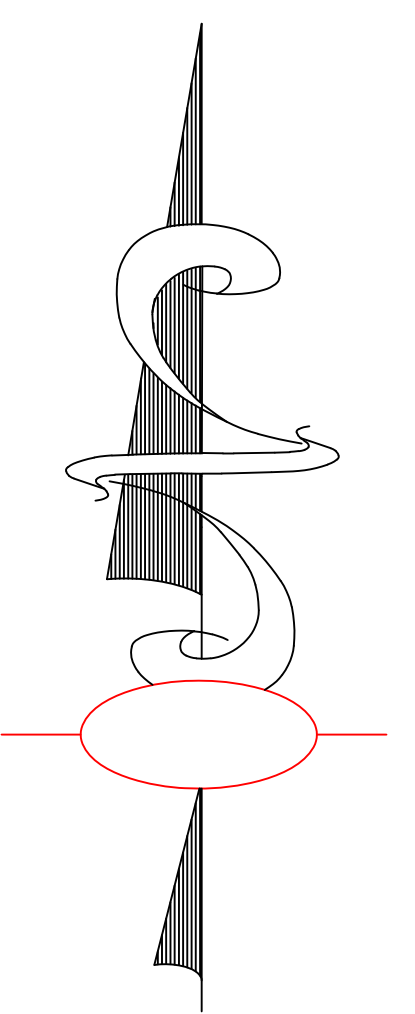
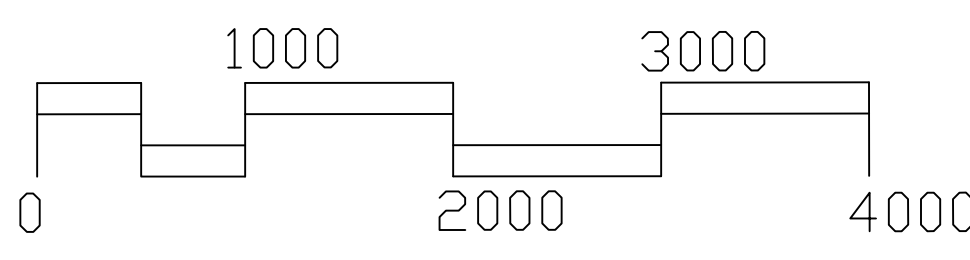


Appendix E - Open Space Assessment Maps

OPEN SPACE

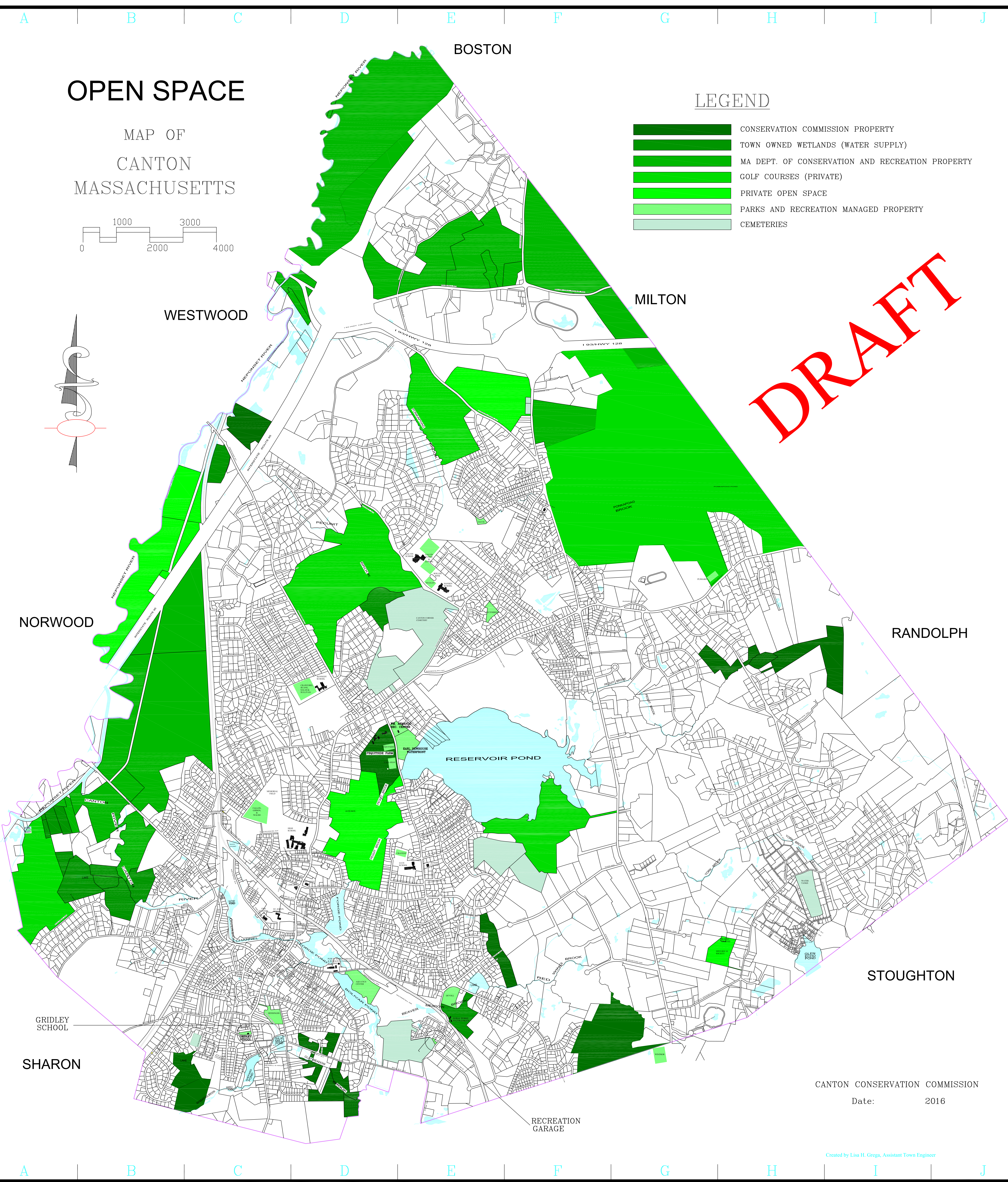
MAP OF
CANTON
MASSACHUSETTS



LEGEND

- CONSERVATION COMMISSION PROPERTY
- TOWN OWNED WETLANDS (WATER SUPPLY)
- MA DEPT. OF CONSERVATION AND RECREATION PROPERTY
- GOLF COURSES (PRIVATE)
- PRIVATE OPEN SPACE
- PARKS AND RECREATION MANAGED PROPERTY
- CEMETERIES

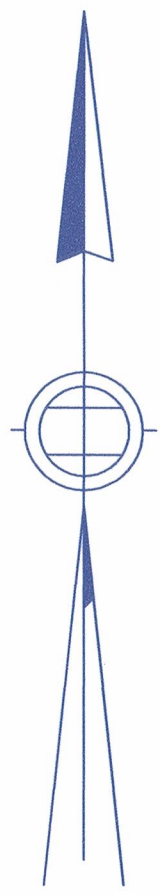
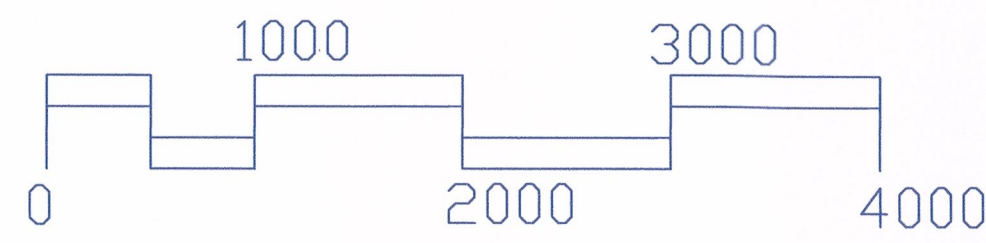
DRAFT



CANTON CONSERVATION COMMISSION
Date: 2016

RECREATION LAND

MAP OF TOWN OF CANTON MASSACHUSETTS

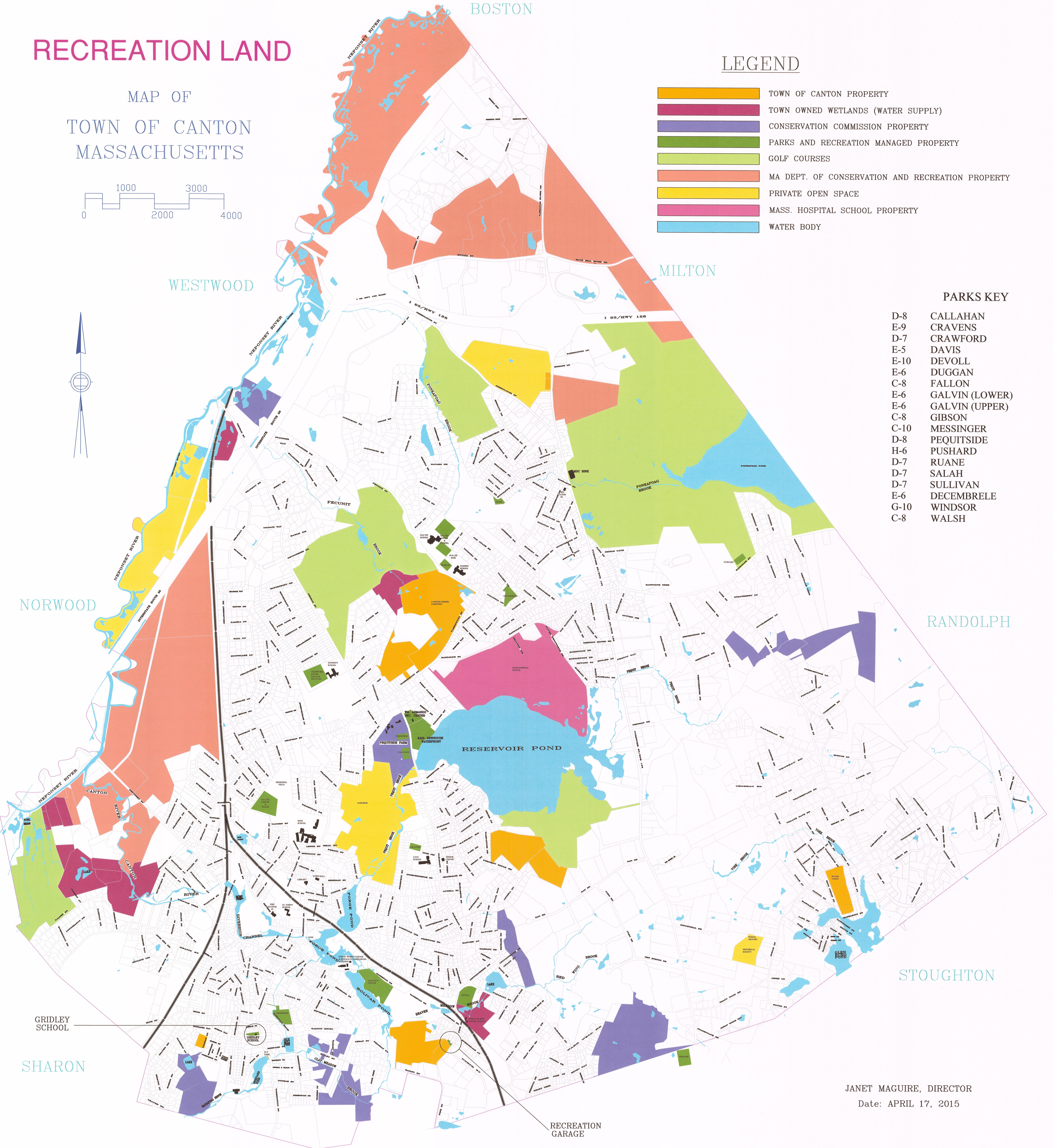


LEGEND

	TOWN OF CANTON PROPERTY
	TOWN OWNED WETLANDS (WATER SUPPLY)
	CONSERVATION COMMISSION PROPERTY
	PARKS AND RECREATION MANAGED PROPERTY
	GOLF COURSES
	MA DEPT. OF CONSERVATION AND RECREATION PROPERTY
	PRIVATE OPEN SPACE
	MASS. HOSPITAL SCHOOL PROPERTY
	WATER BODY

PARKS KEY

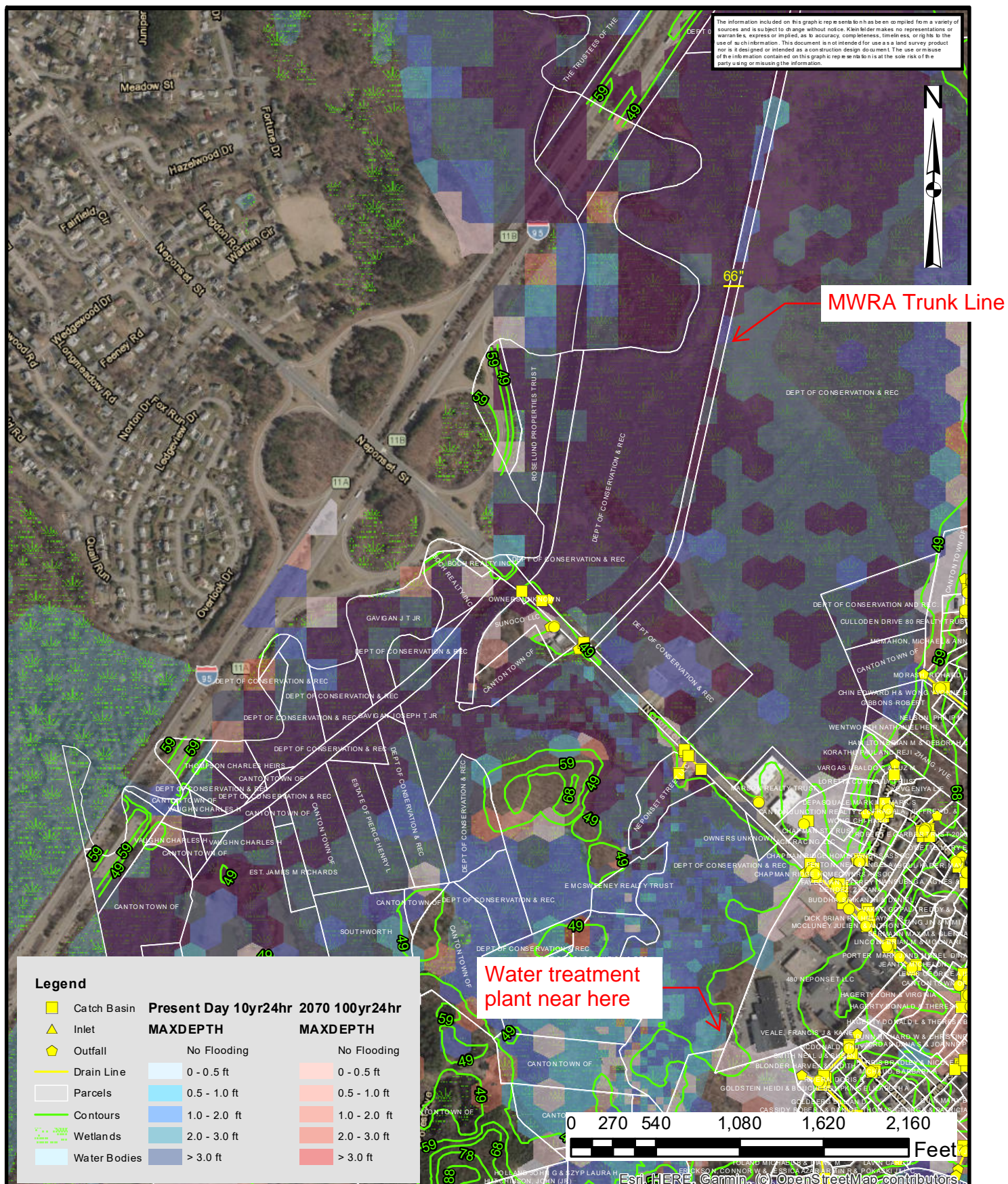
D-8	CALLAHAN
E-9	CRAVENS
D-7	CRAWFORD
E-5	DAVIS
E-10	DEVOLL
E-6	DUGGAN
C-8	FALLON
E-6	GALVIN (LOWER)
E-6	GALVIN (UPPER)
C-8	GIBSON
C-10	MESSINGER
D-8	PEQUITSIDE
H-6	PUSHARD
D-7	RUANE
D-7	SALAH
D-7	SULLIVAN
E-6	DECEMBRELE
G-10	WINDSOR
C-8	WALSH

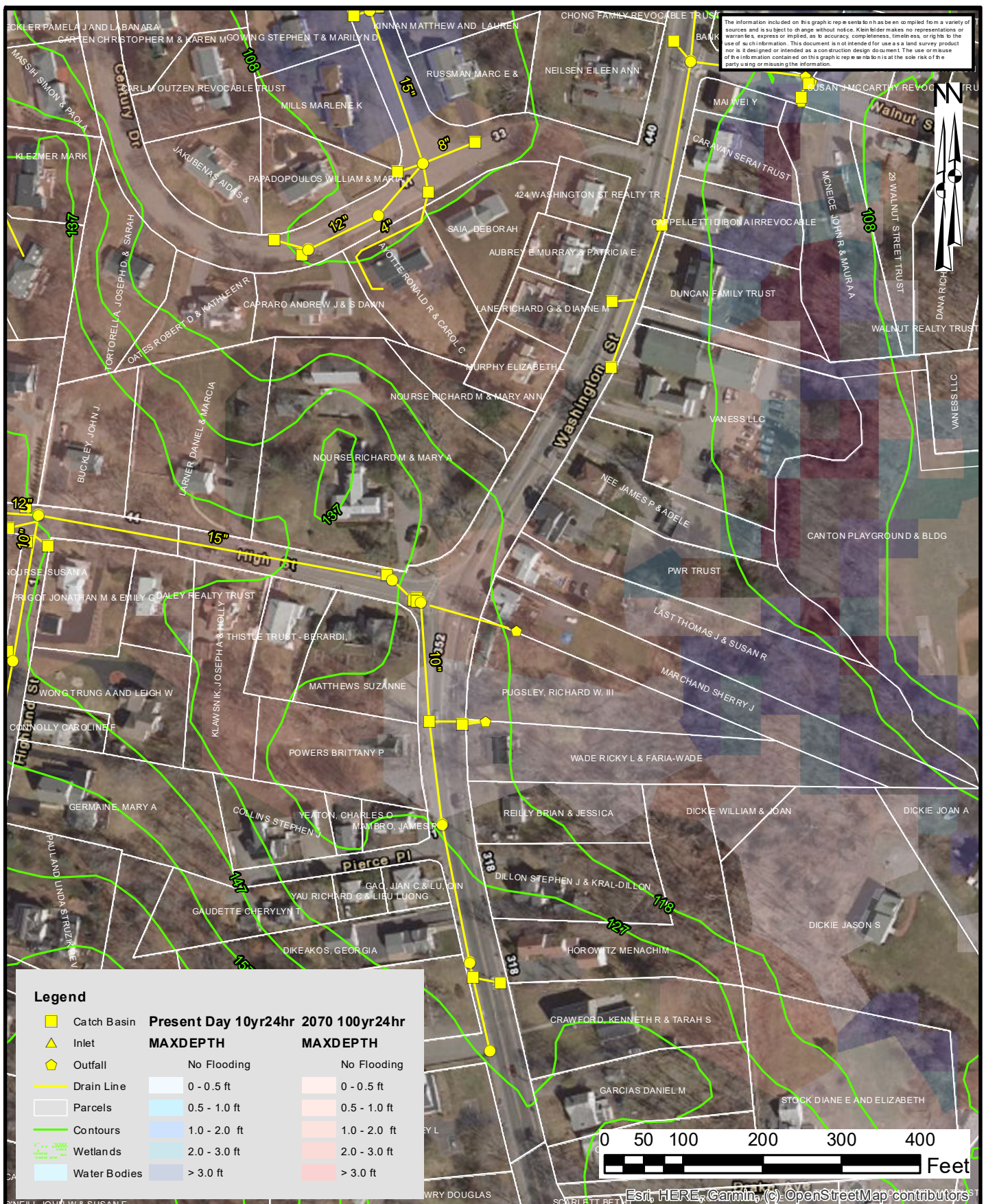



JANET MAGUIRE, DIRECTOR
Date: APRIL 17, 2015

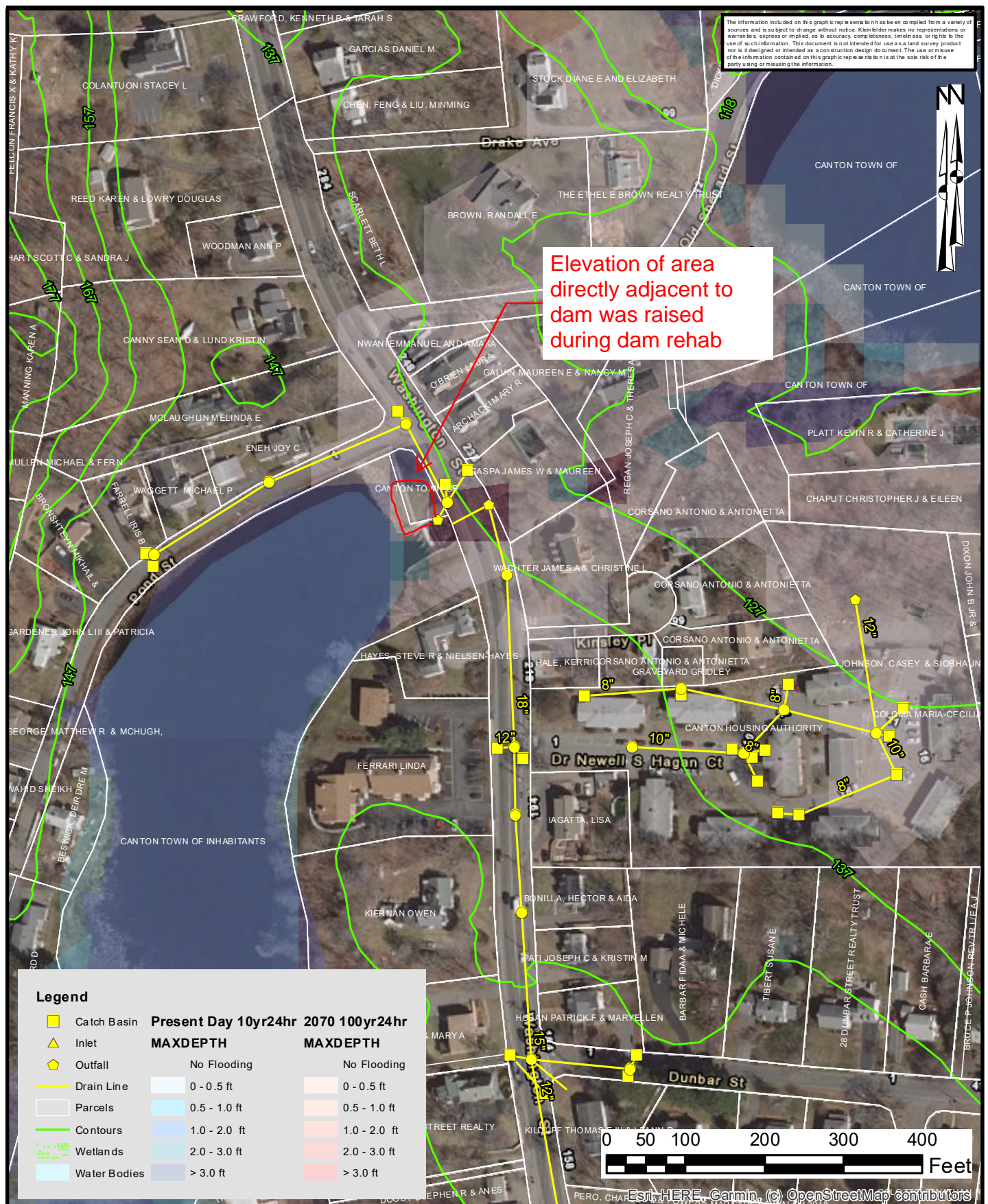
Appendix F -

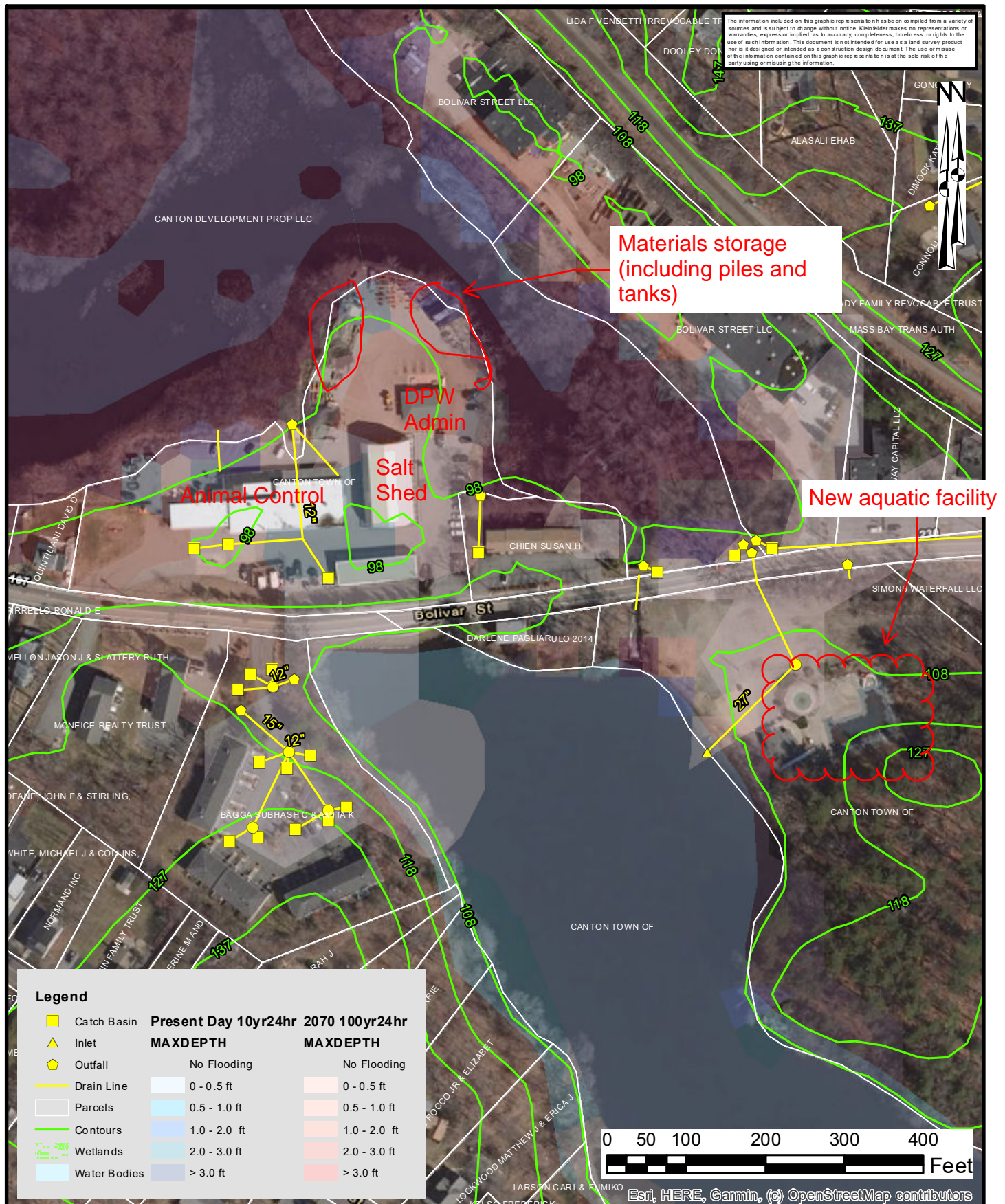
Area of Interest (AOI) Site Notes and Field Maps

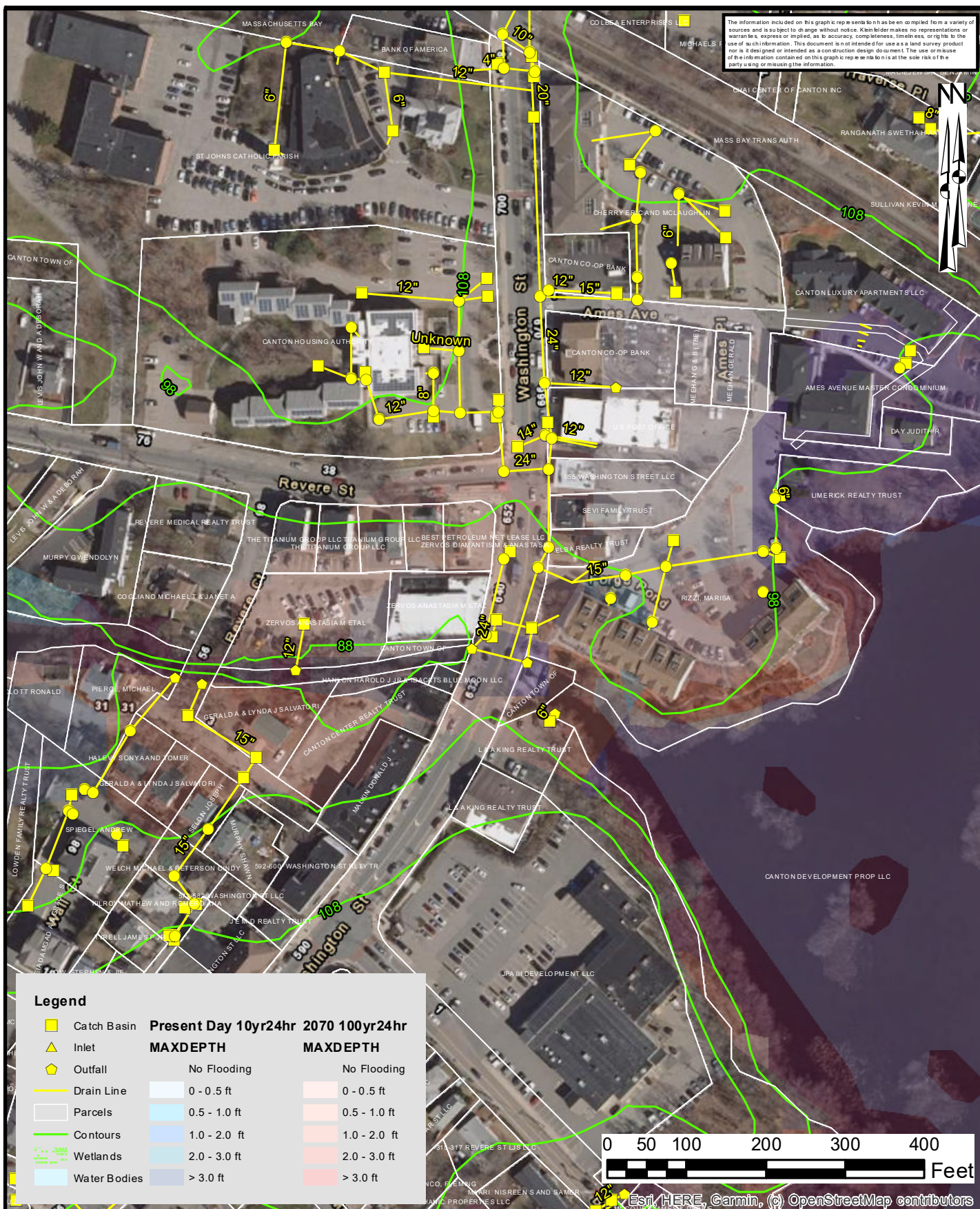


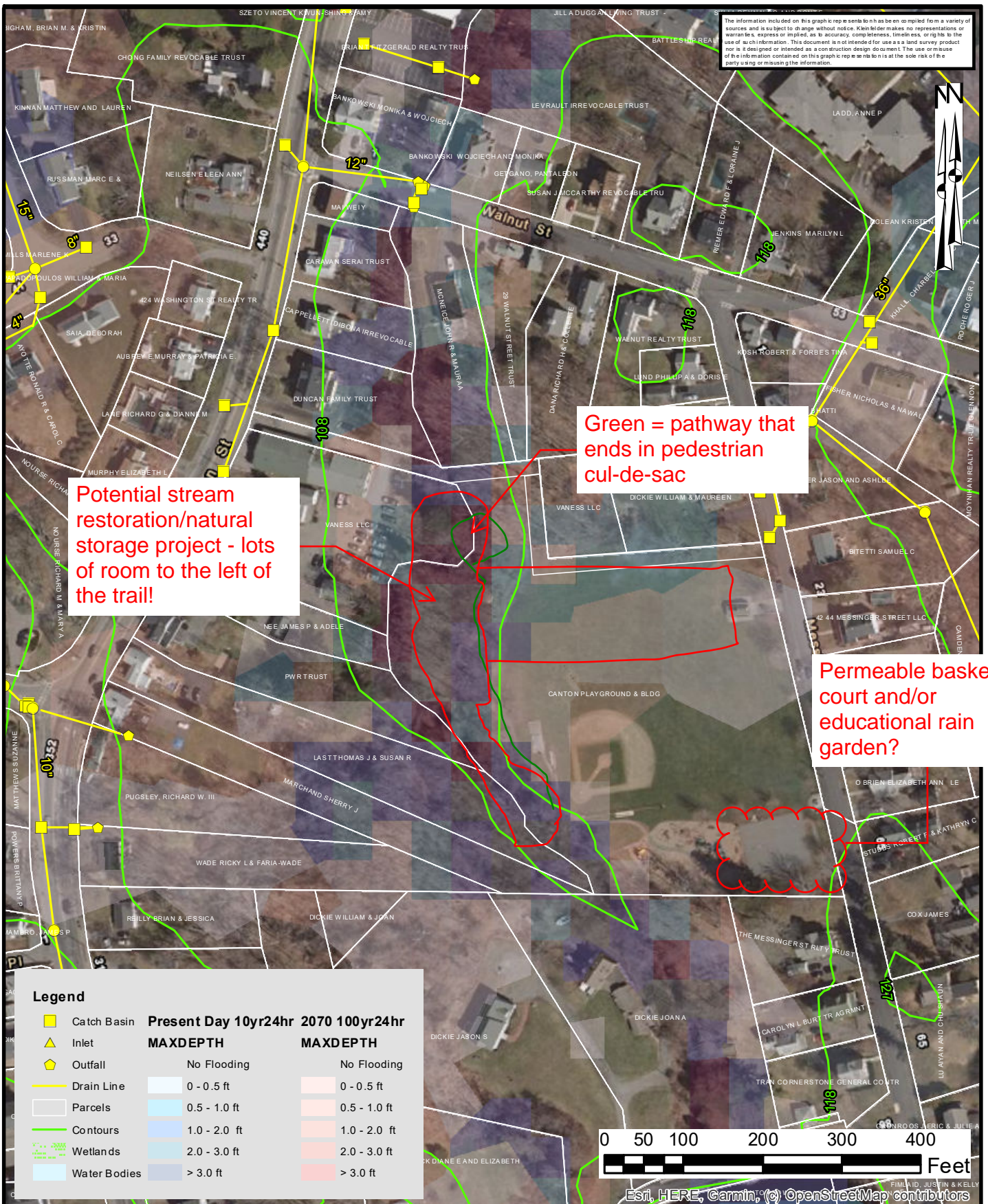


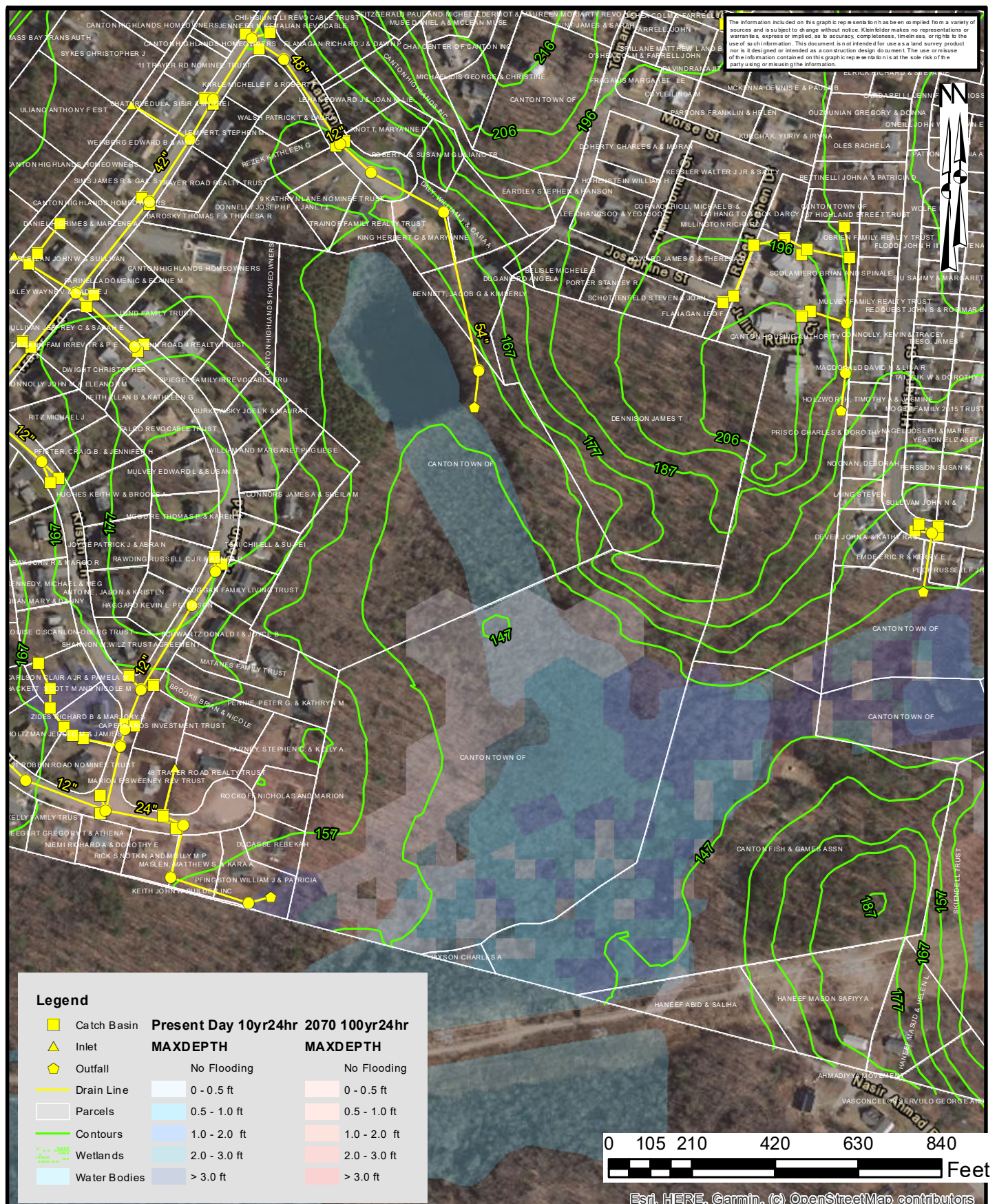
 <p>KLEINFELDER Bright People. Right Solutions. www.kleinfelder.com</p>	PROJECT NO. 20203163.001A	<p>Washington St. & High St.</p> <p>Town of Canton, MA Municipal Vulnerability Preparedness Action Grant BMP Sites</p>	<p>FIGURE 2a</p>
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	CREATED BY: LHowe		
	CHECKED BY: XX		
	FILE NAME: Field Maps_LKH.mxd		






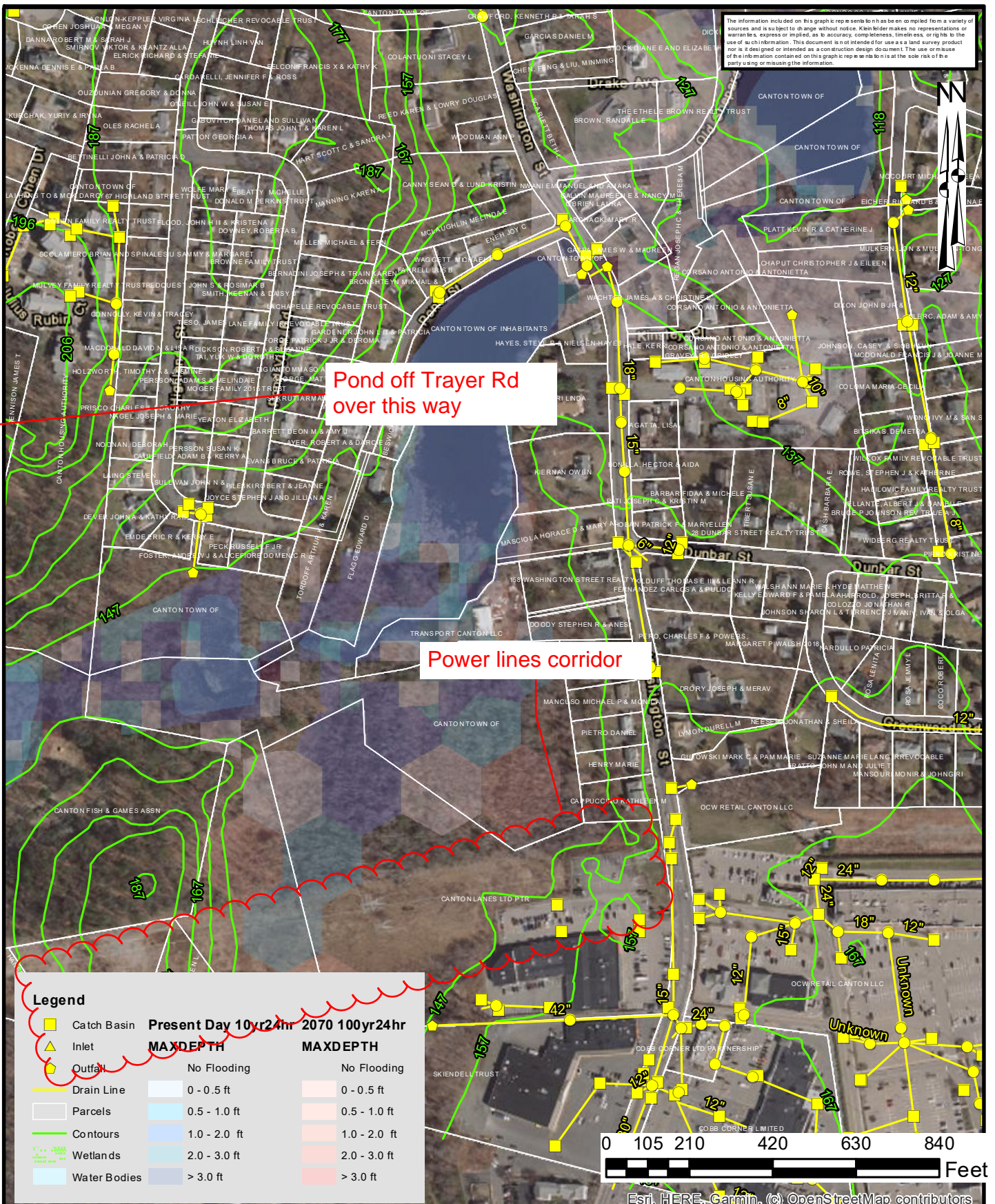


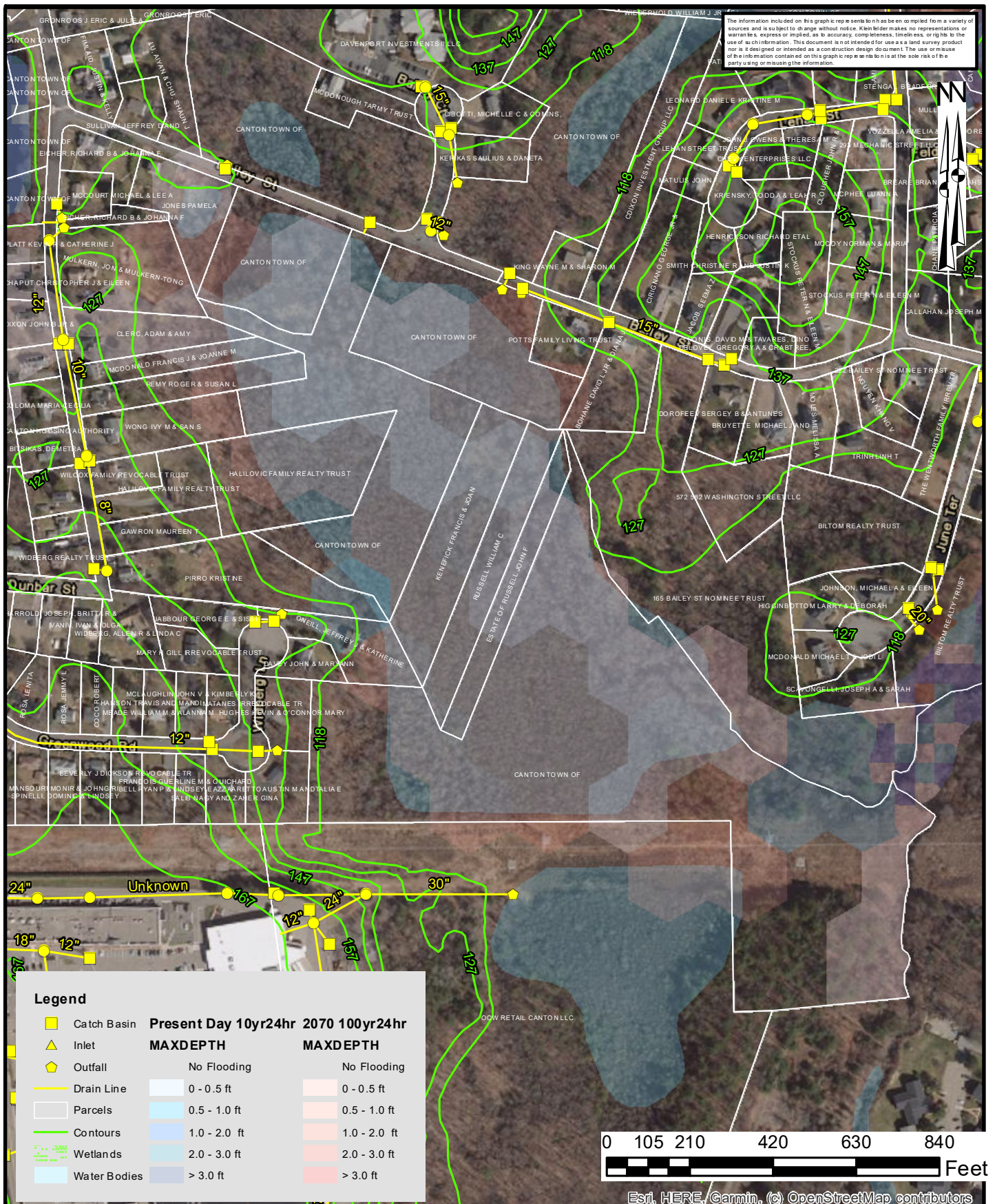





Esri, HERE, Garmin, (c) OpenStreetMap contributors

 <p>KLEINFELDER Bright People. Right Solutions. www.kleinfelder.com</p>	PROJECT NO. 20203163.001A	<p>Massapoag Brook near Tolman S. Conservation Area</p> <p>Town of Canton, MA Municipal Vulnerability Preparedness Action Grant BMP Sites</p>	<p>FIGURE 5a</p>
	CREATED: 4/28/2021		
	CREATED BY: LHowe		
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KLEINFELDER
Bright People. Right Solutions.
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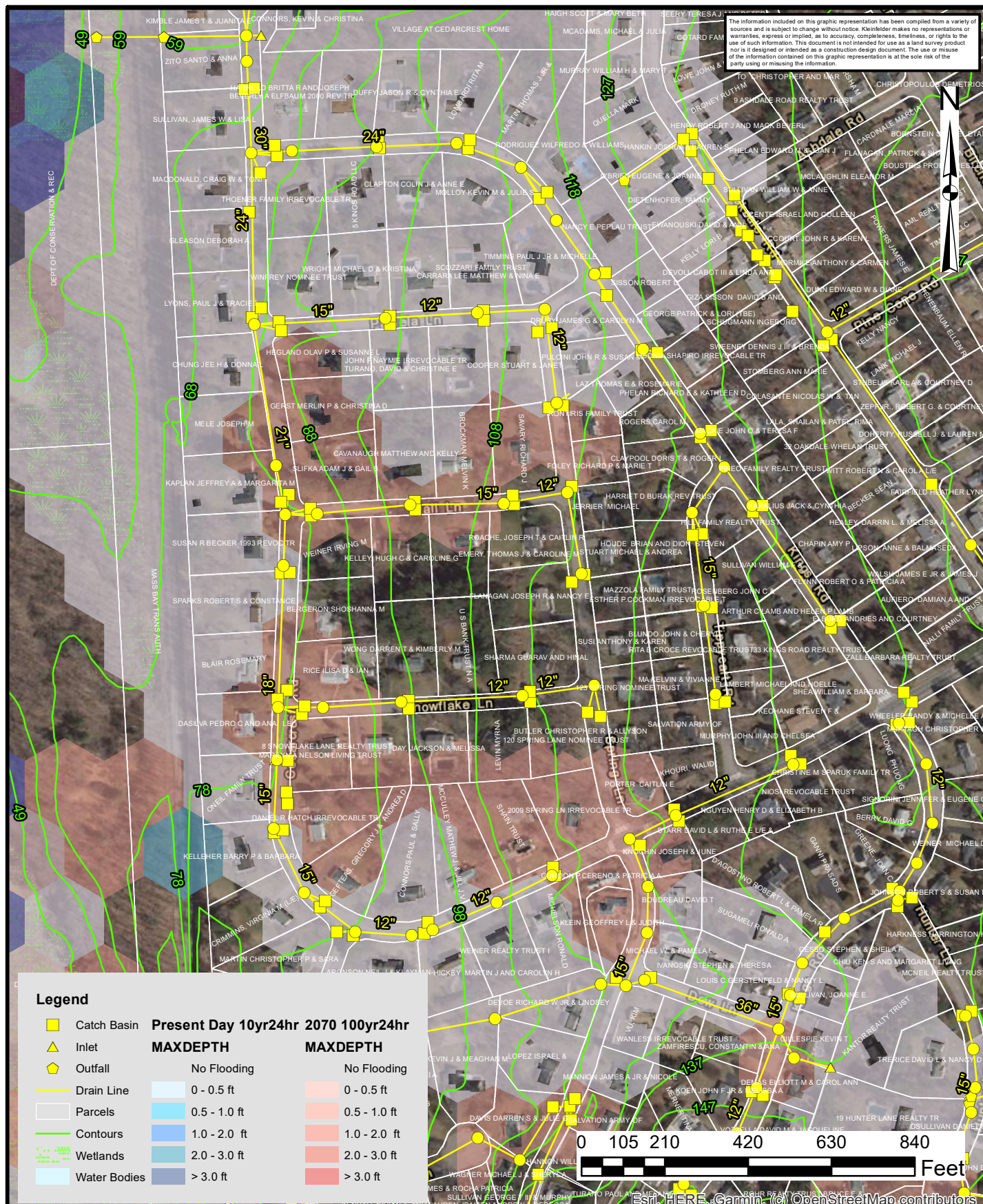
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CREATED:	4/28/2021
CREATED BY:	LHowe
CHECKED BY:	XX
FILE NAME:	Field Maps_LKH.mxd

**Massapoag Brook
near Bailey Ct.
Conservation Area**

Town of Canton, MA
Municipal Vulnerability Preparedness Action Grant
BMP Sites

FIGURE

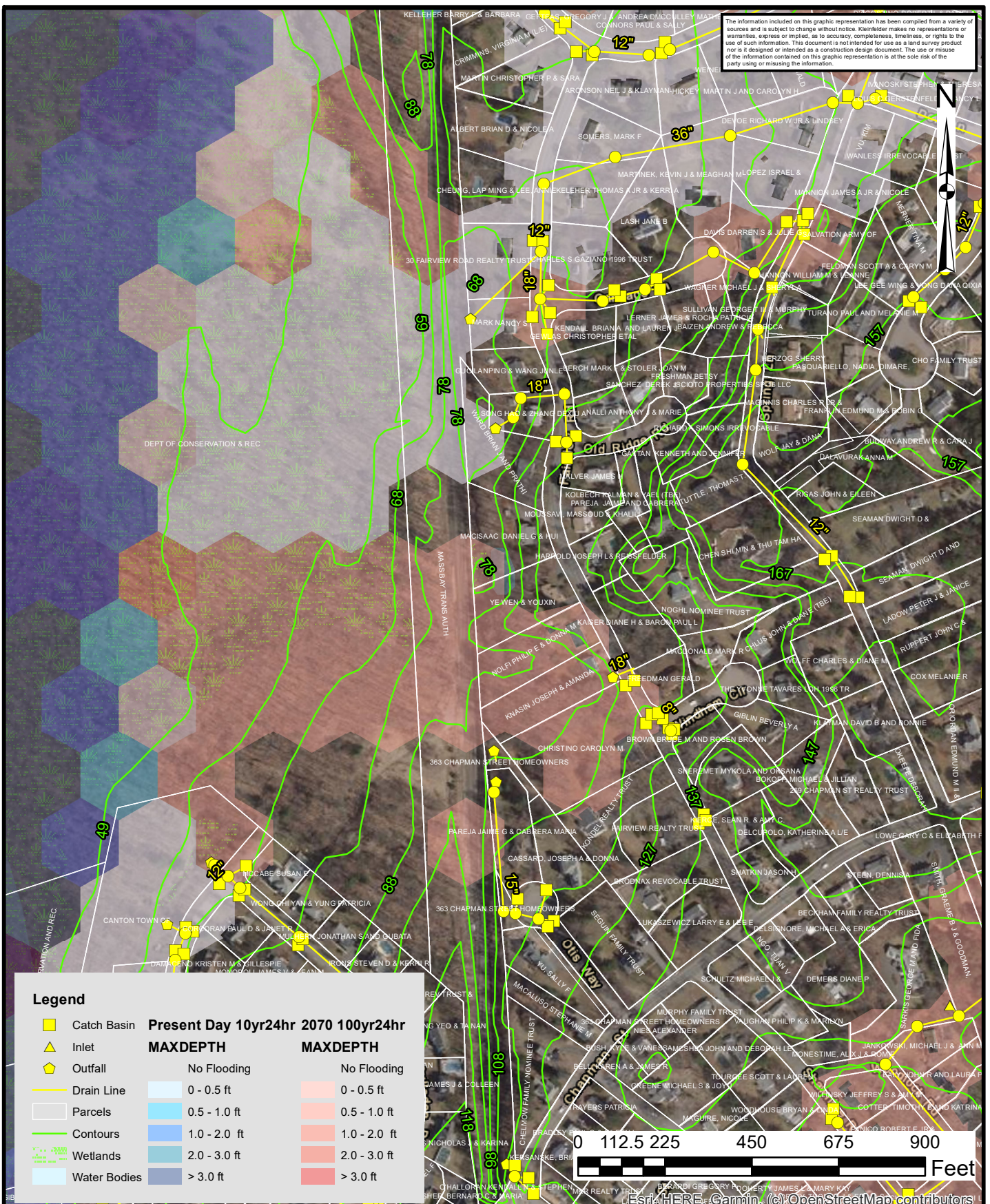
5c



PROJECT NO. 20203163.001A
 CREATED: 4/28/2021
 CREATED BY: KJohnson
 CHECKED BY: XX
 FILE NAME: Field Maps_LKH - Copy.mxd

**Neighborhood West of
 JFK School
 Cedarcrest and Kings Rd.**
 Town of Canton, MA
 Municipal Vulnerability Preparedness Action Grant
 BMP Sites

FIGURE
6a

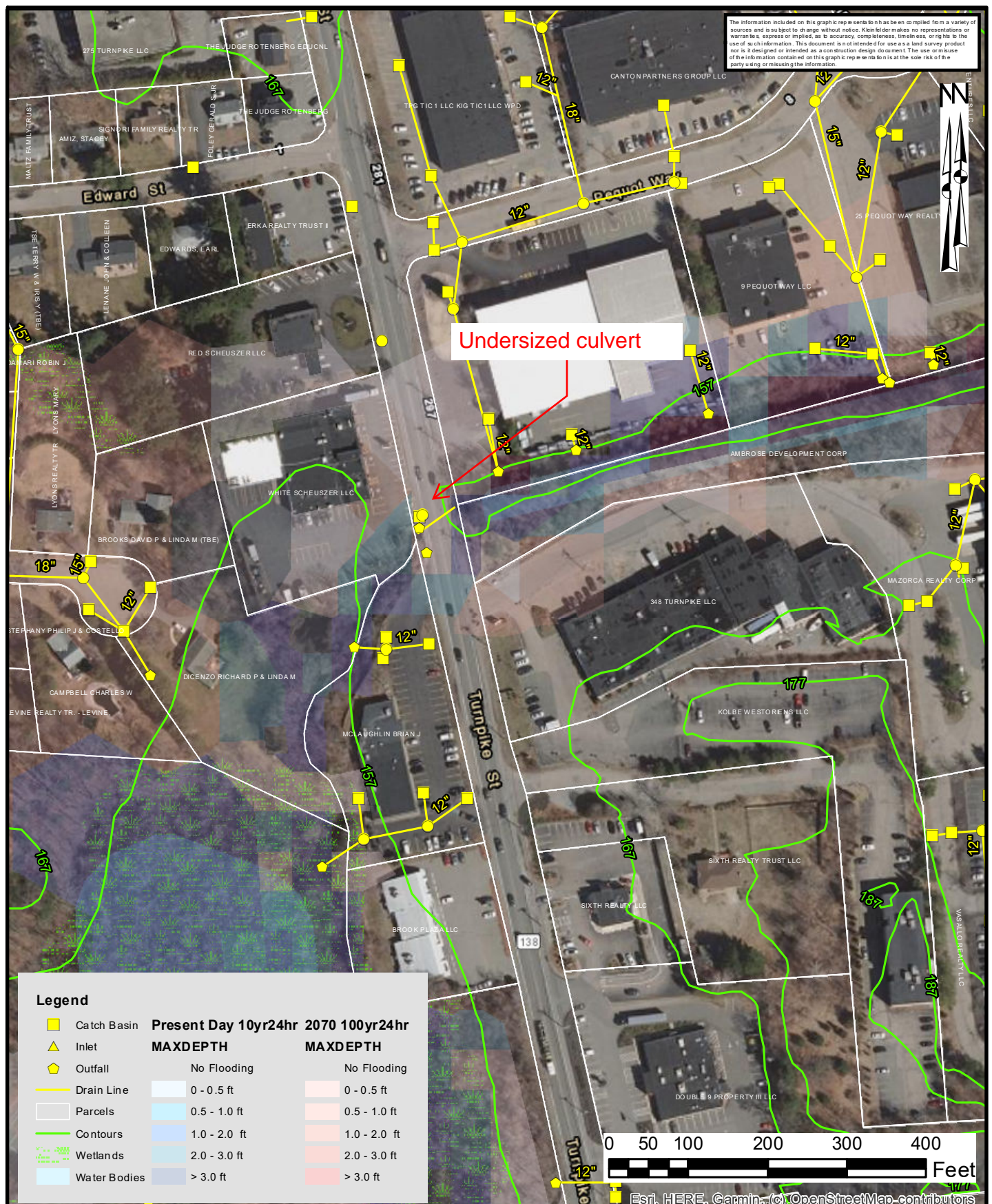



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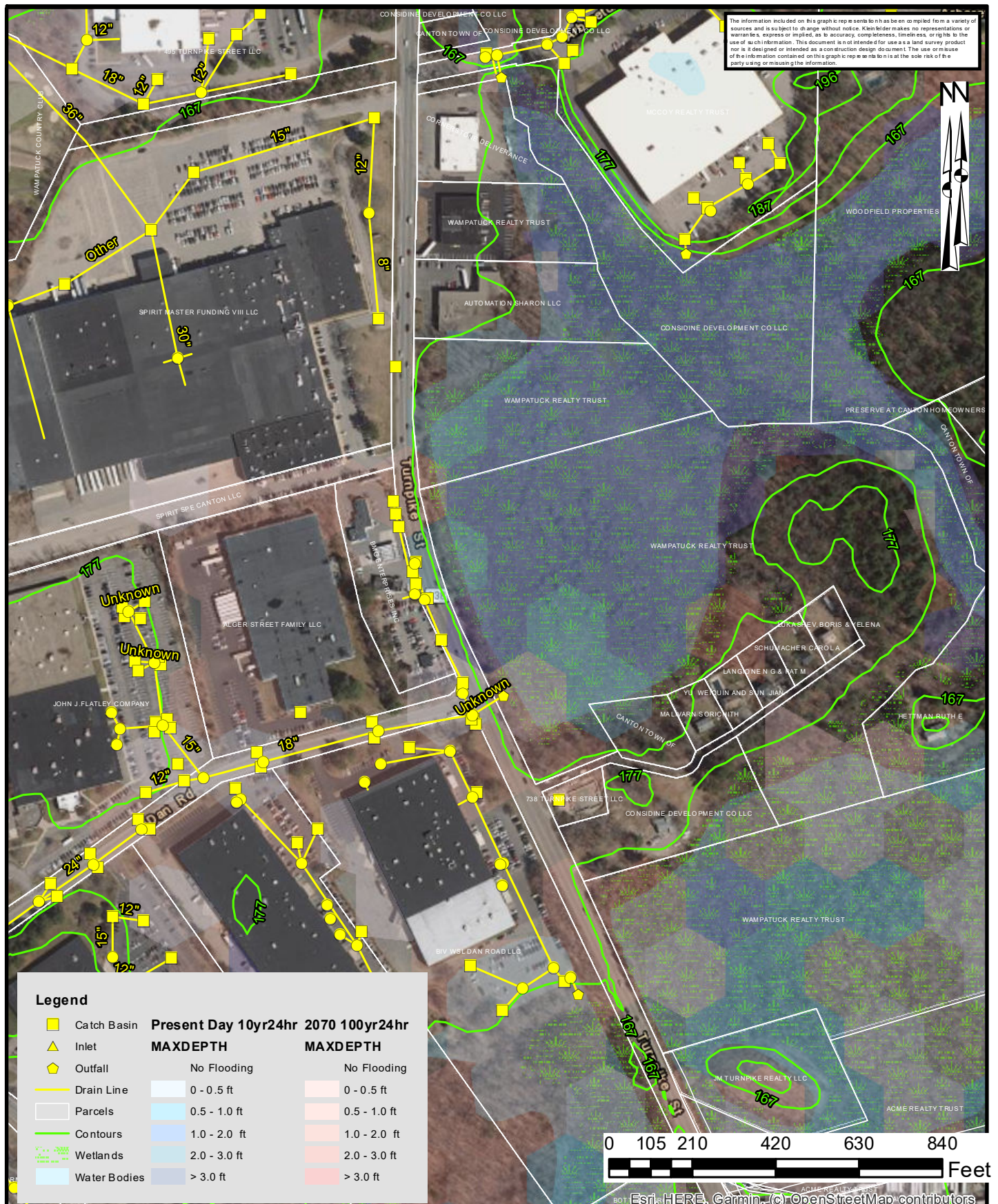
**Neighborhood West of
JFK School
Cedarcrest and Kings Rd.**

Town of Canton, MA
Municipal Vulnerability Preparedness Action Grant
BMP Sites

FIGURE
6a



 <p>KLEINFELDER Bright People. Right Solutions. www.kleinfelder.com</p>	PROJECT NO. 20203163.001A	<p>Route 138 / Pequit Brook near D'Angelo's</p> <p>Town of Canton, MA Municipal Vulnerability Preparedness Action Grant BMP Sites</p>	<p>FIGURE 7</p>
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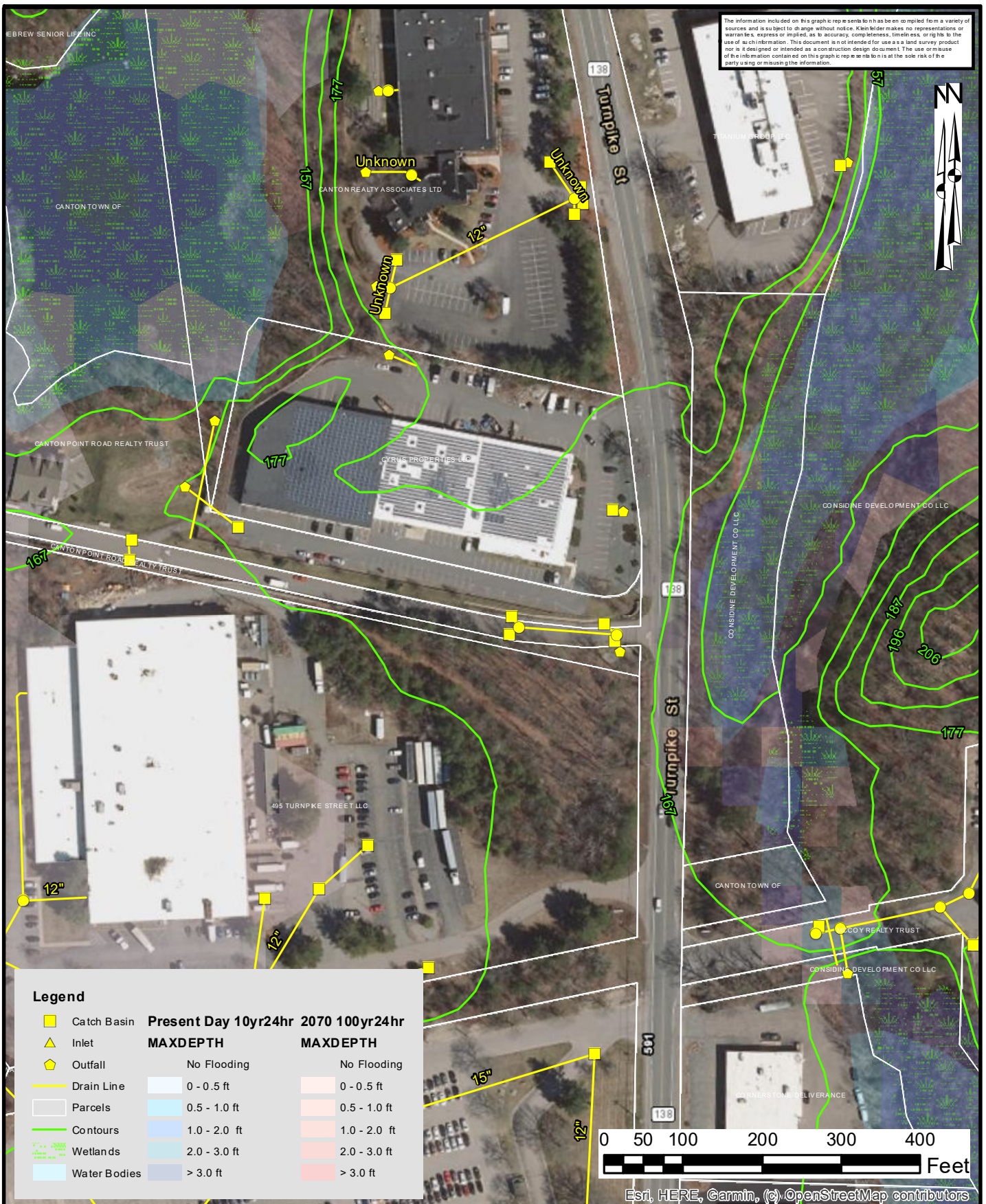
PROJECT NO. 20203163.001A
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CHECKED BY: XX
FILE NAME: Field Maps_LKH.mxd

**Route 138 / York Brook
near Dan Rd.**

Town of Canton, MA
Municipal Vulnerability Preparedness Action Grant
BMP Sites

FIGURE

8



PROJECT NO. 20203163.001A
 CREATED: 4/28/2021
 CREATED BY: LHowe
 CHECKED BY: XX
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Route 138 / Pequit Brook near Canton Point Rd.

Town of Canton, MA
 Municipal Vulnerability Preparedness Action Grant
 BMP Sites

FIGURE

9

Canton MVP Site Visit Summary

4.29.2021

General Notes

- Entities involved with open space for the Town
 - Conservation Agent
 - Parks Department
- The conservation commission is always looking for funding to acquire more conservation lands
- They are interested in multi-benefit projects

Site Notes

- [1 Neponset St at Neponset River](#)
 - *Reason for visit:* discuss road-raising feasibility and modeled water surface elevations
 - There is sanitary treatment behind the fence of Dunkin Donuts – not sure of ownership, think sit is the town. Used to unofficially take septage there.
 - Town open to raising the road a foot for a long-term project, noting there are no residential driveways to have to worry about matching grade
 - The new park was elevated with fill, so connected to a higher road would be less of a problem, some concern with the two gas stations at either end of this stretch of Neponset St
 - When the new park was constructed, they dug out around it to create storage/treatment and used the soil to raise elevation of the park, which is on the site of the old Canton Airport
 - Town mentioned they could try and find plans for the park if that would be helpful – could be nice to understand the design intent of the stormwater areas?
 - Not necessary
 - Town has topo maps from the 70's if that would be helpful to show change in land use over time
 - Not necessary
 - Saw 4-8 in of water over the road during two storms in 2010
 - When there's flooding they experience sewer overflows in the area as well
 - **ACTION:** Could calculate time added to get to hospital by having this evacuation route flooded as justification for roadway elevations
 - **ACTION:** Model impact of raising the road – assess impact to water treatment plant
 - **ACTION:** Consider recommending mobile flood barriers at water treatment plant
- [2a Washington St & High St](#)
 - *Reason for visit:* discuss recent Dam upgrades/outlet controls/system flexibility; road-raising feasibility at High Street
 - Did not visit this site, as it seemed very similar to 2b
 - Could visually see from 2b site @ Pond & Washington St that raising the road between High and Dunbar could be beneficial, depending on impact to local homes along Washington and adjacent to Shephard Pond

- [2b Washington St near Shepard Pond](#)
 - *Reason for visit:* see 2a bullet above
 - Drove by a diversion channel at XX on the way to this spot, which was completed by the Army Corps of Engineers to replace three undersized culverts
 - They do coordinate dam releases with Sharon for Forge Pond and Shepard Pond, typically on a monthly basis but there are also times when they can tell water is being released and they weren't give a heads-up
 - Dam was recently upgraded and they raised elevation of land directly adjacent to dam (where water had spilled over in previous flooding events)
- [3a Bolivar Pond \(DPW/Animal Control Facilities\)](#)
 - *Reason for visit:* discuss with DPW about potential future streets project near downtown assets and the Viaduct, as well as operations/outlet controls at the Dams
 - DPW (Billy) discussed dam level/water management with us – he said:
 - Bolivar is the flashiest pond and it doesn't take much for it to jump 1-2ft
 - Reservoir Pond takes longer to respond (a week or so) – suspects its because golf course pumps water for irrigation from Reservoir Pond
 - **ACTION:** Kenneth to investigate this – some sort of sensitivity analysis in model? Or we recommend further study?
 - **ACTION:** Ask Billy for pond elevations that trigger changes in dam management
 - **ACTION:** Investigate stormwater detention projects in Bolivar pond drainage area
 - Have not seen flooding into their admin building, but it has come up to the door before
 - May be worth noting that there are several storage areas of potential contaminants – could suggest flood protection plan for those?
 - Installed new Aquatic park where they've experienced dam overflows before – when 27" overflow pipe is overwhelmed the water traveled overland, following the pipe and causing severe erosion
- [3b Forge Pond Dam](#)
 - *Reason for visit:* See 3a bullet above
 - Did not make it to this site b/c of time constraints
- [4 Massapoag Brook at Messinger Park](#)
 - *Reason for visit:* discuss potential large storage system, stream daylighting, regional coordination w/Town of Sharon
 - Town does not own the Park land, but it provides maintenance and sometimes funds upgrades
 - This is a CPA community
 - Town not aware of culverted portion of the stream – believe it is open all the way
 - Excellent opportunity here to manage excess stormwater flows from cren along pathway, which could potentially connect to sub-surface detention tank under field
 - Town is interested in increasing biodiversity
 - Also was interested in non-potable reuse when Polly mentioned that as a possibility in conjunction with detention tank
 - **ACTION:** Model restoration/storage project
 - **ACTION:** Assess elevations required for floodplain restoration/mitigation project?

- **ACTION:** Where do flows to Bollinger come from? Messenger street?
- [5a Massapoag Brook near Tolman](#)
 - *Reason for visit:* discuss potential large natural storage, stream daylighting
 - Polly visited this site solo at the end of the day
 - Accessed south side (pictured in map) at Canton Fish and Game Association
 - Potential for partnership/intervention with electric utility land?
 - Also accessed from private neighborhood park on Trayer Rd
 - Discovered pond with earthen dam, saw stone rock walls behind neighborhood – old agricultural lands? Could add cascading flood storage ponds?
 - Enhanced neighborhood amenity with project?
 - **ACTION:** Review w/Conservation Agent
- [5b Massapoag Brook near Shepard Pond](#)
 - *Reason for visit:* see 5a above
 - Kyle visited the Baily Conservation Area site solo at the end of the day (located just outside this map to the right)
 - **ACTION:** Review w/Conservation Agent
- [5c Massapoag Brook near Bailey](#)
 - *Reason for visit:* see 5a above
 - Did not visit this site due to time constraints
- [6a Neighborhood West of JFK Cedarcrest and Kings](#)
 - *Reason for visit:* note (with DPW help) where groundwater flooding comes out of lawns
 - Seepage is happening between Cedar Crest @ snowflake Ln and Fall Ln
 - Repaved Cedar Crest in 2020
 - Recently allowed homeowner to connect sump drain to catch basin at corner of Spring & Dedham because of continual pumping
 - Groundwater flows are clearly coming from topography
 - Could railroad track be impeding flows?
- [6b Neighborhood West of JFK Fairview](#)
 - *Reason for visit:* See note above
 - Did not visit this site due to time constraints
- [7 Rte138 & Pequit Brook near D'Angelos](#)
 - *Reason for visit:* culvert upsizing possibility
 - Undersized culvert, with sustained high flows on the downstream end of the culvert – not sure what's causing a back-up/slight back-flow conditions
 - Was completely submerged on our visit – it had rained the night before, but hadn't rained that day
 - Not much room for mitigation within area we could see from D'Angelos parking lot – but replacement of undersized culvert with box culvert seems appropriate
 - Town did not recall seeing much flooding in this area, except for right over the culvert – raise road slightly there with replacement?
 - Followed brook down to senior living facility at Del Pond Rd
 - Box culverts under Del Pond Rd seemed appropriately sized for flow
 - Del Pond Rd is private road with gate – could not access the rest of the property

- Potential for floodplain restoration in between D’Angelos and senior living facility? Boardwalks/community asset for seniors?
 - Land is totally owned by private property, mostly Hebrew Senior living facility
- **ACTION:** What would flooding implications of upsizing culvert? Kenneth to model?
- **ACTION:** Ask town for culvert drawings
- [8 Rte138 & York Brook near Dan Rd](#)
 - *Reason for visit:* road-raising/berm/distributed GI options
 - HUGE industrial park with lots of impervious surface, wide roads with trucking traffic, etc.
 - No stormwater ponds visible – where is stormwater going?
 - Potential for GI in parking lots or in street industrial downspout disconnect program? Rainwater harvesting for mechanical processing? Car washing?
 - **ACTION:** Team to investigate the area more in model output
- [9 Rte138 & York Brook near Canton Point Rd](#)
 - *Reason for visit:* culvert upsizing possibility
 - Did not visit this site due to time constraints

Flood Elevations from Kenneth’s 4/28/21 Teams message

	Maximum Water Surface Elevation (WSE; ft. [datum])	Depth of Flooding (above ground/roadway surface, per 2013 LiDAR)						
	Present Day, 10-year	2070 10-year	Present Day 100-year	2070 100-year	Present Day, 10-year	2070 10-year	Present Day 100-year	2070 100-year
Neponset Street bridge #1	45.2	45.32	45.74	46.28	2.46	2.58	2.99	3.54
Washington Street at Pond Street #2	130.59	130.64	130.73	130.83	3.27	3.33	3.41	3.51
Washington Street at High Street #2	120.14	120.14	120.15	120.15	0.01	0.01	0.02	0.03
Old Shephard Street at Old Shepard Street Dam #2	110.68	110.78	110.99	111.17	1.25	1.35	1.56	1.74
Neponset/Walpole Street at Canton Viaduct #3	65.42	65.76	66.51	67.05	1.54	1.89	2.63	3.17
Bolivar Street at Bolivar Pond Dam #3	100.46	100.56	100.78	100.93	0.46	0.56	0.78	0.93
Massapoag Brook at Walnut Street (d/s of Messinger Park) #4	103.91	103.97	104.05	104.18	0.76	0.82	0.89	1.02
wetland adjacent Messinger St south of Bailey St #5	123.68	123.68	123.69	123.69	0.01	0.01	0.02	0.02

Rte 138 north of D'Angelos (culvert upsizing)	156.2	156.3	156.54	156.76	0.74	0.84	1.08	1.3
Rte 138/York Brook near Dan Road	160.4	160.51	160.9	161.32	0.47	0.59	0.98	1.4
Rte 138/York Brook near Canton Point Rd	157.55	157.7	158.1	158.49	2.72	2.87	3.27	3.66
Rte 138 between Randolph and Stoughton Town Line (to identify flooded crossings, per model)	183.49	183.49	183.5	183.51	1.38	1.38	1.39	1.4
Pleasant Street (Pequit Brook, just d/s of Reservoir Pond)	136.72	136.82	136.99	137.19	0.49	0.59	0.77	0.96
Pleasant Street, near Devoll Field	150	150.04	150.17	150.34	0.11	0.15	0.27	0.45
Randolph Street, west of Blue Hills Regional Technical School (b/w Hillsvie St and Randolph Terrace)	157	157.07	157.24	157.42	0.33	0.4	0.58	0.75
East Canton nuisance flooding (Woodcliff Ave; ownernship issues)	189.99	190.08	190.3	190.45	3.26	3.36	3.58	3.72