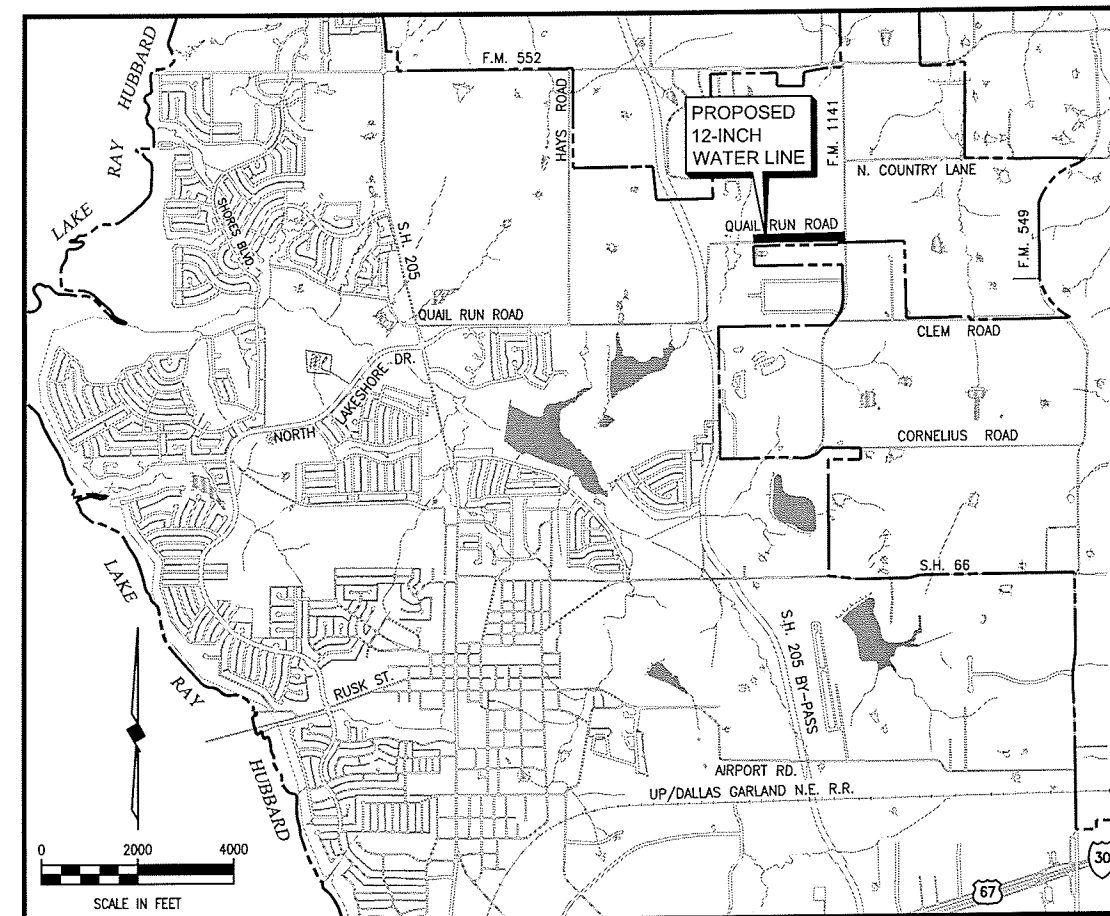


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PLOTTED BY: Rlwe ON 9/30/2011

# CITY OF ROCKWALL, TEXAS

## CONSTRUCTION PLANS FOR

# QUAIL RUN ROAD WATER LINE PHASE 2



**LOCATION MAP**

### COUNCIL MEMBERS

- BILL CECIL, MAYOR
- GLEN FARRIS, MAYOR PRO-TEM
- MATT SCOTT
- DAVID SWEET
- CLIFF SEVIER
- MARK RUSSO
- MARGO NIELSEN

### CITY MANAGER

JULIE COUCH

### ASSISTANT CITY MANAGER

RICHARD CROWLEY

### CITY ENGINEER

CHUCK TODD, P.E.



### **BIRKHOFF, HENDRICKS & CARTER, L.L.P.**

PROFESSIONAL ENGINEERS  
Texas Firm F526  
11910 Greenville Ave., Suite 600  
Dallas, Texas 75243 (214) 361-7900

APRIL 2011



A handwritten signature in black ink, appearing to read 'P. Carline'.

### SHEET INDEX

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
1	COVER SHEET AND LOCATION MAP
2	GENERAL NOTES
3	PLAN-PROFILE STA. 55+53 TO STA. 60+00
4	PLAN-PROFILE STA. 60+00 TO STA. 65+00
5	PLAN-PROFILE STA. 65+00 TO STA. 70+00
6	PLAN-PROFILE STA. 70+00 TO STA. 74+55.68
7	MISCELLANEOUS DETAILS

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BY P.A. Carline, P.E. DATE 09/28/2011

**LEGEND OF SYMBOLS**

	ASPHALT PAVEMENT (H.M.A.C.)
	RIGHT OF WAY, PROPERTY, PROPOSED EASEMENT OR SUB-DIVISION LINE
	PERMANENT EASEMENT
	SLOPE OR TOP BANK
	CREEK OR DITCH
	BURIED TELEPHONE CABLE
	TREES, BUSH OR BRUSH
	BARBED WIRE FENCE
	PIPE RAIL FENCE
	WOOD FENCE
	WROUGHT IRON FENCE
	CHAIN LINK FENCE

**EXISTING UTILITY OWNERS**

NORTH TEXAS MUNICIPAL WATER DISTRICT	DAVID HARTLESS	(972) 442-5405	
CITY OF ROCKWALL ENGINEERING	CHUCK TODD	(972) 771-7746	CITY ENGINEER
CITY OF ROCKWALL UTILITY LOCATES	-	(972) 771-7730	
MT. ZION WSC	DWIGHT LINDOP	(972) 670-9091	
COMCAST	-	(800) 252-1133	
SOUTHWESTERN BELL TELEPHONE	-	(800) 395-0440 (800) 545-6005	
TCI CABLE	-	(214) 328 5000	
TEXAS ONE CALL SYSTEM	-	(800) 245-4545	
TEXAS EXCAVATION SAFETY SYSTEM	-	(800) 344-8377	
ONCOR	RICHARD BREWSTER	(214) 486-4245	
ATMOS ENERGY	LINE LOCATE EMERGENCY BEN CURTIS RONNEY LINTON	(800) 344-8377 (800) 817-8090 (800) 344-8377 (469) 261-2023	PROJECT MANAGER
LEVEL 3 FIBER OPTIC	-	(877) 366-8344	
METRO MEDIA FIBER OPTIC	-	(972) 771-7746	DIG/EMERGENCY

**GENERAL PROJECT NOTES**

- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE MEASURES FOR PREVENTING STORM WATER RUNOFF FROM ENTERING THE TRENCH DURING CONSTRUCTION.
- CONTRACTOR SHALL SECURE EXCAVATION AT THE END OF EACH DAY. THE OWNER MAY REQUIRE THAT NO TRENCHES BE LEFT OPEN OVERNIGHT IN STREETS OR POPULATED AREAS.
- TOPSOIL SHALL BE STOCKPILED AND REPLACED TO A MINIMUM DEPTH OF 12 INCHES AND DISC HARROWED TO A MINIMUM DEPTH OF 4 INCHES.
- FINISHED GROUND SHALL HAVE NO MORE ROCKS OVER 1 INCH THAN SURROUNDING UNDISTURBED GROUND.
- RESTORE GROUND TO ORIGINAL GRADE AND PREVENT PONDING OF STORM WATER RUNOFF ON ALL GROUND DISTURBED BY CONSTRUCTION ACTIVITIES.
- CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT OF ALL POWER AND TELEPHONE POLES AND GUY WIRES WITHIN 15 FEET OF PROPOSED PIPELINE AND SHALL REPAIR DAMAGED POLES AND GUY WIRES OR RELOCATE POLES AND GUY WIRES AS REQUIRED BY THE UTILITY OWNER AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR MUST CONTACT & COORDINATE ALL WORK AND FEES W/ UTILITY OWNER AT NO ADDITIONAL COST TO OWNER.
- TRIMMING OF TREES SHALL BE ACCOMPLISHED USING A SAW OR PRUNING SHEARS. ALL CUT LIMBS OVER 1 INCH IN DIAMETER SHALL BE PAINTED WITH TREE WOUND PAINT IMMEDIATELY AFTER TREE TRIMMING.
- CONTRACTOR SHALL REPLACE ANY TREES REMOVED OR DESTROYED WITHOUT THE OWNER'S PERMISSION OR SHALL PAY FAIR MARKET VALUE (AS DETERMINED BY THE OWNER) TO THE OWNER.
- ANY FENCES DAMAGED OR REMOVED BY CONSTRUCTION ACTIVITIES SHALL BE REPLACED AT THE SAME LOCATION WITH A FENCE OF EQUAL OR SUPERIOR QUALITY.
- TEMPORARY FENCING SHALL BE REQUIRED WHERE INDICATED ON THE DRAWINGS, WHERE THERE IS LIVESTOCK, AND WHERE DAMAGED OR REMOVED FENCES ARE NOT TO BE REPLACED BY END OF SAME WORK DAY, OR AS DIRECTED BY OWNER. CONTRACTOR TO VERIFY PRESENCE OF LIVESTOCK WITH LANDOWNER PRIOR TO ENTERING PROPERTY.
- CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO ORDERING PIPE AND SUFFICIENTLY IN ADVANCE OF THE CONSTRUCTION SO THAT IF IT IS NECESSARY TO CHANGE OR MOVE THE UTILITY, THE PROGRESS OF THE WORK WILL NOT BE DELAYED, & ALL COSTS INCURRED FOR UTILITY CONFLICTS WILL BE AT NO ADDITIONAL COST.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SERVICE LINES CROSSED OR EXPOSED BY HIS CONSTRUCTION OPERATIONS. WHERE EXISTING SERVICE LINES ARE CUT, BROKEN OR DAMAGED THE CONTRACTOR SHALL IMMEDIATELY REPLACE THE SERVICE LINES IN KIND WITH LIKE OR BETTER MATERIALS.
- CONTRACTOR SHALL PROVIDE A STORM WATER POLLUTION PREVENTION PLAN AND PROVIDE ALL APPURTENANCES TO COMPLY WITH THE LATEST TCEQ STORM WATER POLLUTION PREVENTION REGULATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR FILING A NOTICE OF INTENT (NOI) AT THE START OF CONSTRUCTION WITH THE TCEQ AND A NOTICE OF TERMINATION (NOT) AT THE END, ALSO WITH THE TCEQ.
- CONTRACTOR SHALL PROVIDE ADEQUATE MEASURES FOR DEWATERING AS NECESSARY.
- CONTRACTOR SHALL REMOVE FENCES AS REQUIRED FOR CONSTRUCTION. BARBED WIRE, WROUGHT IRON AND CHAIN LINK FENCES SHALL BE REPLACED OR RECONSTRUCTED. NEW MATERIALS SHALL MATCH EXISTING FENCES. ALL WOOD FENCES SHALL BE REPLACED WITH NEW CEDAR WITH THE POSTS MATCHING THE EXISTING POSTS. ANY FENCING REMOVED SHALL BE REPLACED IN KIND WITH LIKE OR BETTER MATERIALS, AND BE PAINTED OR STAINED TO MATCH EXISTING FENCE.
- CONTRACTOR SHALL PROTECT ALL UNDERGROUND IRRIGATION SYSTEMS (KNOWN AND UNKNOWN). ALL DAMAGE SHALL BE REPAIRED BY IRRIGATOR LICENSED IN THE STATE OF TEXAS.
- CONTRACTOR SHALL SUBMIT A WRITTEN PLAN AND SCHEDULE 14 DAYS IN ADVANCE OF CONSTRUCTION ACTIVITIES REQUIRING REPLACEMENT OR SUPPORT OF EXISTING SANITARY SEWER PIPE, WATER PIPE OR STORM DRAIN PIPE. THE PLAN SHALL DESCRIBE IN DETAIL THE METHOD FOR REPLACING OR SUPPORTING EXISTING PIPE AND ASSOCIATED SCHEDULE.
- FOLLOWING INSTALLATION OF PIPELINE ACROSS WATERWAYS, WATERWAY BOTTOM AND BANKS SHALL BE RESTORED TO THEIR ORIGINAL CONFIGURATION AND REVEGETATED, UNLESS NOTED IN PLANS.
- THE CONTRACTOR SHALL EMPLOY ADEQUATE METHODS TO MINIMIZE TURBIDITY IN WATERWAYS DURING ALL PHASES OF THE PROJECT. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS AND REGULATIONS CONCERNING WATER POLLUTION AND CONTROL OF EROSION.
- CONTRACTOR SHALL CLEAN THE RIGHT-OF-WAY OF ANY AND ALL TRASH.
- NO FIRES WILL BE ALLOWED. BRUSH AND CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE SITE.
- ANY EXISTING UTILITY DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED IMMEDIATELY WITH LIKE OR BETTER MATERIALS.
- CONTRACTOR SHALL NOT DAMAGE EXISTING TREES LARGER THAN 3 INCHES IN DIAMETER (MEASURED 4 FT. ABOVE THE GROUND) THAT ARE MORE THAN TWELVE FEET FROM CENTERLINE OF NEW SANITARY SEWER. THE CONTRACTOR MUST OBTAIN APPROVAL FROM THE OWNER'S REPRESENTATIVE BEFORE ANY TREES MORE THAN 10-FT FROM CENTERLINE OF PIPELINE CAN BE REMOVED OR TRIMMED.
- CONTRACTOR SHALL BE REQUIRED TO INSTALL TEMPORARY TEST PLUGS FOR HYDROSTATIC TESTING AS NECESSARY AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR, AT HIS DISCRETION, MAY TUNNEL UNDER EXISTING UTILITIES OR ROADWAYS OTHER THAN THOSE CROSSINGS SPECIFICALLY SHOWN ON THE DRAWINGS, AT NO ADDITIONAL COST TO THE OWNER.
- IT SHALL BE THE COMPLETE RESPONSIBILITY OF THE CONTRACTOR TO REBUILD THE CONCRETE OR ASPHALT PAVEMENT REPLACEMENT SECTIONS TO THE SAME LINE AND GRADE AS WAS EXISTING PRIOR TO PIPELINE CONSTRUCTION.
- ALL NEW TREES REQUESTED BY THE OWNER SHALL BE PLANTED BY A NURSERYMAN LICENSED IN THE STATE OF TEXAS.
- SURVEY POINTS INDICATED AS "CONTROL POINT" (IRON ROD SETS, "X" IN CONC, AND 60D NAILS POINT") SHALL BE USED FOR HORIZONTAL AND VERTICAL SURVEY CONTROL FOR THE PROJECT.
- THE CONTRACTOR SHALL RESTORE AT HIS OWN EXPENSE, TEMPORARY ROADS AND CONSTRUCTION WORK AREAS.
- IN ACCORDANCE WITH TEXAS STATE LAW, AT LEAST 2 DAYS PRIOR TO BEGINNING EXCAVATION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING A TEXAS REGISTERED NOTIFICATION CENTER (I.E. TEXAS ONE CALL, DIG TESS, ETC.). IN ORDER TO HAVE EXISTING UTILITIES LOCATED. DIGTESS: 1-800-344-8377.
- BLASTING WILL NOT BE ALLOWED.
- CONTRACTOR SHALL STAKE BOTH PERMANENT AND TEMPORARY EASEMENTS PRIOR TO CONSTRUCTION. CONSTRUCTION SURVEYING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR INCLUDING BUT NOT LIMITED TO LIMITS OF PERMANENT EASEMENT, TEMPORARY EASEMENT, CENTERLINE, ETC. THE CONTRACTOR SHALL VERIFY ALL CONTROL MONUMENTATION PRIOR TO BEGINNING CONSTRUCTION.
- CLEARING AND GRUBBING MAY BEGIN NO SOONER THAN TWO WEEKS PRIOR TO PIPE TRENCHING OPERATIONS. PIPE STRINGING SHALL BE NO MORE THAN TWO WEEKS PRIOR TO PIPE LAYING. BACKFILL, CLEAN-UP, AND SURFACE RESTORATION SHALL BE COMPLETED NO MORE THAN TWO WEEKS AFTER PIPE LAYING AND NO MORE THAN 500 FEET FROM PIPE LAYING OPERATIONS. THE SITE SHALL BE KEPT CLEAN OF TRASH AT ALL TIMES. FAILURE TO COMPLY WITH THESE REQUIREMENTS MAY RESULT IN WITHHOLDING SOME OR ALL PAYMENT TO THE CONTRACTOR.
- CONTRACTOR SHALL MAINTAIN AT LEAST ONE LANE OF TRAFFIC ON ALL ROADS AT ALL TIMES, AND CONSTRUCT TEMPORARY BYPASS, IF NECESSARY, IF THE ROADWAY MUST BE CLOSED TO FACILITATE CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE OWNER AND THE RIGHT-OF-WAY OWNER FOR THE ROADWAY FOR APPROVAL NO LESS THAN 14 DAYS IN ADVANCE OF THE PROPOSED ROADWAY CLOSURE. ANY COMMENTS RECEIVED ON THE PLAN BY THE OWNER OR RIGHT-OF WAY OWNER SHALL BE INCORPORATED INTO THE PLAN. THE PLAN SHALL BE PREPARED SPECIFICALLY FOR THIS PROJECT AND SHALL BE SEALED AND SIGNED BY AN ENGINEER LICENSED IN THE STATE OF TEXAS. THE COST TO PREPARE THE TRAFFIC CONTROL PLAN, WHEN REQUIRED, SHALL BE MADE INCIDENTAL TO THE PROJECT. IF AT ANYTIME DURING CONSTRUCTION THE CONTRACTOR'S PROPOSED PLAN OF OPERATION FOR HANDLING TRAFFIC DOES NOT PROVIDE FOR THE SAFE, COMFORTABLE MOVEMENT OF TRAFFIC, THE CONTRACTOR SHALL IMMEDIATELY CHANGE HIS OPERATIONS TO CORRECT THE UNSATISFACTORY CONDITIONS.
- CONTRACTOR SHALL PROVIDE APPROPRIATE SIGNAGE, BARRICADES, FLAGMEN, ETC. REQUIRED TO MAINTAIN SAFE TRAFFIC FLOW AT ALL TIMES FOR ANY WORK ACTIVITY ON OR ADJACENT TO ANY CITY, COUNTY OR TXDOT ROADWAY. ALL TRAFFIC CONTROL MEASURES SHALL BE IN ACCORDANCE WITH TXDOT'S MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- CONTRACTOR'S OPERATIONS MUST STAY WITHIN THE PERMANENT AND TEMPORARY EASEMENTS AND CONTRACTOR'S WORK AREA DESIGNATED ON THE PLAN SHEETS. ANY DAMAGE OUTSIDE THESE OPERATIONS SHALL BE REPAIRED AND/OR REPLACED AT THE CONTRACTOR'S EXPENSE. ACCESS ROUTES OR OPERATIONS WHICH FALL OUTSIDE THE DESIGNATED AREAS WILL ONLY BE ALLOWED WITH PRIOR LANDOWNER CONSENT. CONTRACTOR SHALL PROVIDE THE OWNER WITH A COPY OF ANY AGREEMENTS MADE BETWEEN THE LANDOWNER AND THE CONTRACTOR.
- THE CONTRACTOR SHALL PROVIDE A VIDEO TAPE TO THE OWNER DOCUMENTING THE CONDITION OF THE PIPELINE ROUTE, INCLUDING THE PERMANENT EASEMENT, TEMPORARY EASEMENT AND SURROUNDING AREA PRIOR TO THE START OF ANY CONSTRUCTION. VIDEO TO BE PROVIDED PRIOR TO FIRST PAYMENT TO CONTRACTOR.
- PROVIDE ACCESS FOR LANDOWNERS AT EXISTING ROADS AND DRIVES AT ALL TIMES.
- WHEN NEW PIPELINE CONSTRUCTION CROSSES UNDER EXISTING PIPELINES, CONTRACTOR SHALL BACKFILL EXISTING PIPELINE WITH CRUSHED STONE FROM TOP OF PIPE ZONE OF NEW PIPELINE TO ONE FOOT ABOVE EXISTING PIPELINE.
- WHERE NEW PIPELINE CROSSES EXISTING SANITARY SEWER PIPE, CONTRACTOR SHALL CENTER ONE JOINT OF NEW PIPE OVER EXISTING SEWER PIPE SUCH THAT ENDS OF THE NEW PIPE JOINT ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE SEWER PIPE.
- WHERE IT IS NECESSARY FOR LANDOWNERS TO MOVE TRAILERS, SHEDS, OR OTHER FACILITIES OR IMPROVEMENTS, OR WHEN THE CONTRACTOR INTENDS TO MOVE SUCH FACILITIES OR IMPROVEMENTS, CONTRACTOR SHALL NOTIFY THE LAND OWNER AND THE OWNER NO LESS THAN 14 DAYS PRIOR TO MOVING THE FACILITIES OR IMPROVEMENTS.
- CONTRACTOR SHALL PROTECT ALL TREES, LANDSCAPING AND STRUCTURES LOCATED WITHIN THE TEMPORARY AND PERMANENT EASEMENTS. TREES, LANDSCAPING AND STRUCTURES NOT INDICATED FOR REMOVAL OR TRANSPLANT ON THE PLANS SHALL NOT BE REMOVED OR TRANSPLANTED WITHOUT RECEIVING WRITTEN APPROVAL FROM THE CITY OF ROCKWALL.
- CONTRACTOR SHALL PROVIDE ONE LANE OF THRU TRAFFIC ON QUAIL RUN ROAD AT ALL TIMES.

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BY P.A. Carlone, P.E. DATE 09/28/2011

**BIRKHOFF, HENDRICKS & CARTER, L.L.P.**  
 PROFESSIONAL ENGINEERS  
 Texas Firm F526  
 11910 Greenville Ave., Suite 600  
 Dallas, Texas 75243 (214) 361-7900



*(Handwritten Signature)*  
 4/11/11

**CITY OF ROCKWALL, TEXAS**

QUAIL RUN ROAD WATER LINE - PHASE 2

GENERAL NOTES

BHC PROJECT NO. 2011-104

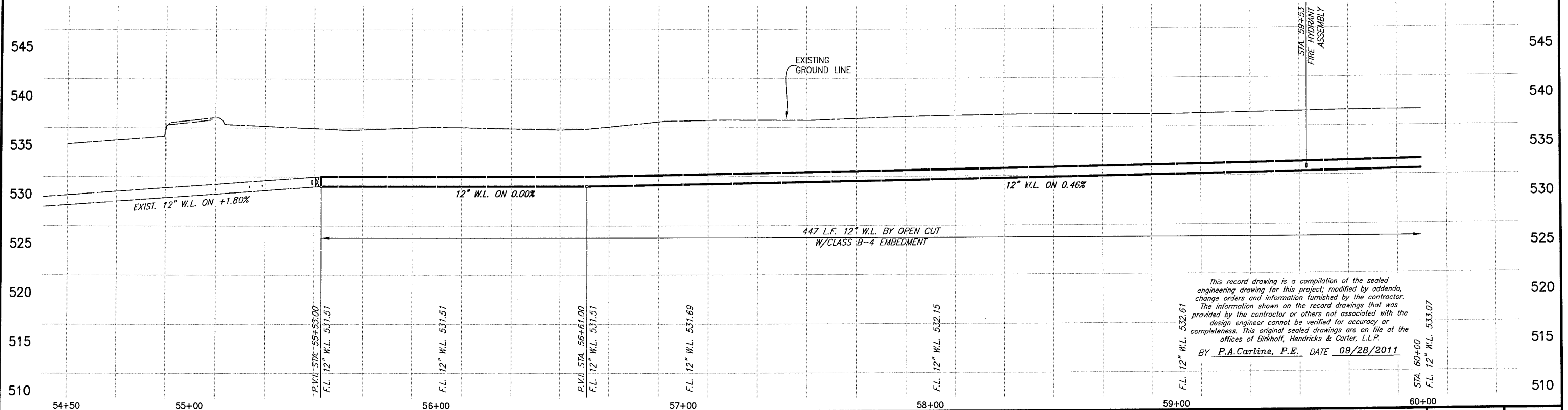
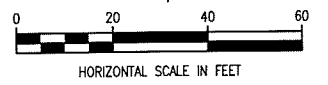
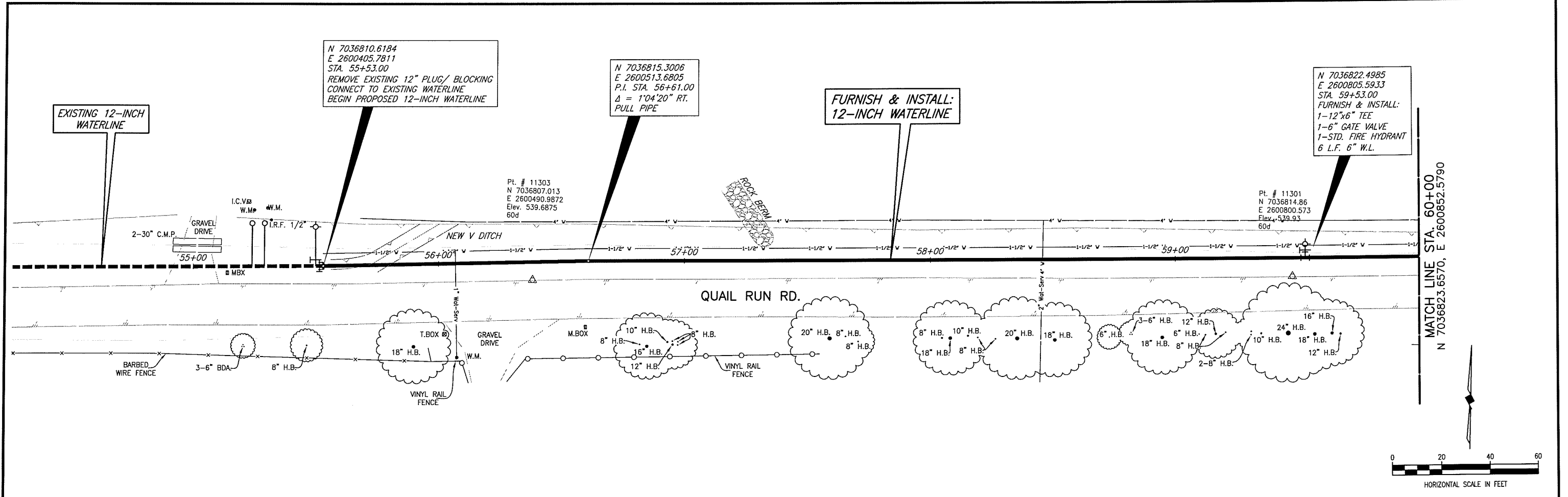
SHEET NO.

APRIL 2011

**2**

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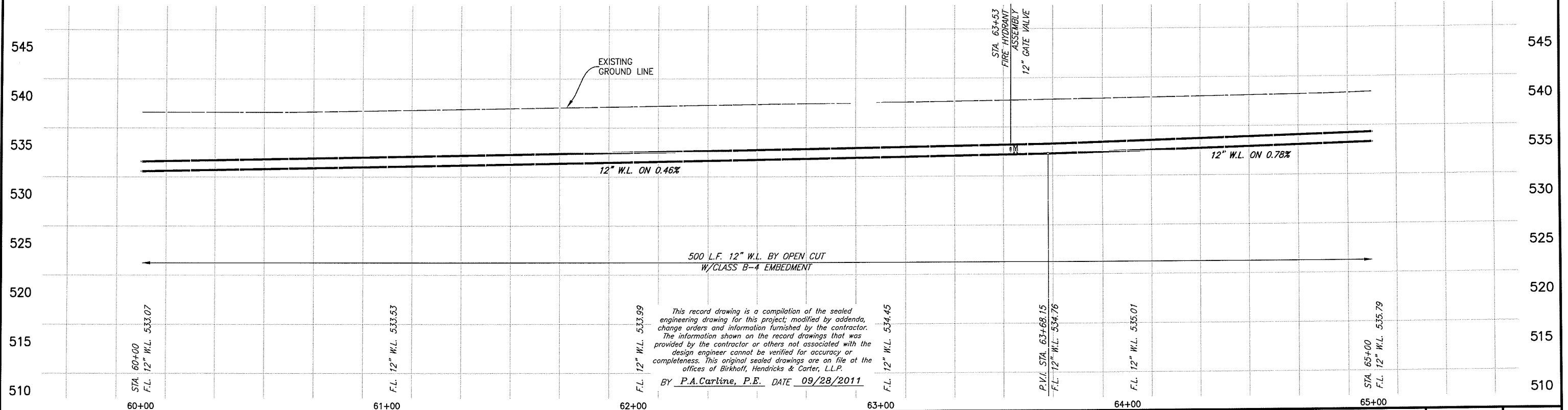
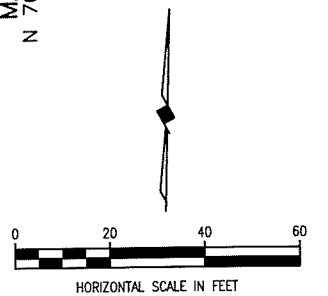
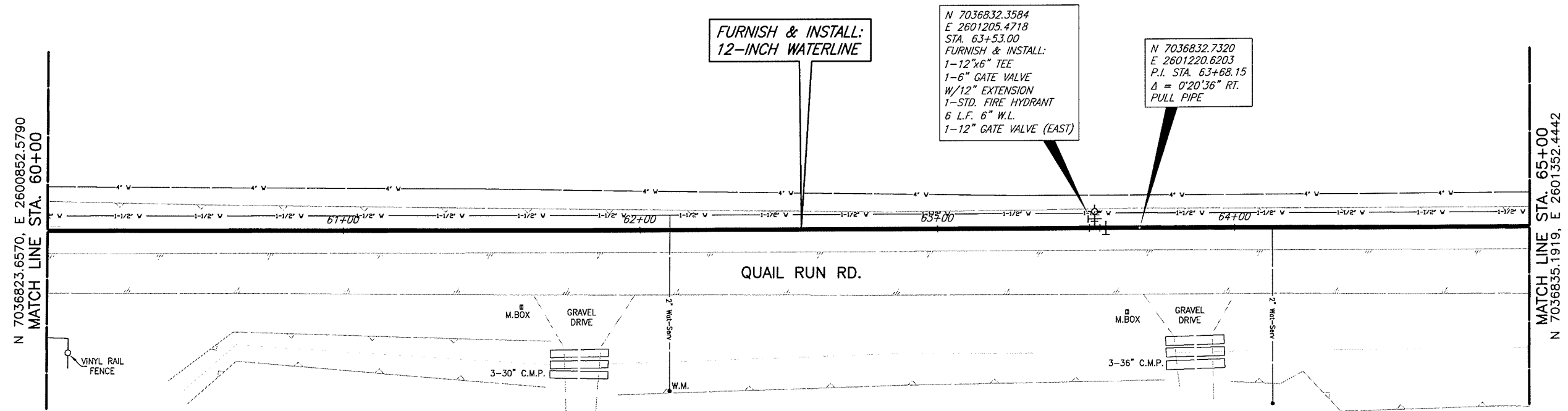
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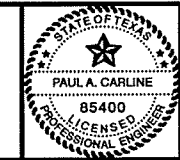
<b>BIRKHOFF, HENDRICKS &amp; CARTER, L.L.P.</b> PROFESSIONAL ENGINEERS Texas Firm F526 11910 Greenville Ave., Suite 600 Dallas, Texas 75243 (214) 361-7900				<b>CITY OF ROCKWALL, TEXAS</b> QUAIL RUN ROAD WATER LINE - PHASE 2 PLAN-PROFILE STA. 55+53 TO STA. 60+00	BHC PROJECT NO. 2011-104 APRIL 2011	SHEET NO. <b>3</b>
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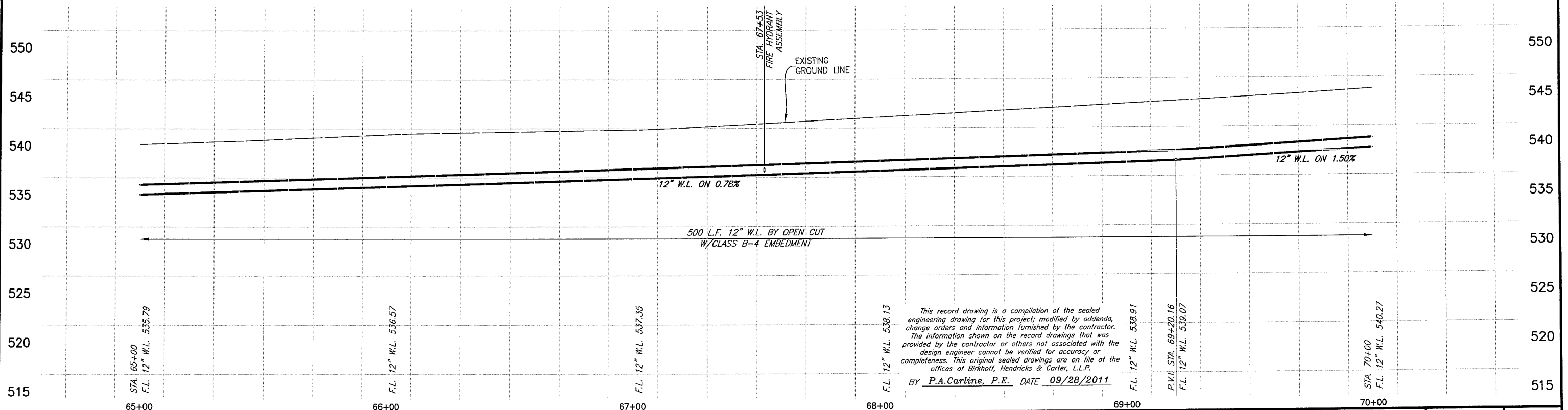
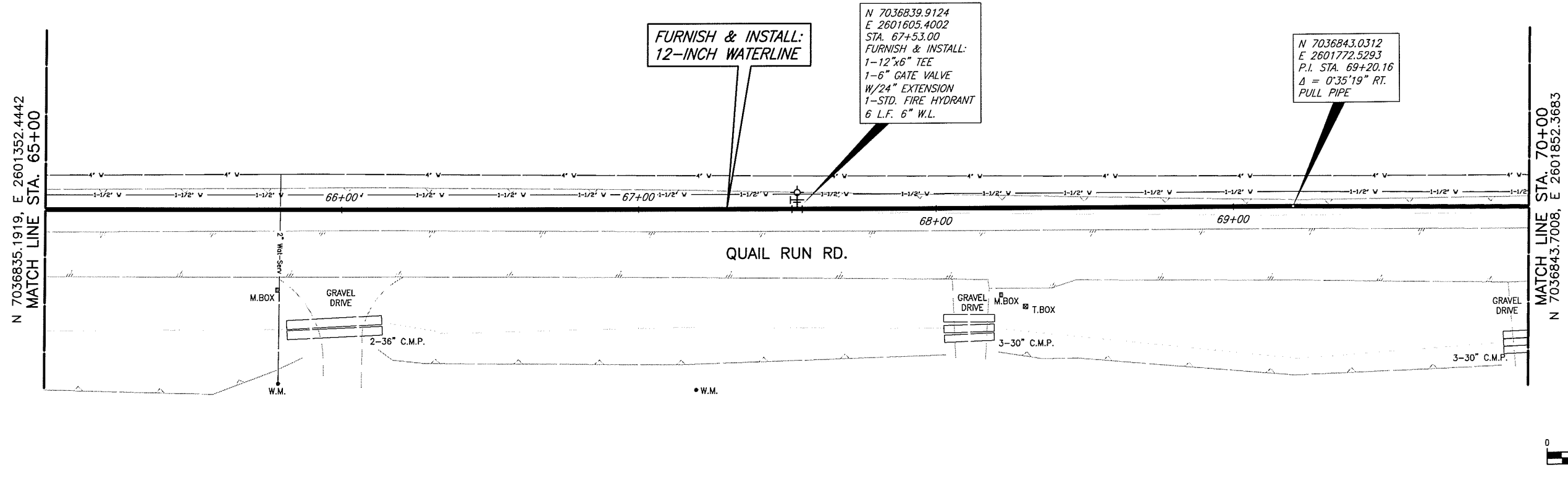
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**CITY OF ROCKWALL, TEXAS**  
 QUAIL RUN ROAD WATER LINE - PHASE 2  
 PLAN-PROFILE STA. 60+00 TO STA. 65+00

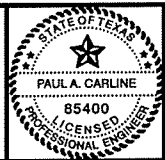
BHC  
 PROJECT NO.  
 2011-104  
 APRIL 2011

SHEET NO.  
**4**

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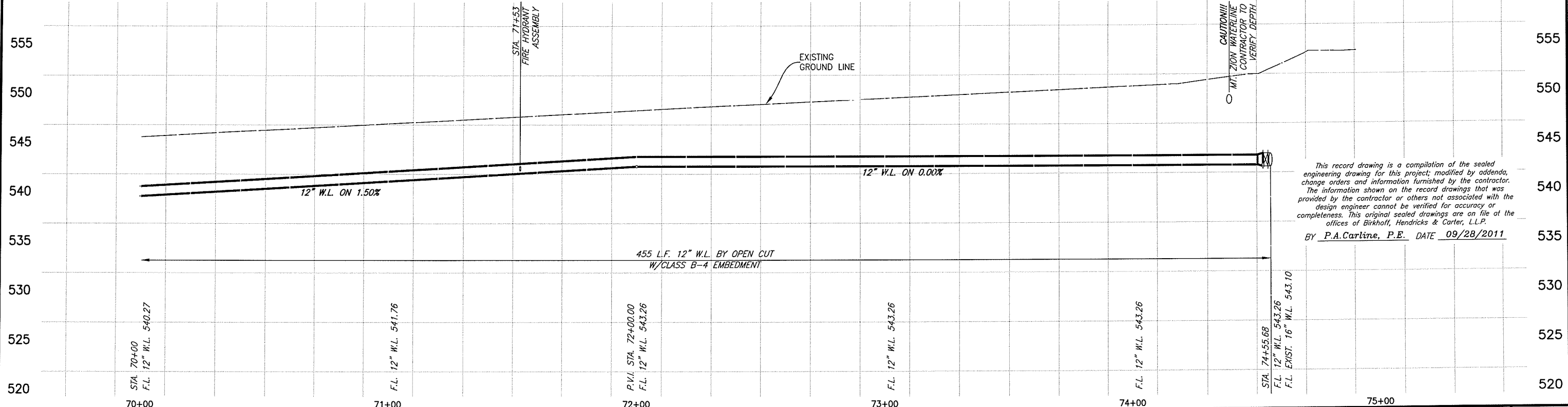
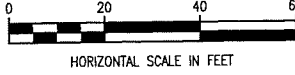
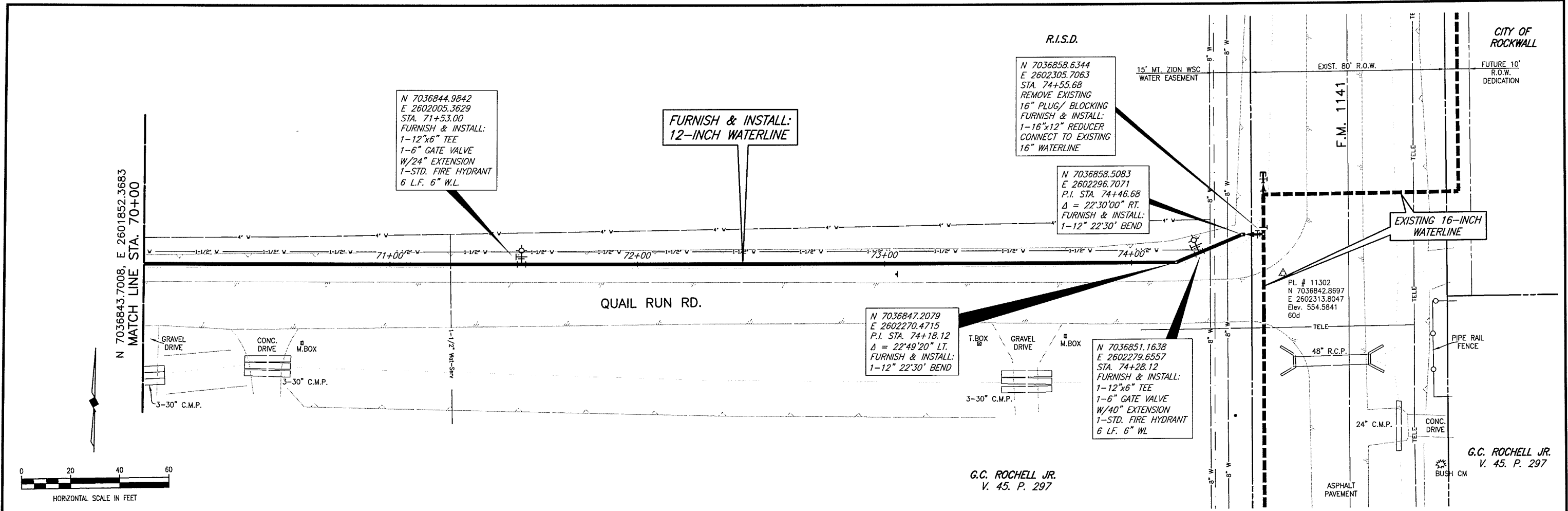
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**CITY OF ROCKWALL, TEXAS**  
QUAIL RUN ROAD WATER LINE - PHASE 2  
PLAN-PROFILE STA. 65+00 TO STA. 70+00

BHC  
PROJECT NO.  
2011-104  
APRIL 2011

SHEET NO.  
**5**

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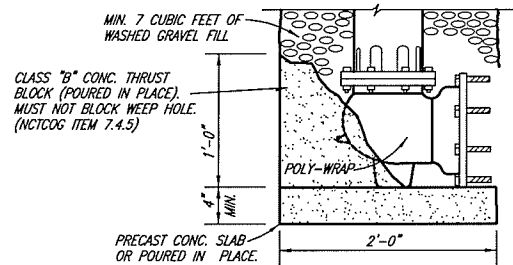
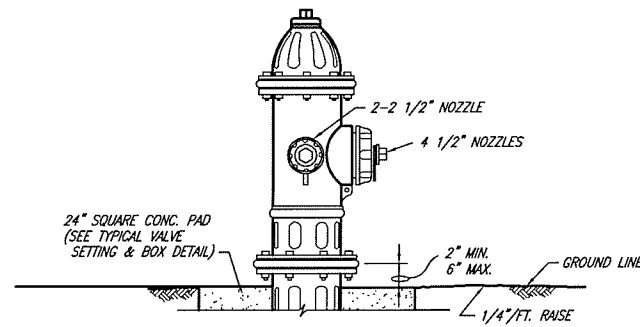


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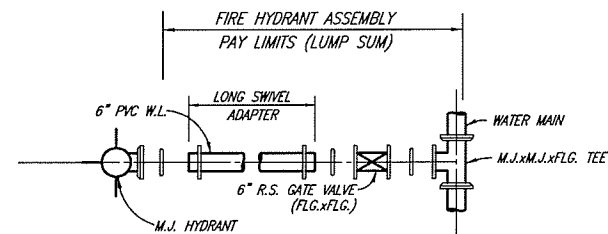
<b>BIRKHOFF, HENDRICKS &amp; CARTER, L.L.P.</b> PROFESSIONAL ENGINEERS Texas Firm F526 11910 Greenville Ave., Suite 600 Dallas, Texas 75243 (214) 361-7900			<b>CITY OF ROCKWALL, TEXAS</b> QUAIL RUN ROAD WATER LINE - PHASE 2 PLAN-PROFILE STA. 70+00 TO STA. 74+55.68	BHC PROJECT NO. 2011-104  APRIL 2011	SHEET NO.  <b>6</b>
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**WATER LINE NOTES**  
(NOTES APPLY TO ALL SHEETS)

1. WATER LINES 6-INCHES TO 12-INCHES IN DIAMETER SHALL BE PVC AWWA C-900 DR-14.
2. WATER LINES 14-INCHES TO 24-INCHES IN DIAMETER SHALL BE PVC AWWA C-905 DR-18.
3. WATERLINES 36-INCHES IN DIAMETER SHALL BE PVC AWWA C-905 DR-25.
4. ALL WATER LINES HAVE A MINIMUM COVER OF 48-INCHES.
5. ALL TEES, BENDS, ELBOWS, PLUGS, AND OTHER FITTINGS SHALL BE RESTRAINED USING MEGA-LUGS OR APPROVED EQUAL. JOINT RESTRAINT SHALL BE SUCH TO RESTRAIN TEST PRESSURES.
6. EXISTING UTILITIES SHOWN ON THE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION PROVIDED BY UTILITY COMPANIES AND FIELD SURVEYS. THE UTILITIES SHOWN MAY NOT REPRESENT ALL UTILITIES PRESENT. THE ENGINEER AND CITY OF ROCKWALL DO NOT ACCEPT RESPONSIBILITY FOR THE UTILITY LOCATIONS SHOWN. THE CONTRACTOR SHALL VERIFY UTILITY LOCATIONS BOTH HORIZONTALLY AND VERTICALLY PRIOR TO CONSTRUCTION AND SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT ALL UTILITIES ENCOUNTERED. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE AND SHALL REPAIR ANY UTILITIES DAMAGED BY THEIR OPERATIONS AT THEIR EXPENSE. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY CONFLICTS WITH UTILITIES.
7. ALL WORK SHALL COMPLY WITH APPLICABLE CODES, REGULATIONS, AND STANDARDS IMPOSED BY UTILITY COMPANIES AND THE CITY OF ROCKWALL.
8. CONTRACTOR SHALL FURNISH AND INSTALL BLUE E.M.T. MARKER PADS AT ALL BENDS, VALVES, CHANGES IN HORIZONTAL ALIGNMENT, AND EVERY 250- FEET ALONG THE LENGTH OF THE WATER LINE AS SHOWN IN THE CITY OF ROCKWALL STANDARD DETAILS. PAYMENT FOR FURNISHING AND INSTALLING THE E.M.T. MARKER PADS SHALL BE SUBSIDIARY TO WATER LINE INSTALLATION.

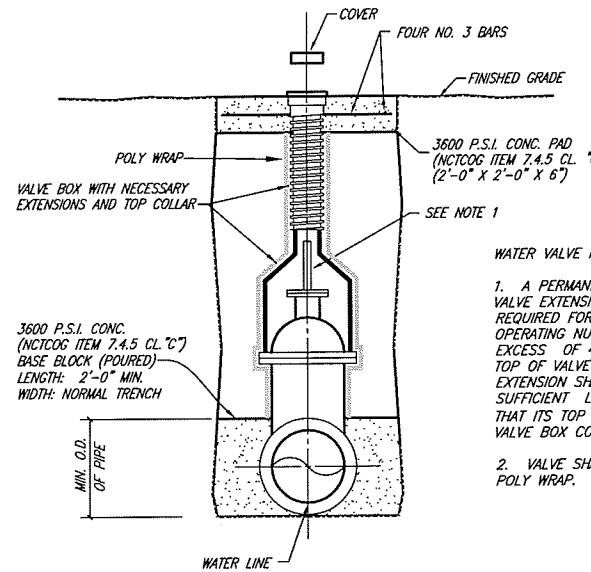


**FIRE HYDRANT NOTES:**  
1. IN GENERAL ALL FIRE HYDRANTS SHALL CONFORM TO AWWA STANDARDS SPECIFICATIONS FOR FIRE HYDRANTS FOR ORDINARY WATER WORKS SERVICE FOR WATER AND SANITARY SEWER IMPROVEMENTS. FIRE HYDRANTS SHALL HAVE A 5-1/4\"/>



**FIRE HYDRANT ASSEMBLY**

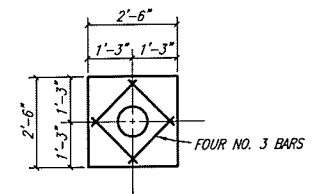
NO SCALE



**WATER VALVE NOTES:**  
1. A PERMANENTLY ATTACHED VALVE EXTENSION STEM SHALL BE REQUIRED FOR ANY VALVE WHOSE OPERATING NUT IS LOCATED IN EXCESS OF 4 FEET BELOW THE TOP OF VALVE BOX. THIS EXTENSION SHALL BE OF SUFFICIENT LENGTH TO INSURE THAT ITS TOP IS WITHIN 4\"/>

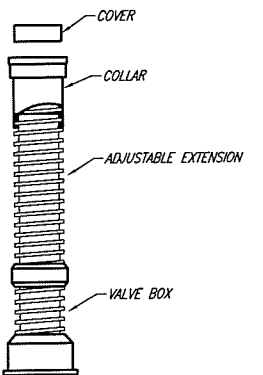
**GATE VALVE SETTING & BOX**

NO SCALE



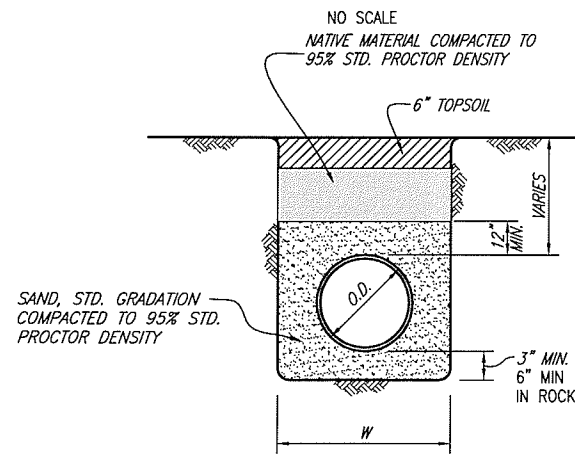
**VALVE BOX PAD PLAN**

NO SCALE



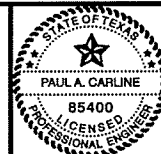
**VALVE BOX WITH EXTENSION**

NO SCALE



**CLASS B-4 EMBEDMENT**

**BIRKHOFF, HENDRICKS & CARTER, L.L.P.**  
PROFESSIONAL ENGINEERS  
Texas Firm F526  
11910 Greenville Ave., Suite 600  
Dallas, Texas 75243 (214) 361-7900



*Handwritten signature and date: 4/11/11*

**CITY OF ROCKWALL, TEXAS**  
QUAIL RUN ROAD WATER LINE - PHASE 2  
MISCELLANEOUS DETAILS

BHC  
PROJECT NO.  
2011-104  
APRIL 2011

SHEET NO.  
**7**

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