

Appendix I3

Stormwater Treatment Documentation

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Acronyms and Abbreviations

SPDES.....	State Pollutant Discharge Elimination System
SWPPP.....	Storm Water Pollution Prevention Plan
UB.....	University at Buffalo
WQV.....	Water Quality Volume

Appendix I Stormwater Treatment

This appendix summarizes the initial water quality volume (WQv) required by the Project for the treatment of stormwater. The treatment of stormwater will meet the requirements of the general permit for stormwater discharges from construction activities (GP-0-25-001) for discharges to the waters of the United States. The treatment of stormwater within the City of Buffalo Combined Sewer limits will meet the requirements of the City of Buffalo Green Code. Where the City of Buffalo Green Code is in effect the Project must demonstrate that post-development peak flows during a 25-year storm will be less than pre-development peak flows during a 2-year storm. In addition, during construction the erosion control portion of the permit requirements will be met using treatments from the NYSDEC blue book. This would include protection of all water resources from contamination and siltation during construction. Dewatering water would need to be pumped to a settlement basin and routed through an erosion control practice for treatment prior to outletting to a waterbody.

Impervious areas are defined as areas that do not absorb water. Impervious areas should include concrete or asphalt pavement surfaces, compacted gravel surfaces (track bed) that are more than 6" in depth, stone filling and rooftops. Soils that are in Hydrologic Soil Group D that are compacted as a result of construction activities that have not been restored using Soil Restoration techniques in the New York State Stormwater Management Design Manual, (hence referred to as the Stormwater Management Design Manual) should also be considered impervious.

The term "New Development" as it relates to the SPDES General Permit for Construction Activity refers to impervious surfaces constructed within the disturbed area, such as widened shoulders, travel lanes or sidewalks that did not exist prior to the pre-construction condition. Temporary pavement placed for maintenance of traffic or pedestrian use, which is to be removed at completion of the contract, is not to be included in the new impervious area. Areas of new development may also be referred to as "New Construction" in the Notice of Intent.

Redevelopment is reconstruction of any existing impervious surfaces that involves disturbance of the bottom 6" layer of subbase material. These areas include impervious surfaces that are relocated or realigned in close proximity to the existing impervious surface or replaced in the existing location. Redevelopment is distinguished from new development in that new development refers to construction on land where there had not been previous construction.

Although redevelopment activities are generally expected to comply with technical standards contained in the Stormwater Management Design Manual, the project's storm water pollution prevention plan (SWPPP) will be considered to be in conformance with the technical standards if the redevelopment application criteria are met and the design utilizes alternative sizing and selection of stormwater management practices.

The required redevelopment application criteria are: An existing impervious area is disturbed and then reconstructed as either a pervious or impervious surface, and there is inadequate space for controlling stormwater runoff from the reconstructed area, or the physical constraints (e.g., soils, water table, and hydraulic head) of the site do not allow meeting the required elements of the green infrastructure or standard stormwater management practices.

The SWPPP for a project that includes redevelopment, with or without increased impervious area, must clearly identify and document the design difficulties and must clearly state that the redevelopment conditions meet the redevelopment application criteria in order to utilize the alternative sizing and selection of stormwater management practices. The alternative sizing and selection of stormwater management practices criteria for the Project includes a redevelopment that results in an increase in the total impervious area and subsequently an increased discharge rate. Water quantity controls will be included for the increased discharge. The Project also results in modified hydrology due to the location of development; water quantity controls will be included for the increased discharge. Any reduction of existing impervious by implementation of soil restoration after the removal of impervious will reduce the volume of stormwater run-off and therefore achieving part of the above criteria. The Project results in the creation of additional impervious area, therefore treatment would be required for 25% of the existing impervious area, plus 100% of the additional (new) impervious area. There are two areas of existing stormwater management practices located within the track alignment. These will be replaced with treatment equal to the treatment that was being provided by the existing practice if that treatment is greater than the required treatment for the Project. Additional treatment may also be required to accommodate the Project.

The requirements under the SPDES General Permit for Construction Activity include designing appropriate erosion and sediment control measures, and, detaining the 1-year, 24-hour storm event, attenuating the peak flows from the 10-year, 24-hour and 100-year, 24-hour storm events, for the new development areas and areas where the hydrology has changed and establishing water quality treatment measures. These elements may require the Project to acquire additional right of way to accommodate these measures.

The current Stormwater Management Design Manual includes a requirement to incorporate green infrastructure principles into the project planning and design process. These include minimizing stormwater impacts by reducing imperviousness, conserving natural resources, maintaining natural drainage courses, reducing the use of pipes and minimizing clearing and grading. They also include providing runoff storage measures dispersed uniformly throughout the site with the use of a variety of retention, detention, and runoff practices and maintaining predevelopment time of concentration by strategically routing flows to maintain travel time and control the discharge. Green infrastructure techniques will be identified and designed during final design.

The WQv information below is the initial water quality volume without the application of unknown green infrastructure techniques (i.e. the below water quality volumes are the worst-case water quality volumes based on the conceptual design.

The following equation can be used to determine the Initial WQv (in acre-feet of storage):

$$WQv(\text{Initial}) = (N + 0.25R)(P)(Rv)(A) / 12$$

P = 90% Rainfall Event Number

Rv = $0.05 + 0.009(IC)$, the runoff coefficient, (a minimum Rv of 0.2 should be used).

IC = $\frac{\text{New Development Impervious Area} + \text{Redevelopment Impervious Area}}{\text{Entire Project Disturbed Area}} \times 100$

A = The total disturbed area for the entire project (in Acres)

N = $\frac{\text{New Development Impervious Area}}{\text{Total Impervious Area (New + Redevelopment)}}$

R = $\frac{\text{Redevelopment Impervious Area}}{\text{Total Impervious Area (New + Redevelopment)}}$

I.1 WATER QUALITY VOLUME

I.1.0 Kenmore Avenue

I.1.0.0 *West of Windermere Boulevard to Niagara Falls Boulevard (Cut and Cover)*

The drainage area (2.36 acres) for this section of Kenmore Avenue generally flows into the combined sanitary sewer system for the City of Buffalo or into the separate Town of Amherst drainage systems on the side streets. The existing impervious area for this section is 2.12 acres which includes the lots at the addresses of 159 Niagara Falls Boulevard and 143 and 135 Kenmore Avenue where the tunnel goes through the existing structures. The redevelopment impervious area for this section is 2.12 acres (Assuming impervious structures and unneeded pavement will be restored to pervious). The WQv required for treatment in this section is 0.07 acre-feet. Assume detention is required to meet City of Buffalo Requirements. Approximate detention areas of approximately 1,538 sf total will be need for this section of the Project.

I.1.1 Niagara Falls Boulevard

Niagara Falls Boulevard can be divided into two drainage areas. South of Sheridan Drive and north of Sheridan Drive.

1.1.1.0 South of Sheridan Drive

The drainage area (22.05 acres) for this section of Niagara Falls Boulevard generally flows north and outlets into an enclosed conduit on Sheridan Drive just east of North Bailey Avenue. The existing impervious area for this section is 19.31 acres. The redevelopment impervious area for this section is 19.31 acres, with a new development impervious of 1.64 acres, (Assuming impervious structures and unneeded pavement will be restored to pervious). The WQv required for treatment in this section is 0.51 acre-feet. This will be less if portions of the road are resurfaced and not taken down to subbase. Assume detention is required to meet water quantity requirements. Approximate detention areas of a total of approximately 11,803 sf will be needed for this section of the Project. The detention areas will be sighted in areas of ROW that are available. There will be multiple areas for detention that will add up to the 11,803sf.

1.1.1.1 Sheridan Drive to North of Maple Road

The drainage area (14.11 acres) for this section of Niagara Falls Boulevard generally flows north and outlets into a creek under the I-290 bridge on Niagara Falls Boulevard. The drainage network consists primarily of drainage structures on the western shoulder of Niagara Falls Boulevard. The existing impervious area for this section is 12.56 acres. The redevelopment impervious area for this section is 12.56 acres with a new development impervious of 0.76 acres. The WQv required for treatment in this section is 0.76 acre-feet. Stormwater treatment would be less if portions of the road are resurfaced and not taken down to subbase. Assume detention is required to meet water quantity requirements. Approximate detention areas of a total of approximately 6,748 sf will be needed for this section of the Project. The detention areas will be sighted in areas of ROW that are available. There will be multiple areas for detention that will add up to the 6,748 sf.

1.1.2 Longmeadow Road

1.1.2.0 Windermere Boulevard to Niagara Falls Boulevard

The drainage area (0.84 acres) for this section of Longmeadow Road generally flows west towards Niagara Falls Boulevard and then connects into the sanitary sewer system. The existing impervious area for this section is 0.77 acres. The redevelopment impervious area for this section is 0.77 acres. The WQv required for treatment in this section is 0.02 acre-feet. Stormwater treatment would be less if portions of the road are resurfaced and not taken down to subbase. Assume detention is required to meet water quantity requirements. Approximate detention areas of a total of approximately 1,721 sf will be needed for this section of the Project. The detention areas will be sighted in areas of ROW that are available. There will be multiple areas for detention that will add up to the 1,721 sf.

I.1.3 Brighton Road

I.1.3.0 Niagara Falls Boulevard to Wynnwood Avenue

The drainage area (0.96 acres) for this section of Brighton Road generally flows west past the project area limits. The existing impervious area for this section is 0.83 acres. The redevelopment impervious area for this section is 0.82 acres and with a new development decrease of impervious area is 0.01 acres. The WQv required for treatment in this section is 0.02 acre-feet. Stormwater treatment would be less if portions of the road are resurfaced and not taken down to subbase. Assume detention is required to meet water quantity requirements. Approximate detention areas of a total of approximately 2,727 sf will be needed for this section of the Project. The detention areas will be sighted in areas of ROW that are available. There will be multiple areas for detention that will add up to the 2,727 sf.

I.1.4 Maple Road

I.1.4.0 West of Alberta Drive to Niagara Falls Boulevard (including east side of Niagara Falls Boulevard)

The drainage area (11.28 acres) for this section of Maple Road generally flows west onto Niagara Falls Boulevard and then continues north on Niagara Falls Boulevard. This network outlets into a creek under the I-290 bridge on Niagara Falls Boulevard. The existing impervious area for this section is 8.60 acres. The redevelopment impervious area for this section is 6.7 acres, with 1.90 acres of new development impervious. The WQv required for treatment in this section is 0.32 acre-feet. This assumes full parcel takes outside of the proposed impervious area are returned to pervious or used for stormwater treatment. This section includes impacts to the existing stormwater treatment basins for the Boulevard Mall property. These basins would be replaced with treatments for equal or greater amounts of stormwater. Stormwater treatment would be less if portions of the road are resurfaced and not taken down to subbase. Assume detention is required to meet water quantity requirements. Approximate detention areas of a total of approximately 3,538 sf will be needed for this section of the Project. The detention areas will be sighted in areas of ROW that are available. There will be multiple areas for detention that will add up to the 3,538 sf.

I.1.4.1 Alberta Drive to Hillcrest Drive

The drainage area (2.57 acres) for this section of Maple Road generally flows east from Alberta Drive and west from Hillcrest Drive to a large structure just west of North Bailey Avenue which then heads north through the parking lot of TOPS. The existing impervious area for this section is 1.9 acres. The redevelopment impervious area for this section is 1.9 acres with 0.5 acres of new development. The WQv required for treatment in this section is 0.08 acre-feet. Stormwater treatment would be less if portions of the road are resurfaced and not taken down to subbase. Assume detention is required to meet water quantity requirements. Approximate detention areas of a total of approximately 3430 sf will be needed for this section of the Project. The detention

areas will be sighted in areas of ROW that are available. There will be multiple areas for detention that will add up to the 3,430 sf.

1.1.4.2 East of Hillcrest Drive

The drainage area (5.0 acres) for this section of Maple Road generally flows east and outlets into a creek south of Maple Road between Corporate Parkway and the I-290. The existing impervious area for this section is 3.0 acres. The redevelopment impervious area for this section is 3.0 acres with 0.33 acres of new development impervious. The WQv required for treatment in this section is 0.09 acre-feet. Stormwater treatment would be less if portions of the road are resurfaced and not taken down to subbase. Assume detention is required to meet water quantity requirements. Approximate detention areas of a total of approximately 3631 sf will be needed for this section of the Project. The detention areas will be sighted in areas of ROW that are available. There will be multiple areas for detention that will add up to the 3,631 sf.

1.1.5 North Bailey Avenue

1.1.5.0 650' North of Maple Road to 530' South of Maple Road

The drainage area (1.71 acres) for this section of North Bailey Avenue generally flows north along North Bailey Avenue and past the project area limits. The existing impervious area for this section is 1.48 acres. The redevelopment impervious area for this section is 1.48 acres with 0.02 acres of new development impervious. The WQv required for treatment in this section is 0.33 acre-feet. Stormwater treatment would be less if portions of the road are resurfaced and not taken down to subbase. Assume detention is required to meet water quantity requirements. Approximate detention areas of a total of approximately 7,248 sf will be needed for this section of the Project. The detention areas will be sighted in areas of ROW that are available. There will be multiple areas for detention that will add up to the 7,248 sf.

1.1.6 Sweet Home Road

1.1.6.0 Maple Road to South of Rensch Road

The drainage area (10.18 acres) for this section of Sweet Home Road generally flows north and outlets into Bizer Creek just south of Rensch Road. The existing impervious area for this section is 4.9 acres. The redevelopment impervious area for this section is 4.9 acres with 2.40 acres of new development impervious. The WQv required for treatment in this section is 0.29 acre-feet. Stormwater treatment would be less if portions of the road are resurfaced and not taken down to subbase. Assume detention is required to meet water quantity requirements. Approximate detention areas of a total of approximately 6,236 sf will be needed for this section of the Project. The detention areas will be sighted in areas of ROW that are available. There will be multiple areas for detention that will add up to the 6,236 sf.

1.1.7 University at Buffalo North Campus

1.1.7.0 UB North

The drainage area (12.69 acres) for this section of UB north has a few outlets, mostly to Bizer creek along with two to Ellicott Creek. The majority generally flows west and outlets into Bizer Creek, a portion of Putnam Way flows south and then flows along Millersport Highway and outlets at Ellicott Creek and a portion of John James Audubon outlets to Ellicott Creek. The existing impervious area for this section is 4.91 acres. The redevelopment impervious area for this section is 4.91 acres, with 5.18 acres of new development impervious area. The WQv required for treatment in this section is 0.526 acre-feet. This section has many unknowns including limits of disturbance, and questions on existing impervious due to ongoing construction along John James Audubon Parkway. This will be less if portions of the road are resurfaced and not taken down to subbase. The track alignment impacts an existing stormwater treatment area east of Jacobs Hall. Stormwater treatment would need to be replaced with a treatment with a capacity to treat the same amount of stormwater that it treats today and additional capacity for any additional impervious area that drains to it. Assume detention is required to meet water quantity requirements. Approximate detention areas of a total of approximately 11,244 sf will be needed for this section of the Project. The detention areas will be sighted in areas of ROW that are available. There will be multiple areas for detention that will add up to the 11,244 sf. Negotiations with UB are on going with regards to impacts to their treatments and proposed treatment areas.

1.1.8 John James Audubon Parkway

1.1.8.0 Ellicott Creek to North of Sylvan Parkway

The drainage area (2.23 acres) for this section of John James Audubon Parkway generally flows south and outlets into Ellicott Creek. The existing impervious area for this section is 1.25 acres. The redevelopment impervious area for this section is 1.25 acres, with 0.42 acres of new development impervious area. The WQv required for treatment in this section is 0.06 acre-feet. Stormwater treatment would be less if portions of the road are resurfaced and not taken down to subbase. Assume detention is required to meet water quantity requirements. Approximate detention areas of a total of approximately 1,282 sf will be needed for this section of the Project. The detention areas will be sighted in areas of ROW that are available. There will be multiple areas for detention that will add up to the 1,282 sf.

1.1.8.1 North of Sylvan Parkway to North End of Project (AREA 1)

The drainage area (10.04 acres) for this section of John James Audubon Parkway generally flows east into a trench where it then flows north into a creek past the end of the Parkway. The existing impervious area for this section is 4.73 acres. The redevelopment impervious area for this section is 4.73 acres, with 3.44 acres of new development impervious. The WQv required for treatment in this section is 0.37 acre-feet. Stormwater treatment would be less if portions of

the road are resurfaced and not taken down to subbase. Assume detention is required to meet water quantity requirements. Approximate detention areas of a total of approximately 8,051 sf will be needed for this section of the Project. The detention areas will be sighted in areas of ROW that are available. There will be multiple areas for detention that will add up to the 8,051 sf.

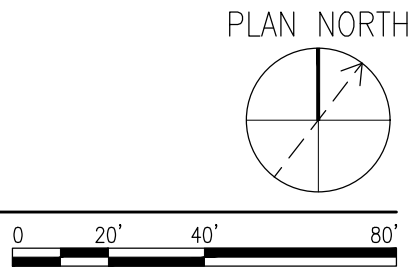
I.1.9 Summary

A total initial WQv of 3.15 acre-feet is required for stormwater treatment as a result of the Project. The initial WQv can be reduced by resurfacing portions of the roadways where applicable (usually by lane width so reflection cracking does not occur) and green infrastructure techniques (impervious removal with soil restoration). The remainder would need to be treated with various treatments. The treatments that are anticipated to be used are tree trenches, underground infiltration, rain gardens, dry swales, wet swales, bio swales and bioretention. Stormwater quantity requirements will also require detention. The private stormwater basins at the Boulevard Mall, Sweet Home Middle School and at the University at Buffalo North Campus would need to be replaced by treatments with the capacity to treat the same amount of stormwater they treat today. These areas that replace the impacted stormwater basins would be temporary easements for relocation of stormwater basins and would be turned back over to the property owners for future maintenance. Project storm water would be collected and treated separately.

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B1 UTILITY PLANS – MAIN ST.

1" = 40'-0"



GENERAL SHEET NOTES:

1. NOTE SOME RELOCATIONS OF PUBLIC UTILITIES ARE STILL BEING PROGRESSSED AND ARE NOT SHOWN.
2. CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

KEYNOTES:

1. UNDERGROUND ELECTRICAL LINE CONFLICT
2. SANITARY PIPE CONFLICT
3. STORM PIPE CONFLICT
4. GAS LINE CONFLICT
5. WATER LINE CONFLICT
6. UNDERGROUND COMMUNICATION LINE CONFLICT
7. ELECTRICAL OVERHEAD LINE CONFLICT
8. UNDERGROUND FIBER OPTIC CONFLICT
9. OVERHEAD COMMUNICATION
10. PROPOSED SANITARY PIPE
11. PROPOSED STORM PIPE
12. PROPOSED WATER LINE
13. PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	----
DIRECTION OF TRAVEL	←
EXISTING COMMUNICATION LINE	----- COMM (QLB) -----
EXISTING GAS LINE	----- G (QLB) ----- G (QLB) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	----- W (QLB) ----- W (QLB) -----
EXISTING ELECTRICAL	----- UE (QLB) ----- UE (QLB) -----
EXISTING ELECTRICAL OVERHEAD	----- OHW ----- OHW -----
EXISTING SANITARY	----- SAN ----- SAN -----
EXISTING STORM	----- ST ----- ST -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----

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ISSUE:		
NFTA PROJECT NO:		34LZ1725
DESIGNER PROJECT NO:		US-WSP-187880C
CAD DWG FILE:		CU101_CU120.dwg
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CHECKED BY:		JCK
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UTILITY PLAN SHEET 3

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B1 UTILITY PLANS – MAIN ST.

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LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	
EXISTING COMMUNICATION LINE	----- COMM (QUB) -----
EXISTING GAS LINE	----- G (QUB) ----- G (QUB) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	----- W (QUB) ----- W (QUB) -----
EXISTING ELECTRICAL	----- UE (QUB) ----- UE (QUB) -----
EXISTING ELECTRICAL OVERHEAD	----- OHW ----- OHW -----
EXISTING SANITARY	----- SAN ----- SAN -----
EXISTING STORM	----- ST ----- ST -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----

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ISSUE:		
NFTA PROJECT NO:		34LZ1725
DESIGNER PROJECT NO:		US-WSP-187880C
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UTILITY PLAN SHEET 4

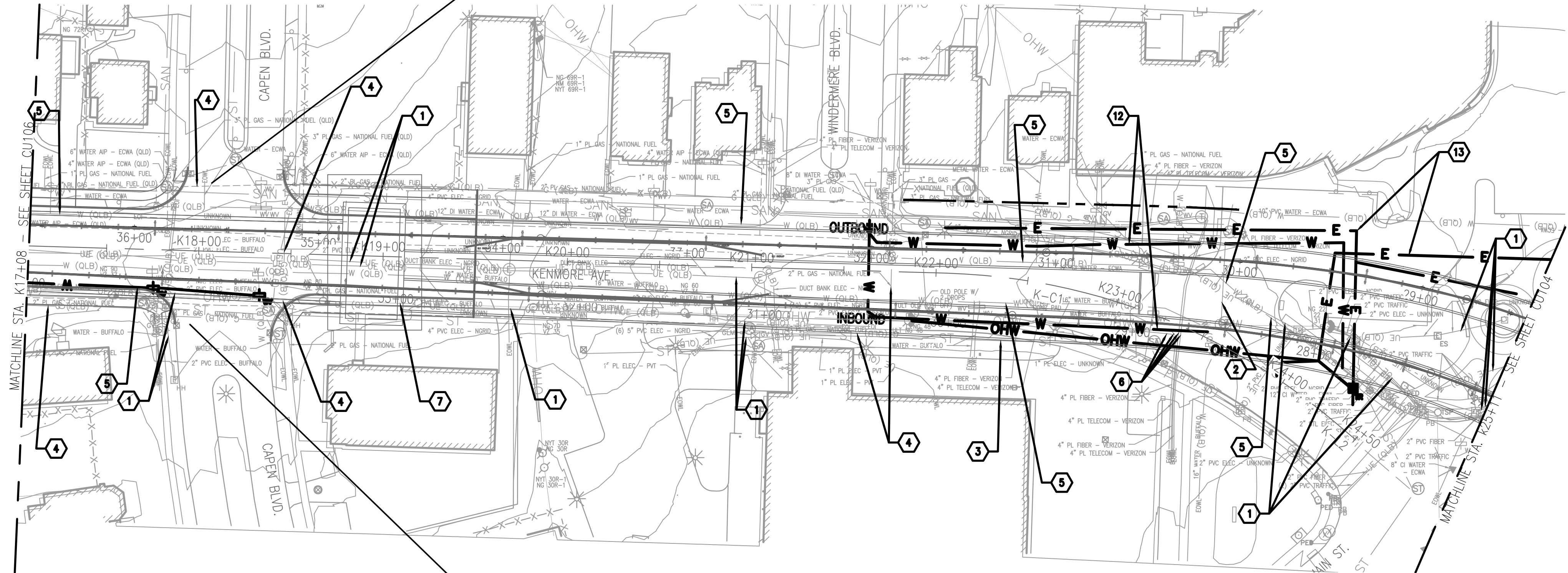
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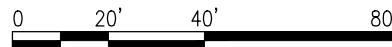
K-1	
Total Area (acres)	1.570
Impervious Area (acres)	1.520
Pervious Area (acres)	0.050
WQv (af)	0.036
WQV managed (af)	0.036
Post Detention Area (sf)	785.892

K-2	
Total Area (acres)	0.790
Impervious Area (acres)	0.750
Pervious Area (acres)	0.040
WQv (af)	0.035
WQV managed (af)	0.035
Post Detention Area (sf)	752.154

B1 UTILITY PLANS – KENMORE AVE.
1" = 40'-0"



PLAN NORTH



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- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	
DIRECTION OF TRAVEL	
EXISTING COMMUNICATION LINE	
EXISTING GAS LINE	
EXISTING UNKNOWN UTILITY LINE	
EXISTING WATER LINE	
EXISTING ELECTRICAL	
EXISTING ELECTRICAL OVERHEAD	
EXISTING SANITARY	
EXISTING STORM	
PROPOSED WATER LINE	
PROPOSED SANITARY	
PROPOSED STORM	

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DESIGNER PROJECT NO:		US-WSP-187880C
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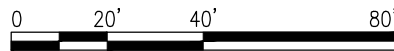
B1 UTILITY PLANS – KENMORE AVE.

1" = 40'-0"

K-1	
Total Area (acres)	1.570
Impervious Area (acres)	1.520
Pervious Area (acres)	0.050
WQv (af)	0.036
WQV managed (af)	0.036
Post Detention Area (sf)	785.892

K-2	
Total Area (acres)	0.790
Impervious Area (acres)	0.750
Pervious Area (acres)	0.040
WQv (af)	0.035
WQV managed (af)	0.035
Post Detention Area (sf)	752.154

PLAN NORTH



GENERAL SHEET NOTES:

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- CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

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- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	←
EXISTING COMMUNICATION LINE	----- COMM (GLB) -----
EXISTING GAS LINE	----- G (GLB) ----- G (GLB) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	----- W (GLB) ----- W (GLB) -----
EXISTING ELECTRICAL	----- UE (GLB) ----- UE (GLB) -----
EXISTING ELECTRICAL OVERHEAD	----- CHW ----- CHW -----
EXISTING SANITARY	----- SAN ----- SAN -----
EXISTING STORM	----- ST ----- ST -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----



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EIS & PRELIMINARY
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P1	04/11/25	15% SUBMISSION
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ISSUE:		
NFTA PROJECT NO:		34LZ1725
DESIGNER PROJECT NO:		US-WSP-187880C
CAD DWG FILE:		CU101_CU120.dwg
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CHECKED BY:		JCK
SCALE:		1"=40'
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SHEET TITLE
UTILITY PLAN SHEET 6

DRAWING#
CU106
SHEET# 0F

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B1 UTILITY PLANS – NIAGARA FALLS BLVD.
1" = 40'-0"

K-1	
Total Area (acres)	1.570
Impervious Area (acres)	1.520
Pervious Area (acres)	0.050
WQv (af)	0.036
WQV managed (af)	0.036
Post Detention Area (sf)	785.892

NS-1	
Total Area (acres)	0.275
Impervious Area (acres)	0.237
Pervious Area (acres)	0.039
WQv (af)	0.005
WQV managed (af)	0.005
Post Detention Area (sf)	102.862

NS-2	
Total Area (acres)	0.147
Impervious Area (acres)	0.105
Pervious Area (acres)	0.042
WQv (af)	0.002
WQV managed (af)	0.002
Post Detention Area (sf)	46.208

GENERAL SHEET NOTES:

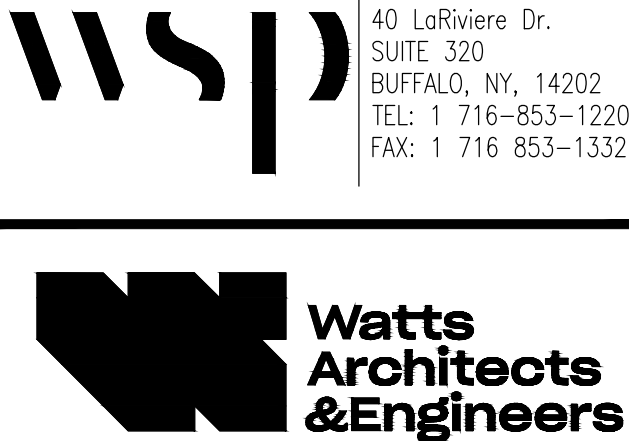
- NOTE SOME RELOCATIONS OF PUBLIC UTILITIES ARE STILL BEING PROGRESSSED AND ARE NOT SHOWN.
- CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	←
EXISTING COMMUNICATION LINE	----- COMM (CLB) -----
EXISTING GAS LINE	----- G (CLB) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	----- W (CLB) -----
EXISTING ELECTRICAL	----- EE (CLB) -----
EXISTING ELECTRICAL OVERHEAD	----- OHW -----
EXISTING SANITARY	----- SAN -----
EXISTING STORM	----- ST -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----



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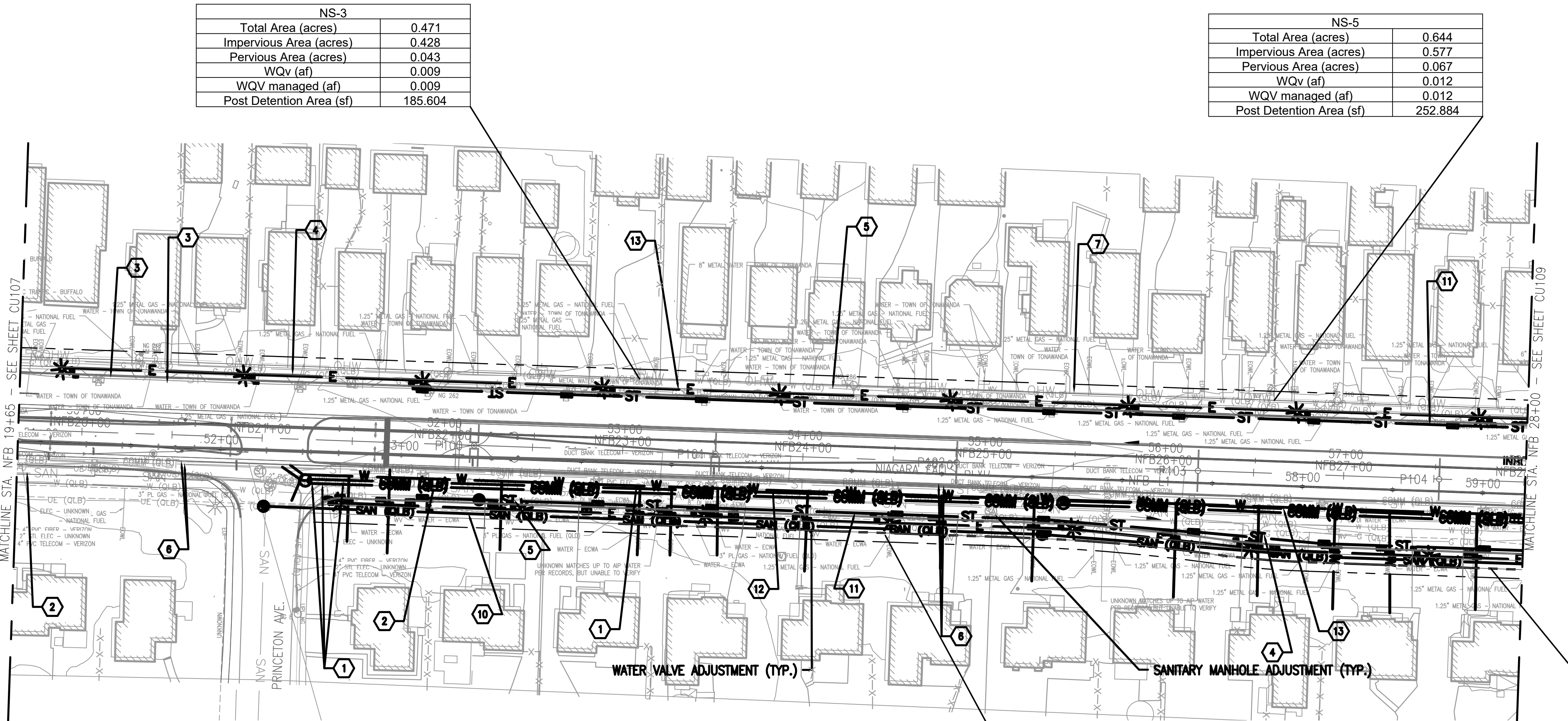
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P1	04/11/25	15% SUBMISSION
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ISSUE:		
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DESIGNER PROJECT NO:		US-WSP-187880C
CAD DWG FILE:		CU101_CU120.dwg
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SHEET TITLE
UTILITY PLAN SHEET 7

DRAWING#
CU107
SHEET# 0F

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NS-3	
Total Area (acres)	0.471
Impervious Area (acres)	0.428
Pervious Area (acres)	0.043
WQv (af)	0.009
WQV managed (af)	0.009
Post Detention Area (sf)	185.604

NS-5	
Total Area (acres)	0.644
Impervious Area (acres)	0.577
Pervious Area (acres)	0.067
WQv (af)	0.012
WQV managed (af)	0.012
Post Detention Area (sf)	252.884

NS-4	
Total Area (acres)	0.727
Impervious Area (acres)	0.669
Pervious Area (acres)	0.058
WQv (af)	0.020
WQV managed (af)	0.020
Post Detention Area (sf)	443.696

NS-6	
Total Area (acres)	0.698
Impervious Area (acres)	0.665
Pervious Area (acres)	0.032
WQv (af)	0.025
WQV managed (af)	0.025
Post Detention Area (sf)	547.602

GENERAL SHEET NOTES:

- NOTE SOME RELOCATIONS OF PUBLIC UTILITIES ARE STILL BEING PROGRESSSED AND ARE NOT SHOWN.
- CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	←
EXISTING COMMUNICATION LINE	COMM (OLB)
EXISTING GAS LINE	G (OLB)
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	W (OLB)
EXISTING ELECTRICAL	EE (OLB)
EXISTING ELECTRICAL OVERHEAD	OHW
EXISTING SANITARY	SAN
EXISTING STORM	ST
PROPOSED WATER LINE	W
PROPOSED SANITARY	SAN
PROPOSED STORM	ST

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WSP USA, Inc.
40 LaRiviere Dr.
SUITE 320
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TEL: 1 716-853-1220
FAX: 1 716 853-1332

Watts Architects & Engineers

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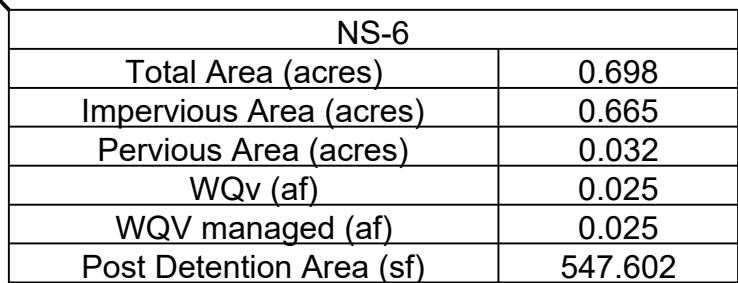
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ISSUE:		
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DESIGNER PROJECT NO:		US-WSP-187880C
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SHEET TITLE
UTILITY PLAN SHEET 8

DRAWING#
CU108

SHEET# 0F

NS-7	
Total Area (acres)	0.833
Impervious Area (acres)	0.800
Pervious Area (acres)	0.033
WQv (af)	0.018
WQv managed (af)	0.018
Post Detention Area (sf)	401.818



NS-8	
Total Area (acres)	0.840
Impervious Area (acres)	0.790
Pervious Area (acres)	0.050
WQv (af)	0.023
WQV managed (af)	0.023
Post Detention Area (sf)	503.242

A horizontal graphic scale bar with four segments. The segments are labeled from left to right as 0, 20', 40', and 80'. The bar is divided into four equal-length segments by vertical tick marks.

1. NOTE SOME RELOCATIONS OF PUBLIC UTILITIES ARE STILL BEING PROGRESSED AND ARE NOT SHOWN.
2. CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

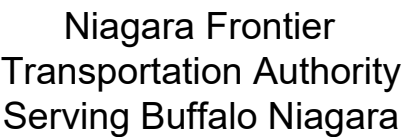
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2. SANITARY PIPE CONFLICT
3. STORM PIPE CONFLICT
4. GAS LINE CONFLICT
5. WATER LINE CONFLICT
6. UNDERGROUND COMMUNICATION LINE CONFLICT
7. ELECTRICAL OVERHEAD LINE CONFLICT
8. UNDERGROUND FIBER OPTIC CONFLICT
9. OVERHEAD COMMUNICATION
10. PROPOSED SANITARY PIPE
11. PROPOSED STORM PIPE
12. PROPOSED WATER LINE
13. PROPOSED UNDERGROUND ELECTRIC LINE

PROPERTY LINE	
DIRECTION OF TRAVEL	
EXISTING COMMUNICATION LINE	
EXISTING GAS LINE	
EXISTING UNKNOWN UTILITY LINE	
EXISTING WATER LINE	
EXISTING ELECTRICAL	
EXISTING ELECTRICAL OVERHEAD	
EXISTING SANITARY	
EXISTING STORM	
PROPOSED WATER LINE	
PROPOSED SANITARY	
PROPOSED STORM	



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METRO RAIL EXTENSION EIS & PRELIMINARY ENGINEERING

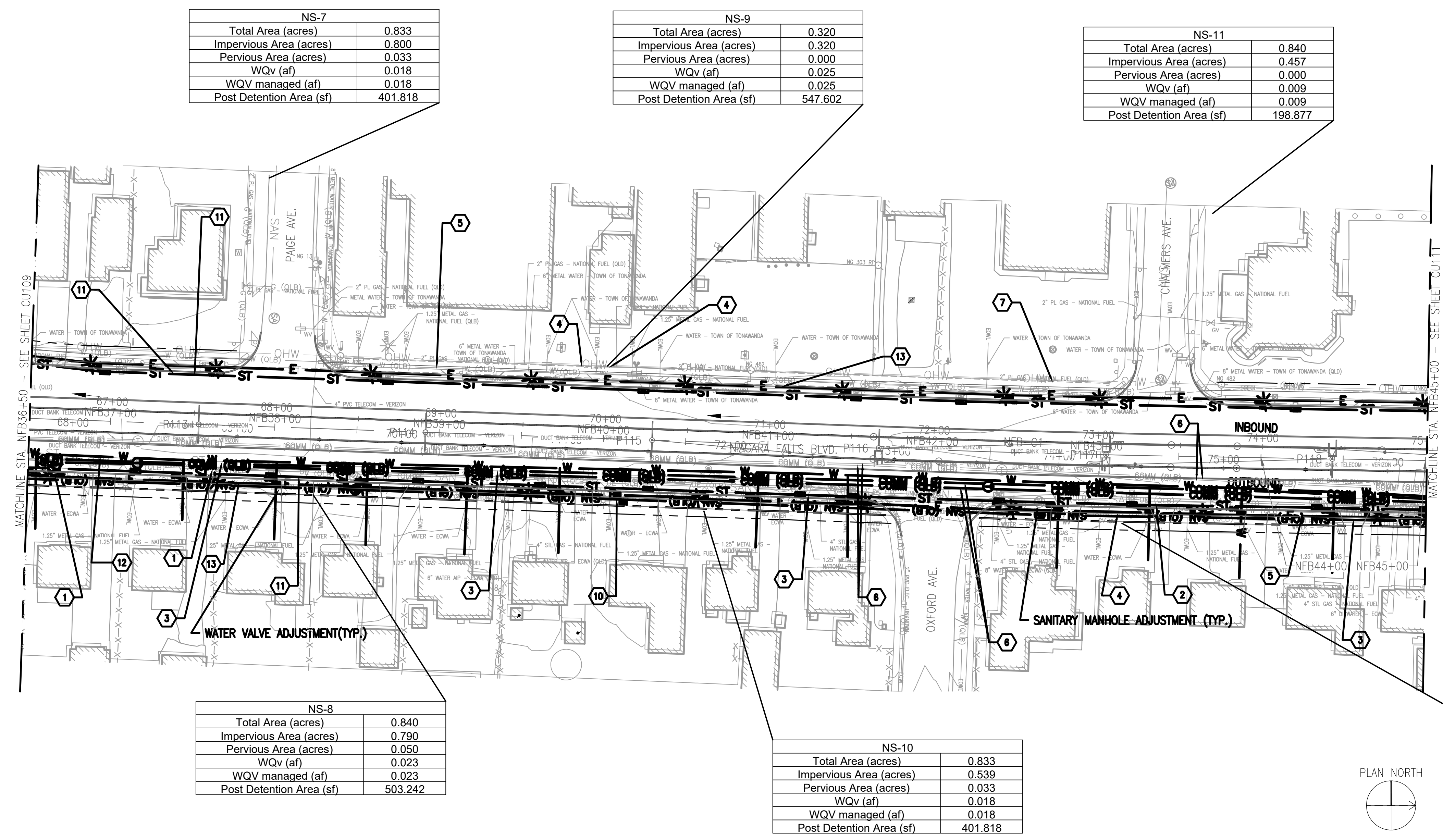
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ISSUE:		
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DESIGNER PROJECT NO:		US-WSP-1878800
CAD DWG FILE:		CU101_CU120.dwg
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SHEET TITLE
UTILITY PLAN SHEET 9

DRAWING#
CU109

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B1 UTILITY PLANS – NIAGARA FALLS BLVD.
1" = 40'-0"



NS-7	
Total Area (acres)	0.833
Impervious Area (acres)	0.800
Pervious Area (acres)	0.033
WQv (af)	0.018
WQV managed (af)	0.018
Post Detention Area (sf)	401.818

NS-9	
Total Area (acres)	0.320
Impervious Area (acres)	0.320
Pervious Area (acres)	0.000
WQv (af)	0.025
WQV managed (af)	0.025
Post Detention Area (sf)	547.602

NS-11	
Total Area (acres)	0.840
Impervious Area (acres)	0.457
Pervious Area (acres)	0.000
WQv (af)	0.009
WQV managed (af)	0.009
Post Detention Area (sf)	198.877

NS-8	
Total Area (acres)	0.840
Impervious Area (acres)	0.790
Pervious Area (acres)	0.050
WQv (af)	0.023
WQV managed (af)	0.023
Post Detention Area (sf)	503.242

NS-10	
Total Area (acres)	0.833
Impervious Area (acres)	0.539
Pervious Area (acres)	0.033
WQv (af)	0.018
WQV managed (af)	0.018
Post Detention Area (sf)	401.818

GENERAL SHEET NOTES:

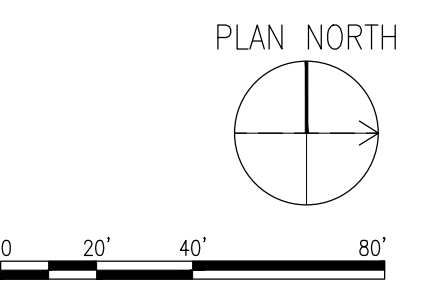
- NOTE SOME RELOCATIONS OF PUBLIC UTILITIES ARE STILL BEING PROGRESSED AND ARE NOT SHOWN.
- CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	---
DIRECTION OF TRAVEL	←
EXISTING COMMUNICATION LINE	--- COMM (GLB) ---
EXISTING GAS LINE	--- G (GLB) --- G (GLB) ---
EXISTING UNKNOWN UTILITY LINE	---
EXISTING WATER LINE	--- W (GLB) --- W (GLB) ---
EXISTING ELECTRICAL	--- E (GLB) --- E (GLB) ---
EXISTING ELECTRICAL OVERHEAD	--- OHW --- OHW ---
EXISTING SANITARY	--- SAN --- SAN ---
EXISTING STORM	--- ST --- ST ---
PROPOSED WATER LINE	--- W ---
PROPOSED SANITARY	--- SAN ---
PROPOSED STORM	--- ST ---



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SHEET TITLE
UTILITY PLAN SHEET 10

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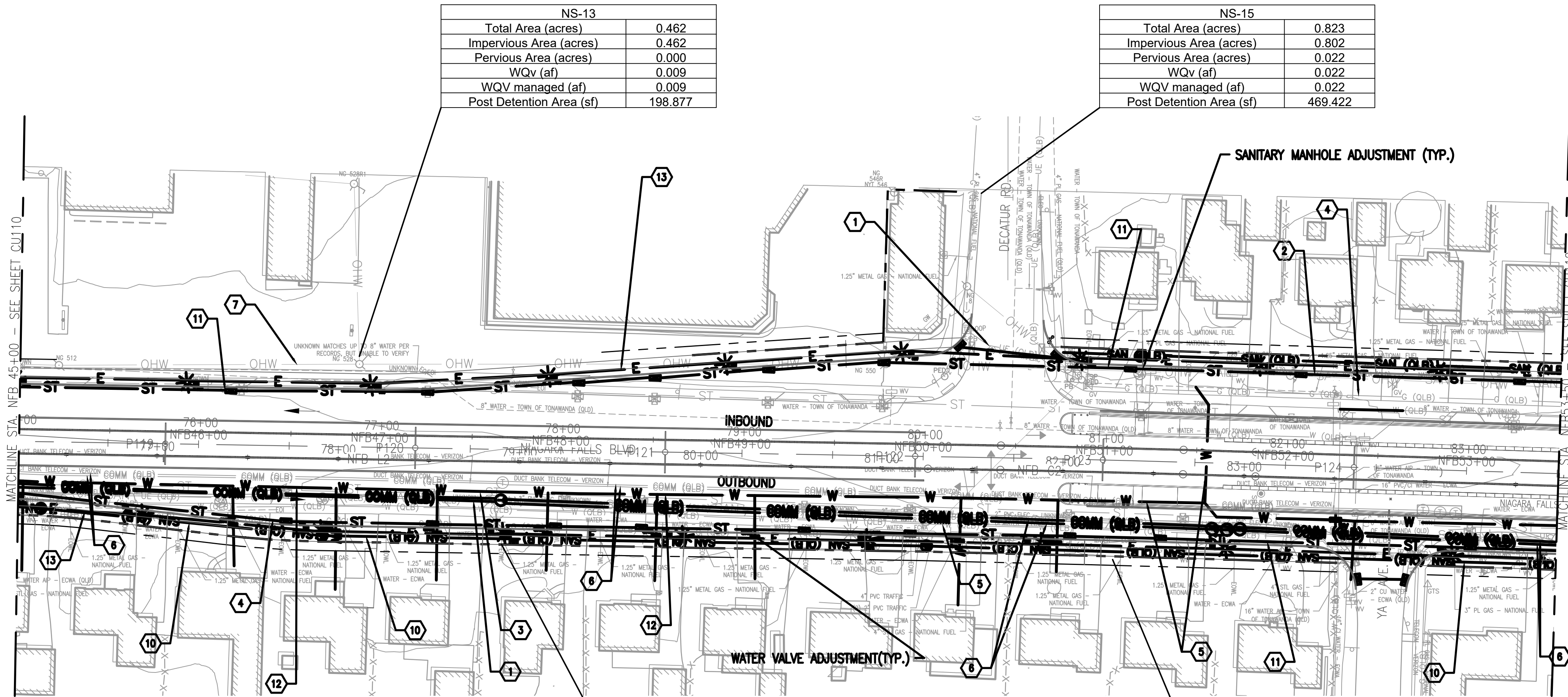
E

D

C

B

A



B1 UTILITY PLANS – NIAGARA FALLS BLVD.

1" = 40'-0"

GENERAL SHEET NOTES:

- NOTE SOME RELOCATIONS OF PUBLIC UTILITIES ARE STILL BEING PROGRESSED AND ARE NOT SHOWN.
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KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	---
DIRECTION OF TRAVEL	←
EXISTING COMMUNICATION LINE	--- COMM (GLB) ---
EXISTING GAS LINE	--- G (GLB) --- G (GLB) ---
EXISTING UNKNOWN UTILITY LINE	---
EXISTING WATER LINE	--- W (GLB) --- W (GLB) ---
EXISTING ELECTRICAL	--- UE (GLB) --- UE (GLB) ---
EXISTING ELECTRICAL OVERHEAD	--- OHW --- OHW ---
EXISTING SANITARY	--- SAN --- SAN ---
EXISTING STORM	--- ST --- ST ---
PROPOSED WATER LINE	--- W ---
PROPOSED SANITARY	--- SAN ---
PROPOSED STORM	--- ST ---

WSP USA, Inc.
40 LaRiviere Dr.
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BUFFALO, NY, 14202
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ISSUE:		
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DESIGNER PROJECT NO:		US-WSP-187880C
CAD DWG FILE:		CU101_CU120.dwg
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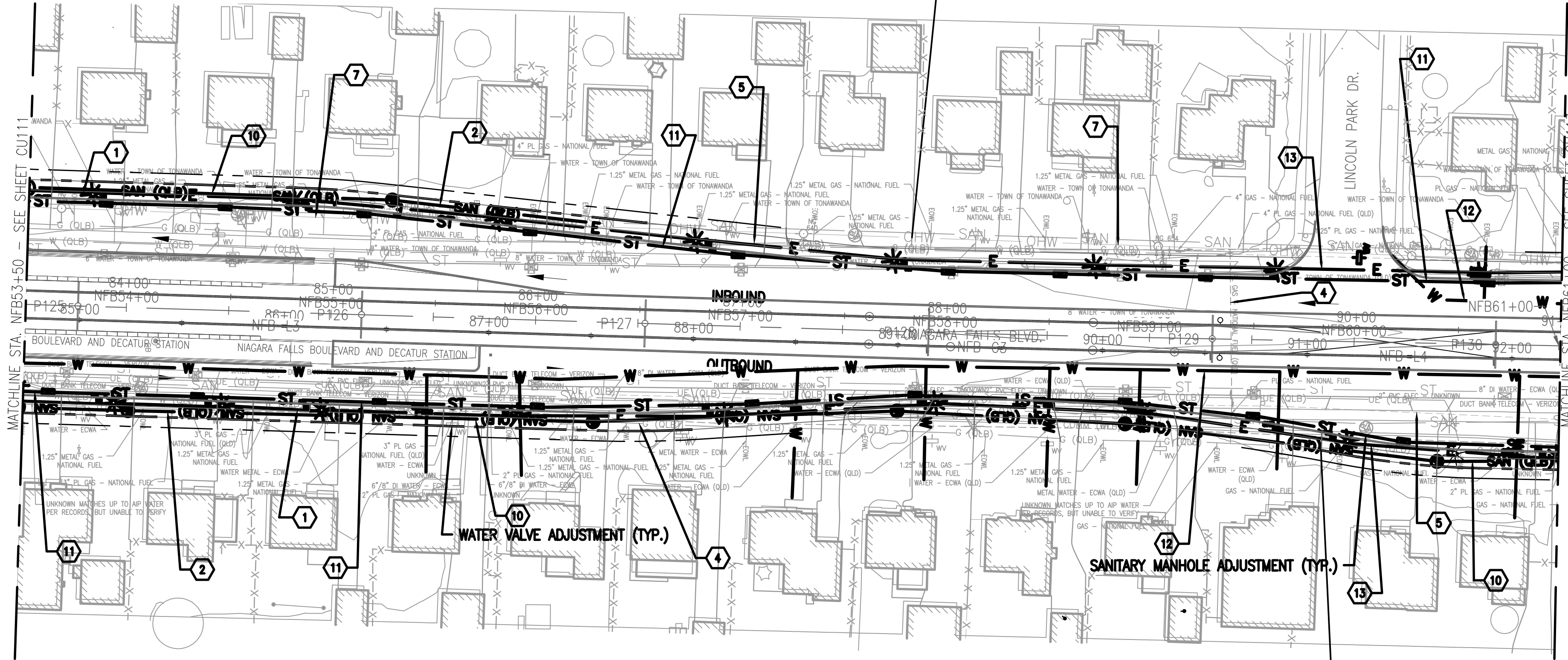
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UTILITY PLAN SHEET 11

DRAWING#
CU111
SHEET# 0F

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B1 UTILITY PLANS – NIAGARA FALLS BLVD.

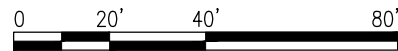
1" = 40'-0"



NS-17	
Total Area (acres)	1.247
Impervious Area (acres)	1.121
Pervious Area (acres)	0.126
WQV (af)	0.032
WQV managed (af)	0.032
Post Detention Area (sf)	698.038

NS-18	
Total Area (acres)	1.115
Impervious Area (acres)	1.027
Pervious Area (acres)	0.088
WQV (af)	0.033
WQV managed (af)	0.033
Post Detention Area (sf)	709.681

PLAN NORTH



GENERAL SHEET NOTES:

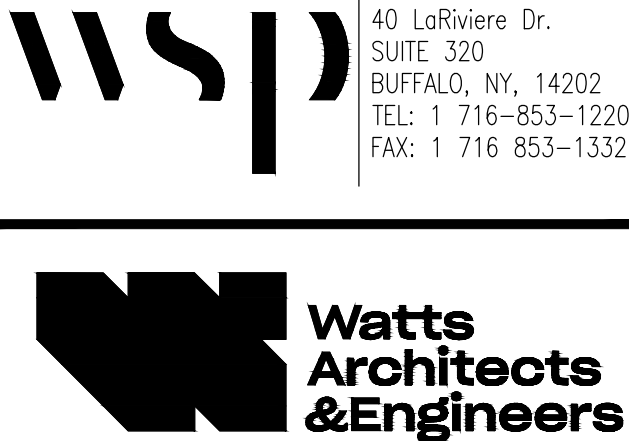
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- CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	---
DIRECTION OF TRAVEL	→
EXISTING COMMUNICATION LINE	--- COMM (OLB) ---
EXISTING GAS LINE	--- G (OLB) --- G (OLB) ---
EXISTING UNKNOWN UTILITY LINE	---
EXISTING WATER LINE	--- W (OLB) --- W (OLB) ---
EXISTING ELECTRICAL	--- UE (OLB) --- UE (OLB) ---
EXISTING ELECTRICAL OVERHEAD	--- OHW --- OHW ---
EXISTING SANITARY	--- SAN --- SAN ---
EXISTING STORM	--- ST --- ST ---
PROPOSED WATER LINE	--- W ---
PROPOSED SANITARY	--- SAN ---
PROPOSED STORM	--- ST ---



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ISSUE:		
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DESIGNER PROJECT NO:		US-WSP-187880C
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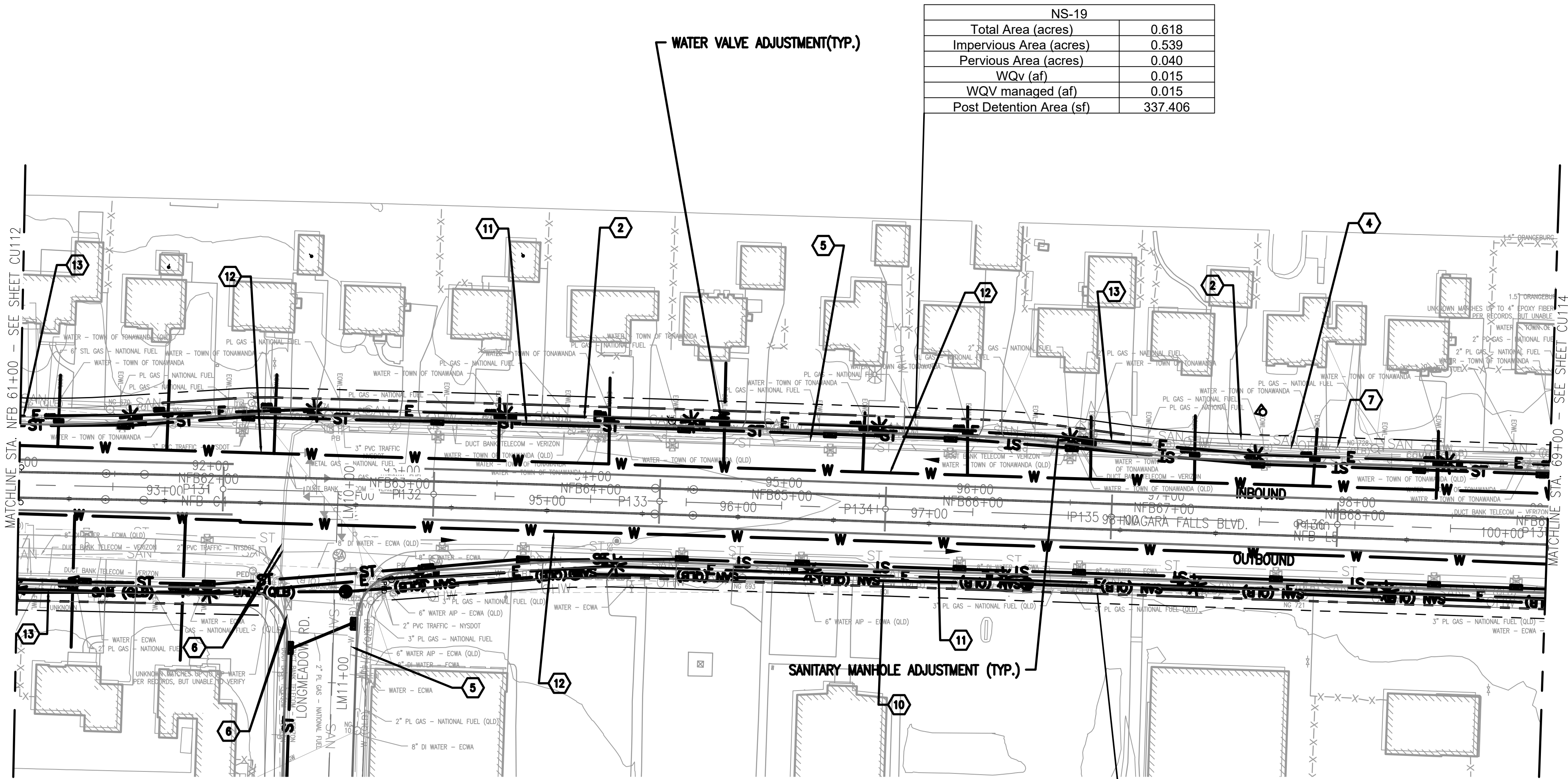
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UTILITY PLAN SHEET 12

DRAWING#
CU112
SHEET# 0F

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B1 UTILITY PLANS – NIAGARA FALLS BLVD.

1" = 40'-0"



NS-19	
Total Area (acres)	0.618
Impervious Area (acres)	0.539
Pervious Area (acres)	0.040
WQv (af)	0.015
WQV managed (af)	0.015
Post Detention Area (sf)	337.406

NS-20	
Total Area (acres)	0.726
Impervious Area (acres)	0.684
Pervious Area (acres)	0.042
WQv (af)	0.016
WQV managed (af)	0.016
Post Detention Area (sf)	339.324

GENERAL SHEET NOTES:

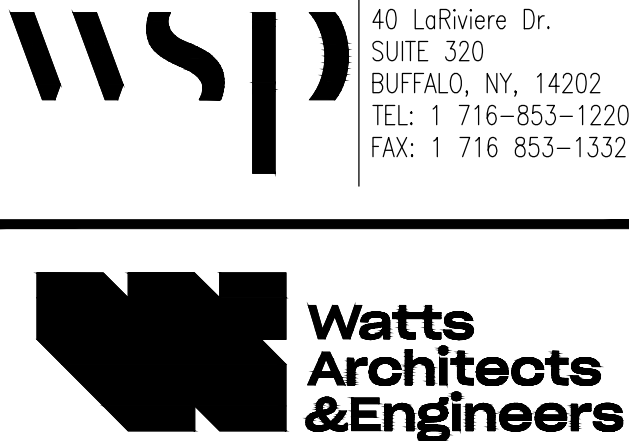
- NOTE SOME RELOCATIONS OF PUBLIC UTILITIES ARE STILL BEING PROGRESSSED AND ARE NOT SHOWN.
- CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	---
DIRECTION OF TRAVEL	←
EXISTING COMMUNICATION LINE	---C (OLB)---
EXISTING GAS LINE	---G (OLB)---
EXISTING UNKNOWN UTILITY LINE	---
EXISTING WATER LINE	---W (OLB)---
EXISTING ELECTRICAL	---E (OLB)---
EXISTING ELECTRICAL OVERHEAD	---OHW---
EXISTING SANITARY	---SAN---
EXISTING STORM	---ST---
PROPOSED WATER LINE	---W---
PROPOSED SANITARY	---SAN---
PROPOSED STORM	---ST---



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P1	04/11/25	15% SUBMISSION
MARK	DATE	DESCRIPTION
ISSUE:		
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DESIGNER PROJECT NO:		US-WSP-187880C
CAD DWG FILE:		CU101_CU120.dwg
DRAWN BY:		AJM
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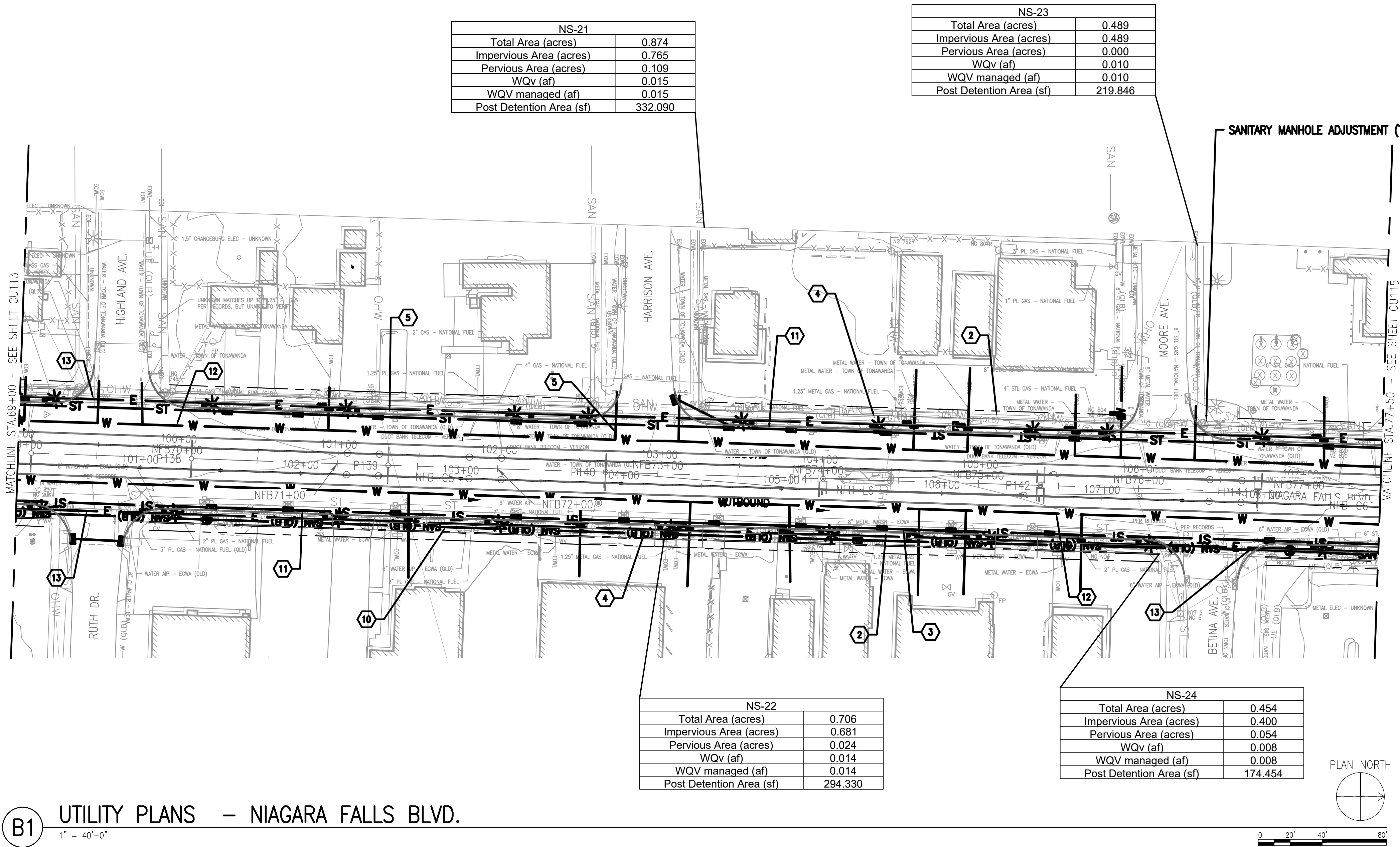
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UTILITY PLAN SHEET 13

DRAWING#
CU113
SHEET# 0F

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E
D
C
B
A

B1 UTILITY PLANS – NIAGARA FALLS BLVD.
1" = 40'-0"



GENERAL SHEET NOTES:

1. NOTE SOME RELOCATIONS OF PUBLIC UTILITIES ARE STILL BEING PROGRESSED AND ARE NOT SHOWN.
2. CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

KEYNOTES:

1. UNDERGROUND ELECTRICAL LINE CONFLICT
2. SANITARY PIPE CONFLICT
3. STORM PIPE CONFLICT
4. GAS LINE CONFLICT
5. WATER LINE CONFLICT
6. UNDERGROUND COMMUNICATION LINE CONFLICT
7. ELECTRICAL OVERHEAD LINE CONFLICT
8. UNDERGROUND FIBER OPTIC CONFLICT
9. OVERHEAD COMMUNICATION
10. PROPOSED SANITARY PIPE
11. PROPOSED STORM PIPE
12. PROPOSED WATER LINE
13. PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	←
EXISTING COMMUNICATION LINE	----- COMM (CLB) -----
EXISTING GAS LINE	----- G (CLB) -----
EXISTING UNKNOWN UTILITY LINE	----- U (CLB) -----
EXISTING WATER LINE	----- W (CLB) -----
EXISTING ELECTRICAL	----- UE (CLB) -----
EXISTING ELECTRICAL OVERHEAD	----- OHW -----
EXISTING SANITARY	----- SAN -----
EXISTING STORM	----- ST -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----



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MARK	DATE	DESCRIPTION
ISSUE:		
NFTA PROJECT NO:		34LZ1725
DESIGNER PROJECT NO:		US-WSP-187880C
CAD DWG FILE:		CU101_CU120.dwg
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SCALE:		1"=40'
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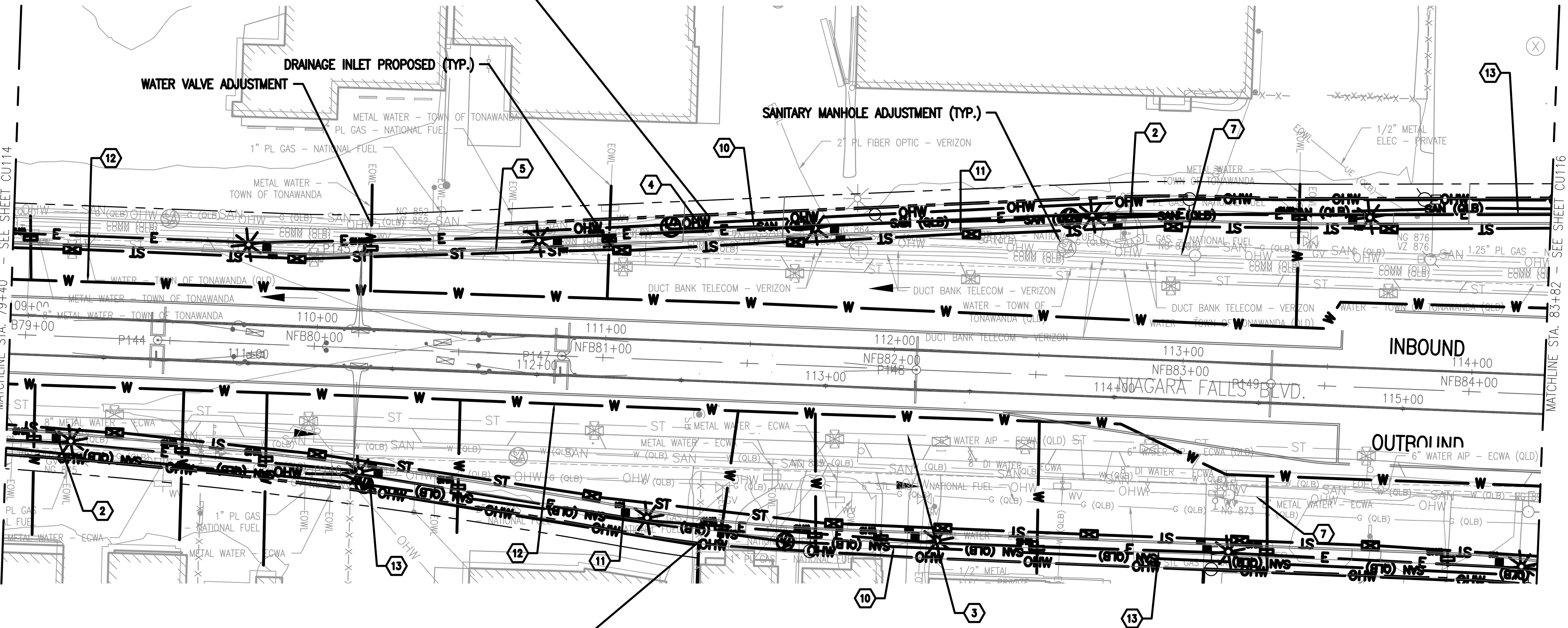
SHEET TITLE
UTILITY PLAN SHEET 14

DRAWING#
CU114
SHEET# 0F

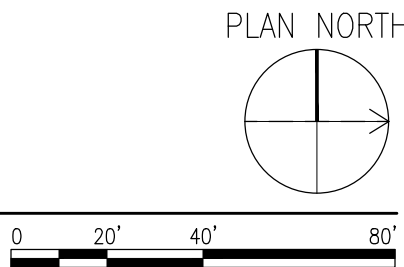
E
D
C
B
A

NS-25	
Total Area (acres)	0.612
Impervious Area (acres)	0.612
Pervious Area (acres)	0.000
WQv (af)	0.012
WQV managed (af)	0.012
Post Detention Area (sf)	267.752

NS-26	
Total Area (acres)	1.135
Impervious Area (acres)	1.119
Pervious Area (acres)	0.016
WQv (af)	0.026
WQV managed (af)	0.026
Post Detention Area (sf)	556.281



B1 UTILITY PLANS – NIAGARA FALLS BLVD.



GENERAL SHEET NOTES:

- NOTE SOME RELOCATIONS OF PUBLIC UTILITIES ARE STILL BEING PROGRESSSED AND ARE NOT SHOWN.
- CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	←
EXISTING COMMUNICATION LINE	----- COMM (QLB) -----
EXISTING GAS LINE	----- G (QLB) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	----- W (QLB) -----
EXISTING ELECTRICAL	----- UE (QLB) -----
EXISTING ELECTRICAL OVERHEAD	----- OHW -----
EXISTING SANITARY	----- SAN -----
EXISTING STORM	----- ST -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----



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NFTA PROJECT NO:		34LZ1725
DESIGNER PROJECT NO:		US-WSP-187880C
CAD DWG FILE:		CU101_CU120.dwg
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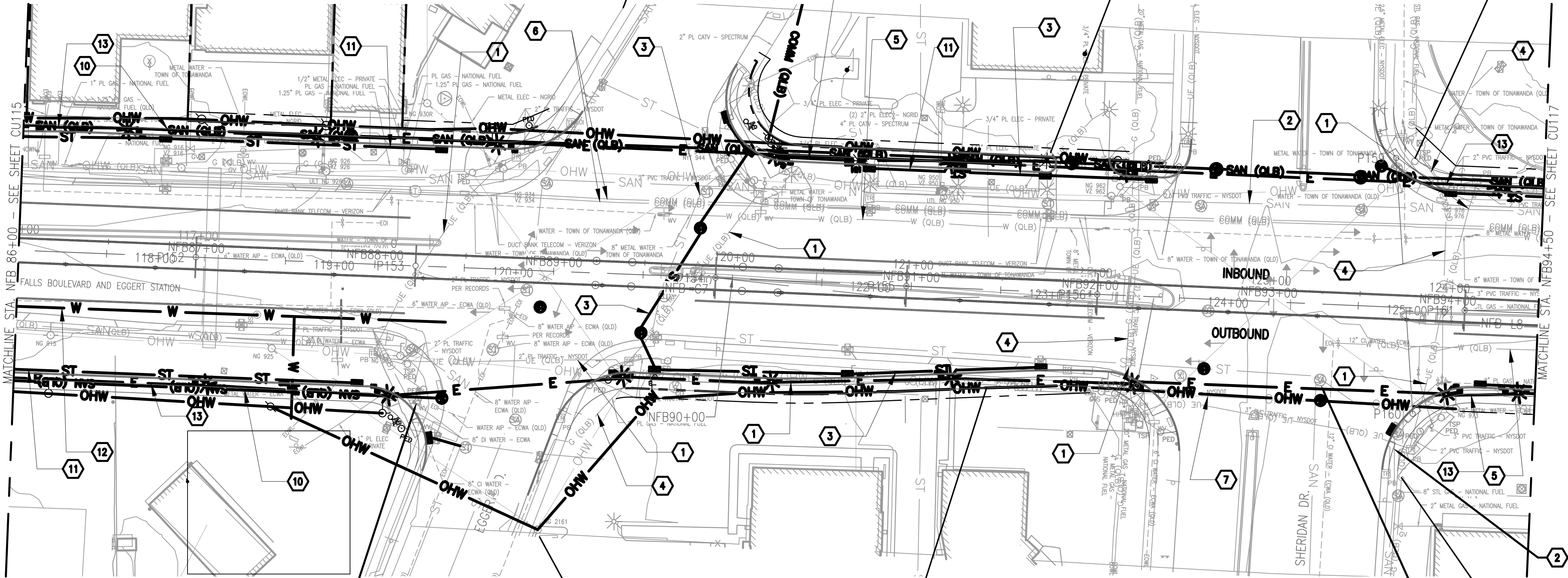
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UTILITY PLAN SHEET 15

DRAWING#
CU115
SHEET# 0F

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B1 UTILITY PLANS – NIAGARA FALLS BLVD.

1" = 40'-0"



NS-27	
Total Area (acres)	1.698
Impervious Area (acres)	1.682
Pervious Area (acres)	0.016
WQv (af)	0.042
WQV managed (af)	0.042
Post Detention Area (sf)	911.953

NS-29	
Total Area (acres)	0.423
Impervious Area (acres)	0.379
Pervious Area (acres)	0.044
WQv (af)	0.010
WQV managed (af)	0.010
Post Detention Area (sf)	215.725

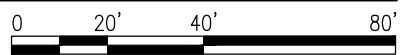
NN-1	
Total Area (acres)	1.816
Impervious Area (acres)	1.768
Pervious Area (acres)	0.048
WQv (af)	0.038
WQV managed (af)	0.038
Post Detention Area (sf)	833.281

NS-28	
Total Area (acres)	3.069
Impervious Area (acres)	3.053
Pervious Area (acres)	0.015
WQv (af)	0.066
WQV managed (af)	0.066
Post Detention Area (sf)	1440.382

NS-30	
Total Area (acres)	0.347
Impervious Area (acres)	0.320
Pervious Area (acres)	0.027
WQv (af)	0.008
WQV managed (af)	0.008
Post Detention Area (sf)	164.830

NN-2	
Total Area (acres)	1.844
Impervious Area (acres)	1.829
Pervious Area (acres)	0.015
WQv (af)	0.037
WQV managed (af)	0.037
Post Detention Area (sf)	815.409

PLAN NORTH



GENERAL SHEET NOTES:

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- CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	---
DIRECTION OF TRAVEL	←
EXISTING COMMUNICATION LINE	---C (Q.L.B.)---
EXISTING GAS LINE	---G (Q.L.B.)---
EXISTING UNKNOWN UTILITY LINE	---
EXISTING WATER LINE	---W (Q.L.B.)---
EXISTING ELECTRICAL	---E (Q.L.B.)---
EXISTING ELECTRICAL OVERHEAD	---OHW---
EXISTING SANITARY	---SAN---
EXISTING STORM	---ST---
PROPOSED WATER LINE	---W---
PROPOSED SANITARY	---SAN---
PROPOSED STORM	---ST---

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ISSUE:		
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UTILITY PLAN SHEET 16

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B1 UTILITY PLANS – NIAGARA FALLS BLVD.

1" = 40'-0"

NN-2	
Total Area (acres)	1.844
Impervious Area (acres)	1.829
Pervious Area (acres)	0.015
WQv (af)	0.037
WQV managed (af)	0.037
Post Detention Area (sf)	815.409

NN-1	
Total Area (acres)	1.816
Impervious Area (acres)	1.768
Pervious Area (acres)	0.048
WQv (af)	0.038
WQV managed (af)	0.038
Post Detention Area (sf)	833.281

PLAN NORTH

0 20' 40' 80'

GENERAL SHEET NOTES:

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- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	→
EXISTING COMMUNICATION LINE	COMM (QLB)
EXISTING GAS LINE	C (QLB)
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	W (QLB)
EXISTING ELECTRICAL	UE (QLB)
EXISTING ELECTRICAL OVERHEAD	OHW
EXISTING SANITARY	SAN
EXISTING STORM	ST
PROPOSED WATER LINE	W
PROPOSED SANITARY	SAN
PROPOSED STORM	ST

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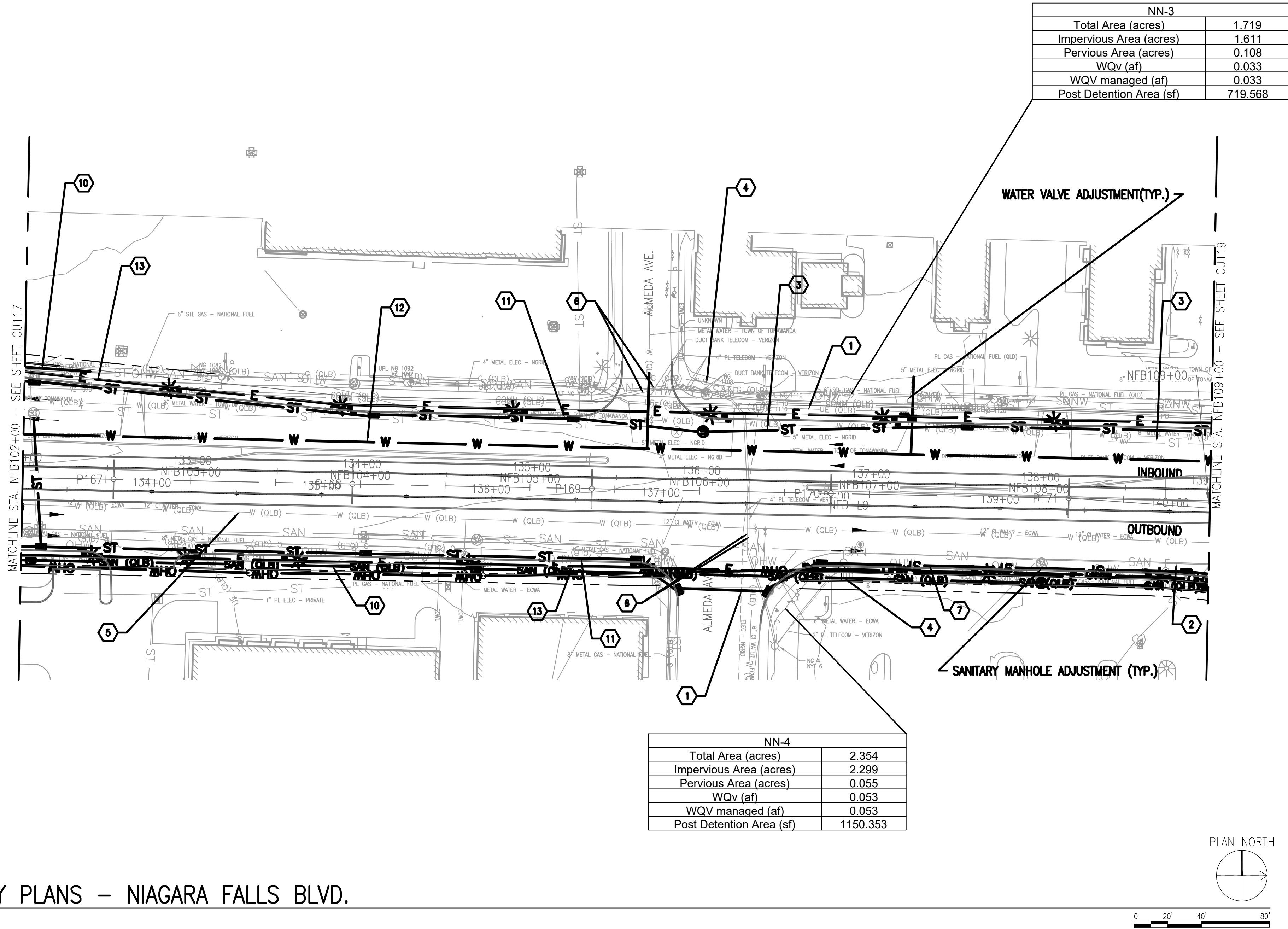
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UTILITY PLAN SHEET 17

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SHEET# 0F

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B1 UTILITY PLANS – NIAGARA FALLS BLVD.

1" = 40'-0"



GENERAL SHEET NOTES:

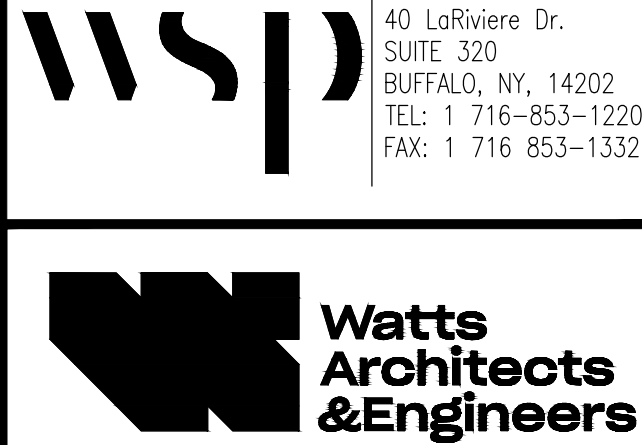
- NOTE SOME RELOCATIONS OF PUBLIC UTILITIES ARE STILL BEING PROGRESSED AND ARE NOT SHOWN.
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KEYNOTES:

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- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	
DIRECTION OF TRAVEL	
EXISTING COMMUNICATION LINE	
EXISTING GAS LINE	
EXISTING UNKNOWN UTILITY LINE	
EXISTING WATER LINE	
EXISTING ELECTRICAL	
EXISTING ELECTRICAL OVERHEAD	
EXISTING SANITARY	
EXISTING STORM	
PROPOSED WATER LINE	
PROPOSED SANITARY	
PROPOSED STORM	



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UTILITY PLAN SHEET 18

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B1

$$1'' = 40' - 0''$$

GENERAL SHEET NOTES:

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KEYNOTES:

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9. OVERHEAD COMMUNICATION
10. PROPOSED SANITARY PIPE
11. PROPOSED STORM PIPE
12. PROPOSED WATER LINE
13. PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE

DIRECTION OF TRAVEL

EXISTING COMMUNICATION LINE

EXISTING GAS LINE

EXISTING UNKNOWN UTILITY LINE

EXISTING WATER LINE

EXISTING ELECTRICAL

EXISTING ELECTRICAL OVERHEAD

EXISTING SANITARY

EXISTING STORM

PROPOSED WATER LINE

PROPOSED SANITARY

PROPOSED STORM



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UTILITY PLAN SHEET 19

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CU119

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B1 UTILITY PLANS – NIAGARA FALLS BLVD.

1" = 40'-0"

NN-4	
Total Area (acres)	2.354
Impervious Area (acres)	2.299
Pervious Area (acres)	0.055
WQv (af)	0.053
WQV managed (af)	0.053
Post Detention Area (sf)	1150.353

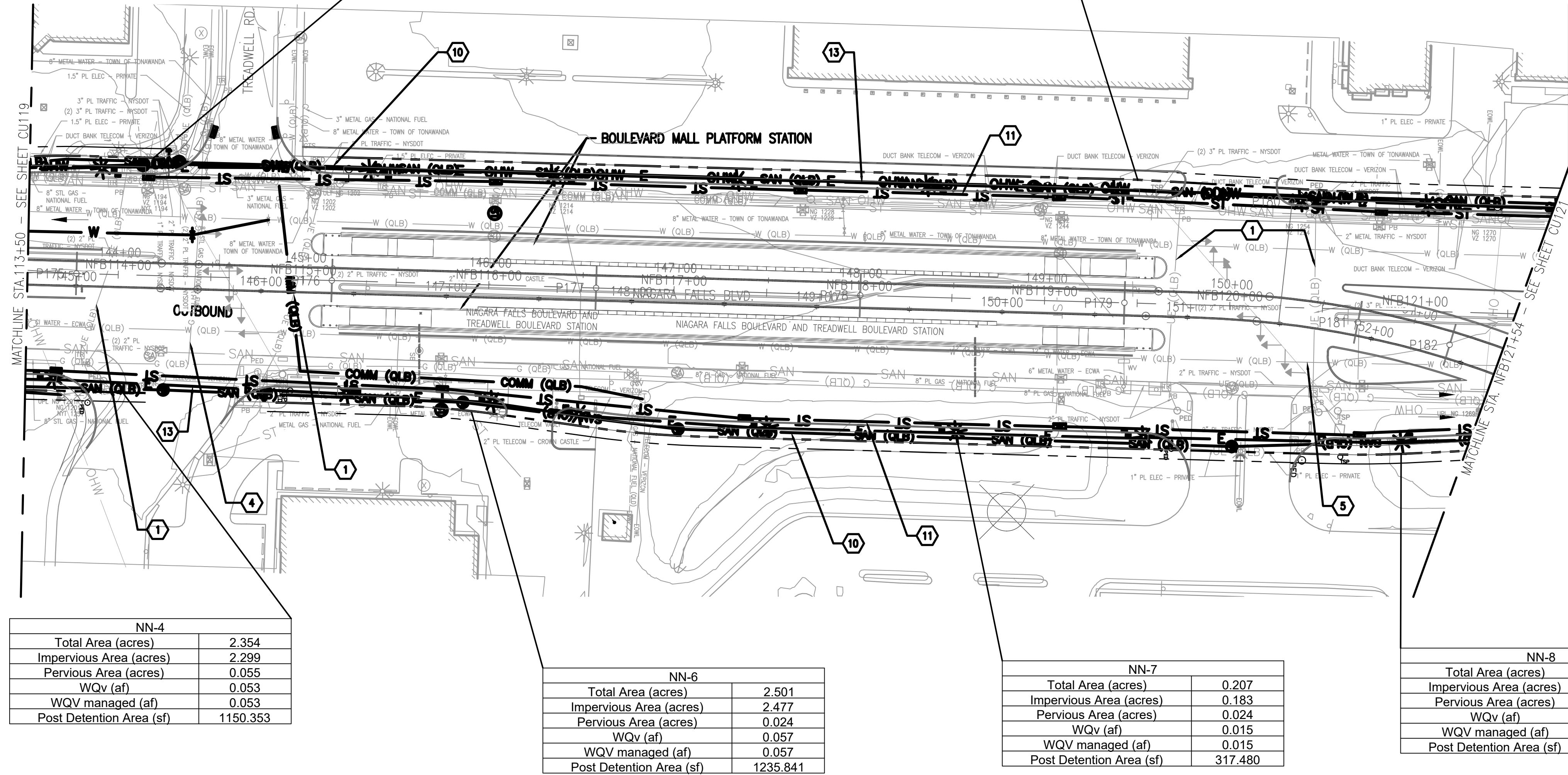
NN-6	
Total Area (acres)	2.501
Impervious Area (acres)	2.477
Pervious Area (acres)	0.024
WQv (af)	0.057
WQV managed (af)	0.057
Post Detention Area (sf)	1235.841

NN-7	
Total Area (acres)	0.207
Impervious Area (acres)	0.183
Pervious Area (acres)	0.024
WQv (af)	0.015
WQV managed (af)	0.015
Post Detention Area (sf)	317.480

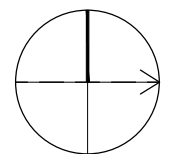
NN-8	
Total Area (acres)	0.184
Impervious Area (acres)	0.109
Pervious Area (acres)	0.075
WQv (af)	0.009
WQV managed (af)	0.009
Post Detention Area (sf)	194.456

NN-3	
Total Area (acres)	1.719
Impervious Area (acres)	1.611
Pervious Area (acres)	0.108
WQv (af)	0.033
WQV managed (af)	0.033
Post Detention Area (sf)	719.568

NN-5	
Total Area (acres)	2.403
Impervious Area (acres)	2.390
Pervious Area (acres)	0.013
WQv (af)	0.050
WQV managed (af)	0.050
Post Detention Area (sf)	1093.014



PLAN NORTH



0 20' 40' 80'

GENERAL SHEET NOTES:

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KEYNOTES:

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- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	---
DIRECTION OF TRAVEL	←
EXISTING COMMUNICATION LINE	--- COMM (OLB) ---
EXISTING GAS LINE	--- G (OLB) ---
EXISTING UNKNOWN UTILITY LINE	---
EXISTING WATER LINE	--- W (OLB) ---
EXISTING ELECTRICAL	--- UE (OLB) ---
EXISTING ELECTRICAL OVERHEAD	--- OHW ---
EXISTING SANITARY	--- SAN ---
EXISTING STORM	--- ST ---
PROPOSED WATER LINE	--- W ---
PROPOSED SANITARY	--- SAN ---
PROPOSED STORM	--- ST ---

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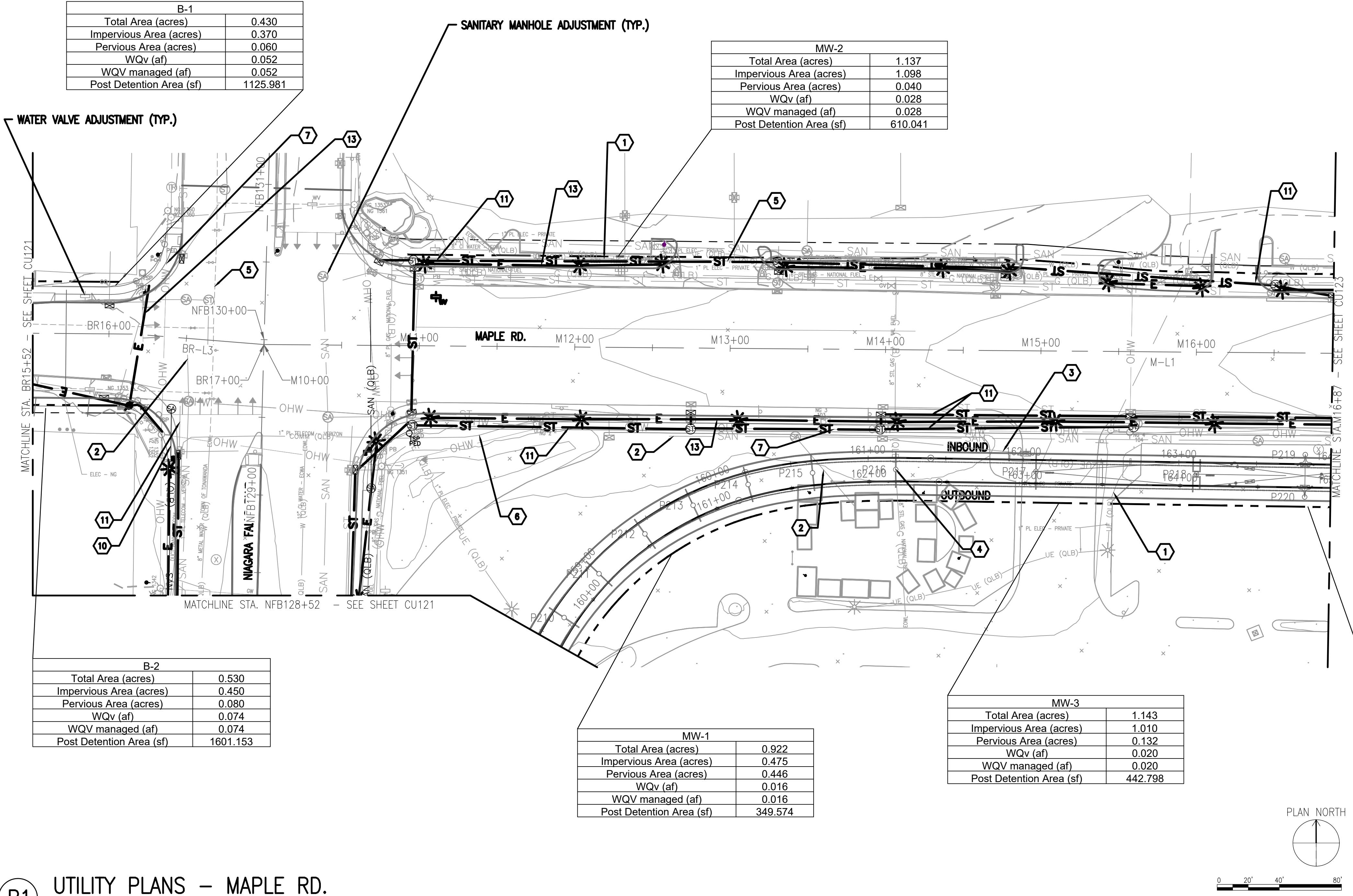
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MARK	DATE	DESCRIPTION
ISSUE:		
NFTA PROJECT NO:		34LZ1725
DESIGNER PROJECT NO:		US-WSP-187880C
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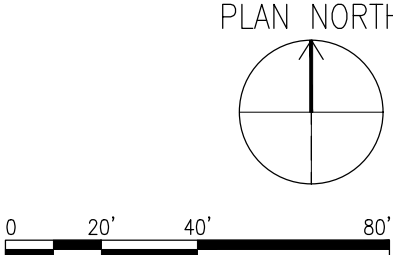
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D
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B1 UTILITY PLANS – MAPLE RD.
1" = 40'-0"



GENERAL SHEET NOTES:

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- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	
EXISTING COMMUNICATION LINE	----- COMM (QLB) -----
EXISTING GAS LINE	----- G (QLB) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	----- W (QLB) -----
EXISTING ELECTRICAL	----- UE (QLB) -----
EXISTING ELECTRICAL OVERHEAD	----- OHW -----
EXISTING SANITARY	----- SAN -----
EXISTING STORM	----- ST -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----

MW-4	
Total Area (acres)	0.434
Impervious Area (acres)	0.373
Pervious Area (acres)	0.061
WQv (af)	0.010
WQV managed (af)	0.010
Post Detention Area (sf)	220.997

MW-3	
Total Area (acres)	1.143
Impervious Area (acres)	1.010
Pervious Area (acres)	0.132
WQv (af)	0.020
WQV managed (af)	0.020
Post Detention Area (sf)	442.798

MW-1	
Total Area (acres)	0.922
Impervious Area (acres)	0.475
Pervious Area (acres)	0.446
WQv (af)	0.016
WQV managed (af)	0.016
Post Detention Area (sf)	349.574

B-2	
Total Area (acres)	0.530
Impervious Area (acres)	0.450
Pervious Area (acres)	0.080
WQv (af)	0.074
WQV managed (af)	0.074
Post Detention Area (sf)	1601.153

B-1	
Total Area (acres)	0.430
Impervious Area (acres)	0.370
Pervious Area (acres)	0.060
WQv (af)	0.052
WQV managed (af)	0.052
Post Detention Area (sf)	1125.981

MW-2	
Total Area (acres)	1.137
Impervious Area (acres)	1.098
Pervious Area (acres)	0.040
WQv (af)	0.028
WQV managed (af)	0.028
Post Detention Area (sf)	610.041



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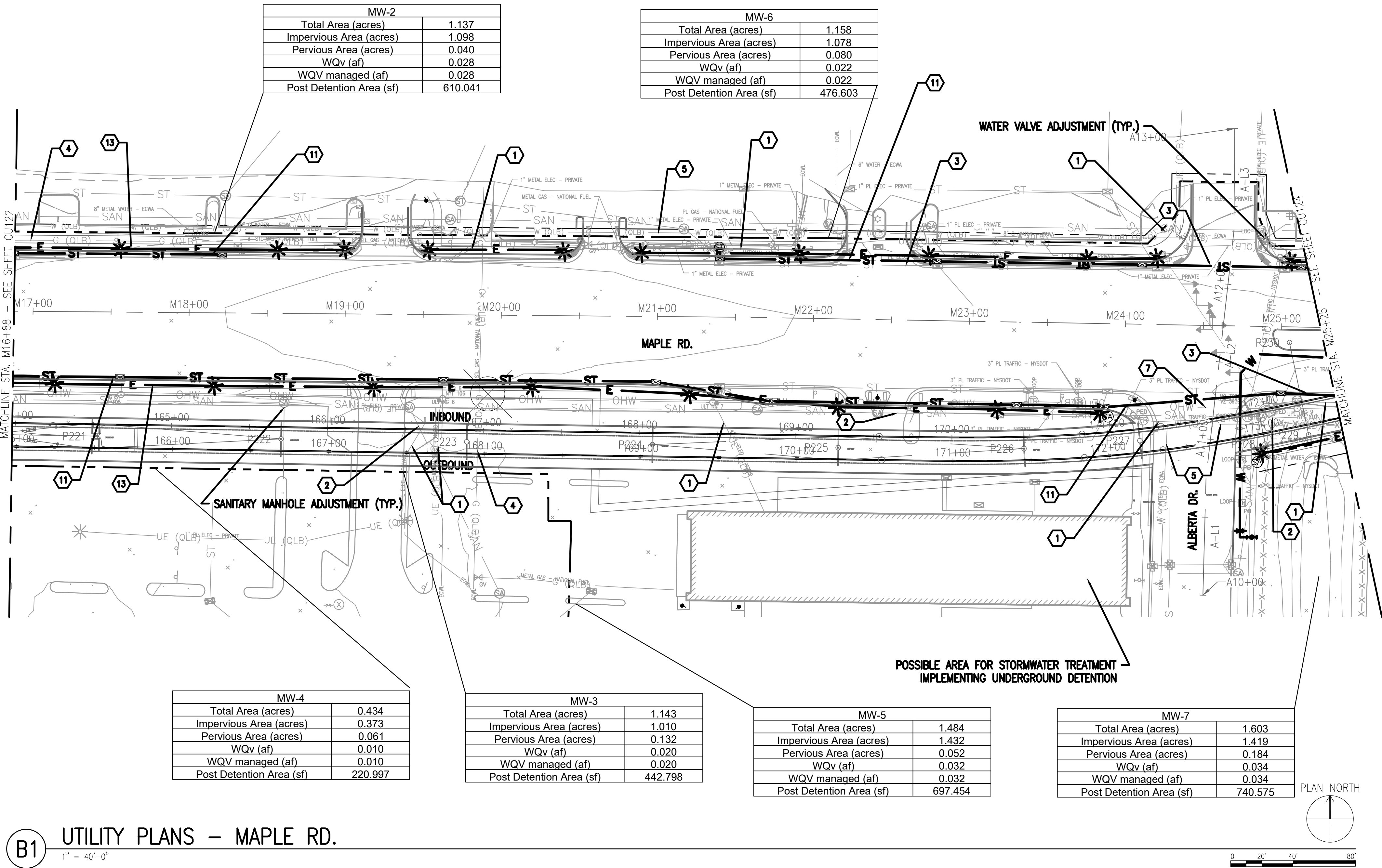
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SHEET TITLE
UTILITY PLAN SHEET 22

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GENERAL SHEET NOTES:

- NOTE SOME RELOCATIONS OF PUBLIC UTILITIES ARE STILL BEING PROGRESSED AND ARE NOT SHOWN.
- CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	----->
EXISTING COMMUNICATION LINE	----- (CLB) -----
EXISTING GAS LINE	----- (CLB) -----
EXISTING UNKNOWN UTILITY LINE	----- (CLB) -----
EXISTING WATER LINE	----- (CLB) -----
EXISTING ELECTRICAL	----- (CLB) -----
EXISTING ELECTRICAL OVERHEAD	----- (CLB) -----
EXISTING SANITARY	----- (CLB) -----
EXISTING STORM	----- (CLB) -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----

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UTILITY PLAN SHEET 23

DRAWING#
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B1 UTILITY PLANS – MAPLE RD.

1" = 40'-0"

MW-6	
Total Area (acres)	1.158
Impervious Area (acres)	1.078
Pervious Area (acres)	0.080
WQV (af)	0.022
WQV managed (af)	0.022
Post Detention Area (sf)	476.603

NB-1	
Total Area (acres)	0.480
Impervious Area (acres)	0.450
Pervious Area (acres)	0.030
WQV (af)	0.080
WQV managed (af)	0.080
Post Detention Area (sf)	1751.929

NB-2	
Total Area (acres)	0.500
Impervious Area (acres)	0.450
Pervious Area (acres)	0.050
WQV (af)	0.092
WQV managed (af)	0.092
Post Detention Area (sf)	1994.483

MAH-1	
Total Area (acres)	2.281
Impervious Area (acres)	2.147
Pervious Area (acres)	0.134
WQV (af)	0.062
WQV managed (af)	0.062
Post Detention Area (sf)	1341.868

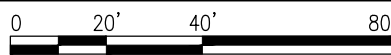
MW-7	
Total Area (acres)	1.603
Impervious Area (acres)	1.419
Pervious Area (acres)	0.184
WQV (af)	0.034
WQV managed (af)	0.034
Post Detention Area (sf)	740.575

NB-3	
Total Area (acres)	0.330
Impervious Area (acres)	0.240
Pervious Area (acres)	0.090
WQV (af)	0.053
WQV managed (af)	0.053
Post Detention Area (sf)	1160.466

NB-4	
Total Area (acres)	0.400
Impervious Area (acres)	0.360
Pervious Area (acres)	0.040
WQV (af)	0.108
WQV managed (af)	0.108
Post Detention Area (sf)	2341.350

MAH-2	
Total Area (acres)	2.679
Impervious Area (acres)	2.526
Pervious Area (acres)	0.153
WQV (af)	0.096
WQV managed (af)	0.096
Post Detention Area (sf)	2087.679

PLAN NORTH



GENERAL SHEET NOTES:

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KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
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- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	---
DIRECTION OF TRAVEL	---
EXISTING COMMUNICATION LINE	--- COMM (QUB) ---
EXISTING GAS LINE	--- G (QUB) --- G (QUB) ---
EXISTING UNKNOWN UTILITY LINE	---
EXISTING WATER LINE	--- W (QUB) --- W (QUB) ---
EXISTING ELECTRICAL	--- E (QUB) --- E (QUB) ---
EXISTING ELECTRICAL OVERHEAD	--- OHW --- OHW ---
EXISTING SANITARY	--- SAN --- SAN ---
EXISTING STORM	--- ST --- ST ---
PROPOSED WATER LINE	--- W ---
PROPOSED SANITARY	--- SAN ---
PROPOSED STORM	--- ST ---

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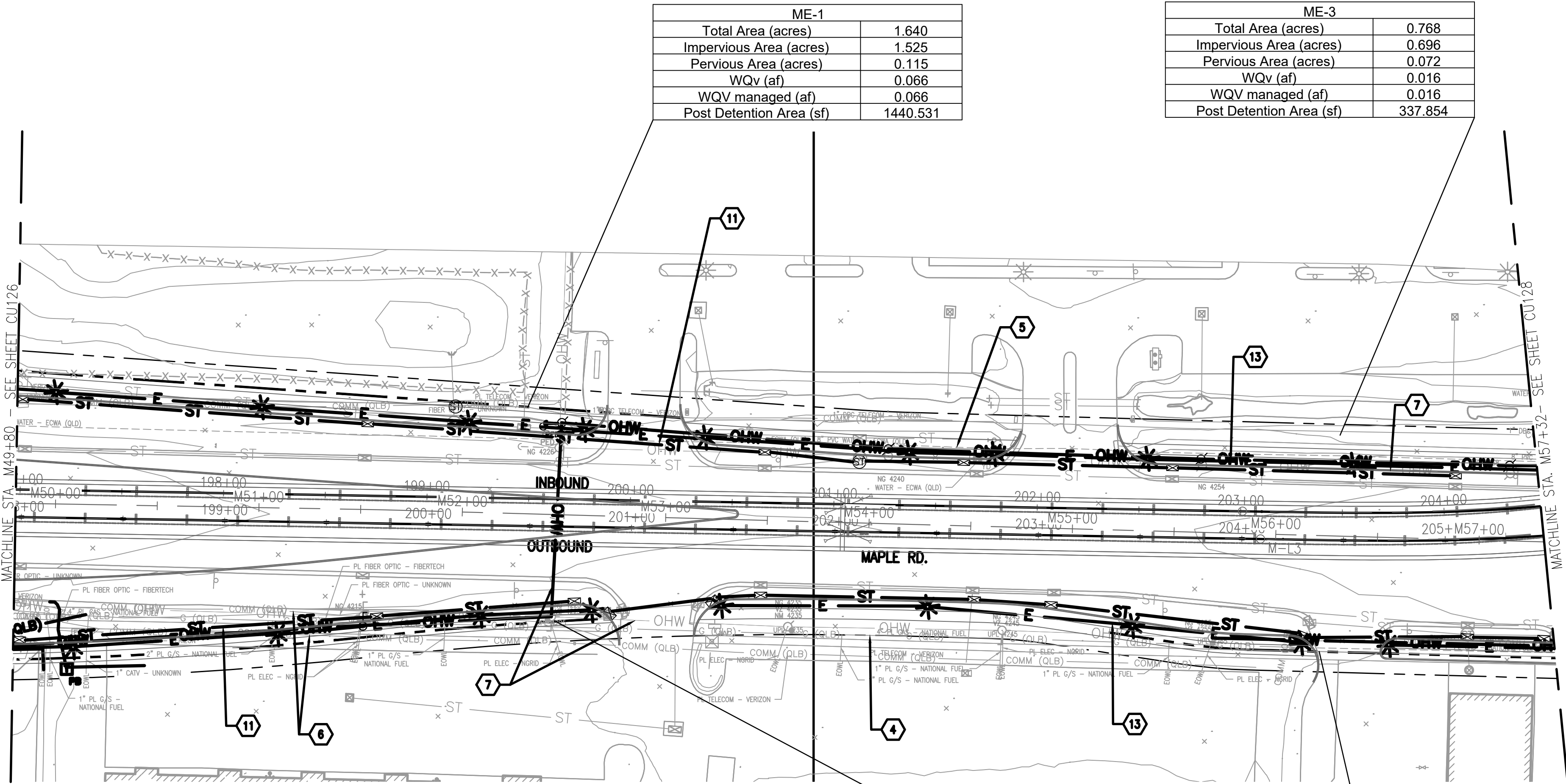
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B1 UTILITY PLANS – MAPLE RD.

1" = 40'-0"



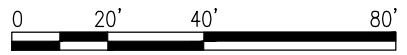
ME-1	
Total Area (acres)	1.640
Impervious Area (acres)	1.525
Pervious Area (acres)	0.115
WQv (af)	0.066
WQV managed (af)	0.066
Post Detention Area (sf)	1440.531

ME-3	
Total Area (acres)	0.768
Impervious Area (acres)	0.696
Pervious Area (acres)	0.072
WQv (af)	0.016
WQV managed (af)	0.016
Post Detention Area (sf)	337.854

ME-2	
Total Area (acres)	1.804
Impervious Area (acres)	1.706
Pervious Area (acres)	0.098
WQv (af)	0.062
WQV managed (af)	0.062
Post Detention Area (sf)	1351.580

ME-4	
Total Area (acres)	0.864
Impervious Area (acres)	0.769
Pervious Area (acres)	0.095
WQv (af)	0.019
WQV managed (af)	0.019
Post Detention Area (sf)	404.456

PLAN NORTH



GENERAL SHEET NOTES:

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KEYNOTES:

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- UNDERGROUND COMMUNICATION LINE CONFLICT
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- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	---
DIRECTION OF TRAVEL	---
EXISTING COMMUNICATION LINE	--- COMM (QUB) ---
EXISTING GAS LINE	--- G (QUB) --- G (QUB) ---
EXISTING UNKNOWN UTILITY LINE	---
EXISTING WATER LINE	--- W (QUB) --- W (QUB) ---
EXISTING ELECTRICAL	--- E (QUB) --- E (QUB) ---
EXISTING ELECTRICAL OVERHEAD	--- OHW --- OHW ---
EXISTING SANITARY	--- SAN --- SAN ---
EXISTING STORM	--- ST --- ST ---
PROPOSED WATER LINE	--- W ---
PROPOSED SANITARY	--- SAN ---
PROPOSED STORM	--- ST ---

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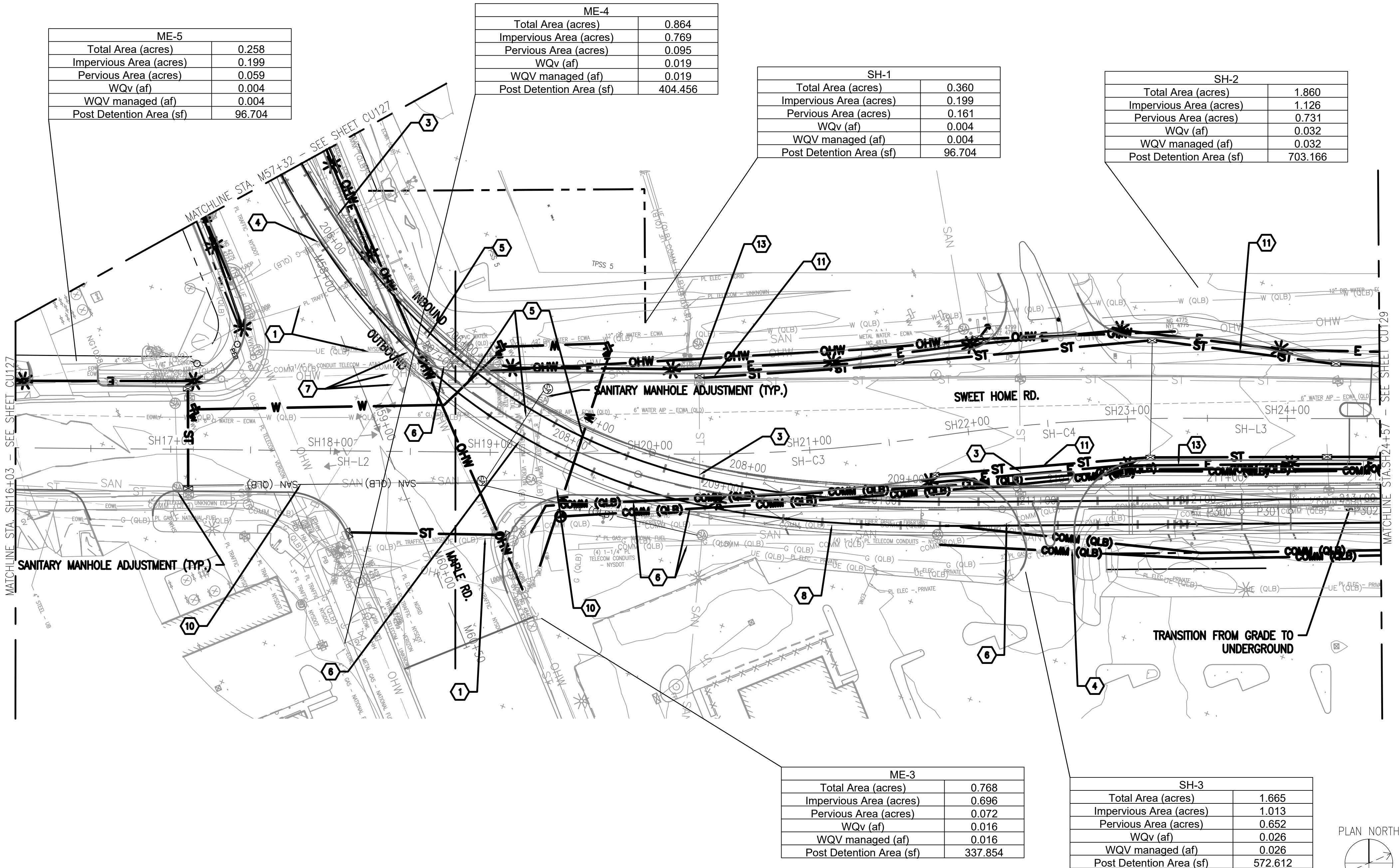
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UTILITY PLAN SHEET 27

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B1 UTILITY PLANS – MAPLE RD. AND SWEET HOME RD.

1" = 40'-0"



GENERAL SHEET NOTES:

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KEYNOTES:

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- SANITARY PIPE CONFLICT
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- GAS LINE CONFLICT
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- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	---
DIRECTION OF TRAVEL	---
EXISTING COMMUNICATION LINE	COMM (QLB)
EXISTING GAS LINE	G (QLB)
EXISTING UNKNOWN UTILITY LINE	---
EXISTING WATER LINE	W (QLB)
EXISTING ELECTRICAL	UE (QLB)
EXISTING ELECTRICAL OVERHEAD	OHW
EXISTING SANITARY	SAN
EXISTING STORM	ST
PROPOSED WATER LINE	W
PROPOSED SANITARY	SAN
PROPOSED STORM	ST

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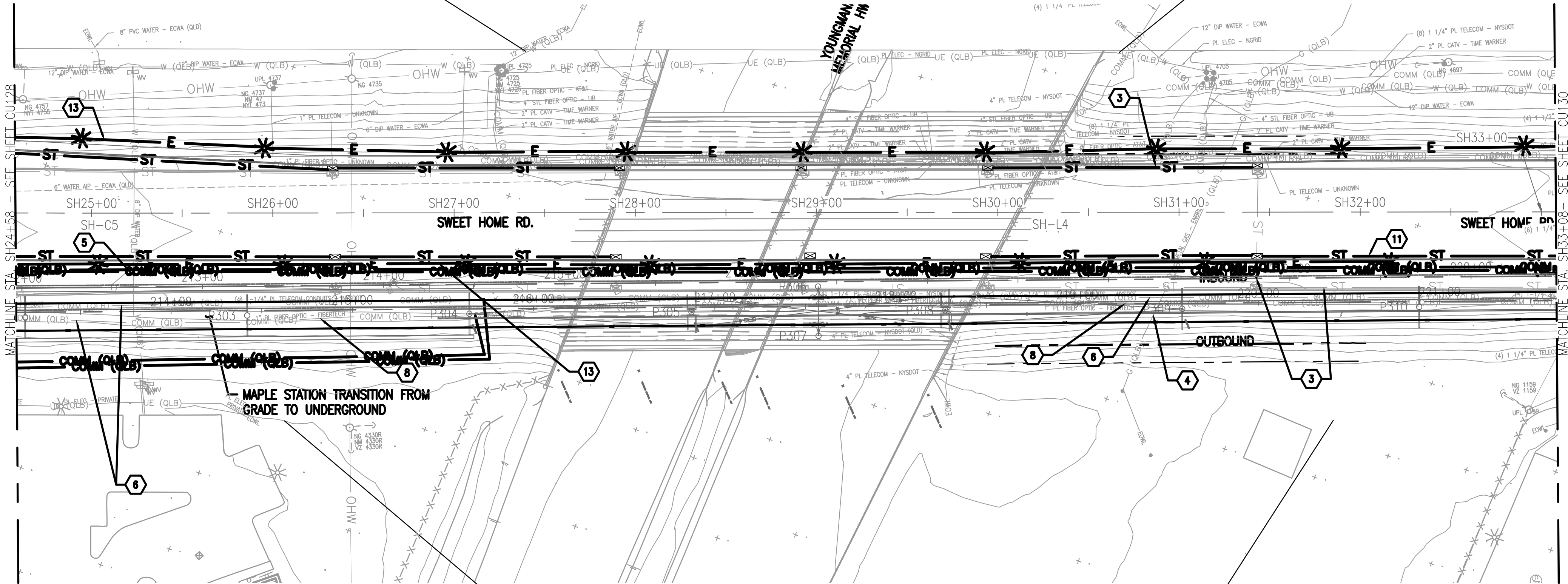
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7

SH-2	
Total Area (acres)	1.860
Impervious Area (acres)	1.126
Pervious Area (acres)	0.731
WQv (af)	0.032
WQV managed (af)	0.032
Post Detention Area (sf)	703.166

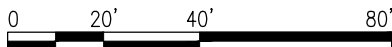
SH-4	
Total Area (acres)	2.434
Impervious Area (acres)	1.461
Pervious Area (acres)	0.973
WQv (af)	0.042
WQV managed (af)	0.042
Post Detention Area (sf)	910.196



SH-3	
Total Area (acres)	1.665
Impervious Area (acres)	1.013
Pervious Area (acres)	0.652
WQv (af)	0.026
WQV managed (af)	0.026
Post Detention Area (sf)	572.612

SH-5	
Total Area (acres)	2.597
Impervious Area (acres)	2.145
Pervious Area (acres)	0.453
WQv (af)	0.061
WQV managed (af)	0.061
Post Detention Area (sf)	1329.885

PLAN NORTH



GENERAL SHEET NOTES:

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KEYNOTES:

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- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	----->
EXISTING COMMUNICATION LINE	COMM (QLB) -----
EXISTING GAS LINE	G (QLB) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	W (QLB) -----
EXISTING ELECTRICAL	UE (QLB) -----
EXISTING ELECTRICAL OVERHEAD	OHW -----
EXISTING SANITARY	SAN -----
EXISTING STORM	ST -----
PROPOSED WATER LINE	W -----
PROPOSED SANITARY	SAN -----
PROPOSED STORM	ST -----

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B1 UTILITY PLANS – SWEET HOME RD.

1" = 40'-0"

SH-4	
Total Area (acres)	2.434
Impervious Area (acres)	1.461
Pervious Area (acres)	0.973
WQv (af)	0.042
WQV managed (af)	0.042
Post Detention Area (sf)	910.196

SH-5	
Total Area (acres)	2.597
Impervious Area (acres)	2.145
Pervious Area (acres)	0.453
WQv (af)	0.061
WQV managed (af)	0.061
Post Detention Area (sf)	1329.885

PLAN NORTH

0 20' 40' 80'

GENERAL SHEET NOTES:

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- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
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- PROPOSED WATER LINE
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LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	----->
EXISTING COMMUNICATION LINE	COMM (QLB) -----
EXISTING GAS LINE	G (QLB) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	W (QLB) -----
EXISTING ELECTRICAL	UE (QLB) -----
EXISTING ELECTRICAL OVERHEAD	OHW -----
EXISTING SANITARY	SAN -----
EXISTING STORM	ST -----
PROPOSED WATER LINE	W -----
PROPOSED SANITARY	SAN -----
PROPOSED STORM	ST -----

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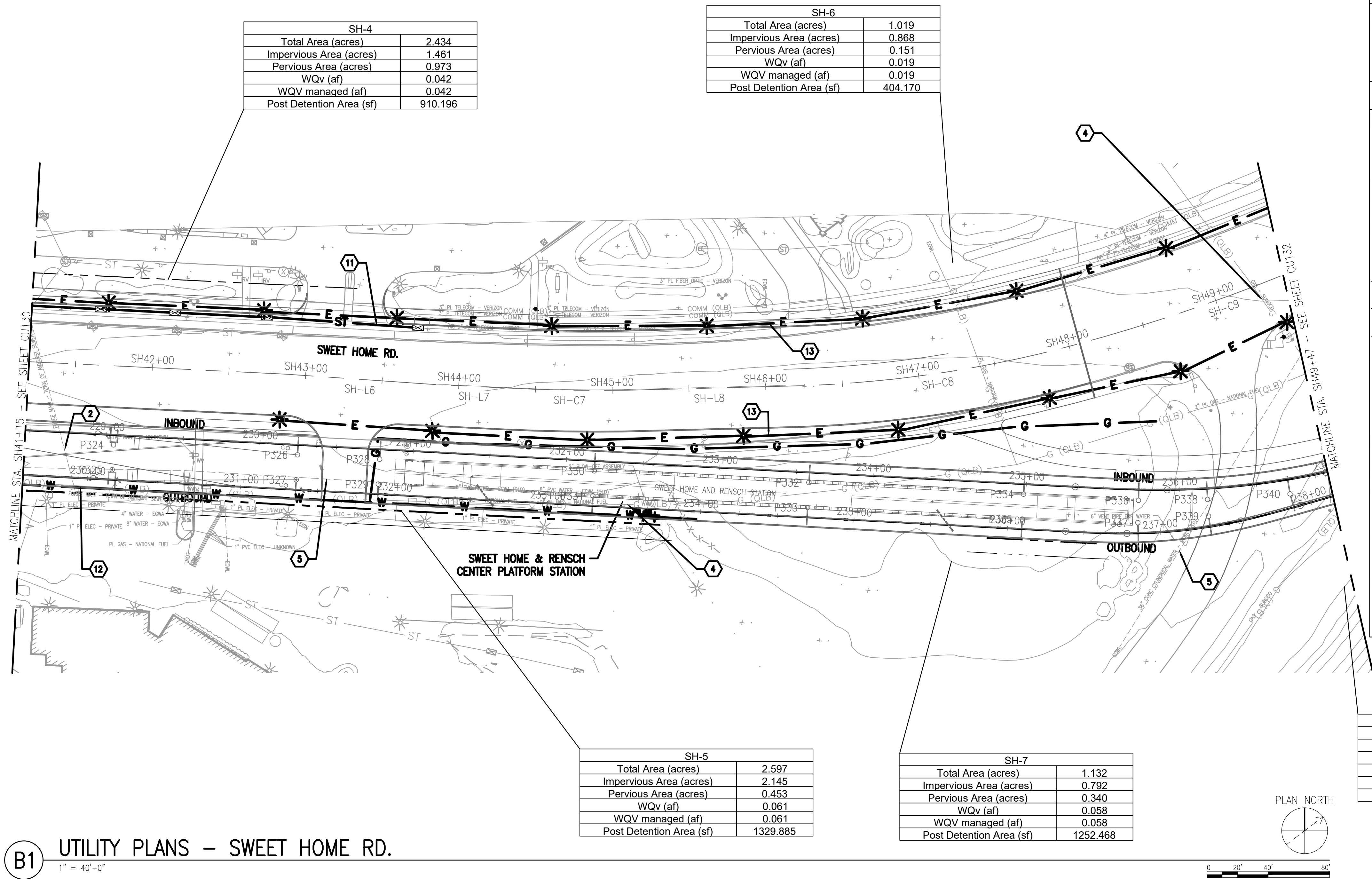
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B1 UTILITY PLANS – SWEET HOME RD.
1" = 40'-0"



SH-4	
Total Area (acres)	2.434
Impervious Area (acres)	1.461
Pervious Area (acres)	0.973
WQv (af)	0.042
WQV managed (af)	0.042
Post Detention Area (sf)	910.196

SH-6	
Total Area (acres)	1.019
Impervious Area (acres)	0.868
Pervious Area (acres)	0.151
WQv (af)	0.019
WQV managed (af)	0.019
Post Detention Area (sf)	404.170

SH-5	
Total Area (acres)	2.597
Impervious Area (acres)	2.145
Pervious Area (acres)	0.453
WQv (af)	0.061
WQV managed (af)	0.061
Post Detention Area (sf)	1329.885

SH-7	
Total Area (acres)	1.132
Impervious Area (acres)	0.792
Pervious Area (acres)	0.340
WQv (af)	0.058
WQV managed (af)	0.058
Post Detention Area (sf)	1252.468

GENERAL SHEET NOTES:

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- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	---
DIRECTION OF TRAVEL	---
EXISTING COMMUNICATION LINE	--- COMM (QLB) ---
EXISTING GAS LINE	--- G (QLB) --- G (QLB) ---
EXISTING UNKNOWN UTILITY LINE	---
EXISTING WATER LINE	--- W (QLB) --- W (QLB) ---
EXISTING ELECTRICAL	--- E (QLB) --- E (QLB) ---
EXISTING ELECTRICAL OVERHEAD	--- OHW --- OHW ---
EXISTING SANITARY	--- SAN --- SAN ---
EXISTING STORM	--- ST --- ST ---
PROPOSED WATER LINE	--- W ---
PROPOSED SANITARY	--- SAN ---
PROPOSED STORM	--- ST ---

SH-8	
Total Area (acres)	0.968
Impervious Area (acres)	0.538
Pervious Area (acres)	0.430
WQv (af)	0.044
WQV managed (af)	0.044
Post Detention Area (sf)	966.519

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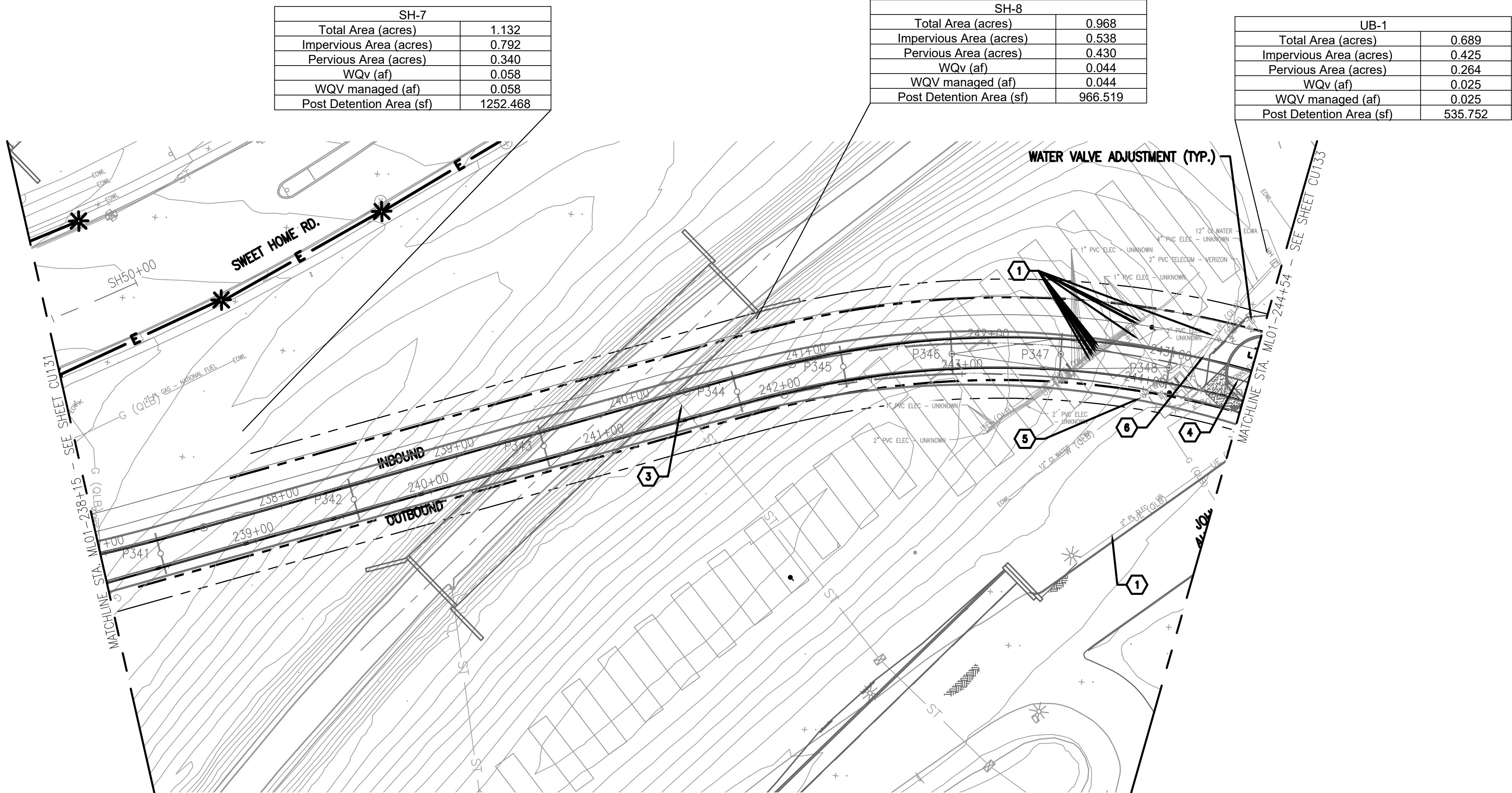
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NFTA PROJECT NO:		34LZ1725
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SHEET TITLE
UTILITY PLAN SHEET 31

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GENERAL SHEET NOTES:

- NOTE SOME RELOCATIONS OF PUBLIC UTILITIES ARE STILL BEING PROGRESSED AND ARE NOT SHOWN.
- CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	-----
EXISTING COMMUNICATION LINE	----- COMM (CLR) -----
EXISTING GAS LINE	----- G (CLR) ----- G (CLR) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	----- W (CLR) ----- W (CLR) -----
EXISTING ELECTRICAL	----- E (CLR) ----- E (CLR) -----
EXISTING ELECTRICAL OVERHEAD	----- OHW ----- OHW -----
EXISTING SANITARY	----- SAN ----- SAN -----
EXISTING STORM	----- ST ----- ST -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----

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SHEET TITLE
UTILITY PLAN SHEET 32

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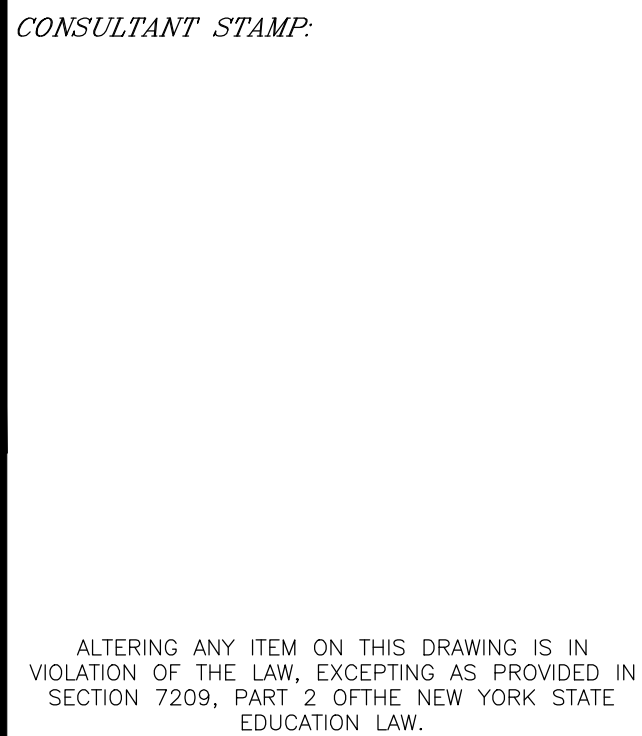


UB-2	
Total Area (acres)	1.220
Impervious Area (acres)	0.951
Pervious Area (acres)	0.269
WQv (af)	0.043
WQV managed (af)	0.043
Post Detention Area (sf)	945.833

1. NOTE SOME RELOCATIONS OF PUBLIC UTILITIES ARE STILL BEING PROGRESSED AND ARE NOT SHOWN.
2. CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

1. UNDERGROUND ELECTRICAL LINE CONFLICT
2. SANITARY PIPE CONFLICT
3. STORM PIPE CONFLICT
4. GAS LINE CONFLICT
5. WATER LINE CONFLICT
6. UNDERGROUND COMMUNICATION LINE CONFLICT
7. ELECTRICAL OVERHEAD LINE CONFLICT
8. UNDERGROUND FIBER OPTIC CONFLICT
9. OVERHEAD COMMUNICATION
10. PROPOSED SANITARY PIPE
11. PROPOSED STORM PIPE
12. PROPOSED WATER LINE
13. PROPOSED UNDERGROUND ELECTRIC LINE

PROPERTY LINE	
DIRECTION OF TRAVEL	
EXISTING COMMUNICATION LINE	COMM (COLOR)
EXISTING GAS LINE	G (COLOR) G (COLOR)
EXISTING UNKNOWN UTILITY LINE	
EXISTING WATER LINE	W (COLOR) W (COLOR)
EXISTING ELECTRICAL	E (COLOR) E (COLOR)
EXISTING ELECTRICAL OVERHEAD	CHOW CHOW
EXISTING SANITARY	SAN SAN
EXISTING STORM	ST ST
PROPOSED WATER LINE	W
PROPOSED SANITARY	SAN
PROPOSED STORM	ST



SHEET TITLE
UTILITY PLAN SHEET 33

DRAWING# **CU133**

SHEET# OF

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B1 UTILITY PLANS – RENSCH RD.

1" = 40'-0"

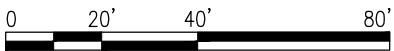
UB-2	
Total Area (acres)	1.220
Impervious Area (acres)	0.951
Pervious Area (acres)	0.269
WQv (af)	0.043
WQV managed (af)	0.043
Post Detention Area (sf)	945.833

UB-3	
Total Area (acres)	0.117
Impervious Area (acres)	0.117
Pervious Area (acres)	0.000
WQv (af)	0.002
WQV managed (af)	0.002
Post Detention Area (sf)	50.588

UB-4	
Total Area (acres)	0.344
Impervious Area (acres)	0.261
Pervious Area (acres)	0.082
WQv (af)	0.015
WQV managed (af)	0.015
Post Detention Area (sf)	336.127

UB-5	
Total Area (acres)	0.266
Impervious Area (acres)	0.241
Pervious Area (acres)	0.025
WQv (af)	0.005
WQV managed (af)	0.005
Post Detention Area (sf)	115.158

PLAN NORTH



GENERAL SHEET NOTES:

- NOTE SOME RELOCATIONS OF PUBLIC UTILITIES ARE STILL BEING PROGRESSSED AND ARE NOT SHOWN.
- CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	
EXISTING COMMUNICATION LINE	----- COMM (QLB) -----
EXISTING GAS LINE	----- G (QLB) ----- G (QLB) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	----- W (QLB) ----- W (QLB) -----
EXISTING ELECTRICAL	----- UE (QLB) ----- UE (QLB) -----
EXISTING ELECTRICAL OVERHEAD	----- OHW ----- OHW -----
EXISTING SANITARY	----- SAN ----- SAN -----
EXISTING STORM	----- ST ----- ST -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----

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UTILITY PLAN SHEET 34

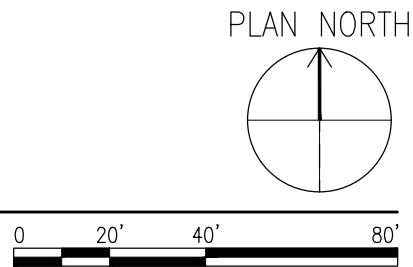
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B1 UTILITY PLANS – MARY TALBERT WAY

1" = 40'-0"



UB-5	
Total Area (acres)	0.266
Impervious Area (acres)	0.241
Pervious Area (acres)	0.025
WQv (af)	0.005
WQV managed (af)	0.005
Post Detention Area (sf)	115.158

UB-6	
Total Area (acres)	0.294
Impervious Area (acres)	0.263
Pervious Area (acres)	0.031
WQv (af)	0.018
WQV managed (af)	0.018
Post Detention Area (sf)	381.298

UB-7	
Total Area (acres)	0.728
Impervious Area (acres)	0.494
Pervious Area (acres)	0.235
WQv (af)	0.012
WQV managed (af)	0.012
Post Detention Area (sf)	258.507

UB-8	
Total Area (acres)	0.919
Impervious Area (acres)	0.516
Pervious Area (acres)	0.402
WQv (af)	0.015
WQV managed (af)	0.015
Post Detention Area (sf)	336.294

GENERAL SHEET NOTES:

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KEYNOTES:

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- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	
EXISTING COMMUNICATION LINE	----- (CLR) -----
EXISTING GAS LINE	----- (CLR) ----- (CLR) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	----- (CLR) ----- (CLR) -----
EXISTING ELECTRICAL	----- (CLR) ----- (CLR) -----
EXISTING ELECTRICAL OVERHEAD	----- OHW ----- OHW -----
EXISTING SANITARY	----- SAN ----- SAN -----
EXISTING STORM	----- ST ----- ST -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----

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UTILITY PLAN SHEET 35

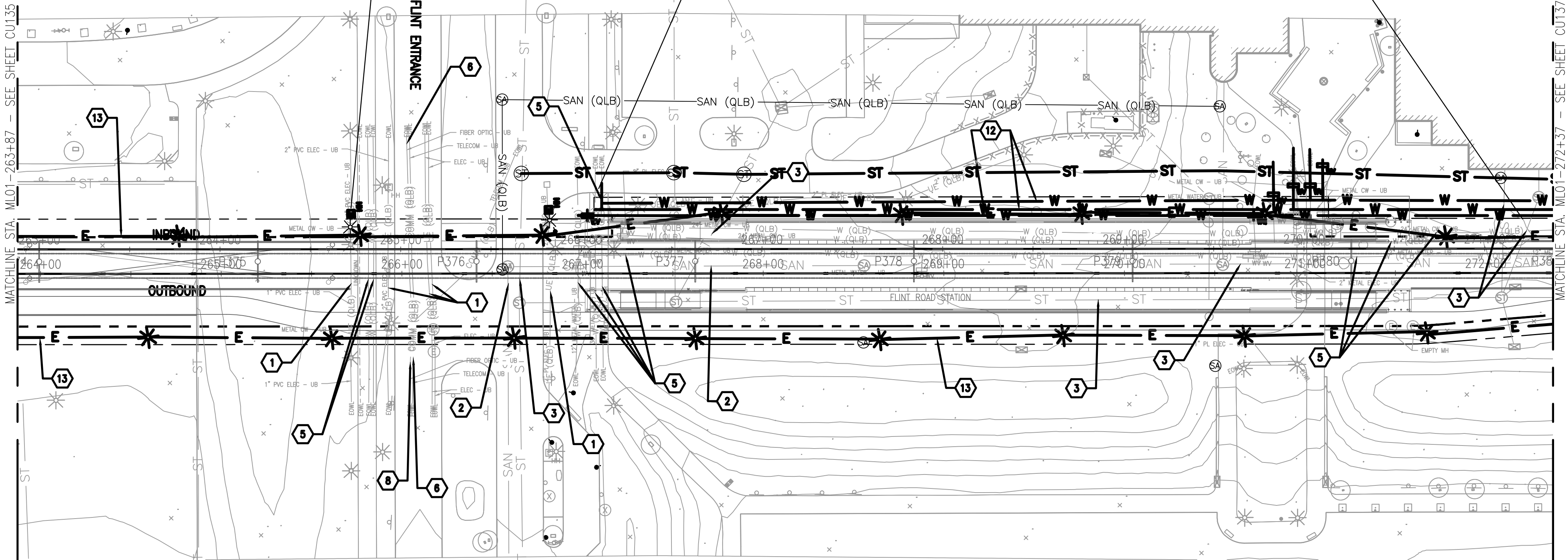
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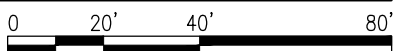
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B1 UTILITY PLANS – MARY TALBERT WAY

1" = 40'-0"



PLAN NORTH



UB-9	
Total Area (acres)	0.218
Impervious Area (acres)	0.176
Pervious Area (acres)	0.042
WQv (af)	0.009
WQV managed (af)	0.009
Post Detention Area (sf)	189.062

UB-10	
Total Area (acres)	0.939
Impervious Area (acres)	0.703
Pervious Area (acres)	0.236
WQv (af)	0.049
WQV managed (af)	0.043
Post Detention Area (sf)	1065.018

UB-11	
Total Area (acres)	0.437
Impervious Area (acres)	0.287
Pervious Area (acres)	0.150
WQv (af)	0.022
WQV managed (af)	0.022
Post Detention Area (sf)	485.459

GENERAL SHEET NOTES:

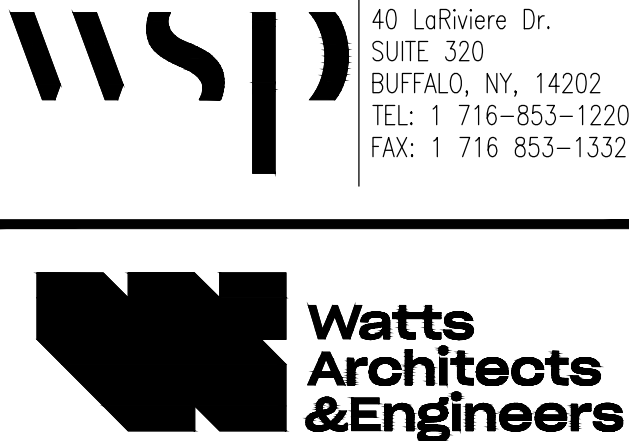
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KEYNOTES:

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- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	----->
EXISTING COMMUNICATION LINE	----- COMM (QLB) -----
EXISTING GAS LINE	----- G (QLB) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	----- W (QLB) -----
EXISTING ELECTRICAL	----- EE (QLB) -----
EXISTING ELECTRICAL OVERHEAD	----- OHW -----
EXISTING SANITARY	----- SAN -----
EXISTING STORM	----- ST -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----



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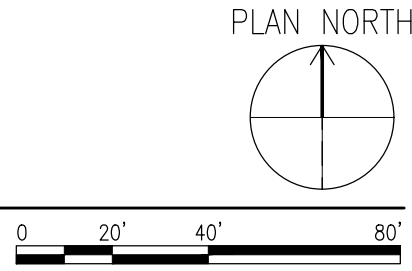
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UTILITY PLAN SHEET 36

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B1 UTILITY PLANS – MARY TALBERT WAY

1" = 40'-0"



UB-12	
Total Area (acres)	0.544
Impervious Area (acres)	0.403
Pervious Area (acres)	0.141
WQv (af)	0.030
WQV managed (af)	0.030
Post Detention Area (sf)	656,589

UB-13	
Total Area (acres)	0.550
Impervious Area (acres)	0.550
Pervious Area (acres)	0.000
WQv (af)	0.011
WQV managed (af)	0.011
Post Detention Area (sf)	236,916

GENERAL SHEET NOTES:

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- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	
EXISTING COMMUNICATION LINE	----- COMM (O.L.B) -----
EXISTING GAS LINE	----- G (O.L.B) ----- G (O.L.B) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	----- W (O.L.B) ----- W (O.L.B) -----
EXISTING ELECTRICAL	----- E (O.L.B) ----- E (O.L.B) -----
EXISTING ELECTRICAL OVERHEAD	----- OH-W ----- OH-W -----
EXISTING SANITARY	----- SAN ----- SAN -----
EXISTING STORM	----- ST ----- ST -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----

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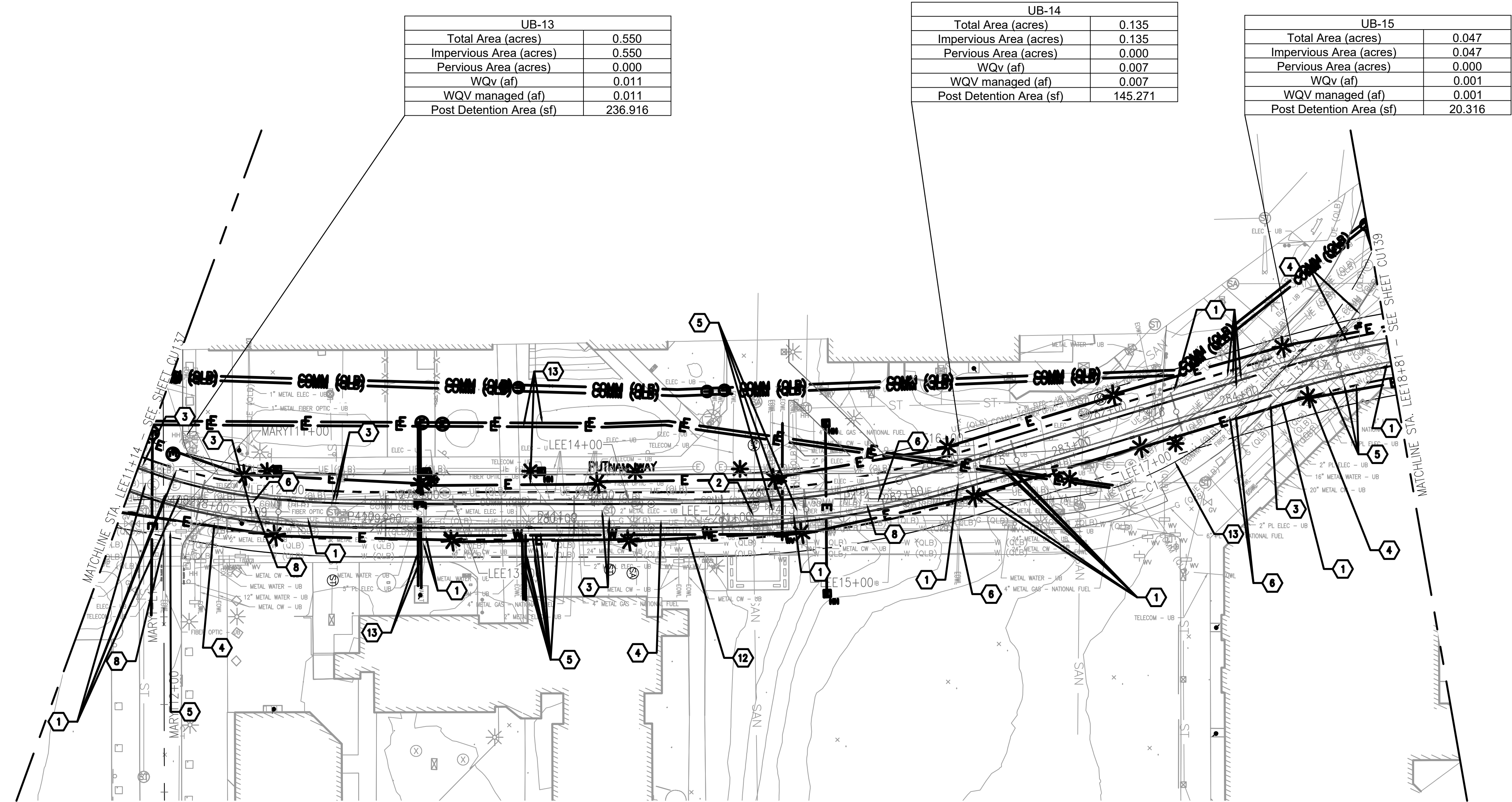
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UTILITY PLAN SHEET 37

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B1 UTILITY PLAN – LEE RD.
1" = 40'-0"



GENERAL SHEET NOTES:

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KEYNOTES:

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- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	
EXISTING COMMUNICATION LINE	COMM (GLB) -----
EXISTING GAS LINE	G (GLB) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	W (GLB) -----
EXISTING ELECTRICAL	E (GLB) -----
EXISTING ELECTRICAL OVERHEAD	OHW -----
EXISTING SANITARY	SAN -----
EXISTING STORM	ST -----
PROPOSED WATER LINE	W -----
PROPOSED SANITARY	SAN -----
PROPOSED STORM	ST -----

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B1 UTILITY PLAN – LEE RD.

1" = 40'-0"

UB-16	
Total Area (acres)	0.267
Impervious Area (acres)	0.267
Pervious Area (acres)	0.000
WQv (af)	0.005
WQV managed (af)	0.005
Post Detention Area (sf)	114.999

UB-17	
Total Area (acres)	0.792
Impervious Area (acres)	0.783
Pervious Area (acres)	0.009
WQv (af)	0.031
WQV managed (af)	0.031
Post Detention Area (sf)	674.437

GENERAL SHEET NOTES:

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KEYNOTES:

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- GAS LINE CONFLICT
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- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	----->
EXISTING COMMUNICATION LINE	----- (CLB) -----
EXISTING GAS LINE	----- (CLB) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	----- (CLB) -----
EXISTING ELECTRICAL	----- (CLB) -----
EXISTING ELECTRICAL OVERHEAD	----- (CLB) -----
EXISTING SANITARY	----- (CLB) -----
EXISTING STORM	----- (CLB) -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----

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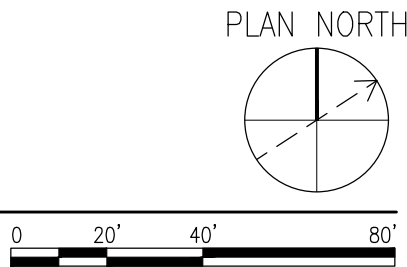
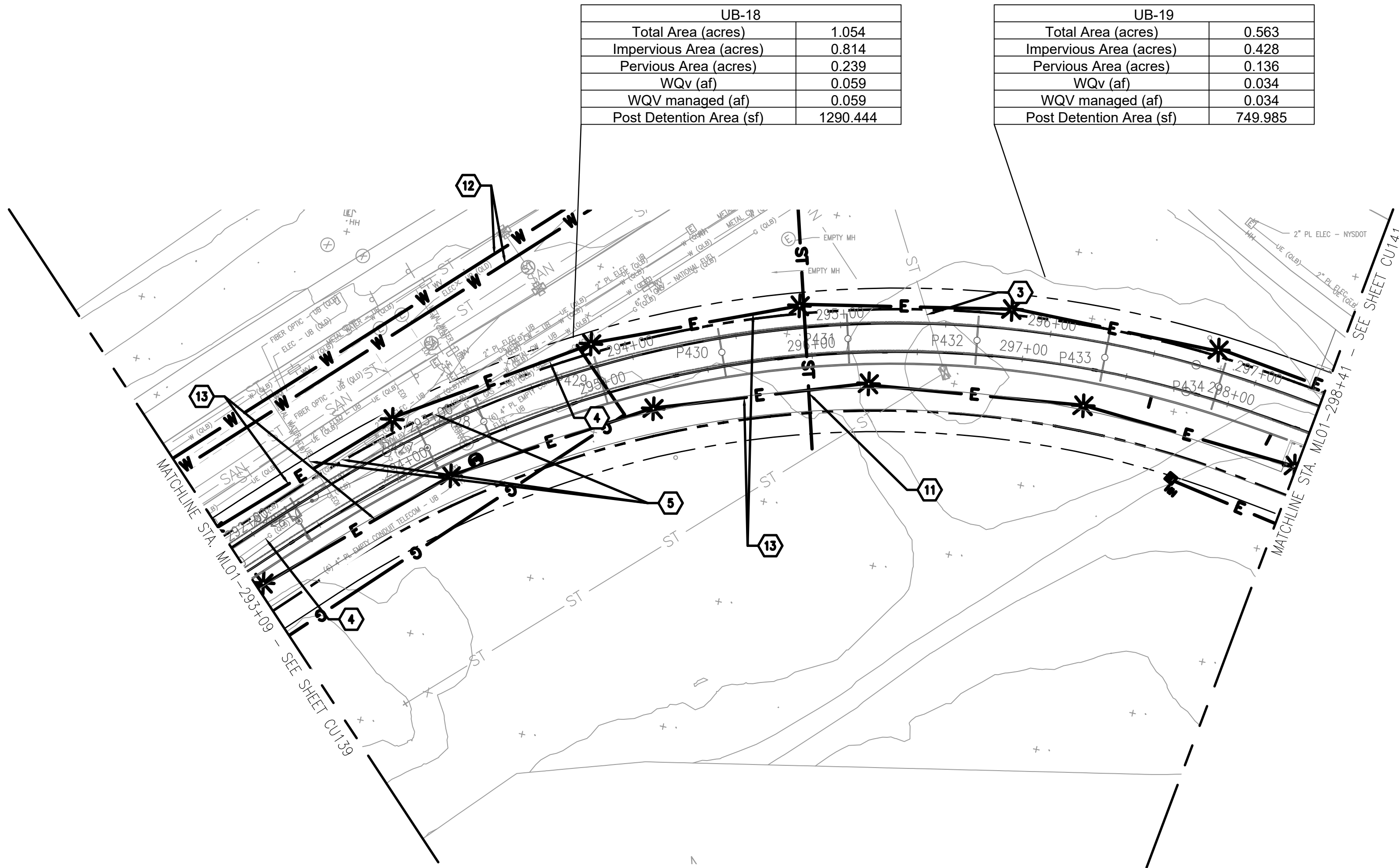
SHEET TITLE
UTILITY PLAN SHEET 39

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CU139
SHEET# 0F

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B1 UTILITY PLANS – LEE RD. AND JOHN JAMES AUDUBON PKWY.

1" = 40'-0"



GENERAL SHEET NOTES:

- NOTE SOME RELOCATIONS OF PUBLIC UTILITIES ARE STILL BEING PROGRESSED AND ARE NOT SHOWN.
- CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	
EXISTING COMMUNICATION LINE	----- COM (CLR) -----
EXISTING GAS LINE	----- G (CLR) ----- G (CLR) -----
EXISTING UNKNOWN UTILITY LINE	----- U (CLR) -----
EXISTING WATER LINE	----- W (CLR) ----- W (CLR) -----
EXISTING ELECTRICAL	----- E (CLR) ----- E (CLR) -----
EXISTING ELECTRICAL OVERHEAD	----- OHW ----- OHW -----
EXISTING SANITARY	----- SAN ----- SAN -----
EXISTING STORM	----- ST ----- ST -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----

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DESIGNER PROJECT NO:		US-WSP-187880C
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SHEET TITLE
UTILITY PLAN SHEET 40

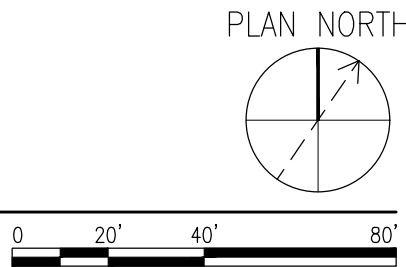
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B1 UTILITY PLANS – JOHN JAMES AUDUBON PKWY.

1" = 40'-0"



UB-20	
Total Area (acres)	0.568
Impervious Area (acres)	0.455
Pervious Area (acres)	0.113
WQv (af)	0.034
WQV managed (af)	0.067
Post Detention Area (sf)	732.833

UB-21	
Total Area (acres)	0.657
Impervious Area (acres)	0.478
Pervious Area (acres)	0.179
WQv (af)	0.030
WQV managed (af)	0.089
Post Detention Area (sf)	649.378

GENERAL SHEET NOTES:

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KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	---
DIRECTION OF TRAVEL	
EXISTING COMMUNICATION LINE	--- COMM (GLB) ---
EXISTING GAS LINE	--- G (GLB) --- G (GLB) ---
EXISTING UNKNOWN UTILITY LINE	---
EXISTING WATER LINE	--- W (GLB) --- W (GLB) ---
EXISTING ELECTRICAL	--- UE (GLB) --- UE (GLB) ---
EXISTING ELECTRICAL OVERHEAD	--- OHW --- OHW ---
EXISTING SANITARY	--- SAN --- SAN ---
EXISTING STORM	--- ST --- ST ---
PROPOSED WATER LINE	--- w ---
PROPOSED SANITARY	--- SAN ---
PROPOSED STORM	--- ST ---

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SHEET TITLE
UTILITY PLAN SHEET 41

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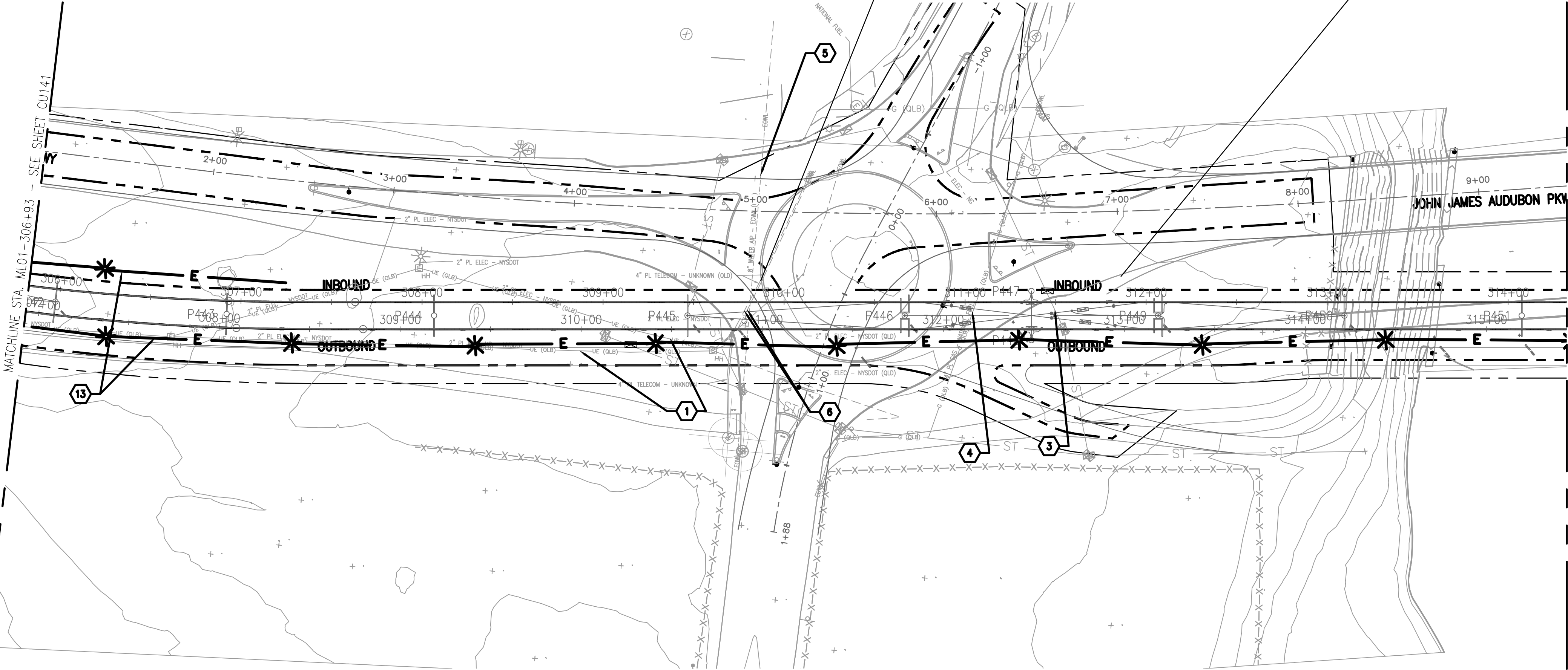
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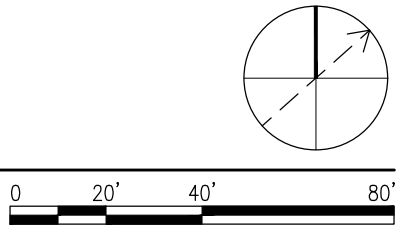
B1 UTILITY PLANS – JOHN JAMES AUDUBON PKWY.
1" = 40'-0"

UB-22	
Total Area (acres)	0.890
Impervious Area (acres)	0.640
Pervious Area (acres)	0.251
WQv (af)	0.037
WQV managed (af)	0.143
Post Detention Area (sf)	813.152

UB-23	
Total Area (acres)	0.454
Impervious Area (acres)	0.307
Pervious Area (acres)	0.147
WQv (af)	0.021
WQV managed (af)	0.103
Post Detention Area (sf)	450.632



PLAN NORTH



GENERAL SHEET NOTES:

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KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	
EXISTING COMMUNICATION LINE	----- COMM (OLB) -----
EXISTING GAS LINE	----- G (OLB) ----- G (OLB) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	----- W (OLB) ----- W (OLB) -----
EXISTING ELECTRICAL	----- UE (OLB) ----- UE (OLB) -----
EXISTING ELECTRICAL OVERHEAD	----- OHW ----- OHW -----
EXISTING SANITARY	----- SAN ----- SAN -----
EXISTING STORM	----- ST ----- ST -----
PROPOSED WATER LINE	----- w -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----

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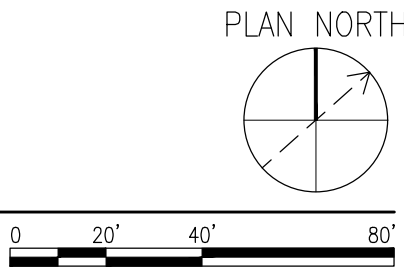
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UTILITY PLAN SHEET 42

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CU142
SHEET# 0F

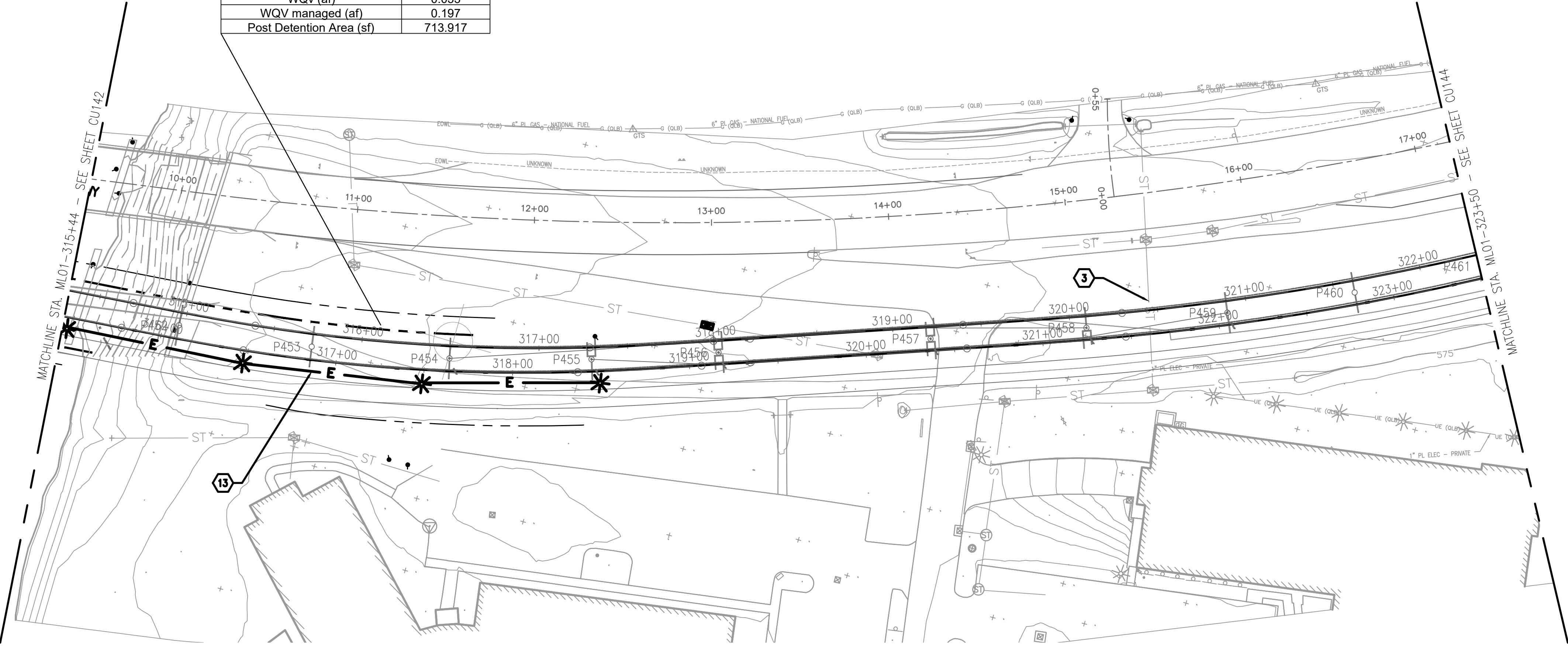
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B1 UTILITY PLANS – JOHN JAMES AUDUBON PKWY.

1" = 40'-0"



JJS-1	
Total Area (acres)	0.663
Impervious Area (acres)	0.527
Pervious Area (acres)	0.137
WQv (af)	0.033
WQV managed (af)	0.197
Post Detention Area (sf)	713.917



GENERAL SHEET NOTES:

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KEYNOTES:

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- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	----->
EXISTING COMMUNICATION LINE	----- COMM (CLB) -----
EXISTING GAS LINE	----- G (CLB) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	----- W (CLB) -----
EXISTING ELECTRICAL	----- E (CLB) -----
EXISTING ELECTRICAL OVERHEAD	----- OHW -----
EXISTING SANITARY	----- SAN -----
EXISTING STORM	----- ST -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----

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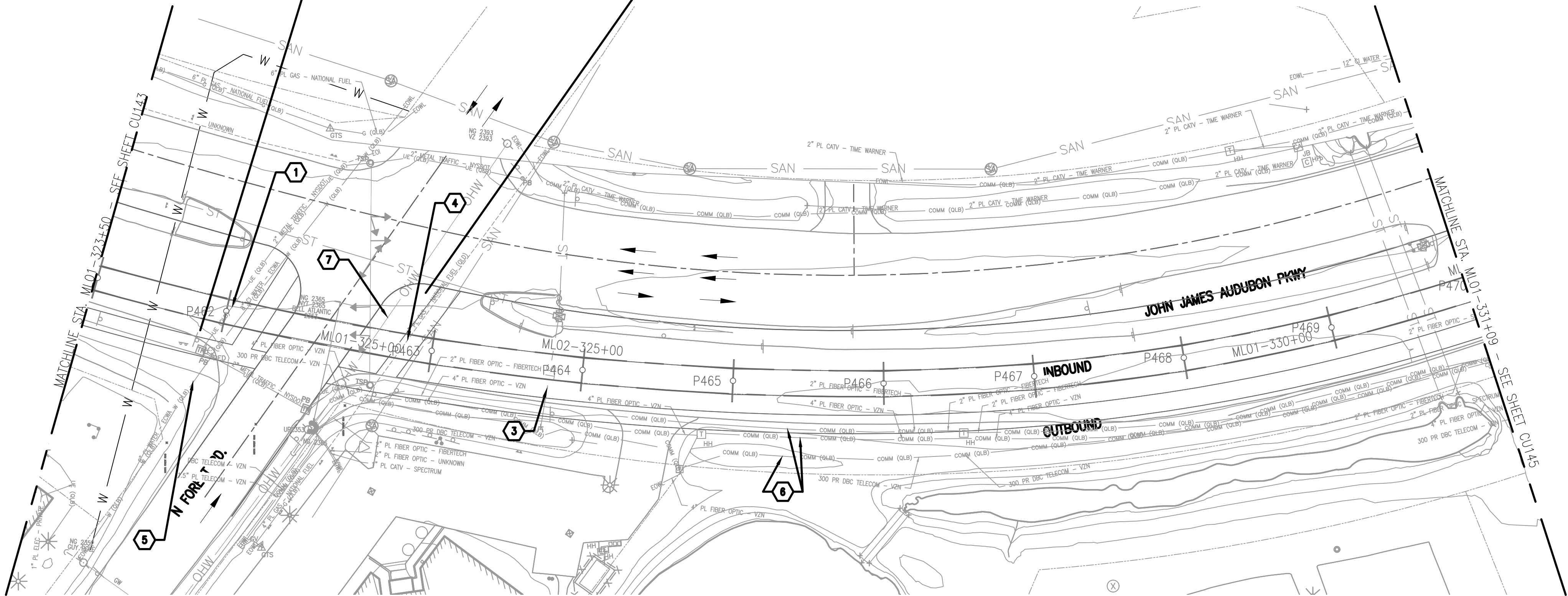
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JJS-2	
Total Area (acres)	0.556
Impervious Area (acres)	0.399
Pervious Area (acres)	0.157
WQv (af)	0.010
WQV managed (af)	0.071
Post Detention Area (sf)	220.873

JJS-3	
Total Area (acres)	1.007
Impervious Area (acres)	0.747
Pervious Area (acres)	0.260
WQv (af)	0.016
WQV managed (af)	0.127
Post Detention Area (sf)	347.079



B1 UTILITY CONFLICT PLAN – JOHN JAMES AUDUBON PKWY
1" = 40'-0"

GENERAL SHEET NOTES:

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- CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	---
DIRECTION OF TRAVEL	←
EXISTING COMMUNICATION LINE	--- COMM (OLB) ---
EXISTING GAS LINE	--- G (OLB) --- G (OLB) ---
EXISTING UNKNOWN UTILITY LINE	---
EXISTING WATER LINE	--- W (OLB) --- W (OLB) ---
EXISTING ELECTRICAL	--- E (OLB) --- E (OLB) ---
EXISTING ELECTRICAL OVERHEAD	--- OHW --- OHW ---
EXISTING SANITARY	--- SAN --- SAN ---
EXISTING STORM	--- ST --- ST ---
PROPOSED WATER LINE	--- W ---
PROPOSED SANITARY	--- SAN ---
PROPOSED STORM	--- ST ---

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UTILITY PLAN SHEET 44

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JJN-1	
Total Area (acres)	0.456
Impervious Area (acres)	0.347
Pervious Area (acres)	0.108
WQv (af)	0.012
WQV managed (af)	0.108
Post Detention Area (sf)	260.245

JJN-2	
Total Area (acres)	2.231
Impervious Area (acres)	1.796
Pervious Area (acres)	0.435
WQv (af)	0.743
WQV managed (af)	0.743
Post Detention Area (sf)	16181.678

GENERAL SHEET NOTES:

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KEYNOTES:

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- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	←
EXISTING COMMUNICATION LINE	----- COMM (OLB) -----
EXISTING GAS LINE	----- G (OLB) ----- G (OLB) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	----- W (OLB) ----- W (OLB) -----
EXISTING ELECTRICAL	----- EE (OLB) ----- EE (OLB) -----
EXISTING ELECTRICAL OVERHEAD	----- OHW ----- OHW -----
EXISTING SANITARY	----- SAN ----- SAN -----
EXISTING STORM	----- ST ----- ST -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----

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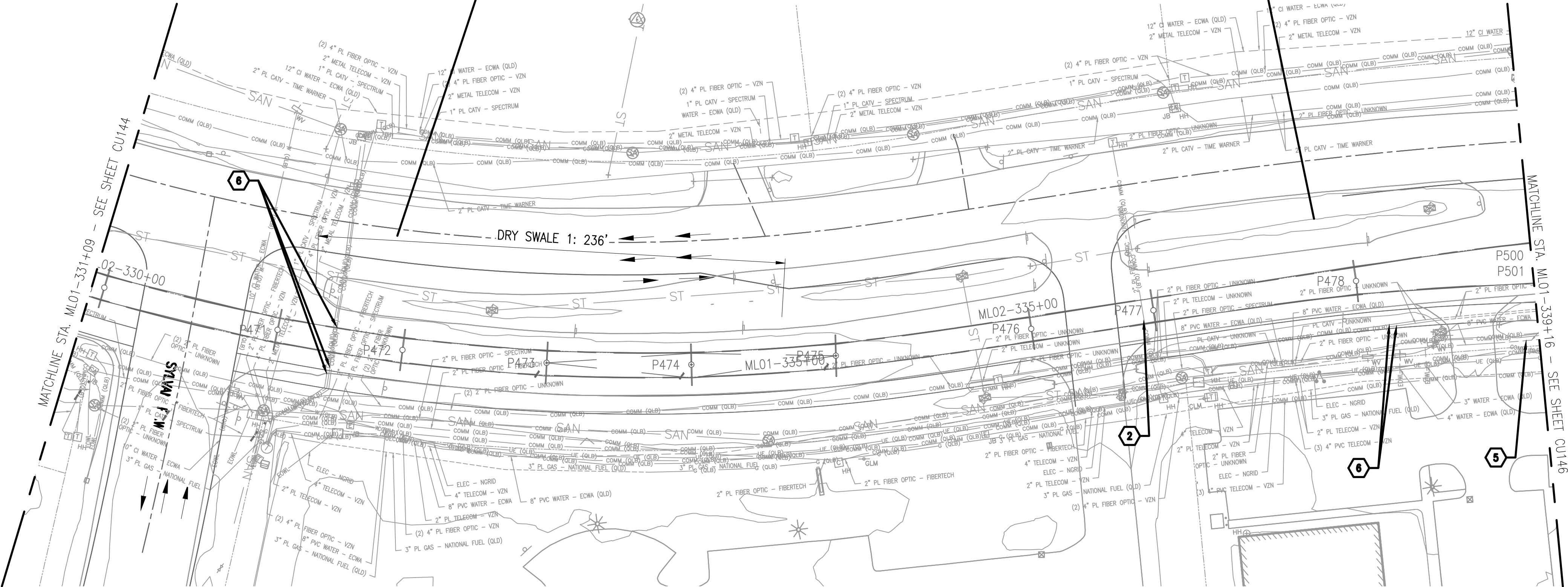
UTILITY PLAN
SHEET 45

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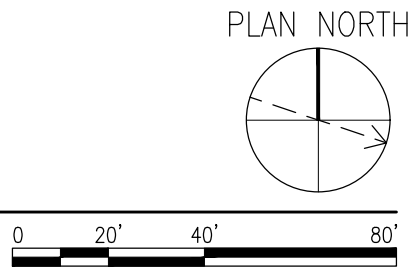
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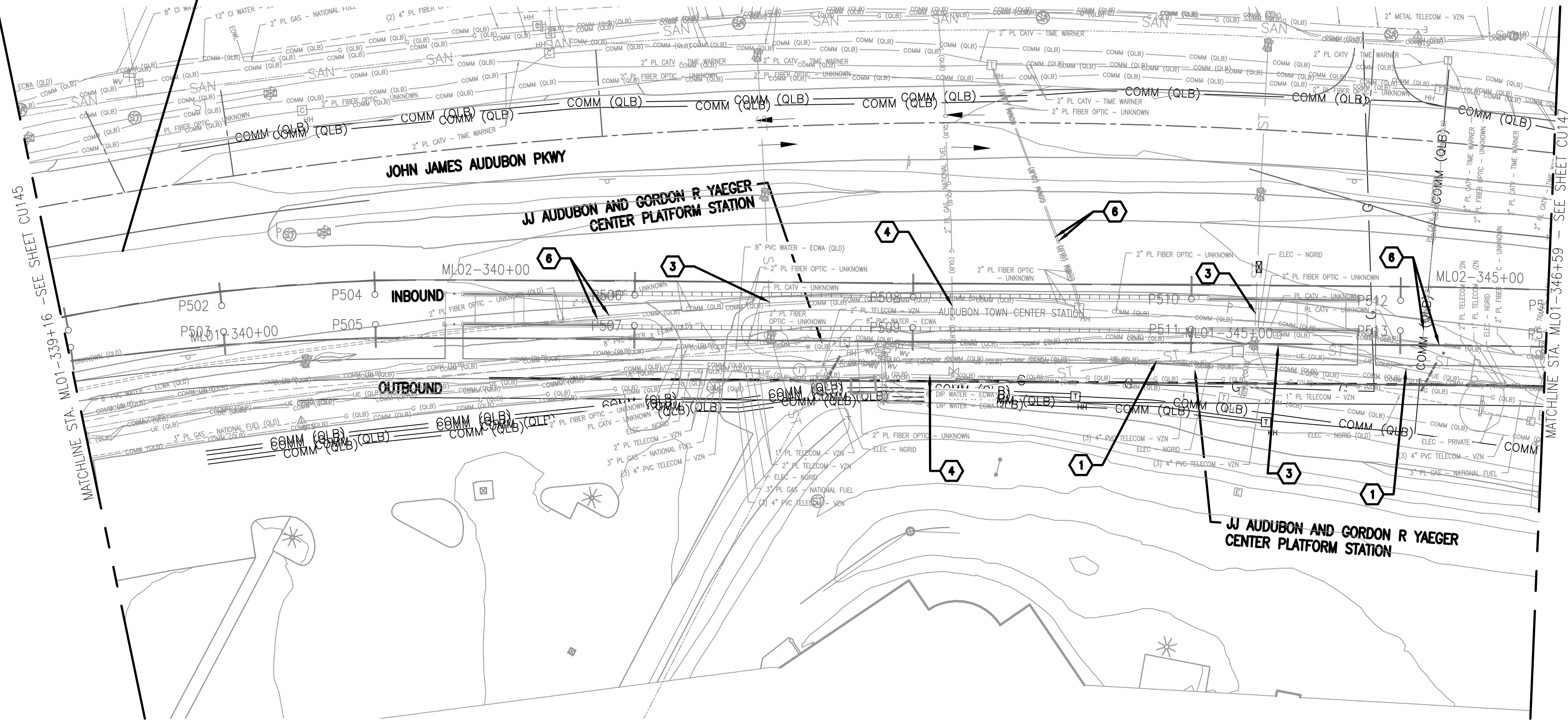


B1 UTILITY PLAN – JOHN JAMES AUDUBON PKWY.
1" = 40'-0"



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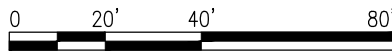
JJN-2	
Total Area (acres)	2.231
Impervious Area (acres)	1.796
Pervious Area (acres)	0.435
WQv (af)	0.074
WQV managed (af)	0.743
Post Detention Area (sf)	1618.168



B1 UTILITY PLAN – JOHN JAMES AUDUBON PKWY.

1" = 40'-0"

PLAN NORTH



GENERAL SHEET NOTES:

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KEYNOTES:

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- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	---
DIRECTION OF TRAVEL	→
EXISTING COMMUNICATION LINE	COMM (QLB)
EXISTING GAS LINE	G (QLB)
EXISTING UNKNOWN UTILITY LINE	---
EXISTING WATER LINE	W (QLB)
EXISTING ELECTRICAL	UE (QLB)
EXISTING ELECTRICAL OVERHEAD	OWH
EXISTING SANITARY	SAN
EXISTING STORM	ST
PROPOSED WATER LINE	W
PROPOSED SANITARY	SAN
PROPOSED STORM	ST

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SHEET TITLE

UTILITY PLAN
SHEET 46

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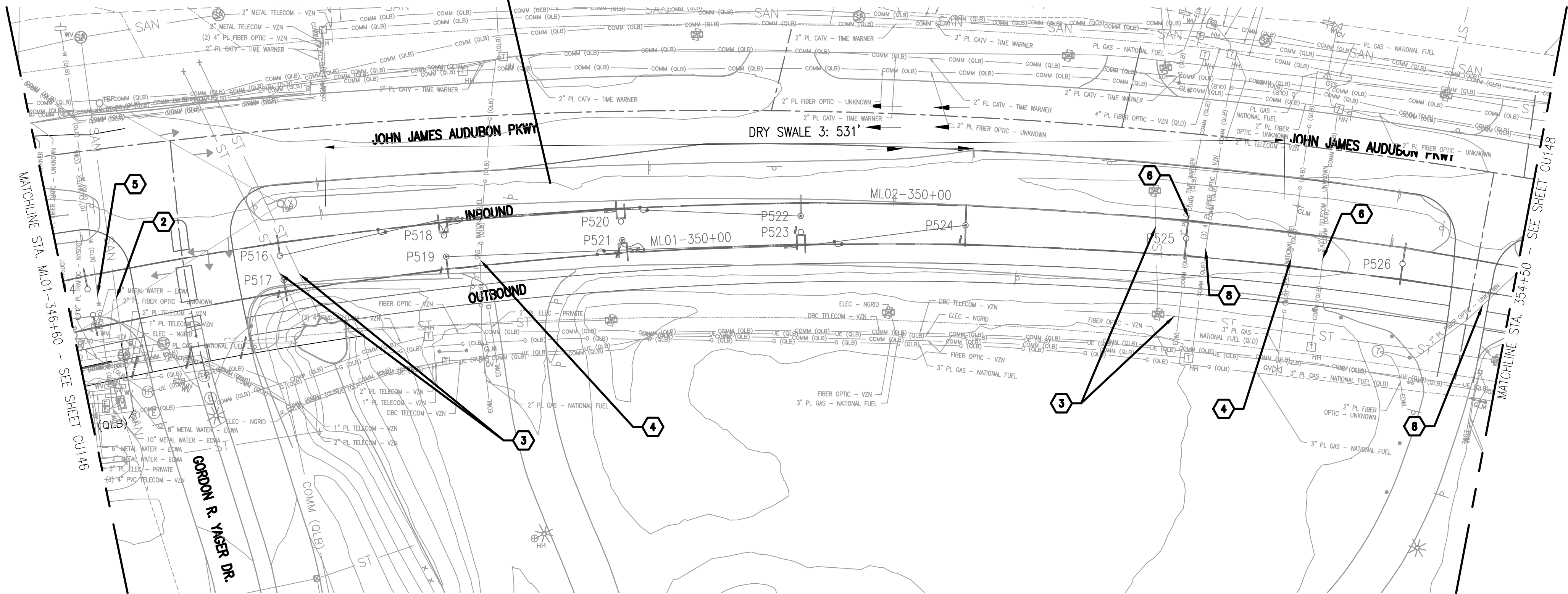
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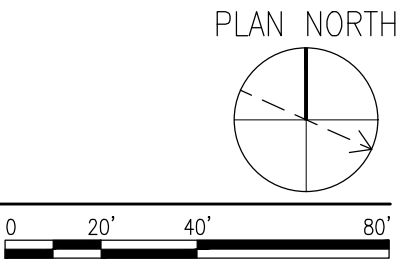
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JJN-3	
Total Area (acres)	1.190
Impervious Area (acres)	0.955
Pervious Area (acres)	0.235
WQV (af)	0.036
WQV managed (af)	0.393
Post Detention Area (sf)	777.533



B1 UTILITY PLAN – JOHN JAMES AUDUBON PKWY
1" = 40'-0"



GENERAL SHEET NOTES:

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- CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	---
DIRECTION OF TRAVEL	←
EXISTING COMMUNICATION LINE	--- COMM (OLB) ---
EXISTING GAS LINE	--- G (OLB) --- G (OLB) ---
EXISTING UNKNOWN UTILITY LINE	---
EXISTING WATER LINE	--- W (OLB) --- W (OLB) ---
EXISTING ELECTRICAL	--- UE (OLB) --- UE (OLB) ---
EXISTING ELECTRICAL OVERHEAD	--- OHW --- OHW ---
EXISTING SANITARY	--- SAN --- SAN ---
EXISTING STORM	--- ST --- ST ---
PROPOSED WATER LINE	--- W ---
PROPOSED SANITARY	--- SAN ---
PROPOSED STORM	--- ST ---

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SHEET TITLE

UTILITY PLAN
SHEET 47

DRAWING#

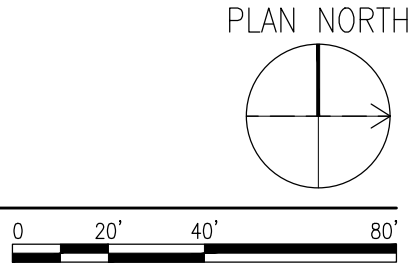
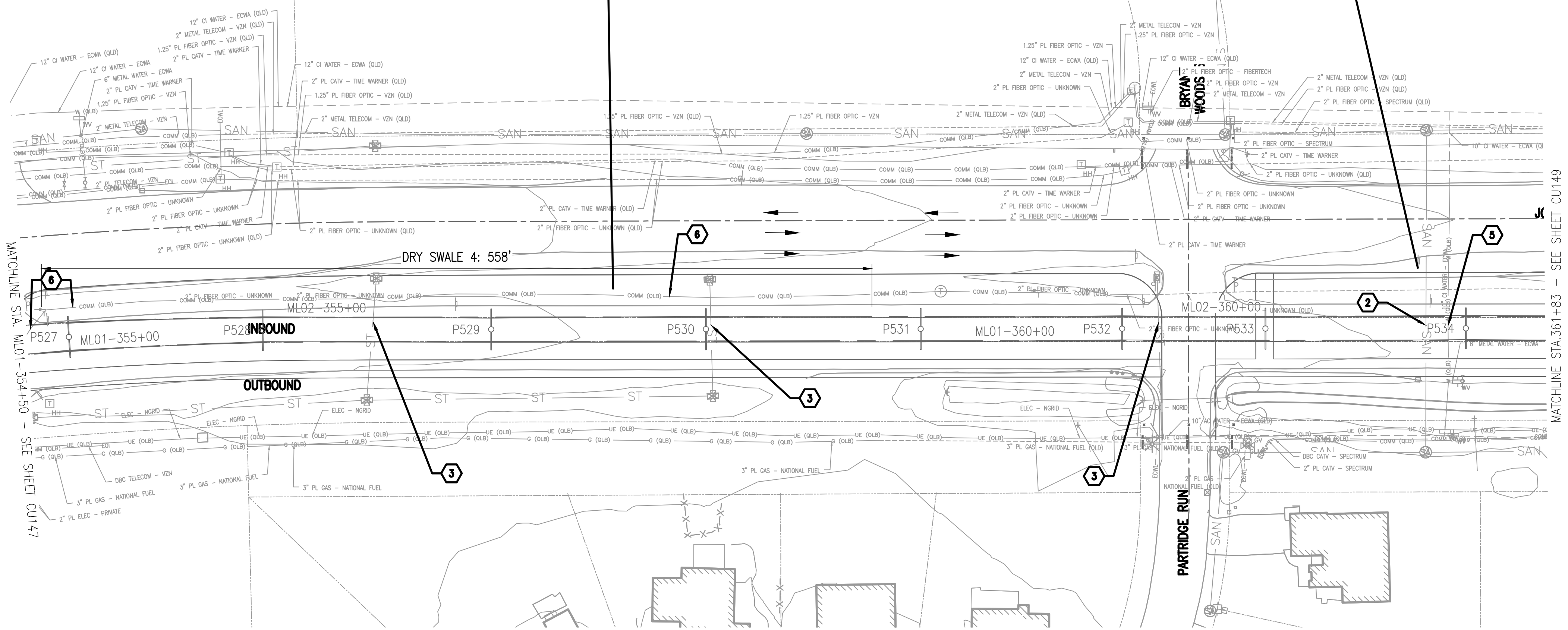
CU147

SHEET#

OF

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B1 UTILITY PLANS – JOHN JAMES AUDUBON PKWY
1" = 40'-0"



JJN-4	
Total Area (acres)	0.942
Impervious Area (acres)	0.714
Pervious Area (acres)	0.228
WQv (af)	0.026
WQV managed (af)	0.315
Post Detention Area (sf)	571.949

JJN-5	
Total Area (acres)	0.945
Impervious Area (acres)	0.722
Pervious Area (acres)	0.223
WQv (af)	0.322
WQV managed (af)	0.322
Post Detention Area (sf)	7011.198

GENERAL SHEET NOTES:

- NOTE SOME RELOCATIONS OF PUBLIC UTILITIES ARE STILL BEING PROGRESSED AND ARE NOT SHOWN.
- CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	←
EXISTING COMMUNICATION LINE	----- COMM (OLB) -----
EXISTING GAS LINE	----- G (OLB) ----- G (OLB) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	----- W (OLB) ----- W (OLB) -----
EXISTING ELECTRICAL	----- UE (OLB) ----- UE (OLB) -----
EXISTING ELECTRICAL OVERHEAD	----- OHW ----- OHW -----
EXISTING SANITARY	----- SAN ----- SAN -----
EXISTING STORM	----- ST ----- ST -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----

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UTILITY PLAN
SHEET 48

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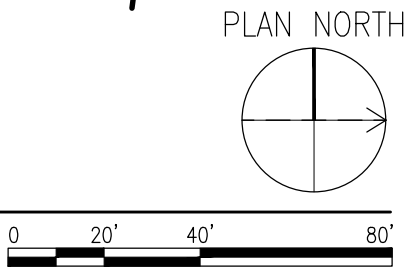
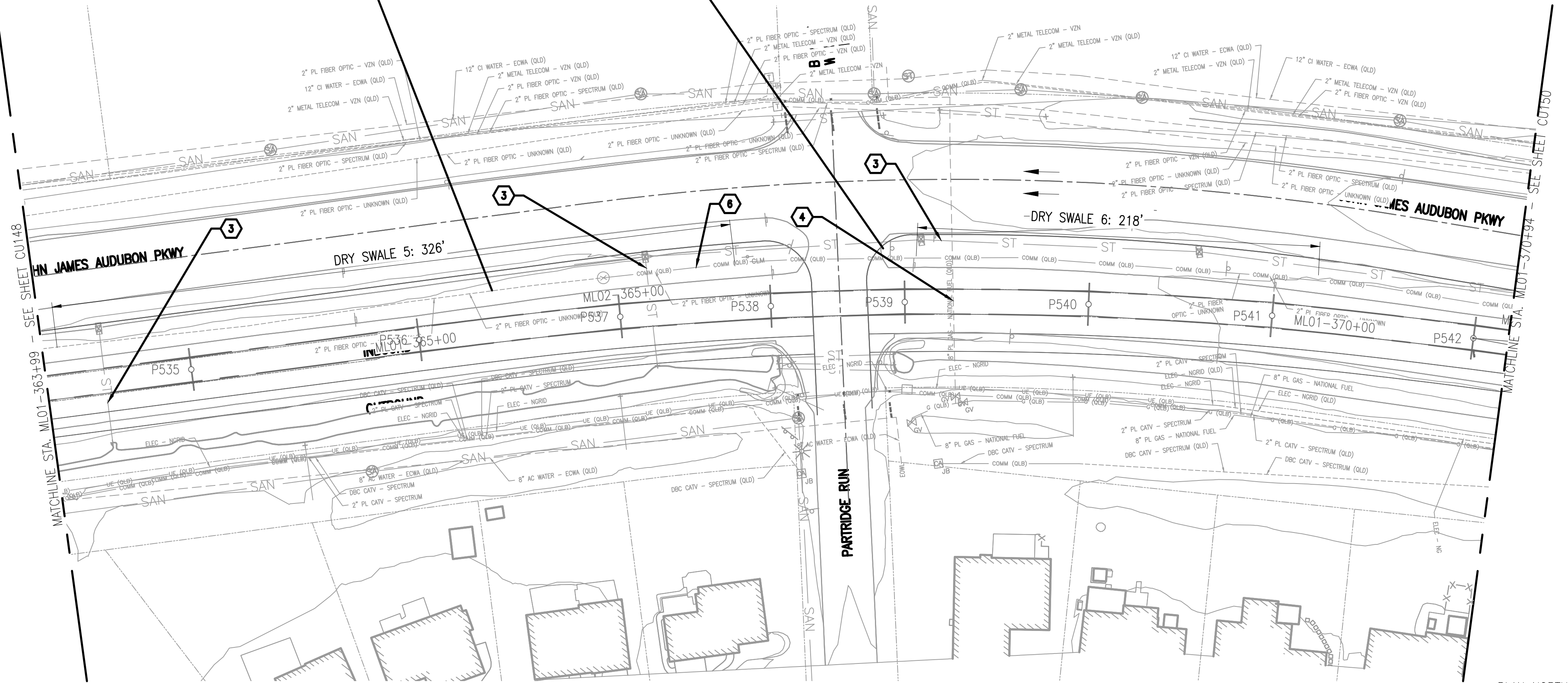
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JJN-5	
Total Area (acres)	0.945
Impervious Area (acres)	0.722
Pervious Area (acres)	0.223
WQv (af)	0.025
WQV managed (af)	0.322
Post Detention Area (sf)	539.323

JJN-6	
Total Area (acres)	1.322
Impervious Area (acres)	1.059
Pervious Area (acres)	0.263
WQv (af)	0.033
WQV managed (af)	0.458
Post Detention Area (sf)	713.218



B1 UTILITY PLANS – JOHN JAMES AUDUBON PKWY
1" = 40'-0"

GENERAL SHEET NOTES:

- NOTE SOME RELOCATIONS OF PUBLIC UTILITIES ARE STILL BEING PROGRESSSED AND ARE NOT SHOWN.
- CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	---
DIRECTION OF TRAVEL	←
EXISTING COMMUNICATION LINE	--- COMM (OLD) ---
EXISTING GAS LINE	--- G (OLD) --- G (OLD) ---
EXISTING UNKNOWN UTILITY LINE	---
EXISTING WATER LINE	--- W (OLD) --- W (OLD) ---
EXISTING ELECTRICAL	--- E (OLD) --- E (OLD) ---
EXISTING ELECTRICAL OVERHEAD	--- OHW --- OHW ---
EXISTING SANITARY	--- SAN --- SAN ---
EXISTING STORM	--- ST --- ST ---
PROPOSED WATER LINE	--- W ---
PROPOSED SANITARY	--- SAN ---
PROPOSED STORM	--- ST ---

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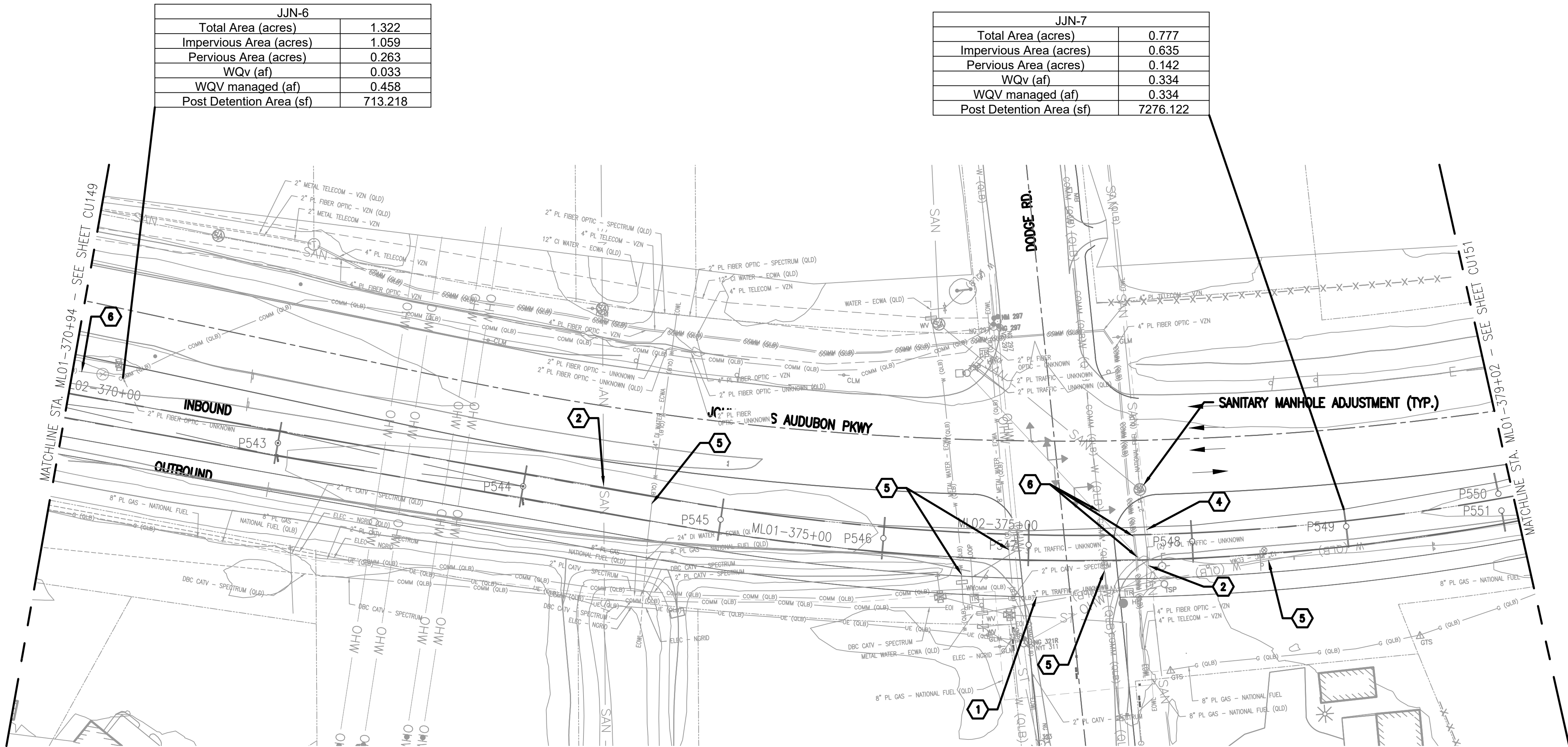
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SHEET TITLE
UTILITY PLAN SHEET 49

DRAWING#
CU149
SHEET# 0F

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B1 UTILITY PLANS – JOHN JAMES AUDUBON PKWY
1" = 40'-0"



JJN-6	
Total Area (acres)	1.322
Impervious Area (acres)	1.059
Pervious Area (acres)	0.263
WQv (af)	0.033
WQV managed (af)	0.458
Post Detention Area (sf)	713.218

JJN-7	
Total Area (acres)	0.777
Impervious Area (acres)	0.635
Pervious Area (acres)	0.142
WQv (af)	0.334
WQV managed (af)	0.334
Post Detention Area (sf)	7276.122

GENERAL SHEET NOTES:

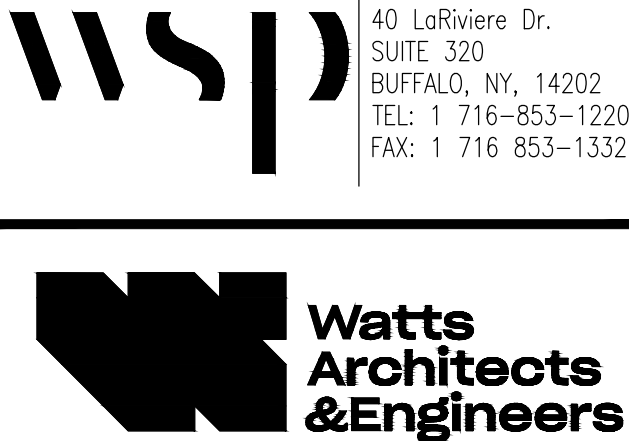
- NOTE SOME RELOCATIONS OF PUBLIC UTILITIES ARE STILL BEING PROGRESSED AND ARE NOT SHOWN.
- CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	---
DIRECTION OF TRAVEL	→
EXISTING COMMUNICATION LINE	--- COMM (OLB) ---
EXISTING GAS LINE	--- G (OLB) --- G (OLB) ---
EXISTING UNKNOWN UTILITY LINE	---
EXISTING WATER LINE	--- W (OLB) --- W (OLB) ---
EXISTING ELECTRICAL	--- UE (OLB) --- UE (OLB) ---
EXISTING ELECTRICAL OVERHEAD	--- CHW --- CHW ---
EXISTING SANITARY	--- SAN --- SAN ---
EXISTING STORM	--- ST --- ST ---
PROPOSED WATER LINE	--- W ---
PROPOSED SANITARY	--- SAN ---
PROPOSED STORM	--- ST ---



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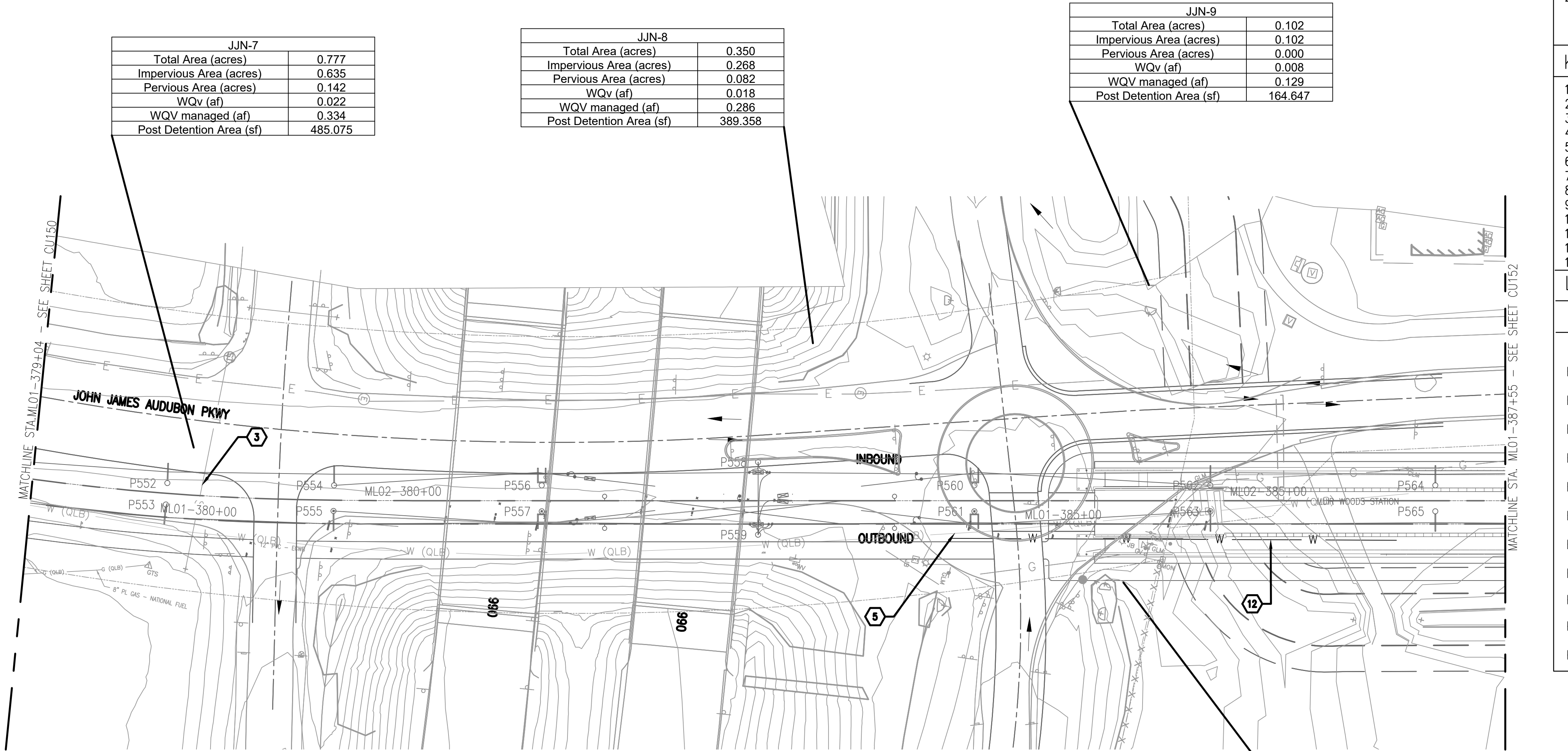
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UTILITY PLAN
SHEET 50

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B1 UTILITY PLAN – JOHN JAMES AUDUBON PKWY
1" = 40'-0"

GENERAL SHEET NOTES:

- NOTE SOME RELOCATIONS OF PUBLIC UTILITIES ARE STILL BEING PROGRESSED AND ARE NOT SHOWN.
- CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	←
EXISTING COMMUNICATION LINE	----- COMM (CLB) -----
EXISTING GAS LINE	----- G (CLB) ----- G (CLB) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	----- W (CLB) ----- W (CLB) -----
EXISTING ELECTRICAL	----- UE (CLB) ----- UE (CLB) -----
EXISTING ELECTRICAL OVERHEAD	----- OHW ----- OHW -----
EXISTING SANITARY	----- SAN ----- SAN -----
EXISTING STORM	----- ST ----- ST -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----

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UTILITY PLAN
SHEET 51

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B1 UTILITY PLANS – JOHN JAMES AUDUBON PKWY

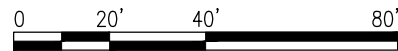
1" = 40'-0"

JJN-11	
Total Area (acres)	0.399
Impervious Area (acres)	0.399
Pervious Area (acres)	0.000
WQv (af)	0.026
WQV managed (af)	0.498
Post Detention Area (sf)	570.891

JJN-13	
Total Area (acres)	0.789
Impervious Area (acres)	0.789
Pervious Area (acres)	0.000
WQv (af)	0.062
WQV managed (af)	1.312
Post Detention Area (sf)	1360.796

JJN-12	
Total Area (acres)	0.379
Impervious Area (acres)	0.277
Pervious Area (acres)	0.102
WQv (af)	0.019
WQV managed (af)	0.387
Post Detention Area (sf)	421.695

PLAN NORTH



GENERAL SHEET NOTES:

- NOTE SOME RELOCATIONS OF PUBLIC UTILITIES ARE STILL BEING PROGRESSED AND ARE NOT SHOWN.
- CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	←
EXISTING COMMUNICATION LINE	----- COMM (GLB) -----
EXISTING GAS LINE	----- G (GLB) ----- G (GLB) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	----- W (GLB) ----- W (GLB) -----
EXISTING ELECTRICAL	----- EE (GLB) ----- EE (GLB) -----
EXISTING ELECTRICAL OVERHEAD	----- OHW ----- OHW -----
EXISTING SANITARY	----- SAN ----- SAN -----
EXISTING STORM	----- ST ----- ST -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----

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UTILITY PLAN
SHEET 52

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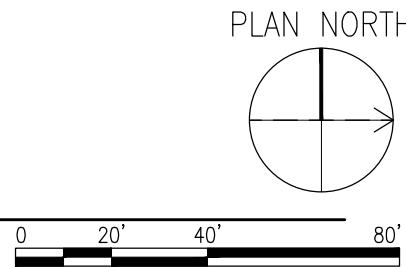
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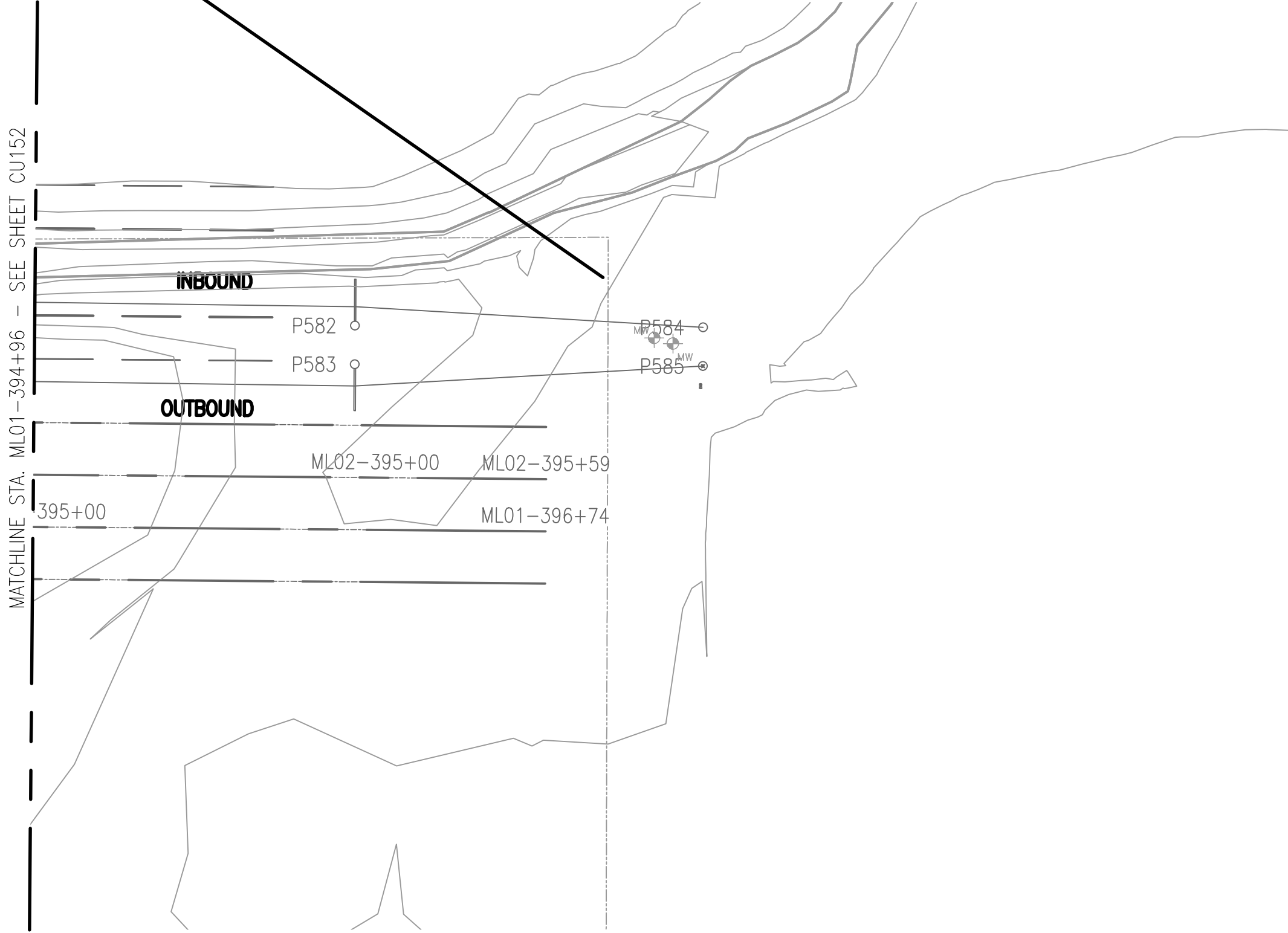
B1

UTILITY PLANS – JOHN JAMES AUDUBON PKWY

1" = 40'-0"



JJN-13	
Total Area (acres)	0.789
Impervious Area (acres)	0.789
Pervious Area (acres)	0.000
WQv (af)	0.062
WQV managed (af)	1.312
Post Detention Area (sf)	1360.796



GENERAL SHEET NOTES:

1. NOTE SOME RELOCATIONS OF PUBLIC UTILITIES ARE STILL BEING PROGRESSED AND ARE NOT SHOWN.
2. CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

KEYNOTES:



1. UNDERGROUND ELECTRICAL LINE CONFLICT
2. SANITARY PIPE CONFLICT
3. STORM PIPE CONFLICT
4. GAS LINE CONFLICT
5. WATER LINE CONFLICT
6. UNDERGROUND COMMUNICATION LINE CONFLICT
7. ELECTRICAL OVERHEAD LINE CONFLICT
8. UNDERGROUND FIBER OPTIC CONFLICT
9. OVERHEAD COMMUNICATION
10. PROPOSED SANITARY PIPE
11. PROPOSED STORM PIPE
12. PROPOSED WATER LINE
13. PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	----
DIRECTION OF TRAVEL	←
EXISTING COMMUNICATION LINE	--- COM (CLB) ---
EXISTING GAS LINE	--- G (CLB) --- G (CLB) ---
EXISTING UNKNOWN UTILITY LINE	----
EXISTING WATER LINE	--- W (CLB) --- W (CLB) ---
EXISTING ELECTRICAL	--- WE (CLB) --- WE (CLB) ---
EXISTING ELECTRICAL OVERHEAD	--- OHW --- OHW ---
EXISTING SANITARY	--- SAN --- SAN ---
EXISTING STORM	--- ST --- ST ---
PROPOSED WATER LINE	--- w ---
PROPOSED SANITARY	--- SAN ---
PROPOSED STORM	--- ST ---



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UTILITY PLAN
SHEET 53

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CU153

SHEET#

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LM-1	
Total Area (acres)	0.180
Impervious Area (acres)	0.170
Pervious Area (acres)	0.010
WQv (af)	0.010
WQV managed (af)	0.010
Post Detention Area (sf)	220.523

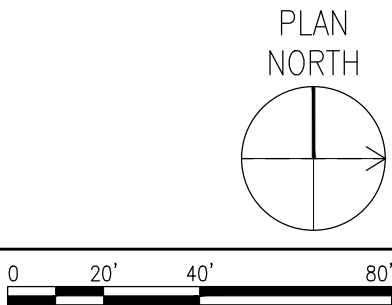
LM-3	
Total Area (acres)	0.180
Impervious Area (acres)	0.170
Pervious Area (acres)	0.010
WQv (af)	0.017
WQV managed (af)	0.017
Post Detention Area (sf)	367.538

LM-2	
Total Area (acres)	0.240
Impervious Area (acres)	0.220
Pervious Area (acres)	0.020
WQv (af)	0.018
WQV managed (af)	0.018
Post Detention Area (sf)	381.150

LM-4	
Total Area (acres)	0.240
Impervious Area (acres)	0.230
Pervious Area (acres)	0.010
WQv (af)	0.035
WQV managed (af)	0.035
Post Detention Area (sf)	751.765

B1 UTILITY PLANS - LONGMEADOW RD.

1" = 40'-0"



GENERAL SHEET NOTES:

- NOTE SOME RELOCATIONS OF PUBLIC UTILITIES ARE STILL BEING PROGRESSSED AND ARE NOT SHOWN.
- CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	←
EXISTING COMMUNICATION LINE	----- COMM (COLR) -----
EXISTING GAS LINE	----- G (COLR) ----- G (COLR) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	----- W (COLR) ----- W (COLR) -----
EXISTING ELECTRICAL	----- EE (COLR) ----- EE (COLR) -----
EXISTING ELECTRICAL OVERHEAD	----- OHW ----- OHW -----
EXISTING SANITARY	----- SAN ----- SAN -----
EXISTING STORM	----- ST ----- ST -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----

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ISSUE:		
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SHEET TITLE

UTILITY PLANS
SHEET 54

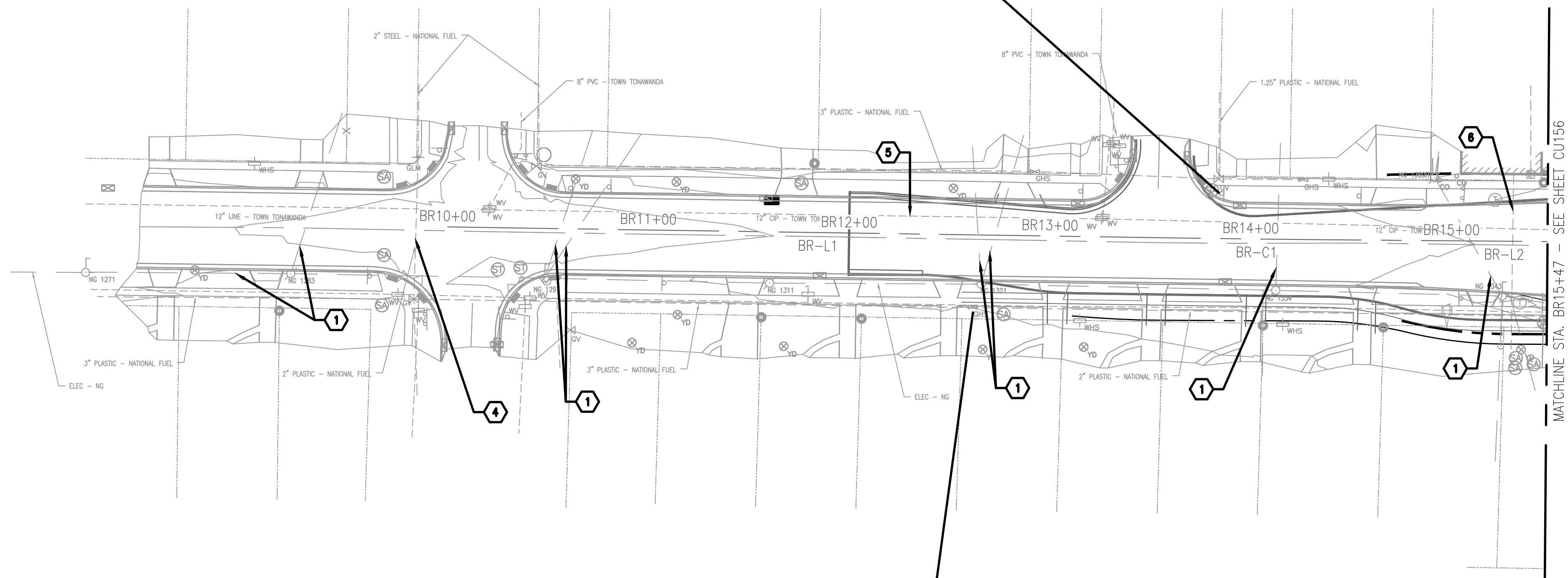
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CU154

SHEET#

OF

B-1	
Total Area (acres)	0.430
Impervious Area (acres)	0.370
Pervious Area (acres)	0.060
WQv (af)	0.052
WQV managed (af)	0.052
Post Detention Area (sf)	1125.981



B-2	
Total Area (acres)	0.530
Impervious Area (acres)	0.450
Pervious Area (acres)	0.080
WQv (af)	0.074
WQV managed (af)	0.074
Post Detention Area (sf)	1601.153

GENERAL SHEET NOTES:

1. NOTE SOME RELOCATIONS OF PUBLIC UTILITIES ARE STILL BEING PROGRESSED AND ARE NOT SHOWN.
2. CONFLICTS ASSUMED DUE TO AGE AND VIBRATIONS.

KEYNOTES: 

1. UNDERGROUND ELECTRICAL LINE CONFLICT
2. SANITARY PIPE CONFLICT
3. STORM PIPE CONFLICT
4. GAS LINE CONFLICT
5. WATER LINE CONFLICT
6. UNDERGROUND COMMUNICATION LINE CONFLICT
7. ELECTRICAL OVERHEAD LINE CONFLICT
8. UNDERGROUND FIBER OPTIC CONFLICT
9. OVERHEAD COMMUNICATION
10. PROPOSED SANITARY PIPE
11. PROPOSED STORM PIPE
12. PROPOSED WATER LINE
13. PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE

DIRECTION OF TRAVEL

EXISTING COMMUNICATION LINE

EXISTING GAS LINE

EXISTING UNKNOWN UTILITY LINE

EXISTING WATER LINE

EXISTING ELECTRICAL

EXISTING ELECTRICAL OVERHEAD

EXISTING SANITARY

EXISTING STORM

PROPOSED WATER LINE

PROPOSED SANITARY

PROPOSED STORM



SP USA Inc.
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SUITE 320
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FAX: 1 716 853-1332



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NFTA PROJECT NO:		34LZ1725
DESIGNER PROJECT NO:		US-WSP-187880C
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SHEET TITLE

UTILITY PLANS
SHEET 55

DRAWING#

CU155

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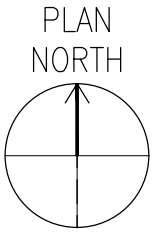
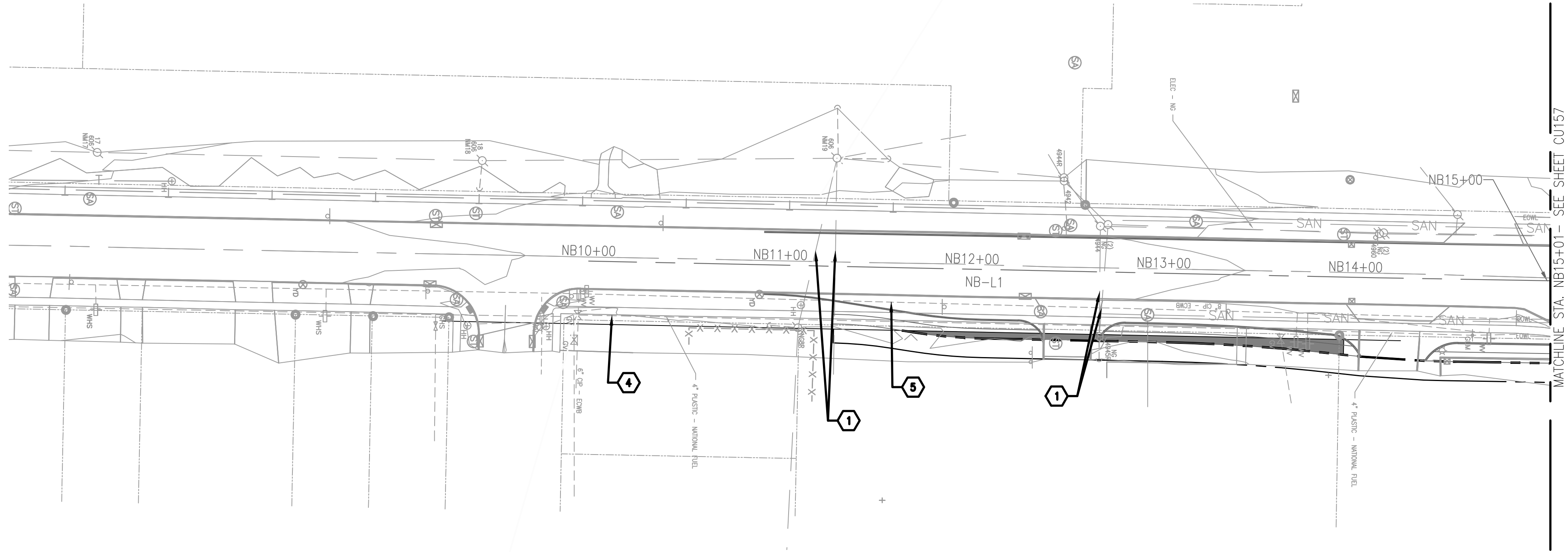
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B1 UTILITY PLANS – NORTH BAILEY AVE

1" = 40'-0"

NB-1	
Total Area (acres)	0.480
Impervious Area (acres)	0.450
Pervious Area (acres)	0.030
WQv (af)	0.080
WQV managed (af)	0.080
Post Detention Area (sf)	1751.929

NB-2	
Total Area (acres)	0.500
Impervious Area (acres)	0.450
Pervious Area (acres)	0.050
WQv (af)	0.092
WQV managed (af)	0.092
Post Detention Area (sf)	1994.483



GENERAL SHEET NOTES:

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KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	-----
DIRECTION OF TRAVEL	
EXISTING COMMUNICATION LINE	----- COMM (CLR) -----
EXISTING GAS LINE	----- G (CLR) ----- G (CLR) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	----- W (CLR) ----- W (CLR) -----
EXISTING ELECTRICAL	----- UE (CLR) ----- UE (CLR) -----
EXISTING ELECTRICAL OVERHEAD	----- OHW ----- OHW -----
EXISTING SANITARY	----- SAN ----- SAN -----
EXISTING STORM	----- ST ----- ST -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----

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UTILITY PLANS
SHEET 56

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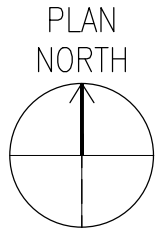
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B1 UTILITY PLANS – NORTH BAILEY AVE

1" = 40'-0"

NB-4	
Total Area (acres)	0.400
Impervious Area (acres)	0.360
Pervious Area (acres)	0.040
WQv (af)	0.108
WQV managed (af)	0.108
Post Detention Area (sf)	2341.350

NB-3	
Total Area (acres)	0.330
Impervious Area (acres)	0.240
Pervious Area (acres)	0.090
WQv (af)	0.053
WQV managed (af)	0.053
Post Detention Area (sf)	1160.466



0 20' 40' 80'

GENERAL SHEET NOTES:

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KEYNOTES:

- UNDERGROUND ELECTRICAL LINE CONFLICT
- SANITARY PIPE CONFLICT
- STORM PIPE CONFLICT
- GAS LINE CONFLICT
- WATER LINE CONFLICT
- UNDERGROUND COMMUNICATION LINE CONFLICT
- ELECTRICAL OVERHEAD LINE CONFLICT
- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	----
DIRECTION OF TRAVEL	←
EXISTING COMMUNICATION LINE	----- COMM (GUB) -----
EXISTING GAS LINE	----- G (GUB) ----- G (GUB) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	----- W (GUB) ----- W (GUB) -----
EXISTING ELECTRICAL	----- UE (GUB) ----- UE (GUB) -----
EXISTING ELECTRICAL OVERHEAD	----- OHW ----- OHW -----
EXISTING SANITARY	----- SAN ----- SAN -----
EXISTING STORM	----- ST ----- ST -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----



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UTILITY PLANS
SHEET 57

DRAWING#

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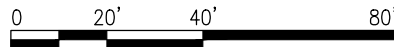
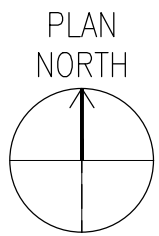
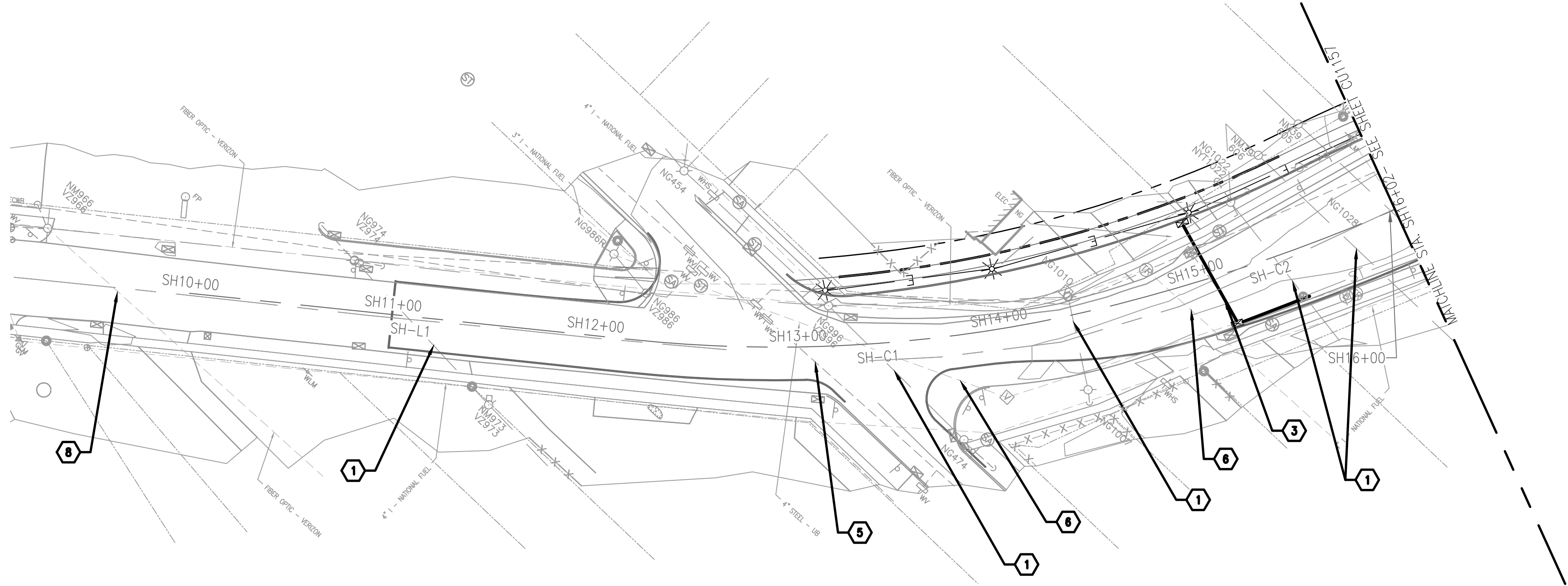
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B1 UTILITY PLANS – SWEET HOME RD

1" = 40'-0"



GENERAL SHEET NOTES:

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KEYNOTES:

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- SANITARY PIPE CONFLICT
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- GAS LINE CONFLICT
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- UNDERGROUND COMMUNICATION LINE CONFLICT
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- UNDERGROUND FIBER OPTIC CONFLICT
- OVERHEAD COMMUNICATION
- PROPOSED SANITARY PIPE
- PROPOSED STORM PIPE
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC LINE

LEGEND:

PROPERTY LINE	----
DIRECTION OF TRAVEL	←
EXISTING COMMUNICATION LINE	----- (CLR) -----
EXISTING GAS LINE	----- (CLR) -----
EXISTING UNKNOWN UTILITY LINE	-----
EXISTING WATER LINE	----- (CLR) -----
EXISTING ELECTRICAL	----- (CLR) -----
EXISTING ELECTRICAL OVERHEAD	----- (CLR) -----
EXISTING SANITARY	----- SAN -----
EXISTING STORM	----- ST -----
PROPOSED WATER LINE	----- W -----
PROPOSED SANITARY	----- SAN -----
PROPOSED STORM	----- ST -----

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UTILITY PLANS
SHEET 58

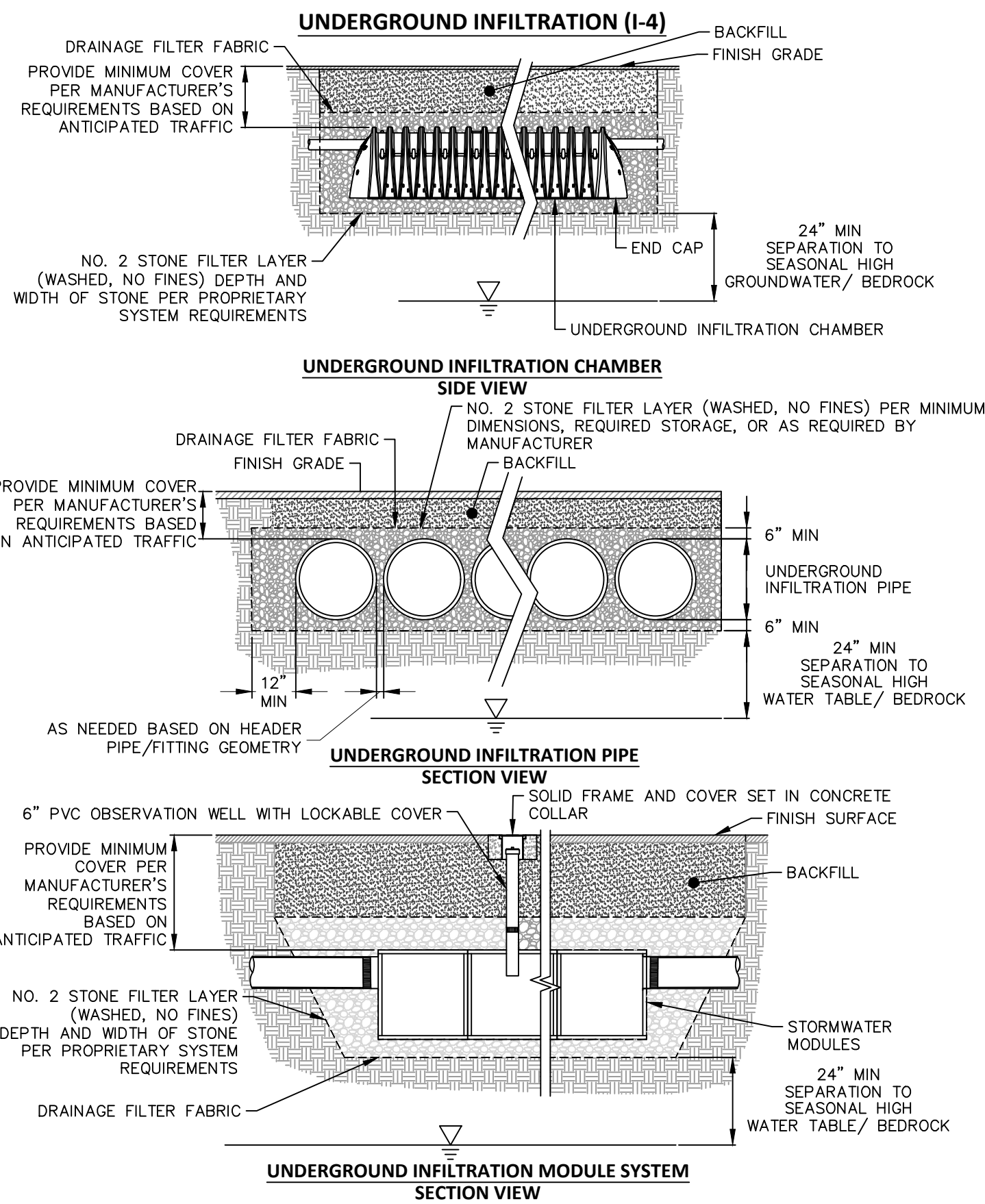
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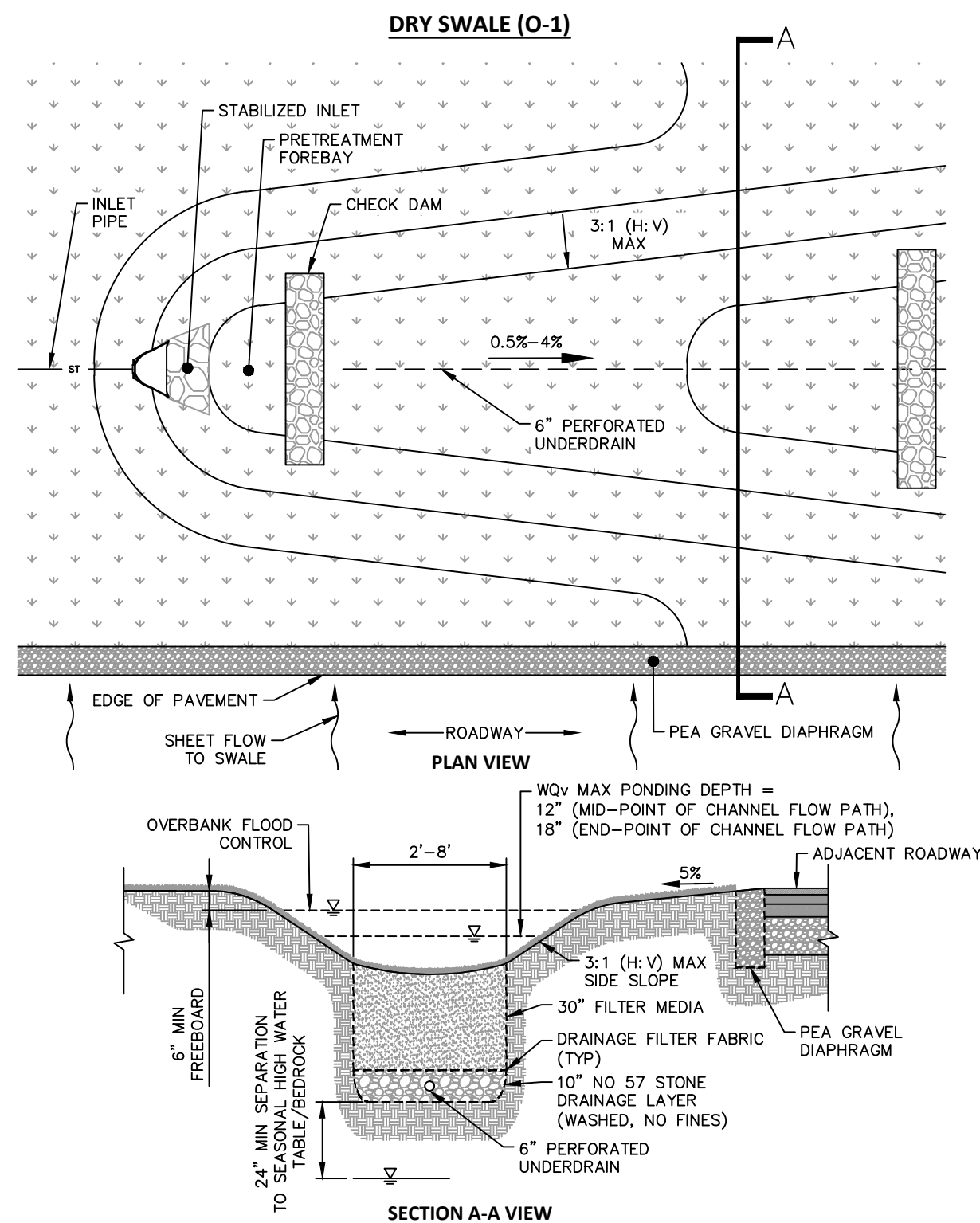
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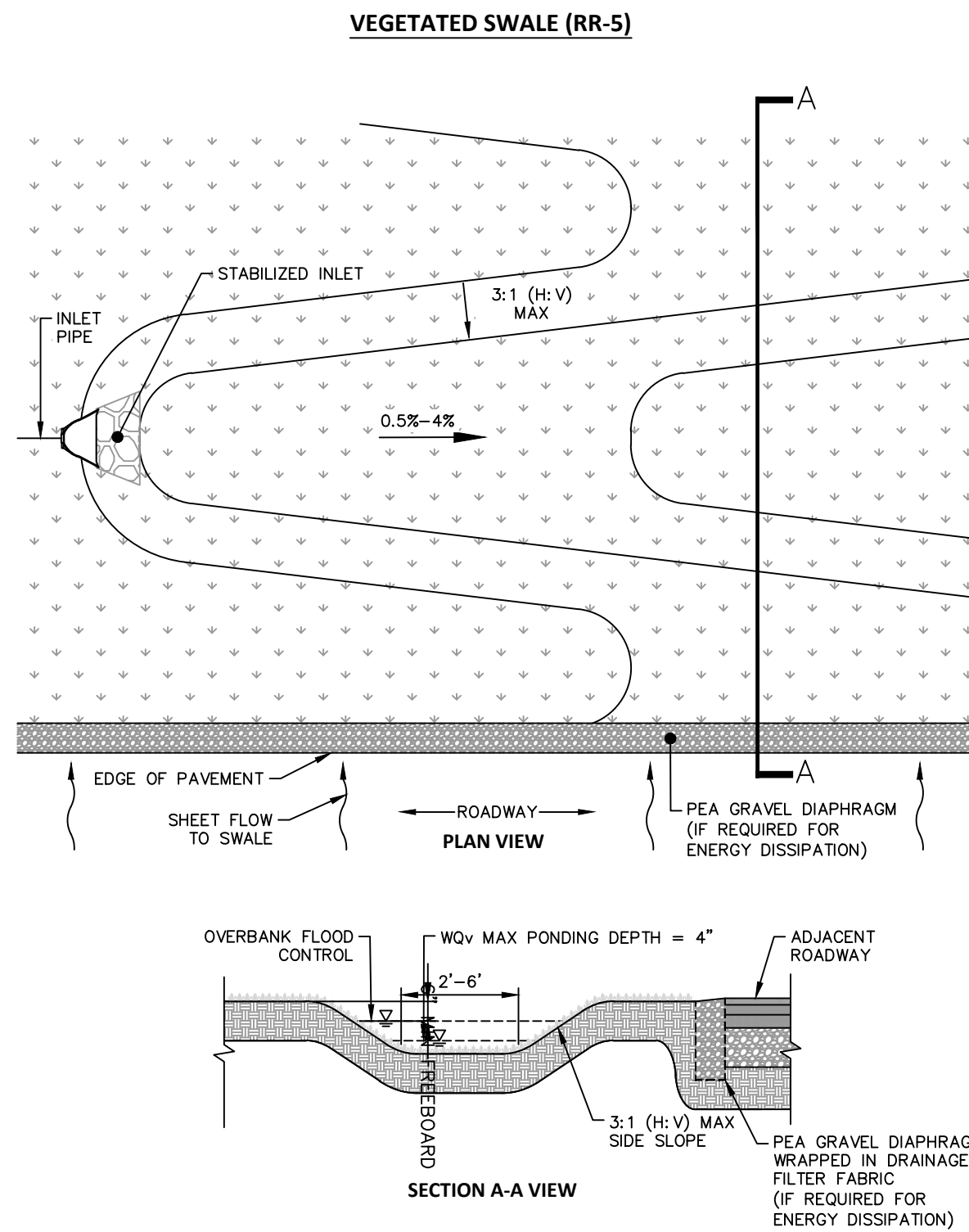
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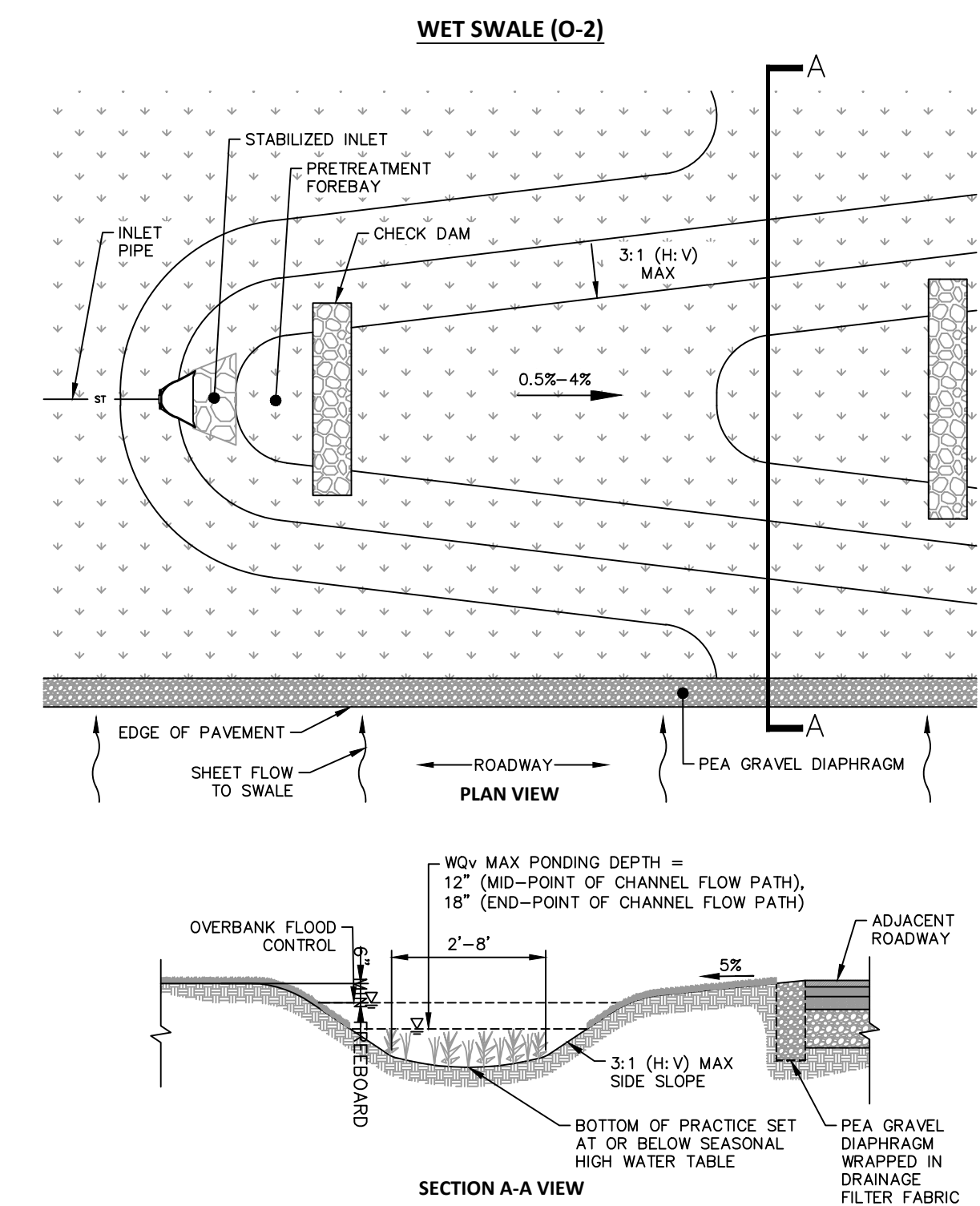
C1 UNDERGROUND INFILTRATION
NTS



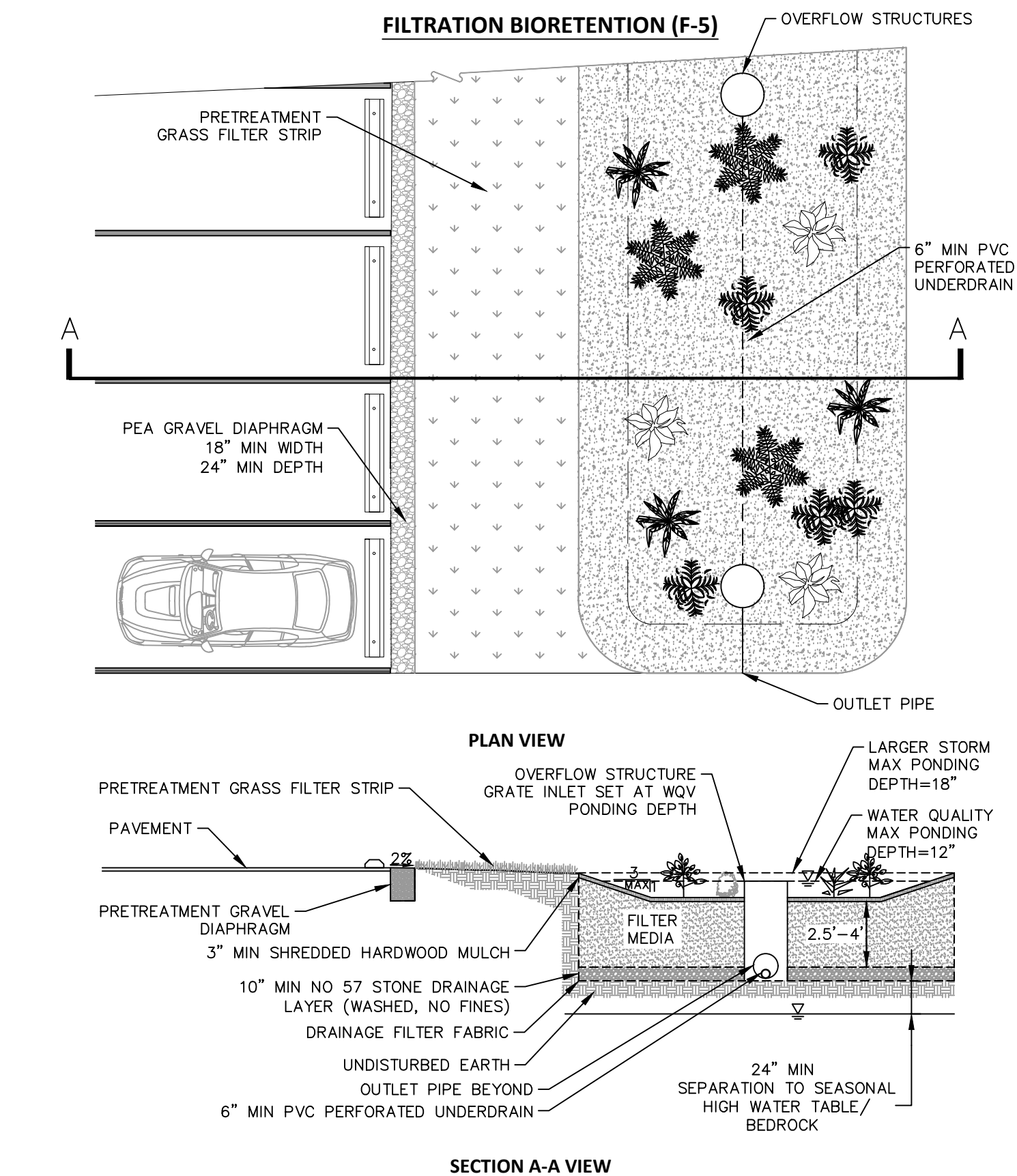
A1 DRY SWALE
NTS



C3 VEGETATED SWALE
NTS



C5 WET SWALE
NTS



A5 FILTRATION BIRETENTION
NTS

A3 INFILTRATION BIORETENTION
NTS

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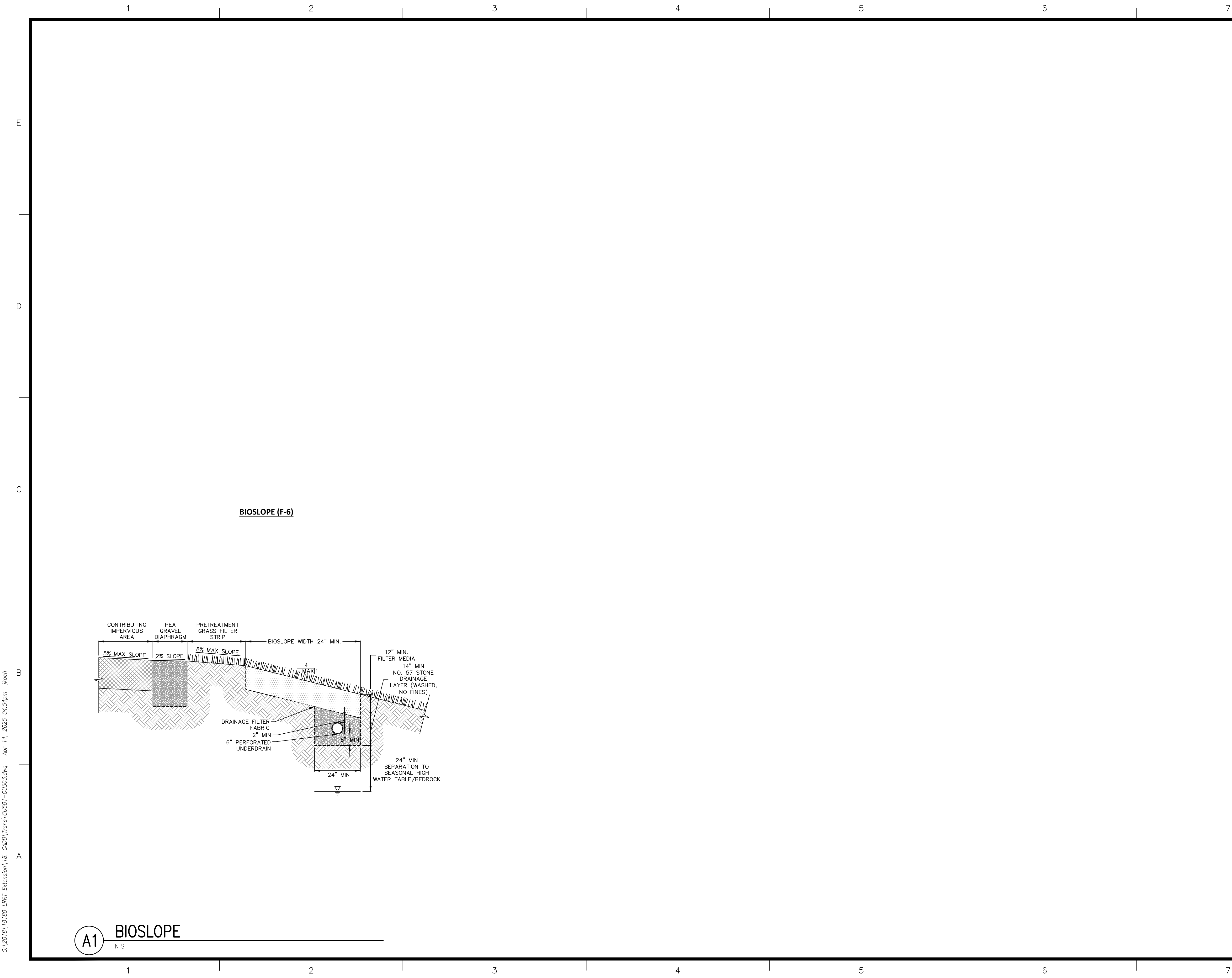
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SHEET TITLE
STORMWATER
TREATMENT DETAIL
SHEET 2

DRAWING#
CU502
SHEET# 207 OF 458



BIOSLOPE (F-6)

A1

BIOSLOPE

NTS

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SHEET TITLE

STORMWATER
TREATMENT DETAIL
SHEET 3

DRAWING#

CU503

SHEET#

208 OF 458

EXISTING CONDITION									
DA	Disturbance	Distrubance Area (Acre)	Pervious Area (ft ²)	Impervious Area (ft ²)	Impervious Area (Acre)	Impervious			
	Area (ft ²)					Cover Percent	P (inches)	R _v	WQ _v
1	11991	0.28	1681	10310	0.24	86	1	0.824	0.02
2	6383	0.15	1813	4570	0.10	72	1	0.694	0.01
3	20515	0.47	1857	18658	0.43	91	1	0.869	0.03
4	31667	0.73	7690	23977	0.55	76	1	0.731	0.04
5	28043	0.64	3016	25027	0.57	89	1	0.853	0.05
6	30397	0.70	10150	20247	0.46	67	1	0.649	0.04
7	36306	0.83	3338	32968	0.76	91	1	0.867	0.06
8	36611	0.84	7598	29013	0.67	79	1	0.763	0.05
9	13955	0.32	7	13948	0.32	100	1	0.95	0.03
10	14788	0.34	2342	12446	0.29	84	1	0.807	0.02
11	19923	0.46	58	19865	0.46	100	1	0.947	0.04
12	20940	0.48	2762	18178	0.42	87	1	0.831	0.03
13	20126	0.46	0	20126	0.46	100	1	0.95	0.04
14	18998	0.44	4531	14467	0.33	76	1	0.735	0.03
15	35859	0.82	5094	30765	0.71	86	1	0.822	0.06
16	25595	0.59	5234	20361	0.47	80	1	0.766	0.04
17	54320	1.25	12597	41723	0.96	77	1	0.741	0.08
18	48570	1.12	12721	35849	0.82	74	1	0.714	0.07
19	26916	0.62	4676	22240	0.51	83	1	0.794	0.04
20	31628	0.73	3272	28356	0.65	90	1	0.857	0.05
21	38081	0.87	4736	33345	0.77	88	1	0.838	0.06
22	30741	0.71	1062	29679	0.68	97	1	0.919	0.05
23	21313	0.49	301	21012	0.48	99	1	0.937	0.04
24	19756	0.45	2375	17381	0.40	88	1	0.842	0.03
25	26649	0.61	136	26513	0.61	99	1	0.945	0.05
26	49424	1.13	3164	46260	1.06	94	1	0.892	0.08
27	73956	1.70	6983	66973	1.54	91	1	0.865	0.12
28	133666	3.07	4838	128828	2.96	96	1	0.917	0.23
29	18423	0.42	3623	14800	0.34	80	1	0.773	0.03
30	15124	0.35	2053	13071	0.30	86	1	0.828	0.02
31	79084	1.82	4455	74629	1.71	94	1	0.899	0.14
32	80314	1.84	1546	78768	1.81	98	1	0.933	0.14
33	74886	1.72	5455	69431	1.59	93	1	0.884	0.13
34	102524	2.35	7720	94804	2.18	92	1	0.882	0.17
35	104693	2.40	2673	102020	2.34	97	1	0.927	0.19
36	108955	2.50	6711	102244	2.35	94	1	0.895	0.19
37	9019	0.21	8989	30	0.00	0	1	0.053	0.00
38	8019	0.18	8019	0	0.00	0	1	0.05	0.00
39	23281	0.53	12077	11204	0.26	48	1	0.483	0.02
40	24032	0.55	10173	13859	0.32	58	1	0.569	0.03
41	40144	0.92	6481	33663	0.77	84	1	0.805	0.06
42	49541	1.14	6304	43237	0.99	87	1	0.835	0.08
43	49768	1.14	5328	44440	1.02	89	1	0.854	0.08
44	18907	0.43	4617	14290	0.33	76	1	0.73	0.03
45	64656	1.48	4940	59716	1.37	92	1	0.881	0.11
46	50443	1.16	3837	46606	1.07	92	1	0.882	0.09

EXISTING CONDITION										
DA	Disturbance	Distrubance Area (Acre)	Pervious Area (ft ²)	Impervious Area (ft ²)	Impervious Area (Acre)	Impervious				
	Area (ft ²)					Cover Percent	P (inches)	R _v	WQ _v	
47	69848	1.60	12199	57649	1.32	83	1	0.793	0.11	
48	99352	2.28	19721	79631	1.83	80	1	0.771	0.15	
49	116707	2.68	40084	76623	1.76	66	1	0.641	0.14	
50	71457	1.64	31204	40253	0.92	56	1	0.557	0.08	
51	78575	1.80	24864	53711	1.23	68	1	0.665	0.10	
52	33452	0.77	4352	29100	0.67	87	1	0.833	0.05	
53	37650	0.86	6511	31139	0.71	83	1	0.794	0.06	
54	11241	0.26	1620	9621	0.22	86	1	0.82	0.02	
55	15680	0.36	8452	7228	0.17	46	1	0.465	0.01	
56	80912	1.86	38390	42522	0.98	53	1	0.523	0.08	
57	72519	1.66	32347	40172	0.92	55	1	0.549	0.08	
58	106032	2.43	50802	55230	1.27	52	1	0.519	0.11	
59	113147	2.60	32879	80268	1.84	71	1	0.688	0.15	
60	44386	1.02	7483	36903	0.85	83	1	0.798	0.07	
61	49312	1.13	44542	4770	0.11	10	1	0.137	0.01	
62	42171	0.97	42171	0	0.00	0	1	0.05	0.00	
63	29995	0.69	22807	7188	0.17	24	1	0.266	0.02	
64	53127	1.22	29284	23843	0.55	45	1	0.454	0.05	
65	5112	0.12	0	5112	0.12	100	1	0.95	0.01	
66	14975	0.34	10926	4049	0.09	27	1	0.293	0.01	
67	11574	0.27	0	11574	0.27	100	1	0.95	0.02	
68	12814	0.29	10292	2522	0.06	20	1	0.227	0.01	
69	31731	0.73	6245	25486	0.59	80	1	0.773	0.05	
70	40017	0.92	7373	32644	0.75	82	1	0.784	0.06	
71	9496	0.22	5573	3923	0.09	41	1	0.422	0.01	
72	40900	0.94	35326	5574	0.13	14	1	0.173	0.01	
73	19022	0.44	18278	744	0.02	4	1	0.085	0.00	
74	23687	0.54	21999	1688	0.04	7	1	0.114	0.01	
75	23941	0.55	0	23941	0.55	100	1	0.95	0.04	
76	5878	0.13	2934	2944	0.07	50	1	0.501	0.01	
77	2053	0.05	0	2053	0.05	100	1	0.95	0.00	
78	11621	0.27	0	11621	0.27	100	1	0.95	0.02	
79	34495	0.79	11722	22773	0.52	66	1	0.644	0.04	
80	45892	1.05	41393	4499	0.10	10	1	0.138	0.01	
81	24545	0.56	24545	0	0.00	0	1	0.05	0.00	
82	24753	0.57	22672	2081	0.05	8	2	0.126	0.01	
83	28606	0.66	22319	6287	0.14	22	3	0.248	0.04	
84	38772	0.89	28465	10307	0.24	27	4	0.289	0.09	
85	19770	0.45	16727	3043	0.07	15	5	0.189	0.04	
86	28900	0.66	22043	6857	0.16	24	6	0.264	0.09	
87	24199	0.56	8332	15867	0.36	66	7	0.64	0.21	
88	43859	1.01	11948	31911	0.73	73	8	0.705	0.47	
89	19843	0.46	8297	11546	0.27	58	9	0.574	0.20	
90	97195	2.23	46689	50506	1.16	52	10	0.518	0.96	
91	51855	1.19	22237	29618	0.68	57	11	0.564	0.62	
92	41034	0.94	18508	22526	0.52	55	12	0.544	0.51	
93	41165	0.95	17109	24056	0.55	58	13	0.576	0.59	

EXISTING CONDITION

DA	Disturbance	Distrubance Area (Acre)	Pervious Area (ft ²)	Impervious Area (ft ²)	Impervious Area (Acre)	Impervious				
	Area (ft ²)					Cover Percent	P (inches)	R _v	WQ _v	
94	57584	1.32	19776	37808	0.87	66	14	0.641	0.99	
95	33855	0.78	13124	20731	0.48	61	15	0.601	0.58	
96	15226	0.35	12583	2643	0.06	17	16	0.206	0.10	
97	4422	0.10	4072	350	0.01	8	17	0.121	0.02	
98	7104	0.16	7104	0	0.00	0	18	0.05	0.01	
99	17361	0.40	13443	3918	0.09	23	19	0.253	0.16	
100	16512	0.38	14372	2140	0.05	13	20	0.167	0.11	
101	34378	0.79	34378	0	0.00	0	21	0.05	0.07	

EXISTING CONDITION

DA	Distrubance Area (Acre)	Pervious Area (acre)	Impervious Area (Acre)	Impervious		P (inches)	R _v	WQ _v
				Cover Percent				
Kenmore North	1.57	0.15	1.42	90	1	0.864	0.11	
Kenmore South	0.79	0.08	0.71	90	2	0.859	0.11	
Longmeadow Northwest	0.18	0.01	0.17	94	3	0.9	0.04	
Longmeadow Southwest	0.24	0.02	0.22	92	4	0.875	0.07	
Longmeadow Northeast	0.18	0.01	0.17	94	5	0.9	0.07	
Longmeadow Southeast	0.24	0.03	0.21	88	6	0.838	0.10	
Brighton North	0.43	0.06	0.37	86	7	0.824	0.21	
Brighton South	0.53	0.07	0.46	87	8	0.831	0.29	
North Bailey Northwest	0.48	0.03	0.45	94	9	0.894	0.32	
North Bailey Northeast	0.50	0.04	0.46	92	10	0.878	0.37	
North Bailey Southwest	0.33	0.09	0.24	73	11	0.705	0.21	
North Bailey Southeast	0.40	0.07	0.33	83	12	0.793	0.32	

PROPOSED CONDITION

DA	Distrubance Area (ft ²)	Distrubance Area (Acre)	Pervious Area (ft ²)	Pervious Area (Acre)	Impervious Area (ft ²)	Impervious Area (Acre)	Impervious Cover Percent	New Developptment Impervious Area (acre)	Redevelopptment Imperivous Area (acre)	P (inches)	R _v	N	R	WQ _v
1	11991	0.28	1682	0.04	10309	0.24	86	0.00	0.24	1	0.82	0.00	1.00	0.005
2	6383	0.15	1812	0.04	4571	0.10	72	0.00	0.10	1	0.69	0.00	1.00	0.002
3	20515	0.47	1857	0.04	18658	0.43	91	0.00	0.43	1	0.87	0.00	1.00	0.009
4	31667	0.73	2526	0.06	29141	0.67	92	0.12	0.55	1	0.88	0.18	0.82	0.020
5	28043	0.64	2923	0.07	25120	0.58	90	0.00	0.57	1	0.86	0.00	1.00	0.012
6	30397	0.70	1413	0.03	28984	0.67	95	0.20	0.46	1	0.91	0.30	0.70	0.025
7	36306	0.83	1451	0.03	34855	0.80	96	0.04	0.76	1	0.91	0.05	0.95	0.018
8	36611	0.84	2180	0.05	34431	0.79	94	0.12	0.67	1	0.90	0.16	0.84	0.023
9	13955	0.32	0	0.00	13955	0.32	100	0.00	0.32	1	0.95	0.00	1.00	0.006
10	14788	0.34	883	0.02	13905	0.32	94	0.03	0.29	1	0.90	0.10	0.90	0.008
11	19923	0.46	0	0.00	19923	0.46	100	0.00	0.46	1	0.95	0.00	1.00	0.009
12	20940	0.48	1624	0.04	19316	0.44	92	0.03	0.42	1	0.88	0.06	0.94	0.010
13	20126	0.46	0	0.00	20126	0.46	100	0.00	0.46	1	0.95	0.00	1.00	0.009
14	18998	0.44	902	0.02	18096	0.42	95	0.08	0.33	1	0.91	0.20	0.80	0.013
15	35859	0.82	943	0.02	34916	0.80	97	0.10	0.71	1	0.93	0.12	0.88	0.022
16	25595	0.59	2100	0.05	23495	0.54	92	0.07	0.47	1	0.88	0.13	0.87	0.015
17	54320	1.25	5497	0.13	48823	1.12	90	0.16	0.96	1	0.86	0.15	0.85	0.032
18	48570	1.12	3835	0.09	44735	1.03	92	0.20	0.82	1	0.88	0.20	0.80	0.033
19	26916	0.62	1743	0.04	25173	0.58	94	0.07	0.51	1	0.89	0.12	0.88	0.015
20	31628	0.73	1816	0.04	29812	0.68	94	0.03	0.65	1	0.90	0.05	0.95	0.016
21	38081	0.87	4745	0.11	33336	0.77	88	0.00	0.77	1	0.84	0.00	1.00	0.015
22	30741	0.71	1060	0.02	29681	0.68	97	0.00	0.68	1	0.92	0.00	1.00	0.014
23	21313	0.49	0	0.00	21313	0.49	100	0.01	0.48	1	0.95	0.01	0.99	0.010
24	19756	0.45	2344	0.05	17412	0.40	88	0.00	0.40	1	0.84	0.00	1.00	0.008
25	26649	0.61	0	0.00	26649	0.61	100	0.00	0.61	1	0.95	0.01	0.99	0.012
26	49424	1.13	686	0.02	48738	1.12	99	0.06	1.06	1	0.94	0.05	0.95	0.026
27	73956	1.70	699	0.02	73257	1.68	99	0.14	1.54	1	0.94	0.09	0.91	0.042
28	133666	3.07	666	0.02	133000	3.05	100	0.10	2.96	1	0.95	0.03	0.97	0.066
29	18423	0.42	1906	0.04	16517	0.38	90	0.04	0.34	1	0.86	0.10	0.90	0.010
30	15124	0.35	1175	0.03	13949	0.32	92	0.02	0.30	1	0.88	0.06	0.94	0.008
31	79084	1.82	2091	0.05	76993	1.77	97	0.05	1.71	1	0.93	0.03	0.97	0.038
32	80314	1.84	647	0.01	79667	1.83	99	0.02	1.81	1	0.94	0.01	0.99	0.037
33	74886	1.72	4698	0.11	70188	1.61	94	0.02	1.59	1	0.89	0.01	0.99	0.033
34	102524	2.35	2396	0.06	100128	2.30	98	0.12	2.18	1	0.93	0.05	0.95	0.053
35	104693	2.40	573	0.01	104120	2.39	99	0.05	2.34	1	0.95	0.02	0.98	0.050
36	108955	2.50	1067	0.02	107888	2.48	99	0.13	2.35	1	0.94	0.05	0.95	0.057
37	9019	0.21	1030	0.02	7989	0.18	89	0.18	0.00	1	0.85	1.00	0.00	0.015
38	8019	0.18	3279	0.08	4740	0.11	59	0.11	0.00	1	0.58	1.00	0.00	0.009
39	23281	0.53	11260	0.26	12021	0.28	52	0.02	0.26	1	0.51	0.07	0.93	0.007
40	24032	0.55	7770	0.18	16262	0.37	68	0.06	0.32	1	0.66	0.15	0.85	0.011
41	40144	0.92	19433	0.45	20711	0.48	52	0.00	0.77	1	0.51	0.00	1.63	0.016
42	49541	1.14	1731	0.04	47810	1.10	97	0.10	0.99	1	0.92	0.10	0.90	0.028
43	49768	1.14	5756	0.13	44012	1.01	88	0.00	1.02	1	0.85	0.00	1.01	0.020
44	18907	0.43	2654	0.06	16253	0.37	86	0.05	0.33	1	0.82	0.12	0.88	0.010
45	64656	1.48	2283	0.05	62373	1.43	96	0.06	1.37	1	0.92	0.04	0.96	0.032
46	50443	1.16	3495	0.08	46948	1.08	93	0.01	1.07	1	0.89	0.01	0.99	0.022

PROPOSED CONDITION															
DA	Distrubance Area (ft ²)	Distrubance Area (Acre)	Pervious Area (ft ²)	Pervious Area (Acre)	Impervious Area (ft ²)	Impervious Area (Acre)	Impervious Cover Percent	New Developptment Impervious Area (acre)	Redevelopptment Imperivous Area (acre)	P (inches)	R _v	N	R	WQ _v	
47	69848	1.60	8029	0.18	61819	1.42	89	0.10	1.32	1	0.85	0.07	0.93	0.034	
48	99352	2.28	5840	0.13	93512	2.15	94	0.32	1.83	1	0.90	0.15	0.85	0.062	
49	116707	2.68	6666	0.15	110041	2.53	94	0.77	1.76	1	0.90	0.30	0.70	0.096	
50	71457	1.64	5019	0.12	66438	1.53	93	0.60	0.92	1	0.89	0.39	0.61	0.066	
51	78575	1.80	4249	0.10	74326	1.71	95	0.47	1.23	1	0.90	0.28	0.72	0.062	
52	33452	0.77	3138	0.07	30314	0.70	91	0.03	0.67	1	0.87	0.04	0.96	0.016	
53	37650	0.86	4144	0.10	33506	0.77	89	0.05	0.71	1	0.85	0.07	0.93	0.019	
54	11241	0.26	2585	0.06	8656	0.20	77	0.00	0.22	1	0.74	0.00	1.11	0.004	
55	15680	0.36	7030	0.16	8650	0.20	55	0.03	0.17	1	0.55	0.16	0.84	0.006	
56	80912	1.86	31843	0.73	49069	1.13	61	0.15	0.98	1	0.60	0.13	0.87	0.032	
57	72519	1.66	28398	0.65	44121	1.01	61	0.09	0.92	1	0.60	0.09	0.91	0.026	
58	106032	2.43	42394	0.97	63638	1.46	60	0.19	1.27	1	0.59	0.13	0.87	0.042	
59	113147	2.60	19718	0.45	93429	2.14	83	0.30	1.84	1	0.79	0.14	0.86	0.061	
60	44386	1.02	6591	0.15	37795	0.87	85	0.02	0.85	1	0.82	0.02	0.98	0.019	
61	49312	1.13	14791	0.34	34521	0.79	70	0.68	0.11	1	0.68	0.86	0.14	0.058	
62	42171	0.97	18740	0.43	23431	0.54	56	0.54	0.00	1	0.55	1.00	0.00	0.044	
63	29995	0.69	11498	0.26	18497	0.42	62	0.26	0.17	1	0.61	0.61	0.39	0.025	
64	53127	1.22	11700	0.27	41427	0.95	78	0.40	0.55	1	0.75	0.42	0.58	0.043	
65	5112	0.12	0	0.00	5112	0.12	100	0.00	0.12	1	0.95	0.00	1.00	0.002	
66	14975	0.34	3585	0.08	11390	0.26	76	0.17	0.09	1	0.73	0.64	0.36	0.015	
67	11574	0.27	1085	0.02	10489	0.24	91	0.00	0.27	1	0.87	0.00	1.10	0.005	
68	12814	0.29	1349	0.03	11465	0.26	89	0.21	0.06	1	0.86	0.78	0.22	0.018	
69	31731	0.73	10215	0.23	21516	0.49	68	0.00	0.59	1	0.66	0.00	1.18	0.012	
70	40017	0.92	17530	0.40	22487	0.52	56	0.00	0.75	1	0.56	0.00	1.45	0.015	
71	9496	0.22	1837	0.04	7659	0.18	81	0.09	0.09	1	0.78	0.49	0.51	0.009	
72	40900	0.94	10281	0.24	30619	0.70	75	0.57	0.13	1	0.72	0.82	0.18	0.049	
73	19022	0.44	6528	0.15	12494	0.29	66	0.27	0.02	1	0.64	0.94	0.06	0.022	
74	23687	0.54	6133	0.14	17554	0.40	74	0.36	0.04	1	0.72	0.90	0.10	0.030	
75	23941	0.55	0	0.00	23941	0.55	100	0.00	0.55	1	0.95	0.00	1.00	0.011	
76	5878	0.13	0	0.00	5878	0.13	100	0.07	0.07	1	0.95	0.50	0.50	0.007	
77	2053	0.05	0	0.00	2053	0.05	100	0.00	0.05	1	0.95	0.00	1.00	0.001	
78	11621	0.27	0	0.00	11621	0.27	100	0.00	0.27	1	0.95	0.00	1.00	0.005	
79	34495	0.79	387	0.01	34108	0.78	99	0.26	0.52	1	0.94	0.33	0.67	0.031	
80	45892	1.05	10413	0.24	35479	0.81	77	0.71	0.10	1	0.75	0.87	0.13	0.059	
81	24545	0.56	5909	0.14	18636	0.43	76	0.43	0.00	1	0.73	1.00	0.00	0.034	
82	24753	0.57	4917	0.11	19836	0.46	80	0.41	0.05	1	0.77	0.90	0.10	0.034	
83	28606	0.66	7803	0.18	20803	0.48	73	0.33	0.14	1	0.70	0.70	0.30	0.030	
84	38772	0.89	10914	0.25	27858	0.64	72	0.40	0.24	1	0.70	0.63	0.37	0.037	
85	19770	0.45	6382	0.15	13388	0.31	68	0.24	0.07	1	0.66	0.77	0.23	0.021	
86	28900	0.66	5965	0.14	22935	0.53	79	0.37	0.16	1	0.76	0.70	0.30	0.033	
87	24199	0.56	6832	0.16	17367	0.40	72	0.03	0.36	1	0.70	0.09	0.91	0.010	
88	43859	1.01	11315	0.26	32544	0.75	74	0.01	0.73	1	0.72	0.02	0.98	0.016	
89	19843	0.46	4715	0.11	15128	0.35	76	0.08	0.27	1	0.74	0.24	0.76	0.012	
90	97195	2.23	18950	0.44	78245	1.80	81	0.64	1.16	1	0.77	0.35	0.65	0.074	
91	51855	1.19	10250	0.24	41605	0.96	80	0.28	0.68	1	0.77	0.29	0.71	0.036	
92	41034	0.94	9929	0.23	31105	0.71	76	0.20	0.52	1	0.73	0.28	0.72	0.026	
93	41165	0.95	9716	0.22	31449	0.72	76	0.17	0.55	1	0.74	0.24	0.76	0.025	

PROPOSED CONDITION

DA	Distrubance Area (ft ²)	Distrubance Area (Acre)	Pervious Area (ft ²)	Pervious Area (Acre)	Impervious Area (ft ²)	Impervious Area (Acre)	Impervious Cover Percent	New Developmt Impervious Area (acre)	Redevelopmt Area (acre)	Imperivous Area (acre)	P (inches)	R _v	N	R	WQ _v
94	57584	1.32	11442	0.26	46142	1.06	80	0.19		0.87	1	0.77	0.18	0.82	0.033
95	33855	0.78	6195	0.14	27660	0.63	82	0.16		0.48	1	0.79	0.25	0.75	0.022
96	15226	0.35	3563	0.08	11663	0.27	77	0.21		0.06	1	0.74	0.77	0.23	0.018
97	4422	0.10	0	0.00	4422	0.10	100	0.09		0.01	1	0.95	0.92	0.08	0.008
98	7104	0.16	2756	0.06	4348	0.10	61	0.10		0.00	1	0.60	1.00	0.00	0.008
99	17361	0.40	0	0.00	17361	0.40	100	0.31		0.09	1	0.95	0.77	0.23	0.026
100	16512	0.38	4457	0.10	12055	0.28	73	0.23		0.05	1	0.71	0.82	0.18	0.019
101	34378	0.79	0	0.00	34378	0.79	100	0.79		0.00	1	0.95	1.00	0.00	0.062

PROPOSED CONDITION													
DA	Distrubance Area (Acre)	Pervious Area (Acre)	Impervious Area (Acre)	Impervious Cover Percent	New Developptment Impervious Area (acre)	Redevelopptment Imperivous Area (acre)	P (inches)	R _v	N	R	WQ _v		
Kenmore North	1.57	0.05	1.52	97	0.10	1.42	1	0.92	0.07	0.93	0.036		
Kenmore South	0.79	0.04	0.75	95	0.04	0.71	2	0.90	0.05	0.95	0.035		
Longmeadow Northwest	0.18	0.01	0.17	94	0.00	0.17	3	0.90	0.00	1.00	0.010		
Longmeadow Southwest	0.24	0.02	0.22	92	0.00	0.22	4	0.88	0.00	1.00	0.018		
Longmeadow Northeast	0.18	0.01	0.17	94	0.00	0.17	5	0.90	0.00	1.00	0.017		
Longmeadow Southeast	0.24	0.01	0.23	96	0.02	0.21	6	0.91	0.09	0.91	0.035		
Brighton North	0.43	0.06	0.37	86	0.00	0.37	7	0.82	0.00	1.00	0.052		
Brighton South	0.53	0.08	0.45	85	-0.01	0.46	8	0.81	0.00	1.02	0.074		
North Bailey Northwest	0.48	0.03	0.45	94	0.00	0.45	9	0.89	0.00	1.00	0.080		
North Bailey Northeast	0.50	0.05	0.45	90	-0.01	0.46	10	0.86	0.00	1.02	0.092		
North Bailey Southwest	0.33	0.09	0.24	73	0.00	0.24	11	0.70	0.00	1.00	0.053		
North Bailey Southeast	0.40	0.04	0.36	90	0.03	0.33	12	0.86	0.08	0.92	0.108		