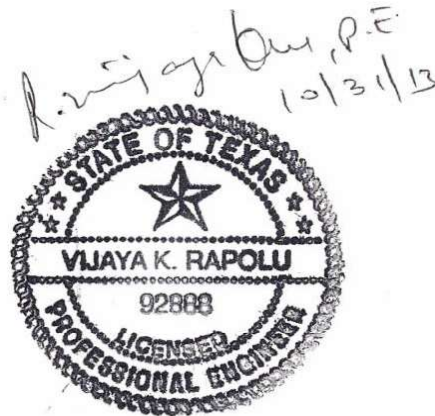


FEASIBILITY REPORT FOR THE DEVELOPMENT AT CLAY RD. AND SUNDOWN WAY

Located in
Key Map 446 F
within Zip Code-77479



Date: 10/31/13

KAVI CONSULTING, INC.
27822 ACACIA GLEN LANE
KATY, TX 77494

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INTRODUCTION

The site is a 2.0764 acre tract of land located in the southwest quadrant of the intersection of Clay Rd and Sundown Way in Katy, Texas. The property shares boundary with the existing subdivision, Wilfred Terra Estates, Sec 1, Harris County, Texas. (HCAD: 046-087-000-0058)

LEGAL DESCRIPTION'

The property is identified as Tract 2G, Abstract 986, E Probert Survey. The site has not been assigned an address yet and one can be assigned by Centerpoint Energy during permitting.

The property is not platted yet and will need to be platted before obtaining permits and service from the Municipal Utility District.

AERIAL MAP

The property is identified in Vicinity map attached as Exhibit 1. The property is bounded by Clay Rd along its Northern boundary, Sundown Way Drive along its Eastern boundary and Upland Fair Land Road along its southern boundary. The property is located within Key Map 446F & lies within the Zip Code 77479.

JURISDICTION

The property is located within the Harris County (HCAD: 046-087-000-0058). The development is subject to the review and approval of the Harris County Public Infrastructure division and Harris County Flood Control District.

Utility service is provided by Ricewood MUD. The property lies within the boundaries of Ricewood MUD (per the HCAD map attached) and any development is subject to the approval of their Engineer (Mr. Jeff Vogler, P.E of Van De Wiele –Vogler Engineering, Houston, TX). A review and inspection fee **may be** charged for the review and approval of the development in addition to the impact fee for water and sanitary sewer. The impact fee charged by the MUD is based on the type of development and is charged according to the anticipated usage. Developments like, restaurants, day care, Laundromats etc. are considered high water usage and are charged higher impact fee. The engineer could provide the anticipated usage of the development based on the square footage.

EXISTING DEVELOPMENT

The property is currently vacant and hasn't had any structure in the past.

PROPOSED DEVELOPMENT

The intent of development is to build a retail center with associated parking lot and driveways to provide access to the site.

UTILITIES

STORM SEWER:

Internal drainage

Since the property is more than 15,000 Square feet internal/underground storm drainage is required. The development shall need to collect the runoff generated on site in a storm event through a series in catch basins and conveyed through underground pipes. The pipes within the property shall be Poly Vinyl Chloride (PVC) and/or High Density Poly Ethylene (HDPE) pipes sloped to drain through gravity.

The collected runoff is then directed to the existing storm sewer system within the ROW. The property has frontage on Clay Rd, which has a road side ditch owned and maintained by Harris County Public Infrastructure Division. The property has frontage on Sundown Way and Upland Fair Land Rd both of which have developed Storm Sewer system, curb and gutter with B-B inlets and storm pipes.

In our professional opinion the internal drainage should connect to the existing storm sewer system along Sundown or Upland Fair Land Rd. The depth of the existing storm sewer along these two Rights-of way is deeper than the ditch along Clay road which will allow for a smaller Detention Pond.

Detention

Any development, within the Harris County Public Infrastructure division (HCPID), draining into a facility owned by the HCPID will need to offset the effects of increasing the runoff generated.

This mitigation of runoff generated is achieved through, among other things, a detention pond on site that collects and stores all the runoff generated on site before draining into the public storm system. Each property shall have only one point of outfall.

The property can drain to the ditch along Clay Rd but the ratio of detention is 1.0 acre Feet per Acre. However, there is drainage system along Upland Fair land Way and Sundown Way Drive, which will reduce the required rate of detention to 0.65 acre Feet per acre. Therefore it is prudent and practical to drain to the existing storm sewer manhole(s) on Upland Fair Land Way and/or Sundown Way Dr..

The detention storage can be accommodated within the proposed parking lot and/or detention pond on site. A preliminary analysis confirms that the minimum size of detention pond required, with maintenance areas per HCPID requirements, is 0.5 acres.

A detailed analysis and design of the site layout by a professional Engineer and/or architect can provide the exact size of the pond that can accommodate the required storage volume.

SANITARY SEWER

The utilities for the tract are provided by the Ricewood Municipal Utility District (hereafter referred to as MUD).

There are no sanitary sewer lines along Clay Road. The MUD owns and operated sanitary and water lines within the vicinity of the subject property and can service the development. There is an 8 inch sanitary sewer line along Sundown Way Dr and the Upland Fair Land Rd. Either of these sewer lines can provide service to the development. There is an existing sanitary sewer manhole within the property along Sundown Way Dr. (called Manhole No. 7 in the attached Exhibit – Sanitary & Water Layout). Connection can be made to the existing line through a 6 inch pipe or connection can be made to the manhole with an 8 inch pipe. The pipe shall be poly Vinyl Chloride.

If the development has any restaurants then provision shall be made to include a separate sewer line to collect grease or oil from the building and route it through a grease trap or interceptor before connecting to the main sewer line. A sample well shall be provided on the grease line before connecting to the main line to measure the amount of grease coming out of the grease trap. The owner shall maintain the grease trap in working condition at no cost to the County or MUD.

WATER LINE

The utilities for the tract are provided by the Ricewood Municipal Utility District (hereafter referred to as MUD).

There is an 8 inch Water line along Sundown Way Drive and the Upland Fair Land Road which can provide service to the site. The existing line along Sundown Way drive and Upland Fair Land Way is across the street. The proposed connection will require the line to be augured underneath the street. The development will need a water meter (to be sized by the design engineer) outside the ROW with a back flow preventer (BFP). The water meter has to be purchased from the MUD which shall be installed by the MUD operator. The BFP shall be within the property mounted on a concrete pad within a security cage.

Any lease space development within the building shall require approval from the Harris County Fire Marshal. Some lease space build-outs may require installation of a fire sprinkler system which will require a separate connection to the existing water line. The minimum size of such a line shall be 6 inches. This line can be metered or unmetered depending on the type of system as designed by the engineer.

The owner will require paying the MUD for the installation and inspection of all the utilities on site.

FLOOD PLAIN

A review of the FEMA's flood Insurance Rate Maps, confirms that the property does not lie within the designated Special Flood Hazard Area (SFHA). The property lies outside the areas of 100 year flood plain per FIRM panel 48201c0605L. Therefore the finished floor elevation of the proposed building does not depend on the Base Flood elevation.

The design engineer shall take measures to design the finished floor elevation (FFE) of the building to be at least 12 inches above the rim of the nearest sanitary sewer manhole. The existing rim elevation of the nearest sanitary sewer manhole is 133.00 Ft and the FFE shall be at least 134.00 FT.

FIRE LANE

Any and all development within the Harris County will need approval from the Harris County Engineering department and the County Fire Marshal. One of the requirements of the Fire Marshal is for an exclusive fire lane to provide access to the building from all sides.

APPROVAL PROCESS

PLAT: The property is currently coming out of a survey and abstract and is the remainder of a larger tract the rest of which has been platted. Plat is required, by law, to obtain a development permit and utility service from MUD. The property is

located in Harris County therefore the plat will need to be recorded at City of Houston and Harris County.

The plating process is long drawn and can take up to 6 months by the time it gets recorded at the city and county. The plat shall first be recorded at the City first and is routed to the County for recordation. The plat will not be recorded until the development plans are approved at the county.

A permit will not be issued by the HCPID without the recordation of the plat the City and no utility service is provided by the MUD without the plat.

HARRIS COUNTY PUBLIC INFRASTRUCTURE DIVISION (HCPID):

CIVIL: The engineering plans for the proposed development will need to be submitted to the office of HCPID for review and approval along with the preliminary approval of the plat (CPC-101) from the City of Houston's Planning Department. A letter of utility commitment from the MUD will be required prior to the approval from the County.

FIRE: The engineering plans for the proposed building (Architectural floor plans, wall sections and Fire code review sheet) will need to be submitted for approval to the Harris County Fire Marshal's office. Any subsequent development including, lease space build out, change of occupancy etc., will need to be approved by the Fire Marshal's office before construction begins.

MUD: The engineering (Plumbing and floor plans) and utility plans for the site must be approved by the MUD through their engineer, *Van De Wiele-Vogler Engineering* office. Once the plans are approved and the requisite review and inspection fee is paid, the MUD operator shall provide the requisite inspection and construction services.

CONCLUSION

The site is free of any apparent easements and/or restrictions that severely inhibit the nature and intent of development. The intent of the development is to propose a commercial building with associated parking and detention structures. The property can gain access from all three streets surrounding the site namely, Clay Rd, Sundown Way Drive and Upland Fair Land way. The driveway from Clay Road will need a culvert, the size and grade of which will be provided by the Harris County Precinct office.

The development will require a detention pond, approximately 5 feet deep and 0.5 acres. The detention pond must be designed, constructed and maintained by the owner as a private facility. The sides of the pond shall be sloped (3:1 or shallower) for grass lines slopes. Steeper slopes can increase the storage volume and reduce the size of pond, but the slopes shall need to be lined with reinforced concrete for slope stability. The decision to reduce the slopes can be taken based on the cost implications of the alternate construction.

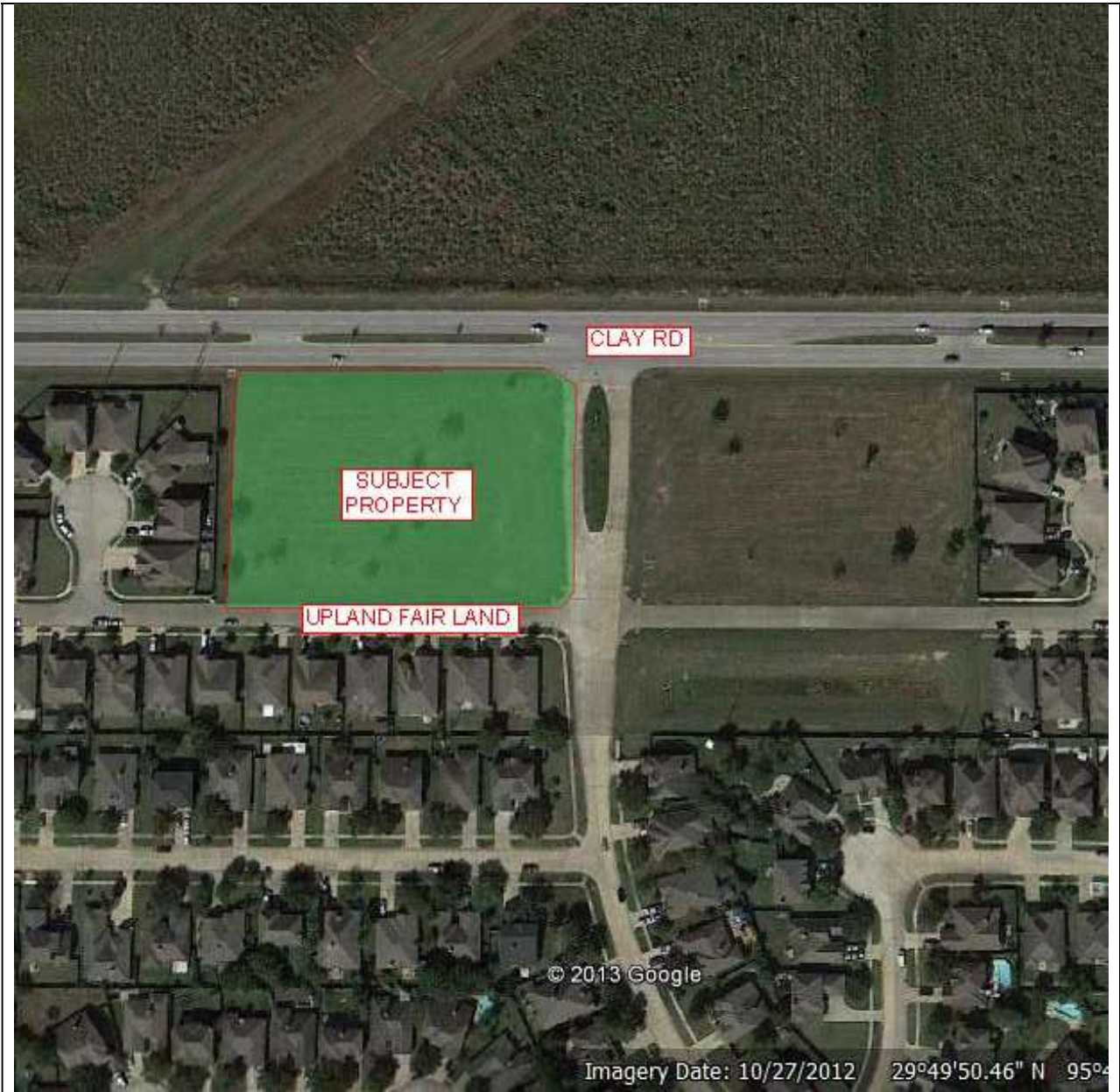
The site has all wet utilities within the limits of its frontage. The sanitary sewer connection is made to a manhole on the site and t waterline requires boring under the street.

The approval and permitting process is normal to this type of development. The first step in development of this process is to obtain a Topographic and boundary survey and plat the property. The plat for the property will also confirm any easements,

building lines, easements, restrictions and additional dedications (if) required by regulatory and/or quasi-governmental entities. The cost of platting including city and county fees shall not exceed \$ 8,500.

In our professional opinion the development if feasible and the extent of allowable development can be ascertained by a licensed engineer or architect designed in conformance with the regulations and guidelines of the Harris County Infrastructure Department and any other regulatory authority having jurisdiction on the site.

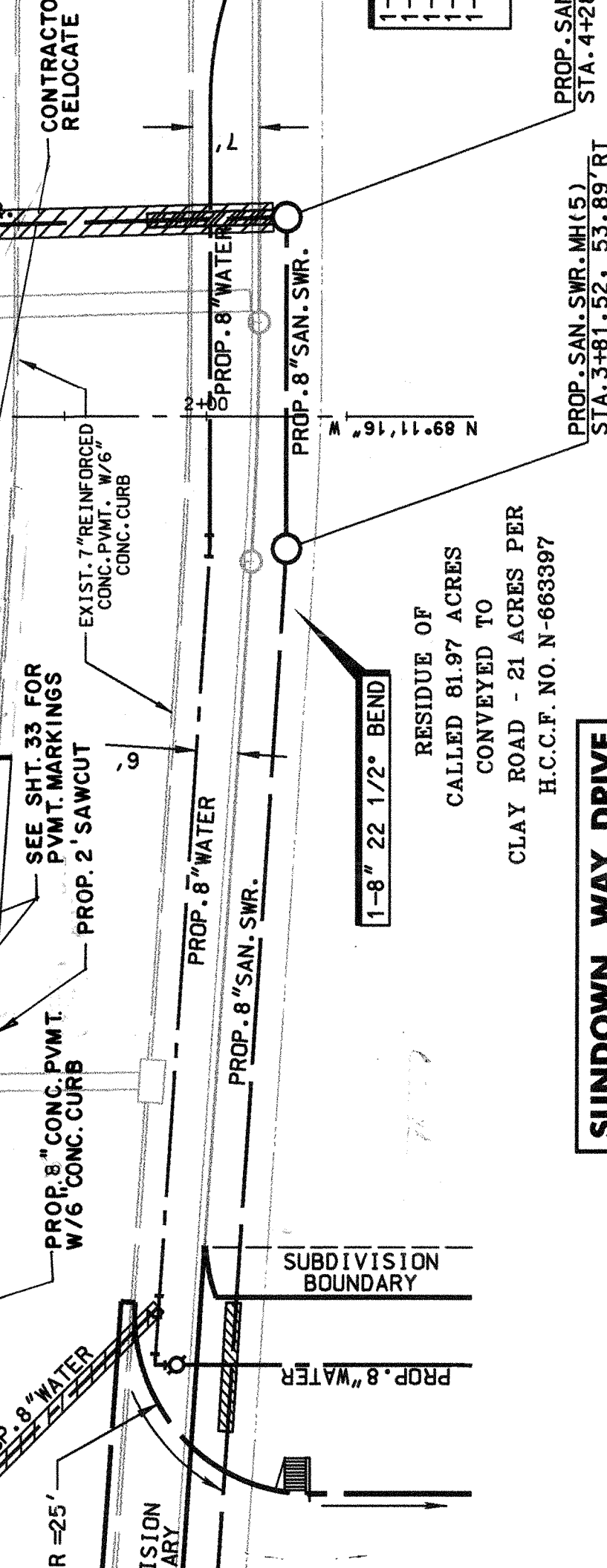
APPENDIX



AERIAL MAP



FLOOD MAP
PANEL # 48201C0 605L



CONTRACTOR
RELOCATE

SEE SHT. 33 FOR
PVMT. MARKINGS

PROP. 2' SAWCUT

PROP. 8" CONC. PVMT.
W/6" CONC. CURB

EXIST. 7" REINFORCED
CONC. PVMT. W/6"
CONC. CURB

PROP. 8" WATER

PROP. 8" SAN. SWR.

NOISIVIDUBS
BOUNDARY

PROP. 8" WATER

1-8" 22 1/2° BEND

RESIDUE OF
CALLED 81.97 ACRES
CONVEYED TO
CLAY ROAD - 21 ACRES PER
H.C.C.F. NO. N-663397

SUNDOWN WAY DRIVE

PROP. 8" SAN. SWR.

PROP. SAN. SWR. MH(5)
STA. 3+81.52 - 53.89' RT

PROP. SAN.
STA. 4+2

T/C=132.28 RT

E/R STA. 2+75.73

T/C=132.35 LT

E/R STA. 2+75.65

T/C=131.94 LT

E/R

T/C=131.87 RT

E/R

EXIST. EAST T/C

EXIST. WEST T/C

4' MIN.
COVER

PROP. 8" WATER

WATER

PROP. 24" RCP STM. SWR.

PROP. 8" WATER

1-8" x 6" TEE
1-6" GV&BOX
1-FIRE HYDRANT
STA. 6+85

6" FL = 125.19
6" FL = 124.94

1-8" x 8" WYE
1-8" 90° BEND
2-8" GV&BOX

PROP. TYPE "B-B" INLET
STA. 8+67.20
T/C = 131.85
FL = 126.14

PROP. TYPE "C" MH(2)
STA. 8+64.20, 20' RT

UPLAND FAIR LANE

PROP. TYPE "C" MH(1)
STA. 8+88.39, 40.28' RT

V.P. I. STA. 8+61.98
T/C = 131.87 LT
V.P. I. STA. 8+67.20
T/C = 131.85 RT

Natural Ground

T/C @ -0.30%

48 LF RESTRAINED JT.

4' MIN. COVER

HGL

RESTRICTED RESERVE "D"

PROP. 36" RCP STM. SWR.

4

(2)

2

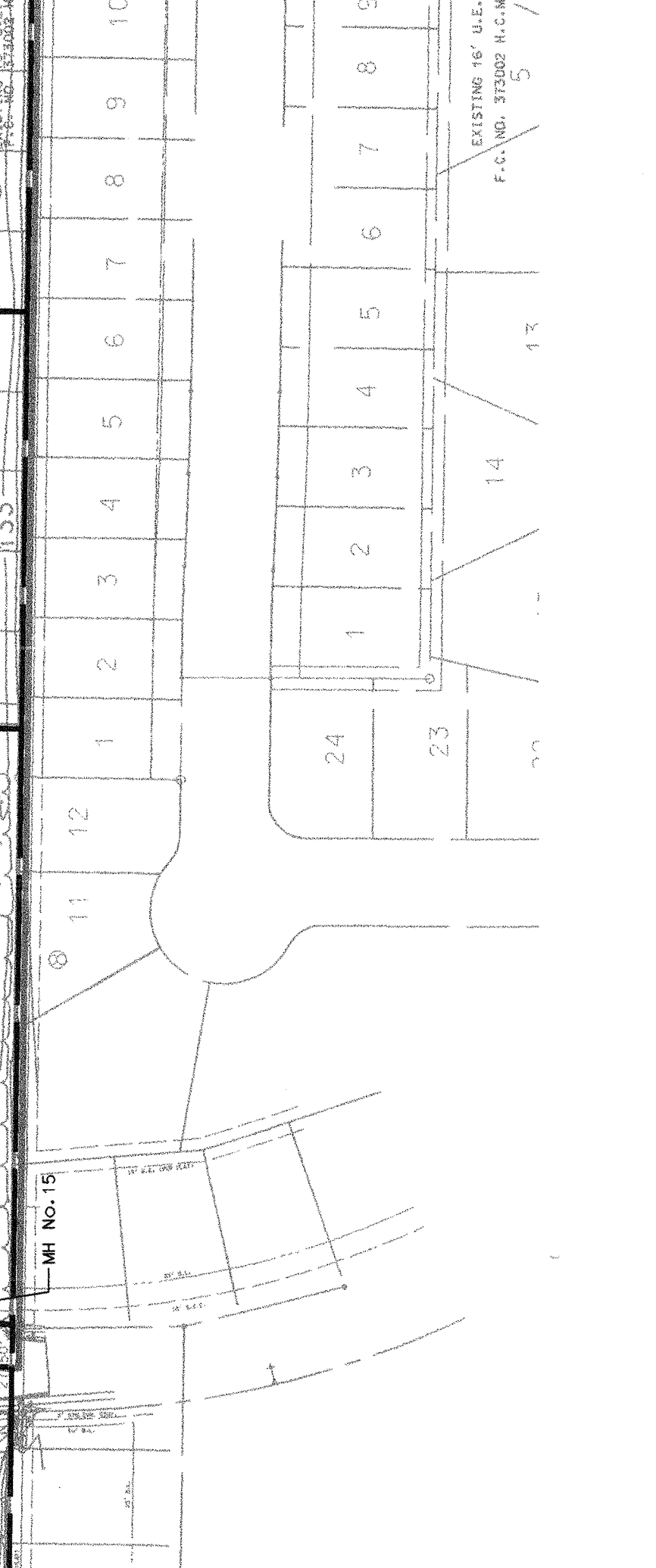
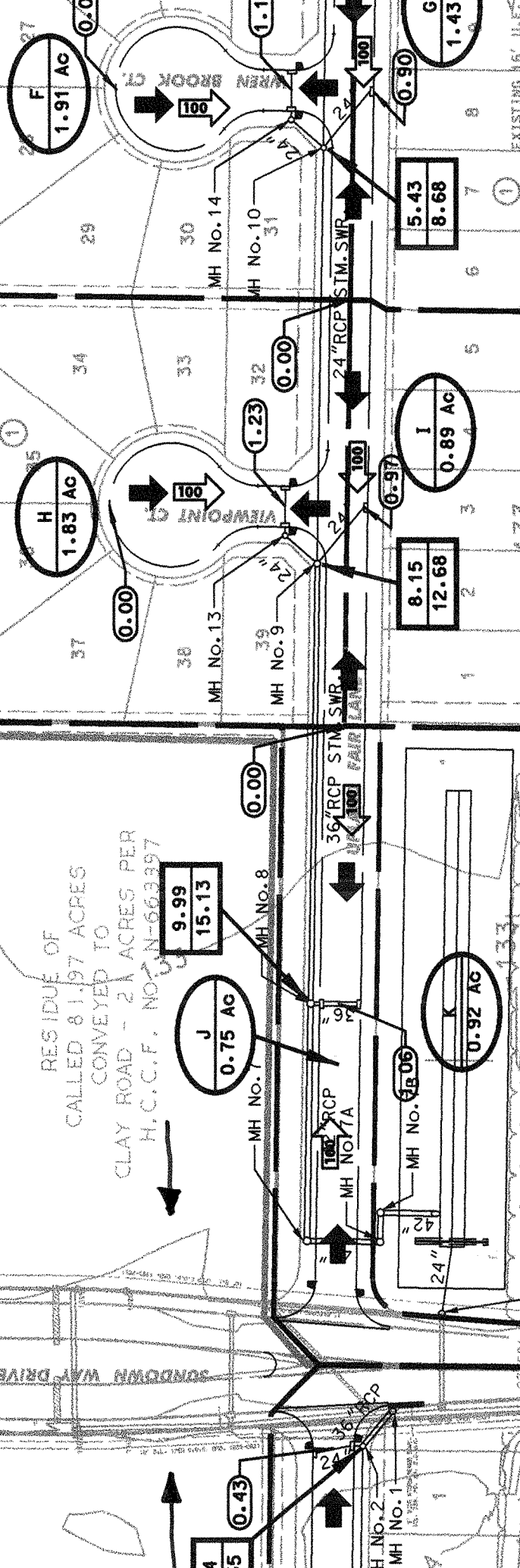
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1

WR.

QUANTITY	SUM OF FLOWS (cfs)	REACH LENGTH (ft)	DIAMETER OR RISE (in)	SPAN (in)	AREA (ft ²)	Rh ² /3	SLOPE (%)	MANNING'S "n"	DESIGN CAPACITY (cfs)	DESIGN VELOCITY (ft/s)	FALL (ft)	MAINRUE		ELEVATION	
												DROP (ft)	UP (ft)	DOWN (ft)	UP (ft)
	1.84	103.92	24	0.00	3.14	0.63	0.17	0.013	9.41	3.00	0.18	0.00	129.88	129.70	131.88
	1.84	185.20	24	0.00	3.14	0.63	0.17	0.013	9.41	3.00	0.32	0.82	128.88	128.56	130.88
	5.36	20.00	24	0.00	3.14	0.63	0.17	0.013	9.41	3.00	0.03	1.57	126.99	126.96	128.99
	8.21	526.95	24	0.00	3.14	0.63	0.17	0.013	9.41	3.00	0.92	0.00	126.96	126.04	128.96
	10.90	27.48	36	0.00	7.07	0.82	0.10	0.013	21.18	3.00	0.03	2.41	122.63	122.60	125.63
	3.81	29.07	24	0.00	3.14	0.63	0.17	0.013	9.41	3.00	0.05	0.00	126.40	126.35	128.40
	3.81	286.00	24	0.00	3.14	0.63	0.17	0.013	9.41	3.00	0.50	1.27	125.08	124.58	127.08
	9.55	286.00	24	0.00	3.14	0.63	0.17	0.013	9.41	3.00	0.50	0.00	124.58	124.08	126.58
	13.98	302.30	36	0.00	7.07	0.82	0.10	0.013	21.18	3.00	0.31	0.00	124.08	123.77	127.08
	14.84	163.52	42	0.00	9.62	0.91	0.08	0.013	28.80	2.99	0.13	0.00	123.77	123.64	127.27
	14.84	50.00	42	0.00	9.62	0.91	0.08	0.013	28.80	2.99	0.04	0.00	123.64	123.60	127.14
	14.84	20.00	42	0.00	9.62	0.91	0.08	0.013	28.80	2.99	0.02	0.00	123.60	123.58	127.10
	14.84	40.50	42	0.00	9.62	0.91	0.08	0.013	28.80	2.99	0.03	0.00	123.58	123.55	127.08
	1.84	62.00	24	0.00	3.14	0.63	0.17	0.013	9.41	3.00	0.11	0.00	128.05	127.94	130.05
	3.35	29.07	24	0.00	3.14	0.63	0.17	0.013	9.41	3.00	0.05	0.00	126.00	125.95	128.00
	3.49	29.07	24	0.00	3.14	0.63	0.17	0.013	9.41	3.00	0.05	0.00	126.05	126.00	128.05

RESIDUE OF
 CALLED 81.97 ACRES
 CONVEYED TO
 CLAY ROAD - 2.1 ACRES PER
 H.C.C.F. NO. N-669997



EXISTING 16' U.E.
 F.C. NO. 373002 H.C.M.
 5 /

EXISTING 16' U.E.
 F.C. NO. 373002 H.C.M.

