

Engineer's Summary of Infrastructure Cost

Name of Project: Mar Bella Sec. 14A – Water, Sanitary Sewer & Drainage Facilities and Paving Improvements

Owner of Project: Taylor Morrison

Owner's Address: 5353 W. Sam Houston Pkwy. North
Houston, TX 77041

General description of infrastructure improvements: Construction of water, sanitary sewer and drainage facilities and paving improvements to serve the section.

Date of Construction Completion: Final Inspection held

Summary of Costs:

Municipal Water System:

Engineering Service: \$4,564

Construction: \$68,642

Municipal Wastewater System:

Engineering Service: \$12,981

Construction: \$195,242

Municipal Storm Sewer and Drainage System:

Engineering Service: \$31,013

Construction: \$466,452

Municipal Street Improvements:

Engineering Service: \$48,558

Construction: \$376,518

Private Street Improvement: N/A

Engineering Service:

Construction:

Private Drainage Improvements: N/A

Engineering Service:

Construction:

I certify that to the best of my knowledge the above information represents the final costs of Infrastructure improvements within the project

Signature and Title:

Robert B. L. , P.E.

Date:

10/30/2017

Attachments: spread sheet of final unit quantities and unit costs of construction

Construction of the Water, Sanitary Sewer and Drainage Facilities to serve Mar Bella Section
14A
0074-0554D (11 2)

ITEM DESCRIPTION	UNIT	CONTRACT	COMPLETE	
		UNIT COST	TOTAL QTY. TO DATE	TOTAL AMT. TO DATE
WATER ITEMS				
1 8" PVC WATER LINE, C-900 DR 18 CL 235 ALL DEPTHS, INCLUDES ALL CAST IRON FITTINGS, COMPLETE IN PLACE	LF	\$17.00	1864	\$31,698.00
2 FLUSHING VALVE UNIT, ALL DEPTHS, INCLUDES APPROPRIATE TEE, 6" GATE VALVE & BOX, 6" LEAD, FIRE HYDRANT, AND TRENCH SAFETY, COMPLETE IN PLACE	EA	\$3,700.00	2	\$7,400.00
3 FLUSHING VALVE UNIT PAINTED BLUE, ALL DEPTHS, INCLUDES REDUCERS, 6" LEAD AND FIRE HYDRANT, INCLUDES FITTINGS, GATE VALVE & BOX, PER TECHNICAL SPECIFICATIONS, COMPLETE IN PLACE	EA	\$3,700.00	3	\$11,100.00
4 8" AWWA GATE VALVE AND BOX, ALL DEPTHS, COMPLETE IN PLACE	EA	\$1,000.00	4	\$4,000.00
5 12" X 8" TAPPING SLEEVE AND VALVE AND CONNECT PROPOSED WATERLINE, COMPLETE IN PLACE	EA	\$4,800.00	2	\$9,600.00
6 AUGER FOR 8" WATER LINE (DOES NOT INCLUDE PIPE), TO INCLUDE DEWATERING, COMPLETE IN PLACE	LF	\$280.00	10	\$2,800.00
7 TRENCH SAFETY, ALL DEPTHS, COMPLETE IN PLACE	LF	\$1.00	1854	\$1,854.00
SUBTOTAL WATER ITEMS				\$68,642.00
SANITARY SEWER ITEMS				
1 8" PVC SEWER PIPE, ASTM D 2241, SDR 26, 8' - 12' CUT, COMPLETE IN PLACE	LF	\$29.00	1502	\$43,558.00
2 8" PVC SEWER PIPE, ASTM D 2241, SDR 26, 12' - 16' CUT, COMPLETE IN PLACE	LF	\$34.00	602	\$20,468.00
3 AUGER FOR 8" SANITARY SEWER WITH 14" STEEL CASING, (INCLUDES 14" STEEL CASING BUT DOES NOT INCLUDE 8" P V C SANITARY SEWER, INCLUDES DEWATERING, COMPLETE IN PLACE	LF	\$180.00	158	\$28,440.00
4 STANDARD SANITARY SEWER MANHOLE FOR 6" - 24" SANITARY SEWER PIPES (0' - 8' DEPTH), COMPLETE IN PLACE	EA	\$2,000.00	13	\$26,000.00
5 EXTRA DEPTH OF SANITARY SEWER MANHOLE (OVER 8' DEPTH), COMPLETE IN PLACE	VF	\$170.00	42	\$7,140.00
6 "LONG SIDE" DOUBLE OR SINGLE 6" PVC PIPE SERVICE LEADS, ASTM D-2241, SDR 26, ALL DEPTHS, INCLUDING CEMENT STABILIZED SAND BACKFILL, RISER, WYE, PLUG, MARKER, AND ANY NECESSARY FITTINGS, ETC., COMPLETE IN PLACE	LF	\$33.00	139	\$4,587.00
7 "SHORT SIDE" DOUBLE OR SINGLE 6" PVC PIPE SERVICE LEADS, ASTM D-2241, SDR 26, ALL DEPTHS, INCLUDING CEMENT STABILIZED SAND BACKFILL, RISER, WYE, PLUG, MARKER, TRENCH SAFETY, AND ANY NECESSARY FITTINGS, ETC., COMPLETE IN PLACE	EA	\$630.00	14	\$8,820.00
8 CORE INTO EXISTING SANITARY SEWER MANHOLE, AND CONNECT PROPOSED 8" PVC SANITARY SEWER PIPE, COMPLETE IN PLACE	EA	\$1,400.00	1	\$1,400.00
9 T V INSPECTION FOR 8" AND 12" SANITARY SEWER, PER CITY OF LEAGUE CITY REQUIREMENTS, COMPLETE IN PLACE	LF	\$2.00	0	\$0.00
10 TRENCH SAFETY SYSTEM, ALL DEPTHS, COMPLETE IN PLACE	LF	\$1.00	2085	\$2,085.00
11 STANDARD 6" SANITARY SEWER STACK, (3' DEPTH), COMPLETE IN PLACE	EA	\$600.00	4	\$2,400.00
12 EXTRA DEPTH OF 6" SANITARY SEWER STACK (OVER 3' DEPTH), COMPLETE IN PLACE	VF	\$25.00	7	\$175.00
13 SANITARY SEWER PLUG (ALL DEPTHS AND SIZES), COMPLETE IN PLACE	EA	\$160.00	2	\$320.00
14 CONSTRUCT SANITARY SEWER MANHOLE ON EXISTING SANITARY SEWER, INCLUDES CUTTING, REMOVING AND DISPOSING EXISTING PIPE AND CONNECTING EXISTING PIPE TO PROPOSED MANHOLE, COMPLETE IN PLACE	EA	\$4,100.00	1	\$4,100.00
15 STANDARD SANITARY SEWER DROP STRUCTURE ON MANHOLE (0' - 3' DEPTH), COMPLETE IN PLACE	EA	\$600.00	2	\$1,200.00
16 EXTRA DEPTH OF SANITARY SEWER DROP STRUCTURE ON MANHOLE (OVER 3' DEPTH), COMPLETE IN PLACE	VF	\$27.00	2.2	\$59.40
SUBTOTAL SANITARY SEWER ITEMS				\$150,752.40

Construction of the Water, Sanitary Sewer and Drainage Facilities to serve Mar Bella Section
14A
0074-0554D (11 2)

ITEM DESCRIPTION		UNIT	CONTRACT UNIT COST	TOTAL QTY. TO DATE	COMPLETE TOTAL AMT. TO DATE
STORM SEWER ITEMS					
1	24" RCP STORM SEWER, ASTM C-76, CLASS III, ALL DEPTHS, COMPLETE IN PLACE	LF	\$39.00	805	\$31,395.00
2	30" RCP STORM SEWER, ASTM C-76, CLASS III, ALL DEPTHS, COMPLETE IN PLACE	LF	\$55.00	463	\$25,465.00
3	36" RCP STORM SEWER, ASTM C-76, CLASS III, ALL DEPTHS, COMPLETE IN PLACE	LF	\$70.00	557	\$38,990.00
4	42" RCP STORM SEWER, ASTM C-76, CLASS III, ALL DEPTHS, COMPLETE IN PLACE	LF	\$80.00	135	\$12,150.00
5	8' X 4' RCB STORM SEWER CULVERT, ASTM C-1433, ALL DEPTHS, COMPLETE IN PLACE	LF	\$292.00	296	\$86,432.00
6	8' X 5' RCB STORM SEWER CULVERT, ASTM C-1433, ALL DEPTHS, COMPLETE IN PLACE	LF	\$364.00	64	\$23,296.00
7	TYPE "C" MANHOLE FOR 42" STORM SEWERS AND SMALLER, COMPLETE IN PLACE	EA	\$2,800.00	16	\$44,800.00
8	JUNCTION BOX WITH TYPE "C" MANHOLE TOP, COMPLETE IN PLACE	EA	\$12,000.00	1	\$12,000.00
9	4 DEGREE BEND FOR DUAL 4' X 8' RCB STORM SEWER, COMPLETE IN PLACE	EA	\$2,600.00	1	\$2,600.00
10	STAGE I - STANDARD 5' PRECAST INLET ("H-2"), ALL DEPTHS, INCLUDES TEMPORARY SILT BARRIER FENCE FOR STAGE I INLETS, COMPLETE IN PLACE	EA	\$900.00	15	\$13,500.00
11	STAGE II - STANDARD 5' PRECAST INLET ("H-2"), COMPLETE IN PLACE	EA	\$1,350.00	15	\$20,250.00
12	STAGE I - STANDARD 10' CURB INLET, ALL DEPTHS, INCLUDES TEMPORARY SILT BARRIER FENCE FOR STAGE I INLETS, COMPLETE IN PLACE	EA	\$1,200.00	2	\$2,400.00
13	STAGE II - STANDARD 10' CURB INLET, COMPLETE IN PLACE	EA	\$1,800.00	2	\$3,600.00
14	TRENCH SAFETY SYSTEM, ALL DEPTHS, COMPLETE IN PLACE	LF	\$1.00	2320	\$2,320.00
15	T V INSPECTION FOR STORM SEWER, PER CITY OF LEAGUE CITY REQUIREMENTS COMPLETE IN PLACE	LF	\$2.00	2320	\$4,640.00
16	CUT EXISTING DUAL, 8' X 4' RCB PERPENDICULAR AND CONNECT PROPOSED DUAL, 8' X 4' RCB WITH REINFORCED CONCRETE COLLAR, COMPLETE IN PLACE	LS	\$14,000.00	1	\$14,000.00
17	COFFER DAM IN DETENTION POND D, TO INCLUDE LABOR & MATERIALS NECESSARY TO REMOVE WATER FROM THE EXISTING BOX CULVERT AND EXISTING DITCH TO CREATE A DRY WORKING ENVIRONMENT, COMPLETE IN PLACE	LS	\$6,200.00	1	\$6,200.00
18	COFFER DAM IN EXISTING DRAINAGE DITCH, TO INCLUDE LABOR & MATERIALS NECESSARY TO REMOVE WATER FROM THE EXISTING BOX CULVERT AND EXISTING DITCH TO CREATE A DRY WORKING ENVIRONMENT, COMPLETE IN PLACE	LS	\$6,200.00	1	\$6,200.00
19	PUMP DOWN (WITH 4-INCH PUMP) STANDING WATER IN, AS NECESSARY TO CREATE A DRY WORKING ENVIRONMENT FOR THE INSTALL OF THE PROPOSED STORM SEWER IMPROVEMENTS AND FOR THE DESILTING/REGRADE OF THE DITCH COMPLETE IN PLACE	HRS	\$170.00	50	\$8,500.00
20	DESLUT, REMOVE MUCK, ALL ORGANIC MATTERS (VEGETATION ROOTS, ORGANIC SOIL LAYER) TO AS DEPTH OF AT LEAST 4", AND REGRADE EXISTING DRAINAGE DITCH, AS PER CONSTRUCTION PLAN, COMPLETE IN PLACE	LF	\$17.00	665	\$11,305.00
21	8" THICK BRICK PLUG (ALL SIZES), COMPLETE IN PLACE	EA	\$500.00	2	\$1,000.00
22	REMOVE AND DISPOSE EXISTING SLOPE PAVING, COMPLETE IN PLACE	SY	\$17.00	115	\$1,955.00
23	RIP RAP (18" THICKNESS), GRADATION NO. 1, INCLUDING GEOTEXTILE FABRIC ("MIRAFI-600" OR APPROVED EQUAL), FOR DRAINAGE DITCH, COMPLETE IN PLACE	SY	\$57.00	552	\$31,464.00
24	BACKFILL EXISTING INTERIM DRAINAGE DITCH PER CONSTRUCTION PLANS USING FILL FROM ADJACENT STOCKPILE, INCLUDES MANIPULATION AND COMPACTION TO 95% SPD, COMPLETE IN PLACE	CY	\$3.50	5000	\$17,500.00
SUBTOTAL STORM SEWER ITEMS					\$421,982.00
MISCELLANEOUS ITEMS					
1	BEDDING AND BACKFILL FOR WET SAND CONSTRUCTION AND UNSATISFACTORY SOIL CONDITIONS (PER DETAIL) (TO BE USED ONLY AS DIRECTED BY THE ENGINEER), COMPLETE IN PLACE	LF	\$5.00	0	\$0.00
2	DEWATERING, (TO BE USED ONLY AS DIRECTED BY THE ENGINEER), COMPLETE IN PLACE	LF	\$20.00	4424	\$88,480.00
3	EXTRA CEMENT STABILIZED SAND BACKFILL (1.5 SACKS PER TON) (TO BE USED ONLY AS DIRECTED BY THE ENGINEER), COMPLETE IN PLACE	CY	\$30.00	0	\$0.00
4	STRIPPING MINIMUM OF 4" OF TOP SOIL TO SUITABLE CONDITION WITHIN R.O.W. (TO BE USED ONLY AS DIRECTED BY THE ENGINEER), COMPLETE IN PLACE	AC	\$500.00	1	\$500.00
5	7" CONCRETE SLAB FOR STORM SEWER BEDDING (AS PER DETAIL) (TO BE USED ONLY AS DIRECTED BY THE ENGINEER), COMPLETE IN PLACE	LF	\$25.00	0	\$0.00
SUBTOTAL MISCELLANEOUS ITEMS					\$88,980.00
TOTALS TO DATE					\$730,338.40

Construction of the Paving and Appurtenances to serve Mar Bella Section 14A

0074 0554 (14 2)

ITEM DESCRIPTION	CONTRACT		COMPLETE	
	UNIT	UNIT COST	TOTAL QTY. TO DATE	TOTAL AMT. TO DATE
PAVING IMPROVEMENT ITEMS				
1. ROADWAY EXCAVATION, COMPLETE IN PLACE	CY	\$3.75	500	\$1,875.00
2. HYDRATED LIME FOR STABILIZED SUB-GRADE, (6% LIME BY WEIGHT) AS REQUIRED BY SOIL CONDITIONS AND APPROVED BY ENGINEER, COMPLETE IN PLACE	TON	\$190.00	115	\$21,850.00
3. 6" LIME STABILIZED SUB-GRADE (MANIPULATION), COMPLETE IN PLACE	SY	\$3.00	7600	\$22,800.00
4. 6" REINFORCED CONCRETE PAVEMENT, COMPLETE IN PLACE	SY	\$39.75	6750	\$268,312.50
5. 6" REINFORCED CONCRETE CURB, COMPLETE IN PLACE	LF	\$3.00	550	\$1,650.00
6. 4" X 12" REINFORCED CONCRETE CURB, COMPLETE IN PLACE	LF	\$3.00	3330	\$9,990.00
7. PERMANENT TRAFFIC CONTROL DEVICES (INCLUDING ALL TRAFFIC BUTTONS BLUE REFLECTORIZED FIRE HYDRANT BUTTONS, PAVEMENT STRIPING, STREET SIGNS, STOP SIGNS, MARKERS TRAFFIC SIGNS, AND REMOVAL OF EXISTING STRIPING), COMPLETE IN PLACE	LS	\$4,840.00	1	\$4,840.00
8. R.O.W. AND LOT GRADING, INCLUDING MANIPULATION AND COMPACTION OF EXISTING FILL TO REQUIRED ELEVATIONS AS SHOWN ON LOT GRADINGPLAN, COMPLETE IN PLACE	LS	\$19,500.00	1	\$19,500.00
9. 5' SIDEWALK (PER DETAIL IN CONSTRUCTION PLANS), COMPLETE IN PLACE	LF	\$36.00	100	\$3,600.00
10. WHEELCHAIR RAMPS AND 5' X 5' LANDING PAD (AS SHOWN ON PAVEMENT DETAIL SHEETS), COMPLETE IN PLACE	EA	\$1,300.00	10	\$13,000.00
11. STANDARD CITY OF LEAGUE CITY TYPE III BARRICADE, COMPLETE IN PLACE	EA	\$1,300.00	4	\$5,200.00
12. 6" SCHEDULE 40 PVC, COMPLETE IN PLACE (LOCATION TBD)	LF	\$20.00	100	\$2,000.00
13. FULL DEPTH SAWCUT AND REMOVE CONCRETE CURB, COMPLETE IN PLACE	LF	\$17.00	100	\$1,700.00
SUBTOTAL PAVING IMPROVEMENT ITEMS				\$376,317.50
MISCELLANEOUS ITEMS				
1. STRIPPING (ALL STRIPPING TO BE APPLIED ON SITE AFTER THE FINAL GRADE) (TO BE USED ONLY AS DIRECTED BY THE ENGINEER), COMPLETE IN PLACE	AC	\$200.00	1	\$200.00
2. HYDRATED LIME FOR STABILIZED SUB - GRADE, (6 % LIME BY WEIGHT) AS REQUIRED BY SOILS CONDITIONS AND APPROVED BY ENGINEER, COMPLETE IN PLACE	TON	\$190.00	0	\$0.00
3. 6" LIME STABILIZED SUB GRADE (MANIPULATION), COMPLETE IN PLACE	SY	\$3.00	0	\$0.00
SUBTOTAL MISCELLANEOUS ITEMS				\$200.00
TOTALS TO DATE				\$376,517.50