

August 1st, 2013
29321

Mike Petter
Brushy Creek M.U.D. General Manager
16318 Great Oaks Drive
Round Rock, TX 78681

RE: Brushy Creek North - Capital Replacement Program Recommendations

Dear Mr. Petter:

Brushy Creek M.U.D. retained the services of Halff to develop a program for the replacement of the existing water system mains and services in the area of the district referred to as the Brushy Creek North Subdivision Sections 1 & 2. The residential neighborhood was platted in 1977 and the majority of water system infrastructure was constructed in the early '80s. The majority of the distribution lines within the neighborhood consist of 6 inch diameter asbestos cement pipe. Based on discussions about the annual budget for the program, the proposed capital improvements were partitioned into sections that both met budget parameters and were logical from an operations and logistical standpoint. Cost estimates with descriptions of each project section are provided. Several factors, which were evaluated in the development of this program, are discussed below.

Asbestos Concrete Pipe

The water distribution system in Brushy Bend North Sections 1 & 2 consists of asbestos cement (AC) pipe. BCMUD currently does not promulgate standards or specifications regarding work with this material. Construction activities on and proper disposal of AC pipe are governed by regulations of the EPA, the Occupational Safety and Health Administration (OSHA) and the National Emissions Standards for Hazardous Air Pollutants (NESHAP). AC pipe is not categorically classified as hazardous material, but as an asbestos containing material it is regulated in this state by the Texas Health and Human Services Commission. The cost estimates included in this report assume that the existing AC pipe will be abandoned in place once it has been replaced. Proper removal and disposal of this pipe material would substantially increase project costs. There is currently no regulation that would require BCMUD to remove this pipe material after it has been taken out of service. However, BCMUD still owns and is liable for AC pipe after it has been abandoned in place. There is no technical or operational reason to remove the AC pipe from the ground in its entirety. There is a small risk of the AC pipe becoming susceptible to failure once it no longer contains water. This would result in visible settling of the ground along the trench alignment, which may be repaired on a case by case basis.

A Licensed Asbestos Consultant will be retained by a contractor who constructs any of the projects proposed in this report. This consultant will perform an inspection and develop an environmental plan for the work required on the AC waterline, such as cutting and capping. The results of an inspection will determine the level of safety measures that the contractor must use during

construction. Should BCMUD choose to remove the AC waterline from the ground at the time of construction of the replacement PVC pipe, it may be more cost effective to consider bundling several of the program sections in this report into larger projects in order to leverage savings for handling and disposal.

Project Criteria

The capital replacement program described in this report assumes the replacement of all AC pipe material in Brushy Creek North Sections 1 & 2. The entire area of the replacement program was divided into discrete sections. The limits of these sections were chosen in order to minimize service interruptions and disruption of residential access, while generally adhering to a set budget range. Exhibit 1, found after this letter, shows the location and limits of each section. Cost estimates for each section follow the exhibit. The program sections are prioritized based on the number of water main failures experienced over the last two years. BCMUD work orders were reviewed in order to differentiate between leaks on the main and other types of leaks. The locations of the water main leaks from this period are designated on Exhibit #1.

Predominately, the plan concept for each section assumes that the new waterline will be placed within the right of way (ROW) on the opposite of the road pavement from the existing AC line. See Exhibit #2 for an illustration. This alignment choice was driven by three factors:

- Where clearly marked for identification, existing underground franchise utilities, i.e. gas and telecommunications, were found to be adjacent and parallel to the existing waterline creating potential conflicts with new pipe installation.
- AC water pipe can be brittle and easily crushed under heavy active loading. Installing new pipe adjacent to the existing waterline would require heavy machinery to drive and work over the AC pipe for the duration of the project.
- The dedicated ROW in the Brushy Creek North development is 50 feet wide and the largest pavement section is 28 feet wide. The space left over for trench excavation, accounting for the existing waterline and necessary clearance, would not be sufficient to avoid conflicts with private property. At a minimum, the limited space would require the removal and replacement of fencing and landscaping, which is an additional cost. Even more costly and time consuming would be the acquisition of temporary easements for the length of each section.

There are only two locations where this new alignment preference was not used. The first instance is the only location where a portion of the transmission main on Great Oaks Drive is replaced and in the second instance the existing waterline switches sides on Emerald Hill Road.

Installation of new water system improvements in a residential setting can involve many challenges, some of them discussed above. Many of the residences in this development have rock drainage improvements and landscape features, in addition to wide driveways. In an attempt to mitigate some of these issues, avoid land owner complaints, and possibly manage some line item costs, Halff investigated the use of pipe installation technologies other than open trenching. Large diameter, high-density polyethylene (HDPE) pipe was a suggested alternative. This material would be installed for long distances by a directional bore machine, which avoids any impact on above ground features. However, HDPE was not found to be a viable choice. It would not be cost effective in this instance. It requires experienced water system contractors with the proper equipment for installation, which

there are few of in Texas. It would require BCMUD to double stock on repair materials. HDPE pipe performs well when installed in long uninterrupted sections. When pipe failure occurs, the most likely point of failure is at junctions and fittings. Residential waterline replacement requires many fittings in order to cross tie distribution lines and services. For these reasons, this alternative installation method is not recommended by Halff.

Recommendations

- Prior to the construction of any the sections of this proposed replacement program, BCMUD should develop an internal policy regarding its AC pipe assets, weighing the considerable costs of disposal against the liability of public risk for an indeterminate time period.
- BCMUD should contract a licensed asbestos consultant to sample the existing pipe material and provide laboratory analysis results. (Approximate cost of \$400)
- Dependent upon the results of the AC pipe analysis and the input of a licensed asbestos consultant, BCMUD may decide to adopt a multi-year replacement program rather than an annual one in order to leverage possible savings on construction costs and professional services.
- Otherwise, BCMUD should implement the replacement program outlined in the exhibit and cost estimates to reduce line breaks and water loss and to remove the use of AC pipe in this area of the district.
- New waterlines should be a minimum of 8" diameter C-900, DR18 to match the City of Round Rock standards.
- New system improvements should typically be constructed on the opposite side of the roadway from existing waterlines in order to avoid conflicts with existing utilities and clearance issues the ROW. Exceptions should be made to this assumption on a case by case basis dependent upon structural conflicts, i.e. drainage improvements, retaining walls, and large trees. These instances will be identified during field surveys of the project. This concept should be reevaluated in the event that BCMUD chooses to remove and dispose of all AC pipe material in order to identify the most cost effective means of constructions.

Halff appreciates this opportunity to serve the Brushy Creek M.U.D. and I look forward to future endeavors.

Sincerely,

HALFF ASSOCIATES, INC.
TBPE FIRM #312



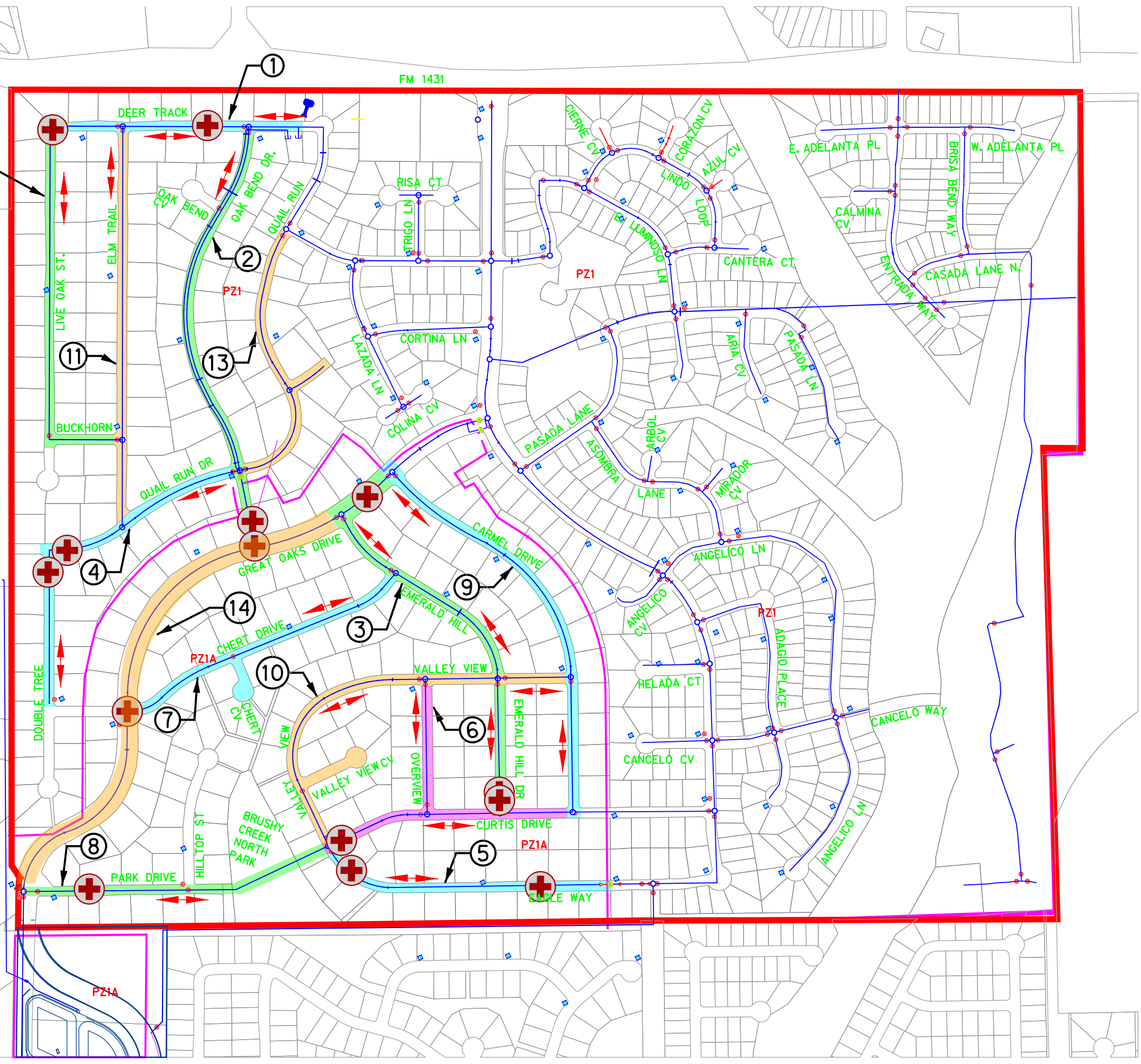
Noah Shaffer, P.E.
Project Engineer

C:



8/1/2013 1:57:37 PM ah2167 HALFF I:\29000s\29366\CADD\366 Brushy Creek North.dgn NORTH SOUTH FULL PDF_2D_CLR_FW_300.plt

SECTION #	PIPE LENGTH	# OF METERS	ESTIMATED COST
1	1,380	14	\$239,450
2	2,150	21	\$302,360
3	2,130	18	\$352,090
4	1,790	17	\$263,440
5	1,480	19	\$214,880
6	1,900	13	\$264,250
7	1,530	19	\$243,820
8	1,580	11	\$250,280
9	2,030	23	\$313,510
10	2,045	26	\$290,660
11	1,940	18	\$268,270
12	1,890	24	\$271,650
13	1,570	18	\$236,510
14	2,650	24	\$443,900



SM HALFF
 TWO SIERRA WAY, SUITE 105
 GEORGETOWN, TEXAS 78626-7574
 TEL (512) 942-6232
 FAX (512) 869-0089

EXISTING WATERLINE
 PROJECT SECTION
 WATER MAIN BREAK

N

0 250 500 750 1000

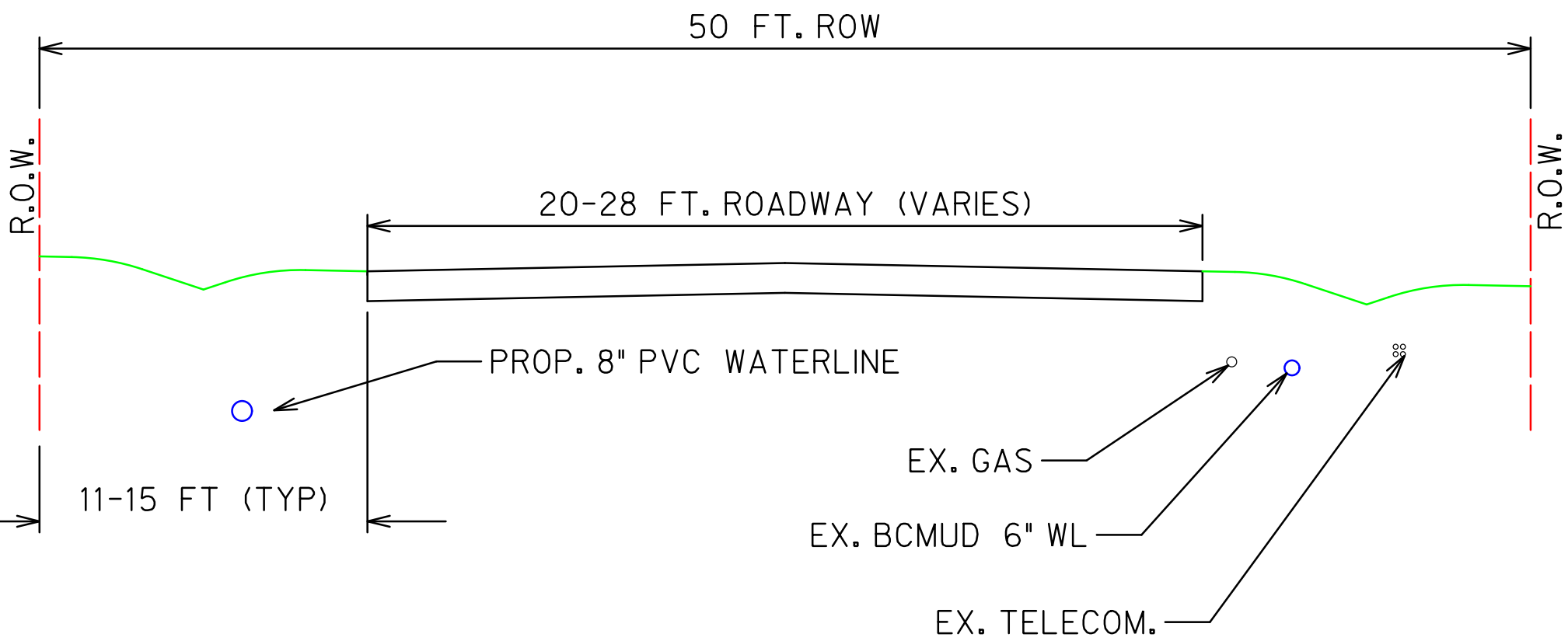
SCALE: 1"=500'

Project No.: 29366
 Issued: JULY 2013
 Drawn By: BC
 Checked By: NS
 Scale: 1"=500'
 Sheet Title

EXHIBIT #1

 4
 Sheet Number

TYPICAL STREET SECTION IN BRUSHY BEND NORTH



SCALE: 1 IN. = 5 FT.

EXHIBIT	2
SHEET #	5

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS
Brushy Creek M.U.D.
Brushy Creek North Capital Replacement Section #1 - Deer Tract Street

DATE: 7/12/2013
 PREPARED BY: NS
 HA AVO: 29366

PAY ITEM NO	DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	ITEM COSTS	SUB-TOTALS	% OF TOTAL COSTS
1	CLEARING ROW INC. REMOVAL OF ABAN. FACILITIES	STA	12.0	\$350.00	\$4,200	\$4,200	1.75%
2	CUT & REPAIR CONC. DRIVEWAYS (W/ SIDEWALKS INCIDENTAL)	EA	10	\$2,400.00	\$24,000	\$24,000	10.02%
3	WET CONNECTIONS (8"x6") INC. CUT, PLUG & ABANDON EX. WL	EA	4	\$1,600.00	\$6,400	\$6,400	2.67%
4	INSTALL 16" STEEL ENCASEMENT BY BORE	LF	120	\$225.00	\$27,000	\$27,000	11.28%
5	TRENCH EXCAVATION SAFETY SYSTEMS	LF	1,260	\$1.25	\$1,575	\$1,575	0.66%
6	8" DIA. PVC PIPE, C900, DR-18, INC. TRACER WIRE	LF	1,380	\$26.00	\$35,880	\$35,880	14.98%
7	DUCTILE IRON FITTINGS (8")	TON	1.5	\$12,000.00	\$18,000	\$18,000	7.52%
8	GATE VALVE (8")	EA	6	\$1,200.00	\$7,200	\$7,200	3.01%
9	GATE VALVE (6")	EA	2	\$900.00	\$1,800	\$1,800	0.75%
10	INSTALL FIRE HYDRANT, NOT INC. GATE VALVE	EA	2	\$2,500.00	\$5,000	\$5,000	2.09%
11	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE)	EA	1	\$1,200.00	\$1,200	\$1,200	0.50%
12	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	1	\$2,200.00	\$2,200	\$2,200	0.92%
13	INSTALL DUAL WATER SERVICE (2" HDPE PIPE)	EA	4	\$1,400.00	\$5,600	\$5,600	2.34%
14	INSTALL DUAL WATER SERVICE (2" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	2	\$2,500.00	\$5,000	\$5,000	2.09%
15	MOBILIZATION	LS	1	\$12,000.00	\$12,000	\$12,000	5.01%
16	SOD AND LANDSCAPING REPAIR	SY	1,400	\$4.50	\$6,300	\$6,300	2.63%
17	SILT FENCE AND OTHER EROSION CONTROL	LF	1,260	\$2.00	\$2,520	\$2,520	1.05%
18	TEMPORARY CONSTRUCTION EASEMENTS	EA	3	\$500.00	\$1,500	\$1,500	0.63%
19	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	1	\$3,000.00	\$3,000	\$3,000	1.25%
SUB TOTAL						\$170,375	
CONTINGENCY (20%)						\$34,075	
PROFESSIONAL SERVICES						\$35,000	
GRAND TOTAL						\$239,450	

NOTES:

- PROFESSIONAL SERVICES COSTS ARE APPROXIMATE AND A DETAILED PROPOSAL WILL BE SUBMITTED FOR EACH PROJECT. THE GENERAL BUDGET PROVIDED CONSISTS OF SUE (\$5,000), SURVEY (\$5,000), AND ENGINEERING (\$25,000). EASEMENT ACQUISITION COSTS ARE NOT INCLUDED IN THIS LINE ITEM.
- ESTIMATE ASSUMES THAT IMPROVEMENTS ARE CONSTRUCTED ON THE OPPOSITE SIDE OF THE ROAD FROM EXISTING WATER FACILITIES, THAT NO ENCASEMENT IS PLACED UNDER DRIVEWAYS, NO EXISTING MATERIALS ARE SALVAGED, AND THAT ALL ROAD CROSSINGS ARE BORED.

UNIT PRICES ARE ENGINEER'S ESTIMATE BASED ON ENGINEER'S PREVIOUS EXPERIENCE AND QUALIFICATIONS WHICH REPRESENTS THE ENGINEER'S JUDGEMENT AS A DESIGN PROFESSIONAL FAMILIAR WITH THE CONSTRUCTION INDUSTRY. QUANTITIES IDENTIFIED IN THIS ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS HAVE BEEN ESTIMATED BY HALFF ASSOCIATES, INC. THE ENGINEER NEITHER MAKES REPRESENTATION NOR ACCEPTS RESPONSIBILITY AS TO THE ACCURACY OF THESE QUANTITIES AS STATED ABOVE. THE ENGINEER CANNOT AND DOES NOT GUARANTEE THAT THE PROPOSALS, BIDS, OR ACTUAL CONSTRUCTION COSTS WILL NOT VARY FROM THESE ESTIMATES OF PROBABLE COSTS PREPARED FOR THE OWNER OR THE INTENDED RECIPIENT OF THIS DOCUMENT.

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS
Brushy Creek M.U.D.
Brushy Creek North Capital Replacement Section #2 - Oak Bend Drive

DATE: 7/12/2013
 PREPARED BY: NS
 HA AVO: 29366

PAY ITEM NO	DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	ITEM COSTS	SUB-TOTALS	% OF TOTAL COSTS
1	CLEARING ROW, INC. REMOVAL OF ABAN. FACILITIES	STA	21.5	\$350.00	\$7,525	\$7,525	2.49%
2	CUT & REPAIR CONC. DRIVEWAYS (W/ SIDEWALKS INCIDENTAL)	EA	9	\$2,400.00	\$21,600	\$21,600	7.14%
3	WET CONNECTIONS (8"X6") INC. CUT, PLUG & ABANDON EX. WL	EA	2	\$1,600.00	\$3,200	\$3,200	1.06%
4	CONNECT TO EX. WATERLINE (12"), INC. TAP SADDLE & GATE VALVE	EA	1	\$3,500.00	\$3,500	\$3,500	1.16%
5	INSTALL 16" STEEL ENCASEMENT BY BORE	LF	80	\$225.00	\$18,000	\$18,000	40.39%
6	TRENCH EXCAVATION SAFETY SYSTEMS	LF	2,070	\$1.25	\$2,588	\$2,588	0.86%
7	8" DIA. PVC PIPE, C900, DR-18, INC. TRACER WIRE	LF	2,150	\$26.00	\$55,900	\$55,900	18.49%
8	DUCTILE IRON FITTINGS (8")	TON	2.4	\$12,000.00	\$28,800	\$28,800	9.53%
9	GATE VALVE (8")	EA	4	\$1,200.00	\$4,800	\$4,800	1.59%
10	GATE VALVE (6")	EA	2	\$900.00	\$1,800	\$1,800	0.60%
11	INSTALL FIRE HYDRANT, NOT INC. GATE VALVE	EA	2	\$2,500.00	\$5,000	\$5,000	1.65%
12	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE)	EA	2	\$1,200.00	\$2,400	\$2,400	0.79%
13	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE), INC. BORE & HDPE ENCASEMENT	EA	3	\$2,200.00	\$6,600	\$6,600	2.18%
14	INSTALL DUAL WATER SERVICE (2" HDPE PIPE)	EA	4	\$1,400.00	\$5,600	\$5,600	1.85%
15	INSTALL DUAL WATER SERVICE (2" HDPE PIPE), INC. BORE & HDPE ENCASEMENT	EA	4	\$2,500.00	\$10,000	\$10,000	3.31%
16	INSTALL PRECAST CONCRETE PRV VAULT & RELOCATE EX. PRV AND VALVES	LS	1	\$6,000.00	\$6,000	\$6,000	1.98%
17	MOBILIZATION	LS	1	\$18,000.00	\$18,000	\$18,000	5.95%
18	SOD AND LANDSCAPING REPAIR	SY	2,300	\$4.50	\$10,350	\$10,350	3.42%
19	SILT FENCE AND OTHER EROSION CONTROL	LF	2,070	\$2.00	\$4,140	\$4,140	1.37%
20	TEMPORARY CONSTRUCTION EASEMENTS	EA	2	\$500.00	\$1,000	\$1,000	0.33%
21	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	2	\$3,000.00	\$6,000	\$6,000	1.98%
SUB TOTAL						\$222,803	
CONTINGENCY (20%)						\$44,561	
PROFESSIONAL SERVICES						\$35,000	
GRAND TOTAL						\$302,360	

NOTES:

- PROFESSIONAL SERVICES COSTS ARE APPROXIMATE AND A DEATAILED PROPOSAL WILL BE SUBMITTED FOR EACH PROJECT. THE GENERAL BUDGET PROVIDED CONSISTS OF SUE (\$5,000), SURVEY (\$5,000), AND ENGINEERING (\$25,000). EASEMENT ACQUISITION COSTS ARE NOT INCLUDED IN THIS LINE ITEM.
- ESTIMATE ASSUMES THAT IMPROVEMENTS ARE CONSTRUCTED ON THE OPPOSITE SIDE OF THE ROAD FROM EXISTING WATER MAINS, THAT NO ENCASEMENT IS PLACED UNDER DRIVEWAYS, THAT THE DISTRIBUTION LINE (PVC) ON OAK BEND COVE IS NOT REPLACED, AND THAT ALL ROAD CROSSINGS ARE BORED.
- RECORDS INDICATE THERE ARE TWO 6" MAINS ON OAK BEND DR. THIS ESTIMATE ASSUMES THE 6" MAINS ARE REPLACED BY ONE 8" MAIN.
- THIS ESTIMATE ASSUMES THAT THE EXISTING PRV ON OAK BEND DR. IS SALVAGED AND RELOCATED TO THE NEW MAIN.

UNIT PRICES ARE ENGINEER'S ESTIMATE BASED ON ENGINEER'S PREVIOUS EXPERIENCE AND QUALIFICATIONS WHICH REPRESENTS THE ENGINEER'S JUDGEMENT AS A DESIGN PROFESSIONAL FAMILIAR WITH THE CONSTRUCTION INDUSTRY. QUANTITIES IDENTIFIED IN THIS ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS HAVE BEEN ESTIMATED BY HALFF ASSOCIATES, INC. THE ENGINEER NEITHER MAKES REPRESENTATION NOR ACCEPTS RESPONSIBILITY AS TO THE ACCURACY OF THESE QUANTITIES AS STATED ABOVE. THE ENGINEER CANNOT AND DOES NOT GUARANTEE THAT THE PROPOSALS, BIDS, OR ACTUAL CONSTRUCTION COSTS WILL NOT VARY FROM THESE ESTIMATES OF PROBABLE COSTS PREPARED FOR THE OWNER OR THE INTENDED RECIPIENT OF THIS DOCUMENT.

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS
Brushy Creek M.U.D.
Brushy Creek North Capital Replacement Section #3 - Great Oaks Dr. & Emerald Hill Dr.

DATE: 7/12/2013
 PREPARED BY: NS
 HA AVO: 29366

PAY ITEM NO	DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	ITEM COSTS	SUB-TOTALS	% OF TOTAL COSTS
1	CLEARING ROW INC. REMOVAL OF ABAN. FACILITIES	STA	19.5	\$350.00	\$6,825	\$6,825	1.94%
2	CUT & REPAIR CONC. DRIVEWAYS (W/ SIDEWALKS INCIDENTAL)	EA	9	\$2,400.00	\$21,600	\$21,600	6.13%
3	WET CONNECTIONS (8"X6") INC. CUT, PLUG & ABANDON EX. WL	EA	4	\$1,600.00	\$6,400	\$6,400	1.82%
4	WET CONNECTIONS (12"X12.") INC. CUT, PLUG & ABANDON EX. WL	EA	2	\$2,000.00	\$4,000	\$4,000	1.14%
5	INSTALL 16" STEEL ENCASEMENT BY BORE	LF	220	\$225.00	\$49,500	\$49,500	14.06%
6	TRENCH EXCAVATION SAFETY SYSTEMS	LF	1,910	\$1.25	\$2,388	\$2,388	0.68%
7	8" DIA. PVC PIPE, C900, DR-18, INC. TRACER WIRE	LF	1,810	\$26.00	\$47,060	\$47,060	13.37%
8	12" DIA. PVC PIPE, C900, DR-18, INC. TRACER WIRE	LF	320	\$35.00	\$11,200	\$11,200	3.18%
9	DUCTILE IRON FITTINGS (8")	TON	2.0	\$12,000.00	\$24,000	\$24,000	6.82%
10	DUCTILE IRON FITTINGS (12")	TON	1.0	\$10,000.00	\$10,000	\$10,000	2.84%
11	GATE VALVE (8")	EA	6	\$1,200.00	\$7,200	\$7,200	2.04%
12	GATE VALVE (6")	EA	2	\$900.00	\$1,800	\$1,800	0.51%
13	INSTALL FIRE HYDRANT, NOT INC. GATE VALVE	EA	2	\$2,500.00	\$5,000	\$5,000	1.42%
14	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE)	EA	5	\$1,200.00	\$6,000	\$6,000	1.70%
15	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	3	\$2,200.00	\$6,600	\$6,600	1.87%
16	INSTALL DUAL WATER SERVICE (2" HDPE PIPE)	EA	2	\$1,400.00	\$2,800	\$2,800	0.80%
17	INSTALL DUAL WATER SERVICE (2" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	3	\$2,500.00	\$7,500	\$7,500	2.13%
18	MOBILIZATION	LS	1	\$20,000.00	\$20,000	\$20,000	5.68%
19	SOD AND LANDSCAPING REPAIR	SY	2,122	\$4.50	\$9,550	\$9,550	2.71%
20	SILT FENCE AND OTHER EROSION CONTROL	LF	1,910	\$2.00	\$3,820	\$3,820	1.08%
21	TEMPORARY CONSTRUCTION EASEMENTS	EA	4	\$500.00	\$2,000	\$2,000	0.57%
22	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	3	\$3,000.00	\$9,000	\$9,000	2.56%
SUB TOTAL						\$264,243	
CONTINGENCY (20%)						\$52,849	
PROFESSIONAL SERVICES						\$35,000	
GRAND TOTAL						\$352,090	

NOTES:

- 1) PROFESSIONAL SERVICES COSTS ARE APPROXIMATE AND A DETAILED PROPOSAL WILL BE SUBMITTED FOR EACH PROJECT. THE GENERAL BUDGET PROVIDED CONSISTS OF SUE (\$5,000), SURVEY (\$5,000), AND ENGINEERING (\$25,000). EASEMENT ACQUISITION COSTS ARE NOT INCLUDED IN THIS LINE ITEM.
- 2) ESTIMATE ASSUMES THAT NO ENCASEMENT IS PLACED UNDER DRIVEWAYS, NO EXISTING MATERIALS ARE SALVAGED, AND THAT ALL ROAD CROSSINGS ARE BORED.
- 3) NEW IMPROVEMENTS WILL BE CONSTRUCTED ON SAME SIDE OF THE ROAD AND PARALLEL TO EX. WATERLINE ALONG GREAT OAKS DR. AND ON EMERALD HILL DR. BETWEEN VALLEY VIEW AND CURTIS DR.

UNIT PRICES ARE ENGINEER'S ESTIMATE BASED ON ENGINEER'S PREVIOUS EXPERIENCE AND QUALIFICATIONS WHICH REPRESENTS THE ENGINEER'S JUDGEMENT AS A DESIGN PROFESSIONAL FAMILIAR WITH THE CONSTRUCTION INDUSTRY. QUANTITIES IDENTIFIED IN THIS ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS HAVE BEEN ESTIMATED BY HALFF ASSOCIATES, INC. THE ENGINEER NEITHER MAKES REPRESENTATION NOR ACCEPTS RESPONSIBILITY AS TO THE ACCURACY OF THESE QUANTITIES AS STATED ABOVE. THE ENGINEER CANNOT AND DOES NOT GUARANTEE THAT THE PROPOSALS, BIDS, OR ACTUAL CONSTRUCTION COSTS WILL NOT VARY FROM THESE ESTIMATES OF PROBABLE COSTS PREPARED FOR THE OWNER OR THE INTENDED RECIPIENT OF THIS DOCUMENT.

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS

Brushy Creek M.U.D.

Brushy Creek North Capital Replacement Section #4 - Double Tree and Quail Run Dr. to Oak Bend Dr.

DATE: 7/12/2013
 PREPARED BY: NS
 HA AVO: 29366

PAY ITEM NO	DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	ITEM COSTS	SUB-TOTALS	% OF TOTAL COSTS
1	CLEARING ROW INC. REMOVAL OF ABAN. FACILITIES	STA	16.7	\$350.00	\$5,845	\$5,845	2.22%
2	CUT & REPAIR CONC. DRIVEWAYS (W/ SIDEWALKS INCIDENTAL)	EA	8	\$2,400.00	\$19,200	\$19,200	7.29%
3	WET CONNECTIONS (8"x6") INC. CUT, PLUG & ABANDON EX. WL	EA	2	\$1,600.00	\$3,200	\$3,200	1.21%
4	INSTALL 16" STEEL ENCASEMENT BY BORE	LF	120	\$225.00	\$27,000	\$27,000	10.25%
5	TRENCH EXCAVATION SAFETY SYSTEMS	LF	1,670	\$1.25	\$2,088	\$2,088	0.79%
6	8" DIA. PVC PIPE, C900, DR-18, INC. TRACER WIRE	LF	1,790	\$26.00	\$46,540	\$46,540	17.67%
7	DUCTILE IRON FITTINGS (8")	TON	2.0	\$12,000.00	\$24,000	\$24,000	9.11%
8	GATE VALVE (8")	EA	4	\$1,200.00	\$4,800	\$4,800	1.82%
9	GATE VALVE (6")	EA	2	\$900.00	\$1,800	\$1,800	0.68%
10	INSTALL FIRE HYDRANT, NOT INC. GATE VALVE	EA	2	\$2,500.00	\$5,000	\$5,000	1.90%
11	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE)	EA	2	\$1,200.00	\$2,400	\$2,400	0.91%
12	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	1	\$2,200.00	\$2,200	\$2,200	0.84%
13	INSTALL DUAL WATER SERVICE (2" HDPE PIPE)	EA	4	\$1,400.00	\$5,600	\$5,600	2.13%
14	INSTALL DUAL WATER SERVICE (2" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	3	\$2,500.00	\$7,500	\$7,500	2.85%
15	MOBILIZATION	LS	1	\$14,000.00	\$14,000	\$14,000	5.31%
16	SOD AND LANDSCAPING REPAIR	SY	1,856	\$4.50	\$8,350	\$8,350	3.17%
17	SILT FENCE AND OTHER EROSION CONTROL	LF	1,670	\$2.00	\$3,340	\$3,340	1.27%
18	TEMPORARY CONSTRUCTION EASEMENTS	EA	3	\$500.00	\$1,500	\$1,500	0.57%
19	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	2	\$3,000.00	\$6,000	\$6,000	2.28%
SUB TOTAL						\$190,363	
CONTINGENCY (20%)						\$38,073	
PROFESSIONAL SERVICES						\$35,000	
GRAND TOTAL						\$263,440	

NOTES:

- PROFESSIONAL SERVICES COSTS ARE APPROXIMATE AND A DETAILED PROPOSAL WILL BE SUBMITTED FOR EACH PROJECT. THE GENERAL BUDGET PROVIDED CONSISTS OF SUE (\$5,000), SURVEY (\$5,000), AND ENGINEERING (\$25,000). EASEMENT ACQUISITION COSTS ARE NOT INCLUDED IN THIS LINE ITEM.
- ESTIMATE ASSUMES THAT IMPROVEMENTS ARE CONSTRUCTED ON THE OPPOSITE SIDE OF THE ROAD FROM EXISTING WATER FACILITIES, THAT NO ENCASEMENT IS PLACED UNDER DRIVEWAYS, NO EXISTING MATERIALS ARE SALVAGED, AND THAT ALL ROAD CROSSINGS ARE BORED.
- THIS ESTIMATE DOES NOT INCLUDE REPLACEMENT OF EXISTING PIPE MATERIAL, LIKELY PVC, IN CUL-DE-SAC OF DOUBLE TREE.

UNIT PRICES ARE ENGINEER'S ESTIMATE BASED ON ENGINEER'S PREVIOUS EXPERIENCE AND QUALIFICATIONS WHICH REPRESENTS THE ENGINEER'S JUDGEMENT AS A DESIGN PROFESSIONAL FAMILIAR WITH THE CONSTRUCTION INDUSTRY. QUANTITIES IDENTIFIED IN THIS ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS HAVE BEEN ESTIMATED BY HALFF ASSOCIATES, INC. THE ENGINEER NEITHER MAKES REPRESENTATION NOR ACCEPTS RESPONSIBILITY AS TO THE ACCURACY OF THESE QUANTITIES AS STATED ABOVE. THE ENGINEER CANNOT AND DOES NOT GUARANTEE THAT THE PROPOSALS, BIDS, OR ACTUAL CONSTRUCTION COSTS WILL NOT VARY FROM THESE ESTIMATES OF PROBABLE COSTS PREPARED FOR THE OWNER OR THE INTENDED RECIPIENT OF THIS DOCUMENT.

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS

Brushy Creek M.U.D.

Brushy Creek North Capital Replacement Section #5 - Eagle Way east from Curtis Dr.

DATE: 7/12/2013
 PREPARED BY: NS
 HA AVO: 29366

PAY ITEM NO	DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	ITEM COSTS	SUB-TOTALS	% OF TOTAL COSTS
1	CLEARING ROW INC. REMOVAL OF ABAN. FACILITIES	STA	14.4	\$350.00	\$5,040	\$5,040	2.35%
2	CUT & REPAIR CONC. DRIVEWAYS (W/ SIDEWALKS INCIDENTAL)	EA	9	\$2,400.00	\$21,600	\$21,600	10.05%
3	WET CONNECTIONS (8"x6") INC. CUT, PLUG & ABANDON EX. WL	EA	2	\$1,600.00	\$3,200	\$3,200	1.49%
4	INSTALL 16" STEEL ENCASEMENT BY BORE	LF	40	\$225.00	\$9,000	\$9,000	4.19%
5	TRENCH EXCAVATION SAFETY SYSTEMS	LF	1,440	\$1.25	\$1,800	\$1,800	0.84%
6	8" DIA. PVC PIPE, C900, DR-18, INC. TRACER WIRE	LF	1,480	\$26.00	\$38,480	\$38,480	17.91%
7	DUCTILE IRON FITTINGS (8")	TON	1.5	\$12,000.00	\$18,000	\$18,000	8.38%
8	GATE VALVE (8")	EA	3	\$1,200.00	\$3,600	\$3,600	1.68%
9	GATE VALVE (6")	EA	1	\$900.00	\$900	\$900	0.42%
10	INSTALL FIRE HYDRANT, NOT INC. GATE VALVE	EA	1	\$2,500.00	\$2,500	\$2,500	1.16%
11	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE)	EA	2	\$1,200.00	\$2,400	\$2,400	1.12%
12	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	1	\$2,200.00	\$2,200	\$2,200	1.02%
13	INSTALL DUAL WATER SERVICE (2" HDPE PIPE)	EA	4	\$1,400.00	\$5,600	\$5,600	2.61%
14	INSTALL DUAL WATER SERVICE (2" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	4	\$2,500.00	\$10,000	\$10,000	4.65%
15	MOBILIZATION	LS	1	\$12,000.00	\$12,000	\$12,000	5.58%
16	SOD AND LANDSCAPING REPAIR	SY	1,600	\$4.50	\$7,200	\$7,200	3.35%
17	SILT FENCE AND OTHER EROSION CONTROL	LF	1,440	\$2.00	\$2,880	\$2,880	1.34%
18	TEMPORARY CONSTRUCTION EASEMENTS	EA	1	\$500.00	\$500	\$500	0.23%
19	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	1	\$3,000.00	\$3,000	\$3,000	1.40%
SUB TOTAL						\$149,900	
CONTINGENCY (20%)						\$29,980	
PROFESSIONAL SERVICES						\$35,000	
GRAND TOTAL						\$214,880	

NOTES:

- PROFESSIONAL SERVICES COSTS ARE APPROXIMATE AND A DEATAILED PROPOSAL WILL BE SUBMITTED FOR EACH PROJECT. THE GENERAL BUDGET PROVIDED CONSISTS OF SUE (\$5,000), SURVEY (\$5,000), AND ENGINEERING (\$25,000). EASEMENT ACQUISITION COSTS ARE NOT INCLUDED IN THIS LINE ITEM.
- ESTIMATE ASSUMES THAT IMPROVEMENTS ARE CONSTRUCTED ON THE OPPOSITE SIDE OF THE ROAD FROM EXISTING WATER FACILITIES, THAT NO ENCASEMENT IS PLACED UNDER DRIVEWAYS, NO EXISTING MATERIALS ARE SALVAGED, AND THAT ALL ROAD CROSSINGS ARE BORED.

UNIT PRICES ARE ENGINEER'S ESTIMATE BASED ON ENGINEER'S PREVIOUS EXPERIENCE AND QUALIFICATIONS WHICH REPRESENTS THE ENGINEER'S JUDGEMENT AS A DESIGN PROFESSIONAL FAMILIAR WITH THE CONSTRUCTION INDUSTRY. QUANTITIES IDENTIFIED IN THIS ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS HAVE BEEN ESTIMATED BY HALFF ASSOCIATES, INC. THE ENGINEER NEITHER MAKES REPRESENTATION NOR ACCEPTS RESPONSIBILITY AS TO THE ACCURACY OF THESE QUANTITIES AS STATED ABOVE. THE ENGINEER CANNOT AND DOES NOT GUARANTEE THAT THE PROPOSALS, BIDS, OR ACTUAL CONSTRUCTION COSTS WILL NOT VARY FROM THESE ESTIMATES OF PROBABLE COSTS PREPARED FOR THE OWNER OR THE INTENDED RECIPIENT OF THIS DOCUMENT.

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS
Brushy Creek M.U.D.

Brushy Creek North Capital Replacement Section #6 - Overview and Curtis Dr. from Valley View to Carmel

DATE: 7/12/2013
 PREPARED BY: NS
 HA AVO: 29366

PAY ITEM NO	DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	ITEM COSTS	SUB-TOTALS	% OF TOTAL COSTS
1	CLEARING ROW INC. REMOVAL OF ABAN. FACILITIES	STA	17.4	\$350.00	\$6,090	\$6,090	2.30%
2	CUT & REPAIR CONC. DRIVEWAYS (W/ SIDEWALKS INCIDENTAL)	EA	5	\$2,400.00	\$12,000	\$12,000	4.54%
3	WET CONNECTIONS (8"X6") INC. CUT, PLUG & ABANDON EX. WL	EA	2	\$1,600.00	\$3,200	\$3,200	1.21%
4	INSTALL 16" STEEL ENCASEMENT BY BORE	LF	160	\$225.00	\$36,000	\$36,000	13.62%
5	TRENCH EXCAVATION SAFETY SYSTEMS	LF	1,740	\$1.25	\$2,175	\$2,175	0.82%
6	8" DIA. PVC PIPE, C900, DR-18, INC. TRACER WIRE	LF	1,900	\$26.00	\$49,400	\$49,400	18.69%
7	DUCTILE IRON FITTINGS (8")	TON	2.0	\$12,000.00	\$24,000	\$24,000	9.08%
8	GATE VALVE (8")	EA	3	\$1,200.00	\$3,600	\$3,600	1.36%
9	GATE VALVE (6")	EA	1	\$900.00	\$900	\$900	0.34%
10	INSTALL FIRE HYDRANT, NOT INC. GATE VALVE	EA	1	\$2,500.00	\$2,500	\$2,500	0.95%
11	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE)	EA	3	\$1,200.00	\$3,600	\$3,600	1.36%
12	INSTALL DUAL WATER SERVICE (2" HDPE PIPE)	EA	1	\$1,400.00	\$1,400	\$1,400	0.53%
13	INSTALL DUAL WATER SERVICE (2" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	4	\$2,500.00	\$10,000	\$10,000	3.78%
14	MOBILIZATION	LS	1	\$16,000.00	\$16,000	\$16,000	6.05%
15	SOD AND LANDSCAPING REPAIR	SY	1,933	\$4.50	\$8,700	\$8,700	3.29%
16	SILT FENCE AND OTHER EROSION CONTROL	LF	1,740	\$2.00	\$3,480	\$3,480	1.32%
17	TEMPORARY CONSTRUCTION EASEMENTS	EA	4	\$500.00	\$2,000	\$2,000	0.76%
18	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	2	\$3,000.00	\$6,000	\$6,000	2.27%
SUB TOTAL						\$191,045	
CONTINGENCY (20%)						\$38,209	
PROFESSIONAL SERVICES						\$35,000	
GRAND TOTAL						\$264,250	

NOTES:

- PROFESSIONAL SERVICES COSTS ARE APPROXIMATE AND A DEATAILED PROPOSAL WILL BE SUBMITTED FOR EACH PROJECT. THE GENERAL BUDGET PROVIDED CONSISTS OF SUE (\$5,000), SURVEY (\$5,000), AND ENGINEERING (\$25,000). EASEMENT ACQUISITION COSTS ARE NOT INCLUDED IN THIS LINE ITEM.
- ESTIMATE ASSUMES THAT IMPROVEMENTS ARE CONSTRUCTED ON THE OPPOSITE SIDE OF THE ROAD FROM EXISTING WATER FACILITIES, THAT NO ENCASEMENT IS PLACED UNDER DRIVEWAYS, NO EXISTING MATERIALS ARE SALVAGED, AND THAT ALL ROAD CROSSINGS ARE BORED.

UNIT PRICES ARE ENGINEER'S ESTIMATE BASED ON ENGINEER'S PREVIOUS EXPERIENCE AND QUALIFICATIONS WHICH REPRESENTS THE ENGINEER'S JUDGEMENT AS A DESIGN PROFESSIONAL FAMILIAR WITH THE CONSTRUCTION INDUSTRY. QUANTITIES IDENTIFIED IN THIS ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS HAVE BEEN ESTIMATED BY HALFF ASSOCIATES, INC. THE ENGINEER NEITHER MAKES REPRESENTATION NOR ACCEPTS RESPONSIBILITY AS TO THE ACCURACY OF THESE QUANTITIES AS STATED ABOVE. THE ENGINEER CANNOT AND DOES NOT GUARANTEE THAT THE PROPOSALS, BIDS, OR ACTUAL CONSTRUCTION COSTS WILL NOT VARY FROM THESE ESTIMATES OF PROBABLE COSTS PREPARED FOR THE OWNER OR THE INTENDED RECIPIENT OF THIS DOCUMENT.

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS
Brushy Creek M.U.D.
Brushy Creek North Capital Replacement Section #7 - Chert Dr.

DATE: 7/12/2013
 PREPARED BY: NS
 HA AVO: 29366

PAY ITEM NO	DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	ITEM COSTS	SUB-TOTALS	% OF TOTAL COSTS
1	CLEARING ROW INC. REMOVAL OF ABAN. FACILITIES	STA	13.9	\$350.00	\$4,865	\$4,865	2.00%
2	CUT & REPAIR CONC. DRIVEWAYS (W/ SIDEWALKS INCIDENTAL)	EA	6	\$2,400.00	\$14,400	\$14,400	5.91%
3	WET CONNECTIONS (8"X6") INC. CUT, PLUG & ABANDON EX. WL	EA	2	\$1,600.00	\$3,200	\$3,200	1.31%
4	INSTALL 16" STEEL ENCASEMENT BY BORE	LF	140	\$225.00	\$31,500	\$31,500	12.92%
5	TRENCH EXCAVATION SAFETY SYSTEMS	LF	1,390	\$1.25	\$1,738	\$1,738	0.71%
6	8" DIA. PVC PIPE, C900, DR-18, INC. TRACER WIRE	LF	1,530	\$26.00	\$39,780	\$39,780	16.32%
7	DUCTILE IRON FITTINGS (8")	TON	1.7	\$12,000.00	\$20,400	\$20,400	8.37%
8	GATE VALVE (8")	EA	2	\$1,200.00	\$2,400	\$2,400	0.98%
9	GATE VALVE (6")	EA	1	\$900.00	\$900	\$900	0.37%
10	INSTALL FIRE HYDRANT, NOT INC. GATE VALVE	EA	1	\$2,500.00	\$2,500	\$2,500	1.03%
11	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE)	EA	2	\$1,200.00	\$2,400	\$2,400	0.98%
12	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	3	\$2,200.00	\$6,600	\$6,600	2.71%
13	INSTALL DUAL WATER SERVICE (2" HDPE PIPE)	EA	4	\$1,400.00	\$5,600	\$5,600	2.30%
14	INSTALL DUAL WATER SERVICE (2" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	3	\$2,500.00	\$7,500	\$7,500	3.08%
15	MOBILIZATION	LS	1	\$14,000.00	\$14,000	\$14,000	5.74%
16	SOD AND LANDSCAPING REPAIR	SY	1,544	\$4.50	\$6,950	\$6,950	2.85%
17	SILT FENCE AND OTHER EROSION CONTROL	LF	1,390	\$2.00	\$2,780	\$2,780	1.14%
18	TEMPORARY CONSTRUCTION EASEMENTS	EA	1	\$500.00	\$500	\$500	0.21%
19	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	2	\$3,000.00	\$6,000	\$6,000	2.46%
SUB TOTAL						\$174,013	
CONTINGENCY (20%)						\$34,803	
PROFESSIONAL SERVICES						\$35,000	
GRAND TOTAL						\$243,820	

NOTES:

- 1) PROFESSIONAL SERVICES COSTS ARE APPROXIMATE AND A DETAILED PROPOSAL WILL BE SUBMITTED FOR EACH PROJECT. THE GENERAL BUDGET PROVIDED CONSISTS OF SUE (\$5,000), SURVEY (\$5,000), AND ENGINEERING (\$25,000). EASEMENT ACQUISITION COSTS ARE NOT INCLUDED IN THIS LINE ITEM.
- 2) ESTIMATE ASSUMES THAT IMPROVEMENTS ARE CONSTRUCTED ON THE OPPOSITE SIDE OF THE ROAD FROM EXISTING WATER FACILITIES, THAT NO ENCASEMENT IS PLACED UNDER DRIVEWAYS, NO EXISTING MATERIALS ARE SALVAGED, AND THAT ALL ROAD CROSSINGS ARE BORED.
- 3) THIS ESTIMATE DOES NOT INCLUDE REPLACEMENT OF EXISTING PIPE MATERIAL, LIKELY PVC, IN CUL-DE-SAC OF CHERT COVE.

UNIT PRICES ARE ENGINEER'S ESTIMATE BASED ON ENGINEER'S PREVIOUS EXPERIENCE AND QUALIFICATIONS WHICH REPRESENTS THE ENGINEER'S JUDGEMENT AS A DESIGN PROFESSIONAL FAMILIAR WITH THE CONSTRUCTION INDUSTRY. QUANTITIES IDENTIFIED IN THIS ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS HAVE BEEN ESTIMATED BY HALFF ASSOCIATES, INC. THE ENGINEER NEITHER MAKES REPRESENTATION NOR ACCEPTS RESPONSIBILITY AS TO THE ACCURACY OF THESE QUANTITIES AS STATED ABOVE. THE ENGINEER CANNOT AND DOES NOT GUARANTEE THAT THE PROPOSALS, BIDS, OR ACTUAL CONSTRUCTION COSTS WILL NOT VARY FROM THESE ESTIMATES OF PROBABLE COSTS PREPARED FOR THE OWNER OR THE INTENDED RECIPIENT OF THIS DOCUMENT.

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS

Brushy Creek M.U.D.

Brushy Creek North Capital Replacement Section #8 - Park Dr. & Brushy Bend North Park

DATE: 7/12/2013
 PREPARED BY: NS
 HA AVO: 29366

PAY ITEM NO	DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	ITEM COSTS	SUB-TOTALS	% OF TOTAL COSTS
1	CLEARING ROW INC. REMOVAL OF ABAN. FACILITIES	STA	14.4	\$350.00	\$5,040	\$5,040	2.01%
2	EXCAVATION & BERM REPAIR	CY	284	\$50.00	\$14,200	\$14,200	
3	CUT & REPAIR CONC. DRIVEWAYS (W/ SIDEWALKS INCIDENTAL)	EA	4	\$2,400.00	\$9,600	\$9,600	3.84%
4	WET CONNECTIONS (8"X6") INC. CUT, PLUG & ABANDON EX. WL	EA	2	\$1,600.00	\$3,200	\$3,200	1.28%
5	INSTALL 16" STEEL ENCASEMENT BY BORE	LF	140	\$225.00	\$31,500	\$31,500	12.59%
6	TRENCH EXCAVATION SAFETY SYSTEMS	LF	1,440	\$1.25	\$1,800	\$1,800	0.72%
7	8" DIA. PVC PIPE, C900, DR-18, INC. TRACER WIRE	LF	1,580	\$26.00	\$41,080	\$41,080	16.41%
8	DUCTILE IRON FITTINGS (8")	TON	1.7	\$12,000.00	\$20,400	\$20,400	8.15%
9	GATE VALVE (8")	EA	3	\$1,200.00	\$3,600	\$3,600	1.44%
10	GATE VALVE (6")	EA	1	\$900.00	\$900	\$900	0.36%
11	INSTALL FIRE HYDRANT, NOT INC. GATE VALVE	EA	1	\$2,500.00	\$2,500	\$2,500	1.00%
12	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE)	EA	3	\$1,200.00	\$3,600	\$3,600	1.44%
13	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	2	\$2,200.00	\$4,400	\$4,400	1.76%
14	INSTALL DUAL WATER SERVICE (2" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	3	\$2,500.00	\$7,500	\$7,500	3.00%
15	MOBILIZATION	LS	1	\$15,000.00	\$15,000	\$15,000	5.99%
16	SOD AND LANDSCAPING REPAIR	SY	1,600	\$4.50	\$7,200	\$7,200	2.88%
17	SILT FENCE AND OTHER EROSION CONTROL	LF	1,440	\$2.00	\$2,880	\$2,880	1.15%
18	TEMPORARY CONSTRUCTION EASEMENTS	EA	4	\$500.00	\$2,000	\$2,000	0.80%
19	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	1	\$3,000.00	\$3,000	\$3,000	1.20%
SUB TOTAL						\$179,400	
CONTINGENCY (20%)						\$35,880	
PROFESSIONAL SERVICES						\$35,000	
GRAND TOTAL						\$250,280	

NOTES:

- 1) PROFESSIONAL SERVICES COSTS ARE APPROXIMATE AND A DETAILED PROPOSAL WILL BE SUBMITTED FOR EACH PROJECT. THE GENERAL BUDGET PROVIDED CONSISTS OF SUE (\$5,000), SURVEY (\$5,000), AND ENGINEERING (\$25,000). EASEMENT ACQUISITION COSTS ARE NOT INCLUDED IN THIS LINE ITEM.
- 2) ESTIMATE ASSUMES THAT IMPROVEMENTS ARE CONSTRUCTED ON THE OPPOSITE SIDE OF THE ROAD FROM EXISTING WATER FACILITIES, THAT NO ENCASEMENT IS PLACED UNDER DRIVEWAYS, NO EXISTING MATERIALS ARE SALVAGED, AND THAT ALL ROAD CROSSINGS ARE BORED.
- 3) THIS ESTIMATE ASSUMES THAT NEW WATERLINE IS INSTALLED BY OPEN CUT ACROSS BRUSHY CREEK NORTH PARK.
- 4) THIS ESTIMATE DOES NOT INCLUDE REPLACEMENT OF EXISTING PIPE MATERIAL, LIKELY PVC, IN CUL-DE-SAC OF HILLTOP ST.

UNIT PRICES ARE ENGINEER'S ESTIMATE BASED ON ENGINEER'S PREVIOUS EXPERIENCE AND QUALIFICATIONS WHICH REPRESENTS THE ENGINEER'S JUDGEMENT AS A DESIGN PROFESSIONAL FAMILIAR WITH THE CONSTRUCTION INDUSTRY. QUANTITIES IDENTIFIED IN THIS ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS HAVE BEEN ESTIMATED BY HALFF ASSOCIATES, INC. THE ENGINEER NEITHER MAKES REPRESENTATION NOR ACCEPTS RESPONSIBILITY AS TO THE ACCURACY OF THESE QUANTITIES AS STATED ABOVE. THE ENGINEER CANNOT AND DOES NOT GUARANTEE THAT THE PROPOSALS, BIDS, OR ACTUAL CONSTRUCTION COSTS WILL NOT VARY FROM THESE ESTIMATES OF PROBABLE COSTS PREPARED FOR THE OWNER OR THE INTENDED RECIPIENT OF THIS DOCUMENT.

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS
Brushy Creek M.U.D.
Brushy Creek North Capital Replacement Section #9 - Carmel Dr.

DATE: 7/12/2013
 PREPARED BY: NS
 HA AVO: 29366

PAY ITEM NO	DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	ITEM COSTS	SUB-TOTALS	% OF TOTAL COSTS
1	CLEARING ROW INC. REMOVAL OF ABAN. FACILITIES	STA	18.9	\$350.00	\$6,615	\$6,615	2.11%
2	CUT & REPAIR CONC. DRIVEWAYS (W/ SIDEWALKS INCIDENTAL)	EA	14	\$2,400.00	\$33,600	\$33,600	10.72%
3	WET CONNECTIONS (8"X6") INC. CUT, PLUG & ABANDON EX. WL	EA	2	\$1,600.00	\$3,200	\$3,200	1.02%
4	INSTALL 16" STEEL ENCASEMENT BY BORE	LF	140	\$225.00	\$31,500	\$31,500	10.05%
5	TRENCH EXCAVATION SAFETY SYSTEMS	LF	1,890	\$1.25	\$2,363	\$2,363	0.75%
6	8" DIA. PVC PIPE, C900, DR-18, INC. TRACER WIRE	LF	2,030	\$26.00	\$52,780	\$52,780	16.84%
7	DUCTILE IRON FITTINGS (8")	TON	2.2	\$12,000.00	\$26,400	\$26,400	8.42%
8	GATE VALVE (8")	EA	3	\$1,200.00	\$3,600	\$3,600	1.15%
9	GATE VALVE (6")	EA	2	\$900.00	\$1,800	\$1,800	0.57%
10	INSTALL FIRE HYDRANT, NOT INC. GATE VALVE	EA	2	\$2,500.00	\$5,000	\$5,000	1.59%
11	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE)	EA	1	\$1,200.00	\$1,200	\$1,200	0.38%
12	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	2	\$2,200.00	\$4,400	\$4,400	1.40%
13	INSTALL DUAL WATER SERVICE (2" HDPE PIPE)	EA	6	\$1,400.00	\$8,400	\$8,400	2.68%
14	INSTALL DUAL WATER SERVICE (2" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	4	\$2,500.00	\$10,000	\$10,000	3.19%
15	MOBILIZATION	LS	1	\$18,000.00	\$18,000	\$18,000	5.74%
16	SOD AND LANDSCAPING REPAIR	SY	2,100	\$4.50	\$9,450	\$9,450	3.01%
17	SILT FENCE AND OTHER EROSION CONTROL	LF	1,890	\$2.00	\$3,780	\$3,780	1.21%
18	TEMPORARY CONSTRUCTION EASEMENTS	EA	2	\$500.00	\$1,000	\$1,000	0.32%
19	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	3	\$3,000.00	\$9,000	\$9,000	2.87%
SUB TOTAL						\$232,088	
CONTINGENCY (20%)						\$46,418	
PROFESSIONAL SERVICES						\$35,000	
GRAND TOTAL						\$313,510	

NOTES:

- PROFESSIONAL SERVICES COSTS ARE APPROXIMATE AND A DEATAILED PROPOSAL WILL BE SUBMITTED FOR EACH PROJECT. THE GENERAL BUDGET PROVIDED CONSISTS OF SUE (\$5,000), SURVEY (\$5,000), AND ENGINEERING (\$25,000). EASEMENT ACQUISITION COSTS ARE NOT INCLUDED IN THIS LINE ITEM.
- ESTIMATE ASSUMES THAT IMPROVEMENTS ARE CONSTRUCTED ON THE OPPOSITE SIDE OF THE ROAD FROM EXISTING WATER FACILITIES, THAT NO ENCASEMENT IS PLACED UNDER DRIVEWAYS, NO EXISTING MATERIALS ARE SALVAGED, AND THAT ALL ROAD CROSSINGS ARE BORED.

UNIT PRICES ARE ENGINEER'S ESTIMATE BASED ON ENGINEER'S PREVIOUS EXPERIENCE AND QUALIFICATIONS WHICH REPRESENTS THE ENGINEER'S JUDGEMENT AS A DESIGN PROFESSIONAL FAMILIAR WITH THE CONSTRUCTION INDUSTRY. QUANTITIES IDENTIFIED IN THIS ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS HAVE BEEN ESTIMATED BY HALFF ASSOCIATES, INC. THE ENGINEER NEITHER MAKES REPRESENTATION NOR ACCEPTS RESPONSIBILITY AS TO THE ACCURACY OF THESE QUANTITIES AS STATED ABOVE. THE ENGINEER CANNOT AND DOES NOT GUARANTEE THAT THE PROPOSALS, BIDS, OR ACTUAL CONSTRUCTION COSTS WILL NOT VARY FROM THESE ESTIMATES OF PROBABLE COSTS PREPARED FOR THE OWNER OR THE INTENDED RECIPIENT OF THIS DOCUMENT.

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS
Brushy Creek M.U.D.
Brushy Creek North Capital Replacement Section #10 - Valley View

DATE: 7/12/2013
 PREPARED BY: NS
 HA AVO: 29366

PAY ITEM NO	DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	ITEM COSTS	SUB-TOTALS	% OF TOTAL COSTS
1	CLEARING ROW INC. REMOVAL OF ABAN. FACILITIES	STA	20.4	\$350.00	\$7,140	\$7,140	2.46%
2	CUT & REPAIR CONC. DRIVEWAYS (W/ SIDEWALKS INCIDENTAL)	EA	14	\$2,400.00	\$33,600	\$33,600	11.56%
3	WET CONNECTIONS (8"x6") INC. CUT, PLUG & ABANDON EX. WL	EA	3	\$1,600.00	\$4,800	\$4,800	1.65%
4	INSTALL 16" STEEL ENCASEMENT BY BORE	LF	40	\$225.00	\$9,000	\$9,000	3.10%
5	TRENCH EXCAVATION SAFETY SYSTEMS	LF	2,005	\$1.25	\$2,506	\$2,506	0.86%
6	8" DIA. PVC PIPE, C900, DR-18, INC. TRACER WIRE	LF	2,045	\$26.00	\$53,170	\$53,170	18.29%
7	DUCTILE IRON FITTINGS (8")	TON	2.3	\$12,000.00	\$27,600	\$27,600	9.50%
8	GATE VALVE (8")	EA	3	\$1,200.00	\$3,600	\$3,600	1.24%
9	GATE VALVE (6")	EA	1	\$900.00	\$900	\$900	0.31%
10	INSTALL FIRE HYDRANT, NOT INC. GATE VALVE	EA	1	\$2,500.00	\$2,500	\$2,500	0.86%
11	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE)	EA	3	\$1,200.00	\$3,600	\$3,600	1.24%
12	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	3	\$2,200.00	\$6,600	\$6,600	2.27%
13	INSTALL DUAL WATER SERVICE (2" HDPE PIPE)	EA	5	\$1,400.00	\$7,000	\$7,000	2.41%
14	INSTALL DUAL WATER SERVICE (2" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	5	\$2,500.00	\$12,500	\$12,500	4.30%
15	MOBILIZATION	LS	1	\$18,000.00	\$18,000	\$18,000	6.19%
16	SOD AND LANDSCAPING REPAIR	SY	2,228	\$4.50	\$10,025	\$10,025	3.45%
17	SILT FENCE AND OTHER EROSION CONTROL	LF	2,005	\$2.00	\$4,010	\$4,010	1.38%
18	TEMPORARY CONSTRUCTION EASEMENTS	EA	1	\$500.00	\$500	\$500	0.17%
19	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	2	\$3,000.00	\$6,000	\$6,000	2.06%
SUB TOTAL						\$213,051	
CONTINGENCY (20%)						\$42,610	
PROFESSIONAL SERVICES						\$35,000	
GRAND TOTAL						\$290,660	

NOTES:

- PROFESSIONAL SERVICES COSTS ARE APPROXIMATE AND A DETAILED PROPOSAL WILL BE SUBMITTED FOR EACH PROJECT. THE GENERAL BUDGET PROVIDED CONSISTS OF SUE (\$5,000), SURVEY (\$5,000), AND ENGINEERING (\$25,000). EASEMENT ACQUISITION COSTS ARE NOT INCLUDED IN THIS LINE ITEM.
- ESTIMATE ASSUMES THAT IMPROVEMENTS ARE CONSTRUCTED ON THE OPPOSITE SIDE OF THE ROAD FROM EXISTING WATER FACILITIES, THAT NO ENCASEMENT IS PLACED UNDER DRIVEWAYS, NO EXISTING MATERIALS ARE SALVAGED, AND THAT ALL ROAD CROSSINGS ARE BORED.
- THIS ESTIMATE DOES NOT INCLUDE REPLACEMENT OF EXISTING PIPE MATERIAL, LIKELY PVC, IN CUL-DE-SAC OF VALLEY VIEW COVE.

UNIT PRICES ARE ENGINEER'S ESTIMATE BASED ON ENGINEER'S PREVIOUS EXPERIENCE AND QUALIFICATIONS WHICH REPRESENTS THE ENGINEER'S JUDGEMENT AS A DESIGN PROFESSIONAL FAMILIAR WITH THE CONSTRUCTION INDUSTRY. QUANTITIES IDENTIFIED IN THIS ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS HAVE BEEN ESTIMATED BY HALFF ASSOCIATES, INC. THE ENGINEER NEITHER MAKES REPRESENTATION NOR ACCEPTS RESPONSIBILITY AS TO THE ACCURACY OF THESE QUANTITIES AS STATED ABOVE. THE ENGINEER CANNOT AND DOES NOT GUARANTEE THAT THE PROPOSALS, BIDS, OR ACTUAL CONSTRUCTION COSTS WILL NOT VARY FROM THESE ESTIMATES OF PROBABLE COSTS PREPARED FOR THE OWNER OR THE INTENDED RECIPIENT OF THIS DOCUMENT.

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS
Brushy Creek M.U.D.
Brushy Creek North Capital Replacement Section #11 - Elm Trail

DATE: 7/12/2013
 PREPARED BY: NS
 HA AVO: 29366

PAY ITEM NO	DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	ITEM COSTS	SUB-TOTALS	% OF TOTAL COSTS
1	CLEARING ROW INC. REMOVAL OF ABAN. FACILITIES	STA	18.6	\$350.00	\$6,510	\$6,510	2.43%
2	CUT & REPAIR CONC. DRIVEWAYS (W/ SIDEWALKS INCIDENTAL)	EA	11	\$2,400.00	\$26,400	\$26,400	9.84%
3	WET CONNECTIONS (8"X6") INC. CUT, PLUG & ABANDON EX. WL	EA	1	\$1,600.00	\$1,600	\$1,600	0.60%
4	INSTALL 16" STEEL ENCASEMENT BY BORE	LF	80	\$225.00	\$18,000	\$18,000	6.71%
5	TRENCH EXCAVATION SAFETY SYSTEMS	LF	1,860	\$1.25	\$2,325	\$2,325	0.87%
6	8" DIA. PVC PIPE, C900, DR-18, INC. TRACER WIRE	LF	1,940	\$26.00	\$50,440	\$50,440	18.80%
7	DUCTILE IRON FITTINGS (8")	TON	2.0	\$12,000.00	\$24,000	\$24,000	8.95%
8	GATE VALVE (8")	EA	2	\$1,200.00	\$2,400	\$2,400	0.89%
9	GATE VALVE (6")	EA	2	\$900.00	\$1,800	\$1,800	0.67%
10	INSTALL FIRE HYDRANT, NOT INC. GATE VALVE	EA	2	\$2,500.00	\$5,000	\$5,000	1.86%
11	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE)	EA	2	\$1,200.00	\$2,400	\$2,400	0.89%
12	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	2	\$2,200.00	\$4,400	\$4,400	1.64%
13	INSTALL DUAL WATER SERVICE (2" HDPE PIPE)	EA	4	\$1,400.00	\$5,600	\$5,600	2.09%
14	INSTALL DUAL WATER SERVICE (2" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	3	\$2,500.00	\$7,500	\$7,500	2.80%
15	MOBILIZATION	LS	1	\$16,000.00	\$16,000	\$16,000	5.96%
16	SOD AND LANDSCAPING REPAIR	SY	2,067	\$4.50	\$9,300	\$9,300	3.47%
17	SILT FENCE AND OTHER EROSION CONTROL	LF	1,860	\$2.00	\$3,720	\$3,720	1.39%
18	TEMPORARY CONSTRUCTION EASEMENTS	EA	2	\$500.00	\$1,000	\$1,000	0.37%
19	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	2	\$3,000.00	\$6,000	\$6,000	2.24%
SUB TOTAL						\$194,395	
CONTINGENCY (20%)						\$38,879	
PROFESSIONAL SERVICES						\$35,000	
GRAND TOTAL						\$268,270	

NOTES:

- PROFESSIONAL SERVICES COSTS ARE APPROXIMATE AND A DEATAILED PROPOSAL WILL BE SUBMITTED FOR EACH PROJECT. THE GENERAL BUDGET PROVIDED CONSISTS OF SUE (\$5,000), SURVEY (\$5,000), AND ENGINEERING (\$25,000). EASEMENT ACQUISITION COSTS ARE NOT INCLUDED IN THIS LINE ITEM.
- ESTIMATE ASSUMES THAT IMPROVEMENTS ARE CONSTRUCTED ON THE OPPOSITE SIDE OF THE ROAD FROM EXISTING WATER FACILITIES, THAT NO ENCASEMENT IS PLACED UNDER DRIVEWAYS, NO EXISTING MATERIALS ARE SALVAGED, AND THAT ALL ROAD CROSSINGS ARE BORED.

UNIT PRICES ARE ENGINEER'S ESTIMATE BASED ON ENGINEER'S PREVIOUS EXPERIENCE AND QUALIFICATIONS WHICH REPRESENTS THE ENGINEER'S JUDGEMENT AS A DESIGN PROFESSIONAL FAMILIAR WITH THE CONSTRUCTION INDUSTRY. QUANTITIES IDENTIFIED IN THIS ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS HAVE BEEN ESTIMATED BY HALFF ASSOCIATES, INC. THE ENGINEER NEITHER MAKES REPRESENTATION NOR ACCEPTS RESPONSIBILITY AS TO THE ACCURACY OF THESE QUANTITIES AS STATED ABOVE. THE ENGINEER CANNOT AND DOES NOT GUARANTEE THAT THE PROPOSALS, BIDS, OR ACTUAL CONSTRUCTION COSTS WILL NOT VARY FROM THESE ESTIMATES OF PROBABLE COSTS PREPARED FOR THE OWNER OR THE INTENDED RECIPIENT OF THIS DOCUMENT.

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS

Brushy Creek M.U.D.

Brushy Creek North Capital Replacement Section #12 - Live Oak St. & Buckhorn

DATE: 7/12/2013
 PREPARED BY: NS
 HA AVO: 29366

PAY ITEM NO	DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	ITEM COSTS	SUB-TOTALS	% OF TOTAL COSTS
1	CLEARING ROW INC. REMOVAL OF ABAN. FACILITIES	STA	18.1	\$350.00	\$6,335	\$6,335	2.33%
2	CUT & REPAIR CONC. DRIVEWAYS (W/ SIDEWALKS INCIDENTAL)	EA	11	\$2,400.00	\$26,400	\$26,400	9.72%
3	WET CONNECTIONS (8"x6") INC. CUT, PLUG & ABANDON EX. WL	EA	2	\$1,600.00	\$3,200	\$3,200	1.18%
4	INSTALL 16" STEEL ENCASEMENT BY BORE	LF	80	\$225.00	\$18,000	\$18,000	6.63%
5	TRENCH EXCAVATION SAFETY SYSTEMS	LF	1,810	\$1.25	\$2,263	\$2,263	0.83%
6	8" DIA. PVC PIPE, C900, DR-18, INC. TRACER WIRE	LF	1,890	\$26.00	\$49,140	\$49,140	18.09%
7	DUCTILE IRON FITTINGS (8")	TON	2.1	\$12,000.00	\$25,200	\$25,200	9.28%
8	GATE VALVE (8")	EA	2	\$1,200.00	\$2,400	\$2,400	0.88%
9	GATE VALVE (6")	EA	1	\$900.00	\$900	\$900	0.33%
10	INSTALL FIRE HYDRANT, NOT INC. GATE VALVE	EA	1	\$2,500.00	\$2,500	\$2,500	0.92%
11	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE)	EA	2	\$1,200.00	\$2,400	\$2,400	0.88%
12	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	2	\$2,200.00	\$4,400	\$4,400	1.62%
13	INSTALL DUAL WATER SERVICE (2" HDPE PIPE)	EA	6	\$1,400.00	\$8,400	\$8,400	3.09%
14	INSTALL DUAL WATER SERVICE (2" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	4	\$2,500.00	\$10,000	\$10,000	3.68%
15	MOBILIZATION	LS	1	\$16,000.00	\$16,000	\$16,000	5.89%
16	SOD AND LANDSCAPING REPAIR	SY	2,011	\$4.50	\$9,050	\$9,050	3.33%
17	SILT FENCE AND OTHER EROSION CONTROL	LF	1,810	\$2.00	\$3,620	\$3,620	1.33%
18	TEMPORARY CONSTRUCTION EASEMENTS	EA	2	\$500.00	\$1,000	\$1,000	0.37%
19	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	2	\$3,000.00	\$6,000	\$6,000	2.21%
SUB TOTAL						\$197,208	
CONTINGENCY (20%)						\$39,442	
PROFESSIONAL SERVICES						\$35,000	
GRAND TOTAL						\$271,650	

NOTES:

- 1) PROFESSIONAL SERVICES COSTS ARE APPROXIMATE AND A DETAILED PROPOSAL WILL BE SUBMITTED FOR EACH PROJECT. THE GENERAL BUDGET PROVIDED CONSISTS OF SUE (\$5,000), SURVEY (\$5,000), AND ENGINEERING (\$25,000). EASEMENT ACQUISITION COSTS ARE NOT INCLUDED IN THIS LINE ITEM.
- 2) ESTIMATE ASSUMES THAT IMPROVEMENTS ARE CONSTRUCTED ON THE OPPOSITE SIDE OF THE ROAD FROM EXISTING WATER FACILITIES, THAT NO ENCASEMENT IS PLACED UNDER DRIVEWAYS, NO EXISTING MATERIALS ARE SALVAGED, AND THAT ALL ROAD CROSSINGS ARE BORED.
- 3) THIS ESTIMATE DOES NOT INCLUDE REPLACEMENT OF EXISTING PIPE MATERIAL, LIKELY PVC, IN CUL-DE-SAC OF LIVE OAK ST.

UNIT PRICES ARE ENGINEER'S ESTIMATE BASED ON ENGINEER'S PREVIOUS EXPERIENCE AND QUALIFICATIONS WHICH REPRESENTS THE ENGINEER'S JUDGEMENT AS A DESIGN PROFESSIONAL FAMILIAR WITH THE CONSTRUCTION INDUSTRY. QUANTITIES IDENTIFIED IN THIS ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS HAVE BEEN ESTIMATED BY HALFF ASSOCIATES, INC. THE ENGINEER NEITHER MAKES REPRESENTATION NOR ACCEPTS RESPONSIBILITY AS TO THE ACCURACY OF THESE QUANTITIES AS STATED ABOVE. THE ENGINEER CANNOT AND DOES NOT GUARANTEE THAT THE PROPOSALS, BIDS, OR ACTUAL CONSTRUCTION COSTS WILL NOT VARY FROM THESE ESTIMATES OF PROBABLE COSTS PREPARED FOR THE OWNER OR THE INTENDED RECIPIENT OF THIS DOCUMENT.

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS

Brushy Creek M.U.D.

Brushy Creek North Capital Replacement Section #13 - Pheasant Hollow & Quail Run Dr. from Oak Bend to Luminoso

DATE: 7/12/2013
 PREPARED BY: NS
 HA AVO: 29366

PAY ITEM NO	DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	ITEM COSTS	SUB-TOTALS	% OF TOTAL COSTS
1	CLEARING ROW INC. REMOVAL OF ABAN. FACILITIES	STA	14.9	\$350.00	\$5,215	\$5,215	2.20%
2	CUT & REPAIR CONC. DRIVEWAYS (W/ SIDEWALKS INCIDENTAL)	EA	8	\$2,400.00	\$19,200	\$19,200	8.12%
3	WET CONNECTIONS (8"x6") INC. CUT, PLUG & ABANDON EX. WL	EA	2	\$1,600.00	\$3,200	\$3,200	1.35%
4	INSTALL 16" STEEL ENCASEMENT BY BORE	LF	80	\$225.00	\$18,000	\$18,000	7.61%
5	TRENCH EXCAVATION SAFETY SYSTEMS	LF	1,490	\$1.25	\$1,863	\$1,863	0.79%
6	8" DIA. PVC PIPE, C900, DR-18, INC. TRACER WIRE	LF	1,570	\$26.00	\$40,820	\$40,820	17.26%
7	DUCTILE IRON FITTINGS (8")	TON	1.7	\$12,000.00	\$20,400	\$20,400	8.63%
8	GATE VALVE (8")	EA	3	\$1,200.00	\$3,600	\$3,600	1.52%
9	GATE VALVE (6")	EA	1	\$900.00	\$900	\$900	0.38%
10	INSTALL FIRE HYDRANT, NOT INC. GATE VALVE	EA	1	\$2,500.00	\$2,500	\$2,500	1.06%
11	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE)	EA	3	\$1,200.00	\$3,600	\$3,600	1.52%
12	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	3	\$2,200.00	\$6,600	\$6,600	2.79%
13	INSTALL DUAL WATER SERVICE (2" HDPE PIPE)	EA	4	\$1,400.00	\$5,600	\$5,600	2.37%
14	INSTALL DUAL WATER SERVICE (2" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	2	\$2,500.00	\$5,000	\$5,000	2.11%
15	MOBILIZATION	LS	1	\$14,000.00	\$14,000	\$14,000	5.92%
16	SOD AND LANDSCAPING REPAIR	SY	1,656	\$4.50	\$7,450	\$7,450	3.15%
17	SILT FENCE AND OTHER EROSION CONTROL	LF	1,490	\$2.00	\$2,980	\$2,980	1.26%
18	TEMPORARY CONSTRUCTION EASEMENTS	EA	2	\$500.00	\$1,000	\$1,000	0.42%
19	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	2	\$3,000.00	\$6,000	\$6,000	2.54%
SUB TOTAL						\$167,928	
CONTINGENCY (20%)						\$33,586	
PROFESSIONAL SERVICES						\$35,000	
GRAND TOTAL						\$236,510	

NOTES:

- 1) PROFESSIONAL SERVICES COSTS ARE APPROXIMATE AND A DEATAILED PROPOSAL WILL BE SUBMITTED FOR EACH PROJECT. THE GENERAL BUDGET PROVIDED CONSISTS OF SUE (\$5,000), SURVEY (\$5,000), AND ENGINEERING (\$25,000). EASEMENT ACQUISITION COSTS ARE NOT INCLUDED IN THIS LINE ITEM.
- 2) ESTIMATE ASSUMES THAT IMPROVEMENTS ARE CONSTRUCTED ON THE OPPOSITE SIDE OF THE ROAD FROM EXISTING WATER FACILITIES, THAT NO ENCASEMENT IS PLACED UNDER DRIVEWAYS, NO EXISTING MATERIALS ARE SALVAGED, AND THAT ALL ROAD CROSSINGS ARE BORED.

UNIT PRICES ARE ENGINEER'S ESTIMATE BASED ON ENGINEER'S PREVIOUS EXPERIENCE AND QUALIFICATIONS WHICH REPRESENTS THE ENGINEER'S JUDGEMENT AS A DESIGN PROFESSIONAL FAMILIAR WITH THE CONSTRUCTION INDUSTRY. QUANTITIES IDENTIFIED IN THIS ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS HAVE BEEN ESTIMATED BY HALFF ASSOCIATES, INC. THE ENGINEER NEITHER MAKES REPRESENTATION NOR ACCEPTS RESPONSIBILITY AS TO THE ACCURACY OF THESE QUANTITIES AS STATED ABOVE. THE ENGINEER CANNOT AND DOES NOT GUARANTEE THAT THE PROPOSALS, BIDS, OR ACTUAL CONSTRUCTION COSTS WILL NOT VARY FROM THESE ESTIMATES OF PROBABLE COSTS PREPARED FOR THE OWNER OR THE INTENDED RECIPIENT OF THIS DOCUMENT.

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS

Brushy Creek M.U.D.

Brushy Creek North Capital Replacement Section #14 - Great Oaks Drive from Park Dr. to Emerald Hill Dr.

DATE: 7/31/2013
 PREPARED BY: NS
 HA AVO: 29366

PAY ITEM NO	DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	ITEM COSTS	SUB-TOTALS	% OF TOTAL COSTS
1	CLEARING ROW INC. REMOVAL OF ABAN. FACILITIES	STA	26.5	\$350.00	\$9,275	\$9,275	2.09%
2	CUT & REPAIR CONC. DRIVEWAYS (W/ SIDEWALKS INCIDENTAL)	EA	14	\$2,400.00	\$33,600	\$33,600	7.57%
3	WET CONNECTIONS (12"X8") INC. CUT, PLUG & ABANDON EX. WL	EA	5	\$2,500.00	\$12,500	\$12,500	2.82%
4	INSTALL 24" STEEL ENCASEMENT BY BORE	LF	150	\$325.00	\$48,750	\$48,750	10.98%
5	TRENCH EXCAVATION SAFETY SYSTEMS	LF	2,500	\$1.25	\$3,125	\$3,125	0.70%
6	12" DIA. PVC PIPE, C900, DR-18, INC. TRACER WIRE	LF	2,650	\$40.00	\$106,000	\$106,000	23.88%
7	DUCTILE IRON FITTINGS (12")	TON	2.4	\$13,000.00	\$31,200	\$31,200	7.03%
8	GATE VALVE (12")	EA	3	\$2,300.00	\$6,900	\$6,900	1.55%
9	GATE VALVE (6")	EA	3	\$900.00	\$2,700	\$2,700	0.61%
10	INSTALL FIRE HYDRANT, NOT INC. GATE VALVE	EA	3	\$2,500.00	\$7,500	\$7,500	1.69%
11	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE)	EA	1	\$1,200.00	\$1,200	\$1,200	0.27%
12	INSTALL SINGLE WATER SERVICE (1" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	3	\$2,200.00	\$6,600	\$6,600	1.49%
13	INSTALL DUAL WATER SERVICE (2" HDPE PIPE)	EA	6	\$1,400.00	\$8,400	\$8,400	1.89%
14	INSTALL DUAL WATER SERVICE (2" HDPE PIPE) INC. BORE & HDPE ENCASEMENT	EA	4	\$2,500.00	\$10,000	\$10,000	2.25%
15	MOBILIZATION	LS	1	\$25,000.00	\$25,000	\$25,000	5.63%
16	SOD AND LANDSCAPING REPAIR	SY	2,778	\$4.50	\$12,500	\$12,500	2.82%
17	SILT FENCE AND OTHER EROSION CONTROL	LF	2,500	\$2.00	\$5,000	\$5,000	1.13%
18	TEMPORARY CONSTRUCTION EASEMENTS	EA	3	\$500.00	\$1,500	\$1,500	0.34%
19	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	3	\$3,000.00	\$9,000	\$9,000	2.03%
SUB TOTAL						\$340,750	
CONTINGENCY (20%)						\$68,150	
PROFESSIONAL SERVICES						\$35,000	
GRAND TOTAL						\$443,900	

NOTES:
 1) PROFESSIONAL SERVICES COSTS ARE APPROXIMATE AND A DETAILED PROPOSAL WILL BE SUBMITTED FOR EACH PROJECT. THE GENERAL BUDGET PROVIDED CONSISTS OF SUE (\$5,000), SURVEY (\$5,000), AND ENGINEERING (\$25,000). EASEMENT ACQUISITION COSTS ARE NOT INCLUDED IN THIS LINE ITEM.
 2) ESTIMATE ASSUMES THAT IMPROVEMENTS ARE CONSTRUCTED ON THE OPPOSITE SIDE OF THE ROAD FROM EXISTING WATER FACILITIES, THAT NO ENCASEMENT IS PLACED UNDER DRIVEWAYS, NO EXISTING MATERIALS ARE SALVAGED, AND THAT ALL ROAD CROSSINGS ARE BORED.

UNIT PRICES ARE ENGINEER'S ESTIMATE BASED ON ENGINEER'S PREVIOUS EXPERIENCE AND QUALIFICATIONS WHICH REPRESENTS THE ENGINEER'S JUDGEMENT AS A DESIGN PROFESSIONAL FAMILIAR WITH THE CONSTRUCTION INDUSTRY. QUANTITIES IDENTIFIED IN THIS ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS HAVE BEEN ESTIMATED BY HALFF ASSOCIATES, INC. THE ENGINEER NEITHER MAKES REPRESENTATION NOR ACCEPTS RESPONSIBILITY AS TO THE ACCURACY OF THESE QUANTITIES AS STATED ABOVE. THE ENGINEER CANNOT AND DOES NOT GUARANTEE THAT THE PROPOSALS, BIDS, OR ACTUAL CONSTRUCTION COSTS WILL NOT VARY FROM THESE ESTIMATES OF PROBABLE COSTS PREPARED FOR THE OWNER OR THE INTENDED RECIPIENT OF THIS DOCUMENT.