

POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-D20e3

McM PROJECT NO: F0057-9-17-00221

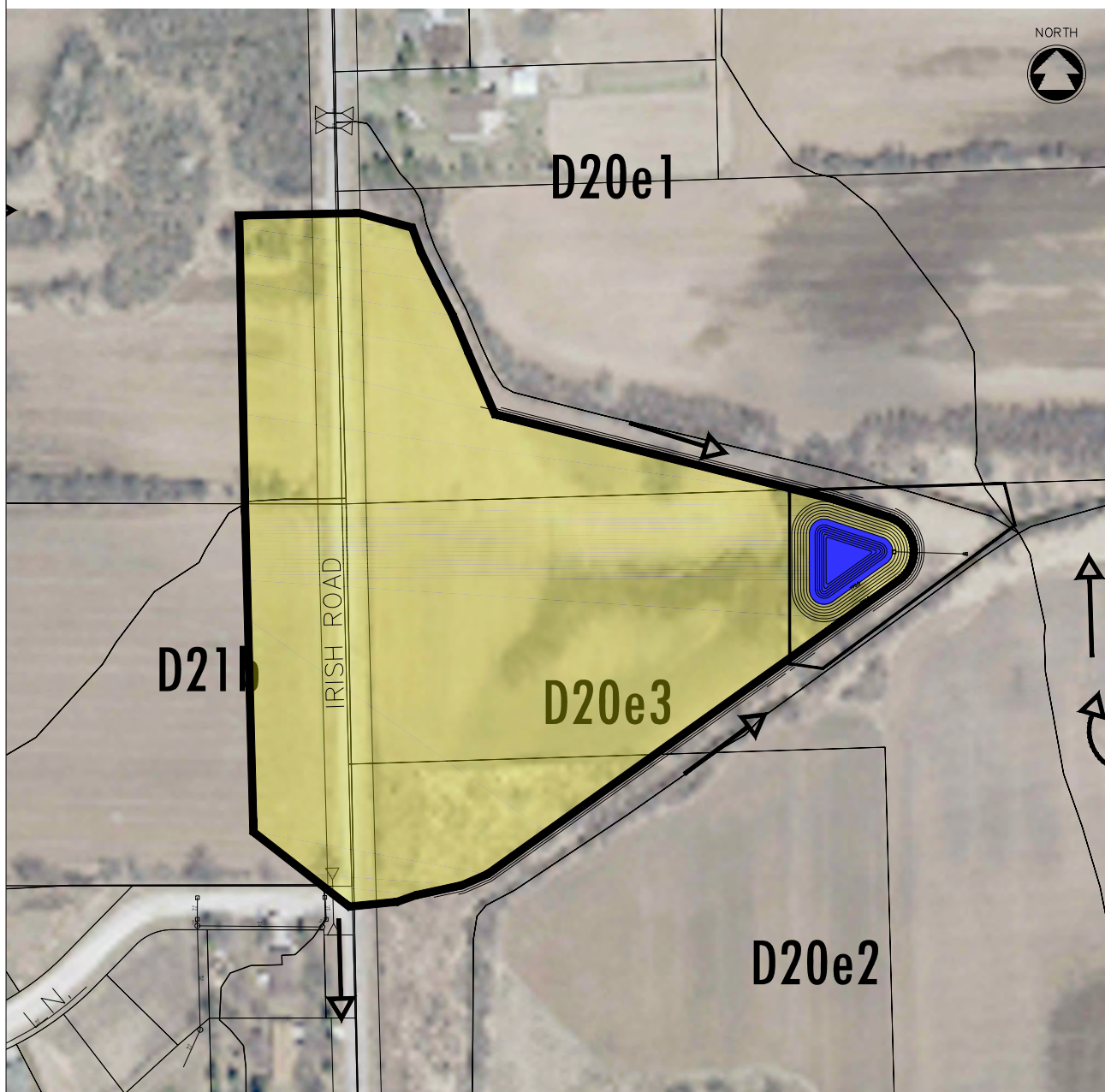
SITE INFORMATION:

| | |
|------------------------------------------|--------------------|
| Municipality: VILLAGE OF FOX CROSSING | Date: MAY, 2018 |
| Proposed BMP Name: IRISH MIDDLE POND | Initials: AWS |

DRAINAGE AREA:

| | | |
|------------------------------------|---------------------------------------|--------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: D20e3 | Total Drainage Area: 12.0 acres |
| Imperviousness (Future): 37.7 % | Runoff Curve Number (Future): 83 | Water Quality Volume (Future): 0.59 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

Groundwater Depth (ft): > 6 ft, 0.5 ft
Bedrock Depth (in): >60 in
USDA Soil Texture: Hortonville Silt Loam,
Neenah Silty Clay Loam

Remediation: ☐ Yes ☒ No
Historical: ☐ Yes ☒ No
100-Year Floodplain: ☐ Yes ☒ No

Wetland: ☒ Potential ☐ Yes ☐ No
Public Well < 400 ft: ☐ Yes ☒ No
Private Well < 100 ft: ☐ Yes ☒ No

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):
Outfall via storm sewer to the adjacent creek.

Infrastructure modifications or flow diversions required for retrofit:
Future storm sewer to serve the watershed and storm sewer from Irish Road.

Site access for future BMP maintenance:
Access from Irish Road.

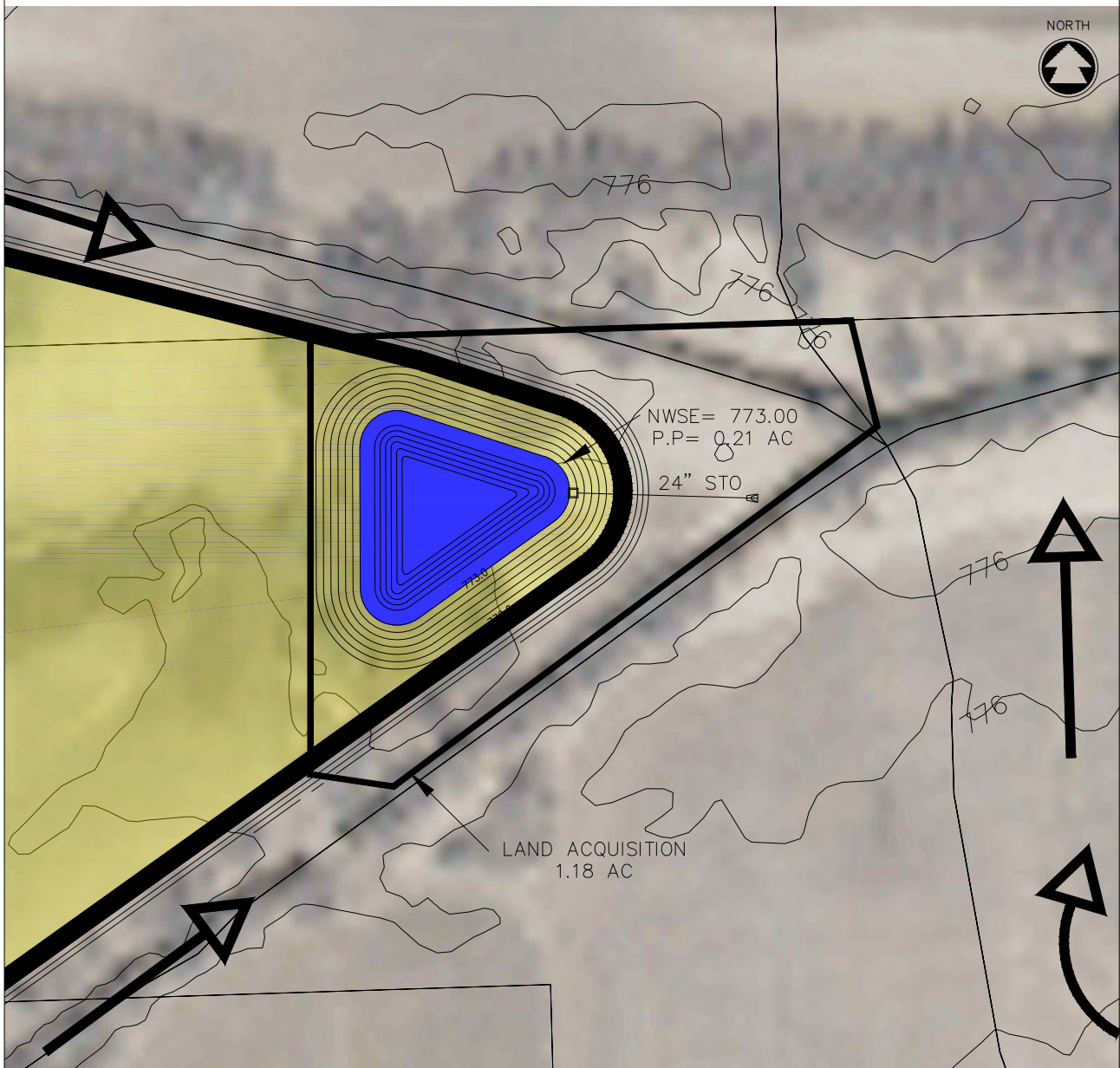
Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):
Rock excavation, groundwater and private property.

Approx. Size of BMP Retrofit:
0.21 acre permanent pool

Approx. Land Required (ac):
1.18 acres

Estimated Cost:
\$210,900

Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-D21e

McM PROJECT NO: M0003-910495

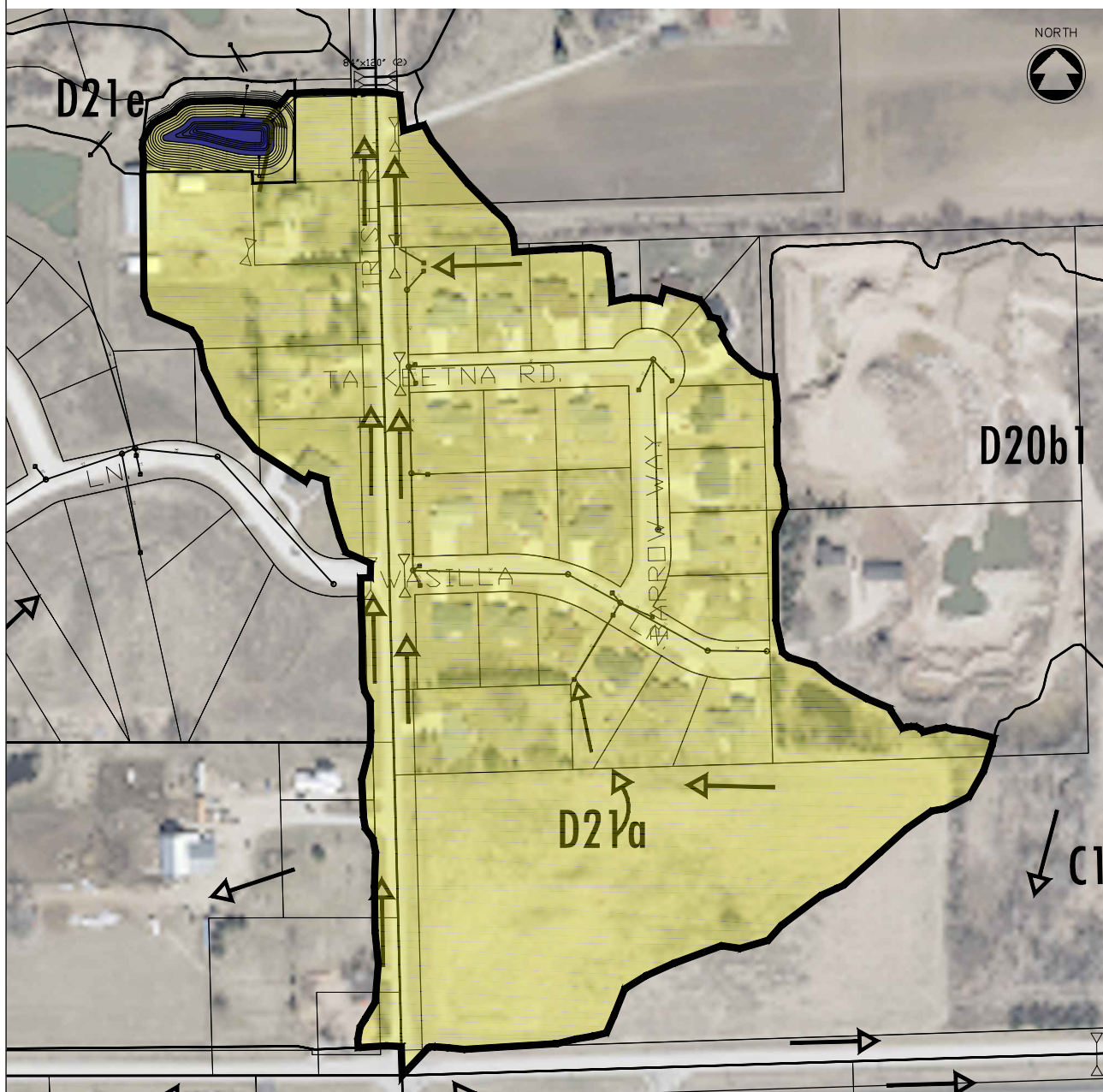
SITE INFORMATION:

| | |
|-----------------------------------|-------------------------|
| Municipality: TOWN OF MENASHA | Date: DECEMBER, 2013 |
| Proposed BMP Name: TALKEETNA POND | Initials: AWS |

DRAINAGE AREA:

| | | |
|------------------------------------|--------------------------------------------|--------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: D21a, D21e | Total Drainage Area: 24.2 acres |
| Imperviousness (Future): 34.6 % | Runoff Curve Number (Future): 82 | Water Quality Volume (Future): 1.09 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

| | | | | |
|-------------------------------------------|----------------------|---------------------------------------------------------------------|------------------------|--------------------------------------------------------------------------------------------------------|
| Groundwater Depth (ft): <1 ft | Remediation: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Wetland: | <input checked="" type="checkbox"/> Potential <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Bedrock Depth (in): >60 in | Historical: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Public Well < 400 ft: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| USDA Soil Texture: NEENAH SILTY CLAY LOAM | 100-Year Floodplain: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Private Well < 100 ft: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Outfall via storm sewer north to the adjacent stream.

Infrastructure modifications or flow diversions required for retrofit:

Divert the Irish Road ditches into the pond via storm sewer and culverts and divert the swale south of the pond into the pond.

Site access for future BMP maintenance:

Access shall be from property acquisition or easement from Irish Road to the pond.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Potential utility conflicts, wetlands, high groundwater, private property.

Approx. Size of BMP Retrofit:

0.18 acre permanent pool

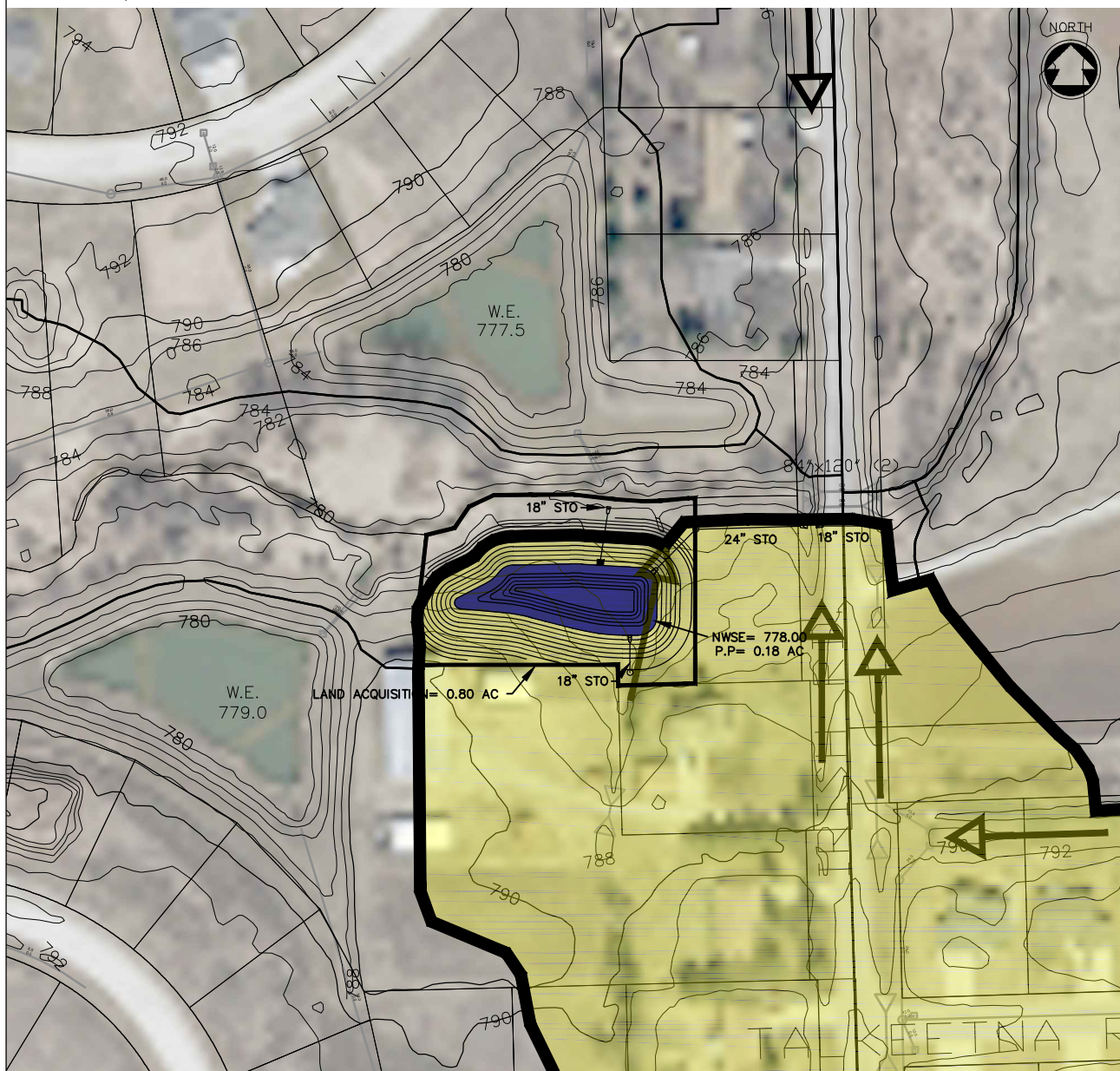
Approx. Land Required (ac):

0.80 acres

Estimated Cost:

\$135,000

Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-D23e

McM PROJECT NO: M0003-910495

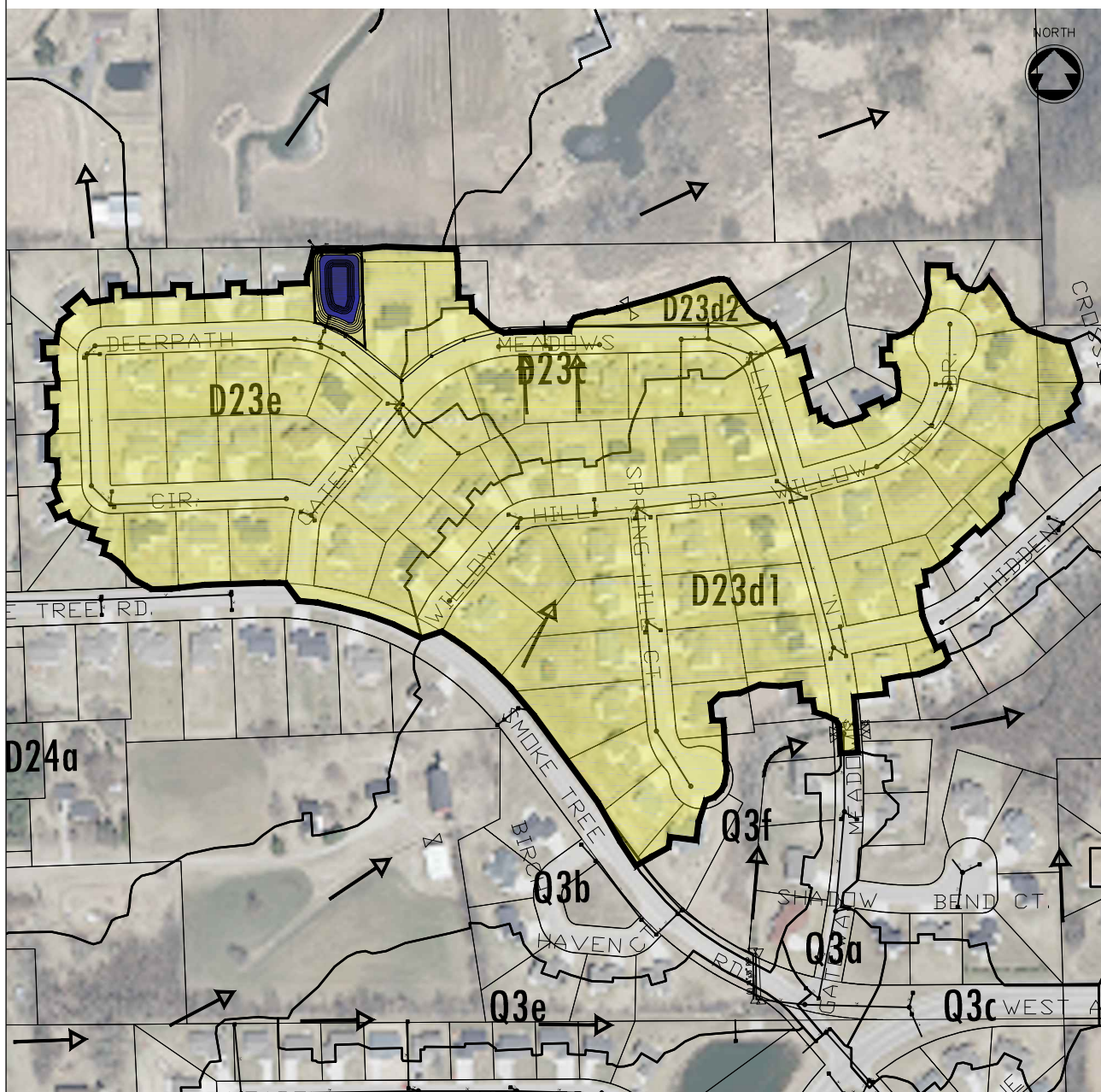
SITE INFORMATION:

| | |
|----------------------------------|-------------------------|
| Municipality: TOWN OF MENASHA | Date: DECEMBER, 2013 |
| Proposed BMP Name: DEERPATH POND | Initials: AWS |

DRAINAGE AREA:

| | | |
|------------------------------------|--------------------------------------|--------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: D23e | Total Drainage Area: 29.0 acres |
| Imperviousness (Future): 35.9 % | Runoff Curve Number (Future): 83 | Water Quality Volume (Future): 1.35 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

Groundwater Depth (ft): 1-2 ft

Remediation:

☐ Yes ☒ No

Wetland: ☒ Potential ☐ Yes ☐ No

Bedrock Depth (in): 36-48 in

Historical:

☐ Yes ☒ No

Public Well < 400 ft: ☐ Yes ☒ No

USDA Soil Texture: MANAWA SILTY CLAY LOAM 100-Year Floodplain:

☐ Yes ☒ No

Private Well < 100 ft: ☐ Yes ☒ No

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Outfall via storm sewer north to the adjacent stream/ditch.

Infrastructure modifications or flow diversions required for retrofit:

Collect stormwater from storm sewer along Gateway Meadows Lane west to the pond via storm sewer.

Site access for future BMP maintenance:

Access is from Deerpath Circle.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Potential utility conflicts, storm sewer depths, wetlands, high groundwater.

Approx. Size of BMP Retrofit:

0.20 acre permanent pool

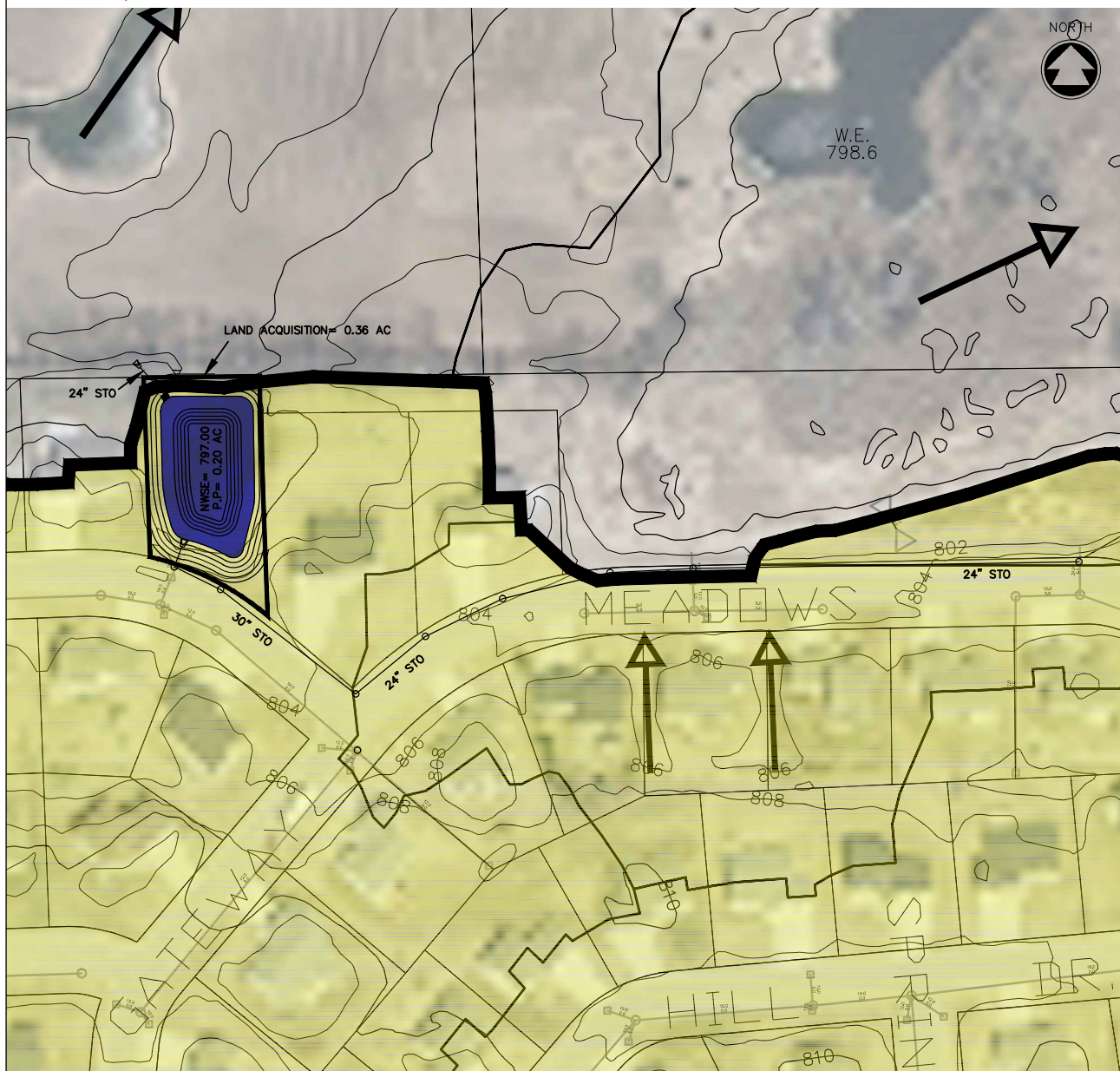
Approx. Land Required (ac):

0.36 acres

Estimated Cost:

\$240,000

Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-D24a

McM PROJECT NO: M0003-910495

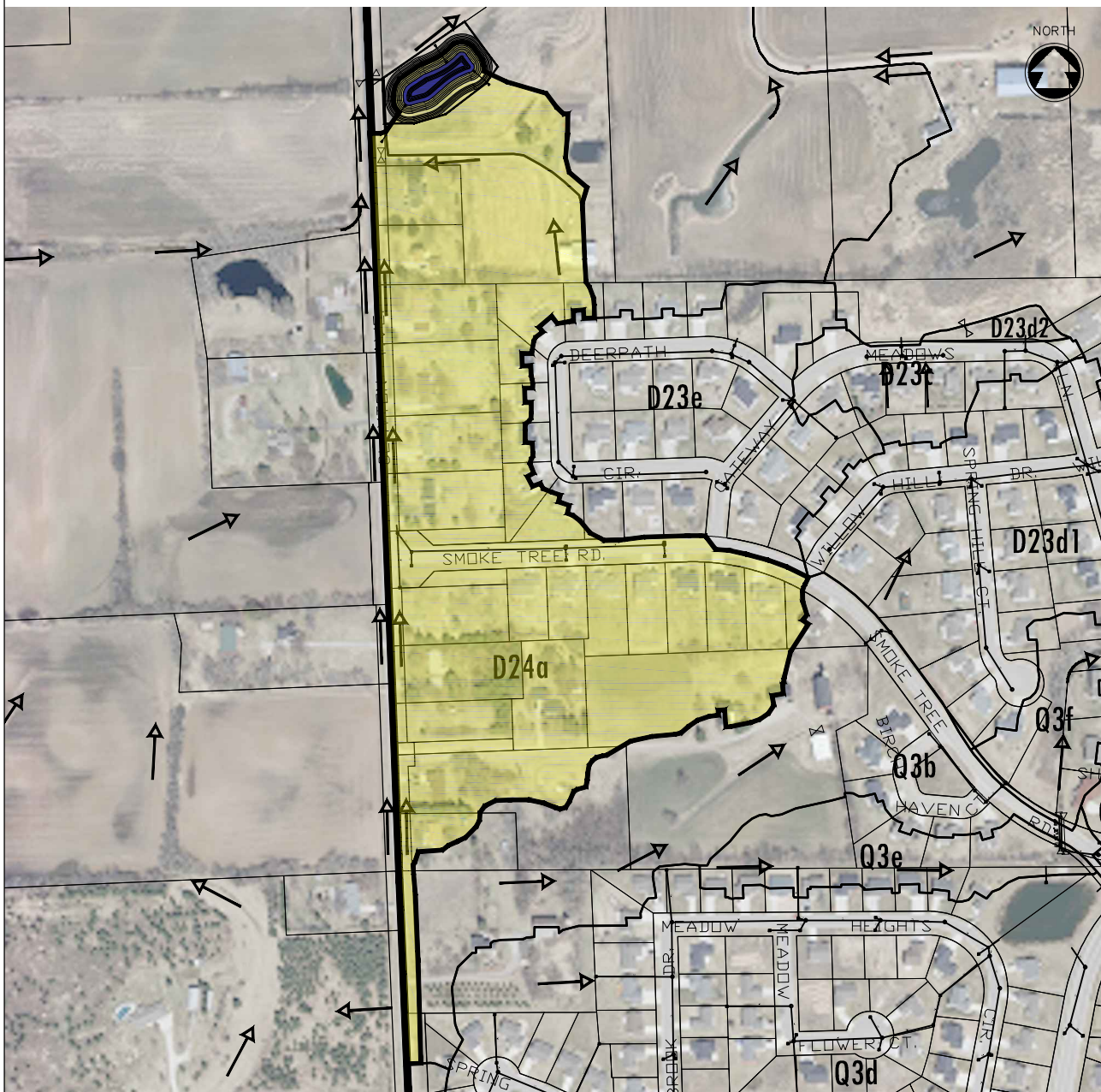
SITE INFORMATION:

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|----------------------------------|-------------------------|
| Municipality: TOWN OF MENASHA | Date: DECEMBER, 2013 |
| Proposed BMP Name: CLAYTON POND | Initials: AWS |

DRAINAGE AREA:

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|------------------------------------|---------------------------------------------|--------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: D23a2, D24a | Total Drainage Area: 26.4 acres |
| Imperviousness (Future): 23.4 % | Runoff Curve Number (Future): 80 | Water Quality Volume (Future): 0.86 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

Groundwater Depth (ft): <1 ft

Remediation:

☐ Yes ☒ No

Wetland: ☒ Potential ☐ Yes ☐ No

Bedrock Depth (in): >60 in

Historical:

☐ Yes ☒ No

Public Well < 400 ft: ☐ Yes ☒ No

USDA Soil Texture: POYGAN SILTY CLAY LOAM 100-Year Floodplain: ☐ Yes ☒ No

Private Well < 100 ft: ☐ Yes ☒ No

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Outfall via storm sewer to the adjacent stream north of the pond.

Infrastructure modifications or flow diversions required for retrofit:

Divert the east Clayton Ave. ditch and the swale SE of the pond into the pond via storm sewer.

Site access for future BMP maintenance:

Access is from Clayton Avenue.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Potential utility conflicts, wetlands, high groundwater, private property.

Approx. Size of BMP Retrofit:

0.23 acre permanent pool

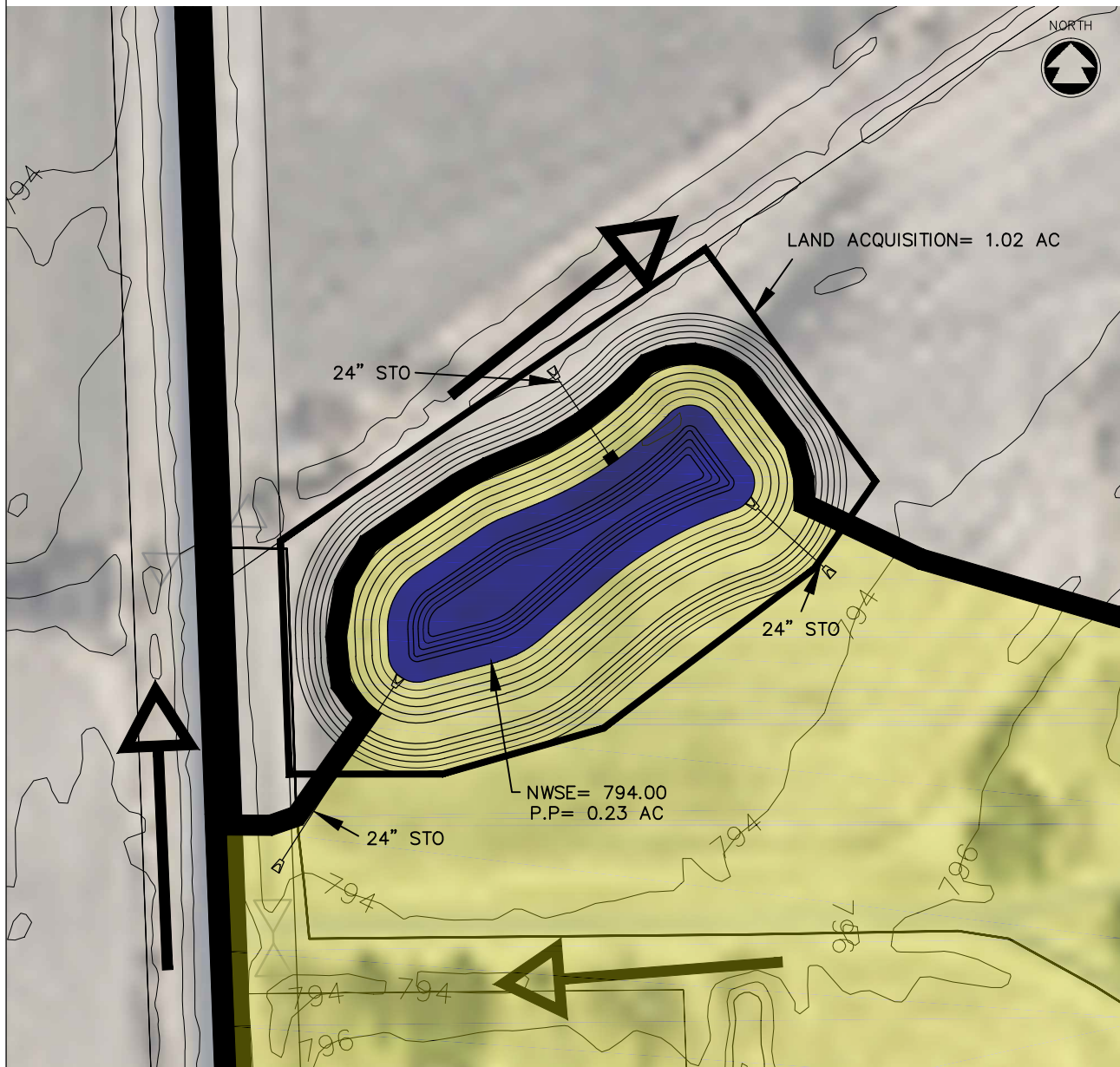
Approx. Land Required (ac):

1.02 acres

Estimated Cost:

\$125,000

Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-E2a1

McM PROJECT NO: M0003-910495

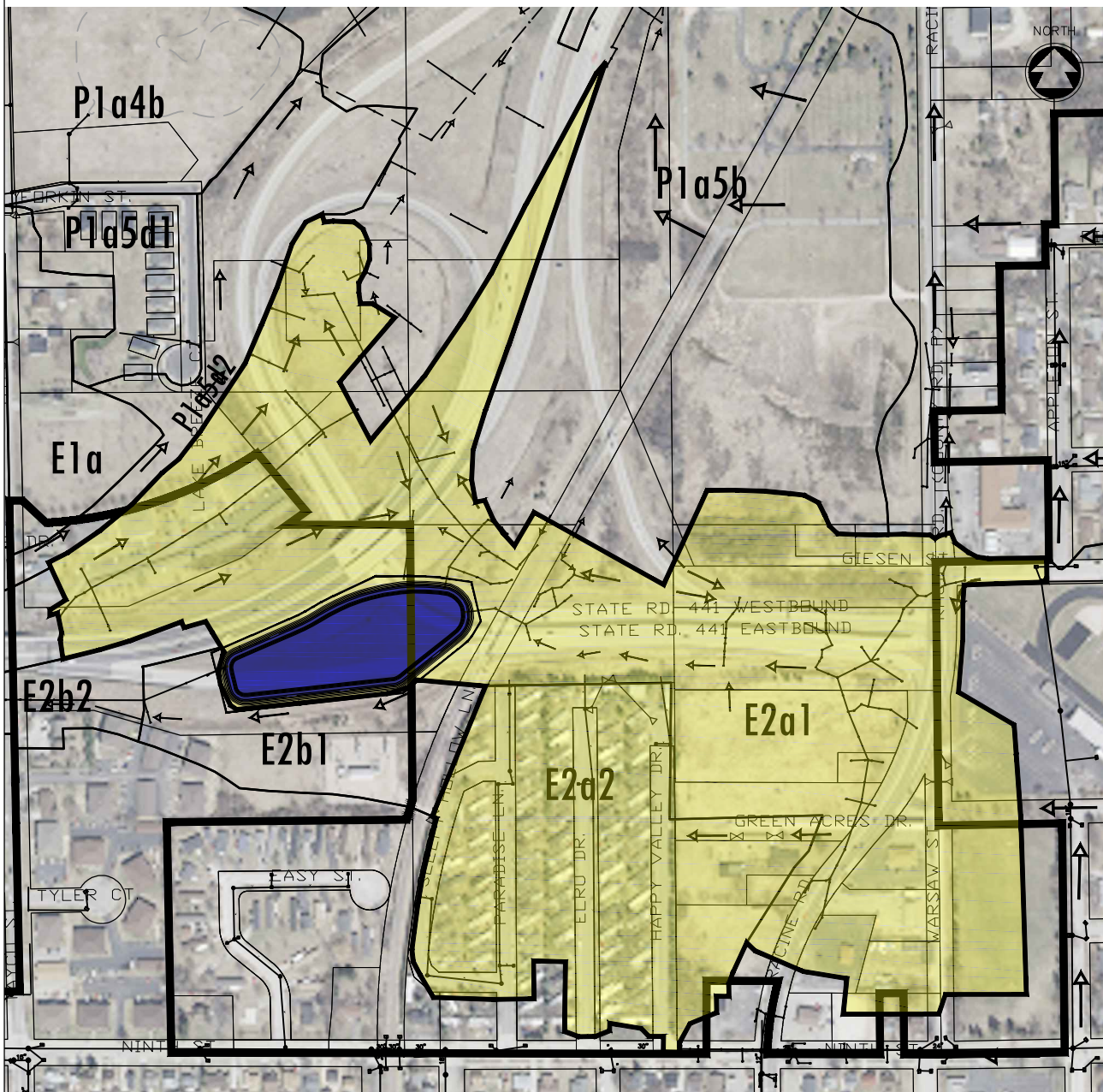
SITE INFORMATION:

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|----------------------------------|-------------------------|
| Municipality: TOWN OF MENASHA | Date: DECEMBER, 2013 |
| Proposed BMP Name: DOT POND 2 | Initials: AWS |

DRAINAGE AREA:

| | | |
|------------------------------------|--------------------------------------|--------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: E2a1 | Total Drainage Area: 56.2 acres |
| Imperviousness (Future): 56.8 % | Runoff Curve Number (Future): 88 | Water Quality Volume (Future): 3.94 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

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|-------------------------|------------------------|----------------------|---------------------------------------------------------------------|------------------------|--------------------------------------------------------------------------------------------------------|
| Groundwater Depth (ft): | <1 ft | Remediation: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Wetland: | <input checked="" type="checkbox"/> Potential <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Bedrock Depth (in): | >60 in | Historical: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Public Well < 400 ft: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| USDA Soil Texture: | NEENAH SILTY CLAY LOAM | 100-Year Floodplain: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Private Well < 100 ft: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):
Outfall via storm sewer west to the USH 441 ditch

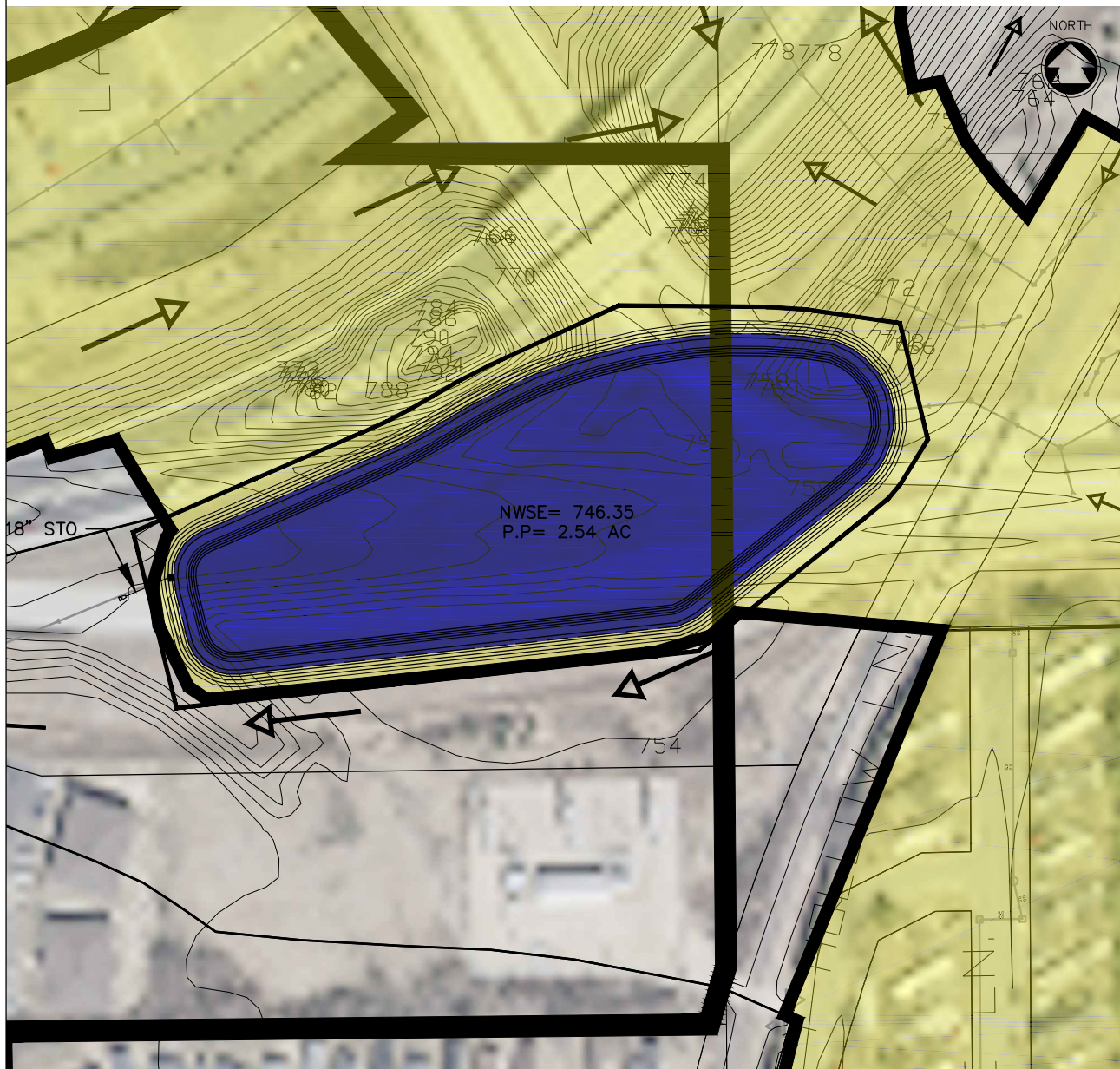
Infrastructure modifications or flow diversions required for retrofit:
Infrastructure will be from Wisconsin DOT USH 441 plans.

Site access for future BMP maintenance:
Site access from USH 441 Right-of-way.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):
Site constraints as indicated on Wisconsin DOT Plans, State R/W, and cost share with State.

| | | |
|-------------------------------|-----------------------------|-----------------|
| Approx. Size of BMP Retrofit: | Approx. Land Required (ac): | Estimated Cost: |
| 2.54 acre permanent pool | 3.42 acres | \$680,000 |

Sketch of Proposed BMP Retrofit:



Municipality:
TOWN OF MENASHA

Date:
DECEMBER, 2013

Proposed BMP Name: WINCHESTER POND

Initials:
AWS

Sub-watershed ID:
FOX RIVER

Tributary Drainage Area IDs:
G1b, G1d, G2a2, G2b, G2c, G3a7, G3b1, G3b2, G3b3, G3b4, G3b5, G3b6, G3c3, G4a4, G4a5, G4a5b, G4b1, G4b2, G4b3, G4c, G4e, G5c, G6b, G7, G8a, G8b1, G8b2a, G8b2b1, G8b2b2, G8b2c, G8b2d, G8b3a, G8b3b, G8b3c, G8b3d, G8c1a, G8c1b, G8c1c, G8c1d, G8c2, G9a1a, G9a1b, G9a2

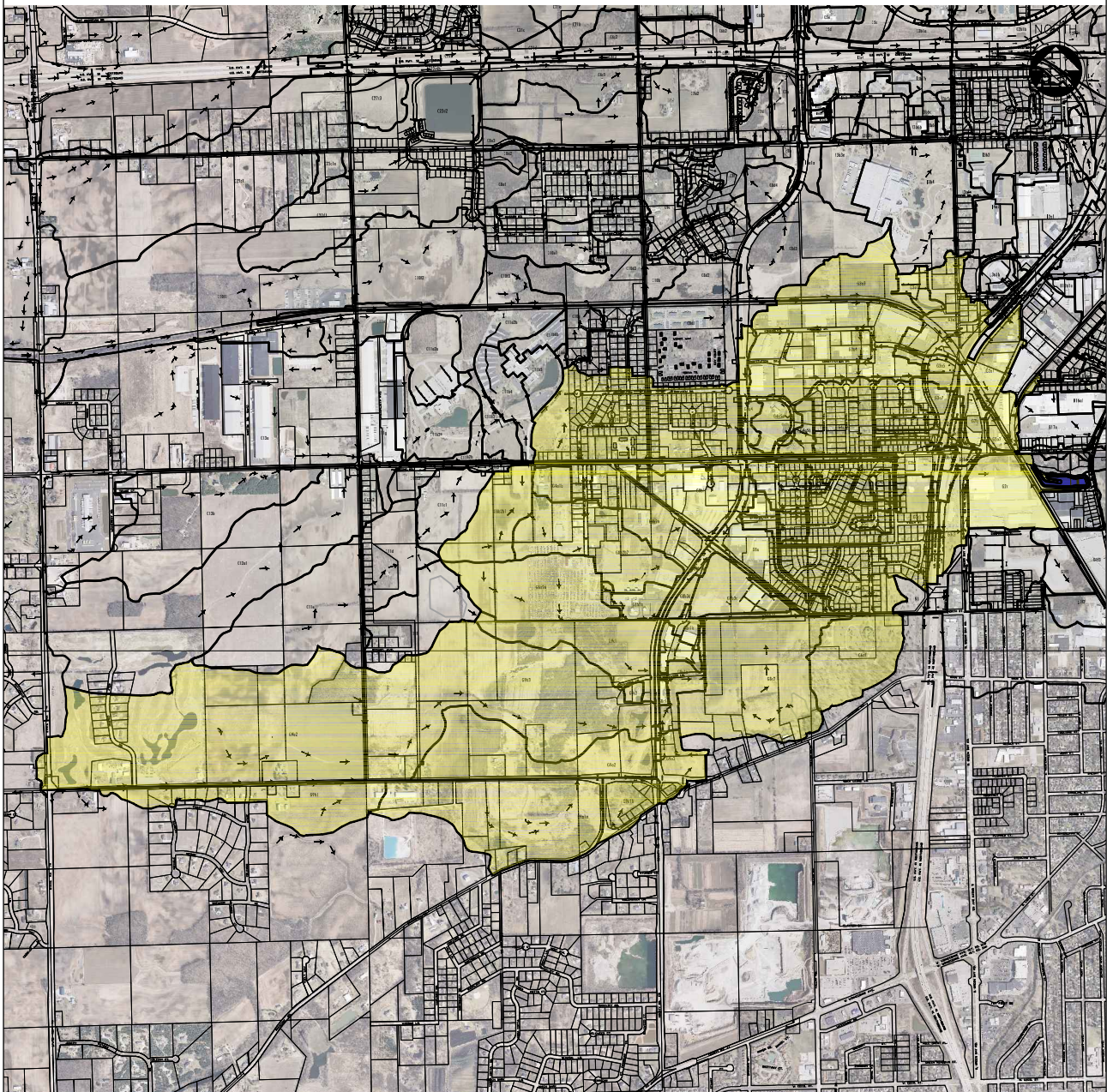
Total Drainage Area:
1800.6 acres

Imperviousness (Future):
46.6 %

| | |
|-------------------------------|----|
| Runoff Curve Number (Future): | 83 |
|-------------------------------|----|

| | |
|--------------------------------|------------------|
| Water Quality Volume (Future): | 105.60 acre-feet |
|--------------------------------|------------------|

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

Groundwater Depth (ft): 5-6 ft

Bedrock Depth (in): >60 in

USDA Soil Texture: OMRO CLAY LOAM

Remediation:

☐ Yes ☒ No

Historical:

☐ Yes ☒ No

100-Year Floodplain:

☐ Yes ☒ No

Wetland: ☐ Potential ☐ Yes ☒ No

Public Well < 400 ft: ☐ Yes ☒ No

Private Well < 100 ft: ☐ Yes ☒ No

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Outfall via storm sewer and overflow into the adjacent navigable stream.

Infrastructure modifications or flow diversions required for retrofit:

Divert the existing navigable stream east of the Railroad (SE of the Green Bay Road/Winchester Road intersection).

Site access for future BMP maintenance:

Access from North Lake Street and/or Blair Avenue.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Online w/navigable stream, utility conflicts, wetlands, groundwater, private property & cost share with City & Town of Neenah.

Approx. Size of BMP Retrofit:

3.12 acre permanent pool

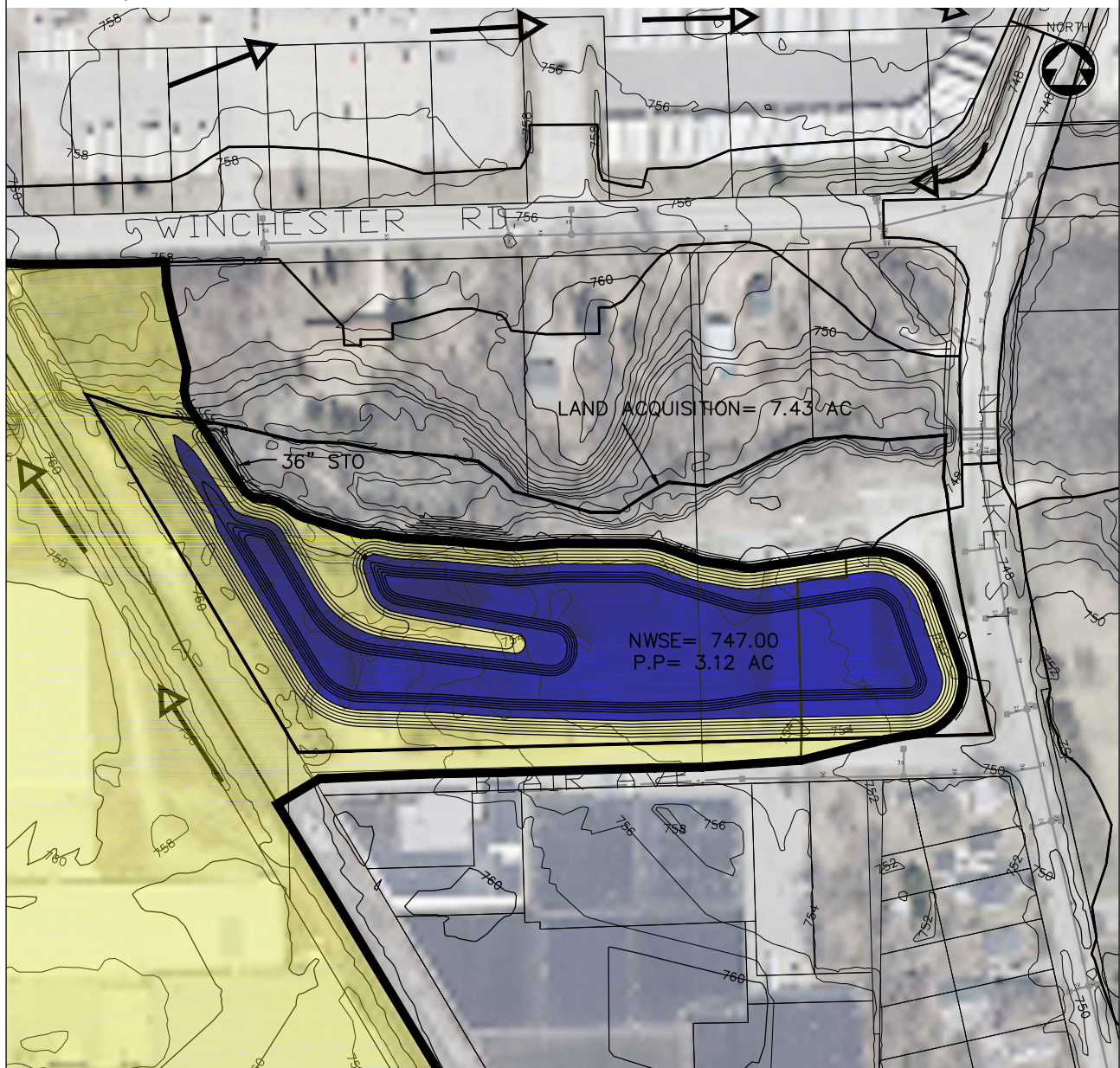
Approx. Land Required (ac):

7.43 acres

Estimated Cost:

\$825,000

Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-G1d

McM PROJECT NO: F0057-9-17-00221

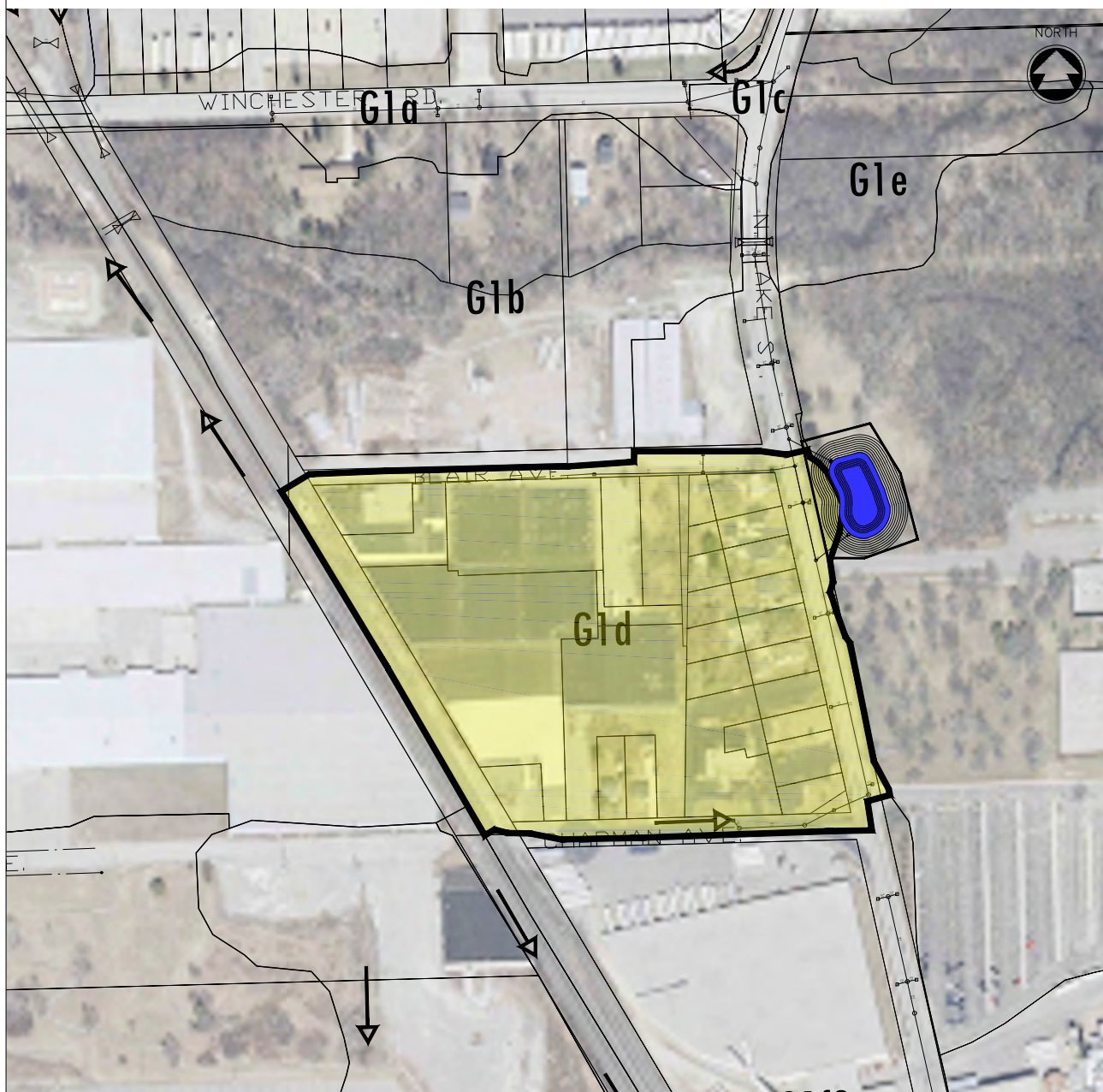
SITE INFORMATION:

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|------------------------------------------|--------------------|
| Municipality: VILLAGE OF FOX CROSSING | Date: MAY, 2018 |
| Proposed BMP Name: BLAIR POND | Initials: AWS |

DRAINAGE AREA:

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|------------------------------------|-------------------------------------|--------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: G1d | Total Drainage Area: 13.2 acres |
| Imperviousness (Future): 66.5 % | Runoff Curve Number (Future): 90 | Water Quality Volume (Future): 1.07 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

Groundwater Depth (ft): > 5 FT
Bedrock Depth (in): > 60 IN
USDA Soil Texture: Omro Clay Loam

Remediation: ☐ Yes ☒ No
Historical: ☐ Yes ☒ No
100-Year Floodplain: ☐ Yes ☒ No

Wetland: ☒ Potential ☐ Yes ☐ No
Public Well < 400 ft: ☐ Yes ☒ No
Private Well < 100 ft: ☐ Yes ☒ No

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):
Outfall via storm sewer to the Lake Street storm sewer.

Infrastructure modifications or flow diversions required for retrofit:
Divert storm sewer on Lake Street through the pond.

Site access for future BMP maintenance:
Access from Lake Street.

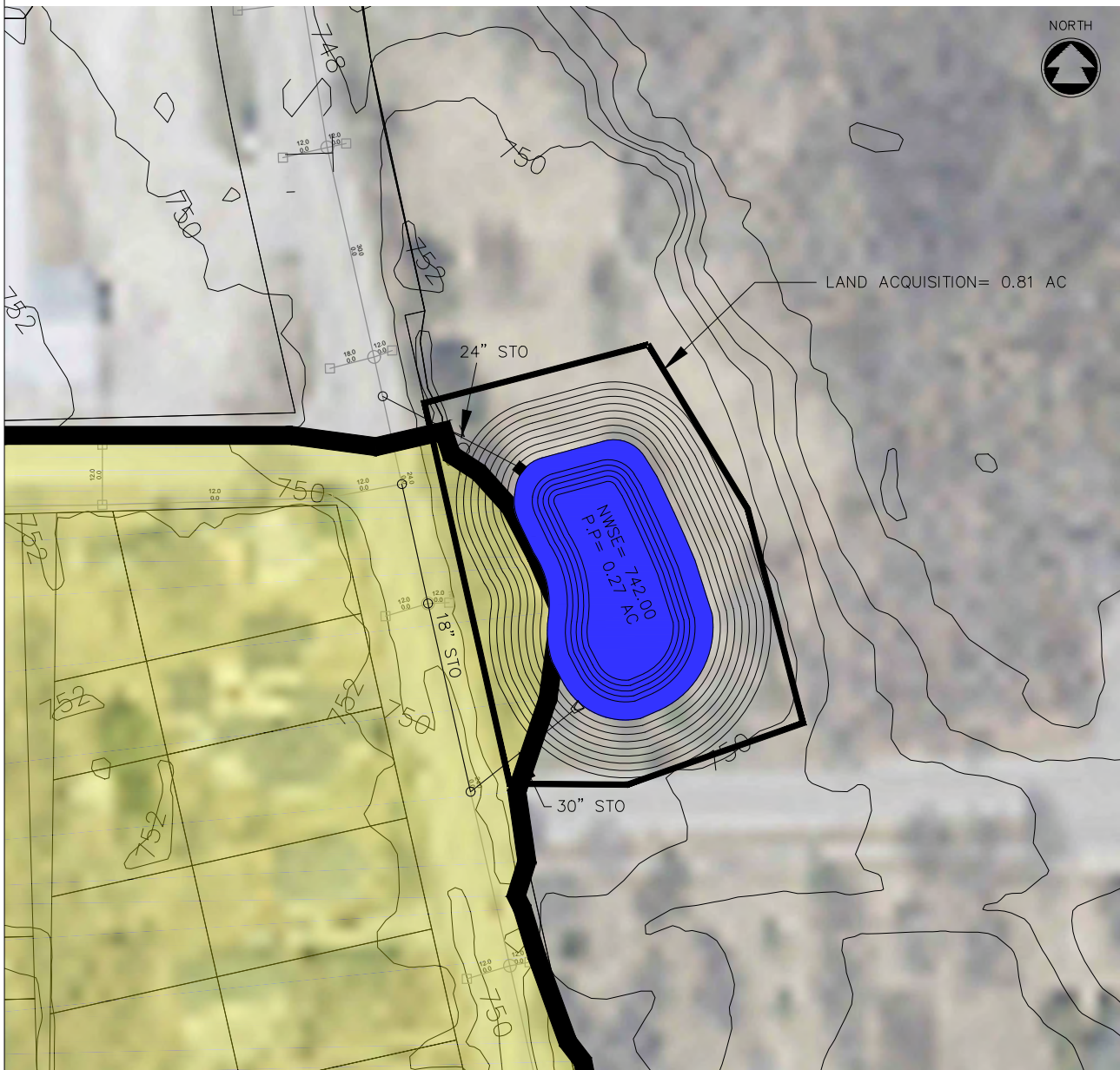
Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):
Rock excavation, groundwater and private property.

Approx. Size of BMP Retrofit:
0.27 acre permanent pool

Approx. Land Required (ac):
0.81 acres

Estimated Cost:
\$232,600

Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-G1f2

McM PROJECT NO: M0003-910495

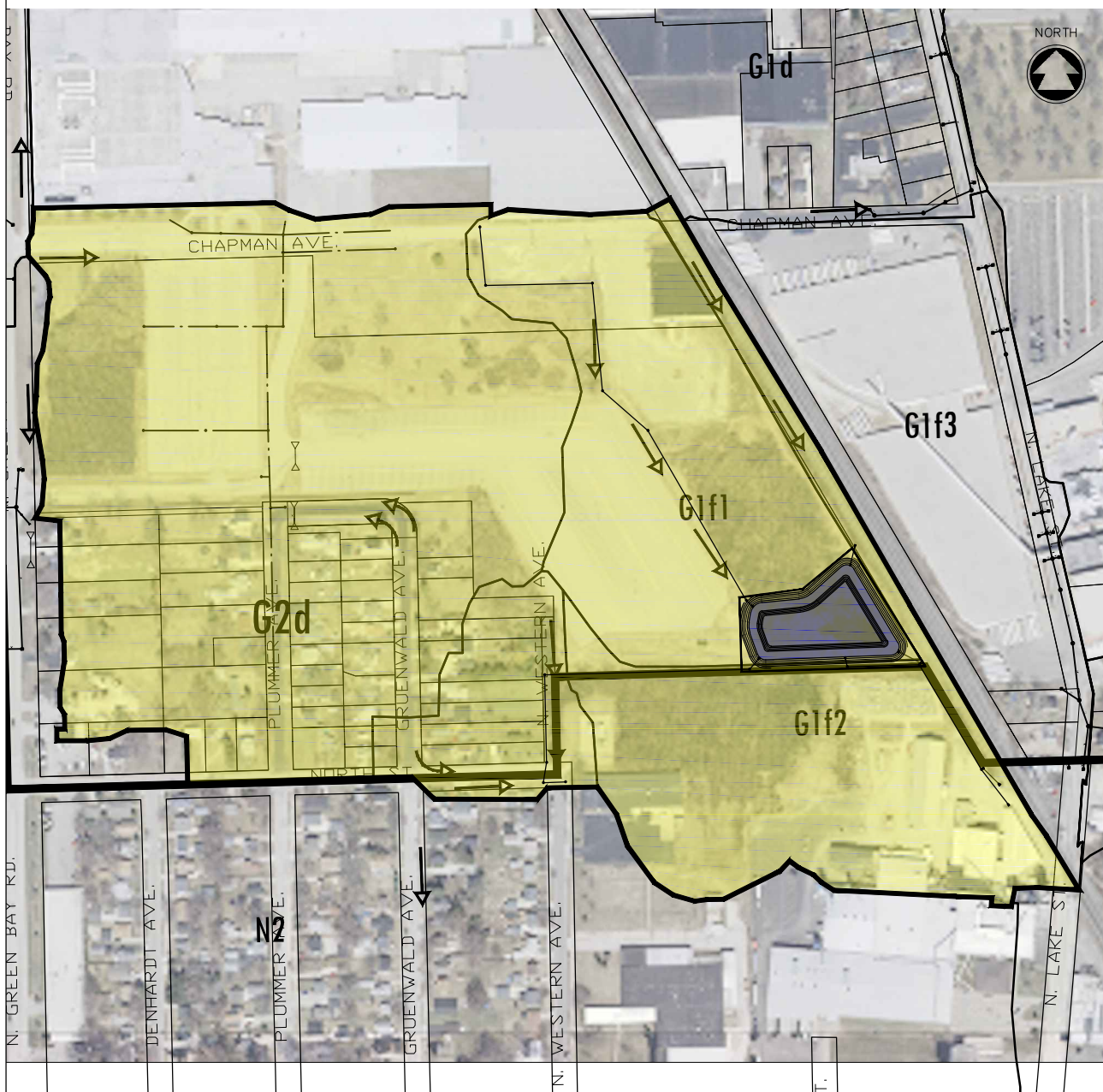
SITE INFORMATION:

| | |
|----------------------------------|-------------------------|
| Municipality: TOWN OF MENASHA | Date: DECEMBER, 2013 |
| Proposed BMP Name: CHAPMAN POND | Initials: AWS |

DRAINAGE AREA:

| | | |
|------------------------------------|--------------------------------------------|--------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: G1f1, G1f2 | Total Drainage Area: 66.1 acres |
| Imperviousness (Future): 63.0 % | Runoff Curve Number (Future): 89 | Water Quality Volume (Future): 5.10 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

Groundwater Depth (ft): 2-3 ft Remediation: ☐ Yes ☒ No Wetland: ☒ Potential ☐ Yes ☐ No
Bedrock Depth (in): >60 in Historical: ☐ Yes ☒ No Public Well < 400 ft: ☐ Yes ☒ No
USDA Soil Texture: UDORTHENTS 100-Year Floodplain: ☐ Yes ☒ No Private Well < 100 ft: ☐ Yes ☒ No

Wetland: ☒ Potential ☐ Yes ☐ No
Public Well < 400 ft: ☐ Yes ☒ No
Private Well < 100 ft: ☐ Yes ☒ No

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):
Outfall via storm sewer southeast to the west Railroad right-of-way ditch.

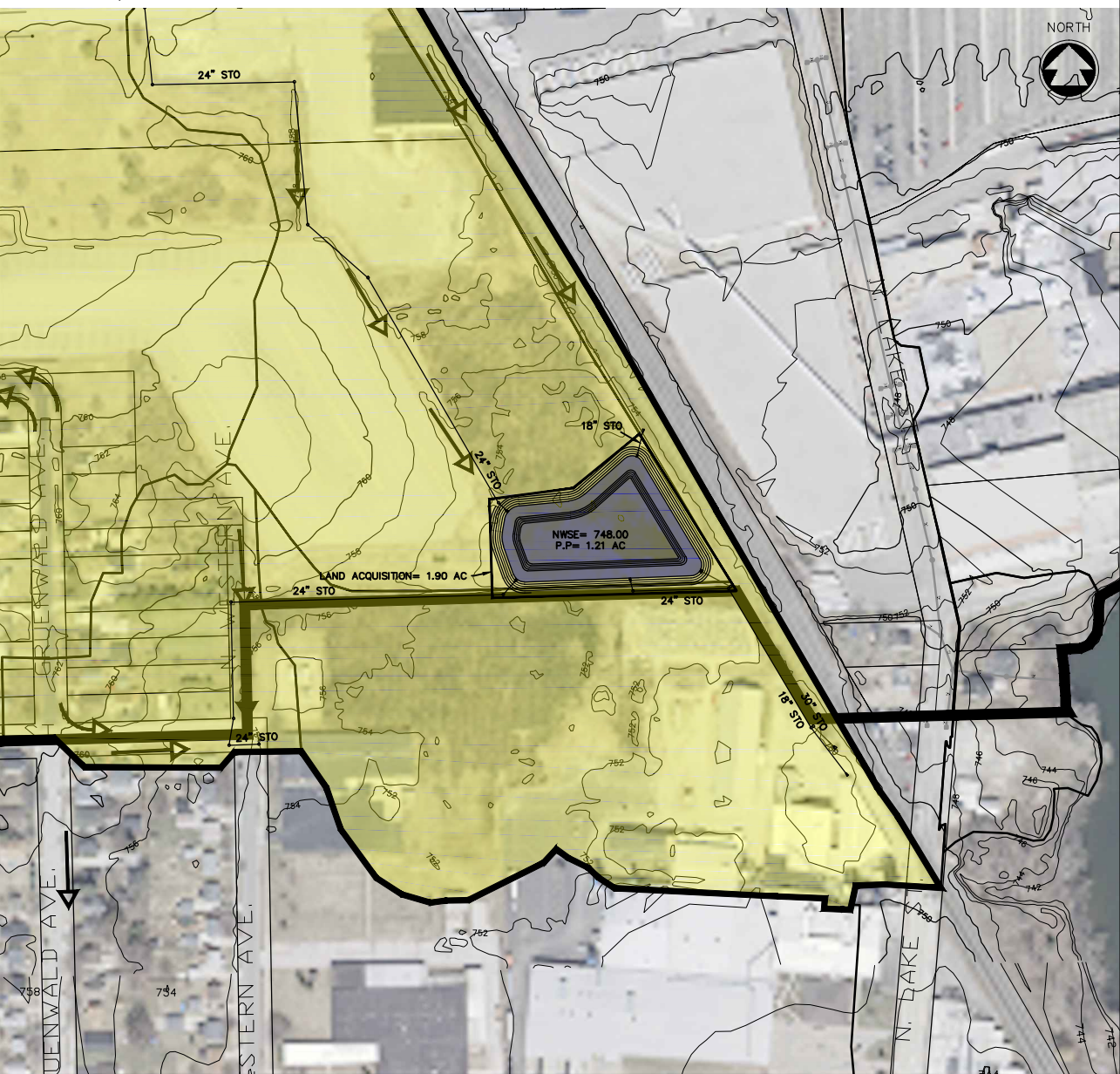
Infrastructure modifications or flow diversions required for retrofit:
Divert storm sewer from north of the property (near Chapman Ave) and ditches on North St and from the west RR R/W to the pond.

Site access for future BMP maintenance:
An easement shall be obtained through the property or from North Street for access.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):
Potential utility conflicts, storm sewer depths, wetlands, high groundwater, private property & cost share with City of Neenah.

| | | |
|-----------------------------------------------------------|-------------------------------------------|------------------------------|
| Approx. Size of BMP Retrofit: 1.21 acre permanent pool | Approx. Land Required (ac): 1.90 acres | Estimated Cost: \$605,000 |
|-----------------------------------------------------------|-------------------------------------------|------------------------------|

Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-G2c

McM PROJECT NO: M0003-910495

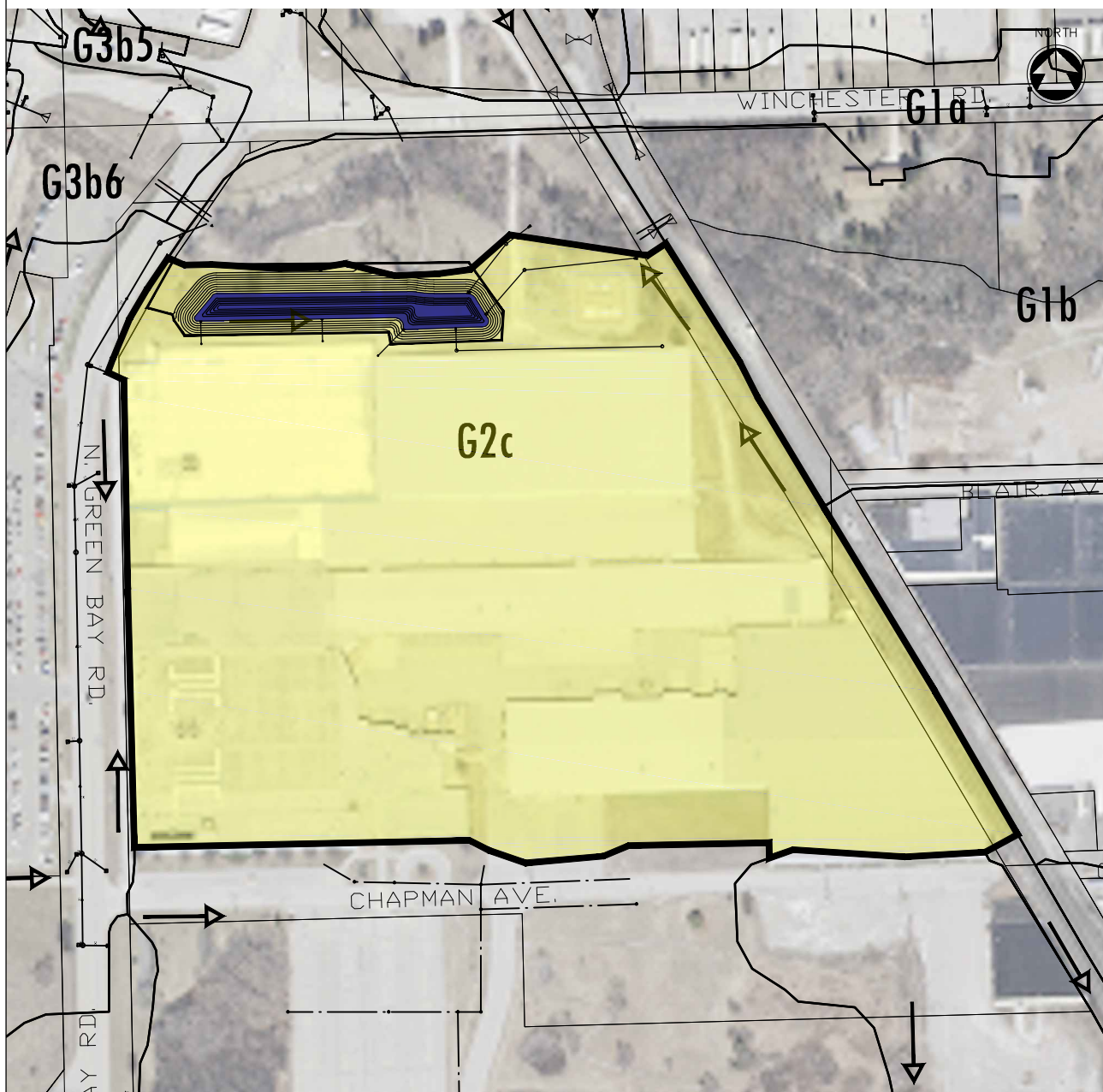
SITE INFORMATION:

| | |
|-----------------------------------|-------------------------|
| Municipality: TOWN OF MENASHA | Date: DECEMBER, 2013 |
| Proposed BMP Name: PROLAMINA POND | Initials: AWS |

DRAINAGE AREA:

| | | |
|------------------------------------|-------------------------------------|--------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: G2c | Total Drainage Area: 29.4 acres |
| Imperviousness (Future): 68.9 % | Runoff Curve Number (Future): 90 | Water Quality Volume (Future): 2.46 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

Groundwater Depth (ft): 5-6 ft

Bedrock Depth (in): >60 in

USDA Soil Texture: OMRO CLAY LOAM

Remediation:

☐ Yes ☒ No

Historical:

☐ Yes ☒ No

100-Year Floodplain:

☐ Yes ☒ No

Wetland: ☐ Potential ☐ Yes ☒ No

Public Well < 400 ft: ☐ Yes ☒ No

Private Well < 100 ft: ☐ Yes ☒ No

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Storm sewer northeast to the adjacent navigable stream.

Infrastructure modifications or flow diversions required for retrofit:

Divert the adjacent roof drains and the west Railroad ditch to the pond via storm sewer.

Site access for future BMP maintenance:

Access is from N. Green Bay Road.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Potential utility conflicts, rock excavation, wetlands, high groundwater, private property.

Approx. Size of BMP Retrofit:

0.56 acre permanent pool

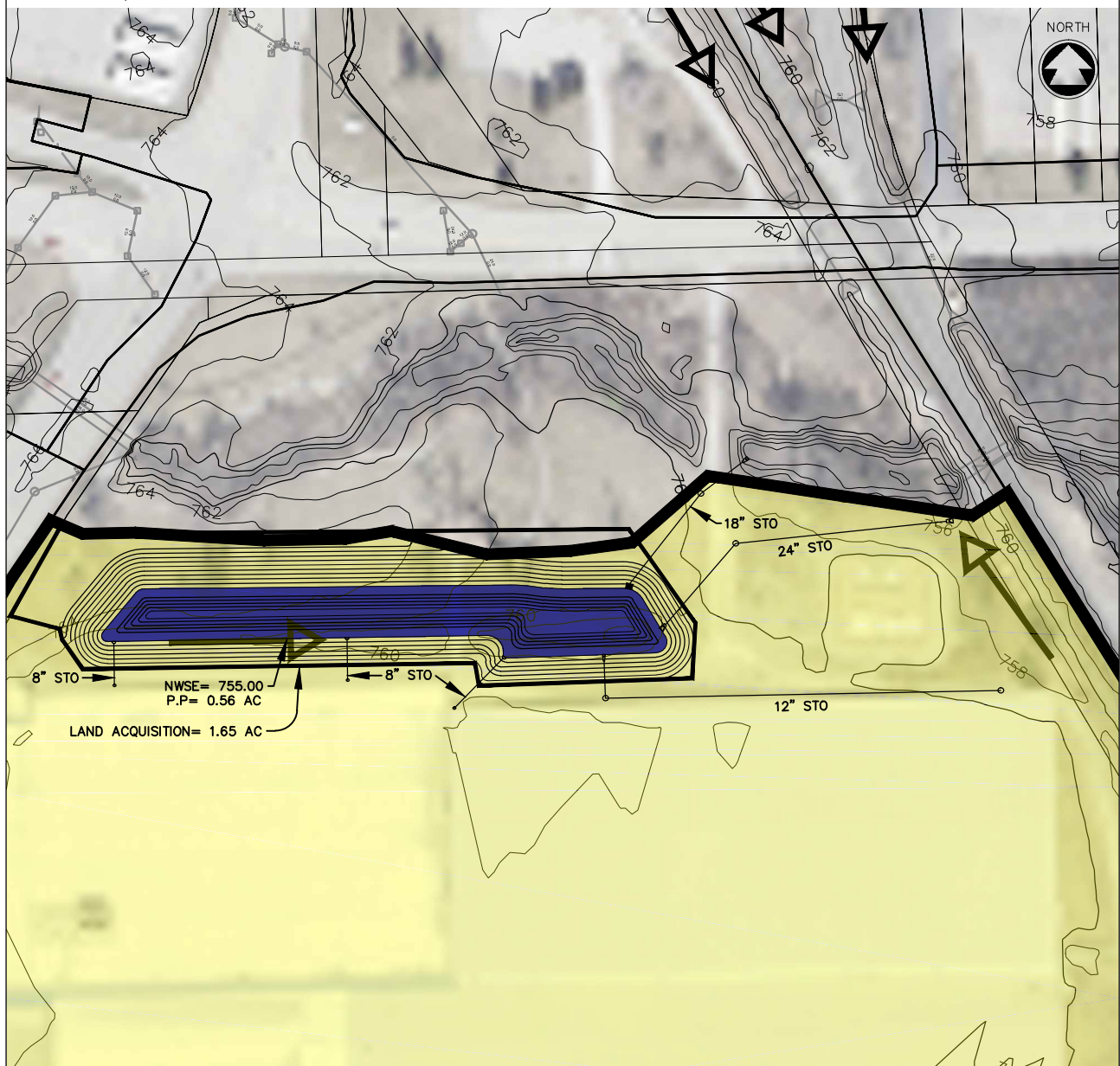
Approx. Land Required (ac):

1.65 acres

Estimated Cost:

\$530,000

Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-G3c3

McM PROJECT NO: M0003-910495

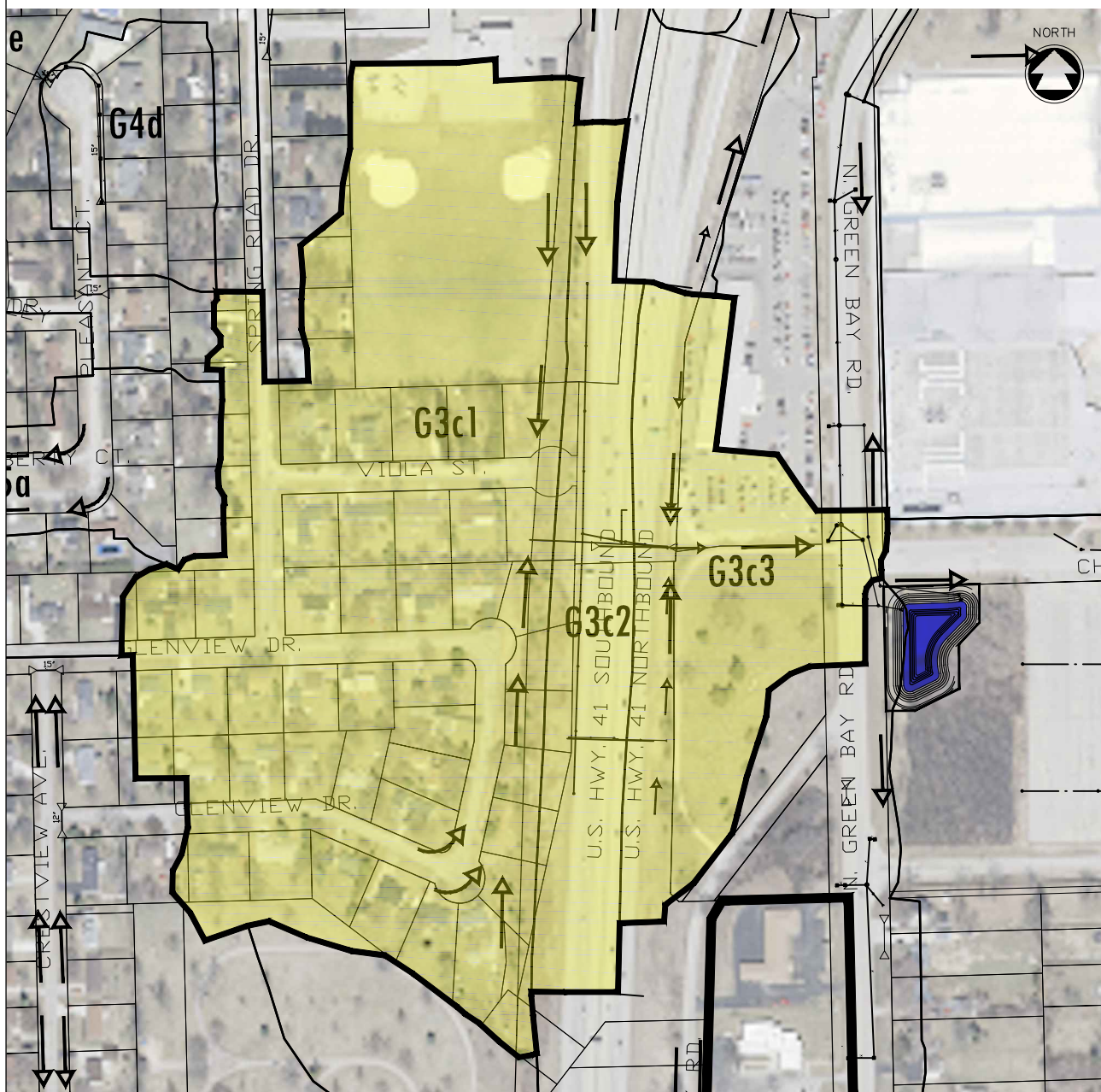
SITE INFORMATION:

| | |
|----------------------------------------|-------------------------|
| Municipality: TOWN OF MENASHA | Date: DECEMBER, 2013 |
| Proposed BMP Name: GREEN BAY ROAD POND | Initials: AWS |

DRAINAGE AREA:

| | | |
|------------------------------------|--------------------------------------------------|--------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: G3c1, G3c2, G3c3 | Total Drainage Area: 40.4 acres |
| Imperviousness (Future): 45.5 % | Runoff Curve Number (Future): 84 | Water Quality Volume (Future): 2.32 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

Groundwater Depth (ft): 5-6 ft

Bedrock Depth (in): >60 in

USDA Soil Texture: CASCO LOAM

Remediation:

☐ Yes ☒ No

Historical:

☐ Yes ☒ No

100-Year Floodplain:

☐ Yes ☒ No

Wetland: ☐ Potential ☐ Yes ☒ No

Public Well < 400 ft: ☐ Yes ☒ No

Private Well < 100 ft: ☐ Yes ☒ No

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Outfall via storm sewer to the existing storm sewer on N. Green Bay Road north of Chapman Avenue.

Infrastructure modifications or flow diversions required for retrofit:

Divert the storm sewer on N. Green Bay Road to the proposed pond.

Site access for future BMP maintenance:

Access is from N. Green Bay Road and/or Chapman Avenue.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Potential utility conflicts, rock excavation, storm sewer depths, wetlands, high groundwater, private property.

Approx. Size of BMP Retrofit:

0.33 acre permanent pool

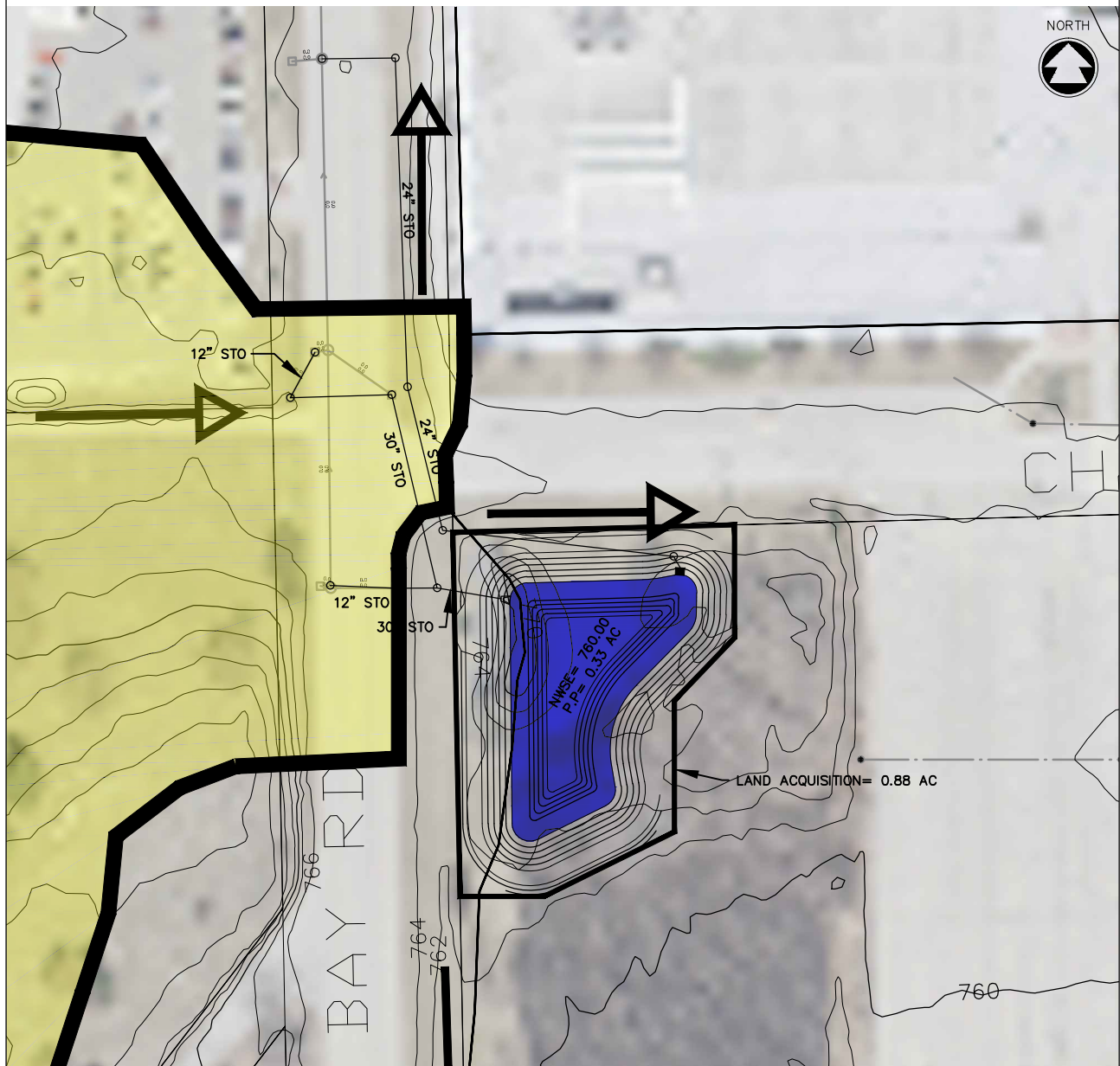
Approx. Land Required (ac):

0.88 acres

Estimated Cost:

\$310,000

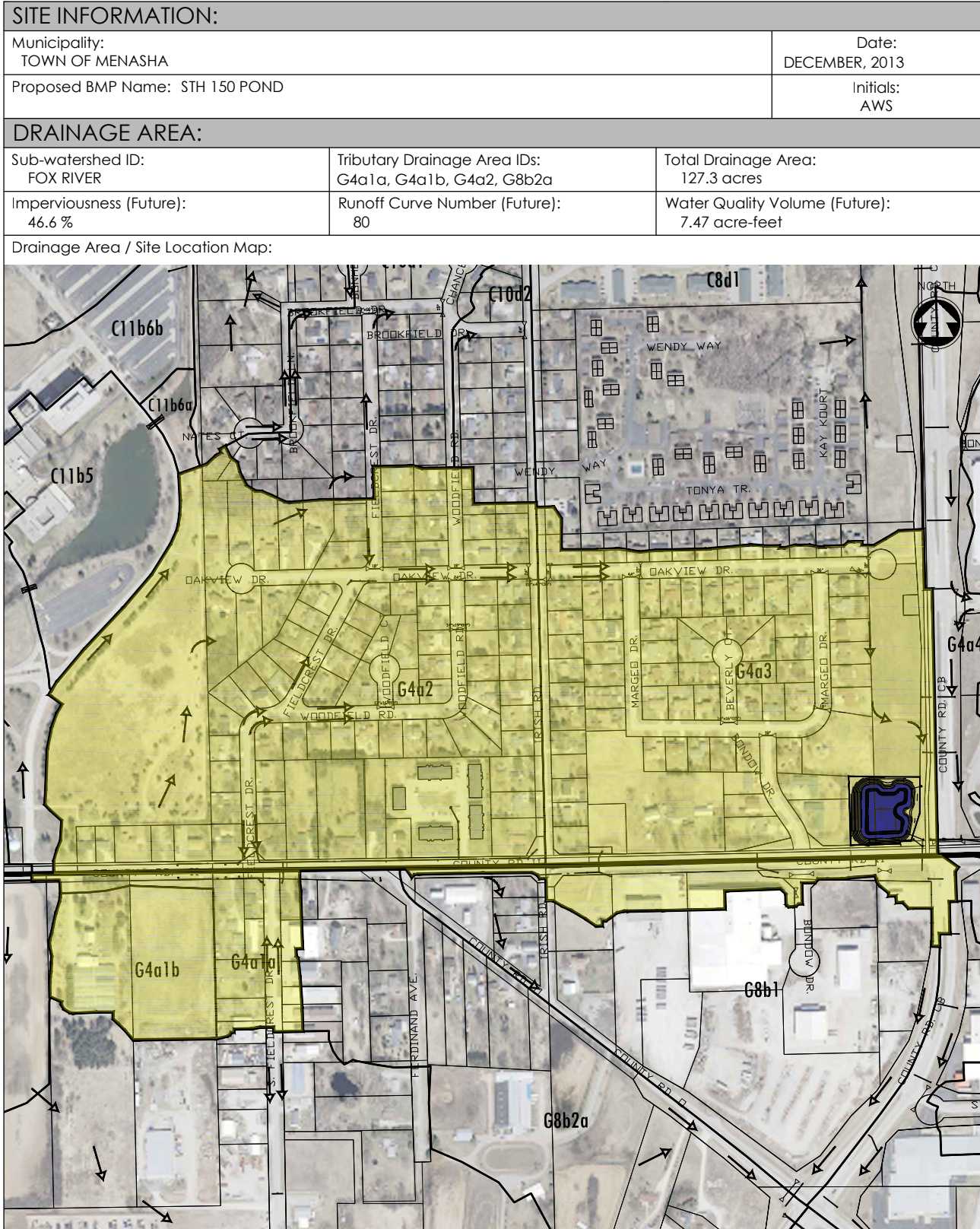
Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-G4a3

McM PROJECT NO: M0003-910495



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

Groundwater Depth (ft): 1-2 ft

Bedrock Depth (in): >60 in

USDA Soil Texture: NENNO LOAM

Remediation:

☐ Yes ☒ No

Historical:

☐ Yes ☒ No

100-Year Floodplain:

☐ Yes ☒ No

Wetland: ☒ Potential ☐ Yes ☐ No

Public Well < 400 ft: ☐ Yes ☒ No

Private Well < 100 ft: ☐ Yes ☒ No

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Outfall via storm sewer southeast to the existing storm sewer along CTH 'Il'.

Infrastructure modifications or flow diversions required for retrofit:

Divert the storm sewer from the CTH 'Il' and CTH 'CB' intersection and the west CTH 'CB' ditch into the pond via storm sewer.

Site access for future BMP maintenance:

Access is from CTH 'Il' and/or CTH 'CB'.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Utility conflicts, rock excavation, storm sewer depth, wetlands, groundwater, private property & 10% Town of Neenah cost share.

Approx. Size of BMP Retrofit:

0.86 acre permanent pool

Approx. Land Required (ac):

1.65 acres

Estimated Cost:

\$885,000

Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-G4c

McM PROJECT NO: M0003-910495

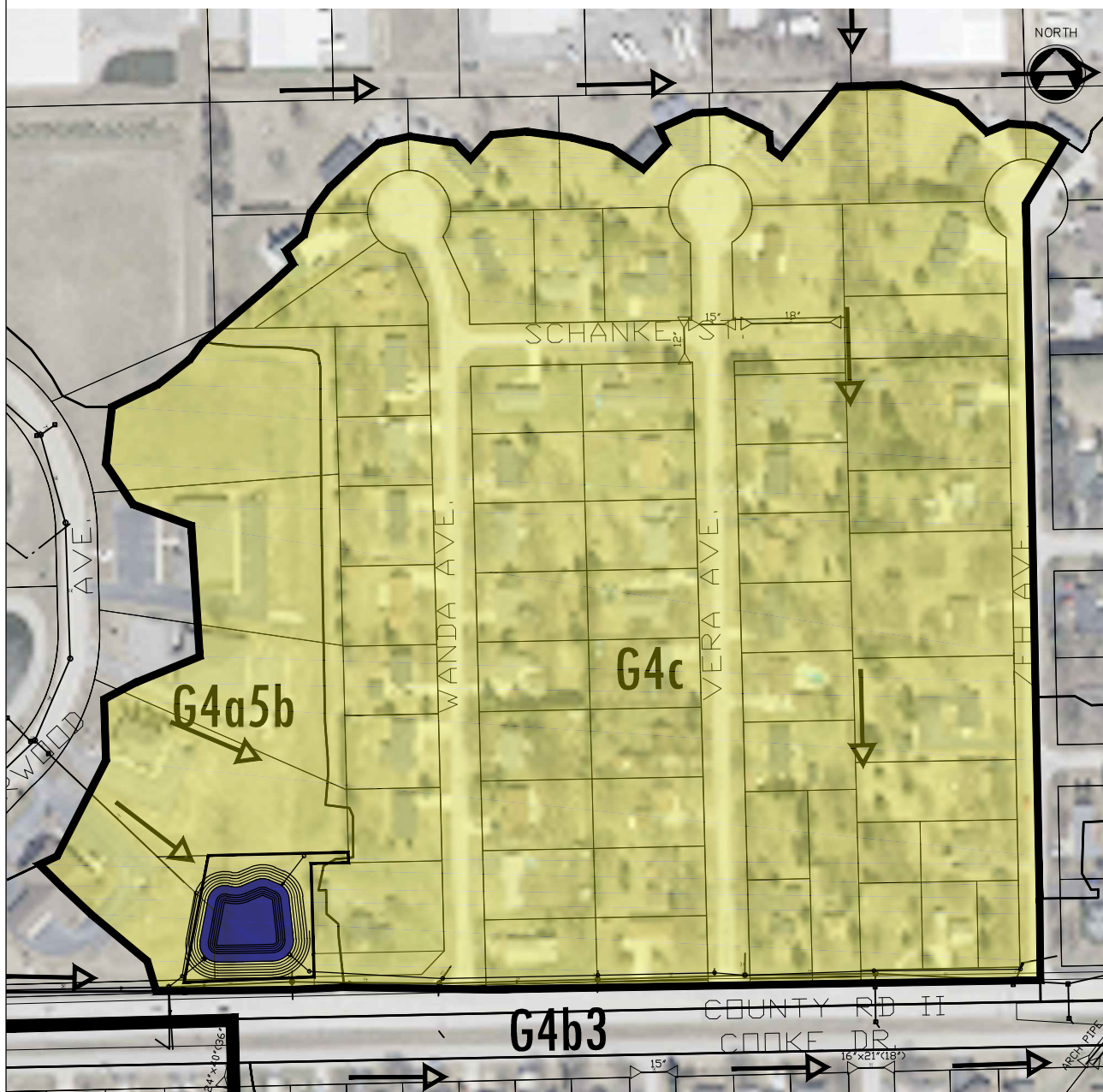
SITE INFORMATION:

| | |
|----------------------------------|-------------------------|
| Municipality: TOWN OF MENASHA | Date: DECEMBER, 2013 |
| Proposed BMP Name: DEERWOOD POND | Initials: AWS |

DRAINAGE AREA:

| | | |
|------------------------------------|--------------------------------------------|--------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: G4a5b, G4c | Total Drainage Area: 35.3 acres |
| Imperviousness (Future): 40.2 % | Runoff Curve Number (Future): 84 | Water Quality Volume (Future): 1.82 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

Groundwater Depth (ft): 1-2 ft
Bedrock Depth (in): >60 in
USDA Soil Texture: NENNO LOAM

Remediation: ☐ Yes ☒ No
Historical: ☐ Yes ☒ No
100-Year Floodplain: ☐ Yes ☒ No

Wetland: ☐ Potential ☐ Yes ☒ No
Public Well < 400 ft: ☐ Yes ☒ No
Private Well < 100 ft: ☐ Yes ☒ No

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):
Outfall via storm sewer into the existing storm sewer along CTH 'II'.

Infrastructure modifications or flow diversions required for retrofit:
Storm sewer relay from the Zeh Dr/CTH 'II' intersection west to the pond & storm sewer to bypass the existing dry pond storm sewer.

Site access for future BMP maintenance:
Access will be from CTH 'II'.

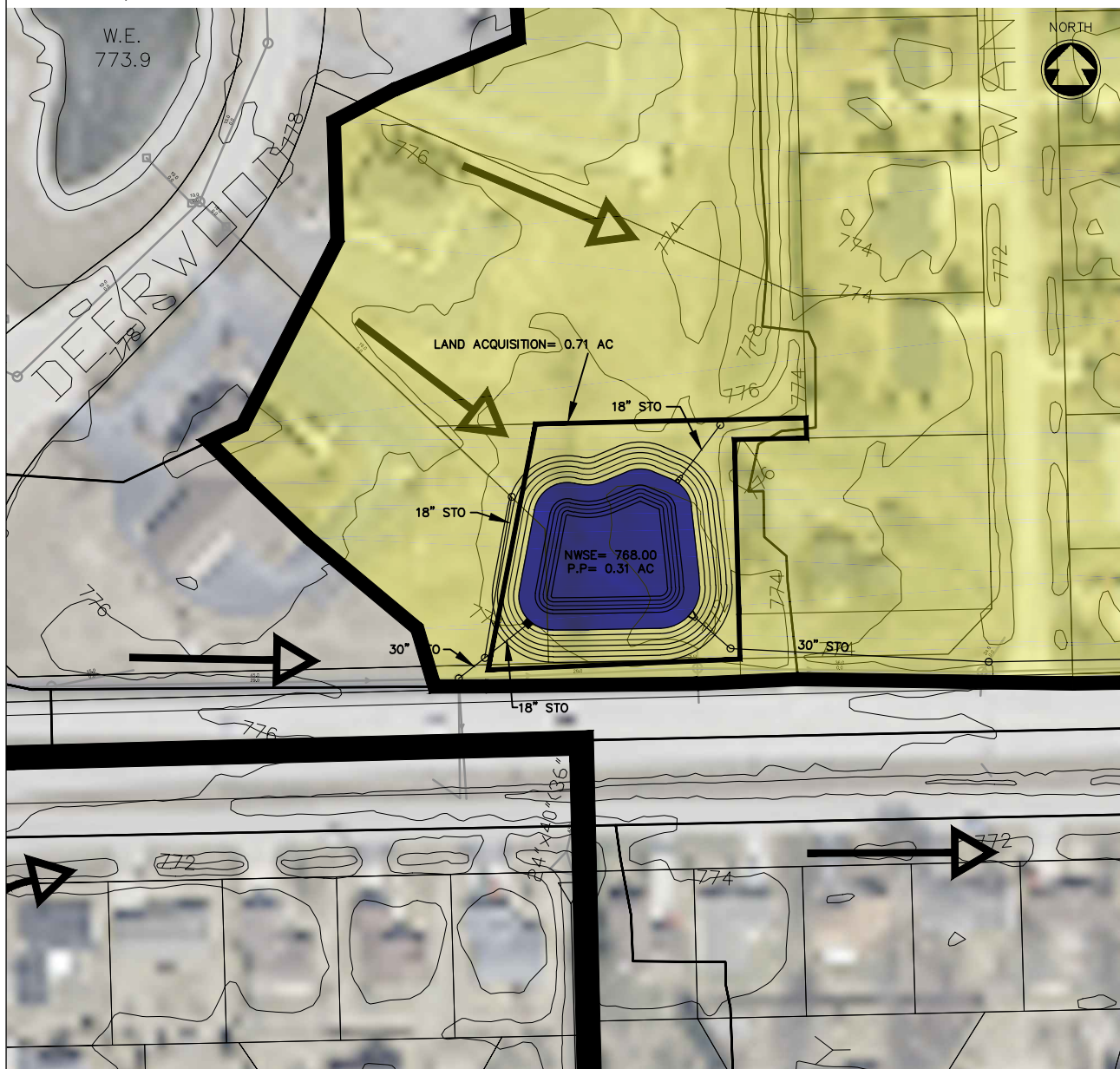
Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):
Potential utility conflicts, rock excavation, storm sewer depths, wetlands, high groundwater, private property.

Approx. Size of BMP Retrofit:
0.31 acre permanent pool

Approx. Land Required (ac):
0.71 acres

Estimated Cost:
\$325,000

Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-G5a

McM PROJECT NO: M0003-910495

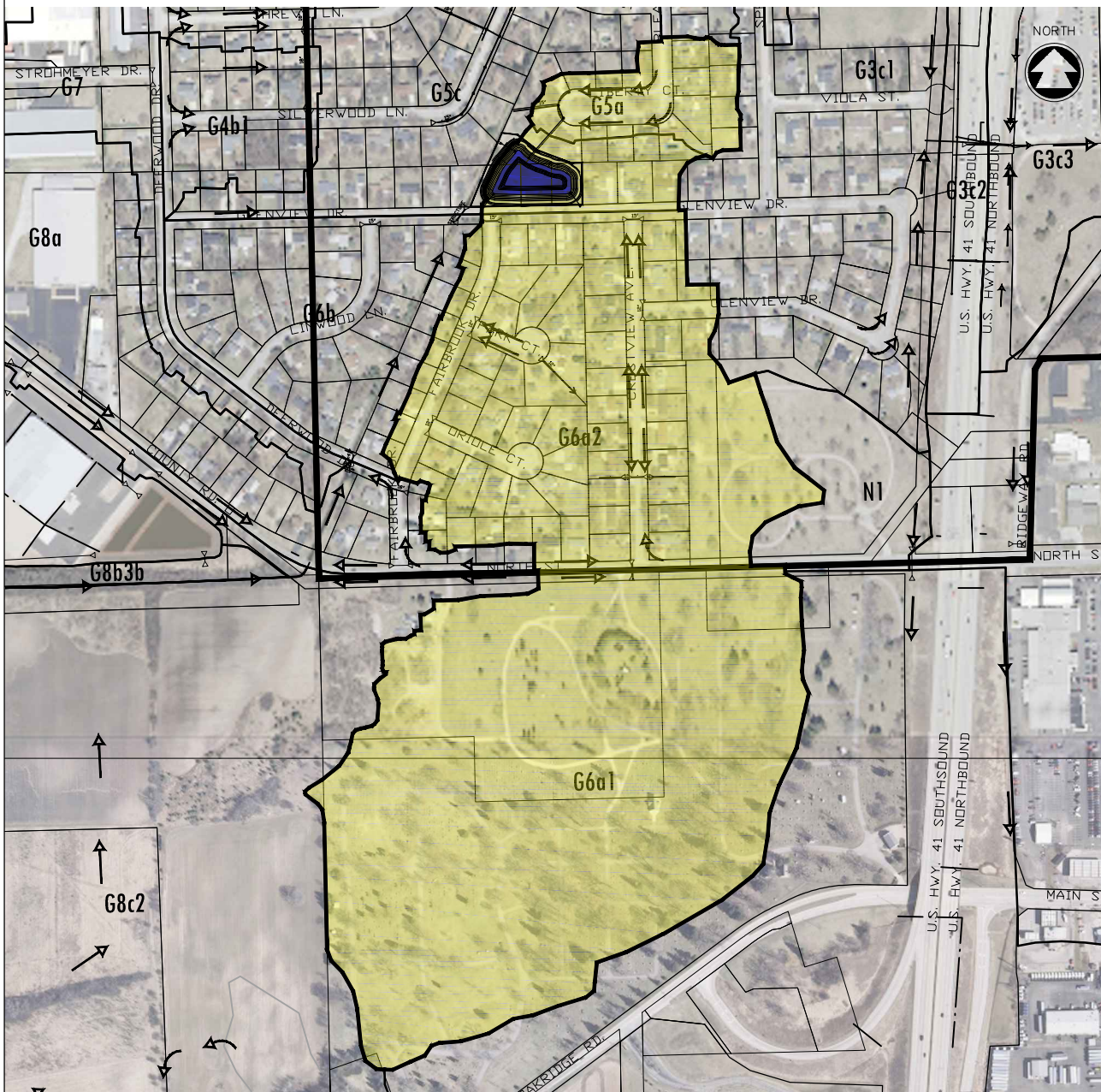
SITE INFORMATION:

| | |
|----------------------------------|-------------------------|
| Municipality: TOWN OF MENASHA | Date: DECEMBER, 2013 |
| Proposed BMP Name: LIBERTY POND | Initials: AWS |

DRAINAGE AREA:

| | | |
|------------------------------------|------------------------------------------------------|--------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: G5a, G5c, G6a1, G6a2 | Total Drainage Area: 77.4 acres |
| Imperviousness (Future): 24.7 % | Runoff Curve Number (Future): 78 | Water Quality Volume (Future): 2.64 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

Groundwater Depth (ft): 1-2 ft

Bedrock Depth (in): 36-48 in

USDA Soil Texture: MANAWA SILTY CLAY LOAM

Remediation:

☐ Yes ☒ No

Historical:

☐ Yes ☒ No

100-Year Floodplain:

☐ Yes ☒ No

Wetland: ☒ Potential ☐ Yes ☐ No

Public Well < 400 ft: ☐ Yes ☒ No

Private Well < 100 ft: ☐ Yes ☒ No

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Outfall via storm sewer directly into Green Valley Ditch.

Infrastructure modifications or flow diversions required for retrofit:

Divert the Glenview Drive ditches and the Liberty Court storm sewer to the pond with proposed storm sewer.

Site access for future BMP maintenance:

Access from Glenview Drive.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Utility conflicts, rock excavation, storm sewer depth, wetlands, groundwater, private property & cost share w/City & Town of Neenah.

Approx. Size of BMP Retrofit:

0.55 acre permanent pool

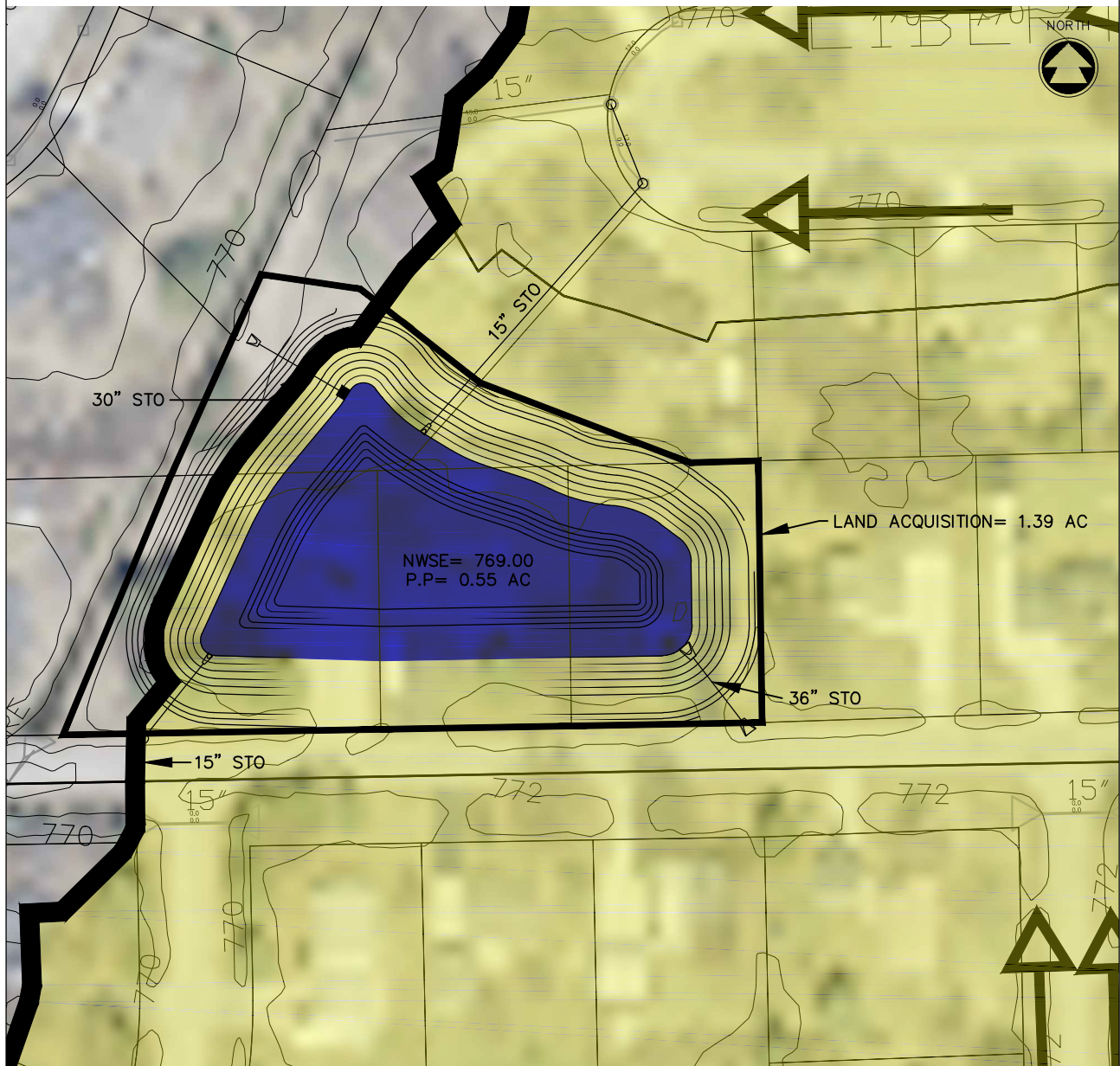
Approx. Land Required (ac):

1.39 acres

Estimated Cost:

\$535,000

Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-G5c

McM PROJECT NO: M0003-910495

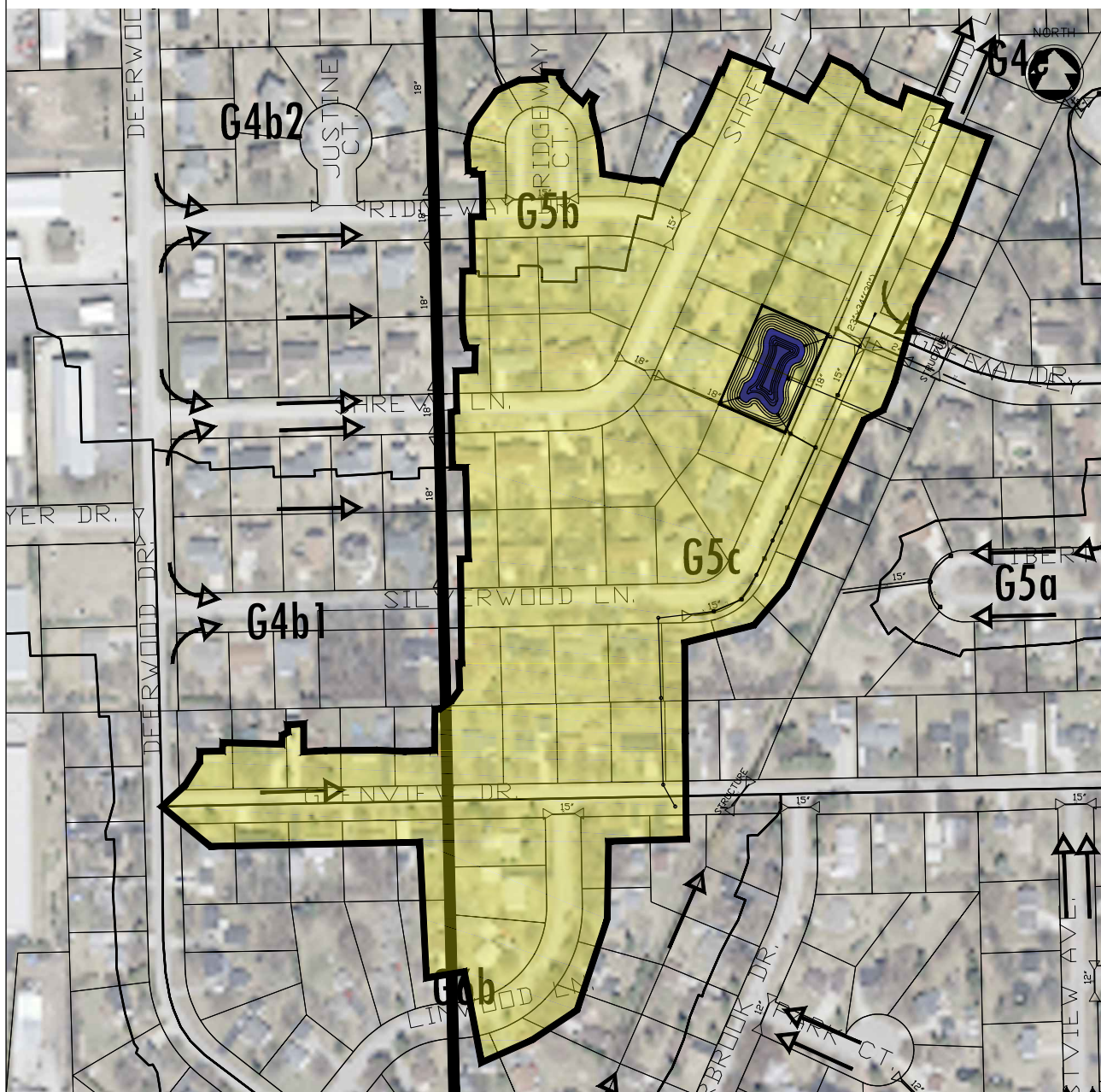
SITE INFORMATION:

| | |
|------------------------------------|-------------------------|
| Municipality: TOWN OF MENASHA | Date: DECEMBER, 2013 |
| Proposed BMP Name: SILVERWOOD POND | Initials: AWS |

DRAINAGE AREA:

| | | |
|------------------------------------|----------------------------------------------------|--------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: G4e, G5b, G5c, G6b | Total Drainage Area: 21.1 acres |
| Imperviousness (Future): 37.6 % | Runoff Curve Number (Future): 83 | Water Quality Volume (Future): 1.03 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

Groundwater Depth (ft): 1-2 ft

Bedrock Depth (in): 36-48 in

USDA Soil Texture: MANAWA SILTY CLAY LOAM

Remediation:

☐ Yes ☒ No

Historical:

☐ Yes ☒ No

100-Year Floodplain:

☐ Yes ☒ No

Wetland: ☒ Potential ☐ Yes ☐ No

Public Well < 400 ft: ☐ Yes ☒ No

Private Well < 100 ft: ☐ Yes ☒ No

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Outfall via storm sewer directly into Green Valley Ditch.

Infrastructure modifications or flow diversions required for retrofit:

Divert the Glenview Drive ditches north to the pond and the Silverwood Drive ditches to the pond via storm sewer.

Site access for future BMP maintenance:

Access from Silverwood Lane.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Potential utility conflicts, rock excavation, wetlands, high groundwater, private property.

Approx. Size of BMP Retrofit:

0.18 acre permanent pool

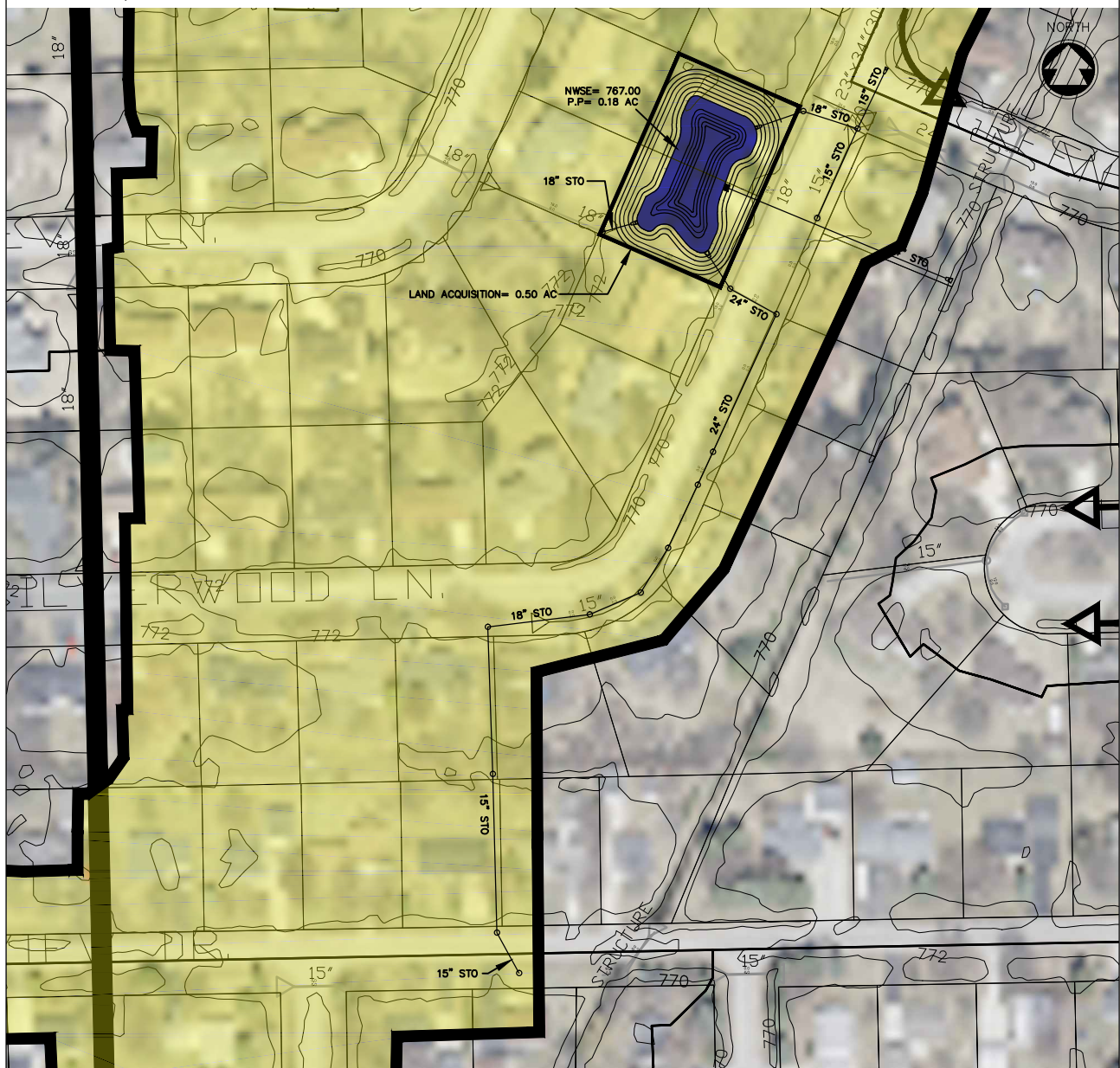
Approx. Land Required (ac):

0.50 acres

Estimated Cost:

\$480,000

Sketch of Proposed BMP Retrofit:



BMP ID: P-BMP-I1c1

| SITE INFORMATION: | |
|----------------------------------|-------------------------|
| Municipality: TOWN OF MENASHA | Date: DECEMBER, 2013 |
| Proposed BMP Name: DOT POND 7 | Initials: AWS |

| | | |
|------------------------------------|--------------------------------------|--------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: 11c1 | Total Drainage Area: 13.0 acres |
| Imperviousness (Future): 72.7 % | Runoff Curve Number (Future): 90 | Water Quality Volume (Future): 1.15 acre-feet |

PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

Groundwater Depth (ft): 2-3 ft

Bedrock Depth (in): >60 in

USDA Soil Texture: WINNECONNE SILTY CLAY LOAM

Remediation:

☐ Yes ☒ No

Historical:

☐ Yes ☒ No

100-Year Floodplain:

☐ Yes ☒ No

Wetland: ☐ Potential ☐ Yes ☒ No

Public Well < 400 ft: ☐ Yes ☒ No

Private Well < 100 ft: ☐ Yes ☒ No

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Outfall via storm sewer NE of the proposed pond to the USH 41 ditch.

Infrastructure modifications or flow diversions required for retrofit:

Infrastructure as designed by Wisconsin DOT.

Site access for future BMP maintenance:

Access is from USH 41 and associated ramps.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Potential utility conflicts, high groundwater, State R/W & cost share with State.

Approx. Size of BMP Retrofit:

0.36 acre permanent pool

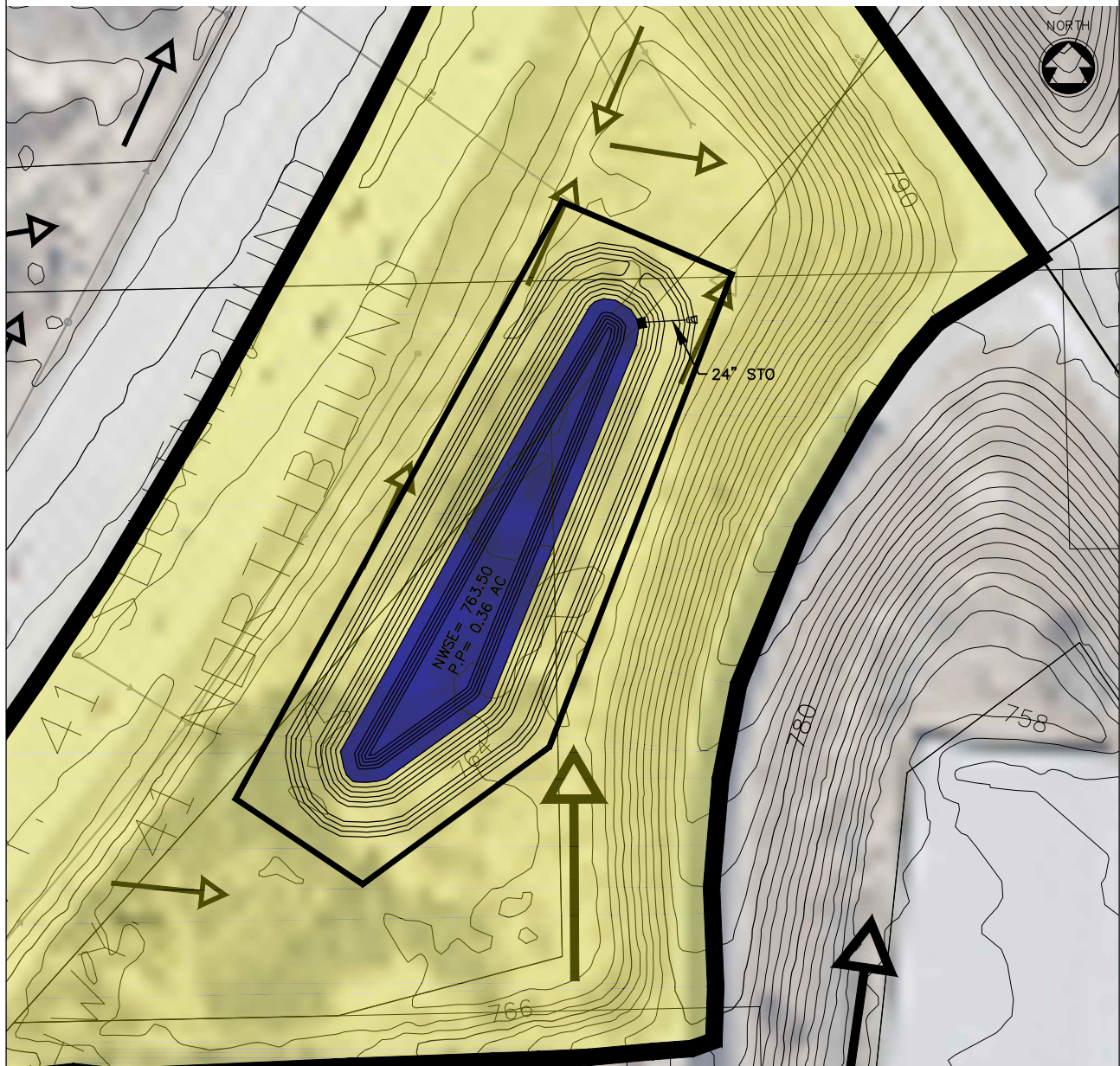
Approx. Land Required (ac):

1.25 acres

Estimated Cost:

\$115,000

Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-I2a2

McM PROJECT NO: M0003-910495

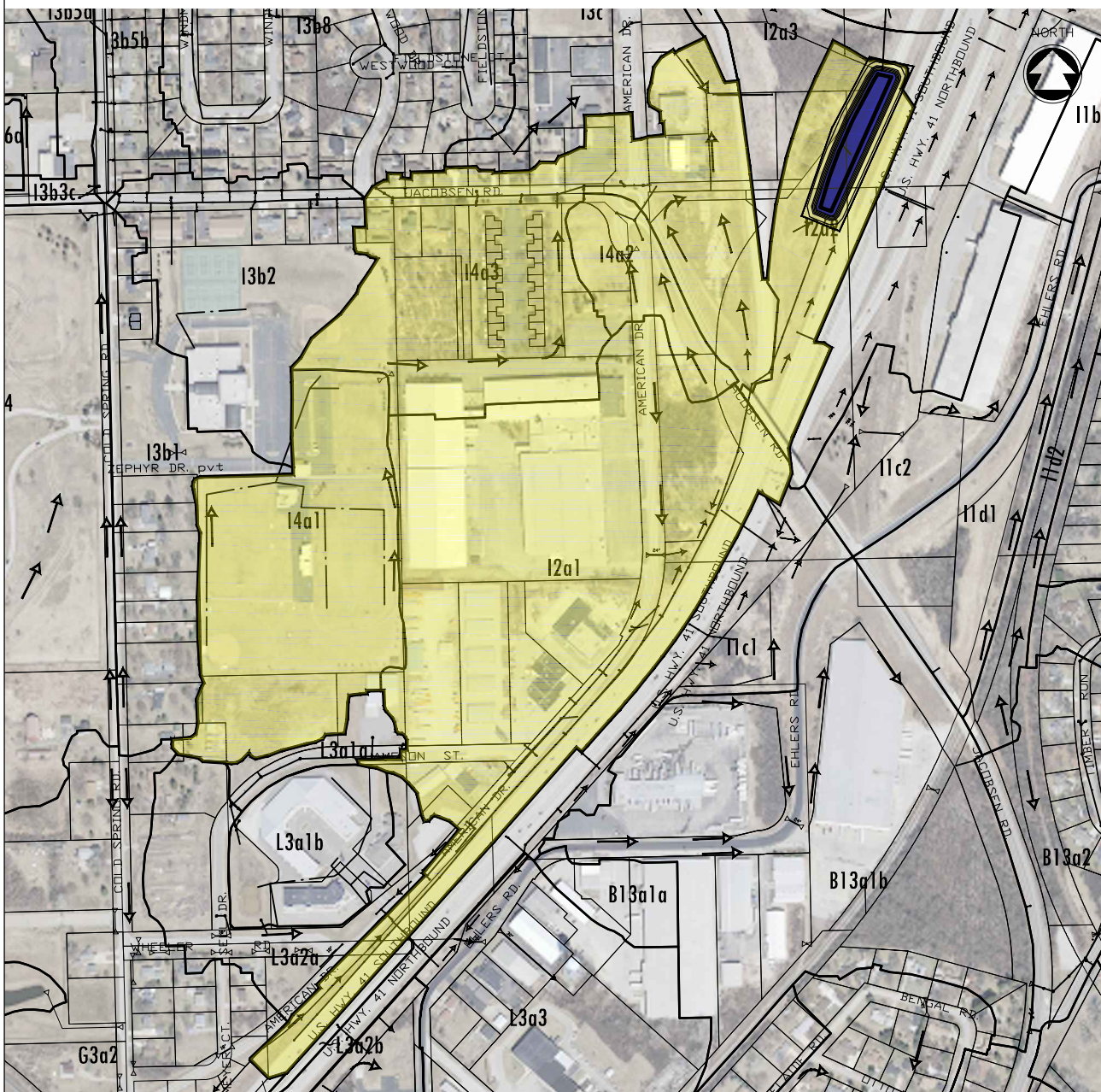
SITE INFORMATION:

| | |
|----------------------------------|-------------------------|
| Municipality: TOWN OF MENASHA | Date: DECEMBER, 2013 |
| Proposed BMP Name: DOT POND 6 | Initials: AWS |

DRAINAGE AREA:

| | | |
|------------------------------------|--------------------------------------------|--------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: I2a1, I2a2 | Total Drainage Area: 95.5 acres |
| Imperviousness (Future): 63.9 % | Runoff Curve Number (Future): 88 | Water Quality Volume (Future): 7.47 acre-feet |

Drainage Area / Site Location Map:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-I3a3-1

McM PROJECT NO: M0003-910495

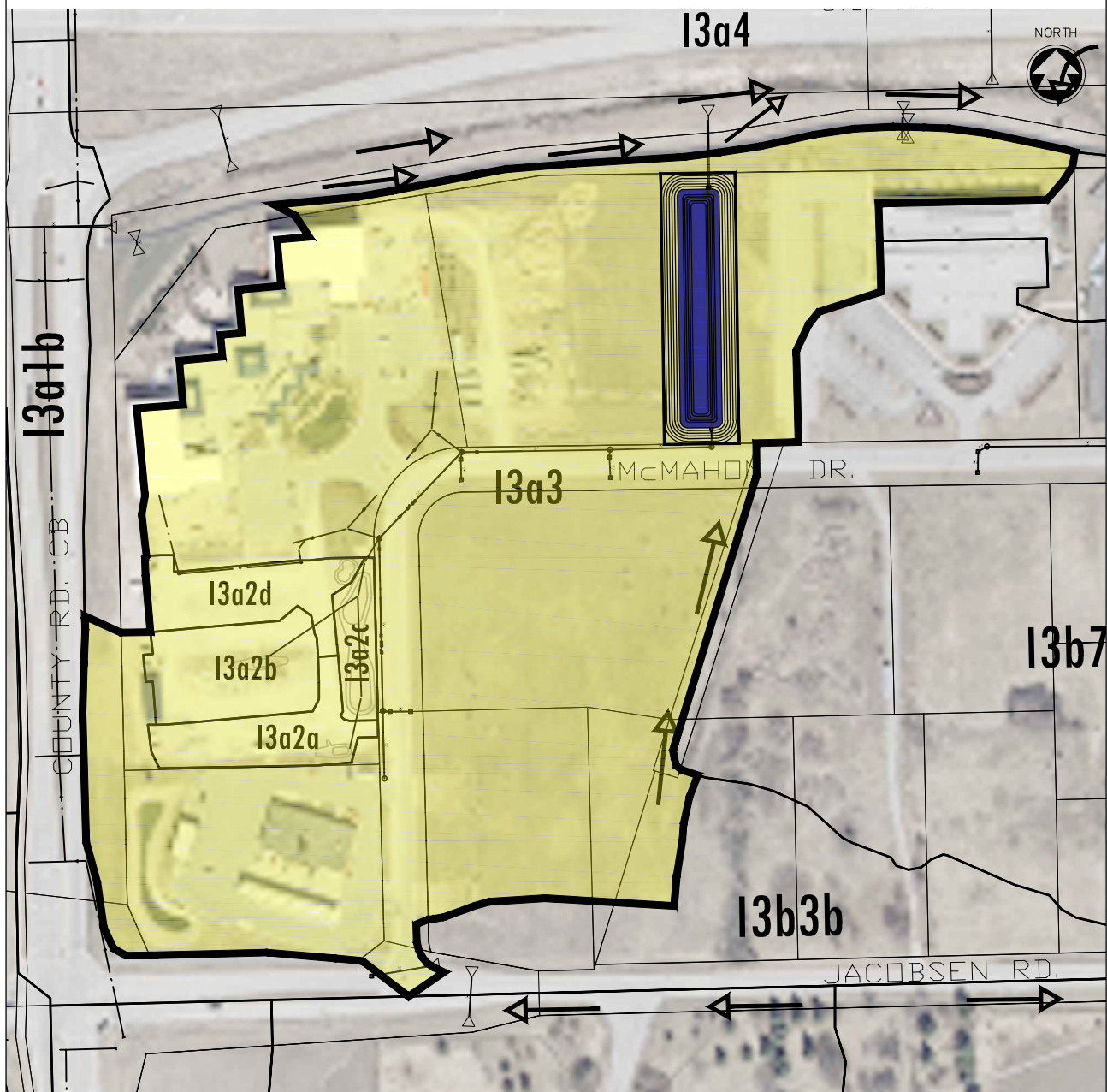
SITE INFORMATION:

| | |
|-------------------------------------------------|-------------------------|
| Municipality: TOWN OF MENASHA | Date: DECEMBER, 2013 |
| Proposed BMP Name: SCA OFFICE POND MODIFICATION | Initials: AWS |

DRAINAGE AREA:

| | | |
|------------------------------------|--------------------------------------|--------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: I3a3 | Total Drainage Area: 23.7 acres |
| Imperviousness (Future): 71.2 % | Runoff Curve Number (Future): 90 | Water Quality Volume (Future): 2.05 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

Groundwater Depth (ft): >6 ft

Bedrock Depth (in): 36-48 in

USDA Soil Texture: WHALAN SILT LOAM

Remediation:

☐ Yes ☒ No

Historical:

☐ Yes ☒ No

100-Year Floodplain:

☐ Yes ☒ No

Wetland: ☐ Potential ☐ Yes ☒ No

Public Well < 400 ft: ☐ Yes ☒ No

Private Well < 100 ft: ☐ Yes ☒ No

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Outfall via the existing dry pond culvert under the trail.

Infrastructure modifications or flow diversions required for retrofit:

Discharge the existing storm sewer into the proposed pond.

Site access for future BMP maintenance:

Access from McMahon Drive.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Potential utility conflicts, rock excavation, wetlands, high groundwater, private property.

Approx. Size of BMP Retrofit:

0.50 acre permanent pool

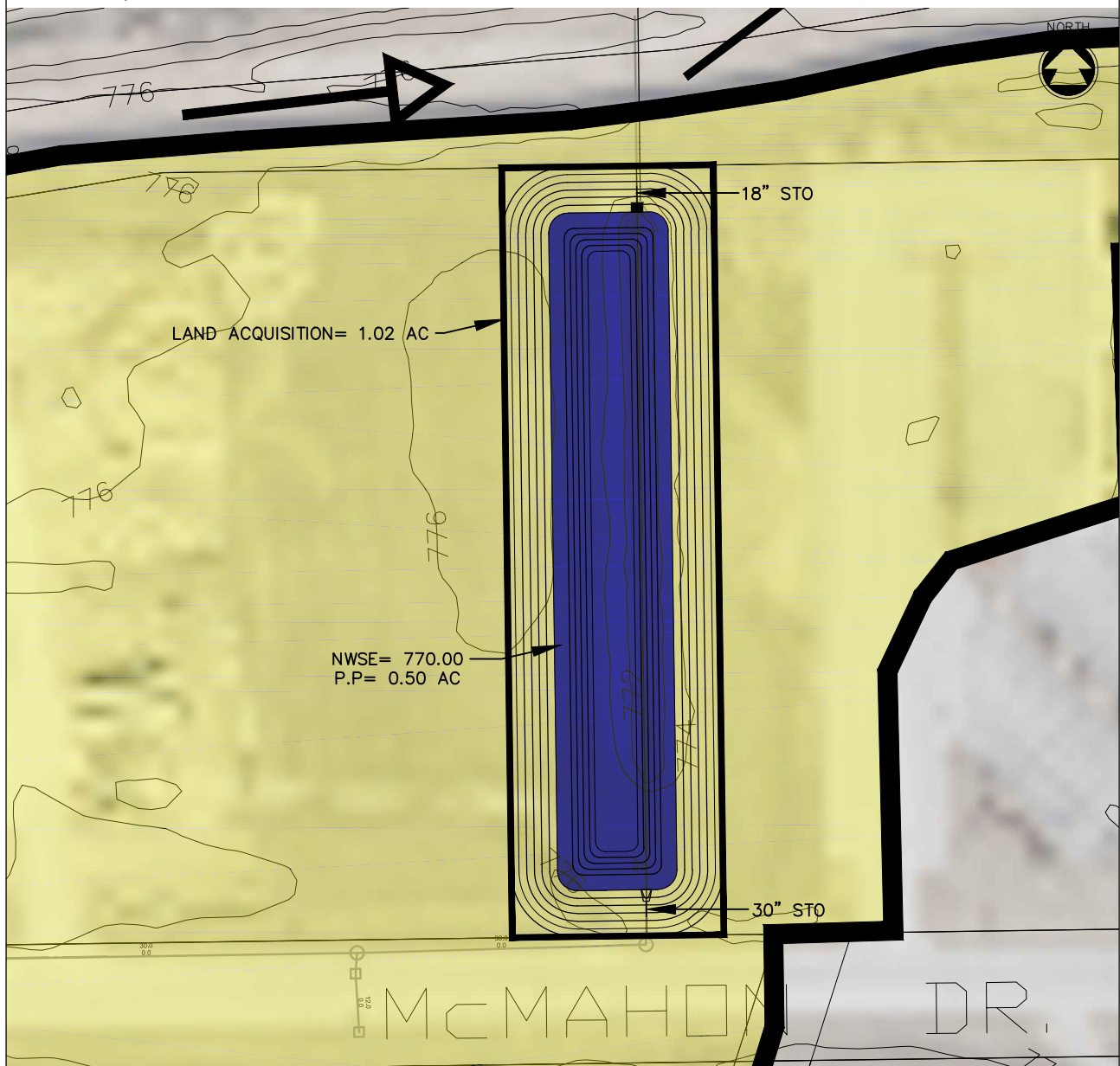
Approx. Land Required (ac):

1.02 acres

Estimated Cost:

\$165,000

Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-L3a3

McM PROJECT NO: M0003-910495

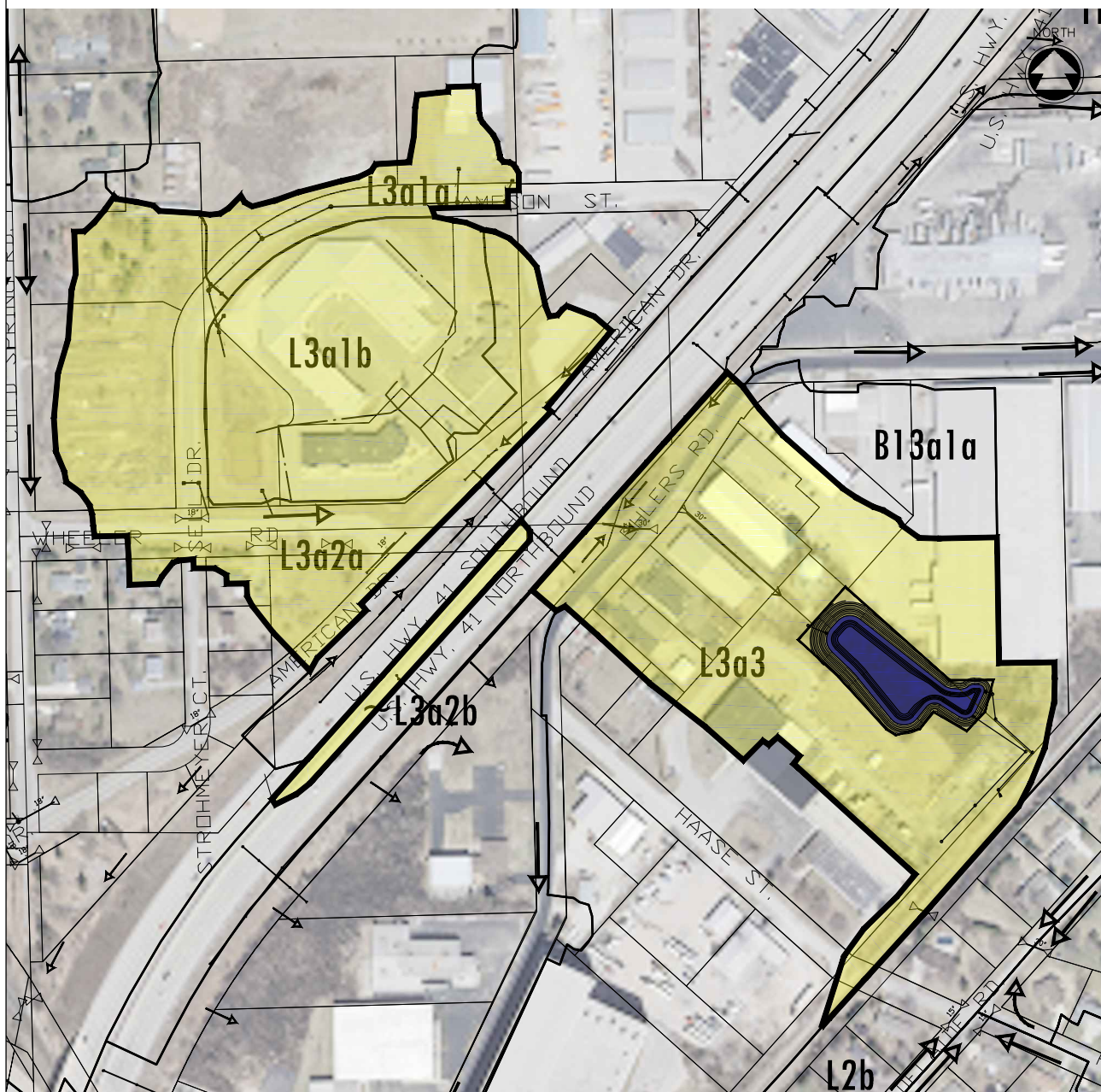
SITE INFORMATION:

| | |
|----------------------------------|-------------------------|
| Municipality: TOWN OF MENASHA | Date: DECEMBER, 2013 |
| Proposed BMP Name: WOODWARD POND | Initials: AWS |

DRAINAGE AREA:

| | | |
|------------------------------------|----------------------------------------------------|--------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: L3a2a, L3a2b, L3a3 | Total Drainage Area: 30.4 acres |
| Imperviousness (Future): 69.5 % | Runoff Curve Number (Future): 88 | Water Quality Volume (Future): 2.57 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

Groundwater Depth (ft): 2-3 ft

Bedrock Depth (in): >60 in

USDA Soil Texture: WINNECONNE SILTY CLAY LOAM

Remediation:

☐ Yes ☒ No

Historical:

☐ Yes ☒ No

100-Year Floodplain:

☐ Yes ☒ No

Wetland: ☐ Potential ☐ Yes ☒ No

Public Well < 400 ft: ☐ Yes ☒ No

Private Well < 100 ft: ☐ Yes ☒ No

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Outfall via storm sewer east to the Railroad R/W culvert.

Infrastructure modifications or flow diversions required for retrofit:

Divert the adjacent site stormwater to the west and south into the pond with proposed storm sewer.

Site access for future BMP maintenance:

An easement from Haase Street is required for access.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Potential utility conflicts, wetlands, high groundwater, private property.

Approx. Size of BMP Retrofit:

0.68 acre permanent pool

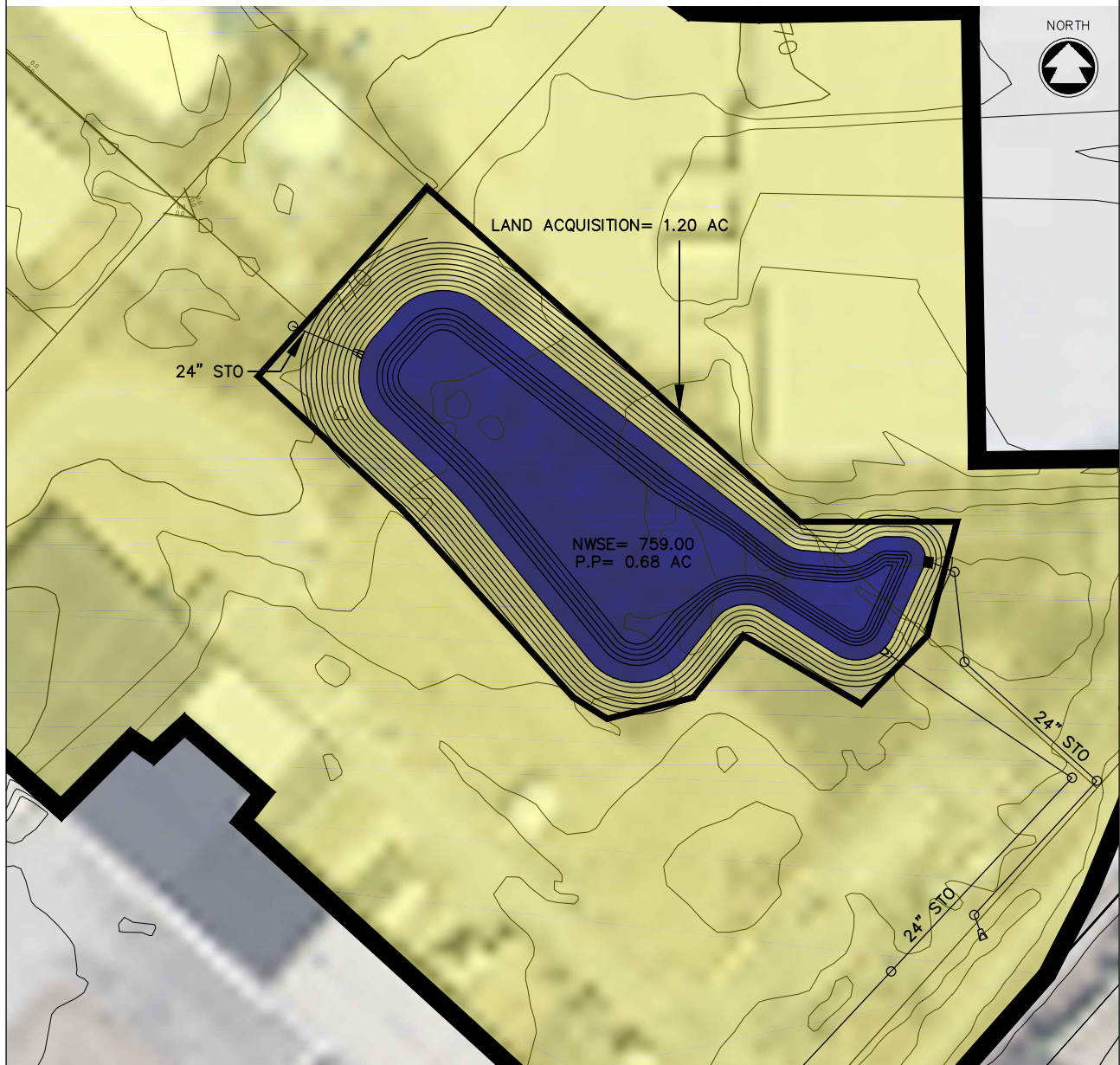
Approx. Land Required (ac):

1.20 acres

Estimated Cost:

\$325,000

Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-L3a3-2

McM PROJECT NO: F0057-9-17-00221

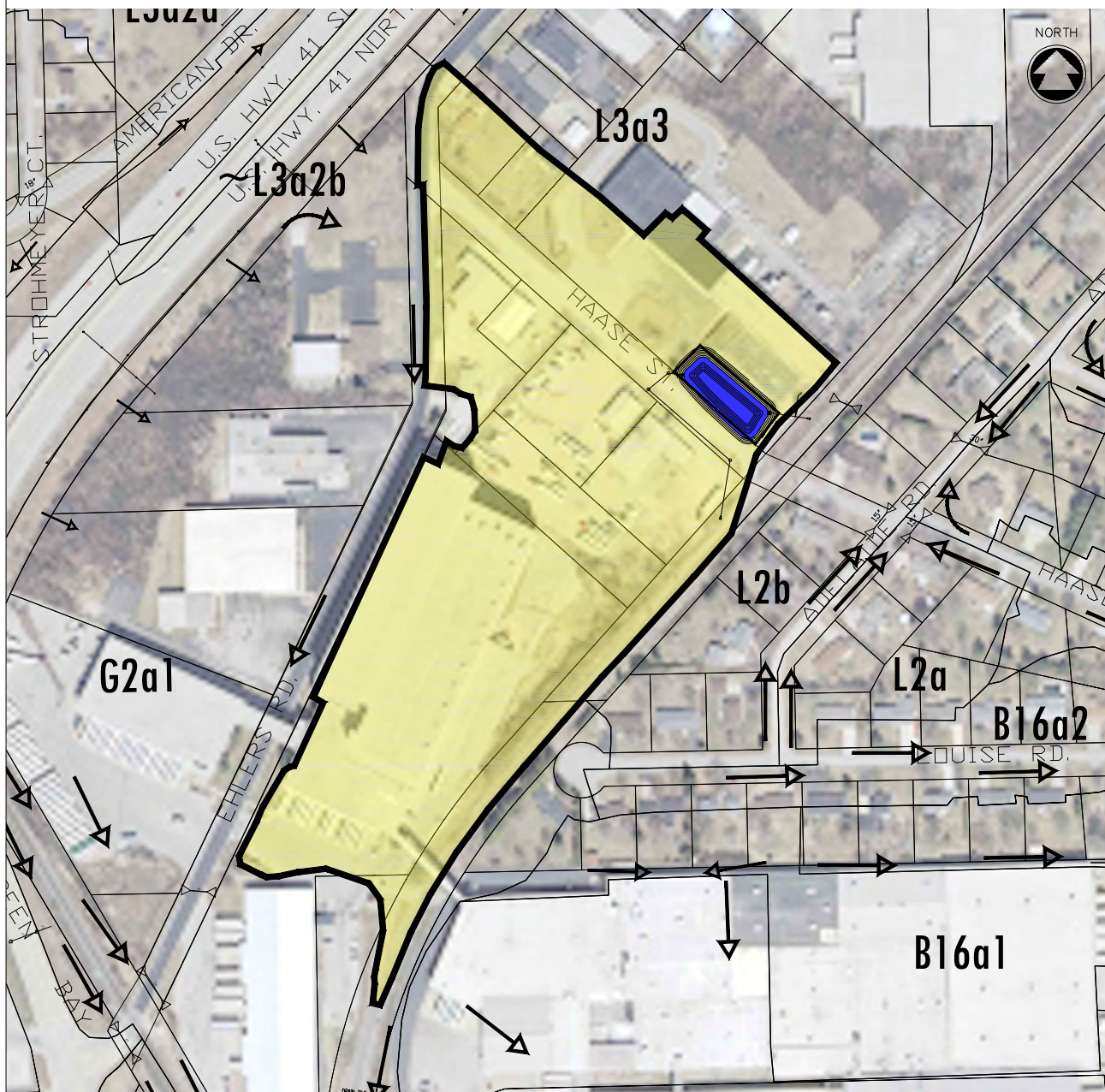
SITE INFORMATION:

| | |
|------------------------------------------|--------------------|
| Municipality: VILLAGE OF FOX CROSSING | Date: MAY, 2018 |
| Proposed BMP Name: HAASE POND | Initials: AWS |

DRAINAGE AREA:

| | | |
|------------------------------------|-------------------------------------------------|--------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: portion of L3a3 | Total Drainage Area: 16.3 acres |
| Imperviousness (Future): 74.1 % | Runoff Curve Number (Future): 91 | Water Quality Volume (Future): 1.45 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

Groundwater Depth (ft): 2-3 FT
Bedrock Depth (in): > 60 IN
USDA Soil Texture: Winneconne Silty Clay Loam

Remediation: ☐ Yes ☒ No
Historical: ☐ Yes ☒ No
100-Year Floodplain: ☐ Yes ☒ No

Wetland: ☒ Potential ☐ Yes ☐ No
Public Well < 400 ft: ☐ Yes ☒ No
Private Well < 100 ft: ☐ Yes ☒ No

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):
Outfall via storm sewer to the east ditch.

Infrastructure modifications or flow diversions required for retrofit:
Divert Haase Street storm sewer to the pond.

Site access for future BMP maintenance:
Access from Haase Street.

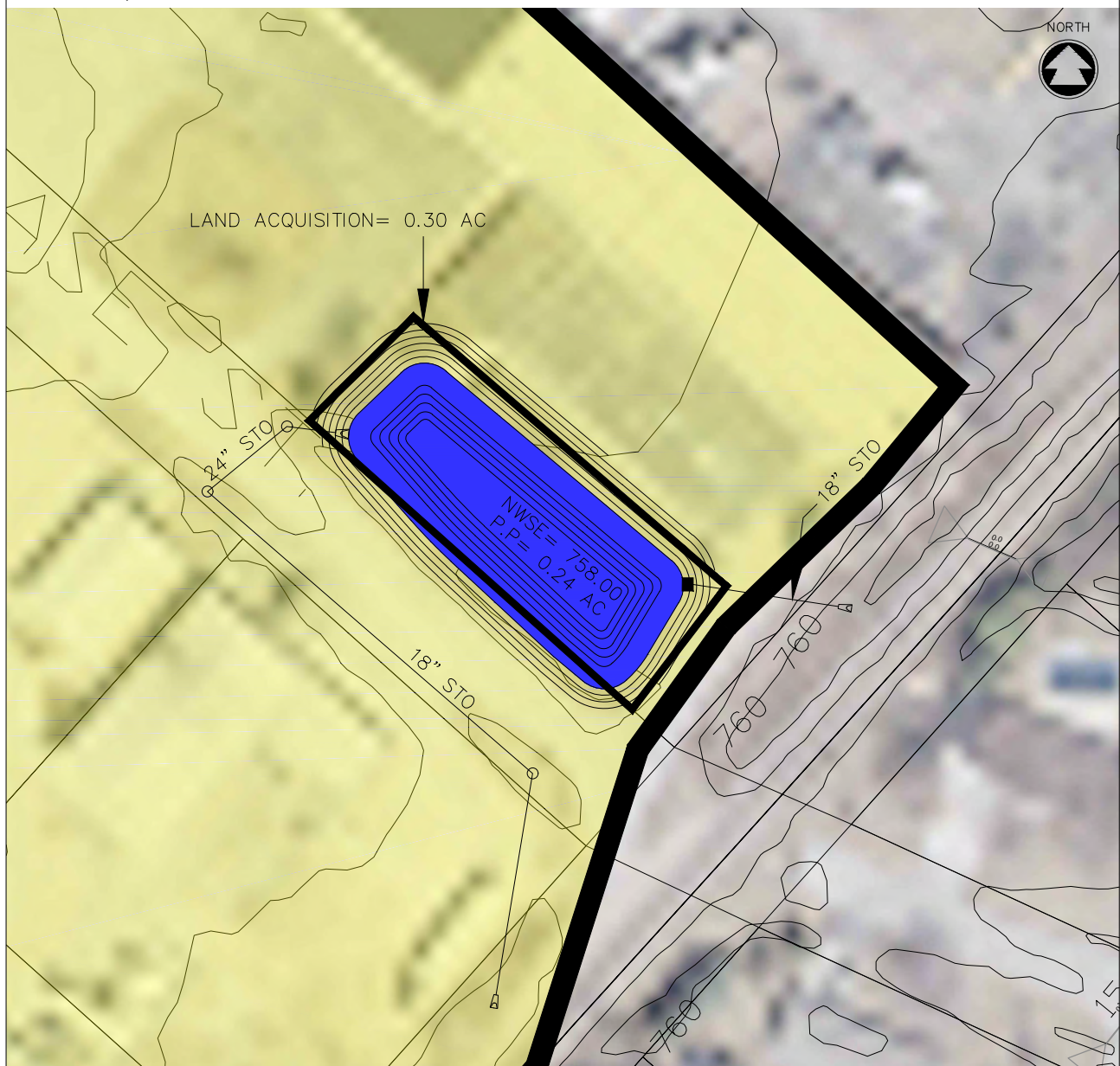
Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):
Rock excavation, groundwater and private property.

Approx. Size of BMP Retrofit:
0.20 acre permanent pool

Approx. Land Required (ac):
0.30 acres

Estimated Cost:
\$222,000

Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-M1a4g

McM PROJECT NO: M0003-910495

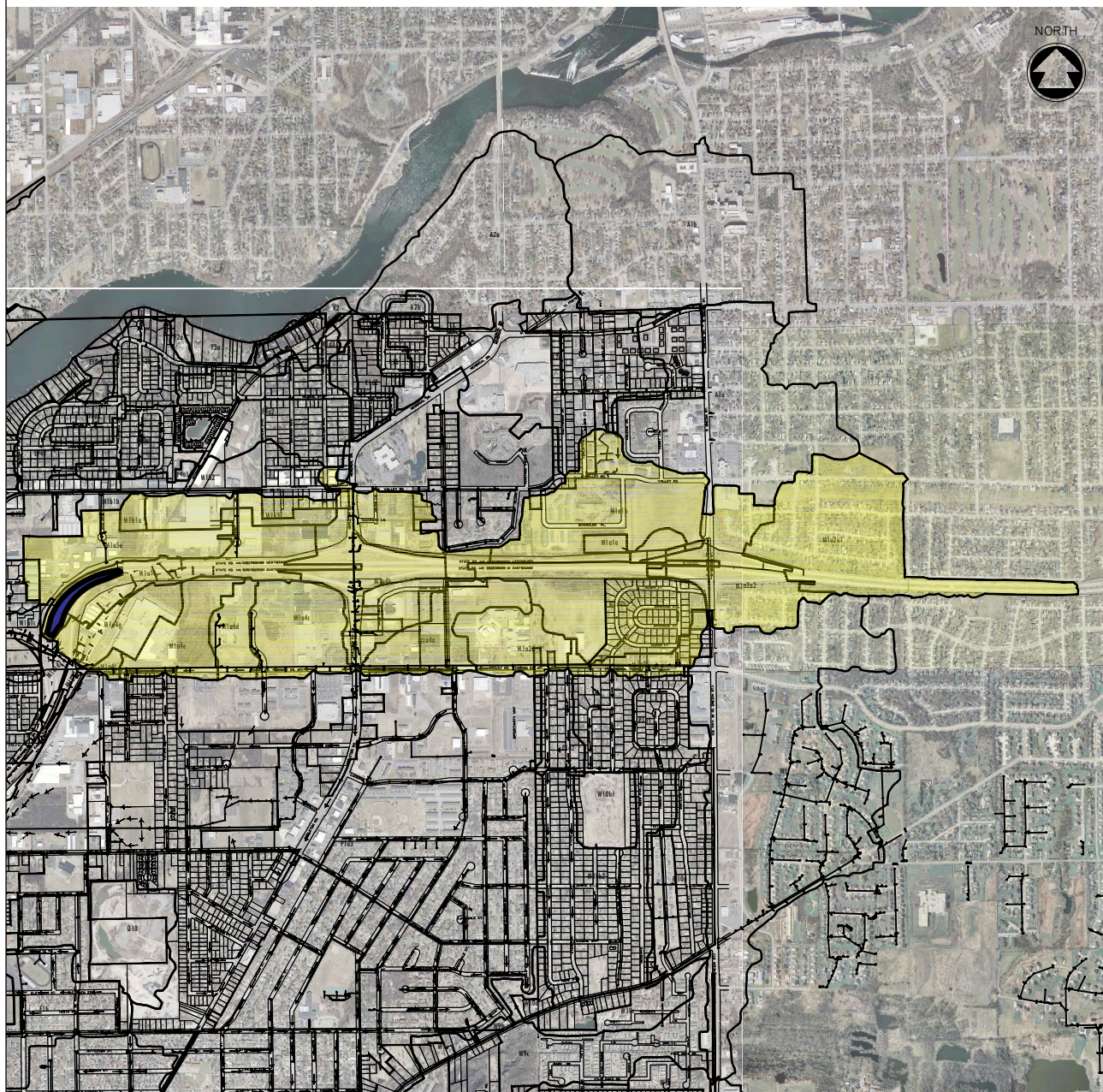
SITE INFORMATION:

| | |
|---------------------------------------|-------------------------|
| Municipality: TOWN OF MENASHA | Date: DECEMBER, 2013 |
| Proposed BMP Name: DOT POND 4, ALT. 3 | Initials: AWS |

DRAINAGE AREA:

| | | |
|------------------------------------|----------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: M1a1b, M1a2b, M1a2c, M1a2d, M1a4a, M1a4b, M1a4c, M1a4d, M1a4e, M1a4f, M1a4g | Total Drainage Area: 728.9 acres |
| Imperviousness (Future): 60.9 % | Runoff Curve Number (Future): 89 | Water Quality Volume (Future): 54.47 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

| | | | | |
|---------------------------------------|----------------------|---------------------------------------------------------------------|------------------------|--------------------------------------------------------------------------------------------------------|
| Groundwater Depth (ft): <1 ft | Remediation: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Wetland: | <input checked="" type="checkbox"/> Potential <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Bedrock Depth (in): >60 in | Historical: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Public Well < 400 ft: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| USDA Soil Texture: KOROBAGO SILT LOAM | 100-Year Floodplain: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Private Well < 100 ft: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Outfall via storm sewer south to the existing storm sewer along Midway Road.

Infrastructure modifications or flow diversions required for retrofit:

Divert the Midway Rd (CTH AP) storm sewer north & the stream NE of the pond & the north USH 441 ditch to the pond by storm sewer.

Site access for future BMP maintenance:

Access from Midway Road and/or the USH 441 R/W.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Site constraints as shown on WI-DOT Plans, State R/W & cost share w/ State, City of Appleton and City of Menasha (15% T. Menasha)

Approx. Size of BMP Retrofit:

3.70 acre permanent pool

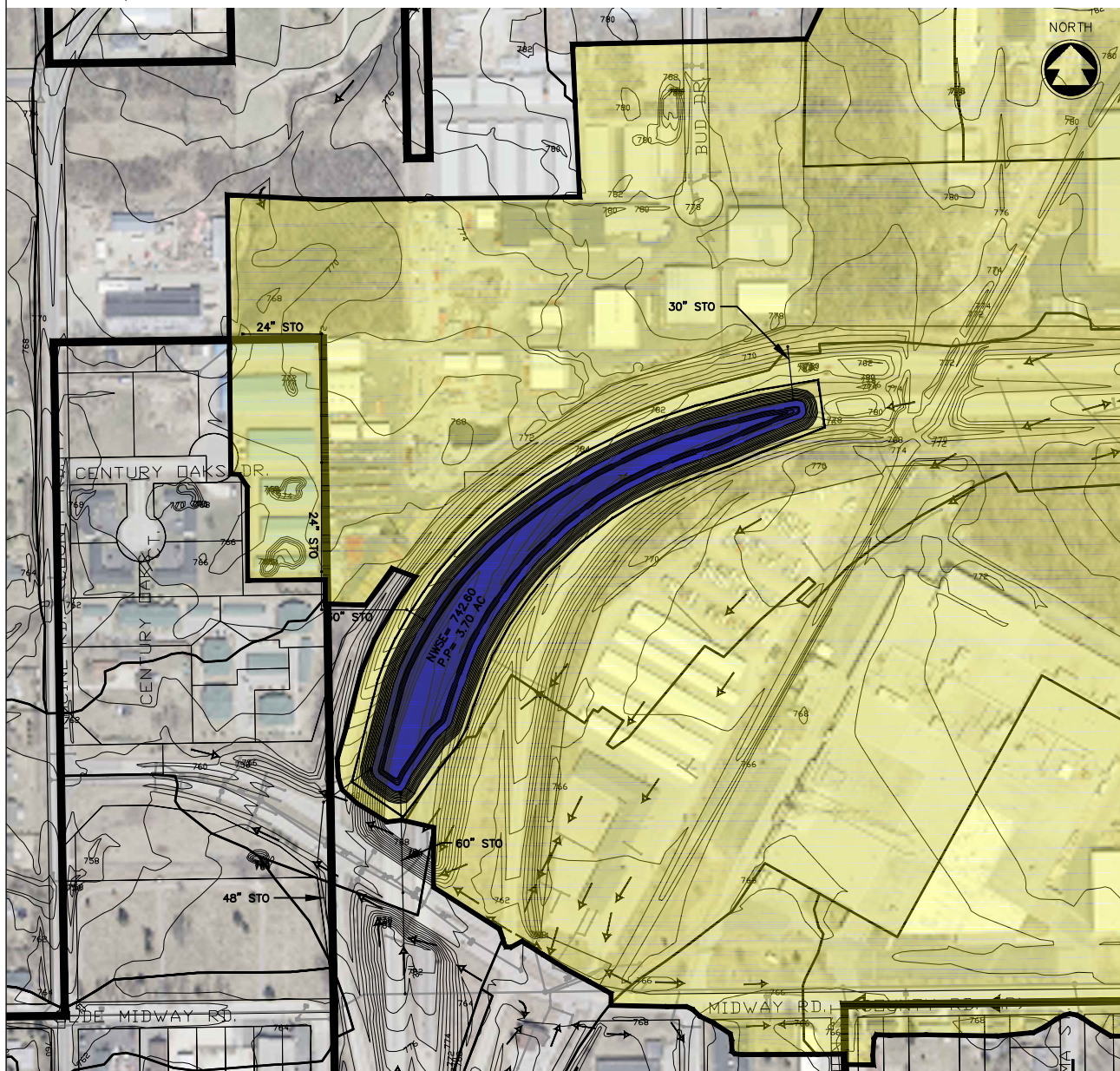
Approx. Land Required (ac):

6.72 acres

Estimated Cost:

\$3,205,000

Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-M1a5b

McM PROJECT NO: M0003-910495

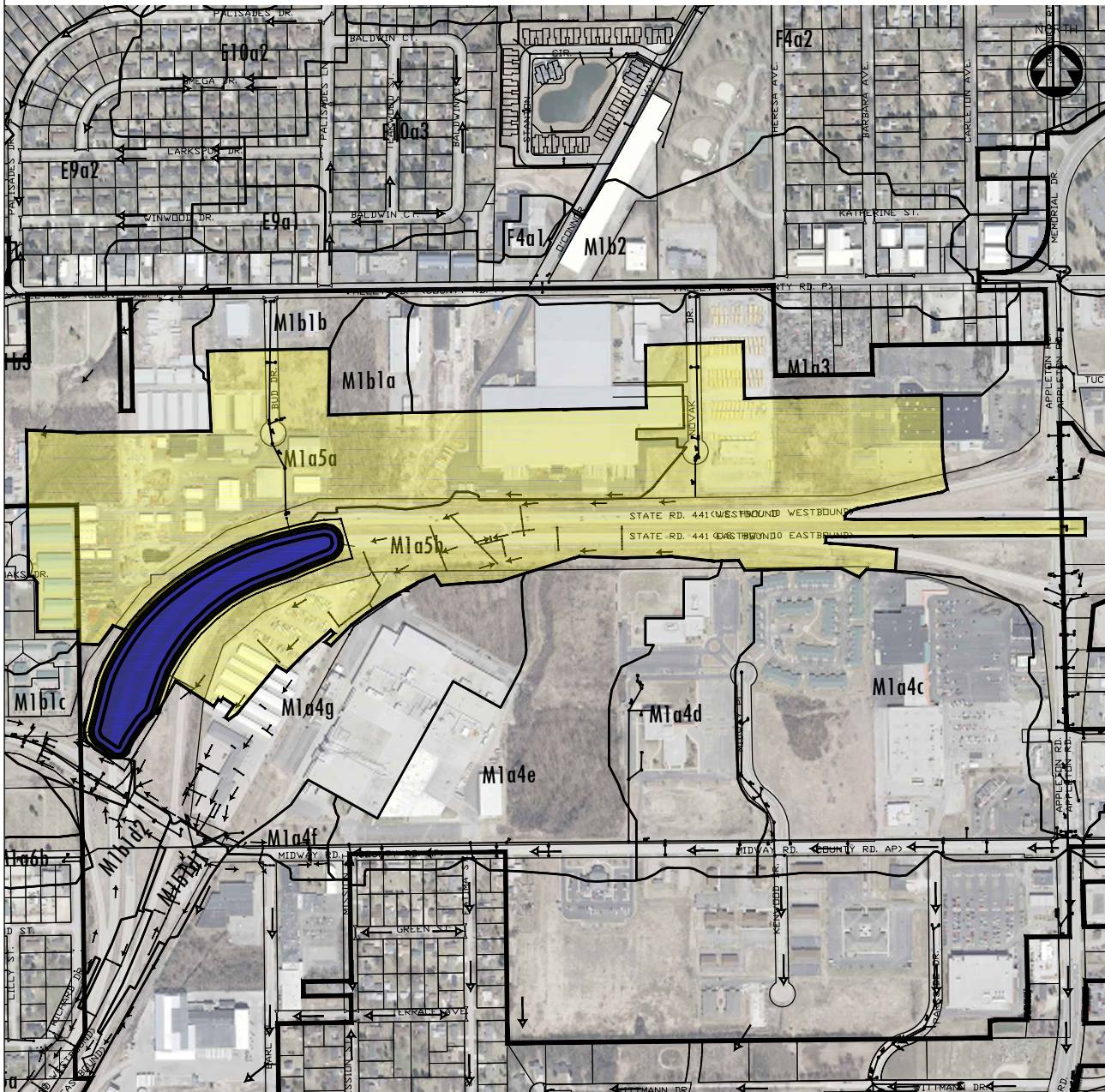
SITE INFORMATION:

| | |
|----------------------------------|-------------------------|
| Municipality: TOWN OF MENASHA | Date: DECEMBER, 2013 |
| Proposed BMP Name: DOT POND 4 | Initials: AWS |

DRAINAGE AREA:

| | | |
|------------------------------------|----------------------------------------------|--------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: M1a5a, M1a5b | Total Drainage Area: 97.3 acres |
| Imperviousness (Future): 70.4 % | Runoff Curve Number (Future): 91 | Water Quality Volume (Future): 8.32 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

| | | | | |
|---------------------------------------|----------------------|---------------------------------------------------------------------|------------------------|--------------------------------------------------------------------------------------------------------|
| Groundwater Depth (ft): <1 ft | Remediation: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Wetland: | <input checked="" type="checkbox"/> Potential <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Bedrock Depth (in): >60 in | Historical: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Public Well < 400 ft: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| USDA Soil Texture: KOROBAGO SILT LOAM | 100-Year Floodplain: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Private Well < 100 ft: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Outfall via storm sewer west to Racine Road (CTH 'P')

Infrastructure modifications or flow diversions required for retrofit:

Infrastructure as shown on Wisconsin DOT plans, including diverting the south extent of the Bud Drive storm sewer to the pond.

Site access for future BMP maintenance:

Access from Racine Road and/or the USH 441 R/W.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Constraints as shown on Wisconsin DOT Plans, State R/W & cost share with State and City of Menasha.

Approx. Size of BMP Retrofit:

6.56 acre permanent pool

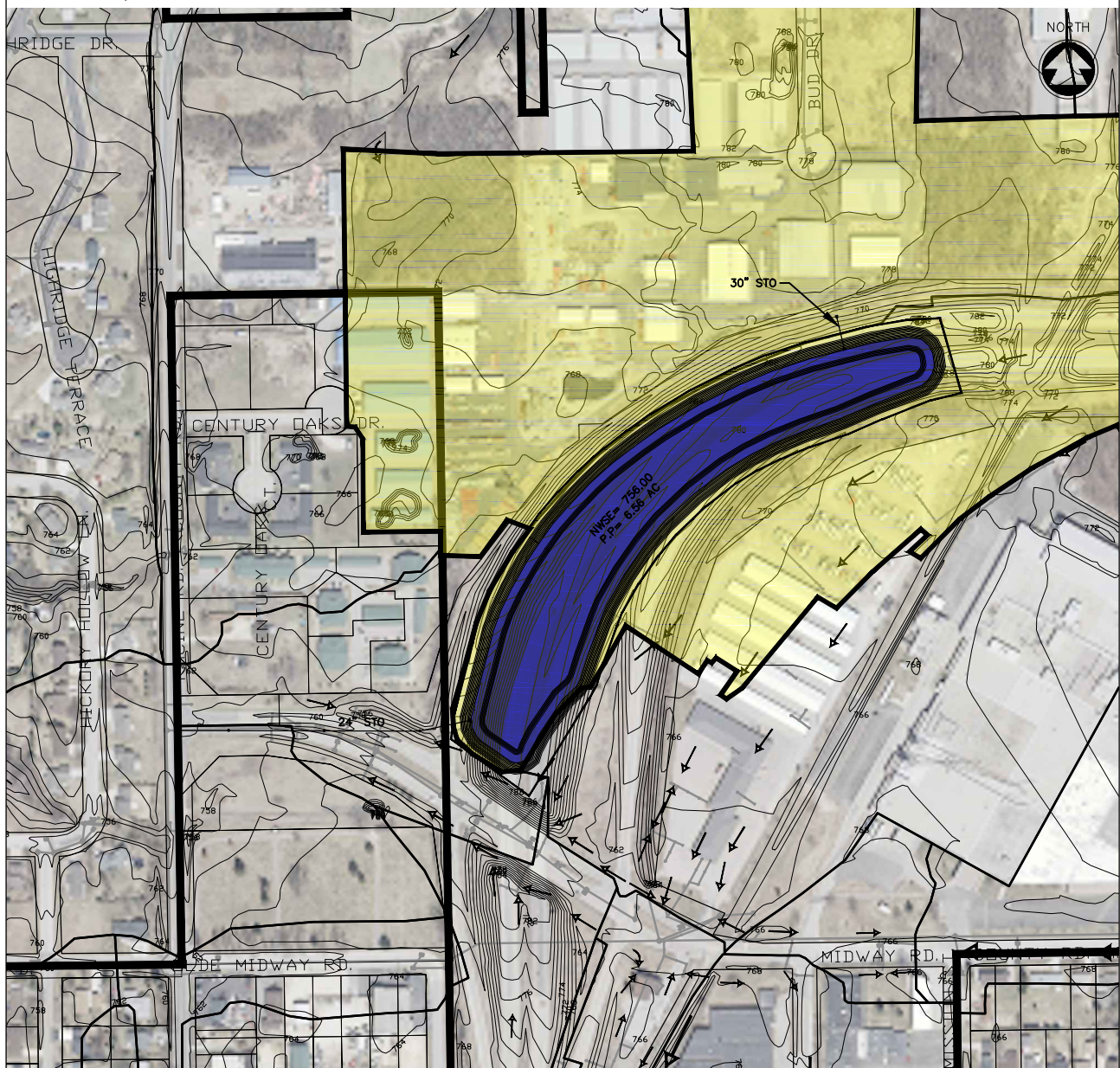
Approx. Land Required (ac):

10.10 acres

Estimated Cost:

\$2,395,000

Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

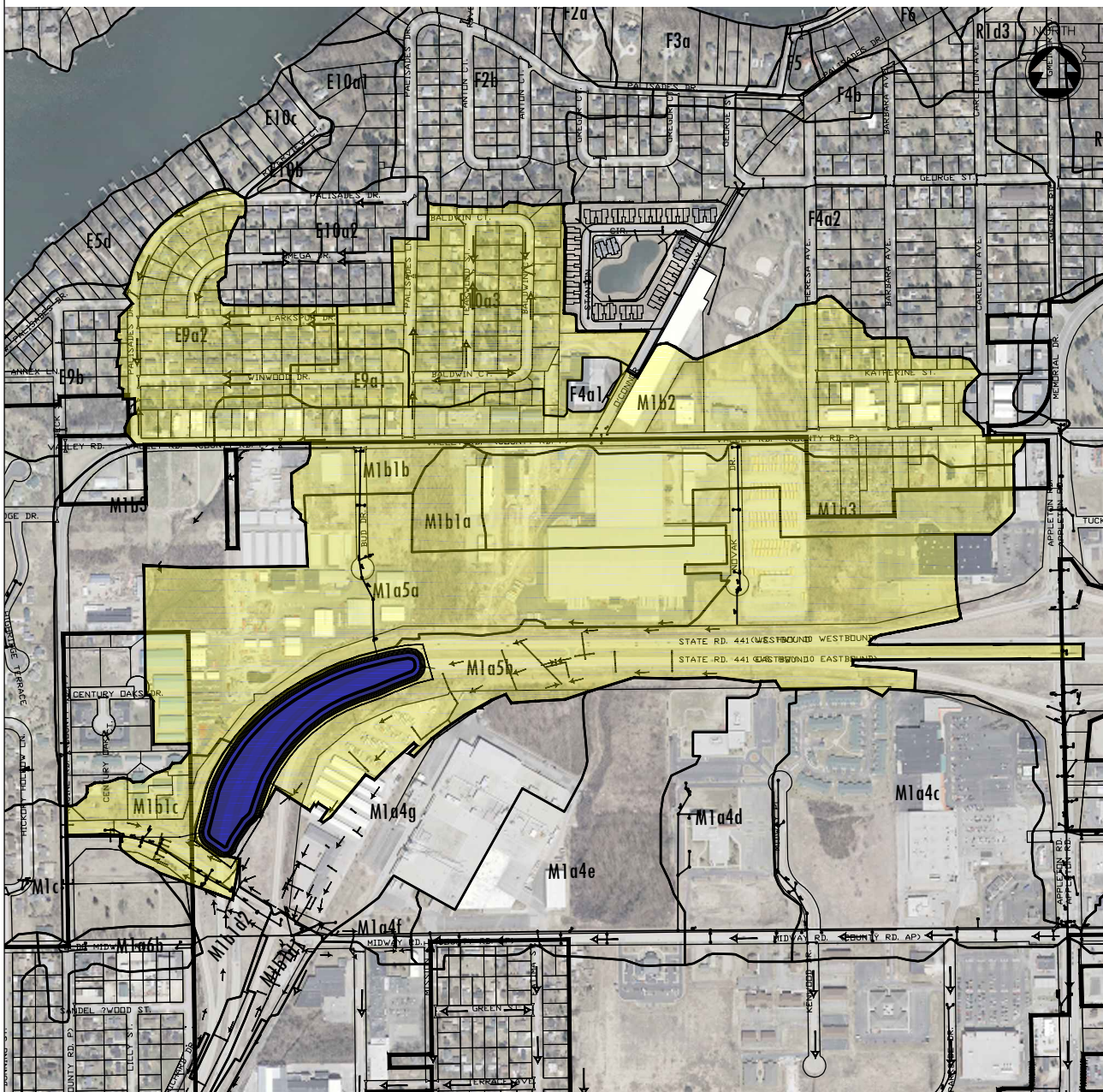
BMP ID: P-BMP-M1b1c

McM PROJECT NO: M0003-910495

| SITE INFORMATION: | |
|---------------------------------------|-------------------------|
| Municipality: TOWN OF MENASHA | Date: DECEMBER, 2013 |
| Proposed BMP Name: DOT POND 4, ALT. 1 | Initials: AWS |

| DRAINAGE AREA: | | |
|------------------------------------|---------------------------------------|---------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: M1b1c | Total Drainage Area: 258.0 acres |
| Imperviousness (Future): 64.4 % | Runoff Curve Number (Future): 90 | Water Quality Volume (Future): 20.32 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

| | | | | |
|---------------------------------------|----------------------|---------------------------------------------------------------------|------------------------|--------------------------------------------------------------------------------------------------------|
| Groundwater Depth (ft): <1 ft | Remediation: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Wetland: | <input checked="" type="checkbox"/> Potential <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Bedrock Depth (in): >60 in | Historical: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Public Well < 400 ft: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| USDA Soil Texture: KOROBAGO SILT LOAM | 100-Year Floodplain: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Private Well < 100 ft: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Outfall via storm sewer west to the existing Racine Road (CTH P) storm sewer.

Infrastructure modifications or flow diversions required for retrofit:

Infrastructure as shown on Wisconsin DOT plans & divert the ditches from Valley Road (CTH P) south to the pond via storm sewer.

Site access for future BMP maintenance:

Access is from Racine Road and/or USH 441 R/W.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Constraints as shown on Wisconsin DOT Plans, State R/W & cost share with State and the City of Menasha.

Approx. Size of BMP Retrofit:

6.56 acre permanent pool

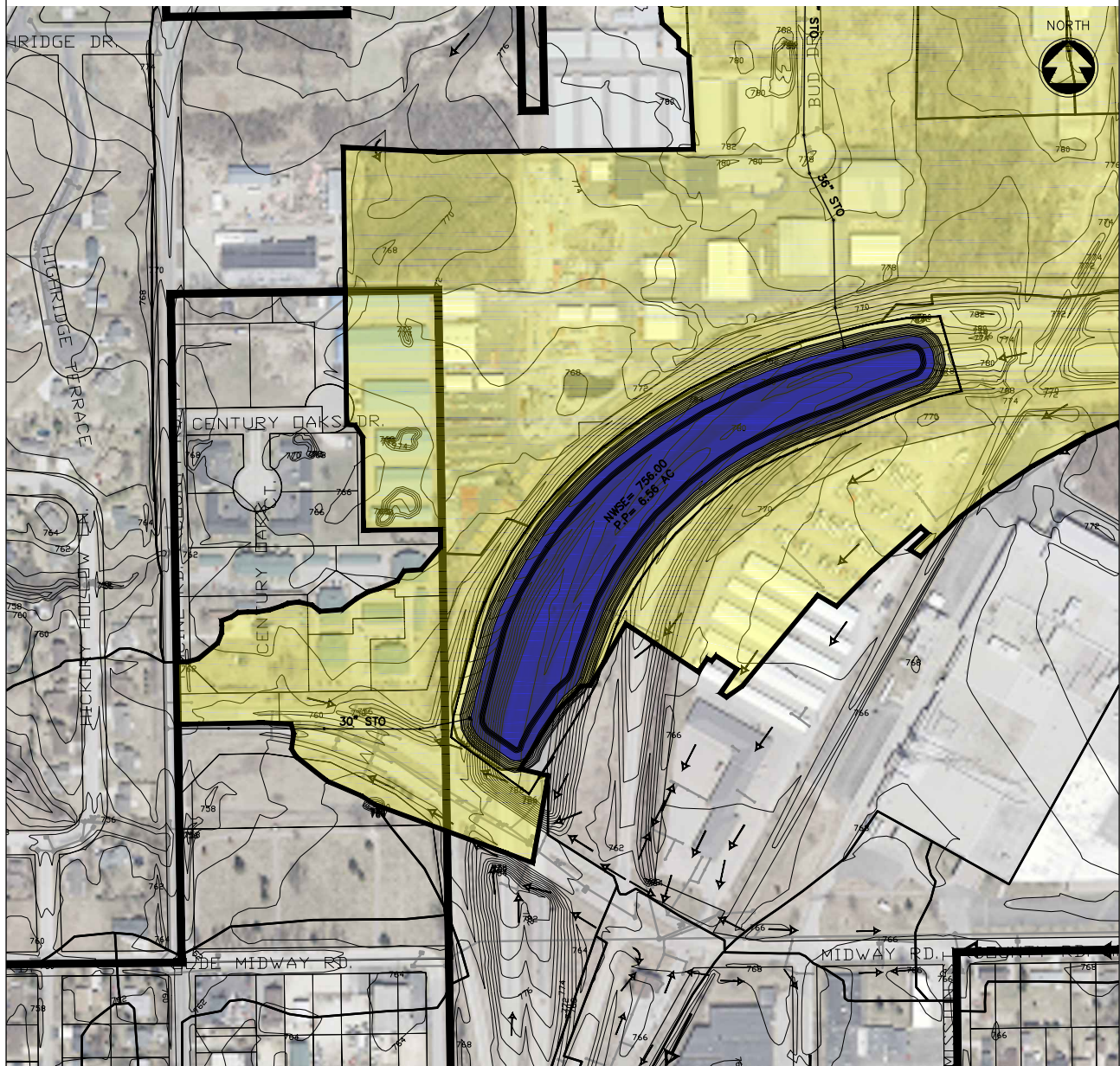
Approx. Land Required (ac):

10.10 acres

Estimated Cost:

\$2,580,000

Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

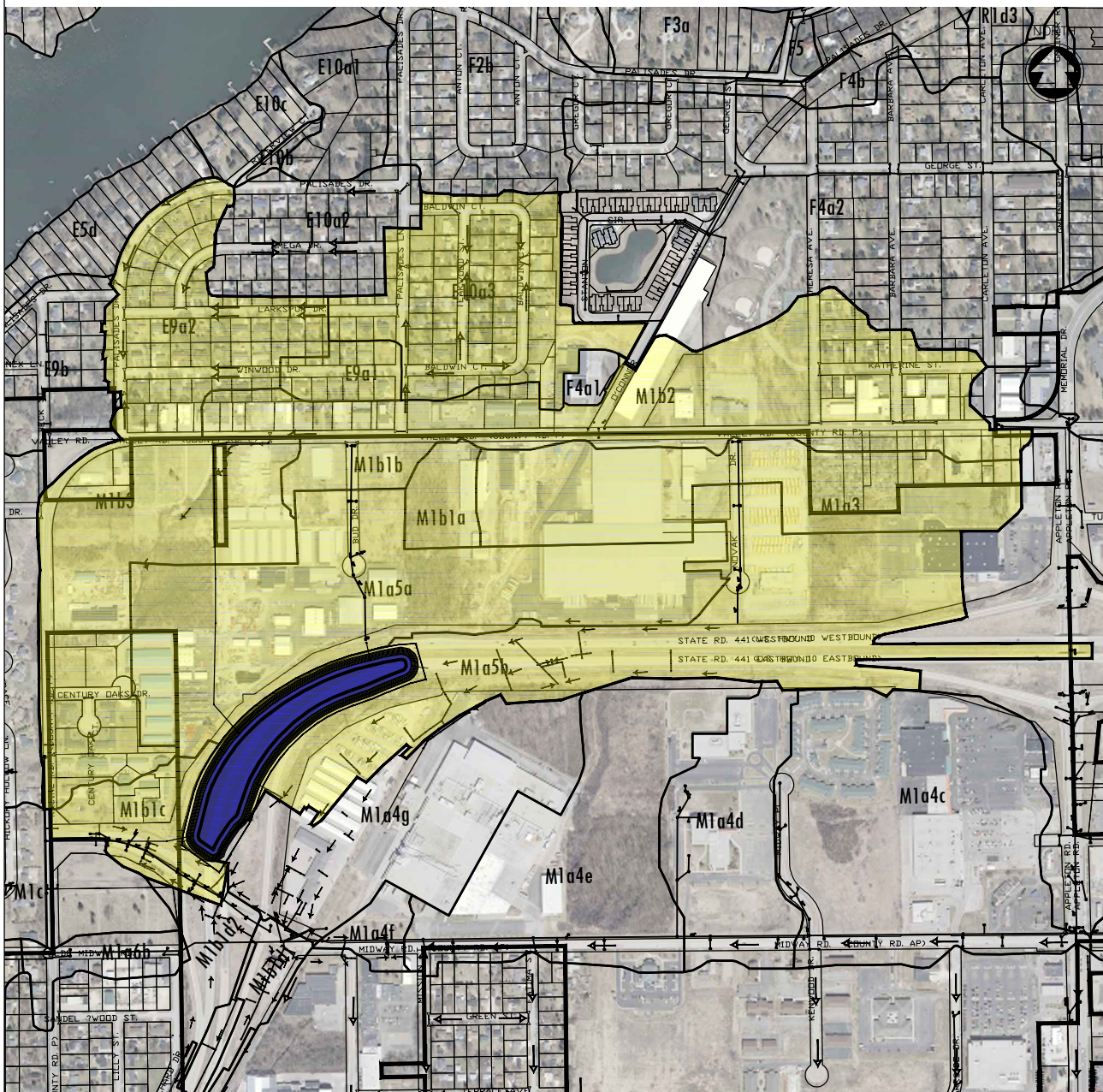
BMP ID: P-BMP-M1b3

McM PROJECT NO: M0003-910495

| SITE INFORMATION: | |
|---------------------------------------|-------------------------|
| Municipality: TOWN OF MENASHA | Date: DECEMBER, 2013 |
| Proposed BMP Name: DOT POND 4, ALT. 2 | Initials: AWS |

| DRAINAGE AREA: | | |
|------------------------------------|-------------------------------------------------------------------------------------------|---------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: PBMPs: E9a2, E10a3, M1a5b, M1b1a, M1b1b, M1b1c, M1b3a, M1b3b | Total Drainage Area: 258.0 acres |
| Imperviousness (Future): 64.4 % | Runoff Curve Number (Future): 90 | Water Quality Volume (Future): 20.32 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

| | | | | |
|---------------------------------------|----------------------|---------------------------------------------------------------------|------------------------|--------------------------------------------------------------------------------------------------------|
| Groundwater Depth (ft): <1 ft | Remediation: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Wetland: | <input checked="" type="checkbox"/> Potential <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Bedrock Depth (in): >60 in | Historical: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Public Well < 400 ft: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| USDA Soil Texture: KOROBAGO SILT LOAM | 100-Year Floodplain: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Private Well < 100 ft: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Outfall via storm sewer west to the existing storm sewer on Racine Road (CTH P)

Infrastructure modifications or flow diversions required for retrofit:

Infrastructure as shown on WI-DOT plans and divert storm sewer from Valley Road (CTH P) to the pond via storm sewer.

Site access for future BMP maintenance:

Access from Midway Road (CTH AP) and/or USH 441 R/W, State R/W & cost share with State and the City of Menasha..

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Site constraints as shown on Wisconsin DOT plans.

Approx. Size of BMP Retrofit:

5.88 acre permanent pool

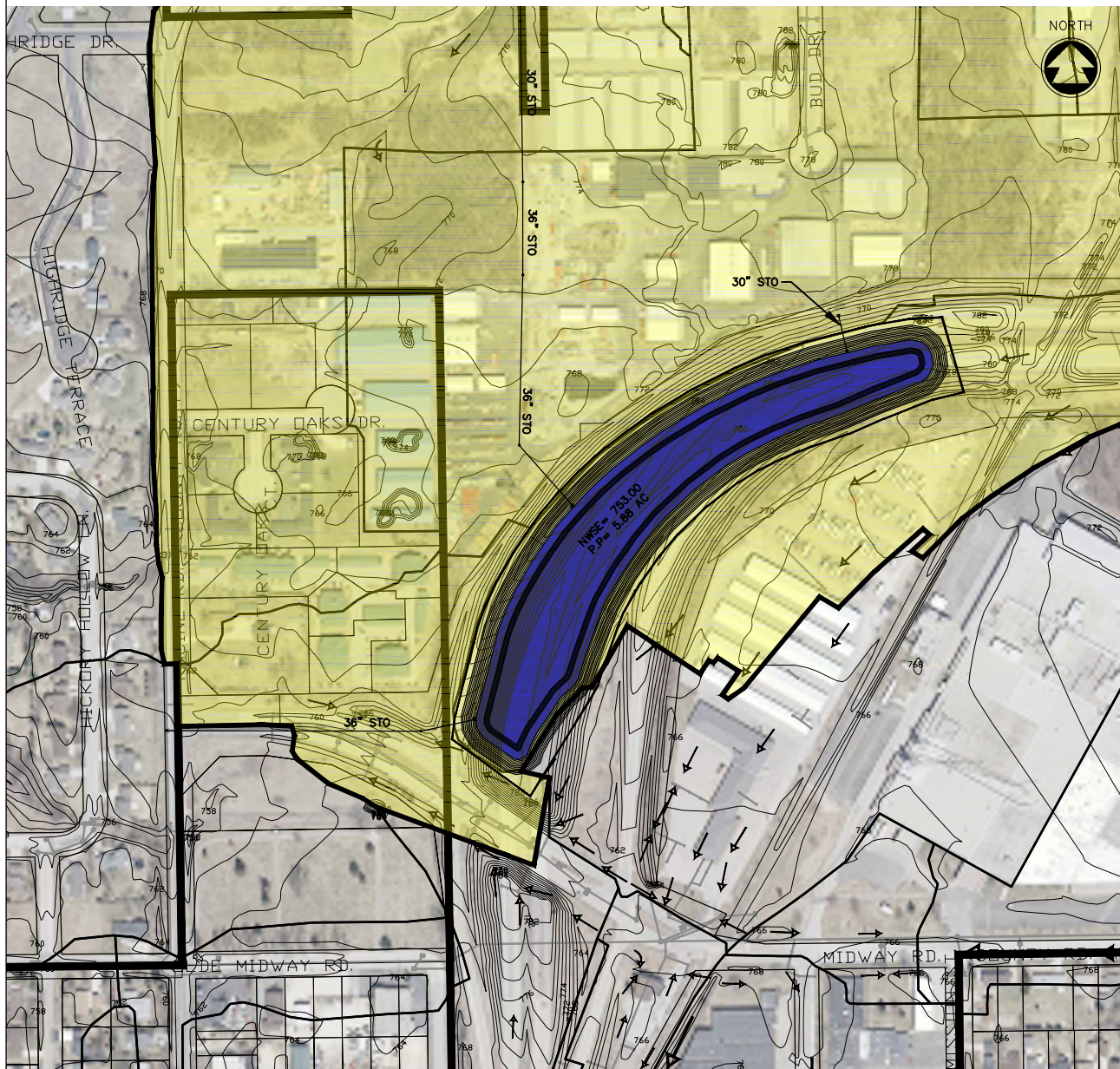
Approx. Land Required (ac):

10.10 acres

Estimated Cost:

\$2,730,000

Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-M1b3a

McM PROJECT NO: M0003-910495

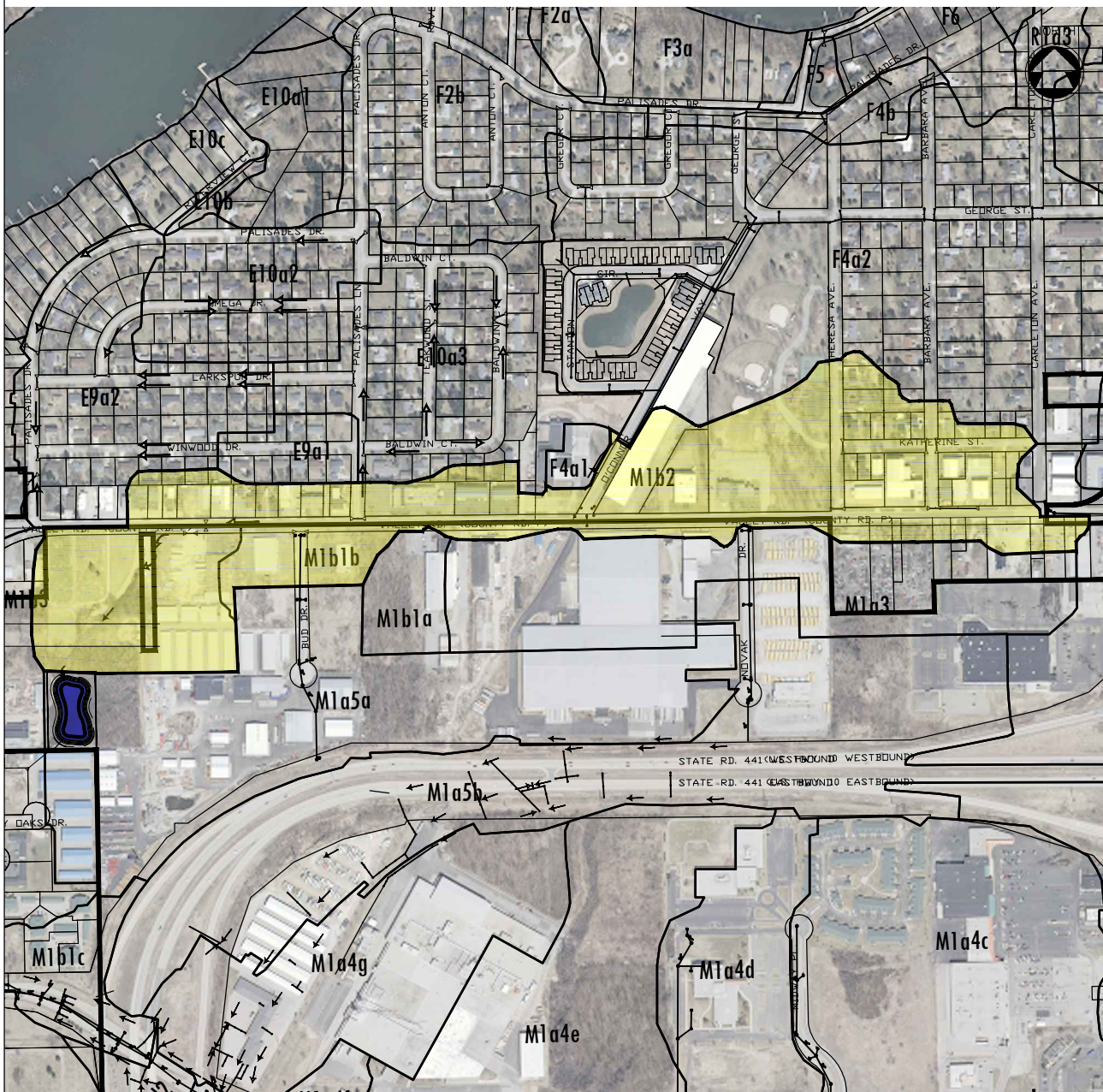
SITE INFORMATION:

| | |
|-------------------------------------|-------------------------|
| Municipality: TOWN OF MENASHA | Date: DECEMBER, 2013 |
| Proposed BMP Name: VALLEY ROAD POND | Initials: AWS |

DRAINAGE AREA:

| | | |
|------------------------------------|--------------------------------------|--------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: M1b3 | Total Drainage Area: 55.5 acres |
| Imperviousness (Future): 63.8 % | Runoff Curve Number (Future): 89 | Water Quality Volume (Future): 4.33 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

Groundwater Depth (ft): <1 ft

Bedrock Depth (in): >60 in

USDA Soil Texture: KOROBAGO SILT LOAM

Remediation:

☐ Yes ☒ No

Historical:

☐ Yes ☒ No

100-Year Floodplain:

☐ Yes ☒ No

Wetland: ☐ Potential ☒ Yes ☐ No

Public Well < 400 ft: ☐ Yes ☒ No

Private Well < 100 ft: ☐ Yes ☒ No

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Outfall via storm sewer SW to the existing culvert under the adjacent site.

Infrastructure modifications or flow diversions required for retrofit:

Divert the stream north of the proposed pond into the pond with proposed storm sewer.

Site access for future BMP maintenance:

An ingress/egress easement shall be obtained from Racine St. (CTH 'P')

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Potential utility conflicts, wetlands, private property & cost share with the City of Menasha.

Approx. Size of BMP Retrofit:

0.65 acre permanent pool

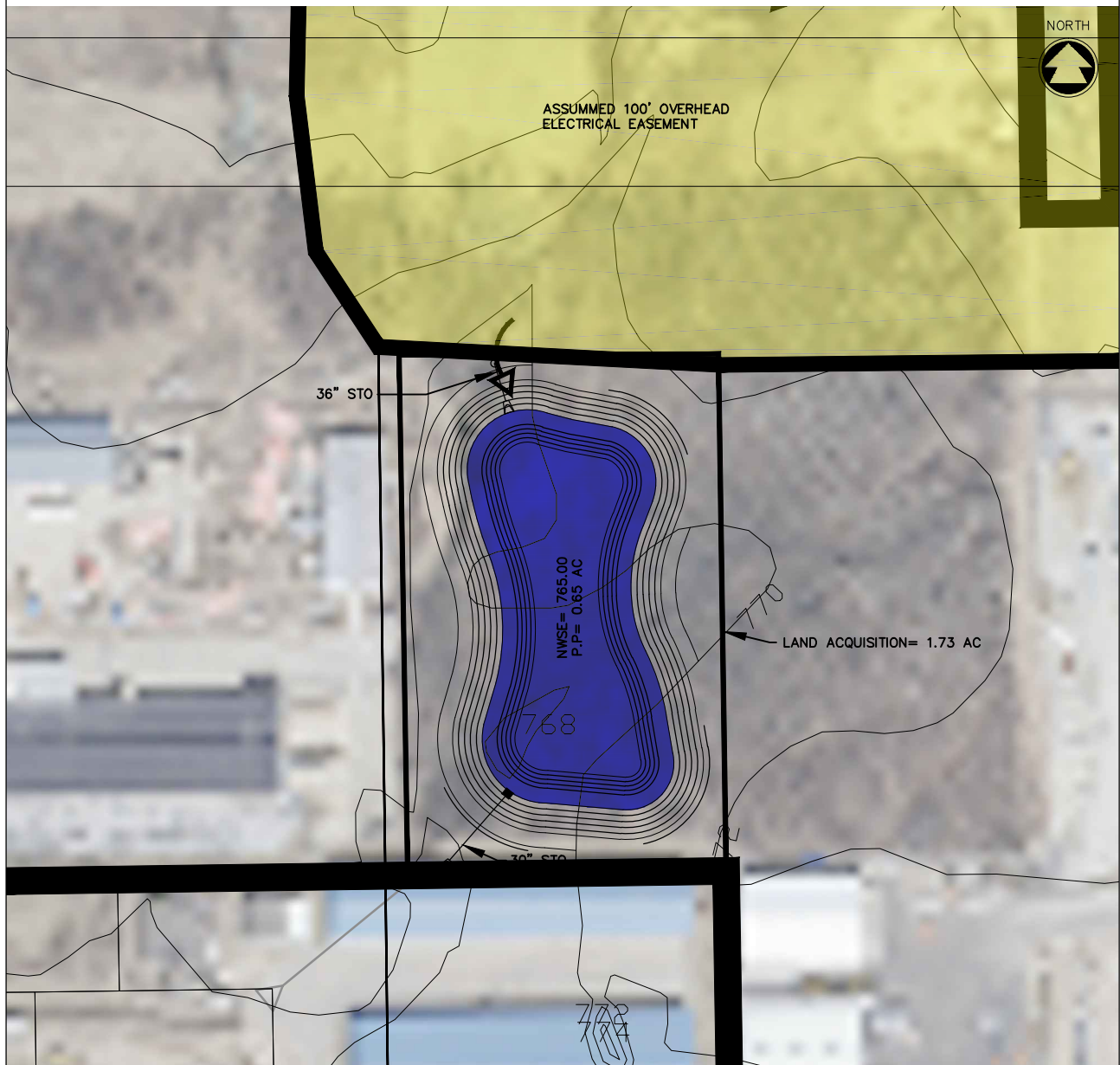
Approx. Land Required (ac):

1.73 acres

Estimated Cost:

\$245,000

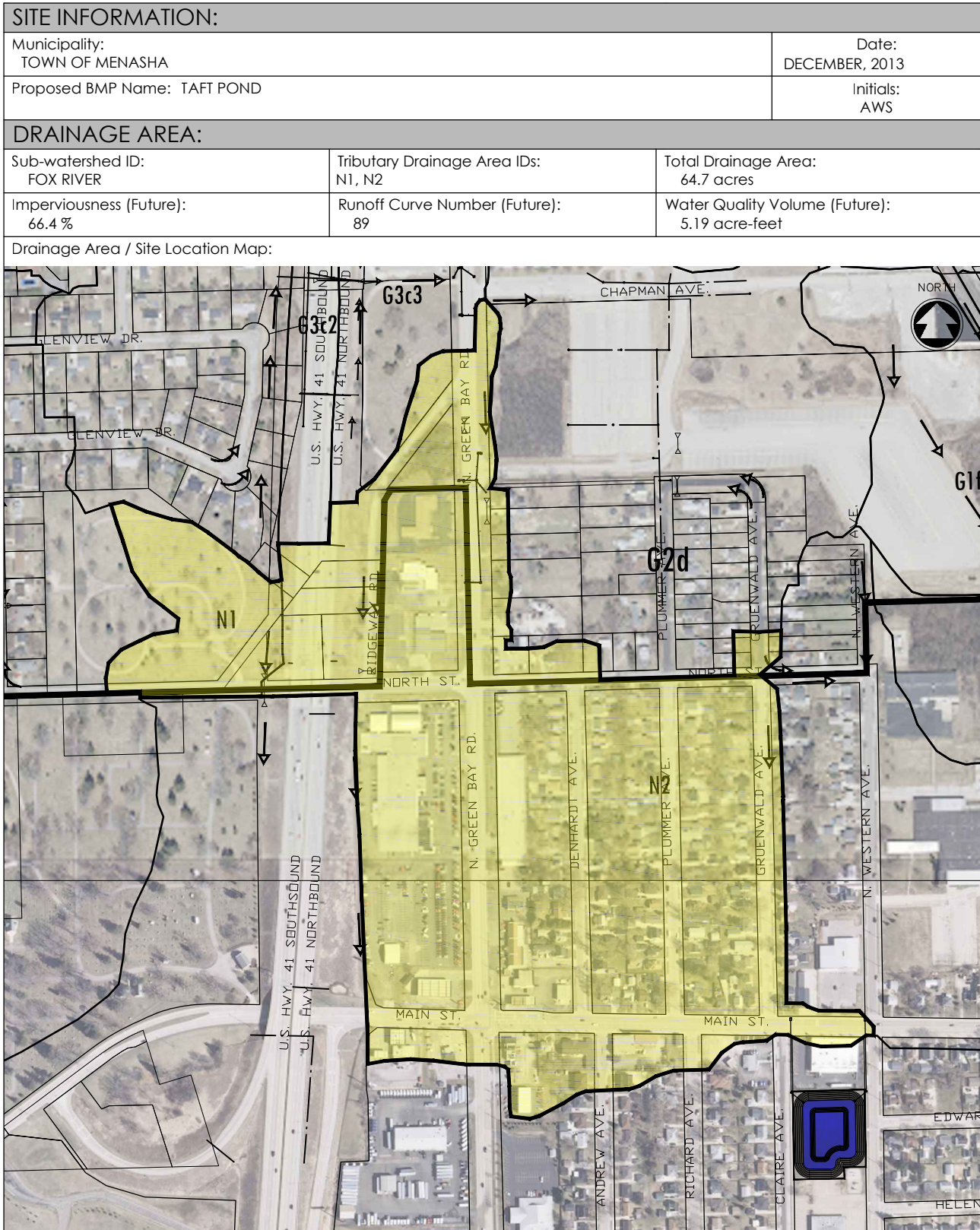
Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-N1a4

McM PROJECT NO: M0003-910495



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

Groundwater Depth (ft): 2-3 ft

Bedrock Depth (in): >60 in

USDA Soil Texture: WINNECONNE SILTY CLAY LOAM

Remediation:

☐ Yes ☒ No

Historical:

☐ Yes ☒ No

100-Year Floodplain: ☐ Yes ☒ No

Wetland: ☐ Potential ☐ Yes ☒ No

Public Well < 400 ft: ☐ Yes ☒ No

Private Well < 100 ft: ☐ Yes ☒ No

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Storm sewer to the existing storm sewer along Main Street.

Infrastructure modifications or flow diversions required for retrofit:

Divert storm sewer from Main Street south along Claire Ave. to the pond via storm sewer.

Site access for future BMP maintenance:

Access from Claire Ave. and/or N. Western Avenue.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Potential utility conflicts, storm sewer depths, private property in the City of Neenah, cost sharing with City of Neenah.

Approx. Size of BMP Retrofit:

0.87 acre permanent pool

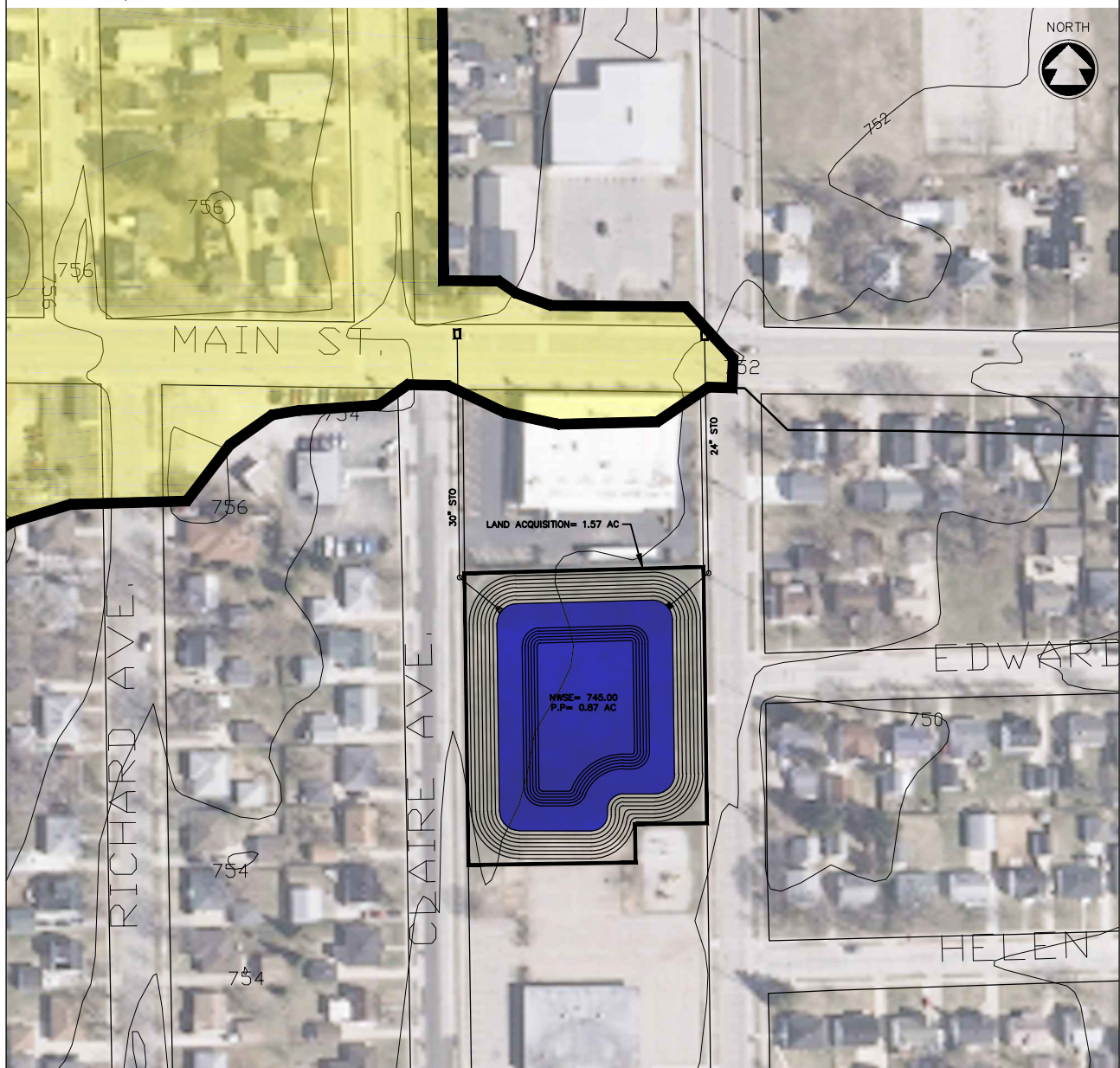
Approx. Land Required (ac):

1.57 acres

Estimated Cost:

\$365,000

Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-P1a5

McM PROJECT NO: M0003-910495

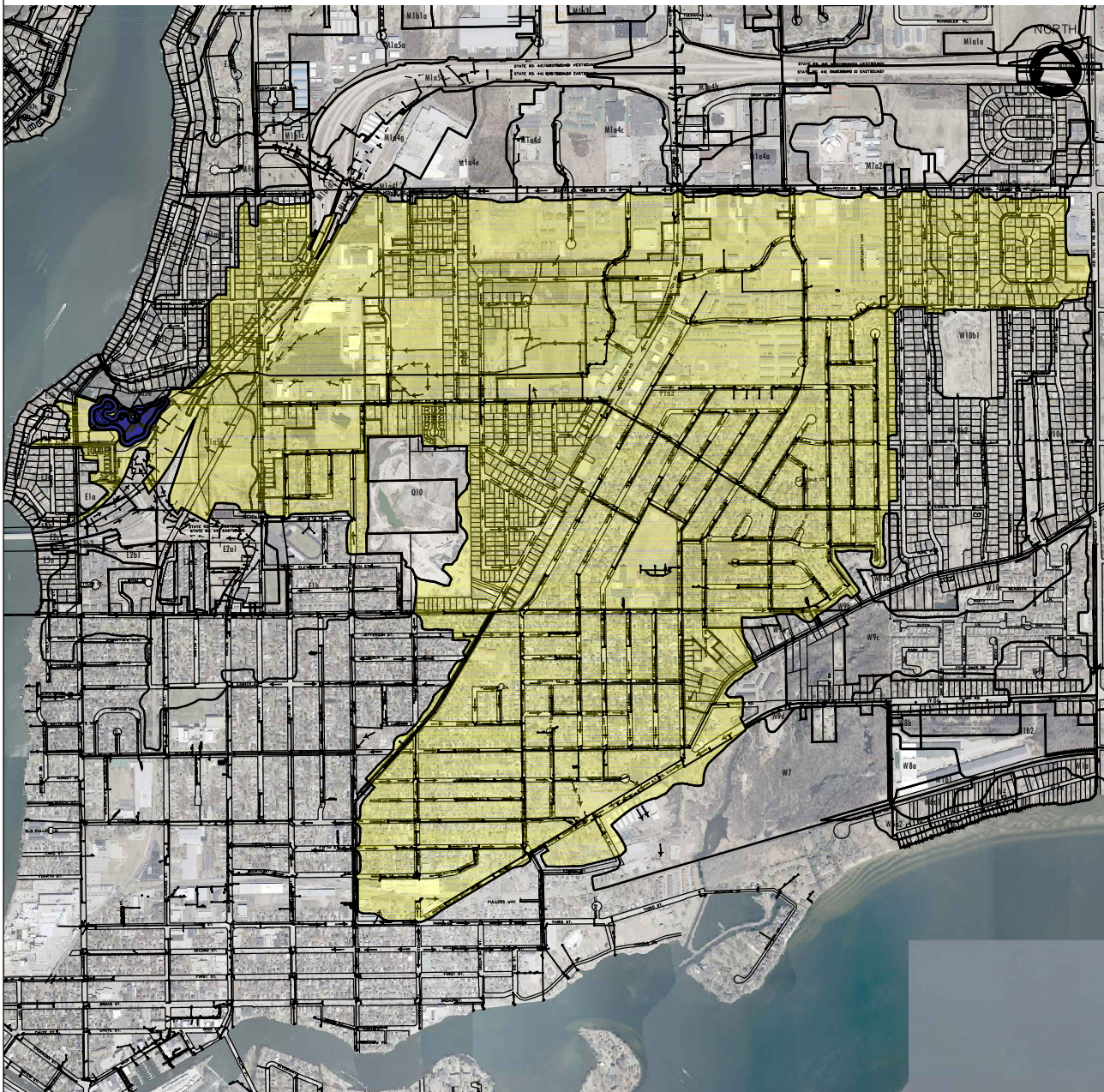
SITE INFORMATION:

| | |
|-----------------------------------------|-------------------------|
| Municipality: TOWN OF MENASHA | Date: DECEMBER, 2013 |
| Proposed BMP Name: TAYCO POND EXPANSION | Initials: AWS |

DRAINAGE AREA:

| | | |
|------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: EBMPs: P1a4, P1a5d1, PBMPs: P1a5b, P1a5d2 | Total Drainage Area: 1314.6 acres |
| Imperviousness (Future): 46.5 % | Runoff Curve Number (Future): 85 | Water Quality Volume (Future): 76.93 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

Groundwater Depth (ft): 2-3 ft

Bedrock Depth (in): >60 in

USDA Soil Texture: WINNECONNE SILTY CLAY LOAM

Remediation:

☐ Yes ☒ No

Historical:

☐ Yes ☒ No

100-Year Floodplain:

☐ Yes ☒ No

Wetland: ☐ Potential ☐ Yes ☒ No

Public Well < 400 ft: ☐ Yes ☒ No

Private Well < 100 ft: ☐ Yes ☒ No

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Modifications to the existing outlet structure for Tayco Pond.

Infrastructure modifications or flow diversions required for retrofit:

Infrastructure modifications include storm sewer from the Wisconsin DOT project and relay of the existing 96" storm sewer.

Site access for future BMP maintenance:

Access is from Twin Oaks Drive.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Potential utility conflicts, State R/W, cost share with the State.

Approx. Size of BMP Retrofit:

6.84 acre permanent pool

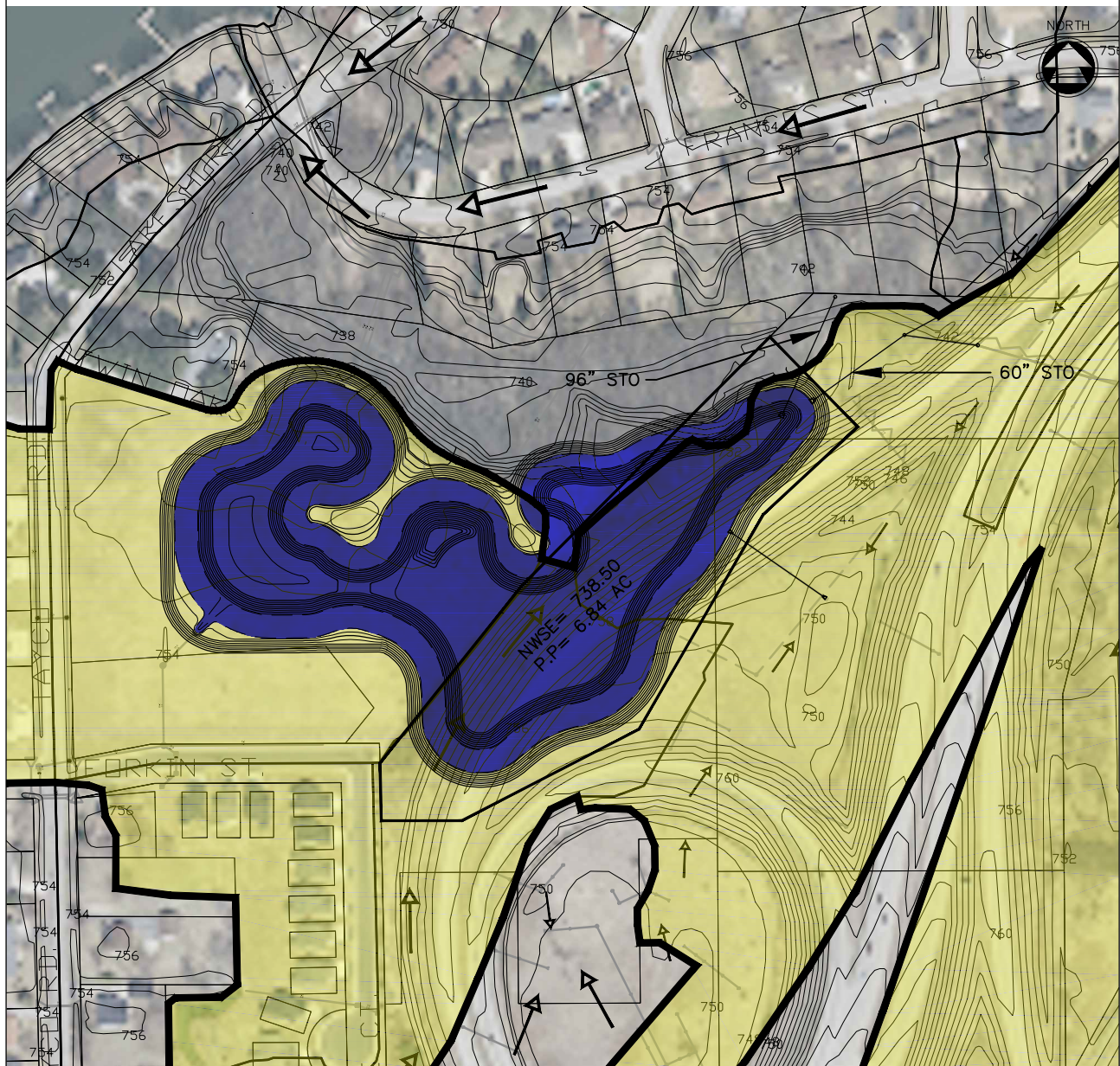
Approx. Land Required (ac):

4.43 acres

Estimated Cost:

\$1,015,000

Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-P1a5b

McM PROJECT NO: M0003-910495

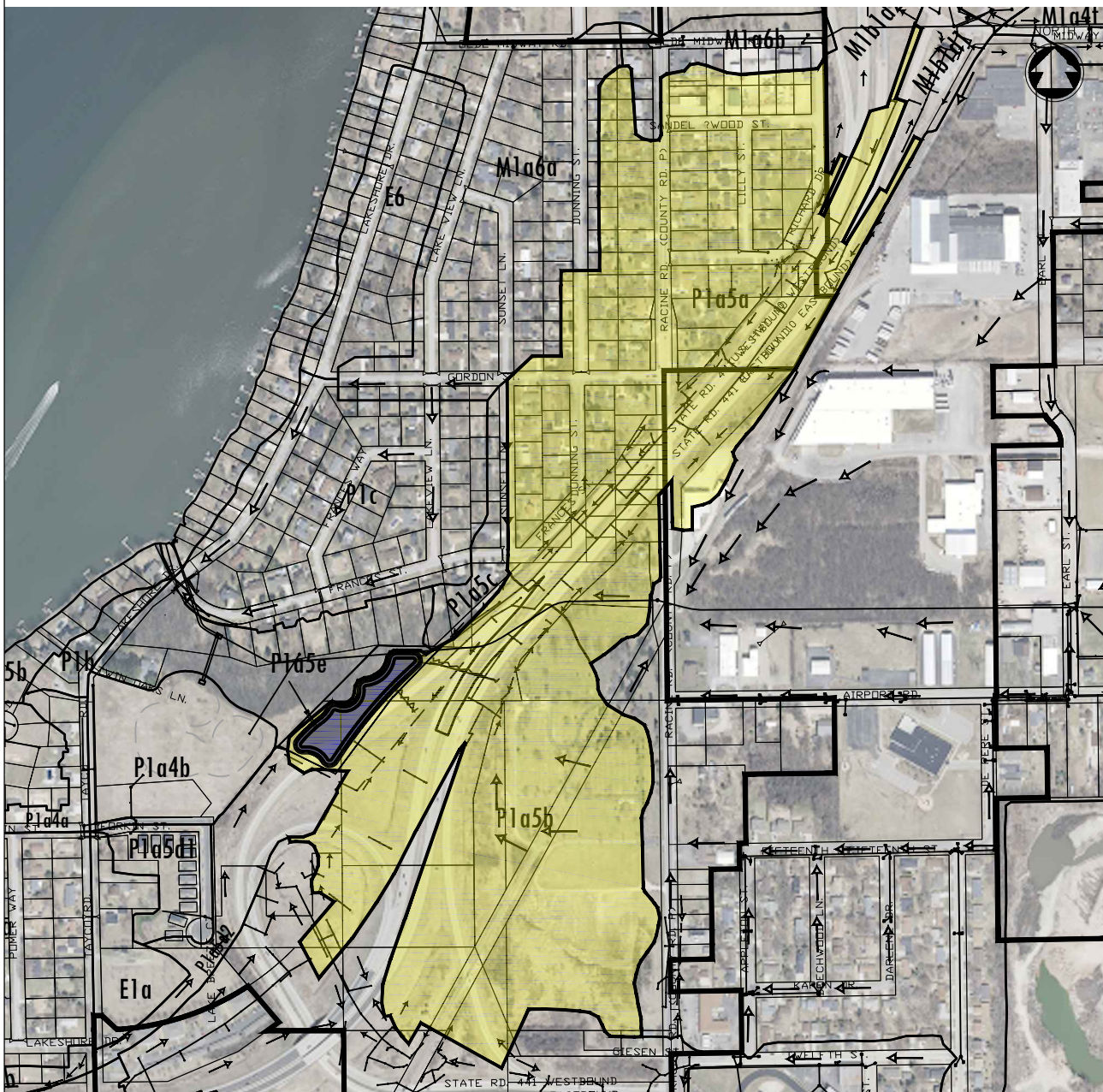
SITE INFORMATION:

| | |
|----------------------------------|-------------------------|
| Municipality: TOWN OF MENASHA | Date: DECEMBER, 2013 |
| Proposed BMP Name: DOT POND 3 | Initials: AWS |

DRAINAGE AREA:

| | | |
|------------------------------------|----------------------------------------------|----------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: P1a5a, P1a5b | Total Drainage Area: 90.2 acres |
| Imperviousness (Future): 44.4 % | Runoff Curve Number (Future): 85 | Water Quality Volume (Future): 5.07 |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

Groundwater Depth (ft): 5-6 ft

Bedrock Depth (in): >60 in

USDA Soil Texture: KEWAUNEE SILTY CLAY LOAM

Remediation:

☐ Yes ☒ No

Historical:

☐ Yes ☒ No

100-Year Floodplain: ☐ Yes ☒ No

Wetland: ☐ Potential ☐ Yes ☒ No

Public Well < 400 ft: ☐ Yes ☒ No

Private Well < 100 ft: ☐ Yes ☒ No

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Outfall via storm sewer into the existing stream north of existing Tayco Pond.

Infrastructure modifications or flow diversions required for retrofit:

Infrastructure modifications shown on Wisconsin DOT plans, including relay of the existing 96" storm sewer.

Site access for future BMP maintenance:

Access is from USH 41 and associated ramps or from the Tayco Pond property.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Constraints as shown on Wisconsin DOT Plans, State R/W, cost share with the State.

Approx. Size of BMP Retrofit:

1.32 acre permanent pool

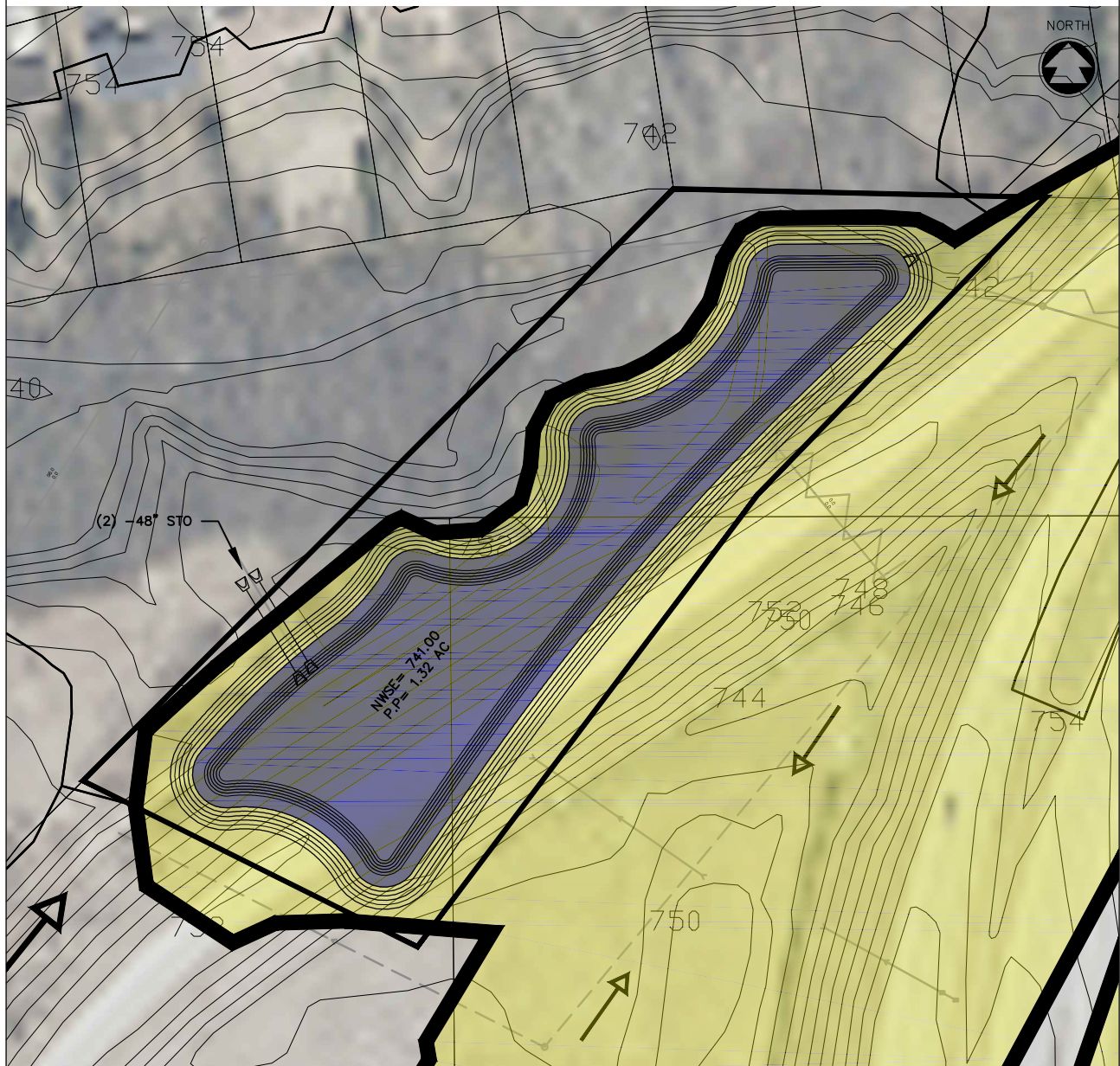
Approx. Land Required (ac):

2.93 acres

Estimated Cost:

\$400,000

Sketch of Proposed BMP Retrofit:



McMAHON

ENGINEERS ARCHITECTS
1445 McMAHON DRIVE NEENAH, WI 54956
Mailing: P.O. BOX 1025 NEENAH, WI 54957-1025
Tel: (920) 751-4200 Fax: (920) 751-4284
www.mcmgrp.com

POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-P1c

McM PROJECT NO: F0057-9-17-00221

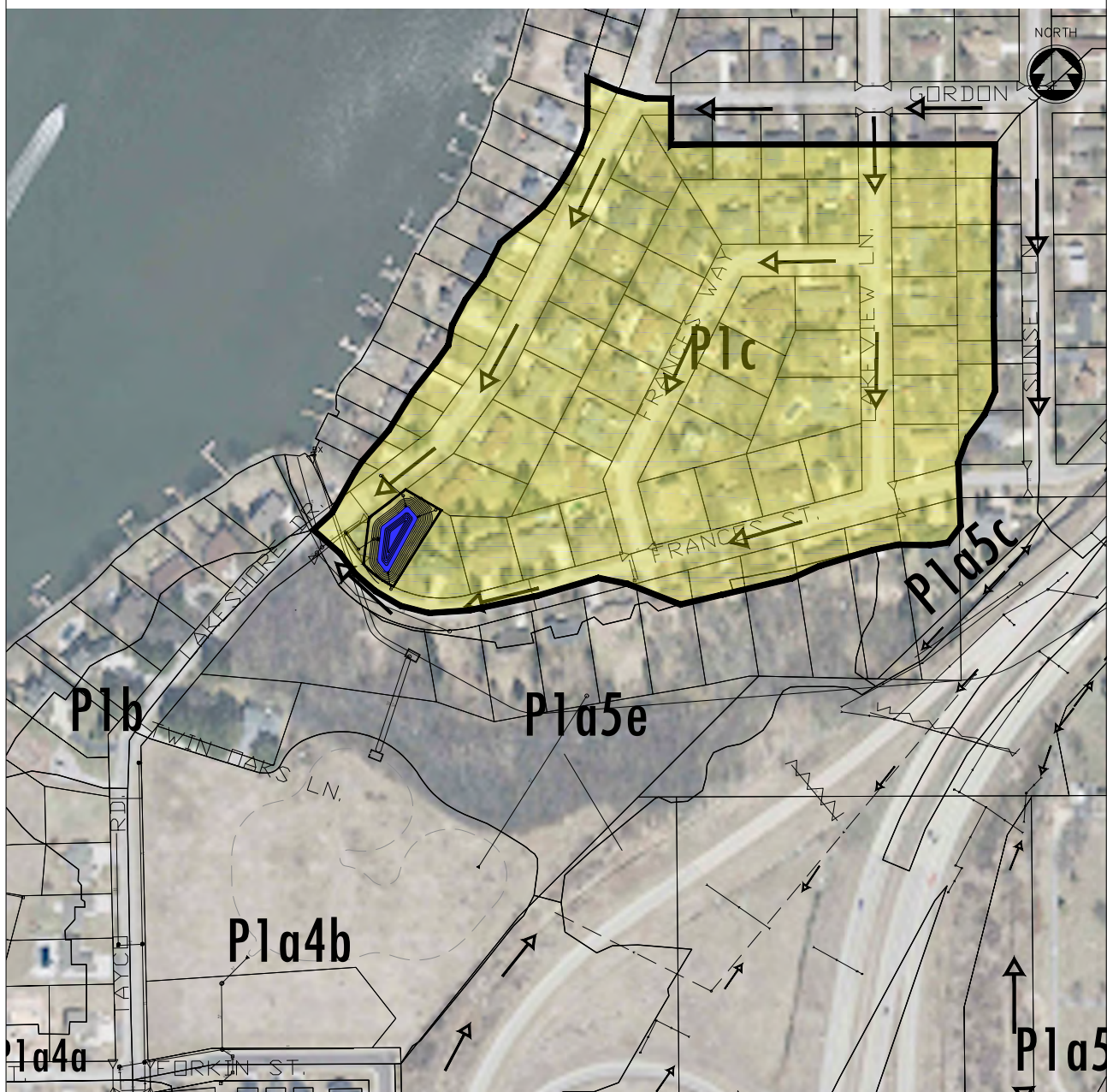
SITE INFORMATION:

| | |
|------------------------------------------|--------------------|
| Municipality: VILLAGE OF FOX CROSSING | Date: MAY, 2018 |
| Proposed BMP Name: FRANCES POND | Initials: AWS |

DRAINAGE AREA:

| | | |
|------------------------------------|-------------------------------------|--------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: P1c | Total Drainage Area: 20 acres |
| Imperviousness (Future): 36.3 % | Runoff Curve Number (Future): 83 | Water Quality Volume (Future): 0.94 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

Groundwater Depth (ft): 2-3 FT

Bedrock Depth (in): > 60 IN

USDA Soil Texture: Winneconne Silty Clay Loam

Remediation:

☐ Yes ☒ No

Historical:

☐ Yes ☒ No

100-Year Floodplain:

☒ Yes ☐ No

Wetland: ☒ Potential ☐ Yes ☐ No

Public Well < 400 ft: ☐ Yes ☒ No

Private Well < 100 ft: ☐ Yes ☒ No

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Outfall via storm sewer to Lakeshore Drive storm sewer.

Infrastructure modifications or flow diversions required for retrofit:

Divert storm water to the pond.

Site access for future BMP maintenance:

Access from Lakeshore Drive.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Rock excavation, floodplain, groundwater and private property.

Approx. Size of BMP Retrofit:

0.10 acre permanent pool

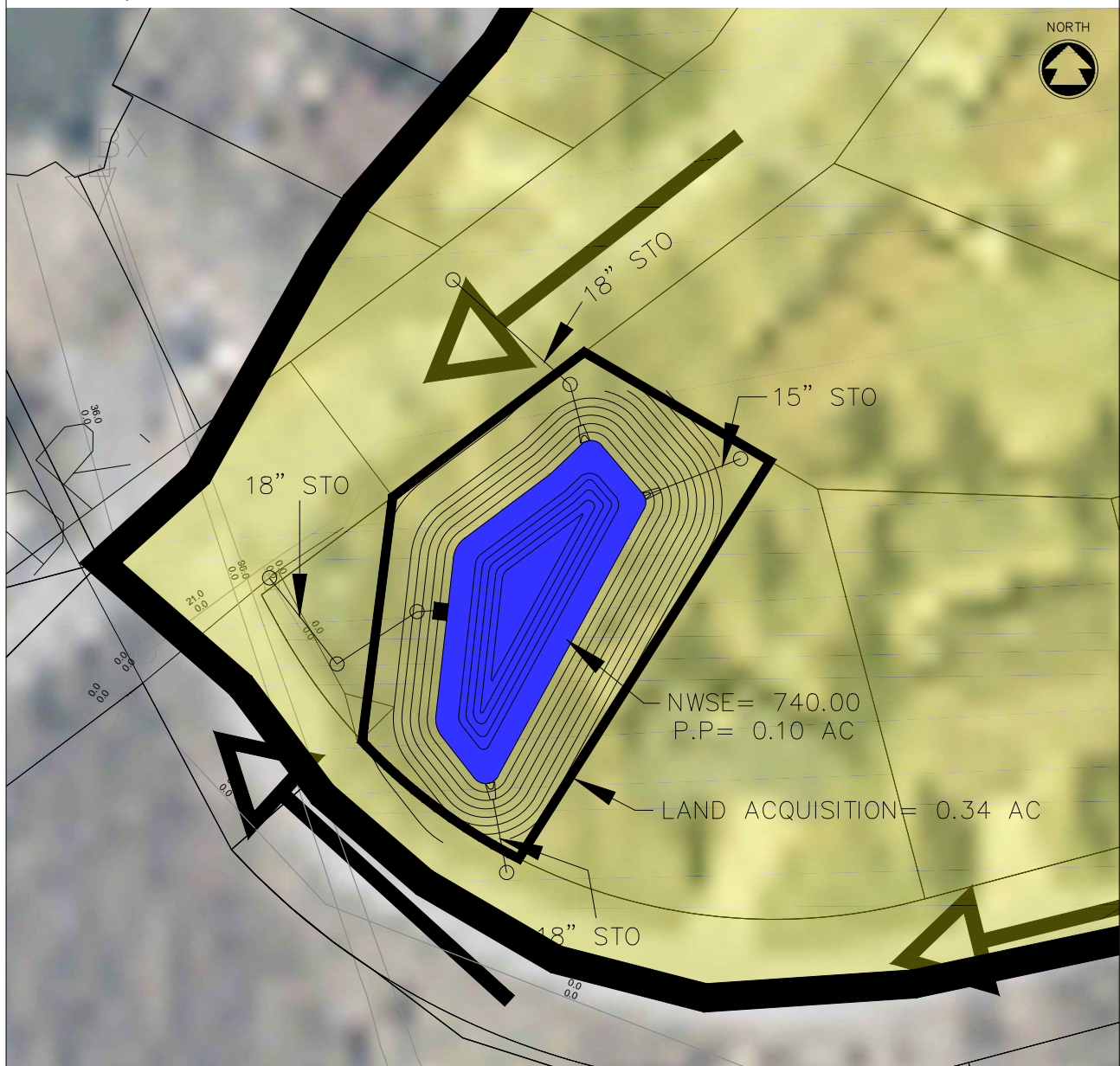
Approx. Land Required (ac):

0.34 acres

Estimated Cost:

\$197,300

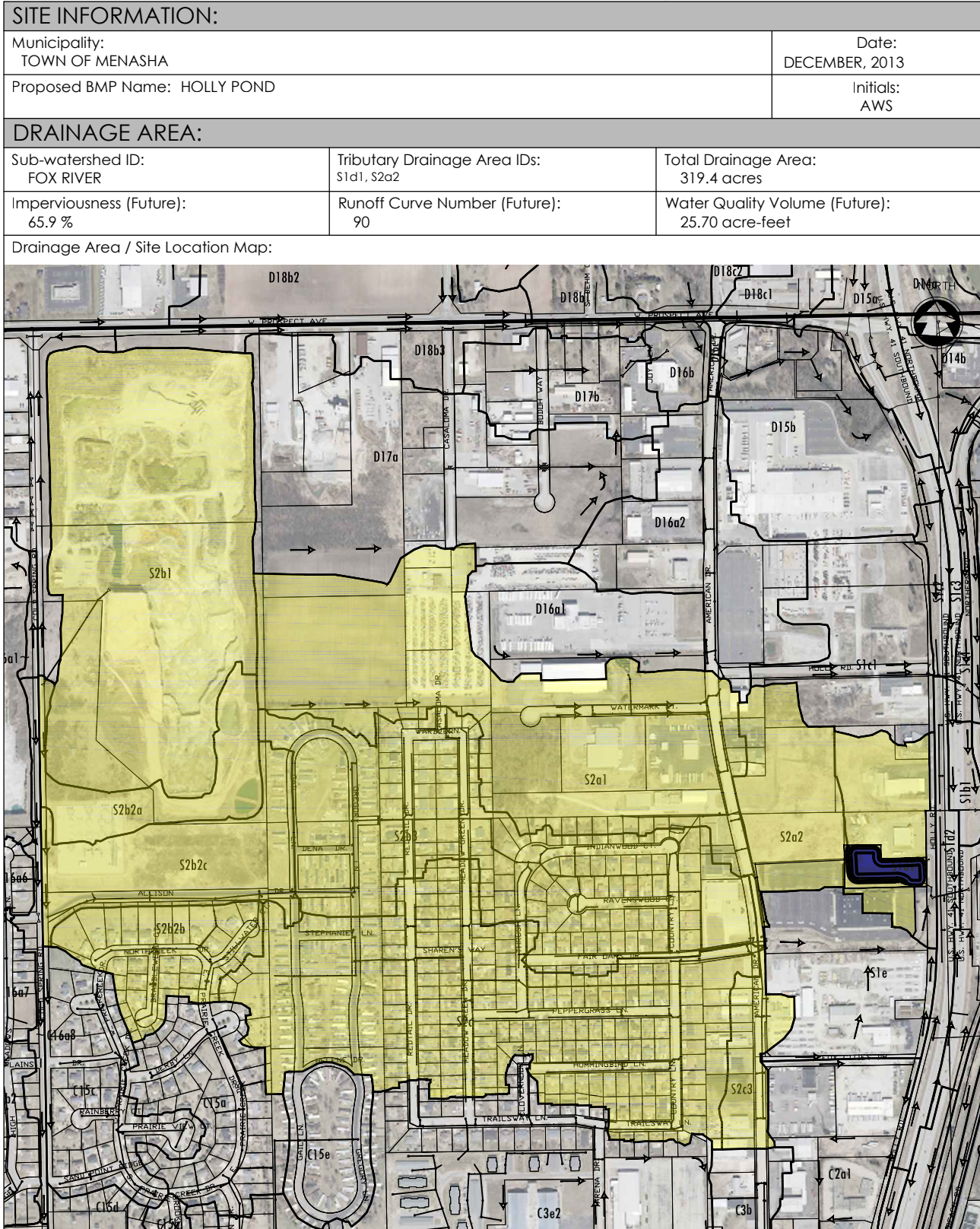
Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-S1d1

McM PROJECT NO: M0003-910495



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

Groundwater Depth (ft): 2-3 ft

Bedrock Depth (in): >60 in

USDA Soil Texture: WINNECONNE SILTY CLAY LOAM

Remediation:

☐ Yes ☒ No

Historical:

☐ Yes ☒ No

100-Year Floodplain: ☐ Yes ☒ No

Wetland: ☐ Potential ☐ Yes ☒ No

Public Well < 400 ft: ☐ Yes ☒ No

Private Well < 100 ft: ☐ Yes ☒ No

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Outfall via storm sewer to the existing culvert under Holly Road and USH 41.

Infrastructure modifications or flow diversions required for retrofit:

Divert the American Drive storm sewer east and the west Holly Road ditch to the proposed pond via storm sewer.

Site access for future BMP maintenance:

Access from Holly Road.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Potential utility conflicts, storm sewer depths, wetlands, high groundwater, private property.

Approx. Size of BMP Retrofit:

1.32 acre permanent pool

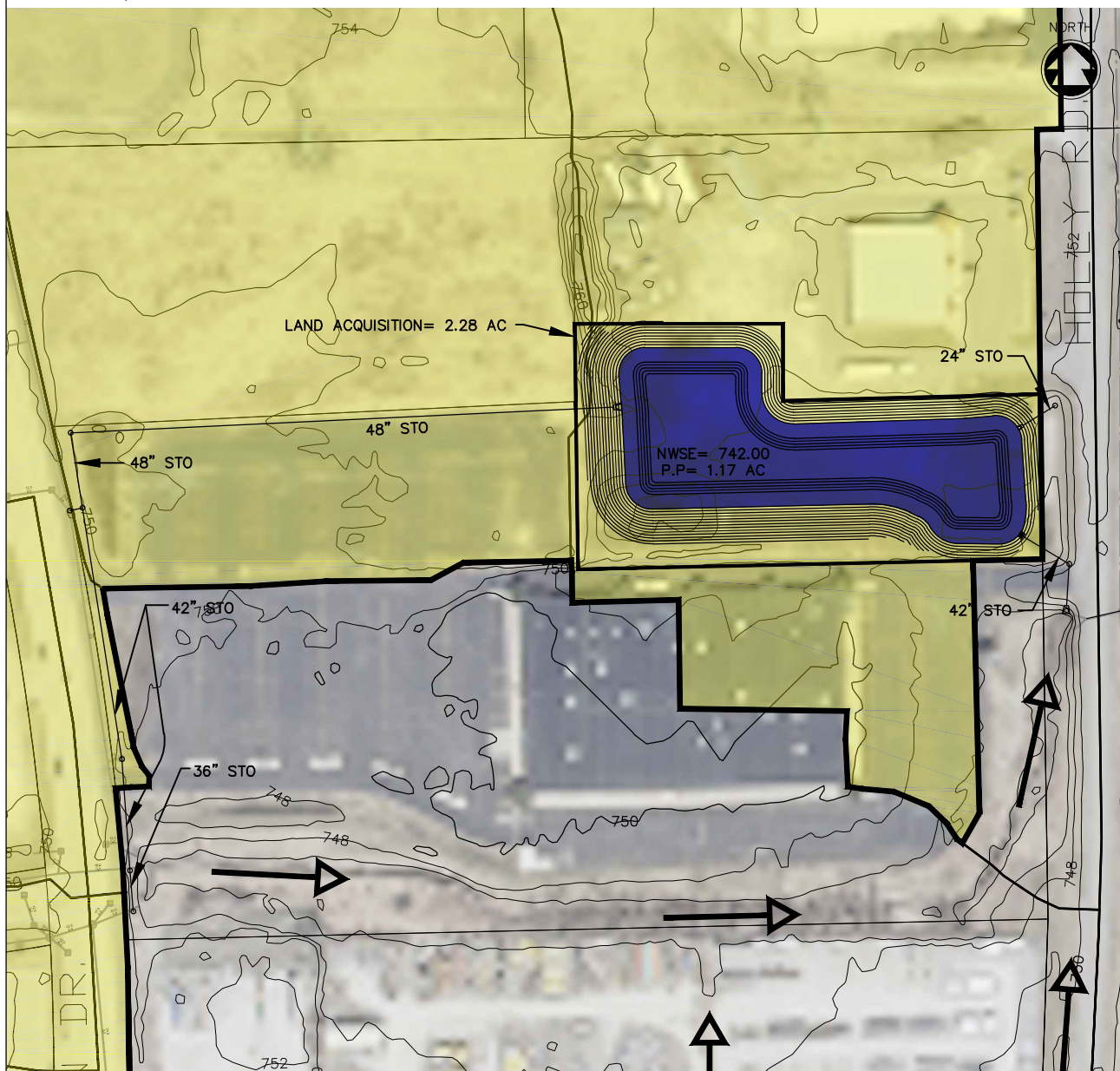
Approx. Land Required (ac):

2.93 acres

Estimated Cost:

\$400,000

Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-W10b2

McM PROJECT NO: M0003-910495

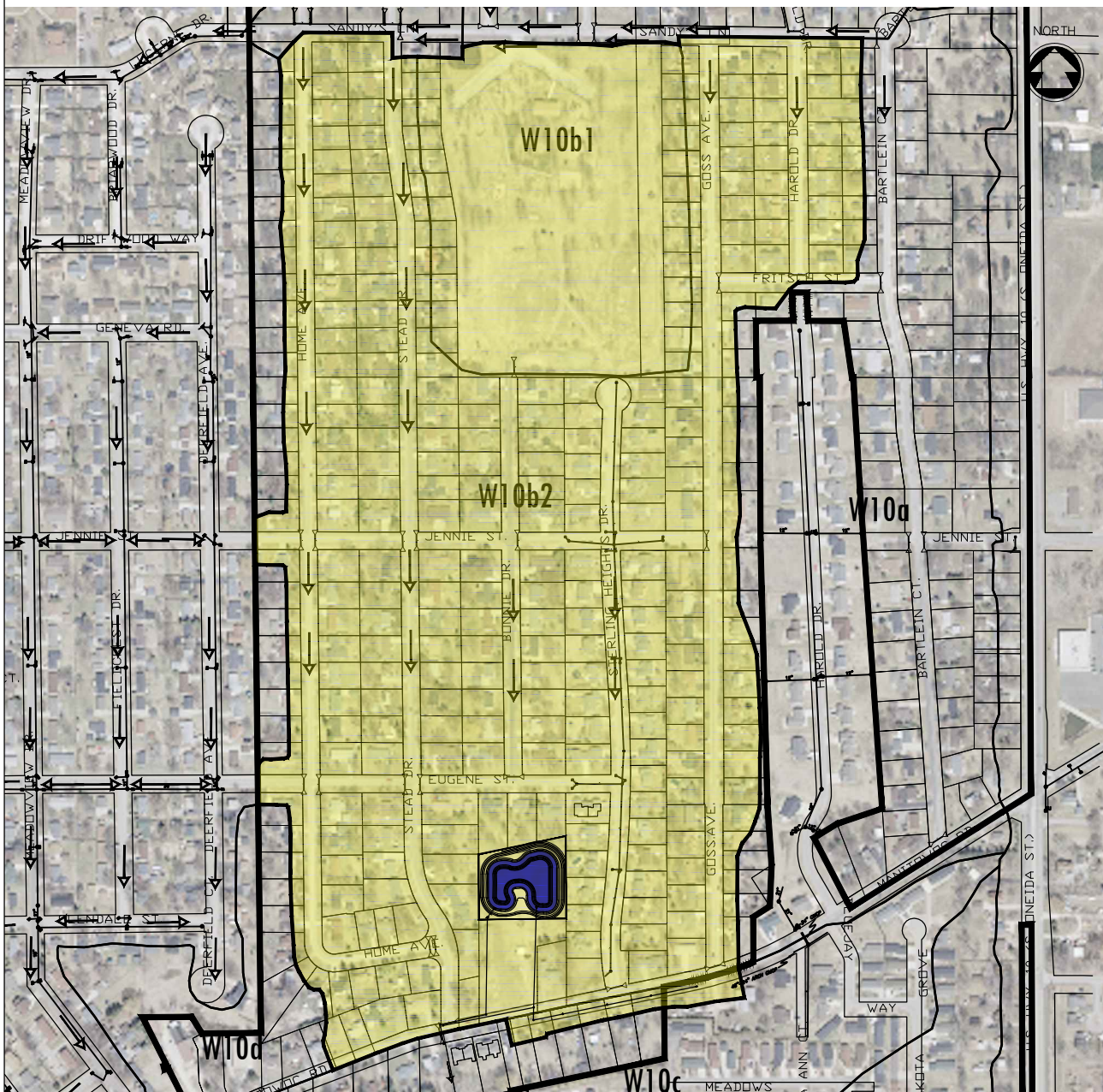
SITE INFORMATION:

| | |
|----------------------------------------------|-------------------------|
| Municipality: TOWN OF MENASHA | Date: DECEMBER, 2013 |
| Proposed BMP Name: MANITOWOC ROAD NORTH POND | Initials: AWS |

DRAINAGE AREA:

| | | |
|------------------------------------|----------------------------------------------------|--------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: W10b1, W10b2, W10c | Total Drainage Area: 125.5 acres |
| Imperviousness (Future): 33.7 % | Runoff Curve Number (Future): 82 | Water Quality Volume (Future): 5.54 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

| | | | | |
|-------------------------------------------|----------------------|---------------------------------------------------------------------|------------------------|--------------------------------------------------------------------------------------------------------|
| Groundwater Depth (ft): <1 ft | Remediation: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Wetland: | <input checked="" type="checkbox"/> Potential <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Bedrock Depth (in): >60 in | Historical: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Public Well < 400 ft: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| USDA Soil Texture: NEENAH SILTY CLAY LOAM | 100-Year Floodplain: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Private Well < 100 ft: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Outfall via storm sewer south to the existing stream south of Manitowoc Road.

Infrastructure modifications or flow diversions required for retrofit:

Divert the Manitowoc Road ditches to the propose pond via storm sewer.

Site access for future BMP maintenance:

An ingress/egress easement or property acquisition is required for site access.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Potential utility conflicts, wetlands, private property.

Approx. Size of BMP Retrofit:

0.82 acre permanent pool

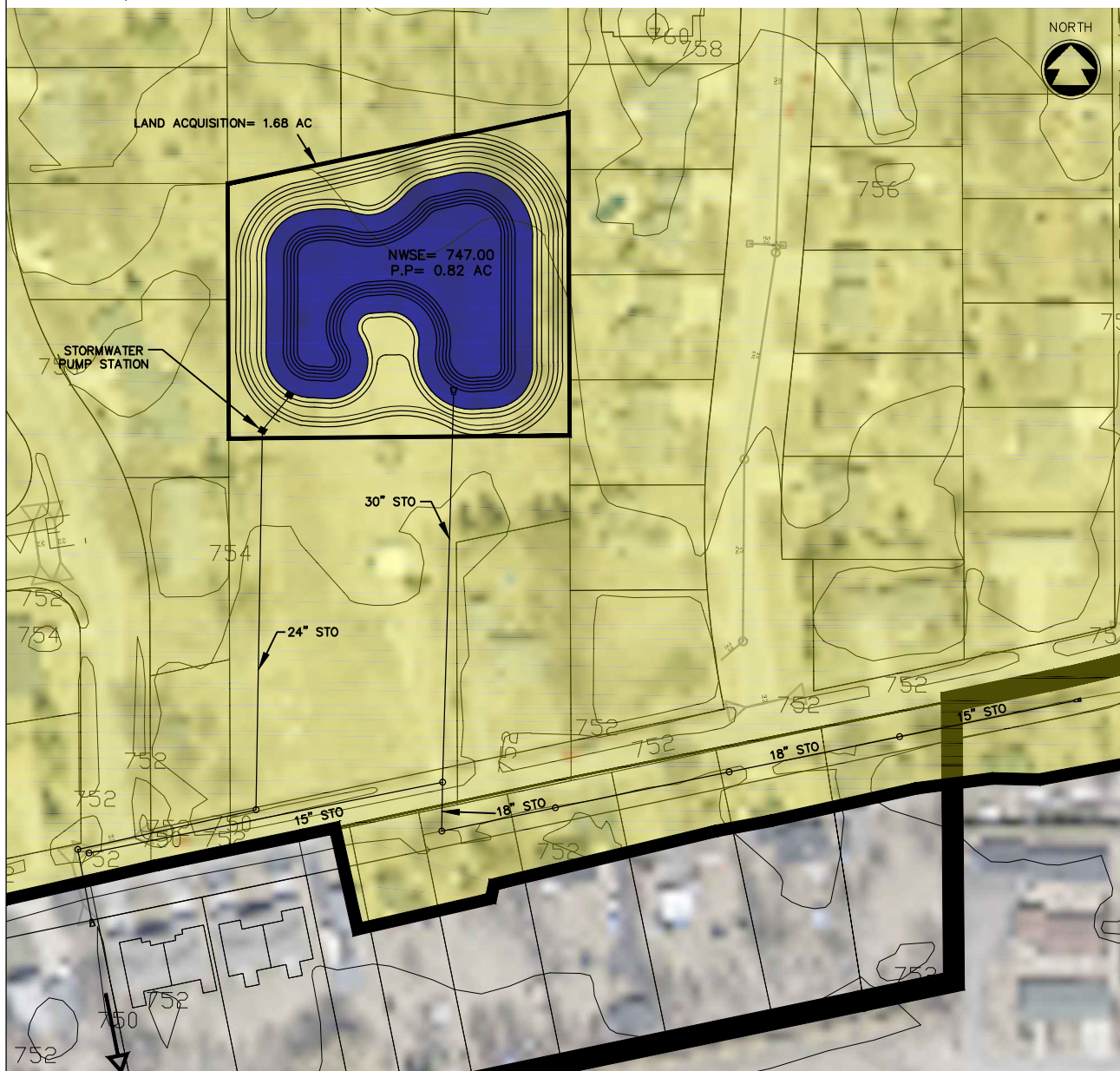
Approx. Land Required (ac):

1.68 acres

Estimated Cost:

\$415,000

Sketch of Proposed BMP Retrofit:



POTENTIAL STORMWATER BMP RETROFIT

BMP ID: P-BMP-W10c

McM PROJECT NO: M0003-910495

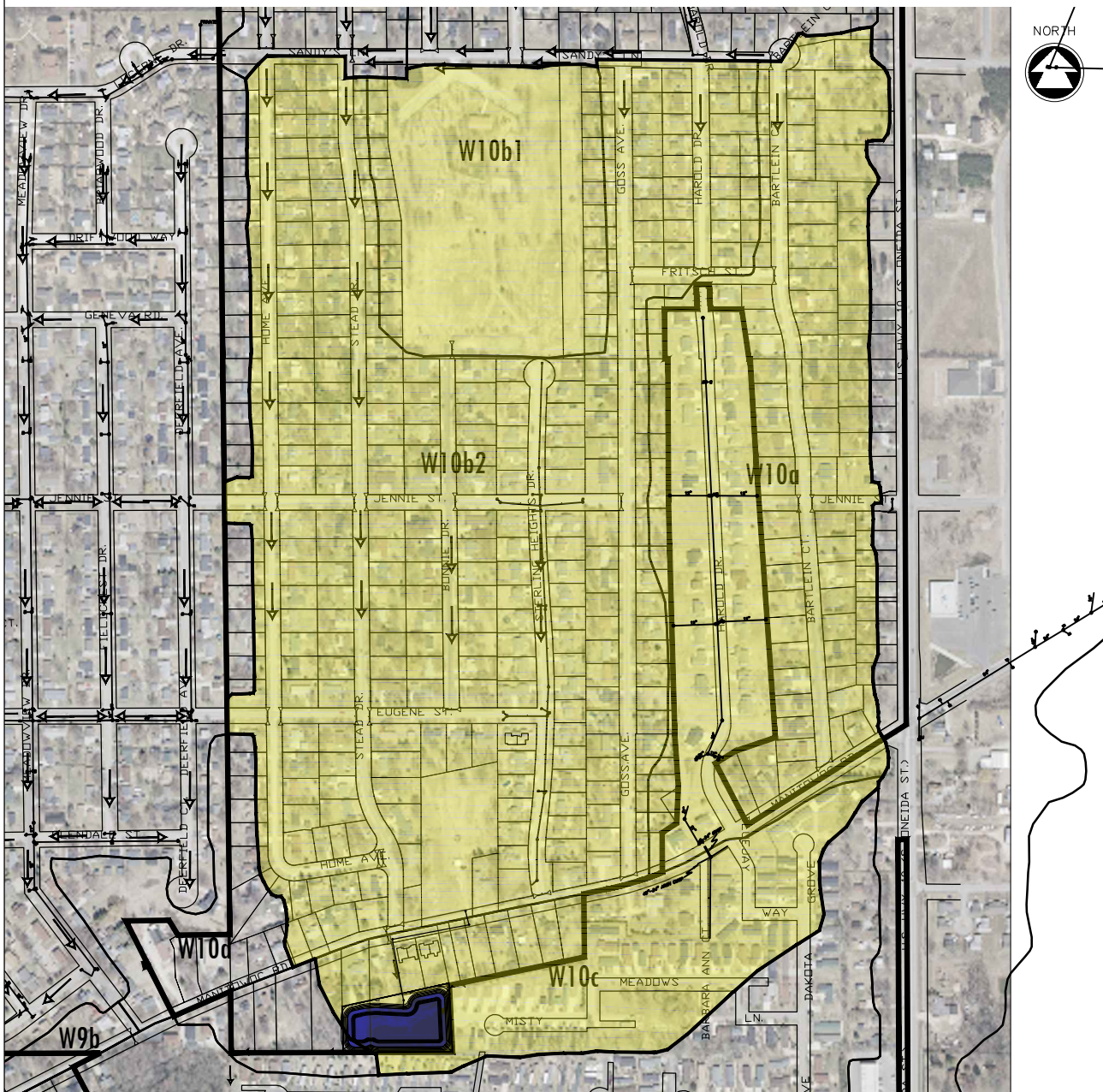
SITE INFORMATION:

| | |
|----------------------------------------|-------------------------|
| Municipality: TOWN OF MENASHA | Date: DECEMBER, 2013 |
| Proposed BMP Name: MANITOWOC ROAD POND | Initials: AWS |

DRAINAGE AREA:

| | | |
|------------------------------------|--------------------------------------------|--------------------------------------------------|
| Sub-watershed ID: FOX RIVER | Tributary Drainage Area IDs: W10a, W10c | Total Drainage Area: 199.0 acres |
| Imperviousness (Future): 35.7 % | Runoff Curve Number (Future): 82 | Water Quality Volume (Future): 9.23 acre-feet |

Drainage Area / Site Location Map:



PROPOSED BMP RETROFIT:

Type of proposed BMP retrofit (e.g. wet pond, bioretention, proprietary device, etc.):
Wet Detention Pond

Initial BMP Screening

Groundwater Depth (ft): 2-3 ft

Bedrock Depth (in): >60 in

USDA Soil Texture: UDORTHENTS

Remediation:

☐ Yes ☒ No

Historical:

☐ Yes ☒ No

100-Year Floodplain:

☐ Yes ☒ No

Wetland: ☒ Potential ☐ Yes ☐ No

Public Well < 400 ft: ☐ Yes ☒ No

Private Well < 100 ft: ☐ Yes ☒ No

BMP Outfall (storm sewer, stream, wetland, groundwater, etc.):

Outfall via storm sewer to the stream west of the proposed pond.

Infrastructure modifications or flow diversions required for retrofit:

Divert the Manitowoc Road ditches into the pond via storm sewer.

Site access for future BMP maintenance:

An ingress/egress easement shall be acquired from Manitowoc Road for access.

Site constraints that require further investigation (e.g. utility conflicts, wetlands, groundwater, etc.):

Potential utility conflicts, wetlands, private property, cost share with the City of Menasha.

Approx. Size of BMP Retrofit:

1.40 acre permanent pool

Approx. Land Required (ac):

2.10 acres

Estimated Cost:

\$355,000

Sketch of Proposed BMP Retrofit:

