

W. H. PORTER CONSULTANTS, PLLC

6055 Primacy Parkway, Suite 115
Memphis, Tennessee 38119
(901) 363-9453 • FAX: (901) 363-2722

Engineers, Planners, Surveyors, Consultants

March 8, 2016

Tennessee Department of Environment and Conservation
Water Quality Branch
Division of Water Resources
312 Rosa L. Parks, 11th Floor
Nashville, TN 37243

TN DEPT OF ENVIRONMENT
AND CONSERVATION
MAR 11 2016
DIV OF WATER RESOURCES
RECEIVED

WPN16-0180

RE: Hayes Place Planned Development

Hayes Place Planned Development is a 32 lot single family residential development on 13.09 acres to be constructed in Arlington, TN. Submitted for your review, are the proposed sanitary sewer plans and the street plan and profiles for Hayes Place Planned Development. Also, included you will find the sewer calculations for the development and a plan depicting the sewer manhole numbers as depicted within the sewer calculations. The Town of Arlington has acknowledged this submittal and a letter stating so has been included.

We appreciate all your help. If you need further information please let me know.

Yours very truly,

W.H. PORTER CONSULTANTS, PLLC



Henry L. Porter, P.E.

Town of Arlington

P.O. Box 507 • 5854 Airline Road • Arlington, TN 38002-0507
(901) 867-2620 • Fax: (901) 867-2638 • www.townofarlington.org



WPN16-0180

March 7, 2016 TN DEPT OF ENVIRONMENT
AND CONSERVATION

Mr. Henry L. Porter, P.E.
W. H. Porter Consultants, PLLC
6055 Primacy Parkway, Suite 115
Memphis, TN 38119

MAR 11 2016
DIV OF WATER RESOURCES
RECEIVED

RE: HAYES PLACE PD
ARLINGTON, TENNESSEE

Dear Mr. Porter:

I have reviewed your sewer plan for the above referenced project and it is acceptable to the Town of Arlington. You are hereby authorized to submit this plan to the State of Tennessee Department of Environment and Conservation for their review and approval.

If you have questions or need additional information, please give me a call.

Sincerely,

Steve Hill, P.E.
Town Engineer

SH/ms

cc: Ms. Cathy Durant
Ms. Angela Reeder
Mr. Jason Allen

"Taking Pride in Arlington"

Mayor Mike Wissman, Vice Mayor Harry McKee
Aldermen Glen Bascom, Jr., Gerald McGee, Jeff McKee, Oscar Brooks and Brian Thompson

W. H. PORTER CONSULTANTS, PLLC
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 Memphis, Tennessee 38119

(901) 363-9453

LETTER OF TRANSMITTAL

DATE	3/8/16	JOB NO.	
ATTENTION	Sanitary Sewer Approval		
RE:	Hayes Place Planned Development		

To: TDEC - Water Quality Branch
312 Rosa L. Parks, 11th Floor
Nashville, TN 37243

WE ARE SENDING YOU Attached Under separate cover via _____ the following items:

- Shop drawings Prints Plans Samples Specifications
 Copy of letter Change order _____

COPIES	DATE	NO.	DESCRIPTION
		1	Letter
		1	Calculations - Sewer
		1	Arlington Authorization letter
		1	Sewer Fee
		1	5 sets of Sewer Plans.
		1	Sewer Detail

THESE ARE TRANSMITTED as checked below:

- For approval Approved as submitted Resubmit _____ copies for approval
 For your use Approved as noted Submit _____ copies for distribution
 As requested Returned for corrections Return _____ corrected proofs
 For review and comment _____
 FOR BIDS DUE _____ PRINTS RETURNED AFTER LOAN TO US

REMARKS _____

COPY TO File

SIGNED 

If enclosures are not as noted, kindly notify us at once.

Design Flow 350 GPD
 Peak Factor 4
 n 0.013 n = Coeff. Of Roughness
 A $A = (D/2)^2 * \pi$

Country: Shelby
 City: Arlington
 Project: Hayes Place Planned Development
 Sewage Flow Per House 0.001354 cfs

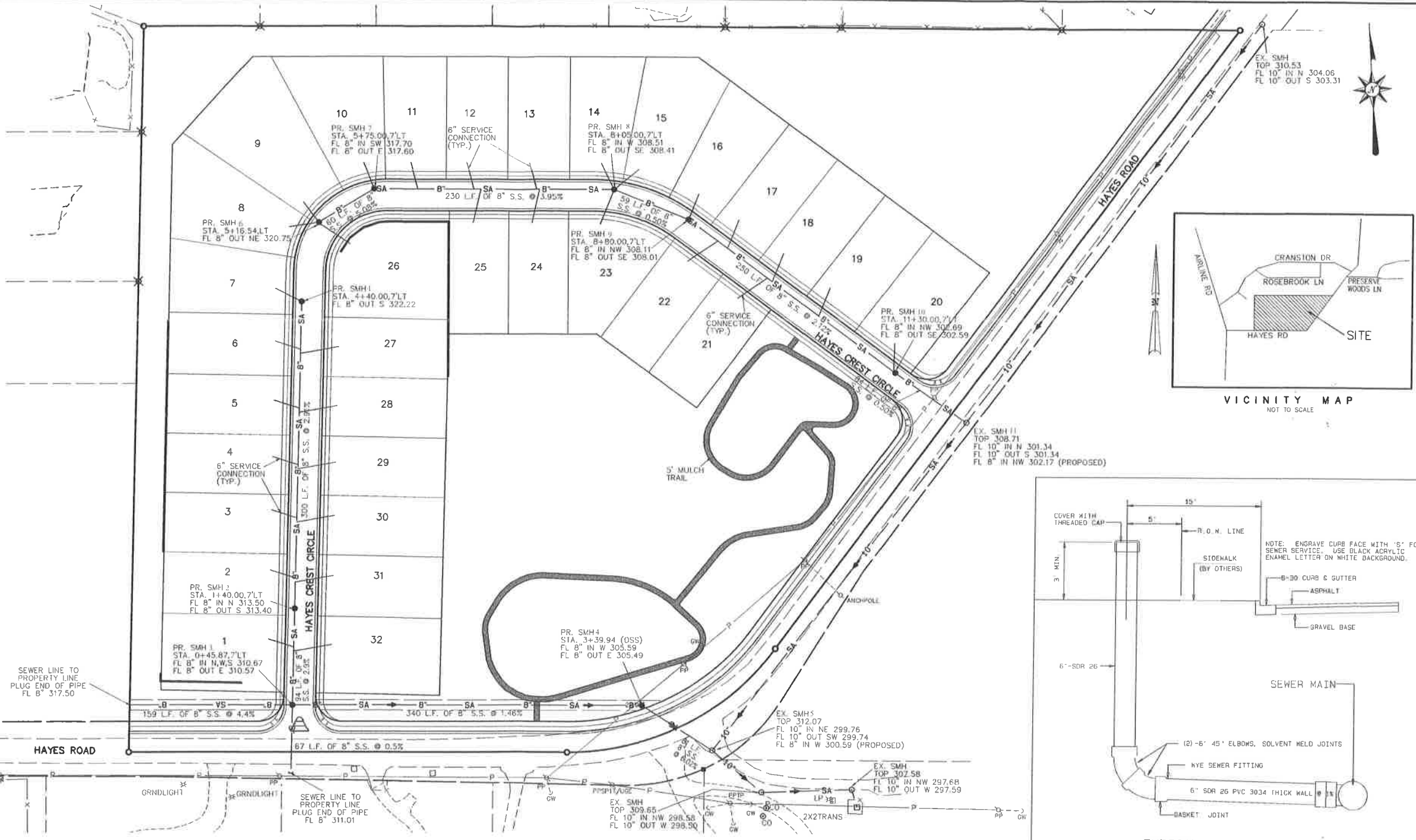
$Q_{full} = V_{full} * A$
 $0.002228 \text{ Ft}^3/\text{s} = 1 \text{ Ft}^3/\text{s} = 646316.9 \text{ GPD}$
 1 GPM

Line No.	From MH	To MH	Length, FT	Lot # Served	# of Lots Served	Avg. Sewage Flow (GPD)	Max. Sewage Flows (GPD)	Avg Sewage Flow (CFS)	Pipe Dia. (in)	Pipe Area, Ft ²	Upper Invert Elev	Lower Invert Elev	Slope, %	Velocity, fps	Capacity Full, GPD	Capacity Full, cfs
1	1	2	300	7	1	875.11	3500.45	0.0014	8	0.35	322.22	313.5	2.91%	5.902	1331552.97	2.060
2	2	3	94	2-6, 27-31	10	875.13	35004.53	0.0135	8	0.35	313.4	310.67	2.90%	5.900	1331000.53	2.059
3	3	4	340	1,32	2	1750.23	7000.91	0.0027	8	0.35	310.57	305.59	1.46%	4.190	945226.84	1.462
4	4	5	81	0	0	0.00	0.00	0.0000	8	0.35	305.49	300.59	6.05%	8.515	1920951.34	2.972
5	6	7	60	8,9,26	3	2625.34	10501.36	0.0041	8	0.35	320.75	317.7	5.08%	7.805	1760901.76	2.725
6	7	8	230	10-13, 24, 25	6	5250.68	21002.72	0.0081	8	0.35	317.6	308.6	3.91%	6.848	1544963.31	2.390
7	8	9	77	14,15,23	3	2625.34	10501.36	0.0041	8	0.35	308.5	308.11	0.51%	2.464	555837.41	0.860
8	9	10	250	16-22	7	6125.79	24503.17	0.0095	10	0.55	308.01	302.69	2.13%	5.860	2065728.99	3.196
9	10	11	84	0	0	0.00	0.00	0.0000	10	0.55	302.59	302.17	0.50%	2.841	1001319.18	1.549
10	West Stub	SMH 3	159	0	0	0.00	0.00	0.0000	10	0.55	317.5	310.67	4.30%	8.326	2934940.65	4.541
11	South Stub	SMH 3	67	0	0	0.00	0.00	0.0000	10	0.55	311.01	310.67	0.51%	2.862	1008764.04	1.561
12																
Total															1742 L.F.	

CONTRACTOR MUST LAY THE SEWER LINES SHOWN HEREON TO THE SPECIFIED GRADE. SEWER LINES LAID TO A GRADE LESS THAN THE MINIMUM GRADE OF 0.40% WILL BE REMOVED FROM GROUND AND LAID TO SPECIFIED GRADE. ANY UPSTREAM LINES AFFECTED BY REMOVAL SHALL BE RECONSTRUCTED AS REQUIRED.

SURVEYOR SHALL DELIVER TO CONTRACTOR AND CITY INSPECTOR A CERTIFIED CUT SHEET SHOWING CORRECT GRADE AT 50' INTERVALS FOR MINIMUM GRADE SEWER LINES.

ACCEPTANCE OR REJECTION OF SEWER LINES WILL BE BASED ON AS-BUILT SURVEY. AS-BUILT SURVEY WILL TAKE PLACE AS SOON AS PRACTICAL AFTER MANHOLES ARE BUILT AND LINES CAN BE TESTED FOR ACCEPTANCE.



TYPICAL CONSTRUCTION NOTES:

LOCATION OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND ARE NOT NECESSARILY ALL OF SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE APPROPRIATE UTILITY COMPANY TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES AND/OR UNDERGROUND STRUCTURES, PRIOR TO THE INITIATION OF ANY CONSTRUCTION. THE CONTRACTOR SHALL ALSO ASSUME FULL RESPONSIBILITY FOR DAMAGE TO ANY UTILITIES ENCOUNTERED WITHIN THE CONSTRUCTION PERIMETERS. FOR INFORMATION CONCERNING M.G.W., BELLSOUTH, OR TEXAS GAS, PLEASE CALL 1-800-351-1111. FOR SEWER SERVICE LOCATIONS, CALL 867-2620.

CONTRACTOR SHALL INSURE UNINTERRUPTED SEWER SERVICE ON EXISTING SEWER AND SERVICE CONNECTIONS BY PROVIDING AMPLE TEMPORARY WASTEWATER PUMPING AND/OR BYPASSING.

CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES

THE CONTRACTOR SHALL NOTIFY THE TOWN OF ARLINGTON CONSTRUCTION INSPECTION OFFICE, AT 867-2620, A MINIMUM OF 24 HOURS PRIOR TO INITIATION OF ANY CONSTRUCTION.

ALL AREAS IN CUT OR FILL WHERE VEGETATION HAS BEEN REMOVED SHALL BE FERTILIZED, MULCHED, SEEDED AND/OR SLOTTED AS REQUIRED TO PREVENT EROSION.

THE CONTRACTOR SHALL VERIFY EXISTING DATA AND REPORT ANY SIGNIFICANT DISCREPANCIES TO THE ENGINEER.

ALL SANITARY SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH TOWN OF ARLINGTON STANDARD CONSTRUCTION SPECIFICATIONS. SANITARY SEWER SERVICE CONNECTIONS TO BE INSTALLED AS PER TOWN OF ARLINGTON STANDARD.

ALL SEWER MANHOLE LIDS IN OPEN AREAS ARE TO BE CONSTRUCTED A MINIMUM 1.0' ABOVE 100-YEAR FLOOD ELEVATION OR 1.5' ABOVE PROPOSED GRADE. IN BACKYARDS, MANHOLE LIDS ARE TO 1.5' ABOVE INITIAL GRADE, 0.5' ABOVE FINAL GRADE.

ALL SANITARY SEWER, INCLUDING SERVICE CONNECTIONS, WITH LESS THAN 1.5' OF CLEARANCE (OUTSIDE OF PIPES) WITH DRAINAGE PIPES OR STRUCTURES SHALL BE CLASS 50 D.I.P. OR CONCRETE ENCASED, 10" EACH SIDE OF THE CROSSING. ALL DUCTILE IRON PIPE SHALL BE POLYETHYLENE LINED OR SHALL BE TREATED WITH PROTECTO 401 OR APPROVED EQUIVALENT.

THE TOWN OF ARLINGTON SHALL HAVE INGRESS/EGRESS RIGHTS TO USE PRIVATE DRIVES AND YARDS FOR THE PURPOSE OF MAINTAINING ALL PUBLIC SEWER LINES AND SHALL BEAR NO RESPONSIBILITY FOR THE MAINTENANCE OF SAID PRIVATE DRIVES AND YARDS.

NO TREES, SHRUBS, PERMANENT STRUCTURES OR OTHER UTILITIES (EXCEPT FOR CROSSINGS) WILL BE ALLOWED WITHIN PUBLIC SANITARY SEWER EASEMENT AND/OR DRAINAGE EASEMENT.

ALL SANITARY SEWER MANHOLES IN REVERSE CROWN STREETS, ALLEYS, OR DRIVES (PUBLIC OR PRIVATE) SHALL BE PROVIDED WITH GASKETS AND PLUGS FOR A PILE HOLES TO PREVENT DRAINAGE INFLOW INTO THE SEWER SYSTEM.

THE CONTRACTOR SHALL PROVIDE ADEQUATE AND EFFECTIVE EROSION CONTROL, AS NECESSARY TO PREVENT ANY SILTATION INTO EXISTING DRAINAGE SYSTEM AND/OR ADJACENT PROPERTIES.

NOTES:

THIS PROPERTY IS NOT LOCATED IN THE 100-YEAR FLOOD PLAIN PER FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 47157CD495G, ZONE "X", EFFECTIVE DATE FEBRUARY 13, 2013. 100-YEAR FLOOD ELEVATION: NONE

FOR CONSTRUCTION NOTES - SEE "GENERAL CONSTRUCTION NOTES" DRAWING (SHEET 2)

AS-BUILT CERTIFICATE

I HEREBY CERTIFY THAT THE DISTANCES BETWEEN STRUCTURES AND THE AS-BUILT ELEVATIONS SHOWN HEREON (INDICATED WITH A CLOUD) WERE TAKEN ON THE GROUND ON _____ 20____ USING THE B.M. OR T.B.M. NOTED HEREON.

W. H. PORTER CONSULTANTS, PLLC

BY: WILLIAM D. PORTER, R.L.S. DATE: _____
TENNESSEE CERTIFICATE NO. 1664



CALL BEFORE YOU DIG

1-800-351-1111

REVISIONS	APPROVAL
ITEM NO.	DESCRIPTION OF CHANGE

W. H. PORTER CONSULTANTS, PLLC
REGISTERED PROFESSIONAL ENGINEERS
REGISTERED PROFESSIONAL SURVEYORS
REGISTERED PROFESSIONAL LAND SURVEYORS
REGISTERED PROFESSIONAL CIVIL ENGINEERS

HAYES PLACE P.D.
DEVELOPER: REGENCY HOMEBUILDERS

#13-0208

SHEET 1 OF 1

DIVISION OF ENGINEERING
SANITARY SEWER PLAN
APPROX. 788' EAST OF THE EAST LINE OF AIRLINE RD.,
ARLINGTON, TENNESSEE

SURVEY: WHP DATE: 7/2012 BOOK: _____
DRAWN: JDP DATE: 12/2012 SCALE: 1" = 50'
DESIGN: WHP DATE: 12/2012 PROJECT: 13-0208

DEPUTY CITY ENGINEER DATE CITY ENGINEER DATE