APPENDIX C

PERTINENT INFORMATION

Subdivision Plat
Tax Assessment Information
Custom Soil Resource Report

Note All distances in Original Village Plat, Corbin + Wigton, Wigton + Gurney, and Pornin add. are given in feet and parts of a foot. The other distances are in chains and links

STANDARD MAP of the Village of HART

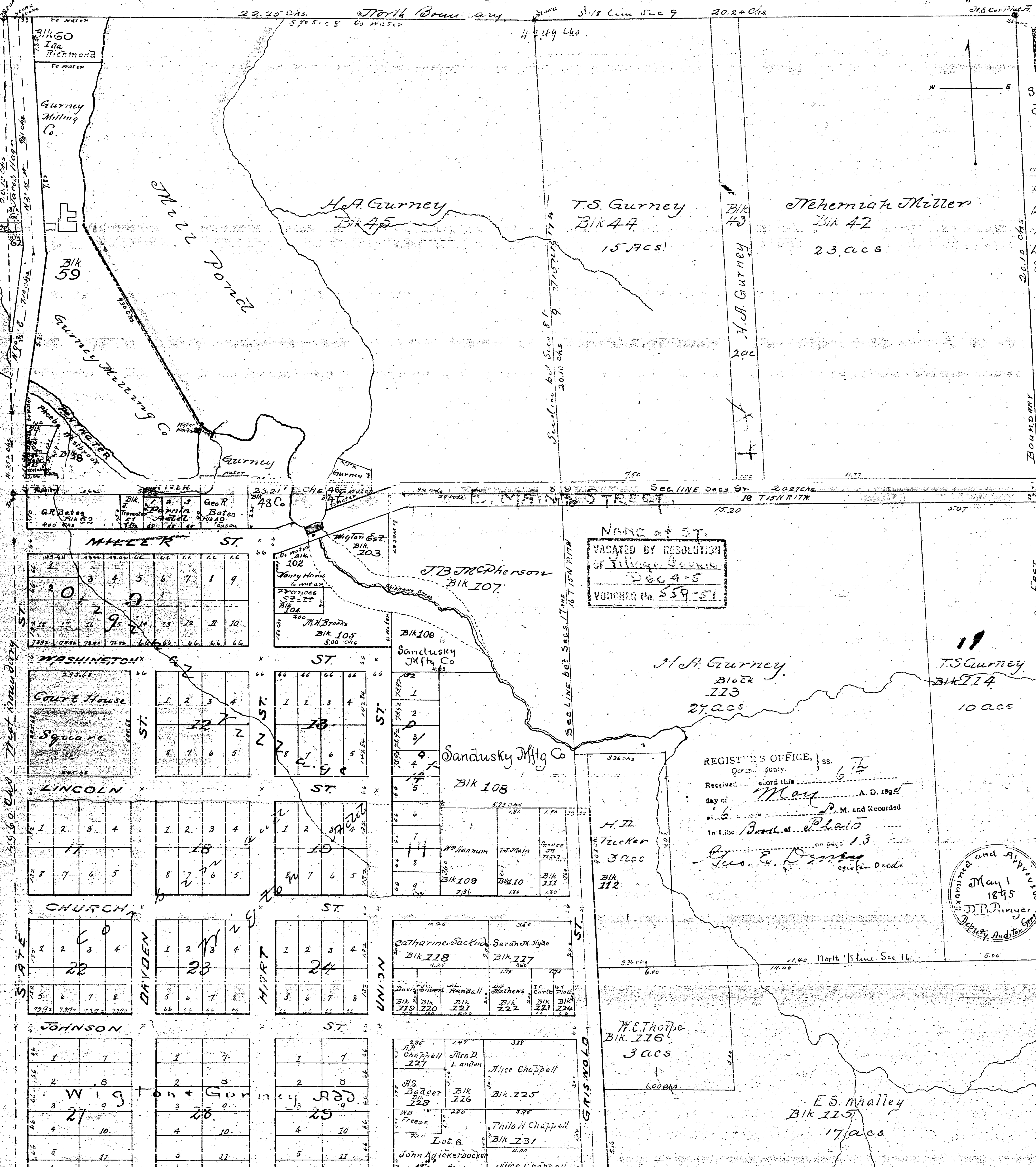
Scale 3 chs (198 feet) to One Inch

Plat "A"

Surveyed and drawn by The Standard Atlas Co Hart Mich

Oceana Co Mich

April 1895.



Know all men by these presents. That I Henry B Hatch. Assessor of the Village of Hart, Oceana County and State of Michigan by virtue of the authority in me given by Section 1473. Vol 3. Howells Statutes, State of Michigan having been duly authorized by resolution adopted April 8 1895 by the Common Council of said Village of Hart have caused the following plat or map to be made of the land described as follows. Commencing at a point in the center of State Street and Jefferson Streets said Village of Hart thence North along center of State Street and a continuation of said center line 49.63 Chs. to the S 1/8 line Section 8 T 15 N R 17 W thence East along said 1/8 line and S 1/8 line of Section 9 42.49 Chs. to West 1/8 line Section 9 thence South on West 1/8 line of Sections 9 + 16. 50.22 Chs. thence West 20.46 Chs to Section line bet Secs 16 + 17 thence North 45/100 Chs thence West along center line (if produced east) of Jefferson Street 24.60 Chs to place of beginning. The proprietors thereof have caused the same to be laid out as additions to the Village of Hart and have sold and deeded such several lots by metes and bounds and courses and have failed or neglected to have a plat thereof made and recorded with the Register of Deeds of Oceana Co.

... of the Village of Hart. Michigan

Signed sealed and delivered in presence of { John R Butler, W. N. Sayles }

Henry B. Hatch {L.S.}
Assessor Village of Hart Mich

State of Michigan } ss.
County of Oceana }

On this 20th day of April 1895 before me a Notary Public in and for said County, personally came the above named Henry B Hatch known to me to be the person who executed the above dedication and acknowledged the same to be his free act and deed.

John R. Butler Notary Public Oceana Co.

Description of Land Platted.

The land embraced in the annexed Standard Map of the Village of Hart Michigan is described as follows and comprises a part of Sections 8.9.16.17. T 15 N R 17 W Commencing at a point in the center of State and Jefferson Streets said Village of Hart thence North along center of State Street and a continuation of said center line 49.63 Chs to S 1/8 line of Section 8 thence east along said 1/8 line and South 1/8 line of Section 9. 42.49 Chs to West 1/8 line Section 9. thence South on West 1/8 line of Sections 9 + 16, 50.22 Chs. thence West 20.46 Chs to Section line between Secs 16 + 17. thence North 45/100 Chs. thence West along center line (if produced East) of Jefferson St. 24.60 Chs to place of beginning.

Surveyors Certificate

The Standard Atlas Company hereby certify that the plat herein delineated is a correct one, and that permanent monuments consisting of iron and stones have been planted at points marked ⊙ x as thereon shown at all angles in the boundaries of the land platted and at all intersections of streets or streets and Alleys.

The Standard Atlas Co.
per John B. Smalley
Surveyor.

State of Michigan } ss. We George E Dewey
County of Oceana }
Register of Deeds and John B. Smalley Surveyor hereby certify that we have each carefully compared this copy with the original Plat of Standard Map of the Village of Hart Mich. and that it is an exact copy thereof and of the whole of such original Map or Plat.

Geo. E. Dewey Register of Deeds
John B. Smalley Surveyor

State of Michigan } ss. We G... E. D...
County of Oceana }
Register of Deeds and John B. Smalley Surveyor hereby certify that we have each carefully compared the annexed copy with the Plat of the Standard Map of Hart Michigan now of record in the Office of said Register of Deeds and that it is a true transcript therefrom and of the whole of such record.

Geo. E. Dewey Register of Deeds
John B. Smalley Surveyor

RECEIVED AND FILED
IN AUDITOR GENERAL'S OFFICE
May 25 1895
D.B. Ringer
Deputy Auditor General

11736

233

Parcel Number: 020-209-005-00 Jurisdiction: CITY OF HART STC 51 County: OCEANA Printed on 09/17/2019

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.
MOORMAN GENE C	MOORMAN GENE C	122,189	07/11/2019	SHD	FORECLOSURE	2019/12324	.	100.0
SALAZAR GAIL	MOORMAN GENE C	0	08/24/2018	QC	NOT USED	2019/12320	.	0.0
MOORMAN GENE C & LUANN	SALAZAR GAIL	134,660	12/06/2012	WD	NOT USED	L2012P30115	PTA	100.0
CARMBOB LLC	MOORMAN GENE C	0	05/09/2012	QC	NOT USED	L2012P11670	.	100.0

Property Address

227 E MAIN ST

Owner's Name/Address

MOORMAN GENE C
1840 40TH AVE
MEARS MI 49436

Tax Description

SH DEED 2019/12324 QCD 2019/12320 & AFF 2019/12322 CITY OF HART LOTS 5 & 6 & UNDIV 1/2 INT IN LOT 7 & E 6 FT OF LOT 4 BLOCK 9. WD-L2012P30115 COMB WI 6 & 7 IN 80 PT TO 007 IN 80 PT FR 004 IN 98 COMB WI 7 IN 99 PER FL DESC CHG IN 2000 PER FL

Comments/Influences

Class: COMMERCIAL - IMPR Zoning:

School: DISTRICT 64040-HART

P.R.E. 0%

Map:

2020 Est TCV 62,200(Value Overridden)

Building Permit(s)	Date	Number	Status

X Improved Vacant

Public Improvements

Dirt Road
Gravel Road
X Paved Road
X Storm Sewer
X Sidewalk
X Water
X Sewer
X Electric
X Gas
X Curb
X Street Lights
Standard Utilities
Underground Utils.

Topography of Site

X Level
Rolling
Low
High
Landscaped
Swamp
Wooded
Pond
Waterfront
Ravine
Wetland
Flood Plain

Land Value Estimates for Land Table 002.COM/IND RURAL & VILLAGE 2018

Description	Frontage	Depth	* Factors * Front	Depth	Rate	%Adj.	Reason	Value
CITY FF	204.00	66.00	1.0000	1.0000	500	150		153,000
204 Actual Front Feet, 0.31 Total Acres							Total Est. Land Value =	153,000

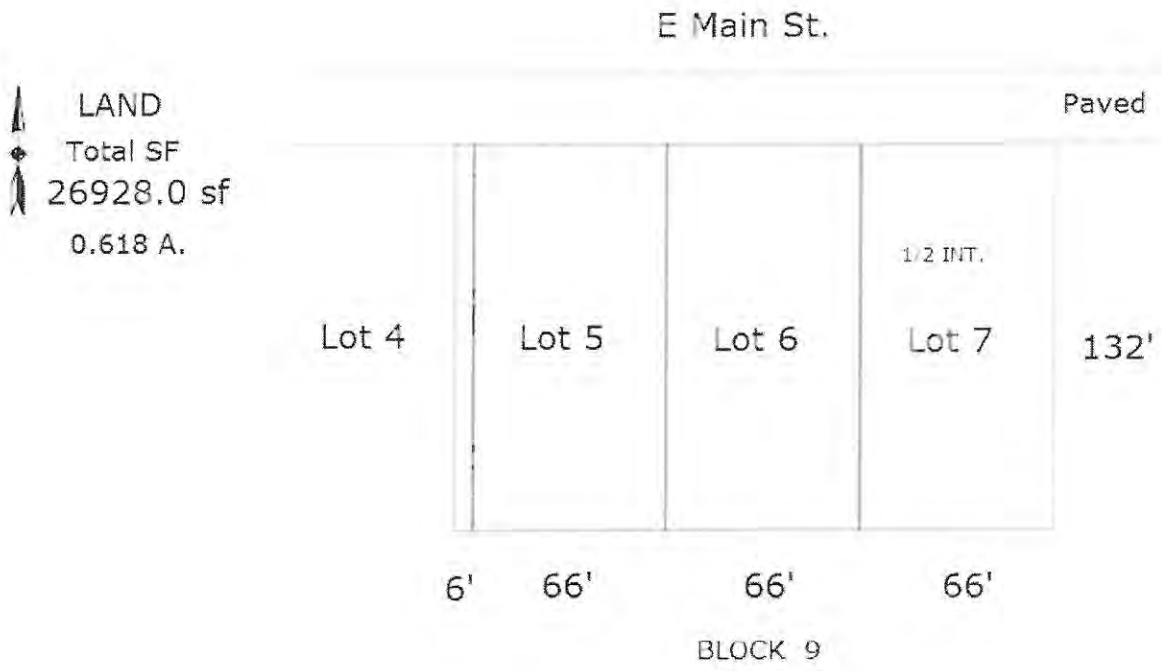
Land Improvement Cost Estimates

Description	Rate	Size	% Good	Cash Value
Wood Frame	15.31	192	48	1,411
Total Estimated Land Improvements True Cash Value =				1,411

Who	When	What
AJC	10/17/2014	DATA ENTER
ABC	09/25/2014	VIEWED
SMT	05/29/2014	DATA ENTER

Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/ Other	Taxable Value
2020	31,100	0	31,100			31,100C
2019	31,100	0	31,100			31,100S
2018	33,200	0	33,200			33,200S
2017	35,800	0	35,800			35,800S

*** Information herein deemed reliable but not guaranteed***



Sketch by Apex Sketch

*** Information herein deemed reliable but not guaranteed***

Residential Building 1 of 1 Parcel Number: 020-209-005-00 Printed on 09/17/2019

Building Type

X Single Family
Mobile Home
Town Home
Duplex
A-Frame

Wood Frame

Building Style: 1 STORY

Yr Built	Remodeled
0	0

Condition: Poor

Room List

Basement
1st Floor
2nd Floor
Bedrooms

(1) Exterior

Wood/Shingle
Aluminum/Vinyl
Brick

Insulation

(2) Windows

Many	Large
Avg.	Avg.
Few	Small

Wood Sash
Metal Sash
Vinyl Sash
Double Hung
Horiz. Slide
Casement
Double Glass
Patio Doors
Storms & Screens

(3) Roof

Gable	Gambrel
Hip	Mansard
Flat	Shed

Asphalt Shingle

Chimney:

(3) Roof (cont.)

Eavestrough
Insulation
0 Front Overhang
0 Other Overhang

(4) Interior

Drywall	Plaster
Paneled	Wood T&G

Trim & Decoration

Ex	Ord	Min

Size of Closets

Lg	Ord	Small

Doors	Solid	H.C.

(5) Floors

Kitchen:
Other:
Other:

(6) Ceilings

(7) Excavation

Basement: 1200 S.F.
Crawl: 0 S.F.
Slab: 0 S.F.
Height to Joists: 0.0

(8) Basement

Conc. Block
Poured Conc.
Stone
Treated Wood
Concrete Floor

(9) Basement Finish

Recreation SF
Living SF
Walkout Doors
No Floor SF

(10) Floor Support

Joists:
Unsupported Len:
Cntr.Sup:

(11) Heating/Cooling

Gas	Oil	Elec.
Wood	Coal	Steam

Forced Air w/o Ducts
X Forced Air w/ Ducts
Forced Hot Water
Electric Baseboard
Elec. Ceil. Radiant
Radiant (in-floor)
Electric Wall Heat
Space Heater
Wall/Floor Furnace
Forced Heat & Cool
Heat Pump
No Heating/Cooling

Central Air
Wood Furnace

(12) Electric

0 Amps Service

No./Qual. of Fixtures

Ex.	Ord.	Min

No. of Elec. Outlets

Many	Ave.	Few

(13) Plumbing

Average Fixture(s)
1 3 Fixture Bath
2 Fixture Bath
Softener, Auto
Softener, Manual
Solar Water Heat
No Plumbing
Extra Toilet
Extra Sink
Separate Shower
Ceramic Tile Floor
Ceramic Tile Wains
Ceramic Tub Alcove
Vent Fan

(14) Water/Sewer

Public Water
Public Sewer
1 Water Well
1 1000 Gal Septic
2000 Gal Septic

Lump Sum Items:

(15) Built-ins

Appliance Allow.
Cook Top
Dishwasher
Garbage Disposal
Bath Heater
Vent Fan
Hot Tub
Unvented Hood
Vented Hood
Intercom
Jacuzzi Tub
Jacuzzi repl.Tub
Oven
Microwave
Standard Range
Self Clean Range
Sauna
Trash Compactor
Central Vacuum
Security System

(15) Fireplaces

Interior 1 Story
Interior 2 Story
2nd/Same Stack
Two Sided
Exterior 1 Story
Exterior 2 Story
Prefab 1 Story
Prefab 2 Story
Heat Circulator
Raised Hearth
Wood Stove
Direct-Vented Ga

Class: D -10
Effec. Age: 57
Floor Area: 1,200
Total Base New : 115,056 E.C.F.
Total Depr Cost: 26,105 X 0.868
Estimated T.C.V: 22,659

(16) Porches/Decks

Area Type

(17) Garage

Year Built:
Car Capacity:
Class: D
Exterior: Siding
Brick Ven.: 0
Stone Ven.: 0
Common Wall: 1 Wall
Foundation: 42 Inch
Finished ?:
Auto. Doors: 0
Mech. Doors: 0
Area: 198
% Good: 23
Storage Area: 0
No Conc. Floor: 0

Bsmnt Garage:

Carport Area:
Roof:

Cost Est. for Res. Bldg: 1 Single Family 1 STORY Cls D-10 Blt 0
(11) Heating System: Forced Air w/ Ducts
Ground Area = 1200 SF Floor Area = 1200 SF.
Phy/Ab.Phy/Func/Econ/Comb. % Good=45/100/50/100/22.5
Building Areas

Stories	Exterior	Foundation	Size	Cost New	Depr. Cost	
1 Story	Siding	Basement	1,200			
			Total:	98,885	22,236	
Other Additions/Adjustments						
Water/Sewer						
1000 Gal Septic			1	3,295	741	
Water Well, 200 Feet			1	7,734	1,740	
Garages						
Class: D Exterior: Siding Foundation: 42 Inch (Unfinished)						
Common Wall: 1 Wall			1	-1,786	-205	
Base Cost			198	6,928	1,593	*
			Totals:	115,056	26,105	

Notes:

ECF (COMMERCIAL) 0.868 => TCV: 22,659

*** Information herein deemed reliable but not guaranteed***

Desc. of Bldg/Section:
Calculator Occupancy: Restaurants

Class: D
Floor Area: 3,930
Gross Bldg Area: 3,930
Stories Above Grd: 1
Average Sty Hght : 10
Bsmnt Wall Hght

Depr. Table : 4
Effective Age : 70
Physical %Good: 35
Func. %Good : 100
Economic %Good: 100

1946 Year Built
2013 Remodeled

10 Overall Bldg Height

Comments:

Construction Cost

High | Above Ave. | Ave. | X | Low

** ** Calculator Cost Data ** **
Quality: Low Cost
Heat#1: Complete H.V.A.C. 60
Heat#2: Complete H.V.A.C. 0
Ave. SqFt/Story: 3930
Ave. Perimeter: 340
Has Elevators:

*** Basement Info ***
Area:
Perimeter:
Type:
Heat: Hot Water, Radiant Floor

* Mezzanine Info *
Area #1:
Type #1:
Area #2:
Type #2:

* Sprinkler Info *
Area:
Type: Low

<<<<< Calculator Cost Computations >>>>>
Class: D Quality: Low Cost
Stories: 1 Story Height: 10 Perimeter: 340
Overall Building Height: 10

Base Rate for Upper Floors = 85.93

(10) Heating system: Complete H.V.A.C. Cost/SqFt: 18.66 60%
Adjusted Square Foot Cost for Upper Floors = 97.13

Total Floor Area: 3,930 Base Cost New of Upper Floors = 381,705

Reproduction/Replacement Cost = 381,705
Eff.Age:70 Phy.%Good/Abnr.Phy./Func./Econ./Overall %Good: 35 /100/100/100/35.0
Total Depreciated Cost = 133,597

Unit in Place Items	Rate	Quantity	Arch	%Good	Depr.Cost
/CI16/YARI/PAV/CONSA	4.45	400	1.00	35	623
/CI16/YARI/PAV/2A	1.82	6785	1.00	35	4,322

ECF (COMMERCIAL) 0.737 => TCV of Bldg: 1 = 102,105
Replacement Cost/Floor Area= 100.72 Est. TCV/Floor Area= 25.98

(1) Excavation/Site Prep:

(2) Foundation: Footings
X Poured Conc Brick/Stone Block
X Class D, Masonry

(3) Frame:
X Bearing Walls, Masonry supports on

(4) Floor Structure:
X Concrete, On Ground

(5) Floor Cover:
X Carpet and Pad
X Asphalt Tile

(6) Ceiling:
X Acoustical Ceilings, Tile or Panel

(7) Interior:
X Frame, Restaurants, Table Service
X Frame, Bars

(8) Plumbing:

	Many Above Ave.	Average Typical	Few None
	Total Fixtures	2 Urinals	
	3-Piece Baths	Wash Bowls	
2	2-Piece Baths	Water Heaters	
	Shower Stalls	Wash Fountains	
	Toilets	Water Softeners	

(9) Sprinklers:

(10) Heating and Cooling:

X	Gas	Coal		Hand Fired
	Oil	Stoker		Boiler

X Package Heating/Cooling, Short Ducts

(11) Electric and Lighting:

	Outlets:		Fixtures:
	Few		Few
X	Average	X	Average
	Many		Many
	Unfinished		Unfinished
	Typical		Typical
	Flex Conduit	X	Incandescent
	Rigid Conduit	X	Fluorescent
	Armored Cable		Mercury
X	Non-Metalic		Sodium Vapor
	Bus Duct		Transformer

(13) Roof Structure: Slope=0
X Wood Joists, Wood or Composition

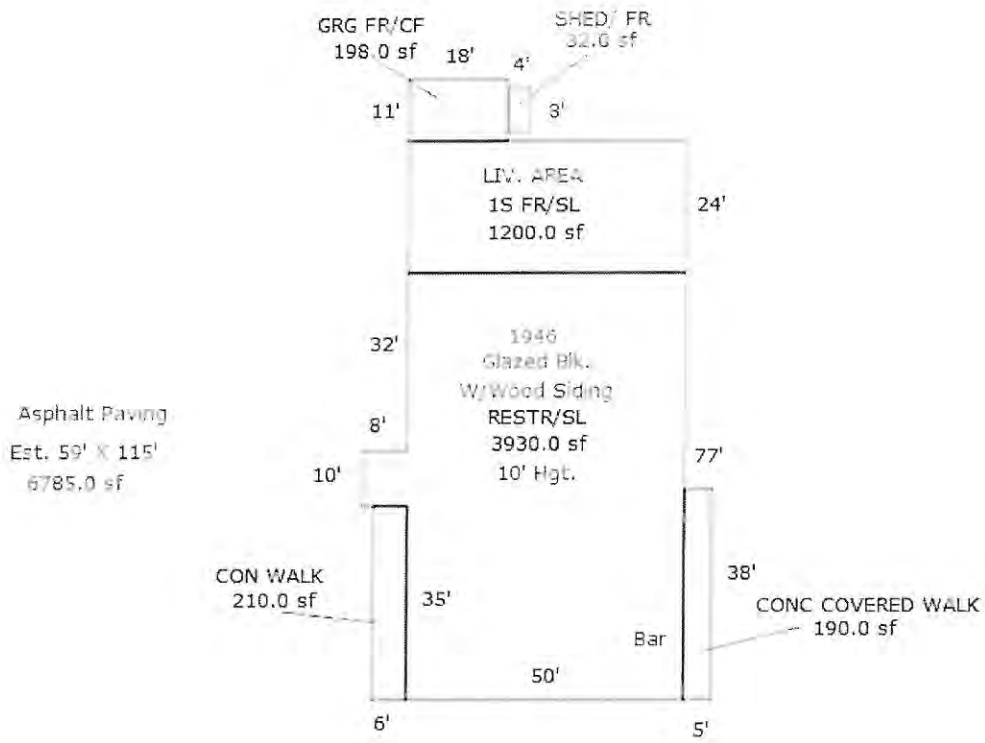
(14) Roof Cover:
X Built-Up Composite

(39) Miscellaneous:

(40) Exterior Wall:

Thickness	Bsmnt Insul.
X Wood Siding	
X Block, Concrete, 16"	

*** Information herein deemed reliable but not guaranteed***



Sketch by Apex Sketch

*** Information herein deemed reliable but not guaranteed***

COMMERICAL

LKER WM & BARBARA

504 E MAIN ST

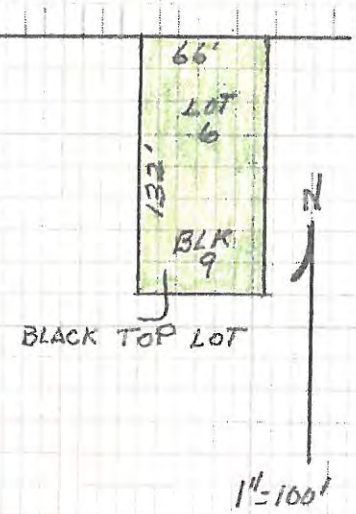
HART MI 49420

MAIL TO:

Date of Transfer	Grantee's Name	Address	Revenue Stamp	Verified Sale Price

HA-74
CITY OF HART
LOT 6
BLK 9

LAND SKETCH



Map No.	Book No.	Page No.	Parcel Code No

Property Address St. Ave.

Building or Alteration Permit	Date	Amount
		$

LAND IMPROVEMENTS

	Dirt		Sidewalk		Gas
	Gravel		Water		Electric
	Paved		Sewer		Fence
	Curb				

LAND VALUE COMPUTATIONS

Lot Size	Depth Factor	Equiv. Front	Rate	Base Value
			$	$

TOTAL LAND	$
TOTAL LAND IMPROVEMENTS	$
TOTAL BUILDING	$
TOTAL APPRAISED VALUE	$

Year	Assessed Valuation	Board of Review	Tax Commission
1977	$ 3000	$ 3000	$
1979	4000	4000	

Form L-4189

STATE TAX COMMISSION APPROVAL 10/72 *COMMERCIAL-INDUSTRIAL*

COMMERICAL

LKER WM. D & BARBARA

MAIL TO:

504 E MAIN ST
HART MI 49420

Date of Transfer	Grantee's Name	Address	Revenue Stamp	Verified Sale Price

HA-73
CITY OF HART
LOT 5
BLK 9.

Map No.	Book No.	Page No.	Parcel Code No.

Property Address ____ St Ave.

Building or Alteration Permit	Date	Amount
		$

LAND IMPROVEMENTS

	Dirt		Sidewalk		Gas
	Gravel		Water		Electric
	Paved		Sewer		Fence
	Curb				

LAND VALUE COMPUTATIONS

Lot Size	Depth Factor	Equiv. Front	Rate	Base Value
			$	$

TOTAL LAND	$
TOTAL LAND IMPROVEMENTS	$
TOTAL BUILDING	$
TOTAL APPRAISED VALUE	$

Year	Assessed Valuation	Board of Review	Tax Commission
1993	$ 39160	$ 39100	$
1978	20,000	20,000	
1979	20,000	20,000	
1980	22000		
1981	30600		
1982	32,800		

Form L-4189

STATE TAX COMMISSION APPROVAL 10/73 *COMMERCIAL/INDUSTRIAL* MANATRON TAX SYSTEMS KALAMAZOO MI 49009

21. EXT. WALLS

- CONC. BLOCK
- COMMON BRICK
- FACE BRICK
- BRICK/BLOCK
- SANDWICH PANEL
- REINF. CONC.
- PRECAST CONC. PANEL
- WINDOW CURTAIN
- SIDING

22. FOUNDATION WALL

- POST
- CONCRETE
- BRICK
- CONC. BLOCK
- STONE
- PILING

23. PARAPET WALL

- REINF. CONC.
- COMMON BRICK
- FACE BRICK
- TRIM:

24. INT. FOUND

- PILING
- DRILLED CAISSONS
- REINF. CONC.

25. FRAMING

- WOOD FRAME
- CONC. BLOCK
- BRICK
- STEEL/OPEN
- STEEL/FIREPROOF
- REINF. CONC.
- PRECAST CONC.
- PRE-ENGINEERED

26. SLAB ON GROUND

- CONCRETE
- REINF. CONC.

27. STRUCTURAL FLOORS

- WOOD
- STEEL AND CONC.
- METAL DECK
- CONC. BEAM & SLAB
- CONC. FLAT SLAB
- PRECAST CONC. SLAB

28. ROOF & DRAINAGE

- METAL DECK
- METAL DECK & CONC.
- REINF. CONC.
- CONC. PLANK
- WOOD
- INSUL.
- ASPHALT SHINGLE
- BUILT-UP T & G
- ASPHALT ROLL
- DOWNSPOUTS
- GUTTERS
- ROOF DRAINS
- BAR JOIST

29. FLOOR FINISH

- HARDWOOD
- SOFTWOOD
- LINOLEUM
- TERRAZZO
- CARPETING
- WOOD BLOCK
- CONC. HARDENER
- TILE

30. CEILING FINISH

- ACOUSTIC TILE
- GYPSUM BOARD
- PLASTER
- PAINT
- WOOD

31. PARTITIONS

- MASONRY
- STUD FRAMING
- MOVABLE
- PLASTER
- DRYWALL
- FURRING
- MARBLE
- HARDBOARD
- PAINT

32. PLUMBING

- NONE
- BATH
- TILE FLOORS
- TILE WALLS
- SHOWER STALL
- LAVATORY 2 PC.
- WATER CLOSET
- WASH BOWL
- URINALS
- WASHFOUNTAINS
- WATER HEATERS
- WATER SOFTENERS

33. HEATING & A.C.

- GAS
- OIL
- ELECTRIC
- STEAM-CENTRAL
- UNIT HEATERS
- FORCED WARM AIR
- WALL HEATERS
- AIR CONDITIONING

34. ELECTRICAL

- ROMEX
- CONDUIT
- FLUORESCENT
- INCANDESCENT
- MERCURY VAPOR
- BUS DUCT
- PANEL BOARDS
- DISTRIBUTION CEN.
- TRANSFORMERS

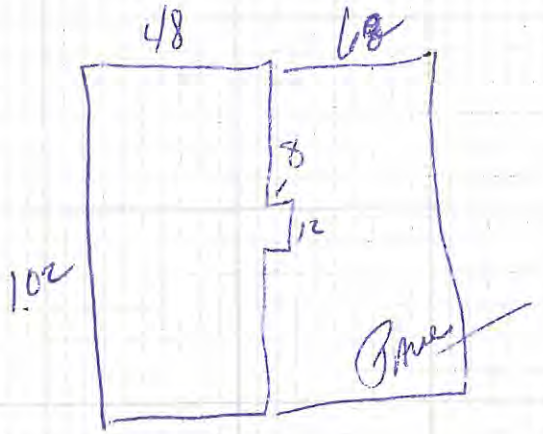
35. FIRE PROTECTION

- SPRINKLER SYSTEM
- CITY WATER SUPPLY
- PRIVATE SYSTEM

36. MISCELLANEOUS

- ELEVATORS
- ESCALATORS
- STAIRS
- LOADING DOCKS
- DOCK LEVELERS
- INCINERATORS
- CRANES

41. PLAN OF BUILDING 1 SPACE =



REMARKS:

Big Lot 216

37. CONSTRUCTION

- GOOD
- AVERAGE
- POOR
- CHEAP

38. YEAR BUILT

39. YEAR REMODELED

40. PERCENT CONDITION

PERSON INTERVIEWED

EXAMINED BY

DATE

BUILDING VALUE COMPUTATIONS

TYPE OF BUILDING	NO. STYS.	SQ. FT.	UNIT COST	BASE VALUE	ADDITIONS AND DEDUCTIONS ITEM	ADDITIONS AND DEDUCTIONS AMOUNT	REPRODUCTION COST NEW	PHYS. DEP. % COND.	REPRODUCTION COST DEP'D	ECONOMIC COND. %	COST MOD.	COMP. MULT.	TRUE CASH VALUE
			$	$		$	$		$				$

HA- 73

COMMERCIAL / INDUSTRIAL ASSESSMENT RECORD

64 20 209 009 00

Date of Transfer	Grantee's Name	Address	Revenue Stamp	Verified Sale Price	Map No.	Book No.	Page No.	Parcel Code No.
					Property Address			St. Ave.
					Building or Alteration Permit		Date	Amount
								$

DESCRIPTION

HA-73 C-201
WM. D. & BARBARA WALKER

HART, MICH

CITY OF HART
LOT 5 - BLOCK 9

LAND SKETCH

+750
VEW AWNING IN 75 FOR 76

LAND IMPROVEMENTS

	Dirt		Sidewalk		Gas
	Gravel		Water		Electric
	Paved		Sewer		Fence
	Curb				

LAND VALUE COMPUTATIONS

Lot Size	Depth Factor	Equiv. Front	Rate	Base Value
			$	$

TOTAL LAND	$
TOTAL LAND IMPROVEMENTS	$
TOTAL BUILDING	$
TOTAL APPRAISED VALUE	$

Year	Assessed Valuation	Board of Review	Tax Commission
74	$	$16,000	$17,074
75	16,000	16,000	16,000
76	16,400 ✕		
78	16,400	20,000	

HA-74

COMMERCIAL / INDUSTRIAL ASSESSMENT RECORD

Date of Transfer	Grantee's Name	Address	Revenue Stamp	Verified Sale Price	Map No.	Book No.	Page No.	Parcel Code No.
					Property Address			St. Ave.
					Building or Alteration Permit		Date	Amount
								$

DESCRIPTION

HA-74 C-201
WM & BARBARA WALKER
504 E. MAIN ST.,
HART, MICH 49420

CITY OF HART
LOT 6 - BLOCK 9

LAND SKETCH

BLACK TOP - LOT

LAND IMPROVEMENTS

	Dirt		Sidewalk		Gas
	Gravel		Water		Electric
	Paved		Sewer		Fence
	Curb				

LAND VALUE COMPUTATIONS

Lot Size	Depth Factor	Equiv. Front	Rate	Base Value
			$	$

TOTAL LAND	$
TOTAL LAND IMPROVEMENTS	$
TOTAL BUILDING	$
TOTAL APPRAISED VALUE	$

Year	Assessed Valuation	Board of Review	Tax Commission
74	$	$3000	$3201
75	3000	3000	3000
76	4000	4000	


08 22 2003 11:35

COMMERICAL

WALKER WILLIAM D & BARBARA A

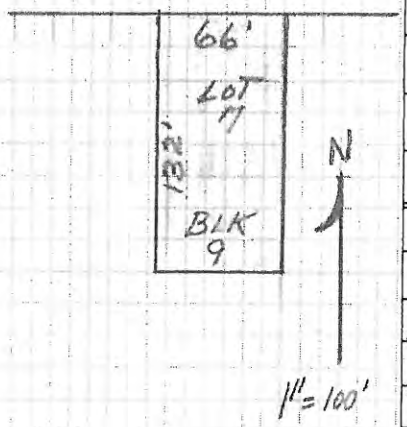
504 E MAIN ST
HART MI 49420

MAIL TO:

Date of Transfer	Grantee's Name	Address	Revenue Stamp	Verified Sale Price
2-1-83	Barbara Walker + Husband	½ interest		$1500

*HA-75
CITY OF HART
LOT 7
BLK 9.

LAND SKETCH



Map No.	Book No.	Page No.	Parcel Code No.

Property Address _____ St Ave.

Building or Alteration Permit	Date	Amount
		$

LAND IMPROVEMENTS

	Dirt		Sidewalk		Gas
	Gravel		Water		Electric
	Paved		Sewer		Fence
	Curb				

LAND VALUE COMPUTATIONS

Lot Size	Depth Factor	Equiv. Front	Rate	Base Value
			$	$

TOTAL LAND	$
TOTAL LAND IMPROVEMENTS	$
TOTAL BUILDING	$
TOTAL APPRAISED VALUE	$

Year	Assessed Valuation	Board of Review	Tax Commission
1979	$ 3000	$ 3000	$
1981	3500	4000	
1982	4000		
1993	4800		

Form L-4189

COMMERCIAL / INDUSTRIAL ASSESSMENT RECORD

Hart City

20-209-007-00

Date of Transfer	Grantee's Name	Address	Revenue Stamp	Verified Sale Price	Map No.	Book No.	Page No.	Parcel Code No.
	LUM & BARBARA WALKER							
					Property Address			St. Ave.
					Building or Alteration Permit		Date	Amount
								$

DESCRIPTION

City of Hart
Block 9
Lot # 7

Empty lot

BA 9/28/82

LAND SKETCH

Parking Lot

LAND IMPROVEMENTS

	Dirt		Sidewalk		Gas
	Gravel		Water		Electric
	Paved		Sewer		Fence
	Curb				

LAND VALUE COMPUTATIONS

Lot Size	Depth Factor	Equiv. Front	Rate	Base Value
			$	$

TOTAL LAND	$
TOTAL LAND IMPROVEMENTS	$
TOTAL BUILDING	$
TOTAL APPRAISED VALUE	$

Year	Assessed Valuation	Board of Review	Tax Commission
1982	$ 4,000	$	$

TYPE

. EXT. WALLS
- CONC. BLOCK
- COMMON BRICK
- FACE BRICK
- BRICK / BLOCK
- SANDWICH PANEL
- REINF. CONC.
- PRECAST CONC. PANEL
- WINDOW CURTAIN
- SIDING

. FOUNDATION WALL
- POST
- CONCRETE
- BRICK
- CONC. BLOCK
- STONE
- PILING

. PARAPET WALL
- REINF. CONC.
- COMMON BRICK
- FACE BRICK
- TRIM:

. INT. FOUND
- PILING
- DRILLED CAISSONS
- REINF. CONC.

. FRAMING
- WOOD FRAME
- CONC. BLOCK
- BRICK
- STEEL / OPEN
- STEEL / FIREPROOF
- REINF. CONC.
- PRE-CAST CONC.
- PRE-ENGINEERED

. SLAB ON GROUND
- CONCRETE
- REINF. CONC.

27. STRUCTURAL FLOORS
- WOOD
- STEEL AND CONC.
- METAL DECK
- CONC. BEAM & SLAB
- CONC. FLAT SLAB
- PRECAST CONC. SLAB

28. ROOF & DRAINAGE
- METAL DECK
- METAL DECK & CONC.
- REINF. CONC.
- CONC. PLANK
- WOOD
- INSUL.
- ASPHALT SHINGLE
- BUILT-UP T & G
- ASPHALT ROLL
- DOWNSPOUTS
- GUTTERS
- ROOF DRAINS

29. FLOOR FINISH
- HARDWOOD
- SOFTWOOD
- LINOLEUM
- TERRAZZO
- CARPETING
- WOOD BLOCK
- CONC. HARDENER
- TILE:

30. CEILING FINISH
- ACOUSTIC TILE
- GYPSUM BOARD
- PLASTER
- PAINT
- WOOD

31. PARTITIONS
- MASONRY
- STUD FRAMING
- MOVABLE
- PLASTER
- DRYWALL
- FURRING
- MARBLE
- HARDBOARD
- PAINT

32. PLUMBING
- NONE
- BATH
- TILE FLOORS
- TILE WALLS
- SHOWER STALL
- LAVATORY 2 PC.
- WATER CLOSET
- WASH BOWL
- URINALS
- WASHFOUNTAINS
- WATER HEATERS
- WATER SOFTENERS

33. HEATING & A.C.
- GAS
- OIL
- ELECTRIC
- STEAM - CENTRAL
- UNIT HEATERS
- FORCED WARM AIR
- WALL HEATERS
- AIR CONDITIONING

34. ELECTRICAL
- ROMEX
- CONDUIT
- FLUORESCENT
- INCANDESCENT
- MERCURY VAPOR
- BUS DUCT
- PANEL BOARDS
- DISTRIBUTION CEN.
- TRANSFORMERS

35. FIRE PROTECTION
- SPRINKLER SYSTEM
- CITY WATER SUPPLY
- PRIVATE SYSTEM

36. MISCELLANEOUS
- ELEVATORS
- ESCALATORS
- STAIRS
- LOADING DOCKS
- DOCK LEVELERS
- INCINERATORS
- CRANES

41. PLAN OF BUILDING — 1 SPACE =

REMARKS:

37. CONSTRUCTION
- GOOD
- AVERAGE
- POOR
- CHEAP

38. YEAR BUILT

39. YEAR REMODELED

40. % COND.

PERSON INTERVIEWED

EXAMINED BY

DATE

BUILDING VALUE COMPUTATIONS

TYPE OF BUILDING	NO. STYS.	SQ. FT.	UNIT COST	BASE VALUE	ADDITIONS AND DEDUCTIONS ITEM	ADDITIONS AND DEDUCTIONS AMOUNT	REPRODUCTION COST NEW	PHYS. DEP. % COND.	REPRODUCTION COST DEP'D	ECONOMIC COND. %	COST MOD.	COMP. MULT.	TRUE CASH VALUE
			$	$		$	$		$				$

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Oceana County, Michigan

September 13, 2019

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Map Scale: 1:349 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 5 10 20 30

Feet
0 15 30 60 90

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Oceana County, Michigan
Survey Area Data: Version 13, Sep 6, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Nov 4, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
59B	Benona sand, 0 to 6 percent slopes	0.6	100.0%
Totals for Area of Interest		**0.6**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Oceana County, Michigan

59B—Benona sand, 0 to 6 percent slopes

Map Unit Setting

National map unit symbol: 6bqv
Elevation: 600 to 1,200 feet
Mean annual precipitation: 28 to 40 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 120 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition

Benona and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Benona

Setting

Landform: Lake plains, outwash plains, moraines
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy glaciofluvial deposits

Typical profile

H1 - 0 to 8 inches: sand
H2 - 8 to 46 inches: sand
H3 - 46 to 60 inches: sand

Properties and qualities

Slope: 0 to 6 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Covert

Percent of map unit: 3 percent
Landform: Outwash plains, moraines, lake plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear

Across-slope shape: Linear
Hydric soil rating: No

Spinks

Percent of map unit: 3 percent
Landform: Outwash plains, moraines, lake plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Pipestone

Percent of map unit: 2 percent
Landform: Moraines, lake plains, outwash plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Granby

Percent of map unit: 2 percent
Landform: Depressions on moraines, depressions on lake plains, depressions on outwash plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf