

SEWER ENGINEER'S REPORT

Northern Rivers Behavioral Health Center

58 Academy Road

CITY OF ALBANY
COUNTY OF ALBANY
STATE OF NEW YORK

Applicant: Parsons Child and Family Center

Prepared by:

Hershberg & Hershberg
Consulting Engineers and Land Surveyors
18 Locust Street
Albany, NY 12203-2908
(518) 459-3096
Fax (518) 459-5683
hhershberg@aol.com

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INTRODUCTION:

Hershberg & Hershberg, Consulting Engineers and Land Surveyors, were retained by Parsons Child & Family (hereinafter the “Applicant”) with an address of 60 Academy Road, Albany NY 12008 as site engineer for the construction of a residential and outpatient treatment facility to be known as Northern Rivers Behavioral Health Center. This report is for the consideration of the Department of Water & Water Supply and the City of Albany Planning Board.

DESCRIPTION OF EXISTING SITE:

PARCEL AREA

The existing parcel is Tax Map Parcel #75.12-2-13.1 listed as No. 60 Academy Road. The Applicant proposed to create a new lot from No. 60 Academy Road to be listed as No. 58 Academy Road. The new lot will consist of 101,128 SF or 2.32 acres of land.



Fig. No. 1 - Aerial Photo of Site

DESCRIPTION OF INTENDED SITE DEVELOPMENT AND USE

Under the current application the Applicant is proposing to demolish the existing residential building and construct a new building for residential and outpatient treatment use. The new building will contain 20 bedrooms. The parking lot will be expanded to include parking for 39 cars including 2 handicapped parking spaces. Also included in site development is landscaping, lighting, stormwater management and utility connections.

SEWER GENERATION

In absence of existing water records, the *New York State Design Standards for Intermediate Sized Wastewater Treatment Systems (March 5, 2014)*¹ is used to compute the Average Daily Flow. Based upon 110 GPD per bed (Method 1: Typical Per-Unit Hydraulic Loading Rates) and 15 GPD per employee, 20 beds and 45 employees will generate an estimated 2,875 GPD or an average flow of 1.99 GPM of sanitary waste. See Fig. No. 2 below. Peak sewage flow generation is estimated at 450% of average flow or 8.96 GPM. This is equivalent to 0.019 CFS.

Sewage Generation
Northern Rivers Behavioral Health Center

<u>Floor/Use</u>	<u>Unit</u>	<u>Value</u>	<u>Water Use Per</u>		<u>Water Use (GPD)</u>
			<u>Unit per</u>	<u>day(GPD) See</u>	
Residential	Beds	20	110		<u>2200</u>
Employee	Person	45	15		675
	TOTAL				2875

1) Source: New York State Design Standards for Intermediate Sized Wastewater Treatment Works, NYSDEC, March 5, 2014

2) Sewage Generation is equivalent to potable water use

Fig. No. 2 – Sewage Generation`

The proposed connection is to a manhole on an existing 8" sanitary sewer located interior to 60 Academy Road utilizing a 1 ½ " DIP force main from a pump station used by the new building. The pump station contains two hydromatic grinder pumps which will grind hard objects that are potentially flushed down drains of the building. The existing 8" sanitary sewer is an 8" PVC with an approximate grade of 1% and full flowing capacity of 1.77 CFS. The 1.99 GPM or 0.0039 CFS of sanitary waste generated by the new building represents 0.22% of the existing 8" sanitary sewer pipe capacity. The 8" pipe is tributary to a 12" VP sewer on Academy Road. A portion of Sewer Atlas Sheet 81 is reproduced below

Fig. No. 3 – Portion of Sewer Atlas Sheet 81

The existing site is tributary to the Beaver Creek Sewer District (see map below).

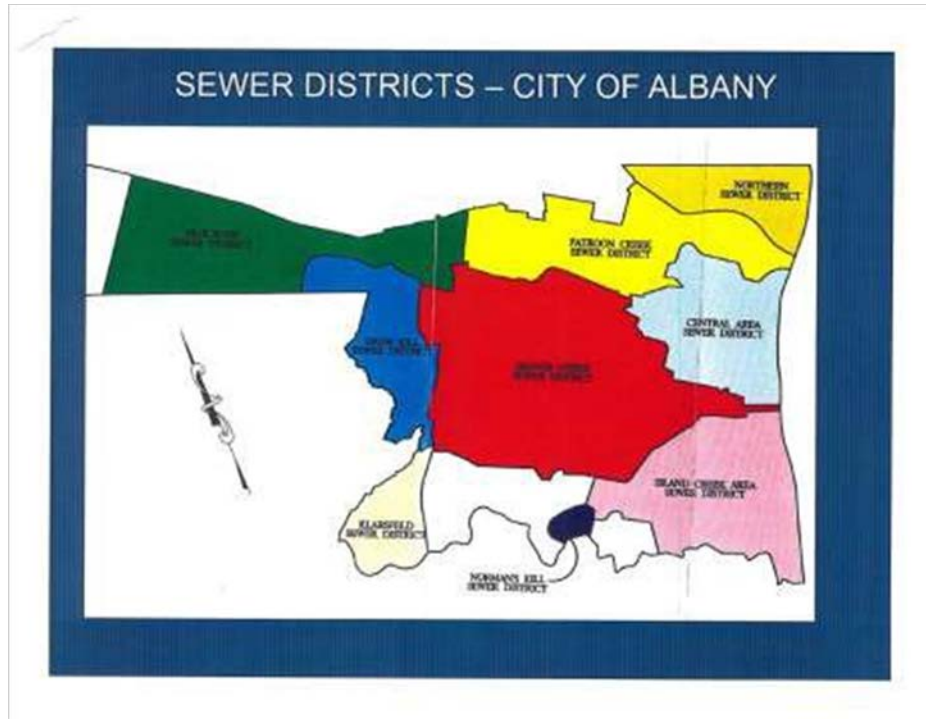
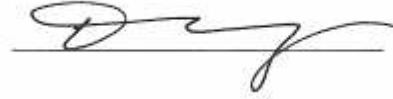


Fig. No. 4- Albany Sewer District Map

CONCLUSION:

It is the Engineer's opinion that this project can be served by existing public sewer system with minimal impact on the system.

Prepared by:



HERSHBERG & HERSHBERG
Daniel R. Hershberg, P.E. & L.S.



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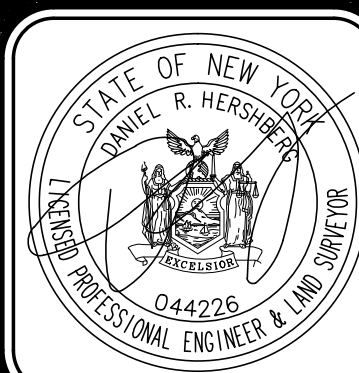
SEWER ENGINEER'S REPORT

APPENDIX A

Sheet C4- UTILITY PLAN



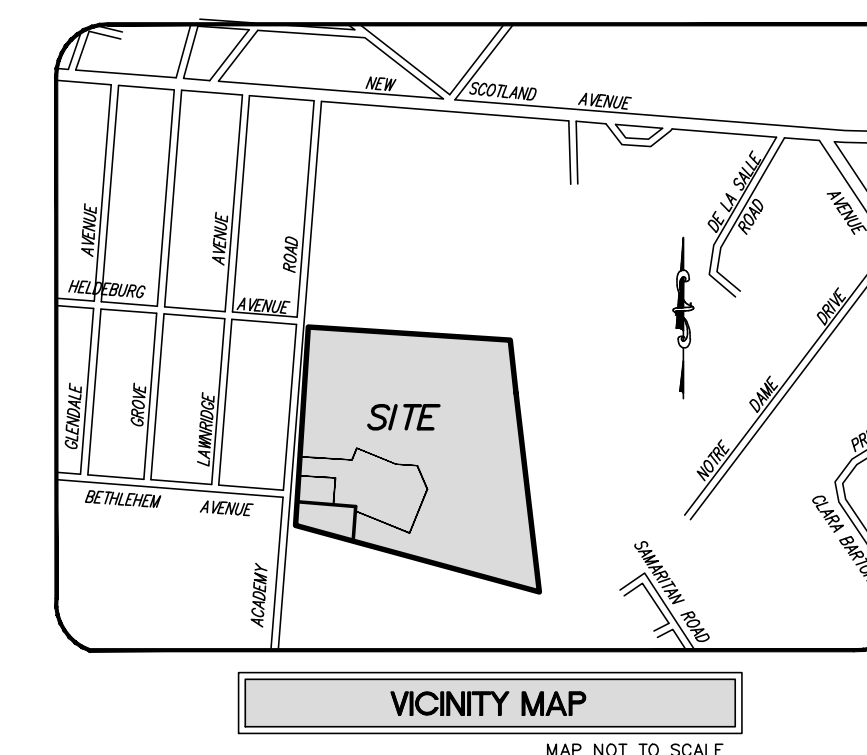
ALTERATION OF THIS
DOCUMENT EXCEPT BY A
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UTILITY PLAN
NORTHERN RIVERS BEHAVIOR HEALTH CENTER
PROPOSED No. 58 ACADEMY ROAD
ALBANY, NEW YORK

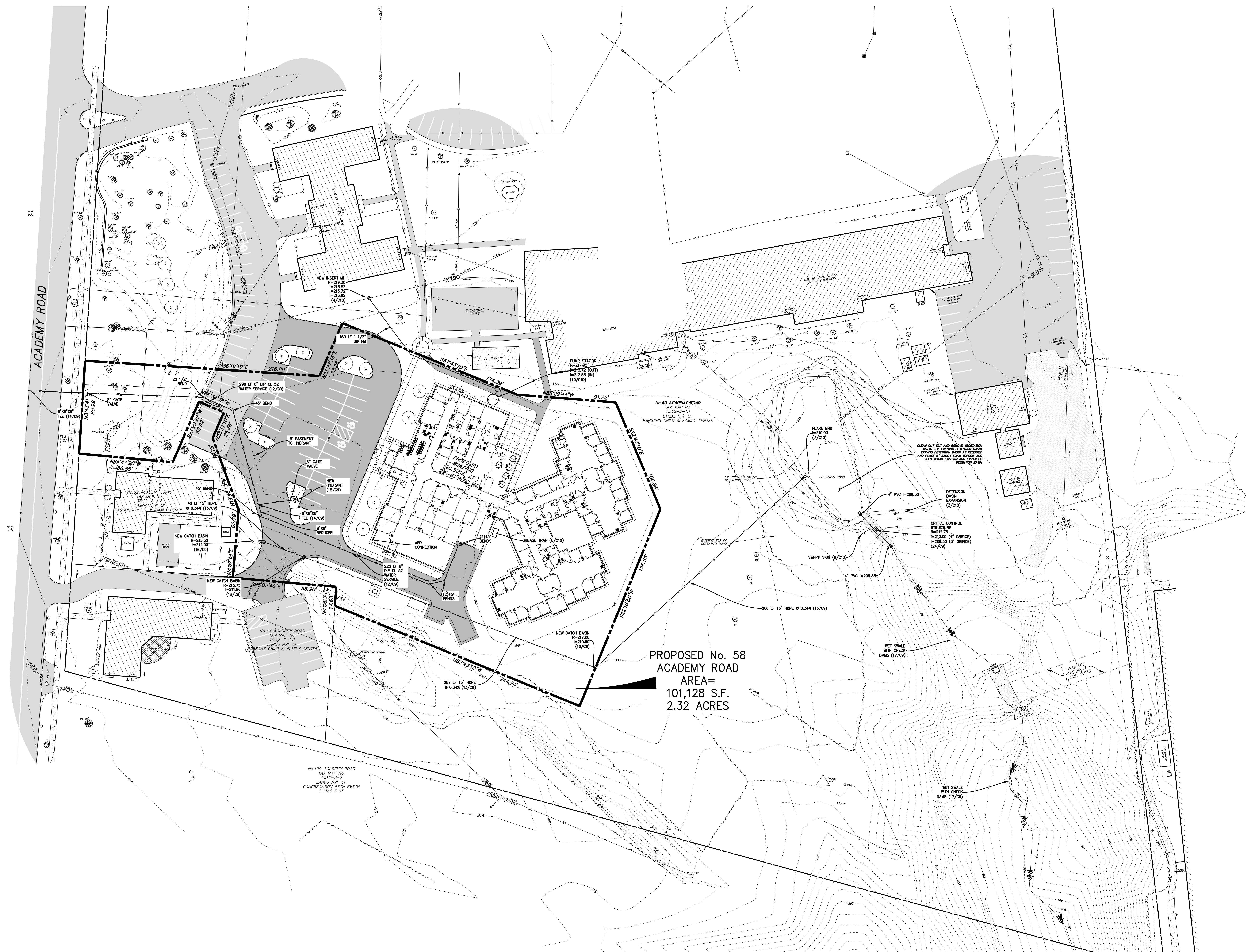
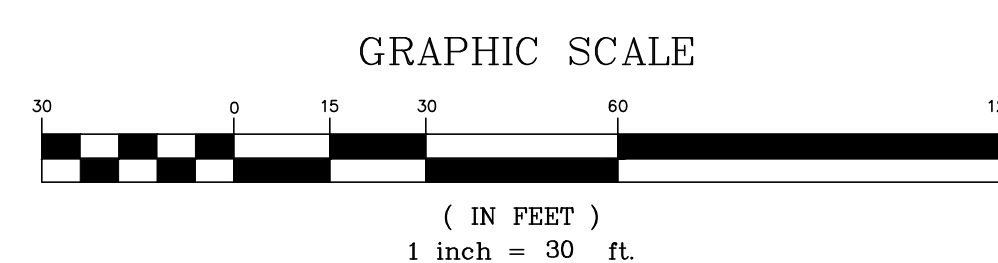
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C4



NOTES

1. 48 HOURS NOTICE MUST BE GIVEN TO DEPARTMENT OF WATER FOR INSPECTIONS FOR THE SANITARY, WATER AND STORMWATER UTILITIES.
2. PRESSURE AND LEAKAGE TESTING OF THE WATER MAIN SHALL BE WITNESSED BY DEPARTMENT STAFF AND ACCEPTABLE BACTERIOLOGICAL TEST MUST BE SUBMITTED AND ACCEPTED BY THE DEPARTMENT PRIOR TO FINAL OF THE NEW WATER MAIN.
3. KNOX BOX FOR PROPOSED BUILDING WILL BE LOCATED AT BUILDING ENTRANCE.



EXISTING LEGEND

R.O.B.	RIGHT OF WAY		MONUMENT
Nd	NUMBER		IRON ROD
enc.	ENCROACHMENT		MANHOLE
P.B.R.	POINT OF BEGINNING		CATCHRAIN
S.F.	SQUARE FEET		SIGN
N/T	NOT FORMERLY		BOLLARD
N	NORTH		FENCE LINE
S	SOUTH		GUARD RAIL
E	EAST		OVERHEAD WIRE, LIT POLE & OUT WIRE
W	WEST		TRAFFIC LIGHT, TRAFFIC SIGNAL, ASSESS AREA
tel.	TELEPHONE		WATER SHUT OFF
elec.	ELECTRIC		WATER VALVE
L	LIBER		HYDRANT
P.	PAVE		GAS VALVE
— 24in —	EXISTING COURTER		STREET LIGHT
	STORM LINE		LIGHT POLE
	SEWER LINE		CONCRETE
	WATER LINE		PAVEMENT
	GAS LINE		STONE
	UNDERGROUND ELECTRIC		
	UNDERGROUND ELECTRIC		

PROPOSED LEGEND

	PROPOSED CONTOUR
	PROPOSED CHECK DAMS
	PROPOSED SANITARY SEWER
	PROPOSED WATER SERVICE
	PROPOSED FORCE MAIN
	PROPOSED STORM SEWER
	PROPOSED CONCRETE CURB
	PROPOSED HYDRANT
	PROPOSED PAVEMENT & STRIPING
	PROPOSED CONCRETE WALK
	PROPOSED ASPHALT WALK

APPENDIX 2

PIPE CAPACITY CALCULATIONS

Existing Sewer Analysis for 58 Academy Road

THE FOLLOWING IS THE CALCULATION FOR THE PIPE FLOWING FULL AS STATED IN THE CHEZY-MANNING FORMULA, WHERE:

Q MAX = DISCHARGE FOR PIPE FLOWING FULL IN C.F.S.

n = COEFFICIENT OF ROUGHNESS

A = CROSS SECTIONAL AREA OF FLOW IN SQUARE FEET

R = HYDRAULIC RADIUS IN FT.

S = SLOPE IN FT./FT.

Vm = VELOCITY OF PIPE FLOWING FULL IN FT./SEC.

D = PIPE DIAMETER IN INCHES

LOCATION	Q MAX	n	A	R	S	Vm	D
8" PVC	1.77	0.009	0.349	0.167	0.0100	5.1	8