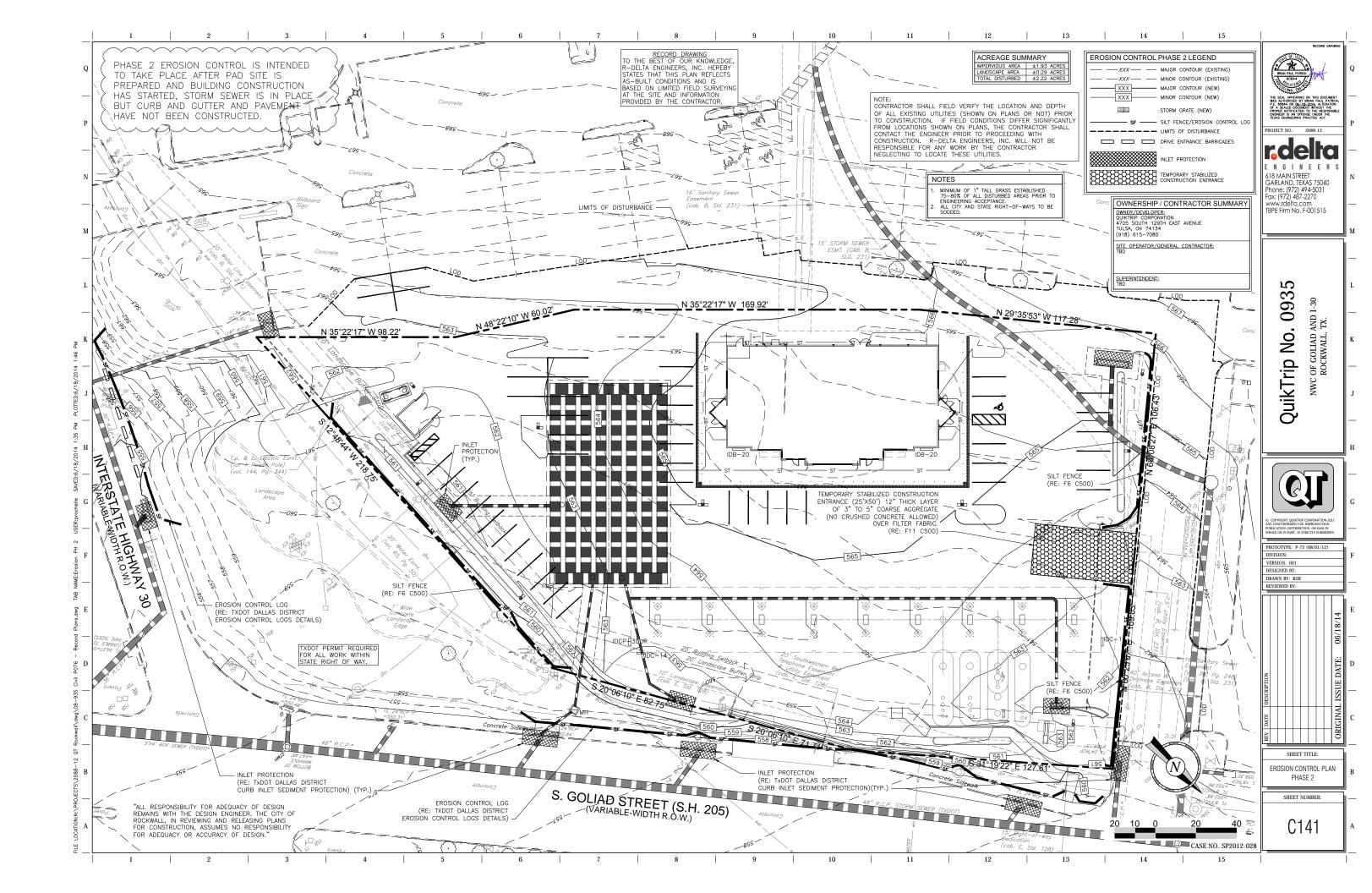


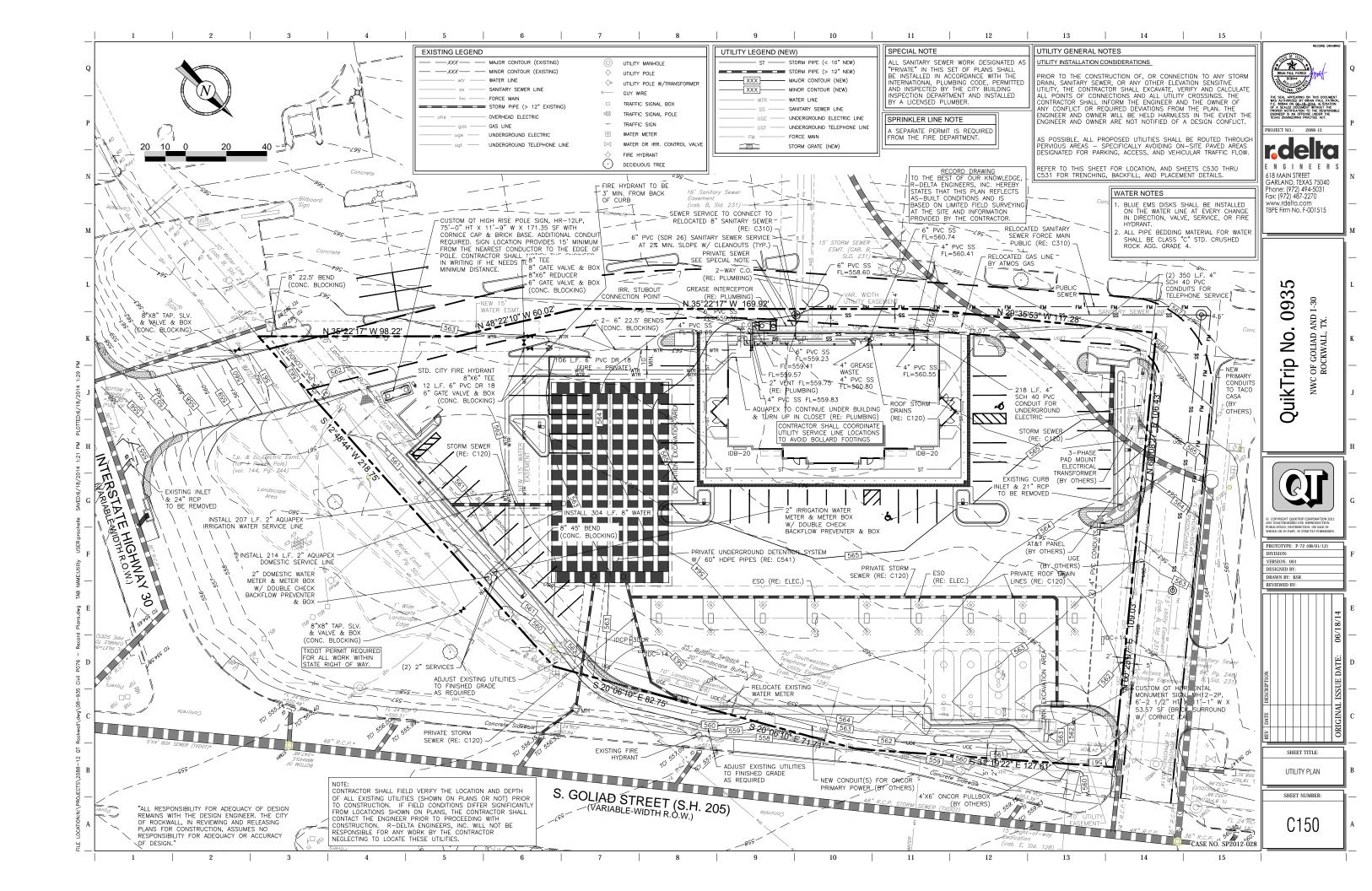


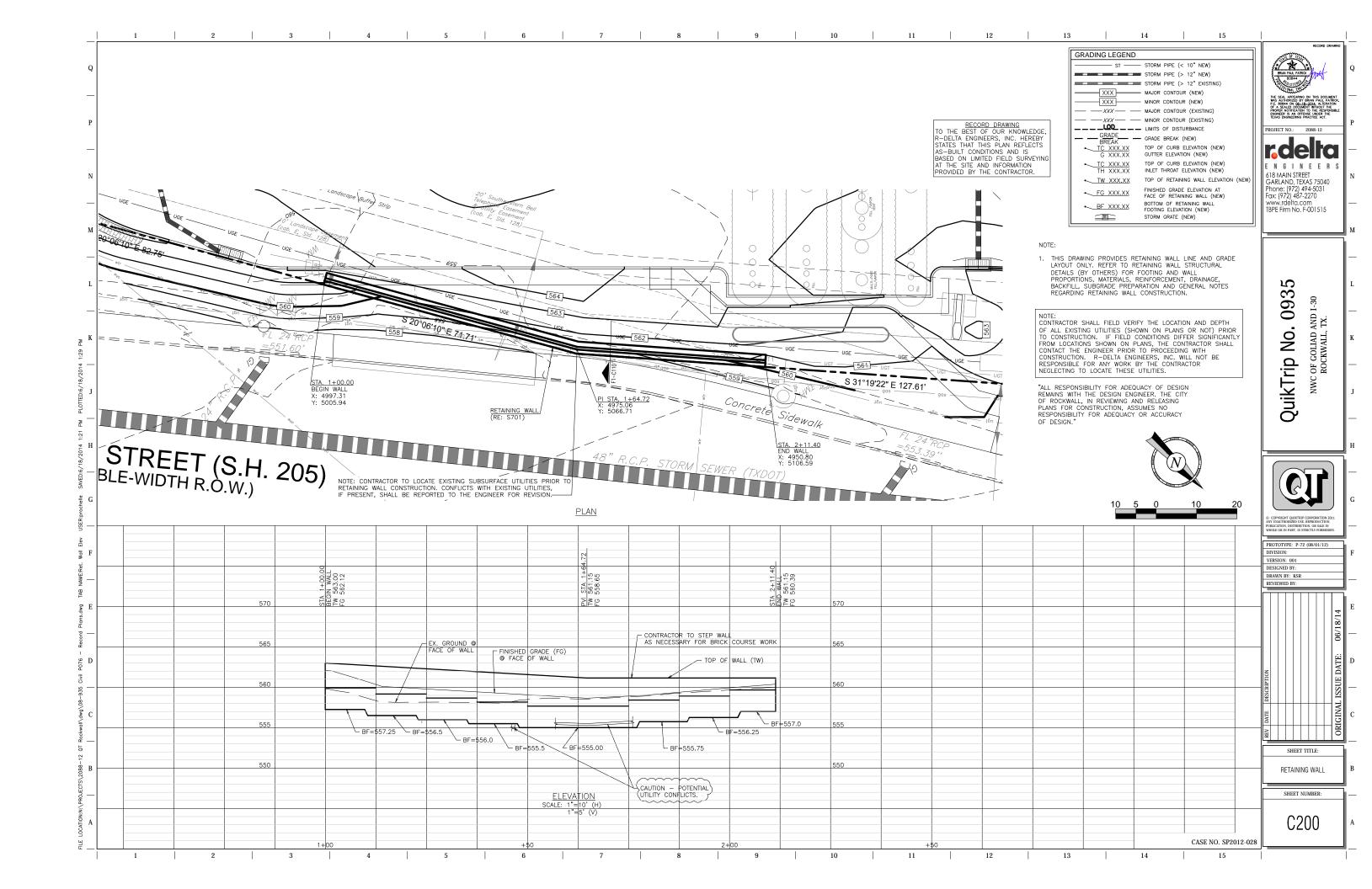


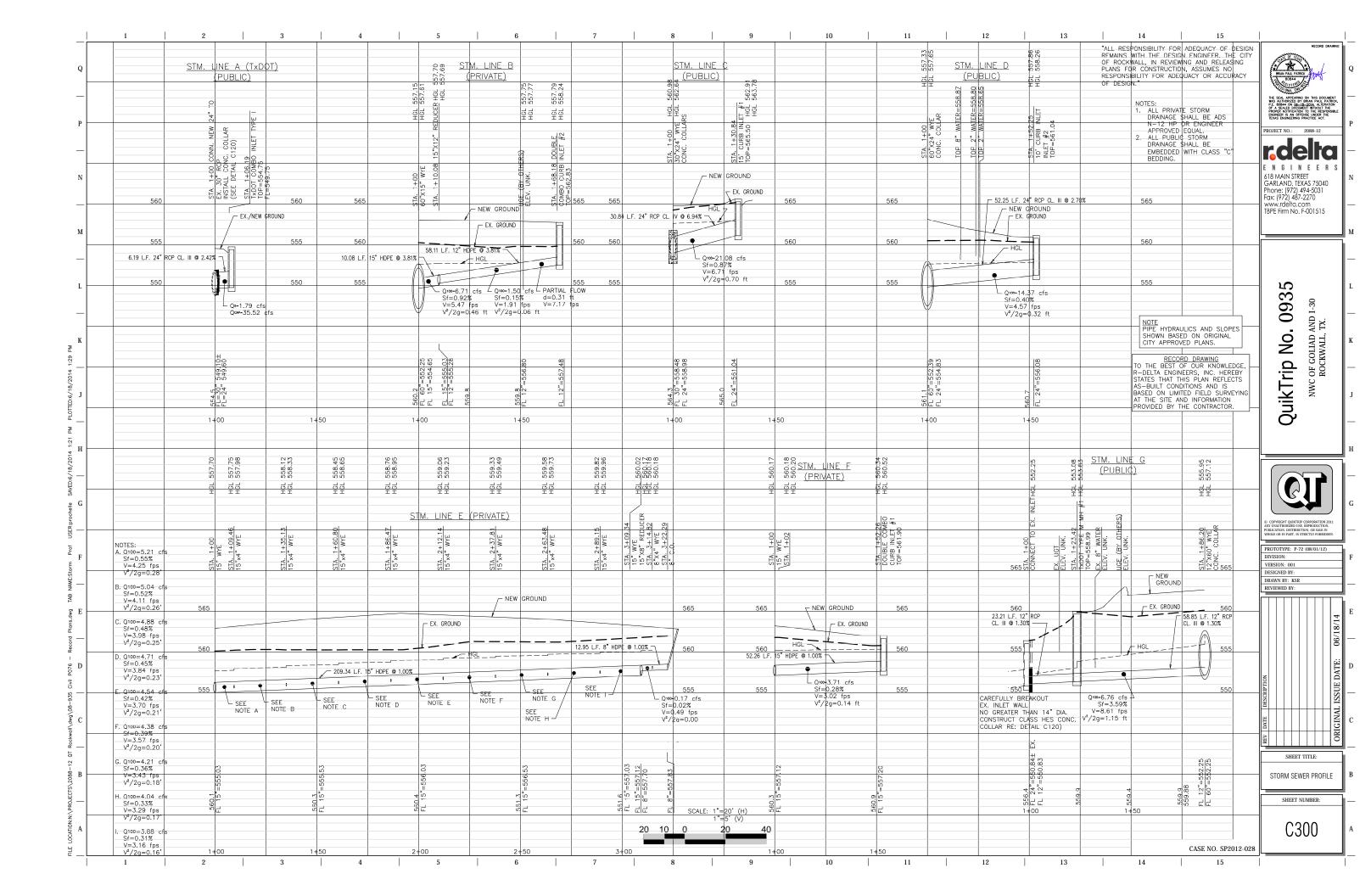


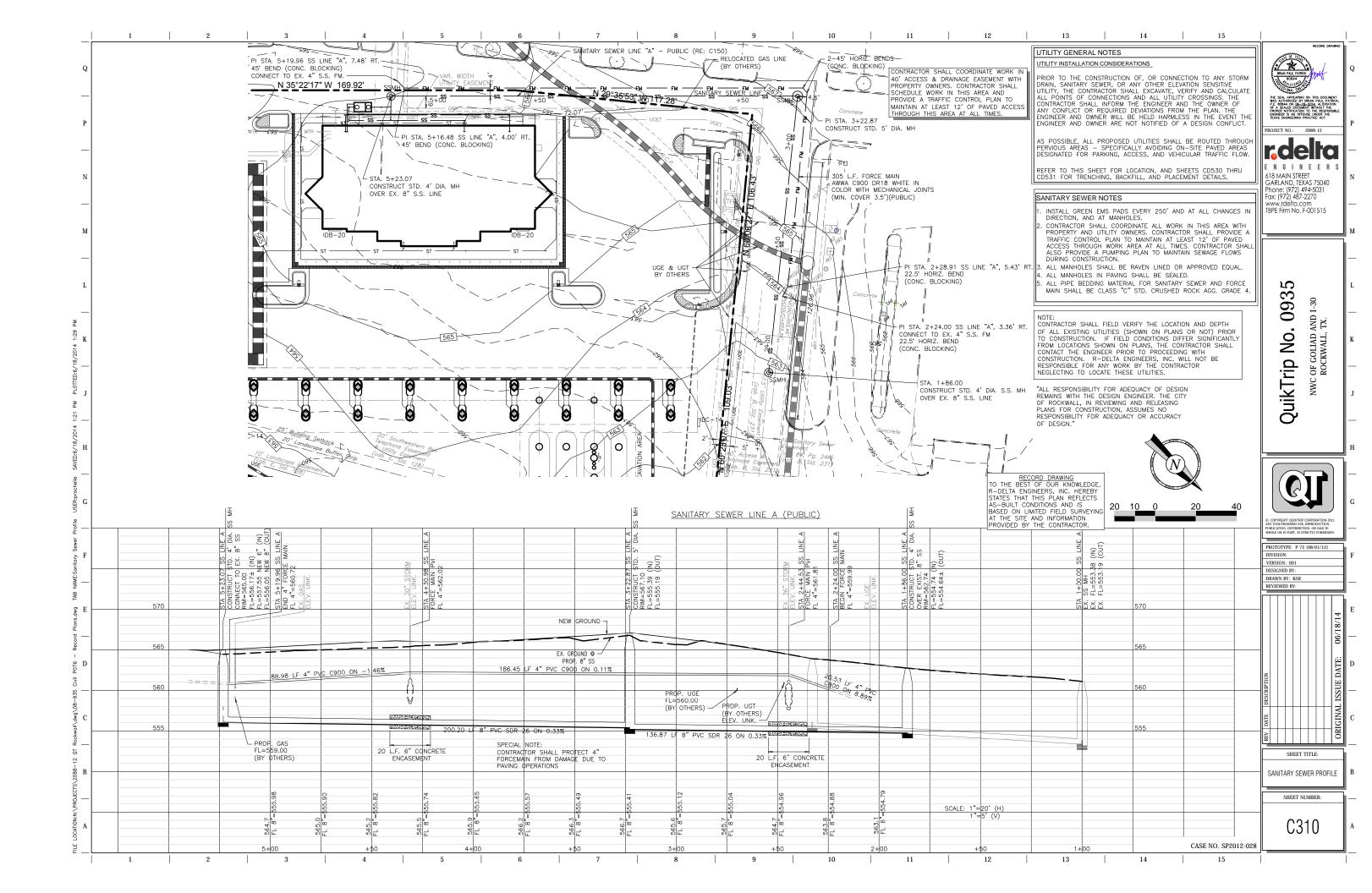


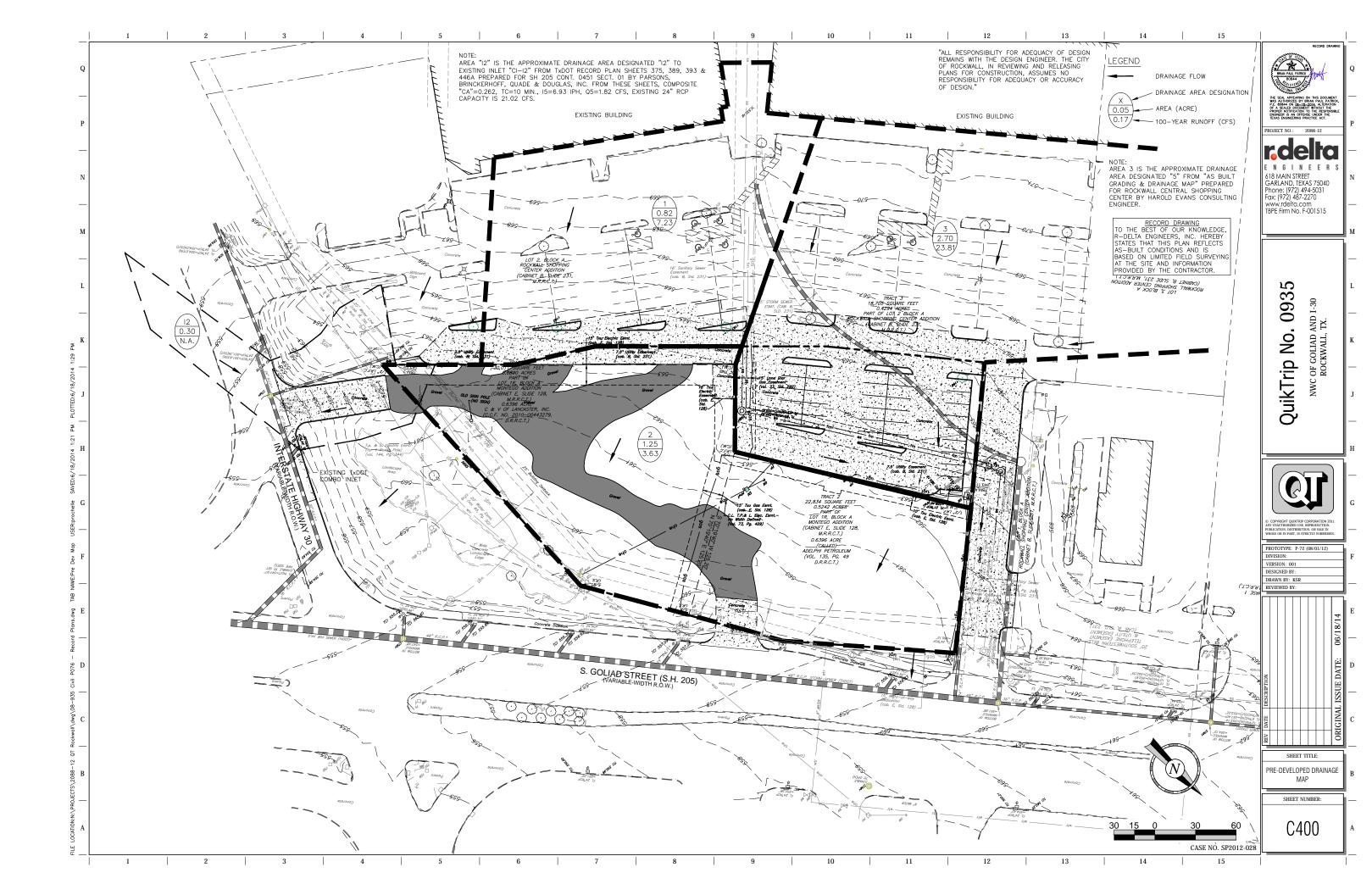


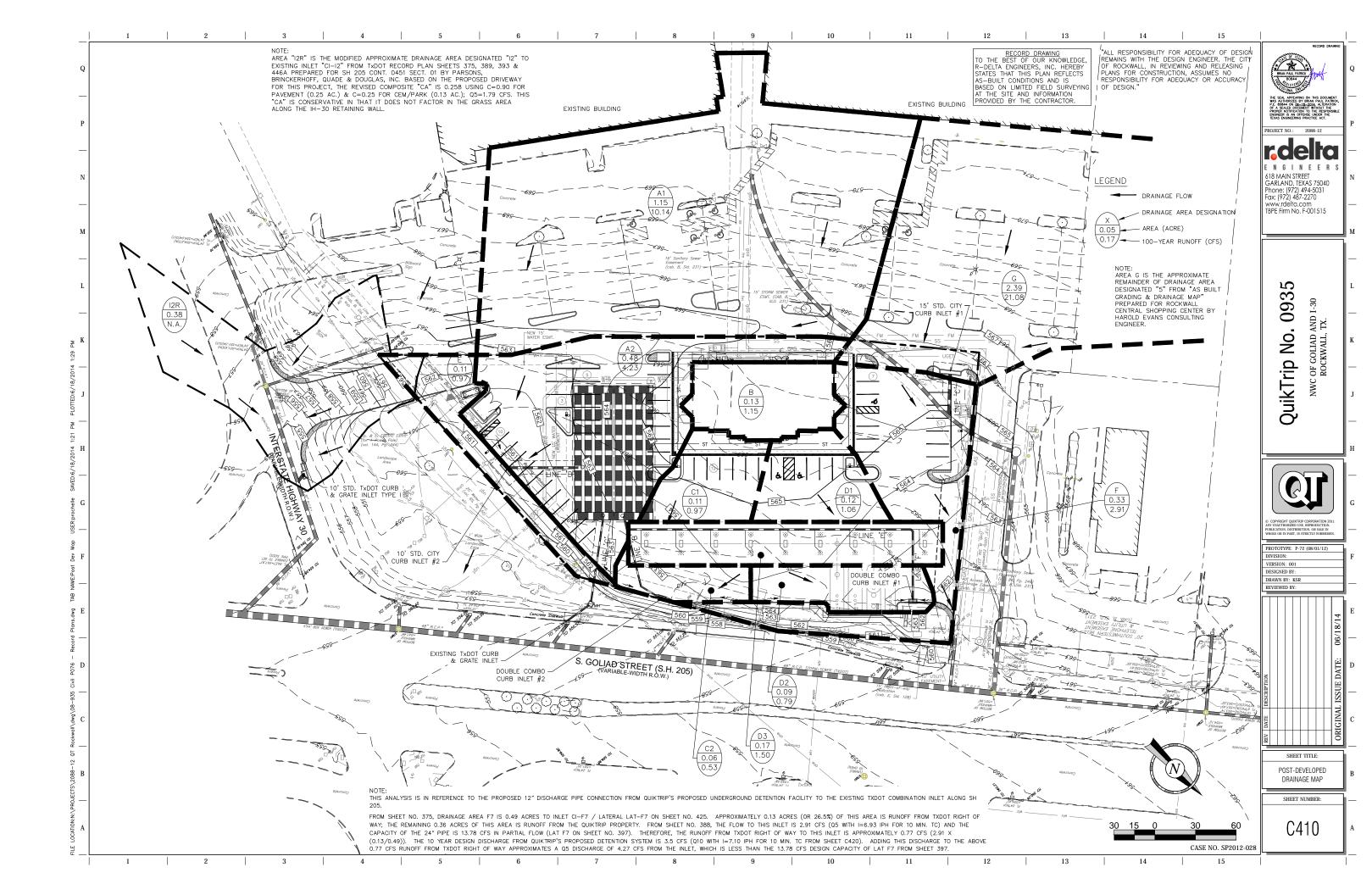












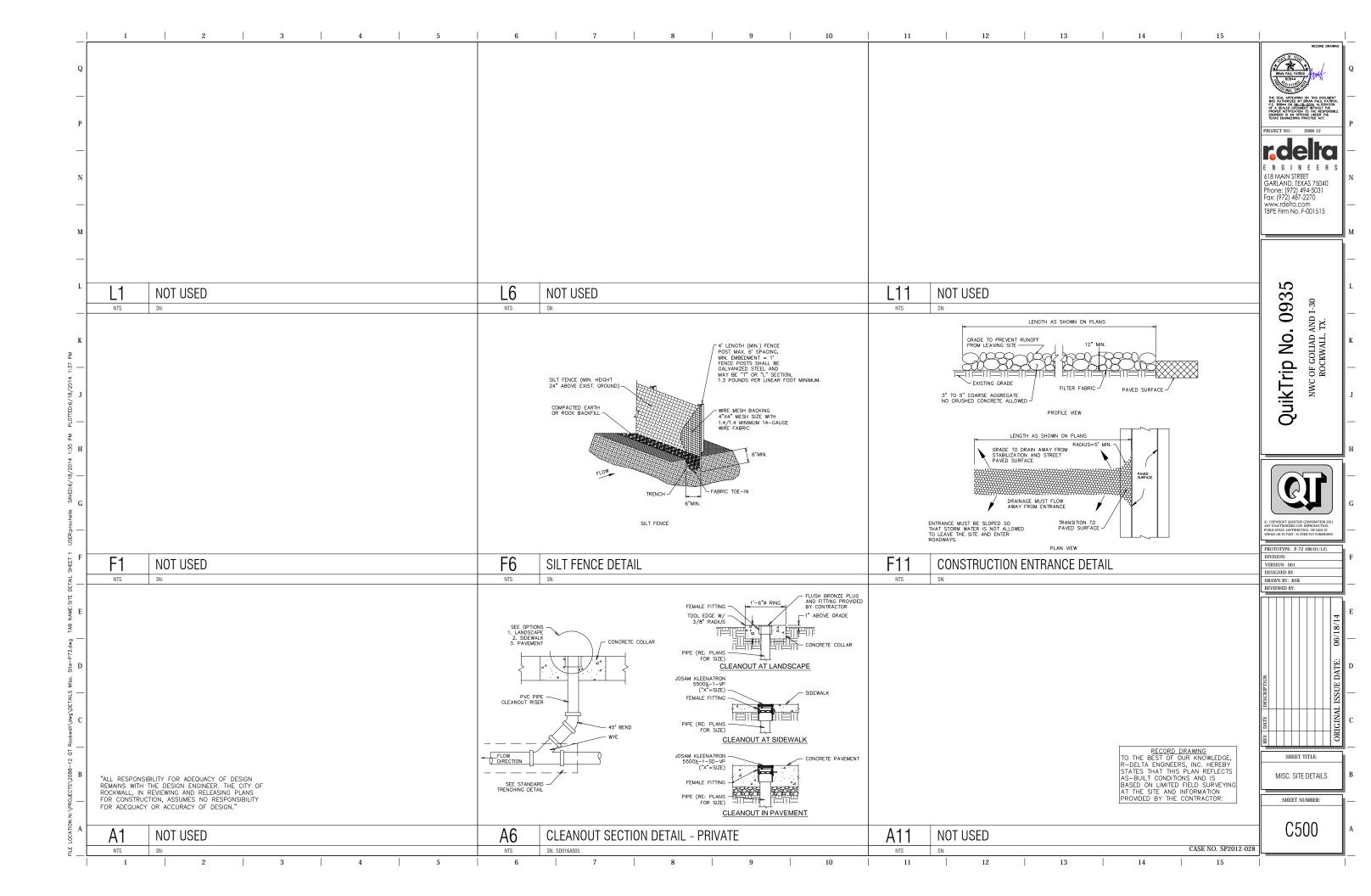
				Н	IYDROLOGIC	CALCULATI	ONS - EXISTING	CONDITIO	ONS		BRANN 6-	пть	100-VP	LATIONS - PROPO	10 VP	5-YR	0.01	
	DRAINAGE AREA ID (AREA (ACRES) "A	" TIME (MIN.)	RUN-OFF COE		I" Q100=CIA (CFS)	25-YR NTENSITY "I" Q25=C (CFS)	INTENSITY	"I" Q10=CIA (CFS)	5-YR NTENSITY "I" Q5=CIA (CFS) COMMENT	DRAINAGE AREA (ACRES) "A"	TIME (MIN.) RUN-OFF COEF. "		Q100=CIA (CFS) INTENSITY "I" (IPH)	Q25=CIA INTENSITY "I' (IPH)	" Q10=CIA (CFS) INTENSITY "I" (IPH)	Q5=CIA (CFS) COMMENT	BRIAN PAUL PATRIC
_	1	0.82	10	0.90	(IPH) 9.80	7.23	(IPH) (61 3) 8.30 6.13	(IPH)	5.24	(IPH) 6.10 4.50 OFFSITE	A1 1.15 A2 0.48	10 0.90 10 0.90	9.80 9.80	10.14 8.30 4.23 8.30	8.59 7.10 3.59 7.10	7.35 6.10 3.07 6.10	6.31 TO DETENTION 2.64 TO DETENTION	80844 0/51E8
	2 3	1.25 2.70	20 10	0.35 0.90	8.30 9.80	3.63 23.81	6.60 2.89 8.30 20.17		2.58 17.25	4.90 2.14 ONSITE 6.10 14.82 OFFSITE	B 0.13 C1 0.11	10 0.90 10 0.90	9.80 9.80	1.15 8.30 0.97 8.30	0.97 7.10 0.82 7.10	0.83 6.10 0.70 6.10	0.71 TO DETENTION 0.60 TO DETENTION	THE SEAL APPEARING WAS AUTHORIZED BY E
Ε.	TOTALS	4.77	_	_		34.68	29.18		25.07	21.47	C2 0.06 D1 0.12	10 0.90 10 0.90	9.80 9.80	0.53 8.30 1.06 8.30	0.45 7.10 0.90 7.10	0.38 6.10 0.77 6.10	0.33 TO DETENTION 0.66 TO DETENTION	OF A SEALED DOCUME PROPER NOTIFICATION
					l .	1 0					D2 0.09 D3 0.17	10 0.90	9.80	0.79 8.30	0.67 7.10	0.58 6.10	0.49 TO DETENTION	∐
											E 0.11	10 0.90	9.80 9.80	0.97 8.30	0.82 7.10	1.09 6.10 0.70 6.10	0.60 BYPASS	
											F 0.33 G 2.39	10 0.90 10 0.90	9.80 9.80	2.91 8.30 21.08 8.30	2.47 7.10 17.85 7.10	2.11 6.10 15.27 6.10	1.81 BYPASS 13.12 OFFSITE	r.de
ESENT C	CONDITIONS:		Undeveloped								TOTALS 5.14		-	45.33	38.40	32.84	28.22	E N G I N
=	0.3		,								(1) TOTAL FLOW TO DETENTION	N = RUNOFF FROM AREAS "A+B+C+D":	= CFS	20.37	17.26	14.76	12.68	618 MAIN STREI GARLAND, TEX
= 00=	2 8.		-	= 6.	6 IPH	110	5.9 IPH	15=	4.9 IPH		(2) TOTAL DETENTION BYPASS	FLOW = RUNOFF FROM AREAS "E+F":	= CFS	3.88	3.29	2.81	2.42	Phone: (972) 4 Fax: (972) 487-
: LOO=CIA:	1.8 A= 5.2		-	5= 4.2	0 CFS	Q10=	3.76 CFS	Q5=	3.12 CFS	(AREA BASED ON ORIG. PROPERTY) (ALLOWABLE RELEASES)	(3) TOTAL RUNOFF FROM SUBJ		CFS	16.05	13.60	11.63	9.99	TBPE Firm No. F
					0 0.0	420	3.70 0.3	43	5.12 6.5	(LESTINGE RELEIGES)								
ESENT C	CONDITIONS: 0.9		Developed Co	mmercial							(4) ALLOWABLE RELEASE FRO		CFS	5.29	4.20	3.76	3.12	
= 00=	1 9.	-	۷ اعد	0	2 (0)	110	7.1 IDII	15-	C 1 IPU		(5) ADJUSTED ALLOWABLE RE	ELEASE = (1)-(2)-(3)+(4) =	CFS	5.73	4.57	4.08	3.40	
JU=	0.4			= 8	3 IPH	110	7.1 IPH	15=	6.1 IPH	(AREA BASED ON TOTAL FLOW AREA TO DETENTION - ORIG. PROPE	RTY AREA 1.82 AC)							
00=CIA	A= 4.3	2 C	S Q2	5= 3.6	6 CFS	Q10=	3.13 CFS	Q5=	2.69 CFS	(ALLOWABLE RELEASES)			Ratina Table	e for Circular Orifice	= 1			
TALS													Input Data		•			35
ESENT INDITIO													Headwater (Elevation 557.25 ft evation 552.63 ft				93
.00=	2.3 9.6			5= 70	6 CFS	Q10=	6.89 CFS	Q5=	5.81 CFS	(AREA BASED ON TOTAL FLOW TO DETENTION) (ALLOWABLE RELEASES)			Tailwater Ele	evation 552.25 ft Coefficient 0.60				
JU-	9.6		J (12)	. /.8	5 513	Q10-	0.05 CF3	=ري	J.01 Cr3	6 growung ingruory)			Diameter 0.					-
TURE C	CONDITIONS:		Commercial										Solve For D	Discharge				≥
	0.9												Headwater (552.25	Elevation (ft) Dischar	ge (cf/s) Velocity (ft	:/s)		
= 00=	1 9.		•	= 8.:	3 IPH	110	7.1 IPH	15=	6.1 IPH				552.50 552.75	0.75	1.70			<u>i</u> e
00=CIA:	2.3 A= 20.3			= 17.2	6 CFS	Q10=	14.76 CFS	Q5=	12.68 CFS	(AREA BASED ON TOTAL FLOW AREA TO DETENTION)			553.00 553.25	1.30 1.68	2.95 3.81			⊨
OU-CIA-	4- 20.3	, .	3 Q2.	J- 17.2	o crs	QIO-	14.70 CF3	Q3-	12.08 CF3				553.50 553.75	1.99 2.26	4.50 5.10			l is T
O YR. DE	ESIGN STORM	1			MAX. STORAGE VO	LUME=INFLOW-OU	JTFLOW			STAGE-STORAGE-RATING (15,525 CF 60" HDP	PIPES INCLUDING 2 HEADERS)		554.00 554.25	2.26 2.49 2.71	5.64 6.14			
	ON (MIN)	1100 9.8		Q100 (CFS) 0.37	INFLOW (CF)	OUTFLOW (CF)		VOLUME	(CF)		T MAX. STORAGE	F.VD	554.50 554.75	2.71 2.91 3.10	6.59 7.02			
10 15		9.0		8.71	12,225 16,840	5,765 7,207	6,459 9,633			ELEV. VOL. PROVIDED 100 YR. 25 552.25 0 556.93 555		5 YR. 554.95	555.00 555.25	3.28 3.45	7.42 7.80			
20 30		8.3 6.9		7.26 4.35	20,707 25,821	8,648 11,531	12,059 14,291			552.75 1,553 553.25 3,105			555.50 555.75	3.61 3.76	8.16 8.51			
40		5.8	1	2.06	28,940	14,413	14,526			553.75 4,658 APPRO	C. DISCHARGE AT MAX. STORAGE		556.00 556.25	3.91 4.05	8.84 9.16			
50 60		5.0 4.5		.0.40 9.36	31,185 33,680	17,296 20,179	13,889 13,501			554.25 6,210 100 YR. 25 554.75 7,763 4.42 3.		5 YR. 3.24	556.50 556.75	4.19 4.32	9.47 9.78			
70 80		4.0 3.7		8.32 7.69	34,927 36,923	23,061 25,944	11,866 10,979			555.25 9,315 555.75 10,868			557.00 557.25	4.45 4.57	10.07 10.35			
90		3.5		7.28	39,293	28,827	10,466			556.25 12,420					Methods Solution Center			
										556.75 13,973 557.25 15,525			Bentley Flow	wMaster V8i (SELECTs	eries1) [08.11.01.03]		55_1666	© COPYRIGHT QUIKTRIP O ANY UNAUTHORIZED USE,
	SIGN STORM ON (MIN)	125	(IPH)	Q25 (CFS)	MAX. STORAGE VO INFLOW (CF)	LUME=INFLOW-OU OUTFLOW (CF)		VOLUME	(CF)				27 Siemons	Company Drive Suit	e 200 w Watertown, C	T 06795 USA 1-203-7	33-1000	PUBLICATION, DISTRIBUTE WHOLE OR IN PART, IS ST
10	314 (IVIII4)	8.3		7.26	10,353	4,719	5,635	VOLONIE	(61)	**************************************	N ************							PROTOTYPE: P-72
15 20		7.5 6.6		5.59 3.72	14,033 16,466	5,898 7,078	8,135 9,388			<1> DISCHARGE PIPE INLET INVERT ELEVATION, ft.	ABOVE datum> 552.2	25			DISCHARGE PIP	F		DIVISION: VERSION: 001
30 40		5.5 4.6		1.43 9.56	20,582 22,952	9,437 11,797	11,145 11,155			<2> DISCHARGE PIPE DIAMETER, ft.	> 1		BASIN WATE		RISER BOX WATER	TAILWATER	OUTLET CULV.	DESIGNED BY: DRAWN BY: KSR
50		4.0		8.32	24,948	14,156	10,792			<3> DISCHARGE PIPE LENGTH, ft.	> 84		ELEVATION,ft 552.25			ELEVATION,ft. 552.25	CONTROL N/A	REVIEWED BY:
60 70		3.5 3.3		7.28 6.86	26,195 28,815	16,515 18,875	9,680 9,940			<4> DISCHARGE PIPE SLOPE, ft/ft.	> .0155	5	552.50 552.75	0.20 0.73	N/A N/A	552.25 552.25 552.25	ORIFICE CONT ORIFICE CONT	
80 90		3.1 2.9		6.44 6.03	30,936 32,557	21,234 23,594	9,701 8,964			<5> DISCHARGE PIPE MANNING'S N	> .013		553.00	1.51	N/A	552.25	ORIFICE CONT	
55		2.5			,,	23,334	3,504			<6> DISCHARGE PIPE ENTRANCE CONDITION	> SEH		553.25 553.50	2.28 2.95	N/A N/A	552.25 552.25	ORIFICE CONT ORIFICE CONT	
	SIGN STORM				MAX. STORAGE VO					Where SEP> Square end p	ojecting (concrete or CMP))	553.75 554.00	3.55 4.09	N/A N/A	552.25 552.25	ORIFICE CONT ORIFICE CONT	
URATIO 10	ON (MIN)	110 7.1		Q10 (CFS) .4.76	INFLOW (CF) 8,857	OUTFLOW (CF) 4,134	MAX. STORAGE 4,723	VOLUME	(CF)	SOP> Concrete soc			554.25 554.50	4.39 4.66	N/A N/A	552.25 552.25	FRICTION CONT FRICTION CONT	
15 20		6.5 5.9	1	3.51 2.27	12,162 14,719	5,167 6,200	6,995 8,519			SOH> Concrete soc	ket end in headwall		554.75 555.00	4.91 5.15	N/A N/A	552.25 552.25	FRICTION CONT FRICTION CONT	
30		4.8		9.98	17,963	8,267	9,695						555.25	5.38	N/A N/A N/A	552.25	FRICTION CONT	DITALI
40 50		4.0 3.5		8.32 7.28	19,958 21,830	10,334 12,401	9,624 9,429						555.50 555.75	5.60 5.81	N/A	552.25 552.25	FRICTION CONT FRICTION CONT	DESCR
60		3.0		6.24 5.82	22,453	14,468	7,985			_	<u>∇ Q25</u> 3.82 CFS*		556.00 556.25	6.02 6.21	N/A N/A	552.25 552.25	FRICTION CONT FRICTION CONT	E E
70 80		2.8 2.6		5.41	24,449 25,946	16,535 18,601	7,914 7,345				<u>∇ Q10</u> 3.52 CFS* <u>∇ Q5</u> 3.24 CFS*		556.50 556.75	6.41 6.59	N/A N/A	552.25 552.25	FRICTION CONT FRICTION CONT	DAT
90		2.5		5.20	28,067	20,668	7,398				<u>V</u> <u>G</u> 5.21 613		557.00 557.25	6.77 6.95	N/A N/A	552.25 552.25	FRICTION CONT FRICTION CONT	REV
/D DEC:	IGN STORES				MAY CTORACE VIC	I LIME- INC. OV. C.	ITELOW			12"X60" HDPE	I		557.25	6.90	IN/A	332.23	I MICTION CONT	SHEET T
URATIO	IGN STORM ON (MIN)	15		Q5 (CFS)	MAX. STORAGE VO INFLOW (CF)	OUTFLOW (CF)	MAX. STORAGE	VOLUME	(CF)	12 DIA. HDPF WELDED PLATE /	UTFALL STRUCTURE ELEVATI	ION						
10 15		6.1 5.5		2.68 1.43	7,609 10,291	3,487 4,359	4,122 5,933		W/CTIFFENER	W/9" DIA. SMOOTH ORIFICE / N.T.S.)TFS:							DRAINAGE CAL
20		4.9	1	0.19	12,225	5,230	6,994		W/SIIFFENER	S AS REQUIRED BY MANUFACTURER $\!$	ACTUAL RELEASE RATE							-
		4.1 3.4		8.52 7.07	15,343 16,965	6,974 8,717	8,369 8,248					SE RATES PER HYDROLOGIC	RECORD TO THE BEST OF	DRAWING OUR KNOWLEDGE.	"ALL DECOMPOSITION TO	DB ADEQUACY OF SEC		SHEET NU
30 40		2.8		5.82	17,464	10,461	7,003				ALCULATIONS - PROPOSED 100 5.73 CFS	CONDITIONS TABLE LINE (5):	R-DELTA ENGINEE STATES THAT THIS	RS, INC. HEREBY	REMAINS WITH THE DES	OR ADEQUACY OF DESIGN SIGN ENGINEER. THE CITY		
30 40 50				5.41	10 /50	12 204	7 256											
30 40		2.6 2.4 2.3		5.41 4.99 4.78	19,459 20,956 22,952	12,204 13,947 15,691	7,256 7,009 7,261			Q Q Q	25 4.57 CFS 10 4.08 CFS		AS-BUILT CONDITI		OF ROCKWALL, IN REVIE PLANS FOR CONSTRUCT RESPONSIBILITY FOR AD	TON, ASSUMES NO		C42

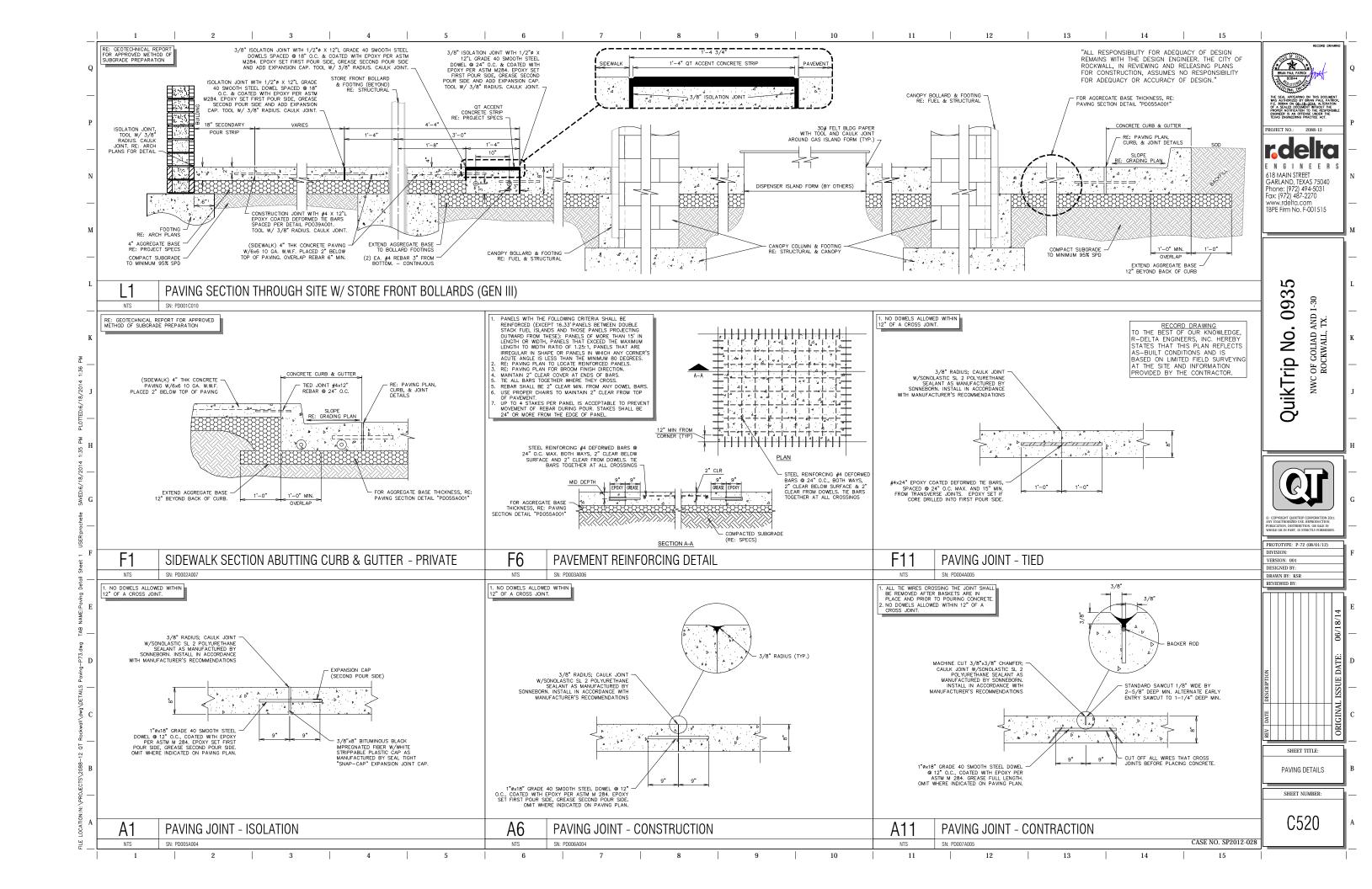
Q

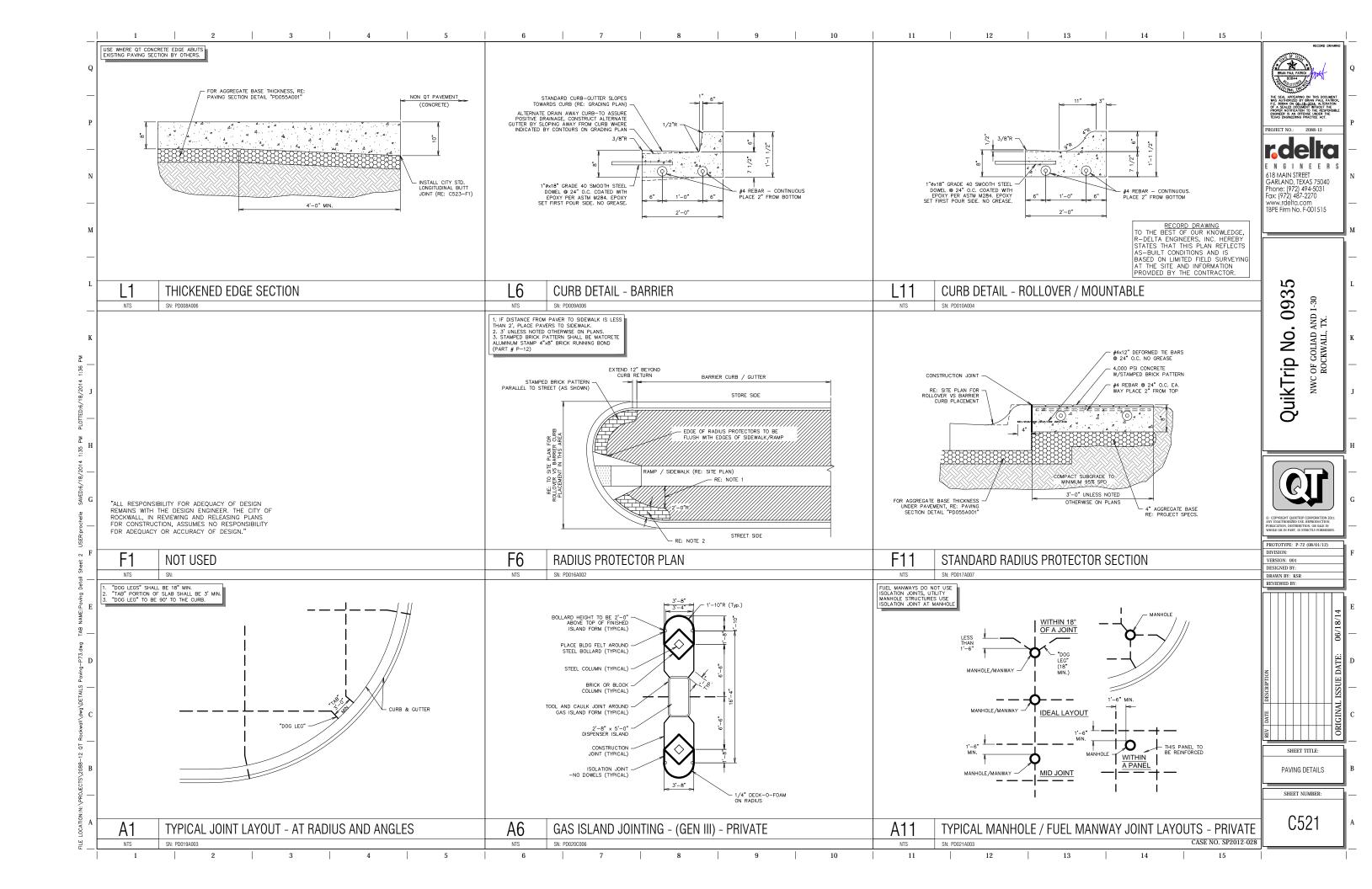
N

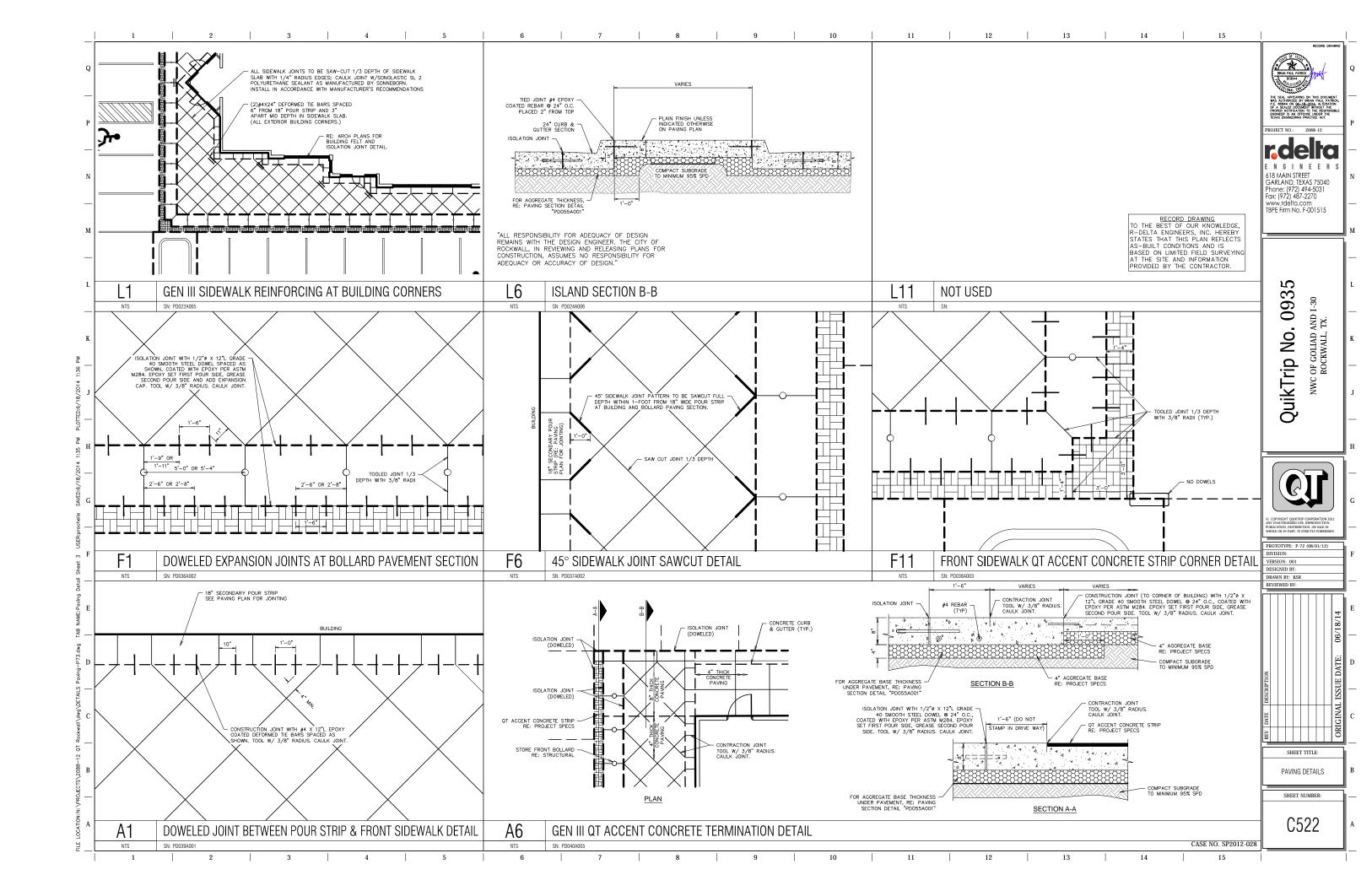
G

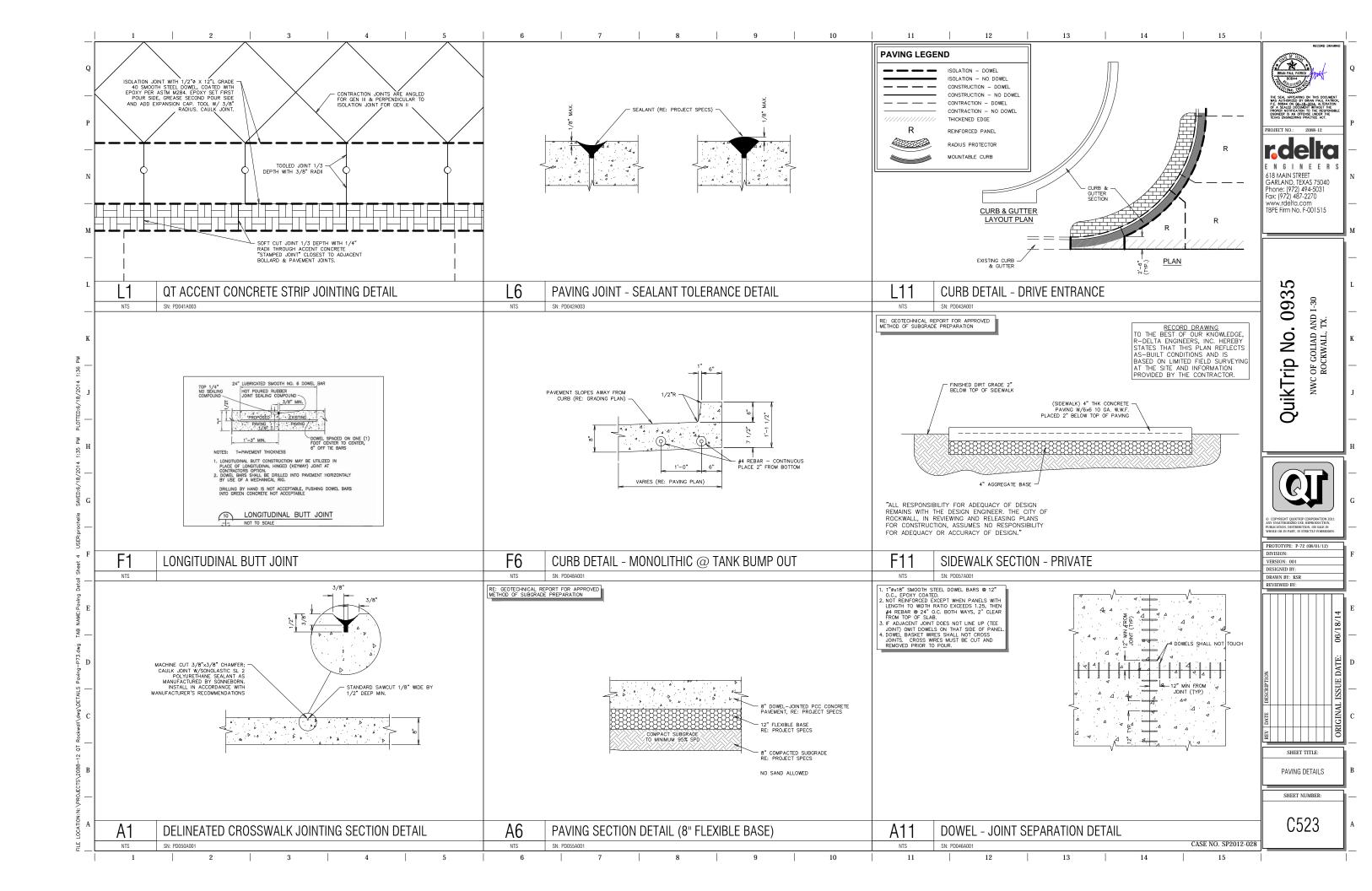
Α

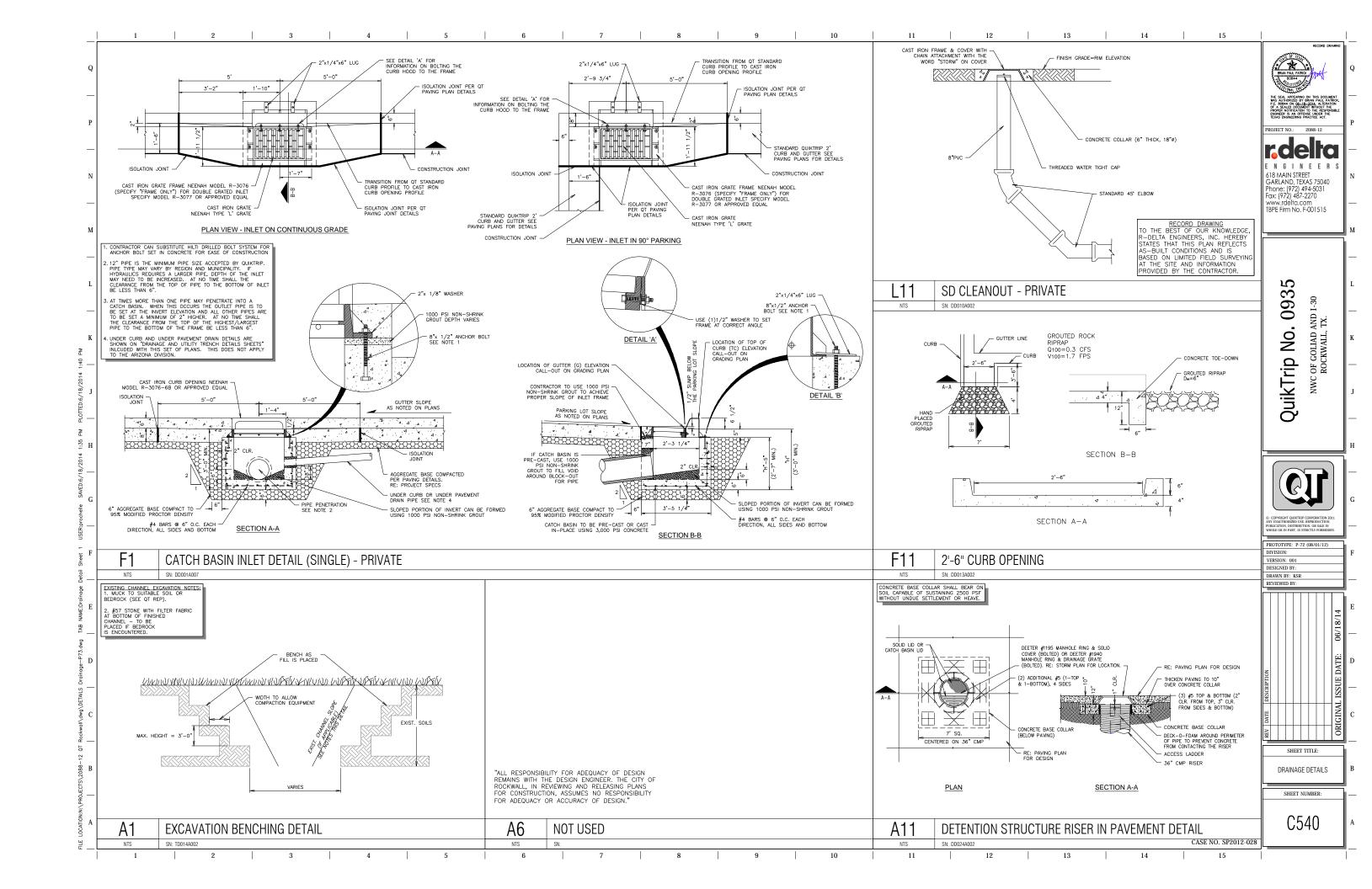


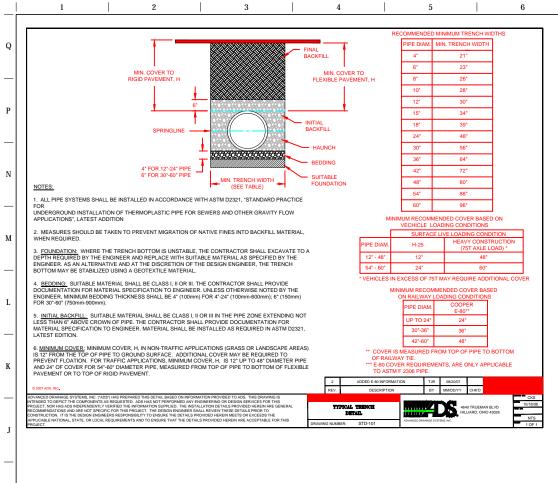










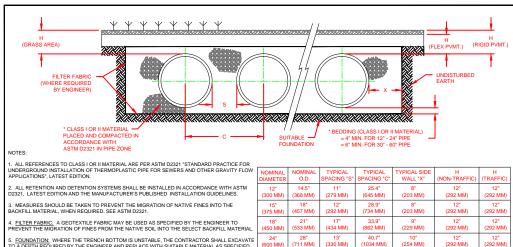


PROJECT NOTES:

1. ASTM D2321 (

1. ASTM D2321 CLASS I MATERIAL SHALL BE REQUIRED FOR ALL BEDDING & INITIAL BACKFILL. INITIAL BACKFILL SHALL EXTEND A MINIMUM OF 12" ABOVE TOP OF PIPES.

2. FILTER FABRIC SHALL BE REQUIRED BETWEEN THE NATIVE SOIL AND CLASS I MATERIAL FOR THE DETENTION SYSTEM.



S. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE. IT HE CONTRACTOR SHALL EXCAVATE
OF A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED
TY THE HONINEER. AS AN ALTERNATIVE AND AT THE DISORCTION OF THE DESIGN ENGINEER. THE
OFFICE AND ALTERNATIVE AND AT THE DISORCTION OF THE DESIGN ENGINEER. THE
TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.

SEEDING: SUITABLE MATERIAL SHALL BE LASS I OR II THE CONTRACTOR SHALL PROVIDE
DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER UNLESS OTHERWISE NOTED BY
150mm) FOR 30°-60′ (750mm-900mm).

INTIAL BACKFILL: SUITABLE MATERIAL SHALL BE LASS I OR II IN THE PIPE ZONE EXTENDING
TOK THE STABILIZED USING PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION
OR MATERIAL SPECIFICATION TO ENGINEER UNLESS OTHERWISE AND THE PIPE ZONE EXTENDING
OR MATERIAL SPECIFICATION TO ENGINEER MATERIAL SHALL BE INSTALLED AS REQUIRED IN

50° 24′ 25′ 78.5′ 78.5′ 18′
(1200 MM) (1372 MM) (1904 MM) (1904 MM) (1457 MM)
(1505 MM) (1505 MM) (1506 MM) (1507 MM) (1507

ASTM D2221, LATEST EDITION.

8. MINIMUM COVER: MINIMUM COVER OVER ALL RETNETION DETERTION SYSTEMS IN NON-TRAFFIT APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER IS 12" UP TO 35" DIAMETER PIPE AND 24" OF COVER FOR 42"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

PAVEMENT.

2007 AGE, INC.

ADVANCED DENIANGE SYSTEMS, INC. ("ADS") HAS PREPARED THIS DETAIL BASED ON INFORMATION PROVIDED TO ADS. THIS DRAWING IS INTENDED TO EXPORT THE COMPONENTS AS REQUESTED. ADS HAS NOT REPROVABLE ON MY BRAINESHING, OR ESSON SERVICES FOR THIS INTENDED TO EXPORT THE COMPONENTS AS REQUESTED. ADD HAS NOT REPROVABLE ON THE STATE OF THE CHEEKEAL RECOMMENDATIONS AND ARE NOT SEPECT FOR THIS PROVIDE. THE DESIAN SENDERS HAVE BEEN ADD. ADD. THE CHEEKEAL RECOMMENDATIONS AND ARE NOT SEPECT FOR THIS PROVIDE. THE DESIAN SENDERS HAVE BEEN AS RECORD THE ADDRESS HAVE BEEN ADDRESS HAVE BEEN

| MM | (457 MM) | (292 MM) | (734 MM) | (203 MM) | (292 MM) | (393 MM) | (333 MM) | (334 MM) | (3457 MM) | (292 MM) | (292 MM) | (292 MM) | (292 MM) | (3457 MM) | (292 MM) | (292 MM) | (3457 MM) | (292 MM) | (3457 MM) | (345

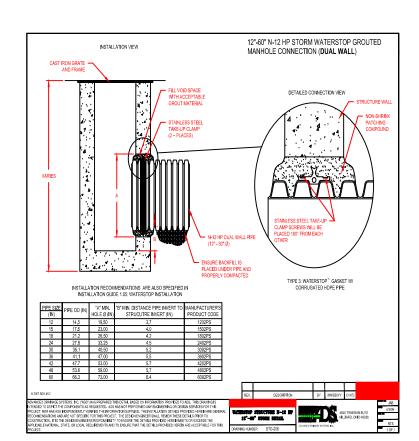
12

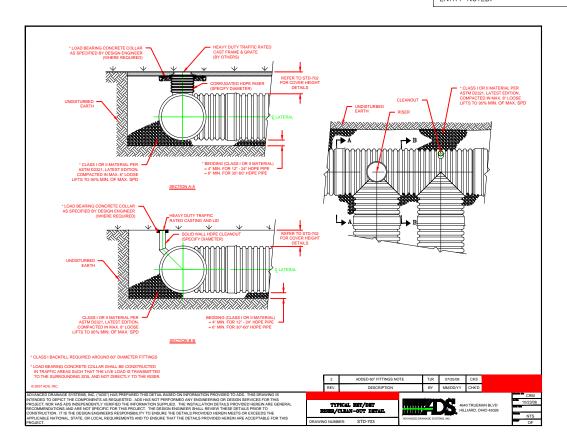
13

14

RECORD DRAWING
TO THE BEST OF OUR KNOWLEDGE,
R—DELTA ENGINEERS, INC. HEREBY
STATES THAT THIS PLAN REFLECTS
AS—BUILT CONDITIONS AND IS
BASED ON LIMITED FIELD SURVEYING
AT THE SITE AND INFORMATION
PROVIDED BY THE CONTRACTOR.

NOTE: THIS DOCUMENT CONSISTS OF STANDARD CONSTRUCTION DETAILS THIS PROFESSIONAL ENGINEER HAS REVIEWED FOR THEIR APPLICABILITY AND SELECTED FOR USE ON THIS PROJECT. THE ORIGINAL DOCUMENTS ARE PUBLISHED BY THE ENTITY NOTED.





© COPREIENT QUINTIFE CORCORATION 2011
ANY IDMATINGEZED ISSE REPRODUCTION.
PRINCETON. DESTRUCTION. OR SALE N
WOOD OF THE PROPERTY OF THE PROPER

ENGINEER 618 MAIN STREET GARLAND, TEXAS 75040

Phone: (972) 494-5031 Fax: (972) 487-2270

www.rdelta.com TBPE Firm No. F-001515

5

093

9

QuikTrip

OF GOLIAD A ROCKWALL, '

CASE NO. SP2012-028

8 9 10 11 12 13 14 15

